ANNUAL GROUNDWATER MONITORING REPORT

OPEN BURNING GROUND
(HAZARDOUS WASTE MANAGEMENT UNIT 13)
CALENDAR YEAR 2010

RADFORD ARMY AMMUNITION PLANT
RADFORD, VIRGINIA

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FEBRUARY 2011

DAA PROJECT NO. B03204-08

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EXECUTIVE SUMMARY

This document serves as the Annual Groundwater Monitoring Report for calendar year 2010 for the Open Burning Ground (OBG; also known as Hazardous Waste Management Unit [HWMU] 13) located at the Radford Army Ammunition Plant (Radford AAP) in Radford, Virginia. The Annual Groundwater Monitoring Report was compiled in accordance with the requirements specified in the *Permit for the Treatment of Hazardous Waste by Open Burning* (Permit) dated October 28, 2005. Groundwater monitoring activities for calendar year 2010 were conducted in accordance with the proposed *Groundwater Compliance Monitoring Plan*, which was included in the Class 3 Permit Modification dated August 9, 2007, was reviewed and modified by the VDEQ in a memorandum dated October 24, 2007, and was further revised by the VDEQ following the January 23, 2008 meeting between Radford AAP and the VDEQ. The Class 3 Permit Modification is pending final review for incorporation into the Permit.

During the calendar year 2010 semiannual groundwater monitoring events, carbon tetrachloride was detected in POC well 13MW3 at a concentration greater than the proposed GPS of 5 µg/l during Second Quarter 2010, and perchlorate was detected in POC well 13MW4 at concentrations greater than the proposed GPS of 26 µg/l during both semiannual monitoring events. As a result, Radford AAP is required to establish a Corrective Action Program for carbon tetrachloride and perchlorate that meets the requirements of 40 CFR Part 264.100. Radford AAP has submitted a Corrective Action Program for carbon tetrachloride and perchlorate, which is pending final review for incorporation into the Permit.

During annual monitoring for the constituents listed in Appendix IX of 40 CFR Part 264, additional constituents 1,1-dichloroethane, 1,1,1-trichloroethane, and trichlorofluoromethane were confirmed in POC well 13MW3. In accordance with the pending Compliance Monitoring Plan, background monitoring for the confirmed additional Appendix IX constituents in upgradient wells 13MW1 and 13MW2 began in Third Quarter 2010, and will be completed in Second Quarter 2011. During Third Quarter 2010 and Fourth Quarter 2010, the additional Appendix IX constituents were not detected in the upgradient wells at concentrations greater than their respective QLs.

1.0 INTRODUCTION

This document serves as the Annual Groundwater Monitoring Report for calendar year 2010 for the Open Burning Ground (OBG; also known as Hazardous Waste Management Unit [HWMU] 13) located at the Radford Army Ammunition Plant (Radford AAP) in Radford, Virginia. The Annual Groundwater Monitoring Report was compiled in accordance with the requirements specified in the *Permit for the Treatment of Hazardous Waste by Open Burning* (Permit) dated October 28, 2005. The Annual Groundwater Monitoring Report presents the following set of information: basic information and unit identification, a description of the groundwater monitoring plan, a discussion of groundwater movement, updated potentiometric maps, a table of groundwater elevations, and detailed statistical evaluations of the analytical data. The report evaluates the analytical data from two semiannual sampling events performed during calendar year 2010. Copies of field notes recorded during sample collection are included in **Appendix A**. The laboratory analytical results for the calendar year 2010 semiannual monitoring events are included in **Appendix B**.

The OBG is the waste propellant burning ground. Material that cannot be burned in the Explosive Waste Incinerators is open burned at this Unit. Groundwater monitoring activities for calendar year 2010 were conducted in accordance with the proposed *Groundwater Compliance Monitoring Plan*, which was included in the Class 3 Permit Modification dated August 9, 2007, was reviewed and modified by the VDEQ in a memorandum dated October 24, 2007, and was further revised by the VDEQ following the January 23, 2008 meeting between Radford AAP and the VDEQ. The Class 3 Permit Modification is pending final review for incorporation into the Permit.

2.0 ANNUAL GROUNDWATER MONITORING REPORT

2.1 Waste Management Unit Information

Unit Name: Open Burning Ground (OBG)
(Hazardous Waste Management Unit 13 [HWMU-13])
Owner/Operator: United States Army/Alliant Techsystems Inc.

Unit Location: Radford AAP Horseshoe Area, Radford, Virginia

Class: Hazardous Waste Management Unit
Type: Waste Propellant Burning Ground

2.2 Groundwater Monitoring Plan

Monitoring Network
Upgradient Well: 13MW1, 13MW2
Point of Compliance Wells: 13MW3, 13MW4, 13MW5, 13MW6, 13MW7

Monitoring Status: Compliance Monitoring Program

CY 2010 Monitoring Events:
Second Quarter 2010: April 27-28, 2010
Fourth Quarter 2010: October 18-19, 2010

2.3 Groundwater Movement

The static water level measurements gathered at the OBG during the 2010 monitoring events are summarized in **Table 1**. Annual groundwater fluctuations ranged from 0.62 to 2.1 feet. As shown on the Potentiometric Surface Maps (**Figures 1** and **2**), groundwater movement beneath the site is generally to the south toward the New River.

For the purposes of this report, Darcian flow conditions were assumed for the alluvium and carbonate bedrock beneath the OBG. As a result, the groundwater velocities were calculated by multiplying the hydraulic conductivity (determined from previously conducted slug tests) by the average hydraulic gradient across the site and dividing by an assumed effective porosity for the aquifer materials. The average hydraulic gradient was determined by superimposing three evenly spaced flow line vectors over the Fourth Quarter 2010 Potentiometric Surface Map, measuring their lengths, calculating the head differential over the distances measured, and dividing the head differential by the length of the flow line vectors. The three calculated gradients were then averaged to a single value. Using this method, the average groundwater hydraulic gradient across the site based on Fourth Quarter 2010 groundwater elevations was calculated to be 0.004 ft/ft. Historical slug test data for the site yielded an average hydraulic conductivity of 6.56×10^{-5} ft/second, which is consistent with literature values for carbonate rock and for clayey, silty sand, and gravel alluvium (Domenico and Schwartz, 1990).

The estimated groundwater velocity across the site was calculated to be approximately 5.67×10^{-2} ft/day or 21 ft/year, based on the following:

- An average hydraulic conductivity of 6.56×10^{-5} ft/second.
- An average hydraulic gradient of 0.004 ft/ft.
- An assumed effective porosity of 0.40, based on a representative range of porosities for carbonate rock and clayey, silty sand and gravel alluvium (Domenico and Schwartz, 1990).

The actual groundwater flow velocities in the carbonate bedrock may vary as much as one to two orders of magnitude from the average velocity presented above depending on water level conditions and the distribution of secondary porosity.

2.4 2010 Groundwater Monitoring Activities

Radford AAP began semiannual Detection monitoring at the OBG after the Permit went into effect in October 2005. During Fourth Quarter 2005, carbon tetrachloride and perchlorate were detected at concentrations above their respective background concentrations, which prompted the need to develop a Compliance monitoring program. As a result, during First Quarter 2006, all wells were sampled for the constituents listed in Appendix IX of 40 CFR Part 264 to determine the Compliance Monitoring List. The hazardous constituents detected during the initial Appendix IX analysis formed the basis for the Compliance Groundwater Monitoring List for the Unit.

Groundwater monitoring activities for calendar year 2010 were conducted in accordance with the proposed *Groundwater Compliance Monitoring Plan* dated February 2007, including the annual monitoring of the point of compliance (POC) wells for the constituents listed in Appendix IX of 40 CFR Part 264. Copies of field notes recorded during sample collection activities are included in **Appendix A**. The groundwater analytical data for the calendar year 2010 semiannual monitoring events were evaluated in accordance with the procedures specified in the proposed *Groundwater Compliance Monitoring Plan*, including comparison to the proposed Groundwater Protection Standards (GPS). As the proposed *Groundwater Compliance Monitoring Plan* is pending final review for incorporation into the Permit, the groundwater analytical data for calendar year 2010 were also compared to the background concentrations for the OBG previously calculated in the *Constituent Background Values for the Compliance Groundwater Monitoring Program* dated February 2007 (a copy of which is included in **Appendix C**).

2.5 Groundwater Analytical Data Evaluation

The groundwater samples collected during the calendar year 2010 events were analyzed for the constituents listed in Attachment V.B (Compliance Groundwater Monitoring List) of the proposed *Groundwater Compliance Monitoring Plan*. Additionally, the groundwater samples collected from the POC wells during Second Quarter 2010 were analyzed for the constituents listed in Appendix IX of 40 CFR Part 264. The constituents detected during the semiannual events and their corresponding concentrations, background values, and proposed GPS are listed

in **Table 2**. The laboratory analytical results for the calendar year 2010 semiannual monitoring events are included in **Appendix B**. The analytical data were validated in accordance with SW-846, *USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review*, and *USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review*. Data validation reports are included in **Appendix B**. No data were rejected.

2.5.1 Second Quarter 2010

Total barium, total chromium, and total nickel were detected in all monitoring wells (**Table 2**). Total barium was detected in upgradient well 13MW2 at a concentration greater than the background concentration of 205.9 µg/l, but the total barium concentrations detected in all other monitoring wells were less than the background concentration. The total chromium concentrations detected in all monitoring wells were less than the background concentration of 112 µg/l. Total nickel was detected in POC well 13MW7 at a concentration greater than the background concentration of 5 µg/l, but the total nickel concentrations detected in all other monitoring wells were less than the background concentration. The total barium, total chromium, and total nickel concentrations detected in all of the monitoring wells were less than their proposed GPS of 2,000 µg/l, 112 µg/l, and 313 µg/l, respectively. These detections are consistent with previous data.

Total selenium was detected in upgradient well 13MW1 and in POC wells 13MW5, 13MW6, and 13MW7; however, the detected concentrations were less than the background concentration of 5 µg/l and the proposed GPS of 50 µg/l (**Table 2**).

Total zinc was detected in POC well 13MW4 at a concentration less than the background concentration of 5 µg/l, and in POC wells 13MW3 and 13MW7 at concentrations greater than the background concentration (**Table 2**). However, the detected total zinc concentrations were less than the proposed GPS of 4,695 µg/l. These detections are consistent with previous data.

Chloroform was detected in POC well 13MW3 at a concentration less than the background concentration of 1 µg/l and less than the proposed GPS of 80 µg/l (**Table 2**). Trichloroethene was detected in POC well 13MW3 at a concentration greater than the background concentration of 1 µg/l, and in POC wells 13MW4 and 13MW7 at concentrations less than the background concentration; however, the detected trichloroethene concentrations were less than the proposed GPS of 5 µg/l (**Table 2**). These detections are consistent with previous data.

Carbon tetrachloride was detected in POC well 13MW3 at a concentration of 7.9 µg/l, which is greater than the background concentration and the proposed GPS of 5 µg/l (**Table 2**). Carbon tetrachloride was also detected in upgradient well 13MW2 at a concentration less than the quantitation limit of 0.5 µg/l. Perchlorate was detected in POC well 13MW4 at a concentration of 143 µg/l, which is greater than the background concentration of 4 µg/l and the proposed GPS of 26 µg/l (**Table 2**). These detections of carbon tetrachloride and perchlorate are consistent with previous data. However, due to the fact that the detected concentrations in POC wells 13MW3 and 13MW4 are greater than their respective proposed GPS, Radford AAP is required to establish a Corrective Action Program for carbon tetrachloride and perchlorate that

meets the requirements of 40 CFR Part 264.100. Radford AAP has submitted a Corrective Action Program for carbon tetrachloride and perchlorate, which is pending final review for incorporation into the Permit.

2.5.2 Fourth Quarter 2010

Total barium was detected in all monitoring wells; however, all concentrations were less than the background concentration of 205.9 µg/l and the proposed GPS of 2,000 µg/l (**Table 2**). These detections are consistent with previous data.

Total chromium was detected in POC wells 13MW3, 13MW4 and 13MW5 at concentrations less than the background concentration of 112 µg/l and the proposed GPS for chromium of 112 µg/l (**Table 2**). The detections of total chromium in these wells are generally consistent with previous data.

Total nickel was detected in POC well 13MW7 at a concentration greater than the background concentration of 5 µg/l; however, the detected total nickel concentration was less than the proposed GPS for nickel of 313 µg/l (**Table 2**). The detection of total nickel in well 13MW7 is generally consistent with previous data.

Total zinc was detected in POC wells 13MW4 and 13MW7 at concentrations greater than the background concentration of 5 µg/l; however, the detected total zinc concentrations were less than the proposed GPS for zinc of 4,695 µg/l (**Table 2**). The detection of total zinc in wells 13MW4 and 13MW7 is generally consistent with previous data.

Chloroform was detected in POC well 13MW3 at a concentration less than the background concentration of 1 µg/l and less than the proposed GPS of 80 µg/l (**Table 2**). Trichloroethene was detected in POC wells 13MW4 and 13MW7 at concentrations greater than the background concentration of 1 µg/l; however, the detected trichloroethene concentrations were less than the proposed GPS of 5 µg/l (**Table 2**). These detections are consistent with previous data.

Perchlorate was detected in POC well 13MW4 at a concentration of 34.1 µg/l, which was greater than the background concentration of 4 µg/l and the proposed GPS of 26 µg/l. Perchlorate was also detected in POC well 13MW5 at a concentration of 6.36 µg/l, which was greater than the background concentration but below the proposed GPS. These detections of perchlorate are consistent with previous data; however, due to the fact that the concentration detected in POC well 13MW4 is greater than the proposed GPS, Radford AAP is required to establish a Corrective Action Program for perchlorate that meets the requirements of 40 CFR Part 264.100. Radford AAP has submitted a Corrective Action Program for perchlorate, which is pending final review for incorporation into the Permit.

Carbon tetrachloride was detected in POC well 13MW3 at a concentration of 4.2 µg/l, which is less than the background concentration and proposed GPS of 5 µg/l. This detection of carbon tetrachloride is consistent with previous data; however, due to the fact that previous carbon tetrachloride concentrations detected in POC well 13MW3 have been greater than the

proposed GPS, Radford AAP is required to establish a Corrective Action Program for carbon tetrachloride that meets the requirements of 40 CFR Part 264.100. Radford AAP has submitted a Corrective Action Program for carbon tetrachloride, which is pending final review for incorporation into the Permit.

2.5.3 Annual Monitoring for Constituents Listed in Appendix IX of 40 CFR Part 264

The groundwater samples collected from the POC wells during Second Quarter 2010 were analyzed for the constituents listed in Appendix IX of 40 CFR Part 264. Upon receipt of the Second Quarter 2010 analytical data, Radford AAP notified the VDEQ of the initial detection of four additional Appendix IX constituents (1,1-dichloroethane, 1,1,1-trichloroethane, and trichlorofluoromethane in well 13MW3, and total vanadium in well 13MW5). On June 23, 2010, Radford AAP collected verification samples to confirm or refute the detection of additional Appendix IX constituents in POC wells 13MW3 and 13MW5. The verification sample results confirmed the presence of additional Appendix IX constituents 1,1-dichloroethane, 1,1,1-trichloroethane, and trichlorofluoromethane in POC well 13MW3, but did not confirm the presence of vanadium in POC well 13MW5. Therefore, additional Appendix IX constituents 1,1-dichloroethane, 1,1,1-trichloroethane, and trichlorofluoromethane will be added to the proposed Compliance Monitoring List for the Unit.

In accordance with the pending Compliance Monitoring Plan, background monitoring for the confirmed additional Appendix IX constituents in upgradient wells 13MW1 and 13MW2 began in Third Quarter 2010, and will be completed in Second Quarter 2011. During Third Quarter 2010 and Fourth Quarter 2010, the additional Appendix IX constituents (1,1-dichloroethane, 1,1,1-trichloroethane, and trichlorofluoromethane) were not detected in the upgradient wells at concentrations greater than their respective QLs. The laboratory analytical results and data validation reports for the Third Quarter 2010 and Fourth Quarter 2010 background monitoring for the confirmed additional Appendix IX constituents are included in **Appendix B**.

3.0 RECOMMENDATIONS

During the calendar year 2010 semiannual groundwater monitoring events, carbon tetrachloride was detected in POC well 13MW3 at a concentration greater than the proposed GPS of 5 µg/l during Second Quarter 2010, and perchlorate was detected in POC well 13MW4 at concentrations greater than the proposed GPS of 26 µg/l during both semiannual monitoring events. As a result, Radford AAP is required to establish a Corrective Action Program for carbon tetrachloride and perchlorate that meets the requirements of 40 CFR Part 264.100. Radford AAP has submitted a Corrective Action Program for carbon tetrachloride and perchlorate, which is pending final review for incorporation into the Permit.

During annual monitoring for the constituents listed in Appendix IX of 40 CFR Part 264, additional constituents 1,1-dichloroethane, 1,1,1-trichloroethane, and trichlorofluoromethane were confirmed in POC well 13MW3. In accordance with the pending Compliance Monitoring Plan, background monitoring for the confirmed additional Appendix IX constituents in upgradient wells 13MW1 and 13MW2 began in Third Quarter 2010, and will be completed in Second Quarter 2011. During Third Quarter 2010 and Fourth Quarter 2010, the additional Appendix IX constituents were not detected in the upgradient wells at concentrations greater than their respective QLs.

Radford AAP will continue to monitoring groundwater at the OBG in accordance with the *Groundwater Compliance Monitoring Plan* until the Corrective Action Program is approved and implemented, at which time groundwater monitoring will be conducted in accordance with the Corrective Action and Groundwater Monitoring Program.

SIGNATURES/CERTIFICATIONS

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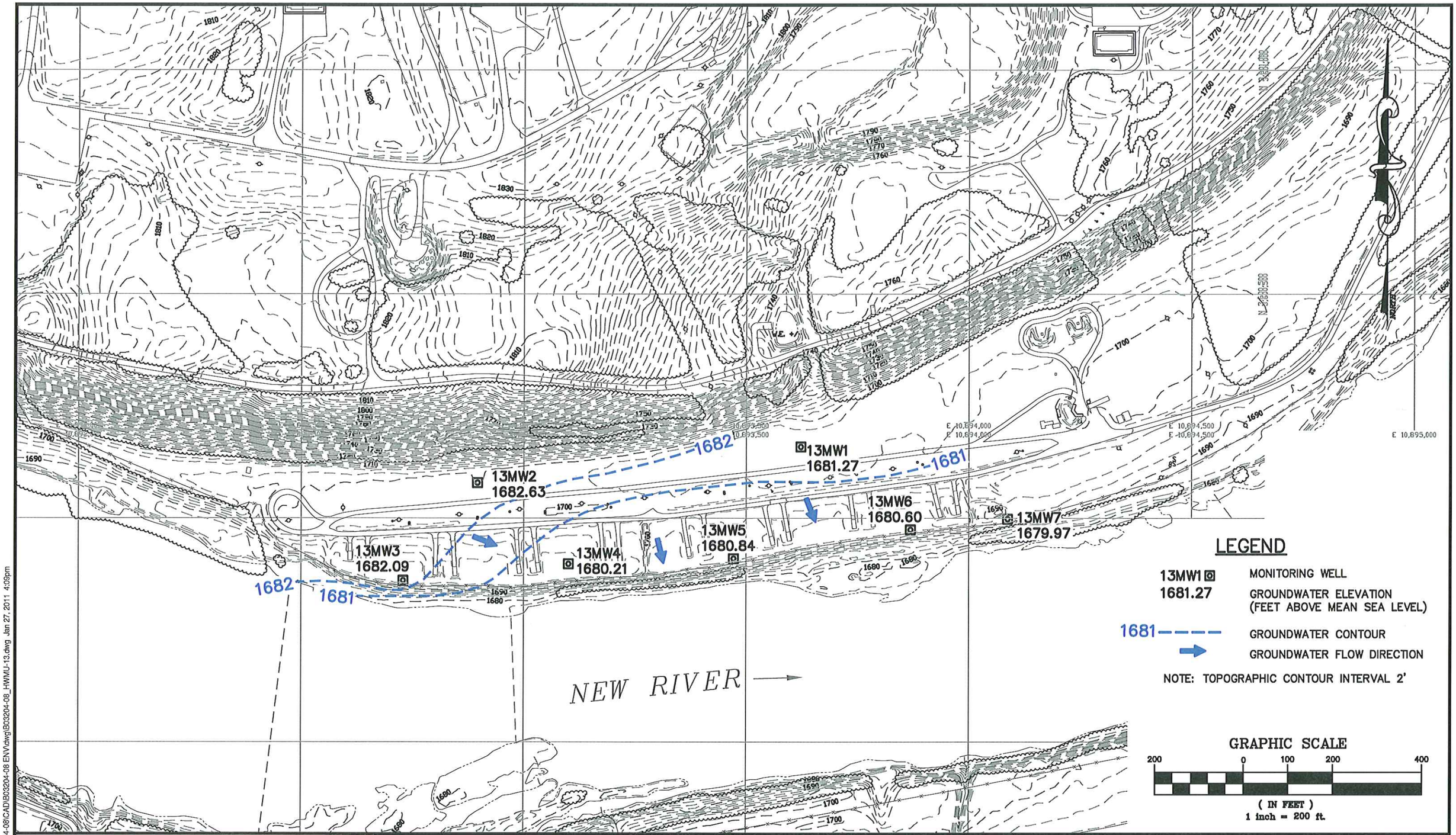
I certify that I have prepared or supervised preparation of the attached report, that it has been prepared in accordance with industry standards and practices, and that the information contained herein is truthful and accurate to the best of my knowledge.

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FIGURES



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OPEN BURNING GROUND/HWMU-13 POTENTIOMETRIC SURFACE MAP (2ND QUARTER 2010)

RADFORD ARMY AMMUNITION PLANT

RADFORD, VIRGINIA

SCALE: 1"=200'

PLAN NO. B03204-08

FIGURE 1

P:\B03200\B03204\B03204-08\CAD\B03204-08 ENV\dwg\B03204-08_HWMU-13.dwg Jan 27, 2011 4:09pm

13MW1
1679.40

13MW2
1680.62

13MW3
1682.71

13MW4
1678.95

13MW5
1678.74

13MW6
1678.71

13MW7
1678.78

1681
1680
1679

NEW RIVER

E 10,894,000
E 10,894,500
E 10,895,000

N 36,881,000
N 36,880,500

LEGEND

13MW1 ◘	MONITORING WELL
1679.40	GROUNDWATER ELEVATION (FEET ABOVE MEAN SEA LEVEL)
1681 – – – –	GROUNDWATER CONTOUR
→	GROUNDWATER FLOW DIRECTION

NOTE: TOPOGRAPHIC CONTOUR INTERVAL 2'

GRAPHIC SCALE

200 0 100 200 400

(IN FEET)
1 inch = 200 ft.

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OPEN BURNING GROUND/HWMU-13 POTENTIOMETRIC SURFACE MAP (4TH QUARTER 2010)

RADFORD ARMY AMMUNITION PLANT

RADFORD, VIRGINIA

SCALE: 1"=200'

PLAN NO. B03204-08

FIGURE 2

P:\B03200\B03204\B03204-08\CAD\B03204-08 ENV\dwg\B03204-08_HWMU-13.dwg Jan 27, 2011 4:10pm

TABLES

TABLE 1
GROUNDWATER ELEVATIONS - 2010
OPEN BURNING GROUND (HWMU-13)
RADFORD ARMY AMMUNITION PLANT, RADFORD, VIRGINIA

MONITORING WELL ID	ELEVATION TOP OF WELL	SECOND QUARTER 2010		FOURTH QUARTER 2010	
		DTW	GW ELEV	DTW	GW ELEV
13MW1	1701.46	20.19	1681.27	22.06	1679.40
13MW2	1702.71	20.08	1682.63	22.09	1680.62
13MW3	1695.01	12.92	1682.09	12.30	1682.71
13MW4	1696.58	16.37	1680.21	17.63	1678.95
13MW5	1696.76	15.92	1680.84	18.02	1678.74
13MW6	1696.11	15.51	1680.60	17.40	1678.71
13MW7	1695.51	15.54	1679.97	16.73	1678.78

NOTES:
DTW: Depth to water from top of casing.
GW ELEV: Groundwater elevation.
All elevations in feet above mean sea level.
NM: Not measured.

Table 2: Target Analyte Monitoring Results - Calendar Year 2010
Radford Army Ammunition Plant - Open Burning Ground - Groundwater Monitoring
Upgradient wells = 13MW1 and 13MW2
All Results in ug/L.

Analyte/Quarter	*13MW1 Q*	*13MW2 Q*	*13MW3 Q*	*13MW4 Q*	*13MW5 Q*	*13MW6 Q*	*13MW7 Q*	*QL*	*Background*	*GPS*	*Method*
Antimony					*CAS # 7440-36-0*						
Second Quarter 2010	-	U	U	U	U	U	U	5	6	6	6020
Fourth Quarter 2010	U	U	U	U	U	U	U	5	6	6	6020
Arsenic					*CAS # 7440-38-2*						
Second Quarter 2010	U	U	U	U	U	U	U	5	5	10	6020
Fourth Quarter 2010	U	U	U	U	U	U	U	5	5	10	6020
Barium					*CAS # 7440-39-3*						
Second Quarter 2010	100	211	92.3	49.9	70.2	74.5	77	1	205.9	2000	6020
Fourth Quarter 2010	116 J	148 J	96.7 J	57.7 J	96.2 J	89.2 J	146 J	1	205.9	2000	6020
Beryllium					*CAS # 7440-41-7*						
Second Quarter 2010	-	-	U	U	U	U	U	1		-	6020
Cadmium					*CAS # 7440-43-9*						
Second Quarter 2010	U	U	U	U	U	U	U	1	1	5	6020
Fourth Quarter 2010	U	U	U	U	U	U	U	1	1	5	6020
Chromium					*CAS # 7440-47-3*						
Second Quarter 2010	1.7 J	6.6	3 J	2.3 J	4.4 J	2.6 J	3.7 J	5	112	112	6020
Fourth Quarter 2010	U	U	5.9	5.1	5.4	U	U	5	112	112	6020
Cobalt					*CAS # 7440-48-4*						
Second Quarter 2010	-	-	U	U	U	U	U	5		-	6020
Copper					*CAS # 7440-50-8*						
Second Quarter 2010	-	-	U	U	U	U	U	5		-	6020
Lead					*CAS # 7439-92-1*						
Second Quarter 2010	U	U	U	U	U	U	U	5	14	15	6020
Fourth Quarter 2010	U	U	U	U	U	U	U	5	14	15	6020
Mercury					*CAS # 7439-97-6*						
Second Quarter 2010	U	U	U	U	U	U	U	2	2.52	2.52	7470A
Fourth Quarter 2010	-	U	U	U	U	U	U	0.5	2.52	2.52	7470A
Nickel					*CAS # 7440-02-0*						
Second Quarter 2010	2.4 J	2.3 J	1 J	2.1 J	1.2 J	1.4 J	71.9	5	5	313	6020
Fourth Quarter 2010	U	U	U	U	U	U	36	5	5	313	6020
Selenium					*CAS # 7782-49-2*						
Second Quarter 2010	3.7 J	U	U	U	2.5 J	3 J	3.2 J	5	5	50	6020
Fourth Quarter 2010	U	U	U	U	U	U	U	5	5	50	6020
Silver					*CAS # 7440-22-4*						
Second Quarter 2010	U	U	U	U	U	U	U	2	2.4	78.3	6020
Fourth Quarter 2010	U	U	U	U	U	U	U	2	2.4	78.3	6020
Thallium					*CAS # 7440-28-0*						
Second Quarter 2010	-	-	U	U	U	U	U	2		-	6020
Tin					*CAS # 7440-31-5*						
Second Quarter 2010	-	-	U	U	U	U	U	15		-	6010B
Vanadium					*CAS # 7440-62-2*						
Second Quarter 2010	-	-	U	U	U	U	U	5		-	6020
Zinc					*CAS # 7440-66-6*						
Second Quarter 2010	U	U	8.2	4.4 J	U	U	5.8	5	5	4695	6020
Fourth Quarter 2010	U	U	U	7	U	U	39.1	5	5	4695	6020

Table 2: Target Analyte Monitoring Results - Calendar Year 2010
Radford Army Ammunition Plant - Open Burning Ground - Groundwater Monitoring
Upgradient wells = 13MW1 and 13MW2
All Results in ug/L.

Analyte/Quarter	*13MW1*	*Q*	*13MW2*	*Q*	*13MW3*	*Q*	*13MW4*	*Q*	*13MW5*	*Q*	*13MW6*	*Q*	*13MW7*	*Q*	*QL*	*Background*	*GPS*	*Method*
Sulfide									*CAS # 18496-25-8*									
Second Quarter 2010	-		-		U		U		U		U		U		3000		-	9034
Perchlorate									*CAS # 14797-73-0*									
Second Quarter 2010	U		U		U		143		U		U		U		4	4	26	314.0
Fourth Quarter 2010	U	J	U	J	U	J	34.1	J	6.36	J	U	J	U	J	4	4	26	314.0
Cyanide									*CAS # 57-12-5*									
Second Quarter 2010	-		-		U		U		U		U		U		20		-	9012A
Acenaphthene									*CAS # 83-32-9*									
Second Quarter 2010	-		-		U		U		U		U		U		5		-	8270C
Acenaphthylene									*CAS # 208-96-8*									
Second Quarter 2010	-		-		U		U		U		U		U		5		-	8270C
Acetone									*CAS # 67-64-1*									
Second Quarter 2010	-		-		U		U		U		U		U		5		-	8260B
Acetonitrile									*CAS # 75-05-8*									
Second Quarter 2010	-		-		U		U		U		U		U		20		-	8260B
Acetophenone									*CAS # 98-86-2*									
Second Quarter 2010	U		U		U		U		U		U		U		5	10	224	8270C
Fourth Quarter 2010	U		U		U		U		U		U		U		5	10	224	8270C
2-Acetylaminofluorene									*CAS # 53-96-3*									
Second Quarter 2010	-		-		U		U		U		U		U		5		-	8270C
Acrolein									*CAS # 107-02-8*									
Second Quarter 2010	-		-		U	J	U	J	U	J	U	J	U	J	25		-	8260B
Acrylonitrile									*CAS # 107-13-1*									
Second Quarter 2010	-		-		U		U		U		U		U		5		-	8260B
Aldrin									*CAS # 309-00-2*									
Second Quarter 2010	-		-		U		U		U		U		U		0.05		-	8081A
Allyl chloride									*CAS # 107-05-1*									
Second Quarter 2010	-		-		U		U		U		U		U		0.5		-	8260B
4-Aminobiphenyl									*CAS # 92-67-1*									
Second Quarter 2010	-		-		U		U		U		U		U		5		-	8270C
Aniline									*CAS # 62-53-3*									
Second Quarter 2010	-		-		U		U		U		U		U		5		-	8270C
Anthracene									*CAS # 120-12-7*									
Second Quarter 2010	-		-		U		U		U		U		U		5		-	8270C
Aramite									*CAS # 140-57-8*									
Second Quarter 2010	-		-		U		U		U		U		U		5		-	8270C
Benzene									*CAS # 71-43-2*									
Second Quarter 2010	U		U		U		U		U		U		U		0.5	5	5	8260B
Fourth Quarter 2010	U		U		U		U		U		U		U		0.5	5	5	8260B
Benzyl chloride									*CAS # 100-44-7*									
Second Quarter 2010	U		U		U		U		U		U		U		0.5	5	5	8260B
Fourth Quarter 2010	U		U		U		U		U		U		U		0.5	5	5	8260B
Benzyl alcohol									*CAS # 100-51-6*									
Second Quarter 2010	-		-		U	J	U	J	U	J	U	J	U	J	5			8270C

Table 2: Target Analyte Monitoring Results - Calendar Year 2010
Radford Army Ammunition Plant - Open Burning Ground - Groundwater Monitoring
Upgradient wells = 13MW1 and 13MW2
All Results in ug/L.

Analyte/Quarter	*13MW1 Q*	*13MW2 Q*	*13MW3 Q*	*13MW4 Q*	*13MW5 Q*	*13MW6 Q*	*13MW7 Q*	*QL*	*Background*	*GPS*	*Method*
Benzo[a]anthracene					*CAS # 56-55-3*						
Second Quarter 2010	U	U	U	U	U	U	U	5	10	0.0917	8270C
Fourth Quarter 2010	U	U	U	U	U	U	U	5	10	0.0917	8270C
Benzo[b]fluoranthene					*CAS # 205-99-2*						
Second Quarter 2010	U	U	U	U	U	U	U	5	10	0.0917	8270C
Fourth Quarter 2010	U	U	U	U	U	U	U	5	10	0.0917	8270C
Benzo[k]fluoranthene					*CAS # 207-08-9*						
Second Quarter 2010	U J	U J	U	U	U	U	U	5	10	0.917	8270C
Fourth Quarter 2010	U	U	U	U	U	U	U	5	10	0.917	8270C
Benzo[a]pyrene					*CAS # 50-32-8*						
Second Quarter 2010	U	U	U	U	U	U	U	5	10	0.2	8270C
Fourth Quarter 2010	U	U	U	U	U	U	U	5	10	0.2	8270C
Benzo[ghi]perylene					*CAS # 191-24-2*						
Second Quarter 2010	-	-	U	U	U	U	U	5			8270C
alpha-BHC					*CAS # 319-84-6*						
Second Quarter 2010	-	-	U	U	U	U	U	0.05		-	8081A
beta-BHC					*CAS # 319-85-7*						
Second Quarter 2010	-	-	U	U	U	U	U	0.05		-	8081A
delta-BHC					*CAS # 319-86-8*						
Second Quarter 2010	-	-	U	U	U	U	U	0.05		-	8081A
gamma-BHC					*CAS # 58-89-9*						
Second Quarter 2010	-	-	U	U	U	U	U	0.05		-	8081A
bis(2-Chloro-1-methylethyl)ether					*CAS # 108-60-1*						
Second Quarter 2010	-	-	U	U	U	U	U	5		-	8270C
bis(2-Chloroethoxy)methane					*CAS # 111-91-1*						
Second Quarter 2010	-	-	U	U	U	U	U	5			8270C
bis(2-Chloroethyl) ether					*CAS # 111-44-4*						
Second Quarter 2010	-	-	U	U	U	U	U	5			8270C
bis(2-Ethylhexyl)phthalate					*CAS # 117-81-7*						
Second Quarter 2010	U	U	U	U	U	U	U	5	6	6	8270C
Fourth Quarter 2010	U	U	U	U	U	U	U	5	6	6	8270C
Bromochloromethane					*CAS # 74-97-5*						
Second Quarter 2010	-	-	U	U	U	U	U	0.5		-	8260B
Bromodichloromethane					*CAS # 75-27-4*						
Second Quarter 2010	-	-	U	U	U	U	U	0.5			8260B
Bromoform					*CAS # 75-25-2*						
Second Quarter 2010	-	-	U	U	U	U	U	0.5			8260B
Bromomethane					*CAS # 74-83-9*						
Second Quarter 2010	U	U	U	U	U	U	U	0.5	1	3.13	8260B
Fourth Quarter 2010	U	U	U	U	U	U	U	0.5	1	3.13	8260B
4-Bromophenyl phenyl ether					*CAS # 101-55-3*						
Second Quarter 2010	-	-	U	U	U	U	U	5		-	8270C
2-Butanone					*CAS # 78-93-3*						
Second Quarter 2010	-	-	U	U	U	U	U	5		-	8260B

Table 2: Target Analyte Monitoring Results - Calendar Year 2010
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Upgradient wells = 13MW1 and 13MW2
All Results in ug/L.

Analyte/Quarter	13MW1 Q	13MW2 Q	13MW3 Q	13MW4 Q	13MW5 Q	13MW6 Q	13MW7 Q	QL	Background	GPS	Method
Butyl benzyl phthalate					CAS # 85-68-7						
Second Quarter 2010	U	U	U	U	U	U	U	5	10	3130	8270C
Fourth Quarter 2010	U	U	U	U	U	U	U	5	10	3130	8270C
Carbon disulfide					CAS # 75-15-0						
Second Quarter 2010	-	-	U	U	U	U	U	0.5		-	8260B
Carbon tetrachloride					CAS # 56-23-5						
Second Quarter 2010	U	0.2 J	7.9	U	U	U	U	0.5	5	5	8260B
Fourth Quarter 2010	U	U	4.2	U	U	U	U	1	5	5	8260B
Chlordane					CAS # 57-74-9						
Second Quarter 2010	-	-	U	U	U	U	U	0.86		-	8081A
p-Chloroaniline					CAS # 106-47-8						
Second Quarter 2010	-	-	U	U	U	U	U	5		-	8270C
Chlorobenzene					CAS # 108-90-7						
Second Quarter 2010	U	U	U	U	U	U	U	0.5	5	100	8260B
Fourth Quarter 2010	U	U	U	U	U	U	U	0.5	5	100	8260B
Chlorobenzilate					CAS # 510-15-6						
Second Quarter 2010	-	-	U	U	U	U	U	5		-	8270C
Chloromethane					CAS # 74-87-3						
Second Quarter 2010	U	U	U	U	U	U	U	0.5	5	58.1	8260B
Fourth Quarter 2010	U	U	U	U	U	U	U	0.5	5	58.1	8260B
p-Chloro-m-cresol					CAS # 59-50-7						
Second Quarter 2010	-	-	U	U	U	U	U	10		-	8270C
Chloroethane					CAS # 75-00-3						
Second Quarter 2010	-	-	U	U	U	U	U	0.5		-	8260B
Chloroform					CAS # 67-66-3						
Second Quarter 2010	U	U	0.6	U	U	U	U	0.5	1	80	8260B
Fourth Quarter 2010	U	U	0.6	U	U	U	U	0.5	1	80	8260B
2-Chloronaphthalene					CAS # 91-58-7						
Second Quarter 2010	-	-	U	U	U	U	U	5		-	8270C
2-Chlorophenol					CAS # 95-57-8						
Second Quarter 2010	U	U	U	U	U	U	U	10	10	11.2	8270C
Fourth Quarter 2010	U J	U J	U J	U J	U J	U J	U J	10	10	11.2	8270C
4-Chlorophenyl phenyl ether					CAS # 7005-72-3						
Second Quarter 2010	-	-	U	U	U	U	U	5		-	8270C
Chloroprene					CAS # 126-99-8						
Second Quarter 2010	-	-	U	U	U	U	U	0.5		-	8260B
Chrysene					CAS # 218-01-9						
Second Quarter 2010	-	-	U	U	U	U	U	5		-	8270C
Diethyl phthalate					CAS # 84-66-2						
Second Quarter 2010	U	U	U	U	U	U	U	5	10	12500	8270C
Fourth Quarter 2010	U	U	U	U	U	U	U	5	10	12500	8270C
2,4-Dinitrotoluene					CAS # 121-14-2						
Second Quarter 2010	U	U	U	U	U	U	U	5	10	31.3	8330B
Fourth Quarter 2010	U	U	U	U	U	U	U	5	10	31.3	8330B
p-Phenylenediamine					CAS # 106-50-3						
Second Quarter 2010	-	-	U J	U J	U J	U J	U J	50			8270C

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Analyte/Quarter	*13MW1 Q*	*13MW2 Q*	*13MW3 Q*	*13MW4 Q*	*13MW5 Q*	*13MW6 Q*	*13MW7 Q*	*QL*	*Background*	*GPS*	*Method*
Diphenylamine					*CAS # 122-39-4*						
Second Quarter 2010	U	U	U	U	U	U	U	5	10	391	8270C
2,4-Dichlorophenoxyacetic acid					*CAS # 94-75-7*						
Second Quarter 2010	-	-	U	U	U	U	U	5		-	8151A
4,4'-DDD					*CAS # 72-54-8*						
Second Quarter 2010	-	-	U	U	U	U	U	0.1		-	8081A
4,4'-DDE					*CAS # 72-55-9*						
Second Quarter 2010	-	-	U	U	U	U	U	0.1		-	8081A
4,4'-DDT					*CAS # 50-29-3*						
Second Quarter 2010	-	-	U	U	U	U	U	0.1		-	8081A
Diallate					*CAS # 2303-16-4*						
Second Quarter 2010	-	-	U	U	U	U	U	5		-	8270C
Dibenz(a,h)anthracene					*CAS # 53-70-3*						
Second Quarter 2010	U	U	U	U	U	U	U	5	10	0.00917	8270C
Fourth Quarter 2010	U	U	U	U	U	U	U	5	10	0.00917	8270C
Dibenzofuran					*CAS # 132-64-9*						
Second Quarter 2010	U	U	U	U	U	U	U	5	10	10	8270C
Fourth Quarter 2010	U	U	U	U	U	U	U	5	10	10	8270C
Dibromochloromethane					*CAS # 124-48-1*						
Second Quarter 2010	-	-	U	U	U	U	U	0.5			8260B
1,2-Dibromo-3-chloropropane					*CAS # 96-12-8*						
Second Quarter 2010	-	-	U	U	U	U	U	0.5		-	8260B
1,2-Dibromoethane					*CAS # 106-93-4*						
Second Quarter 2010	-	-	U	U	U	U	U	0.5		-	8260B
Dibromomethane					*CAS # 74-95-3*						
Second Quarter 2010	-	-	U	U	U	U	U	0.5		-	8260B
1,2-Dichlorobenzene					*CAS # 95-50-1*						
Second Quarter 2010	-	-	U	U	U	U	U	0.5		-	8260B
1,3-Dichlorobenzene					*CAS # 541-73-1*						
Second Quarter 2010	-	-	U	U	U	U	U	0.5		-	8260B
1,4-Dichlorobenzene					*CAS # 106-46-7*						
Second Quarter 2010	-	-	U	U	U	U	U	0.5		-	8260B
3,3'-Dichlorobenzidine					*CAS # 91-94-1*						
Second Quarter 2010	-	-	U	U	U	U	U	5		-	8270C
trans-1,4-Dichloro-2-butene					*CAS # 110-57-6*						
Second Quarter 2010	-	-	U	U	U	U	U	5		-	8260B
Dichlorodifluoromethane					*CAS # 75-71-8*						
Second Quarter 2010	-	-	U	U	U	U	U	0.5		-	8260B
1,1-Dichloroethane					*CAS # 75-34-3*						
Second Quarter 2010	-	-	0.2 J	U	U	U	U	0.5		-	8260B
Fourth Quarter 2010	U	U	U	U	U	U	U	1		-	8260B
1,2-Dichloroethane					*CAS # 107-06-2*						
Second Quarter 2010	U	U	U	U	U	U	U	0.5	1	5	8260B
Fourth Quarter 2010	U	U	U	U	U	U	U	0.5	1	5	8260B

Table 2: Target Analyte Monitoring Results - Calendar Year 2010
Radford Army Ammunition Plant - Open Burning Ground - Groundwater Monitoring
Upgradient wells = 13MW1 and 13MW2
All Results in ug/L.

Analyte/Quarter	13MW1	Q	13MW2	Q	13MW3	Q	13MW4	Q	13MW5	Q	13MW6	Q	13MW7	Q	QL	Background	GPS	Method
1,1-Dichloroethene									CAS # 75-35-4									
Second Quarter 2010	U		U		U		U		U		U		U		0.5	1	7	8260B
Fourth Quarter 2010	U		U		U		U		U		U		U		0.5	1	7	8260B
trans-1,2-Dichloroethene									CAS # 156-60-5									
Second Quarter 2010	-		-		U		U		U		U		U		0.5			8260B
2,4-Dichlorophenol									CAS # 120-83-2									
Second Quarter 2010	U	J	U	J	U		U		U		U		U		10	10	47	8270C
Fourth Quarter 2010	U		U		U		U		U		U		U		10	10	47	8270C
2,6-Dichlorophenol									CAS # 87-65-0									
Second Quarter 2010	-		-		U		U		U		U		U		10		-	8270C
cis-1,3-Dichloropropene									CAS # 10061-01-5									
Second Quarter 2010	-		-		U		U		U		U		U		0.5		-	8260B
trans-1,3-Dichloropropene									CAS # 10061-02-6									
Second Quarter 2010	-		-		U		U		U		U		U		0.5		-	8260B
Dieldrin									CAS # 60-57-1									
Second Quarter 2010	-		-		U		U		U		U		U		0.1		-	8081A
1,2-Dichloropropane									CAS # 78-87-5									
Second Quarter 2010	-		-		U		U		U		U		U		0.5			8260B
O,O-Diethyl O-2-pyrazinyl									CAS # 297-97-2									
Second Quarter 2010	-		-		U		U		U		U		U		5		-	8270C
Dimethoate									CAS # 60-51-5									
Second Quarter 2010	-		-		U		U		U		U		U		5		-	8270C
p-(Dimethylamino)azobenzene									CAS # 60-11-7									
Second Quarter 2010	-		-		U		U		U		U		U		5		-	8270C
7,12-Dimethylbenz[a]anthracene									CAS # 57-97-6									
Second Quarter 2010	-		-		U		U		U		U		U		5		-	8270C
3,3'-Dimethylbenzidine									CAS # 119-93-7									
Second Quarter 2010	U		U		U		U		U		U		U		5	10	10	8270C
Fourth Quarter 2010	U		U		U		U		U		U		U		5	10	10	8270C
a,a-Dimethylphenethylamine									CAS # 122-09-8									
Second Quarter 2010	-		-		U	J	U	J	U	J	U	J	U	J	50		-	8270C
2,4-Dimethylphenol									CAS # 105-67-9									
Second Quarter 2010	-		-		U		U		U		U		U		10		-	8270C
Dimethyl phthalate									CAS # 131-11-3									
Second Quarter 2010	U		U		U		U		U		U		U		5	10	10	8270C
Fourth Quarter 2010	U		U		U		U		U		U		U		5	10	10	8270C
Di-n-butyl phthalate									CAS # 84-74-2									
Second Quarter 2010	U		U		U		U		U		U		U		5	10	1570	8270C
Fourth Quarter 2010	U		U		U		U		U		U		U		5	10	1570	8270C
m-Dinitrobenzene									CAS # 99-65-0									
Second Quarter 2010	U		U		U		U		U		U		U		2.5	2.5	1.57	8330B
Fourth Quarter 2010	U		U		U		U		U		U		U		2.5	2.5	1.57	8330B
4,6-Dinitro-o-cresol									CAS # 534-52-1									
Second Quarter 2010	-		-		U		U		U		U		U		10		-	8270C
2,4-Dinitrophenol									CAS # 51-28-5									
Second Quarter 2010	-		-		U	J	U	J	U	J	U	J	U	J	10		-	8270C

Table 2: Target Analyte Monitoring Results - Calendar Year 2010
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Upgradient wells = 13MW1 and 13MW2
All Results in ug/L.

Analyte/Quarter	*13MW1 Q*	*13MW2 Q*	*13MW3 Q*	*13MW4 Q*	*13MW5 Q*	*13MW6 Q*	*13MW7 Q*	*QL*	*Background*	*GPS*	*Method*
2,6-Dinitrotoluene					*CAS # 606-20-2*						
Second Quarter 2010	U	U	U	U	U	U	U	5	5	15.7	8330B
Fourth Quarter 2010	U	U	U	U	U	U	U	5	5	15.7	8330B
Dinoseb					*CAS # 88-85-7*						
Second Quarter 2010	-	-	U	U	U	U	U	2.5			8151A
Di-n-octyl phthalate					*CAS # 117-84-0*						
Second Quarter 2010	U	U	U	U	U	U	U	5	10	313	8270C
Fourth Quarter 2010	U	U	U	U	U	U	U	5	10	313	8270C
1,4-Dioxane					*CAS # 123-91-1*						
Second Quarter 2010	-	-	U	U	U	U	U	100		-	8260B
Disulfoton					*CAS # 298-04-4*						
Second Quarter 2010	-	-	U	U	U	U	U	5		-	8270C
Endosulfan I					*CAS # 959-98-8*						
Second Quarter 2010	-	-	U	U	U	U	U	0.05		-	8081A
Endosulfan II					*CAS # 33213-65-9*						
Second Quarter 2010	-	-	U	U	U	U	U	0.1		-	8081A
Endosulfan sulfate					*CAS # 1031-07-8*						
Second Quarter 2010	-	-	U J	U J	U J	U J	U J	0.1		-	8081A
Endrin					*CAS # 72-20-8*						
Second Quarter 2010	-	-	U	U	U	U	U	0.1		-	8081A
Endrin aldehyde					*CAS # 7421-93-4*						
Second Quarter 2010	-	-	U J	U J	U J	U J	U J	0.1		-	8081A
Ethylbenzene					*CAS # 100-41-4*						
Second Quarter 2010	-	-	U	U	U	U	U	0.5		-	8260B
Ethyl methacrylate					*CAS # 97-63-2*						
Second Quarter 2010	-	-	U	U	U	U	U	0.5		-	8260B
Ethyl methanesulfonate					*CAS # 62-50-0*						
Second Quarter 2010	-	-	U	U	U	U	U	5		-	8270C
Famphur					*CAS # 52-85-7*						
Second Quarter 2010	-	-	U	U	U	U	U	5		-	8270C
Fluoranthene					*CAS # 206-44-0*						
Second Quarter 2010	U	U	U	U	U	U	U	5	10	626	8270C
Fourth Quarter 2010	U	U	U	U	U	U	U	5	10	626	8270C
Fluorene					*CAS # 86-73-7*						
Second Quarter 2010	-	-	U	U	U	U	U	5		-	8270C
Heptachlor					*CAS # 76-44-8*						
Second Quarter 2010	-	-	U	U	U	U	U	0.05		-	8081A
Heptachlor epoxide					*CAS # 1024-57-3*						
Second Quarter 2010	-	-	U	U	U	U	U	0.05		-	8081A
Hexachlorobenzene					*CAS # 118-74-1*						
Second Quarter 2010	-	-	U	U	U	U	U	5		-	8270C
Hexachlorobutadiene					*CAS # 87-68-3*						
Second Quarter 2010	-	-	U	U	U	U	U	0.5		-	8260B
Hexachlorocyclopentadiene					*CAS # 77-47-4*						
Second Quarter 2010	-	-	U	U	U	U	U	5			8270C

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Upgradient wells = 13MW1 and 13MW2
All Results in ug/L.

Analyte/Quarter	*13MW1 Q*	*13MW2 Q*	*13MW3 Q*	*13MW4 Q*	*13MW5 Q*	*13MW6 Q*	*13MW7 Q*	*QL*	*Background*	*GPS*	*Method*
Hexachloroethane					*CAS # 67-72-1*						
Second Quarter 2010	U	U	U	U	U	U	U	5	10	4.78	8270C
Second Quarter 2010	U	U	U	U	U	U	U	0.5	10	4.78	8260B
Fourth Quarter 2010	U	U	U	U	U	U	U	5	10	4.78	8270C
Fourth Quarter 2010	U	U	U	U	U	U	U	0.5	10	4.78	8260B
Hexachlorophene					*CAS # 70-30-4*						
Second Quarter 2010	-	-	U J	U J	U J	U J	U J	40		-	8270C
Hexachloropropene					*CAS # 1888-71-7*						
Second Quarter 2010	-	-	U	U	U	U	U	5		-	8270C
2-Hexanone					*CAS # 591-78-6*						
Second Quarter 2010	-	-	U	U	U	U	U	5		-	8260B
Indeno[1,2,3-cd]pyrene					*CAS # 193-39-5*						
Second Quarter 2010	U	U	U	U	U	U	U	5	10	0.0917	8270C
Fourth Quarter 2010	U	U	U	U	U	U	U	5	10	0.0917	8270C
Iodomethane					*CAS # 74-88-4*						
Second Quarter 2010	-	-	U	U	U	U	U	0.5		-	8260B
Isobutyl alcohol					*CAS # 78-83-1*						
Second Quarter 2010	-	-	U	U	U	U	U	25		-	8260B
Isodrin					*CAS # 465-73-6*						
Second Quarter 2010	-	-	U	U	U	U	U	5		-	8270C
Isophorone					*CAS # 78-59-1*						
Second Quarter 2010	-	-	U	U	U	U	U	5		-	8270C
Isosafrole					*CAS # 120-58-1*						
Second Quarter 2010	-	-	U	U	U	U	U	5		-	8270C
Kepone					*CAS # 143-50-0*						
Second Quarter 2010	-	-	U J	U J	U J	U J	U J	5		-	8270C
Methacrylonitrile					*CAS # 126-98-7*						
Second Quarter 2010	-	-	U	U	U	U	U	5		-	8260B
Methylene chloride					*CAS # 75-09-2*						
Second Quarter 2010	U	U	U	U	U	U	U	0.5	5	5	8260B
Fourth Quarter 2010	U	U	U	U	U	U	U	1	5	5	8260B
Methapyrilene					*CAS # 91-80-5*						
Second Quarter 2010	-	-	U J	U J	U J	U J	U J	5		-	8270C
Methoxychlor					*CAS # 72-43-5*						
Second Quarter 2010	-	-	U	U	U	U	U	0.5		-	8081A
3-Methylcholanthrene					*CAS # 56-49-5*						
Second Quarter 2010	-	-	U	U	U	U	U	5		-	8270C
Methyl methacrylate					*CAS # 80-62-6*						
Second Quarter 2010	-	-	U	U	U	U	U	0.5		-	8260B
Methyl methane sulfonate					*CAS # 66-27-3*						
Second Quarter 2010	-	-	U	U	U	U	U	5		-	8270C
2-Methylnaphthalene					*CAS # 91-57-6*						
Second Quarter 2010	-	-	U	U	U	U	U	5		-	8270C
Methyl parathion					*CAS # 298-00-0*						
Second Quarter 2010	-	-	U	U	U	U	U	5		-	8270C

Table 2: Target Analyte Monitoring Results - Calendar Year 2010
Radford Army Ammunition Plant - Open Burning Ground - Groundwater Monitoring
Upgradient wells = 13MW1 and 13MW2
All Results in ug/L.

Analyte/Quarter	*13MW1 Q*	*13MW2 Q*	*13MW3 Q*	*13MW4 Q*	*13MW5 Q*	*13MW6 Q*	*13MW7 Q*	*QL*	*Background*	*GPS*	*Method*
4-Methyl-2-pentanone					*CAS # 108-10-1*						
Second Quarter 2010	-	-	U	U	U	U	U	5		-	8260B
2-Methylphenol					*CAS # 95-48-7*						
Second Quarter 2010	-	-	U	U	U	U	U	10		-	8270C
3 & 4-Methylphenol					*CAS # m 108-39-4 p 106-44-5*						
Second Quarter 2010	U J	U J	U	U	U	U	U	10	20	78.3	8270C
Fourth Quarter 2010	U	U	U	U	U	U	U	8	20	78.3	8270C
Naphthalene					*CAS # 91-20-3*						
Second Quarter 2010	U	U	U	U	U	U	U	0.5	1	2.33	8260B
Fourth Quarter 2010	U	U	U	U	U	U	U	0.5	1	2.33	8260B
1,4-Naphthoquinone					*CAS # 130-15-4*						
Second Quarter 2010	-	-	U	U	U	U	U	5		-	8270C
1-Naphthylamine					*CAS # 134-32-7*						
Second Quarter 2010	-	-	U	U	U	U	U	5		-	8270C
2-Naphthylamine					*CAS # 91-59-8*						
Second Quarter 2010	-	-	U	U	U	U	U	5		-	8270C
o-Nitroaniline					*CAS # 88-74-4*						
Second Quarter 2010	-	-	U	U	U	U	U	5		-	8270C
m-Nitroaniline					*CAS # 99-09-2*						
Second Quarter 2010	-	-	U	U	U	U	U	5		-	8270C
p-Nitroaniline					*CAS # 100-01-6*						
Second Quarter 2010	-	-	U	U	U	U	U	5		-	8270C
Nitrobenzene					*CAS # 98-95-3*						
Second Quarter 2010	U J	U J	U	U	U	U	U	5	10	1.3	8270C
Fourth Quarter 2010	U	U	U	U	U	U	U	5	10	1.3	8270C
Nitroglycerin					*CAS # 55-63-0*						
Second Quarter 2010	U	U	U	U	U	U	U	16	10000	10000	8332
Fourth Quarter 2010	U	U	U	U	U	U	U	16	10000	10000	8332
o-Nitrophenol					*CAS # 88-75-5*						
Second Quarter 2010	-	-	U	U	U	U	U	10		-	8270C
p-Nitrophenol					*CAS # 100-02-7*						
Second Quarter 2010	U J	U J	U	U	U	U	U	10	20	20	8270C
Fourth Quarter 2010	U	U	U	U	U	U	U	10	20	20	8270C
4-Nitroquinoline-1-oxide					*CAS # 56-57-5*						
Second Quarter 2010	-	-	U	U	U	U	U	5		-	8270C
N-Nitrosodi-n-butylamine					*CAS # 924-16-3*						
Second Quarter 2010	-	-	U	U	U	U	U	5		-	8270C
N-Nitrosodiethylamine					*CAS # 55-18-5*						
Second Quarter 2010	-	-	U	U	U	U	U	5		-	8270C
N-Nitrosodimethylamine					*CAS # 62-75-9*						
Second Quarter 2010	-	-	U	U	U	U	U	5		-	8270C
N-Nitrosodiphenylamine					*CAS # 86-30-6*						
Second Quarter 2010	-	-	U	U	U	U	U	5		-	8270C
Fourth Quarter 2010	U	U	U	U	U	U	U	5		-	8270C
N-Nitrosodipropylamine					*CAS # 621-64-7*						
Second Quarter 2010	-	-	U	U	U	U	U	5		-	8270C

Table 2: Target Analyte Monitoring Results - Calendar Year 2010
Radford Army Ammunition Plant - Open Burning Ground - Groundwater Monitoring
Upgradient wells = 13MW1 and 13MW2
All Results in ug/L.

Analyte/Quarter	13MW1 Q	13MW2 Q	13MW3 Q	13MW4 Q	13MW5 Q	13MW6 Q	13MW7 Q	QL	Background	GPS	Method
N-Nitrosomethylethylamine					CAS # 10595-95-6						
Second Quarter 2010	-	-	U	U	U	U	U	5		-	8270C
N-Nitrosomorpholine					CAS # 59-89-2						
Second Quarter 2010	-	-	U	U	U	U	U	5		-	8270C
N-Nitrosopiperidine					CAS # 100-75-4						
Second Quarter 2010	-	-	U	U	U	U	U	5		-	8270C
N-Nitrosopyrrolidine					CAS # 930-55-2						
Second Quarter 2010	-	-	U	U	U	U	U	5		-	8270C
5-Nitroso-o-toluidine					CAS # 99-55-8						
Second Quarter 2010	-	-	U	U	U	U	U	5		-	8270C
Parathion					CAS # 56-38-2						
Second Quarter 2010	-	-	U	U	U	U	U	5		-	8270C
Pentachlorobenzene					CAS # 608-93-5						
Second Quarter 2010	-	-	U	U	U	U	U	5		-	8270C
Pentachloroethane					CAS # 76-01-7						
Second Quarter 2010	-	-	U	U	U	U	U	0.5		-	8260B
Pentachloronitrobenzene					CAS # 82-68-8						
Second Quarter 2010	-	-	U	U	U	U	U	5		-	8270C
Pentachlorophenol					CAS # 87-86-5						
Second Quarter 2010	-	-	U	U	U	U	U	10		-	8270C
Phenacetin					CAS # 62-44-2						
Second Quarter 2010	-	-	U	U	U	U	U	5		-	8270C
Phenanthrene					CAS # 85-01-8						
Second Quarter 2010	-	-	U	U	U	U	U	5		-	8270C
Phenol					CAS # 108-95-2						
Second Quarter 2010	U	U	U	U	U	U	U	10	10	4700	8270C
Fourth Quarter 2010	U	U	U	U	U	U	U	10	10	4700	8270C
Phorate					CAS # 298-02-2						
Second Quarter 2010	-	-	U	U	U	U	U	5		-	8270C
2-Picoline					CAS # 109-06-8						
Second Quarter 2010	-	-	U	U	U	U	U	5		-	8270C
PCBs					CAS # 12674-11-2						
Second Quarter 2010	-	-	U	U	U	U	U	0.5			8082
Pronamide					CAS # 23950-58-5						
Second Quarter 2010	-	-	U	U	U	U	U	5		-	8270C
Propionitrile					CAS # 107-12-0						
Second Quarter 2010	-	-	U	U	U	U	U	10		-	8260B
Pyrene					CAS # 129-00-0						
Second Quarter 2010	U	U	U	U	U	U	U	5	10	67.1	8270C
Fourth Quarter 2010	U	U	U	U	U	U	U	5	10	67.1	8270C
Pyridine					CAS # 110-86-1						
Second Quarter 2010	-	-	U	U	U	U	U	5		-	8270C
Safrole					CAS # 94-59-7						
Second Quarter 2010	-	-	U	U	U	U	U	5		-	8270C

Table 2: Target Analyte Monitoring Results - Calendar Year 2010
Radford Army Ammunition Plant - Open Burning Ground - Groundwater Monitoring
Upgradient wells = 13MW1 and 13MW2
All Results in ug/L.

Analyte/Quarter	*13MW1 Q*	*13MW2 Q*	*13MW3 Q*	*13MW4 Q*	*13MW5 Q*	*13MW6 Q*	*13MW7 Q*	*QL*	*Background*	*GPS*	*Method*
Silvex					*CAS # 93-72-1*						
Second Quarter 2010	-	-	U	U	U	U	U	2.5			8151A
Styrene					*CAS # 100-42-5*						
Second Quarter 2010	-	-	U	U	U	U	U	0.5		-	8260B
Sulfotep					*CAS # 3689-24-5*						
Second Quarter 2010	-	-	U	U	U	U	U	5		-	8270C
Total TCDF					*CAS # 55722-27-5*						
Second Quarter 2010	-	-	U	U	U	U	U				8280A
Total PeCDF					*CAS # 30402-15-4*						
Second Quarter 2010	-	-	U	U	U	U	U				8280A
Total HxCDF					*CAS # 55684-94-1*						
Second Quarter 2010	-	-	U	U	U	U	U				8280A
Total TCDD					*CAS # 41903-57-5*						
Second Quarter 2010	-	-	U	U	U	U	U				8280A
2,3,7,8-TCDD					*CAS # 1746-01-6*						
Second Quarter 2010	-	-	U	U	U	U	U				8280A
Total PeCDD					*CAS # 36088-22-9*						
Second Quarter 2010	-	-	U	U	U	U	U				8280A
Total HxCDD					*CAS # 34465-46-8*						
Second Quarter 2010	-	-	U	U	U	U	U				8280A
2,4,5-Trichlorophenoxyacetic acid					*CAS # 93-76-5*						
Second Quarter 2010	-	-	U	U	U	U	U	2.5		-	8151A
1,2,4,5-Tetrachlorobenzene					*CAS # 95-94-3*						
Second Quarter 2010	-	-	U	U	U	U	U	5		-	8270C
1,1,1,2-Tetrachloroethane					*CAS # 630-20-6*						
Second Quarter 2010	-	-	U	U	U	U	U	0.5		-	8260B
1,1,2,2-Tetrachloroethane					*CAS # 79-34-5*						
Second Quarter 2010	-	-	U	U	U	U	U	0.5		-	8260B
Tetrachloroethene					*CAS # 127-18-4*						
Second Quarter 2010	U	U	U	U	U	U	U	0.5	1	5	8260B
Fourth Quarter 2010	U	U	U	U	U	U	U	1	1	5	8260B
2,3,4,6-Tetrachlorophenol					*CAS # 58-90-2*						
Second Quarter 2010	-	-	U	U	U	U	U	10		-	8270C
Toluene					*CAS # 108-88-3*						
Second Quarter 2010	U	U	U	U	U	U	U	0.5	5	1000	8260B
Fourth Quarter 2010	U	U	U	U	U	U	U	1	5	1000	8260B
o-Toluidine					*CAS # 95-53-4*						
Second Quarter 2010	-	-	U	U	U	U	U	5		-	8270C
Toxaphene					*CAS # 8001-35-2*						
Second Quarter 2010	-	-	U	U	U	U	U	2.5		-	8081A
1,2,4-Trichlorobenzene					*CAS # 120-82-1*						
Second Quarter 2010	-	-	U	U	U	U	U	0.5		-	8260B
1,1,1-Trichloroethane					*CAS # 71-55-6*						
Second Quarter 2010	-	-	0.2 J	U	U	U	U	0.5		-	8260B
Fourth Quarter 2010	U	U	U	U	U	U	U	1		-	8260B

Table 2: Target Analyte Monitoring Results - Calendar Year 2010
Radford Army Ammunition Plant - Open Burning Ground - Groundwater Monitoring
Upgradient wells = 13MW1 and 13MW2
All Results in ug/L.

Analyte/Quarter	*13MW1 Q*	*13MW2 Q*	*13MW3 Q*	*13MW4 Q*	*13MW5 Q*	*13MW6 Q*	*13MW7 Q*	*QL*	*Background*	*GPS*	*Method*
1,1,2-Trichloroethane					*CAS # 79-00-5*						
Second Quarter 2010	-	-	U	U	U	U	U	0.5			8260B
Trichloroethene					*CAS # 79-01-6*						
Second Quarter 2010	U	U	1.3	0.9	U	U	0.2 J	0.5	1	5	8260B
Fourth Quarter 2010	U	U	U	2.7	U	U	1.4	1	1	5	8260B
Trichlorofluoromethane					*CAS # 75-69-4*						
Second Quarter 2010	-	-	0.4 J	U	U	U	U	0.5		-	8260B
Fourth Quarter 2010	U	U	U	U	U	U	U	1		-	8260B
2,4,5-Trichlorophenol					*CAS # 95-95-4*						
Second Quarter 2010	-	-	U	U	U	U	U	10		-	8270C
2,4,6-Trichlorophenol					*CAS # 88-06-2*						
Second Quarter 2010	-	-	U	U	U	U	U	10		-	8270C
1,2,3-Trichloropropane					*CAS # 96-18-4*						
Second Quarter 2010	-	-	U	U	U	U	U	1		-	8260B
O,O,O-Triethyl phosphorothioate					*CAS # 126-68-1*						
Second Quarter 2010	-	-	U	U	U	U	U	5		-	8270C
sym-Trinitrobenzene					*CAS # 99-35-4*						
Second Quarter 2010	U	U	U	U	U	U	U	2.5	2.5	470	8330B
Fourth Quarter 2010	U	U	U	U	U	U	U	2.5	2.5	470	8330B
Vinyl acetate					*CAS # 108-05-4*						
Second Quarter 2010	-	-	U	U	U	U	U	0.5		-	8260B
Vinyl chloride					*CAS # 75-01-4*						
Second Quarter 2010	U	U	U	U	U	U	U	0.5	1	2	8260B
Fourth Quarter 2010	U	U	U	U	U	U	U	0.5	1	2	8260B
Xylenes (Total)					*CAS # 1330-20-7*						
Second Quarter 2010	-	-	U	U	U	U	U	0.5			8260B

Table 2: Target Analyte Monitoring Results - Calendar Year 2010
Radford Army Ammunition Plant - Open Burning Ground - Groundwater Monitoring
Upgradient wells = 13MW1 and 13MW2
All Results in ug/L.

Analyte/Quarter	*13MW1 Q*	*13MW2 Q*	*13MW3 Q*	*13MW4 Q*	*13MW5 Q*	*13MW6 Q*	*13MW7 Q*	*QL*	*Background*	*GPS*	*Method*

Definitions: QL Denotes quantitation limit. **U** Denotes analyte not detected at or above the detection limit or QL. **UA** Denotes analyte not detected at or above adjusted sample detection limit or QL. **J** Denotes analyte estimated due to quality control reasons. When used with "U" (i.e., "**UJ**"), denotes analyte not detected at or above detection limit or QL and the detection limit and QL are estir control reasons. When used with "UA" (i.e., "**UAJ**"), denotes analyte not detected at or above adjusted detection limit or QL and adjusted detection limi due to quality control reasons. **R** Denotes result rejected. **Q** Denotes data validation qualifier. **NS** denotes not sampled. **NA** denotes not analyzed.

See data validation report or laboratory deliverable for presentation of detection limits.

Note: First Quarter 2006 – Appendix IX monitoring event. For Appendix IX monitoring events, results reported to at or above the detection limit. Results between the detection limit and QL are considered unquantifiable and estimated. See laboratory deliverable for presentation of detection limits.
Second Quarter 2006 – First semiannual sampling event, includes perchlorate confirmation via MS.
Third Quarter 2006 – Additional sampling event – background data collection.
Fourth Quarter 2006 – Second semiannual sampling event.
Second Quarter 2007 - Appendix IX monitoring event. For Appendix IX monitoring events, results reported to at or above the detection limit. Results between the detection limit and QL are considered unquantifiable and estimated. See laboratory deliverable for presentation of detection limits.
Second Quarter 2008 - Appendix IX monitoring event. For Appendix IX monitoring events, results reported to at or above the detection limit. Results between the detection limit and QL are considered unquantifiable and estimated. See laboratory deliverable for presentation of detection limits.
Second Quarter 2009 - Appendix IX monitoring event. For Appendix IX monitoring events, results reported to at or above the detection limit. Results between the detection limit and QL are considered unquantifiable and estimated. See laboratory deliverable for presentation of detection limits.
Second Quarter 2010 - Appendix IX monitoring event. For Appendix IX monitoring events, results reported to at or above the detection limit. Results between the detection limit and QL are considered unquantifiable and estimated. See laboratory deliverable for presentation of detection limits.

Hexachlorophene analyzed and reported as a tentatively identified compound (TIC) during First Quarter 2006, Second Quarter 2009, Second Quarter 2010).
For Dioxin results (Method 8280A), see laboratory report for sample specific QLs (All results, not detected).

GPS Denotes Groundwater Protection Standard. GPS proposed (not final).

APPENDIX A

FIELD NOTES

5WC22 ✓

DTW - 9.45 Begin Purge (1107)

Post Purge DTW - 9.52 Initial Purge - Clear

Time	Temp(C)	Cond(us)	DO mg/L	pH	ORP(MV)	Purge K	Desc
(1110)	13.66	823	2.19	6.56	235	0.3 L/min	Clear
(1115)	13.79	926	0.99	6.77	201	"	Clear
(1120)	13.81	960	0.76	6.80	187	"	Clear
(1125)	13.92	967	0.75	6.80	183	"	Clear
(1130)	14.00	968	0.73	6.82	176	"	Clear
(1135)	14.13	971	0.76	6.83	173	"	Clear
(1140)	14.20	971	0.76	6.83	169	"	Clear
(1140)	Readings Stable						
(1204)	14.59	983	0.80	6.90	162	Post Purge Reading	

Sample Time (1145)

Samples Collected: (3)8260, (2)RSK175, (1)Sulfide, (1)9056
(1)TM, (2)8270, (2)TOC

5WC23 ✓

DTW - 8.86 Begin Purge (1220)

Post Purge DTW - 8.89 Initial Purge - Clear

Time	Temp(C)	Cond(us)	DO mg/L	pH	ORP(MV)	Purge K	Desc
(1225)	13.06	921	5.67	7.22	156	0.3 L/min	Clear
(1230)	12.79	988	1.25	6.90	167	"	Clear
(1235)	12.85	996	1.12	6.88	167	"	Clear
(1240)	13.15	997	1.05	6.86	164	"	Clear
(1245)	13.32	1001	1.08	6.84	164	"	Clear
(1250)	13.46	1001	1.06	6.86	160	"	Clear
(1255)	13.51	1002	1.06	6.85	158	"	Clear
(1255)	Readings Stable						
(1318)	13.74	1007	1.10	6.88	155	Post Purge Reading	

Sample Time (1300)

Samples Collected: (3)8260, (3)RSK175, (1)Sulfide, (1)9056
(1)TM, (2)8270, (2)TOC

General Notes

Weather - Partly Sunny, Scattered Showers, 50-60's

PPE - Eye Protection, Nitrile gloves, Cotton Suits,

Calibrations - YSI 650 MDS / Myron L Ultrameter

- pH - 4.00 = 4.00, 7.00 = 7.00, 10.00 = 10.00
- Conductivity reads 1413 us in 1413 us std.
- DO% = 100

- Dedicated tubing and well skirts used at each well
- All equipment deconed between each well
- Purge water disposed of at dedicated location onsite
- All samples collected, stored and transported on ice in coolers.

Static Water Level Table

WELL	DTW	Post Purge DTW	Notes
13MW1	20.19 ✓	20.35	
13MW2	20.08 ✓	20.85	
13MW3	12.92 ✓	12.97	
13MW4	16.37 ✓	16.43	
13MW5	15.92 ✓	16.46	
13MW6	15.51 ✓	16.05	
13MW7	15.54 ✓	15.66	

13MW3 ✓

DTW - 12.92 Begin Purge (0711)

Post Purge DTW - 12.97 Initial Purge - Clear

Time	Temp(C)	Cond(us)	DO mg/L	pH	ORP(MV)	Purge K	Desc
(0715)	11.72	615	7.28	7.30	134	0.3 L/min	Clear
(0720)	11.76	639	6.70	7.10	135	"	Clear
(0725)	11.76	647	6.60	6.98	134	"	Clear
(0730)	11.79	654	6.51	6.96	137	"	Clear
(0735)	11.77	656	6.46	6.98	135	"	Clear
(0740)	11.74	657	6.46	6.96	134	"	Clear
(0740)	Readings Stable						

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13MW3(Cont.)	(Cond(us))	DO mg/L	pH	ORP	
(0810) 11.88	656	6.56	6.98	142	Post Purge Reading

Sample Time (0745)

Samples Collected: (3)8260, (2)Sulfide, (2)8280, (2)8332/8330
(2)8021/8082, (2)8151, (1)314.0, (1)TM, (1)CN, (2)8270

13MW4 ✓

DTW - 16.37 Begin Purge (0823)

Post Purge DTW - 16.43 Initial Purge - Clear

Time	Temp(C)	Cond(us)	DO mg/L	pH	ORP(mv)	Purge K	Desc
(0825)	12.15	453	6.70	6.98	145	0.3 L/min	Clear
(0830)	12.16	482	6.56	6.82	145	"	Clear
(0835)	12.15	492	6.59	6.82	149	"	Clear
(0840)	12.17	496	6.60	6.81	152	"	Clear
(0845)	12.20	497	6.60	6.78	151	"	Clear
(0850)	12.19	497	6.61	6.78	149	"	Clear
(0850) Readings Stable							
(0929) 12.16		475	6.83	6.78	157	Post Purge Reading	

Sample Time (0855)

Samples Collected: (3)8260, (2)Sulfide, (2)8280, (1)TM, (1)314.0
(1)CN, (2)8270, (2)8151, (2)8021/8082, (2)8330/8332

13mw DUP

Sample Time (0910)

Samples Collected: (3)8260, (2)Sulfide, (2)8280, (1)TM, (1)314.0
(1)CN, (2)8270, (2)8151, (2)8021/8082, (2)8330/8332

4/27/10 RAAP B03204-08 DAS/TQE FB#9

10MW1 ✓

DTW - 15.81 Begin Purge (1014)

Post Purge DTW - 16.03 Initial Purge - Clear

Time	Temp(C)	Cond(us)	DO mg/L	pH	ORP(mv)	Purge K	Desc
(1015)	13.02	426	9.92	7.25	157	0.3 L/min	Clear
(1020)	12.88	427	9.51	7.29	153	"	Clear
(1025)	12.91	426	9.50	7.28	157	"	Clear
(1030)	12.87	427	9.49	7.32	145	"	Clear
(1035)	12.68	428	9.52	7.43	142	"	Clear
(1040)	12.56	427	9.52	7.40	143	"	Clear
(1045)	12.74	427	9.51	7.35	148	"	Clear
(1045) Readings Stable							
(1208) 13.10		428	9.63	7.40	147	Post Purge Reading	

Sample Time (1050)

Samples Collected: (18)8260, (3)TM, (3)CN, (3)9065, (6)8151
(6)8270, (6)8021, (4)8081, (4)Sulfide

Static Water Level Table - Unit 10

WELL	DTW	Post Purge DTW	Notes
10DDH2R	17.74 ✓	17.76	
10D3			
10D3D	16.38 ✓	16.45	
10MW1	15.81 ✓	16.03	
10D4			

10DDH2R ✓

DTW- 17.74 Begin Purge (1228)

Post Purge DTW-17.76 Initial Purge - Clear

Time	Temp(C)	Cond(us)	DO mg/L	pH	ORP(mv)	Purge k	Desc
(1230)	11.56	599	3.11	7.13	159	0.3 L/min	Clear
(1235)	11.19	654	1.00	7.24	142	"	Clear
(1240)	10.98	644	0.95	7.20	122	"	Clear
(1245)	10.89	626	0.98	7.16	116	"	Clear
(1250)	10.85	593	1.15	7.09	116	"	Clear
(1255)	10.86	569	1.49	6.96	118	"	Clear
(1300)	10.97	555	1.62	6.94	120	"	Clear
(1305)	10.98	546	1.68	6.96	120	"	Clear
(1310)	11.02	539	1.74	6.97	122	"	Clear
(1310)	Readings Stable						
(1334)	10.92	515	1.96	6.85	127		

Sample Time (1315)

Samples Collected: (6)8260, (2)Sulfide, (1)TM, (1)CN, (1)9065
(2)8151, (2)8270, (2)8081, (2)8081

General Notes

Weather -

PPE - Eye protection, Nitrile gloves, Cotton suits, Rubber boots, Heavy duty gloves, Face Shields

Calibrations - YSI 650 MDS / Myron L Ultrameter

- pH: 4.00 = 4.00, 7.00 = 7.01, 10.00 = 10.00
- Conductivity reads 1413 us in 1413 us std
- DO% = 100

- Dedicated tubing and well skirts used at each well
- All equipment deconed between each well
- Purge water disposed of at dedicated location onsite
- All samples collected stored and transported on ice in coolers

13MW06 ✓

DTW - 15.51 Begin Purge (0704)

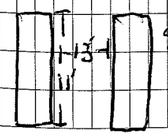
Post Purge DTW-16.05 Initial Purge - Clear

Time	Temp(C)	Cond(us)	DO mg/L	pH	ORP(mv)	Purge k	Desc
(0705)	11.56	791	4.34	7.12	137	0.3 L/min	Clear
(0710)	11.95	825	3.54	7.00	139	"	Clear
(0715)	12.10	831	3.44	7.05	140	"	Clear
(0720)	12.16	831	3.44	7.04	143	"	Clear
(0725)	12.19	830	3.39	7.02	144	"	Clear
(0730)	12.17	828	3.37	7.00	144	"	Clear
(0730)	Readings Stable						
(0800)		820	3.53	7.05	146	Post Purge Reading	

Sample Time (0735)

Samples Collected: (3)8260, (2)Sulfide, (2)8280, (1)TM, (1)CN
(2)8270, (1)314.0, (2)8081/8082, (2)8151, (3)8332/8330

PAD-1



Sample Time (0750)

Samples Collected:
(4) 8290

DUP-1

Sample Time (0800)

Samples Collected:
(4) 8290

4/28/10 RAAP B03204-08 DAS/TQE FB# 9

13MW5 ✓

DTW - 15.92 Begin Purge (0818)

Post Purge DTW - 16.46 Initial Purge - Clear

Time	Temp(C)	Cond(us)	DO mg/L	pH	ORP(mv)	Purge k	Desc
(0820)	12.49	629	6.30	7.04	137	0.3 L/min	Clear
(0825)	12.72	627	6.21	7.00	137	"	Clear
(0830)	12.72	627	6.18	7.02	137	"	Clear
(0835)	12.83	625	6.19	7.04	138	"	Clear
(0840)	12.81	623	6.19	7.05	137	"	Clear
(0845)	12.95	624	6.22	7.04	135	"	Clear
(0850)	12.91	626	6.26	7.05	131	"	Clear
(0850)	Readings Stable						
(1006)	13.12	627	6.38	7.20	132	"	Post Purge Reading

Sample Time (0855)

Samples Collected: (3)8260, (2)Sulfide, (2)8280, (1)TM, (1)CN
(1)3140, (2)8081/8082, (2)8270, (2)8151, (2)8330/8332

13MW7 ✓

DTW - 15.54 Begin Purge (1024)

Post Purge DTW - 15.66 Initial Purge - Clear

Time	Temp(C)	Cond(us)	DO mg/L	pH	ORP(mv)	Purge k	Desc
(1025)	10.27	489	6.97	7.30	134	0.3 L/min	Clear
(1030)	10.39	509	6.41	7.24	136	"	Clear
(1035)	10.46	511	6.38	7.25	135	"	Clear
(1040)	10.49	512	6.37	7.25	135	"	Clear
(1045)	10.42	513	6.40	7.25	135	"	Clear
(1050)	10.53	515	6.41	7.22	136	"	Clear
(1050)	Readings Stable						
(1112)	10.34	512	6.47	7.23	139		

Sample Time (1055)

Samples Collected: (3)8260, (2)Sulfide, (2)8280, (1)TM, (1)CN
(1)3140, (2)8081/8082, (2)8270, (2)8151, (2)8330/8332

4/28/10 RAAP B03204-08 DAS/TQE FB# 9

13MW1 ✓

DTW - 20.19 Begin Purge (1124)

Post Purge DTW - 20.35 Initial Purge - Clear

Time	Temp(C)	Cond(us)	DO mg/L	pH	ORP(mv)	Purge k	Desc
(1125)	12.40	618	7.50	7.00	140	0.3 L/min	Clear
(1130)	12.55	664	5.36	7.01	145	"	Clear
(1135)	12.61	682	4.45	7.04	141	"	Clear
(1140)	12.78	692	4.30	7.05	140	"	Clear
(1145)	12.87	698	4.25	7.06	138	"	Clear
(1150)	12.93	705	4.10	7.08	137	"	Clear
(1155)	13.00	710	4.01	7.11	135	"	Clear
(1155)	Readings Stable						
(1210)	12.87	693	4.28	7.08	136		Post Purge Reading

Sample Time (1200)

Samples Collected: (3)8260, (1)TM, (1)3140, (2)8270, (2)8330/8332

13MW2 ✓

DTW - 20.08 Begin Purge (1224)

Post Purge DTW - 20.85 Initial Purge - Clear

Time	Temp(C)	Cond(us)	DO mg/L	pH	ORP(mv)	Purge k	Desc
(1225)	13.84	710	8.82	7.15	134	0.3 L/min	Clear
(1230)	14.05	722	8.43	7.15	130	"	Clear
(1235)	14.15	741	8.32	7.17	130	"	Clear
(1240)	14.31	748	8.27	7.17	131	"	Clear
(1245)	14.51	753	8.29	7.20	132	"	Clear
(1250)	14.70	755	8.30	7.22	132	"	Clear
(1255)	14.64	756	8.30	7.18	125	"	Clear
(1255)	Readings Stable						
(1313)	14.50	753	8.40	7.20	132		Post Purge Reading

Sample Time (1300)

Samples Collected: (3)8260, (1)TM, (1)3140, (2)8270
(2)8330/8332

6/23/10 — RAAP R032041-08 CJB/KFC — FB#9

General Notes:
- Weather - Partly Cloudy, 70's
- PPE - Nitrile Gloves, White Cotton Suits, Eye Protection, Steel toe boots
- Calibrations = Myron L Ultrameter
  4.00 = 4.00 7.00 = 7.00 10.00 = 9.99
  Conductivity reads 1412 µs in a 1413 µs solution
  DO% = 100 %
- Dedicated tubing and plastic well skirts used at each well.
- All equipment decanned between each well.
- Purge water disposed of at dedicated location on-site.
- All samples collected, stored and transported on ice in coolers

13MW-3 (3) ✓

DTW - 13.51 — Begin Purge (0715)

Post Purge DTW - 13.52 — Initial Purge - CLEAR

Time	Temp (C°)	Cond (µS)	DO mg/L	pH	ORP (mV)	Purge (L)	Desc.
(0720)	15.3	642.3	6.05	6.60	239	0.3 L/min.	Clear
(0725)	14.8	614.7	5.58	6.91	223	"	"
(0730)	14.7	615.6	5.59	6.94	219	"	"
(0735)	14.7	617.2	5.18	6.92	216	"	"
(0740)	14.9	618.5	5.32	6.92	214	"	"
(0745)	15.0	617.8	5.31	6.98	213	"	"
(0750)	14.8	621.5	5.17	6.95	212	"	"
(0750)	Readings Stable					Post-Purge Ready	
(0805)	14.7	622.4	5.08	6.96	209	0.3L/min	CLEAR

Sample Time (0755)

Samples Collected: (6) 8260B

13MW3-DUP

SAMPLE TIME (0800)

Samples Collected: (3) 8260B

6/23/10 — RAAP R032041-08 CJB/KFC — FB#9

13MW-5 ✓

DTW - 17.19 — Begin Purge (0810)

Post Purge DTW - 17.23 — Initial Purge - CLEAR

TIME	Temp (C°)	Cond (µS)	DO mg/L	pH	ORP (mV)	Purge (L)	Desc.
(0820)	14.1	691.2	4.67	7.02	215	0.3 L/min	CLEAR
(0825)	14.0	692.8	4.36	7.03	214	"	"
(0830)	14.0	692.9	4.53	7.02	211	"	"
(0835)	13.9	690.7	4.49	7.03	207	"	"
(0840)	14.0	691.2	4.46	7.04	205	"	"
(0845)	14.0	689.4	4.34	7.03	204	"	"
(0850)	14.0	690.8	4.37	7.02	203	"	"
(0850)	READINGS STABLE						
(0905)	13.9	689.3	4.42	7.03	201	Post-Purge Ready	

Sample Time (0855)

Samples Collected: (2) TM

13MW5-DUP

SAMPLE TIME (0900)

SAMPLE COLLECTED: (1) TM

Left site ~0920

9-1-10 F.B.#9

RAAP
B032G4-305
CJB/KFC
(Arrived onsite ≈ 0730)

GENERAL NOTES:

- Weather- Fog in early morning otherwise sunny; 80's
- PPE- Eye Protection, Nitrile Gloves, White Cotton Flame Retardant Coveralls
- CALIBRATIONS: YSI 650 MDS
  pH: 4.00 = 4.00 7.00 = 7.00, 10.00 = 9.97
  Conductivity reads 1413 µs in a 1413µs standard.
  DO% = 100 %
- Dedicated tubing and well skirts used at each well.
- All equipment decon'ed between each well.
- Purge water disposed of at treatment plant onsite.
- All samples collected, stored and transported on ice in coolers.

13MW1-
DTW- 21.81 Begin Purge (0800)
Post Purge DTW- 21.96 Initial Purge- CLEAR

TIME	Temp(C°)	Cond(µs)	DO mg/L	pH	ORP(mV)	Purge K	Desc.
(0805)	12.45	730	5.83	6.84	247.6	≤0.3L/min.	CLEAR
(0810)	12.45	730	5.51	6.86	255.1	"	"
(0815)	12.51	728	5.37	6.87	262.0	"	"
(0820)	12.52	727	5.24	6.88	267.0	"	"
(0825)	12.55	726	5.12	6.89	273.1	"	"
(0830)	12.52	726	5.04	6.90	278.3	"	"
(0835)	12.50	724	5.00	6.90	279.0	"	"
(0835)	READINGS STABLE						
(0842)	12.51	724	5.01	6.90	281.0	"	"

SAMPLE TIME (0840)
SAMPLES COLLECTED: (4) 8260B

9-1-10 RAAP B032G4 CJB/KFC F.B.#9

13MW2-
DTW- 21.95 Begin Purge- (0855)
Post Purge DTW- Initial Purge- CLEAR

TIME	TEMP(C°)	COND(µs)	DO mg/L	pH	ORP(mV)	PURGE K	DESC.
(0900)	13.60	697	6.12	6.96	284.4	≤0.3L/min	CLEAR
(0905)	13.29	692	4.59	6.93	289.5	"	"
(0910)	13.29	692	4.52	6.92	292.8	"	"
(0915)	13.36	691	4.80	6.90	296.2	"	"
(0920)	13.38	690	4.95	6.89	300.0	"	"
(0925)	13.40	690	5.02	6.89	302.1	"	"
(0930)	13.45	691	4.99	6.88	305.3	"	"
(0930)	READINGS STABLE						
(0938)	13.69	691	5.08	6.88	307.2	"	"

SAMPLE TIME (0935)
SAMPLES COLLECTED: (4) 8260B

COMPLETED 1119/10 ESK

16C1 ✓

DTW - 50.15 Begin Purge: (1600)
Post Purge DTW - 50.17 Initial Purge: Clear

Time	Temp(°C)	Cond(µS)	DO(mg/L)	pH	ORP(mV)	Purge K (L/min)	Desc.
(1605)	15.19	488	9.25	6.80	269.6	0.3	Clear
(1610)	14.44	669	2.53	6.44	272.4	"	"
(1615)	14.94	706	1.84	6.45	265.7	"	"
(1620)	15.06	722	1.57	6.45	262.6	"	"
(1625)	15.26	730	1.44	6.44	259.3	"	"
(1630)	15.29	731	1.42	6.44	258.4	"	"
(1635)	15.27	735	1.42	6.44	258.0	"	"
(1635)	Readings stable.						
(1645)	15.52	742	1.70	6.58	271.1	"	"

Sample Time: (1640)
Samples Collected: (3) 8260, (2) 8270, (1) TM

COMPLETED
10/19/10 SK

GENERAL NOTES:
- Weather - Clear - 40°s
- PPE - White cotton flame retardant coveralls, Nitrile Gloves, Eye protection Steel toed boots
- Calibrations: YSI 600 MDS
  pH: 4.00 = 4.00 7.00 = 7.00 10.00 = 10.00
  Conductivity reads 1413 µs in a 1413 µs standard
  DO% = 100 %
- Dedicated tubing and well skirts used at all wells.
- All equipment decanned between wells.
- Purge water disposed of at dedicated location on-site.
- All samples collected, then stored and transported on ice.

13MW3 ✓

DTW - 12.30 Begin Purge: (0725)
Post Purge DTW - 13.70 Initial Purge: Clear

TIME	Temp(°C)	Cond(µS)	DO(mg/L)	pH	ORP(mV)	Purge K (L/min)	Clear
(0725)	15.92	604	7.19	6.87	374.9	0.3	Clear

Note: Debris from stormwater over flowing well head during flooding has caused a dense mat of pine needles and other small fines of plant matter to form a layer at the surface of the water column. It took a bailer and several deployments of the bailer to bust through the fibrous mat in order to ~~take~~ collect the water level.

(0730)	16.02	605	4.85	6.94	285.0	0.3	Clear
(0735)	16.07	605	4.75	6.97	264.1	"	"
(0740)	16.20	608	4.84	6.97	237.8	"	"
(0745)	16.17	608	4.88	6.99	230.1	"	"
(0750)	16.20	608	4.91	6.98	229.7	"	"
(0755)	16.23	608	4.92	6.96	229.6	"	"
(0755)	Readings stable.						
(0810)	16.68	610	4.92	6.96	233.2	"	"

-continued on page 99

10/18/10 RAAP FB# 9

B03204-08
CJB/~~TAL~~ KFC

13MW3

Time on 10/18/10

Samples ~~Collected~~: (0800)

Samples Collected: (3) 8260, (1) TM, (1) 314.0, (3) 8270, (2) 8332/8330

Static Water Level Table - Unit 13

Well		DTW	Post Purge DTW	Notes
~~16 1~~	13MW1	22.06	22.19	
~~16 2~~	13MW2	22.19	23.84	
~~16 3~~	13MW3	12.30	13.70	Debris mat at surface of water column. 1.4' cult to read water level.
~~16 5~~	13MW4	17.63	20.51	
~~16WC2B~~	13MW5	18.02	18.06	
~~16MW8~~	13MW6	17.40	17.89	
~~16~~	13MW7	16.73	17.05	

13MW4 ✓

DTW: 17.63 Begin Purge: (08:20)

Post Purge DTW: 20.51 Initial Purge:

Time	Temp(°C)	Cond(µs)	DO(mg/L)	pH	ORP(mV)	Purge K (L/min)	Desc.
(0825)	14.81	625	0.88	7.22	264.3	0.3	Clear
(0830)	14.87	624	0.71	7.23	257.6	"	"
(0835)	14.83	623	0.76	7.22	250.8	"	"
(0840)	14.86	617	1.00	7.18	244.0	"	"
(0845)	14.89	582	2.18	7.05	245.1	"	"
(0850)	14.65	554	3.14	6.96	253.1	"	"
(0855)	14.48	542	3.73	6.92	263.8	"	"
(0900)	14.45	542	3.74	6.91	265.0	"	"
(0905)	14.41	540	3.79	6.90	270.5	"	"
(0905)	Readings stable.						
(0915)	14.93	540	4.22	6.86	281.6	"	"

Sample Time: (0910)

Samples Collected: (3) 8260, (1) TM, (1) 314.0, (1) 8270, (1) 8332/8330

Well went dry during sampling (99) finish collecting 13MW4 and Dup tomorrow.

10/18/10 RAAP FB# 9

B03204-08
CJB/KFC

~~13MW Dup~~ CJB 10/18/10

Sample Time: (0920)

Samples ~~Collected~~: (3) 8260, (1) TM, (1) 314.0, (3) 8270, (2) 8332/8330

13MW6 ✓

DTW: 17.40 Begin Purge: (0935)

Post Purge DTW: 17.89 Initial Purge: Clear

Time	Temp(°C)	Cond(µs)	DO(mg/L)	pH	ORP(mV)	Purge K (L/min)	Desc.
(0940)	14.37	910	3.62	7.03	304.8	0.3	Clear
(0945)	14.43	925	3.03	7.03	303.1	"	"
(0950)	14.44	927	2.91	7.04	299.1	"	"
(~~0955~~ 0955)	14.47	928	2.82	7.05	297.3	"	"
(1000)	14.48	928	2.80	7.05	296.2	"	"
(1005)	14.49	928	2.78	7.03	295.5	"	"
(1005)	Readings stable.						
(1015)	14.50	928	2.85	7.02	294.7	"	"

Sample Time: (1010)

Samples Collected: (3) 8260, (1) TM, (1) 314.0, (2) 8270, (2) 8332/8330

13MW1 ✓

DTW = 22.06 Begin Purge: (10:32)

Post Purge DTW = 22.19 Initial Purge: Clear

Time	Temp(°C)	Cond(µs)	DO(mg/L)	pH	ORP(mV)	Purge K (L/min)	Desc
(1035)	13.71	750	5.68	7.02	316.8	0.3 L/min	Clear
(1040)	13.74	752	3.57	7.00	314.9	"	"
(1045)	13.81	752	3.40	7.00	310.6	"	"
(1050)	13.95	756	3.20	7.02	308.6	"	"
(1055)	13.99	749	3.17	7.02	307.1	"	"
(1100)	14.10	749	3.16	7.01	305.6	"	"
(1100)	Readings stable.						

(100)

10/18/10 — RAAP B03204-08 CJB/KFC — FB# 9

13MW1

Time	Temp(°C)	Cond(µS)	DO(mg/L)	pH	ORP(mV)	Purge K (L/min)	Desc
(1115)	13.71	746	3.58	7.02	300.3	0.3	post purge reading

Sample Time: (1105)
Samples Collected: (3)8260, (1) TM, (1) 314.0, (2)8270, (2) 8332/8330

13MW2 ✓

DTW: 22.19 — Begin Purge: (1125)
Post Purge DTW: 23.84 — Initial Purge: Clear

Time	Temp(°C)	Cond(µS)	DO(mg/L)	pH	ORP(mV)	Purge K (L/min)	Desc.
(1130)	14.95	710	3.30	6.92	308.2	0.3	Clear
(1135)	15.00	709	3.15	6.93	305.0	"	"
(1140)	15.15	709	3.15	6.91	302.9	"	"
(1145)	15.20	709	3.14	6.91	302.2	"	"
(1150)	15.31	709	3.12	6.90	300.8	"	"
(1155)	15.70	709	3.08	6.89	299.0	"	"
(1755)	READINGS STABLE						
(1205)	15.92	709	3.74	6.80	293.6	"	POST PURGE READING

SAMPLE TIME (1200)
SAMPLES COLLECTED: (3)8260, (1)TM (1)314.0, (2)8270, (2)8332/8330

10/19/10 — RAAP B03204-08 CJB/KF — FB# 9

- WEATHER - Mostly Clear 50°-60°s
- PPE - White cotton coveralls, Nitrile Gloves, Eye Protection Steel Toed Boots
- CALIBRATIONS: YSI 650MDS
  - pH 4.00 = 4.00, 7.00 = 7.00, 10.00 = 10.00
  - Conductivity reads 1413µs in a 1413µs standard
  - DO % = 100%
- Dedicated tubing and well skirts used at all wells.
- All equipment decanned between wells.
- Purge water disposed of at dedicated location on-site.
- All samples collected, stored and transported on ice.

13MWDUP

Sample Time: (0730)
Samples Collected: (3)8260, (1) TM, (1) 314.0, (2) 8270 (2) 8332/8330

Note: 13MW4

Samples Collected: (1) 8270, (1) 8332/8330 to complete yesterdays bottle kit after well went DRY.
Sample Time: (0740)

13MW5 ✓

DTW: 18.02 — Begin Purge: (0755)
Post Purge DTW: 18.06 — Initial Purge: Clear

Time	Temp(°C)	Cond(µS)	DO(mg/L)	pH	ORP(mV)	Purge K (L/min)	Desc
(0800)	14.73	803	4.42	6.98	246.6	0.3	Clear
(0805)	14.71	735	4.61	6.82	246.1	"	"
(0810)	14.78	726	4.61	6.84	247.1	"	"
(0815)	14.78	724	4.61	6.84	254.9	"	"
(0820)	14.81	722	4.61	6.85	259.0	"	"
(0825)	14.84	722	4.59	6.88	262.7	"	"

10/18/10 RAAP B03204-08 CJB/KFC FB#9

13MW5

Time	Temp(°C)	Cond(µS)	DO(mg/L)	pH	ORP(mV)	Purge K (L/min)	Desc
(0825)	Readings stable				~~311.6~~	~~0.3~~	
(0850)	14.78	716	5.22	6.92	311.6	0.3	Clear

Sample Time: (0830)
Samples Collected: (4) 8260, (3) TM, (3) 314.0, (6) 8270, (6) 8332/8330

13MW7 ✓

DTW: 16.73 Begin Purge: (0905)
PostPurge DTW: 17.05 Initial Purge: Clear

Time	Temp(°C)	Cond(µS)	DO(mg/L)	pH	ORP(mV)	Purge K (L/min)	Desc
(0910)	14.26	782	1.93	6.93	315.1	0.3	Clear
(0915)	14.37	794	1.80	6.92	305.2	"	"
(0920)	14.44	791	1.75	6.89	296.5	"	"
(0925)	14.47	791	1.77	6.91	293.1	"	"
(0930)	14.46	792	1.77	6.90	292.0	"	"
(0935)	14.53	791	1.79	6.90	289.1	"	"
(0940)	14.54	791	1.81	6.90	287.2	"	"
(0940)	Readings stable.						
(0950)	14.50	786	2.13	6.88	285.6	"	"

Sample Time: (0945)
Samples Collected: (3) 8260, (1) TM, (1) 314.0 (2) 8270, (2) 8332/8330

COMPLETED 11/19/10 EBC

10/19/10 RAAP ~~B03204-08~~ 304 CJB/KFC FB#9

Arrived on-site ~ 1000

5MW7B - Pulled pump from well. Took measurements.

DTW - 9.93
TD - 21.47

Pulled ~~pump~~ from well.
Stored pump in plastic bag. Top 24" of PVC pipe was severed/cracked when metal riser was straightened up by ATK. Left this top in well.
We reattached air hose to pump.

Bailed well and poured into (3) separate zip lok bags to allow for soil sediment to settle. Decanted water from bags and poured soil into (2) separate glass jars. over time.
Bailed approx. (40) gallons from well.

Appearance of water was brown, muddy.

Unable to insert surge block into PVC pipe due to section of broken PVC from top 24" of PVC pipe.

SAMPLE TIME (1300)
Samples Collected: (2) TM, Dry Wt. 5:0.1 sediment jars

PPE: Nitrile gloves, Eye Protection

Left Site @ 1500

APPENDIX B

2010 LABORATORY ANALYTICAL RESULTS AND DATA VALIDATION REPORTS (CD-ROM)

APPENDIX C

CONSTITUENT BACKGROUND VALUES FOR THE COMPLIANCE GROUNDWATER MONITORING PROGRAM (CD-ROM)

APPENDIX C

CONSTITUENT BACKGROUND VALUES FOR THE COMPLIANCE GROUNDWATER MONITORING PROGRAM

RADFORD ARMY AMMUNITION PLANT – OPEN BURNING GROUND
CALCULATION OF CONSTITUENT BACKGROUND VALUES FOR THE COMPLIANCE GROUNDWATER MONITORING PROGRAM CONSTITUENTS

Draper Aden Associates calculated background values for the Compliance Groundwater Monitoring Program (CGMP) constituents for the Open Burning Ground located at the Radford Army Ammunition Plant (Radford AAP) in Radford, Virginia. Background values were calculated for the additional CGMP constituents that are not on the Detection Groundwater Monitoring Program (DGMP) list.

Previously the background values for the DGMP constituents were calculated in May 2005. With the exceptions of carbon tetrachloride, chlorobenzene, hexachloroethane, methyl chloride, methlyene chloride, and perchlorate, the background values for each constituent listed in the DGMP were calculated using the analytical data for upgradient wells 13MW1 and 13MW2 from First Quarter 1996 through First Quarter 2005. Groundwater monitoring for carbon tetrachloride, chlorobenzene, hexachloroethane, methyl chloride, methlyene chloride, and perchlorate began in Fourth Quarter 2003; therefore, the background values for those six constituents were calculated using the analytical data for upgradient wells 13MW1 and 13MW2 from Fourth Quarter 2003 through First Quarter 2005. The background value calculations were based on site-wide 95% confidence, 95% coverage upper prediction intervals.

The background values for CGMP constituents not on the DGMP list were calculated using the analytical data for upgradient wells 13MW1 and 13MW2 from Fourth Quarter 2005 through Fourth Quarter 2006. The calculated background values for all target constituents are listed on **Table 1**.

Background Data and Background Value Calculations

Statistical calculations of background values were performed using the analytical data from upgradient wells 13MW1 and 13MW2 as background data. The methods of statistical analysis were dependent on the percentage of non-detects and the distribution of the background data. All CGMP constituents not on the DGMP list were 100% non-detected (<LOQ) in the background wells. The background values for these constituents were established as equal to their quantitation limits (QL). The one exception was bis(2-ethylhexyl)phthalate for which the background value was established as 6 µg/l (USEPA Maximum Contaminant Level (MCL)) whereas its LOQ is 10 µg/l. When GPS is less than the LOQ, constituent concentrations will be compared to the LOQ.

Background Value = Quantitation Limit (QL)				
Constituent	**Sample Size**	**% Non-Detects**	**QL (µg/l)**	**Background Value (µg/l)**
Cadmium	10	100	1	1
Nickel	10	100	5	5
Selenium	10	100	5	5
Zinc	10	100	5	5
Acetophenone	10	100	10	10
Benzyl chloride	8	100	5	5
Benzo[a]anthracene	10	100	10	10

Background Value = Quantitation Limit (QL)				
Constituent	**Sample Size**	**% Non-Detects**	**QL (µg/l)**	**Background Value (µg/l)**
Benzo[b]fluoranthene	10	100	10	10
Benzo[k]fluoranthene	10	100	10	10
Benzo[a]pyrene	10	100	10	10
Chloromethane	10	100	5	5
Bis(2-ethylhexyl)phthalate	10	100	10	6
Butyl benzyl phthalate	10	100	10	10
Chloroform	10	100	1	1
2-Chlorophenol	10	100	10	10
Dibenz(a, h)anthracene	10	100	10	10
Dibenzofuran	10	100	10	10
1,2-Dichloroethane	10	100	1	1
1,1-Dichloroethene	10	100	1	1
2,4-Dichlorophenol	10	100	10	10
3,3'-Dimethylbenzidine	10	100	10	10
Dimethyl phthalate	10	100	10	10
m-Dinitrobenzene	10	100	2.5	2.5
2,6-Dinitrotoluene	10	100	5	5
Di-n-octyl phthalate	10	100	10	10
Fluoranthene	10	100	10	10
Indeno[1,2,3-cd]pyrene	10	100	10	10
Bromomethane	10	100	1	1
3&4-Methylphenol	10	100	20	20
Naphthalene	10	100	1	1
Nitrobenzene	10	100	10	10
p-Nitrophenol	10	100	20	20
Phenol	10	100	10	10
Pyrene	10	100	10	10
Tetrachloroethene	10	100	1	1
Toluene	10	100	5	5
Trichloroethene	10	100	1	1
sym-Trinitrobenzene	10	100	2.5	2.5
Vinyl chloride	10	100	1	1

TABLE 1

OPEN BURNING GROUND
CALCULATED BACKGROUND VALUES

Constituent	Background Value (µg/l unless otherwise noted)
DGMP Parameters	
Antimony	6
Arsenic	5
Barium	228
Chromium	112
Lead	14.0
Mercury	2.52
Silver	2.4
Acetone	25
Benzene	5
Carbon Tetrachloride	5
Chlorobenzene	5
Methyl chloride	5
Methylene chloride	5
Toluene	5
2,4-Dinitrotoluene	10
Di-n-butylphthalate	10
Diethyl phthalate	10
Diphenylamine	10
Hexachloroethane	10
Nitroglycerine	10 mg/l
Perchlorate	4
Total Phenols	20.0
Nitrate	1,311
Nitrite	100
Sulfate	88,000
Total Organic Carbon	10,600
Total Organic Halides	54.5
Specific Conductivity	6,870 µS/cm
pH	5.72 – 7.80 pH units
CGMP Parameters not on DGMP List	
Cadmium	1
Nickel	5
Selenium	5
Zinc	5
Acetophenone	10
Benzyl chloride	5
Benzo[a]anthracene	10
Benzo[b]fluoranthene	10
Benzo[k]fluoranthene	10
Benzo[a]pyrene	10
Chloromethane	5
Bis(2-ethylhexyl)phthalate	6

Constituent	Background Value (µg/l unless otherwise noted)
Butyl benzyl phthalate	10
Chloroform	1
2-Chlorophenol	10
Dibenz(a, h)anthracene	10
Dibenzofuran	10
1,2-Dichloroethane	1
1,1-Dichloroethene	1
2,4-Dichlorophenol	10
3,3'-Dimethylbenzidine	10
Dimethyl phthalate	10
m-Dinitrobenzene	2.5
2,6-Dinitrotoluene	5
Di-n-octyl phthalate	10
Fluoranthene	10
Indeno[1,2,3-cd]pyrene	10
Bromomethane	1
3&4-Methylphenol	20
Naphthalene	1
Nitrobenzene	10
p-Nitrophenol	20
Phenol	10
Pyrene	10
Tetrachloroethene	1
Toluene	5
Trichloroethene	1
sym-Trinitrobenzene	2.5
Vinyl chloride	1

APPENDIX A

OPEN BURNING GROUND
BACKGROUND VALUE CALCULATIONS FOR DGMP PARAMETERS

RADFORD ARMY AMMUNITION PLANT – OPEN BURNING GROUND CALCULATION OF CONSTITUENT BACKGROUND VALUES FOR THE DETECTION GROUNDWATER MONITORING PROGRAM

Draper Aden Associates calculated background values for each constituent listed in the Detection Groundwater Monitoring Program (DGMP) dated September 2003 for the Open Burning Ground located at the Radford Army Ammunition Plant (Radford AAP) in Radford, Virginia. With the exceptions of carbon tetrachloride, chlorobenzene, hexachloroethane, methyl chloride, methlyene chloride, and perchlorate, the background values for each constituent listed in the DGMP were calculated using the analytical data for upgradient wells 13MW1 and 13MW2 from First Quarter 1996 through First Quarter 2005. Groundwater monitoring for carbon tetrachloride, chlorobenzene, hexachloroethane, methyl chloride, methlyene chloride, and perchlorate began in Fourth Quarter 2003; therefore, the background values for those six constituents were calculated using the analytical data for upgradient wells 13MW1 and 13MW2 from Fourth Quarter 2003 through First Quarter 2005. The background value calculations were based on site-wide 95% confidence, 95% coverage upper prediction intervals. The calculated background values are listed in **Table 1**.

Background Data and Statistical Calculations

Statistical calculations of background values were performed using the analytical data from upgradient wells 13MW1 and 13MW2 as background data. Based on the percentage of non-detects and the distribution of the background data, methods of statistical calculations varied. Background average, standard deviation and other descriptive statistical data were computed for all constituents and are presented in **Appendix A**.

The constituents listed below were 100% non-detected (<LOQ) in the background wells. The background values for these constituents were established as equal to their quantitation limits (QL).

Background Value = Quantitation Limit (QL)				
Parameter	**Sample Size**	**% Non-Detects**	**QL (µg/l)**	**Background Value (µg/l)**
Acetone	74	100	25	25
Benzene	74	100	5	5
Carbon tetrachloride	12	100	5	5
Chlorobenzene	12	100	5	5
Methyl chloride	12	100	5	5
Methylene chloride	12	100	5	5
Toluene	74	100	5	5
2,4-Dinitrotoluene	74	100	10	10
Di-n-butylphthalate	74	100	10	10
Diethyl phthalate	74	100	10	10
Diphenylamine	74	100	10	10
Hexachloroethane	12	100	10	10
Nitroglycerine	74	100	10 mg/l	10 mg/l
Perchlorate	12	100	4	4
Nitrite	61	100	100	100

Non-parametric prediction intervals were computed for all of the constituents for which the data from upgradient wells 13MW1 and 13MW2 satisfied one of the following two criteria, per VDEQ regulations and guidance as well as USEPA guidance:

- Percentage of non-detects was greater than or equal to 50 and less than 100; or
- Percentage of non-detects was less than 50, but data was not normally distributed in original or log-transformed mode.

The background values for these constituents were set as equal to their upper prediction limits (UPLs), with one exception. For pH, a two-sided parametric prediction interval was computed; therefore, the background value for pH consists of a range between the lower prediction limit (LPL) and the UPL. The background and relevant statistical data for these constituents are summarized below. Associated statistical computations are presented in **Appendix A**.

Background Value = UPL of Non-parametric Prediction Interval Background Value for pH = LPL – UPL of two-sided Prediction Interval				
Parameter	**Sample Size**	**% Non-Detects**	**QL (µg/l)**	**Background Value (µg/l)**
Antimony	74	99	5	6
Arsenic	74	93	5	5
Chromium	74	31	5	112
Lead	74	69	5	14.0
Mercury	74	99	2	2.52
Silver	74	92	2	2.4
Total Phenols	74	97	5	20.0
Total Organic Carbon	74	73	1,000	10,600
Total Organic Halides	74	85	20	54.5
Sulfate	61	0	1,000	88,000
pH	62	0	0.1 pH units	5.72 – 7.80 pH units
Specific Conductivity	62	0	1 µS/cm	6,870 µS/cm

The following constituents exhibited normally or ln-normally distributed background data with less than 25% non-detects. One sided parametric prediction intervals were computed on the background data for each of these constituents. The background values for these constituents were set as equal to their UPLs. The background concentration calculations were based on a site wide 95% confidence, 95% coverage upper prediction intervals. When adjusted for multiple comparisons of the background data, the false positive rate was 5% (0.05). The background and relevant statistical data for these constituents are summarized below. The prediction interval computations for these constituents are presented in **Appendix A**.

Background Value = UPL of one-sided Prediction Interval				
Parameter	**Sample Size**	**% Non-Detects**	**QL (µg/l)**	**Background Value (µg/l)**
Barium	74	0	10	228
Nitrate	61	3	100	1,311

TABLE 1

OPEN BURNING GROUND
CALCULATED BACKGROUND VALUES

Constituent	Background Value (µg/l unless otherwise noted)
Antimony	6
Arsenic	5
Barium	228
Chromium	112
Lead	14.0
Mercury	2.52
Silver	2.4
Acetone	25
Benzene	5
Carbon Tetrachloride	5
Chlorobenzene	5
Methyl chloride	5
Methylene chloride	5
Toluene	5
2,4-Dinitrotoluene	10
Di-n-butylphthalate	10
Diethyl phthalate	10
Diphenylamine	10
Hexachloroethane	10
Nitroglycerine	10 mg/l
Perchlorate	4
Total Phenols	20.0
Nitrate	1,311
Nitrite	100
Sulfate	88,000
Total Organic Carbon	10,600
Total Organic Halides	54.5
Specific Conductivity	6,870 µS/cm
pH	5.72 – 7.80 pH units

APPENDIX A

OPEN BURNING GROUND
BACKGROUND VALUE STATISTICAL CALCULATIONS

RAAP - Open Burning Ground (HWMU-13) - Statistical Analysis - Background Calculation

May 10, 2005

1) Y2K Correction dates on GRITS/STAT software are as shown in the table below.

Actual Event Date	Date Used in Stat Software	Notes
1st Quarter 2000	12/10/1999	
2nd Quarter 2000	12/11/1999	
3rd Quarter 2000	12/12/1999	
4th Quarter 2000	12/13/1999	
1st Quarter 2001	12/14/1999	
2nd Quarter 2001	12/15/1999	
3rd Quarter 2001	12/16/1999	
4th Quarter 2001	12/17/1999	
1st Quarter 2002	12/18/1999	
2nd Quarter 2002	12/19/1999	
3rd Quarter 2002	12/20/1999	
4th Quarter 2002	12/21/1999	
1st Quarter 2003	12/22/1999	
2nd Quarter 2003	12/23/1999	
3rd Quarter 2003	12/24/1999	
4th Quarter 2003	12/25/1999	
1st Quarter 2004	12/26/1999	
2nd Quarter 2004	12/27/1999	
3rd Quarter 2004	12/28/1999	
4th Quarter 2004	12/29/1999	
1st Quarter 2005	12/30/1999	

2) No adjustments for multiple comparisons could be made for non-parametric UPLs and where UPL=QL.
Any Statistically significant increase (SSI) must be confirmed by verification sampling.

3) No data available for pH and Specific conductivity from 2nd Qtr 1996 - 2nd Qtr 1997.

4) Background for chlorobenzene, Carbon tetrachloride, Methyl Chloride (Chloromethane), Methylene Chloride (Dichloromethane), Hexachloroethane and Perchlorate based on 4th Quarter 2003 to 1st Quarter 2005 data.

5) Background for all other target constituents based on 1st Quarter 1996 through 1st Quarter 2005 data.

P:\B03\200\B03204\B03204-03\WORK\[StatDate correction.xls]Statcorrection dates

Data Set Summary

Report Printed: 05-10-2005 20:01

Facility:RAAPHWMU13 Haz. Waste Unit 13 - RAAP

Address:

City:Radford ST:VA Zip:
County:PULASKI

Contact:
Phone:( ) -

Permit Type:Detection

Constituent:CCl4 Carbon tetrachloride

CAS Number: 56-23-5
MCL: 5.000 ppb
ACL: 0.000 ppb
Detect Limit: 10.000 ppb

Start Date:Mar 31 1996
End Date:Dec 30 1999

Well ID:13MW1

Sample Date	Observation	Ln
Dec 25 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 26 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 27 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 28 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 29 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 30 1999	5.000 ppb	1.609 (* Nondetect *)

Well ID:13MW1 Summary Statistics

Observations (N): 6
Nondetects (%ND):100

Minimum:	5.000 ppb	Ln Minimum:	1.609
Maximum:	5.000 ppb	Ln Maximum:	1.609
Mean:	5.000 ppb	Ln Mean:	1.609
Std. Dev.:	0.000 ppb	Ln Std. Dev.:	0.000

Well ID:13MW2

Sample Date	Observation	Ln

Dec 25 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 26 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 27 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 28 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 29 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 30 1999	5.000 ppb	1.609 (* Nondetect *)

Well ID:13MW2 Summary Statistics

Observations (N): 6
Nondetects (%ND):100

Minimum:	5.000 ppb	Ln Minimum:	1.609
Maximum:	5.000 ppb	Ln Maximum:	1.609
Mean:	5.000 ppb	Ln Mean:	1.609
Std. Dev.:	0.000 ppb	Ln Std. Dev.:	0.000

Data Set Summary

Report Printed: 05-10-2005 20:01

Facility:RAAPHWMU13 Haz. Waste Unit 13 - RAAP

Address:

City:Radford ST:VA Zip:
County:PULASKI

Contact:
Phone:( ) -

Permit Type:Detection

Constituent:ChlBenz Chlorobenzene

CAS Number: 108-90-7
MCL: 100.000 ppb
ACL: 0.000 ppb
Detect Limit: 10.000 ppb

Start Date:Mar 31 1996
End Date:Dec 30 1999

Well ID:13MW1

Sample Date	Observation	Ln
Dec 25 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 26 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 27 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 28 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 29 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 30 1999	5.000 ppb	1.609 (* Nondetect *)

Well ID:13MW1 Summary Statistics

Observations (N): 6
Nondetects (%ND):100

Minimum:	5.000 ppb	Ln Minimum:	1.609
Maximum:	5.000 ppb	Ln Maximum:	1.609
Mean:	5.000 ppb	Ln Mean:	1.609
Std. Dev.:	0.000 ppb	Ln Std. Dev.:	0.000

Well ID:13MW2

Sample Date	Observation	Ln

Dec 25 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 26 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 27 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 28 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 29 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 30 1999	5.000 ppb	1.609 (* Nondetect *)

Well ID: 13MW2 Summary Statistics

Observations (N): 6
Nondetects (%ND): 100

Minimum:	5.000 ppb	Ln Minimum:	1.609
Maximum:	5.000 ppb	Ln Maximum:	1.609
Mean:	5.000 ppb	Ln Mean:	1.609
Std. Dev.:	0.000 ppb	Ln Std. Dev.:	0.000

Data Set Summary

Report Printed: 05-10-2005 20:01

Facility:RAAPHWMU13 Haz. Waste Unit 13 - RAAP

Address:

City:Radford ST:VA Zip:
County:PULASKI

Contact:
Phone:( ) -

Permit Type:Detection

Constituent:ChlMeth Chloromethane

CAS Number: 74-87-3
MCL: 0.000 ppb
ACL: 0.000 ppb
Detect Limit: 10.000 ppb

Start Date:Mar 31 1996
End Date:Dec 30 1999

Well ID:13MW1

Sample Date	Observation	Ln
Dec 25 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 26 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 27 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 28 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 29 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 30 1999	5.000 ppb	1.609 (* Nondetect *)

Well ID:13MW1 Summary Statistics

Observations (N): 6
Nondetects (%ND):100

Minimum:	5.000 ppb	Ln Minimum:	1.609
Maximum:	5.000 ppb	Ln Maximum:	1.609
Mean:	5.000 ppb	Ln Mean:	1.609
Std. Dev.:	0.000 ppb	Ln Std. Dev.:	0.000

Well ID:13MW2

Sample Date	Observation	Ln

Dec 25 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 26 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 27 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 28 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 29 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 30 1999	5.000 ppb	1.609 (* Nondetect *)

Well ID:13MW2 Summary Statistics

Observations (N): 6
Nondetects (%ND):100

Minimum:	5.000 ppb	Ln Minimum:	1.609
Maximum:	5.000 ppb	Ln Maximum:	1.609
Mean:	5.000 ppb	Ln Mean:	1.609
Std. Dev.:	0.000 ppb	Ln Std. Dev.:	0.000

Data Set Summary

Report Printed: 05-10-2005 20:02

Facility:RAAPHWMU13 Haz. Waste Unit 13 - RAAP

Address:

City:Radford ST:VA Zip:
County:PULASKI

Contact:
Phone:( ) -

Permit Type:Detection

Constituent:DiClMe Dichloromethane

CAS Number: 75-09-2
MCL: 5.000 ppb
ACL: 0.000 ppb
Detect Limit: 10.000 ppb

Start Date:Mar 31 1996
End Date:Dec 30 1999

Well ID:13MW1

Sample Date	Observation	Ln
Dec 25 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 26 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 27 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 28 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 29 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 30 1999	5.000 ppb	1.609 (* Nondetect *)

Well ID:13MW1 Summary Statistics

Observations (N): 6
Nondetects (%ND):100

Minimum:	5.000 ppb	Ln Minimum:	1.609
Maximum:	5.000 ppb	Ln Maximum:	1.609
Mean:	5.000 ppb	Ln Mean:	1.609
Std. Dev.:	0.000 ppb	Ln Std. Dev.:	0.000

Well ID:13MW2

Sample Date	Observation	Ln

Dec 25 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 26 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 27 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 28 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 29 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 30 1999	5.000 ppb	1.609 (* Nondetect *)

Well ID:13MW2 Summary Statistics

Observations (N): 6
Nondetects (%ND):100

Minimum:	5.000 ppb	Ln Minimum:	1.609
Maximum:	5.000 ppb	Ln Maximum:	1.609
Mean:	5.000 ppb	Ln Mean:	1.609
Std. Dev.:	0.000 ppb	Ln Std. Dev.:	0.000

Data Set Summary

Report Printed: 05-10-2005 20:02

Facility:RAAPHWMU13 Haz. Waste Unit 13 - RAAP

Address:

City:Radford ST:VA Zip:
County:PULASKI

Contact:
Phone:( ) -

Permit Type:Detection

Constituent:HClEth Hexachloroethane

CAS Number: 67-72-1
MCL: 0.000 ppb
ACL: 0.000 ppb
Detect Limit: 20.000 ppb

Start Date:Mar 31 1996
End Date:Dec 30 1999

Well ID:13MW1

Sample Date	Observation	Ln
Dec 25 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 26 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 27 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 28 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 29 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 30 1999	10.000 ppb	2.303 (* Nondetect *)

Well ID:13MW1 Summary Statistics

Observations (N): 6
Nondetects (%ND):100

Minimum:	10.000 ppb	Ln Minimum:	2.303
Maximum:	10.000 ppb	Ln Maximum:	2.303
Mean:	10.000 ppb	Ln Mean:	2.303
Std. Dev.:	0.000 ppb	Ln Std. Dev.:	0.000

Well ID:13MW2

Sample Date	Observation	Ln

Dec 25 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 26 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 27 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 28 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 29 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 30 1999	10.000 ppb	2.303 (* Nondetect *)

Well ID:13MW2 Summary Statistics

Observations (N): 6
Nondetects (%ND):100

Minimum:	10.000 ppb	Ln Minimum:	2.303
Maximum:	10.000 ppb	Ln Maximum:	2.303
Mean:	10.000 ppb	Ln Mean:	2.303
Std. Dev.:	0.000 ppb	Ln Std. Dev.:	0.000

Data Set Summary

Report Printed: 05-10-2005 20:02

Facility:RAAPHWMU13 Haz. Waste Unit 13 - RAAP

Address:

City:Radford ST:VA Zip:
County:PULASKI

Contact:
Phone:( ) -

Permit Type:Detection

Constituent:Perchlor Perchlorate

CAS Number: - -
MCL: 0.000 ug/l
ACL: 0.000 ug/l
Detect Limit: 8.000 ug/l

Start Date:Mar 31 1996
End Date:Dec 30 1999

Well ID:13MW1

Sample Date	Observation	Ln
Dec 25 1999	4.000 ug/l	1.386 (* Nondetect *)
Dec 26 1999	4.000 ug/l	1.386 (* Nondetect *)
Dec 27 1999	4.000 ug/l	1.386 (* Nondetect *)
Dec 28 1999	4.000 ug/l	1.386 (* Nondetect *)
Dec 29 1999	4.000 ug/l	1.386 (* Nondetect *)
Dec 30 1999	4.000 ug/l	1.386 (* Nondetect *)

Well ID:13MW1 Summary Statistics

Observations (N): 6
Nondetects (%ND):100

Minimum:	4.000 ug/l	Ln Minimum:	1.386
Maximum:	4.000 ug/l	Ln Maximum:	1.386
Mean:	4.000 ug/l	Ln Mean:	1.386
Std. Dev.:	0.000 ug/l	Ln Std. Dev.:	0.000

Well ID:13MW2

Sample Date	Observation	Ln

Dec 25 1999	4.000 ug/l	1.386 (* Nondetect *)
Dec 26 1999	4.000 ug/l	1.386 (* Nondetect *)
Dec 27 1999	4.000 ug/l	1.386 (* Nondetect *)
Dec 28 1999	4.000 ug/l	1.386 (* Nondetect *)
Dec 29 1999	4.000 ug/l	1.386 (* Nondetect *)
Dec 30 1999	4.000 ug/l	1.386 (* Nondetect *)

Well ID:13MW2 Summary Statistics

Observations (N): 6
Nondetects (%ND):100

Minimum:	4.000 ug/l	Ln Minimum:	1.386
Maximum:	4.000 ug/l	Ln Maximum:	1.386
Mean:	4.000 ug/l	Ln Mean:	1.386
Std. Dev.:	0.000 ug/l	Ln Std. Dev.:	0.000

Data Set Summary

Report Printed: 05-10-2005 17:22

Facility:RAAPHWMU13 Haz. Waste Unit 13 - RAAP

Address:

City:Radford ST:VA Zip:
County:PULASKI

Contact:
Phone:( ) -

Permit Type:Detection

Constituent:Sb Antimony, total

CAS Number: 7440-36-0
MCL: 0.000 ppb
ACL: 0.000 ppb
Detect Limit: 10.000 ppb

Start Date:Mar 31 1996
End Date:Dec 30 1999

Well ID:13MW1

Sample Date	Observation	Ln
Mar 31 1996	1.500 ppb	0.405 (* Nondetect *)
Jun 30 1996	1.500 ppb	0.405 (* Nondetect *)
Sep 30 1996	1.500 ppb	0.405 (* Nondetect *)
Dec 31 1996	1.500 ppb	0.405 (* Nondetect *)
Mar 31 1997	1.500 ppb	0.405 (* Nondetect *)
Jun 30 1997	1.500 ppb	0.405 (* Nondetect *)
Sep 30 1997	1.500 ppb	0.405 (* Nondetect *)
Dec 31 1997	1.500 ppb	0.405 (* Nondetect *)
Mar 09 1998	1.500 ppb	0.405 (* Nondetect *)
May 14 1998	1.500 ppb	0.405 (* Nondetect *)
Aug 14 1998	1.500 ppb	0.405 (* Nondetect *)
Nov 23 1998	1.500 ppb	0.405 (* Nondetect *)
Mar 13 1999	1.500 ppb	0.405 (* Nondetect *)
May 27 1999	1.500 ppb	0.405 (* Nondetect *)
Jul 27 1999	1.500 ppb	0.405 (* Nondetect *)
Nov 08 1999	1.500 ppb	0.405 (* Nondetect *)
Dec 10 1999	1.500 ppb	0.405 (* Nondetect *)
Dec 11 1999	1.500 ppb	0.405 (* Nondetect *)
Dec 12 1999	1.500 ppb	0.405 (* Nondetect *)
Dec 13 1999	1.500 ppb	0.405 (* Nondetect *)
Dec 14 1999	1.500 ppb	0.405 (* Nondetect *)
Dec 15 1999	1.500 ppb	0.405 (* Nondetect *)
Dec 16 1999	1.500 ppb	0.405 (* Nondetect *)
Dec 17 1999	1.500 ppb	0.405 (* Nondetect *)

Dec 18 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 19 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 20 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 21 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 22 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 23 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 24 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 25 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 26 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 27 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 28 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 29 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 30 1999	5.000 ppb	1.609 (* Nondetect *)

Well ID:13MW1 Summary Statistics

Observations (N): 37
Nondetects (%ND):100

Minimum:	1.500 ppb	Ln Minimum:	0.405
Maximum:	5.000 ppb	Ln Maximum:	1.609
Mean:	2.730 ppb	Ln Mean:	0.828
Std. Dev.:	1.694 ppb	Ln Std. Dev.:	0.583

Well ID:13MW2

Sample Date	Observation	Ln
Mar 31 1996	1.500 ppb	0.405 (* Nondetect *)
Jun 30 1996	1.500 ppb	0.405 (* Nondetect *)
Sep 30 1996	1.500 ppb	0.405 (* Nondetect *)
Dec 31 1996	6.000 ppb	1.792
Mar 31 1997	1.500 ppb	0.405 (* Nondetect *)
Jun 30 1997	1.500 ppb	0.405 (* Nondetect *)
Sep 30 1997	1.500 ppb	0.405 (* Nondetect *)
Dec 31 1997	1.500 ppb	0.405 (* Nondetect *)
Mar 09 1998	1.500 ppb	0.405 (* Nondetect *)
May 14 1998	1.500 ppb	0.405 (* Nondetect *)
Aug 14 1998	1.500 ppb	0.405 (* Nondetect *)
Nov 23 1998	1.500 ppb	0.405 (* Nondetect *)
Mar 13 1999	1.500 ppb	0.405 (* Nondetect *)
May 27 1999	1.500 ppb	0.405 (* Nondetect *)
Jul 27 1999	1.500 ppb	0.405 (* Nondetect *)
Nov 08 1999	1.500 ppb	0.405 (* Nondetect *)
Dec 10 1999	1.500 ppb	0.405 (* Nondetect *)
Dec 11 1999	1.500 ppb	0.405 (* Nondetect *)
Dec 12 1999	1.500 ppb	0.405 (* Nondetect *)
Dec 13 1999	1.500 ppb	0.405 (* Nondetect *)
Dec 14 1999	1.500 ppb	0.405 (* Nondetect *)
Dec 15 1999	1.500 ppb	0.405 (* Nondetect *)
Dec 16 1999	1.500 ppb	0.405 (* Nondetect *)
Dec 17 1999	1.500 ppb	0.405 (* Nondetect *)
Dec 18 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 19 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 20 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 21 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 22 1999	5.000 ppb	1.609 (* Nondetect *)

Dec 23 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 24 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 25 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 26 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 27 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 28 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 29 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 30 1999	5.000 ppb	1.609 (* Nondetect *)

Well ID:13MW2 Summary Statistics

Observations (N): 37
Nondetects (%ND): 97

Minimum:	1.500 ppb	Ln Minimum:	0.405
Maximum:	6.000 ppb	Ln Maximum:	1.792
Mean:	2.851 ppb	Ln Mean:	0.866
Std. Dev.:	1.763 ppb	Ln Std. Dev.:	0.599

Normality Tests

Report Printed: 05-10-2005 15:34

Facility:RAAPHWMU13 Haz. Waste Unit 13 - RAAP

Address:

City:Radford ST:VA Zip:
County:PULASKI

Contact:
Phone:( ) -

Permit Type:Detection

Constituent:Sb Antimony, total

CAS Number: 7440-36-0
MCL: 0.000 ppb
ACL: 0.000 ppb
Detect Limit: 10.000 ppb

Start Date:Mar 31 1996
End Date:Dec 30 1999

Normality Test on Observations for wells listed below:

Well:13MW1 Position:Upgradient Observations:37

Scale	Minimum	Maximum	Mean	Std Dev
Original:	1.500	5.000	2.730	1.694
Log:	0.405	1.609	0.828	0.583

Well:13MW2 Position:Upgradient Observations:37

Scale	Minimum	Maximum	Mean	Std Dev
Original:	1.500	6.000	2.851	1.763
Log:	0.405	1.792	0.866	0.599

Pooled Statistics
Observations: 74

Statistic	Original Scale	Log Scale
Mean:	2.791	0.847
Std Dev:	1.718	0.587
Skewness:	0.578	0.566
Kurtosis:	-1.636	-1.673
Minimum:	1.500	0.405
Maximum:	6.000	1.792

CV: 0.616 0.693

Shapiro-Francia Statistics

Scale	Test Statistic	5% Critical Value	1% Critical Value
Original:	0.6407*	0.9690	0.9560
Log:	0.6351*	0.9690	0.9560

* Indicates statistically significant evidence of non-normality.
GRIT/STAT Version 5.0

%ND = 99%. ~~100~~

Nonparametric Prediction Interval
Report Printed May 10,2005

Facility:Haz. Waste Unit 13 - RAAP
Parameter:Antimony, total(CAS Number:7440-36-0)

ONE-TAILED UPPER PARAMETRIC PREDICTION INTERVAL

Observations (n):	74
Conf. Level (1-α):	***.***%

UL: ~~[illegible]~~ 6.0 ppb
LL: 0.000

%ND : 99%

Report Produced by GRITS/STAT 5.01

Data Set Summary

Report Printed: 05-10-2005 17:22

Facility:RAAPHWMU13 Haz. Waste Unit 13 - RAAP

Address:

City:Radford ST:VA Zip:
County:PULASKI

Contact:
Phone:( ) -

Permit Type:Detection

Constituent:As Arsenic, total

CAS Number: 7440-38-2
MCL: 0.000 ppb
ACL: 0.000 ppb
Detect Limit: 10.000 ppb

Start Date:Mar 31 1996
End Date:Dec 30 1999

Well ID:13MW1

Sample Date	Observation	Ln
Mar 31 1996	0.500 ppb	-0.693 (* Nondetect *)
Jun 30 1996	0.500 ppb	-0.693 (* Nondetect *)
Sep 30 1996	0.500 ppb	-0.693 (* Nondetect *)
Dec 31 1996	0.500 ppb	-0.693 (* Nondetect *)
Mar 31 1997	0.500 ppb	-0.693 (* Nondetect *)
Jun 30 1997	0.500 ppb	-0.693 (* Nondetect *)
Sep 30 1997	0.500 ppb	-0.693 (* Nondetect *)
Dec 31 1997	0.500 ppb	-0.693 (* Nondetect *)
Mar 09 1998	0.500 ppb	-0.693 (* Nondetect *)
May 14 1998	0.500 ppb	-0.693 (* Nondetect *)
Aug 14 1998	0.500 ppb	-0.693 (* Nondetect *)
Nov 23 1998	3.000 ppb	1.099
Mar 13 1999	1.000 ppb	0.000
May 27 1999	0.500 ppb	-0.693 (* Nondetect *)
Jul 27 1999	0.500 ppb	-0.693 (* Nondetect *)
Nov 08 1999	0.500 ppb	-0.693 (* Nondetect *)
Dec 10 1999	0.500 ppb	-0.693 (* Nondetect *)
Dec 11 1999	0.500 ppb	-0.693 (* Nondetect *)
Dec 12 1999	0.500 ppb	-0.693 (* Nondetect *)
Dec 13 1999	2.000 ppb	0.693
Dec 14 1999	0.500 ppb	-0.693 (* Nondetect *)
Dec 15 1999	0.500 ppb	-0.693 (* Nondetect *)
Dec 16 1999	0.500 ppb	-0.693 (* Nondetect *)
Dec 17 1999	0.500 ppb	-0.693 (* Nondetect *)

Dec 18 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 19 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 20 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 21 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 22 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 23 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 24 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 25 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 26 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 27 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 28 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 29 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 30 1999	5.000 ppb	1.609 (* Nondetect *)

Well ID:13MW1 Summary Statistics

Observations (N): 37
Nondetects (%ND): 92

Minimum:	0.500 ppb	Ln Minimum:	-0.693
Maximum:	5.000 ppb	Ln Maximum:	1.609
Mean:	2.203 ppb	Ln Mean:	0.220
Std. Dev.:	2.139 ppb	Ln Std. Dev.:	1.101

Well ID:13MW2

Sample Date	Observation	Ln
Mar 31 1996	0.500 ppb	-0.693 (* Nondetect *)
Jun 30 1996	0.500 ppb	-0.693 (* Nondetect *)
Sep 30 1996	0.500 ppb	-0.693 (* Nondetect *)
Dec 31 1996	0.500 ppb	-0.693 (* Nondetect *)
Mar 31 1997	0.500 ppb	-0.693 (* Nondetect *)
Jun 30 1997	0.500 ppb	-0.693 (* Nondetect *)
Sep 30 1997	0.500 ppb	-0.693 (* Nondetect *)
Dec 31 1997	0.500 ppb	-0.693 (* Nondetect *)
Mar 09 1998	0.500 ppb	-0.693 (* Nondetect *)
May 14 1998	0.500 ppb	-0.693 (* Nondetect *)
Aug 14 1998	0.500 ppb	-0.693 (* Nondetect *)
Nov 23 1998	0.500 ppb	-0.693 (* Nondetect *)
Mar 13 1999	0.500 ppb	-0.693 (* Nondetect *)
May 27 1999	0.500 ppb	-0.693 (* Nondetect *)
Jul 27 1999	1.000 ppb	0.000
Nov 08 1999	0.500 ppb	-0.693 (* Nondetect *)
Dec 10 1999	0.500 ppb	-0.693 (* Nondetect *)
Dec 11 1999	0.500 ppb	-0.693 (* Nondetect *)
Dec 12 1999	0.500 ppb	-0.693 (* Nondetect *)
Dec 13 1999	2.000 ppb	0.693
Dec 14 1999	0.500 ppb	-0.693 (* Nondetect *)
Dec 15 1999	0.500 ppb	-0.693 (* Nondetect *)
Dec 16 1999	0.500 ppb	-0.693 (* Nondetect *)
Dec 17 1999	0.500 ppb	-0.693 (* Nondetect *)
Dec 18 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 19 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 20 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 21 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 22 1999	5.000 ppb	1.609 (* Nondetect *)

Dec 23 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 24 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 25 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 26 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 27 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 28 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 29 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 30 1999	5.000 ppb	1.609 (* Nondetect *)

Well ID:13MW2 Summary Statistics

Observations (N): 37
Nondetects (%ND): 95

Minimum:	0.500 ppb	Ln Minimum:	-0.693
Maximum:	5.000 ppb	Ln Maximum:	1.609
Mean:	2.135 ppb	Ln Mean:	0.172
Std. Dev.:	2.153 ppb	Ln Std. Dev.:	1.101

Normality Tests

Report Printed: 05-10-2005 15:45

Facility:RAAPHWMU13 Haz. Waste Unit 13 - RAAP

Address:

City:Radford ST:VA Zip:
County:PULASKI

Contact:
Phone:( ) -

Permit Type:Detection

Constituent:As Arsenic, total

CAS Number: 7440-38-2
MCL: 0.000 ppb
ACL: 0.000 ppb
Detect Limit: 10.000 ppb

Start Date:Mar 31 1996
End Date:Dec 30 1999

Normality Test on Observations for wells listed below:

Well:13MW1 Position:Upgradient Observations:37

Scale	Minimum	Maximum	Mean	Std Dev
Original:	0.500	5.000	2.203	2.139
Log:	-0.693	1.609	0.220	1.101

Well:13MW2 Position:Upgradient Observations:37

Scale	Minimum	Maximum	Mean	Std Dev
Original:	0.500	5.000	2.135	2.153
Log:	-0.693	1.609	0.172	1.101

Pooled Statistics
Observations: 74

Statistic	Original Scale	Log Scale
Mean:	2.169	0.196
Std Dev:	2.131	1.094
Skewness:	0.552	0.465
Kurtosis:	-1.649	-1.725
Minimum:	0.500	-0.693
Maximum:	5.000	1.609

CV: 0.983 5.572

Shapiro-Francia Statistics

Scale	Test Statistic	5% Critical Value	1% Critical Value
Original:	0.6615*	0.9690	0.9560
Log:	0.6742*	0.9690	0.9560

* Indicates statistically significant evidence of non-normality.
GRIT/STAT Version 5.0

Nonparametric Prediction Interval
Report Printed May 10,2005

Facility:Haz. Waste Unit 13 - RAAP
Parameter:Arsenic, total(CAS Number:7440-38-2)

ONE-TAILED UPPER PARAMETRIC PREDICTION INTERVAL

Observations (n): 74
Conf. Level (1-α): ***.***%

UL: ~~0.500~~ 5.0 ppb
LL: 0.000

% ND: 100%.

BACKGROUND TO COMPLIANCE WELL COMPARISON

Well:13MW3

Sample Date	Observation
12/17/99	ND < 1.000 ppb

Report Produced by GRITS/STAT 5.01

Data Set Summary

Report Printed: 05-10-2005 17:23

Facility:RAAPHWMU13 Haz. Waste Unit 13 - RAAP

Address:

City:Radford ST:VA Zip:
County:PULASKI

Contact:
Phone:( ) -

Permit Type:Detection

Constituent:Ba Barium, total

CAS Number: 7440-39-3
MCL: 0.000 ppb
ACL: 0.000 ppb
Detect Limit: 20.000 ppb

Start Date:Mar 31 1996
End Date:Dec 30 1999

Well ID:13MW1

Sample Date	Observation	Ln
Mar 31 1996	87.000 ppb	4.466
Jun 30 1996	105.000 ppb	4.654
Sep 30 1996	90.000 ppb	4.500
Dec 31 1996	88.000 ppb	4.477
Mar 31 1997	127.000 ppb	4.844
Jun 30 1997	129.000 ppb	4.860
Sep 30 1997	154.000 ppb	5.037
Dec 31 1997	126.000 ppb	4.836
Mar 09 1998	117.000 ppb	4.762
May 14 1998	98.000 ppb	4.585
Aug 14 1998	107.000 ppb	4.673
Nov 23 1998	255.000 ppb	5.541
Mar 13 1999	178.000 ppb	5.182
May 27 1999	85.000 ppb	4.443
Jul 27 1999	103.000 ppb	4.635
Nov 08 1999	128.000 ppb	4.852
Dec 10 1999	96.000 ppb	4.564
Dec 11 1999	91.000 ppb	4.511
Dec 12 1999	81.000 ppb	4.394
Dec 13 1999	111.000 ppb	4.710
Dec 14 1999	115.000 ppb	4.745
Dec 15 1999	81.800 ppb	4.404
Dec 16 1999	112.000 ppb	4.718
Dec 17 1999	132.000 ppb	4.883

Dec 18 1999	127.000 ppb	4.844
Dec 19 1999	107.000 ppb	4.673
Dec 20 1999	132.000 ppb	4.883
Dec 21 1999	143.000 ppb	4.963
Dec 22 1999	110.000 ppb	4.700
Dec 23 1999	78.000 ppb	4.357
Dec 24 1999	89.500 ppb	4.494
Dec 25 1999	120.000 ppb	4.787
Dec 26 1999	98.800 ppb	4.593
Dec 27 1999	96.300 ppb	4.567
Dec 28 1999	97.100 ppb	4.576
Dec 29 1999	106.000 ppb	4.663
Dec 30 1999	101.000 ppb	4.615

Well ID:13MW1 Summary Statistics

Observations (N): 37
Nondetects (%ND): 0

Minimum:	78.000 ppb	Ln Minimum:	4.357
Maximum:	255.000 ppb	Ln Maximum:	5.541
Mean:	113.581 ppb	Ln Mean:	4.703
Std. Dev.:	32.212 ppb	Ln Std. Dev.:	0.235

Well ID:13MW2

Sample Date	Observation	Ln
Mar 31 1996	134.000 ppb	4.898
Jun 30 1996	139.000 ppb	4.934
Sep 30 1996	128.000 ppb	4.852
Dec 31 1996	110.000 ppb	4.700
Mar 31 1997	137.000 ppb	4.920
Jun 30 1997	125.000 ppb	4.828
Sep 30 1997	140.000 ppb	4.942
Dec 31 1997	141.000 ppb	4.949
Mar 09 1998	220.000 ppb	5.394
May 14 1998	159.000 ppb	5.069
Aug 14 1998	151.000 ppb	5.017
Nov 23 1998	172.000 ppb	5.147
Mar 13 1999	168.000 ppb	5.124
May 27 1999	153.000 ppb	5.030
Jul 27 1999	124.000 ppb	4.820
Nov 08 1999	146.000 ppb	4.984
Dec 10 1999	138.000 ppb	4.927
Dec 11 1999	145.000 ppb	4.977
Dec 12 1999	130.000 ppb	4.868
Dec 13 1999	135.000 ppb	4.905
Dec 14 1999	131.000 ppb	4.875
Dec 15 1999	147.000 ppb	4.990
Dec 16 1999	148.000 ppb	4.997
Dec 17 1999	155.000 ppb	5.043
Dec 18 1999	128.000 ppb	4.852
Dec 19 1999	148.000 ppb	4.997
Dec 20 1999	148.000 ppb	4.997
Dec 21 1999	142.000 ppb	4.956
Dec 22 1999	153.000 ppb	5.030

Dec 23 1999	172.000 ppb	5.147
Dec 24 1999	168.000 ppb	5.124
Dec 25 1999	152.000 ppb	5.024
Dec 26 1999	174.000 ppb	5.159
Dec 27 1999	168.000 ppb	5.124
Dec 28 1999	154.000 ppb	5.037
Dec 29 1999	171.000 ppb	5.142
Dec 30 1999	180.000 ppb	5.193

Well ID:13MW2 Summary Statistics

Observations (N): 37
Nondetects (%ND): 0

Minimum:	110.000 ppb	Ln Minimum:	4.700
Maximum:	220.000 ppb	Ln Maximum:	5.394
Mean:	149.568 ppb	Ln Mean:	4.999
Std. Dev.:	20.240 ppb	Ln Std. Dev.:	0.130

Normality Tests

Report Printed: 05-10-2005 15:54

Facility:RAAPHWMU13 Haz. Waste Unit 13 - RAAP

Address:

City:Radford ST:VA Zip:
County:PULASKI

Contact:
Phone:( ) -

Permit Type:Detection

Constituent:Ba Barium, total

CAS Number: 7440-39-3
MCL: 0.000 ppb
ACL: 0.000 ppb
Detect Limit: 20.000 ppb

Start Date:Mar 31 1996
End Date:Dec 30 1999

Normality Test on Observations for wells listed below:

Well:13MW1 Position:Upgradient Observations:37

Scale	Minimum	Maximum	Mean	Std Dev
Original:	78.000	255.000	113.581	32.212
Log:	4.357	5.541	4.703	0.235

Well:13MW2 Position:Upgradient Observations:37

Scale	Minimum	Maximum	Mean	Std Dev
Original:	110.000	220.000	149.568	20.240
Log:	4.700	5.394	4.999	0.130

Pooled Statistics
Observations: 74

Statistic	Original Scale	Log Scale
Mean:	131.574	4.851
Std Dev:	32.278	0.241
Skewness:	0.845	0.030
Kurtosis:	1.800	-0.118
Minimum:	78.000	4.357
Maximum:	255.000	5.541

CV:	0.245	0.050

Shapiro-Francia Statistics

Scale	Test Statistic	5% Critical Value	1% Critical Value
Original:	0.9407*	0.9690	0.9560
Log:	0.9794	0.9690	0.9560

* Indicates statistically significant evidence of non-normality.
GRIT/STAT Version 5.0

Parametric Prediction Interval
Report Printed May 10,2005

Facility:Haz. Waste Unit 13 - RAAP
Parameter:Barium, total(CAS Number:7440-39-3)

ONE-TAILED UPPER PARAMETRIC PREDICTION INTERVAL

Observations (n):	74
Shapiro-Francia (W):	0.9794
Critical W,α=0.01:	0.9560
Mean:	4.851 ln(ppb)
Std Dev:	0.241 ln(ppb)
DF:	73
Conf. Level (1-α):	0.9500
Future Samples (k):	5
$t_{\left[1-\frac{\alpha}{k}\right]}$:	2.3785
Kappa:	2.3945
UL:	227.572 ppb
LL:	0.000

%ND: 0 %

Report Produced by GRITS/STAT 5.01

Data Set Summary

Report Printed: 05-10-2005 17:23

Facility:RAAPHWMU13 Haz. Waste Unit 13 - RAAP

Address:

City:Radford ST:VA Zip:
County:PULASKI

Contact:
Phone:( ) -

Permit Type:Detection

Constituent:Cr Chromium, total

CAS Number: 7440-47-3
MCL: 0.000 ppb
ACL: 0.000 ppb
Detect Limit: 10.000 ppb

Start Date:Mar 31 1996
End Date:Dec 30 1999

Well ID:13MW1

Sample Date	Observation	Ln
Mar 31 1996	11.000 ppb	2.398
Jun 30 1996	13.000 ppb	2.565
Sep 30 1996	56.000 ppb	4.025
Dec 31 1996	20.000 ppb	2.996
Mar 31 1997	22.000 ppb	3.091
Jun 30 1997	19.000 ppb	2.944
Sep 30 1997	40.000 ppb	3.689
Dec 31 1997	23.000 ppb	3.135
Mar 09 1998	55.000 ppb	4.007
May 14 1998	6.000 ppb	1.792
Aug 14 1998	9.000 ppb	2.197
Nov 23 1998	112.000 ppb	4.718
Mar 13 1999	108.000 ppb	4.682
May 27 1999	3.000 ppb	1.099
Jul 27 1999	2.000 ppb	0.693
Nov 08 1999	15.000 ppb	2.708
Dec 10 1999	2.000 ppb	0.693
Dec 11 1999	2.000 ppb	0.693
Dec 12 1999	2.000 ppb	0.693
Dec 13 1999	4.000 ppb	1.386
Dec 14 1999	0.500 ppb	-0.693 (* Nondetect *)
Dec 15 1999	0.500 ppb	-0.693 (* Nondetect *)
Dec 16 1999	0.500 ppb	-0.693 (* Nondetect *)
Dec 17 1999	0.500 ppb	-0.693 (* Nondetect *)

Dec 18 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 19 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 20 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 21 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 22 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 23 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 24 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 25 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 26 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 27 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 28 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 29 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 30 1999	5.000 ppb	1.609 (* Nondetect *)

Well ID:13MW1 Summary Statistics

Observations (N): 37
Nondetects (%ND): 46

Minimum:	0.500 ppb	Ln Minimum:	-0.693
Maximum:	112.000 ppb	Ln Maximum:	4.718
Mean:	15.973 ppb	Ln Mean:	1.847
Std. Dev.:	26.511 ppb	Ln Std. Dev.:	1.386

Well ID:13MW2

Sample Date	Observation	Ln
Mar 31 1996	13.000 ppb	2.565
Jun 30 1996	10.000 ppb	2.303
Sep 30 1996	11.000 ppb	2.398
Dec 31 1996	14.000 ppb	2.639
Mar 31 1997	10.000 ppb	2.303
Jun 30 1997	10.000 ppb	2.303
Sep 30 1997	19.000 ppb	2.944
Dec 31 1997	12.000 ppb	2.485
Mar 09 1998	12.000 ppb	2.485
May 14 1998	7.000 ppb	1.946
Aug 14 1998	17.000 ppb	2.833
Nov 23 1998	20.000 ppb	2.996
Mar 13 1999	9.000 ppb	2.197
May 27 1999	6.000 ppb	1.792
Jul 27 1999	6.000 ppb	1.792
Nov 08 1999	6.000 ppb	1.792
Dec 10 1999	4.000 ppb	1.386
Dec 11 1999	6.000 ppb	1.792
Dec 12 1999	2.000 ppb	0.693
Dec 13 1999	5.000 ppb	1.609
Dec 14 1999	0.500 ppb	-0.693 (* Nondetect *)
Dec 15 1999	10.700 ppb	2.370
Dec 16 1999	9.210 ppb	2.220
Dec 17 1999	7.020 ppb	1.949
Dec 18 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 19 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 20 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 21 1999	57.600 ppb	4.054
Dec 22 1999	10.300 ppb	2.332

Dec 23 1999	6.300 ppb	1.841
Dec 24 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 25 1999	6.000 ppb	1.792
Dec 26 1999	7.600 ppb	2.028
Dec 27 1999	5.500 ppb	1.705
Dec 28 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 29 1999	7.400 ppb	2.001
Dec 30 1999	7.600 ppb	2.028

Well ID:13MW2 Summary Statistics

Observations (N): 37
Nondetects (%ND): 16

Minimum:	0.500 ppb	Ln Minimum:	-0.693
Maximum:	57.600 ppb	Ln Maximum:	4.054
Mean:	9.722 ppb	Ln Mean:	2.025
Std. Dev.:	9.158 ppb	Ln Std. Dev.:	0.733

Normality Tests

Report Printed: 05-10-2005 15:57

Facility:RAAPHWMU13 Haz. Waste Unit 13 - RAAP

Address:

City:Radford ST:VA Zip:
County:PULASKI

Contact:
Phone:( ) -

Permit Type:Detection

Constituent:Cr Chromium, total

CAS Number: 7440-47-3
MCL: 0.000 ppb
ACL: 0.000 ppb
Detect Limit: 10.000 ppb

Start Date:Mar 31 1996
End Date:Dec 30 1999

Normality Test on Observations for wells listed below:

Well:13MW1 Position:Upgradient Observations:37

Scale	Minimum	Maximum	Mean	Std Dev
Original:	0.500	112.000	15.973	26.511
Log:	-0.693	4.718	1.847	1.386

Well:13MW2 Position:Upgradient Observations:37

Scale	Minimum	Maximum	Mean	Std Dev
Original:	0.500	57.600	9.722	9.158
Log:	-0.693	4.054	2.025	0.733

Pooled Statistics
Observations: 74

Statistic	Original Scale	Log Scale
Mean:	12.848	1.936
Std Dev:	19.947	1.105
Skewness:	3.603*	-0.168
Kurtosis:	13.679	1.161
Minimum:	0.500	-0.693
Maximum:	112.000	4.718

CV:	1.553	0.570

Shapiro-Francia Statistics

Scale	Test Statistic	5% Critical Value	1% Critical Value
Original:	0.4961*	0.9690	0.9560
Log:	0.9189*	0.9690	0.9560

* Indicates statistically significant evidence of non-normality.
GRIT/STAT Version 5.0

Nonparametric Prediction Interval
Report Printed May 10,2005

Facility:Haz. Waste Unit 13 - RAAP
Parameter:Chromium, total(CAS Number:7440-47-3)

ONE-TAILED UPPER PARAMETRIC PREDICTION INTERVAL

Observations (n):	74
Conf. Level (1-α):	***.***%
UL:	~~0.500~~ 112.0 ppb
LL:	0.000

%ND: 31%.

Report Produced by GRITS/STAT 5.01

Data Set Summary

Report Printed: 05-10-2005 17:23

Facility:RAAPHWMU13 Haz. Waste Unit 13 - RAAP

Address:

City:Radford ST:VA Zip:
County:PULASKI

Contact:
Phone:( ) -

Permit Type:Detection

Constituent:Pb Lead, total

CAS Number: 7439-92-1
MCL: 0.000 ppb
ACL: 0.000 ppb
Detect Limit: 10.000 ppb

Start Date:Mar 31 1996
End Date:Dec 30 1999

Well ID:13MW1

Sample Date	Observation	Ln
Mar 31 1996	1.000 ppb	0.000
Jun 30 1996	1.000 ppb	0.000
Sep 30 1996	2.000 ppb	0.693
Dec 31 1996	4.000 ppb	1.386
Mar 31 1997	14.000 ppb	2.639
Jun 30 1997	9.000 ppb	2.197
Sep 30 1997	8.000 ppb	2.079
Dec 31 1997	5.000 ppb	1.609
Mar 09 1998	2.000 ppb	0.693
May 14 1998	0.500 ppb	-0.693 (* Nondetect *)
Aug 14 1998	0.500 ppb	-0.693 (* Nondetect *)
Nov 23 1998	6.000 ppb	1.792
Mar 13 1999	6.000 ppb	1.792
May 27 1999	0.500 ppb	-0.693 (* Nondetect *)
Jul 27 1999	0.500 ppb	-0.693 (* Nondetect *)
Nov 08 1999	0.500 ppb	-0.693 (* Nondetect *)
Dec 10 1999	0.500 ppb	-0.693 (* Nondetect *)
Dec 11 1999	0.500 ppb	-0.693 (* Nondetect *)
Dec 12 1999	0.500 ppb	-0.693 (* Nondetect *)
Dec 13 1999	0.500 ppb	-0.693 (* Nondetect *)
Dec 14 1999	0.500 ppb	-0.693 (* Nondetect *)
Dec 15 1999	0.500 ppb	-0.693 (* Nondetect *)
Dec 16 1999	3.200 ppb	1.163
Dec 17 1999	0.500 ppb	-0.693 (* Nondetect *)

Dec 18 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 19 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 20 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 21 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 22 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 23 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 24 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 25 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 26 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 27 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 28 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 29 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 30 1999	5.000 ppb	1.609 (* Nondetect *)

Well ID:13MW1 Summary Statistics

Observations (N): 37
Nondetects (%ND): 68

Minimum:	0.500 ppb	Ln Minimum:	-0.693
Maximum:	14.000 ppb	Ln Maximum:	2.639
Mean:	3.573 ppb	Ln Mean:	0.774
Std. Dev.:	3.027 ppb	Ln Std. Dev.:	1.138

Well ID:13MW2

Sample Date	Observation	Ln
Mar 31 1996	2.000 ppb	0.693
Jun 30 1996	4.000 ppb	1.386
Sep 30 1996	2.000 ppb	0.693
Dec 31 1996	6.000 ppb	1.792
Mar 31 1997	0.500 ppb	-0.693 (* Nondetect *)
Jun 30 1997	7.000 ppb	1.946
Sep 30 1997	6.000 ppb	1.792
Dec 31 1997	5.000 ppb	1.609
Mar 09 1998	3.000 ppb	1.099
May 14 1998	0.500 ppb	-0.693 (* Nondetect *)
Aug 14 1998	0.500 ppb	-0.693 (* Nondetect *)
Nov 23 1998	1.000 ppb	0.000
Mar 13 1999	2.000 ppb	0.693
May 27 1999	0.500 ppb	-0.693 (* Nondetect *)
Jul 27 1999	2.000 ppb	0.693
Nov 08 1999	0.500 ppb	-0.693 (* Nondetect *)
Dec 10 1999	0.500 ppb	-0.693 (* Nondetect *)
Dec 11 1999	0.500 ppb	-0.693 (* Nondetect *)
Dec 12 1999	0.500 ppb	-0.693 (* Nondetect *)
Dec 13 1999	0.500 ppb	-0.693 (* Nondetect *)
Dec 14 1999	0.500 ppb	-0.693 (* Nondetect *)
Dec 15 1999	0.500 ppb	-0.693 (* Nondetect *)
Dec 16 1999	0.500 ppb	-0.693 (* Nondetect *)
Dec 17 1999	0.500 ppb	-0.693 (* Nondetect *)
Dec 18 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 19 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 20 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 21 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 22 1999	5.000 ppb	1.609 (* Nondetect *)

Dec 23 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 24 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 25 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 26 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 27 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 28 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 29 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 30 1999	5.000 ppb	1.609 (* Nondetect *)

Well ID:13MW2 Summary Statistics

Observations (N): 37
Nondetects (%ND): 70

Minimum:	0.500 ppb	Ln Minimum:	-0.693
Maximum:	7.000 ppb	Ln Maximum:	1.946
Mean:	3.014 ppb	Ln Mean:	0.657
Std. Dev.:	2.238 ppb	Ln Std. Dev.:	1.078

Normality Tests

Report Printed: 05-10-2005 16:25

Facility:RAAPHWMU13 Haz. Waste Unit 13 - RAAP

Address:

City:Radford ST:VA Zip:
County:PULASKI

Contact:
Phone:( ) -

Permit Type:Detection

Constituent:Pb Lead, total

CAS Number: 7439-92-1
MCL: 0.000 ppb
ACL: 0.000 ppb
Detect Limit: 10.000 ppb

Start Date:Mar 31 1996
End Date:Dec 30 1999

Normality Test on Observations for wells listed below:

Well:13MW1 Position:Upgradient Observations:37

Scale	Minimum	Maximum	Mean	Std Dev
Original:	0.500	14.000	3.573	3.027
Log:	-0.693	2.639	0.774	1.138

Well:13MW2 Position:Upgradient Observations:37

Scale	Minimum	Maximum	Mean	Std Dev
Original:	0.500	7.000	3.014	2.238
Log:	-0.693	1.946	0.657	1.078

Pooled Statistics
Observations: 74

Statistic	Original Scale	Log Scale
Mean:	3.293	0.716
Std Dev:	2.658	1.102
Skewness:	0.876	-0.314
Kurtosis:	1.714	-1.614
Minimum:	0.500	-0.693
Maximum:	14.000	2.639

CV: 0.807 1.540

Shapiro-Francia Statistics

Scale	Test Statistic	5% Critical Value	1% Critical Value
Original:	0.8098*	0.9690	0.9560
Log:	0.7963*	0.9690	0.9560

* Indicates statistically significant evidence of non-normality.
GRIT/STAT Version 5.0

Nonparametric Prediction Interval
Report Printed May 10,2005

Facility:Haz. Waste Unit 13 - RAAP
Parameter:Lead, total(CAS Number:7439-92-1)

ONE-TAILED UPPER PARAMETRIC PREDICTION INTERVAL

Observations (n):	74
Conf. Level (1-α):	100.000%
UL:	14.0 ~~0.500~~ ppb
LL:	0.000

%ND: 69%.

Report Produced by GRITS/STAT 5.01

Data Set Summary

Report Printed: 05-10-2005 17:23

Facility:RAAPHWMU13 Haz. Waste Unit 13 - RAAP

Address:

City:Radford ST:VA Zip:
County:PULASKI

Contact:
Phone:( ) -

Permit Type:Detection

Constituent:Hg Mercury

CAS Number: 7439-97-6
MCL: 0.000 ppb
ACL: 0.000 ppb
Detect Limit: 4.000 ppb

Start Date:Mar 31 1996
End Date:Dec 30 1999

Well ID:13MW1

Sample Date	Observation	Ln
Mar 31 1996	0.100 ppb	-2.303 (* Nondetect *)
Jun 30 1996	0.100 ppb	-2.303 (* Nondetect *)
Sep 30 1996	0.100 ppb	-2.303 (* Nondetect *)
Dec 31 1996	0.100 ppb	-2.303 (* Nondetect *)
Mar 31 1997	0.100 ppb	-2.303 (* Nondetect *)
Jun 30 1997	0.100 ppb	-2.303 (* Nondetect *)
Sep 30 1997	0.100 ppb	-2.303 (* Nondetect *)
Dec 31 1997	0.100 ppb	-2.303 (* Nondetect *)
Mar 09 1998	0.100 ppb	-2.303 (* Nondetect *)
May 14 1998	0.100 ppb	-2.303 (* Nondetect *)
Aug 14 1998	0.100 ppb	-2.303 (* Nondetect *)
Nov 23 1998	0.100 ppb	-2.303 (* Nondetect *)
Mar 13 1999	0.100 ppb	-2.303 (* Nondetect *)
May 27 1999	0.100 ppb	-2.303 (* Nondetect *)
Jul 27 1999	0.100 ppb	-2.303 (* Nondetect *)
Nov 08 1999	0.100 ppb	-2.303 (* Nondetect *)
Dec 10 1999	0.100 ppb	-2.303 (* Nondetect *)
Dec 11 1999	0.100 ppb	-2.303 (* Nondetect *)
Dec 12 1999	0.100 ppb	-2.303 (* Nondetect *)
Dec 13 1999	0.100 ppb	-2.303 (* Nondetect *)
Dec 14 1999	0.100 ppb	-2.303 (* Nondetect *)
Dec 15 1999	0.100 ppb	-2.303 (* Nondetect *)
Dec 16 1999	0.100 ppb	-2.303 (* Nondetect *)
Dec 17 1999	0.100 ppb	-2.303 (* Nondetect *)

Dec 18 1999	2.000 ppb	0.693 (* Nondetect *)
Dec 19 1999	2.000 ppb	0.693 (* Nondetect *)
Dec 20 1999	2.000 ppb	0.693 (* Nondetect *)
Dec 21 1999	2.000 ppb	0.693 (* Nondetect *)
Dec 22 1999	2.000 ppb	0.693 (* Nondetect *)
Dec 23 1999	2.000 ppb	0.693 (* Nondetect *)
Dec 24 1999	2.000 ppb	0.693 (* Nondetect *)
Dec 25 1999	2.000 ppb	0.693 (* Nondetect *)
Dec 26 1999	2.000 ppb	0.693 (* Nondetect *)
Dec 27 1999	2.000 ppb	0.693 (* Nondetect *)
Dec 28 1999	2.000 ppb	0.693 (* Nondetect *)
Dec 29 1999	2.000 ppb	0.693 (* Nondetect *)
Dec 30 1999	2.000 ppb	0.693 (* Nondetect *)

Well ID:13MW1 Summary Statistics

Observations (N): 37
Nondetects (%ND):100

Minimum:	0.100 ppb	Ln Minimum:	-2.303
Maximum:	2.000 ppb	Ln Maximum:	0.693
Mean:	0.768 ppb	Ln Mean:	-1.250
Std. Dev.:	0.920 ppb	Ln Std. Dev.:	1.450

Well ID:13MW2

Sample Date	Observation	Ln
Mar 31 1996	0.100 ppb	-2.303 (* Nondetect *)
Jun 30 1996	0.100 ppb	-2.303 (* Nondetect *)
Sep 30 1996	0.100 ppb	-2.303 (* Nondetect *)
Dec 31 1996	0.100 ppb	-2.303 (* Nondetect *)
Mar 31 1997	0.100 ppb	-2.303 (* Nondetect *)
Jun 30 1997	0.100 ppb	-2.303 (* Nondetect *)
Sep 30 1997	0.100 ppb	-2.303 (* Nondetect *)
Dec 31 1997	0.100 ppb	-2.303 (* Nondetect *)
Mar 09 1998	0.100 ppb	-2.303 (* Nondetect *)
May 14 1998	0.100 ppb	-2.303 (* Nondetect *)
Aug 14 1998	0.100 ppb	-2.303 (* Nondetect *)
Nov 23 1998	0.100 ppb	-2.303 (* Nondetect *)
Mar 13 1999	0.100 ppb	-2.303 (* Nondetect *)
May 27 1999	0.100 ppb	-2.303 (* Nondetect *)
Jul 27 1999	0.100 ppb	-2.303 (* Nondetect *)
Nov 08 1999	0.100 ppb	-2.303 (* Nondetect *)
Dec 10 1999	0.100 ppb	-2.303 (* Nondetect *)
Dec 11 1999	0.100 ppb	-2.303 (* Nondetect *)
Dec 12 1999	0.100 ppb	-2.303 (* Nondetect *)
Dec 13 1999	0.100 ppb	-2.303 (* Nondetect *)
Dec 14 1999	0.100 ppb	-2.303 (* Nondetect *)
Dec 15 1999	0.100 ppb	-2.303 (* Nondetect *)
Dec 16 1999	0.100 ppb	-2.303 (* Nondetect *)
Dec 17 1999	0.100 ppb	-2.303 (* Nondetect *)
Dec 18 1999	2.000 ppb	0.693 (* Nondetect *)
Dec 19 1999	2.000 ppb	0.693 (* Nondetect *)
Dec 20 1999	2.520 ppb	0.924
Dec 21 1999	2.000 ppb	0.693 (* Nondetect *)
Dec 22 1999	2.000 ppb	0.693 (* Nondetect *)

Dec 23 1999	2.000 ppb	0.693 (* Nondetect *)
Dec 24 1999	2.000 ppb	0.693 (* Nondetect *)
Dec 25 1999	2.000 ppb	0.693 (* Nondetect *)
Dec 26 1999	2.000 ppb	0.693 (* Nondetect *)
Dec 27 1999	2.000 ppb	0.693 (* Nondetect *)
Dec 28 1999	2.000 ppb	0.693 (* Nondetect *)
Dec 29 1999	2.000 ppb	0.693 (* Nondetect *)
Dec 30 1999	2.000 ppb	0.693 (* Nondetect *)

Well ID: 13MW2 Summary Statistics

Observations (N): 37
Nondetects (%ND): 97

Minimum:	0.100 ppb	Ln Minimum:	-2.303
Maximum:	2.520 ppb	Ln Maximum:	0.924
Mean:	0.782 ppb	Ln Mean:	-1.244
Std. Dev.:	0.943 ppb	Ln Std. Dev.:	1.459

Normality Tests

Report Printed: 05-10-2005 16:28

Facility:RAAPHWMU13 Haz. Waste Unit 13 - RAAP

Address:

City:Radford ST:VA Zip:
County:PULASKI

Contact:
Phone:( ) -

Permit Type:Detection

Constituent:Hg Mercury

CAS Number: 7439-97-6
MCL: 0.000 ppb
ACL: 0.000 ppb
Detect Limit: 4.000 ppb

Start Date:Mar 31 1996
End Date:Dec 30 1999

Normality Test on Observations for wells listed below:

Well:13MW1 Position:Upgradient Observations:37

Scale	Minimum	Maximum	Mean	Std Dev
Original:	0.100	2.000	0.768	0.920
Log:	-2.303	0.693	-1.250	1.450

Well:13MW2 Position:Upgradient Observations:37

Scale	Minimum	Maximum	Mean	Std Dev
Original:	0.100	2.520	0.782	0.943
Log:	-2.303	0.924	-1.244	1.459

Pooled Statistics
Observations: 74

Statistic	Original Scale	Log Scale
Mean:	0.775	-1.247
Std Dev:	0.925	1.444
Skewness:	0.638	0.624
Kurtosis:	-1.565	-1.609
Minimum:	0.100	-2.303
Maximum:	2.520	0.924

CV: 1.194 -1.158

Shapiro-Francia Statistics

Scale	Test Statistic	5% Critical Value	1% Critical Value
Original:	0.6336*	0.9690	0.9560
Log:	0.6250*	0.9690	0.9560

* Indicates statistically significant evidence of non-normality.
GRIT/STAT Version 5.0

Nonparametric Prediction Interval
Report Printed May 10,2005

Facility:Haz. Waste Unit 13 - RAAP
Parameter:Mercury(CAS Number:7439-97-6)

ONE-TAILED UPPER PARAMETRIC PREDICTION INTERVAL

Observations (n):	74
Conf. Level (1-α):	100.000%
UL:	2.52 ~~0.100~~ ppb
LL:	0.000

%ND: ~99%.

Data Set Summary

Report Printed: 05-10-2005 17:24

Facility:RAAPHWMU13 Haz. Waste Unit 13 - RAAP

Address:

City:Radford ST:VA Zip:
County:PULASKI

Contact:
Phone:( ) -

Permit Type:Detection

Constituent:Ag Silver, total

CAS Number: 7440-22-4
MCL: 0.000 ppb
ACL: 0.000 ppb
Detect Limit: 4.000 ppb

Start Date:Mar 31 1996
End Date:Dec 30 1999

Well ID:13MW1

Sample Date	Observation	Ln
Mar 31 1996	0.300 ppb	-1.204
Jun 30 1996	0.100 ppb	-2.303 (* Nondetect *)
Sep 30 1996	2.400 ppb	0.875
Dec 31 1996	0.900 ppb	-0.105
Mar 31 1997	1.000 ppb	0.000
Jun 30 1997	0.100 ppb	-2.303 (* Nondetect *)
Sep 30 1997	0.100 ppb	-2.303 (* Nondetect *)
Dec 31 1997	0.100 ppb	-2.303 (* Nondetect *)
Mar 09 1998	0.100 ppb	-2.303 (* Nondetect *)
May 14 1998	0.100 ppb	-2.303 (* Nondetect *)
Aug 14 1998	0.100 ppb	-2.303 (* Nondetect *)
Nov 23 1998	0.100 ppb	-2.303 (* Nondetect *)
Mar 13 1999	0.100 ppb	-2.303 (* Nondetect *)
May 27 1999	0.100 ppb	-2.303 (* Nondetect *)
Jul 27 1999	0.100 ppb	-2.303 (* Nondetect *)
Nov 08 1999	0.100 ppb	-2.303 (* Nondetect *)
Dec 10 1999	0.100 ppb	-2.303 (* Nondetect *)
Dec 11 1999	0.100 ppb	-2.303 (* Nondetect *)
Dec 12 1999	0.100 ppb	-2.303 (* Nondetect *)
Dec 13 1999	0.100 ppb	-2.303 (* Nondetect *)
Dec 14 1999	0.100 ppb	-2.303 (* Nondetect *)
Dec 15 1999	0.100 ppb	-2.303 (* Nondetect *)
Dec 16 1999	0.100 ppb	-2.303 (* Nondetect *)
Dec 17 1999	0.100 ppb	-2.303 (* Nondetect *)

Dec 18 1999	2.000 ppb	0.693 (* Nondetect *)
Dec 19 1999	2.000 ppb	0.693 (* Nondetect *)
Dec 20 1999	2.000 ppb	0.693 (* Nondetect *)
Dec 21 1999	2.000 ppb	0.693 (* Nondetect *)
Dec 22 1999	2.000 ppb	0.693 (* Nondetect *)
Dec 23 1999	2.000 ppb	0.693 (* Nondetect *)
Dec 24 1999	2.000 ppb	0.693 (* Nondetect *)
Dec 25 1999	2.000 ppb	0.693 (* Nondetect *)
Dec 26 1999	2.000 ppb	0.693 (* Nondetect *)
Dec 27 1999	2.000 ppb	0.693 (* Nondetect *)
Dec 28 1999	2.000 ppb	0.693 (* Nondetect *)
Dec 29 1999	2.000 ppb	0.693 (* Nondetect *)
Dec 30 1999	2.000 ppb	0.693 (* Nondetect *)

Well ID:13MW1 Summary Statistics

Observations (N): 37
Nondetects (%ND): 89

Minimum:	0.100 ppb	Ln Minimum:	-2.303
Maximum:	2.400 ppb	Ln Maximum:	0.875
Mean:	0.881 ppb	Ln Mean:	-1.013
Std. Dev.:	0.930 ppb	Ln Std. Dev.:	1.458

Well ID:13MW2

Sample Date	Observation	Ln
Mar 31 1996	0.100 ppb	-2.303 (* Nondetect *)
Jun 30 1996	0.100 ppb	-2.303 (* Nondetect *)
Sep 30 1996	0.400 ppb	-0.916
Dec 31 1996	0.700 ppb	-0.357
Mar 31 1997	0.100 ppb	-2.303 (* Nondetect *)
Jun 30 1997	0.100 ppb	-2.303 (* Nondetect *)
Sep 30 1997	0.100 ppb	-2.303 (* Nondetect *)
Dec 31 1997	0.100 ppb	-2.303 (* Nondetect *)
Mar 09 1998	0.100 ppb	-2.303 (* Nondetect *)
May 14 1998	0.100 ppb	-2.303 (* Nondetect *)
Aug 14 1998	0.100 ppb	-2.303 (* Nondetect *)
Nov 23 1998	0.100 ppb	-2.303 (* Nondetect *)
Mar 13 1999	0.100 ppb	-2.303 (* Nondetect *)
May 27 1999	0.100 ppb	-2.303 (* Nondetect *)
Jul 27 1999	0.100 ppb	-2.303 (* Nondetect *)
Nov 08 1999	0.100 ppb	-2.303 (* Nondetect *)
Dec 10 1999	0.100 ppb	-2.303 (* Nondetect *)
Dec 11 1999	0.100 ppb	-2.303 (* Nondetect *)
Dec 12 1999	0.100 ppb	-2.303 (* Nondetect *)
Dec 13 1999	0.100 ppb	-2.303 (* Nondetect *)
Dec 14 1999	0.100 ppb	-2.303 (* Nondetect *)
Dec 15 1999	0.100 ppb	-2.303 (* Nondetect *)
Dec 16 1999	0.100 ppb	-2.303 (* Nondetect *)
Dec 17 1999	0.100 ppb	-2.303 (* Nondetect *)
Dec 18 1999	2.000 ppb	0.693 (* Nondetect *)
Dec 19 1999	2.000 ppb	0.693 (* Nondetect *)
Dec 20 1999	2.000 ppb	0.693 (* Nondetect *)
Dec 21 1999	2.000 ppb	0.693 (* Nondetect *)
Dec 22 1999	2.000 ppb	0.693 (* Nondetect *)

Dec 23 1999	2.000 ppb	0.693 (* Nondetect *)
Dec 24 1999	2.000 ppb	0.693 (* Nondetect *)
Dec 25 1999	2.000 ppb	0.693 (* Nondetect *)
Dec 26 1999	2.000 ppb	0.693 (* Nondetect *)
Dec 27 1999	2.000 ppb	0.693 (* Nondetect *)
Dec 28 1999	2.000 ppb	0.693 (* Nondetect *)
Dec 29 1999	2.000 ppb	0.693 (* Nondetect *)
Dec 30 1999	2.000 ppb	0.693 (* Nondetect *)

Well ID:13MW2 Summary Statistics

Observations (N): 37
Nondetects (%ND): 95

Minimum:	0.100 ppb	Ln Minimum:	-2.303
Maximum:	2.000 ppb	Ln Maximum:	0.693
Mean:	0.792 ppb	Ln Mean:	-1.160
Std. Dev.:	0.908 ppb	Ln Std. Dev.:	1.434

Normality Tests

Report Printed: 05-10-2005 16:37

Facility:RAAPHWMU13 Haz. Waste Unit 13 - RAAP

Address:

City:Radford ST:VA Zip:
County:PULASKI

Contact:
Phone:( ) -

Permit Type:Detection

Constituent:Ag Silver, total

CAS Number: 7440-22-4
MCL: 0.000 ppb
ACL: 0.000 ppb
Detect Limit: 4.000 ppb

Start Date:Mar 31 1996
End Date:Dec 30 1999

Normality Test on Observations for wells listed below:

Well:13MW1 Position:Upgradient Observations:37

Scale	Minimum	Maximum	Mean	Std Dev
Original:	0.100	2.400	0.881	0.930
Log:	-2.303	0.875	-1.013	1.458

Well:13MW2 Position:Upgradient Observations:37

Scale	Minimum	Maximum	Mean	Std Dev
Original:	0.100	2.000	0.792	0.908
Log:	-2.303	0.693	-1.160	1.434

Pooled Statistics
Observations: 74

Statistic	Original Scale	Log Scale
Mean:	0.836	-1.086
Std Dev:	0.914	1.438
Skewness:	0.502	0.376
Kurtosis:	-1.683	-1.799
Minimum:	0.100	-2.303
Maximum:	2.400	0.875

CV: 1.092 -1.324

Shapiro-Francia Statistics

Scale	Test Statistic	5% Critical Value	1% Critical Value
Original:	0.6793*	0.9690	0.9560
Log:	0.6842*	0.9690	0.9560

* Indicates statistically significant evidence of non-normality.
GRIT/STAT Version 5.0

Nonparametric Prediction Interval
Report Printed May 10,2005

Facility:Haz. Waste Unit 13 - RAAP
Parameter:Silver, total(CAS Number:7440-22-4)

ONE-TAILED UPPER PARAMETRIC PREDICTION INTERVAL

Observations (n):	74
Conf. Level (1-α):	***.***%
UL:	~~0.100~~ 2.4 ppb
LL:	0.000

%ND: 92%.

Report Produced by GRITS/STAT 5.01

Data Set Summary

Report Printed: 05-10-2005 16:44

Facility:RAAPHWMU13 Haz. Waste Unit 13 - RAAP

Address:

City:Radford ST:VA Zip:
County:PULASKI

Contact:
Phone:( ) -

Permit Type:Detection

Constituent:Acetone Acetone

CAS Number: 67-64-1
MCL: 0.000 ppb
ACL: 0.000 ppb
Detect Limit: 50.000 ppb

Start Date:Mar 31 1996
End Date:Dec 30 1999

Well ID:13MW1

Sample Date	Observation	Ln
Mar 31 1996	5.000 ppb	1.609 (* Nondetect *)
Jun 30 1996	5.000 ppb	1.609 (* Nondetect *)
Sep 30 1996	5.000 ppb	1.609 (* Nondetect *)
Dec 31 1996	5.000 ppb	1.609 (* Nondetect *)
Mar 31 1997	5.000 ppb	1.609 (* Nondetect *)
Jun 30 1997	5.000 ppb	1.609 (* Nondetect *)
Sep 30 1997	5.000 ppb	1.609 (* Nondetect *)
Dec 31 1997	5.000 ppb	1.609 (* Nondetect *)
Mar 09 1998	5.000 ppb	1.609 (* Nondetect *)
May 14 1998	5.000 ppb	1.609 (* Nondetect *)
Aug 14 1998	5.000 ppb	1.609 (* Nondetect *)
Nov 23 1998	5.000 ppb	1.609 (* Nondetect *)
Mar 13 1999	5.000 ppb	1.609 (* Nondetect *)
May 27 1999	5.000 ppb	1.609 (* Nondetect *)
Jul 27 1999	5.000 ppb	1.609 (* Nondetect *)
Nov 08 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 10 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 11 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 12 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 13 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 14 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 15 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 16 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 17 1999	5.000 ppb	1.609 (* Nondetect *)

Dec 18 1999	25.000 ppb	3.219 (* Nondetect *)
Dec 19 1999	25.000 ppb	3.219 (* Nondetect *)
Dec 20 1999	25.000 ppb	3.219 (* Nondetect *)
Dec 21 1999	25.000 ppb	3.219 (* Nondetect *)
Dec 22 1999	25.000 ppb	3.219 (* Nondetect *)
Dec 23 1999	25.000 ppb	3.219 (* Nondetect *)
Dec 24 1999	25.000 ppb	3.219 (* Nondetect *)
Dec 25 1999	25.000 ppb	3.219 (* Nondetect *)
Dec 26 1999	25.000 ppb	3.219 (* Nondetect *)
Dec 27 1999	25.000 ppb	3.219 (* Nondetect *)
Dec 28 1999	25.000 ppb	3.219 (* Nondetect *)
Dec 29 1999	25.000 ppb	3.219 (* Nondetect *)
Dec 30 1999	25.000 ppb	3.219 (* Nondetect *)

Well ID:13MW1 Summary Statistics

Observations (N): 37
Nondetects (%ND):100

Minimum:	5.000 ppb	Ln Minimum:	1.609
Maximum:	25.000 ppb	Ln Maximum:	3.219
Mean:	12.027 ppb	Ln Mean:	2.175
Std. Dev.:	9.680 ppb	Ln Std. Dev.:	0.779

Well ID:13MW2

Sample Date	Observation	Ln
Mar 31 1996	5.000 ppb	1.609 (* Nondetect *)
Jun 30 1996	5.000 ppb	1.609 (* Nondetect *)
Sep 30 1996	5.000 ppb	1.609 (* Nondetect *)
Dec 31 1996	5.000 ppb	1.609 (* Nondetect *)
Mar 31 1997	5.000 ppb	1.609 (* Nondetect *)
Jun 30 1997	5.000 ppb	1.609 (* Nondetect *)
Sep 30 1997	5.000 ppb	1.609 (* Nondetect *)
Dec 31 1997	5.000 ppb	1.609 (* Nondetect *)
Mar 09 1998	5.000 ppb	1.609 (* Nondetect *)
May 14 1998	5.000 ppb	1.609 (* Nondetect *)
Aug 14 1998	5.000 ppb	1.609 (* Nondetect *)
Nov 23 1998	5.000 ppb	1.609 (* Nondetect *)
Mar 13 1999	5.000 ppb	1.609 (* Nondetect *)
May 27 1999	5.000 ppb	1.609 (* Nondetect *)
Jul 27 1999	5.000 ppb	1.609 (* Nondetect *)
Nov 08 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 10 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 11 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 12 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 13 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 14 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 15 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 16 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 17 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 18 1999	25.000 ppb	3.219 (* Nondetect *)
Dec 19 1999	25.000 ppb	3.219 (* Nondetect *)
Dec 20 1999	25.000 ppb	3.219 (* Nondetect *)
Dec 21 1999	25.000 ppb	3.219 (* Nondetect *)
Dec 22 1999	25.000 ppb	3.219 (* Nondetect *)

Dec 23 1999	25.000 ppb	3.219 (* Nondetect *)
Dec 24 1999	25.000 ppb	3.219 (* Nondetect *)
Dec 25 1999	25.000 ppb	3.219 (* Nondetect *)
Dec 26 1999	25.000 ppb	3.219 (* Nondetect *)
Dec 27 1999	25.000 ppb	3.219 (* Nondetect *)
Dec 28 1999	25.000 ppb	3.219 (* Nondetect *)
Dec 29 1999	25.000 ppb	3.219 (* Nondetect *)
Dec 30 1999	25.000 ppb	3.219 (* Nondetect *)

Well ID: 13MW2 Summary Statistics

Observations (N): 37
Nondetects (%ND): 100

Minimum:	5.000 ppb	Ln Minimum:	1.609
Maximum:	25.000 ppb	Ln Maximum:	3.219
Mean:	12.027 ppb	Ln Mean:	2.175
Std. Dev.:	9.680 ppb	Ln Std. Dev.:	0.779

Data Set Summary

Report Printed: 05-10-2005 16:43

Facility:RAAPHWMU13 Haz. Waste Unit 13 - RAAP

Address:

City:Radford ST:VA Zip:
County:PULASKI

Contact:
Phone:( ) -

Permit Type:Detection

Constituent:Benzene Benzene

CAS Number: 71-43-2
MCL: 0.000 ppb
ACL: 0.000 ppb
Detect Limit: 10.000 ppb

Start Date:Mar 31 1996
End Date:Dec 30 1999

Well ID:13MW1

Sample Date	Observation	Ln
Mar 31 1996	0.050 ppb	-2.996 (* Nondetect *)
Jun 30 1996	0.050 ppb	-2.996 (* Nondetect *)
Sep 30 1996	0.050 ppb	-2.996 (* Nondetect *)
Dec 31 1996	0.050 ppb	-2.996 (* Nondetect *)
Mar 31 1997	0.050 ppb	-2.996 (* Nondetect *)
Jun 30 1997	0.050 ppb	-2.996 (* Nondetect *)
Sep 30 1997	0.050 ppb	-2.996 (* Nondetect *)
Dec 31 1997	0.050 ppb	-2.996 (* Nondetect *)
Mar 09 1998	0.050 ppb	-2.996 (* Nondetect *)
May 14 1998	0.050 ppb	-2.996 (* Nondetect *)
Aug 14 1998	0.050 ppb	-2.996 (* Nondetect *)
Nov 23 1998	0.050 ppb	-2.996 (* Nondetect *)
Mar 13 1999	0.050 ppb	-2.996 (* Nondetect *)
May 27 1999	0.050 ppb	-2.996 (* Nondetect *)
Jul 27 1999	0.050 ppb	-2.996 (* Nondetect *)
Nov 08 1999	0.050 ppb	-2.996 (* Nondetect *)
Dec 10 1999	0.050 ppb	-2.996 (* Nondetect *)
Dec 11 1999	0.050 ppb	-2.996 (* Nondetect *)
Dec 12 1999	0.050 ppb	-2.996 (* Nondetect *)
Dec 13 1999	0.050 ppb	-2.996 (* Nondetect *)
Dec 14 1999	0.050 ppb	-2.996 (* Nondetect *)
Dec 15 1999	0.050 ppb	-2.996 (* Nondetect *)
Dec 16 1999	0.050 ppb	-2.996 (* Nondetect *)
Dec 17 1999	0.050 ppb	-2.996 (* Nondetect *)

Dec 18 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 19 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 20 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 21 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 22 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 23 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 24 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 25 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 26 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 27 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 28 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 29 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 30 1999	5.000 ppb	1.609 (* Nondetect *)

Well ID:13MW1 Summary Statistics

Observations (N): 37
Nondetects (%ND):100

Minimum:	0.050 ppb	Ln Minimum:	-2.996
Maximum:	5.000 ppb	Ln Maximum:	1.609
Mean:	1.789 ppb	Ln Mean:	-1.378
Std. Dev.:	2.396 ppb	Ln Std. Dev.:	2.229

Well ID:13MW2

Sample Date	Observation	Ln
Mar 31 1996	0.050 ppb	-2.996 (* Nondetect *)
Jun 30 1996	0.050 ppb	-2.996 (* Nondetect *)
Sep 30 1996	0.050 ppb	-2.996 (* Nondetect *)
Dec 31 1996	0.050 ppb	-2.996 (* Nondetect *)
Mar 31 1997	0.050 ppb	-2.996 (* Nondetect *)
Jun 30 1997	0.050 ppb	-2.996 (* Nondetect *)
Sep 30 1997	0.050 ppb	-2.996 (* Nondetect *)
Dec 31 1997	0.050 ppb	-2.996 (* Nondetect *)
Mar 09 1998	0.050 ppb	-2.996 (* Nondetect *)
May 14 1998	0.050 ppb	-2.996 (* Nondetect *)
Aug 14 1998	0.050 ppb	-2.996 (* Nondetect *)
Nov 23 1998	0.050 ppb	-2.996 (* Nondetect *)
Mar 13 1999	0.050 ppb	-2.996 (* Nondetect *)
May 27 1999	0.050 ppb	-2.996 (* Nondetect *)
Jul 27 1999	0.050 ppb	-2.996 (* Nondetect *)
Nov 08 1999	0.050 ppb	-2.996 (* Nondetect *)
Dec 10 1999	0.050 ppb	-2.996 (* Nondetect *)
Dec 11 1999	0.050 ppb	-2.996 (* Nondetect *)
Dec 12 1999	0.050 ppb	-2.996 (* Nondetect *)
Dec 13 1999	0.050 ppb	-2.996 (* Nondetect *)
Dec 14 1999	0.050 ppb	-2.996 (* Nondetect *)
Dec 15 1999	0.050 ppb	-2.996 (* Nondetect *)
Dec 16 1999	0.050 ppb	-2.996 (* Nondetect *)
Dec 17 1999	0.050 ppb	-2.996 (* Nondetect *)
Dec 18 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 19 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 20 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 21 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 22 1999	5.000 ppb	1.609 (* Nondetect *)

Dec 23 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 24 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 25 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 26 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 27 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 28 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 29 1999	5.000 ppb	

Data Set Summary

Report Printed: 05-10-2005 16:46

Facility:RAAPHWMU13 Haz. Waste Unit 13 - RAAP

Address:

City:Radford ST:VA Zip:
County:PULASKI

Contact:
Phone:( ) -

Permit Type:Detection

Constituent:Toluen Toluene

CAS Number: 108-88-3
MCL: 0.000 ppb
ACL: 0.000 ppb
Detect Limit: 10.000 ppb

Start Date:Mar 31 1996
End Date:Dec 30 1999

Well ID:13MW1

Sample Date	Observation	Ln
Mar 31 1996	0.050 ppb	-2.996 (* Nondetect *)
Jun 30 1996	0.200 ppb	-1.609
Sep 30 1996	0.050 ppb	-2.996 (* Nondetect *)
Dec 31 1996	0.050 ppb	-2.996 (* Nondetect *)
Mar 31 1997	0.050 ppb	-2.996 (* Nondetect *)
Jun 30 1997	0.050 ppb	-2.996 (* Nondetect *)
Sep 30 1997	0.050 ppb	-2.996 (* Nondetect *)
Dec 31 1997	0.050 ppb	-2.996 (* Nondetect *)
Mar 09 1998	0.050 ppb	-2.996 (* Nondetect *)
May 14 1998	0.050 ppb	-2.996 (* Nondetect *)
Aug 14 1998	0.050 ppb	-2.996 (* Nondetect *)
Nov 23 1998	0.050 ppb	-2.996 (* Nondetect *)
Mar 13 1999	0.050 ppb	-2.996 (* Nondetect *)
May 27 1999	0.050 ppb	-2.996 (* Nondetect *)
Jul 27 1999	0.050 ppb	-2.996 (* Nondetect *)
Nov 08 1999	0.050 ppb	-2.996 (* Nondetect *)
Dec 10 1999	0.050 ppb	-2.996 (* Nondetect *)
Dec 11 1999	0.050 ppb	-2.996 (* Nondetect *)
Dec 12 1999	0.050 ppb	-2.996 (* Nondetect *)
Dec 13 1999	0.050 ppb	-2.996 (* Nondetect *)
Dec 14 1999	0.050 ppb	-2.996 (* Nondetect *)
Dec 15 1999	0.050 ppb	-2.996 (* Nondetect *)
Dec 16 1999	0.050 ppb	-2.996 (* Nondetect *)
Dec 17 1999	0.050 ppb	-2.996 (* Nondetect *)

Dec 18 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 19 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 20 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 21 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 22 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 23 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 24 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 25 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 26 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 27 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 28 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 29 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 30 1999	5.000 ppb	1.609 (* Nondetect *)

Well ID:13MW1 Summary Statistics

Observations (N): 37
Nondetects (%ND): 97

Minimum:	0.050 ppb	Ln Minimum:	-2.996
Maximum:	5.000 ppb	Ln Maximum:	1.609
Mean:	1.793 ppb	Ln Mean:	-1.340
Std. Dev.:	2.393 ppb	Ln Std. Dev.:	2.212

Well ID:13MW2

Sample Date	Observation	Ln
Mar 31 1996	0.050 ppb	-2.996 (* Nondetect *)
Jun 30 1996	0.200 ppb	-1.609
Sep 30 1996	0.050 ppb	-2.996 (* Nondetect *)
Dec 31 1996	0.050 ppb	-2.996 (* Nondetect *)
Mar 31 1997	0.050 ppb	-2.996 (* Nondetect *)
Jun 30 1997	0.050 ppb	-2.996 (* Nondetect *)
Sep 30 1997	0.050 ppb	-2.996 (* Nondetect *)
Dec 31 1997	0.050 ppb	-2.996 (* Nondetect *)
Mar 09 1998	0.050 ppb	-2.996 (* Nondetect *)
May 14 1998	0.050 ppb	-2.996 (* Nondetect *)
Aug 14 1998	0.050 ppb	-2.996 (* Nondetect *)
Nov 23 1998	0.050 ppb	-2.996 (* Nondetect *)
Mar 13 1999	0.050 ppb	-2.996 (* Nondetect *)
May 27 1999	0.050 ppb	-2.996 (* Nondetect *)
Jul 27 1999	0.050 ppb	-2.996 (* Nondetect *)
Nov 08 1999	0.050 ppb	-2.996 (* Nondetect *)
Dec 10 1999	0.050 ppb	-2.996 (* Nondetect *)
Dec 11 1999	0.050 ppb	-2.996 (* Nondetect *)
Dec 12 1999	0.050 ppb	-2.996 (* Nondetect *)
Dec 13 1999	0.050 ppb	-2.996 (* Nondetect *)
Dec 14 1999	0.050 ppb	-2.996 (* Nondetect *)
Dec 15 1999	0.050 ppb	-2.996 (* Nondetect *)
Dec 16 1999	0.050 ppb	-2.996 (* Nondetect *)
Dec 17 1999	0.050 ppb	-2.996 (* Nondetect *)
Dec 18 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 19 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 20 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 21 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 22 1999	5.000 ppb	1.609 (* Nondetect *)

Dec 23 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 24 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 25 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 26 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 27 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 28 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 29 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 30 1999	5.000 ppb	1.609 (* Nondetect *)

Well ID: 13MW2 Summary Statistics

Observations (N): 37
Nondetects (%ND): 97

Minimum:	0.050 ppb	Ln Minimum:	-2.996
Maximum:	5.000 ppb	Ln Maximum:	1.609
Mean:	1.793 ppb	Ln Mean:	-1.340
Std. Dev.:	2.393 ppb	Ln Std. Dev.:	2.212

Data Set Summary

Report Printed: 05-10-2005 16:46

Facility:RAAPHWMU13 Haz. Waste Unit 13 - RAAP

Address:

City:Radford ST:VA Zip:
County:PULASKI

Contact:
Phone:( ) -

Permit Type:Detection

Constituent:2,4-DNT 2,4-Dinitrotoluene

CAS Number: 121-14-2
MCL: 0.000 ppb
ACL: 0.000 ppb
Detect Limit: 20.000 ppb

Start Date:Mar 31 1996
End Date:Dec 30 1999

Well ID:13MW1

Sample Date	Observation	Ln
Mar 31 1996	0.040 ppb	-3.219 (* Nondetect *)
Jun 30 1996	0.040 ppb	-3.219 (* Nondetect *)
Sep 30 1996	0.040 ppb	-3.219 (* Nondetect *)
Dec 31 1996	0.040 ppb	-3.219 (* Nondetect *)
Mar 31 1997	0.040 ppb	-3.219 (* Nondetect *)
Jun 30 1997	0.040 ppb	-3.219 (* Nondetect *)
Sep 30 1997	0.040 ppb	-3.219 (* Nondetect *)
Dec 31 1997	0.040 ppb	-3.219 (* Nondetect *)
Mar 09 1998	0.040 ppb	-3.219 (* Nondetect *)
May 14 1998	0.040 ppb	-3.219 (* Nondetect *)
Aug 14 1998	0.040 ppb	-3.219 (* Nondetect *)
Nov 23 1998	0.040 ppb	-3.219 (* Nondetect *)
Mar 13 1999	0.040 ppb	-3.219 (* Nondetect *)
May 27 1999	0.040 ppb	-3.219 (* Nondetect *)
Jul 27 1999	0.040 ppb	-3.219 (* Nondetect *)
Nov 08 1999	0.040 ppb	-3.219 (* Nondetect *)
Dec 10 1999	0.040 ppb	-3.219 (* Nondetect *)
Dec 11 1999	0.040 ppb	-3.219 (* Nondetect *)
Dec 12 1999	0.040 ppb	-3.219 (* Nondetect *)
Dec 13 1999	0.040 ppb	-3.219 (* Nondetect *)
Dec 14 1999	0.040 ppb	-3.219 (* Nondetect *)
Dec 15 1999	0.040 ppb	-3.219 (* Nondetect *)
Dec 16 1999	0.040 ppb	-3.219 (* Nondetect *)
Dec 17 1999	0.040 ppb	-3.219 (* Nondetect *)

Dec 18 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 19 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 20 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 21 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 22 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 23 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 24 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 25 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 26 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 27 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 28 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 29 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 30 1999	10.000 ppb	2.303 (* Nondetect *)

Well ID:13MW1 Summary Statistics

Observations (N): 37
Nondetects (%ND):100

Minimum:	0.040 ppb	Ln Minimum:	-3.219
Maximum:	10.000 ppb	Ln Maximum:	2.303
Mean:	3.539 ppb	Ln Mean:	-1.279
Std. Dev.:	4.820 ppb	Ln Std. Dev.:	2.672

Well ID:13MW2

Sample Date	Observation	Ln
Mar 31 1996	0.040 ppb	-3.219 (* Nondetect *)
Jun 30 1996	0.040 ppb	-3.219 (* Nondetect *)
Sep 30 1996	0.040 ppb	-3.219 (* Nondetect *)
Dec 31 1996	0.040 ppb	-3.219 (* Nondetect *)
Mar 31 1997	0.040 ppb	-3.219 (* Nondetect *)
Jun 30 1997	0.040 ppb	-3.219 (* Nondetect *)
Sep 30 1997	0.040 ppb	-3.219 (* Nondetect *)
Dec 31 1997	0.040 ppb	-3.219 (* Nondetect *)
Mar 09 1998	0.040 ppb	-3.219 (* Nondetect *)
May 14 1998	0.040 ppb	-3.219 (* Nondetect *)
Aug 14 1998	0.040 ppb	-3.219 (* Nondetect *)
Nov 23 1998	0.040 ppb	-3.219 (* Nondetect *)
Mar 13 1999	0.040 ppb	-3.219 (* Nondetect *)
May 27 1999	0.040 ppb	-3.219 (* Nondetect *)
Jul 27 1999	0.040 ppb	-3.219 (* Nondetect *)
Nov 08 1999	0.040 ppb	-3.219 (* Nondetect *)
Dec 10 1999	0.040 ppb	-3.219 (* Nondetect *)
Dec 11 1999	0.040 ppb	-3.219 (* Nondetect *)
Dec 12 1999	0.040 ppb	-3.219 (* Nondetect *)
Dec 13 1999	0.040 ppb	-3.219 (* Nondetect *)
Dec 14 1999	0.040 ppb	-3.219 (* Nondetect *)
Dec 15 1999	0.040 ppb	-3.219 (* Nondetect *)
Dec 16 1999	0.040 ppb	-3.219 (* Nondetect *)
Dec 17 1999	0.040 ppb	-3.219 (* Nondetect *)
Dec 18 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 19 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 20 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 21 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 22 1999	10.000 ppb	2.303 (* Nondetect *)

Dec 23 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 24 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 25 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 26 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 27 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 28 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 29 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 30 1999	10.000 ppb	2.303 (* Nondetect *)

Well ID: 13MW2 Summary Statistics

Observations (N): 37
Nondetects (%ND): 100

Minimum:	0.040 ppb	Ln Minimum:	-3.219
Maximum:	10.000 ppb	Ln Maximum:	2.303
Mean:	3.539 ppb	Ln Mean:	-1.279
Std. Dev.:	4.820 ppb	Ln Std. Dev.:	2.672

Data Set Summary

Report Printed: 05-10-2005 16:47

Facility:RAAPHWMU13 Haz. Waste Unit 13 - RAAP

Address:

City:Radford ST:VA Zip:
County:PULASKI

Contact:
Phone:( ) -

Permit Type:Detection

Constituent:Di-N-Bu Di-n-Butylphthalate

CAS Number: 84-74-2
MCL: 0.000 ppb
ACL: 0.000 ppb
Detect Limit: 20.000 ppb

Start Date:Mar 31 1996
End Date:Dec 30 1999

Well ID:13MW1

Sample Date	Observation	Ln
Mar 31 1996	2.500 ppb	0.916 (* Nondetect *)
Jun 30 1996	2.500 ppb	0.916 (* Nondetect *)
Sep 30 1996	2.500 ppb	0.916 (* Nondetect *)
Dec 31 1996	2.500 ppb	0.916 (* Nondetect *)
Mar 31 1997	2.500 ppb	0.916 (* Nondetect *)
Jun 30 1997	2.500 ppb	0.916 (* Nondetect *)
Sep 30 1997	2.500 ppb	0.916 (* Nondetect *)
Dec 31 1997	2.500 ppb	0.916 (* Nondetect *)
Mar 09 1998	2.500 ppb	0.916 (* Nondetect *)
May 14 1998	2.500 ppb	0.916 (* Nondetect *)
Aug 14 1998	2.500 ppb	0.916 (* Nondetect *)
Nov 23 1998	2.500 ppb	0.916 (* Nondetect *)
Mar 13 1999	2.500 ppb	0.916 (* Nondetect *)
May 27 1999	2.500 ppb	0.916 (* Nondetect *)
Jul 27 1999	2.500 ppb	0.916 (* Nondetect *)
Nov 08 1999	2.500 ppb	0.916 (* Nondetect *)
Dec 10 1999	2.500 ppb	0.916 (* Nondetect *)
Dec 11 1999	2.500 ppb	0.916 (* Nondetect *)
Dec 12 1999	2.500 ppb	0.916 (* Nondetect *)
Dec 13 1999	2.500 ppb	0.916 (* Nondetect *)
Dec 14 1999	2.500 ppb	0.916 (* Nondetect *)
Dec 15 1999	2.500 ppb	0.916 (* Nondetect *)
Dec 16 1999	2.500 ppb	0.916 (* Nondetect *)
Dec 17 1999	2.500 ppb	0.916 (* Nondetect *)

Dec 18 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 19 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 20 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 21 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 22 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 23 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 24 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 25 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 26 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 27 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 28 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 29 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 30 1999	10.000 ppb	2.303 (* Nondetect *)

Well ID:13MW1 Summary Statistics

Observations (N): 37
Nondetects (%ND):100

Minimum:	2.500 ppb	Ln Minimum:	0.916
Maximum:	10.000 ppb	Ln Maximum:	2.303
Mean:	5.135 ppb	Ln Mean:	1.403
Std. Dev.:	3.630 ppb	Ln Std. Dev.:	0.671

Well ID:13MW2

Sample Date	Observation	Ln
Mar 31 1996	2.500 ppb	0.916 (* Nondetect *)
Jun 30 1996	2.500 ppb	0.916 (* Nondetect *)
Sep 30 1996	2.500 ppb	0.916 (* Nondetect *)
Dec 31 1996	2.500 ppb	0.916 (* Nondetect *)
Mar 31 1997	2.500 ppb	0.916 (* Nondetect *)
Jun 30 1997	2.500 ppb	0.916 (* Nondetect *)
Sep 30 1997	2.500 ppb	0.916 (* Nondetect *)
Dec 31 1997	2.500 ppb	0.916 (* Nondetect *)
Mar 09 1998	2.500 ppb	0.916 (* Nondetect *)
May 14 1998	2.500 ppb	0.916 (* Nondetect *)
Aug 14 1998	2.500 ppb	0.916 (* Nondetect *)
Nov 23 1998	2.500 ppb	0.916 (* Nondetect *)
Mar 13 1999	2.500 ppb	0.916 (* Nondetect *)
May 27 1999	2.500 ppb	0.916 (* Nondetect *)
Jul 27 1999	2.500 ppb	0.916 (* Nondetect *)
Nov 08 1999	2.500 ppb	0.916 (* Nondetect *)
Dec 10 1999	2.500 ppb	0.916 (* Nondetect *)
Dec 11 1999	2.500 ppb	0.916 (* Nondetect *)
Dec 12 1999	2.500 ppb	0.916 (* Nondetect *)
Dec 13 1999	2.500 ppb	0.916 (* Nondetect *)
Dec 14 1999	2.500 ppb	0.916 (* Nondetect *)
Dec 15 1999	2.500 ppb	0.916 (* Nondetect *)
Dec 16 1999	2.500 ppb	0.916 (* Nondetect *)
Dec 17 1999	2.500 ppb	0.916 (* Nondetect *)
Dec 18 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 19 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 20 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 21 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 22 1999	10.000 ppb	2.303 (* Nondetect *)

Dec 23 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 24 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 25 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 26 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 27 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 28 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 29 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 30 1999	10.000 ppb	2.303 (* Nondetect *)

Well ID: 13MW2 Summary Statistics

Observations (N): 37
Nondetects (%ND): 100

Minimum:	2.500 ppb	Ln Minimum:	0.916
Maximum:	10.000 ppb	Ln Maximum:	2.303
Mean:	5.135 ppb	Ln Mean:	1.403
Std. Dev.:	3.630 ppb	Ln Std. Dev.:	0.671

Data Set Summary

Report Printed: 05-10-2005 16:47

Facility:RAAPHWMU13 Haz. Waste Unit 13 - RAAP

Address:

City:Radford ST:VA Zip:
County:PULASKI

Contact:
Phone:( ) -

Permit Type:Detection

Constituent:DEthPhth Diethylphthalate

CAS Number: 84-66-2
MCL: 0.000 ppb
ACL: 0.000 ppb
Detect Limit: 20.000 ppb

Start Date:Mar 31 1996
End Date:Dec 30 1999

Well ID:13MW1

Sample Date	Observation	Ln
Mar 31 1996	2.500 ppb	0.916 (* Nondetect *)
Jun 30 1996	2.500 ppb	0.916 (* Nondetect *)
Sep 30 1996	2.500 ppb	0.916 (* Nondetect *)
Dec 31 1996	2.500 ppb	0.916 (* Nondetect *)
Mar 31 1997	2.500 ppb	0.916 (* Nondetect *)
Jun 30 1997	2.500 ppb	0.916 (* Nondetect *)
Sep 30 1997	2.500 ppb	0.916 (* Nondetect *)
Dec 31 1997	2.500 ppb	0.916 (* Nondetect *)
Mar 09 1998	2.500 ppb	0.916 (* Nondetect *)
May 14 1998	2.500 ppb	0.916 (* Nondetect *)
Aug 14 1998	2.500 ppb	0.916 (* Nondetect *)
Nov 23 1998	2.500 ppb	0.916 (* Nondetect *)
Mar 13 1999	2.500 ppb	0.916 (* Nondetect *)
May 27 1999	2.500 ppb	0.916 (* Nondetect *)
Jul 27 1999	2.500 ppb	0.916 (* Nondetect *)
Nov 08 1999	2.500 ppb	0.916 (* Nondetect *)
Dec 10 1999	2.500 ppb	0.916 (* Nondetect *)
Dec 11 1999	2.500 ppb	0.916 (* Nondetect *)
Dec 12 1999	2.500 ppb	0.916 (* Nondetect *)
Dec 13 1999	2.500 ppb	0.916 (* Nondetect *)
Dec 14 1999	2.500 ppb	0.916 (* Nondetect *)
Dec 15 1999	2.500 ppb	0.916 (* Nondetect *)
Dec 16 1999	2.500 ppb	0.916 (* Nondetect *)
Dec 17 1999	2.500 ppb	0.916 (* Nondetect *)

Dec 18 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 19 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 20 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 21 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 22 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 23 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 24 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 25 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 26 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 27 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 28 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 29 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 30 1999	10.000 ppb	2.303 (* Nondetect *)

Well ID:13MW1 Summary Statistics

Observations (N): 37
Nondetects (%ND):100

Minimum:	2.500 ppb	Ln Minimum:	0.916
Maximum:	10.000 ppb	Ln Maximum:	2.303
Mean:	5.135 ppb	Ln Mean:	1.403
Std. Dev.:	3.630 ppb	Ln Std. Dev.:	0.671

Well ID:13MW2

Sample Date	Observation	Ln
Mar 31 1996	2.500 ppb	0.916 (* Nondetect *)
Jun 30 1996	2.500 ppb	0.916 (* Nondetect *)
Sep 30 1996	2.500 ppb	0.916 (* Nondetect *)
Dec 31 1996	2.500 ppb	0.916 (* Nondetect *)
Mar 31 1997	2.500 ppb	0.916 (* Nondetect *)
Jun 30 1997	2.500 ppb	0.916 (* Nondetect *)
Sep 30 1997	2.500 ppb	0.916 (* Nondetect *)
Dec 31 1997	2.500 ppb	0.916 (* Nondetect *)
Mar 09 1998	2.500 ppb	0.916 (* Nondetect *)
May 14 1998	2.500 ppb	0.916 (* Nondetect *)
Aug 14 1998	2.500 ppb	0.916 (* Nondetect *)
Nov 23 1998	2.500 ppb	0.916 (* Nondetect *)
Mar 13 1999	2.500 ppb	0.916 (* Nondetect *)
May 27 1999	2.500 ppb	0.916 (* Nondetect *)
Jul 27 1999	2.500 ppb	0.916 (* Nondetect *)
Nov 08 1999	2.500 ppb	0.916 (* Nondetect *)
Dec 10 1999	2.500 ppb	0.916 (* Nondetect *)
Dec 11 1999	2.500 ppb	0.916 (* Nondetect *)
Dec 12 1999	2.500 ppb	0.916 (* Nondetect *)
Dec 13 1999	2.500 ppb	0.916 (* Nondetect *)
Dec 14 1999	2.500 ppb	0.916 (* Nondetect *)
Dec 15 1999	2.500 ppb	0.916 (* Nondetect *)
Dec 16 1999	2.500 ppb	0.916 (* Nondetect *)
Dec 17 1999	2.500 ppb	0.916 (* Nondetect *)
Dec 18 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 19 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 20 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 21 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 22 1999	10.000 ppb	2.303 (* Nondetect *)

Dec 23 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 24 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 25 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 26 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 27 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 28 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 29 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 30 1999	10.000 ppb	2.303 (* Nondetect *)

Well ID:13MW2 Summary Statistics

Observations (N): 37
Nondetects (%ND):100

Minimum:	2.500 ppb	Ln Minimum:	0.916
Maximum:	10.000 ppb	Ln Maximum:	2.303
Mean:	5.135 ppb	Ln Mean:	1.403
Std. Dev.:	3.630 ppb	Ln Std. Dev.:	0.671

Data Set Summary

Report Printed: 05-10-2005 16:47

Facility:RAAPHWMU13 Haz. Waste Unit 13 - RAAP

Address:

City:Radford ST:VA Zip:
County:PULASKI

Contact:
Phone:( ) -

Permit Type:Detection

Constituent:DPA Diphenylamine

CAS Number: 122-39-4
MCL: 0.000 ppb
ACL: 0.000 ppb
Detect Limit: 20.000 ppb

Start Date:Mar 31 1996
End Date:Dec 30 1999

Well ID:13MW1

Sample Date	Observation	Ln
Mar 31 1996	5.000 ppb	1.609 (* Nondetect *)
Jun 30 1996	5.000 ppb	1.609 (* Nondetect *)
Sep 30 1996	5.000 ppb	1.609 (* Nondetect *)
Dec 31 1996	5.000 ppb	1.609 (* Nondetect *)
Mar 31 1997	5.000 ppb	1.609 (* Nondetect *)
Jun 30 1997	5.000 ppb	1.609 (* Nondetect *)
Sep 30 1997	5.000 ppb	1.609 (* Nondetect *)
Dec 31 1997	5.000 ppb	1.609 (* Nondetect *)
Mar 09 1998	5.000 ppb	1.609 (* Nondetect *)
May 14 1998	5.000 ppb	1.609 (* Nondetect *)
Aug 14 1998	5.000 ppb	1.609 (* Nondetect *)
Nov 23 1998	5.000 ppb	1.609 (* Nondetect *)
Mar 13 1999	5.000 ppb	1.609 (* Nondetect *)
May 27 1999	5.000 ppb	1.609 (* Nondetect *)
Jul 27 1999	5.000 ppb	1.609 (* Nondetect *)
Nov 08 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 10 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 11 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 12 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 13 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 14 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 15 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 16 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 17 1999	5.000 ppb	1.609 (* Nondetect *)

Dec 18 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 19 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 20 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 21 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 22 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 23 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 24 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 25 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 26 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 27 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 28 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 29 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 30 1999	10.000 ppb	2.303 (* Nondetect *)

Well ID:13MW1 Summary Statistics

Observations (N): 37
Nondetects (%ND):100

Minimum:	5.000 ppb	Ln Minimum:	1.609
Maximum:	10.000 ppb	Ln Maximum:	2.303
Mean:	6.757 ppb	Ln Mean:	1.853
Std. Dev.:	2.420 ppb	Ln Std. Dev.:	0.335

Well ID:13MW2

Sample Date	Observation	Ln
Mar 31 1996	5.000 ppb	1.609 (* Nondetect *)
Jun 30 1996	5.000 ppb	1.609 (* Nondetect *)
Sep 30 1996	5.000 ppb	1.609 (* Nondetect *)
Dec 31 1996	5.000 ppb	1.609 (* Nondetect *)
Mar 31 1997	5.000 ppb	1.609 (* Nondetect *)
Jun 30 1997	5.000 ppb	1.609 (* Nondetect *)
Sep 30 1997	5.000 ppb	1.609 (* Nondetect *)
Dec 31 1997	5.000 ppb	1.609 (* Nondetect *)
Mar 09 1998	5.000 ppb	1.609 (* Nondetect *)
May 14 1998	5.000 ppb	1.609 (* Nondetect *)
Aug 14 1998	5.000 ppb	1.609 (* Nondetect *)
Nov 23 1998	5.000 ppb	1.609 (* Nondetect *)
Mar 13 1999	5.000 ppb	1.609 (* Nondetect *)
May 27 1999	5.000 ppb	1.609 (* Nondetect *)
Jul 27 1999	5.000 ppb	1.609 (* Nondetect *)
Nov 08 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 10 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 11 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 12 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 13 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 14 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 15 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 16 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 17 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 18 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 19 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 20 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 21 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 22 1999	10.000 ppb	2.303 (* Nondetect *)

Dec 23 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 24 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 25 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 26 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 27 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 28 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 29 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 30 1999	10.000 ppb	2.303 (* Nondetect *)

Well ID: 13MW2 Summary Statistics

Observations (N): 37
Nondetects (%ND): 100

Minimum:	5.000 ppb	Ln Minimum:	1.609
Maximum:	10.000 ppb	Ln Maximum:	2.303
Mean:	6.757 ppb	Ln Mean:	1.853
Std. Dev.:	2.420 ppb	Ln Std. Dev.:	0.335

Data Set Summary

Report Printed: 05-10-2005 16:48

Facility:RAAPHWMU13 Haz. Waste Unit 13 - RAAP

Address:

City:Radford ST:VA Zip:
County:PULASKI

Contact:
Phone:( ) -

Permit Type:Detection

Constituent:NGlycern Nitroglycerin or1,2,3-Propanetriol,trinitrate

CAS Number: 55-63-0
MCL: 0.000 mg/l
ACL: 0.000 mg/l
Detect Limit: 20.000 mg/l

Start Date:Mar 31 1996
End Date:Dec 30 1999

Well ID:13MW1

Sample Date	Observation	Ln
Mar 31 1996	0.005 mg/l	-5.298 (* Nondetect *)
Jun 30 1996	0.005 mg/l	-5.298 (* Nondetect *)
Sep 30 1996	0.005 mg/l	-5.298 (* Nondetect *)
Dec 31 1996	0.005 mg/l	-5.298 (* Nondetect *)
Mar 31 1997	0.005 mg/l	-5.298 (* Nondetect *)
Jun 30 1997	0.005 mg/l	-5.298 (* Nondetect *)
Sep 30 1997	0.005 mg/l	-5.298 (* Nondetect *)
Dec 31 1997	0.005 mg/l	-5.298 (* Nondetect *)
Mar 09 1998	0.005 mg/l	-5.298 (* Nondetect *)
May 14 1998	0.005 mg/l	-5.298 (* Nondetect *)
Aug 14 1998	0.005 mg/l	-5.298 (* Nondetect *)
Nov 23 1998	0.005 mg/l	-5.298 (* Nondetect *)
Mar 13 1999	0.005 mg/l	-5.298 (* Nondetect *)
May 27 1999	0.005 mg/l	-5.298 (* Nondetect *)
Jul 27 1999	0.005 mg/l	-5.298 (* Nondetect *)
Nov 08 1999	0.005 mg/l	-5.298 (* Nondetect *)
Dec 10 1999	0.005 mg/l	-5.298 (* Nondetect *)
Dec 11 1999	0.005 mg/l	-5.298 (* Nondetect *)
Dec 12 1999	0.005 mg/l	-5.298 (* Nondetect *)
Dec 13 1999	0.005 mg/l	-5.298 (* Nondetect *)
Dec 14 1999	0.005 mg/l	-5.298 (* Nondetect *)
Dec 15 1999	0.005 mg/l	-5.298 (* Nondetect *)
Dec 16 1999	0.005 mg/l	-5.298 (* Nondetect *)
Dec 17 1999	0.005 mg/l	-5.298 (* Nondetect *)

Dec 18 1999	10.000 mg/l	2.303 (* Nondetect *)
Dec 19 1999	10.000 mg/l	2.303 (* Nondetect *)
Dec 20 1999	10.000 mg/l	2.303 (* Nondetect *)
Dec 21 1999	10.000 mg/l	2.303 (* Nondetect *)
Dec 22 1999	10.000 mg/l	2.303 (* Nondetect *)
Dec 23 1999	10.000 mg/l	2.303 (* Nondetect *)
Dec 24 1999	10.000 mg/l	2.303 (* Nondetect *)
Dec 25 1999	10.000 mg/l	2.303 (* Nondetect *)
Dec 26 1999	10.000 mg/l	2.303 (* Nondetect *)
Dec 27 1999	10.000 mg/l	2.303 (* Nondetect *)
Dec 28 1999	10.000 mg/l	2.303 (* Nondetect *)
Dec 29 1999	10.000 mg/l	2.303 (* Nondetect *)
Dec 30 1999	10.000 mg/l	2.303 (* Nondetect *)

Well ID:13MW1 Summary Statistics

Observations (N): 37
Nondetects (%ND):100

Minimum:	0.005 mg/l	Ln Minimum:	-5.298
Maximum:	10.000 mg/l	Ln Maximum:	2.303
Mean:	3.517 mg/l	Ln Mean:	-2.628
Std. Dev.:	4.837 mg/l	Ln Std. Dev.:	3.679

Well ID:13MW2

Sample Date	Observation	Ln
Mar 31 1996	0.005 mg/l	-5.298 (* Nondetect *)
Jun 30 1996	0.005 mg/l	-5.298 (* Nondetect *)
Sep 30 1996	0.005 mg/l	-5.298 (* Nondetect *)
Dec 31 1996	0.005 mg/l	-5.298 (* Nondetect *)
Mar 31 1997	0.005 mg/l	-5.298 (* Nondetect *)
Jun 30 1997	0.005 mg/l	-5.298 (* Nondetect *)
Sep 30 1997	0.005 mg/l	-5.298 (* Nondetect *)
Dec 31 1997	0.005 mg/l	-5.298 (* Nondetect *)
Mar 09 1998	0.005 mg/l	-5.298 (* Nondetect *)
May 14 1998	0.005 mg/l	-5.298 (* Nondetect *)
Aug 14 1998	0.005 mg/l	-5.298 (* Nondetect *)
Nov 23 1998	0.005 mg/l	-5.298 (* Nondetect *)
Mar 13 1999	0.005 mg/l	-5.298 (* Nondetect *)
May 27 1999	0.005 mg/l	-5.298 (* Nondetect *)
Jul 27 1999	0.005 mg/l	-5.298 (* Nondetect *)
Nov 08 1999	0.005 mg/l	-5.298 (* Nondetect *)
Dec 10 1999	0.005 mg/l	-5.298 (* Nondetect *)
Dec 11 1999	0.005 mg/l	-5.298 (* Nondetect *)
Dec 12 1999	0.005 mg/l	-5.298 (* Nondetect *)
Dec 13 1999	0.005 mg/l	-5.298 (* Nondetect *)
Dec 14 1999	0.005 mg/l	-5.298 (* Nondetect *)
Dec 15 1999	0.005 mg/l	-5.298 (* Nondetect *)
Dec 16 1999	0.005 mg/l	-5.298 (* Nondetect *)
Dec 17 1999	0.005 mg/l	-5.298 (* Nondetect *)
Dec 18 1999	10.000 mg/l	2.303 (* Nondetect *)
Dec 19 1999	10.000 mg/l	2.303 (* Nondetect *)
Dec 20 1999	10.000 mg/l	2.303 (* Nondetect *)
Dec 21 1999	10.000 mg/l	2.303 (* Nondetect *)
Dec 22 1999	10.000 mg/l	2.303 (* Nondetect *)

Dec 23 1999	10.000 mg/l	2.303 (* Nondetect *)
Dec 24 1999	10.000 mg/l	2.303 (* Nondetect *)
Dec 25 1999	10.000 mg/l	2.303 (* Nondetect *)
Dec 26 1999	10.000 mg/l	2.303 (* Nondetect *)
Dec 27 1999	10.000 mg/l	2.303 (* Nondetect *)
Dec 28 1999	10.000 mg/l	2.303 (* Nondetect *)
Dec 29 1999	10.000 mg/l	2.303 (* Nondetect *)
Dec 30 1999	10.000 mg/l	2.303 (* Nondetect *)

Well ID: 13MW2 Summary Statistics

Observations (N): 37
Nondetects (%ND): 100

Minimum:	0.005 mg/l	Ln Minimum:	-5.298
Maximum:	10.000 mg/l	Ln Maximum:	2.303
Mean:			

3.517 mg/l	Ln Mean:	-2.628	
Std. Dev.:	4.837 mg/l	Ln Std. Dev.:	3.679

Data Set Summary

Report Printed: 05-10-2005 16:59

Facility:RAAPHWMU13 Haz. Waste Unit 13 - RAAP

Address:

City:Radford ST:VA Zip:
County:PULASKI

Contact:
Phone:( ) -

Permit Type:Detection

Constituent:Phenols Phenols, total

CAS Number: 108-95-2
MCL: 0.000 ppb
ACL: 0.000 ppb
Detect Limit: 10.000 ppb

Start Date:Mar 31 1996
End Date:Dec 30 1999

Well ID:13MW1

Sample Date	Observation	Ln
Mar 31 1996	20.000 ppb	2.996
Jun 30 1996	5.000 ppb	1.609 (* Nondetect *)
Sep 30 1996	5.000 ppb	1.609 (* Nondetect *)
Dec 31 1996	5.000 ppb	1.609 (* Nondetect *)
Mar 31 1997	14.000 ppb	2.639
Jun 30 1997	5.000 ppb	1.609 (* Nondetect *)
Sep 30 1997	5.000 ppb	1.609 (* Nondetect *)
Dec 31 1997	5.000 ppb	1.609 (* Nondetect *)
Mar 09 1998	5.000 ppb	1.609 (* Nondetect *)
May 14 1998	5.000 ppb	1.609 (* Nondetect *)
Aug 14 1998	5.000 ppb	1.609 (* Nondetect *)
Nov 23 1998	5.000 ppb	1.609 (* Nondetect *)
Mar 13 1999	5.000 ppb	1.609 (* Nondetect *)
May 27 1999	5.000 ppb	1.609 (* Nondetect *)
Jul 27 1999	5.000 ppb	1.609 (* Nondetect *)
Nov 08 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 10 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 11 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 12 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 13 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 14 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 15 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 16 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 17 1999	5.000 ppb	1.609 (* Nondetect *)

Dec 18 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 19 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 20 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 21 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 22 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 23 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 24 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 25 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 26 1999	13.000 ppb	2.565
Dec 27 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 28 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 29 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 30 1999	5.000 ppb	1.609 (* Nondetect *)

Well ID:13MW1 Summary Statistics

Observations (N): 37
Nondetects (%ND): 92

Minimum:	5.000 ppb	Ln Minimum:	1.609
Maximum:	20.000 ppb	Ln Maximum:	2.996
Mean:	5.865 ppb	Ln Mean:	1.701
Std. Dev.:	3.084 ppb	Ln Std. Dev.:	0.316

Well ID:13MW2

Sample Date	Observation	Ln
Mar 31 1996	5.000 ppb	1.609 (* Nondetect *)
Jun 30 1996	5.000 ppb	1.609 (* Nondetect *)
Sep 30 1996	5.000 ppb	1.609 (* Nondetect *)
Dec 31 1996	5.000 ppb	1.609 (* Nondetect *)
Mar 31 1997	5.000 ppb	1.609 (* Nondetect *)
Jun 30 1997	5.000 ppb	1.609 (* Nondetect *)
Sep 30 1997	5.000 ppb	1.609 (* Nondetect *)
Dec 31 1997	5.000 ppb	1.609 (* Nondetect *)
Mar 09 1998	5.000 ppb	1.609 (* Nondetect *)
May 14 1998	5.000 ppb	1.609 (* Nondetect *)
Aug 14 1998	5.000 ppb	1.609 (* Nondetect *)
Nov 23 1998	5.000 ppb	1.609 (* Nondetect *)
Mar 13 1999	5.000 ppb	1.609 (* Nondetect *)
May 27 1999	5.000 ppb	1.609 (* Nondetect *)
Jul 27 1999	5.000 ppb	1.609 (* Nondetect *)
Nov 08 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 10 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 11 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 12 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 13 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 14 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 15 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 16 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 17 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 18 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 19 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 20 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 21 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 22 1999	5.000 ppb	1.609 (* Nondetect *)

Dec 23 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 24 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 25 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 26 1999	12.000 ppb	2.485
Dec 27 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 28 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 29 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 30 1999	5.000 ppb	1.609 (* Nondetect *)

Well ID:13MW2 Summary Statistics

Observations (N): 37
Nondetects (%ND): 97

Minimum:	5.000 ppb	Ln Minimum:	1.609
Maximum:	12.000 ppb	Ln Maximum:	2.485
Mean:	5.189 ppb	Ln Mean:	1.633
Std. Dev.:	1.151 ppb	Ln Std. Dev.:	0.144

Normality Tests

Report Printed: 05-10-2005 16:59

Facility:RAAPHWMU13 Haz. Waste Unit 13 - RAAP

Address:

City:Radford ST:VA Zip:
County:PULASKI

Contact:
Phone:( ) -

Permit Type:Detection

Constituent:Phenols Phenols, total

CAS Number: 108-95-2
MCL: 0.000 ppb
ACL: 0.000 ppb
Detect Limit: 10.000 ppb

Start Date:Mar 31 1996
End Date:Dec 30 1999

Normality Test on Observations for wells listed below:

Well:13MW1 Position:Upgradient Observations:37

Scale	Minimum	Maximum	Mean	Std Dev
Original:	5.000	20.000	5.865	3.084
Log:	1.609	2.996	1.701	0.316

Well:13MW2 Position:Upgradient Observations:37

Scale	Minimum	Maximum	Mean	Std Dev
Original:	5.000	12.000	5.189	1.151
Log:	1.609	2.485	1.633	0.144

Pooled Statistics
Observations: 74

Statistic	Original Scale	Log Scale
Mean:	5.527	1.667
Std Dev:	2.336	0.246
Skewness:	4.671*	4.192*
Kurtosis:	22.128	16.382
Minimum:	5.000	1.609
Maximum:	20.000	2.996

CV:	0.423	0.148

Shapiro-Francia Statistics

Scale	Test Statistic	5% Critical Value	1% Critical Value
Original:	0.2166*	0.9690	0.9560
Log:	0.2249*	0.9690	0.9560

* Indicates statistically significant evidence of non-normality.
GRIT/STAT Version 5.0

Nonparametric Prediction Interval
Report Printed May 10,2005

Facility:Haz. Waste Unit 13 - RAAP
Parameter:Phenols, total(CAS Number:108-95-2)

ONE-TAILED UPPER PARAMETRIC PREDICTION INTERVAL

Observations (n):	74
Conf. Level (1-α):	100.000%
UL:	~~5.000~~ 20.0 ppb
LL:	0.000

%ND: 97%

Report Produced by GRITS/STAT 5.01

Data Set Summary

Report Printed: 05-10-2005 17:05

Facility:RAAPHWMU13 Haz. Waste Unit 13 - RAAP

Address:

City:Radford ST:VA Zip:
County:PULASKI

Contact:
Phone:( ) -

Permit Type:Detection

Constituent:TOC Total Organic Carbon

CAS Number: - -
MCL: 0.000 ppb
ACL: 0.000 ppb
Detect Limit: 2000.000 ppb

Start Date:Mar 31 1996
End Date:Dec 30 1999

Well ID:13MW1

Sample Date	Observation	Ln
Mar 31 1996	500.000 ppb	6.215 (* Nondetect *)
Jun 30 1996	3000.000 ppb	8.006
Sep 30 1996	500.000 ppb	6.215 (* Nondetect *)
Dec 31 1996	500.000 ppb	6.215 (* Nondetect *)
Mar 31 1997	500.000 ppb	6.215 (* Nondetect *)
Jun 30 1997	2000.000 ppb	7.601
Sep 30 1997	500.000 ppb	6.215 (* Nondetect *)
Dec 31 1997	500.000 ppb	6.215 (* Nondetect *)
Mar 09 1998	500.000 ppb	6.215 (* Nondetect *)
May 14 1998	500.000 ppb	6.215 (* Nondetect *)
Aug 14 1998	500.000 ppb	6.215 (* Nondetect *)
Nov 23 1998	500.000 ppb	6.215 (* Nondetect *)
Mar 13 1999	1725.000 ppb	7.453
May 27 1999	500.000 ppb	6.215 (* Nondetect *)
Jul 27 1999	500.000 ppb	6.215 (* Nondetect *)
Nov 08 1999	500.000 ppb	6.215 (* Nondetect *)
Dec 10 1999	500.000 ppb	6.215 (* Nondetect *)
Dec 11 1999	500.000 ppb	6.215 (* Nondetect *)
Dec 12 1999	1550.000 ppb	7.346
Dec 13 1999	500.000 ppb	6.215 (* Nondetect *)
Dec 14 1999	500.000 ppb	6.215 (* Nondetect *)
Dec 15 1999	500.000 ppb	6.215 (* Nondetect *)
Dec 16 1999	500.000 ppb	6.215 (* Nondetect *)
Dec 17 1999	500.000 ppb	6.215 (* Nondetect *)

Dec 18 1999	1000.000 ppb	6.908 (* Nondetect *)
Dec 19 1999	1000.000 ppb	6.908 (* Nondetect *)
Dec 20 1999	1000.000 ppb	6.908 (* Nondetect *)
Dec 21 1999	1000.000 ppb	6.908 (* Nondetect *)
Dec 22 1999	1000.000 ppb	6.908 (* Nondetect *)
Dec 23 1999	2177.000 ppb	7.686
Dec 24 1999	10600.000 ppb	9.269
Dec 25 1999	10600.000 ppb	9.269
Dec 26 1999	5682.000 ppb	8.645
Dec 27 1999	8370.000 ppb	9.032
Dec 28 1999	1000.000 ppb	6.908 (* Nondetect *)
Dec 29 1999	1000.000 ppb	6.908 (* Nondetect *)
Dec 30 1999	1000.000 ppb	6.908 (* Nondetect *)

Well ID:13MW1 Summary Statistics

Observations (N): 37
Nondetects (%ND): 76

Minimum:	500.000 ppb	Ln Minimum:	6.215
Maximum:	10600.000 ppb	Ln Maximum:	9.269
Mean:	1721.730 ppb	Ln Mean:	6.861
Std. Dev.:	2653.605 ppb	Ln Std. Dev.:	0.928

Well ID:13MW2

Sample Date	Observation	Ln
Mar 31 1996	500.000 ppb	6.215 (* Nondetect *)
Jun 30 1996	3000.000 ppb	8.006
Sep 30 1996	500.000 ppb	6.215 (* Nondetect *)
Dec 31 1996	500.000 ppb	6.215 (* Nondetect *)
Mar 31 1997	500.000 ppb	6.215 (* Nondetect *)
Jun 30 1997	2000.000 ppb	7.601
Sep 30 1997	500.000 ppb	6.215 (* Nondetect *)
Dec 31 1997	500.000 ppb	6.215 (* Nondetect *)
Mar 09 1998	500.000 ppb	6.215 (* Nondetect *)
May 14 1998	1400.000 ppb	7.244
Aug 14 1998	500.000 ppb	6.215 (* Nondetect *)
Nov 23 1998	500.000 ppb	6.215 (* Nondetect *)
Mar 13 1999	8625.000 ppb	9.062
May 27 1999	500.000 ppb	6.215 (* Nondetect *)
Jul 27 1999	500.000 ppb	6.215 (* Nondetect *)
Nov 08 1999	500.000 ppb	6.215 (* Nondetect *)
Dec 10 1999	500.000 ppb	6.215 (* Nondetect *)
Dec 11 1999	500.000 ppb	6.215 (* Nondetect *)
Dec 12 1999	1625.000 ppb	7.393
Dec 13 1999	500.000 ppb	6.215 (* Nondetect *)
Dec 14 1999	500.000 ppb	6.215 (* Nondetect *)
Dec 15 1999	500.000 ppb	6.215 (* Nondetect *)
Dec 16 1999	500.000 ppb	6.215 (* Nondetect *)
Dec 17 1999	500.000 ppb	6.215 (* Nondetect *)
Dec 18 1999	1000.000 ppb	6.908 (* Nondetect *)
Dec 19 1999	1000.000 ppb	6.908 (* Nondetect *)
Dec 20 1999	1000.000 ppb	6.908 (* Nondetect *)
Dec 21 1999	1000.000 ppb	6.908 (* Nondetect *)
Dec 22 1999	1000.000 ppb	6.908 (* Nondetect *)

Dec 23 1999	3550.000 ppb	8.175
Dec 24 1999	1505.000 ppb	7.317
Dec 25 1999	8417.000 ppb	9.038
Dec 26 1999	5972.000 ppb	8.695
Dec 27 1999	8255.000 ppb	9.019
Dec 28 1999	1000.000 ppb	6.908 (* Nondetect *)
Dec 29 1999	1000.000 ppb	6.908 (* Nondetect *)
Dec 30 1999	1042.000 ppb	6.949

Well ID:13MW2 Summary Statistics

Observations (N): 37
Nondetects (%ND): 70

Minimum:	500.000 ppb	Ln Minimum:	6.215
Maximum:	8625.000 ppb	Ln Maximum:	9.062
Mean:	1672.730 ppb	Ln Mean:	6.890
Std. Dev.:	2302.313 ppb	Ln Std. Dev.:	0.909

Normality Tests

Report Printed: 05-10-2005 17:02

Facility:RAAPHWMU13 Haz. Waste Unit 13 - RAAP

Address:

City:Radford ST:VA Zip:
County:PULASKI

Contact:
Phone:( ) -

Permit Type:Detection

Constituent:TOC Total Organic Carbon

CAS Number: - -
MCL: 0.000 ppb
ACL: 0.000 ppb
Detect Limit: 2000.000 ppb

Start Date:Mar 31 1996
End Date:Dec 30 1999

Normality Test on Observations for wells listed below:

Well:13MW1 Position:Upgradient Observations:37

Scale	Minimum	Maximum	Mean	Std Dev
Original:	500.000	10600.000	1721.730	2653.605
Log:	6.215	9.269	6.861	0.928

Well:13MW2 Position:Upgradient Observations:37

Scale	Minimum	Maximum	Mean	Std Dev
Original:	500.000	8625.000	1672.730	2302.313
Log:	6.215	9.062	6.890	0.909

Pooled Statistics
Observations: 74

Statistic	Original Scale	Log Scale
Mean:	1697.230	6.876
Std Dev:	2467.227	0.912
Skewness:	2.485*	1.364*
Kurtosis:	5.030	0.781
Minimum:	500.000	6.215
Maximum:	10600.000	9.269

CV:	1.454	0.133

Shapiro-Francia Statistics

Scale	Test Statistic	5% Critical Value	1% Critical Value
Original:	0.5304*	0.9690	0.9560
Log:	0.7452*	0.9690	0.9560

* Indicates statistically significant evidence of non-normality.
GRIT/STAT Version 5.0

Nonparametric Prediction Interval
Report Printed May 10,2005

Facility:Haz. Waste Unit 13 - RAAP
Parameter:Total Organic Carbon(CAS Number:- -)

ONE-TAILED UPPER PARAMETRIC PREDICTION INTERVAL

Observations (n):	74
Conf. Level (1-α):	***.***%
UL:	~~16,000.0~~ ~~500.000 ppb~~ 10,600.00 ppb
LL:	0.000

%ND: 73%.

Report Produced by GRITS/STAT 5.01

Normality Tests

Report Printed: 05-10-2005 17:10

Facility:RAAPHWMU13 Haz. Waste Unit 13 - RAAP

Address:

City:Radford ST:VA Zip:
County:PULASKI

Contact:
Phone:( ) -

Permit Type:Detection

Constituent:TOX Total Organic Halogens, Halides

CAS Number: - -
MCL: 0.000 ppb
ACL: 0.000 ppb
Detect Limit: 40.000 ppb

Start Date:Mar 31 1996
End Date:Dec 30 1999

Normality Test on Observations for wells listed below:

Well:13MW1 Position:Upgradient Observations:37

Scale	Minimum	Maximum	Mean	Std Dev
Original:	2.500	38.000	10.932	10.539
Log:	0.916	3.638	1.874	1.056

Well:13MW2 Position:Upgradient Observations:37

Scale	Minimum	Maximum	Mean	Std Dev
Original:	2.500	54.500	10.405	11.289
Log:	0.916	3.998	1.789	1.059

Pooled Statistics
Observations: 74

Statistic	Original Scale	Log Scale
Mean:	10.669	1.831
Std Dev:	10.849	1.051
Skewness:	1.378*	0.399
Kurtosis:	2.259	-1.616
Minimum:	2.500	0.916
Maximum:	54.500	3.998

CV:	1.017	0.574

Shapiro-Francia Statistics

Scale	Test Statistic	5% Critical Value	1% Critical Value
Original:	0.7158*	0.9690	0.9560
Log:	0.7407*	0.9690	0.9560

* Indicates statistically significant evidence of non-normality.
GRIT/STAT Version 5.0

Data Set Summary

Report Printed: 05-10-2005 17:10

Facility:RAAPHWMU13 Haz. Waste Unit 13 - RAAP

Address:

City:Radford ST:VA Zip:
County:PULASKI

Contact:
Phone:( ) -

Permit Type:Detection

Constituent:TOX Total Organic Halogens, Halides

CAS Number: - -
MCL: 0.000 ppb
ACL: 0.000 ppb
Detect Limit: 40.000 ppb

Start Date:Mar 31 1996
End Date:Dec 30 1999

Well ID:13MW1

Sample Date	Observation	Ln
Mar 31 1996	2.500 ppb	0.916 (* Nondetect *)
Jun 30 1996	2.500 ppb	0.916 (* Nondetect *)
Sep 30 1996	2.500 ppb	0.916 (* Nondetect *)
Dec 31 1996	2.500 ppb	0.916 (* Nondetect *)
Mar 31 1997	2.500 ppb	0.916 (* Nondetect *)
Jun 30 1997	2.500 ppb	0.916 (* Nondetect *)
Sep 30 1997	2.500 ppb	0.916 (* Nondetect *)
Dec 31 1997	9.000 ppb	2.197
Mar 09 1998	2.500 ppb	0.916 (* Nondetect *)
May 14 1998	5.500 ppb	1.705
Aug 14 1998	2.500 ppb	0.916 (* Nondetect *)
Nov 23 1998	25.500 ppb	3.239
Mar 13 1999	2.500 ppb	0.916 (* Nondetect *)
May 27 1999	2.500 ppb	0.916 (* Nondetect *)
Jul 27 1999	6.500 ppb	1.872
Nov 08 1999	14.500 ppb	2.674
Dec 10 1999	2.500 ppb	0.916 (* Nondetect *)
Dec 11 1999	2.500 ppb	0.916 (* Nondetect *)
Dec 12 1999	2.500 ppb	0.916 (* Nondetect *)
Dec 13 1999	2.500 ppb	0.916 (* Nondetect *)
Dec 14 1999	2.500 ppb	0.916 (* Nondetect *)
Dec 15 1999	2.500 ppb	0.916 (* Nondetect *)
Dec 16 1999	2.500 ppb	0.916 (* Nondetect *)
Dec 17 1999	2.500 ppb	0.916 (* Nondetect *)

Dec 18 1999	20.000 ppb	2.996 (* Nondetect *)
Dec 19 1999	20.000 ppb	2.996 (* Nondetect *)
Dec 20 1999	20.000 ppb	2.996 (* Nondetect *)
Dec 21 1999	20.000 ppb	2.996 (* Nondetect *)
Dec 22 1999	20.000 ppb	2.996 (* Nondetect *)
Dec 23 1999	20.000 ppb	2.996 (* Nondetect *)
Dec 24 1999	20.000 ppb	2.996 (* Nondetect *)
Dec 25 1999	20.000 ppb	2.996 (* Nondetect *)
Dec 26 1999	20.000 ppb	2.996 (* Nondetect *)
Dec 27 1999	20.000 ppb	2.996 (* Nondetect *)
Dec 28 1999	38.000 ppb	3.638
Dec 29 1999	20.000 ppb	2.996 (* Nondetect *)
Dec 30 1999	38.000 ppb	3.638

Well ID:13MW1 Summary Statistics

Observations (N): 37
Nondetects (%ND): 81

Minimum:	2.500 ppb	Ln Minimum:	0.916
Maximum:	38.000 ppb	Ln Maximum:	3.638
Mean:	10.932 ppb	Ln Mean:	1.874
Std. Dev.:	10.539 ppb	Ln Std. Dev.:	1.056

Well ID:13MW2

Sample Date	Observation	Ln
Mar 31 1996	2.500 ppb	0.916 (* Nondetect *)
Jun 30 1996	2.500 ppb	0.916 (* Nondetect *)
Sep 30 1996	2.500 ppb	0.916 (* Nondetect *)
Dec 31 1996	2.500 ppb	0.916 (* Nondetect *)
Mar 31 1997	2.500 ppb	0.916 (* Nondetect *)
Jun 30 1997	2.500 ppb	0.916 (* Nondetect *)
Sep 30 1997	2.500 ppb	0.916 (* Nondetect *)
Dec 31 1997	2.500 ppb	0.916 (* Nondetect *)
Mar 09 1998	2.500 ppb	0.916 (* Nondetect *)
May 14 1998	6.000 ppb	1.792
Aug 14 1998	2.500 ppb	0.916 (* Nondetect *)
Nov 23 1998	7.500 ppb	2.015
Mar 13 1999	2.500 ppb	0.916 (* Nondetect *)
May 27 1999	2.500 ppb	0.916 (* Nondetect *)
Jul 27 1999	2.500 ppb	0.916 (* Nondetect *)
Nov 08 1999	24.500 ppb	3.199
Dec 10 1999	2.500 ppb	0.916 (* Nondetect *)
Dec 11 1999	2.500 ppb	0.916 (* Nondetect *)
Dec 12 1999	2.500 ppb	0.916 (* Nondetect *)
Dec 13 1999	2.500 ppb	0.916 (* Nondetect *)
Dec 14 1999	2.500 ppb	0.916 (* Nondetect *)
Dec 15 1999	2.500 ppb	0.916 (* Nondetect *)
Dec 16 1999	2.500 ppb	0.916 (* Nondetect *)
Dec 17 1999	2.500 ppb	0.916 (* Nondetect *)
Dec 18 1999	20.000 ppb	2.996 (* Nondetect *)
Dec 19 1999	20.000 ppb	2.996 (* Nondetect *)
Dec 20 1999	20.000 ppb	2.996 (* Nondetect *)
Dec 21 1999	20.000 ppb	2.996 (* Nondetect *)
Dec 22 1999	20.000 ppb	2.996 (* Nondetect *)

Dec 23 1999	20.000 ppb	2.996 (* Nondetect *)
Dec 24 1999	20.000 ppb	2.996 (* Nondetect *)
Dec 25 1999	20.000 ppb	2.996 (* Nondetect *)
Dec 26 1999	20.000 ppb	2.996 (* Nondetect *)
Dec 27 1999	20.000 ppb	2.996 (* Nondetect *)
Dec 28 1999	20.000 ppb	2.996 (* Nondetect *)
Dec 29 1999	20.000 ppb	2.996 (* Nondetect *)
Dec 30 1999	54.500 ppb	3.998

Well ID: 13MW2 Summary Statistics

Observations (N): 37
Nondetects (%ND): 89

Minimum:	2.500 ppb	Ln Minimum:	0.916
Maximum:	54.500 ppb	Ln Maximum:	3.998
Mean:	10.405 ppb	Ln Mean:	1.789
Std. Dev.:	11.289 ppb	Ln Std. Dev.:	1.059

Nonparametric Prediction Interval
Report Printed May 10,2005

Facility:Haz. Waste Unit 13 - RAAP
Parameter:Total Organic Halogens, Halides(CAS Number:- -)

ONE-TAILED UPPER PARAMETRIC PREDICTION INTERVAL

Observations (n):	74
Conf. Level (1-α):	100.000%
UL:	54.5 ~~2500~~ ppb
LL:	0.000

%ND : 85%.

Report Produced by GRITS/STAT 5.01

Data Set Summary

Report Printed: 05-10-2005 17:13

Facility:RAAPHWMU13 Haz. Waste Unit 13 - RAAP

Address:

City:Radford ST:VA Zip:
County:PULASKI

Contact:
Phone:( ) -

Permit Type:Detection

Constituent:Cond F Specific Conductivity, Field

CAS Number: - -
MCL: 0.000 umhos/cm
ACL: 0.000 umhos/cm
Detect Limit: 2.000 umhos/cm

Start Date:Mar 31 1996
End Date:Dec 30 1999

Well ID:13MW1

Sample Date	Observation	Ln
Mar 31 1996	707.500 umhos/cm	6.562
Sep 30 1997	717.500 umhos/cm	6.576
Dec 31 1997	692.500 umhos/cm	6.540
Mar 09 1998	660.000 umhos/cm	6.492
May 14 1998	590.000 umhos/cm	6.380
Aug 14 1998	613.000 umhos/cm	6.418
Nov 23 1998	660.000 umhos/cm	6.492
Mar 13 1999	1940.000 umhos/cm	7.570
May 27 1999	6870.000 umhos/cm	8.835
Jul 27 1999	759.000 umhos/cm	6.632
Nov 08 1999	896.000 umhos/cm	6.798
Dec 10 1999	634.000 umhos/cm	6.452
Dec 11 1999	599.000 umhos/cm	6.395
Dec 12 1999	506.000 umhos/cm	6.227
Dec 13 1999	871.000 umhos/cm	6.770
Dec 14 1999	754.000 umhos/cm	6.625
Dec 15 1999	457.000 umhos/cm	6.125
Dec 16 1999	762.000 umhos/cm	6.636
Dec 17 1999	730.000 umhos/cm	6.593
Dec 18 1999	732.000 umhos/cm	6.596
Dec 19 1999	665.000 umhos/cm	6.500
Dec 20 1999	733.000 umhos/cm	6.597
Dec 21 1999	729.000 umhos/cm	6.592
Dec 23 1999	430.000 umhos/cm	6.064

Dec 24 1999	490.000 umhos/cm	6.194
Dec 25 1999	640.000 umhos/cm	6.461
Dec 26 1999	690.000 umhos/cm	6.537
Dec 27 1999	440.000 umhos/cm	6.087
Dec 28 1999	610.000 umhos/cm	6.413
Dec 29 1999	620.000 umhos/cm	6.430
Dec 30 1999	720.000 umhos/cm	6.579

Well ID:13MW1 Summary Statistics

Observations (N): 31
Nondetects (%ND): 0

Minimum:	430.000 umhos/cm	Ln Minimum:	6.064
Maximum:	6870.000 umhos/cm	Ln Maximum:	8.835
Mean:	900.564 umhos/cm	Ln Mean:	6.586
Std. Dev.:	1136.958 umhos/cm	Ln Std. Dev.:	0.495

Well ID:13MW2

Sample Date	Observation	Ln
Mar 31 1996	582.500 umhos/cm	6.367
Sep 30 1997	567.500 umhos/cm	6.341
Dec 31 1997	570.000 umhos/cm	6.346
Mar 09 1998	568.000 umhos/cm	6.342
May 14 1998	573.000 umhos/cm	6.351
Aug 14 1998	553.000 umhos/cm	6.315
Nov 23 1998	560.000 umhos/cm	6.328
Mar 13 1999	500.000 umhos/cm	6.215
May 27 1999	5810.000 umhos/cm	8.667
Jul 27 1999	589.000 umhos/cm	6.378
Nov 08 1999	687.000 umhos/cm	6.532
Dec 10 1999	495.000 umhos/cm	6.205
Dec 11 1999	568.000 umhos/cm	6.342
Dec 12 1999	601.000 umhos/cm	6.399
Dec 13 1999	689.000 umhos/cm	6.535
Dec 14 1999	618.000 umhos/cm	6.426
Dec 15 1999	574.000 umhos/cm	6.353
Dec 16 1999	613.000 umhos/cm	6.418
Dec 17 1999	617.000 umhos/cm	6.425
Dec 18 1999	612.000 umhos/cm	6.417
Dec 19 1999	648.000 umhos/cm	6.474
Dec 20 1999	610.000 umhos/cm	6.413
Dec 21 1999	621.000 umhos/cm	6.431
Dec 23 1999	630.000 umhos/cm	6.446
Dec 24 1999	670.000 umhos/cm	6.507
Dec 25 1999	600.000 umhos/cm	6.397
Dec 26 1999	750.000 umhos/cm	6.620
Dec 27 1999	450.000 umhos/cm	6.109
Dec 28 1999	550.000 umhos/cm	6.310
Dec 29 1999	670.000 umhos/cm	6.507
Dec 30 1999	710.000 umhos/cm	6.565

Well ID:13MW2 Summary Statistics

Observations (N): 31
Nondetects (%ND): 0

Minimum:	450.000 umhos/cm	Ln Minimum:	6.109
Maximum:	5810.000 umhos/cm	Ln Maximum:	8.667
Mean:	769.548 umhos/cm	Ln Mean:	6.467
Std. Dev.:	937.607 umhos/cm	Ln Std. Dev.:	0.422

Normality Tests

Report Printed: 05-10-2005 17:12

Facility:RAAPHWMU13 Haz. Waste Unit 13 - RAAP

Address:

City:Radford ST:VA Zip:
County:PULASKI

Contact:
Phone:( ) -

Permit Type:Detection

Constituent:Cond F Specific Conductivity, Field

CAS Number: - -
MCL: 0.000 umhos/cm
ACL: 0.000 umhos/cm
Detect Limit: 2.000 umhos/cm

Start Date:Mar 31 1996
End Date:Dec 30 1999

Normality Test on Observations for wells listed below:

Well:13MW1 Position:Upgradient Observations:31

Scale	Minimum	Maximum	Mean	Std Dev
Original:	430.000	6870.000	900.564	1136.958
Log:	6.064	8.835	6.586	0.495

Well:13MW2 Position:Upgradient Observations:31

Scale	Minimum	Maximum	Mean	Std Dev
Original:	450.000	5810.000	769.548	937.607
Log:	6.109	8.667	6.467	0.422

Pooled Statistics
Observations: 62

Statistic	Original Scale	Log Scale
Mean:	835.056	6.527
Std Dev:	1035.592	0.460
Skewness:	5.111*	3.858*
Kurtosis:	25.116	15.873
Minimum:	430.000	6.064
Maximum:	6870.000	8.835

CV:	1.240	0.071

Shapiro-Francia Statistics

Scale	Test Statistic	5% Critical Value	1% Critical Value
Original:	0.2489*	0.9640	0.9470
Log:	0.5030*	0.9640	0.9470

* Indicates statistically significant evidence of non-normality.
GRIT/STAT Version 5.0

Nonparametric Prediction Interval
Report Printed May 10,2005

Facility:Haz. Waste Unit 13 - RAAP
Parameter:Specific Conductivity, Field(CAS Number:- -)

ONE-TAILED UPPER PARAMETRIC PREDICTION INTERVAL

Observations (n):	62
Conf. Level (1-α):	100.000%
UL:	6870.0 umhos/cm
LL:	0.000

%ND: 0

Report Produced by GRITS/STAT 5.01

Data Set Summary

Report Printed: 05-10-2005 17:13

Facility:RAAPHWMU13 Haz. Waste Unit 13 - RAAP

Address:

City:Radford ST:VA Zip:
County:PULASKI

Contact:
Phone:( ) -

Permit Type:Detection

Constituent:pH F pH, Field

CAS Number: - -
MCL: 0.000 SU
ACL: 0.000 SU
Detect Limit: 0.100 SU

Start Date:Mar 31 1996
End Date:Dec 30 1999

Well ID:13MW1

Sample Date	Observation	Ln
Mar 31 1996	7.100 SU	1.960
Sep 30 1997	7.200 SU	1.974
Dec 31 1997	7.200 SU	1.974
Mar 09 1998	6.700 SU	1.902
May 14 1998	6.300 SU	1.841
Aug 14 1998	6.500 SU	1.872
Nov 23 1998	7.000 SU	1.946
Mar 13 1999	6.700 SU	1.902
May 27 1999	6.990 SU	1.944
Jul 27 1999	7.030 SU	1.950
Nov 08 1999	6.950 SU	1.939
Dec 10 1999	6.820 SU	1.920
Dec 11 1999	6.600 SU	1.887
Dec 12 1999	6.390 SU	1.855
Dec 13 1999	5.720 SU	1.744
Dec 14 1999	7.010 SU	1.947
Dec 15 1999	6.480 SU	1.869
Dec 16 1999	6.520 SU	1.875
Dec 17 1999	6.690 SU	1.901
Dec 18 1999	6.940 SU	1.937
Dec 19 1999	6.570 SU	1.883
Dec 20 1999	6.550 SU	1.879
Dec 21 1999	6.650 SU	1.895
Dec 23 1999	6.670 SU	1.898

Dec 24 1999	6.400 SU	1.856
Dec 25 1999	6.930 SU	1.936
Dec 26 1999	6.640 SU	1.893
Dec 27 1999	6.720 SU	1.905
Dec 28 1999	6.470 SU	1.867
Dec 29 1999	7.020 SU	1.949
Dec 30 1999	7.250 SU	1.981

Well ID:13MW1 Summary Statistics

Observations (N): 31
Nondetects (%ND): 0

Minimum:	5.720 SU	Ln Minimum:	1.744
Maximum:	7.250 SU	Ln Maximum:	1.981
Mean:	6.733 SU	Ln Mean:	1.906
Std. Dev.:	0.323 SU	Ln Std. Dev.:	0.049

Well ID:13MW2

Sample Date	Observation	Ln
Mar 31 1996	7.400 SU	2.001
Sep 30 1997	7.800 SU	2.054
Dec 31 1997	7.200 SU	1.974
Mar 09 1998	6.800 SU	1.917
May 14 1998	6.700 SU	1.902
Aug 14 1998	6.700 SU	1.902
Nov 23 1998	7.100 SU	1.960
Mar 13 1999	7.700 SU	2.041
May 27 1999	7.180 SU	1.971
Jul 27 1999	7.170 SU	1.970
Nov 08 1999	7.090 SU	1.959
Dec 10 1999	6.910 SU	1.933
Dec 11 1999	6.960 SU	1.940
Dec 12 1999	6.710 SU	1.904
Dec 13 1999	6.200 SU	1.825
Dec 14 1999	7.090 SU	1.959
Dec 15 1999	6.830 SU	1.921
Dec 16 1999	6.670 SU	1.898
Dec 17 1999	6.790 SU	1.915
Dec 18 1999	7.060 SU	1.954
Dec 19 1999	6.840 SU	1.923
Dec 20 1999	6.670 SU	1.898
Dec 21 1999	6.710 SU	1.904
Dec 23 1999	7.130 SU	1.964
Dec 24 1999	7.030 SU	1.950
Dec 25 1999	7.070 SU	1.956
Dec 26 1999	7.020 SU	1.949
Dec 27 1999	7.090 SU	1.959
Dec 28 1999	7.220 SU	1.977
Dec 29 1999	6.970 SU	1.942
Dec 30 1999	7.500 SU	2.015

Well ID:13MW2 Summary Statistics

Observations (N): 31
Nondetects (%ND): 0

Minimum:	6.200 SU	Ln Minimum:	1.825
Maximum:	7.800 SU	Ln Maximum:	2.054
Mean:	7.010 SU	Ln Mean:	1.946
Std. Dev.:	0.322 SU	Ln Std. Dev.:	0.046

Normality Tests

Report Printed: 05-10-2005 17:14

Facility:RAAPHWMU13 Haz. Waste Unit 13 - RAAP

Address:

City:Radford ST:VA Zip:
County:PULASKI

Contact:
Phone:( ) -

Permit Type:Detection

Constituent:pH F pH, Field

CAS Number: - -
MCL: 0.000 SU
ACL: 0.000 SU
Detect Limit: 0.100 SU

Start Date:Mar 31 1996
End Date:Dec 30 1999

Normality Test on Observations for wells listed below:

Well:13MW1 Position:Upgradient Observations:31

Scale	Minimum	Maximum	Mean	Std Dev
Original:	5.720	7.250	6.733	0.323
Log:	1.744	1.981	1.906	0.049

Well:13MW2 Position:Upgradient Observations:31

Scale	Minimum	Maximum	Mean	Std Dev
Original:	6.200	7.800	7.010	0.322
Log:	1.825	2.054	1.946	0.046

Pooled Statistics
Observations: 62

Statistic	Original Scale	Log Scale
Mean:	6.871	1.926
Std Dev:	0.349	0.051
Skewness:	-0.187	-0.447
Kurtosis:	1.327	1.708
Minimum:	5.720	1.744
Maximum:	7.800	2.054

CV: 0.051 0.027

Shapiro-Francia Statistics

Scale	Test Statistic	5% Critical Value	1% Critical Value
Original:	0.9566*	0.9640	0.9470
Log:	0.9489*	0.9640	0.9470

* Indicates statistically significant evidence of non-normality.
GRIT/STAT Version 5.0

Nonparametric Prediction Interval
Report Printed May 10,2005

Facility:Haz. Waste Unit 13 - RAAP
Parameter:pH, Field(CAS Number:- -)

TWO-TAILED PARAMETRIC PREDICTION INTERVAL

Observations (n):	62
Conf. Level (1-α):	100.000%

UL: ~~6.990 SU~~ 7.80 SU
LL: 6.910 SU 5.72 SU

Report Produced by GRITS/STAT 5.01

Data Set Summary

Report Printed: 05-10-2005 17:17

Facility:RAAPHWMU13 Haz. Waste Unit 13 - RAAP

Address:

City:Radford ST:VA Zip:
County:PULASKI

Contact:
Phone:( ) -

Permit Type:Detection

Constituent:Nitrate Nitrate

CAS Number:14797-55-8
MCL: 0.000 ppb
ACL: 0.000 ppb
Detect Limit: 100.000 ppb

Start Date:Mar 31 1996
End Date:Dec 30 1999

Well ID:13MW1

Sample Date	Observation	Ln
Mar 31 1996	700.000 ppb	6.551
Jun 30 1996	700.000 ppb	6.551
Sep 30 1996	500.000 ppb	6.215
Dec 31 1996	600.000 ppb	6.397
Mar 31 1997	700.000 ppb	6.551
Jun 30 1997	700.000 ppb	6.551
Sep 30 1997	900.000 ppb	6.802
Dec 31 1997	700.000 ppb	6.551
Mar 09 1998	480.000 ppb	6.174
May 14 1998	360.000 ppb	5.886
Aug 14 1998	440.000 ppb	6.087
Nov 23 1998	560.000 ppb	6.328
Mar 13 1999	410.000 ppb	6.016
May 27 1999	230.000 ppb	5.438
Jul 27 1999	380.000 ppb	5.940
Nov 08 1999	430.000 ppb	6.064
Dec 10 1999	430.000 ppb	6.064
Dec 11 1999	130.000 ppb	4.868
Dec 12 1999	900.000 ppb	6.802
Dec 13 1999	310.000 ppb	5.737
Dec 14 1999	320.000 ppb	5.768
Dec 15 1999	150.000 ppb	5.011
Dec 16 1999	380.000 ppb	5.940
Dec 17 1999	400.000 ppb	5.991

Dec 18 1999	340.000 ppb	5.829
Dec 19 1999	250.000 ppb	5.521
Dec 20 1999	260.000 ppb	5.561
Dec 21 1999	380.000 ppb	5.940
Dec 22 1999	300.000 ppb	5.704
Dec 23 1999	300.000 ppb	5.704
Dec 24 1999	50.000 ppb	3.912 (* Nondetect *)

Well ID:13MW1 Summary Statistics

Observations (N): 31
Nondetects (%ND): 3

Minimum:	50.000 ppb	Ln Minimum:	3.912
Maximum:	900.000 ppb	Ln Maximum:	6.802
Mean:	441.613 ppb	Ln Mean:	5.950
Std. Dev.:	212.259 ppb	Ln Std. Dev.:	0.600

Well ID:13MW2

Sample Date	Observation	Ln
Mar 31 1996	600.000 ppb	6.397
Jun 30 1996	800.000 ppb	6.685
Sep 30 1996	700.000 ppb	6.551
Dec 31 1996	800.000 ppb	6.685
Mar 31 1997	700.000 ppb	6.551
Jun 30 1997	900.000 ppb	6.802
Sep 30 1997	700.000 ppb	6.551
Dec 31 1997	600.000 ppb	6.397
Mar 09 1998	790.000 ppb	6.672
May 14 1998	380.000 ppb	5.940
Aug 14 1998	640.000 ppb	6.461
Nov 23 1998	600.000 ppb	6.397
Mar 13 1999	710.000 ppb	6.565
May 27 1999	860.000 ppb	6.757
Jul 27 1999	890.000 ppb	6.791
Nov 08 1999	920.000 ppb	6.824
Dec 10 1999	50.000 ppb	3.912 (* Nondetect *)
Dec 11 1999	920.000 ppb	6.824
Dec 12 1999	1050.000 ppb	6.957
Dec 13 1999	1360.000 ppb	7.215
Dec 14 1999	1200.000 ppb	7.090
Dec 15 1999	1160.000 ppb	7.056
Dec 16 1999	1190.000 ppb	7.082
Dec 17 1999	710.000 ppb	6.565
Dec 18 1999	920.000 ppb	6.824
Dec 19 1999	750.000 ppb	6.620
Dec 20 1999	580.000 ppb	6.363
Dec 22 1999	800.000 ppb	6.685
Dec 23 1999	700.000 ppb	6.551
Dec 24 1999	441.000 ppb	6.089

Well ID:13MW2 Summary Statistics

Observations (N): 30

Nondetects (%ND): 3

Minimum:	50.000 ppb	Ln Minimum:	3.912
Maximum:	1360.000 ppb	Ln Maximum:	7.215
Mean:	780.700 ppb	Ln Mean:	6.562
Std. Dev.:	262.094 ppb	Ln Std. Dev.:	0.574

Normality Tests

Report Printed: 05-10-2005 17:17

Facility:RAAPHWMU13 Haz. Waste Unit 13 - RAAP

Address:

City:Radford ST:VA Zip:
County:PULASKI

Contact:
Phone:( ) -

Permit Type:Detection

Constituent:Nitrate Nitrate

CAS Number:14797-55-8
MCL: 0.000 ppb
ACL: 0.000 ppb
Detect Limit: 100.000 ppb

Start Date:Mar 31 1996
End Date:Dec 30 1999

Normality Test on Observations for wells listed below:

Well:13MW1 Position:Upgradient Observations:31

Scale	Minimum	Maximum	Mean	Std Dev
Original:	50.000	900.000	441.613	212.259
Log:	3.912	6.802	5.950	0.600

Well:13MW2 Position:Upgradient Observations:30

Scale	Minimum	Maximum	Mean	Std Dev
Original:	50.000	1360.000	780.700	262.094
Log:	3.912	7.215	6.562	0.574

Pooled Statistics
Observations: 61

Statistic	Original Scale	Log Scale
Mean:	608.377	6.251
Std Dev:	291.453	0.659
Skewness:	0.269	-1.602*
Kurtosis:	-0.285	3.355
Minimum:	50.000	3.912
Maximum:	1360.000	7.215

CV:	0.479	0.105

Shapiro-Francia Statistics

Scale	Test Statistic	5% Critical Value	1% Critical Value
Original:	0.9813	0.9630	0.9470
Log:	0.8553*	0.9630	0.9470

* Indicates statistically significant evidence of non-normality.
GRIT/STAT Version 5.0

Parametric Prediction Interval
Report Printed May 10,2005

Facility:Haz. Waste Unit 13 - RAAP
Parameter:Nitrate(CAS Number:14797-55-8)

ONE-TAILED UPPER PARAMETRIC PREDICTION INTERVAL

Observations (n):	61
Shapiro-Francia (W):	0.9813
Critical W,α=0.01:	0.9470
Mean:	608.377 ppb
Std Dev:	291.453 ppb
DF:	60
Conf. Level (1-α):	0.9500
Future Samples (k):	5
$t_{\left[1-\frac{\alpha}{k}\right]}$:	2.3901
Kappa:	2.4096
UL:	1310.672 ppb
LL:	-∞

X.ND: 3y.

Report Produced by GRITS/STAT 5.01

Data Set Summary

Report Printed: 05-10-2005 17:19

Facility:RAAPHWMU13 Haz. Waste Unit 13 - RAAP

Address:

City:Radford ST:VA Zip:
County:PULASKI

Contact:
Phone:( ) -

Permit Type:Detection

Constituent:Nitrite Nitrite

CAS Number:14797-65-0
MCL: 0.000 ppb
ACL: 0.000 ppb
Detect Limit: 10.000 ppb

Start Date:Mar 31 1996
End Date:Dec 30 1999

Well ID:13MW1

Sample Date	Observation	Ln
Mar 31 1996	5.000 ppb	1.609 (* Nondetect *)
Jun 30 1996	5.000 ppb	1.609 (* Nondetect *)
Sep 30 1996	5.000 ppb	1.609 (* Nondetect *)
Dec 31 1996	5.000 ppb	1.609 (* Nondetect *)
Mar 31 1997	5.000 ppb	1.609 (* Nondetect *)
Jun 30 1997	5.000 ppb	1.609 (* Nondetect *)
Sep 30 1997	5.000 ppb	1.609 (* Nondetect *)
Dec 31 1997	5.000 ppb	1.609 (* Nondetect *)
Mar 09 1998	5.000 ppb	1.609 (* Nondetect *)
May 14 1998	5.000 ppb	1.609 (* Nondetect *)
Aug 14 1998	5.000 ppb	1.609 (* Nondetect *)
Nov 23 1998	5.000 ppb	1.609 (* Nondetect *)
Mar 13 1999	5.000 ppb	1.609 (* Nondetect *)
May 27 1999	5.000 ppb	1.609 (* Nondetect *)
Jul 27 1999	5.000 ppb	1.609 (* Nondetect *)
Nov 08 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 10 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 11 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 12 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 13 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 14 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 15 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 16 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 17 1999	5.000 ppb	1.609 (* Nondetect *)

Dec 18 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 19 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 20 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 21 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 22 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 23 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 24 1999	5.000 ppb	1.609 (* Nondetect *)

Well ID:13MW1 Summary Statistics

Observations (N): 31
Nondetects (%ND):100

Minimum:	5.000 ppb	Ln Minimum:	1.609
Maximum:	5.000 ppb	Ln Maximum:	1.609
Mean:	5.000 ppb	Ln Mean:	1.609
Std. Dev.:	0.000 ppb	Ln Std. Dev.:	0.000

Well ID:13MW2

Sample Date	Observation	Ln
Mar 31 1996	5.000 ppb	1.609 (* Nondetect *)
Jun 30 1996	5.000 ppb	1.609 (* Nondetect *)
Sep 30 1996	5.000 ppb	1.609 (* Nondetect *)
Dec 31 1996	5.000 ppb	1.609 (* Nondetect *)
Mar 31 1997	5.000 ppb	1.609 (* Nondetect *)
Jun 30 1997	5.000 ppb	1.609 (* Nondetect *)
Sep 30 1997	5.000 ppb	1.609 (* Nondetect *)
Dec 31 1997	5.000 ppb	1.609 (* Nondetect *)
Mar 09 1998	5.000 ppb	1.609 (* Nondetect *)
May 14 1998	5.000 ppb	1.609 (* Nondetect *)
Aug 14 1998	5.000 ppb	1.609 (* Nondetect *)
Nov 23 1998	5.000 ppb	1.609 (* Nondetect *)
Mar 13 1999	5.000 ppb	1.609 (* Nondetect *)
May 27 1999	5.000 ppb	1.609 (* Nondetect *)
Jul 27 1999	5.000 ppb	1.609 (* Nondetect *)
Nov 08 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 10 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 11 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 12 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 13 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 14 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 15 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 16 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 17 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 18 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 19 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 20 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 22 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 23 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 24 1999	5.000 ppb	1.609 (* Nondetect *)

Well ID:13MW2 Summary Statistics

Observations (N): 30

Nondetects (%ND):100

Minimum:	5.000 ppb	Ln Minimum:	1.609
Maximum:	5.000 ppb	Ln Maximum:	1.609
Mean:	5.000 ppb	Ln Mean:	1.609
Std. Dev.:	0.000 ppb	Ln Std. Dev.:	0.000

Data Set Summary

Report Printed: 05-10-2005 17:19

Facility:RAAPHWMU13 Haz. Waste Unit 13 - RAAP

Address:

City:Radford ST:VA Zip:
County:PULASKI

Contact:
Phone:( ) -

Permit Type:Detection

Constituent:Sulfate Sulfate, total

CAS Number:14808-79-8
MCL: 0.000 ppb
ACL: 0.000 ppb
Detect Limit: 1000.000 ppb

Start Date:Mar 31 1996
End Date:Dec 30 1999

Well ID:13MW1

Sample Date	Observation	Ln
Mar 31 1996	88000.000 ppb	11.385
Jun 30 1996	84000.000 ppb	11.339
Sep 30 1996	80000.000 ppb	11.290
Dec 31 1996	82000.000 ppb	11.314
Mar 31 1997	70000.000 ppb	11.156
Jun 30 1997	64000.000 ppb	11.067
Sep 30 1997	73000.000 ppb	11.198
Dec 31 1997	79000.000 ppb	11.277
Mar 09 1998	73900.000 ppb	11.210
May 14 1998	61500.000 ppb	11.027
Aug 14 1998	64100.000 ppb	11.068
Nov 23 1998	73300.000 ppb	11.202
Mar 13 1999	65000.000 ppb	11.082
May 27 1999	53900.000 ppb	10.895
Jul 27 1999	68500.000 ppb	11.135
Nov 08 1999	61700.000 ppb	11.030
Dec 10 1999	65000.000 ppb	11.082
Dec 11 1999	47500.000 ppb	10.768
Dec 12 1999	39800.000 ppb	10.592
Dec 13 1999	59600.000 ppb	10.995
Dec 14 1999	59100.000 ppb	10.987
Dec 15 1999	34700.000 ppb	10.454
Dec 16 1999	58300.000 ppb	10.973
Dec 17 1999	64900.000 ppb	11.081

Dec 18 1999	65000.000 ppb	11.082
Dec 19 1999	49200.000 ppb	10.804
Dec 20 1999	62900.000 ppb	11.049
Dec 21 1999	65000.000 ppb	11.082
Dec 22 1999	50100.000 ppb	10.822
Dec 23 1999	40900.000 ppb	10.619
Dec 24 1999	38900.000 ppb	10.569

Well ID:13MW1 Summary Statistics

Observations (N): 31
Nondetects (%ND): 0

Minimum:	34700.000 ppb	Ln Minimum:	10.454
Maximum:	88000.000 ppb	Ln Maximum:	11.385
Mean:	62670.957 ppb	Ln Mean:	11.020
Std. Dev.:	13583.912 ppb	Ln Std. Dev.:	0.235

Well ID:13MW2

Sample Date	Observation	Ln
Mar 31 1996	32000.000 ppb	10.373
Jun 30 1996	31000.000 ppb	10.342
Sep 30 1996	28000.000 ppb	10.240
Dec 31 1996	27000.000 ppb	10.204
Mar 31 1997	24000.000 ppb	10.086
Jun 30 1997	24000.000 ppb	10.086
Sep 30 1997	26000.000 ppb	10.166
Dec 31 1997	29000.000 ppb	10.275
Mar 09 1998	30300.000 ppb	10.319
May 14 1998	30700.000 ppb	10.332
Aug 14 1998	26900.000 ppb	10.200
Nov 23 1998	27500.000 ppb	10.222
Mar 13 1999	26200.000 ppb	10.174
May 27 1999	22400.000 ppb	10.017
Jul 27 1999	23100.000 ppb	10.048
Nov 08 1999	24400.000 ppb	10.102
Dec 10 1999	25700.000 ppb	10.154
Dec 11 1999	22200.000 ppb	10.008
Dec 12 1999	27300.000 ppb	10.215
Dec 13 1999	23400.000 ppb	10.060
Dec 14 1999	26300.000 ppb	10.177
Dec 15 1999	31800.000 ppb	10.367
Dec 16 1999	22700.000 ppb	10.030
Dec 17 1999	24100.000 ppb	10.090
Dec 18 1999	29900.000 ppb	10.306
Dec 19 1999	28300.000 ppb	10.251
Dec 20 1999	28500.000 ppb	10.258
Dec 22 1999	34100.000 ppb	10.437
Dec 23 1999	48800.000 ppb	10.795
Dec 24 1999	32800.000 ppb	10.398

Well ID:13MW2 Summary Statistics

Observations (N): 30

Nondetects (%ND): 0

Minimum:	22200.000 ppb	Ln Minimum:	10.008
Maximum:	48800.000 ppb	Ln Maximum:	10.795
Mean:	27946.664 ppb	Ln Mean:	10.224
Std. Dev.:	5141.363 ppb	Ln Std. Dev.:	0.162

Normality Tests

Report Printed: 05-10-2005 17:19

Facility:RAAPHWMU13 Haz. Waste Unit 13 - RAAP

Address:

City:Radford ST:VA Zip:
County:PULASKI

Contact:
Phone:( ) -

Permit Type:Detection

Constituent:Sulfate Sulfate, total

CAS Number:14808-79-8
MCL: 0.000 ppb
ACL: 0.000 ppb
Detect Limit: 1000.000 ppb

Start Date:Mar 31 1996
End Date:Dec 30 1999

Normality Test on Observations for wells listed below:

Well:13MW1 Position:Upgradient Observations:31

Scale	Minimum	Maximum	Mean	Std Dev
Original:	34700.000	88000.000	62670.957	13583.912
Log:	10.454	11.385	11.020	0.235

Well:13MW2 Position:Upgradient Observations:30

Scale	Minimum	Maximum	Mean	Std Dev
Original:	22200.000	48800.000	27946.664	5141.363
Log:	10.008	10.795	10.224	0.162

Pooled Statistics
Observations: 61

Statistic	Original Scale	Log Scale
Mean:	45593.438	10.629
Std Dev:	20283.574	0.449
Skewness:	0.447	0.144
Kurtosis:	-1.253	-1.551
Minimum:	22200.000	10.008
Maximum:	88000.000	11.385

CV:	0.445	0.042

Shapiro-Francia Statistics

Scale	Test Statistic	5% Critical Value	1% Critical Value
Original:	0.8955*	0.9630	0.9470
Log:	0.9128*	0.9630	0.9470

* Indicates statistically significant evidence of non-normality.
GRIT/STAT Version 5.0

Nonparametric Prediction Interval
Report Printed May 10,2005

Facility:Haz. Waste Unit 13 - RAAP
Parameter:Sulfate, total(CAS Number:14808-79-8)

ONE-TAILED UPPER PARAMETRIC PREDICTION INTERVAL

Observations (n):	61
Conf. Level (1-α):	100.000%
UL:	88,000.0 ~~22200.000~~ ppb
LL:	0.000

% ND: 0

Report Produced by GRITS/STAT 5.01

5WC22 ✓

DTW - 9.45 Begin Purge (1107)

Post Purge DTW - 9.52 Initial Purge - Clear

Time	Temp(C)	Cond(us)	DO mg/L	pH	ORP(MV)	Purge K	Desc
(1110)	13.66	823	2.19	6.56	235	0.3 L/min	Clear
(1115)	13.79	926	0.99	6.77	201	"	Clear
(1120)	13.81	960	0.76	6.80	187	"	Clear
(1125)	13.92	967	0.75	6.80	183	"	Clear
(1130)	14.00	968	0.73	6.82	176	"	Clear
(1135)	14.13	971	0.76	6.83	173	"	Clear
(1140)	14.20	971	0.76	6.83	169	"	Clear
(1140)	Readings Stable						
(1204)	14.59	983	0.80	6.90	162	Post Purge Reading	

Sample Time (1145)

Samples Collected: (3)8260, (2)RSK175, (1)Sulfide, (1)9056
(1)TM, (2)8270, (2)TOC

5WC23 ✓

DTW - 8.86 Begin Purge (1220)

Post Purge DTW - 8.89 Initial Purge - Clear

Time	Temp(C)	Cond(us)	DO mg/L	pH	ORP(MV)	Purge K	Desc
(1225)	13.06	921	5.67	7.22	156	0.3 L/min	Clear
(1230)	12.79	988	1.25	6.90	167	"	Clear
(1235)	12.85	996	1.12	6.88	167	"	Clear
(1240)	13.15	997	1.05	6.86	164	"	Clear
(1245)	13.32	1001	1.08	6.84	164	"	Clear
(1250)	13.46	1001	1.06	6.86	160	"	Clear
(1255)	13.51	1002	1.06	6.85	158	"	Clear
(1255)	Readings Stable						
(1318)	13.74	1007	1.10	6.88	155	Post Purge Reading	

Sample Time (1300)

Samples Collected: (3)8260, (3)RSK175, (1)Sulfide, (1)9056
(1)TM, (2)8270, (2)TOC

General Notes

Weather - Partly Sunny, Scattered Showers, 50-60's

PPE - Eye Protection, Nitrile gloves, Cotton Suits,

Calibrations - YSI 650 MDS / Myron L Ultrameter

- pH - 4.00 = 4.00, 7.00 = 7.00, 10.00 = 10.00
- Conductivity reads 1413 us in 1413 us std.
- DO% = 100

- Dedicated tubing and well skirts used at each well
- All equipment deconed between each well
- Purge water disposed of at dedicated location onsite
- All samples collected, stored and transported on ice in coolers.

Static Water Level Table

WELL	DTW	Post Purge DTW	Notes
13MW1	20.19 ✓	20.35	
13MW2	20.08 ✓	20.85	
13MW3	12.92 ✓	12.97	
13MW4	16.37 ✓	16.43	
13MW5	15.92 ✓	16.46	
13MW6	15.51 ✓	16.05	
13MW7	15.54 ✓	15.66	

13MW3 ✓

DTW - 12.92 Begin Purge (0711)

Post Purge DTW - 12.97 Initial Purge - Clear

Time	Temp(C)	Cond(us)	DO mg/L	pH	ORP(MV)	Purge K	Desc
(0715)	11.72	615	7.28	7.30	134	0.3 L/min	Clear
(0720)	11.76	639	6.70	7.10	135	"	Clear
(0725)	11.76	647	6.60	6.98	134	"	Clear
(0730)	11.79	654	6.51	6.96	137	"	Clear
(0735)	11.77	656	6.46	6.98	135	"	Clear
(0740)	11.74	657	6.46	6.96	134	"	Clear
(0740)	Readings Stable						

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13MW3(Cont.)	(Cond(us))	DO mg/L	pH	ORP	
(0810) 11.88	656	6.56	6.98	142	Post Purge Reading

Sample Time (0745)

Samples Collected: (3)8260, (2)Sulfide, (2)8280, (2)8332/8330
(2)8021/8082, (2)8151, (1)314.0, (1)TM, (1)CN, (2)8270

13MW4 ✓

DTW - 16.37 Begin Purge (0823)

Post Purge DTW - 16.43 Initial Purge - Clear

Time	Temp(C)	Cond(us)	DO mg/L	pH	ORP(mv)	Purge K	Desc
(0825)	12.15	453	6.70	6.98	145	0.3 L/min	Clear
(0830)	12.16	482	6.56	6.82	145	"	Clear
(0835)	12.15	492	6.59	6.82	149	"	Clear
(0840)	12.17	496	6.60	6.81	152	"	Clear
(0845)	12.20	497	6.60	6.78	151	"	Clear
(0850)	12.19	497	6.61	6.78	149	"	Clear
(0850) Readings Stable							
(0929) 12.16		475	6.83	6.78	157	Post Purge Reading	

Sample Time (0855)

Samples Collected: (3)8260, (2)Sulfide, (2)8280, (1)TM, (1)314.0
(1)CN, (2)8270, (2)8151, (2)8021/8082, (2)8330/8332

13mw DUP

Sample Time (0910)

Samples Collected: (3)8260, (2)Sulfide, (2)8280, (1)TM, (1)314.0
(1)CN, (2)8270, (2)8151, (2)8021/8082, (2)8330/8332

4/27/10 RAAP B03204-08 DAS/TQE FB#9

10MW1 ✓

DTW - 15.81 Begin Purge (1014)

Post Purge DTW - 16.03 Initial Purge - Clear

Time	Temp(C)	Cond(us)	DO mg/L	pH	ORP(mv)	Purge K	Desc
(1015)	13.02	426	9.92	7.25	157	0.3 L/min	Clear
(1020)	12.88	427	9.51	7.29	153	"	Clear
(1025)	12.91	426	9.50	7.28	157	"	Clear
(1030)	12.87	427	9.49	7.32	145	"	Clear
(1035)	12.68	428	9.52	7.43	142	"	Clear
(1040)	12.56	427	9.52	7.40	143	"	Clear
(1045)	12.74	427	9.51	7.35	148	"	Clear
(1045) Readings Stable							
(1208) 13.10		428	9.63	7.40	147	Post Purge Reading	

Sample Time (1050)

Samples Collected: (18)8260, (3)TM, (3)CN, (3)9065, (6)8151
(6)8270, (6)8021, (4)8081, (4)Sulfide

Static Water Level Table - Unit 10

WELL	DTW	Post Purge DTW	Notes
10DDH2R	17.74 ✓	17.76	
10D3			
10D3D	16.38 ✓	16.45	
10MW1	15.81 ✓	16.03	
10D4			

10DDH2R ✓

DTW- 17.74 Begin Purge (1228)

Post Purge DTW-17.76 Initial Purge - Clear

Time	Temp(C)	Cond(us)	DO mg/L	pH	ORP(mv)	Purge k	Desc
(1230)	11.56	599	3.11	7.13	159	0.3 L/min	Clear
(1235)	11.19	654	1.00	7.24	142	"	Clear
(1240)	10.98	644	0.95	7.20	122	"	Clear
(1245)	10.89	626	0.98	7.16	116	"	Clear
(1250)	10.85	593	1.15	7.09	116	"	Clear
(1255)	10.86	569	1.49	6.96	118	"	Clear
(1300)	10.97	555	1.62	6.94	120	"	Clear
(1305)	10.98	546	1.68	6.96	120	"	Clear
(1310)	11.02	539	1.74	6.97	122	"	Clear
(1310)	Readings Stable						
(1334)	10.92	515	1.96	6.85	127		

Sample Time (1315)

Samples Collected: (6)8260, (2)Sulfide, (1)TM, (1)CN, (1)9065
(2)8151, (2)8270, (2)8081, (2)8081

General Notes

Weather -

PPE - Eye protection, Nitrile gloves, Cotton suits, Rubber boots, Heavy duty gloves, Face Shields

Calibrations - YSI 650 MDS / Myron L Ultrameter

- pH: 4.00 = 4.00, 7.00 = 7.01, 10.00 = 10.00
- Conductivity reads 1413 us in 1413 us std
- DO% = 100

- Dedicated tubing and well skirts used at each well
- All equipment deconed between each well
- Purge water disposed of at dedicated location onsite
- All samples collected stored and transported on ice in coolers

13MW06 ✓

DTW - 15.51 Begin Purge (0704)

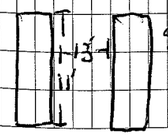
Post Purge DTW-16.05 Initial Purge - Clear

Time	Temp(C)	Cond(us)	DO mg/L	pH	ORP(mv)	Purge k	Desc
(0705)	11.56	791	4.34	7.12	137	0.3 L/min	Clear
(0710)	11.95	825	3.54	7.00	139	"	Clear
(0715)	12.10	831	3.44	7.05	140	"	Clear
(0720)	12.16	831	3.44	7.04	143	"	Clear
(0725)	12.19	830	3.39	7.02	144	"	Clear
(0730)	12.17	828	3.37	7.00	144	"	Clear
(0730)	Readings Stable						
(0800)		820	3.53	7.05	146	Post Purge Reading	

Sample Time (0735)

Samples Collected: (3)8260, (2)Sulfide, (2)8280, (1)TM, (1)CN
(2)8270, (1)314.0, (2)8081/8082, (2)8151, (3)8332/8330

PAD-1



Sample Time (0750)

Samples Collected:
(4) 8290

DUP-1

Sample Time (0800)

Samples Collected:
(4) 8290

4/28/10 RAAP B03204-08 DAS/TQE FB# 9

13MW5 ✓

DTW - 15.92 Begin Purge (0818)

Post Purge DTW - 16.46 Initial Purge - Clear

Time	Temp(C)	Cond(us)	DO mg/L	pH	ORP(mv)	Purge k	Desc
(0820)	12.49	629	6.30	7.04	137	0.3 L/min	Clear
(0825)	12.72	627	6.21	7.00	137	"	Clear
(0830)	12.72	627	6.18	7.02	137	"	Clear
(0835)	12.83	625	6.19	7.04	138	"	Clear
(0840)	12.81	623	6.19	7.05	137	"	Clear
(0845)	12.95	624	6.22	7.04	135	"	Clear
(0850)	12.91	626	6.26	7.05	131	"	Clear
(0850)	Readings Stable						
(1006)	13.12	627	6.38	7.20	132	"	Post Purge Reading

Sample Time (0855)

Samples Collected: (3)8260, (2)Sulfide, (2)8280, (1)TM, (1)CN
(1)3140, (2)8081/8082, (2)8270, (2)8151, (2)8330/8332

13MW7 ✓

DTW - 15.54 Begin Purge (1024)

Post Purge DTW - 15.66 Initial Purge - Clear

Time	Temp(C)	Cond(us)	DO mg/L	pH	ORP(mv)	Purge k	Desc
(1025)	10.27	489	6.97	7.30	134	0.3 L/min	Clear
(1030)	10.39	509	6.41	7.24	136	"	Clear
(1035)	10.46	511	6.38	7.25	135	"	Clear
(1040)	10.49	512	6.37	7.25	135	"	Clear
(1045)	10.42	513	6.40	7.25	135	"	Clear
(1050)	10.53	515	6.41	7.22	136	"	Clear
(1050)	Readings Stable						
(1112)	10.34	512	6.47	7.23	139		

Sample Time (1055)

Samples Collected: (3)8260, (2)Sulfide, (2)8280, (1)TM, (1)CN
(1)3140, (2)8081/8082, (2)8270, (2)8151, (2)8330/8332

4/28/10 RAAP B03204-08 DAS/TQE FB# 9

13MW1 ✓

DTW - 20.19 Begin Purge (1124)

Post Purge DTW - 20.35 Initial Purge - Clear

Time	Temp(C)	Cond(us)	DO mg/L	pH	ORP(mv)	Purge k	Desc
(1125)	12.40	618	7.50	7.00	140	0.3 L/min	Clear
(1130)	12.55	664	5.36	7.01	145	"	Clear
(1135)	12.61	682	4.45	7.04	141	"	Clear
(1140)	12.78	692	4.30	7.05	140	"	Clear
(1145)	12.87	698	4.25	7.06	138	"	Clear
(1150)	12.93	705	4.10	7.08	137	"	Clear
(1155)	13.00	710	4.01	7.11	135	"	Clear
(1155)	Readings Stable						
(1210)	12.87	693	4.28	7.08	136		Post Purge Reading

Sample Time (1200)

Samples Collected: (3)8260, (1)TM, (1)3140, (2)8270, (2)8330/8332

13MW2 ✓

DTW - 20.08 Begin Purge (1224)

Post Purge DTW - 20.85 Initial Purge - Clear

Time	Temp(C)	Cond(us)	DO mg/L	pH	ORP(mv)	Purge k	Desc
(1225)	13.84	710	8.82	7.15	134	0.3 L/min	Clear
(1230)	14.05	722	8.43	7.15	130	"	Clear
(1235)	14.15	741	8.32	7.17	130	"	Clear
(1240)	14.31	748	8.27	7.17	131	"	Clear
(1245)	14.51	753	8.29	7.20	132	"	Clear
(1250)	14.70	755	8.30	7.22	132	"	Clear
(1255)	14.64	756	8.30	7.18	125	"	Clear
(1255)	Readings Stable						
(1313)	14.50	753	8.40	7.20	132		Post Purge Reading

Sample Time (1300)

Samples Collected: (3)8260, (1)TM, (1)3140, (2)8270
(2)8330/8332

6/23/10 — RAAP R032041-08 CJB/KFC — FB#9

General Notes:
- Weather - Partly Cloudy, 70's
- PPE - Nitrile Gloves, White Cotton Suits, Eye Protection, Steel toe boots
- Calibrations = Myron L Ultrameter
  4.00 = 4.00 7.00 = 7.00 10.00 = 9.99
  Conductivity reads 1412 µs in a 1413 µs solution
  DO% = 100 %
- Dedicated tubing and plastic well skirts used at each well.
- All equipment decanned between each well.
- Purge water disposed of at dedicated location on-site.
- All samples collected, stored and transported on ice in coolers

13MW-3 (3) ✓

DTW - 13.51 — Begin Purge (0715)

Post Purge DTW - 13.52 — Initial Purge - CLEAR

Time	Temp (C°)	Cond (µS)	DO mg/L	pH	ORP (mV)	Purge (L)	Desc.
(0720)	15.3	642.3	6.05	6.60	239	0.3 L/min.	Clear
(0725)	14.8	614.7	5.58	6.91	223	"	"
(0730)	14.7	615.6	5.59	6.94	219	"	"
(0735)	14.7	617.2	5.18	6.92	216	"	"
(0740)	14.9	618.5	5.32	6.92	214	"	"
(0745)	15.0	617.8	5.31	6.98	213	"	"
(0750)	14.8	621.5	5.17	6.95	212	"	"
(0750)	Readings Stable					Post-Purge Ready	
(0805)	14.7	622.4	5.08	6.96	209	0.3L/min	CLEAR

Sample Time (0755)

Samples Collected: (6) 8260B

13MW3-DUP

SAMPLE TIME (0800)

Samples Collected: (3) 8260B

6/23/10 — RAAP R032041-08 CJB/KFC — FB#9

13MW-5 ✓

DTW - 17.19 — Begin Purge (0810)

Post Purge DTW - 17.23 — Initial Purge - CLEAR

TIME	Temp (C°)	Cond (µS)	DO mg/L	pH	ORP (mV)	Purge (L)	Desc.
(0820)	14.1	691.2	4.67	7.02	215	0.3 L/min	CLEAR
(0825)	14.0	692.8	4.36	7.03	214	"	"
(0830)	14.0	692.9	4.53	7.02	211	"	"
(0835)	13.9	690.7	4.49	7.03	207	"	"
(0840)	14.0	691.2	4.46	7.04	205	"	"
(0845)	14.0	689.4	4.34	7.03	204	"	"
(0850)	14.0	690.8	4.37	7.02	203	"	"
(0850)	READINGS STABLE						
(0905)	13.9	689.3	4.42	7.03	201	Post-Purge Ready	

Sample Time (0855)

Samples Collected: (2) TM

13MW5-DUP

SAMPLE TIME (0900)

SAMPLE COLLECTED: (1) TM

Left site ~0920

9-1-10 F.B.#9

RAAP
B032G4-305
CJB/KFC
(Arrived onsite ≈ 0730)

GENERAL NOTES:

- Weather- Fog in early morning otherwise sunny; 80's
- PPE- Eye Protection, Nitrile Gloves, White Cotton Flame Retardant Coveralls
- CALIBRATIONS: YSI 650 MDS
  pH: 4.00 = 4.00 7.00 = 7.00, 10.00 = 9.97
  Conductivity reads 1413 µs in a 1413µs standard.
  DO% = 100 %
- Dedicated tubing and well skirts used at each well.
- All equipment decon'ed between each well.
- Purge water disposed of at treatment plant onsite.
- All samples collected, stored and transported on ice in coolers.

13MW1-
DTW- 21.81 Begin Purge (0800)
Post Purge DTW- 21.96 Initial Purge- CLEAR

TIME	Temp(C°)	Cond(µs)	DO mg/L	pH	ORP(mV)	Purge K	Desc.
(0805)	12.45	730	5.83	6.84	247.6	≤0.3L/min.	CLEAR
(0810)	12.45	730	5.51	6.86	255.1	"	"
(0815)	12.51	728	5.37	6.87	262.0	"	"
(0820)	12.52	727	5.24	6.88	267.0	"	"
(0825)	12.55	726	5.12	6.89	273.1	"	"
(0830)	12.52	726	5.04	6.90	278.3	"	"
(0835)	12.50	724	5.00	6.90	279.0	"	"
(0835)	READINGS STABLE						
(0842)	12.51	724	5.01	6.90	281.0	"	"

SAMPLE TIME (0840)
SAMPLES COLLECTED: (4) 8260B

9-1-10 RAAP B032G4 CJB/KFC F.B.#9

13MW2-
DTW- 21.95 Begin Purge- (0855)
Post Purge DTW- Initial Purge- CLEAR

TIME	TEMP(C°)	COND(µs)	DO mg/L	pH	ORP(mV)	PURGE K	DESC.
(0900)	13.60	697	6.12	6.96	284.4	≤0.3L/min	CLEAR
(0905)	13.29	692	4.59	6.93	289.5	"	"
(0910)	13.29	692	4.52	6.92	292.8	"	"
(0915)	13.36	691	4.80	6.90	296.2	"	"
(0920)	13.38	690	4.95	6.89	300.0	"	"
(0925)	13.40	690	5.02	6.89	302.1	"	"
(0930)	13.45	691	4.99	6.88	305.3	"	"
(0930)	READINGS STABLE						
(0938)	13.69	691	5.08	6.88	307.2	"	"

SAMPLE TIME (0935)
SAMPLES COLLECTED: (4) 8260B

COMPLETED 1119/10 ESK

16C1 ✓

DTW - 50.15 Begin Purge: (1600)
Post Purge DTW - 50.17 Initial Purge: Clear

Time	Temp(°C)	Cond(µS)	DO(mg/L)	pH	ORP(mV)	Purge K (L/min)	Desc.
(1605)	15.19	488	9.25	6.80	269.6	0.3	Clear
(1610)	14.44	669	2.53	6.44	272.4	"	"
(1615)	14.94	706	1.84	6.45	265.7	"	"
(1620)	15.06	722	1.57	6.45	262.6	"	"
(1625)	15.26	730	1.44	6.44	259.3	"	"
(1630)	15.29	731	1.42	6.44	258.4	"	"
(1635)	15.27	735	1.42	6.44	258.0	"	"
(1635)	Readings stable.						
(1645)	15.52	742	1.70	6.58	271.1	"	"

Sample Time: (1640)
Samples Collected: (3) 8260, (2) 8270, (1) TM

COMPLETED
10/19/10 SK

GENERAL NOTES:
- Weather - Clear - 40°s
- PPE - White cotton flame retardant coveralls, Nitrile Gloves, Eye protection Steel toed boots
- Calibrations: YSI 600 MDS
  pH: 4.00 = 4.00 7.00 = 7.00 10.00 = 10.00
  Conductivity reads 1413 µs in a 1413 µs standard
  DO% = 100 %
- Dedicated tubing and well skirts used at all wells.
- All equipment decanned between wells.
- Purge water disposed of at dedicated location on-site.
- All samples collected, then stored and transported on ice.

13MW3 ✓

DTW - 12.30 Begin Purge: (0725)
Post Purge DTW - 13.70 Initial Purge: Clear

TIME	Temp(°C)	Cond(µS)	DO(mg/L)	pH	ORP(mV)	Purge K (L/min)	Clear
(0725)	15.92	604	7.19	6.87	374.9	0.3	Clear

Note: Debris from stormwater over flowing well head during flooding has caused a dense mat of pine needles and other small fines of plant matter to form a layer at the surface of the water column. It took a bailer and several deployments of the bailer to bust through the fibrous mat in order to ~~take~~ collect the water level.

(0730)	16.02	605	4.85	6.94	285.0	0.3	Clear
(0735)	16.07	605	4.75	6.97	264.1	"	"
(0740)	16.20	608	4.84	6.97	237.8	"	"
(0745)	16.17	608	4.88	6.99	230.1	"	"
(0750)	16.20	608	4.91	6.98	229.7	"	"
(0755)	16.23	608	4.92	6.96	229.6	"	"
(0755)	Readings stable.						
(0810)	16.68	610	4.92	6.96	233.2	"	"

-continued on page 99

10/18/10 RAAP FB# 9

B03204-08
CJB/~~TAL~~ KFC

13MW3

Time on 10/18/10
Samples ~~Collected~~: (0800)
Samples Collected: (3) 8260, (1) TM, (1) 314.0, (3) 8270,
(2) 8332/8330

Static Water Level Table - Unit 13

Well		DTW	Post Purge DTW	Notes
~~to 1~~	13MW1	22.06	22.19	
~~to 2~~	13MW2	22.19	23.84	
~~to 3~~	13MW3	12.30	13.70	Debris mat at surface of water column. 1.4' cult to read water level.
~~to 5~~	13MW4	17.63	20.51	
~~to WC2B~~	13MW5	18.02	18.06	
~~to MW8~~	13MW6	17.40	17.89	
~~to~~	13MW7	16.73	17.05	

13MW4 ✓

DTW: 17.63 Begin Purge: (08:20)
Post Purge DTW: 20.51 Initial Purge:

Time	Temp(°C)	Cond(µs)	DO(mg/L)	pH	ORP(mV)	Purge K (L/min)	Desc.
(0825)	14.81	625	0.88	7.22	264.3	0.3	Clear
(0830)	14.87	624	0.71	7.23	257.6	"	"
(0835)	14.83	623	0.76	7.22	250.8	"	"
(0840)	14.86	617	1.00	7.18	244.0	"	"
(0845)	14.89	582	2.18	7.05	245.1	"	"
(0850)	14.65	554	3.14	6.96	253.1	"	"
(0855)	14.48	542	3.73	6.92	263.8	"	"
(0900)	14.45	542	3.74	6.91	265.0	"	"
(0905)	14.41	540	3.79	6.90	270.5	"	"
(0905)	Readings stable.						
(0915)	14.93	540	4.22	6.86	281.6	"	"

Sample Time: (0910)
Samples Collected: (3) 8260, (1) TM, (1) 314.0, (1) 8270, (1) 8332/8330

Well went dry during sampling (99) finish collecting 13MW4 and Dup tomorrow.

10/18/10 RAAP FB# 9

B03204-08
CJB/KFC

~~13MW Dup~~ CJB 10/18/10

Sample Time: (0920)
Samples ~~Collected~~: (3) 8260, (1) ~~TM~~, (1) 314.0, (3) 8270,
(2) ~~8332/8330~~

13MW6 ✓

DTW: 17.40 Begin Purge: (0935)
Post Purge DTW: 17.89 Initial Purge: Clear

Time	Temp(°C)	Cond(µs)	DO(mg/L)	pH	ORP(mV)	Purge K (L/min)	Desc.
(0940)	14.37	910	3.62	7.03	304.8	0.3	Clear
(0945)	14.43	925	3.03	7.03	303.1	"	"
(0950)	14.44	927	2.91	7.04	299.1	"	"
(~~0955~~ 0955)	14.47	928	2.82	7.05	297.3	"	"
(1000)	14.48	928	2.80	7.05	296.2	"	"
(1005)	14.49	928	2.78	7.03	295.5	"	"
(1005)	Readings stable.						
(1015)	14.50	928	2.85	7.02	294.7	"	"

Sample Time: (1010)
Samples Collected: (3) 8260, (1) TM, (1) 314.0, (2) 8270,
(2) 8332/8330

13MW1 ✓

DTW = 22.06 Begin Purge: (10:32)
Post Purge DTW = 22.19 Initial Purge: Clear

Time	Temp(°C)	Cond(µs)	DO(mg/L)	pH	ORP(mV)	Purge K (L/min)	Desc
(1035)	13.71	750	5.68	7.02	316.8	0.3 L/min	Clear
(1040)	13.74	752	3.57	7.00	314.9	"	"
(1045)	13.81	752	3.40	7.00	310.6	"	"
(1050)	13.95	756	3.20	7.02	308.6	"	"
(1055)	13.99	749	3.17	7.02	307.1	"	"
(1100)	14.10	749	3.16	7.01	305.6	"	"
(1100)	Readings stable.						

(100)

10/18/10 — RAAP B03204-08 CJB/KFC — FB# 9

13MW1

Time	Temp(°C)	Cond(µS)	DO(mg/L)	pH	ORP(mV)	Purge K (L/min)	Desc
(1115)	13.71	746	3.58	7.02	300.3	0.3	post purge reading

Sample Time: (1105)
Samples Collected: (3)8260, (1) TM, (1) 314.0, (2)8270, (2) 8332/8330

13MW2 ✓

DTW: 22.19 — Begin Purge: (1125)
Post Purge DTW: 23.84 — Initial Purge: Clear

Time	Temp(°C)	Cond(µS)	DO(mg/L)	pH	ORP(mV)	Purge K (L/min)	Desc.
(1130)	14.95	710	3.30	6.92	308.2	0.3	Clear
(1135)	15.00	709	3.15	6.93	305.0	"	"
(1140)	15.15	709	3.15	6.91	302.9	"	"
(1145)	15.20	709	3.14	6.91	302.2	"	"
(1150)	15.31	709	3.12	6.90	300.8	"	"
(1155)	15.70	709	3.08	6.89	299.0	"	"
(1755)	READINGS STABLE						
(1205)	15.92	709	3.74	6.80	293.6	"	POST PURGE READING

SAMPLE TIME (1200)
SAMPLES COLLECTED: (3)8260, (1)TM (1)314.0, (2)8270, (2)8332/8330

10/19/10 — RAAP B03204-08 CJB/KF — FB# 9

- WEATHER - Mostly Clear 50°-60°s
- PPE - White cotton coveralls, Nitrile Gloves, Eye Protection Steel Toed Boots
- CALIBRATIONS: YSI 650MDS
  - pH 4.00 = 4.00, 7.00 = 7.00, 10.00 = 10.00
  - Conductivity reads 1413µs in a 1413µs standard
  - DO % = 100%
- Dedicated tubing and well skirts used at all wells.
- All equipment decanned between wells.
- Purge water disposed of at dedicated location on-site.
- All samples collected, stored and transported on ice.

13MWDUP

Sample Time: (0730)
Samples Collected: (3)8260, (1) TM, (1) 314.0, (2) 8270 (2) 8332/8330

Note: 13MW4

Samples Collected: (1) 8270, (1) 8332/8330 to complete yesterdays bottle kit after well went DRY.
Sample Time: (0740)

13MW5 ✓

DTW: 18.02 — Begin Purge: (0755)
Post Purge DTW: 18.06 — Initial Purge: Clear

Time	Temp(°C)	Cond(µS)	DO(mg/L)	pH	ORP(mV)	Purge K (L/min)	Desc
(0800)	14.73	803	4.42	6.98	246.6	0.3	Clear
(0805)	14.71	735	4.61	6.82	246.1	"	"
(0810)	14.78	726	4.61	6.84	247.1	"	"
(0815)	14.78	724	4.61	6.84	254.9	"	"
(0820)	14.81	722	4.61	6.85	259.0	"	"
(0825)	14.84	722	4.59	6.88	262.7	"	"

10/18/10 RAAP B03204-08 CJB/KFC FB#9

13MW5

Time	Temp(°C)	Cond(µS)	DO(mg/L)	pH	ORP(mV)	Purge K (L/min)	Desc
(0825)	Readings stable				~~311.6~~	~~0.3~~	
(0850)	14.78	716	5.22	6.92	311.6	0.3	Clear

Sample Time: (0830)
Samples Collected: (4) 8260, (3) TM, (3) 314.0, (6) 8270, (6) 8332/8330

13MW7 ✓

DTW: 16.73 Begin Purge: (0905)
PostPurge DTW: 17.05 Initial Purge: Clear

Time	Temp(°C)	Cond(µS)	DO(mg/L)	pH	ORP(mV)	Purge K (L/min)	Desc
(0910)	14.26	782	1.93	6.93	315.1	0.3	Clear
(0915)	14.37	794	1.80	6.92	305.2	"	"
(0920)	14.44	791	1.75	6.89	296.5	"	"
(0925)	14.47	791	1.77	6.91	293.1	"	"
(0930)	14.46	792	1.77	6.90	292.0	"	"
(0935)	14.53	791	1.79	6.90	289.1	"	"
(0940)	14.54	791	1.81	6.90	287.2	"	"
(0940)	Readings stable.						
(0950)	14.50	786	2.13	6.88	285.6	"	"

Sample Time: (0945)
Samples Collected: (3) 8260, (1) TM, (1) 314.0 (2) 8270, (2) 8332/8330

COMPLETED 11/19/10 EBC

10/19/10 RAAP ~~B03204-08~~ 304 CJB/KFC FB#9

Arrived on-site ~ 1000

5MW7B - Pulled pump from well. Took measurements.

DTW - 9.93
TD - 21.47

Pulled ~~pump~~ from well.
Stored pump in plastic bag. Top 24" of PVC pipe was severed/cracked when metal riser was straightened up by ATK. Left this top in well.
We reattached air hose to pump.

Bailed well and poured into (3) separate zip lok bags to allow for soil sediment to settle. Decanted water from bags and poured soil into (2) separate glass jars. over time.
Bailed approx. (40) gallons from well.

Appearance of water was brown, muddy.

Unable to insert surge block into PVC pipe due to section of broken PVC from top 24" of PVC pipe.

SAMPLE TIME (1300)
Samples Collected: (2) TM, Dry Wt. 5:0.1 sediment jars

PPE: Nitrile gloves, Eye Protection

Left Site @ 1500

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ANALYTICAL REPORT

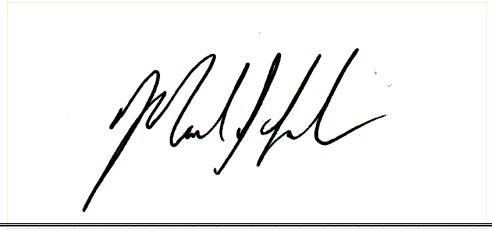
RAAP, RADFORD, VIRGINIA

Lot #: A0D300605

Janet Frazier

Draper Aden Associates Inc
2206 South Main Street
Blackburg, VA 24060

TESTAMERICA LABORATORIES, INC.



Approved for release.
Mark J. Loeb
Project Manager II
5/20/2010 3:04 PM

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Project Manager
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May 20, 2010

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TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

CASE NARRATIVE

CASE NARRATIVE

A0D300605

The following report contains the analytical results for six water samples submitted to TestAmerica North Canton by Draper Aden Associates from the RAAP, Radford, Virginia Site. The samples were received April 30, 2010, according to documented sample acceptance procedures.

The 8280A Dioxins/ Furans analysis was performed at the TestAmerica West Sacramento. Refer to the narrative provided in the West Sacramento package.

TestAmerica utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameter(s) listed on the analytical methods summary page in accordance with the method(s) indicated. Preliminary results were provided to Janet Frazier on May 14, 2010. A summary of QC data for these analyses is included at the back of the report.

TestAmerica North Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the applicable methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

All parameters were evaluated to the method detection limit and include qualified results where applicable.

Please refer to the Quality Control Elements Narrative following this case narrative for additional quality control information.

If you have any questions, please call the Project Manager, Mark J. Loeb, at 330-497-9396.

This report is sequentially paginated. The final page of the report is labeled as "END OF REPORT."

CASE NARRATIVE (continued)

SUPPLEMENTAL QC INFORMATION

SAMPLE RECEIVING

The temperatures of the coolers upon sample receipt were 1.3, 1.4 and 1.6°C.

GENERAL CHEMISTRY

The analytical results met the requirements of the laboratory's QA/QC program.

QUALITY CONTROL ELEMENTS NARRATIVE

TestAmerica conducts a quality assurance/quality control (QA/QC) program designed to provide scientifically valid and legally defensible data. Toward this end, several types of quality control indicators are incorporated into the QA/QC program, which is described in detail in QA Policy, QA-003. These indicators are introduced into the sample testing process to provide a mechanism for the assessment of the analytical data. Program or agency specific requirements take precedence over the requirements listed in this narrative.

QC BATCH

Environmental samples are taken through the testing process in groups called QUALITY CONTROL BATCHES (QC batches). A QC batch contains up to twenty environmental samples of a similar matrix (water, soil) that are processed using the same reagents and standards. TestAmerica North Canton requires that each environmental sample be associated with a QC batch.

Several quality control samples are included in each QC batch and are processed identically to the twenty environmental samples.

For SW846/RCRA methods, QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD) pair or a MATRIX SPIKE/SAMPLE DUPLICATE (MS/DU) pair. If there is insufficient sample to perform an MS/MSD or an MS/DU, then a LABORATORY CONTROL SAMPLE DUPLICATE (LCSD) is included in the QC batch.

For 600 series/CWA methods, QC samples include a METHOD BLANK (MB), a LABORATORY CONTROL SAMPLE (LCS) and, where appropriate, a MATRIX SPIKE (MS). An MS is prepared and analyzed at a 10% frequency for GC Methods and at a 5% frequency for GC/MS methods.

LABORATORY CONTROL SAMPLE

The Laboratory Control Sample is a QC sample that is created by adding known concentrations of a full or partial set of target analytes to a matrix similar to that of the environmental samples in the QC batch. Multi peak responders may not be included in the target spike list due to co-elution. The LCS analyte recovery results are used to monitor the analytical process and provide evidence that the laboratory is performing the method within acceptable guidelines. All control analytes indicated by a bold type in the LCS must meet acceptance criteria. Failure to meet the established recovery guidelines requires the repreparation and reanalysis of all samples in the QC batch. Comparison of only the failed parameters from the first batch are evaluated. The only exception to the rework requirement is that if the LCS recoveries are biased high and the associated sample is ND (non-detected) for the parameter(s) of interest, the batch is acceptable.

At times, a Laboratory Control Sample Duplicate (LCSD) is also included in the QC batch. An LCSD is a QC sample that is created and handled identically to the LCS. Analyte recovery data from the LCSD is assessed in the same way as that of the LCS. The LCSD recoveries, together with the LCS recoveries, are used to determine the reproducibility (precision) of the analytical system. Precision data are expressed as relative percent differences (RPDs). If the RPD fails for an LCS/LCSD and yet the recoveries are within acceptance criteria, the batch is still acceptable.

METHOD BLANK

The Method Blank is a QC sample consisting of all the reagents used in analyzing the environmental samples contained in the QC batch. Method Blank results are used to determine if interference or contamination in the analytical system could lead to the reporting of false positive data or elevated analyte concentrations. All target analytes must be below the reporting limits (RL) or the associated sample(s) must be ND except under the following circumstances:

- Common organic contaminants may be present at concentrations up to 5 times the reporting limits. Common metals contaminants may be present at concentrations up to 2 times the reporting limit, or the reported blank concentration must be twenty fold less than the concentration reported in the associated environmental samples. (See common laboratory contaminants listed in the table.)

Volatile (GC or GC/MS)	Semivolatile (GC/MS)	Metals ICP-MS	Metals ICP Trace
Methylene Chloride, Acetone, 2-Butanone	Phthalate Esters	Copper, Iron, Zinc, Lead, Calcium, Magnesium, Potassium, Sodium, Barium, Chromium, Manganese	Copper, Iron, Zinc, Lead

- Organic blanks will be accepted if compounds detected in the blank are present in the associated samples at levels 10 times the blank level. Inorganic blanks will be accepted if elements detected in the blank are present in the associated samples at 20 times the blank level.

- Blanks will be accepted if the compounds/elements detected are not present in any of the associated environmental samples.

Failure to meet these Method Blank criteria requires the repreparation and reanalysis of all samples in the QC batch.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

A Matrix Spike and a Matrix Spike Duplicate are a pair of environmental samples to which known concentrations of a full or partial set of target analytes are added. The MS/MSD results are determined in the same manner as the results of the environmental sample used to prepare the MS/MSD. The analyte recoveries and the relative percent differences (RPDs) of the recoveries are calculated and used to evaluate the effect of the sample matrix on the analytical results. Due to the potential variability of the matrix of each sample, the MS/MSD results may not have an immediate bearing on any samples except the one spiked; therefore, the associated batch MS/MSD may not reflect the same compounds as the samples contained in the analytical report. When these MS/MSD results fail to meet acceptance criteria, the data is evaluated. If the LCS is within acceptance criteria, the batch is considered acceptable.

For certain methods, a Matrix Spike/Sample Duplicate (MS/DU) may be included in the QC batch in place of the MS/MSD. For the parameters (i.e. pH, ignitability) where it is not possible to prepare a spiked sample, a Sample Duplicate may be included in the QC batch. However, a Sample Duplicate is less likely to provide usable precision statistics depending on the likelihood of finding concentrations below the standard reporting limit. When the Sample Duplicate result fails to meet acceptance criteria, the data is evaluated.

For certain methods (600 series methods/CWA), a Matrix Spike is required in place of a Matrix Spike/Matrix Spike Duplicate (MS/MSD) or Matrix Spike/Sample Duplicate (MS/DU).

The acceptance criteria do not apply to samples that are diluted.

SURROGATE COMPOUNDS

In addition to these batch-related QC indicators, each organic environmental and QC sample is spiked with surrogate compounds. Surrogates are organic chemicals that behave similarly to the analytes of interest and that are rarely present in the environment. Surrogate recoveries are used to monitor the individual performance of a sample in the analytical system.

If surrogate recoveries are biased high in the LCS, LCSD, or the Method Blank, and the associated sample(s) are ND, the batch is acceptable. Otherwise, if the LCS, LCSD, or Method Blank surrogate(s) fail to meet recovery criteria, the entire sample batch is reprepared and reanalyzed. If the surrogate recoveries are outside criteria for environmental samples, the samples will be reprepared and reanalyzed unless there is objective evidence of matrix interference or if the sample dilution is greater than the threshold outlined in the associated method SOP.

The acceptance criteria do not apply to samples that are diluted. All other surrogate recoveries will be reported.

For the GC/MS BNA methods, the surrogate criterion is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater.

For the Pesticide and PCB methods, the surrogate criterion is that one of two surrogate compounds must meet acceptance criteria. The second surrogate must have a recovery of 10% or greater.

TestAmerica Certifications and Approvals:

The laboratory is certified for the analytes listed on the documents below. These are available upon request.

California (#01144CA), Connecticut (#PH-0590), Florida (#E87225),
Illinois (#200004), Kansas (#E10336), Minnesota (#39-999-348), New Jersey (#OH001), New York (#10975), Nevada (#OH-000482008A), OhioVAP (#CL0024), Pennsylvania (#008), West Virginia (#210), Wisconsin (#999518190),NAVY, ARMY, USDA Soil Permit

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EXECUTIVE SUMMARY

EXECUTIVE SUMMARY - Detection Highlights

A0D300605

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD

NO DETECTABLE PARAMETERS

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METHOD SUMMARY

METHODS SUMMARY

A0D300605

PARAMETER	ANALYTICAL METHOD	PREPARATION METHOD
Dioxins/Furans, HRGC/LRMS (8280A)	SW846 8280A	SW846 8280A
Sulfides, Total 9030B/9034	SW846 9030B/903	SW846 9030B/903

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

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SAMPLE SUMMARY

SAMPLE SUMMARY

A0D300605

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
L0VEC	001	13MW3	04/27/10	07:45
L0VEF	002	13MW4	04/27/10	08:55
L0VEG	003	13MWDUP	04/27/10	09:10
L0VEH	004	13MW5	04/28/10	08:55
L0VEJ	005	13MW6	04/28/10	07:35
L0VEL	006	13MW7	04/28/10	10:55

NOTE(S):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

SHIPPING AND RECEIVING DOCUMENTS

CHAIN OF CUSTODY RECORD

Laboratory: Test America Laboratories NORTH CANTON, 4101 Shuffel Drive NW, North Canton, OH 44720 Mark Loeb, Project Manager. 330-497-9396 4/01/10

Client:	Draper Aden Associates	**Consultant:**	Draper Aden Associates	**Sample Site:**	RAAP, Radford, Virginia
Attn:	0	**Attn:**	Janet C. Frazier		
Address:	0	**Address:**	2206 South Main Street	**Location:**	Open Burning Ground (OBG)/HWMU13
	0		Blacksburg, Virginia 24060		
Phone:	0	**Phone:**	(540) 552-0444	**Event:**	1st Semiannual 2010 Appendix IX Monitoring Event
Fax:	0	**Fax:**	(540) 552-0291	**DAA JN:**	B03204-08
Fax:	0			**Lab JN:**	

Project Specific (PS) QC: ☑ YES ☐ NO
Sample Collection for Project Complete? ☑ YES ☐ NO
Carrier: UPS: 12-237-301-01-5759-5946
Tracking Number: 12-237-301-01-5738-3531 / 12-237-301-01-5786-3503 / 12-237-301-01-5850-1311

Box 1: Matrix
SW Surface Water; GW Groundwater; L Leachate; S Soil; T Trip Blank; E Equipment Blank; P Product; O Other

Box 2: Preservative
A HCL; B HNO_3; C H_2SO_4; D $Na_2S_2O_3$; E NaOH; F ZnAc; G Other (Specify); H None

Box 3: Filtered/Unfiltered
F Filtered; U Unfiltered

Box 4: Sample Type
G Grab; C Composite

Box 5: Sample Container Type
P Plastic; V VOA; AG Amber Glass; CG Clear Glass

Invoice
Copy to Consultant: ☑ YES ☐ NO
Bill: ☐ Client ☑ Consultant
Preserved and shipped on ice: ☑ YES ☐ NO

Box 4 - Sample Type				G	G							
Box 3 - Filtered/Unfiltered				U	U							
Required pH of Sample				>9	-							
Box 2 - Preservative				E/F	H							
Box 5 - Sample Container Type				1-500 mL P	2-1L AG							
Sample ID	**Date: 2010**	**Time**	**Box 1: Matrix**	**Number of Bottles**	**Sulfide 9030B**	**Appdx 9 DIOXINS/Furans 8280A**						
13MW1	~~4/28~~	~~1140~~	GW	0			> ANALYSIS NOT REQ'D. - JLC 4/01/10					
13MW2	~~4/28~~	~~1140~~	GW	0								
13MW3	4/27	0745	GW	3	X	X						
13MW4	4/27	0855	GW	3	X	X						
13MWDUP	4/27	0910	GW	3	X	X						
13MW5	4/28	0855	GW	9	X	X						USE FOR QC
13MW6	4/28	0735	GW	3	X	X						
13MW7	4/28	1055	GW	3	X	X						

GENERAL NOTES:
1. Level 4 deliverable with EDD and pdf.
2. REPORT DL/QL and estimated results.

Clients Special Instructions: level 4 with edd.

Received by lab in Good Condition _____ Yes _____ No Custody Seal Intact _____ Yes _____ No Temperature upon arrival _____ Received on Ice _____ Yes _____ No
Describe problems, if any:

Sampler Name (Print): Dale Slaughter	Date: 4/27/10	#1 Relinquished by (Signature): Dale Slaughter	Date: 4/29/10	#2 Relinquished by (Signature):	Date: 4/29/10	Sample Storage
Sampler Signature: Dale Slaughter	Time: 0530	Company Name: DAA	Time: 0800	Company Name: DAA	Time: 1700	Time Requested:
Sampler Name (Print): Tyler Emery	Date: 4/27/10	#1 Received by (Signature):	Date: 4/29/10	#2 Received by (Signature):	Date: 4/30/10	30 DYS ORG/6 MTHS INORG
Sampler Signature: Tyler Emery	Time: 0530	Company Name: DAA	Time: 0800	Company Name: TA NC	Time: 1020	

JLC 4-29-2010 1/ JLC 4/30/2010 1/1 JLC 4/01/10

North Canton

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TestAmerica Cooler Receipt Form/Narrative **Lot Number:** 400300605
North Canton Facility

Client DAA Project RAAP Refund By: (Signature)
Cooler Received on 4/30/10 Opened on 4/30/10
FedEx ☐ UPS ☒ DHL ☐ FAS ☐ Stetson ☐ Client Drop Off ☐ TestAmerica Courier ☐ Other
TestAmerica Cooler # Multiple Coolers ☒ Foam Box ☐ Client Cooler ☐ Other

1. Were custody seals on the outside of the cooler(s)? Yes ☒ No ☐ Intact? Yes ☒ No ☐ NA ☐
   If YES, Quantity 3 Quantity Unsalvageable
   Were custody seals on the outside of cooler(s) signed and dated? Yes ☒ No ☐ NA ☐
   Were custody seals on the bottle(s)? Yes ☐ No ☒
   If YES, are there any exceptions?
2. Shippers' packing slip attached to the cooler(s)? Yes ☒ No ☐
3. Did custody papers accompany the sample(s)? Yes ☒ No ☐ Relinquished by client? Yes ☒ No ☐
4. Were the custody papers signed in the appropriate place? Yes ☒ No ☐
5. Packing material used: Bubble Wrap ☒ Foam ☐ None ☐ Other
6. Cooler temperature upon receipt °C See back of form for multiple coolers/temps ☒
   METHOD: IR ☒ Other ☐
   COOLANT: Wet Ice ☒ Blue Ice ☐ Dry Ice ☐ Water ☐ None ☐
7. Did all bottles arrive in good condition (Unbroken)? Yes ☒ No ☐
8. Could all bottle labels be reconciled with the COC? Yes ☒ No ☐
9. Were sample(s) at the correct pH upon receipt? Yes ☒ No ☐ NA ☐
10. Were correct bottle(s) used for the test(s) indicated? Yes ☒ No ☐
11. Were air bubbles >6 mm in any VOA vials? Yes ☐ No ☐ NA ☒
12. Sufficient quantity received to perform indicated analyses? Yes ☒ No ☐
13. Was a trip blank present in the cooler(s)? Yes ☐ No ☒ Were VOAs on the COC? Yes ☐ No ☒

Contacted PM Date by via Verbal ☐ Voice Mail ☐ Other ☐
Concerning

14. CHAIN OF CUSTODY

The following discrepancies occurred:

15. SAMPLE CONDITION

Sample(s) were received after the recommended holding time had expired.
Sample(s) were received in a broken container.
Sample(s) were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) were further preserved in Sample Receiving to meet recommended pH level(s). *Nitric Acid Lot#* 121709-HNO_3; *Sulfuric Acid Lot#* 121709-H_2SO_4; *Sodium Hydroxide Lot#* 100108 -*NaOH; Hydrochloric Acid Lot#* 092006-*HCl; Sodium Hydroxide and Zinc Acetate Lot#* 100108-$(CH_3COO)_2ZN$/*NaOH.* What time was preservative added to sample(s)?

Client ID	pH	Date	Initials
13MW3	>9 >9	4/30/10	g
13MW4	>9 >9		
13MWDUP	>9 >9		
13MW5	>9 >9 >9>9		
13MW6	>9 >9		
13MW7	>9 >9		

TestAmerica Cooler Receipt Form/Narrative
North Canton Facility

Client ID	pH	Date	Initials

Cooler #	Temp. °C	Method	Coolant
TA 20	1.6	IR	Ice
A413	1.4	〃	〃
A379	1.3	〃	〃

Discrepancies Cont'd:

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

GENERAL CHEMISTRY DATA

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

SAMPLE DATA

Draper Aden Associates Inc

Client Sample ID: 13MW3

General Chemistry

Lot-Sample #...: A0D300605-001 **Work Order #...:** L0VEC **Matrix.....:** WG
Date Sampled...: 04/27/10 07:45 **Date Received..:** 04/30/10

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Acid-soluble sulfide	ND	3.0	mg/L	SW846 9030B/9034	05/04/10	0124303

Dilution Factor: 1 MDL.....: 0.94

Draper Aden Associates Inc

Client Sample ID: 13MW4

General Chemistry

Lot-Sample #...: A0D300605-002 **Work Order #...:** L0VEF **Matrix.....:** WG
Date Sampled...: 04/27/10 08:55 **Date Received..:** 04/30/10

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Acid-soluble sulfide	ND	3.0	mg/L	SW846 9030B/9034	05/04/10	0124303

Dilution Factor: 1 MDL.....: 0.94

Draper Aden Associates Inc

Client Sample ID: 13MWDUP

General Chemistry

Lot-Sample #...: A0D300605-003 **Work Order #...:** L0VEG **Matrix.....:** WG
Date Sampled...: 04/27/10 09:10 **Date Received..:** 04/30/10

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Acid-soluble sulfide	ND	3.0	mg/L	SW846 9030B/9034	05/04/10	0124303

Dilution Factor: 1 MDL.....: 0.94

Draper Aden Associates Inc

Client Sample ID: 13MW5

General Chemistry

Lot-Sample #...: A0D300605-004 **Work Order #...:** L0VEH **Matrix.....:** WG
Date Sampled...: 04/28/10 08:55 **Date Received..:** 04/30/10

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Acid-soluble sulfide	ND	3.0	mg/L	SW846 9030B/9034	05/04/10	0124303

Dilution Factor: 1 MDL.....: 0.94

Draper Aden Associates Inc

Client Sample ID: 13MW6

General Chemistry

Lot-Sample #...: A0D300605-005 **Work Order #...:** L0VEJ **Matrix.....:** WG
Date Sampled...: 04/28/10 07:35 **Date Received..:** 04/30/10

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Acid-soluble sulfide	ND	3.0	mg/L	SW846 9030B/9034	05/04/10	0124303

Dilution Factor: 1 MDL.....: 0.94

Draper Aden Associates Inc

Client Sample ID: 13MW7

General Chemistry

Lot-Sample #...: A0D300605-006 **Work Order #...:** L0VEL **Matrix.....:** WG
Date Sampled...: 04/28/10 10:55 **Date Received..:** 04/30/10

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Acid-soluble sulfide	ND	3.0	mg/L	SW846 9030B/9034	05/04/10	0124303

Dilution Factor: 1 MDL.....: 0.94

METHOD BLANK REPORT

General Chemistry

Client Lot #...: A0D300605 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Acid-soluble sulfide	Work Order #: L00MC1AA			MB Lot-Sample #:	A0E040000-303	
	ND	3.0	mg/L	SW846 9030B/9034	05/04/10	0124303
		Dilution Factor: 1				

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: A0D300605 **Matrix.....:** WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Acid-soluble sulfide		Work Order #: L00MC1AC	LCS Lot-Sample#: A0E040000-303		
	105	(70 - 130)	SW846 9030B/9034	05/04/10	0124303
		Dilution Factor: 1			

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE DATA REPORT

General Chemistry

Client Lot #...: A0D300605 **Matrix.....:** WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Acid-soluble sulfide	Work Order #: L00MC1AC			LCS Lot-Sample#: A0E040000-303			
	8.7	9.2	mg/L	105	SW846 9030B/9034	05/04/10	0124303
		Dilution Factor: 1					

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: A0D300605 **Matrix.....:** WATER
Date Sampled...: 04/27/10 10:50 **Date Received..:** 04/30/10

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Acid-soluble sulfide	WO#: L0VC21AC-MS/L0VC21AD-MSD					MS Lot-Sample #: A0D300597-002	
	100	(27 - 124)			SW846 9030B/9034	05/04/10	0124303
	100	(27 - 124)	0.0	(0-20)	SW846 9030B/9034	05/04/10	0124303

Dilution Factor: 1

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE DATA REPORT

General Chemistry

Client Lot #...: A0D300605 **Matrix.....:** WATER
Date Sampled...: 04/27/10 10:50 **Date Received..:** 04/30/10

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Acid-soluble sulfide	WO#: L0VC21AC-MS/L0VC21AD-MSD						MS Lot-Sample #: A0D300597-002		
	ND	8.7	8.7	mg/L	100		SW846 9030B/9	05/04/10	0124303
	ND	8.7	8.7	mg/L	100	0.0	SW846 9030B/9	05/04/10	0124303

Dilution Factor: 1

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: A0D300605 **Matrix.....:** WG
Date Sampled...: 04/28/10 08:55 **Date Received..:** 04/30/10

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Acid-soluble sulfide	WO#: L0VEH1AF-MS/L0VEH1AG-MSD					MS Lot-Sample #: A0D300605-004	
	81	(27 - 124)			SW846 9030B/9034	05/04/10	0124303
	86	(27 - 124)	5.6	(0-20)	SW846 9030B/9034	05/04/10	0124303

Dilution Factor: 1

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

MATRIX SPIKE SAMPLE DATA REPORT

General Chemistry

Client Lot #...: A0D300605 **Matrix.....:** WG
Date Sampled...: 04/28/10 08:55 **Date Received..:** 04/30/10

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Acid-soluble sulfide	WO#: L0VEH1AF-MS/L0VEH1AG-MSD						MS Lot-Sample #: A0D300605-004		
	ND	8.7	7.1	mg/L	81		SW846 9030B/9	05/04/10	0124303
	ND	8.7	7.5	mg/L	86	5.6	SW846 9030B/9	05/04/10	0124303

Dilution Factor: 1

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

TestAmerica
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SUPPORTIVE RAW DATA

	TestAmerica, North Canton					
		9030 Sulfide Logsheet				
Prep Date	05/04/10		Batch	0124303		
Anal Date	05/04/10					
			Lcs No.	SD0006		
Analyst	BW		Prep Date	04/23/10		
Titrant	Sodium					
Name	Thiosulfate		Iodine			
Normality	0.0255		Normality	0.0278		
Standardization	04/23/10		Date	05/04/10		
Intials	BW		Intials	BW		
Sample	Sample	dil	Titrant	Final Conc	Time	QC/Calc
No.	Vol		Vol (ml)	mg/L or mg/kg		
	50 ml soluble/total					
	5 gram all solids					
BLK	50	1	8.75	-0.23	14:26	
LCS	50	1	7.60	9.15	14:26	TV=8.74
L0VC0	50	1	8.75	-0.23	14:26	
L0VC2	50	1	8.75	-0.23	14:26	
L0VC2 MS	50	1	7.65	8.74	14:26	TV=8.74
L0VC2 MSD	50	1	7.65	8.74	14:26	
L0VC3	50	1	8.65	0.58	14:27	
L0VC6	50	1	8.65	0.58	14:27	
L0VC7	50	1	8.65	0.58	14:27	
L0VC9	50	1	8.65	0.58	14:27	
L0VEC	50	1	8.75	-0.23	14:27	
L0VEF	50	1	8.85	-1.05	14:27	
L0VEG	50	1	8.80	-0.64	14:27	
L0VEH	50	1	8.85	-1.05	14:27	
L0VEH MS	50	1	7.85	7.11	14:27	TV=8.74
L0VEH MSD	50	1	7.80	7.52	14:27	
L0VEJ	50	1	8.80	-0.64	14:27	
L0VEL	50	1	8.75	-0.23	14:27	
	50	1		71.17		
	50	1		71.17		
	50	1		71.17		
	50	1		71.17		
	50	1		71.17		
	50	1		71.17		
	50	1		71.17		
	50	1		71.17		
Zinc Acetate:	***WR00349***		***NaThio:***	***WR00063***		
Starch:	***WR00378***		***Iodine:***	***WR00256***		
BLK 1			***LCS 1***			
BLK 2			***LCS 2***			

TestAmerica North Canton

Sample Control Chain of Custody for General Chemistry

Lot Number	Sample	Suffix	Lab ID	Test	Prep Date	Prepared by	Analysis Date	Analyzed by
A0D300605	1		L0VEC1AC	Sulfides, Total (9030B-dist/9034-titrat.)	05/04/10	Bruce Woodward	05/04/10	Bruce Woodward
A0D300605	2		L0VEF1AC	Sulfides, Total (9030B-dist/9034-titrat.)	05/04/10	Bruce Woodward	05/04/10	Bruce Woodward
A0D300605	3		L0VEG1AC	Sulfides, Total (9030B-dist/9034-titrat.)	05/04/10	Bruce Woodward	05/04/10	Bruce Woodward
A0D300605	4		L0VEH1AE	Sulfides, Total (9030B-dist/9034-titrat.)	05/04/10	Bruce Woodward	05/04/10	Bruce Woodward
A0D300605	4	S	L0VEH1AF	Sulfides, Total (9030B-dist/9034-titrat.)	05/04/10	Bruce Woodward	05/04/10	Bruce Woodward
A0D300605	4	D	L0VEH1AG	Sulfides, Total (9030B-dist/9034-titrat.)	05/04/10	Bruce Woodward	05/04/10	Bruce Woodward
A0D300605	5		L0VEJ1AC	Sulfides, Total (9030B-dist/9034-titrat.)	05/04/10	Bruce Woodward	05/04/10	Bruce Woodward
A0D300605	6		L0VEL1AC	Sulfides, Total (9030B-dist/9034-titrat.)	05/04/10	Bruce Woodward	05/04/10	Bruce Woodward

TestAmerica
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WEST SACRAMENTO DATA

Case Narrative

TestAmerica West Sacramento Project Number A0D300605

General Comments
The samples were received at 0-1 degrees C.

There are no other anomalies associated with this project.

Draper Aden Associates Inc

Client Sample ID: 13MW3

Trace Level Organic Compounds

Lot-Sample #...: A0D300605-001 **Work Order #...:** L0VEC1AA **Matrix.....:** WG
Date Sampled...: 04/27/10 07:45 **Date Received..:** 04/30/10
Prep Date.....: 05/07/10 **Analysis Date..:** 05/12/10
Prep Batch #...: 0127096
Dilution Factor: 0.99

PARAMETER	RESULT	DETECTION LIMIT	UNITS	METHOD
Total HxCDD	ND	0.24	ng/L	SW846 8280A
Total HxCDF	ND	0.31	ng/L	SW846 8280A
Total PeCDD	ND	0.50	ng/L	SW846 8280A
Total PeCDF	ND	0.45	ng/L	SW846 8280A
2,3,7,8-TCDD	ND	0.15	ng/L	SW846 8280A
Total TCDD	ND	2.8	ng/L	SW846 8280A
Total TCDF	ND	0.26	ng/L	SW846 8280A

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	68	(25 - 150)
13C-2,3,7,8-TCDF	71	(25 - 150)
13C-1,2,3,6,7,8-HxCDD	75	(25 - 150)
13C-1,2,3,4,6,7,8-HpCDF	78	(25 - 150)

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
37Cl4-2,3,7,8-TCDD	89	(25 - 150)

Draper Aden Associates Inc

Client Sample ID: 13MW4

Trace Level Organic Compounds

Lot-Sample #...: A0D300605-002 **Work Order #...:** L0VEF1AA **Matrix.....:** WG
Date Sampled...: 04/27/10 08:55 **Date Received..:** 04/30/10
Prep Date.....: 05/07/10 **Analysis Date..:** 05/12/10
Prep Batch #...: 0127096
Dilution Factor: 0.99

PARAMETER	RESULT	DETECTION LIMIT	UNITS	METHOD
Total HxCDD	ND	0.28	ng/L	SW846 8280A
Total HxCDF	ND	0.28	ng/L	SW846 8280A
Total PeCDD	ND	0.56	ng/L	SW846 8280A
Total PeCDF	ND	0.49	ng/L	SW846 8280A
2,3,7,8-TCDD	ND	0.27	ng/L	SW846 8280A
Total TCDD	ND	2.7	ng/L	SW846 8280A
Total TCDF	ND	0.38	ng/L	SW846 8280A

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	74	(25 - 150)
13C-2,3,7,8-TCDF	72	(25 - 150)
13C-1,2,3,6,7,8-HxCDD	76	(25 - 150)
13C-1,2,3,4,6,7,8-HpCDF	82	(25 - 150)

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
37Cl4-2,3,7,8-TCDD	83	(25 - 150)

Draper Aden Associates Inc

Client Sample ID: 13MWDUP

Trace Level Organic Compounds

Lot-Sample #...: A0D300605-003 **Work Order #...:** L0VEG1AA **Matrix.....:** WG
Date Sampled...: 04/27/10 09:10 **Date Received..:** 04/30/10
Prep Date.....: 05/07/10 **Analysis Date..:** 05/12/10
Prep Batch #...: 0127096
Dilution Factor: 0.98

PARAMETER	RESULT	DETECTION LIMIT	UNITS	METHOD
Total HxCDD	ND	0.24	ng/L	SW846 8280A
Total HxCDF	ND	0.33	ng/L	SW846 8280A
Total PeCDD	ND	0.61	ng/L	SW846 8280A
Total PeCDF	ND	0.55	ng/L	SW846 8280A
2,3,7,8-TCDD	ND	0.27	ng/L	SW846 8280A
Total TCDD	ND	2.5	ng/L	SW846 8280A
Total TCDF	ND	0.31	ng/L	SW846 8280A

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	70	(25 - 150)
13C-2,3,7,8-TCDF	69	(25 - 150)
13C-1,2,3,6,7,8-HxCDD	74	(25 - 150)
13C-1,2,3,4,6,7,8-HpCDF	77	(25 - 150)

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
37Cl4-2,3,7,8-TCDD	85	(25 - 150)

Draper Aden Associates Inc

Client Sample ID: 13MW5

Trace Level Organic Compounds

Lot-Sample #...: A0D300605-004 **Work Order #...:** L0VEH1AA **Matrix.....:** WG
Date Sampled...: 04/28/10 08:55 **Date Received..:** 04/30/10
Prep Date.....: 05/07/10 **Analysis Date..:** 05/12/10
Prep Batch #...: 0127096
Dilution Factor: 1.03

PARAMETER	RESULT	DETECTION LIMIT	UNITS	METHOD
Total HxCDD	ND	0.32	ng/L	SW846 8280A
Total HxCDF	ND	0.34	ng/L	SW846 8280A
Total PeCDD	ND	0.71	ng/L	SW846 8280A
Total PeCDF	ND	0.50	ng/L	SW846 8280A
2,3,7,8-TCDD	ND	0.26	ng/L	SW846 8280A
Total TCDD	ND	3.0	ng/L	SW846 8280A
Total TCDF	ND	0.42	ng/L	SW846 8280A

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	76	(25 - 150)
13C-2,3,7,8-TCDF	78	(25 - 150)
13C-1,2,3,6,7,8-HxCDD	80	(25 - 150)
13C-1,2,3,4,6,7,8-HpCDF	87	(25 - 150)
13C-OCDD	82	(25 - 150)

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
37Cl4-2,3,7,8-TCDD	87	(25 - 150)

Draper Aden Associates Inc

Client Sample ID: 13MW6

Trace Level Organic Compounds

Lot-Sample #...: A0D300605-005 **Work Order #...:** L0VEJ1AA **Matrix.....:** WG
Date Sampled...: 04/28/10 07:35 **Date Received..:** 04/30/10
Prep Date.....: 05/10/10 **Analysis Date..:** 05/11/10
Prep Batch #...: 0130174
Dilution Factor: 1

PARAMETER	RESULT	DETECTION LIMIT	UNITS	METHOD
Total HxCDD	ND	0.27	ng/L	SW846 8280A
Total HxCDF	ND	0.33	ng/L	SW846 8280A
Total PeCDD	ND	0.71	ng/L	SW846 8280A
Total PeCDF	ND	0.36	ng/L	SW846 8280A
2,3,7,8-TCDD	ND	0.38	ng/L	SW846 8280A
Total TCDD	ND	2.7	ng/L	SW846 8280A
Total TCDF	ND	0.34	ng/L	SW846 8280A

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	60	(25 - 150)
13C-2,3,7,8-TCDF	60	(25 - 150)
13C-1,2,3,6,7,8-HxCDD	65	(25 - 150)
13C-1,2,3,4,6,7,8-HpCDF	67	(25 - 150)

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
37Cl4-2,3,7,8-TCDD	85	(25 - 150)

Draper Aden Associates Inc

Client Sample ID: 13MW7

Trace Level Organic Compounds

Lot-Sample #...: A0D300605-006 **Work Order #...:** L0VEL1AA **Matrix.....:** WG
Date Sampled...: 04/28/10 10:55 **Date Received..:** 04/30/10
Prep Date.....: 05/07/10 **Analysis Date..:** 05/12/10
Prep Batch #...: 0127096
Dilution Factor: 1.01

PARAMETER	RESULT	DETECTION LIMIT	UNITS	METHOD
Total HxCDD	ND	0.27	ng/L	SW846 8280A
Total HxCDF	ND	0.31	ng/L	SW846 8280A
Total PeCDD	ND	0.62	ng/L	SW846 8280A
Total PeCDF	ND	0.48	ng/L	SW846 8280A
2,3,7,8-TCDD	ND	0.13	ng/L	SW846 8280A
Total TCDD	ND	2.8	ng/L	SW846 8280A
Total TCDF	ND	0.54	ng/L	SW846 8280A

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	76	(25 - 150)
13C-2,3,7,8-TCDF	77	(25 - 150)
13C-1,2,3,6,7,8-HxCDD	78	(25 - 150)
13C-1,2,3,4,6,7,8-HpCDF	81	(25 - 150)

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
37Cl4-2,3,7,8-TCDD	87	(25 - 150)

METHOD BLANK REPORT

Trace Level Organic Compounds

Client Lot #...: A0D300605 **Work Order #...:** L057J1AA **Matrix.....:** WATER
MB Lot-Sample #: G0E070000-096
Prep Date.....: 05/07/10
Analysis Date..: 05/12/10 **Prep Batch #...:** 0127096
Dilution Factor: 1

PARAMETER	RESULT	DETECTION LIMIT	UNITS	METHOD
2,3,7,8-TCDD	ND	0.23	ng/L	SW846 8280A
Total TCDF	ND	0.29	ng/L	SW846 8280A
Total PeCDF	ND	0.43	ng/L	SW846 8280A
Total HxCDF	ND	0.30	ng/L	SW846 8280A
Total TCDD	ND	2.6	ng/L	SW846 8280A
Total PeCDD	ND	0.67	ng/L	SW846 8280A
Total HxCDD	ND	0.25	ng/L	SW846 8280A

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	73	(25 - 150)
13C-2,3,7,8-TCDF	71	(25 - 150)
13C-1,2,3,6,7,8-HxCDD	77	(25 - 150)
13C-1,2,3,4,6,7,8-HpCDF	79	(25 - 150)
13C-OCDD	77	(25 - 150)

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
37Cl4-2,3,7,8-TCDD	94	(25 - 150)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

METHOD BLANK REPORT

Trace Level Organic Compounds

Client Lot #...: A0D300605 **Work Order #...:** L09N01AA **Matrix.....:** WATER
MB Lot-Sample #: G0E100000-174
Prep Date.....: 05/10/10
Analysis Date..: 05/11/10 **Prep Batch #...:** 0130174
Dilution Factor: 1

PARAMETER	RESULT	DETECTION LIMIT	UNITS	METHOD
Total TCDF	ND	0.15	ng/L	SW846 8280A
Total PeCDF	ND	0.47	ng/L	SW846 8280A
Total HxCDF	ND	0.59	ng/L	SW846 8280A
Total TCDD	ND	2.7	ng/L	SW846 8280A
2,3,7,8-TCDD	ND	0.21	ng/L	SW846 8280A
Total PeCDD	ND	0.56	ng/L	SW846 8280A
Total HxCDD	ND	0.66	ng/L	SW846 8280A

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	81	(25 - 150)
13C-2,3,7,8-TCDF	80	(25 - 150)
13C-1,2,3,6,7,8-HxCDD	84	(25 - 150)
13C-1,2,3,4,6,7,8-HpCDF	87	(25 - 150)

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
37Cl4-2,3,7,8-TCDD	90	(25 - 150)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

Trace Level Organic Compounds

Client Lot #...: A0D300605 **Work Order #...:** L057J1AC **Matrix.....:** WATER
LCS Lot-Sample#: G0E070000-096
Prep Date.....: 05/07/10 **Analysis Date..:** 05/12/10
Prep Batch #...: 0127096
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
2,3,7,8-TCDD	**102**	**(67 - 127)**	**SW846 8280A**
1,2,3,7,8-PeCDD	**97**	**(69 - 129)**	**SW846 8280A**
1,2,3,7,8,9-HxCDD	**104**	**(73 - 140)**	**SW846 8280A**
1,2,3,4,7,8-HxCDD	**92**	**(63 - 123)**	**SW846 8280A**
1,2,3,6,7,8-HxCDD	**98**	**(67 - 127)**	**SW846 8280A**
1,2,3,4,6,7,8-HpCDD	**99**	**(74 - 138)**	**SW846 8280A**
OCDD	**100**	**(67 - 127)**	**SW846 8280A**
2,3,7,8-TCDF	**100**	**(67 - 127)**	**SW846 8280A**
1,2,3,7,8-PeCDF	**96**	**(69 - 129)**	**SW846 8280A**
2,3,4,7,8-PeCDF	**93**	**(43 - 141)**	**SW846 8280A**
1,2,3,4,7,8-HxCDF	**95**	**(62 - 122)**	**SW846 8280A**
1,2,3,6,7,8-HxCDF	**97**	**(66 - 126)**	**SW846 8280A**
2,3,4,6,7,8-HxCDF	**99**	**(72 - 133)**	**SW846 8280A**
1,2,3,7,8,9-HxCDF	**99**	**(67 - 146)**	**SW846 8280A**
1,2,3,4,6,7,8-HpCDF	**100**	**(66 - 126)**	**SW846 8280A**
1,2,3,4,7,8,9-HpCDF	**100**	**(68 - 146)**	**SW846 8280A**
OCDF	**102**	**(67 - 127)**	**SW846 8280A**

INTERNAL STANDARD	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	61	(25 - 150)
13C-2,3,7,8-TCDF	63	(25 - 150)
13C-1,2,3,6,7,8-HxCDD	63	(25 - 150)
13C-1,2,3,4,6,7,8-HpCDF	63	(25 - 150)
13C-OCDD	62	(25 - 150)

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
37Cl4-2,3,7,8-TCDD	84	(25 - 150)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

Trace Level Organic Compounds

Client Lot #...: A0D300605 **Work Order #...:** L057J1AC **Matrix.....:** WATER
LCS Lot-Sample#: G0E070000-096
Prep Date.....: 05/07/10 **Analysis Date..:** 05/12/10
Prep Batch #...: 0127096
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
2,3,7,8-TCDD	**25**	**25**	**ng/L**	**102**	**SW846 8280A**
1,2,3,7,8-PeCDD	**62**	**61**	**ng/L**	**97**	**SW846 8280A**
1,2,3,7,8,9-HxCDD	**62**	**65**	**ng/L**	**104**	**SW846 8280A**
1,2,3,4,7,8-HxCDD	**62**	**58**	**ng/L**	**92**	**SW846 8280A**
1,2,3,6,7,8-HxCDD	**62**	**61**	**ng/L**	**98**	**SW846 8280A**
1,2,3,4,6,7,8-HpCDD	**62**	**62**	**ng/L**	**99**	**SW846 8280A**
OCDD	**120**	**120**	**ng/L**	**100**	**SW846 8280A**
2,3,7,8-TCDF	**25**	**25**	**ng/L**	**100**	**SW846 8280A**
1,2,3,7,8-PeCDF	**62**	**60**	**ng/L**	**96**	**SW846 8280A**
2,3,4,7,8-PeCDF	**62**	**58**	**ng/L**	**93**	**SW846 8280A**
1,2,3,4,7,8-HxCDF	**62**	**59**	**ng/L**	**95**	**SW846 8280A**
1,2,3,6,7,8-HxCDF	**62**	**60**	**ng/L**	**97**	**SW846 8280A**
2,3,4,6,7,8-HxCDF	**62**	**62**	**ng/L**	**99**	**SW846 8280A**
1,2,3,7,8,9-HxCDF	**62**	**62**	**ng/L**	**99**	**SW846 8280A**
1,2,3,4,6,7,8-HpCDF	**62**	**63**	**ng/L**	**100**	**SW846 8280A**
1,2,3,4,7,8,9-HpCDF	**62**	**62**	**ng/L**	**100**	**SW846 8280A**
OCDF	**120**	**130**	**ng/L**	**102**	**SW846 8280A**

INTERNAL STANDARD	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	61	(25 - 150)
13C-2,3,7,8-TCDF	63	(25 - 150)
13C-1,2,3,6,7,8-HxCDD	63	(25 - 150)
13C-1,2,3,4,6,7,8-HpCDF	63	(25 - 150)
13C-OCDD	62	(25 - 150)

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
37Cl4-2,3,7,8-TCDD	84	(25 - 150)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

Trace Level Organic Compounds

Client Lot #...: A0D300605 **Work Order #...:** L09N01AC **Matrix.....:** WATER
LCS Lot-Sample#: G0E100000-174
Prep Date.....: 05/10/10 **Analysis Date..:** 05/11/10
Prep Batch #...: 0130174
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
2,3,7,8-TCDD	**102**	**(67 - 127)**	**SW846 8280A**
1,2,3,7,8-PeCDD	**102**	**(69 - 129)**	**SW846 8280A**
1,2,3,7,8,9-HxCDD	**101**	**(73 - 140)**	**SW846 8280A**
1,2,3,4,7,8-HxCDD	**104**	**(63 - 123)**	**SW846 8280A**
1,2,3,6,7,8-HxCDD	**95**	**(67 - 127)**	**SW846 8280A**
1,2,3,4,6,7,8-HpCDD	**101**	**(74 - 138)**	**SW846 8280A**
OCDD	**99**	**(67 - 127)**	**SW846 8280A**
2,3,7,8-TCDF	**100**	**(67 - 127)**	**SW846 8280A**
1,2,3,7,8-PeCDF	**104**	**(69 - 129)**	**SW846 8280A**
2,3,4,7,8-PeCDF	**102**	**(43 - 141)**	**SW846 8280A**
1,2,3,4,7,8-HxCDF	**98**	**(62 - 122)**	**SW846 8280A**
1,2,3,6,7,8-HxCDF	**98**	**(66 - 126)**	**SW846 8280A**
2,3,4,6,7,8-HxCDF	**96**	**(72 - 133)**	**SW846 8280A**
1,2,3,7,8,9-HxCDF	**98**	**(67 - 146)**	**SW846 8280A**
1,2,3,4,6,7,8-HpCDF	**100**	**(66 - 126)**	**SW846 8280A**
1,2,3,4,7,8,9-HpCDF	**100**	**(68 - 146)**	**SW846 8280A**
OCDF	**100**	**(67 - 127)**	**SW846 8280A**

INTERNAL STANDARD	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	68	(25 - 150)
13C-2,3,7,8-TCDF	67	(25 - 150)
13C-1,2,3,6,7,8-HxCDD	73	(25 - 150)
13C-1,2,3,4,6,7,8-HpCDF	73	(25 - 150)
13C-OCDD	75	(25 - 150)

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
37Cl4-2,3,7,8-TCDD	91	(25 - 150)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

Trace Level Organic Compounds

Client Lot #...: A0D300605 **Work Order #...:** L09N01AC **Matrix.....:** WATER
LCS Lot-Sample#: G0E100000-174
Prep Date.....: 05/10/10 **Analysis Date..:** 05/11/10
Prep Batch #...: 0130174
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
2,3,7,8-TCDD	**25**	**26**	**ng/L**	**102**	**SW846 8280A**
1,2,3,7,8-PeCDD	**62**	**64**	**ng/L**	**102**	**SW846 8280A**
1,2,3,7,8,9-HxCDD	**62**	**63**	**ng/L**	**101**	**SW846 8280A**
1,2,3,4,7,8-HxCDD	**62**	**65**	**ng/L**	**104**	**SW846 8280A**
1,2,3,6,7,8-HxCDD	**62**	**60**	**ng/L**	**95**	**SW846 8280A**
1,2,3,4,6,7,8-HpCDD	**62**	**63**	**ng/L**	**101**	**SW846 8280A**
OCDD	**120**	**120**	**ng/L**	**99**	**SW846 8280A**
2,3,7,8-TCDF	**25**	**25**	**ng/L**	**100**	**SW846 8280A**
1,2,3,7,8-PeCDF	**62**	**65**	**ng/L**	**104**	**SW846 8280A**
2,3,4,7,8-PeCDF	**62**	**64**	**ng/L**	**102**	**SW846 8280A**
1,2,3,4,7,8-HxCDF	**62**	**61**	**ng/L**	**98**	**SW846 8280A**
1,2,3,6,7,8-HxCDF	**62**	**61**	**ng/L**	**98**	**SW846 8280A**
2,3,4,6,7,8-HxCDF	**62**	**60**	**ng/L**	**96**	**SW846 8280A**
1,2,3,7,8,9-HxCDF	**62**	**61**	**ng/L**	**98**	**SW846 8280A**
1,2,3,4,6,7,8-HpCDF	**62**	**63**	**ng/L**	**100**	**SW846 8280A**
1,2,3,4,7,8,9-HpCDF	**62**	**63**	**ng/L**	**100**	**SW846 8280A**
OCDF	**120**	**120**	**ng/L**	**100**	**SW846 8280A**

INTERNAL STANDARD	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	68	(25 - 150)
13C-2,3,7,8-TCDF	67	(25 - 150)
13C-1,2,3,6,7,8-HxCDD	73	(25 - 150)
13C-1,2,3,4,6,7,8-HpCDF	73	(25 - 150)
13C-OCDD	75	(25 - 150)

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
37Cl4-2,3,7,8-TCDD	91	(25 - 150)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

Trace Level Organic Compounds

Client Lot #...: A0D300605 **Work Order #...:** L0VEH1AC-MS **Matrix.....:** WG
MS Lot-Sample #: A0D300605-004 L0VEH1AD-MSD
Date Sampled...: 04/28/10 08:55 **Date Received..:** 04/30/10
Prep Date.....: 05/07/10 **Analysis Date..:** 05/12/10
Prep Batch #...: 0127096
Dilution Factor: 1.02

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
2,3,7,8-TCDD	**91**	**(67 - 127)**			**SW846 8280A**
	101	**(67 - 127)**	**6.3**	**(0-60)**	**SW846 8280A**
1,2,3,7,8-PeCDD	**88**	**(69 - 129)**			**SW846 8280A**
	99	**(69 - 129)**	**8.4**	**(0-62)**	**SW846 8280A**
1,2,3,7,8,9-HxCDD	**91**	**(73 - 140)**			**SW846 8280A**
	106	**(73 - 140)**	**11**	**(0-78)**	**SW846 8280A**
1,2,3,4,7,8-HxCDD	**85**	**(63 - 123)**			**SW846 8280A**
	100	**(63 - 123)**	**12**	**(0-52)**	**SW846 8280A**
1,2,3,6,7,8-HxCDD	**91**	**(67 - 127)**			**SW846 8280A**
	106	**(67 - 127)**	**12**	**(0-65)**	**SW846 8280A**
1,2,3,4,6,7,8-HpCDD	**88**	**(74 - 138)**			**SW846 8280A**
	106	**(74 - 138)**	**14**	**(0-74)**	**SW846 8280A**
OCDD	**90**	**(67 - 127)**			**SW846 8280A**
	100	**(67 - 127)**	**6.6**	**(0-64)**	**SW846 8280A**
2,3,7,8-TCDF	**89**	**(67 - 127)**			**SW846 8280A**
	100	**(67 - 127)**	**8.2**	**(0-70)**	**SW846 8280A**
1,2,3,7,8-PeCDF	**90**	**(69 - 129)**			**SW846 8280A**
	105	**(69 - 129)**	**11**	**(0-65)**	**SW846 8280A**
2,3,4,7,8-PeCDF	**90**	**(43 - 141)**			**SW846 8280A**
	103	**(43 - 141)**	**9.5**	**(0-41)**	**SW846 8280A**
1,2,3,4,7,8-HxCDF	**87**	**(62 - 122)**			**SW846 8280A**
	100	**(62 - 122)**	**9.6**	**(0-61)**	**SW846 8280A**
1,2,3,6,7,8-HxCDF	**90**	**(66 - 126)**			**SW846 8280A**
	101	**(66 - 126)**	**8.0**	**(0-70)**	**SW846 8280A**
2,3,4,6,7,8-HxCDF	**88**	**(72 - 133)**			**SW846 8280A**
	102	**(72 - 133)**	**11**	**(0-81)**	**SW846 8280A**
1,2,3,7,8,9-HxCDF	**89**	**(67 - 146)**			**SW846 8280A**
	102	**(67 - 146)**	**9.2**	**(0-90)**	**SW846 8280A**
1,2,3,4,6,7,8-HpCDF	**91**	**(66 - 126)**			**SW846 8280A**
	102	**(66 - 126)**	**7.6**	**(0-67)**	**SW846 8280A**
1,2,3,4,7,8,9-HpCDF	**90**	**(68 - 146)**			**SW846 8280A**
	102	**(68 - 146)**	**9.2**	**(0-83)**	**SW846 8280A**
OCDF	**92**	**(67 - 127)**			**SW846 8280A**
	102	**(67 - 127)**	**6.9**	**(0-66)**	**SW846 8280A**

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	67	(25 - 150)
	69	(25 - 150)

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

Trace Level Organic Compounds

Client Lot #...: A0D300605 **Work Order #...:** L0VEH1AC-MS **Matrix.....:** WG
MS Lot-Sample #: A0D300605-004 L0VEH1AD-MSD

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDF	68	(25 - 150)
	72	(25 - 150)
13C-1,2,3,6,7,8-HxCDD	71	(25 - 150)
	71	(25 - 150)
13C-1,2,3,4,6,7,8-HpCDF	71	(25 - 150)
	73	(25 - 150)
13C-OCDD	70	(25 - 150)
	74	(25 - 150)

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
37Cl4-2,3,7,8-TCDD	90	(25 - 150)
	92	(25 - 150)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE DATA REPORT

Trace Level Organic Compounds

Client Lot #...: A0D300605 **Work Order #...:** L0VEH1AC-MS **Matrix.....:** WG
MS Lot-Sample #: A0D300605-004 L0VEH1AD-MSD
Date Sampled...: 04/28/10 08:55 **Date Received..:** 04/30/10
Prep Date.....: 05/07/10 **Analysis Date..:** 05/12/10
Prep Batch #...: 0127096
Dilution Factor: 1.02

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
2,3,7,8-TCDD	**ND**	**26**	**23**	**ng/L**	**91**		**SW846 8280A**
	ND	**24**	**25**	**ng/L**	**101**	**6.3**	**SW846 8280A**
1,2,3,7,8-PeCDD	**ND**	**64**	**56**	**ng/L**	**88**		**SW846 8280A**
	ND	**61**	**61**	**ng/L**	**99**	**8.4**	**SW846 8280A**
1,2,3,7,8,9-HxCDD	**ND**	**64**	**58**	**ng/L**	**91**		**SW846 8280A**
	ND	**61**	**65**	**ng/L**	**106**	**11**	**SW846 8280A**
1,2,3,4,7,8-HxCDD	**ND**	**64**	**54**	**ng/L**	**85**		**SW846 8280A**
	ND	**61**	**61**	**ng/L**	**100**	**12**	**SW846 8280A**
1,2,3,6,7,8-HxCDD	**ND**	**64**	**58**	**ng/L**	**91**		**SW846 8280A**
	ND	**61**	**65**	**ng/L**	**106**	**12**	**SW846 8280A**
1,2,3,4,6,7,8-HpCDD	**ND**	**64**	**56**	**ng/L**	**88**		**SW846 8280A**
	ND	**61**	**65**	**ng/L**	**106**	**14**	**SW846 8280A**
OCDD	**ND**	**130**	**110**	**ng/L**	**90**		**SW846 8280A**
	ND	**120**	**120**	**ng/L**	**100**	**6.6**	**SW846 8280A**
2,3,7,8-TCDF	**ND**	**26**	**23**	**ng/L**	**89**		**SW846 8280A**
	ND	**24**	**25**	**ng/L**	**100**	**8.2**	**SW846 8280A**
1,2,3,7,8-PeCDF	**ND**	**64**	**57**	**ng/L**	**90**		**SW846 8280A**
	ND	**61**	**64**	**ng/L**	**105**	**11**	**SW846 8280A**
2,3,4,7,8-PeCDF	**ND**	**64**	**57**	**ng/L**	**90**		**SW846 8280A**
	ND	**61**	**63**	**ng/L**	**103**	**9.5**	**SW846 8280A**
1,2,3,4,7,8-HxCDF	**ND**	**64**	**56**	**ng/L**	**87**		**SW846 8280A**
	ND	**61**	**61**	**ng/L**	**100**	**9.6**	**SW846 8280A**
1,2,3,6,7,8-HxCDF	**ND**	**64**	**57**	**ng/L**	**90**		**SW846 8280A**
	ND	**61**	**62**	**ng/L**	**101**	**8.0**	**SW846 8280A**
2,3,4,6,7,8-HxCDF	**ND**	**64**	**56**	**ng/L**	**88**		**SW846 8280A**
	ND	**61**	**63**	**ng/L**	**102**	**11**	**SW846 8280A**
1,2,3,7,8,9-HxCDF	**ND**	**64**	**57**	**ng/L**	**89**		**SW846 8280A**
	ND	**61**	**62**	**ng/L**	**102**	**9.2**	**SW846 8280A**
1,2,3,4,6,7,8-HpCDF	**ND**	**64**	**58**	**ng/L**	**91**		**SW846 8280A**
	ND	**61**	**62**	**ng/L**	**102**	**7.6**	**SW846 8280A**
1,2,3,4,7,8,9-HpCDF	**ND**	**64**	**57**	**ng/L**	**90**		**SW846 8280A**
	ND	**61**	**63**	**ng/L**	**102**	**9.2**	**SW846 8280A**
OCDF	**ND**	**130**	**120**	**ng/L**	**92**		**SW846 8280A**
	ND	**120**	**130**	**ng/L**	**102**	**6.9**	**SW846 8280A**

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDD	67	(25 - 150)
	69	(25 - 150)

(Continued on next page)

MATRIX SPIKE SAMPLE DATA REPORT

Trace Level Organic Compounds

Client Lot #...: A0D300605 **Work Order #...:** L0VEH1AC-MS **Matrix.....:** WG
MS Lot-Sample #: A0D300605-004 L0VEH1AD-MSD

INTERNAL STANDARDS	PERCENT RECOVERY	RECOVERY LIMITS
13C-2,3,7,8-TCDF	68	(25 - 150)
	72	(25 - 150)
13C-1,2,3,6,7,8-HxCDD	71	(25 - 150)
	71	(25 - 150)
13C-1,2,3,4,6,7,8-HpCDF	71	(25 - 150)
	73	(25 - 150)
13C-OCDD	70	(25 - 150)
	74	(25 - 150)

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
37Cl4-2,3,7,8-TCDD	90	(25 - 150)
	92	(25 - 150)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

WATER, 8280A, Dioxins/Furans

Raw Data Package

Run/Batch Data

Includes (as applicable):

runlogs

continuing calibration standards

interference/performance check standards

continuing calibration blanks

method blanks

lcs

ms/sd

sample raw data

ms tune data

Quantitation Report (Not Reviewed)

Sample ID: G0D280478-MB 1.0L 8280A
L057J-1-AA WATER LR009

Size: 1.000
Inst : DB1

Data File:C:\8280\2DB\051110.B\S051108.D
Acq On :12 May 2010 3:08

Vial: 8
Operator: MEO
Sample Amount: 1.00

MS Integration Params: RTEINT.P
Quant Time: May 12 9:32 2010

Quant Results File: 10MY11C2.RES

Quant Method : C:\8280\ DATA METHODS\10MY11C2.M (RTE Integrator)
Title : Dioxin Furan Total
Last Update : Wed May 12 09:30:50 2010
Response via : Single (C:\8280\2DB\051110.B\ST0511C.D 12 May 2010 1:32)
DataAcq Meth : TOKAS
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Recovery\Internal Stds	R.T.	QIon	Ratio	Response	Conc		Dev(Min)
1) 13C-1234-TCDD	24.03	332+334	0.82	159015	25.00	NG	0.00
5) 13C-123789-HxCDD	36.48	402+404	1.27	229582	25.00	NG	0.00
9) 13C-2378-TCDF	23.20	316+318	0.81	160715	25.00	NG	0.00
15) 13C-2378-TCDD	24.30	332+334	0.79	114067	25.00	NG	0.00
20) 13C-123678-HxCDD	36.21	402+404	1.27	140550	25.00	NG	0.00
27) 13C-1234678-HpCDF	38.19	420+422	1.07	182366	25.00	NG	0.00
36) 13C-OCDD	42.20	470+472	0.91	232537	50.00	NG	-0.01

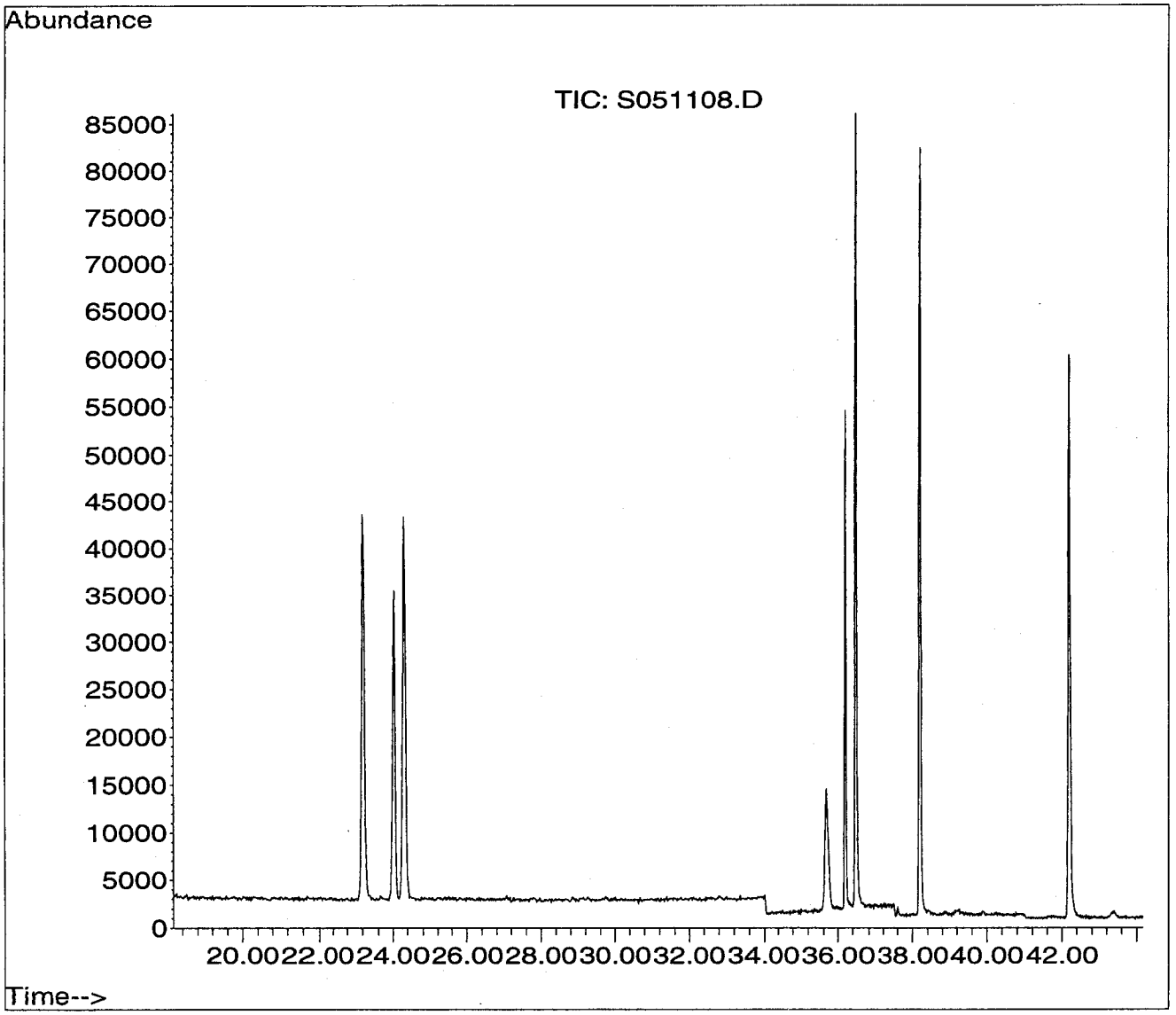
Surrogate Compound							
4) 37Cl-2378-TCDD	24.33	328		103543	11.723	NG	0.00
Spiked Amount = 12.500	RRF = 1.389			Recovery =	93.76%		

Target Compounds	RT	Ratio	Area	RRF	Conc	EDL	%Rec
2) 13C-2378-TCDF-IS	23.20	0.81	160715	1.428	17.690	0.0476	70.8
3) 13C-2378-TCDD-IS	24.30	0.79	114067	0.983	18.240	2.4762	73.0
6) 13C-123678-HxCDD-	36.21	1.27	140550	0.796	19.216	0.1258	76.9
7) 13C-1234678-HpCDF	38.19	1.07	182366	1.010	19.659	0.1063	78.6
8) 13C-OCDD-IS	42.20	0.91	232537	0.659	38.449	0.1110	76.9
10) 2378-TCDF	0.00		0	1.265	N.D.	0.1835	
11) TCDF TOTAL	22.00		0	1.265	N.D.	0.2898	
12) 12378-PeCDF	0.00		0	1.136	N.D.	0.2430	
13) 23478-PeCDF	0.00		0	1.137	N.D.	0.1676	
14) PeCDF TOTAL	29.50		0	1.136	N.D.	0.4302	
16) 2378-TCDD	0.00		0	1.221	N.D.	0.2288	
1	23.20	5.36 #	14397		2.583		
17) TCDD TOTAL	22.50	5.36	14397	1.221	2.583		
18) 12378-PeCDD	0.00		0	1.142	N.D.	0.4357	
19) PeCDD TOTAL	30.00		0	1.142	N.D.	0.6685	
21) 123478-HxCDD	0.00		0	1.012	N.D.	0.1769	
22) 123678-HxCDD	0.00		0	0.981	N.D.	0.1927	
23) 123789-HxCDD	0.00		0	1.038	N.D.	0.1740	
24) HxCDD TOTAL	36.50		0	0.981	N.D.	0.2482	
25) 1234678-HpCDD	0.00		0	1.039	N.D.	0.1544	
26) HpCDD TOTAL	39.35		0	1.039	N.D.	0.3944	
28) 123478-HxCDF	0.00		0	0.984	N.D.	0.1583	
29) 123678-HxCDF	0.00		0	1.042	N.D.	0.1495	
30) 234678-HxCDF	0.00		0	0.970	N.D.	0.1581	
31) 123789-HxCDF	0.00		0	0.928	N.D.	0.1849	
32) HxCDF TOTAL	36.00		0	0.928	N.D.	0.3016	
33) 1234678-HpCDF	0.00		0	1.160	N.D.	0.1574	
34) 1234789-HpCDF	0.00		0	1.006	N.D.	0.2056	
35) HpCDF TOTAL	39.50		0	1.006	N.D.	0.3108	
37) OCDD	0.00		0	1.102	N.D.	0.3453	

38) OCDF	0.00	0	1.397	N.D.	0.5903

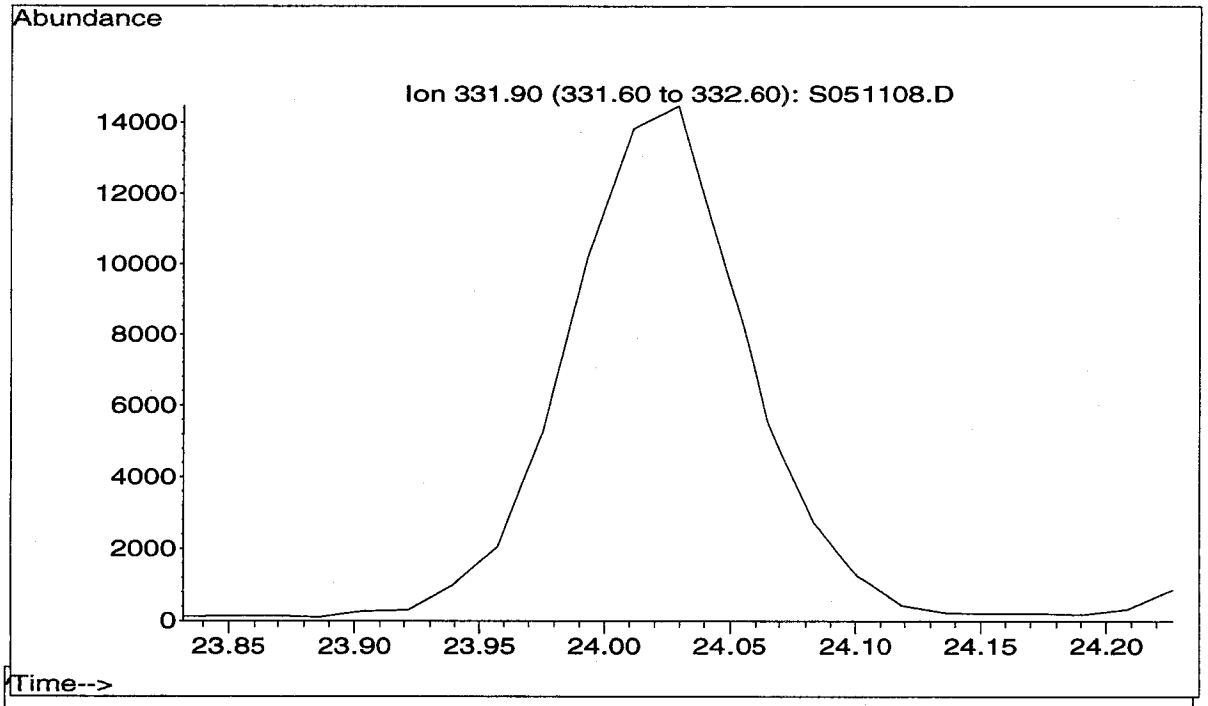
(#) = qualifier out of range•: areas and concentration based on theoretical ion ratio
(m) = manual integration
S051108.D 10MY11C2.M Wed May 12 09:32:20 2010

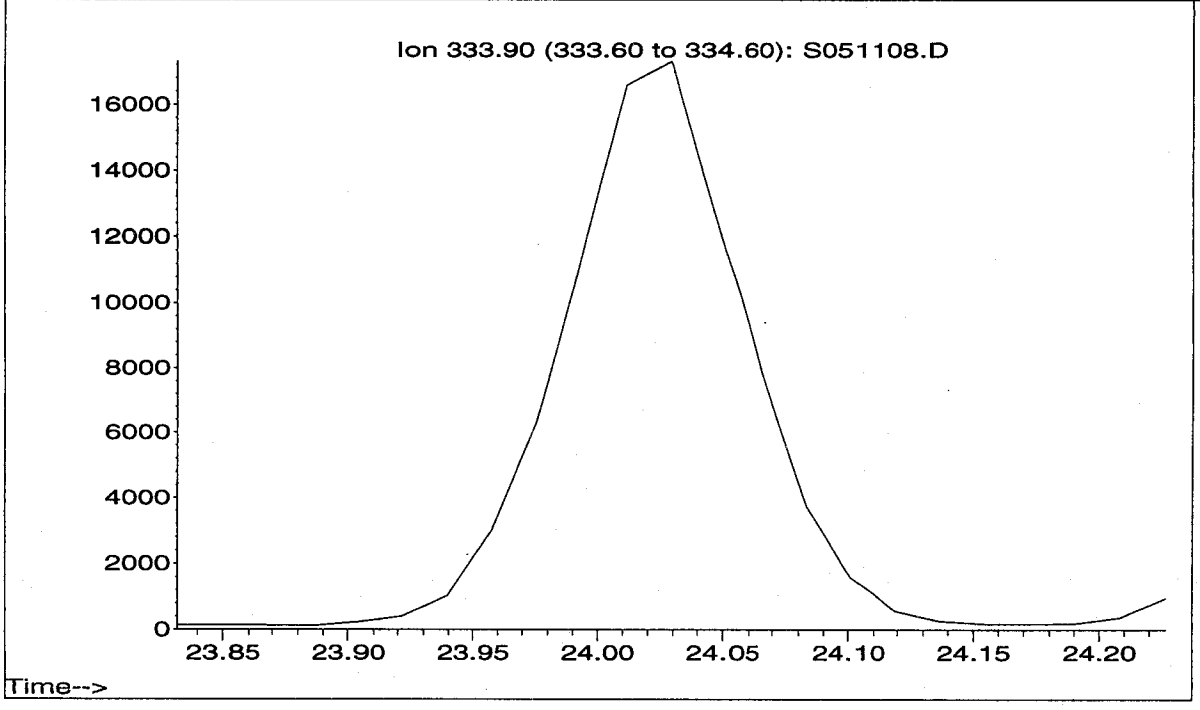
Data File Name	S051108.D
Data File Path	C:\8280\2DB\051110.B\
Operator	MEO
Date Acquired	5/12/2010 3:08
Acq. Method File	TOKAS
Sample Name	L057J-1-AA WATER LR009
Misc Info	G0D280478-MB 1.0L 8280A
Vial Number	8
Instrument Name	2DB
Sample Multiplier	1
Sample Amount	1



13C-1234-TCDD

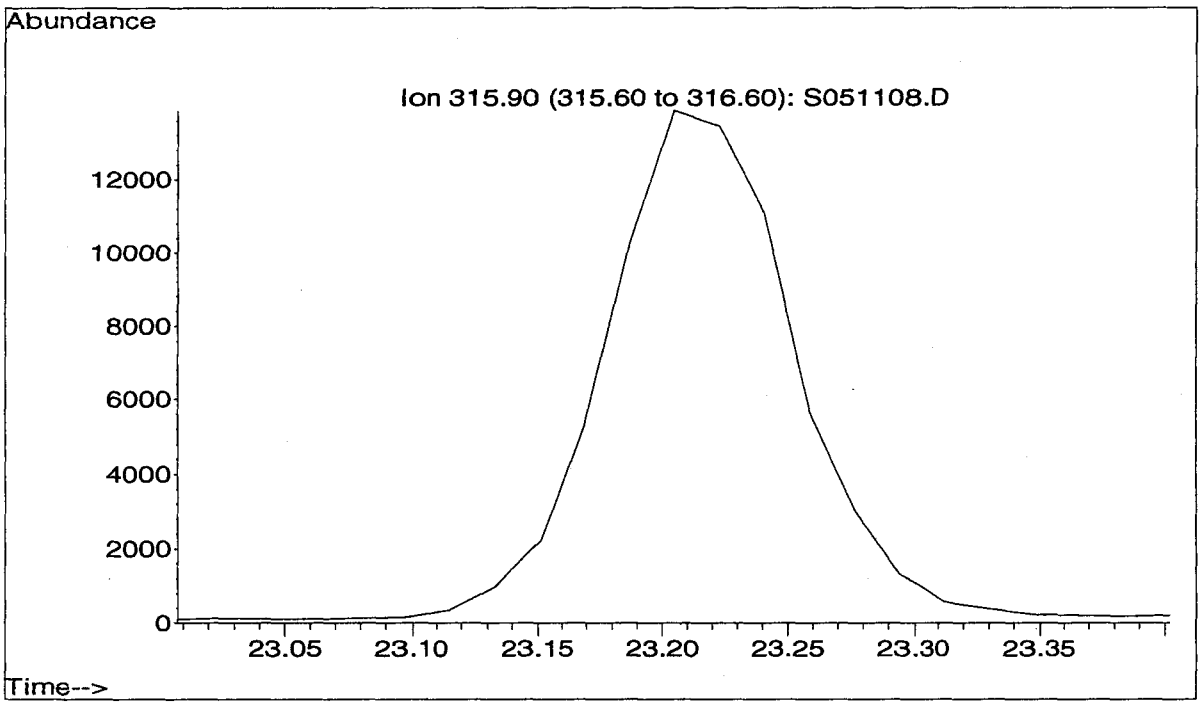
TS R.T. Lower Limit	23.83		
TS R.T. Upper Limit	24.23		
Ret Time	24.03		
Target Ion	331.9	Q1 Ion	333.9
Target Response	71417	Q1 Response	87598
Total Response	159015	Ion Ratio	0.82

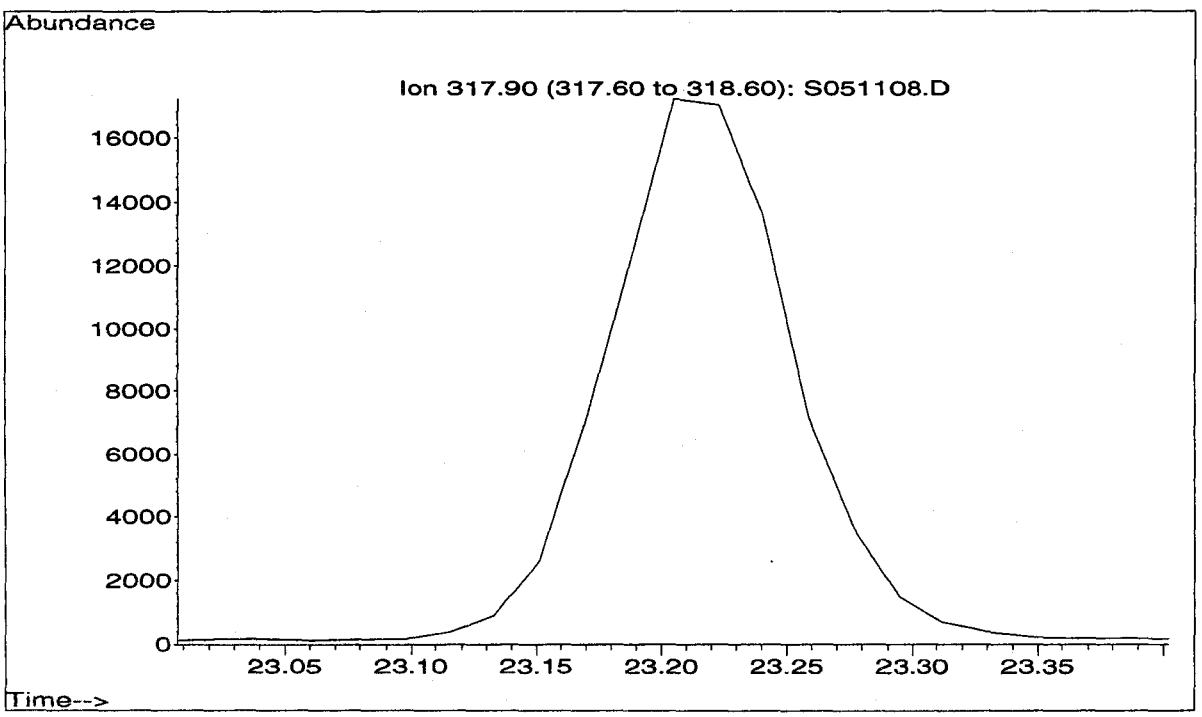




13C-2378-TCDF-IS

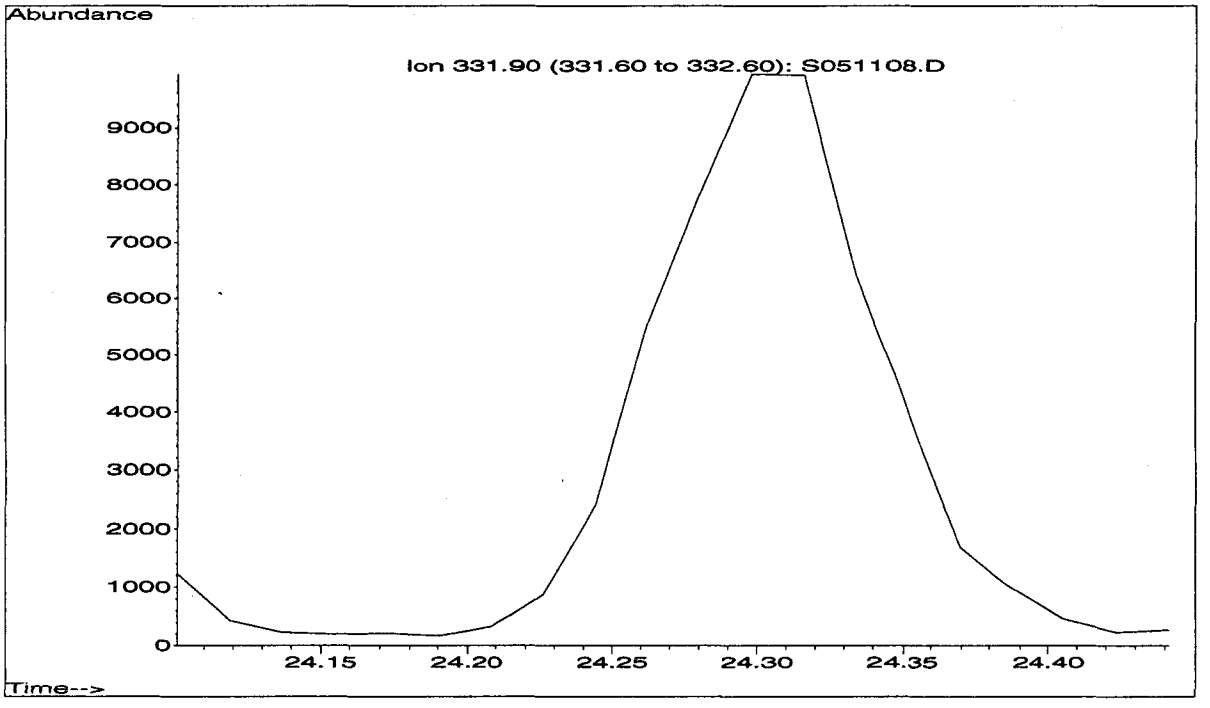
TS R.T. Lower Limit	23.01		
TS R.T. Upper Limit	23.41		
Ret Time	23.20		
Target Ion	315.9	Q1 Ion	317.9
Target Response	72041	Q1 Response	88674
Target Response	160715	Ion Ratio	0.81

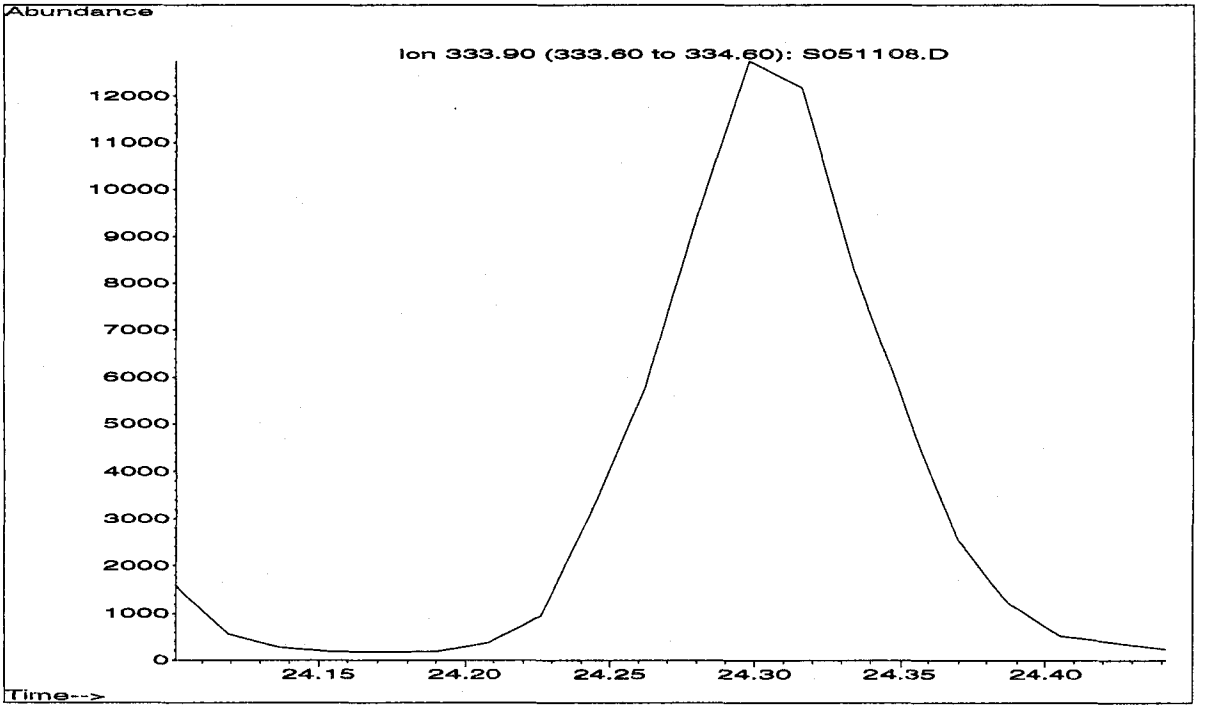




13C-2378-TCDD-IS

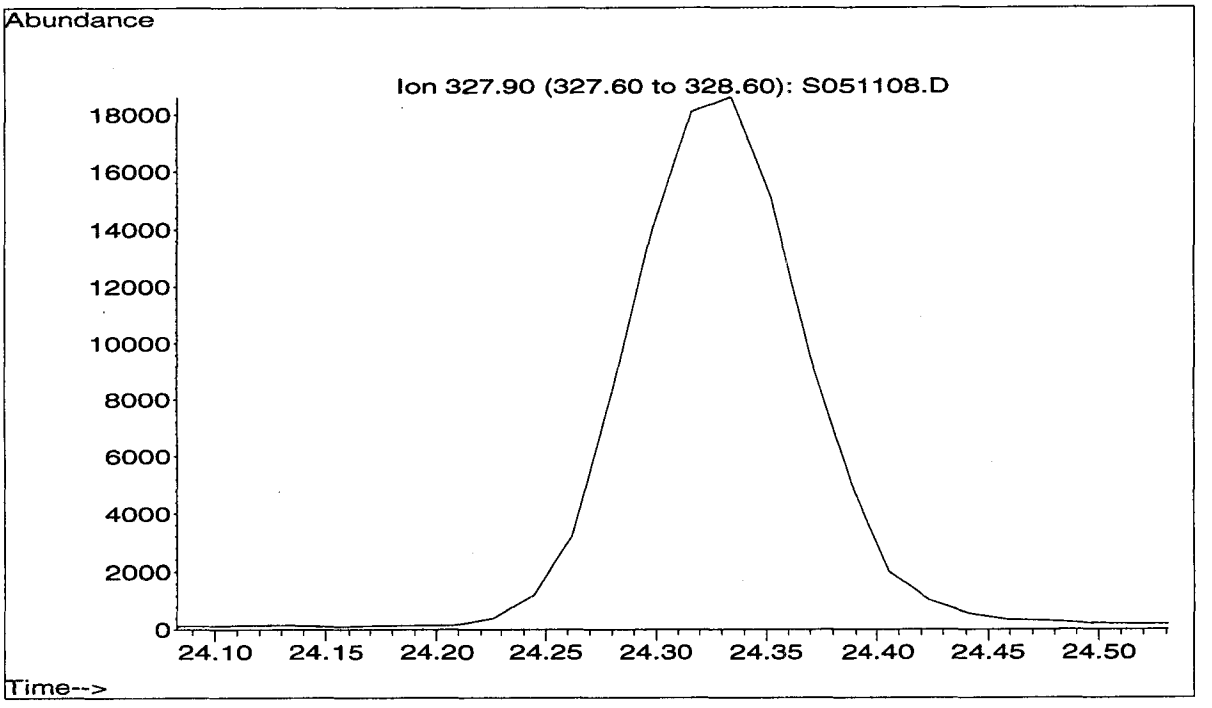
TS R.T. Lower Limit	24.10		
TS R.T. Upper Limit	24.45		
Ret Time	24.30		
Target Ion	331.9	Q1 Ion	333.9
Target Response	50407	Q1 Response	63660
Total Response	114067	Ion Ratio	0.79

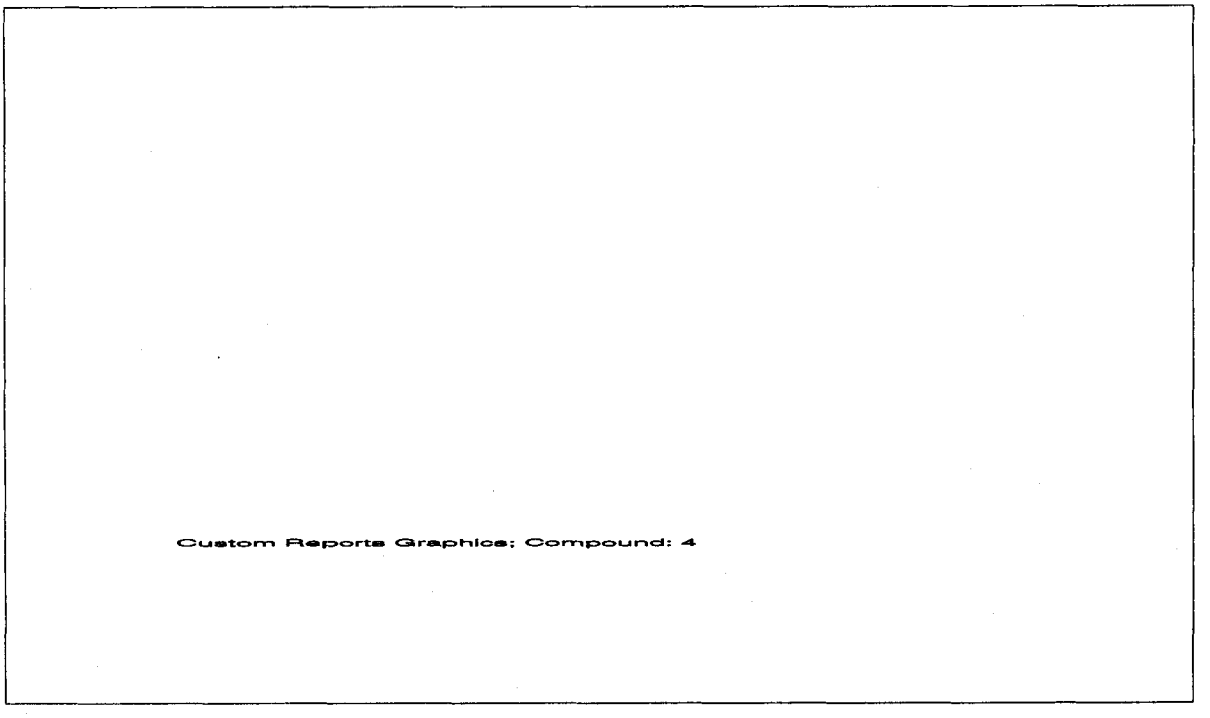




37Cl-2378-TCDD

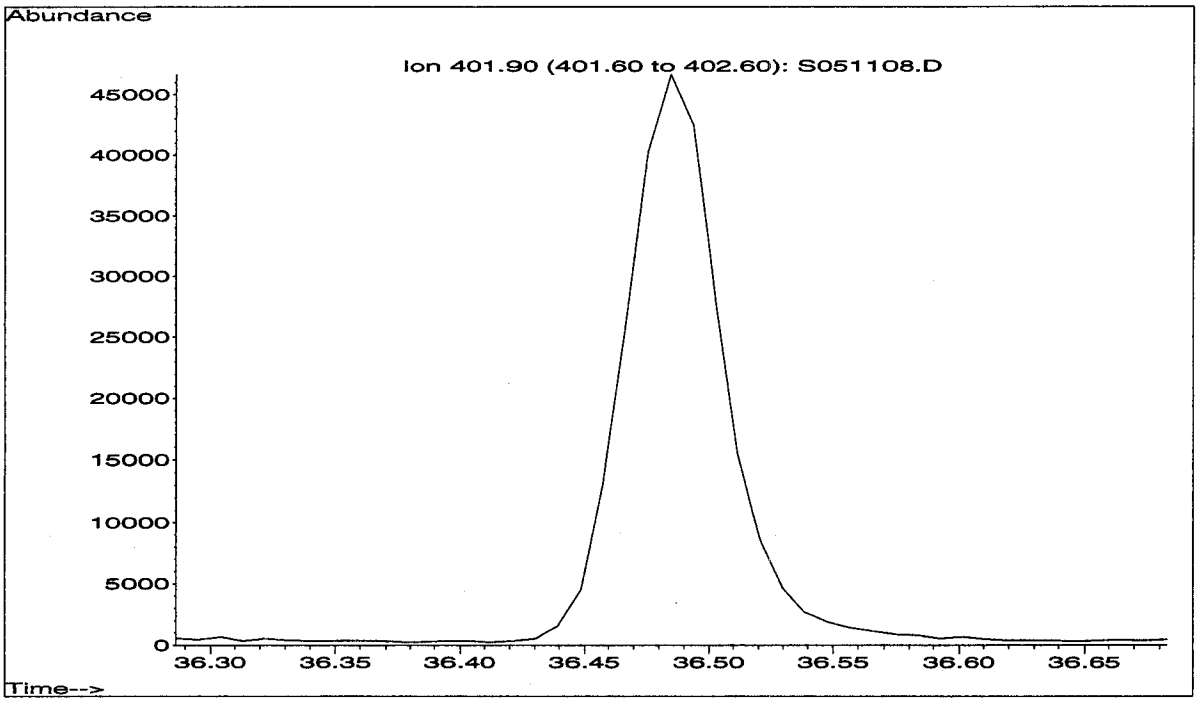
TS R.T. Lower Limit	24.09		
TS R.T. Upper Limit	24.54		
Ret Time	24.33		
Target Ion	327.9	Q1 Ion	0
Target Response	103543	Q1 Response	0
Total Response	103543	Ion Ratio	#DIV/0!

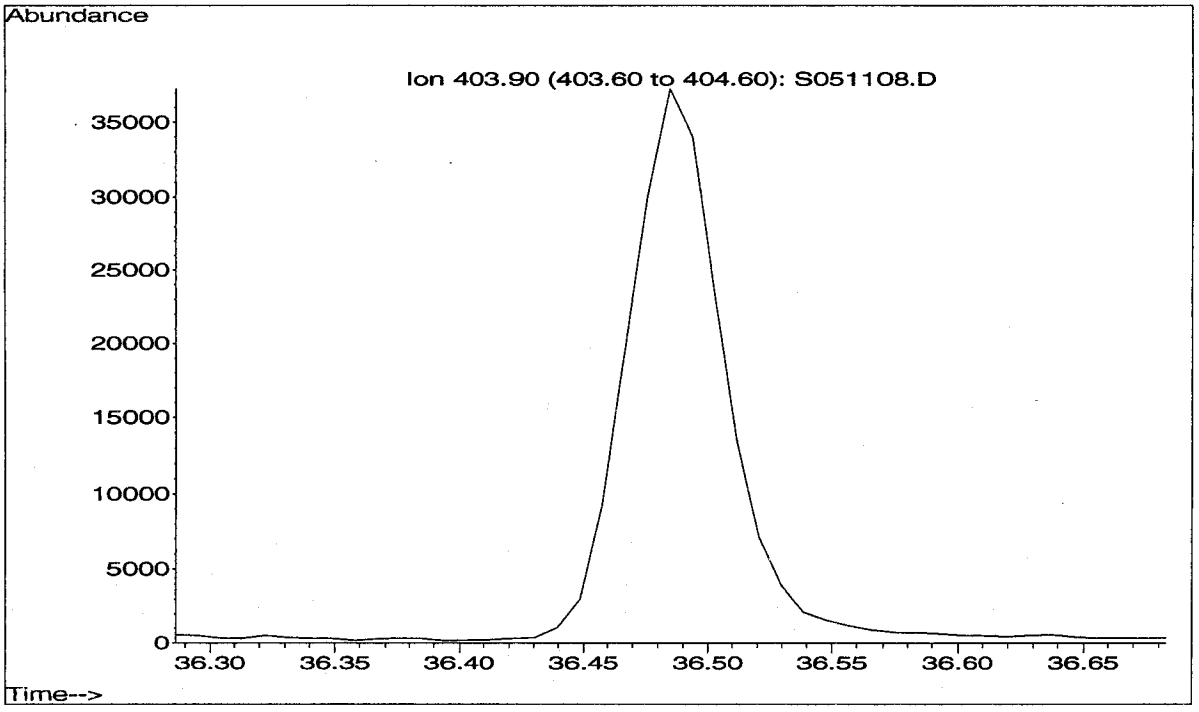




13C-123789-HxCDD

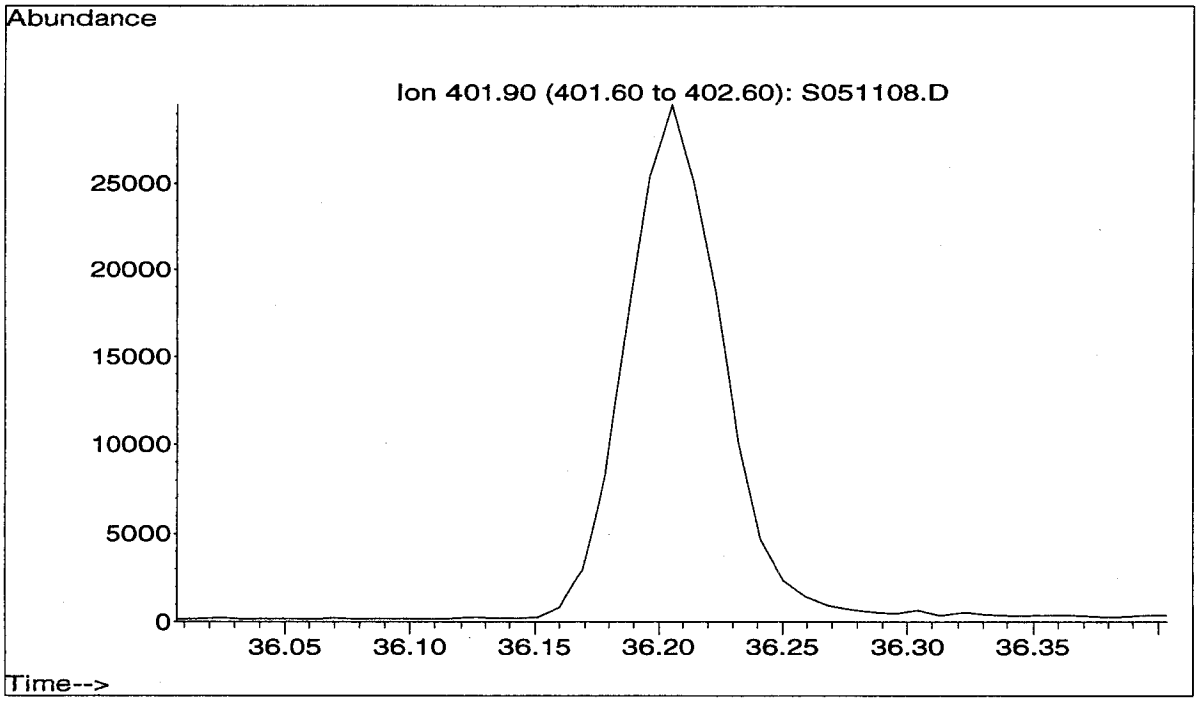
TS R.T. Lower Limit	36.29		
TS R.T. Upper Limit	36.69		
Ret Time	36.48		
Target Ion	401.9	Q1 Ion	403.9
Target Response	128226	Q1 Response	101356
Target Response	229582	Ion Ratio	1.27

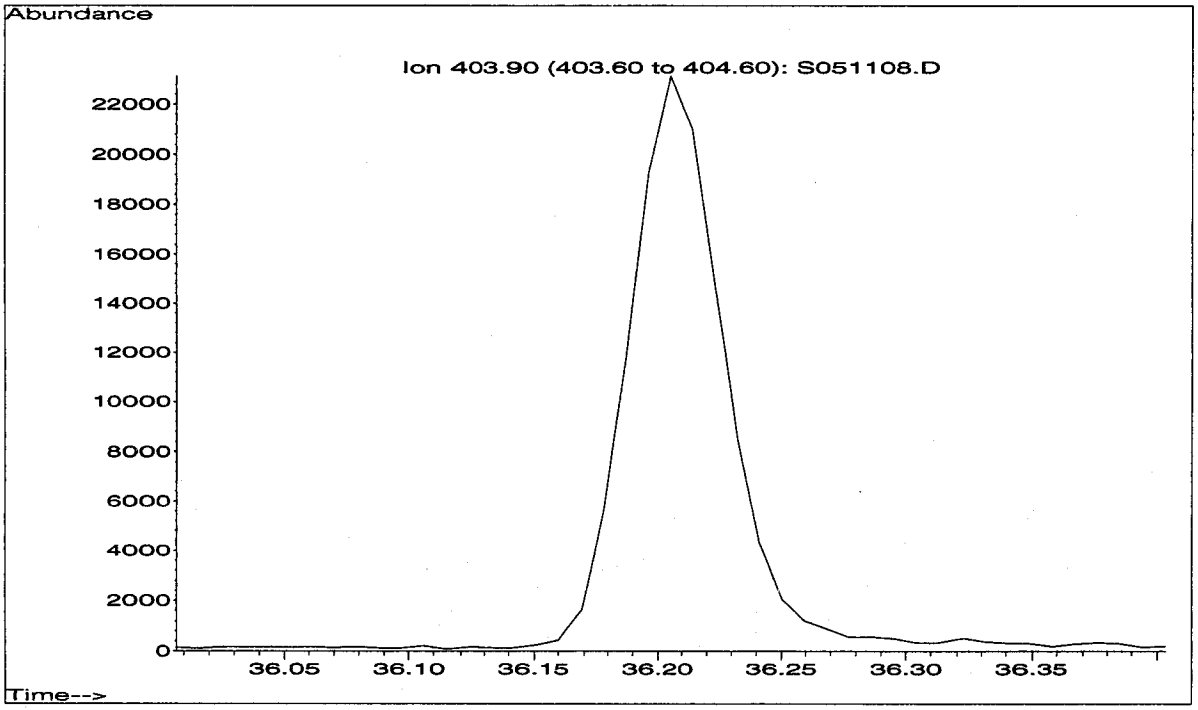




13C-123678-HxCDD-IS

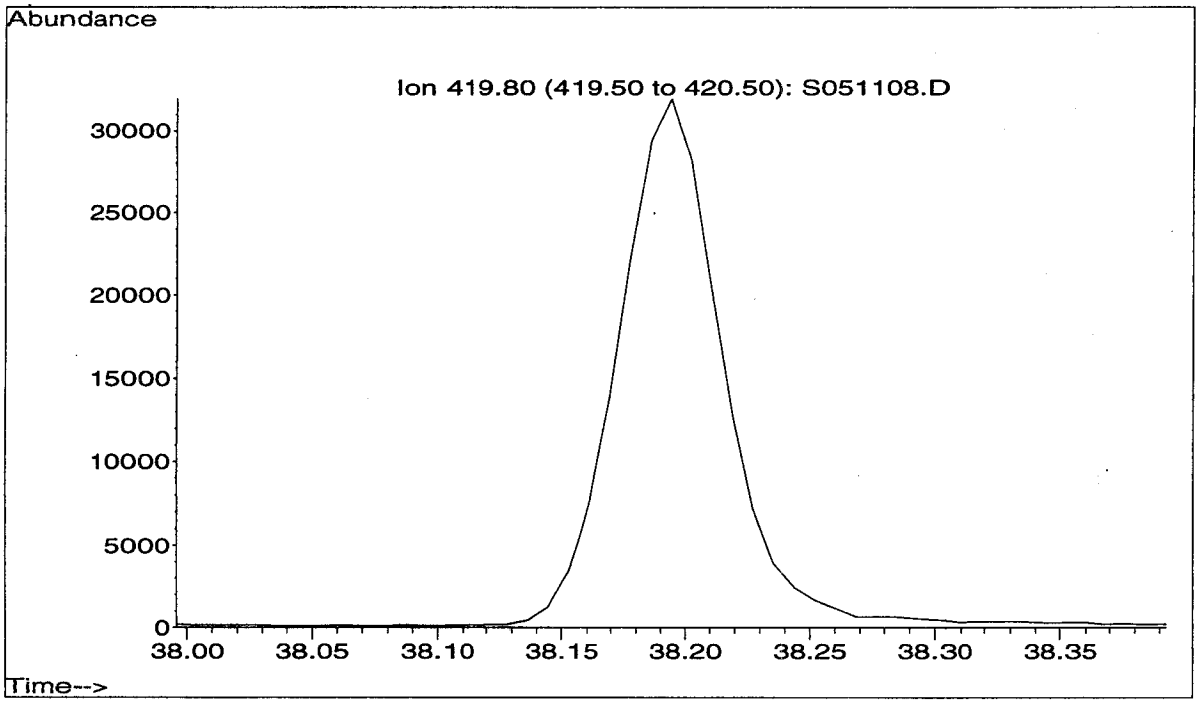
TS R.T. Lower Limit	36.01		
TS R.T. Upper Limit	36.41		
Ret Time	36.21		
Target Ion	401.9	Q1 Ion	403.9
Target Response	78728	Q1 Response	61822
Total Response	140550	Ion Ratio	1.27

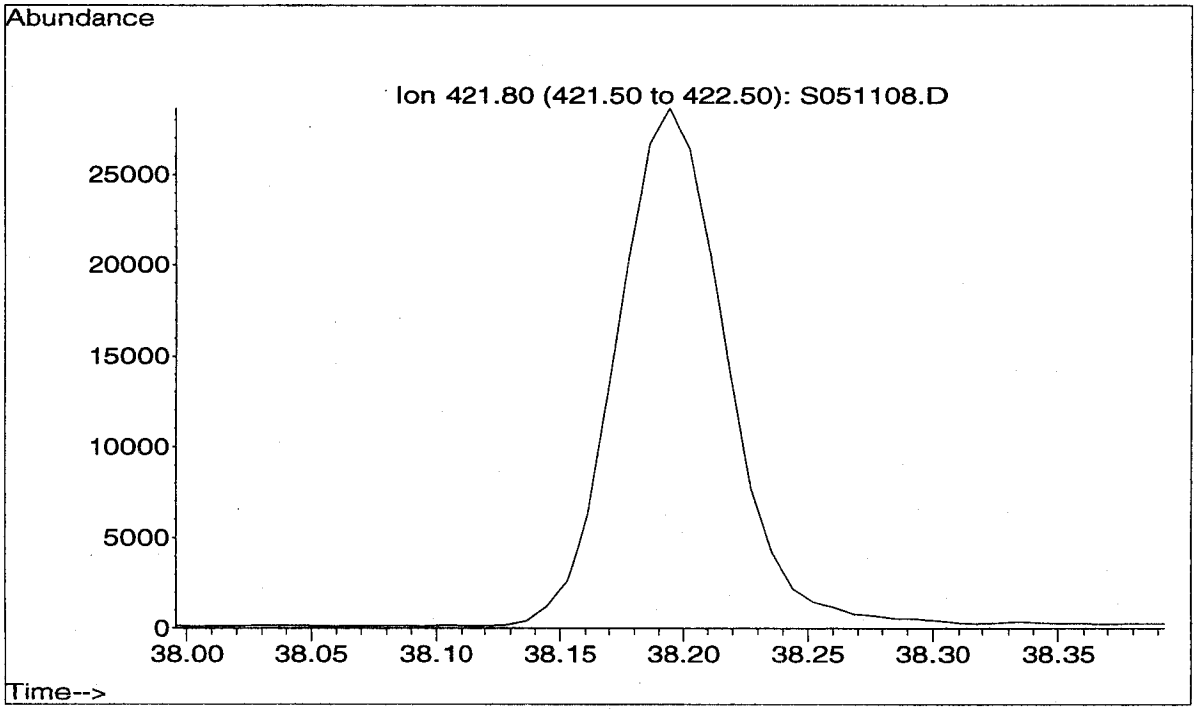




13C-1234678-HpCDF-IS

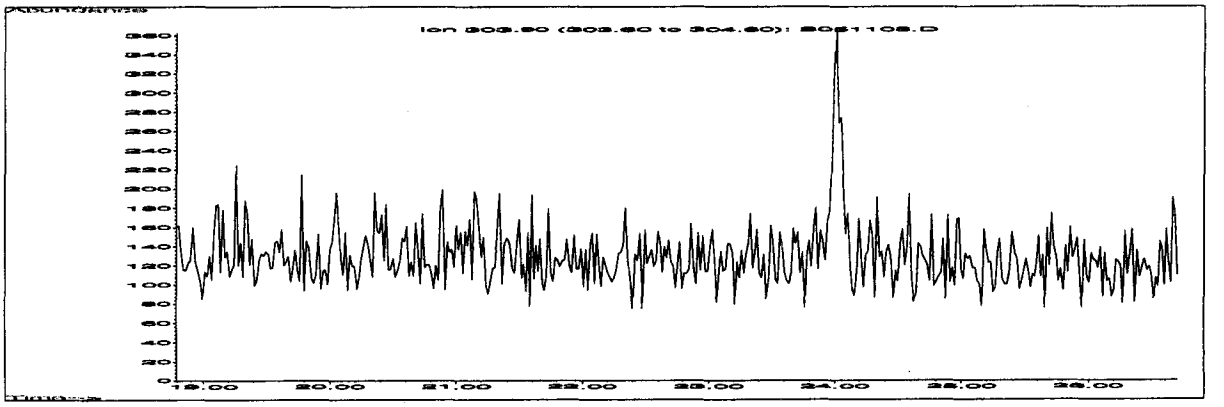
TS R.T. Lower Limit	37.99		
TS R.T. Upper Limit	38.39		
Ret Time	38.19		
Target Ion	419.8	Q1 Ion	421.8
Target Response	94250	Q1 Response	88116
Target Response	182366	Ion Ratio	1.07

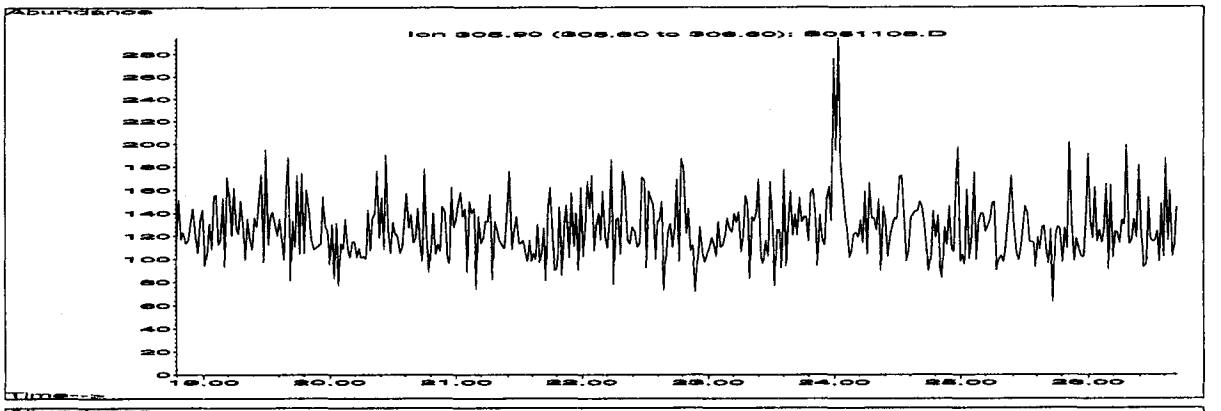


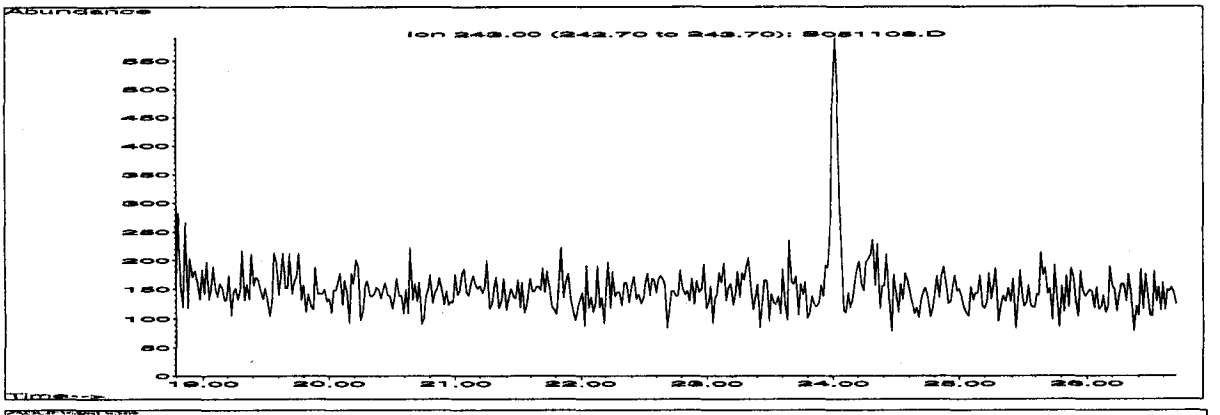


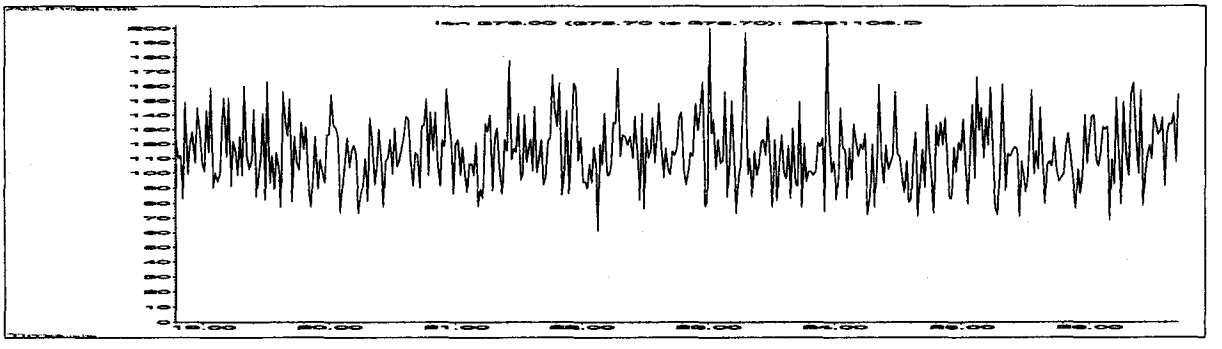
TCDF TOTAL

TS R.T. Lower Limit	18.80
TS R.T. Upper Limit	26.70



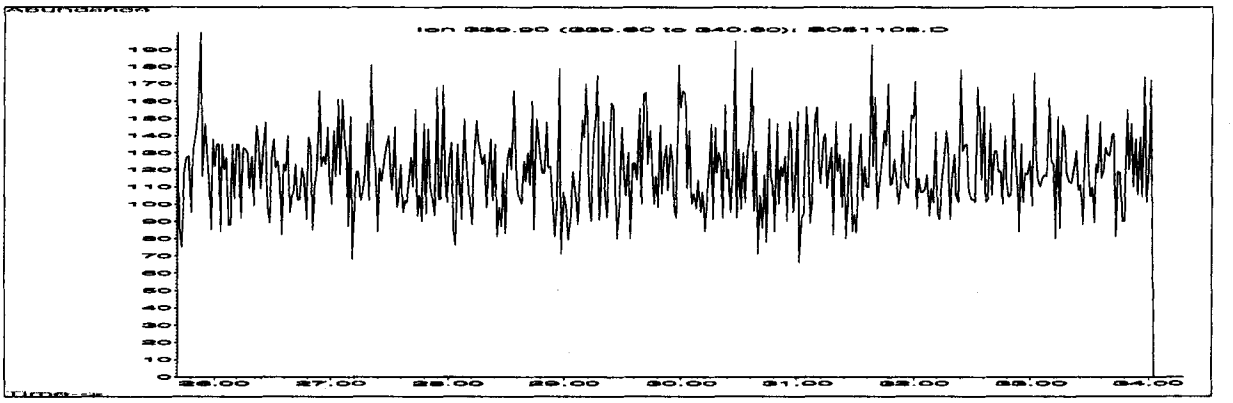


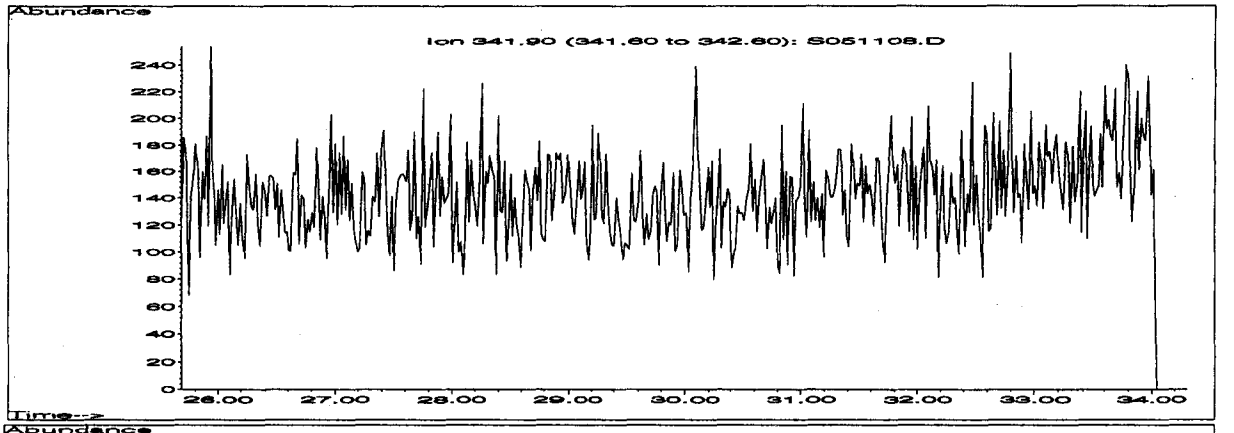


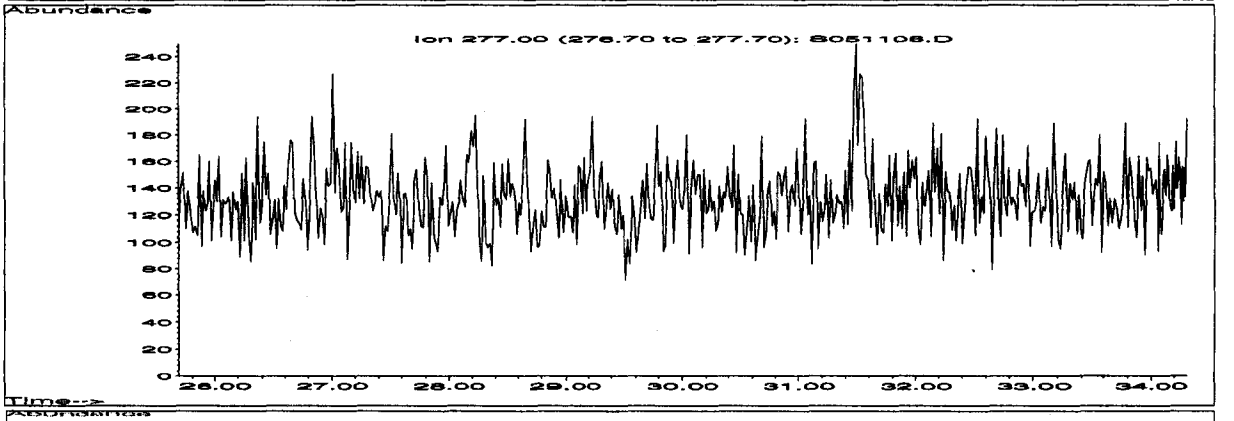


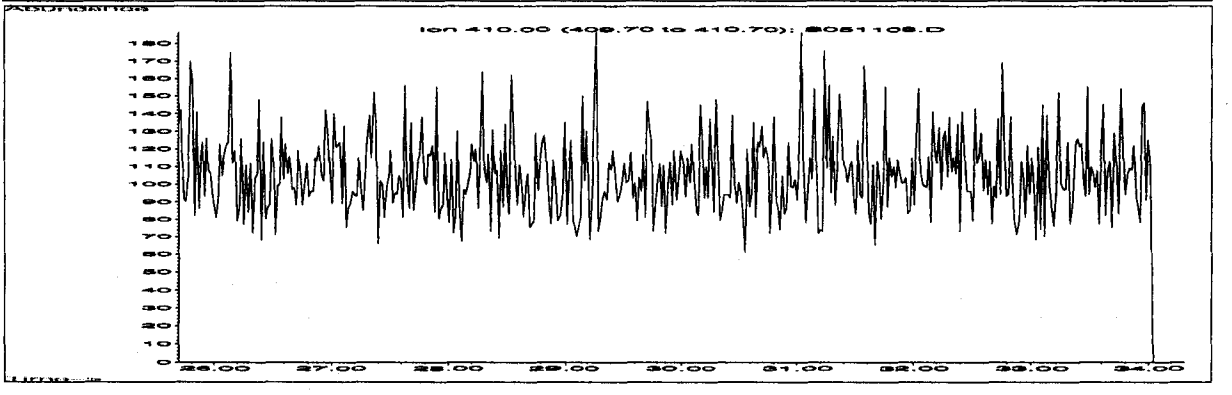
PeCDF TOTAL

TS R.T. Lower Limit	25.70
TS R.T. Upper Limit	34.30



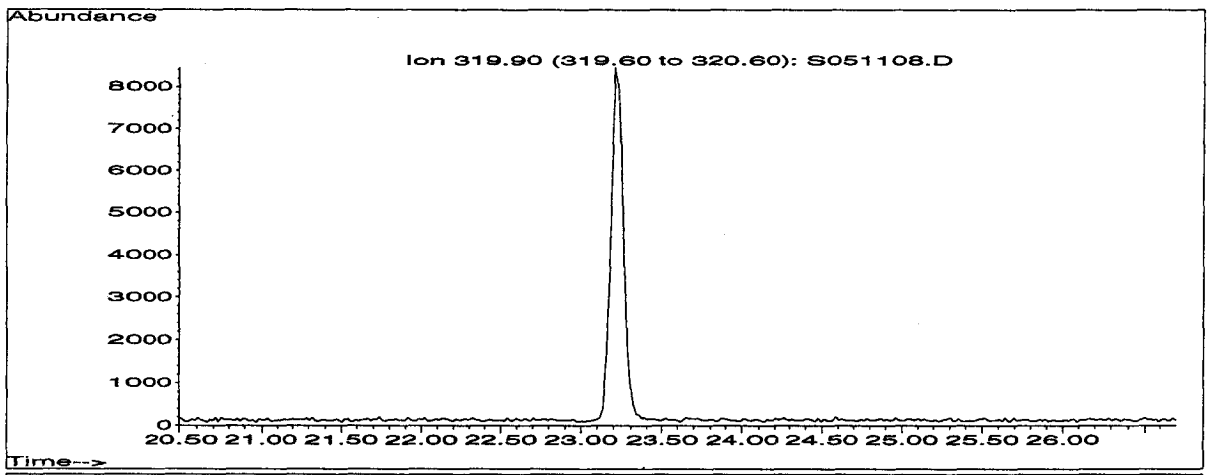


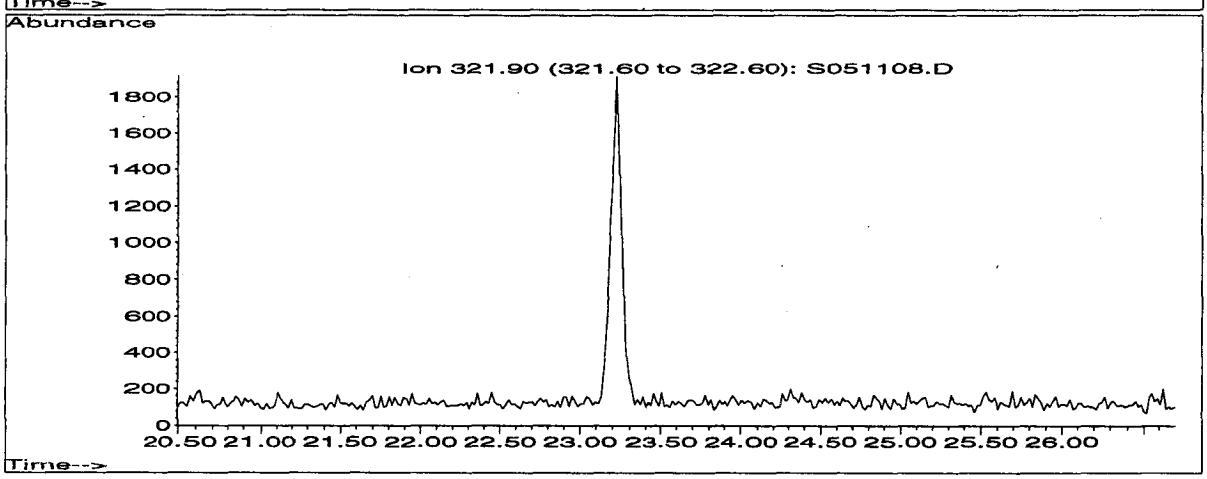


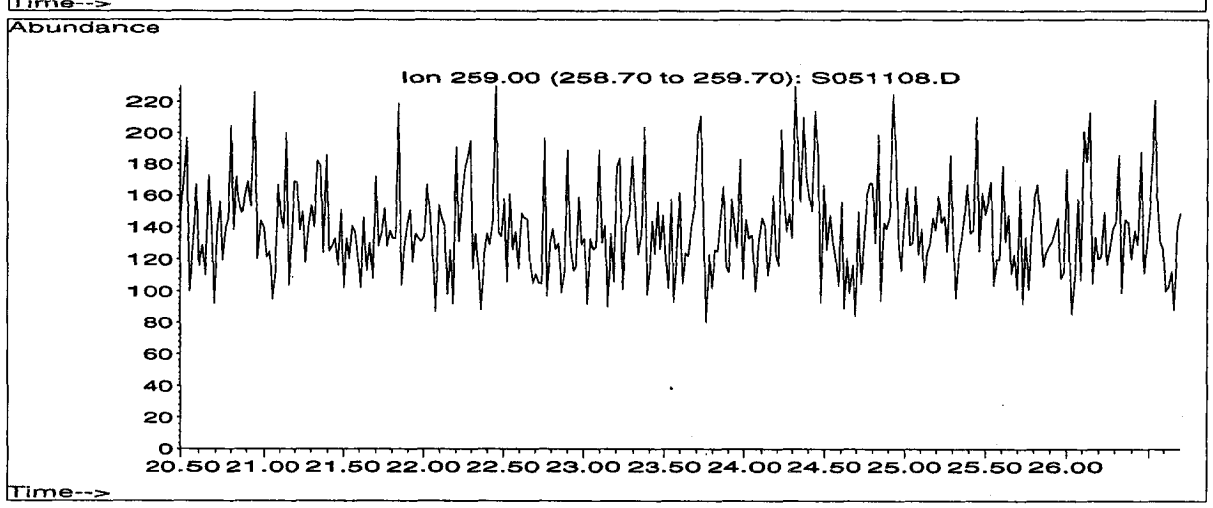


TCDD TOTAL

TS R.T. Lower Limit	20.50
TS R.T. Upper Limit	26.70

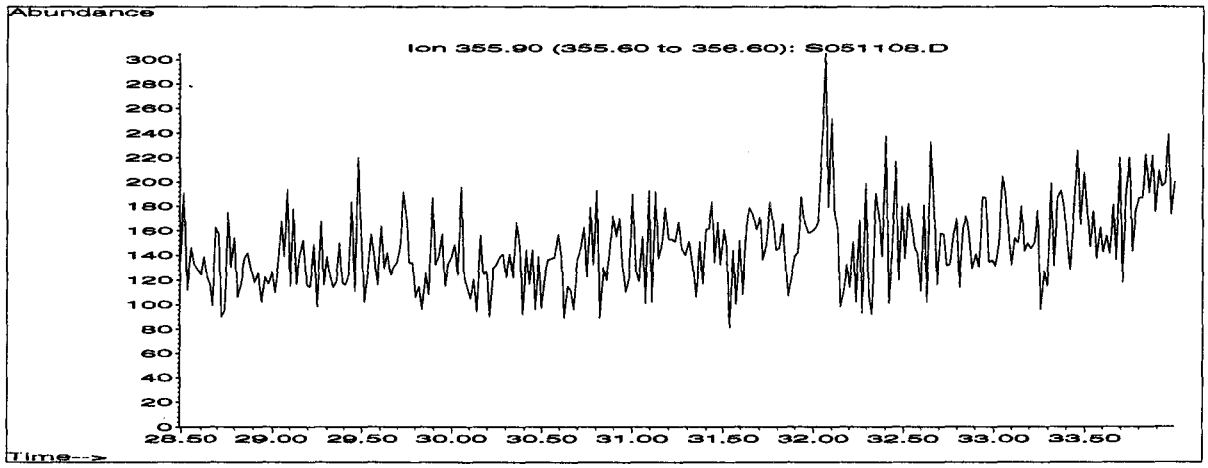


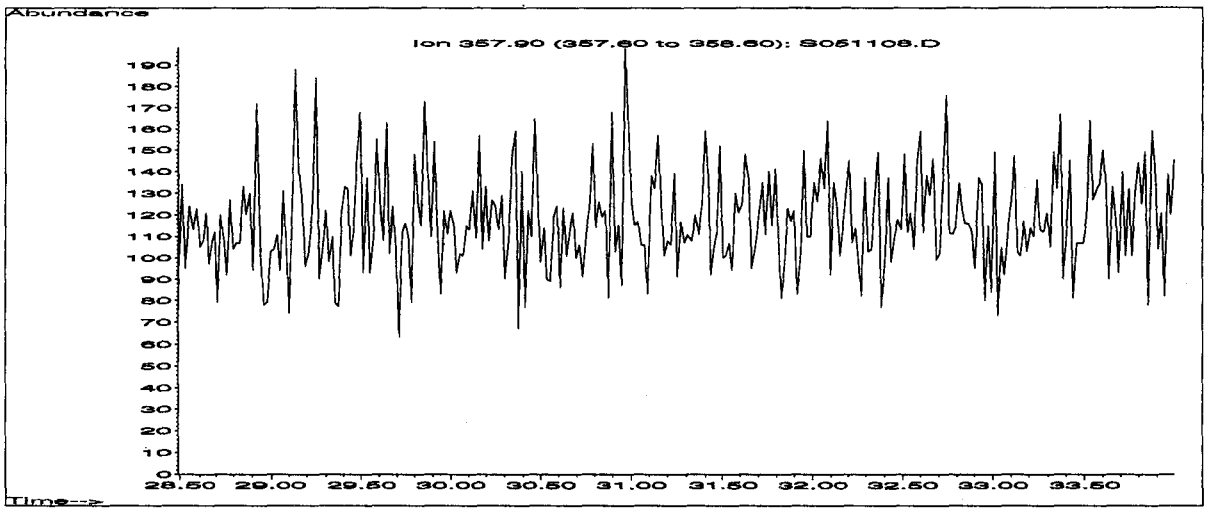


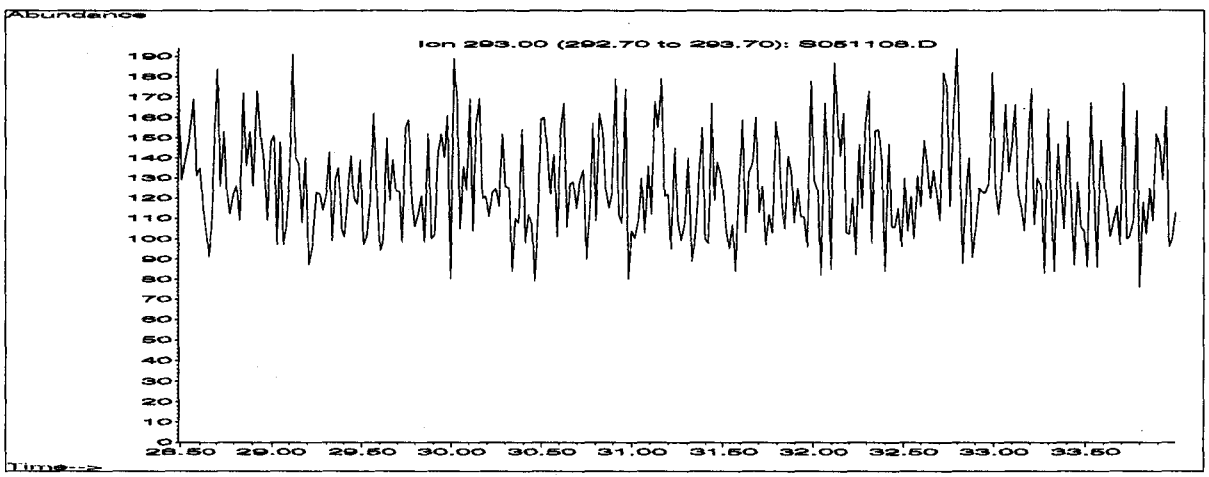


PeCDD TOTAL

TS R.T. Lower Limit	28.50
TS R.T. Upper Limit	34.00

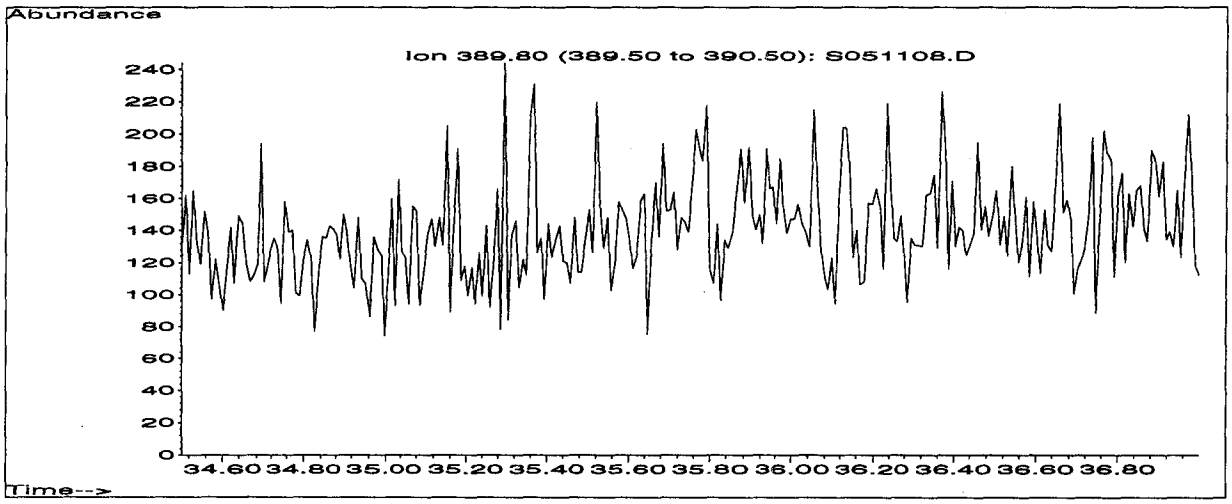


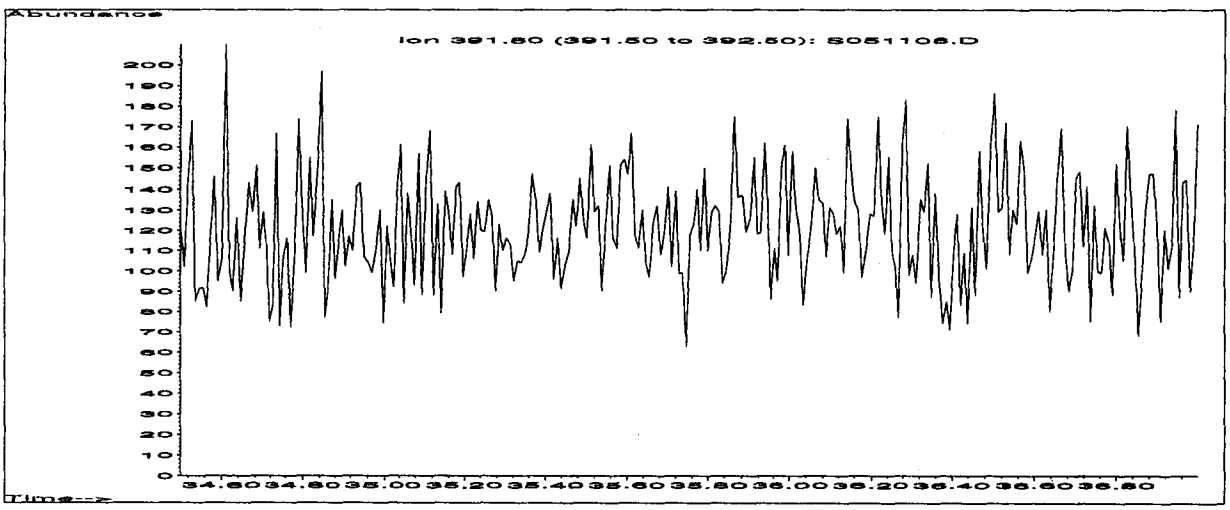


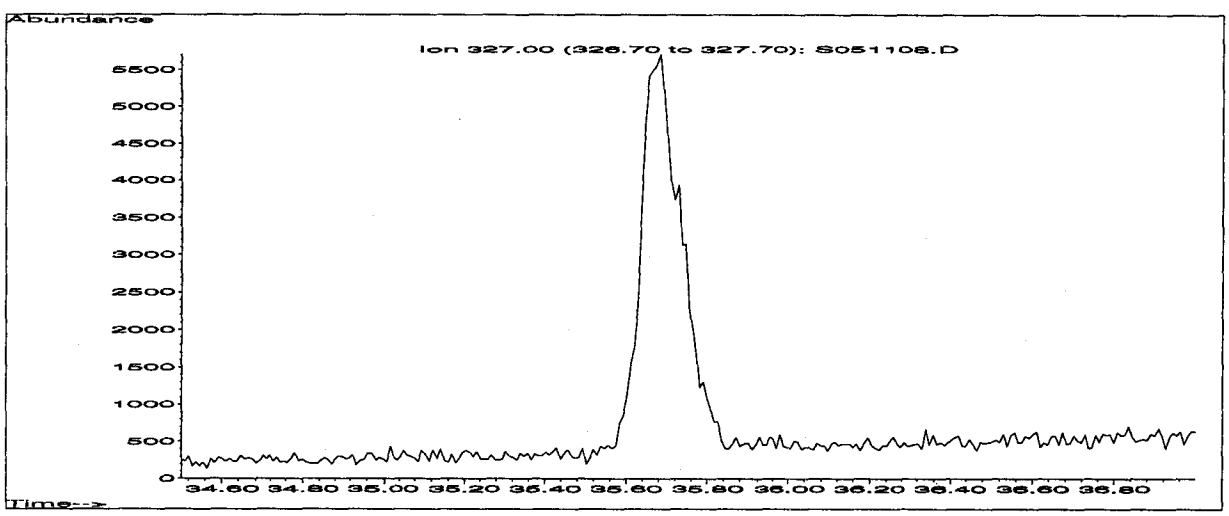


HxCDD TOTAL

TS R.T. Lower Limit	34.50
TS R.T. Upper Limit	37.00

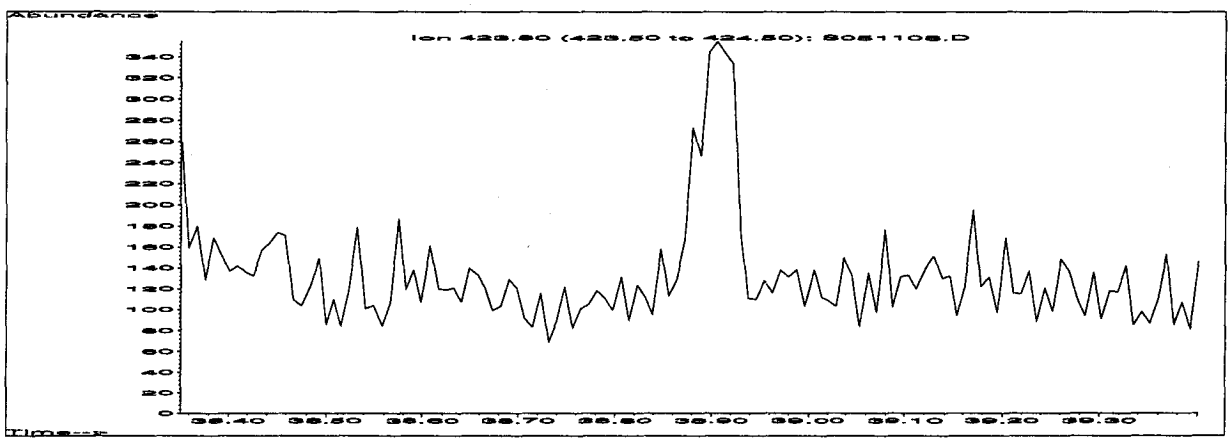


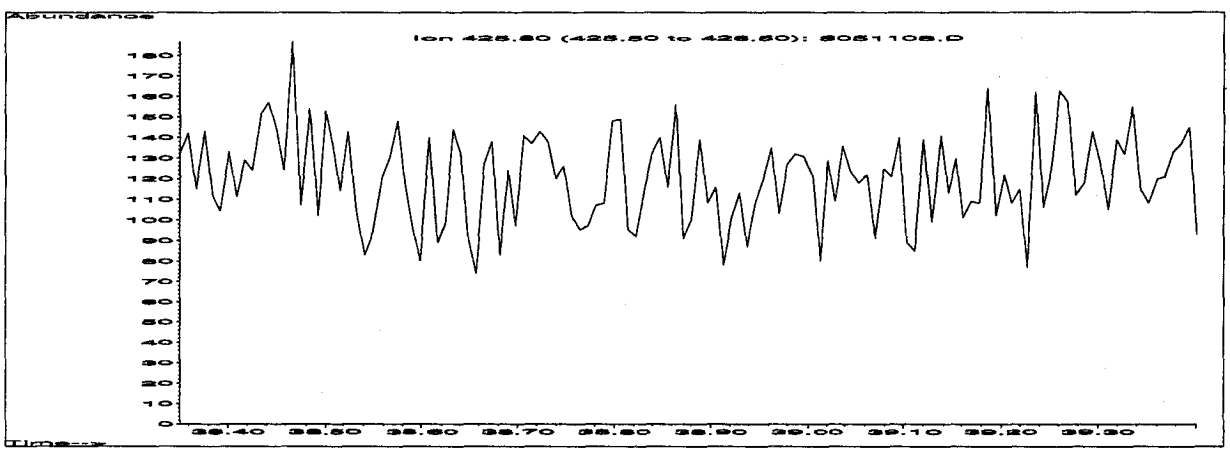


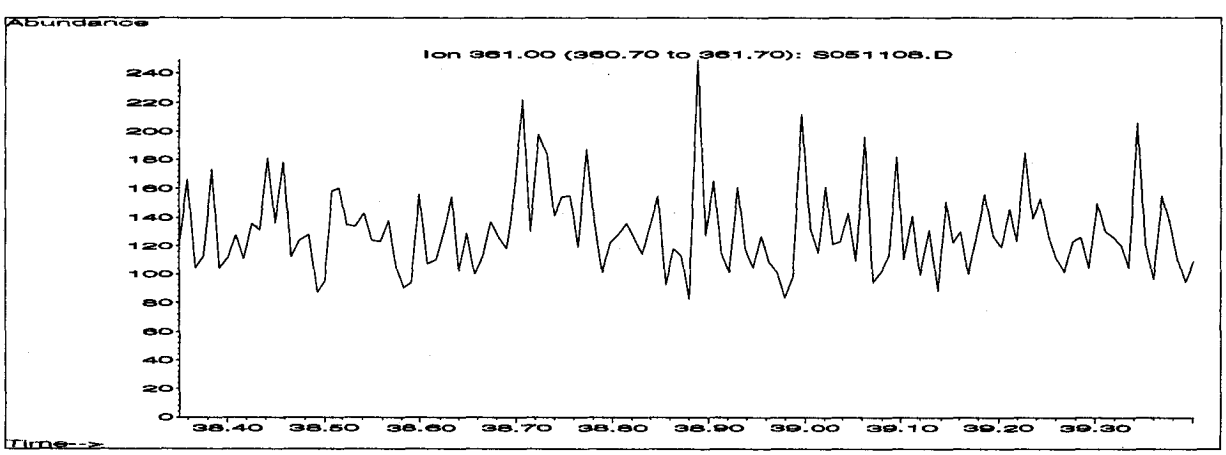


HpCDD TOTAL

TS R.T. Lower Limit	38.35
TS R.T. Upper Limit	39.40

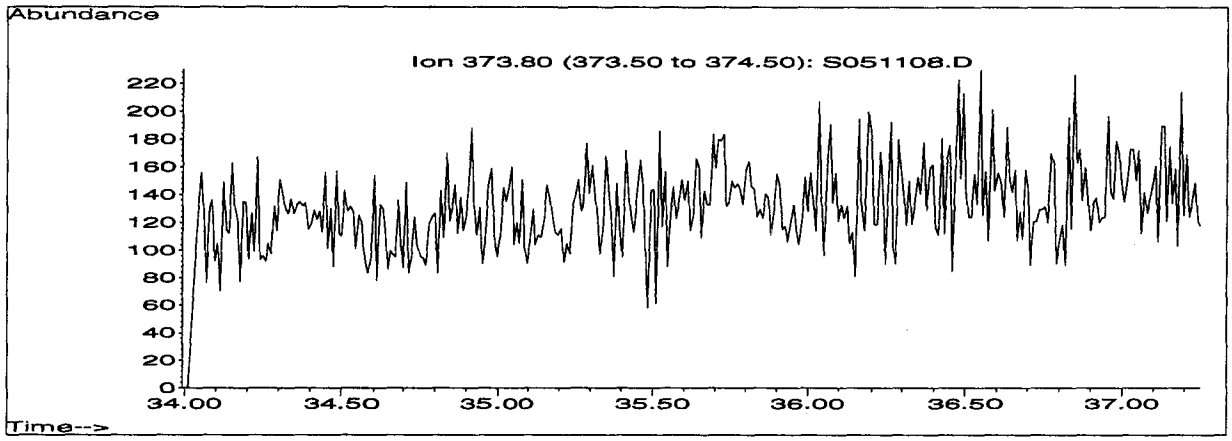


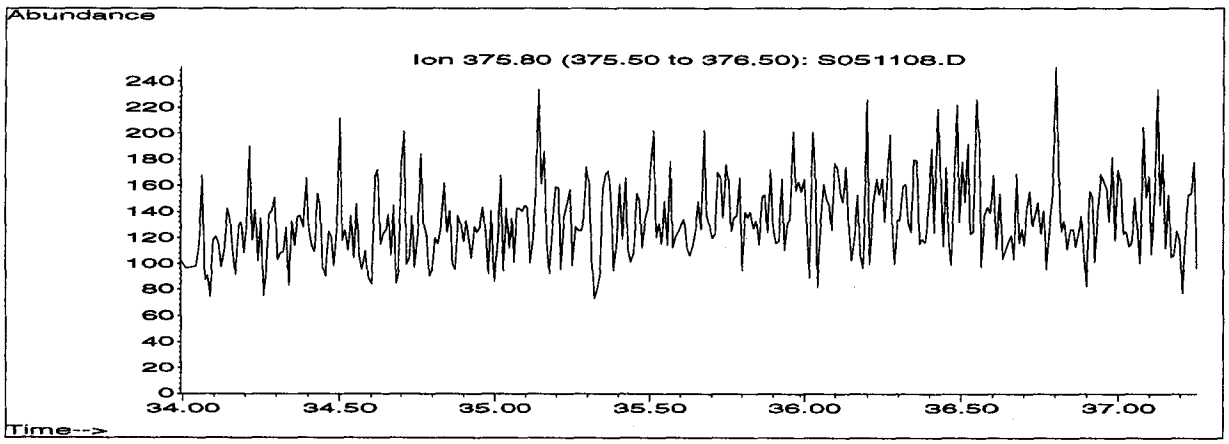


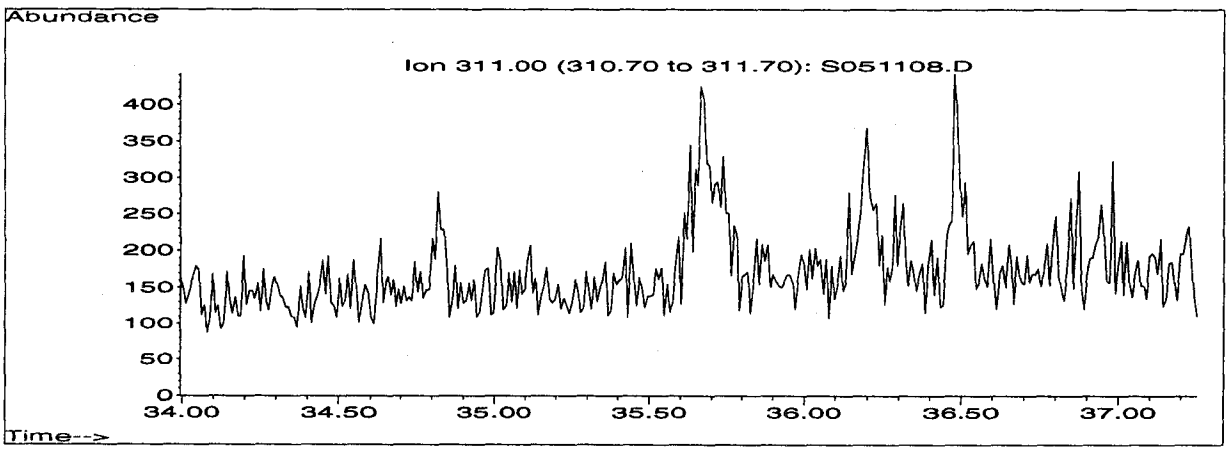


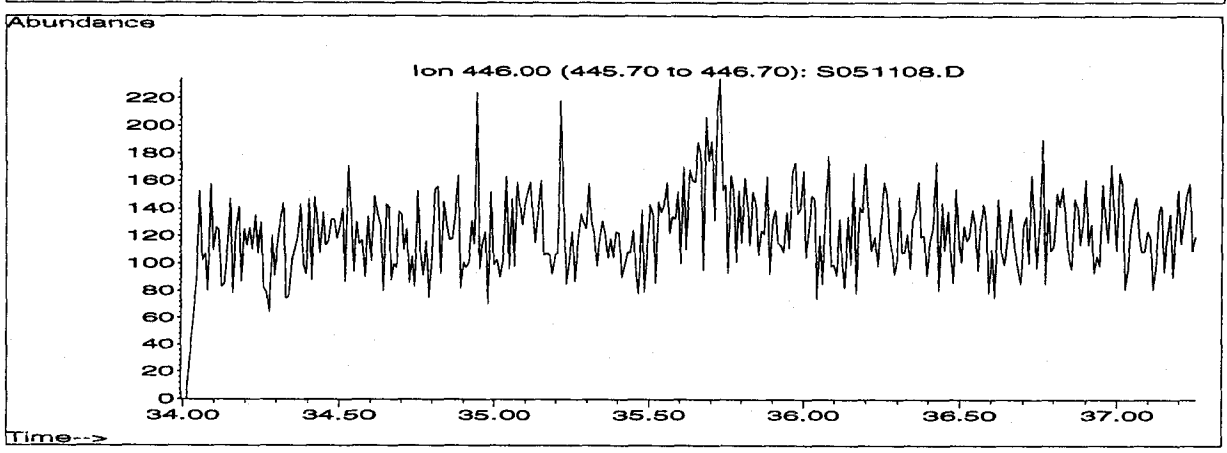
HxCDF TOTAL

TS R.T. Lower Limit	34.00
TS R.T. Upper Limit	37.25



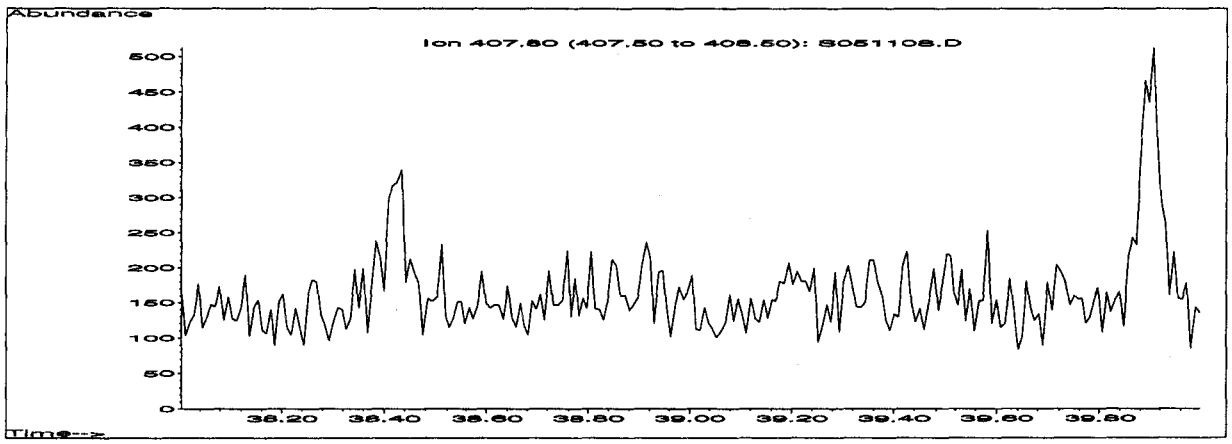


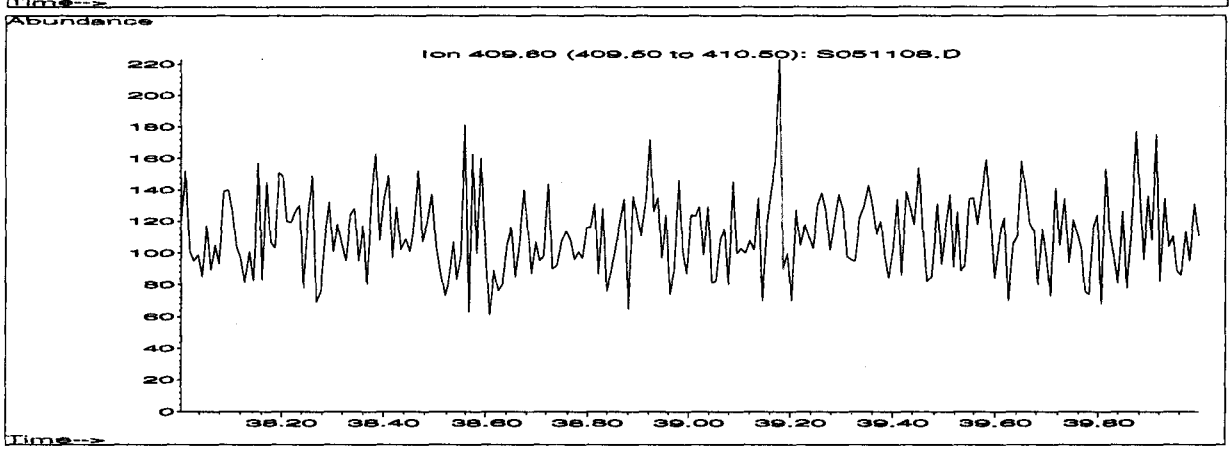


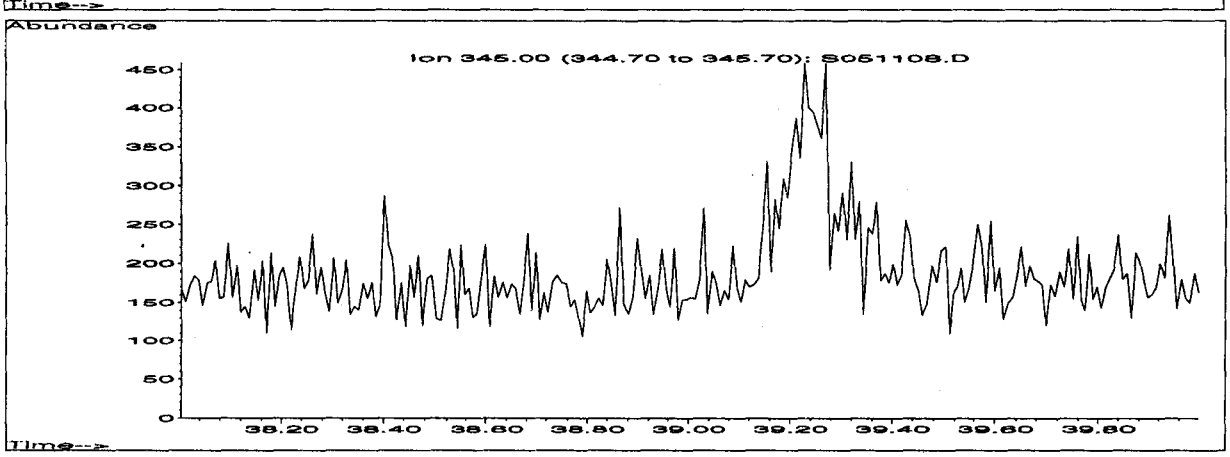


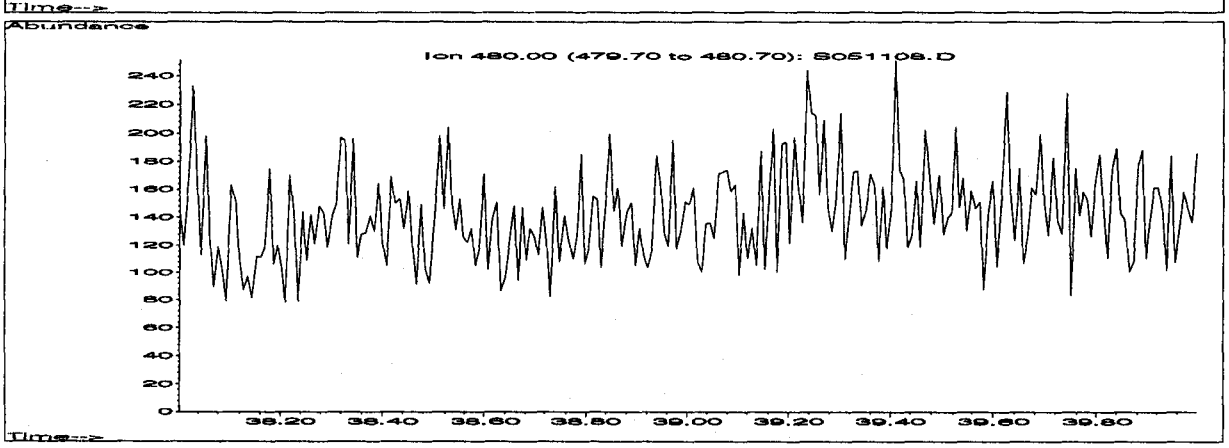
HpCDF TOTAL

TS R.T. Lower Limit	38.00
TS R.T. Upper Limit	40.00

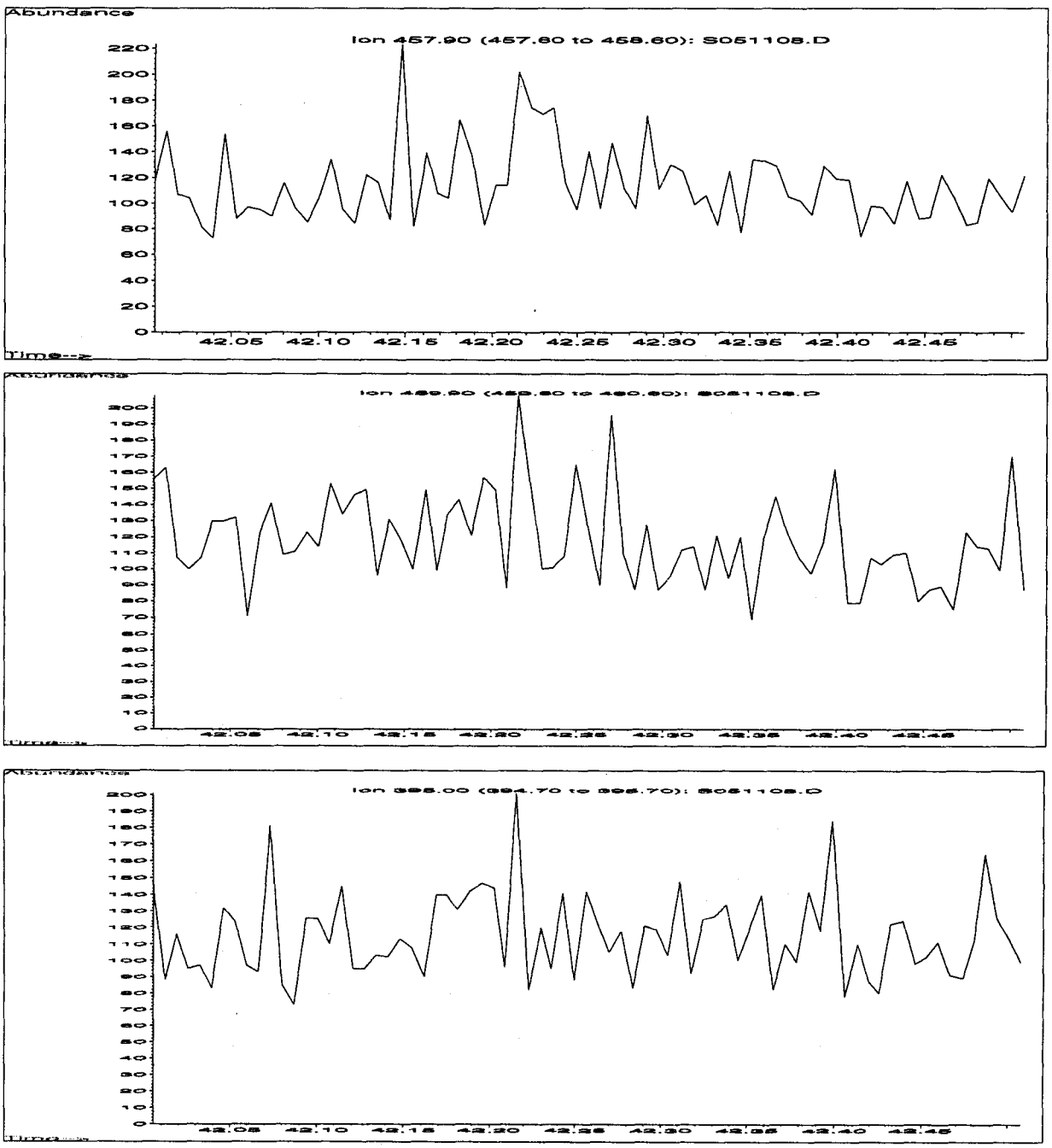




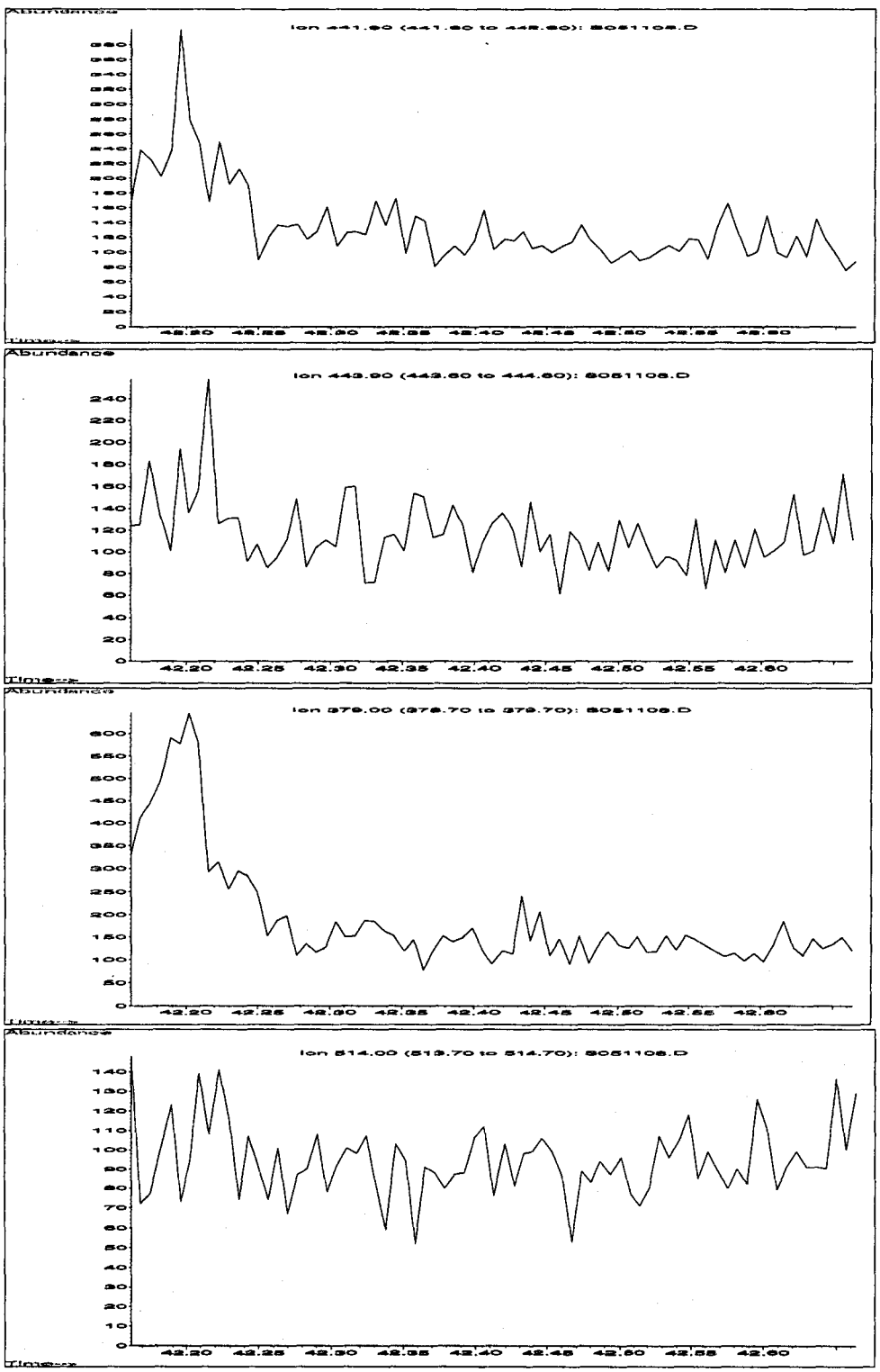




OCDD			
TS R.T. Lower Limit	42.01		
TS R.T. Upper Limit	42.51		
Ret. Time	0.00		
Target Ion	457.9	Q1 Ion	459.9
Target Response	0	Q1 Response	0
Total Response	0	Ion ratio	#DIV/0!
Q2 Ion	395		
Q2 Response	0		

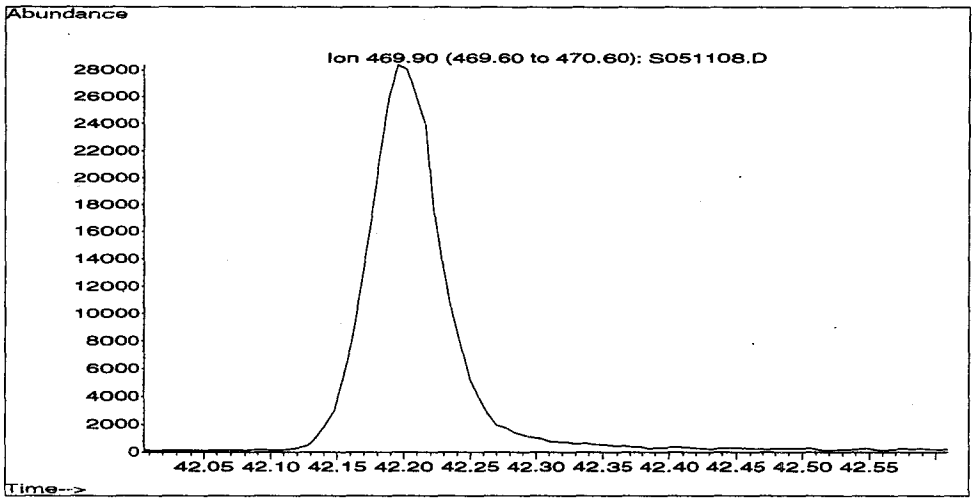


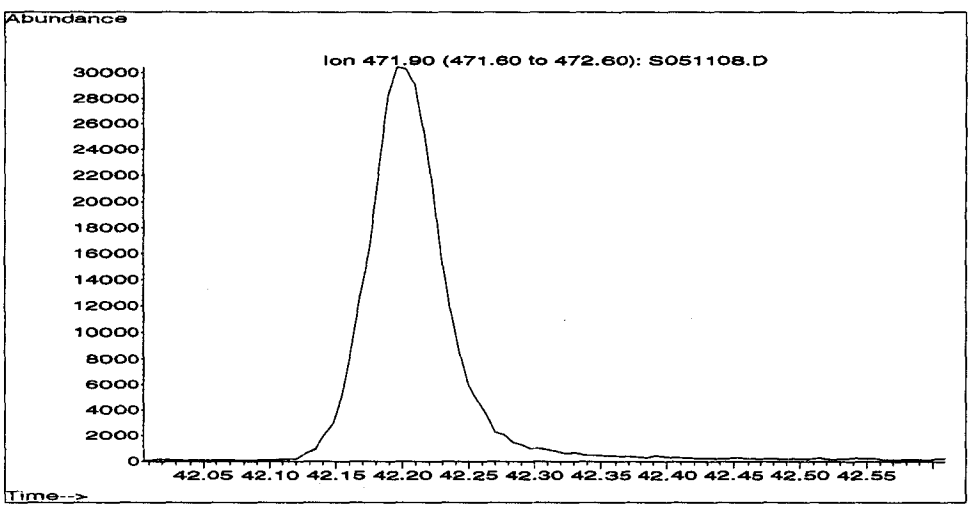
OCDF			
TS R.T. Lower Limit	42.16		
TS R.T. Upper Limit	42.66		
Ret Time	0.00		
Target Ion	441.9	Q1 Ion	443.9
Target Response	0	Q1 Response	0
Target Response	0	Ion Ratio	#DIV/0!
Q2 Ion	379	DPE Ion	514
Q2 Response	0	DPE Response	0



13C-OCDD-IS

RT Lower Limit	42.01		
RT Upper Limit	42.61		
Ret Time	42.20		
Target Ion	469.9	Q1 Ion	471.9
Target Response	111075	Q1 Response	121462
Total response	232537	Ratio	0.91





Quantitation Report (Not Reviewed)

Sample ID: G0D280478-LCS 1.0L 8280A
L057J-1-AC WATER LR009

Size: 1.000
Inst : DB1

Data File:C:\8280\2DB\051110.B\S051109.D
Acq On :12 May 2010 3:56

Vial: 9
Operator: MEO
Sample Amount: 1.00

MS Integration Params: RTEINT.P
Quant Time: May 12 10:54 2010

Quant Results File: 10MY11C2.RES

Quant Method : C:\8280\ DATA METHODS\10MY11C2.M (RTE Integrator)
Title : Dioxin Furan Total
Last Update : Wed May 12 09:30:50 2010
Response via : Single (C:\8280\2DB\051110.B\ST0511C.D 12 May 2010 1:32)
DataAcq Meth : TOKAS
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

5/12/10
MK

Recovery\Internal Stds	R.T.	QIon	Ratio	Response	Conc	Dev(Min)
1) 13C-1234-TCDD	24.03	332+334	0.80	117263	25.00 NG	0.00
5) 13C-123789-HxCDD	36.49	402+404	1.27	175997	25.00 NG	0.00
9) 13C-2378-TCDF	23.23	316+318	0.79	105811	25.00 NG	0.02
15) 13C-2378-TCDD	24.32	332+334	0.80	71088	25.00 NG	0.02
20) 13C-123678-HxCDD	36.21	402+404	1.27	87865	25.00 NG	0.00
27) 13C-1234678-HpCDF	38.20	420+422	1.04	111643	25.00 NG	0.00
36) 13C-OCDD	42.21	470+472	0.91	142765	50.00 NG	0.00

Surrogate Compound

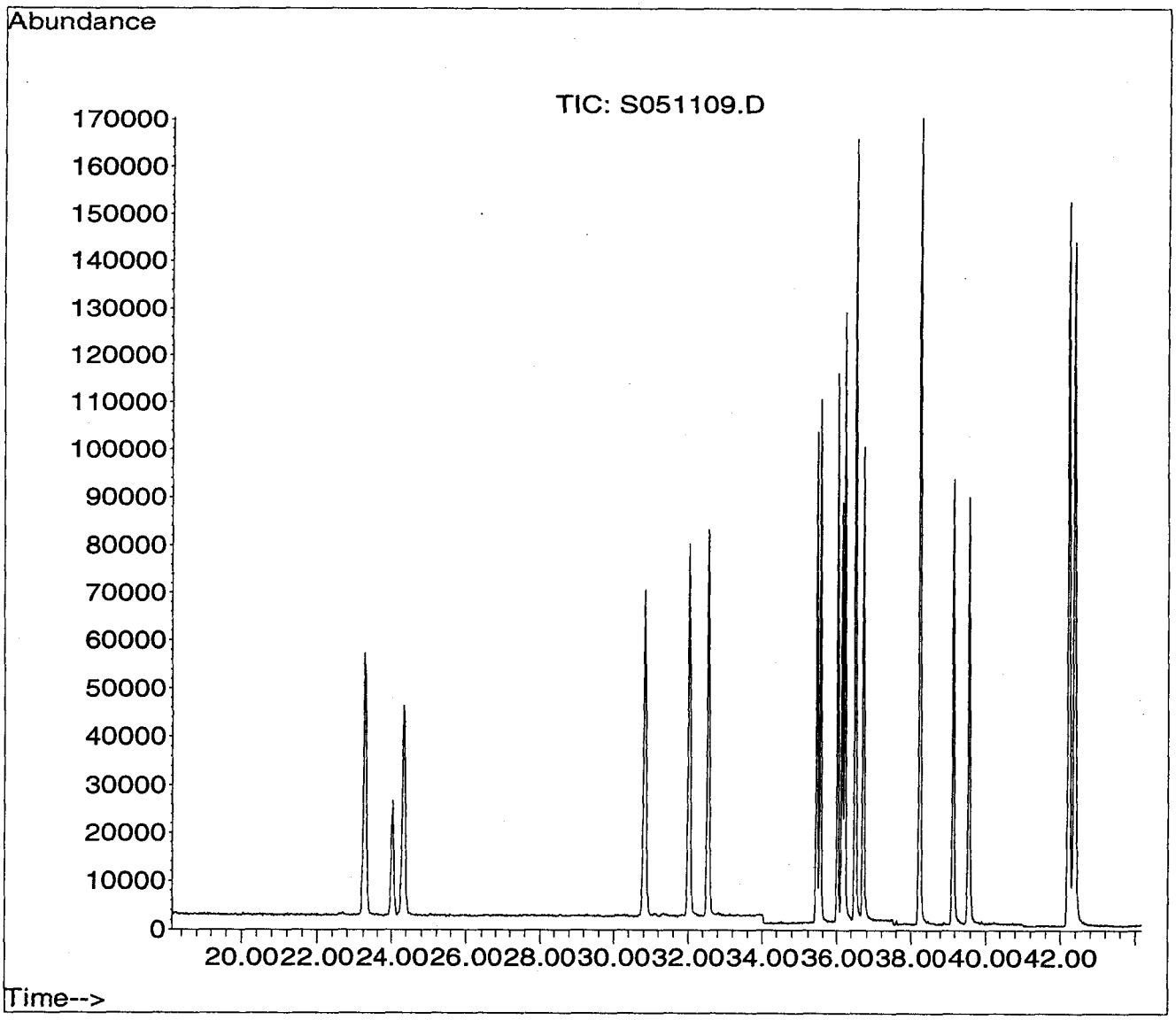
4) 37Cl-2378-TCDD	24.34	328	68535	10.522 NG	0.00
Spiked Amount = 12.500	RRF = 1.389		Recovery =	84.16%	

Target Compounds	RT	Ratio	Area	RRF	Conc	EDL	%Rec
2) 13C-2378-TCDF-IS	23.23	0.79	105811	1.428	15.794	0.1144	63.2
3) 13C-2378-TCDD-IS	24.32	0.80	69776	0.983	15.131	3.0845	60.5
6) 13C-123678-HxCDD-	36.21	1.27	87865	0.796	15.671	0.1515	62.7
7) 13C-1234678-HpCDF	38.20	1.04	111667	1.010	15.703	0.1007	62.8
8) 13C-OCDD-IS	42.21	0.91	142765	0.659	30.793	0.1473	61.6
10) 2378-TCDF	23.24	0.74	133990	1.265	25.026	0.3378	
1	23.24	0.73	134572		25.134		
11) TCDF TOTAL	22.00	0.73	134572	1.265	25.134		
12) 12378-PeCDF	30.82	1.57	289054	1.136	60.114	0.0130	
13) 23478-PeCDF	32.01	1.50	280289	1.137	58.246	0.3143	
1	30.82	1.56	289882		60.286		
2	31.33	1.62	3334		0.693		
3	32.01	1.49	280289		58.246		
14) PeCDF TOTAL	29.50	1.49	573505	1.136	119.225		
16) 2378-TCDD	24.34	0.76	88268	1.221	25.414	0.1483	
1	23.23	4.81 #	10390		2.992		
2	24.34	0.78	91032		26.210		
17) TCDD TOTAL	22.50	0.78	101422	1.221	29.202		
18) 12378-PeCDD	32.55	1.60	197780	1.142	60.902	0.3271	
1	32.55	1.60	198599		61.154		
19) PeCDD TOTAL	30.00	1.60	198599	1.142	61.154		
21) 123478-HxCDD	36.13	1.27	205055	1.012	57.644	0.3689	
22) 123678-HxCDD	36.22	1.23	211590	0.981	61.365	0.5698	
23) 123789-HxCDD	36.49	1.24	236825	1.038	64.946	0.7547	
1	36.13	1.28	205055		57.644		
2	36.22	1.30	211590		61.365		
3	36.49	1.25	754509		218.822		
24) HxCDD TOTAL	36.50	1.25	1171154	0.981	337.830		
25) 1234678-HpCDD	39.14	1.07	226246	1.039	61.966	0.2026	

	1	39.14	1.07	226246		61.966	
26)	HpCDD TOTAL	39.35	1.07	226246	1.039	61.966	
28)	123478-HxCDF	35.41	1.21	260445	0.984	59.293	0.2110
29)	123678-HxCDF	35.51	1.17	281150	1.042	60.426	0.6886
30)	234678-HxCDF	36.02	1.21	268048	0.970	61.888	0.2299
31)	123789-HxCDF	36.70	1.21	255604	0.928	61.693	0.2048
	1	35.41	1.21	260445		59.293	
	2	35.51	1.17	281150		60.426	
	3	36.02	1.21	268048		61.888	
	4	36.70	1.21	255359		61.634	
32)	HxCDF TOTAL	36.00	1.21	1065002	0.928	243.241	
33)	1234678-HpCDF	38.20	1.04	324212	1.160	62.600	0.1237
34)	1234789-HpCDF	39.55	1.07	280175	1.006	62.361	0.2197
	1	38.20	1.03	324212		62.600	
	2	39.55	1.07	280175		62.361	
35)	HpCDF TOTAL	39.50	1.07	604387	1.006	124.961	
37)	OCDD	42.21	0.88	392280	1.102	124.634	0.3120
38)	OCDF	42.36	0.93	508336	1.397	127.448	0.5496

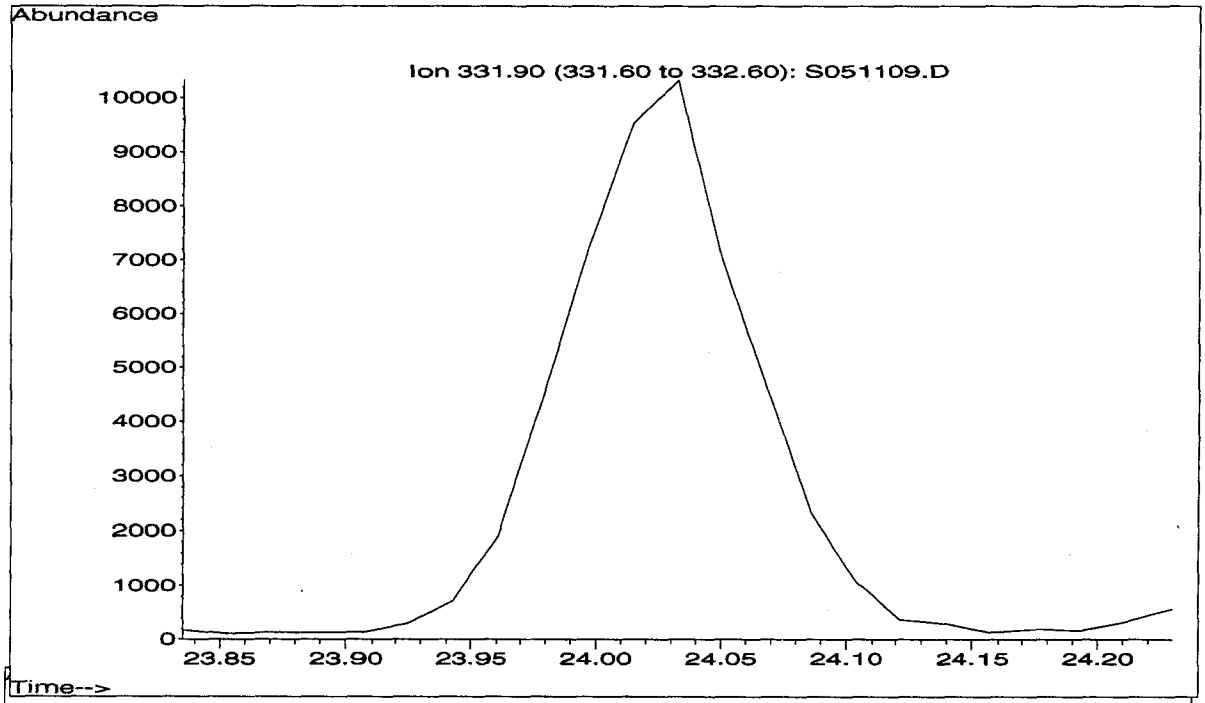
(#) = qualifier out of range•: areas and concentration based on theoretical ion ratio
(m) = manual integration
S051109.D 10MY11C2.M Wed May 12 10:54:55 2010

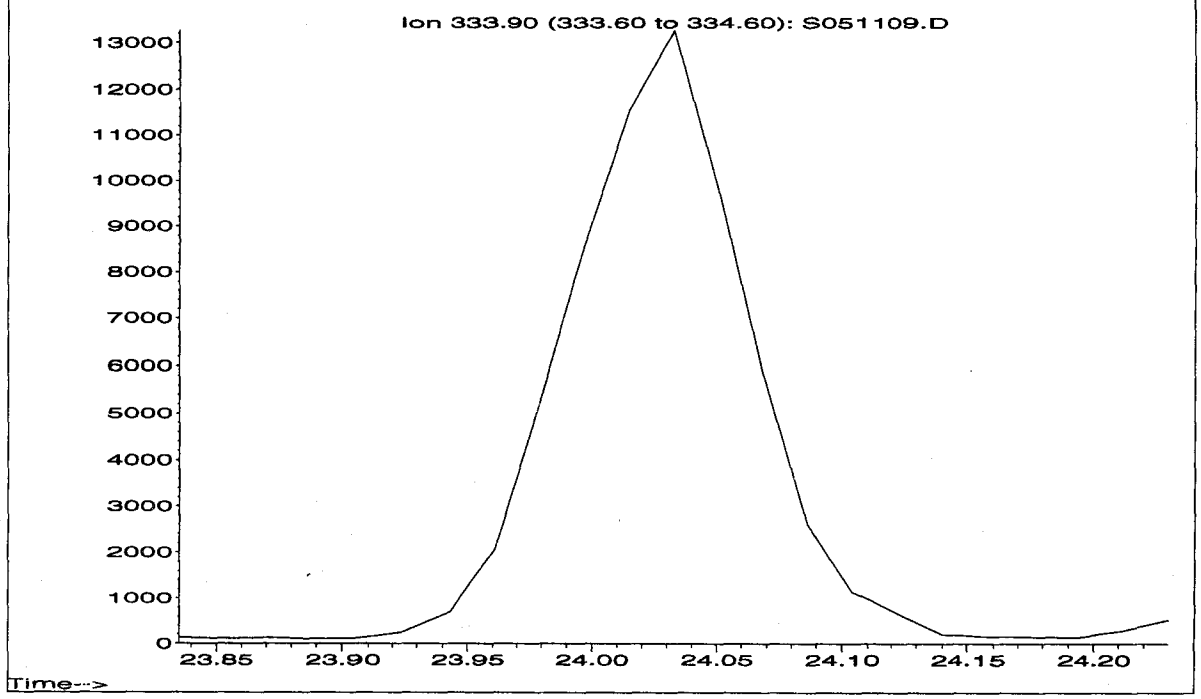
Data File Name	S051109.D
Data File Path	C:\8280\2DB\051110.B\
Operator	MEO
Date Acquired	5/12/2010 3:56
Acq. Method File	TOKAS
Sample Name	L057J-1-AC WATER LR009
Misc Info	30D280478-LCS 1.0L 8280A
Vial Number	9
Instrument Name	2DB
Sample Multiplier	1
Sample Amount	1



13C-1234-TCDD

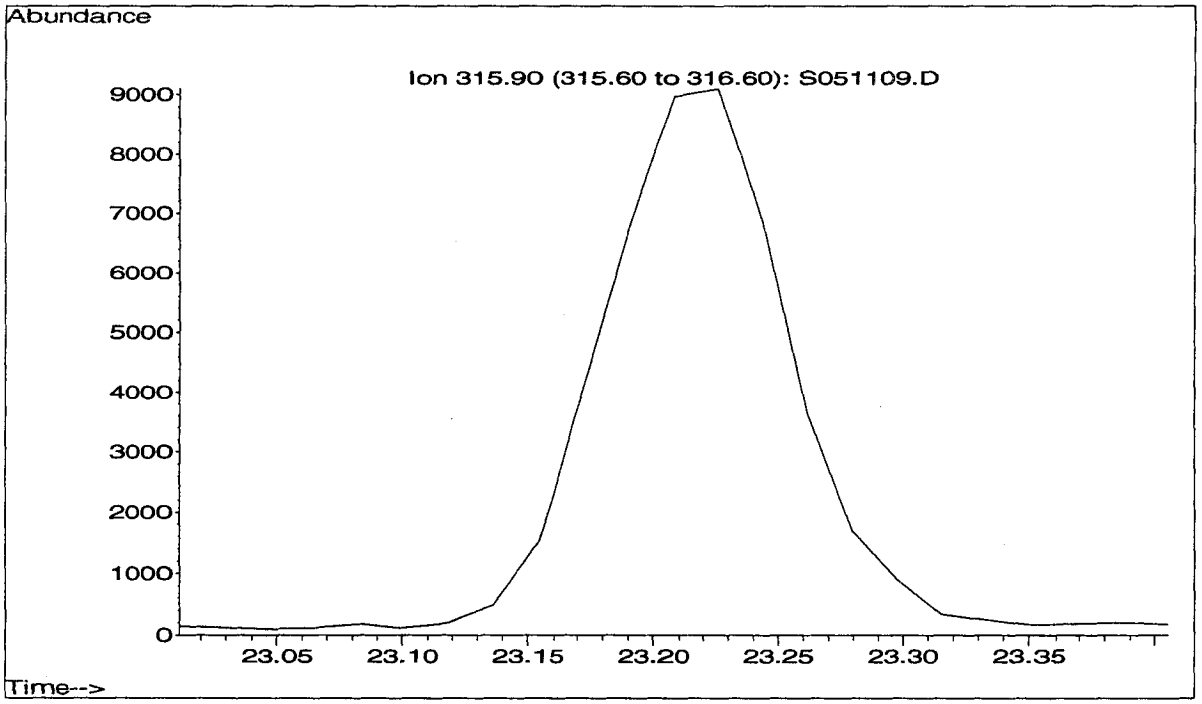
TS R.T. Lower Limit	23.83		
TS R.T. Upper Limit	24.23		
Ret Time	24.03		
Target Ion	331.9	Q1 Ion	333.9
Target Response	52141	Q1 Response	65122
Total Response	117263	Ion Ratio	0.80

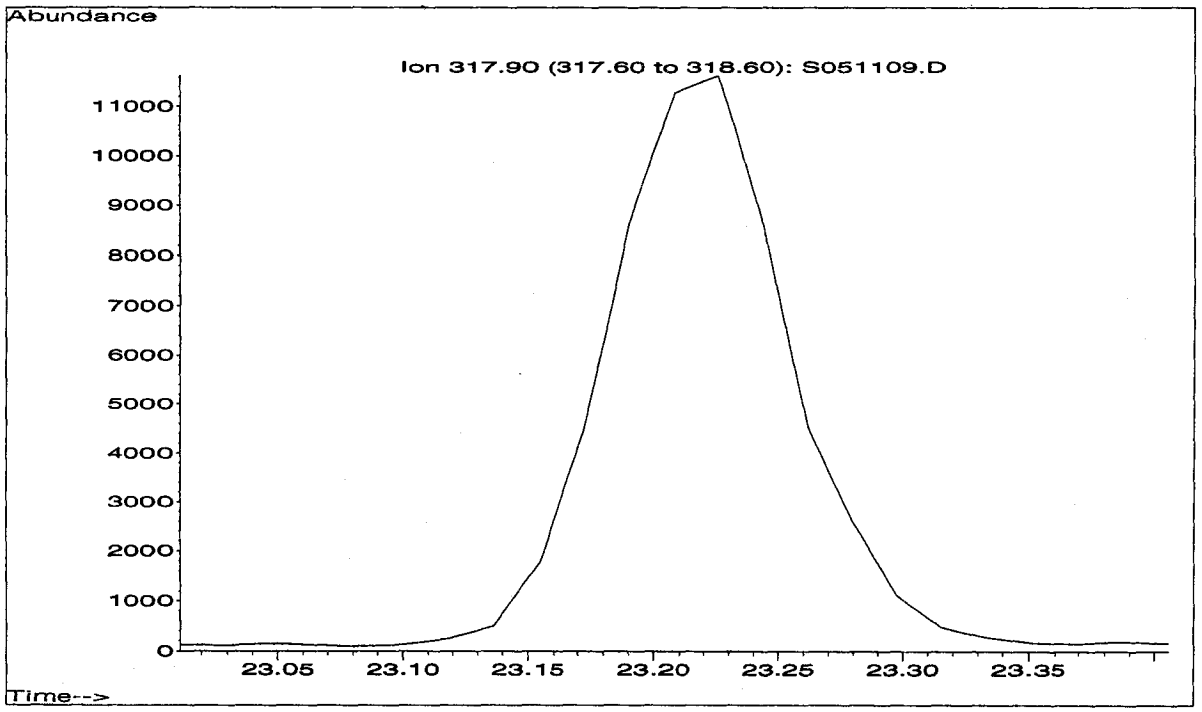




13C-2378-TCDF-IS

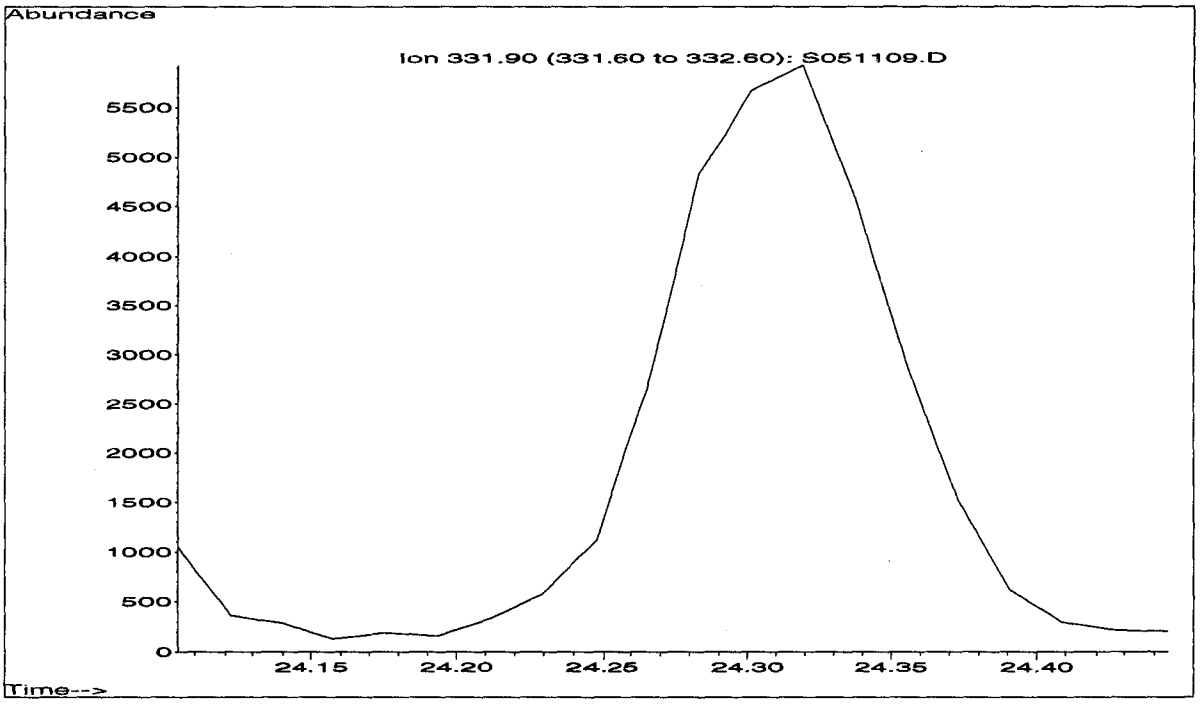
TS R.T. Lower Limit	23.01		
TS R.T. Upper Limit	23.41		
Ret Time	23.23		
Target Ion	315.9	Q1 Ion	317.9
Target Response	46844	Q1 Response	58967
Target Response	105811	Ion Ratio	0.79

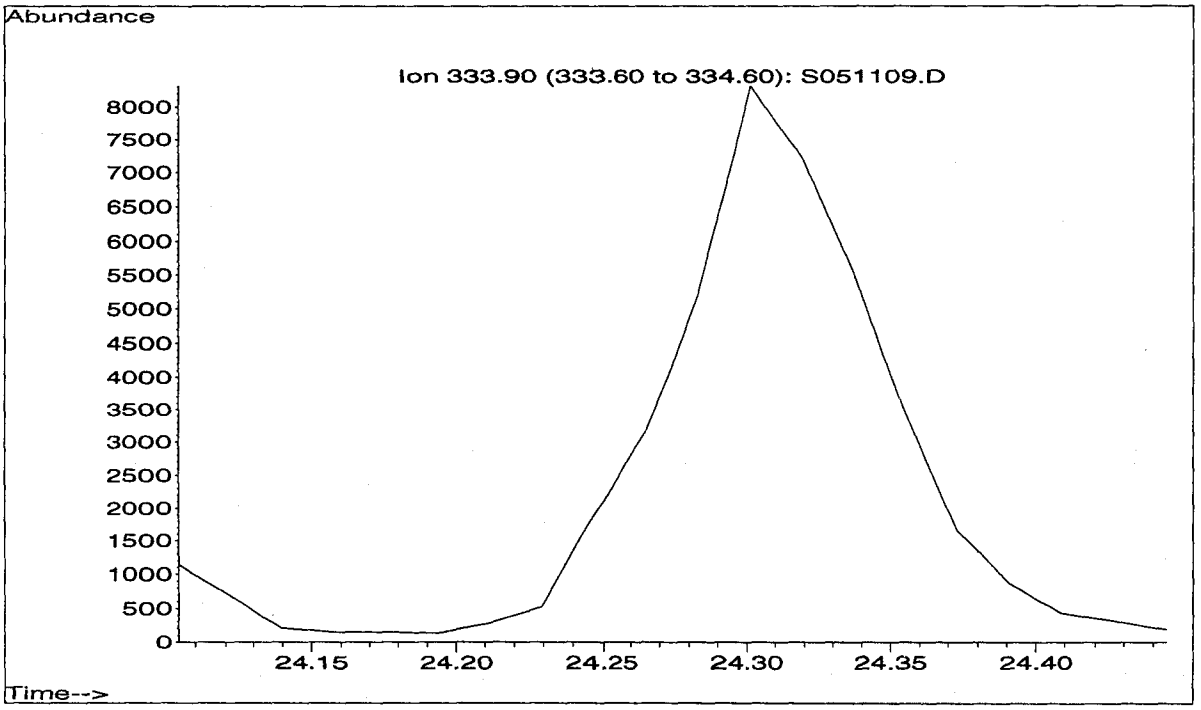




13C-2378-TCDD-IS

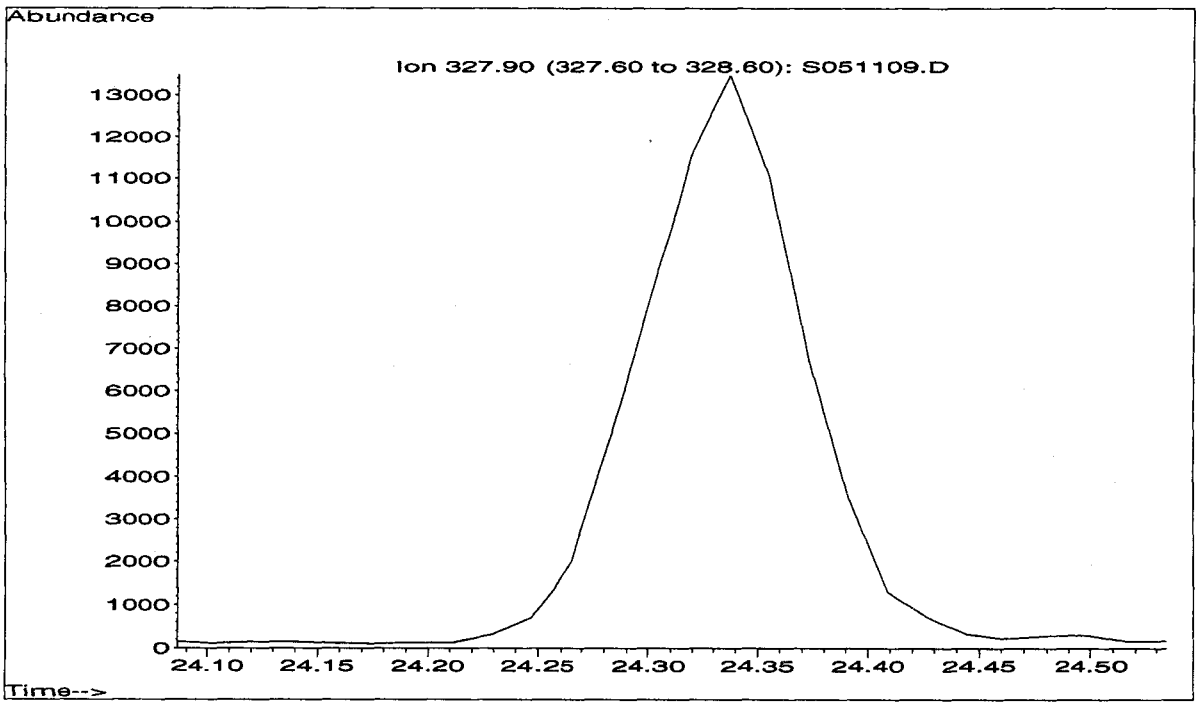
TS R.T. Lower Limit	24.10		
TS R.T. Upper Limit	24.45		
Ret Time	24.32		
Target Ion	331.9	Q1 Ion	333.9
Target Response	31104	Q1 Response	38672
Total Response	69776	Ion Ratio	0.80

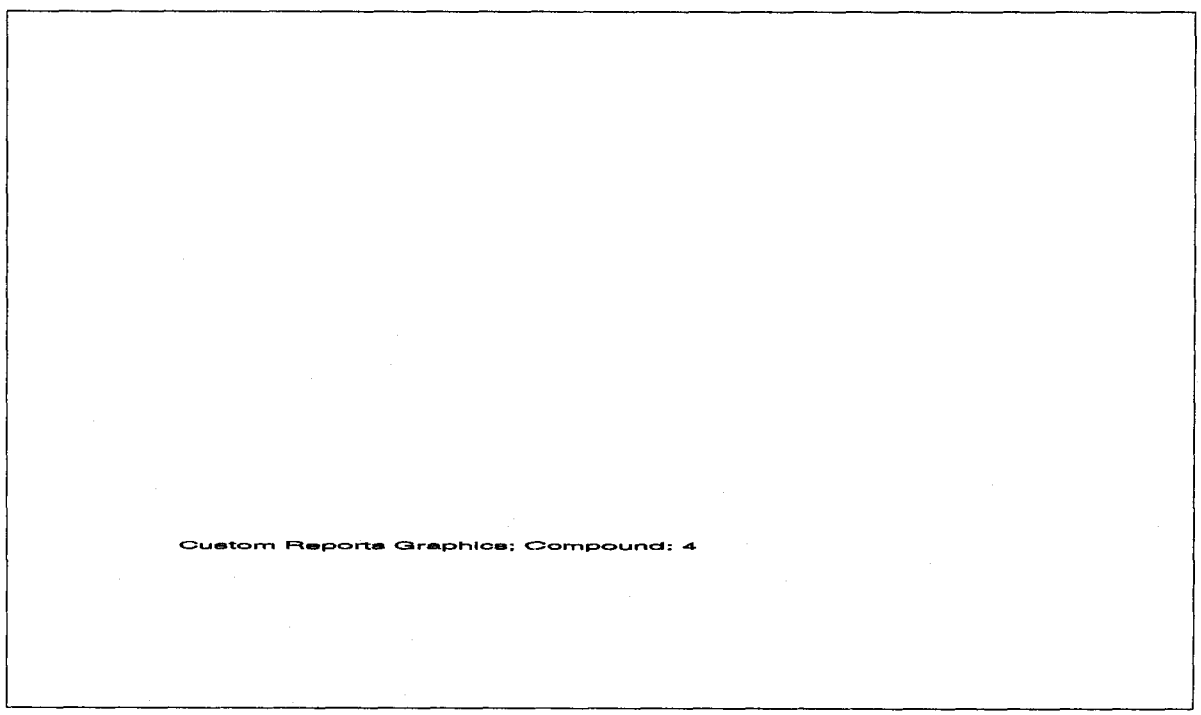




37Cl-2378-TCDD

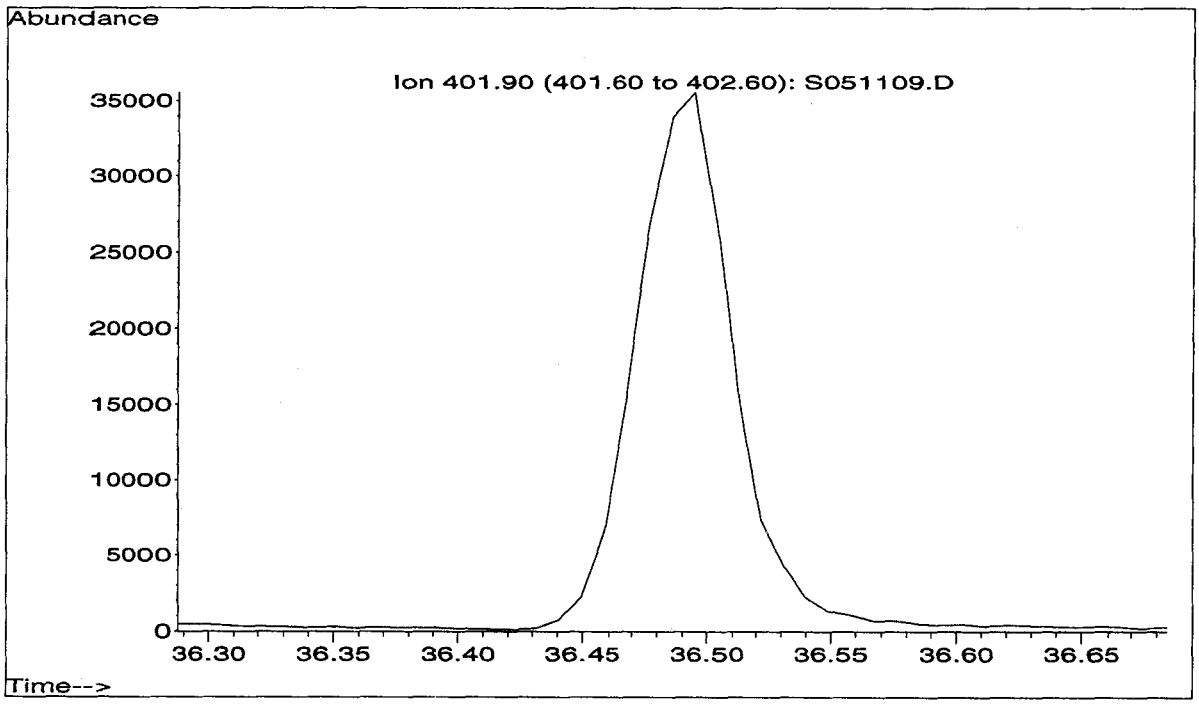
TS R.T. Lower Limit	24.09		
TS R.T. Upper Limit	24.54		
Ret Time	24.34		
Target Ion	327.9	Q1 Ion	0
Target Response	68535	Q1 Response	0
Total Response	68535	Ion Ratio	#DIV/0!

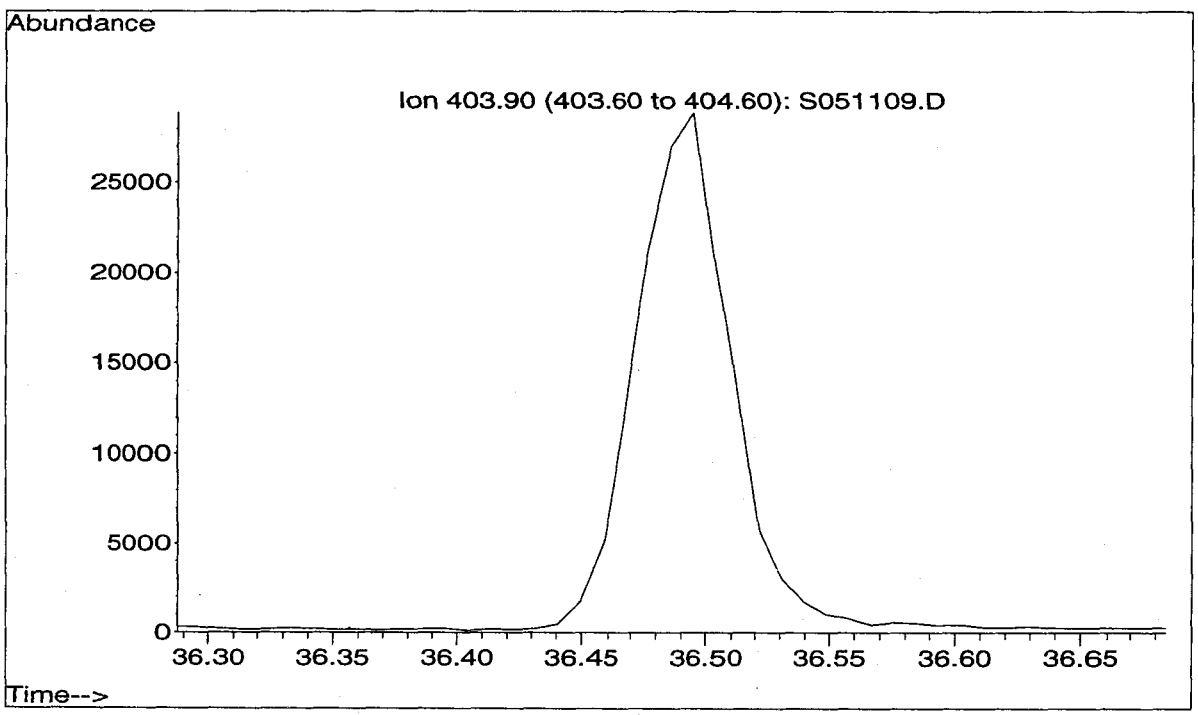




13C-123789-HxCDD

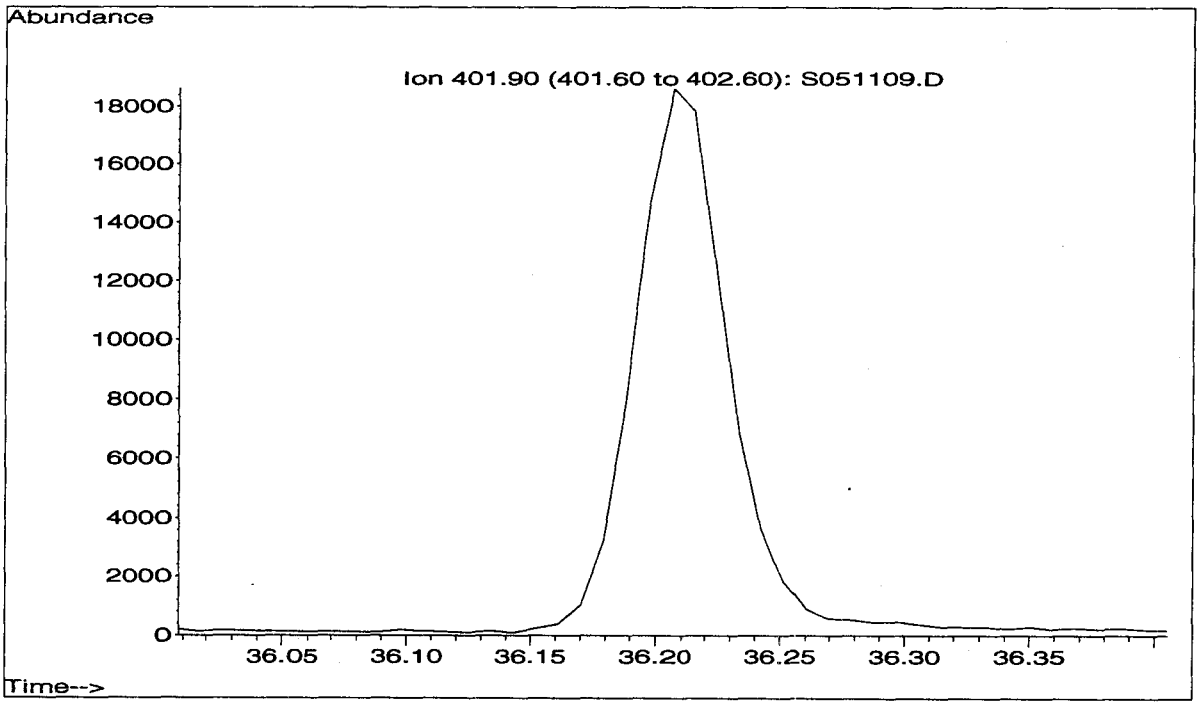
TS R.T. Lower Limit	36.29		
TS R.T. Upper Limit	36.69		
Ret Time	36.49		
Target Ion	401.9	Q1 Ion	403.9
Target Response	98357	Q1 Response	77640
Target Response	175997	Ion Ratio	1.27

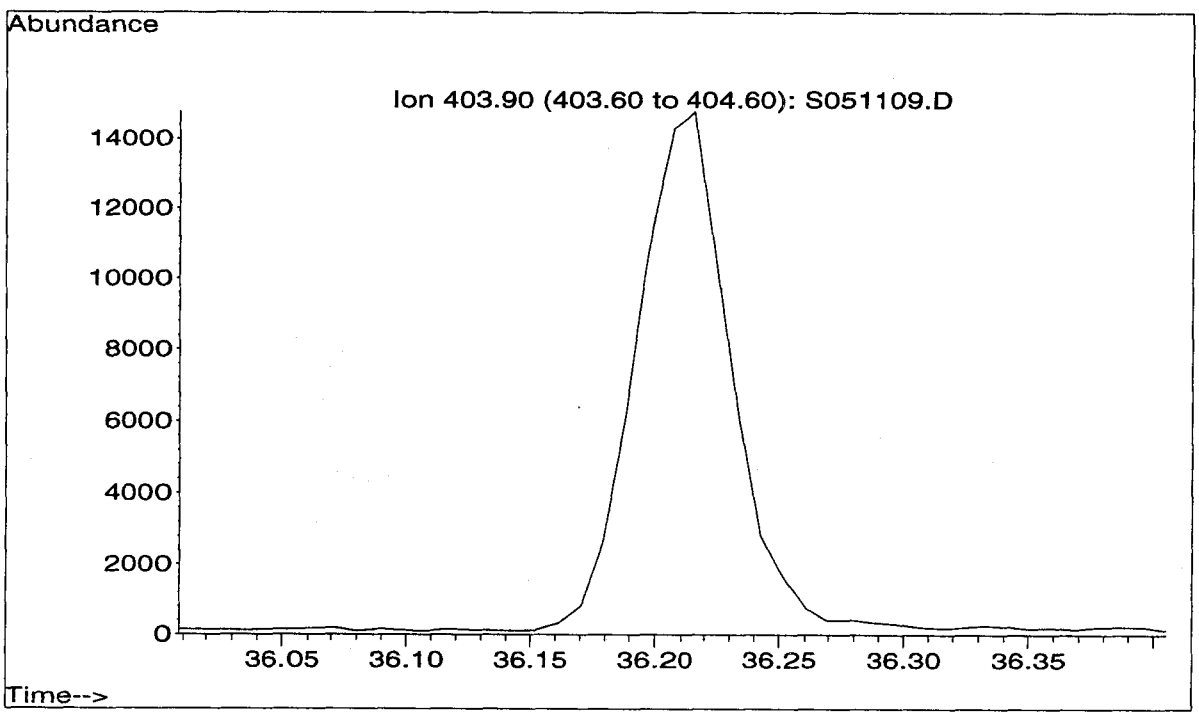




13C-123678-HxCDD-IS

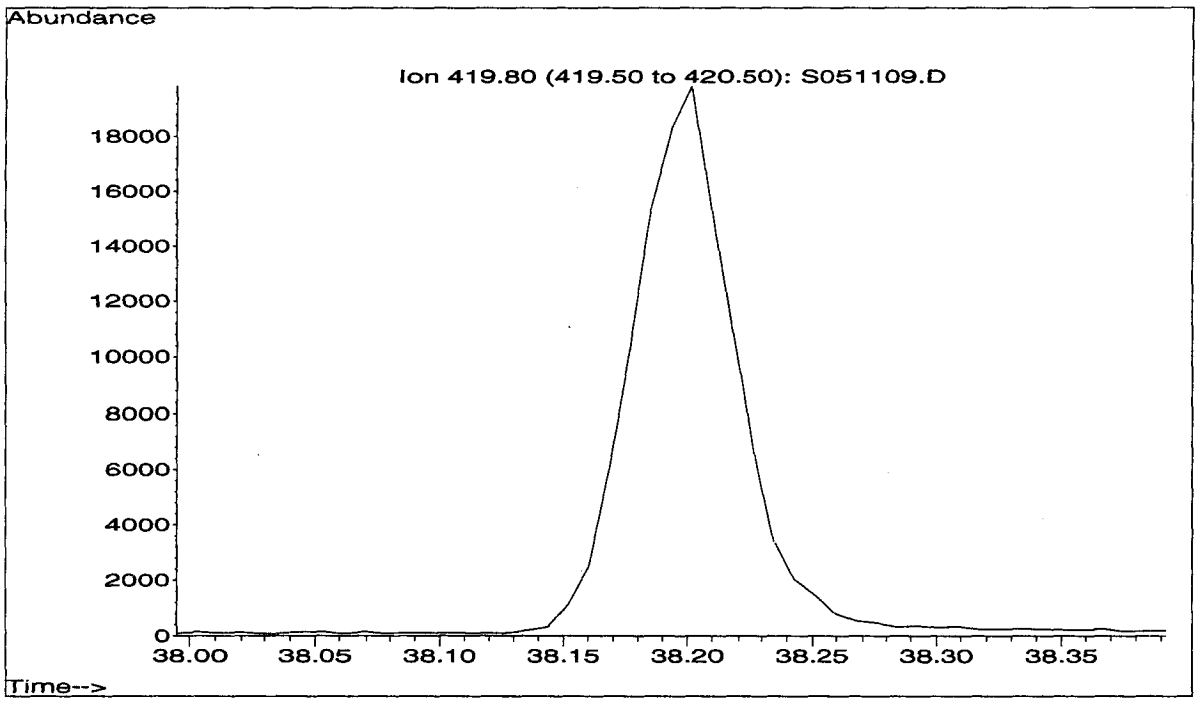
TS R.T. Lower Limit	36.01		
TS R.T. Upper Limit	36.41		
Ret Time	36.21		
Target Ion	401.9	Q1 Ion	403.9
Target Response	49119	Q1 Response	38746
Total Response	87865	Ion Ratio	1.27

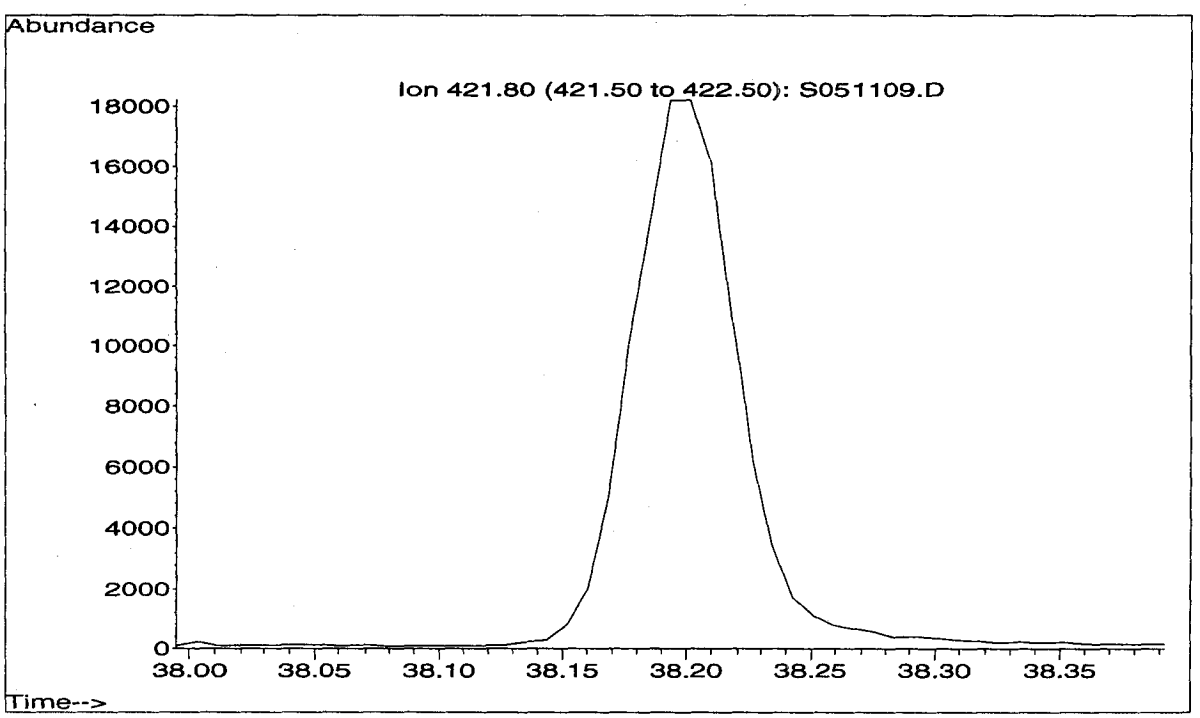




13C-1234678-HpCDF-IS

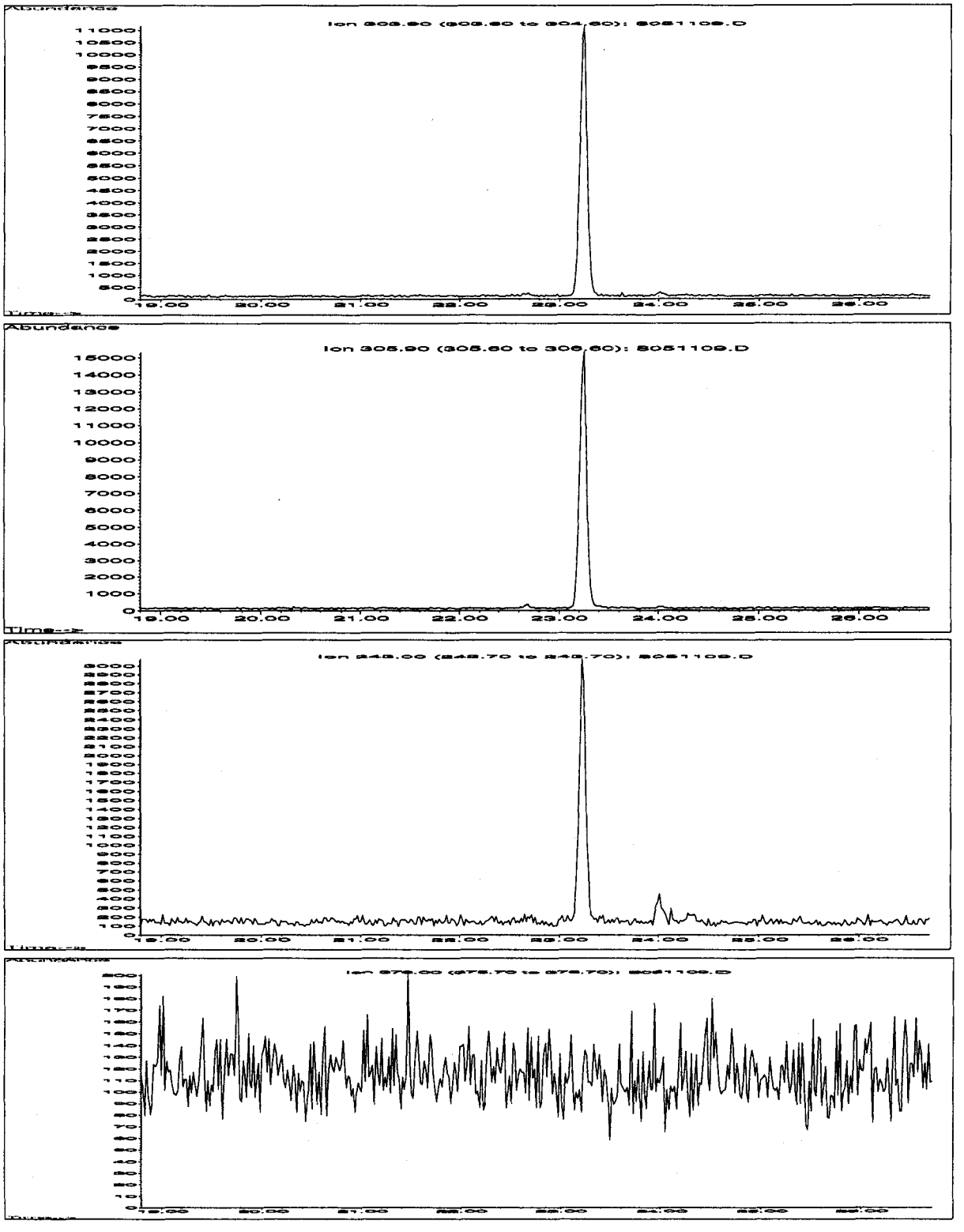
TS R.T. Lower Limit	37.99		
TS R.T. Upper Limit	38.39		
Ret Time	38.20		
Target Ion	419.8	Q1 Ion	421.8
Target Response	56961	Q1 Response	54706
Target Response	111667	Ion Ratio	1.04





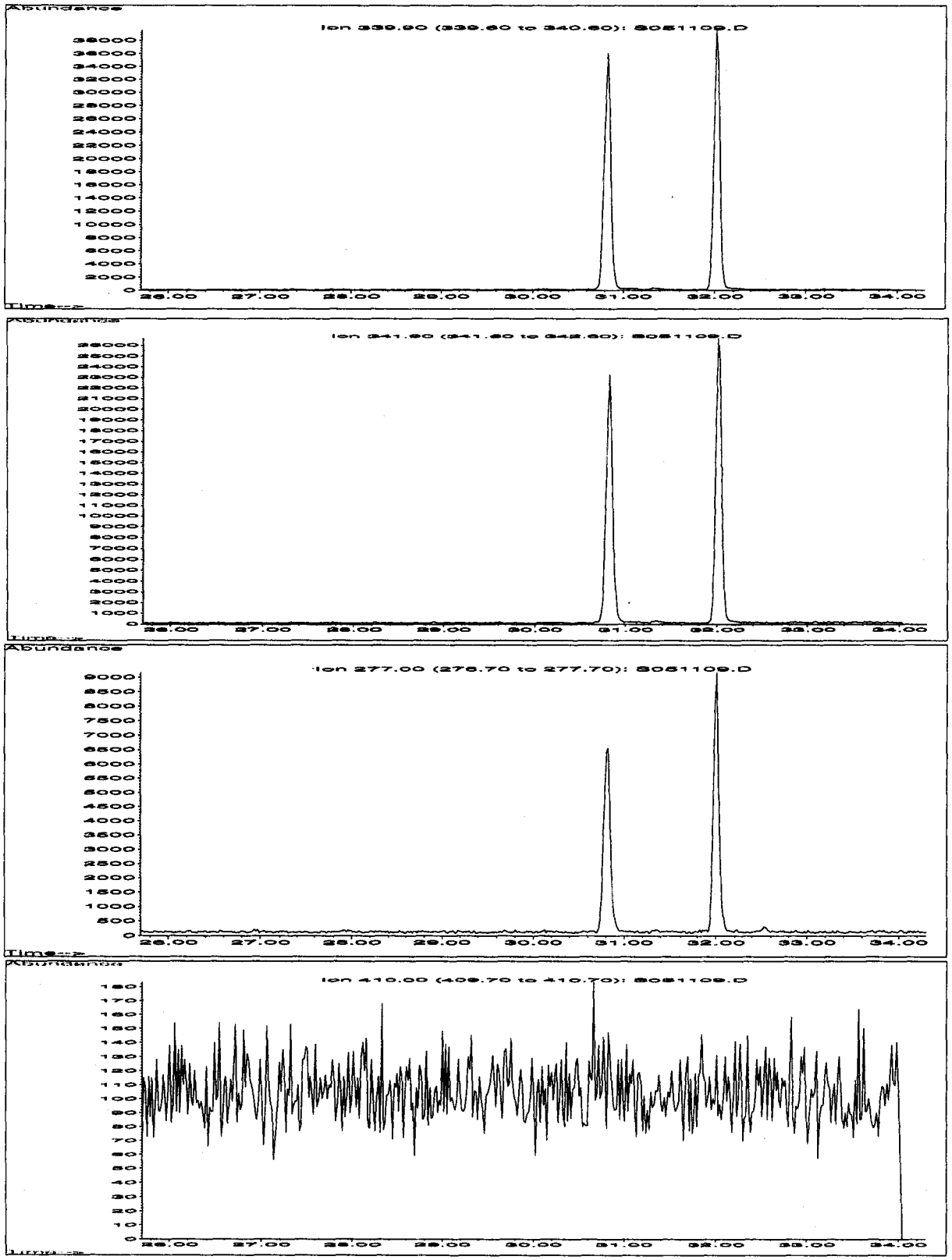
TCDF TOTAL

TS R.T. Lower Limit	18.80
TS R.T. Upper Limit	26.70



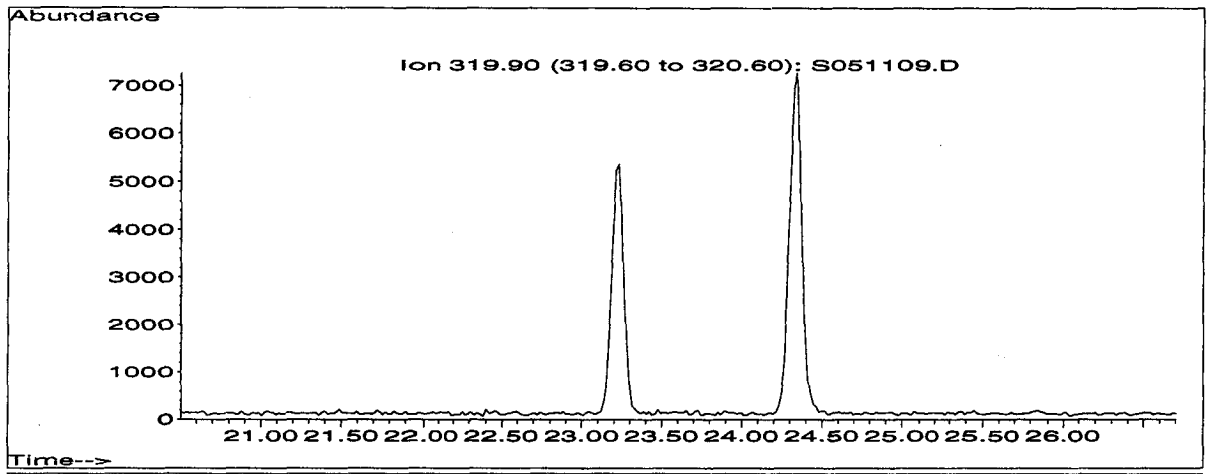
PeCDF TOTAL

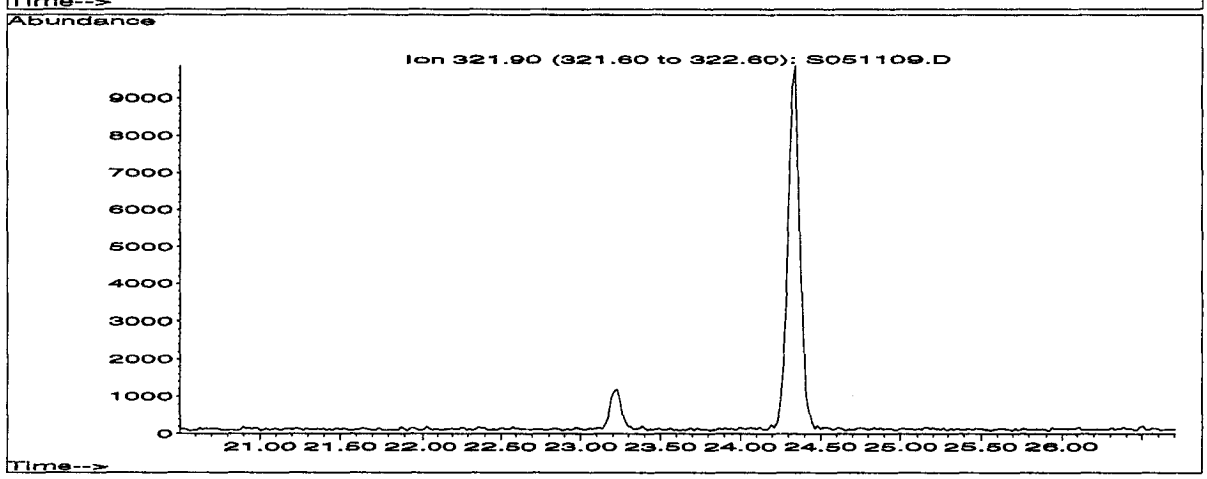
TS R.T. Lower Limit	25.70
TS R.T. Upper Limit	34.30

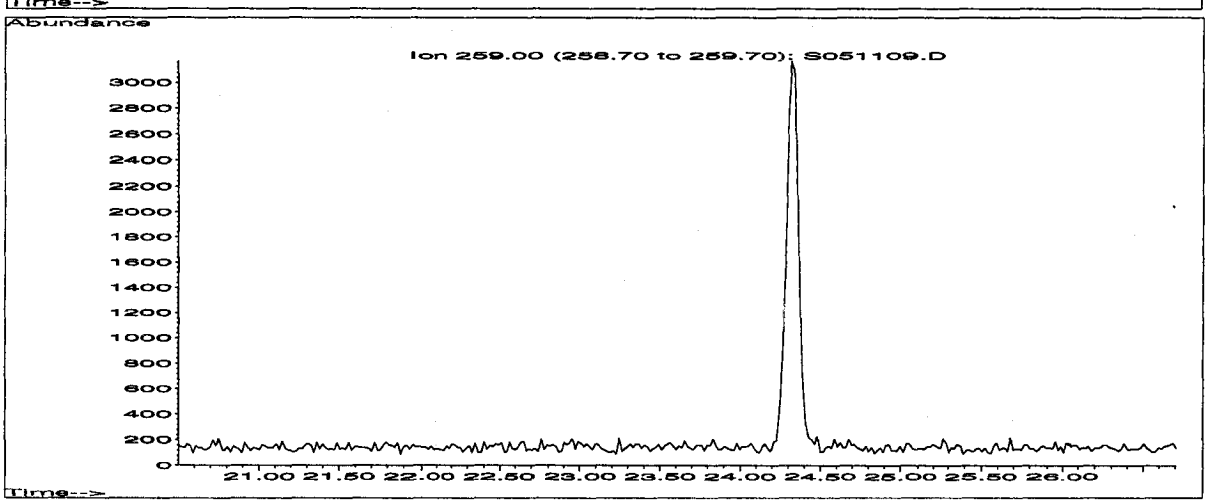


TCDD TOTAL

TS R.T. Lower Limit	20.50
TS R.T. Upper Limit	26.70

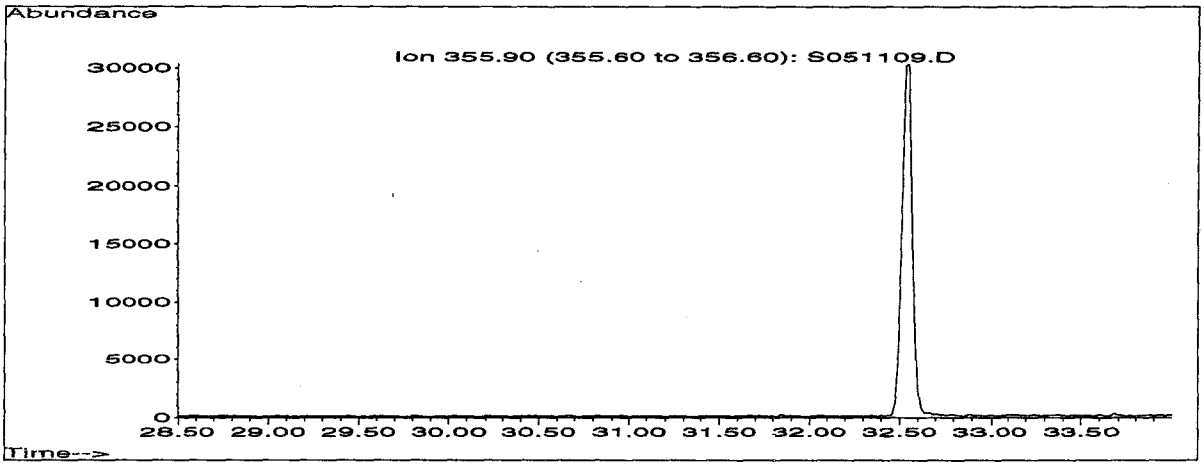


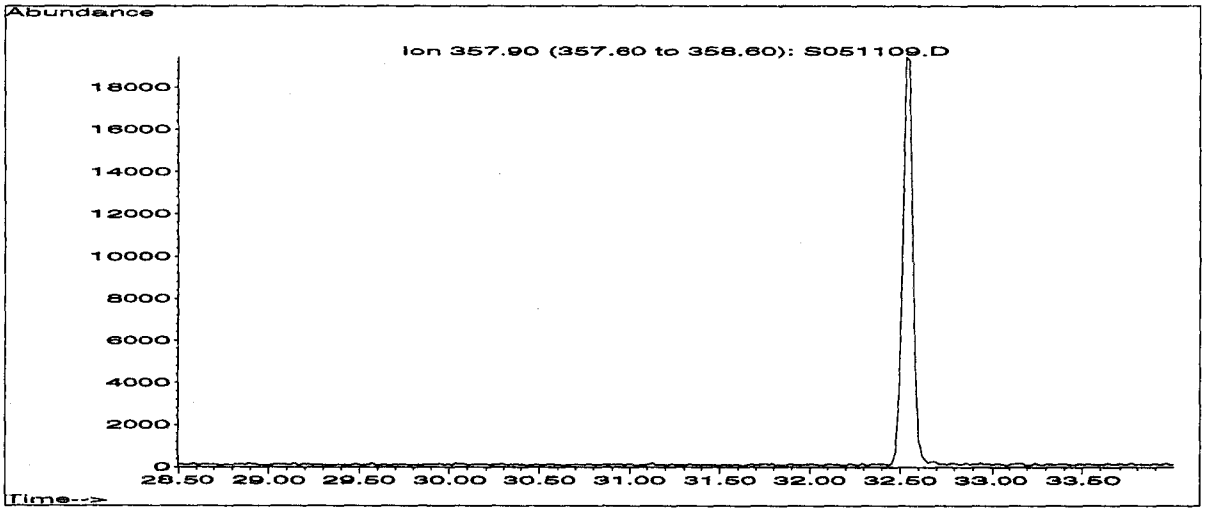


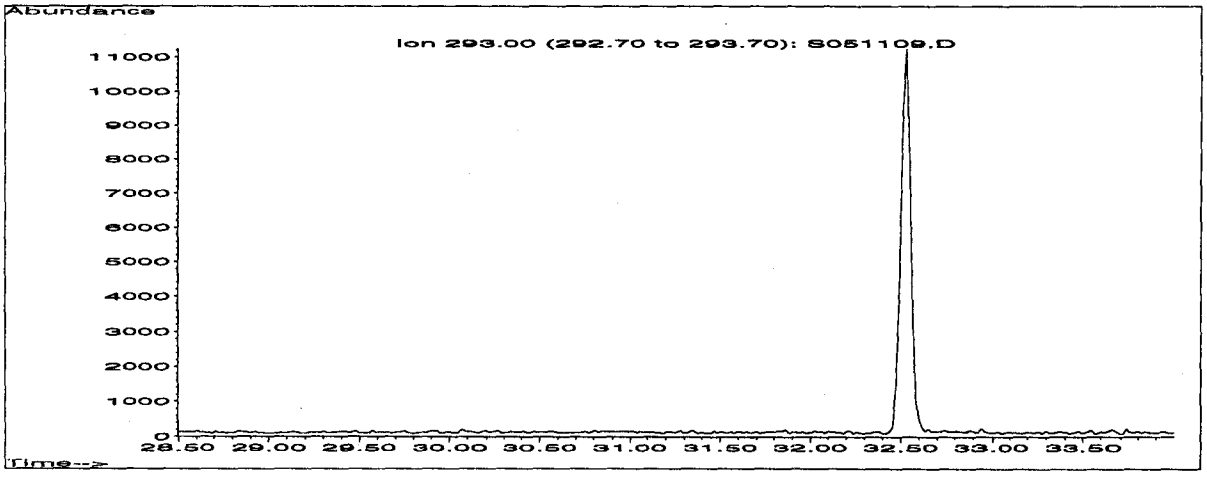


PeCDD TOTAL

TS R.T. Lower Limit	28.50
TS R.T. Upper Limit	34.00

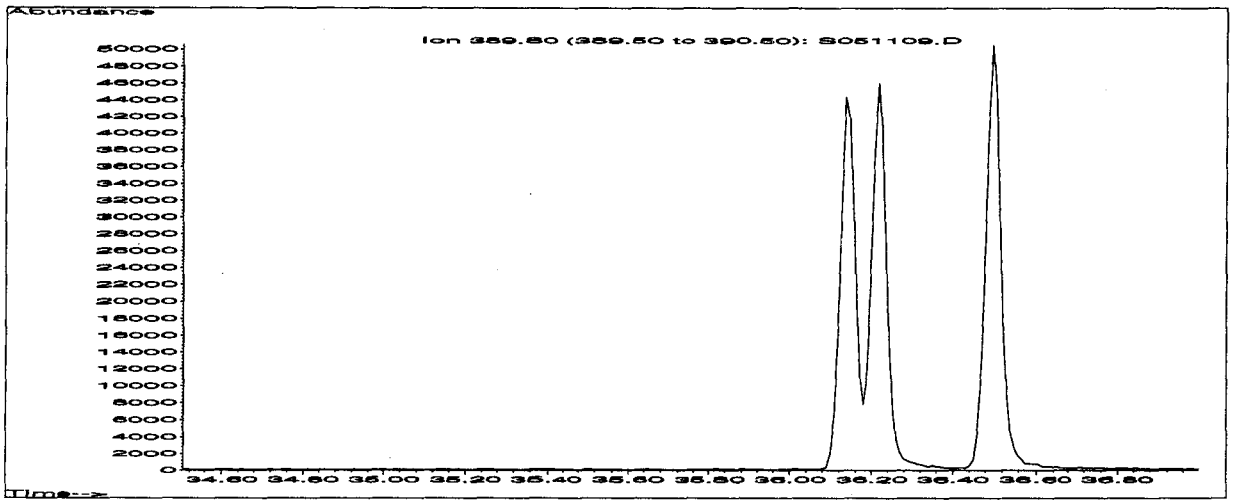


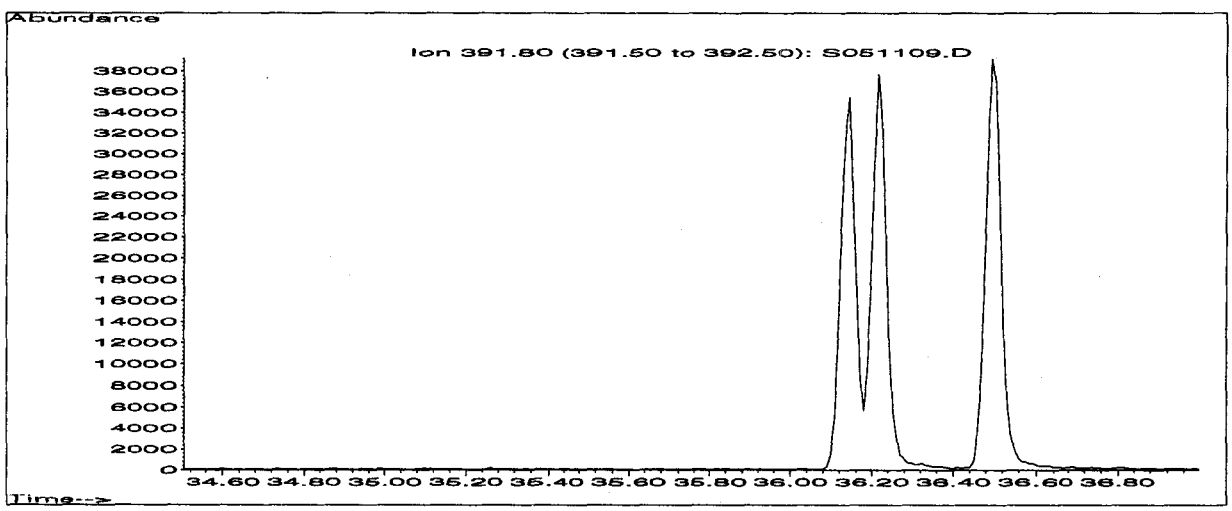


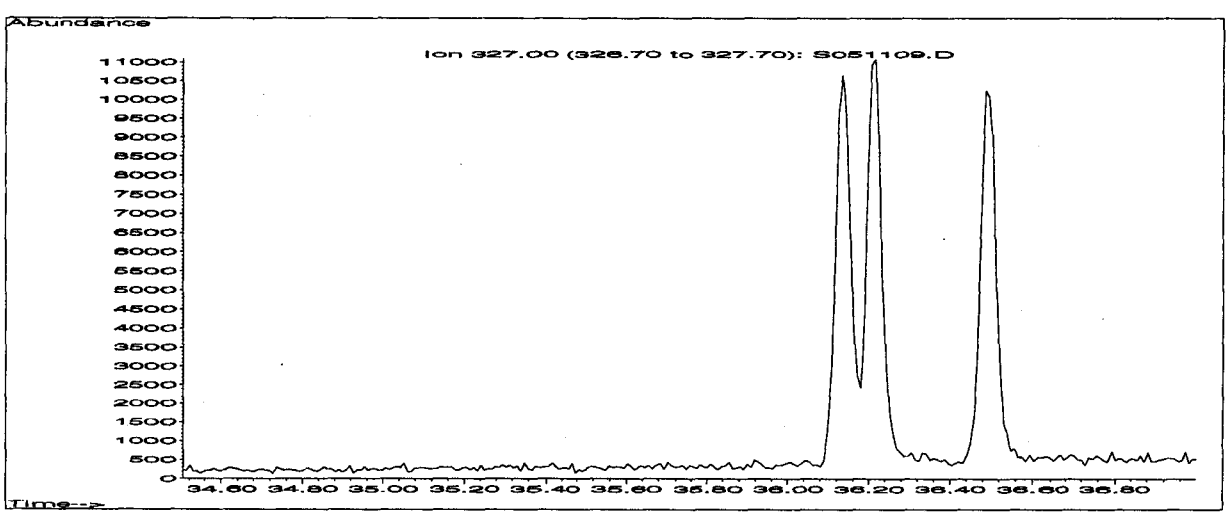


HxCDD TOTAL

TS R.T. Lower Limit	34.50
TS R.T. Upper Limit	37.00

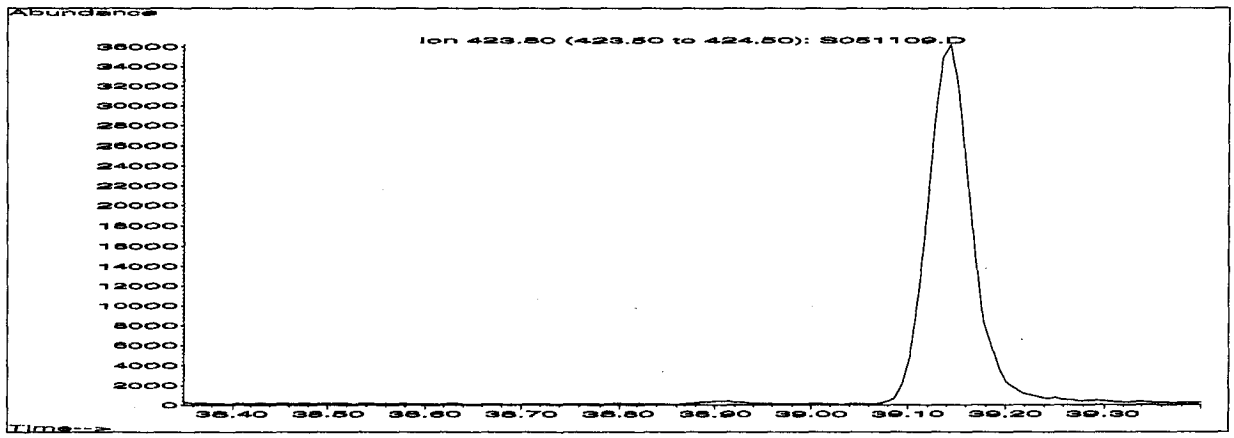


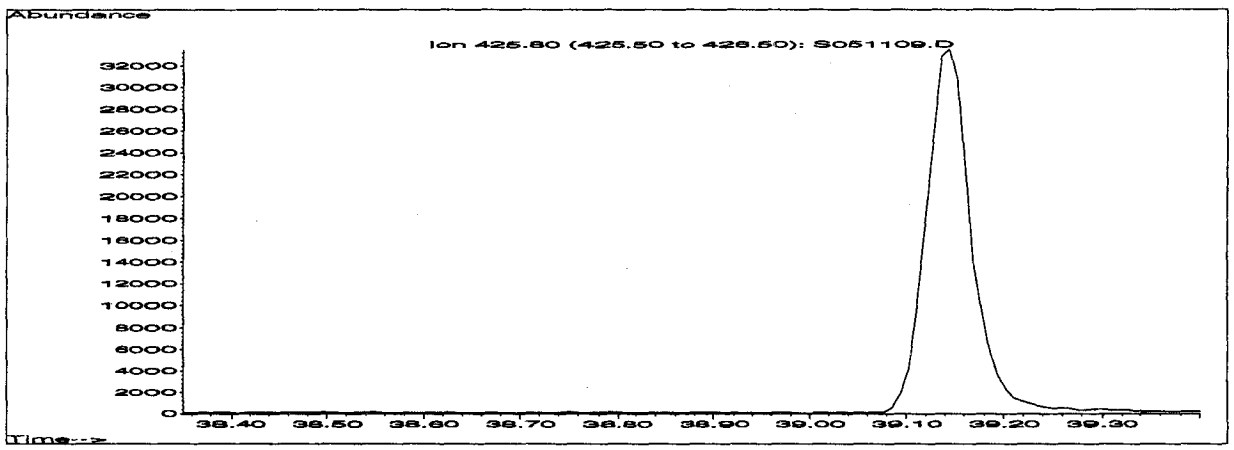


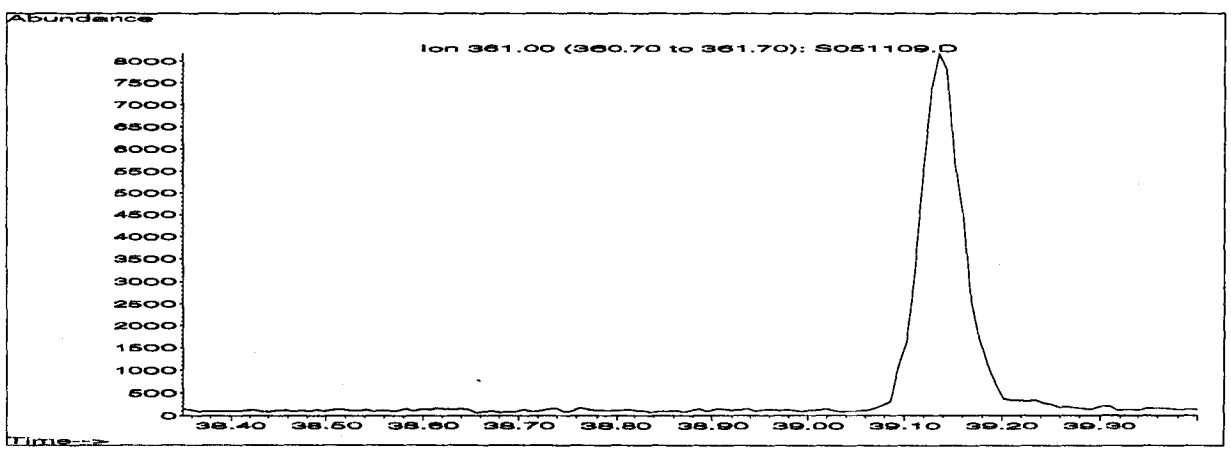


HpCDD TOTAL

TS R.T. Lower Limit	38.35
TS R.T. Upper Limit	39.40

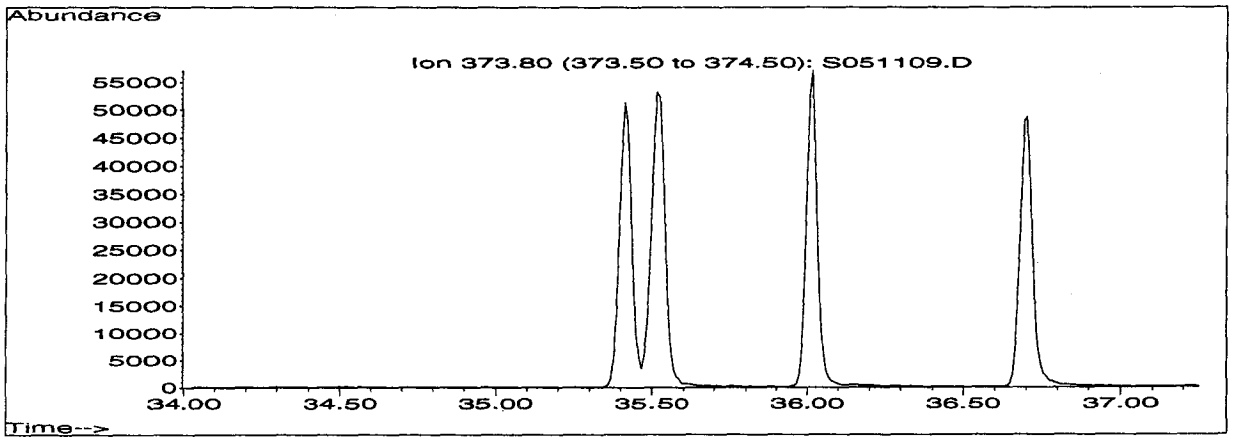


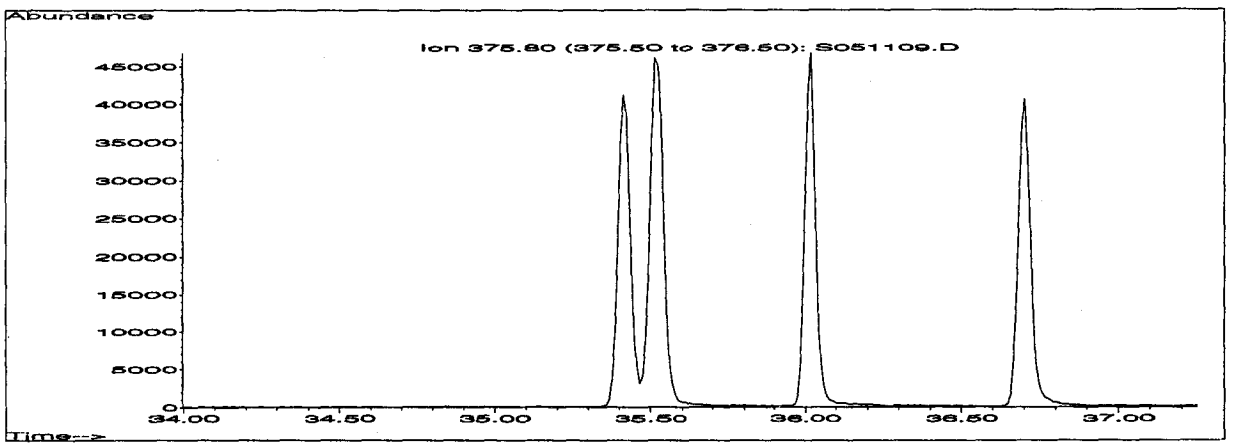


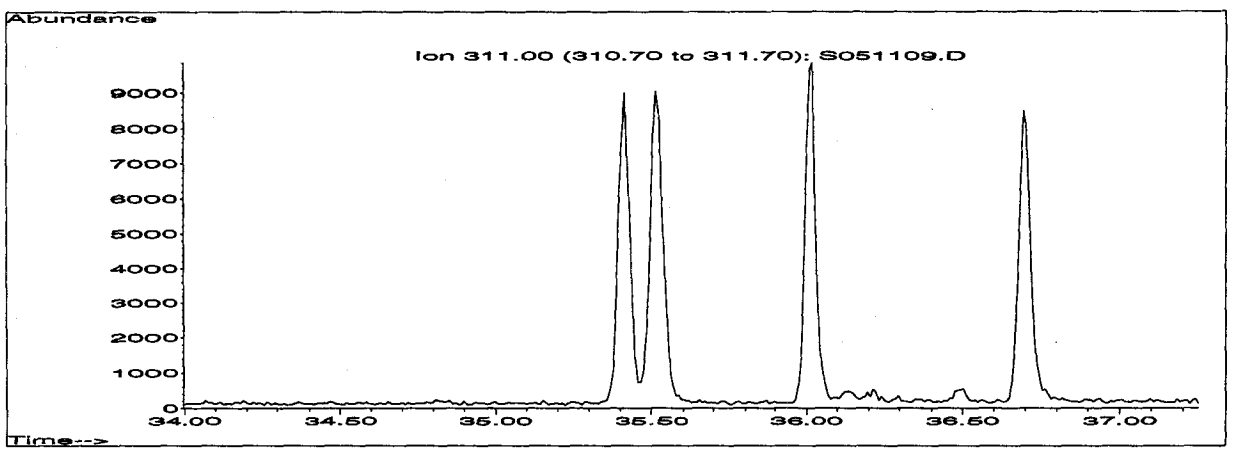


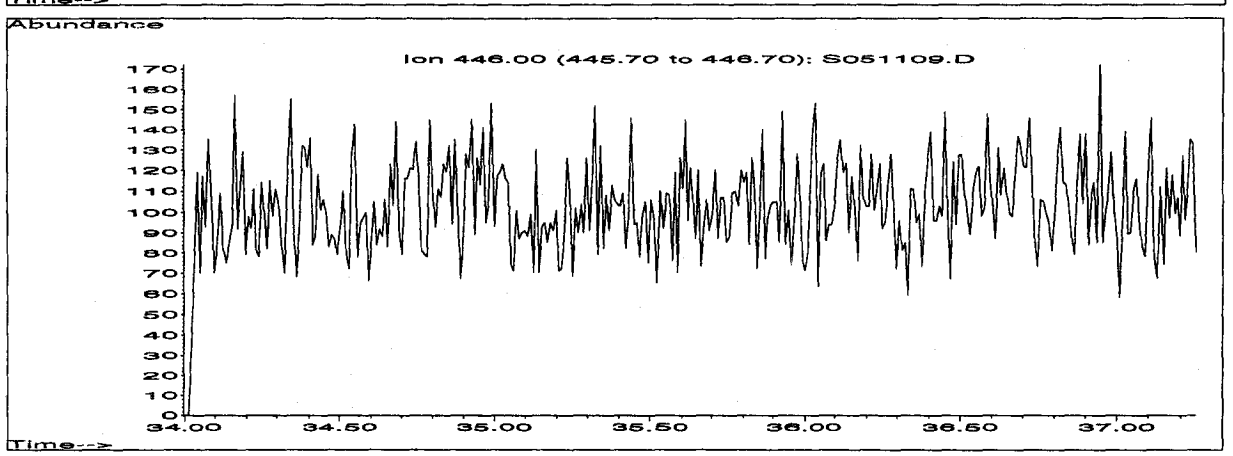
HxCDF TOTAL

TS R.T. Lower Limit	34.00
TS R.T. Upper Limit	37.25



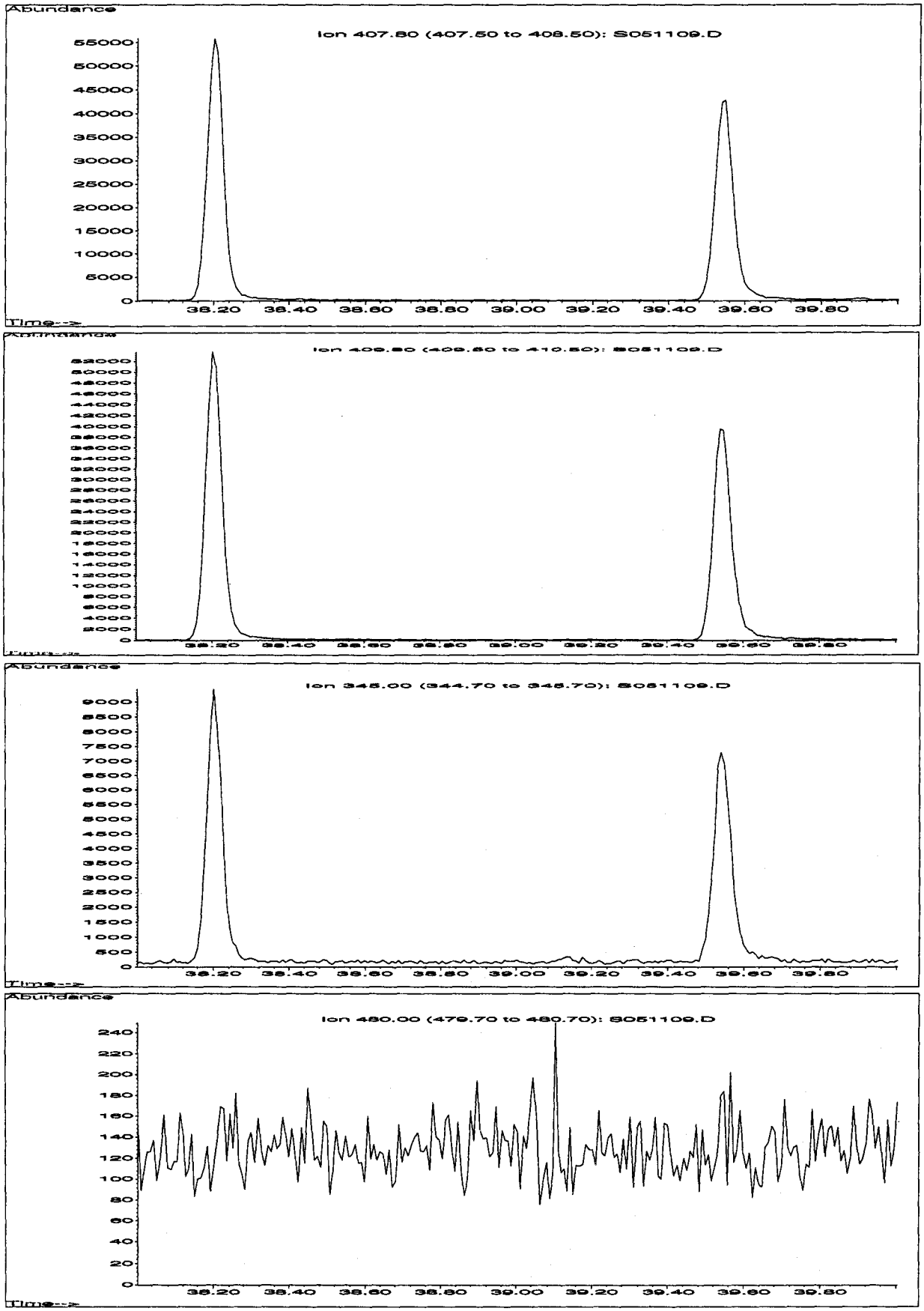




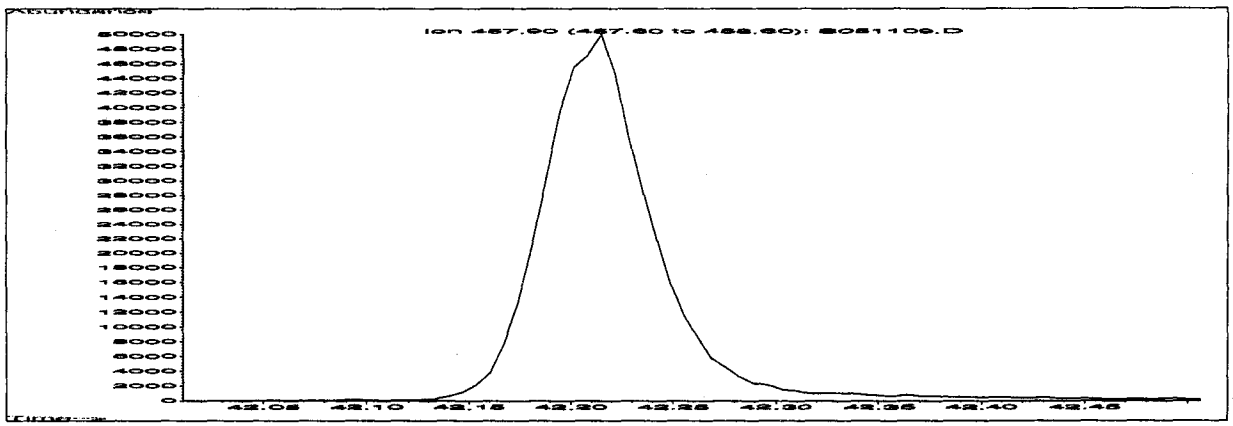


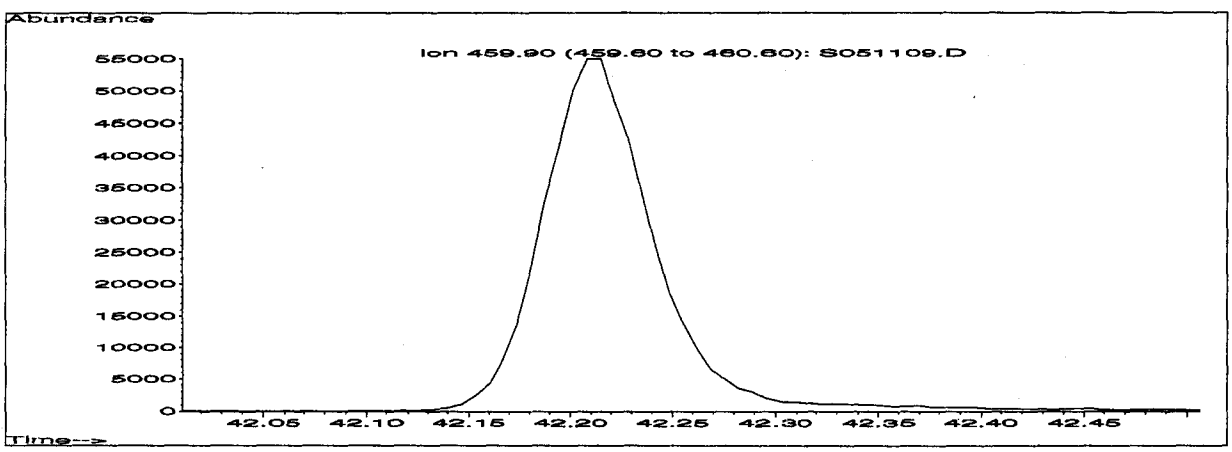
HpCDF TOTAL

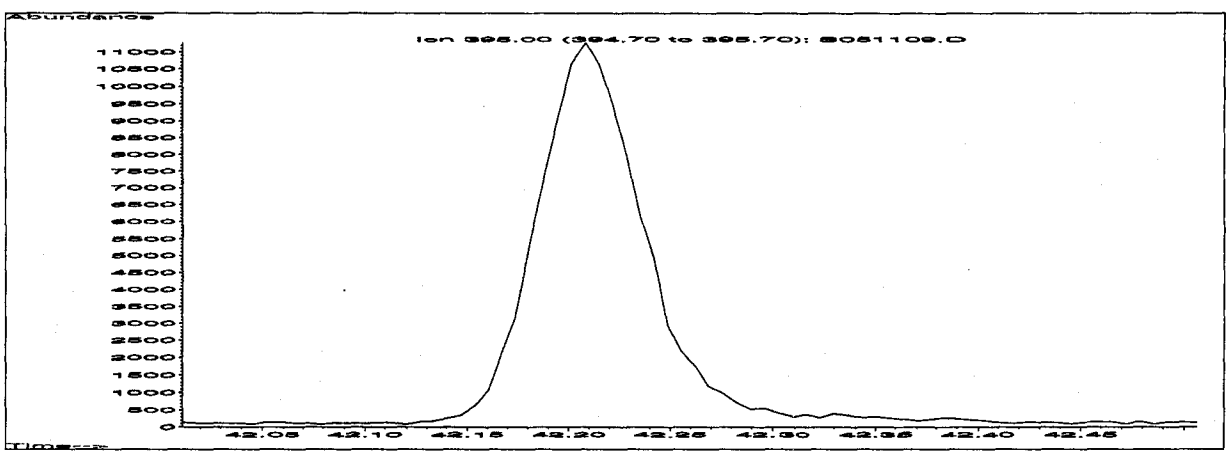
TS R.T. Lower Limit	38.00
TS R.T. Upper Limit	40.00



OCDD			
TS R.T. Lower Limit	42.01		
TS R.T. Upper Limit	42.51		
Ret. Time	42.21		
Target Ion	457.9	Q1 Ion	459.9
Target Response	183779	Q1 Response	208501
Total Response	392280	Ion ratio	0.88
Q2 Ion	395		
Q2 Response	40979		

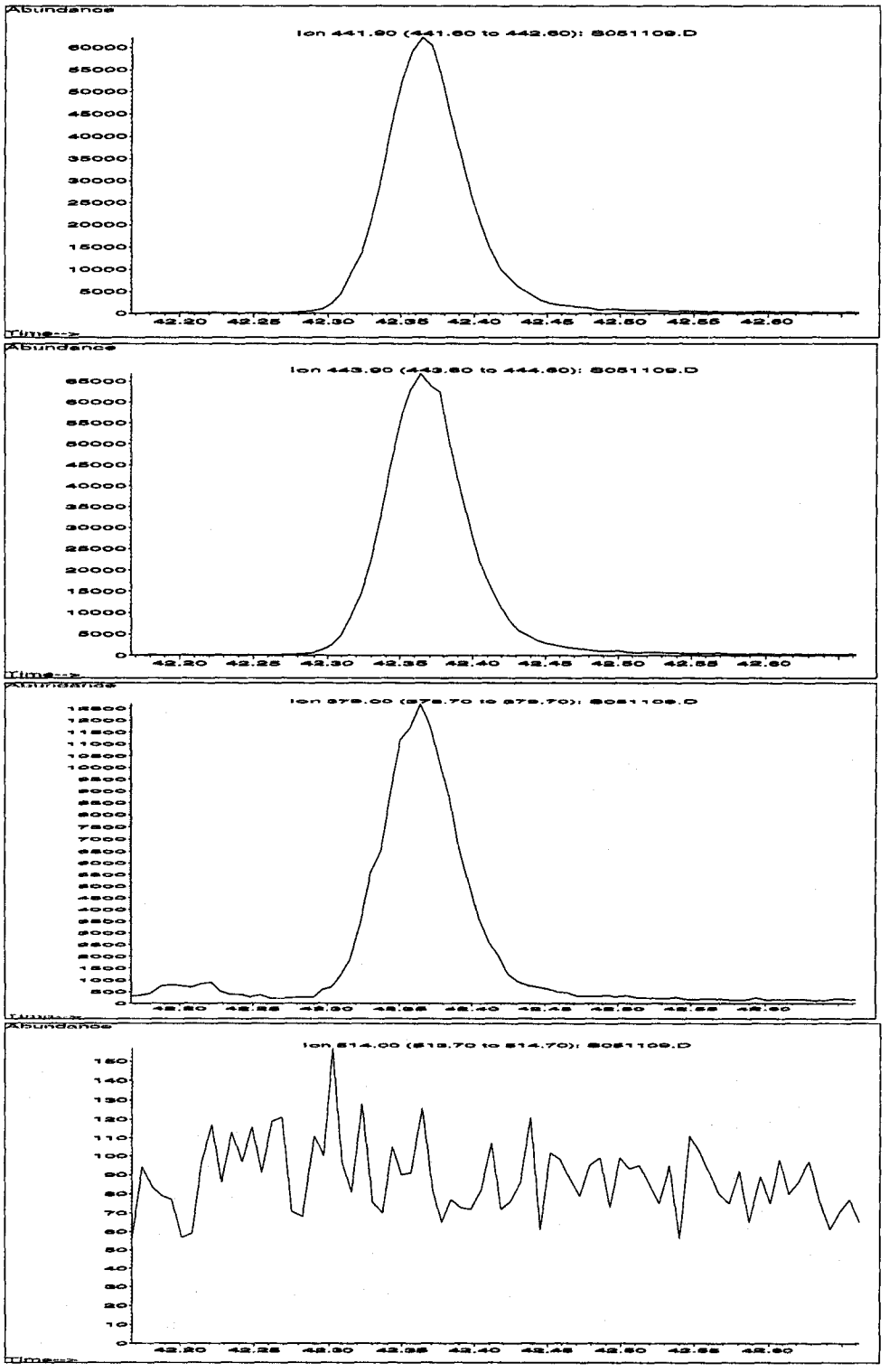






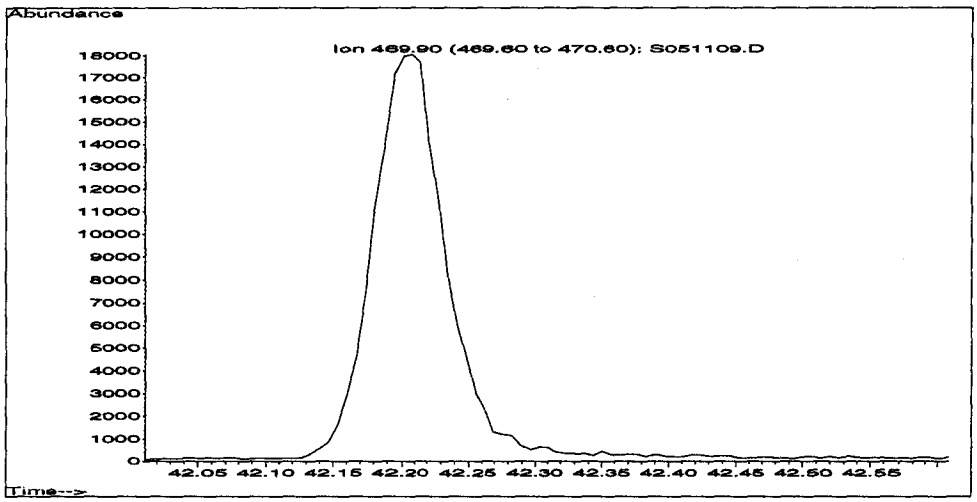
OCDF

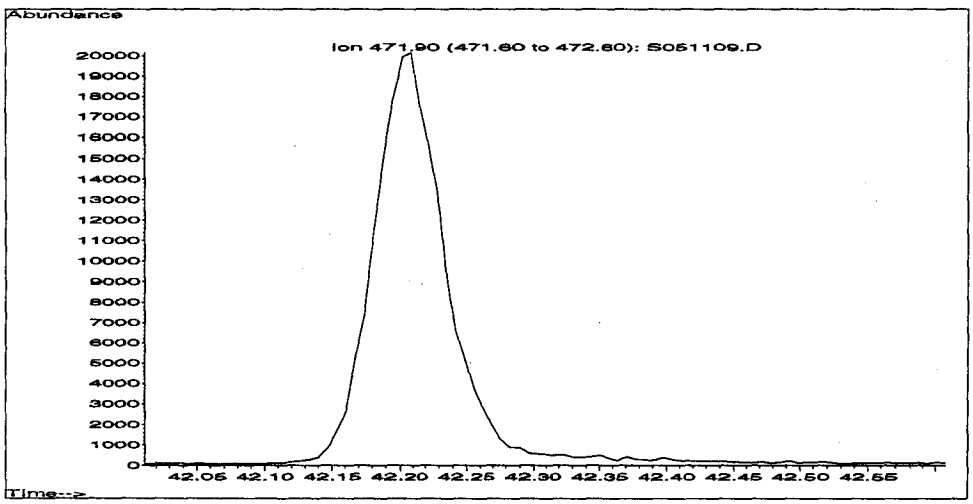
TS R.T. Lower Limit	42.16		
TS R.T. Upper Limit	42.66		
Ret Time	42.36		
Target Ion	441.9	Q1 Ion	443.9
Target Response	244718	Q1 Response	263618
Target Response	508336	Ion Ratio	0.93
Q2 Ion	379	DPE Ion	514
Q2 Response	46798	DPE Response	0



13C-OCDD-IS

RT Lower Limit	42.01		
RT Upper Limit	42.61		
Ret Time	42.21		
Target Ion	469.9	Q1 Ion	471.9
Target Response	68211	Q1 Response	74554
Total response	142765	Ratio	0.91





Quantitation Report (Not Reviewed)

Sample ID: A0D300605-1 1.01535L 8280A
L0VEC-1-AA WATER LR009

Size: 1.015
Inst : DB1

Data File:C:\8280\2DB\051110.B\S051111.D
Acq On :12 May 2010 5:32

Vial: 11
Operator: MEO
Sample Amount: 1.02

AP9

MS Integration Params: RTEINT.P
Quant Time: May 12 10:56 2010

Quant Results File: 10MY11C2.RES

Quant Method : C:\8280\ DATA METHODS\10MY11C2.M (RTE Integrator)
Title : Dioxin Furan Total
Last Update : Wed May 12 09:30:50 2010
Response via : Single (C:\8280\2DB\051110.B\ST0511C.D 12 May 2010 1:32)
DataAcq Meth : TOKAS
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Recovery\Internal Stds	R.T.	QIon	Ratio	Response	Conc	Dev(Min)
1) 13C-1234-TCDD	24.01	332+334	0.79	162867	25.00 NG	-0.02
5) 13C-123789-HxCDD	36.48	402+404	1.26	221417	25.00 NG	0.00
9) 13C-2378-TCDF	23.21	316+318	0.85	165017	25.00 NG	0.00
15) 13C-2378-TCDD	24.30	332+334	0.81	112364	25.00 NG	0.00
20) 13C-123678-HxCDD	36.21	402+404	1.27	131666	25.00 NG	0.00
27) 13C-1234678-HpCDF	38.19	420+422	1.06	174256	25.00 NG	0.00
36) 13C-OCDD	42.20	470+472	0.93	220426	50.00 NG	0.00

Surrogate Compound

4) 37Cl-2378-TCDD	24.33	328		100871	10.982 NG	0.00
Spiked Amount = 12.311	RRF = 1.389			Recovery =	89.20%	

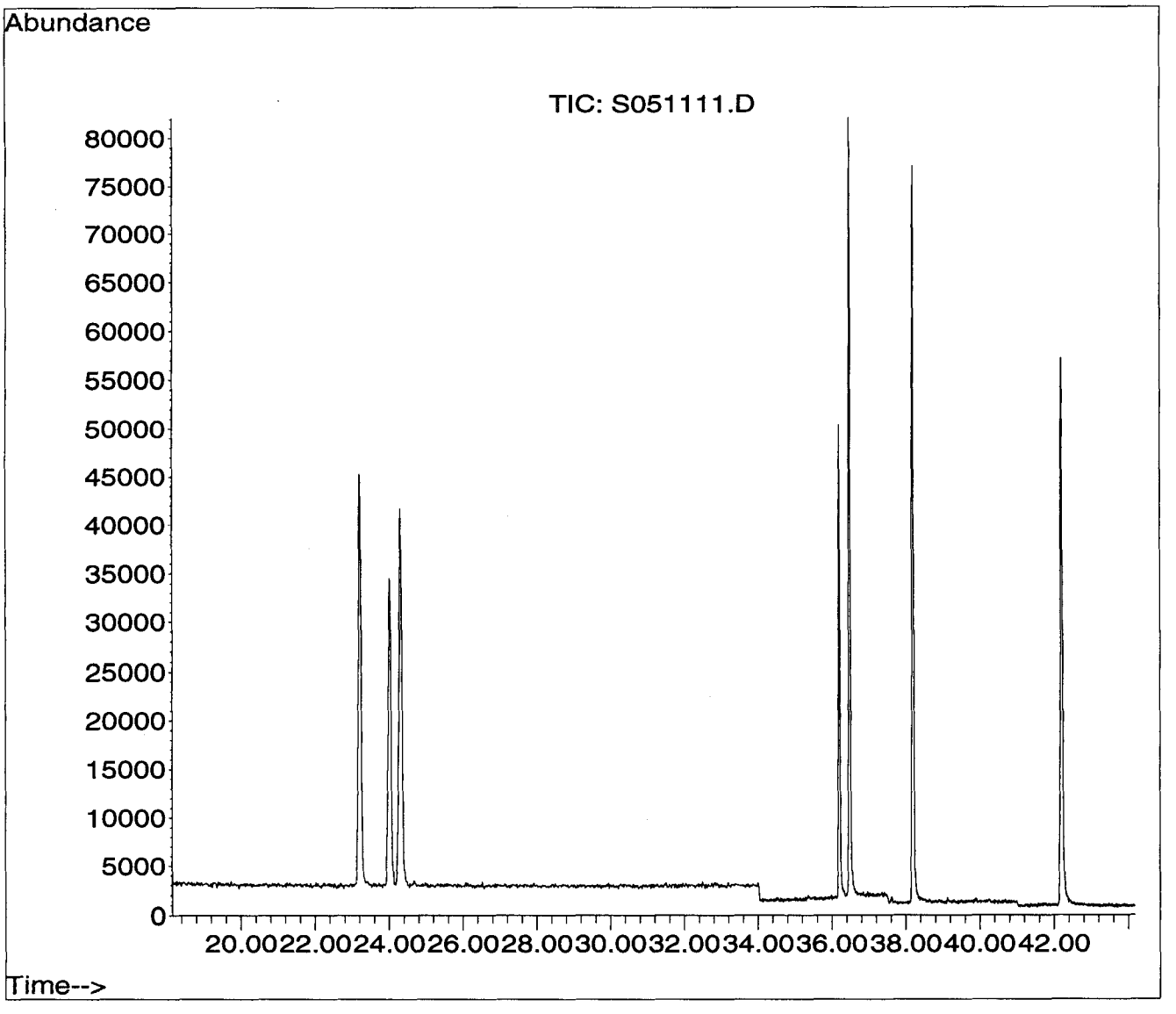
Target Compounds	RT	Ratio	Area	RRF	Conc	EDL	%Rec
2) 13C-2378-TCDF-IS	23.21	0.85	164121	1.428	17.371	0.0738	70.5
3) 13C-2378-TCDD-IS	24.30	0.81	108229	0.983	16.642	2.4184	67.6
6) 13C-123678-HxCDD-	36.21	1.27	131666	0.796	18.383	0.1116	74.6
7) 13C-1234678-HpCDF	38.19	1.06	174256	1.010	19.183	0.0704	77.9
8) 13C-OCDD-IS	42.20	0.93	220426	0.659	37.219	0.1761	75.6
10) 2378-TCDF	0.00		0	1.265	N.D.	0.2213	
11) TCDF TOTAL	22.00		0	1.265	N.D.	0.2555	
12) 12378-PeCDF	0.00		0	1.136	N.D.	0.2644	
13) 23478-PeCDF	0.00		0	1.137	N.D.	0.2062	
14) PeCDF TOTAL	29.50		0	1.136	N.D.	0.4547	
16) 2378-TCDD	0.00		0	1.221	N.D.	0.1453	
1	23.21	5.22 #	15397		2.762		
17) TCDD TOTAL	22.50	5.22	15397	1.221	2.762		
18) 12378-PeCDD	0.00		0	1.142	N.D.	0.3578	
19) PeCDD TOTAL	30.00		0	1.142	N.D.	0.4956	
21) 123478-HxCDD	0.00		0	1.012	N.D.	0.2214	
22) 123678-HxCDD	0.00		0	0.981	N.D.	0.1678	
23) 123789-HxCDD	0.00		0	1.038	N.D.	0.1675	
24) HxCDD TOTAL	36.50		0	0.981	N.D.	0.2409	
25) 1234678-HpCDD	0.00		0	1.039	N.D.	0.1497	
26) HpCDD TOTAL	39.35		0	1.039	N.D.	0.2701	
28) 123478-HxCDF	0.00		0	0.984	N.D.	0.1440	
29) 123678-HxCDF	0.00		0	1.042	N.D.	0.1359	
30) 234678-HxCDF	0.00		0	0.970	N.D.	0.1366	
31) 123789-HxCDF	0.00		0	0.928	N.D.	0.2171	
32) HxCDF TOTAL	36.00		0	0.928	N.D.	0.3137	
33) 1234678-HpCDF	0.00		0	1.160	N.D.	0.1479	
34) 1234789-HpCDF	0.00		0	1.006	N.D.	0.1950	
35) HpCDF TOTAL	39.50		0	1.006	N.D.	0.3784	
37) OCDD	0.00		0	1.102	N.D.	0.2726	

5/13/10
MC

38) OCDF	0.00	0	1.397	N.D.	0.4227

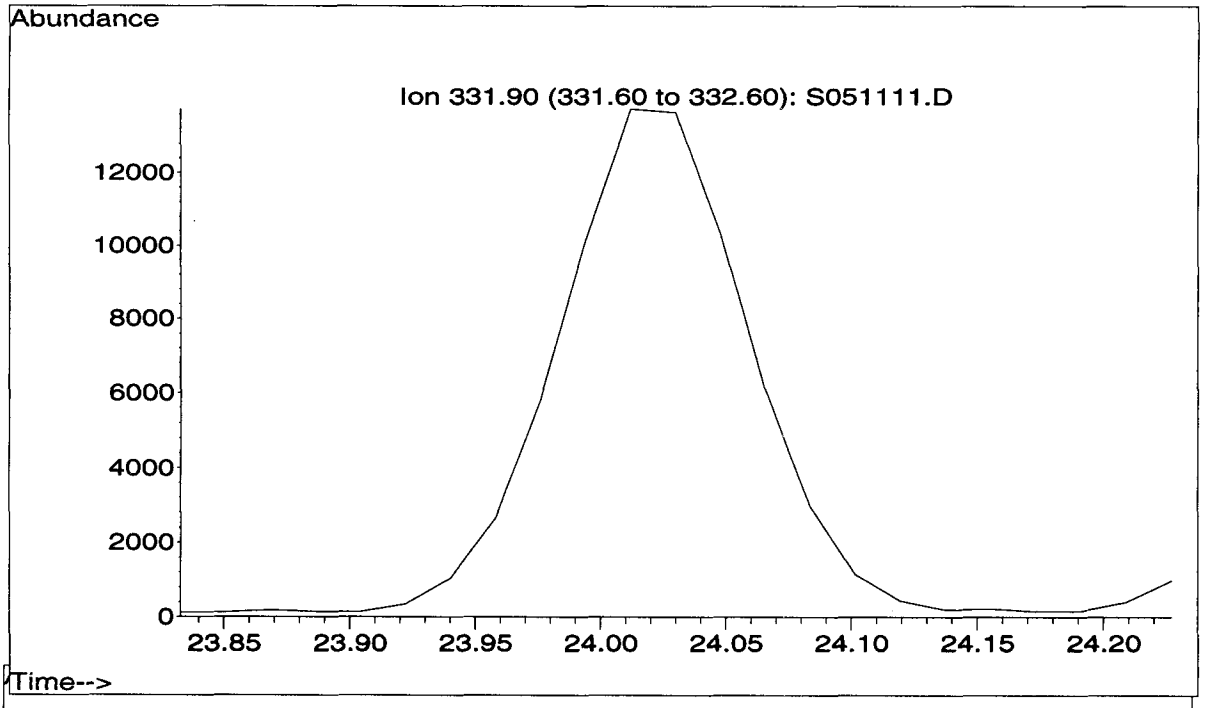
(#) = qualifier out of range•: areas and concentration based on theoretical ion ratio
(m) = manual integration
S051111.D 10MY11C2.M Wed May 12 10:56:27 2010

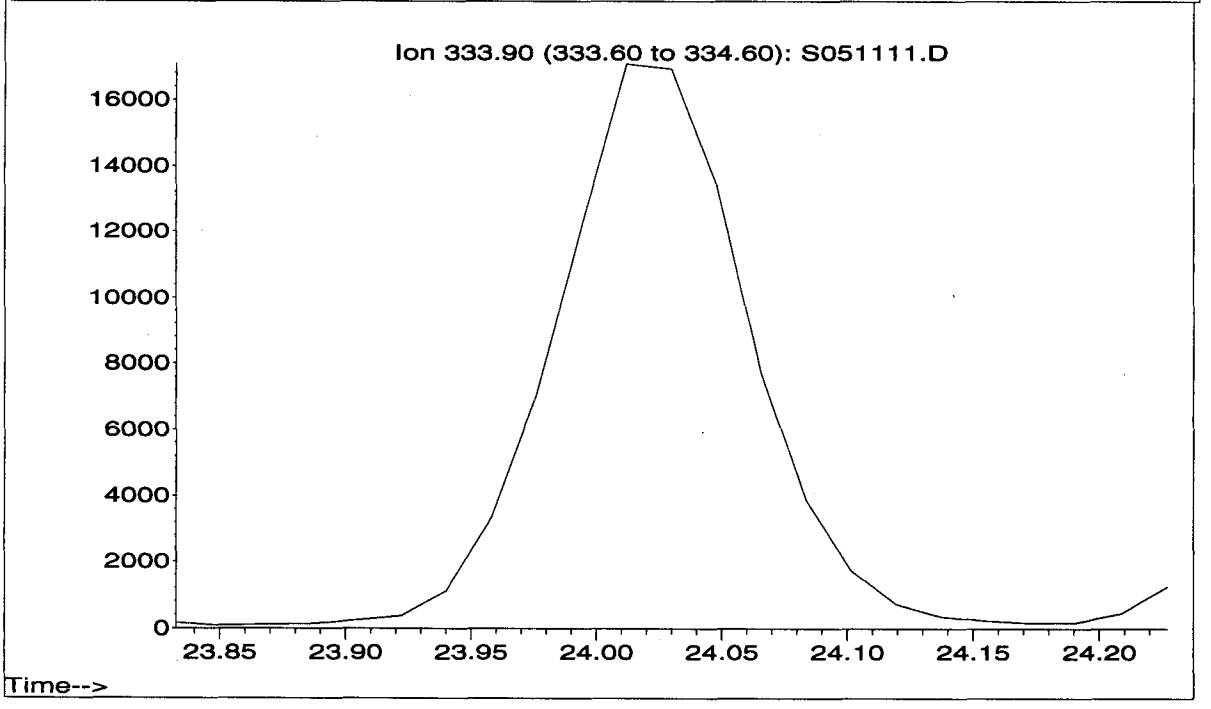
Data File Name	S051111.D
Data File Path	C:\8280\2DB\051110.B\
Operator	MEO
Date Acquired	5/12/2010 5:32
Acq. Method File	TOKAS
Sample Name	_0VEC-1-AA WATER LR009
Misc Info	D300605-1 1.01535L 8280A
Vial Number	11
Instrument Name	2DB
Sample Multiplier	1
Sample Amount	1.01535



13C-1234-TCDD

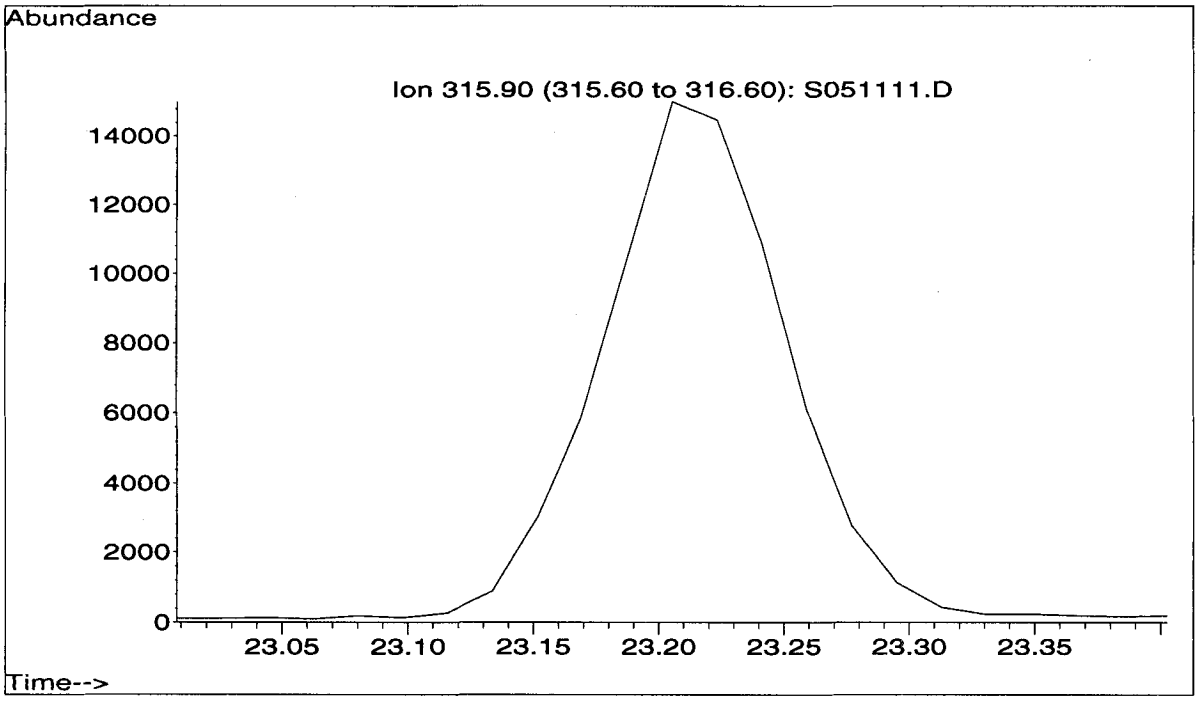
TS R.T. Lower Limit	23.83		
TS R.T. Upper Limit	24.23		
Ret Time	24.01		
Target Ion	331.9	Q1 Ion	333.9
Target Response	71811	Q1 Response	91056
Total Response	162867	Ion Ratio	0.79

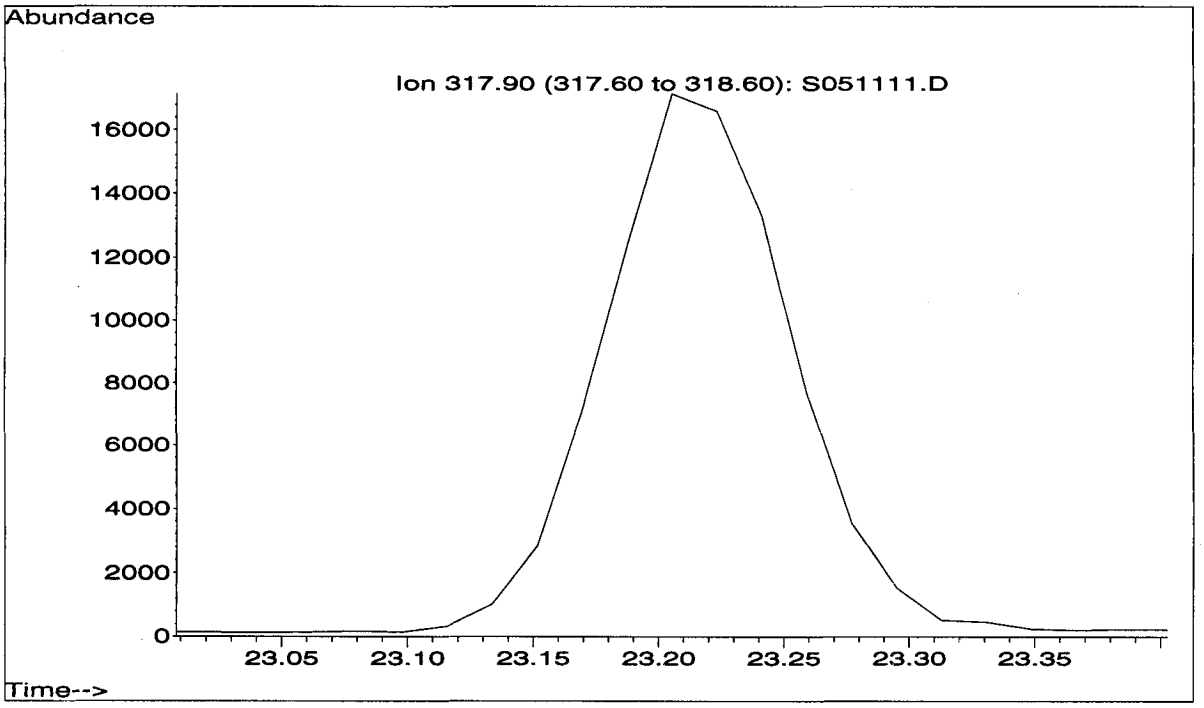




13C-2378-TCDF-IS

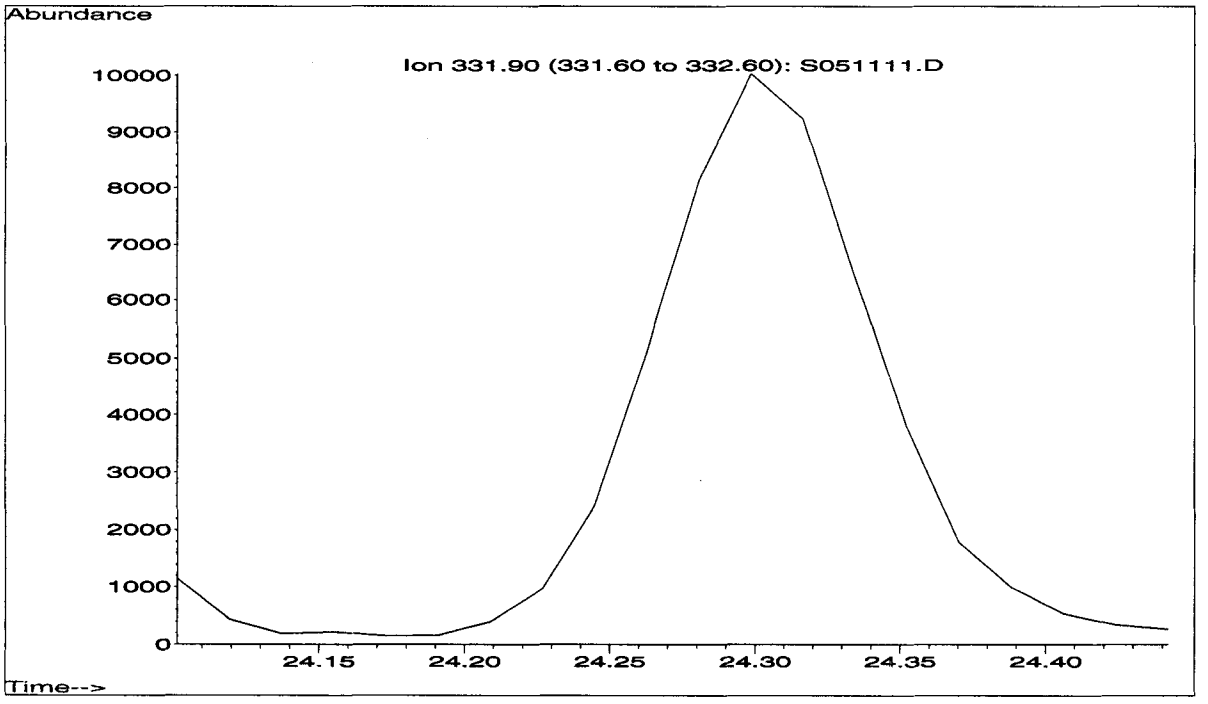
TS R.T. Lower Limit	23.01		
TS R.T. Upper Limit	23.41		
Ret Time	23.21		
Target Ion	315.9	Q1 Ion	317.9
Target Response	75266	Q1 Response	88855
Target Response	164121	Ion Ratio	0.85

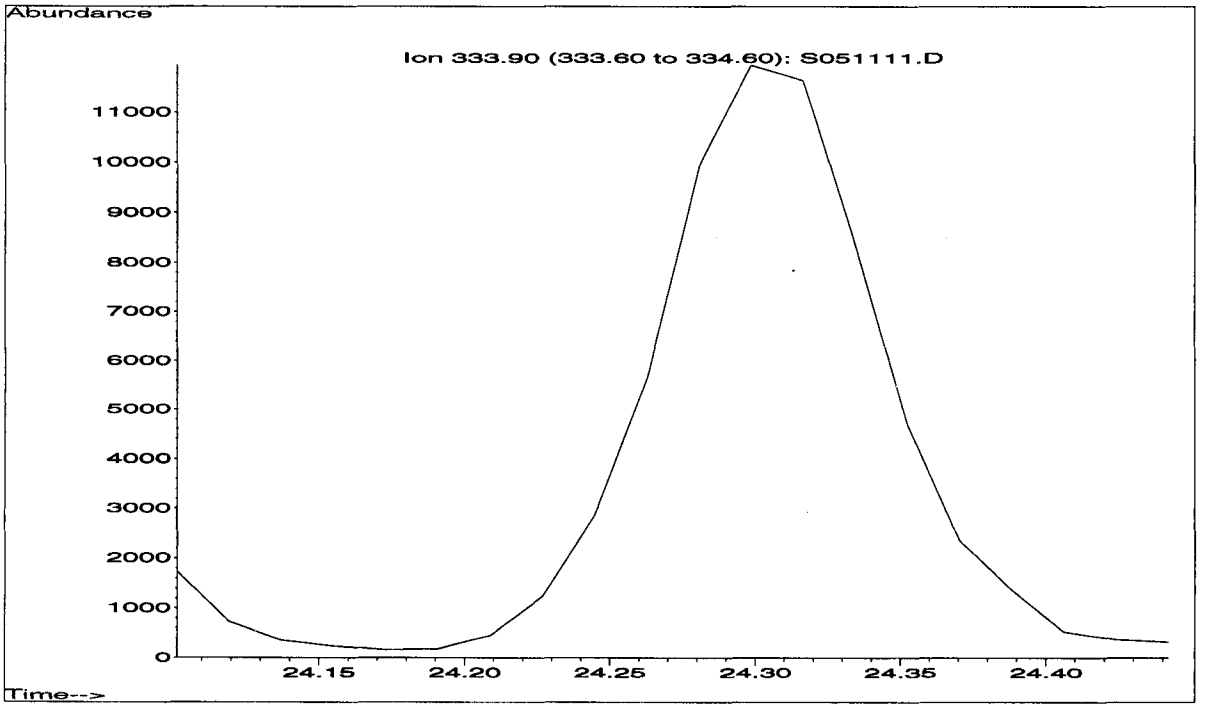




13C-2378-TCDD-IS

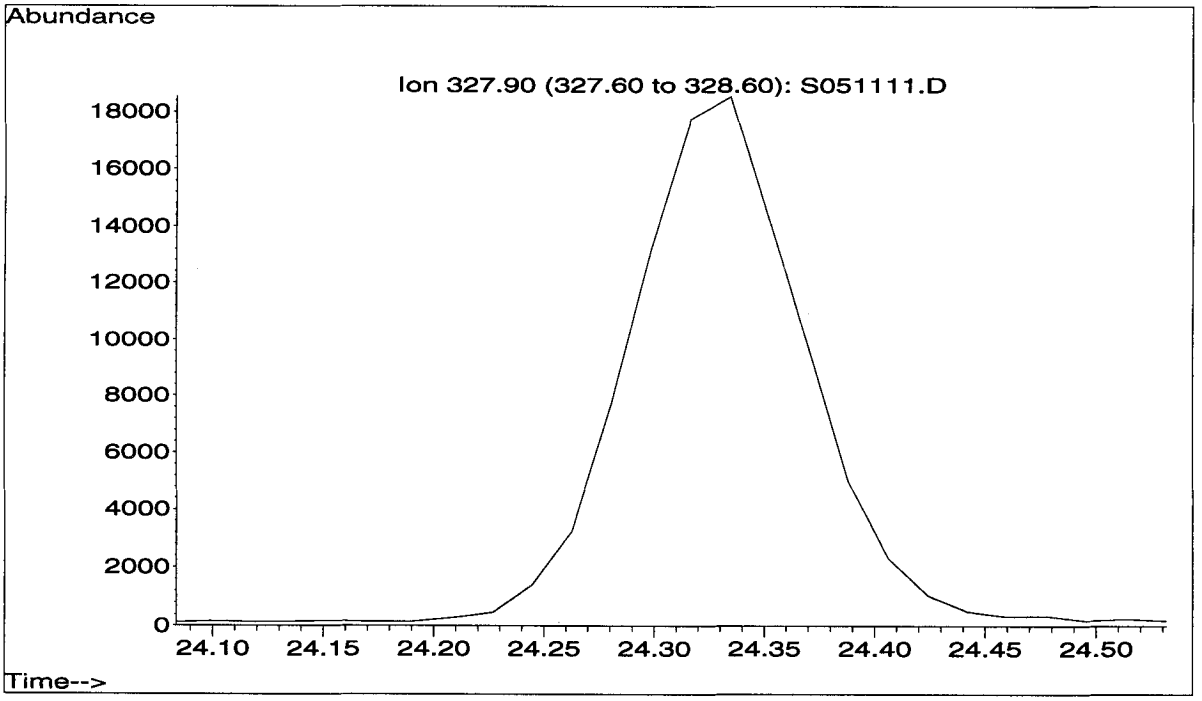
TS R.T. Lower Limit	24.10		
TS R.T. Upper Limit	24.45		
Ret Time	24.30		
Target Ion	331.9	Q1 Ion	333.9
Target Response	48595	Q1 Response	59634
Total Response	108229	Ion Ratio	0.81

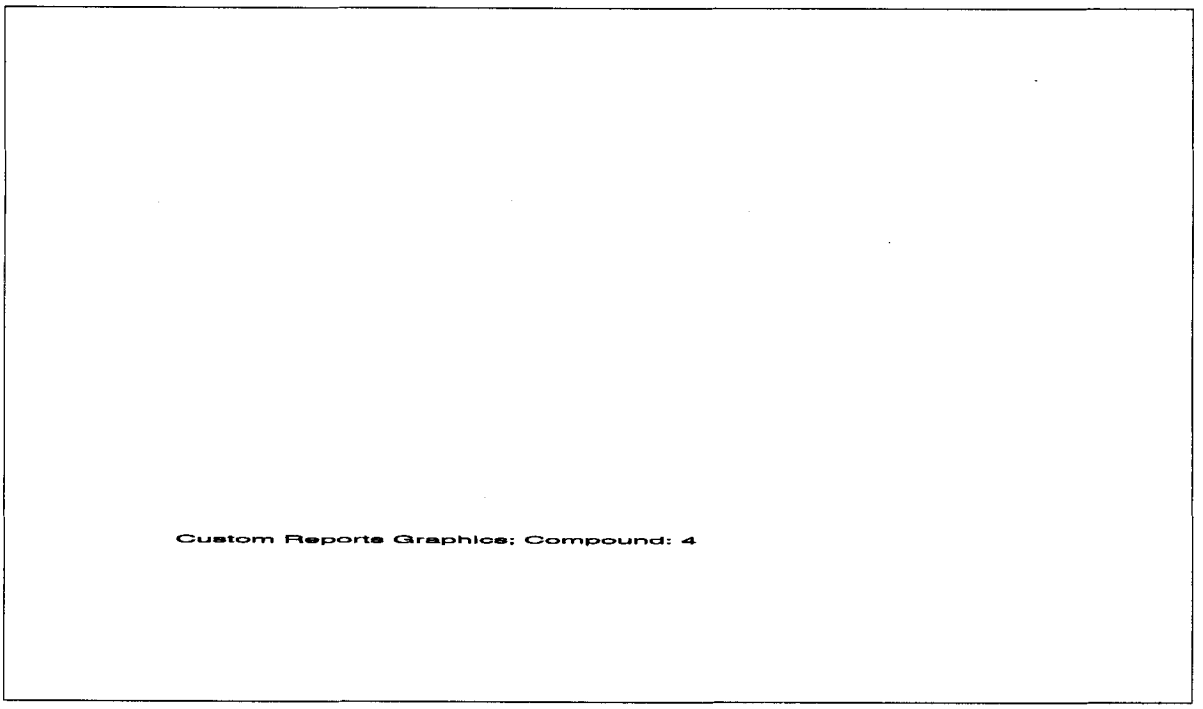




37Cl-2378-TCDD

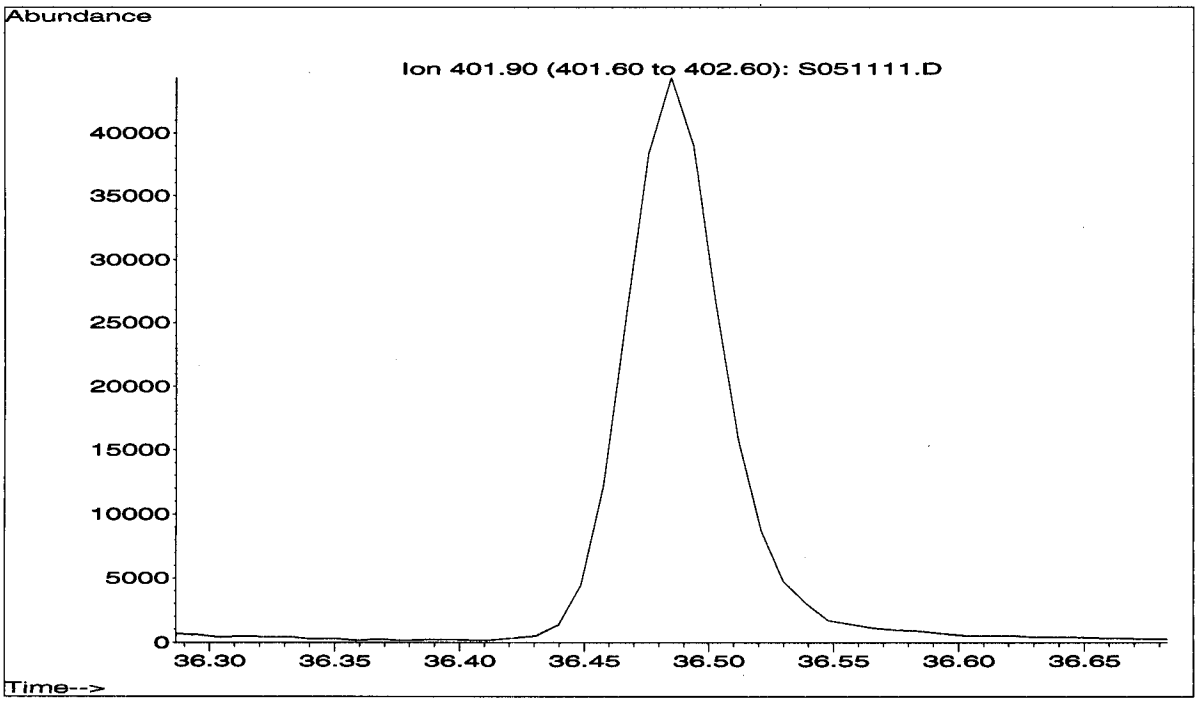
TS R.T. Lower Limit	24.09		
TS R.T. Upper Limit	24.54		
Ret Time	24.33		
Target Ion	327.9	Q1 Ion	0
Target Response	100871	Q1 Response	0
Total Response	100871	Ion Ratio	#DIV/0!

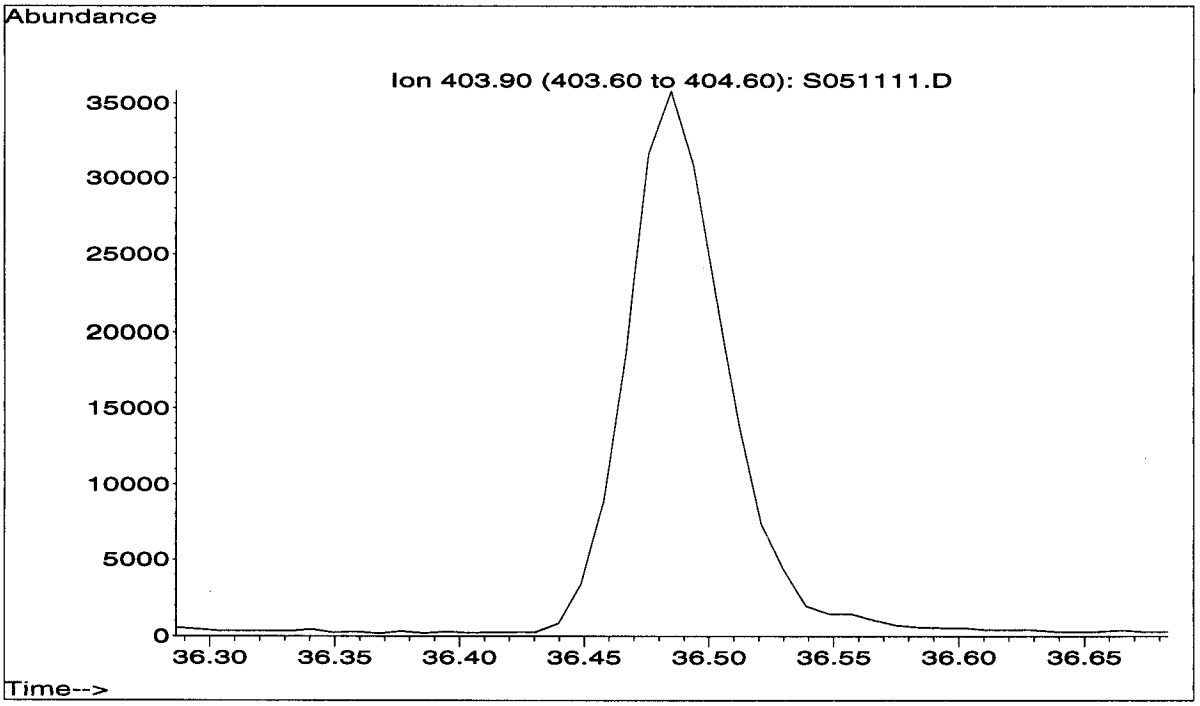




13C-123789-HxCDD

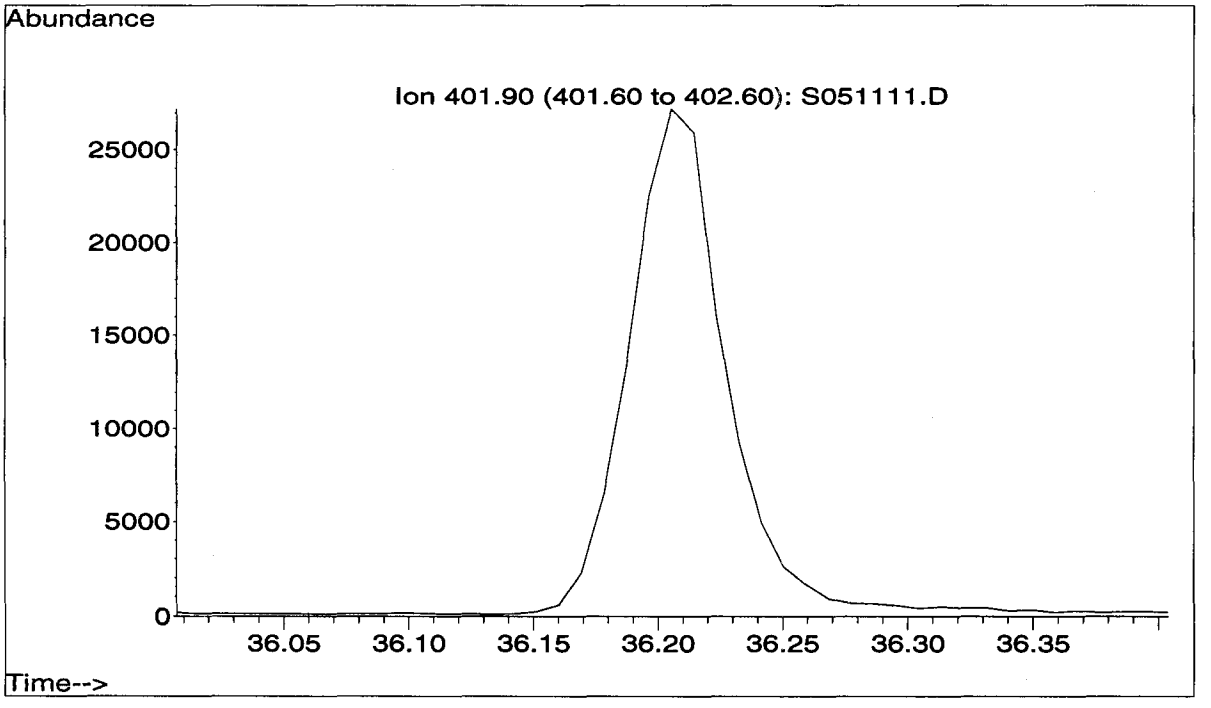
TS R.T. Lower Limit	36.29		
TS R.T. Upper Limit	36.69		
Ret Time	36.48		
Target Ion	401.9	Q1 Ion	403.9
Target Response	123241	Q1 Response	98176
Target Response	221417	Ion Ratio	1.26

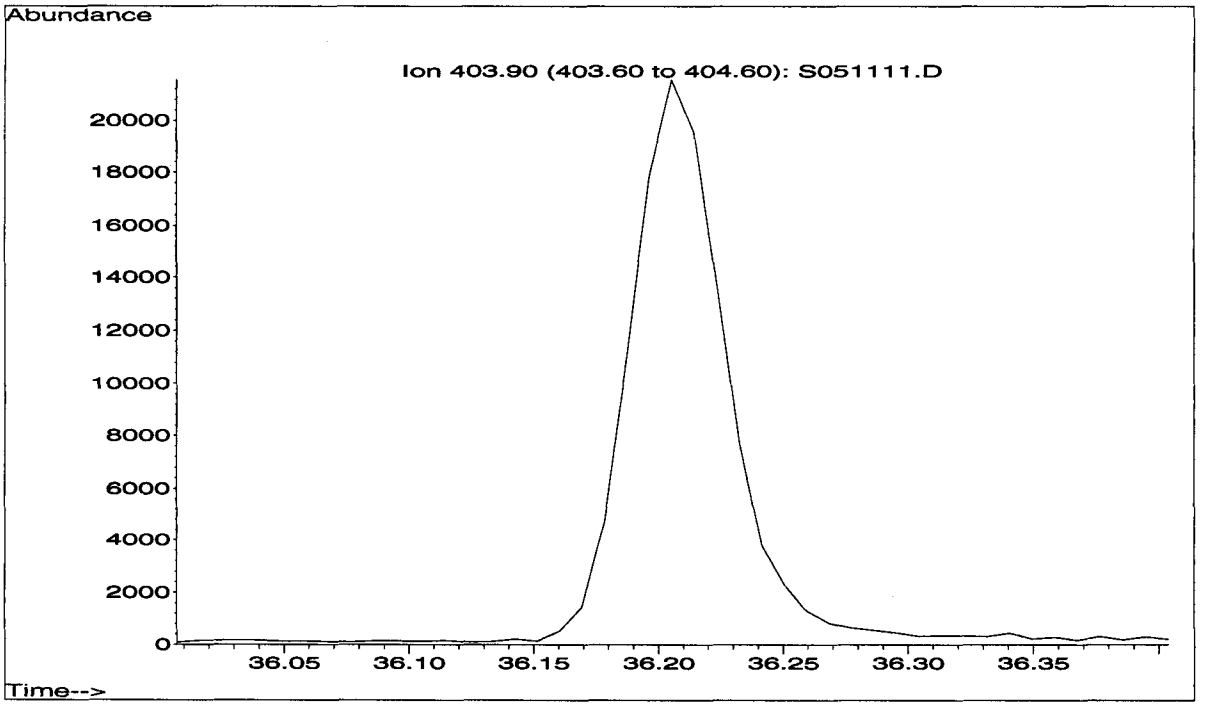




13C-123678-HxCDD-IS

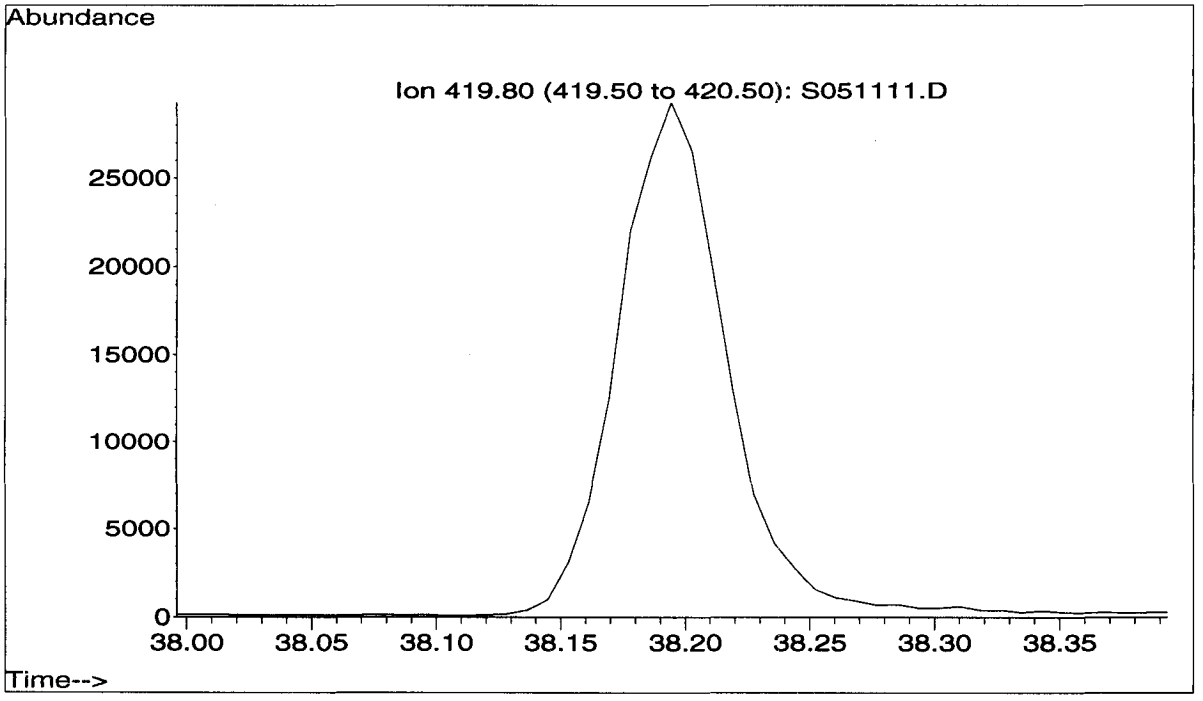
TS R.T. Lower Limit	36.01		
TS R.T. Upper Limit	36.41		
Ret Time	36.21		
Target Ion	401.9	Q1 Ion	403.9
Target Response	73722	Q1 Response	57944
Total Response	131666	Ion Ratio	1.27

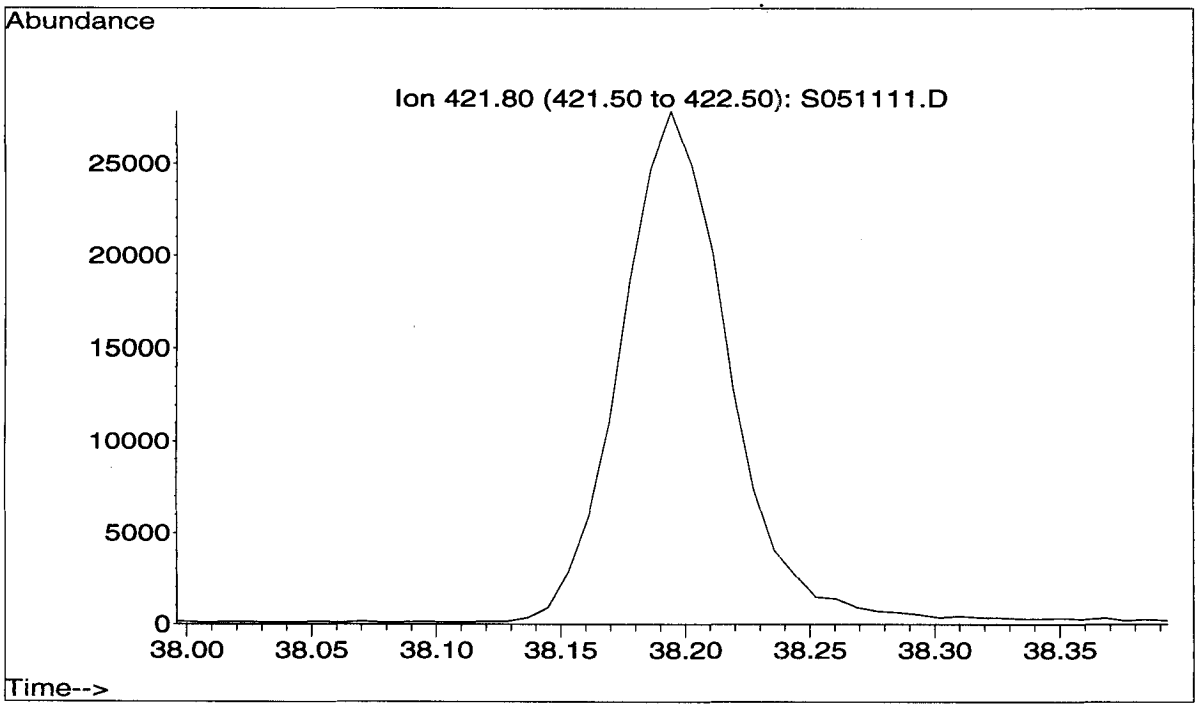




13C-1234678-HpCDF-IS

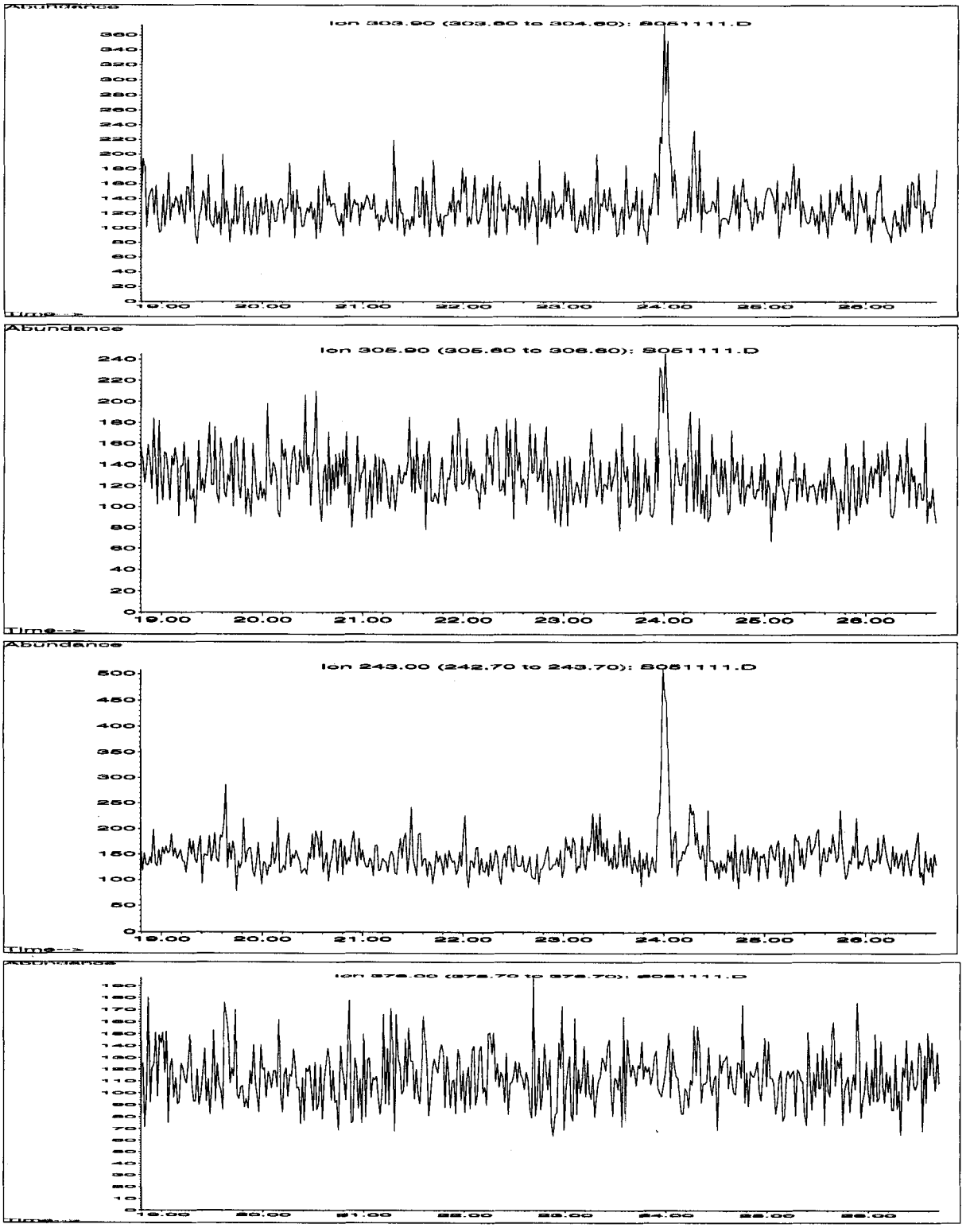
TS R.T. Lower Limit	37.99		
TS R.T. Upper Limit	38.39		
Ret Time	38.19		
Target Ion	419.8	Q1 Ion	421.8
Target Response	89675	Q1 Response	84581
Target Response	174256	Ion Ratio	1.06





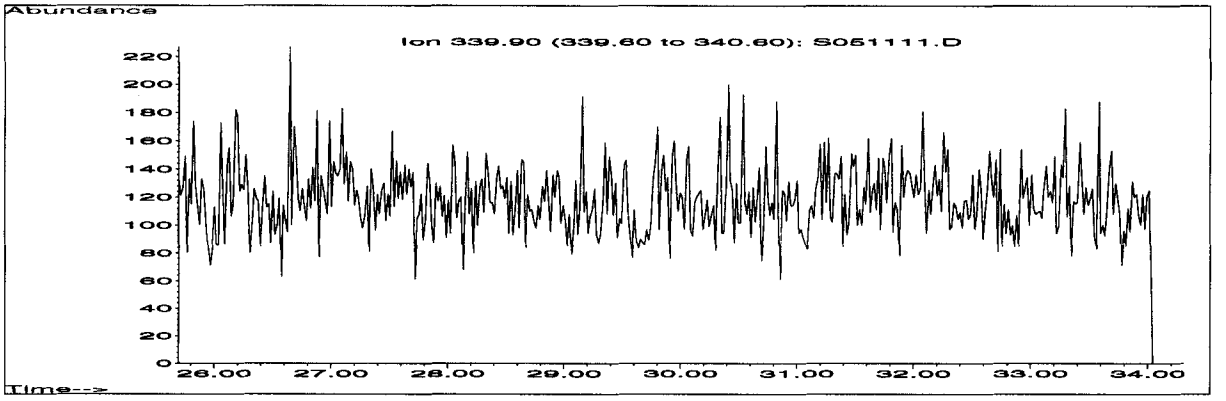
TCDF TOTAL

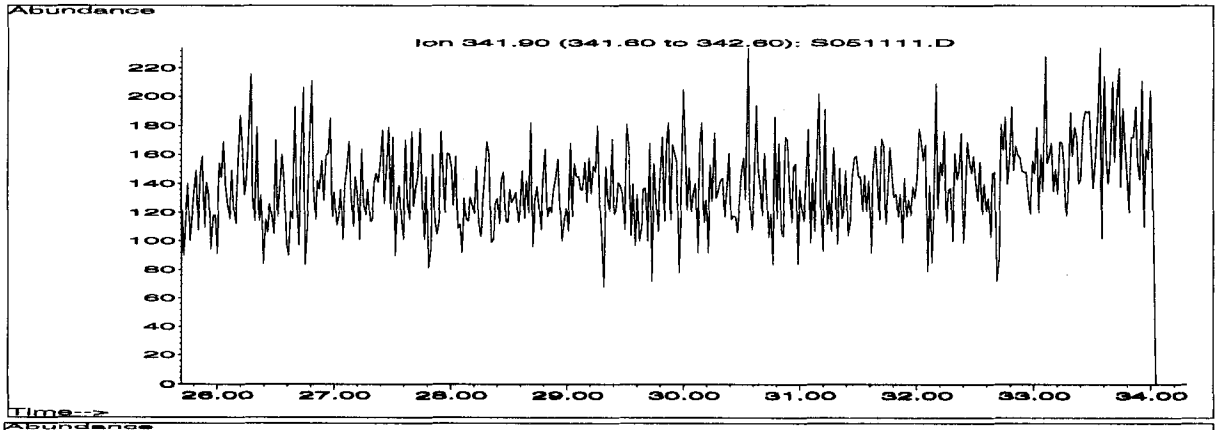
TS R.T. Lower Limit	18.80
TS R.T. Upper Limit	26.70

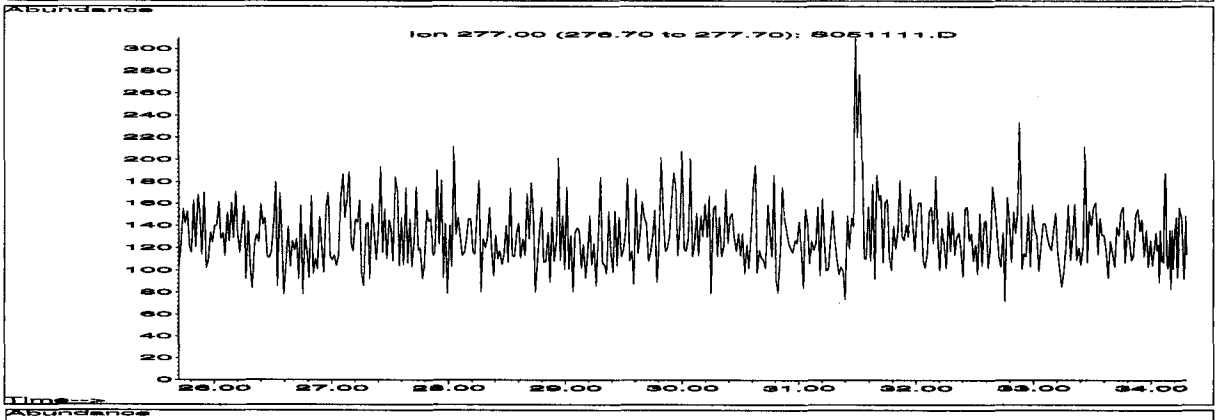


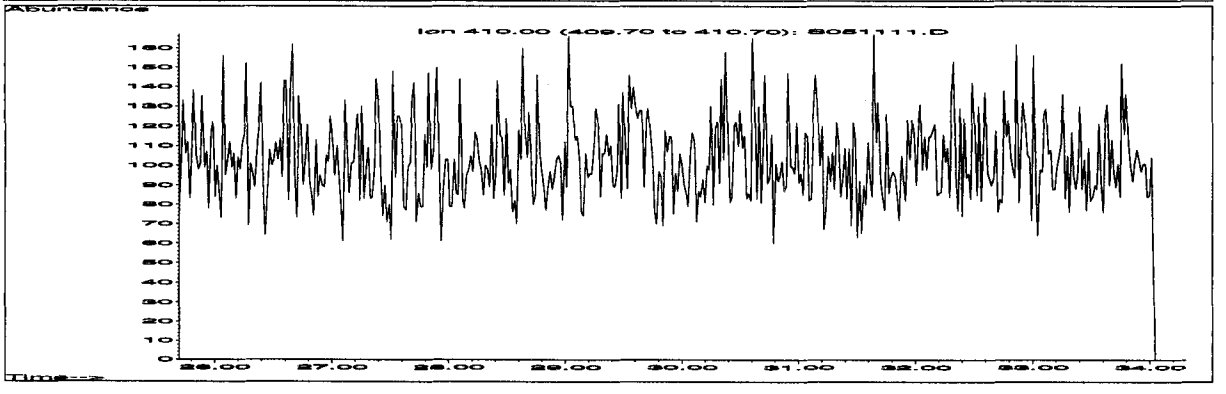
PeCDF TOTAL

TS R.T. Lower Limit	25.70
TS R.T. Upper Limit	34.30



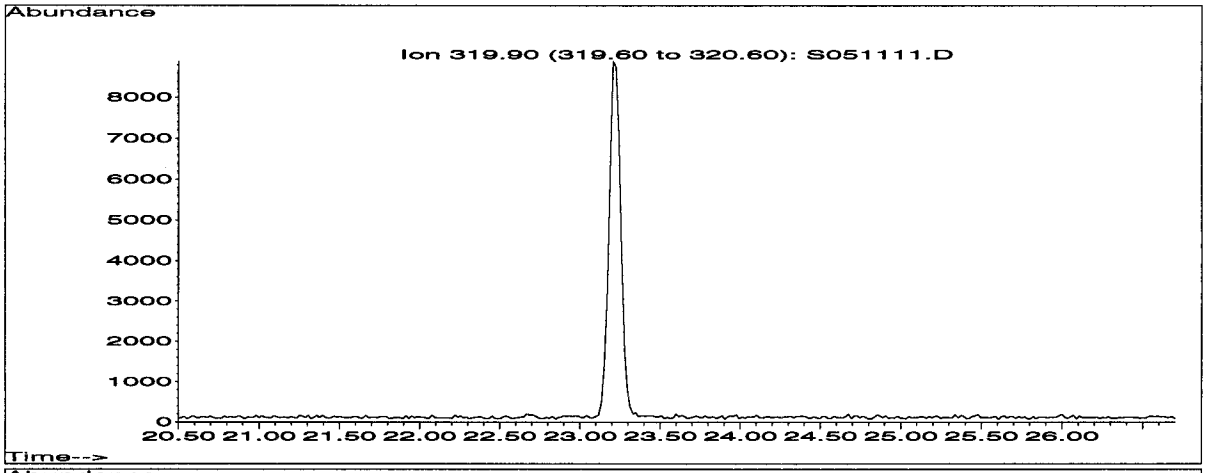


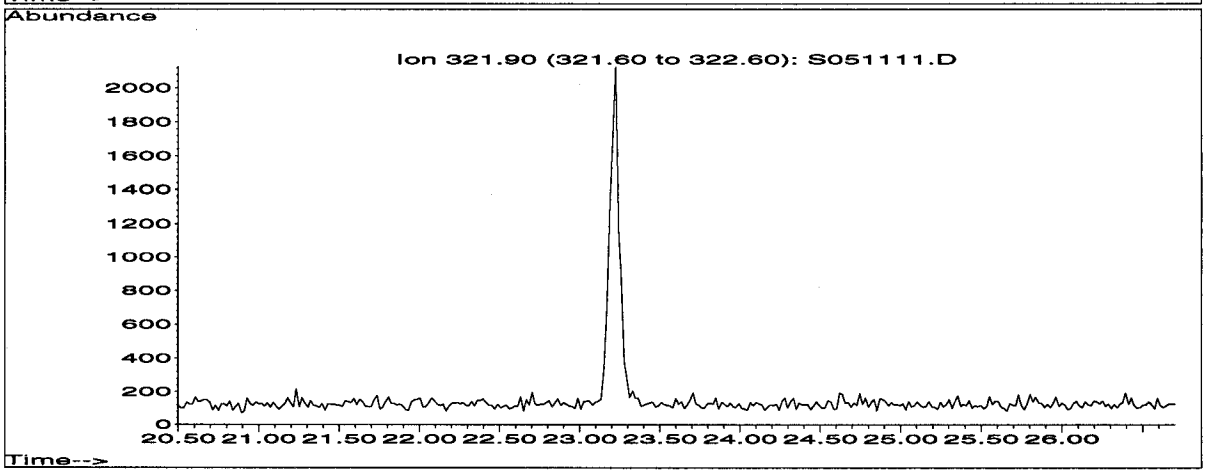


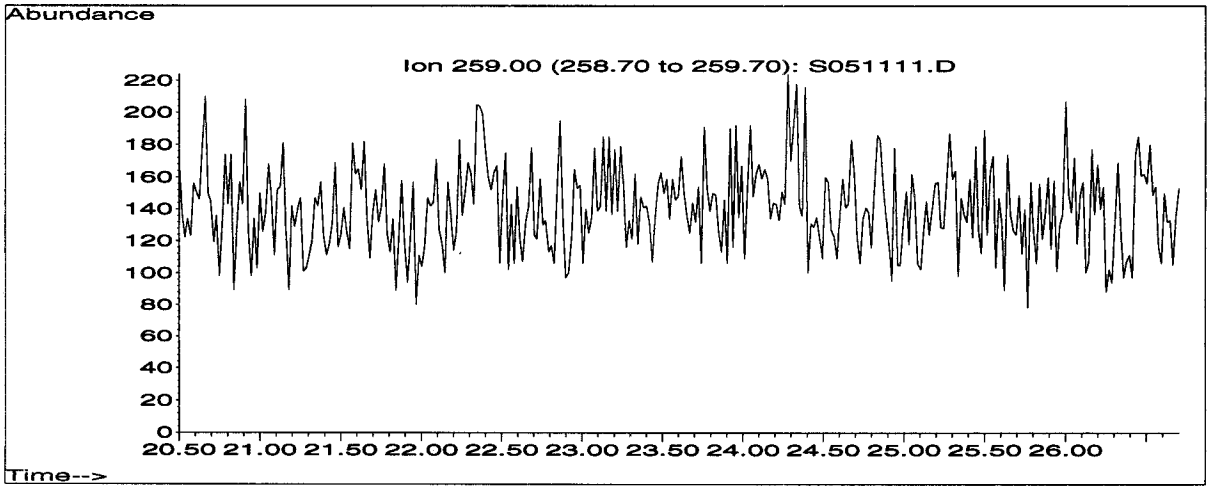


TCDD TOTAL

TS R.T. Lower Limit	20.50
TS R.T. Upper Limit	26.70

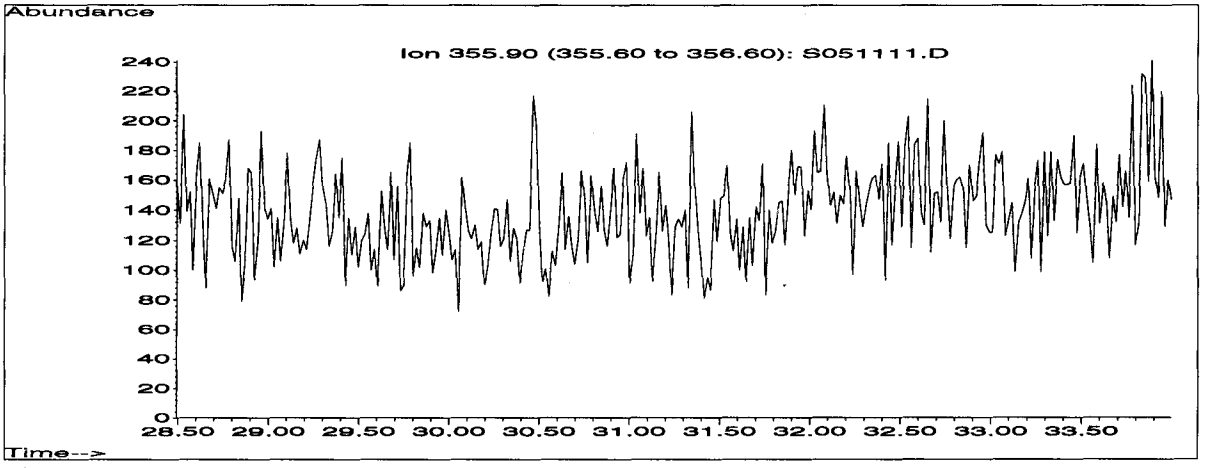


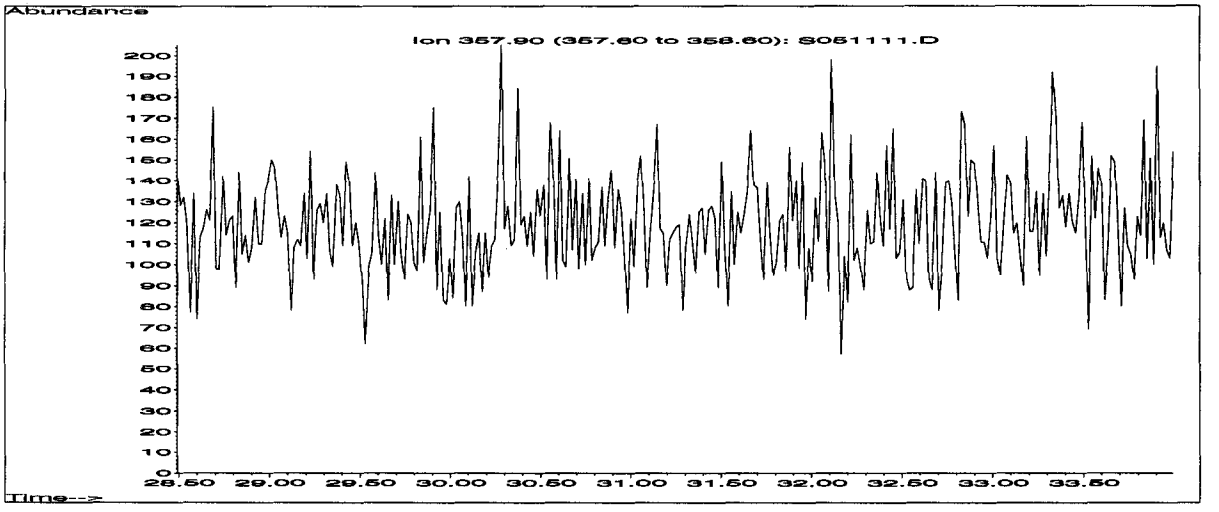


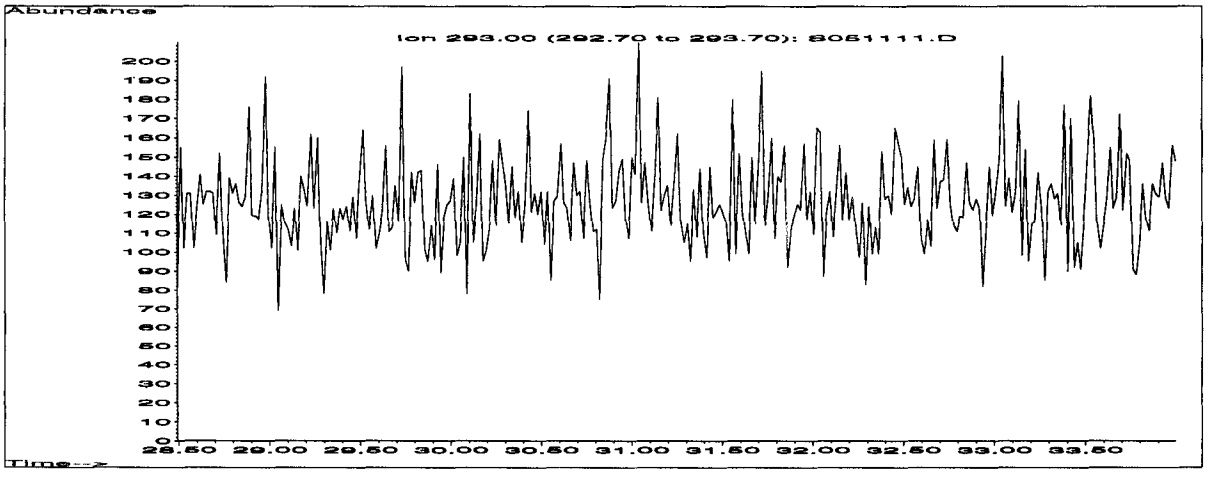


PeCDD TOTAL

TS R.T. Lower Limit	28.50
TS R.T. Upper Limit	34.00

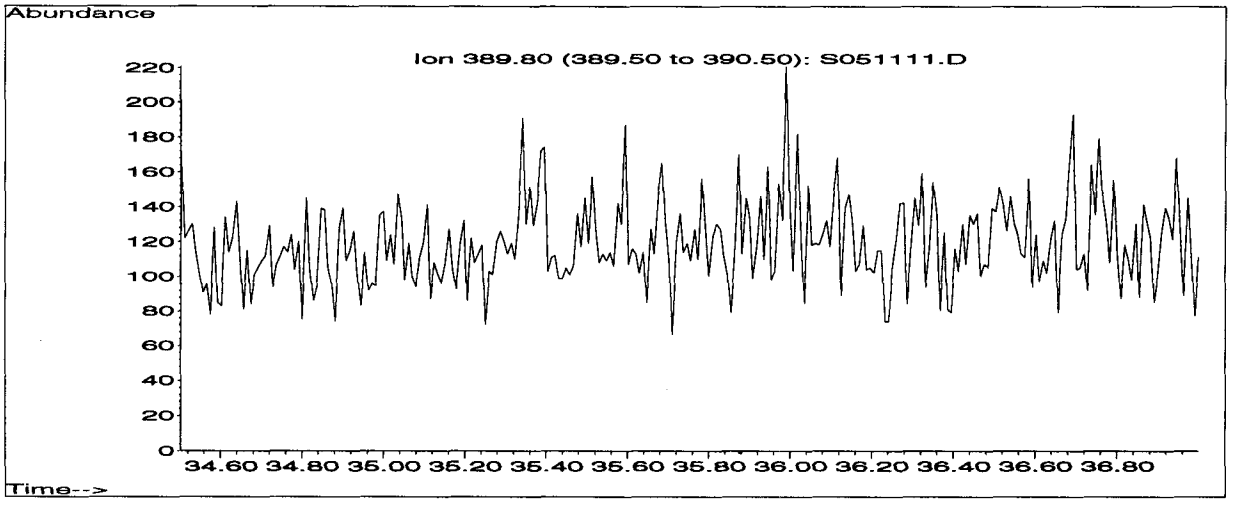


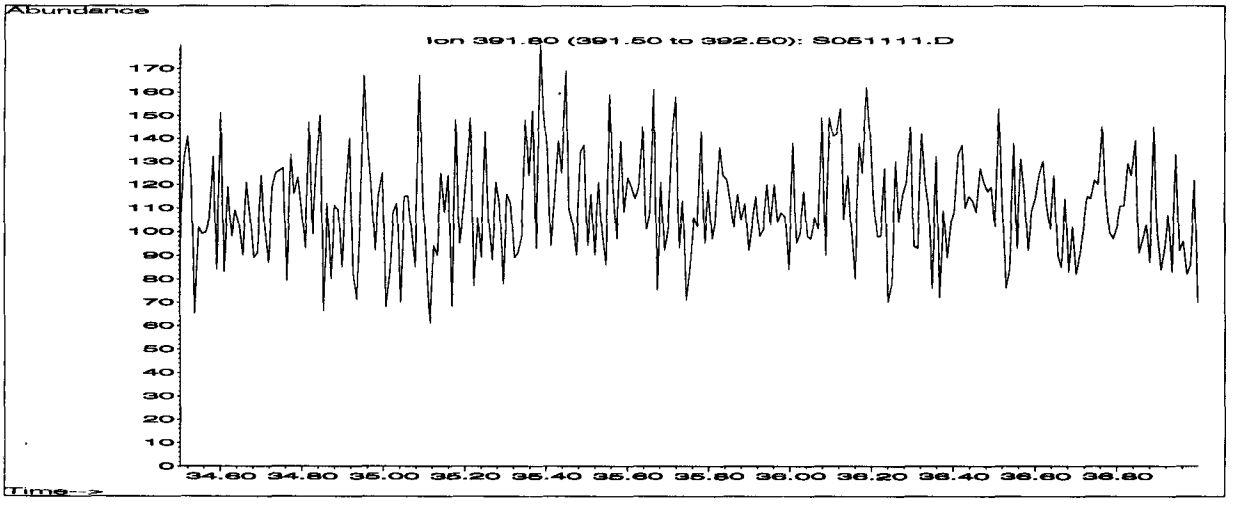


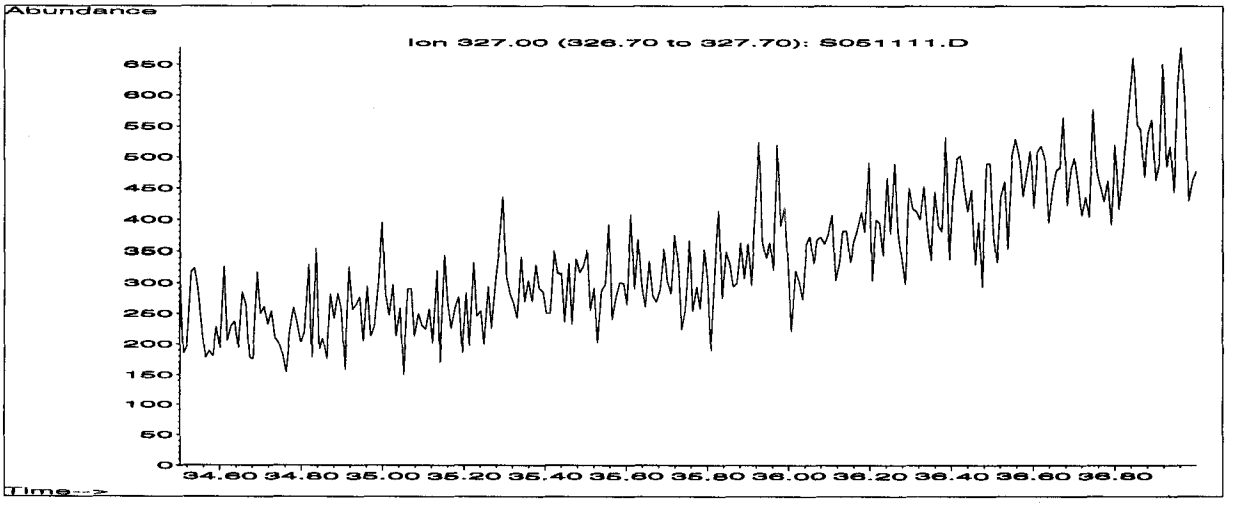


HxCDD TOTAL

TS R.T. Lower Limit	34.50
TS R.T. Upper Limit	37.00

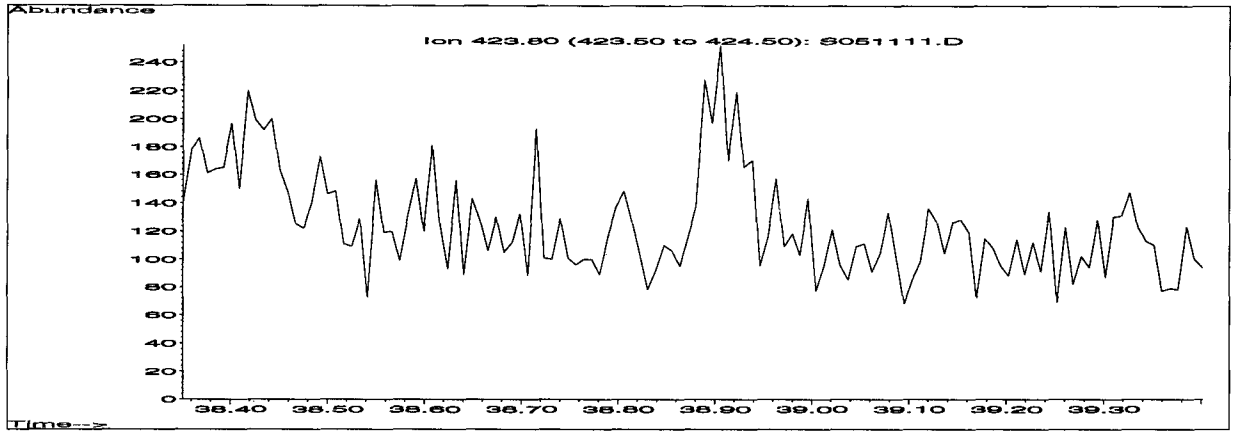


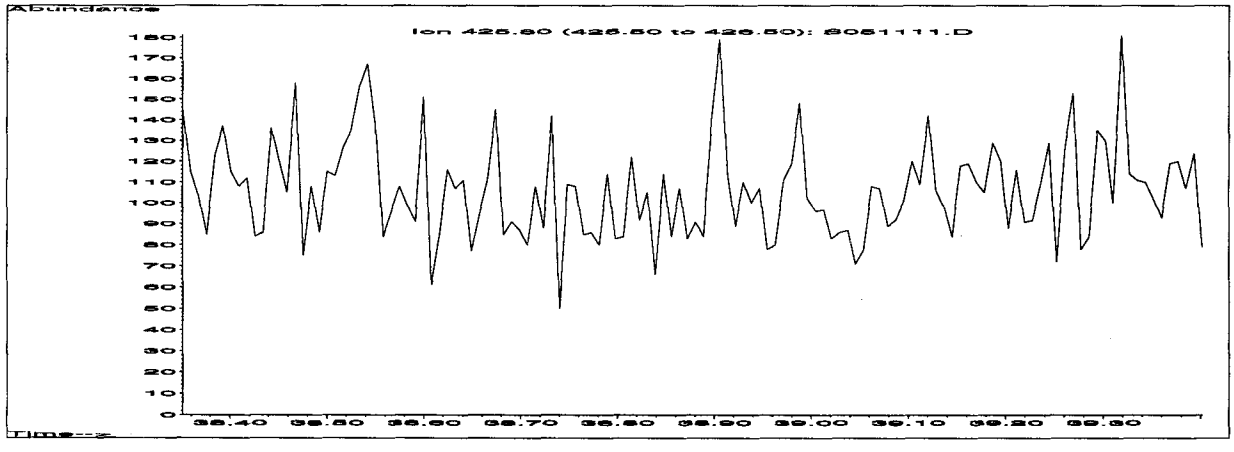


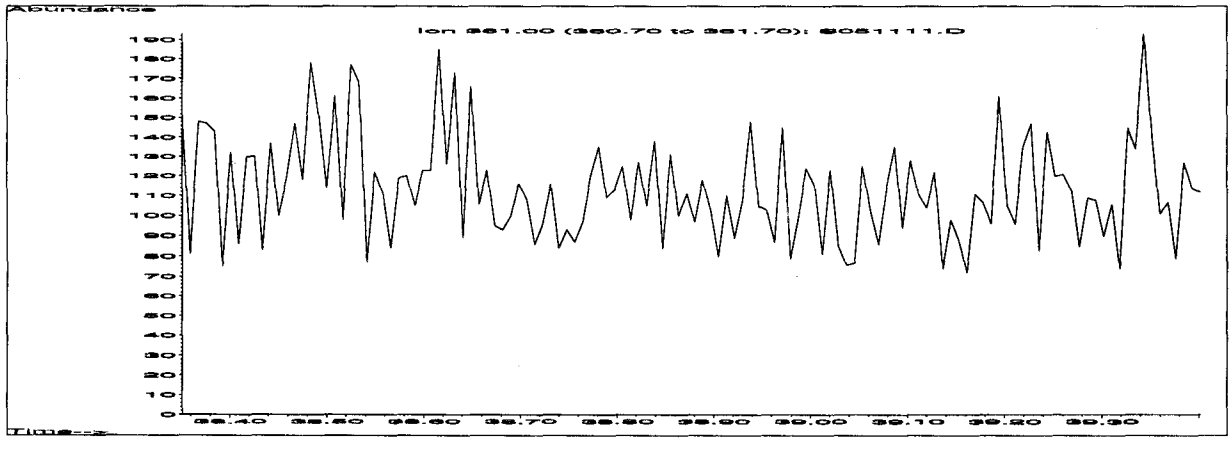


HpCDD TOTAL

TS R.T. Lower Limit	38.35
TS R.T. Upper Limit	39.40

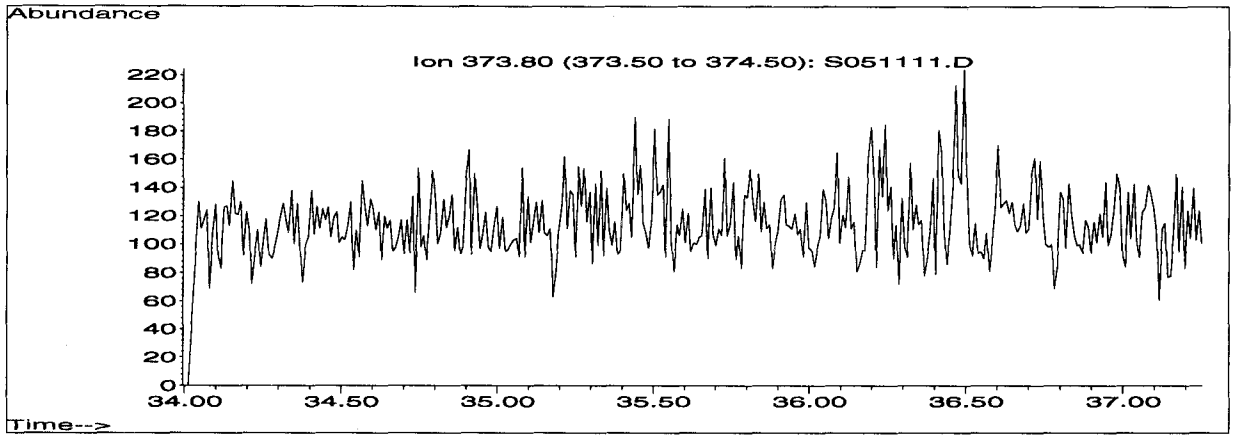


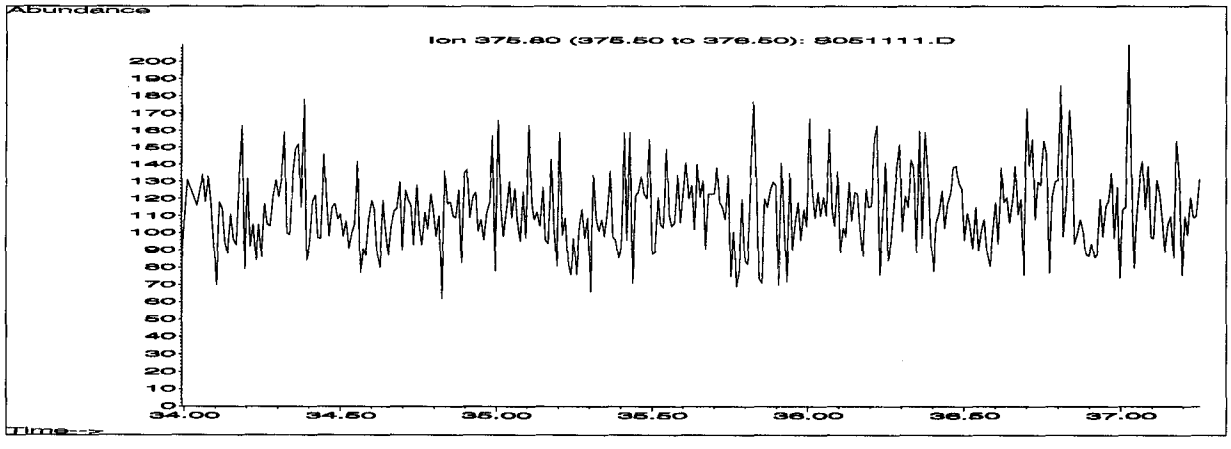


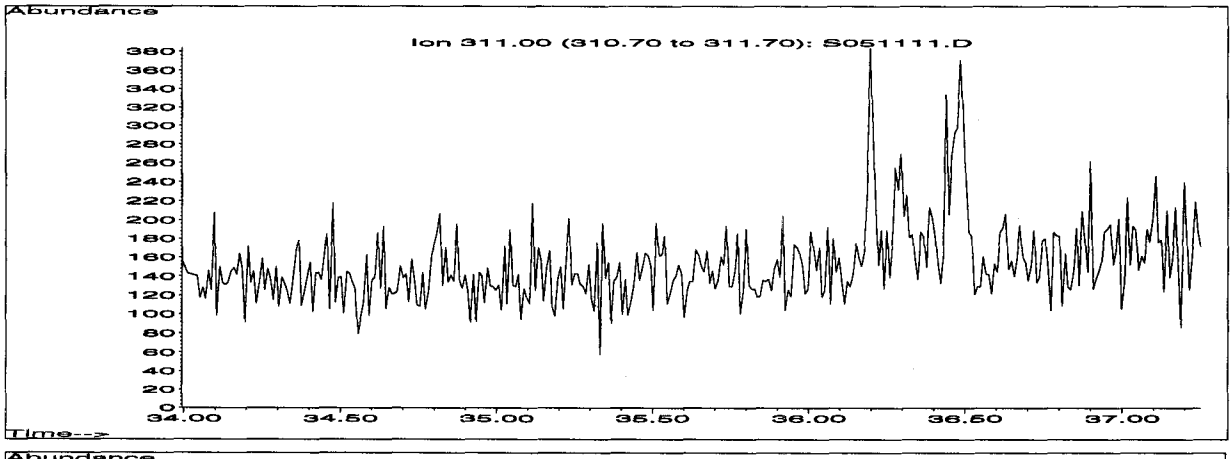


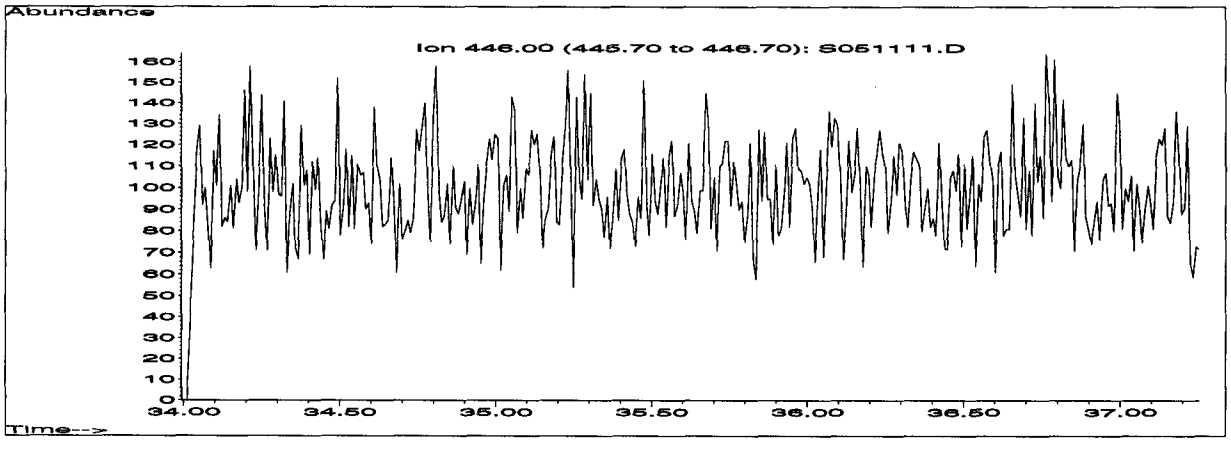
HxCDF TOTAL

TS R.T. Lower Limit	34.00
TS R.T. Upper Limit	37.25



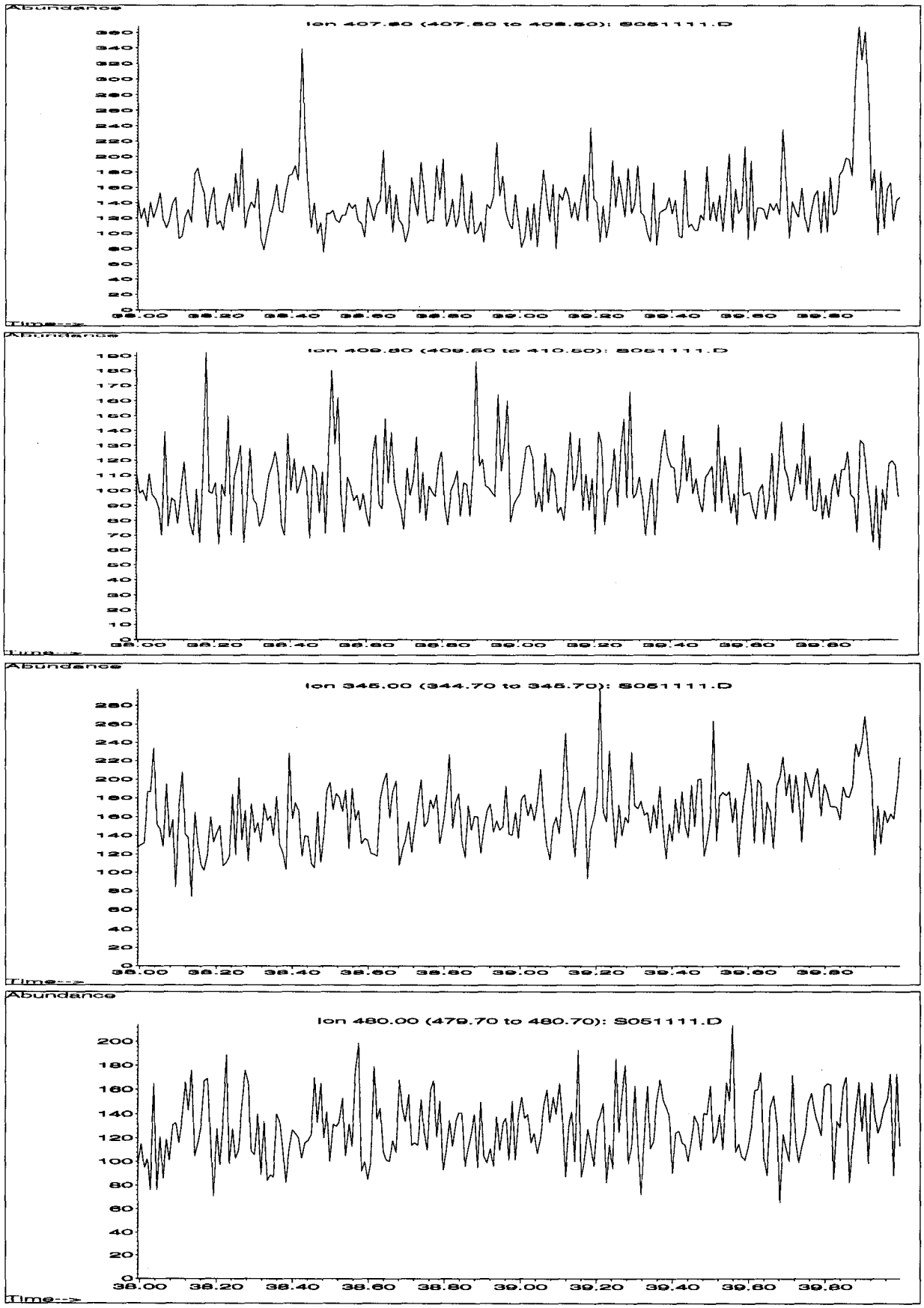






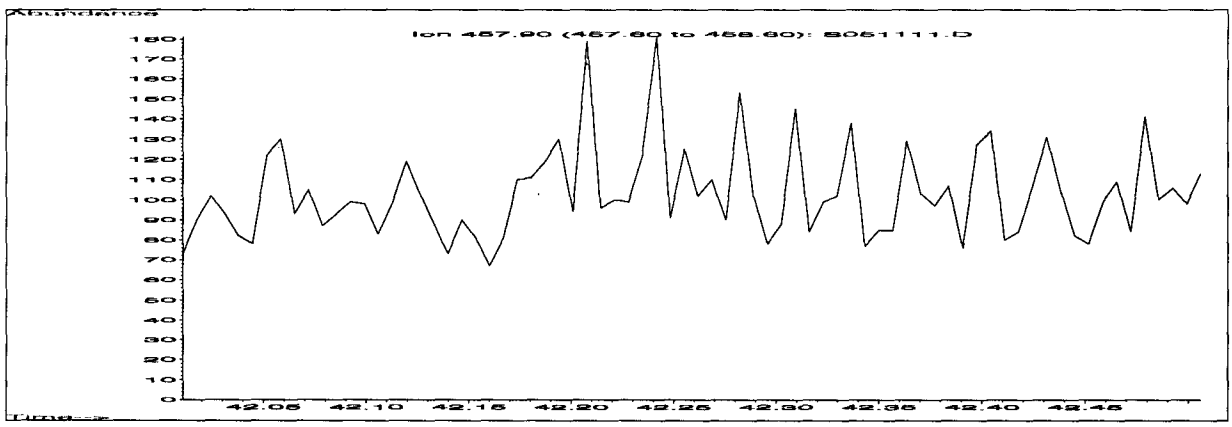
HpCDF TOTAL

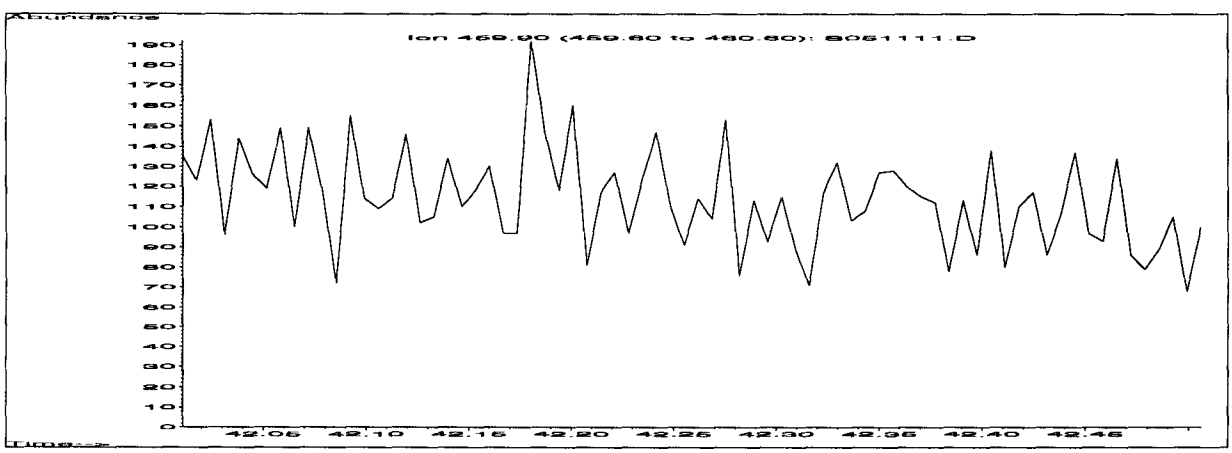
TS R.T. Lower Limit	38.00
TS R.T. Upper Limit	40.00

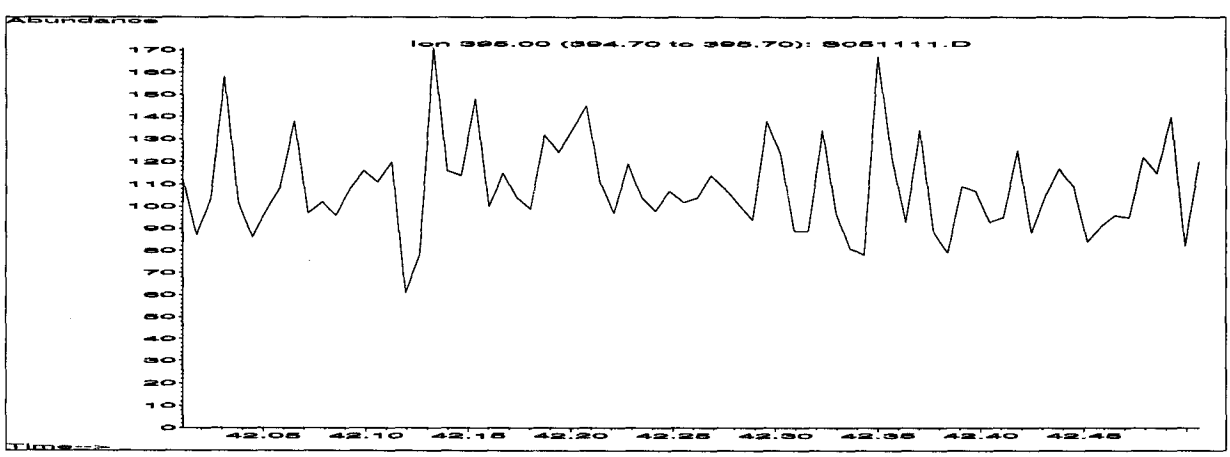


OCDD

TS R.T. Lower Limit	42.01		
TS R.T. Upper Limit	42.51		
Ret. Time	0.00		
Target Ion	457.9	Q1 Ion	459.9
Target Response	0	Q1 Response	0
Total Response	0	Ion ratio	#DIV/0!
Q2 Ion	395		
Q2 Response	0		

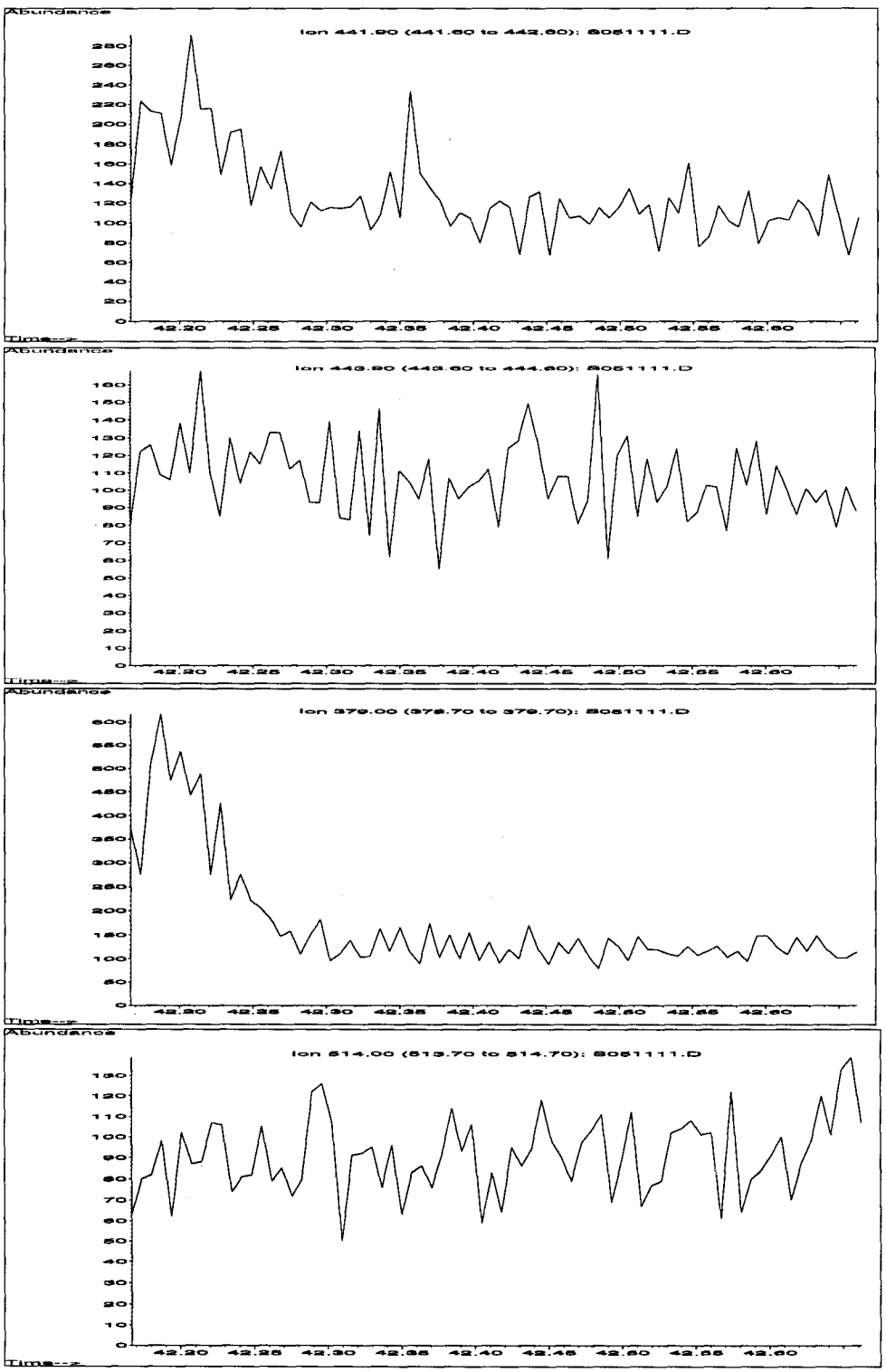






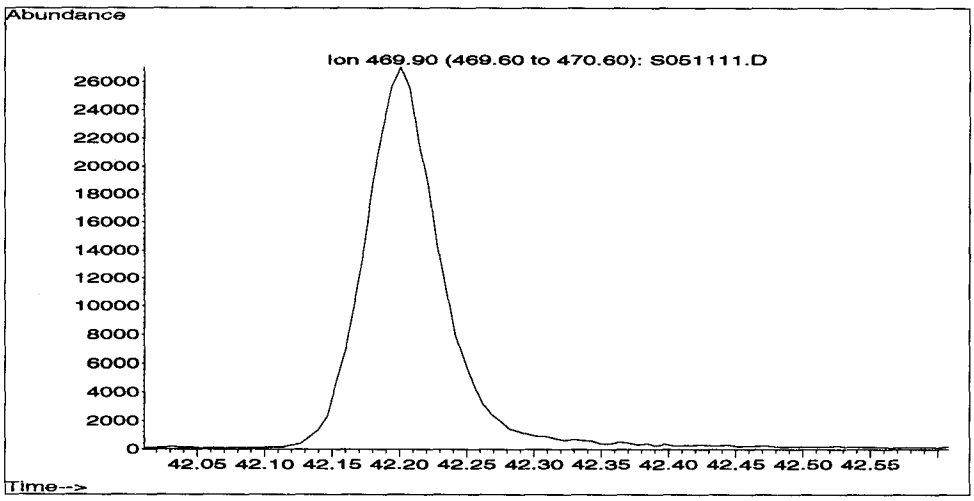
OCDF

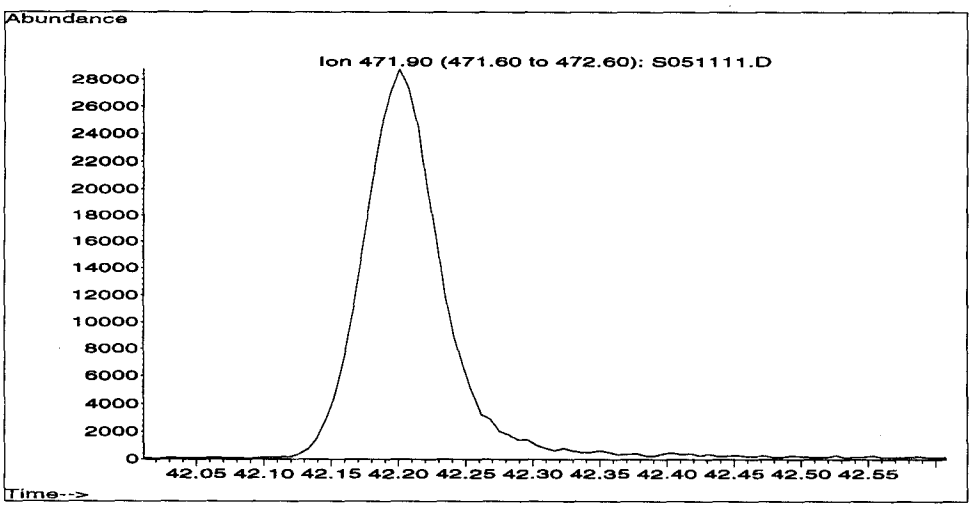
TS R.T. Lower Limit	42.16		
TS R.T. Upper Limit	42.66		
Ret Time	0.00		
Target Ion	441.9	Q1 Ion	443.9
Target Response	0	Q1 Response	0
Target Response	0	Ion Ratio	#DIV/0!
Q2 Ion	379	DPE Ion	514
Q2 Response	0	DPE Response	0



13C-OCDD-IS

RT Lower Limit	42.01		
RT Upper Limit	42.61		
Ret Time	42.20		
Target Ion	469.9	Q1 Ion	471.9
Target Response	105974	Q1 Response	114452
Total response	220426	Ratio	0.93





Quantitation Report (Not Reviewed)

Sample ID: A0D300605-2 1.01413L 8280A
L0VEF-1-AA WATER LR009

Size: 1.014
Inst : DB1

Data File:C:\8280\2DB\051110.B\S051112.D
Acq On :12 May 2010 6:20

Vial: 12
Operator: MEO
Sample Amount: 1.01

MS Integration Params: RTEINT.P
Quant Time: May 12 10:57 2010

Quant Results File: 10MY11C2.RES

Quant Method : C:\8280\ DATA METHODS\10MY11C2.M (RTE Integrator)
Title : Dioxin Furan Total
Last Update : Wed May 12 09:30:50 2010
Response via : Single (C:\8280\2DB\051110.B\ST0511C.D 12 May 2010 1:32)
DataAcq Meth : TOKAS
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

AP 9

Recovery\Internal Stds	R.T.	QIon	Ratio	Response	Conc		Dev(Min)
1) 13C-1234-TCDD	24.03	332+334	0.81	142064	25.00	NG	0.00
5) 13C-123789-HxCDD	36.49	402+404	1.29	190592	25.00	NG	0.00
9) 13C-2378-TCDF	23.21	316+318	0.79	146501	25.00	NG	0.00
15) 13C-2378-TCDD	24.32	332+334	0.80	103220	25.00	NG	0.02
20) 13C-123678-HxCDD	36.21	402+404	1.30	115430	25.00	NG	0.00
27) 13C-1234678-HpCDF	38.19	420+422	1.03	156962	25.00	NG	0.00
36) 13C-OCDD	42.20	470+472	0.92	198180	50.00	NG	0.00

5/13/10 MG

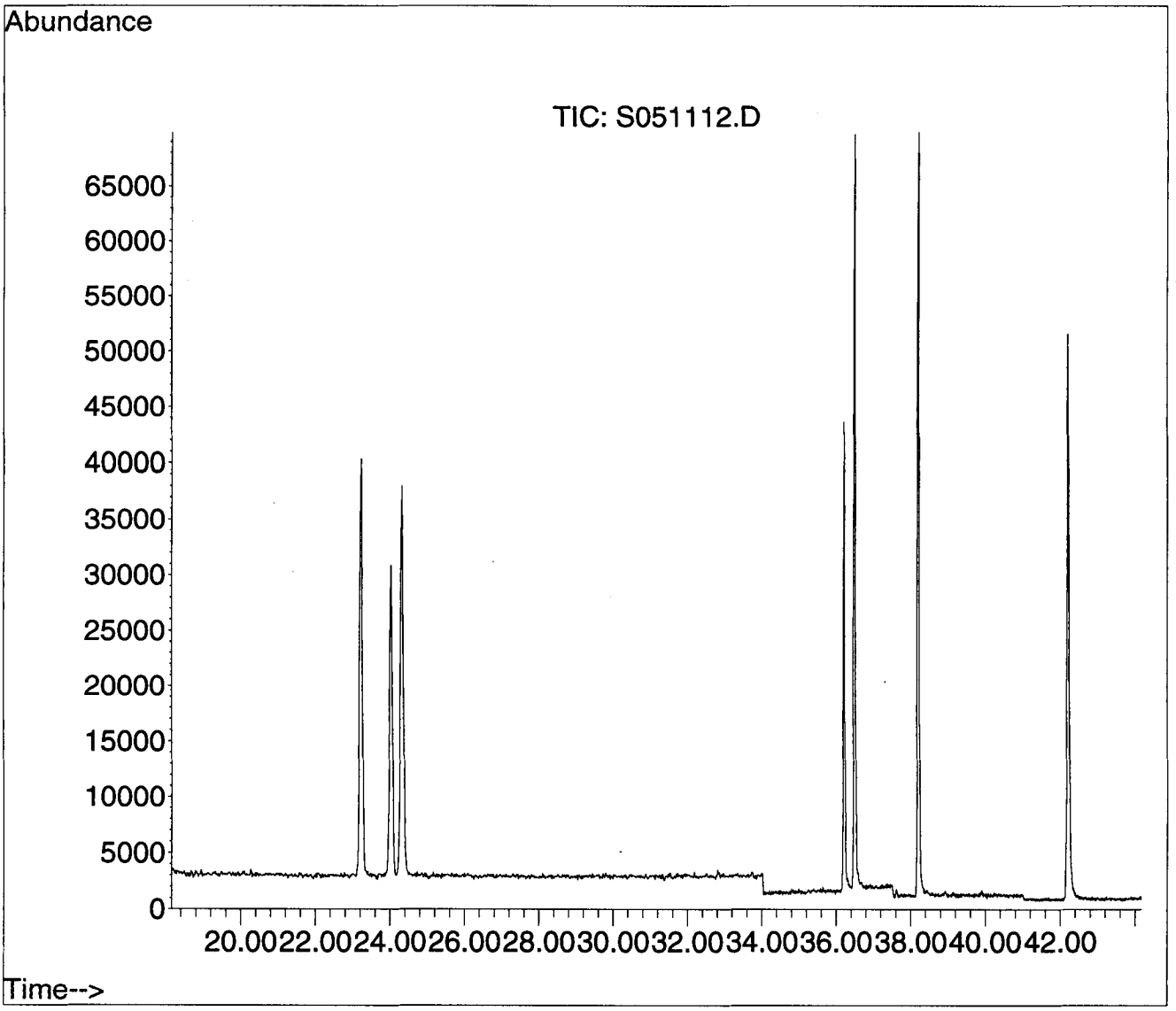
Surrogate Compound							
4) 37Cl-2378-TCDD	24.33	328		82249	10.278	NG	0.00
Spiked Amount = 12.326		RRF = 1.389		Recovery =	83.36%		

Target Compounds	RT	Ratio	Area	RRF	Conc	EDL	%Rec
2) 13C-2378-TCDF-IS	23.21	0.79	146501	1.428	17.799	0.0449	72.2
3) 13C-2378-TCDD-IS	24.32	0.80	103220	0.983	18.218	3.7389	73.9
6) 13C-123678-HxCDD-	36.21	1.30	115338	0.796	18.730	0.1005	76.0
7) 13C-1234678-HpCDF	38.19	1.03	156962	1.010	20.098	0.0621	81.5
8) 13C-OCDD-IS	42.20	0.92	198180	0.659	38.922	0.1840	78.9
10) 2378-TCDF	0.00		0	1.265	N.D.	0.2601	
11) TCDF TOTAL	22.00		0	1.265	N.D.	0.3818	
12) 12378-PeCDF	0.00		0	1.136	N.D.	0.3013	
13) 23478-PeCDF	0.00		0	1.137	N.D.	0.2824	
14) PeCDF TOTAL	29.50		0	1.136	N.D.	0.4928	
16) 2378-TCDD	0.00		0	1.221	N.D.	0.2740	
1	23.22	5.16 #	13623		2.664		
17) TCDD TOTAL	22.50	5.16	13623	1.221	2.664		
18) 12378-PeCDD	0.00		0	1.142	N.D.	0.3720	
19) PeCDD TOTAL	30.00		0	1.142	N.D.	0.5564	
21) 123478-HxCDD	0.00		0	1.012	N.D.	0.1833	
22) 123678-HxCDD	0.00		0	0.981	N.D.	0.1892	
23) 123789-HxCDD	0.00		0	1.038	N.D.	0.2402	
24) HxCDD TOTAL	36.50		0	0.981	N.D.	0.2792	
25) 1234678-HpCDD	0.00		0	1.039	N.D.	0.2297	
26) HpCDD TOTAL	39.35		0	1.039	N.D.	0.5665	
28) 123478-HxCDF	0.00		0	0.984	N.D.	0.1161	
29) 123678-HxCDF	0.00		0	1.042	N.D.	0.0962	
30) 234678-HxCDF	0.00		0	0.970	N.D.	0.1321	
31) 123789-HxCDF	0.00		0	0.928	N.D.	0.1681	
32) HxCDF TOTAL	36.00		0	0.928	N.D.	0.2821	
33) 1234678-HpCDF	0.00		0	1.160	N.D.	0.1200	
34) 1234789-HpCDF	0.00		0	1.006	N.D.	0.1508	
35) HpCDF TOTAL	39.50		0	1.006	N.D.	0.6420	
37) OCDD	0.00		0	1.102	N.D.	0.2490	

38) OCDF	0.00	0	1.397	N.D.	0.4495

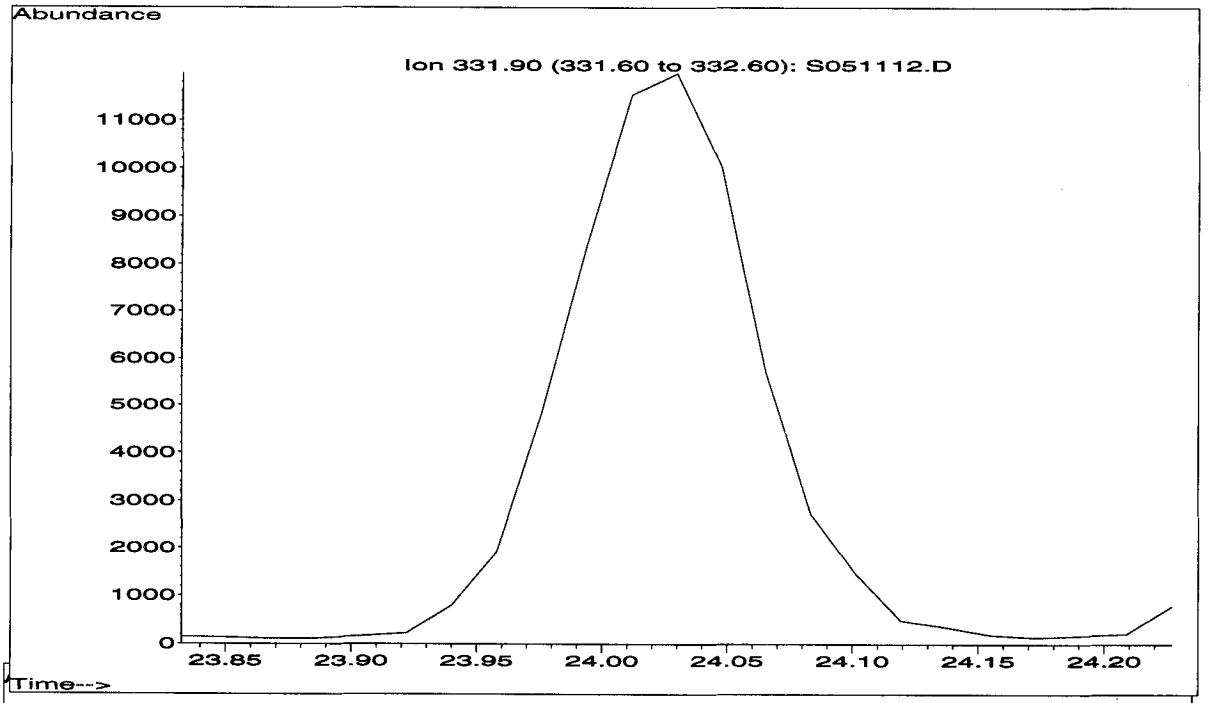
(#) = qualifier out of range•: areas and concentration based on theoretical ion ratio
(m) = manual integration
S051112.D 10MY11C2.M Wed May 12 10:57:08 2010

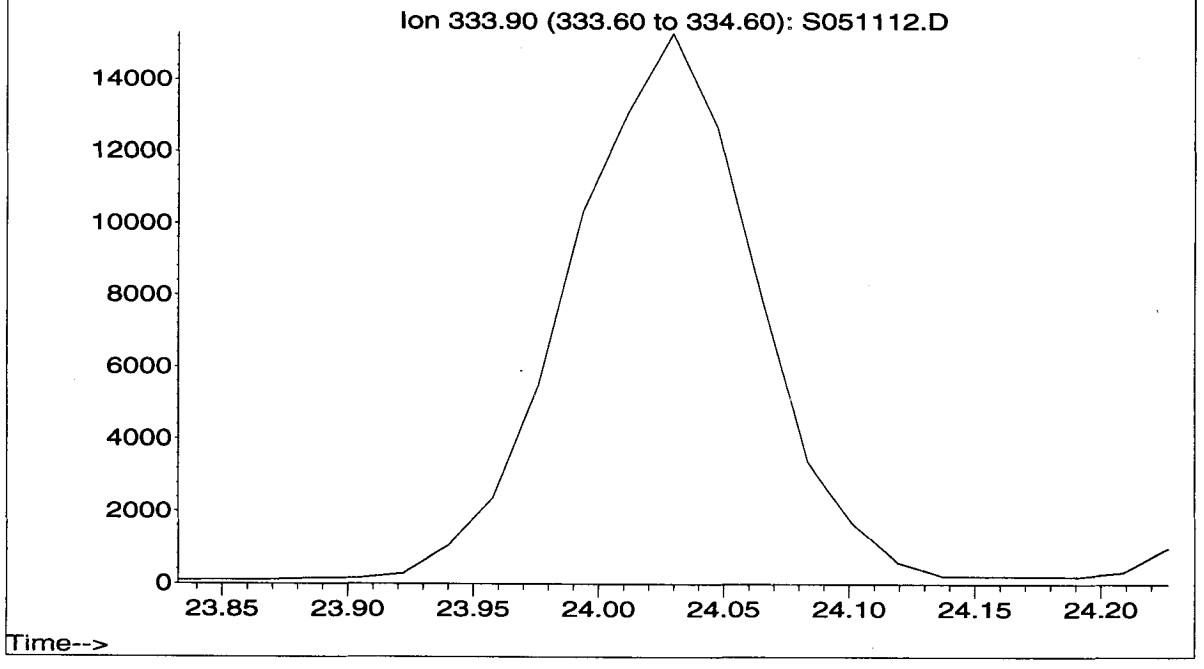
Data File Name	S051112.D
Data File Path	C:\8280\2DB\051110.B\
Operator	MEO
Date Acquired	5/12/2010 6:20
Acq. Method File	TOKAS
Sample Name	L0VEF-1-AA WATER LR009
Misc Info	D300605-2 1.01413L 8280A
Vial Number	12
Instrument Name	2DB
Sample Multiplier	1
Sample Amount	1.01413



13C-1234-TCDD

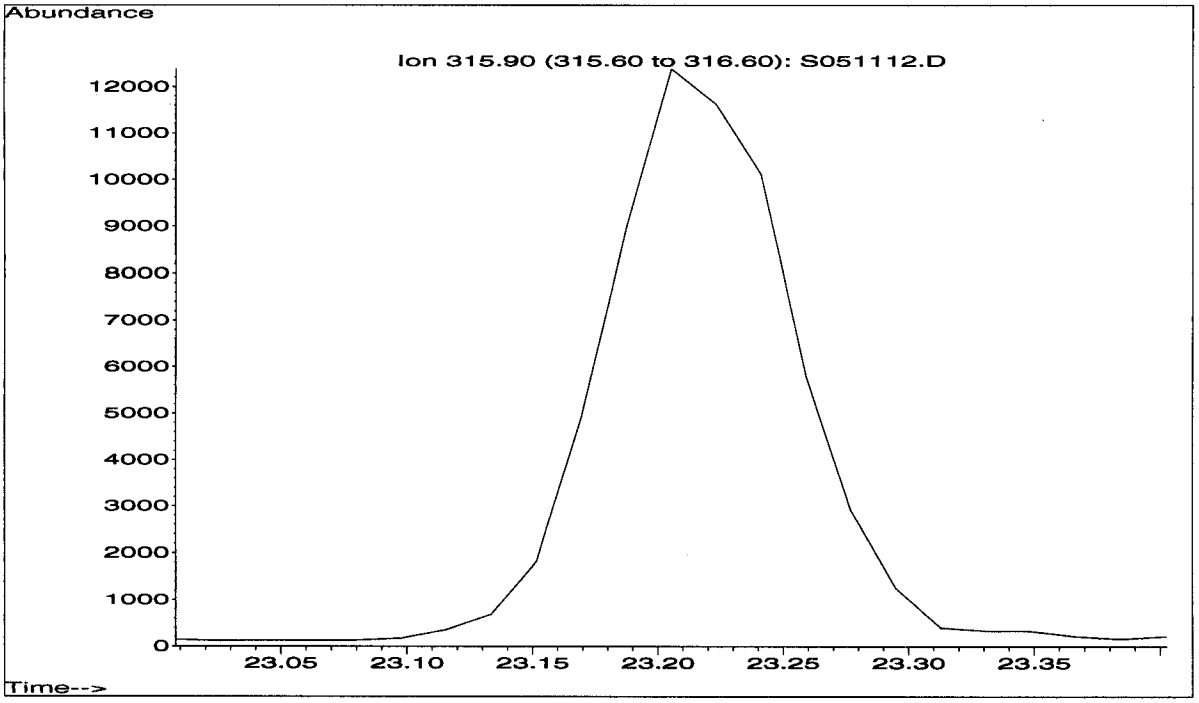
TS R.T. Lower Limit	23.83		
TS R.T. Upper Limit	24.23		
Ret Time	24.03		
Target Ion	331.9	Q1 Ion	333.9
Target Response	63612	Q1 Response	78452
Total Response	142064	Ion Ratio	0.81

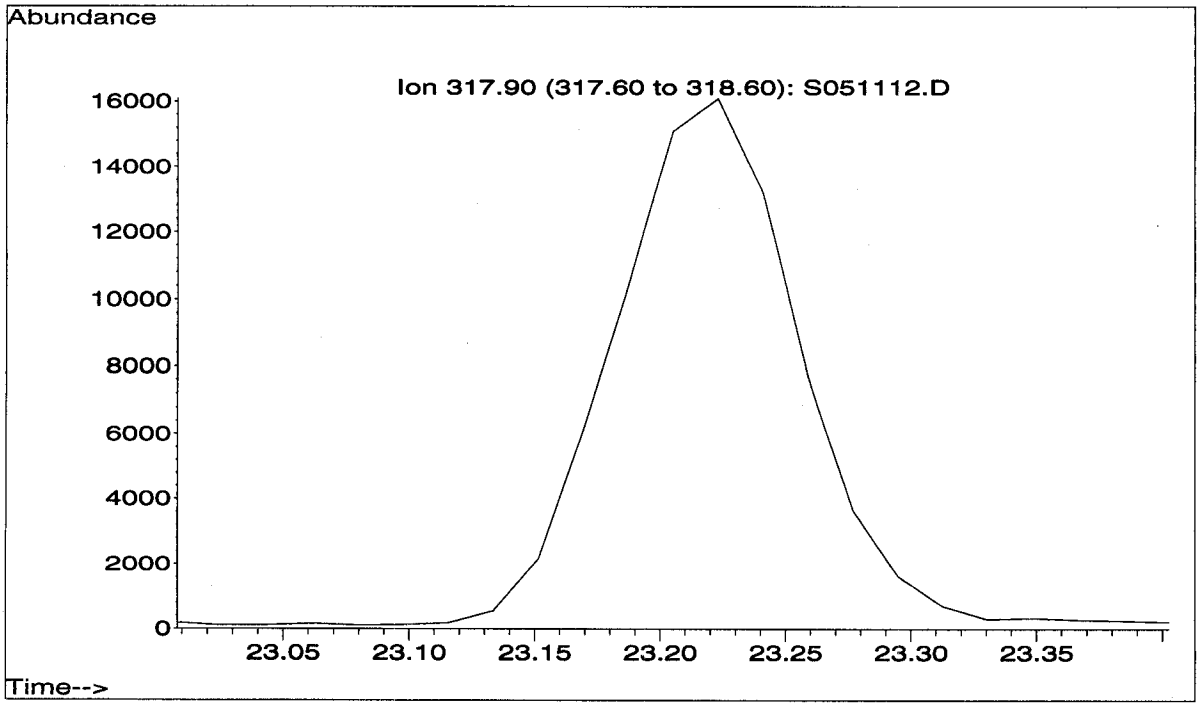




13C-2378-TCDF-IS

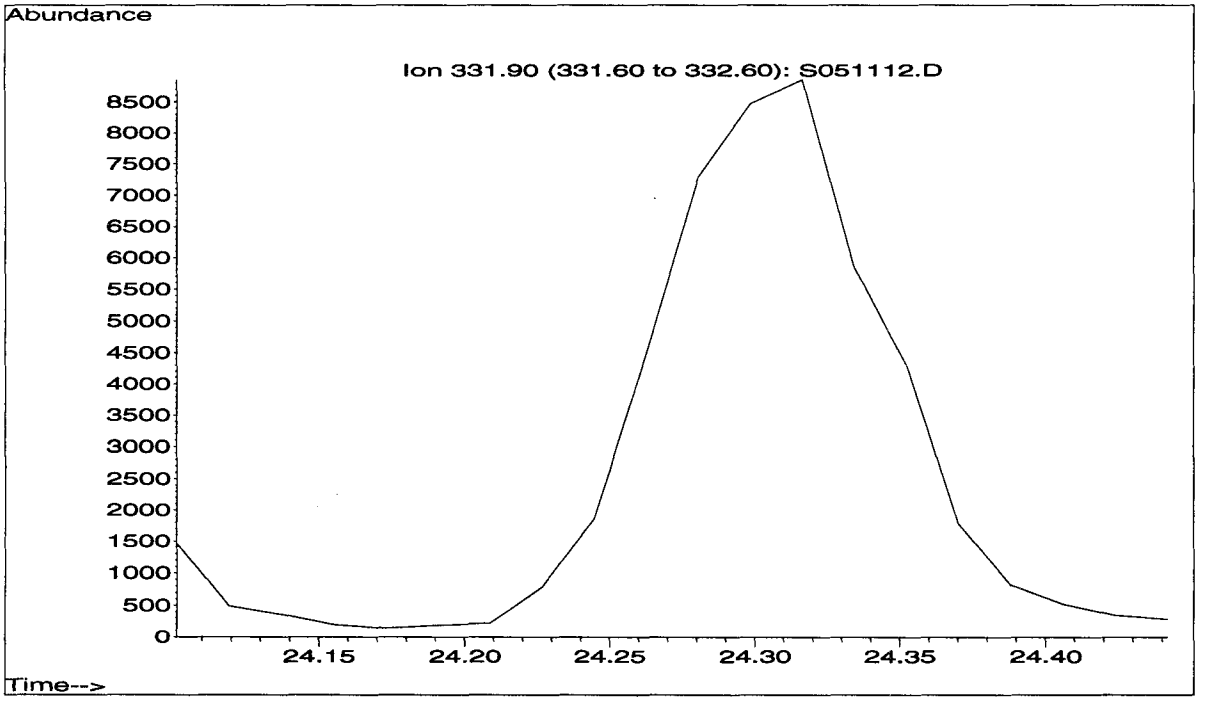
TS R.T. Lower Limit	23.01		
TS R.T. Upper Limit	23.41		
Ret Time	23.21		
Target Ion	315.9	Q1 Ion	317.9
Target Response	64438	Q1 Response	82063
Target Response	146501	Ion Ratio	0.79

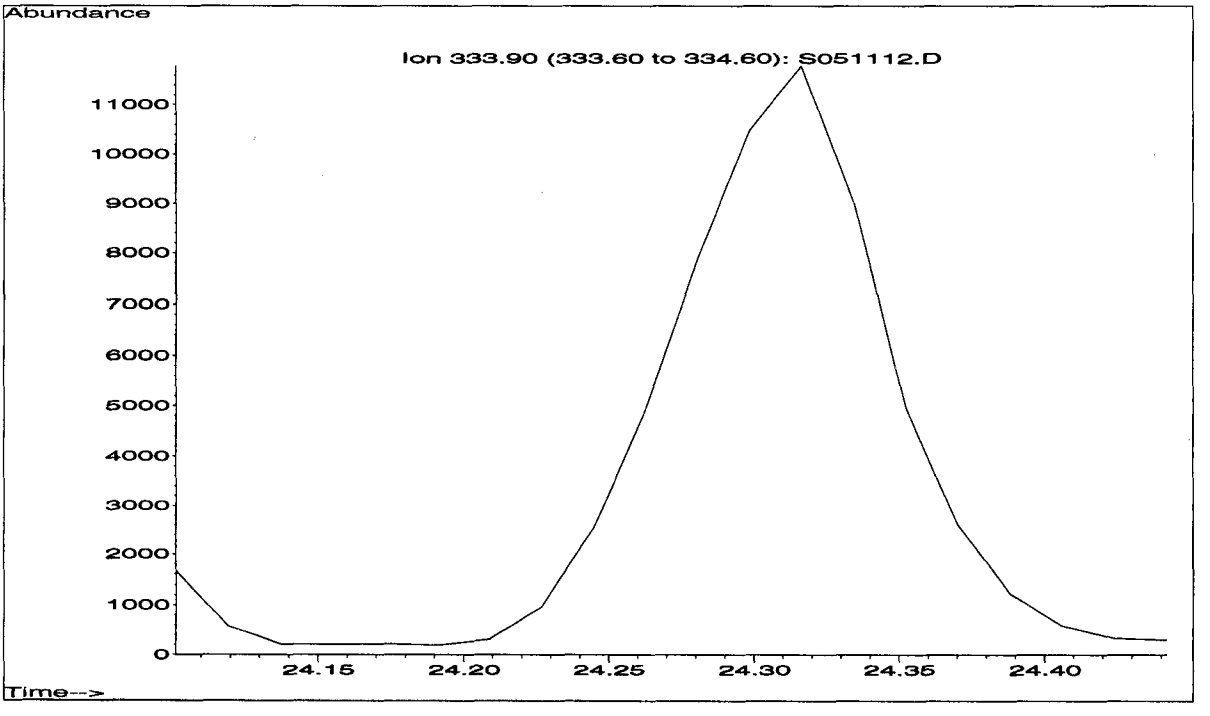




13C-2378-TCDD-IS

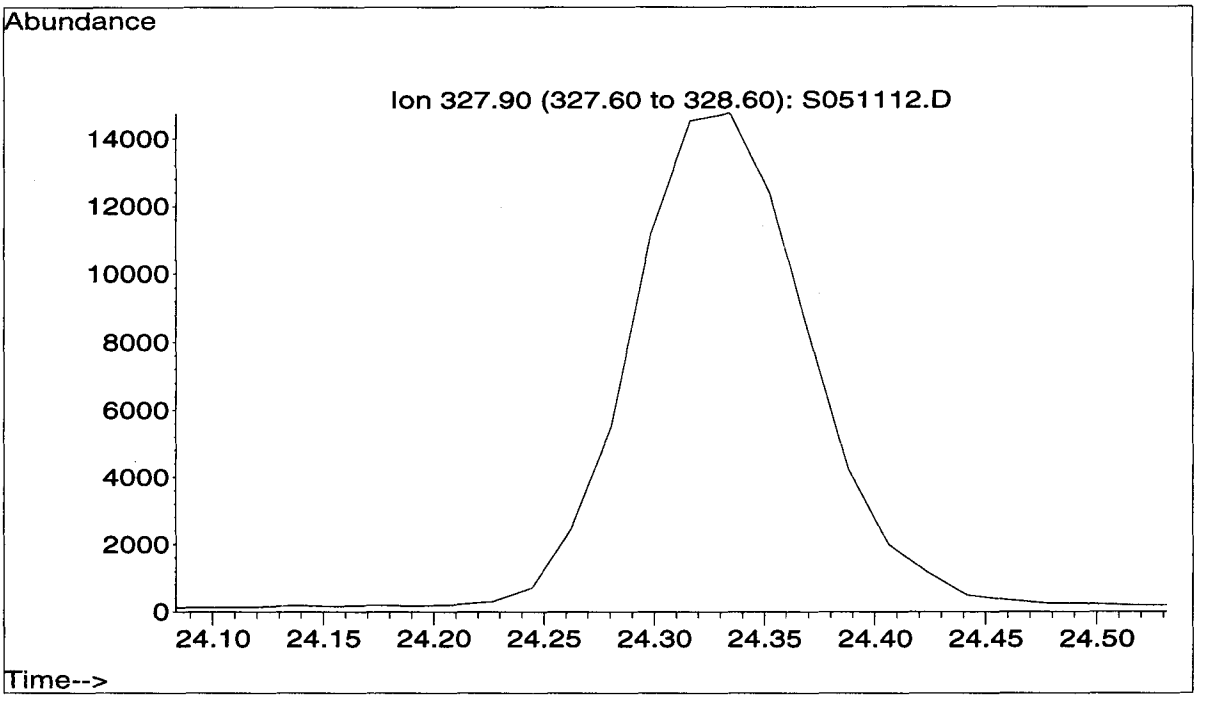
TS R.T. Lower Limit	24.10		
TS R.T. Upper Limit	24.45		
Ret Time	24.32		
Target Ion	331.9	Q1 Ion	333.9
Target Response	45732	Q1 Response	57488
Total Response	103220	Ion Ratio	0.80

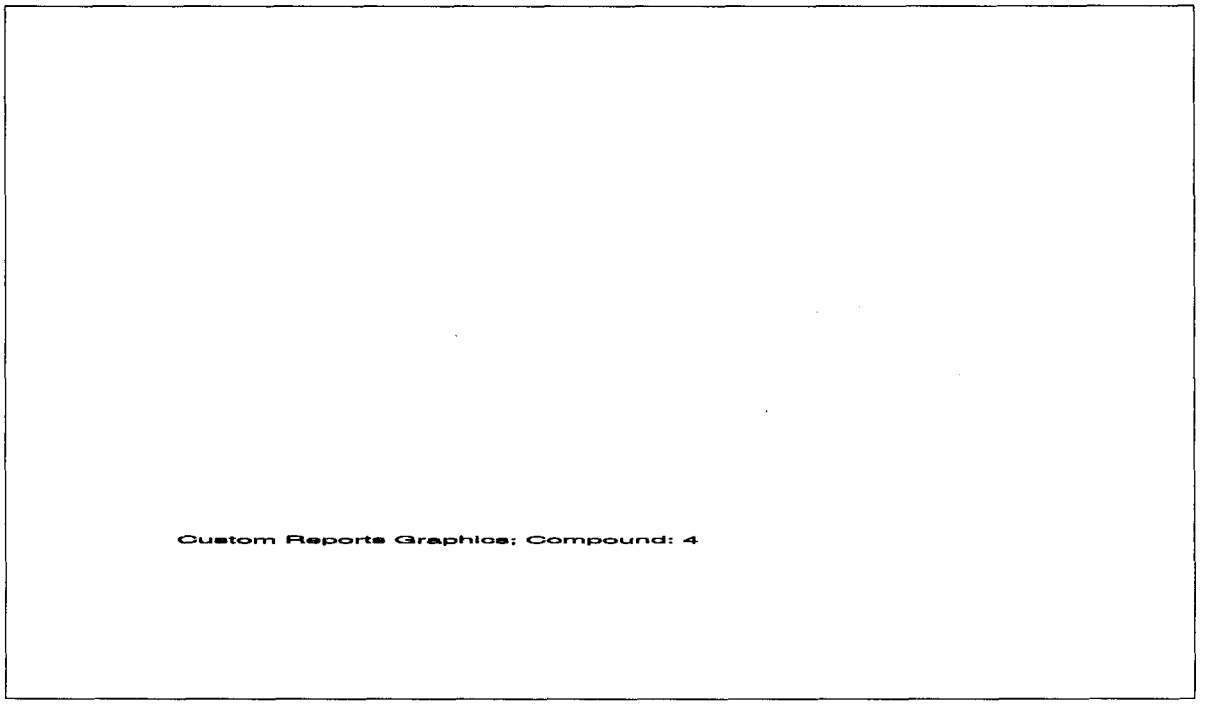




37Cl-2378-TCDD

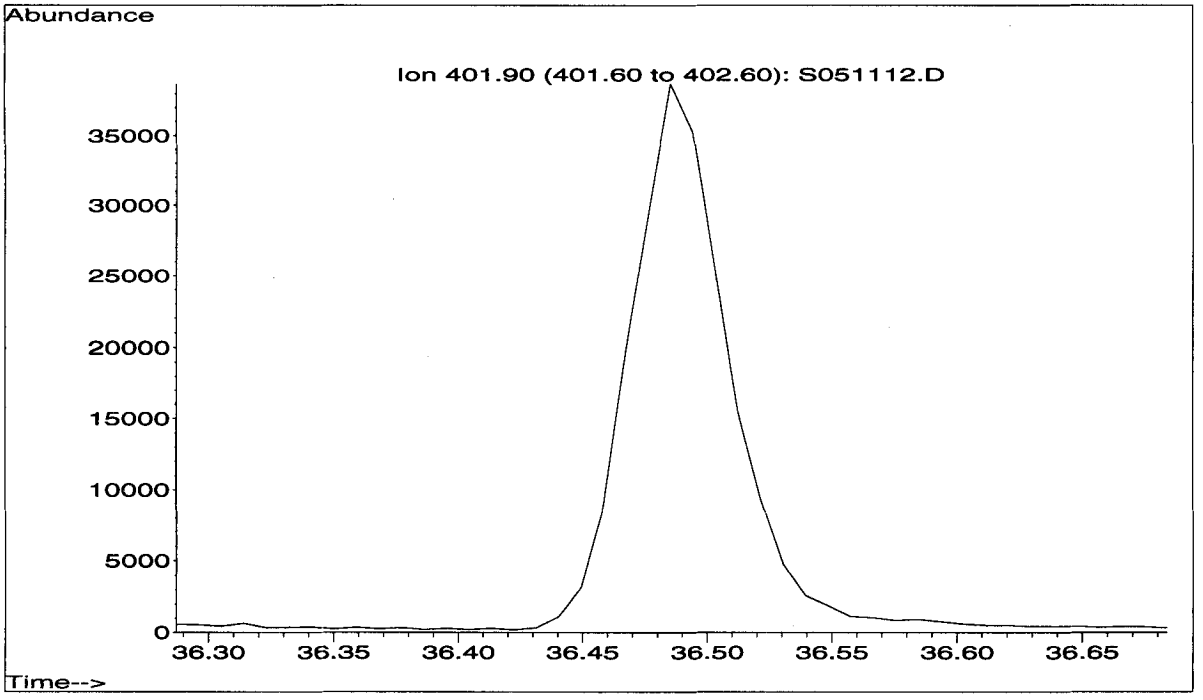
TS R.T. Lower Limit	24.09		
TS R.T. Upper Limit	24.54		
Ret Time	24.33		
Target Ion	327.9	Q1 Ion	0
Target Response	82249	Q1 Response	0
Total Response	82249	Ion Ratio	#DIV/0!

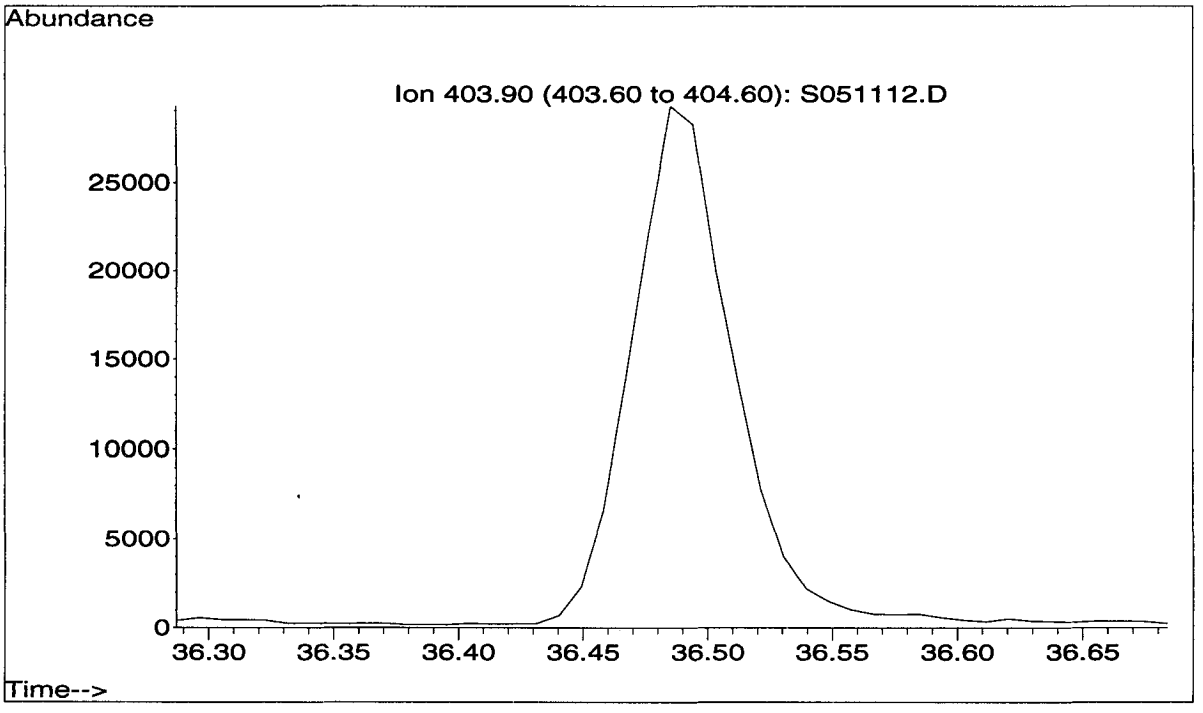




13C-123789-HxCDD

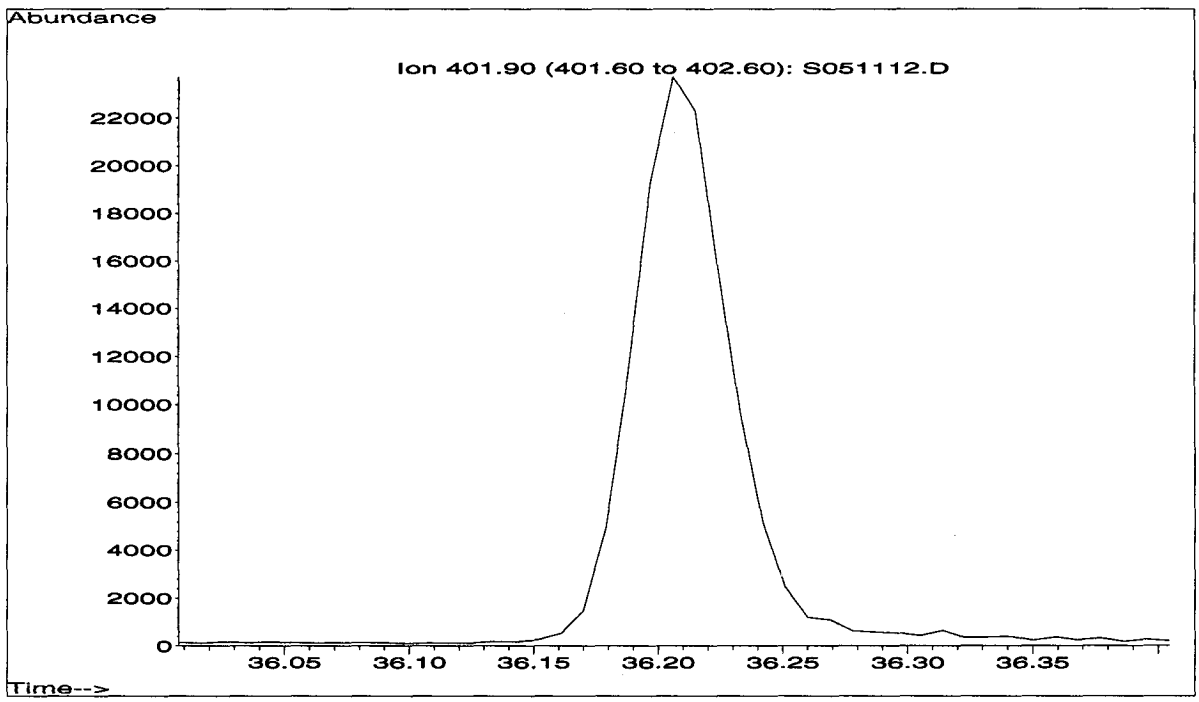
TS R.T. Lower Limit	36.29		
TS R.T. Upper Limit	36.69		
Ret Time	36.49		
Target Ion	401.9	Q1 Ion	403.9
Target Response	107343	Q1 Response	83249
Target Response	190592	Ion Ratio	1.29

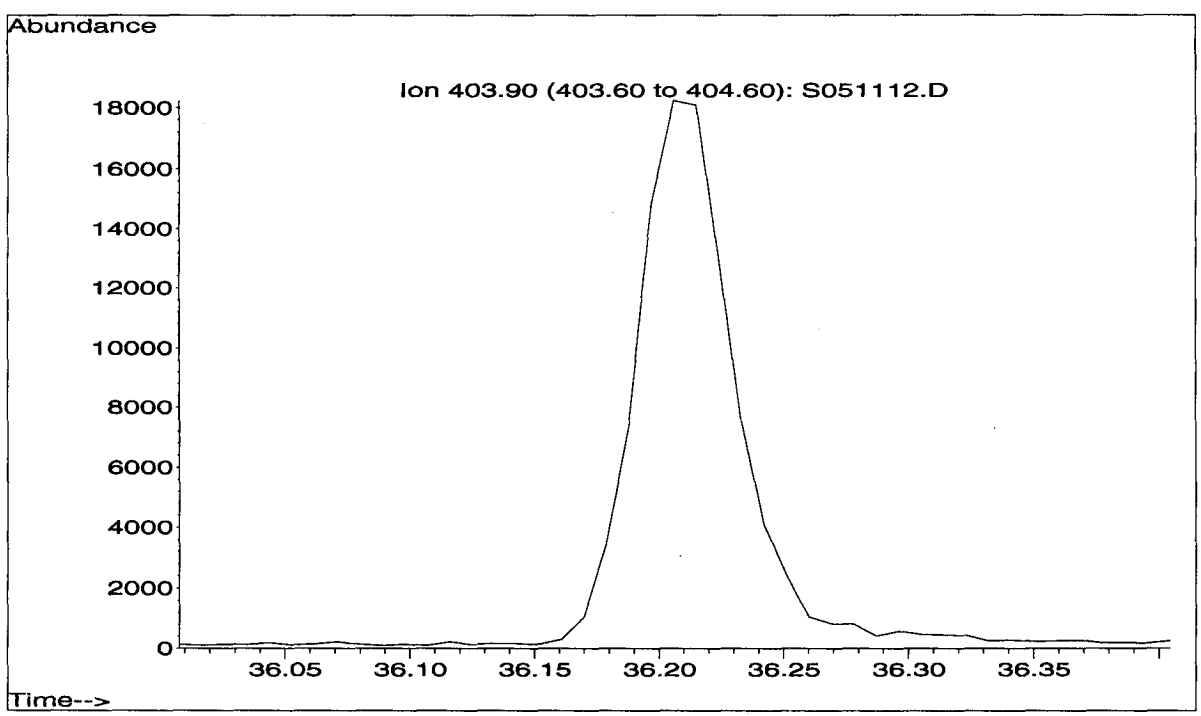




13C-123678-HxCDD-IS

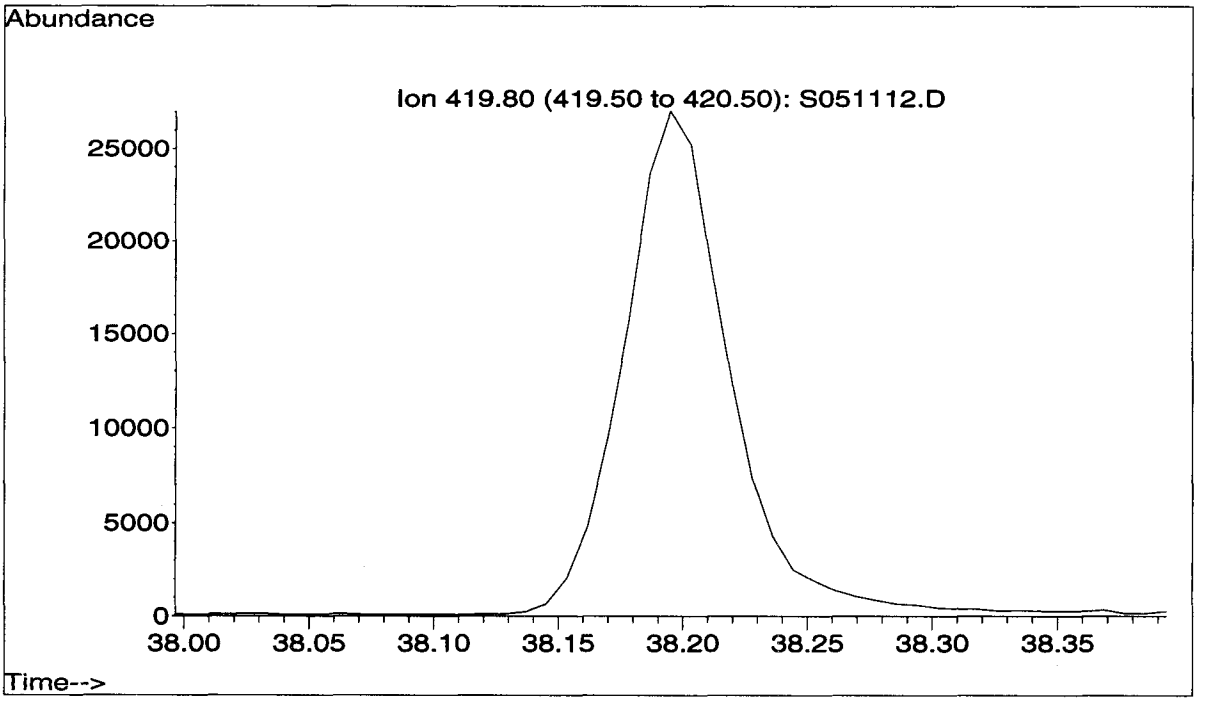
TS R.T. Lower Limit	36.01		
TS R.T. Upper Limit	36.41		
Ret Time	36.21		
Target Ion	401.9	Q1 Ion	403.9
Target Response	65151	Q1 Response	50187
Total Response	115338	Ion Ratio	1.30

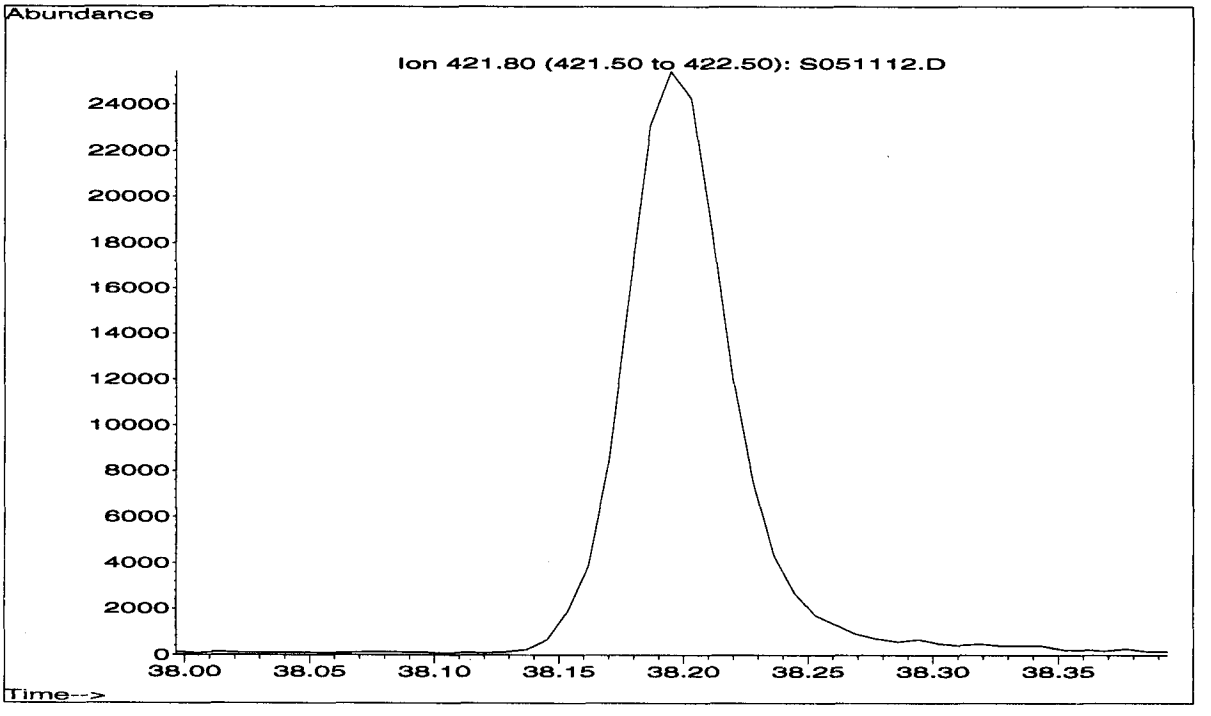




13C-1234678-HpCDF-IS

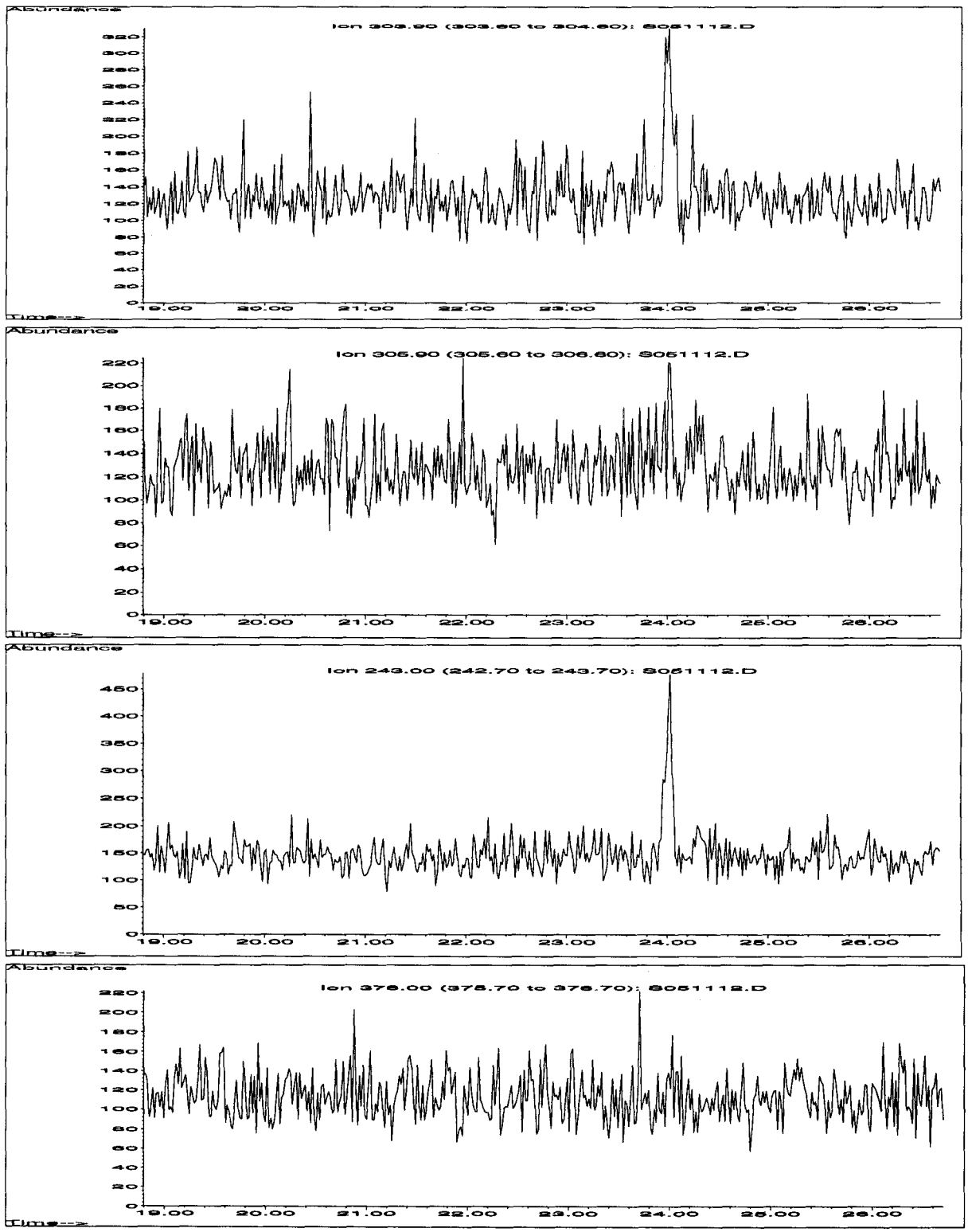
TS R.T. Lower Limit	37.99		
TS R.T. Upper Limit	38.39		
Ret Time	38.19		
Target Ion	419.8	Q1 Ion	421.8
Target Response	79595	Q1 Response	77367
Target Response	156962	Ion Ratio	1.03





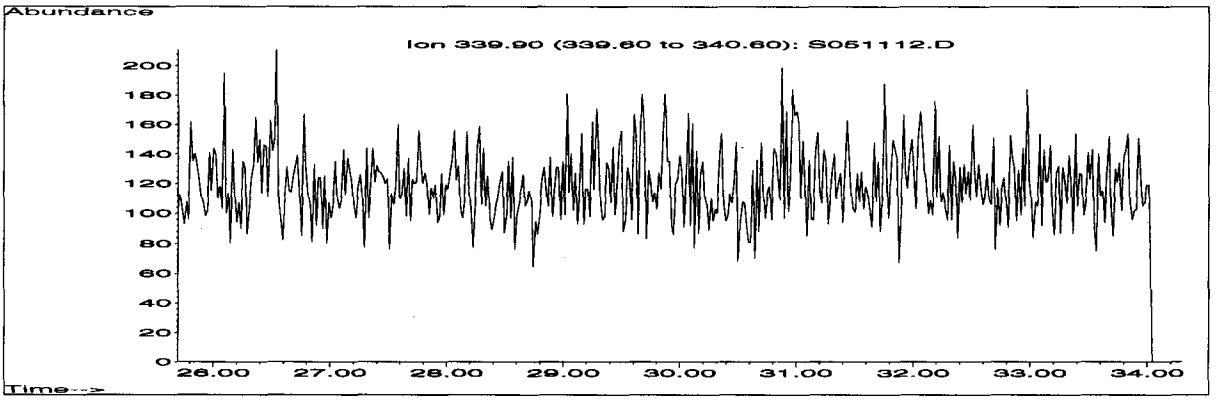
TCDF TOTAL

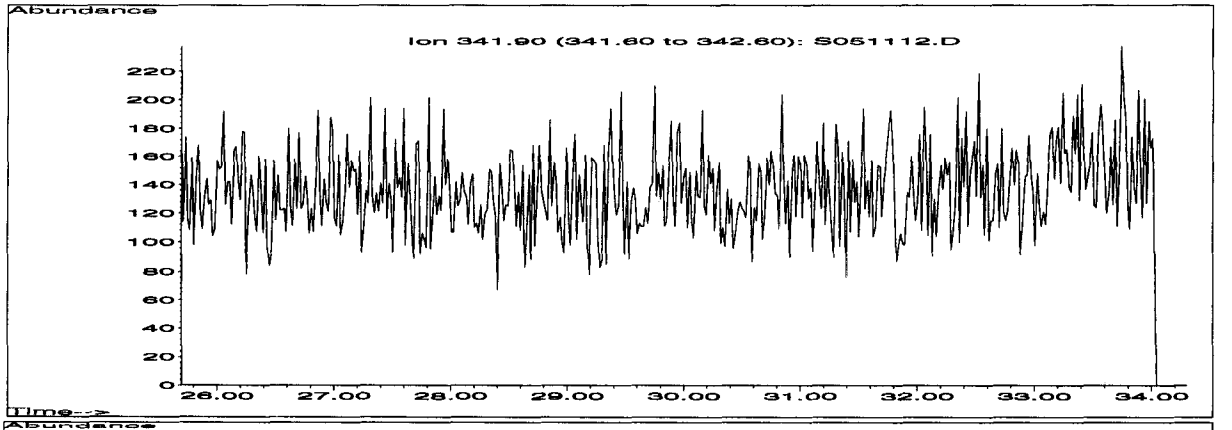
TS R.T. Lower Limit	18.80
TS R.T. Upper Limit	26.70

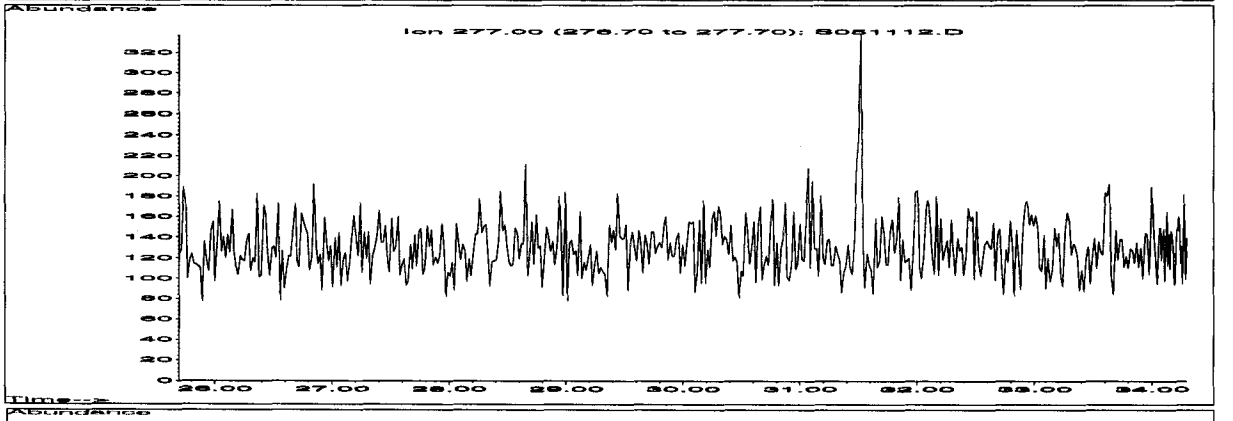


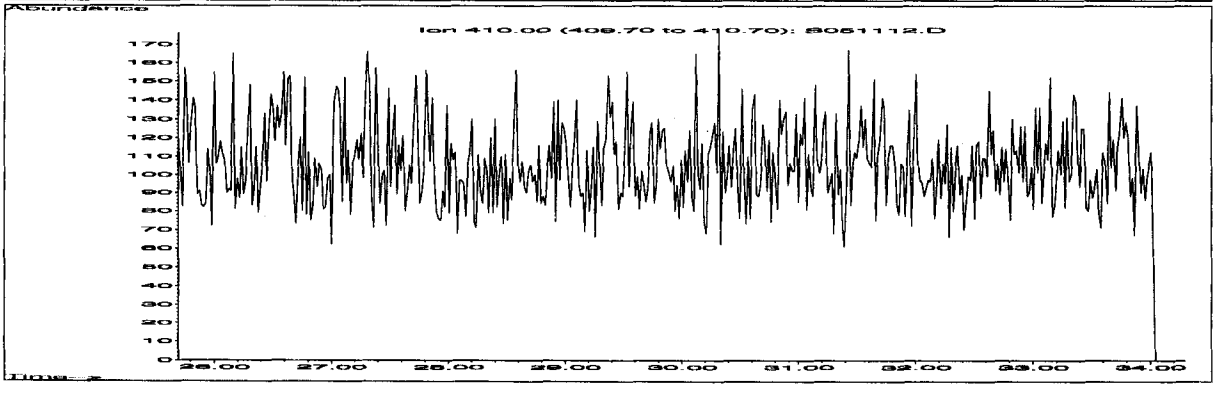
PeCDF TOTAL

TS R.T. Lower Limit	25.70
TS R.T. Upper Limit	34.30



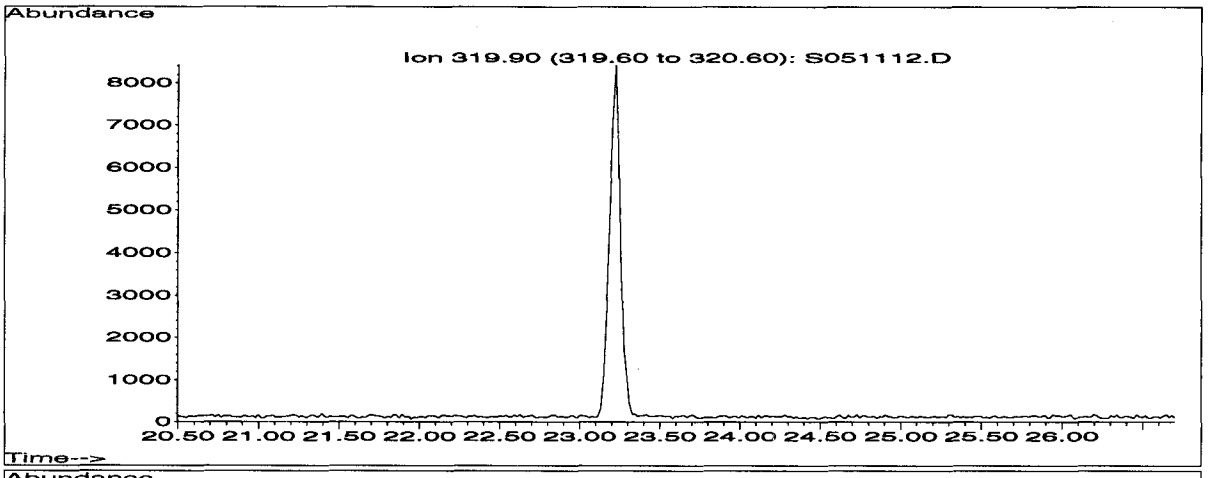


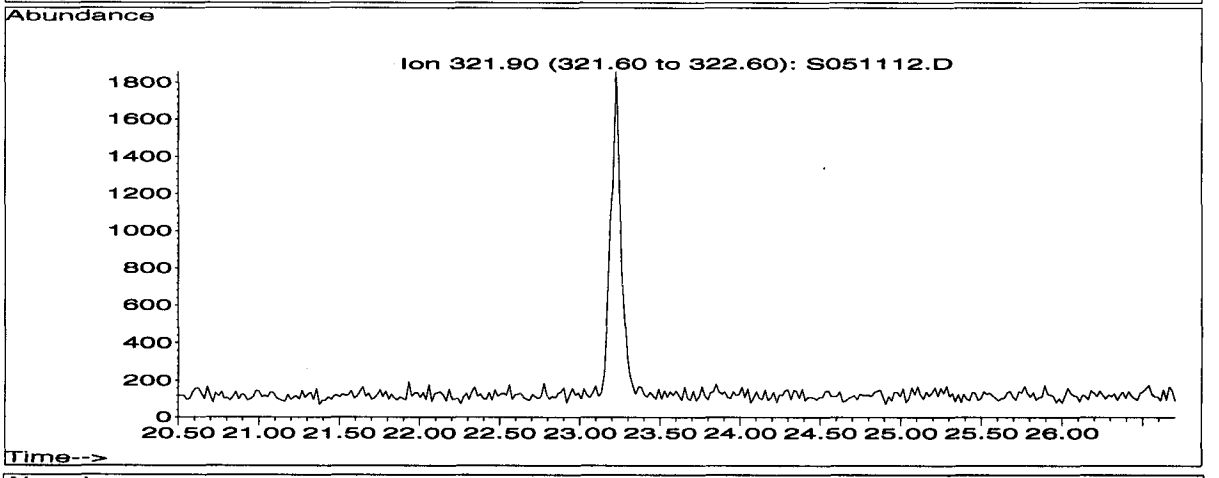


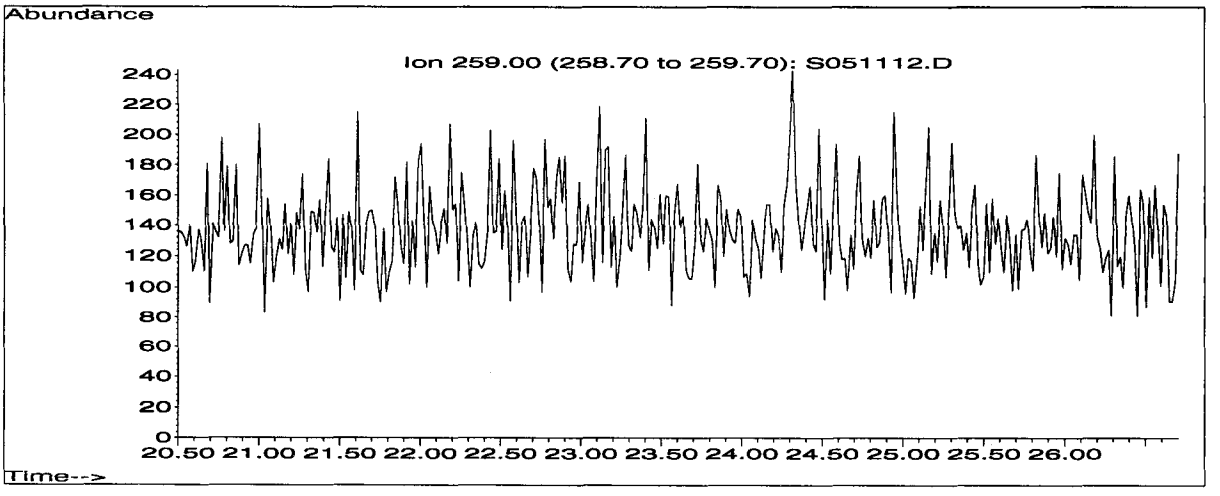


TCDD TOTAL

TS R.T. Lower Limit	20.50
TS R.T. Upper Limit	26.70

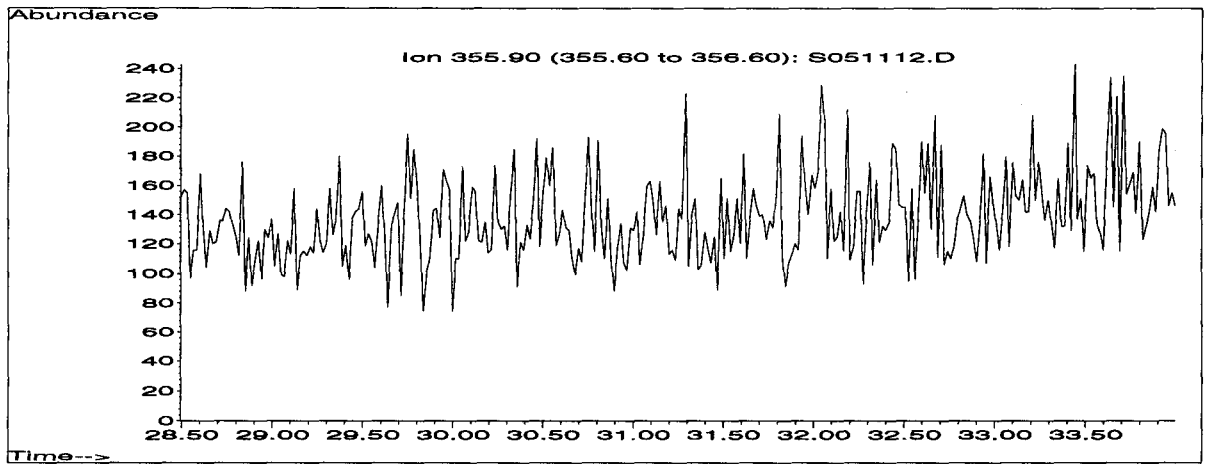


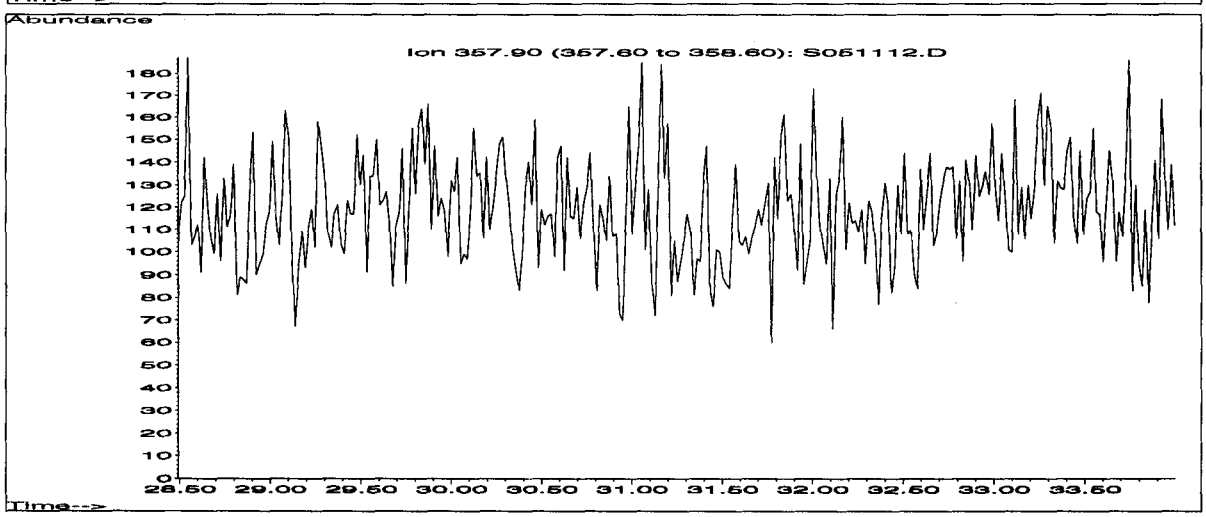


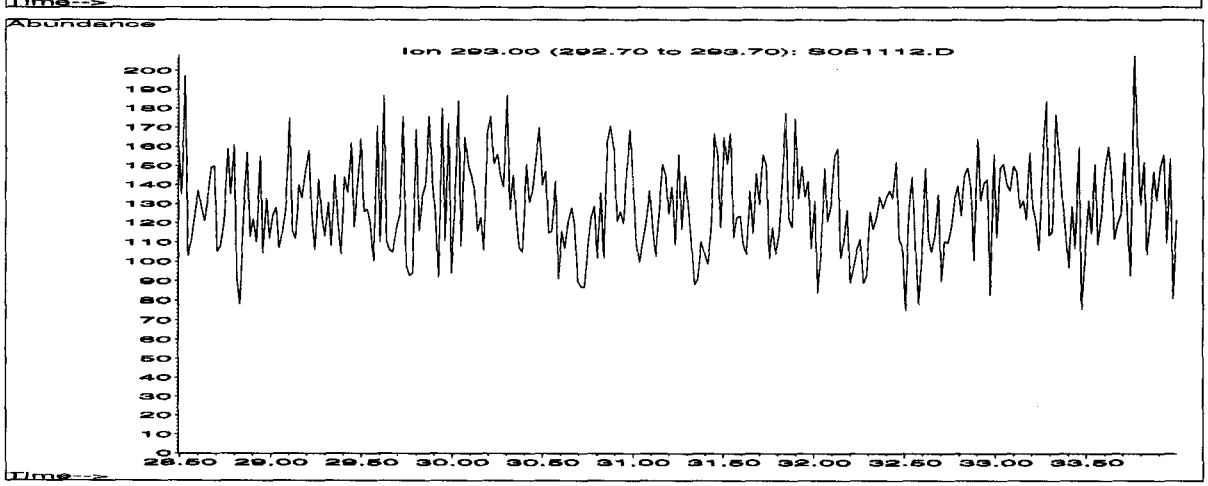


PeCDD TOTAL

TS R.T. Lower Limit	28.50
TS R.T. Upper Limit	34.00

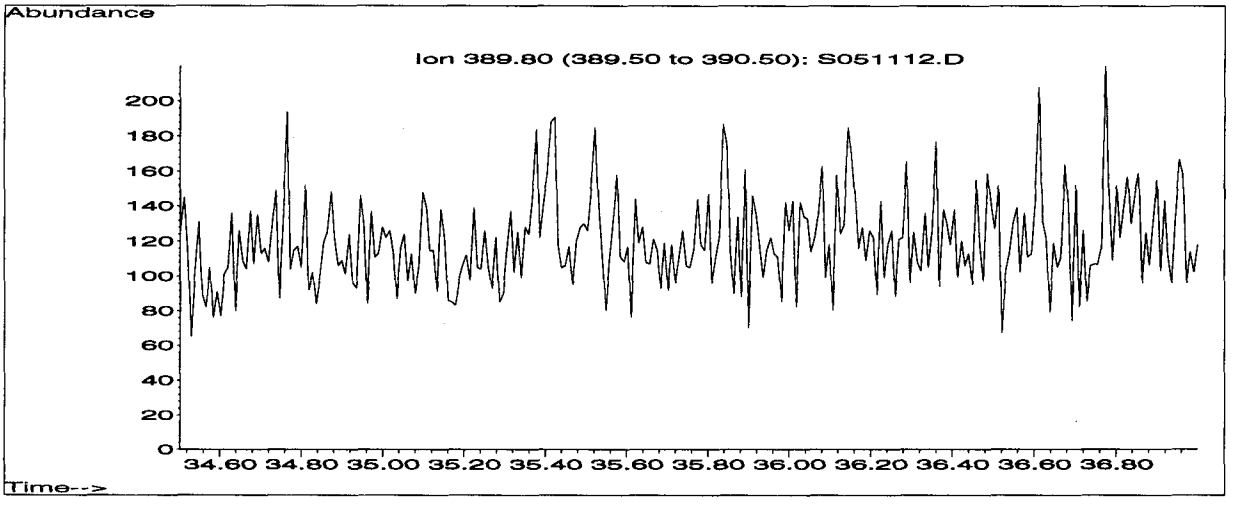


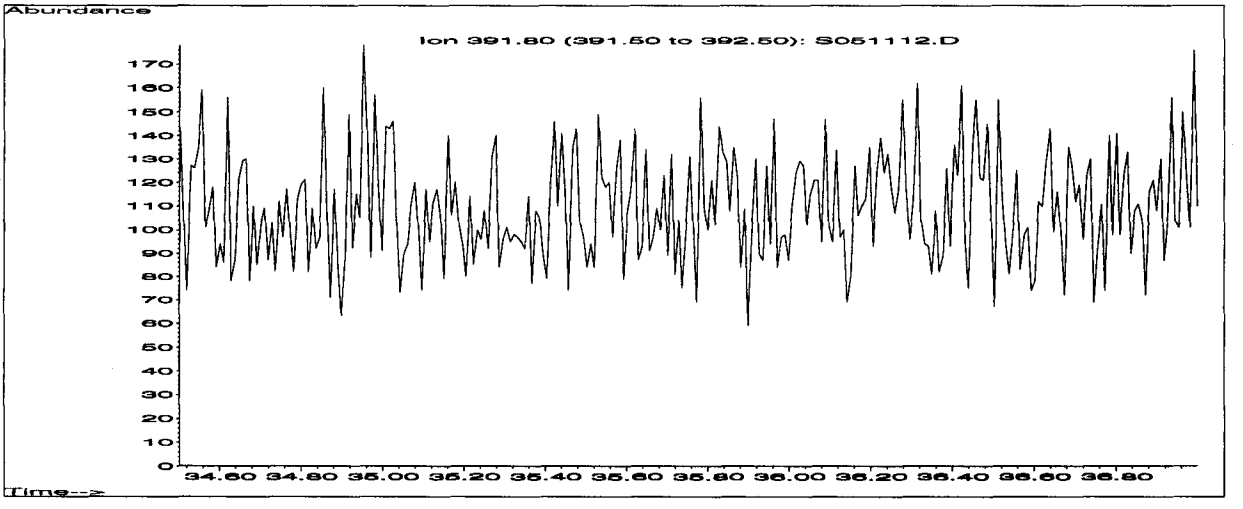


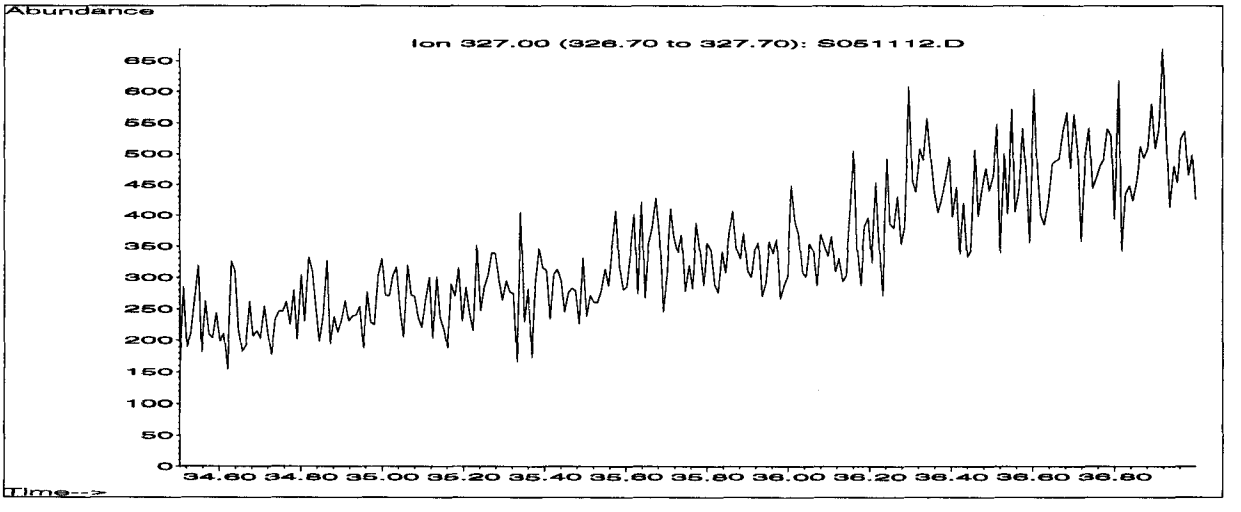


HxCDD TOTAL

TS R.T. Lower Limit	34.50
TS R.T. Upper Limit	37.00

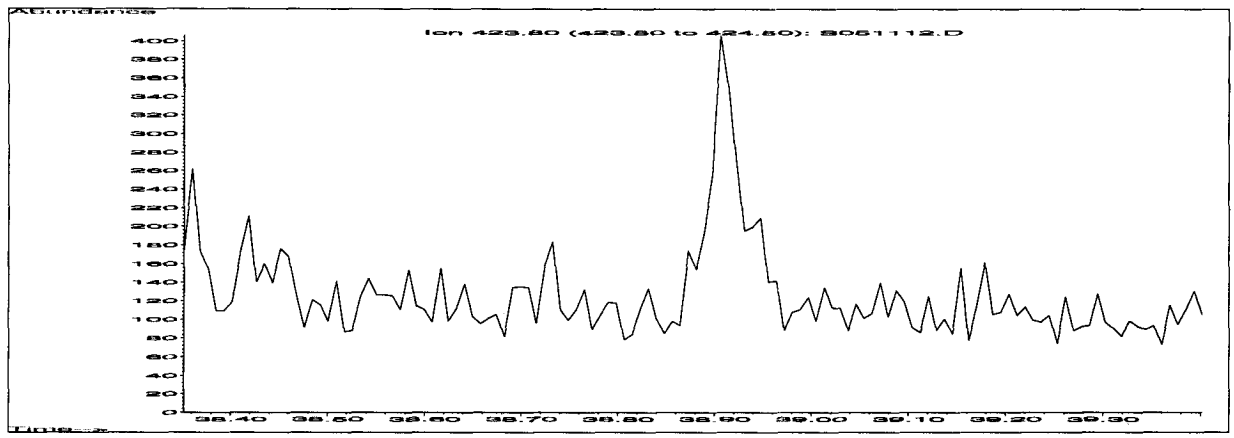


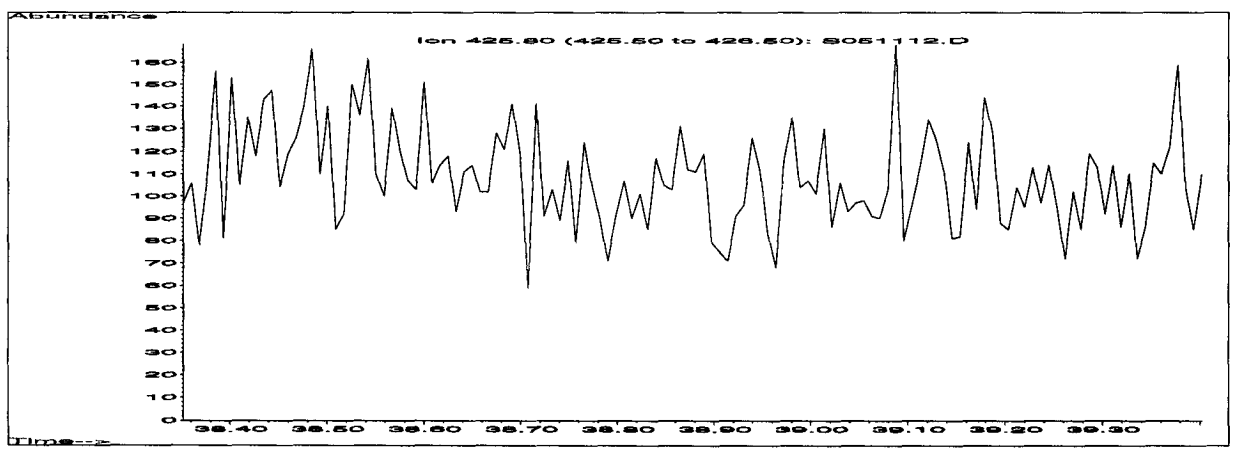


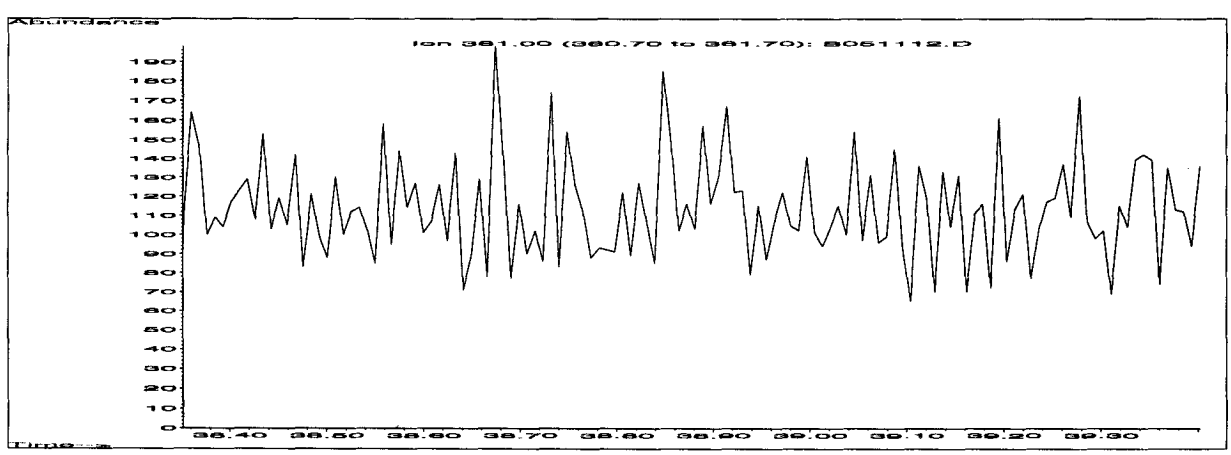


HpCDD TOTAL

TS R.T. Lower Limit	38.35
TS R.T. Upper Limit	39.40

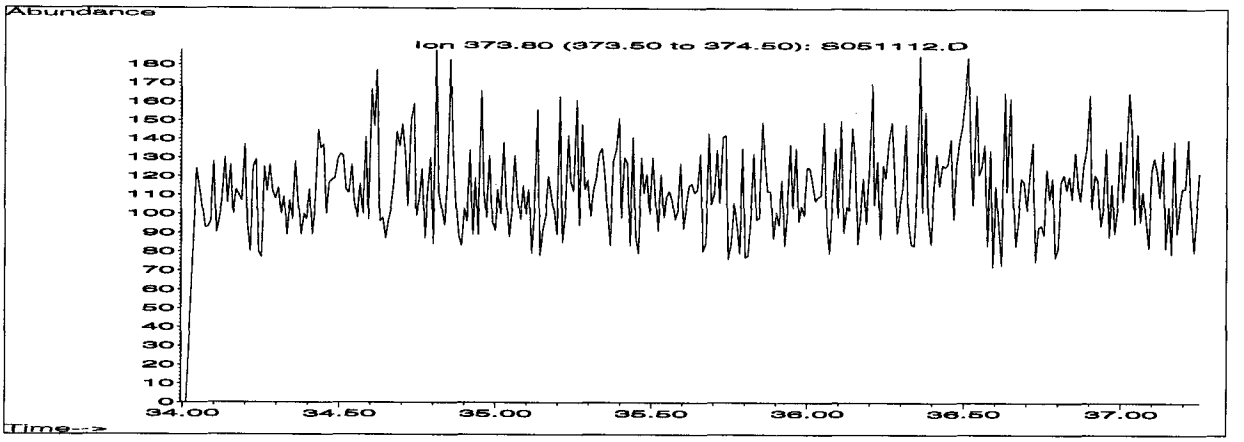


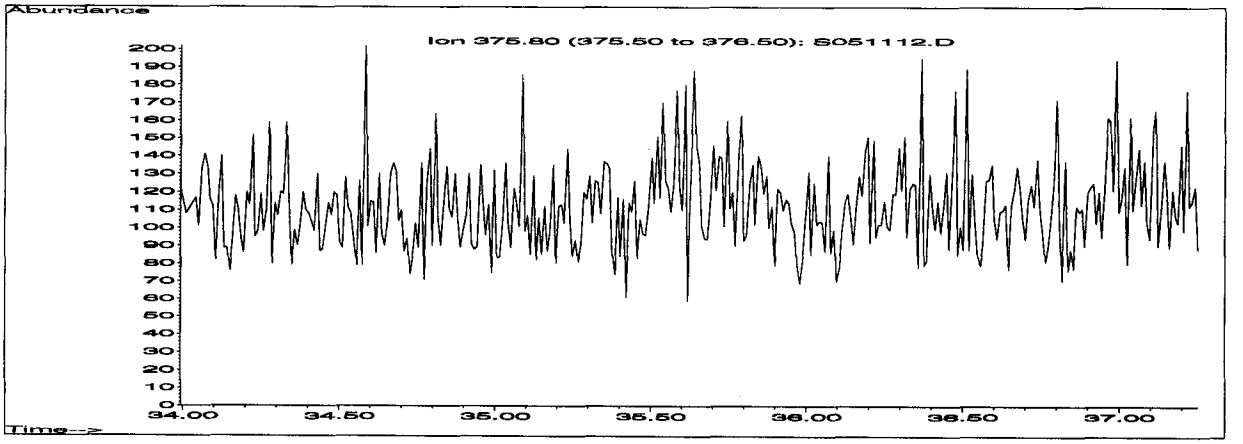


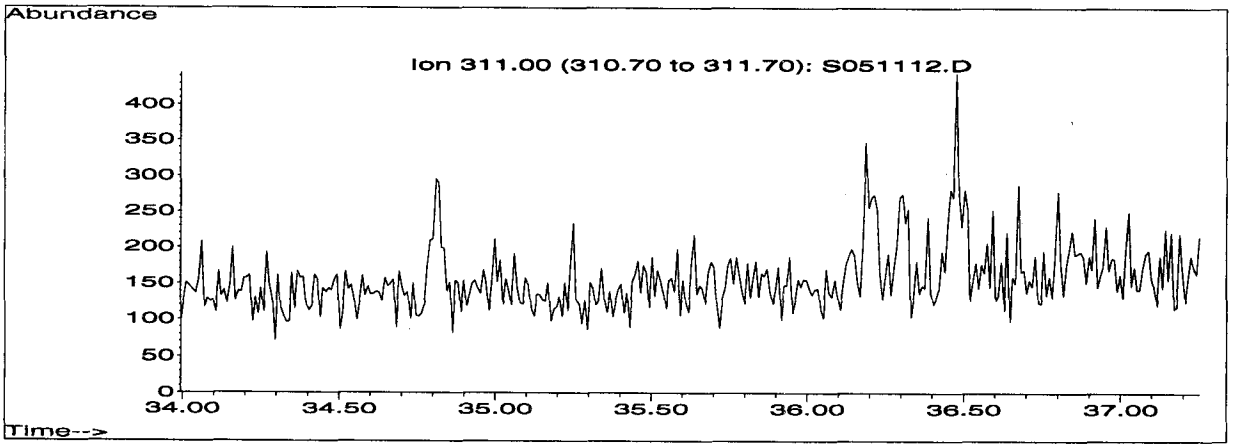


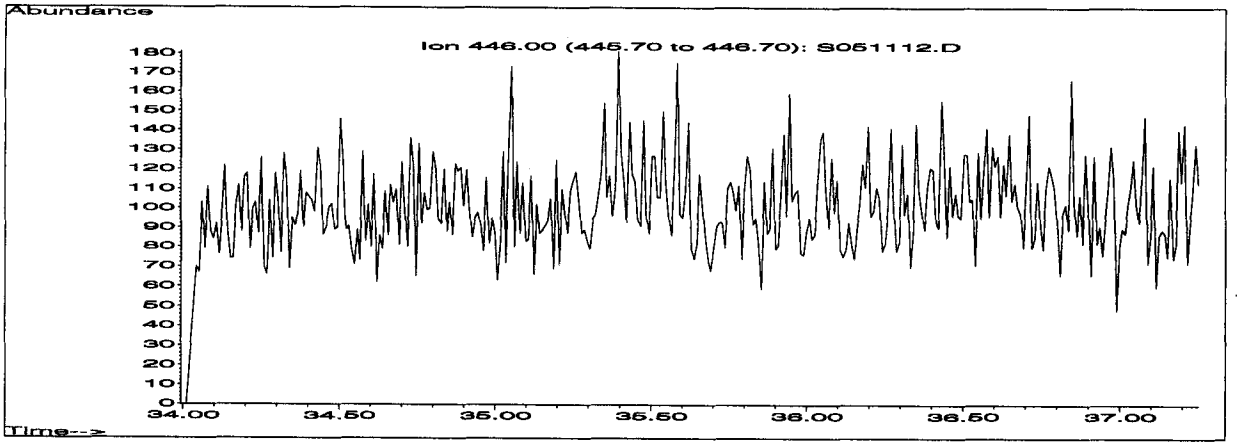
HxCDF TOTAL

TS R.T. Lower Limit	34.00
TS R.T. Upper Limit	37.25



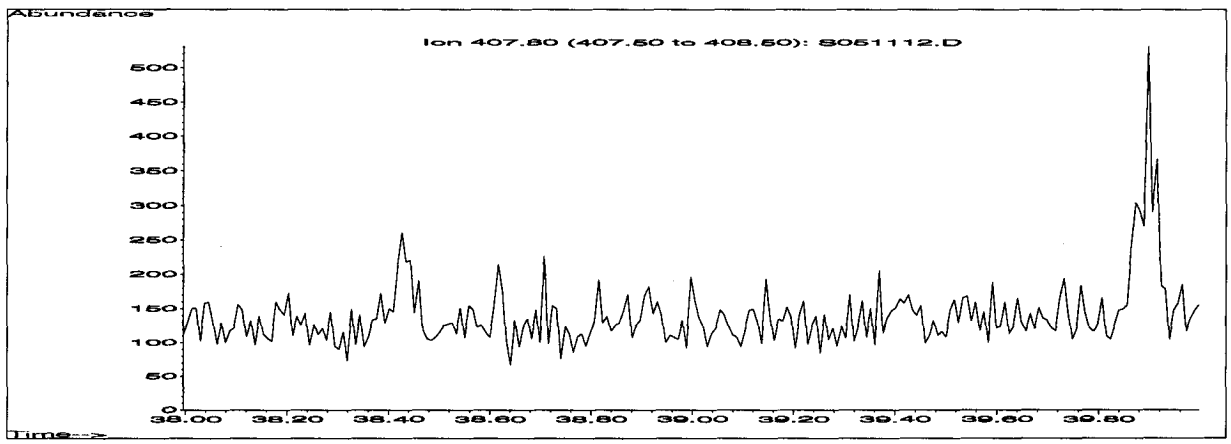


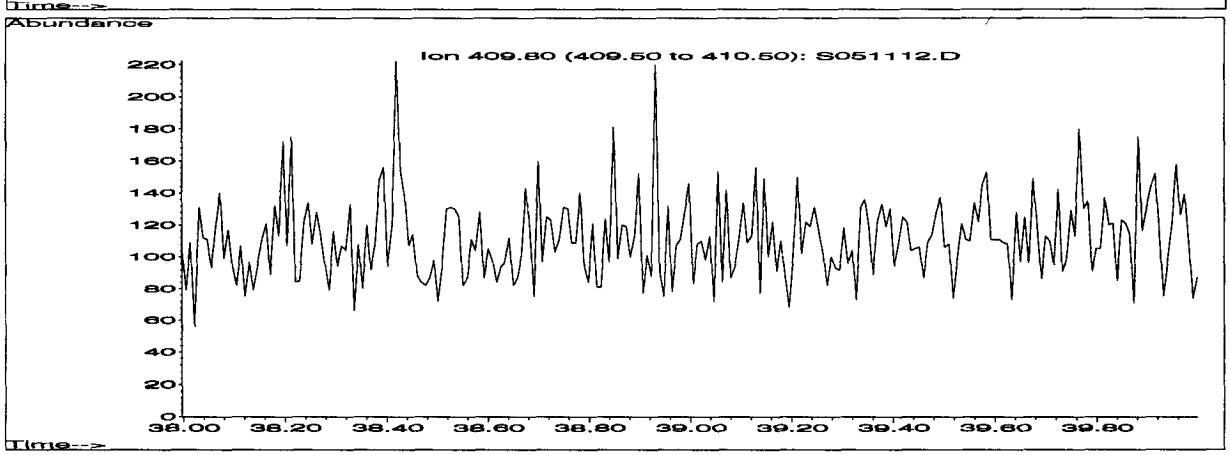


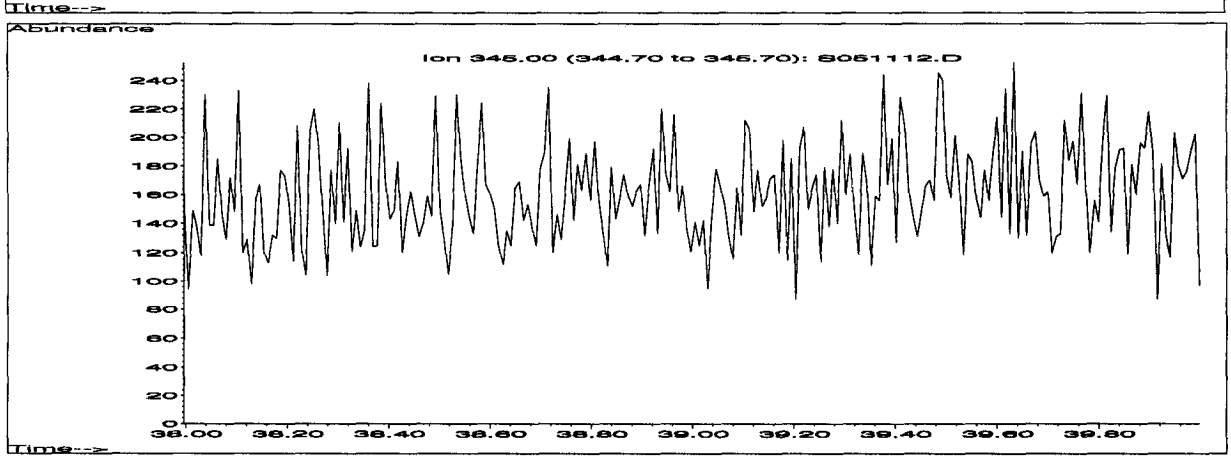


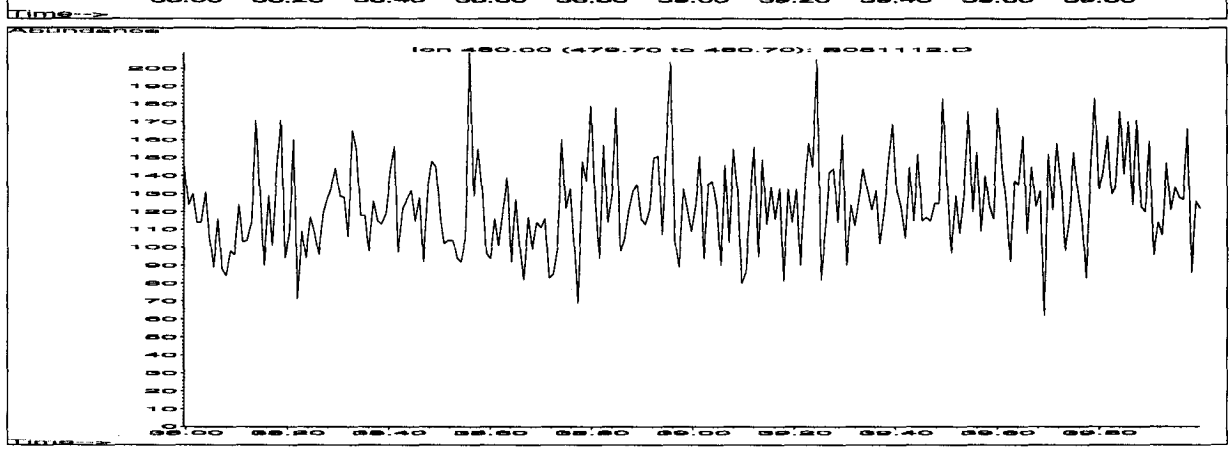
HpCDF TOTAL

TS R.T. Lower Limit	38.00
TS R.T. Upper Limit	40.00



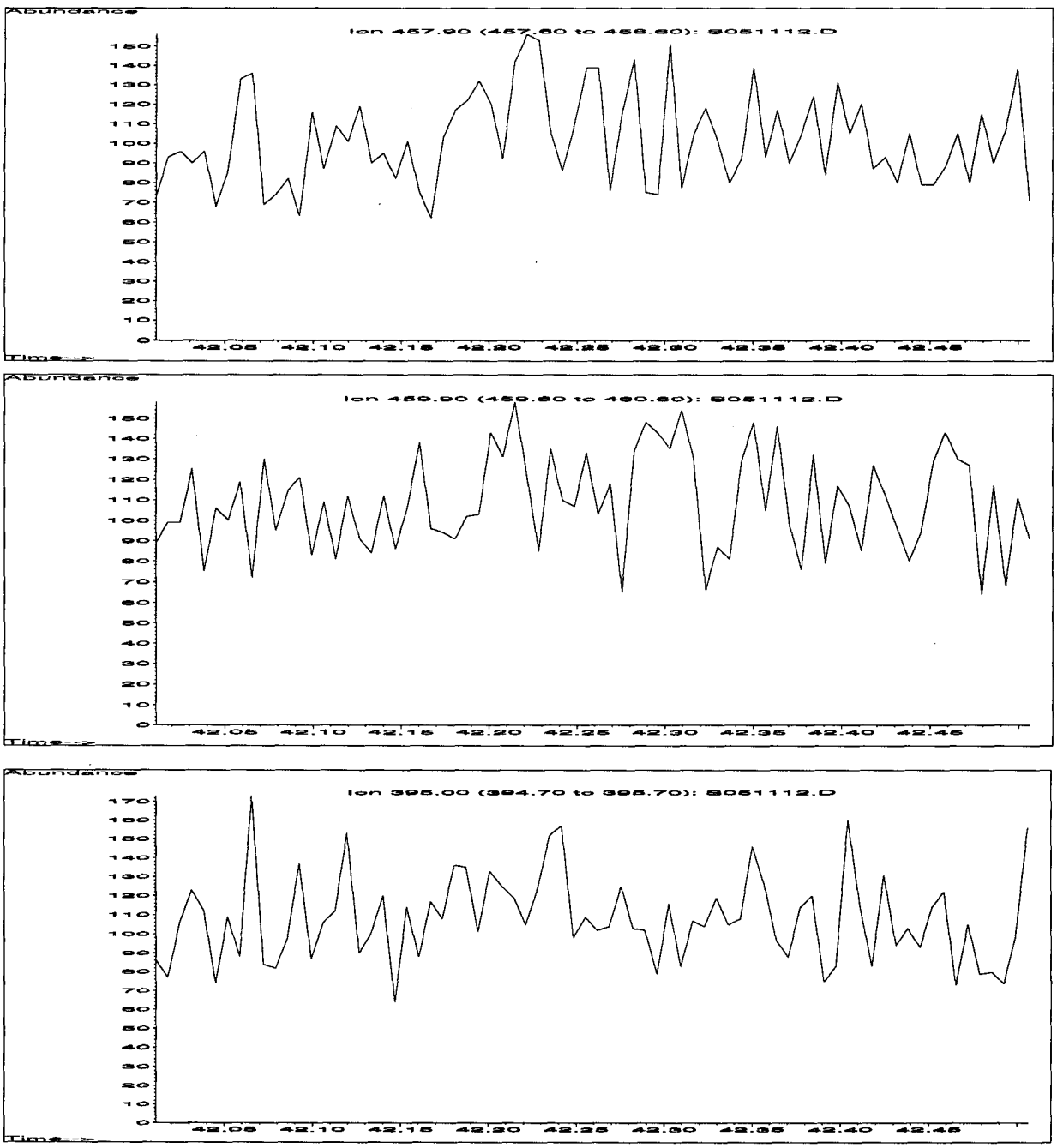




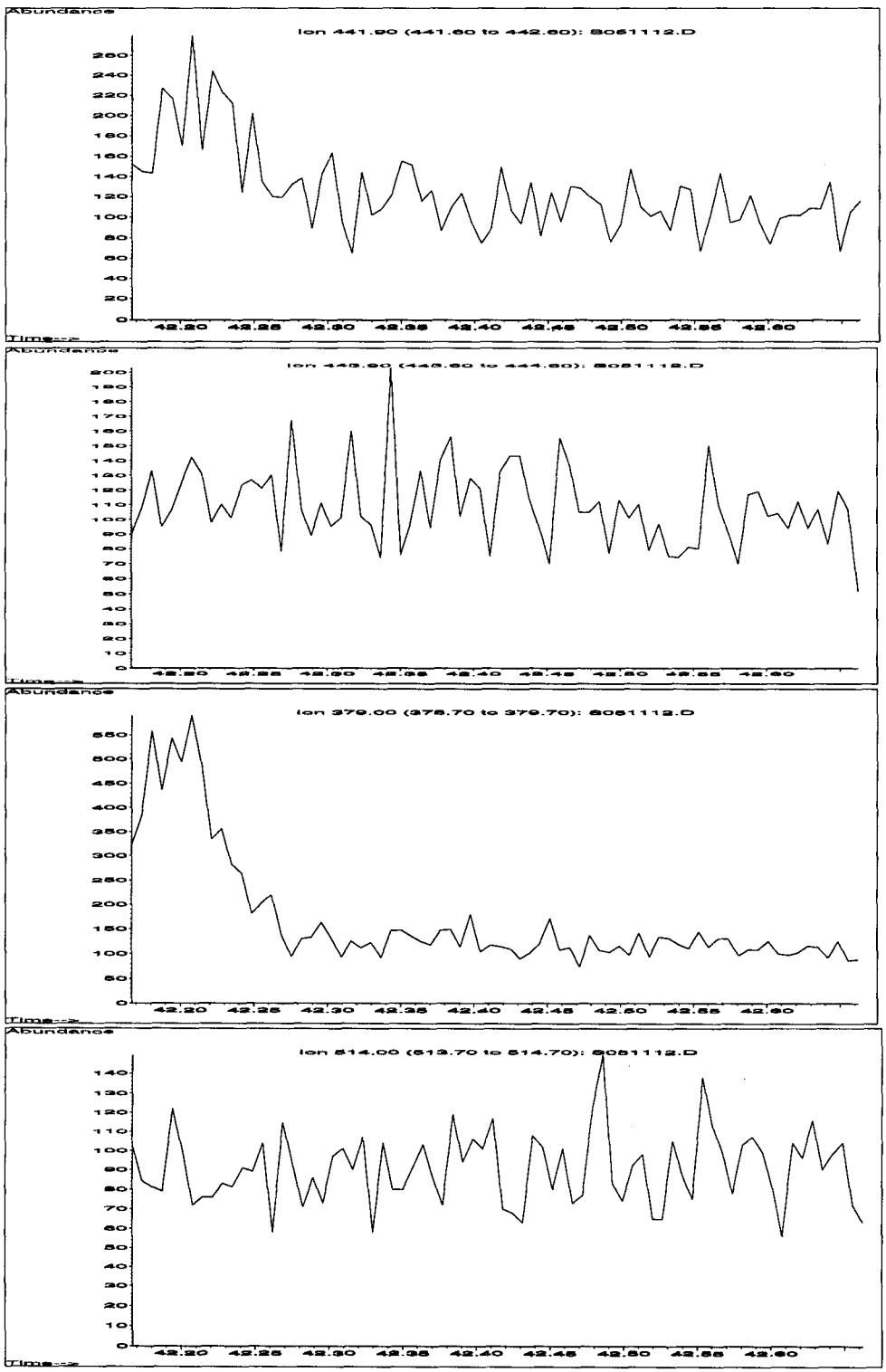


OCDD

TS R.T. Lower Limit	42.01		
TS R.T. Upper Limit	42.51		
Ret. Time	0.00		
Target Ion	457.9	Q1 Ion	459.9
Target Response	0	Q1 Response	0
Total Response	0	Ion ratio	#DIV/0!
Q2 Ion	395		
Q2 Response	0		

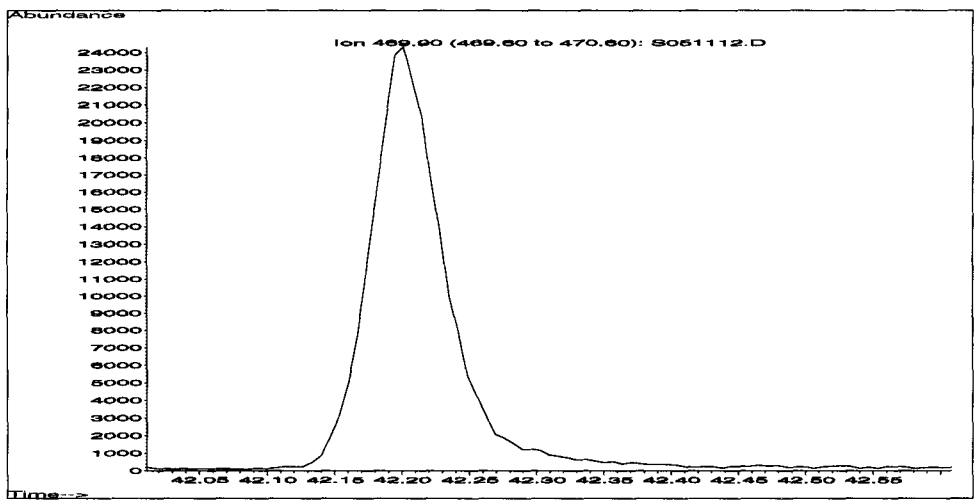


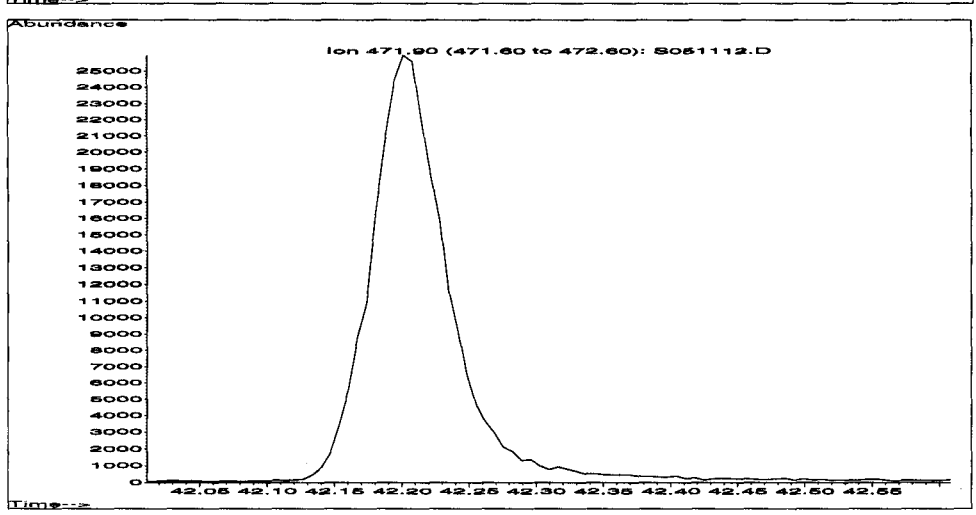
QCDF			
TS R.T. Lower Limit	42.16		
TS R.T. Upper Limit	42.66		
Ret Time	0.00		
Target Ion	441.9	Q1 Ion	443.9
Target Response	0	Q1 Response	0
Target Response	0	Ion Ratio	#DIV/0!
Q2 Ion	379	DPE Ion	514
Q2 Response	0	DPE Response	0



13C-OCDD-IS

RT Lower Limit	42.01		
RT Upper Limit	42.61		
Ret Time	42.20		
Target Ion	469.9	Q1 Ion	471.9
Target Response	94785	Q1 Response	103395
Total response	198180	Ratio	0.92





Quantitation Report (Not Reviewed)

Sample ID: A0D300605-3 1.023 76L 8280A Size: 1.024
L0VEG-1-AA WATER LR009 Inst : DB1

Data File:C:\8280\2DB\051110.B\S051113.D Vial: 13
Acq On :12 May 2010 7:07 Operator: MEO
Sample Amount: 1.02

MS Integration Params: RTEINT.P
Quant Time: May 12 14:02 2010 Quant Results File: 10MY11C2.RES

Quant Method : C:\8280\ DATA METHODS\10MY11C2.M (RTE Integrator)
Title : Dioxin Furan Total
Last Update : Wed May 12 09:30:50 2010
Response via : Single (C:\8280\2DB\051110.B\ST0511C.D 12 May 2010 1:32)
DataAcq Meth : TOKAS
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

AP9

Recovery\Internal Stds	R.T.	QIon	Ratio	Response	Conc	Dev(Min)
1) 13C-1234-TCDD	24.03	332+334	0.82	149804	25.00 NG	0.00
5) 13C-123789-HxCDD	36.48	402+404	1.26	200632	25.00 NG	0.00
9) 13C-2378-TCDF	23.22	316+318	0.79	148196	25.00 NG	0.02
15) 13C-2378-TCDD	24.30	332+334	0.84	105311	25.00 NG	0.00
20) 13C-123678-HxCDD	36.21	402+404	1.25	117377	25.00 NG	0.00
27) 13C-1234678-HpCDF	38.19	420+422	1.06	156405	25.00 NG	0.00
36) 13C-OCDD	42.20	470+472	0.89	196112	50.00 NG	0.00

Surrogate Compound						
4) 37Cl-2378-TCDD	24.32	328		88234	10.358 NG	-0.02
Spiked Amount = 12.210		RRF = 1.389		Recovery =	84.80%	

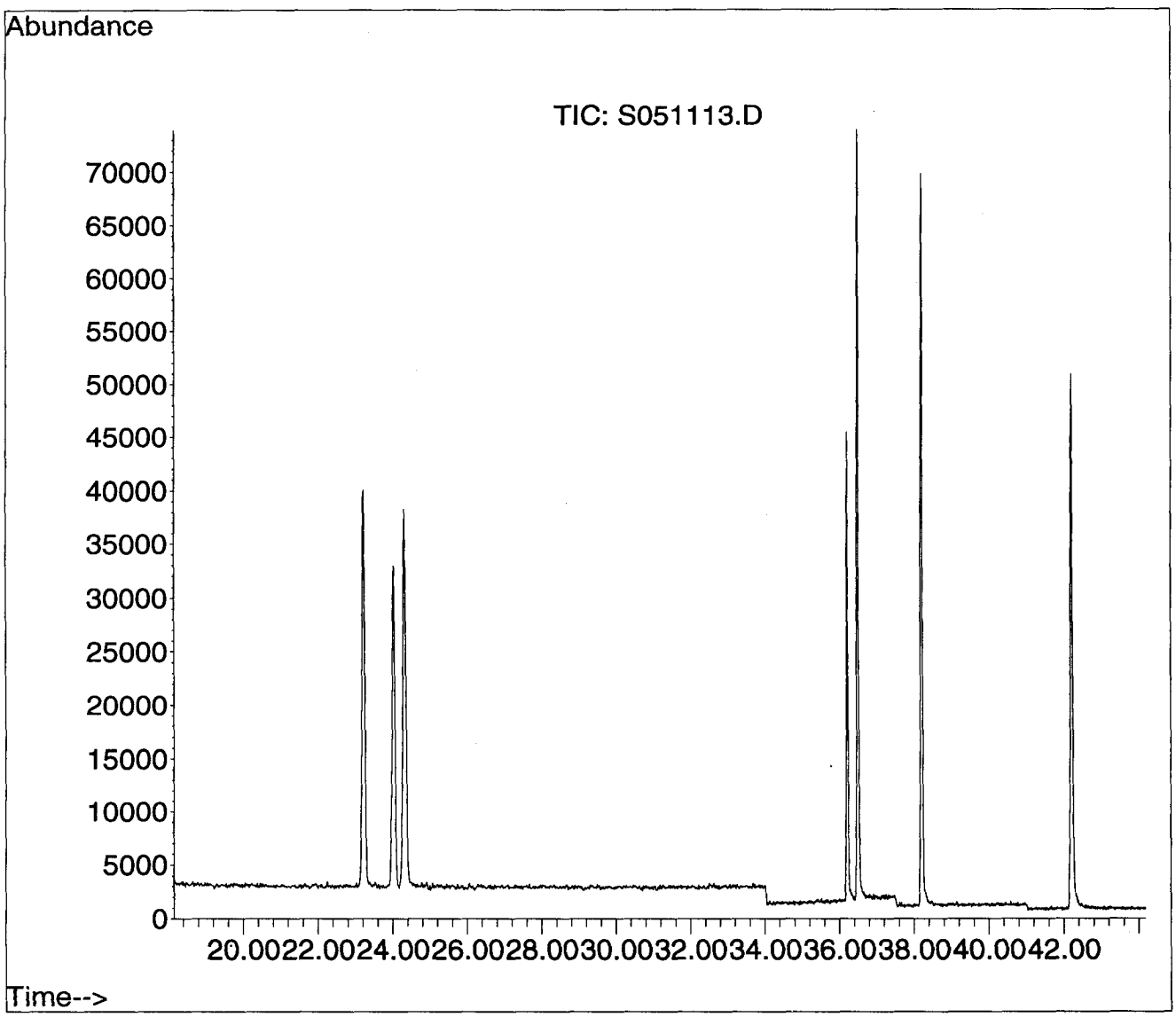
Target Compounds	RT	Ratio	Area	RRF	Conc	EDL	%Rec
2) 13C-2378-TCDF-IS	23.22	0.79	148196	1.428	16.914	0.0842	69.2
3) 13C-2378-TCDD-IS	24.30	0.84	103450	0.983	17.152	2.0860	70.2
6) 13C-123678-HxCDD-	36.21	1.25	117548	0.796	17.964	0.1241	73.5
7) 13C-1234678-HpCDF	38.19	1.06	156405	1.010	18.845	0.0876	77.2
8) 13C-OCDD-IS	42.20	0.89	196112	0.659	36.244	0.1422	74.2
10) 2378-TCDF	0.00		0	1.265	N.D.	0.2299	
11) TCDF TOTAL	22.00		0	1.265	N.D.	0.3128	
12) 12378-PeCDF	0.00		0	1.136	N.D.	0.1292	
13) 23478-PeCDF	0.00		0	1.137	N.D.	0.1959	
14) PeCDF TOTAL	29.50		0	1.136	N.D.	0.5512	
16) 2378-TCDD	0.00		0	1.221	N.D.	0.2706	
1	23.22	5.28 #	13402		2.544		
17) TCDD TOTAL	22.50	5.28	13402	1.221	2.544		
18) 12378-PeCDD	0.00		0	1.142	N.D.	0.5300	
19) PeCDD TOTAL	30.00		0	1.142	N.D.	0.6092	
21) 123478-HxCDD	0.00		0	1.012	N.D.	0.2263	
22) 123678-HxCDD	0.00		0	0.981	N.D.	0.2334	
23) 123789-HxCDD	0.00		0	1.038	N.D.	0.2223	
24) HxCDD TOTAL	36.50		0	0.981	N.D.	0.2368	
25) 1234678-HpCDD	0.00		0	1.039	N.D.	0.1741	
26) HpCDD TOTAL	39.35		0	1.039	N.D.	0.2300	
28) 123478-HxCDF	0.00		0	0.984	N.D.	0.1348	
29) 123678-HxCDF	0.00		0	1.042	N.D.	0.1230	
30) 234678-HxCDF	0.00		0	0.970	N.D.	0.1427	
31) 123789-HxCDF	0.00		0	0.928	N.D.	0.1805	
32) HxCDF TOTAL	36.00		0	0.928	N.D.	0.3297	
33) 1234678-HpCDF	0.00		0	1.160	N.D.	0.1721	
34) 1234789-HpCDF	0.00		0	1.006	N.D.	0.1520	
35) HpCDF TOTAL	39.50		0	1.006	N.D.	0.3446	
37) OCDD	0.00		0	1.102	N.D.	0.2714	

5/13/10

38) OCDF	0.00	0	1.397	N.D.	0.5767

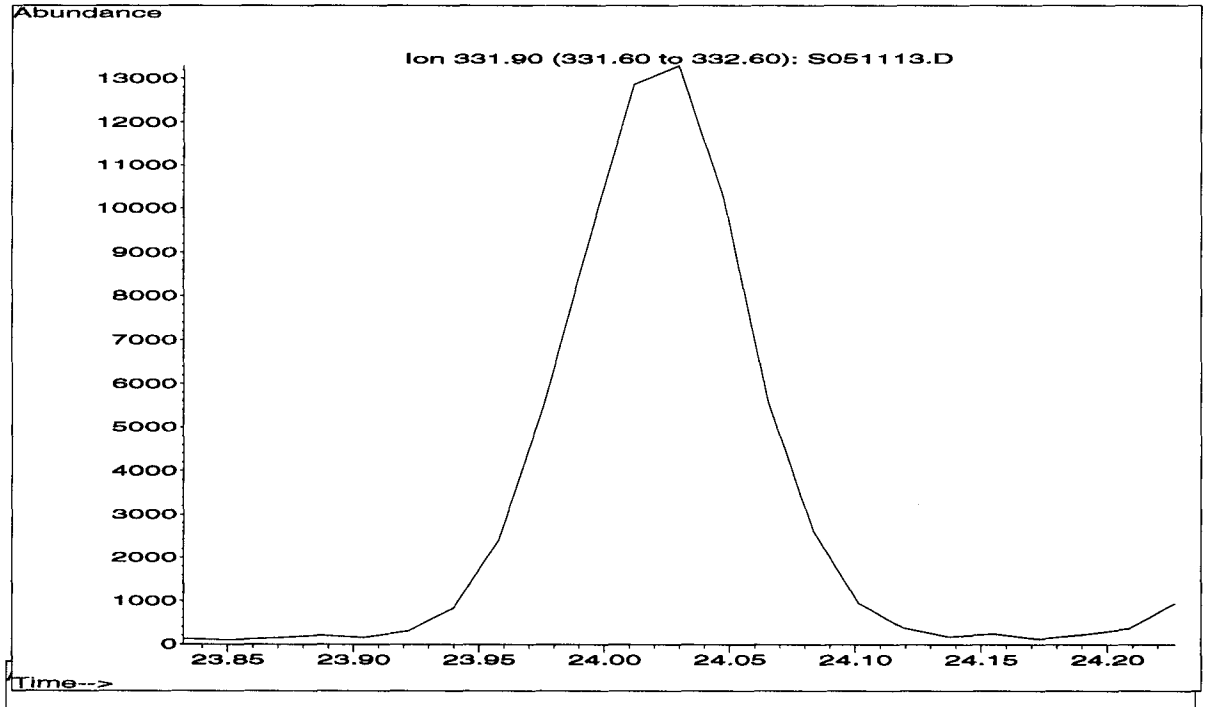
(#) = qualifier out of range•: areas and concentration based on theoretical ion ratio
(m) = manual integration
S051113.D 10MY11C2.M Wed May 12 14:02:49 2010

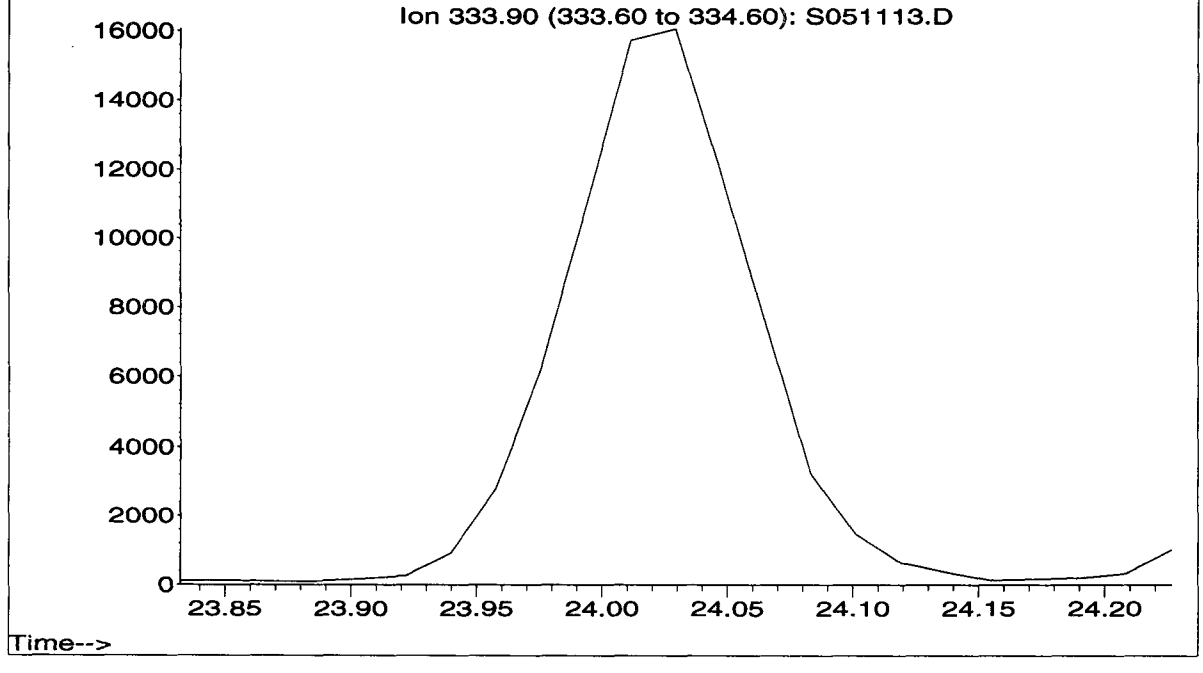
Data File Name	S051113.D
Data File Path	C:\8280\2DB\051110.B\
Operator	MEO
Date Acquired	5/12/2010 7:07
Acq. Method File	TOKAS
Sample Name	_0VEG-1-AA WATER LR009
Misc Info	D300605-3 1.02376L 8280A
Vial Number	13
Instrument Name	2DB
Sample Multiplier	1
Sample Amount	1.02376



13C-1234-TCDD

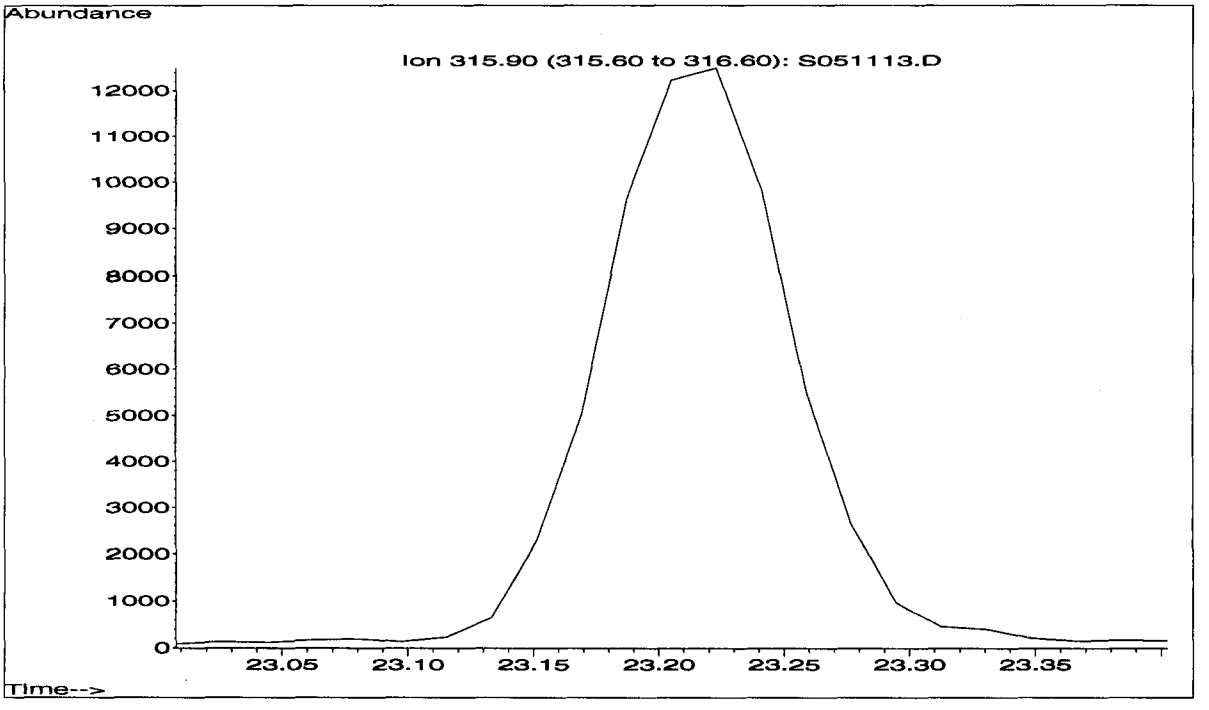
TS R.T. Lower Limit	23.83		
TS R.T. Upper Limit	24.23		
Ret Time	24.03		
Target Ion	331.9	Q1 Ion	333.9
Target Response	67330	Q1 Response	82474
Total Response	149804	Ion Ratio	0.82

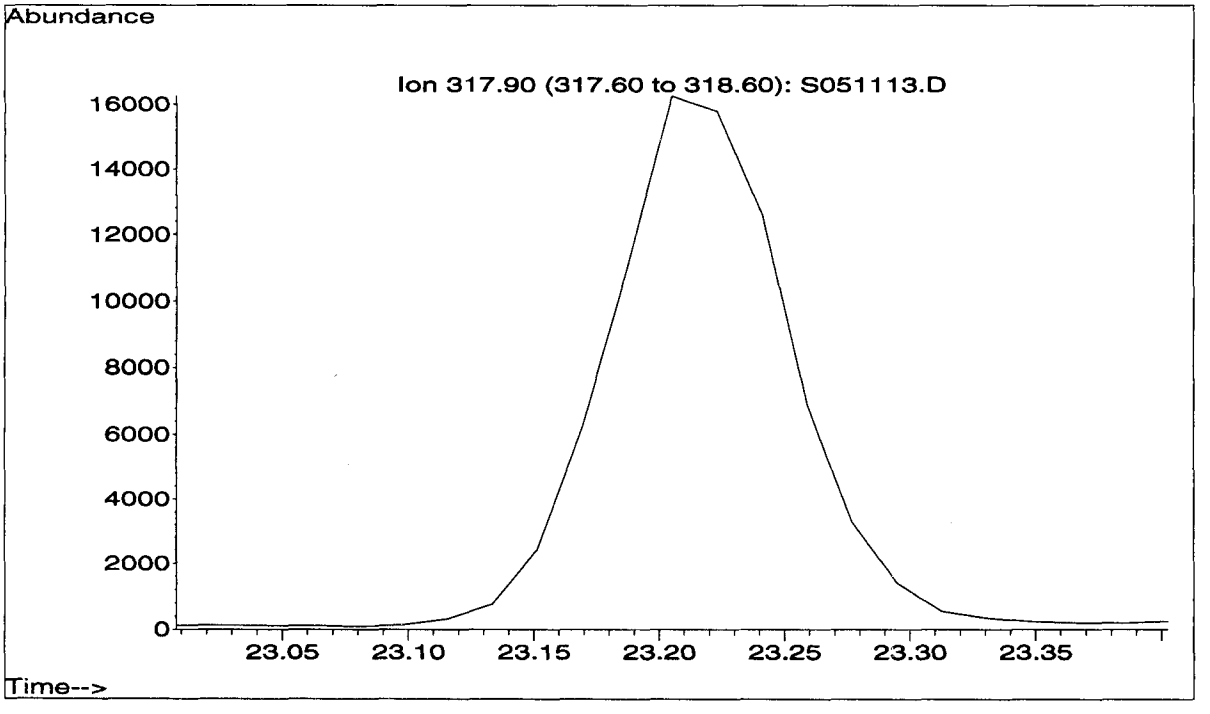




13C-2378-TCDF-IS

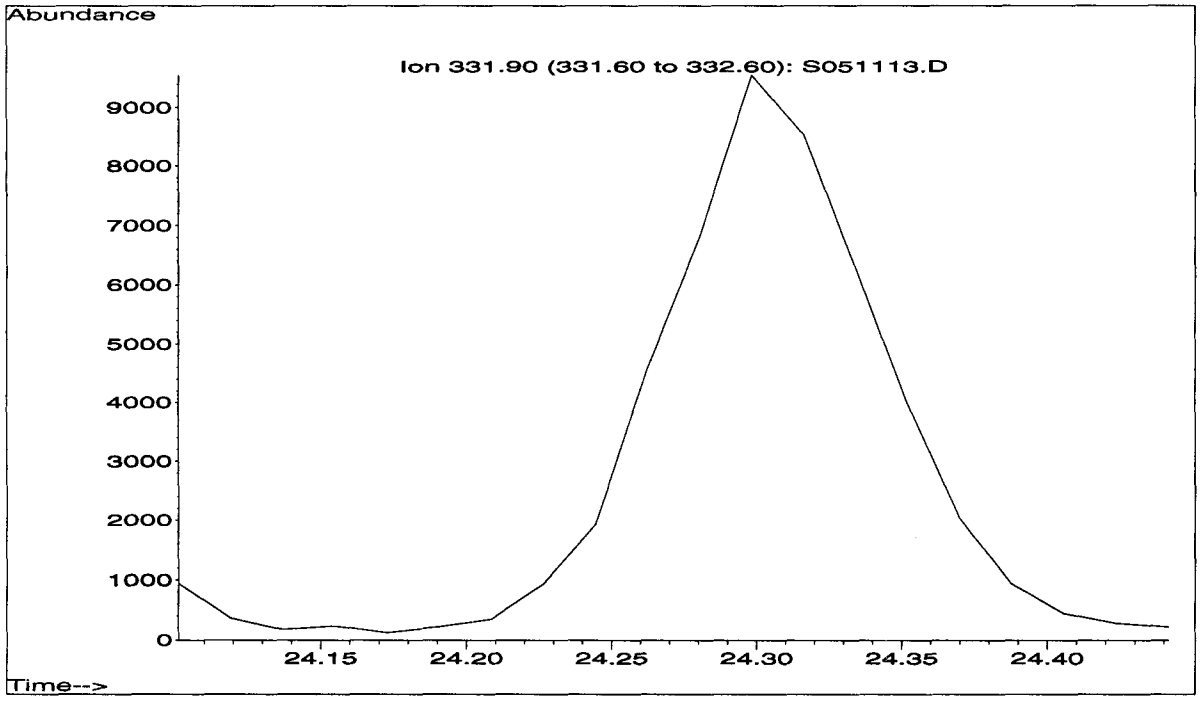
TS R.T. Lower Limit	23.01		
TS R.T. Upper Limit	23.41		
Ret Time	23.22		
Target Ion	315.9	Q1 Ion	317.9
Target Response	65604	Q1 Response	82592
Target Response	148196	Ion Ratio	0.79

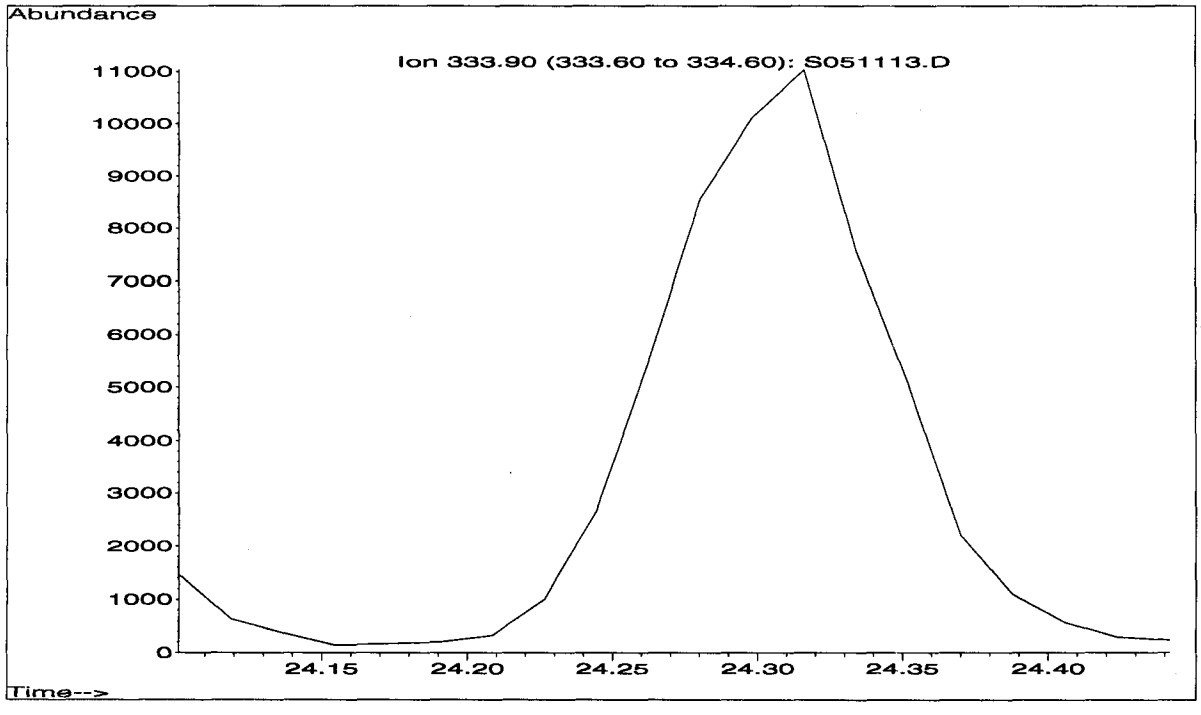




13C-2378-TCDD-IS

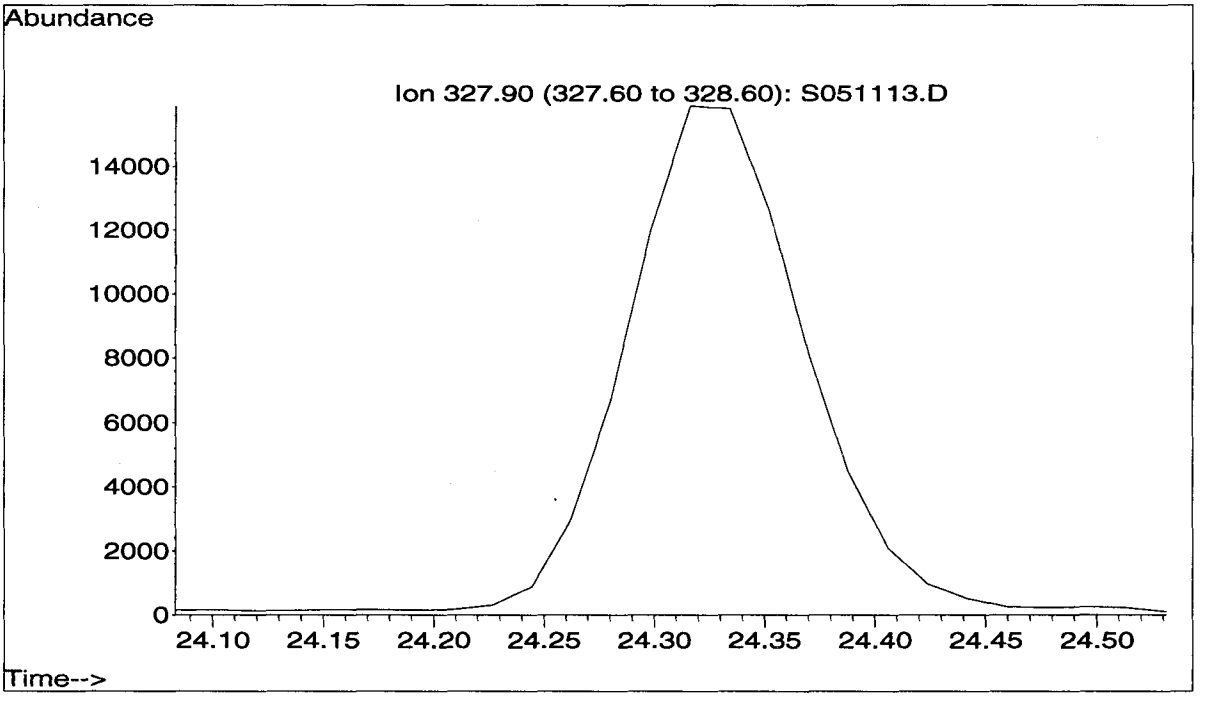
TS R.T. Lower Limit	24.10		
TS R.T. Upper Limit	24.45		
Ret Time	24.30		
Target Ion	331.9	Q1 Ion	333.9
Target Response	47168	Q1 Response	56282
Total Response	103450	Ion Ratio	0.84

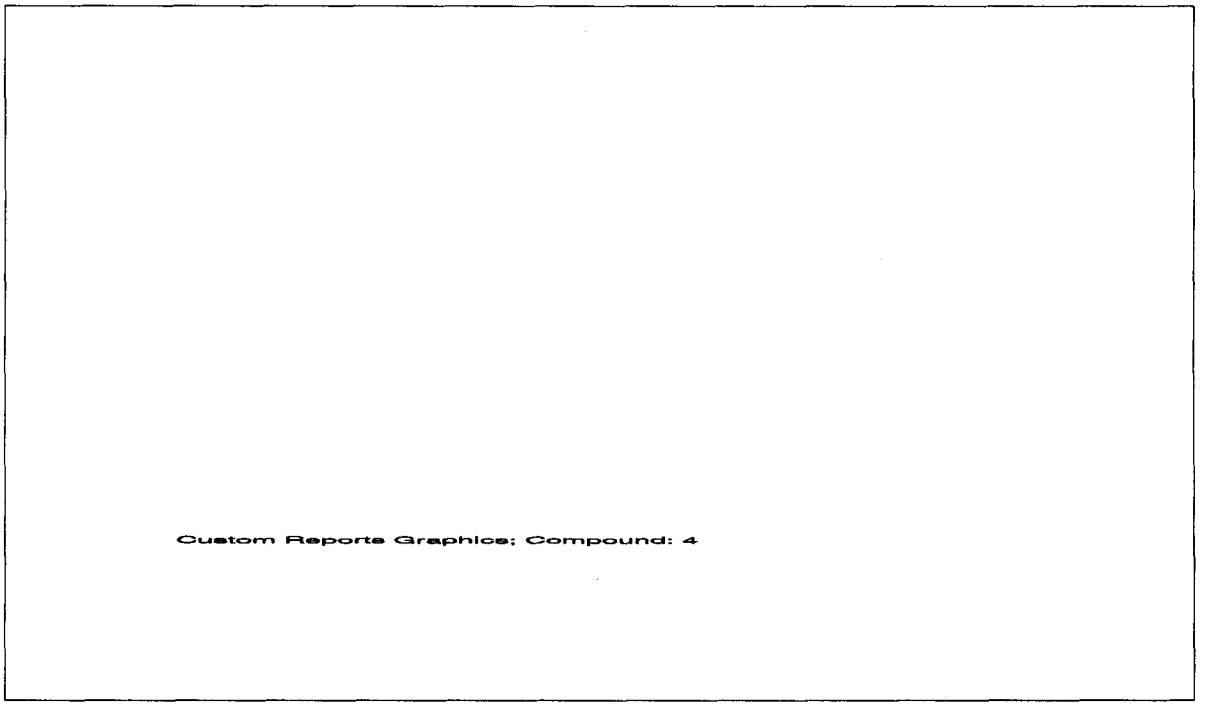




37Cl-2378-TCDD

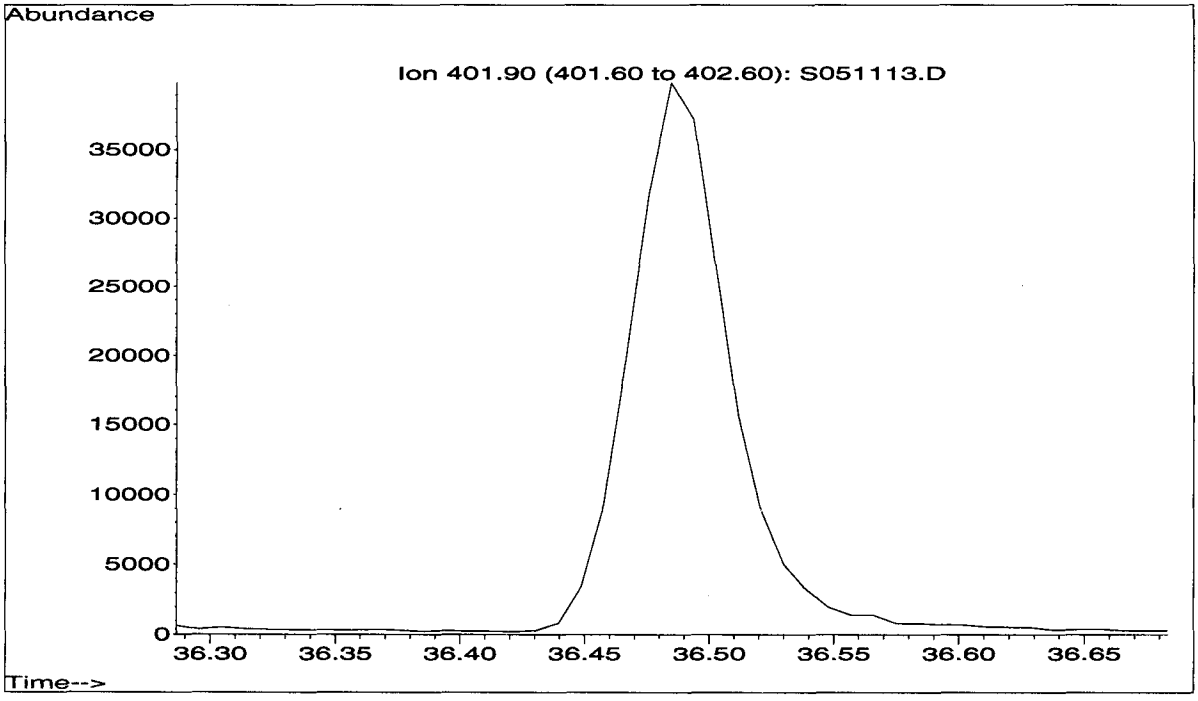
TS R.T. Lower Limit	24.09		
TS R.T. Upper Limit	24.54		
Ret Time	24.32		
Target Ion	327.9	Q1 Ion	0
Target Response	88234	Q1 Response	0
Total Response	88234	Ion Ratio	#DIV/0!

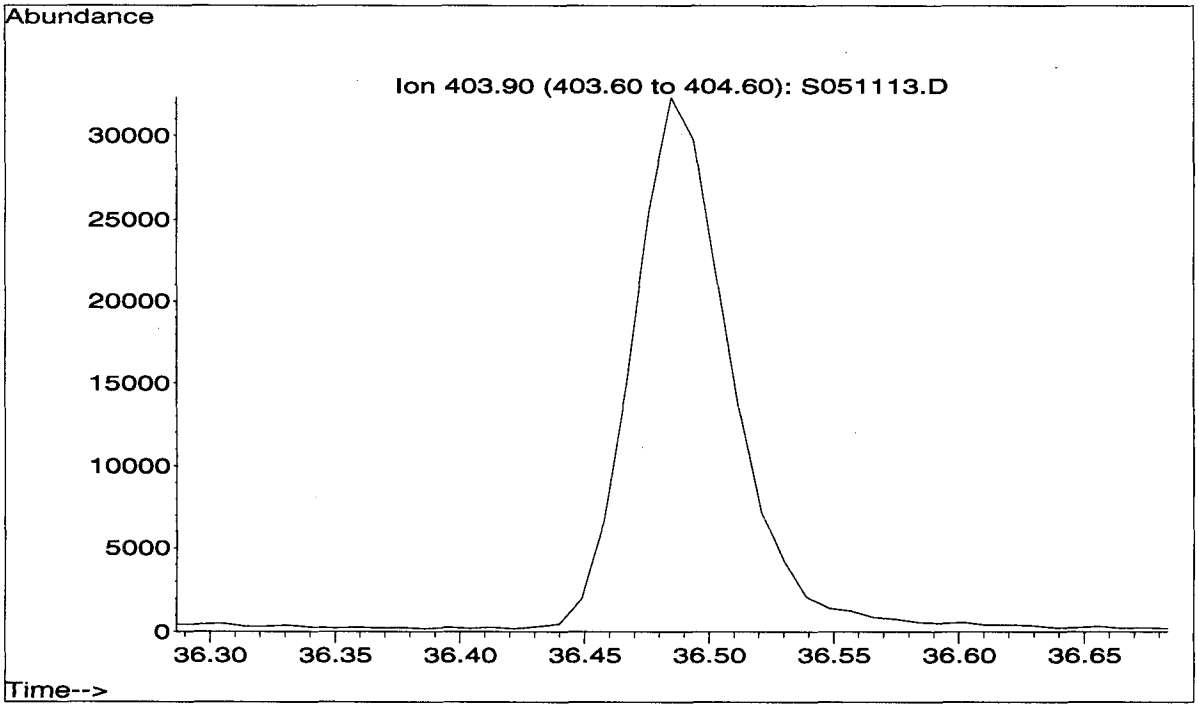




13C-123789-HxCDD

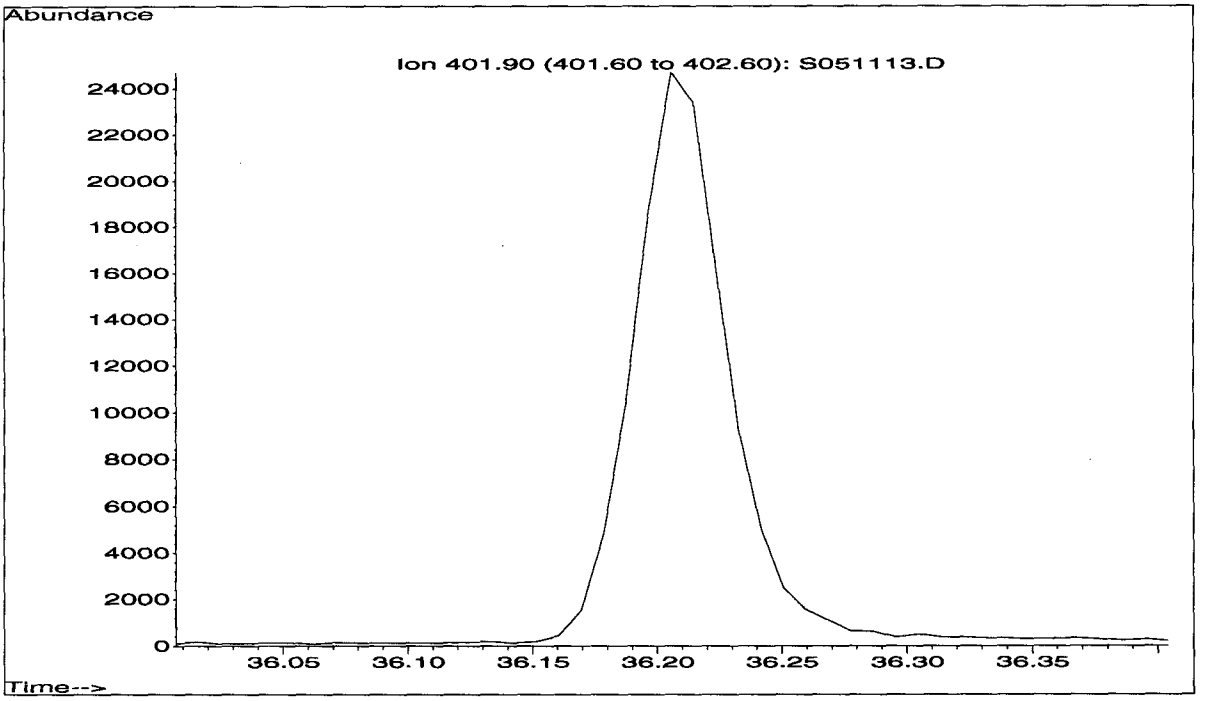
TS R.T. Lower Limit	36.29		
TS R.T. Upper Limit	36.69		
Ret Time	36.48		
Target Ion	401.9	Q1 Ion	403.9
Target Response	111874	Q1 Response	88758
Target Response	200632	Ion Ratio	1.26

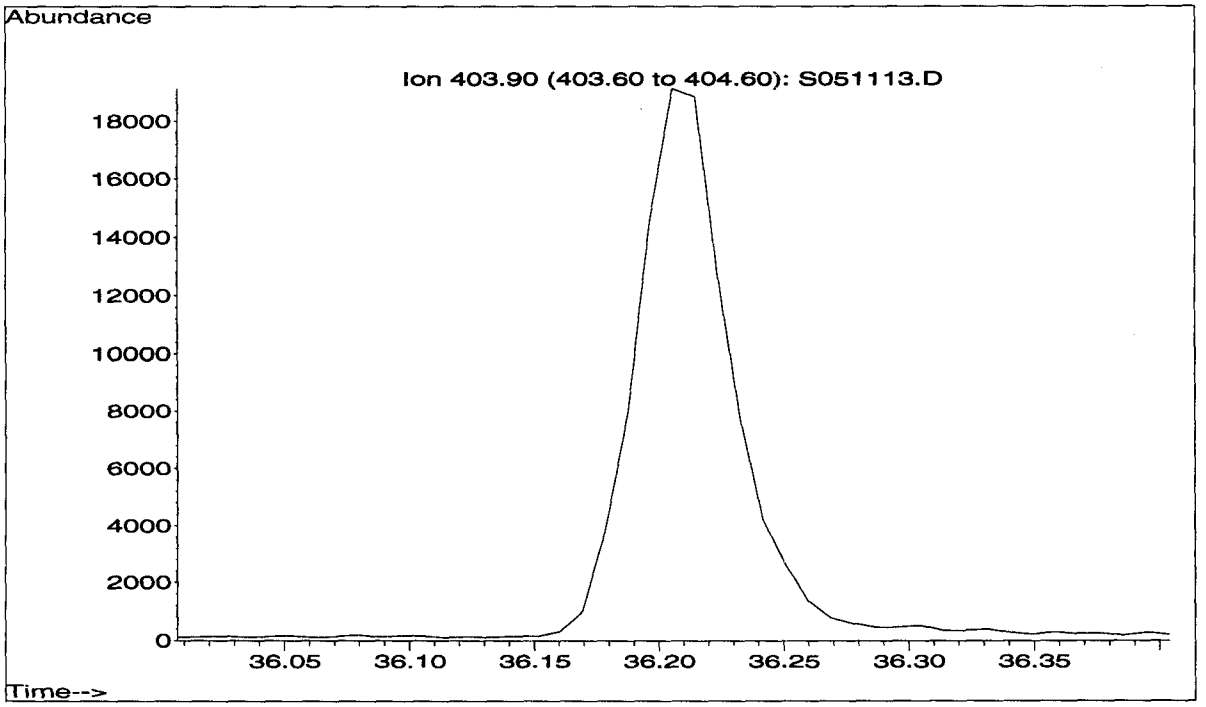




13C-123678-HxCDD-IS

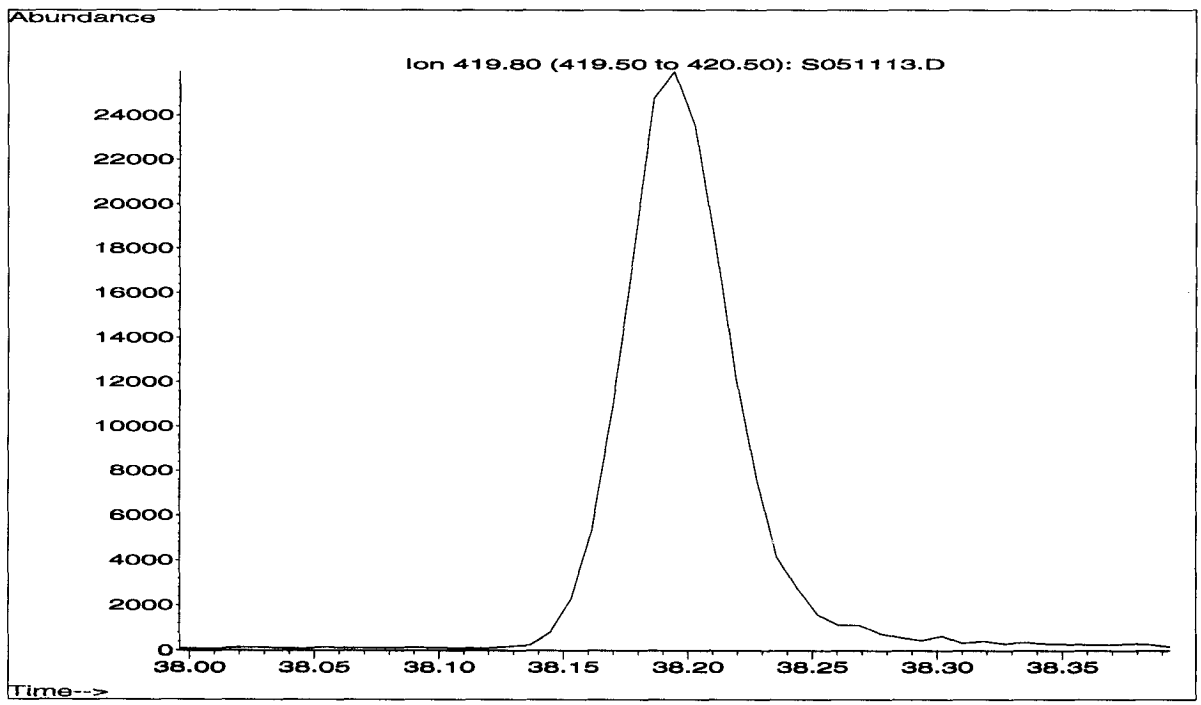
TS R.T. Lower Limit	36.01		
TS R.T. Upper Limit	36.41		
Ret Time	36.21		
Target Ion	401.9	Q1 Ion	403.9
Target Response	65324	Q1 Response	52224
Total Response	117548	Ion Ratio	1.25

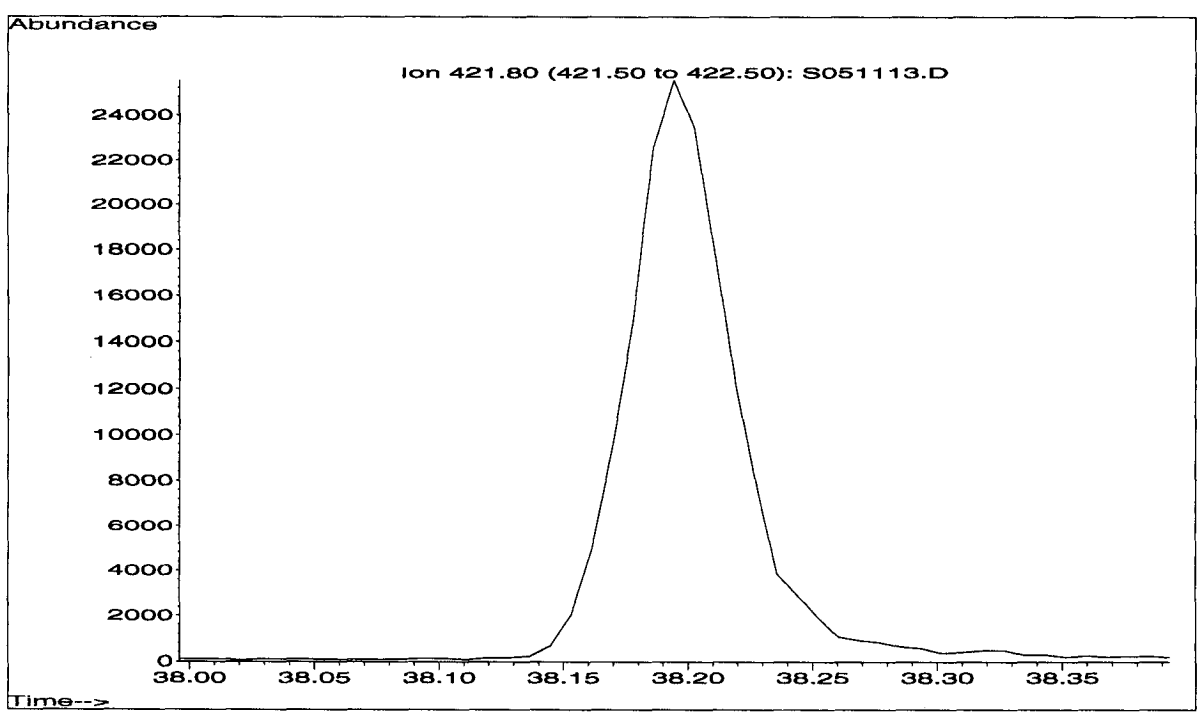




13C-1234678-HpCDF-IS

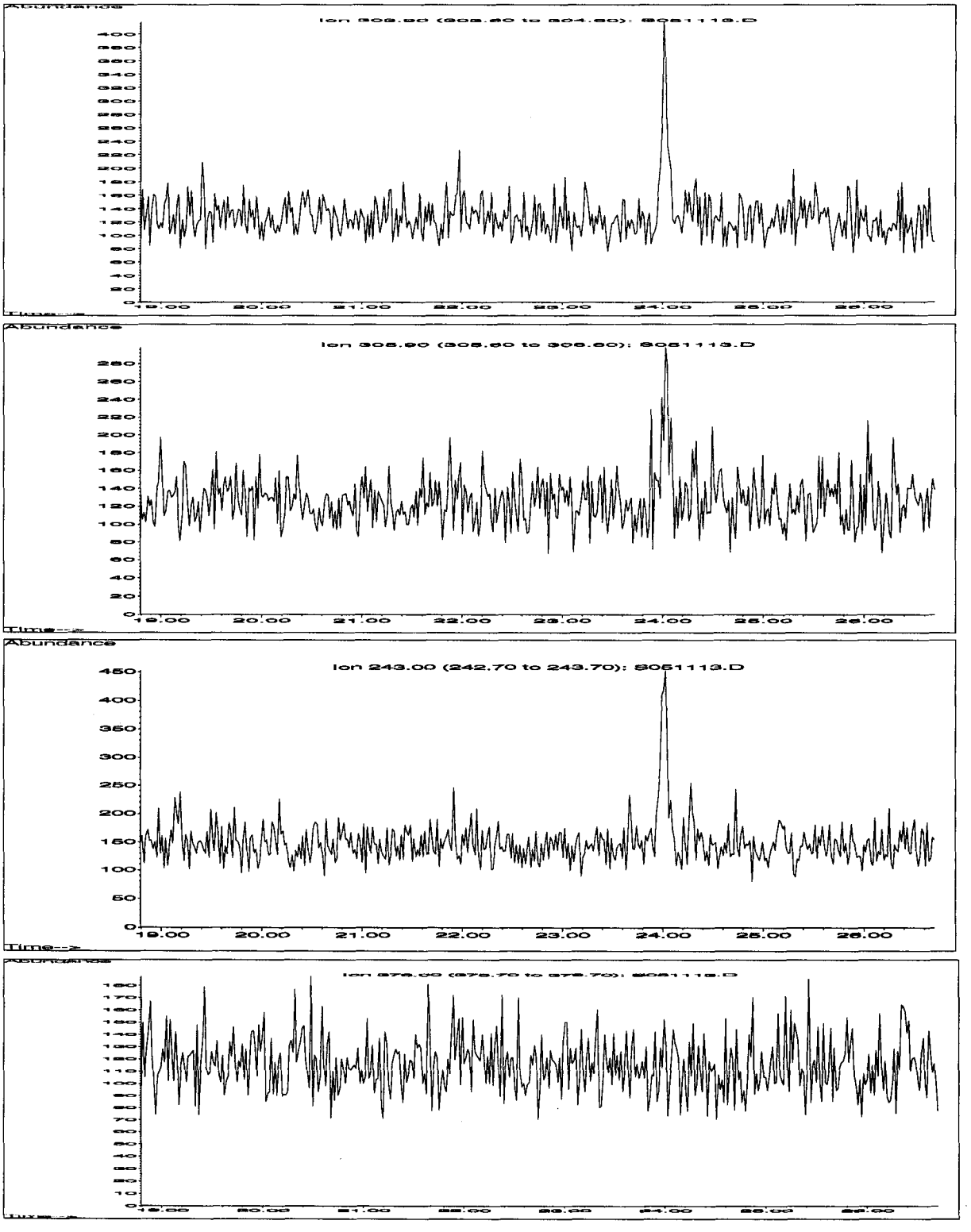
TS R.T. Lower Limit	37.99		
TS R.T. Upper Limit	38.39		
Ret Time	38.19		
Target Ion	419.8	Q1 Ion	421.8
Target Response	80422	Q1 Response	75983
Target Response	156405	Ion Ratio	1.06





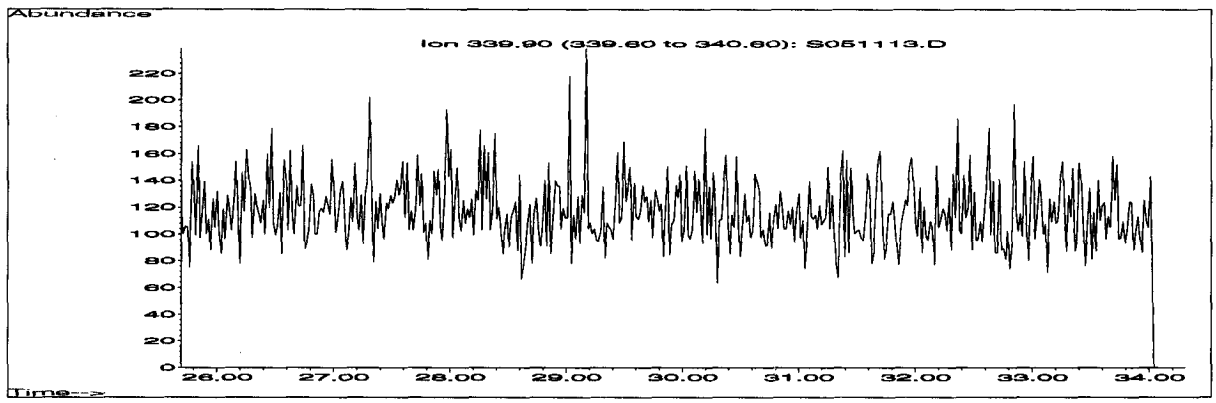
TCDF TOTAL

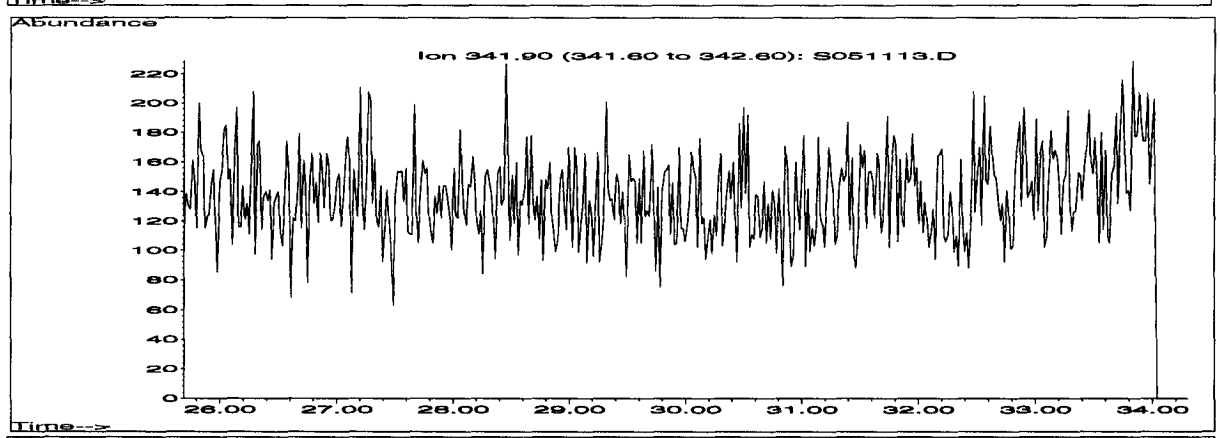
TS R.T. Lower Limit	18.80
TS R.T. Upper Limit	26.70

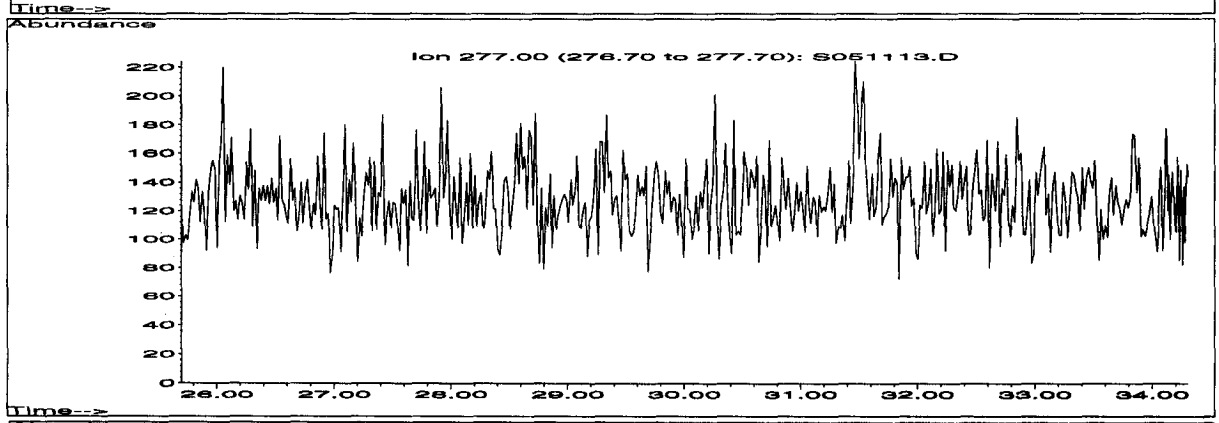


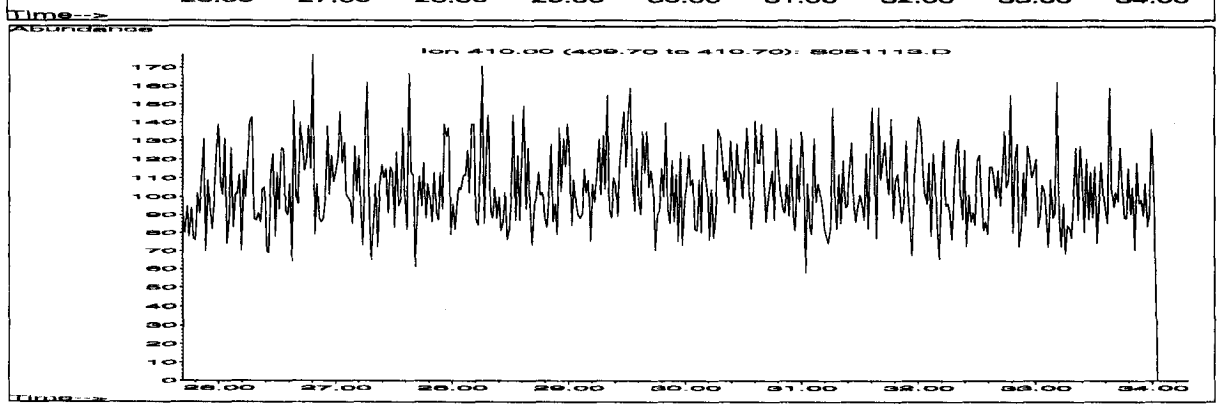
PeCDF TOTAL

TS R.T. Lower Limit	25.70
TS R.T. Upper Limit	34.30



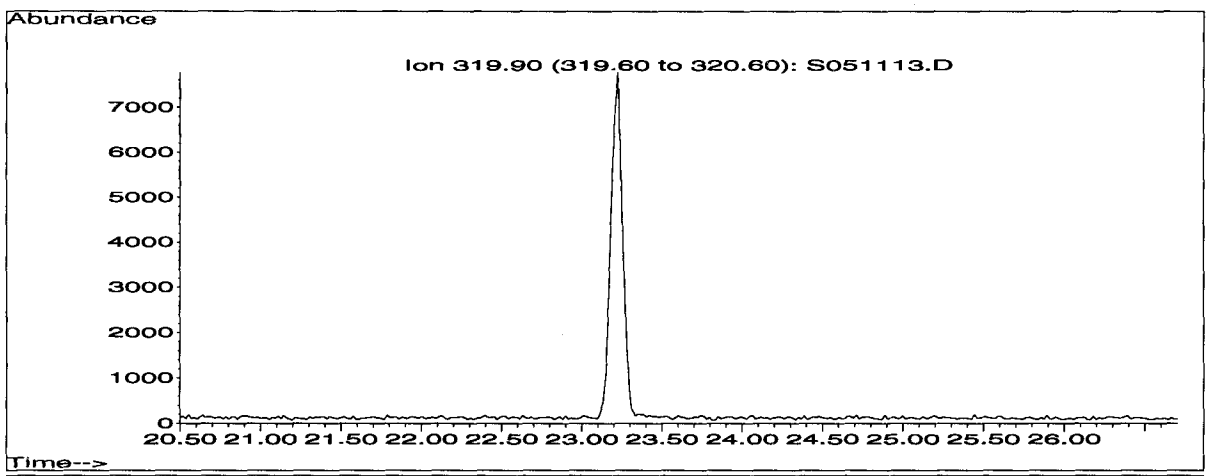


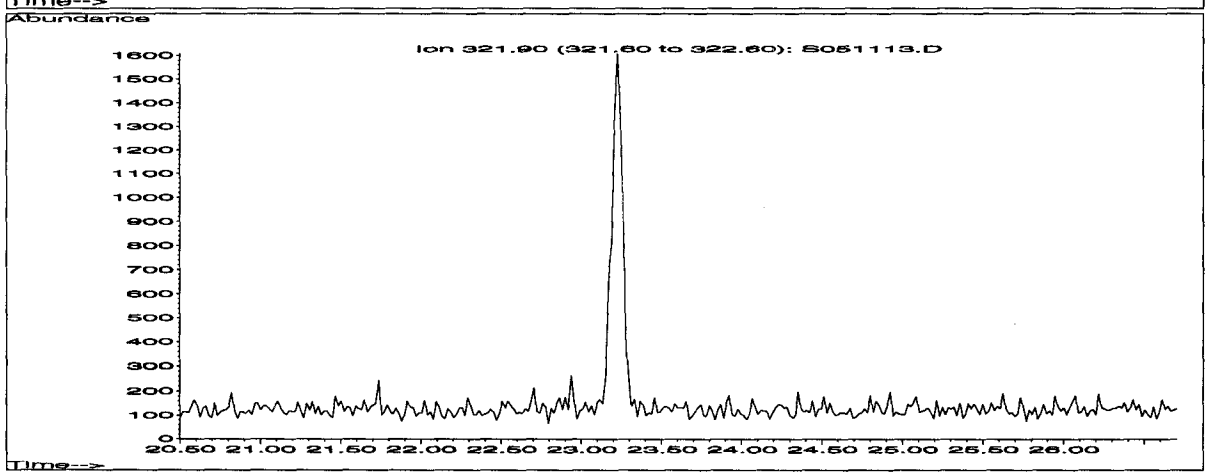


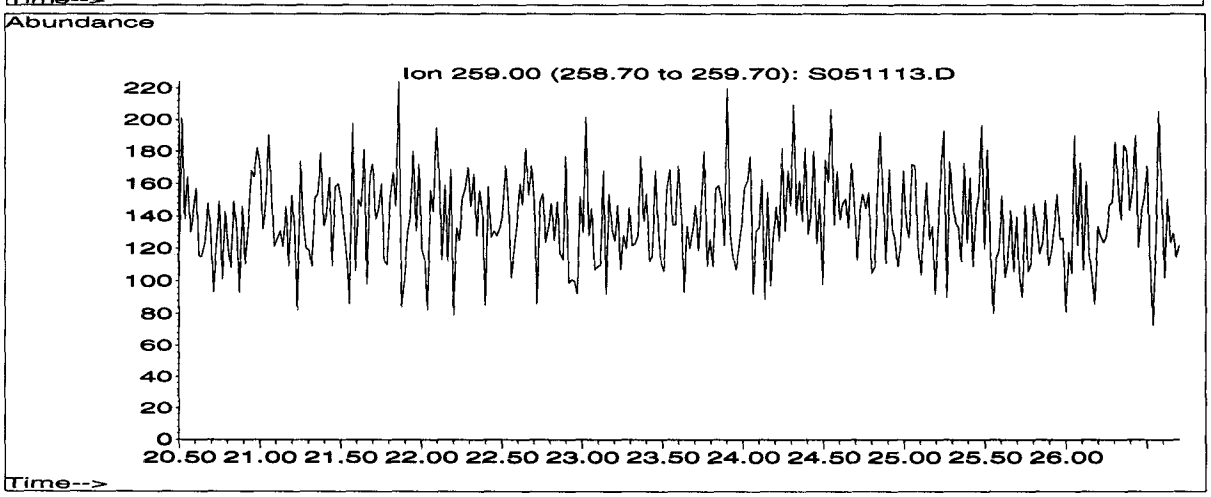


TCDD TOTAL

TS R.T. Lower Limit	20.50
TS R.T. Upper Limit	26.70

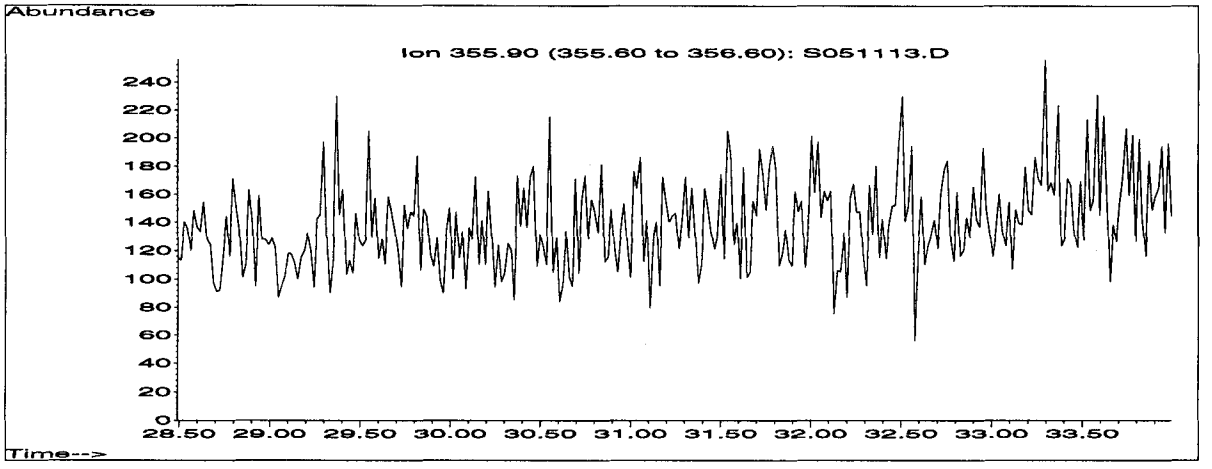


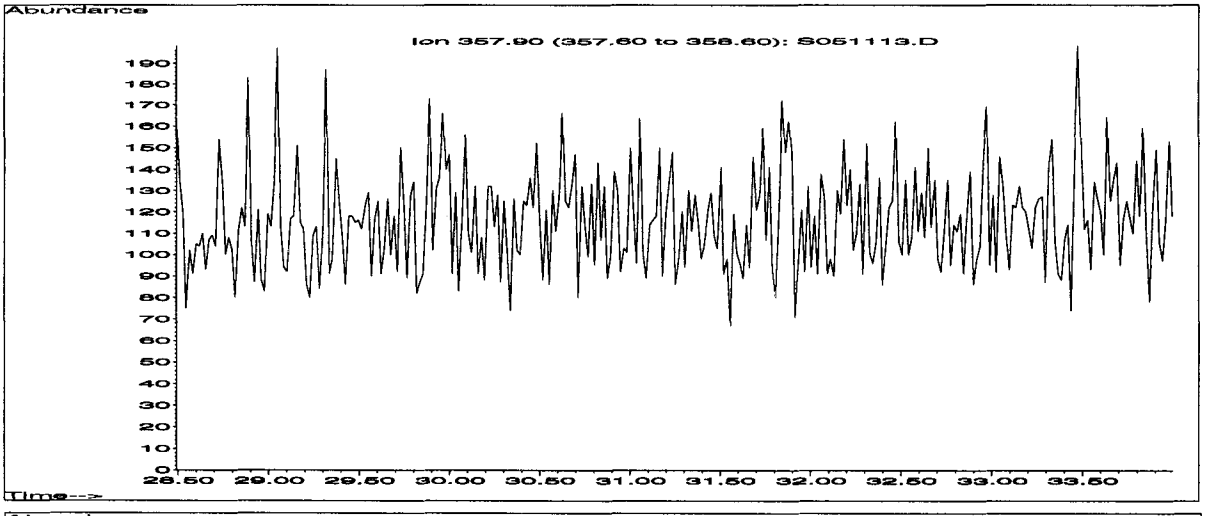


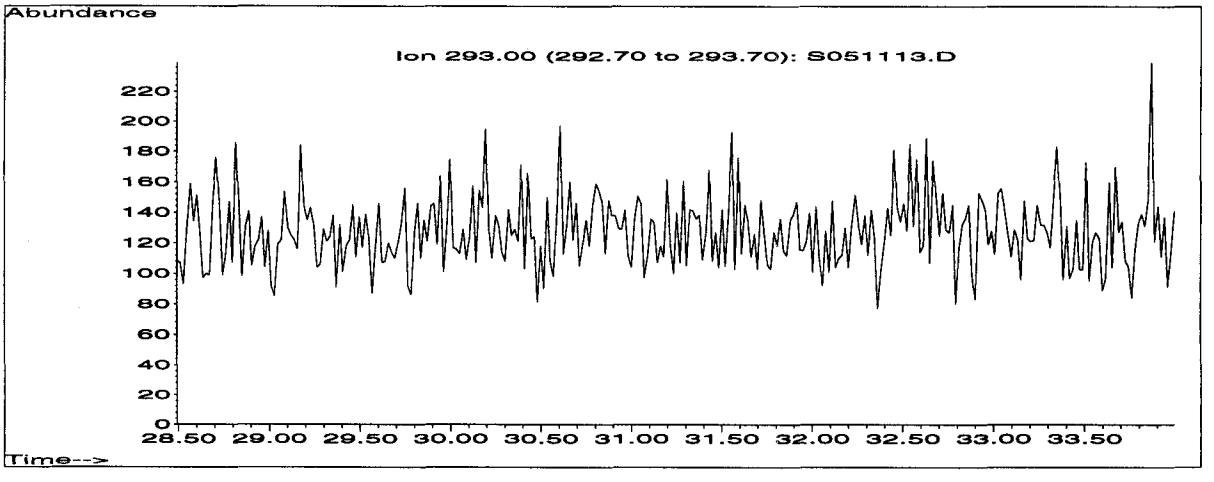


PeCDD TOTAL

TS R.T. Lower Limit	28.50
TS R.T. Upper Limit	34.00

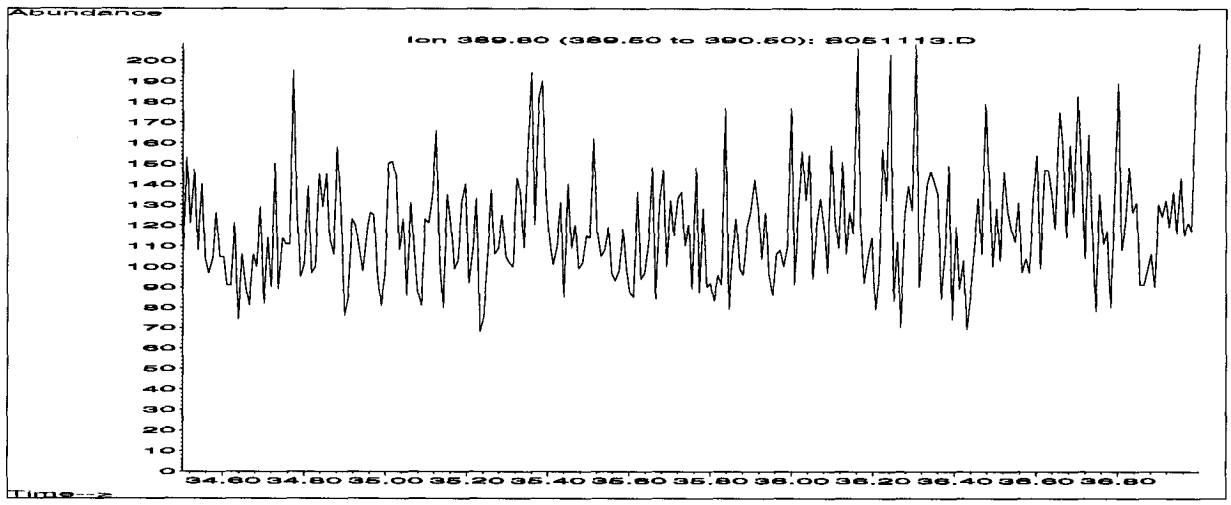


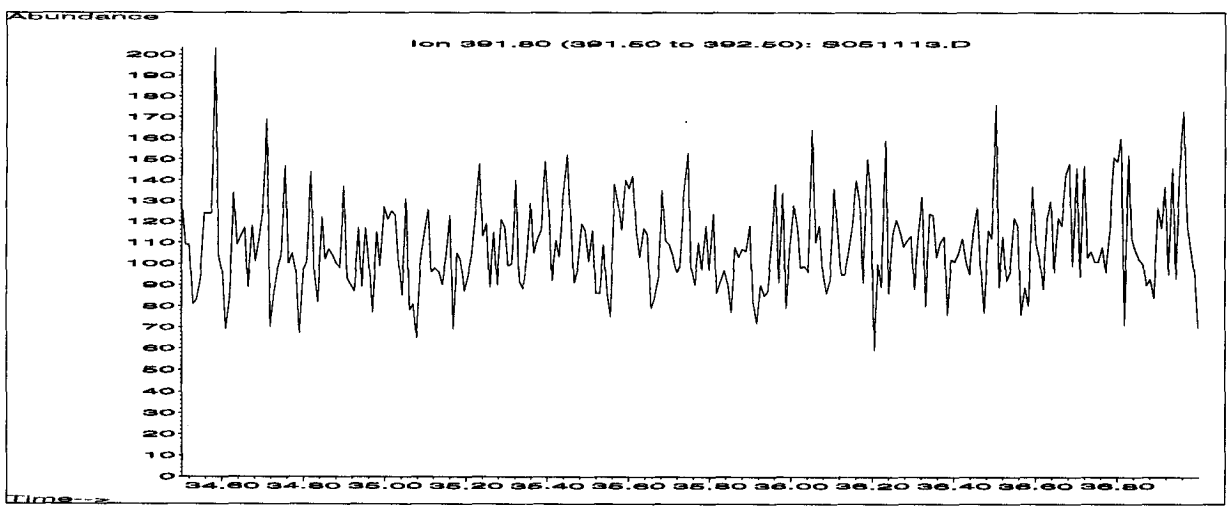


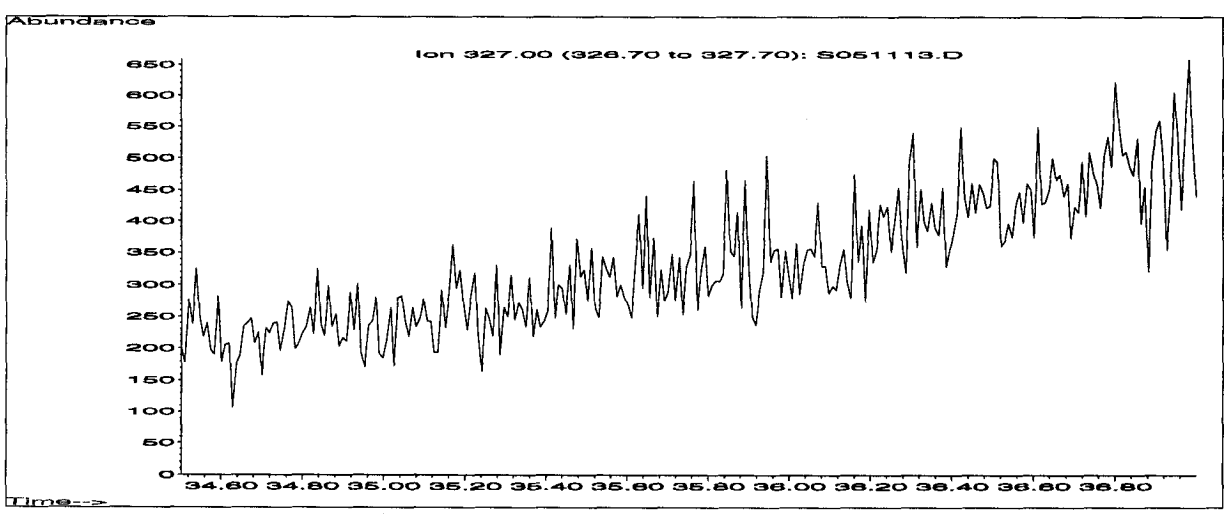


HxCDD TOTAL

TS R.T. Lower Limit	34.50
TS R.T. Upper Limit	37.00

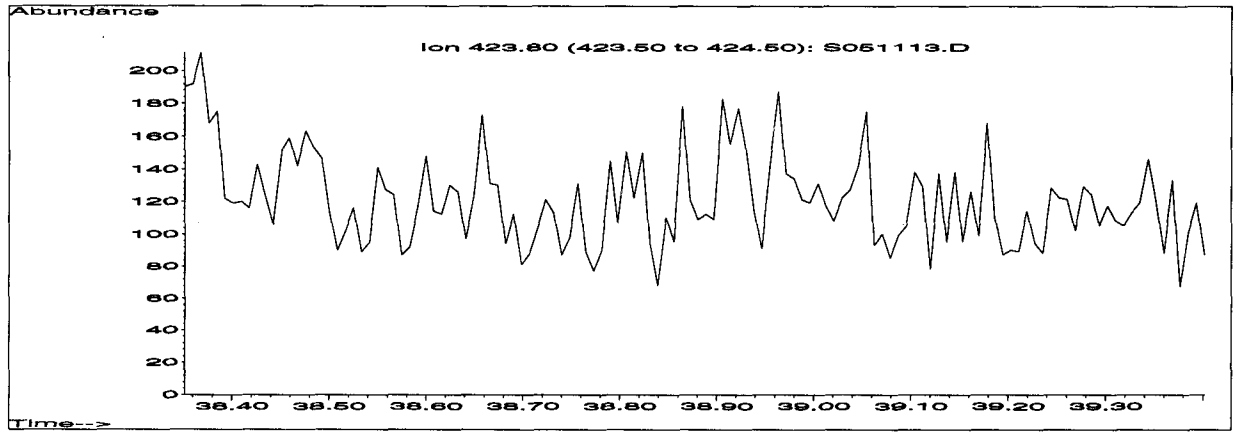


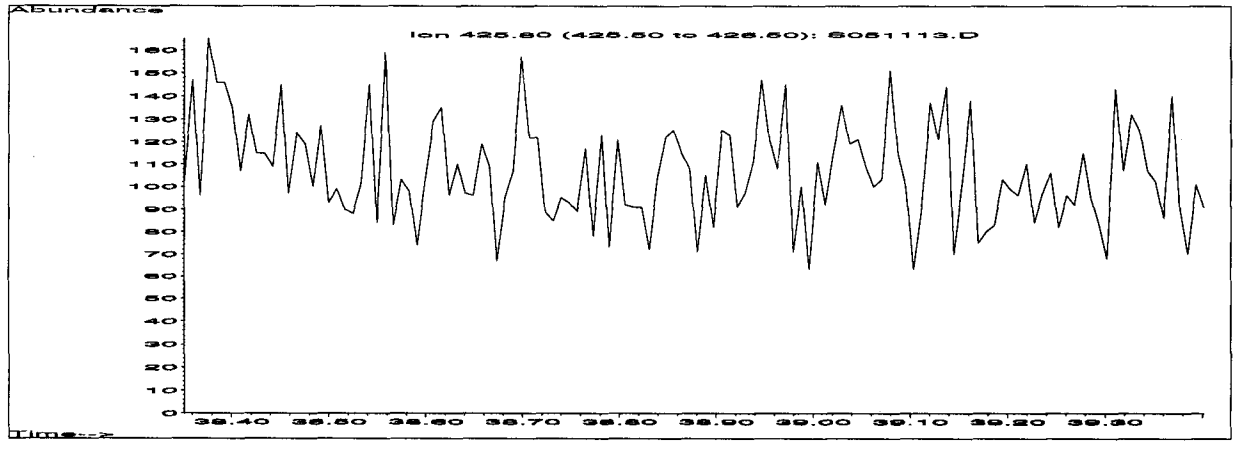


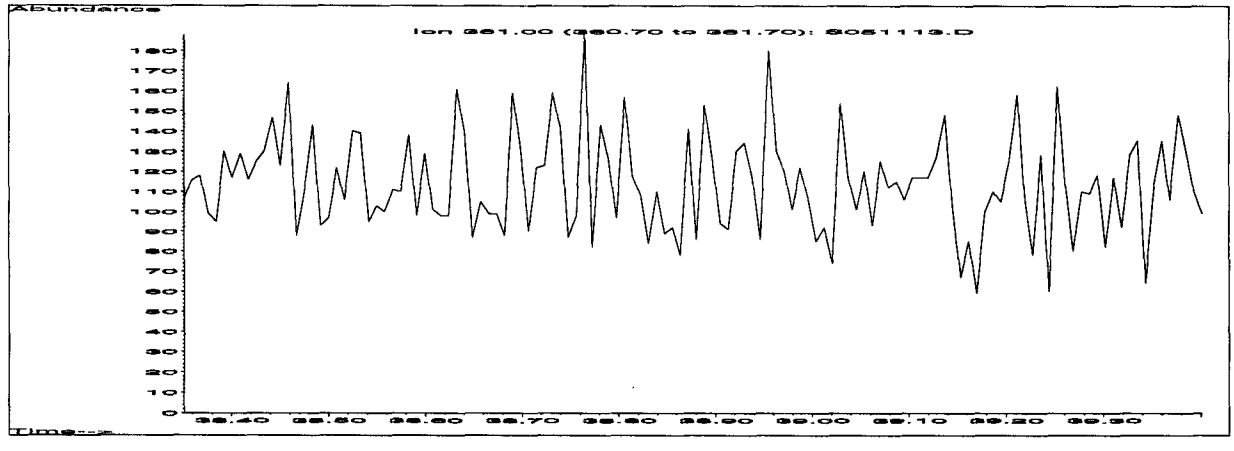


HpCDD TOTAL

TS R.T. Lower Limit	38.35
TS R.T. Upper Limit	39.40

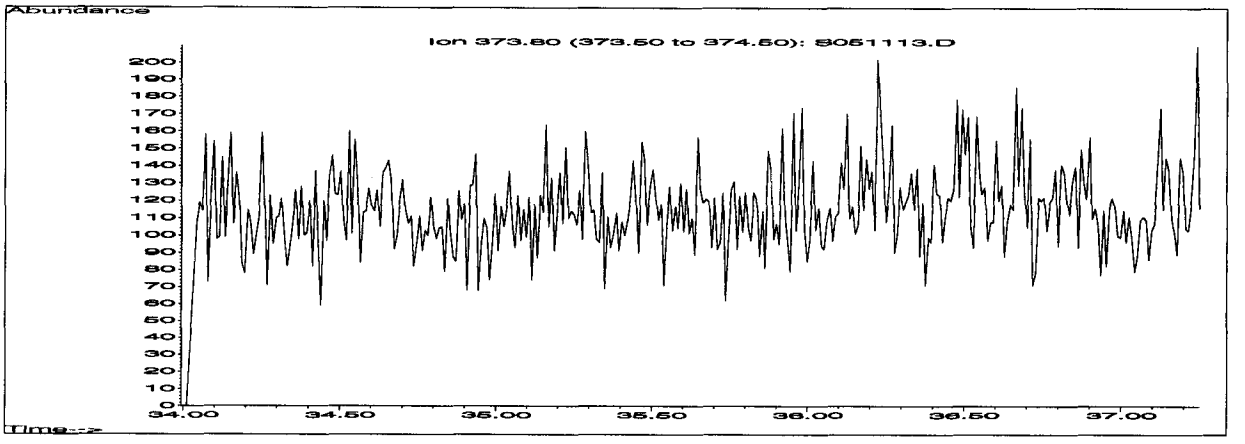


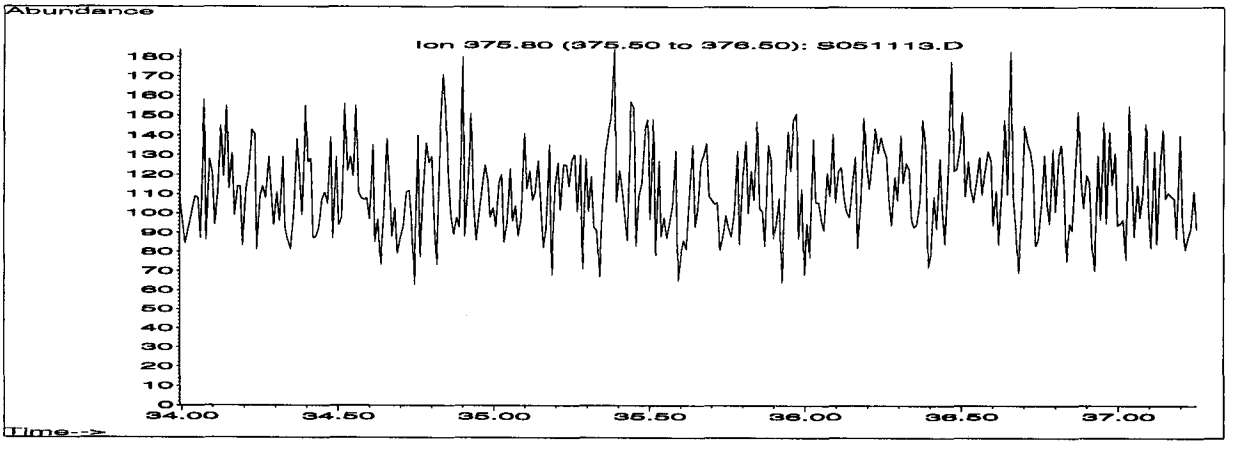


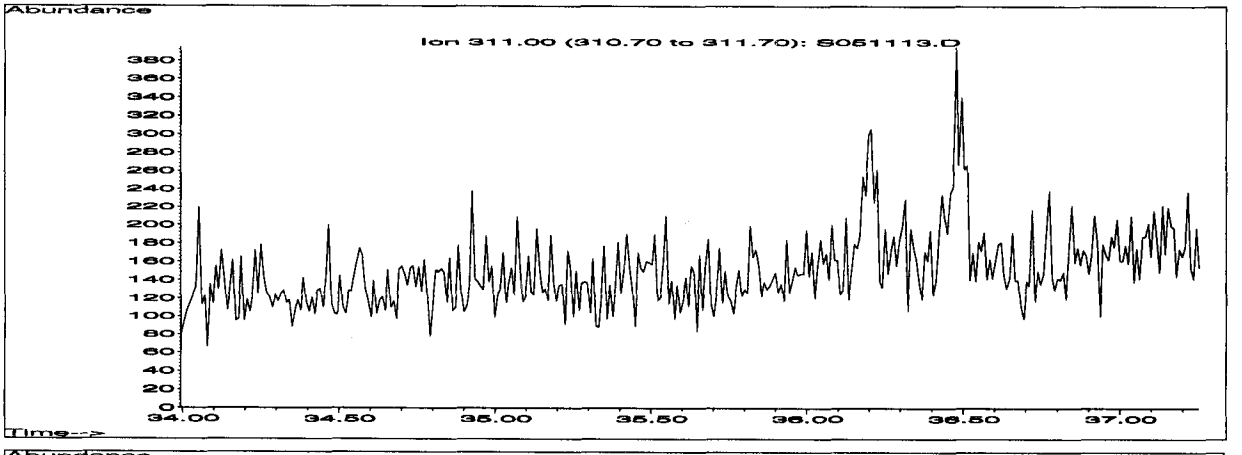


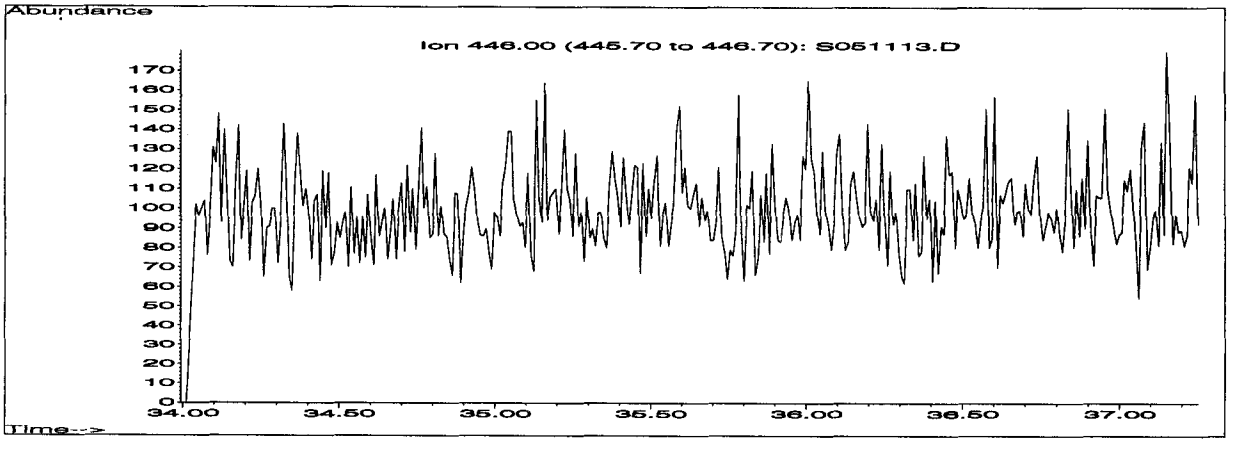
HxCDF TOTAL

TS R.T. Lower Limit	34.00
TS R.T. Upper Limit	37.25



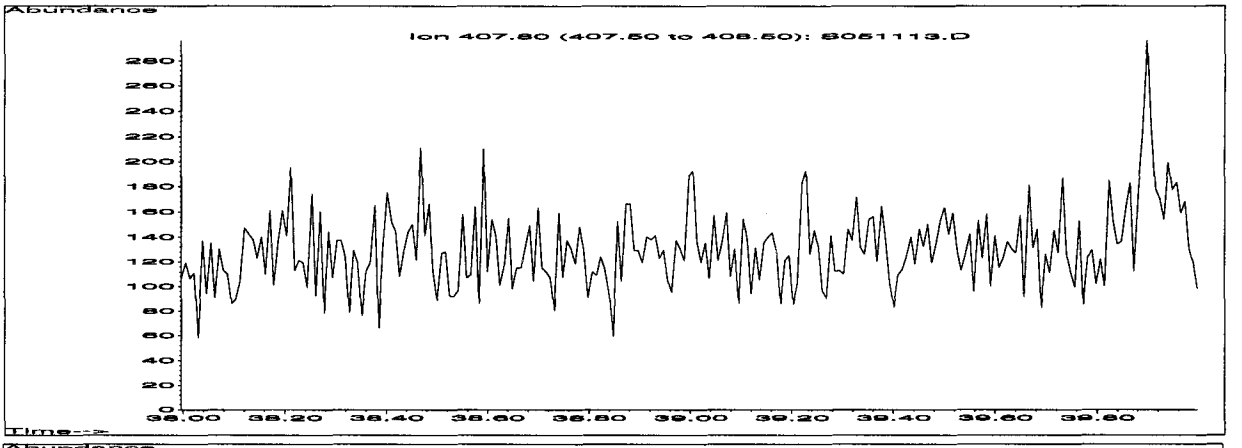


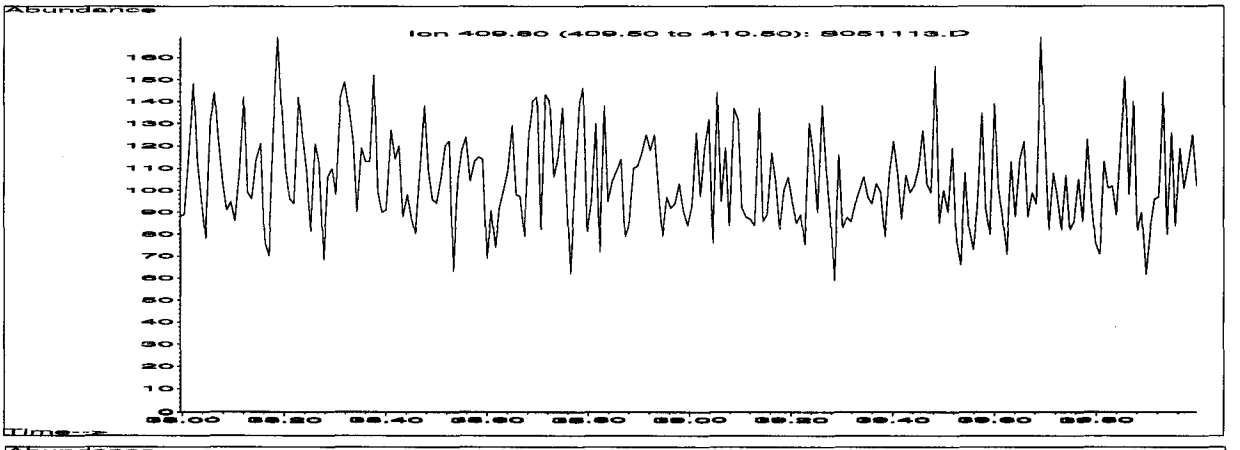


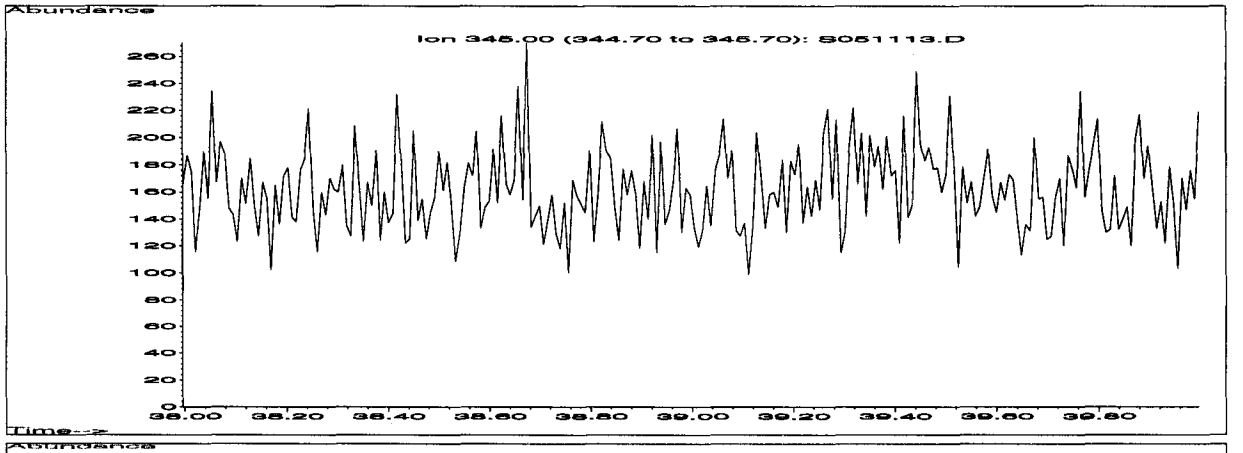


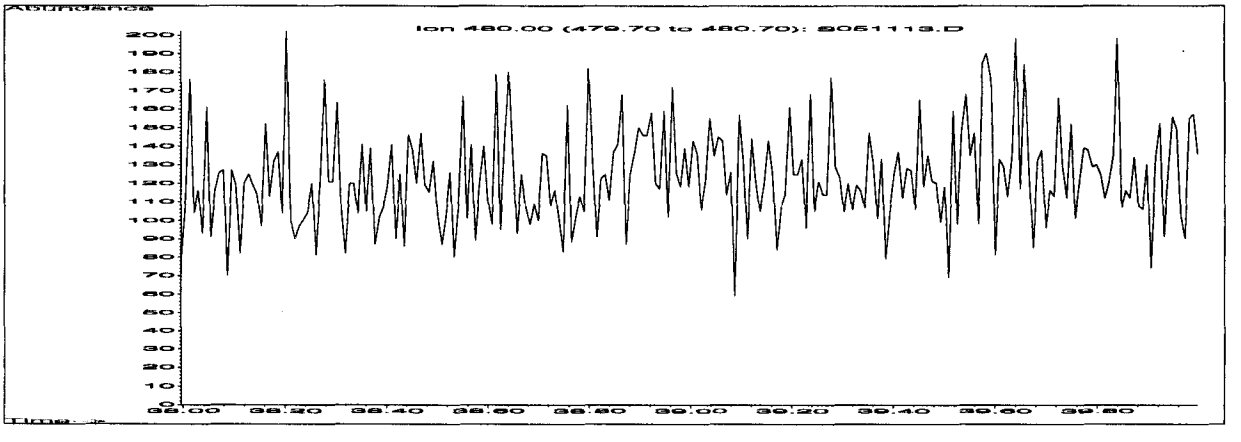
HpCDF TOTAL

TS R.T. Lower Limit	38.00
TS R.T. Upper Limit	40.00

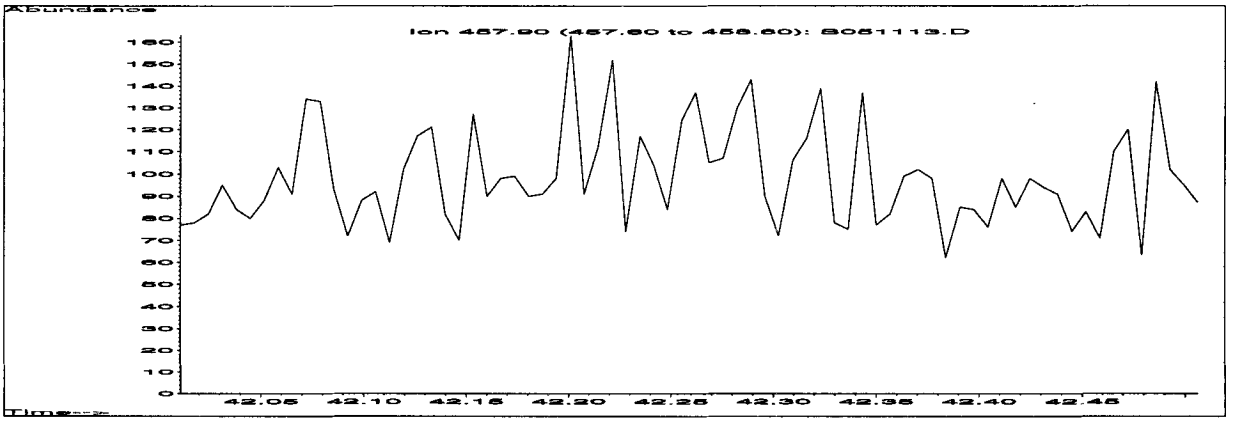


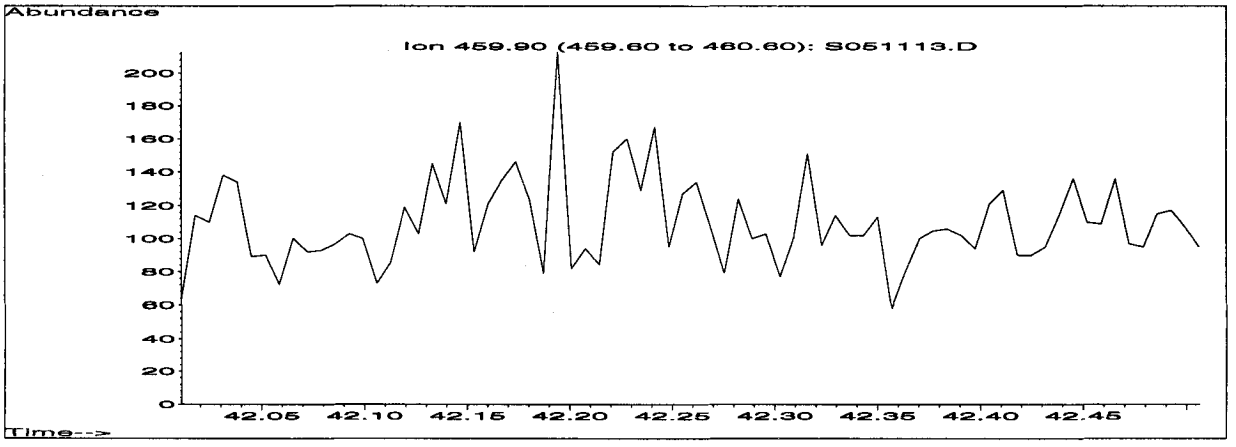


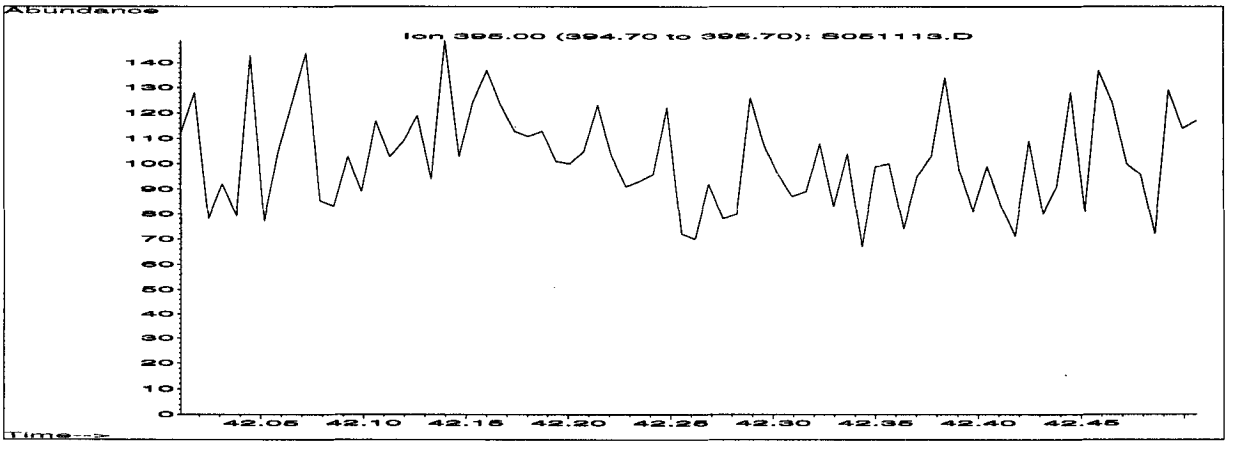




OCDD			
TS R.T. Lower Limit	42.01		
TS R.T. Upper Limit	42.51		
Ret. Time	0.00		
Target Ion	457.9	Q1 Ion	459.9
Target Response	0	Q1 Response	0
Total Response	0	Ion ratio	#DIV/0!
Q2 Ion	395		
Q2 Response	0		

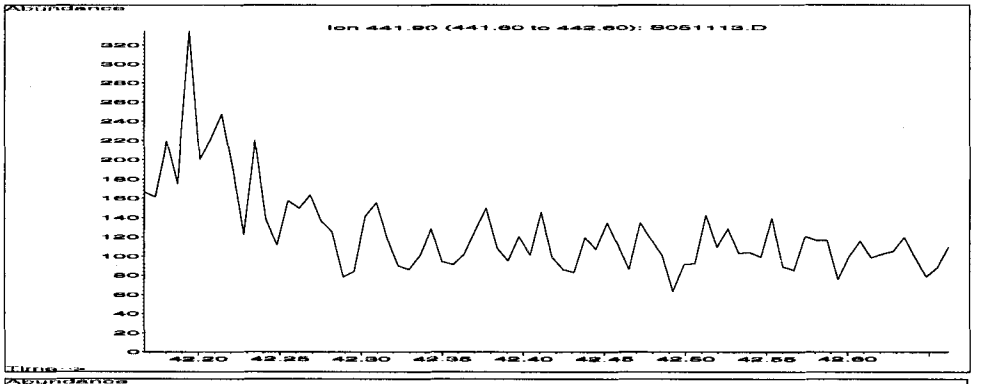


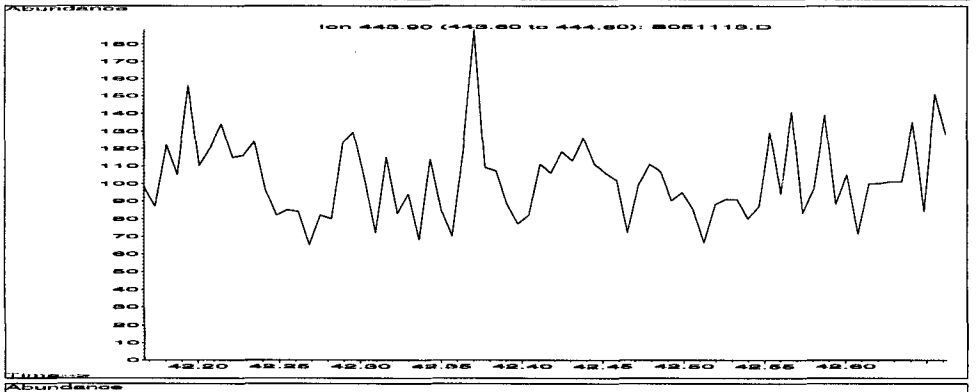


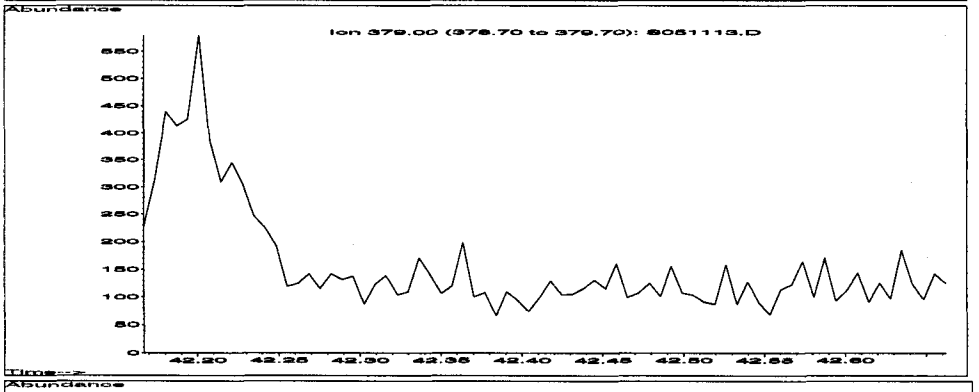


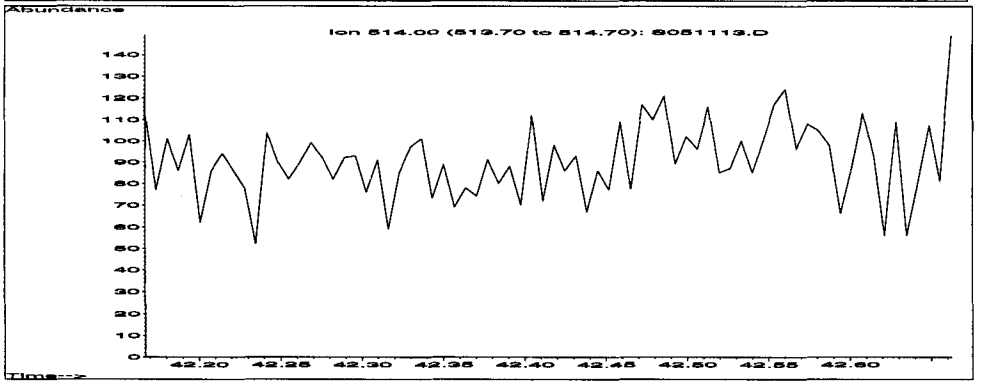
OCDF

TS R.T. Lower Limit	42.16		
TS R.T. Upper Limit	42.66		
Ret Time	0.00		
Target Ion	441.9	Q1 Ion	443.9
Target Response	0	Q1 Response	0
Target Response	0	Ion Ratio	#DIV/0!
Q2 Ion	379	DPE Ion	514
Q2 Response	0	DPE Response	0



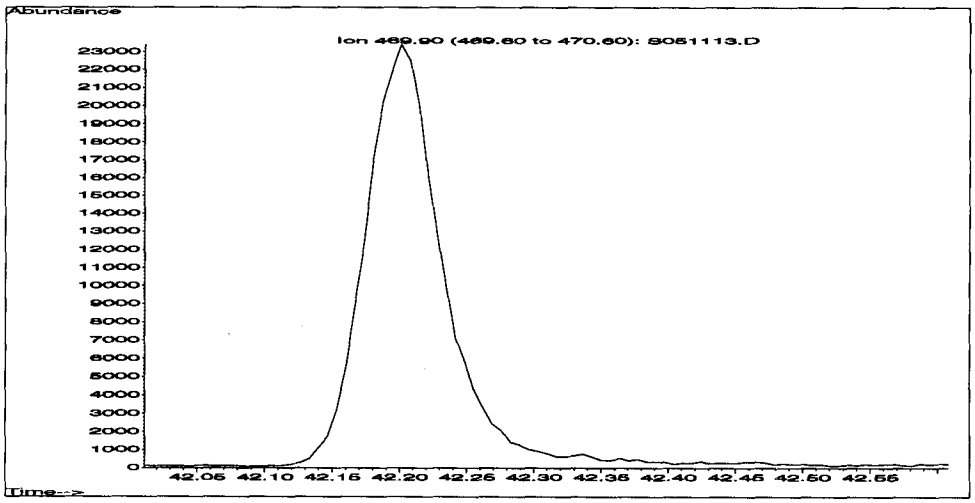


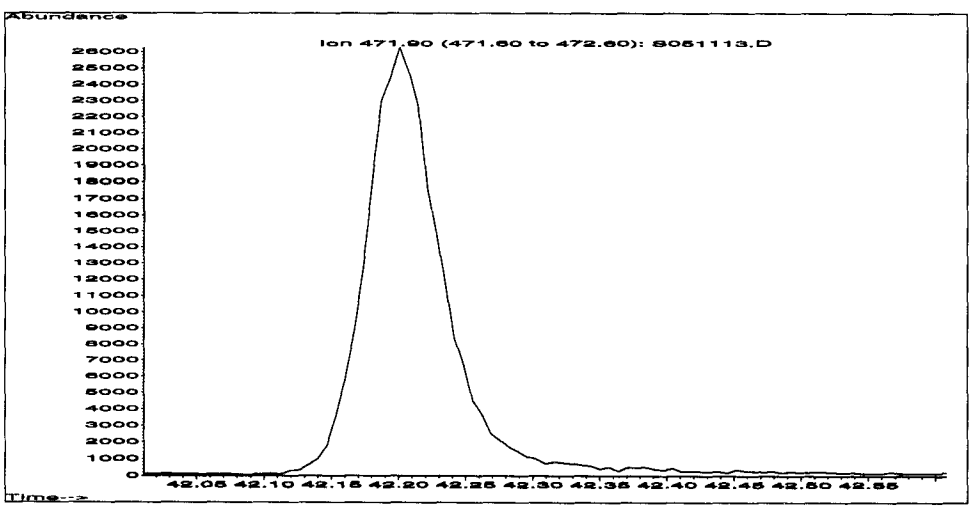




13C-OCDD-IS

RT Lower Limit	42.01		
RT Upper Limit	42.61		
Ret Time	42.20		
Target Ion	469.9	Q1 Ion	471.9
Target Response	92364	Q1 Response	103748
Total response	196112	Ratio	0.89





Quantitation Report (Not Reviewed)

Sample ID: A0D300605-4 0.97026L 8280A
L0VEH-1-AA WATER LR009

Size: 0.970
Inst : DB1

Data File:C:\8280\2DB\051110.B\S051114.D
Acq On :12 May 2010 7:55

Vial: 14
Operator: MEO
Sample Amount: 0.97

MS Integration Params: RTEINT.P
Quant Time: May 12 14:03 2010

Quant Results File: 10MY11C2.RES

Quant Method : C:\8280\ DATA METHODS\10MY11C2.M (RTE Integrator)
Title : Dioxin Furan Total
Last Update : Wed May 12 09:30:50 2010
Response via : Single (C:\8280\2DB\051110.B\ST0511C.D 12 May 2010 1:32)
DataAcq Meth : TOKAS
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

AP 9

Recovery\Internal Stds	R.T.	QIon	Ratio	Response	Conc		Dev(Min)
1) 13C-1234-TCDD	24.01	332+334	0.78	129525	25.00	NG	-0.02
5) 13C-123789-HxCDD	36.49	402+404	1.26	174291	25.00	NG	0.00
9) 13C-2378-TCDF	23.22	316+318	0.81	145278	25.00	NG	0.02
15) 13C-2378-TCDD	24.32	332+334	0.82	102554	25.00	NG	0.02
20) 13C-123678-HxCDD	36.21	402+404	1.29	110374	25.00	NG	0.00
27) 13C-1234678-HpCDF	38.19	420+422	1.04	153598	25.00	NG	0.00
36) 13C-OCDD	42.20	470+472	0.90	189110	50.00	NG	0.00

5/13/10

Surrogate Compound

4) 37Cl-2378-TCDD	24.33	328		77869	11.155	NG 0.00

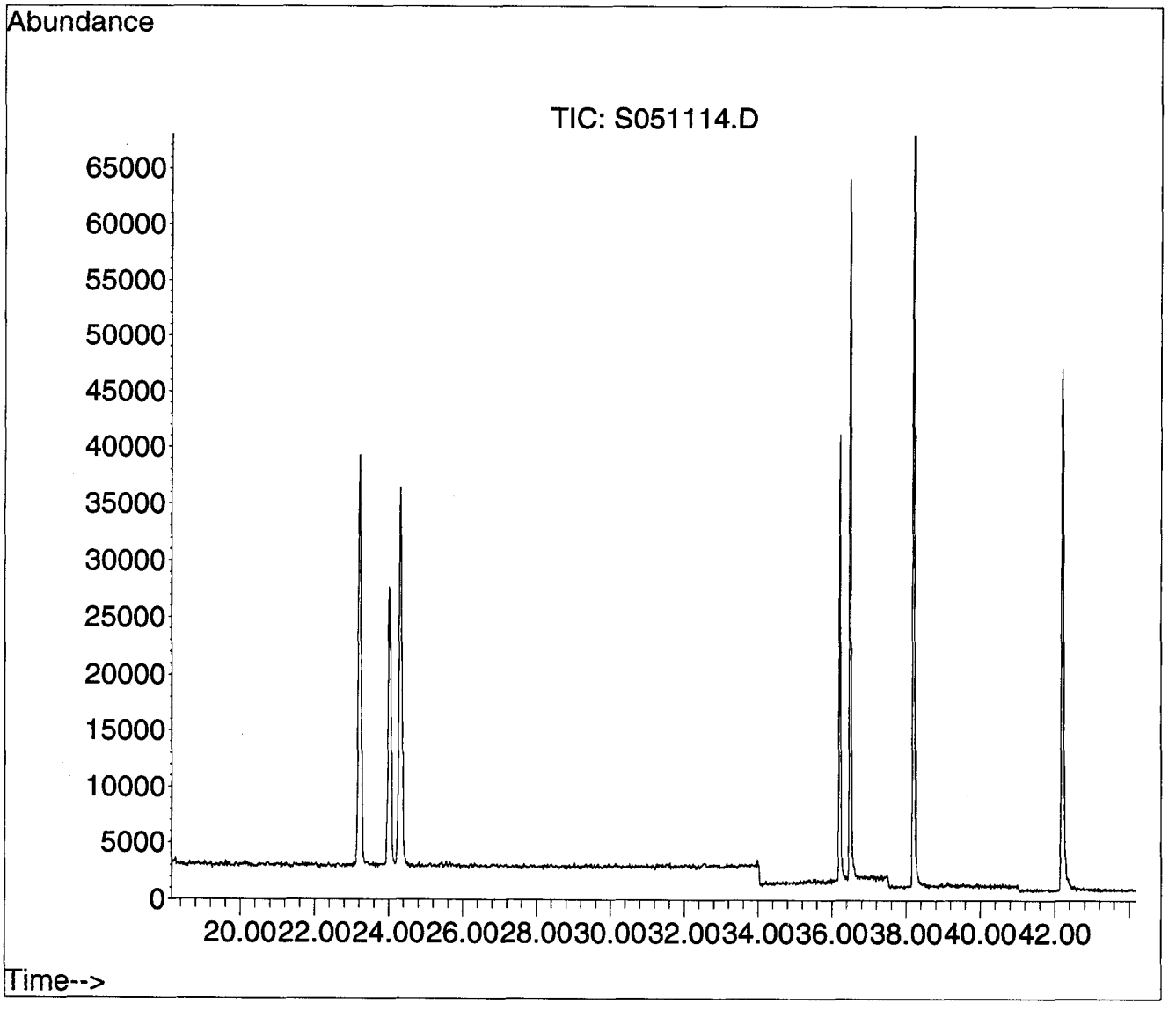
Spiked Amount = 12.883 RRF = 1.389 Recovery = 86.56%

Target Compounds	RT	Ratio		Area	RRF	Conc	EDL	%Rec
2) 13C-2378-TCDF-IS	23.22	0.81		144948	1.428	20.188	0.2342	78.4
3) 13C-2378-TCDD-IS	24.32	0.82		96380	0.983	19.501	2.5512	75.7
6) 13C-123678-HxCDD-	36.21	1.29		110374	0.796	20.487	0.1304	79.5
7) 13C-1234678-HpCDF	38.19	1.04		153598	1.010	22.479	0.1090	87.2
8) 13C-OCDD-IS	42.20	0.90		189110	0.659	42.451	0.1690	82.4
10) 2378-TCDF	0.00			0	1.265	N.D.	0.2552	
11) TCDF TOTAL	22.00			0	1.265	N.D.	0.4180	
12) 12378-PeCDF	0.00			0	1.136	N.D.	0.1592	
13) 23478-PeCDF	0.00			0	1.137	N.D.	0.3206	
14) PeCDF TOTAL	29.50			0	1.136	N.D.	0.5021	
16) 2378-TCDD	0.00			0	1.221	N.D.	0.2586	
1	23.22	4.78	#	14520		2.987		
17) TCDD TOTAL	22.50	4.78		14520	1.221	2.987		
18) 12378-PeCDD	0.00			0	1.142	N.D.	0.4566	
19) PeCDD TOTAL	30.00			0	1.142	N.D.	0.7098	
21) 123478-HxCDD	0.00			0	1.012	N.D.	0.1905	
22) 123678-HxCDD	0.00			0	0.981	N.D.	0.1965	
23) 123789-HxCDD	0.00			0	1.038	N.D.	0.2143	
24) HxCDD TOTAL	36.50			0	0.981	N.D.	0.3168	
25) 1234678-HpCDD	0.00			0	1.039	N.D.	0.1269	
26) HpCDD TOTAL	39.35			0	1.039	N.D.	0.3693	
28) 123478-HxCDF	0.00			0	0.984	N.D.	0.1669	
29) 123678-HxCDF	0.00			0	1.042	N.D.	0.1648	
30) 234678-HxCDF	0.00			0	0.970	N.D.	0.1941	
31) 123789-HxCDF	0.00			0	0.928	N.D.	0.1997	
32) HxCDF TOTAL	36.00			0	0.928	N.D.	0.3376	
33) 1234678-HpCDF	0.00			0	1.160	N.D.	0.2376	
34) 1234789-HpCDF	0.00			0	1.006	N.D.	0.1856	
35) HpCDF TOTAL	39.50			0	1.006	N.D.	0.2739	
37) OCDD	0.00			0	1.102	N.D.	0.4234	

38) OCDF	0.00	0	1.397	N.D.	0.4668

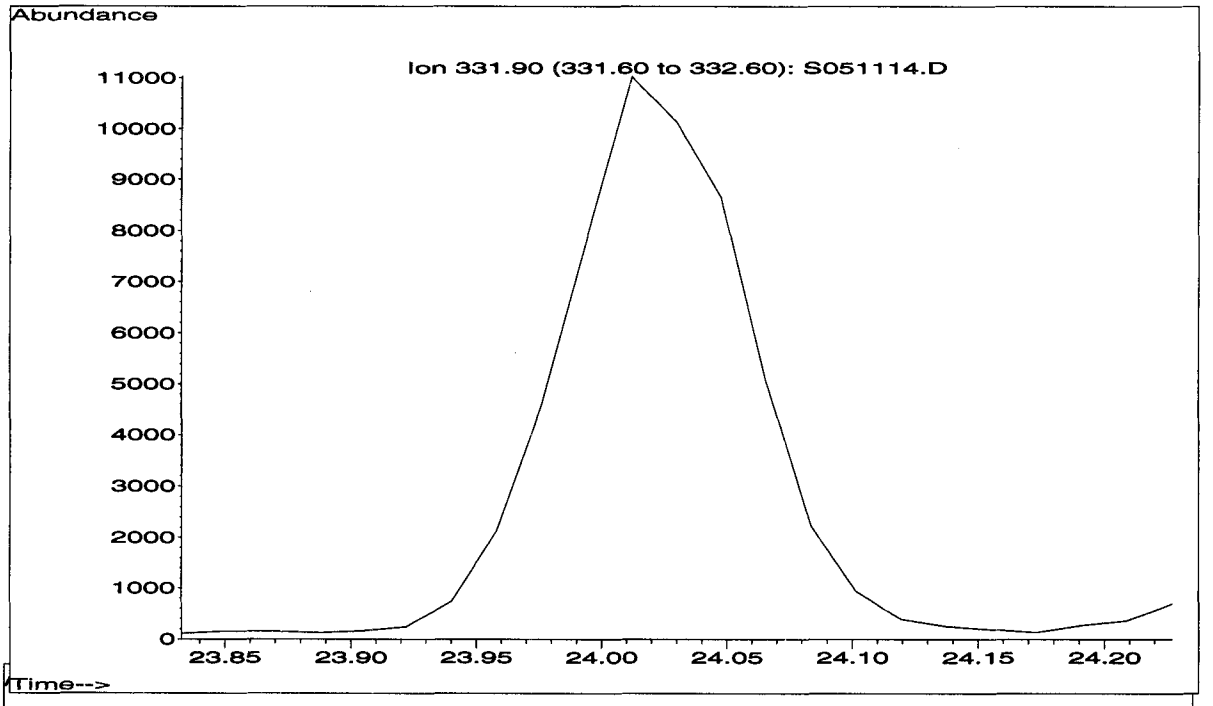
(#) = qualifier out of range•: areas and concentration based on theoretical ion ratio
(m) = manual integration
S051114.D 10MY11C2.M Wed May 12 14:03:34 2010

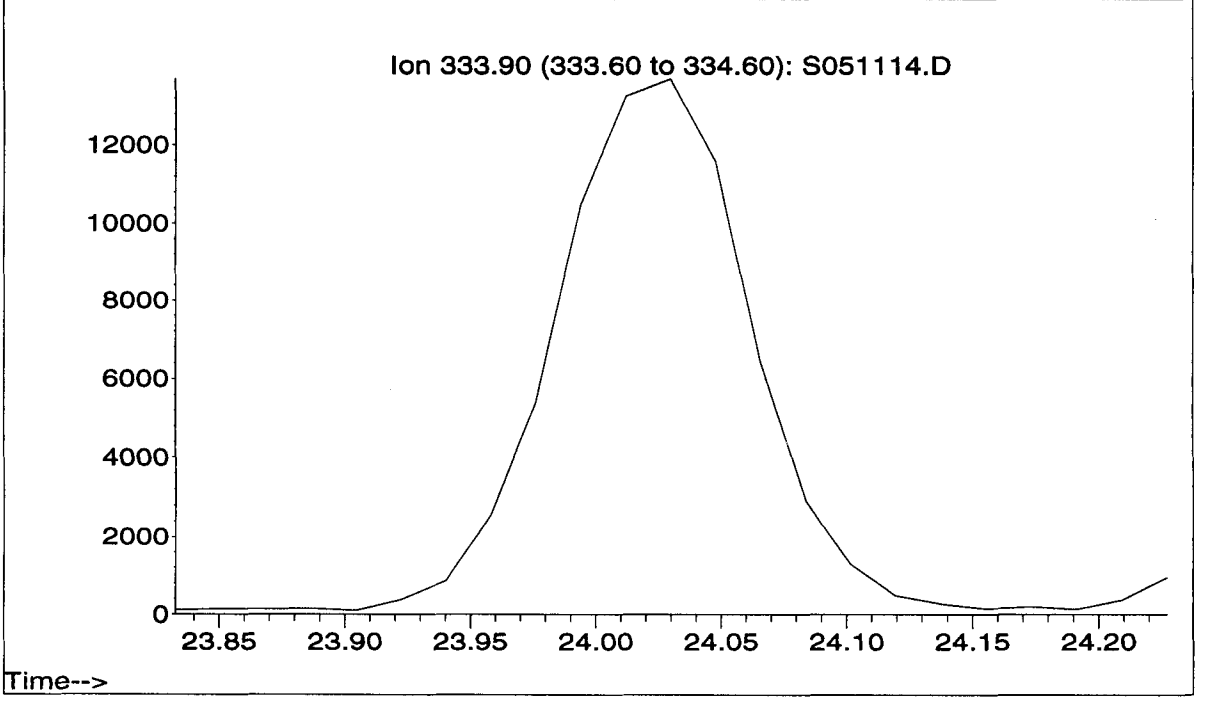
Data File Name	S051114.D
Data File Path	C:\8280\2DB\051110.B\
Operator	MEO
Date Acquired	5/12/2010 7:55
Acq. Method File	TOKAS
Sample Name	_0VEH-1-AA WATER LR009
Misc Info	D300605-4 0.97026L 8280A
Vial Number	14
Instrument Name	2DB
Sample Multiplier	1
Sample Amount	0.97026



13C-1234-TCDD

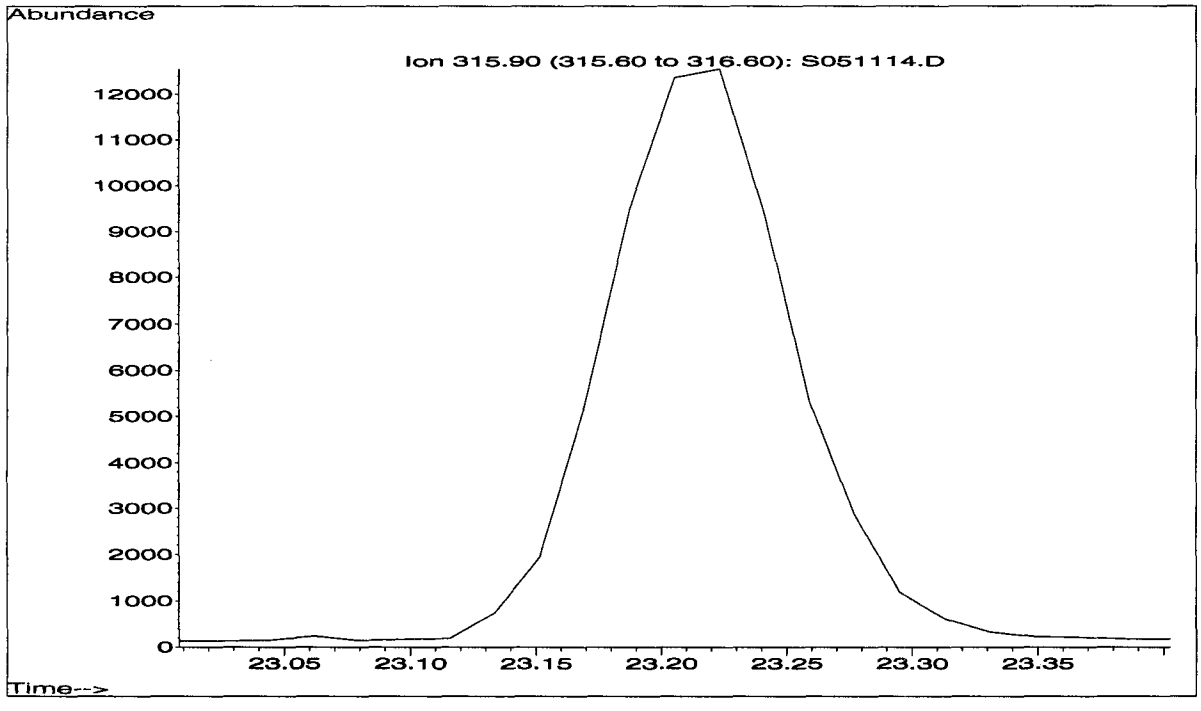
TS R.T. Lower Limit	23.83		
TS R.T. Upper Limit	24.23		
Ret Time	24.01		
Target Ion	331.9	Q1 Ion	333.9
Target Response	56564	Q1 Response	72961
Total Response	129525	Ion Ratio	0.78

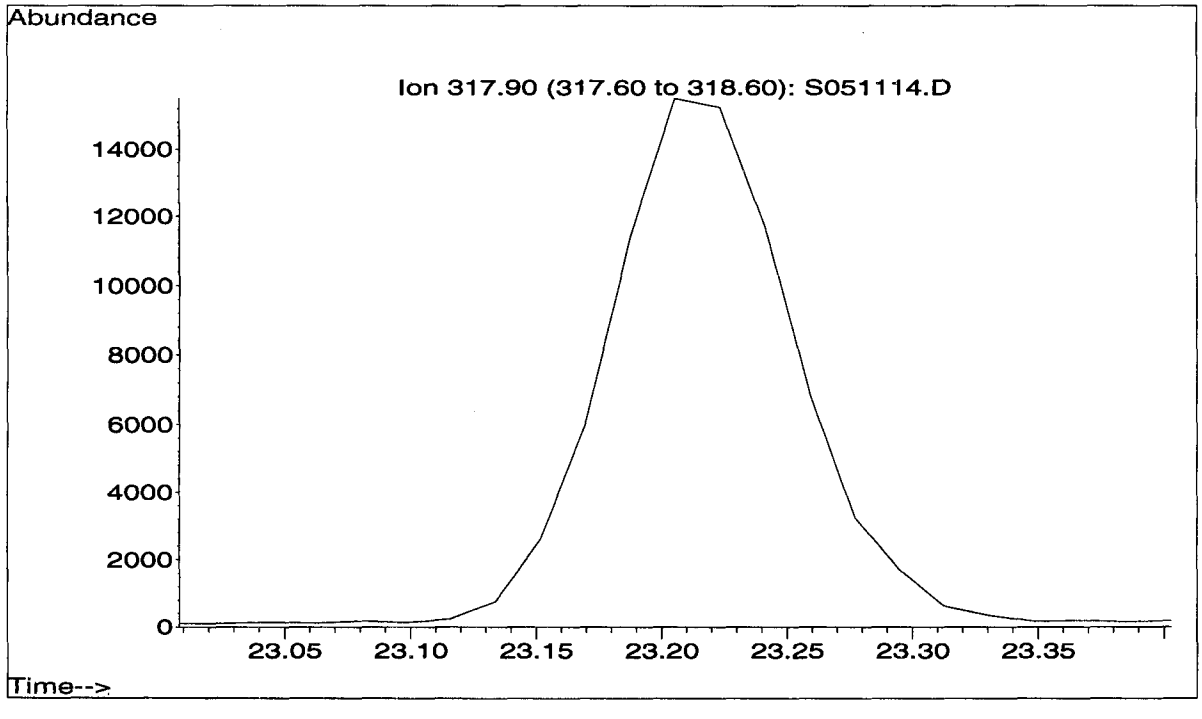




13C-2378-TCDF-IS

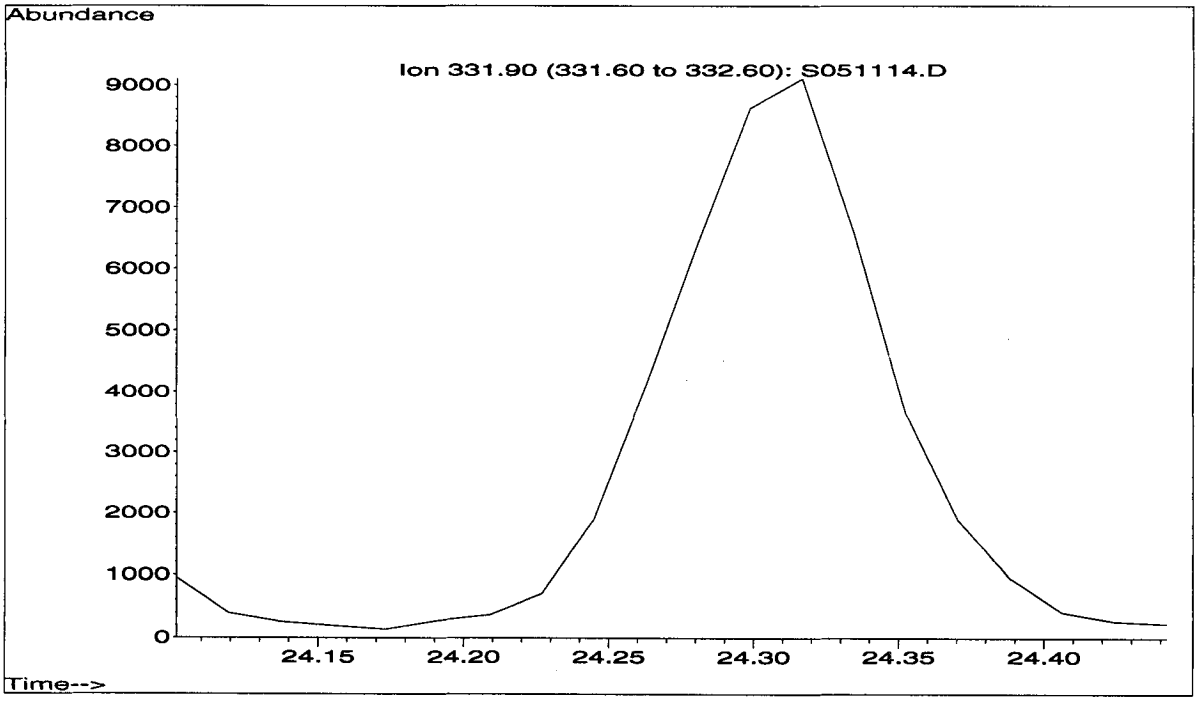
TS R.T. Lower Limit	23.01		
TS R.T. Upper Limit	23.41		
Ret Time	23.22		
Target Ion	315.9	Q1 Ion	317.9
Target Response	64706	Q1 Response	80242
Target Response	144948	Ion Ratio	0.81

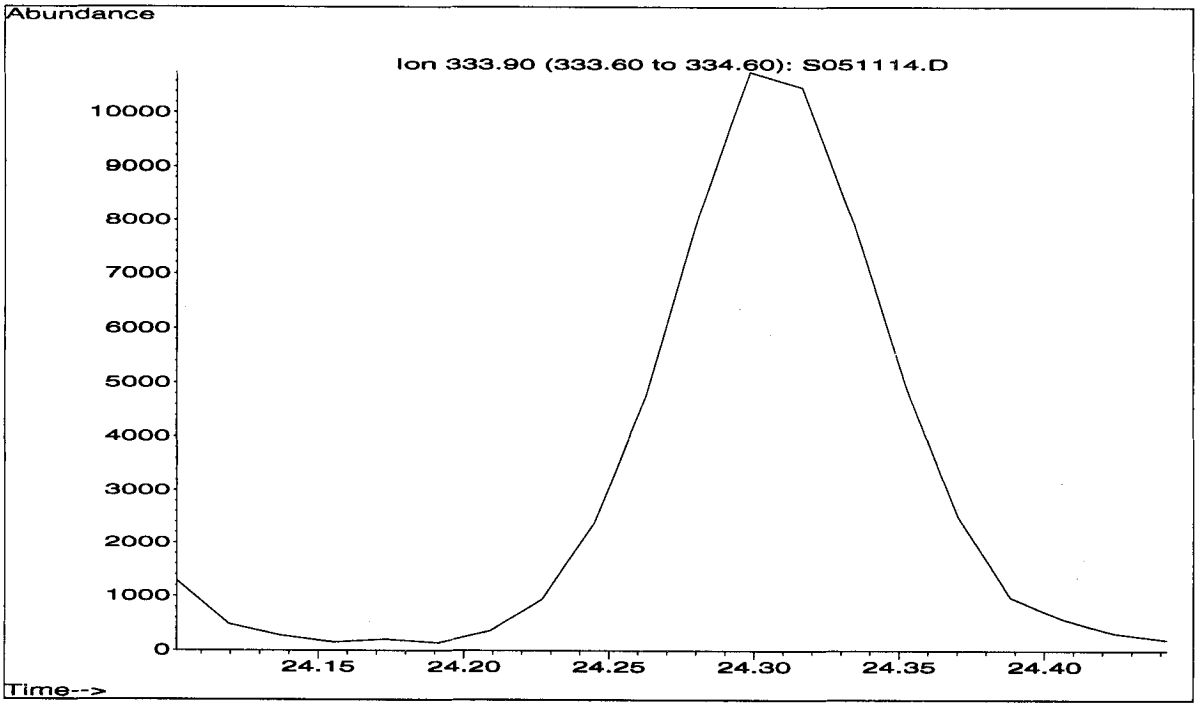




13C-2378-TCDD-IS

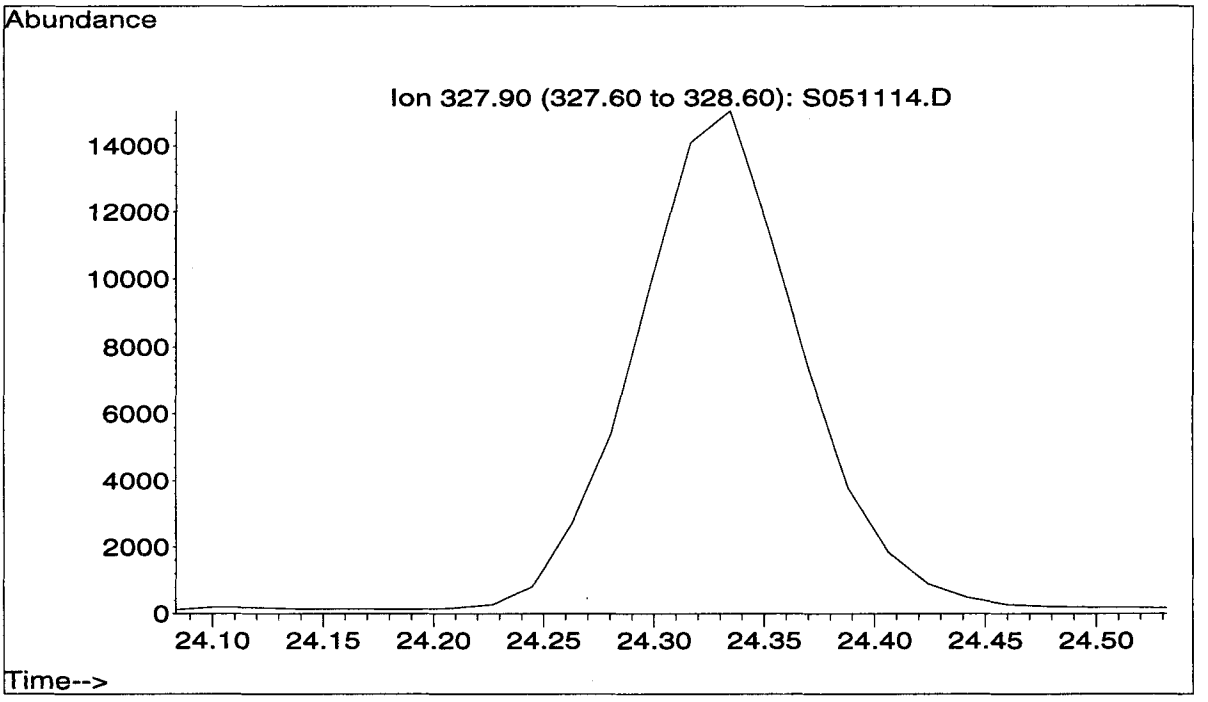
TS R.T. Lower Limit	24.10		
TS R.T. Upper Limit	24.45		
Ret Time	24.32		
Target Ion	331.9	Q1 Ion	333.9
Target Response	43397	Q1 Response	52983
Total Response	96380	Ion Ratio	0.82

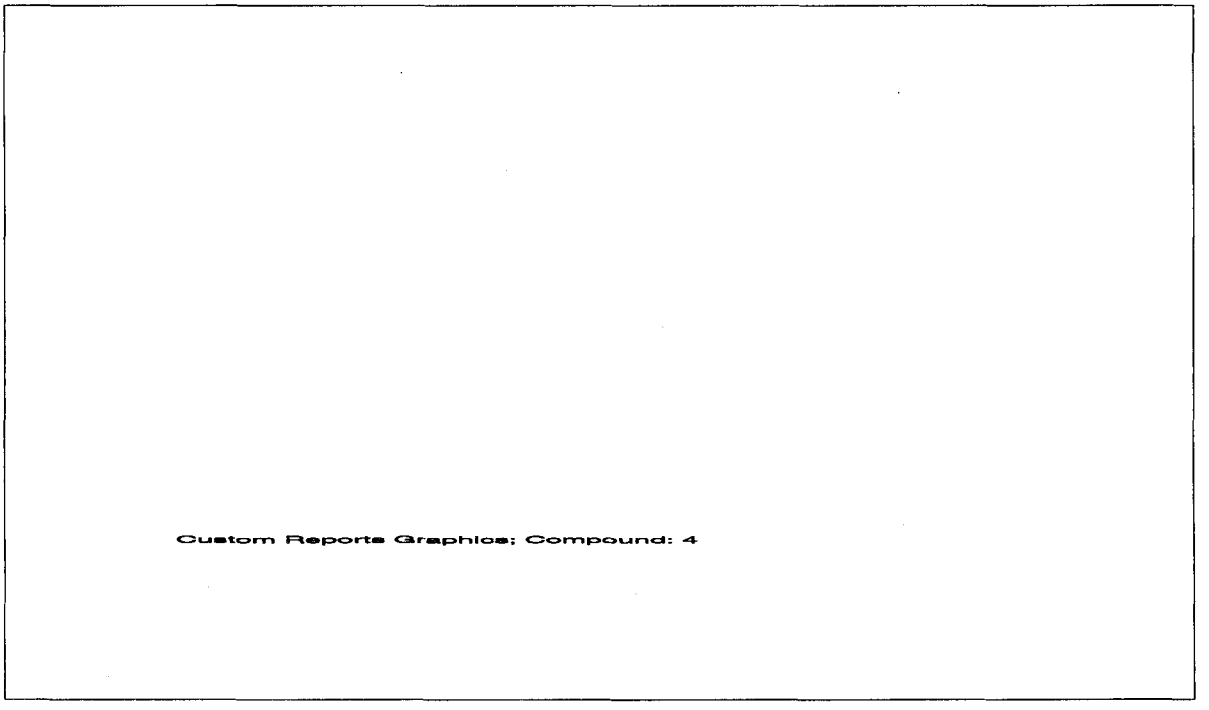




37Cl-2378-TCDD

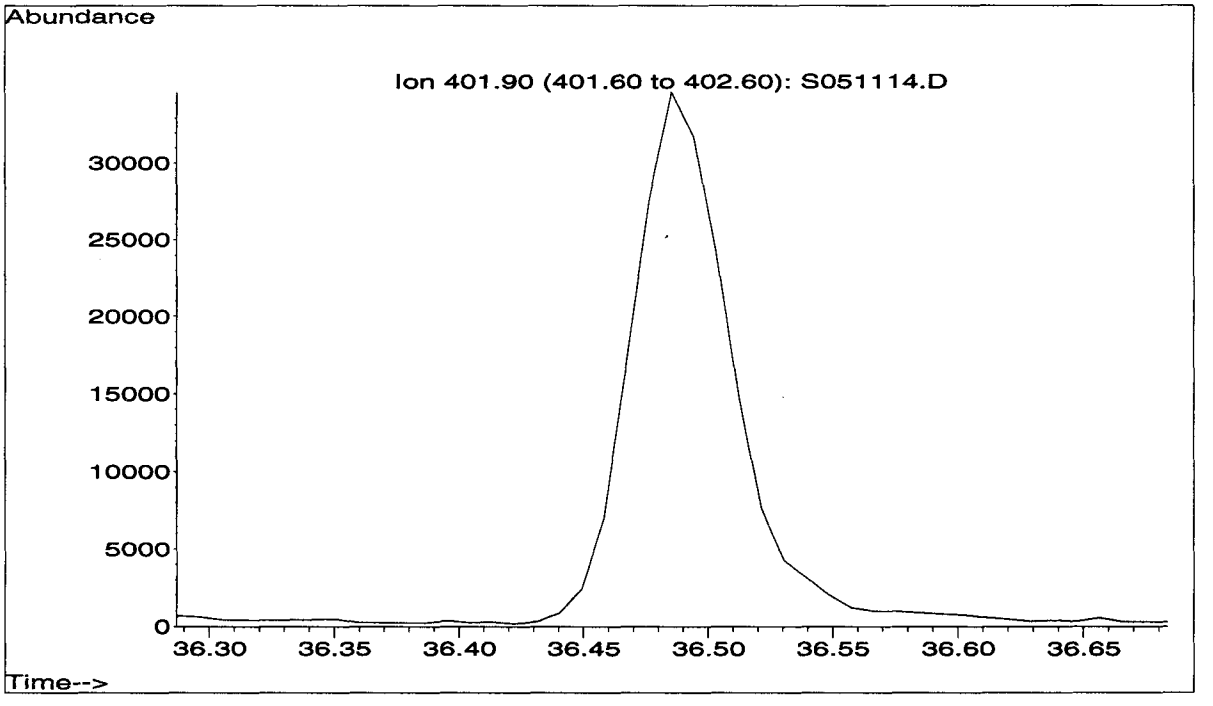
TS R.T. Lower Limit	24.09		
TS R.T. Upper Limit	24.54		
Ret Time	24.33		
Target Ion	327.9	Q1 Ion	0
Target Response	77869	Q1 Response	0
Total Response	77869	Ion Ratio	#DIV/0!

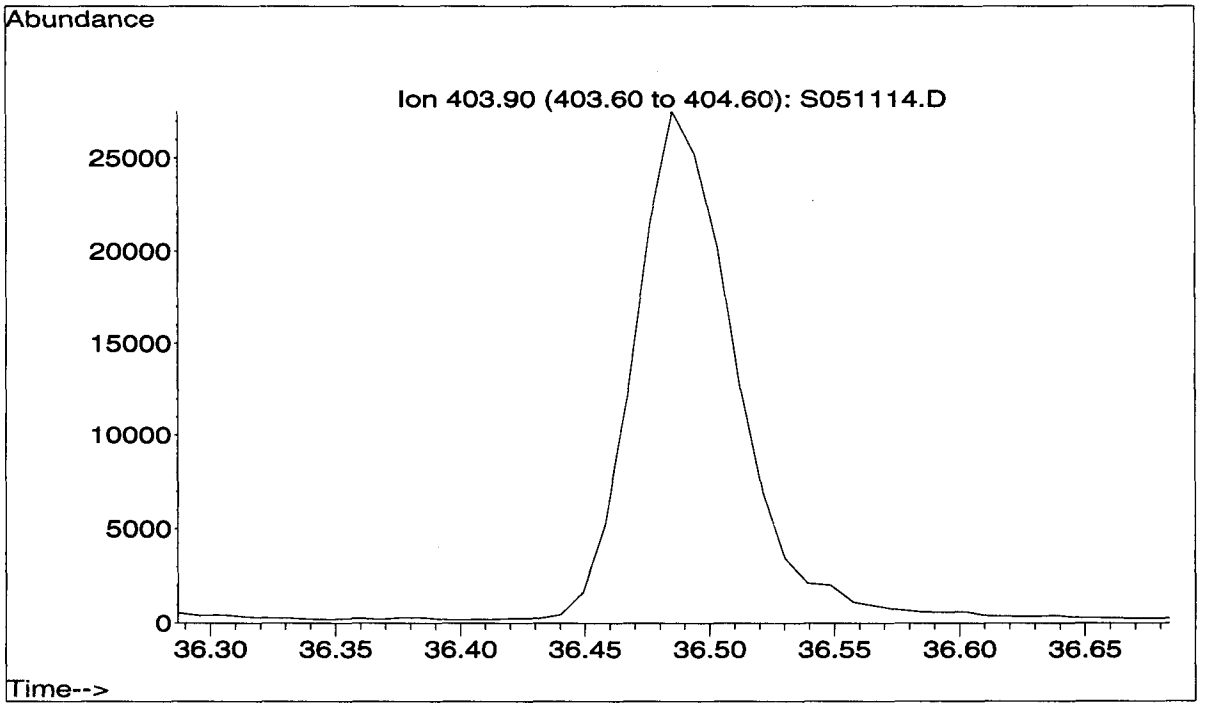




13C-123789-HxCDD

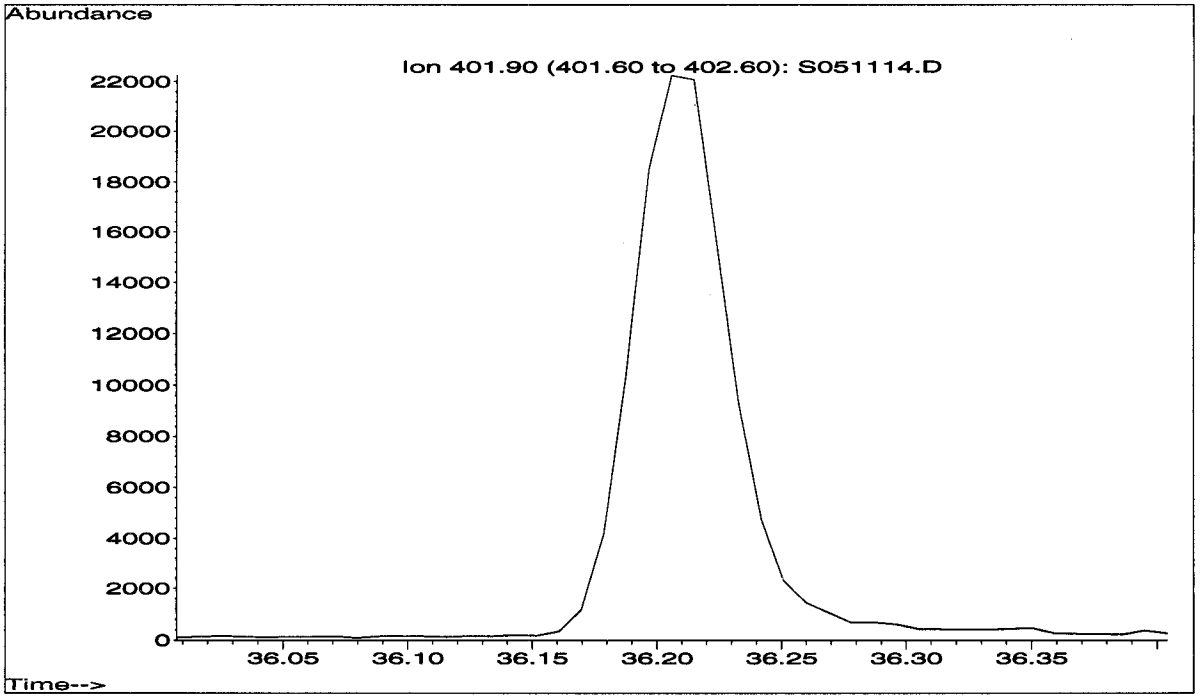
TS R.T. Lower Limit	36.29		
TS R.T. Upper Limit	36.69		
Ret Time	36.49		
Target Ion	401.9	Q1 Ion	403.9
Target Response	97106	Q1 Response	77185
Target Response	174291	Ion Ratio	1.26

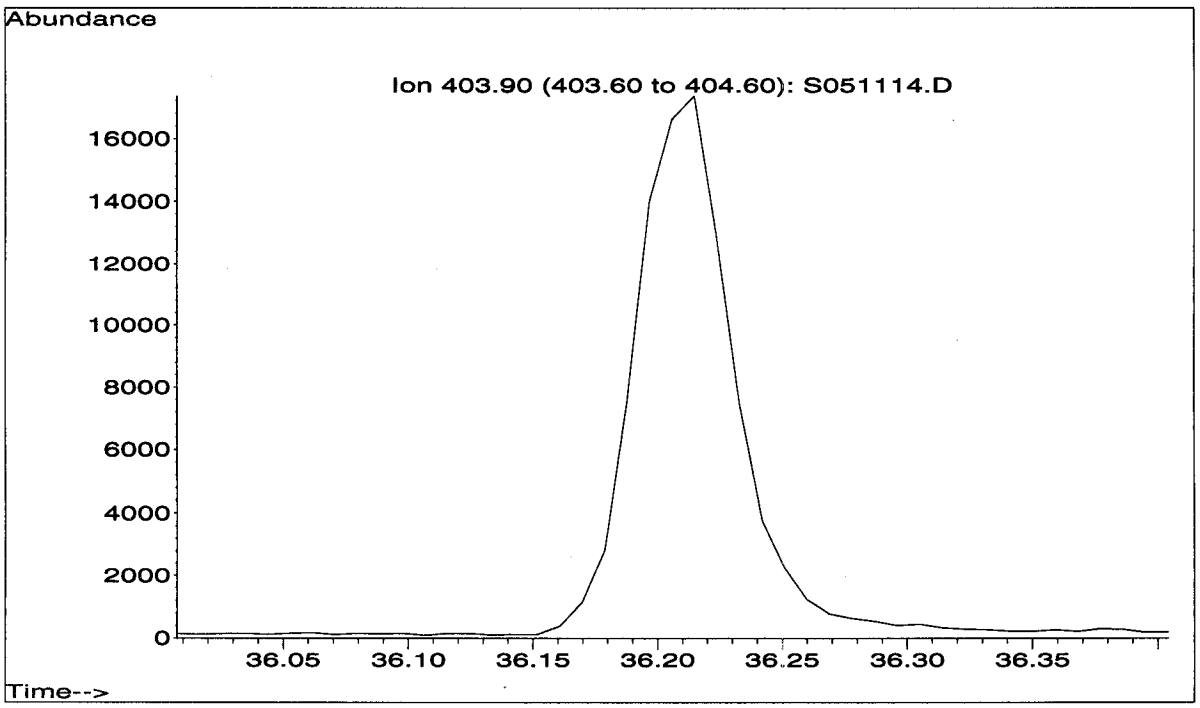




13C-123678-HxCDD-IS

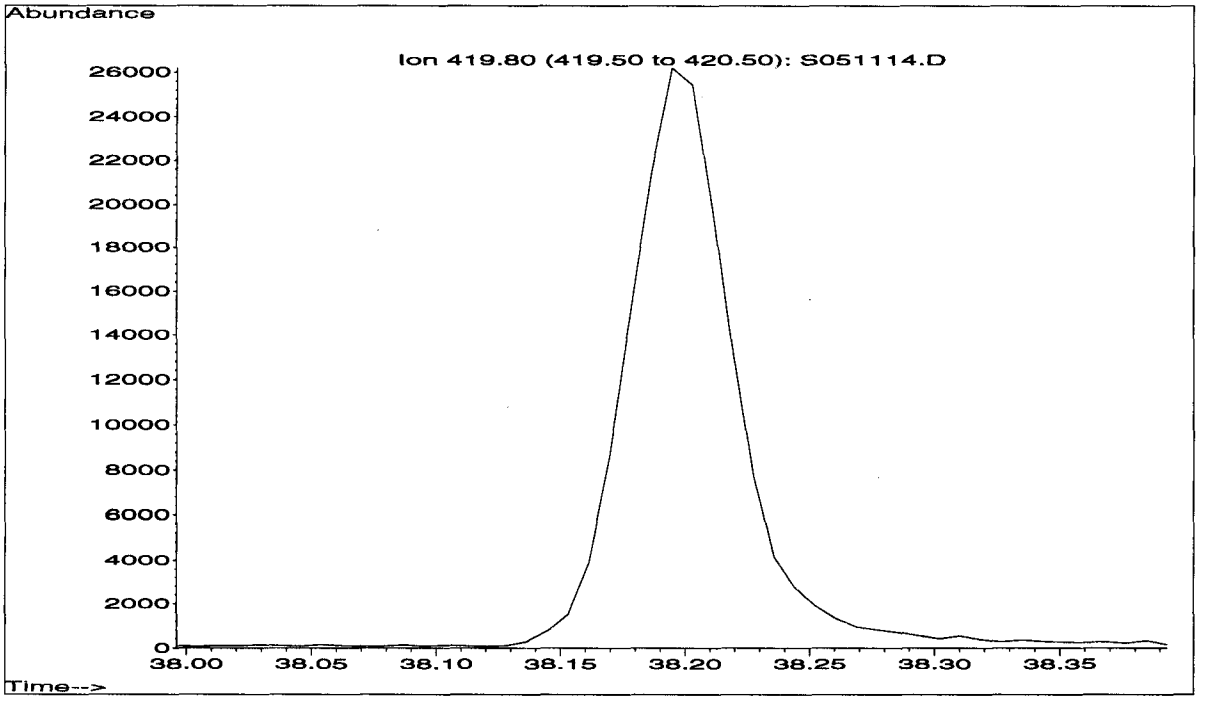
TS R.T. Lower Limit	36.01		
TS R.T. Upper Limit	36.41		
Ret Time	36.21		
Target Ion	401.9	Q1 Ion	403.9
Target Response	62097	Q1 Response	48277
Total Response	110374	Ion Ratio	1.29

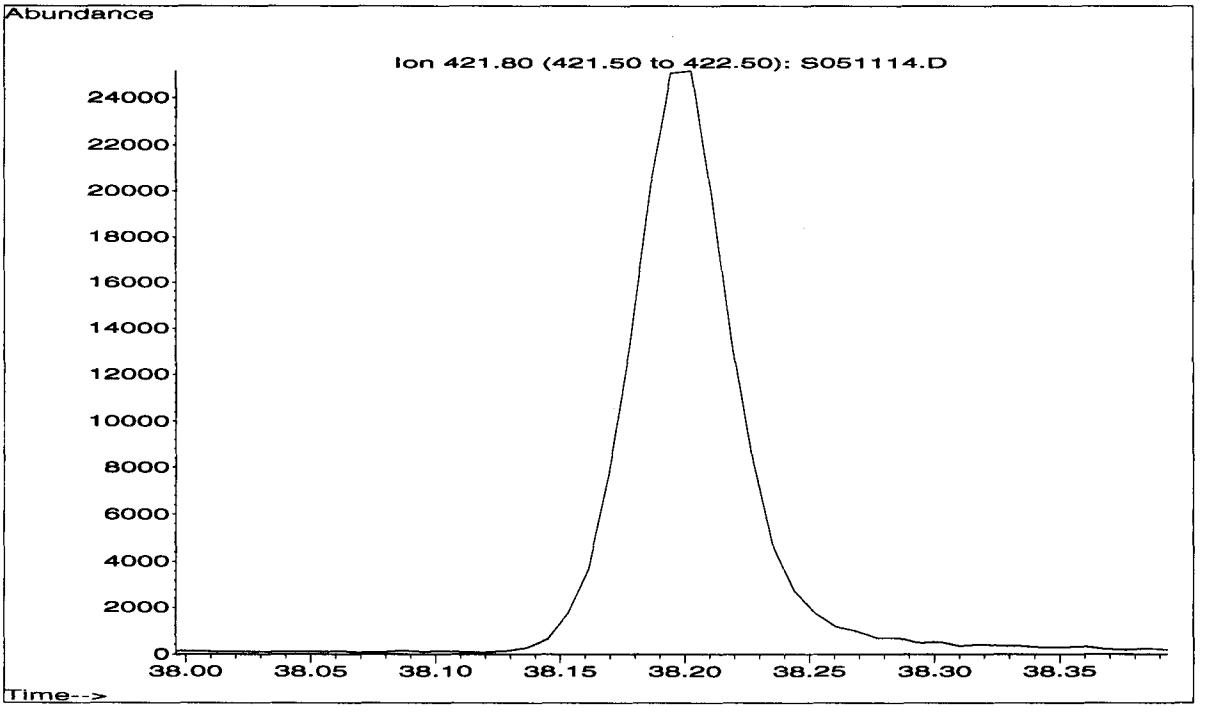




13C-1234678-HpCDF-IS

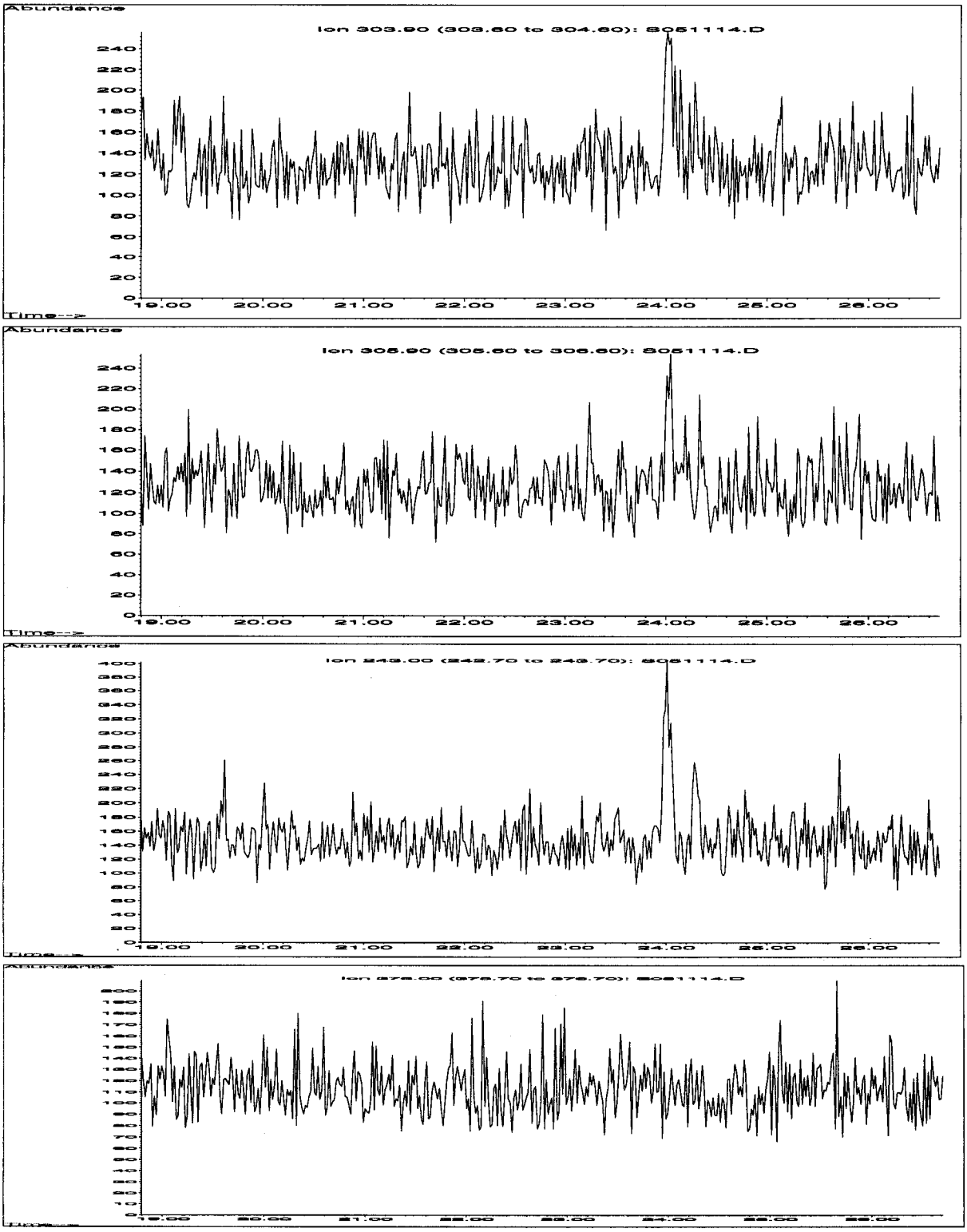
TS R.T. Lower Limit	37.99		
TS R.T. Upper Limit	38.39		
Ret Time	38.19		
Target Ion	419.8	Q1 Ion	421.8
Target Response	78154	Q1 Response	75444
Target Response	153598	Ion Ratio	1.04





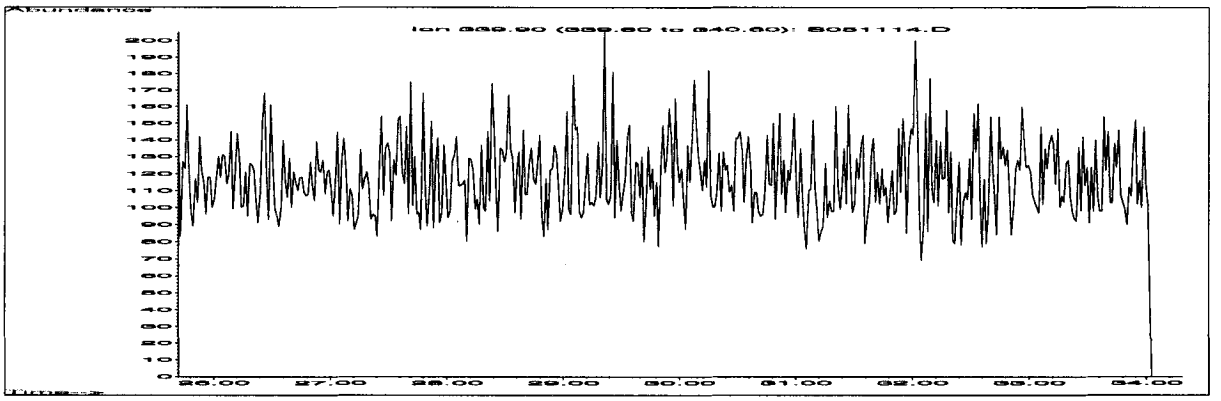
TCDF TOTAL

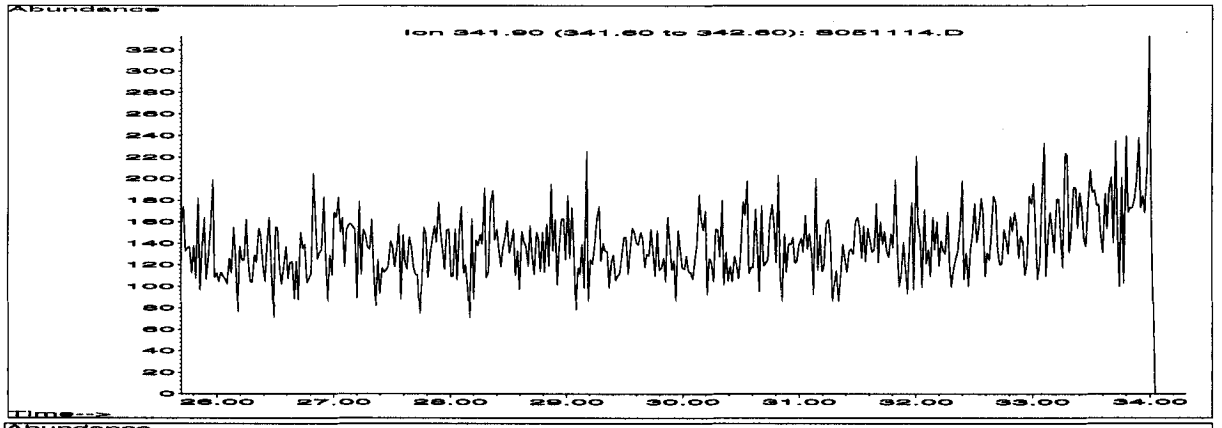
TS R.T. Lower Limit	18.80
TS R.T. Upper Limit	26.70

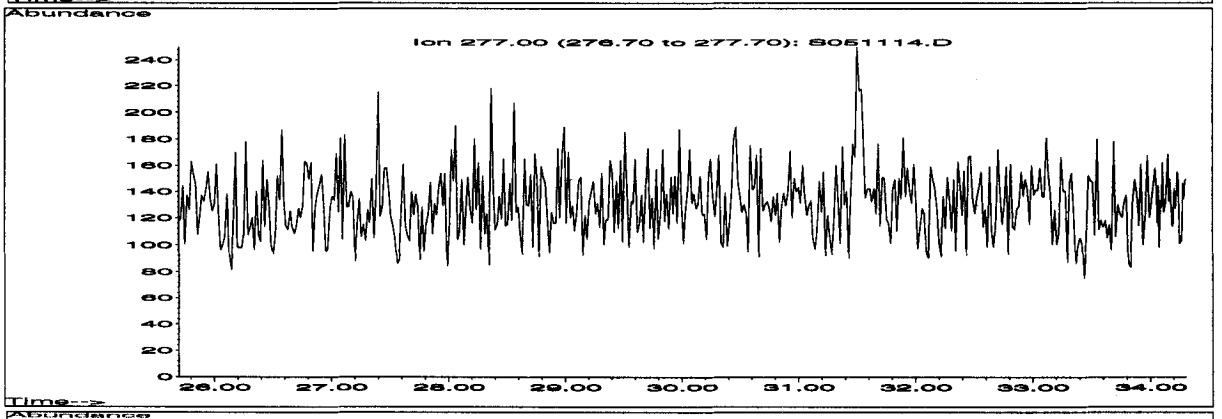


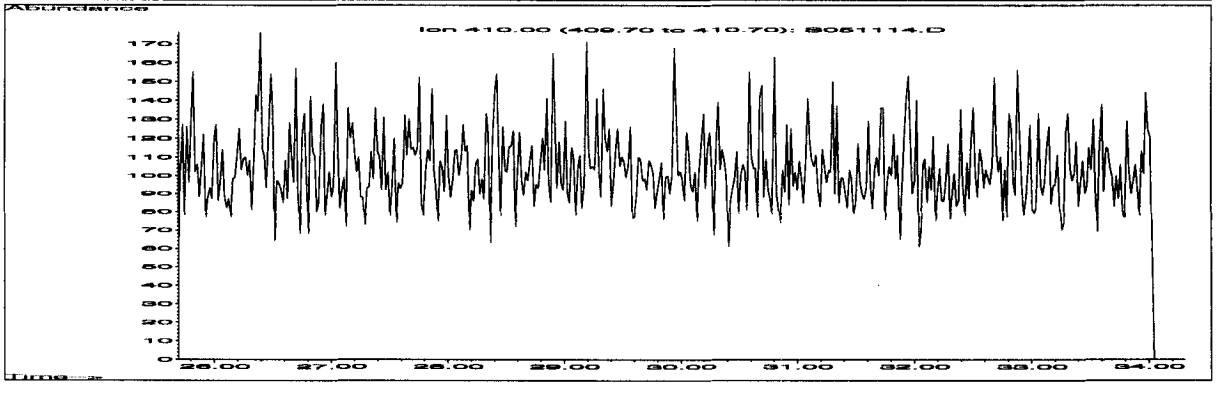
PeCDF TOTAL

TS R.T. Lower Limit	25.70
TS R.T. Upper Limit	34.30



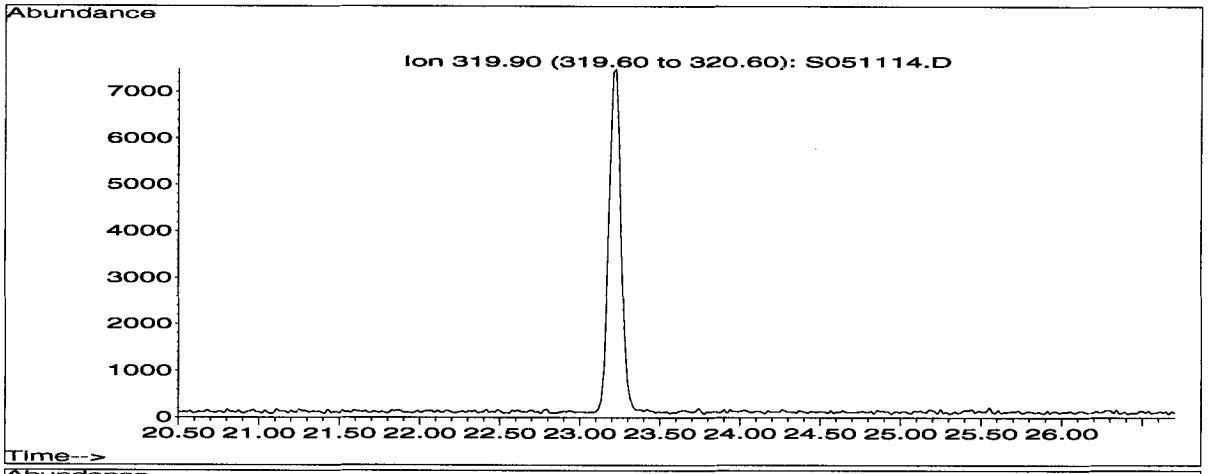


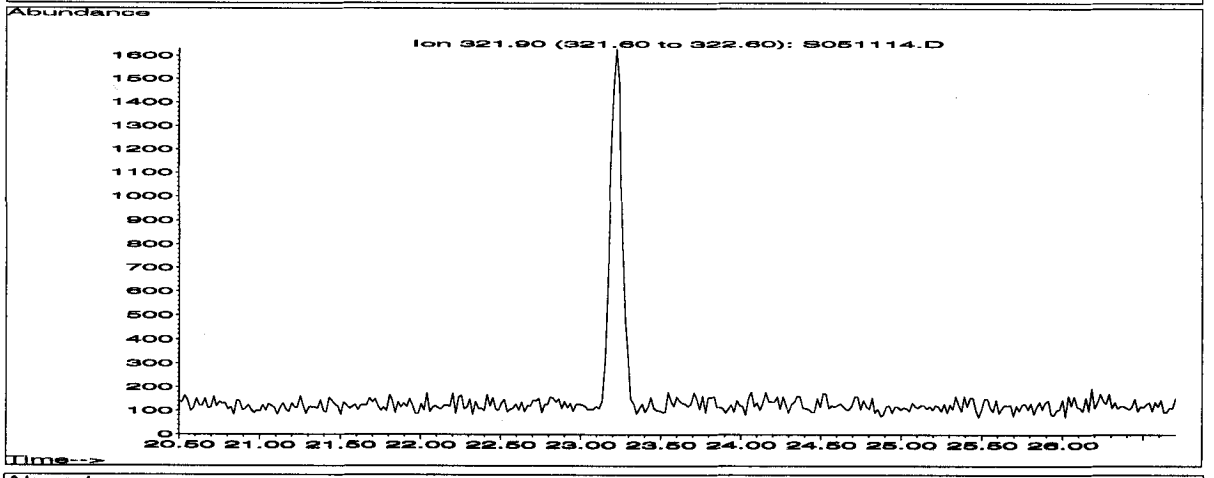


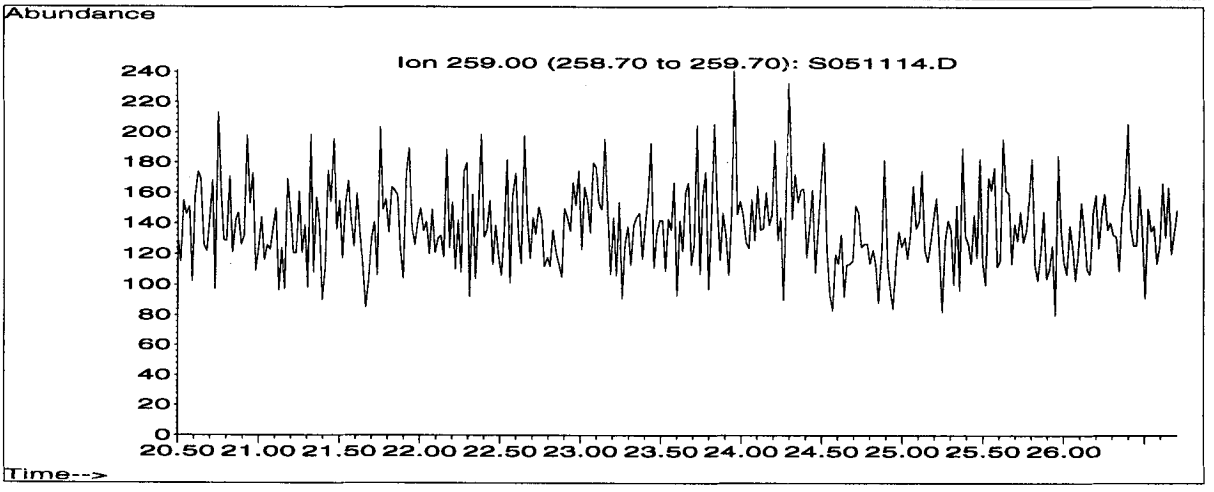


TCDD TOTAL

TS R.T. Lower Limit	20.50
TS R.T. Upper Limit	26.70

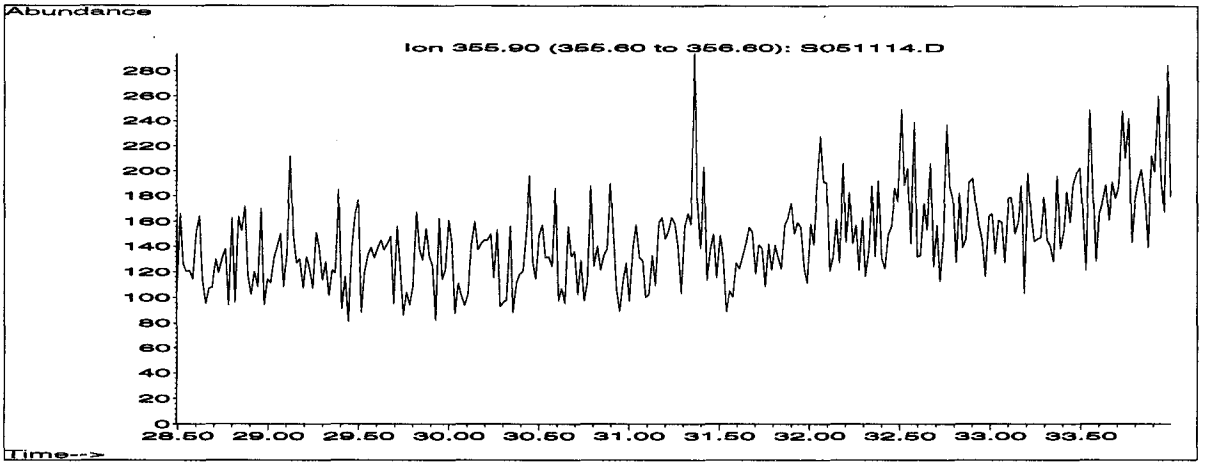


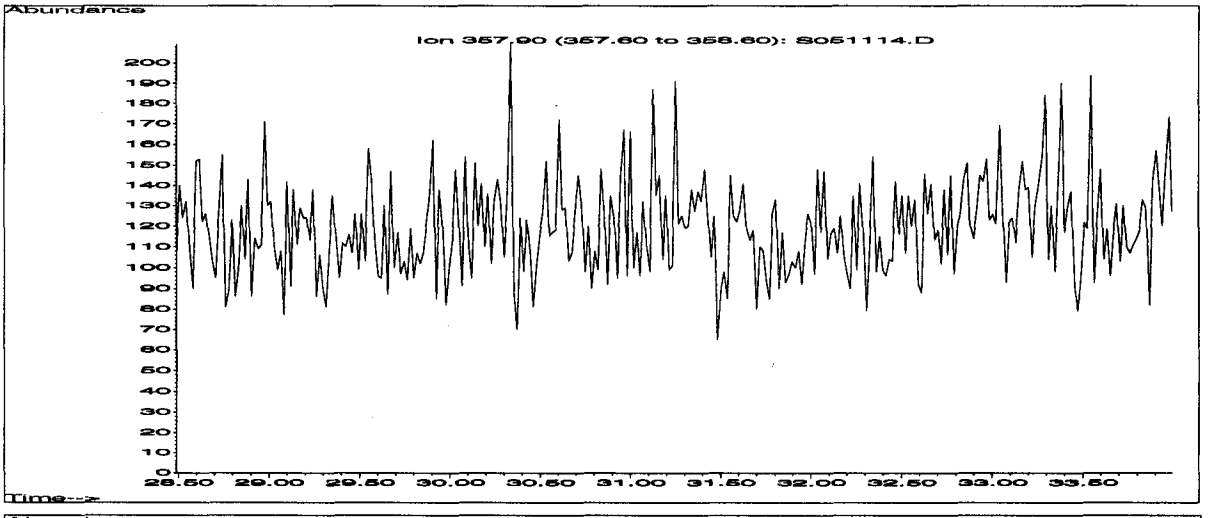


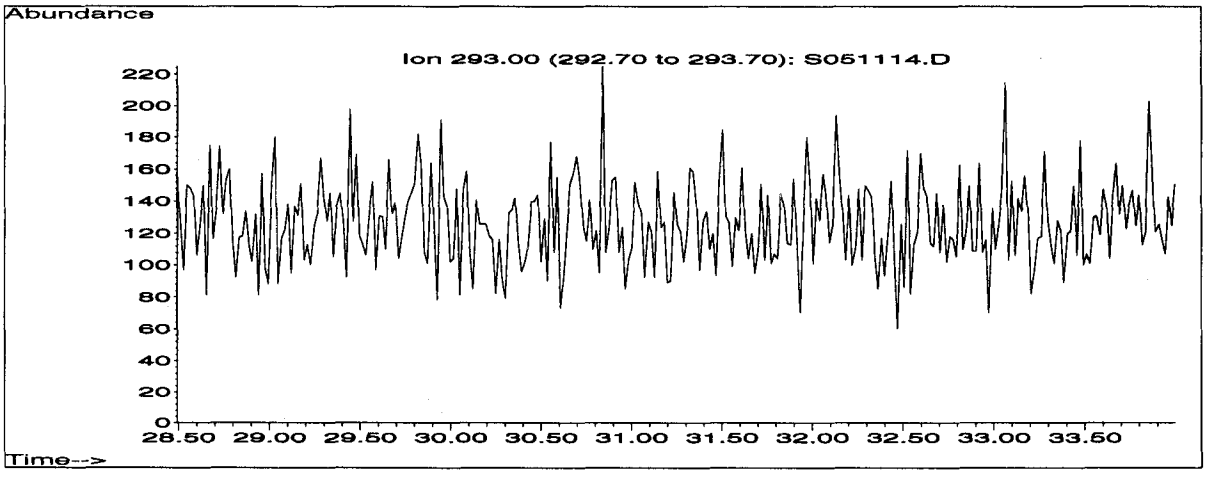


PeCDD TOTAL

TS R.T. Lower Limit	28.50
TS R.T. Upper Limit	34.00

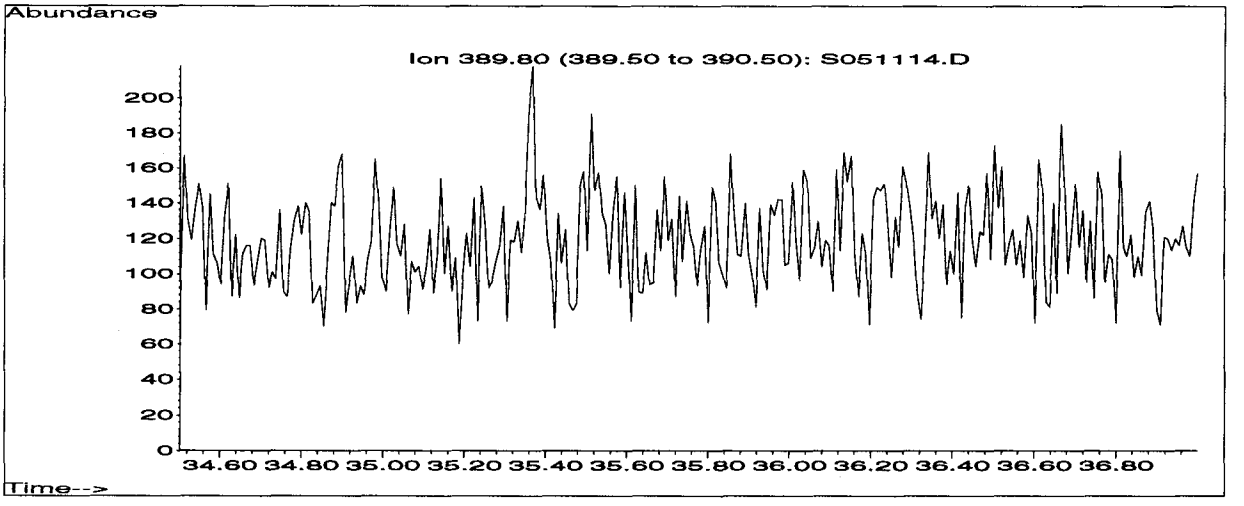


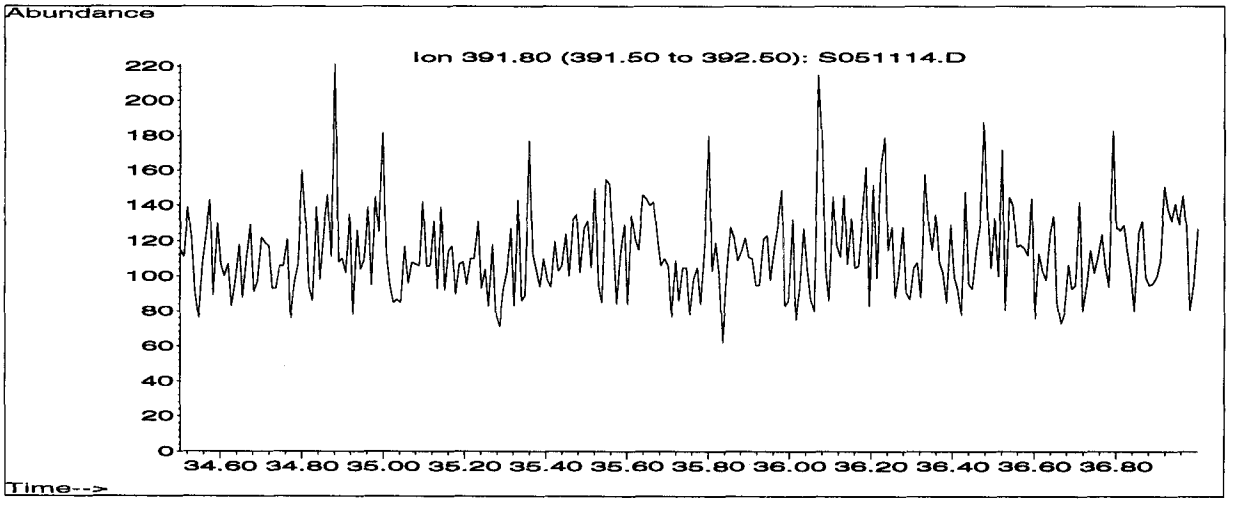


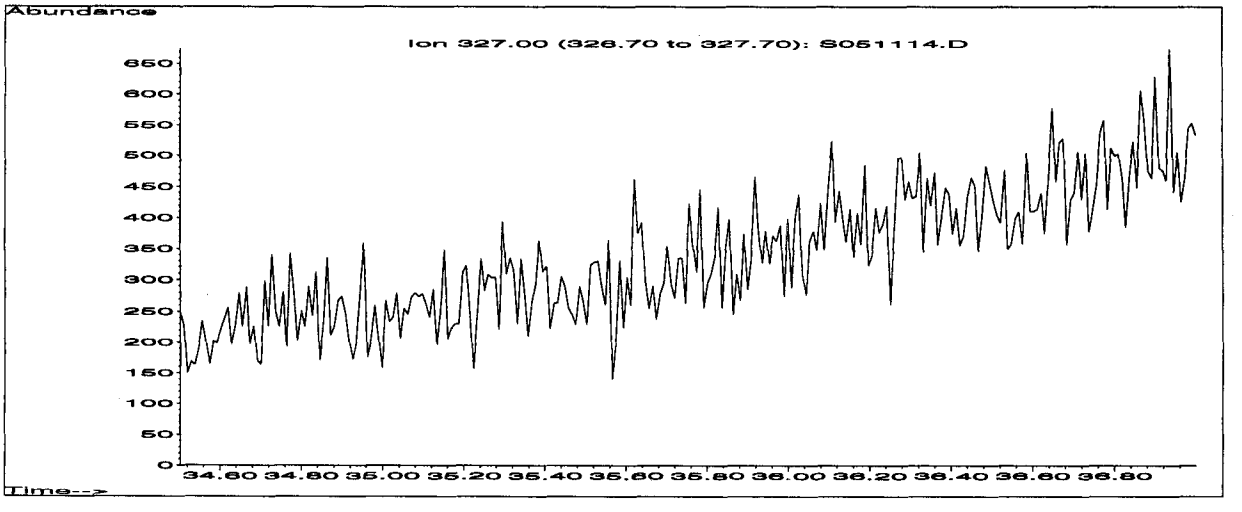


HxCDD TOTAL

TS R.T. Lower Limit	34.50
TS R.T. Upper Limit	37.00

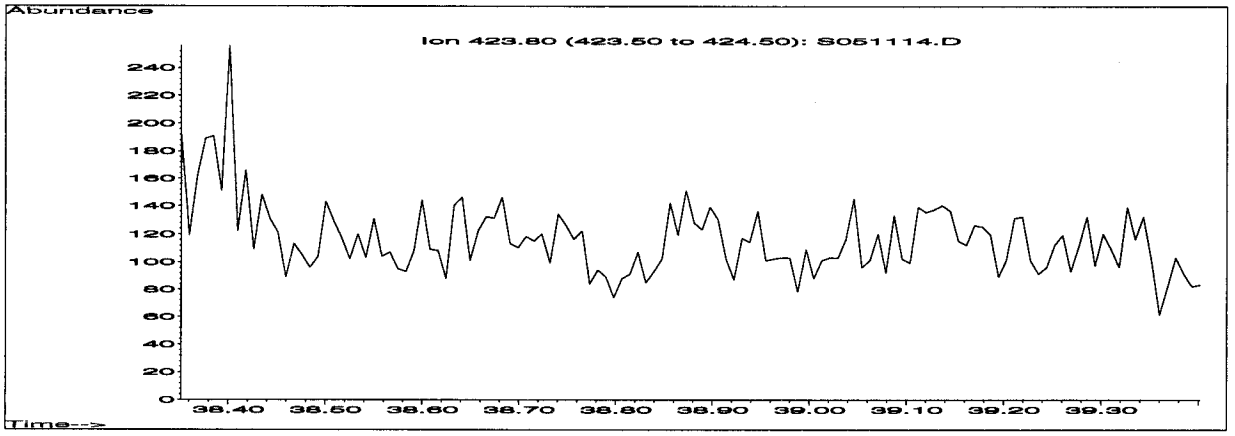


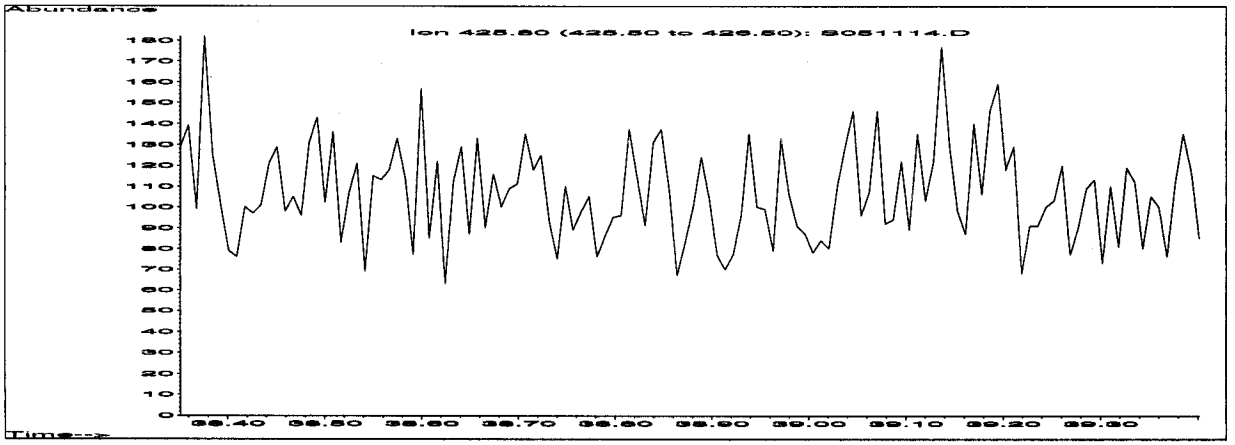


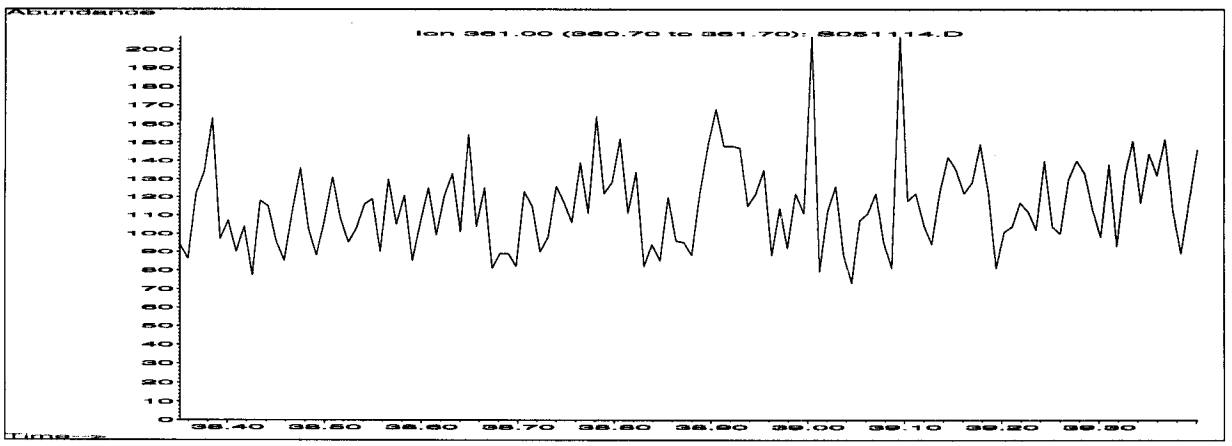


HpCDD TOTAL

TS R.T. Lower Limit	38.35
TS R.T. Upper Limit	39.40

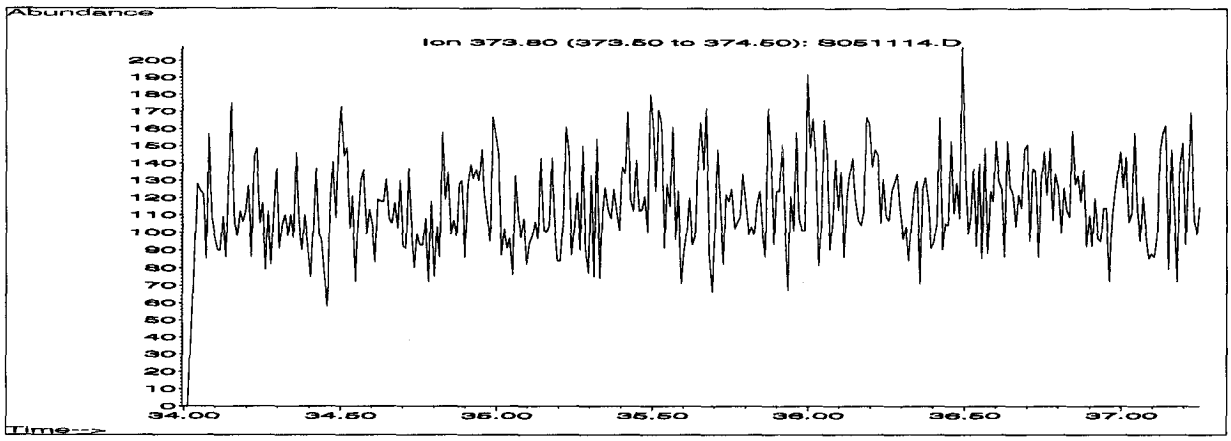


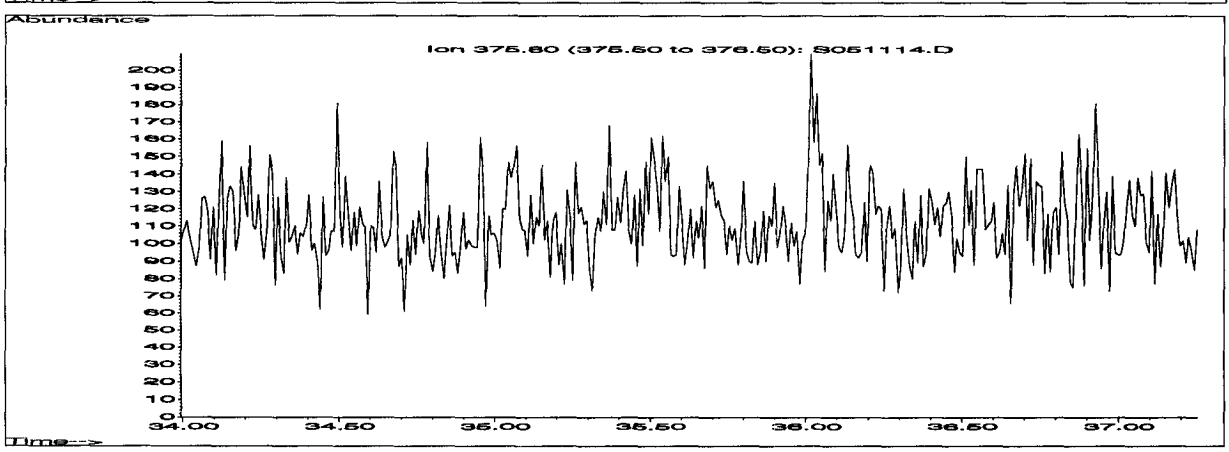


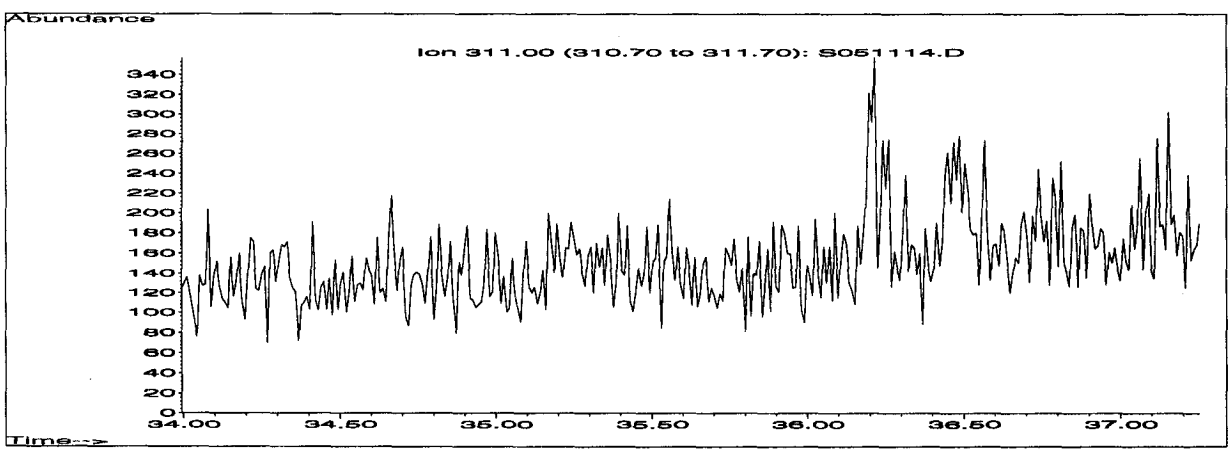


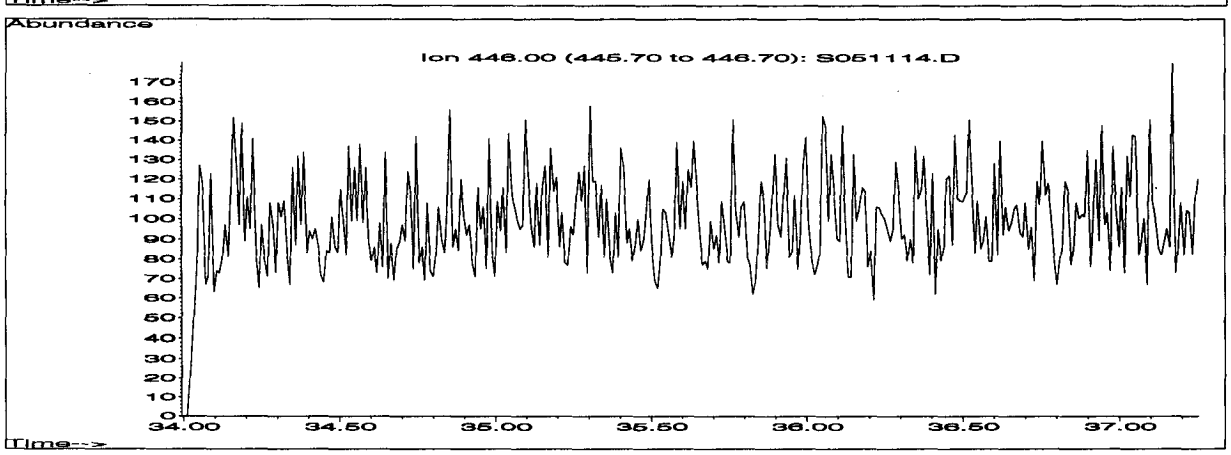
HxCDF TOTAL

TS R.T. Lower Limit	34.00
TS R.T. Upper Limit	37.25



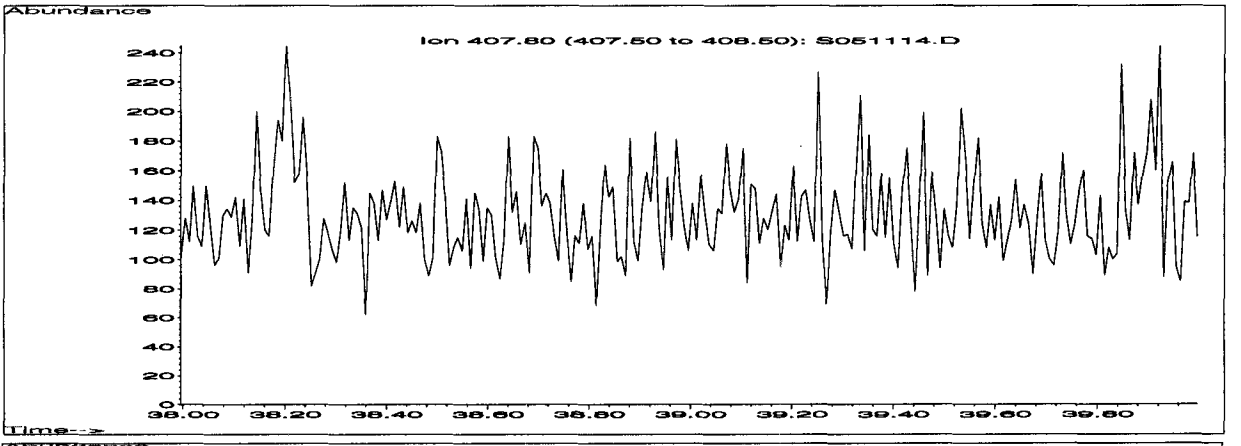


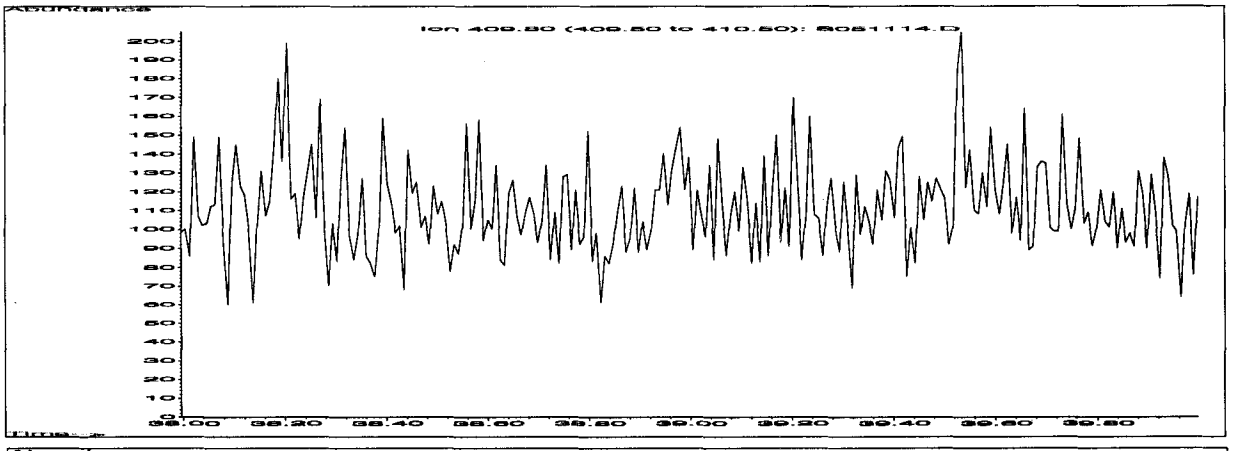


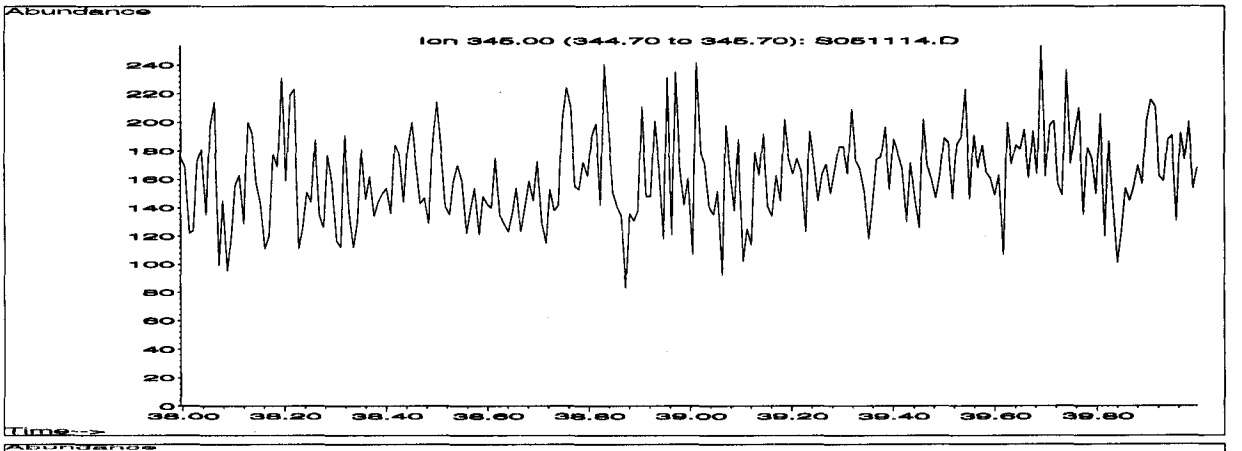


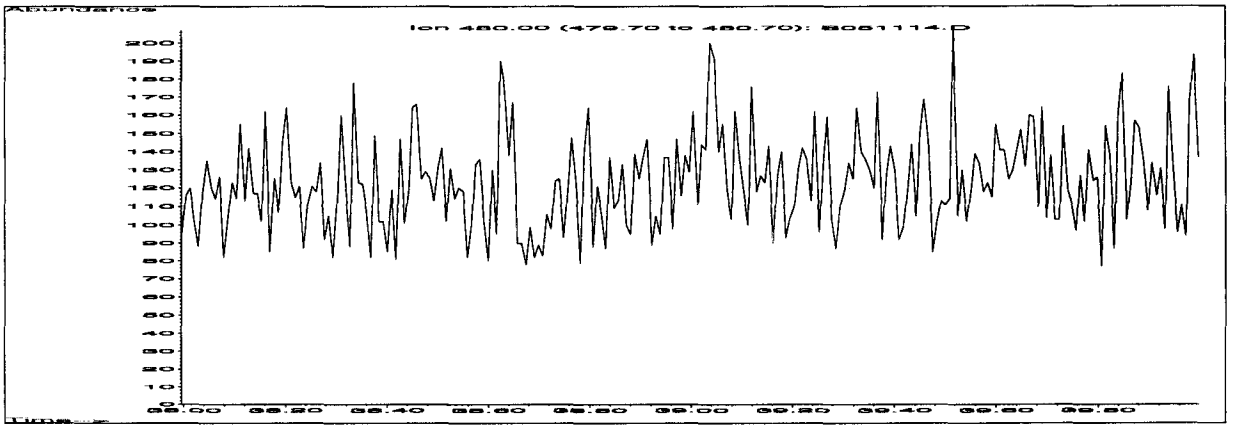
HpCDF TOTAL

TS R.T. Lower Limit	38.00
TS R.T. Upper Limit	40.00



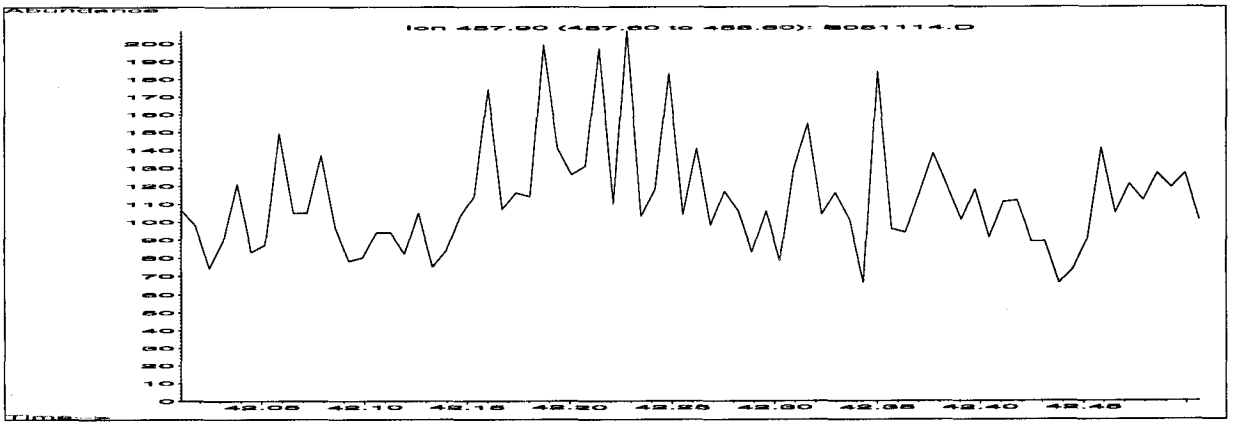


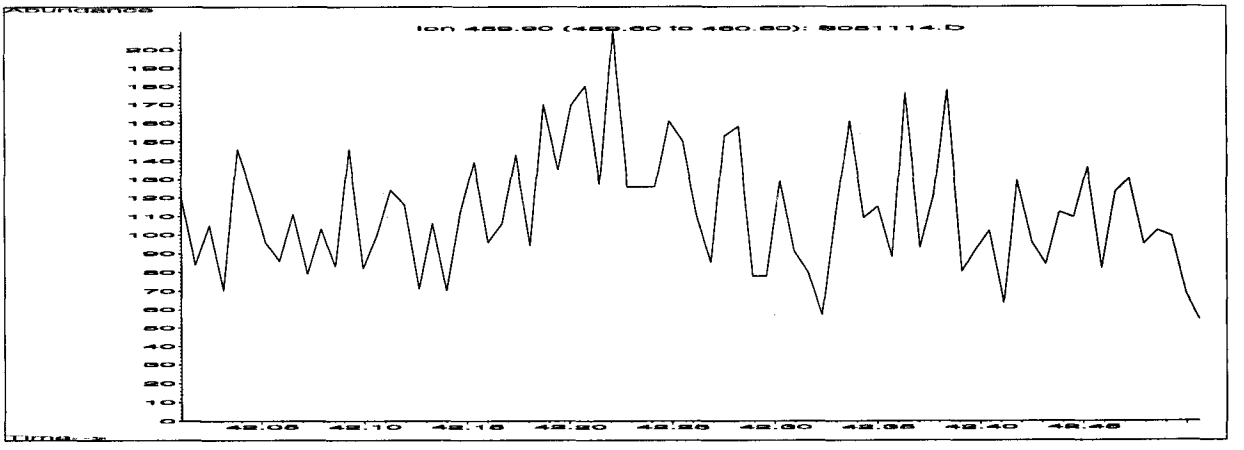


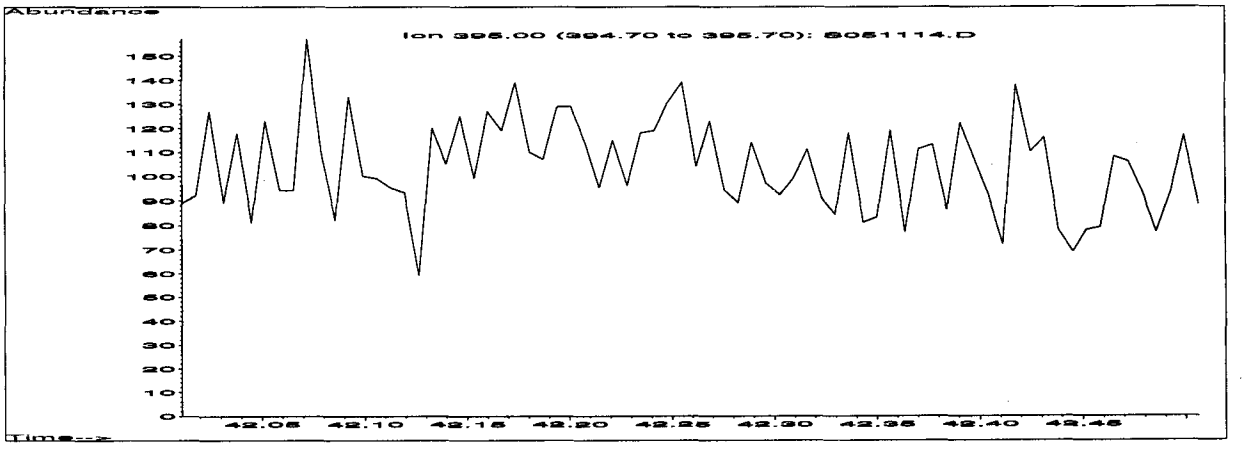


OCDD

TS R.T. Lower Limit	42.01		
TS R.T. Upper Limit	42.51		
Ret. Time	0.00		
Target Ion	457.9	Q1 Ion	459.9
Target Response	0	Q1 Response	0
Total Response	0	Ion ratio	#DIV/0!
Q2 Ion	395		
Q2 Response	0		

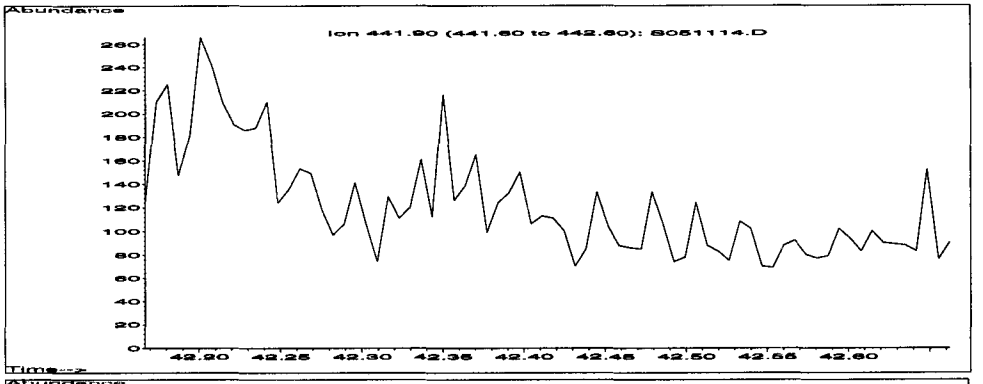


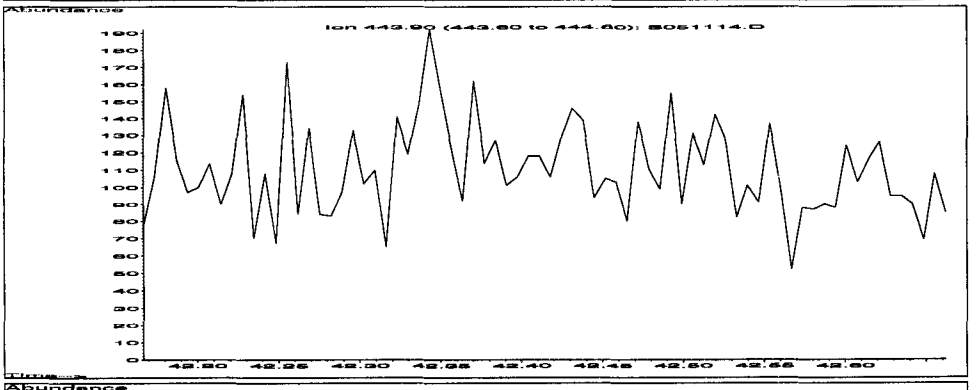


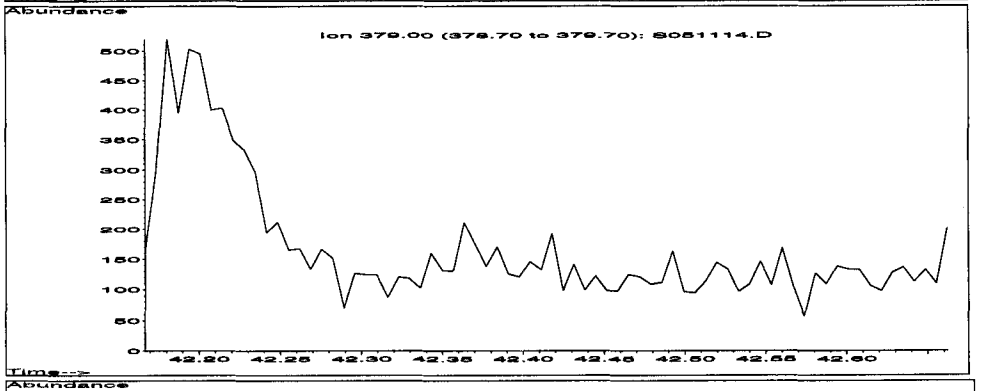


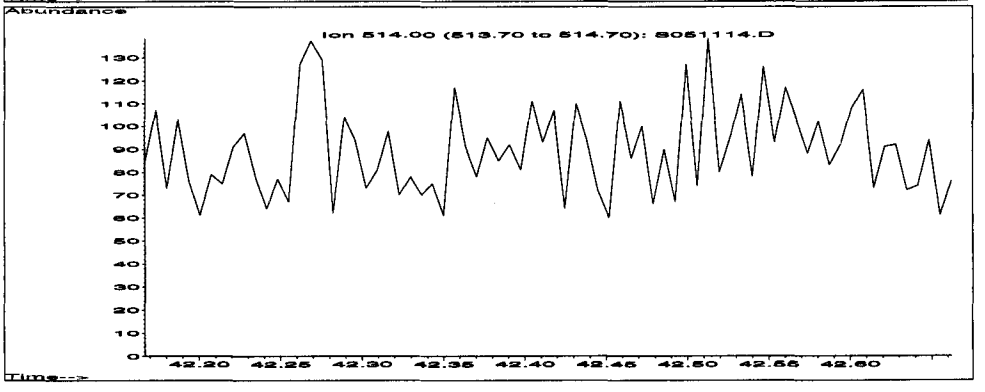
OCDF

TS R.T. Lower Limit	42.16		
TS R.T. Upper Limit	42.66		
Ret Time	0.00		
Target Ion	441.9	Q1 Ion	443.9
Target Response	0	Q1 Response	0
Target Response	0	Ion Ratio	#DIV/0!
Q2 Ion	379	DPE Ion	514
Q2 Response	0	DPE Response	0



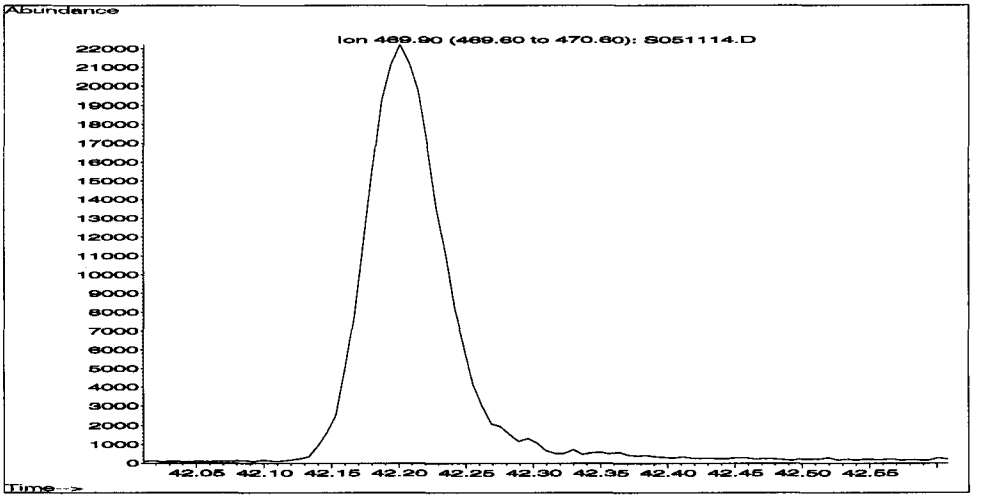


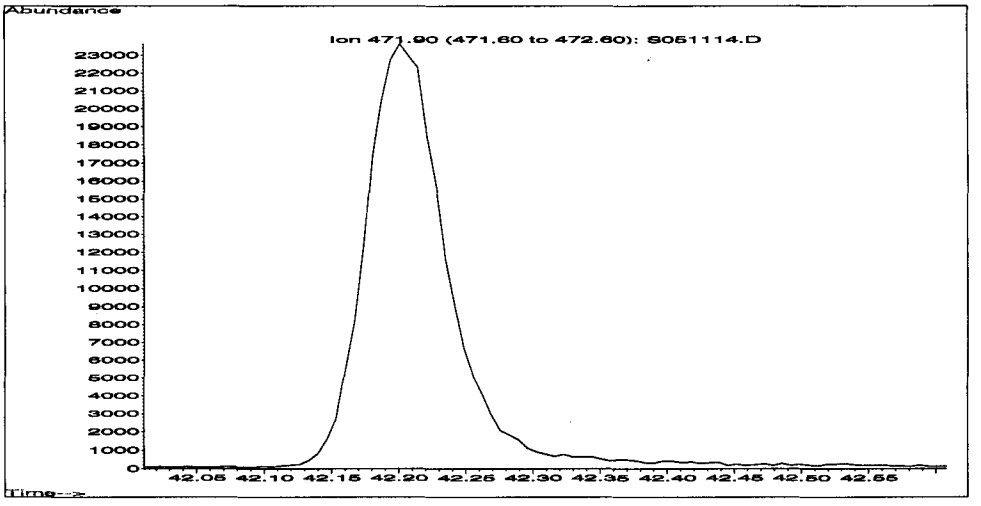




13C-OCDD-IS

RT Lower Limit	42.01		
RT Upper Limit	42.61		
Ret Time	42.20		
Target Ion	469.9	Q1 Ion	471.9
Target Response	89477	Q1 Response	99633
Total response	189110	Ratio	0.90





Quantitation Report (Not Reviewed)

Sample ID: A0D300605-4S 0.97616L 8280A Size: 0.976
L0VEH-1-AC WATER LR009 Inst : DB1

Data File:C:\8280\2DB\051110.B\S051115.D Vial: 15
Acq On :12 May 2010 8:43 Operator: MEO
Sample Amount: 0.98

MS Integration Params: RTEINT.P
Quant Time: May 12 14:05 2010 Quant Results File: 10MY11C2.RES

Quant Method : C:\8280\ DATA METHODS\10MY11C2.M (RTE Integrator)
Title : Dioxin Furan Total
Last Update : Wed May 12 09:30:50 2010
Response via : Single (C:\8280\2DB\051110.B\ST0511C.D 12 May 2010 1:32)
DataAcq Meth : TOKAS
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Recovery\Internal Stds	R.T.	QIon	Ratio	Response	Conc	Dev(Min)
1) 13C-1234-TCDD	24.03	332+334	0.81	129242	25.00 NG	0.00
5) 13C-123789-HxCDD	36.48	402+404	1.25	189281	25.00 NG	0.00
9) 13C-2378-TCDF	23.22	316+318	0.77	124845	25.00 NG	0.02
15) 13C-2378-TCDD	24.30	332+334	0.83	86278	25.00 NG	0.00
20) 13C-123678-HxCDD	36.21	402+404	1.28	107053	25.00 NG	0.00
27) 13C-1234678-HpCDF	38.19	420+422	1.07	134888	25.00 NG	0.00
36) 13C-OCDD	42.20	470+472	0.94	175691	50.00 NG	0.00

5/13/10 MS

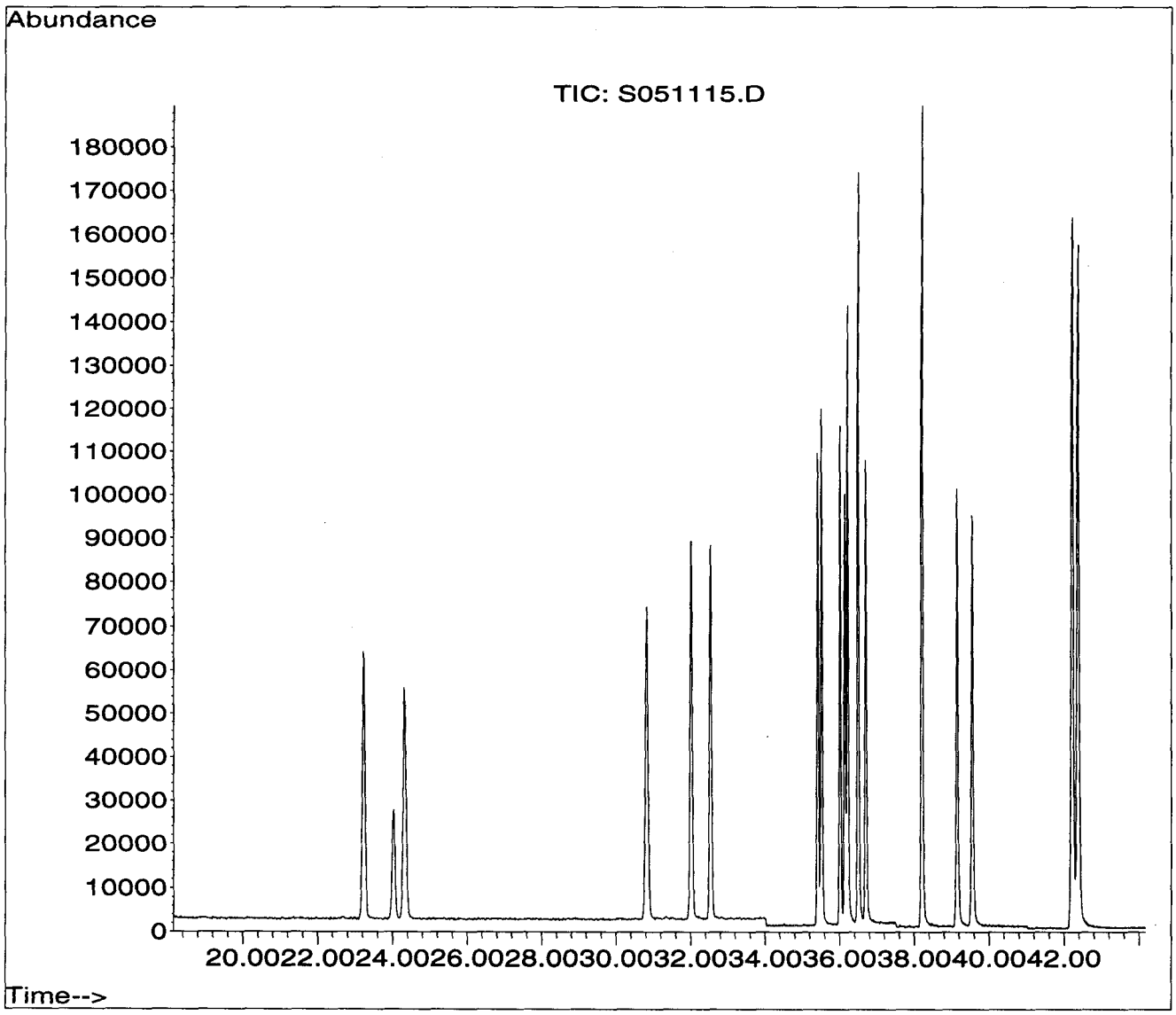
Surrogate Compound						
4) 37Cl-2378-TCDD	24.33	328		81153	11.581 NG	0.00
Spiked Amount = 12.805		RRF = 1.389		Recovery =	90.40%	

Target Compounds	RT	Ratio	Area	RRF	Conc	EDL	%Rec
2) 13C-2378-TCDF-IS	23.22	0.77	124845	1.428	17.321	0.1180	67.6
3) 13C-2378-TCDD-IS	24.30	0.83	84583	0.983	17.048	2.6035	66.6
6) 13C-123678-HxCDD-	36.21	1.28	107053	0.796	18.186	0.0968	71.0
7) 13C-1234678-HpCDF	38.19	1.07	134888	1.010	18.068	0.0977	70.6
8) 13C-OCDD-IS	42.20	0.94	175691	0.659	36.096	0.1292	70.5
10) 2378-TCDF	23.24	0.77	139249	1.265	22.581	0.1985	
1	23.24	0.76	139657		22.647		
11) TCDF TOTAL	22.00	0.76	139657	1.265	22.647		
12) 12378-PeCDF	30.82	1.52	317891	1.136	57.400	0.1252	
13) 23478-PeCDF	32.02	1.47	317748	1.137	57.330	0.2395	
1	30.82	1.52	318414		57.494		
2	32.02	1.45	317748		57.330		
14) PeCDF TOTAL	29.50	1.45	636162	1.136	114.824		
16) 2378-TCDD	24.33	0.76	95138	1.221	23.121	0.1312	
1	23.22	4.90 #	11705		2.845		
2	24.33	0.79	100150		24.339		
17) TCDD TOTAL	22.50	0.79	111855	1.221	27.184		
18) 12378-PeCDD	32.54	1.60	214923	1.142	55.860	0.1321	
1	32.54	1.59	216421		56.250		
19) PeCDD TOTAL	30.00	1.59	216421	1.142	56.250		
21) 123478-HxCDD	36.14	1.27	228561	1.012	54.023	0.2535	
22) 123678-HxCDD	36.21	1.25	237296	0.981	57.864	0.6206	
23) 123789-HxCDD	36.49	1.26	251870	1.038	58.076	0.6108	
1	36.14	1.27	228561		54.023		
2	36.21	1.31	237296		57.864		
3	36.49	1.26	825310		201.251		
24) HxCDD TOTAL	36.50	1.26	1291167	0.981	313.139		
25) 1234678-HpCDD	39.14	1.05	244434	1.039	56.290	0.1917	
1	39.14	1.05	244434		56.290		

26)	HpCDD TOTAL	39.35	1.05	244434	1.039	56.290	
28)	123478-HxCDF	35.41	1.23	288372	0.984	55.665	0.1480
29)	123678-HxCDF	35.51	1.21	314018	1.042	57.224	0.5043
30)	234678-HxCDF	36.01	1.18	286616	0.970	56.109	0.2260
31)	123789-HxCDF	36.70	1.20	277677	0.928	56.826	0.1858
	1	35.41	1.23	288372		55.665	
	2	35.51	1.20	314018		57.224	
	3	36.01	1.19	1299785		265.997	
	4	36.70	1.20	278019		56.896	
32)	HxCDF TOTAL	36.00	1.20	2180194	0.928	435.781	
33)	1234678-HpCDF	38.20	1.04	352522	1.160	57.712	0.0909
34)	1234789-HpCDF	39.54	1.05	303290	1.006	57.237	0.1430
	1	38.20	1.04	352522		57.712	
	2	39.54	1.04	303290		57.237	
35)	HpCDF TOTAL	39.50	1.04	655812	1.006	114.950	
37)	OCDD	42.21	0.89	433955	1.102	114.773	0.1827
38)	OCDF	42.36	0.91	559512	1.397	116.773	0.4648

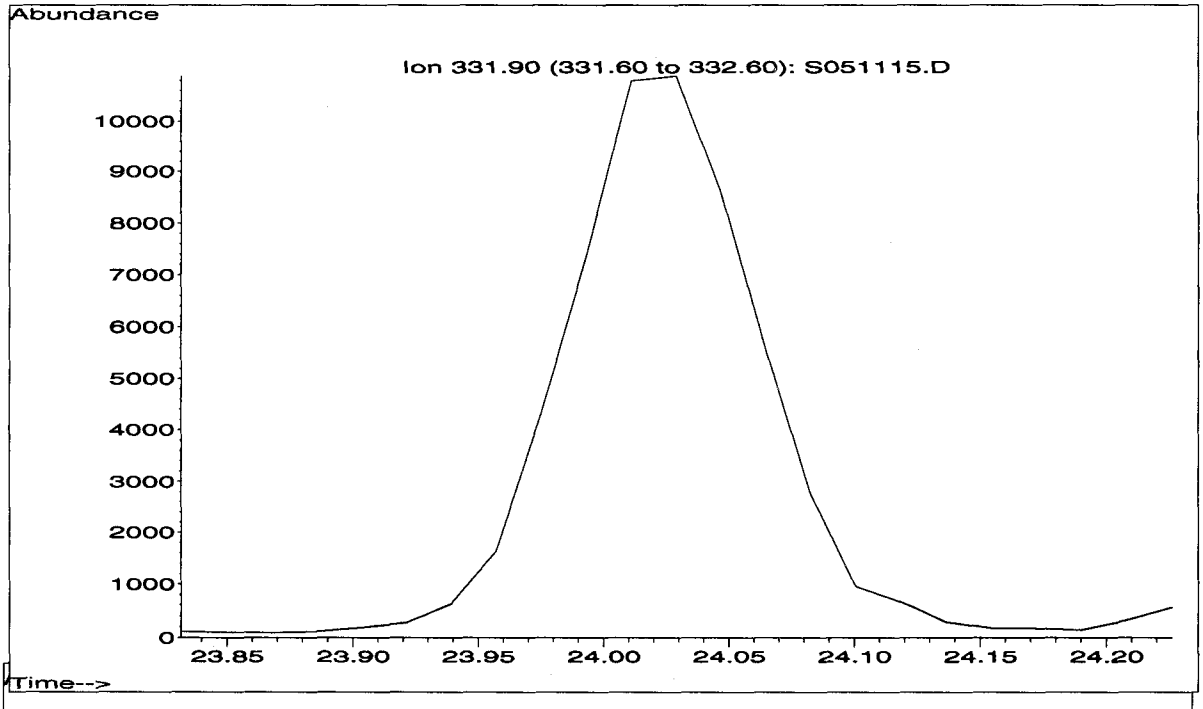
(#) = qualifier out of range•: areas and concentration based on theoretical ion ratio
(m) = manual integration
S051115.D 10MY11C2.M Wed May 12 14:05:09 2010

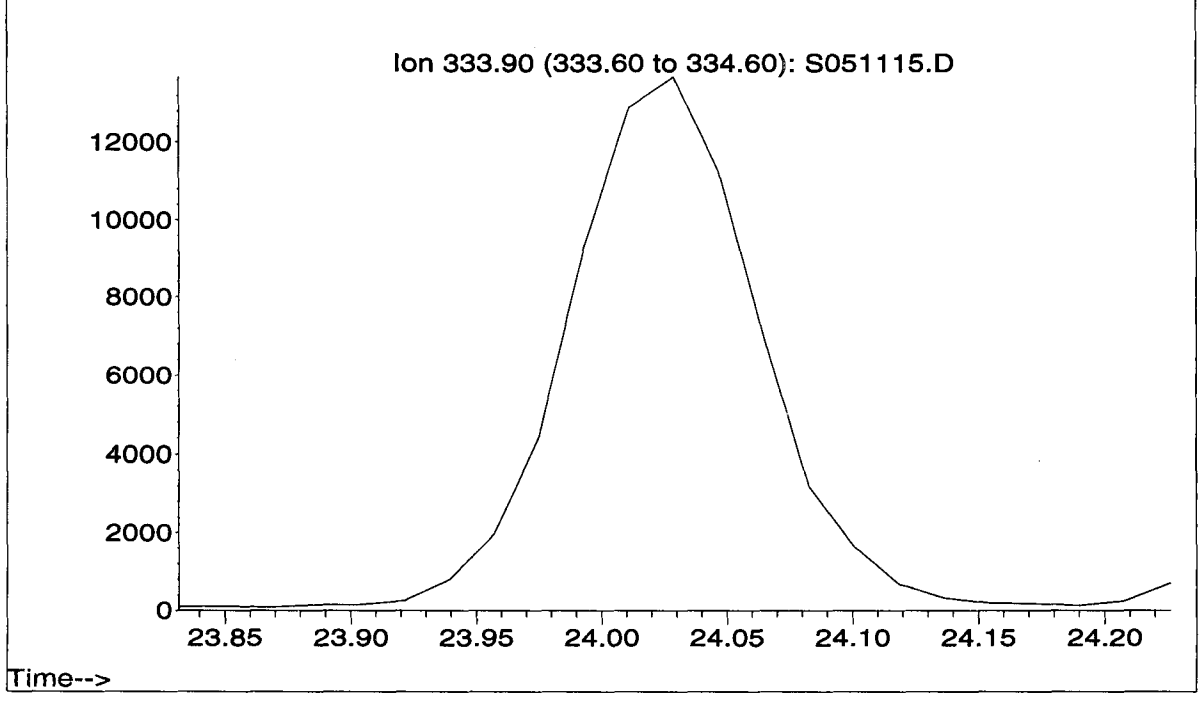
Data File Name	S051115.D
Data File Path	C:\8280\2DB\051110.B\
Operator	MEO
Date Acquired	5/12/2010 8:43
Acq. Method File	TOKAS
Sample Name	_0VEH-1-AC WATER LR009
Misc Info	300605-4S 0.97616L 8280A
Vial Number	15
Instrument Name	2DB
Sample Multiplier	1
Sample Amount	0.97616



13C-1234-TCDD

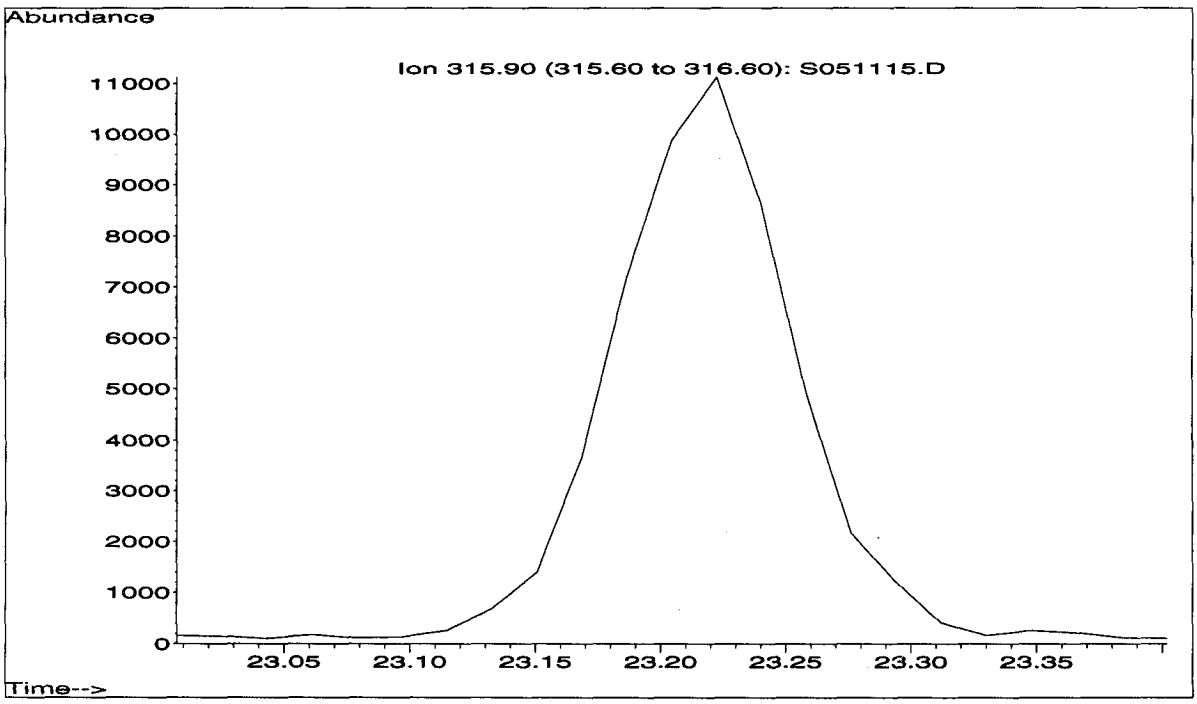
TS R.T. Lower Limit	23.83		
TS R.T. Upper Limit	24.23		
Ret Time	24.03		
Target Ion	331.9	Q1 Ion	333.9
Target Response	57691	Q1 Response	71551
Total Response	129242	Ion Ratio	0.81

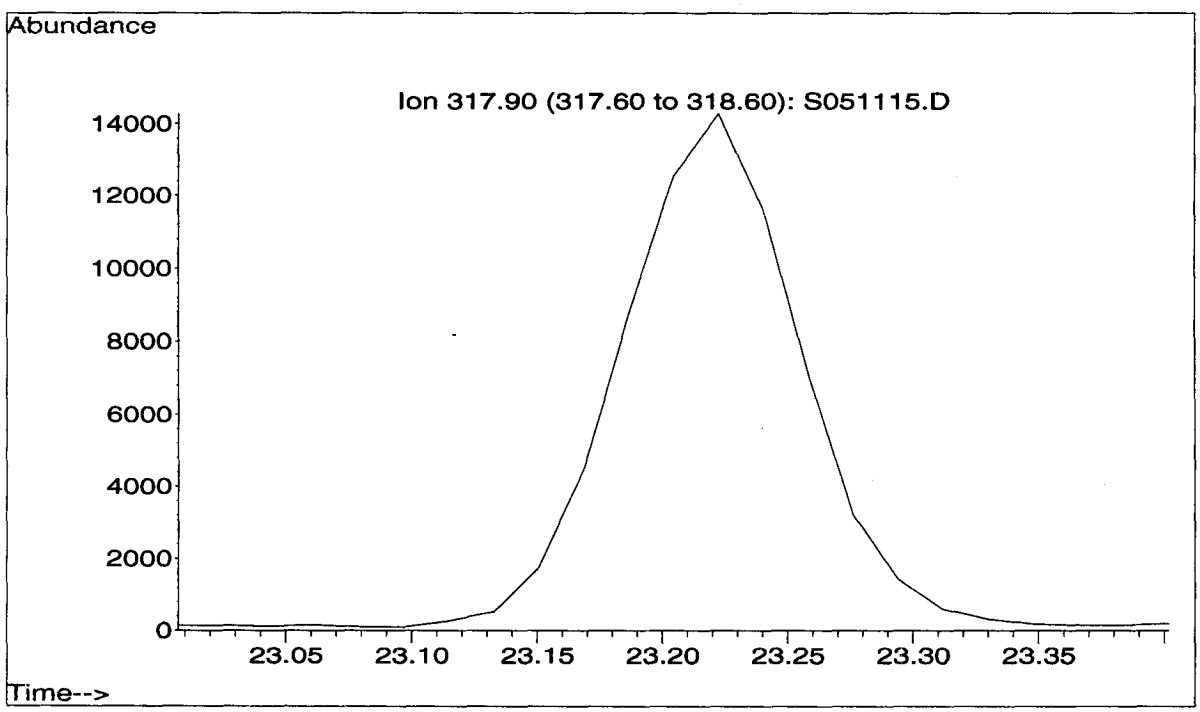




13C-2378-TCDF-IS

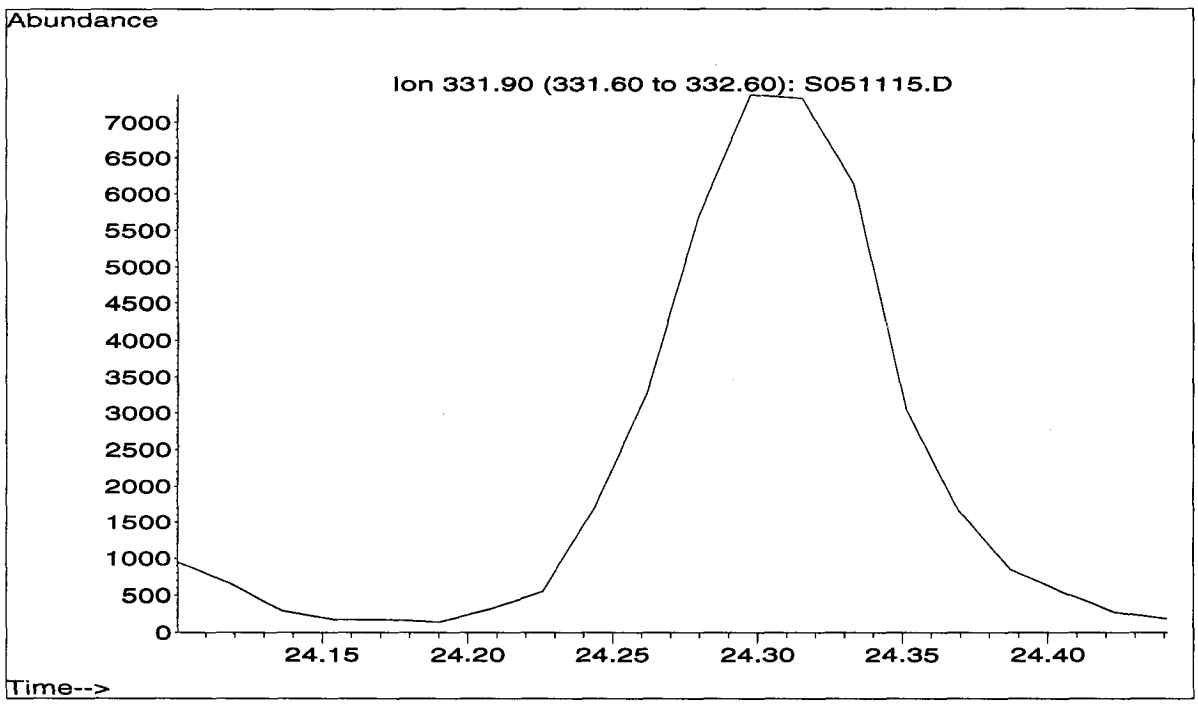
TS R.T. Lower Limit	23.01		
TS R.T. Upper Limit	23.41		
Ret Time	23.22		
Target Ion	315.9	Q1 Ion	317.9
Target Response	54203	Q1 Response	70642
Target Response	124845	Ion Ratio	0.77

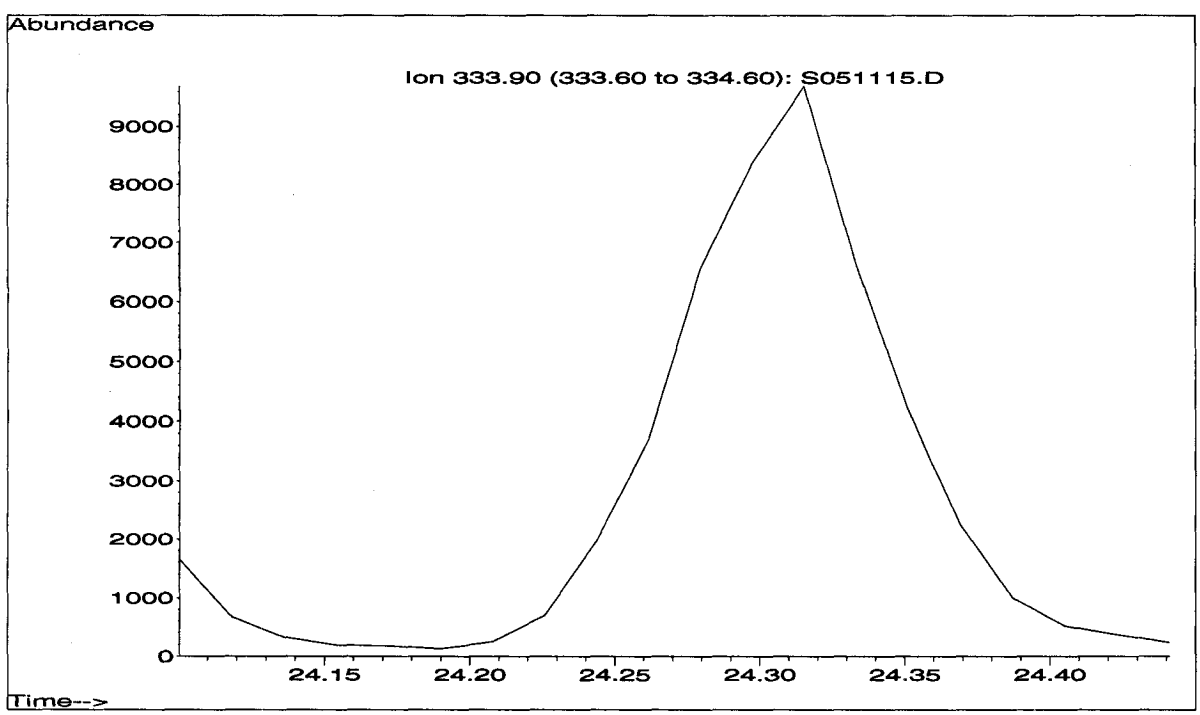




13C-2378-TCDD-IS

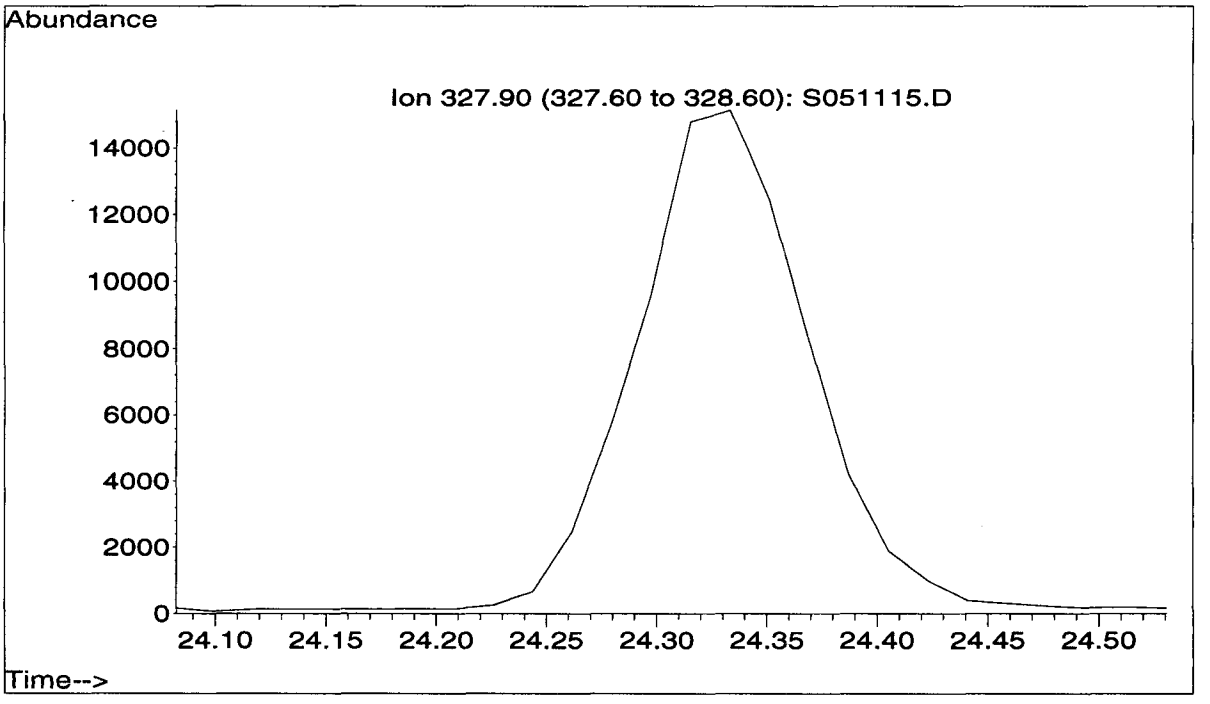
TS R.T. Lower Limit	24.10		
TS R.T. Upper Limit	24.45		
Ret Time	24.30		
Target Ion	331.9	Q1 Ion	333.9
Target Response	38318	Q1 Response	46265
Total Response	84583	Ion Ratio	0.83

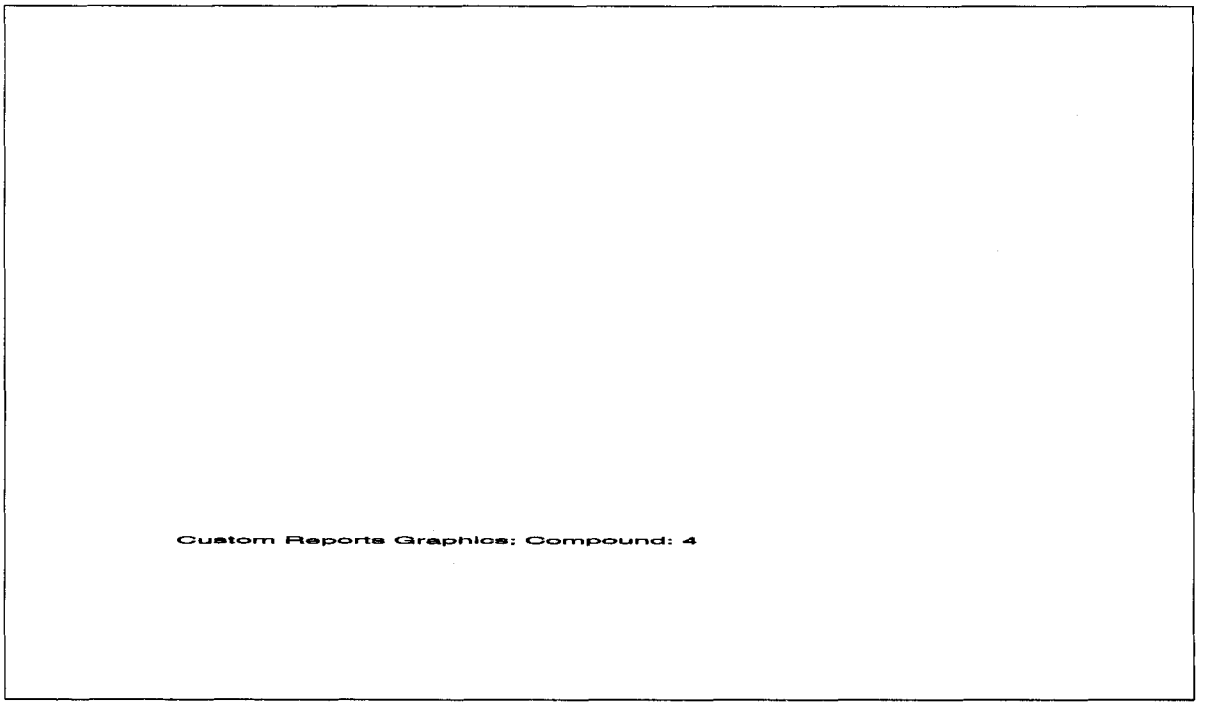




37Cl-2378-TCDD

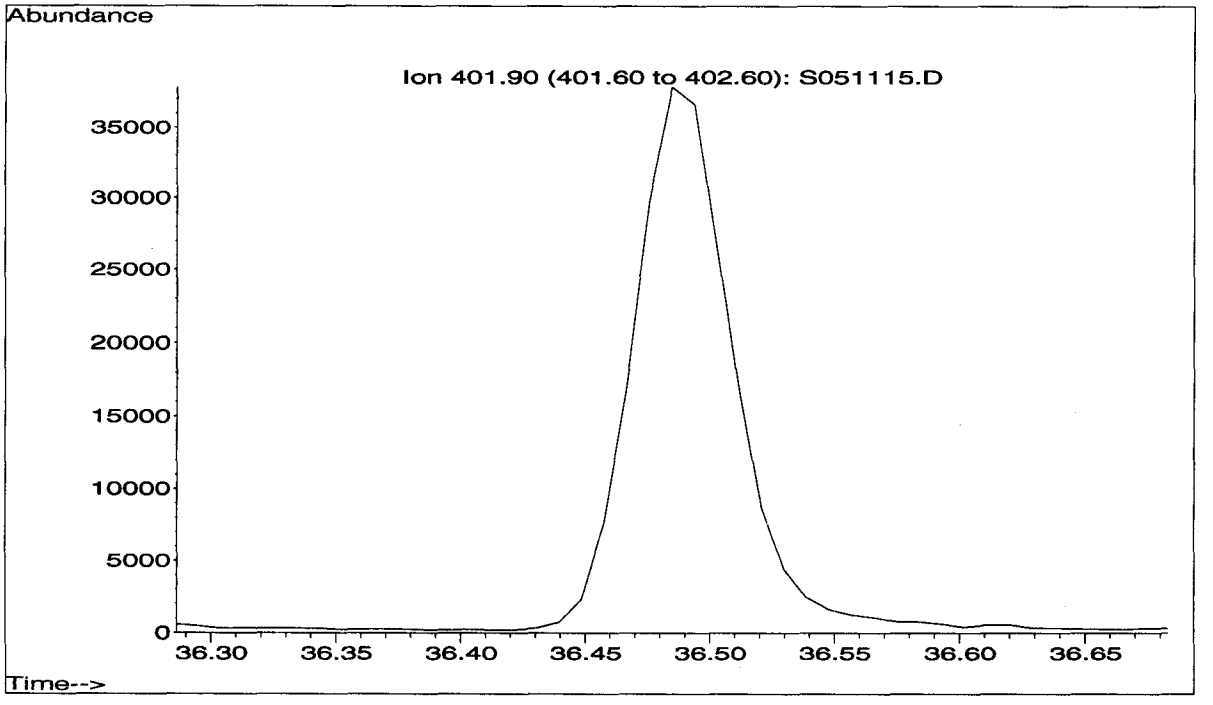
TS R.T. Lower Limit	24.09		
TS R.T. Upper Limit	24.54		
Ret Time	24.33		
Target Ion	327.9	Q1 Ion	0
Target Response	81153	Q1 Response	0
Total Response	81153	Ion Ratio	#DIV/0!

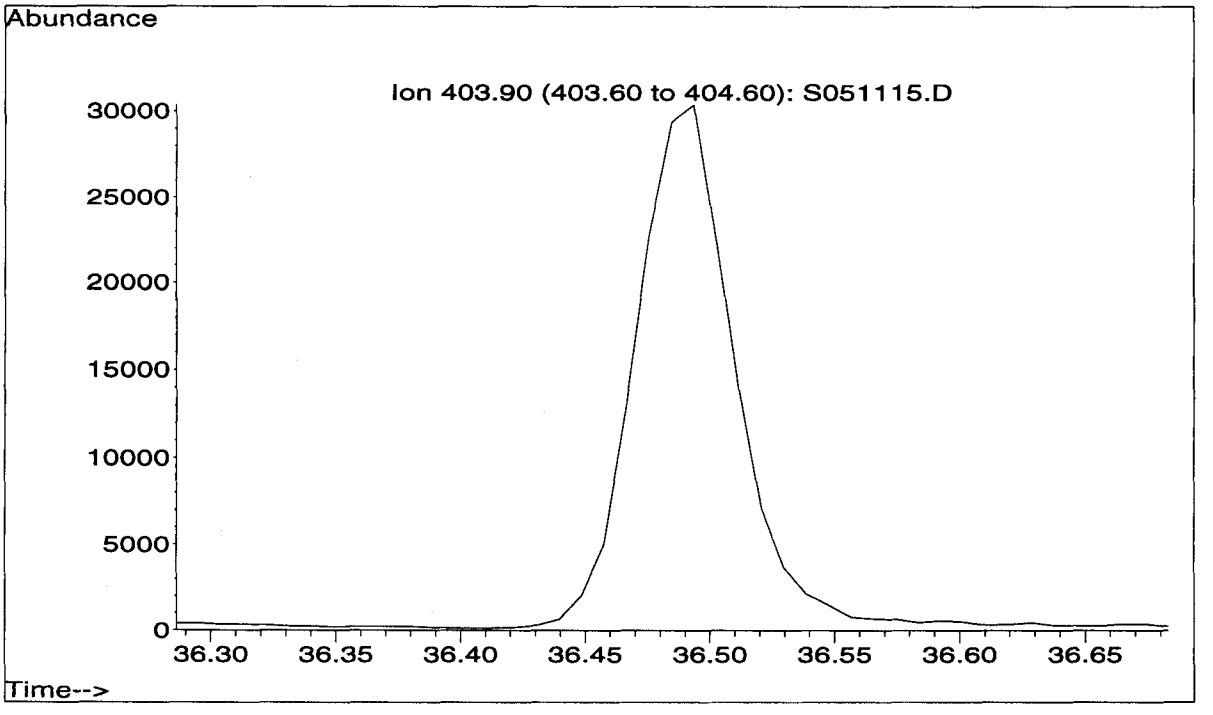




13C-123789-HxCDD

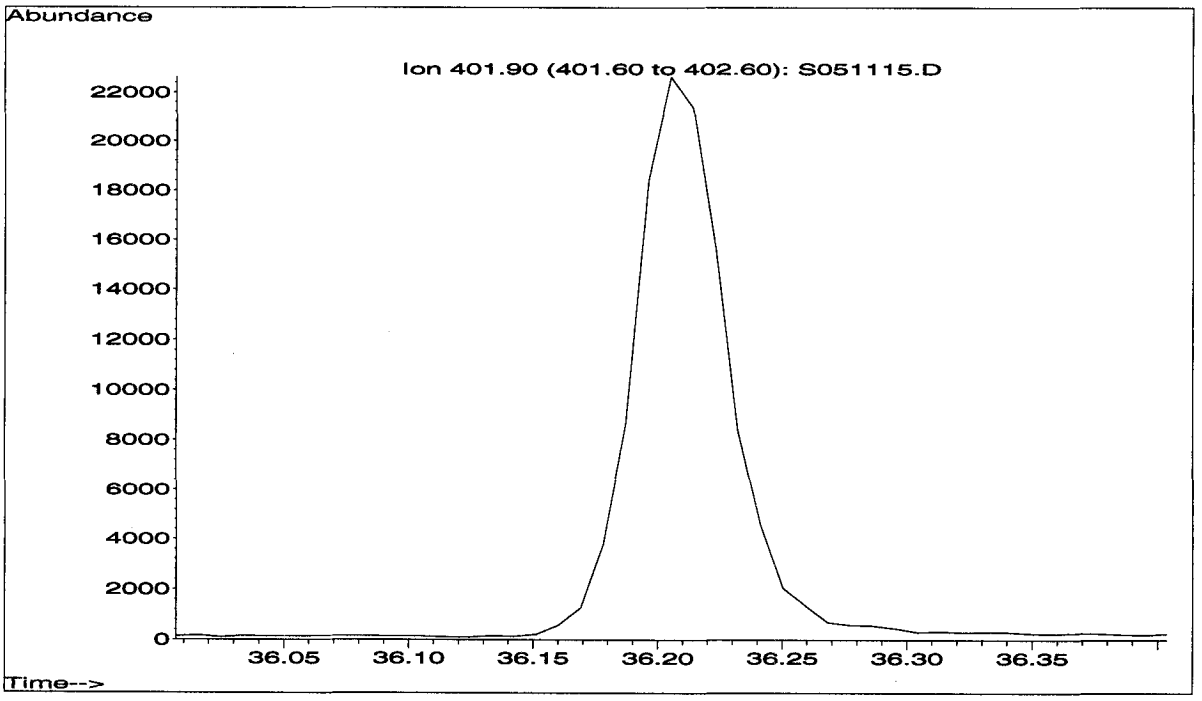
TS R.T. Lower Limit	36.29		
TS R.T. Upper Limit	36.69		
Ret Time	36.48		
Target Ion	401.9	Q1 Ion	403.9
Target Response	105146	Q1 Response	84135
Target Response	189281	Ion Ratio	1.25

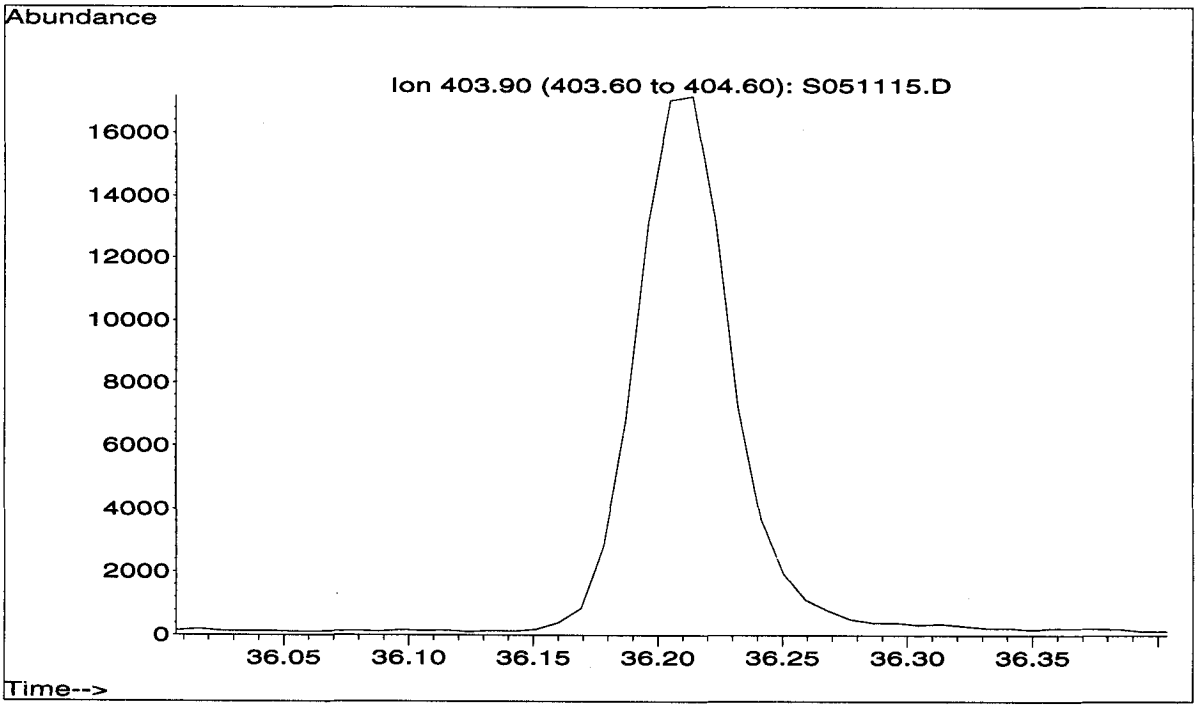




13C-123678-HxCDD-IS

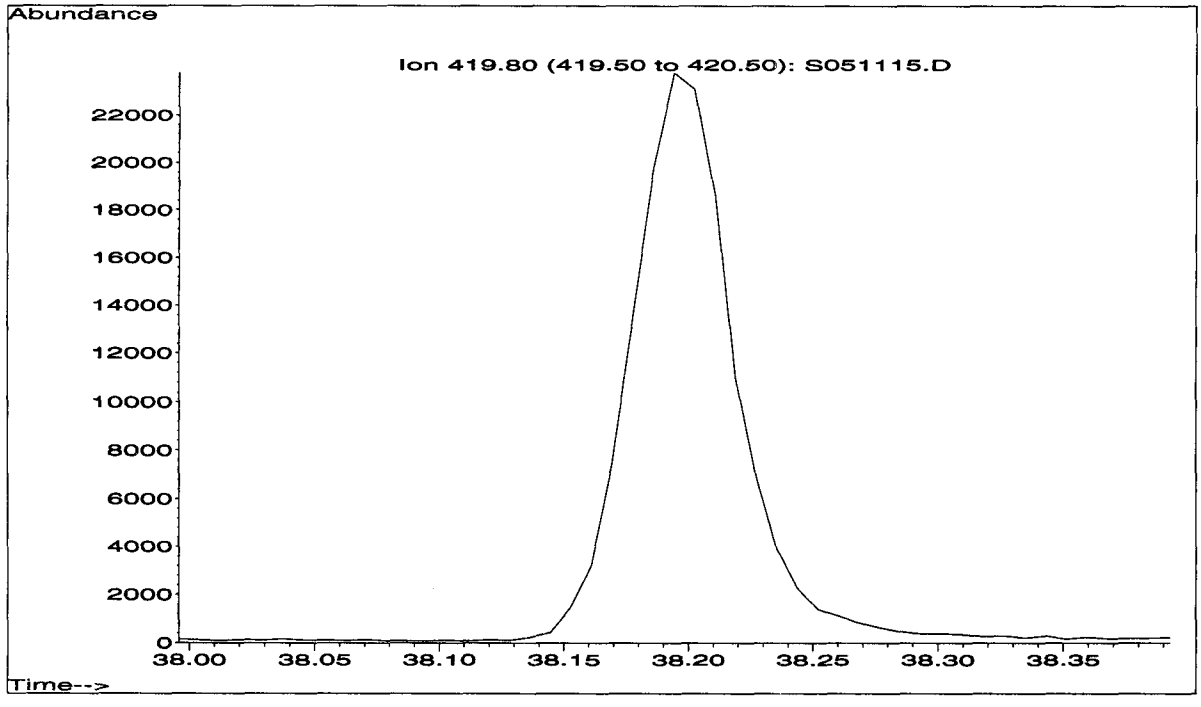
TS R.T. Lower Limit	36.01		
TS R.T. Upper Limit	36.41		
Ret Time	36.21		
Target Ion	401.9	Q1 Ion	403.9
Target Response	60041	Q1 Response	47012
Total Response	107053	Ion Ratio	1.28

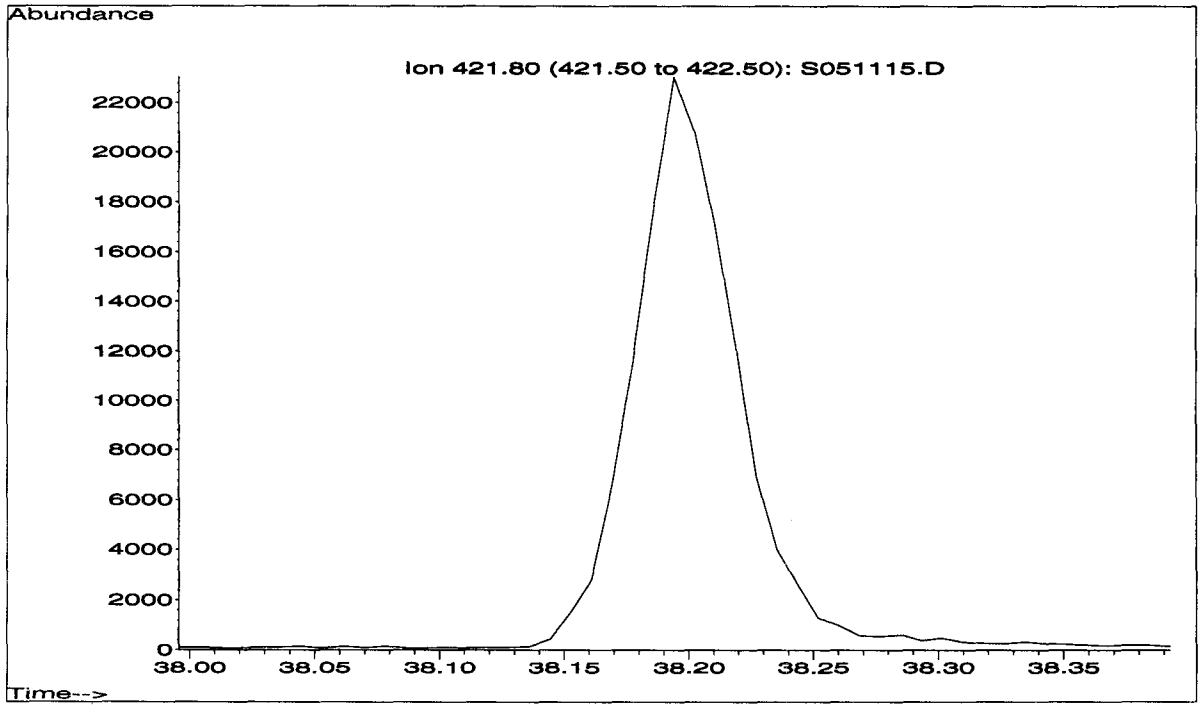




13C-1234678-HpCDF-IS

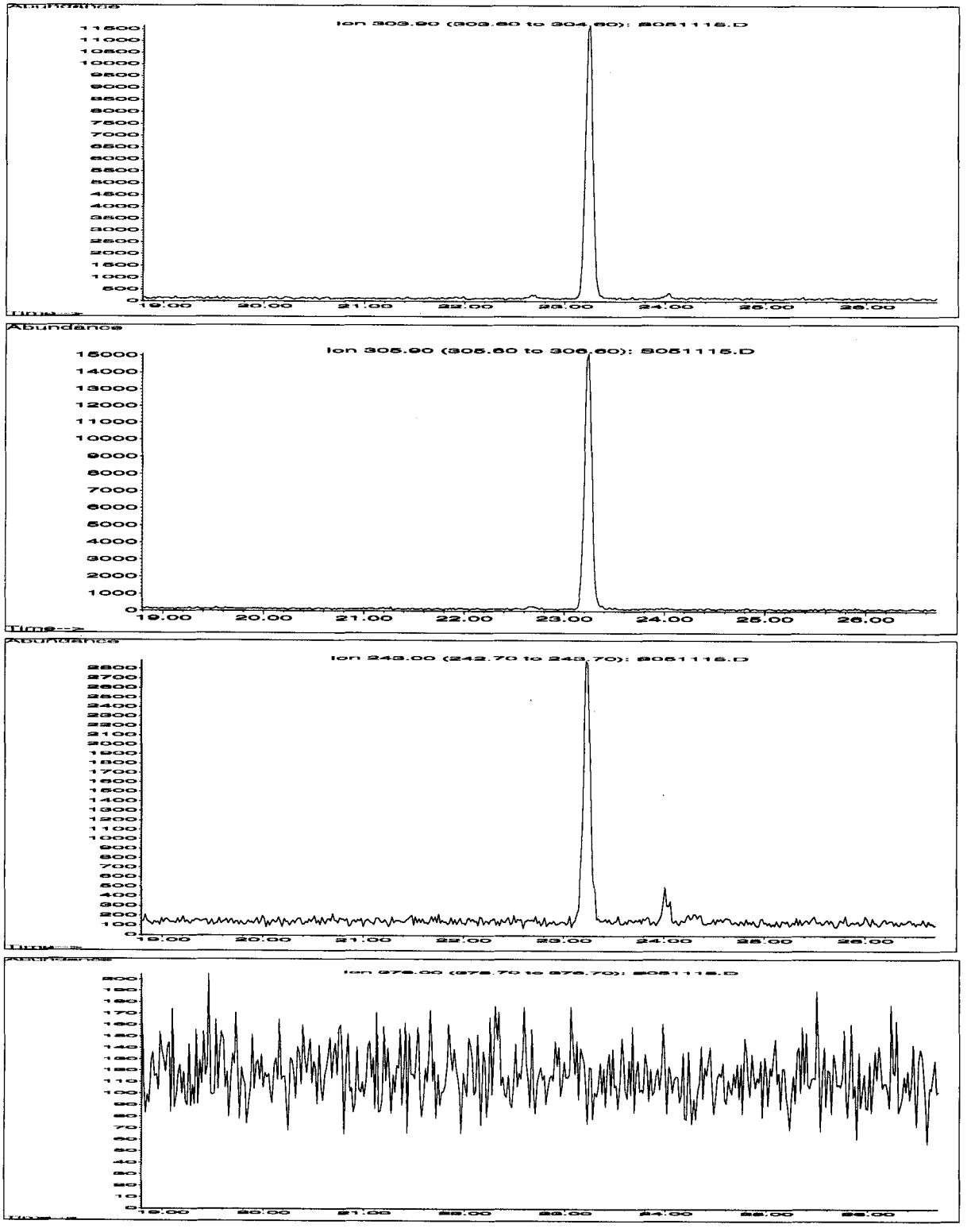
TS R.T. Lower Limit	37.99		
TS R.T. Upper Limit	38.39		
Ret Time	38.19		
Target Ion	419.8	Q1 Ion	421.8
Target Response	69663	Q1 Response	65225
Target Response	134888	Ion Ratio	1.07





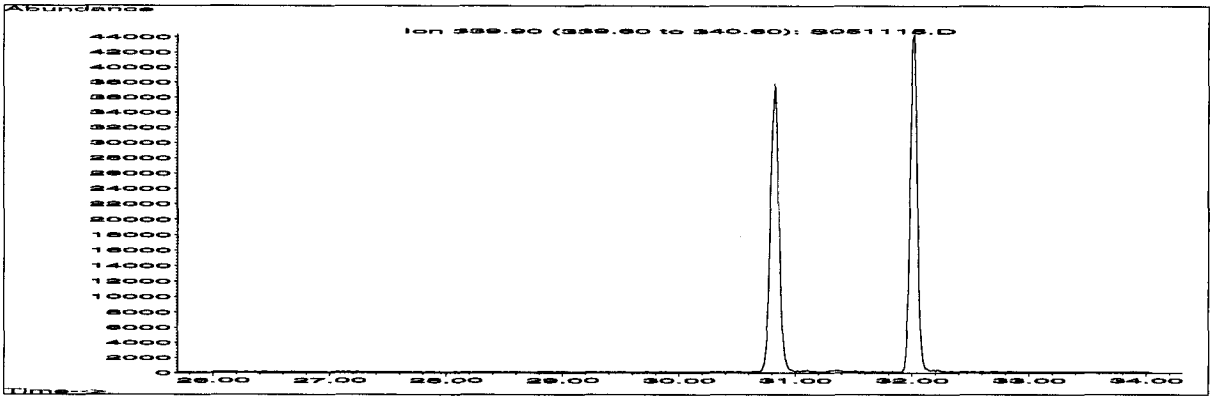
TCDF TOTAL

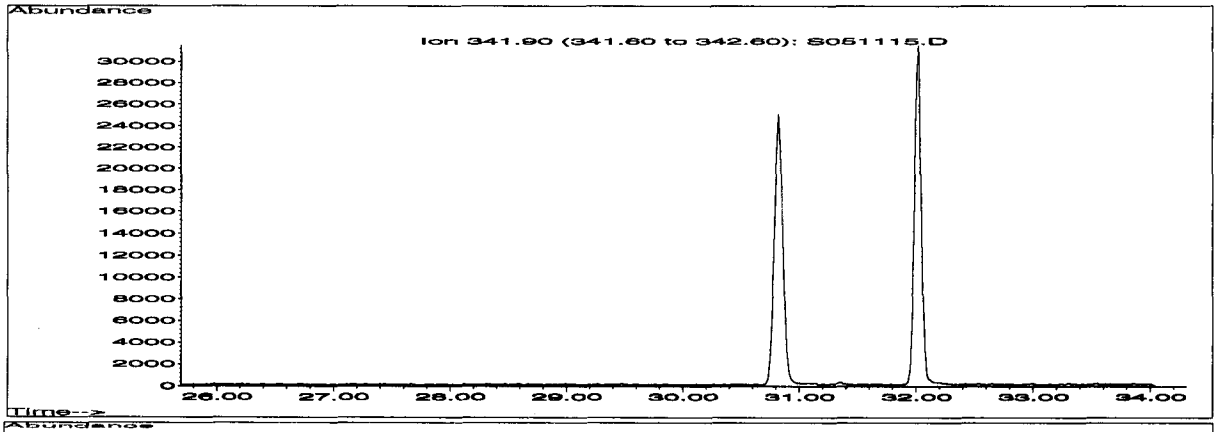
TS R.T. Lower Limit	18.80
TS R.T. Upper Limit	26.70

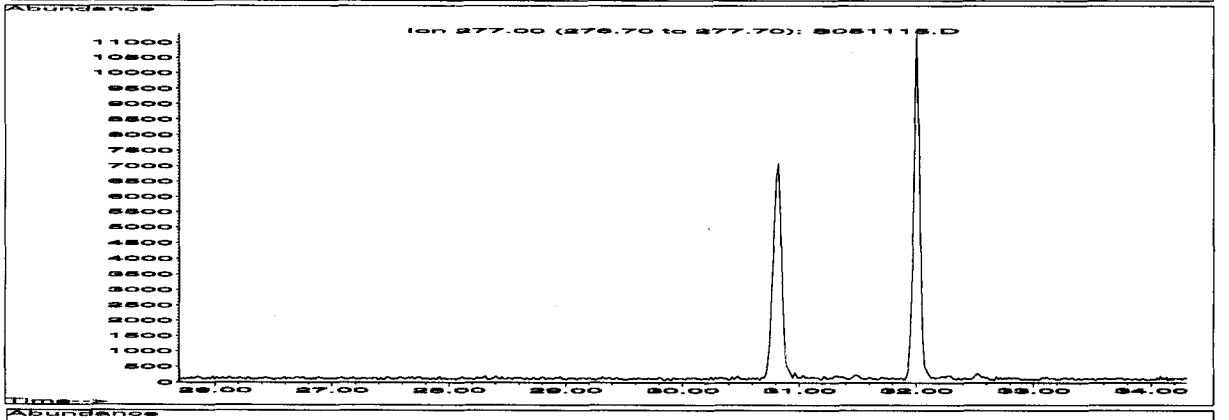


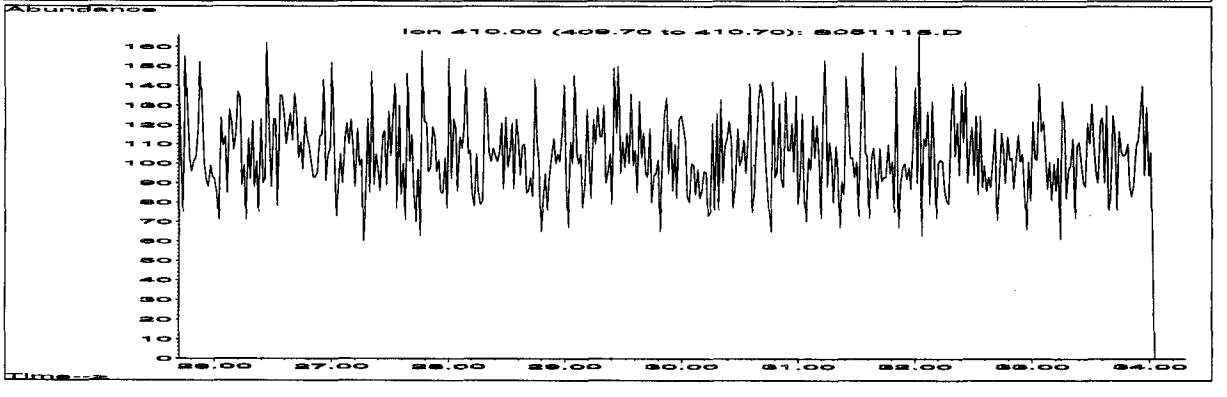
PeCDF TOTAL

TS R.T. Lower Limit	25.70
TS R.T. Upper Limit	34.30



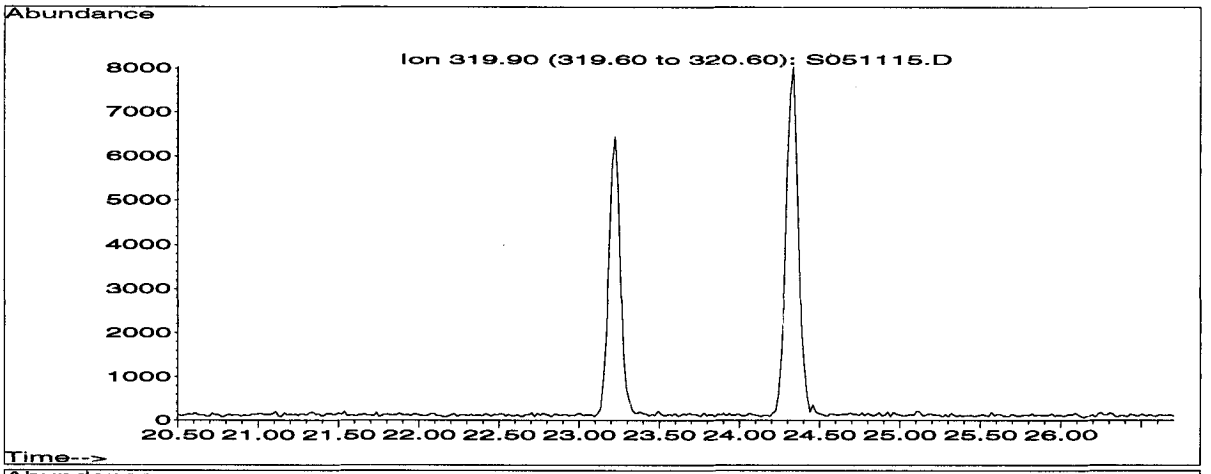


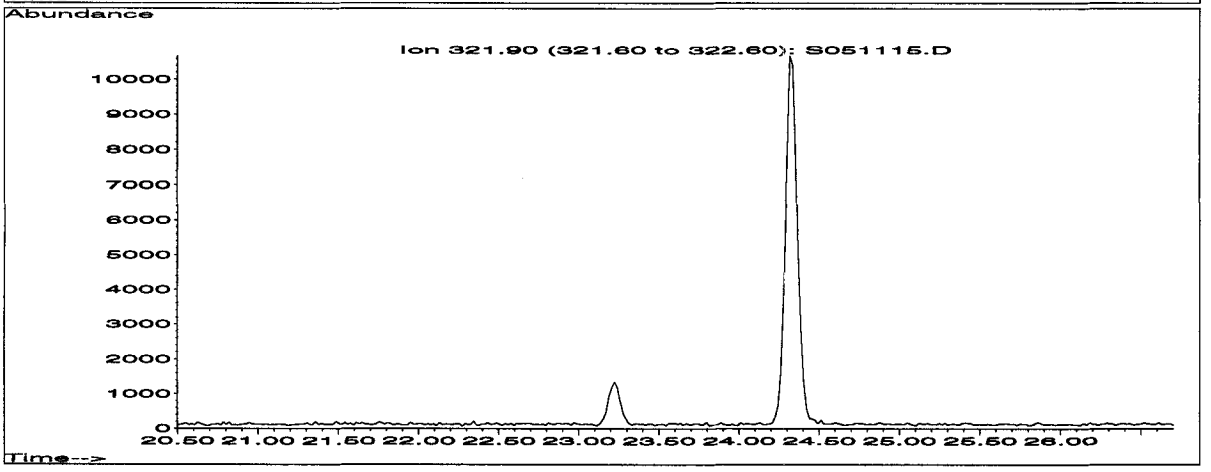


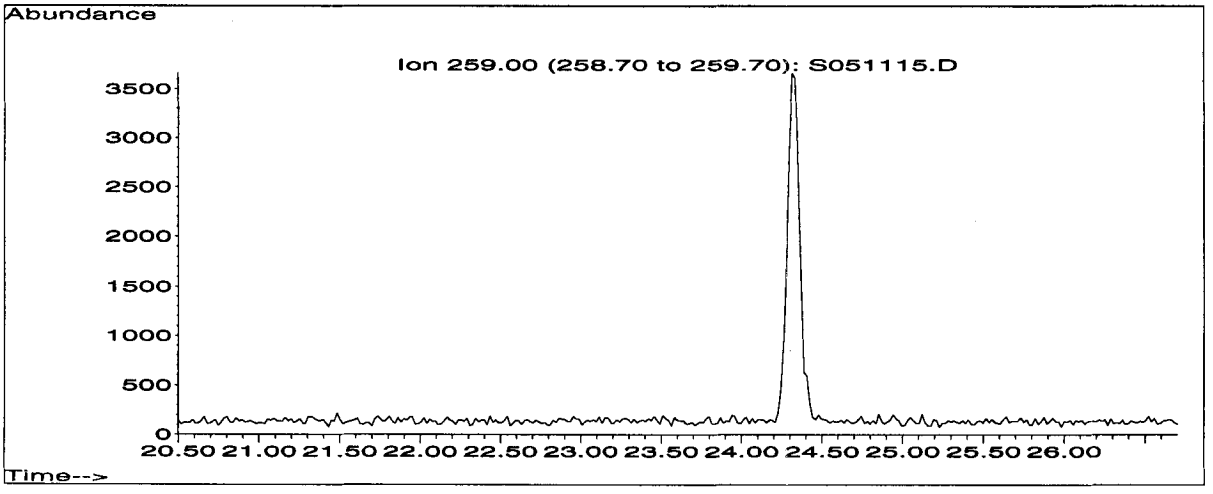


TCDD TOTAL

TS R.T. Lower Limit	20.50
TS R.T. Upper Limit	26.70

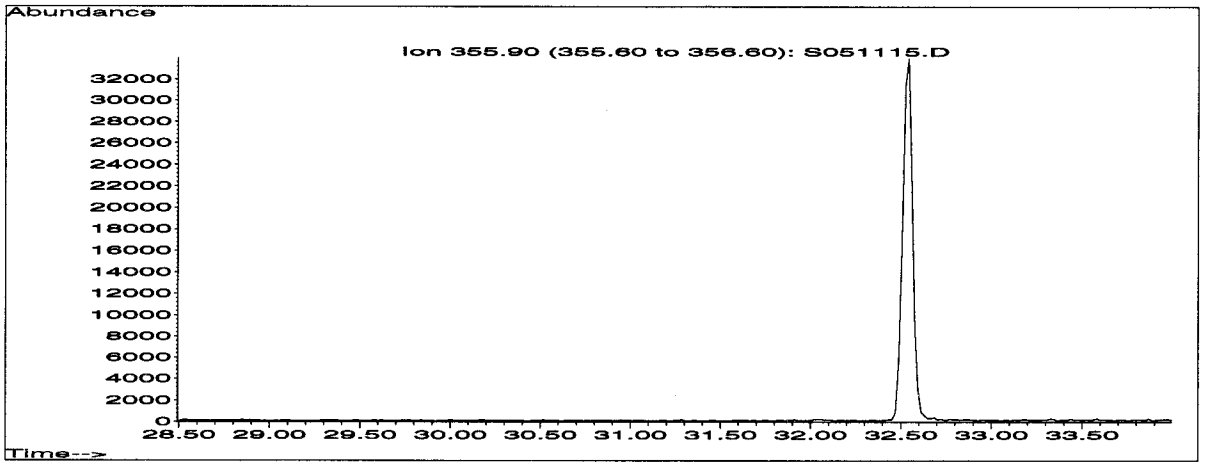


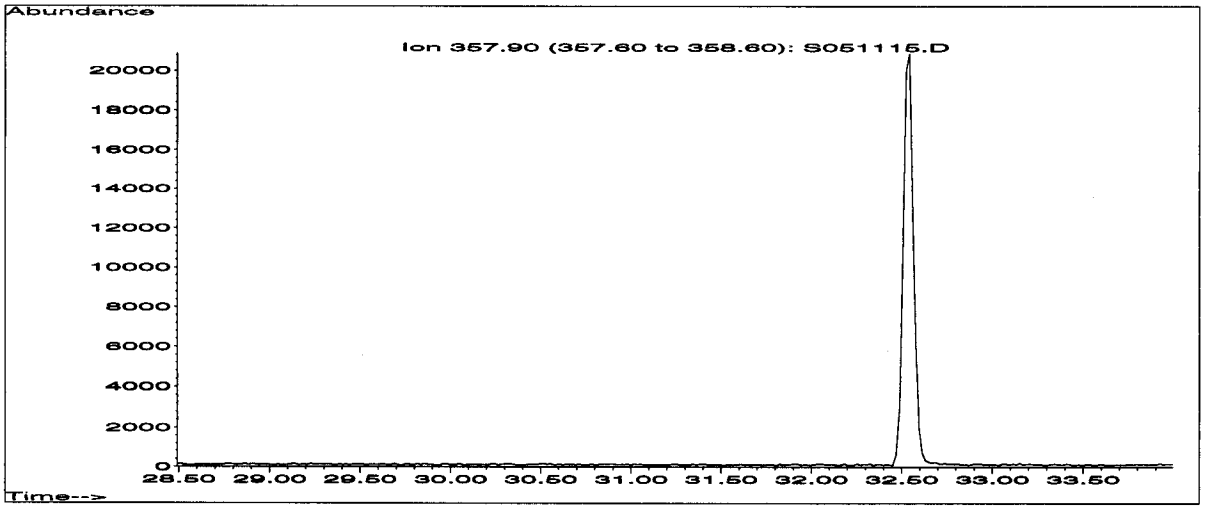


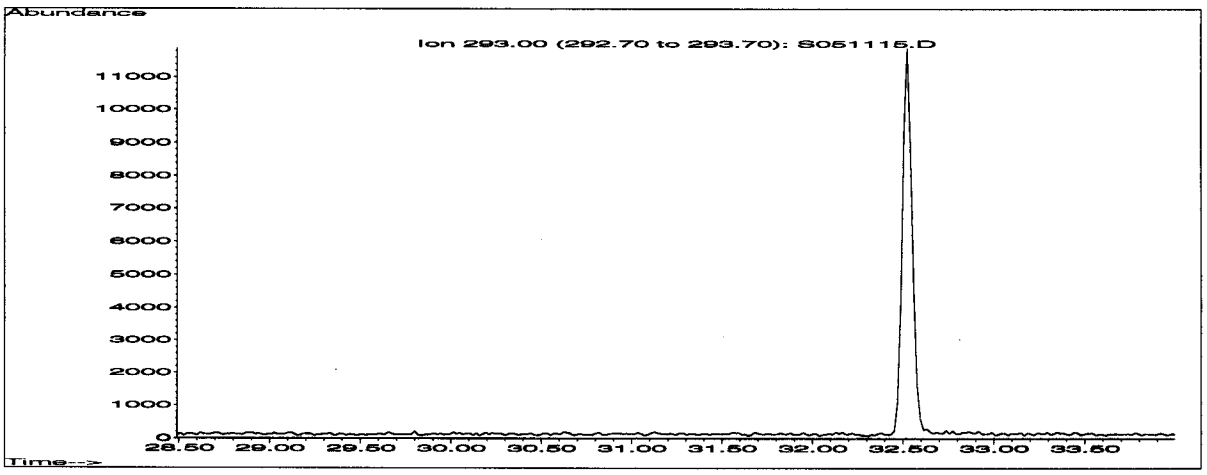


PeCDD TOTAL

TS R.T. Lower Limit	28.50
TS R.T. Upper Limit	34.00

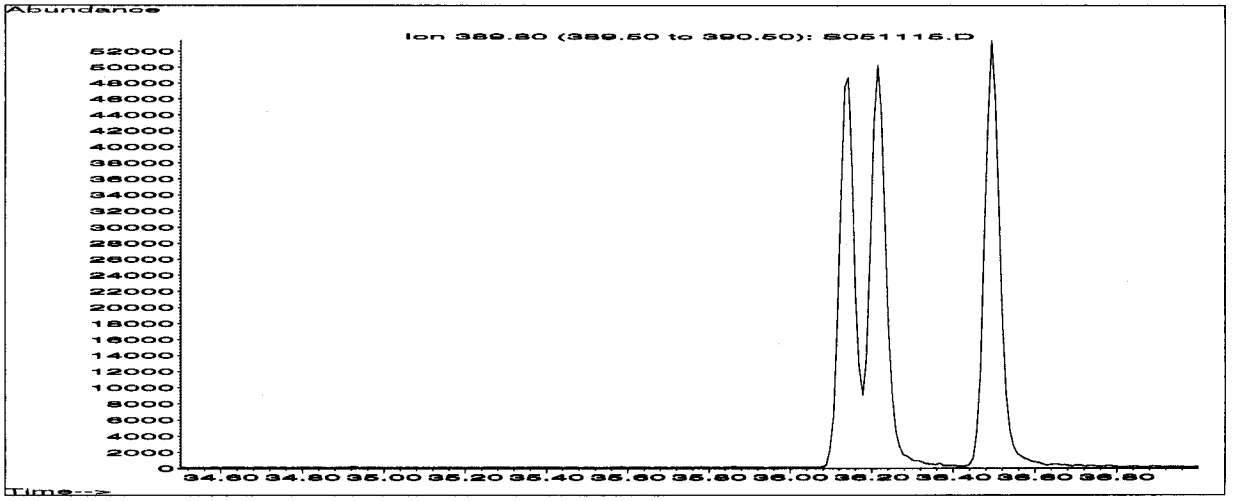


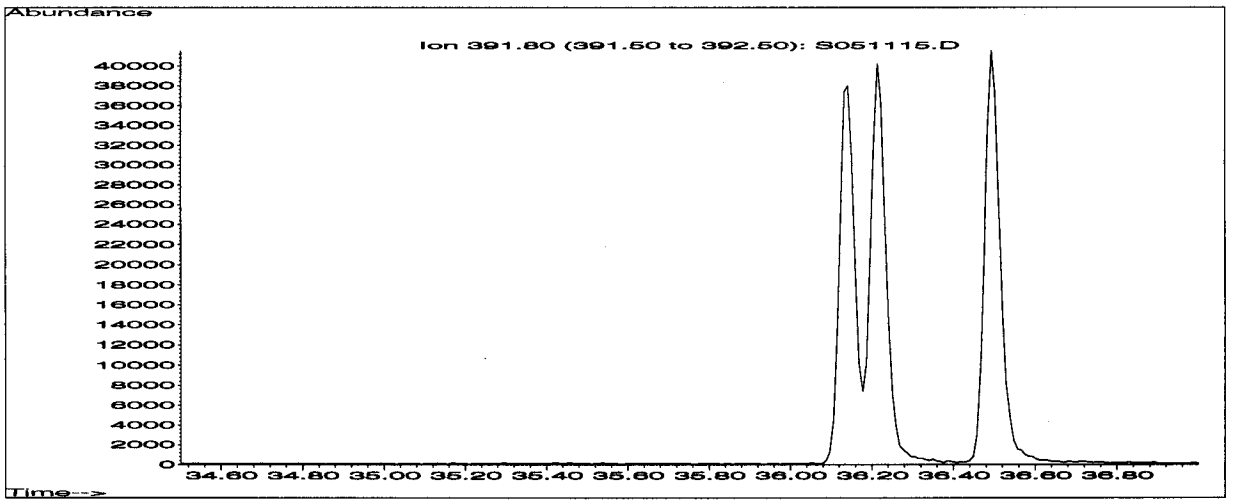


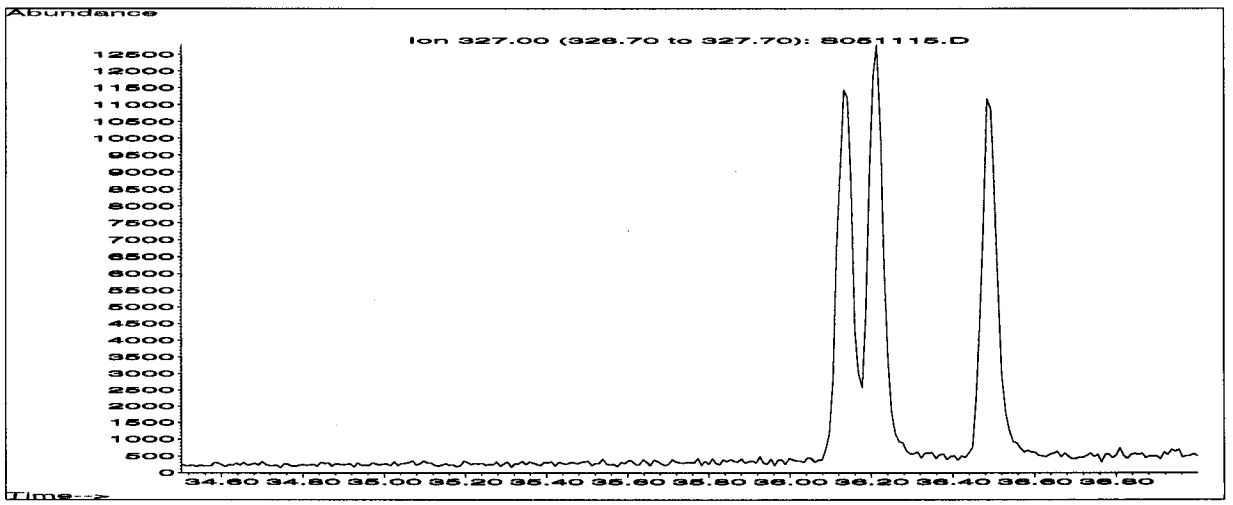


HxCDD TOTAL

TS R.T. Lower Limit	34.50
TS R.T. Upper Limit	37.00

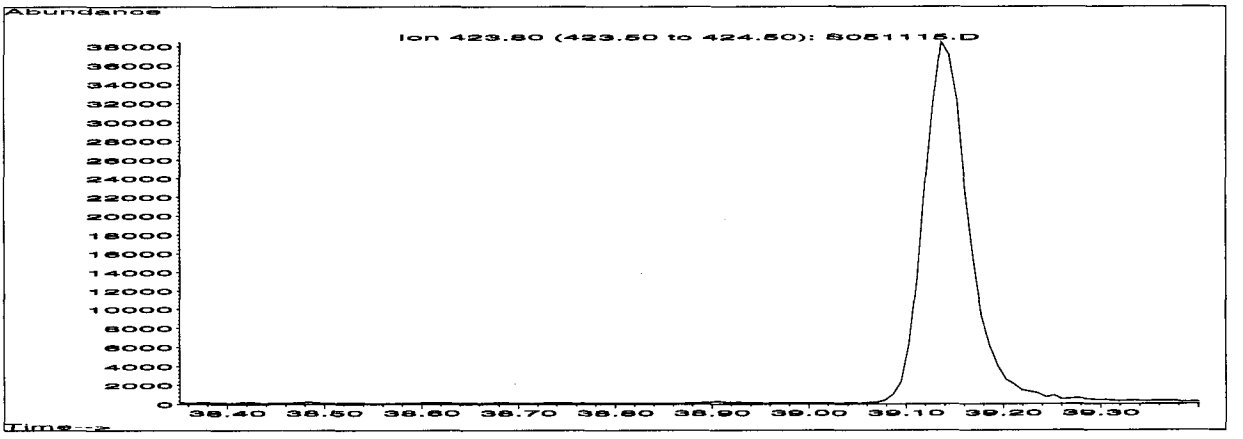


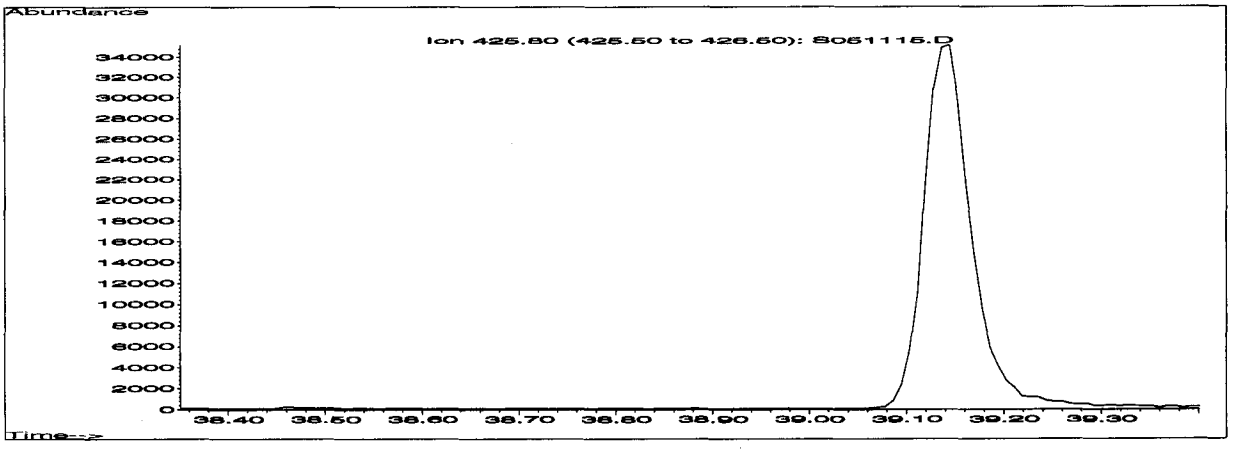


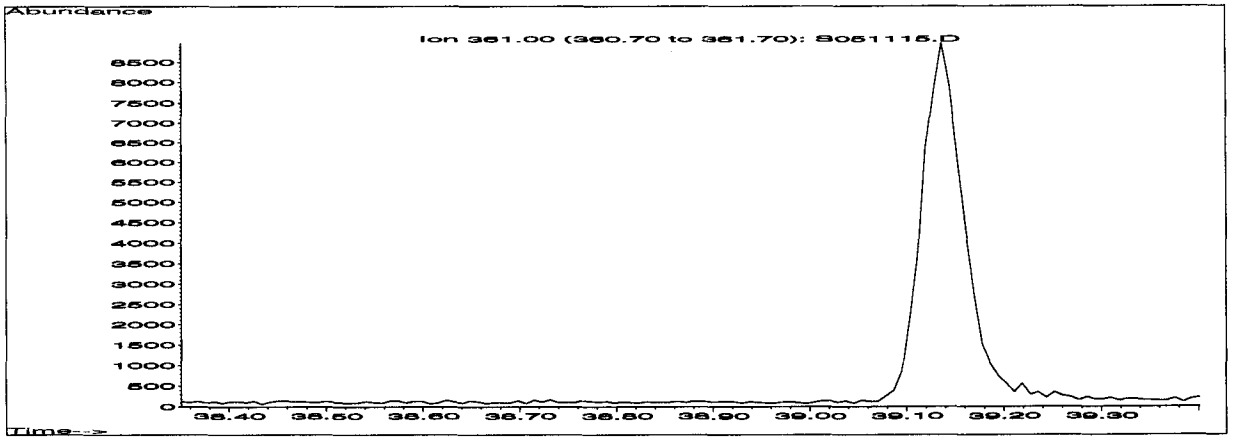


HpCDD TOTAL

TS R.T. Lower Limit	38.35
TS R.T. Upper Limit	39.40

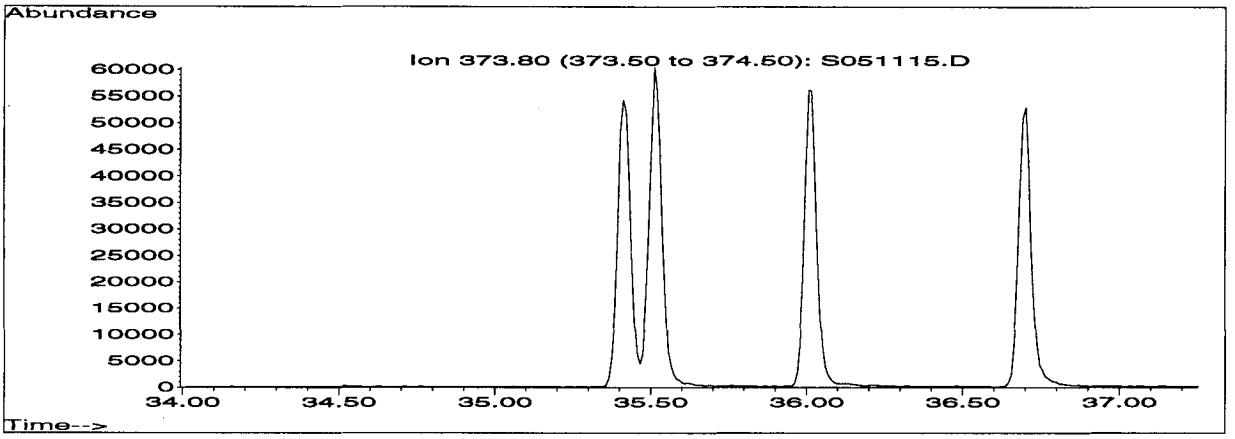


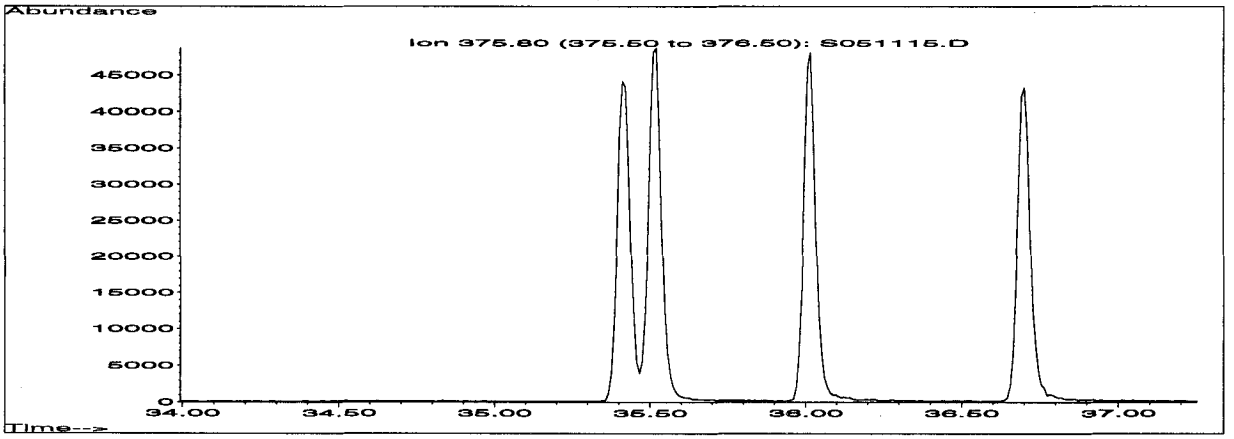


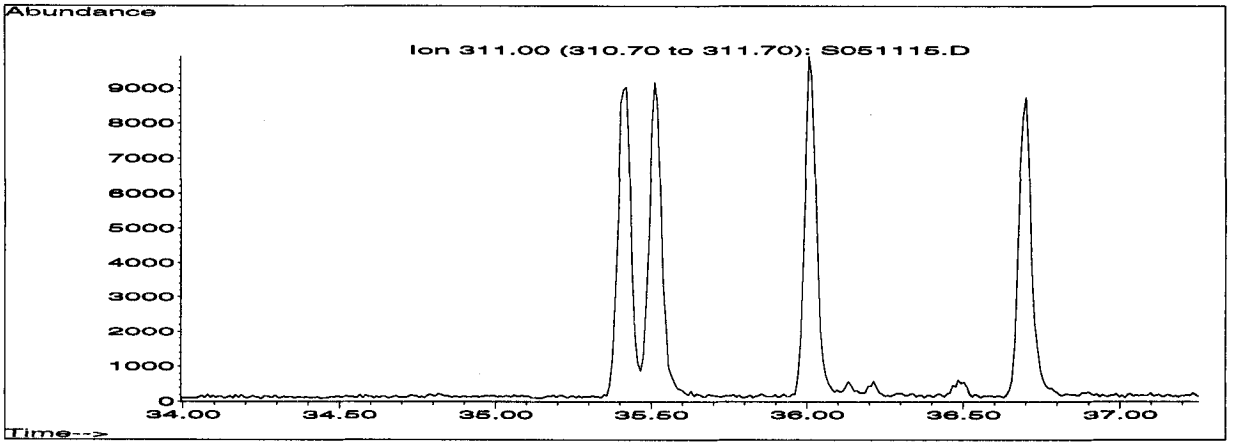


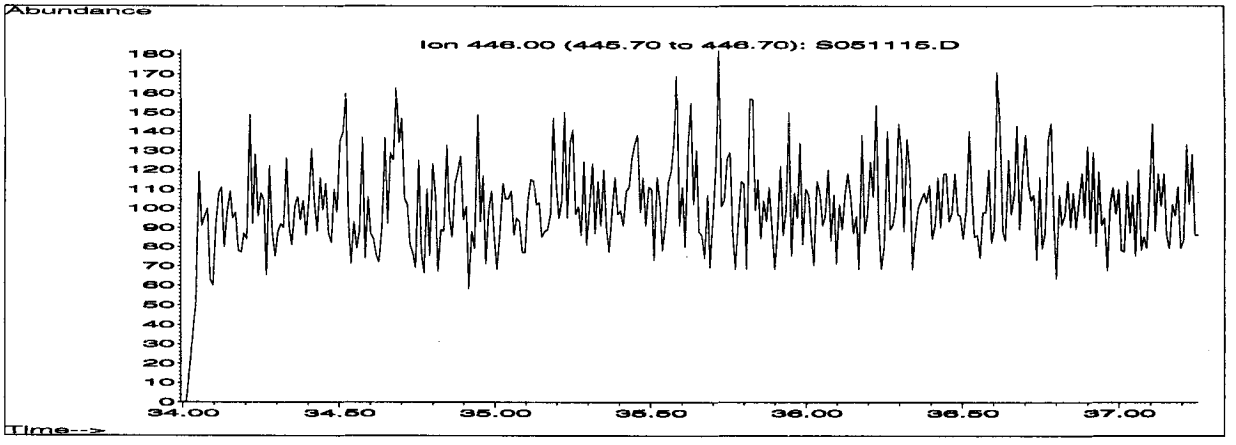
HxCDF TOTAL

TS R.T. Lower Limit	34.00
TS R.T. Upper Limit	37.25



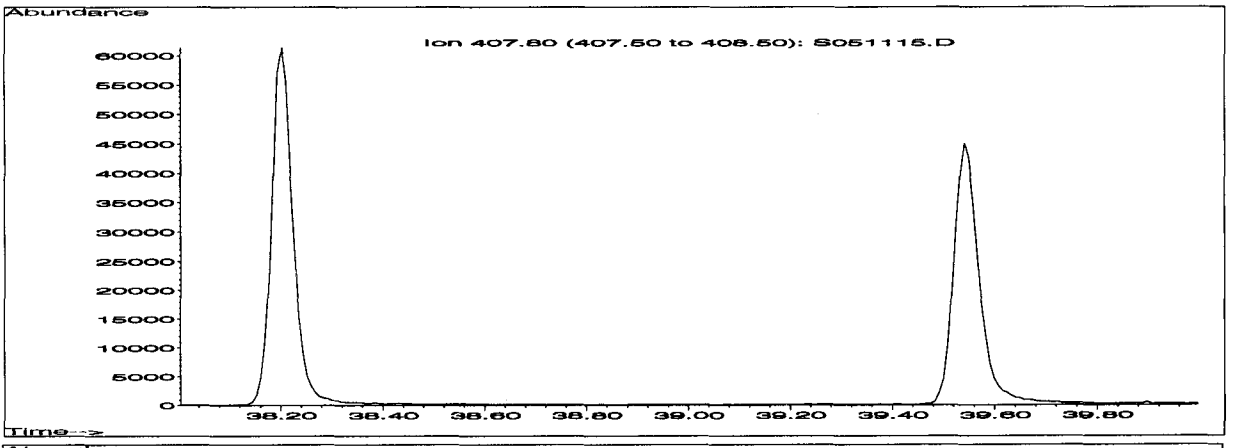


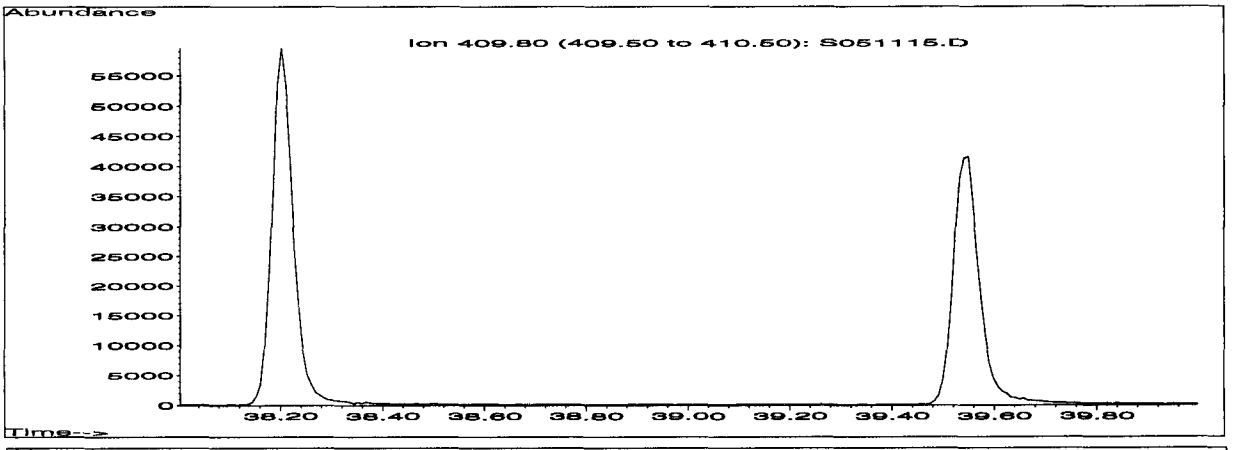


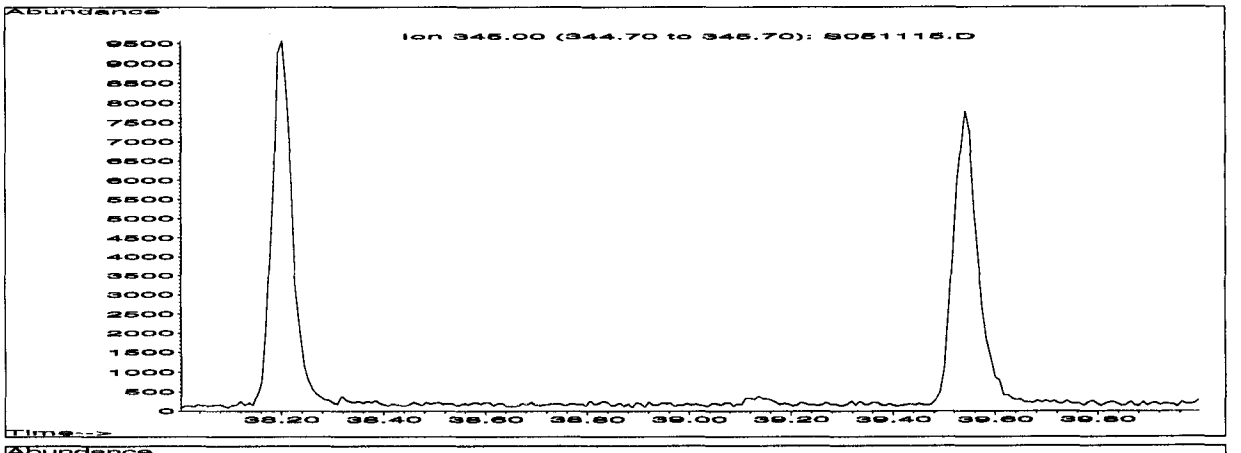


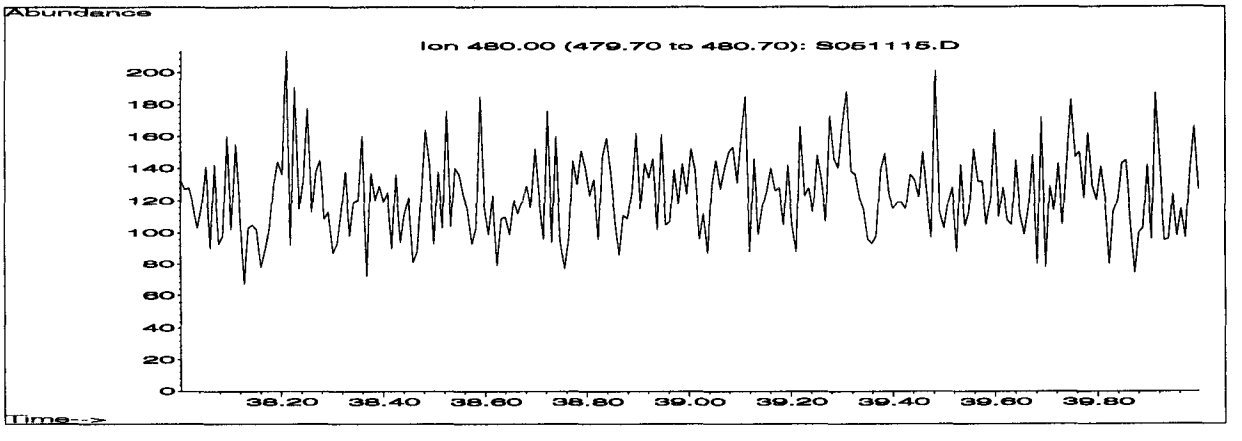
HpCDF TOTAL

TS R.T. Lower Limit	38.00
TS R.T. Upper Limit	40.00



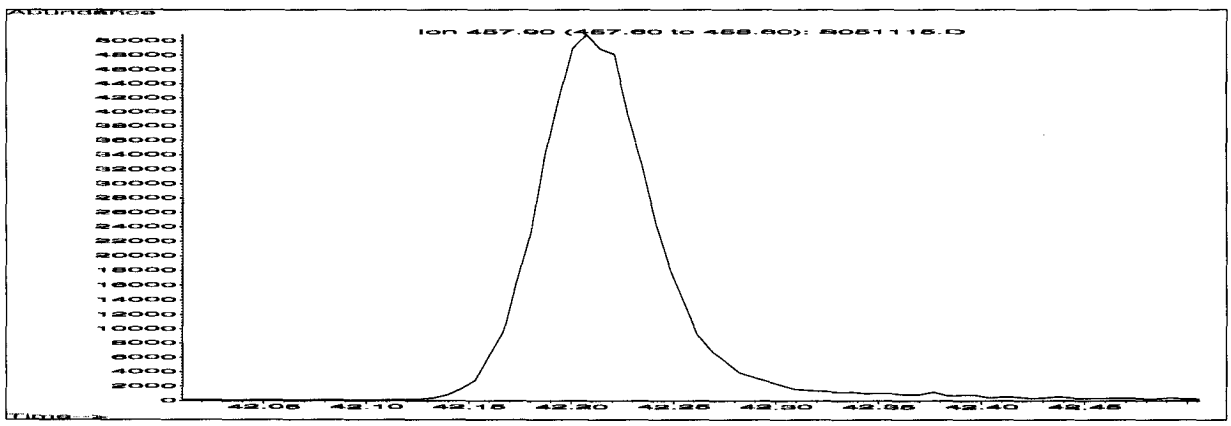


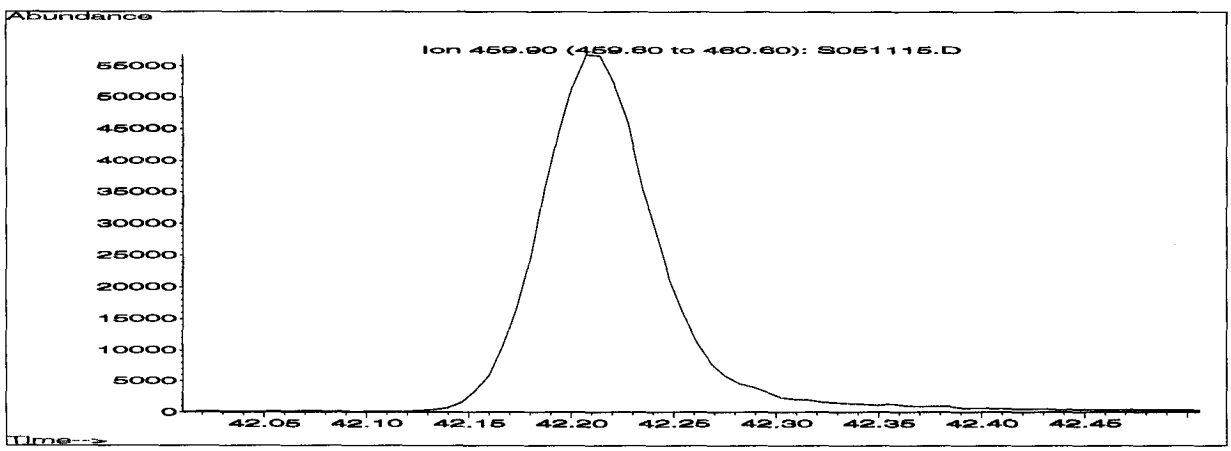


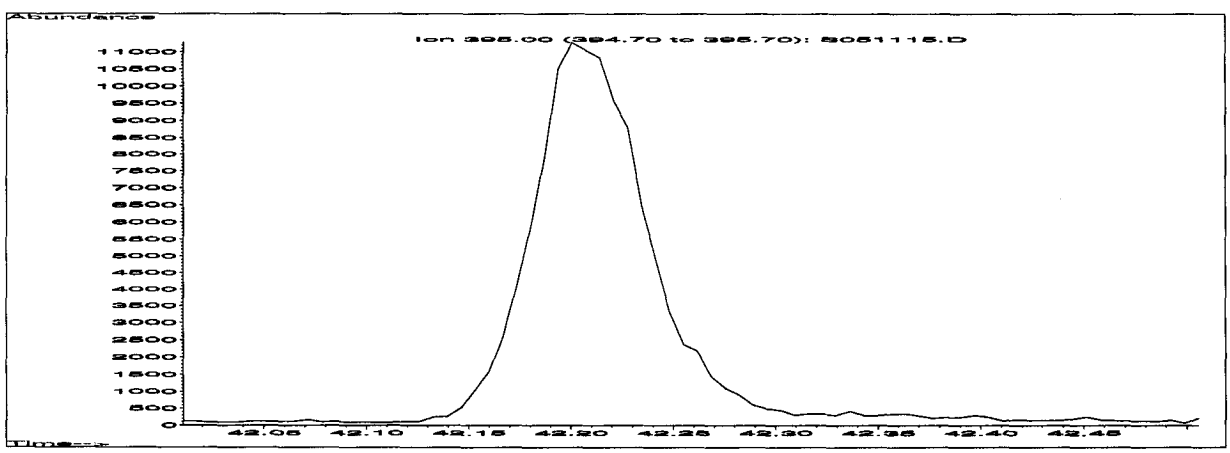


OCDD

TS R.T. Lower Limit	42.01		
TS R.T. Upper Limit	42.51		
Ret. Time	42.21		
Target Ion	457.9	Q1 Ion	459.9
Target Response	204629	Q1 Response	229326
Total Response	433955	Ion ratio	0.89
Q2 Ion	395		
Q2 Response	44408		

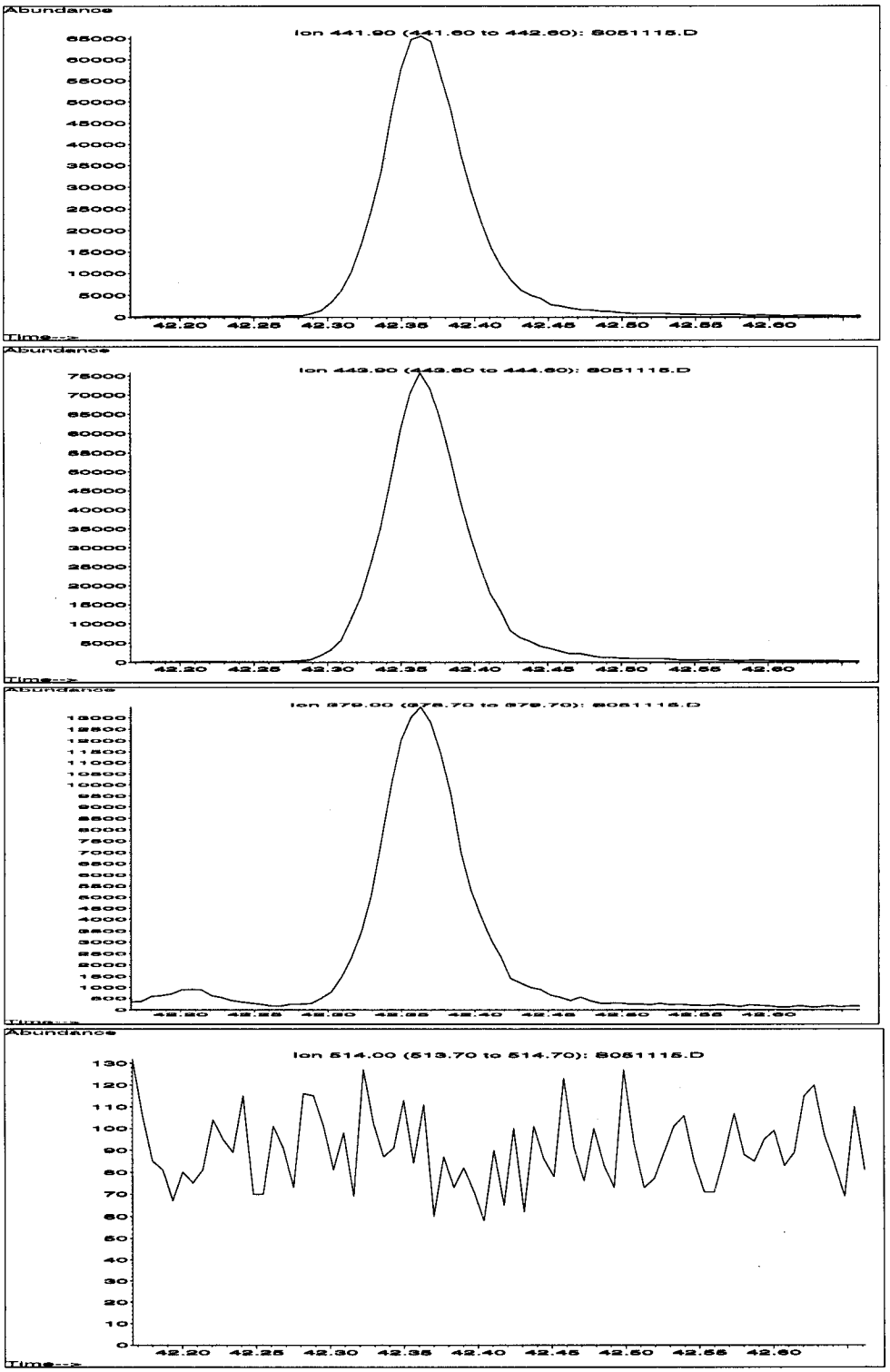






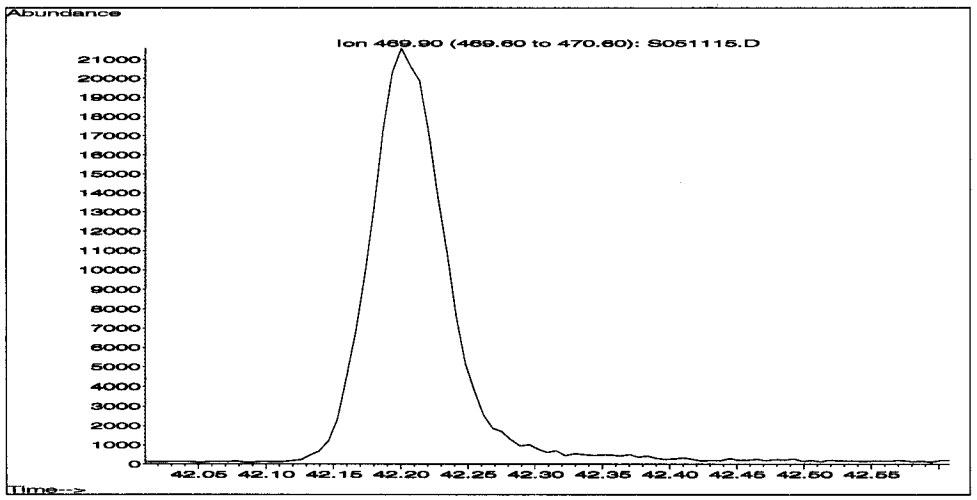
OCDF

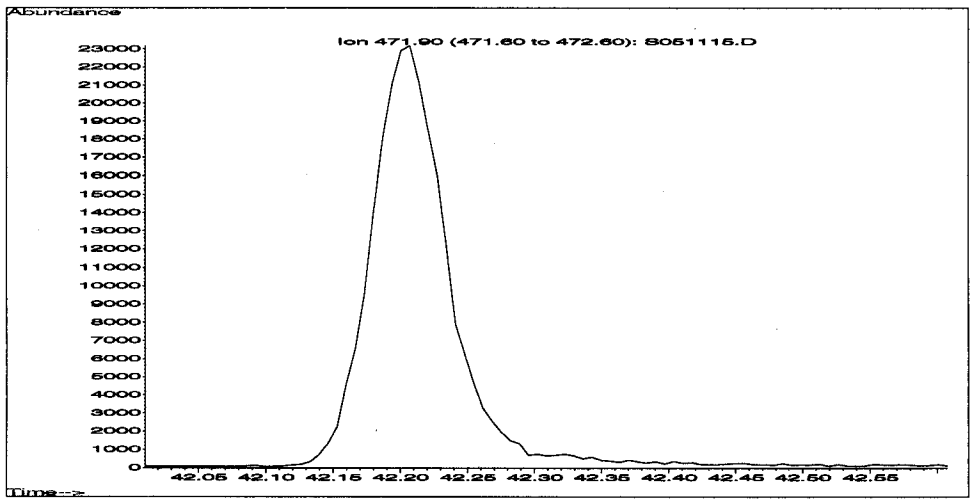
TS R.T. Lower Limit	42.16		
TS R.T. Upper Limit	42.66		
Ret Time	42.36		
Target Ion	441.9	Q1 Ion	443.9
Target Response	266395	Q1 Response	293117
Target Response	559512	Ion Ratio	0.91
Q2 Ion	379	DPE Ion	514
Q2 Response	52282	DPE Response	0



13C-OCDD-IS

RT Lower Limit	42.01		
RT Upper Limit	42.61		
Ret Time	42.20		
Target Ion	469.9	Q1 Ion	471.9
Target Response	85344	Q1 Response	90347
Total response	175691	Ratio	0.94





Quantitation Report (Not Reviewed)

Sample ID: A0D300605-4D 1.02028L 8280A
L0VEH-1-AD WATER LR009

Size: 1.020
Inst : DB1

Data File:C:\8280\2DB\051110.B\S051116.D
Acq On :12 May 2010 9:31

Vial: 16
Operator: MEO
Sample Amount: 1.02

MS Integration Params: RTEINT.P
Quant Time: May 12 14:06 2010

Quant Results File: 10MY11C2.RES

Quant Method : C:\8280\ DATA METHODS\10MY11C2.M (RTE Integrator)
Title : Dioxin Furan Total
Last Update : Wed May 12 09:30:50 2010
Response via : Single (C:\8280\2DB\051110.B\ST0511C.D 12 May 2010 1:32)
DataAcq Meth : TOKAS
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

5/13/10 MG

Recovery\Internal Stds	R.T.	QIon	Ratio	Response	Conc	Dev(Min)
1) 13C-1234-TCDD	24.01	332+334	0.81	154150	25.00 NG	-0.02
5) 13C-123789-HxCDD	36.48	402+404	1.26	233385	25.00 NG	0.00
9) 13C-2378-TCDF	23.23	316+318	0.82	157675	25.00 NG	0.02
15) 13C-2378-TCDD	24.30	332+334	0.80	110926	25.00 NG	0.00
20) 13C-123678-HxCDD	36.21	402+404	1.27	132649	25.00 NG	0.00
27) 13C-1234678-HpCDF	38.19	420+422	1.07	171377	25.00 NG	0.00
36) 13C-OCDD	42.20	470+472	0.92	228540	50.00 NG	0.00

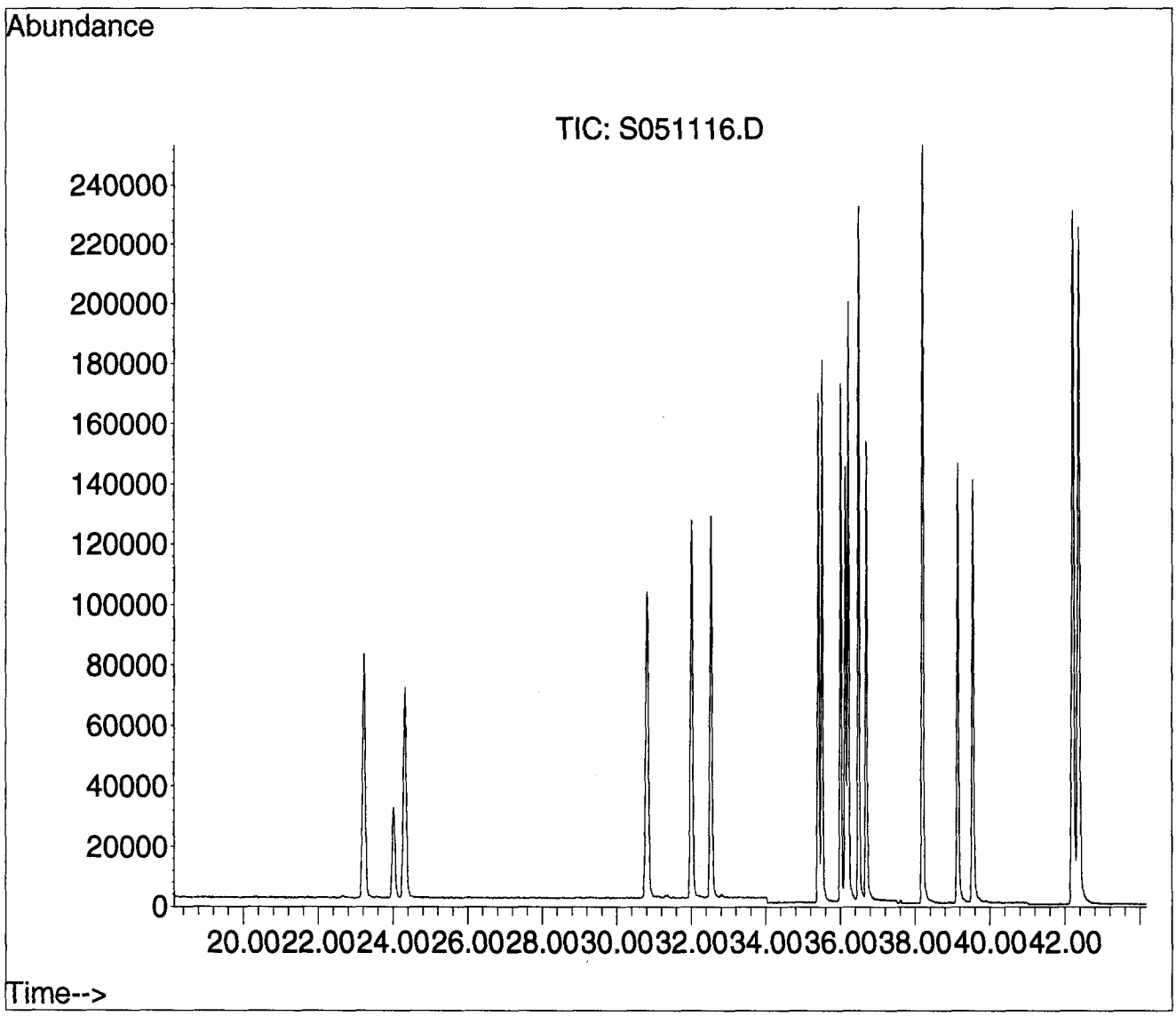
Surrogate Compound						
4) 37Cl-2378-TCDD	24.32	328		98798	11.310 NG	-0.02
Spiked Amount = 12.252		RRF = 1.389		Recovery =	92.32%	

Target Compounds	RT	Ratio		Area	RRF	Conc	EDL	%Rec
2) 13C-2378-TCDF-IS	23.23	0.83		157517	1.428	17.530	0.0315	71.5
3) 13C-2378-TCDD-IS	24.30	0.80		104830	0.983	16.949	2.4728	69.2
6) 13C-123678-HxCDD-	36.21	1.27		132649	0.796	17.486	0.0944	71.4
7) 13C-1234678-HpCDF	38.19	1.07		171216	1.010	17.795	0.0844	72.6
8) 13C-OCDD-IS	42.20	0.92		228540	0.659	36.434	0.0949	74.3
10) 2378-TCDF	23.23	0.75		199564	1.265	24.516	0.2705	
1	23.23	0.75		200151		24.588		
11) TCDF TOTAL	22.00	0.75		200151	1.265	24.588		
12) 12378-PeCDF	30.81	1.54		469963	1.136	64.284	0.1388	
13) 23478-PeCDF	32.01	1.51		461134	1.137	63.028	0.2198	
1	30.81	1.54		471298		64.467		
2	31.34	1.95	#	4064		0.556		
3	32.01	1.50		461134		63.028		
14) PeCDF TOTAL	29.50	1.50		936496	1.136	128.051		
16) 2378-TCDD	24.32	0.76		136210	1.221	24.634	0.2591	
1	23.21	4.48	#	16447		2.974		
2	24.32	0.77		141709		25.628		
17) TCDD TOTAL	22.50	0.77		158156	1.221	28.602		
18) 12378-PeCDD	32.55	1.60		314146	1.142	60.760	0.0756	
1	32.55	1.60		316644		61.244		
19) PeCDD TOTAL	30.00	1.60		316644	1.142	61.244		
21) 123478-HxCDD	36.13	1.28		334354	1.012	61.021	0.0998	
22) 123678-HxCDD	36.21	1.26		344884	0.981	64.937	0.6389	
23) 123789-HxCDD	36.49	1.27		364018	1.038	64.810	0.6083	
1	36.13	1.28		334354		61.021		
2	36.21	1.25		344884		64.937		
3	36.49	1.26		1211731		228.152		
24) HxCDD TOTAL	36.50	1.26		1890969	0.981	354.110		
25) 1234678-HpCDD	39.14	1.05		363469	1.039	64.630	0.1283	

	1	39.15	1.05	363469		64.630	
26)	HpCDD TOTAL	39.35	1.05	363469	1.039	64.630	
28)	123478-HxCDF	35.41	1.19	421804	0.984	61.314	0.1444
29)	123678-HxCDF	35.51	1.23	451794	1.042	61.999	0.5210
30)	234678-HxCDF	36.01	1.20	425697	0.970	62.756	0.2171
31)	123789-HxCDF	36.70	1.20	404407	0.928	62.323	0.1873
	1	35.41	1.19	421804		61.314	
	2	35.51	1.23	451794		61.999	
	3	36.01	1.19	1903627		293.366	
	4	36.70	1.20	406418		62.633	
32)	HxCDF TOTAL	36.00	1.20	3183643	0.928	479.311	
33)	1234678-HpCDF	38.20	1.04	505060	1.160	62.265	0.0995
34)	1234789-HpCDF	39.54	1.04	441669	1.006	62.768	0.1500
	1	38.20	1.04	505060		62.265	
	2	39.54	1.05	441669		62.768	
35)	HpCDF TOTAL	39.50	1.05	946729	1.006	125.034	
37)	OCDD	42.21	0.90	630360	1.102	122.623	0.1906
38)	OCDF	42.36	0.91	814881	1.397	125.088	0.2059

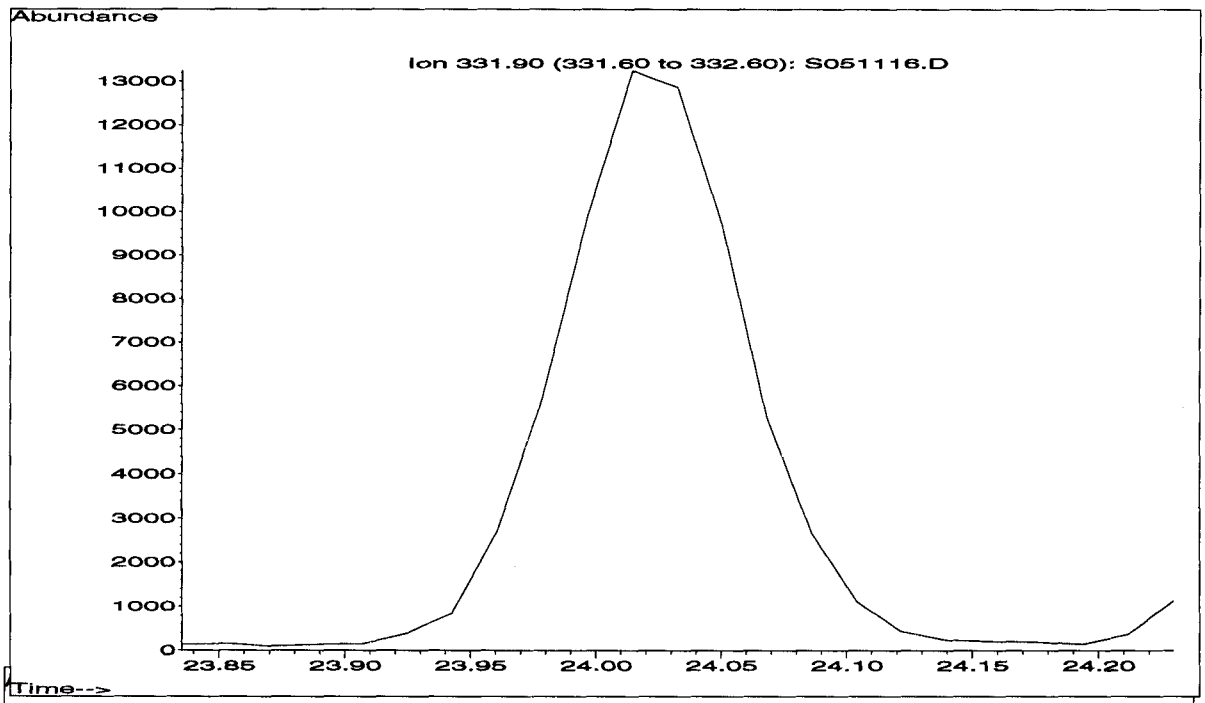
(#) = qualifier out of range•: areas and concentration based on theoretical ion ratio
(m) = manual integration
S051116.D 10MY11C2.M Wed May 12 14:06:33 2010

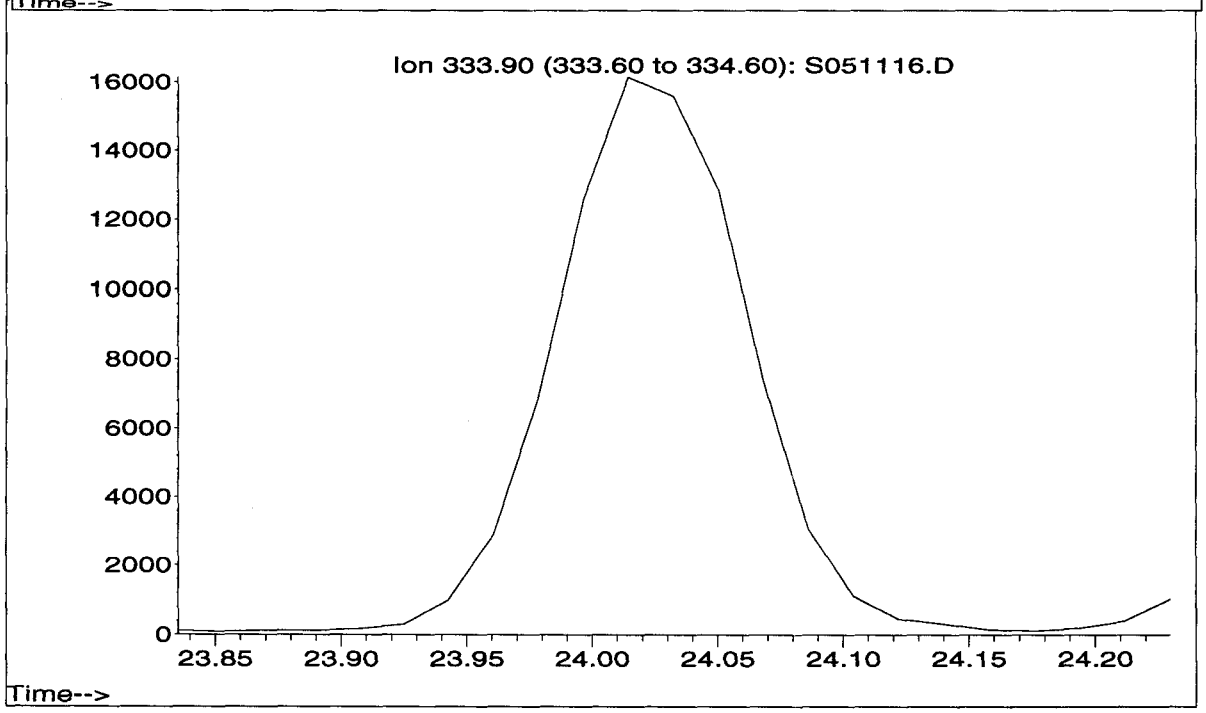
Data File Name	S051116.D
Data File Path	C:\8280\2DB\051110.B\
Operator	MEO
Date Acquired	5/12/2010 9:31
Acq. Method File	TOKAS
Sample Name	0VEH-1-AD WATER LR009
Misc Info	300605-4D 1.02028L 8280A
Vial Number	16
Instrument Name	2DB
Sample Multiplier	1
Sample Amount	1.02028



13C-1234-TCDD

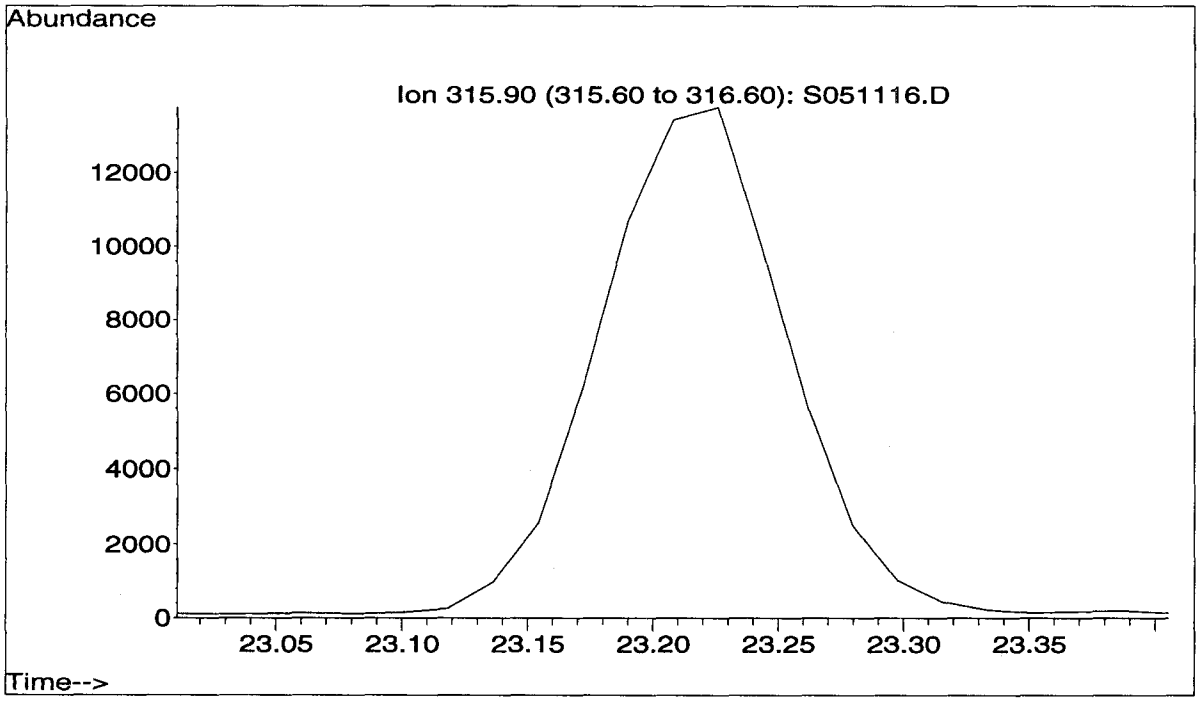
TS R.T. Lower Limit	23.83		
TS R.T. Upper Limit	24.23		
Ret Time	24.01		
Target Ion	331.9	Q1 Ion	333.9
Target Response	68876	Q1 Response	85274
Total Response	154150	Ion Ratio	0.81

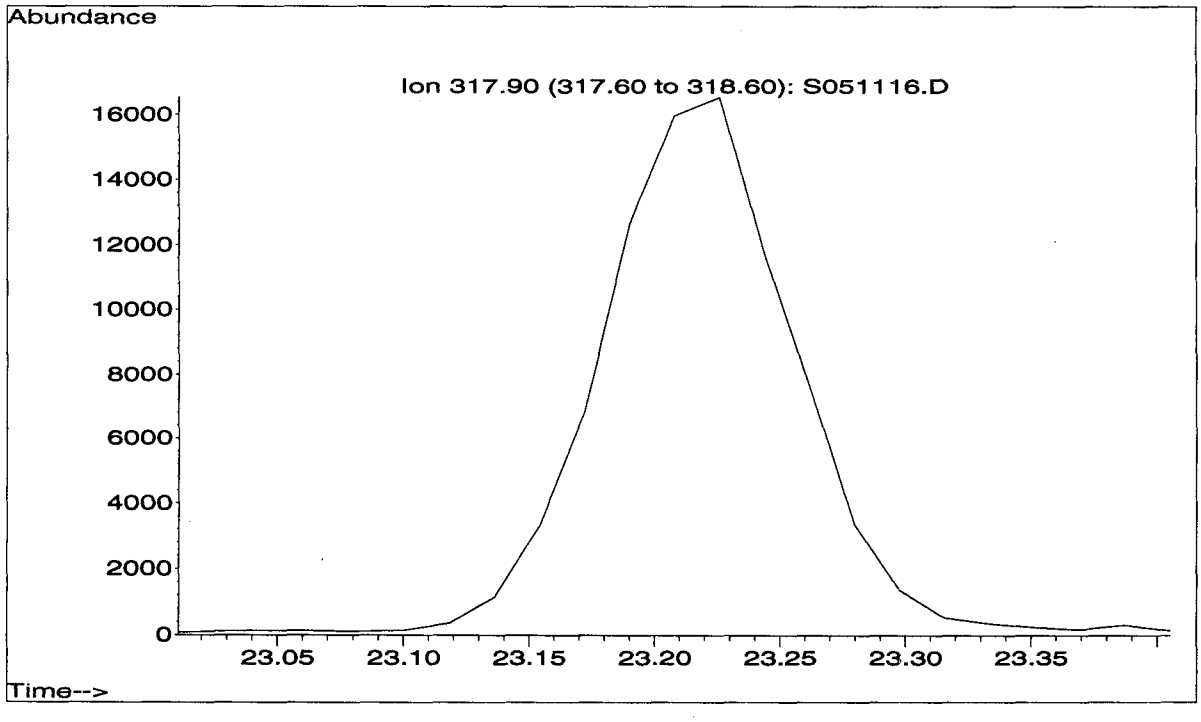




13C-2378-TCDF-IS

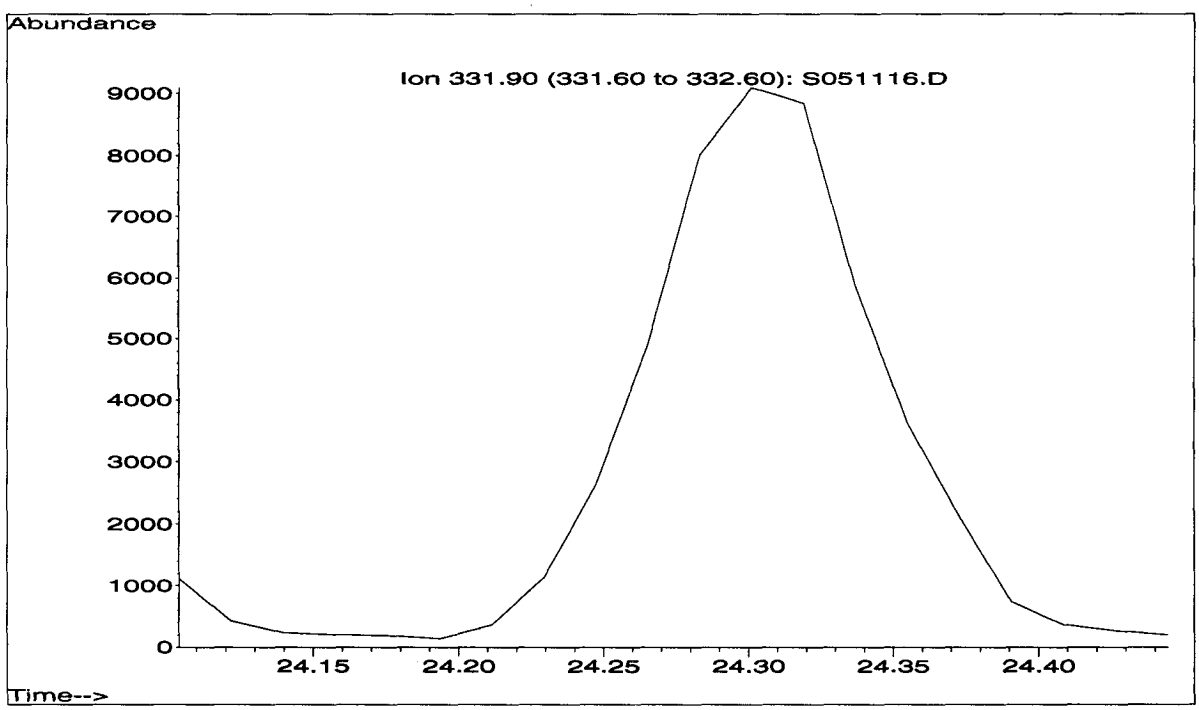
TS R.T. Lower Limit	23.01		
TS R.T. Upper Limit	23.41		
Ret Time	23.23		
Target Ion	315.9	Q1 Ion	317.9
Target Response	71305	Q1 Response	86212
Target Response	157517	Ion Ratio	0.83

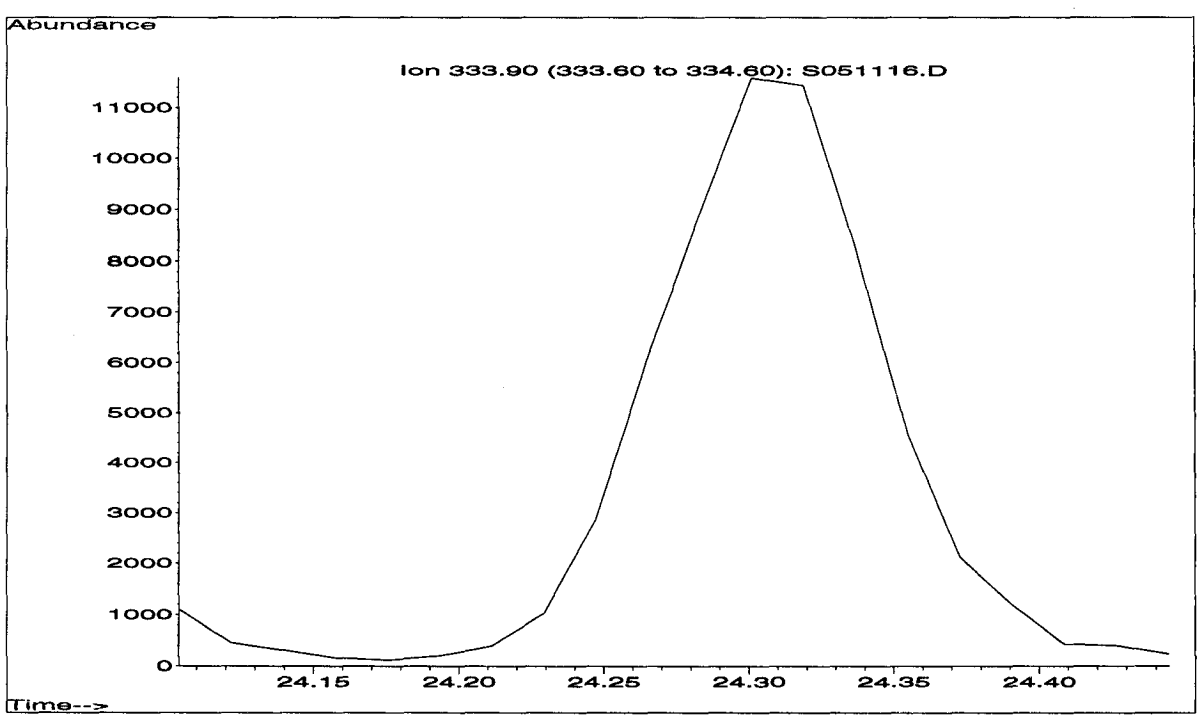




13C-2378-TCDD-IS

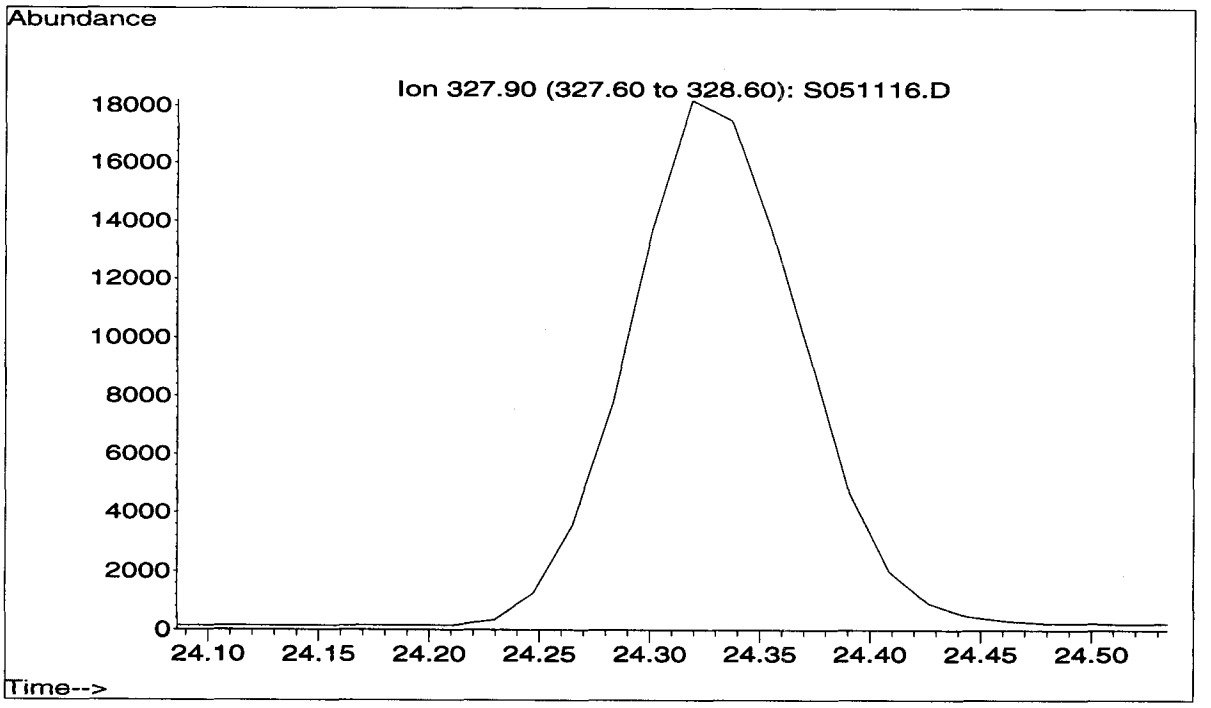
TS R.T. Lower Limit	24.10		
TS R.T. Upper Limit	24.45		
Ret Time	24.30		
Target Ion	331.9	Q1 Ion	333.9
Target Response	46455	Q1 Response	58375
Total Response	104830	Ion Ratio	0.80

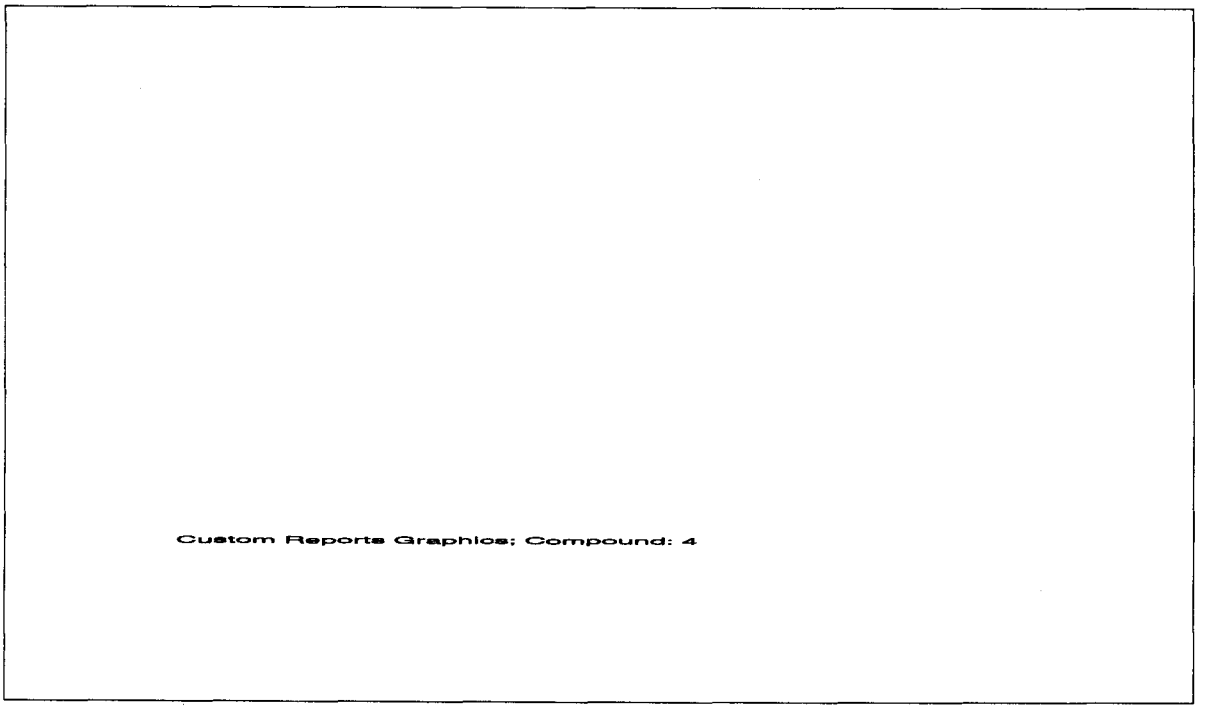




37Cl-2378-TCDD

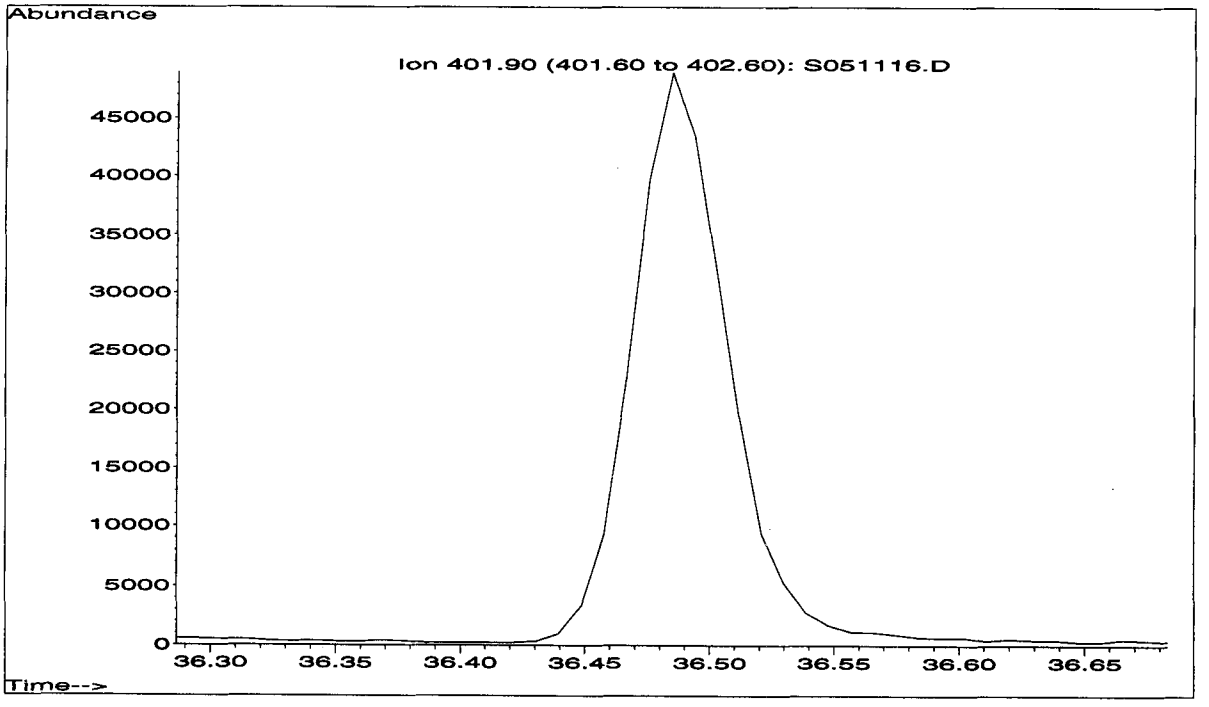
TS R.T. Lower Limit	24.09		
TS R.T. Upper Limit	24.54		
Ret Time	24.32		
Target Ion	327.9	Q1 Ion	0
Target Response	98798	Q1 Response	0
Total Response	98798	Ion Ratio	#DIV/0!

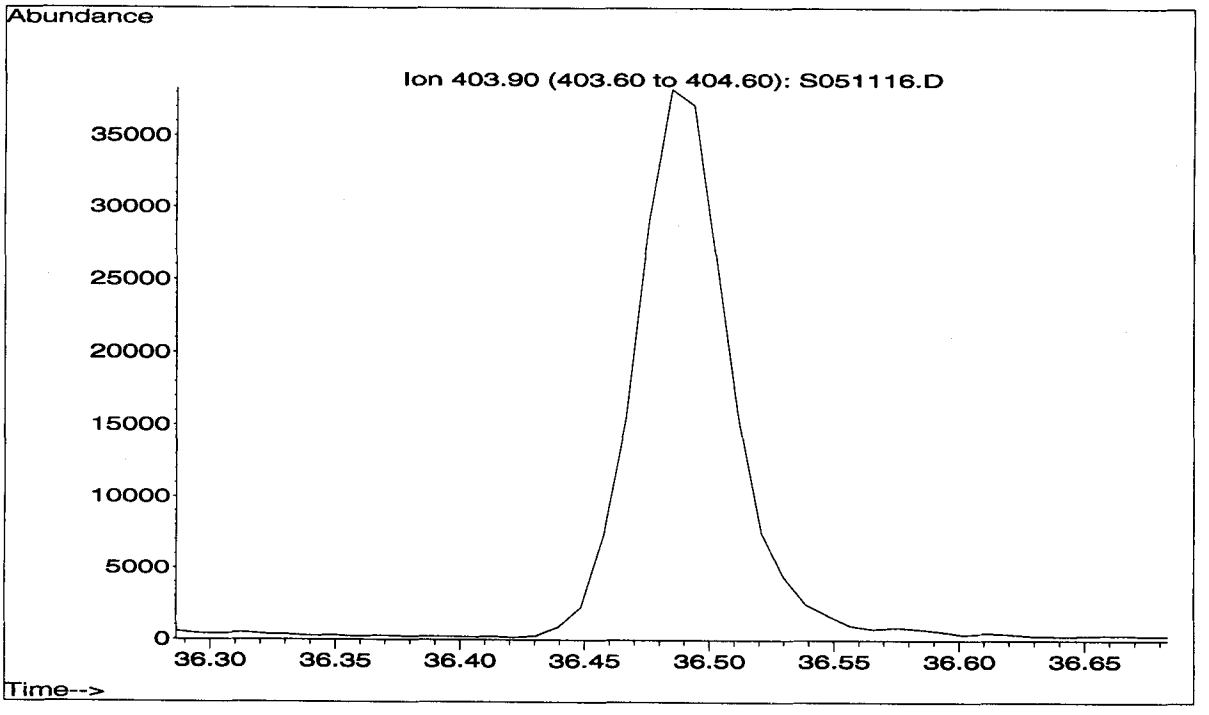




13C-123789-HxCDD

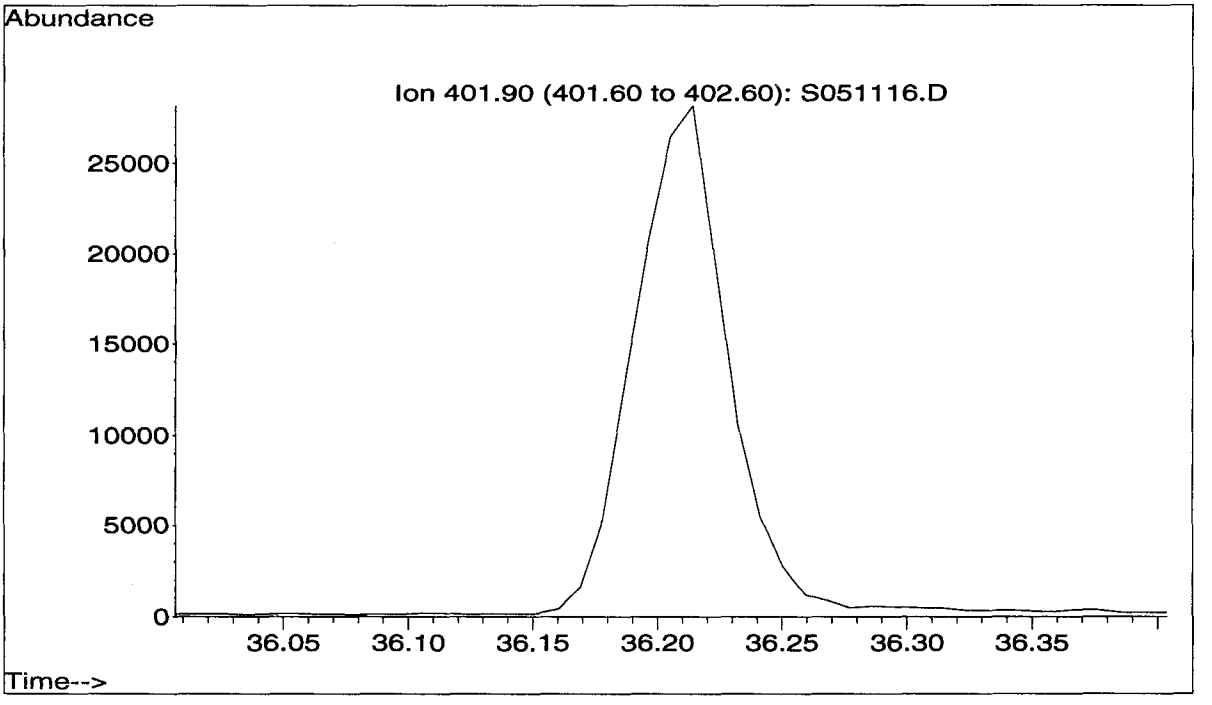
TS R.T. Lower Limit	36.29		
TS R.T. Upper Limit	36.69		
Ret Time	36.48		
Target Ion	401.9	Q1 Ion	403.9
Target Response	130280	Q1 Response	103105
Target Response	233385	Ion Ratio	1.26

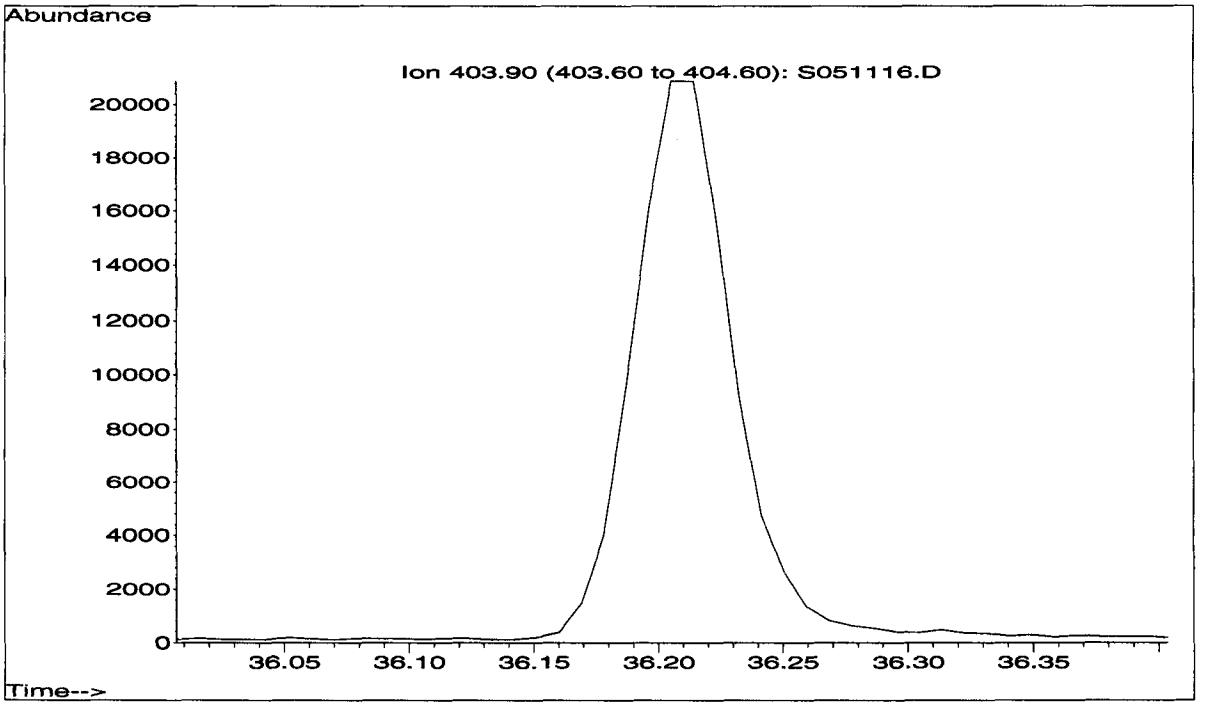




13C-123678-HxCDD-IS

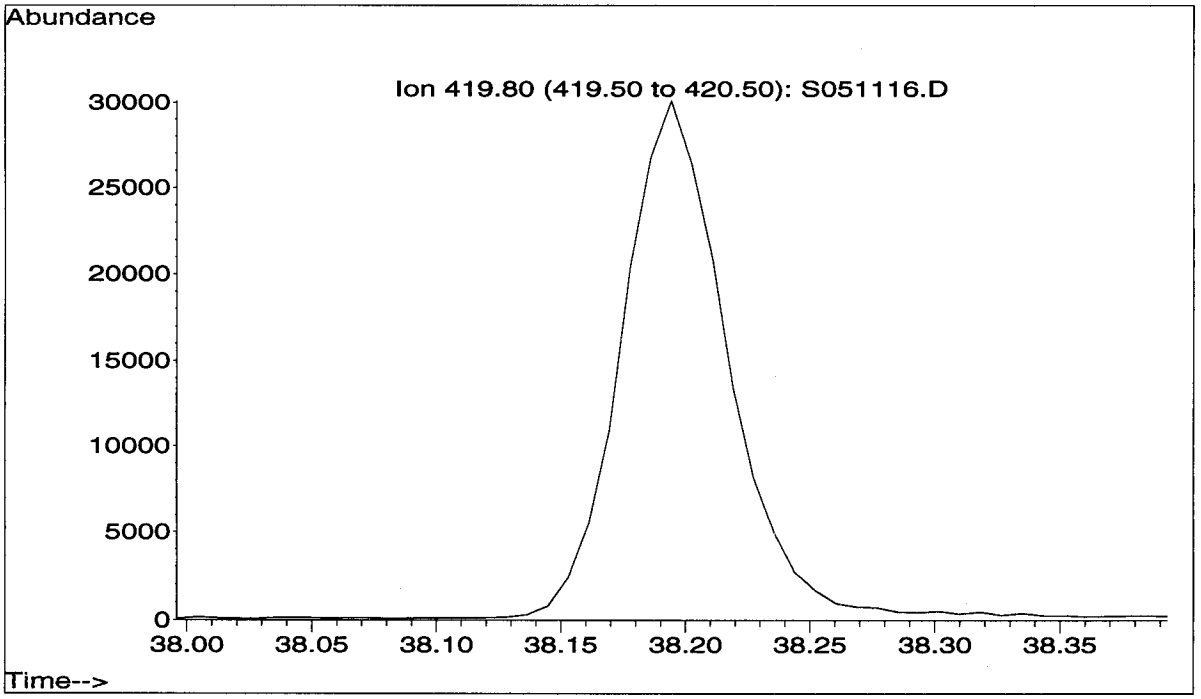
TS R.T. Lower Limit	36.01		
TS R.T. Upper Limit	36.41		
Ret Time	36.21		
Target Ion	401.9	Q1 Ion	403.9
Target Response	74254	Q1 Response	58395
Total Response	132649	Ion Ratio	1.27

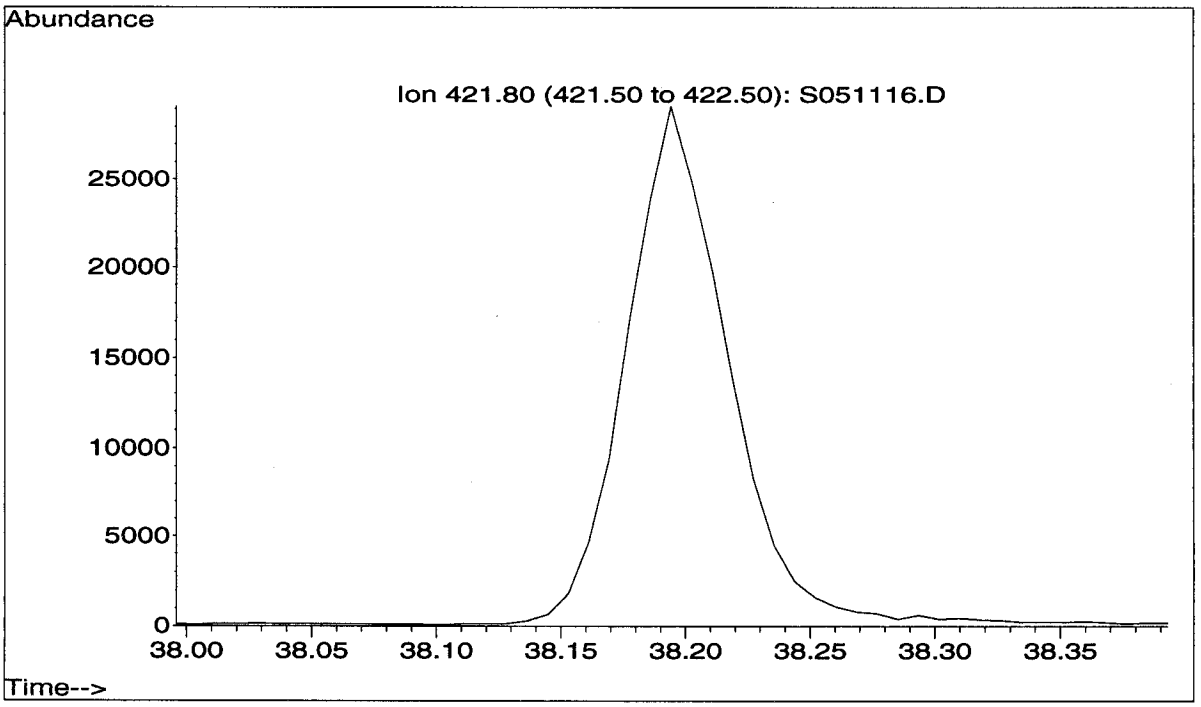




13C-1234678-HpCDF-IS

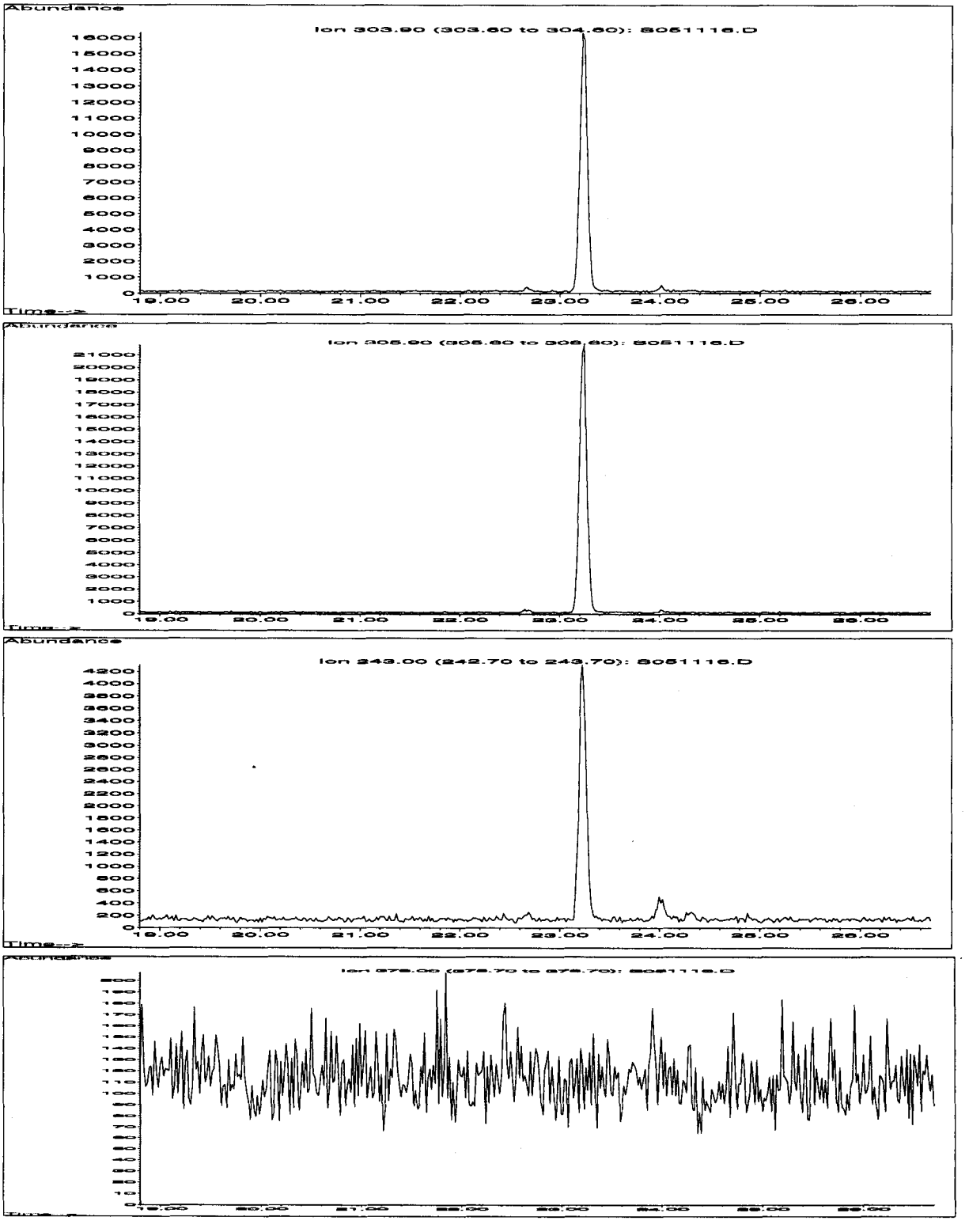
TS R.T. Lower Limit	37.99		
TS R.T. Upper Limit	38.39		
Ret Time	38.19		
Target Ion	419.8	Q1 Ion	421.8
Target Response	88674	Q1 Response	82542
Target Response	171216	Ion Ratio	1.07





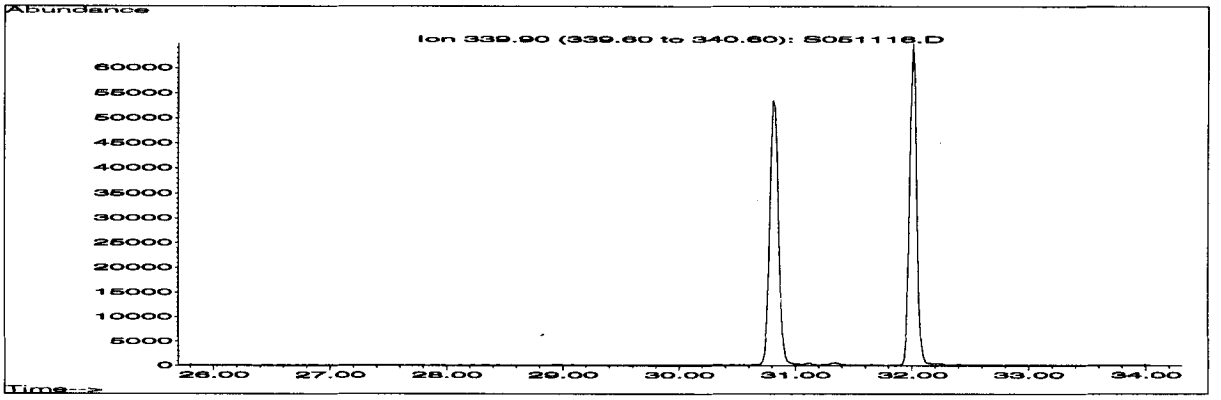
TCDF TOTAL

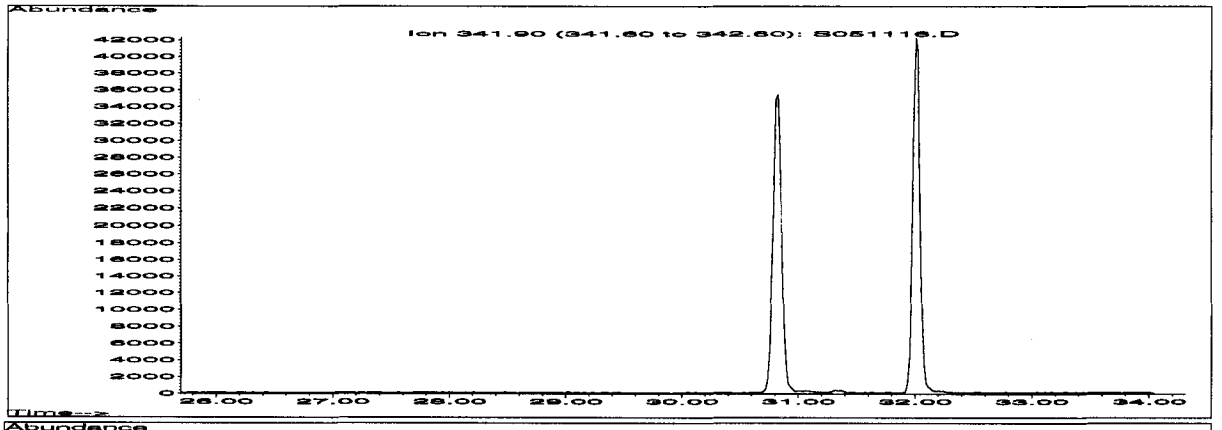
TS R.T. Lower Limit	18.80
TS R.T. Upper Limit	26.70

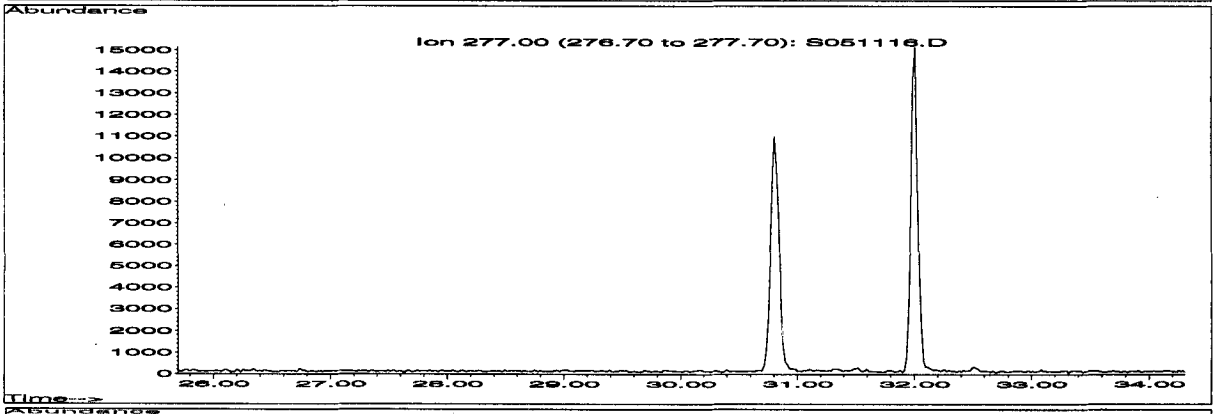


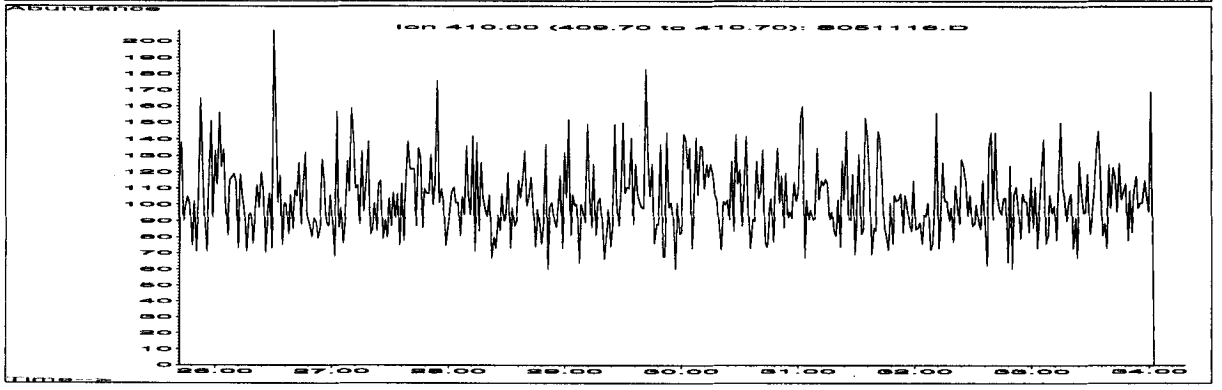
PeCDF TOTAL

TS R.T. Lower Limit	25.70
TS R.T. Upper Limit	34.30



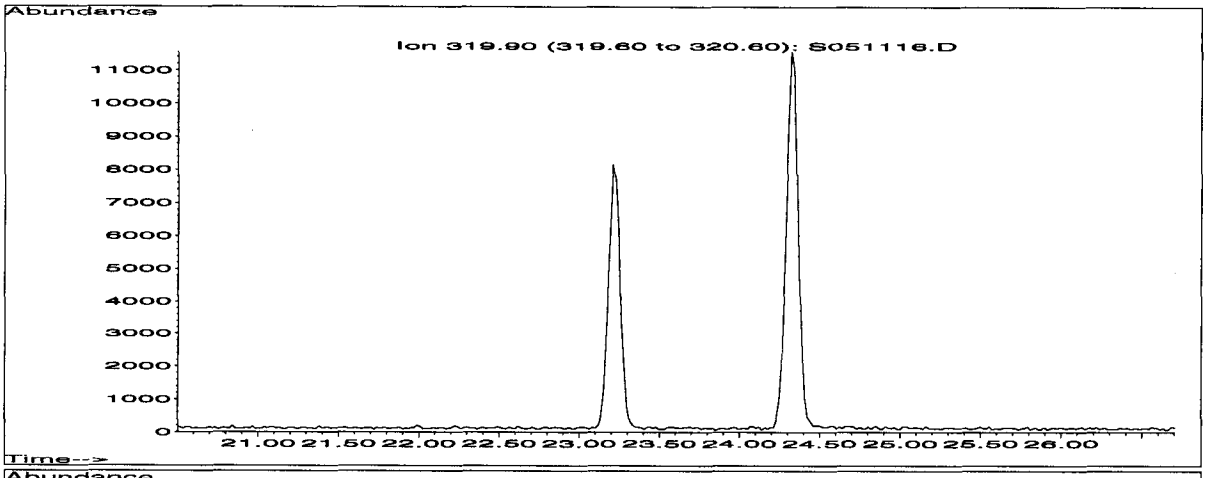


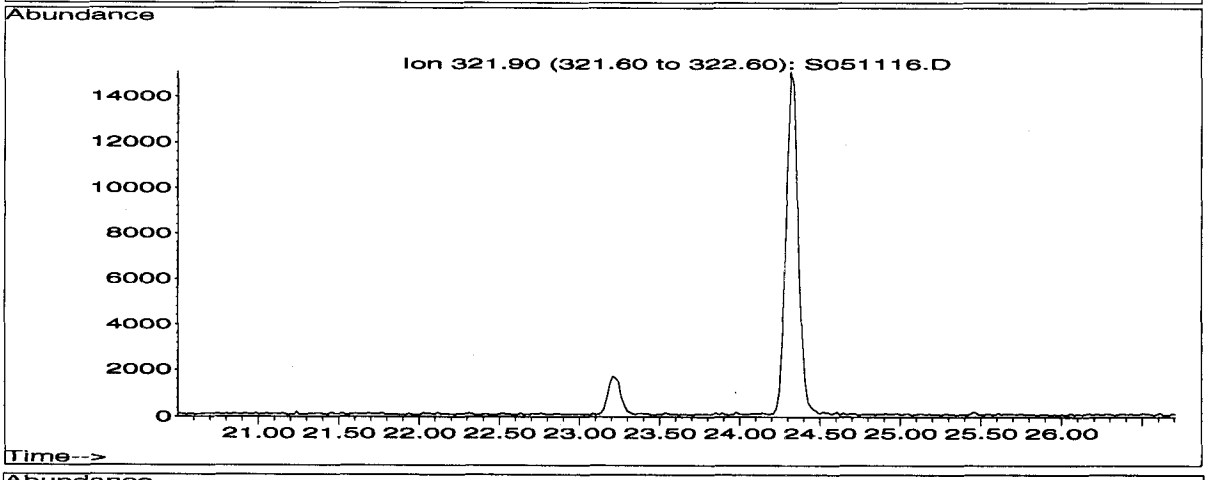


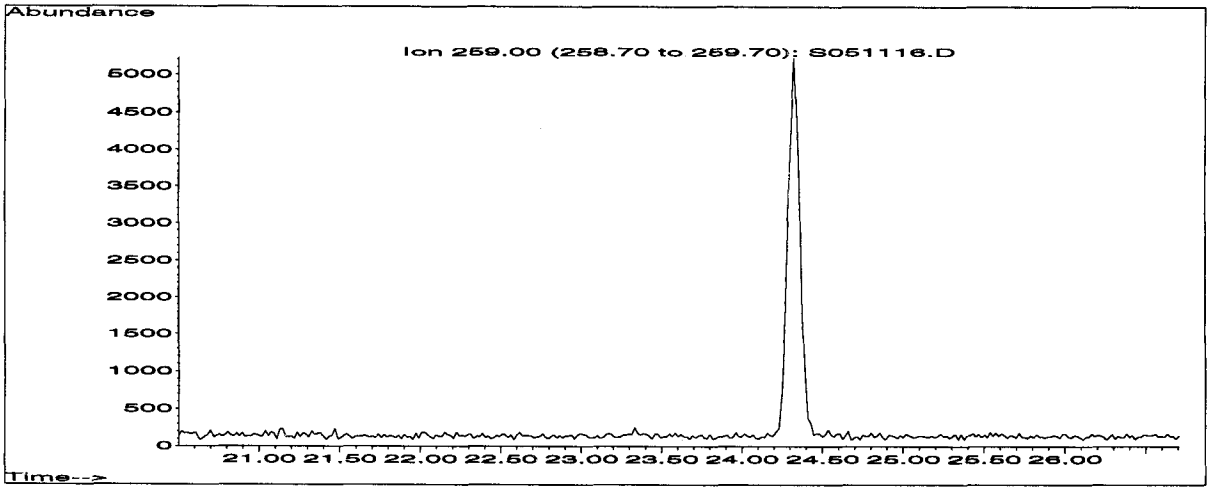


TCDD TOTAL

TS R.T. Lower Limit	20.50
TS R.T. Upper Limit	26.70

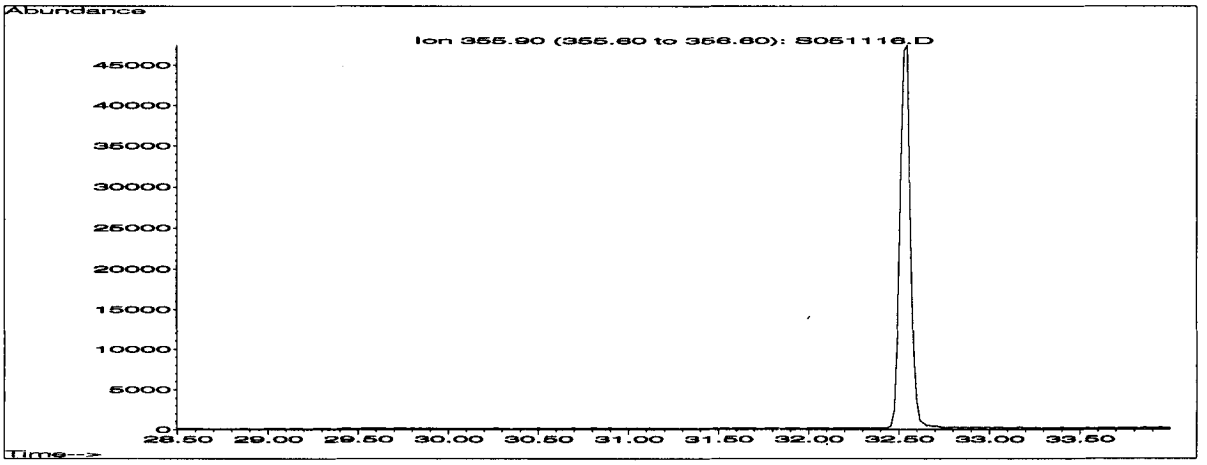


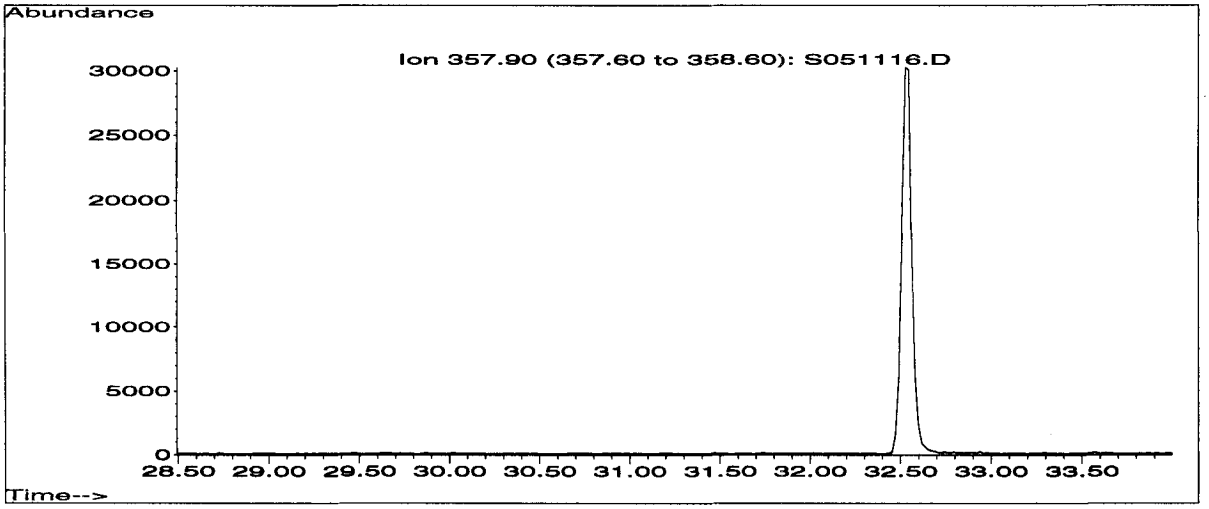


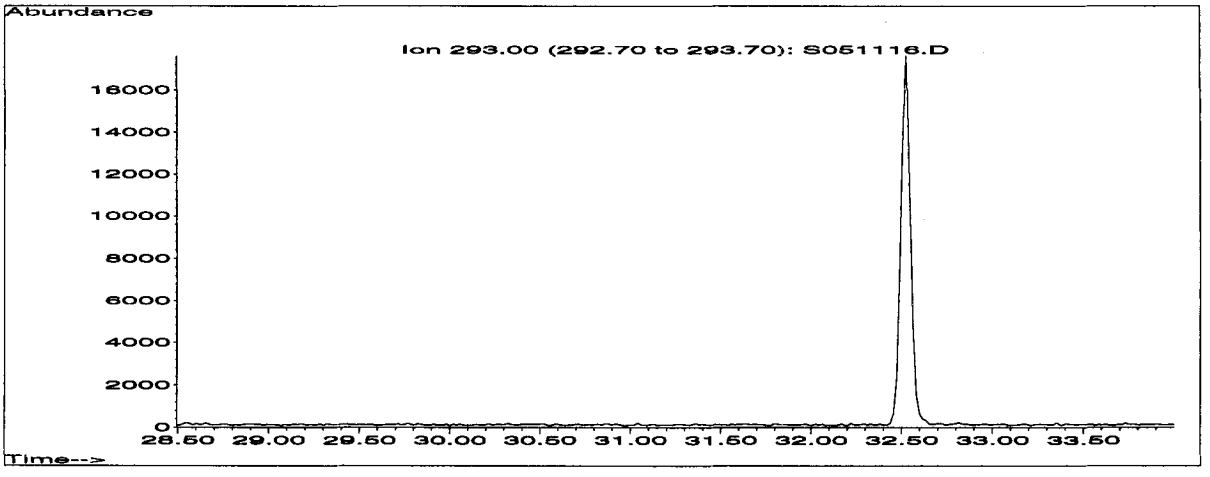


PeCDD TOTAL

TS R.T. Lower Limit	28.50
TS R.T. Upper Limit	34.00

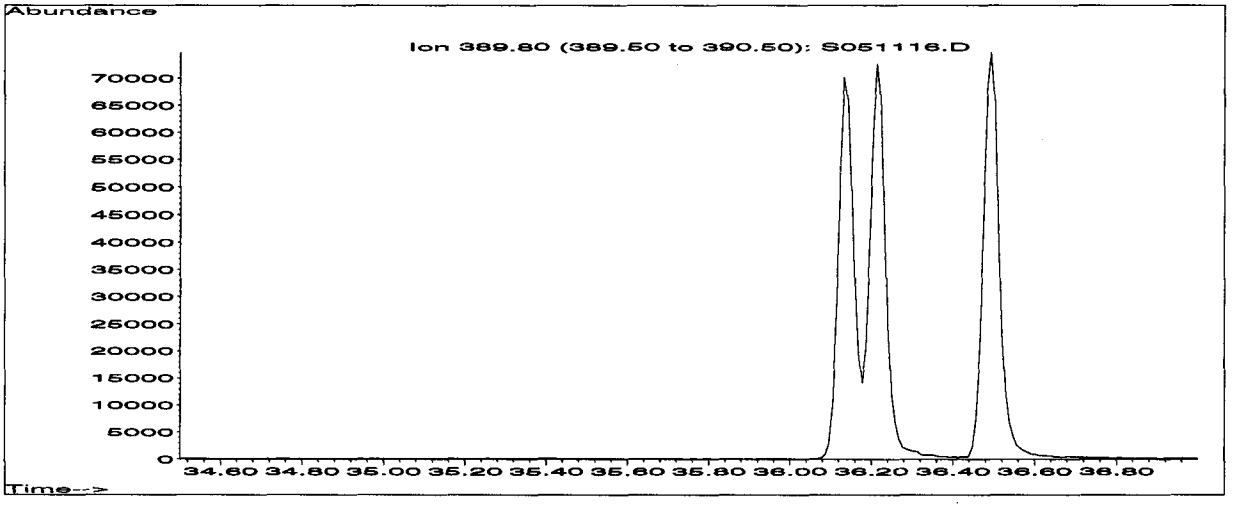


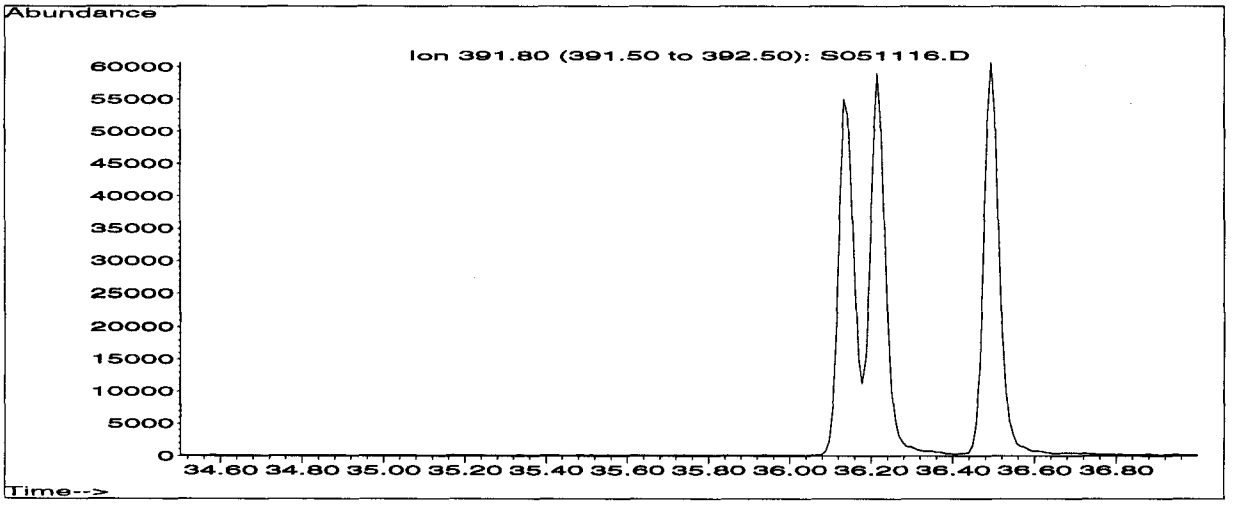


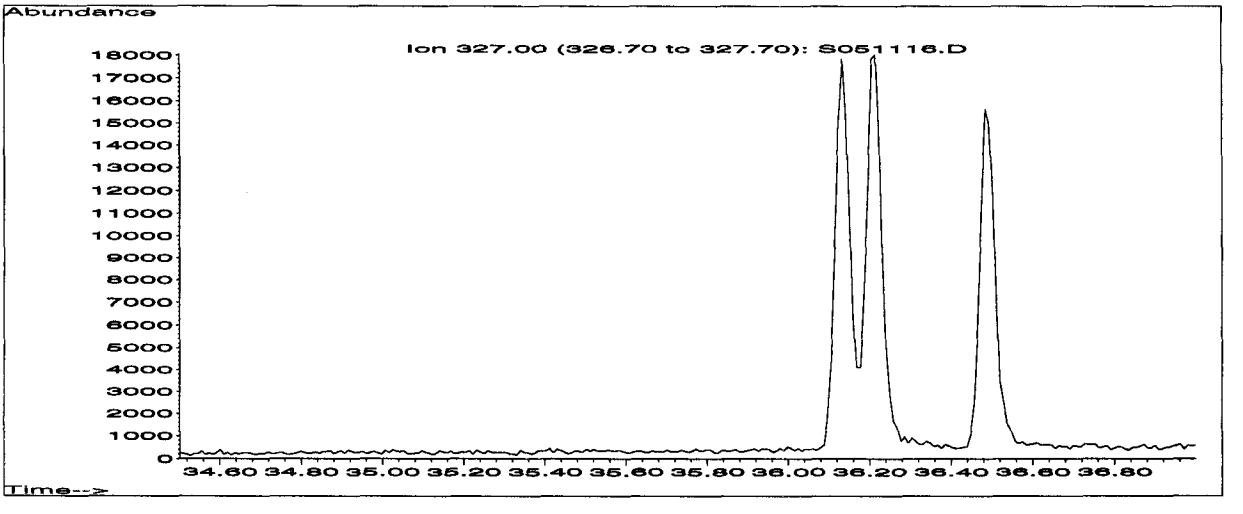


HxCDD TOTAL

TS R.T. Lower Limit	34.50
TS R.T. Upper Limit	37.00

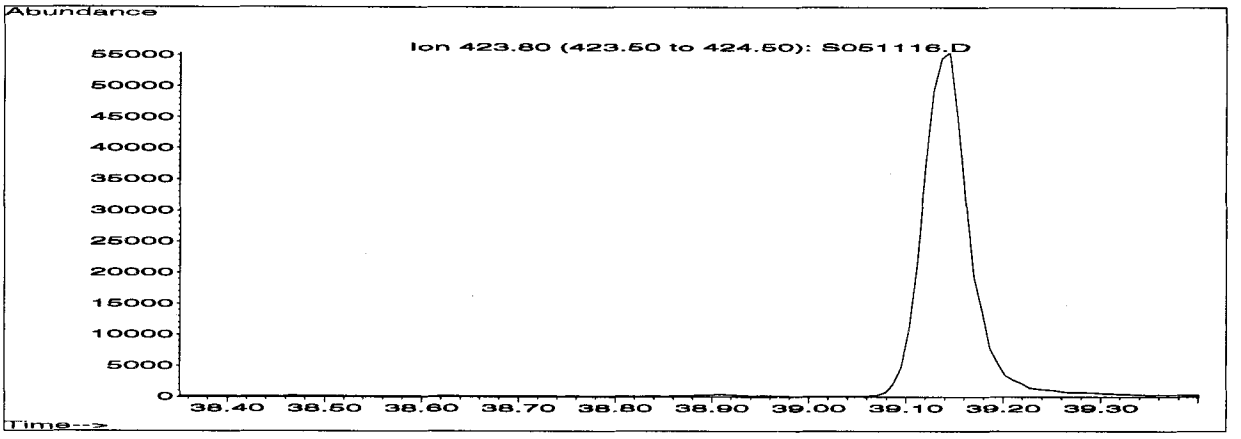


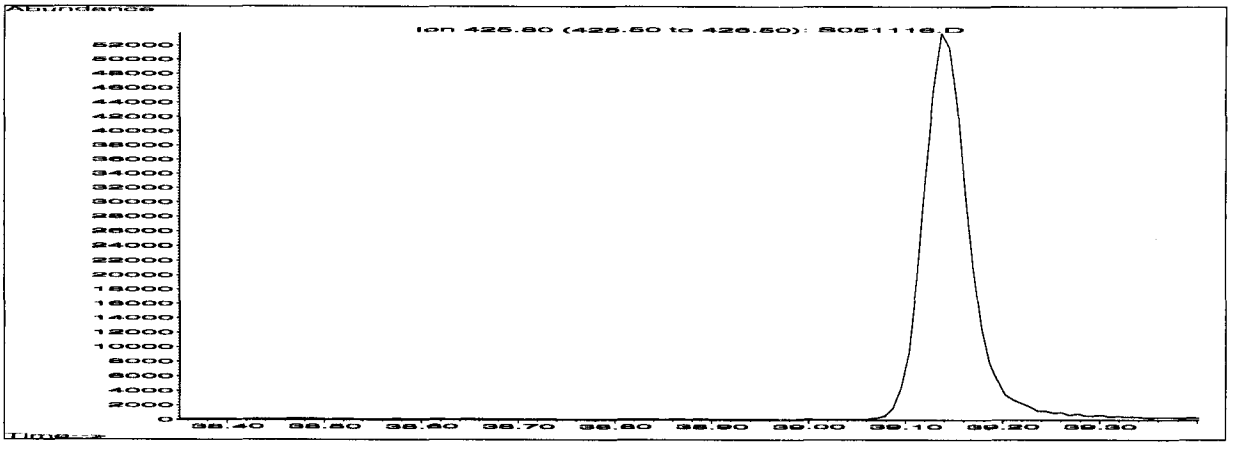


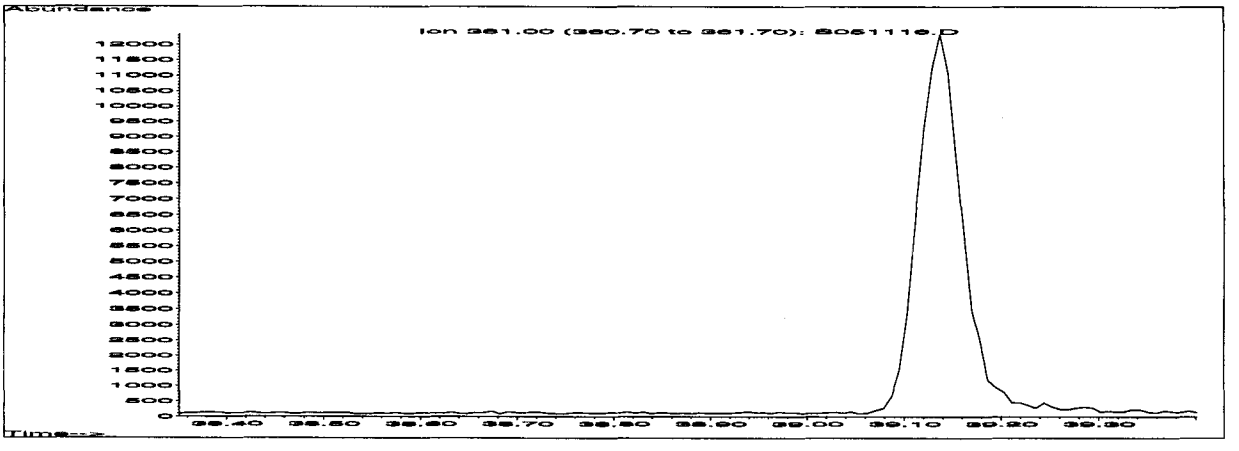


HpCDD TOTAL

TS R.T. Lower Limit	38.35
TS R.T. Upper Limit	39.40

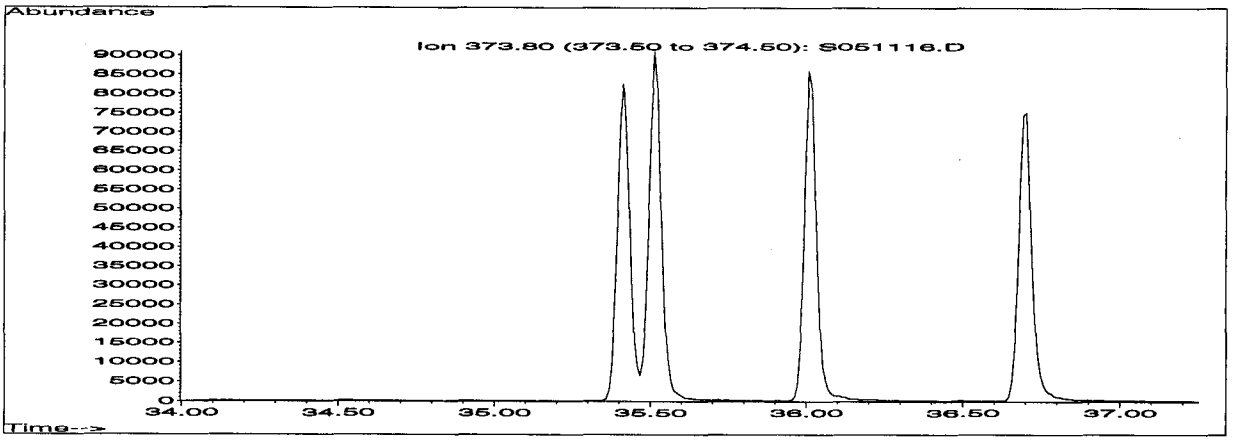


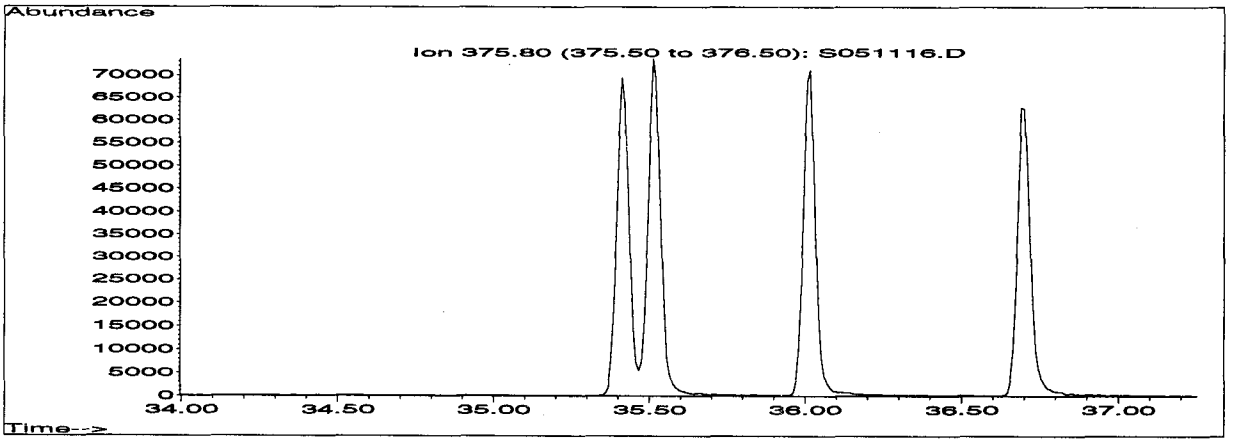


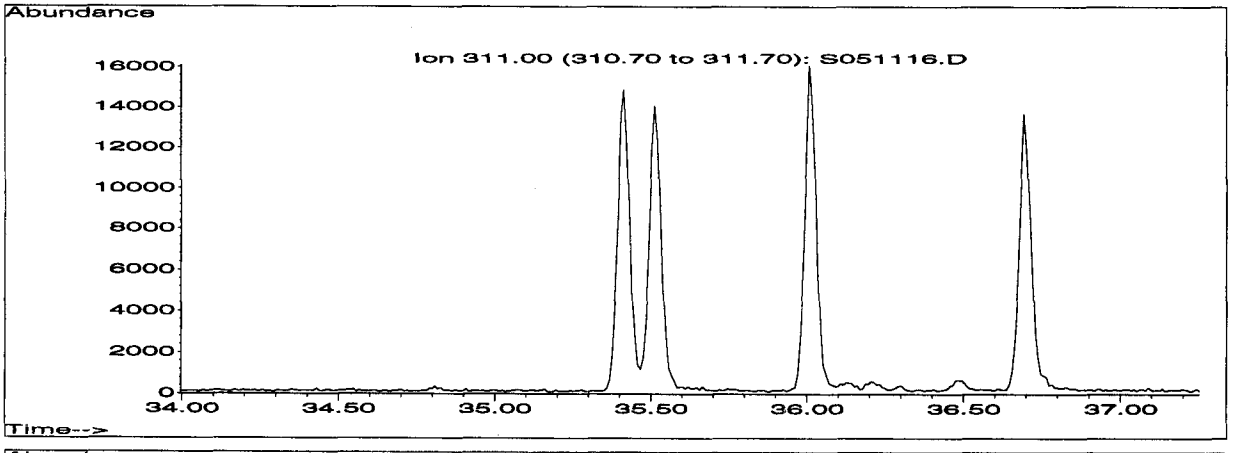


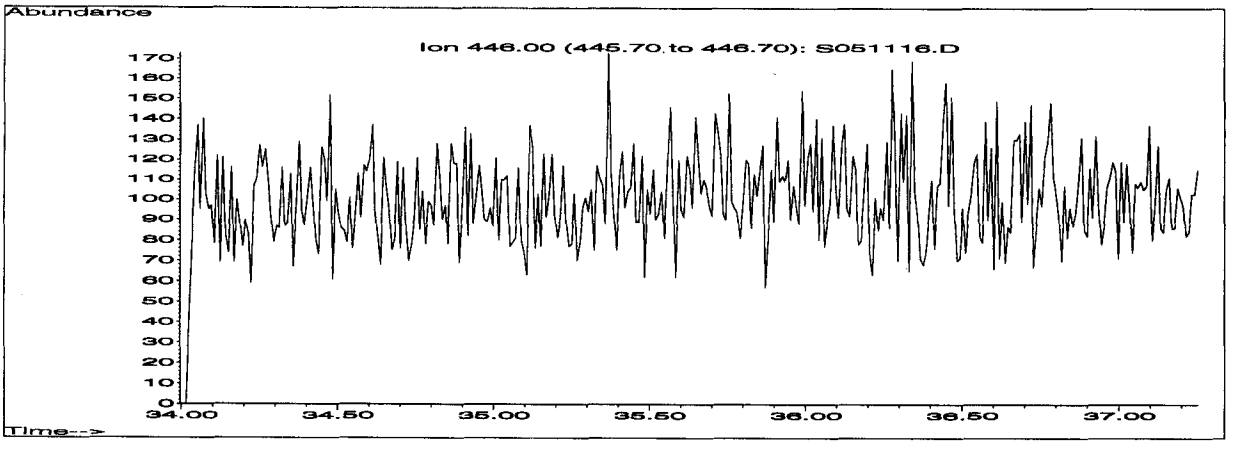
HxCDF TOTAL

TS R.T. Lower Limit	34.00
TS R.T. Upper Limit	37.25



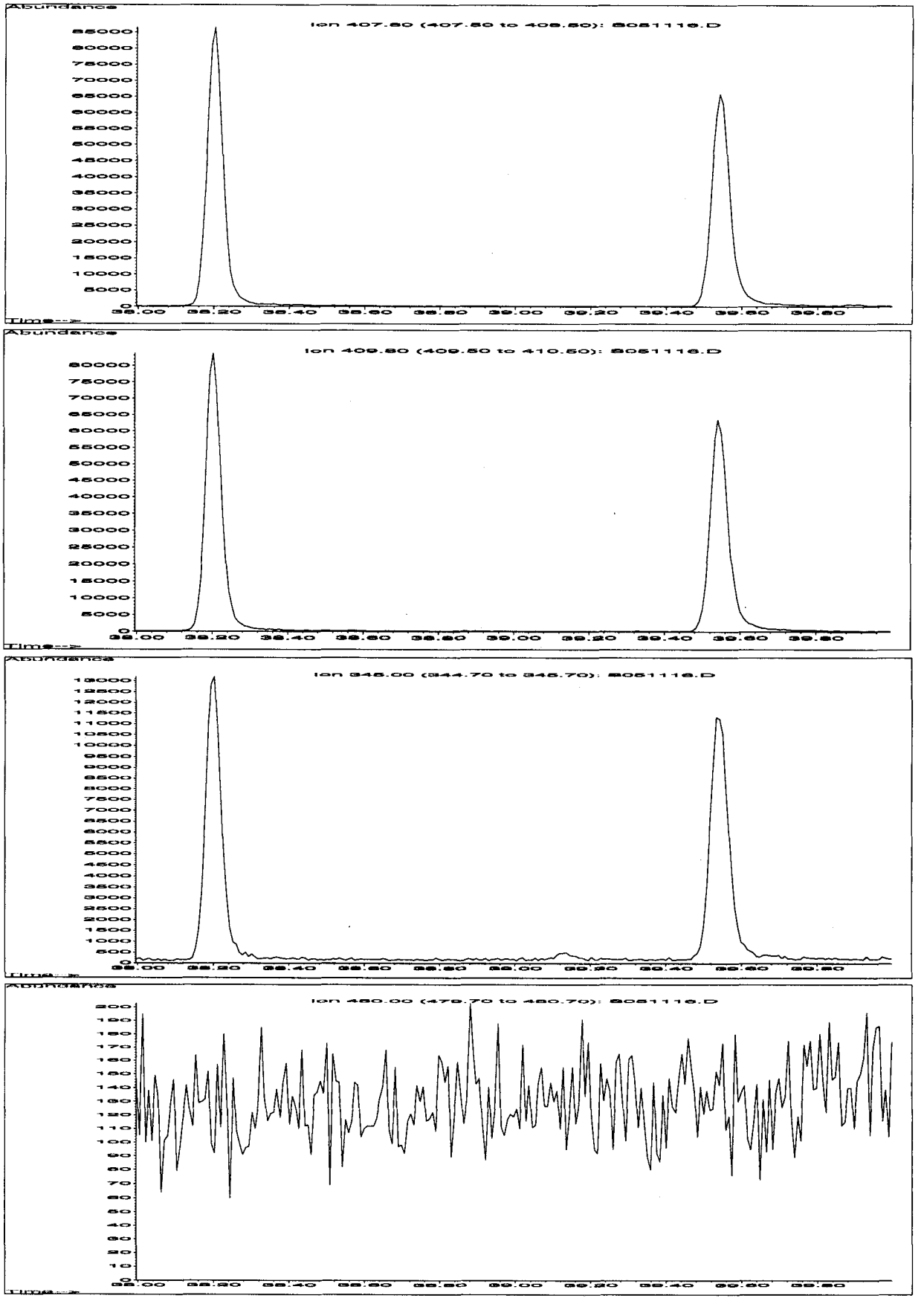






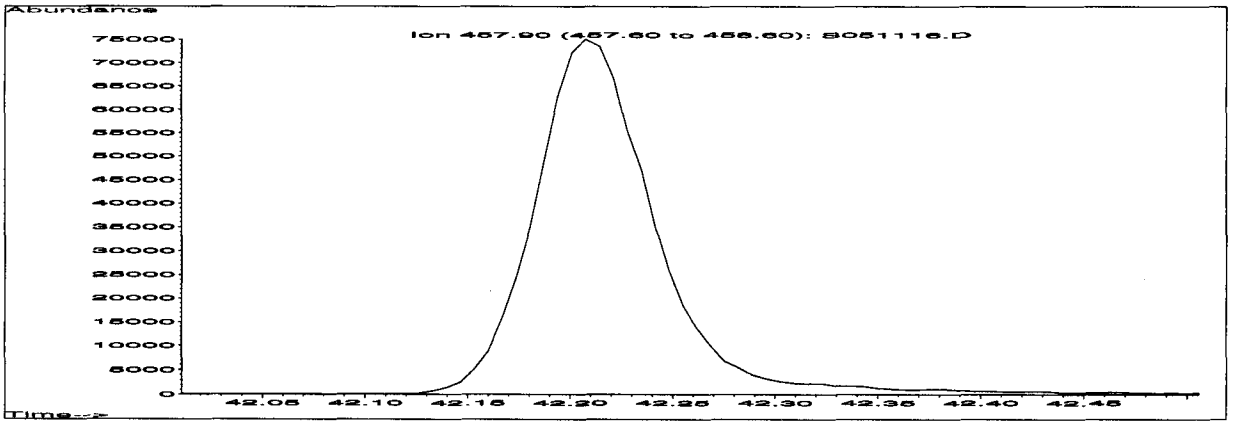
HpCDF TOTAL

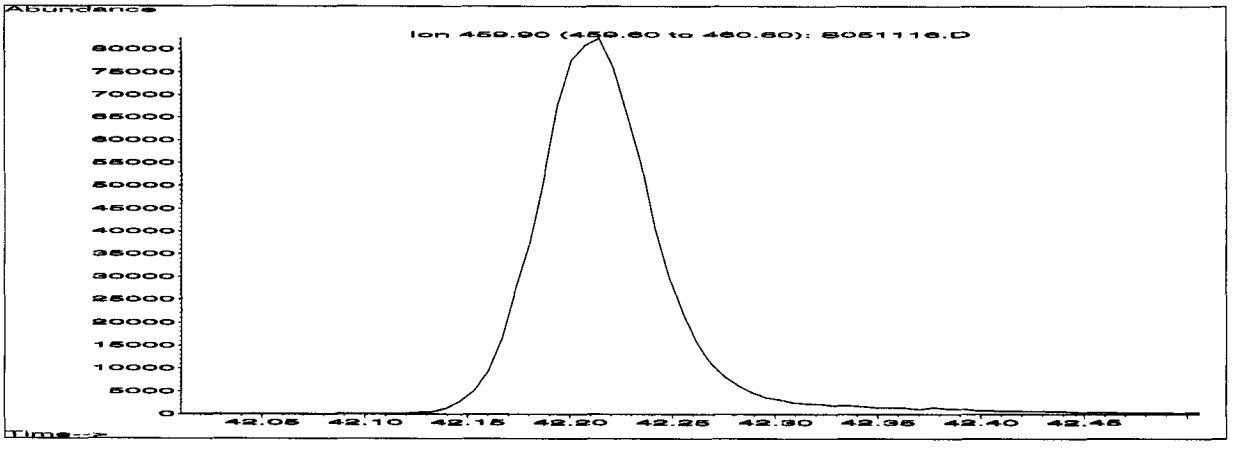
TS R.T. Lower Limit	38.00
TS R.T. Upper Limit	40.00

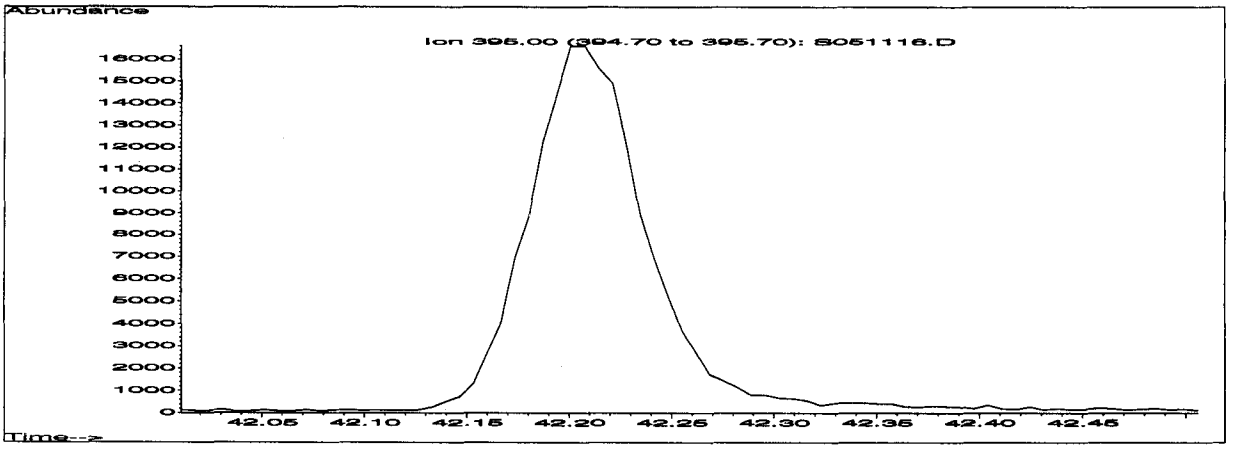


OCDD

TS R.T. Lower Limit	42.01		
TS R.T. Upper Limit	42.51		
Ret. Time	42.21		
Target Ion	457.9	Q1 Ion	459.9
Target Response	298495	Q1 Response	331865
Total Response	630360	Ion ratio	0.90
Q2 Ion	395		
Q2 Response	65517		

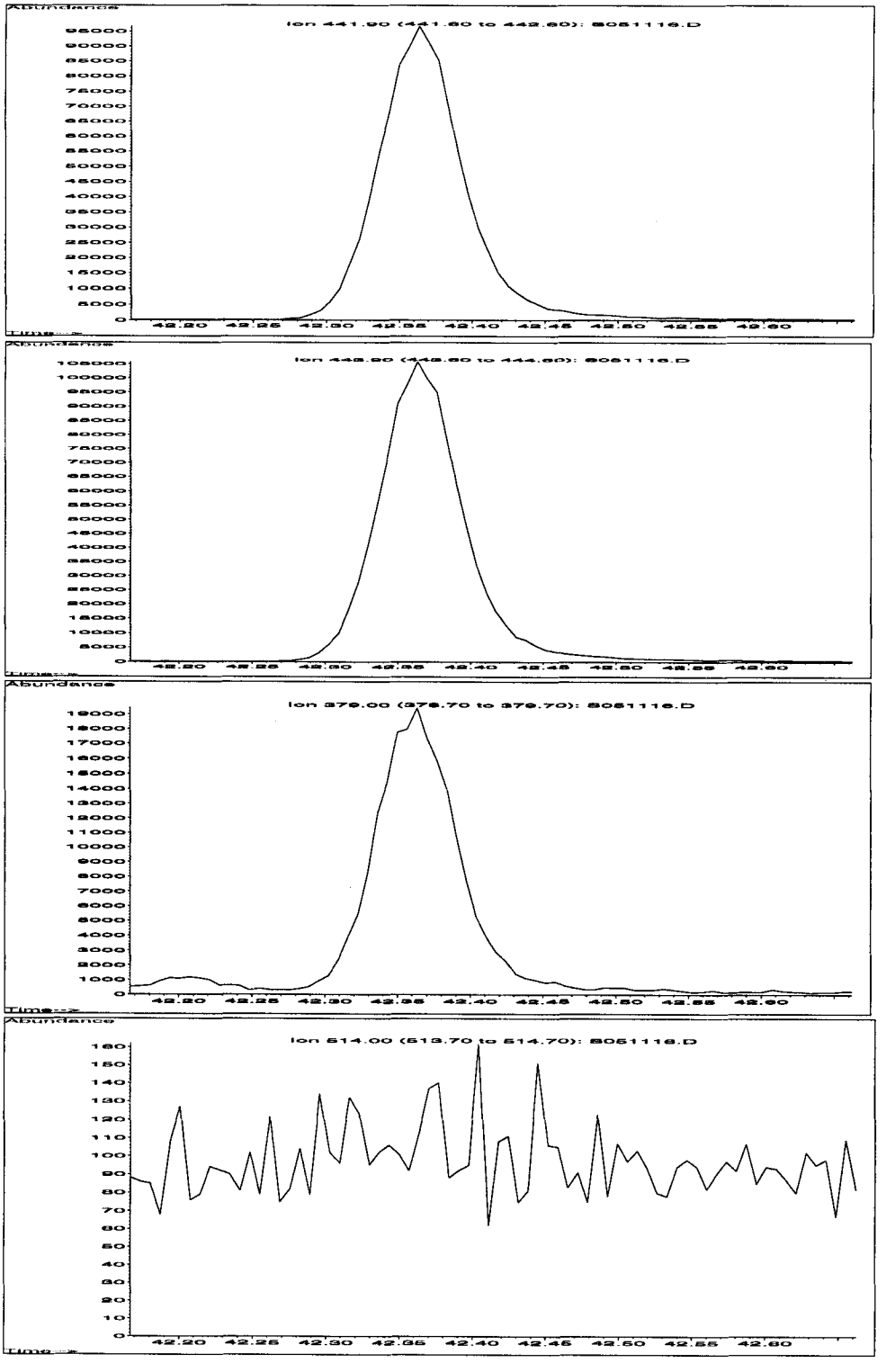






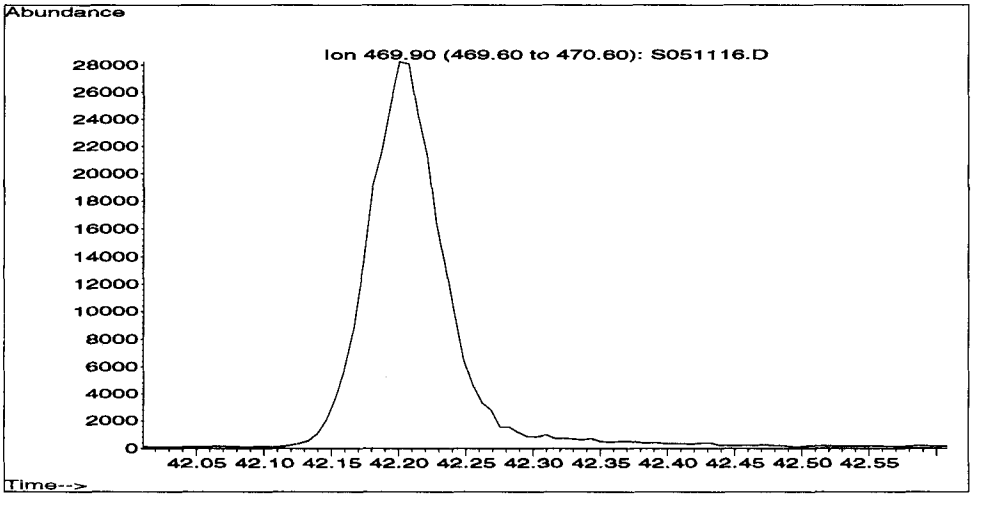
OCDF

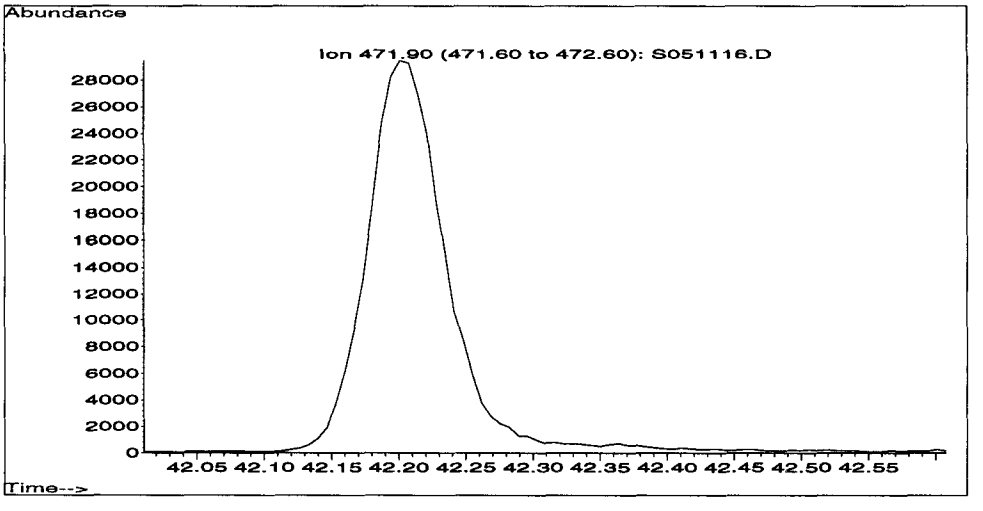
TS R.T. Lower Limit	42.16		
TS R.T. Upper Limit	42.66		
Ret Time	42.36		
Target Ion	441.9	Q1 Ion	443.9
Target Response	388538	Q1 Response	426343
Target Response	814881	Ion Ratio	0.91
Q2 Ion	379	DPE Ion	514
Q2 Response	74436	DPE Response	0



13C-OCDD-IS

RT Lower Limit	42.01		
RT Upper Limit	42.61		
Ret Time	42.20		
Target Ion	469.9	Q1 Ion	471.9
Target Response	109485	Q1 Response	119055
Total response	228540	Ratio	0.92





Quantitation Report (Not Reviewed)

Sample ID: A0D300605-6 0.9882L 8280A
LOVEL-1-AA WATER LR009

Size: 0.988
Inst : DB1

Data File:C:\8280\2DB\051110.B\S051117.D
Acq On :12 May 2010 10:19

Vial: 17
Operator: MEO
Sample Amount: 0.99

MS Integration Params: RTEINT.P
Quant Time: May 12 14:07 2010

Quant Results File: 10MY11C2.RES

Quant Method : C:\8280\ DATA METHODS\10MY11C2.M (RTE Integrator)
Title : Dioxin Furan Total
Last Update : Wed May 12 09:30:50 2010
Response via : Single (C:\8280\2DB\051110.B\ST0511C.D 12 May 2010 1:32)
DataAcq Meth : TOKAS
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

AP 9

Recovery\Internal Stds	R.T.	QIon	Ratio	Response	Conc	Dev(Min)
1) 13C-1234-TCDD	24.03	332+334	0.81	146216	25.00 NG	0.00
5) 13C-123789-HxCDD	36.48	402+404	1.26	200612	25.00 NG	0.00
9) 13C-2378-TCDF	23.21	316+318	0.81	161055	25.00 NG	0.00
15) 13C-2378-TCDD	24.30	332+334	0.79	109656	25.00 NG	0.00
20) 13C-123678-HxCDD	36.21	402+404	1.26	125372	25.00 NG	0.00
27) 13C-1234678-HpCDF	38.19	420+422	1.05	164496	25.00 NG	0.00
36) 13C-OCDD	42.20	470+472	0.91	206498	50.00 NG	0.00

Surrogate Compound						
4) 37Cl-2378-TCDD	24.33	328		88612	11.041 NG	0.00
Spiked Amount = 12.649		RRF = 1.389		Recovery =	87.28%	

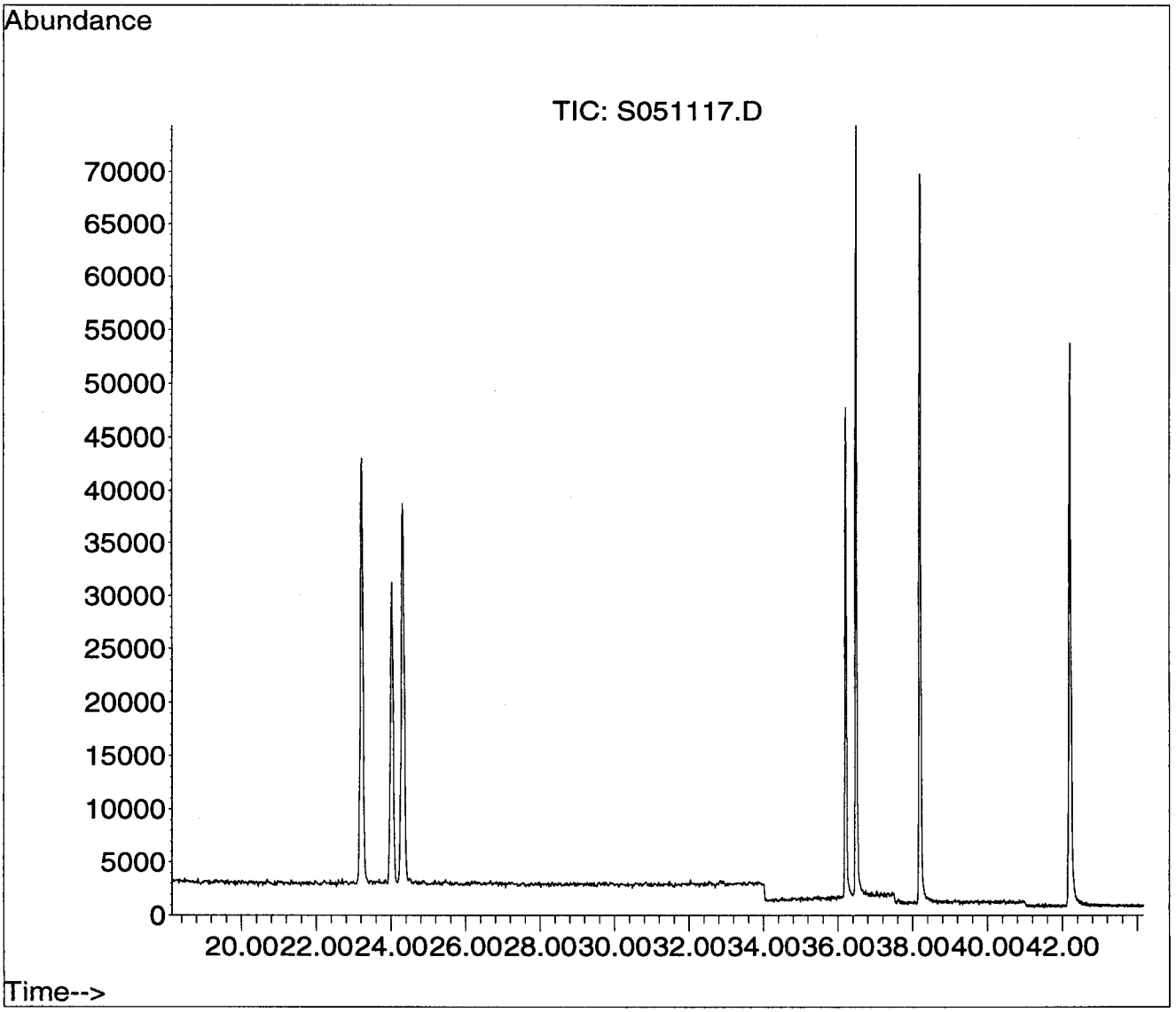
Target Compounds	RT	Ratio	Area	RRF	Conc	EDL	%Rec
2) 13C-2378-TCDF-IS	23.21	0.81	161055	1.428	19.510	0.1375	77.1
3) 13C-2378-TCDD-IS	24.30	0.79	109656	0.983	19.298	3.5923	76.3
6) 13C-123678-HxCDD-	36.21	1.26	125372	0.796	19.851	0.1870	78.5
7) 13C-1234678-HpCDF	38.19	1.05	164496	1.010	20.536	0.0748	81.2
8) 13C-OCDD-IS	42.20	0.91	206498	0.659	39.541	0.1260	78.1
10) 2378-TCDF	0.00		0	1.265	N.D.	0.2104	
11) TCDF TOTAL	22.00		0	1.265	N.D.	0.5418	
12) 12378-PeCDF	0.00		0	1.136	N.D.	0.2872	
13) 23478-PeCDF	0.00		0	1.137	N.D.	0.2120	
14) PeCDF TOTAL	29.50		0	1.136	N.D.	0.4795	
16) 2378-TCDD	0.00		0	1.221	N.D.	0.1281	
1	23.22	4.93 #	14937		2.821		
17) TCDD TOTAL	22.50	4.93	14937	1.221	2.821		
18) 12378-PeCDD	0.00		0	1.142	N.D.	0.3280	
19) PeCDD TOTAL	30.00		0	1.142	N.D.	0.6179	
21) 123478-HxCDD	0.00		0	1.012	N.D.	0.1846	
22) 123678-HxCDD	0.00		0	0.981	N.D.	0.1905	
23) 123789-HxCDD	0.00		0	1.038	N.D.	0.2255	
24) HxCDD TOTAL	36.50		0	0.981	N.D.	0.2694	
25) 1234678-HpCDD	0.00		0	1.039	N.D.	0.1572	
26) HpCDD TOTAL	39.35		0	1.039	N.D.	0.2431	
28) 123478-HxCDF	0.00		0	0.984	N.D.	0.1280	
29) 123678-HxCDF	0.00		0	1.042	N.D.	0.1180	
30) 234678-HxCDF	0.00		0	0.970	N.D.	0.1660	
31) 123789-HxCDF	0.00		0	0.928	N.D.	0.1862	
32) HxCDF TOTAL	36.00		0	0.928	N.D.	0.3060	
33) 1234678-HpCDF	0.00		0	1.160	N.D.	0.1477	
34) 1234789-HpCDF	0.00		0	1.006	N.D.	0.1717	
35) HpCDF TOTAL	39.50		0	1.006	N.D.	0.2473	
37) OCDD	0.00		0	1.102	N.D.	0.3120	

5/13/10 MC

38) OCDF	0.00	0	1.397	N.D.	0.5390

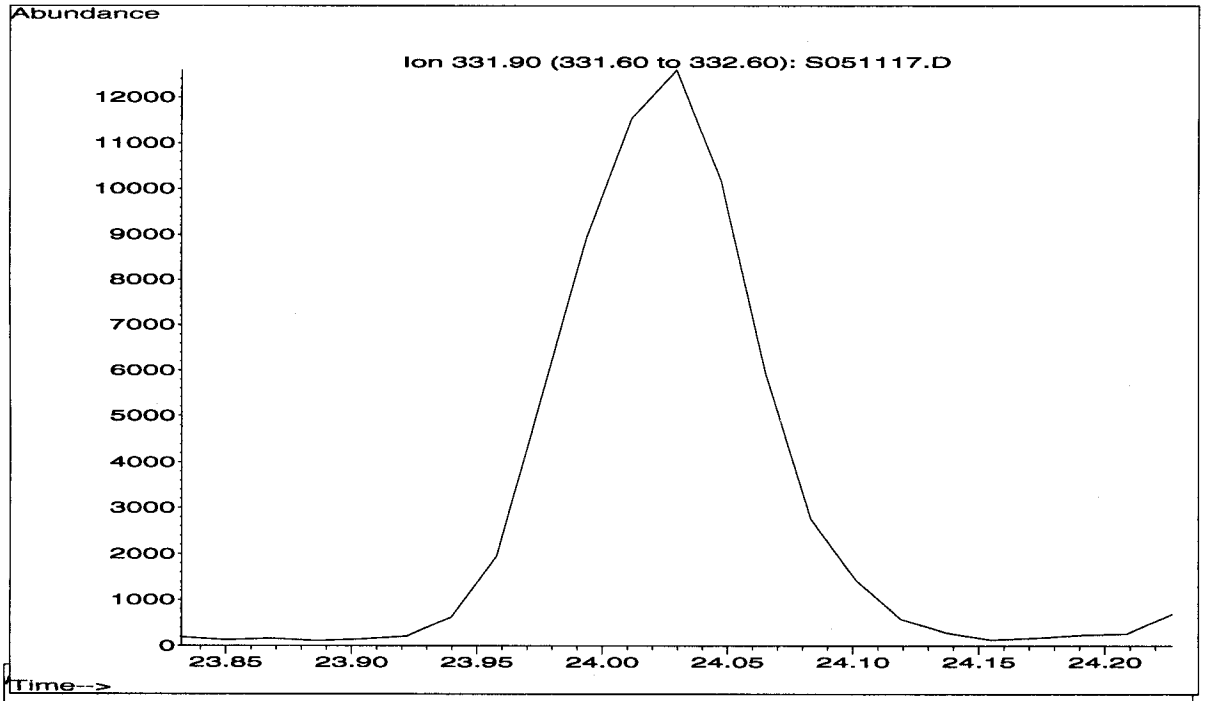
(#) = qualifier out of range•: areas and concentration based on theoretical ion ratio
(m) = manual integration
S051117.D 10MY11C2.M Wed May 12 14:07:22 2010

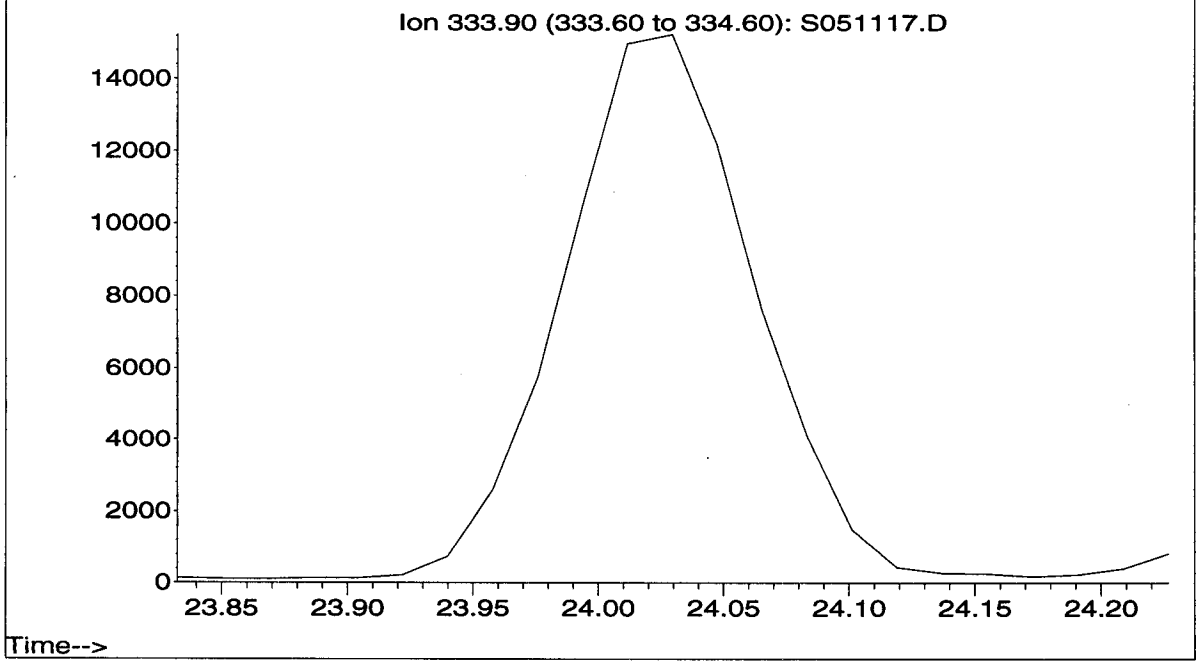
Data File Name	S051117.D
Data File Path	C:\8280\2DB\051110.B\
Operator	MEO
Date Acquired	5/12/2010 10:19
Acq. Method File	TOKAS
Sample Name	L0VEL-1-AA WATER LR009
Misc Info	0D300605-6 0.9882L 8280A
Vial Number	17
Instrument Name	2DB
Sample Multiplier	1
Sample Amount	0.9882



13C-1234-TCDD

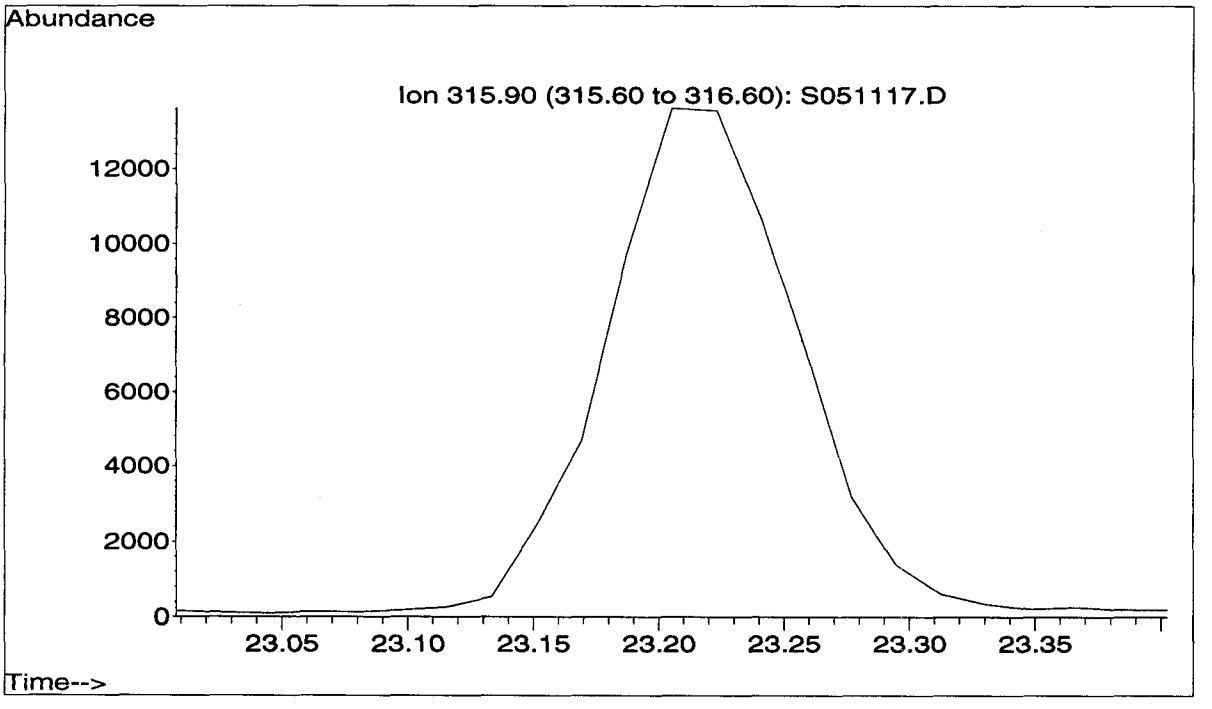
TS R.T. Lower Limit	23.83		
TS R.T. Upper Limit	24.23		
Ret Time	24.03		
Target Ion	331.9	Q1 Ion	333.9
Target Response	65572	Q1 Response	80644
Total Response	146216	Ion Ratio	0.81

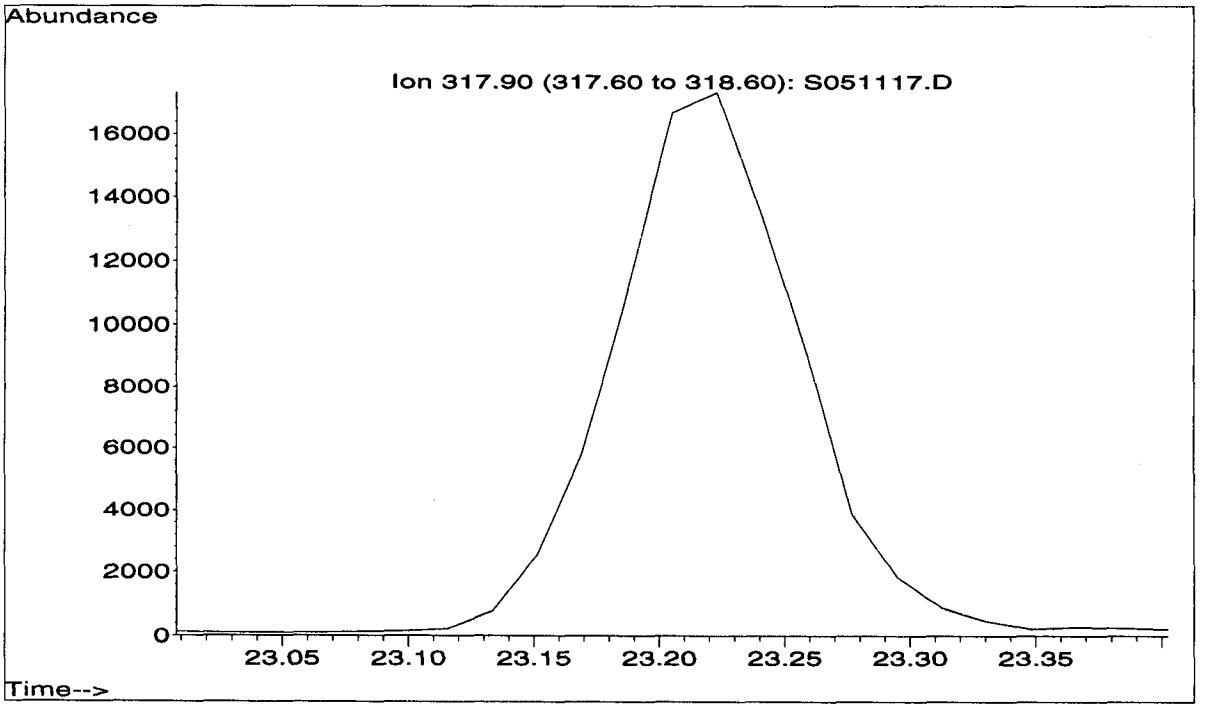




13C-2378-TCDF-IS

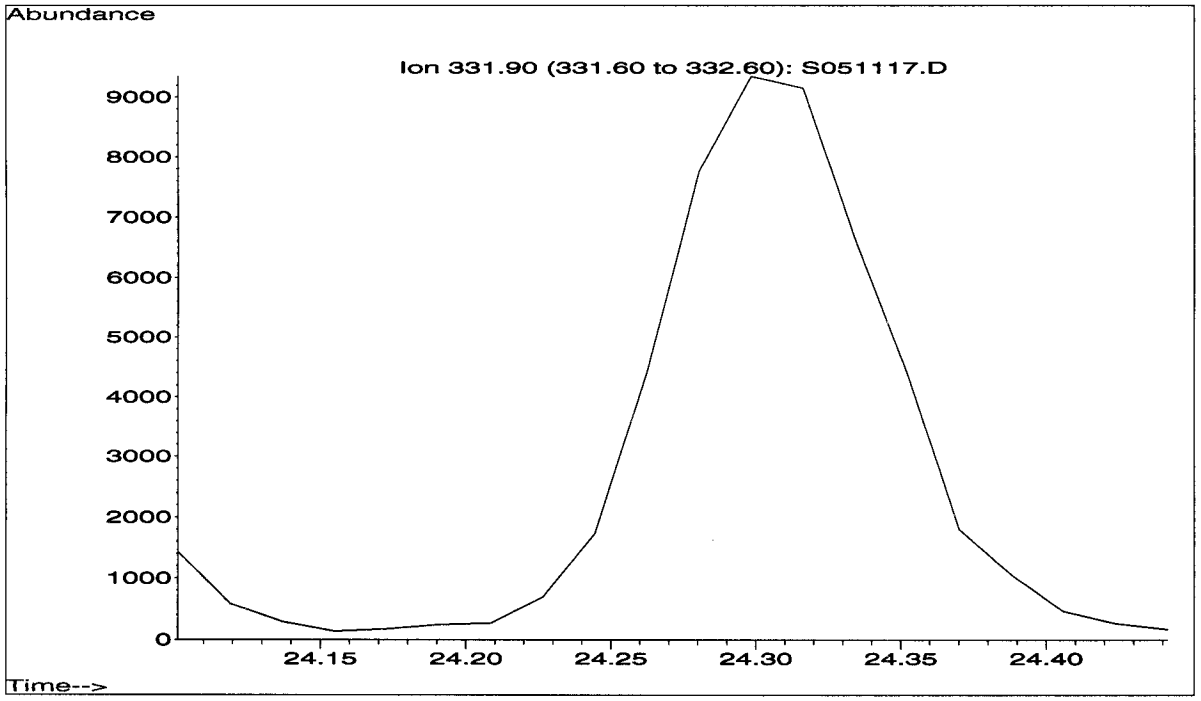
TS R.T. Lower Limit	23.01		
TS R.T. Upper Limit	23.41		
Ret Time	23.21		
Target Ion	315.9	Q1 Ion	317.9
Target Response	72102	Q1 Response	88953
Target Response	161055	Ion Ratio	0.81

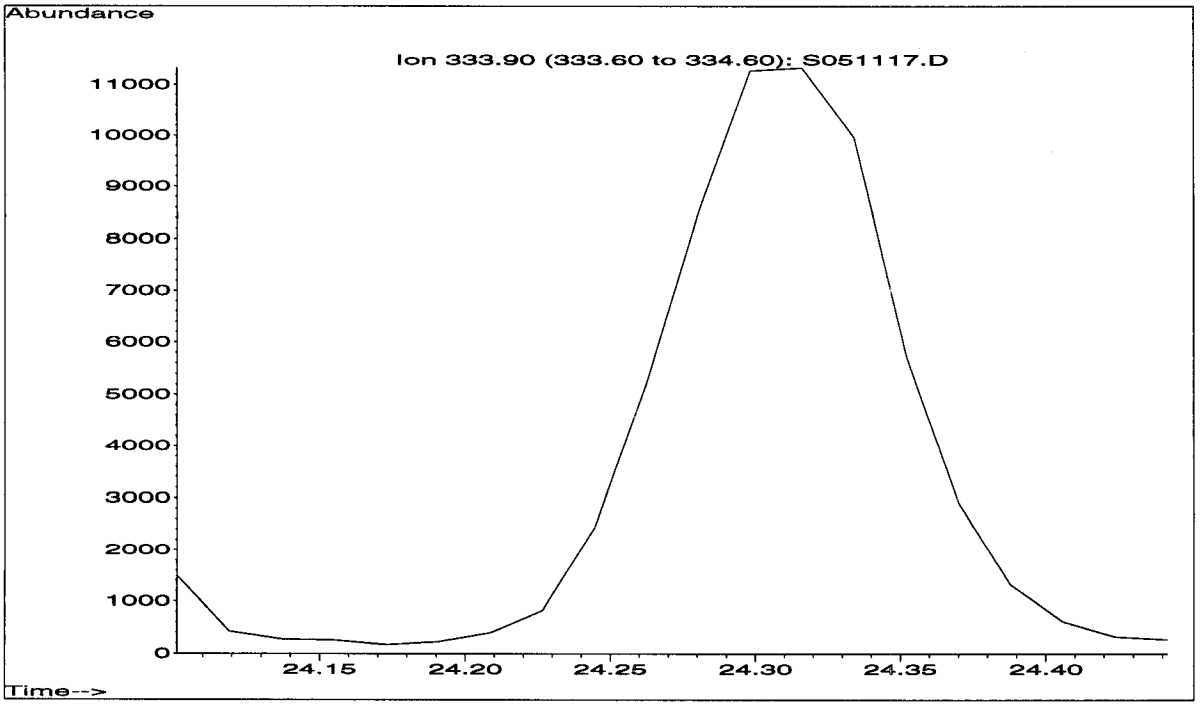




13C-2378-TCDD-IS

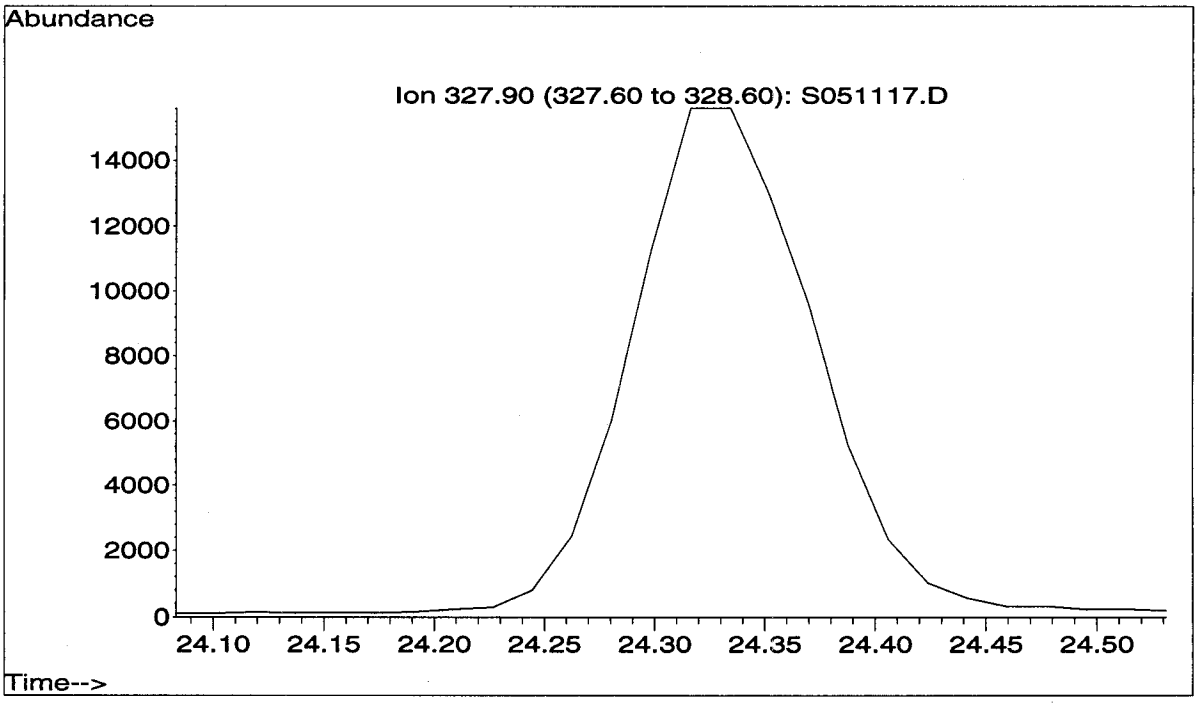
TS R.T. Lower Limit	24.10		
TS R.T. Upper Limit	24.45		
Ret Time	24.30		
Target Ion	331.9	Q1 Ion	333.9
Target Response	48424	Q1 Response	61232
Total Response	109656	Ion Ratio	0.79

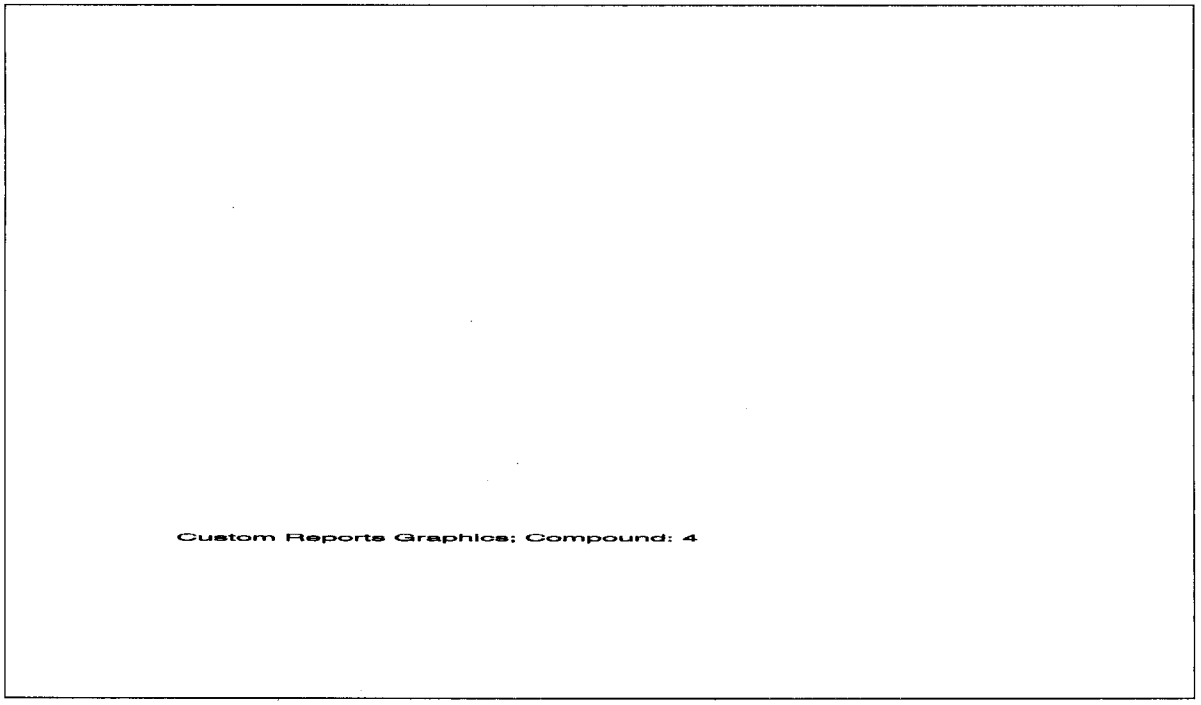




37Cl-2378-TCDD

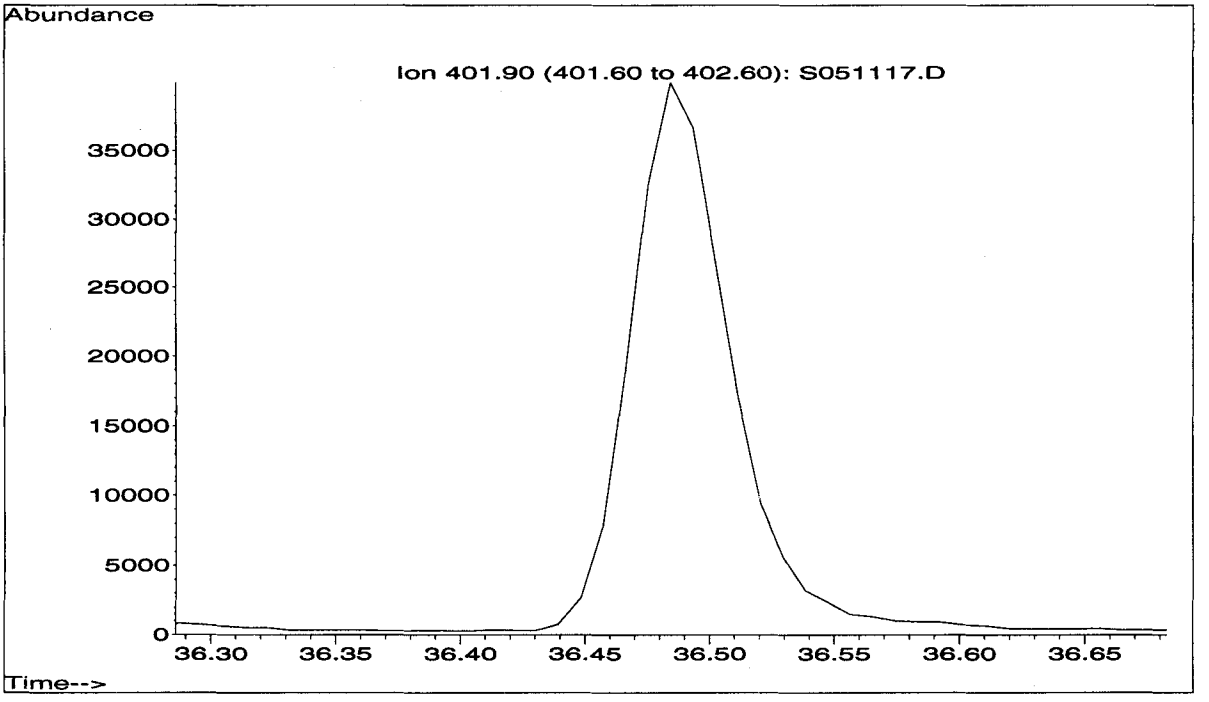
TS R.T. Lower Limit	24.09		
TS R.T. Upper Limit	24.54		
Ret Time	24.33		
Target Ion	327.9	Q1 Ion	0
Target Response	88612	Q1 Response	0
Total Response	88612	Ion Ratio	#DIV/0!

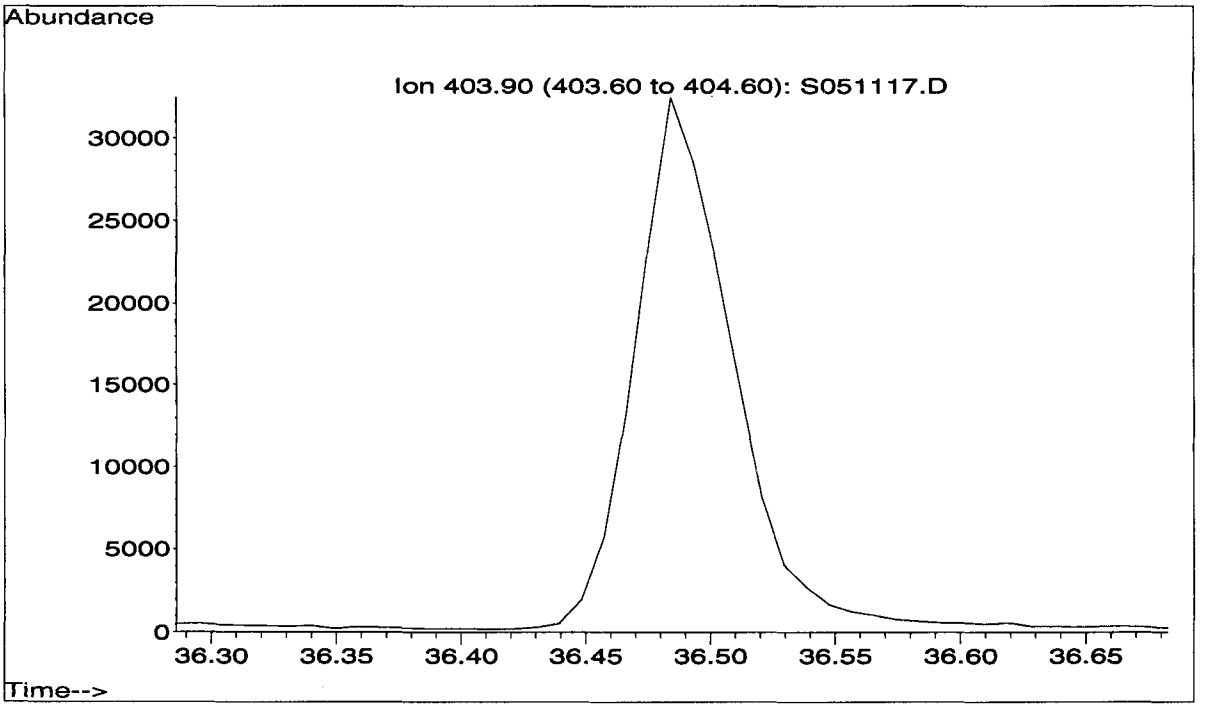




13C-123789-HxCDD

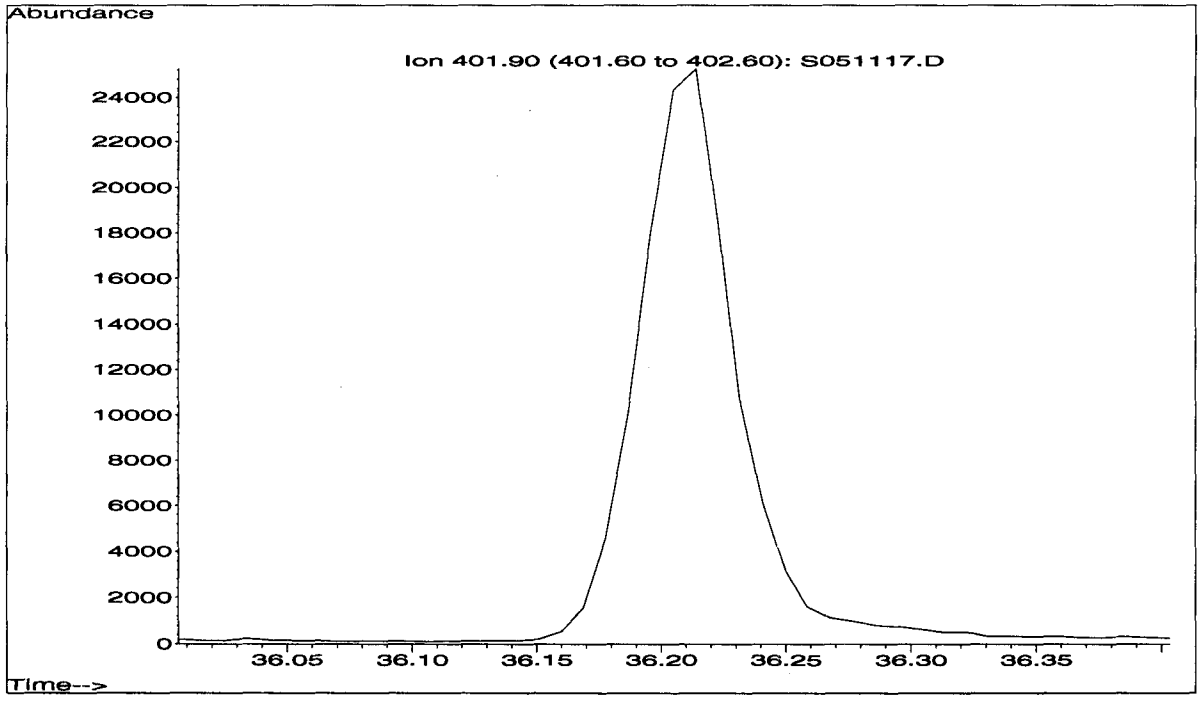
TS R.T. Lower Limit	36.29		
TS R.T. Upper Limit	36.69		
Ret Time	36.48		
Target Ion	401.9	Q1 Ion	403.9
Target Response	111713	Q1 Response	88899
Target Response	200612	Ion Ratio	1.26

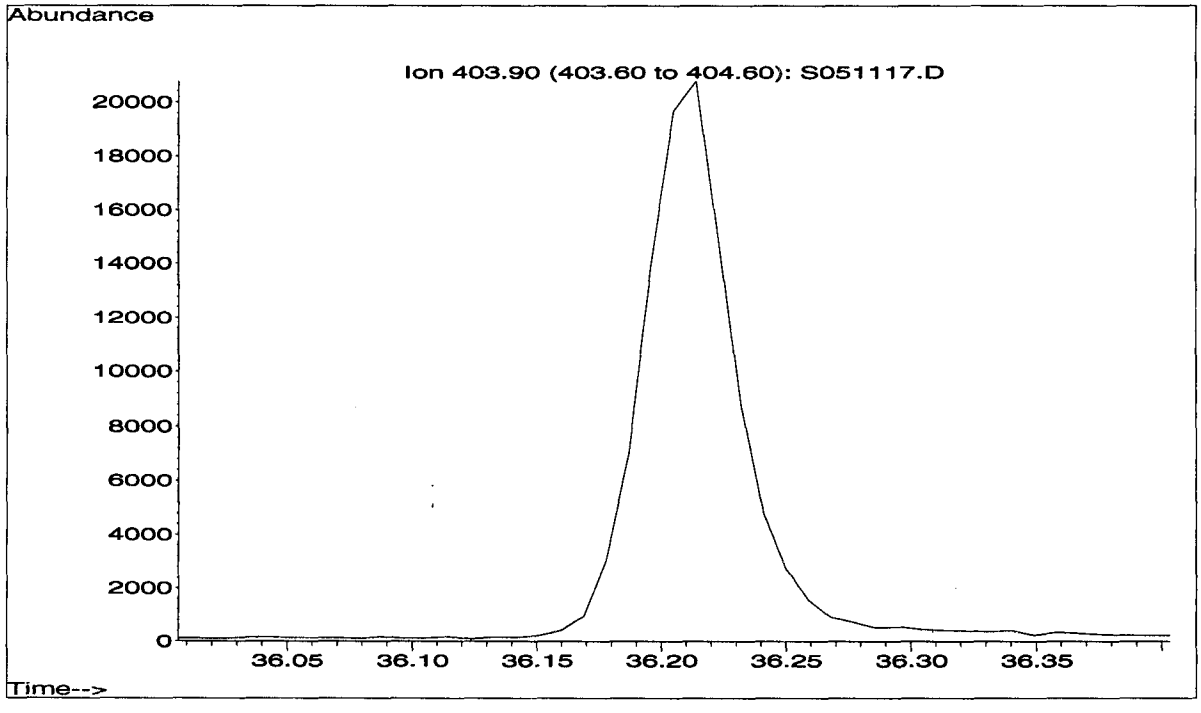




13C-123678-HxCDD-IS

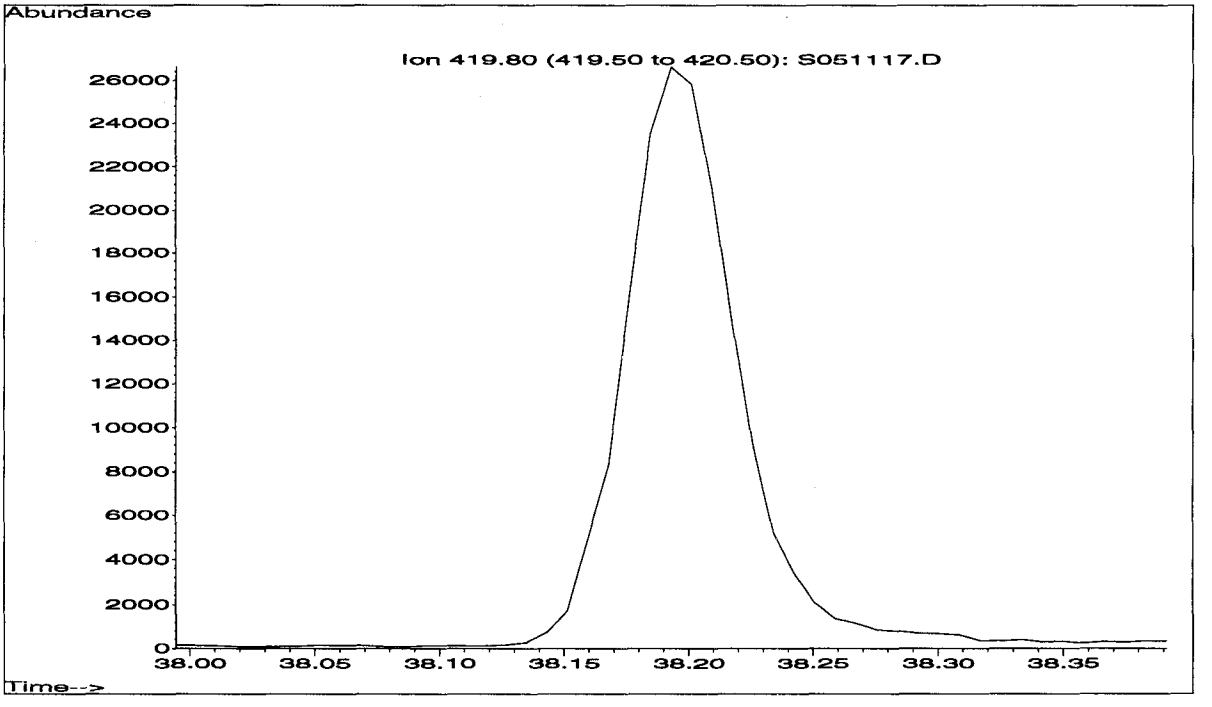
TS R.T. Lower Limit	36.01		
TS R.T. Upper Limit	36.41		
Ret Time	36.21		
Target Ion	401.9	Q1 Ion	403.9
Target Response	70013	Q1 Response	55359
Total Response	125372	Ion Ratio	1.26

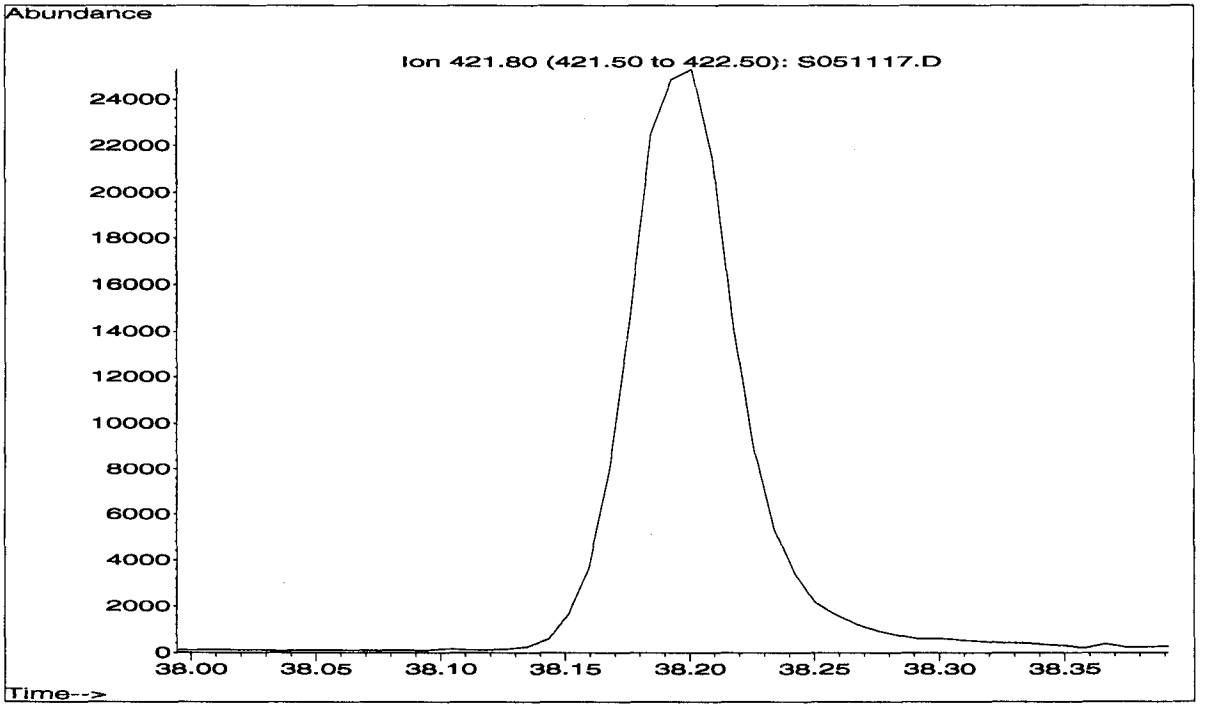




13C-1234678-HpCDF-IS

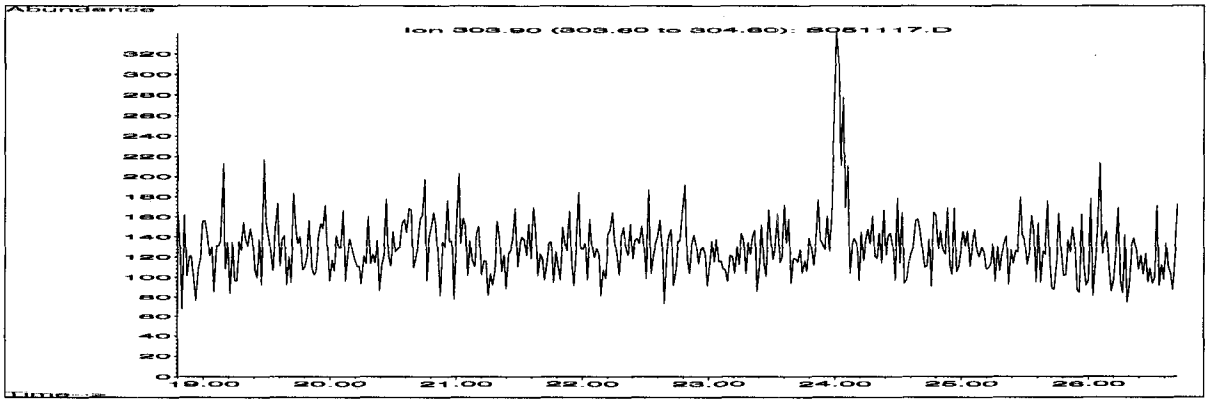
TS R.T. Lower Limit	37.99		
TS R.T. Upper Limit	38.39		
Ret Time	38.19		
Target Ion	419.8	Q1 Ion	421.8
Target Response	84131	Q1 Response	80365
Target Response	164496	Ion Ratio	1.05

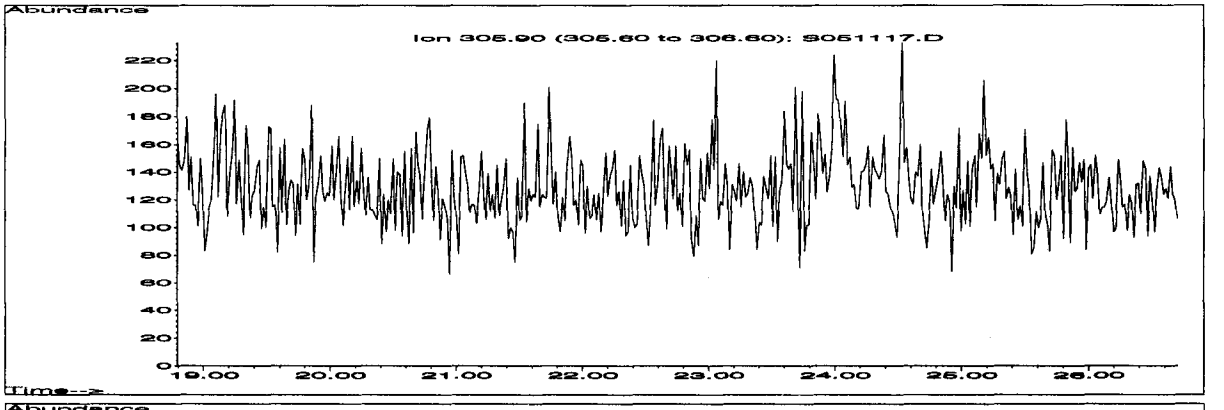


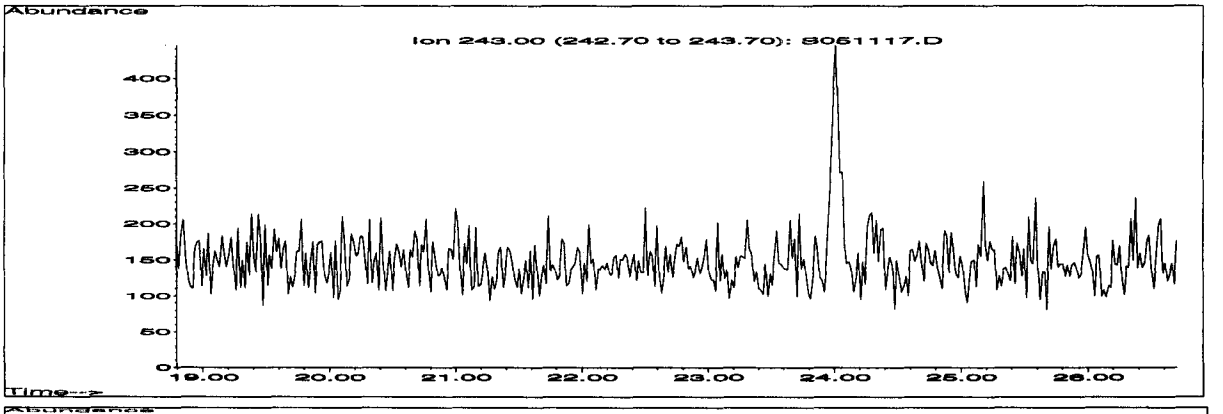


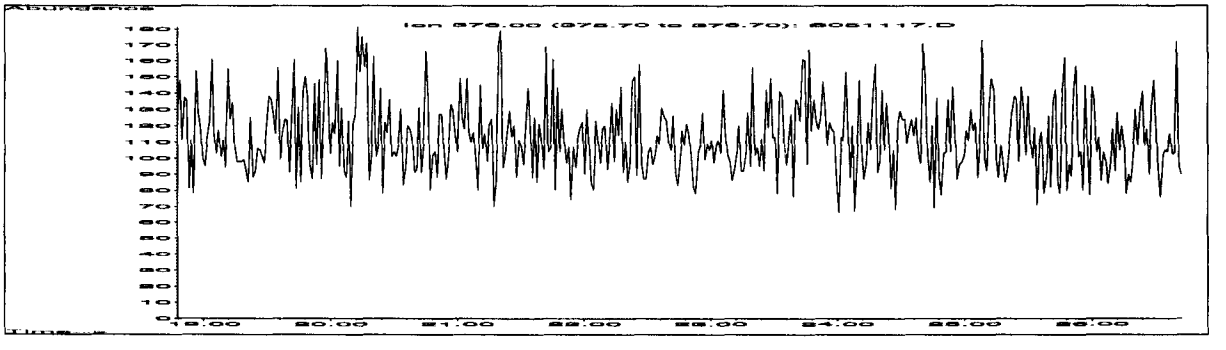
TCDF TOTAL

TS R.T. Lower Limit	18.80
TS R.T. Upper Limit	26.70



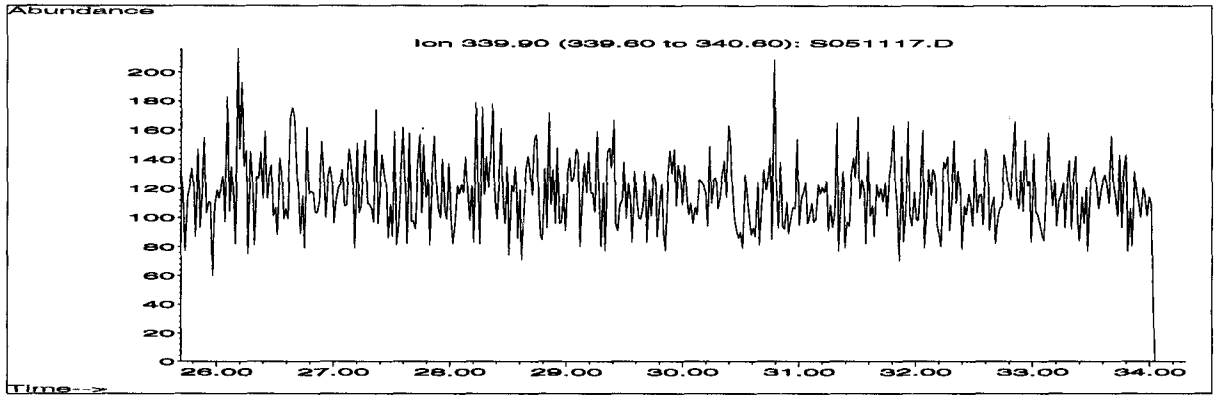


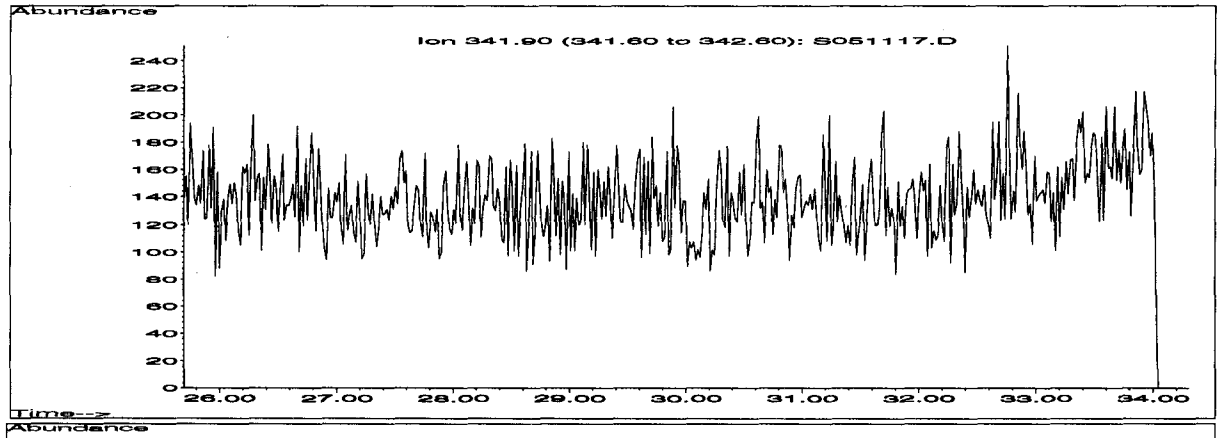


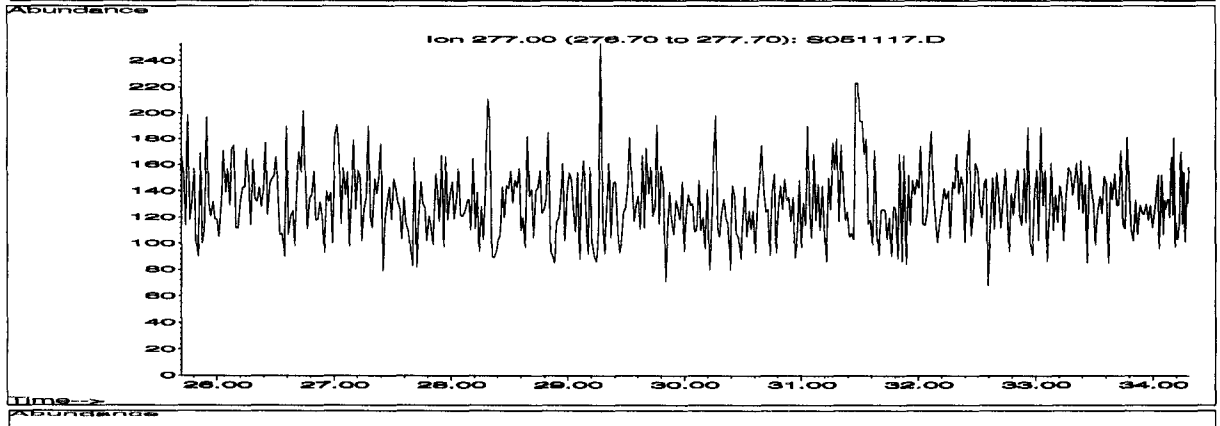


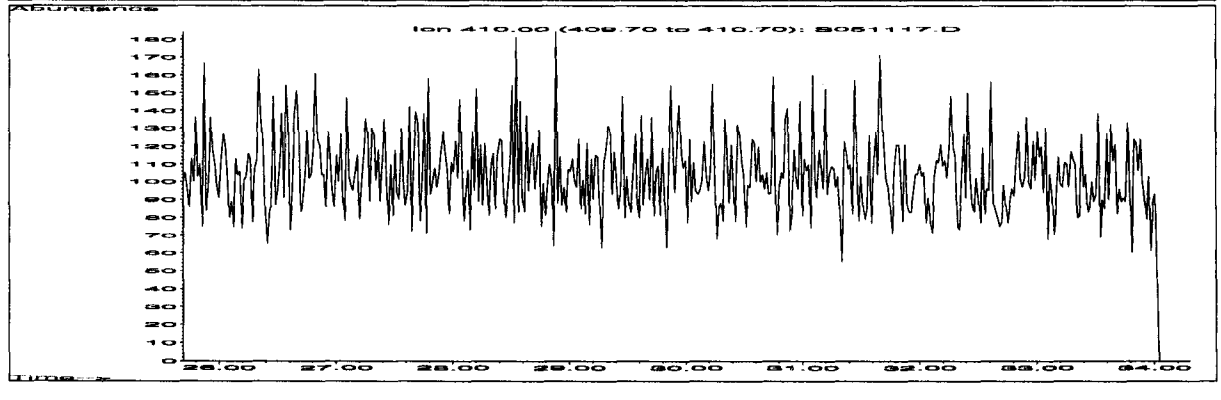
PeCDF TOTAL

TS R.T. Lower Limit	25.70
TS R.T. Upper Limit	34.30



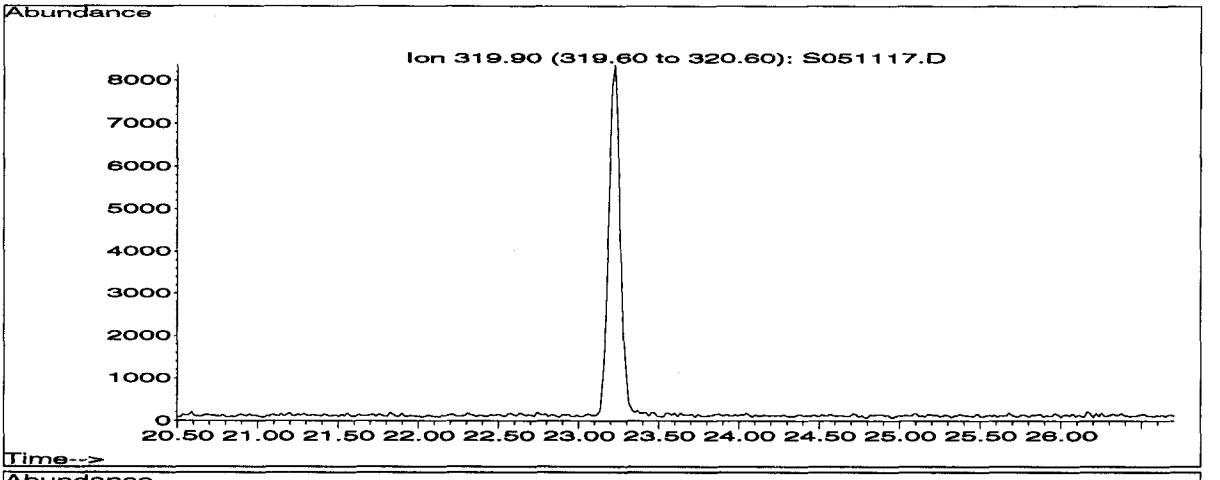


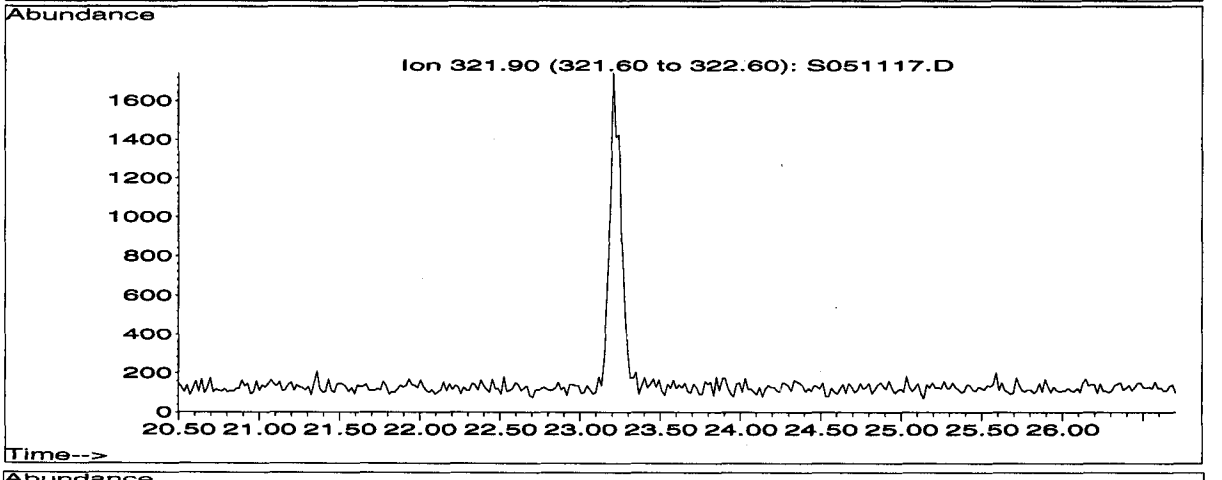


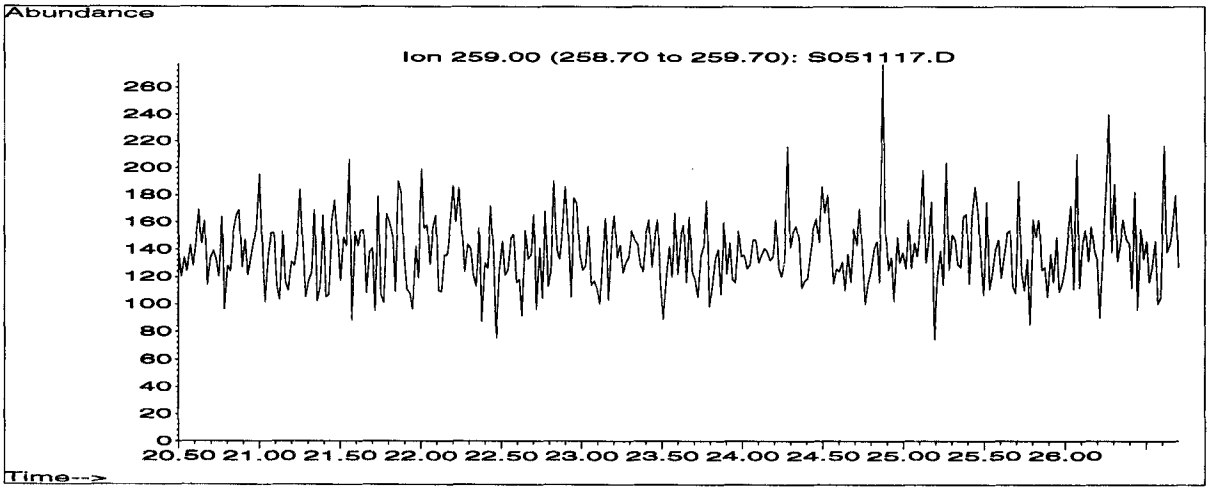


TCDD TOTAL

TS R.T. Lower Limit	20.50
TS R.T. Upper Limit	26.70

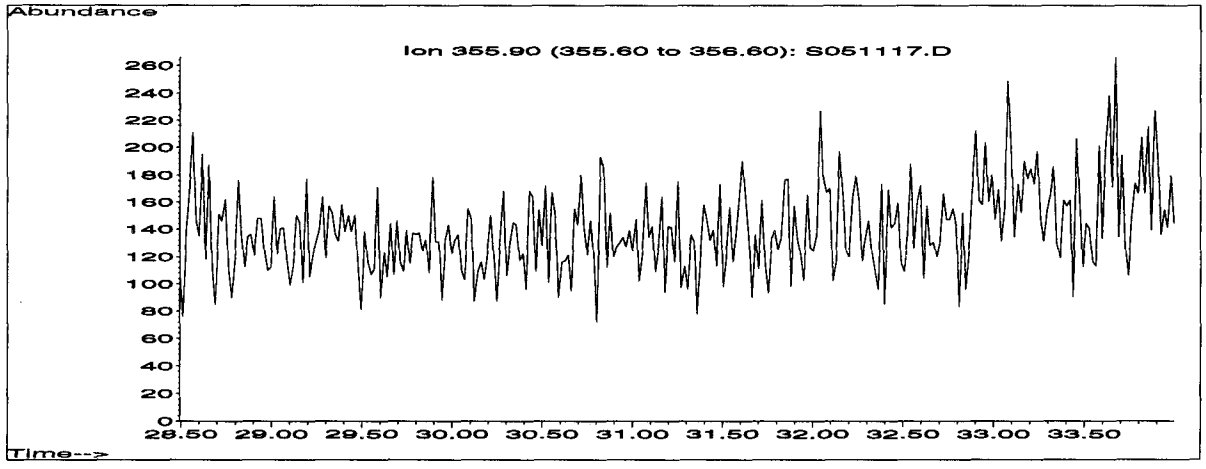


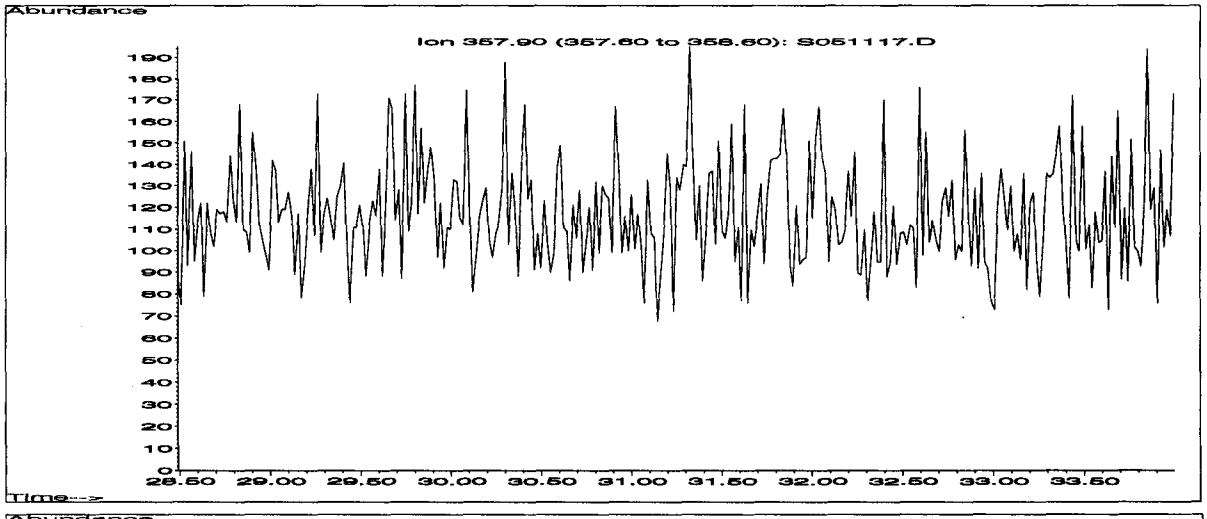


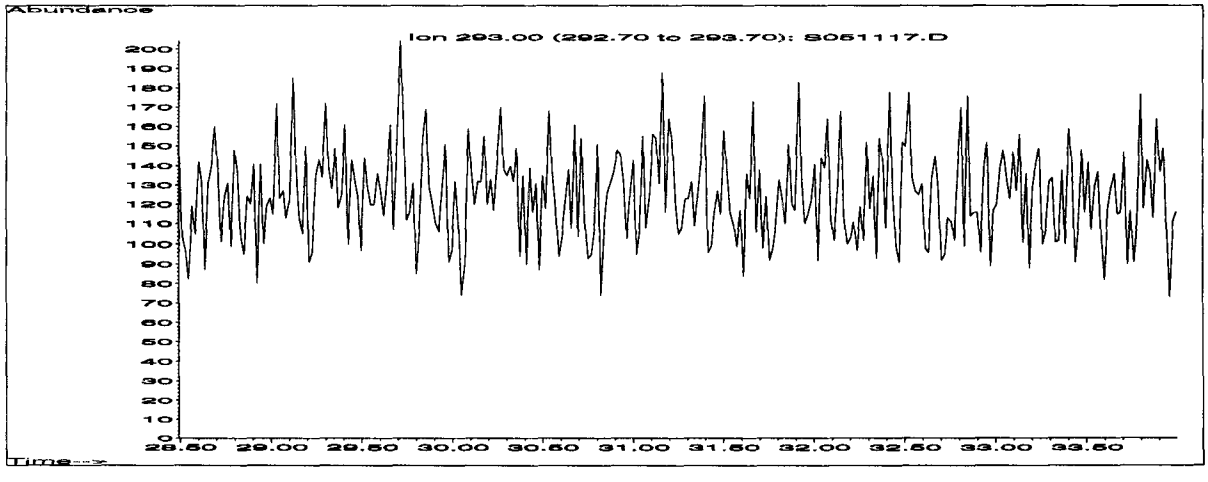


PeCDD TOTAL

TS R.T. Lower Limit	28.50
TS R.T. Upper Limit	34.00

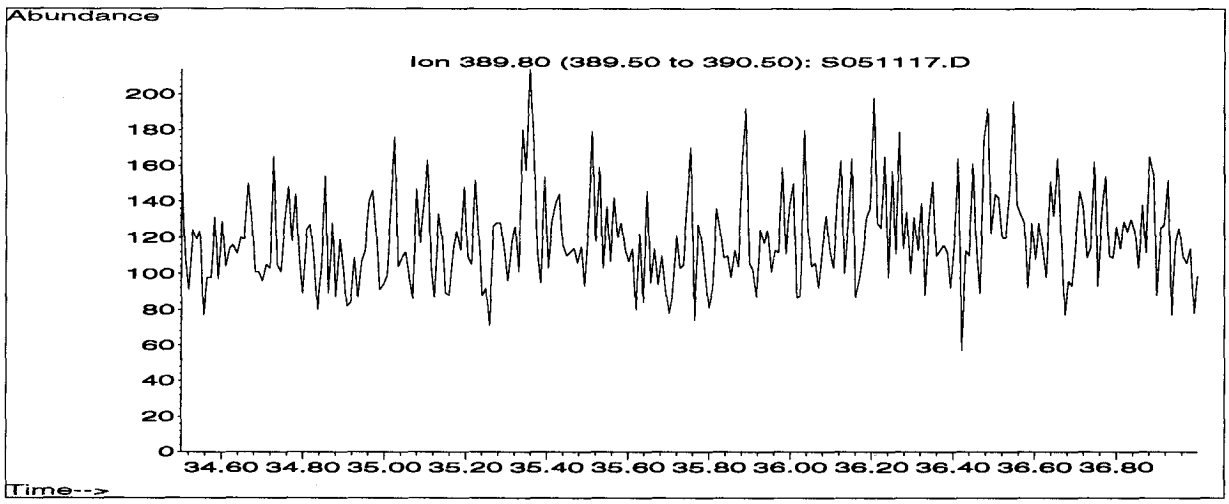


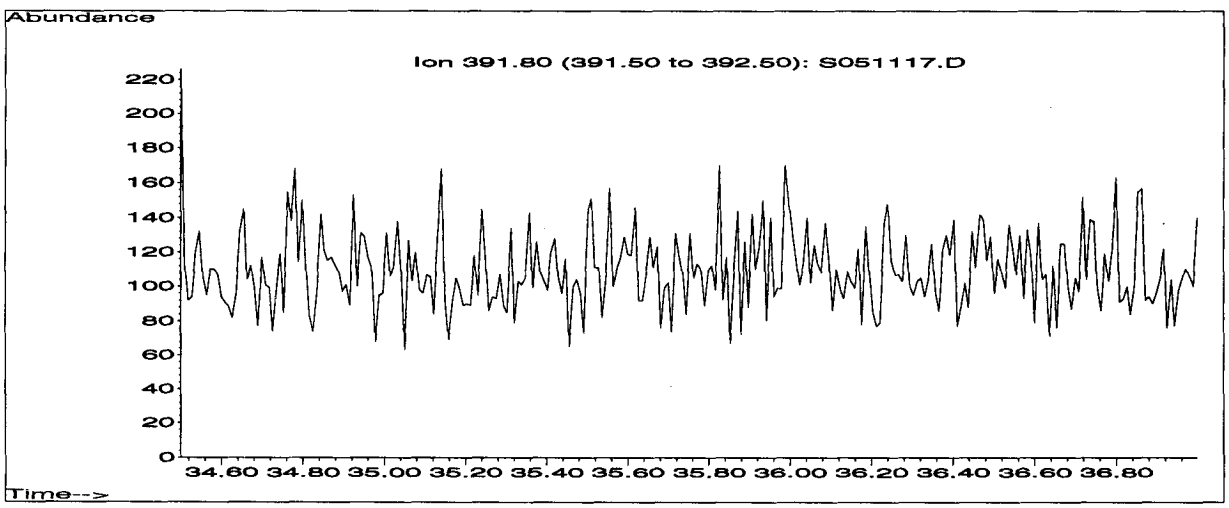


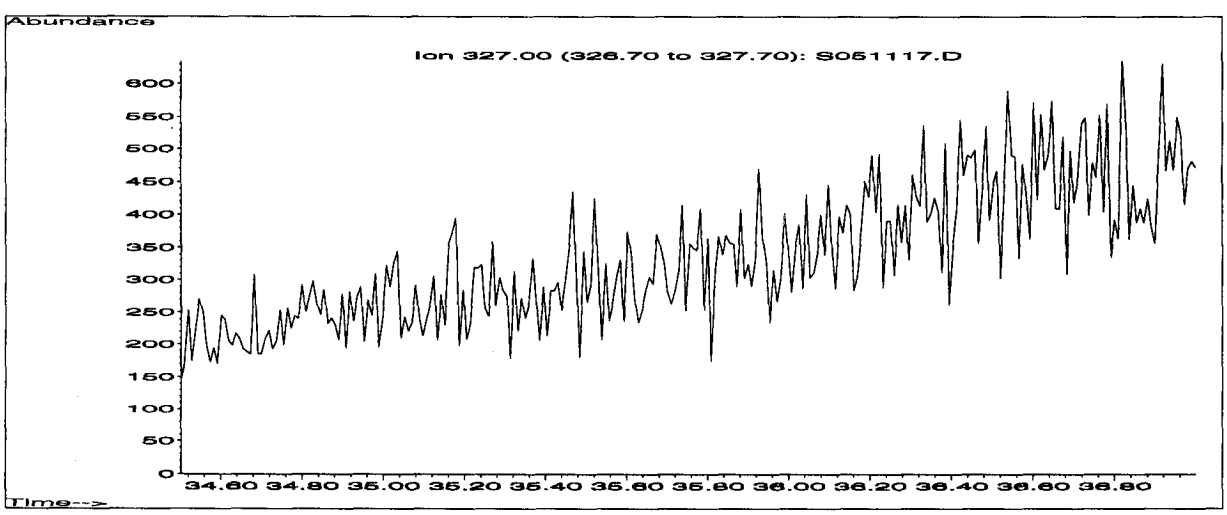


HxCDD TOTAL

TS R.T. Lower Limit	34.50
TS R.T. Upper Limit	37.00

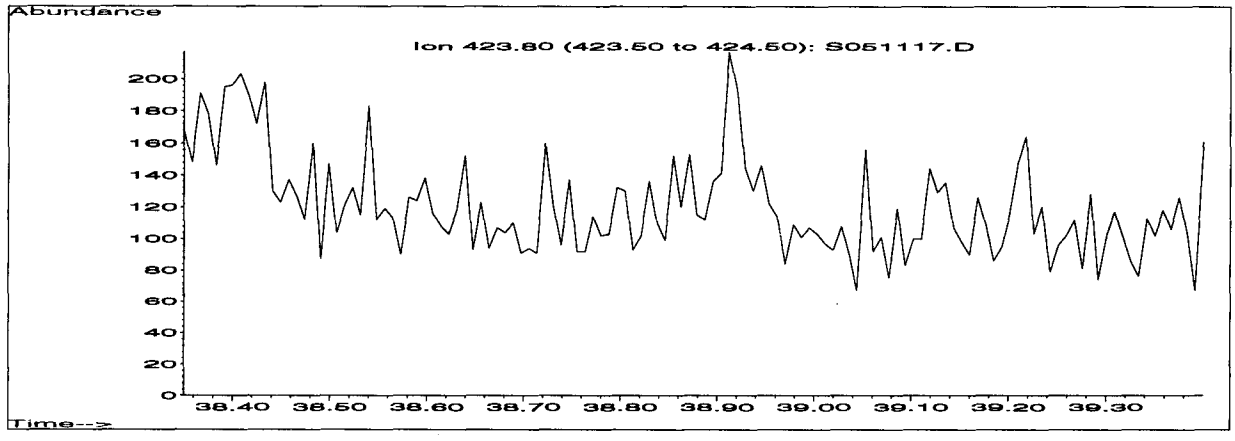


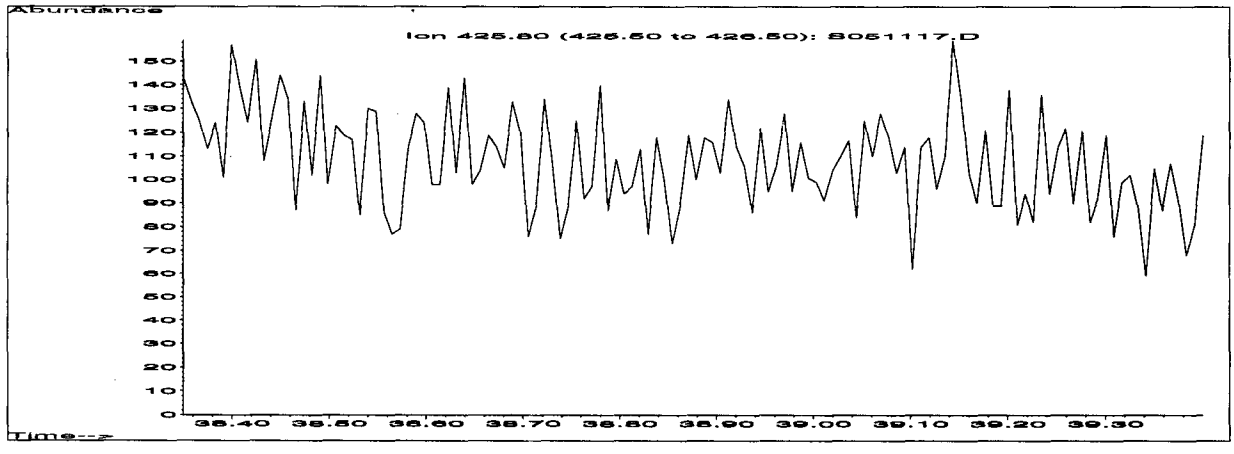


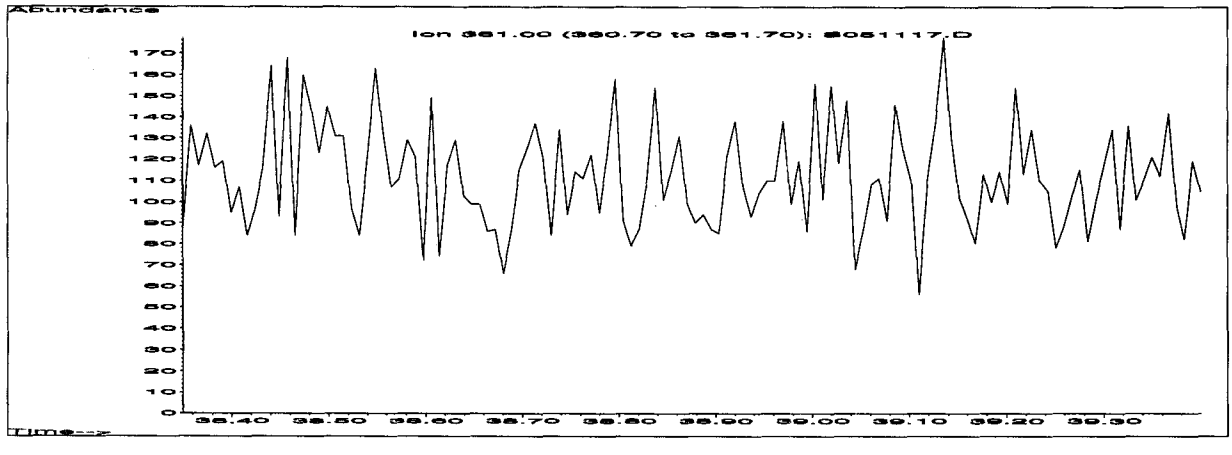


HpCDD TOTAL

TS R.T. Lower Limit	38.35
TS R.T. Upper Limit	39.40

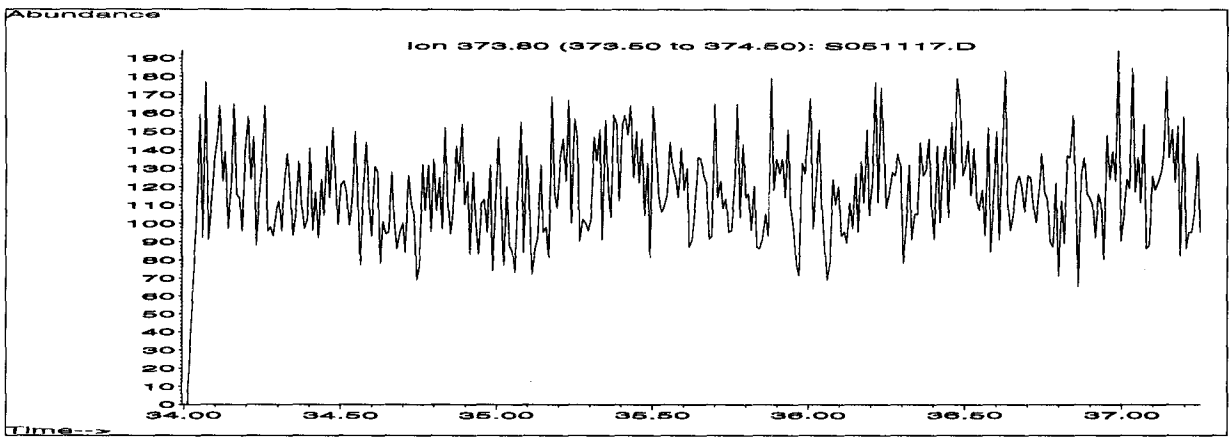


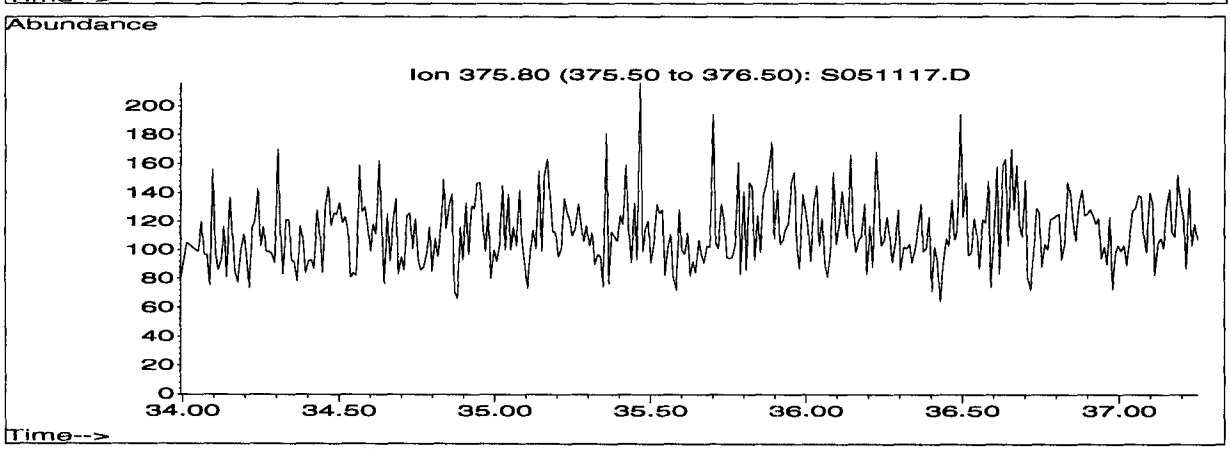


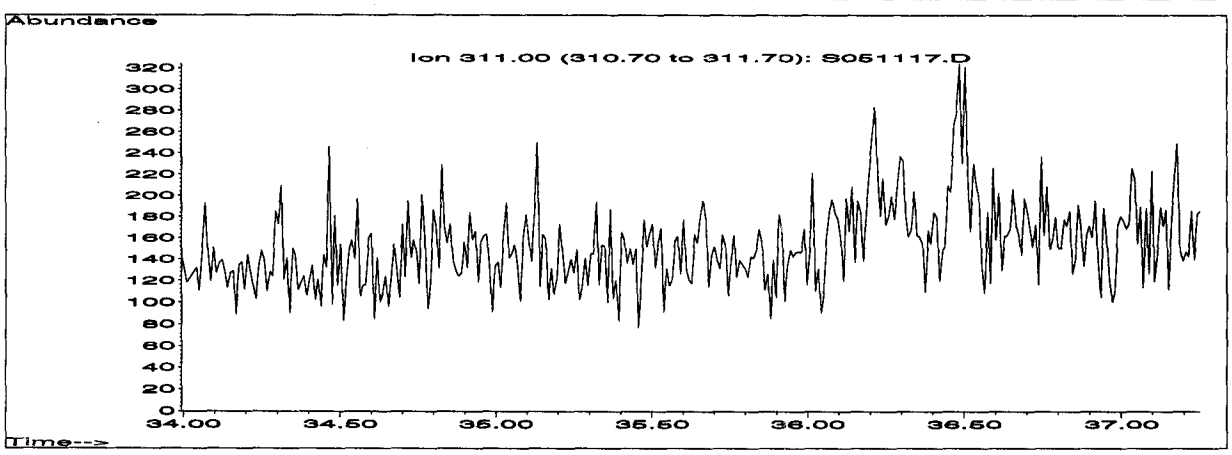


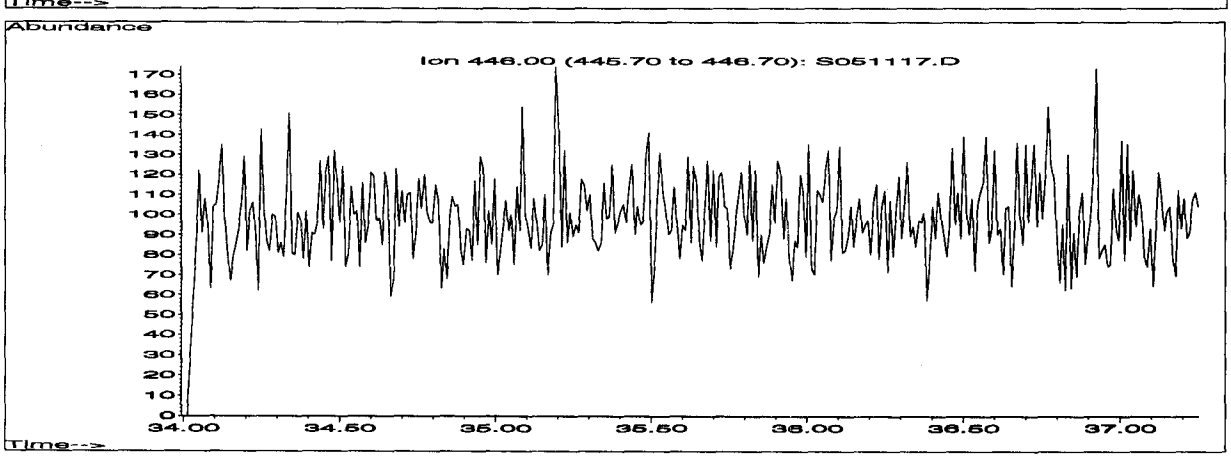
HxCDF TOTAL

TS R.T. Lower Limit	34.00
TS R.T. Upper Limit	37.25



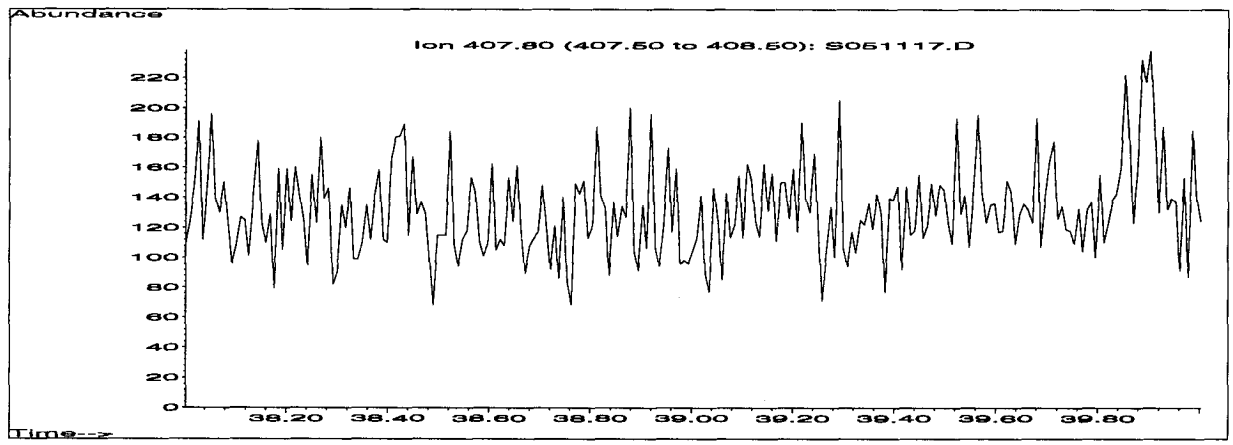


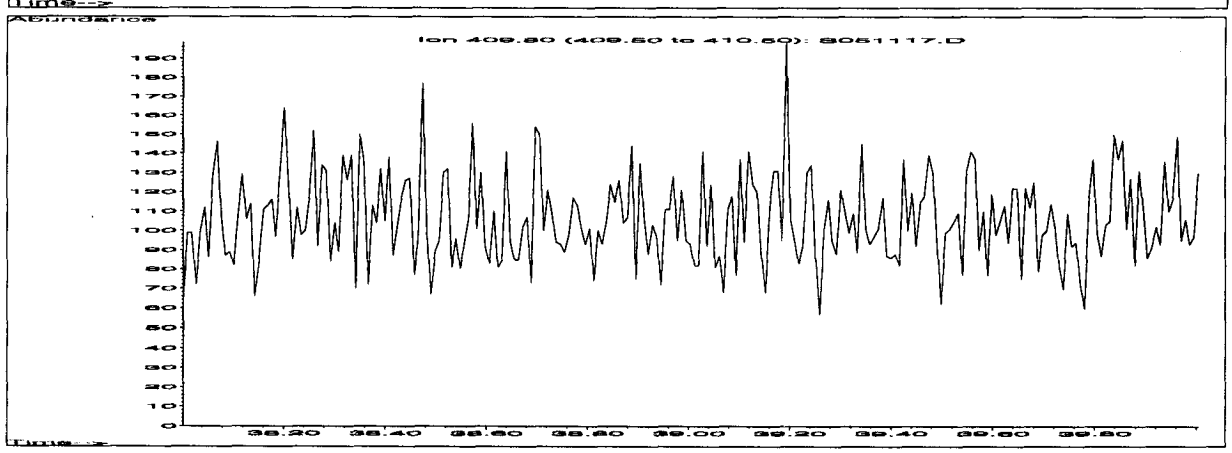


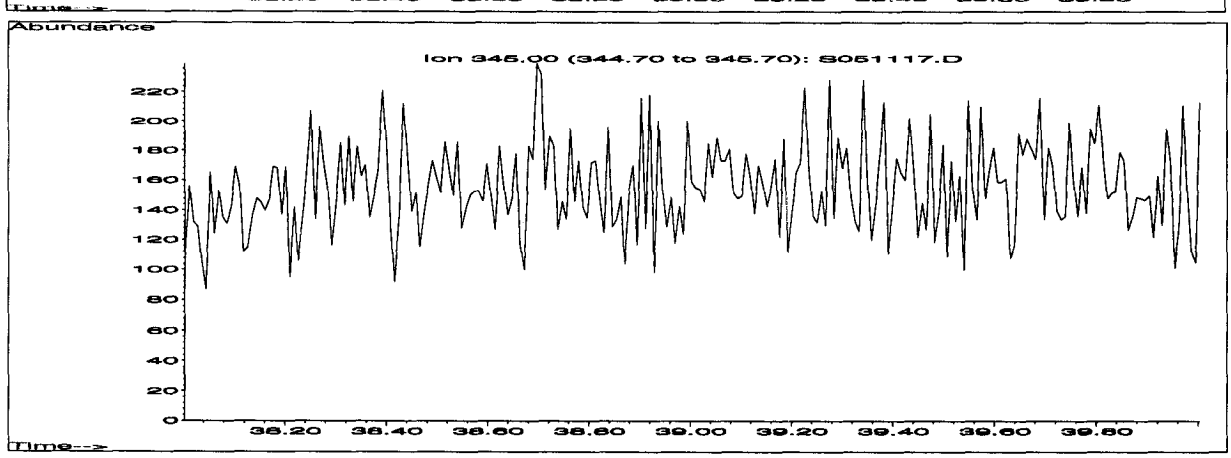


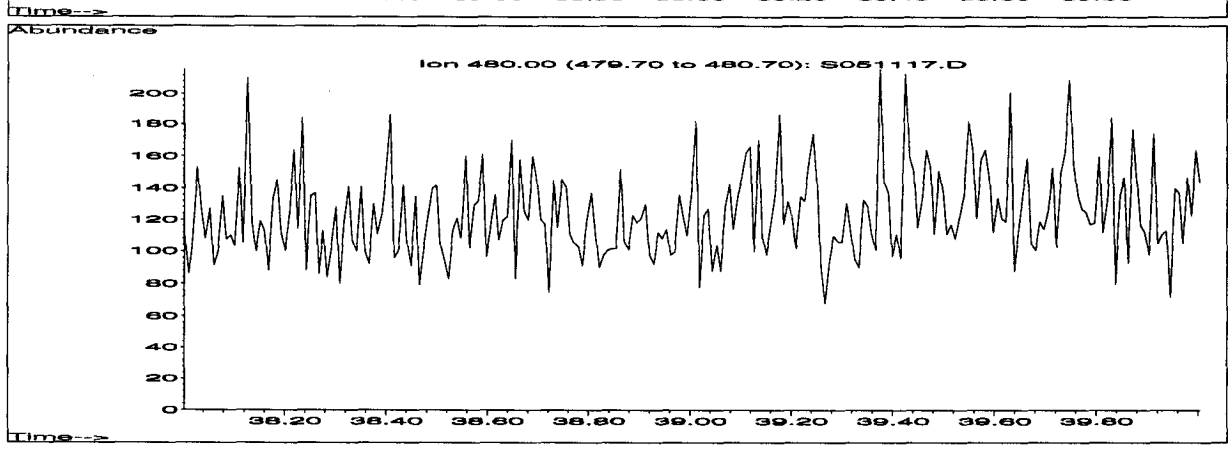
HpCDF TOTAL

TS R.T. Lower Limit	38.00
TS R.T. Upper Limit	40.00



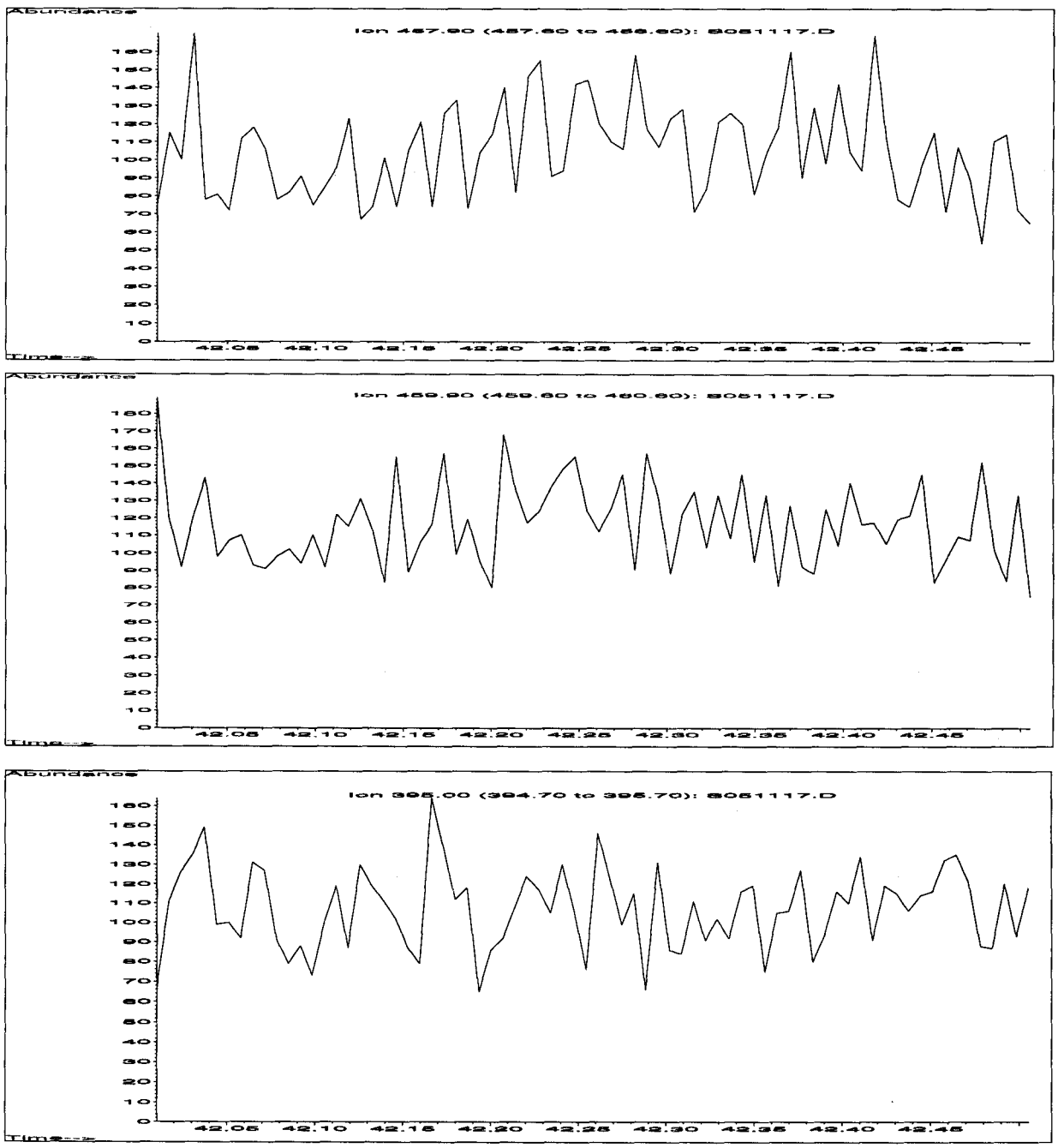






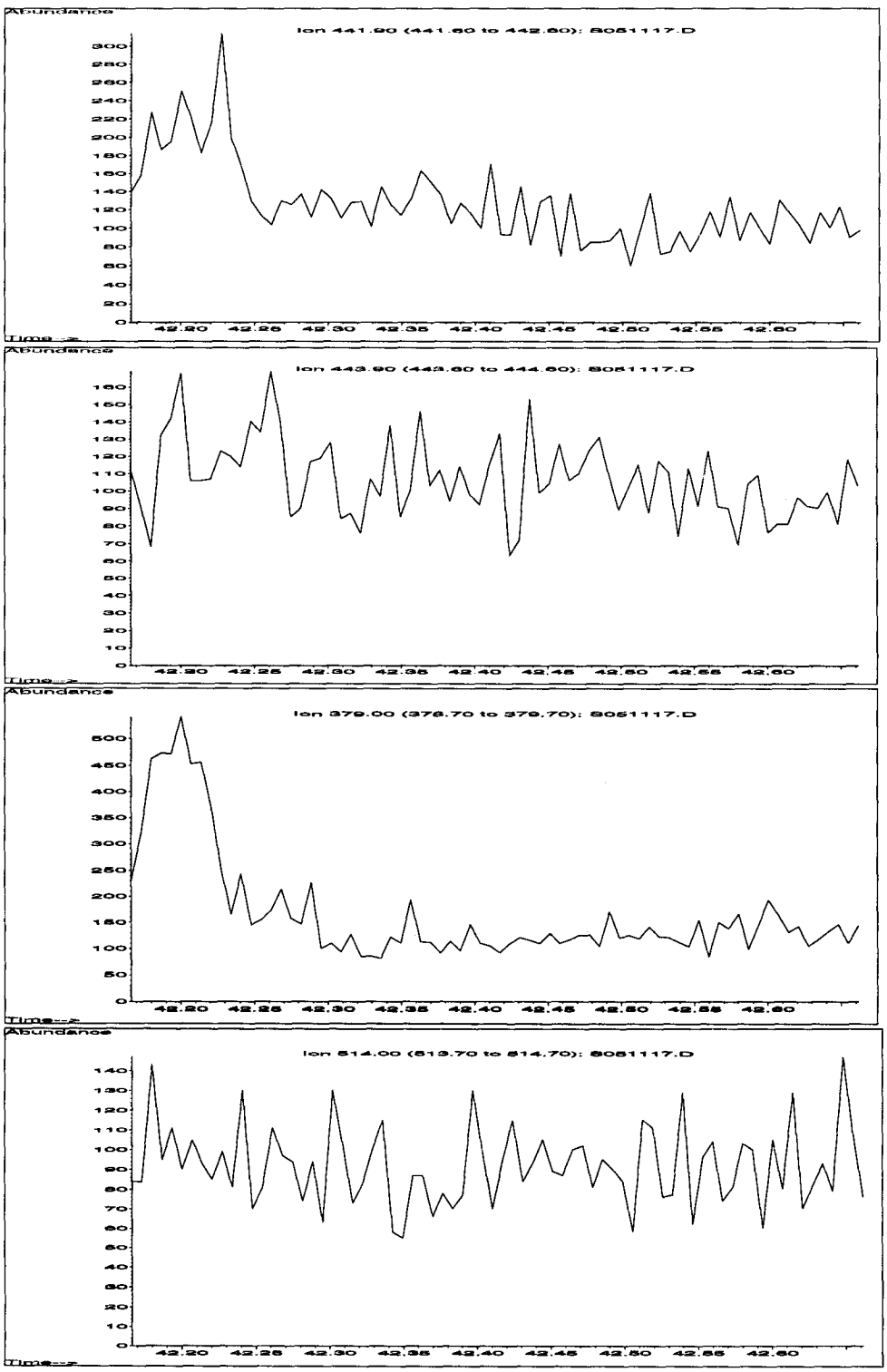
OCDD

TS R.T. Lower Limit	42.01		
TS R.T. Upper Limit	42.51		
Ret. Time	0.00		
Target Ion	457.9	Q1 Ion	459.9
Target Response	0	Q1 Response	0
Total Response	0	Ion ratio	#DIV/0!
Q2 Ion	395		
Q2 Response	0		



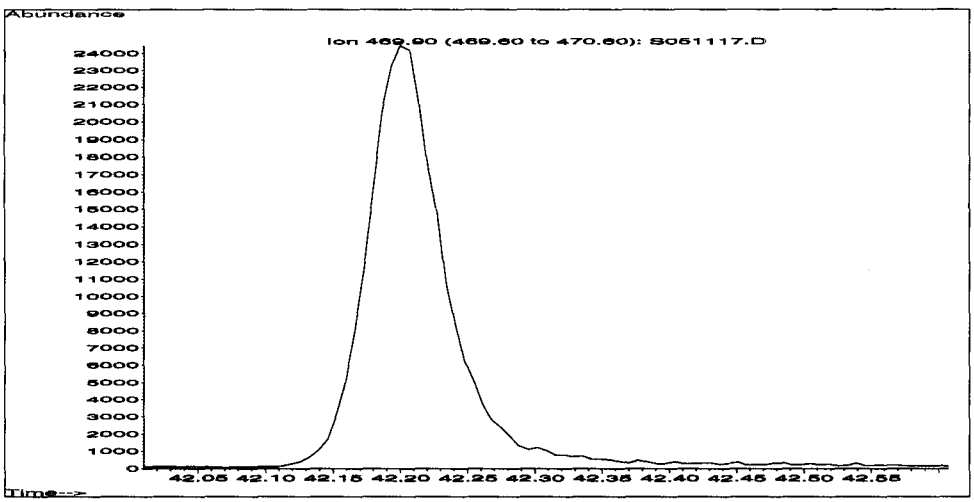
OCDF

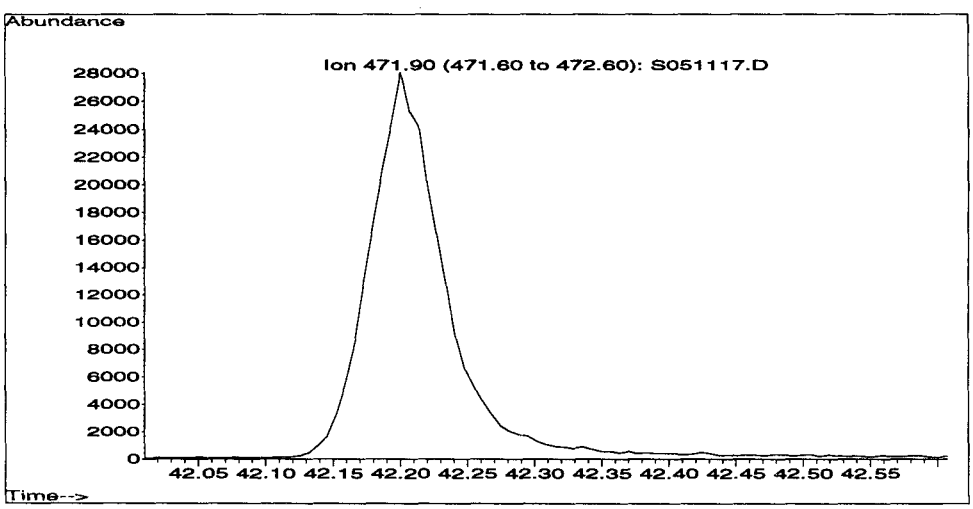
TS R.T. Lower Limit	42.16		
TS R.T. Upper Limit	42.66		
Ret Time	0.00		
Target Ion	441.9	Q1 Ion	443.9
Target Response	0	Q1 Response	0
Target Response	0	Ion Ratio	#DIV/0!
Q2 Ion	379	DPE Ion	514
Q2 Response	0	DPE Response	0



13C-OCDD-IS

RT Lower Limit	42.01		
RT Upper Limit	42.61		
Ret Time	42.20		
Target Ion	469.9	Q1 Ion	471.9
Target Response	98148	Q1 Response	108350
Total response	206498	Ratio	0.91





Quantitation Report (Not Reviewed)

-LØGNØ IAA 5/12/10

Sample ID: G0D270571-MB 1.0L 8280A MEO
L09RG-1-AA WATER LR009

Size: 1.000
Inst : DB1

Data File:C:\8280\2DB\051110.B\S051101.D
Acq On :11 May 2010 17:33

Vial: 1
Operator: MEO
Sample Amount: 1.00

MS Integration Params: RTEINT.P
Quant Time: May 12 9:18 2010

Quant Results File: 10MY11A2.RES

TDL 5/13/10 ME

Quant Method : C:\8280\ DATA METHODS\10MY11A2.M (RTE Integrator)
Title : Dioxin Furan Total
Last Update : Tue May 11 17:13:38 2010
Response via : Single (C:\8280\2DB\051110.B\ST0511A.D 11 May 2010 15:57)
DataAcq Meth : TOKAS
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Recovery\Internal Stds	R.T.	QIon	Ratio	Response	Conc		Dev(Min)
1) 13C-1234-TCDD	24.01	332+334	0.80	269382	25.00	NG	-0.02
5) 13C-123789-HxCDD	36.48	402+404	1.27	386805	25.00	NG	-0.02
9) 13C-2378-TCDF	23.20	316+318	0.81	302998	25.00	NG	-0.02
15) 13C-2378-TCDD	24.30	332+334	0.79	216937	25.00	NG	-0.02
20) 13C-123678-HxCDD	36.20	402+404	1.28	256769	25.00	NG	-0.02
27) 13C-1234678-HpCDF	38.19	420+422	1.05	332078	25.00	NG	0.00
36) 13C-OCDD	42.19	470+472	0.92	433537	50.00	NG	-0.02

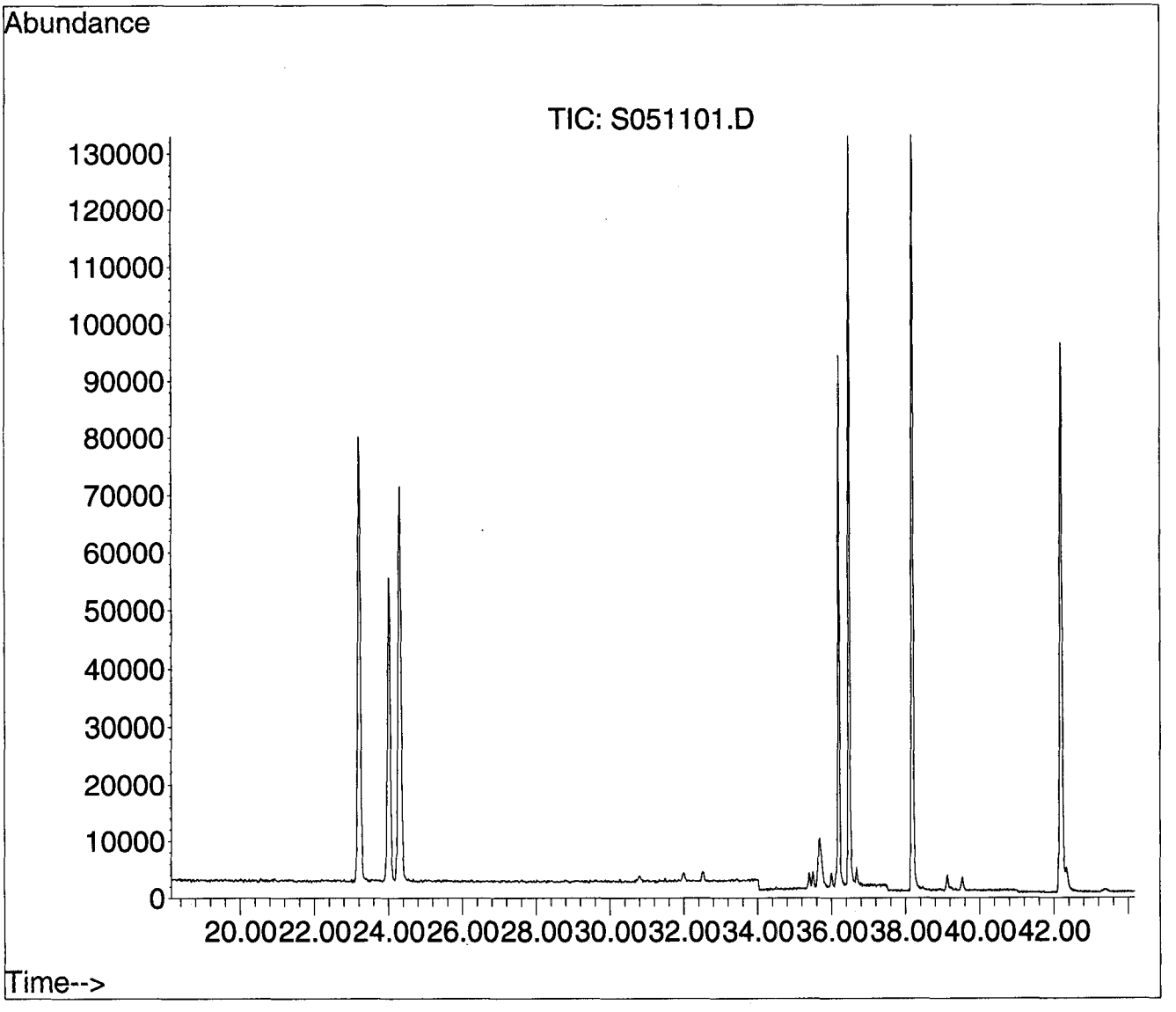
Surrogate Compound							
4) 37Cl-2378-TCDD	24.32	328		165724	11.300	NG	-0.02
Spiked Amount = 12.500		RRF = 1.361		Recovery =	90.40%		

Target Compounds	RT	Ratio		Area	RRF	Conc		EDL	%Rec
2) 13C-2378-TCDF-IS	23.20	0.81		302493	1.407	19.947		0.0658	79.8
3) 13C-2378-TCDD-IS	24.30	0.79		216937	0.991	20.311		0.5370	81.2
6) 13C-123678-HxCDD-	36.20	1.29		257091	0.794	20.926		0.0789	83.7
7) 13C-1234678-HpCDF	38.19	1.05		332078	0.990	21.689		0.0388	86.8
8) 13C-OCDD-IS	42.19	0.92		433537	0.651	43.053		0.0509	86.1
10) 2378-TCDF	0.00			0	1.246	N.D.		0.1534	
11) TCDF TOTAL	22.00			0	1.246	N.D.		0.1544	
12) 12378-PeCDF	30.80	1.48		5165	1.142	0.373		0.0759	
13) 23478-PeCDF	31.99	1.40		6446	1.143	0.465		0.1059	
1	30.80	1.35		5363		~~0.378~~			
2	31.99	1.17	#	8096		0.584			
14) PeCDF TOTAL	29.50	1.17		13459	1.142	~~0.972~~ 0.465			
16) 2378-TCDD	0.00			0	1.230	N.D.		0.2056	
1	23.22	5.04	#	28385		2.660			
17) TCDD TOTAL	22.50	5.04		28385	1.230	2.660			
18) 12378-PeCDD	32.52	1.42		5451	1.122	0.560		0.1169	
1	32.52	1.54		5213		~~0.536~~			
19) PeCDD TOTAL	30.00	1.54		5213	1.122	~~0.536~~ 0.560			
21) 123478-HxCDD	36.13	1.33		6566	0.970	0.659		0.1126	
22) 123678-HxCDD	36.21	1.11		6382	1.003	0.620		0.1040	
23) 123789-HxCDD	36.48	1.22		6995	1.030	0.661		0.1012	
1	36.13	1.33		6566		~~0.659~~			
2	36.21	1.19		6382		0.620			
3	36.48	1.22		6995		0.702			
24) HxCDD TOTAL	36.50	1.22		19943	0.970	~~1.981~~ 0.661			
25) 1234678-HpCDD	39.13	1.01		6878	1.017	0.659		0.0517	
1	39.13	1.01		6878		0.659			
26) HpCDD TOTAL	39.35	1.01		6878	1.017	0.659			

28)	123478-HxCDF	35.40	1.24		7562	0.977	0.583	0.0818
29)	123678-HxCDF	35.50	1.38		7260	1.049	0.521	0.0829
30)	234678-HxCDF	36.00	1.19		7321	0.987	0.558	0.0999
31)	123789-HxCDF	36.68	1.36		7345	0.943	0.586	0.0857
	1	35.40	1.15		7562		0.583	
	2	35.50	1.38		7260		0.521	
	3	36.00	1.19		32379		2.585	
	4	36.68	1.32		7213		0.576	
32)	HxCDF TOTAL	36.00	1.32		54414	0.943	4.265	0.586
33)	1234678-HpCDF	38.19	1.24	#	9805	1.163	0.705	0.0921
34)	1234789-HpCDF	39.54	1.09		8835	1.028	0.647	0.0755
	1	38.19	1.24	#	9805		0.635	
	2	39.54	1.09		8835		0.647	
35)	HpCDF TOTAL	39.50	1.09		18640	1.028	1.282	0.705
37)	OCDD	42.19	0.81		8711	1.109	0.906	0.1889
38)	OCDF	42.34	0.37	#	5375	1.416	0.439	0.3729

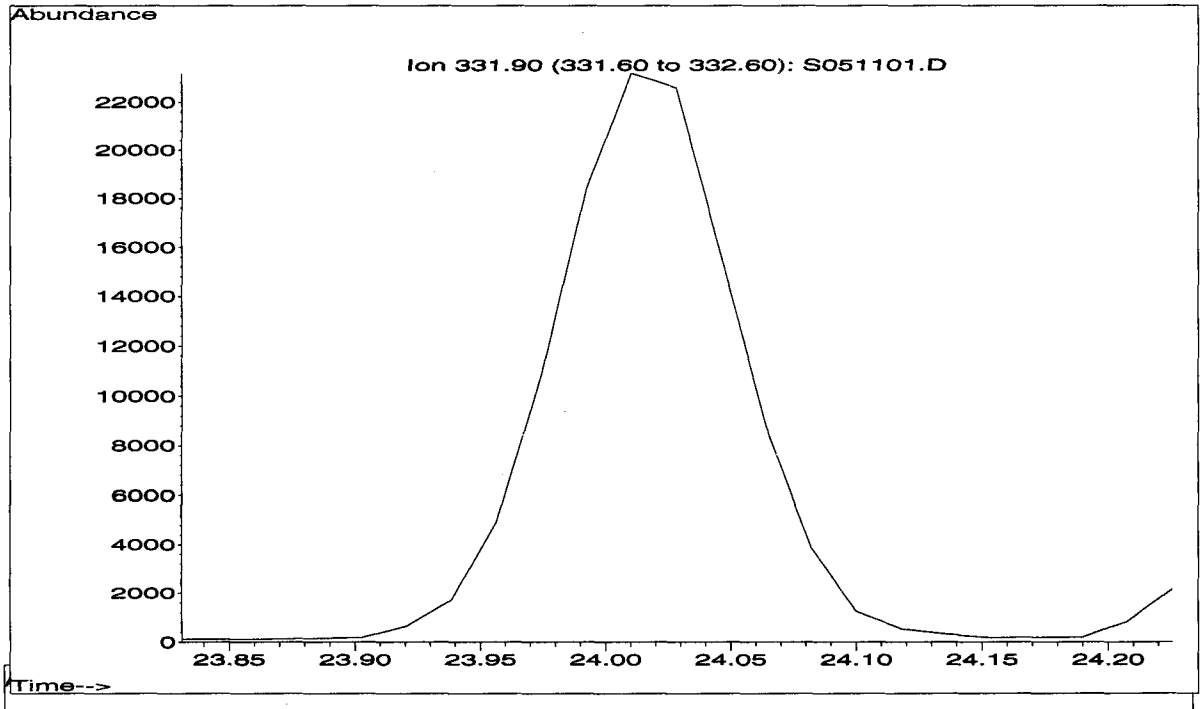
(#) = qualifier out of range•: areas and concentration based on theoretical ion ratio
(m) = manual integration
S051101.D 10MY11A2.M Wed May 12 09:18:20 2010

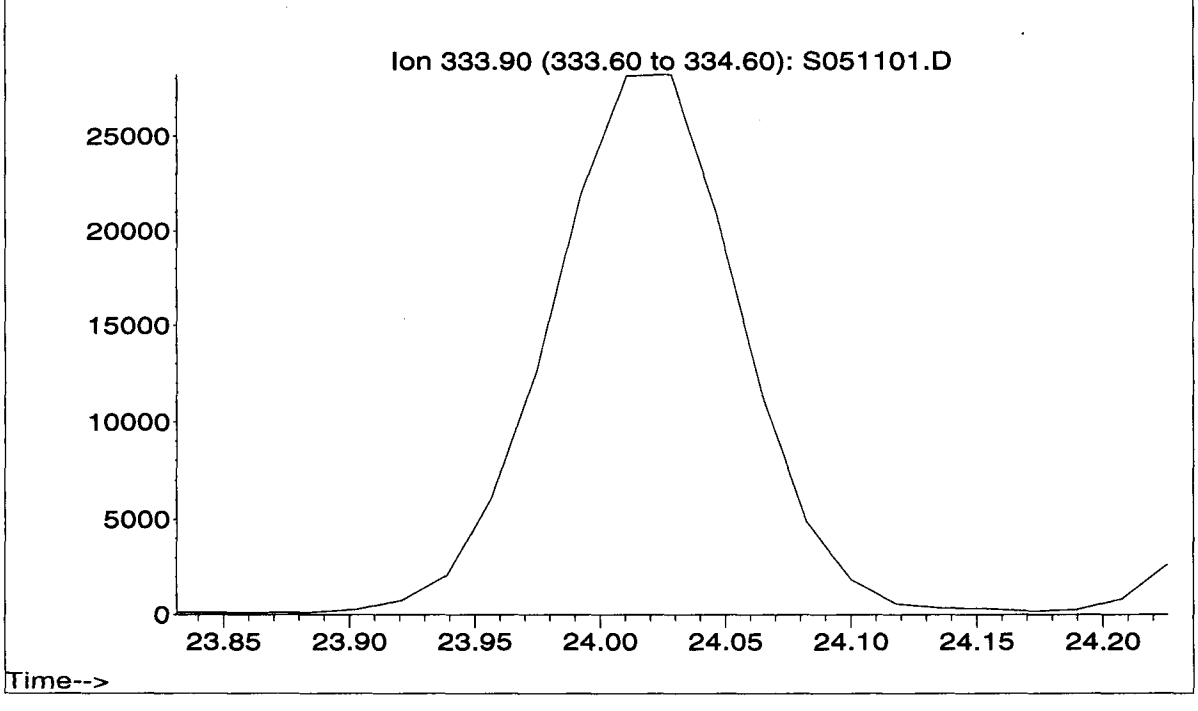
Data File Name	S051101.D
Data File Path	C:\8280\2DB\051110.B\
Operator	MEO
Date Acquired	5/11/2010 17:33
Acq. Method File	TOKAS
Sample Name	09RG-1-AA WATER LR009
Misc Info	G0D270571-MB 1.0L 8280A
Vial Number	1
Instrument Name	2DB
Sample Multiplier	1
Sample Amount	1



13C-1234-TCDD

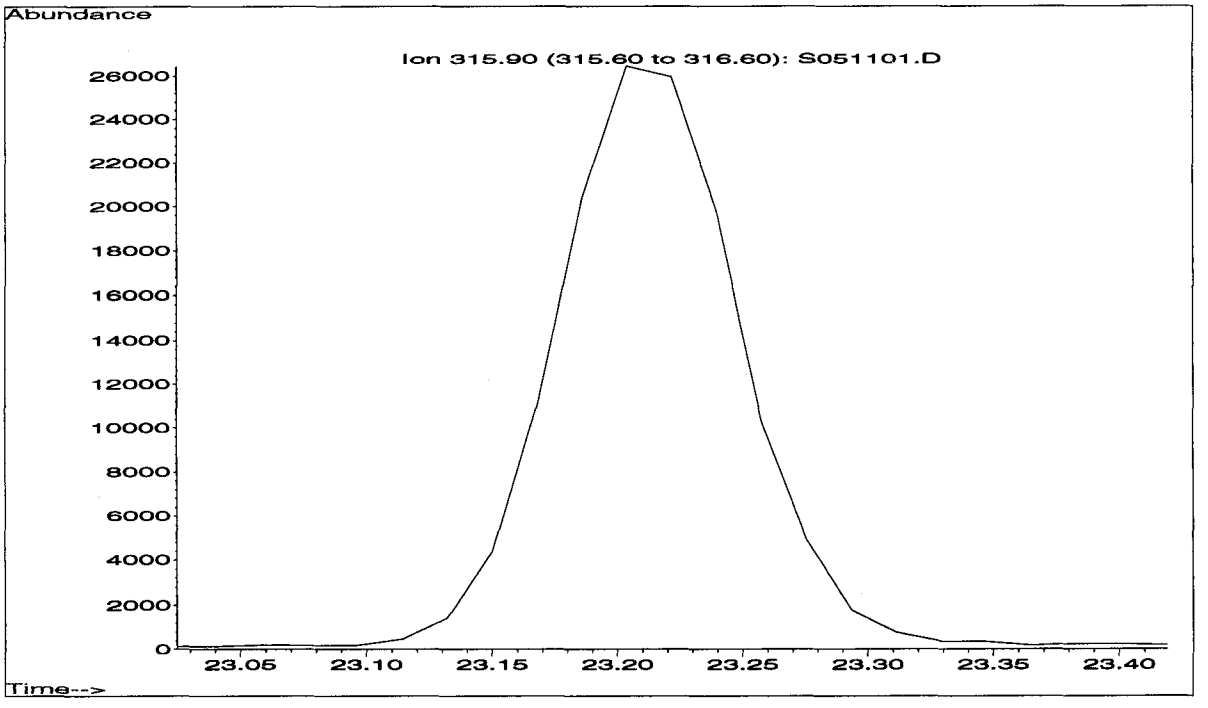
TS R.T. Lower Limit	23.83		
TS R.T. Upper Limit	24.23		
Ret Time	24.01		
Target Ion	331.9	Q1 Ion	333.9
Target Response	119711	Q1 Response	149671
Total Response	269382	Ion Ratio	0.80

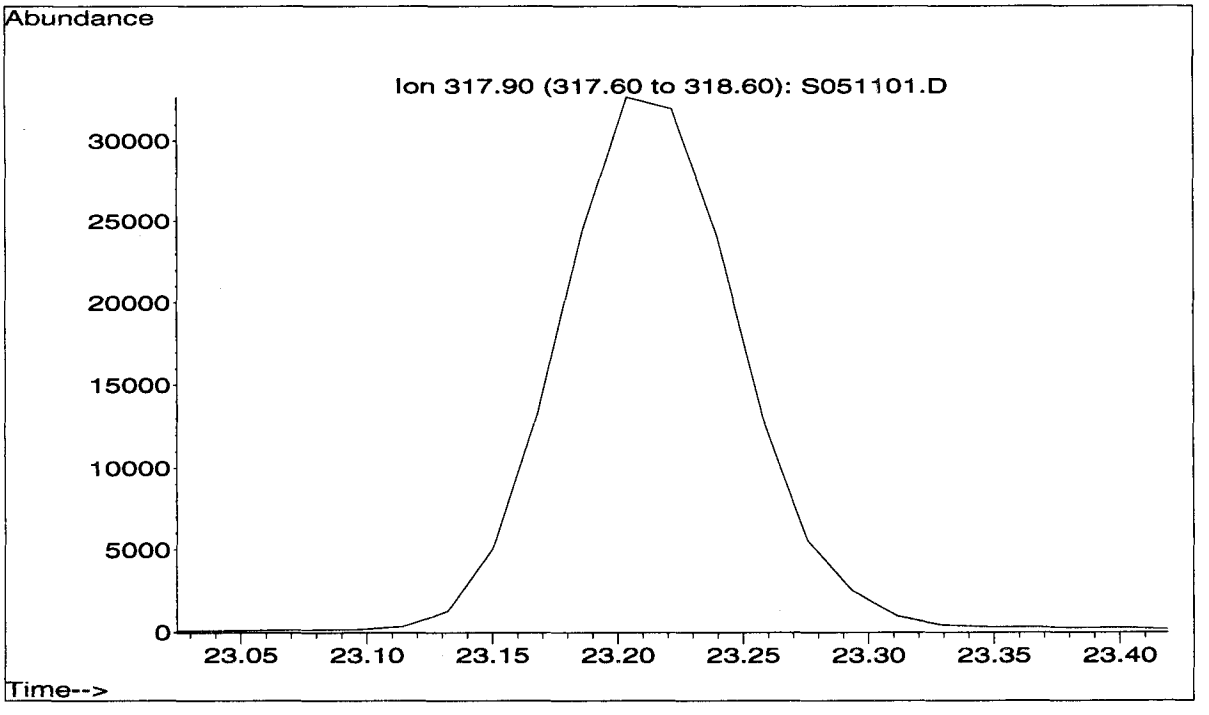




13C-2378-TCDF-IS

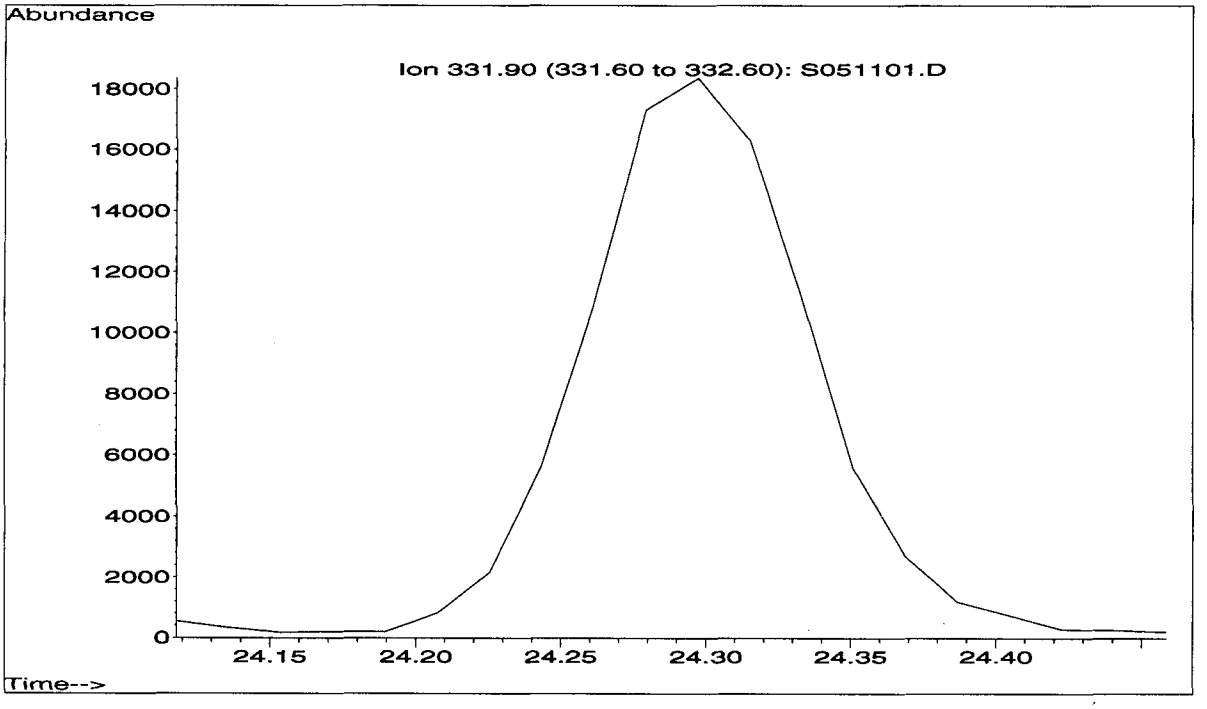
TS R.T. Lower Limit	23.02		
TS R.T. Upper Limit	23.42		
Ret Time	23.20		
Target Ion	315.9	Q1 Ion	317.9
Target Response	135774	Q1 Response	166719
Target Response	302493	Ion Ratio	0.81

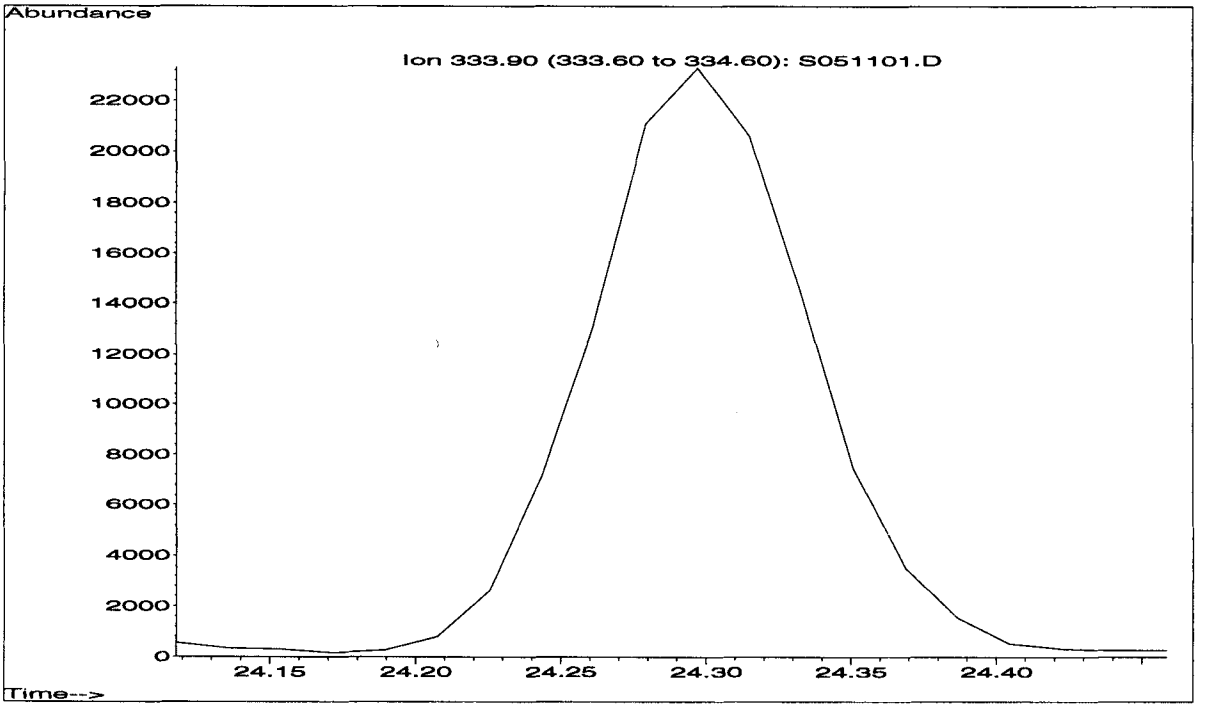




13C-2378-TCDD-IS

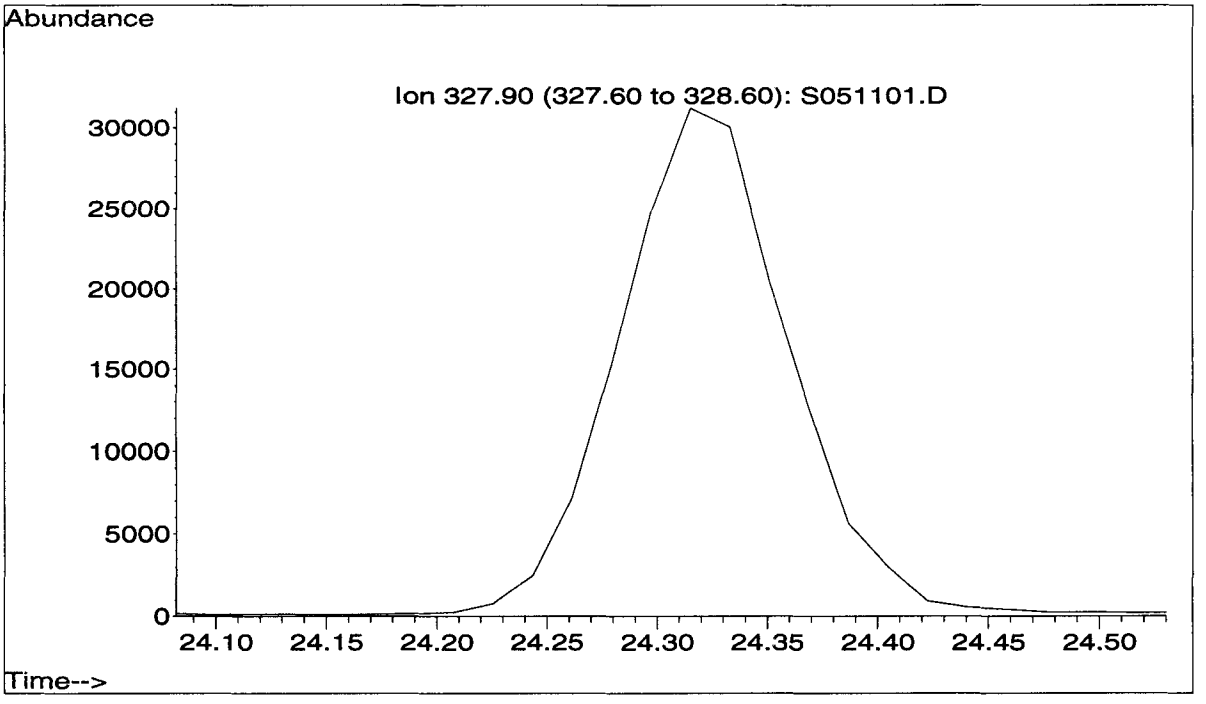
TS R.T. Lower Limit	24.12		
TS R.T. Upper Limit	24.47		
Ret Time	24.30		
Target Ion	331.9	Q1 Ion	333.9
Target Response	95968	Q1 Response	120969
Total Response	216937	Ion Ratio	0.79

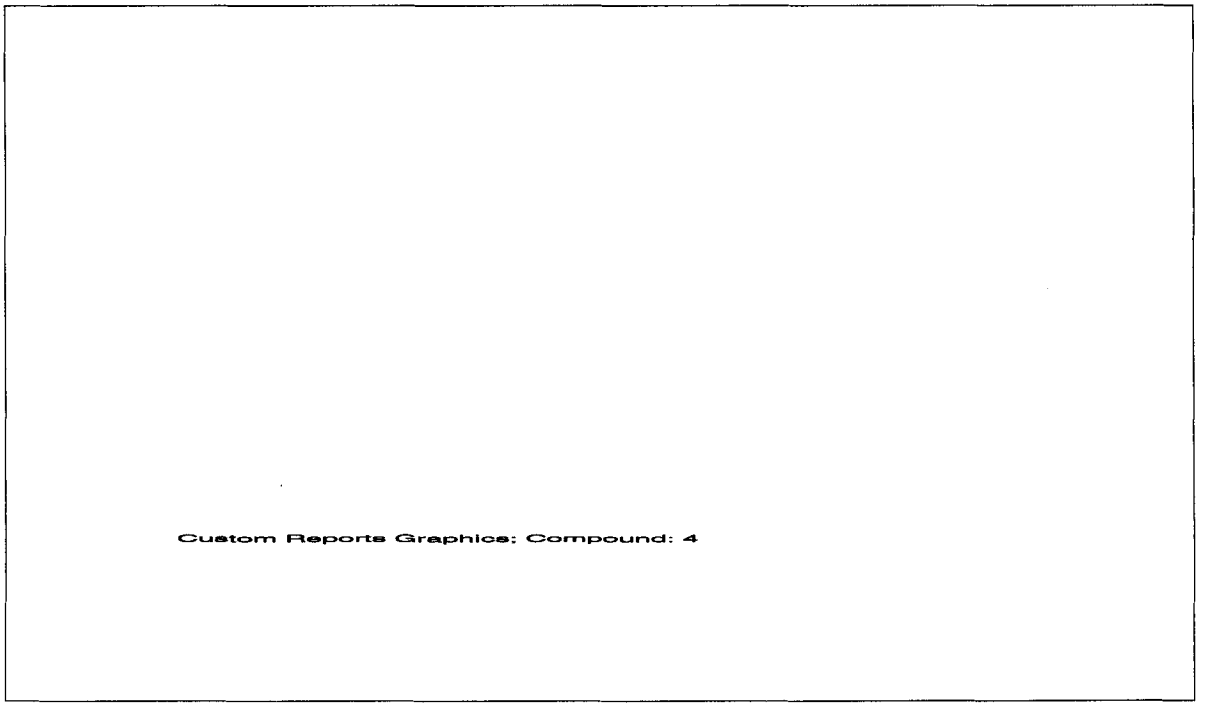




37Cl-2378-TCDD

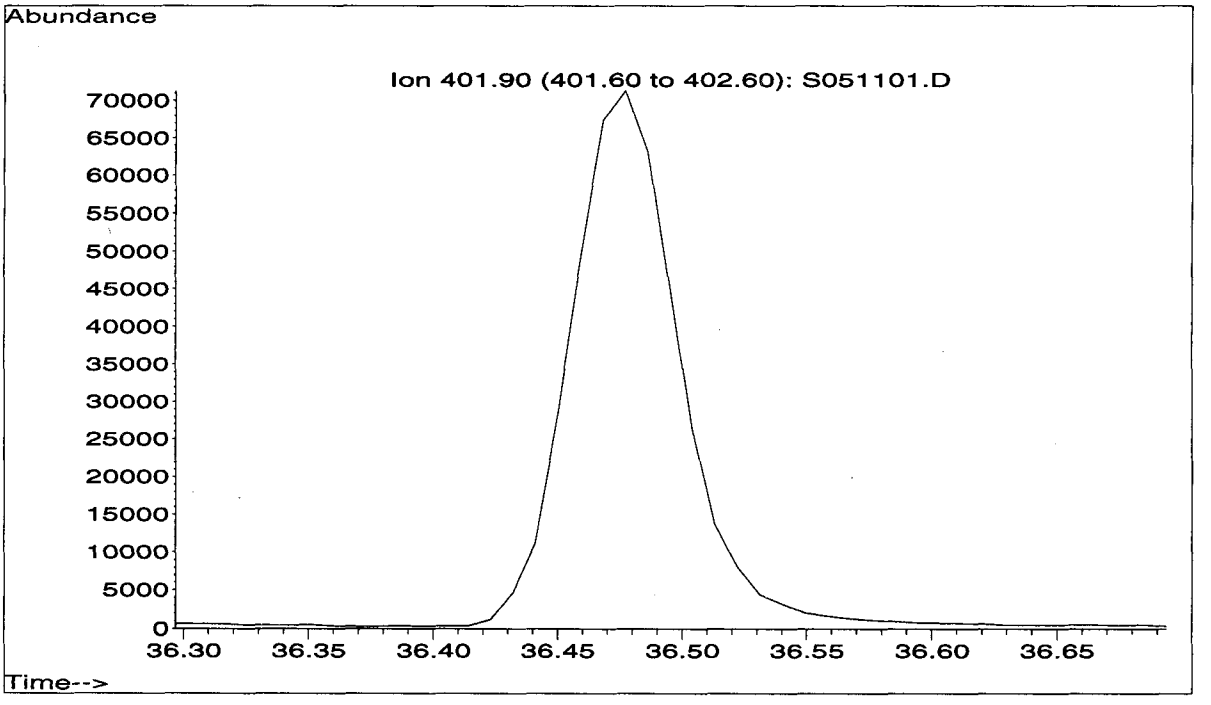
TS R.T. Lower Limit	24.08		
TS R.T. Upper Limit	24.53		
Ret Time	24.32		
Target Ion	327.9	Q1 Ion	0
Target Response	165724	Q1 Response	0
Total Response	165724	Ion Ratio	#DIV/0!

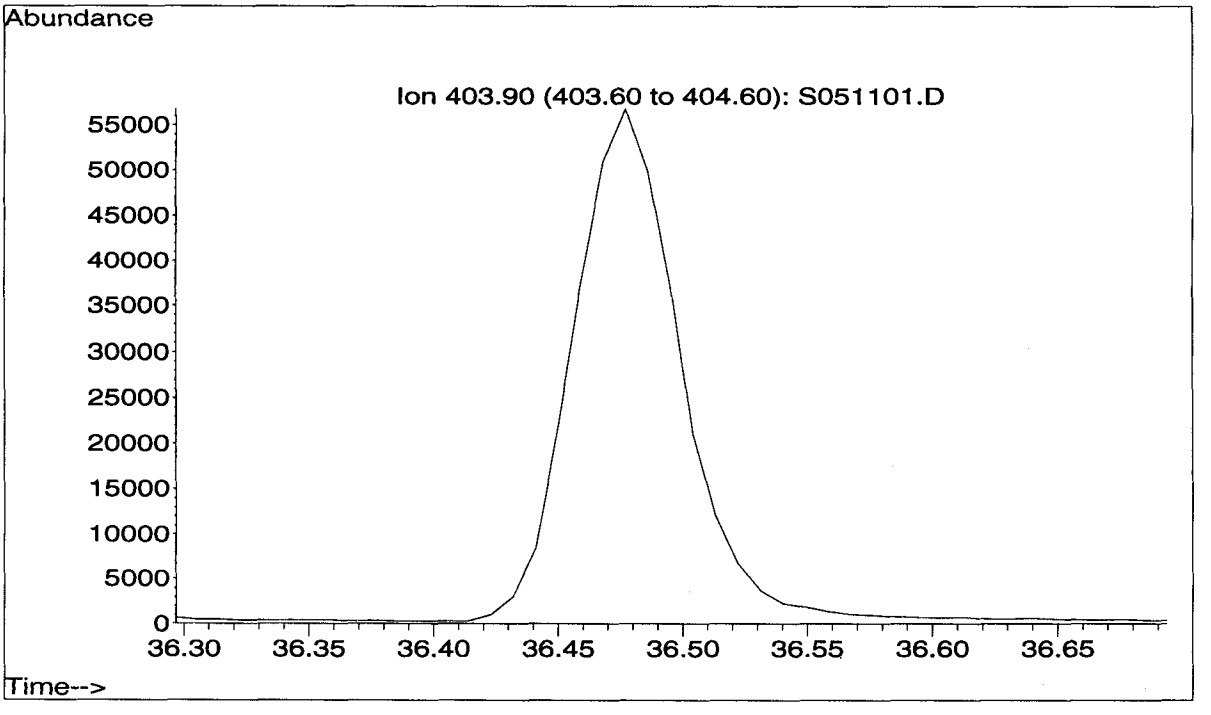




13C-123789-HxCDD

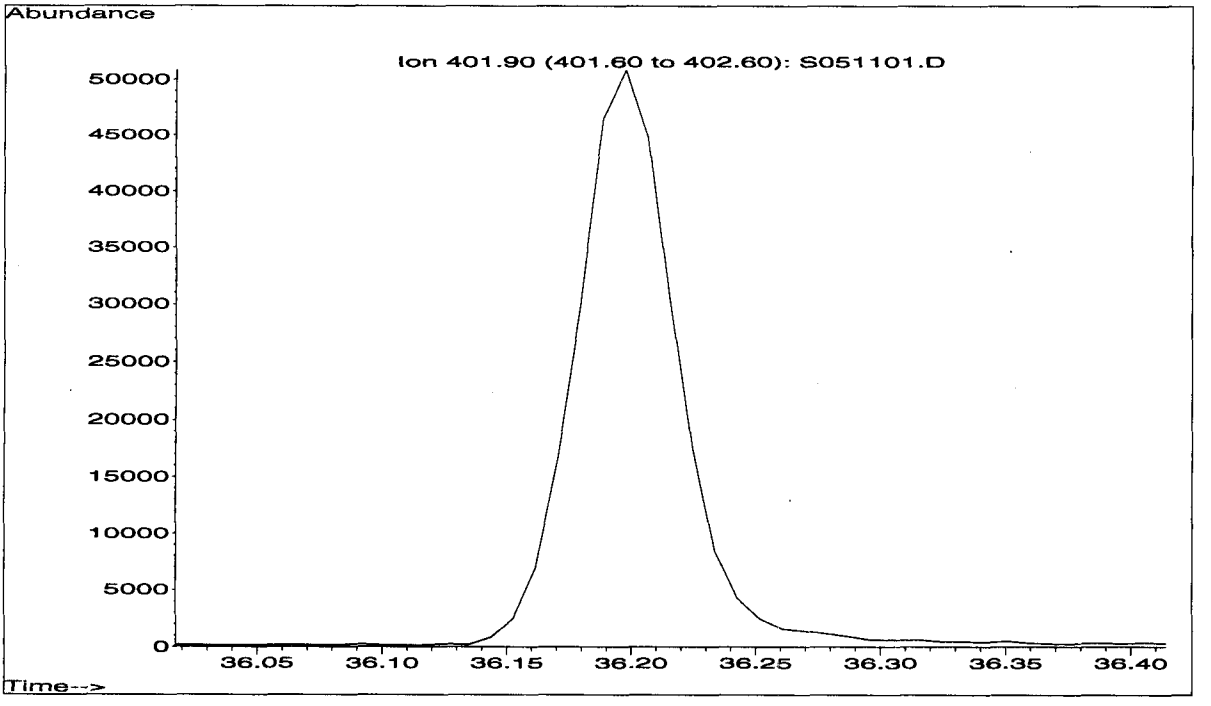
TS R.T. Lower Limit	36.29		
TS R.T. Upper Limit	36.69		
Ret Time	36.48		
Target Ion	401.9	Q1 Ion	403.9
Target Response	216277	Q1 Response	170528
Target Response	386805	Ion Ratio	1.27

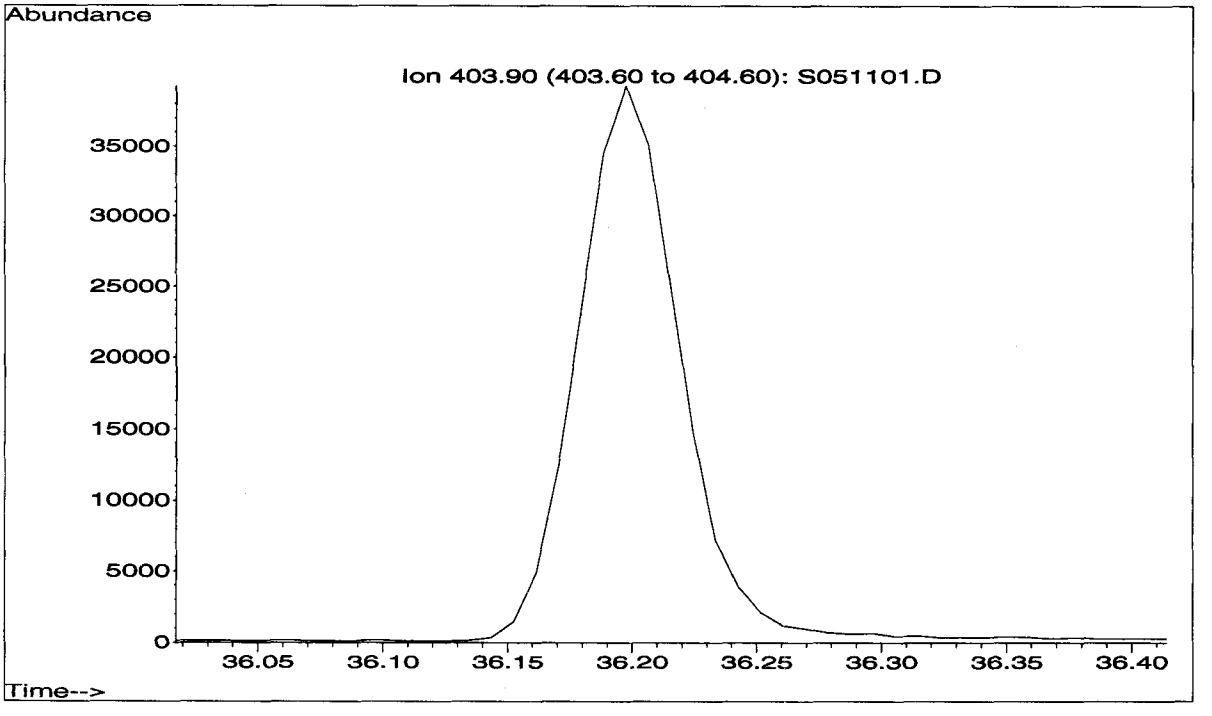




13C-123678-HxCDD-IS

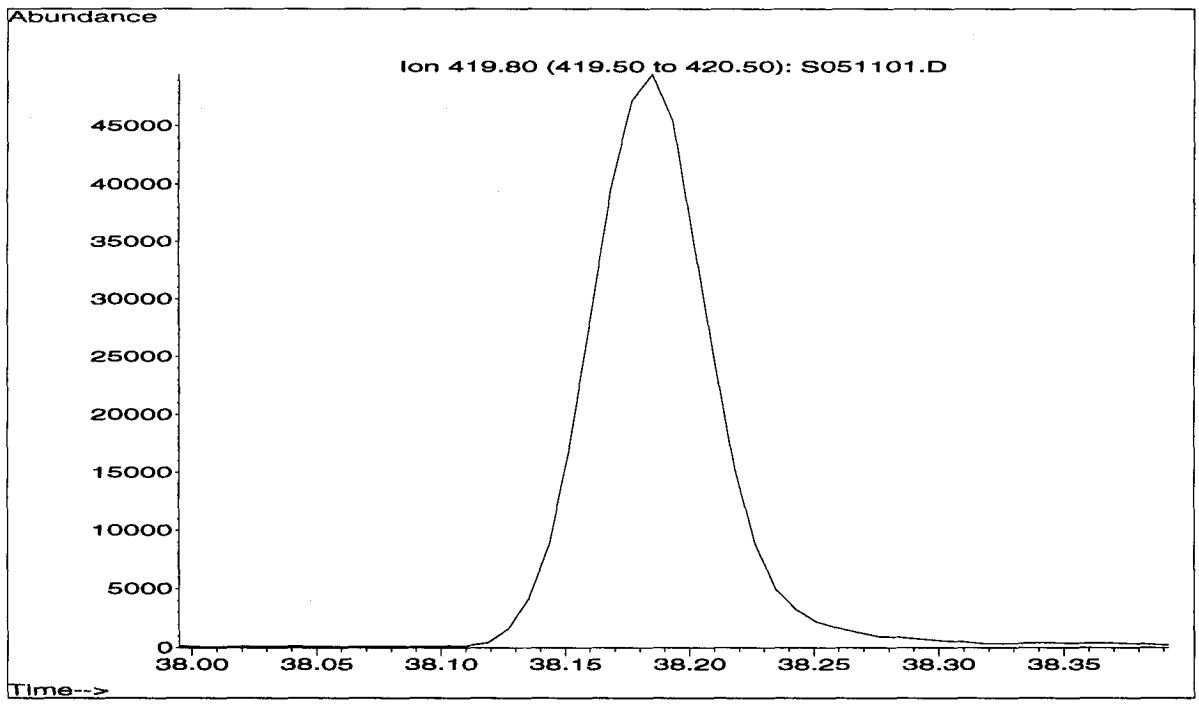
TS R.T. Lower Limit	36.01		
TS R.T. Upper Limit	36.41		
Ret Time	36.20		
Target Ion	401.9	Q1 Ion	403.9
Target Response	144640	Q1 Response	112451
Total Response	257091	Ion Ratio	1.29

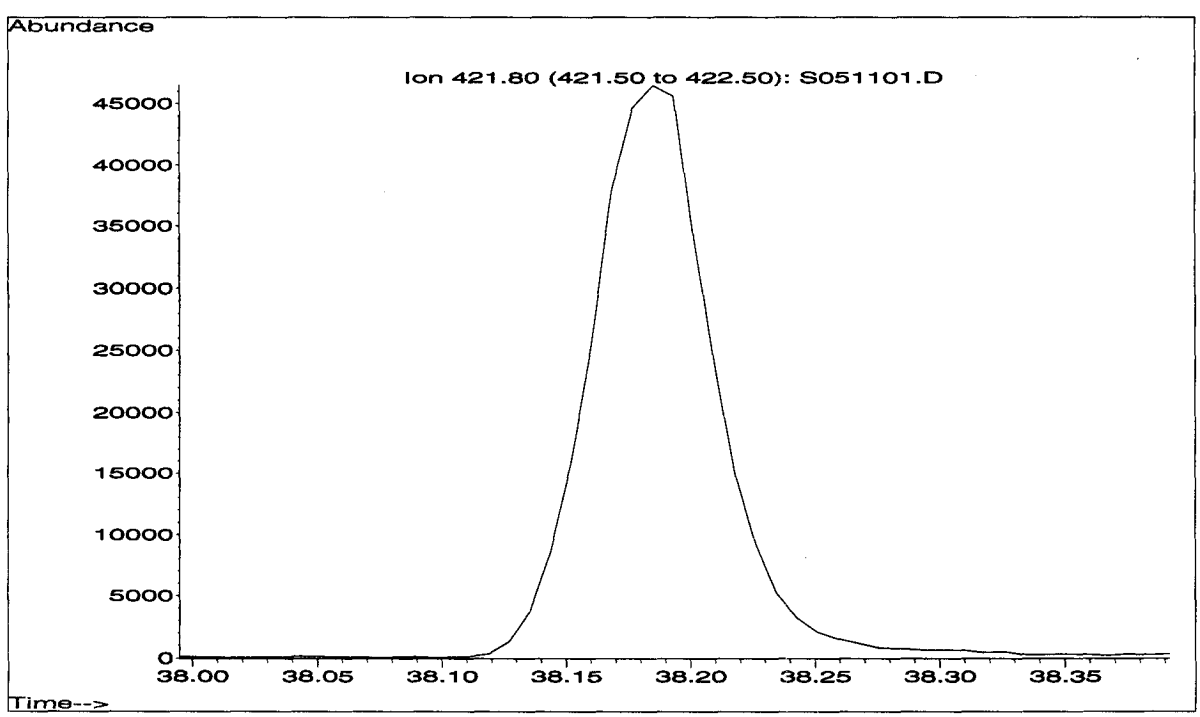




13C-1234678-HpCDF-IS

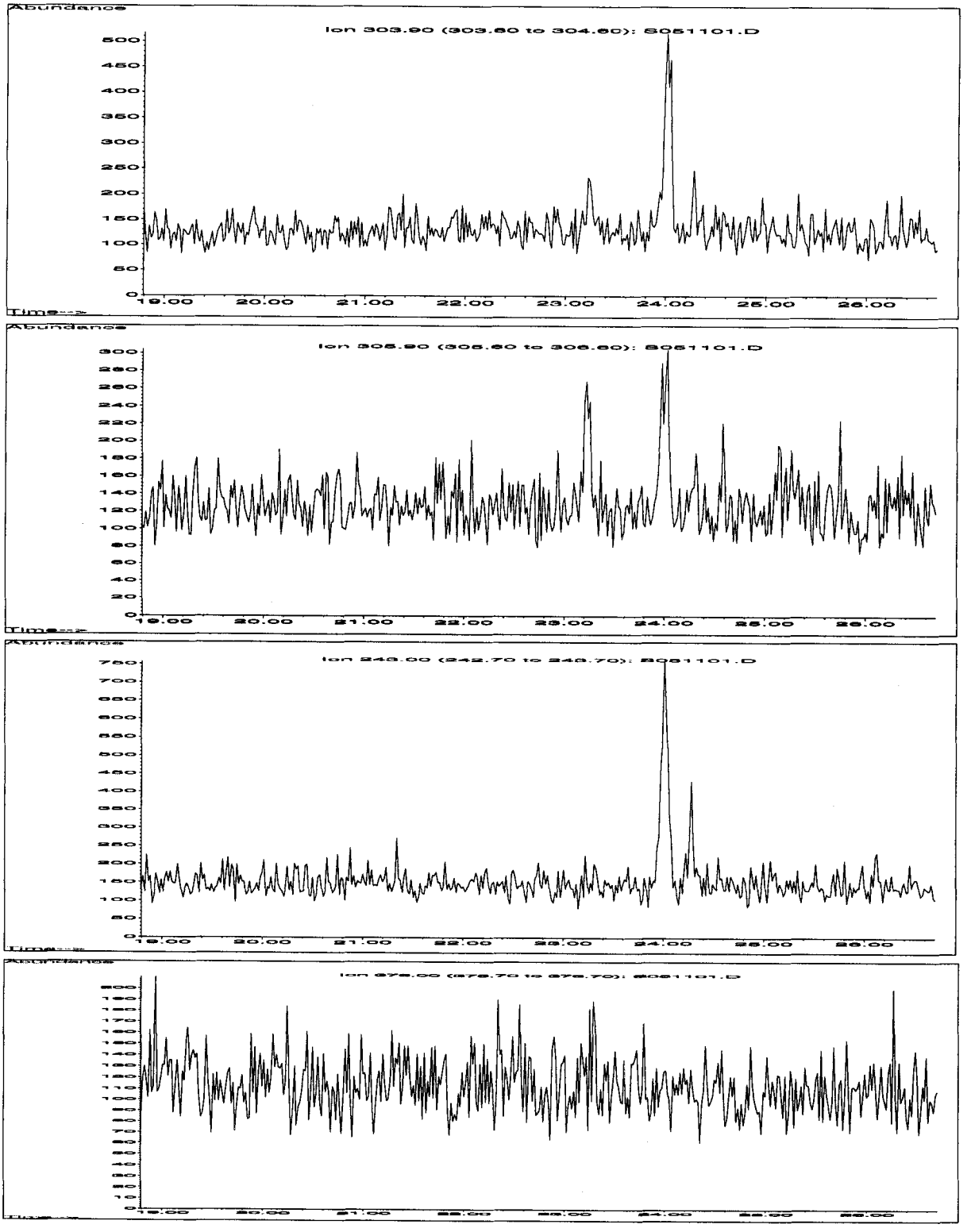
TS R.T. Lower Limit	37.99		
TS R.T. Upper Limit	38.39		
Ret Time	38.19		
Target Ion	419.8	Q1 Ion	421.8
Target Response	169831	Q1 Response	162247
Target Response	332078	Ion Ratio	1.05





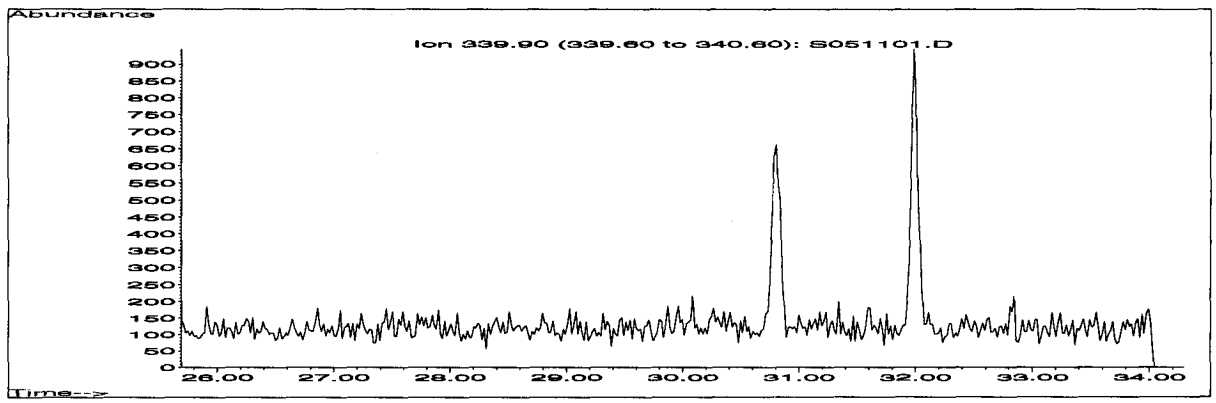
TCDF TOTAL

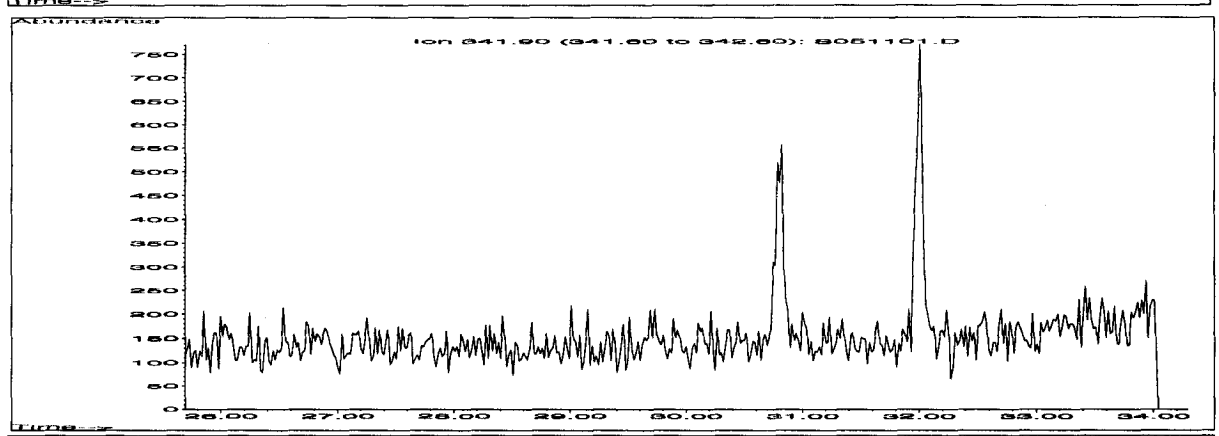
TS R.T. Lower Limit	18.80
TS R.T. Upper Limit	26.70

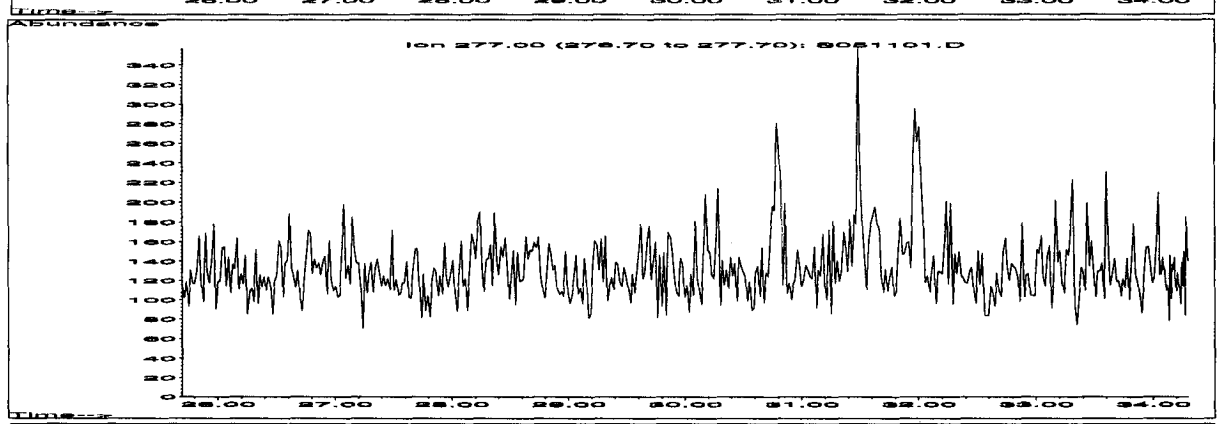


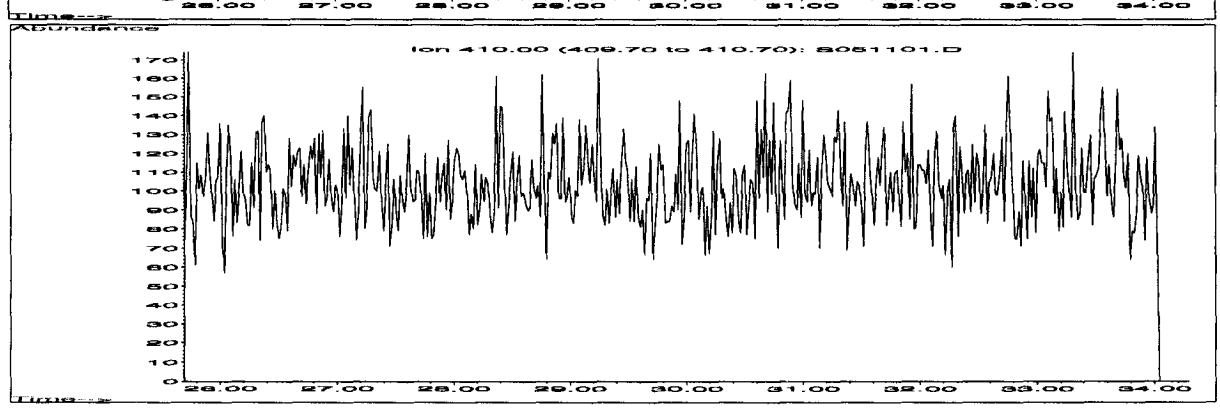
PeCDF TOTAL

TS R.T. Lower Limit	25.70
TS R.T. Upper Limit	34.30



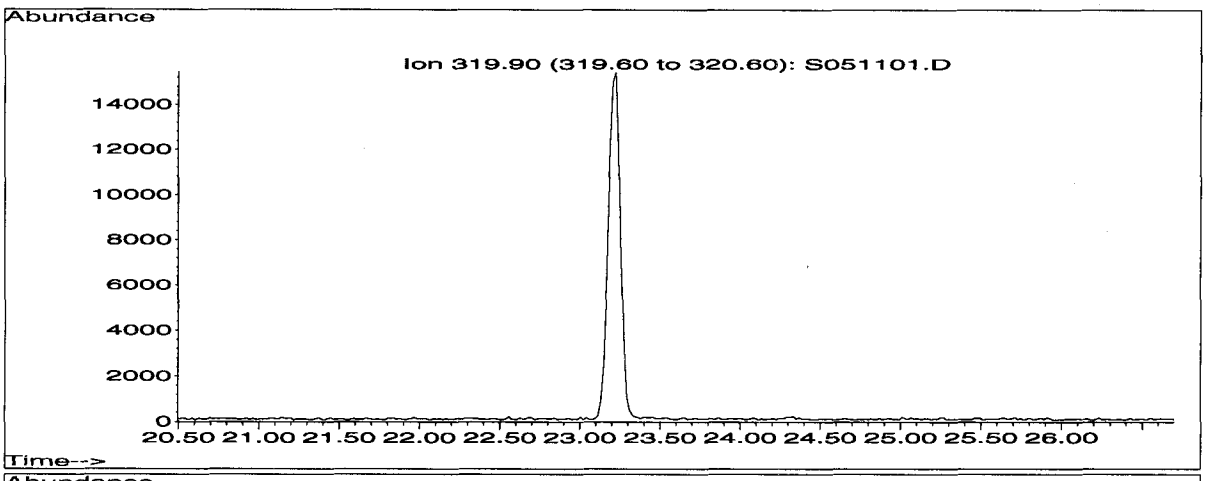


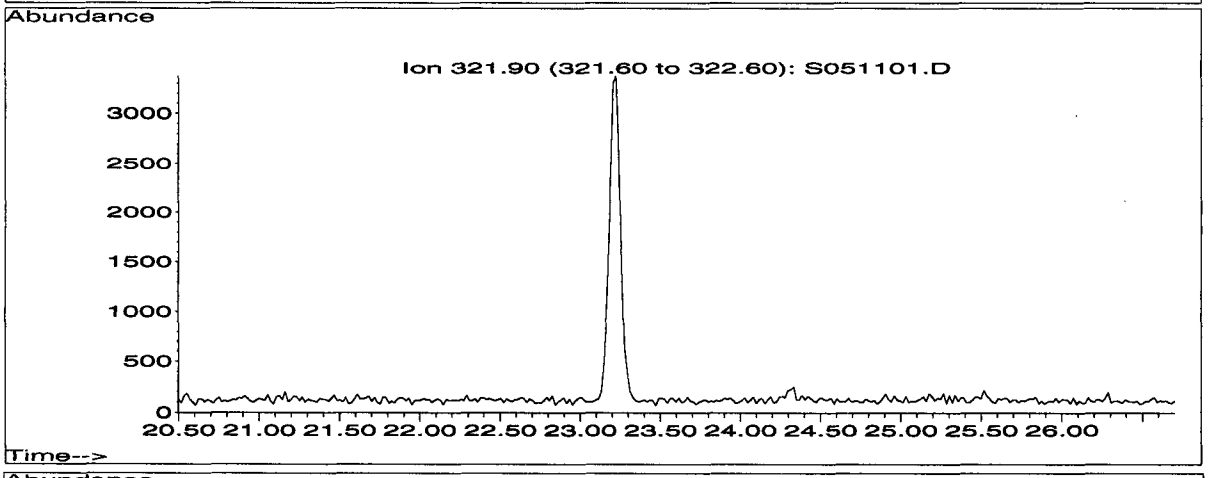


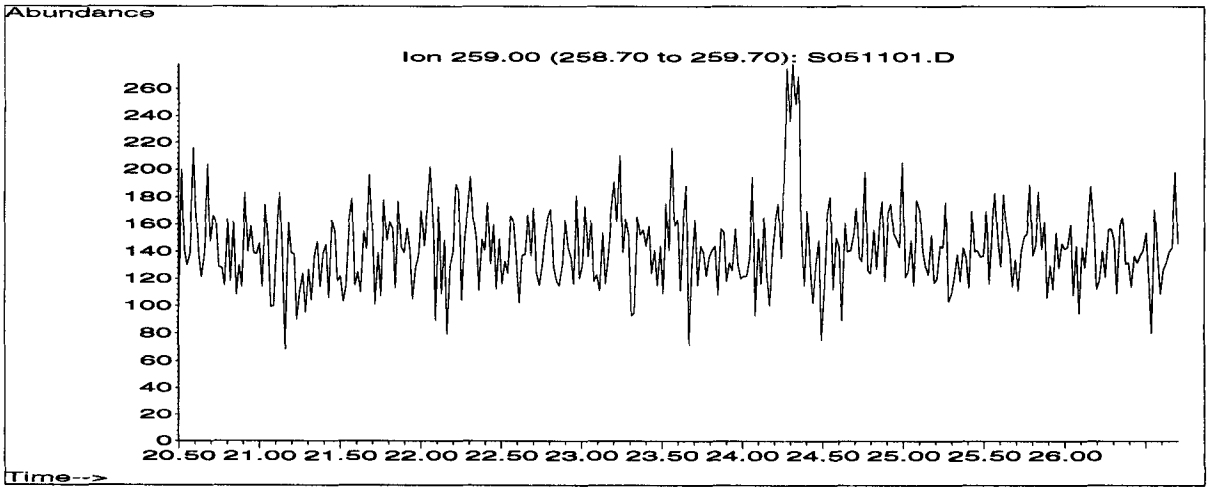


TCDD TOTAL

TS R.T. Lower Limit	20.50
TS R.T. Upper Limit	26.70

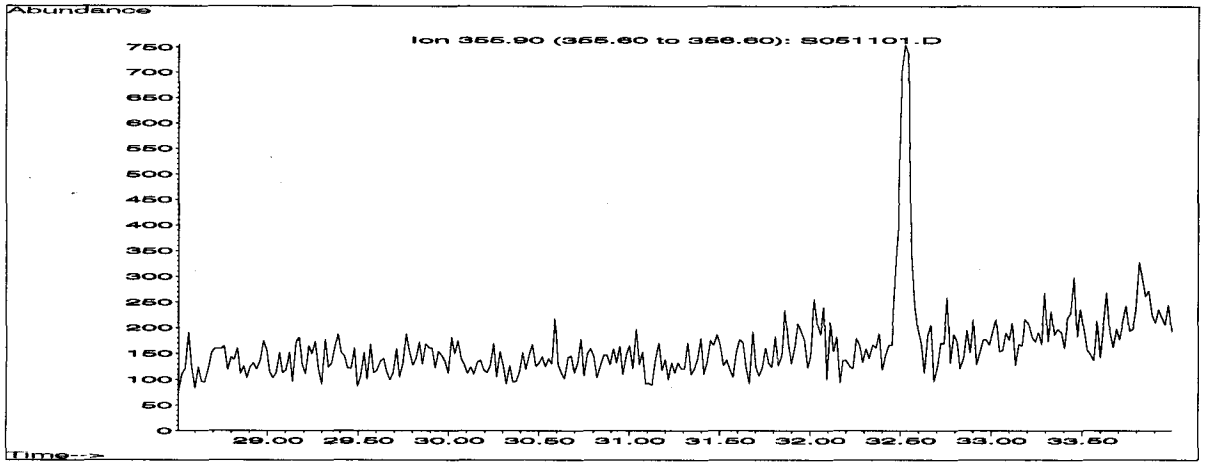


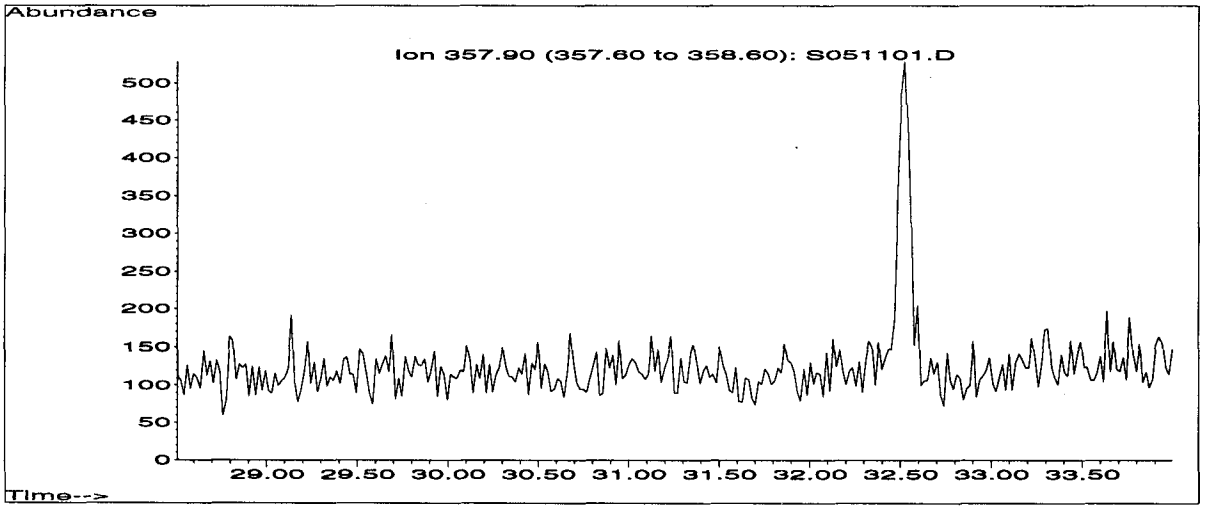


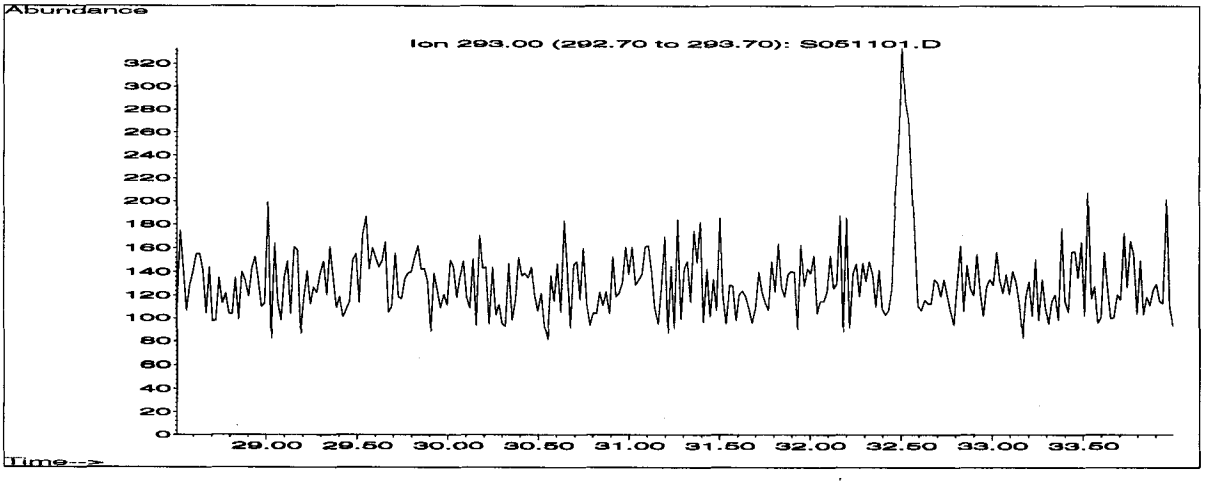


PeCDD TOTAL

TS R.T. Lower Limit	28.50
TS R.T. Upper Limit	34.00

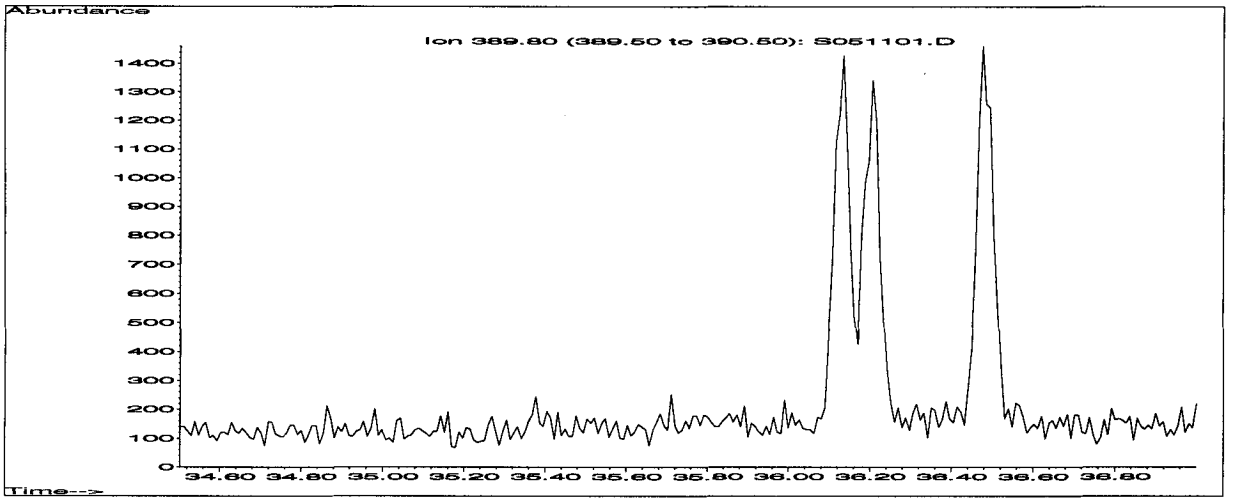


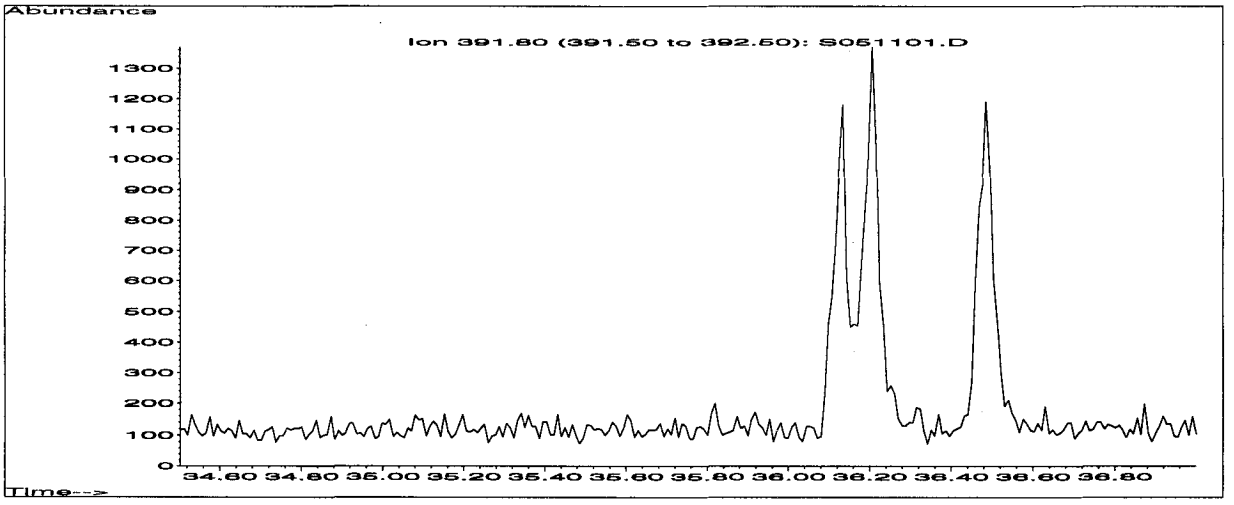


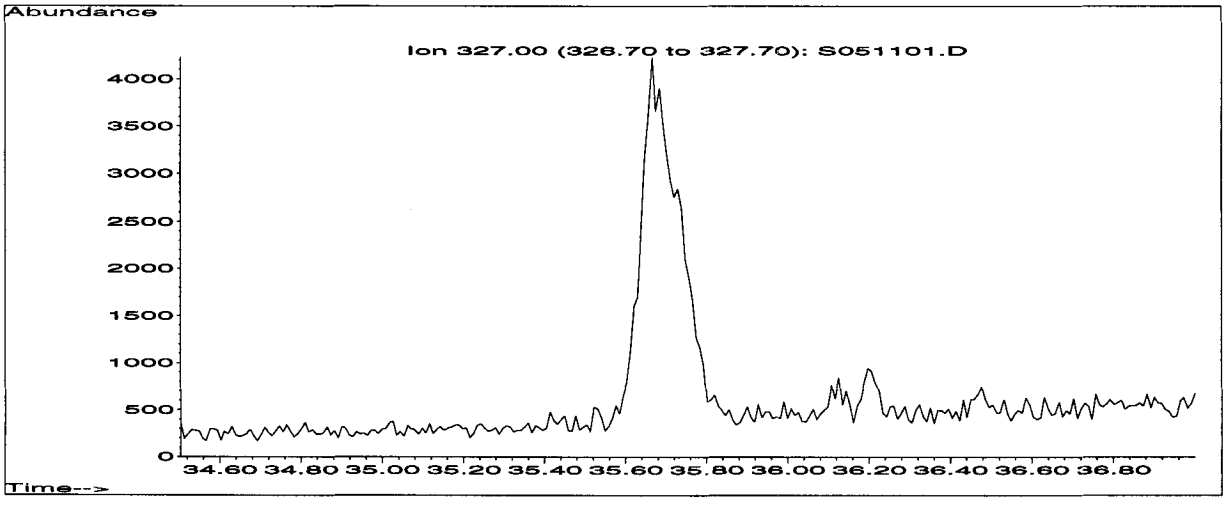


HxCDD TOTAL

TS R.T. Lower Limit	34.50
TS R.T. Upper Limit	37.00

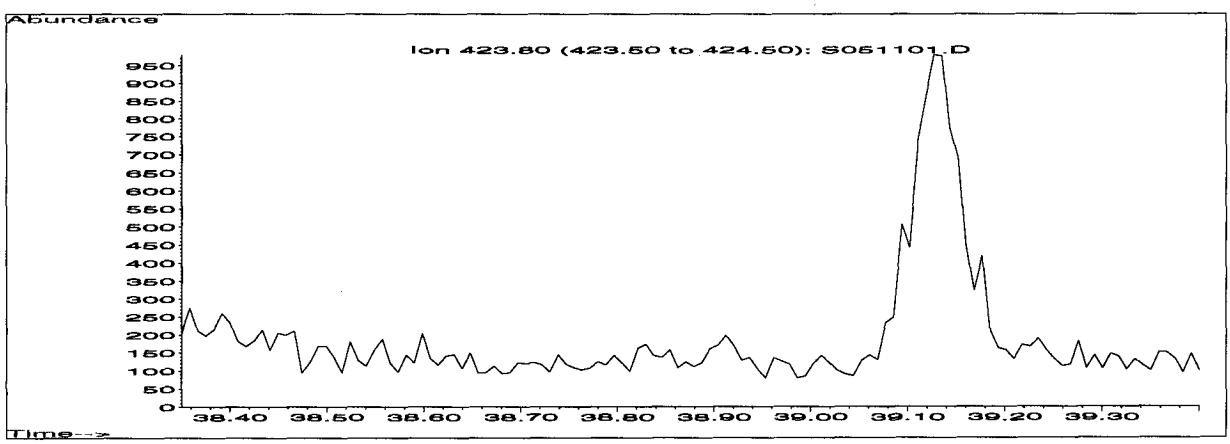


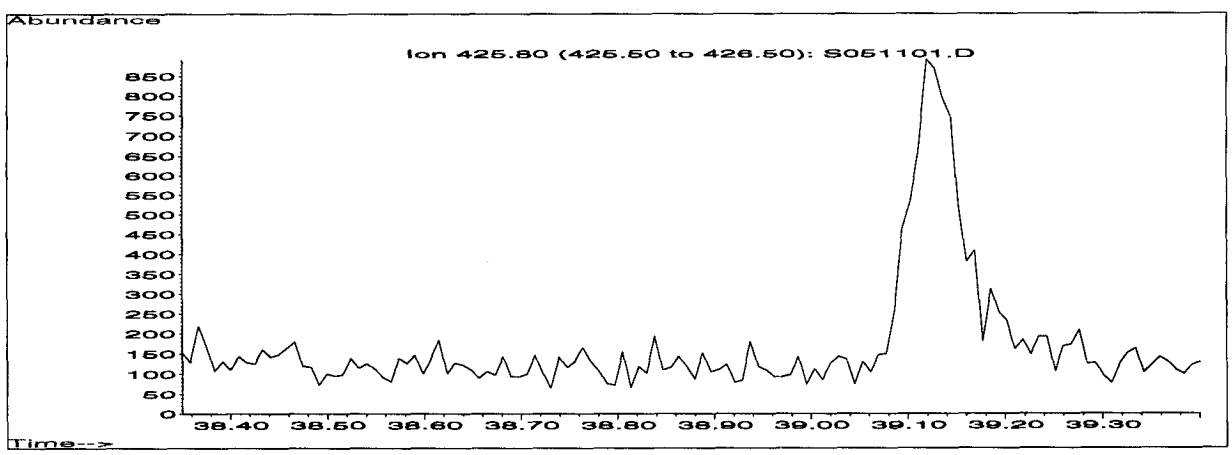


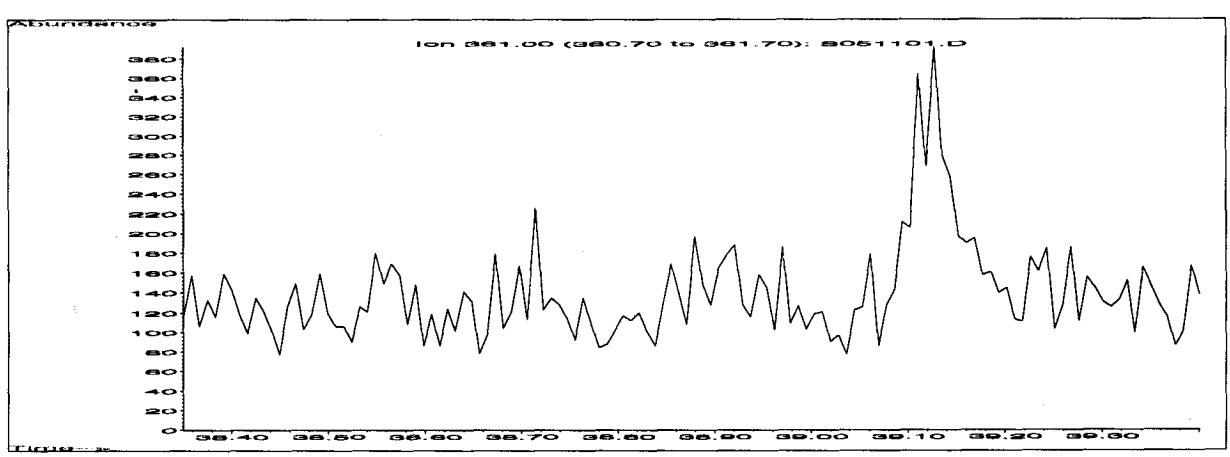


HpCDD TOTAL

TS R.T. Lower Limit	38.35
TS R.T. Upper Limit	39.40

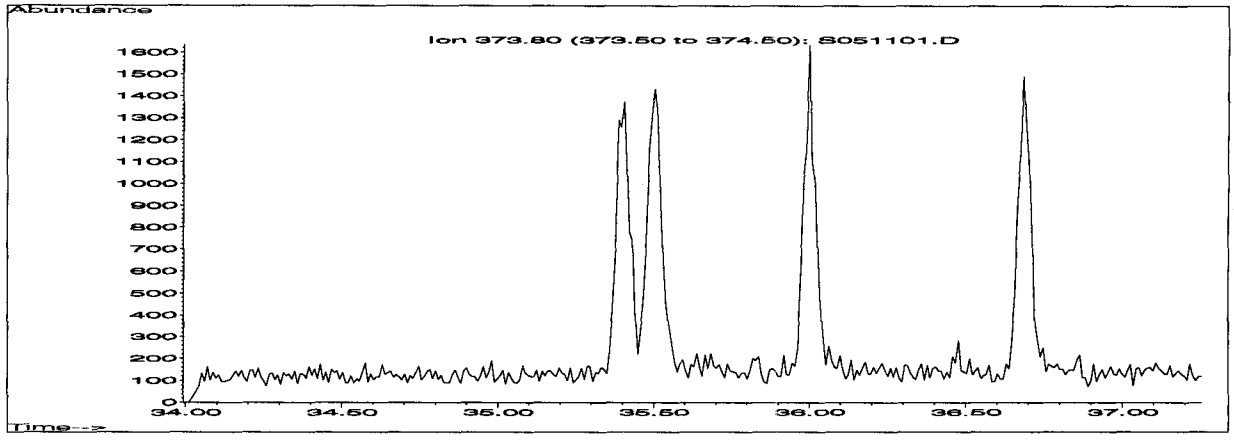


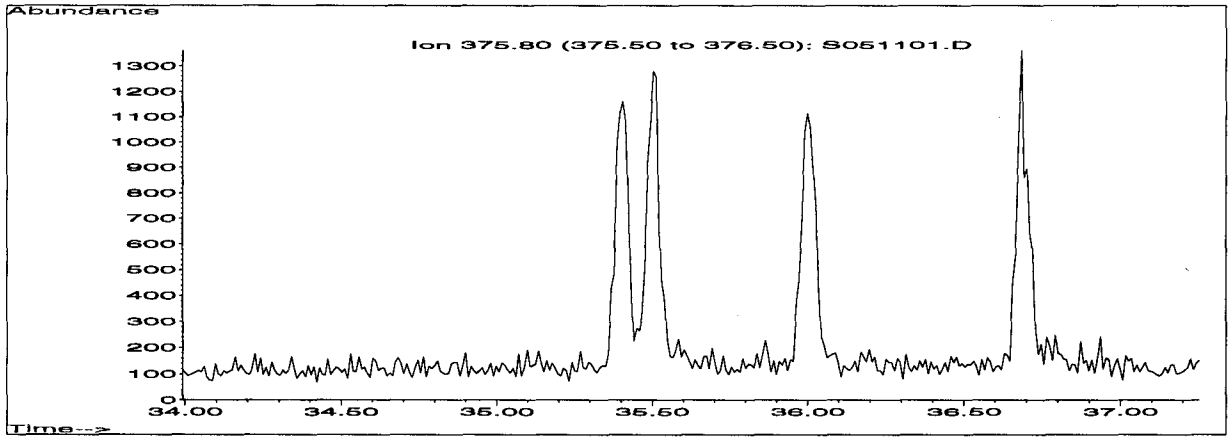


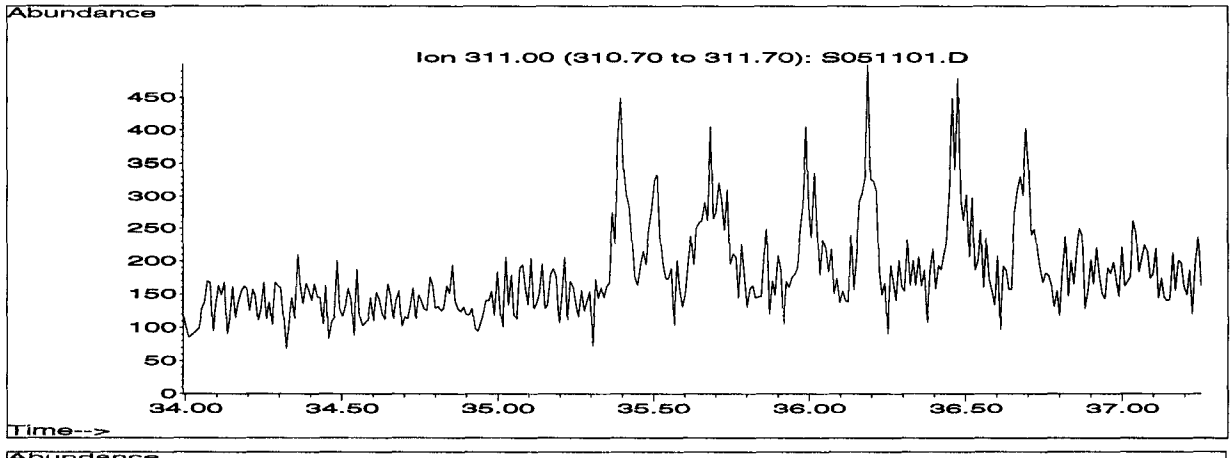


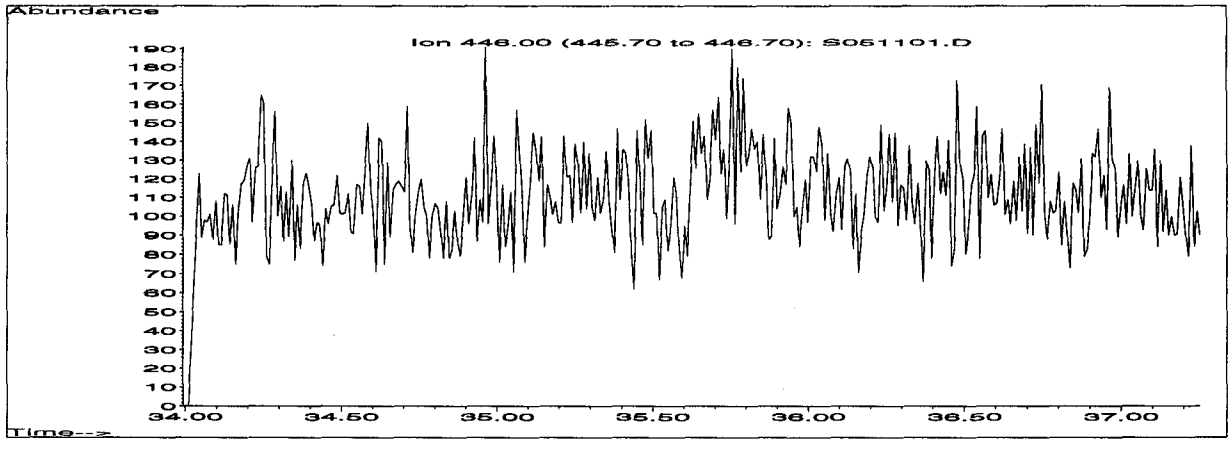
HxCDF TOTAL

TS R.T. Lower Limit	34.00
TS R.T. Upper Limit	37.25



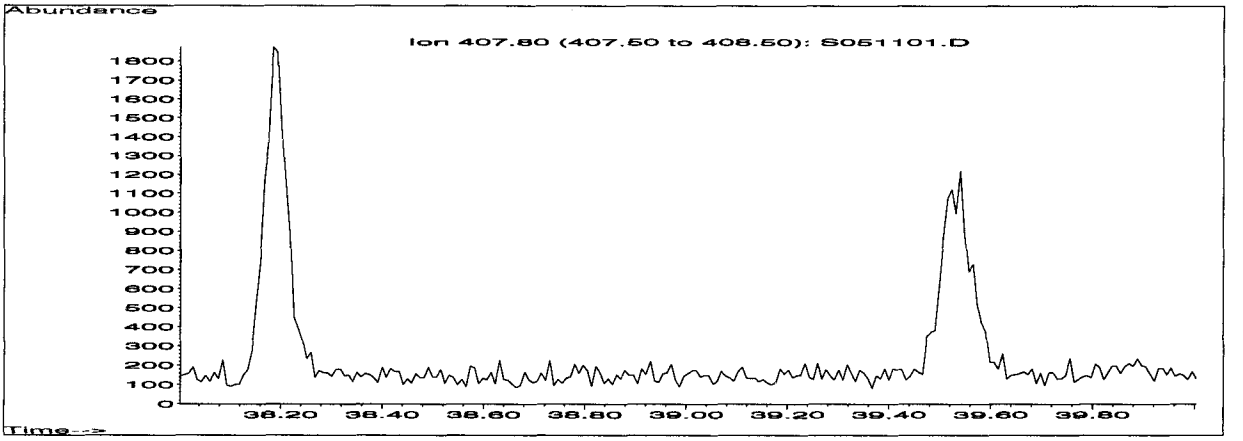


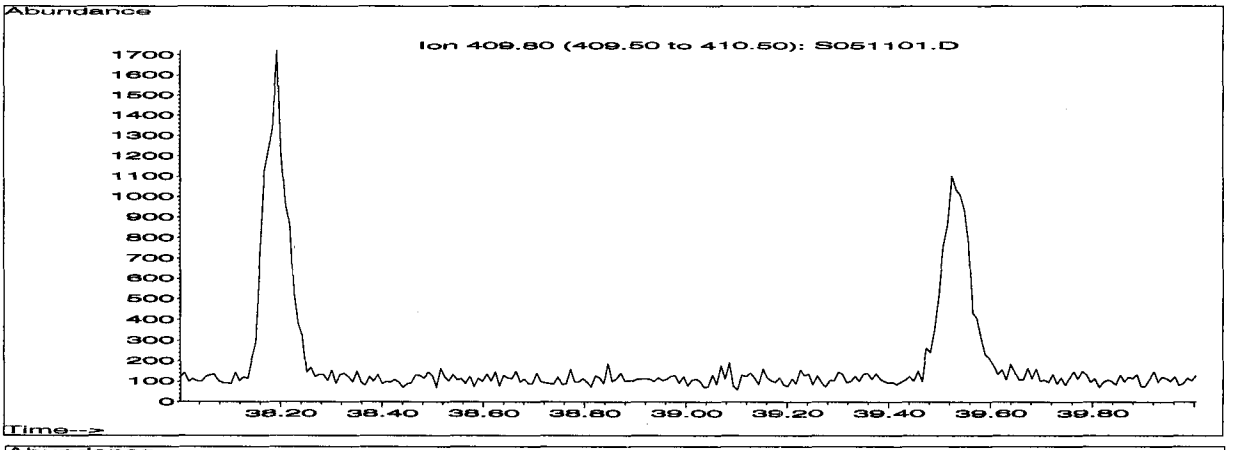


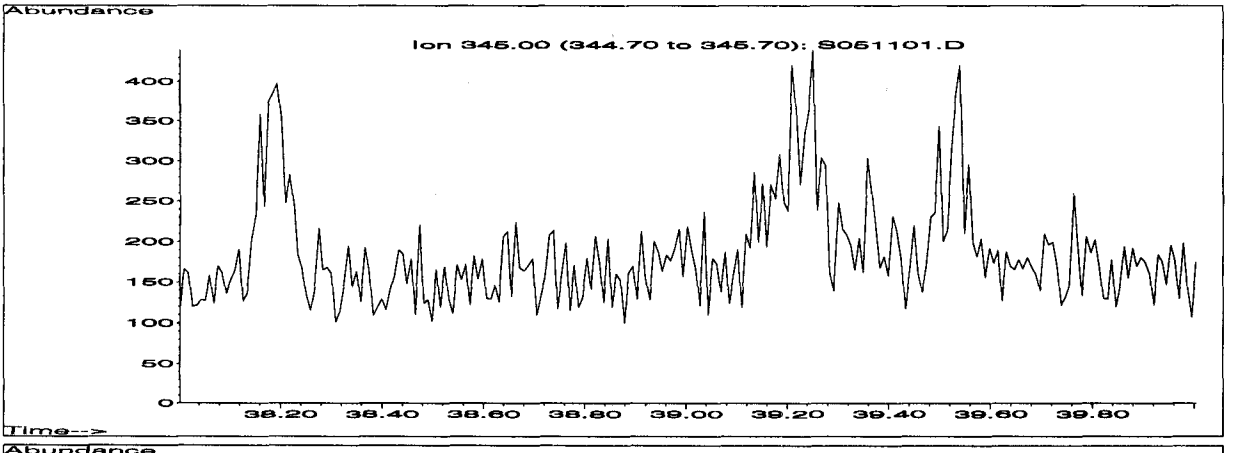


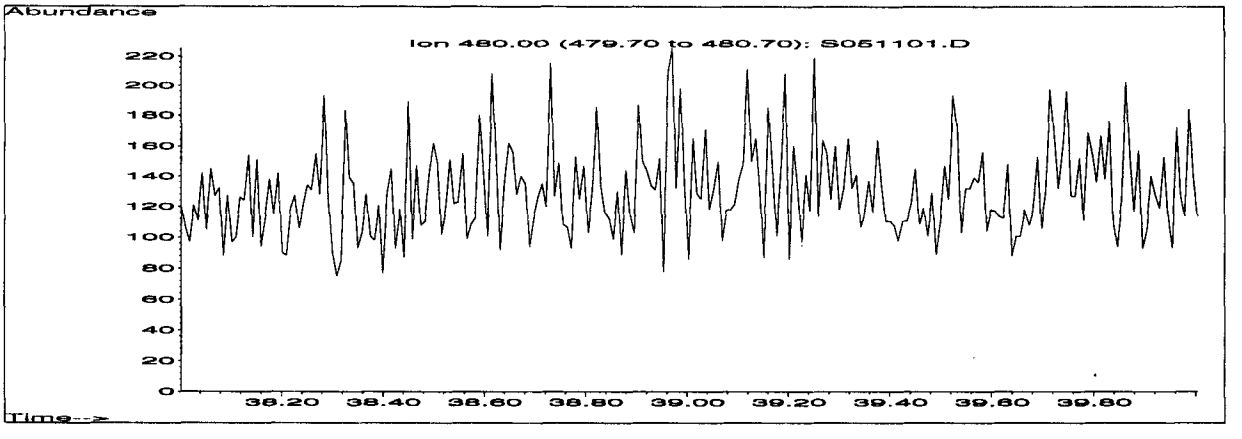
HpCDF TOTAL

TS R.T. Lower Limit	38.00
TS R.T. Upper Limit	40.00

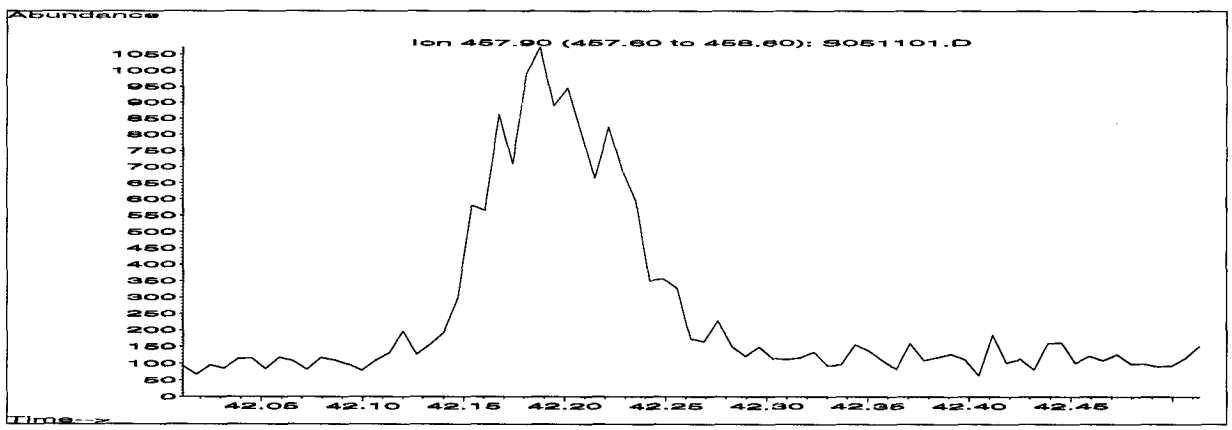


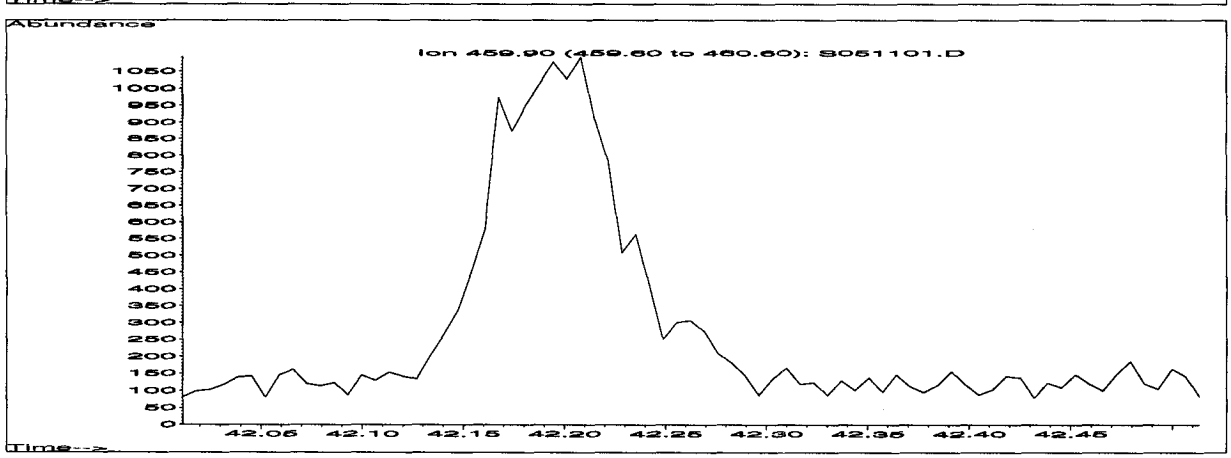


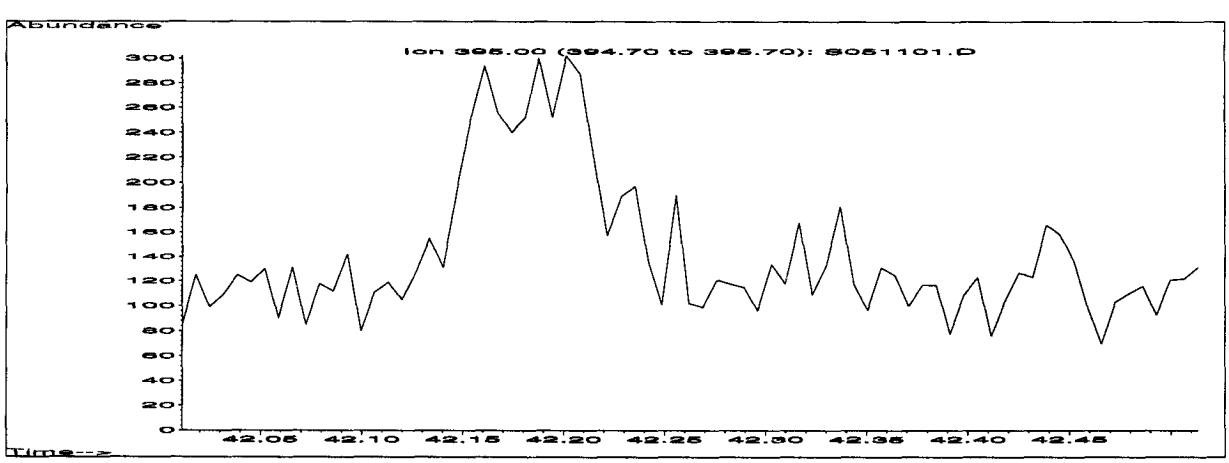




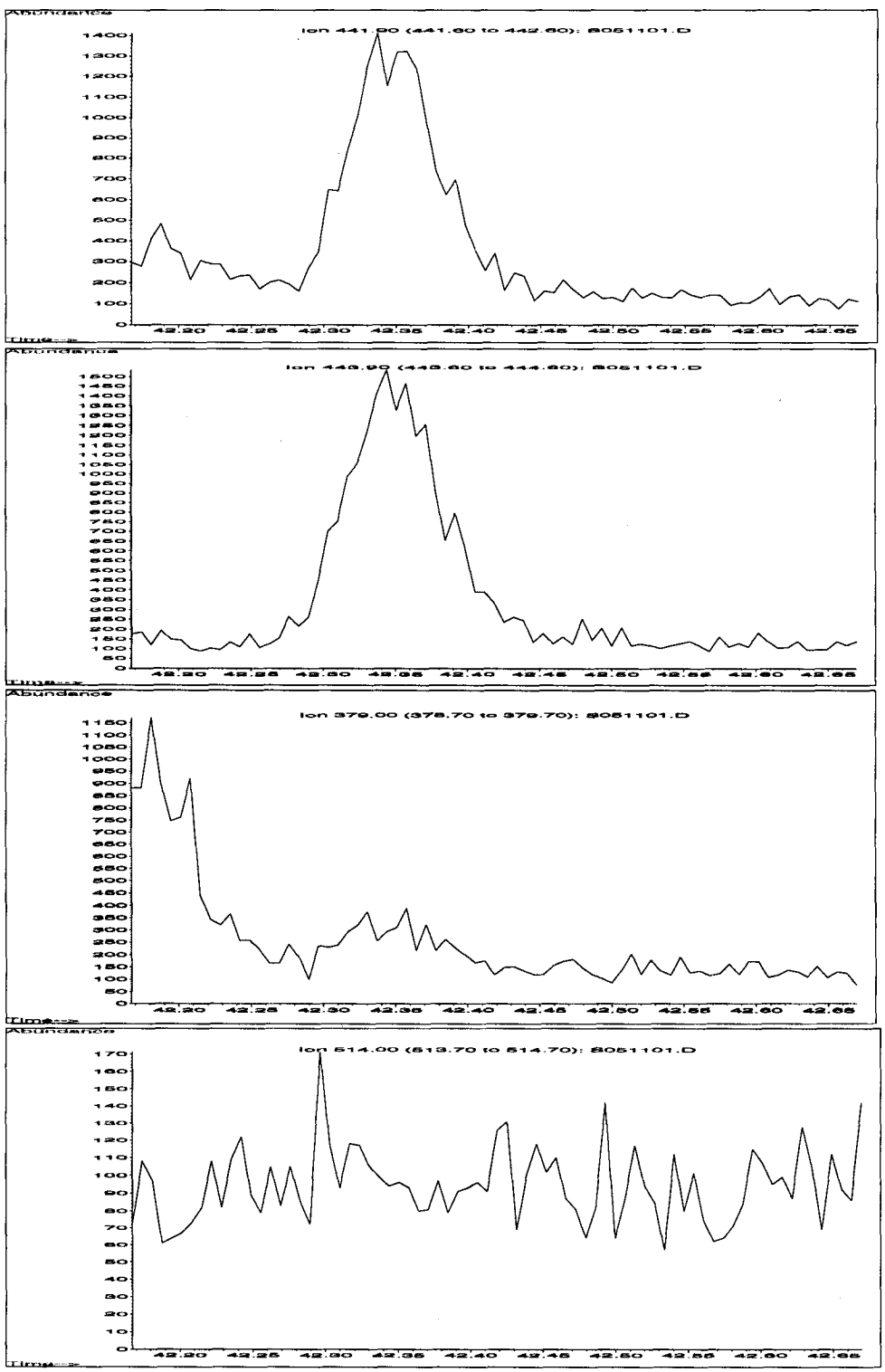
OCDD			
TS R.T. Lower Limit	42.01		
TS R.T. Upper Limit	42.51		
Ret. Time	42.19		
Target Ion	457.9	Q1 Ion	459.9
Target Response	3885	Q1 Response	4826
Total Response	8711	Ion ratio	0.81
Q2 Ion	395		
Q2 Response	0		





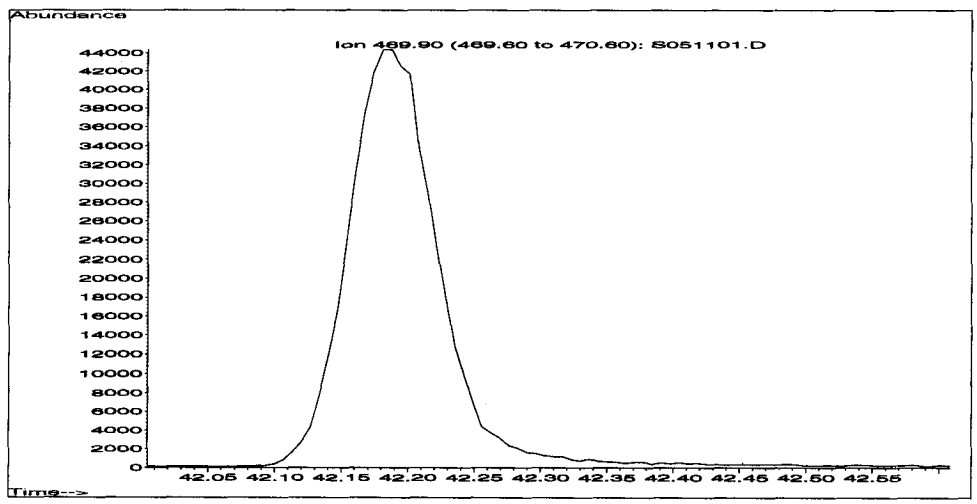


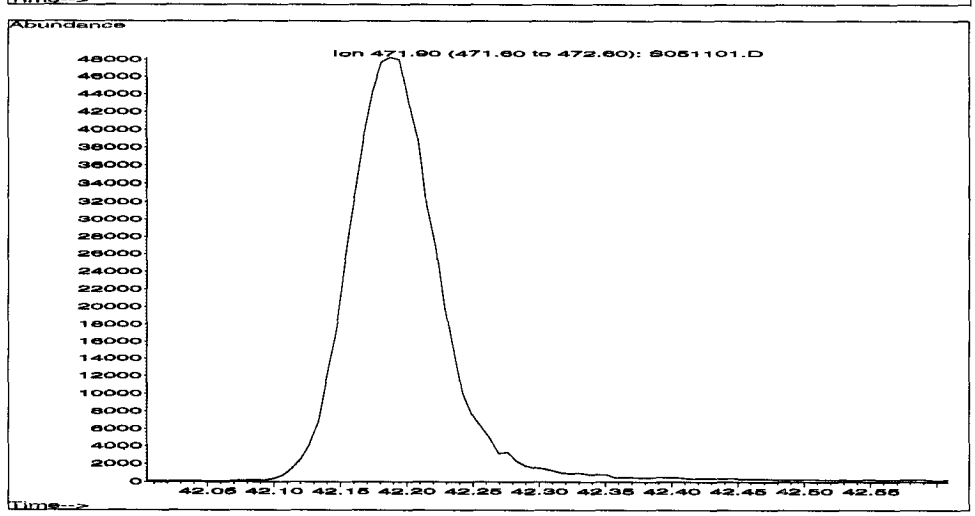
OCDF			
TS R.T. Lower Limit	42.17		
TS R.T. Upper Limit	42.67		
Ret Time	42.34		
Target Ion	441.9	Q1 Ion	443.9
Target Response	2501	Q1 Response	6685
Target Response	9186	Ion Ratio	0.37
Q2 Ion	379	DPE Ion	514
Q2 Response	0	DPE Response	0



13C-OCDD-IS

RT Lower Limit	42.01		
RT Upper Limit	42.61		
Ret Time	42.19		
Target Ion	469.9	Q1 Ion	471.9
Target Response	207679	Q1 Response	225858
Total response	433537	Ratio	0.92





Quantitation Report (Not Reviewed)

=L09N01AC 5/12/10 mc

Sample ID: G0D270571-LCS 1.0L 8280A
L09RG-1-AC WATER LR009

Size: 1.000
Inst : DB1

Data File:C:\8280\2DB\051110.B\S051102.D
Acq On :11 May 2010 18:21

Vial: 2
Operator: MEO
Sample Amount: 1.00

MS Integration Params: RTEINT.P
Quant Time: May 12 9:20 2010

Quant Results File: 10MY11A2.RES

Quant Method : C:\8280\ DATA METHODS\10MY11A2.M (RTE Integrator)
Title : Dioxin Furan Total
Last Update : Tue May 11 17:13:38 2010
Response via : Single (C:\8280\2DB\051110.B\ST0511A.D 11 May 2010 15:57)
DataAcq Meth : TOKAS
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

5/13/10 mc

Recovery\Internal Stds	R.T.	QIon	Ratio	Response	Conc		Dev(Min)
1) 13C-1234-TCDD	24.00	332+334	0.79	403993	25.00	NG	-0.03
5) 13C-123789-HxCDD	36.47	402+404	1.26	609092	25.00	NG	-0.03
9) 13C-2378-TCDF	23.19	316+318	0.82	384221	25.00	NG	-0.03
15) 13C-2378-TCDD	24.28	332+334	0.78	272742	25.00	NG	-0.03
20) 13C-123678-HxCDD	36.19	402+404	1.28	352495	25.00	NG	-0.03
27) 13C-1234678-HpCDF	38.17	420+422	1.05	442395	25.00	NG	-0.03
36) 13C-OCDD	42.19	470+472	0.91	594280	50.00	NG	-0.02

Surrogate Compound

4) 37Cl-2378-TCDD	24.30	328		250095	11.371	NG	-0.03

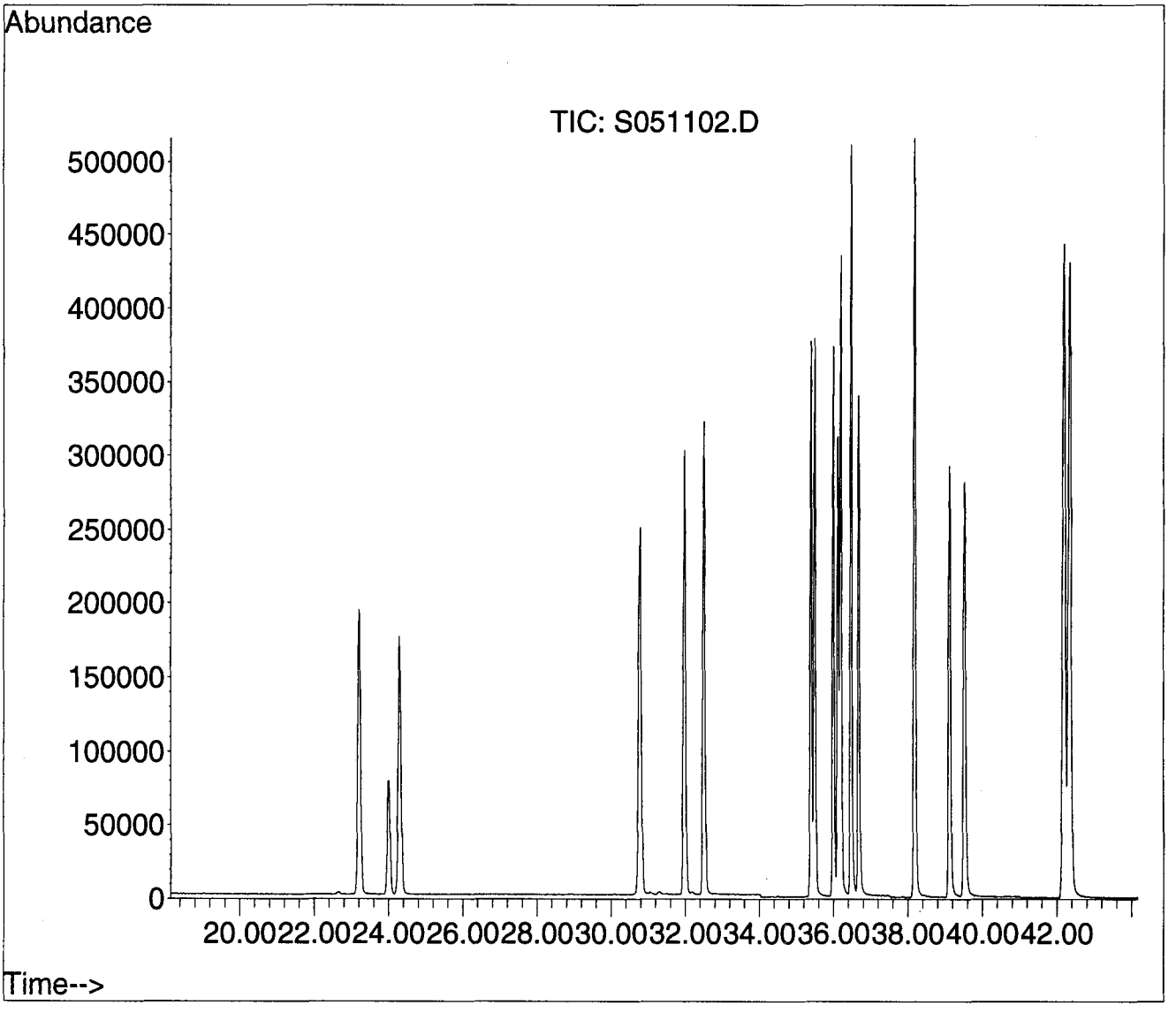
Spiked Amount = 12.500 RRF = 1.361 Recovery = 90.96%

Target Compounds	RT	Ratio		Area	RRF	Conc	EDL	%Rec
2) 13C-2378-TCDF-IS	23.19	0.82		383774	1.407	16.875	0.0319	67.5
3) 13C-2378-TCDD-IS	24.28	0.78		272742	0.991	17.027	0.0700	68.1
6) 13C-123678-HxCDD-	36.19	1.28		353256	0.794	18.260	0.0338	73.0
7) 13C-1234678-HpCDF	38.17	1.05		442395	0.990	18.350	0.0372	73.4
8) 13C-OCDD-IS	42.19	0.91		594280	0.651	37.478	0.0400	75.0
10) 2378-TCDF	23.22	0.76		478786	1.246	24.999	0.0869	
1	22.65	0.67		6260		0.327		
2	23.22	0.76		480959		25.113		
3	23.98	2.02	#	2989		0.156		
11) TCDF TOTAL	22.00	2.02		490208	1.246	25.595		
12) 12378-PeCDF	30.79	1.51		1143477	1.142	65.155	0.0705	
13) 23478-PeCDF	31.99	1.52		1123532	1.143	63.942	0.1011	
1	30.79	1.51		1146350		65.319		
2	31.06	0.93	#	5614		0.320		
3	31.31	1.49		9668		0.551		
4	31.99	1.52		1123532		63.942		
5	32.17	1.53		6013		0.343		
14) PeCDF TOTAL	29.50	1.53		2291177	1.142	130.474		
16) 2378-TCDD	24.30	0.79		342726	1.230	25.542	0.0473	
1	23.21	5.01	#	35209		2.624		
2	24.30	0.79		353422		26.339		
17) TCDD TOTAL	22.50	0.79		388631	1.230	28.963		
18) 12378-PeCDD	32.51	1.60		783560	1.122	64.036	0.0822	
1	32.51	1.60		787119		64.326		
19) PeCDD TOTAL	30.00	1.60		787119	1.122	64.326		
21) 123478-HxCDD	36.13	1.28		893006	0.970	65.290	0.0673	
22) 123678-HxCDD	36.20	1.25		841534	1.003	59.526	0.4576	
23) 123789-HxCDD	36.48	1.25		920647	1.030	63.390	0.5101	
1	36.13	1.28		893006		65.290		
2	36.20	1.20		841534		59.526		
3	36.48	1.24		928651		67.896		

24)	HxCDD TOTAL	36.50	1.24	2663191	0.970	192.711	
25)	1234678-HpCDD	39.12	1.04	905791	1.017	63.174	0.0707
	1	39.12	1.03	905791		63.174	
26)	HpCDD TOTAL	39.35	1.03	905791	1.017	63.174	
28)	123478-HxCDF	35.40	1.20	1061323	0.977	61.373	0.0984
29)	123678-HxCDF	35.49	1.20	1140380	1.049	61.453	0.4690
30)	234678-HxCDF	35.99	1.19	1052783	0.987	60.286	0.1119
31)	123789-HxCDF	36.68	1.21	1026065	0.943	61.499	0.1232
	1	35.40	1.20	1061323		61.373	
	2	35.49	1.19	1140380		61.453	
	3	35.99	1.19	4775143		286.206	
	4	36.68	1.21	1029120		61.682	
32)	HxCDF TOTAL	36.00	1.21	8005966	0.943	470.714	
33)	1234678-HpCDF	38.19	1.04	1290251	1.163	62.685	0.0566
34)	1234789-HpCDF	39.52	1.05	1139140	1.028	62.617	0.0452
	1	38.19	1.04	1290251		62.685	
	2	39.52	1.04	1139140		62.617	
35)	HpCDF TOTAL	39.50	1.04	2429391	1.028	125.302	
37)	OCDD	42.19	0.90	1637563	1.109	124.216	0.0885
38)	OCDF	42.34	0.91	2101130	1.416	124.871	0.1589

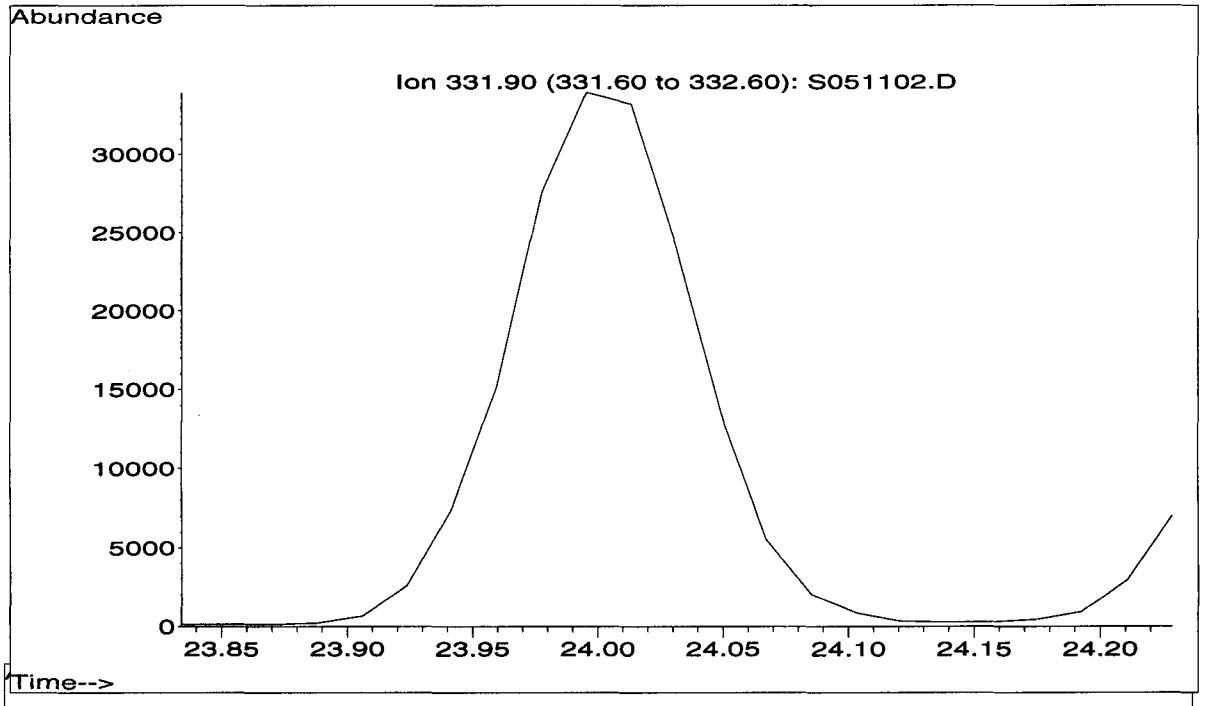
(#) = qualifier out of range•: areas and concentration based on theoretical ion ratio
(m) = manual integration
S051102.D 10MY11A2.M Wed May 12 09:20:10 2010

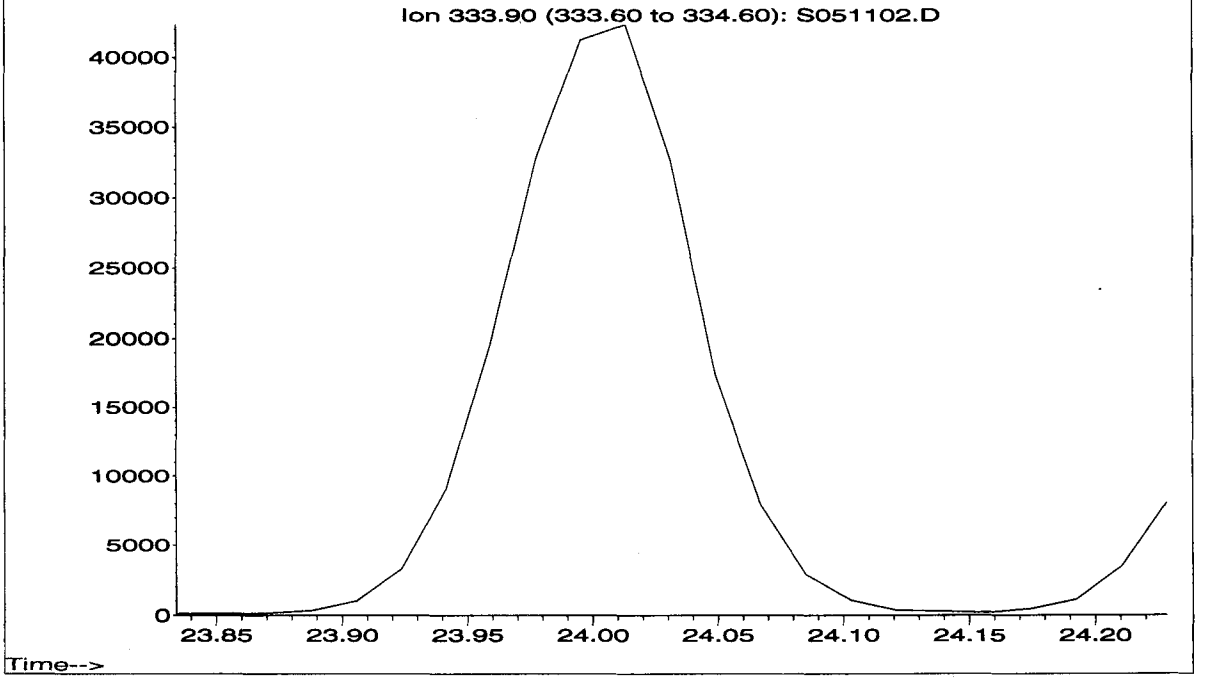
Data File Name	S051102.D
Data File Path	C:\8280\2DB\051110.B\
Operator	MEO
Date Acquired	5/11/2010 18:21
Acq. Method File	TOKAS
Sample Name	_09RG-1-AC WATER LR009
Misc Info	30D270571-LCS 1.0L 8280A
Vial Number	2
Instrument Name	2DB
Sample Multiplier	1
Sample Amount	1



13C-1234-TCDD

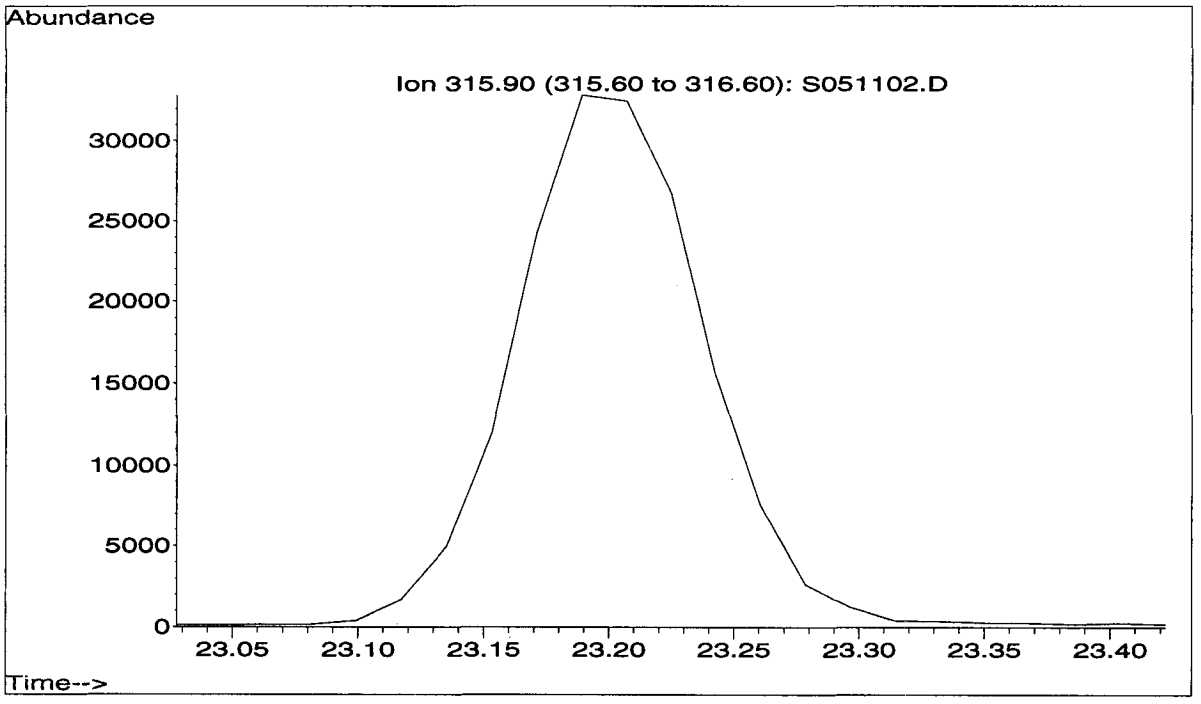
TS R.T. Lower Limit	23.83		
TS R.T. Upper Limit	24.23		
Ret Time	24.00		
Target Ion	331.9	Q1 Ion	333.9
Target Response	178052	Q1 Response	225941
Total Response	403993	Ion Ratio	0.79

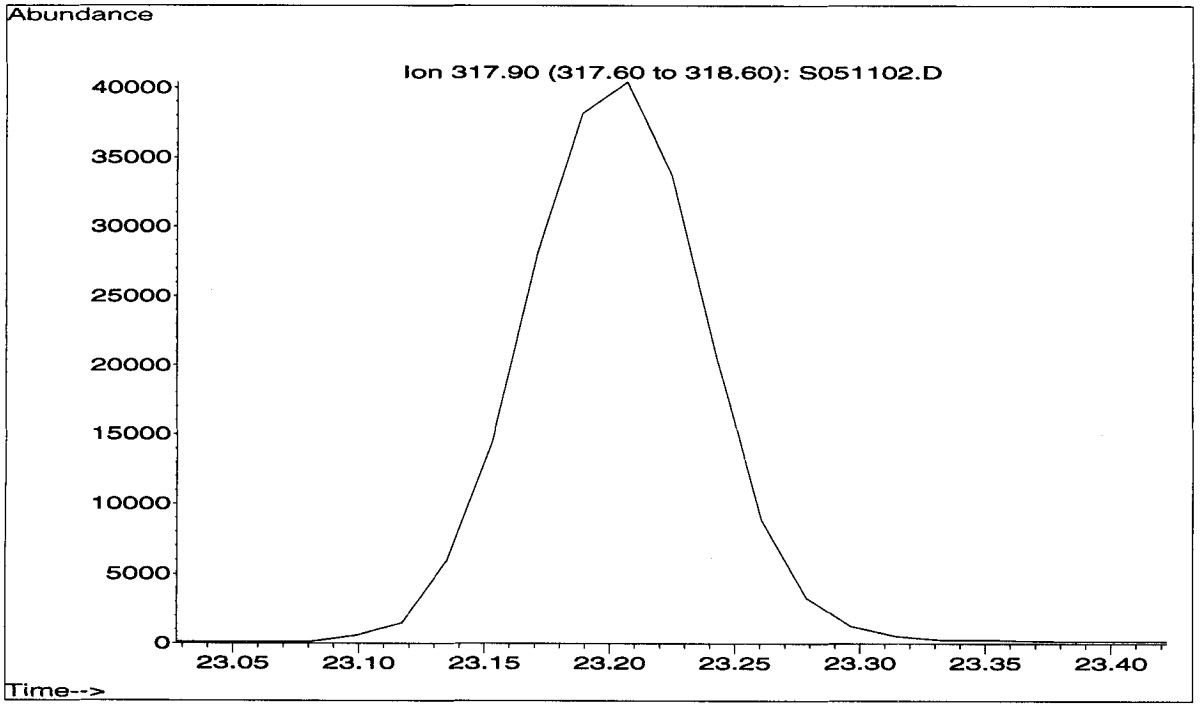




13C-2378-TCDF-IS

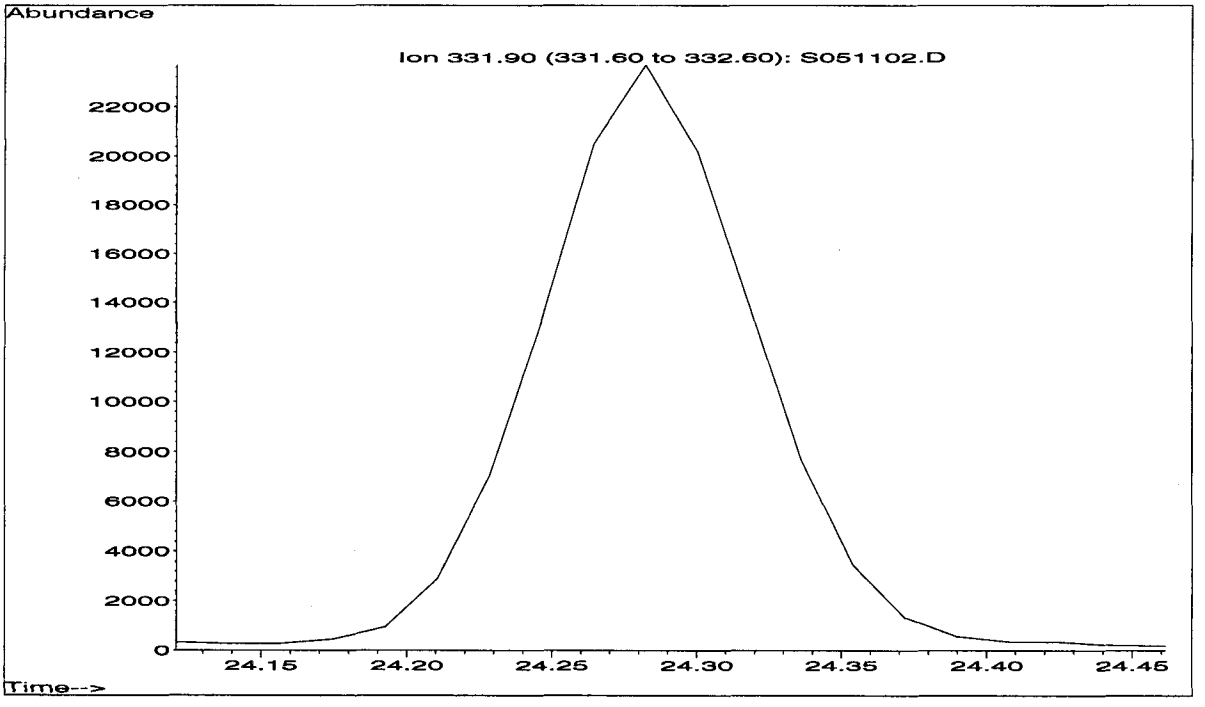
TS R.T. Lower Limit	23.02		
TS R.T. Upper Limit	23.42		
Ret Time	23.19		
Target Ion	315.9	Q1 Ion	317.9
Target Response	172952	Q1 Response	210822
Target Response	383774	Ion Ratio	0.82

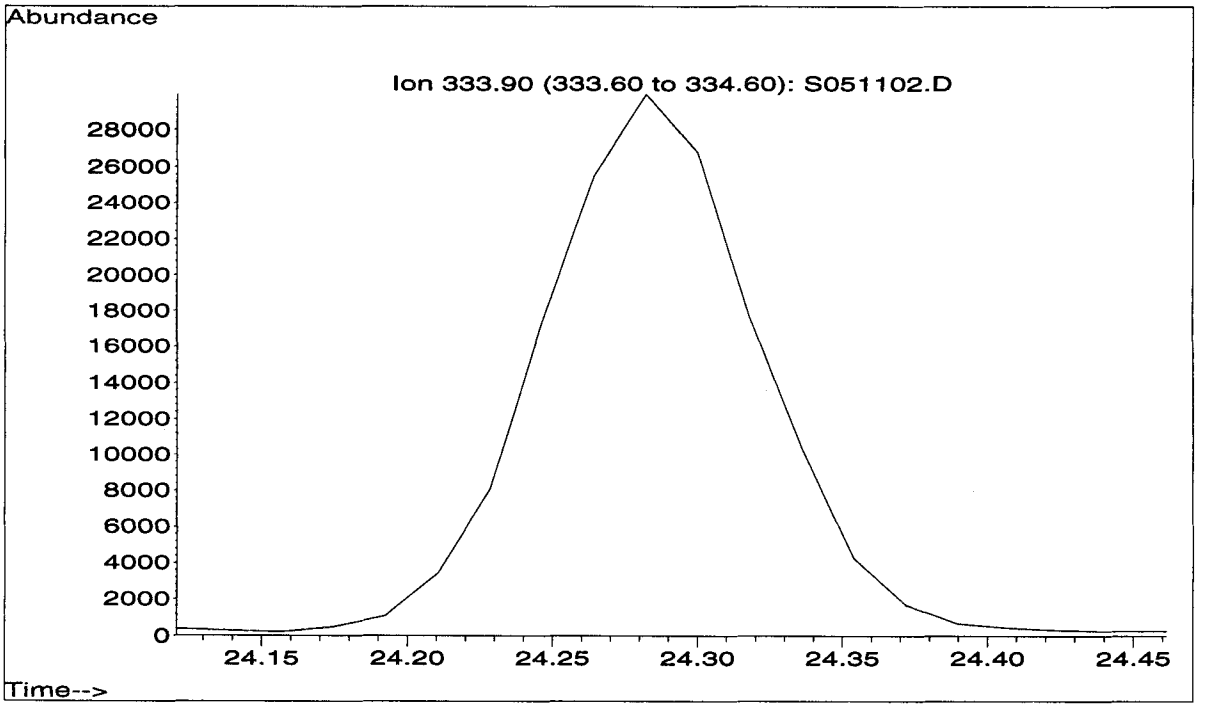




13C-2378-TCDD-IS

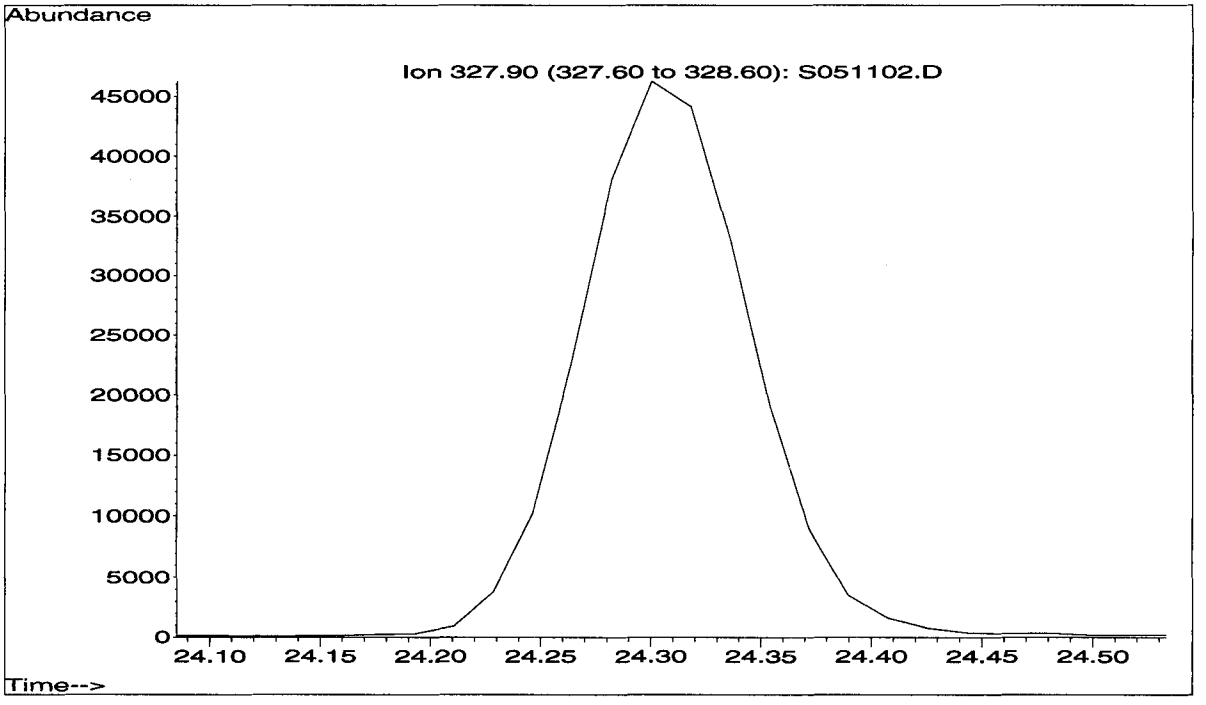
TS R.T. Lower Limit	24.12		
TS R.T. Upper Limit	24.47		
Ret Time	24.28		
Target Ion	331.9	Q1 Ion	333.9
Target Response	119419	Q1 Response	153323
Total Response	272742	Ion Ratio	0.78

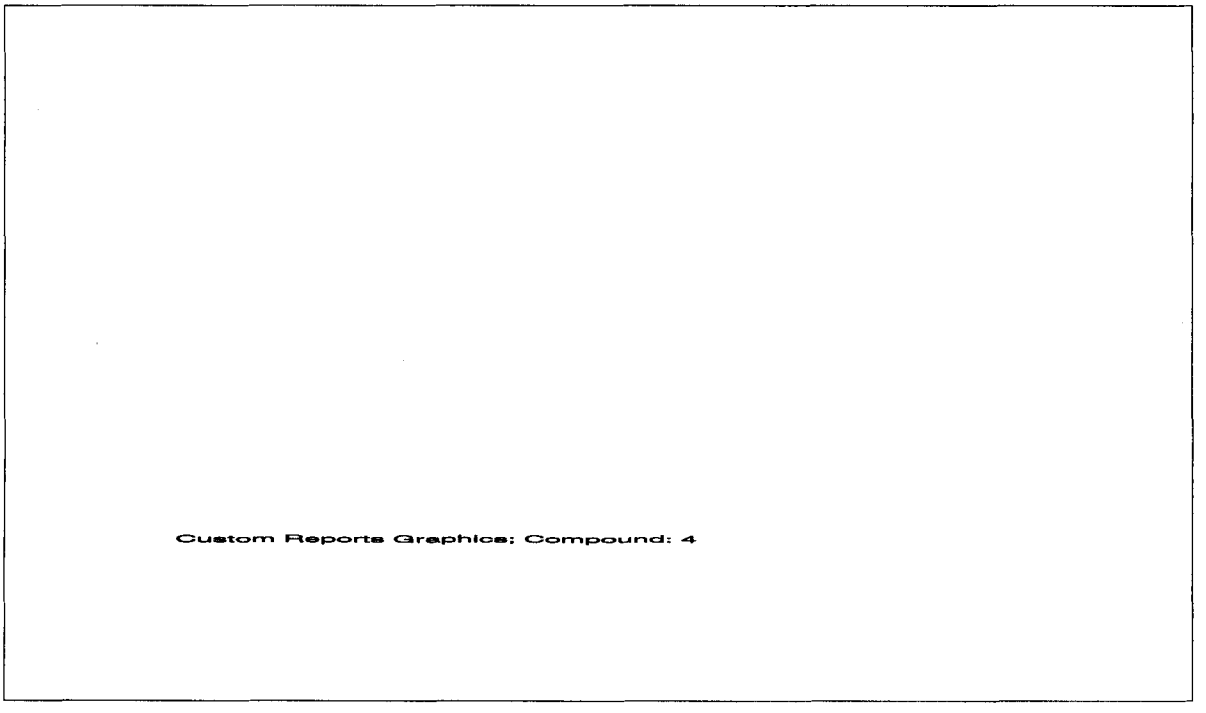




37Cl-2378-TCDD

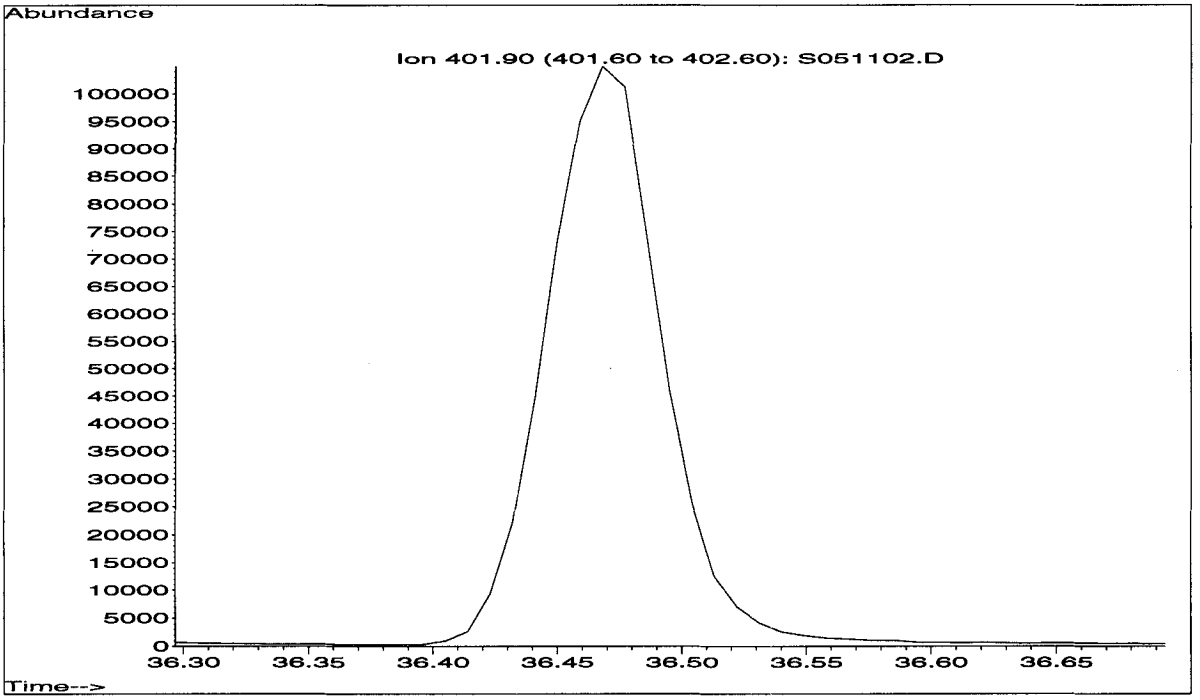
TS R.T. Lower Limit	24.08		
TS R.T. Upper Limit	24.53		
Ret Time	24.30		
Target Ion	327.9	Q1 Ion	0
Target Response	250095	Q1 Response	0
Total Response	250095	Ion Ratio	#DIV/0!

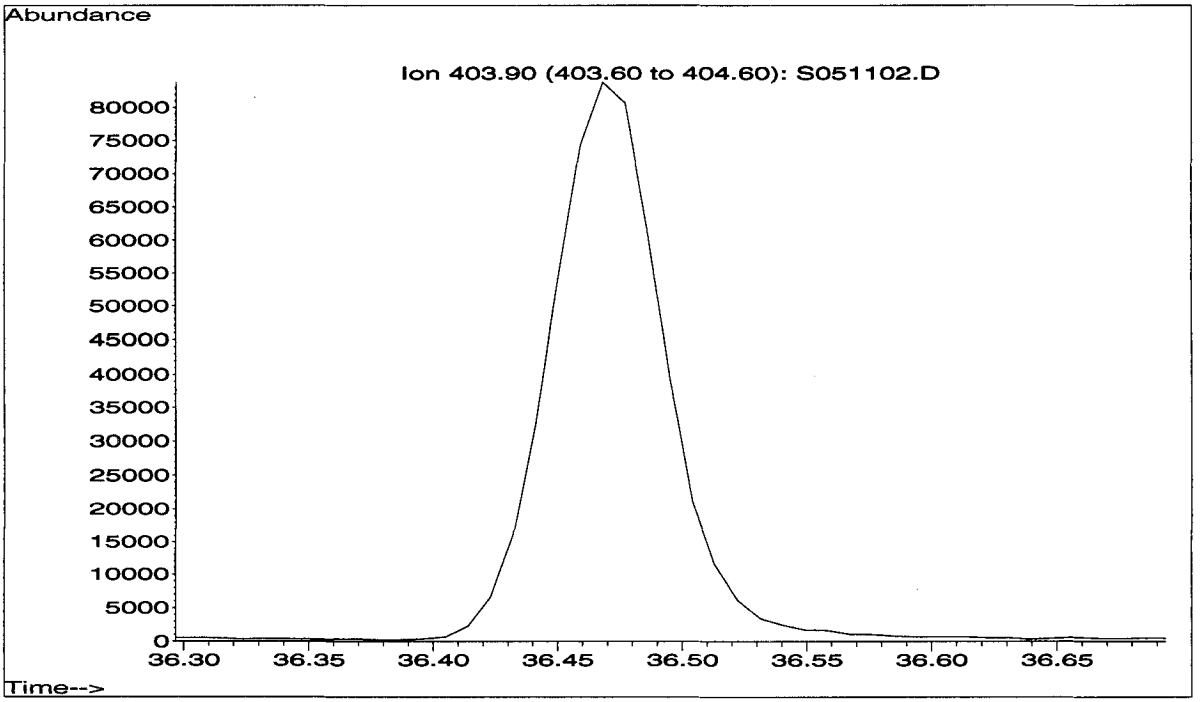




13C-123789-HxCDD

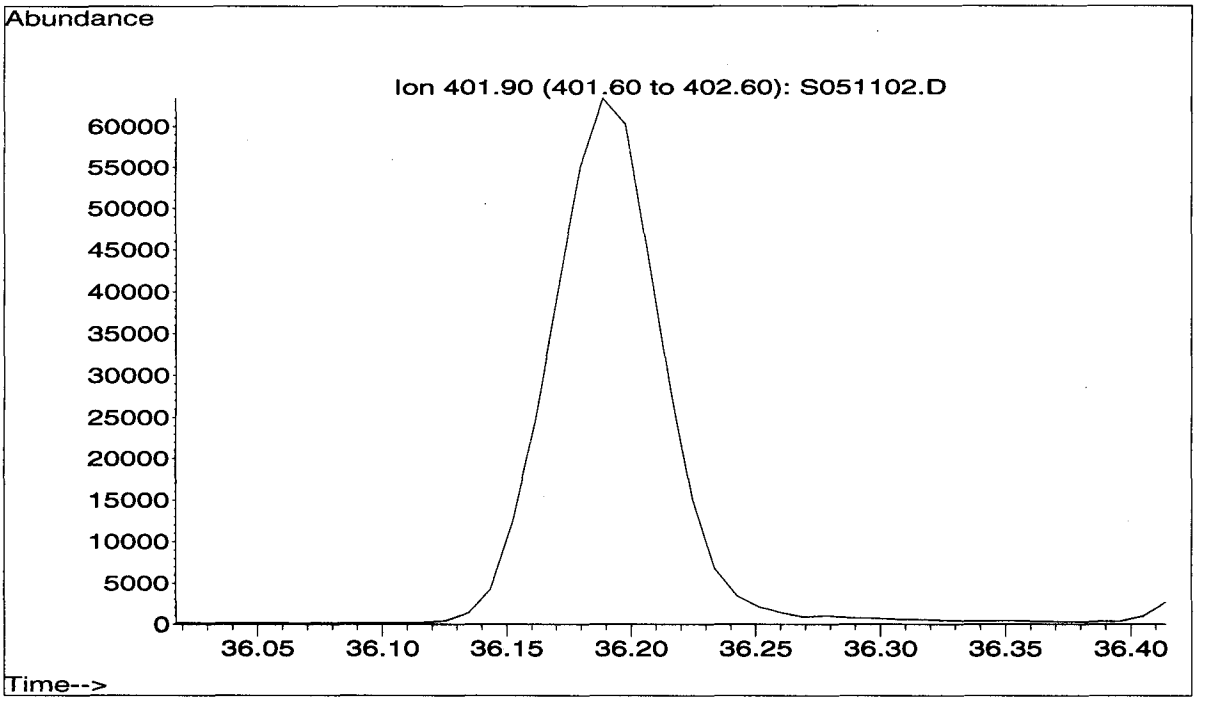
TS R.T. Lower Limit	36.29		
TS R.T. Upper Limit	36.69		
Ret Time	36.47		
Target Ion	401.9	Q1 Ion	403.9
Target Response	339441	Q1 Response	269651
Target Response	609092	Ion Ratio	1.26

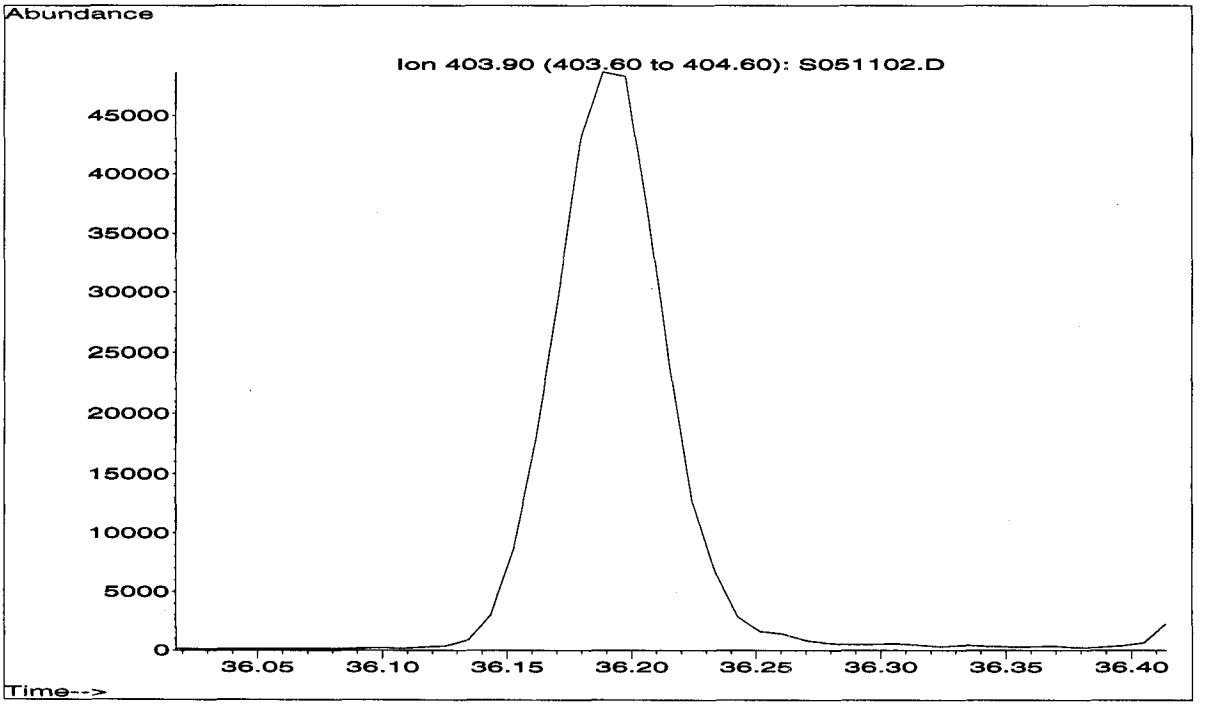




13C-123678-HxCDD-IS

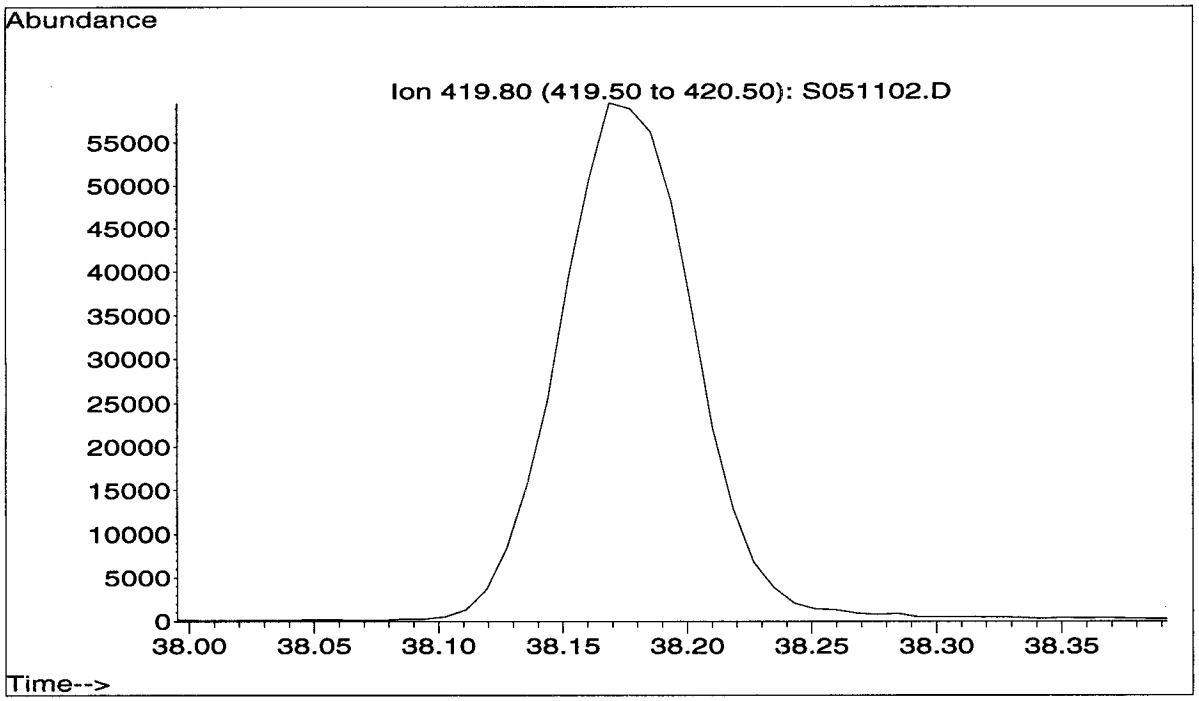
TS R.T. Lower Limit	36.01		
TS R.T. Upper Limit	36.41		
Ret Time	36.19		
Target Ion	401.9	Q1 Ion	403.9
Target Response	198194	Q1 Response	155062
Total Response	353256	Ion Ratio	1.28

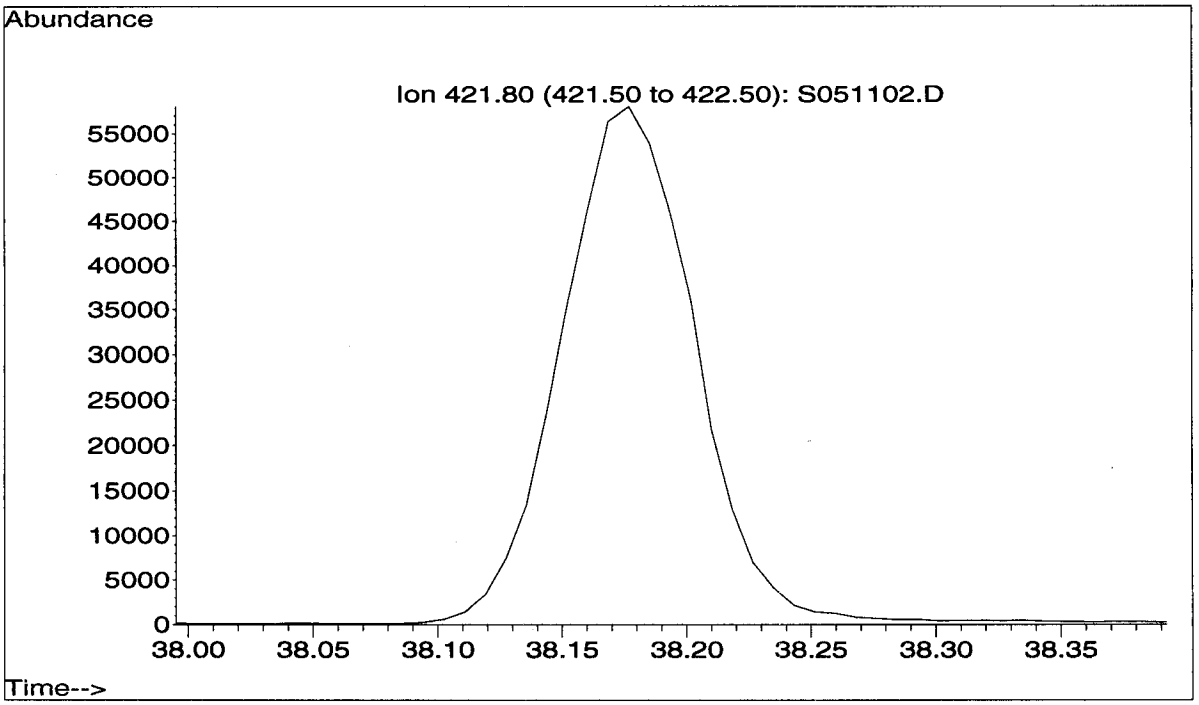




13C-1234678-HpCDF-IS

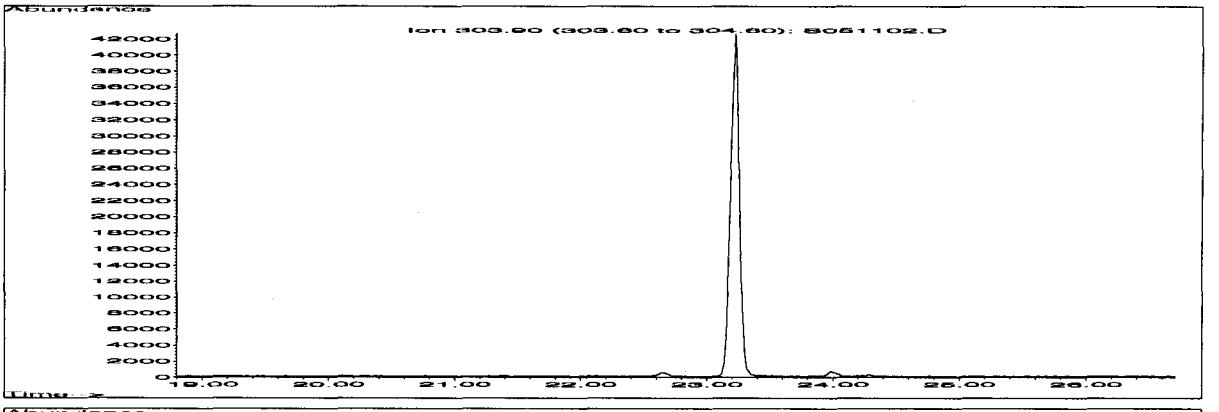
TS R.T. Lower Limit	37.99		
TS R.T. Upper Limit	38.39		
Ret Time	38.17		
Target Ion	419.8	Q1 Ion	421.8
Target Response	226597	Q1 Response	215798
Target Response	442395	Ion Ratio	1.05

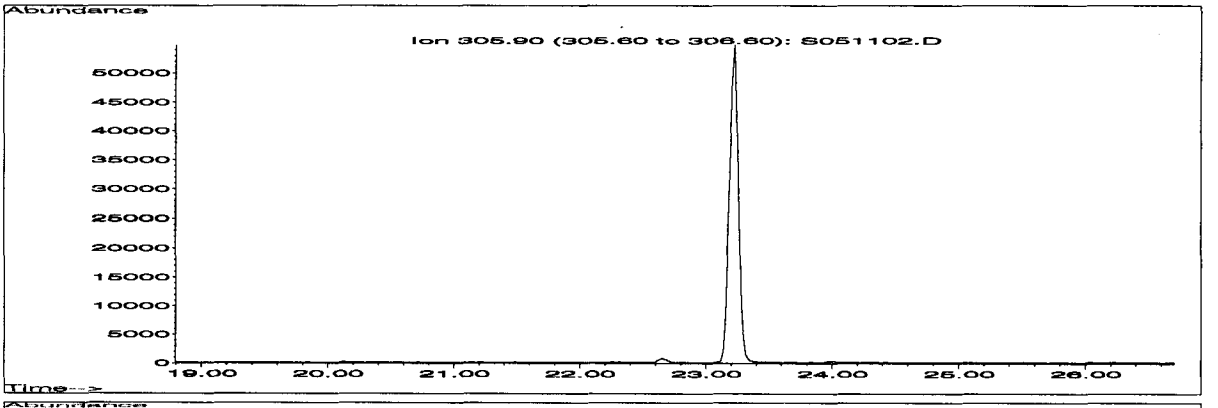


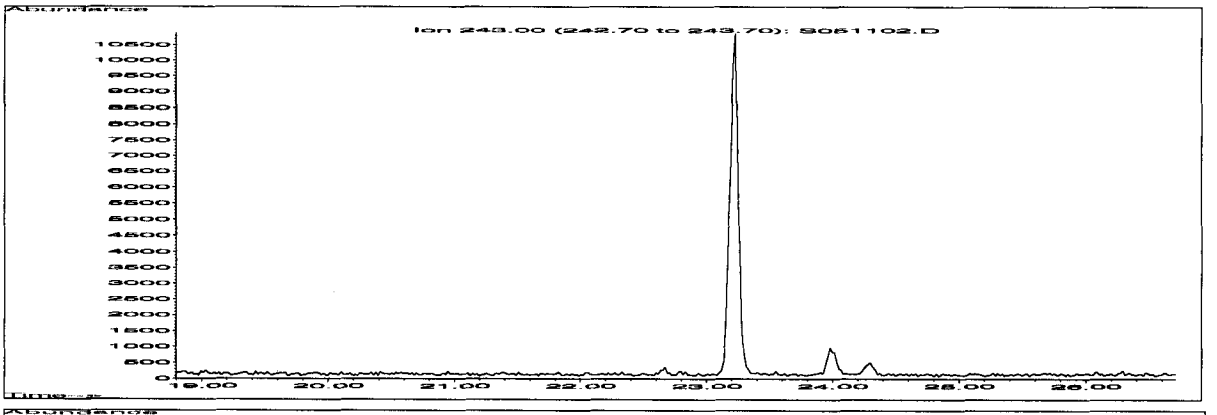


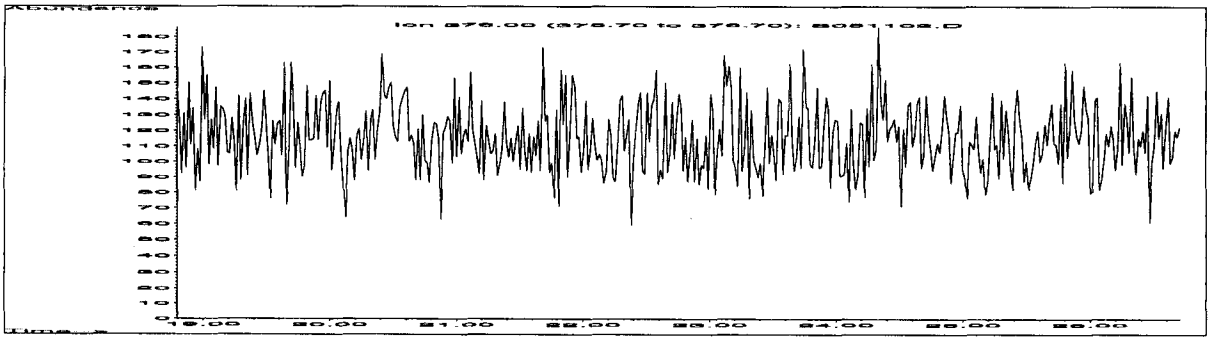
TCDF TOTAL

TS R.T. Lower Limit	18.80
TS R.T. Upper Limit	26.70



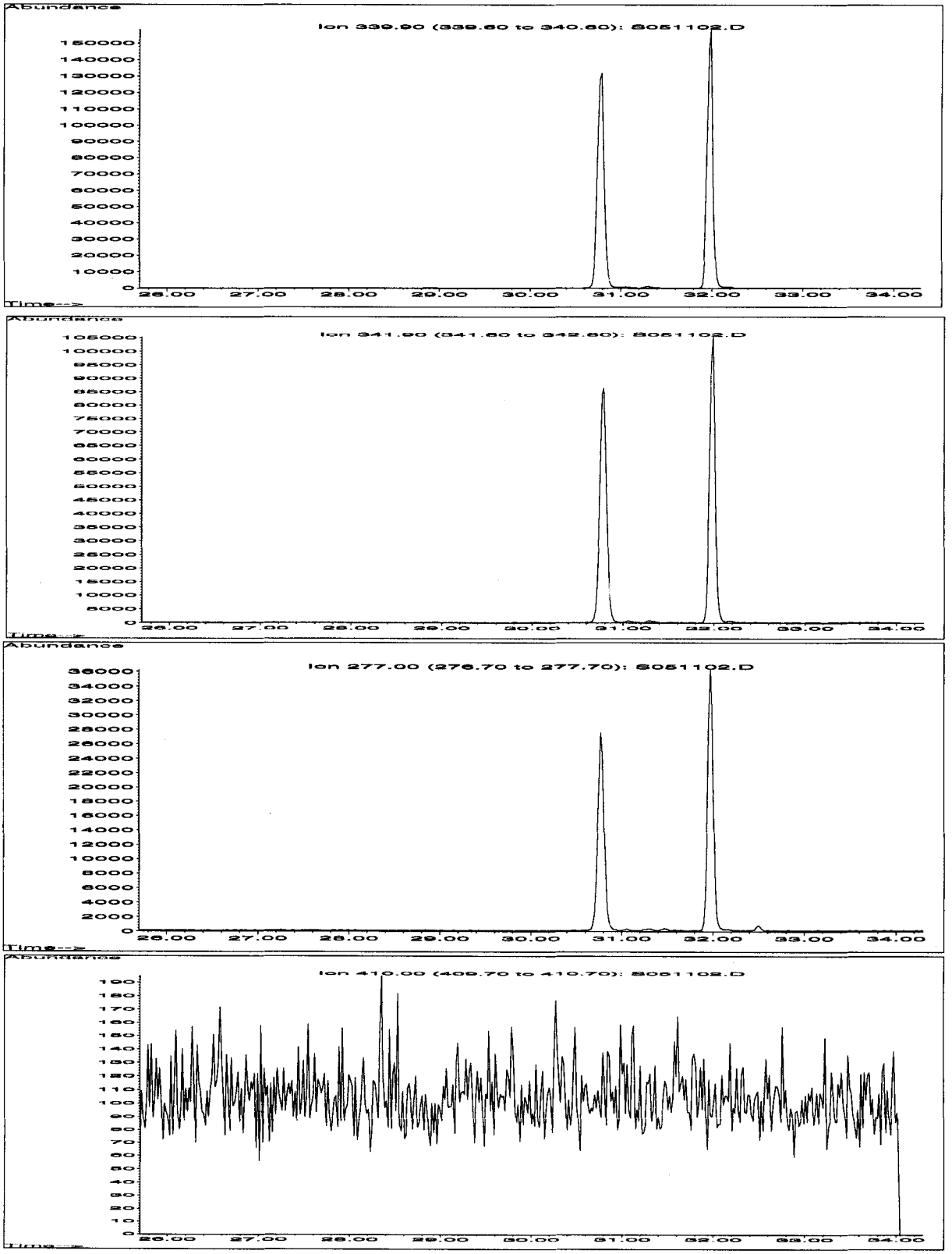






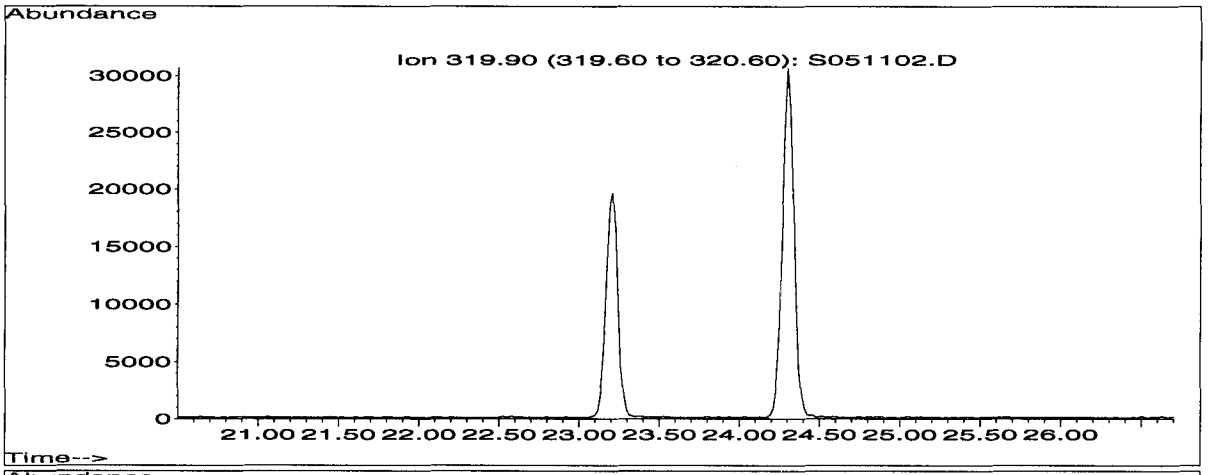
PeCDF TOTAL

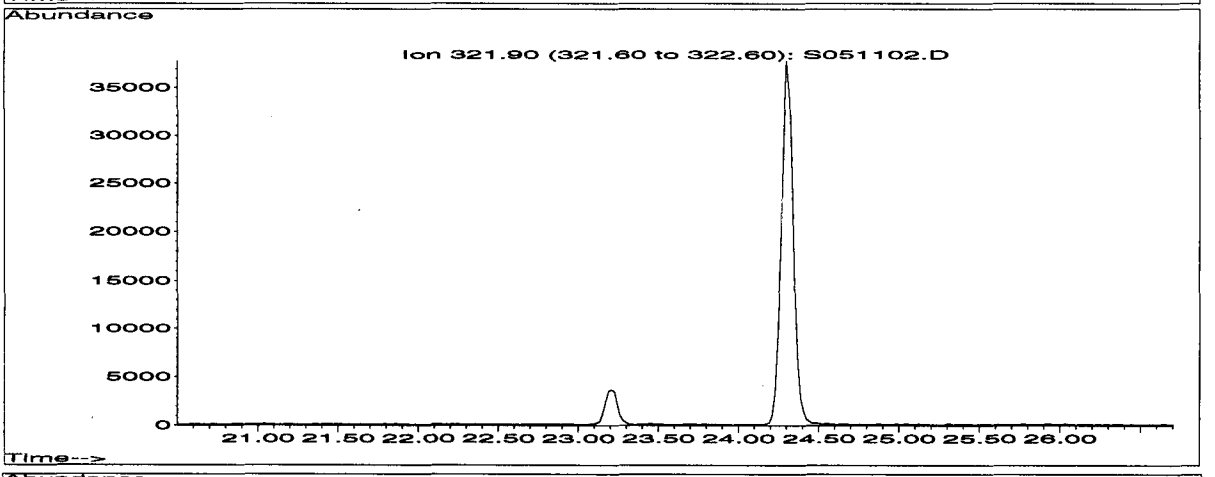
TS R.T. Lower Limit	25.70
TS R.T. Upper Limit	34.30

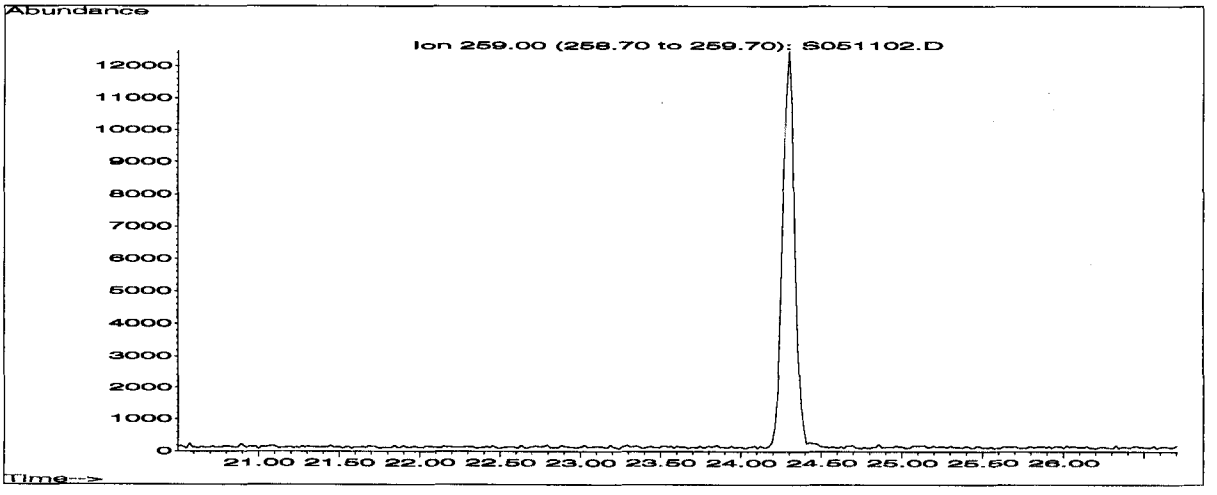


TCDD TOTAL

TS R.T. Lower Limit	20.50
TS R.T. Upper Limit	26.70

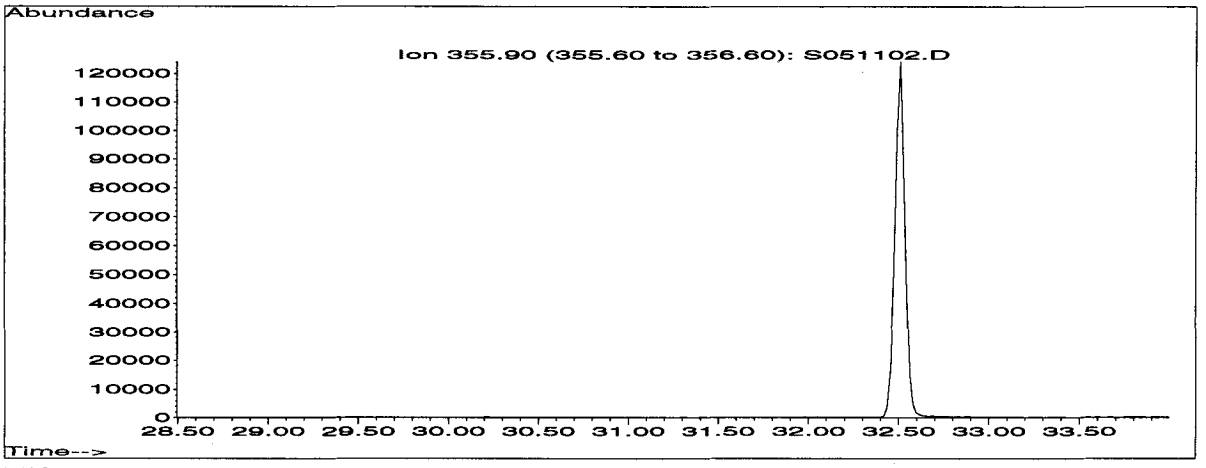


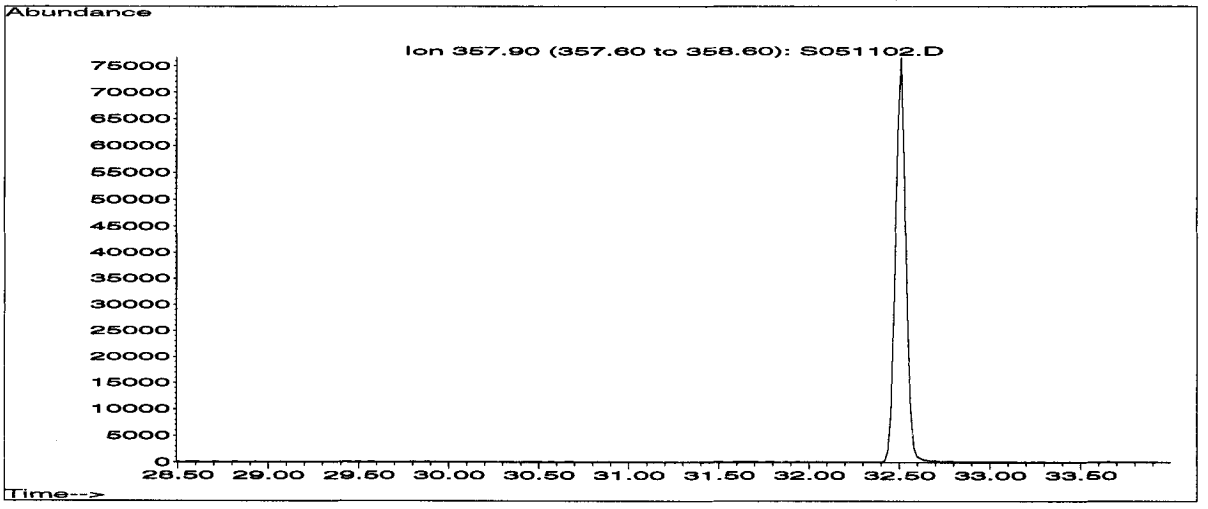


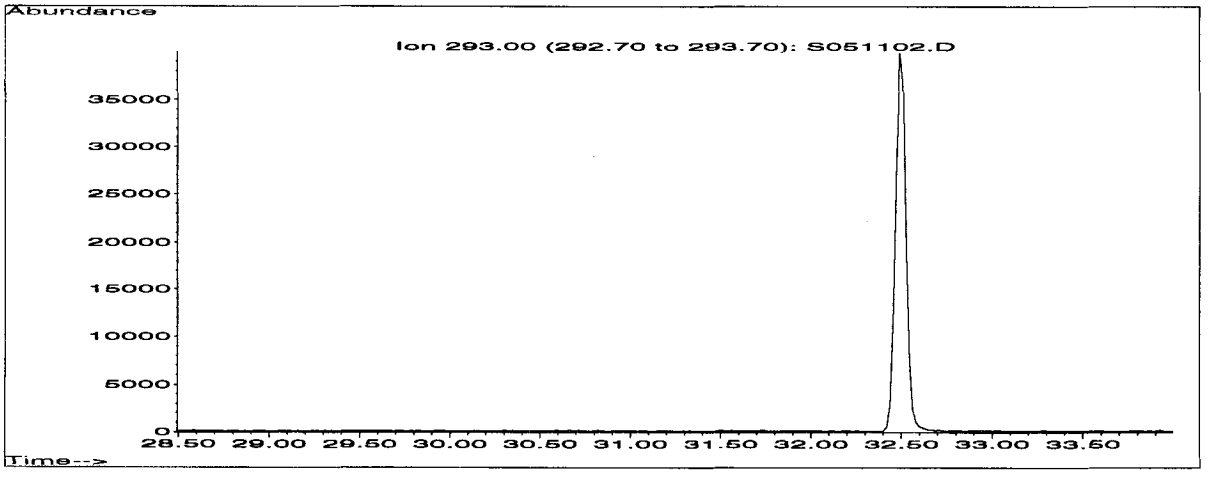


PeCDD TOTAL

TS R.T. Lower Limit	28.50
TS R.T. Upper Limit	34.00

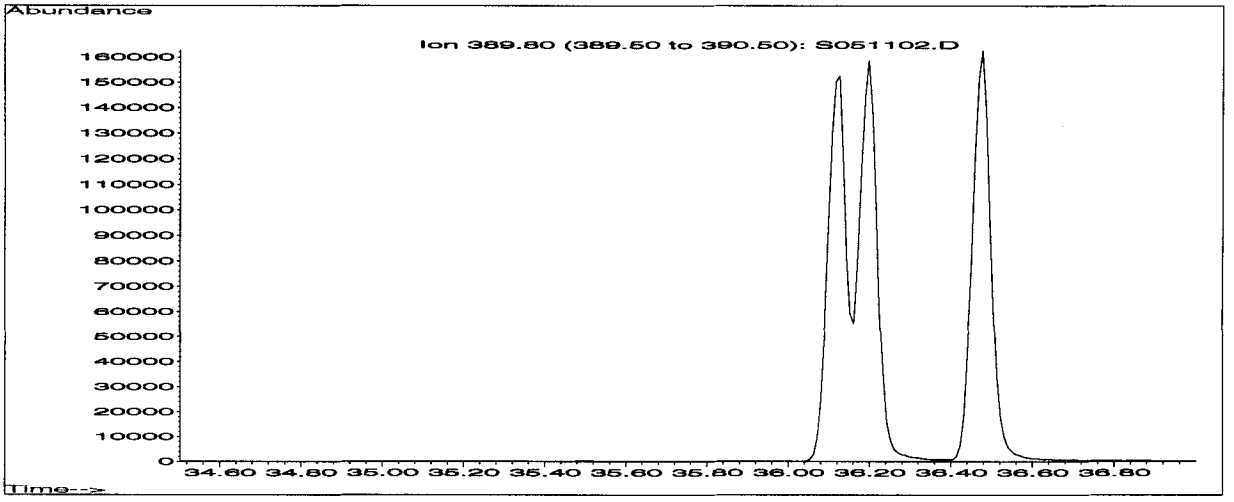


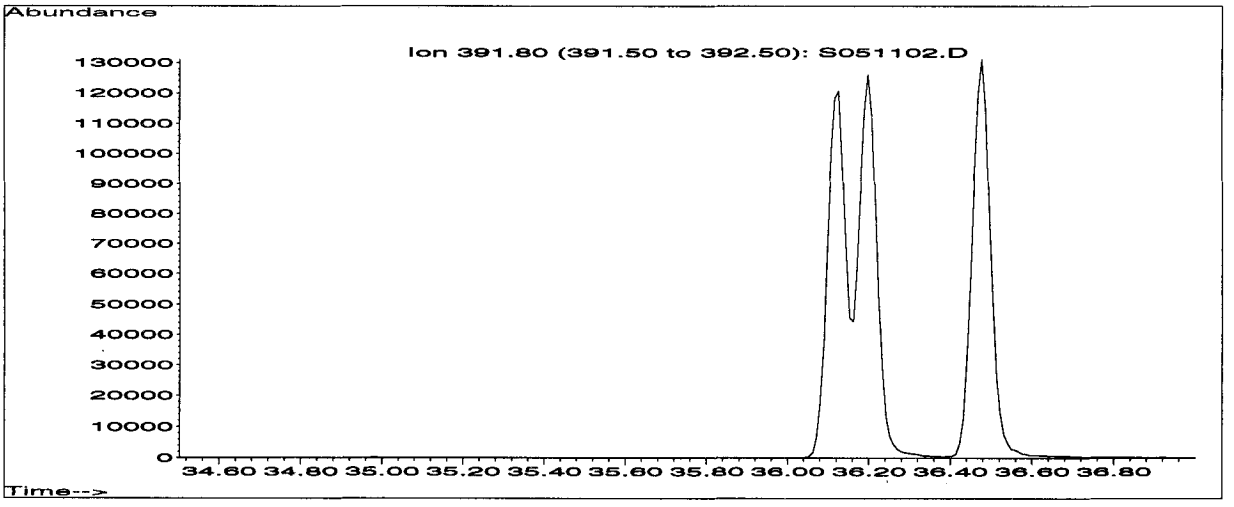


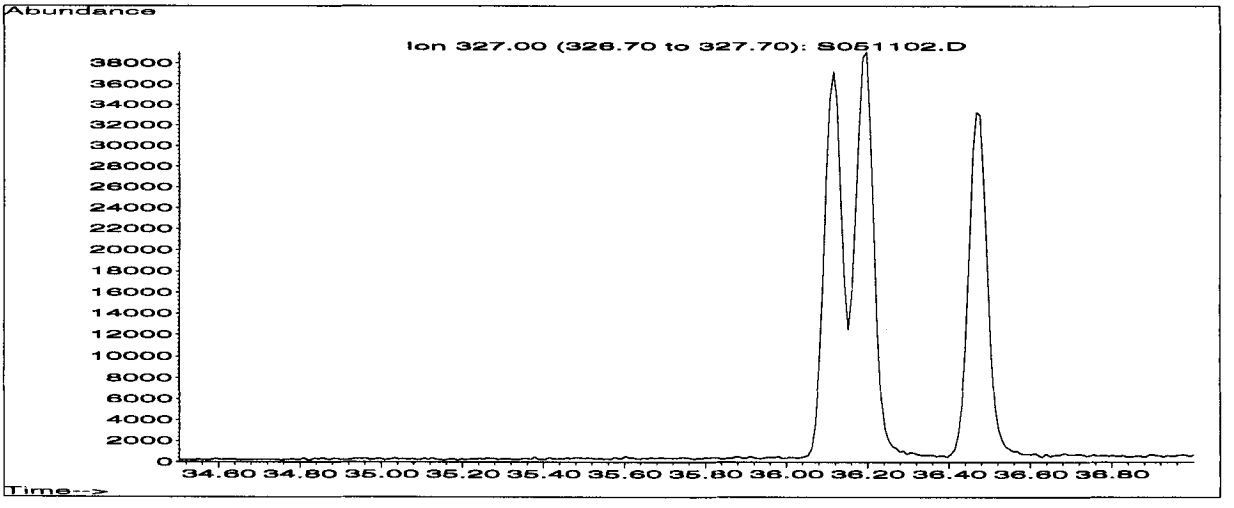


HxCDD TOTAL

TS R.T. Lower Limit	34.50
TS R.T. Upper Limit	37.00

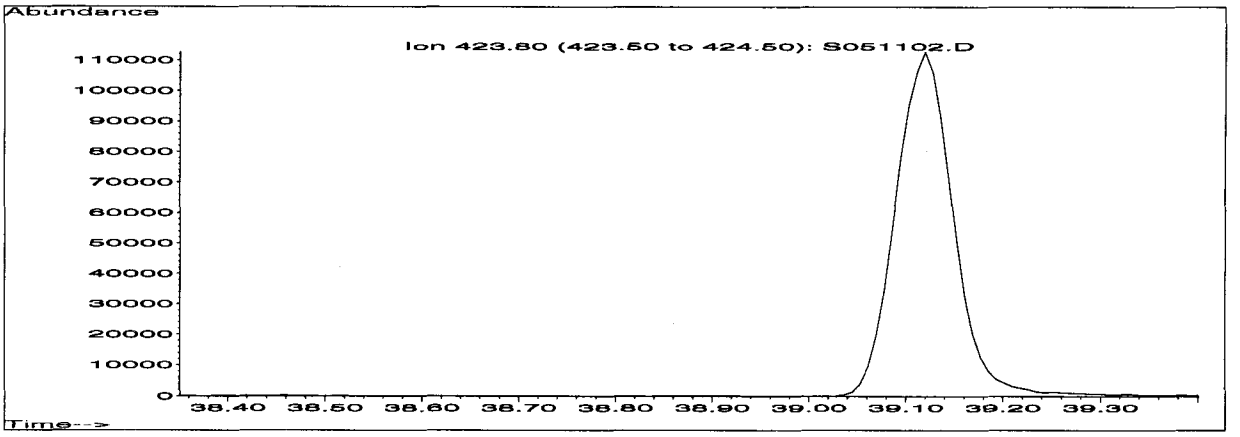


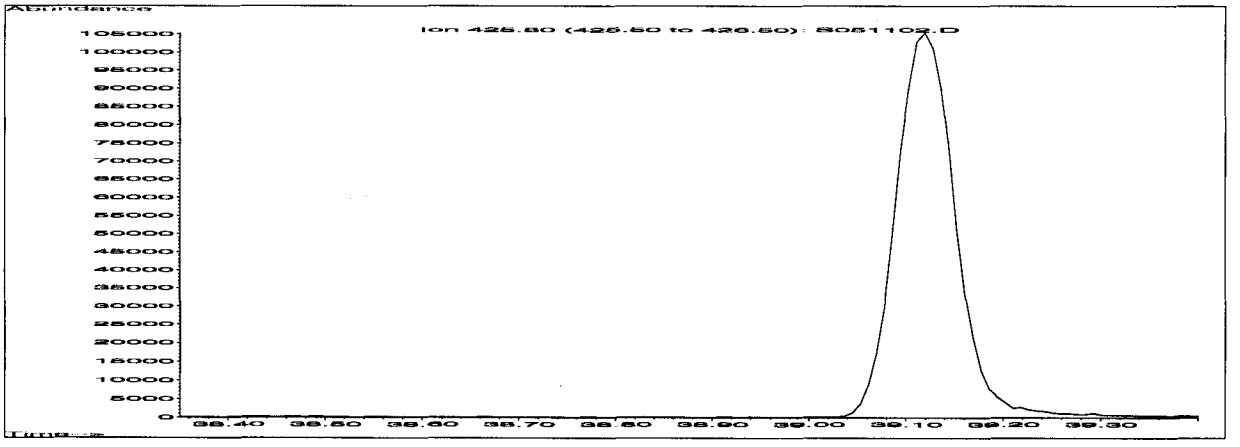


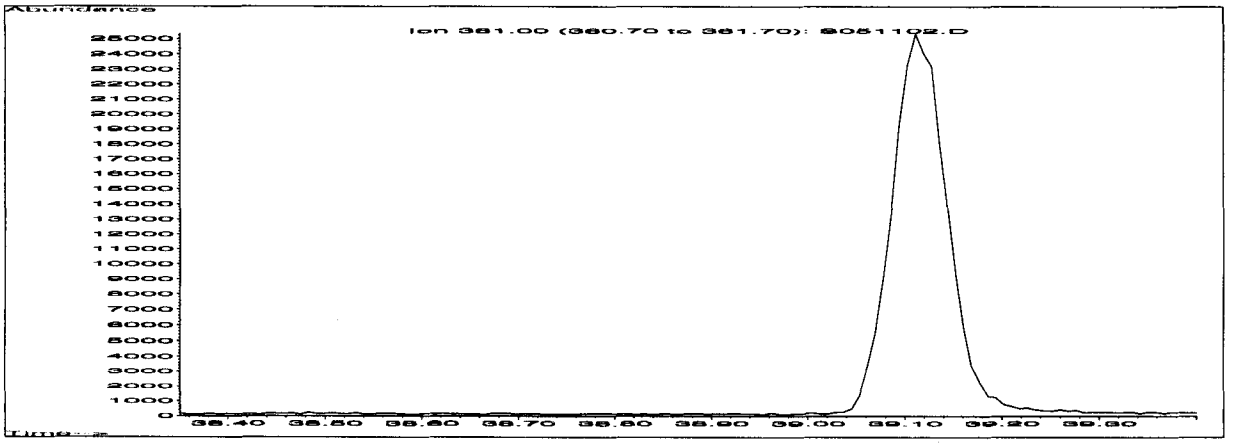


HpCDD TOTAL

TS R.T. Lower Limit	38.35
TS R.T. Upper Limit	39.40

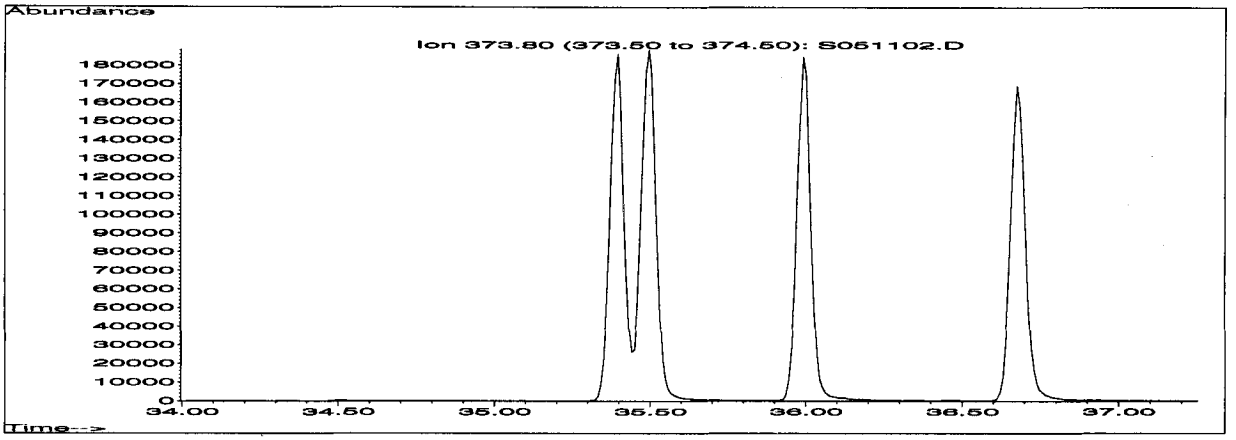


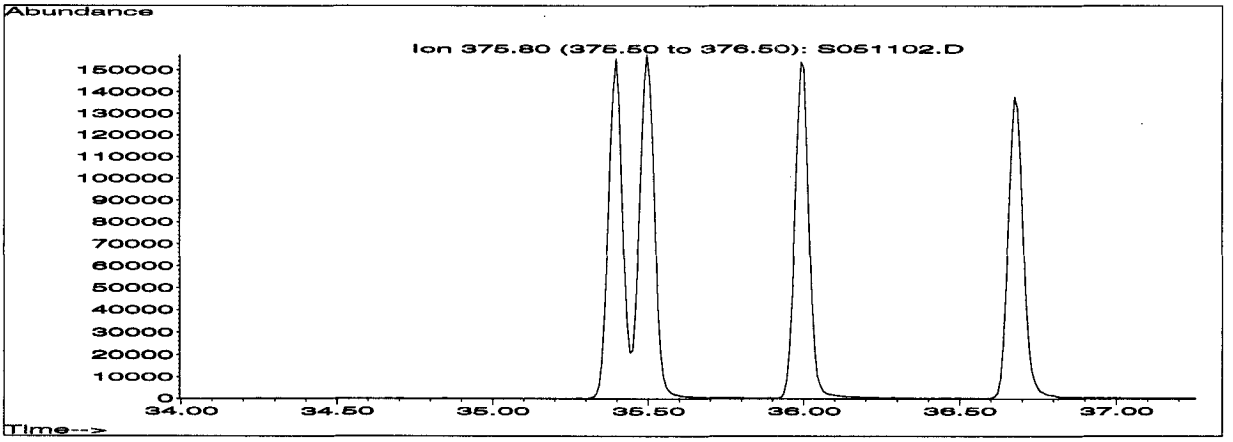


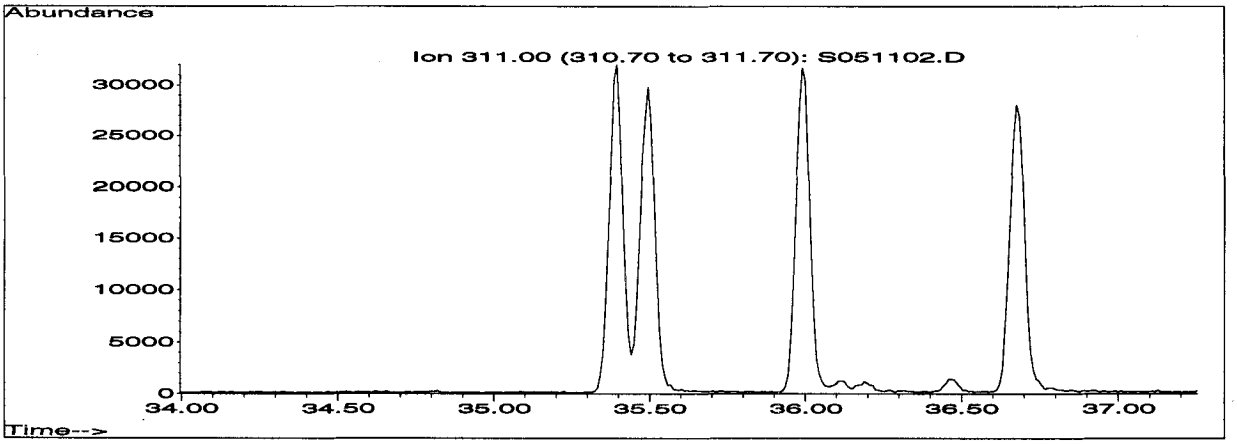


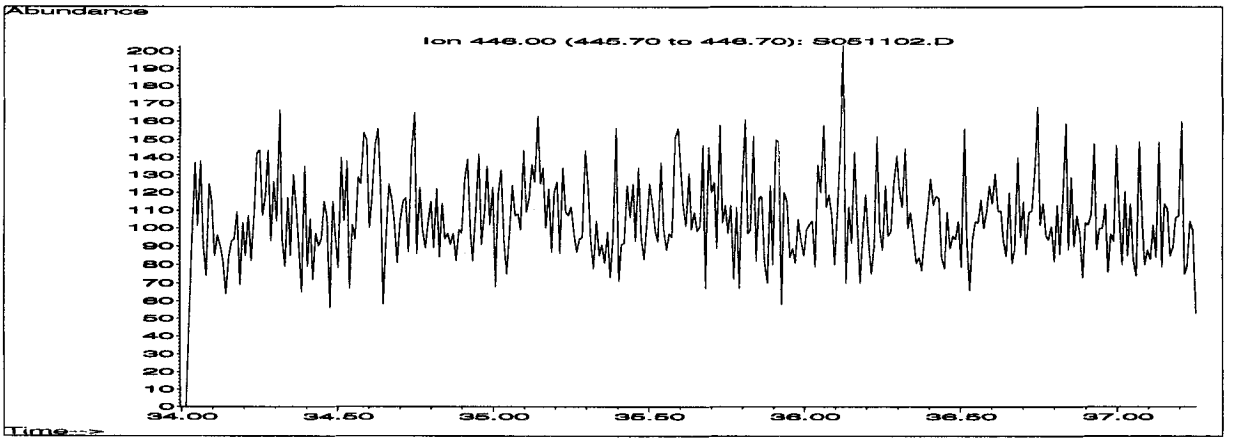
HxCDF TOTAL

TS R.T. Lower Limit	34.00
TS R.T. Upper Limit	37.25



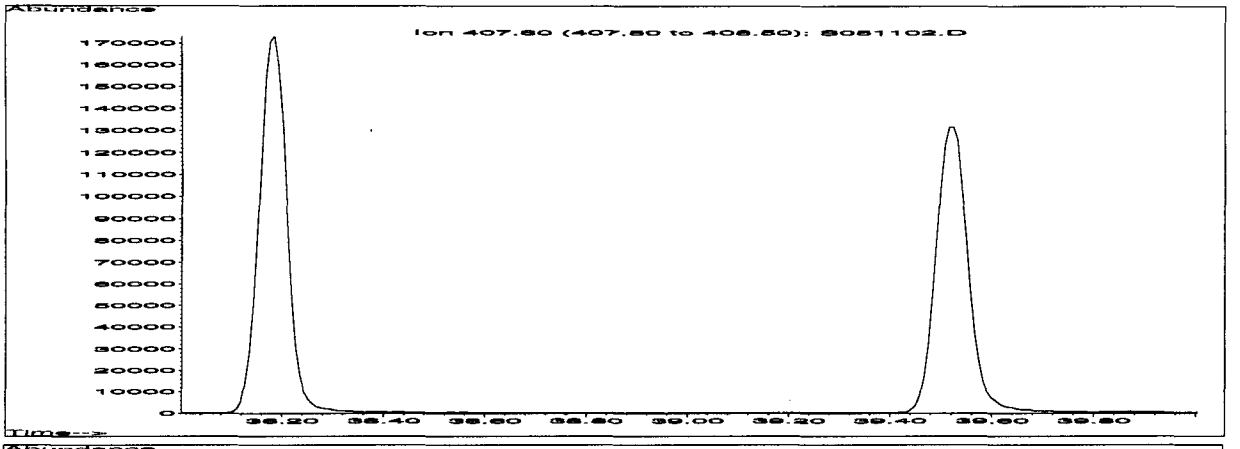


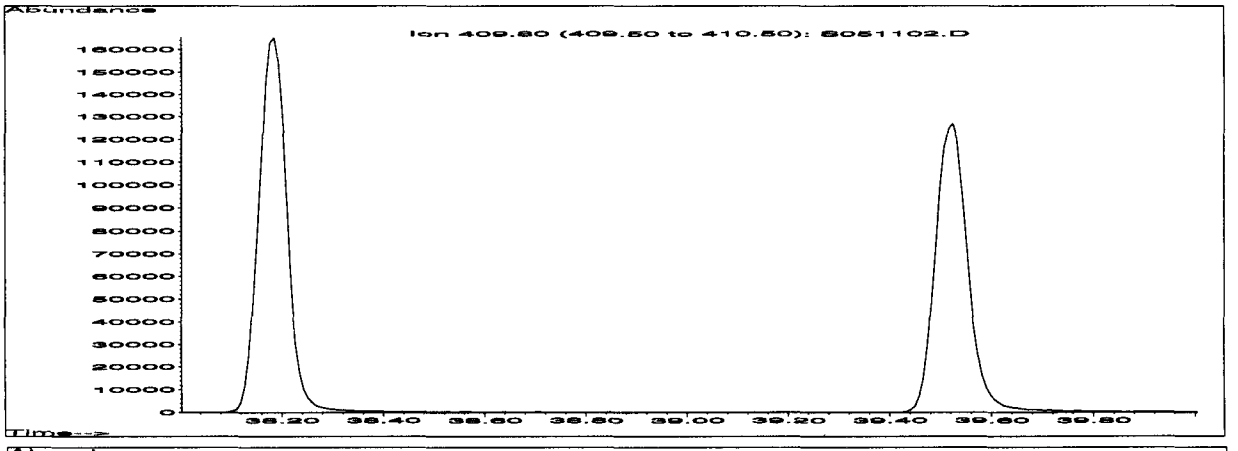


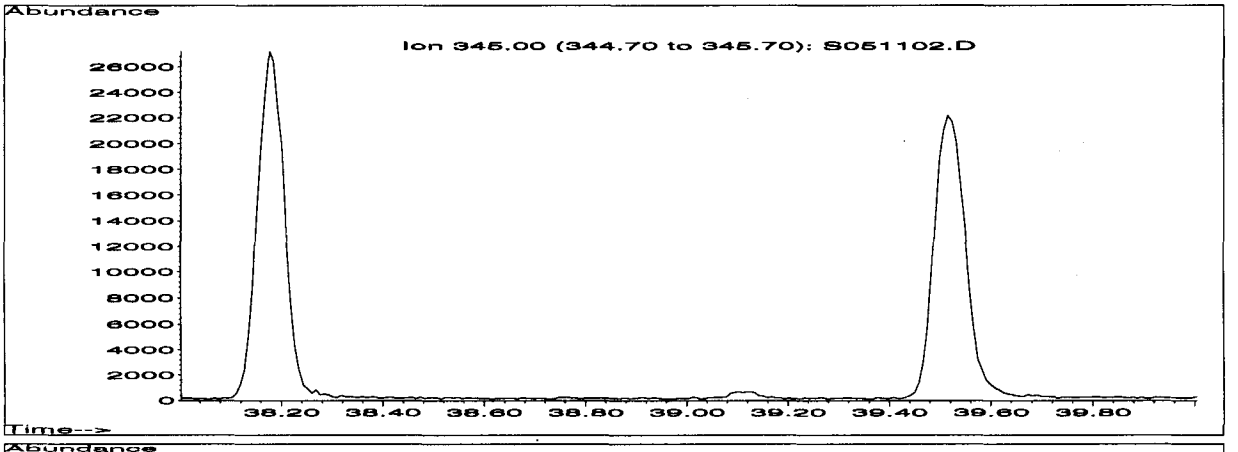


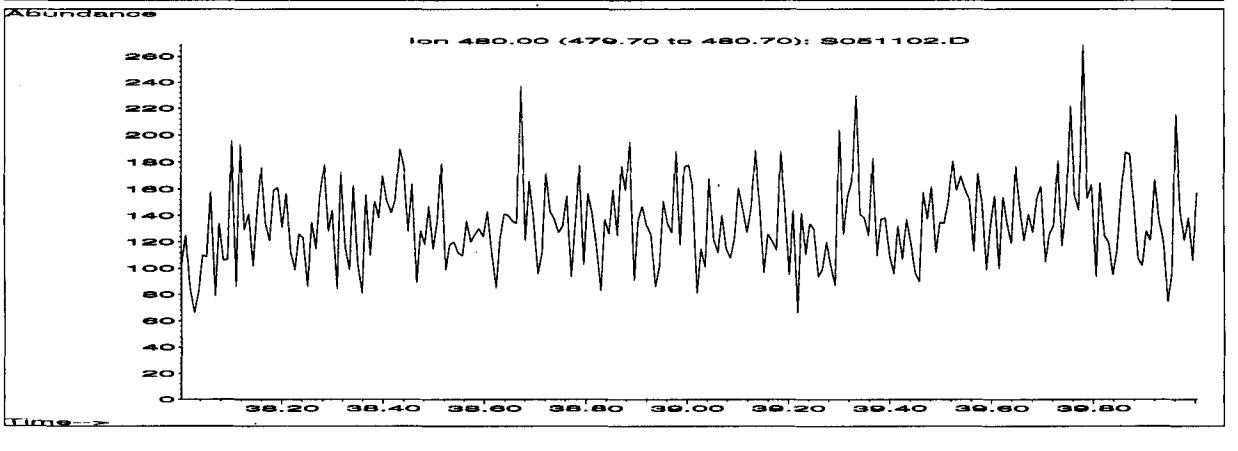
HpCDF TOTAL

TS R.T. Lower Limit	38.00
TS R.T. Upper Limit	40.00

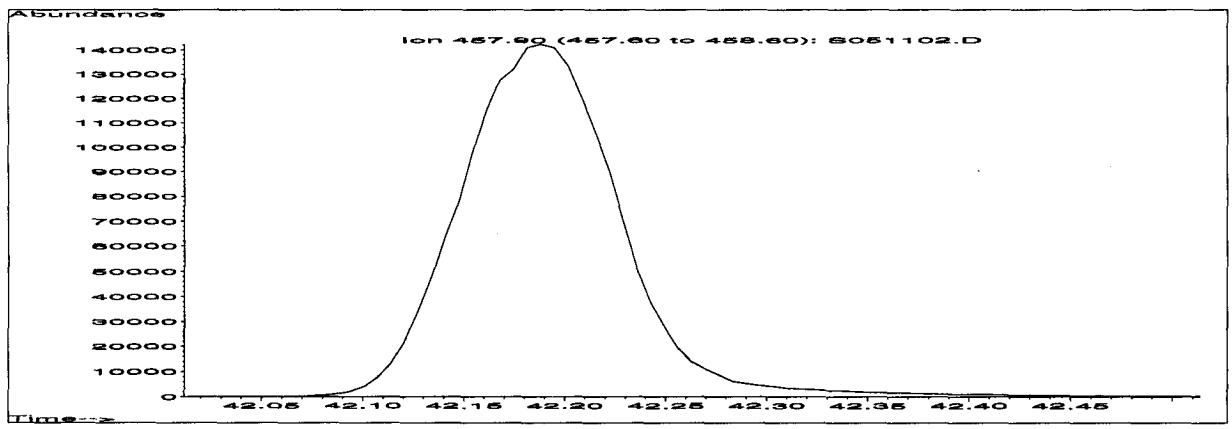


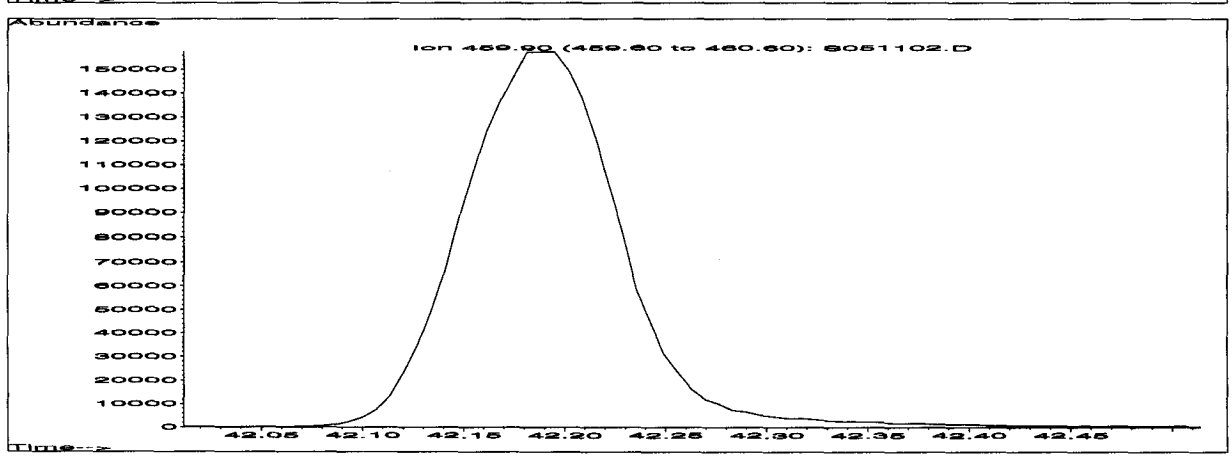


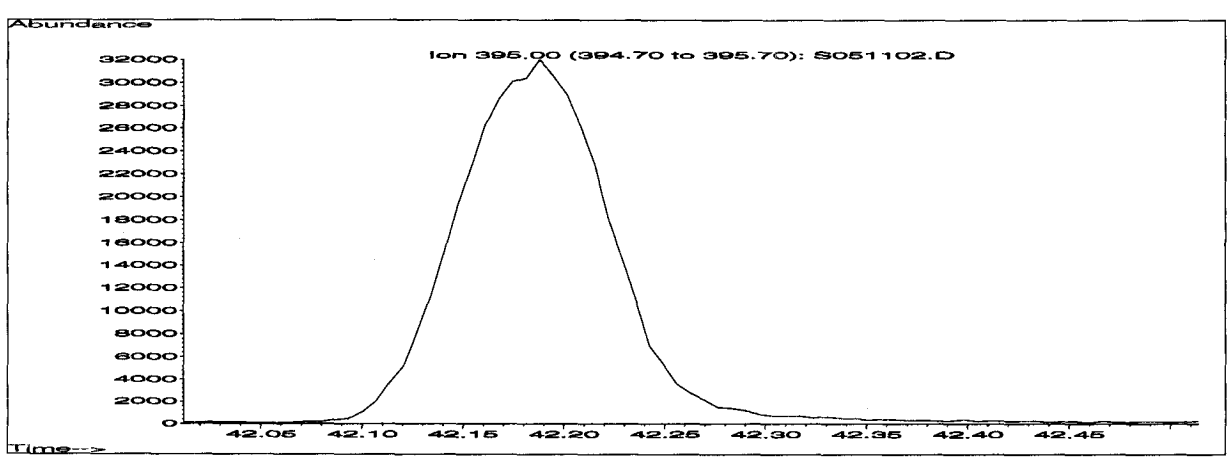




OCDD			
TS R.T. Lower Limit	42.01		
TS R.T. Upper Limit	42.51		
Ret. Time	42.19		
Target Ion	457.9	Q1 Ion	459.9
Target Response	776108	Q1 Response	861455
Total Response	1637563	Ion ratio	0.90
Q2 Ion	395		
Q2 Response	169984		

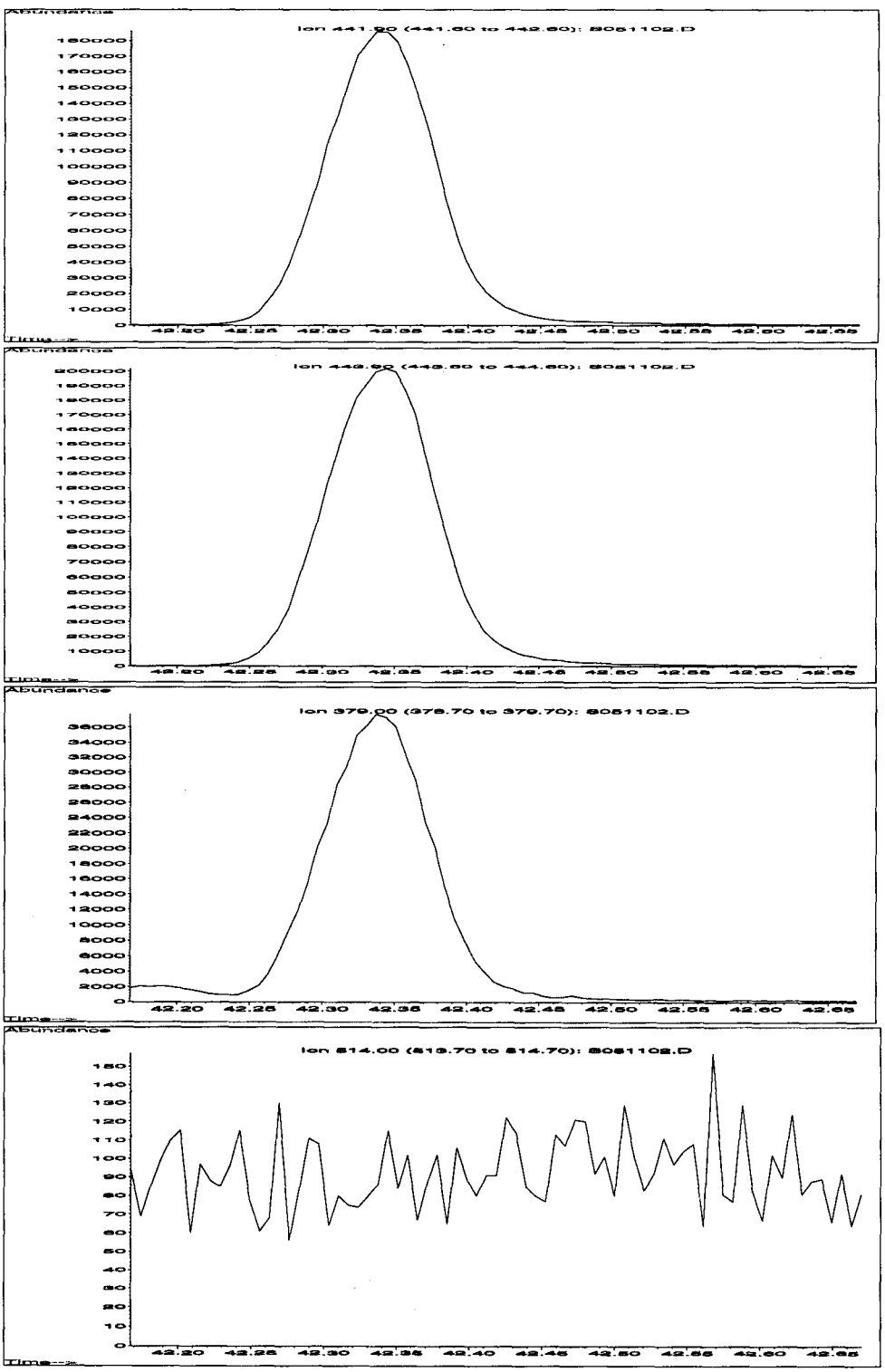






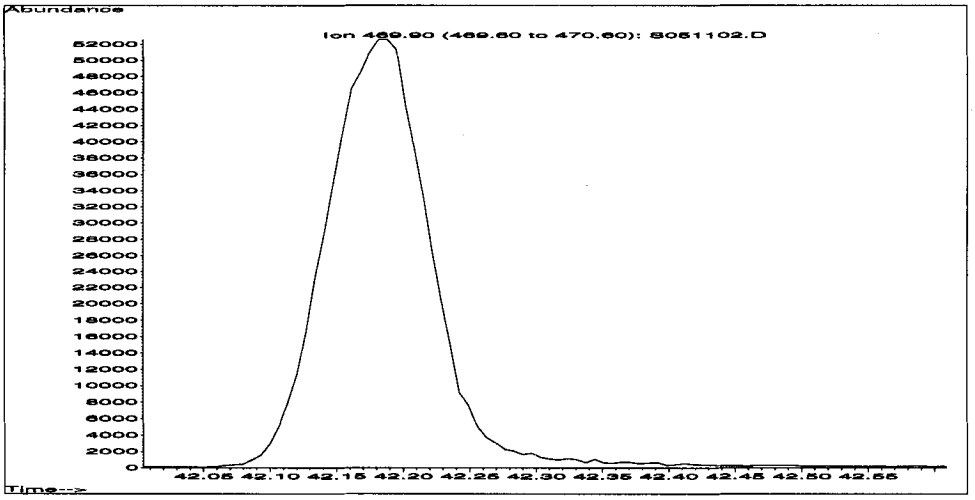
OCDF

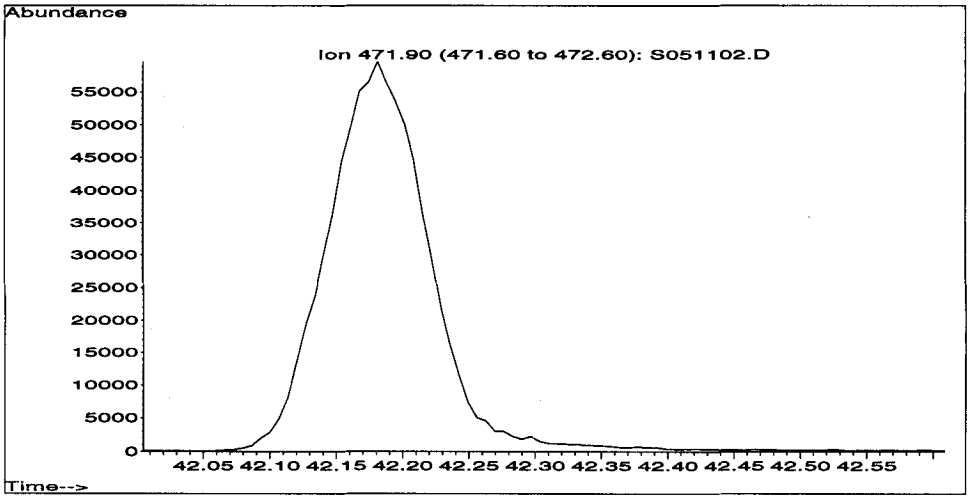
TS R.T. Lower Limit	42.17		
TS R.T. Upper Limit	42.67		
Ret Time	42.34		
Target Ion	441.9	Q1 Ion	443.9
Target Response	1001492	Q1 Response	1099638
Target Response	2101130	Ion Ratio	0.91
Q2 Ion	379	DPE Ion	514
Q2 Response	192806	DPE Response	0



13C-OCDD-IS

RT Lower Limit	42.01		
RT Upper Limit	42.61		
Ret Time	42.19		
Target Ion	469.9	Q1 Ion	471.9
Target Response	283383	Q1 Response	310897
Total response	594280	Ratio	0.91





Quantitation Report (Not Reviewed)

Sample ID: A0D300605-5 1.02945L 8280A Size: 1.029
L0VEJ-1-AA WATER LR009 Inst : DB1

Data File:C:\8280\2DB\051110.B\S051106.D Vial: 6
Acq On :11 May 2010 21:32 Operator: MEO
Sample Amount: 1.03

MS Integration Params: RTEINT.P
Quant Time: May 12 9:23 2010 Quant Results File: 10MY11A2.RES

Quant Method : C:\8280\ DATA METHODS\10MY11A2.M (RTE Integrator)
Title : Dioxin Furan Total
Last Update : Tue May 11 17:13:38 2010
Response via : Single (C:\8280\2DB\051110.B\ST0511A.D 11 May 2010 15:57)
DataAcq Meth : TOKAS
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Recovery\Internal Stds	R.T.	QIon	Ratio	Response	Conc	Dev(Min)
1) 13C-1234-TCDD	24.03	332+334	0.80	166227	25.00 NG	0.00
5) 13C-123789-HxCDD	36.49	402+404	1.29	235358	25.00 NG	0.00
9) 13C-2378-TCDF	23.22	316+318	0.82	141509	25.00 NG	0.00
15) 13C-2378-TCDD	24.30	332+334	0.78	98147	25.00 NG	-0.02
20) 13C-123678-HxCDD	36.21	402+404	1.29	120842	25.00 NG	0.00
27) 13C-1234678-HpCDF	38.20	420+422	1.04	155634	25.00 NG	0.00
36) 13C-OCDD	42.19	470+472	0.91	204103	50.00 NG	-0.01

AK 5/14/10

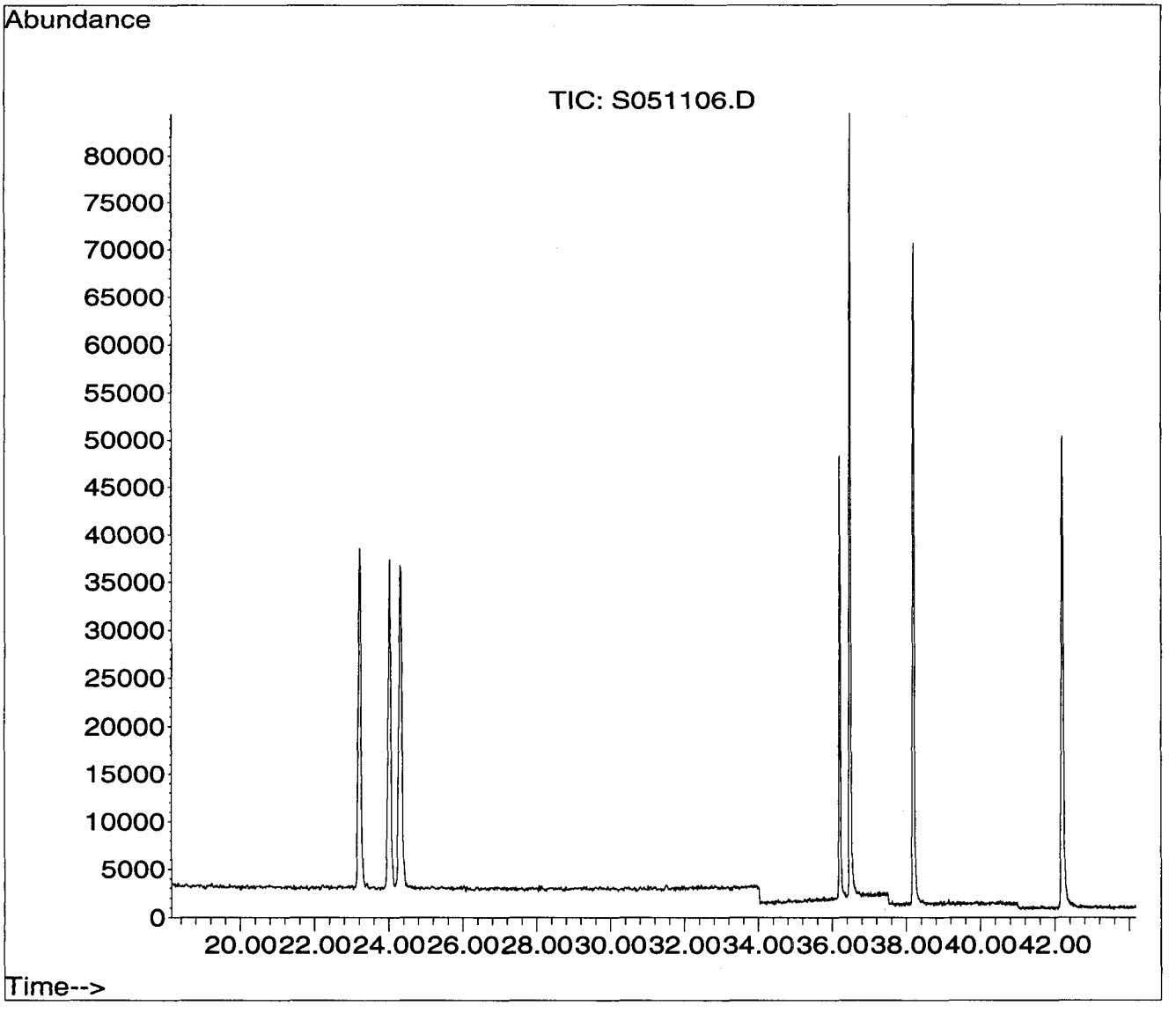
Surrogate Compound						
4) 37Cl-2378-TCDD	24.33	328		95932	10.297 NG	0.00
Spiked Amount = 12.142		RRF = 1.361		Recovery =	84.80%	

Target Compounds	RT	Ratio	Area	RRF	Conc	EDL	%Rec
2) 13C-2378-TCDF-IS	23.22	0.82	141509	1.407	14.690	0.0652	60.5
3) 13C-2378-TCDD-IS	24.30	0.78	98147	0.991	14.466	1.1495	59.6
6) 13C-123678-HxCDD-	36.21	1.29	121142	0.794	15.742	0.1136	64.8
7) 13C-1234678-HpCDF	38.20	1.04	155634	0.990	16.228	0.0702	66.8
8) 13C-OCDD-IS	42.19	0.91	204103	0.651	32.358	0.1386	66.6
10) 2378-TCDF	0.00		0	1.246	N.D.	0.2214	
11) TCDF TOTAL	22.00		0	1.246	N.D.	0.3407	
12) 12378-PeCDF	0.00		0	1.142	N.D.	0.2835	
13) 23478-PeCDF	0.00		0	1.143	N.D.	0.2367	
14) PeCDF TOTAL	29.50		0	1.142	N.D.	0.3602	
16) 2378-TCDD	0.00		0	1.230	N.D.	0.3810	
1	23.22	4.98 #	13351		2.686 PL		
17) TCDD TOTAL	22.50	4.98	13351	1.230	2.686		
18) 12378-PeCDD	0.00		0	1.122	N.D.	0.4283	
19) PeCDD TOTAL	30.00		0	1.122	N.D.	0.7104	
21) 123478-HxCDD	0.00		0	0.970	N.D.	0.1807	
22) 123678-HxCDD	0.00		0	1.003	N.D.	0.1860	
23) 123789-HxCDD	0.00		0	1.030	N.D.	0.2476	
24) HxCDD TOTAL	36.50		0	0.970	N.D.	0.2744	
25) 1234678-HpCDD	0.00		0	1.017	N.D.	0.1990	
26) HpCDD TOTAL	39.35		0	1.017	N.D.	0.3338	
28) 123478-HxCDF	0.00		0	0.977	N.D.	0.2226	
29) 123678-HxCDF	0.00		0	1.049	N.D.	0.1448	
30) 234678-HxCDF	0.00		0	0.987	N.D.	0.1373	
31) 123789-HxCDF	0.00		0	0.943	N.D.	0.1756	
32) HxCDF TOTAL	36.00		0	0.943	N.D.	0.3295	
33) 1234678-HpCDF	0.00		0	1.163	N.D.	0.1600	
34) 1234789-HpCDF	0.00		0	1.028	N.D.	0.1411	
35) HpCDF TOTAL	39.50		0	1.028	N.D.	0.3913	
37) OCDD	0.00		0	1.109	N.D.	0.4293	

38) OCDF	0.00	0	1.416	N.D.	0.4688

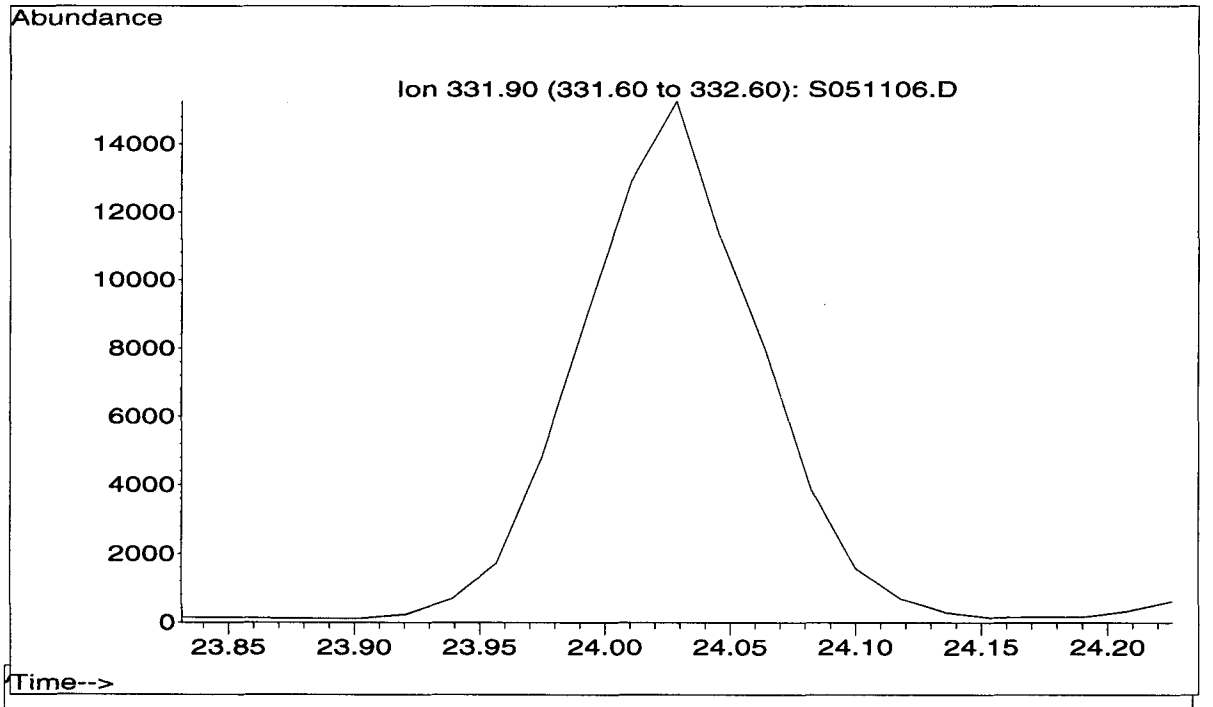
(#) = qualifier out of range•: areas and concentration based on theoretical ion ratio
(m) = manual integration
S051106.D 10MY11A2.M Wed May 12 09:23:50 2010

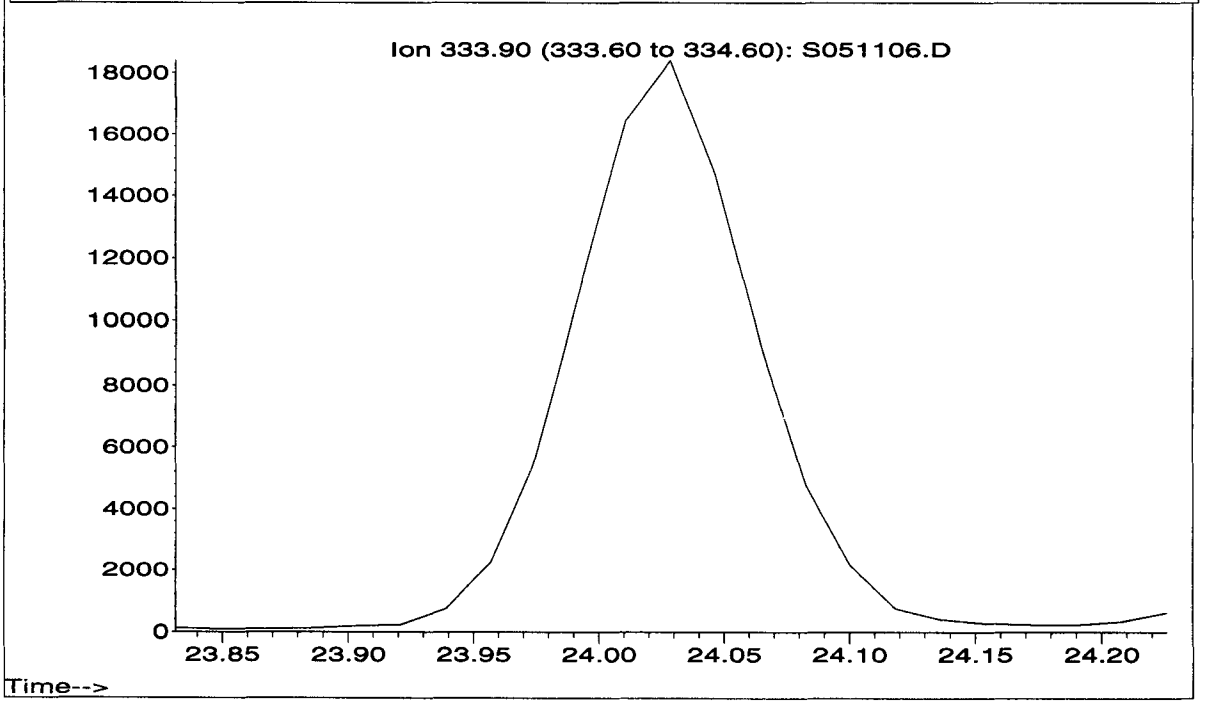
Data File Name	S051106.D
Data File Path	C:\8280\2DB\051110.B\
Operator	MEO
Date Acquired	5/11/2010 21:32
Acq. Method File	TOKAS
Sample Name	L0VEJ-1-AA WATER LR009
Misc Info	D300605-5 1.02945L 8280A
Vial Number	6
Instrument Name	2DB
Sample Multiplier	1
Sample Amount	1.02945



13C-1234-TCDD

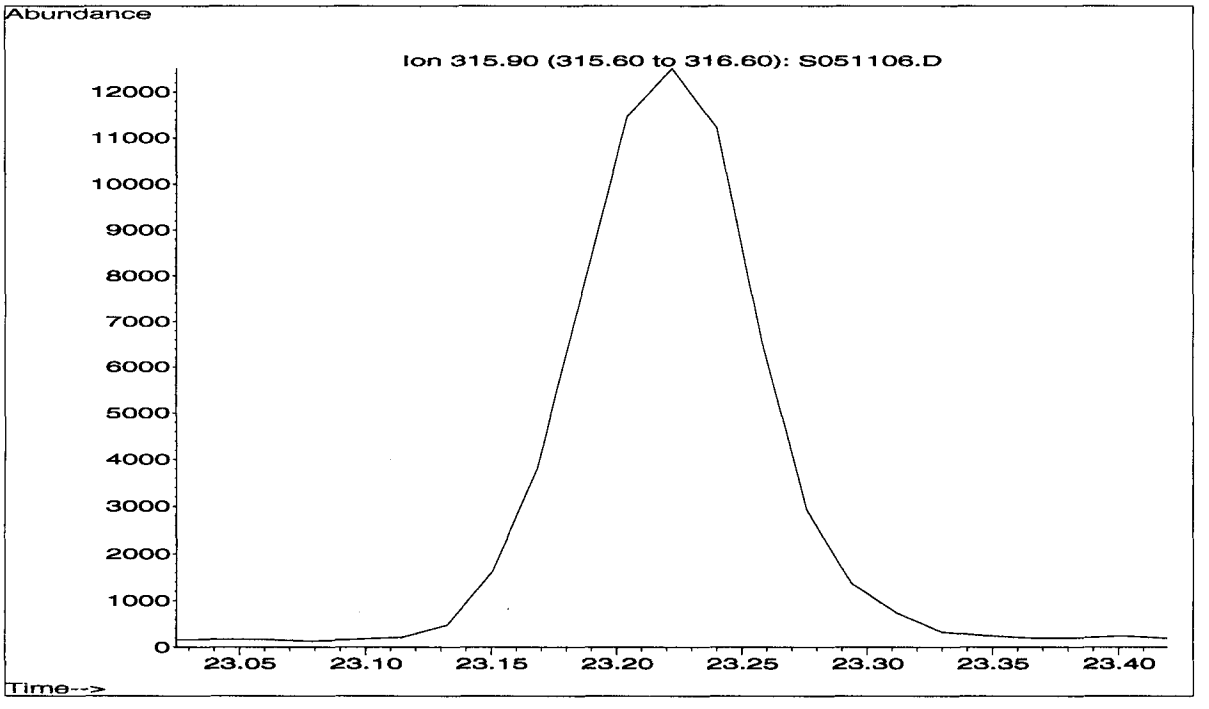
TS R.T. Lower Limit	23.83		
TS R.T. Upper Limit	24.23		
Ret Time	24.03		
Target Ion	331.9	Q1 Ion	333.9
Target Response	73708	Q1 Response	92519
Total Response	166227	Ion Ratio	0.80

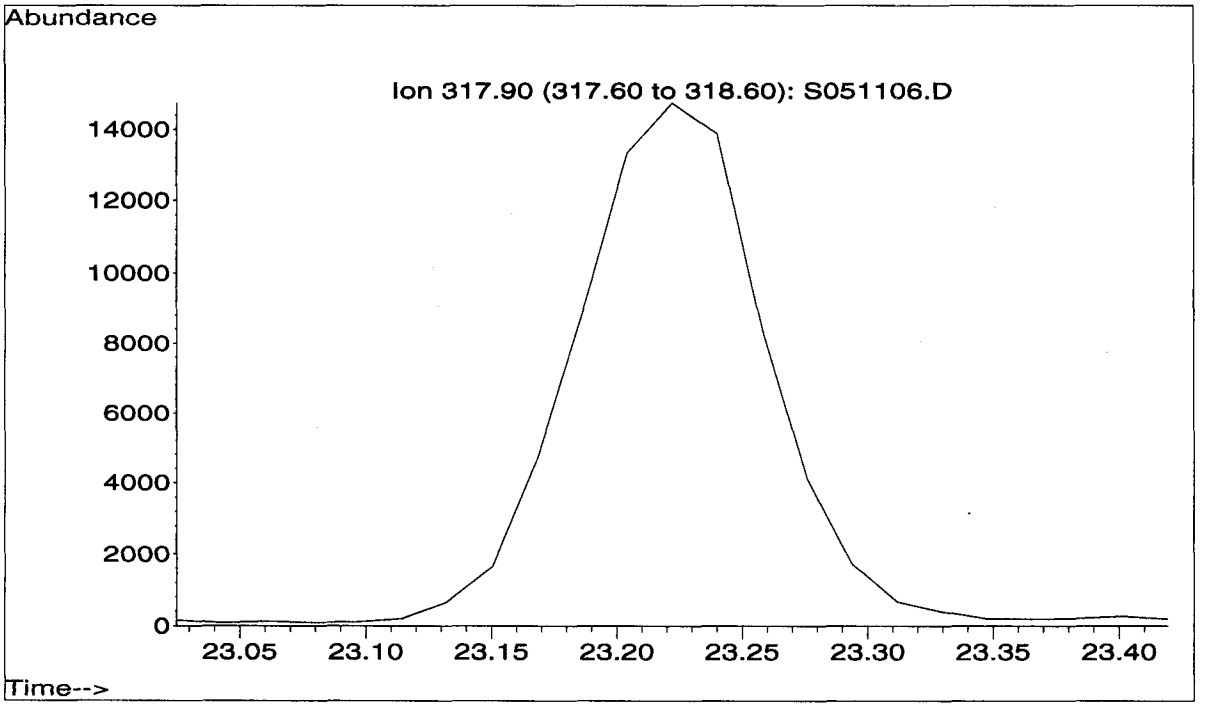




13C-2378-TCDF-IS

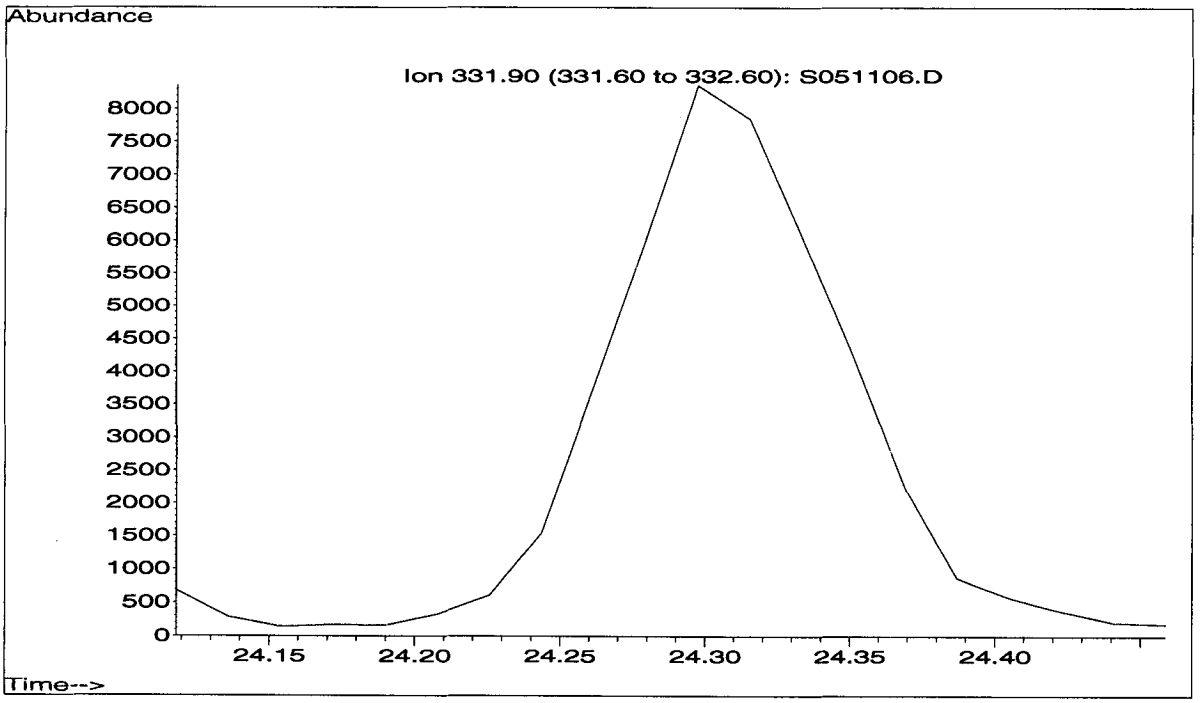
TS R.T. Lower Limit	23.02		
TS R.T. Upper Limit	23.42		
Ret Time	23.22		
Target Ion	315.9	Q1 Ion	317.9
Target Response	63775	Q1 Response	77734
Target Response	141509	Ion Ratio	0.82

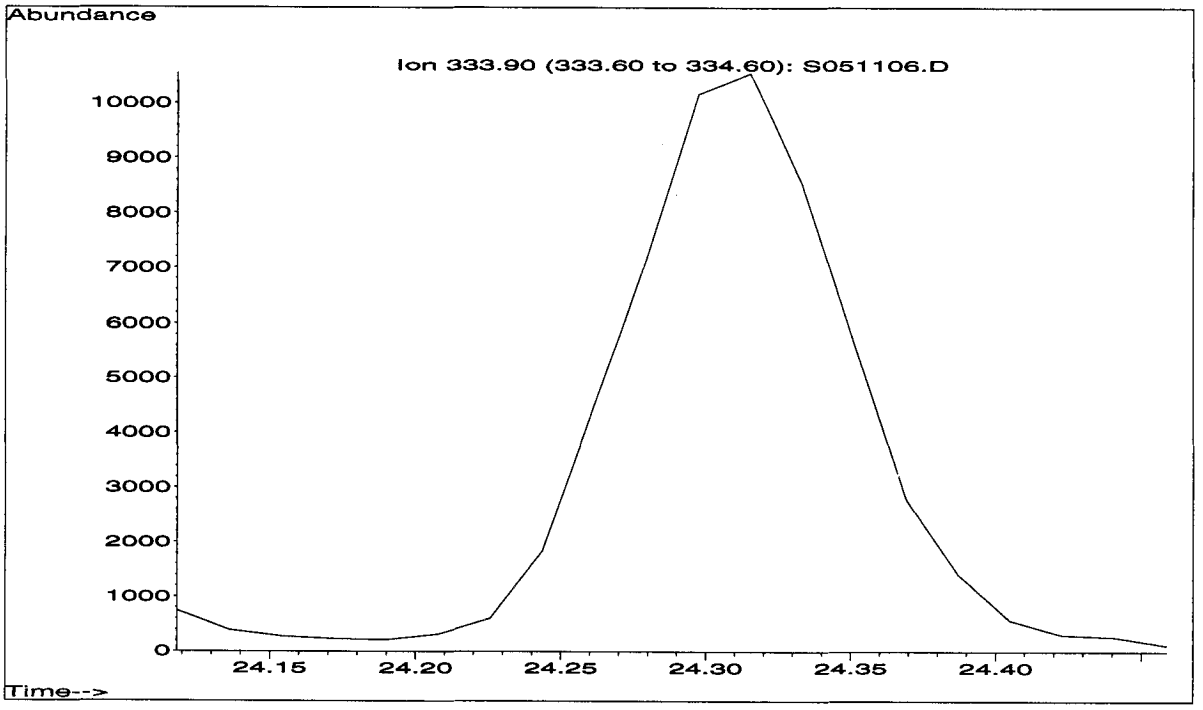




13C-2378-TCDD-IS

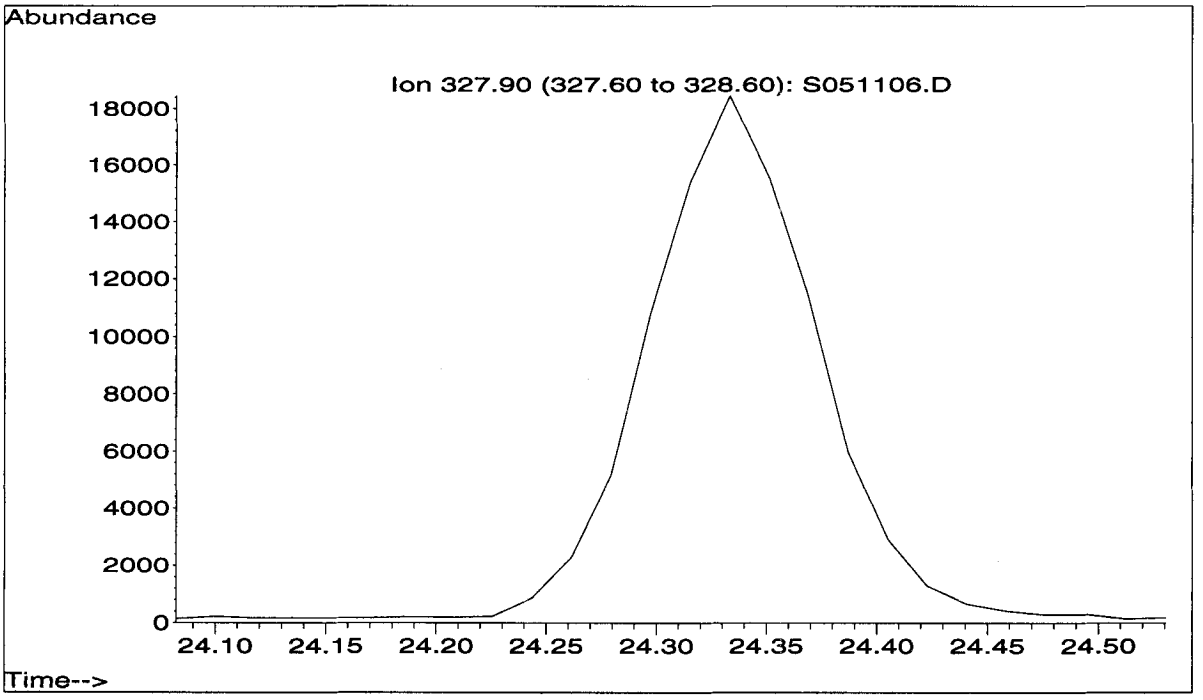
TS R.T. Lower Limit	24.12		
TS R.T. Upper Limit	24.47		
Ret Time	24.30		
Target Ion	331.9	Q1 Ion	333.9
Target Response	43091	Q1 Response	55056
Total Response	98147	Ion Ratio	0.78

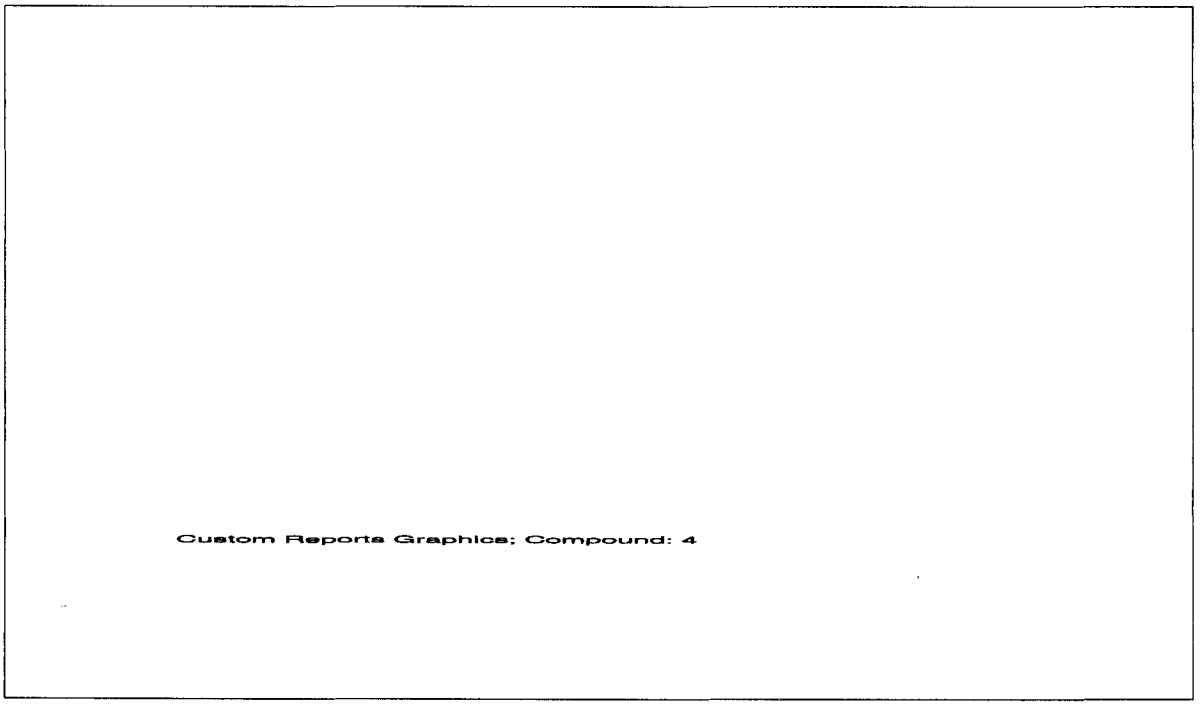




37Cl-2378-TCDD

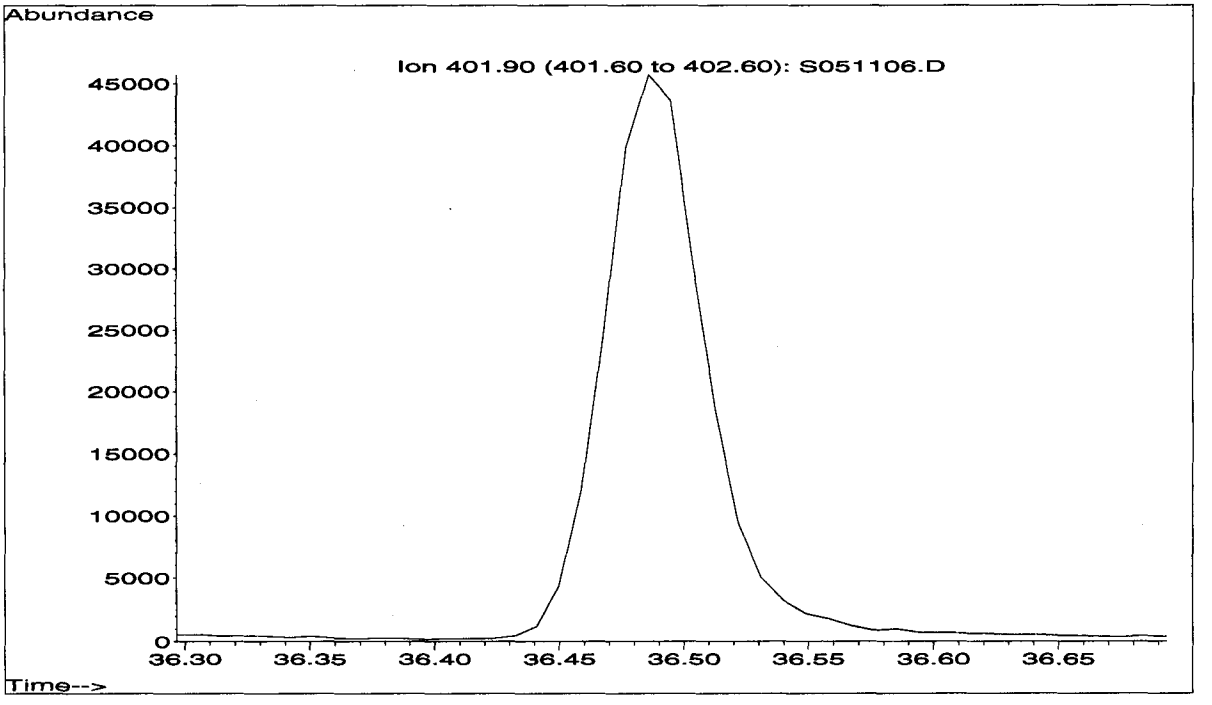
TS R.T. Lower Limit	24.08		
TS R.T. Upper Limit	24.53		
Ret Time	24.33		
Target Ion	327.9	Q1 Ion	0
Target Response	95932	Q1 Response	0
Total Response	95932	Ion Ratio	#DIV/0!

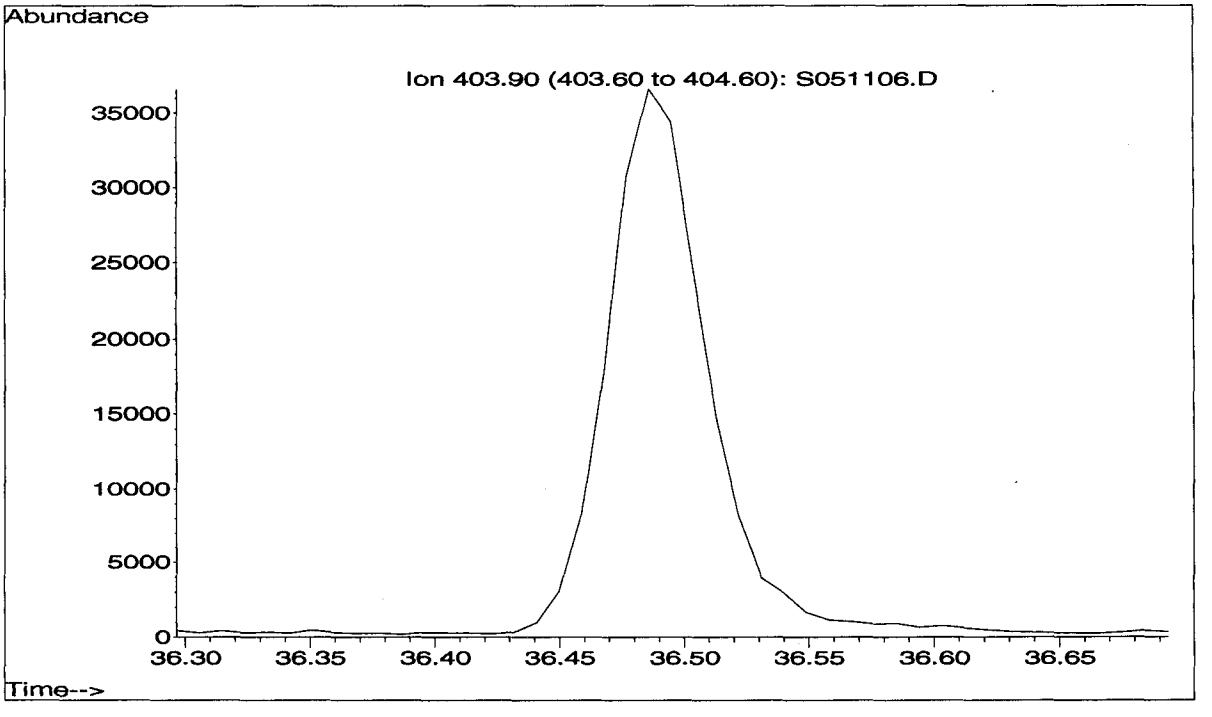




13C-123789-HxCDD

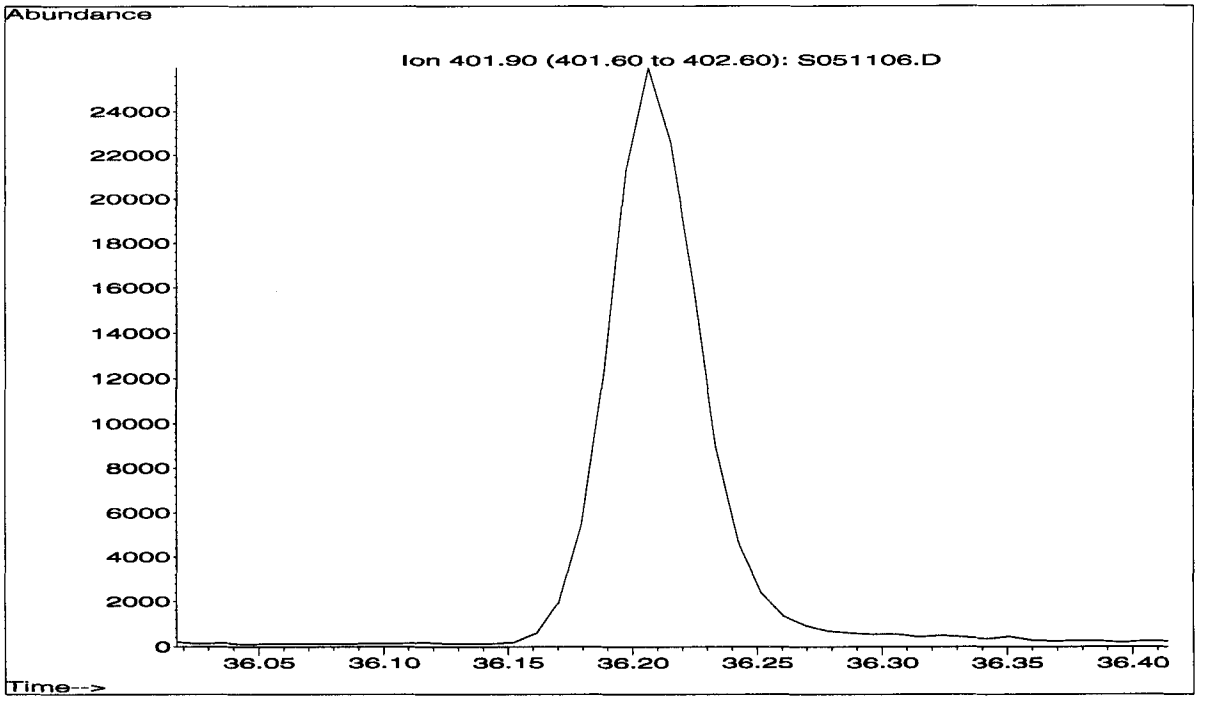
TS R.T. Lower Limit	36.29		
TS R.T. Upper Limit	36.69		
Ret Time	36.49		
Target Ion	401.9	Q1 Ion	403.9
Target Response	132641	Q1 Response	102717
Target Response	235358	Ion Ratio	1.29

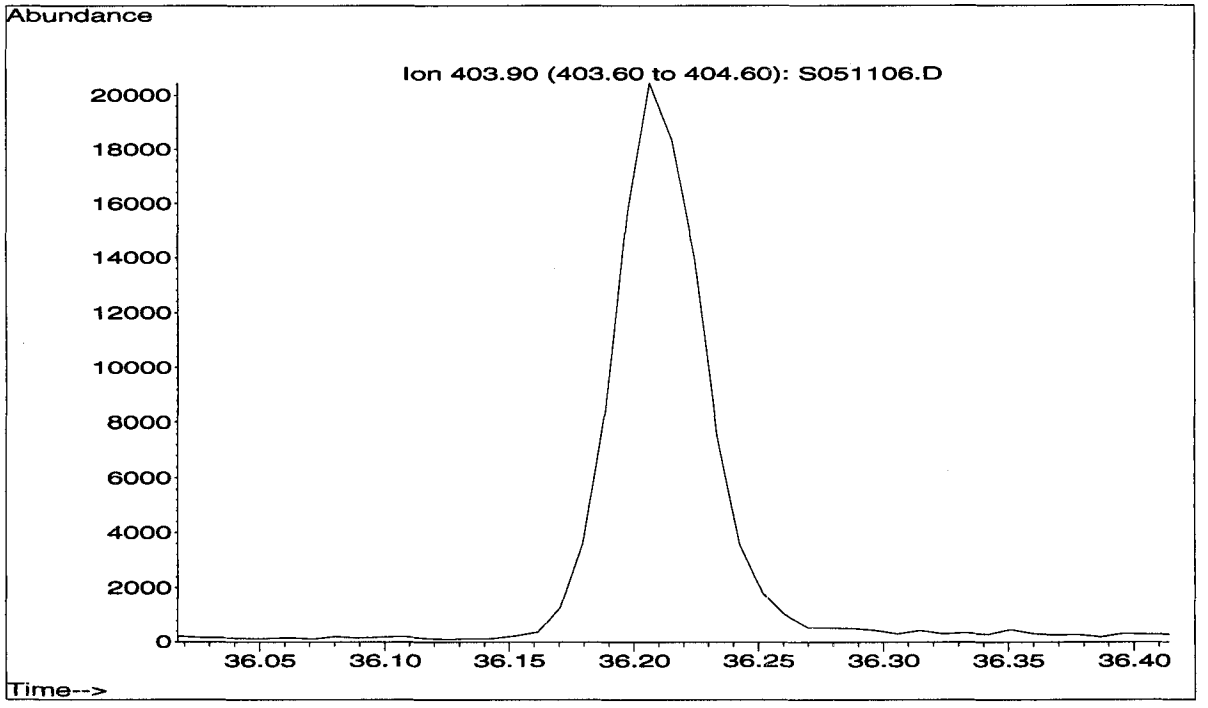




13C-123678-HxCDD-IS

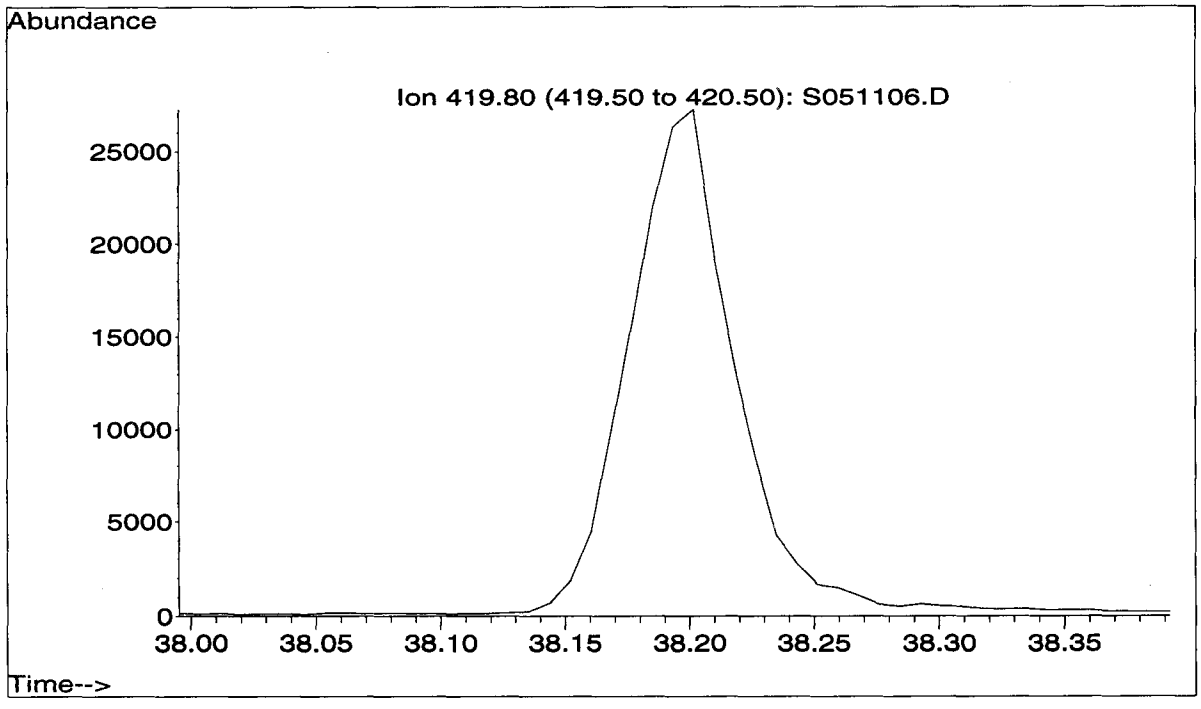
TS R.T. Lower Limit	36.01		
TS R.T. Upper Limit	36.41		
Ret Time	36.21		
Target Ion	401.9	Q1 Ion	403.9
Target Response	68337	Q1 Response	52805
Total Response	121142	Ion Ratio	1.29

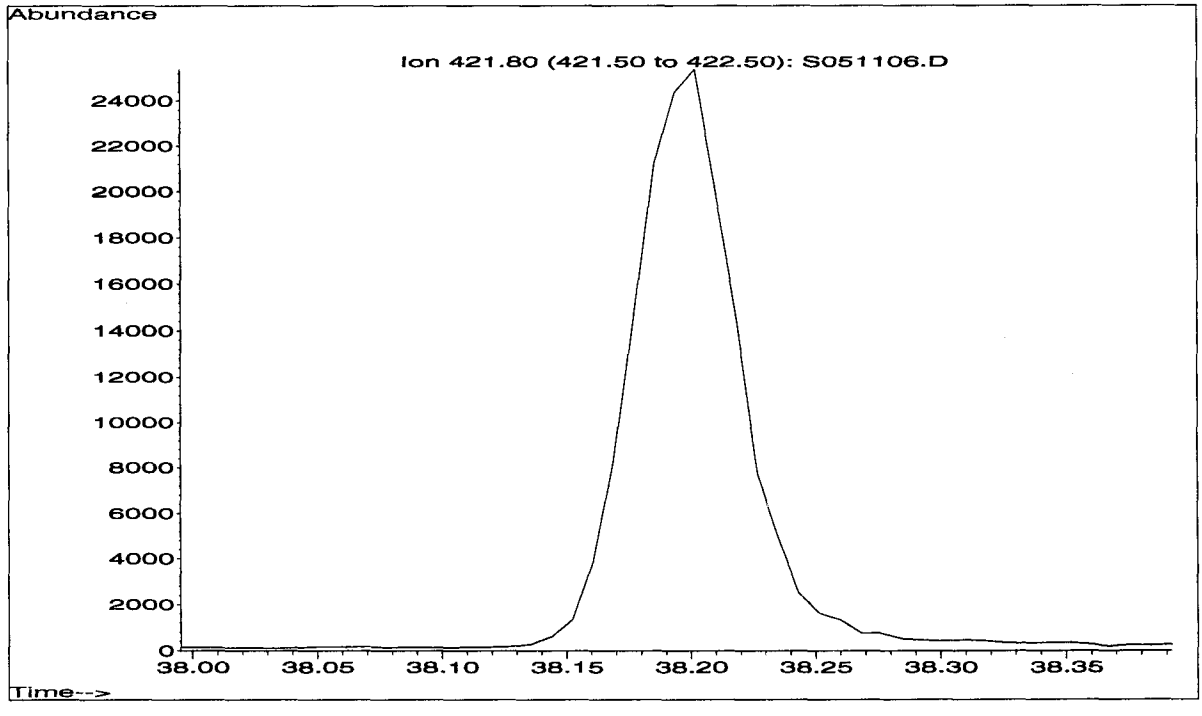




13C-1234678-HpCDF-IS

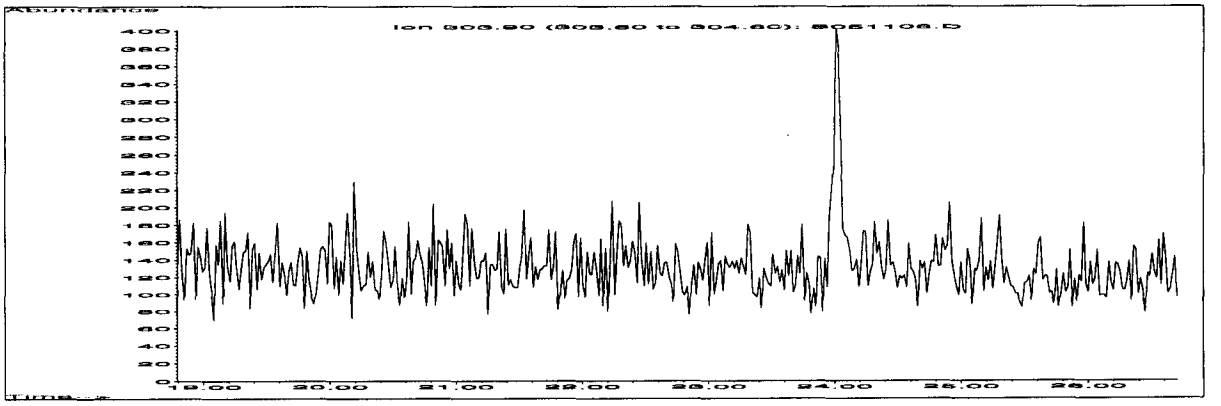
TS R.T. Lower Limit	37.99		
TS R.T. Upper Limit	38.39		
Ret Time	38.20		
Target Ion	419.8	Q1 Ion	421.8
Target Response	79441	Q1 Response	76193
Target Response	155634	Ion Ratio	1.04

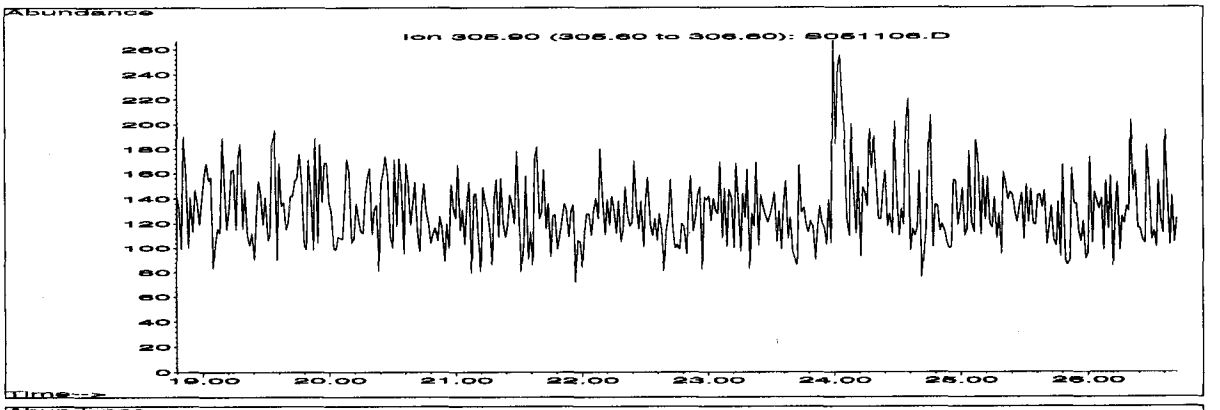


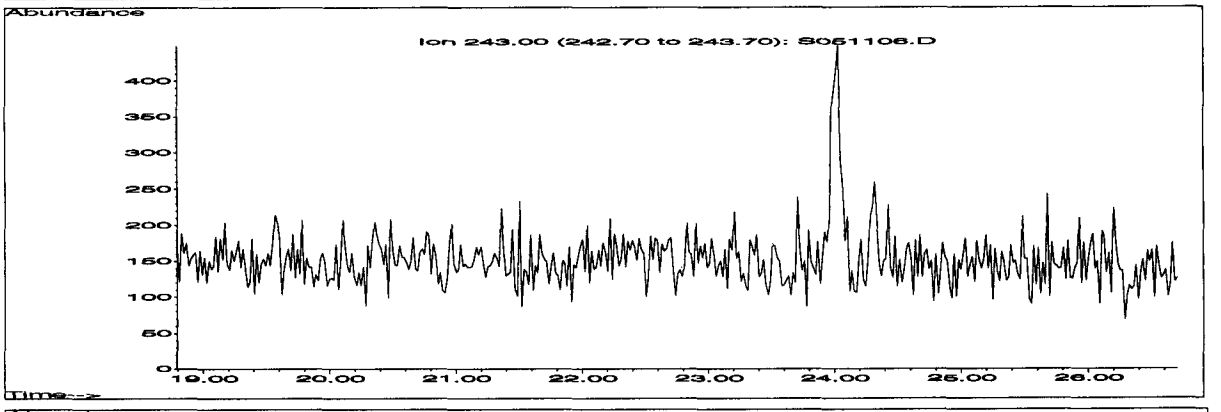


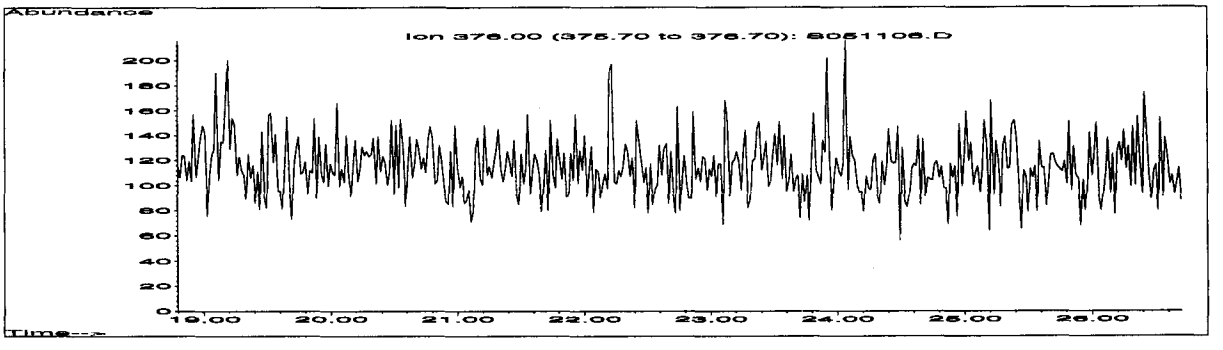
TCDF TOTAL

TS R.T. Lower Limit	18.80
TS R.T. Upper Limit	26.70



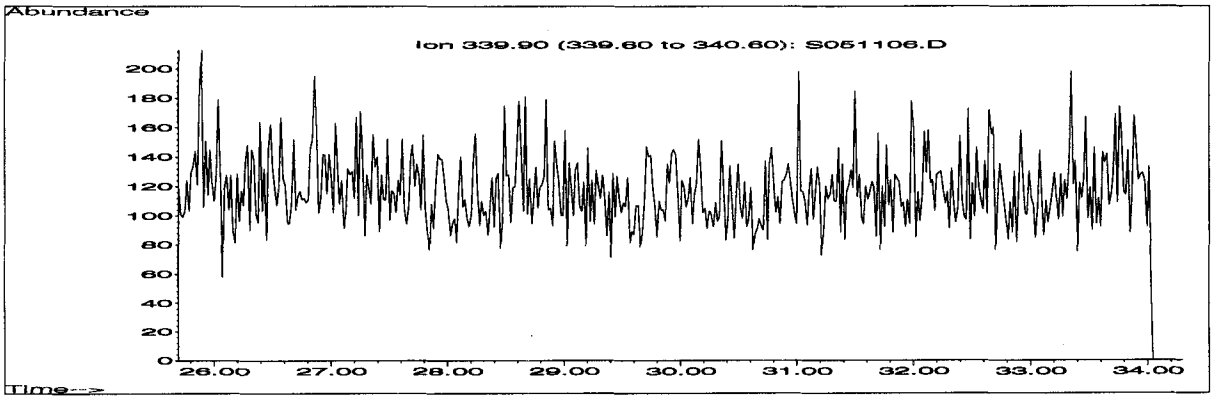


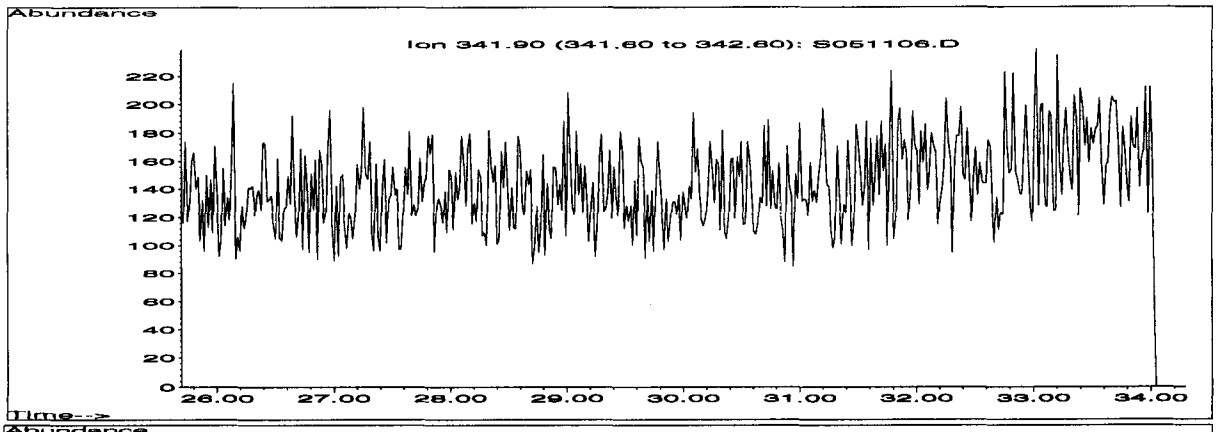


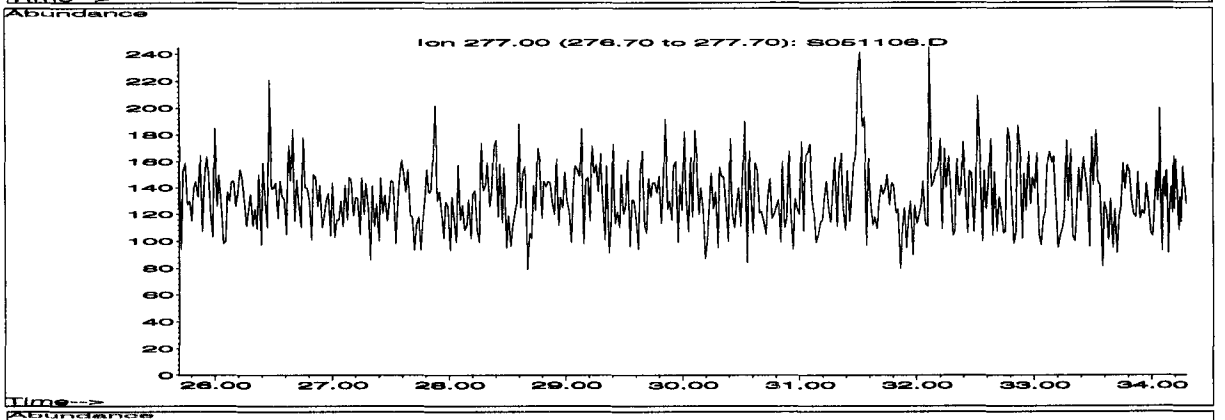


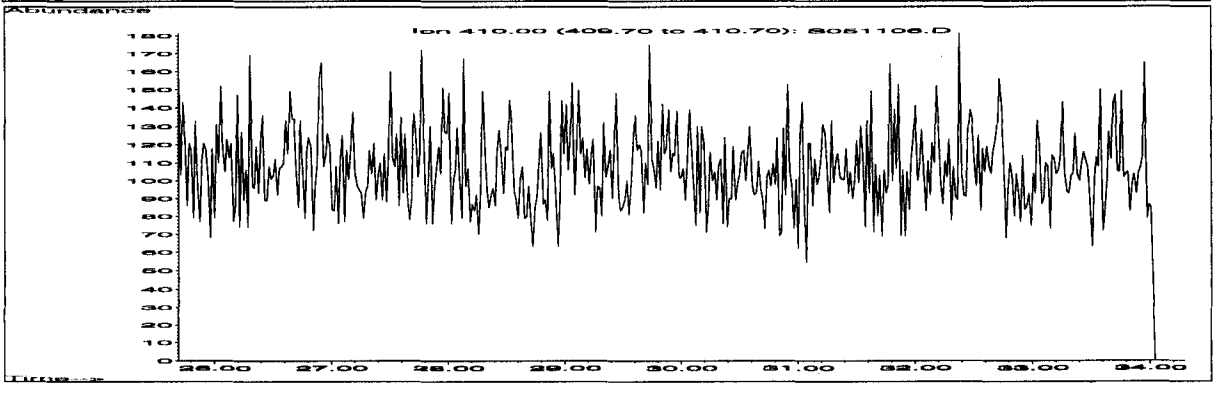
PeCDF TOTAL

TS R.T. Lower Limit	25.70
TS R.T. Upper Limit	34.30



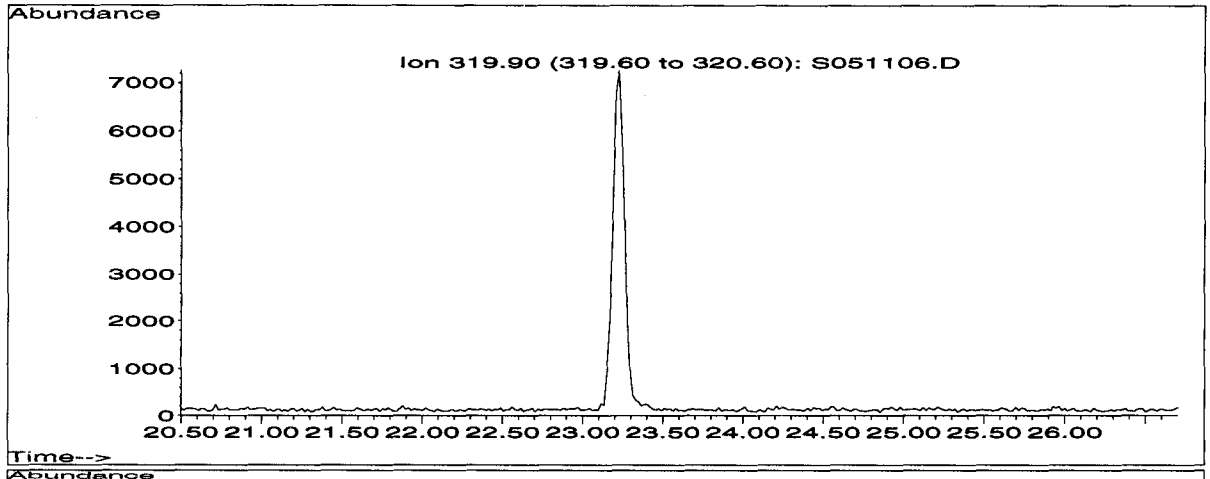


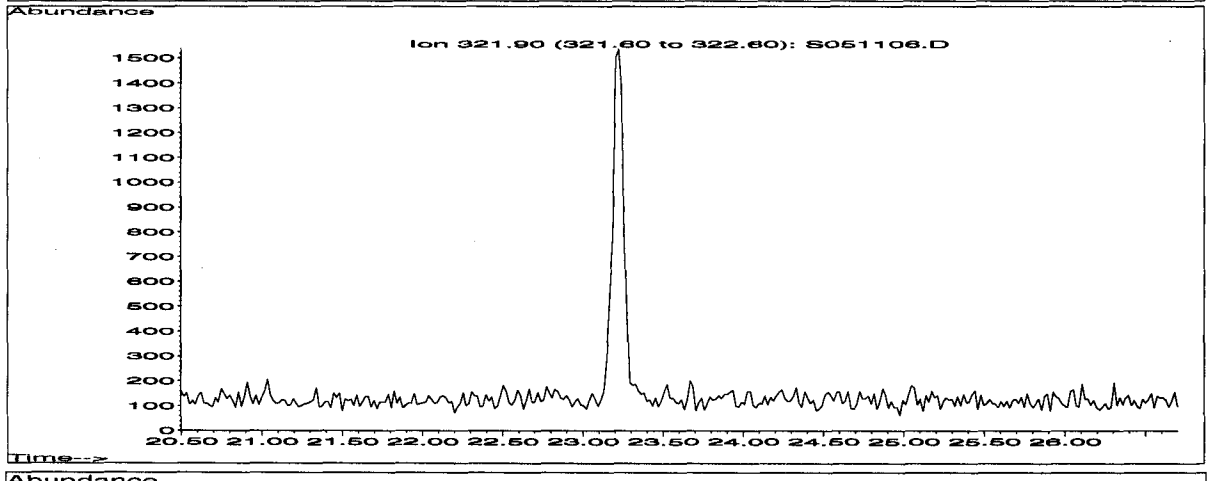


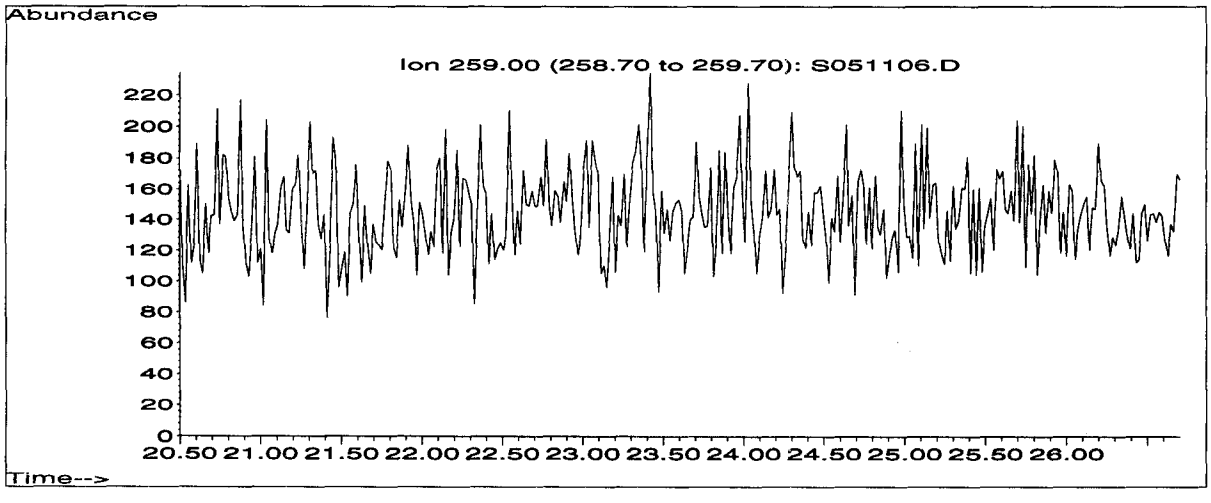


TCDD TOTAL

TS R.T. Lower Limit	20.50
TS R.T. Upper Limit	26.70

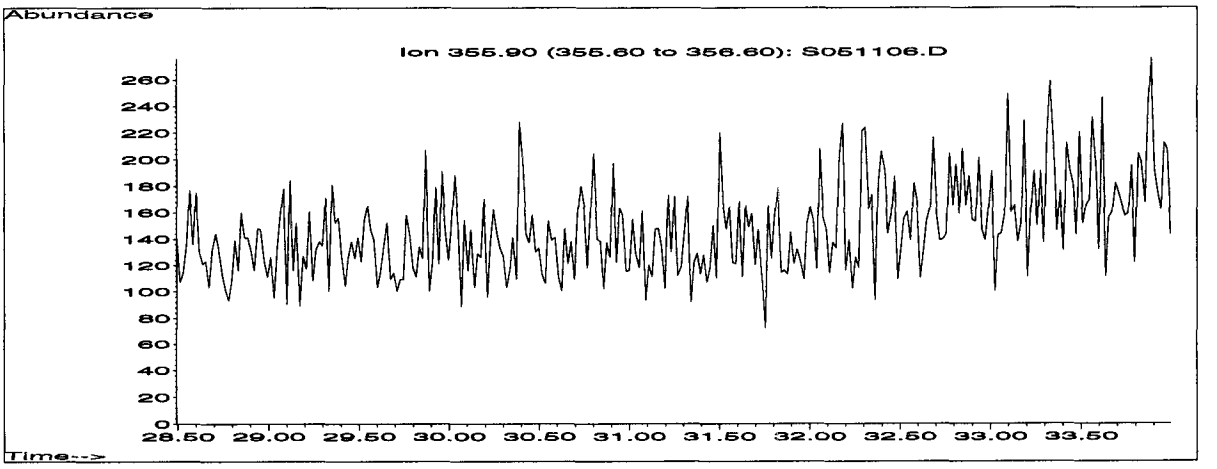


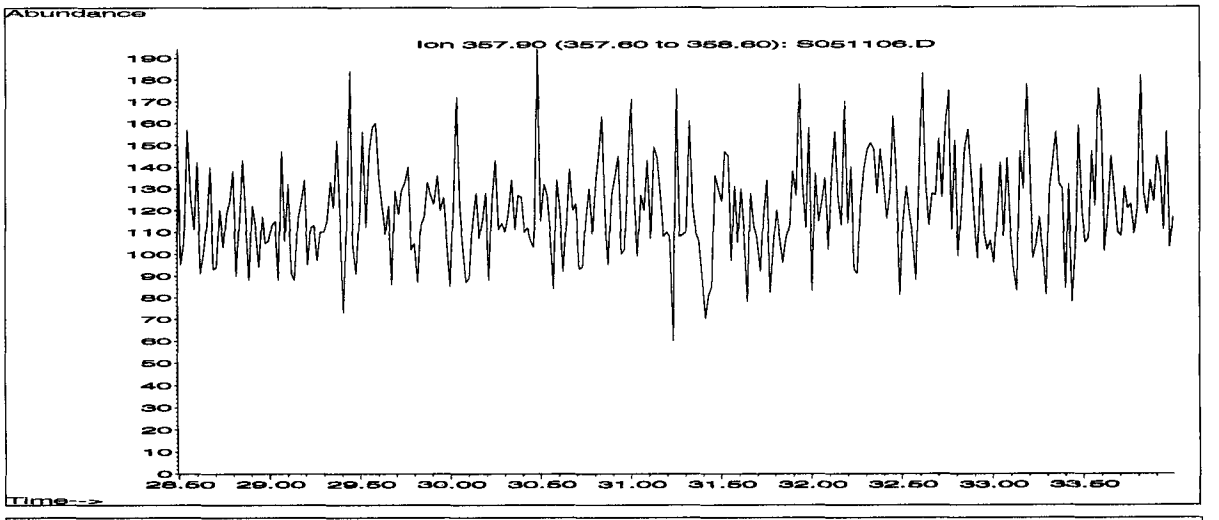


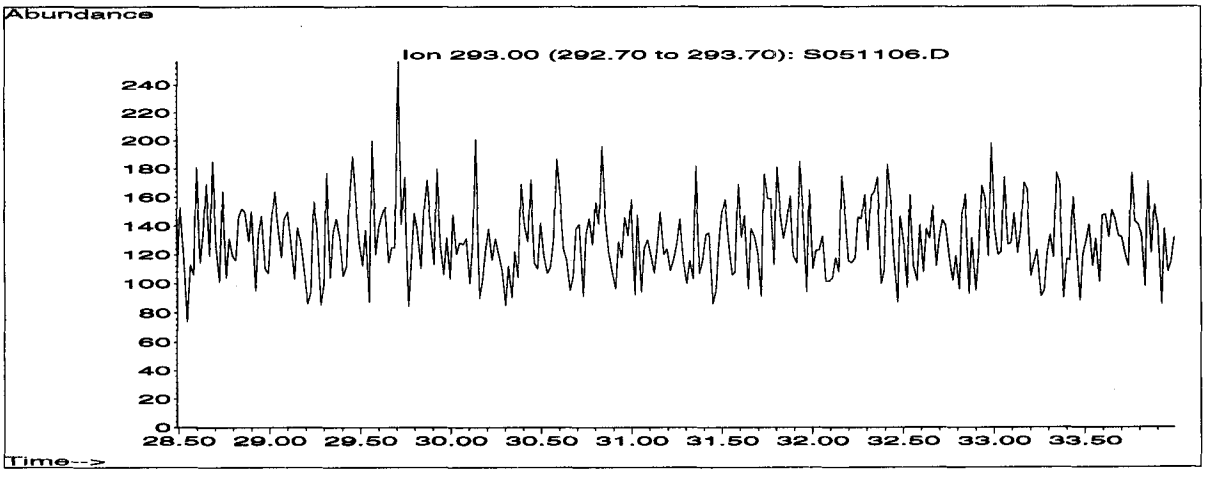


PeCDD TOTAL

TS R.T. Lower Limit	28.50
TS R.T. Upper Limit	34.00

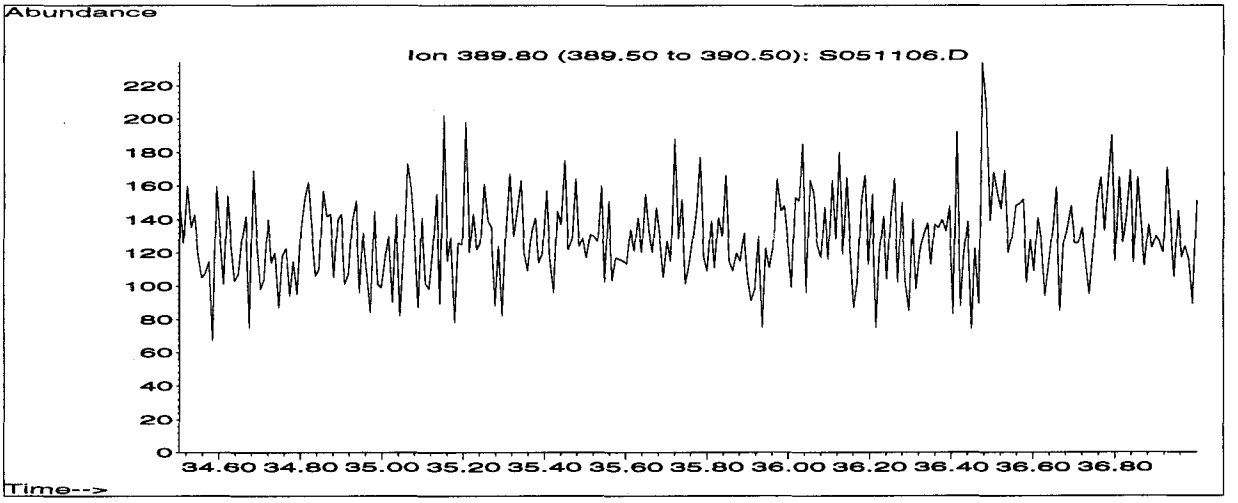


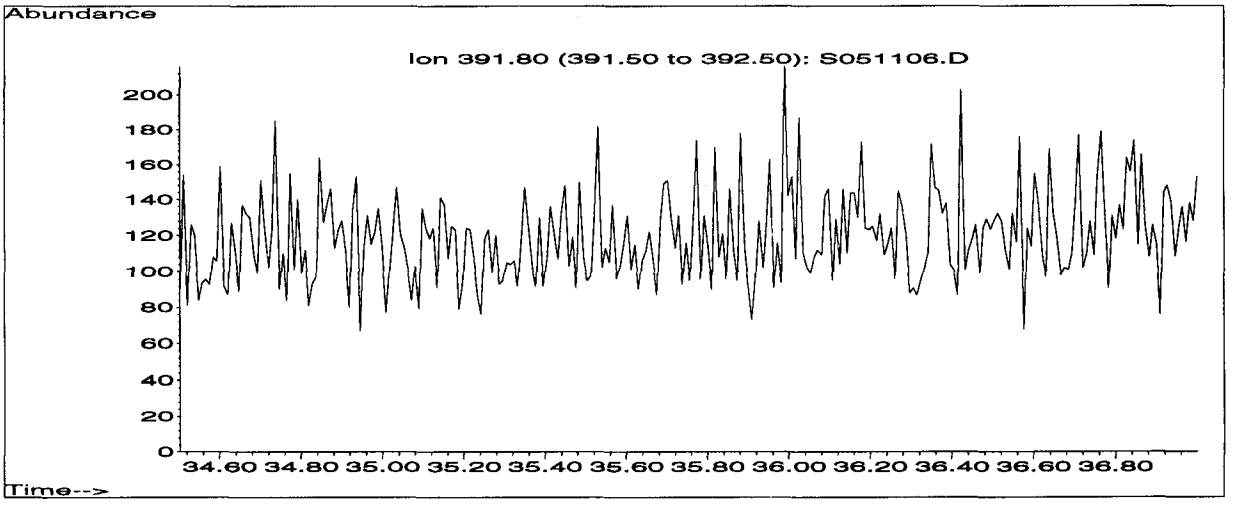


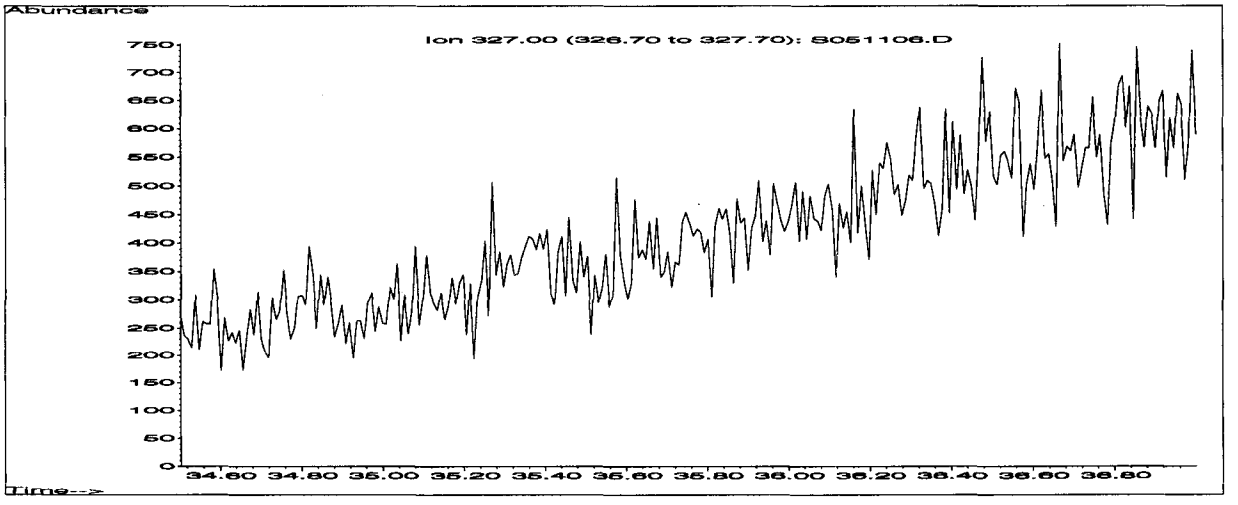


HxCDD TOTAL

TS R.T. Lower Limit	34.50
TS R.T. Upper Limit	37.00

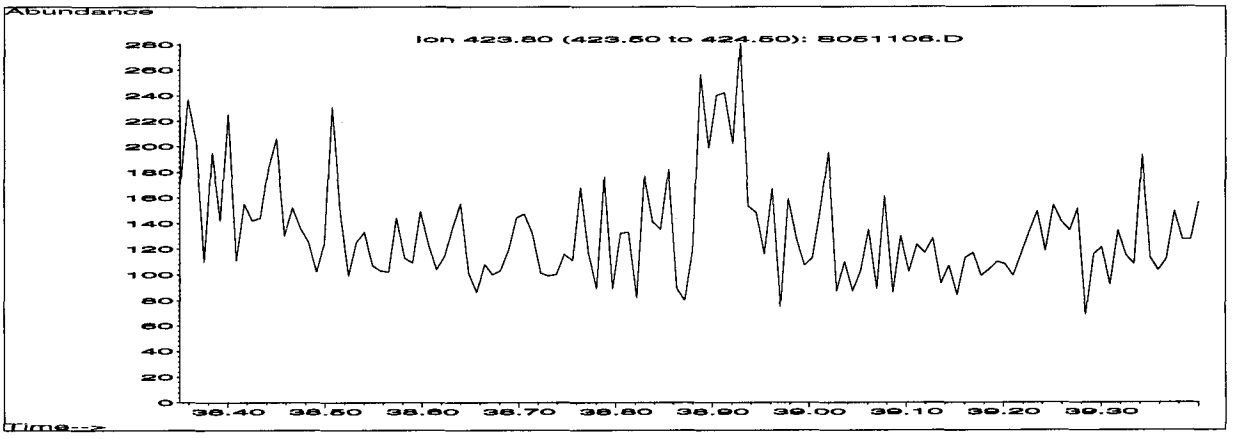


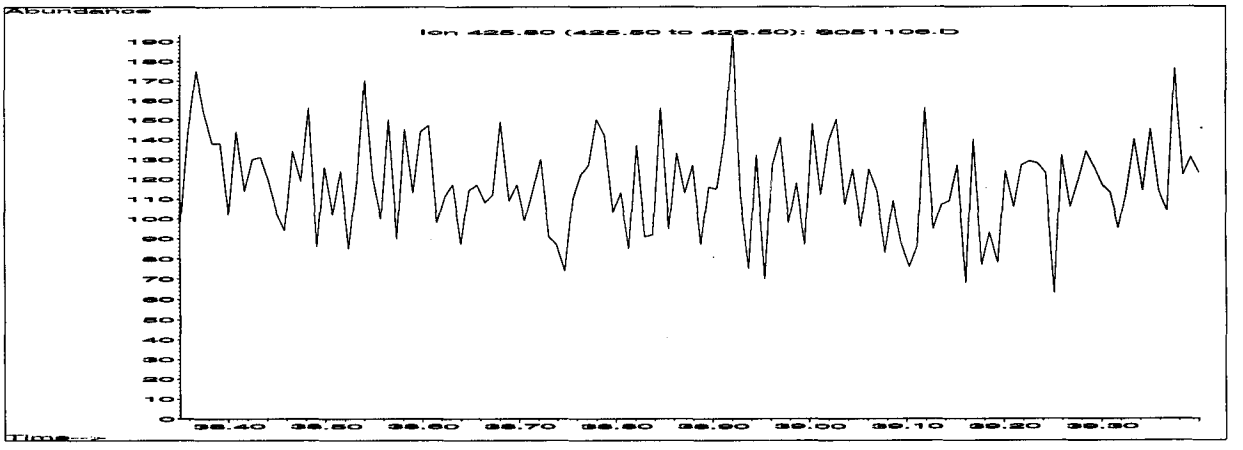


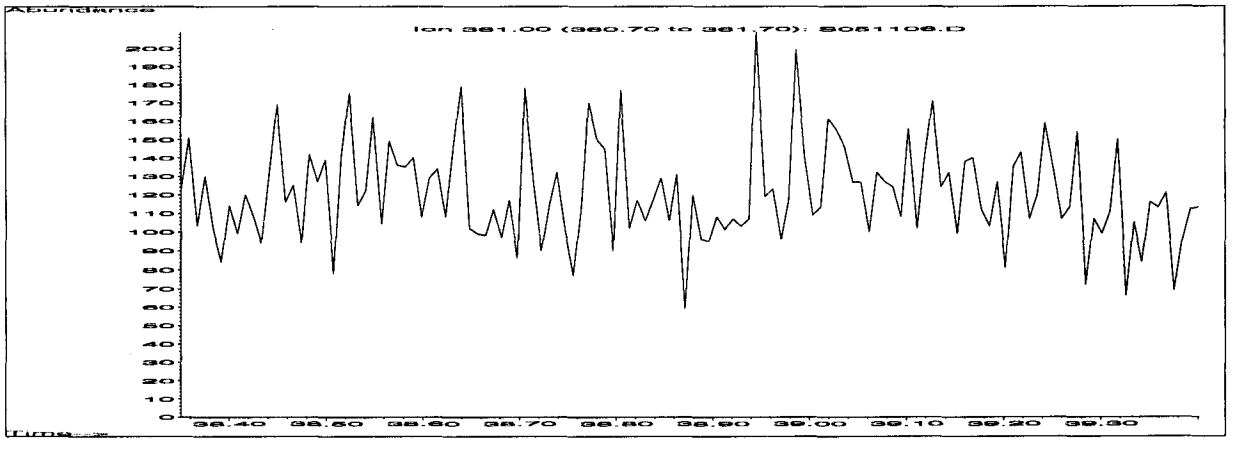


HpCDD TOTAL

TS R.T. Lower Limit	38.35
TS R.T. Upper Limit	39.40

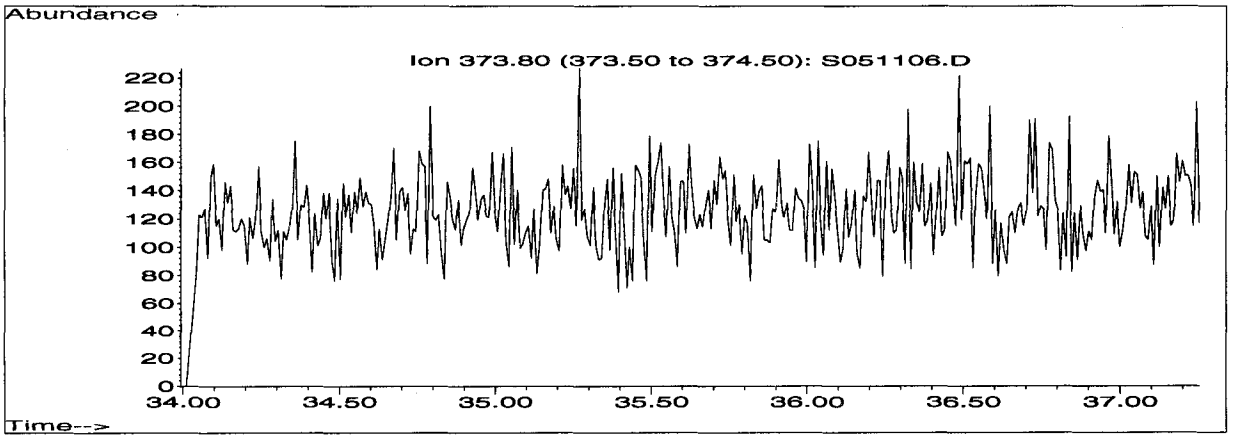


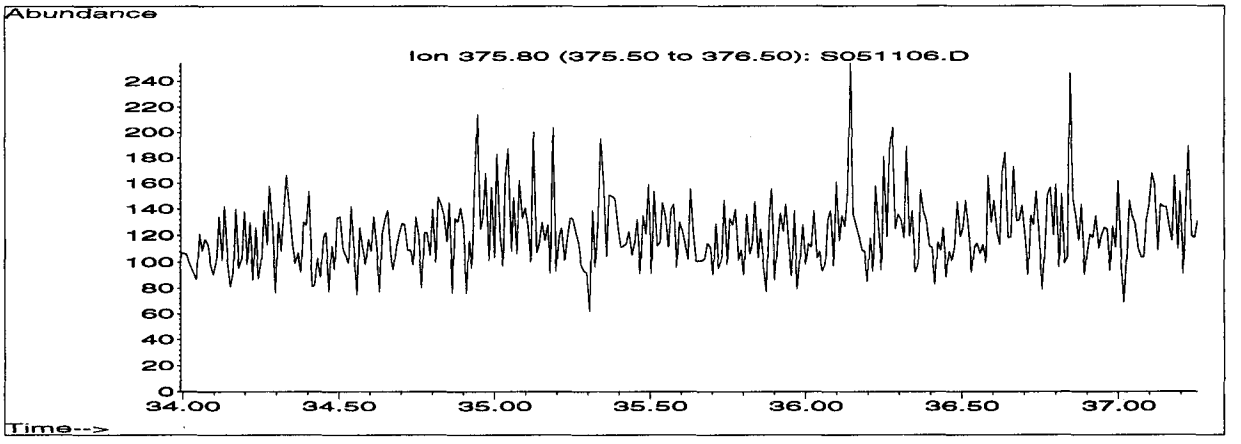


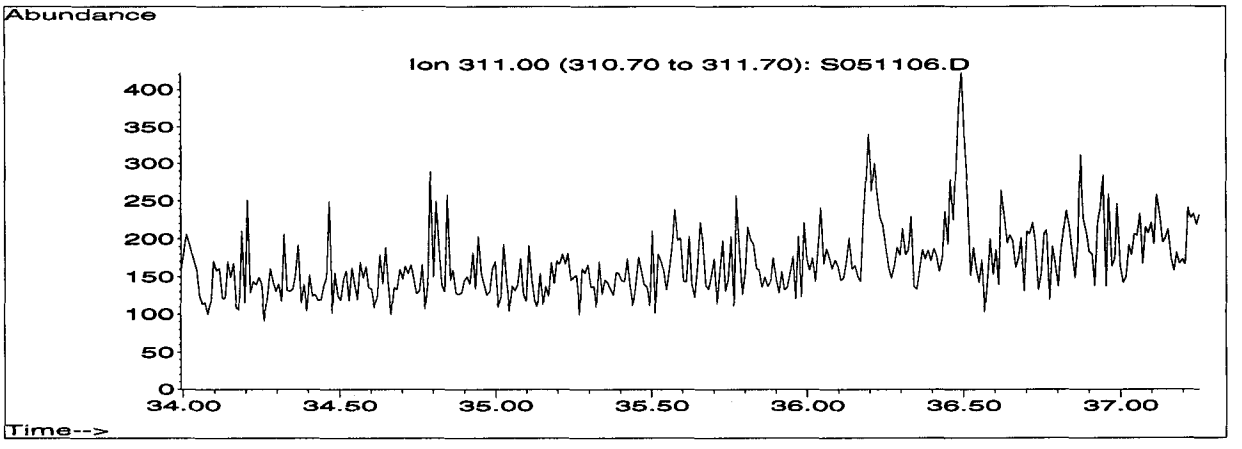


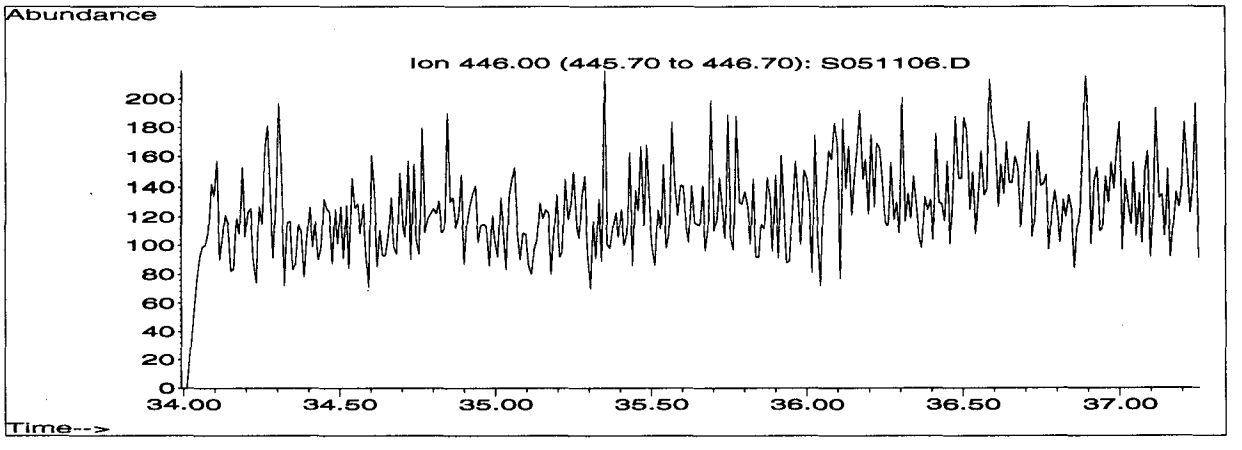
HxCDF TOTAL

TS R.T. Lower Limit	34.00
TS R.T. Upper Limit	37.25



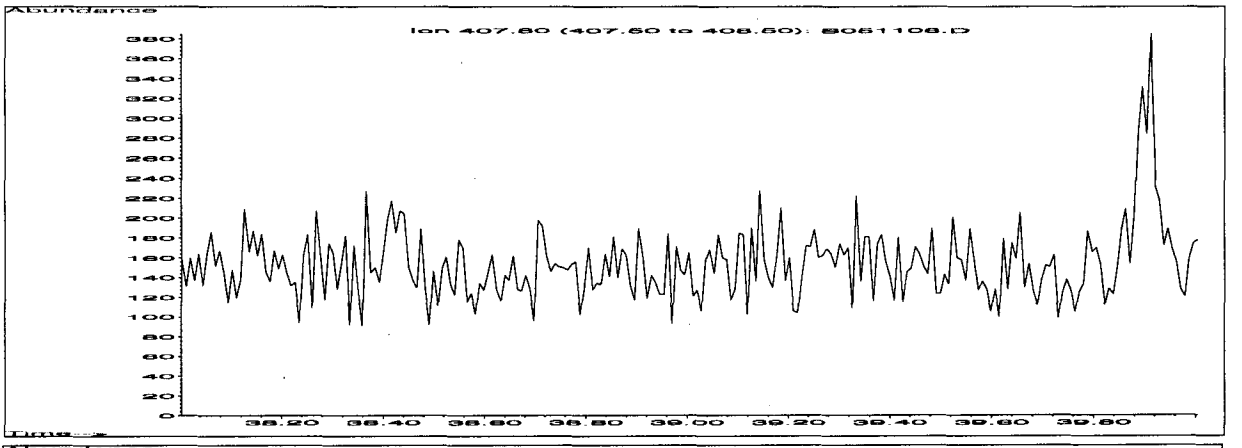


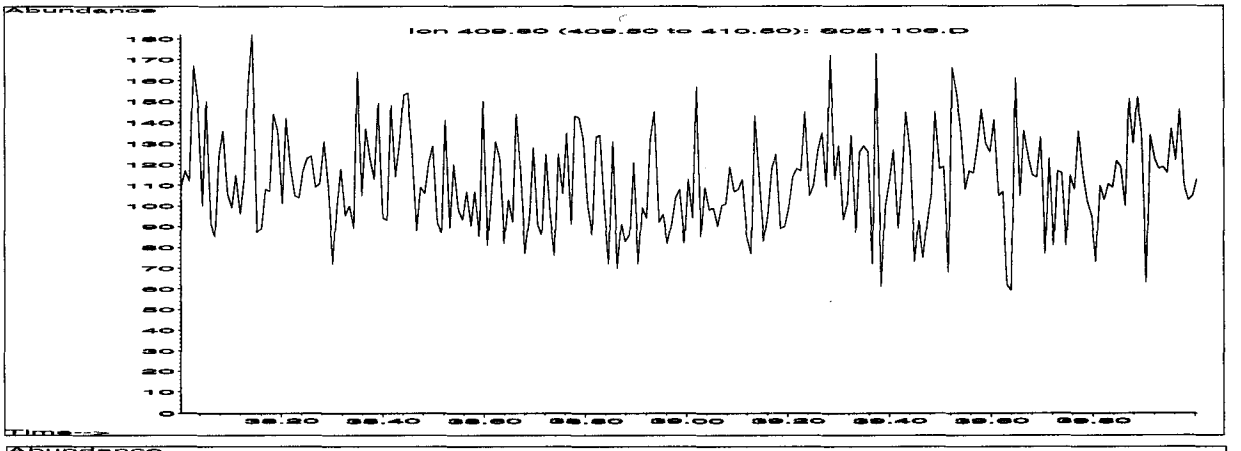


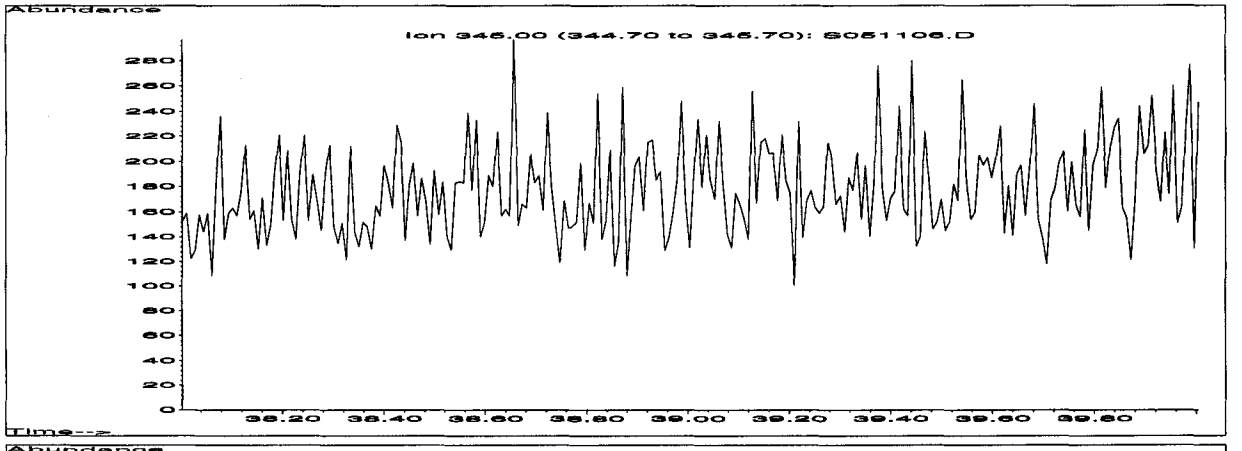


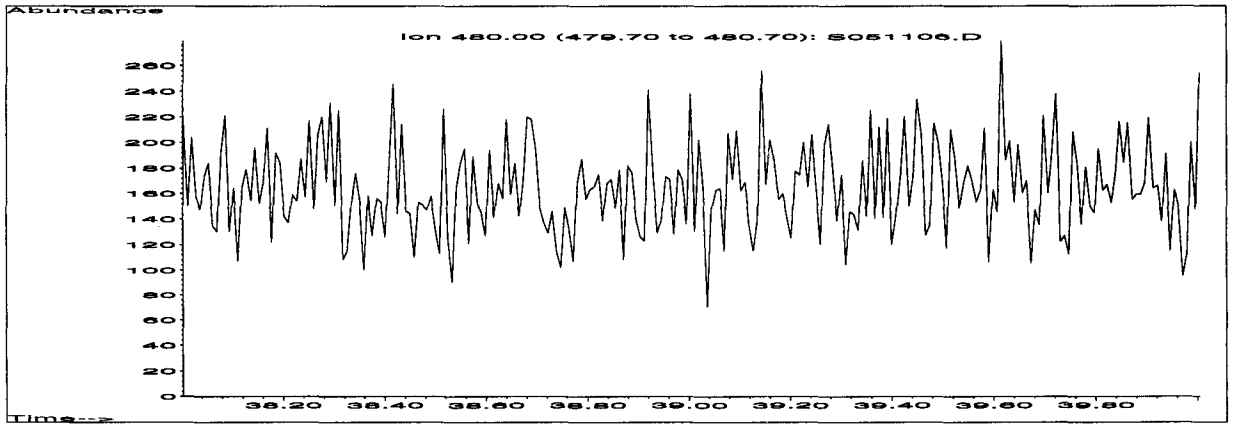
HpCDF TOTAL

TS R.T. Lower Limit	38.00
TS R.T. Upper Limit	40.00

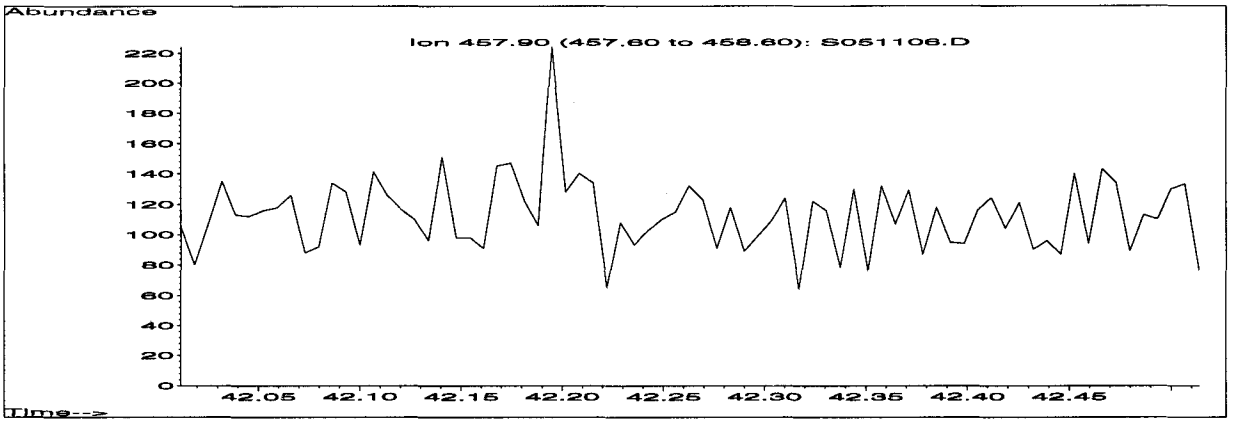


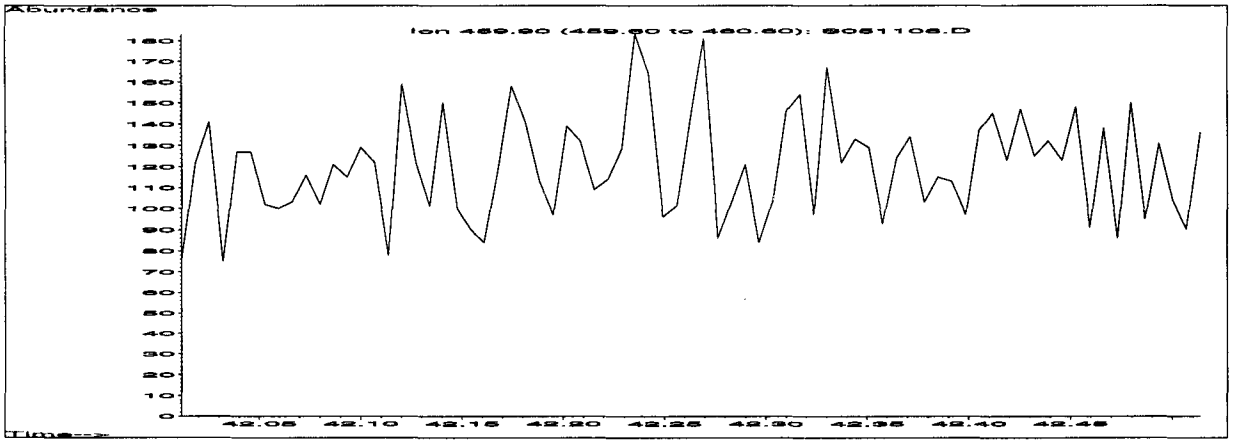


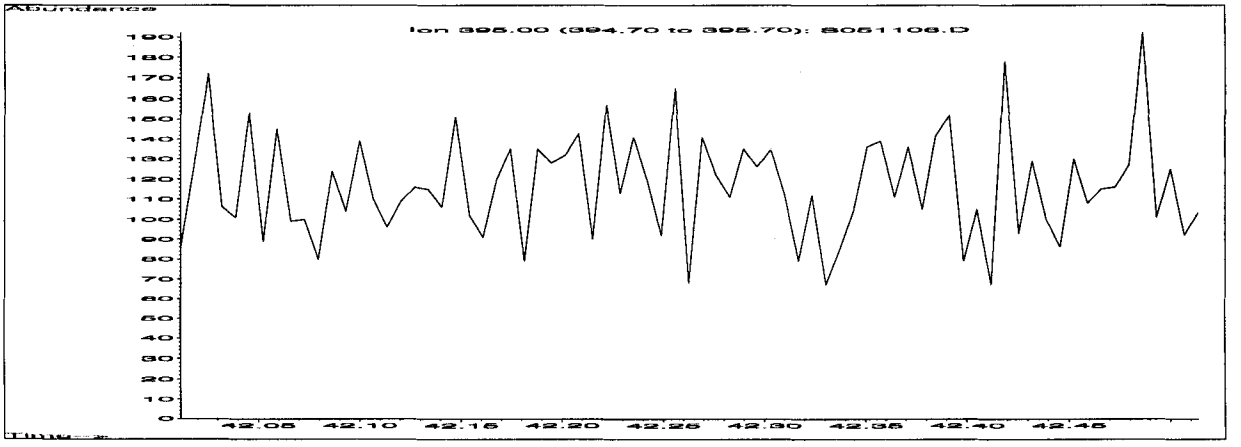




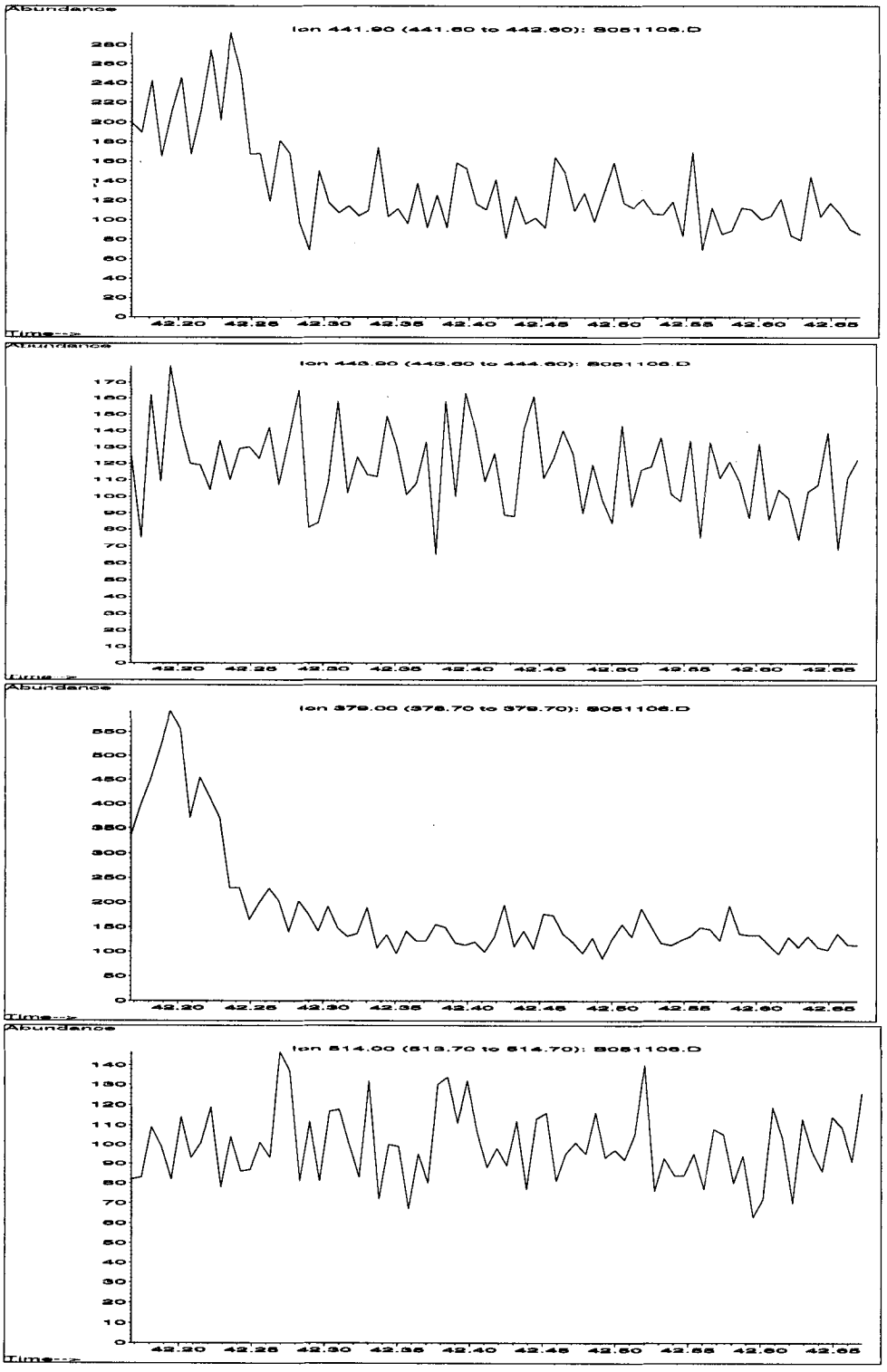
OCDD			
TS R.T. Lower Limit	42.01		
TS R.T. Upper Limit	42.51		
Ret. Time	0.00		
Target Ion	457.9	Q1 Ion	459.9
Target Response	0	Q1 Response	0
Total Response	0	Ion ratio	#DIV/0!
Q2 Ion	395		
Q2 Response	0		





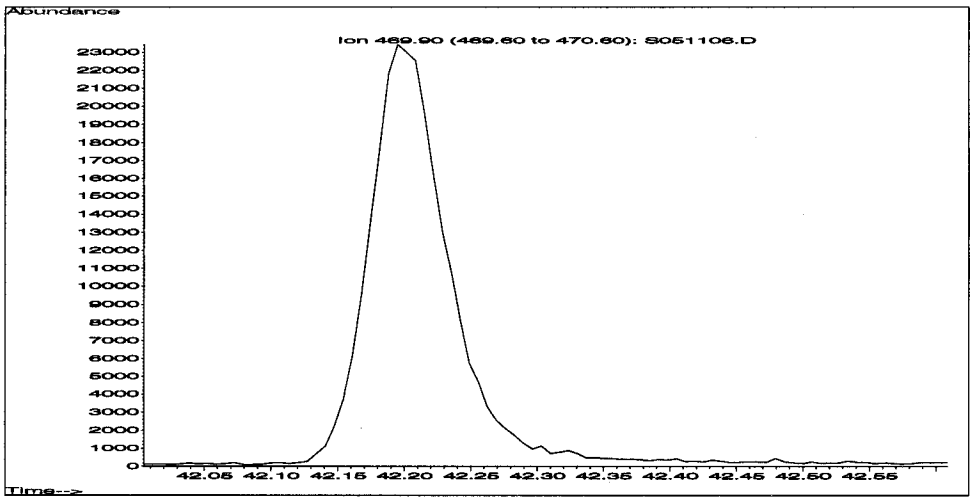


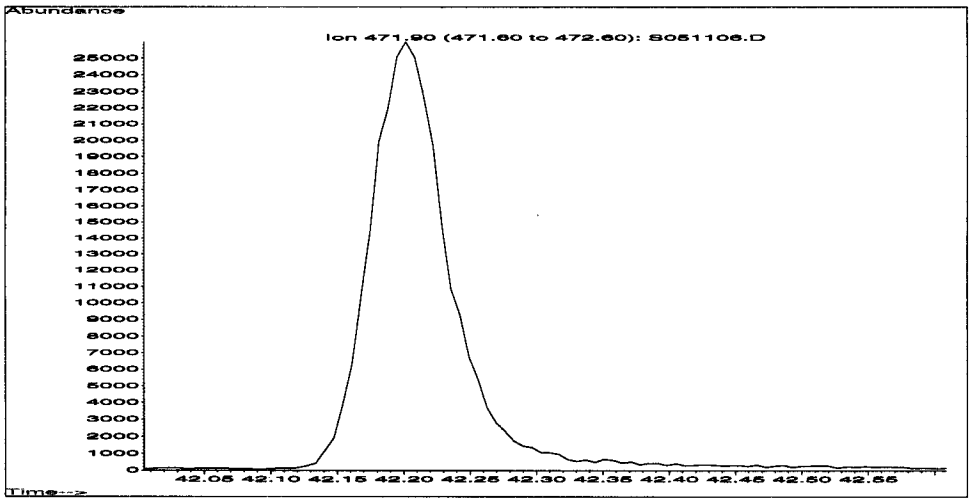
OCDF			
TS R.T. Lower Limit	42.17		
TS R.T. Upper Limit	42.67		
Ret Time	0.00		
Target Ion	441.9	Q1 Ion	443.9
Target Response	0	Q1 Response	0
Target Response	0	Ion Ratio	#DIV/0!
Q2 Ion	379	DPE Ion	514
Q2 Response	0	DPE Response	0



13C-OCDD-IS

RT Lower Limit	42.01		
RT Upper Limit	42.61		
Ret Time	42.19		
Target Ion	469.9	Q1 Ion	471.9
Target Response	97243	Q1 Response	106860
Total response	204103	Ratio	0.91





TestAmerica – West Sacramento

Daily Standard Checklist

Method 8280A

(5)

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Method ID 8280A

Associated ICAL 8280A042610DB

Column ID DB5

Instrument ID 2DB

STD ID STOSIIA, STOSIIB

STD Solution 10LRES12, 10LRES05 11 5/12/10 ME

Analyzed By MEo

Date Analyzed 5/11/10, 5/12/10

Std. Pkg. By MG

Date Std. Pkg. Assembled 5/12/10

Std. Pkg. Reviewed By

Date Std. Pkg. Reviewed 5/12/10

DAILY STANDARD PACKAGE	INITIATED	REVIEWED
Standard and WDM present?	✓	
Copy of Instrument log present?	✓	
Standard compared to correct ICAL curve?	✓	
Curve summary present?	✓	
Daily standard within method specified limits? *	✓	
Daily ion abundance ratios within method limits?	✓	
Analyte retention times correct?	✓	
Peak reintegration documented, initialed and dated?	NA	N/A
WDM windows correct?	✓	
Samples analyzed within 12 hrs of daily standard?	✓	

ANALYSIS of DAILY STANDARDS	INITIATED	REVIEWED
CC3 Valley between 13C-1234-TCDD & 13C-2378-TCDD ≤ 25%?	✓	
CC3 Valley between 123478-HxCDD & 123678-HxCDD ≤ 50%?	✓	
CC1 All native S/N ≥ 2.5:1 ; IS and RS S/N ≥ 10:1 ?	✓	
CC1 All analyte ion abundance ratios within method limits?	✓	
CC1 RS RT ≤ 0.167 decimal minutes from CC3 RS times? (10 sec.)	✓	

COMMENTS:

* For Method 8280A, %D ± 30% from initial calibration curve, S/N ≥2.5:1 for natives, ≥10:1 for IS and RS.

Continuing Calibration Report 2DB

Initial Calibration Date : 26 Apr 2010

Method File : C:\8280\ DATA METHODS\10MY11A2.M (RTE Integrator)
Title : Dioxin Furan Total
Last Update : Tue May 11 17:13:38 2010
Response via : Initial Calibration

Continuing Calibration File: ST0511A.D

Maximum allowable RRF Deviation (8280A) : 30%

		Compound	AvgRF	CCRF	%Dev
1	IR	13C-1234-TCDD	1.000	1.000	0.0
2	T	13C-2378-TCDF-IS	1.338	1.407	-5.2
3	T	13C-2378-TCDD-IS	0.947	0.991	-4.7
4	S	37Cl-2378-TCDD	1.312	1.361	-3.8
5	IR	13C-123789-HxCDD	1.000	1.000	0.0
6	T	13C-123678-HxCDD-IS	0.778	0.794	-2.1
7	T	13C-1234678-HpCDF-IS	0.987	0.990	-0.2
8	T	13C-OCDD-IS	0.659	0.651	1.2
9	IR	13C-2378-TCDF	1.000	1.000	0.0
10	MT	2378-TCDF	1.272	1.246	2.0
11	H	TCDF TOTAL	1.272	1.246	2.0
12	MT	12378-PeCDF	1.194	1.142	4.3
13	T	23478-PeCDF	1.175	1.143	2.7
14	H	PeCDF TOTAL	1.175	1.142	2.8
15	IR	13C-2378-TCDD	1.000	1.000	0.0
16	MT	2378-TCDD	1.254	1.230	1.9
17	H	TCDD TOTAL	1.254	1.230	1.9
18	MT	12378-PeCDD	1.160	1.122	3.3
19	H	PeCDD TOTAL	1.160	1.122	3.3
20	IR	13C-123678-HxCDD	1.000	1.000	0.0
21	T	123478-HxCDD	1.020	0.970	4.9
22	MT	123678-HxCDD	1.004	1.003	0.1
23	T	123789-HxCDD	1.068	1.030	3.6
24	H	HxCDD TOTAL	1.004	0.970	3.4
25	MT	1234678-HpCDD	1.084	1.017	6.2
26	H	HpCDD TOTAL	1.084	1.017	6.2
27	IR	13C-1234678-HpCDF	1.000	1.000	0.0
28	T	123478-HxCDF	1.002	0.977	2.5
29	MT	123678-HxCDF	1.039	1.049	-0.9
30	T	234678-HxCDF	0.991	0.987	0.4
31	T	123789-HxCDF	0.950	0.943	0.8
32	H	HxCDF TOTAL	0.950	0.943	0.8
33	MT	1234678-HpCDF	1.183	1.163	1.7
34	T	1234789-HpCDF	1.063	1.028	3.3
35	H	HpCDF TOTAL	1.063	1.028	3.3
36	IR	13C-OCDD	1.000	1.000	0.0
37	MT	OCDD	1.114	1.109	0.4
38	MT	OCDF	1.418	1.416	0.1

(#) = Out of Range

ST0511A.D 10MY11A2.M Wed May 12 09:02:27 2010

pl_ilog
Injection Log Summary Report

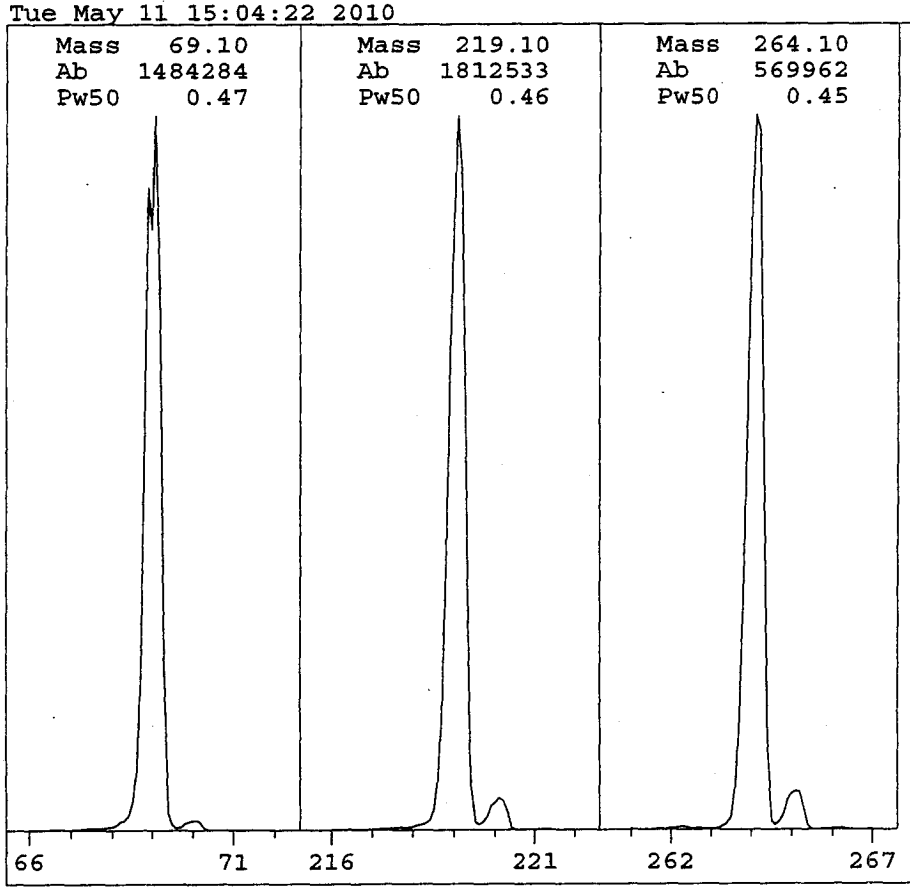
Method : C:\8280_DATA_METHODS\10MY11C2.M
Title : Dioxin Furan Total
Start (Tune) File ID : C:\8280\2DB\051110.B\WDM0511.D
Injection Date : 11 May 2010 Log Time Period (hrs) : ALL
Injection Time : 15:09 Total files within period : 23
Sample Directory : C:\8280\2DB\051110.B\

Injection Log Summary Table

File ID	Sample Name Misc Info	Date	Time
ST0511A	10LRES012 CS-3 CS-3 10LRES012	11 May 2010	15:57
SB0511A	Solvent Blank C-14	11 May 2010	16:45
S051101	L09RG-1-AA WATER LR009 G0D270571-MB 1.0L 8280A	11 May 2010	17:33
S051102	L09RG-1-AC WATER LR009 G0D270571-LCS 1.0L 8280A	11 May 2010	18:21
S051103	L0L26-1-AA WATER LR009 G0D270571-1 0.91583L 8280A	11 May 2010	19:09
S051104	L0QG4-1-AA WATER LR009 G0D290496-1 1.00048L 8280A	11 May 2010	19:57
S051105	L0QGW-1-AA WATER LR009 G0D290499-1 1.02013L 8280A	11 May 2010	20:44
S051106	L0VEJ-1-AA WATER LR009 A0D300605-5 1.02945L 8280A	11 May 2010	21:32
S051107	L0WTR-1-AA WATER LR009 G0E030422-1 1.03178L 8280A	11 May 2010	22:20
SB0511Z	Solvent Blank C-14	11 May 2010	23:08
SB0511B	Solvent Blank C-14	11 May 2010	23:56
ST0511B	10LRES011 CS-1 CS-1 10LRES011	12 May 2010	00:44
ST0511C	10LRES012 CS-3 CS-3 10LRES012	12 May 2010	01:32
SB0511C	Solvent Blank C-14	12 May 2010	02:20
S051108	L057J-1-AA WATER LR009 G0D280478-MB 1.0L 8280A	12 May 2010	03:08
S051109	L057J-1-AC WATER LR009 G0D280478-LCS 1.0L 8280A	12 May 2010	03:56
S051110	L0M32-1-AA WATER LR009 G0D280478-1 1.03668L 8280A	12 May 2010	04:44
S051111	L0VEC-1-AA WATER LR009 A0D300605-1 1.01535L 8280A	12 May 2010	05:32
S051112	L0VEF-1-AA WATER LR009 A0D300605-2 1.01413L 8280A	12 May 2010	06:20
S051113	L0VEG-1-AA WATER LR009 A0D300605-3 1.02376L 8280A	12 May 2010	07:07
S051114	L0VEH-1-AA WATER LR009 A0D300605-4 0.97026L 8280A	12 May 2010	07:55
S051114	L0VEH-1-AA WATER LR009 A0D300605-4 0.97026L 8280A	12 May 2010	07:55
S051115	L0VEH-1-AC WATER LR009 A0D300605-4S 0.97616L 8280A	12 May 2010	08:43

HP5973

Instrument: 2DB
Tue May 11 15:04:22 2010 C:\HPCHEM\1\5973\2DBYTUNE.U

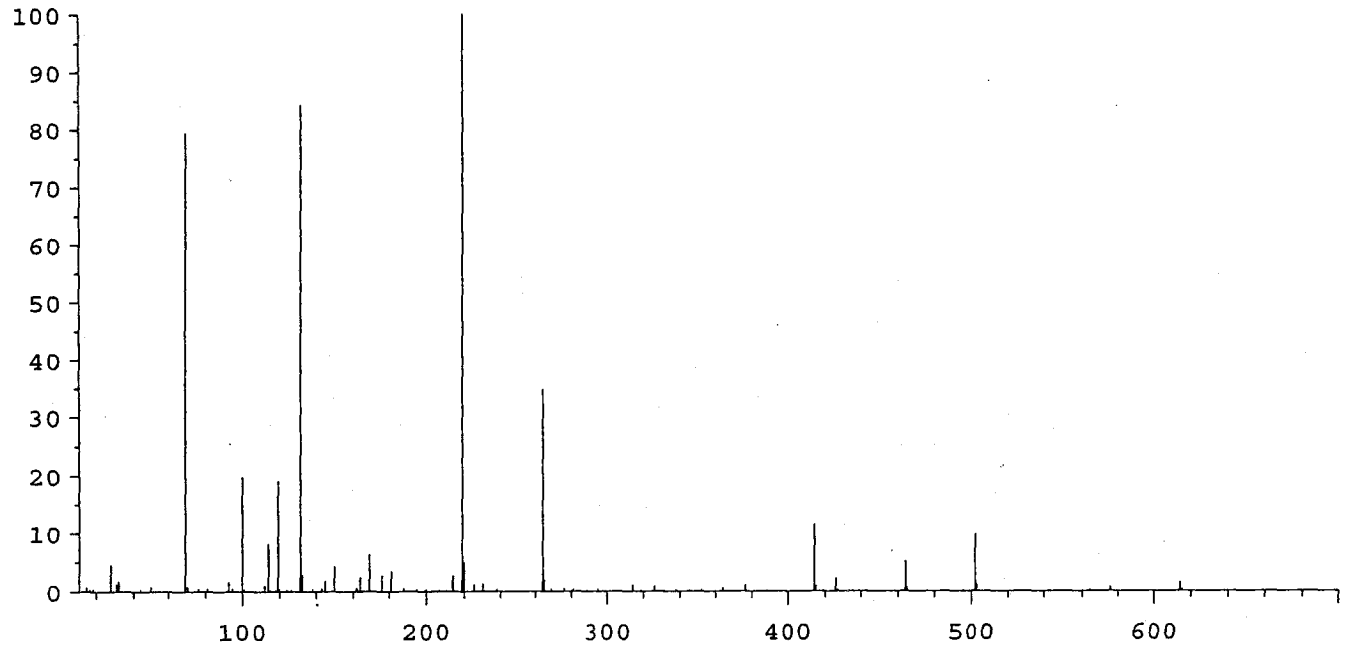


Ion Pol	POS	MassGain	66
		MassOffs	-14
Emission	34.6	AmuGain	2448
EleEnergy	69.9	AmuOffs	140
Filament	1	Wid219	0.042
		DC Pol	POS
Repeller	26.10		
IonFocus	79.7	HED	ON
EntLens	0.0	EMVolts	2212
EntOffs	VAR		
		Samples	8
PFTBA	OPEN	Averages	3
		StepSize	0.10

Zones:

MS Source	250	TurboSpd	100
MS Quad	150		

Scan: 10.00 - 700.00 Samples: 8 Thresh: 100
463 peaks Base: 219.10 Abundance: 1269760



Mass	Abund	Rel Abund	Iso Mass	Iso Abund	Iso Ratio
69.00	1009088	100.00	70.10	9679	0.96
219.10	1269760	125.83	220.10	61864	4.87
264.10	440960	43.70	265.10	24560	5.57

TARGET MASS:	50	69	131	219	414	502
DYNAMIC ENT OFFSET:	7.8	9.3	12.8	13.6	24.8	26.6
TARGET ABUND(%):	1.0	100.0	90.0	90.0	10.0	10.0
ACTUAL TUNE ABUND(%):	1.0	100.0	106.1	125.8	14.4	12.2

Response Factor Report 2DB

Method : C:\8280\ DATA METHODS\10MY11A2.M (RTE Integrator)
Title : Dioxin Furan Total
Last Update : Tue May 11 17:13:38 2010
Response via : Initial Calibration

Calibration Files
CS1=ST0426A.D CS2=ST0426B.D CS3=ST0426C.D
CS4=ST0426D.D CS5=ST0426E.D

		Compound	CS1	CS2	CS3	CS4	CS5	Avg	%RSD
1)	IR	13C-1234-TCDD	----------ISTD----------						
2)	T	13C-2378-TCDF-IS	1.334	1.320	1.348	1.333	1.354	1.338	0.99
3)	T	13C-2378-TCDD-IS	0.932	0.943	0.985	0.931	0.943	0.947	2.33
4)	S	37Cl-2378-TCDD			1.312			1.312	0.00
5)	IR	13C-123789-HxCDD	----------ISTD----------						
6)	T	13C-123678-HxCDD-IS	0.764	0.772	0.789	0.782	0.780	0.778	1.22
7)	T	13C-1234678-HpCDF-IS	0.986	0.986	1.007	0.981	0.978	0.987	1.15
8)	T	13C-OCDD-IS	0.653	0.661	0.673	0.642	0.666	0.659	1.82
9)	IR	13C-2378-TCDF	----------ISTD----------						
10)	MT	2378-TCDF	1.156	1.250	1.269	1.372	1.313	1.272	6.29
11)	H	TCDF TOTAL	1.156	1.250	1.269	1.372	1.313	1.272	6.29
12)	MT	12378-PeCDF	1.088	1.167	1.175	1.289	1.248	1.194	6.53
13)	T	23478-PeCDF	1.081	1.150	1.169	1.257	1.219	1.175	5.73
14)	H	PeCDF TOTAL	1.081	1.150	1.169	1.257	1.219	1.175	5.73
15)	IR	13C-2378-TCDD	----------ISTD----------						
16)	MT	2378-TCDD	1.202	1.238	1.192	1.357	1.281	1.254	5.38
17)	H	TCDD TOTAL	1.202	1.238	1.192	1.357	1.281	1.254	5.38
18)	MT	12378-PeCDD	1.063	1.107	1.120	1.275	1.233	1.160	7.75
19)	H	PeCDD TOTAL	1.063	1.107	1.120	1.275	1.233	1.160	7.75
20)	IR	13C-123678-HxCDD	----------ISTD----------						
21)	T	123478-HxCDD	0.956	1.028	0.990	1.069	1.058	1.020	4.65
22)	MT	123678-HxCDD	0.942	0.968	1.012	1.095	1.002	1.004	5.77
23)	T	123789-HxCDD	1.005	1.059	1.064	1.128	1.086	1.068	4.19
24)	H	HxCDD TOTAL	0.942	0.968	1.012	1.095	1.002	1.004	5.77
25)	MT	1234678-HpCDD	1.020	1.072	1.070	1.153	1.106	1.084	4.53
26)	H	HpCDD TOTAL	1.020	1.072	1.070	1.153	1.106	1.084	4.53
27)	IR	13C-1234678-HpCDF	----------ISTD----------						
28)	T	123478-HxCDF	0.907	0.981	0.987	1.097	1.039	1.002	7.06
29)	MT	123678-HxCDF	0.951	1.014	1.027	1.124	1.080	1.039	6.34
30)	T	234678-HxCDF	0.917	0.965	0.975	1.074	1.024	0.991	6.03
31)	T	123789-HxCDF	0.871	0.933	0.936	1.025	0.985	0.950	6.15
32)	H	HxCDF TOTAL	0.871	0.933	0.936	1.025	0.985	0.950	6.15
33)	MT	1234678-HpCDF	1.123	1.172	1.154	1.261	1.204	1.183	4.45
34)	T	1234789-HpCDF	0.973	1.045	1.049	1.149	1.101	1.063	6.19
35)	H	HpCDF TOTAL	0.973	1.045	1.049	1.149	1.101	1.063	6.19
36)	IR	13C-OCDD	----------ISTD----------						
37)	MT	OCDD	1.049	1.104	1.098	1.189	1.130	1.114	4.59
38)	MT	OCDF	1.295	1.394	1.403	1.548	1.448	1.418	6.48

L = Linear LO = Linear+Origin Q = Quad QO = Quad+Origin R = Corr. Coef
(#) = Out of Range

Quantitation Report (Not Reviewed)

Sample ID: CS-3 10LRES012 Size: 0.000
10LRES012 CS-3 Inst : DB1

Data File:C:\8280\2DB\051110.B\ST0511A.D Vial: 97
Acq On :11 May 2010 15:57 Operator: MEO
Sample Amount: 0.00

MS Integration Params: RTEINT.P
Quant Time: May 11 17:12 2010 Quant Results File: 10MY11A2.RES

Quant Method : C:\8280\ DATA METHODS\10MY11A2.M (RTE Integrator)
Title : Dioxin Furan Total
Last Update : Tue May 11 17:12:10 2010
Response via : Initial Calibration
DataAcq Meth : TOKAS
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Recovery\Internal Stds	R.T.	QIon	Ratio	Response	Conc	Dev(Min)
1) 13C-1234-TCDD	24.03	332+334	0.79	98551	25.00 NG	0.00
5) 13C-123789-HxCDD	36.49	402+404	1.24	153386	25.00 NG	0.00
9) 13C-2378-TCDF	23.22	316+318	0.82	138698	25.00 NG	0.00
15) 13C-2378-TCDD	24.32	332+334	0.79	97686	25.00 NG	0.00
20) 13C-123678-HxCDD	36.21	402+404	1.27	121796	25.00 NG	0.00
27) 13C-1234678-HpCDF	38.19	420+422	1.05	151784	25.00 NG	0.00
36) 13C-OCDD	42.21	470+472	0.92	199659	50.00 NG	0.00

Surrogate Compound

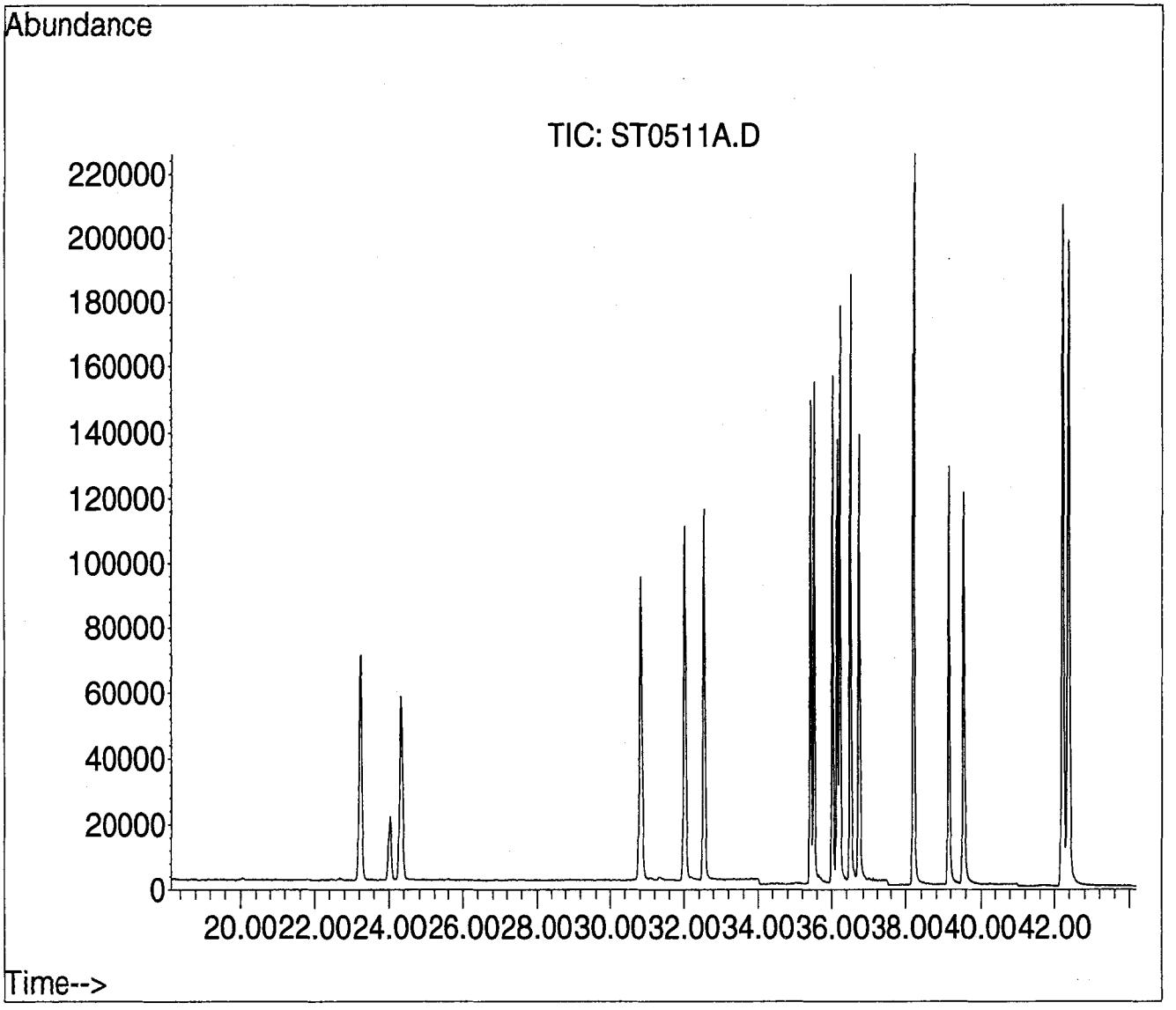
4) 37Cl-2378-TCDD	24.33	328		67067	12.970 NG	0.00
Spiked Amount = 12.500		RRF = 1.312		Recovery = 103.76%		

Target Compounds	RT	Ratio		Area	RRF	Conc	EDL	%Rec
2) 13C-2378-TCDF-IS	23.22	0.82		138698	1.338	26.299	0.1868	105.2
3) 13C-2378-TCDD-IS	24.32	0.79		97686	0.947	26.170	3.3812	104.7
6) 13C-123678-HxCDD-	36.21	1.27		121796	0.778	25.528	0.2407	102.1
7) 13C-1234678-HpCDF	38.19	1.05		151784	0.987	25.057	0.0935	100.2
8) 13C-OCDD-IS	42.21	0.92		199659	0.659	49.397	0.2301	98.8
10) 2378-TCDF	23.24	0.74		172841	1.272	24.491	0.2410	
1	22.68	0.93	#	3196		0.453		
2	23.24	0.74		173658		24.607		
11) TCDF TOTAL	22.00	0.74		176854	1.272	25.060		
12) 12378-PeCDF	30.82	1.53		395955	1.194	59.798	0.1159	
13) 23478-PeCDF	32.02	1.52		396433	1.175	60.802	0.1362	
1	30.82	1.53		398096		61.057		
2	31.36	1.29	#	4429		0.679		
3	32.02	1.52		396433		60.802		
14) PeCDF TOTAL	29.50	1.52		798958	1.175	122.537		
16) 2378-TCDD	24.33	0.77		120148	1.254	24.523	0.0472	
1	23.22	4.60	#	14043		2.866		
2	24.33	0.77		124264		25.363		
17) TCDD TOTAL	22.50	0.77		138307	1.254	28.230		
18) 12378-PeCDD	32.54	1.63		273912	1.160	60.449	0.1531	
1	32.54	1.61		275772		60.860		
19) PeCDD TOTAL	30.00	1.61		275772	1.160	60.860		
21) 123478-HxCDD	36.14	1.26		295373	1.020	59.427	2.0238	
22) 123678-HxCDD	36.21	1.27		305298	1.004	62.419	0.8994	
23) 123789-HxCDD	36.49	1.28		313642	1.068	60.263	1.5777	
1	36.14	1.26		295373		59.427		
2	36.21	1.33		305298		62.419		
3	36.49	1.29		1051512		214.986		
24) HxCDD TOTAL	36.50	1.29		1652183	1.004	336.832		

25)	1234678-HpCDD	39.15	1.05	309634	1.084	58.626	0.1452
	1	39.15	1.05	309634		58.626	
26)	HpCDD TOTAL	39.35	1.05	309634	1.084	58.626	
28)	123478-HxCDF	35.41	1.19	370824	1.002	60.935	4.5851
29)	123678-HxCDF	35.51	1.20	397927	1.039	63.078	1.0581
30)	234678-HxCDF	36.02	1.22	374472	0.991	62.244	0.2187
31)	123789-HxCDF	36.70	1.20	357769	0.950	62.025	0.2493
	1	35.41	1.19	370824		60.935	
	2	35.51	1.20	397927		63.078	
	3	36.02	1.21	374472		62.244	
	4	36.70	1.20	359308		62.292	
32)	HxCDF TOTAL	36.00	1.20	1502531	0.950	248.549	
33)	1234678-HpCDF	38.20	1.03	441376	1.183	61.463	0.1857
34)	1234789-HpCDF	39.54	1.05	390103	1.063	60.430	0.1998
	1	38.20	1.02	441376		61.463	
	2	39.54	1.05	390103		60.430	
35)	HpCDF TOTAL	39.50	1.05	831479	1.063	121.893	
37)	OCDD	42.21	0.91	553639	1.114	124.485	0.2406
38)	OCDF	42.37	0.91	706644	1.418	124.835	0.2069

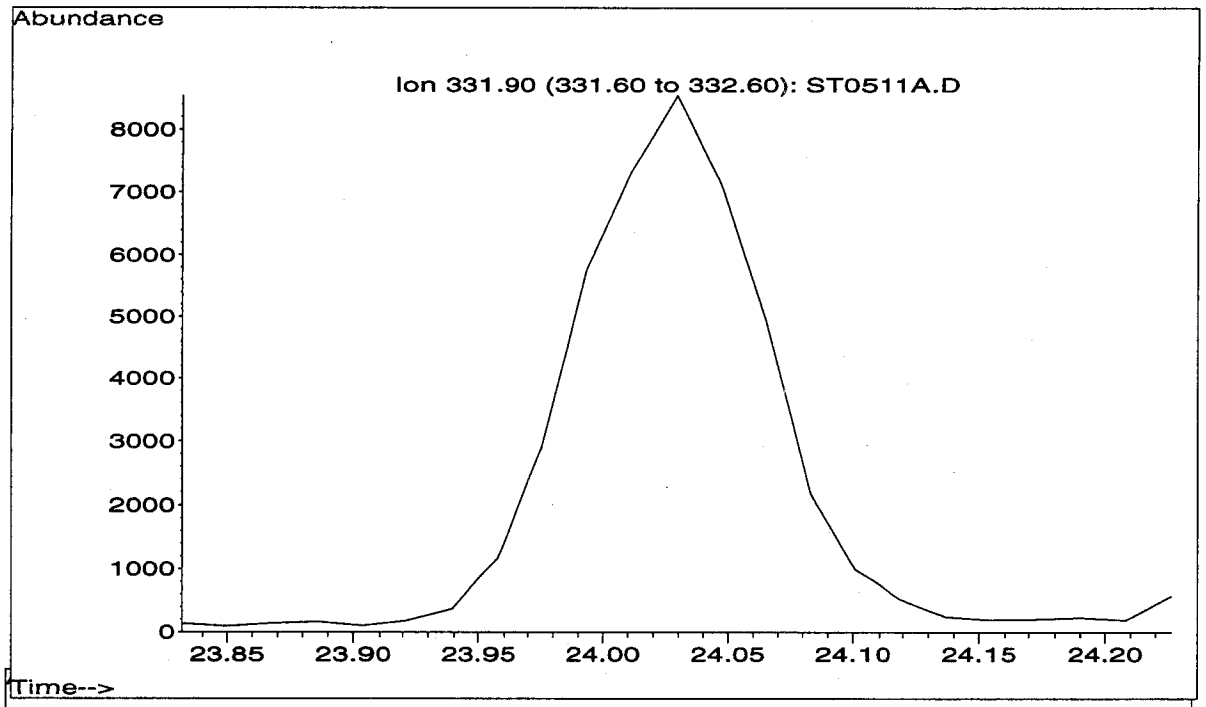
(#) = qualifier out of range•: areas and concentration based on theoretical ion ratio
(m) = manual integration
ST0511A.D 10MY11A2.M Tue May 11 17:12:18 2010

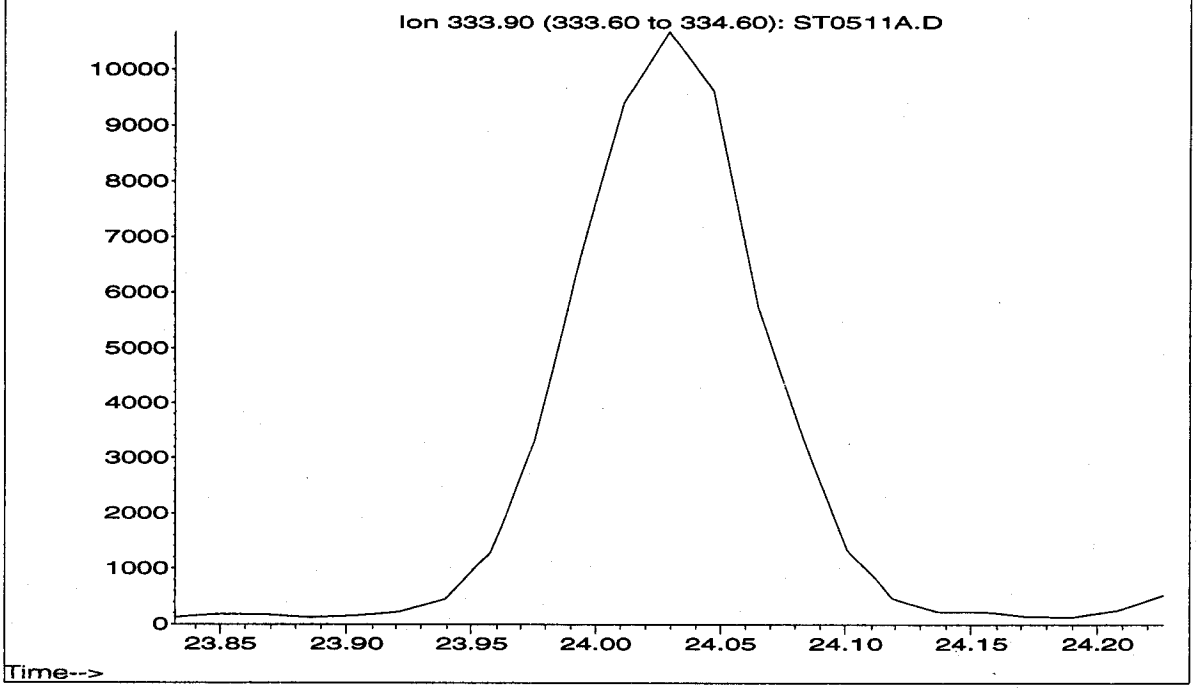
Data File Name	ST0511A.D
Data File Path	C:\8280\2DB\051110.B\
Operator	MEO
Date Acquired	5/11/2010 15:57
Acq. Method File	TOKAS
Sample Name	10LRES012 CS-3
Misc Info	CS-3 10LRES012
Vial Number	97
Instrument Name	2DB
Sample Multiplier	1
Sample Amount	0



13C-1234-TCDD

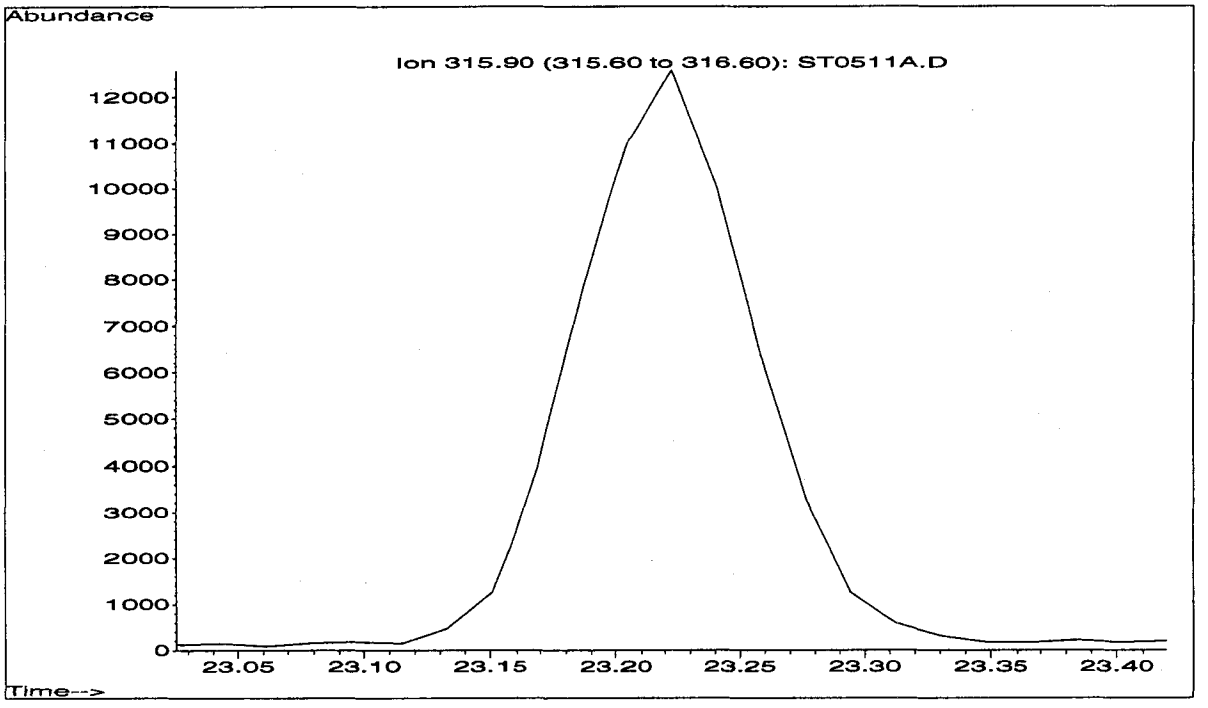
TS R.T. Lower Limit	23.83		
TS R.T. Upper Limit	24.23		
Ret Time	24.03		
Target Ion	331.9	Q1 Ion	333.9
Target Response	43544	Q1 Response	55007
Total Response	98551	Ion Ratio	0.79

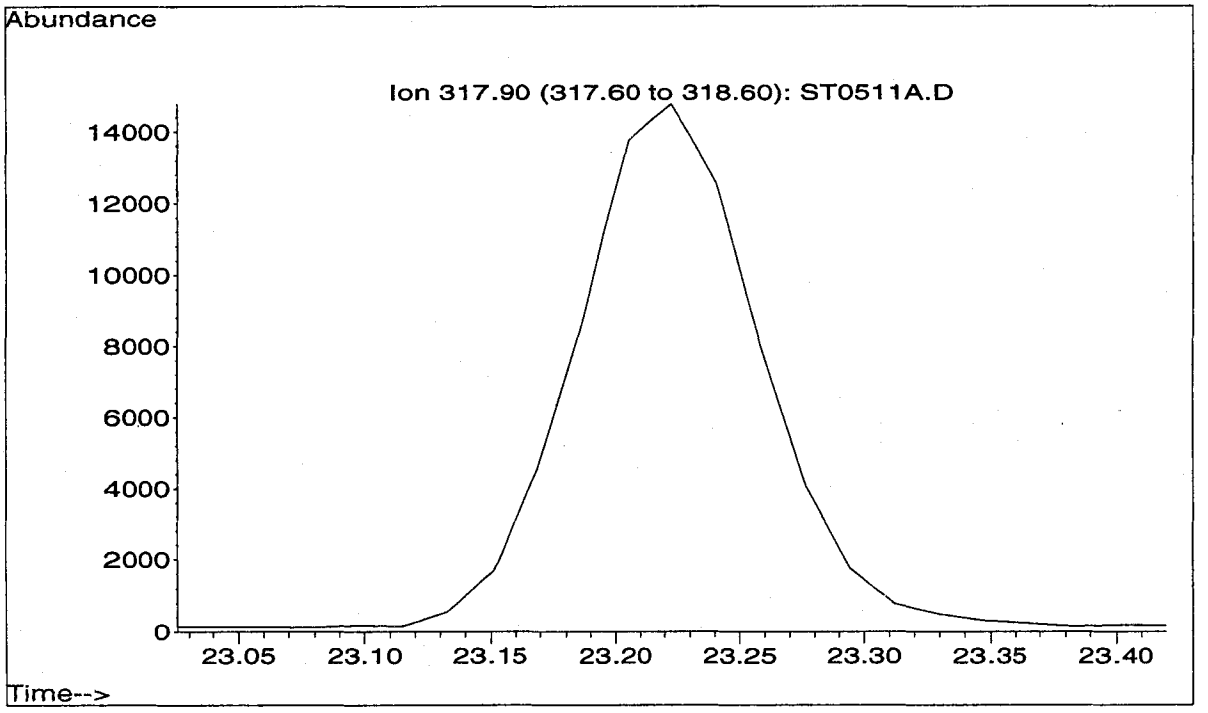




13C-2378-TCDF-IS

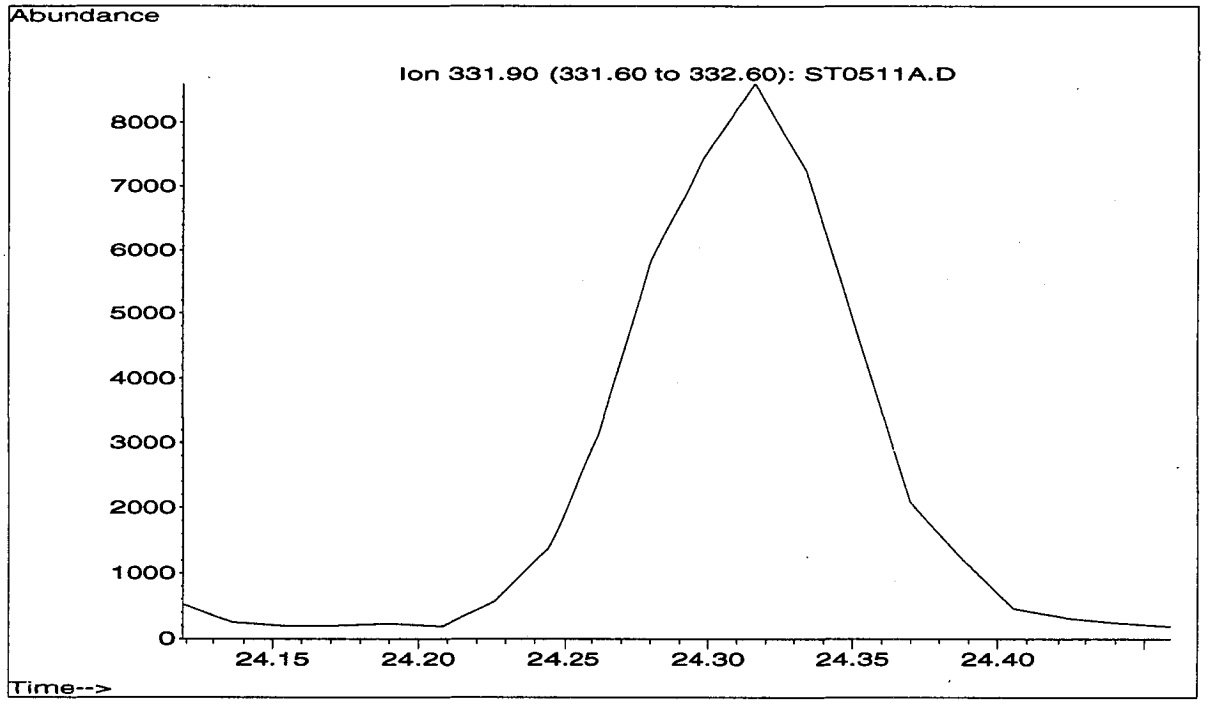
TS R.T. Lower Limit	23.02		
TS R.T. Upper Limit	23.42		
Ret Time	23.22		
Target Ion	315.9	Q1 Ion	317.9
Target Response	62677	Q1 Response	76021
Target Response	138698	Ion Ratio	0.82

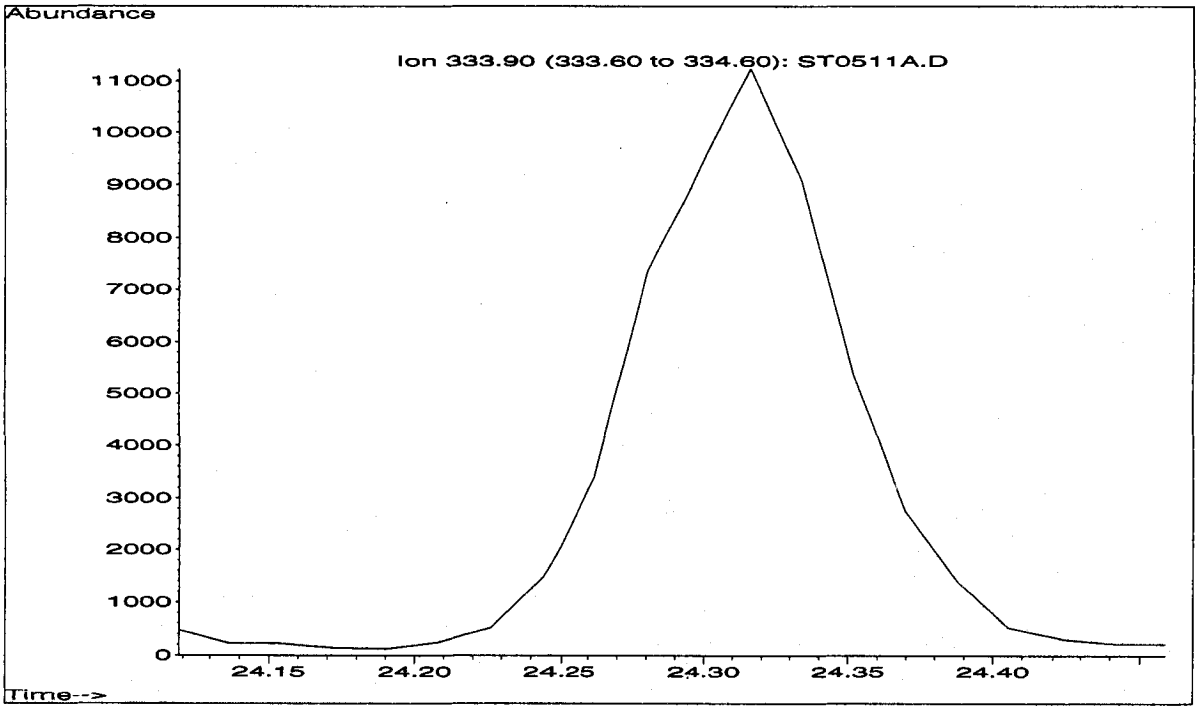




13C-2378-TCDD-IS

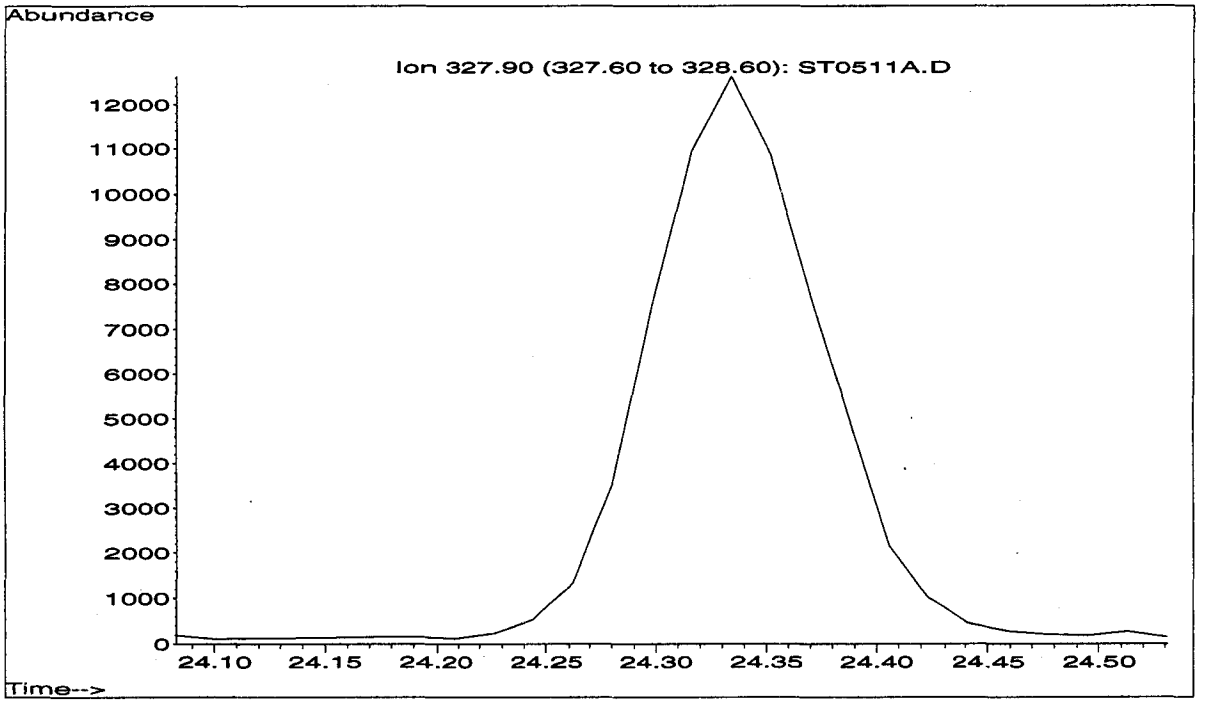
TS R.T. Lower Limit	24.12		
TS R.T. Upper Limit	24.47		
Ret Time	24.32		
Target Ion	331.9	Q1 Ion	333.9
Target Response	43163	Q1 Response	54523
Total Response	97686	Ion Ratio	0.79

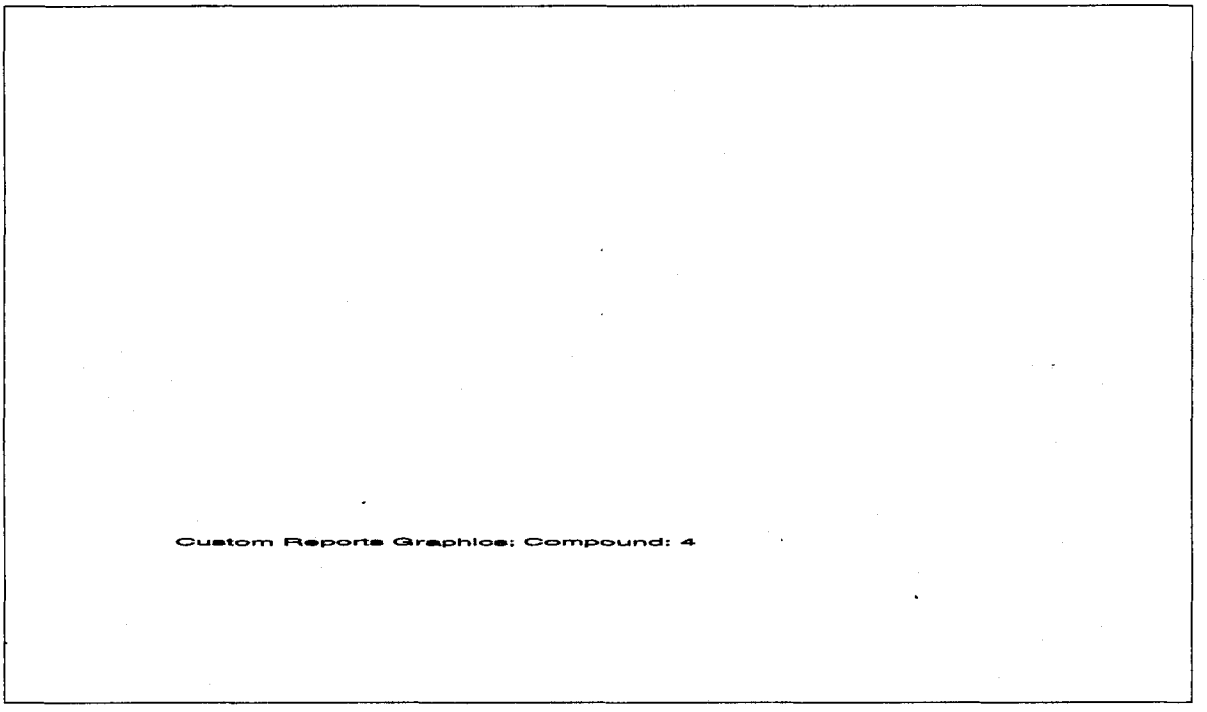




37Cl-2378-TCDD

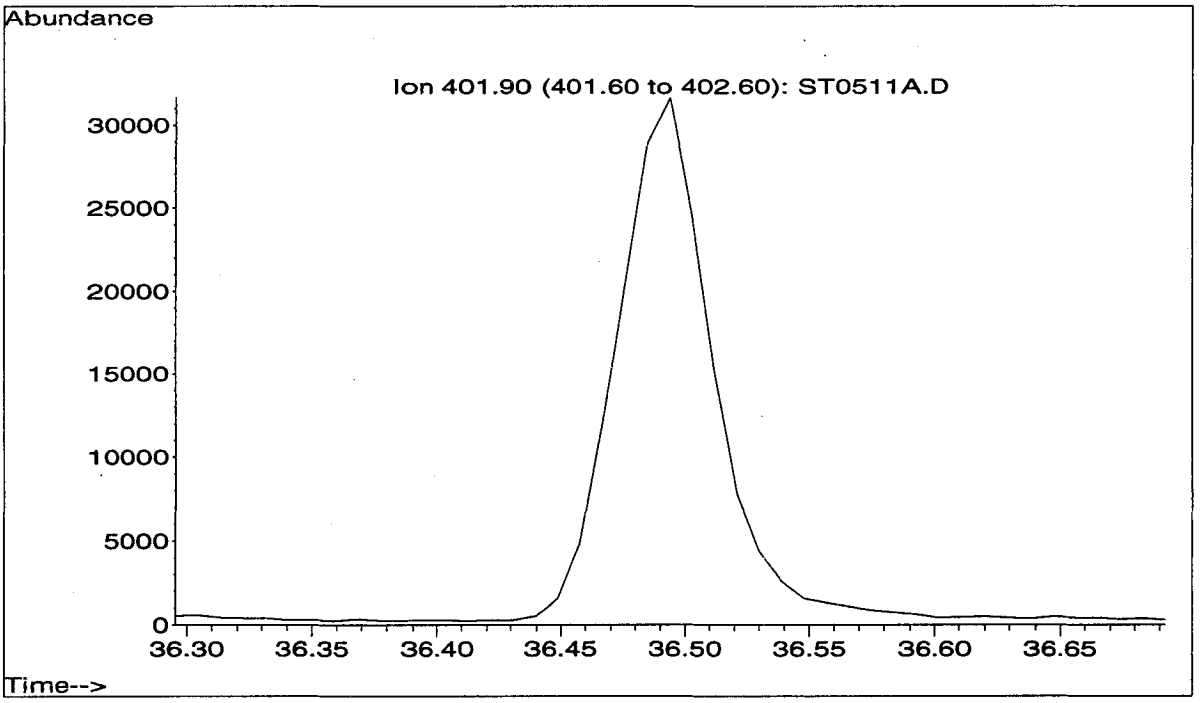
TS R.T. Lower Limit	24.08		
TS R.T. Upper Limit	24.53		
Ret Time	24.33		
Target Ion	327.9	Q1 Ion	0
Target Response	67067	Q1 Response	0
Total Response	67067	Ion Ratio	#DIV/0!

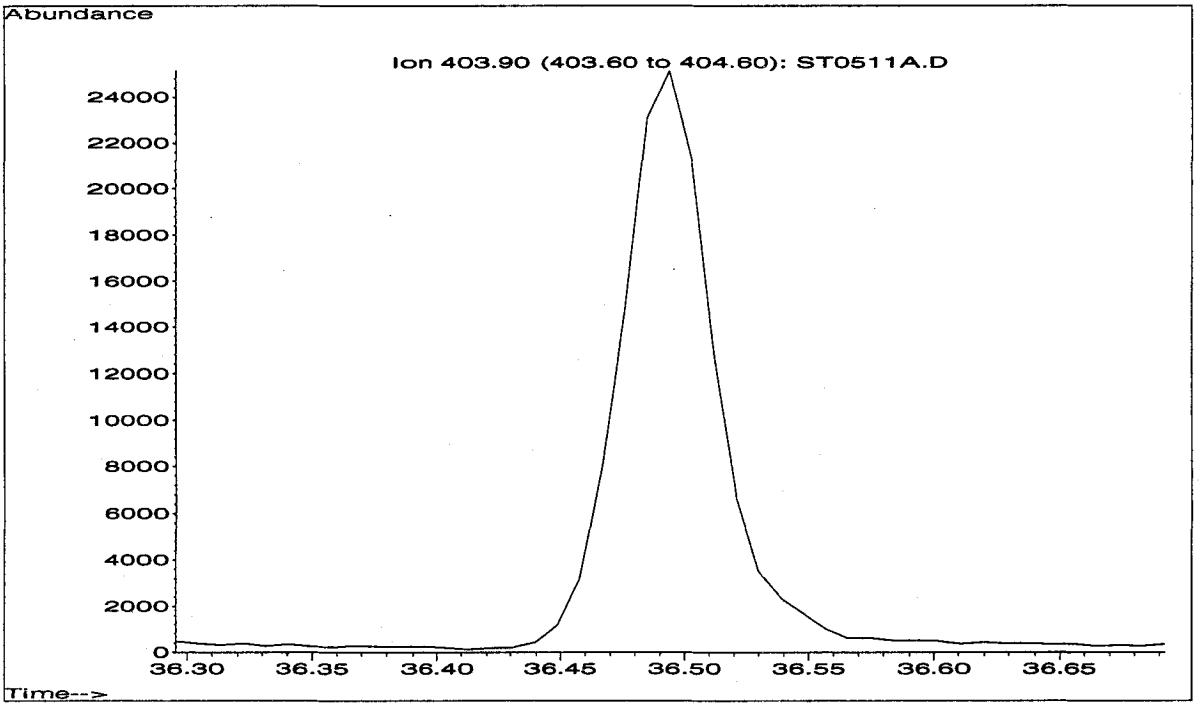




13C-123789-HxCDD

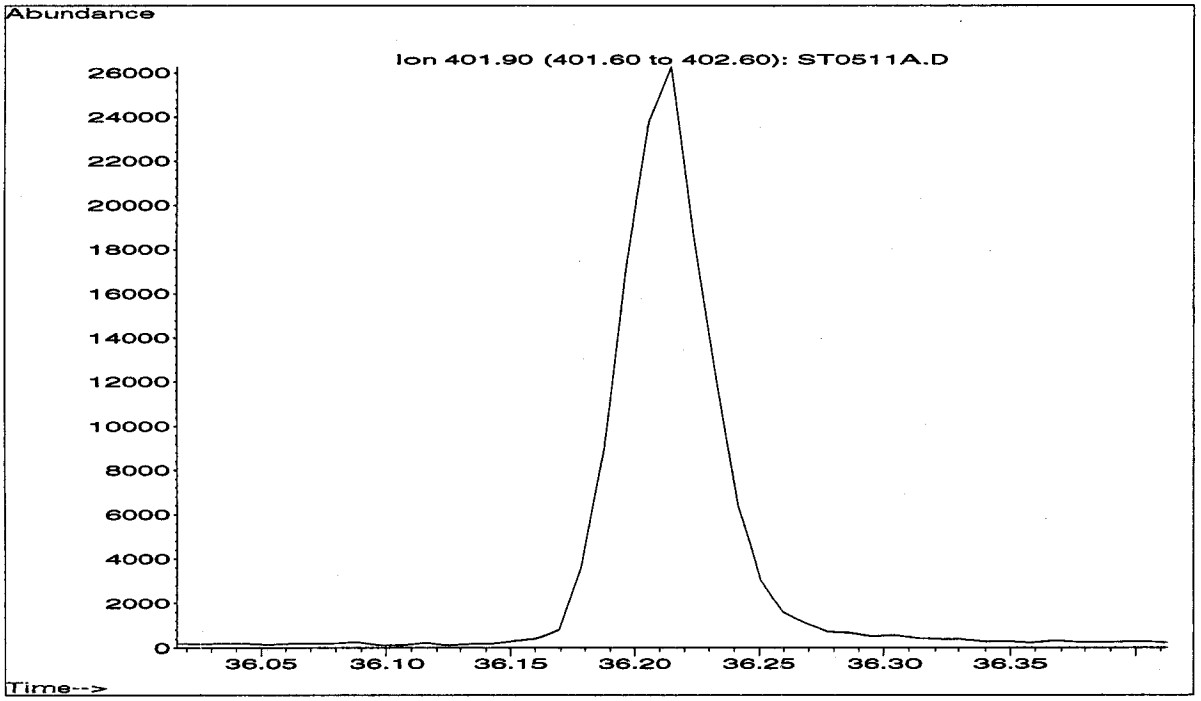
TS R.T. Lower Limit	36.29		
TS R.T. Upper Limit	36.69		
Ret Time	36.49		
Target Ion	401.9	Q1 Ion	403.9
Target Response	84876	Q1 Response	68510
Target Response	153386	Ion Ratio	1.24

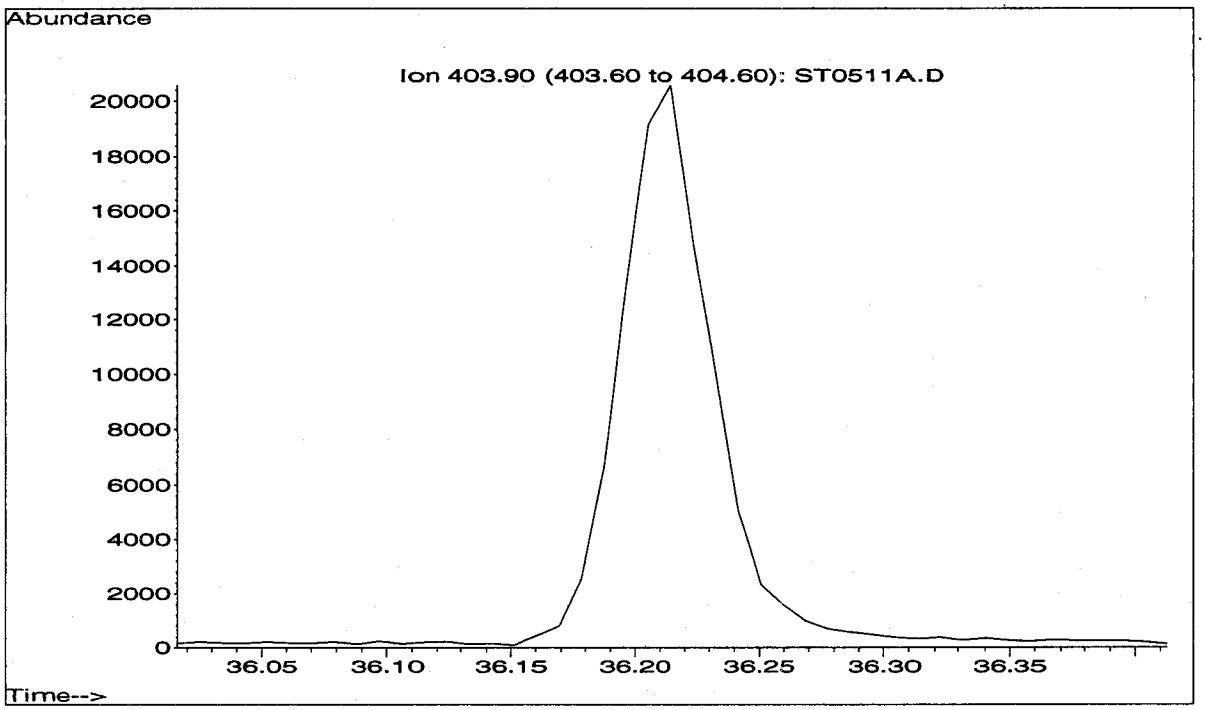




13C-123678-HxCDD-IS

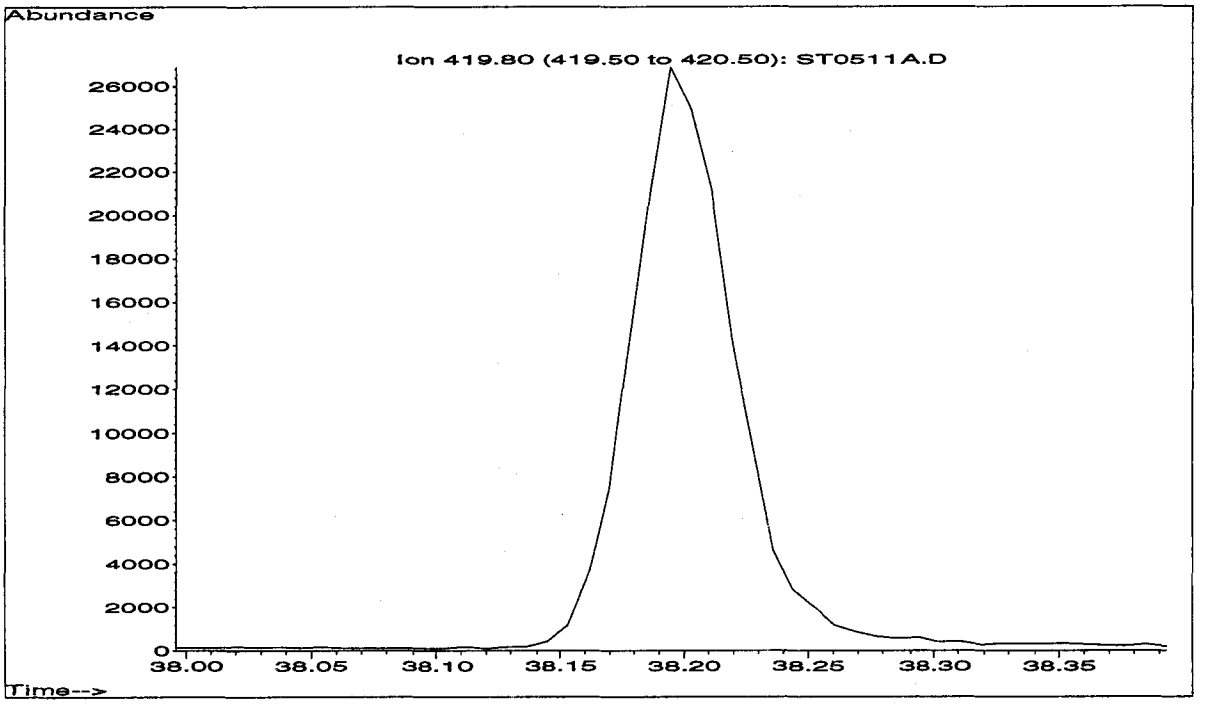
TS R.T. Lower Limit	36.01		
TS R.T. Upper Limit	36.41		
Ret Time	36.21		
Target Ion	401.9	Q1 Ion	403.9
Target Response	68219	Q1 Response	53577
Total Response	121796	Ion Ratio	1.27

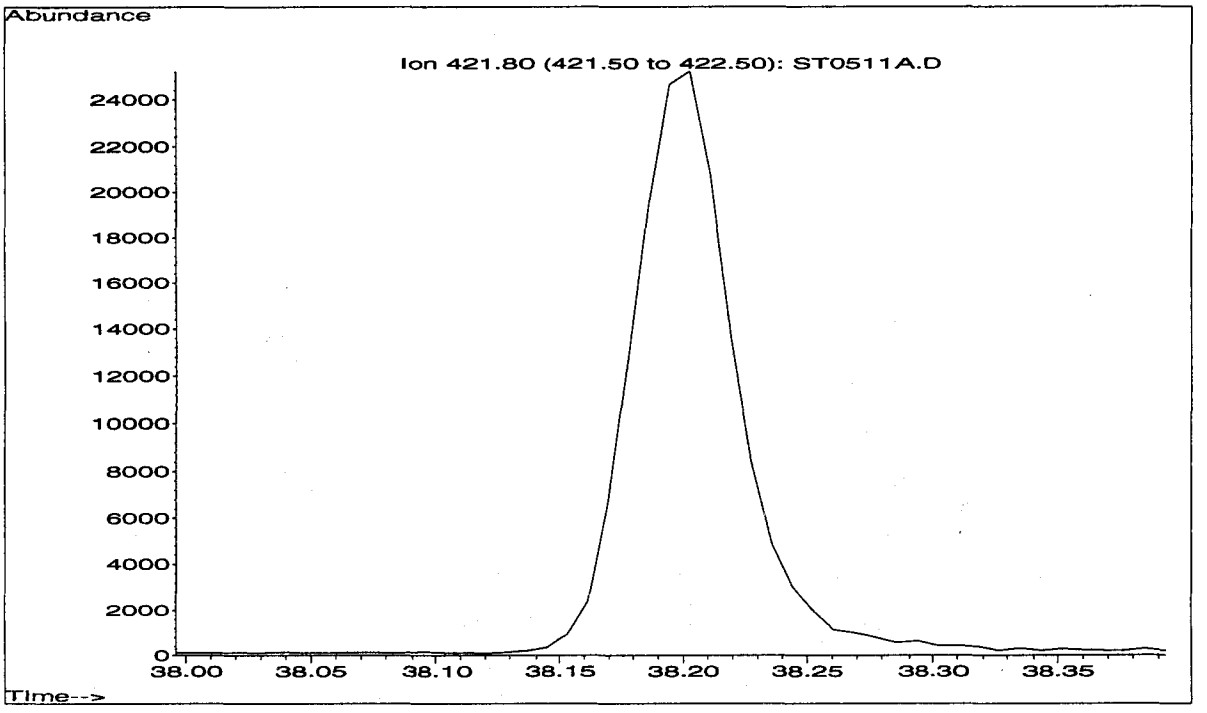




13C-1234678-HpCDF-IS

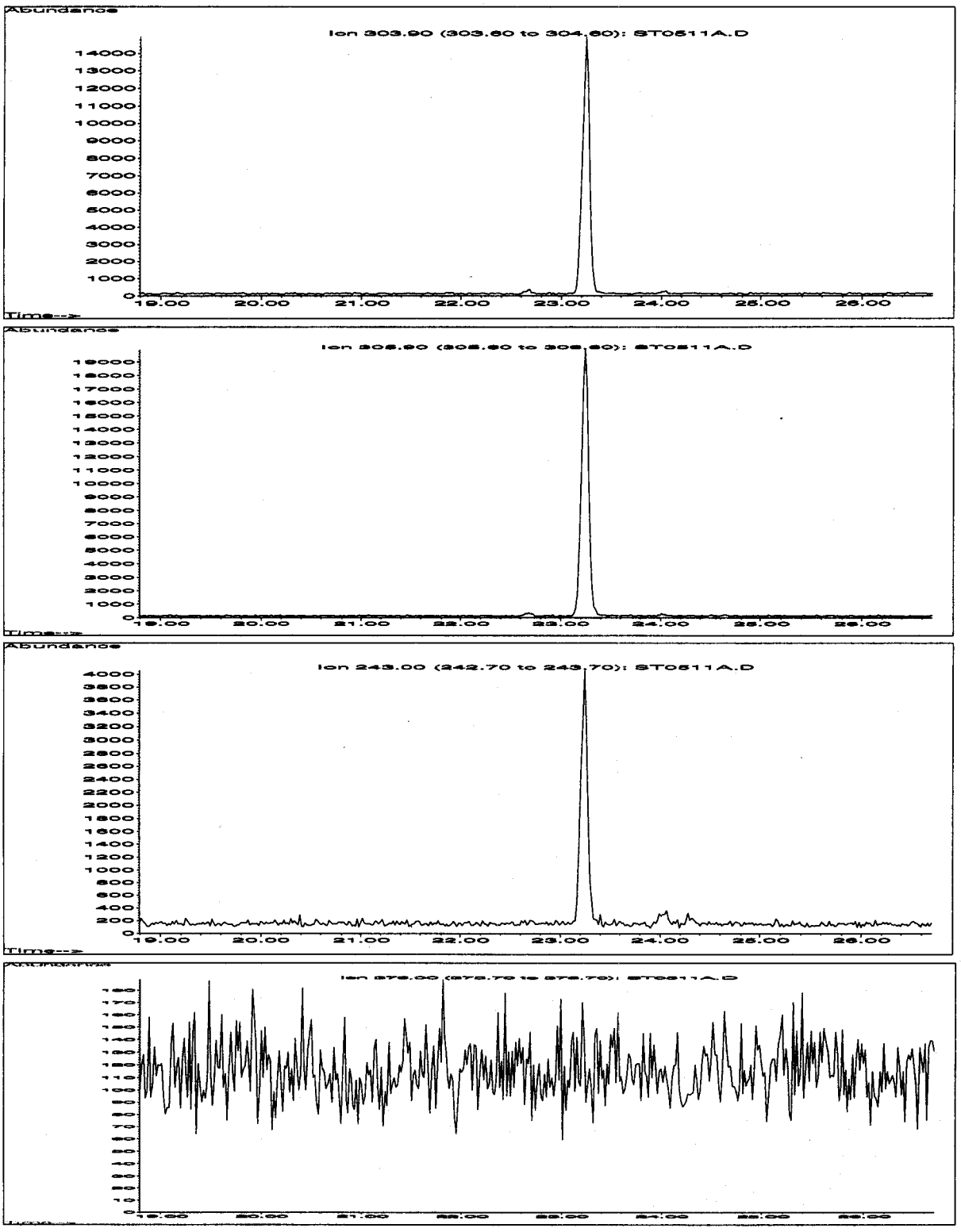
TS R.T. Lower Limit	37.99		
TS R.T. Upper Limit	38.39		
Ret Time	38.19		
Target Ion	419.8	Q1 Ion	421.8
Target Response	77803	Q1 Response	73981
Target Response	151784	Ion Ratio	1.05





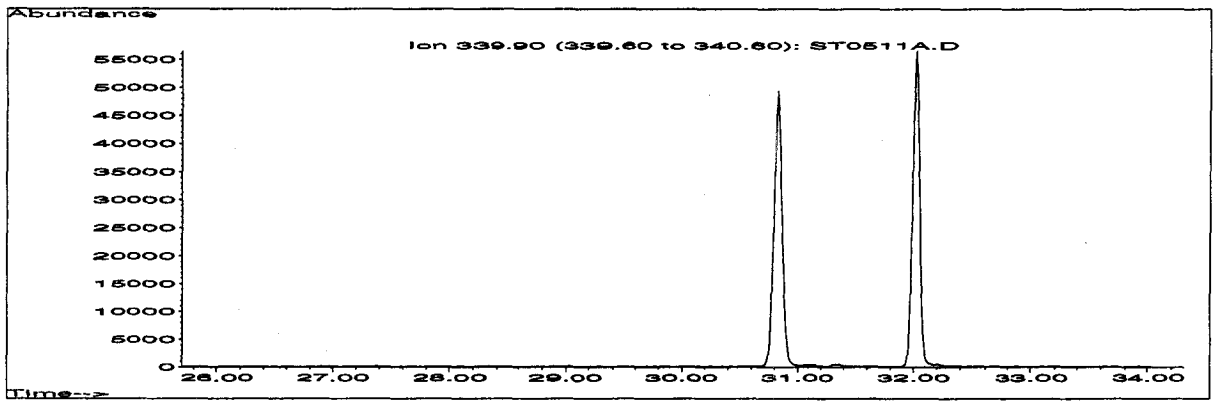
TCDF TOTAL

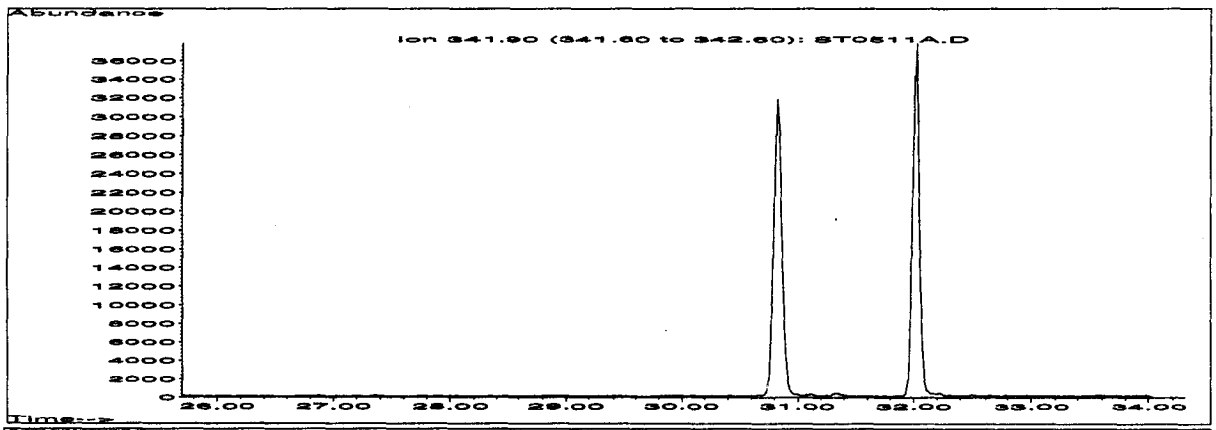
TS R.T. Lower Limit	18.80
TS R.T. Upper Limit	26.70

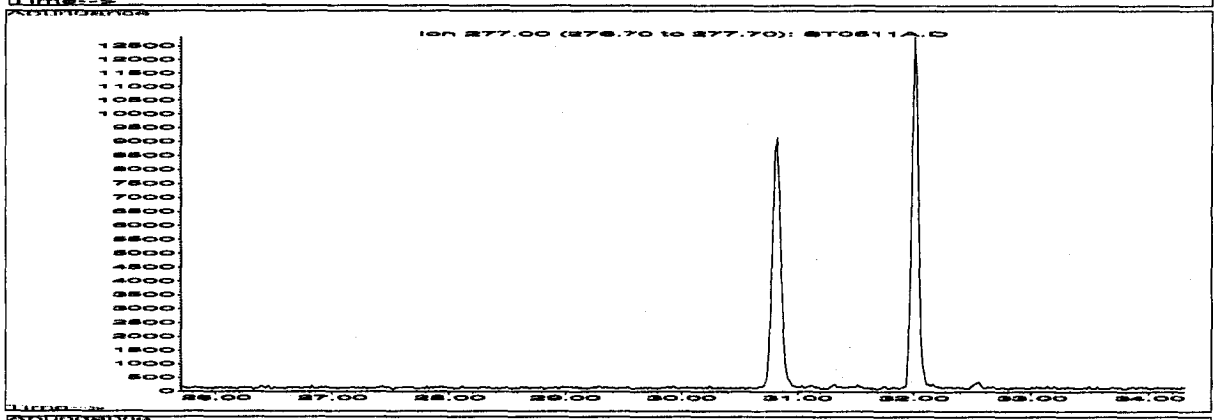


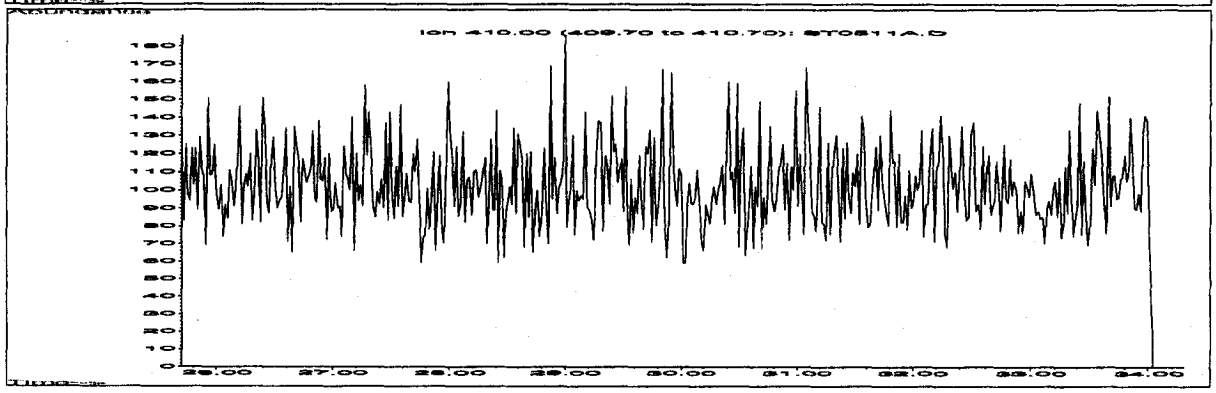
PeCDF TOTAL

TS R.T. Lower Limit	25.70
TS R.T. Upper Limit	34.30



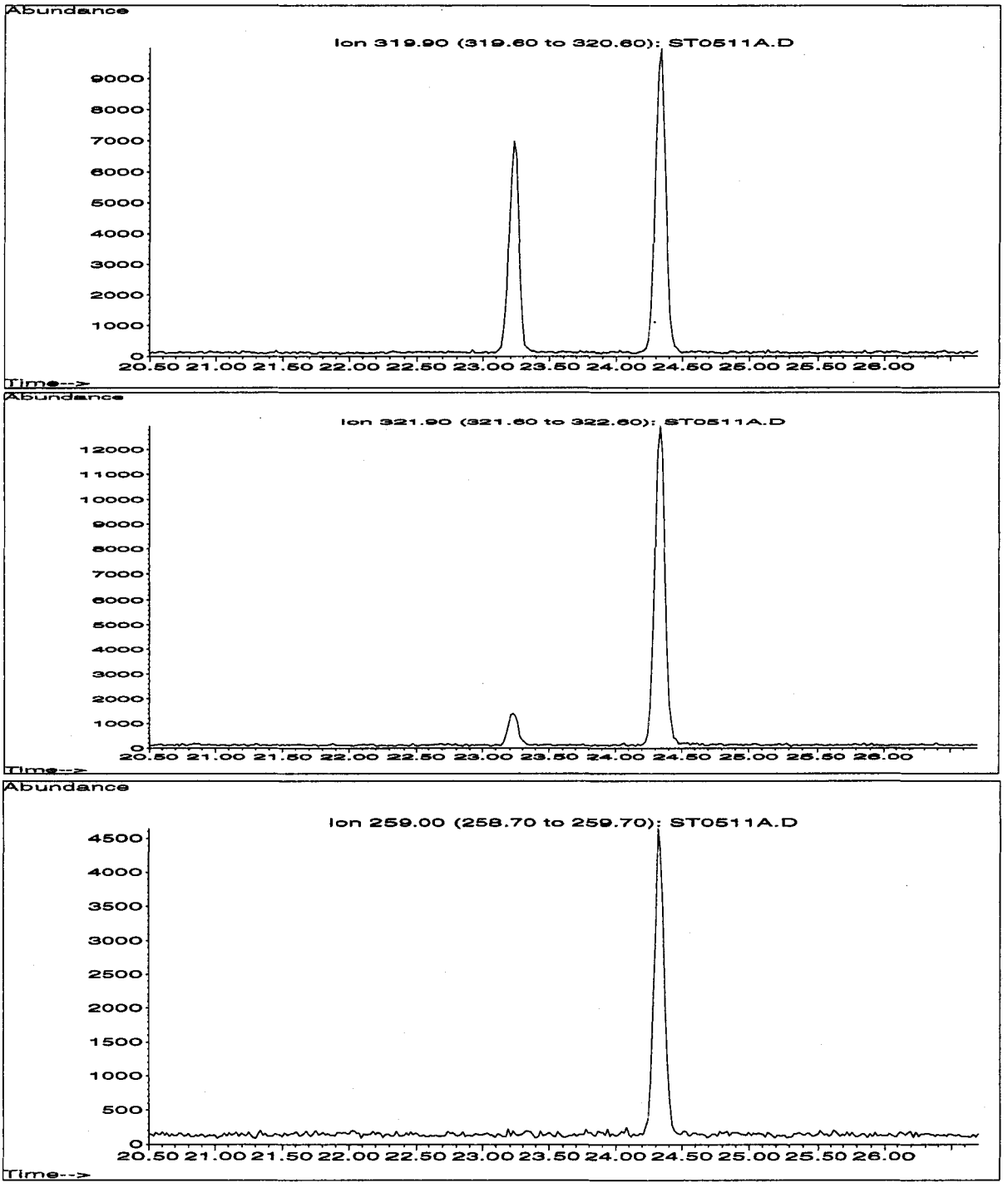






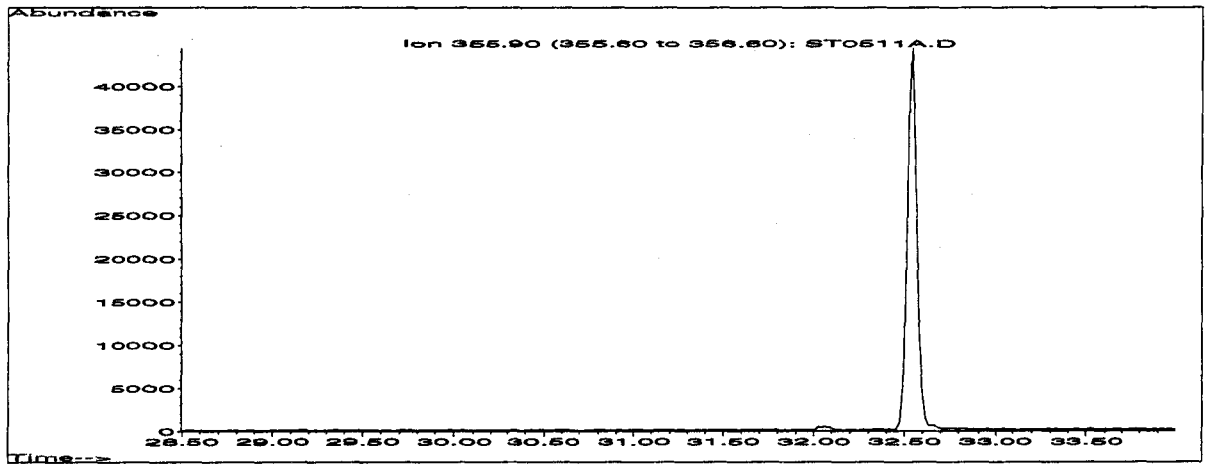
TCDD TOTAL

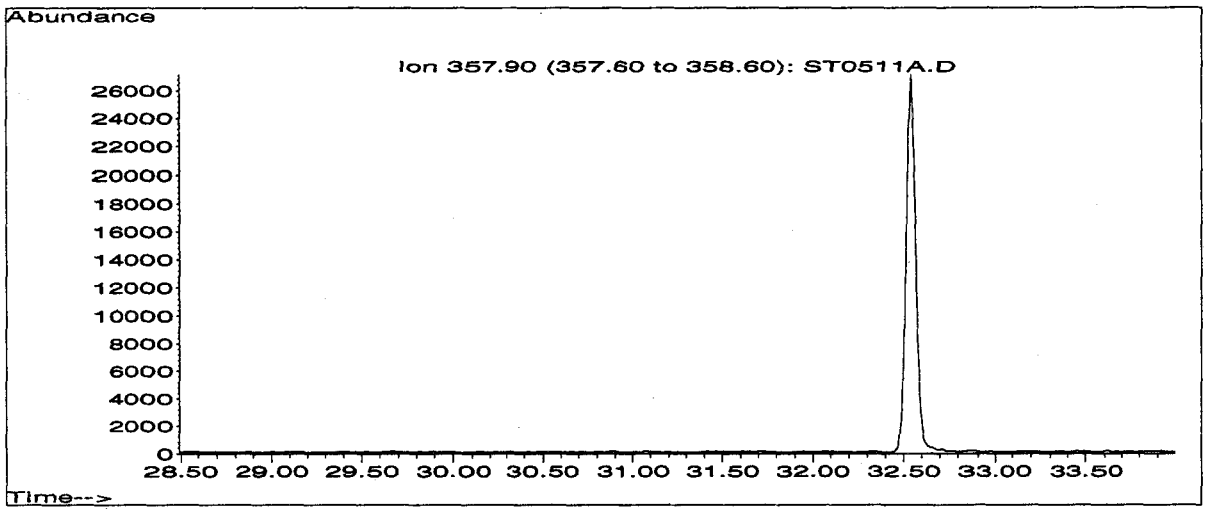
TS R.T. Lower Limit	20.50
TS R.T. Upper Limit	26.70

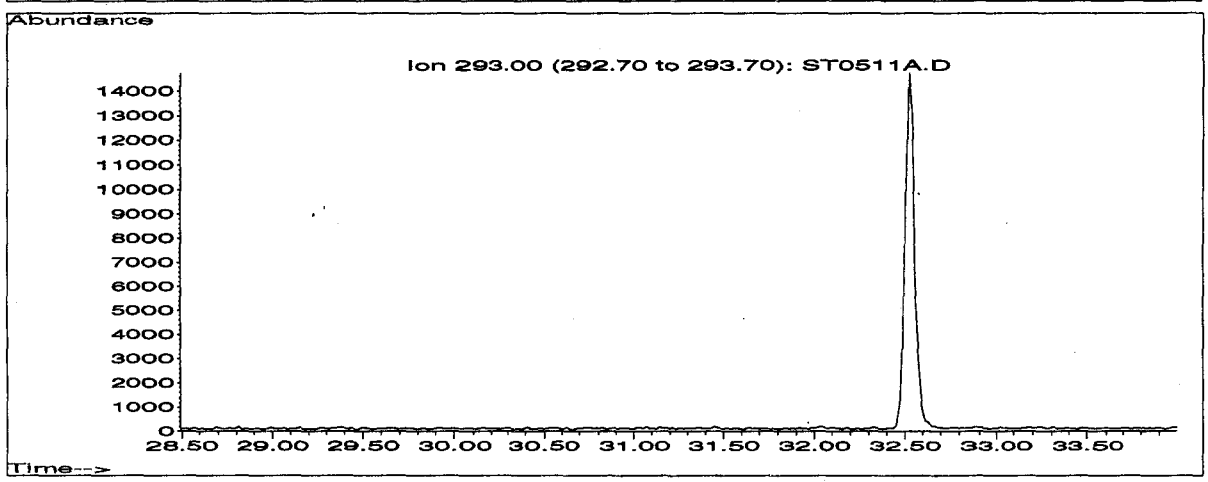


PeCDD TOTAL

TS R.T. Lower Limit	28.50
TS R.T. Upper Limit	34.00

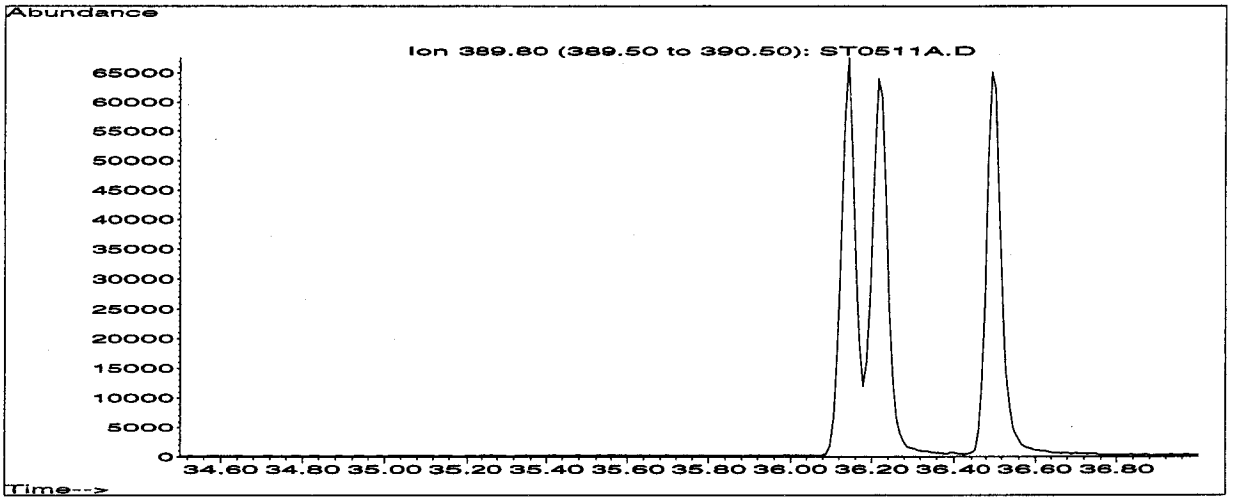


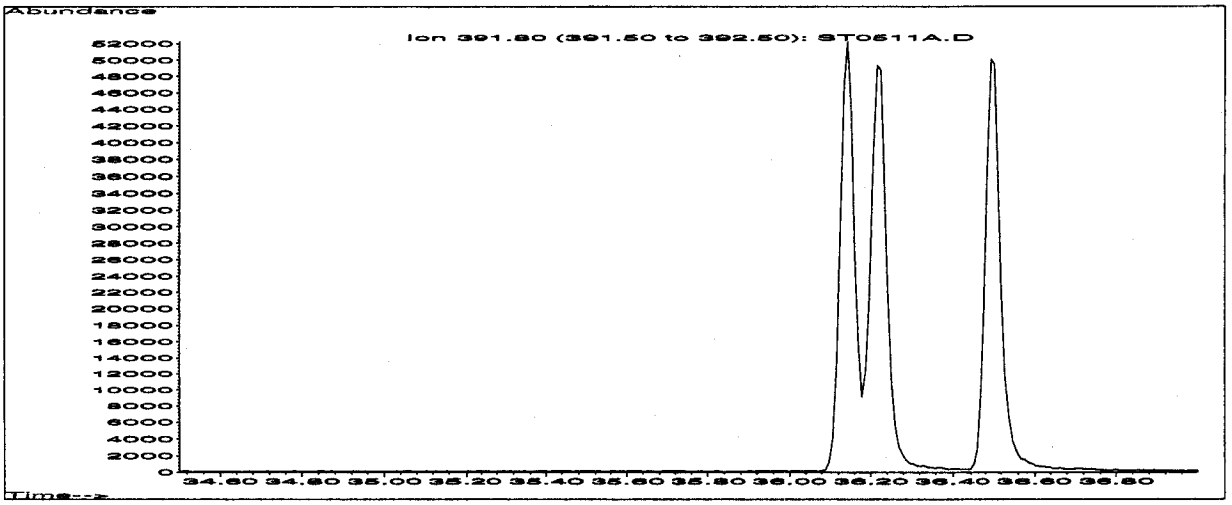


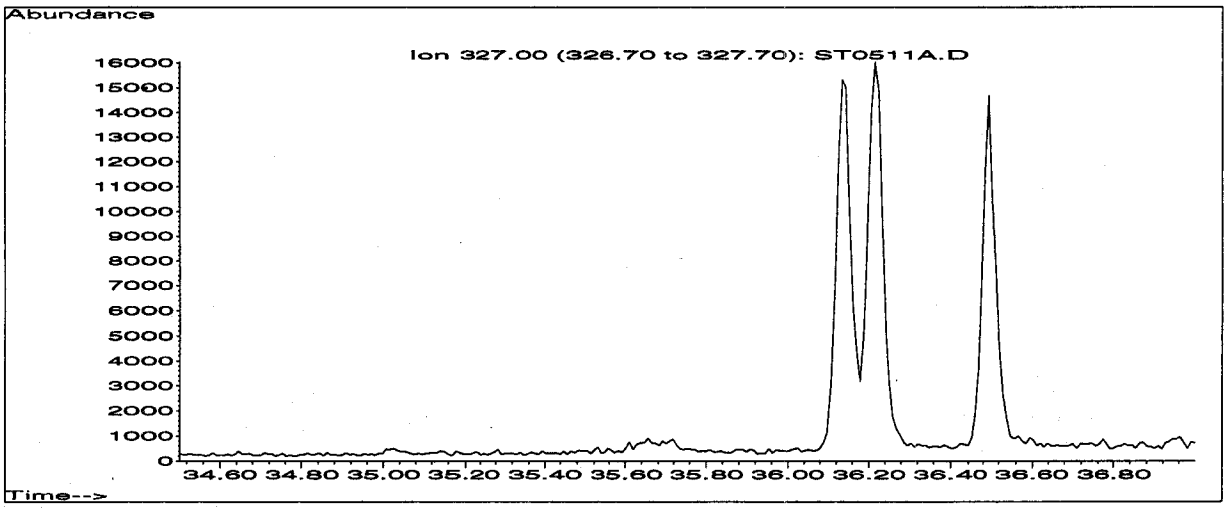


HxCDD TOTAL

TS R.T. Lower Limit	34.50
TS R.T. Upper Limit	37.00

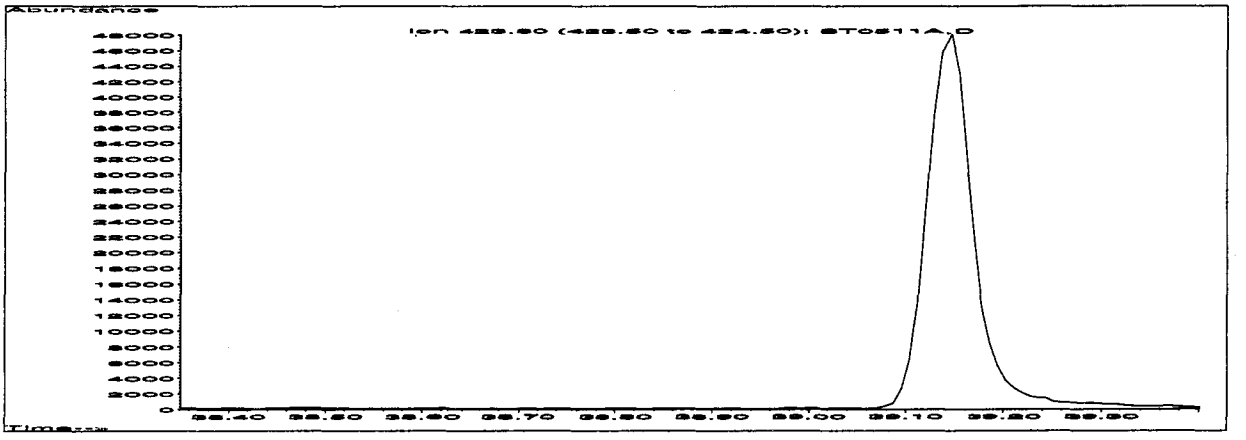


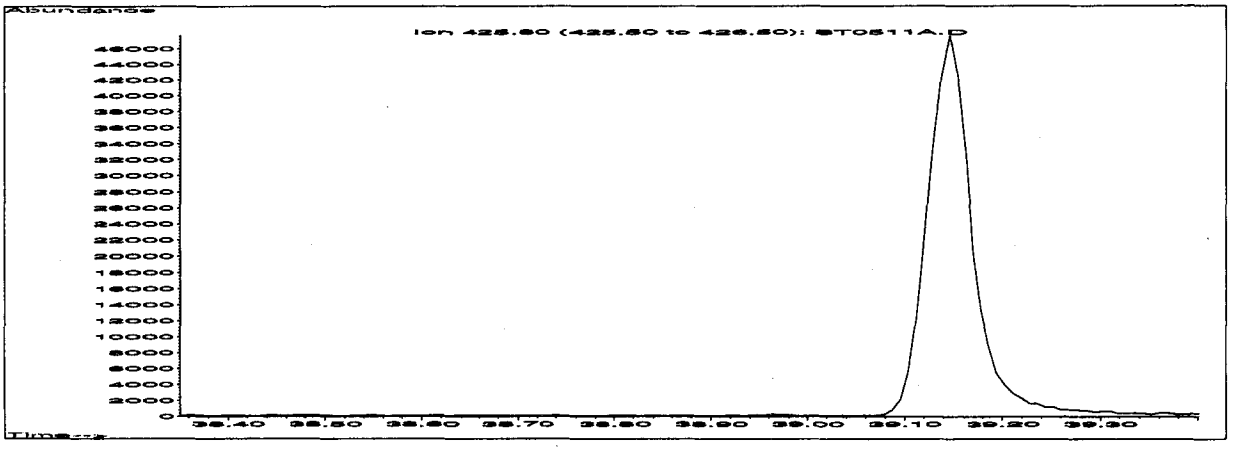


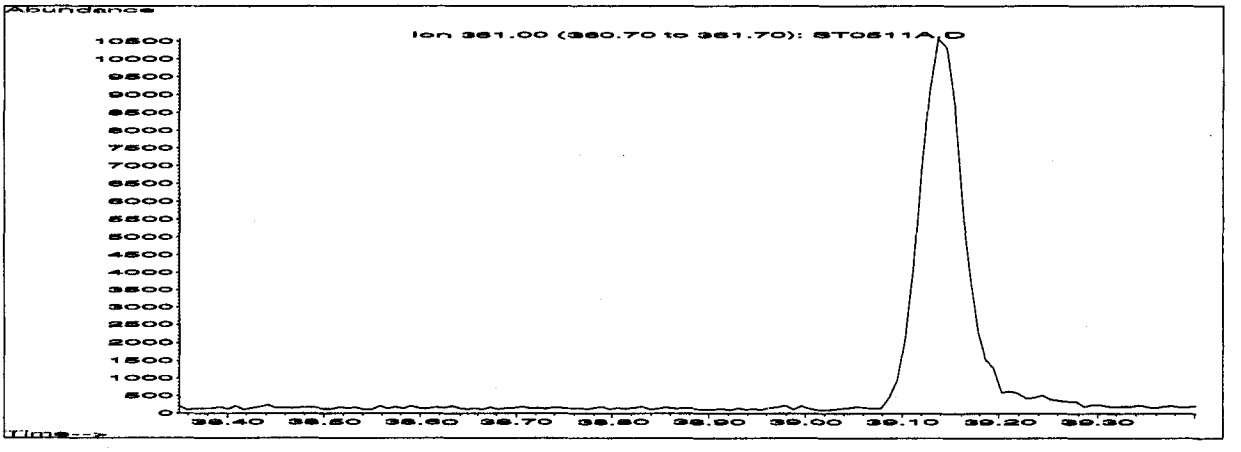


HpCDD TOTAL

TS R.T. Lower Limit	38.35
TS R.T. Upper Limit	39.40

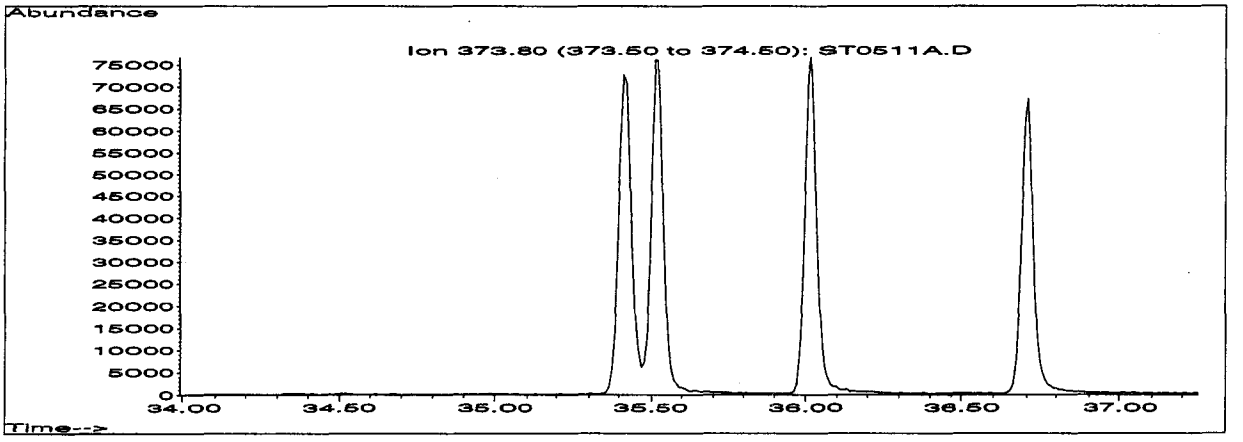


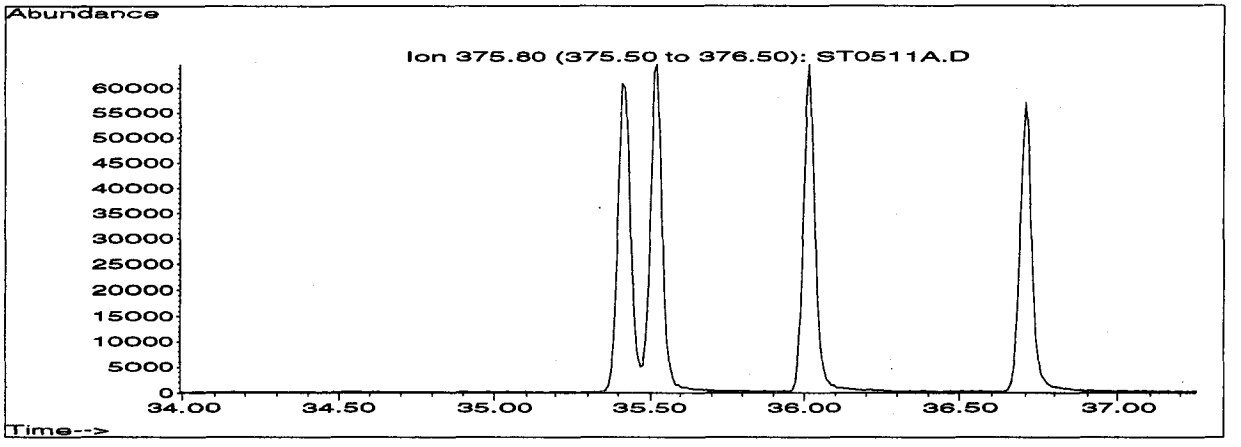


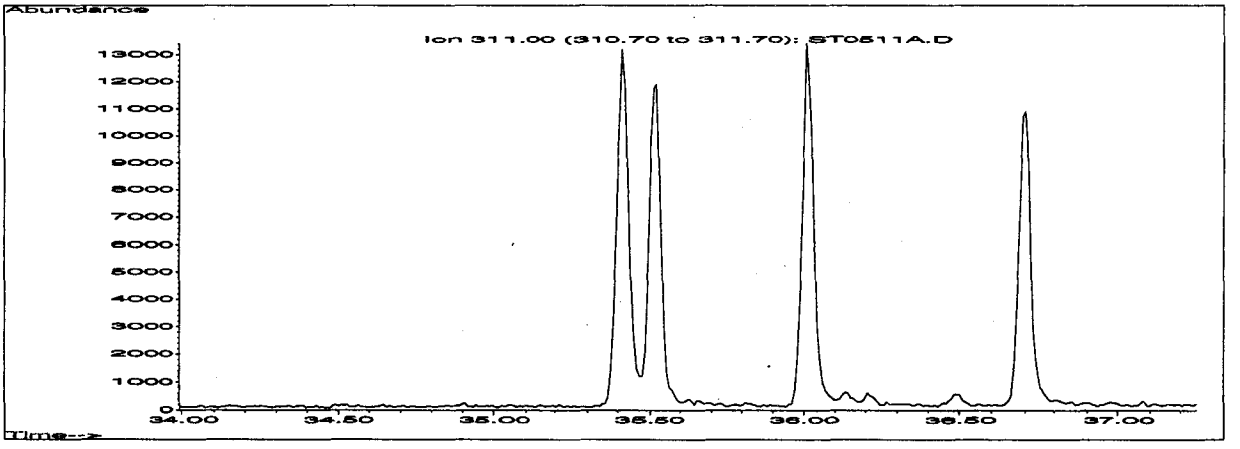


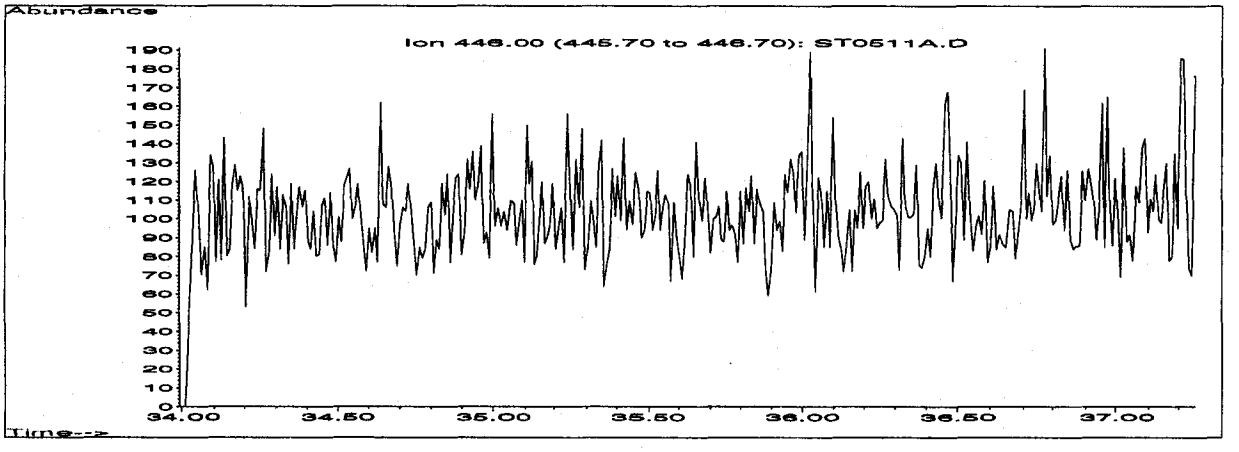
HxCDF TOTAL

TS R.T. Lower Limit	34.00
TS R.T. Upper Limit	37.25



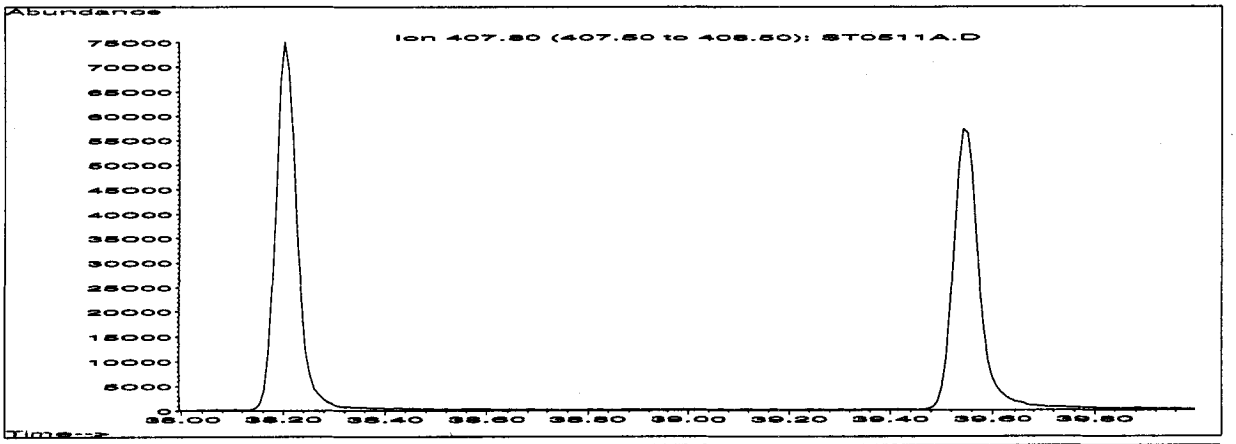


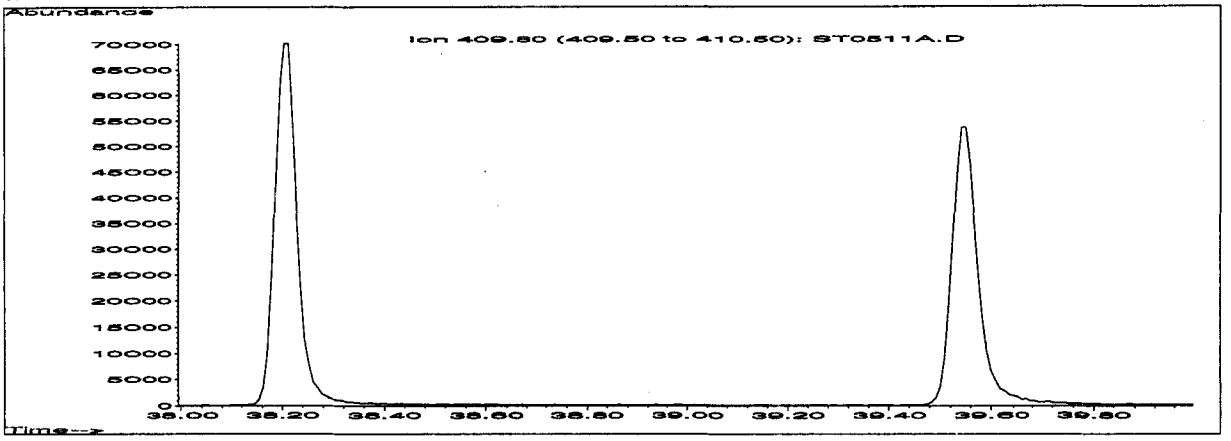


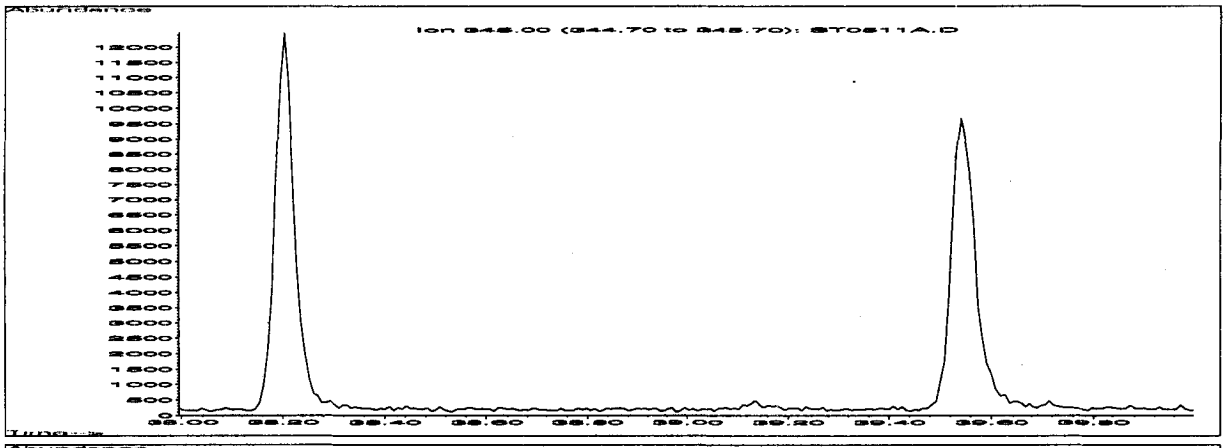


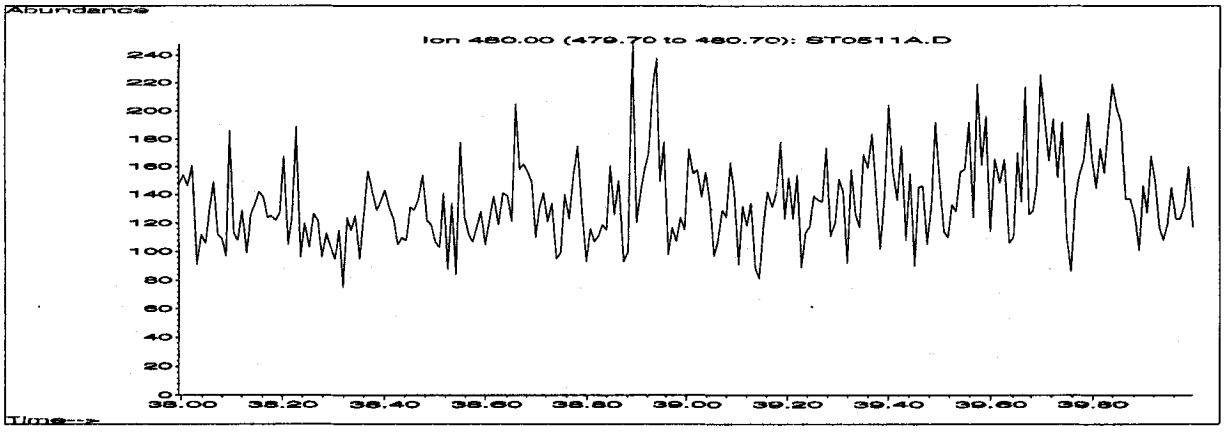
HpCDF TOTAL

TS R.T. Lower Limit	38.00
TS R.T. Upper Limit	40.00

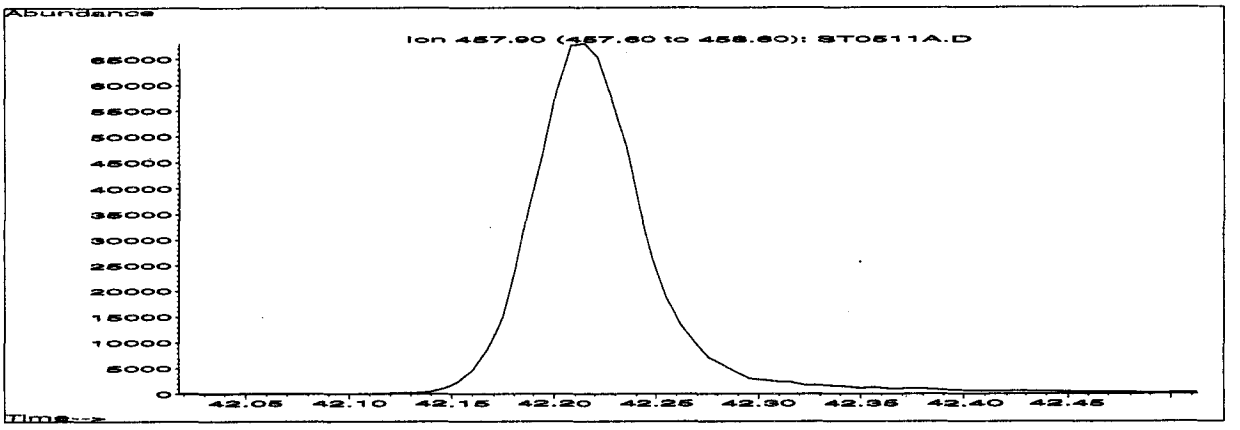


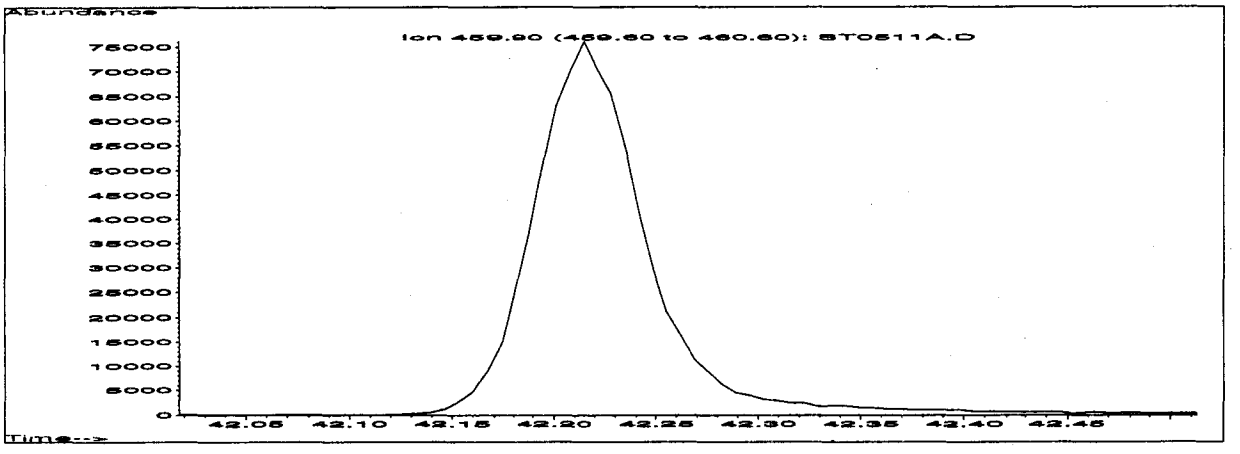


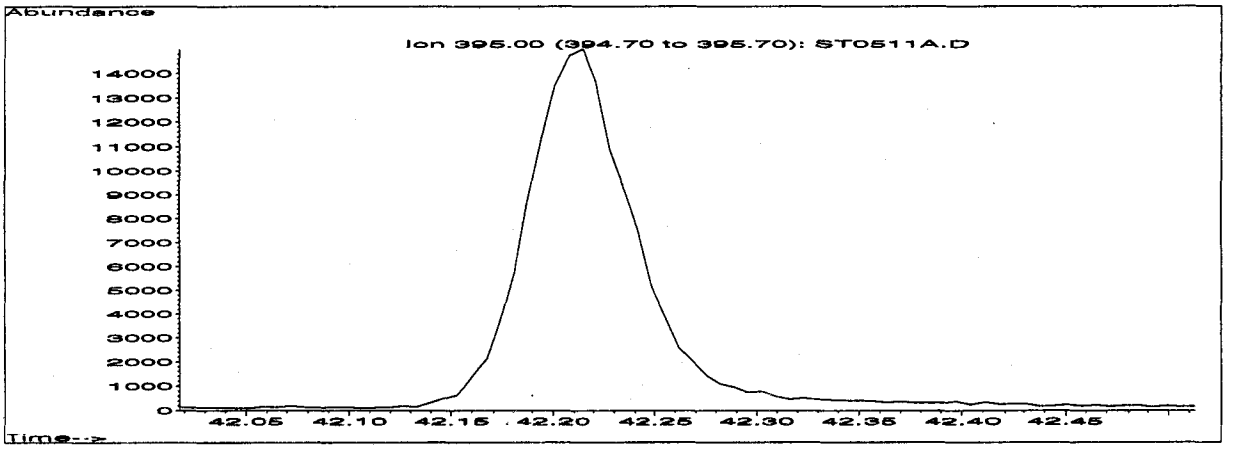




OCDD			
TS R.T. Lower Limit	42.01		
TS R.T. Upper Limit	42.51		
Ret. Time	42.21		
Target Ion	457.9	Q1 Ion	459.9
Target Response	263661	Q1 Response	289978
Total Response	553639	Ion ratio	0.91
Q2 Ion	395		
Q2 Response	56800		

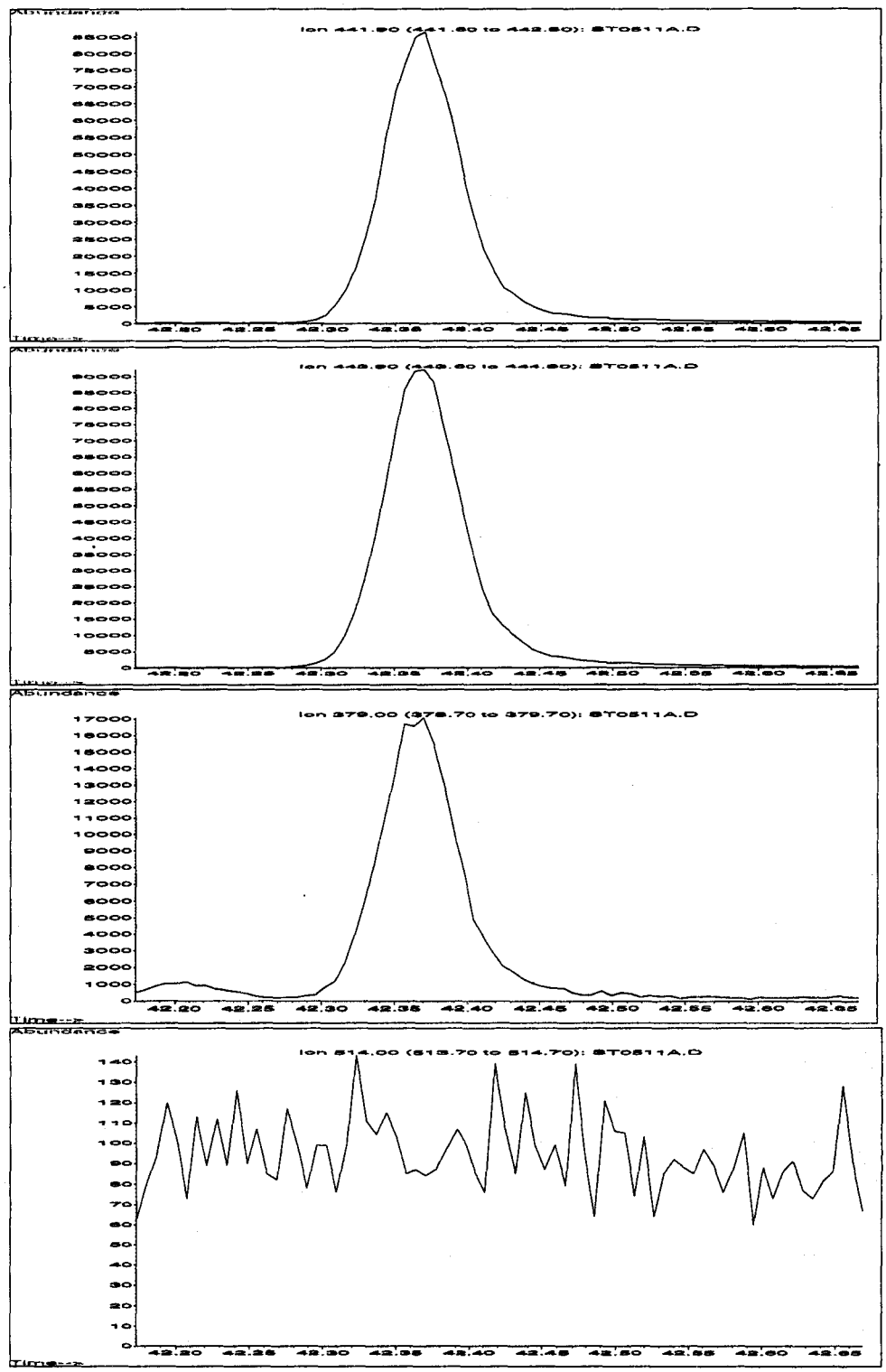






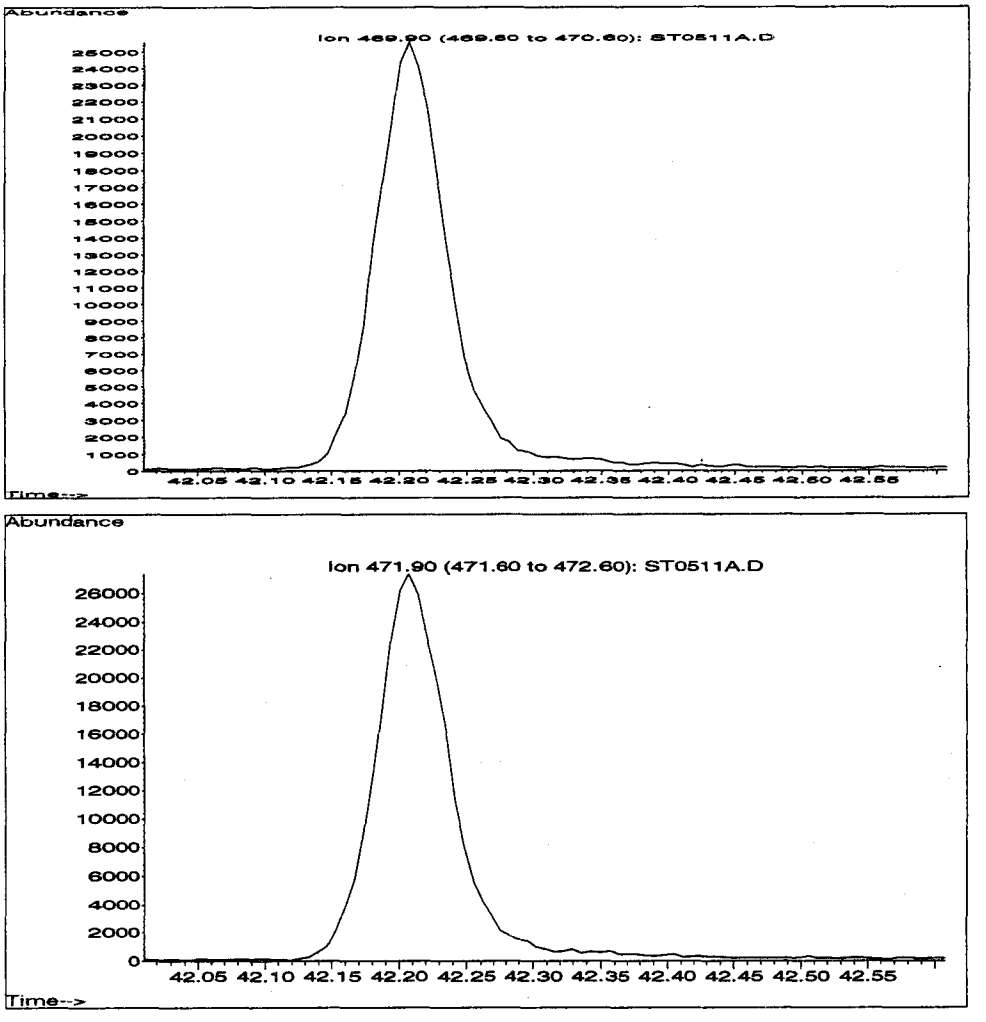
OCDF

TS R.T. Lower Limit	42.17		
TS R.T. Upper Limit	42.67		
Ret Time	42.37		
Target Ion	441.9	Q1 Ion	443.9
Target Response	336874	Q1 Response	369770
Target Response	706644	Ion Ratio	0.91
Q2 Ion	379	DPE Ion	514
Q2 Response	64766	DPE Response	0



13C-OCDD-IS

RT Lower Limit	42.01		
RT Upper Limit	42.61		
Ret Time	42.21		
Target Ion	469.9	Q1 Ion	471.9
Target Response	95615	Q1 Response	104044
Total response	199659	Ratio	0.92



Quantitation Report (Not Reviewed)

Sample ID: CS-1 10LRES011 Size: 0.000
10LRES011 CS-1 Inst : DB1

Data File:C:\8280\2DB\051110.B\ST0511B.D Vial: 99
Acq On :12 May 2010 00:44 Operator: MEO
Sample Amount: 0.00
MS Integration Params: RTEINT.P
Quant Time: May 12 9:06 2010 Quant Results File: 10MY11A2.RES

Quant Method : C:\8280\ DATA METHODS\10MY11A2.M (RTE Integrator)
Title : Dioxin Furan Total
Last Update : Tue May 11 17:13:38 2010
Response via : Single (C:\8280\2DB\051110.B\ST0511A.D 11 May 2010 15:57)
DataAcq Meth : TOKAS
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Recovery\Internal Stds	R.T.	QIon	Ratio	Response	Conc	Dev(Min)
1) 13C-1234-TCDD	24.03	332+334	0.83	135905	25.00 NG	0.00
5) 13C-123789-HxCDD	36.48	402+404	1.26	199833	25.00 NG	0.00
9) 13C-2378-TCDF	23.22	316+318	0.78	186444	25.00 NG	0.00
15) 13C-2378-TCDD	24.30	332+334	0.82	132649	25.00 NG	-0.02
20) 13C-123678-HxCDD	36.21	402+404	1.25	160403	25.00 NG	0.00
27) 13C-1234678-HpCDF	38.19	420+422	1.07	202859	25.00 NG	0.00
36) 13C-OCDD	42.20	470+472	0.92	254152	50.00 NG	0.00

Surrogate Compound

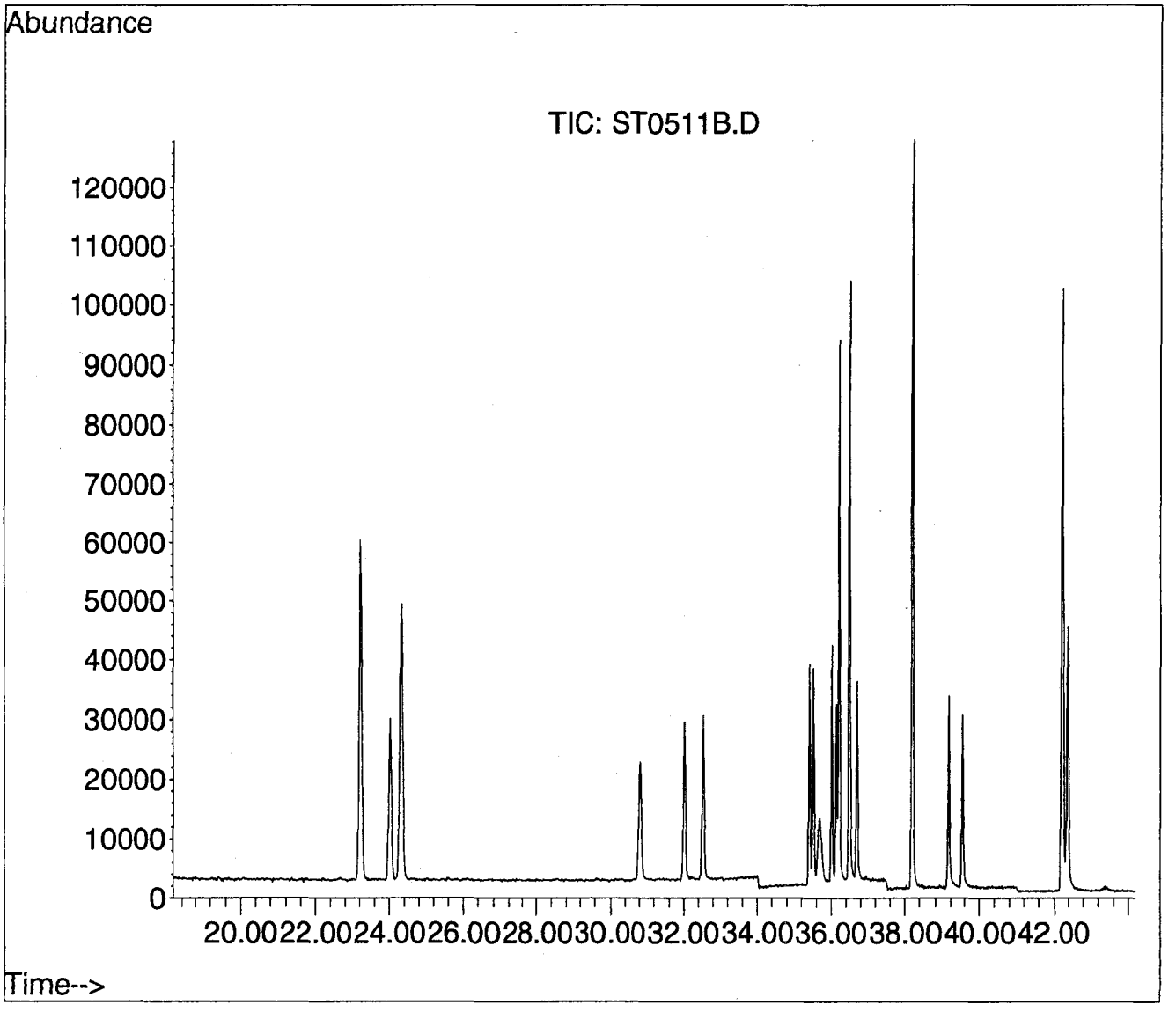
4) 37Cl-2378-TCDD	24.33	328		91327	12.343 NG	0.00
Spiked Amount = 12.500	RRF = 1.361			Recovery =	98.72%	

Target Compounds	RT	Ratio	Area	RRF	Conc	EDL	%Rec
2) 13C-2378-TCDF-IS	23.22	0.78	186444	1.407	24.369	0.1116	97.5
3) 13C-2378-TCDD-IS	24.30	0.82	132649	0.991	24.617	1.0016	98.5
6) 13C-123678-HxCDD-	36.21	1.25	160403	0.794	25.272	0.2221	101.1
7) 13C-1234678-HpCDF	38.19	1.07	202859	0.990	25.646	0.1111	102.6
8) 13C-OCDD-IS	42.20	0.92	254152	0.651	48.853	0.1706	97.7
10) 2378-TCDF	23.24	0.74	43833	1.246	4.716	0.1832	
1	23.24	0.74	44131		4.749		
11) TCDF TOTAL	22.00	0.74	44131	1.246	4.749		
12) 12378-PeCDF	30.82	1.54	95515	1.142	11.216	0.0637	
13) 23478-PeCDF	32.02	1.48	98427	1.143	11.544	0.0707	
1	30.82	1.56	96469		11.328		
2	32.02	1.48	98427		11.544		
14) PeCDF TOTAL	29.50	1.48	194896	1.142	22.872		
16) 2378-TCDD	24.33	0.80	29516	1.230	4.523	0.1175	
1	23.22	5.29 #	16971		2.600		
2	24.33	0.80	30855		4.728		
17) TCDD TOTAL	22.50	0.80	47826	1.230	7.328		
18) 12378-PeCDD	32.54	1.57	68312	1.122	11.479	0.2656	
1	32.54	1.58	68795		11.560		
19) PeCDD TOTAL	30.00	1.58	68795	1.122	11.560		
21) 123478-HxCDD	36.14	1.26	71610	0.970	11.505	0.4746	
22) 123678-HxCDD	36.21	1.24	75881	1.003	11.795	0.3678	
23) 123789-HxCDD	36.49	1.23	77943	1.030	11.794	0.5707	
1	36.14	1.25	71610		11.505		
2	36.21	1.33	75881		11.795		
3	36.49	1.23	257958		41.446		
24) HxCDD TOTAL	36.50	1.23	405449	0.970	64.746		
25) 1234678-HpCDD	39.14	1.02	79711	1.017	12.217	0.1047	
1	39.14	1.02	79711		12.217		

26)	HpCDD TOTAL	39.35	1.02	79711	1.017	12.217	
28)	123478-HxCDF	35.41	1.23	93325	0.977	11.769	1.1658
29)	123678-HxCDF	35.52	1.23	95700	1.049	11.247	0.3081
30)	234678-HxCDF	36.02	1.24	95187	0.987	11.887	0.2693
31)	123789-HxCDF	36.70	1.19	87570	0.943	11.446	0.2398
	1	35.41	1.23	93325		11.769	
	2	35.52	1.23	95700		11.247	
	3	36.02	1.24	95187		11.887	
	4	36.70	1.19	87570		11.446	
32)	HxCDF TOTAL	36.00	1.19	371782	0.943	46.349	
33)	1234678-HpCDF	38.20	1.01	111643	1.163	11.829	0.1470
34)	1234789-HpCDF	39.54	1.08	95218	1.028	11.414	0.1834
	1	38.20	1.01	111643		11.829	
	2	39.54	1.08	95218		11.414	
35)	HpCDF TOTAL	39.50	1.08	206861	1.028	23.243	
37)	OCDD	42.22	0.88	131453	1.109	23.316	0.2507
38)	OCDF	42.36	0.92	163376	1.416	22.704	0.4464

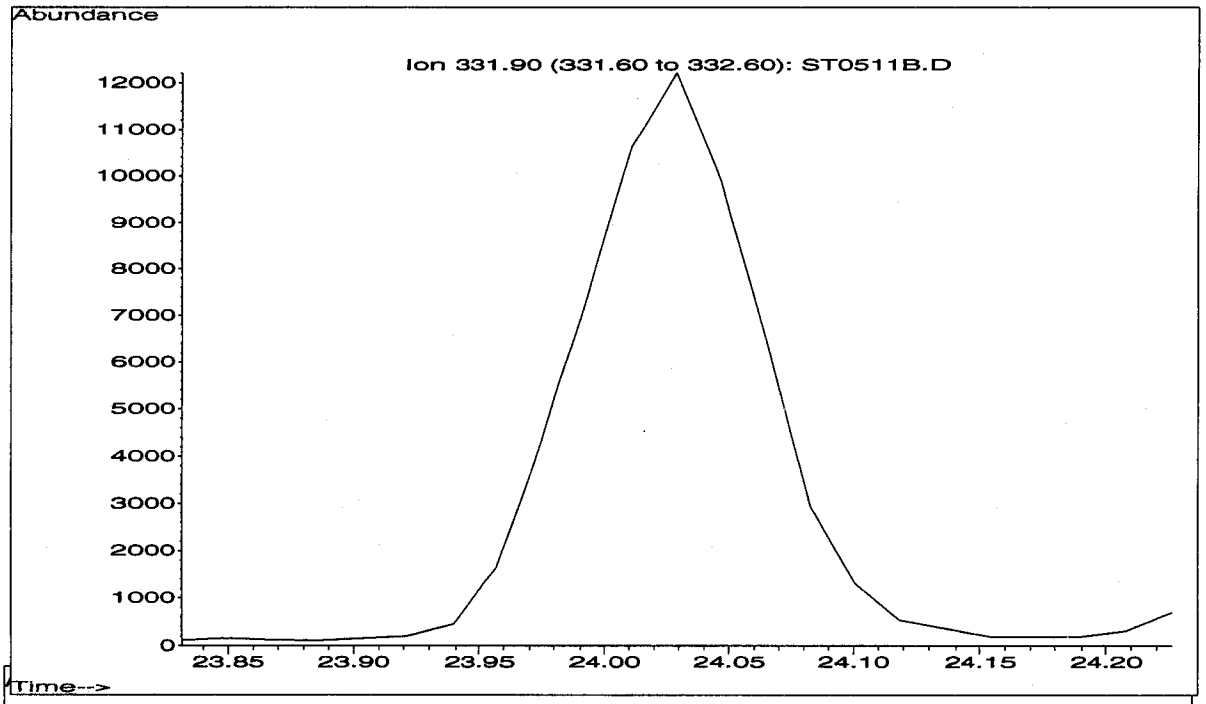
(#) = qualifier out of range•: areas and concentration based on theoretical ion ratio
(m) = manual integration
ST0511B.D 10MY11A2.M Wed May 12 09:06:06 2010

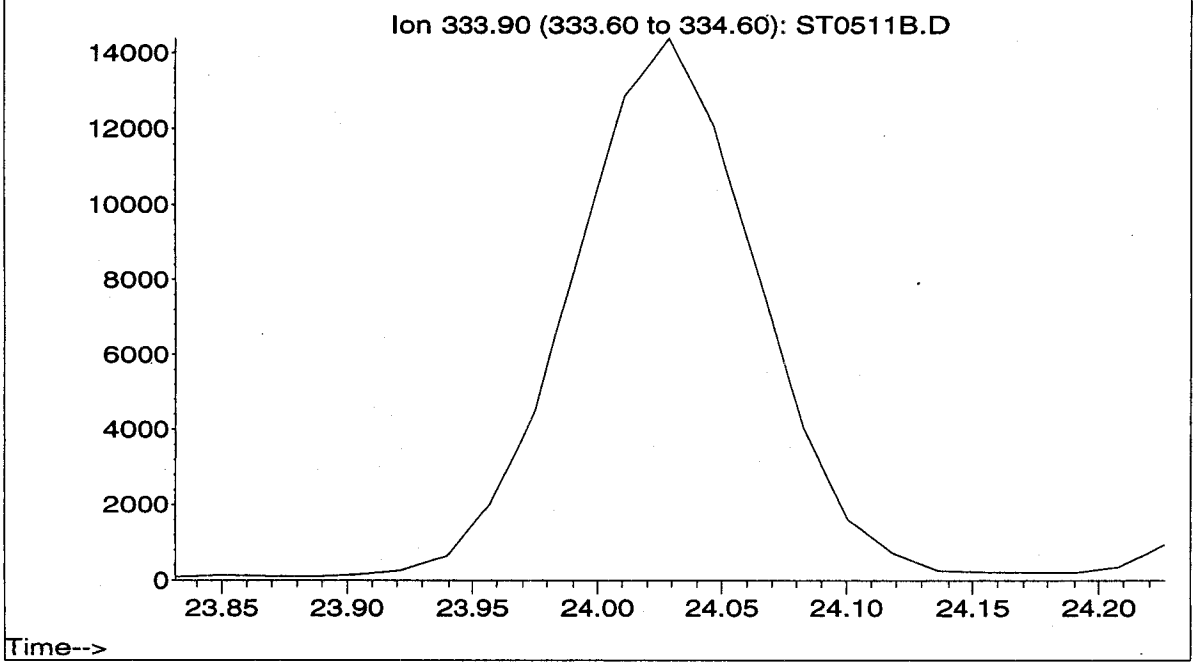
Data File Name	ST0511B.D
Data File Path	C:\8280\2DB\051110.B\
Operator	MEO
Date Acquired	5/12/2010 0:44
Acq. Method File	TOKAS
Sample Name	10LRES011 CS-1
Misc Info	CS-1 10LRES011
Vial Number	99
Instrument Name	2DB
Sample Multiplier	1
Sample Amount	0



13C-1234-TCDD

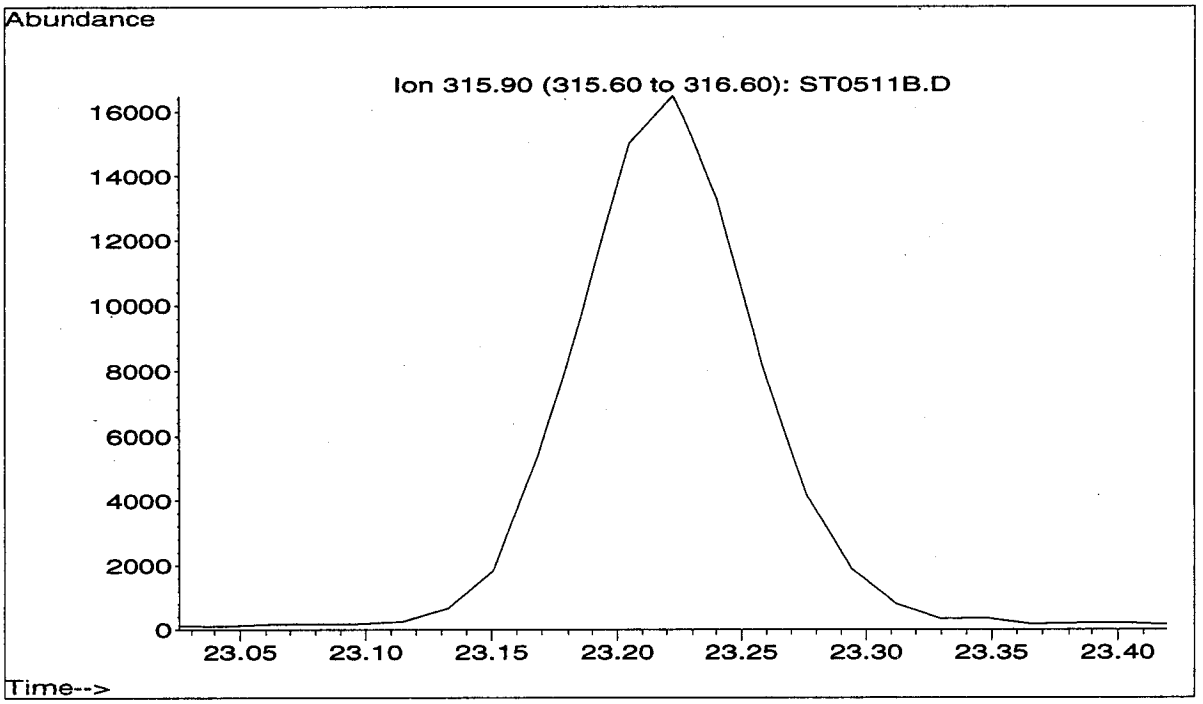
TS R.T. Lower Limit	23.83		
TS R.T. Upper Limit	24.23		
Ret Time	24.03		
Target Ion	331.9	Q1 Ion	333.9
Target Response	61535	Q1 Response	74370
Total Response	135905	Ion Ratio	0.83

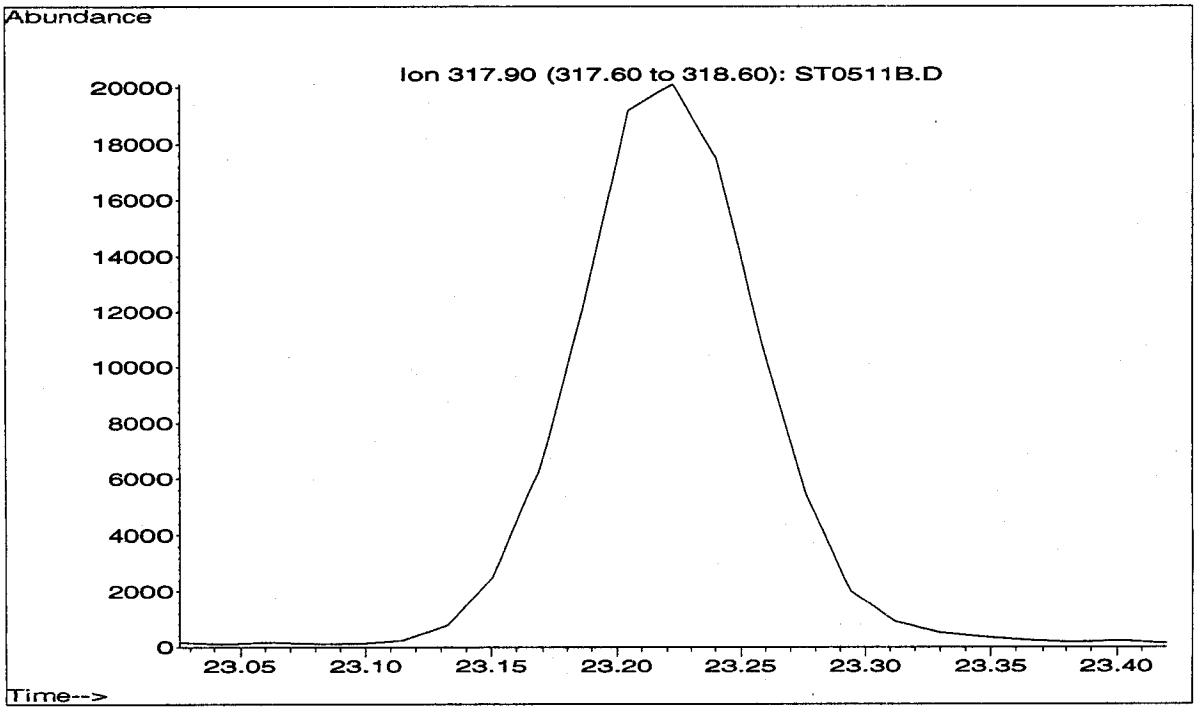




13C-2378-TCDF-IS

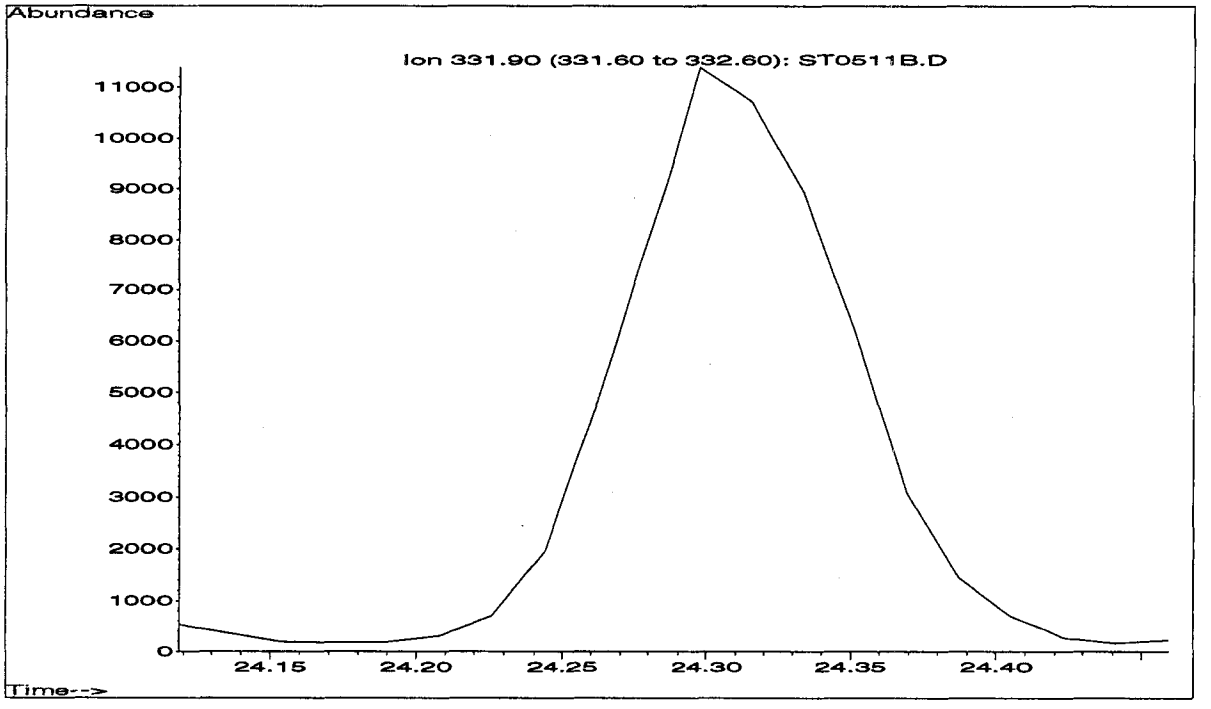
TS R.T. Lower Limit	23.02		
TS R.T. Upper Limit	23.42		
Ret Time	23.22		
Target Ion	315.9	Q1 Ion	317.9
Target Response	81945	Q1 Response	104499
Target Response	186444	Ion Ratio	0.78

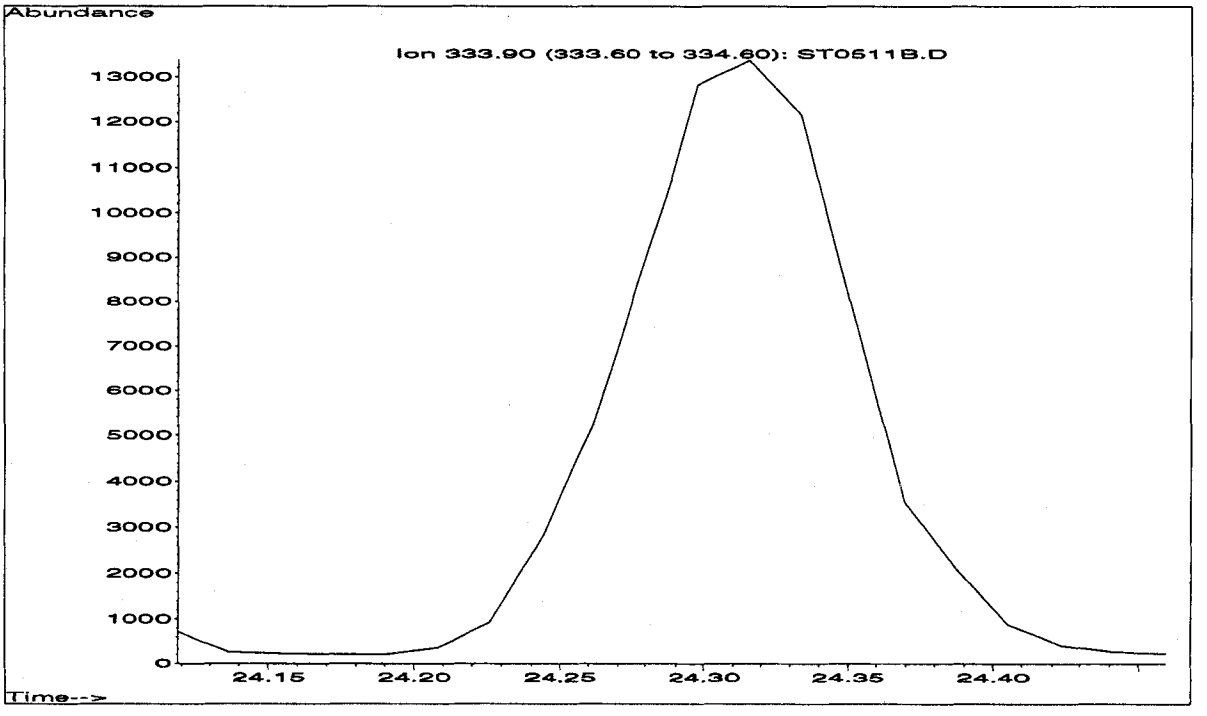




13C-2378-TCDD-IS

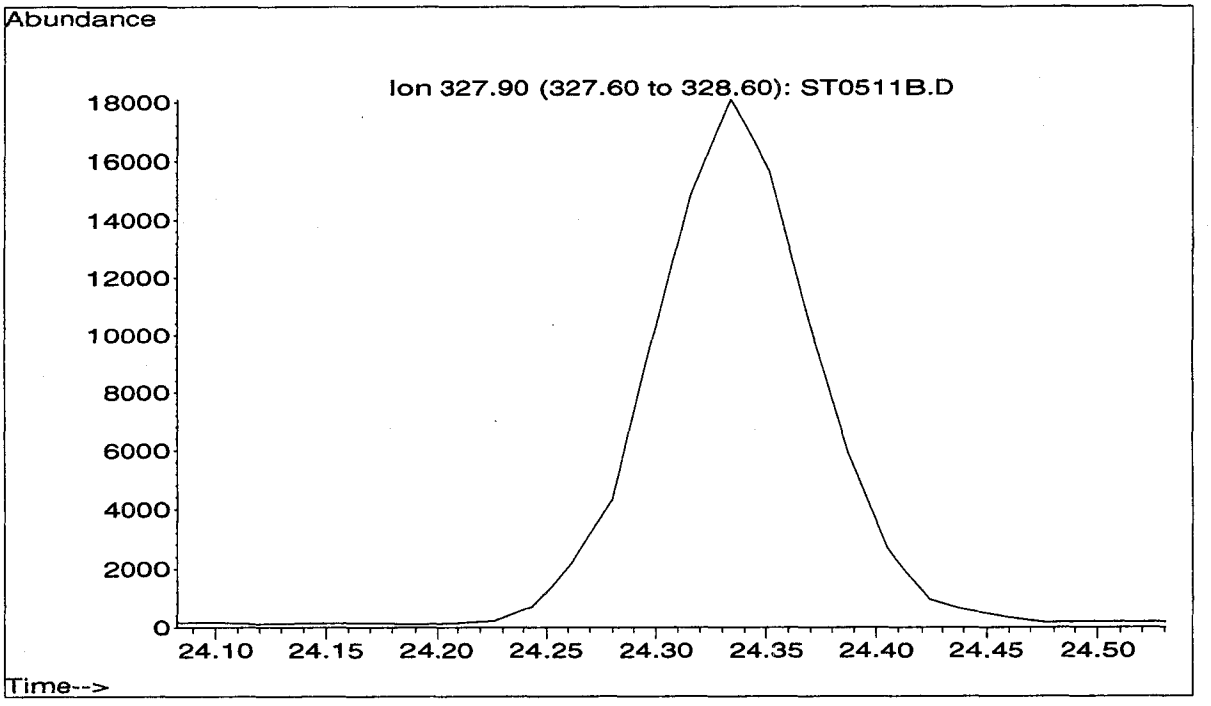
TS R.T. Lower Limit	24.12		
TS R.T. Upper Limit	24.47		
Ret Time	24.30		
Target Ion	331.9	Q1 Ion	333.9
Target Response	59637	Q1 Response	73012
Total Response	132649	Ion Ratio	0.82

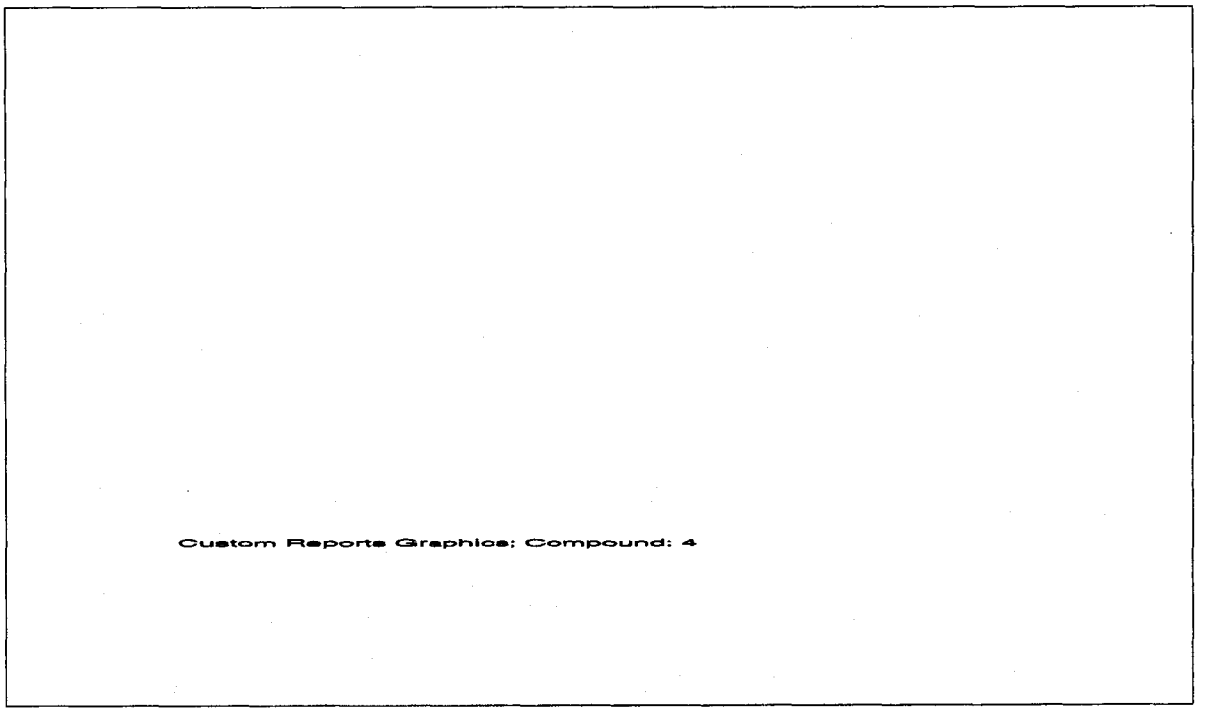




37Cl-2378-TCDD

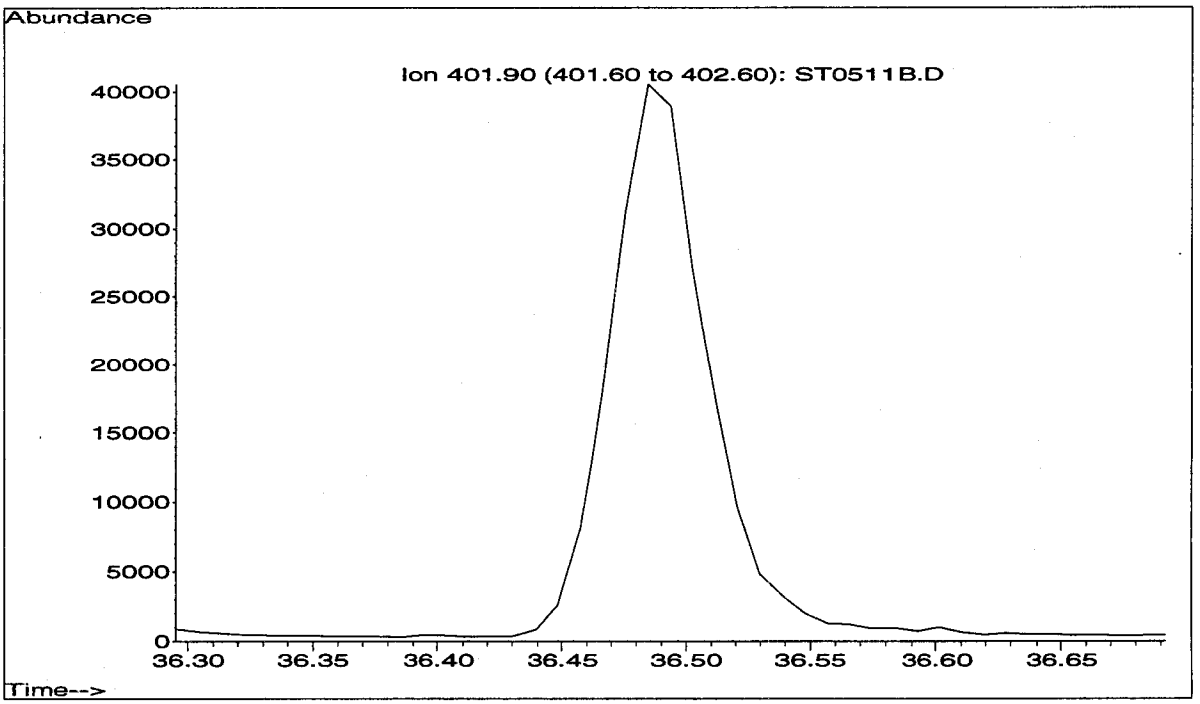
TS R.T. Lower Limit	24.08		
TS R.T. Upper Limit	24.53		
Ret Time	24.33		
Target Ion	327.9	Q1 Ion	0
Target Response	91327	Q1 Response	0
Total Response	91327	Ion Ratio	#DIV/0!

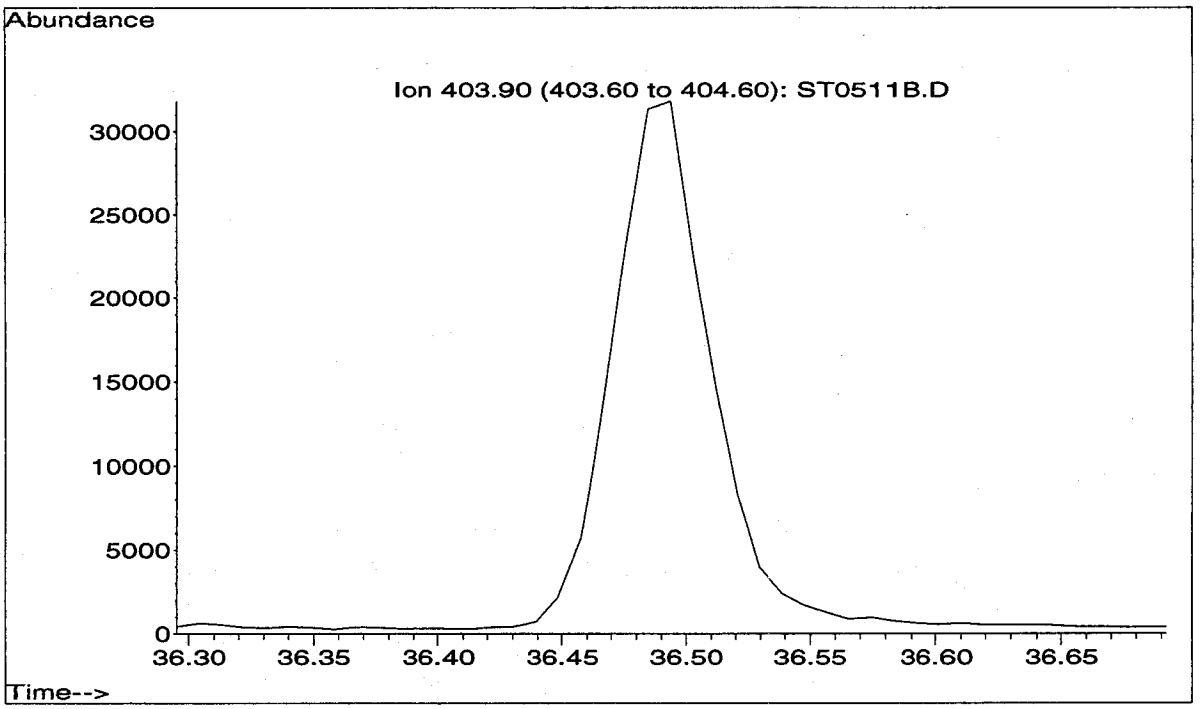




13C-123789-HxCDD

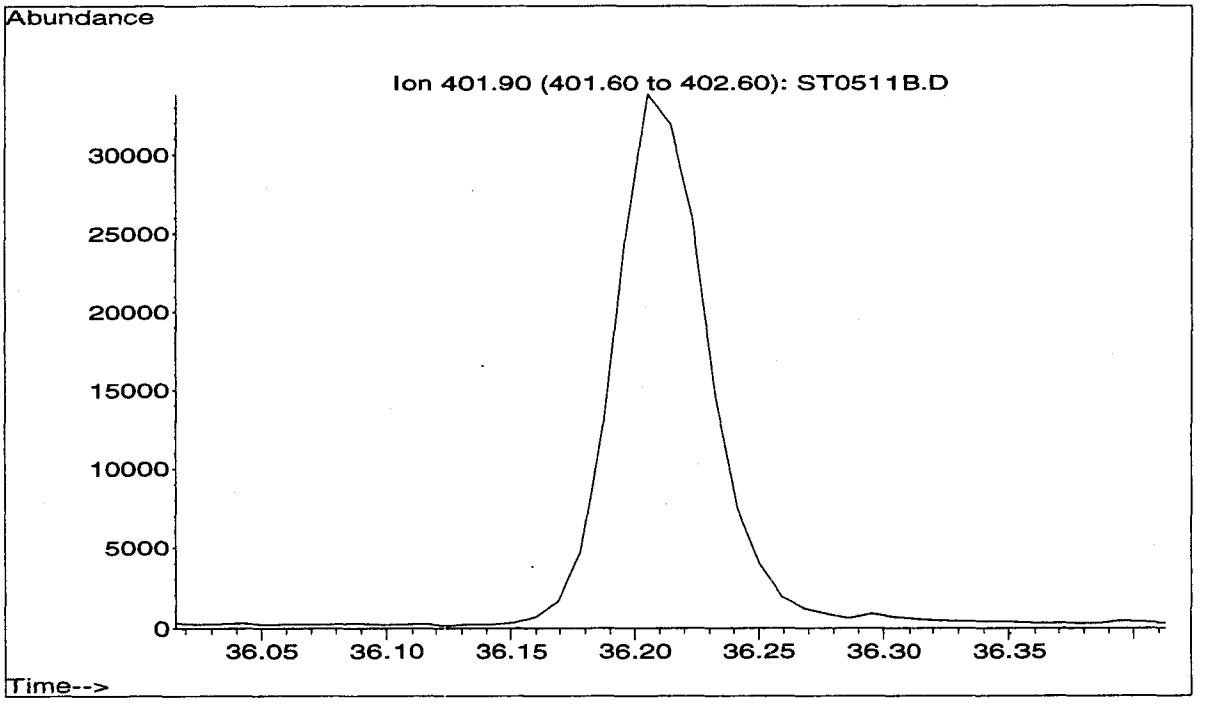
TS R.T. Lower Limit	36.29		
TS R.T. Upper Limit	36.69		
Ret Time	36.48		
Target Ion	401.9	Q1 Ion	403.9
Target Response	111240	Q1 Response	88593
Target Response	199833	Ion Ratio	1.26

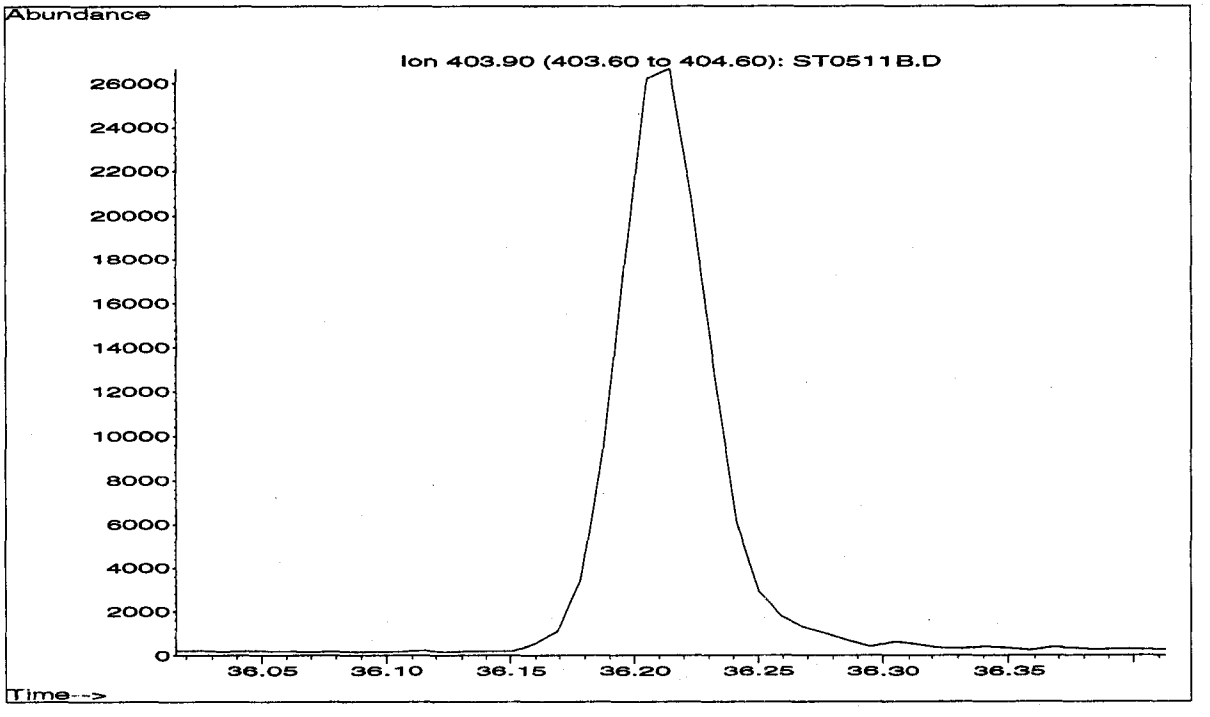




13C-123678-HxCDD-IS

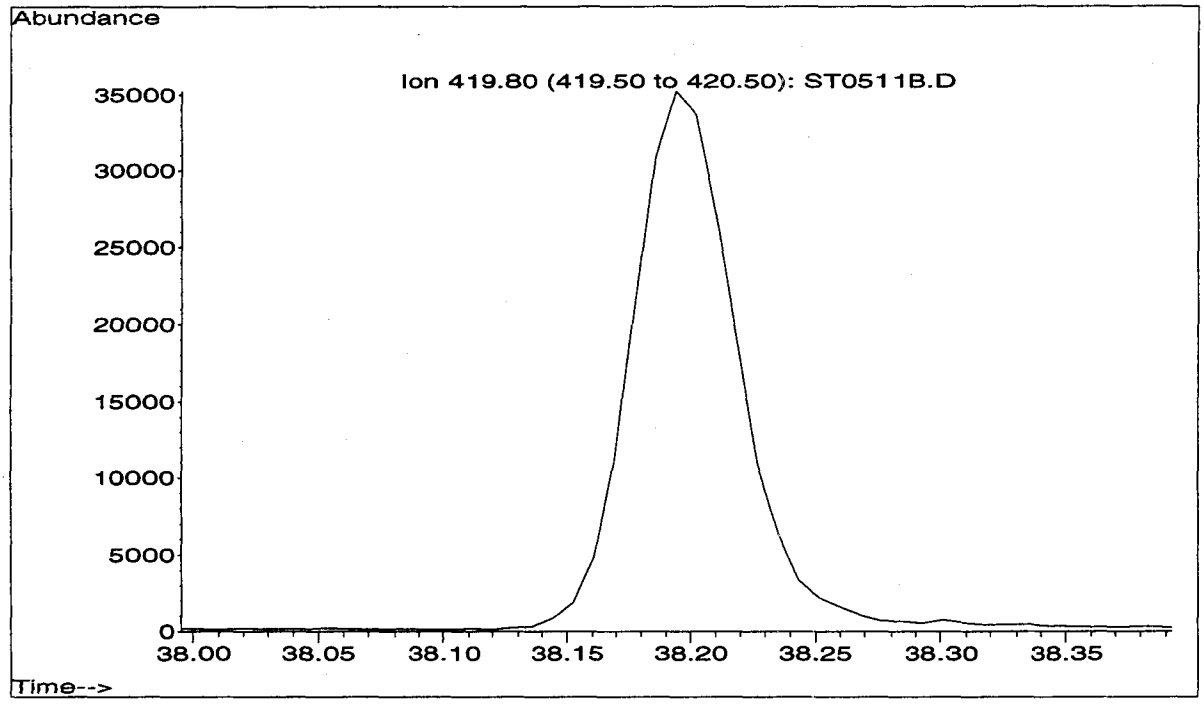
TS R.T. Lower Limit	36.01		
TS R.T. Upper Limit	36.41		
Ret Time	36.21		
Target Ion	401.9	Q1 Ion	403.9
Target Response	89247	Q1 Response	71156
Total Response	160403	Ion Ratio	1.25

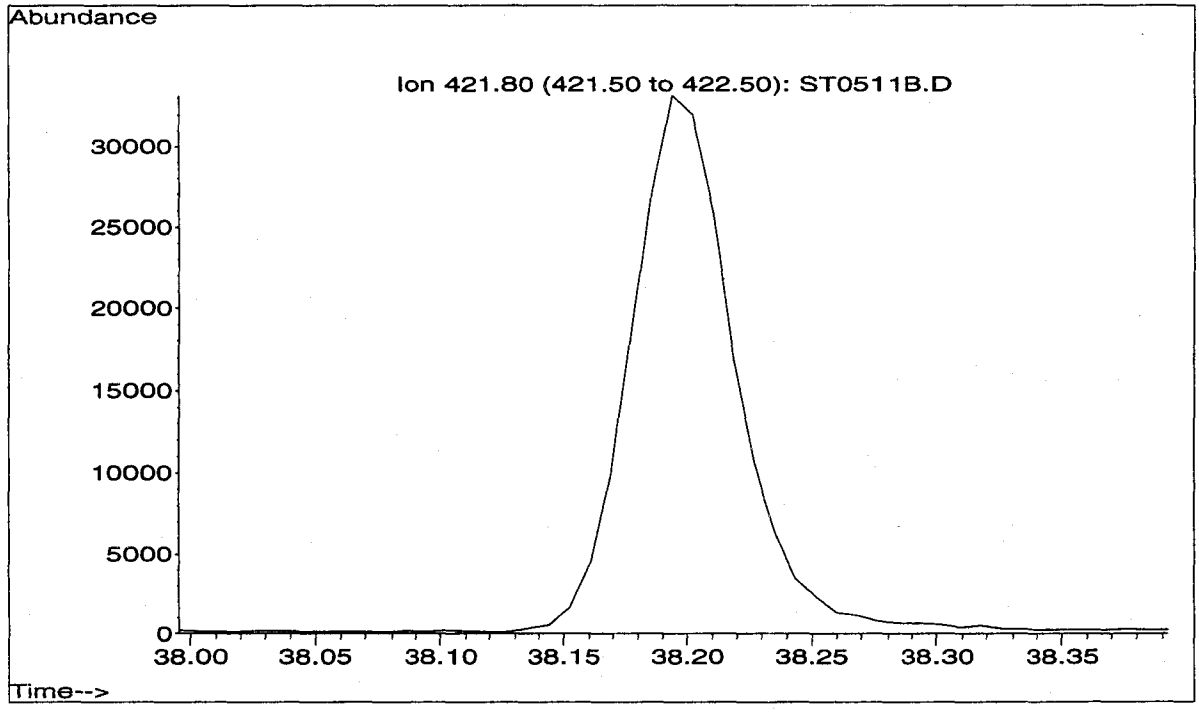




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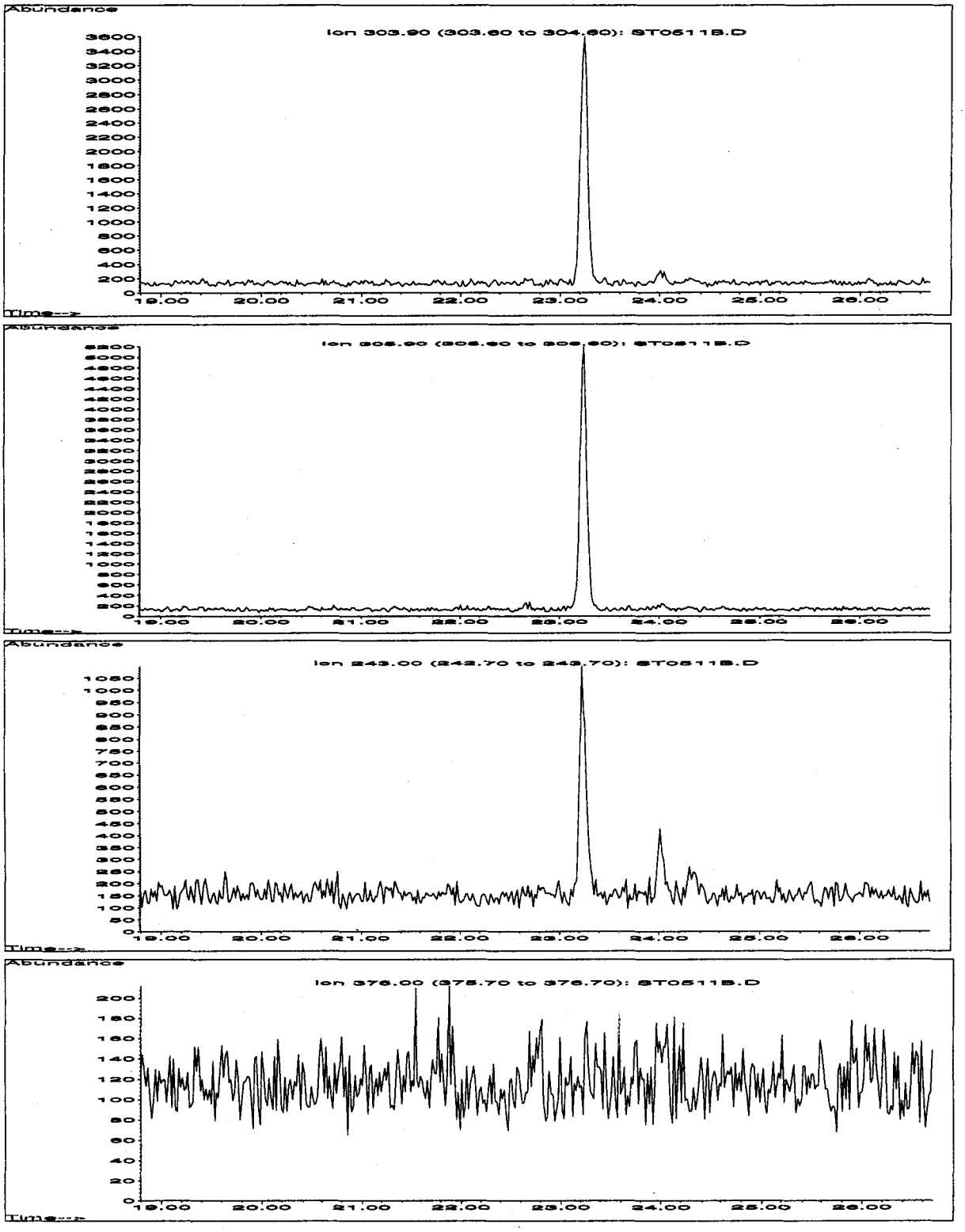
TS R.T. Lower Limit	37.99		
TS R.T. Upper Limit	38.39		
Ret Time	38.19		
Target Ion	419.8	Q1 Ion	421.8
Target Response	104793	Q1 Response	98066
Target Response	202859	Ion Ratio	1.07





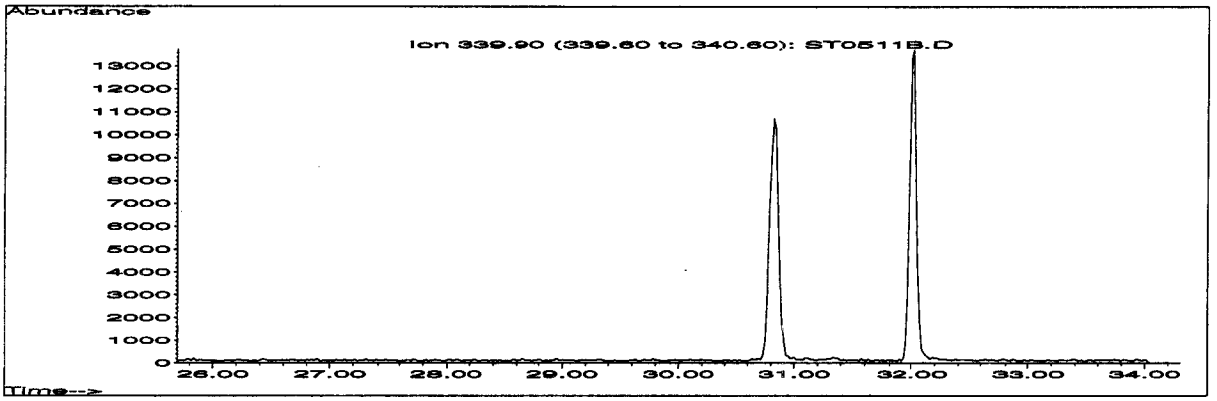
TCDF TOTAL

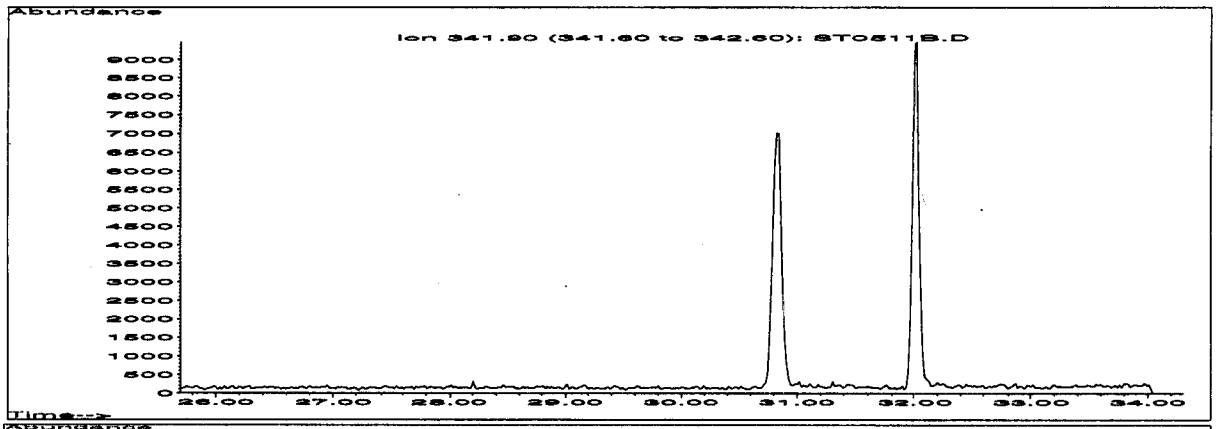
TS R.T. Lower Limit	18.80
TS R.T. Upper Limit	26.70

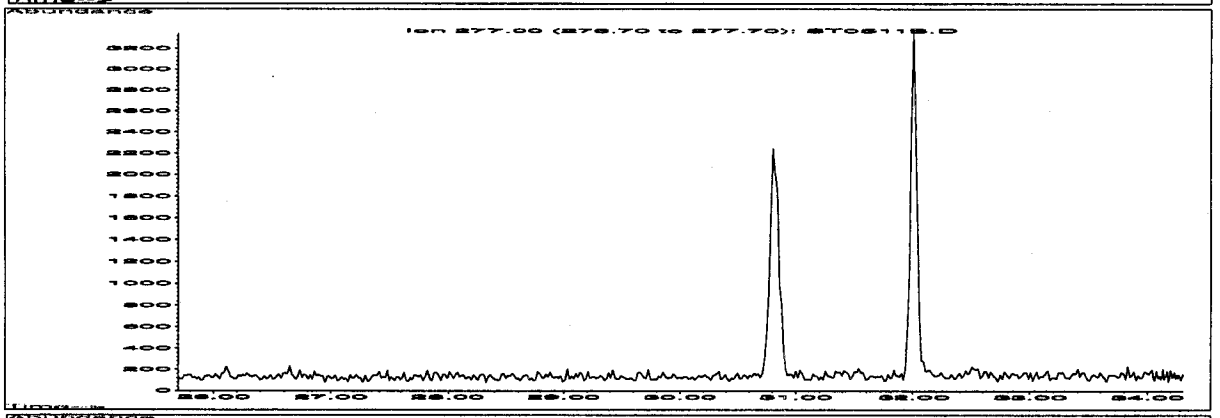


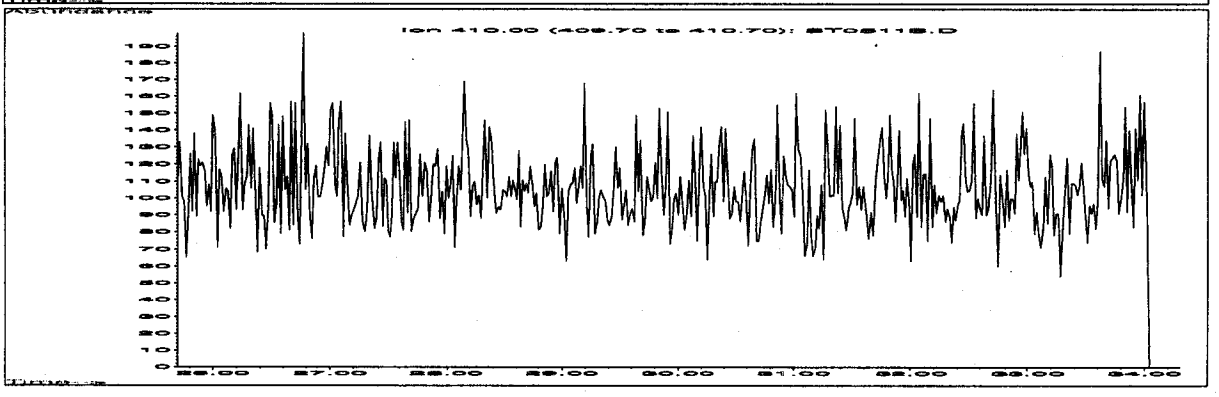
PeCDF TOTAL

TS R.T. Lower Limit	25.70
TS R.T. Upper Limit	34.30





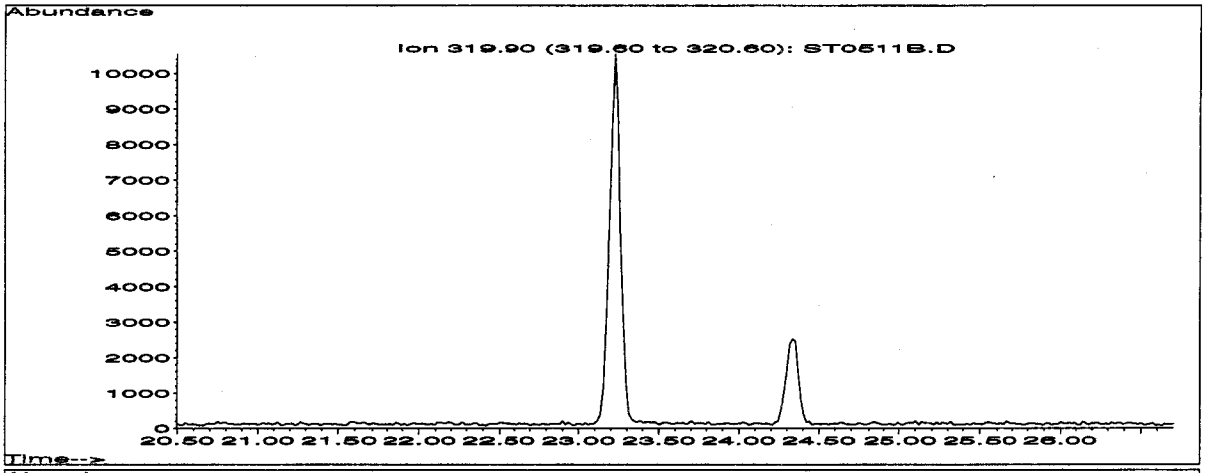


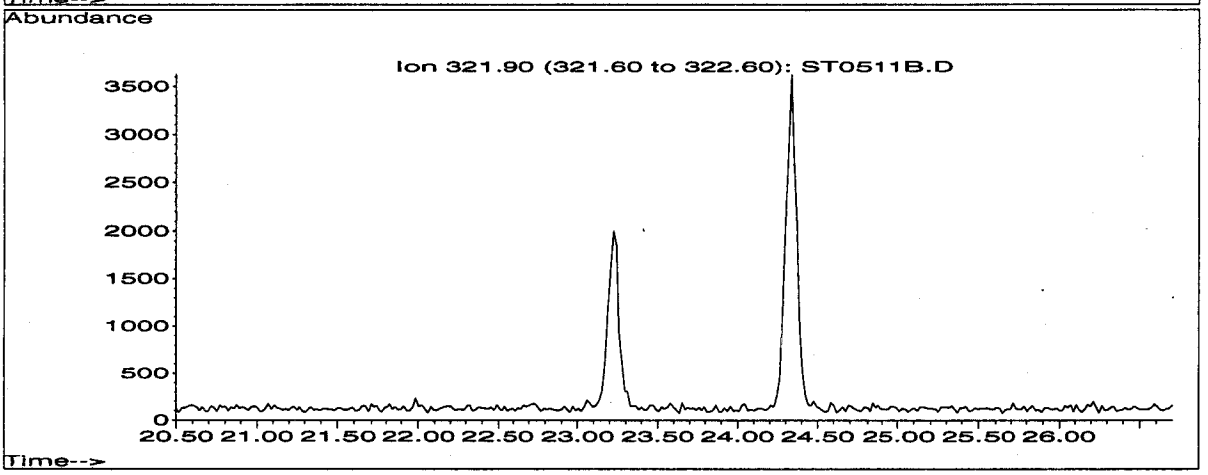


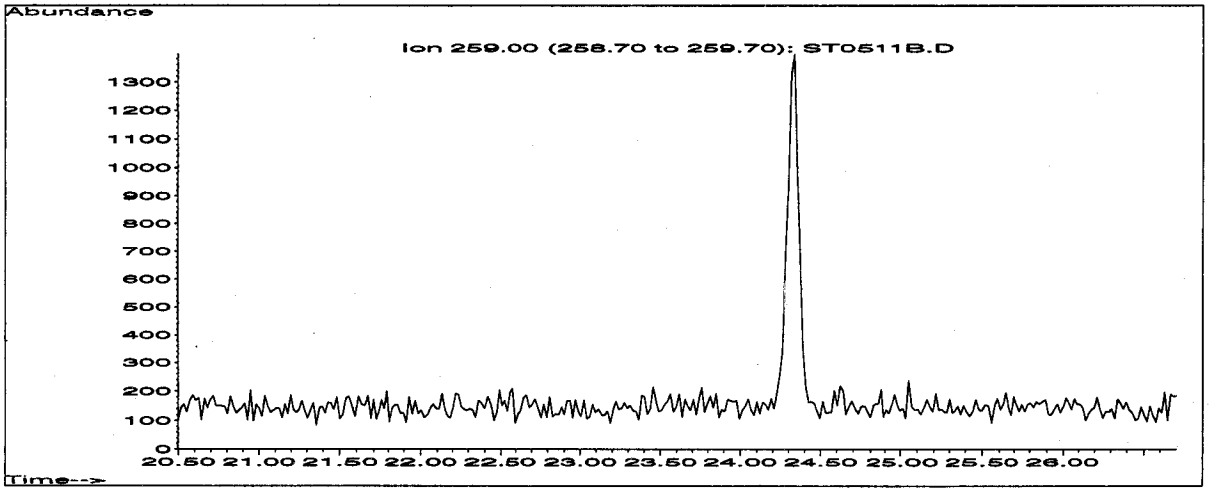
North Canton

TCDD TOTAL

TS R.T. Lower Limit	20.50
TS R.T. Upper Limit	26.70

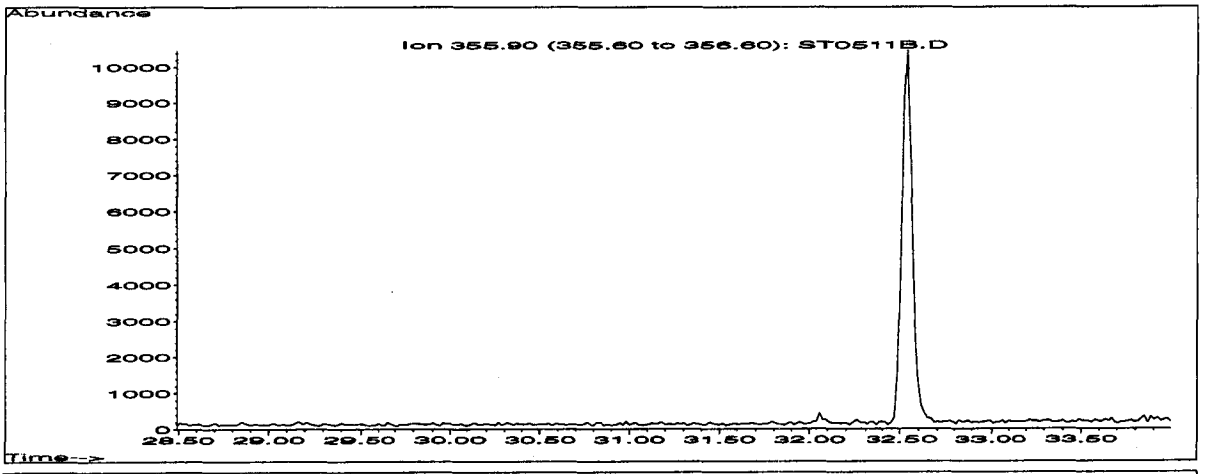


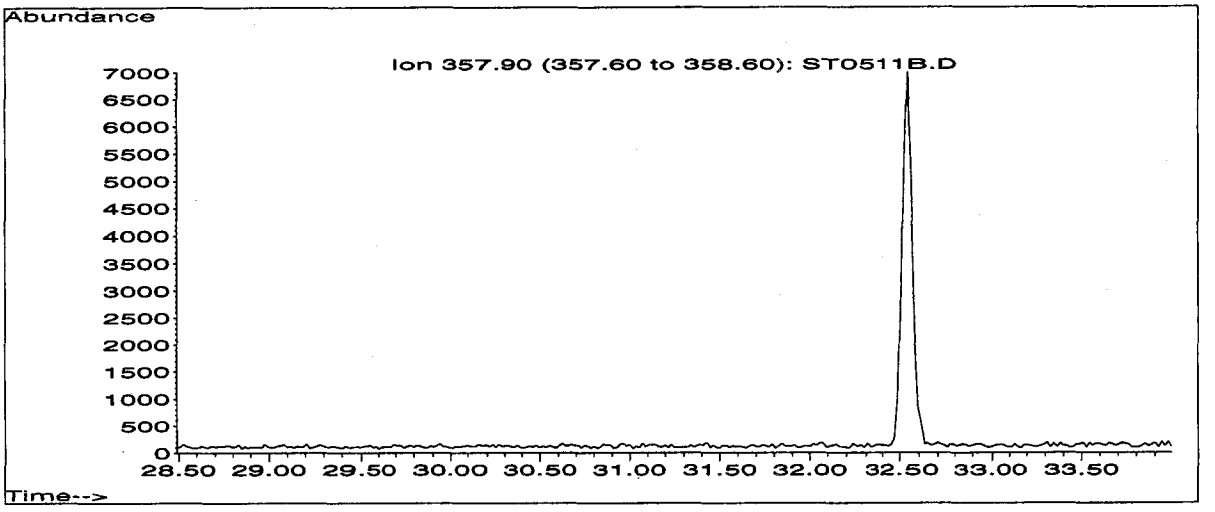


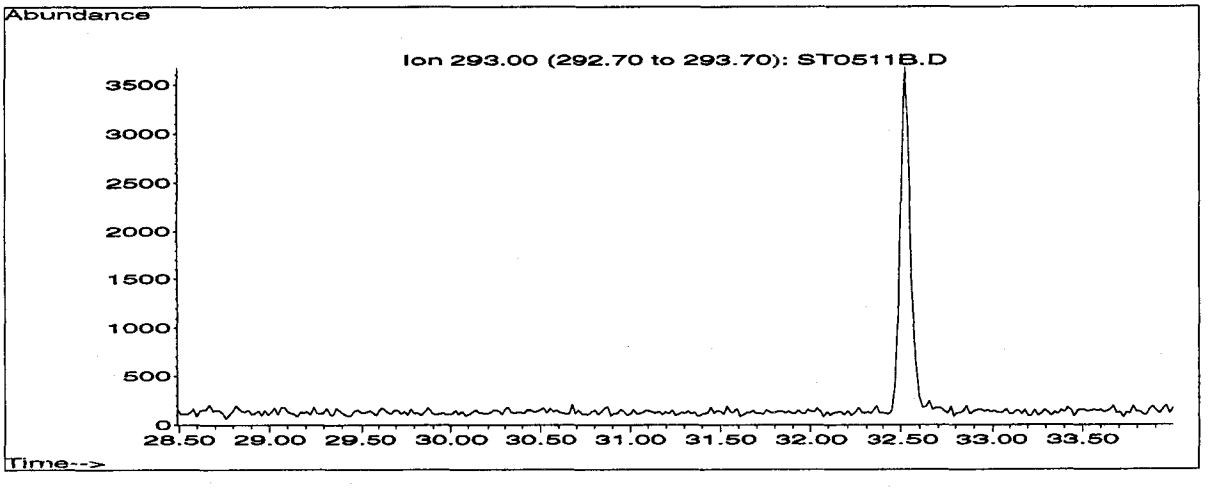


PeCDD TOTAL

TS R.T. Lower Limit	28.50
TS R.T. Upper Limit	34.00

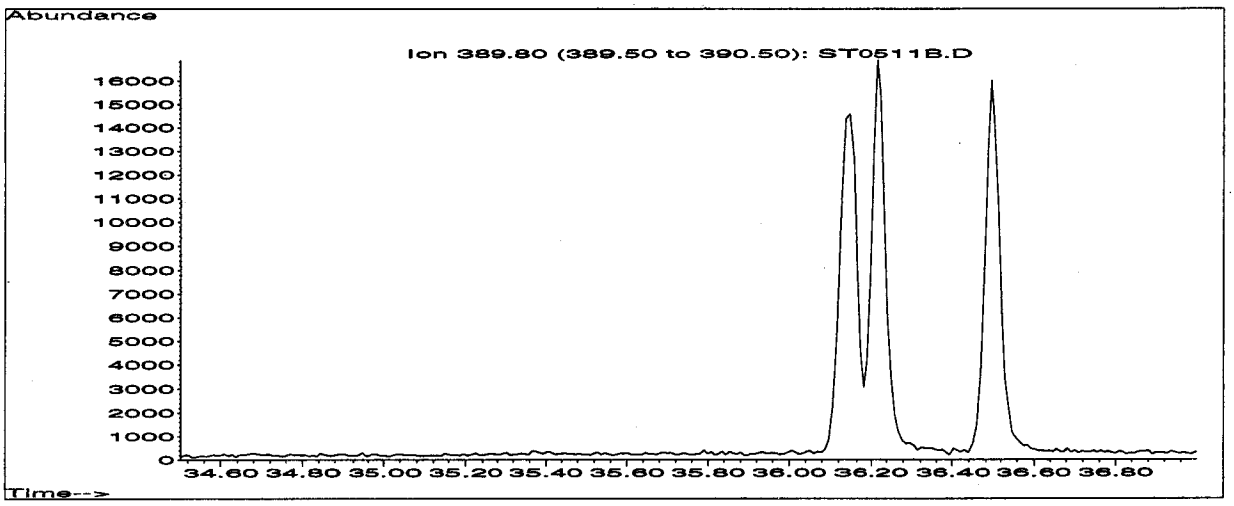


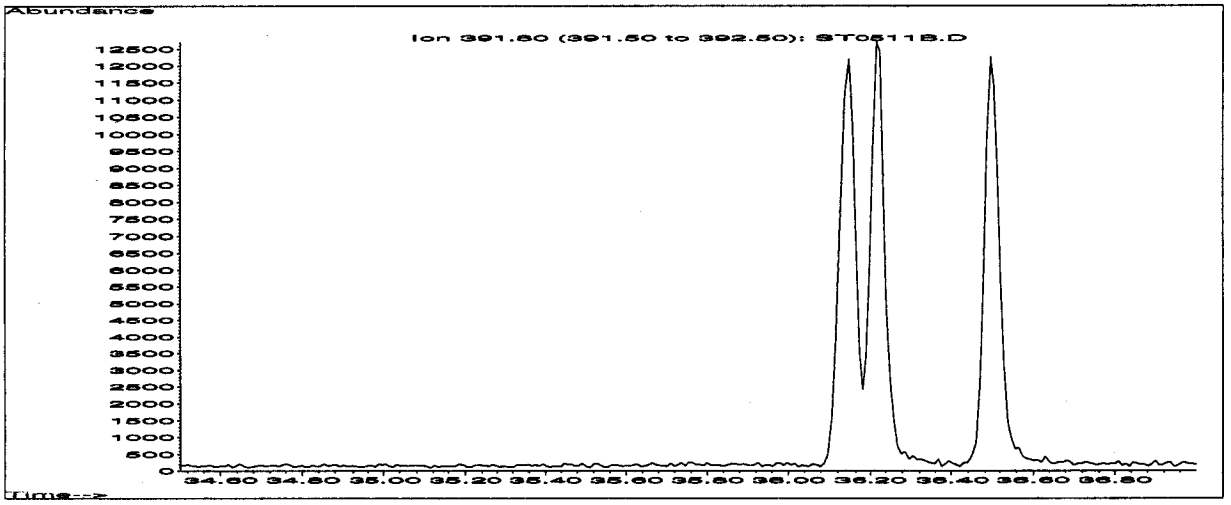


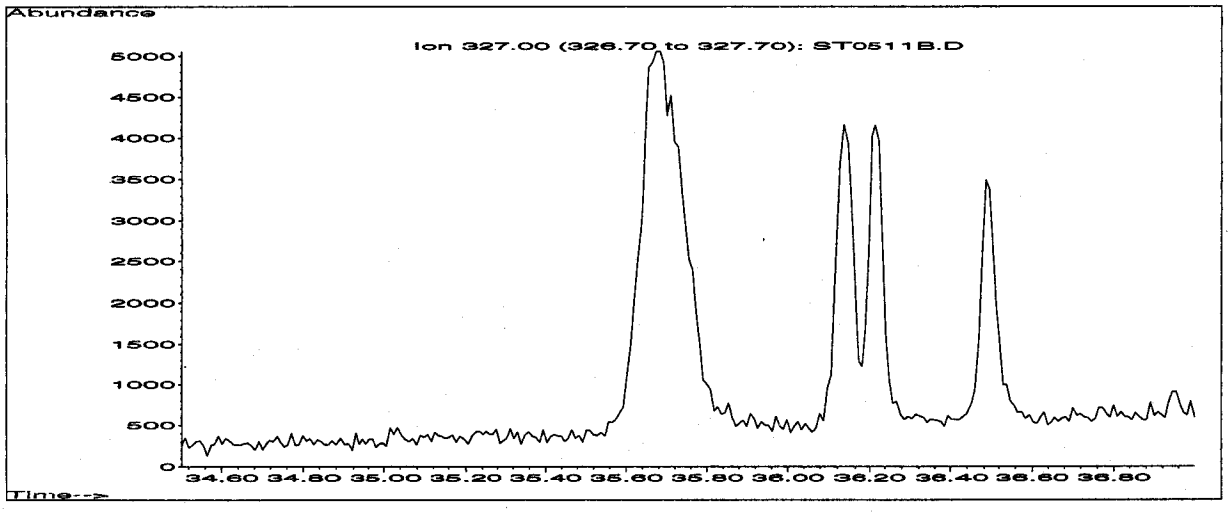


HxCDD TOTAL

TS R.T. Lower Limit	34.50
TS R.T. Upper Limit	37.00

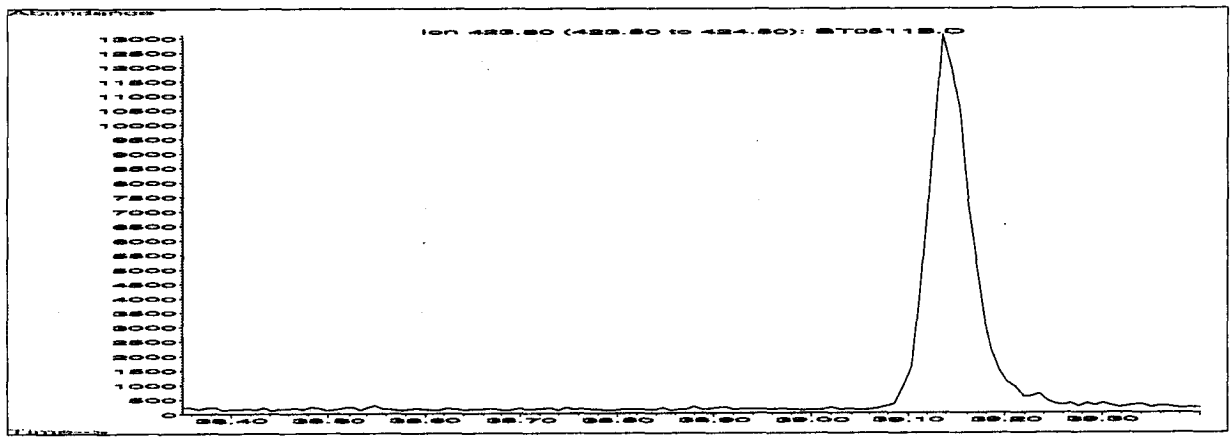


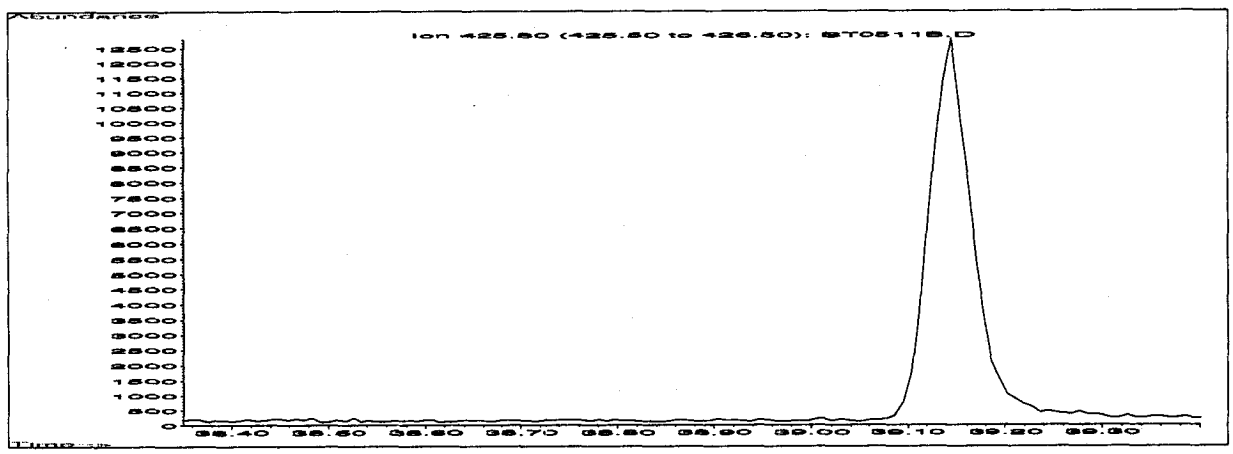


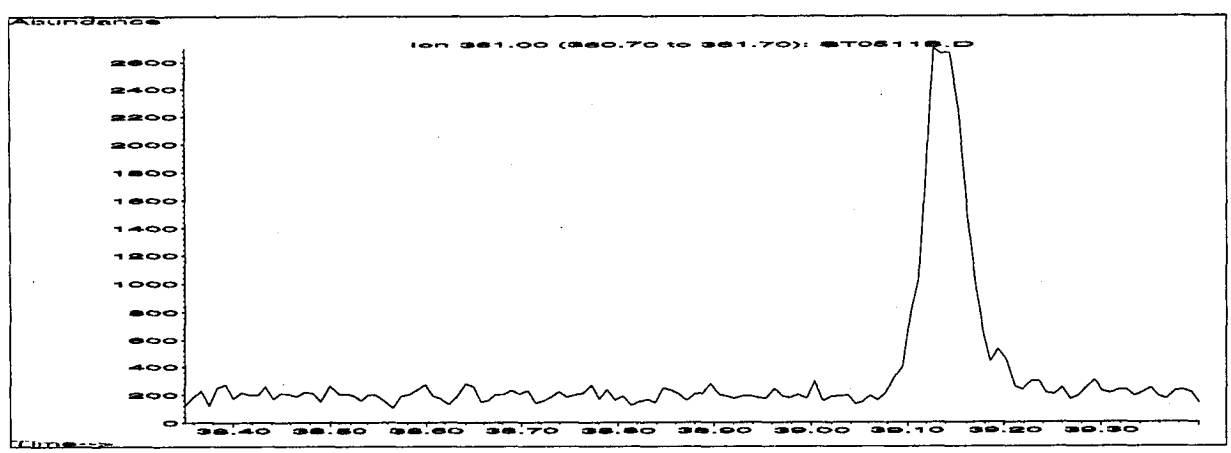


HpCDD TOTAL

TS R.T. Lower Limit	38.35
TS R.T. Upper Limit	39.40

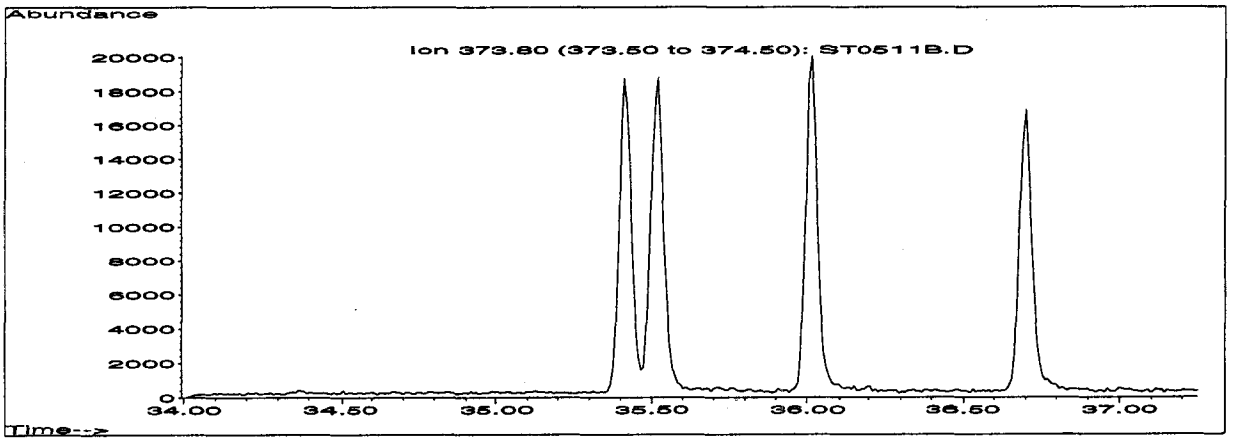


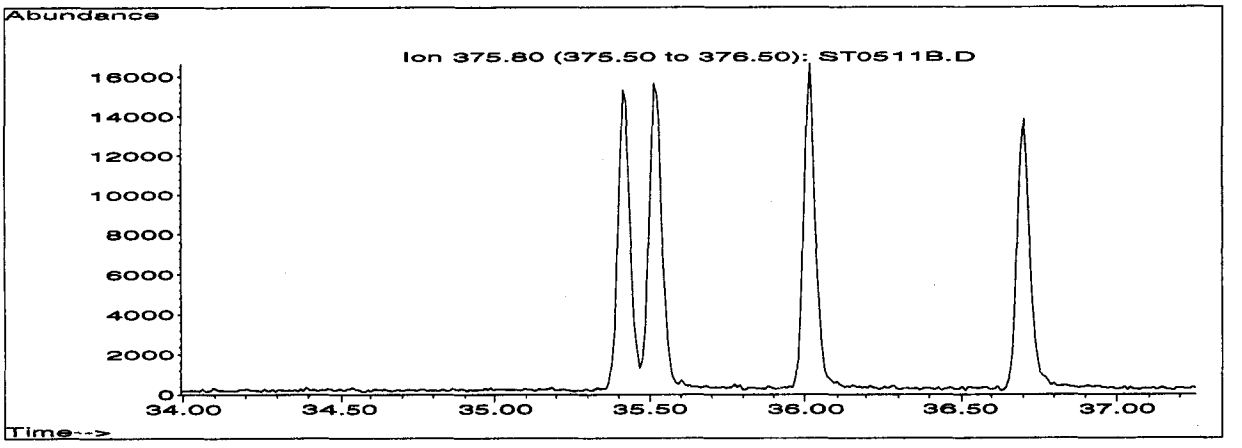


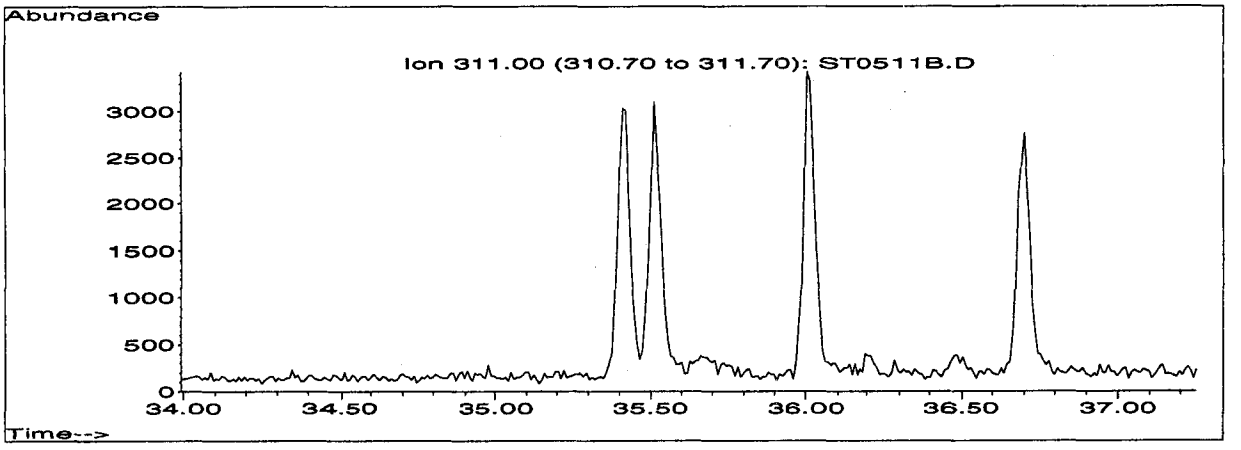


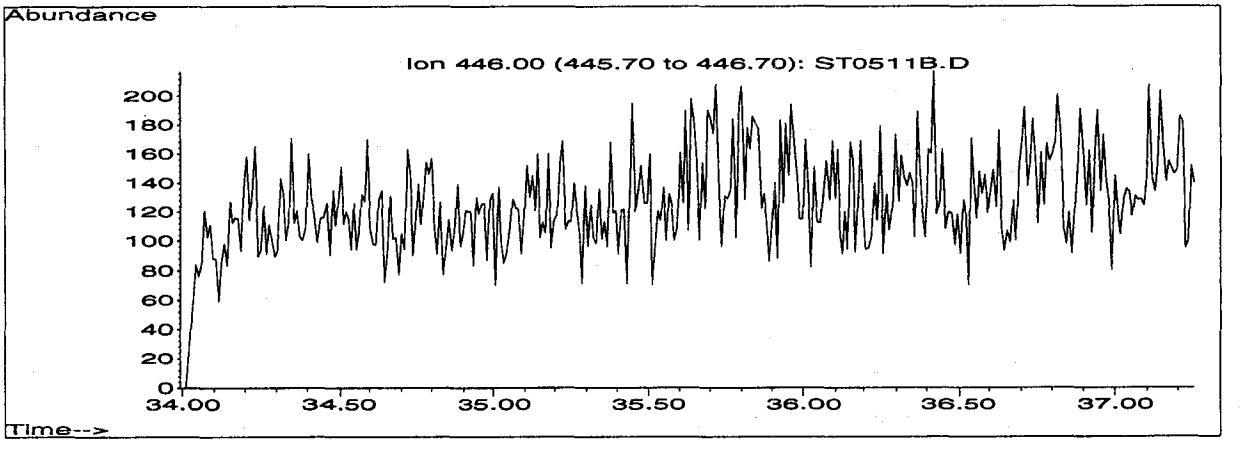
HxCDF TOTAL

TS R.T. Lower Limit	34.00
TS R.T. Upper Limit	37.25



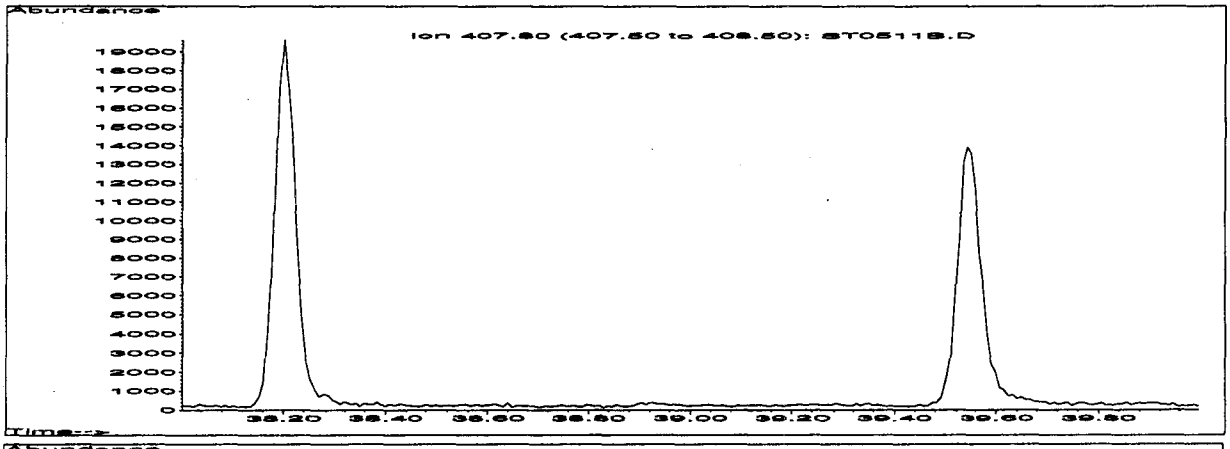


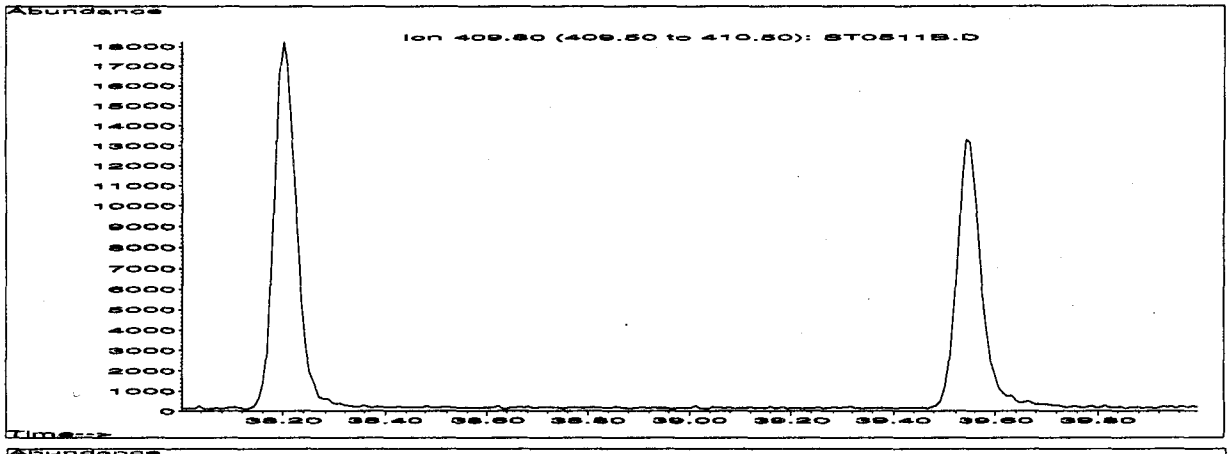


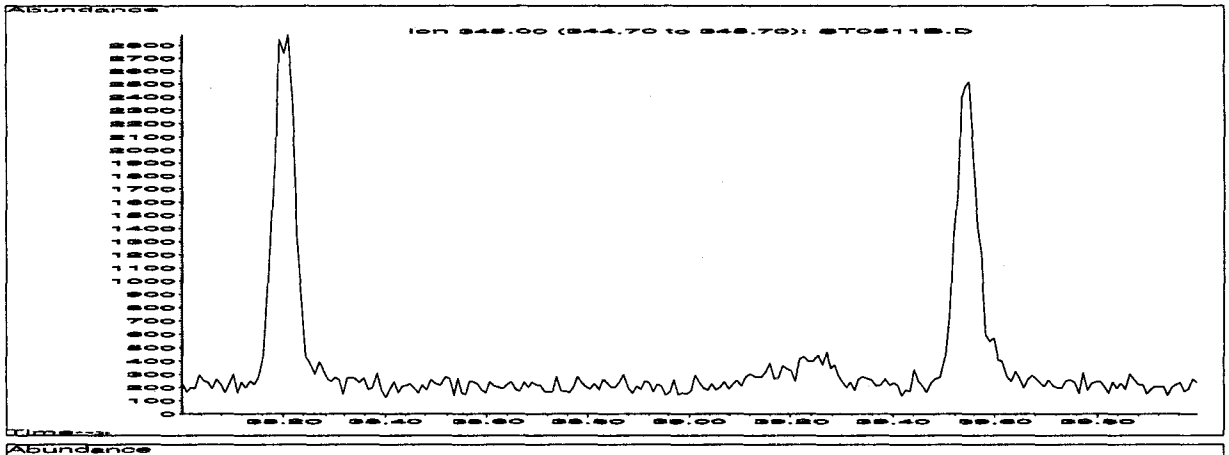


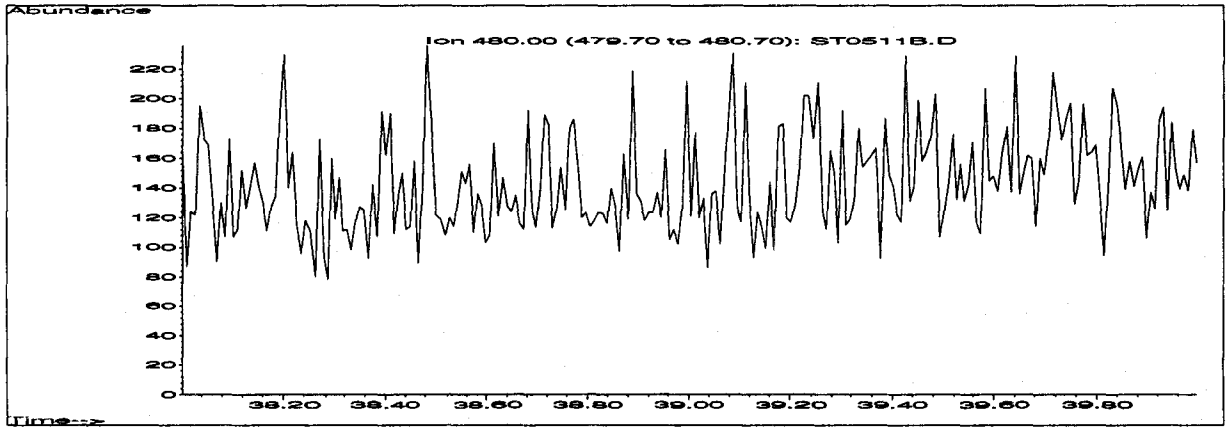
HpCDF TOTAL

TS R.T. Lower Limit	38.00
TS R.T. Upper Limit	40.00



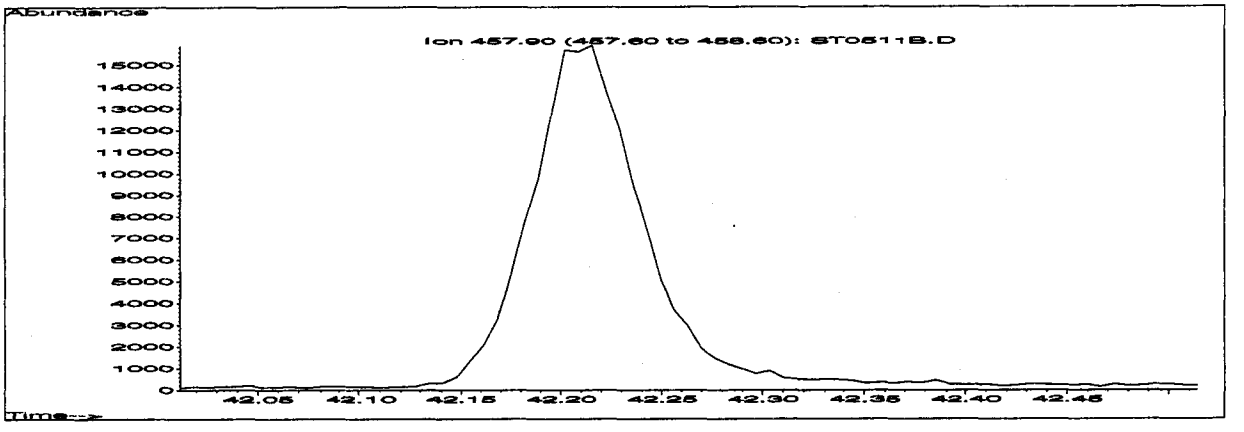


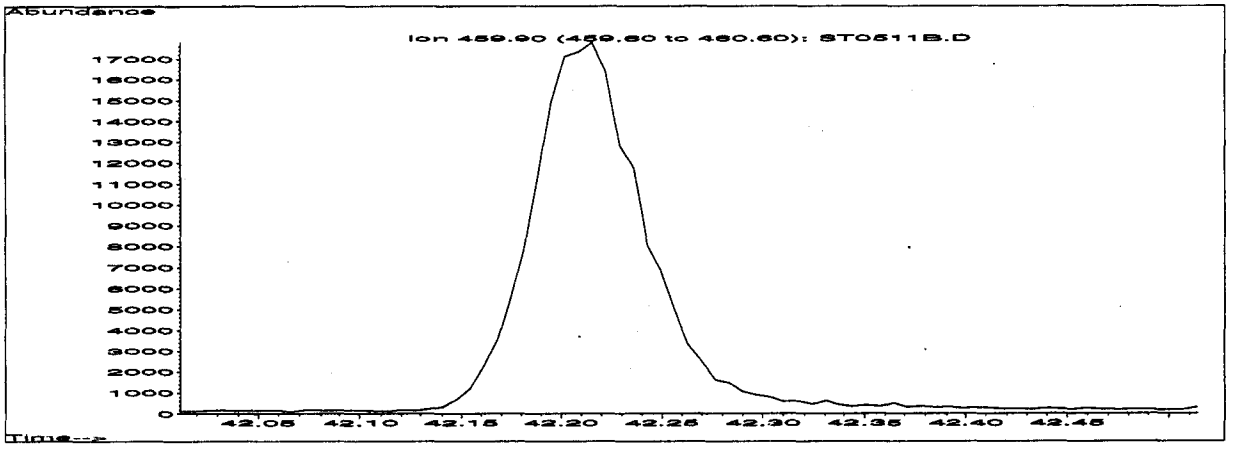


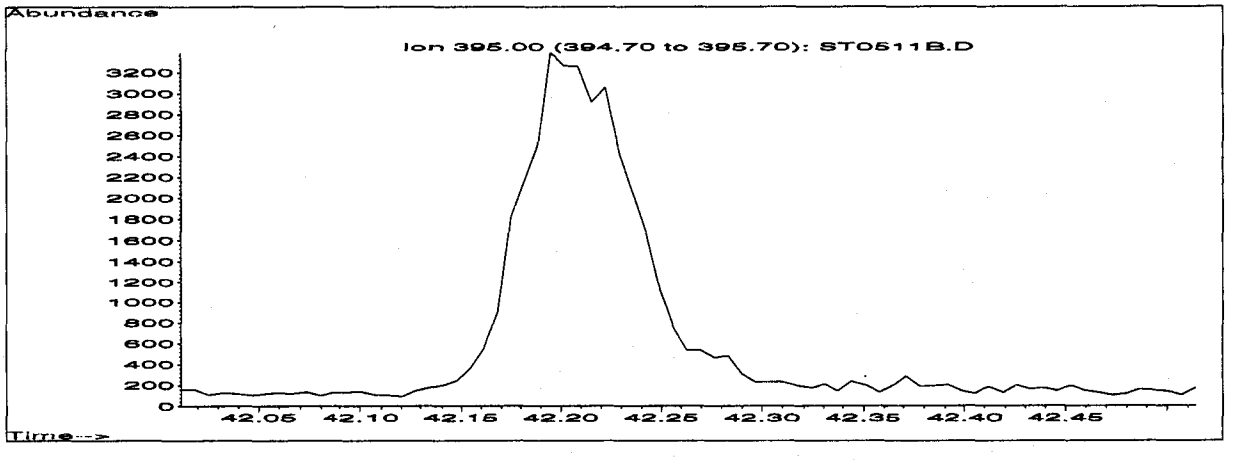


OCDD

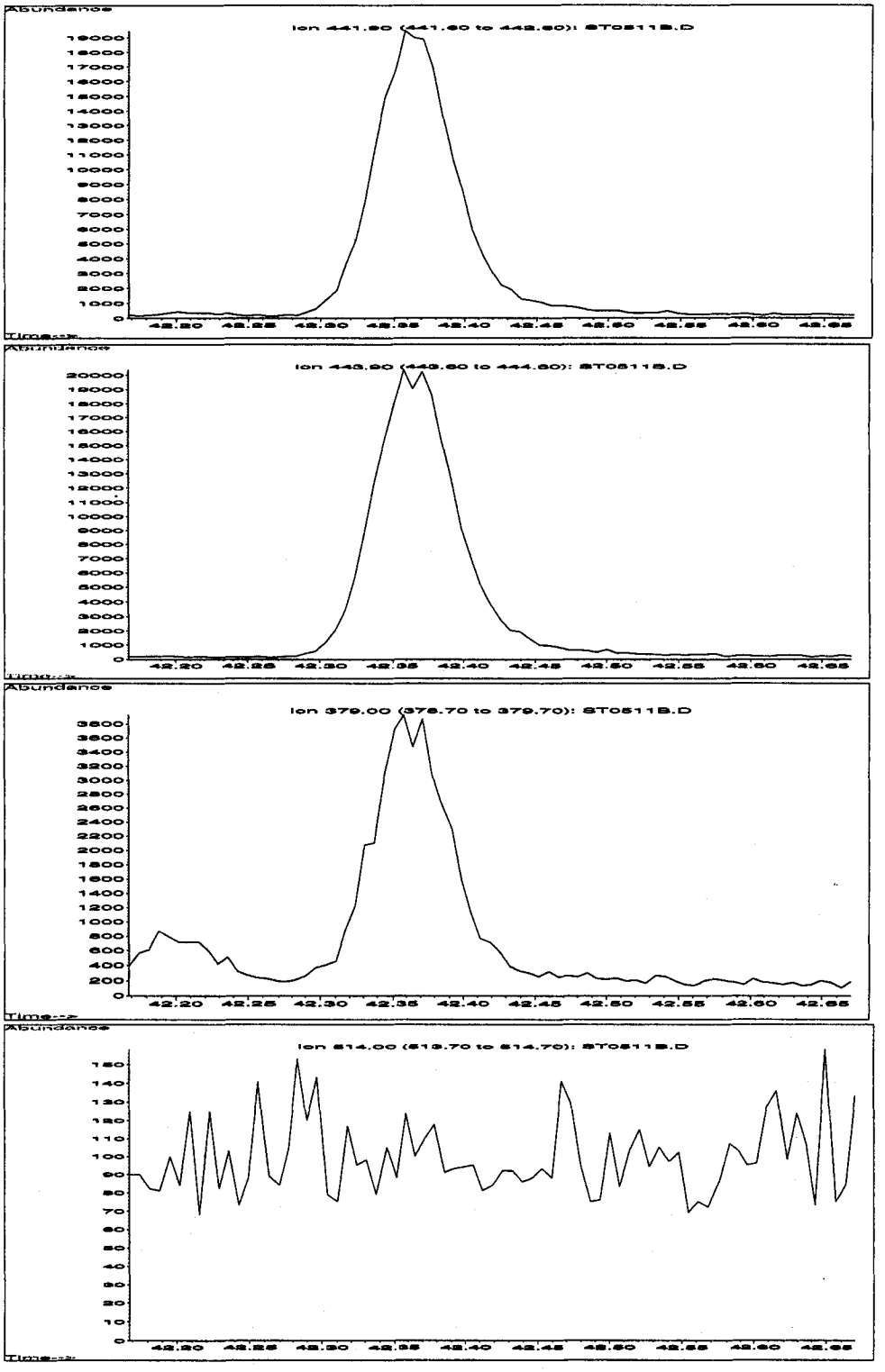
TS R.T. Lower Limit	42.01		
TS R.T. Upper Limit	42.51		
Ret. Time	42.22		
Target Ion	457.9	Q1 Ion	459.9
Target Response	61418	Q1 Response	70035
Total Response	131453	Ion ratio	0.88
Q2 Ion	395		
Q2 Response	13647		





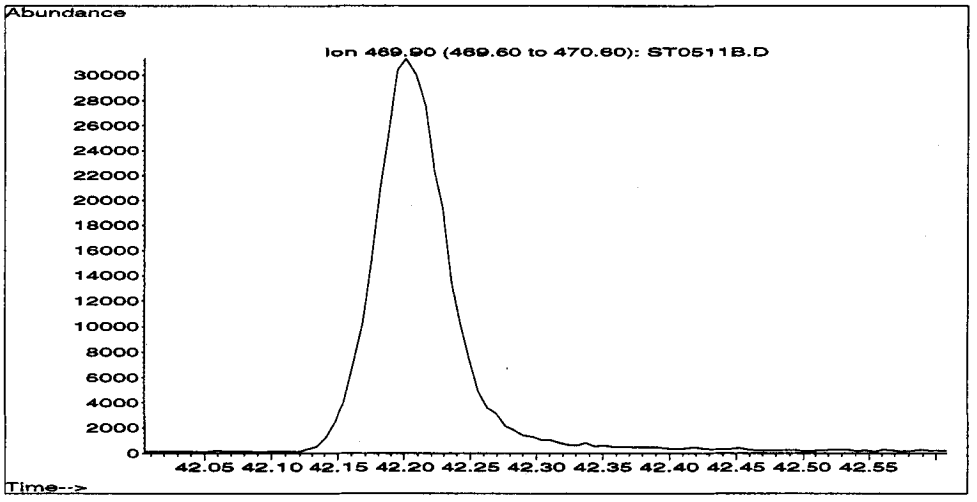


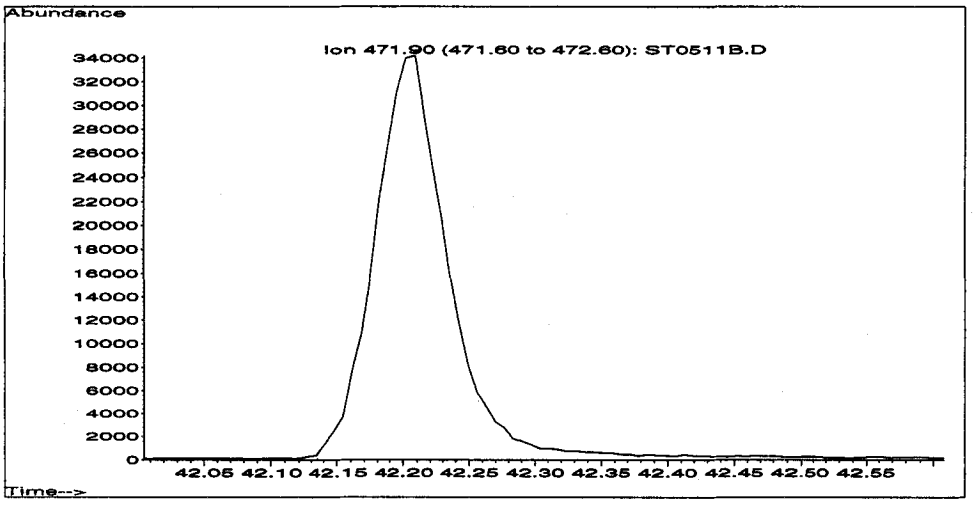
OCDF			
TS R.T. Lower Limit	42.17		
TS R.T. Upper Limit	42.67		
Ret Time	42.36		
Target Ion	441.9	Q1 Ion	443.9
Target Response	78301	Q1 Response	85075
Target Response	163376	Ion Ratio	0.92
Q2 Ion	379	DPE Ion	514
Q2 Response	14337	DPE Response	0



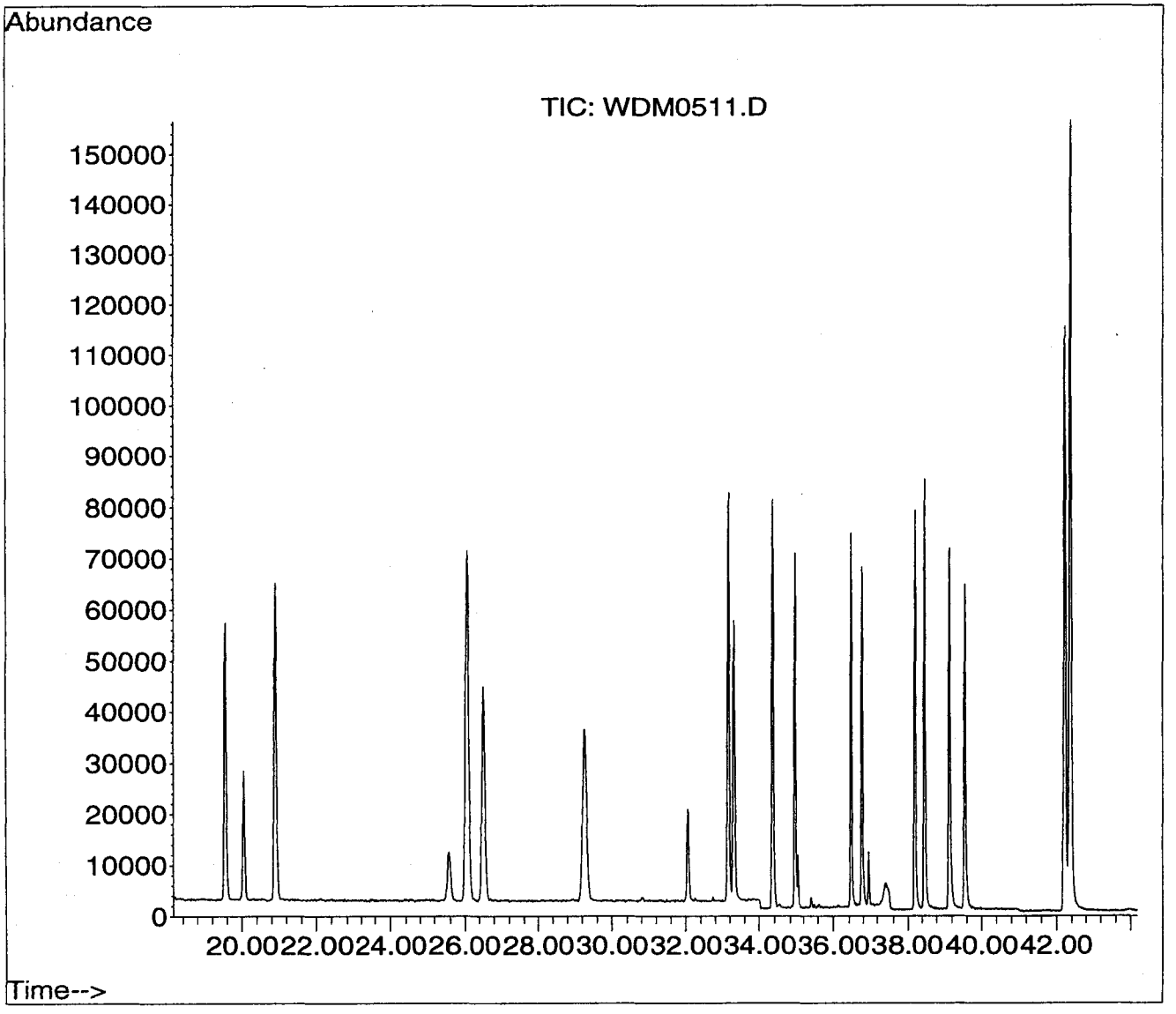
13C-OCDD-IS

RT Lower Limit	42.01		
RT Upper Limit	42.61		
Ret Time	42.20		
Target Ion	469.9	Q1 Ion	471.9
Target Response	121624	Q1 Response	132528
Total response	254152	Ratio	0.92



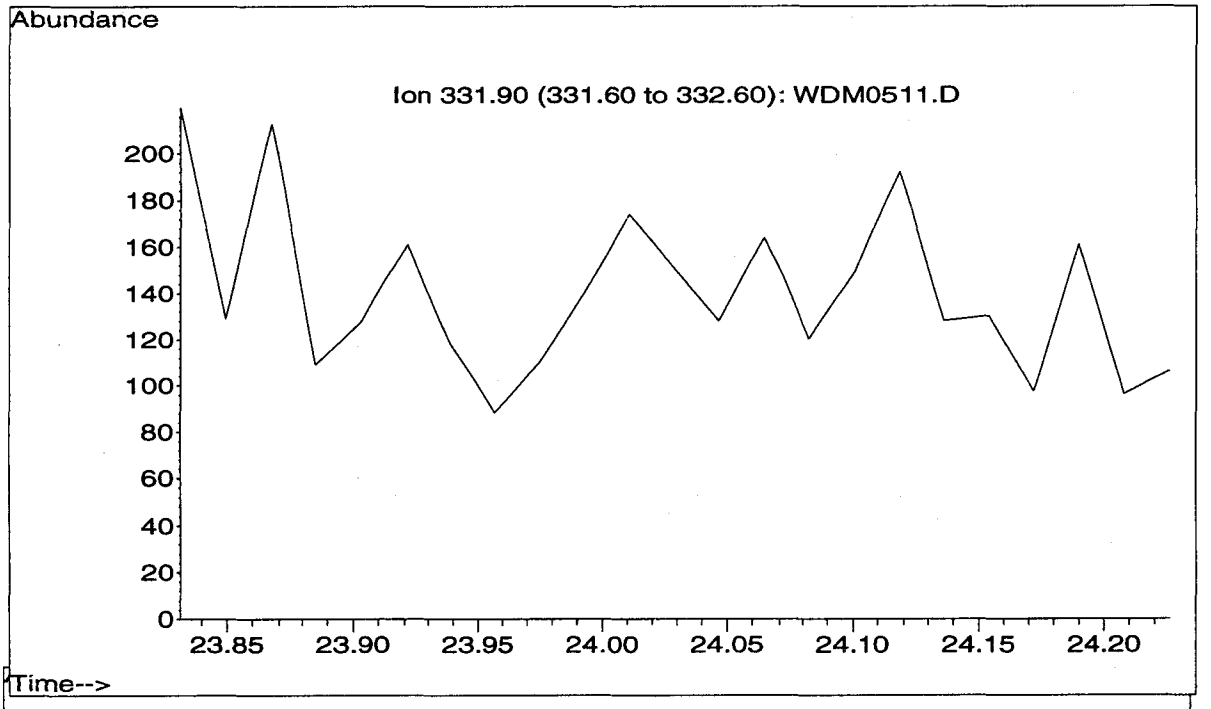


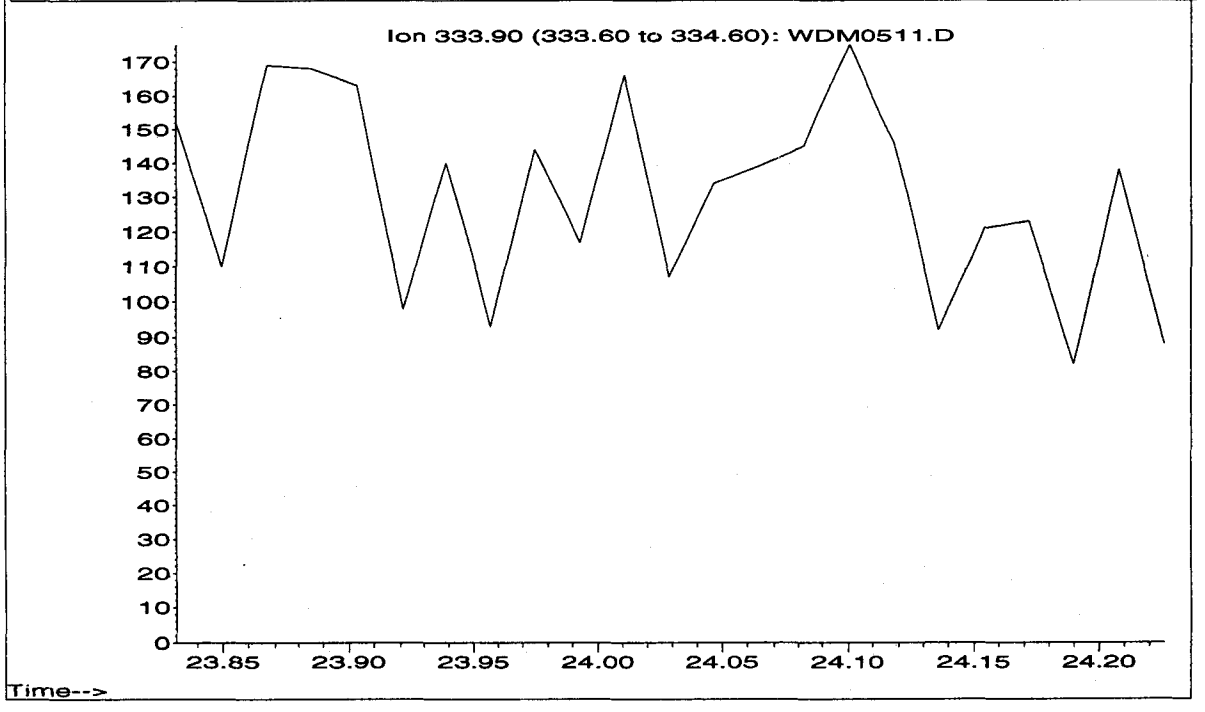
Data File Name	WDM0511.D
Data File Path	C:\8280\2DB\051110.B\
Operator	MEO
Date Acquired	5/11/2010 15:09
Acq. Method File	TOKAS
Sample Name	WDM 3136-37
Misc Info	WINDOW DEFINING MIX
Vial Number	96
Instrument Name	2DB
Sample Multiplier	1
Sample Amount	0



13C-1234-TCDD

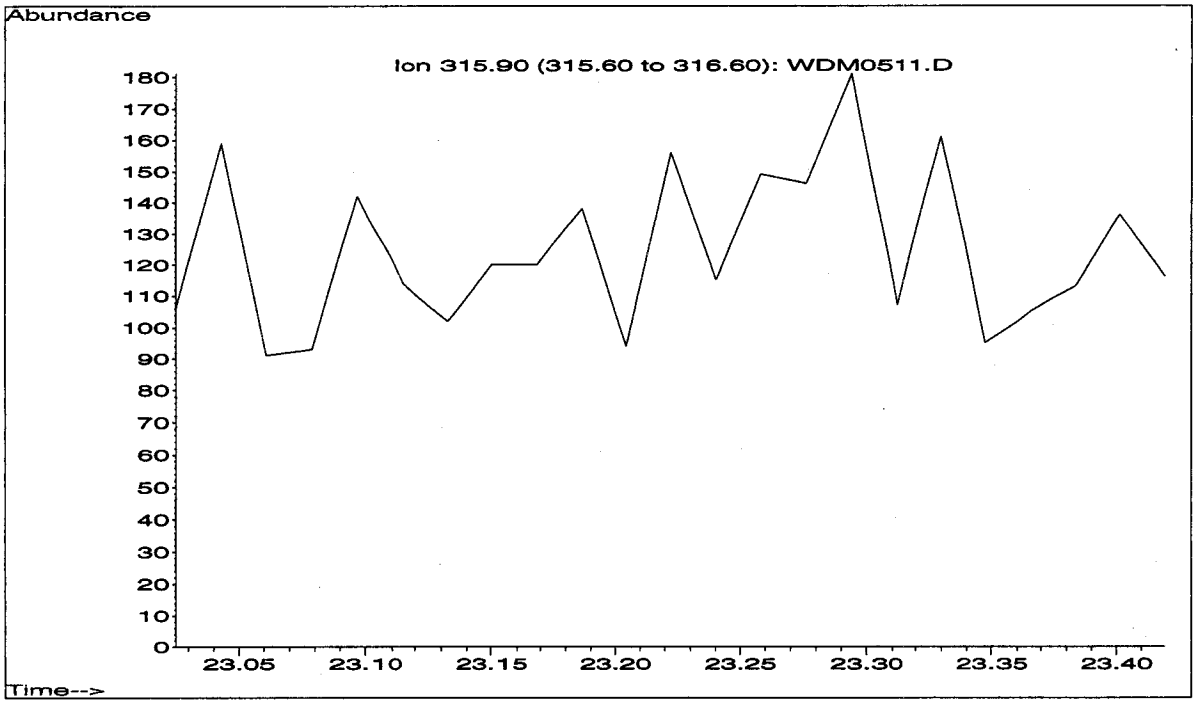
TS R.T. Lower Limit	23.83		
TS R.T. Upper Limit	24.23		
Ret Time	0.00		
Target Ion	331.9	Q1 Ion	333.9
Target Response	0	Q1 Response	0
Total Response	0	Ion Ratio	#DIV/0!

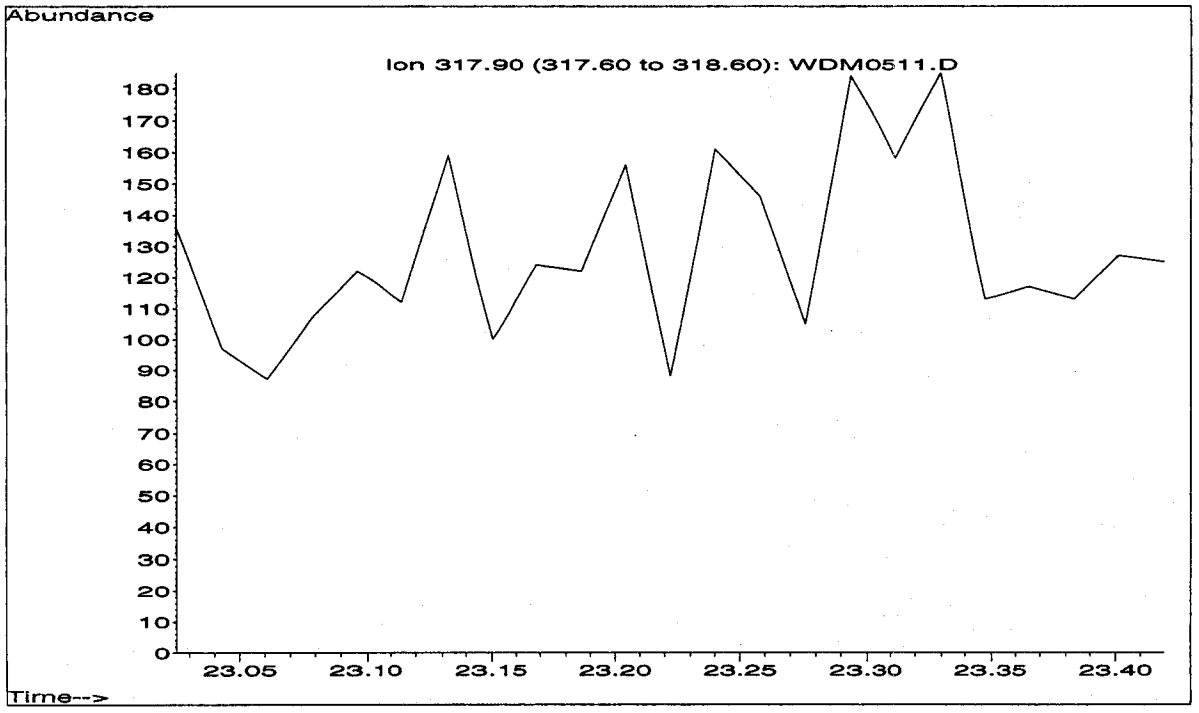




13C-2378-TCDF-IS

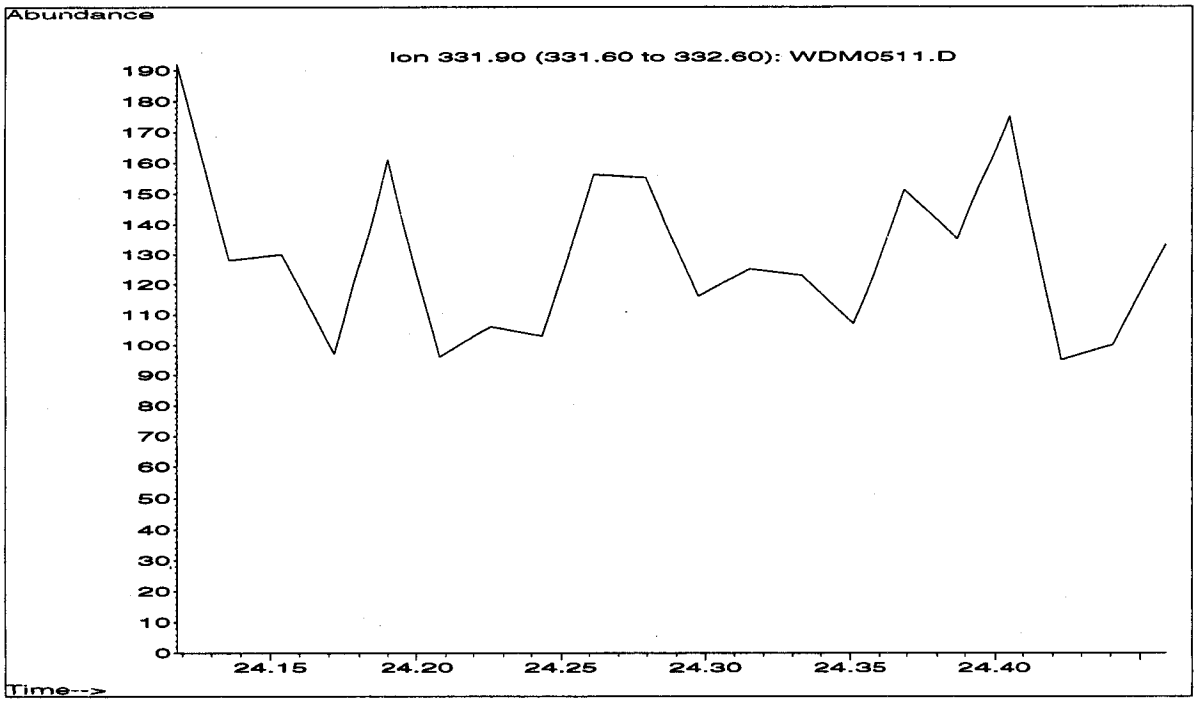
TS R.T. Lower Limit	23.02		
TS R.T. Upper Limit	23.42		
Ret Time	0.00		
Target Ion	315.9	Q1 Ion	317.9
Target Response	0	Q1 Response	0
Target Response	0	Ion Ratio	#DIV/0!

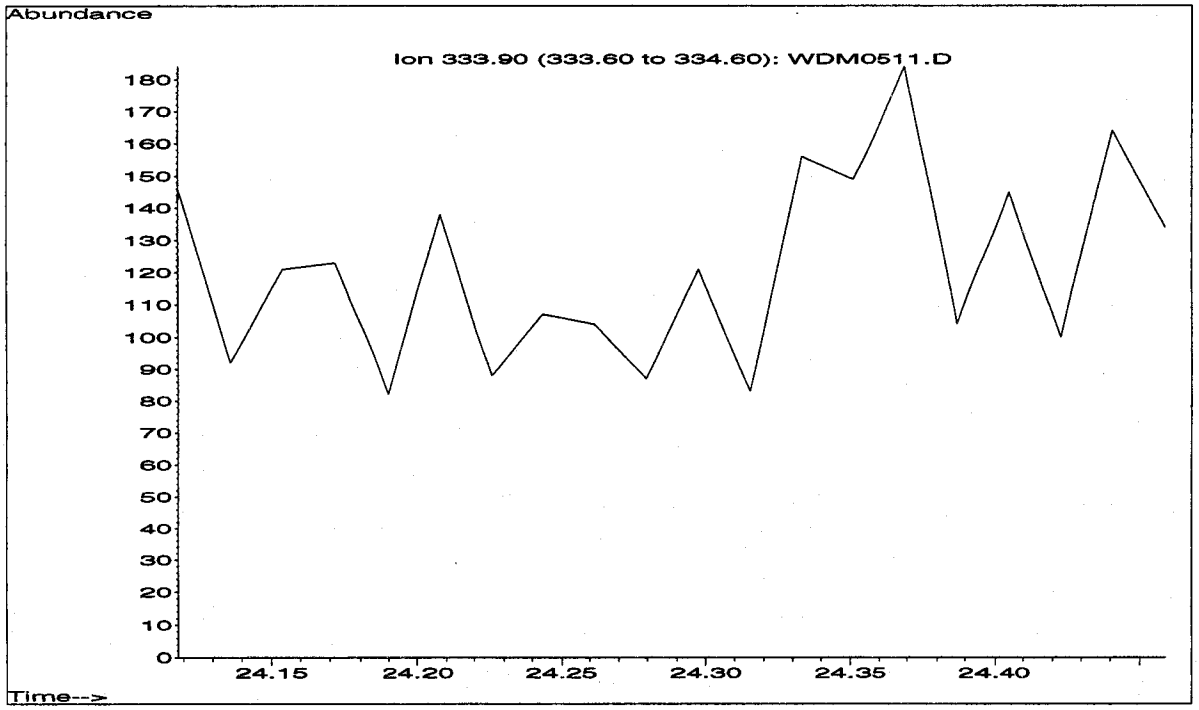




13C-2378-TCDD-IS

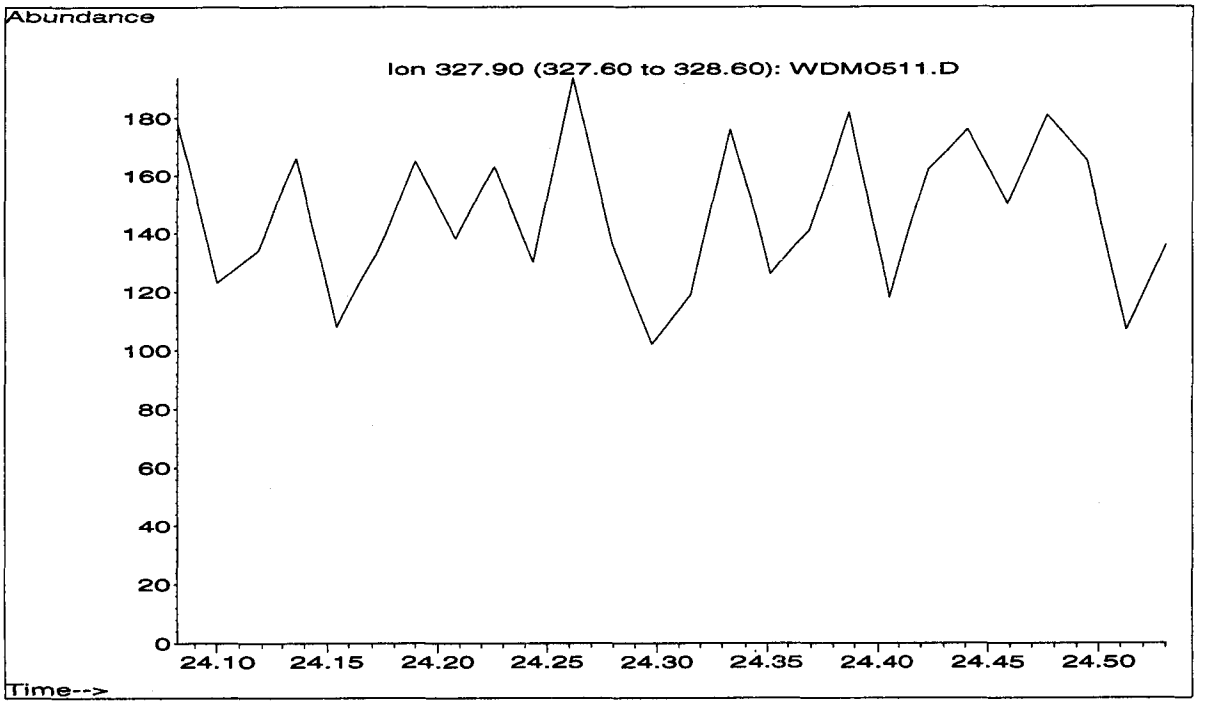
TS R.T. Lower Limit	24.12		
TS R.T. Upper Limit	24.47		
Ret Time	0.00		
Target Ion	331.9	Q1 Ion	333.9
Target Response	0	Q1 Response	0
Total Response	0	Ion Ratio	#DIV/0!

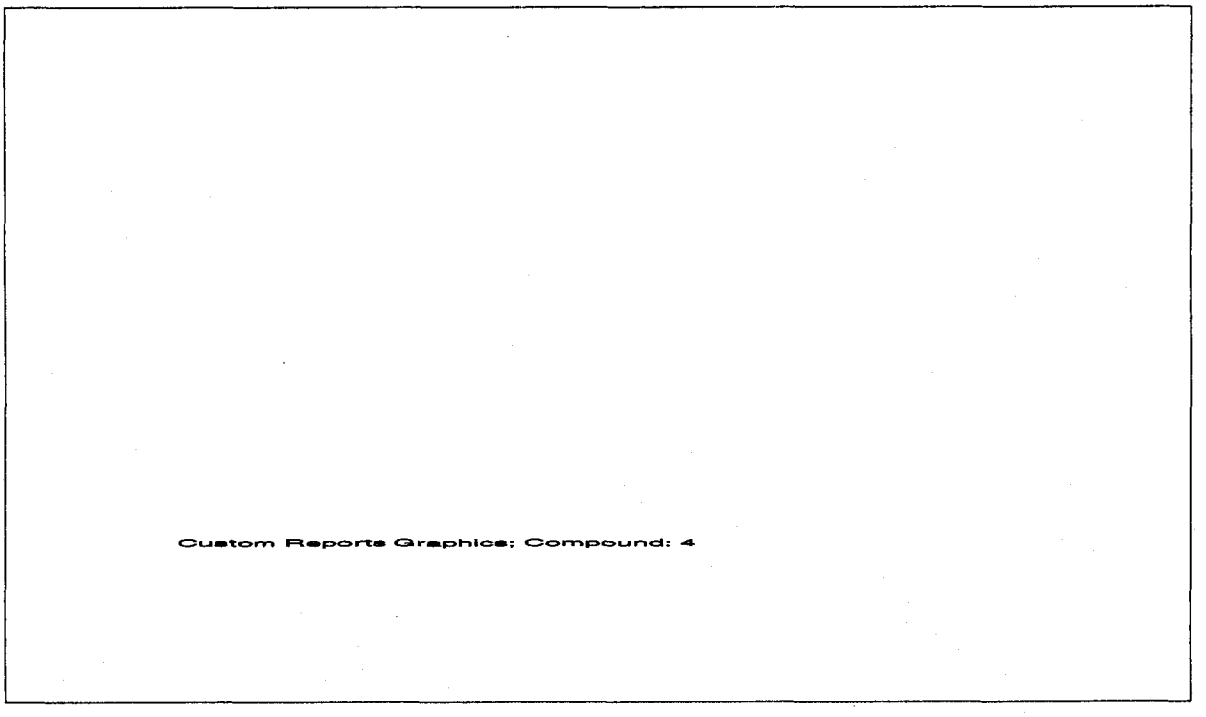




37Cl-2378-TCDD

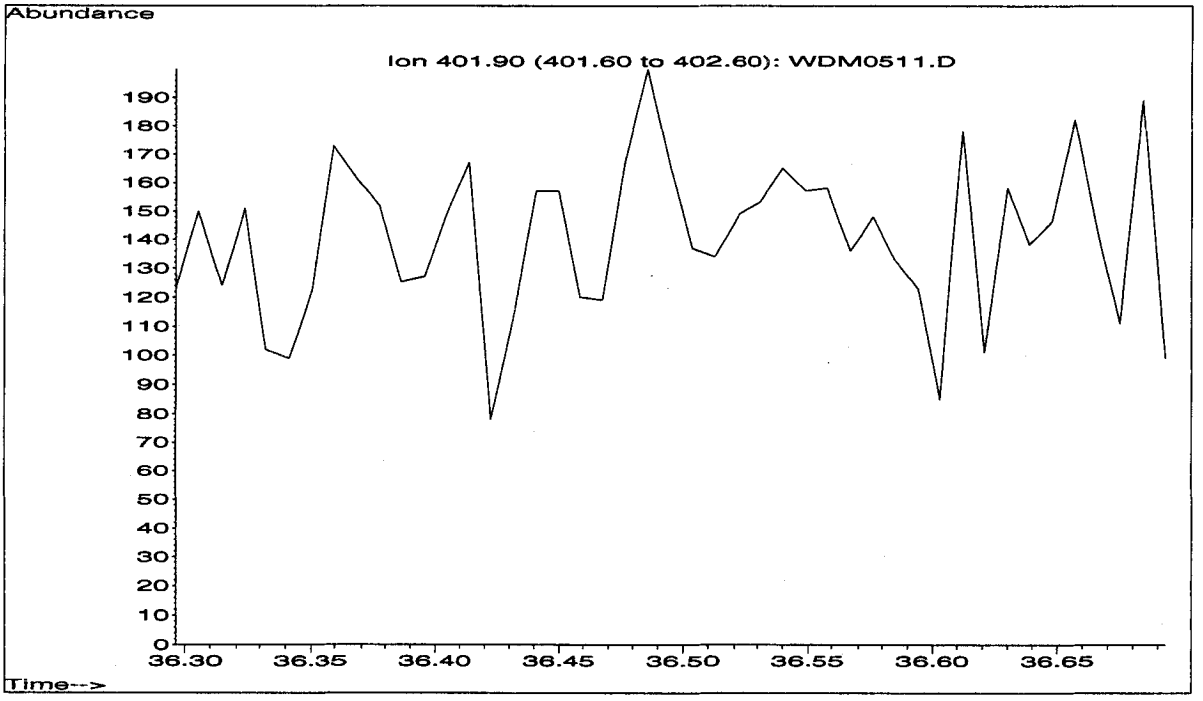
TS R.T. Lower Limit	24.08		
TS R.T. Upper Limit	24.53		
Ret Time	0.00		
Target Ion	327.9	Q1 Ion	0
Target Response	0	Q1 Response	0
Total Response	0	Ion Ratio	#DIV/0!

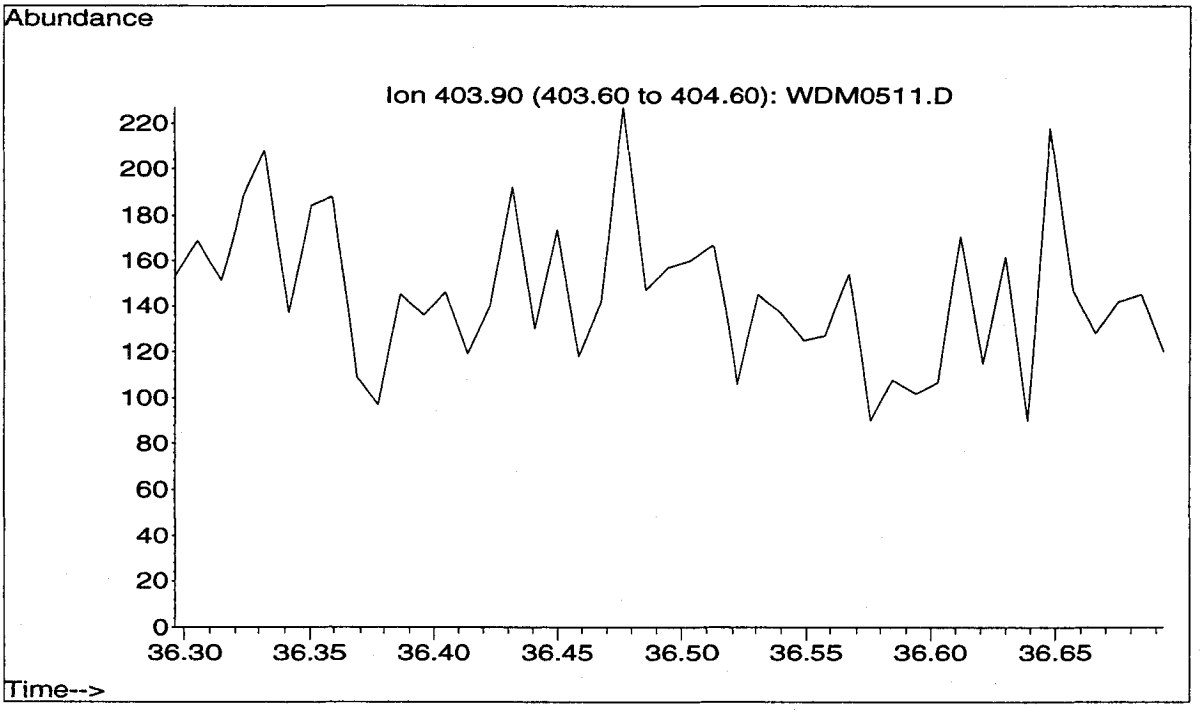




13C-123789-HxCDD

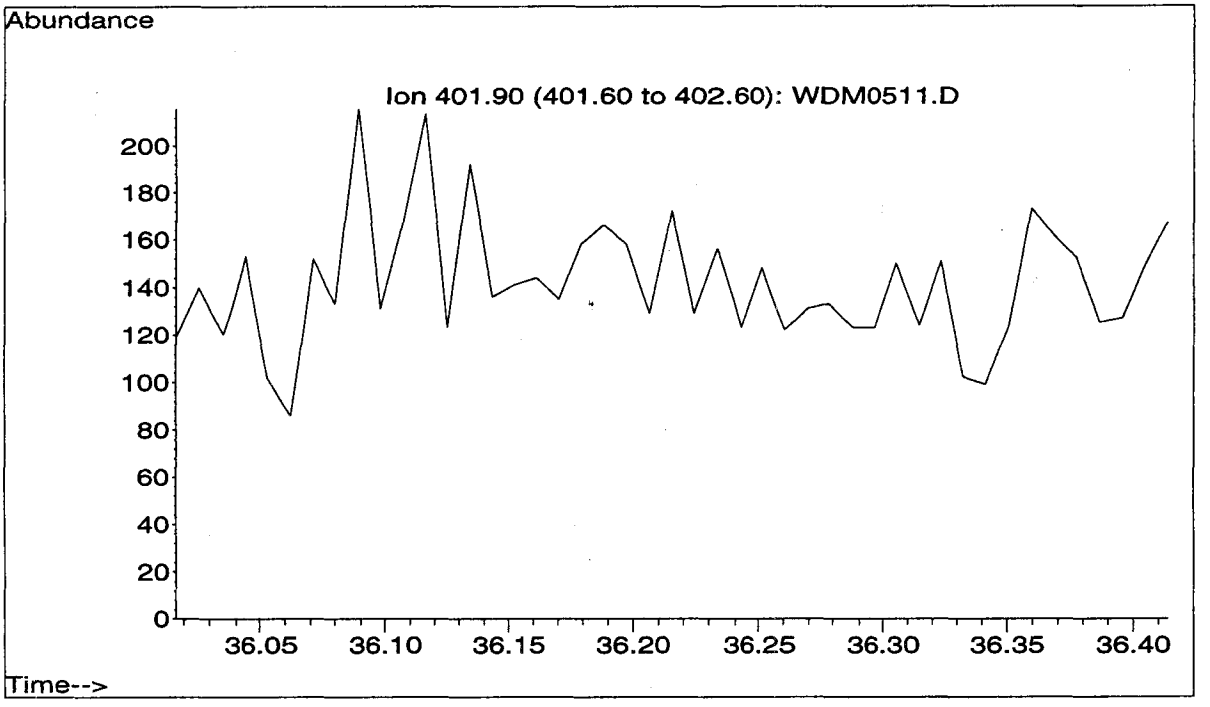
TS R.T. Lower Limit	36.29		
TS R.T. Upper Limit	36.69		
Ret Time	0.00		
Target Ion	401.9	Q1 Ion	403.9
Target Response	0	Q1 Response	0
Target Response	0	Ion Ratio	#DIV/0!

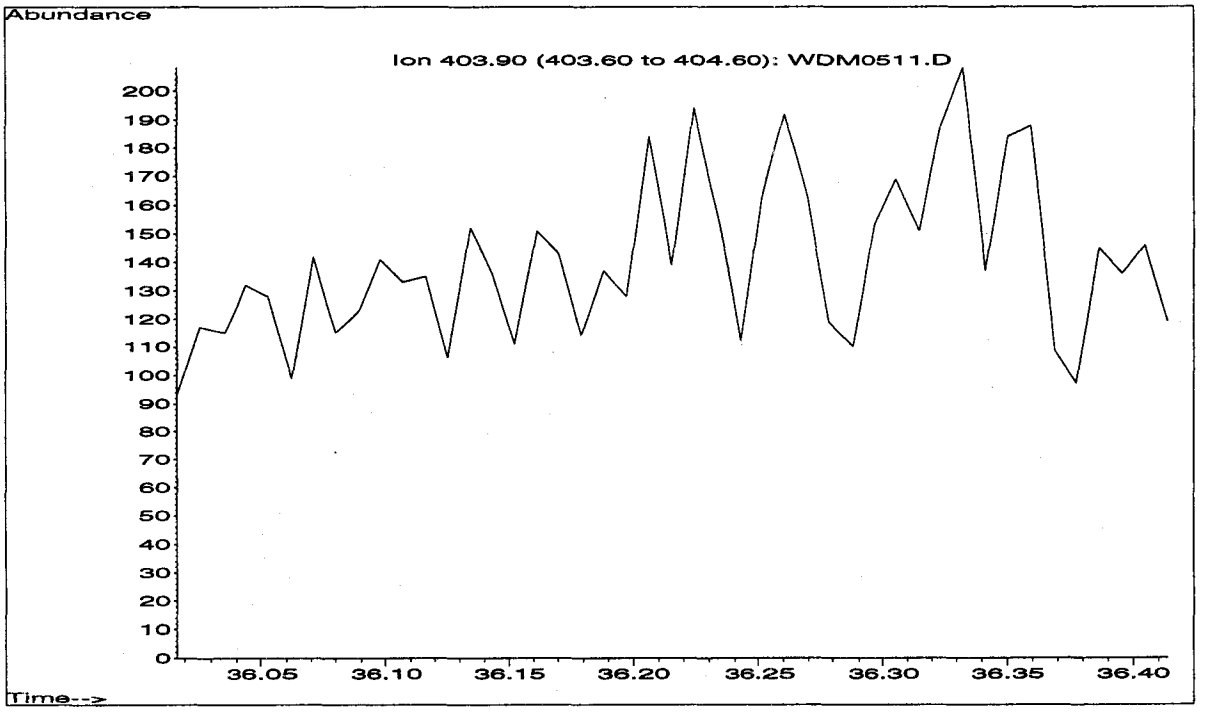




13C-123678-HxCDD-IS

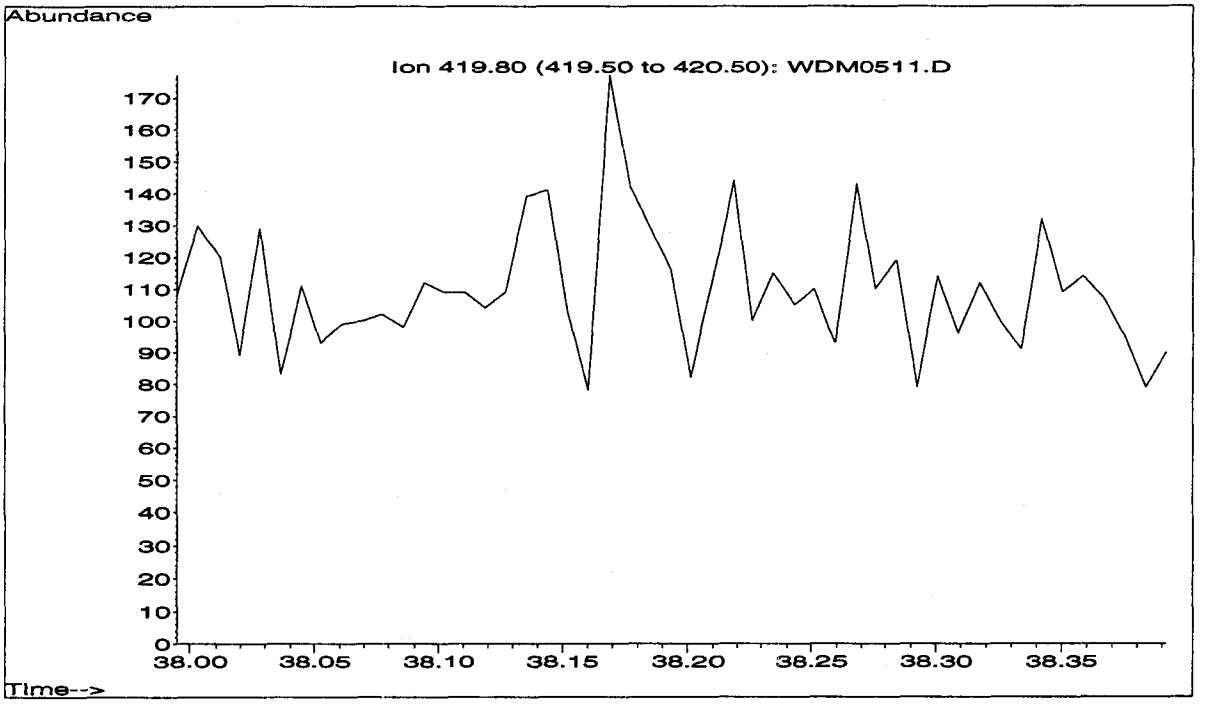
TS R.T. Lower Limit	36.01		
TS R.T. Upper Limit	36.41		
Ret Time	0.00		
Target Ion	401.9	Q1 Ion	403.9
Target Response	0	Q1 Response	0
Total Response	0	Ion Ratio	#DIV/0!

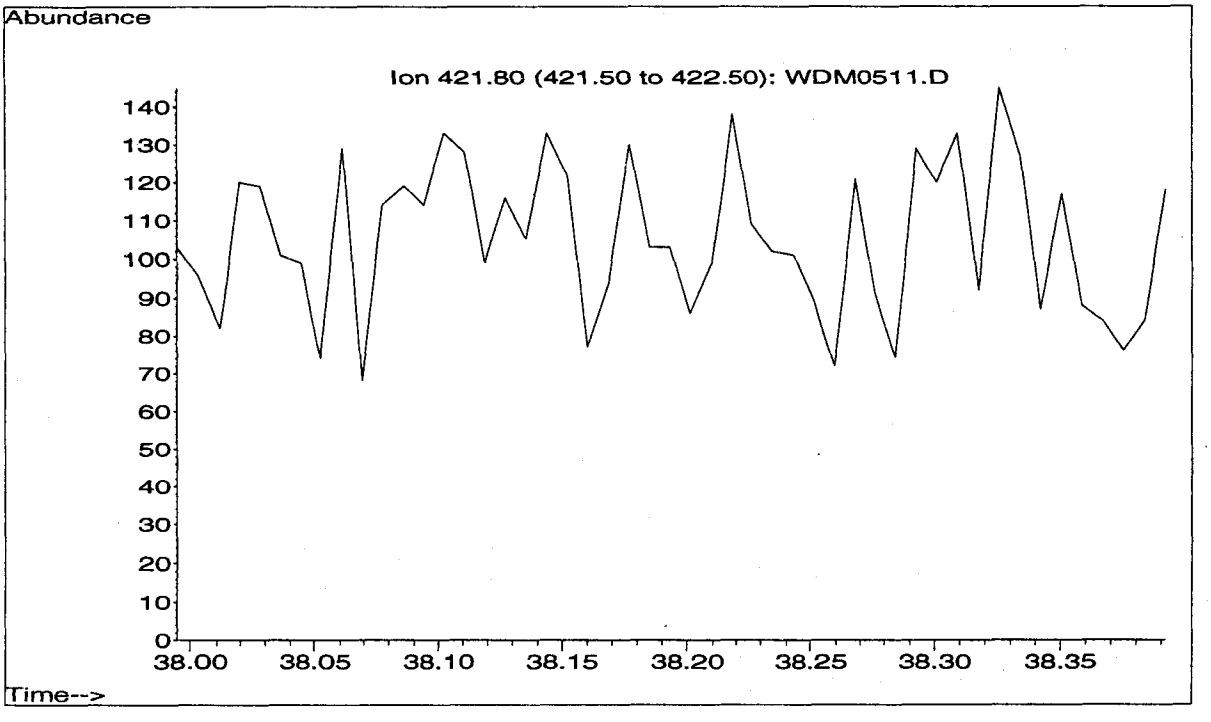




13C-1234678-HpCDF-IS

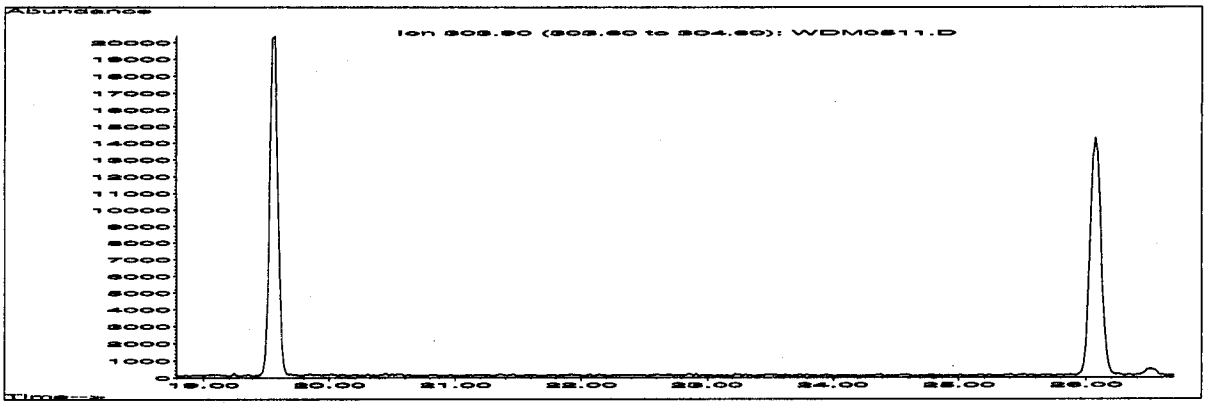
TS R.T. Lower Limit	37.99		
TS R.T. Upper Limit	38.39		
Ret Time	0.00		
Target Ion	419.8	Q1 Ion	421.8
Target Response	0	Q1 Response	0
Target Response	0	Ion Ratio	#DIV/0!

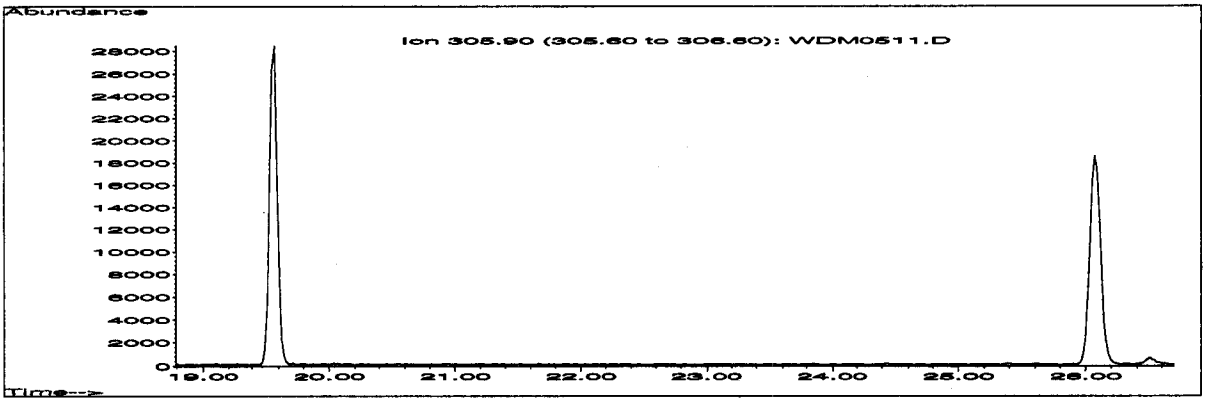


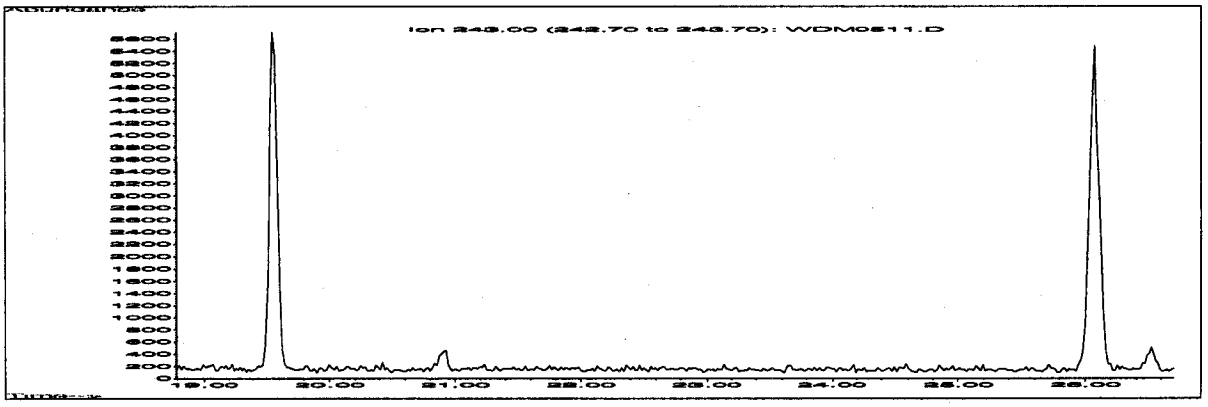


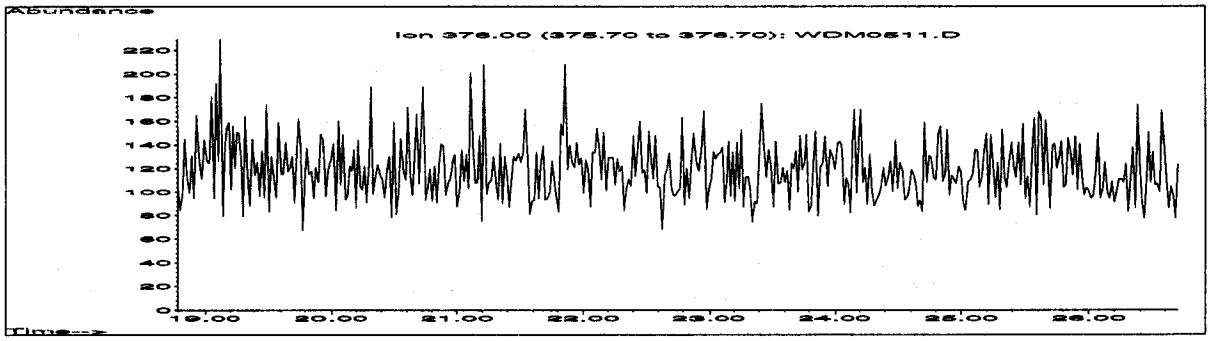
TCDF TOTAL

TS R.T. Lower Limit	18.80
TS R.T. Upper Limit	26.70



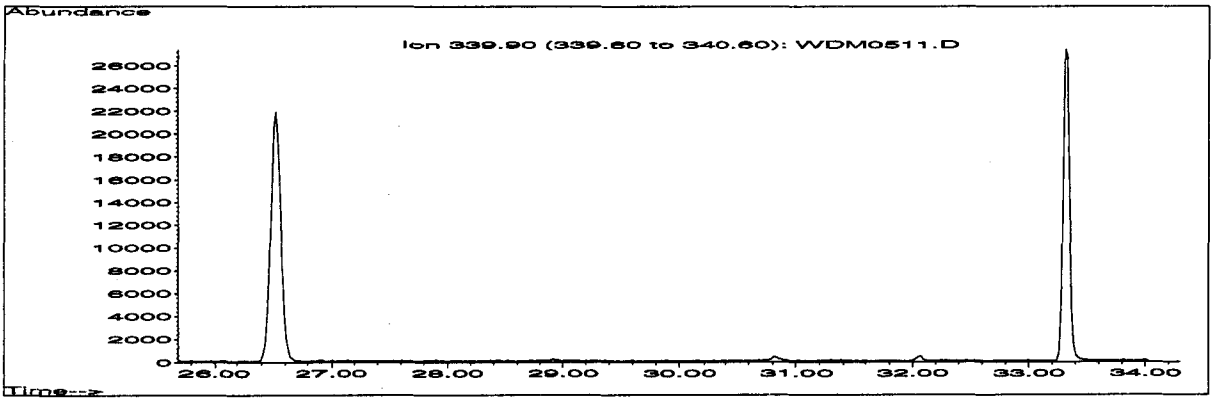


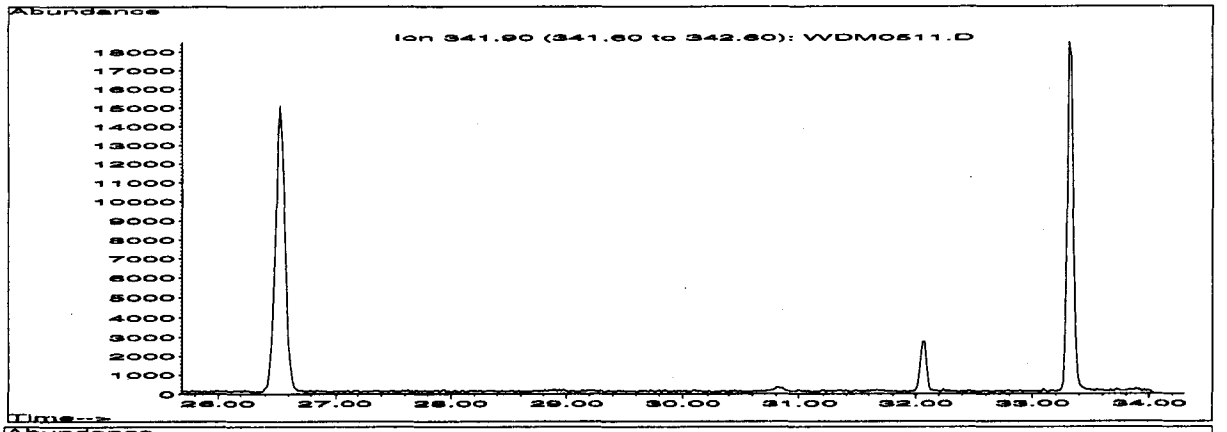


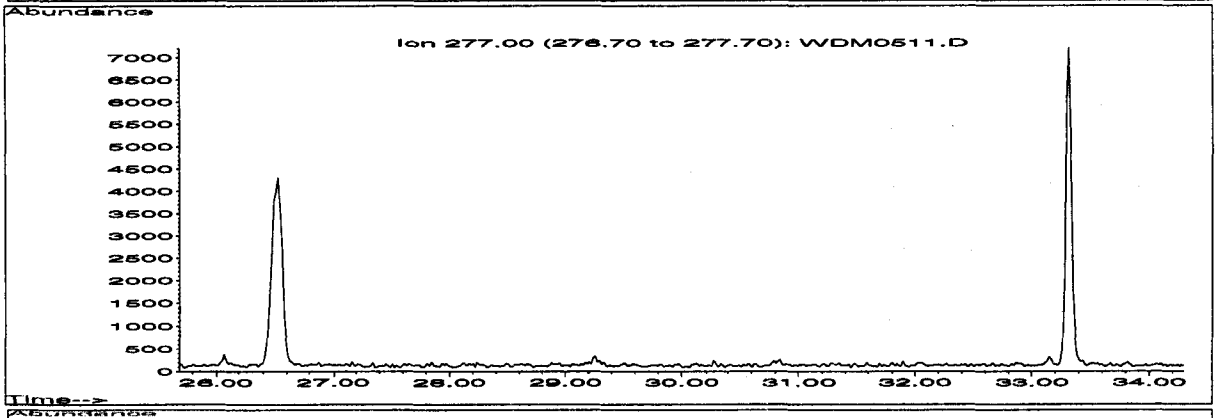


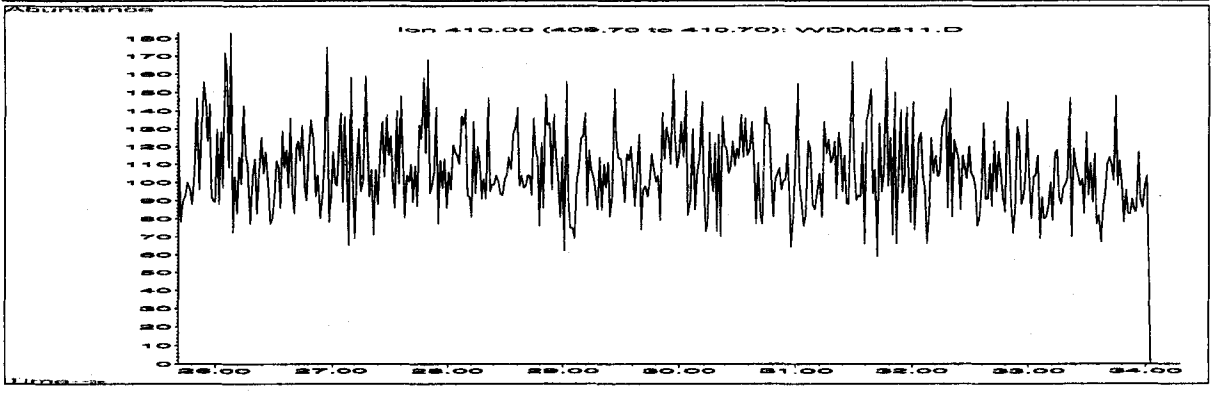
PeCDF TOTAL

TS R.T. Lower Limit	25.70
TS R.T. Upper Limit	34.30



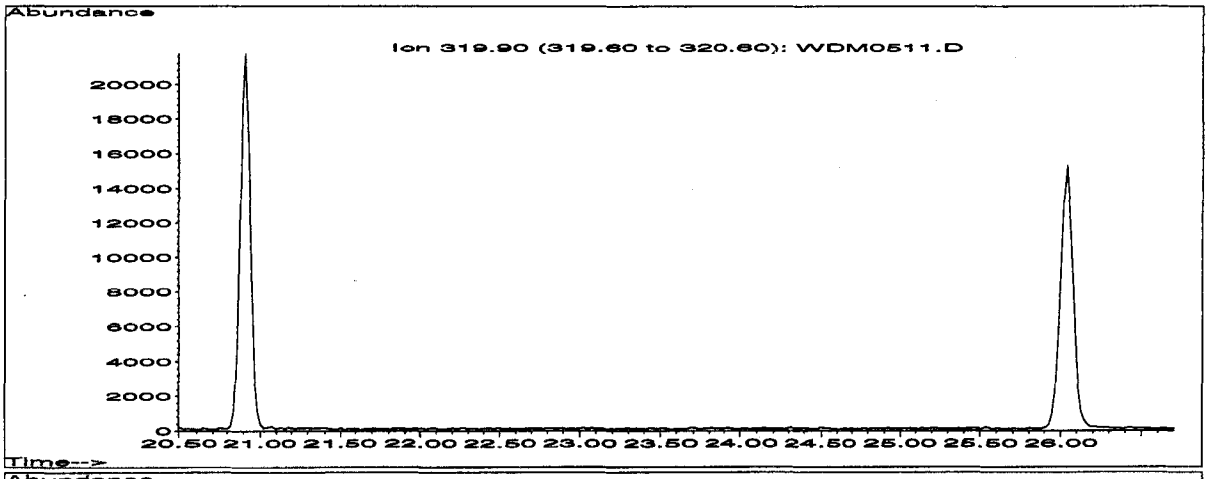


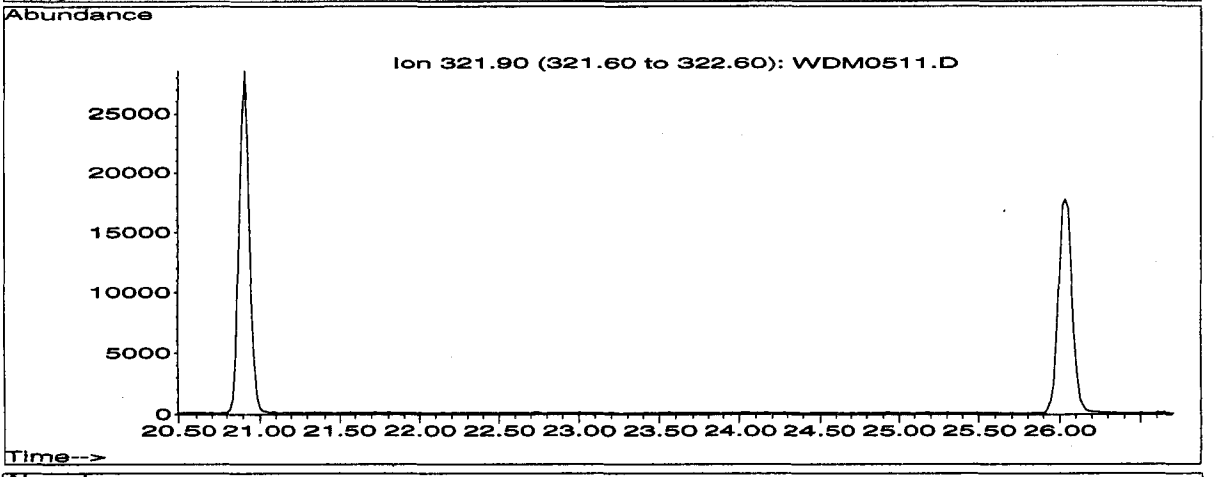


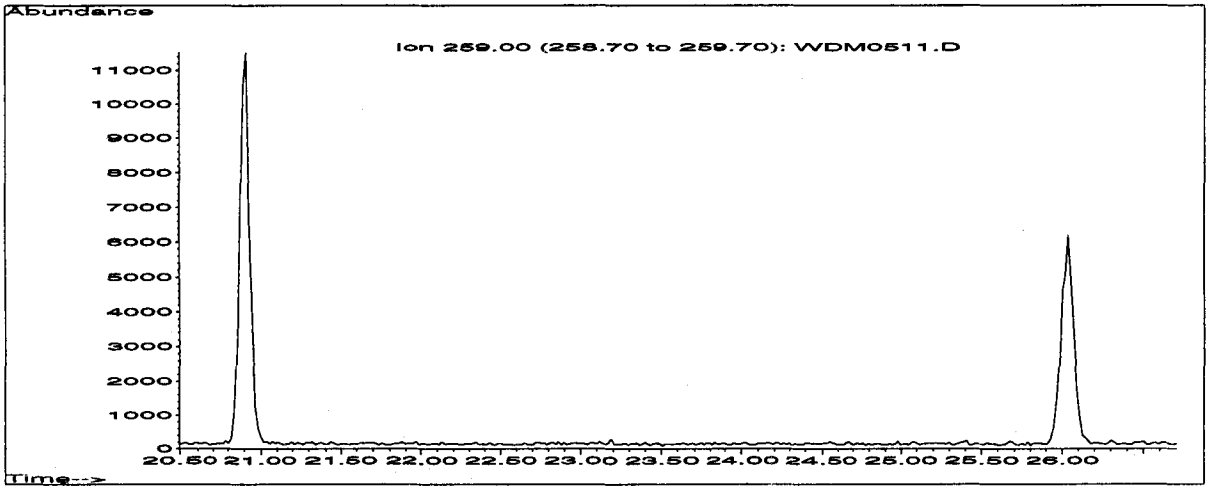


TCDD TOTAL

TS R.T. Lower Limit	20.50
TS R.T. Upper Limit	26.70

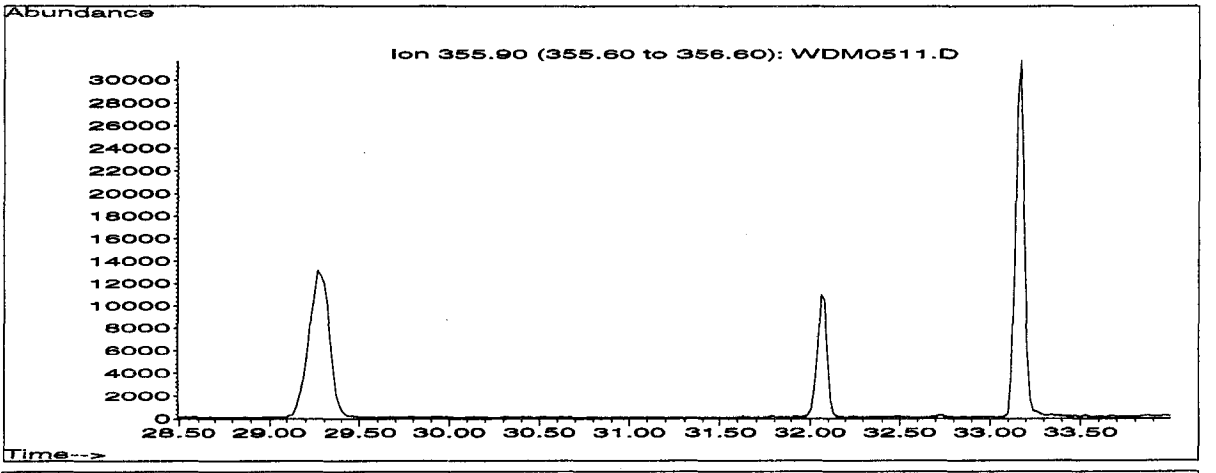


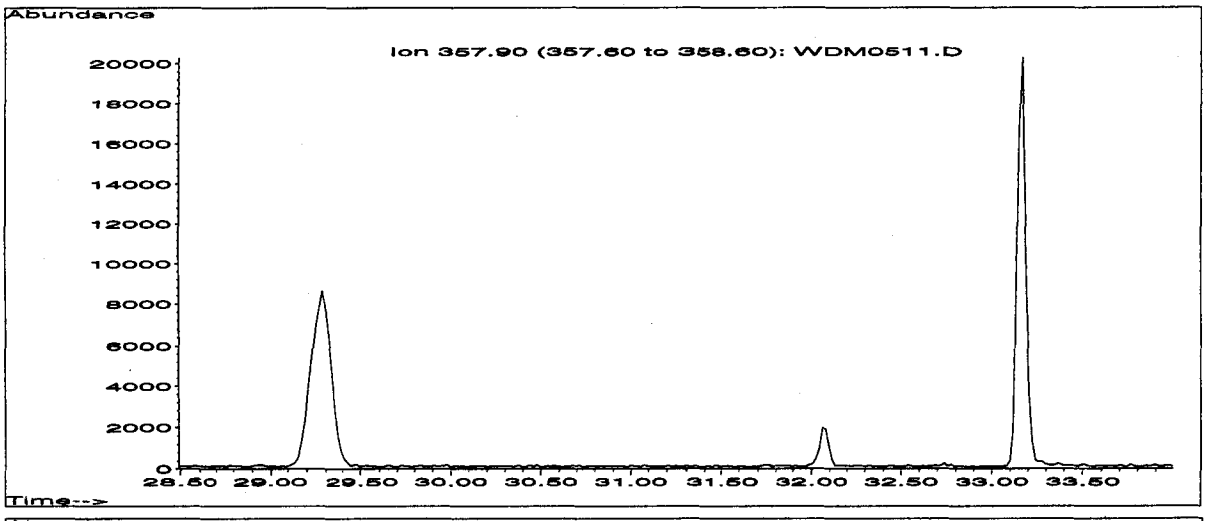


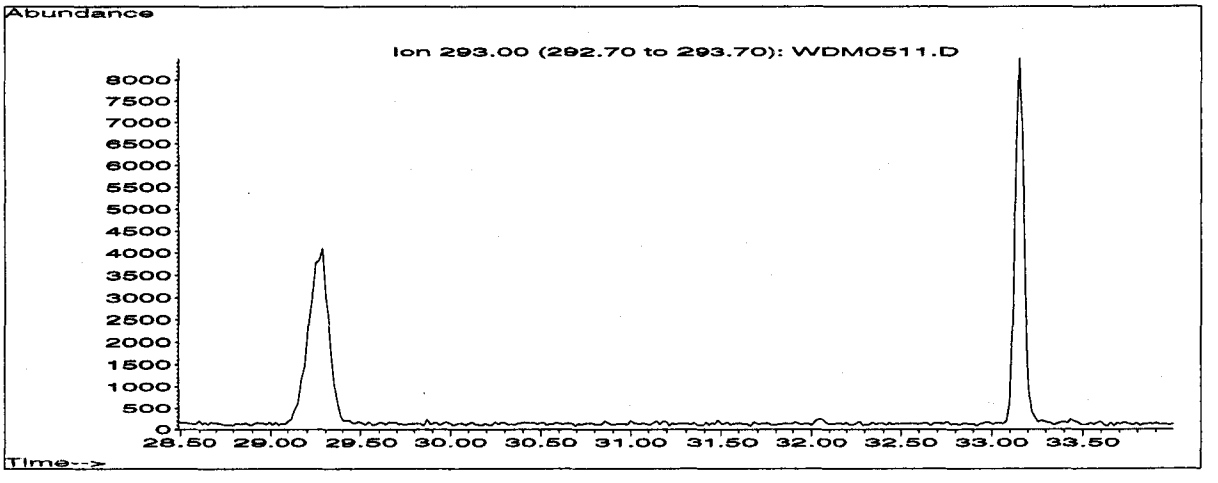


PeCDD TOTAL

TS R.T. Lower Limit	28.50
TS R.T. Upper Limit	34.00

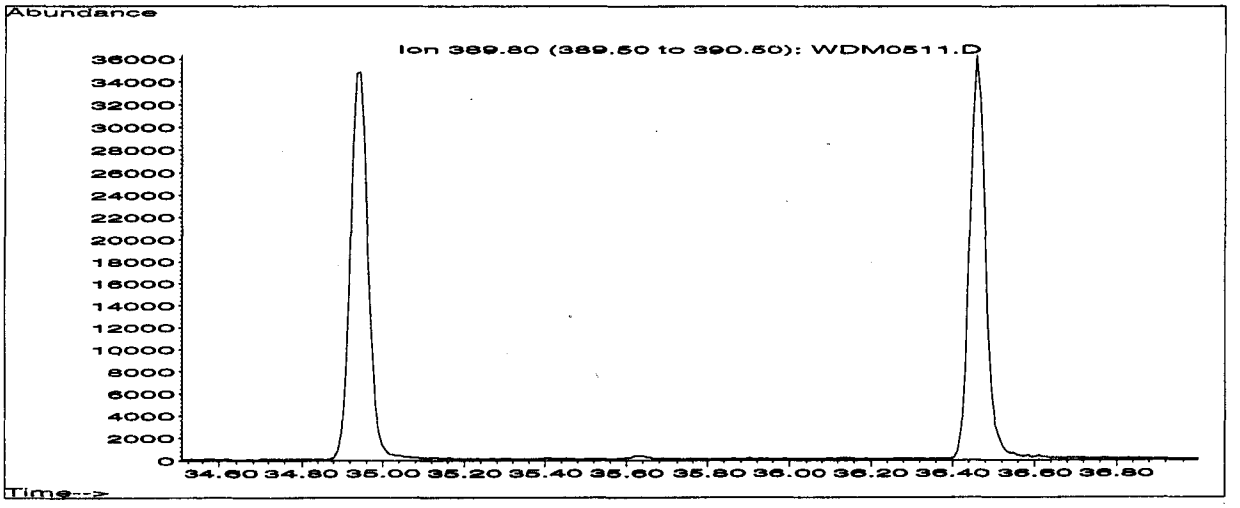


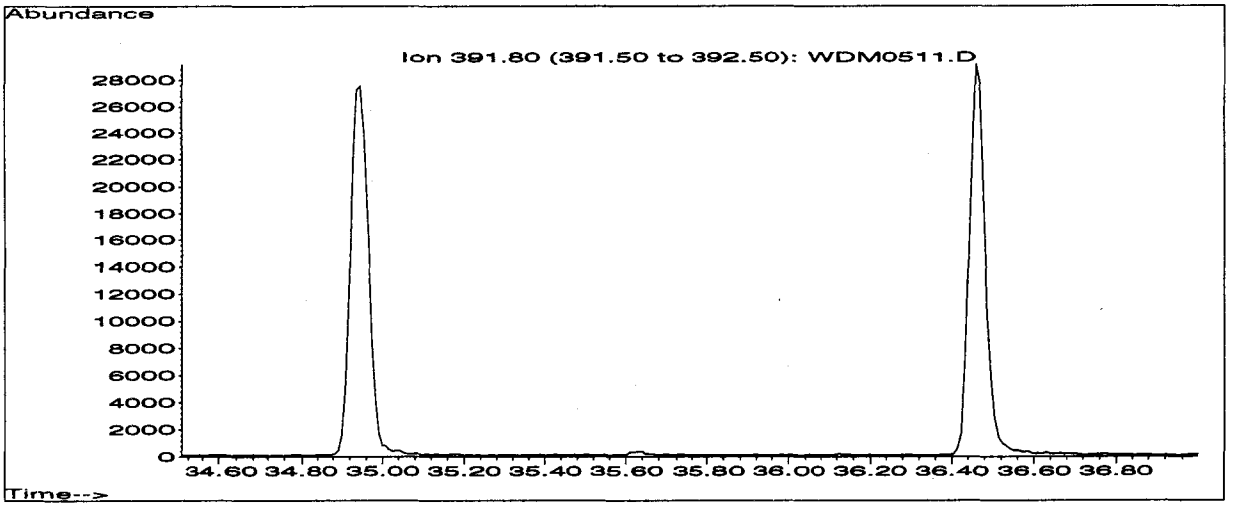


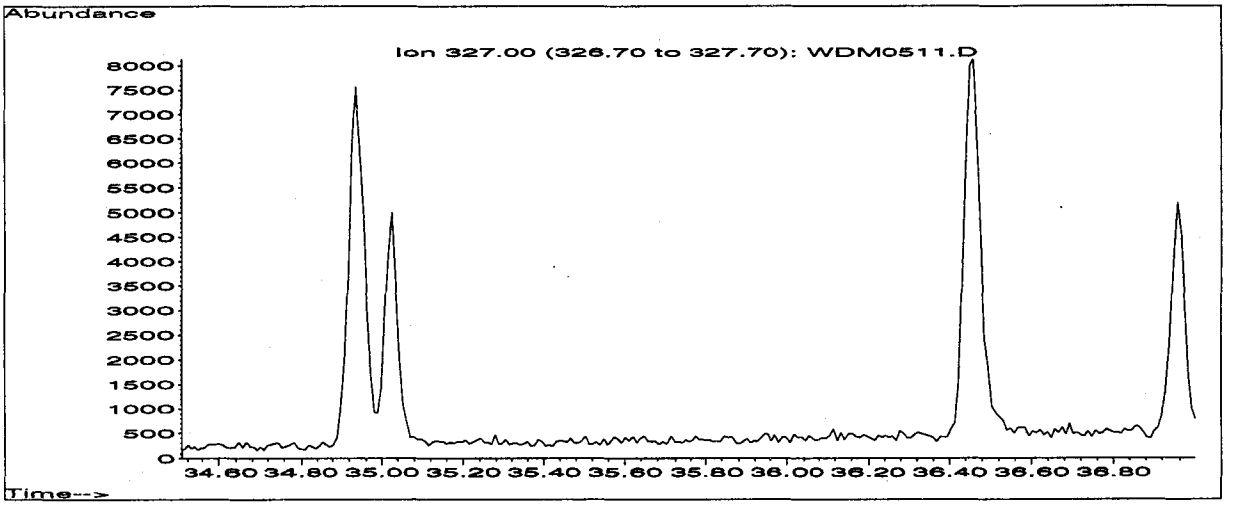


HxCDD TOTAL

TS R.T. Lower Limit	34.50
TS R.T. Upper Limit	37.00

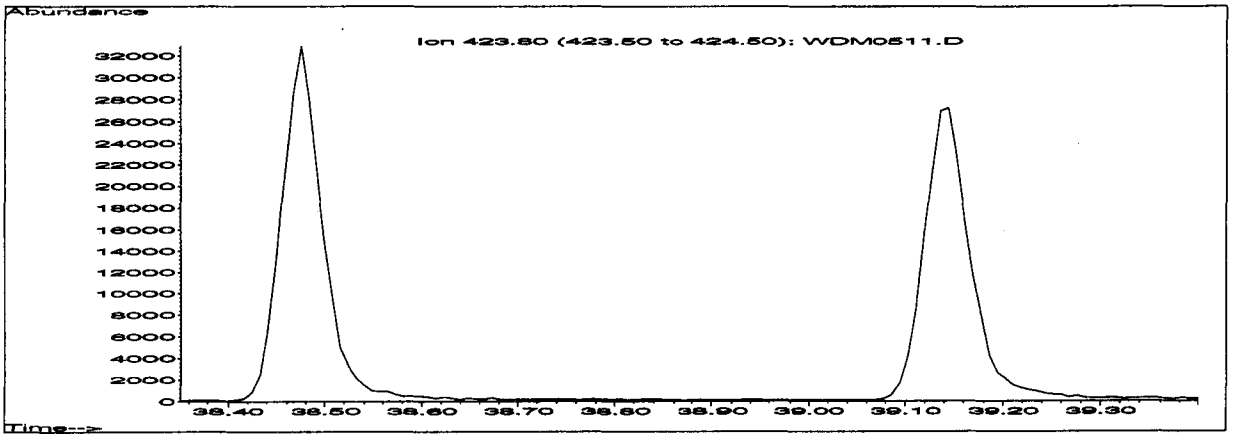


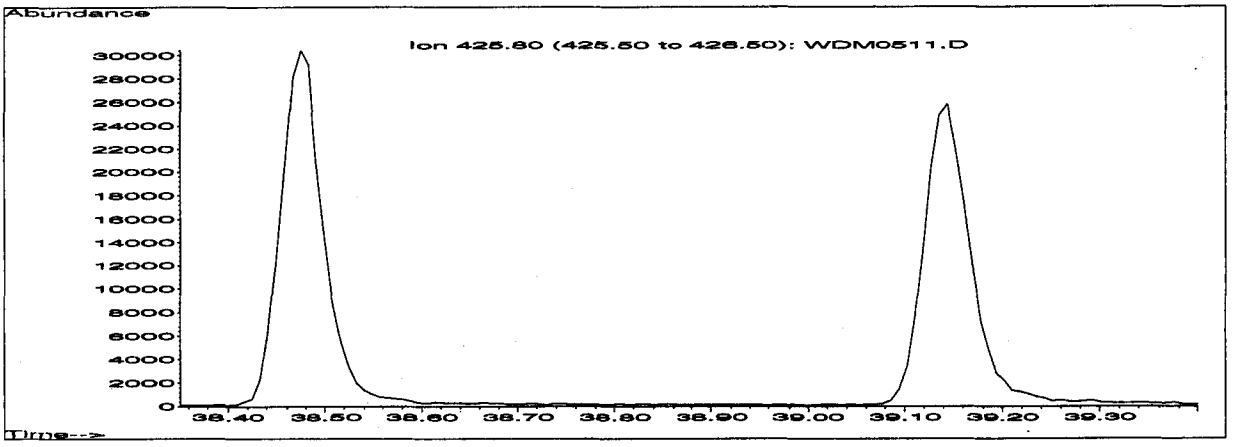


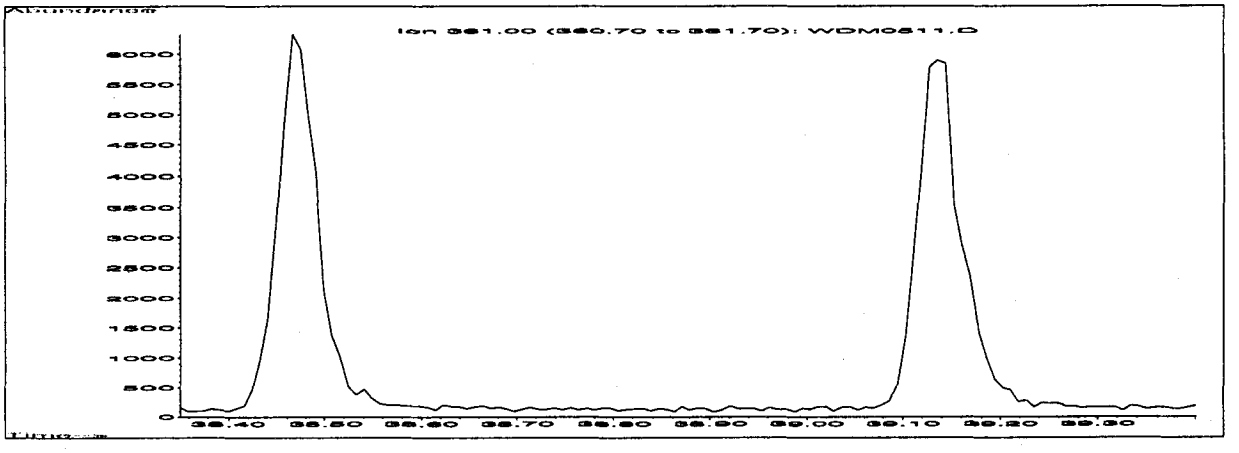


HpCDD TOTAL

TS R.T. Lower Limit	38.35
TS R.T. Upper Limit	39.40

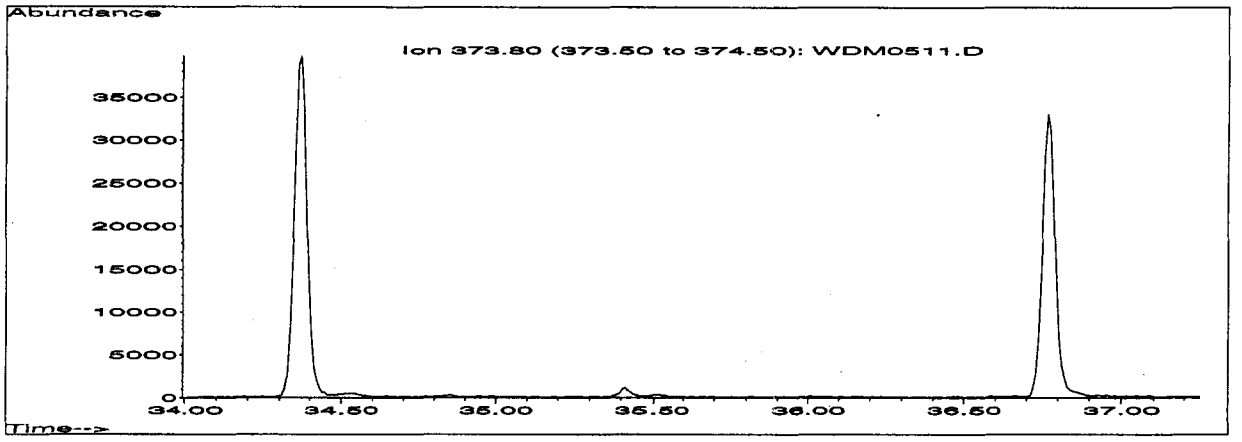


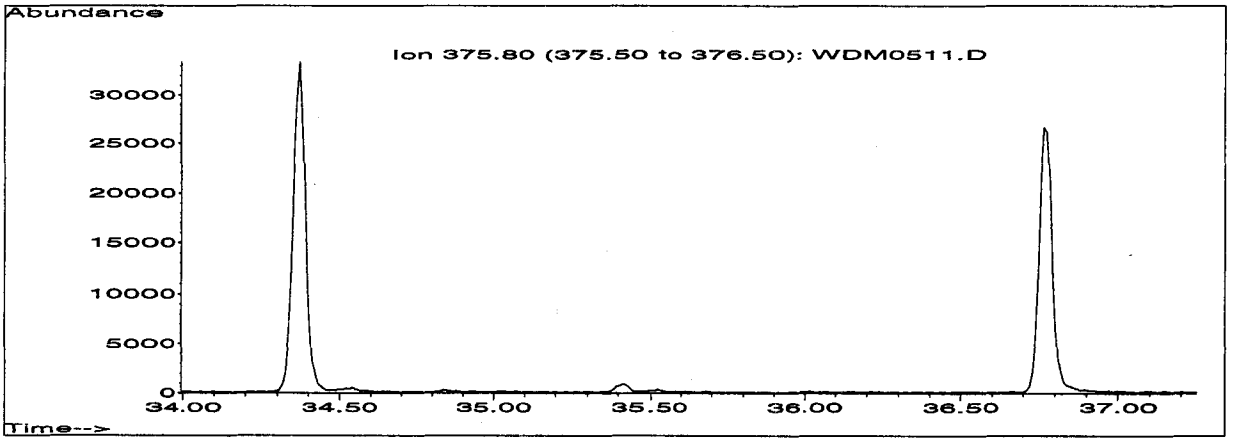


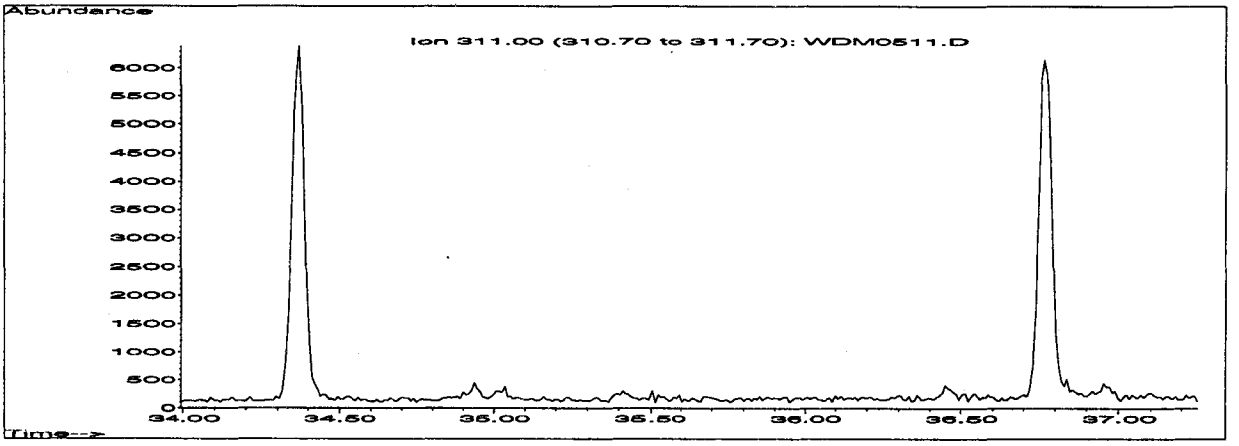


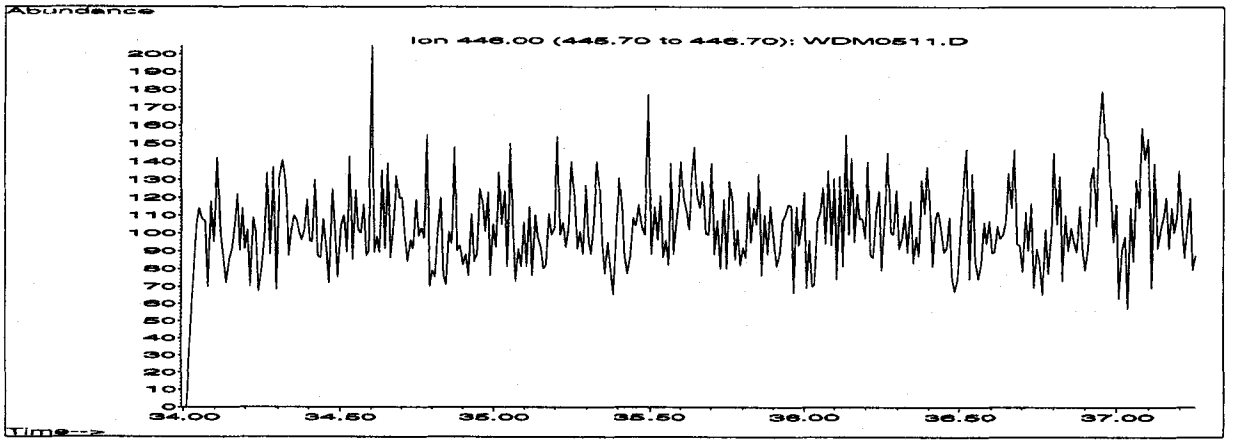
HxCDF TOTAL

TS R.T. Lower Limit	34.00
TS R.T. Upper Limit	37.25



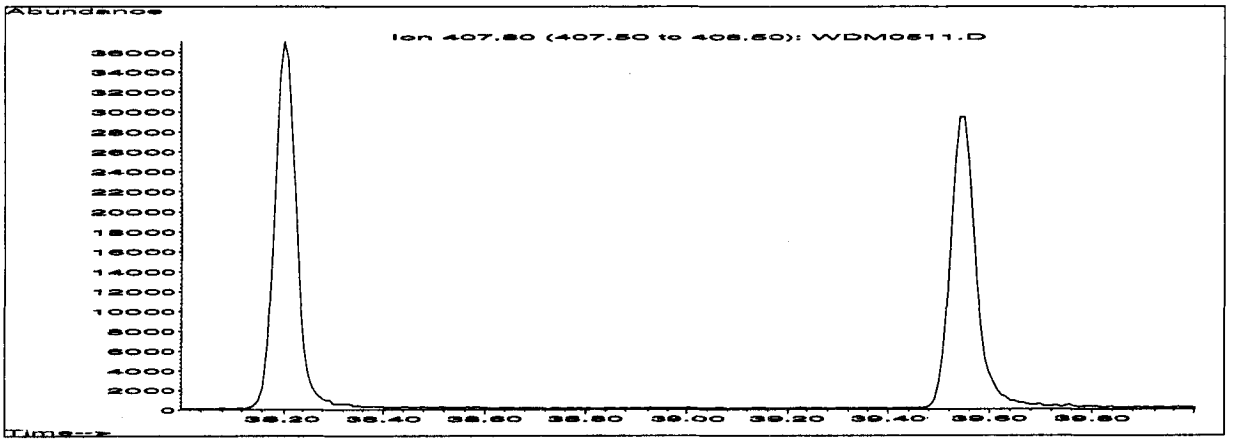


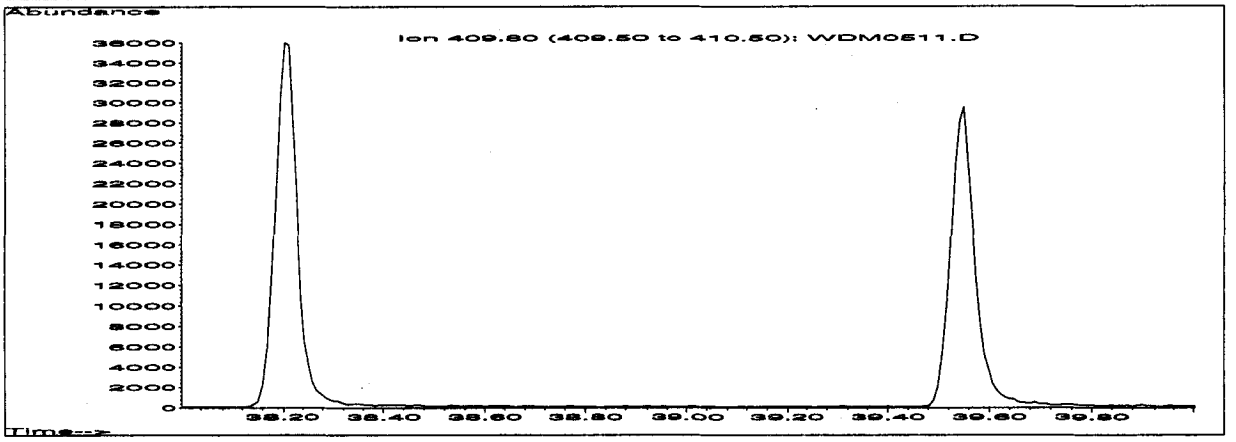


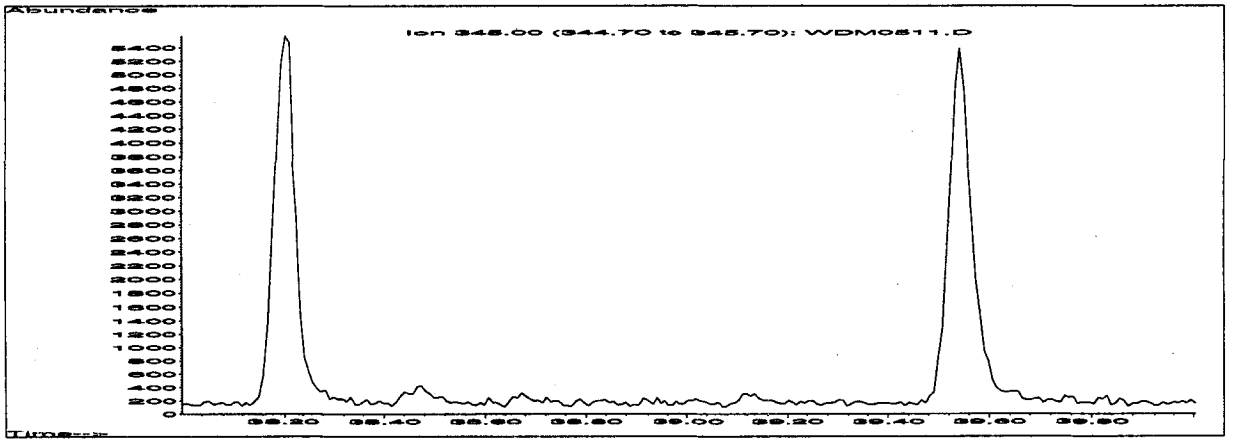


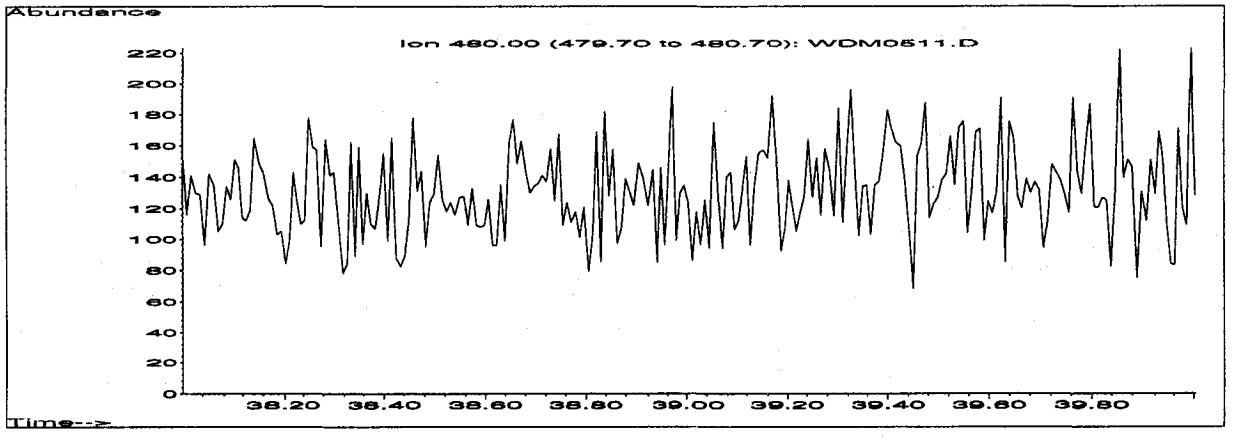
HpCDF TOTAL

TS R.T. Lower Limit	38.00
TS R.T. Upper Limit	40.00



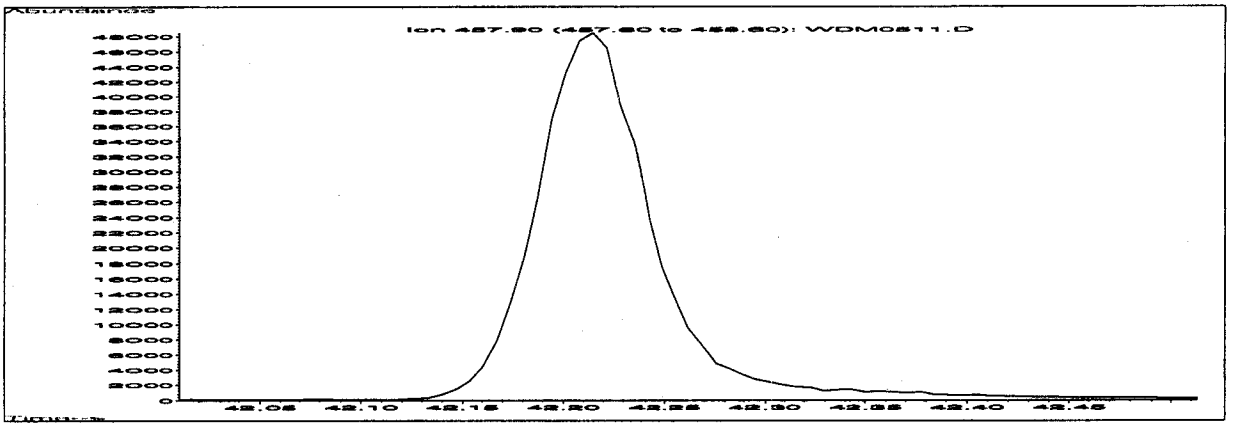


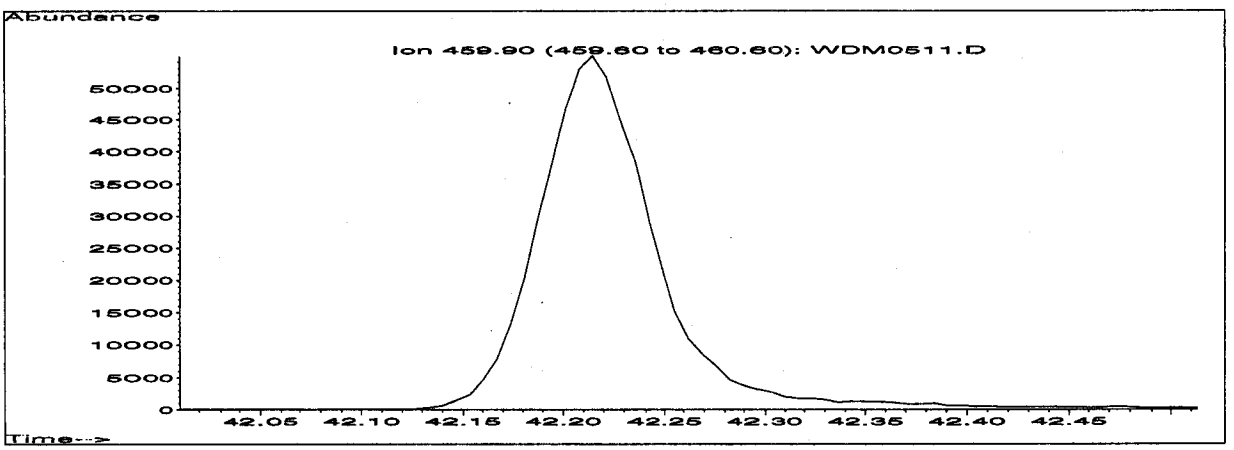


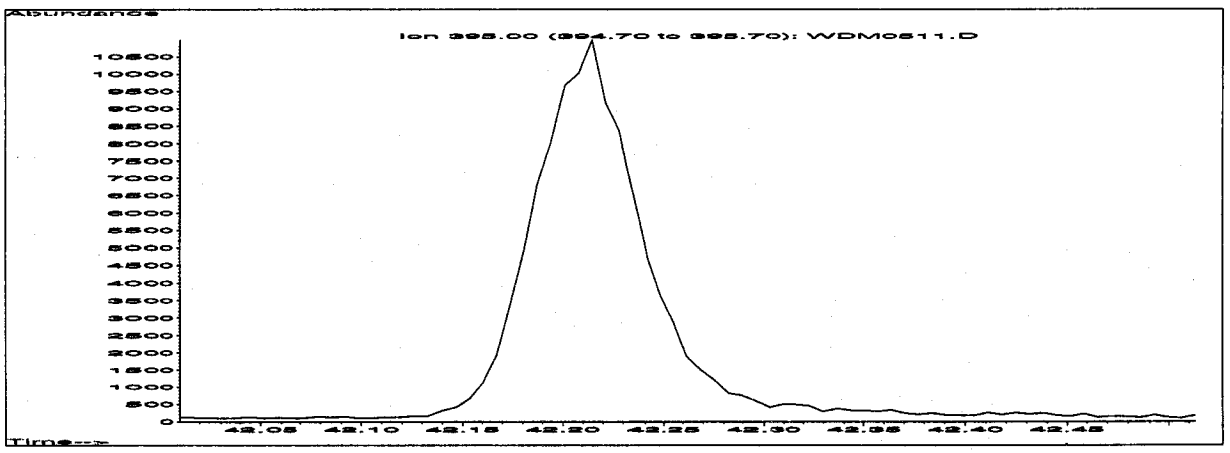


OCDD

TS R.T. Lower Limit	42.01		
TS R.T. Upper Limit	42.51		
Ret. Time	42.21		
Target Ion	457.9	Q1 Ion	459.9
Target Response	193361	Q1 Response	215651
Total Response	409012	Ion ratio	0.90
Q2 Ion	395		
Q2 Response	41372		

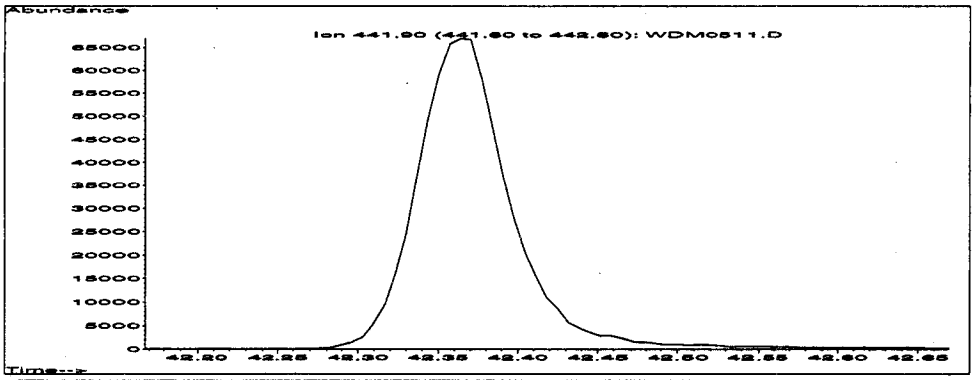


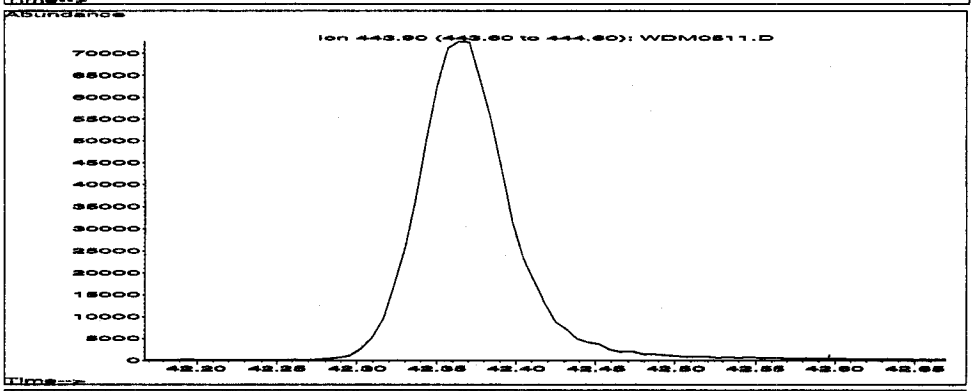


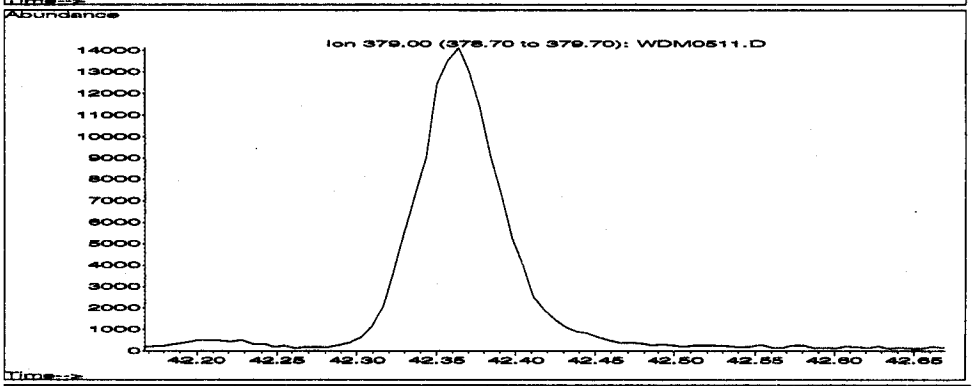


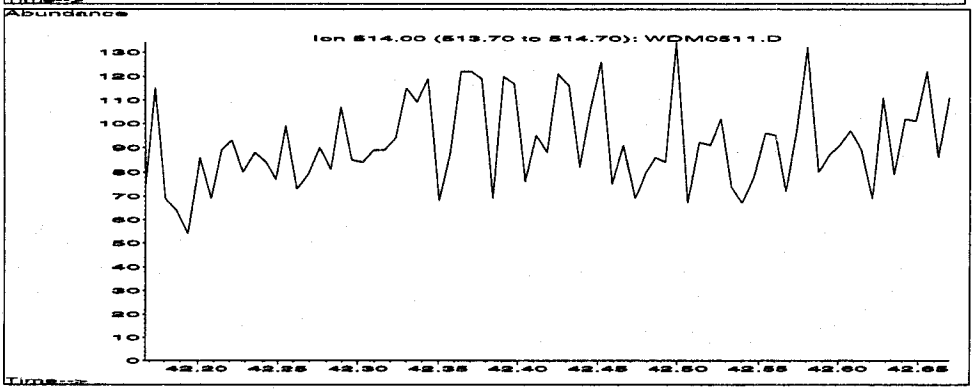
OCDF

TS R.T. Lower Limit	42.17		
TS R.T. Upper Limit	42.67		
Ret Time	42.36		
Target Ion	441.9	Q1 Ion	443.9
Target Response	268156	Q1 Response	292792
Target Response	560948	Ion Ratio	0.92
Q2 Ion	379	DPE Ion	514
Q2 Response	51561	DPE Response	0



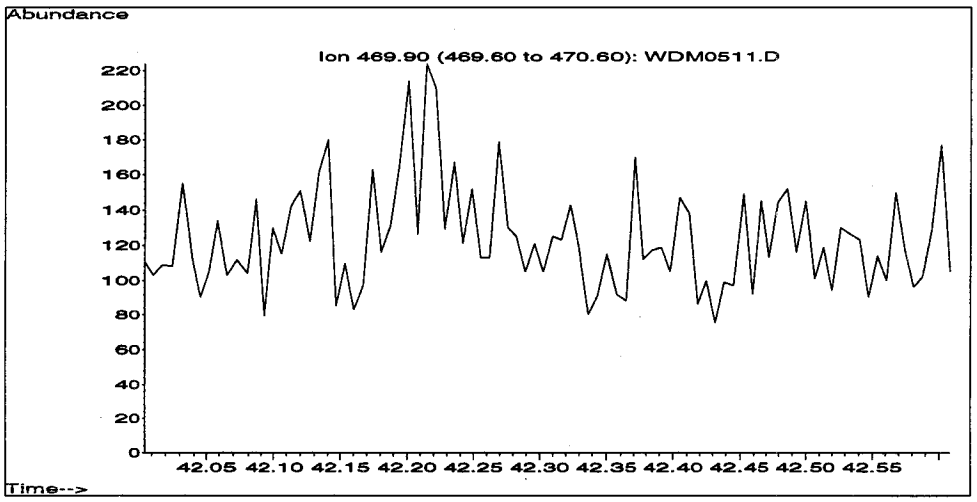


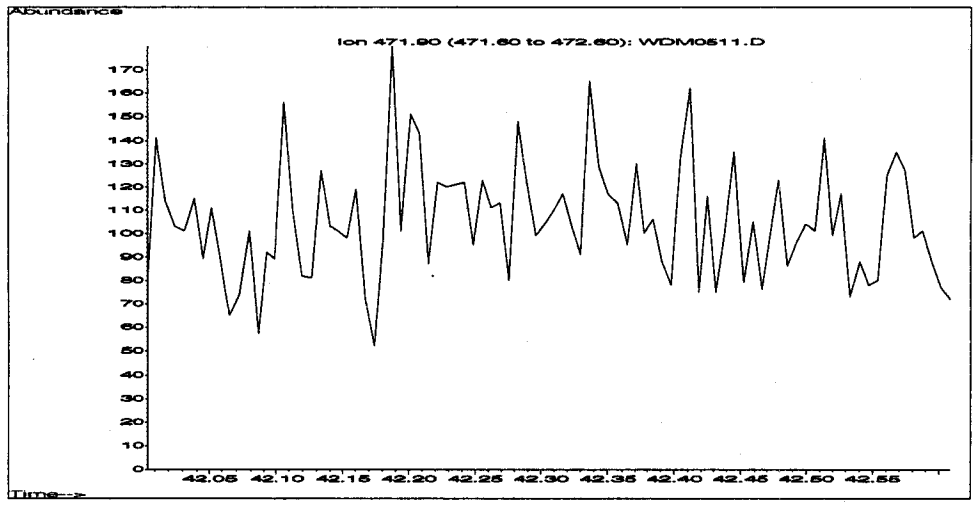




13C-OCDD-IS

RT Lower Limit	42.01		
RT Upper Limit	42.61		
Ret Time	0.00		
Target Ion	469.9	Q1 Ion	471.9
Target Response	0	Q1 Response	0
Total response	0	Ratio	#DIV/0!





Initial Calibration

Includes (as applicable):

runlog

standard raw data

statistical summary

ms tune data

TestAmerica – West Sacramento
Initial Calibration Checklist
Method 8280A

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ICAL ID 8280A042610ZDB
10CCC502,003,012,005,006 10LBES007
Standard ID's STD426A-E , ICV STD426F Date Scanned _____

Method ID 8280A Instrument ID 2DB Column ID DB5

GC Program TOXAS Multiplier Setting 2400eV

Prepared By VMG Date Prepared 4/27/10

Reviewed By JW Date Reviewed 04/27/10

Curve summary present ?	✓	✓
Hardcopies of CC1–CC5 present ?	✓	✓
Copy of instrument log-file present ?	✓	✓
% RSD ≤ 15% for all analytes, labeled or unlabeled ?	✓	✓
All S/N ≥2.5:1 for natives & ≥ 10:1 for labeled analytes ?	✓	✓
Isotopic abundance ratios within method specified limits ?	✓	✓
CC5 not saturated for any analytes ?	✓	✓
WDM present and windows correct ?	✓	✓
Manual reintegrations checked and hardcopies included ?	NA	NA
Data checked for transcription errors ?	✓	✓
Second source standard injected and deviation criteria met ?	✓	✓

COMMENTS:

Response Factor Report 2DB

Method : C:\8280\ DATA METHODS\10AP26I2.M (RTE Integrator)
Title : Dioxin Furan Total
Last Update : Tue Apr 27 15:16:45 2010
Response via : Initial Calibration

Calibration Files
CS1=ST0426A.D CS2=ST0426B.D CS3=ST0426C.D
CS4=ST0426D.D CS5=ST0426E.D

		Compound	CS1	CS2	CS3	CS4	CS5	Avg	%RSD
1)	IR	13C-1234-TCDD	----------ISTD----------						
2)	T	13C-2378-TCDF-IS	1.334	1.320	1.348	1.333	1.354	1.338	0.99
3)	T	13C-2378-TCDD-IS	0.932	0.943	0.985	0.931	0.943	0.947	2.33
4)	S	37Cl-2378-TCDD			1.312			1.312	0.00
5)	IR	13C-123789-HxCDD	----------ISTD----------						
6)	T	13C-123678-HxCDD-IS	0.764	0.772	0.789	0.782	0.780	0.778	1.22
7)	T	13C-1234678-HpCDF-IS	0.986	0.986	1.007	0.981	0.978	0.987	1.15
8)	T	13C-OCDD-IS	0.653	0.661	0.673	0.642	0.666	0.659	1.82
9)	IR	13C-2378-TCDF	----------ISTD----------						
10)	MT	2378-TCDF	1.156	1.250	1.269	1.372	1.313	1.272	6.29
11)	H	TCDF TOTAL	1.156	1.250	1.269	1.372	1.313	1.272	6.29
12)	MT	12378-PeCDF	1.088	1.167	1.175	1.289	1.248	1.194	6.53
13)	T	23478-PeCDF	1.081	1.150	1.169	1.257	1.219	1.175	5.73
14)	H	PeCDF TOTAL	1.081	1.150	1.169	1.257	1.219	1.175	5.73
15)	IR	13C-2378-TCDD	----------ISTD----------						
16)	MT	2378-TCDD	1.202	1.238	1.192	1.357	1.281	1.254	5.38
17)	H	TCDD TOTAL	1.202	1.238	1.192	1.357	1.281	1.254	5.38
18)	MT	12378-PeCDD	1.063	1.107	1.120	1.275	1.233	1.160	7.75
19)	H	PeCDD TOTAL	1.063	1.107	1.120	1.275	1.233	1.160	7.75
20)	IR	13C-123678-HxCDD	----------ISTD----------						
21)	T	123478-HxCDD	0.956	1.028	0.990	1.069	1.058	1.020	4.65
22)	MT	123678-HxCDD	0.942	0.968	1.012	1.095	1.002	1.004	5.77
23)	T	123789-HxCDD	1.005	1.059	1.064	1.128	1.086	1.068	4.19
24)	H	HxCDD TOTAL	0.942	0.968	1.012	1.095	1.002	1.004	5.77
25)	MT	1234678-HpCDD	1.020	1.072	1.070	1.153	1.106	1.084	4.53
26)	H	HpCDD TOTAL	1.020	1.072	1.070	1.153	1.106	1.084	4.53
27)	IR	13C-1234678-HpCDF	----------ISTD----------						
28)	T	123478-HxCDF	0.907	0.981	0.987	1.097	1.039	1.002	7.06
29)	MT	123678-HxCDF	0.951	1.014	1.027	1.124	1.080	1.039	6.34
30)	T	234678-HxCDF	0.917	0.965	0.975	1.074	1.024	0.991	6.03
31)	T	123789-HxCDF	0.871	0.933	0.936	1.025	0.985	0.950	6.15
32)	H	HxCDF TOTAL	0.871	0.933	0.936	1.025	0.985	0.950	6.15
33)	MT	1234678-HpCDF	1.123	1.172	1.154	1.261	1.204	1.183	4.45
34)	T	1234789-HpCDF	0.973	1.045	1.049	1.149	1.101	1.063	6.19
35)	H	HpCDF TOTAL	0.973	1.045	1.049	1.149	1.101	1.063	6.19
36)	IR	13C-OCDD	----------ISTD----------						
37)	MT	OCDD	1.049	1.104	1.098	1.189	1.130	1.114	4.59
38)	MT	OCDF	1.295	1.394	1.403	1.548	1.448	1.418	6.48

L = Linear LO = Linear+Origin Q = Quad QO = Quad+Origin R = Corr. Coef
(#) = Out of Range

pl_ilog
Injection Log Summary Report

Method : C:\8280_DATA_METHODS\10AP26I2.M
Title : Dioxin Furan Total
Start (Tune) File ID : C:\8280\2DB\042610.B\WDM0426.D
Injection Date : 26 Apr 2010 Log Time Period (hrs) : ALL
Injection Time : 13:18 Total files within period : 32
Sample Directory : C:\8280\2DB\042610.B\

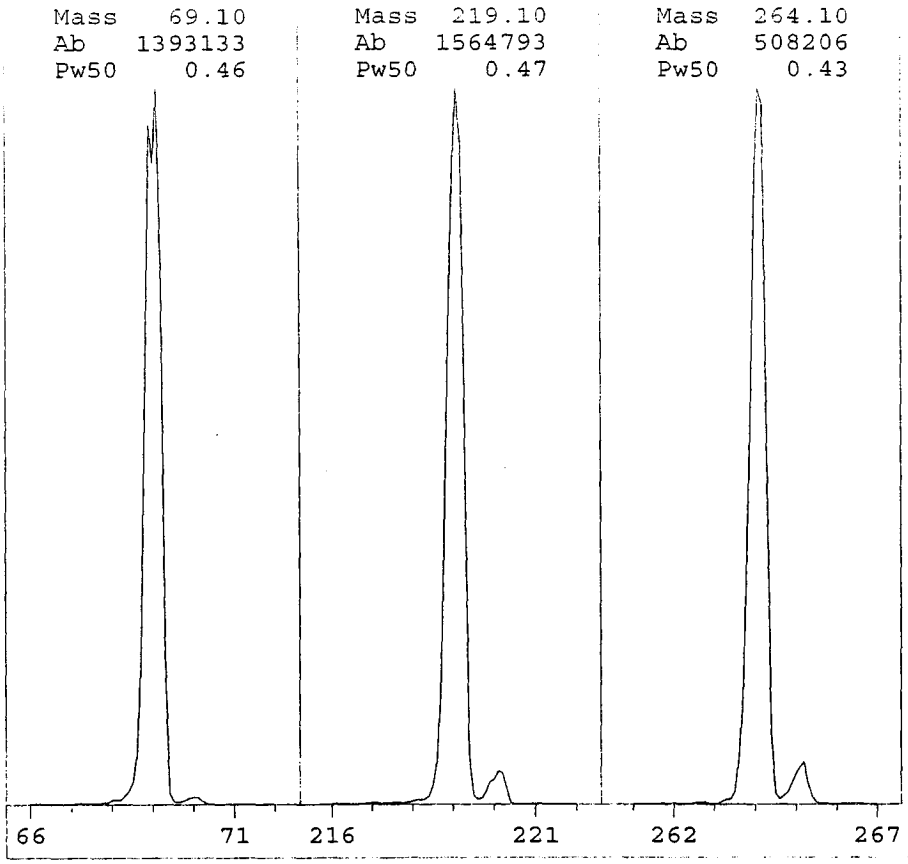
Injection Log Summary Table

File ID	Sample Name Misc Info	Date	Time
ST0426	10LRES012 CS-3 CS-3 10LRES012	26 Apr 2010	14:20
SB0426	Solvent Blank C-14	26 Apr 2010	15:08
ST0426A	10LRES002 CS-1 CS-1 10LRES002	26 Apr 2010	15:56
ST0426B	10LRES003 CS-2 CS-2 10LRES003	26 Apr 2010	16:44
ST0426C	10LRES012 CS-3 CS-3 10LRES012	26 Apr 2010	17:32
ST0426D	10LRES005 CS-4 CS-4 10LRES005	26 Apr 2010	18:20
ST0426E	10LRES006 CS-5 CS-5 10LRES006	26 Apr 2010	19:08
ST0426F	10LRES007 ICV ICV 10LRES007	26 Apr 2010	19:56
ST0426G	10LRES012 CS-3 CS-3 10LRES012	26 Apr 2010	20:44
SB0426G	Solvent Blank C-14	26 Apr 2010	21:32
S042601	L0AX0-1-AA WATER LR007 G0D150595-MB 1.0L 8280A	26 Apr 2010	22:20
S042602	L0AX0-1-AC WATER LR007 G0D150595-LCS 1.0L 8280A	26 Apr 2010	23:07
S042603	LX2LH-1-AA WATER LR007 G0D150595-1 1.01068L 8280A	26 Apr 2010	23:55
S042604	LX2L3-1-AA WATER LR007 G0D150595-2 1.0144L 8280A	27 Apr 2010	00:43
S042605	LX2L6-1-AA WATER LR007 G0D150595-3 1.01838L 8280A	27 Apr 2010	01:31
S042606	LX2L6-1-AC WATER LR007 G0D150595-3S 1.01311L 8280A	27 Apr 2010	02:19
S042607	LX2L6-1-AD WATER LR007 G0D150595-3D 1.01772L 8280A	27 Apr 2010	03:07
S042608	LX2L8-1-AA WATER LR007 G0D150595-4 0.96247L 8280A	27 Apr 2010	03:55
S042609	LX2MC-1-AA WATER LR007 G0D150595-5 1.01701L 8280A	27 Apr 2010	04:43
S042610	LX2MD-1-AA WATER LR007 G0D150595-6 0.98753L 8280A	27 Apr 2010	05:31
S042611	LX2ME-1-AA WATER LR007 G0D150595-7 0.99323L 8280A	27 Apr 2010	06:19
S042612	LX2MF-1-AA WATER LR007 G0D150595-8 0.99622L 8280A	27 Apr 2010	07:07
SB0426Z	Solvent Blank C-14	27 Apr 2010	07:55
SB0426H	Solvent Blank C-14	27 Apr 2010	08:43
ST0426H	10LRES011 CS-1 CS-1 10LRES011	27 Apr 2010	09:31

pl_ilog

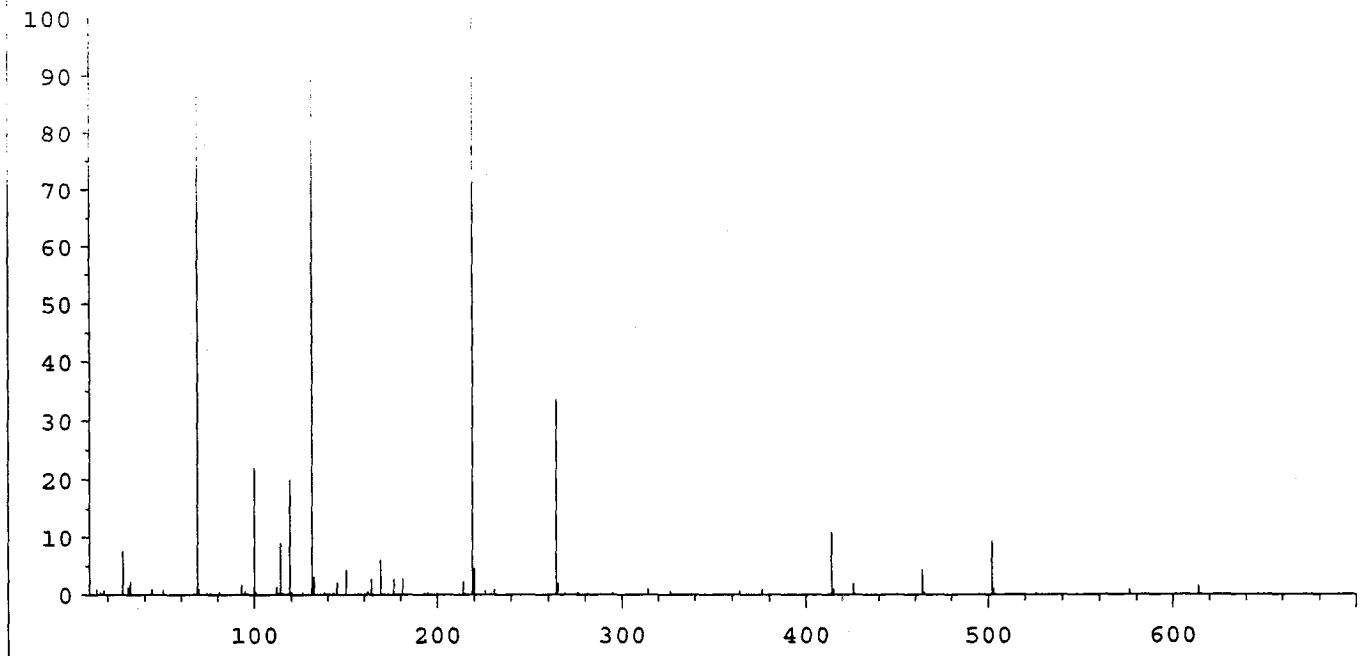
ST0426I	10LRES012 CS-3 CS-3 10LRES012	27 Apr 2010 10:18
SB0426I	Solvent Blank C-14	27 Apr 2010 11:06
S042613	LX9JT-1-AA SOLID LR007 G0D130489-MB 10.0g 8280A	27 Apr 2010 11:54
S042614	LX9JT-1-AC SOLID LR007 G0D130489-LCS 10.0g 8280A	27 Apr 2010 12:42
S042615	LXWK2-1-AA SOLID LR007 G0D130489-1 10.01g 8280A	27 Apr 2010 13:30
S042615	LXWK2-1-AA SOLID LR007 G0D130489-1 10.01g 8280A	27 Apr 2010 13:30
S042616	LXWK4-1-AA SOLID LR007 G0D130489-2 10.04g 8280A	27 Apr 2010 14:18

Instrument: 2DB
Mon Apr 26 12:11:43 2010 C:\HPCHEM\1\5973\2DBYTUNE.U



Ion Pol	POS	MassGain	66
		MassOffs	-14
Emission	34.6	AmuGain	2448
EleEnergy	69.9	AmuOffs	140
Filament	1	Wid219	0.042
		DC Pol	POS
Repeller	26.10		
IonFocus	79.7	HED	ON
EntLens	0.0	EMVolts	2212
EntOffs	VAR		
		Samples	8
PFTBA	OPEN	Averages	3
		StepSize	0.10
Zones:			
MS Source	250	TurboSpd	100
MS Quad	150		

Scan: 10.00 - 700.00 Samples: 8 Thresh: 100
472 peaks Base: 219.10 Abundance: 1185280



Mass	Abund	Rel Abund	Iso Mass	Iso Abund	Iso Ratio
69.00	1038080	100.00	69.90	11137	1.07
219.10	1185280	114.18	220.10	54640	4.61
264.10	398016	38.34	265.10	23016	5.78

TARGET MASS:	50	69	131	219	414	502
DYNAMIC ENT OFFSET:	7.8	9.3	12.8	13.6	24.8	26.6
TARGET ABUND(%):	1.0	100.0	90.0	90.0	10.0	10.0
ACTUAL TUNE ABUND(%):	0.9	100.0	102.3	114.2	12.3	10.7

8280A Calibration Standard Amounts (in ng) for Initial Calibration, Initial Calibration Verification (ICV) and Continuing Calibration Standard (CCV)

	CS1	CS2	CS3	CS4	CS5	ICV	CCV
Compound							
13C-1234-TCDD	25	25	25	25	25	25	25
13C-123789-HxCDD	25	25	25	25	25	25	25
13C-2378-TCDF	25	25	25	25	25	25	25
13C-2378-TCDD	25	25	25	25	25	25	25
13C-123678-HxCDD	25	25	25	25	25	25	25
13C-1234678-HpCDF	25	25	25	25	25	25	25
13C-OCDD	50	50	50	50	50	50	50
37Cl-2378-TCDD	12.5	12.5	12.5	12.5	12.5	12.5	12.5
2378-TCDF	5	12.5	25	50	100	25	25
12378-PeCDF	12.5	31.25	62.5	125	250	125	62.5
23478-PeCDF	12.5	31.25	62.5	125	250	125	62.5
2378-TCDD	5	12.5	25	50	100	25	25
12378-PeCDD	12.5	31.25	62.5	125	250	125	62.5
123478-HxCDD	12.5	31.25	62.5	125	250	125	62.5
123678-HxCDD	12.5	31.25	62.5	125	250	125	62.5
123789-HxCDD	12.5	31.25	62.5	125	250	125	62.5
1234678-HpCDD	12.5	31.25	62.5	125	250	125	62.5
123478-HxCDF	12.5	31.25	62.5	125	250	125	62.5
123678-HxCDF	12.5	31.25	62.5	125	250	125	62.5
234678-HxCDF	12.5	31.25	62.5	125	250	125	62.5
123789-HxCDF	12.5	31.25	62.5	125	250	125	62.5
1234678-HpCDF	12.5	31.25	62.5	125	250	125	62.5
1234789-HpCDF	12.5	31.25	62.5	125	250	125	62.5
OCDD	25	62.5	125	250	250	250	125
OCDF	25	62.5	125	250	250	250	125

Quantitation Report (Not Reviewed)

Sample ID: CS-1 10LRES002 Size: 0.000
10LRES002 CS-1 Inst : DB1

Data File:C:\8280\2DB\042610.B\ST0426A.D Vial: 99
Acq On :26 Apr 2010 15:56 Operator: MEO
Sample Amount: 0.00

MS Integration Params: RTEINT.P
Quant Time: Apr 26 18:46 2010 Quant Results File: 10AP26I2.RES

Quant Method : C:\8280\ DATA METHODS\10AP26I2.M (RTE Integrator)
Title : Dioxin Furan Total
Last Update : Mon Apr 26 18:46:11 2010
Response via : Initial Calibration
DataAcq Meth : TOKAS
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Recovery\Internal Stds	R.T.	QIon	Ratio	Response	Conc	Dev(Min)
1) 13C-1234-TCDD	24.05	332+334	0.82	167926	25.00 NG	0.00
5) 13C-123789-HxCDD	36.50	402+404	1.27	253289	25.00 NG	0.00
9) 13C-2378-TCDF	23.24	316+318	0.80	224011	25.00 NG	0.00
15) 13C-2378-TCDD	24.34	332+334	0.80	156459	25.00 NG	0.00
20) 13C-123678-HxCDD	36.22	402+404	1.28	193632	25.00 NG	0.00
27) 13C-1234678-HpCDF	38.22	420+422	1.07	249683	25.00 NG	0.00
36) 13C-OCDD	42.23	470+472	0.91	330761	50.00 NG	0.00

Surrogate Compound

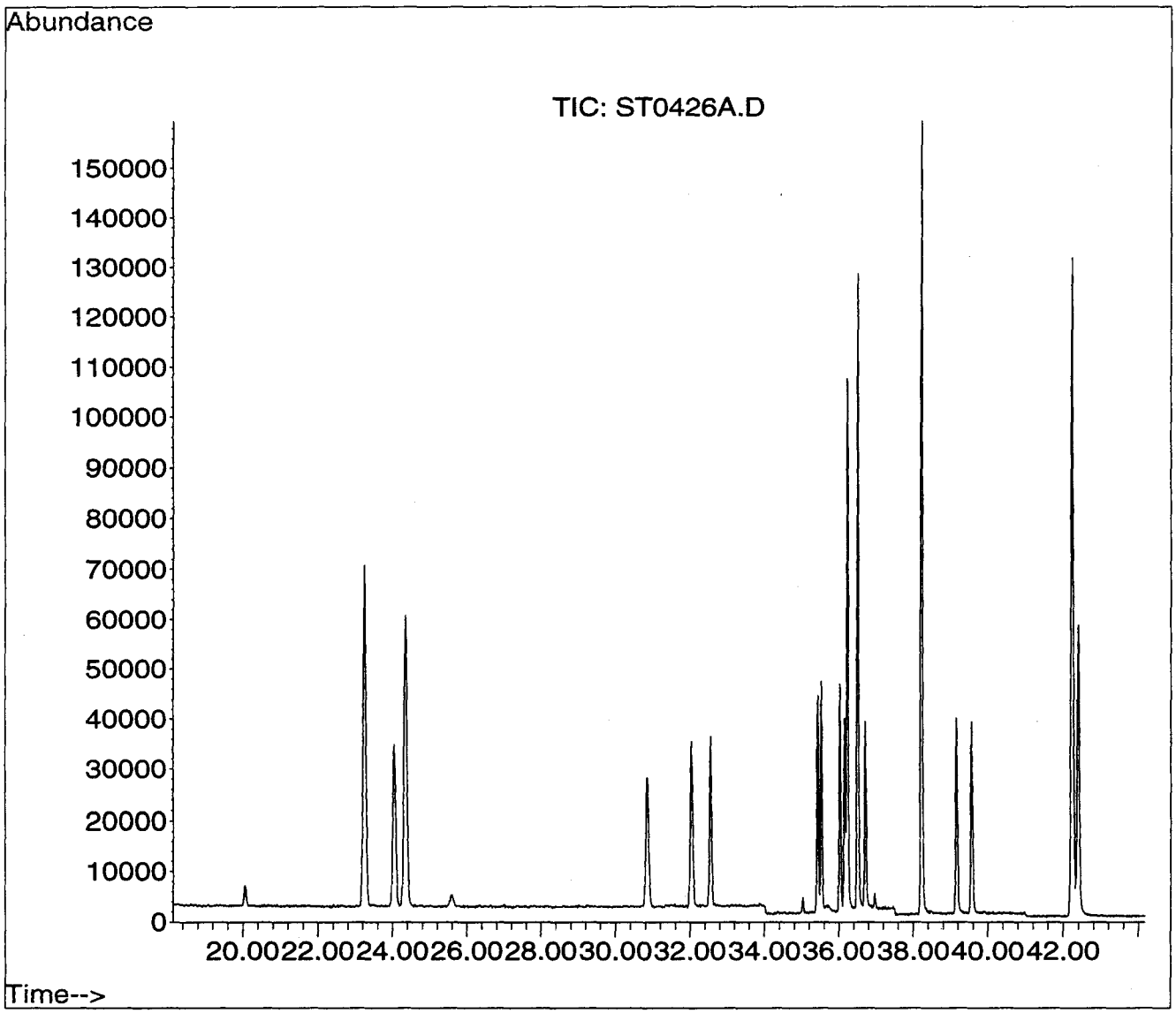
4) 37Cl-2378-TCDD	24.35	328		122272	12.660 NG	0.00
Spiked Amount = 12.500		RRF = 1.438		Recovery = 101.28%		

Target Compounds	RT	Ratio	Area	RRF	Conc	EDL	%Rec
2) 13C-2378-TCDF-IS	23.24	0.80	224011	1.400	23.829	0.0951	95.3
3) 13C-2378-TCDD-IS	24.34	0.80	156459	0.956	24.376	1.8869	97.5
6) 13C-123678-HxCDD-	36.22	1.28	193632	0.807	23.687	0.0796	94.8
7) 13C-1234678-HpCDF	38.22	1.07	249683	0.936	26.322	0.0649	105.3
8) 13C-OCDD-IS	42.23	0.91	330761	0.493	66.174	0.1335	132.3
10) 2378-TCDF	23.26	0.79	51796	1.256	4.604	0.1471	
1	23.26	0.78	52019		4.624		
11) TCDF TOTAL	22.00	0.78	52019	1.256	4.624		
12) 12378-PeCDF	30.84	1.47	121896	1.120	12.142	0.0720	
13) 23478-PeCDF	32.04	1.38	121082	1.119	12.081	0.1517	
1	30.84	1.47	122695		12.242		
2	32.04	1.38	121082		12.081		
14) PeCDF TOTAL	29.50	1.38	243777	1.119	24.323		
16) 2378-TCDD	24.37	0.78	37601	1.242	4.839	0.0915	
1	23.24	4.79 #	21755		2.800		
2	24.37	0.78	38193		4.915		
17) TCDD TOTAL	22.50	0.78	59948	1.242	7.714		
18) 12378-PeCDD	32.56	1.69	83195	1.107	12.005	0.2285	
1	32.08	8.41 #	4170		0.602		
2	32.56	1.72	84265		12.159		
19) PeCDD TOTAL	30.00	1.72	88435	1.107	12.761		
21) 123478-HxCDD	36.15	1.24	92525	1.004	11.904	0.4273	
22) 123678-HxCDD	36.23	1.23	91227	1.061	11.101	0.2385	
23) 123789-HxCDD	36.51	1.24	97262	1.046	12.009	0.3169	
1	36.15	1.24	92525		11.904		
2	36.23	1.22	91227		11.101		
3	36.51	1.24	324162		41.705		
24) HxCDD TOTAL	36.50	1.24	507914	1.004	64.710		
25) 1234678-HpCDD	39.16	1.04	98727	0.893	14.270	0.1564	

	1	39.16	1.04	98727		14.270	
26)	HpCDD TOTAL	39.35	1.04	98727	0.893	14.270	
28)	123478-HxCDF	35.43	1.20	113290	1.163	9.755	0.4692
29)	123678-HxCDF	35.53	1.24	118761	1.274	9.336	0.1247
30)	234678-HxCDF	36.03	1.19	114480	1.140	10.051	0.1131
31)	123789-HxCDF	36.71	1.18	108691	1.070	10.170	0.1118
	1	35.43	1.20	113290		9.755	
	2	35.53	1.24	118761		9.336	
	3	36.03	1.19	114480		10.051	
	4	36.71	1.18	108691		10.170	
32)	HxCDF TOTAL	36.00	1.18	455222	1.070	39.311	
33)	1234678-HpCDF	38.22	1.05	140249	1.251	11.229	0.0769
34)	1234789-HpCDF	39.57	1.09	121503	1.008	12.064	0.1028
	1	38.22	1.05	140249		11.229	
	2	39.57	1.09	121503		12.064	
35)	HpCDF TOTAL	39.50	1.09	261752	1.008	23.293	
37)	OCDD	42.23	0.89	173470	1.137	23.056	0.1284
38)	OCDF	42.40	0.91	214151	1.505	21.516	0.1723

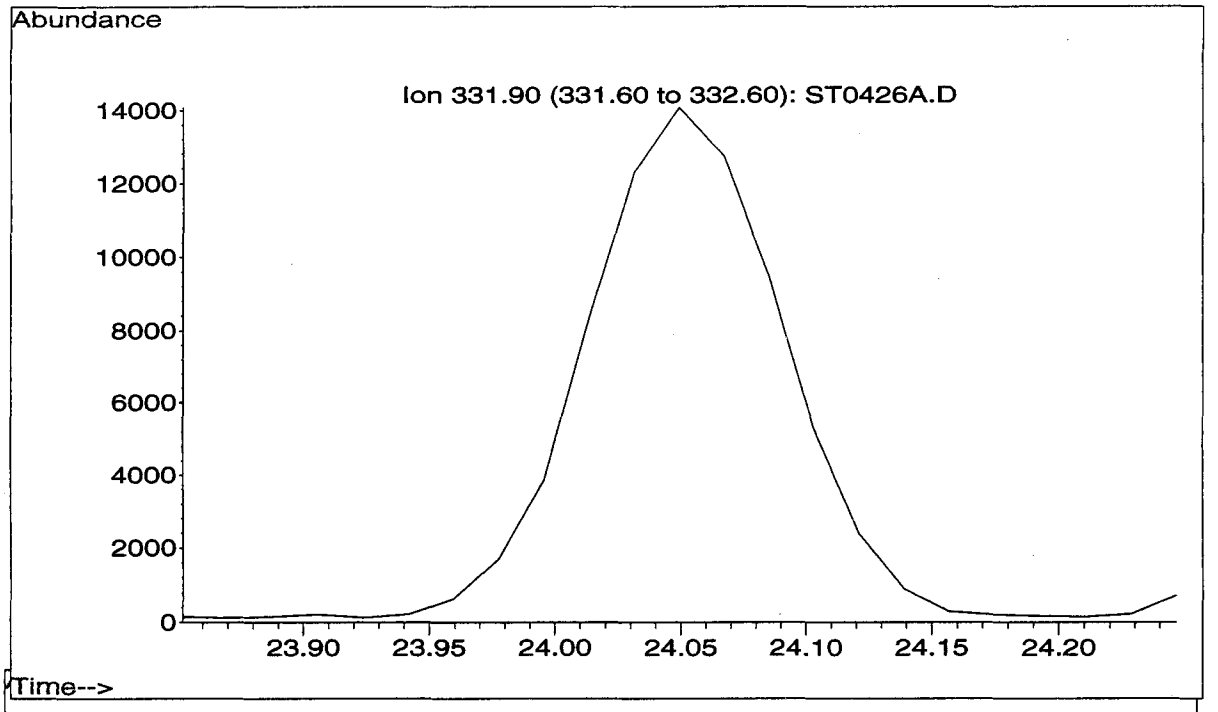
(#) = qualifier out of range•: areas and concentration based on theoretical ion ratio
(m) = manual integration
ST0426A.D 10AP26I2.M Mon Apr 26 18:46:19 2010

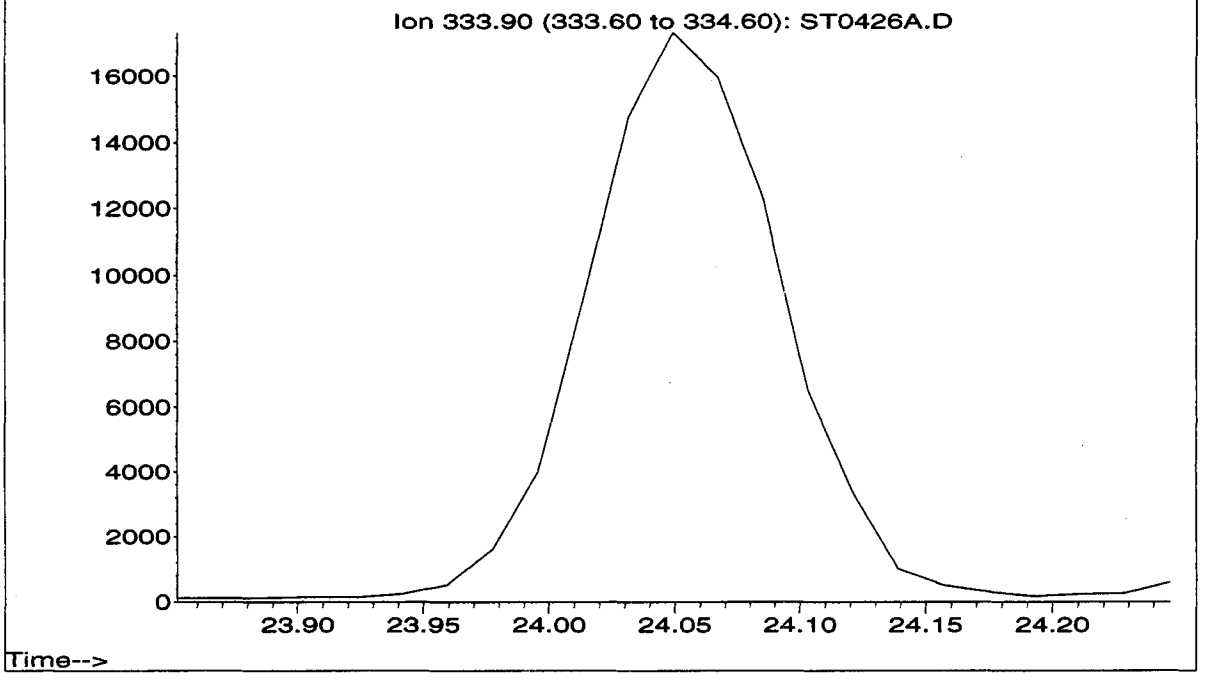
Data File Name	ST0426A.D
Data File Path	C:\8280\2DB\042610.B\
Operator	MEO
Date Acquired	4/26/2010 15:56
Acq. Method File	TOKAS
Sample Name	10LRES002 CS-1
Misc Info	CS-1 10LRES002
Vial Number	99
Instrument Name	2DB
Sample Multiplier	1
Sample Amount	0



13C-1234-TCDD

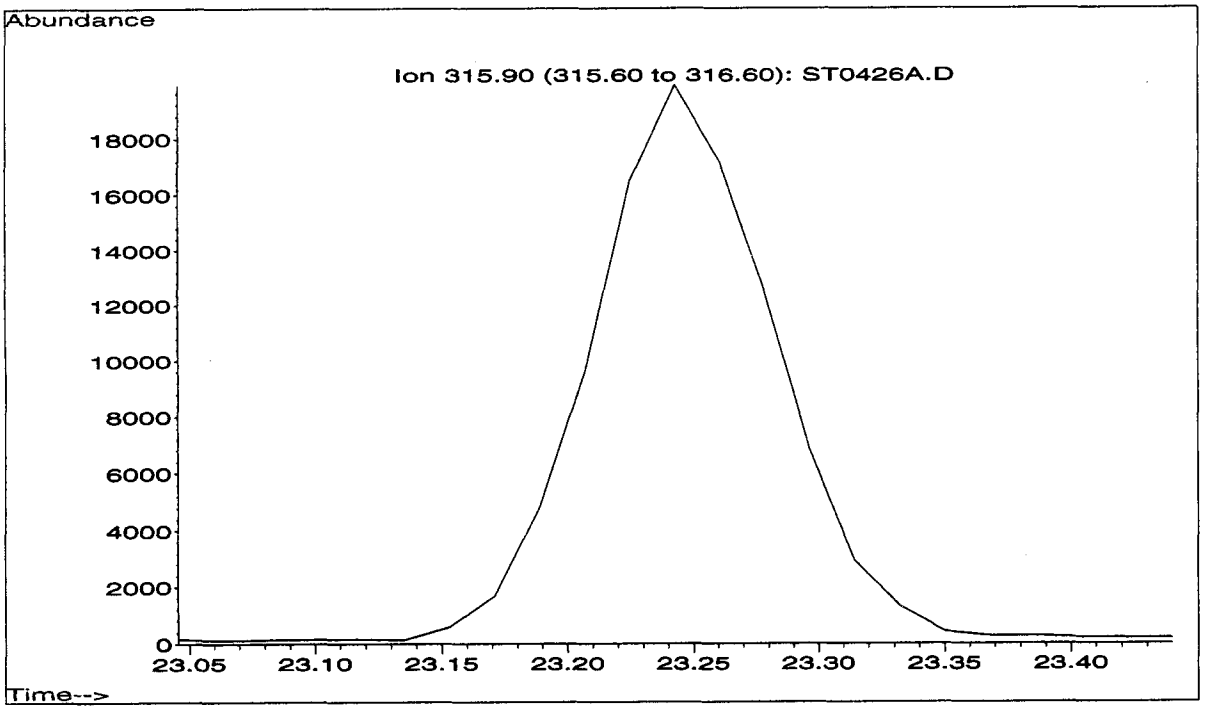
TS R.T. Lower Limit	23.85		
TS R.T. Upper Limit	24.25		
Ret Time	24.05		
Target Ion	331.9	Q1 Ion	333.9
Target Response	75480	Q1 Response	92446
Total Response	167926	Ion Ratio	0.82

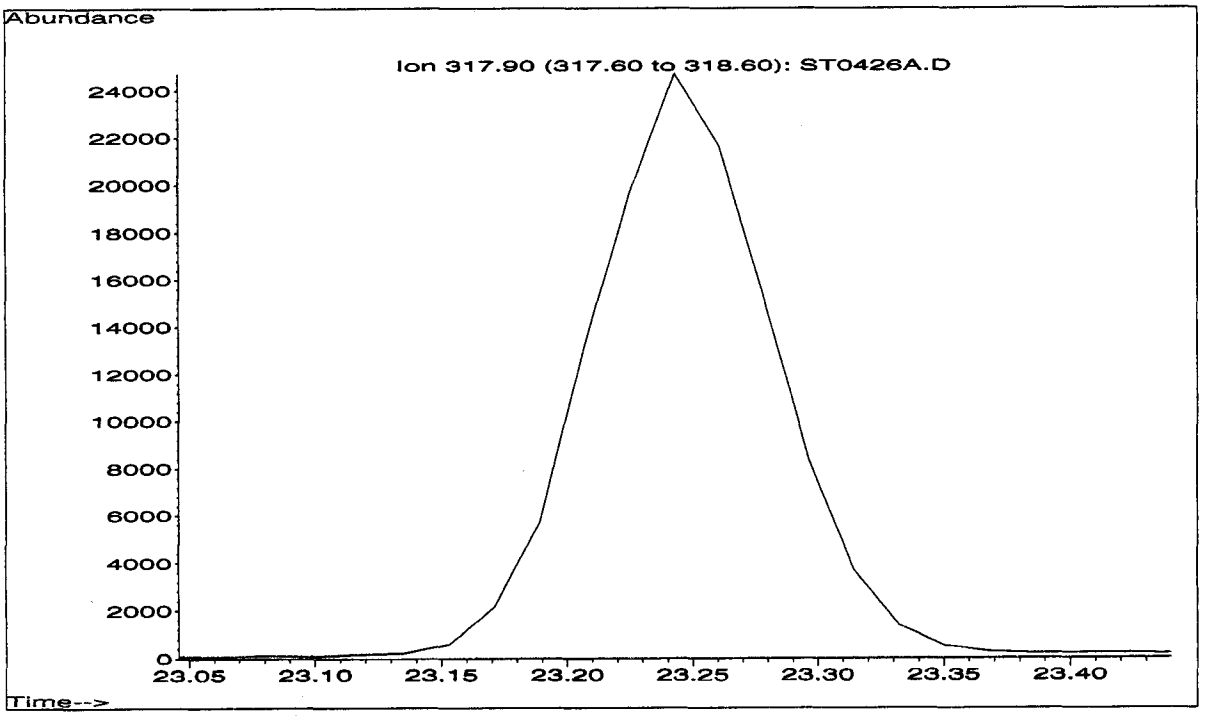




13C-2378-TCDF-IS

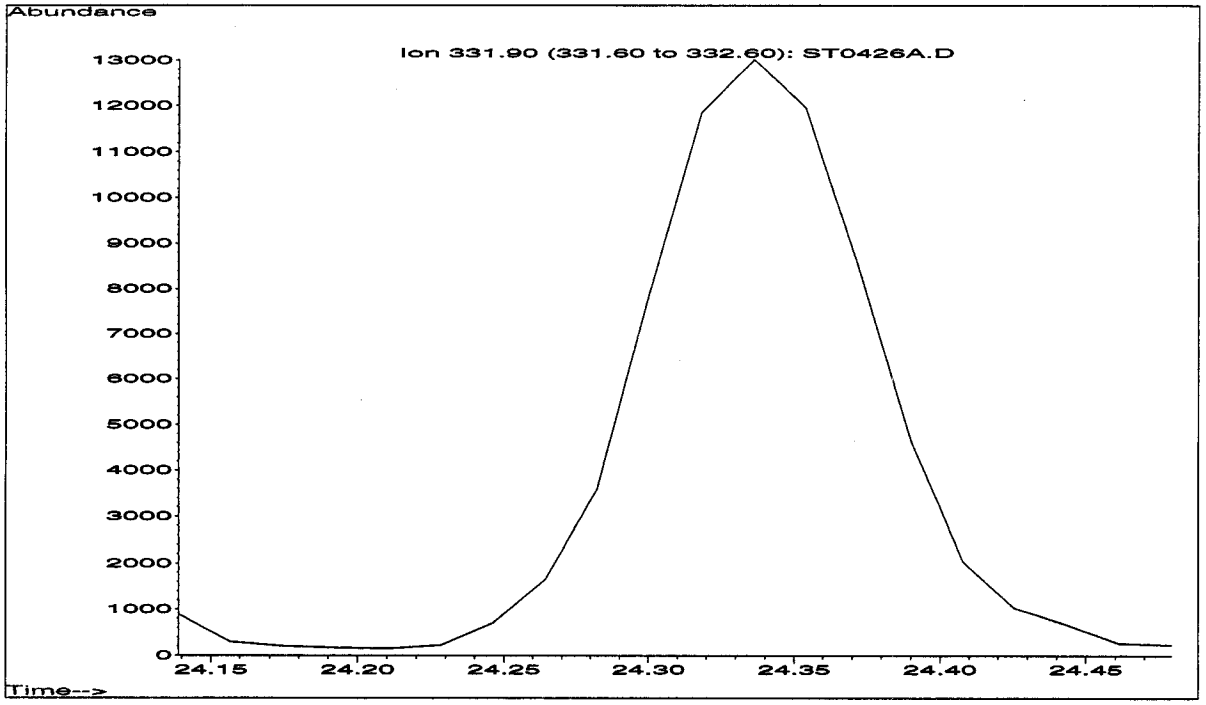
TS R.T. Lower Limit	23.04		
TS R.T. Upper Limit	23.44		
Ret Time	23.24		
Target Ion	315.9	Q1 Ion	317.9
Target Response	99481	Q1 Response	124530
Target Response	224011	Ion Ratio	0.80

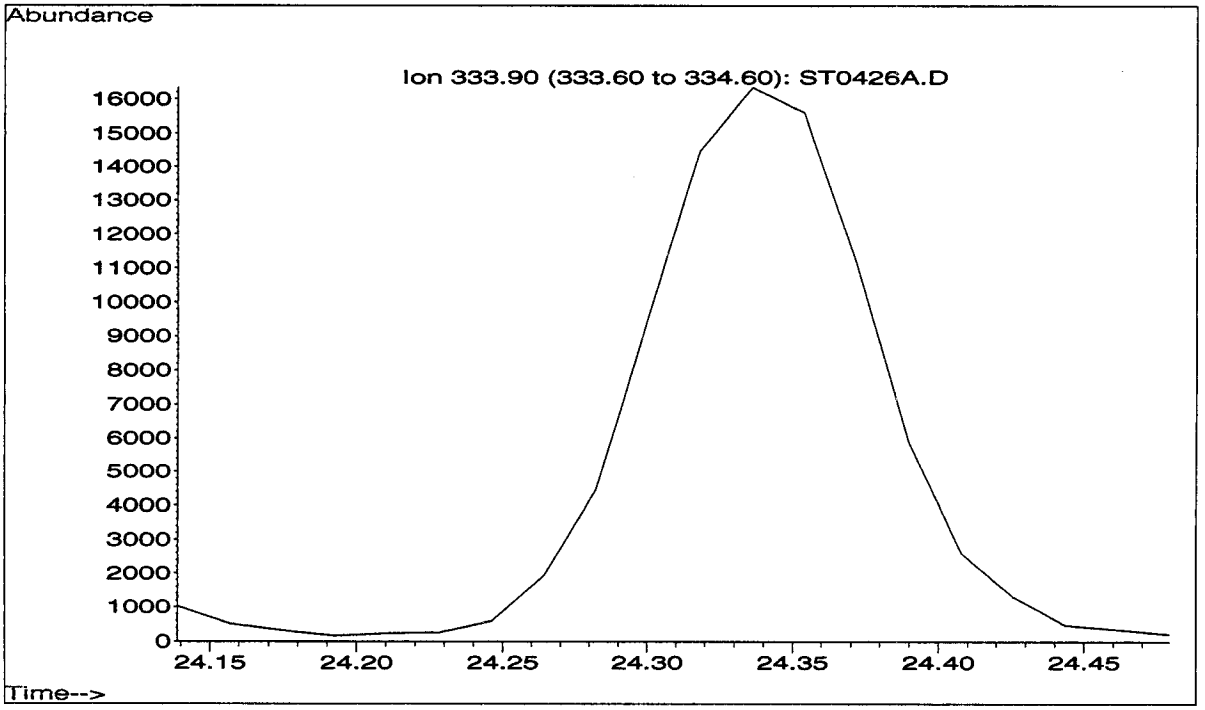




13C-2378-TCDD-IS

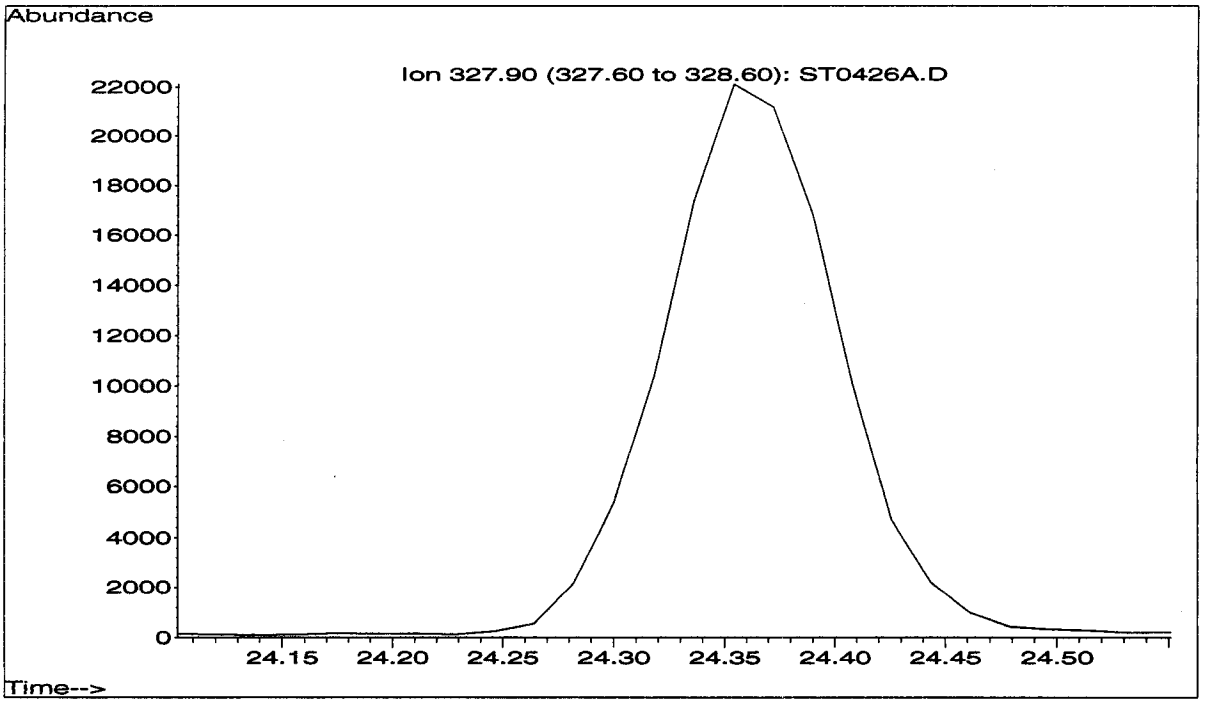
TS R.T. Lower Limit	24.14		
TS R.T. Upper Limit	24.49		
Ret Time	24.34		
Target Ion	331.9	Q1 Ion	333.9
Target Response	69327	Q1 Response	87132
Total Response	156459	Ion Ratio	0.80

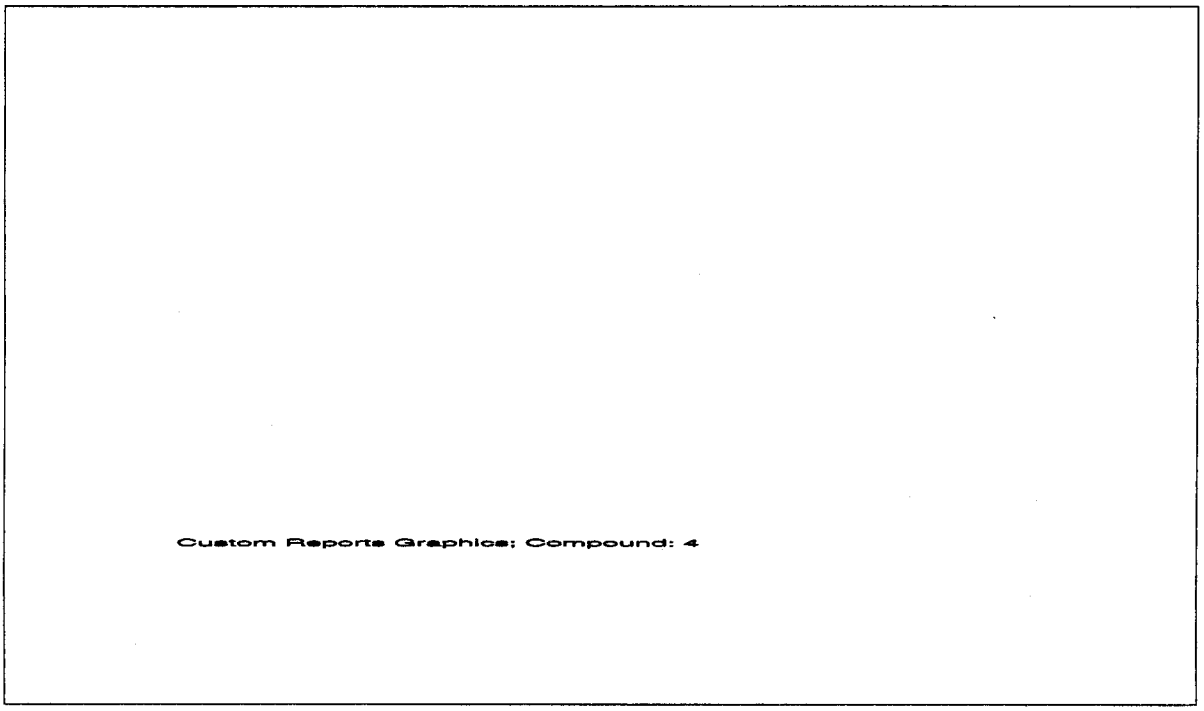




37Cl-2378-TCDD

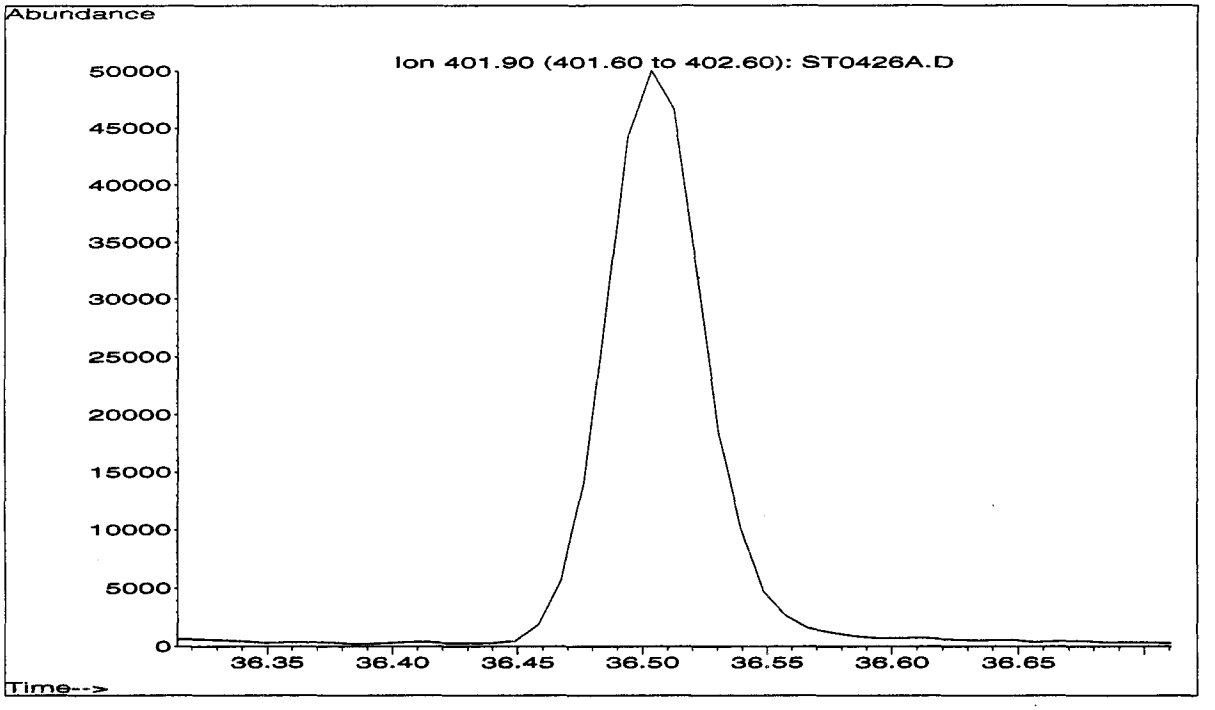
TS R.T. Lower Limit	24.10		
TS R.T. Upper Limit	24.55		
Ret Time	24.35		
Target Ion	327.9	Q1 Ion	0
Target Response	122272	Q1 Response	0
Total Response	122272	Ion Ratio	#DIV/0!

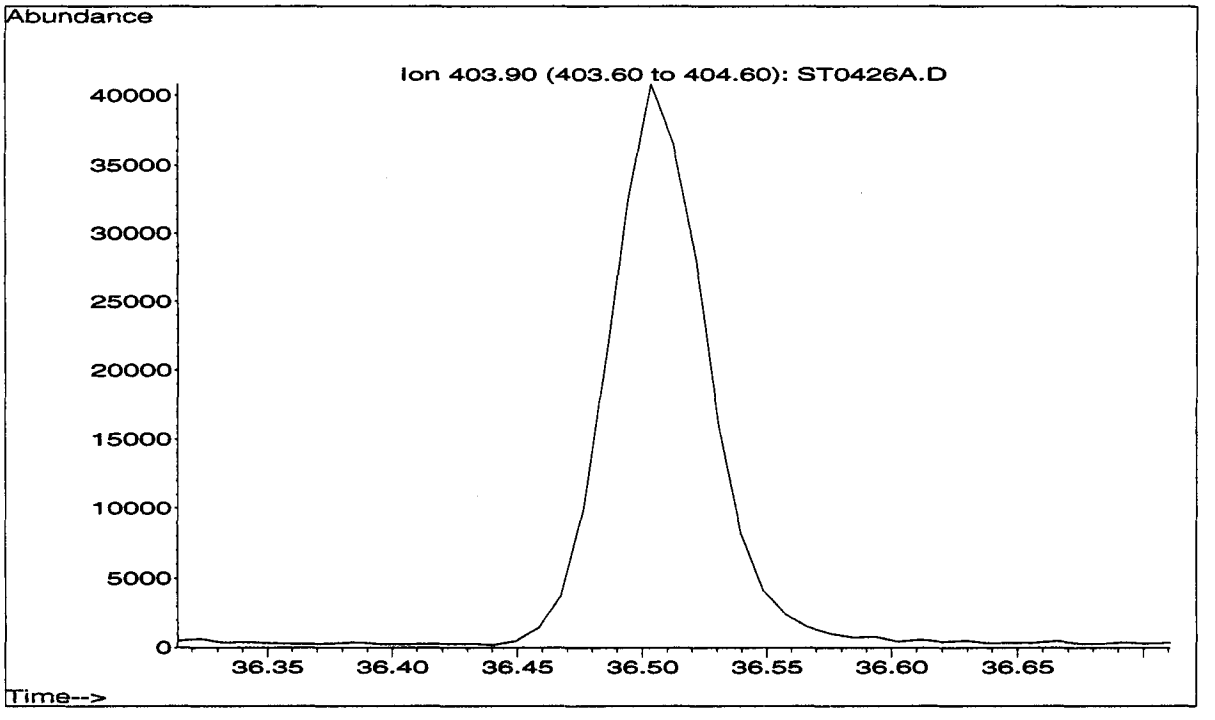




13C-123789-HxCDD

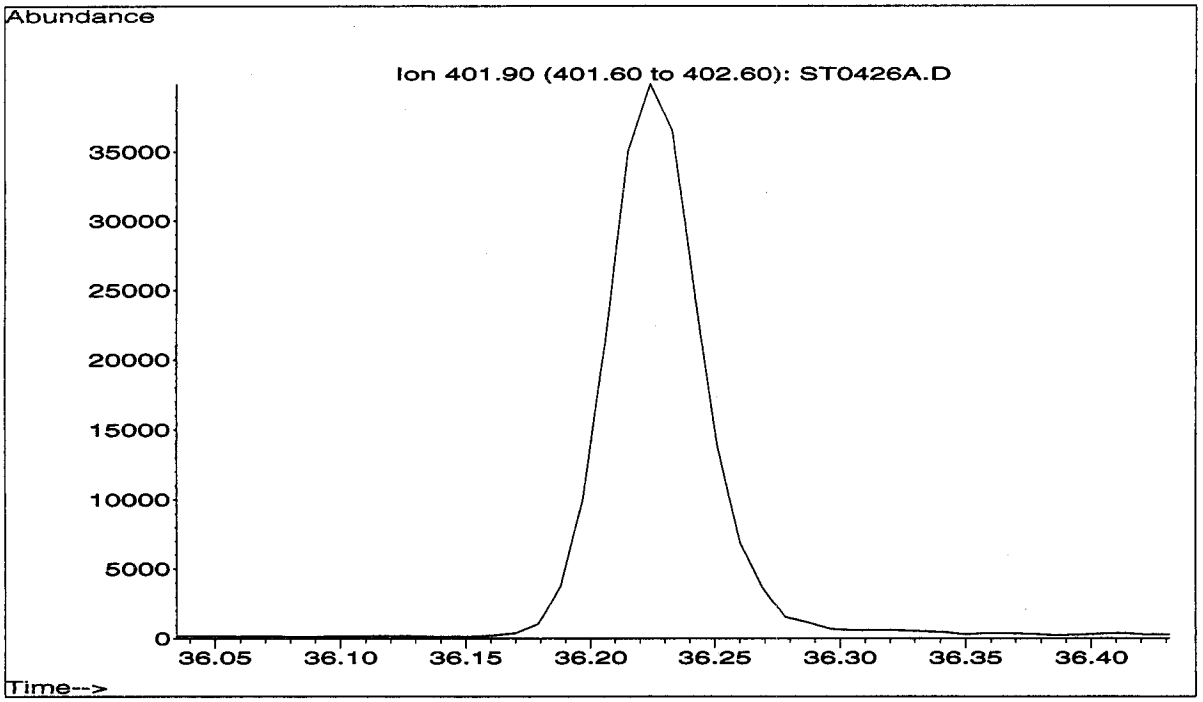
TS R.T. Lower Limit	36.30		
TS R.T. Upper Limit	36.70		
Ret Time	36.50		
Target Ion	401.9	Q1 Ion	403.9
Target Response	141929	Q1 Response	111360
Target Response	253289	Ion Ratio	1.27

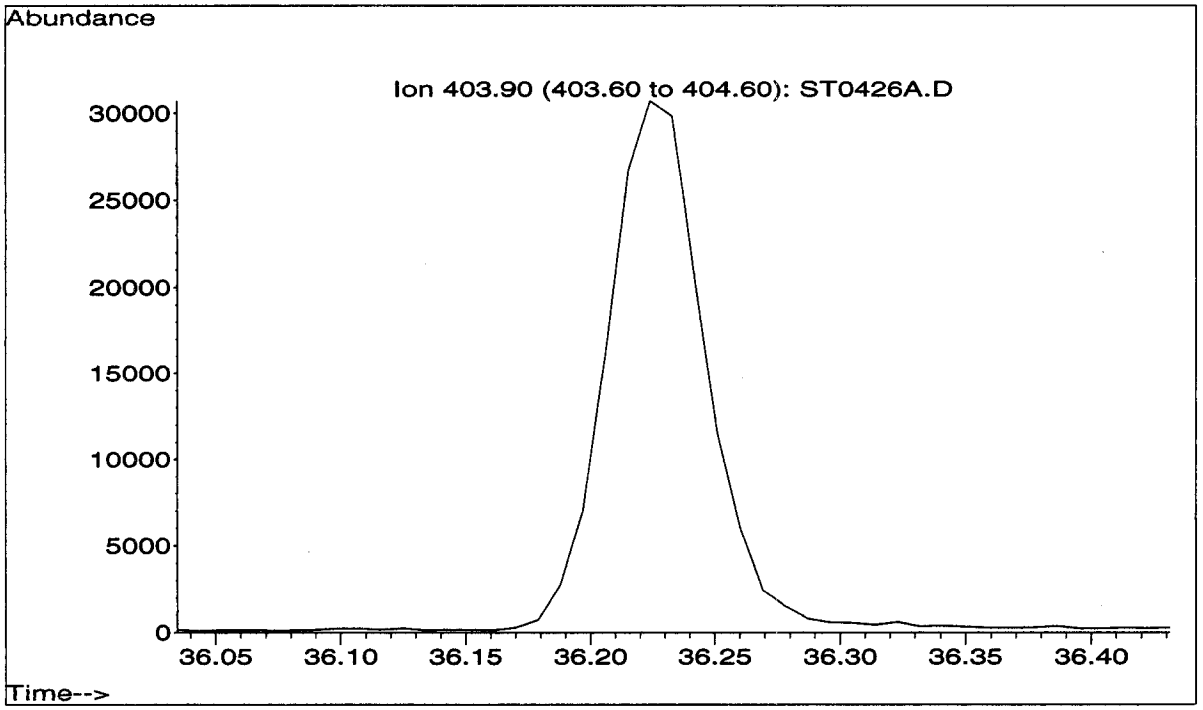




13C-123678-HxCDD-IS

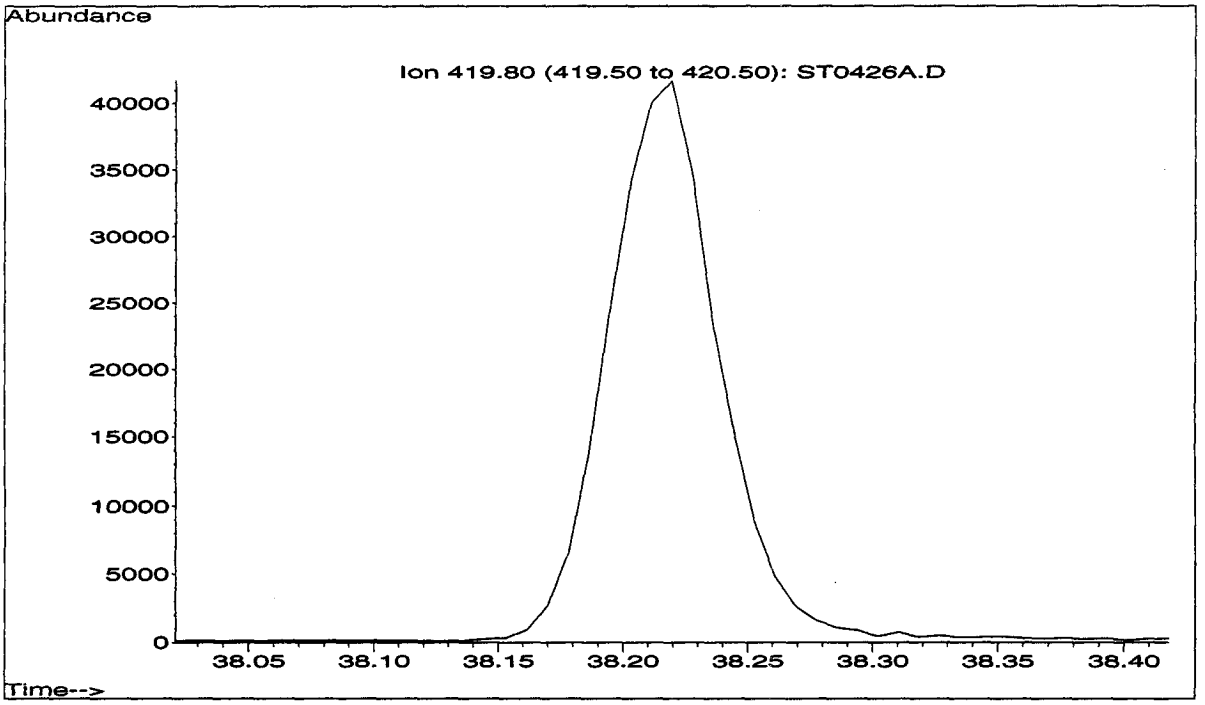
TS R.T. Lower Limit	36.02		
TS R.T. Upper Limit	36.42		
Ret Time	36.22		
Target Ion	401.9	Q1 Ion	403.9
Target Response	108733	Q1 Response	84899
Total Response	193632	Ion Ratio	1.28

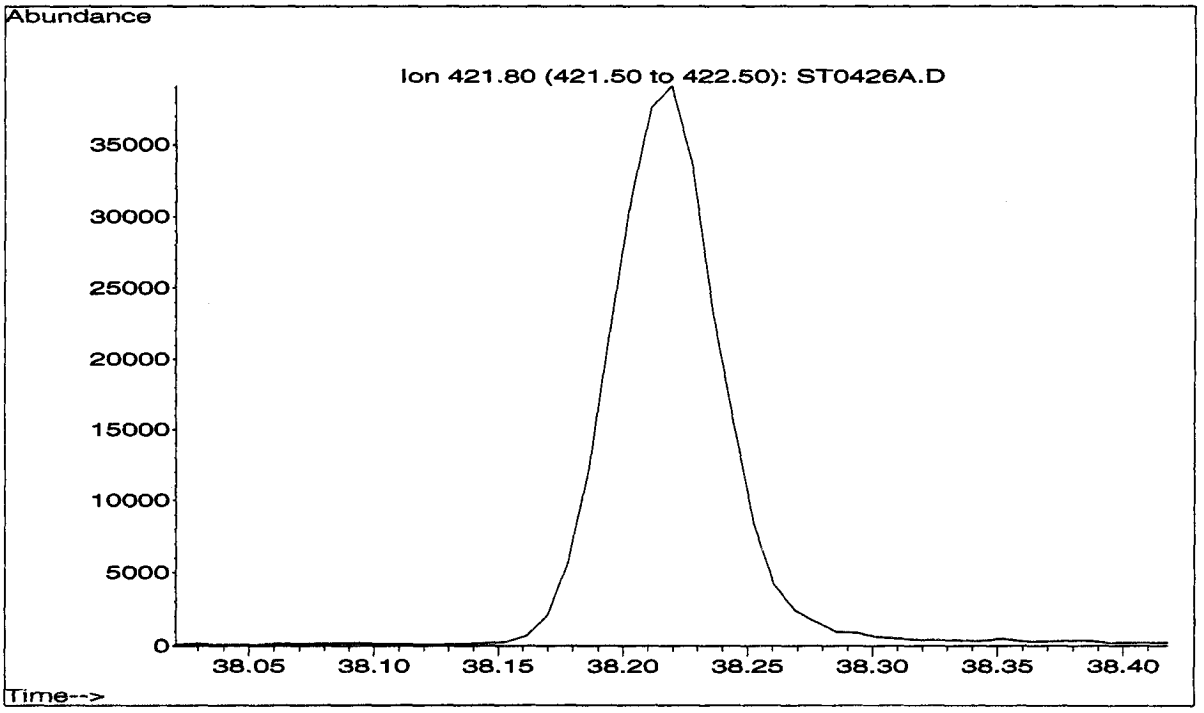




13C-1234678-HpCDF-IS

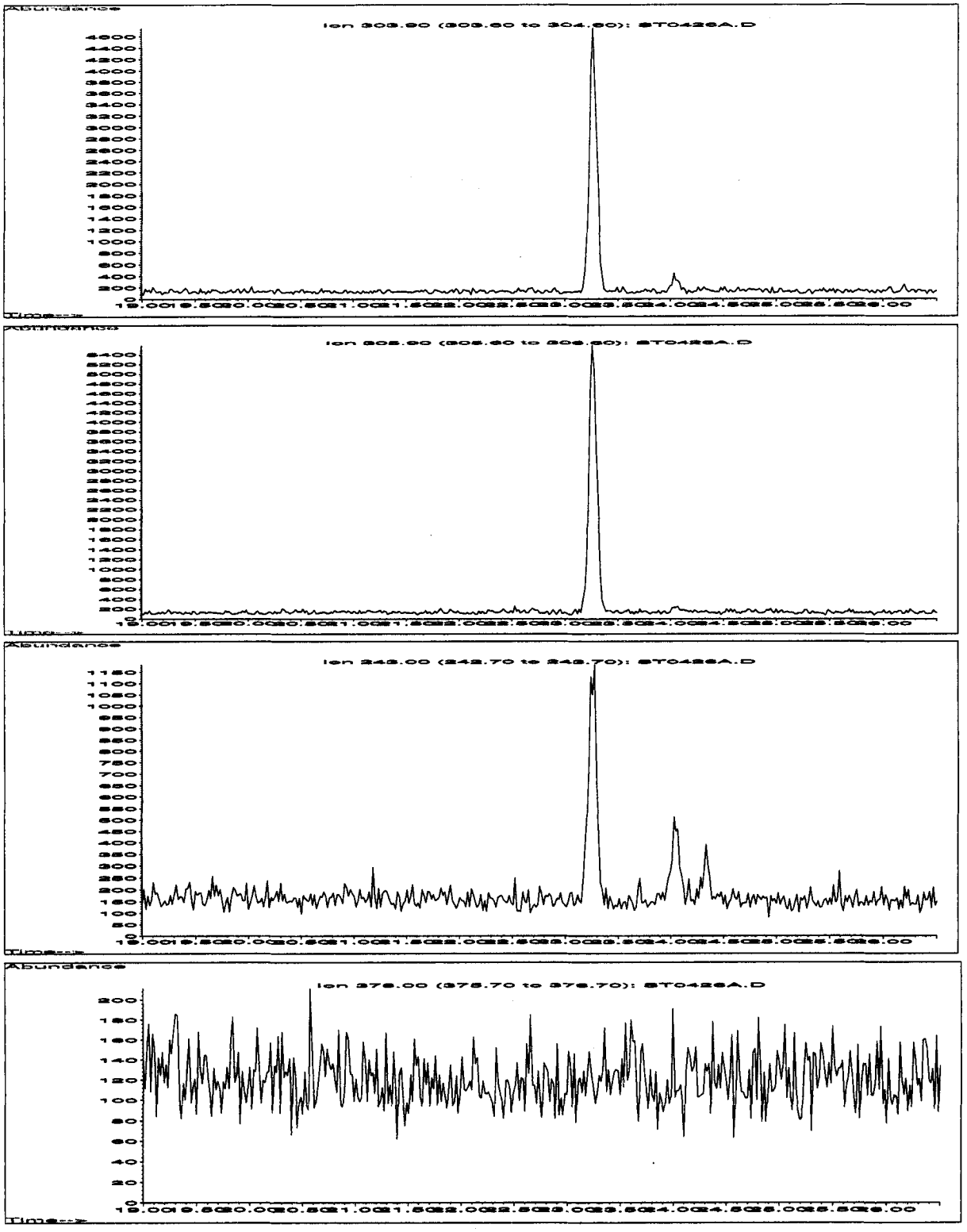
TS R.T. Lower Limit	38.02		
TS R.T. Upper Limit	38.42		
Ret Time	38.22		
Target Ion	419.8	Q1 Ion	421.8
Target Response	129236	Q1 Response	120447
Target Response	249683	Ion Ratio	1.07





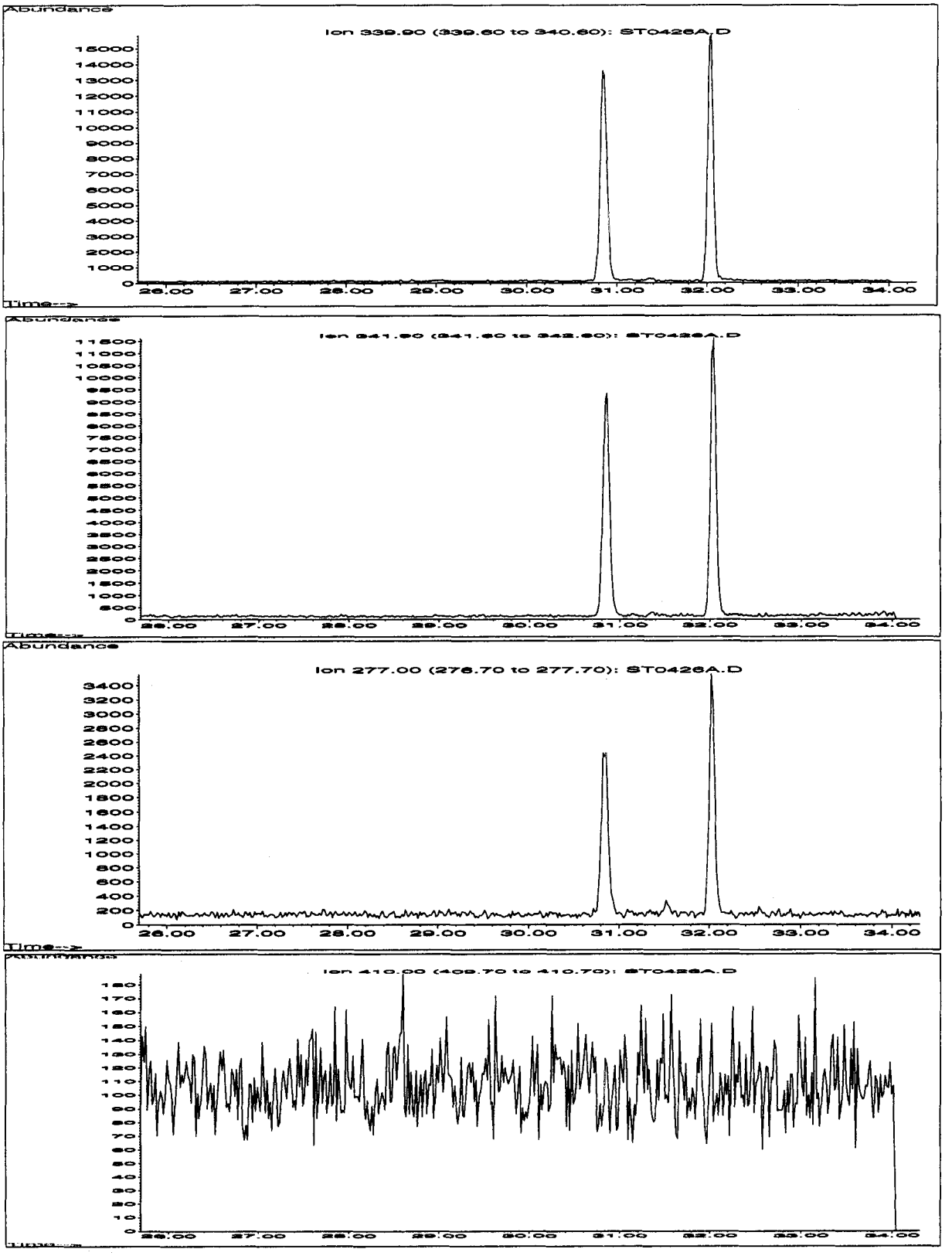
TCDF TOTAL

TS R.T. Lower Limit	19.00
TS R.T. Upper Limit	26.50



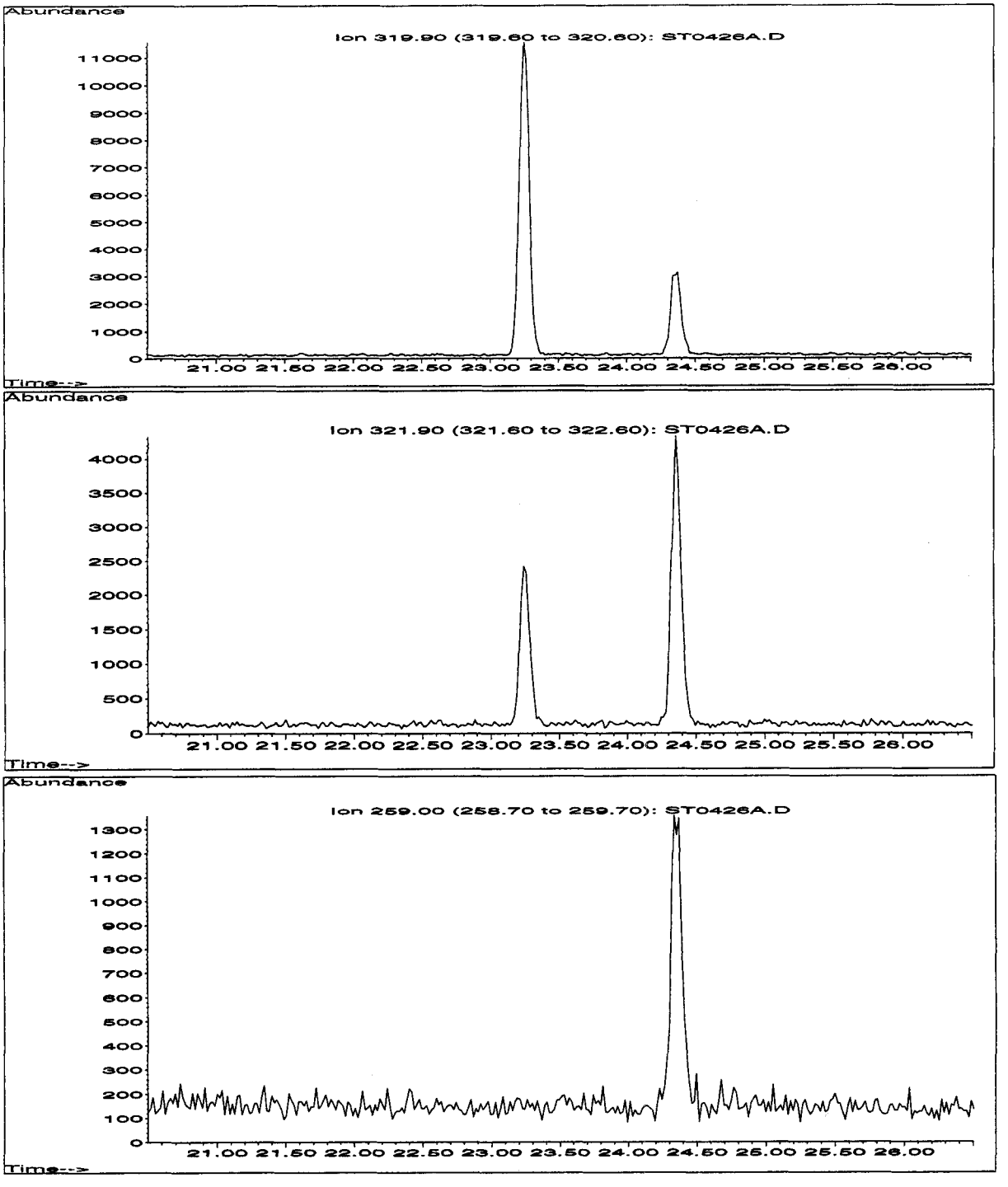
PeCDF TOTAL

TS R.T. Lower Limit	25.70
TS R.T. Upper Limit	34.30



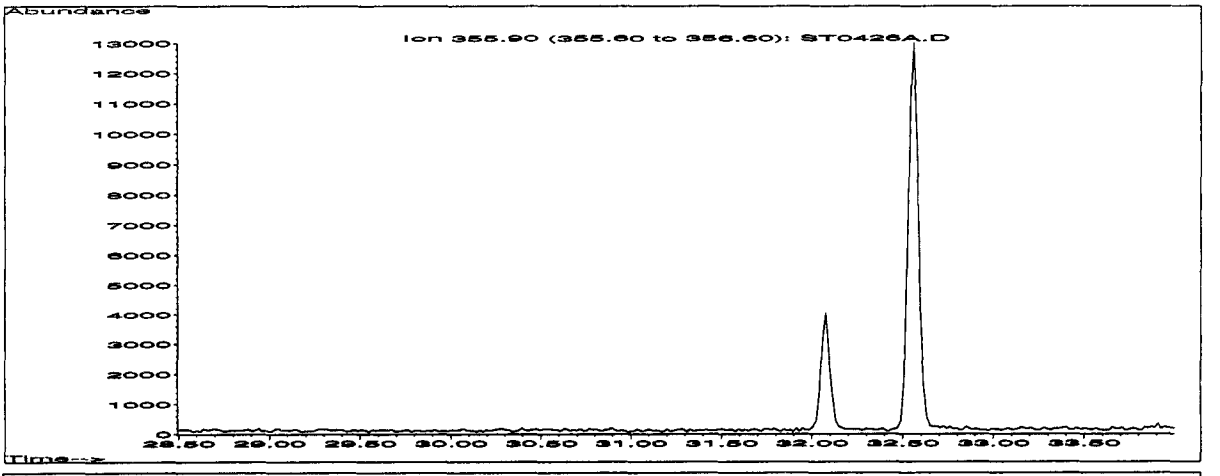
TCDD TOTAL

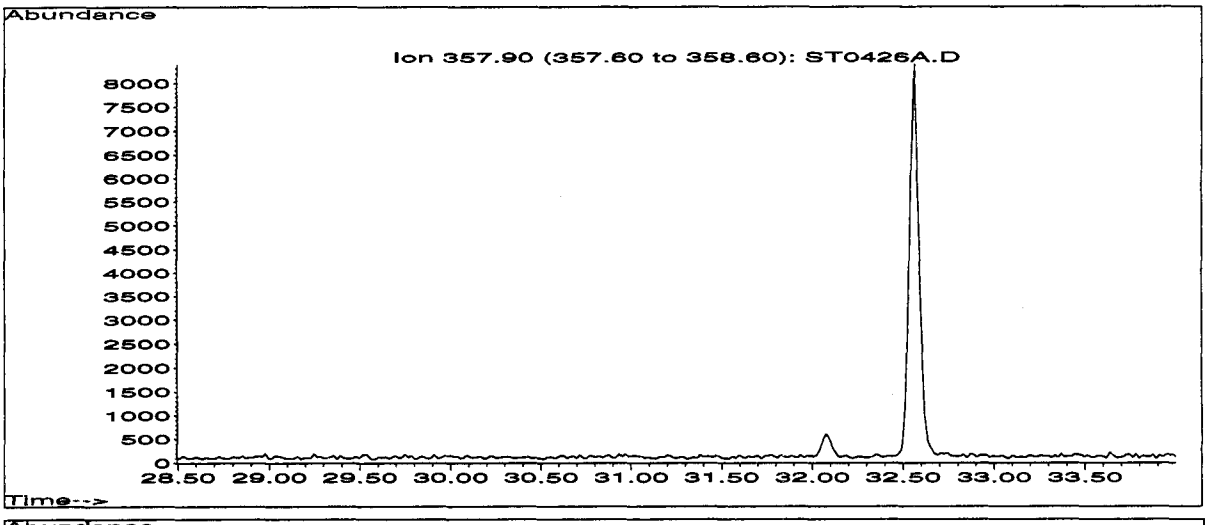
TS R.T. Lower Limit	20.50
TS R.T. Upper Limit	26.50

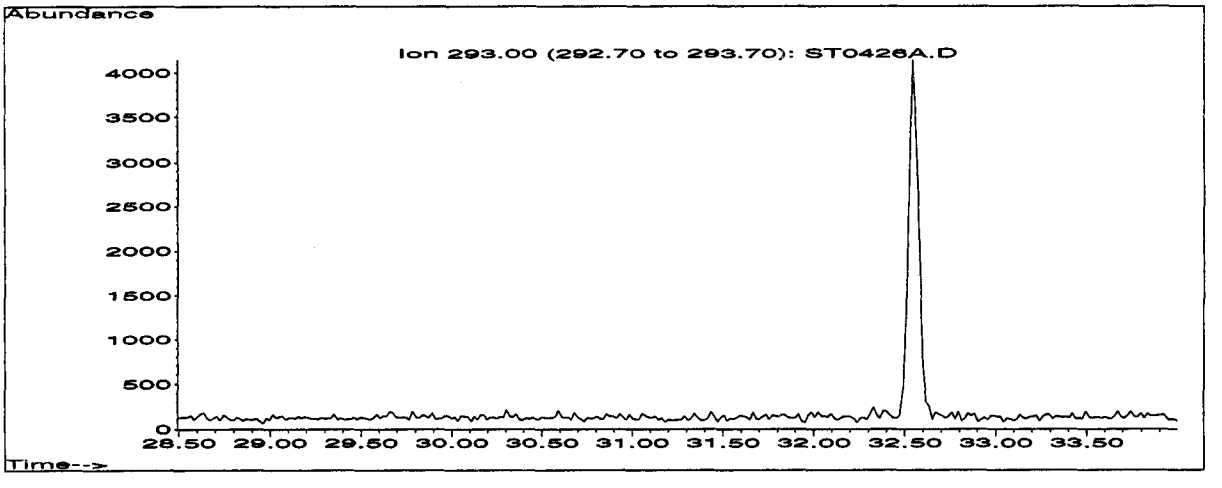


PeCDD TOTAL

TS R.T. Lower Limit	28.50
TS R.T. Upper Limit	34.00

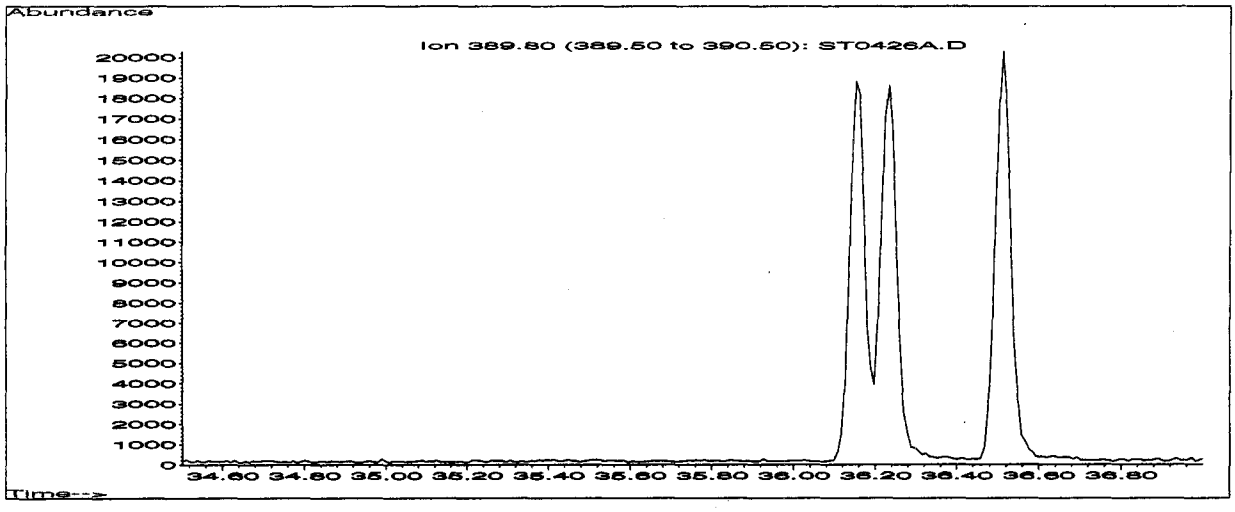


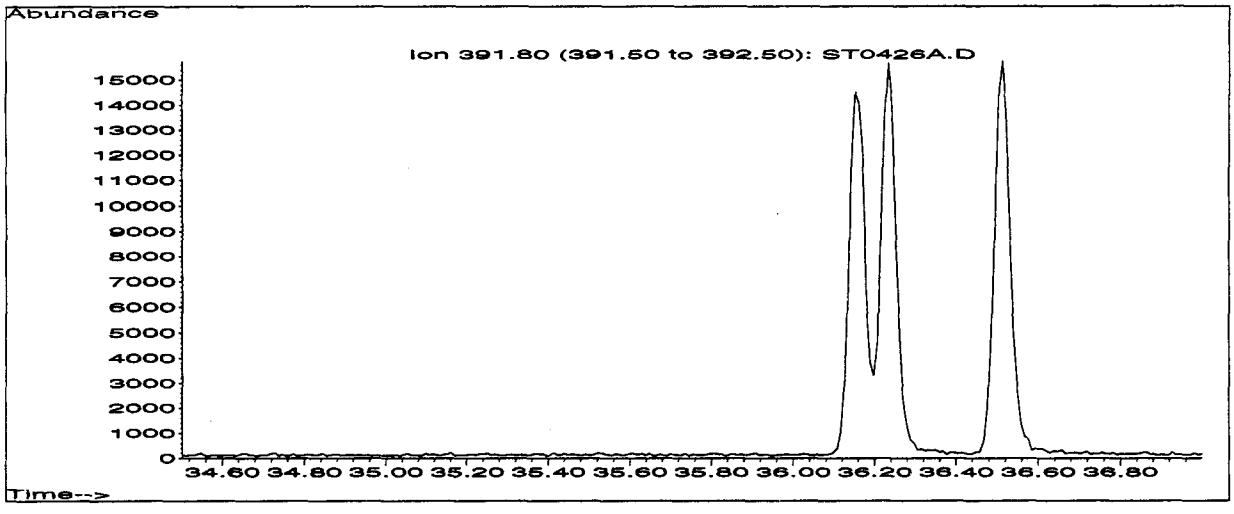


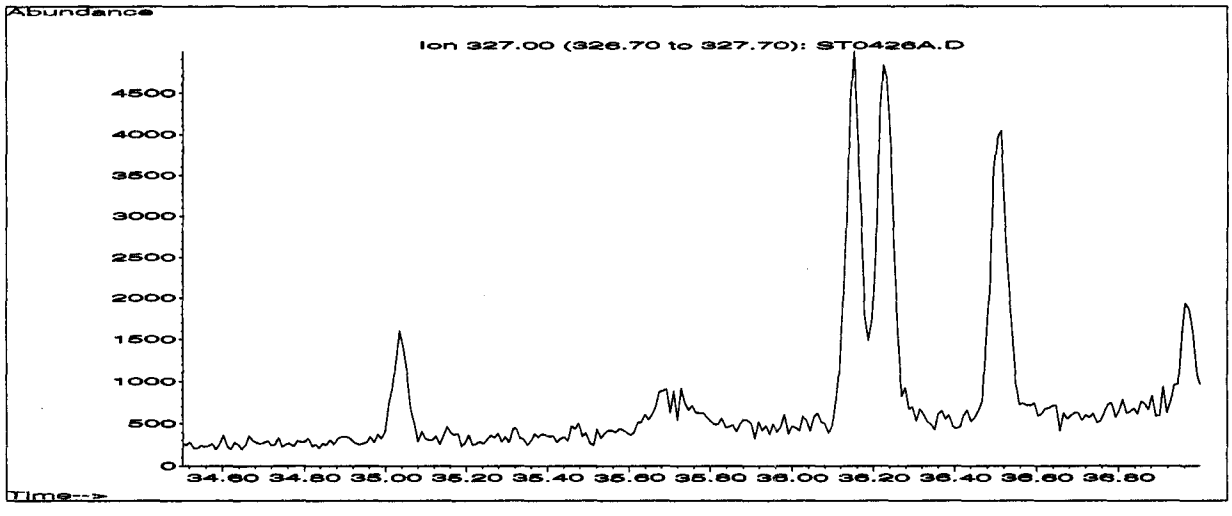


HxCDD TOTAL

TS R.T. Lower Limit	34.50
TS R.T. Upper Limit	37.00

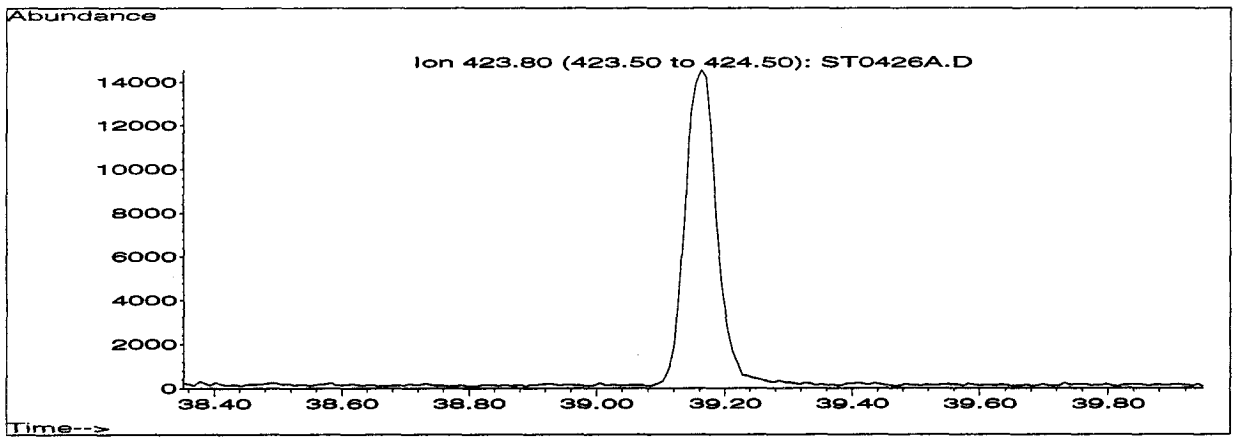


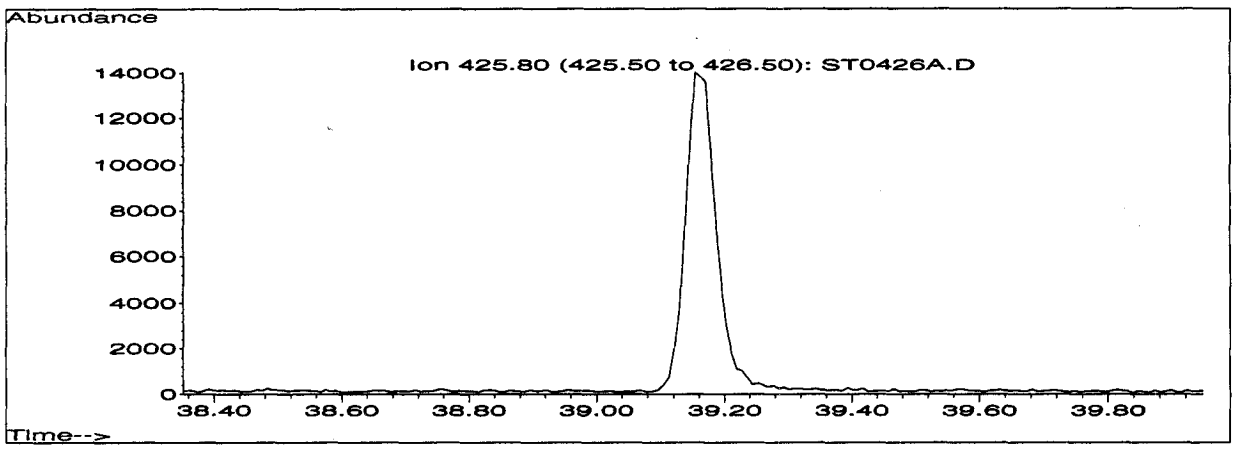


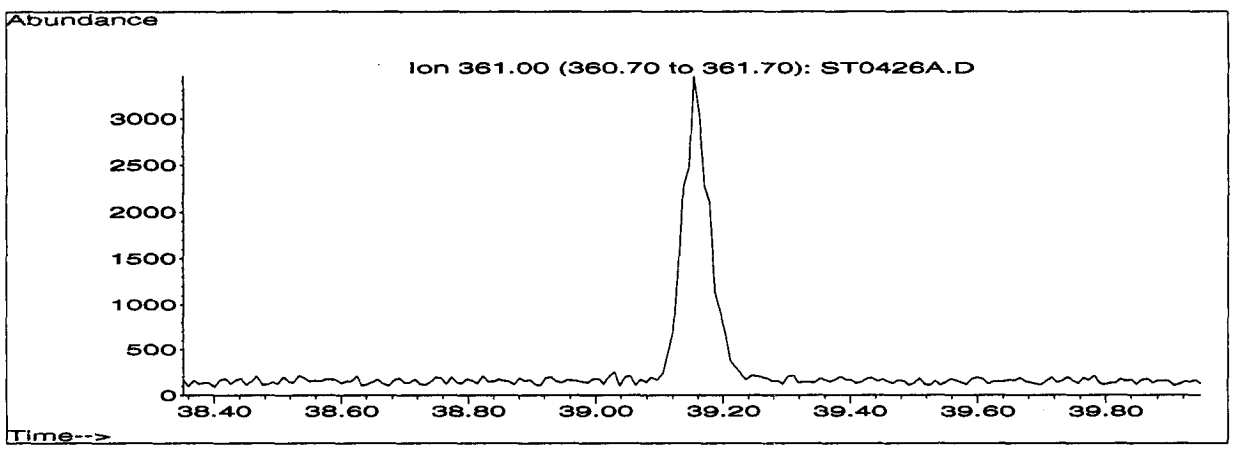


HpCDD TOTAL

TS R.T. Lower Limit	38.35
TS R.T. Upper Limit	39.95

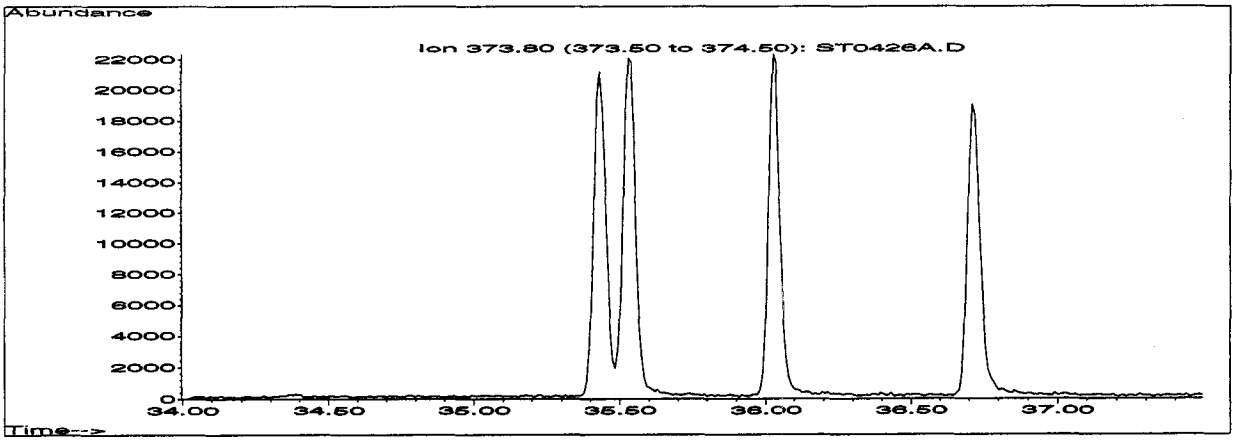


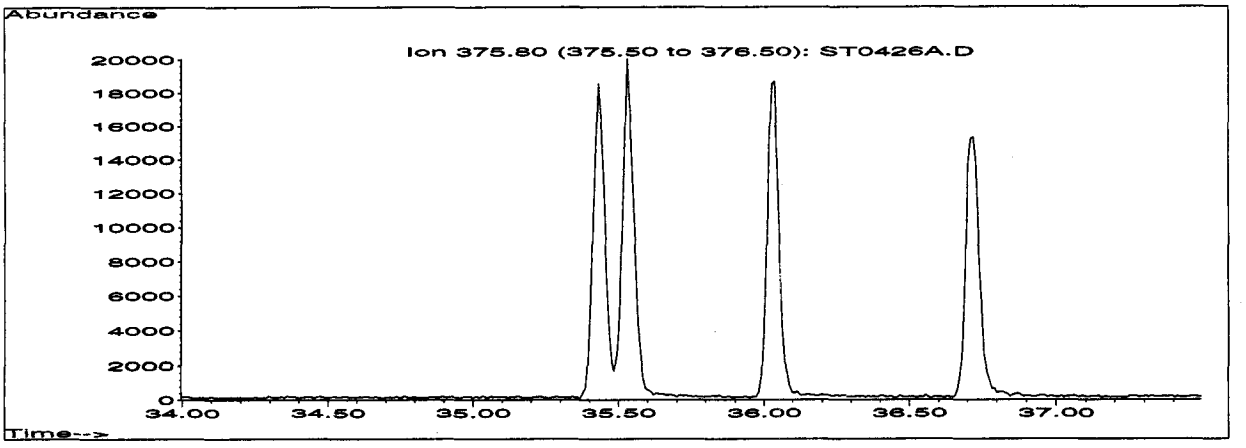


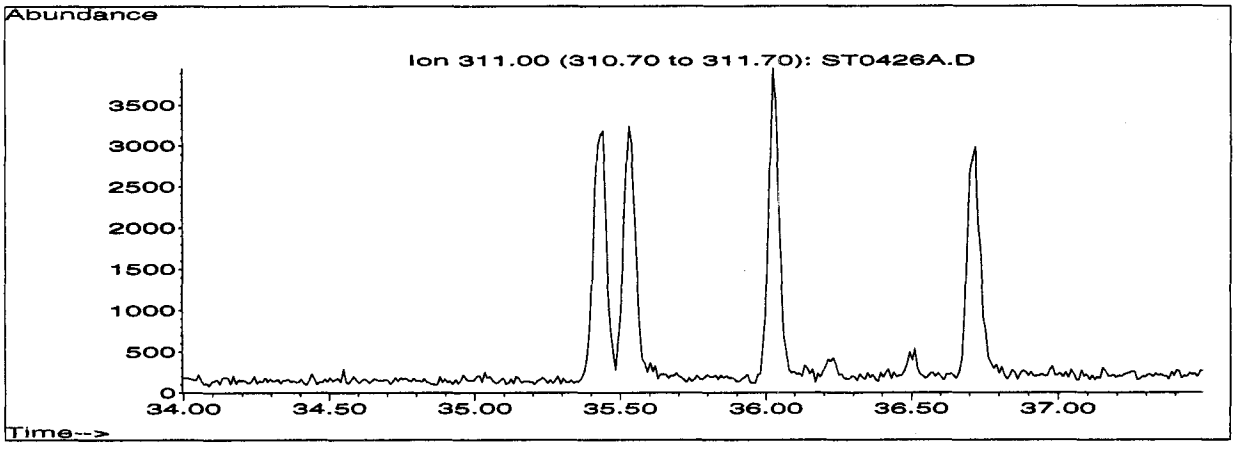


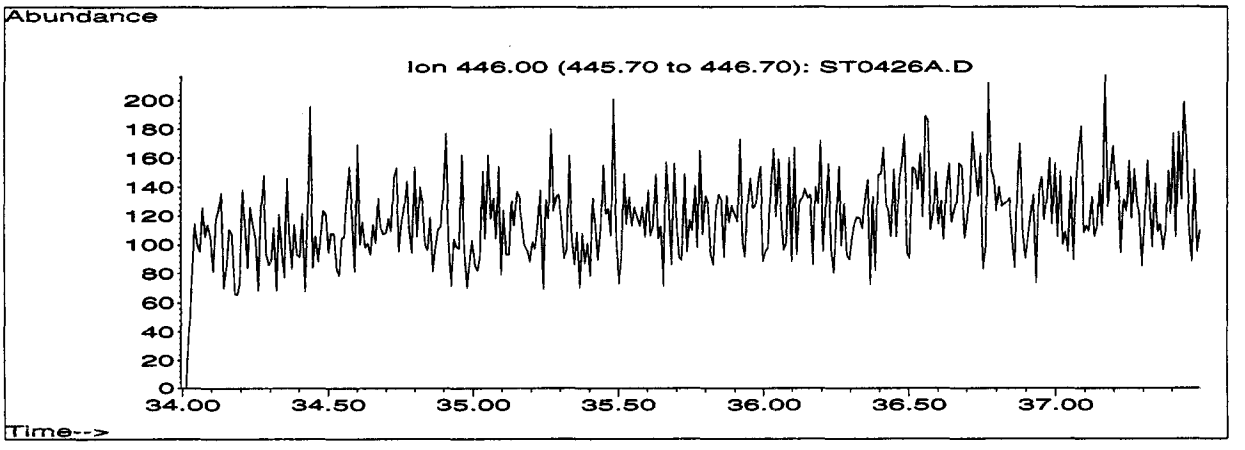
HxCDF TOTAL

TS R.T. Lower Limit	34.00
TS R.T. Upper Limit	37.50



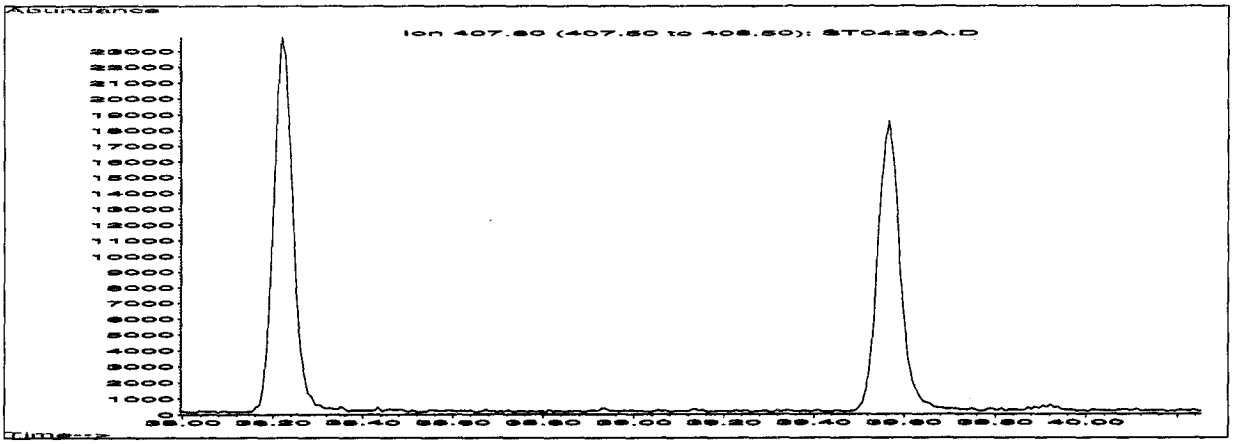


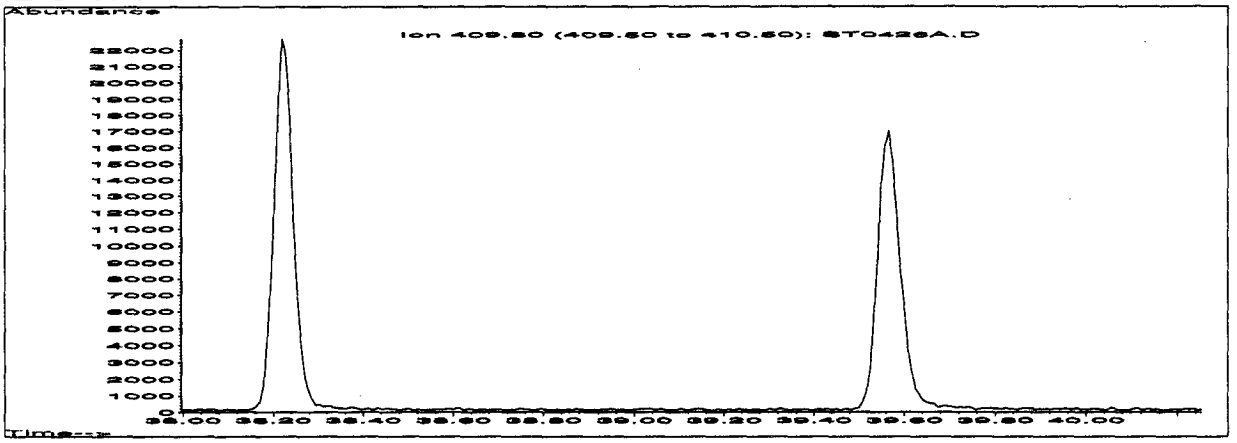


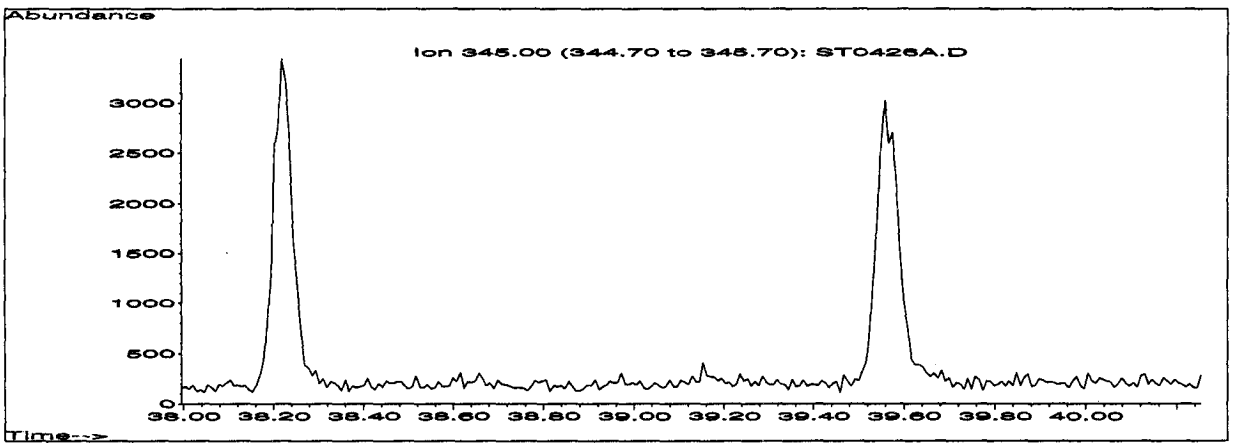


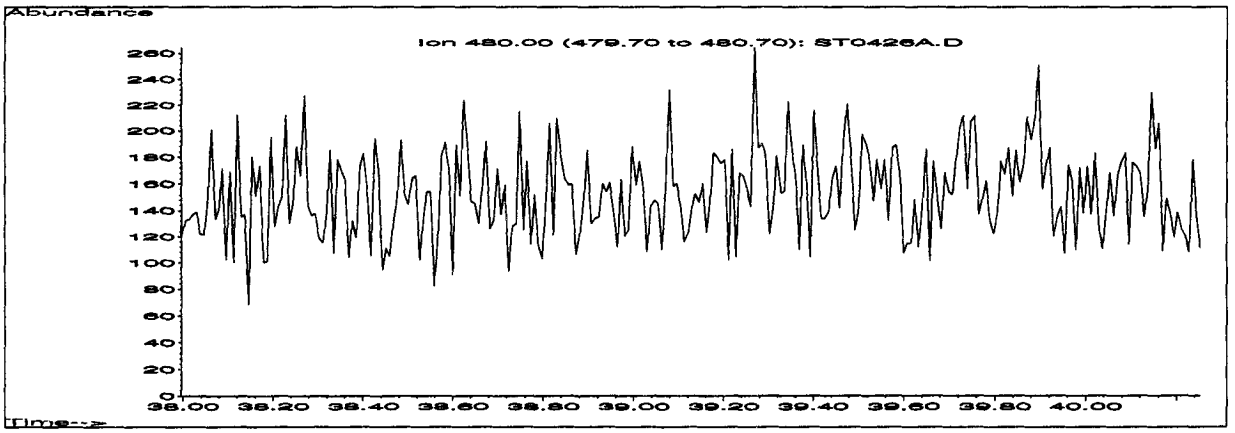
HpCDF TOTAL

TS R.T. Lower Limit	38.00
TS R.T. Upper Limit	40.25

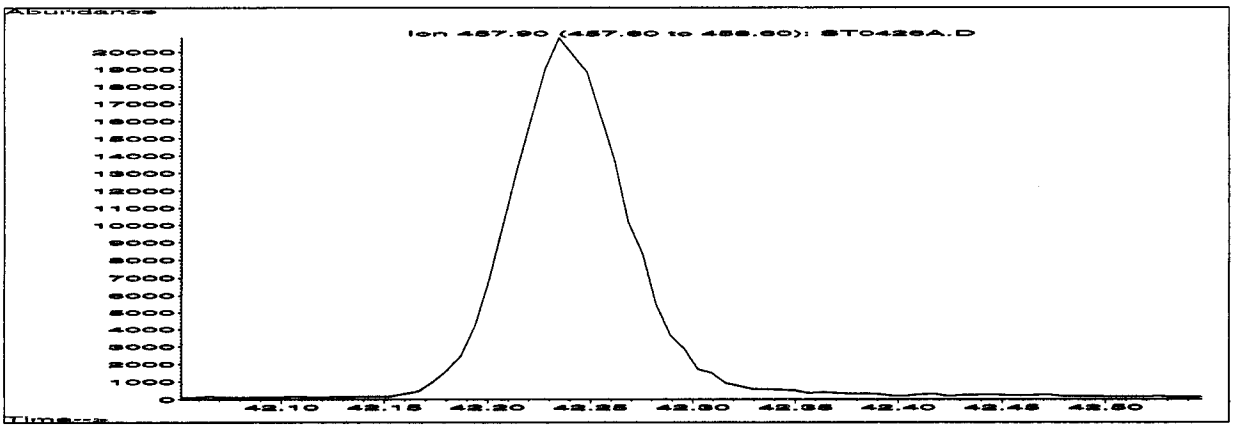


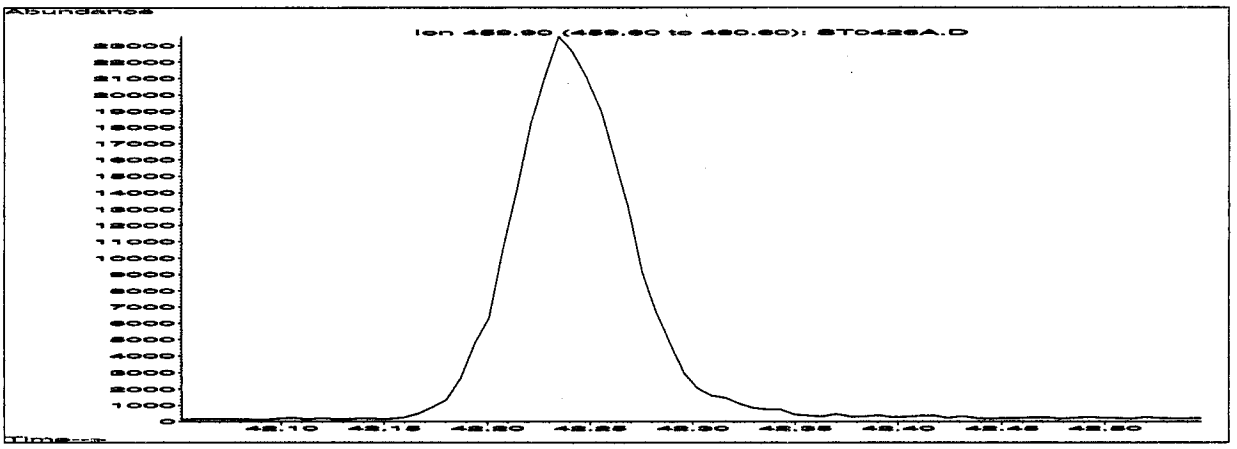


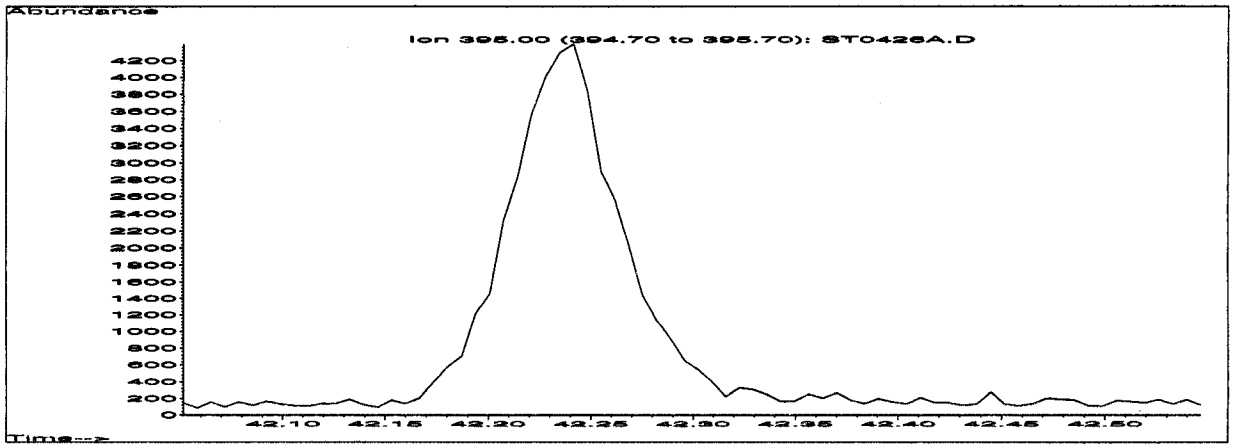




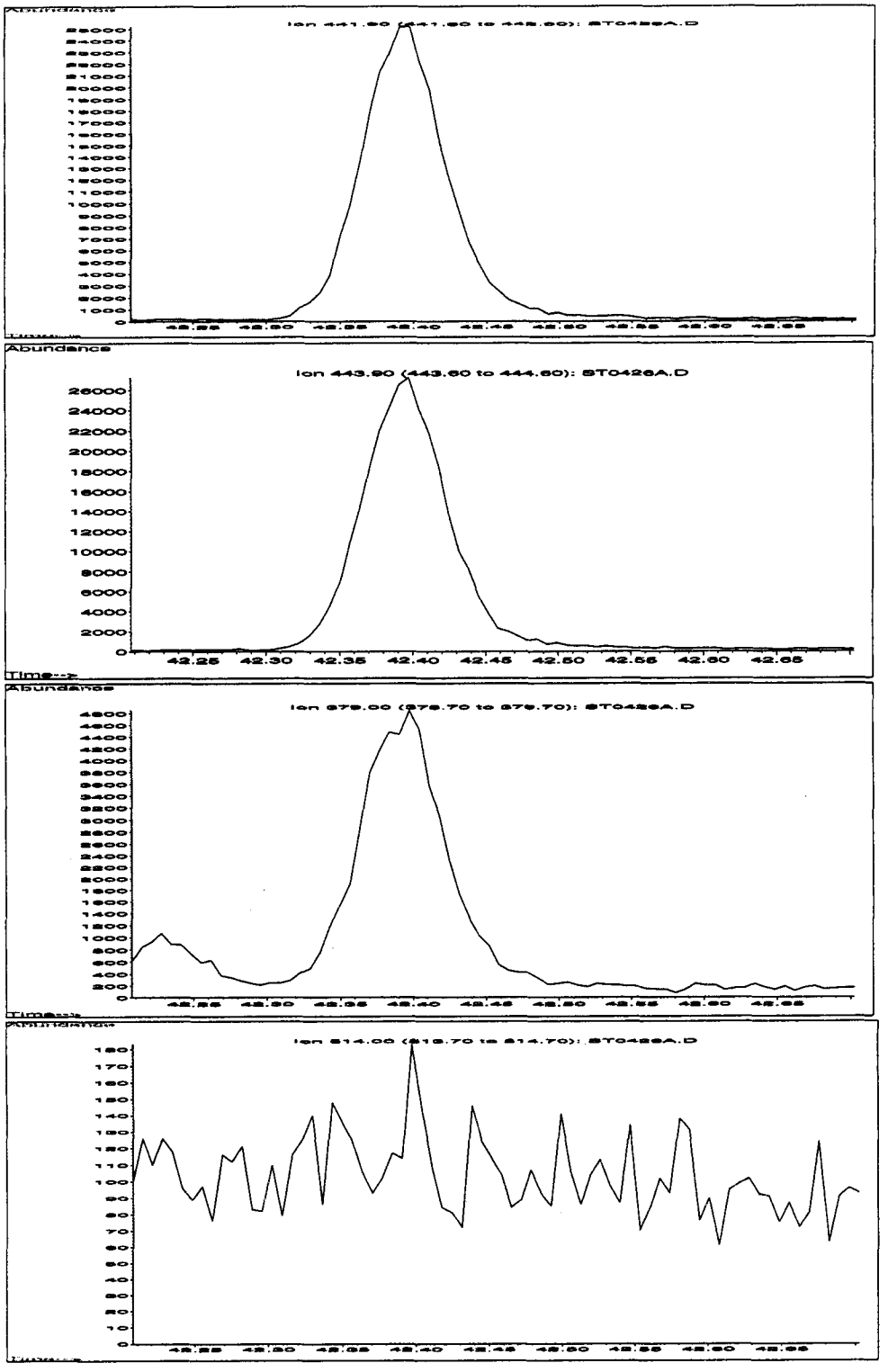
OCDD			
TS R.T. Lower Limit	42.03		
TS R.T. Upper Limit	42.53		
Ret. Time	42.23		
Target Ion	457.9	Q1 Ion	459.9
Target Response	81838	Q1 Response	91632
Total Response	173470	Ion ratio	0.89
Q2 Ion	395		
Q2 Response	16808		





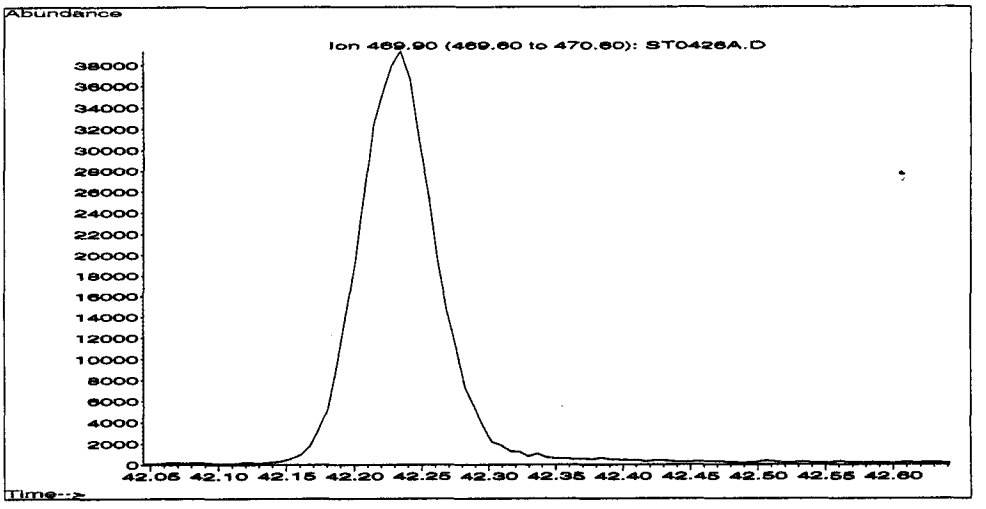


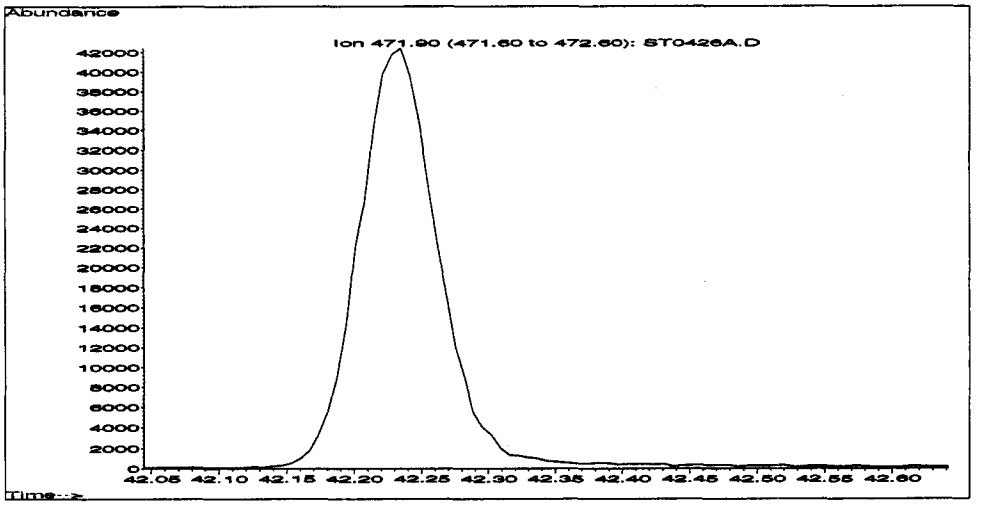
OCDF			
TS R.T. Lower Limit	42.20		
TS R.T. Upper Limit	42.70		
Ret Time	42.40		
Target Ion	441.9	Q1 Ion	443.9
Target Response	102314	Q1 Response	111837
Target Response	214151	Ion Ratio	0.91
Q2 Ion	379	DPE Ion	514
Q2 Response	19300	DPE Response	0



13C-OCDD-IS

RT Lower Limit	42.03		
RT Upper Limit	42.63		
Ret Time	42.23		
Target Ion	469.9	Q1 Ion	471.9
Target Response	157921	Q1 Response	172840
Total response	330761	Ratio	0.91





Quantitation Report (Not Reviewed)

Sample ID: CS-2 10LRES003
10LRES003 CS-2

Size: 0.000
Inst : DB1

Data File:C:\8280\2DB\042610.B\ST0426B.D
Acq On :26 Apr 2010 16:44

Vial: 91
Operator: MEO
Sample Amount: 0.00

MS Integration Params: RTEINT.P
Quant Time: Apr 26 18:47 2010

Quant Results File: 10AP26I2.RES

Quant Method : C:\8280\ DATA METHODS\10AP26I2.M (RTE Integrator)
Title : Dioxin Furan Total
Last Update : Mon Apr 26 18:46:33 2010
Response via : Initial Calibration
DataAcq Meth : TOKAS
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Recovery\Internal Stds	R.T.	QIon	Ratio	Response	Conc	Dev(Min)
1) 13C-1234-TCDD	24.05	332+334	0.81	232869	25.00 NG	0.00
5) 13C-123789-HxCDD	36.50	402+404	1.27	351458	25.00 NG	0.00
9) 13C-2378-TCDF	23.24	316+318	0.78	307470	25.00 NG	0.00
15) 13C-2378-TCDD	24.33	332+334	0.81	219650	25.00 NG	0.00
20) 13C-123678-HxCDD	36.22	402+404	1.25	271329	25.00 NG	0.00
27) 13C-1234678-HpCDF	38.21	420+422	1.07	346390	25.00 NG	0.00
36) 13C-OCDD	42.23	470+472	0.92	464347	50.00 NG	0.00

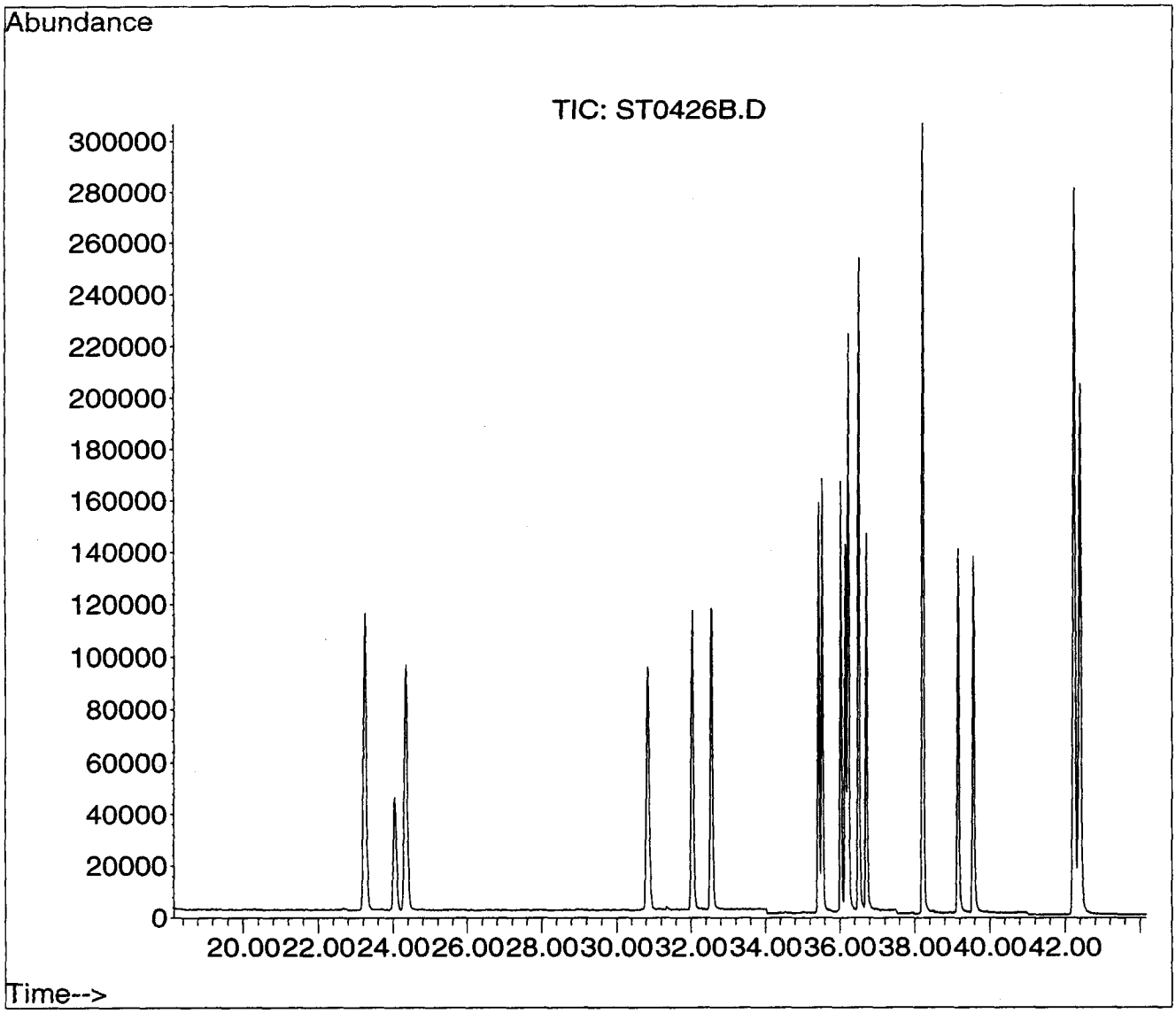
Surrogate Compound						
4) 37Cl-2378-TCDD	24.35	328		164395	12.274 NG	0.00
Spiked Amount = 12.500		RRF = 1.438		Recovery =	98.16%	

Target Compounds	RT	Ratio		Area	RRF	Conc	EDL	%Rec
2) 13C-2378-TCDF-IS	23.24	0.78		307470	1.391	23.731	0.0661	94.9
3) 13C-2378-TCDD-IS	24.33	0.81		219650	0.958	24.621	1.9799	98.5
6) 13C-123678-HxCDD-	36.22	1.25		271329	0.795	24.267	0.1042	97.1
7) 13C-1234678-HpCDF	38.21	1.07		346390	0.944	26.111	0.0756	104.4
8) 13C-OCDD-IS	42.23	0.92		464347	0.530	62.295	0.1262	124.6
10) 2378-TCDF	23.26	0.77		192165	1.264	12.358	0.1118	
1	22.72	0.73		3608		0.232		
2	23.26	0.77		192359		12.360		
3	24.03	1.36	#	2400		0.154		
11) TCDF TOTAL	22.00	1.36		198367	1.265	12.746		
12) 12378-PeCDF	30.86	1.50		448364	1.145	31.847	0.0249	
13) 23478-PeCDF	32.04	1.49		442087	1.149	31.274	0.0948	
1	30.86	1.50		451138		26.784		
2	31.34	1.27	#	5201		0.309		
3	32.04	1.48		442087		31.274		
14) PeCDF TOTAL	29.50	1.48		898426	1.370	58.367		
16) 2378-TCDD	24.35	0.78		135964	1.262	12.262	0.0284	
1	23.24	5.07	#	28085		1.853		
2	24.35	0.77		138708		9.150		
17) TCDD TOTAL	22.50	0.77		166793	1.725	11.003		
18) 12378-PeCDD	32.56	1.54		303886	1.128	30.656	0.0568	
1	32.56	1.55		306050		29.751		
19) PeCDD TOTAL	30.00	1.55		306050	1.171	29.751		
21) 123478-HxCDD	36.15	1.27		348675	1.020	31.501	0.7173	
22) 123678-HxCDD	36.23	1.26		328371	1.060	28.536	0.3306	
23) 123789-HxCDD	36.51	1.26		359238	1.068	30.992	0.5465	
1	36.15	1.27		348675		31.501		
2	36.23	1.26		328371		28.536		
3	36.51	1.26		1195155		73.493		
24) HxCDD TOTAL	36.50	1.26		1872201	1.498	133.530		

25)	1234678-HpCDD	39.16	1.04	363608	0.947	35.382	0.1611
	1	39.16	1.04	363608		35.382	
26)	HpCDD TOTAL	39.35	1.04	363608	1.047	35.382	
28)	123478-HxCDF	35.43	1.21	424967	1.130	27.132	1.8376
29)	123678-HxCDF	35.53	1.18	438836	1.223	25.894	0.3492
30)	234678-HxCDF	36.02	1.19	417931	1.114	27.080	0.0928
31)	123789-HxCDF	36.71	1.20	403896	1.058	27.558	0.1173
	1	35.43	1.21	424967		27.132	
	2	35.53	1.18	438836		25.894	
	3	36.02	1.18	417931		27.080	
	4	36.71	1.21	405077		17.229	
32)	HxCDF TOTAL	36.00	1.21	1686811	1.697	97.335	
33)	1234678-HpCDF	38.22	1.05	507408	1.244	29.444	0.1032
34)	1234789-HpCDF	39.57	1.05	452512	1.032	31.652	0.1638
	1	38.22	1.05	507408		29.444	
	2	39.57	1.05	452512		31.652	
35)	HpCDF TOTAL	39.50	1.05	959920	1.349	61.096	
37)	OCDD	42.24	0.90	640609	1.137	60.651	0.1055
38)	OCDF	42.39	0.91	808983	1.499	58.112	0.1460

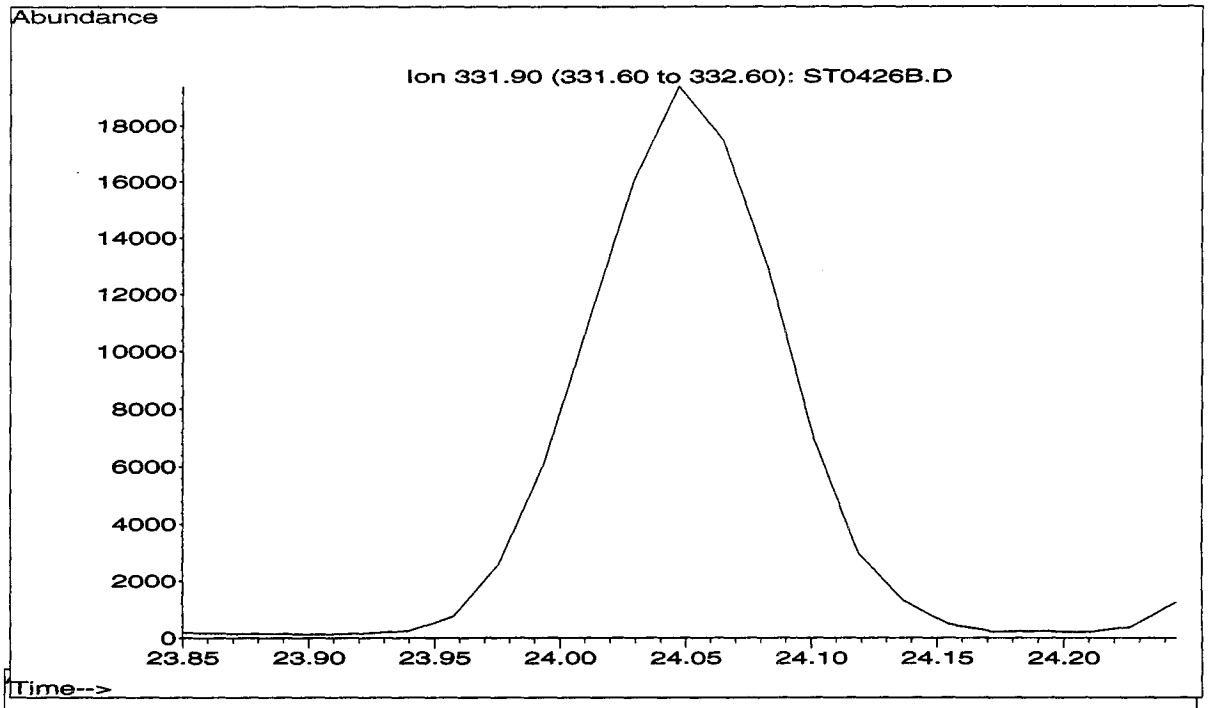
(#) = qualifier out of range•: areas and concentration based on theoretical ion ratio
(m) = manual integration
ST0426B.D 10AP26I2.M Mon Apr 26 18:47:11 2010

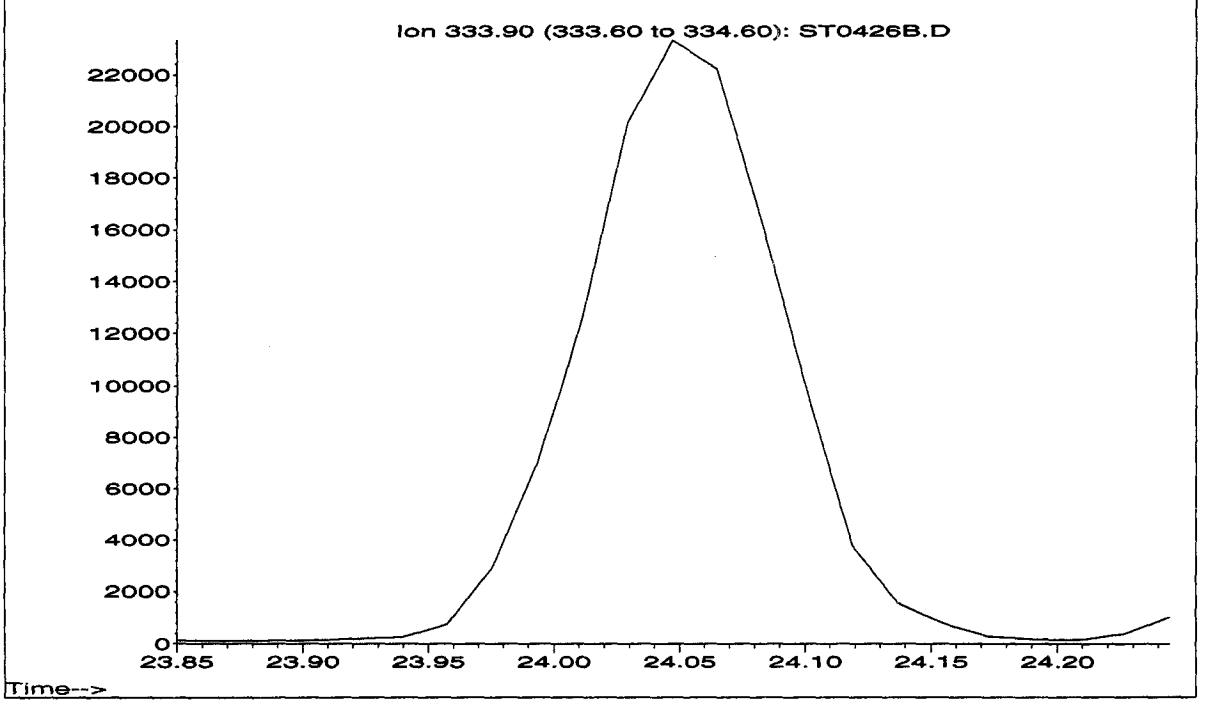
Data File Name	ST0426B.D
Data File Path	C:\8280\2DB\042610.B\
Operator	MEO
Date Acquired	4/26/2010 16:44
Acq. Method File	TOKAS
Sample Name	10LRES003 CS-2
Misc Info	CS-2 10LRES003
Vial Number	91
Instrument Name	2DB
Sample Multiplier	1
Sample Amount	0



13C-1234-TCDD

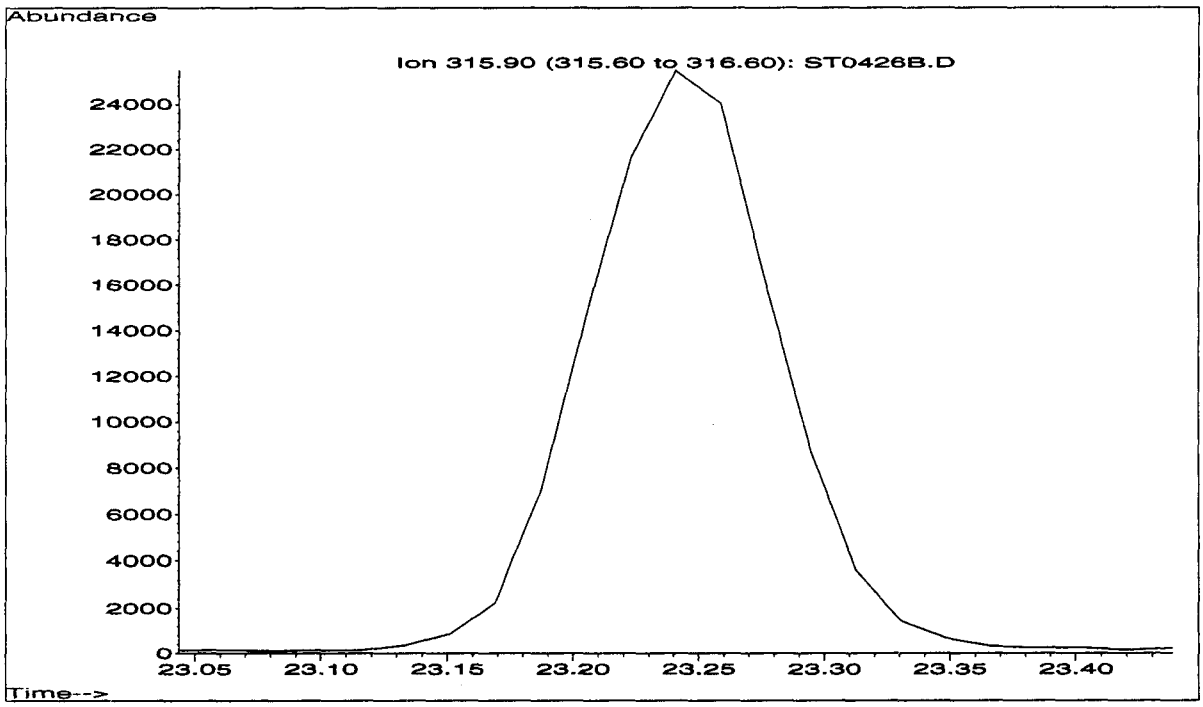
TS R.T. Lower Limit	23.85		
TS R.T. Upper Limit	24.25		
Ret Time	24.05		
Target Ion	331.9	Q1 Ion	333.9
Target Response	103888	Q1 Response	128981
Total Response	232869	Ion Ratio	0.81

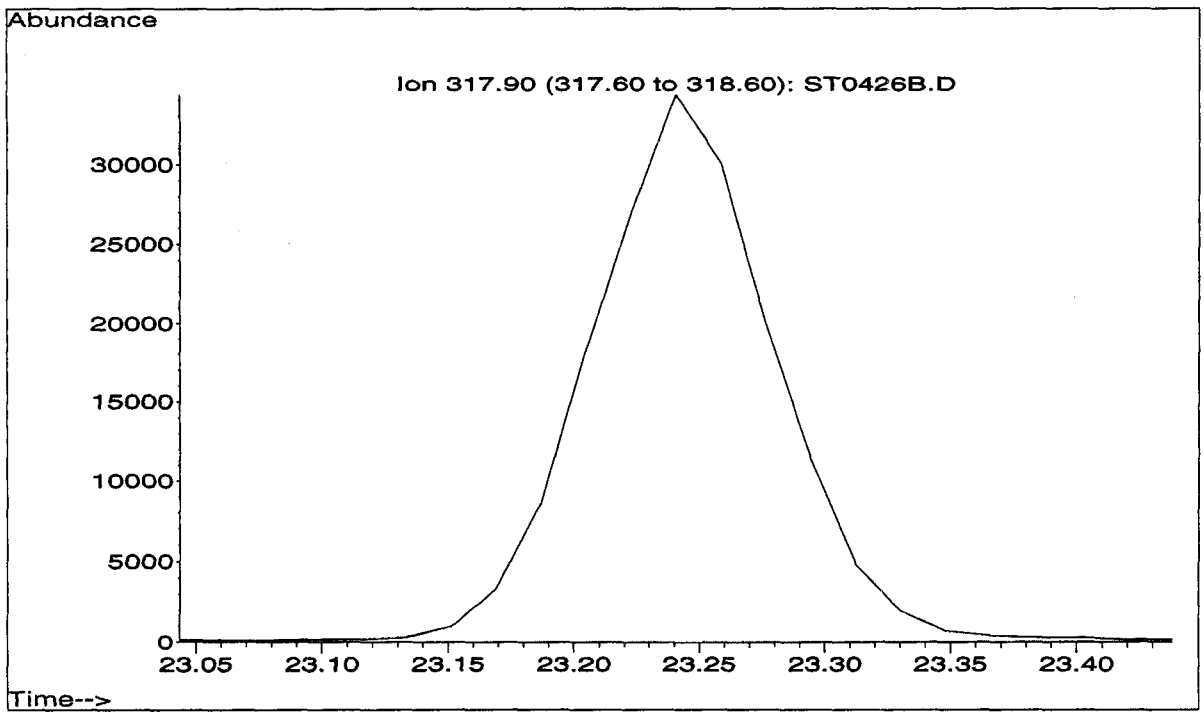




13C-2378-TCDF-IS

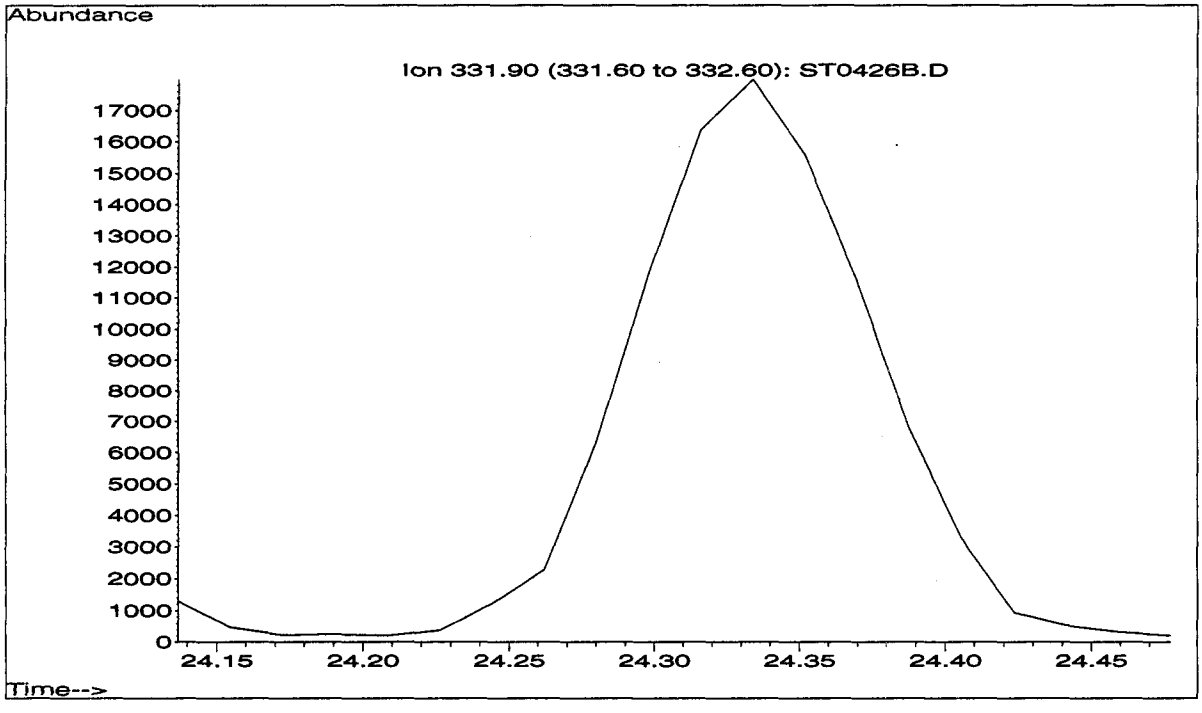
TS R.T. Lower Limit	23.04		
TS R.T. Upper Limit	23.44		
Ret Time	23.24		
Target Ion	315.9	Q1 Ion	317.9
Target Response	134946	Q1 Response	172524
Target Response	307470	Ion Ratio	0.78

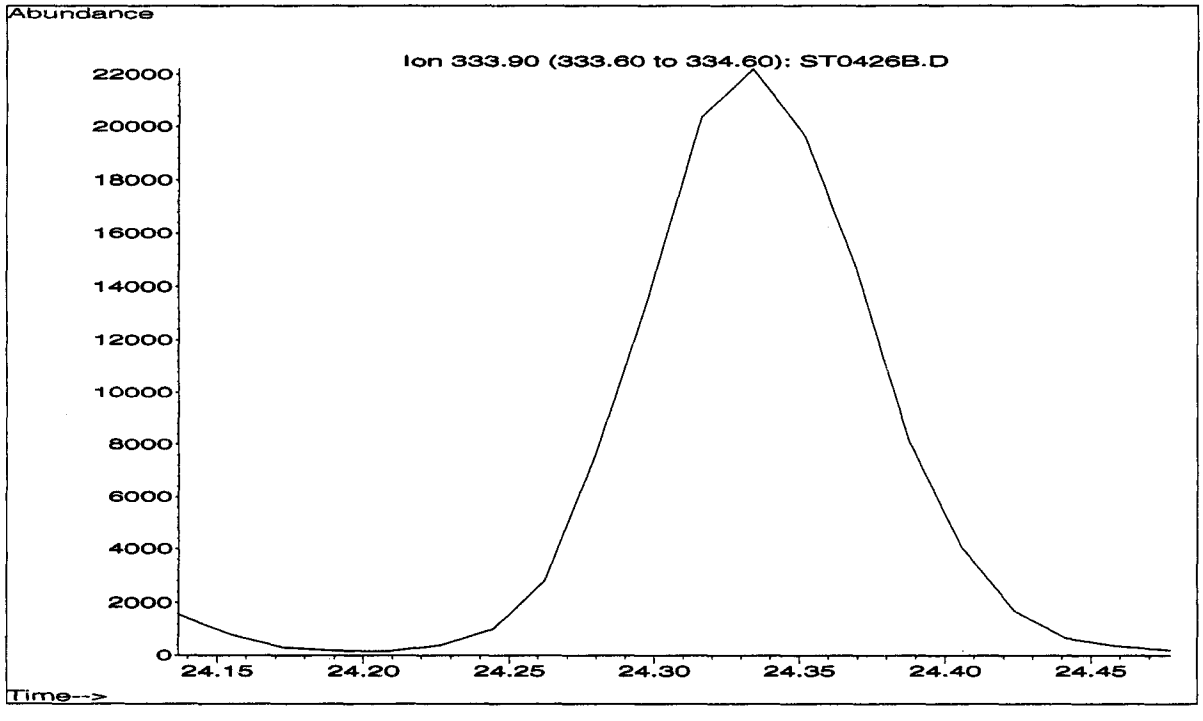




13C-2378-TCDD-IS

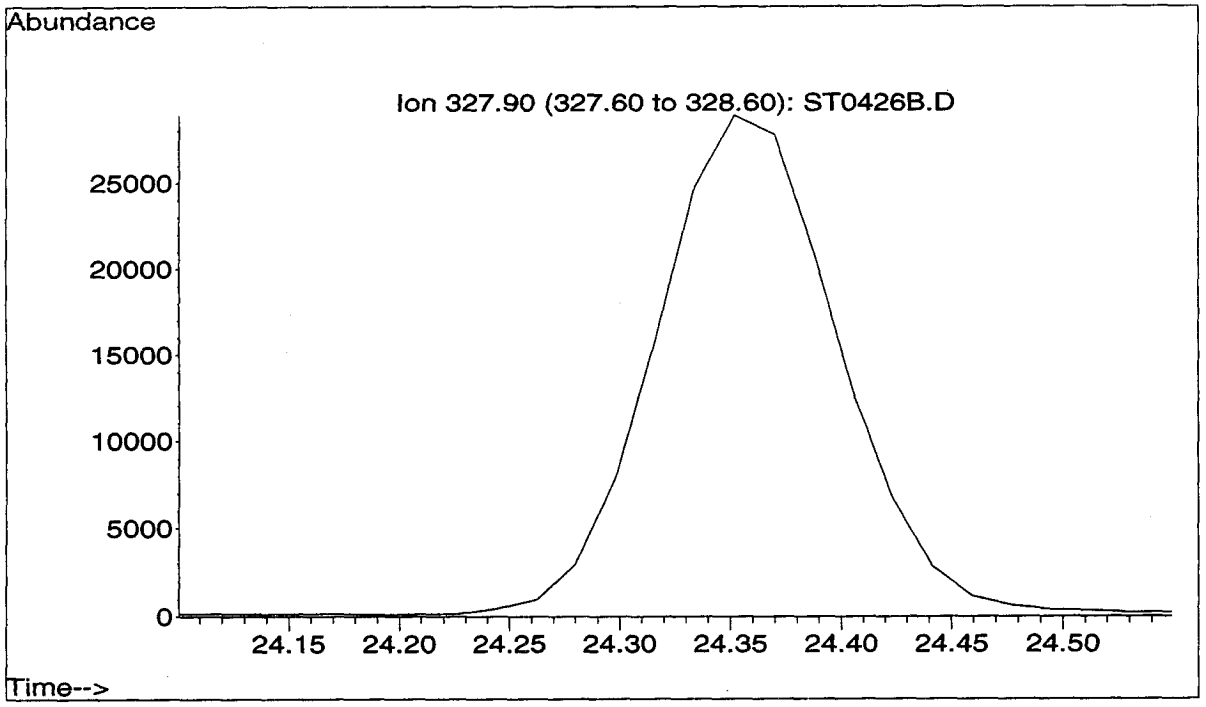
TS R.T. Lower Limit	24.14		
TS R.T. Upper Limit	24.49		
Ret Time	24.33		
Target Ion	331.9	Q1 Ion	333.9
Target Response	98222	Q1 Response	121428
Total Response	219650	Ion Ratio	0.81

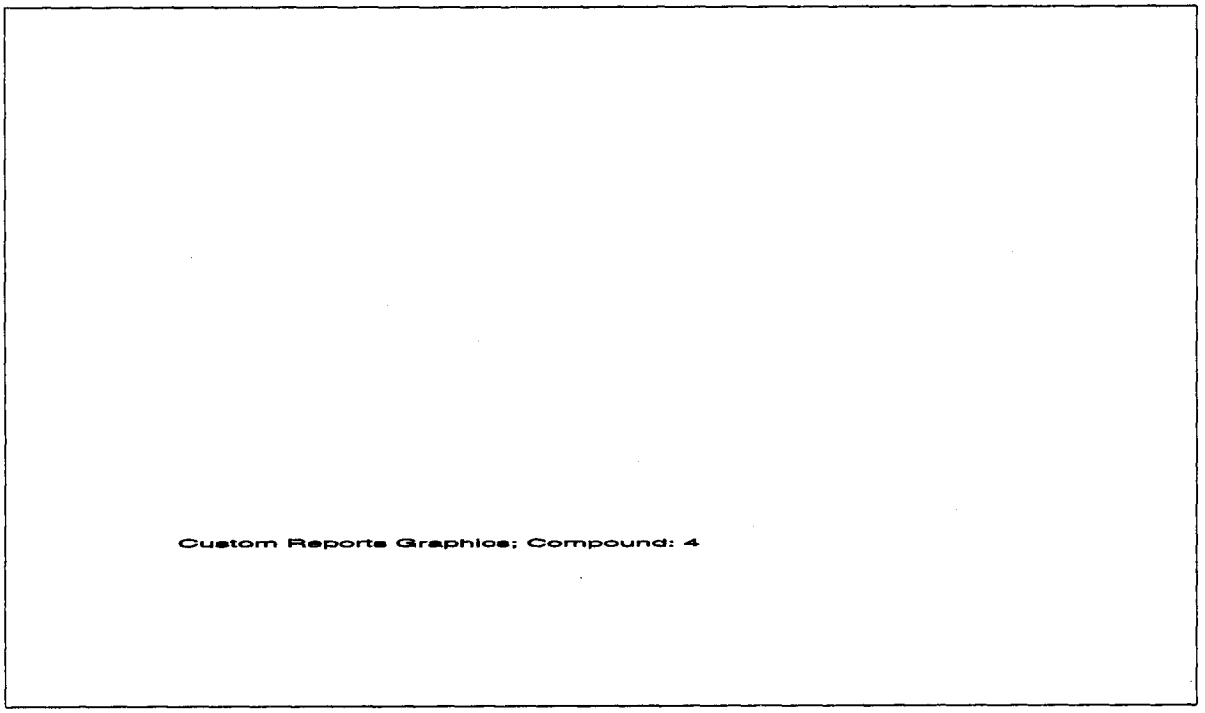




37Cl-2378-TCDD

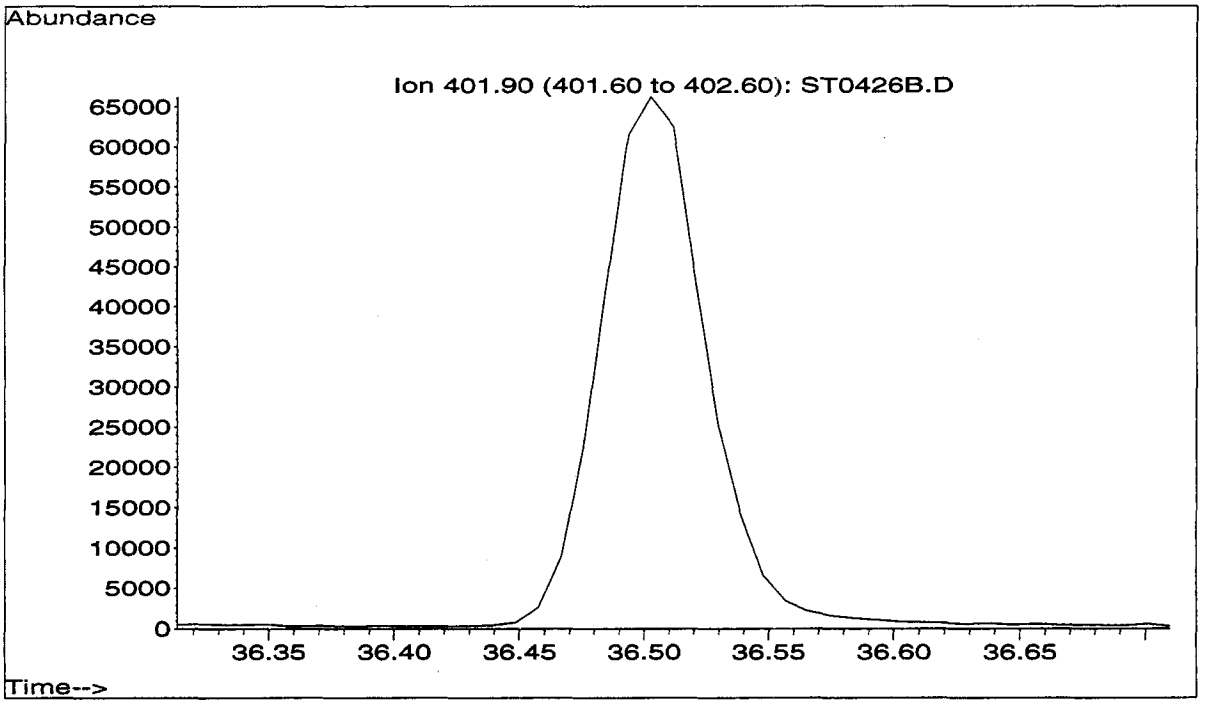
TS R.T. Lower Limit	24.10		
TS R.T. Upper Limit	24.55		
Ret Time	24.35		
Target Ion	327.9	Q1 Ion	0
Target Response	164395	Q1 Response	0
Total Response	164395	Ion Ratio	#DIV/0!

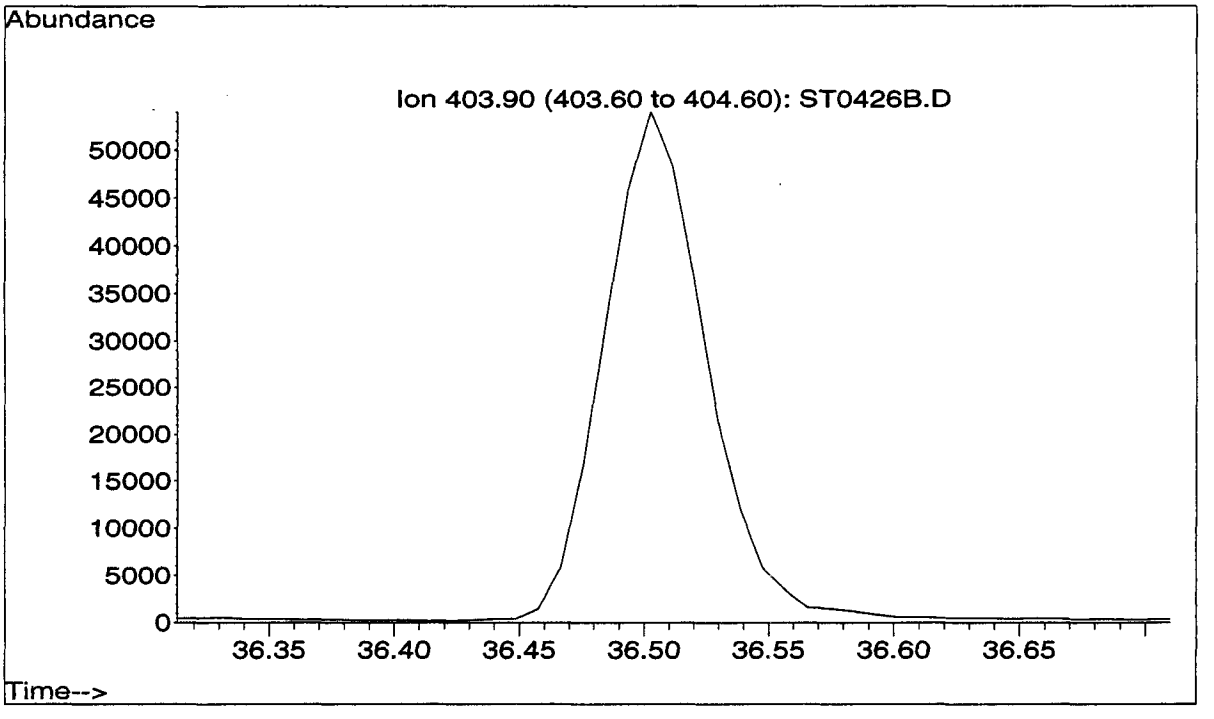




13C-123789-HxCDD

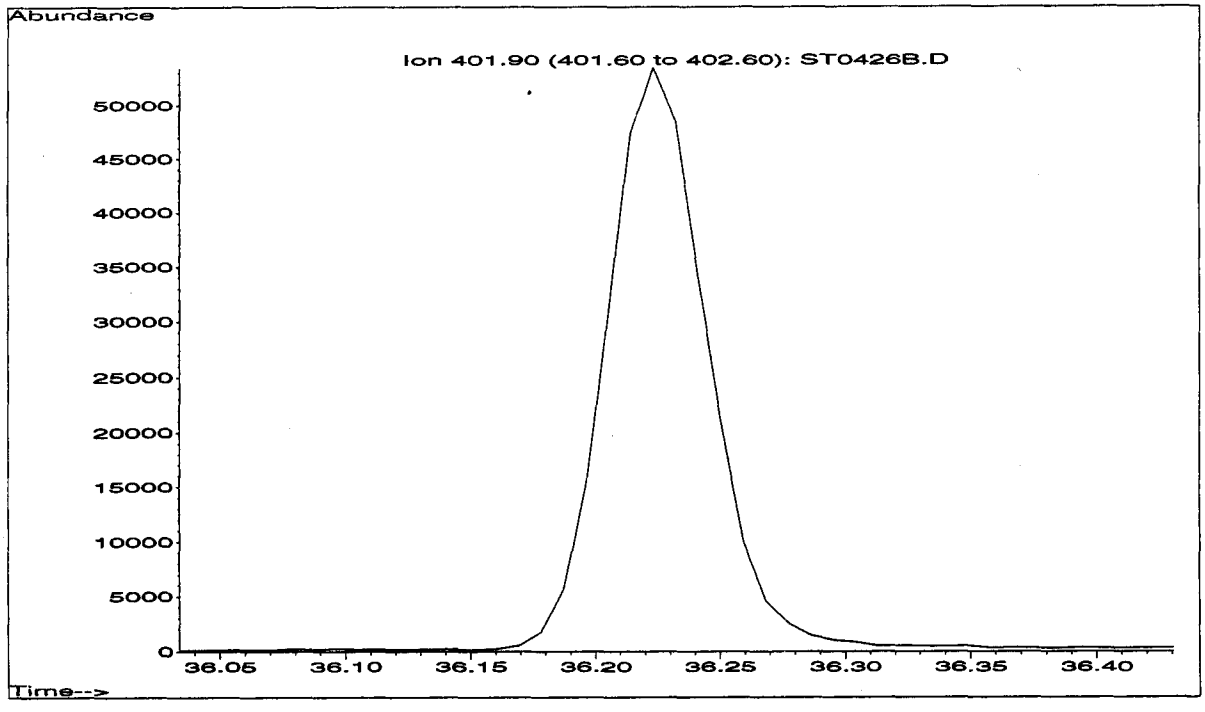
TS R.T. Lower Limit	36.30		
TS R.T. Upper Limit	36.70		
Ret Time	36.50		
Target Ion	401.9	Q1 Ion	403.9
Target Response	196815	Q1 Response	154643
Target Response	351458	Ion Ratio	1.27

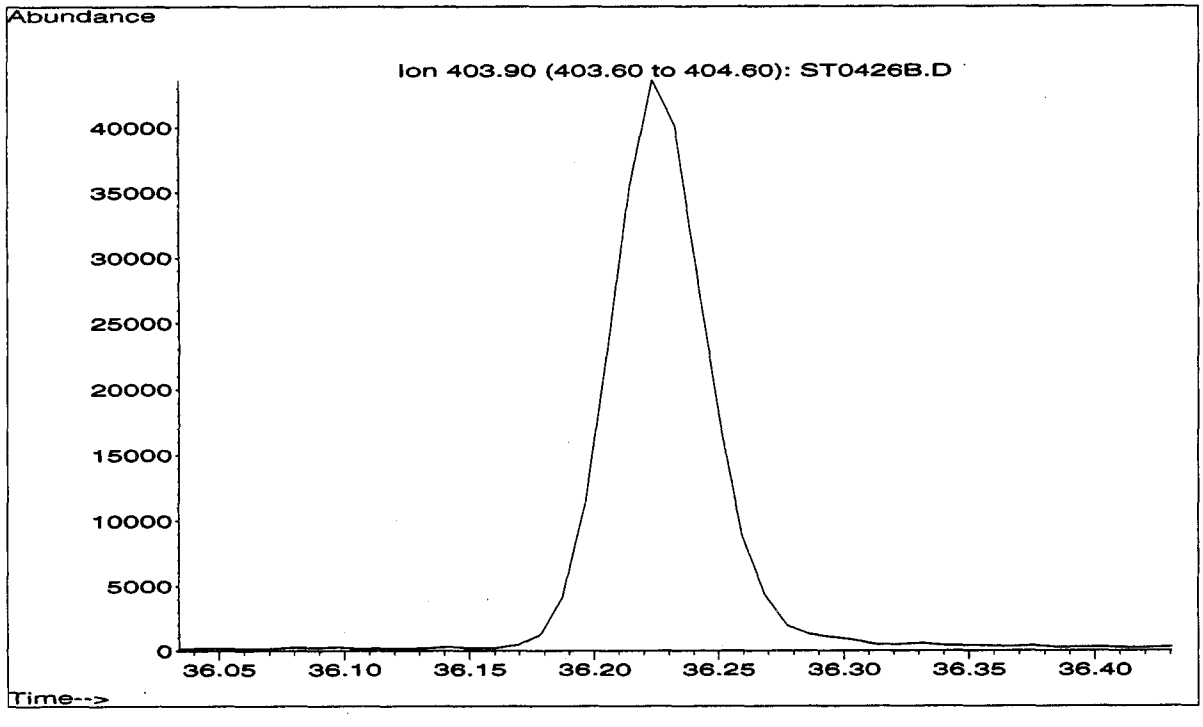




13C-123678-HxCDD-IS

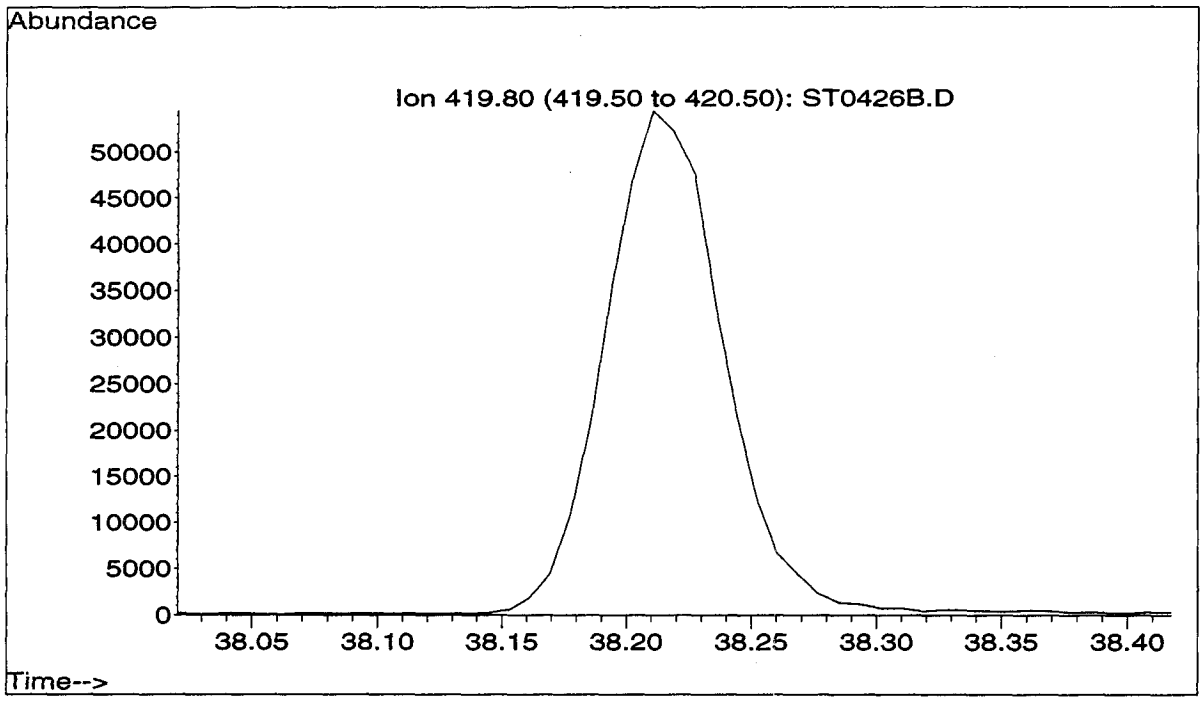
TS R.T. Lower Limit	36.02		
TS R.T. Upper Limit	36.42		
Ret Time	36.22		
Target Ion	401.9	Q1 Ion	403.9
Target Response	150934	Q1 Response	120395
Total Response	271329	Ion Ratio	1.25

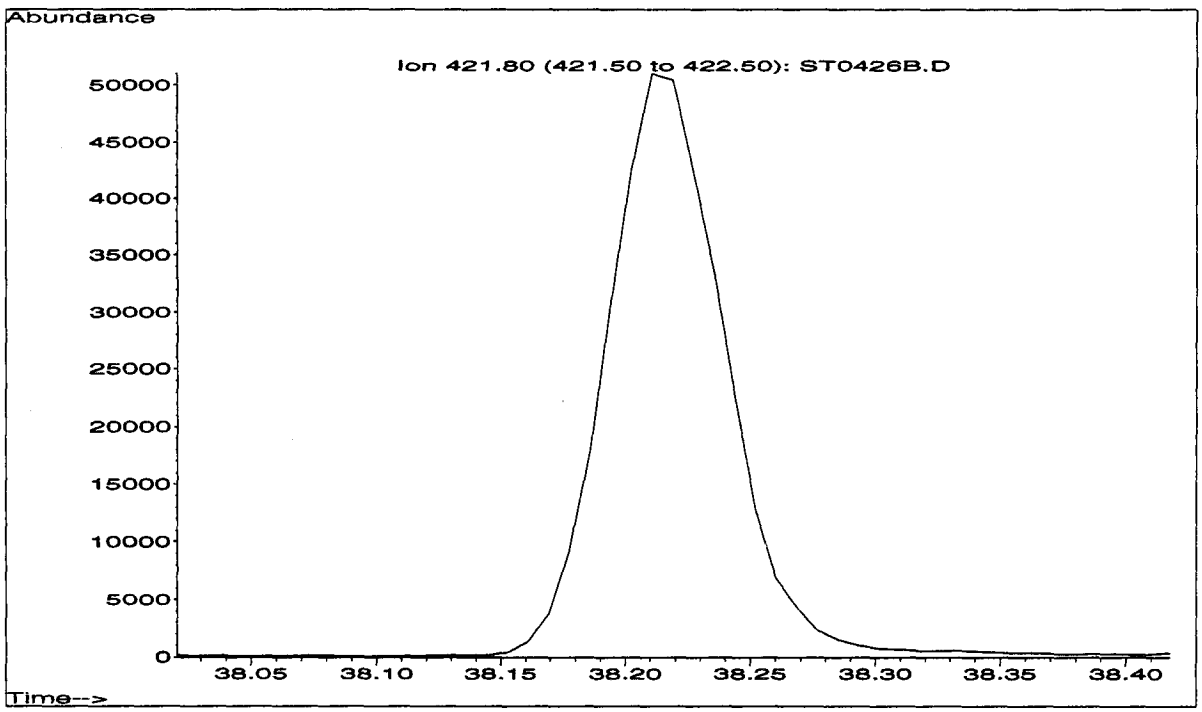




13C-1234678-HpCDF-IS

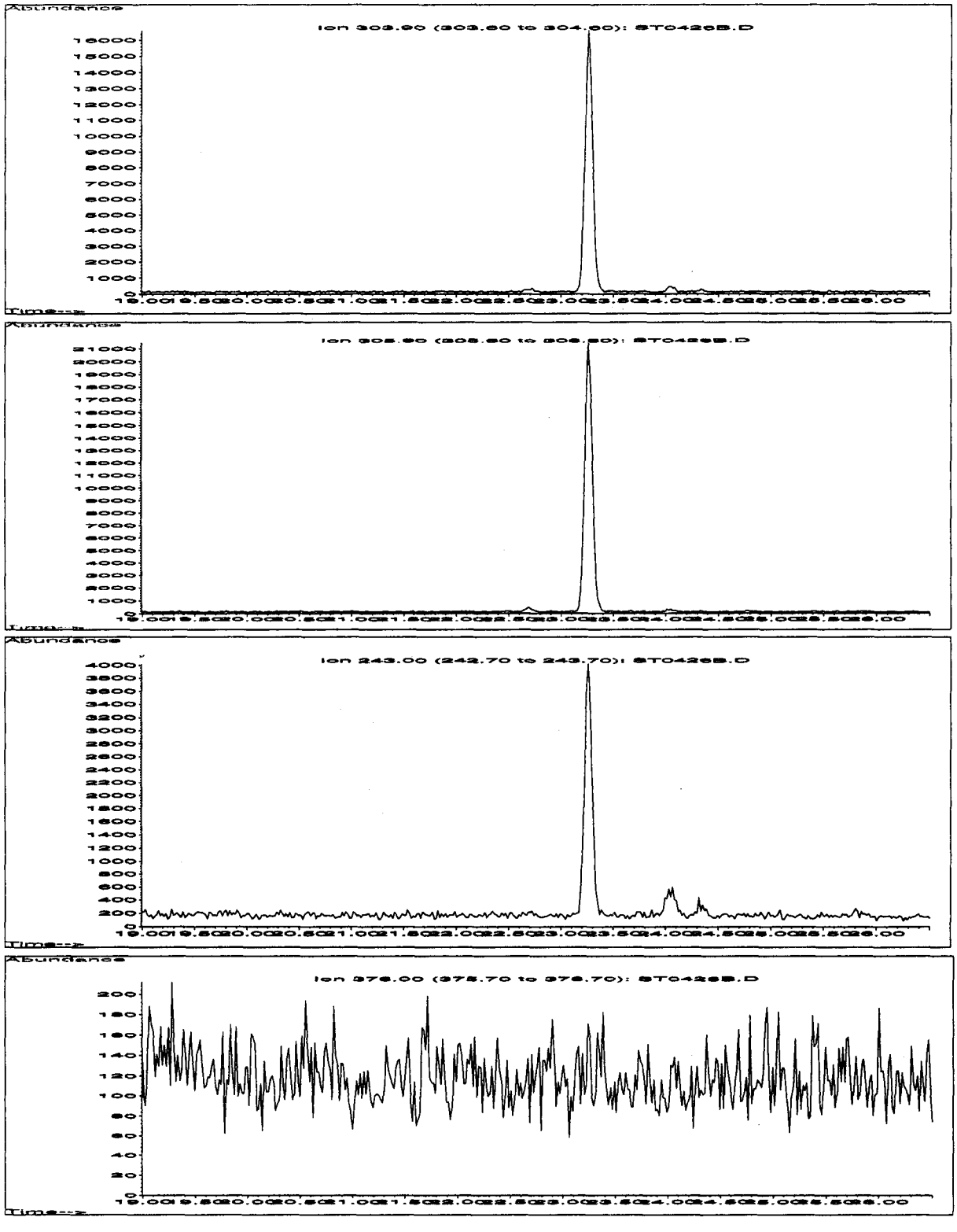
TS R.T. Lower Limit	38.02		
TS R.T. Upper Limit	38.42		
Ret Time	38.21		
Target Ion	419.8	Q1 Ion	421.8
Target Response	178995	Q1 Response	167395
Target Response	346390	Ion Ratio	1.07





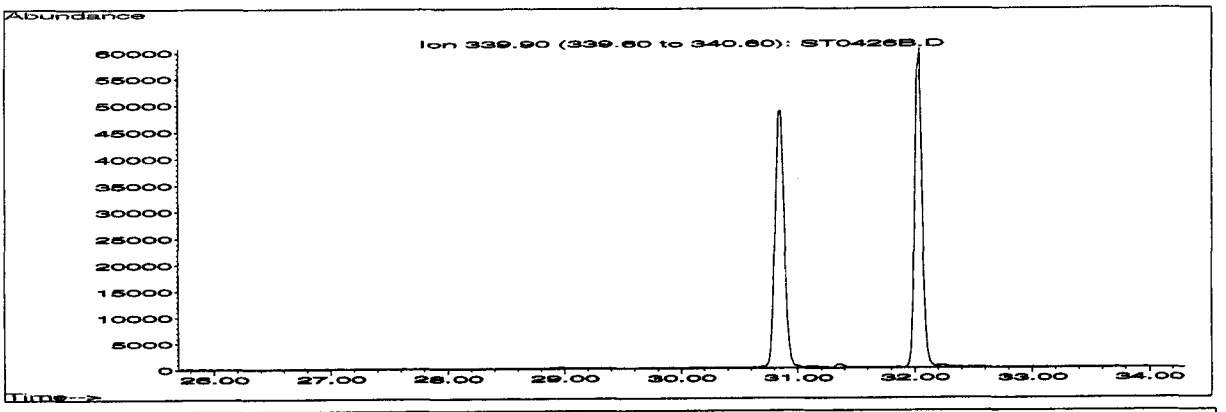
TCDF TOTAL

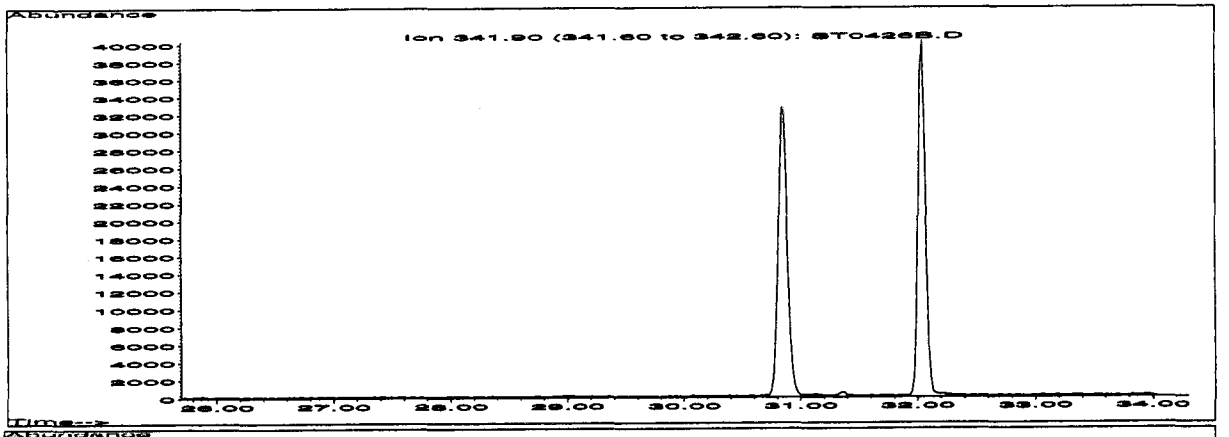
TS R.T. Lower Limit	19.00
TS R.T. Upper Limit	26.50

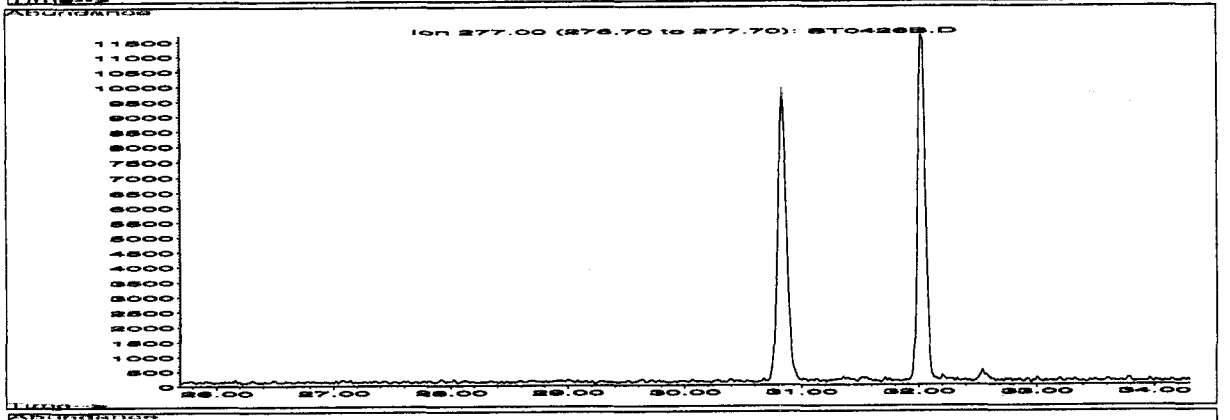


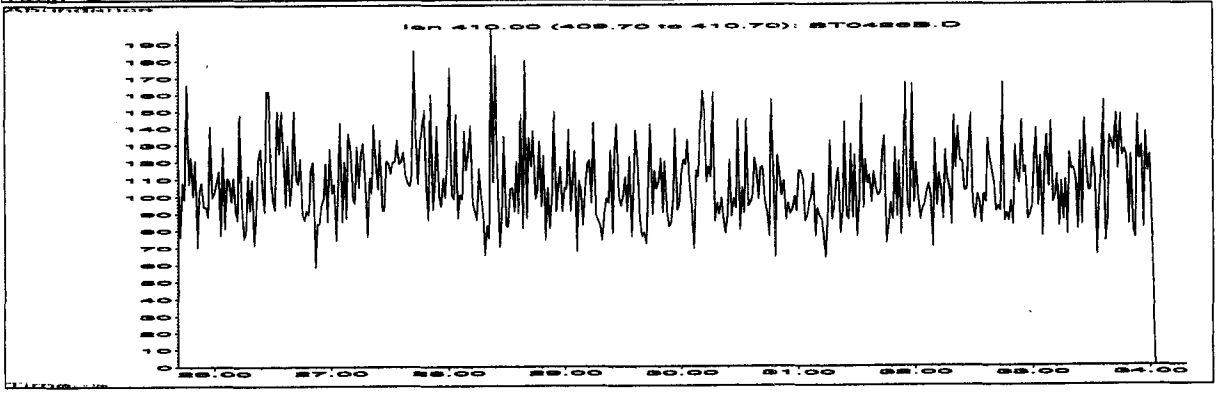
PeCDF TOTAL

TS R.T. Lower Limit	25.70
TS R.T. Upper Limit	34.30



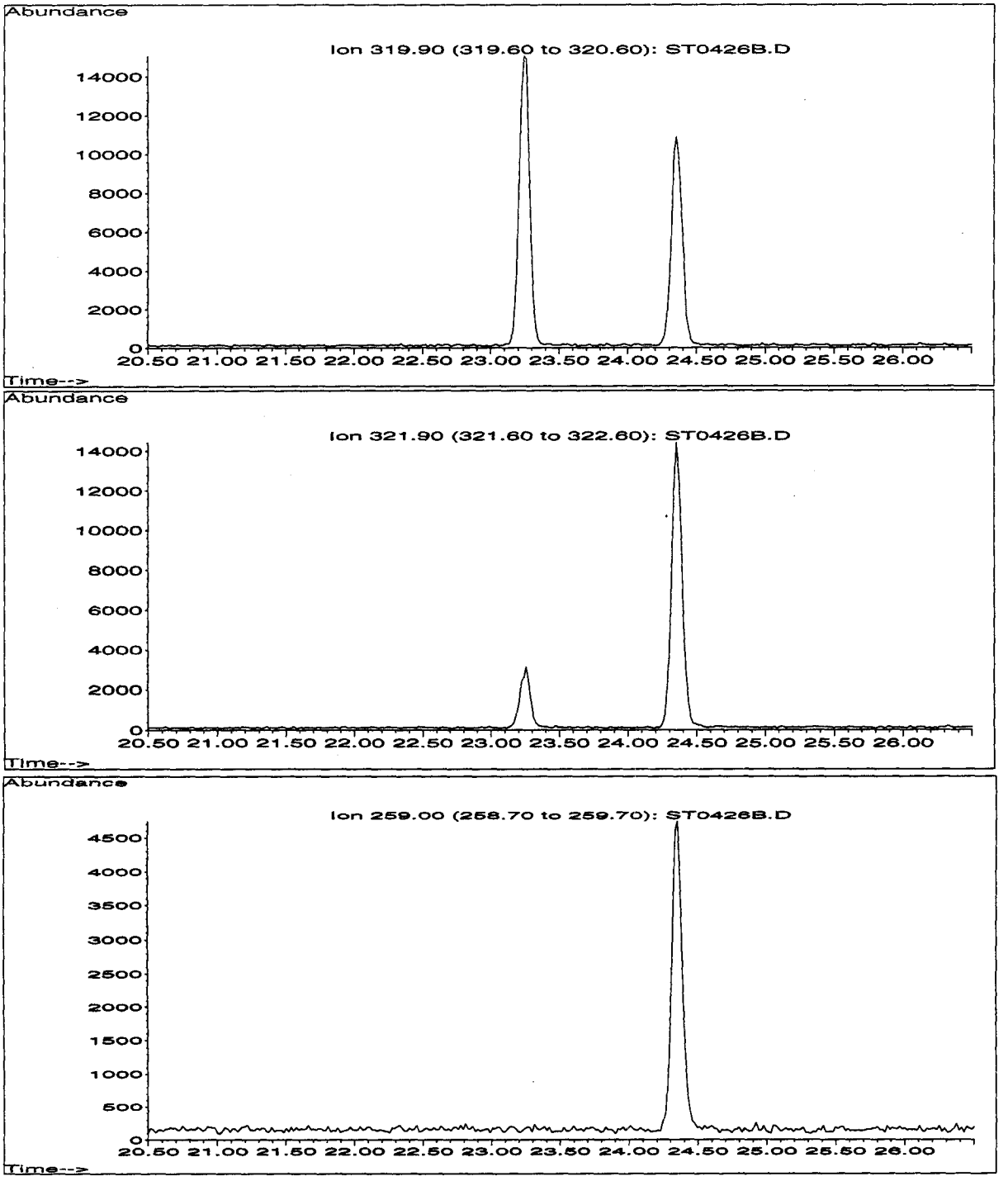






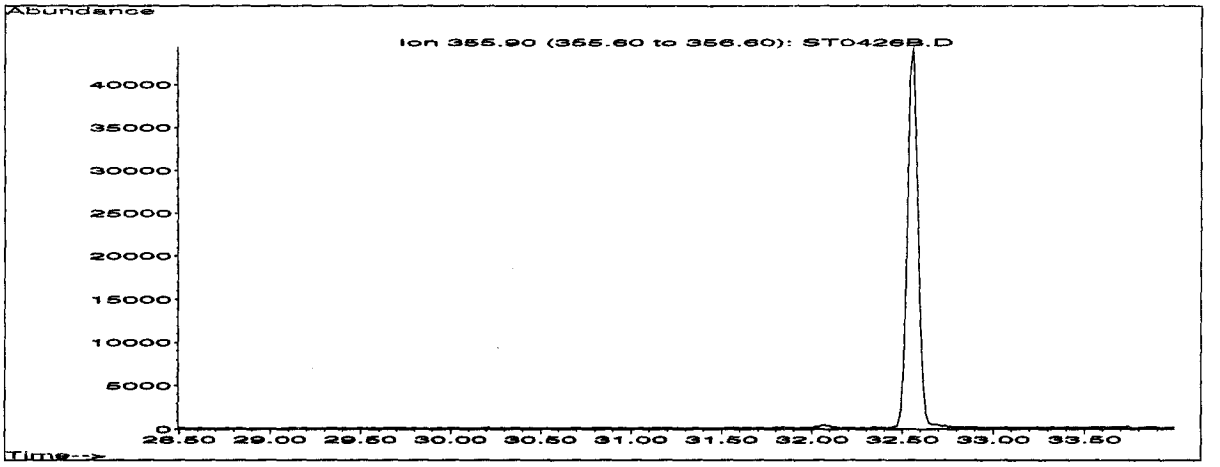
TCDD TOTAL

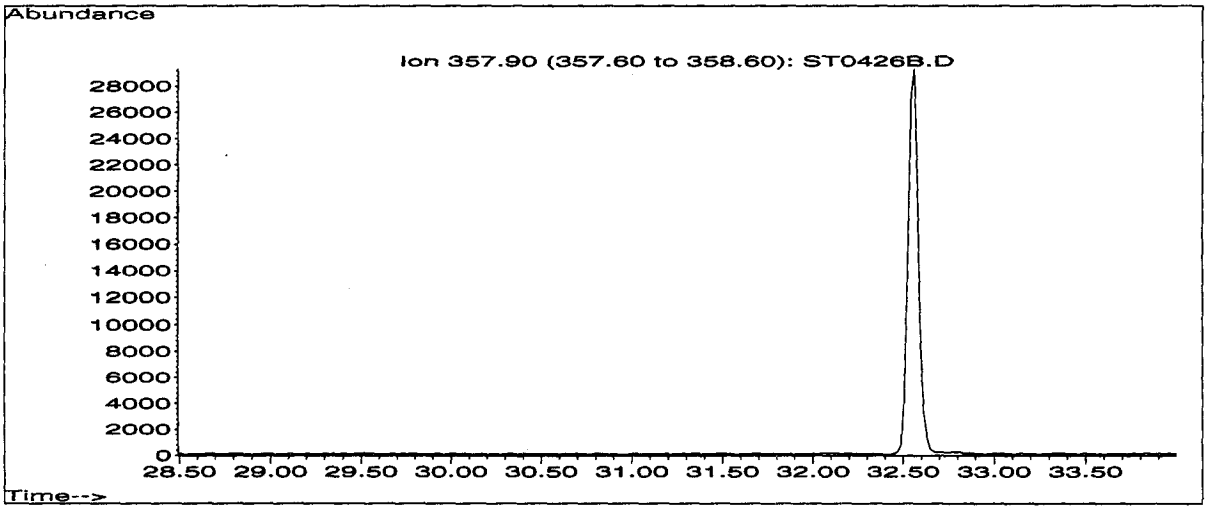
TS R.T. Lower Limit	20.50
TS R.T. Upper Limit	26.50

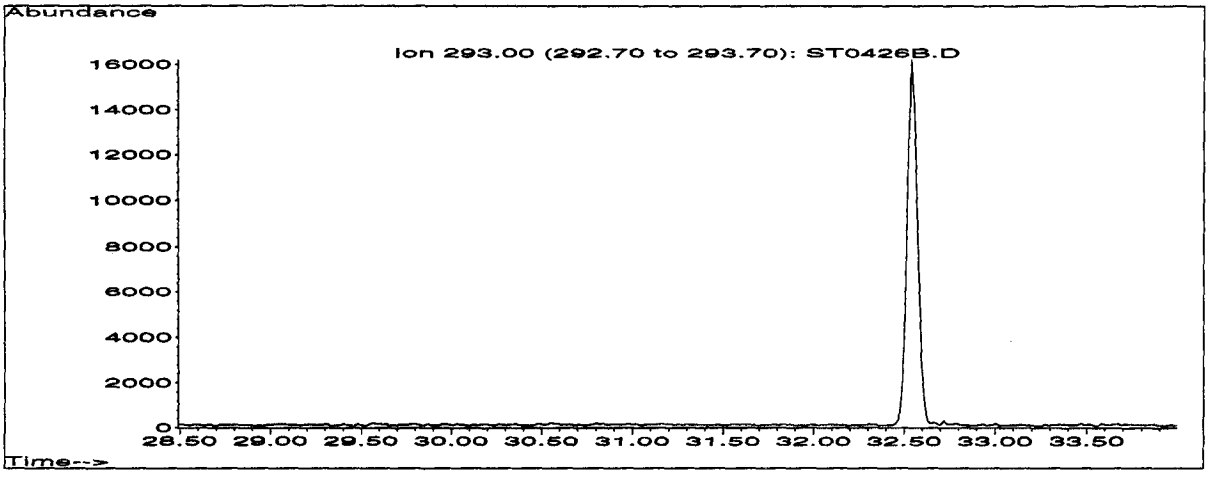


PeCDD TOTAL

TS R.T. Lower Limit	28.50
TS R.T. Upper Limit	34.00

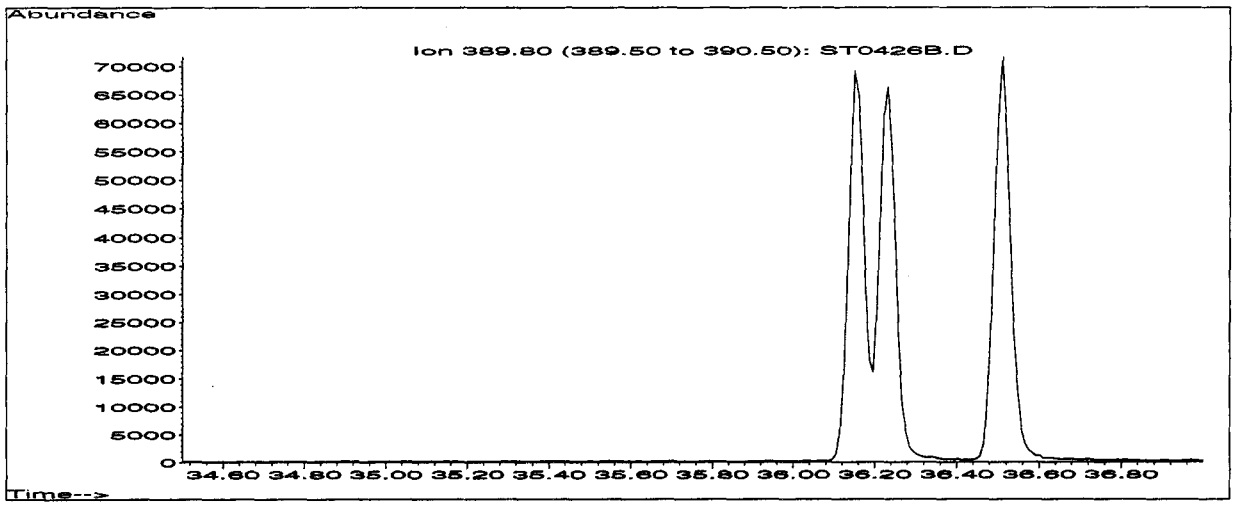


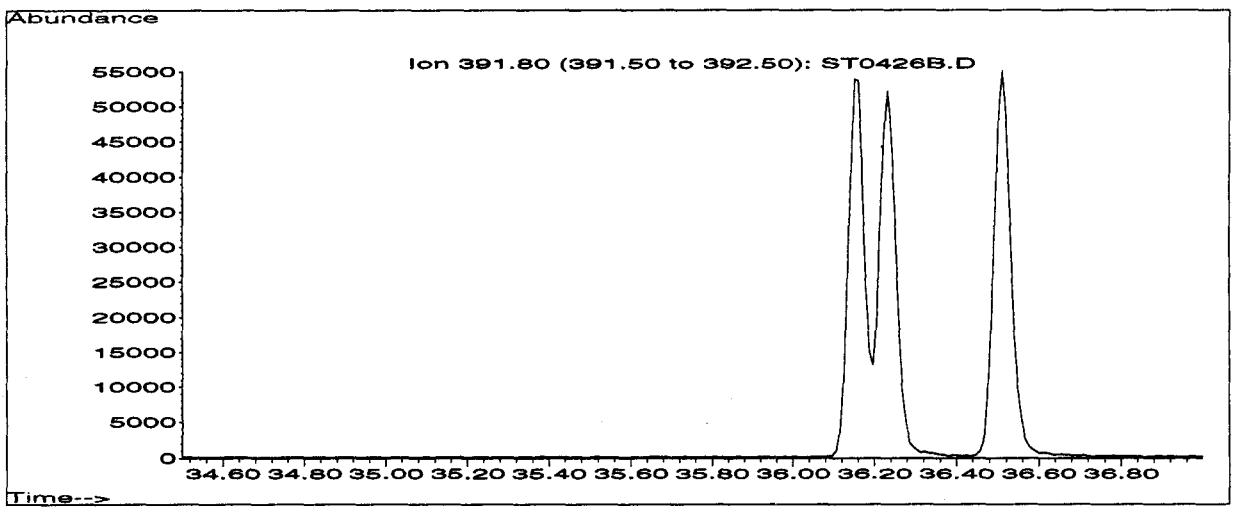


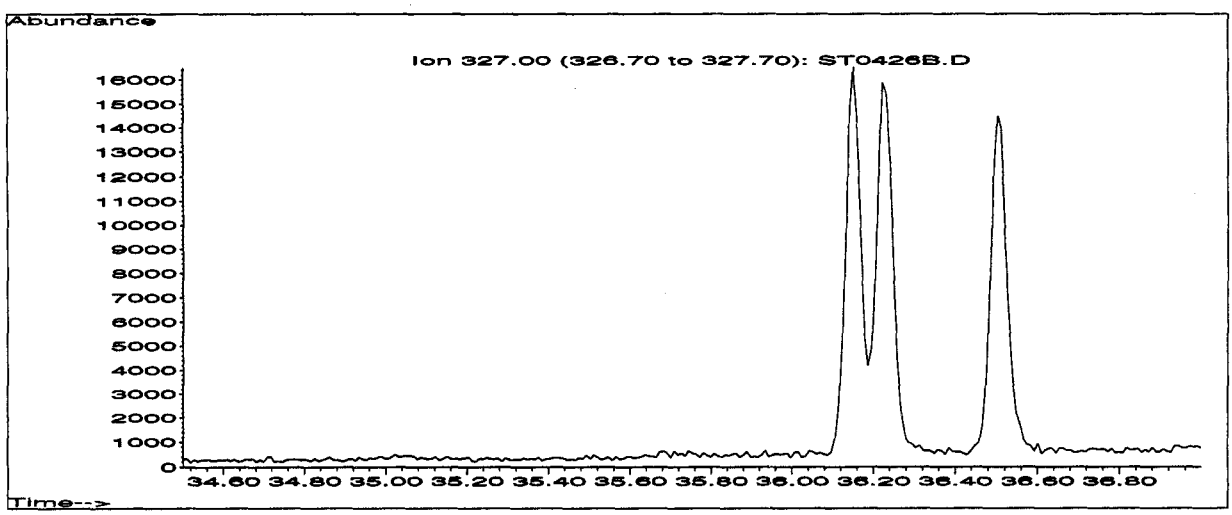


HxCDD TOTAL

TS R.T. Lower Limit	34.50
TS R.T. Upper Limit	37.00

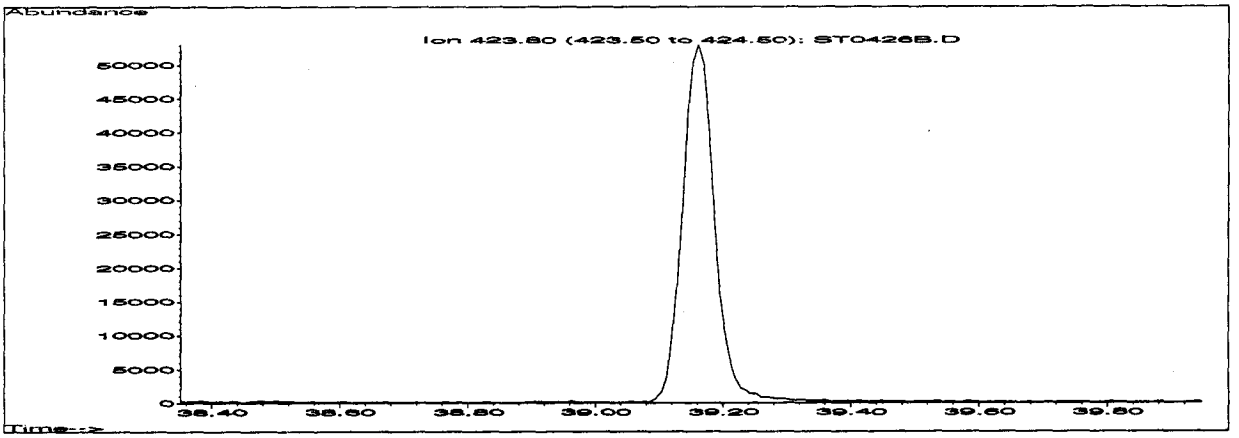


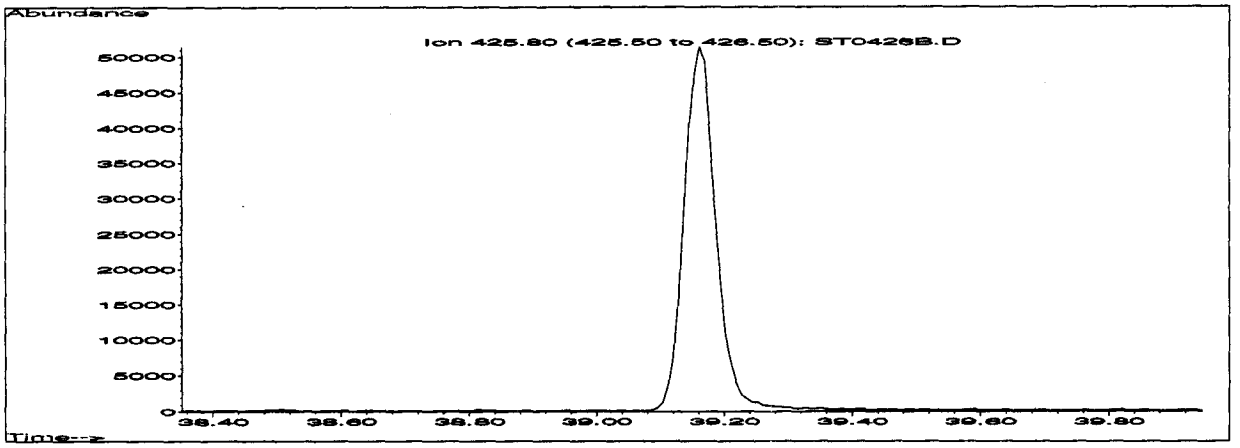


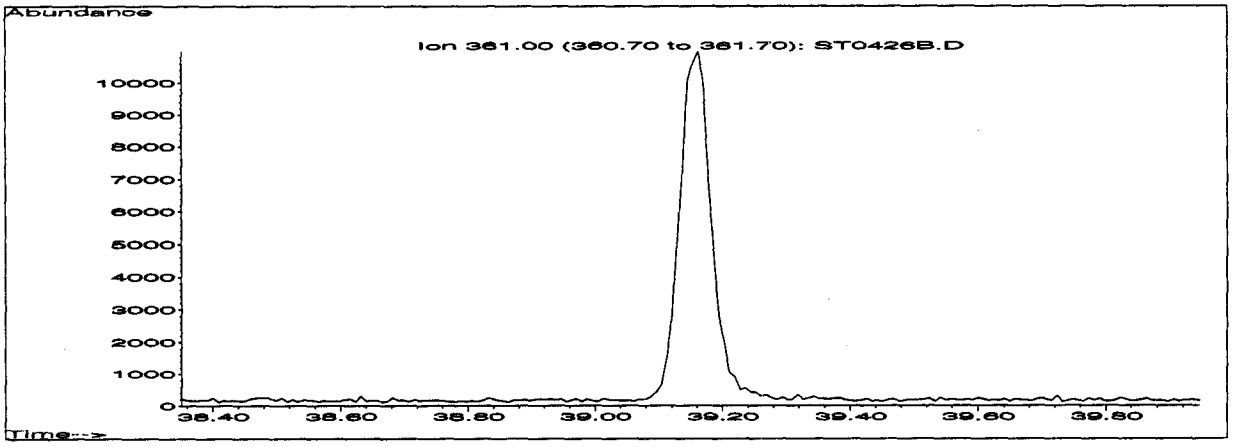


HpCDD TOTAL

TS R.T. Lower Limit	38.35
TS R.T. Upper Limit	39.95

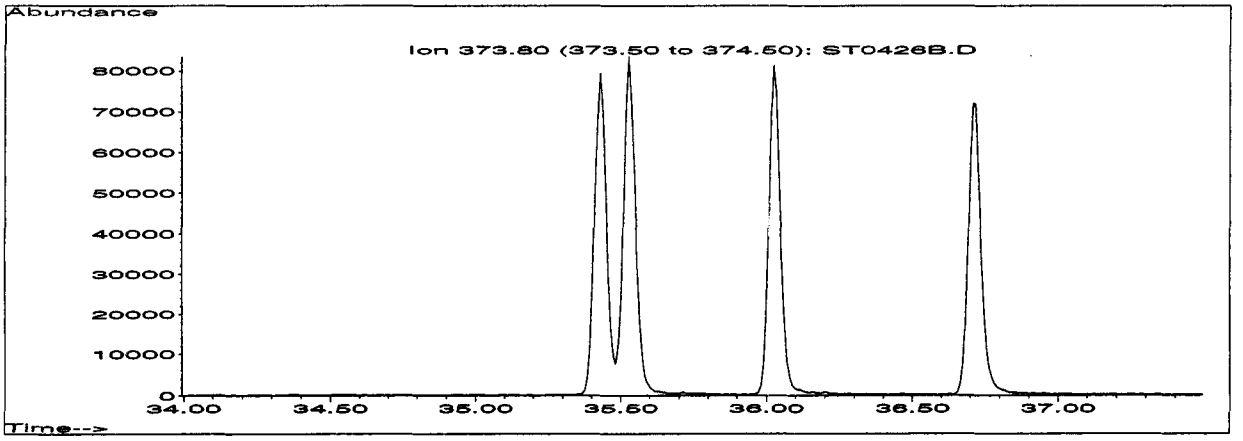


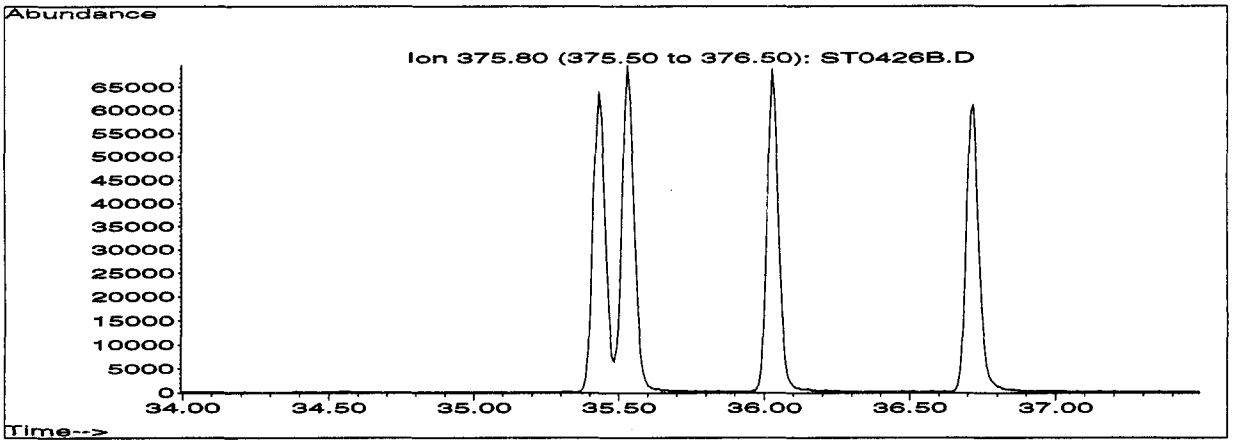


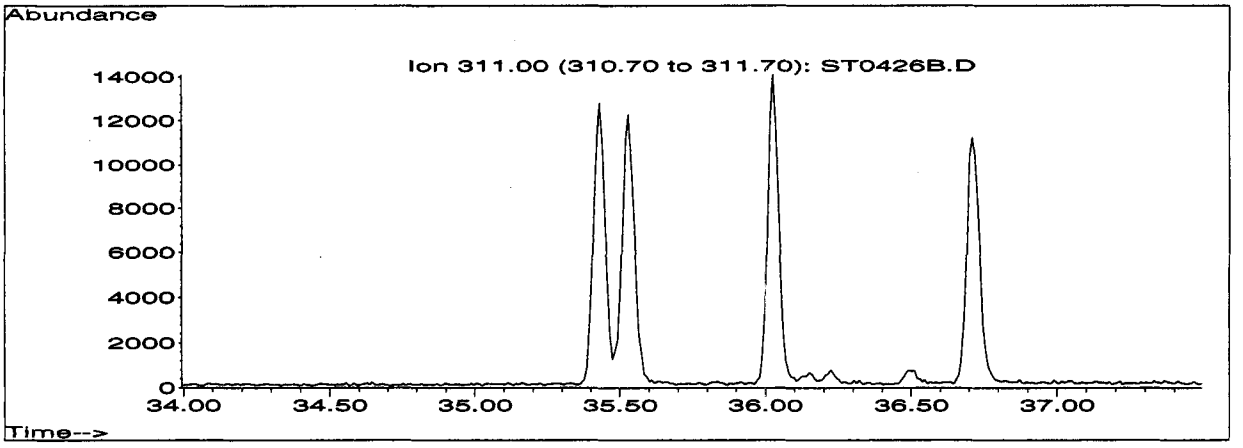


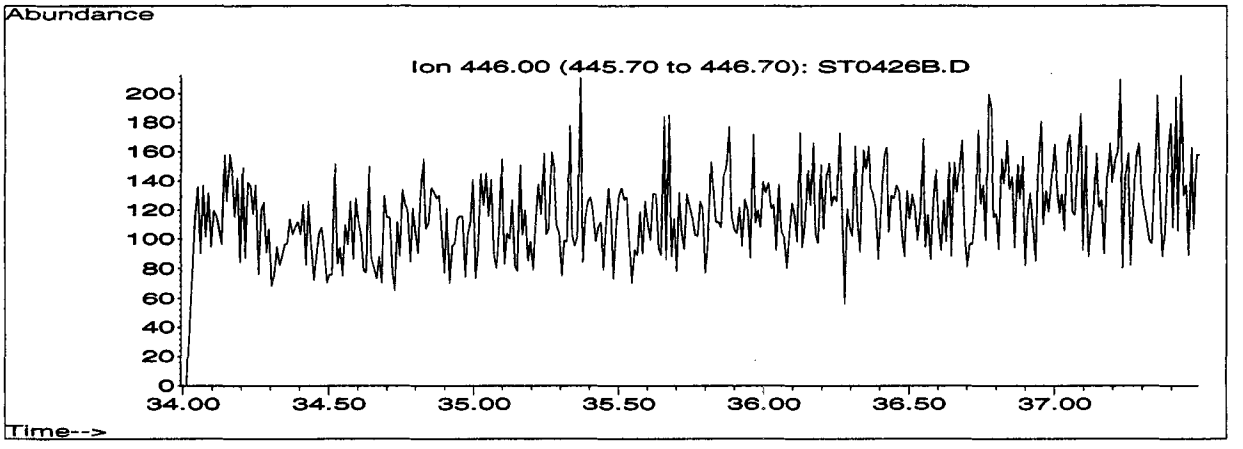
HxCDF TOTAL

TS R.T. Lower Limit	34.00
TS R.T. Upper Limit	37.50



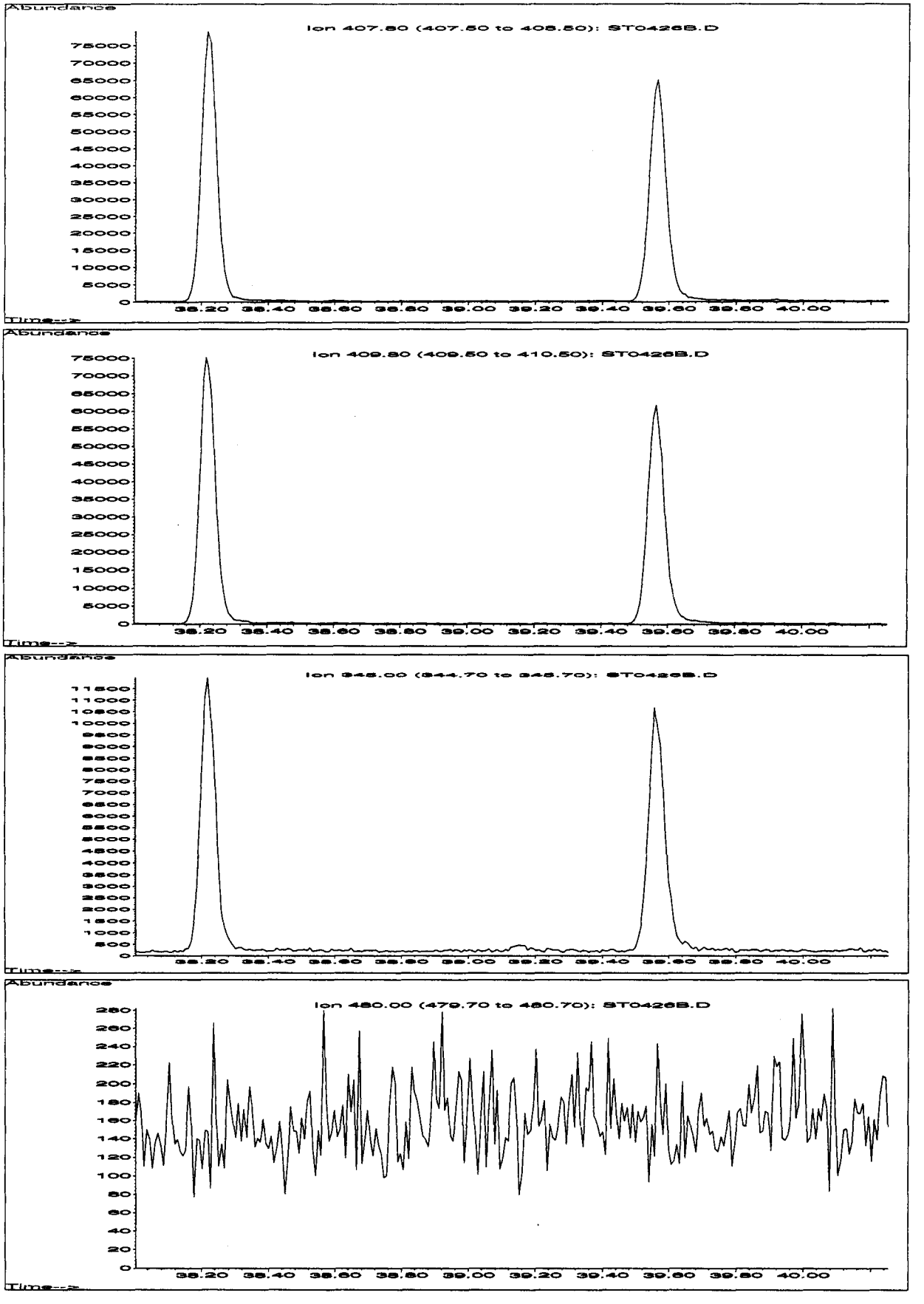






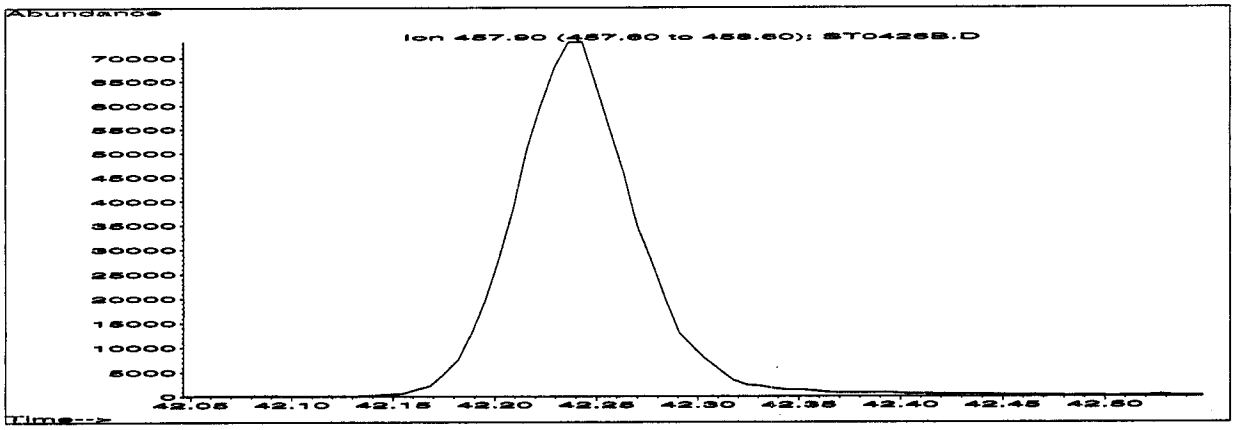
HpCDF TOTAL

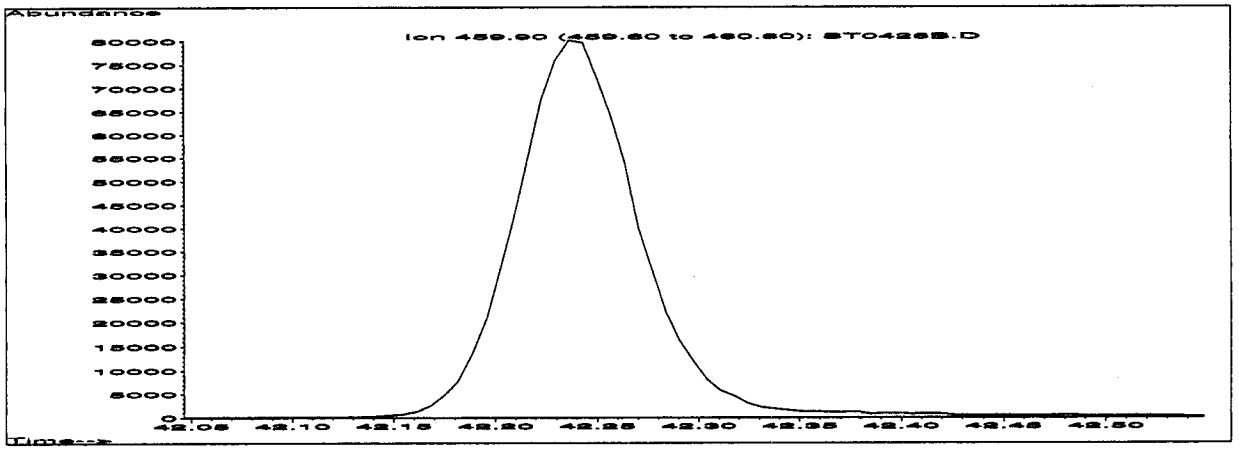
TS R.T. Lower Limit	38.00
TS R.T. Upper Limit	40.25

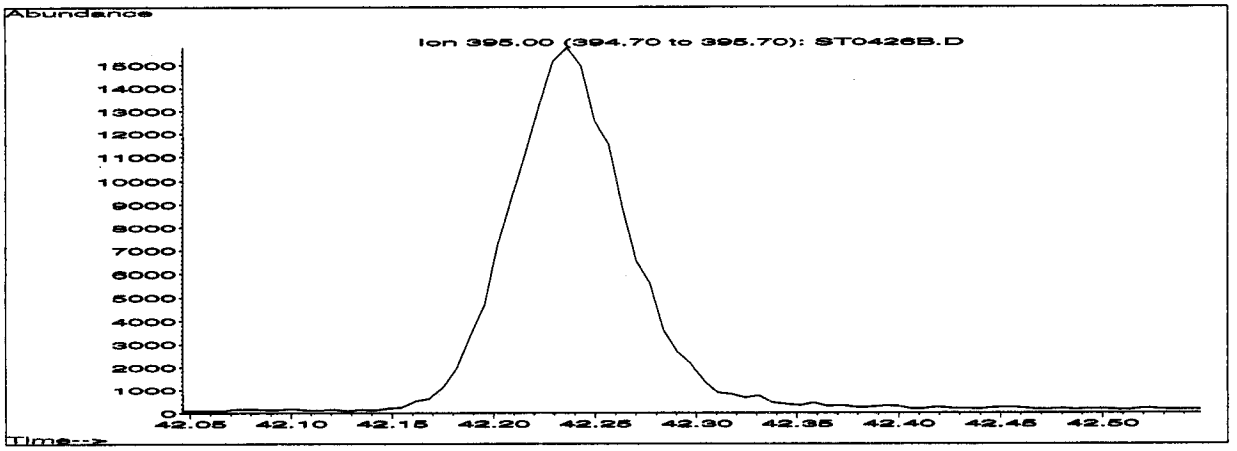


OCDD

TS R.T. Lower Limit	42.03		
TS R.T. Upper Limit	42.53		
Ret. Time	42.24		
Target Ion	457.9	Q1 Ion	459.9
Target Response	302922	Q1 Response	337687
Total Response	640609	Ion ratio	0.90
Q2 Ion	395		
Q2 Response	63505		

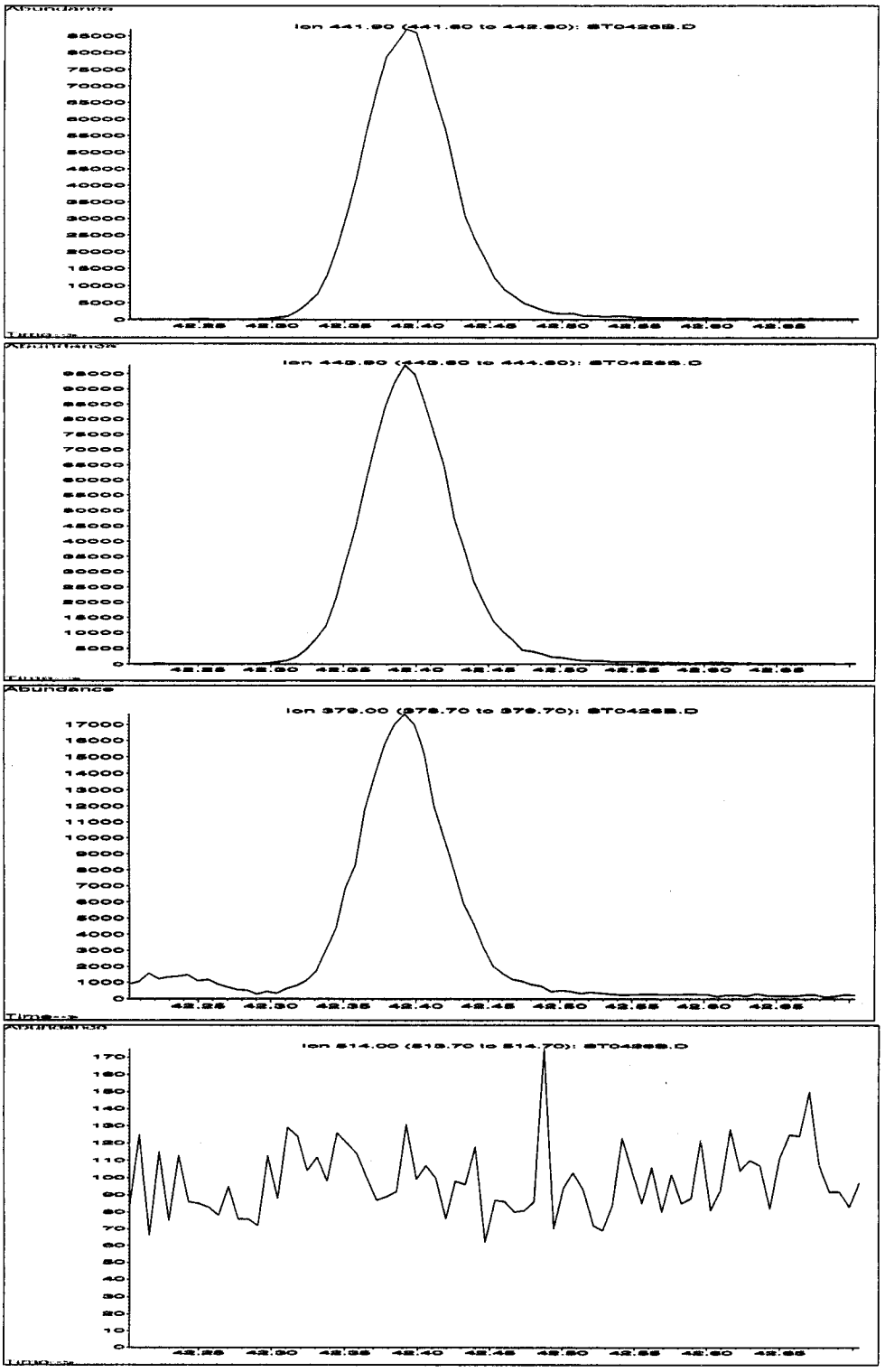






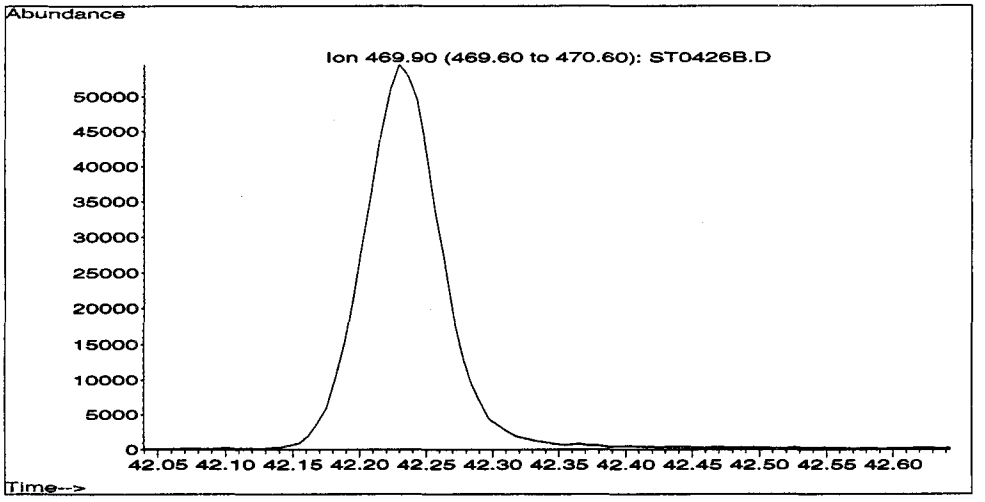
OCDF

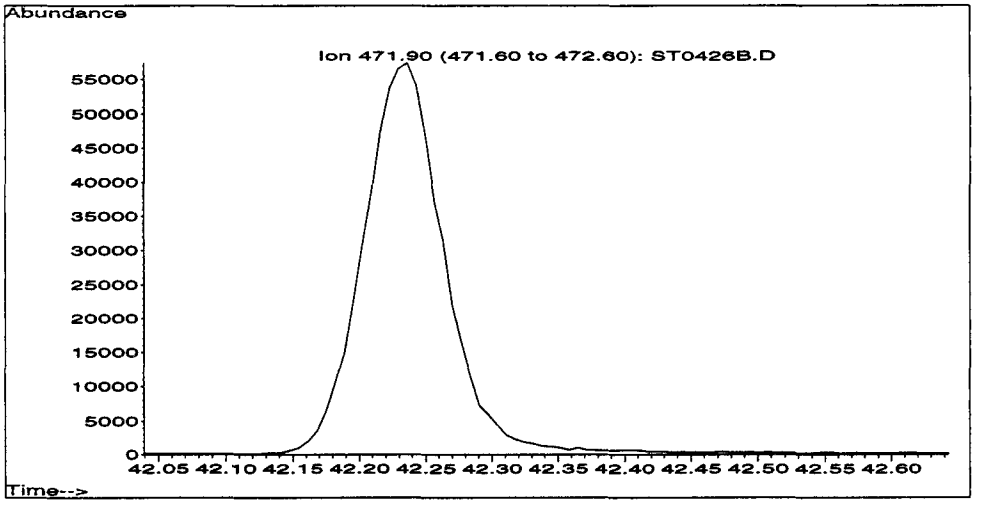
TS R.T. Lower Limit	42.20		
TS R.T. Upper Limit	42.70		
Ret Time	42.39		
Target Ion	441.9	Q1 Ion	443.9
Target Response	385710	Q1 Response	423273
Target Response	808983	Ion Ratio	0.91
Q2 Ion	379	DPE Ion	514
Q2 Response	73536	DPE Response	0



13C-OCDD-IS

RT Lower Limit	42.03		
RT Upper Limit	42.63		
Ret Time	42.23		
Target Ion	469.9	Q1 Ion	471.9
Target Response	221976	Q1 Response	242371
Total response	464347	Ratio	0.92





Quantitation Report (Not Reviewed)

Sample ID: CS-3 10LRES012
10LRES012 CS-3

Size: 0.000
Inst : DB1

Data File:C:\8280\2DB\042610.B\ST0426C.D
Acq On :26 Apr 2010 17:32

Vial: 97
Operator: MEO
Sample Amount: 0.00

MS Integration Params: RTEINT.P
Quant Time: Apr 26 18:47 2010

Quant Results File: 10AP26I2.RES

Quant Method : C:\8280\ DATA METHODS\10AP26I2.M (RTE Integrator)
Title : Dioxin Furan Total
Last Update : Mon Apr 26 18:47:25 2010
Response via : Initial Calibration
DataAcq Meth : TOKAS
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Recovery\Internal Stds	R.T.	QIon	Ratio	Response	Conc		Dev(Min)
1) 13C-1234-TCDD	24.05	332+334	0.81	249679	25.00	NG	0.00
5) 13C-123789-HxCDD	36.50	402+404	1.29	377264	25.00	NG	0.00
9) 13C-2378-TCDF	23.24	316+318	0.81	336668	25.00	NG	0.00
15) 13C-2378-TCDD	24.34	332+334	0.80	245935	25.00	NG	0.00
20) 13C-123678-HxCDD	36.22	402+404	1.26	297601	25.00	NG	0.00
27) 13C-1234678-HpCDF	38.21	420+422	1.05	379799	25.00	NG	0.00
36) 13C-OCDD	42.23	470+472	0.92	507715	50.00	NG	0.00

Surrogate Compound

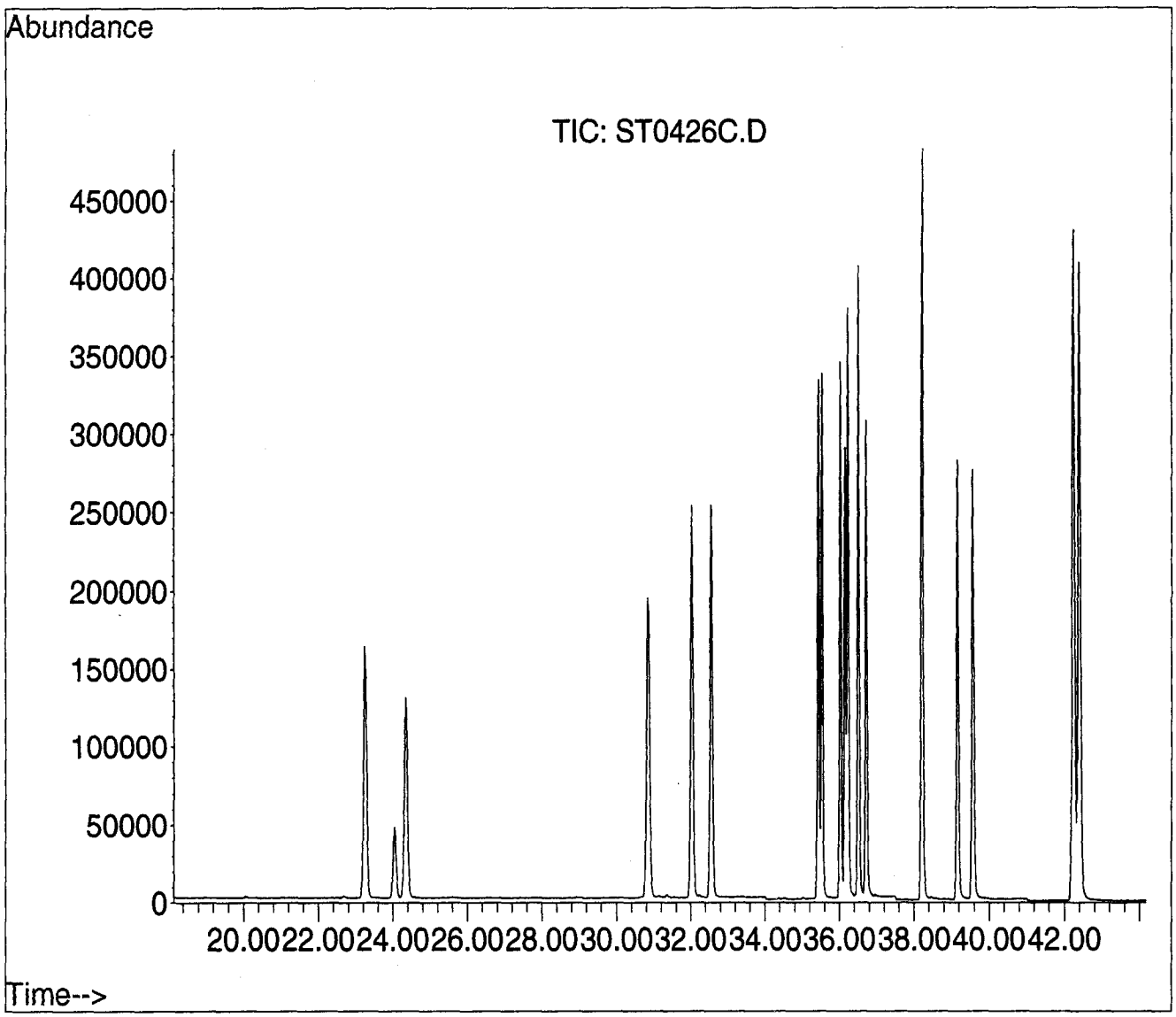
4) 37Cl-2378-TCDD	24.35	328		163754	11.403	NG	0.00
Spiked Amount = 12.500	RRF = 1.438			Recovery =	91.20%		

Target Compounds	RT	Ratio		Area	RRF	Conc	EDL	%Rec
2) 13C-2378-TCDF-IS	23.24	0.81		336668	1.388	24.285	0.0370	97.1
3) 13C-2378-TCDD-IS	24.34	0.80		245935	0.951	25.882	1.5942	103.5
6) 13C-123678-HxCDD-	36.22	1.26		297601	0.792	24.916	0.1454	99.7
7) 13C-1234678-HpCDF	38.21	1.05		379799	0.954	26.385	0.0710	105.6
8) 13C-OCDD-IS	42.23	0.92		507715	0.567	59.308	0.0972	118.6
10) 2378-TCDF	23.26	0.77		427345	1.268	25.035	0.1163	
1	22.69	0.82		5905		0.343		
2	23.26	0.77		428324		24.893		
11) TCDF TOTAL	22.00	0.77		434229	1.278	25.236		
12) 12378-PeCDF	30.84	1.51		989225	1.171	62.712	0.0832	
13) 23478-PeCDF	32.02	1.50		983755	1.161	62.902	0.0440	
1	30.84	1.52		992701		45.511		
2	31.15	1.56		5881		0.270		
3	31.36	1.75		8915		0.409		
4	32.02	1.50		983755		62.902		
14) PeCDF TOTAL	29.50	1.50		1991252	1.620	109.091		
16) 2378-TCDD	24.35	0.79		293057	1.280	23.267	0.0679	
1	23.24	5.04	#	31900		1.684		
2	24.35	0.78		303998		16.046		
17) TCDD TOTAL	22.50	0.78		335898	1.926	17.730		
18) 12378-PeCDD	32.56	1.61		688592	1.149	60.897	0.0556	
1	32.56	1.61		693049		59.022		
19) PeCDD TOTAL	30.00	1.61		693049	1.194	59.022		
21) 123478-HxCDD	36.15	1.24		736380	1.032	59.950	1.3902	
22) 123678-HxCDD	36.22	1.23		753235	1.040	60.821	0.4181	
23) 123789-HxCDD	36.51	1.25		791545	1.070	62.131	1.0918	
1	36.15	1.24		736380		59.950		
2	36.22	1.27		753235		60.821		
3	36.51	1.25		2629502		109.922		
24) HxCDD TOTAL	36.50	1.25		4119117	2.010	230.694		

25)	1234678-HpCDD	39.15	1.05	796269	0.993	67.344	0.1164
	1	39.15	1.04	796269		67.344	
26)	HpCDD TOTAL	39.35	1.04	796269	1.198	67.344	
28)	123478-HxCDF	35.43	1.18	936855	1.103	55.909	3.9296
29)	123678-HxCDF	35.53	1.22	974784	1.181	54.329	0.3128
30)	234678-HxCDF	36.03	1.20	925960	1.085	56.166	0.1164
31)	123789-HxCDF	36.71	1.20	889189	1.036	56.481	0.1747
	1	35.43	1.18	936855		55.909	
	2	35.53	1.22	974784		54.329	
	3	36.03	1.20	925960		56.166	
	4	36.71	1.20	891078		24.892	
32)	HxCDF TOTAL	36.00	1.20	3728677	2.356	191.296	
33)	1234678-HpCDF	38.22	1.05	1095360	1.236	58.337	0.1295
34)	1234789-HpCDF	39.56	1.06	995558	1.046	62.664	0.1033
	1	38.22	1.05	1095360		58.337	
	2	39.56	1.06	995558		62.664	
35)	HpCDF TOTAL	39.50	1.06	2090918	1.701	121.001	
37)	OCDD	42.23	0.90	1393281	1.133	121.053	0.0966
38)	OCDF	42.38	0.92	1780600	1.485	118.096	0.2030

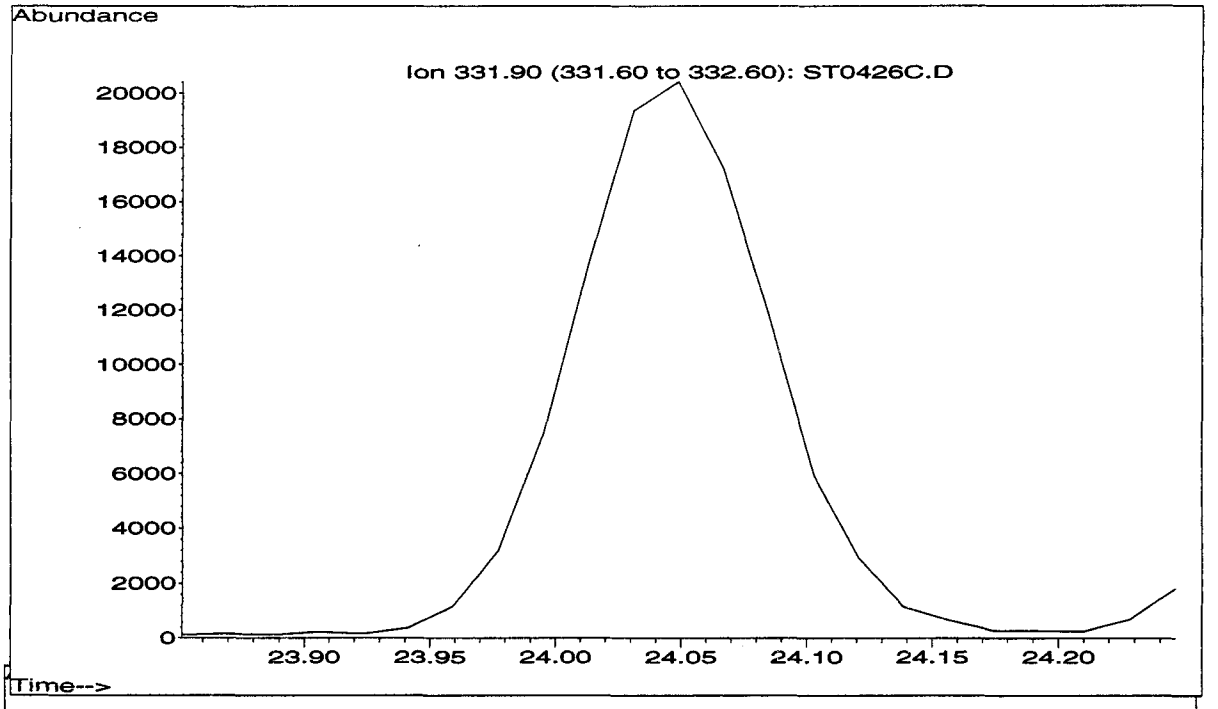
(#) = qualifier out of range•: areas and concentration based on theoretical ion ratio
(m) = manual integration
ST0426C.D 10AP26I2.M Mon Apr 26 18:47:59 2010

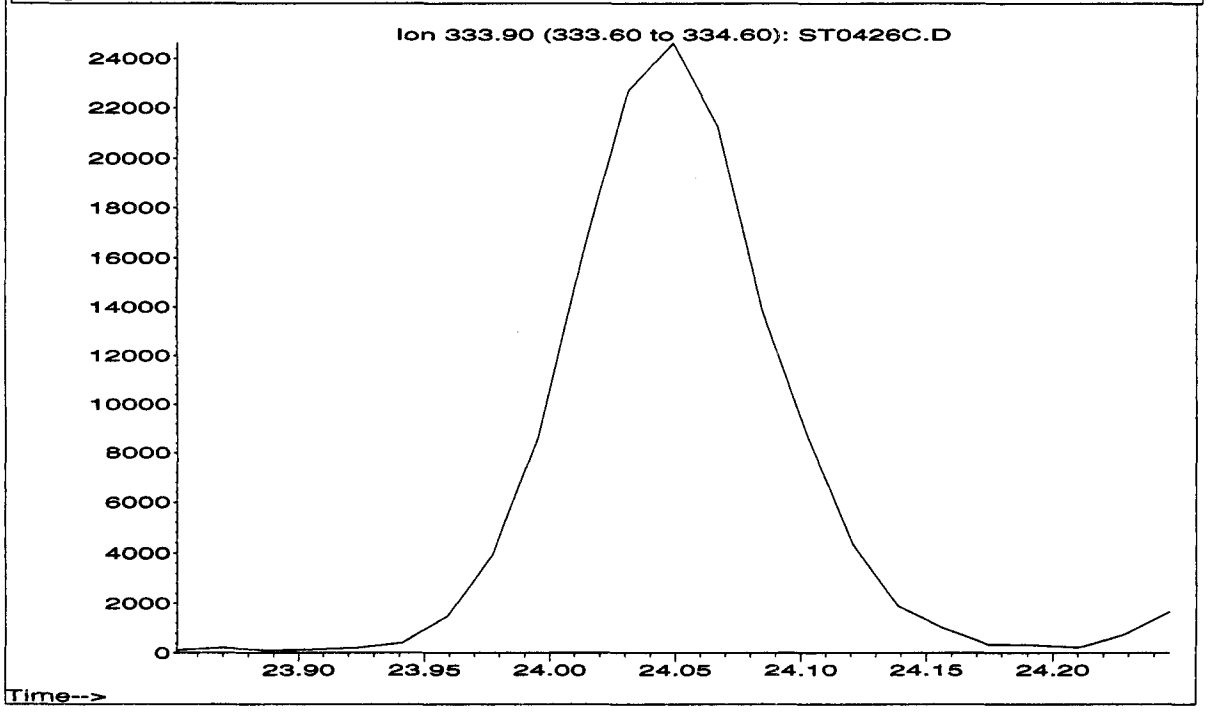
Data File Name	ST0426C.D
Data File Path	C:\8280\2DB\042610.B\
Operator	MEO
Date Acquired	4/26/2010 17:32
Acq. Method File	TOKAS
Sample Name	10LRES012 CS-3
Misc Info	CS-3 10LRES012
Vial Number	97
Instrument Name	2DB
Sample Multiplier	1
Sample Amount	0



13C-1234-TCDD

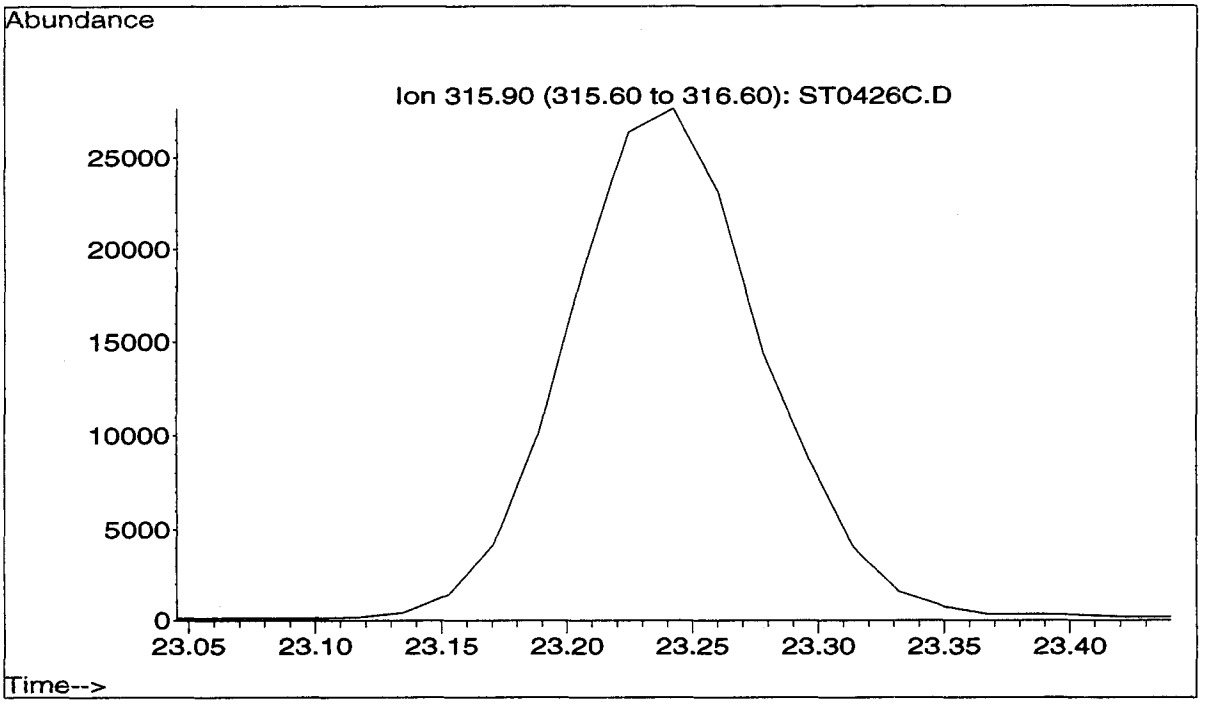
TS R.T. Lower Limit	23.85		
TS R.T. Upper Limit	24.25		
Ret Time	24.05		
Target Ion	331.9	Q1 Ion	333.9
Target Response	111936	Q1 Response	137743
Total Response	249679	Ion Ratio	0.81

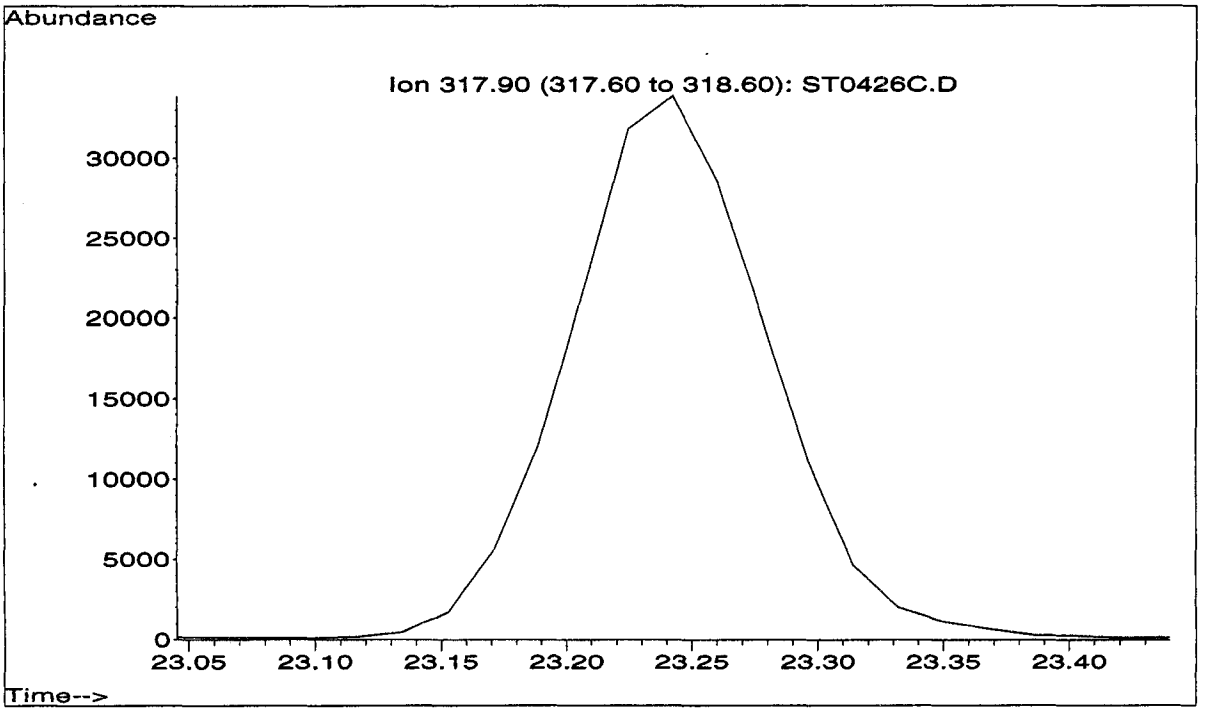




13C-2378-TCDF-IS

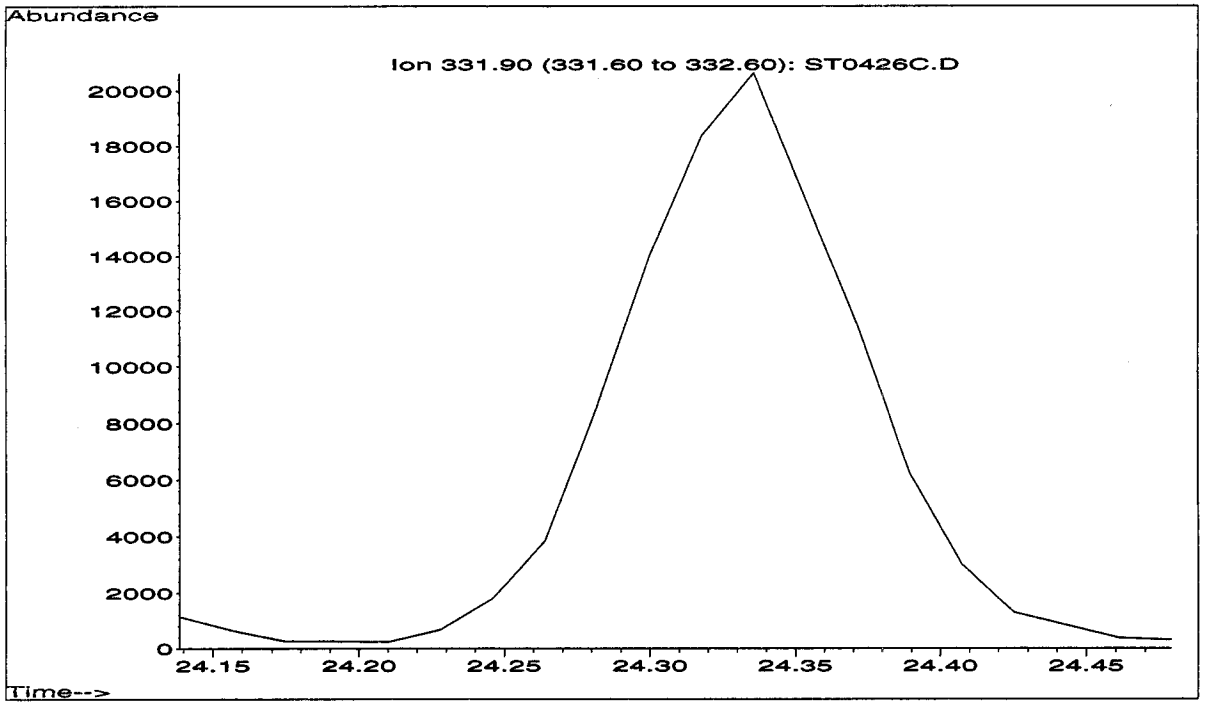
TS R.T. Lower Limit	23.04		
TS R.T. Upper Limit	23.44		
Ret Time	23.24		
Target Ion	315.9	Q1 Ion	317.9
Target Response	150816	Q1 Response	185852
Target Response	336668	Ion Ratio	0.81

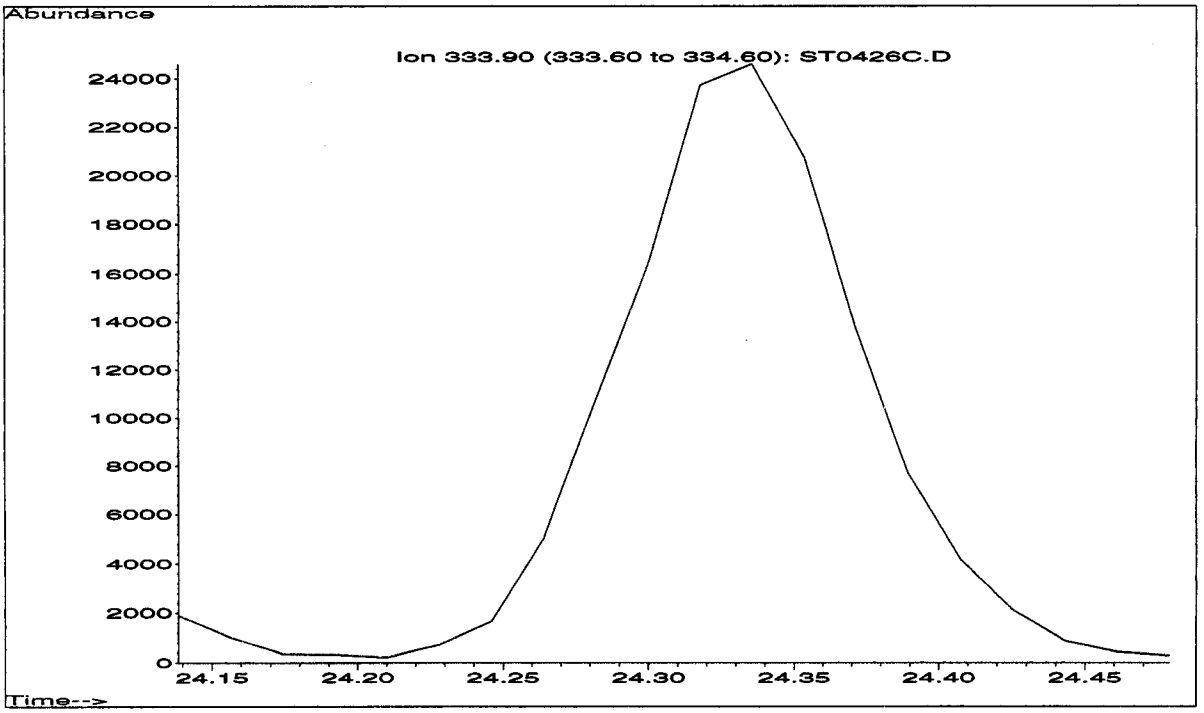




13C-2378-TCDD-IS

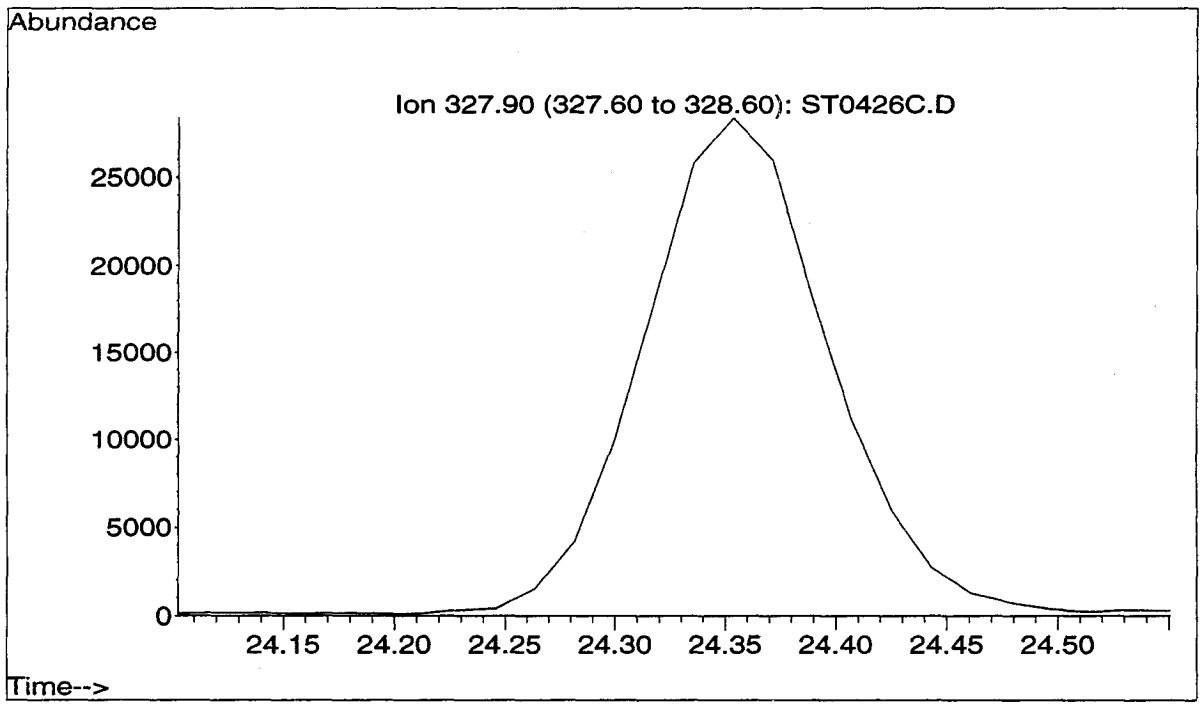
TS R.T. Lower Limit	24.13		
TS R.T. Upper Limit	24.48		
Ret Time	24.34		
Target Ion	331.9	Q1 Ion	333.9
Target Response	109670	Q1 Response	136265
Total Response	245935	Ion Ratio	0.80

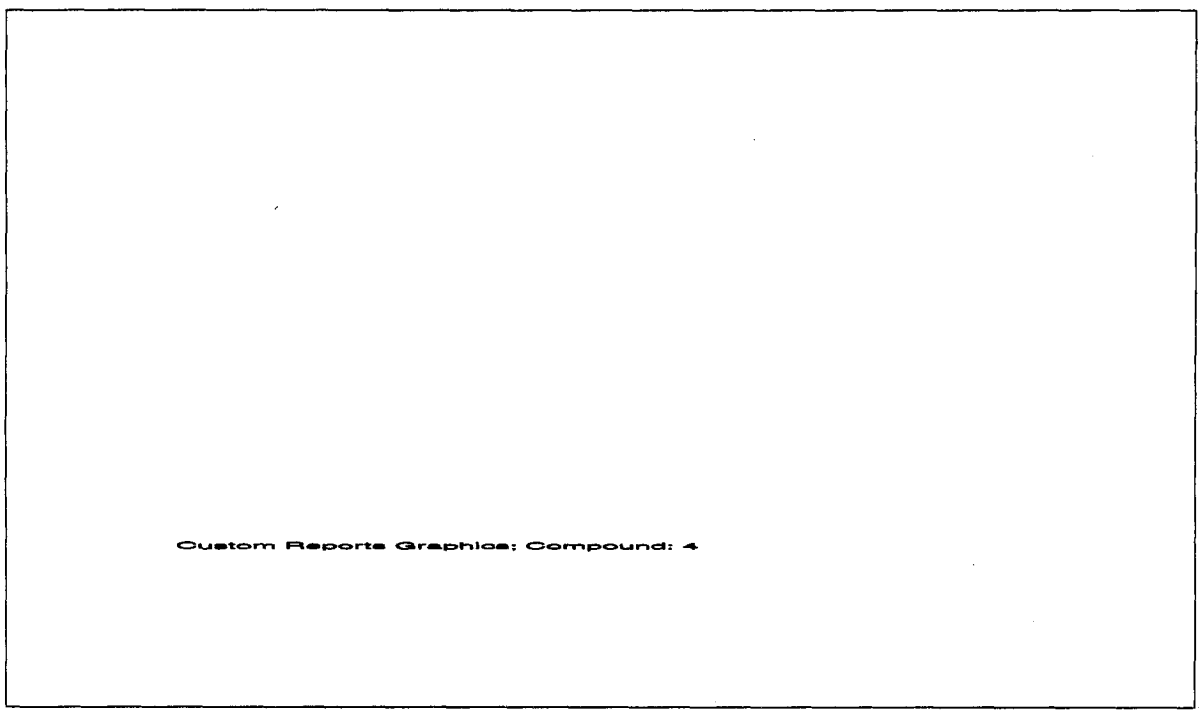




37Cl-2378-TCDD

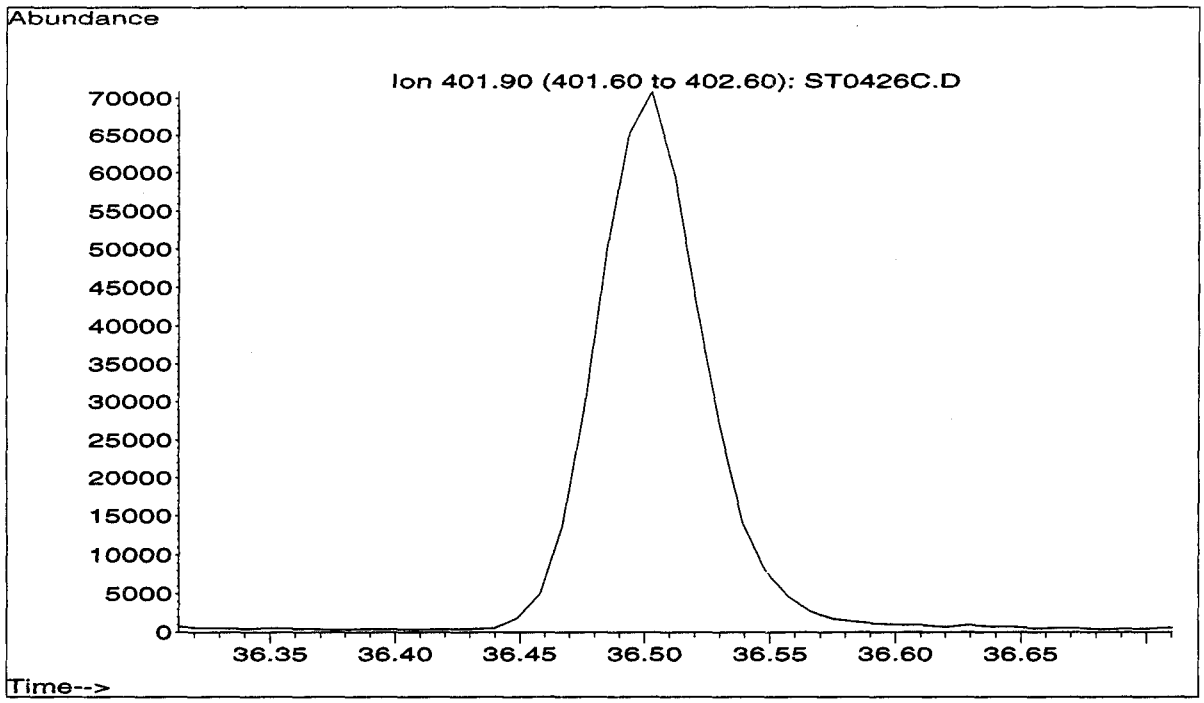
TS R.T. Lower Limit	24.10		
TS R.T. Upper Limit	24.55		
Ret Time	24.35		
Target Ion	327.9	Q1 Ion	0
Target Response	163754	Q1 Response	0
Total Response	163754	Ion Ratio	#DIV/0!

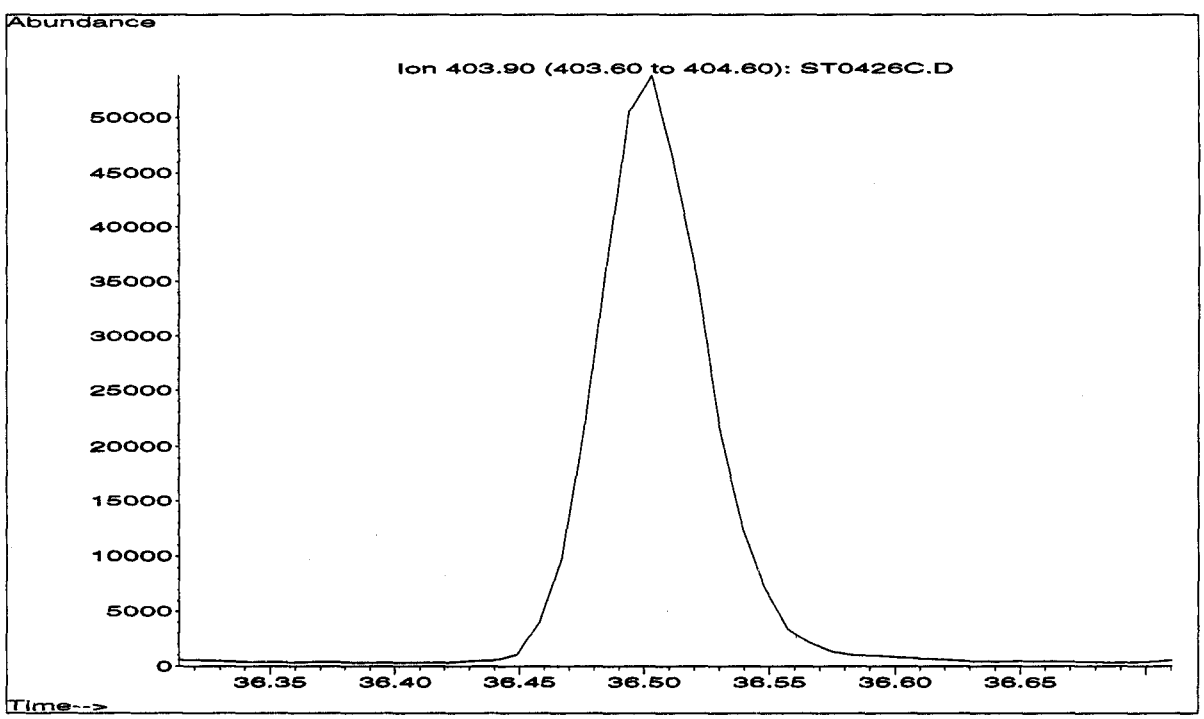




13C-123789-HxCDD

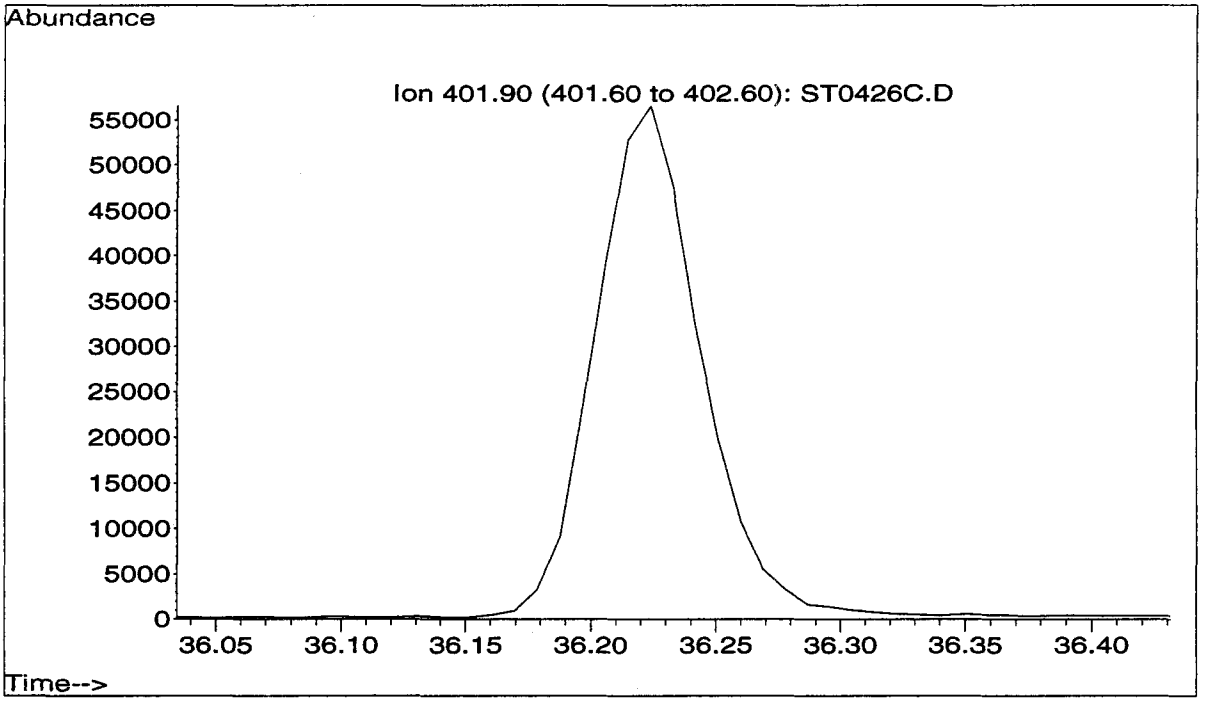
TS R.T. Lower Limit	36.30		
TS R.T. Upper Limit	36.70		
Ret Time	36.50		
Target Ion	401.9	Q1 Ion	403.9
Target Response	212489	Q1 Response	164775
Target Response	377264	Ion Ratio	1.29

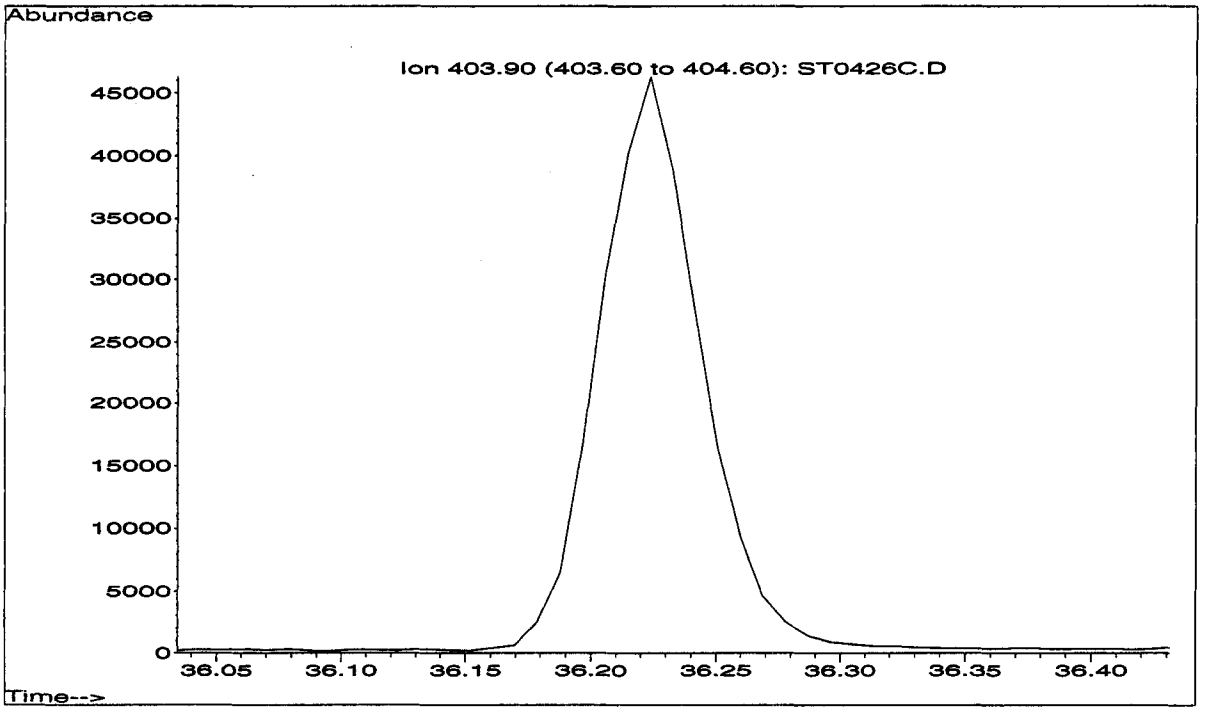




13C-123678-HxCDD-IS

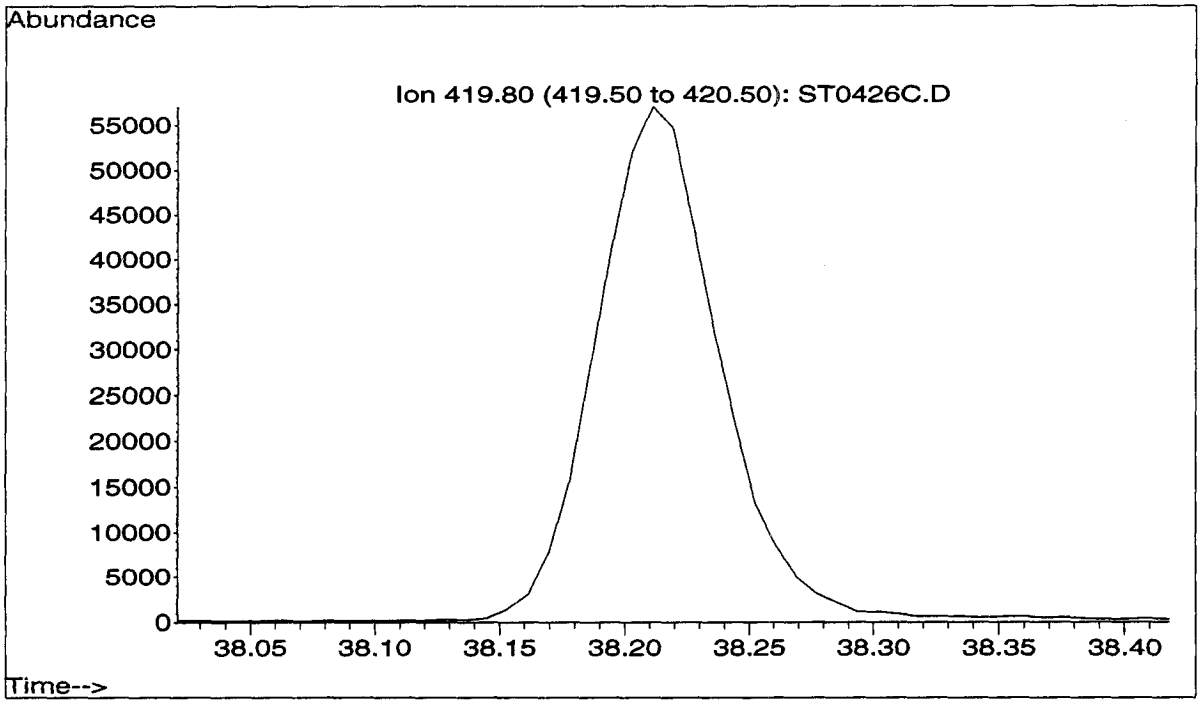
TS R.T. Lower Limit	36.02		
TS R.T. Upper Limit	36.42		
Ret Time	36.22		
Target Ion	401.9	Q1 Ion	403.9
Target Response	165768	Q1 Response	131833
Total Response	297601	Ion Ratio	1.26

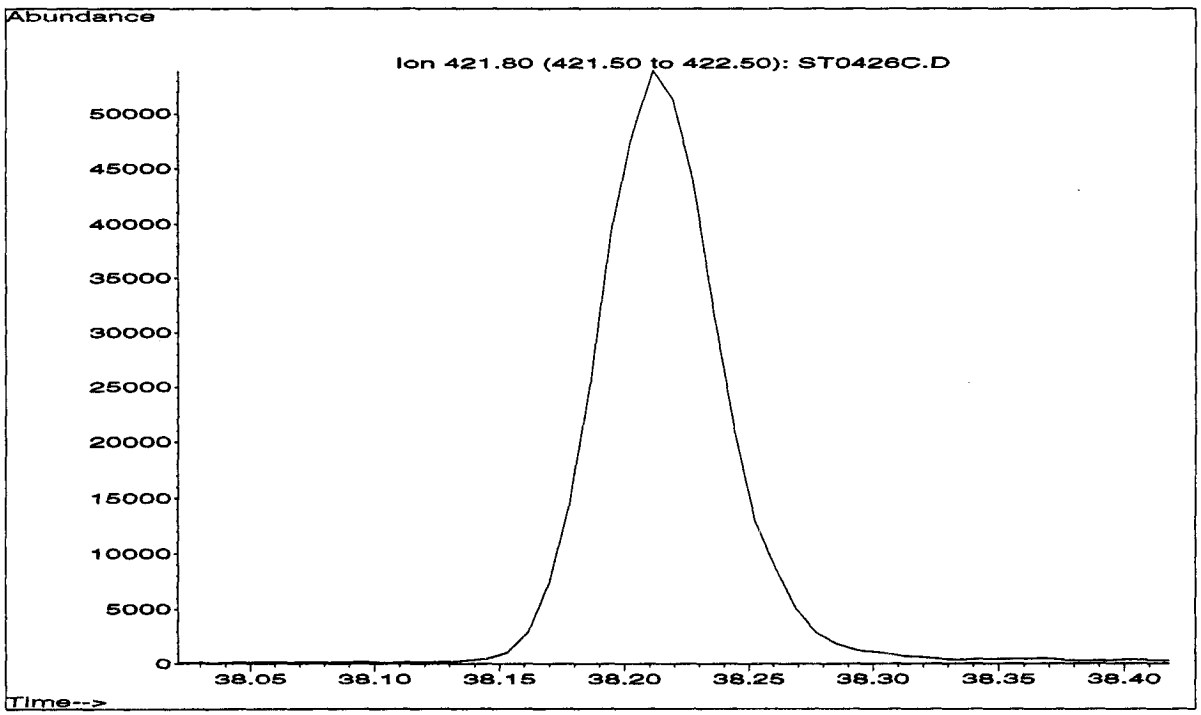




13C-1234678-HpCDF-IS

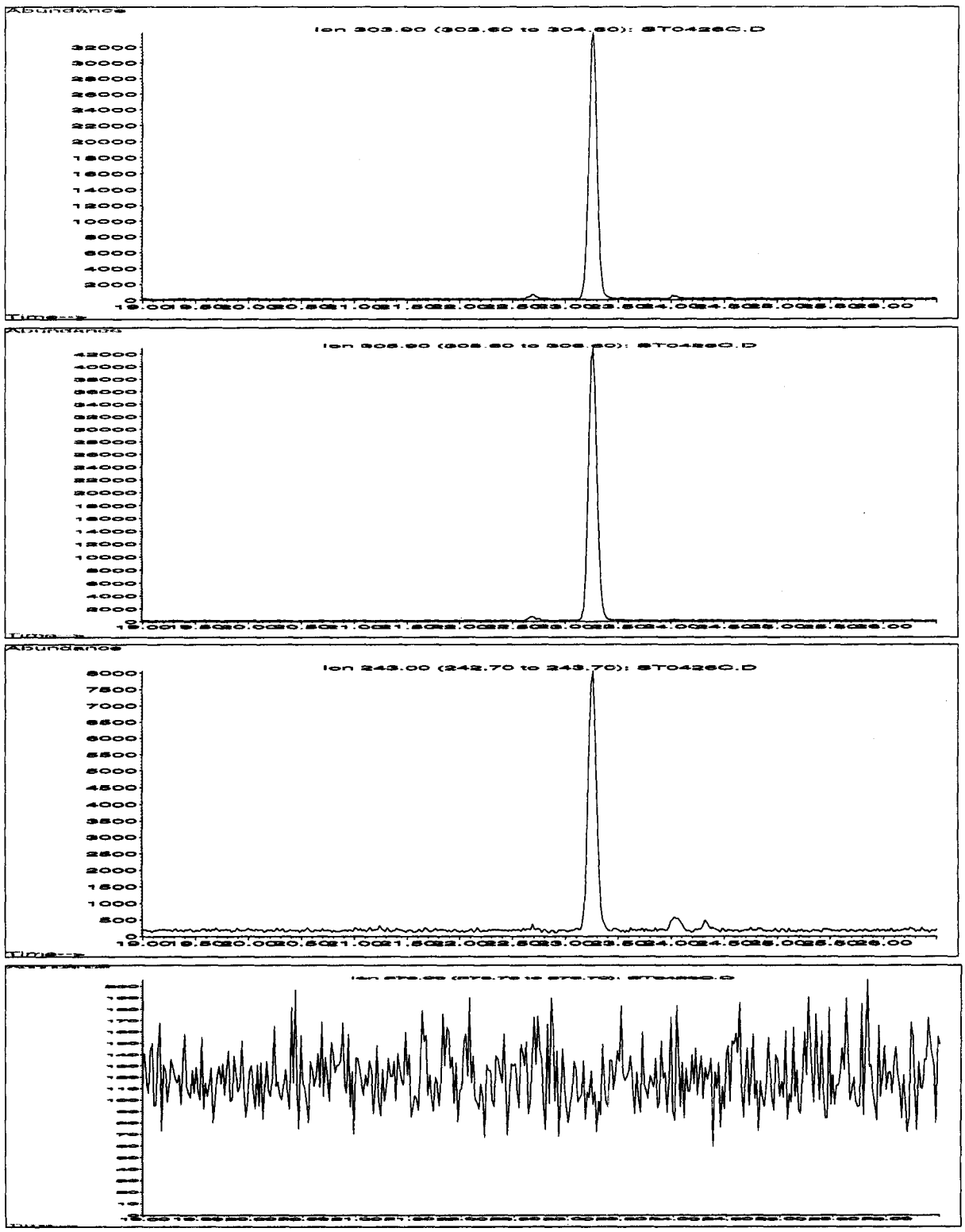
TS R.T. Lower Limit	38.01		
TS R.T. Upper Limit	38.41		
Ret Time	38.21		
Target Ion	419.8	Q1 Ion	421.8
Target Response	194589	Q1 Response	185210
Target Response	379799	Ion Ratio	1.05





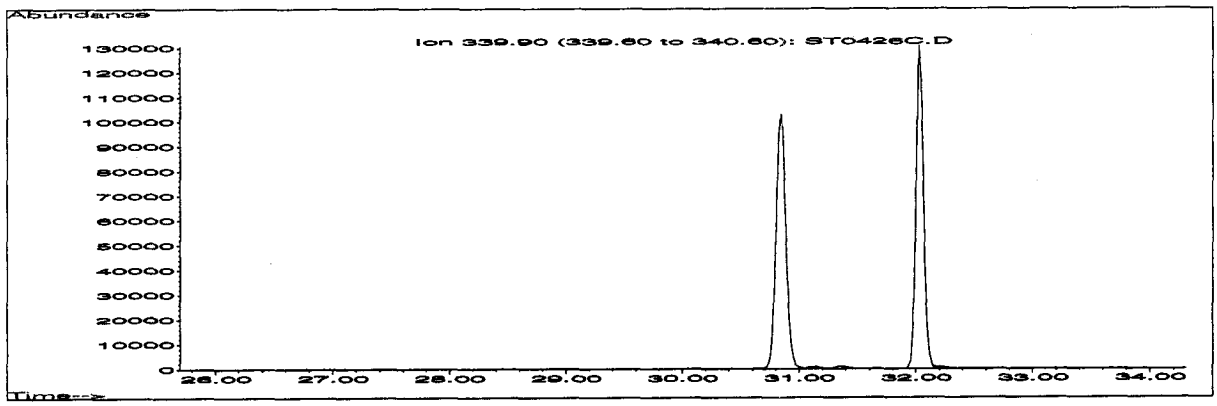
TCDF TOTAL

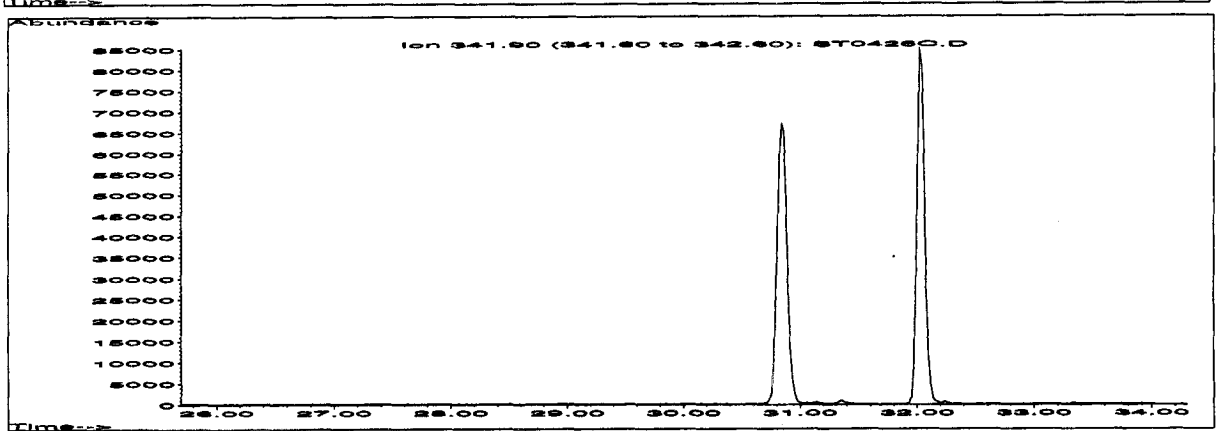
TS R.T. Lower Limit	19.00
TS R.T. Upper Limit	26.50

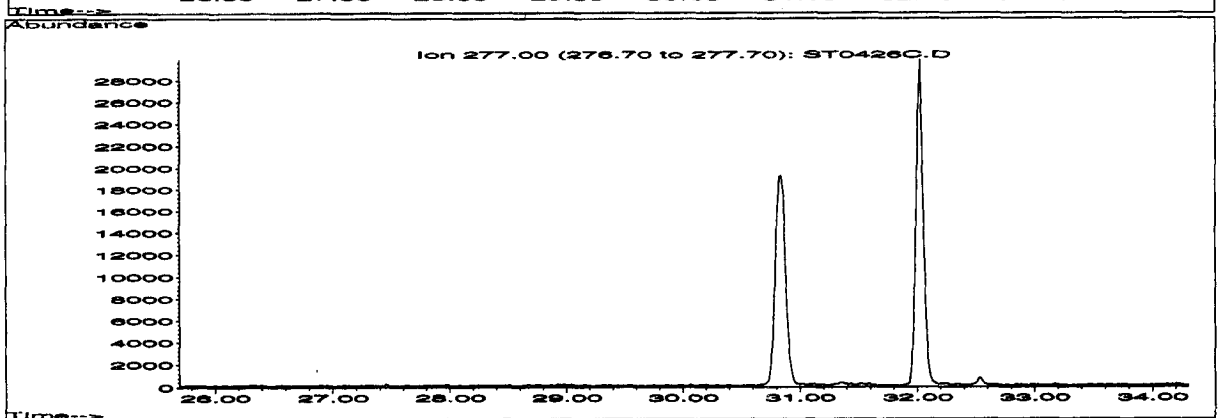


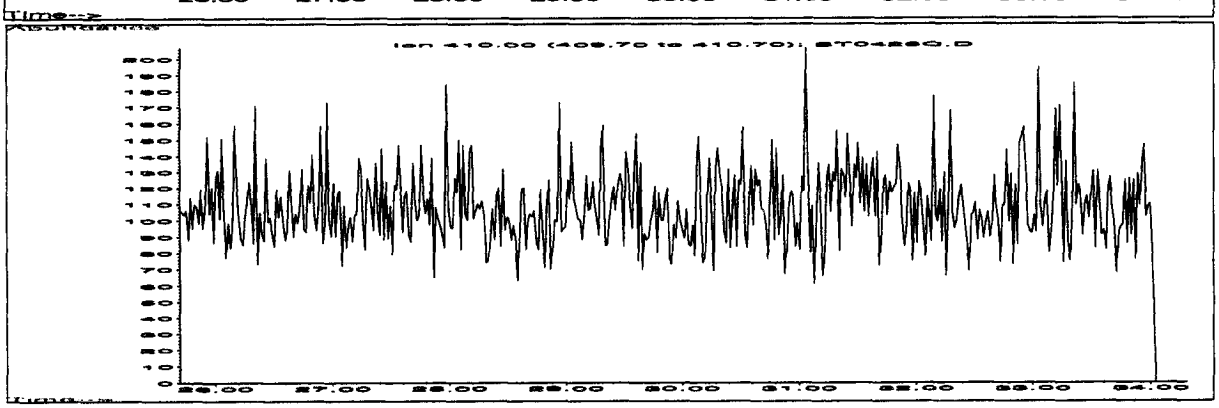
PeCDF TOTAL

TS R.T. Lower Limit	25.70
TS R.T. Upper Limit	34.30



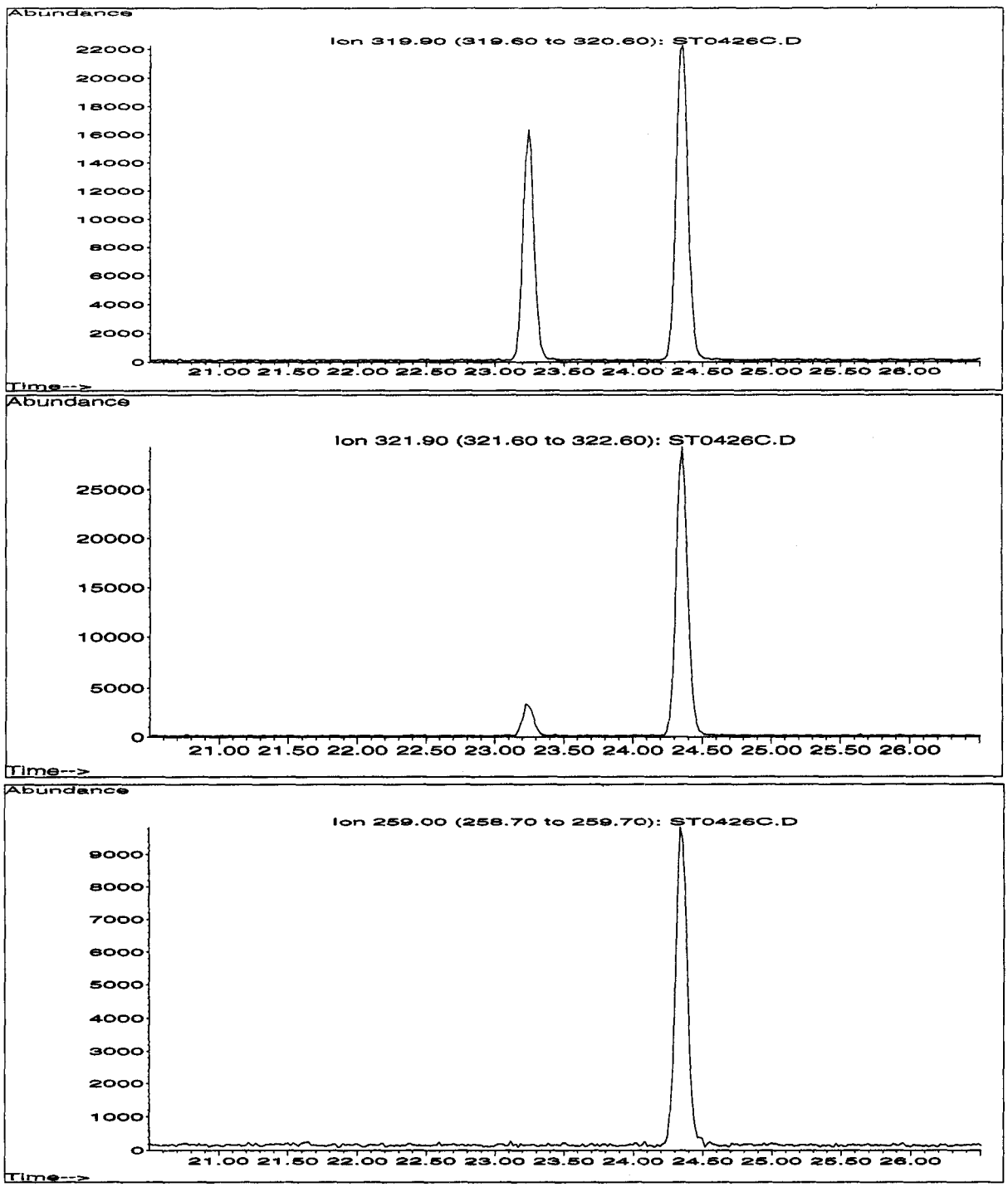






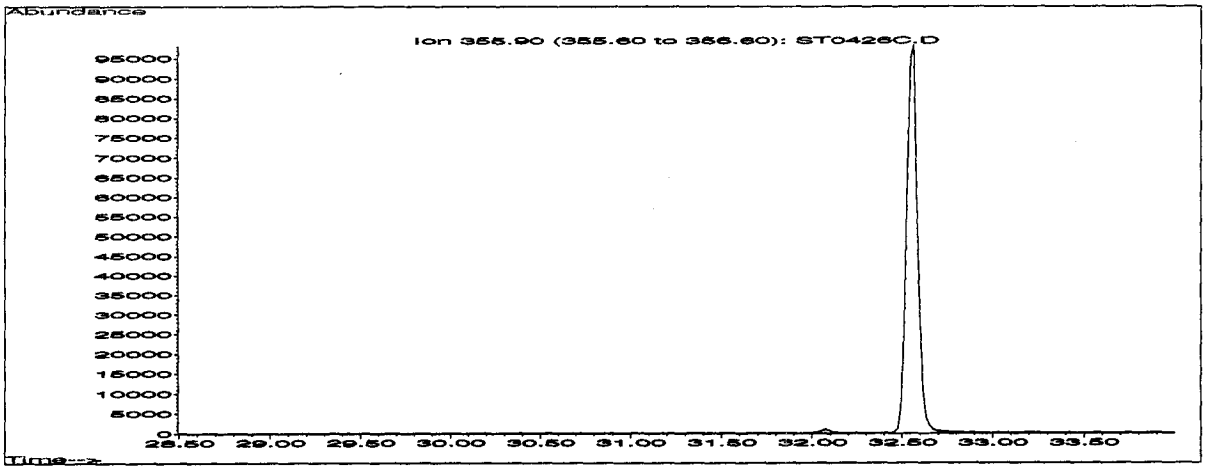
TCDD TOTAL

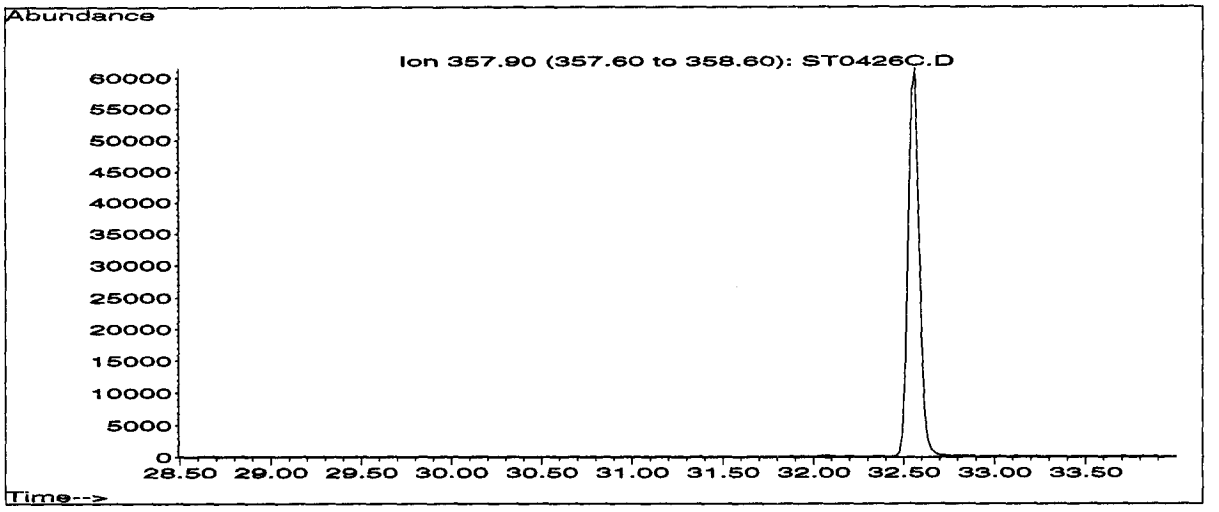
TS R.T. Lower Limit	20.50
TS R.T. Upper Limit	26.50

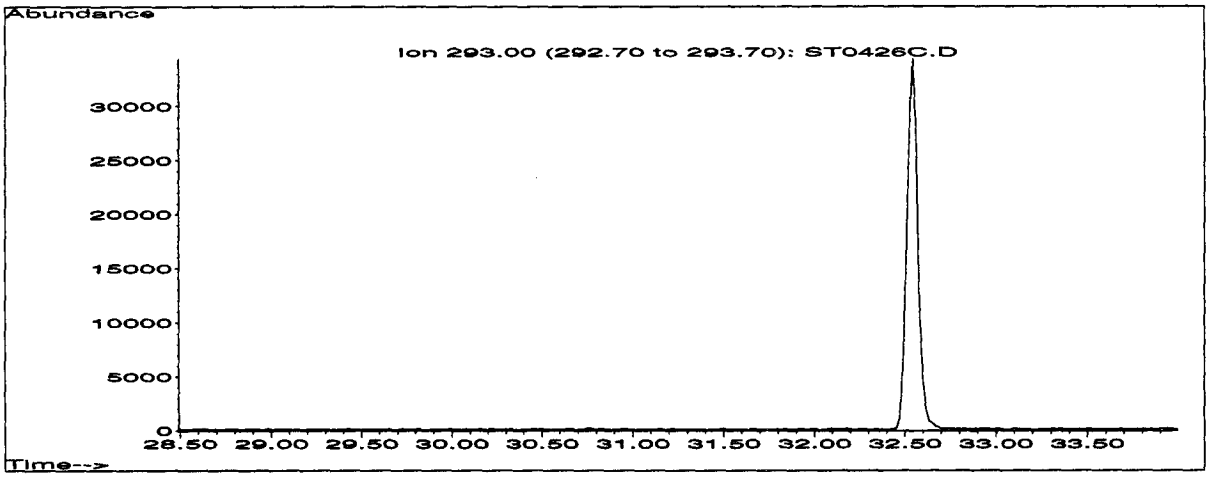


PeCDD TOTAL

TS R.T. Lower Limit	28.50
TS R.T. Upper Limit	34.00

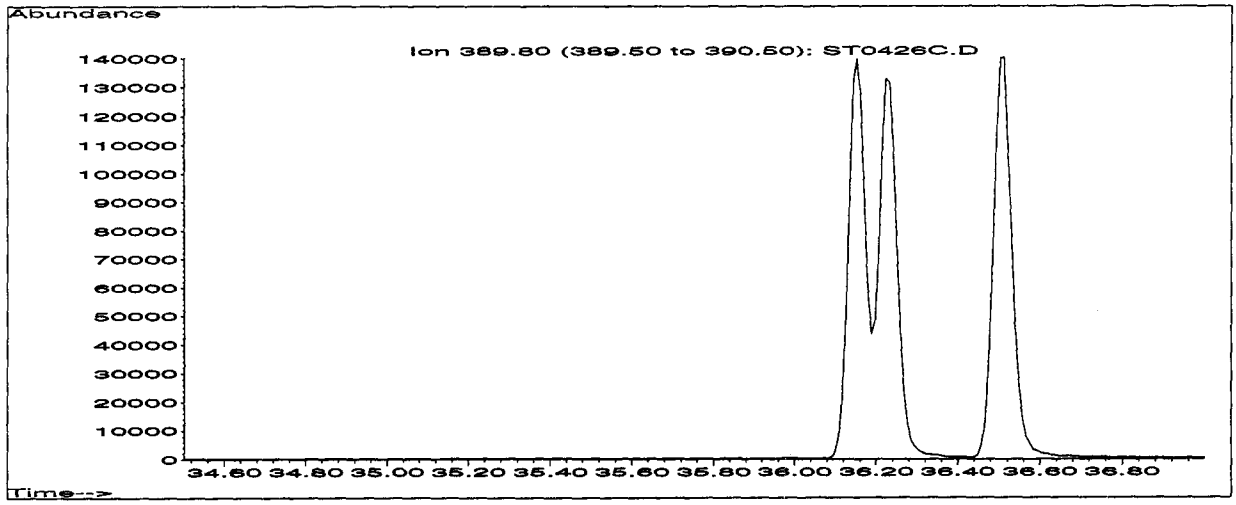


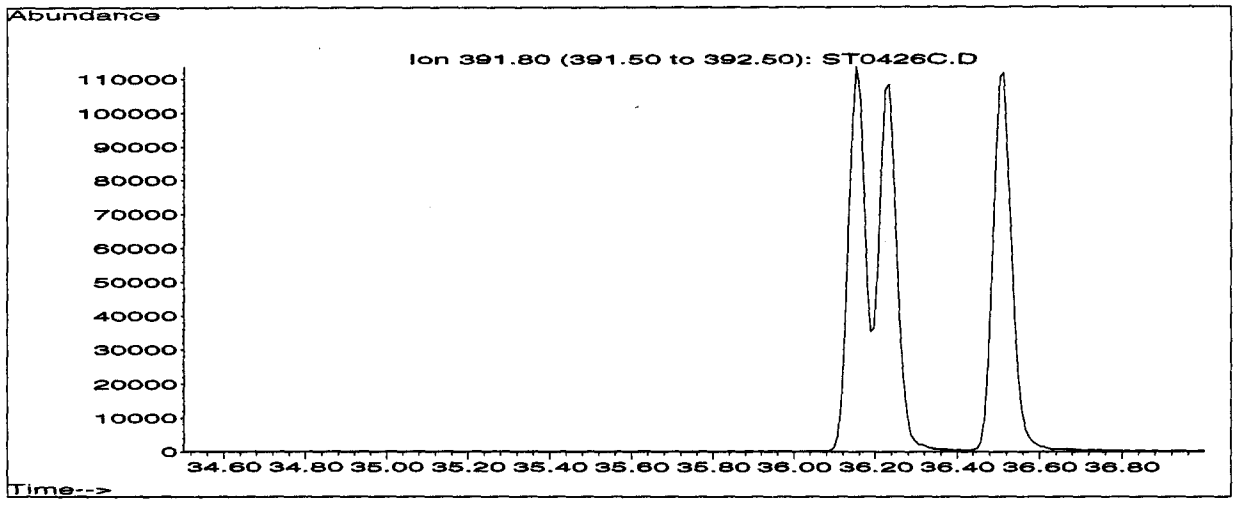


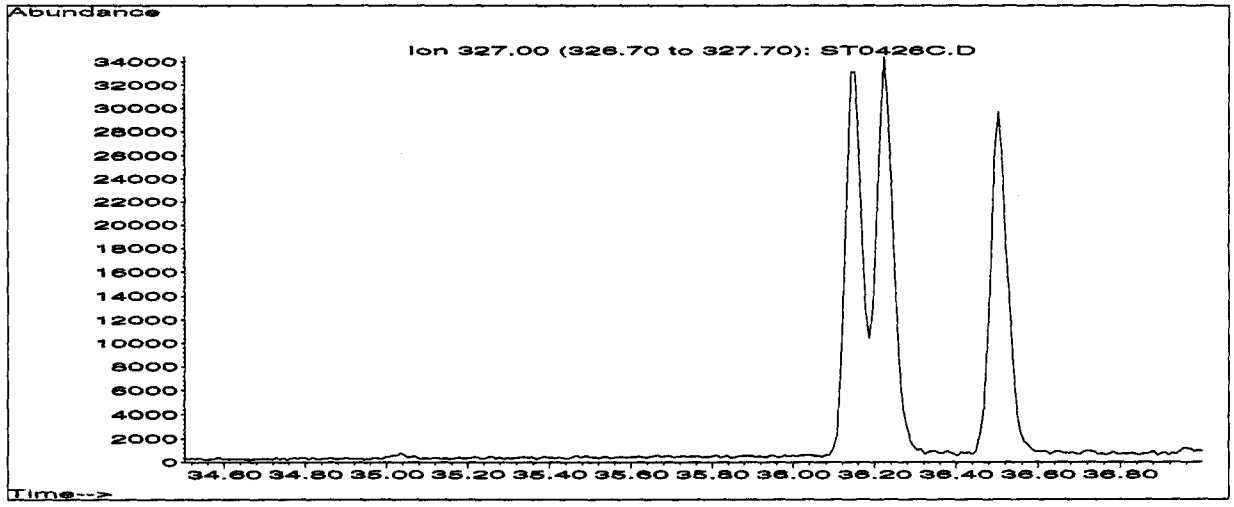


HxCDD TOTAL

TS R.T. Lower Limit	34.50
TS R.T. Upper Limit	37.00

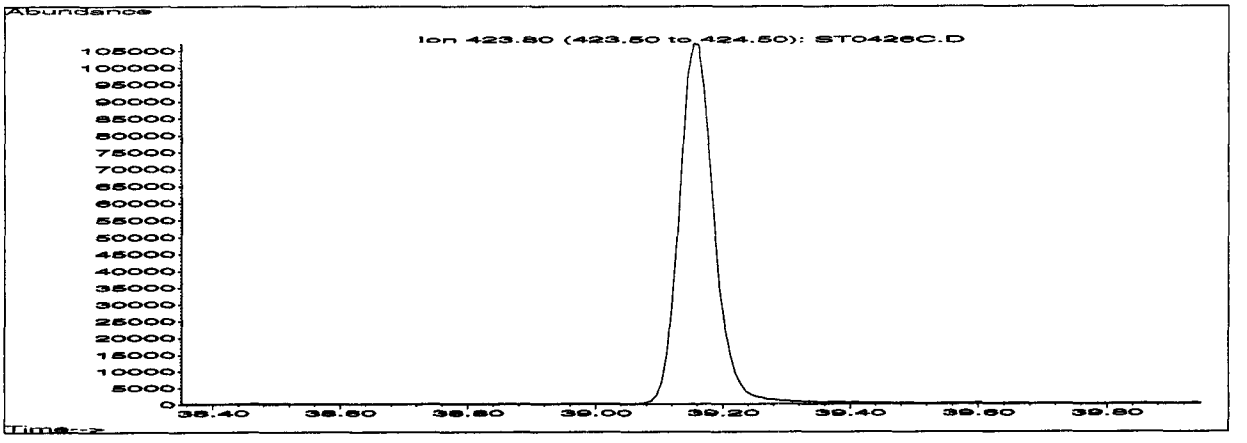


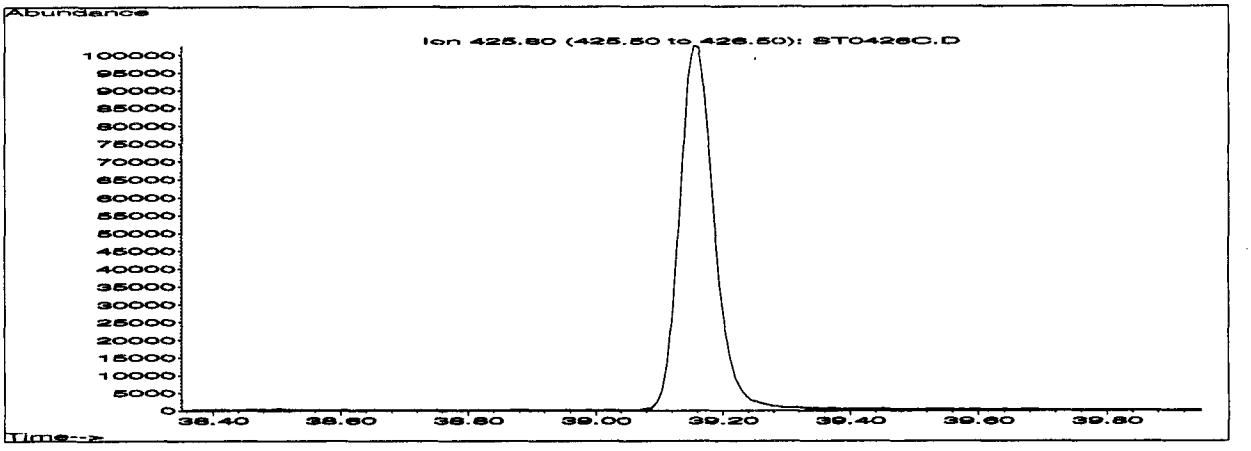


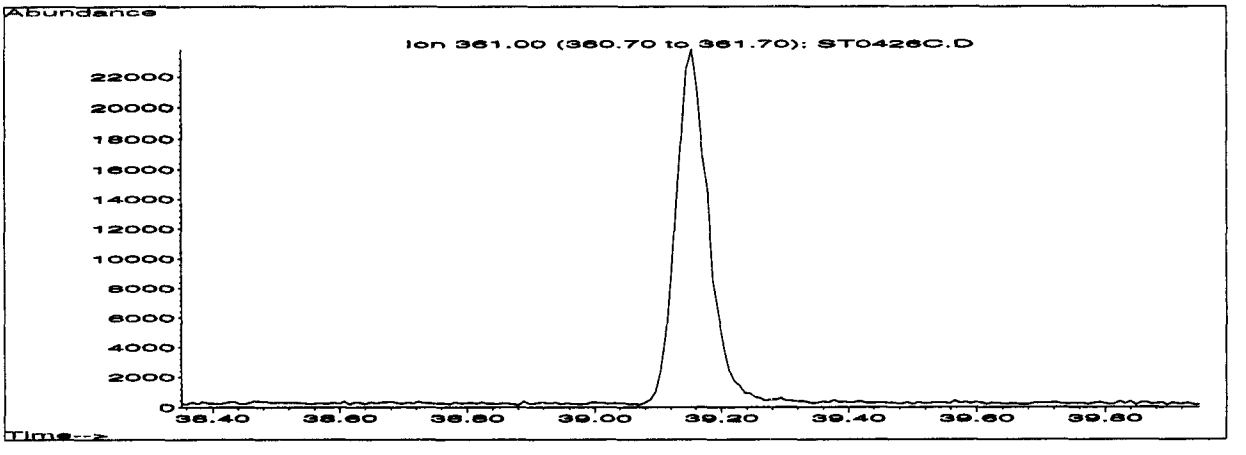


HpCDD TOTAL

TS R.T. Lower Limit	38.35
TS R.T. Upper Limit	39.95

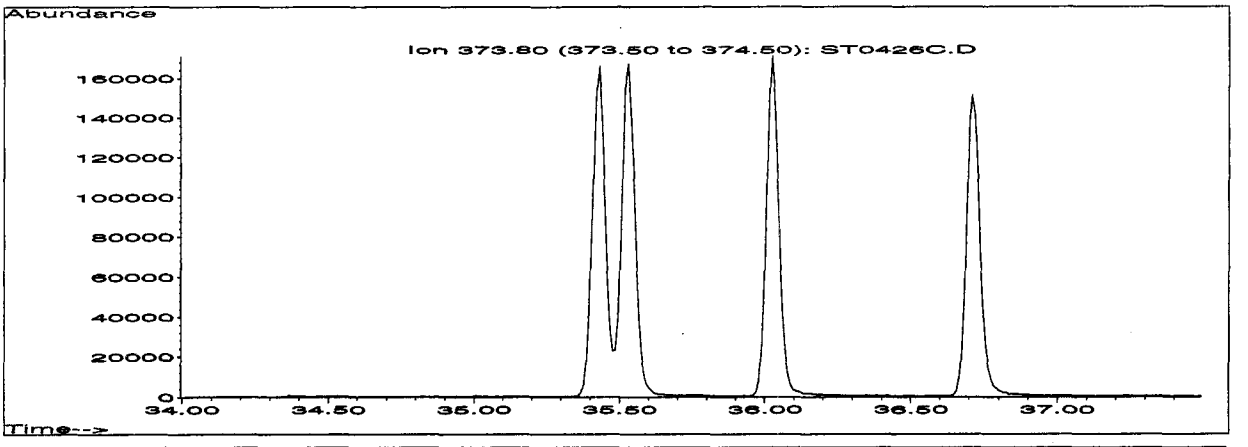


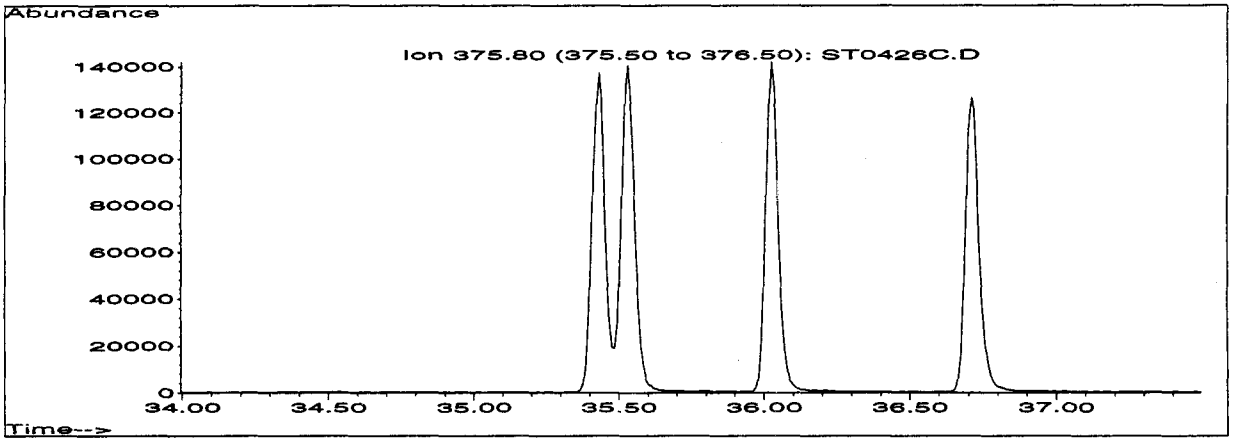


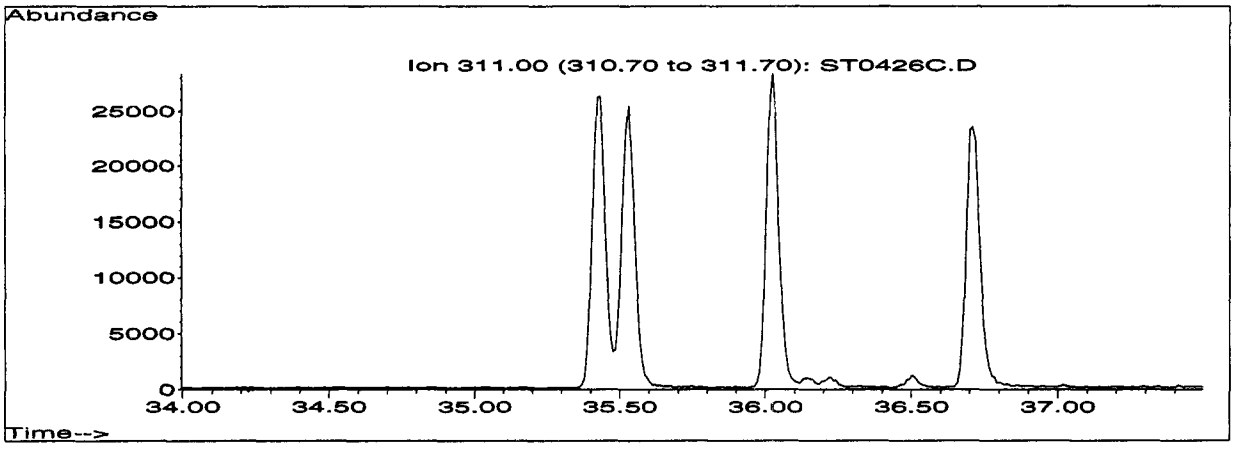


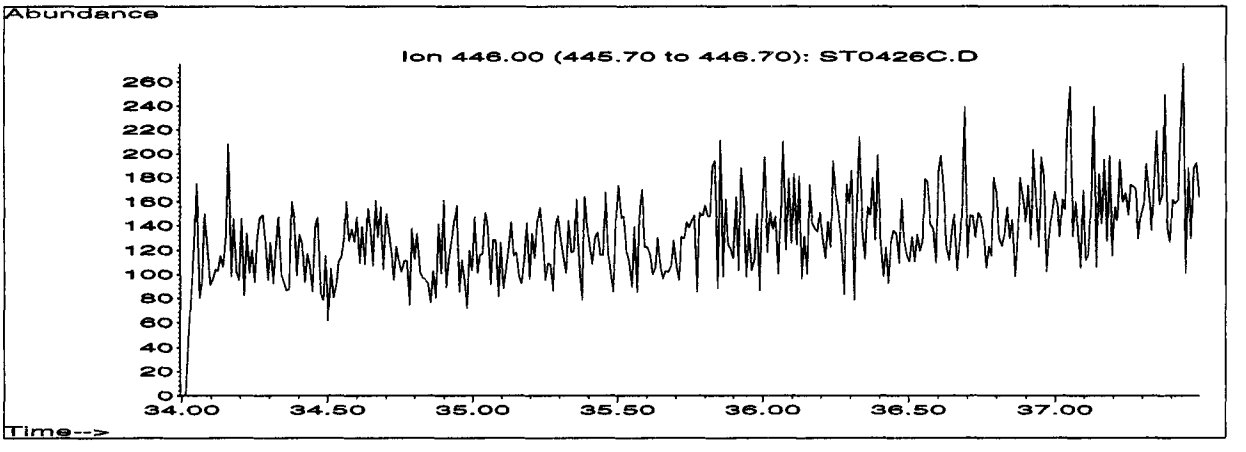
HxCDF TOTAL

TS R.T. Lower Limit	34.00
TS R.T. Upper Limit	37.50



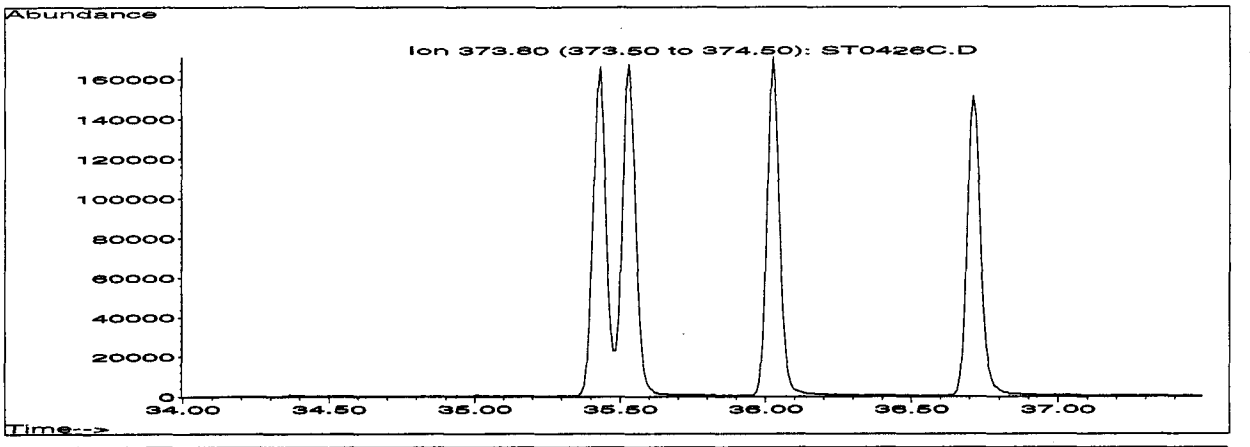


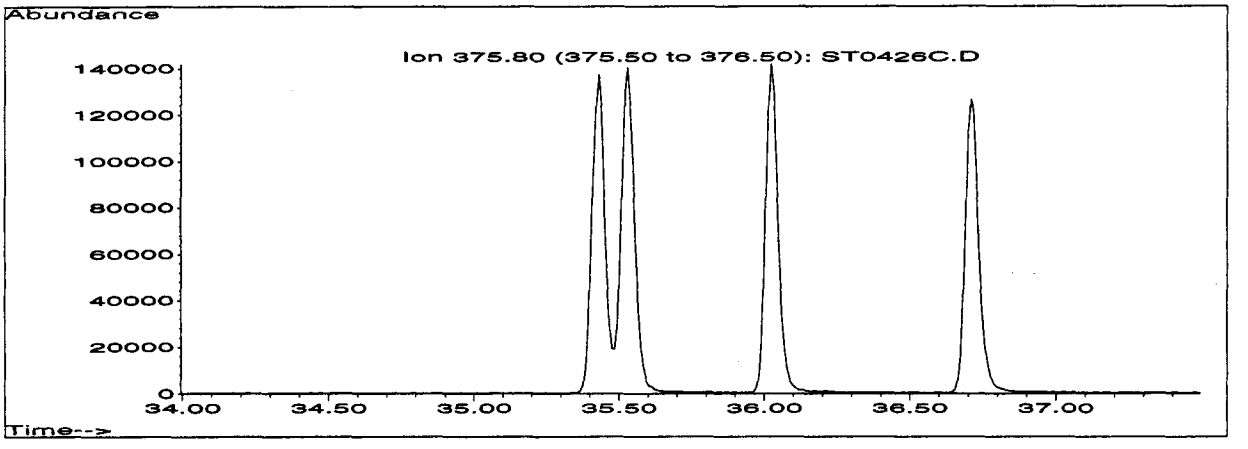


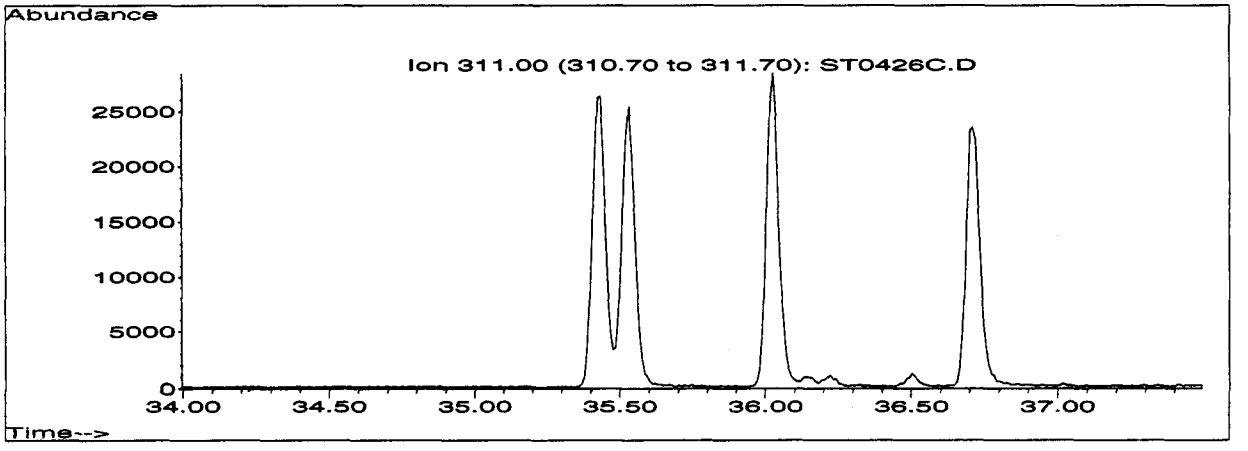


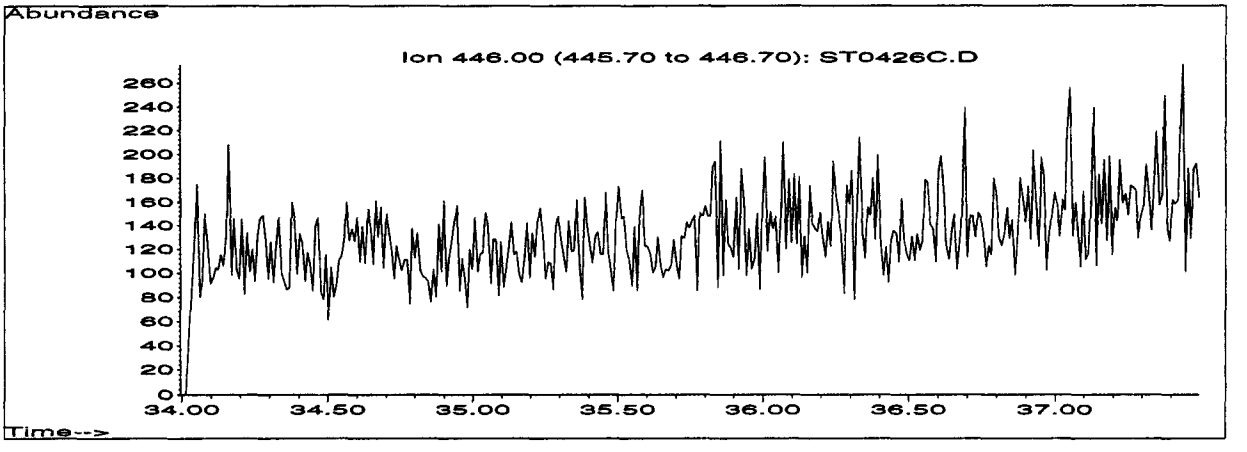
HxCDF TOTAL

TS R.T. Lower Limit	34.00
TS R.T. Upper Limit	37.50



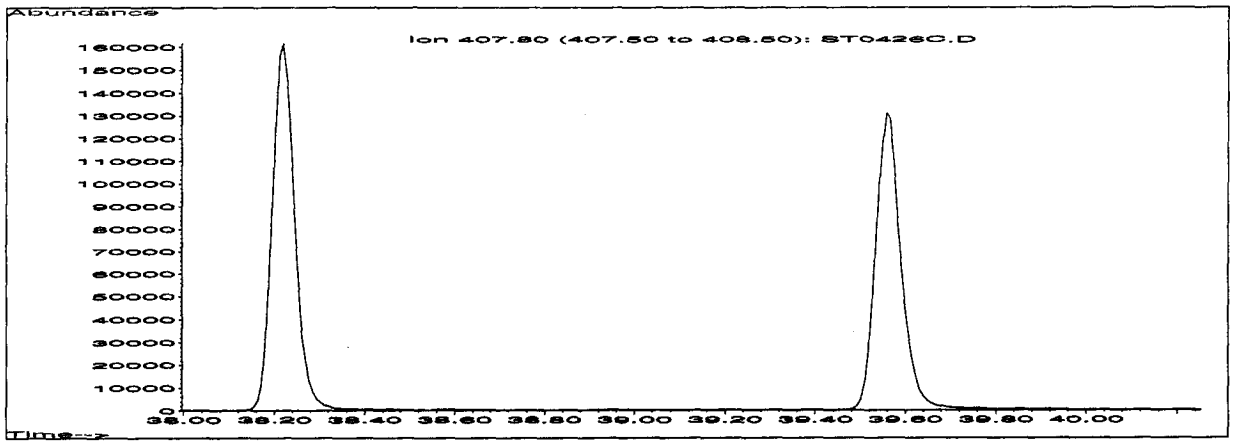


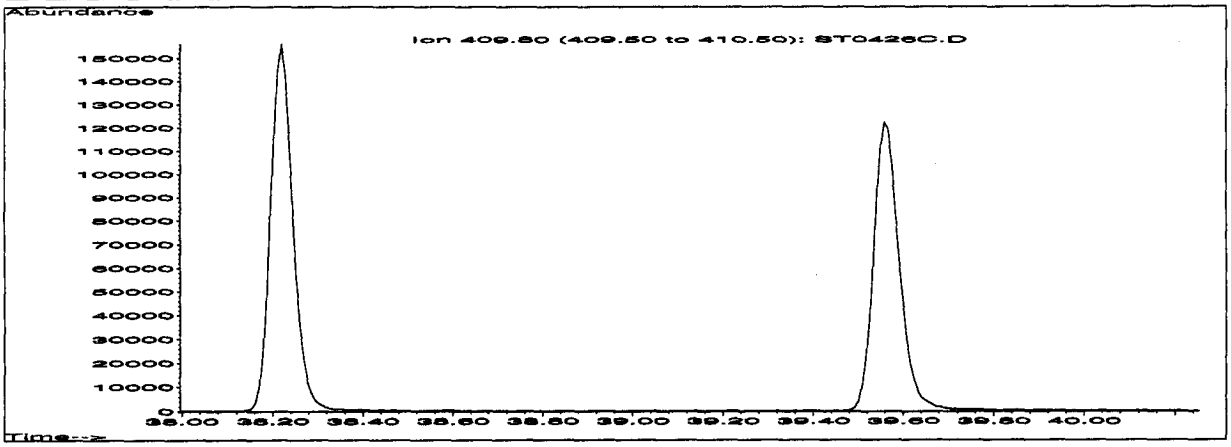


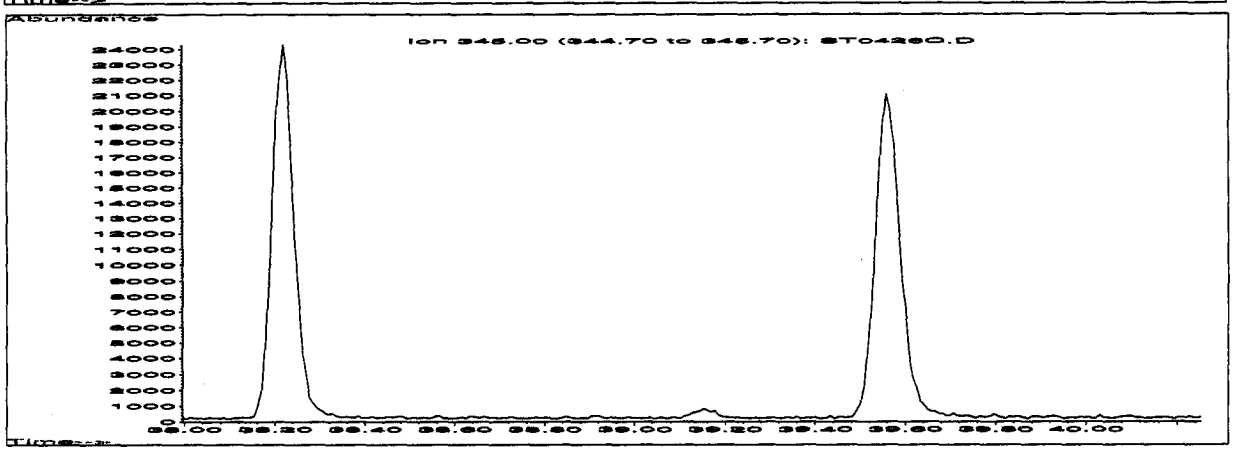


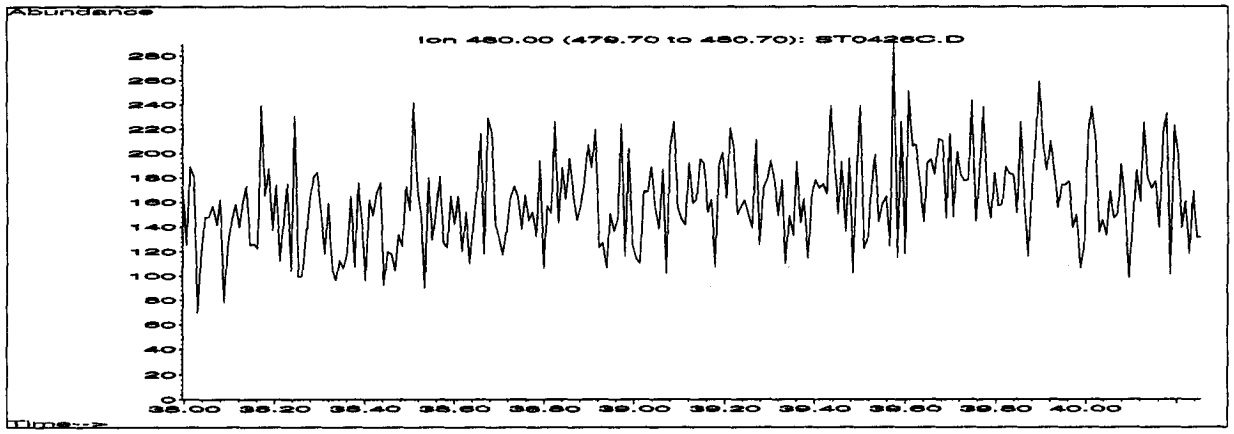
HpCDF TOTAL

TS R.T. Lower Limit	38.00
TS R.T. Upper Limit	40.25



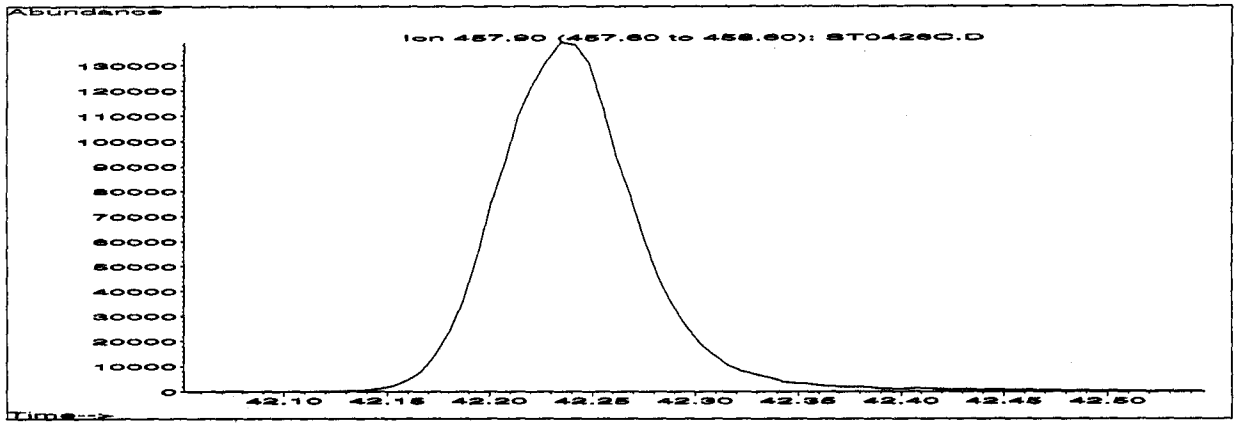


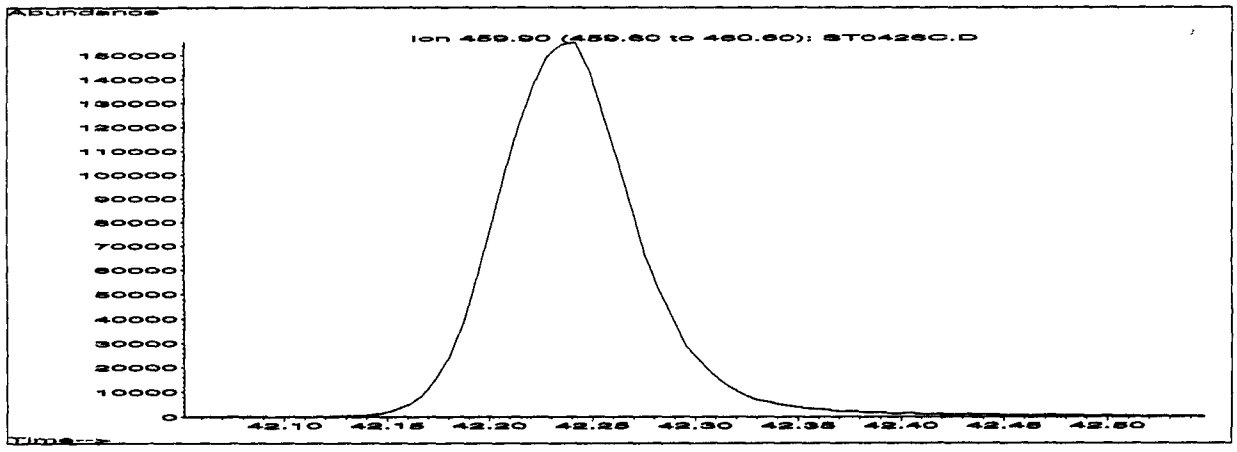


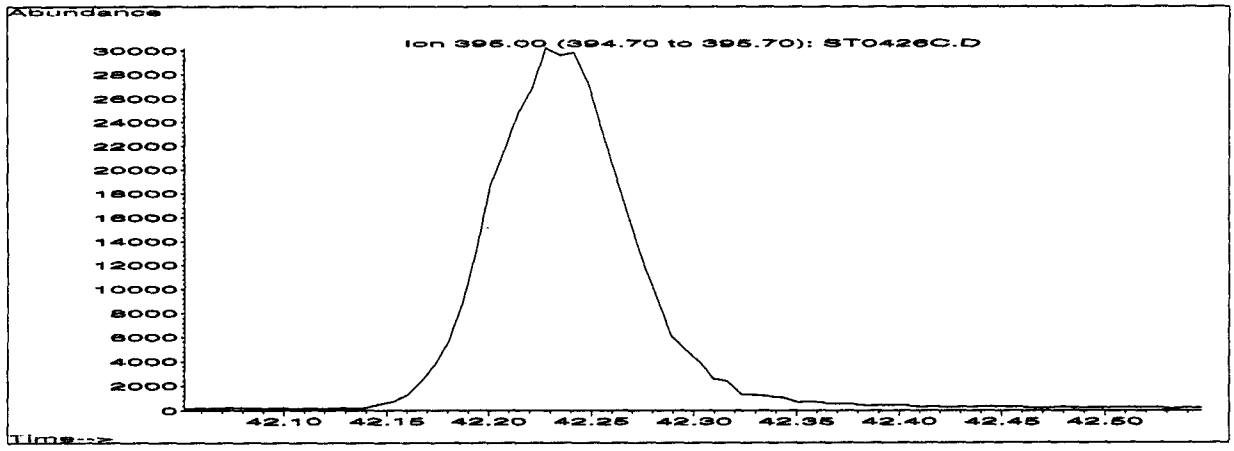


OCDD

TS R.T. Lower Limit	42.04		
TS R.T. Upper Limit	42.54		
Ret. Time	42.23		
Target Ion	457.9	Q1 Ion	459.9
Target Response	658225	Q1 Response	735056
Total Response	1393281	Ion ratio	0.90
Q2 Ion	395		
Q2 Response	142368		

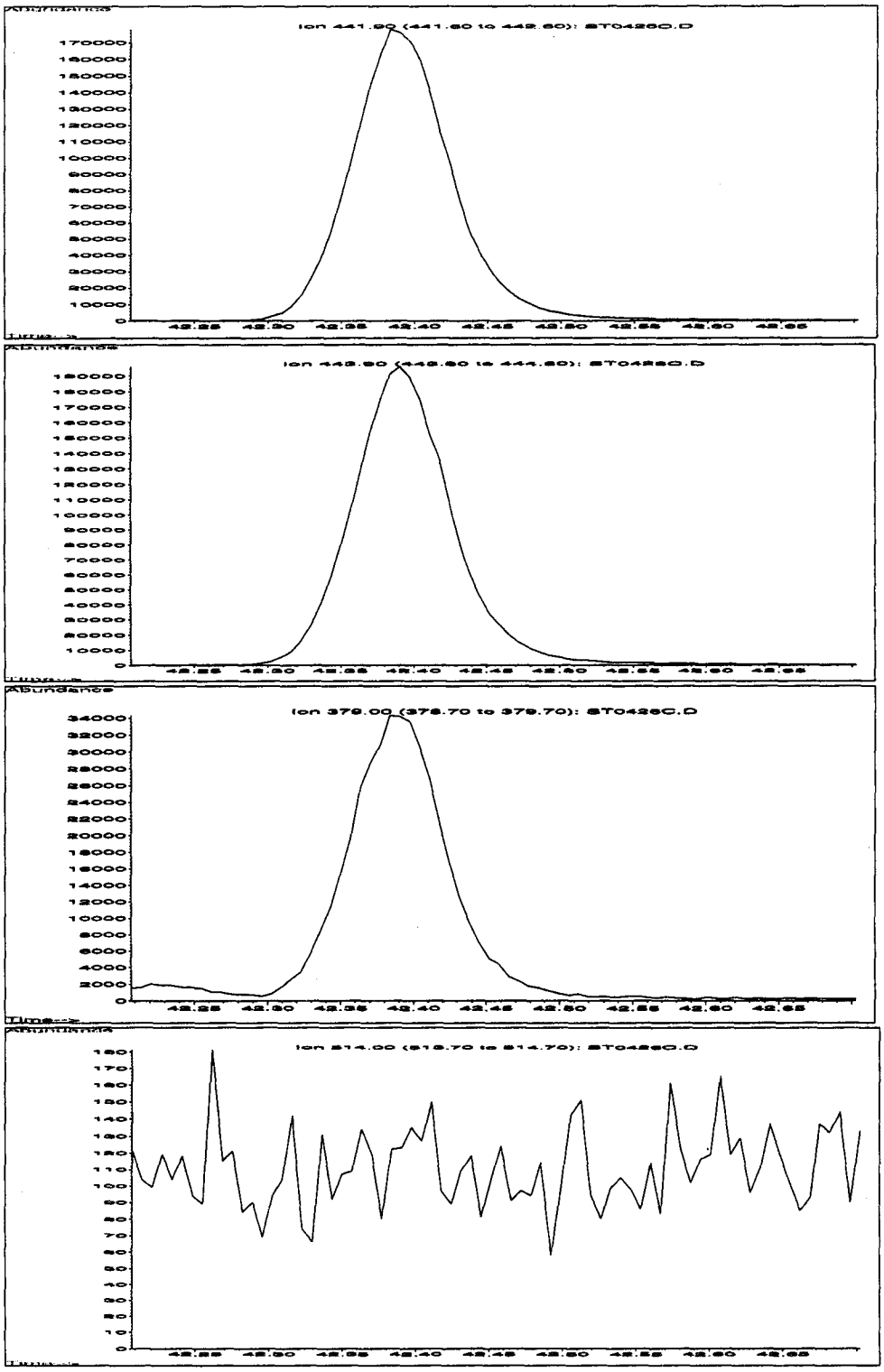






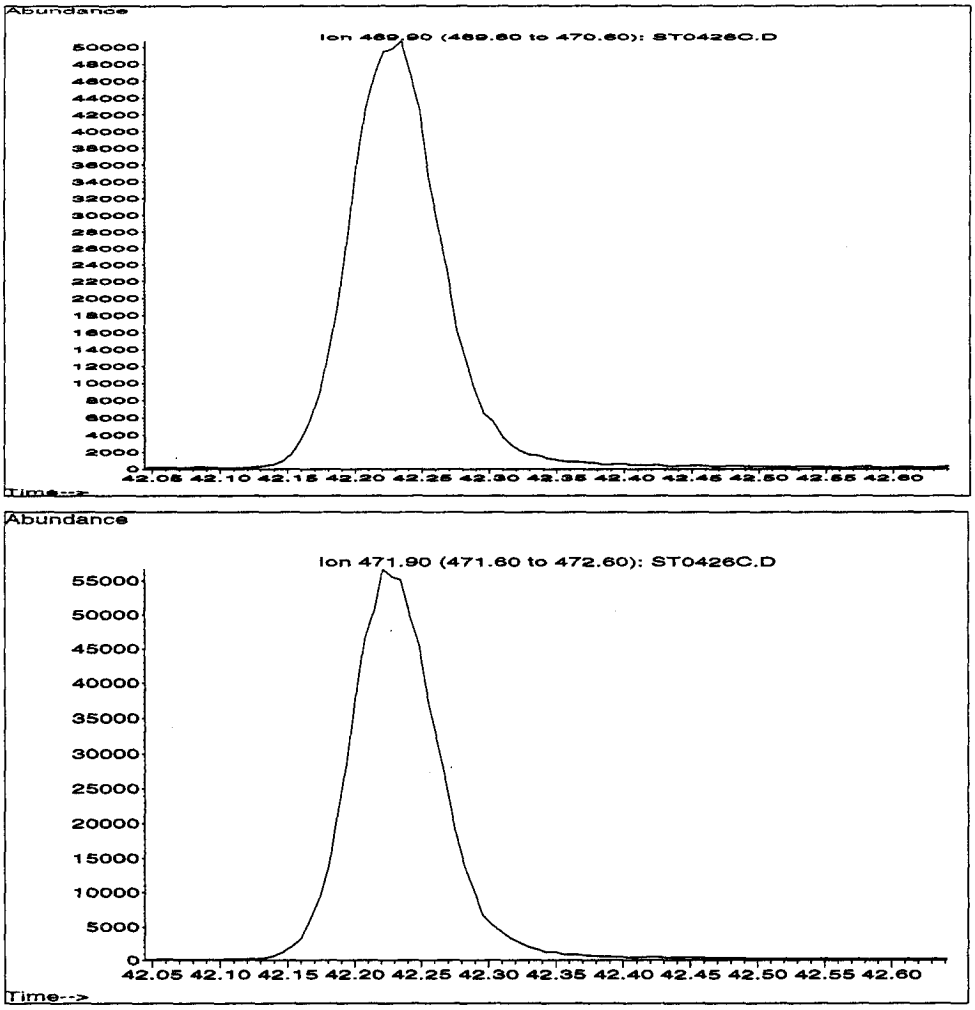
OCDF

TS R.T. Lower Limit	42.19		
TS R.T. Upper Limit	42.69		
Ret Time	42.38		
Target Ion	441.9	Q1 Ion	443.9
Target Response	851448	Q1 Response	929152
Target Response	1780600	Ion Ratio	0.92
Q2 Ion	379	DPE Ion	514
Q2 Response	157662	DPE Response	0



13C-OCDD-IS

RT Lower Limit	42.03		
RT Upper Limit	42.63		
Ret Time	42.23		
Target Ion	469.9	Q1 Ion	471.9
Target Response	243027	Q1 Response	264688
Total response	507715	Ratio	0.92



Quantitation Report (Not Reviewed)

Sample ID: CS-4 10LRES005 Size: 0.000
10LRES005 CS-4 Inst : DB1

Data File:C:\8280\2DB\042610.B\ST0426D.D Vial: 92
Acq On :26 Apr 2010 18:20 Operator: MEO
Sample Amount: 0.00
MS Integration Params: RTEINT.P
Quant Time: Apr 26 19:10 2010 Quant Results File: 10AP26I2.RES

Quant Method : C:\8280\ DATA METHODS\10AP26I2.M (RTE Integrator)
Title : Dioxin Furan Total
Last Update : Mon Apr 26 18:56:09 2010
Response via : Initial Calibration
DataAcq Meth : TOKAS
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Recovery\Internal Stds	R.T.	QIon	Ratio	Response	Conc		Dev(Min)
1) 13C-1234-TCDD	24.05	332+334	0.81	261234	25.00	NG	0.00
5) 13C-123789-HxCDD	36.50	402+404	1.26	395693	25.00	NG	0.00
9) 13C-2378-TCDF	23.24	316+318	0.81	348223	25.00	NG	0.00
15) 13C-2378-TCDD	24.33	332+334	0.80	243338	25.00	NG	0.00
20) 13C-123678-HxCDD	36.22	402+404	1.28	309556	25.00	NG	0.00
27) 13C-1234678-HpCDF	38.21	420+422	1.07	388045	25.00	NG	0.00
36) 13C-OCDD	42.23	470+472	0.92	507851	50.00	NG	0.00

Surrogate Compound

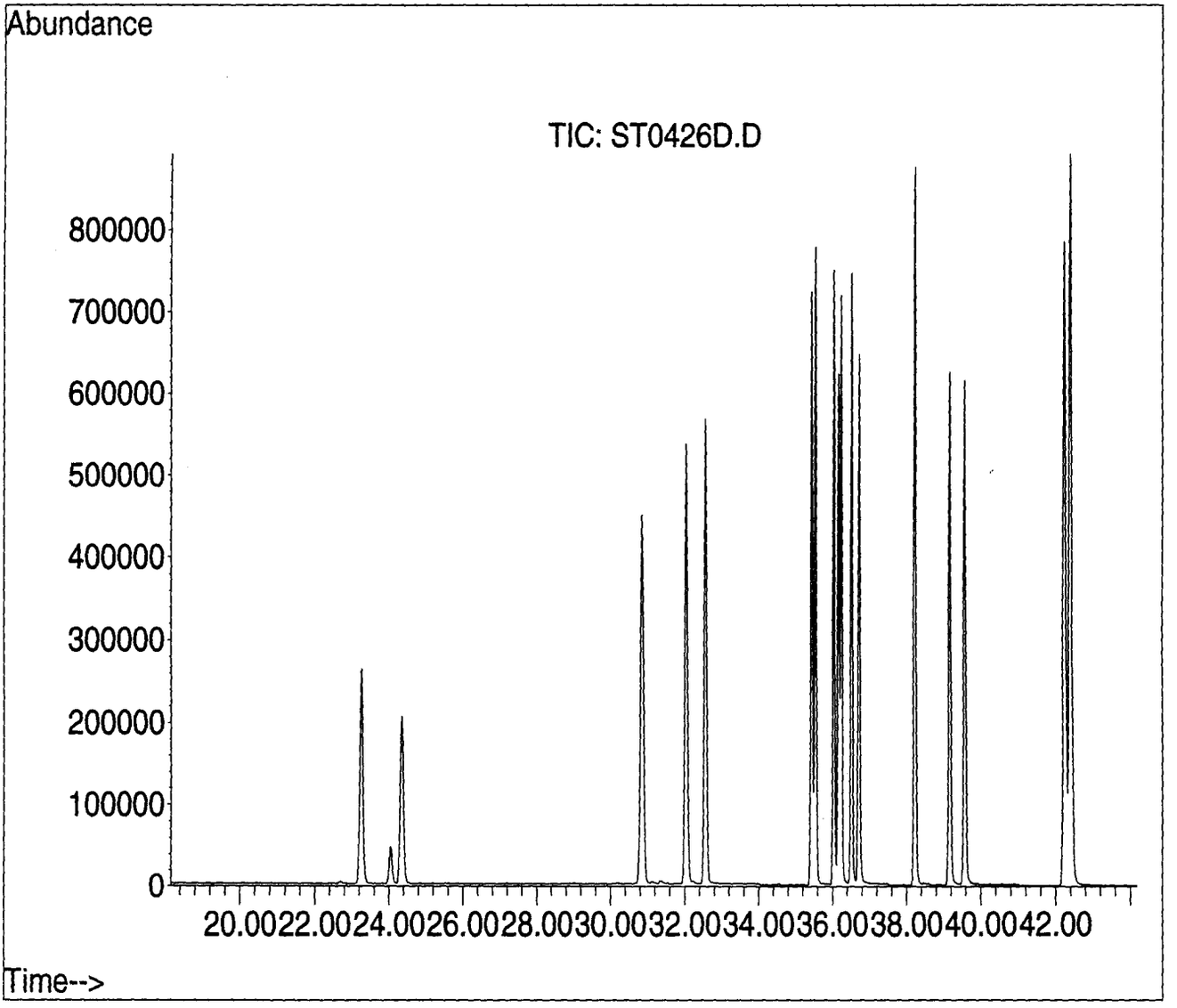
4) 37Cl-2378-TCDD	24.35	328		189654	13.837	NG	0.00
Spiked Amount = 12.500	RRF = 1.312			Recovery = 110.72%			

Target Compounds	RT	Ratio		Area	RRF	Conc	EDL	%Rec
2) 13C-2378-TCDF-IS	23.24	0.81		348223	1.381	24.128	0.0621	96.5
3) 13C-2378-TCDD-IS	24.33	0.80		243338	0.960	24.264	2.7509	97.0
6) 13C-123678-HxCDD-	36.22	1.28		309556	0.790	24.768	0.0932	99.1
7) 13C-1234678-HpCDF	38.21	1.07		388045	0.967	25.350	0.0968	101.4
8) 13C-OCDD-IS	42.23	0.92		507851	0.603	53.169	0.1317	106.3
10) 2378-TCDF	23.26	0.76		955400	1.275	53.814	0.2267	
1	22.69	0.97	#	13402		0.755		
2	23.26	0.76		959546		54.048		
3	24.07	1.64	#	2708		0.153		
11) TCDF TOTAL	22.00	1.64		975657	1.275	54.955		
12) 12378-PeCDF	30.84	1.53		2245148	1.187	135.774	0.0677	
13) 23478-PeCDF	32.02	1.51		2187959	1.170	134.210	0.1138	
1	30.14	1.27	#	3994		0.245		
2	30.84	1.53		2257440		138.471		
3	31.13	1.67		12155		0.746		
4	31.36	1.49		21761		1.335		
5	32.02	1.51		2187959		134.210		
14) PeCDF TOTAL	29.50	1.51		4483309	1.170	275.006		
16) 2378-TCDD	24.35	0.81		660422	1.277	53.144	0.0866	
1	23.24	5.43	#	31372		2.524		
2	24.35	0.81		688500		55.403		
17) TCDD TOTAL	22.50	0.81		719872	1.277	57.927		
18) 12378-PeCDD	32.54	1.58		1551464	1.156	137.925	0.0679	
1	32.54	1.58		1557910		138.498		
19) PeCDD TOTAL	30.00	1.58		1557910	1.156	138.498		
21) 123478-HxCDD	36.15	1.27		1654930	1.035	129.193	2.6725	
22) 123678-HxCDD	36.22	1.25		1694495	1.033	132.515	0.7164	
23) 123789-HxCDD	36.51	1.25		1745629	1.076	131.041	2.1223	
1	36.15	1.27		1654930		129.193		
2	36.22	1.30		1694495		132.515		
3	36.51	1.25		5854955		187.558		

24)	HxCDD TOTAL	36.50	1.25	9204380	2.521	449.265	
25)	1234678-HpCDD	39.16	1.05	1784092	1.029	140.068	0.0754
	1	38.49	0.70 #	3524		0.277	
	2	39.16	1.05	1784092		140.068	
26)	HpCDD TOTAL	39.35	1.05	1787616	1.029	140.345	
28)	123478-HxCDF	35.42	1.20	2129256	1.071	128.133	10.1639
29)	123678-HxCDF	35.53	1.20	2179936	1.138	123.439	0.6314
30)	234678-HxCDF	36.03	1.21	2082849	1.063	126.287	0.2302
31)	123789-HxCDF	36.71	1.21	1988991	1.012	126.585	0.3001
	1	34.54	1.32	5150		0.110	
	2	35.42	1.20	2129256		128.133	
	3	35.53	1.20	2179936		123.439	
	4	36.03	1.20	2082849		126.287	
	5	36.71	1.21	1994980		42.562	
32)	HxCDF TOTAL	36.00	1.21	8392171	3.020	420.530	
33)	1234678-HpCDF	38.22	1.05	2446863	1.219	129.282	0.1301
34)	1234789-HpCDF	39.56	1.05	2228697	1.059	135.648	0.0939
	1	38.22	1.05	2446863		129.282	
	2	38.58	1.11	4525		0.275	
	3	39.56	1.05	2228697		135.648	
35)	HpCDF TOTAL	39.50	1.05	4680085	1.059	265.206	
37)	OCDD	42.23	0.90	3018969	1.130	262.931	0.1314
38)	OCDF	42.39	0.92	3930519	1.472	262.968	0.1709

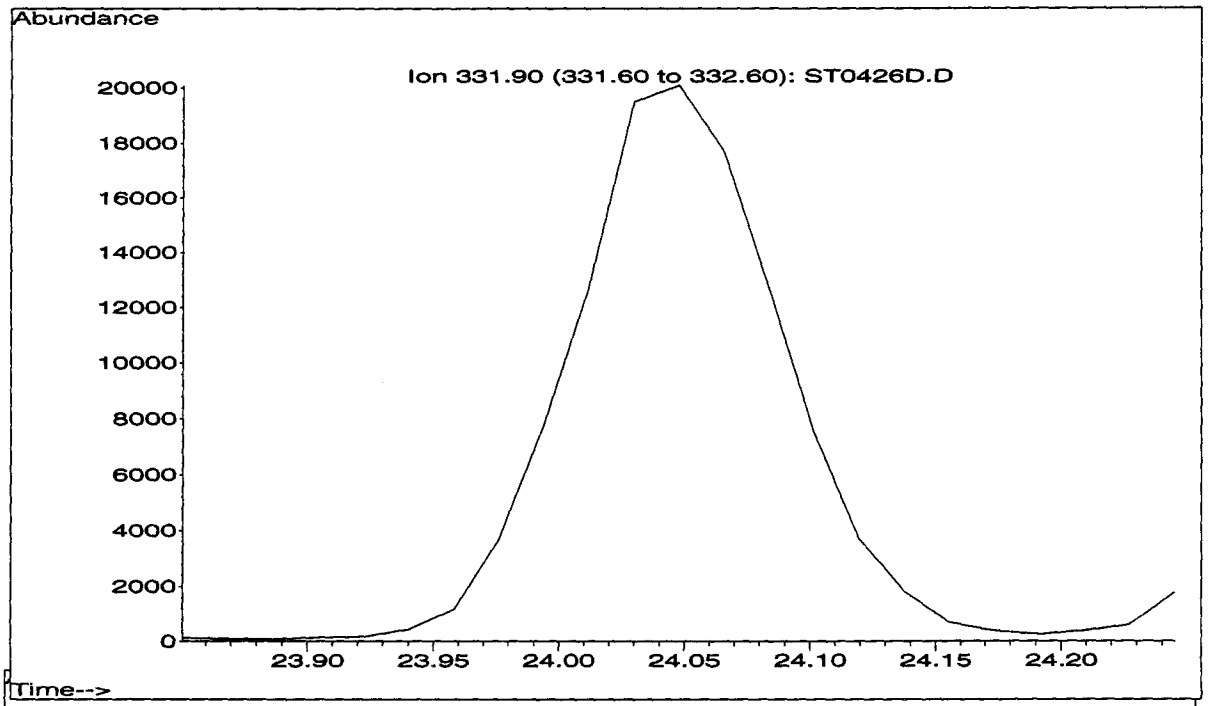
(#) = qualifier out of range•: areas and concentration based on theoretical ion ratio
(m) = manual integration
ST0426D.D 10AP26I2.M Mon Apr 26 19:10:46 2010

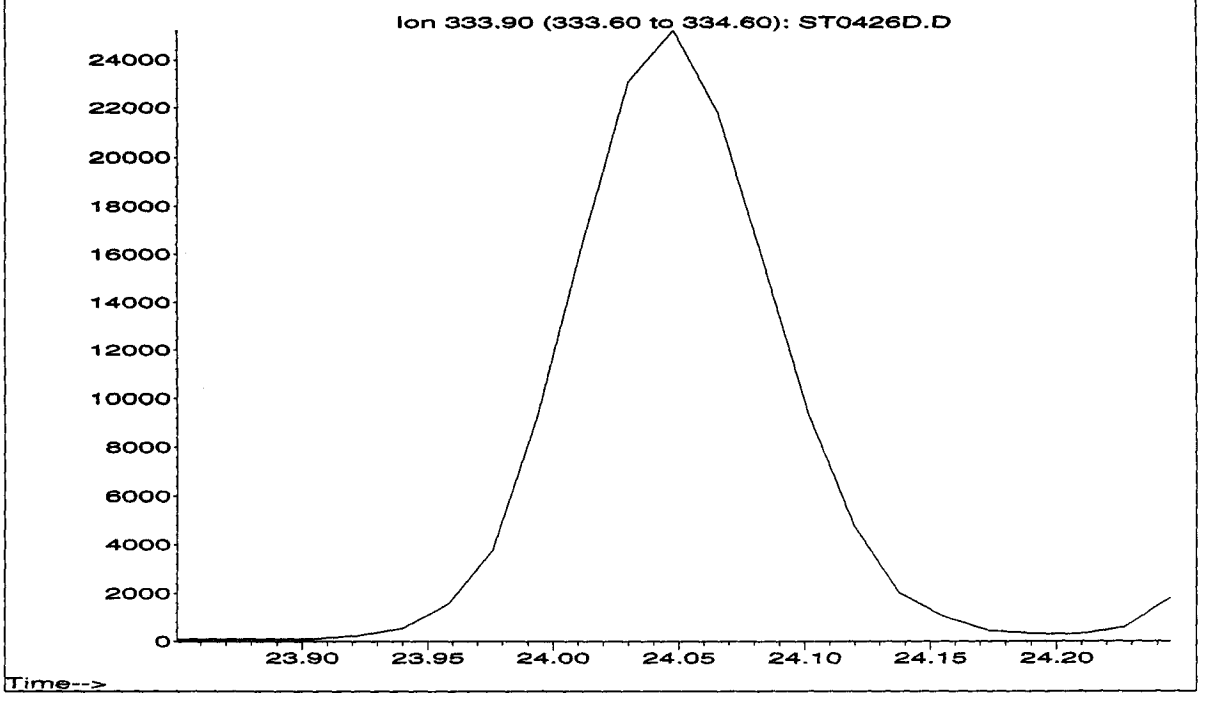
Data File Name	ST0426D.D
Data File Path	C:\8280\2DB\042610.B\
Operator	MEO
Date Acquired	4/26/2010 18:20
Acq. Method File	TOKAS
Sample Name	10LRES005 CS-4
Misc Info	CS-4 10LRES005
Vial Number	92
Instrument Name	2DB
Sample Multiplier	1
Sample Amount	0



13C-1234-TCDD

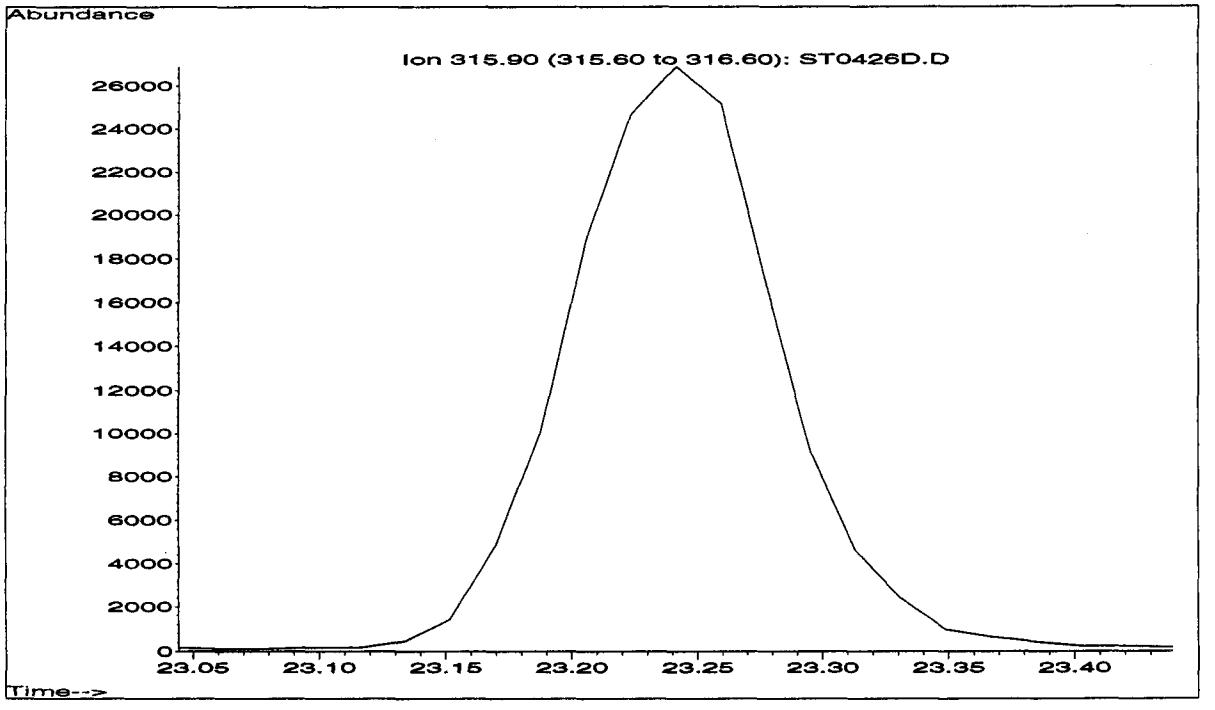
TS R.T. Lower Limit	23.85		
TS R.T. Upper Limit	24.25		
Ret Time	24.05		
Target Ion	331.9	Q1 Ion	333.9
Target Response	117033	Q1 Response	144201
Total Response	261234	Ion Ratio	0.81

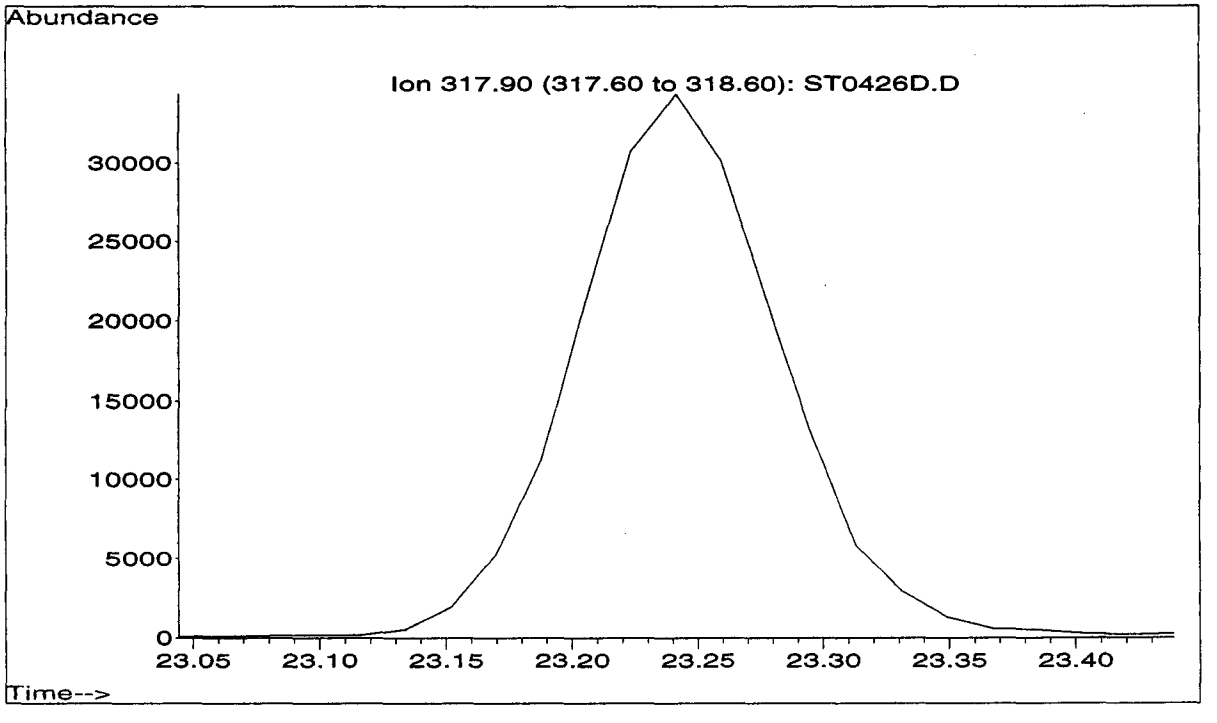




13C-2378-TCDF-IS

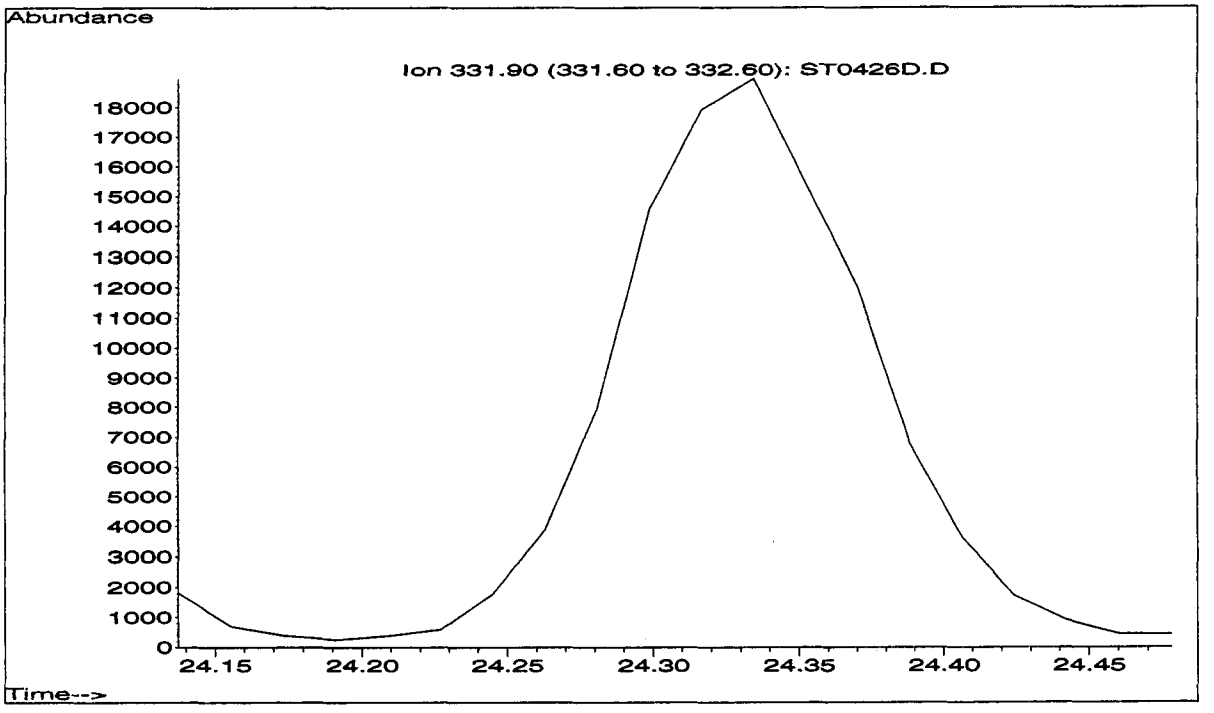
TS R.T. Lower Limit	23.04		
TS R.T. Upper Limit	23.44		
Ret Time	23.24		
Target Ion	315.9	Q1 Ion	317.9
Target Response	156230	Q1 Response	191993
Target Response	348223	Ion Ratio	0.81

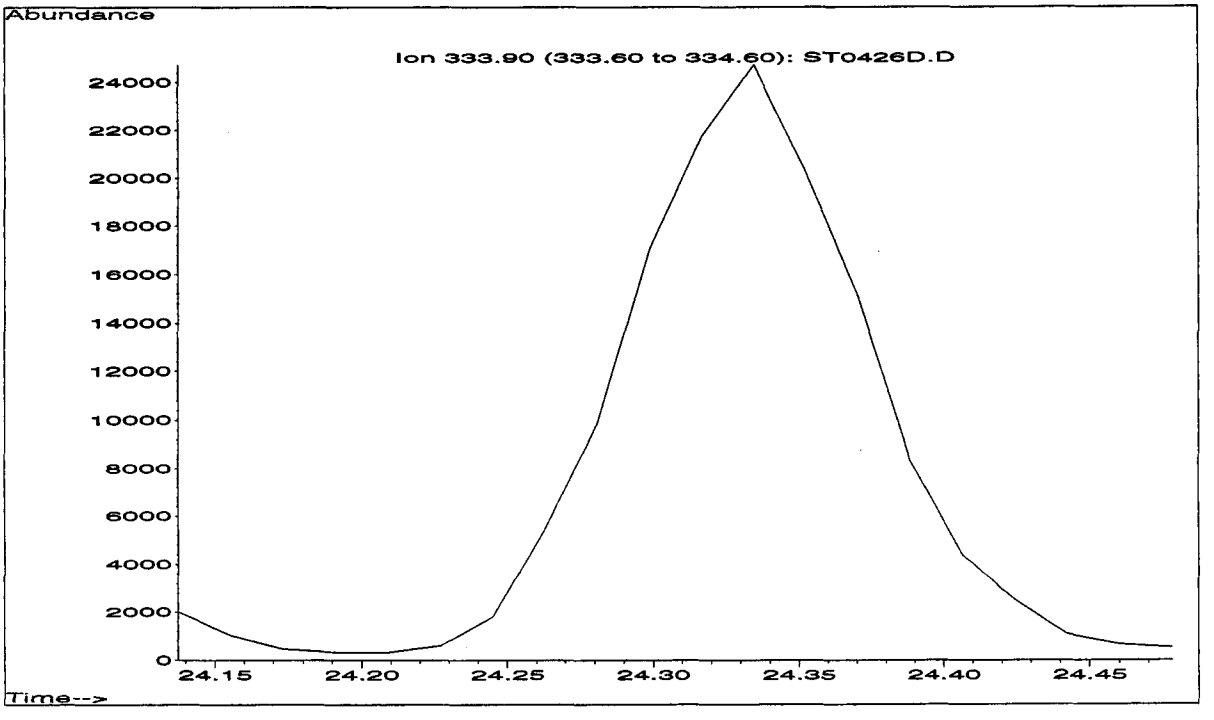




13C-2378-TCDD-IS

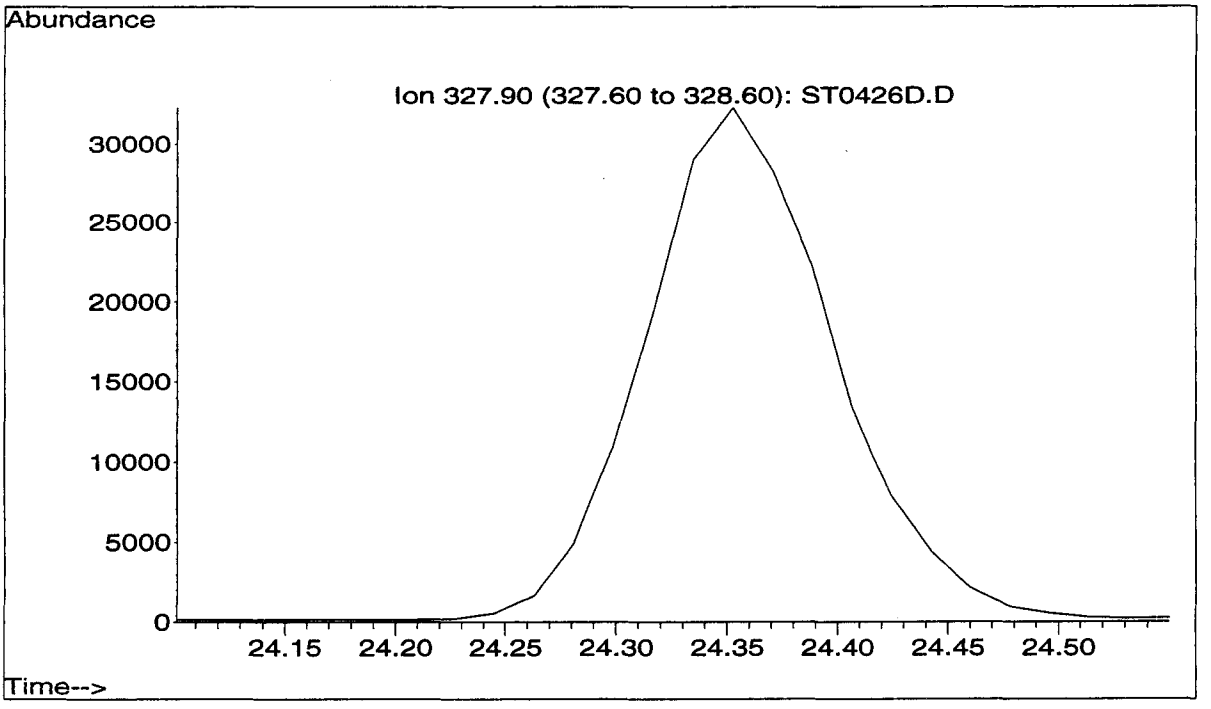
TS R.T. Lower Limit	24.14		
TS R.T. Upper Limit	24.49		
Ret Time	24.33		
Target Ion	331.9	Q1 Ion	333.9
Target Response	108331	Q1 Response	135007
Total Response	243338	Ion Ratio	0.80

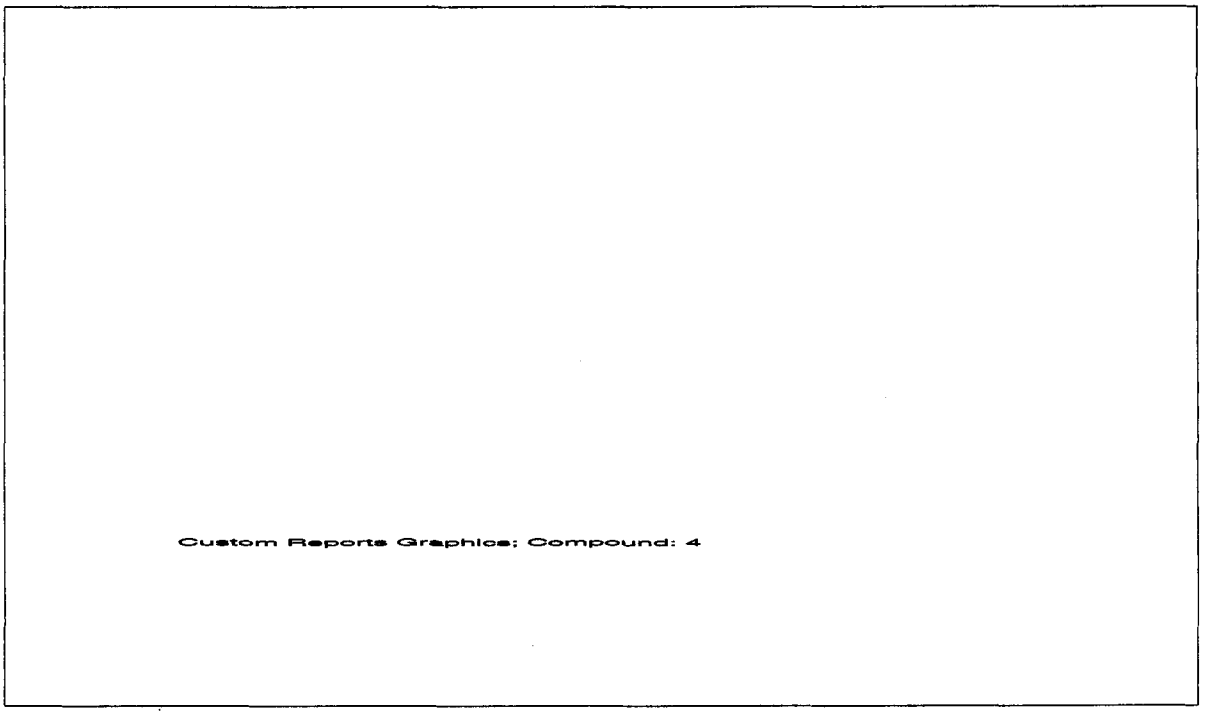




37Cl-2378-TCDD

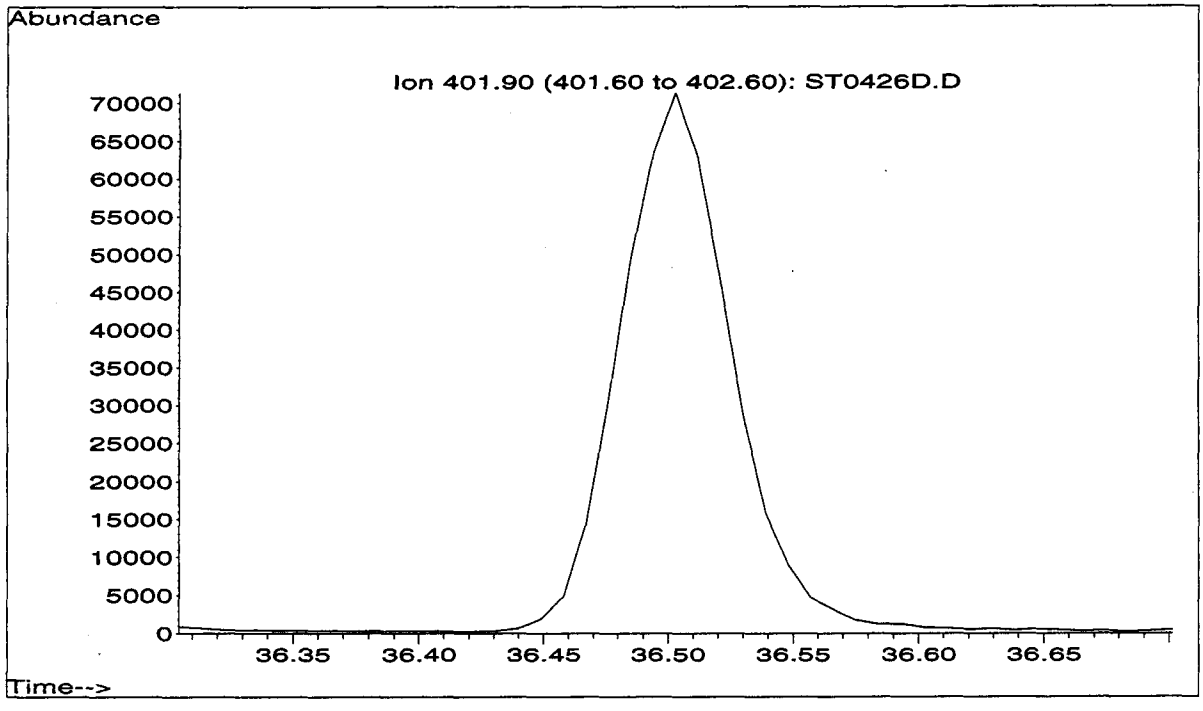
TS R.T. Lower Limit	24.10		
TS R.T. Upper Limit	24.55		
Ret Time	24.35		
Target Ion	327.9	Q1 Ion	0
Target Response	189654	Q1 Response	0
Total Response	189654	Ion Ratio	#DIV/0!

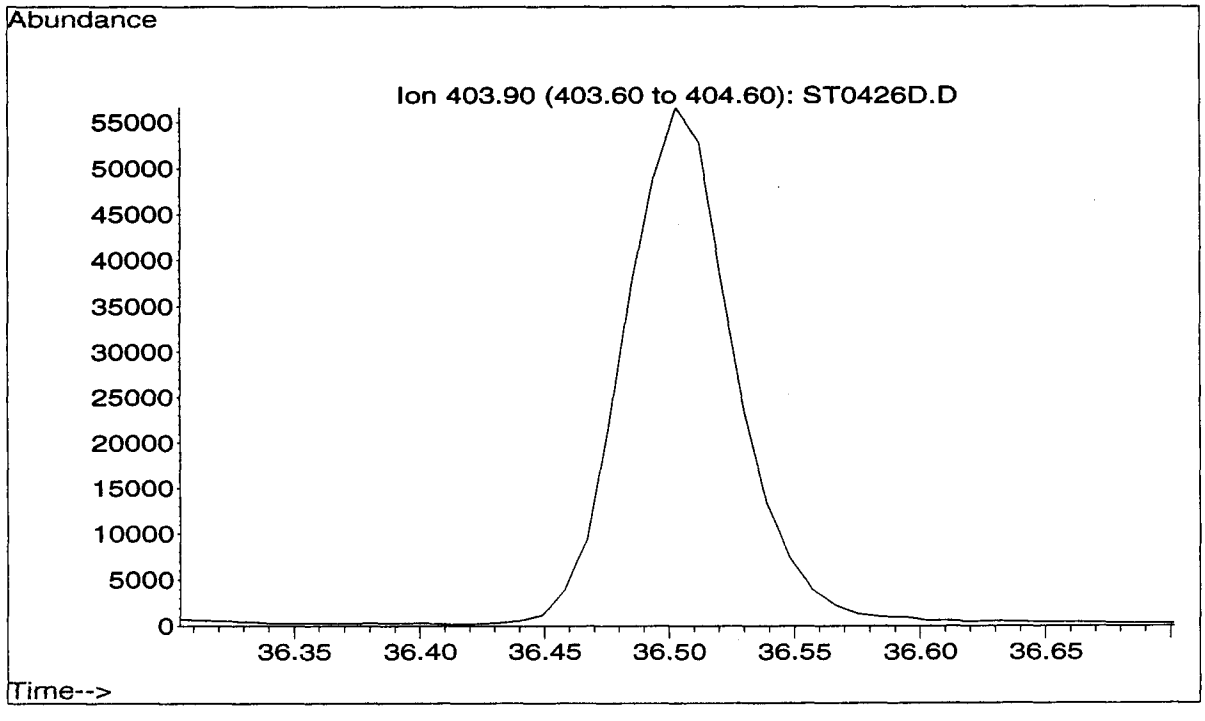




13C-123789-HxCDD

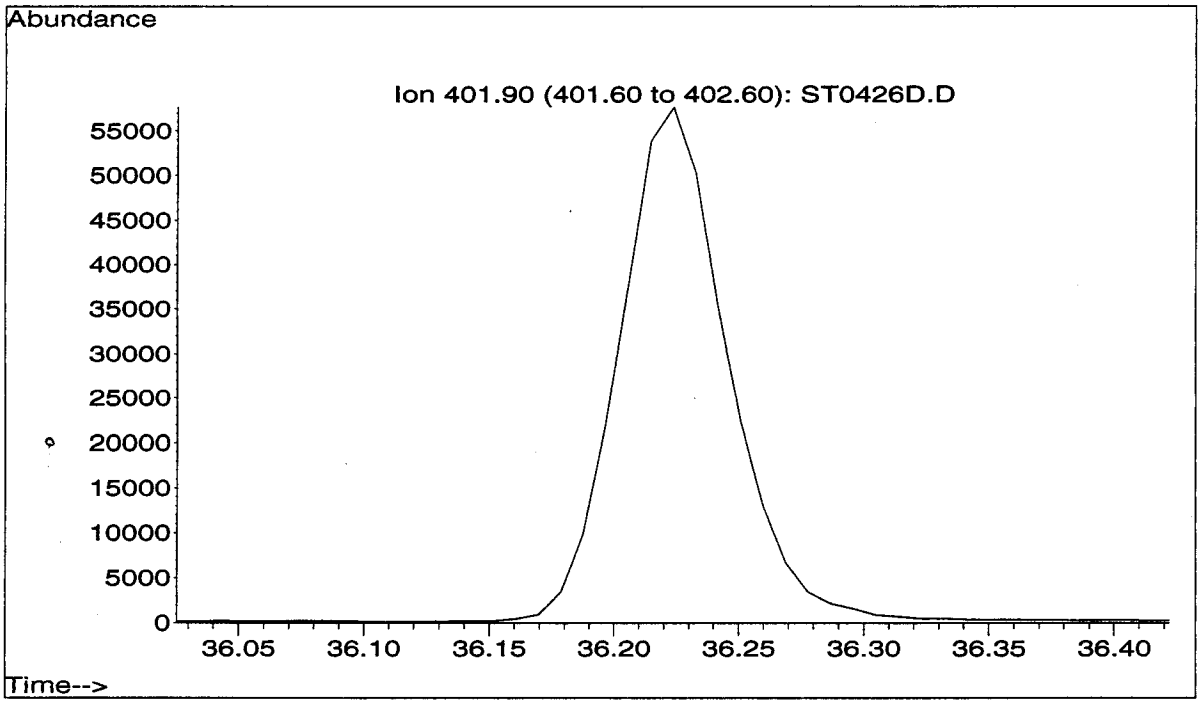
TS R.T. Lower Limit	36.30		
TS R.T. Upper Limit	36.70		
Ret Time	36.50		
Target Ion	401.9	Q1 Ion	403.9
Target Response	220800	Q1 Response	174893
Target Response	395693	Ion Ratio	1.26

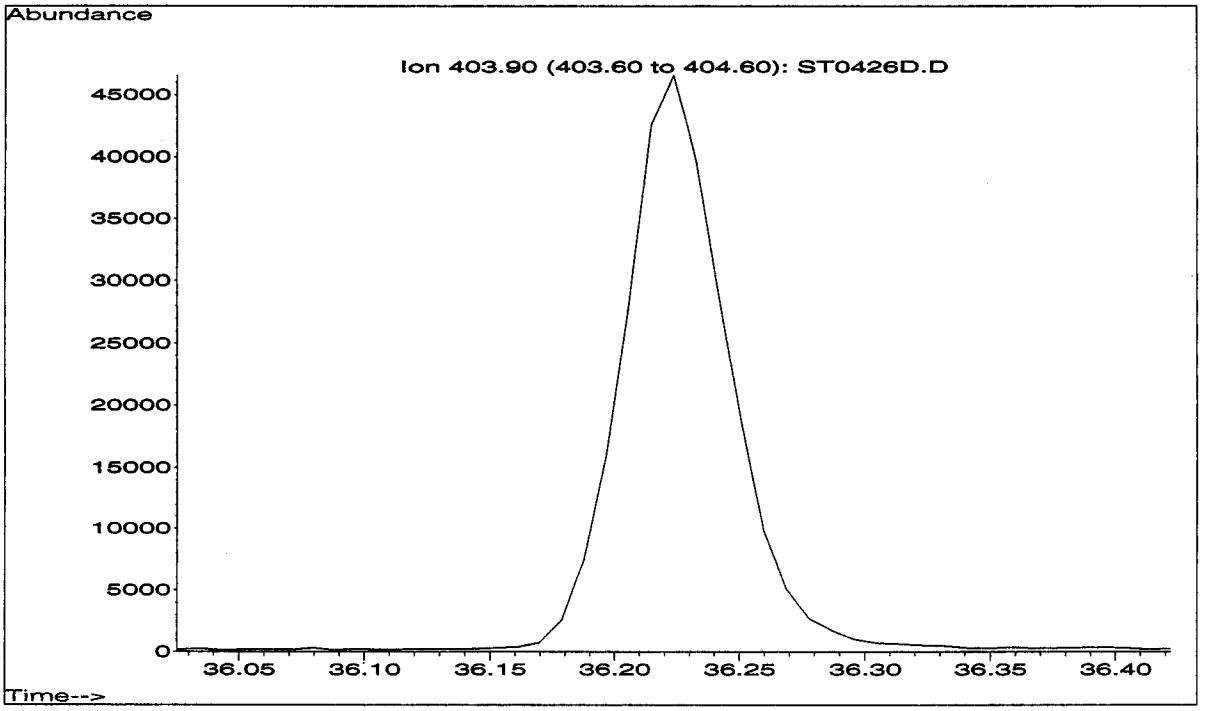




13C-123678-HxCDD-IS

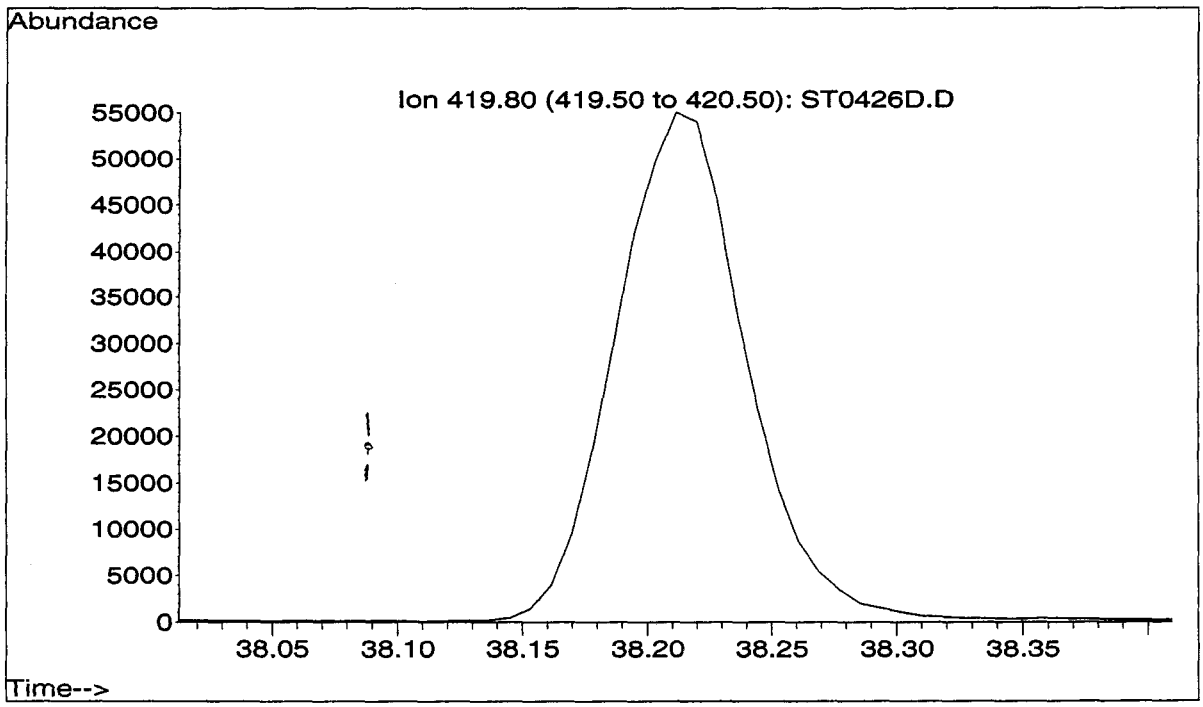
TS R.T. Lower Limit	36.02		
TS R.T. Upper Limit	36.42		
Ret Time	36.22		
Target Ion	401.9	Q1 Ion	403.9
Target Response	173811	Q1 Response	135745
Total Response	309556	Ion Ratio	1.28

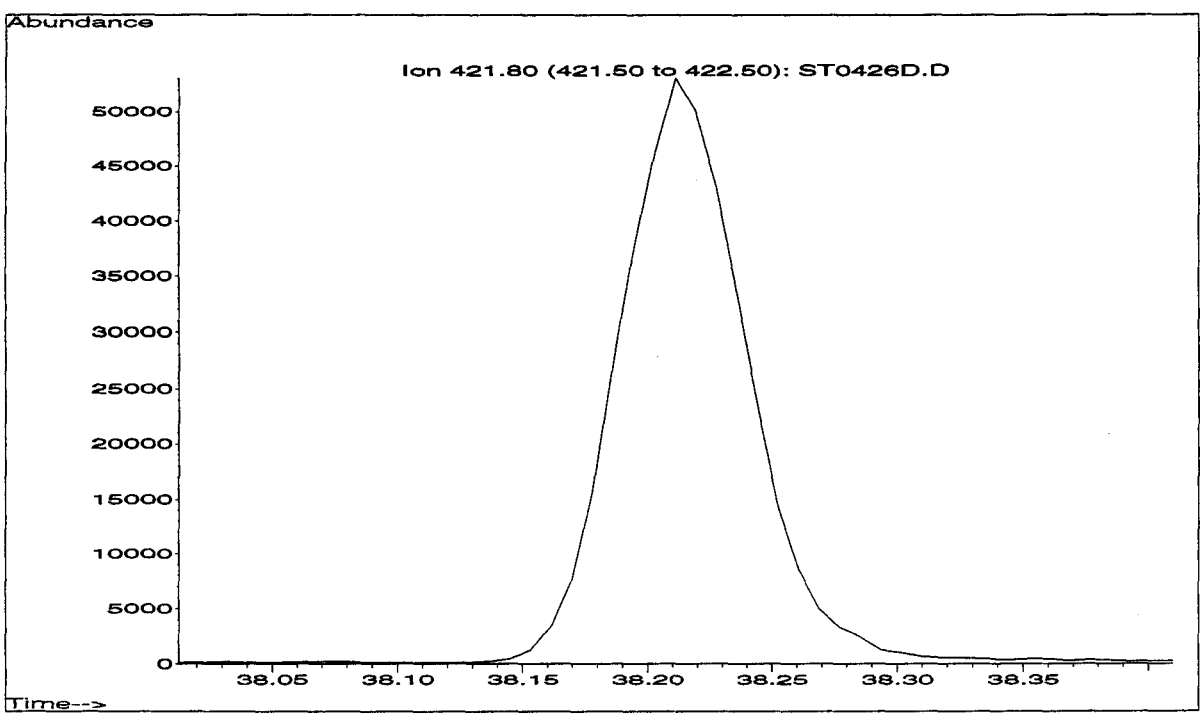




13C-1234678-HpCDF-IS

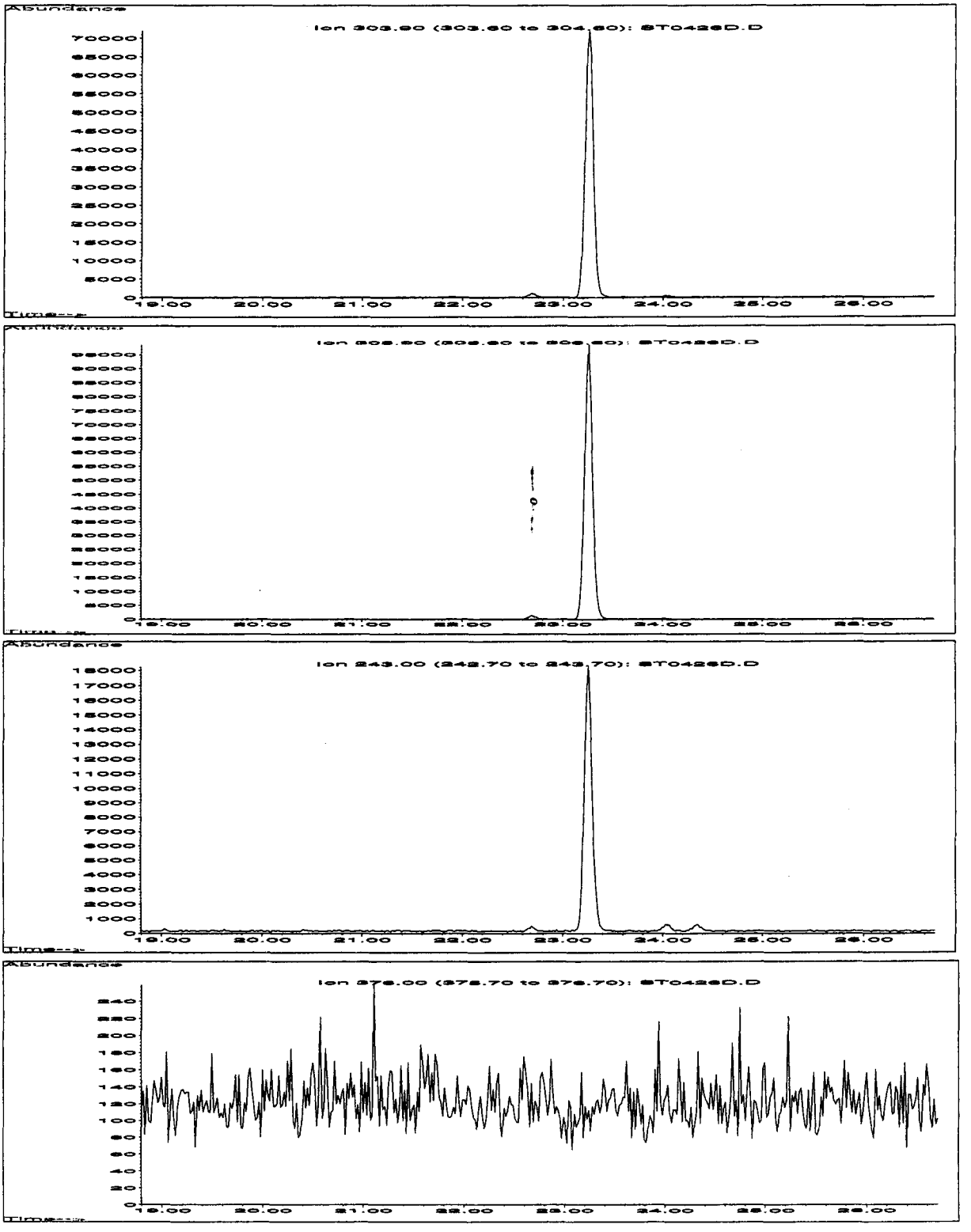
TS R.T. Lower Limit	38.01		
TS R.T. Upper Limit	38.41		
Ret Time	38.21		
Target Ion	419.8	Q1 Ion	421.8
Target Response	200335	Q1 Response	187710
Target Response	388045	Ion Ratio	1.07





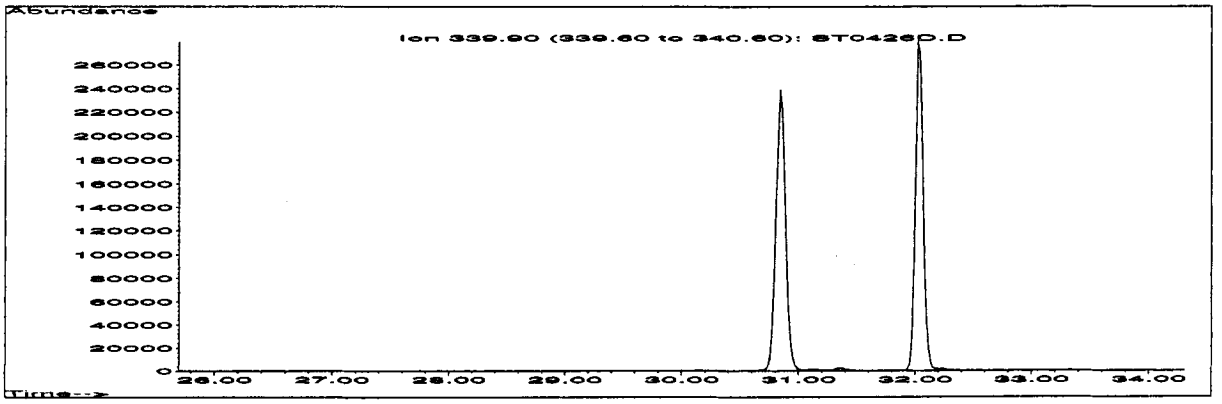
TCDF TOTAL

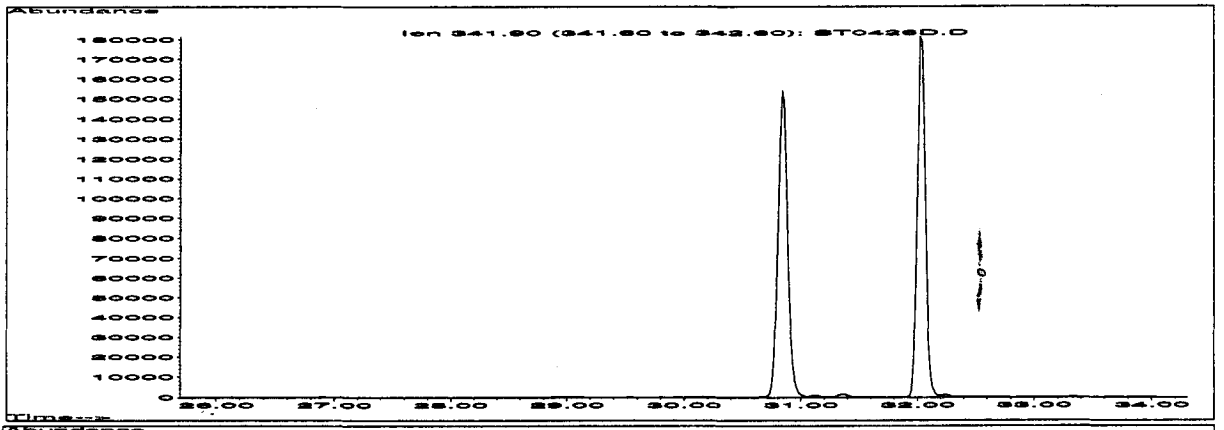
TS R.T. Lower Limit	18.80
TS R.T. Upper Limit	26.70

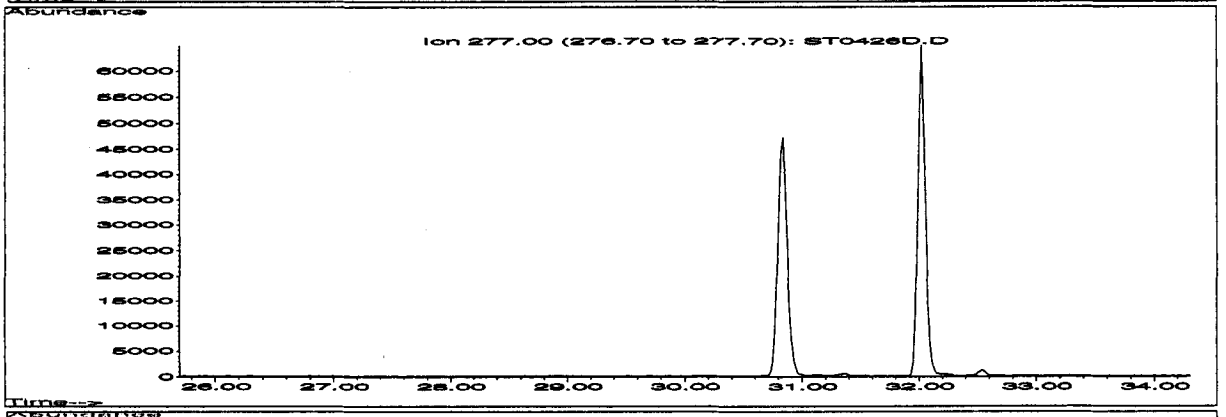


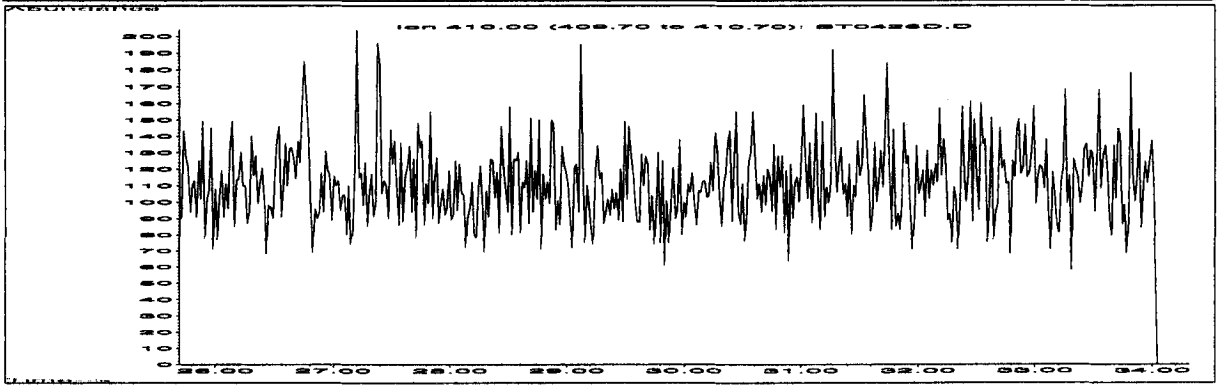
PeCDF TOTAL

TS R.T. Lower Limit	25.70
TS R.T. Upper Limit	34.30



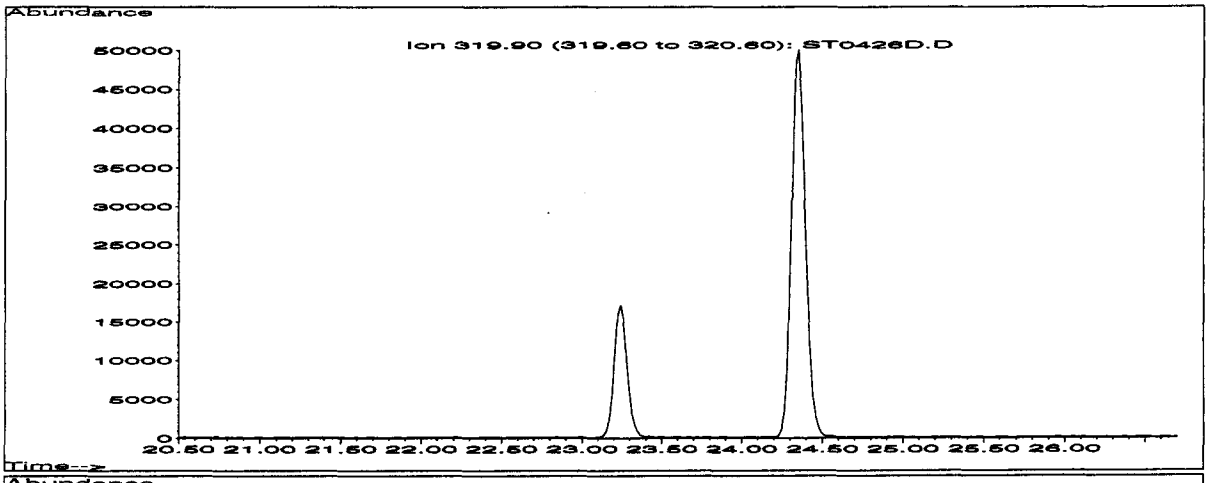


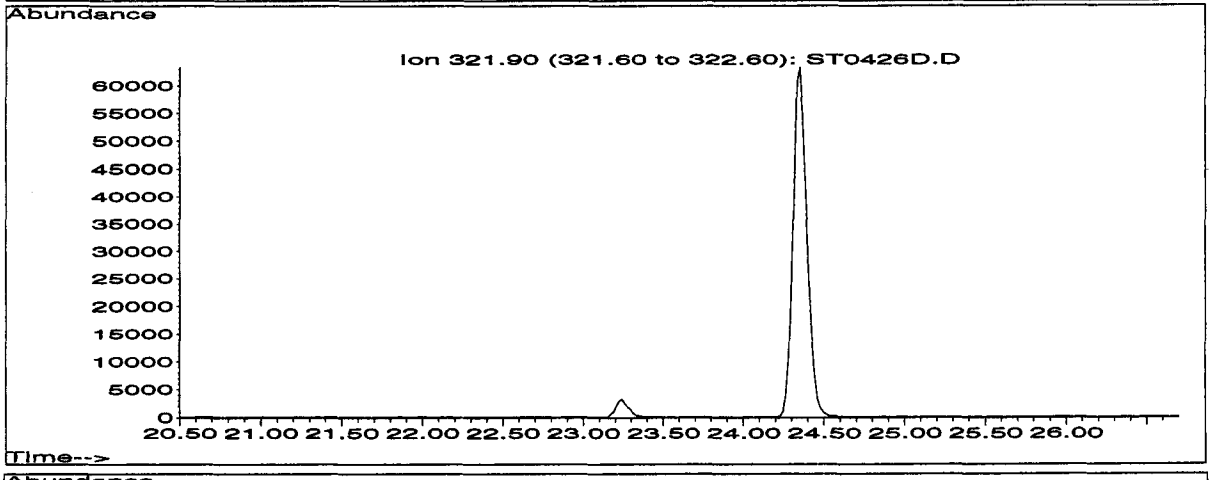


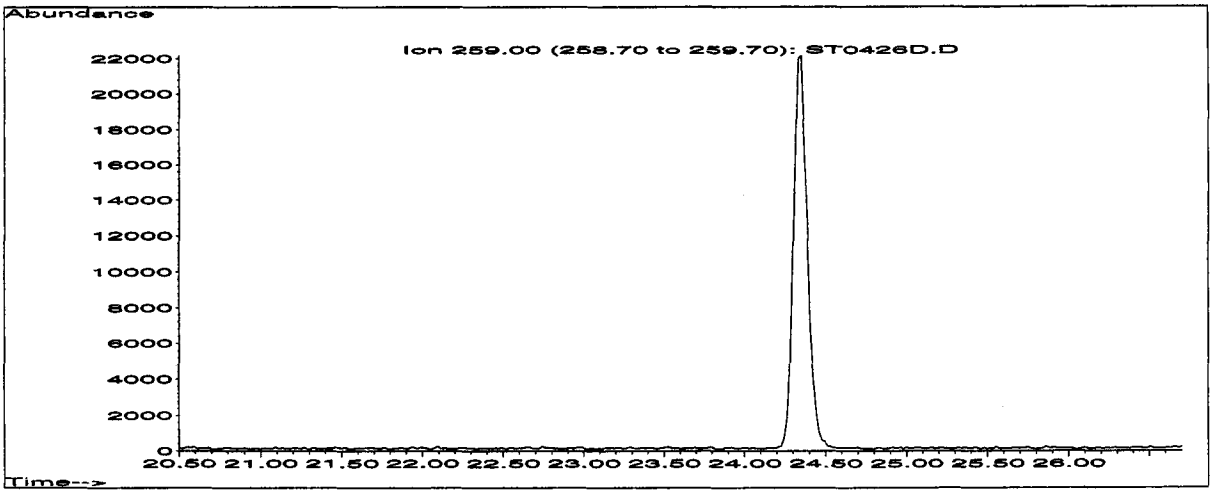


TCDD TOTAL

TS R.T. Lower Limit	20.50
TS R.T. Upper Limit	26.70

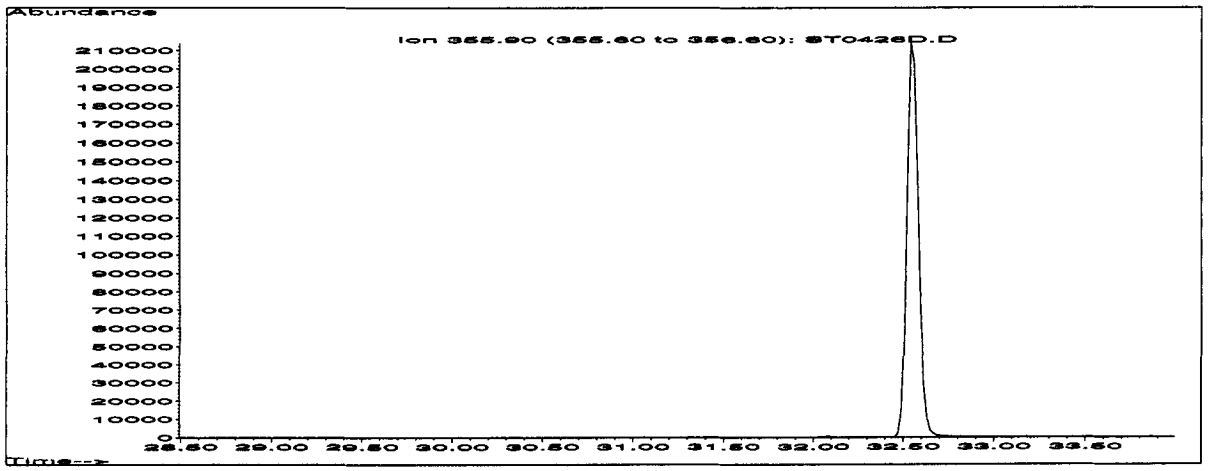


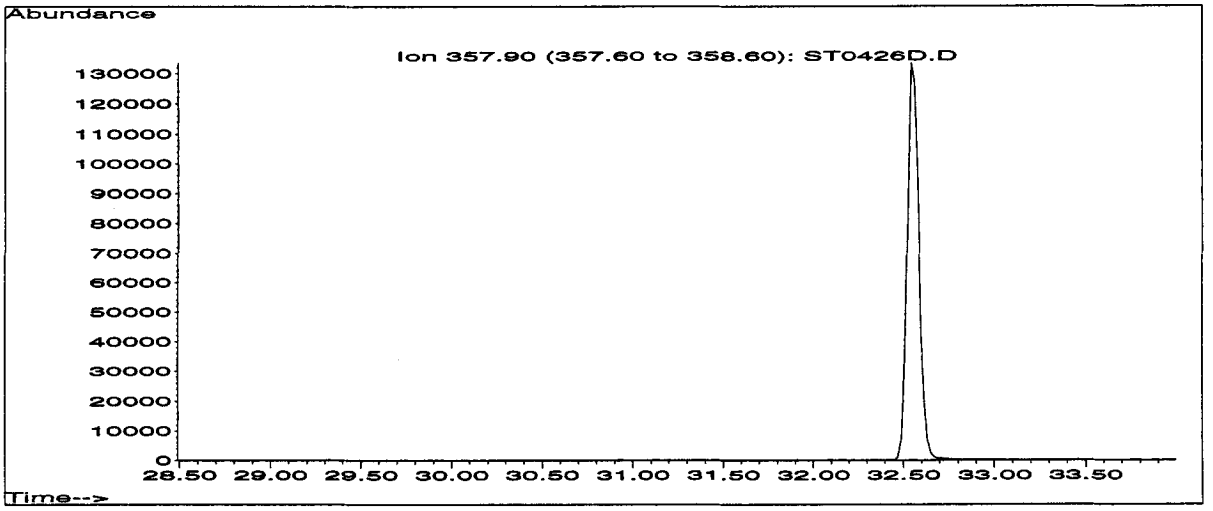


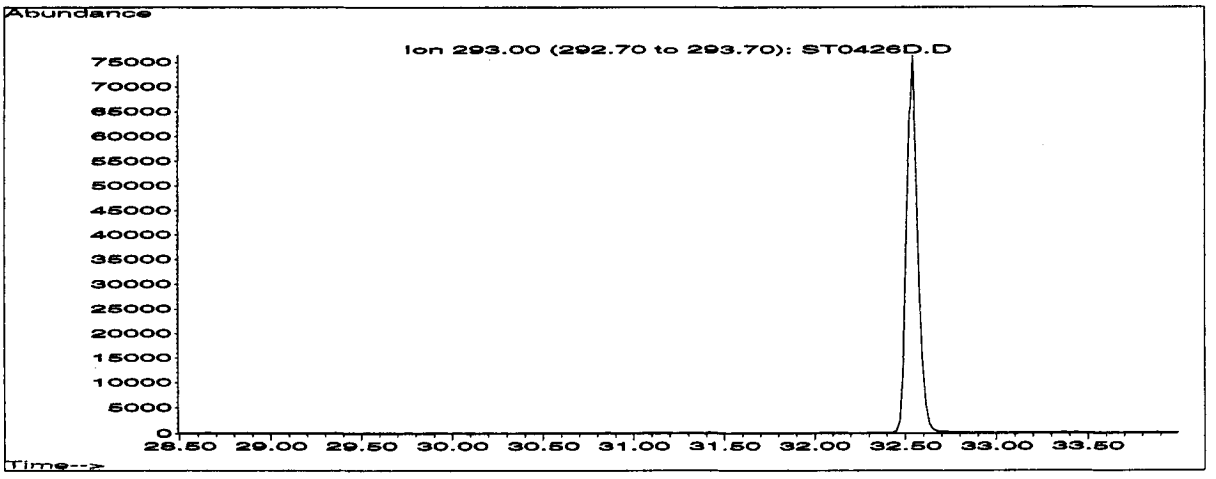


PeCDD TOTAL

TS R.T. Lower Limit	28.50
TS R.T. Upper Limit	34.00

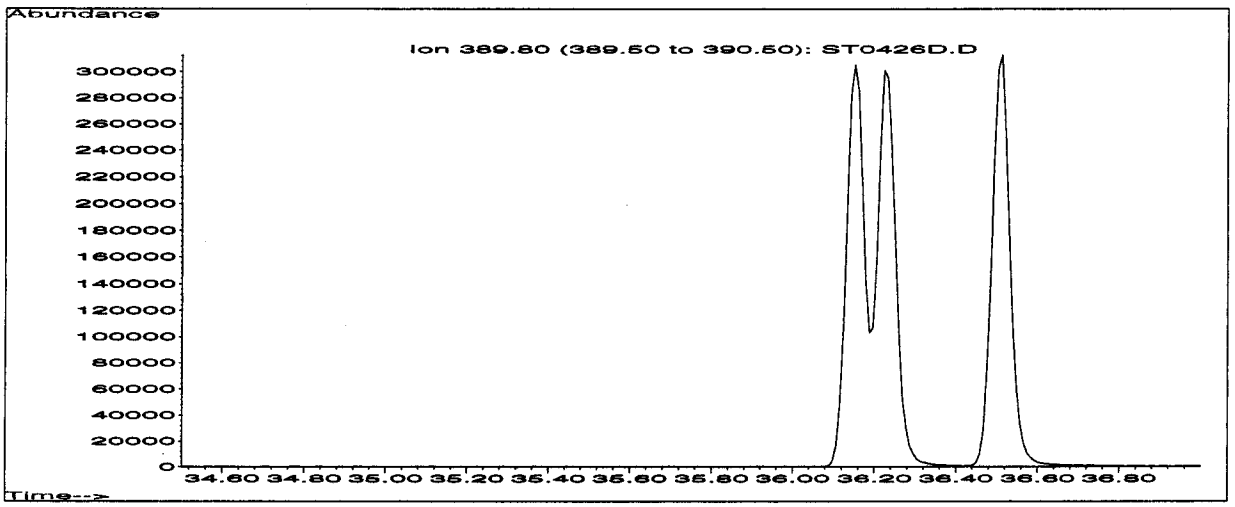


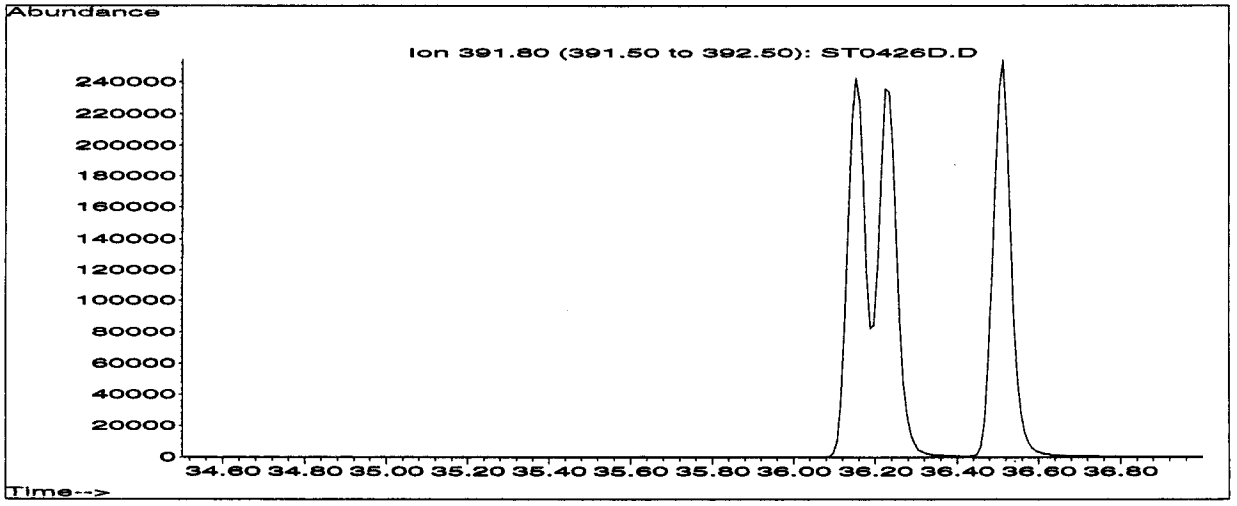


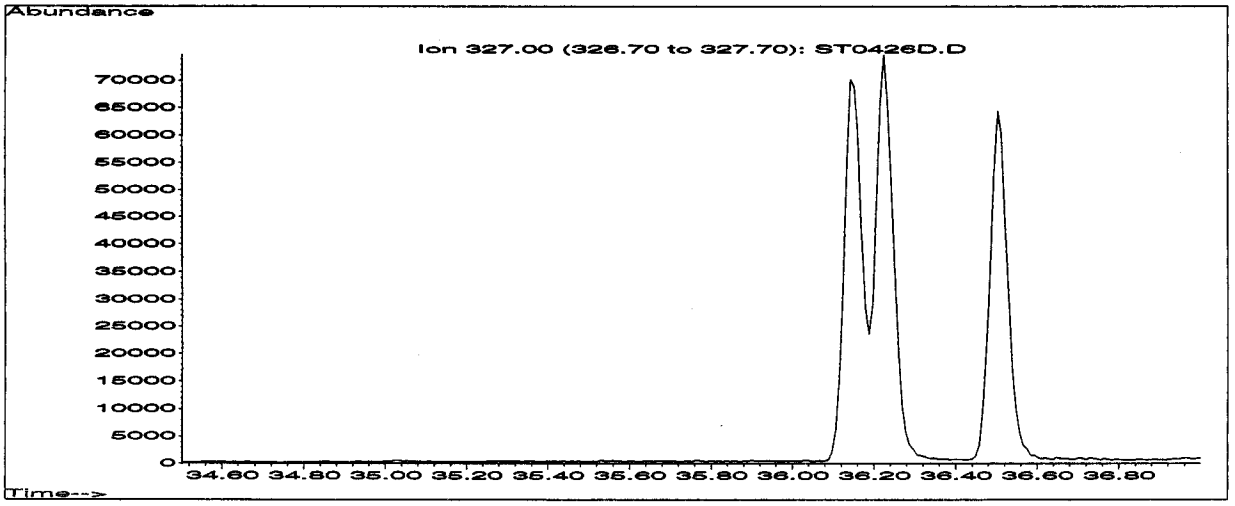


HxCDD TOTAL

TS R.T. Lower Limit	34.50
TS R.T. Upper Limit	37.00

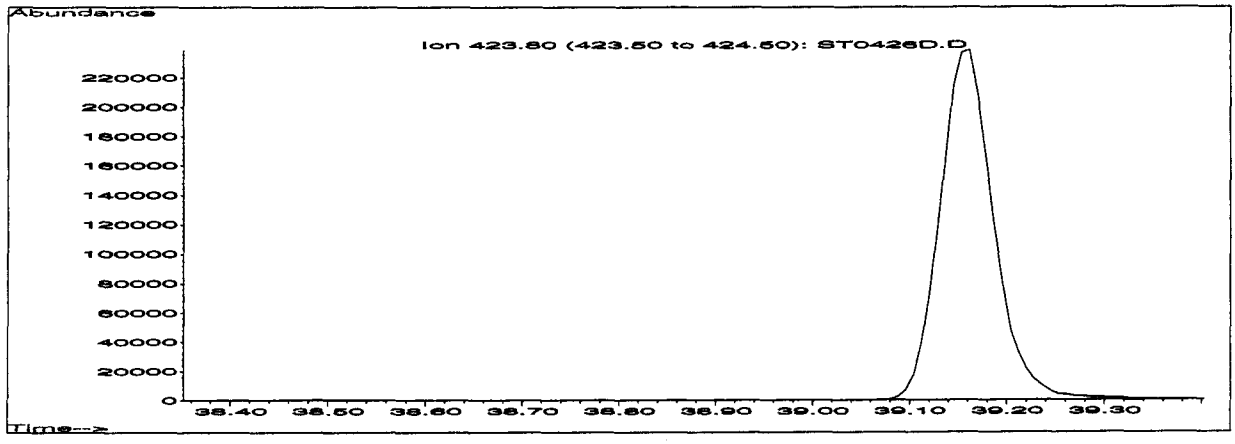


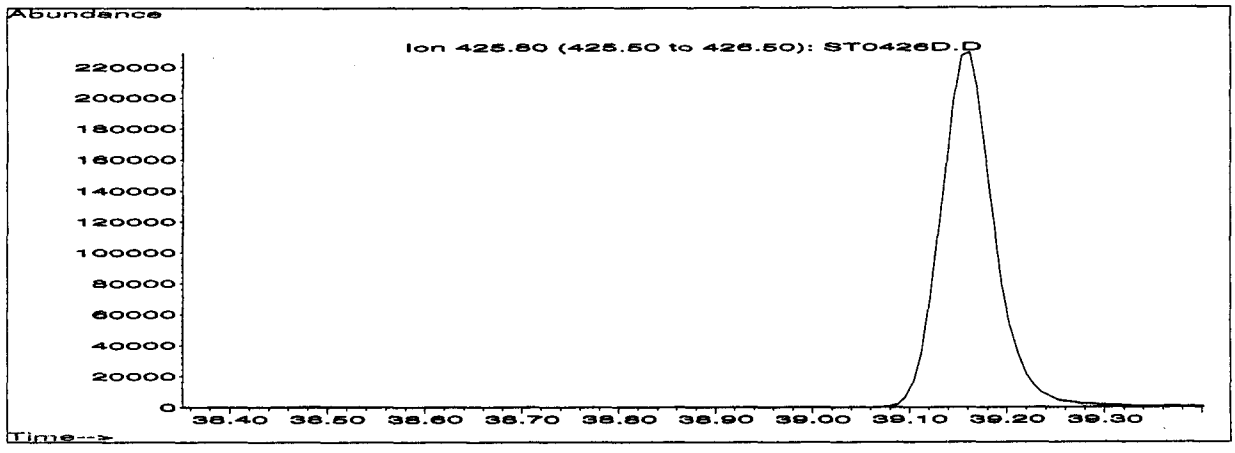


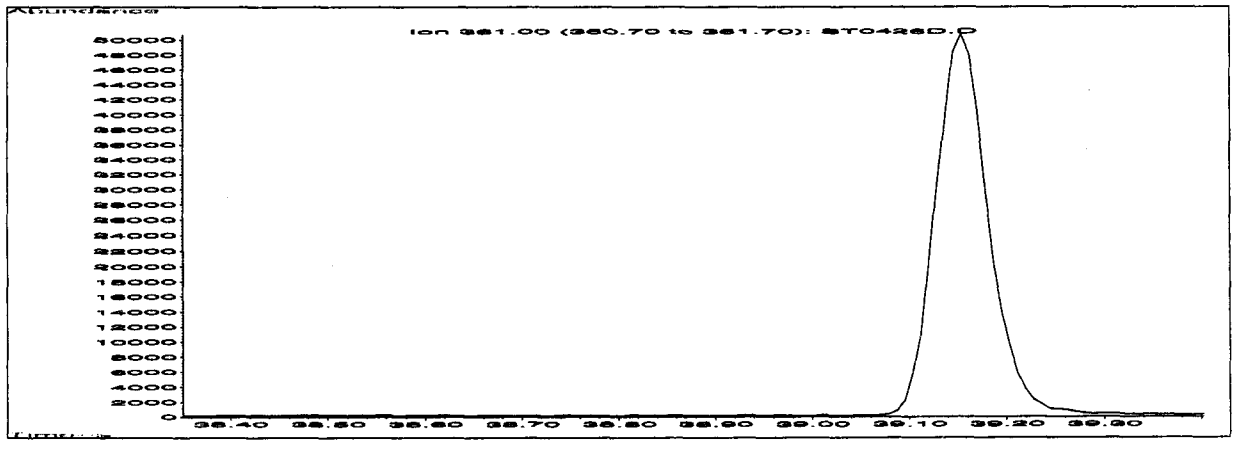


HpCDD TOTAL

TS R.T. Lower Limit	38.35
TS R.T. Upper Limit	39.40

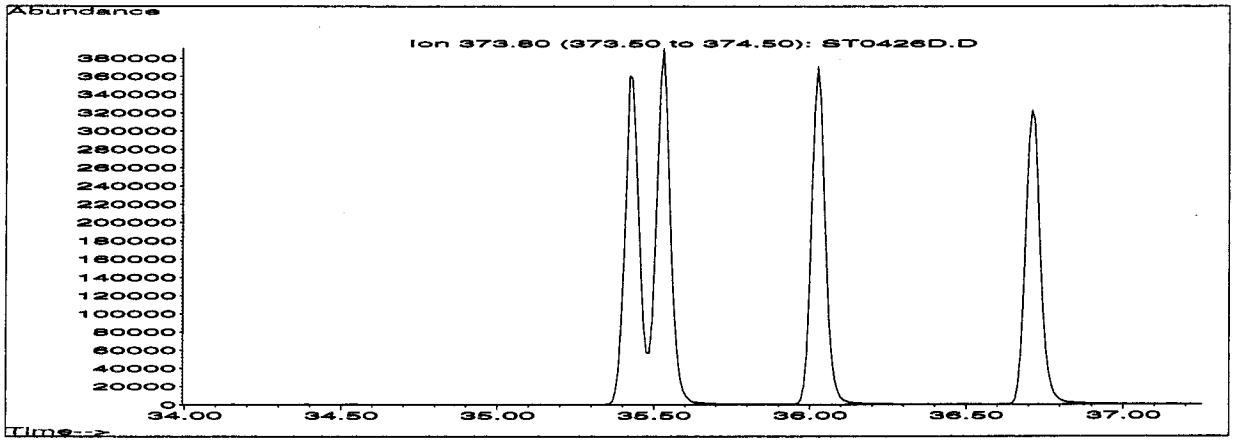


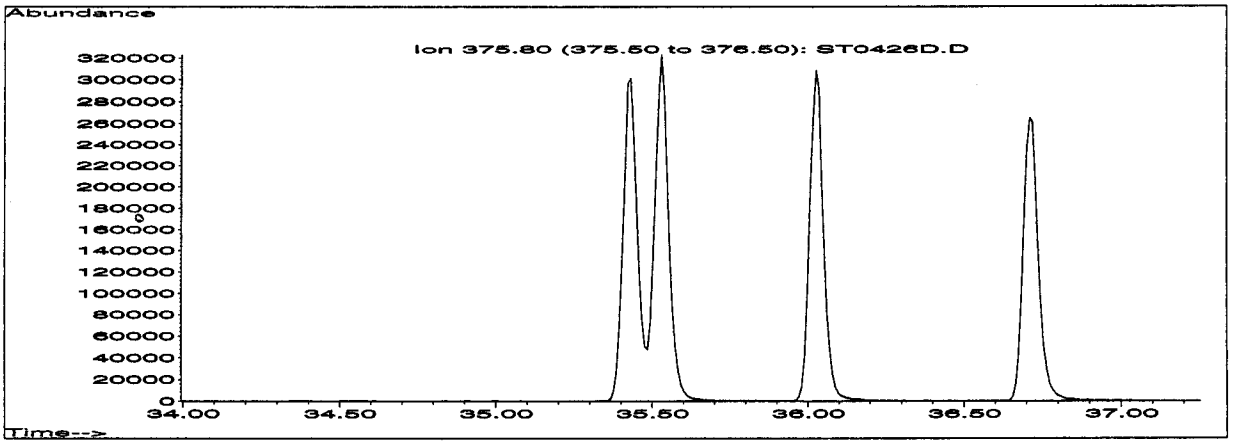


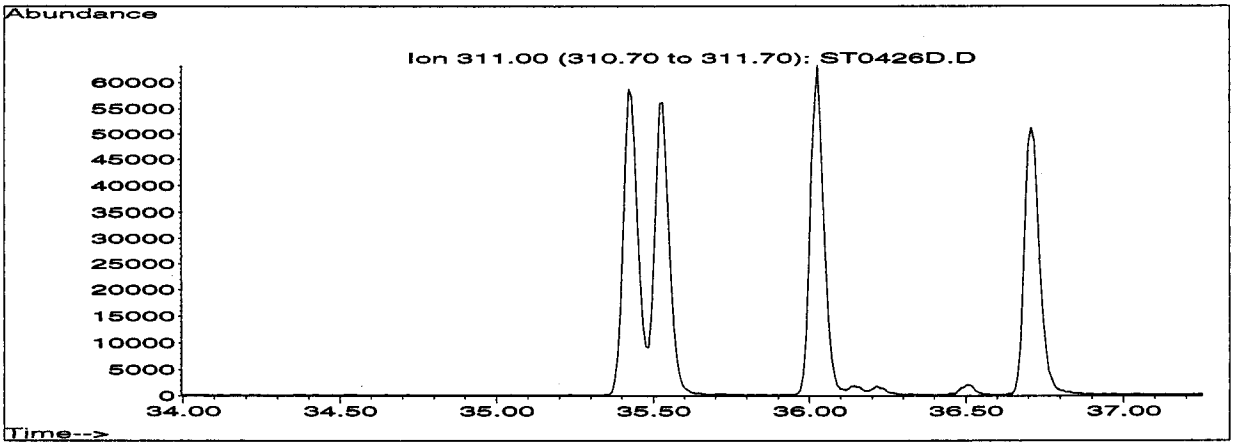


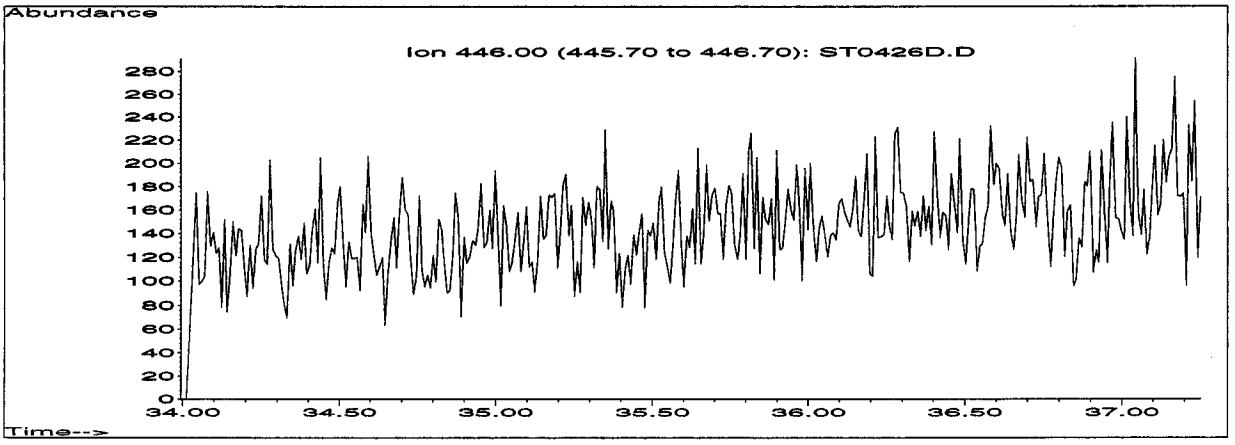
HxCDF TOTAL

TS R.T. Lower Limit	34.00
TS R.T. Upper Limit	37.25



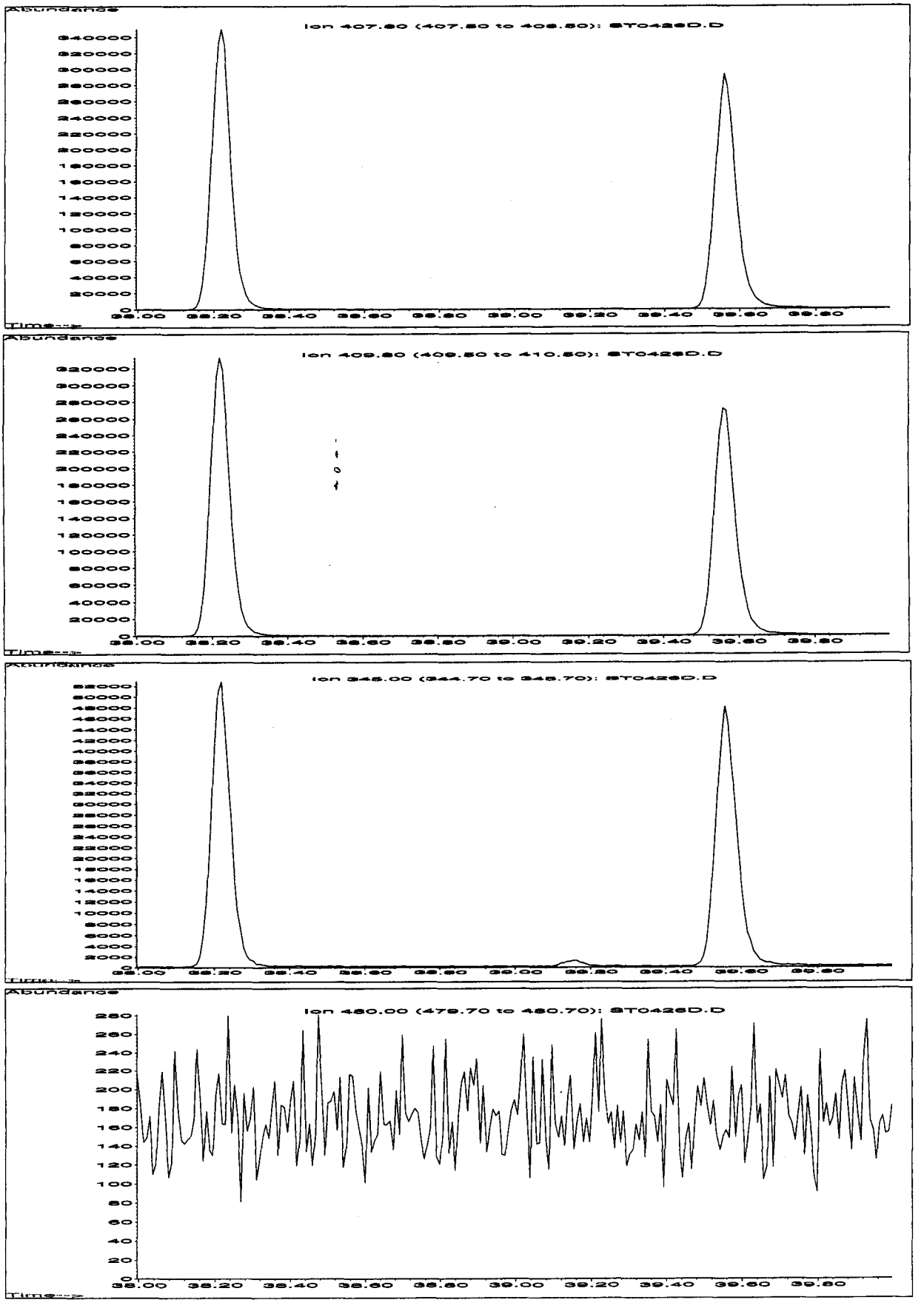




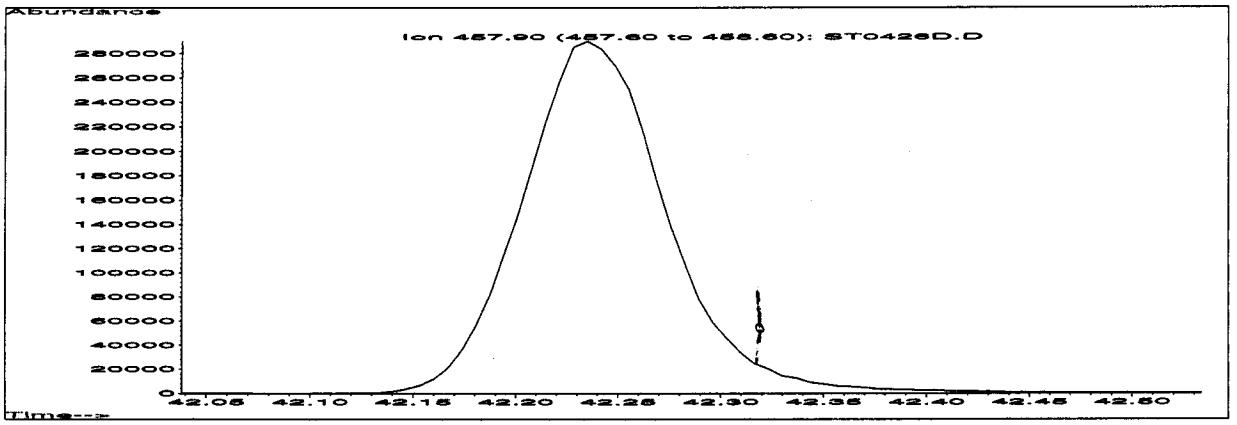


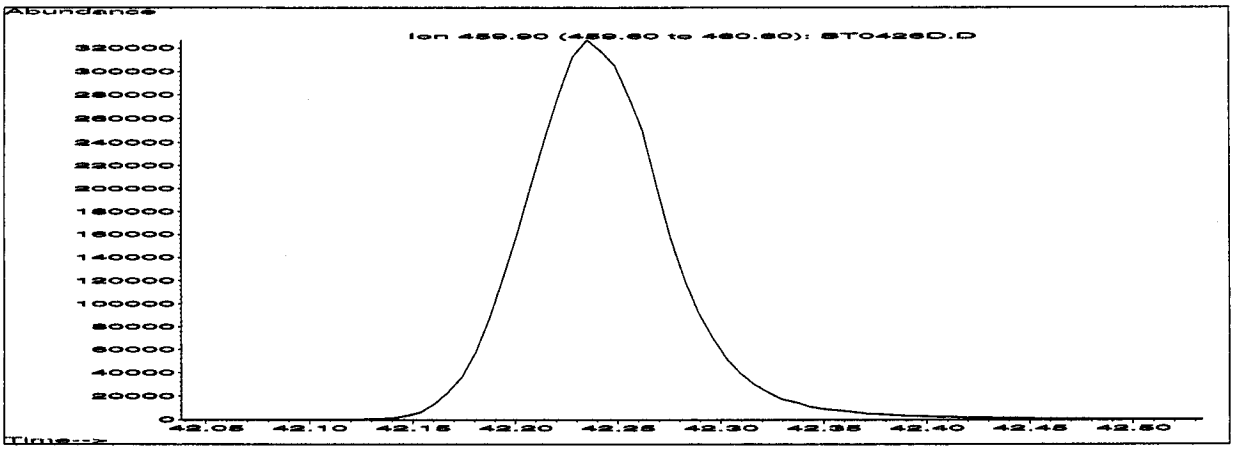
HpCDF TOTAL

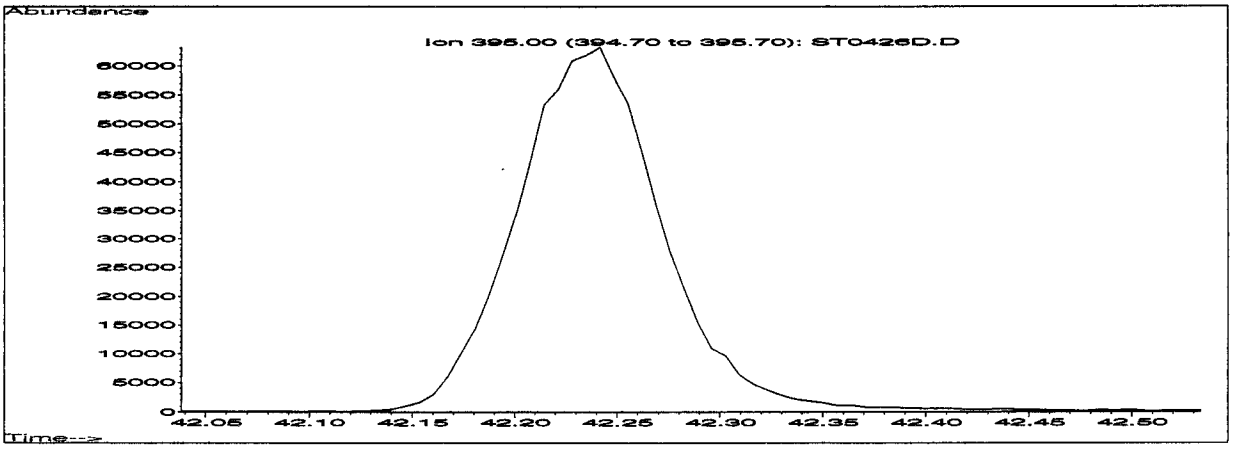
TS R.T. Lower Limit	38.00
TS R.T. Upper Limit	40.00



OCDD			
TS R.T. Lower Limit	42.03		
TS R.T. Upper Limit	42.53		
Ret. Time	42.23		
Target Ion	457.9	Q1 Ion	459.9
Target Response	1426645	Q1 Response	1592324
Total Response	3018969	Ion ratio	0.90
Q2 Ion	395		
Q2 Response	309673		

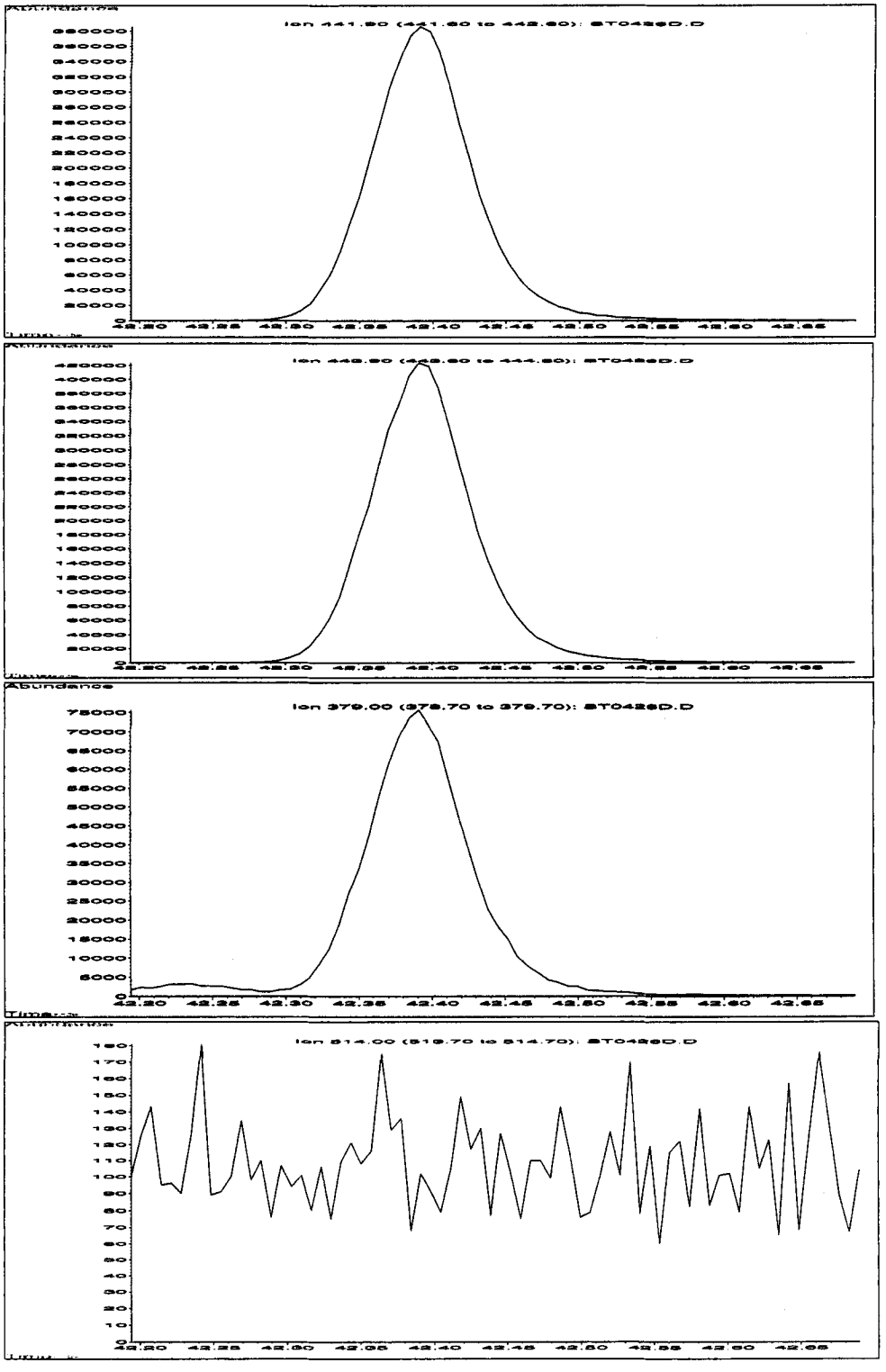






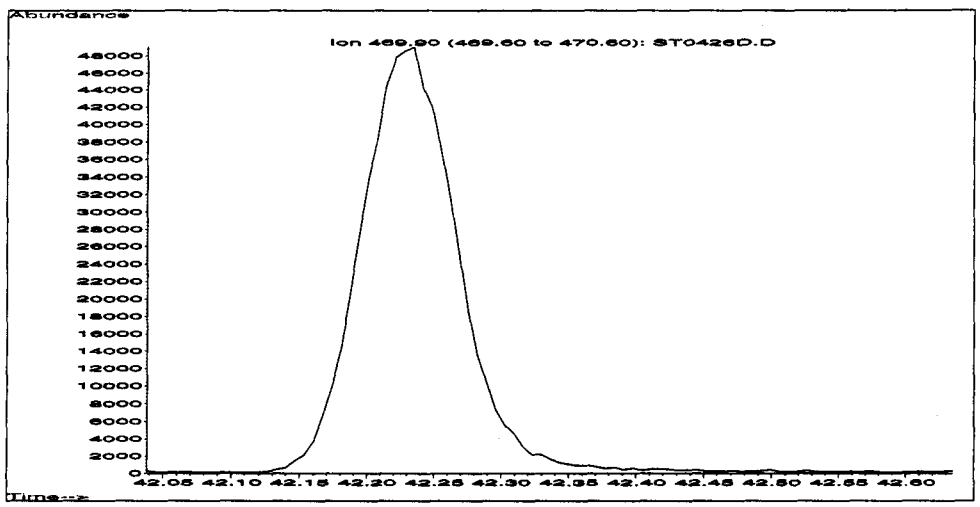
OCDF

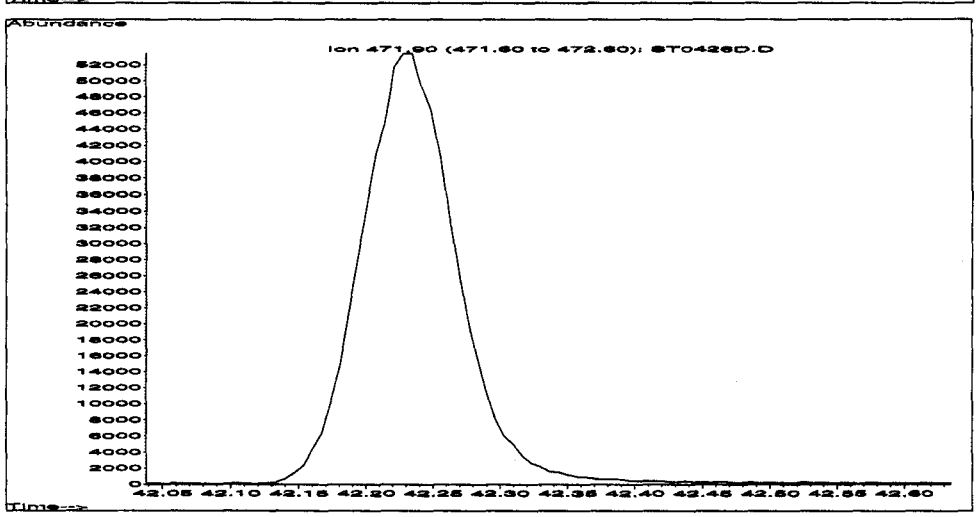
TS R.T. Lower Limit	42.18		
TS R.T. Upper Limit	42.68		
Ret Time	42.39		
Target Ion	441.9	Q1 Ion	443.9
Target Response	1881712	Q1 Response	2048807
Target Response	3930519	Ion Ratio	0.92
Q2 Ion	379	DPE Ion	514
Q2 Response	358773	DPE Response	0



13C-OCDD-IS

RT Lower Limit	42.03		
RT Upper Limit	42.63		
Ret Time	42.23		
Target Ion	469.9	Q1 Ion	471.9
Target Response	243472	Q1 Response	264379
Total response	507851	Ratio	0.92





Quantitation Report (Not Reviewed)

Sample ID: CS-5 10LRES006
10LRES006 CS-5

Size: 0.000
Inst : DB1

Data File:C:\8280\2DB\042610.B\ST0426E.D
Acq On :26 Apr 2010 19:08

Vial: 93
Operator: MEO
Sample Amount: 0.00

MS Integration Params: RTEINT.P
Quant Time: Apr 27 9:23 2010

Quant Results File: 10AP26I2.RES

Quant Method : C:\8280\ DATA METHODS\10AP26I2.M (RTE Integrator)
Title : Dioxin Furan Total
Last Update : Mon Apr 26 19:12:56 2010
Response via : Initial Calibration
DataAcq Meth : TOKAS
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Recovery\Internal Stds	R.T.	QIon	Ratio	Response	Conc	Dev(Min)
1) 13C-1234-TCDD	24.05	332+334	0.81	238015	25.00 NG	0.00
5) 13C-123789-HxCDD	36.50	402+404	1.26	369653	25.00 NG	0.00
9) 13C-2378-TCDF	23.24	316+318	0.80	322195	25.00 NG	0.00
15) 13C-2378-TCDD	24.33	332+334	0.81	224473	25.00 NG	0.00
20) 13C-123678-HxCDD	36.22	402+404	1.24	288507	25.00 NG	0.00
27) 13C-1234678-HpCDF	38.21	420+422	1.05	361477	25.00 NG	0.00
36) 13C-OCDD	42.23	470+472	0.93	492192	50.00 NG	0.00

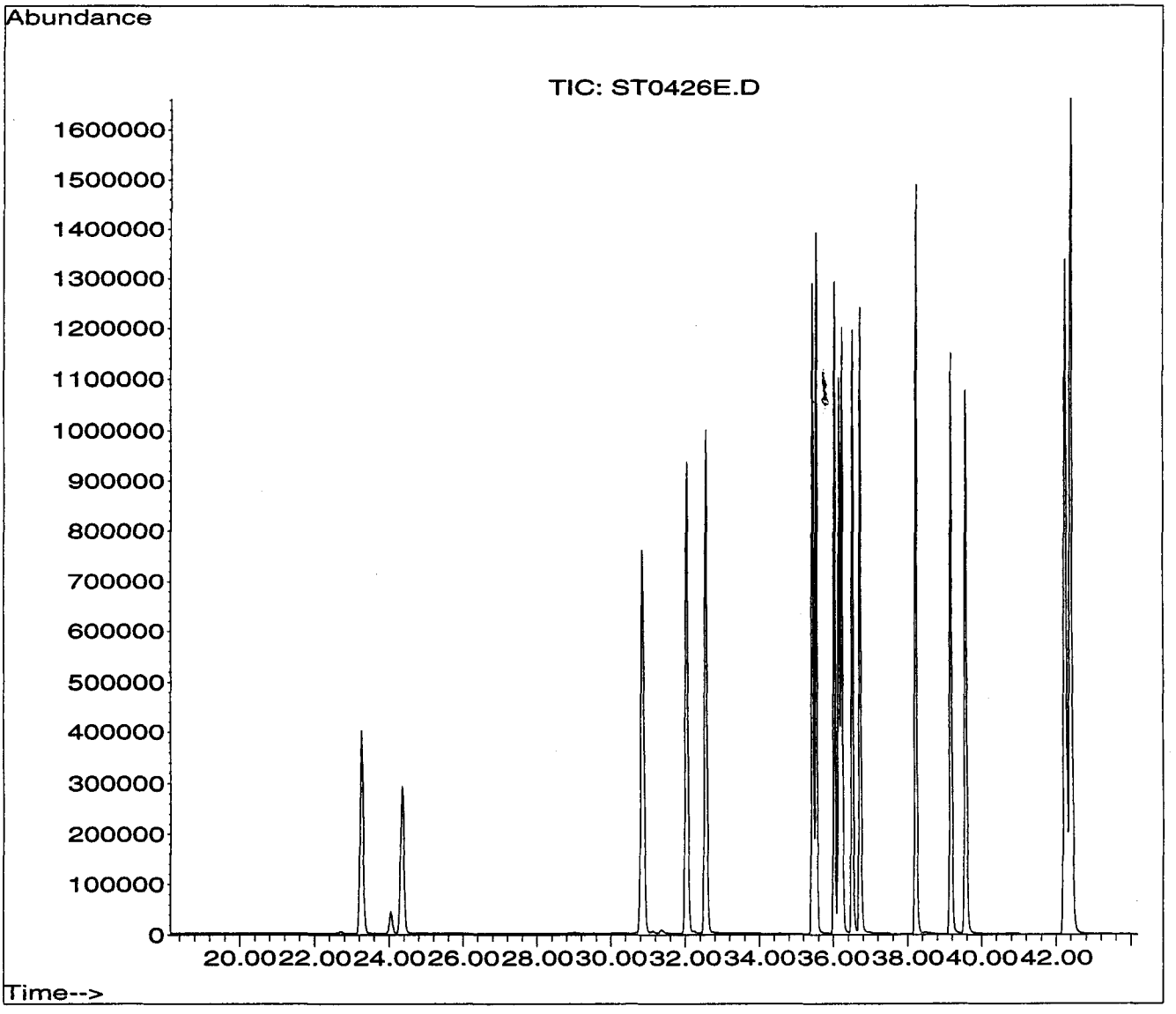
Surrogate Compound						
4) 37Cl-2378-TCDD	24.35	328		176210	14.110 NG	0.00
Spiked Amount = 12.500		RRF = 1.312		Recovery = 112.88%		

Target Compounds	RT	Ratio		Area	RRF	Conc	EDL	%Rec
2) 13C-2378-TCDF-IS	23.24	0.80		322195	1.365	24.798	0.0237	99.2
3) 13C-2378-TCDD-IS	24.33	0.81		224473	0.957	24.634	2.5996	98.5
6) 13C-123678-HxCDD-	36.22	1.24		288507	0.783	24.917	0.1076	99.7
7) 13C-1234678-HpCDF	38.21	1.05		361477	0.975	25.075	0.1024	100.3
8) 13C-OCDD-IS	42.23	0.93		492192	0.627	53.101	0.1158	106.2
10) 2378-TCDF	23.26	0.76		1692276	1.277	102.854	0.4265	
1	22.69	0.81		19941		1.212		
2	23.26	0.76		1699520		103.294		
3	24.01	1.36	#	2535		0.154		
11) TCDF TOTAL	22.00	1.36		1721996	1.277	104.660		
12) 12378-PeCDF	30.84	1.52		4020618	1.190	262.161	0.0931	
13) 23478-PeCDF	32.04	1.51		3928936	1.169	260.758	0.1861	
1	29.01	1.18	#	18215		1.209		
2	30.12	1.24	#	6766		0.449		
3	30.84	1.52		4044960		268.458		
4	31.11	1.35		23185		1.539		
5	31.36	1.51		41958		2.785		
6	32.04	1.51		3928936		260.758		
14) PeCDF TOTAL	29.50	1.51		8064019	1.169	535.197		
16) 2378-TCDD	24.35	0.79		1150185	1.265	101.293	0.1202	
1	23.24	5.14	#	30716		2.705		
2	24.35	0.79		1209360		106.505		
17) TCDD TOTAL	22.50	0.79		1240076	1.265	109.210		
18) 12378-PeCDD	32.56	1.58		2767450	1.154	267.127	0.0693	
1	32.56	1.58		2781340		268.468		
19) PeCDD TOTAL	30.00	1.58		2781340	1.154	268.468		
21) 123478-HxCDD	36.15	1.27		3053468	1.023	258.617	5.3850	
22) 123678-HxCDD	36.23	1.24		2891106	1.022	245.190	0.9542	
23) 123789-HxCDD	36.51	1.25		3132967	1.070	253.736	4.5045	
1	36.15	1.27		3053468		258.617		
2	36.23	1.24		2891106		245.190		

	3	36.51	1.25	10477443		297.439	
24)	HxCDD TOTAL	36.50	1.25	16422017	3.052	801.247	
25)	1234678-HpCDD	39.16	1.05	3189935	1.055	261.915	0.0516
	1	38.49	0.93	5659		0.465	
	2	39.16	1.05	3189935		261.915	
26)	HpCDD TOTAL	39.35	1.05	3195594	1.055	262.380	
28)	123478-HxCDF	35.43	1.21	3754451	1.039	249.891	42.2522
29)	123678-HxCDF	35.53	1.20	3904931	1.089	247.973	1.1544
30)	234678-HxCDF	36.03	1.20	3700260	1.029	248.795	0.3780
31)	123789-HxCDF	36.72	1.21	3561431	0.983	250.614	0.3234
	1	34.39	1.00 #	3402		0.239	
	2	34.54	1.05 #	7413		0.522	
	3	35.43	1.21	3754451		249.891	
	4	35.53	1.20	3904931		247.973	
	5	36.03	1.20	3700260		248.795	
	6	36.72	1.21	3570900		251.281	
32)	HxCDF TOTAL	36.00	1.21	14941357	0.983	998.701	
33)	1234678-HpCDF	38.22	1.04	4352096	1.203	250.292	0.0997
34)	1234789-HpCDF	39.57	1.05	3979043	1.063	258.827	0.1702
	1	38.22	1.04	4352096		250.292	
	2	38.43	1.37 #	6466		0.421	
	3	38.58	1.25 #	6188		0.403	
	4	39.57	1.05	3979043		258.827	
35)	HpCDF TOTAL	39.50	1.05	8343793	1.063	509.943	
37)	OCDD	42.24	0.90	5559732	1.124	502.426	0.1024
38)	OCDF	42.40	0.92	7129358	1.451	499.028	0.2546

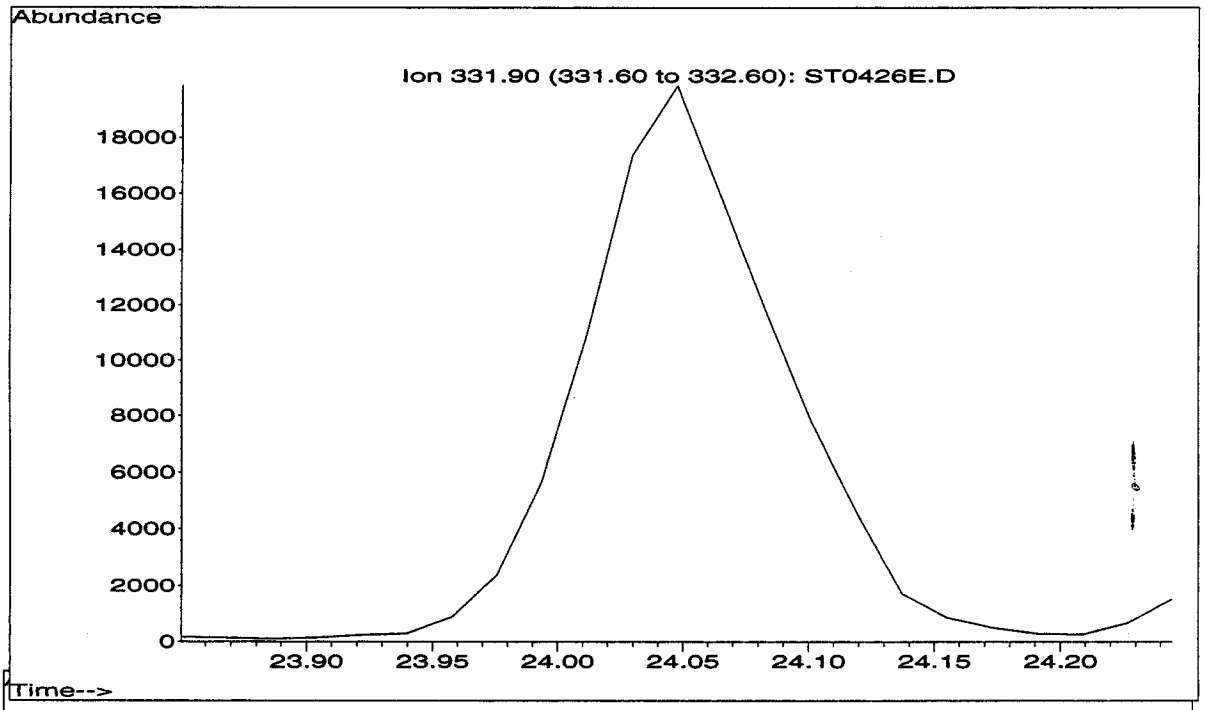
(#) = qualifier out of range•: areas and concentration based on theoretical ion ratio
(m) = manual integration
ST0426E.D 10AP26I2.M Tue Apr 27 09:24:02 2010

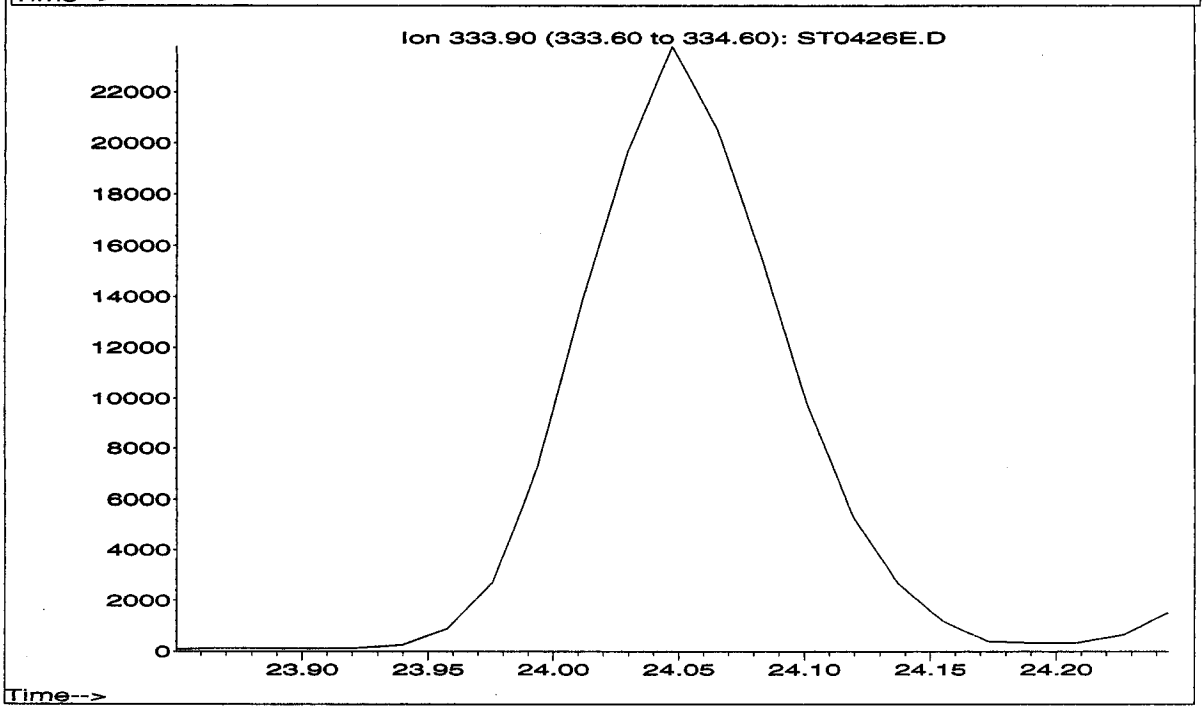
Data File Name	ST0426E.D
Data File Path	C:\8280\2DB\042610.B\
Operator	MEO
Date Acquired	4/26/2010 19:08
Acq. Method File	TOKAS
Sample Name	10LRES006 CS-5
Misc Info	CS-5 10LRES006
Vial Number	93
Instrument Name	2DB
Sample Multiplier	1
Sample Amount	0



13C-1234-TCDD

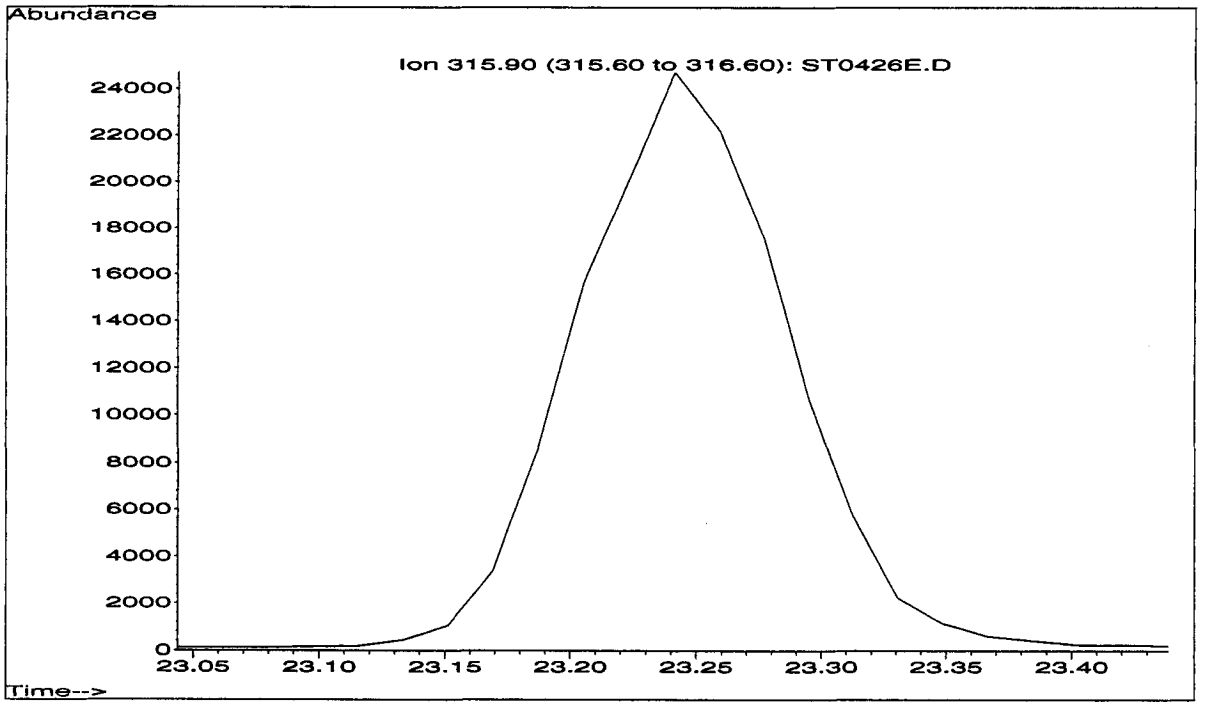
TS R.T. Lower Limit	23.85		
TS R.T. Upper Limit	24.25		
Ret Time	24.05		
Target Ion	331.9	Q1 Ion	333.9
Target Response	106589	Q1 Response	131426
Total Response	238015	Ion Ratio	0.81

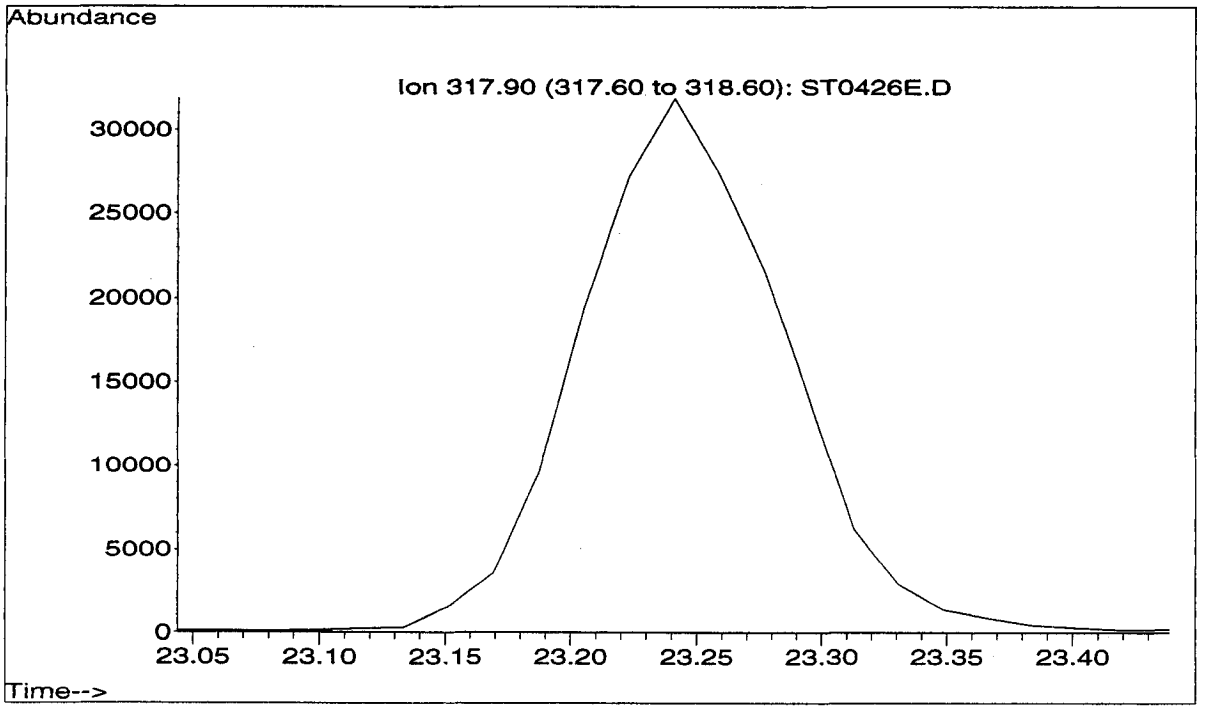




13C-2378-TCDF-IS

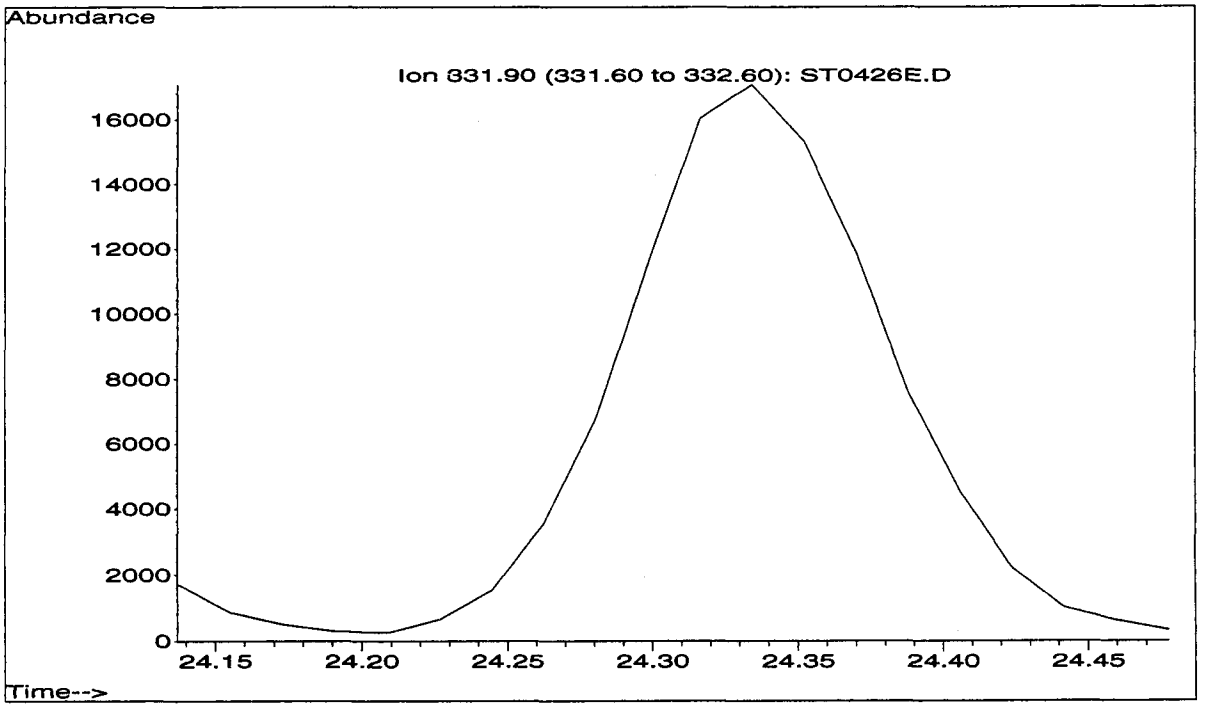
TS R.T. Lower Limit	23.04		
TS R.T. Upper Limit	23.44		
Ret Time	23.24		
Target Ion	315.9	Q1 Ion	317.9
Target Response	142715	Q1 Response	179480
Target Response	322195	Ion Ratio	0.80

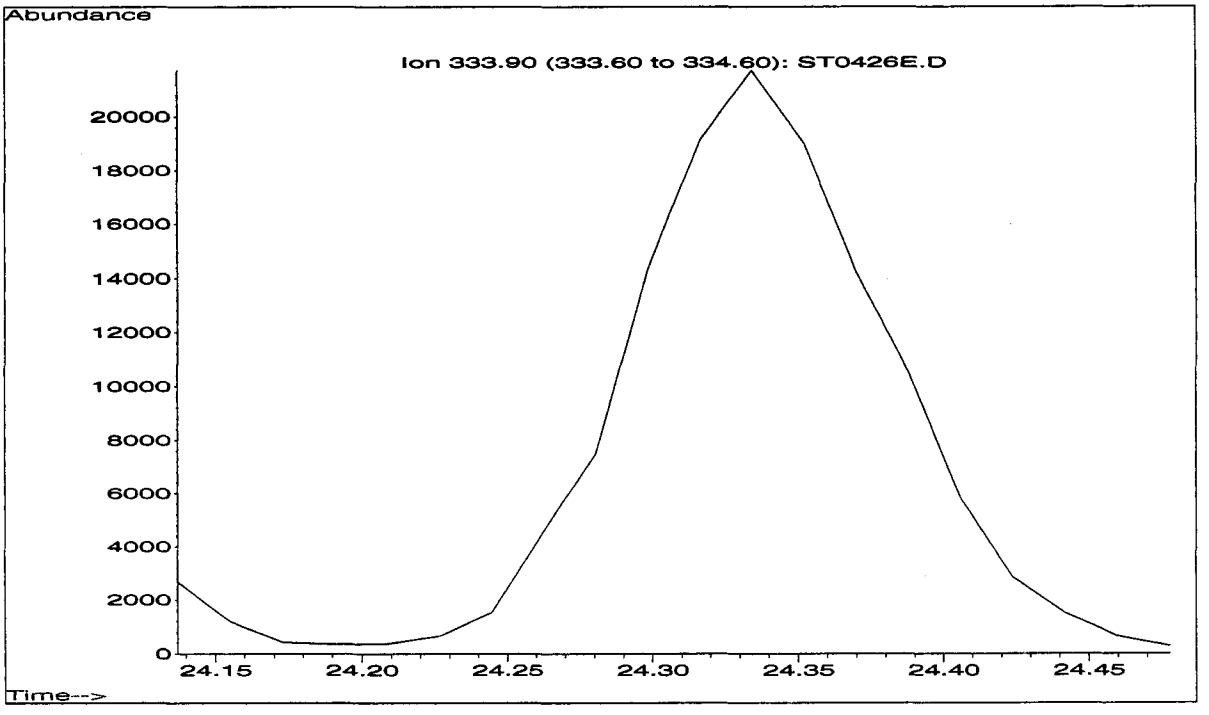




13C-2378-TCDD-IS

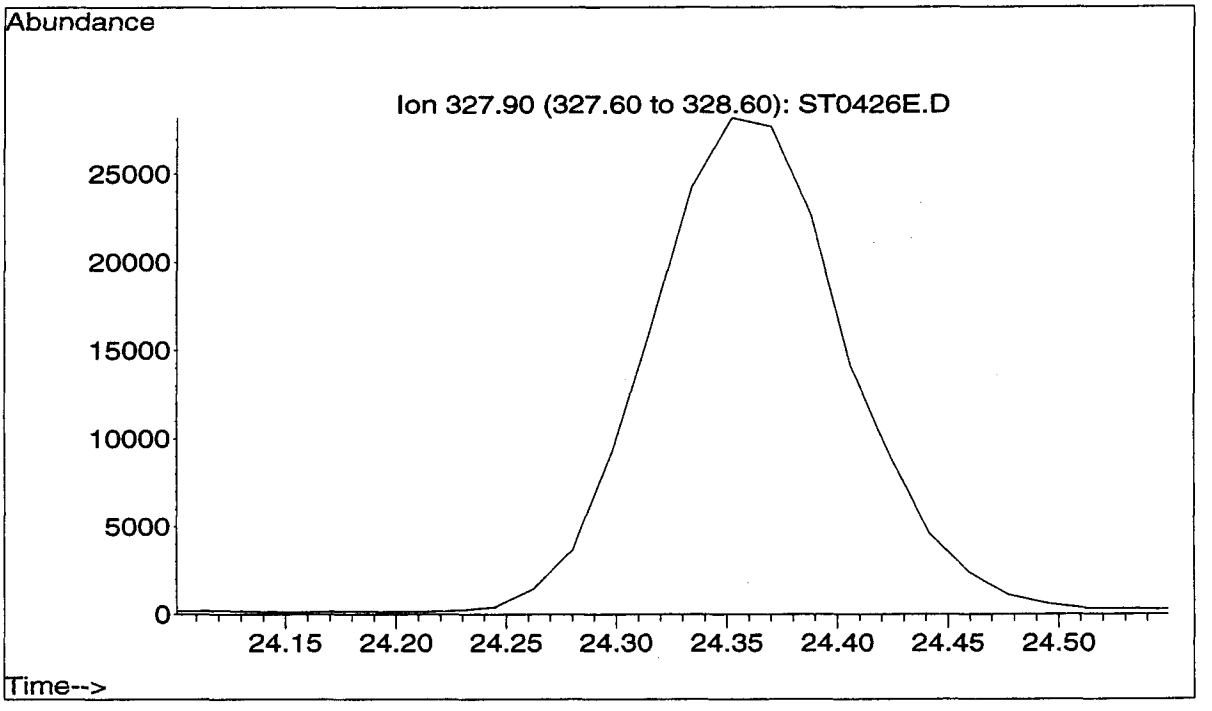
TS R.T. Lower Limit	24.13		
TS R.T. Upper Limit	24.48		
Ret Time	24.33		
Target Ion	331.9	Q1 Ion	333.9
Target Response	100610	Q1 Response	123863
Total Response	224473	Ion Ratio	0.81

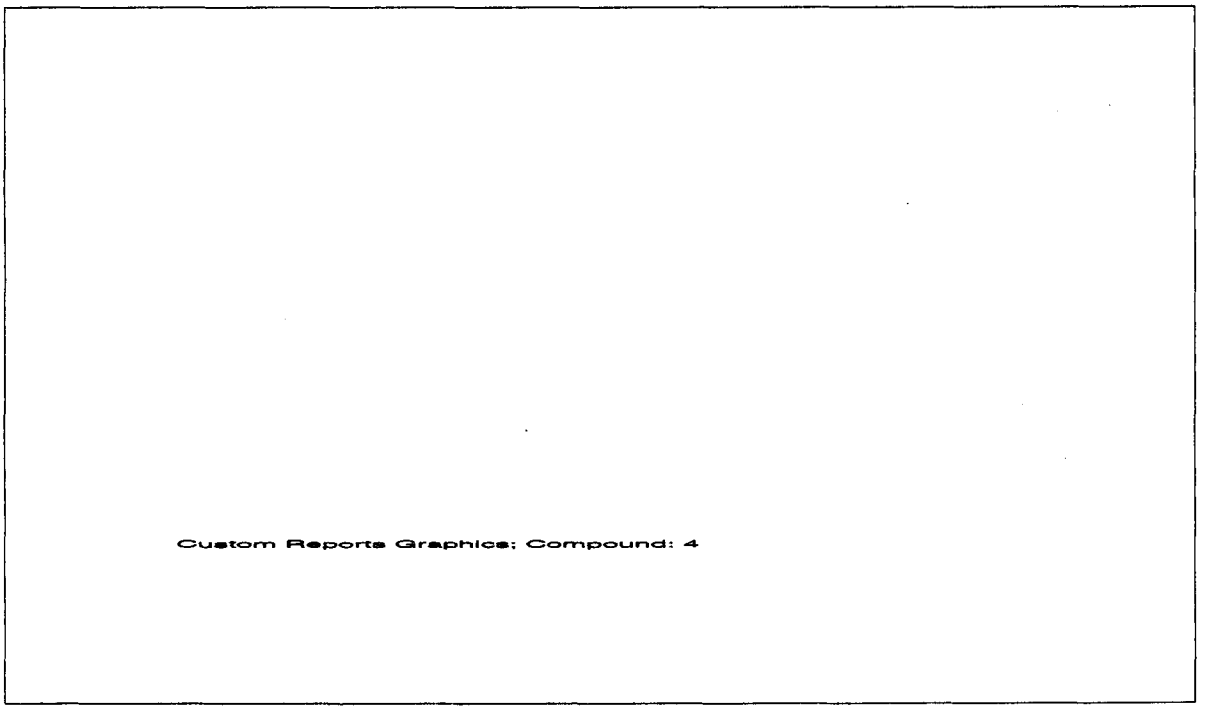




37Cl-2378-TCDD

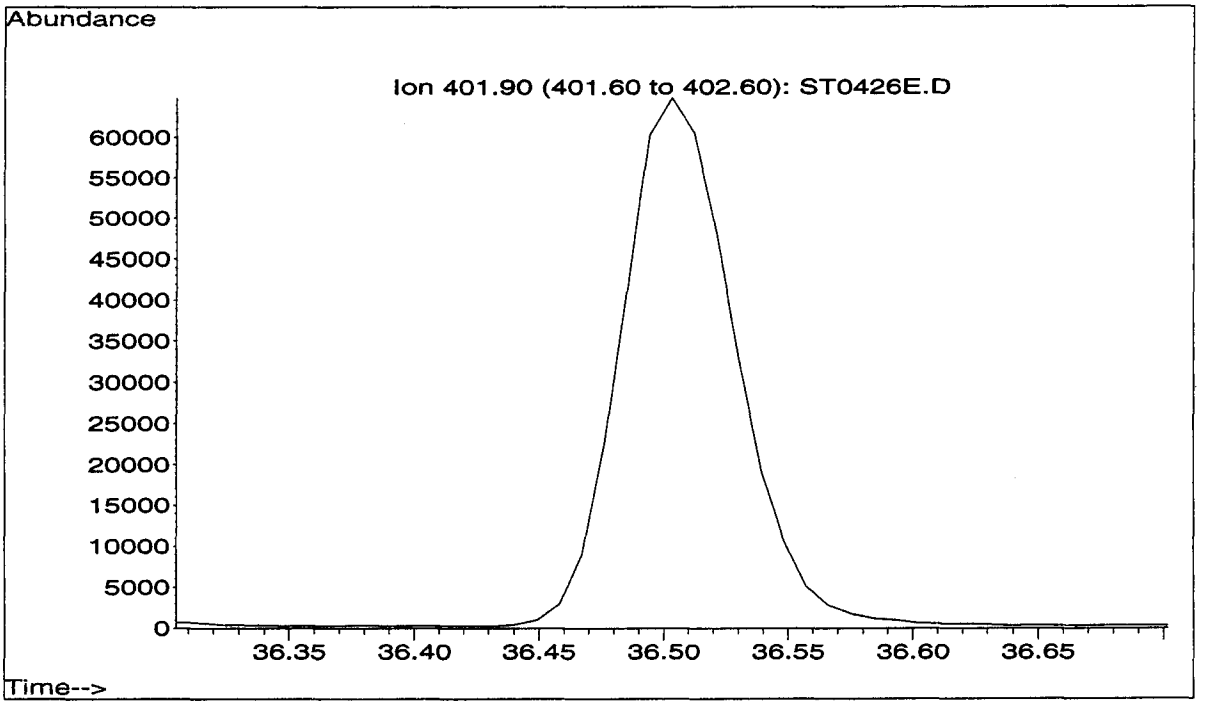
TS R.T. Lower Limit	24.10		
TS R.T. Upper Limit	24.55		
Ret Time	24.35		
Target Ion	327.9	Q1 Ion	0
Target Response	176210	Q1 Response	0
Total Response	176210	Ion Ratio	#DIV/0!

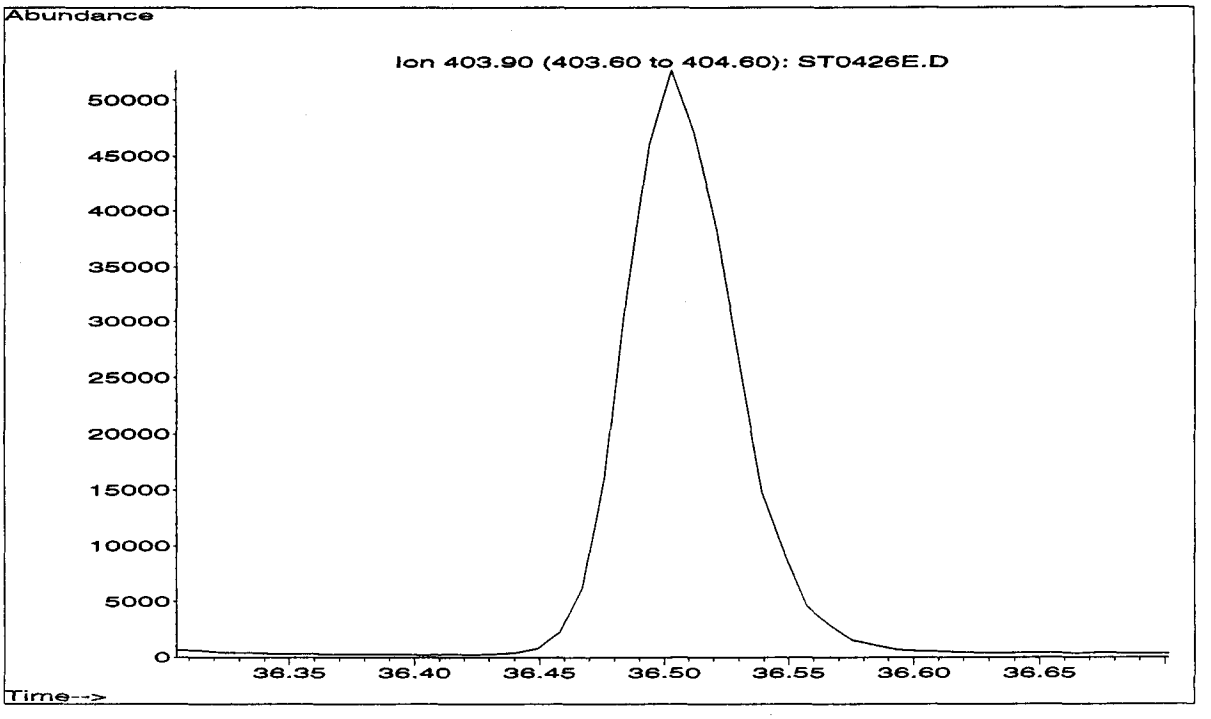




13C-123789-HxCDD

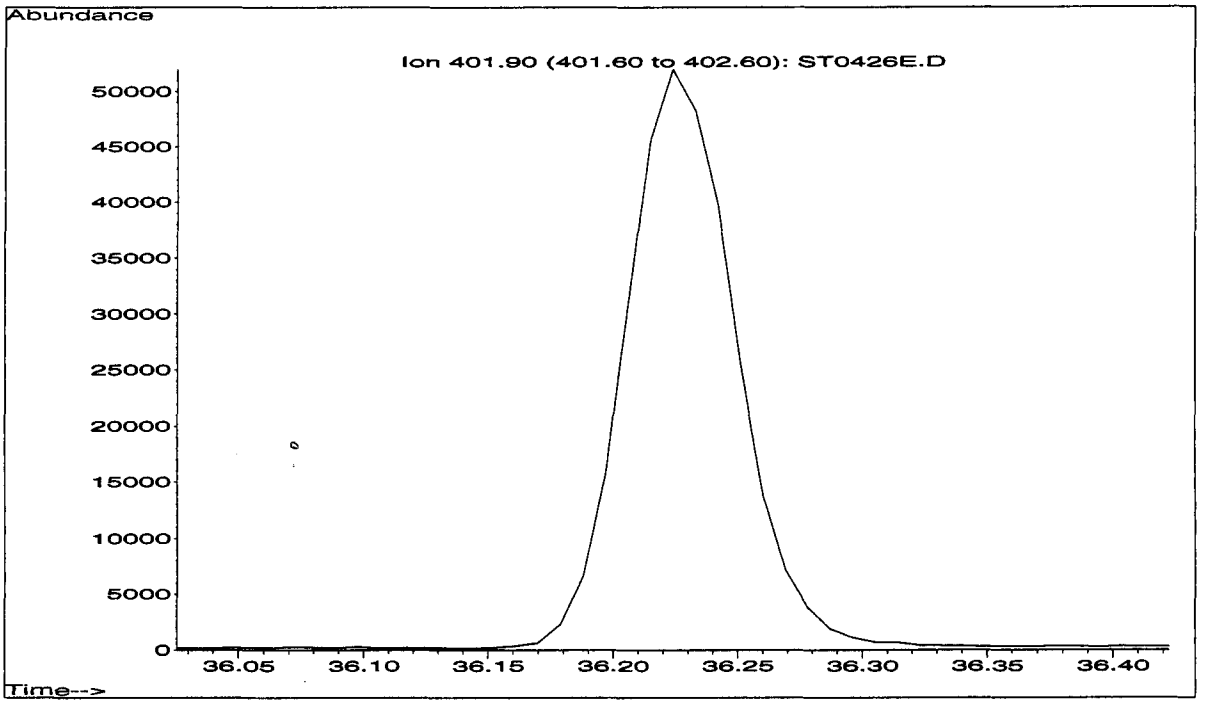
TS R.T. Lower Limit	36.30		
TS R.T. Upper Limit	36.70		
Ret Time	36.50		
Target Ion	401.9	Q1 Ion	403.9
Target Response	206149	Q1 Response	163504
Target Response	369653	Ion Ratio	1.26

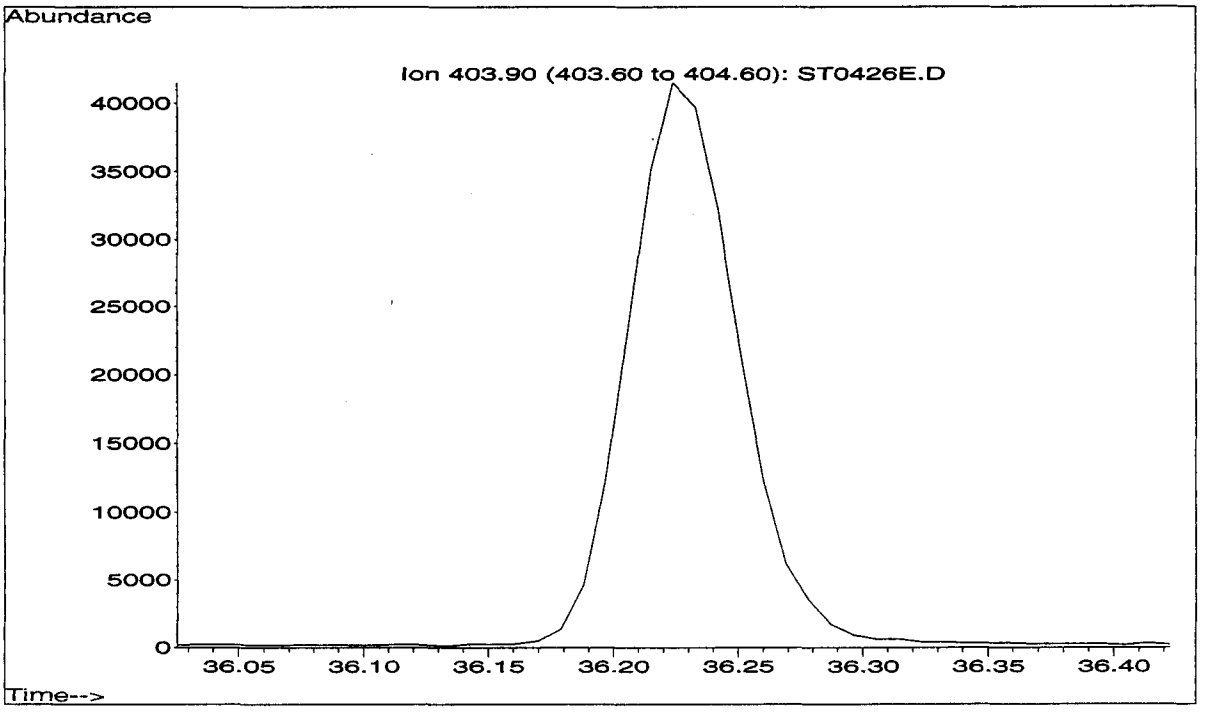




13C-123678-HxCDD-IS

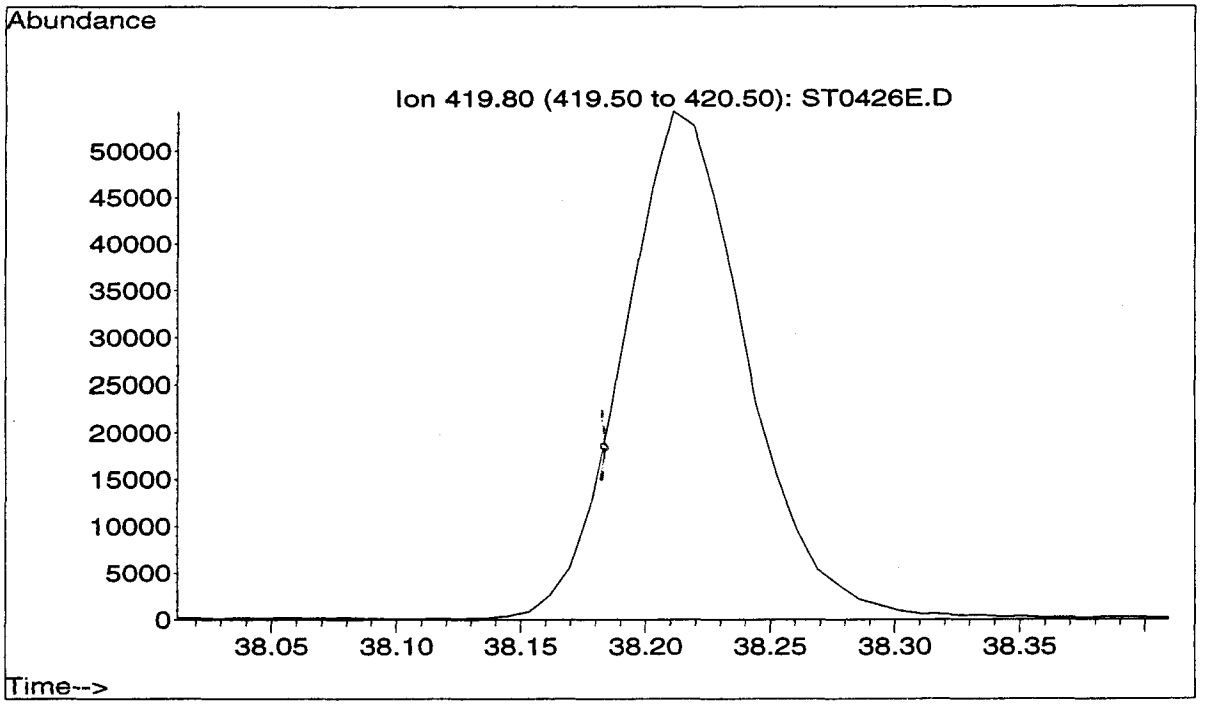
TS R.T. Lower Limit	36.02		
TS R.T. Upper Limit	36.42		
Ret Time	36.22		
Target Ion	401.9	Q1 Ion	403.9
Target Response	159550	Q1 Response	128957
Total Response	288507	Ion Ratio	1.24

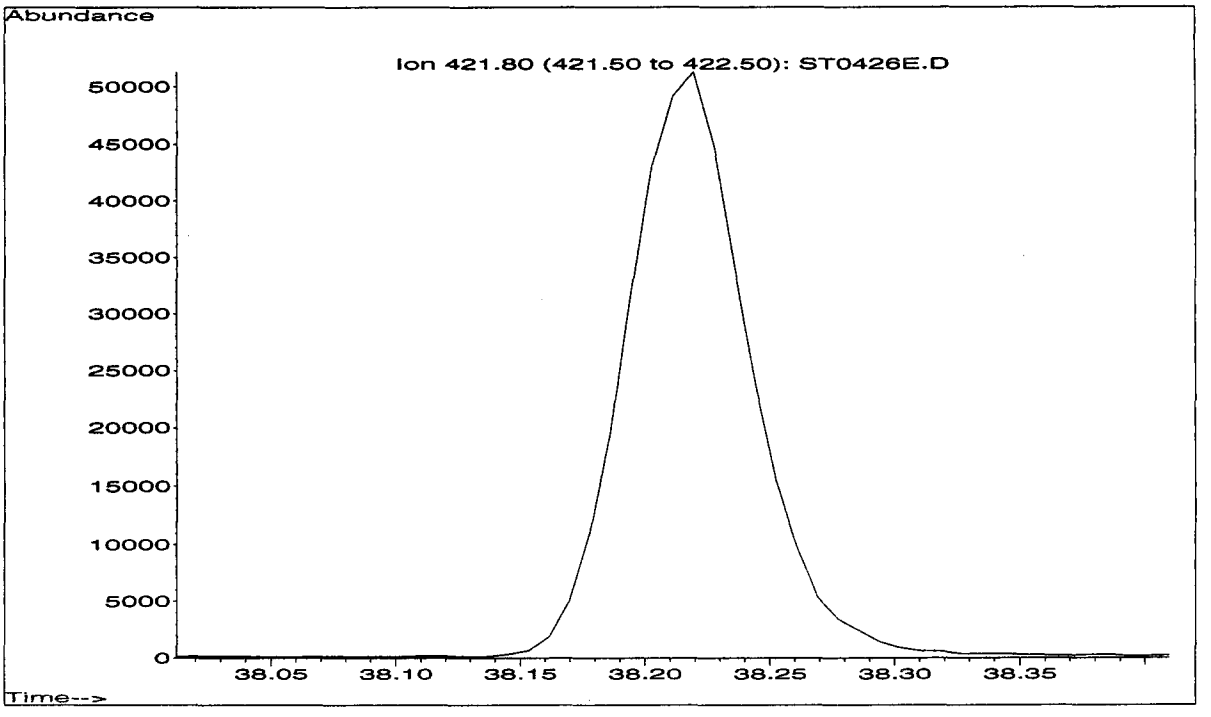




13C-1234678-HpCDF-IS

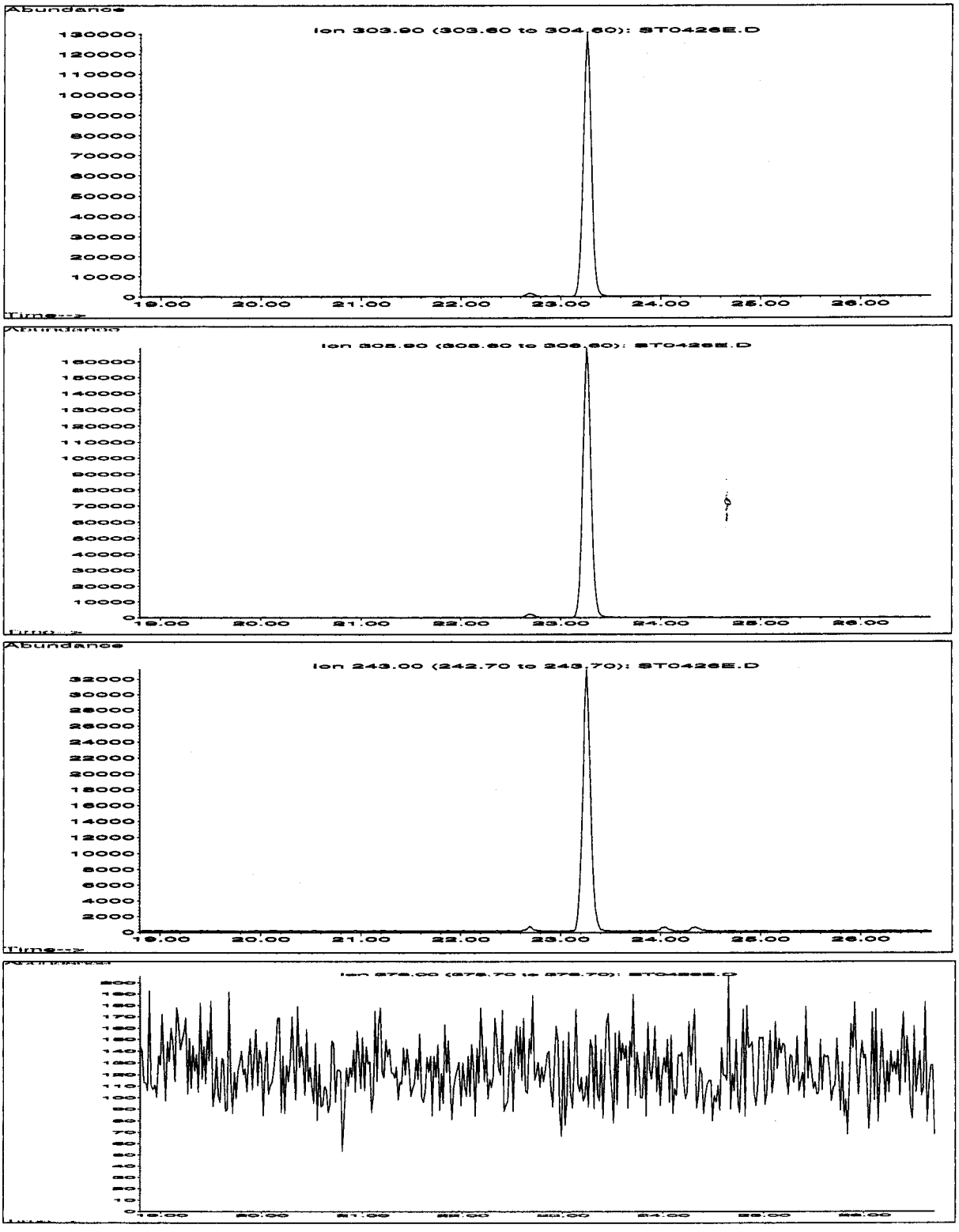
TS R.T. Lower Limit	38.01		
TS R.T. Upper Limit	38.41		
Ret Time	38.21		
Target Ion	419.8	Q1 Ion	421.8
Target Response	185369	Q1 Response	176108
Target Response	361477	Ion Ratio	1.05





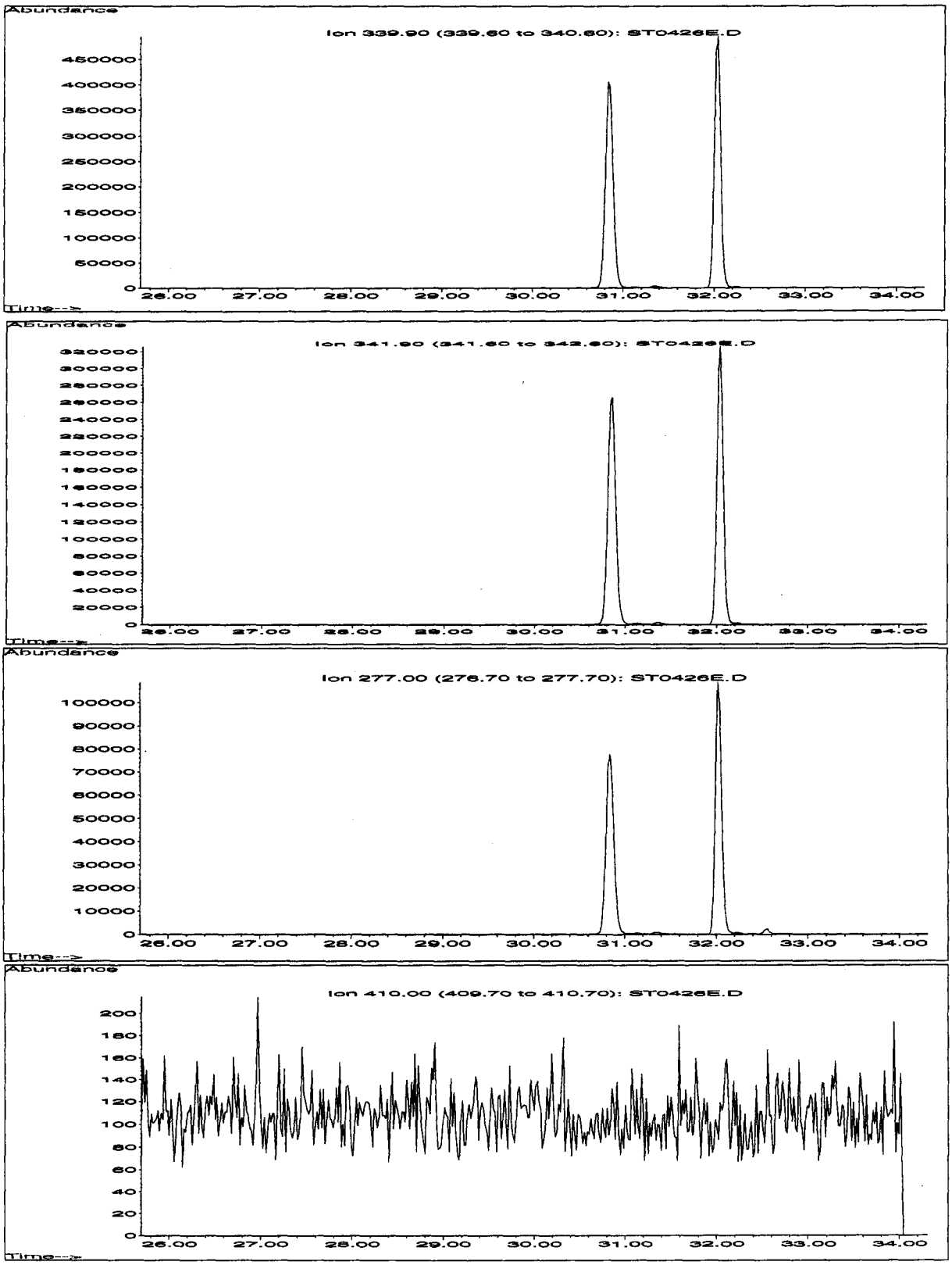
TCDF TOTAL

TS R.T. Lower Limit	18.80
TS R.T. Upper Limit	26.70



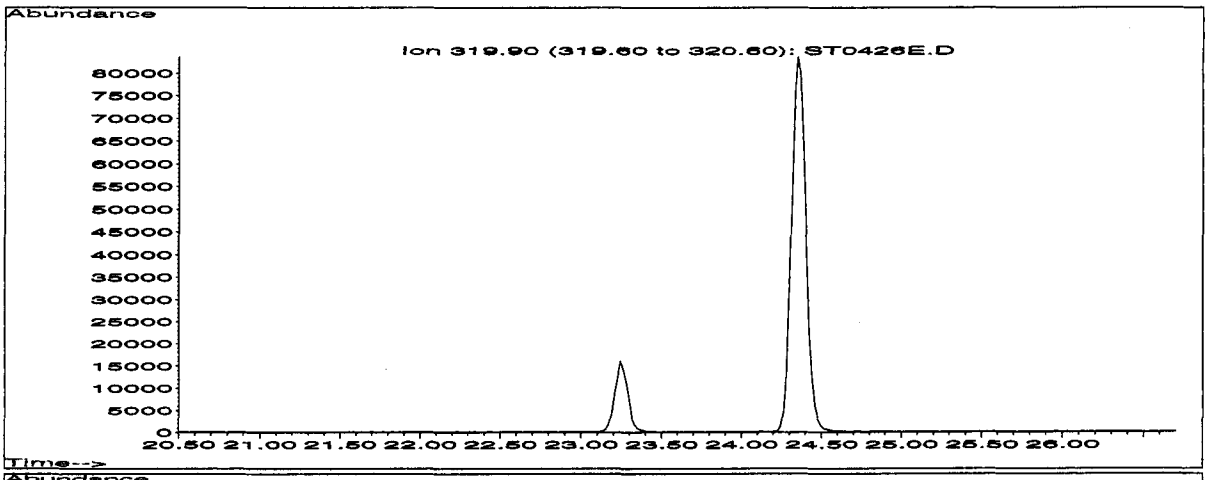
PeCDF TOTAL

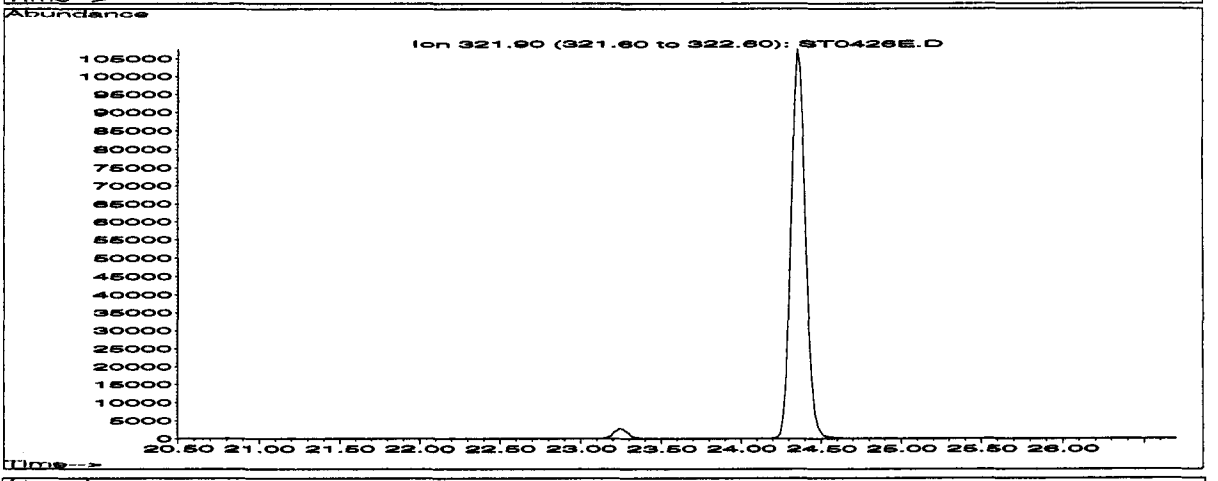
TS R.T. Lower Limit	25.70
TS R.T. Upper Limit	34.30

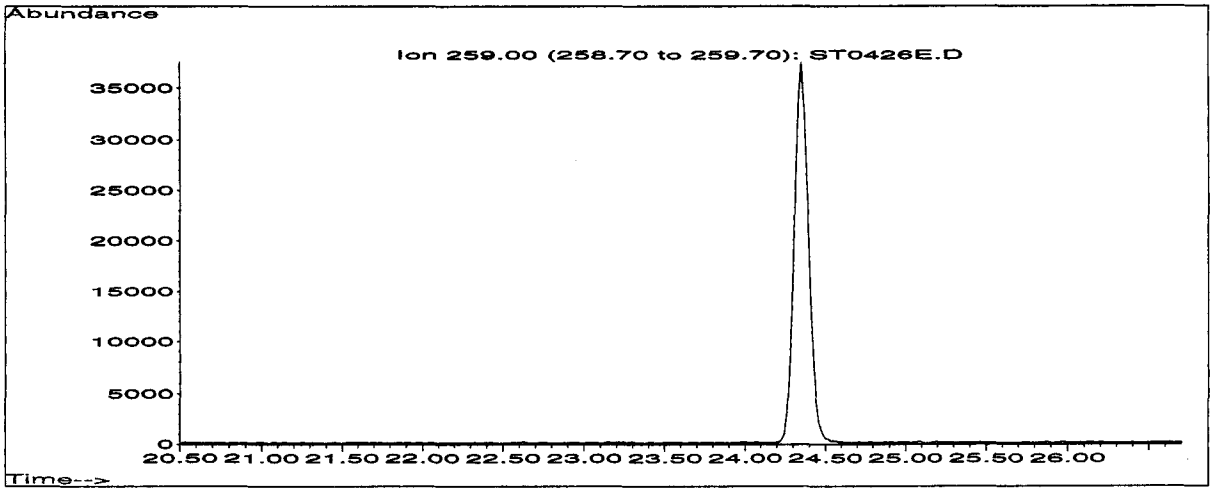


TCDD TOTAL

TS R.T. Lower Limit	20.50
TS R.T. Upper Limit	26.70

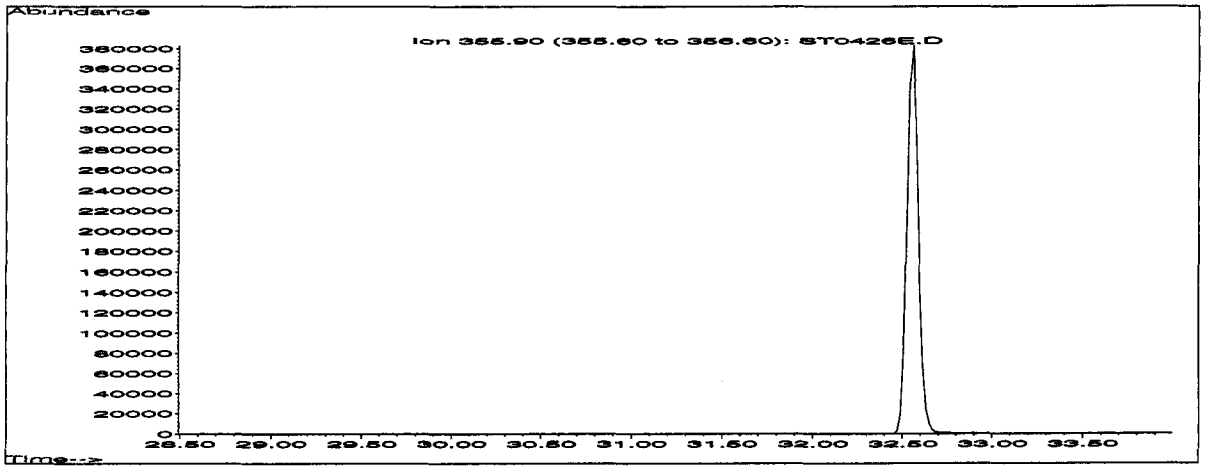


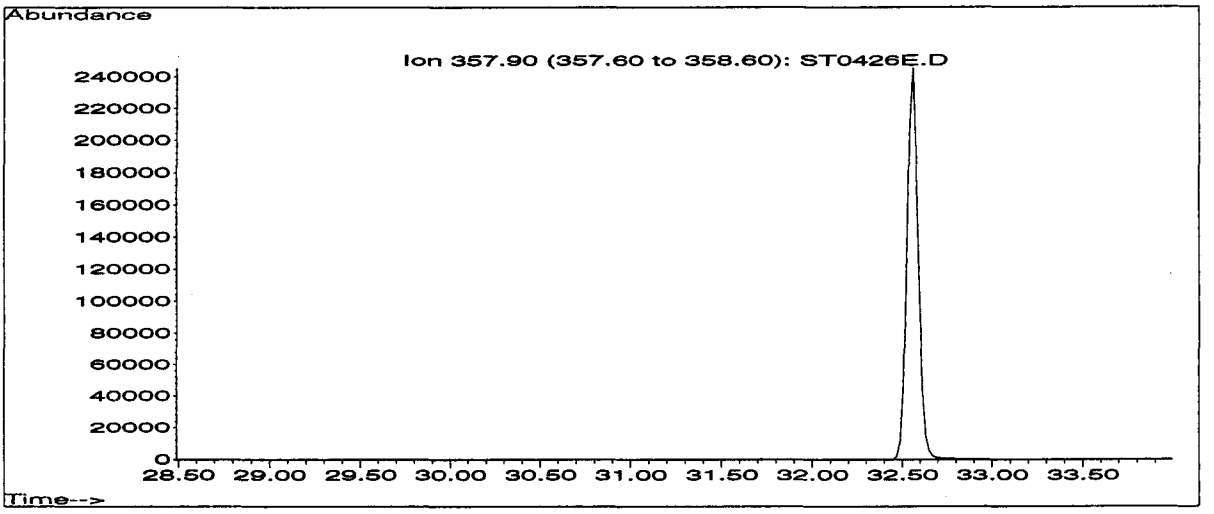


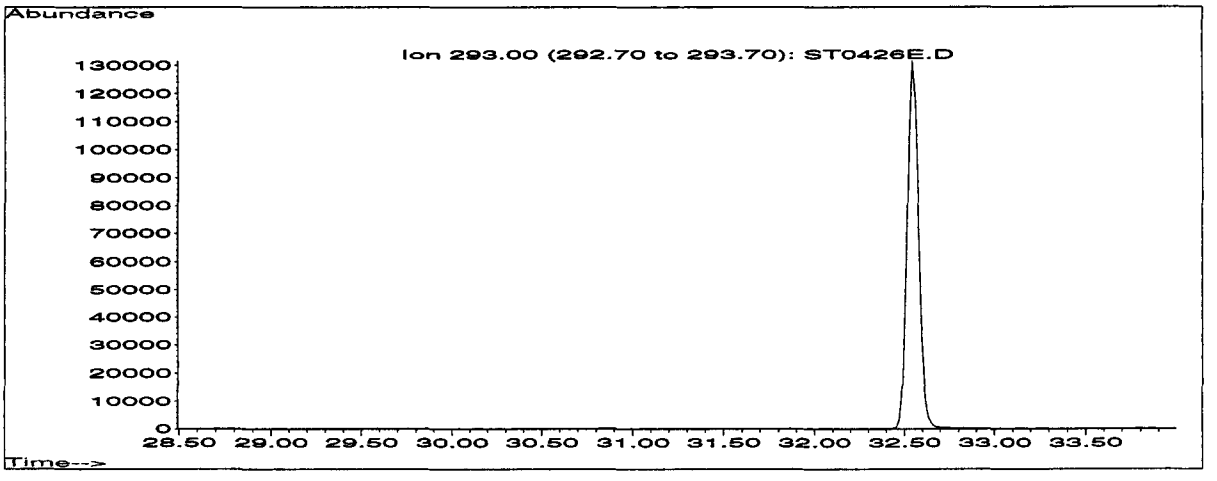


PeCDD TOTAL

TS R.T. Lower Limit	28.50
TS R.T. Upper Limit	34.00

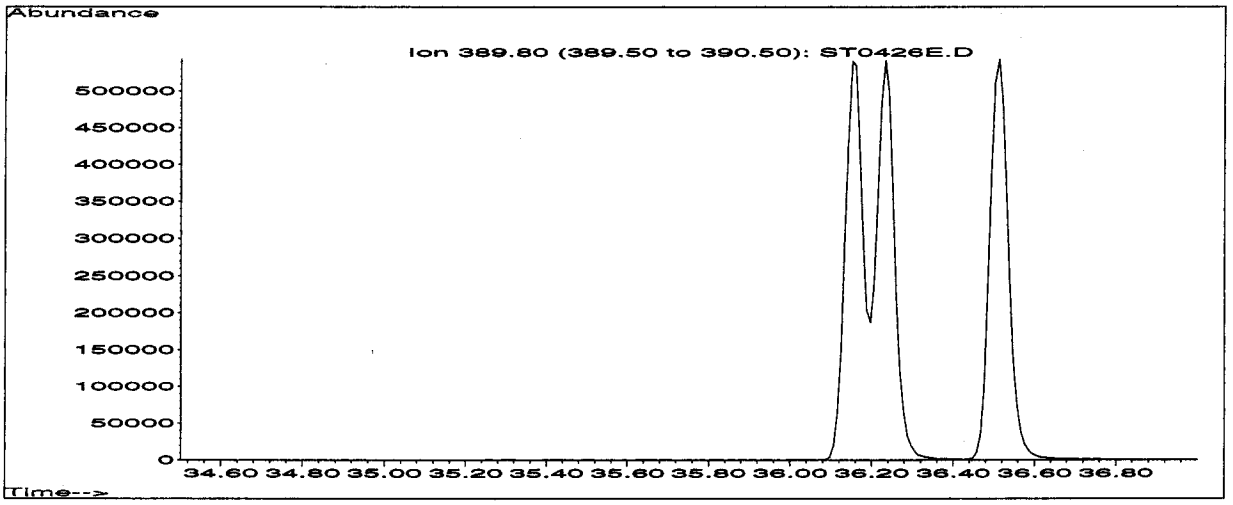


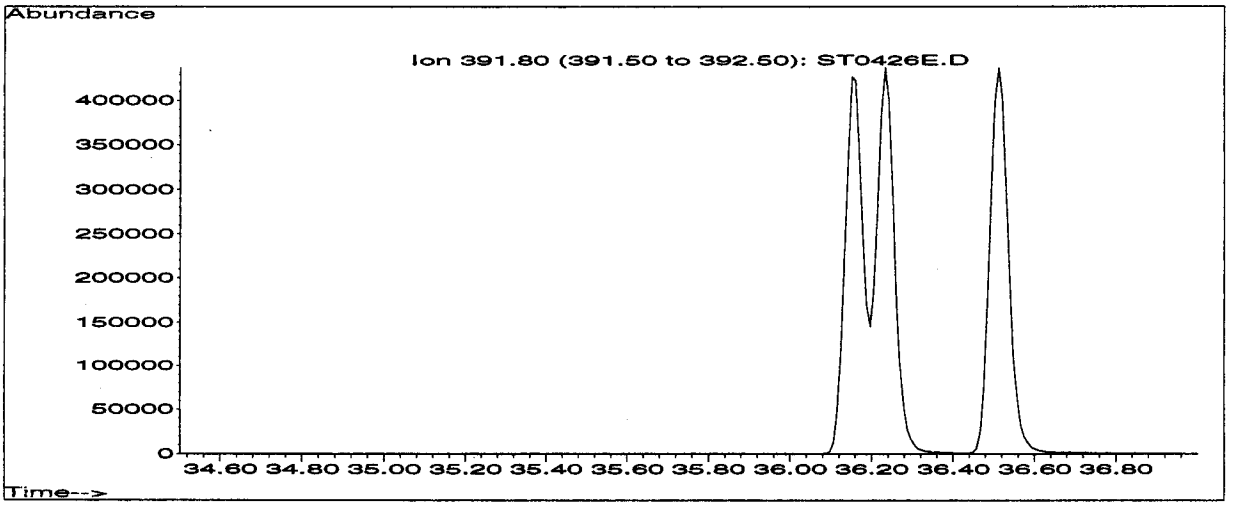


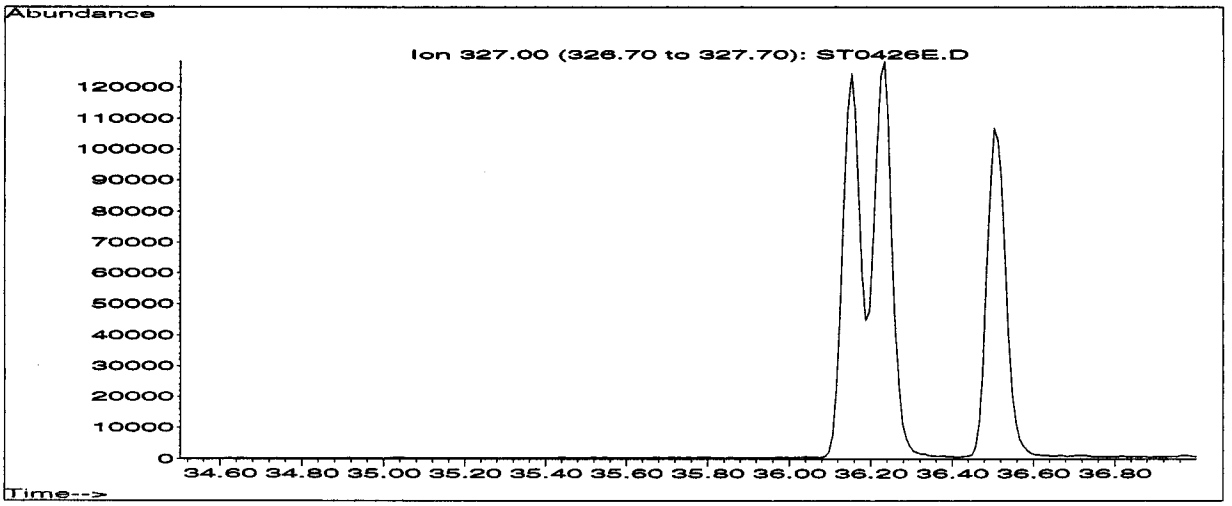


HxCDD TOTAL

TS R.T. Lower Limit	34.50
TS R.T. Upper Limit	37.00

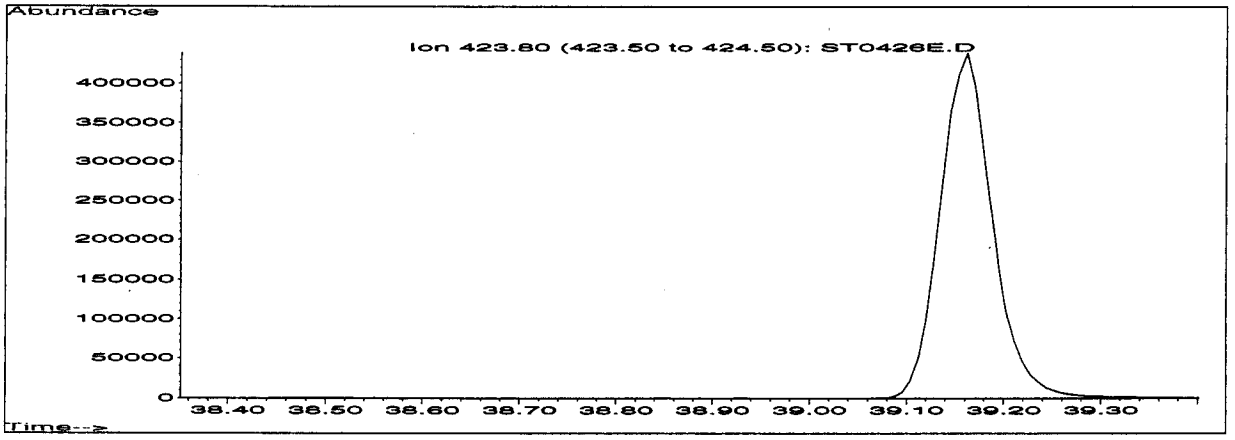


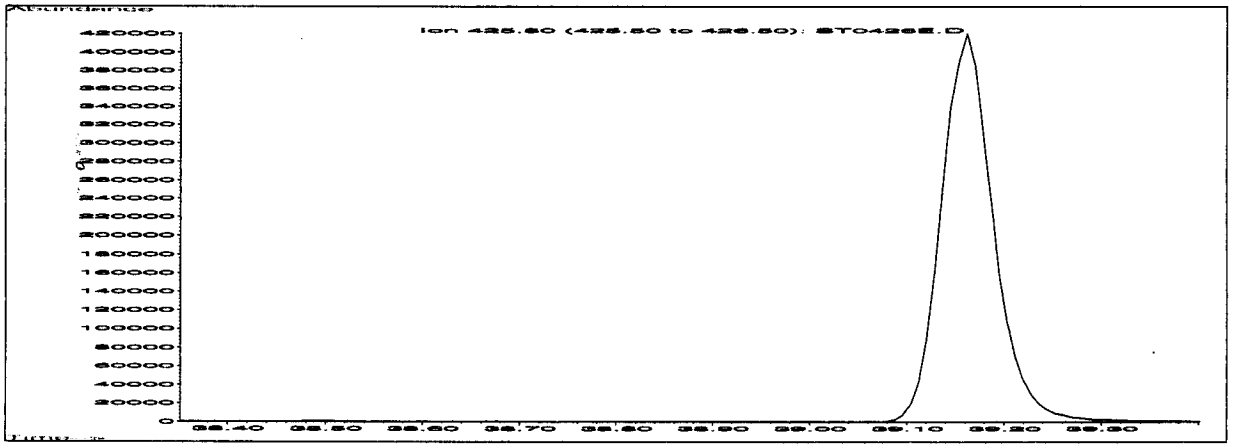


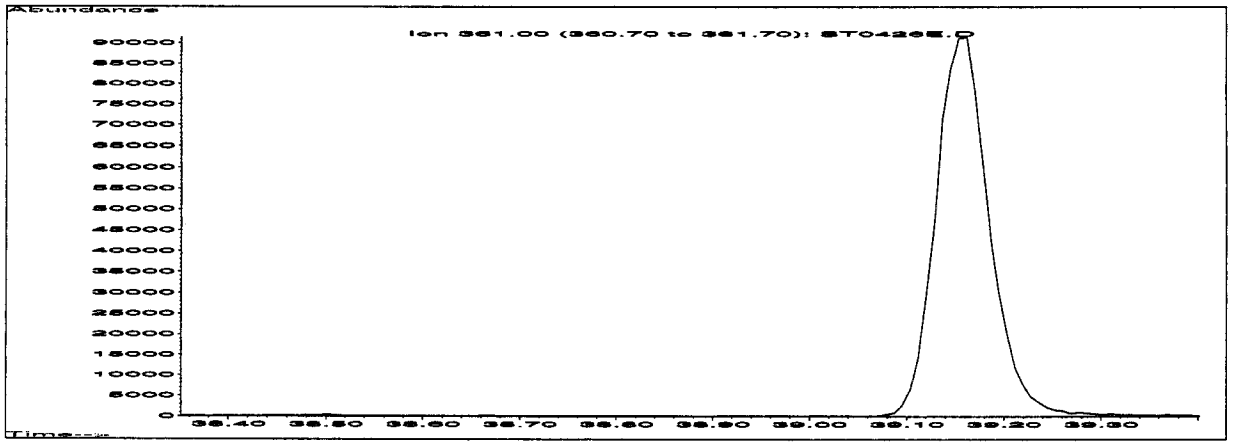


HpCDD TOTAL

TS R.T. Lower Limit	38.35
TS R.T. Upper Limit	39.40

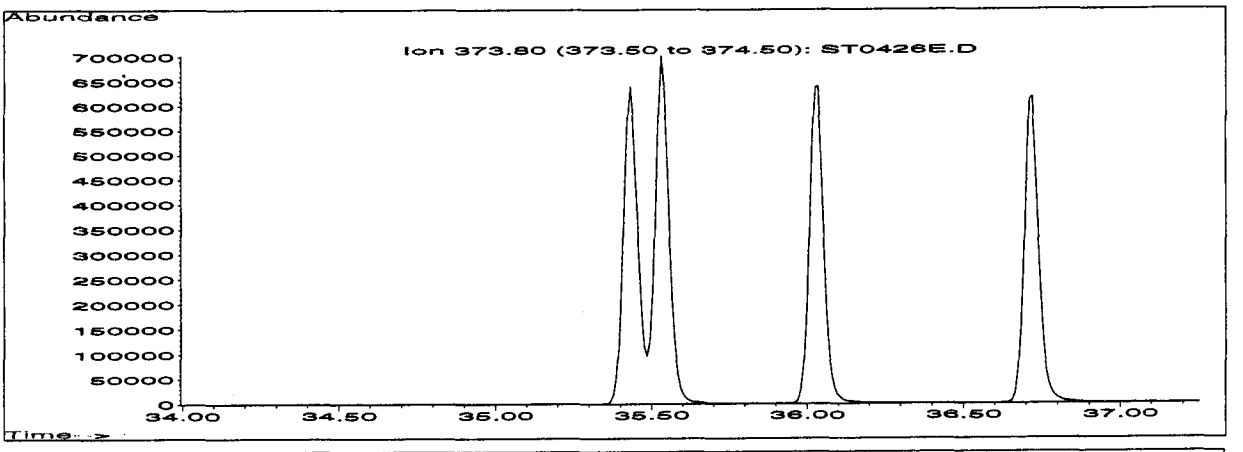


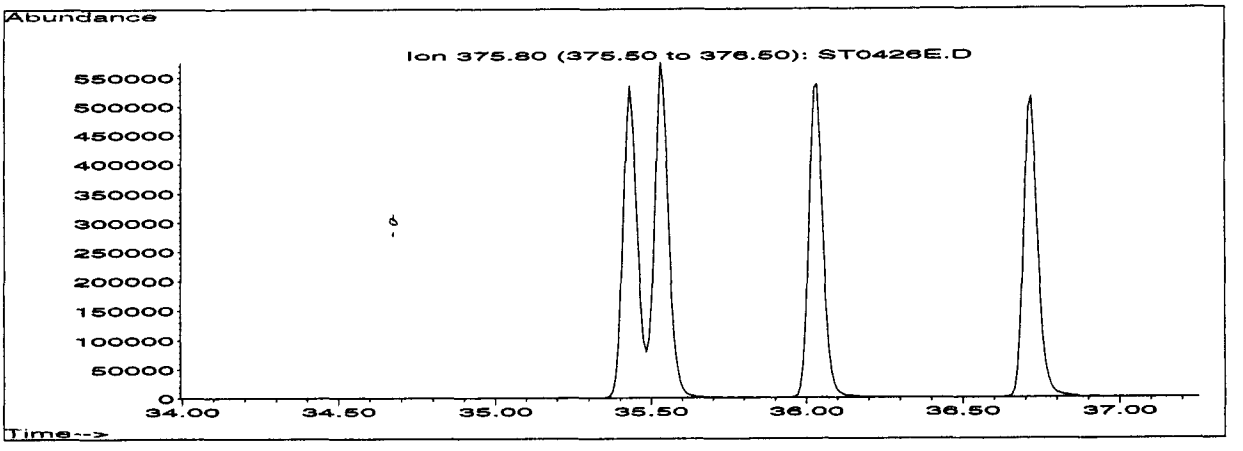


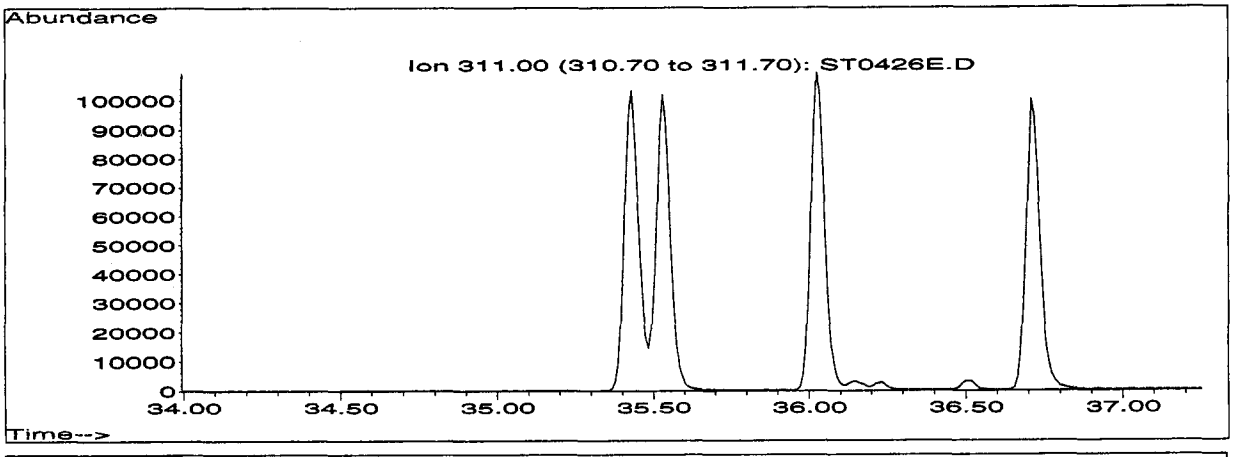


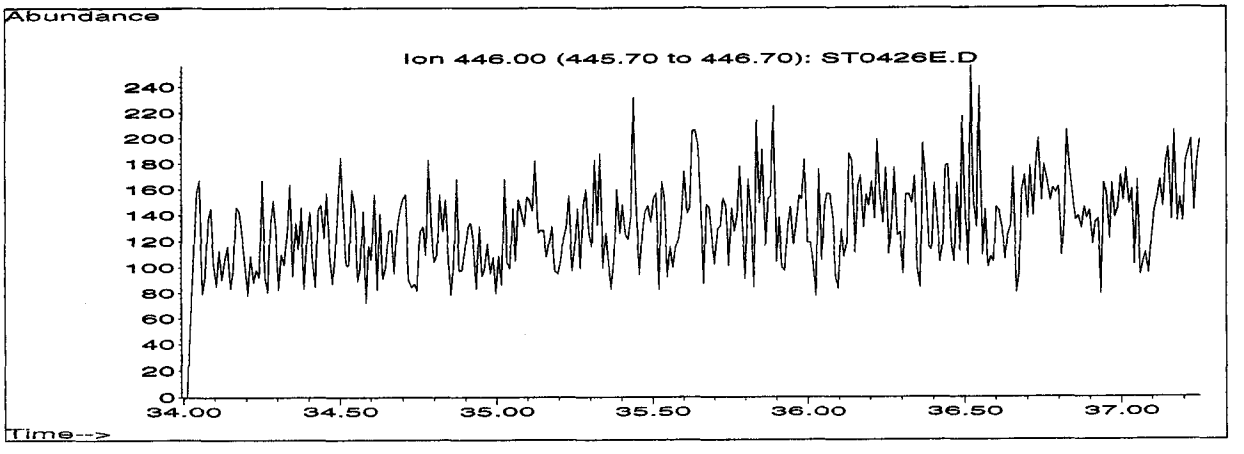
HxCDF TOTAL

TS R.T. Lower Limit	34.00
TS R.T. Upper Limit	37.25



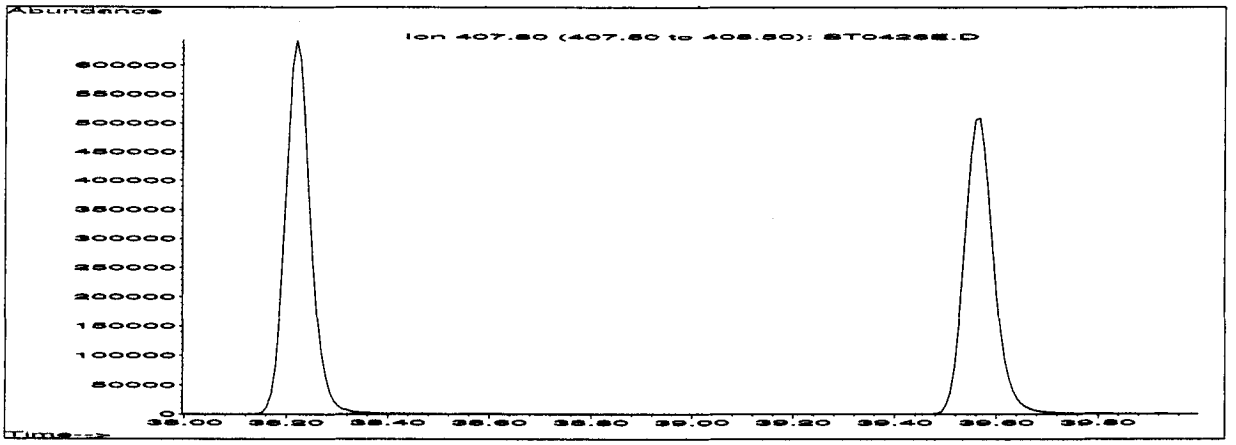


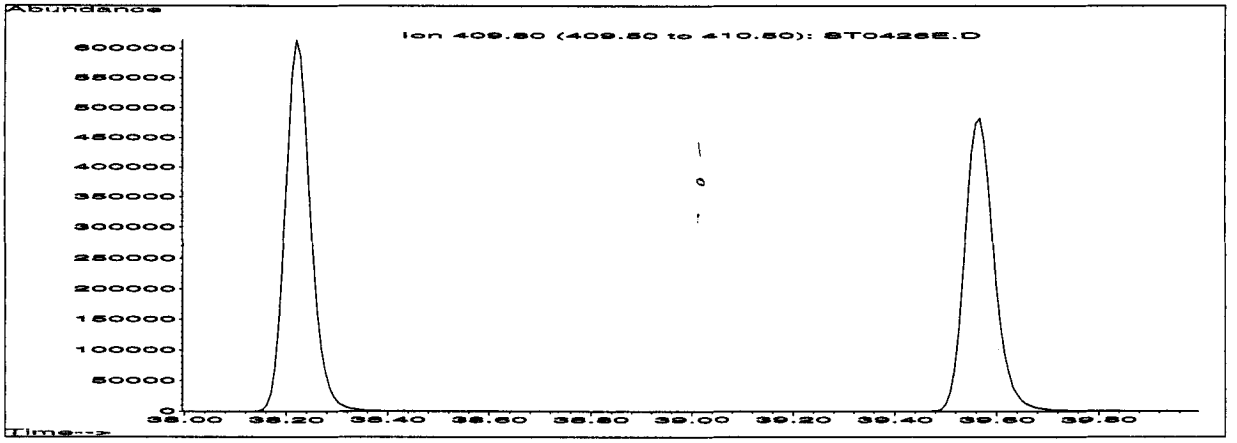


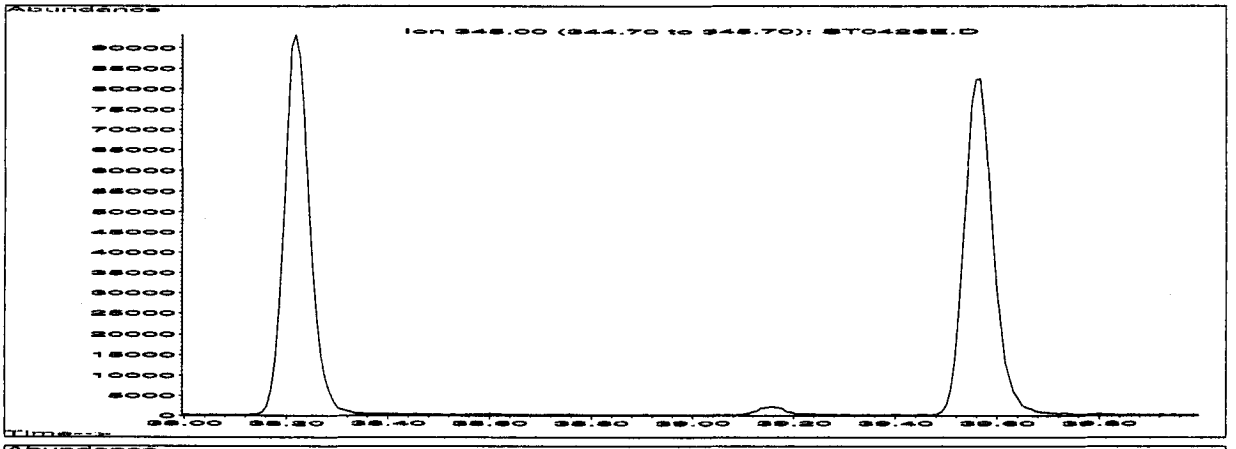


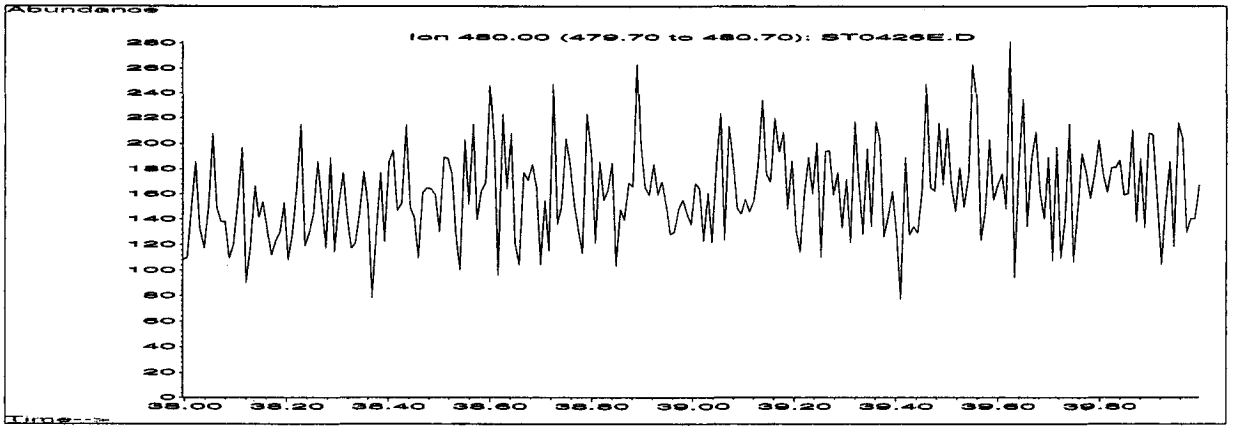
HpCDF TOTAL

TS R.T. Lower Limit	38.00
TS R.T. Upper Limit	40.00



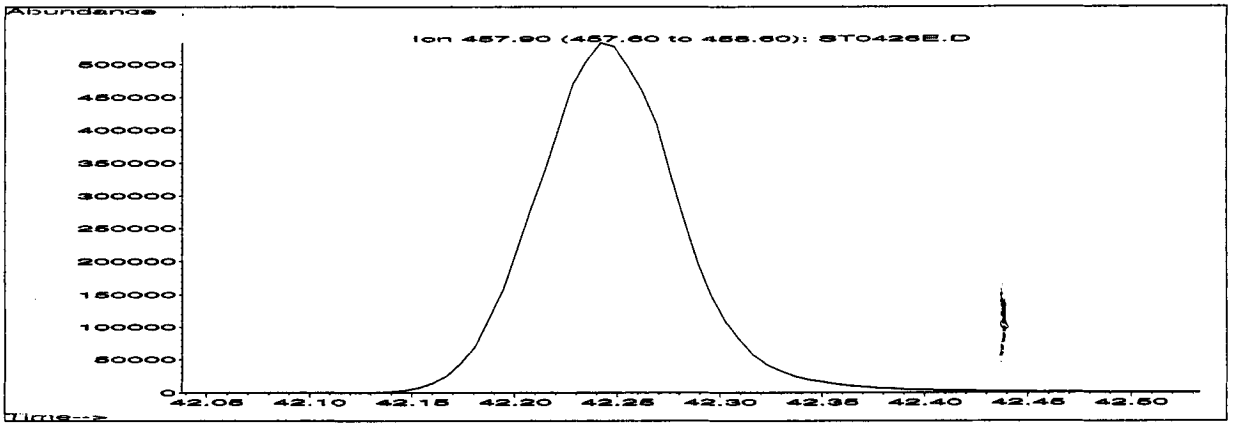


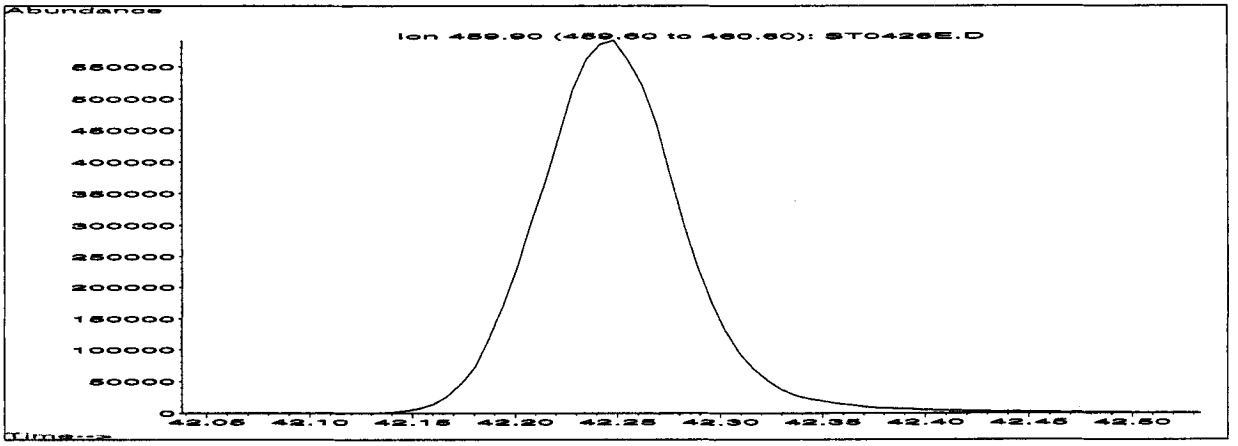


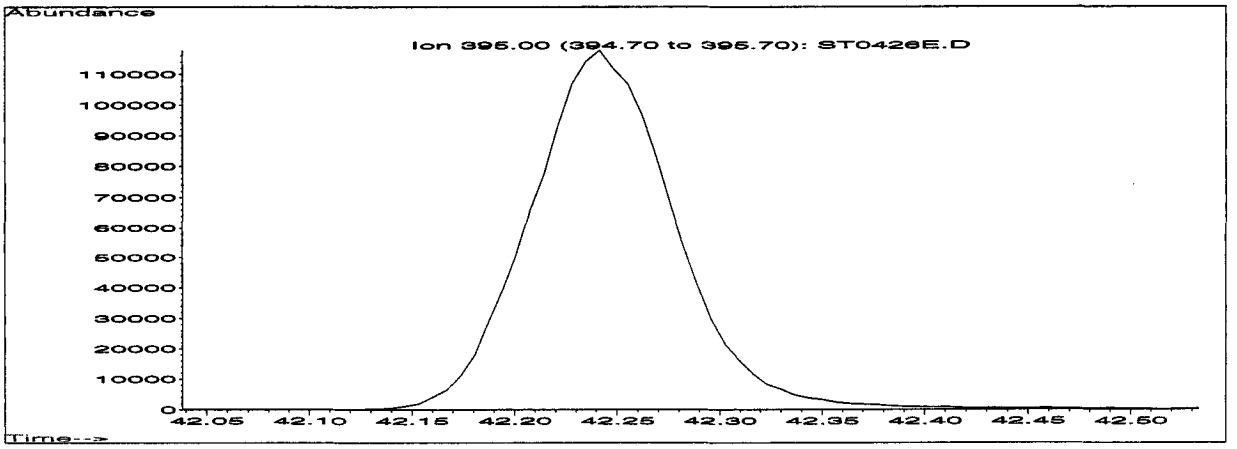


OCDD

TS R.T. Lower Limit	42.03		
TS R.T. Upper Limit	42.53		
Ret. Time	42.24		
Target Ion	457.9	Q1 Ion	459.9
Target Response	2629632	Q1 Response	2930100
Total Response	5559732	Ion ratio	0.90
Q2 Ion	395		
Q2 Response	576421		

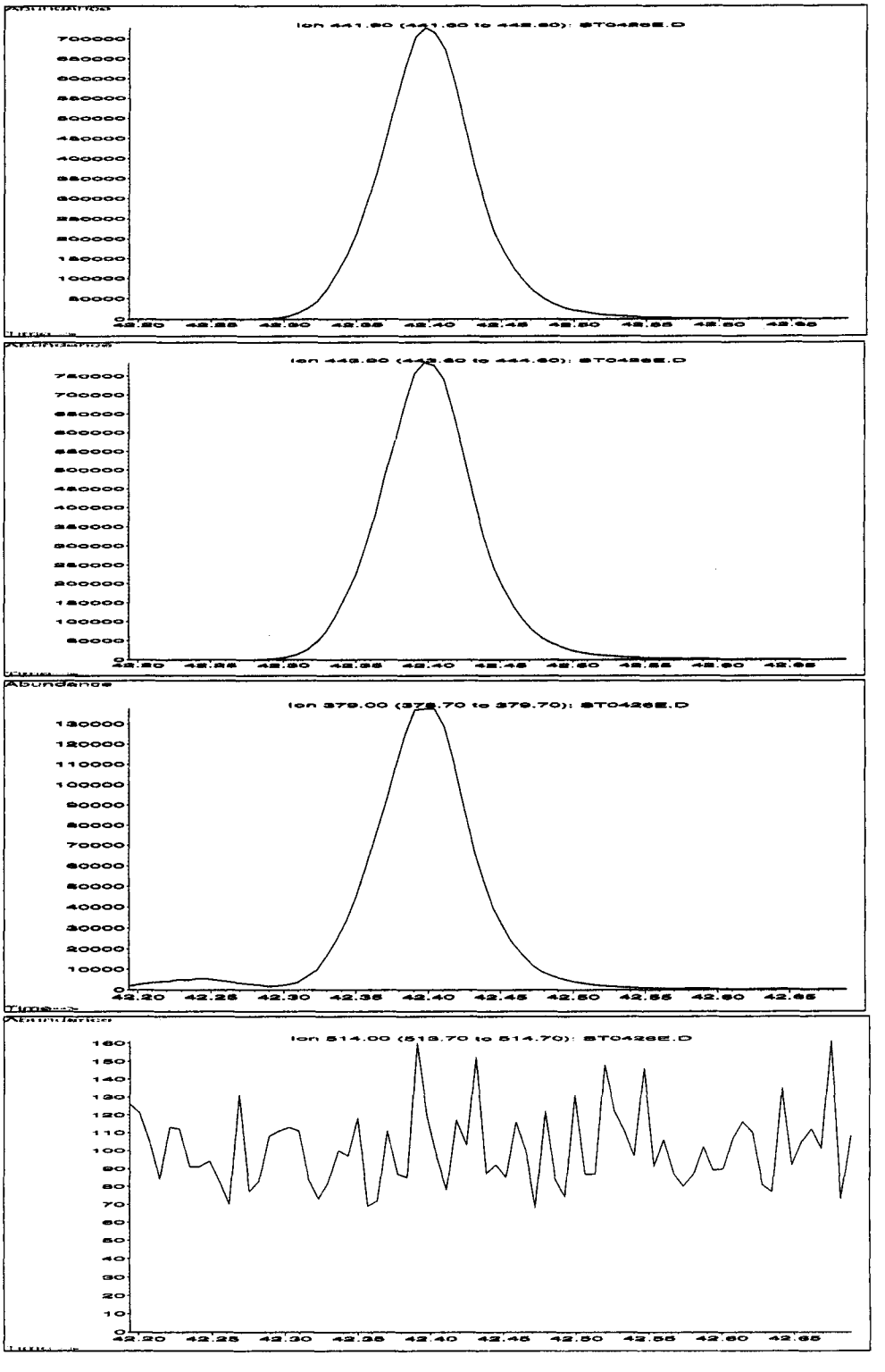






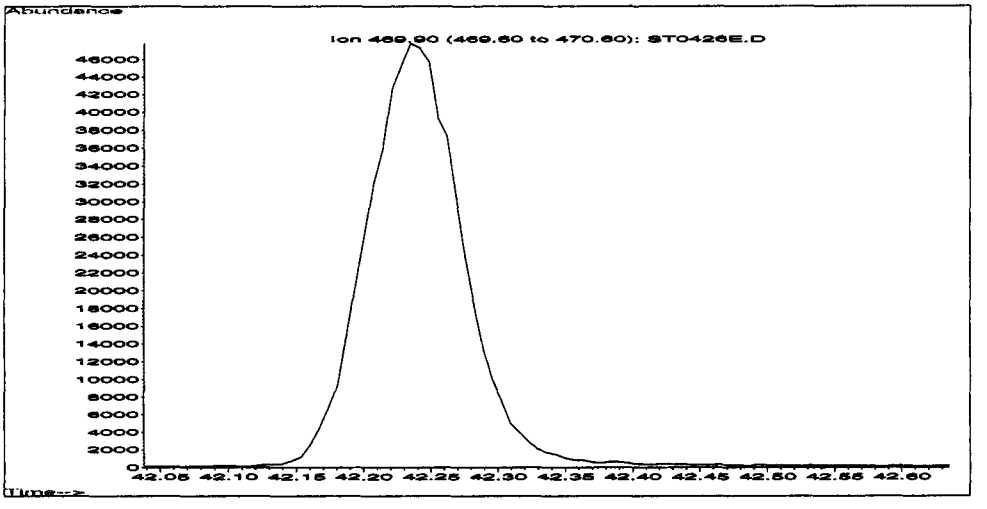
OCDF

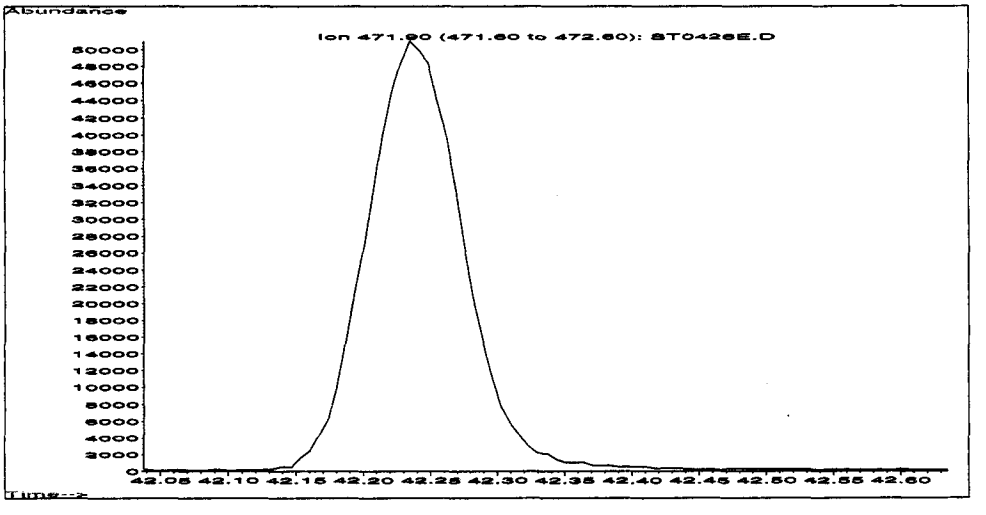
TS R.T. Lower Limit	42.19		
TS R.T. Upper Limit	42.69		
Ret Time	42.40		
Target Ion	441.9	Q1 Ion	443.9
Target Response	3411801	Q1 Response	3717557
Target Response	7129358	Ion Ratio	0.92
Q2 Ion	379	DPE Ion	514
Q2 Response	653249	DPE Response	0



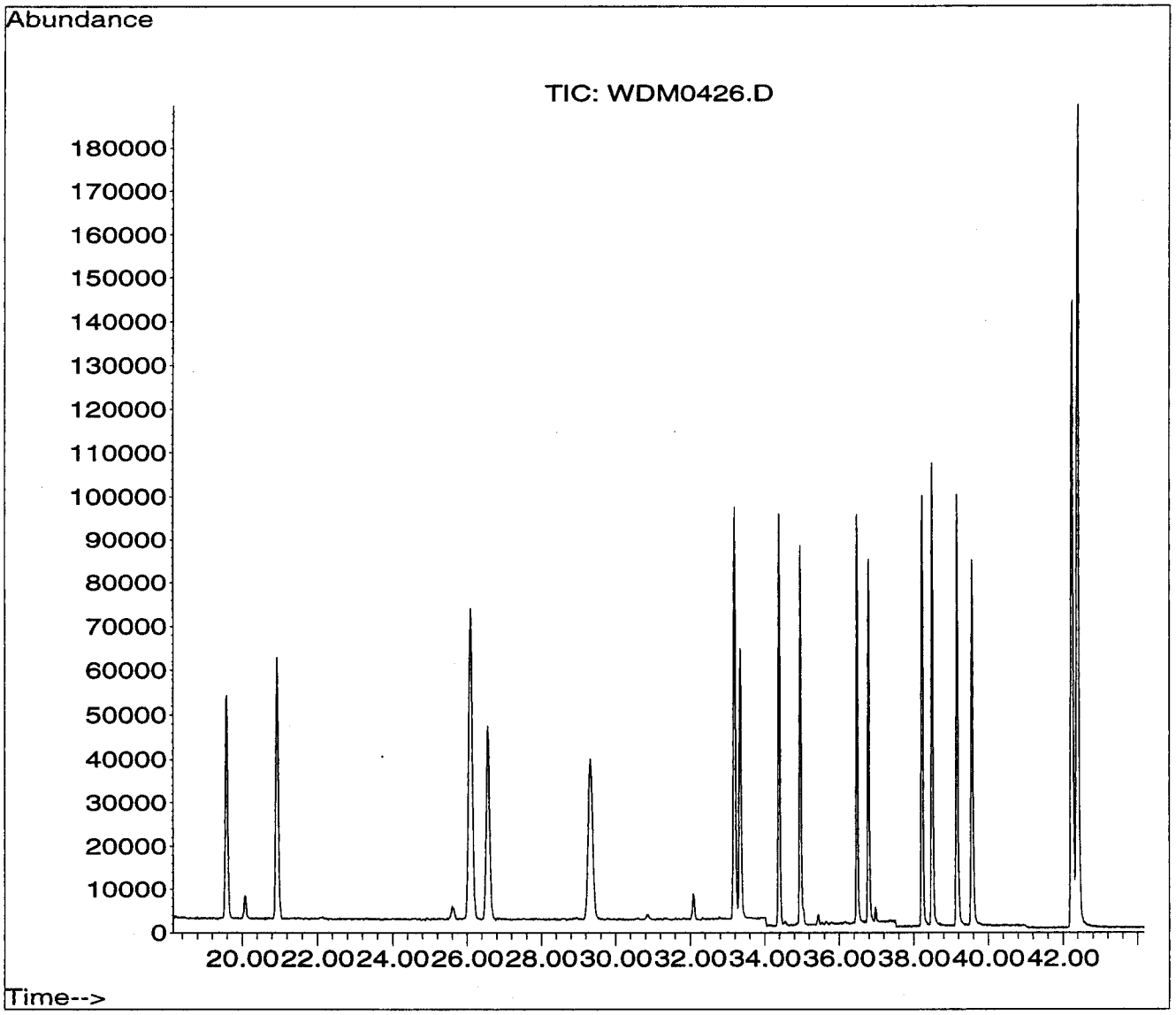
13C-OCDD-IS

RT Lower Limit	42.03		
RT Upper Limit	42.63		
Ret Time	42.23		
Target Ion	469.9	Q1 Ion	471.9
Target Response	236948	Q1 Response	255244
Total response	492192	Ratio	0.93



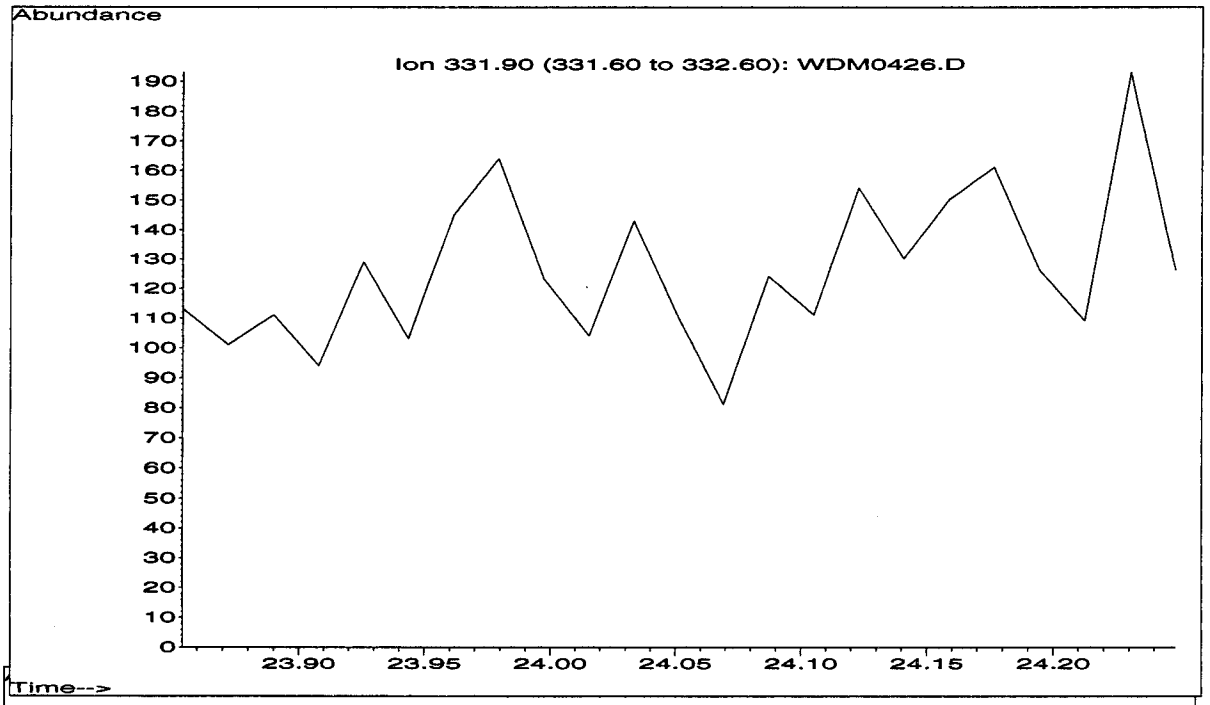


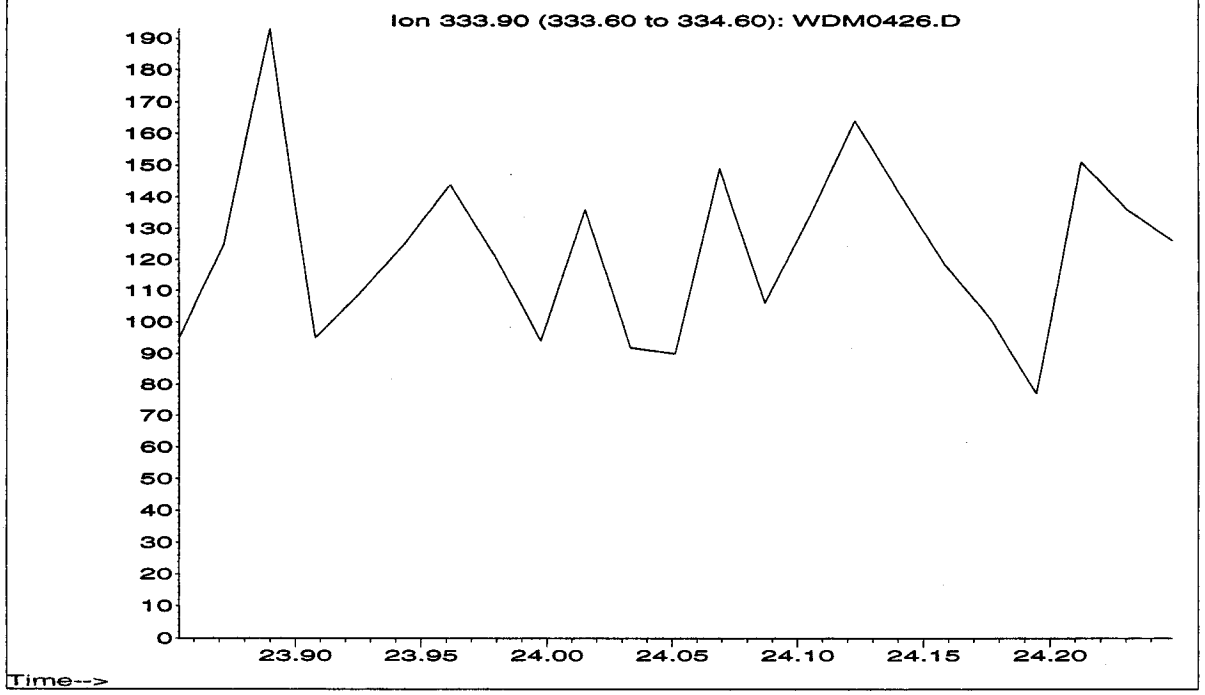
Data File Name	WDM0426.D
Data File Path	C:\8280\2DB\042610.B\
Operator	MEO
Date Acquired	4/26/2010 13:18
Acq. Method File	TOKAS
Sample Name	WDM 3136-37
Misc Info	WINDOW DEFINING MIX
Vial Number	96
Instrument Name	2DB
Sample Multiplier	1
Sample Amount	0



13C-1234-TCDD

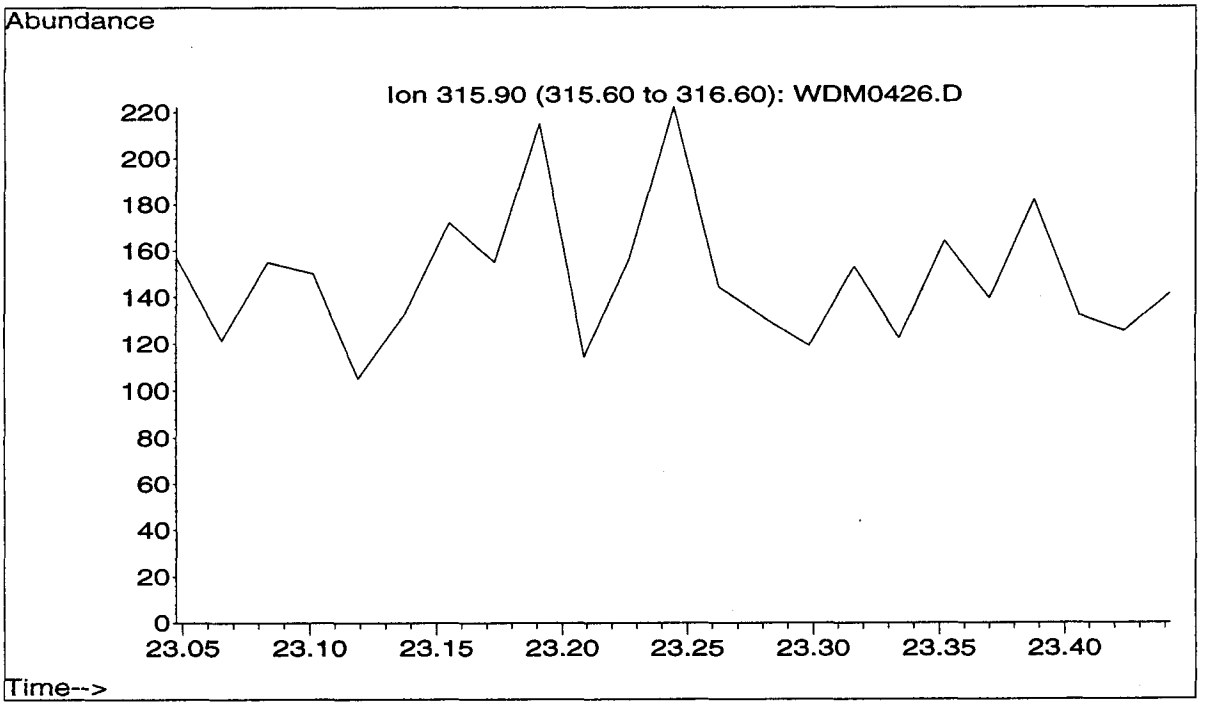
TS R.T. Lower Limit	23.85		
TS R.T. Upper Limit	24.25		
Ret Time	0.00		
Target Ion	331.9	Q1 Ion	333.9
Target Response	0	Q1 Response	0
Total Response	0	Ion Ratio	#DIV/0!

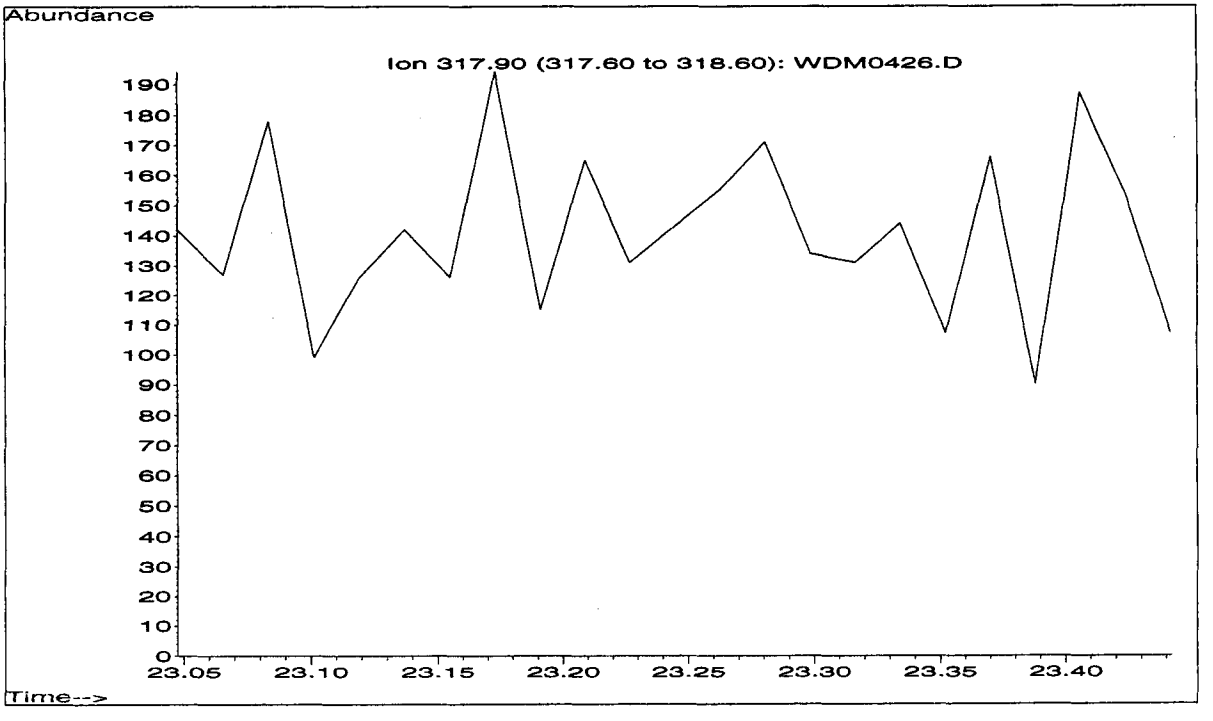




13C-2378-TCDF-IS

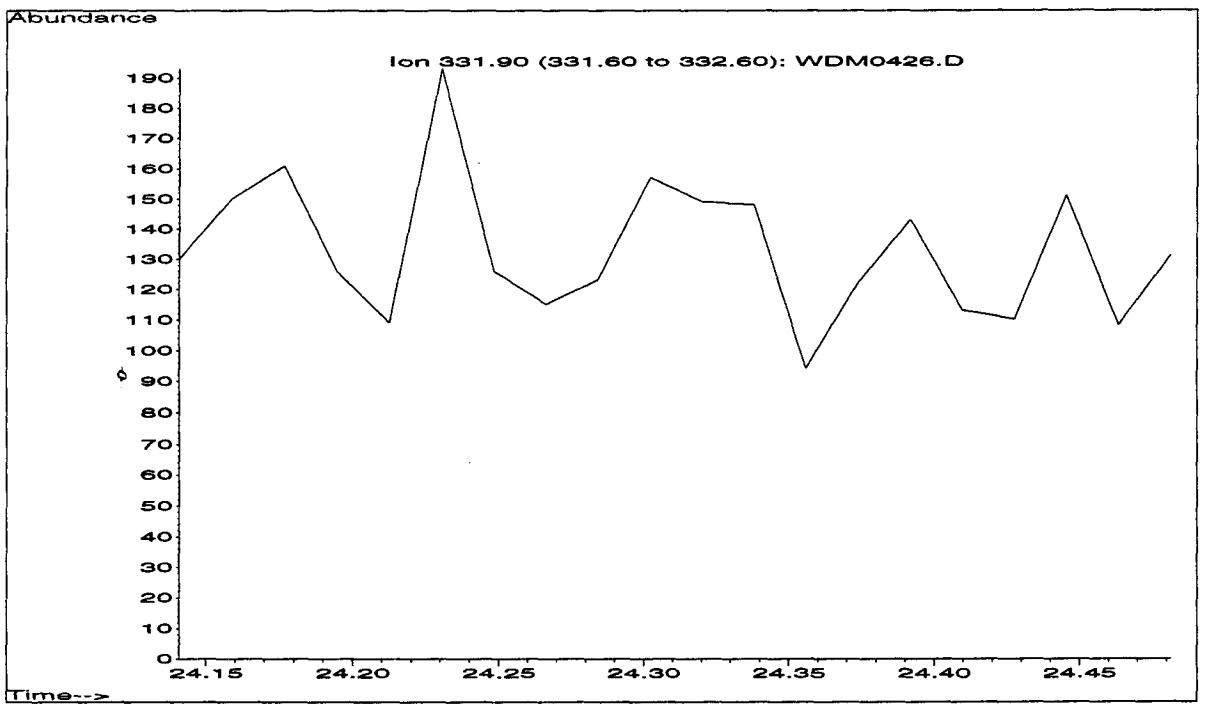
TS R.T. Lower Limit	23.04		
TS R.T. Upper Limit	23.44		
Ret Time	0.00		
Target Ion	315.9	Q1 Ion	317.9
Target Response	0	Q1 Response	0
Target Response	0	Ion Ratio	#DIV/0!

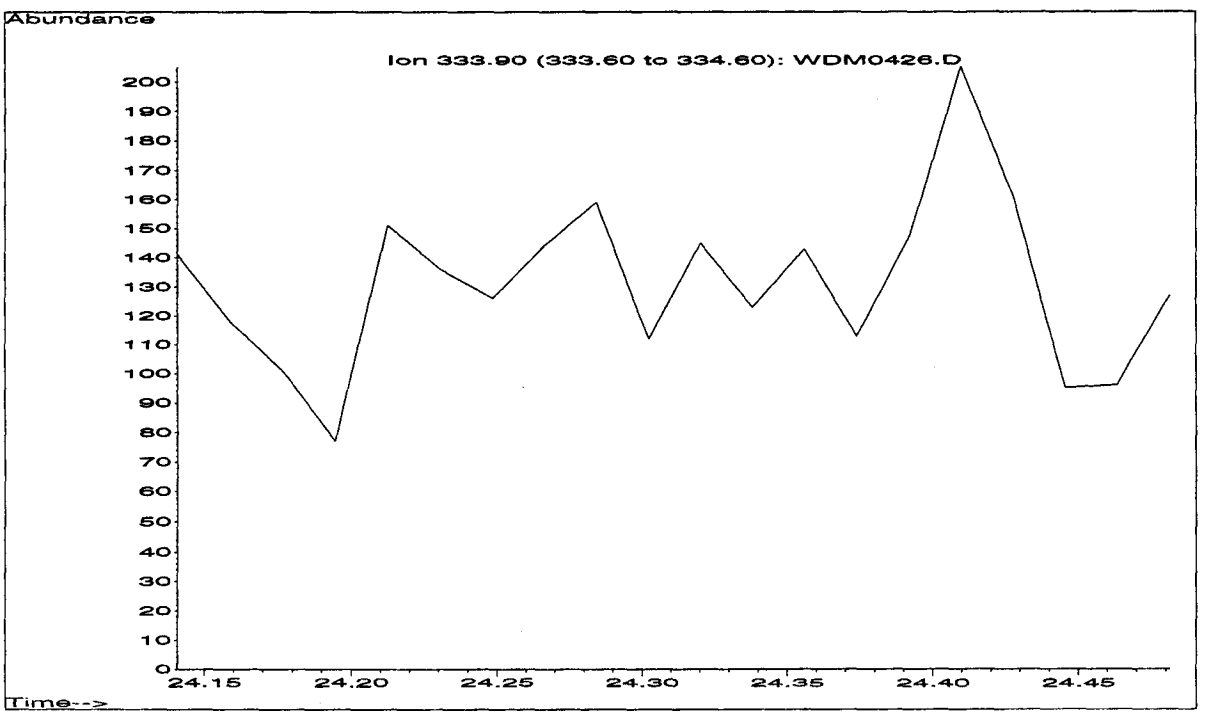




13C-2378-TCDD-IS

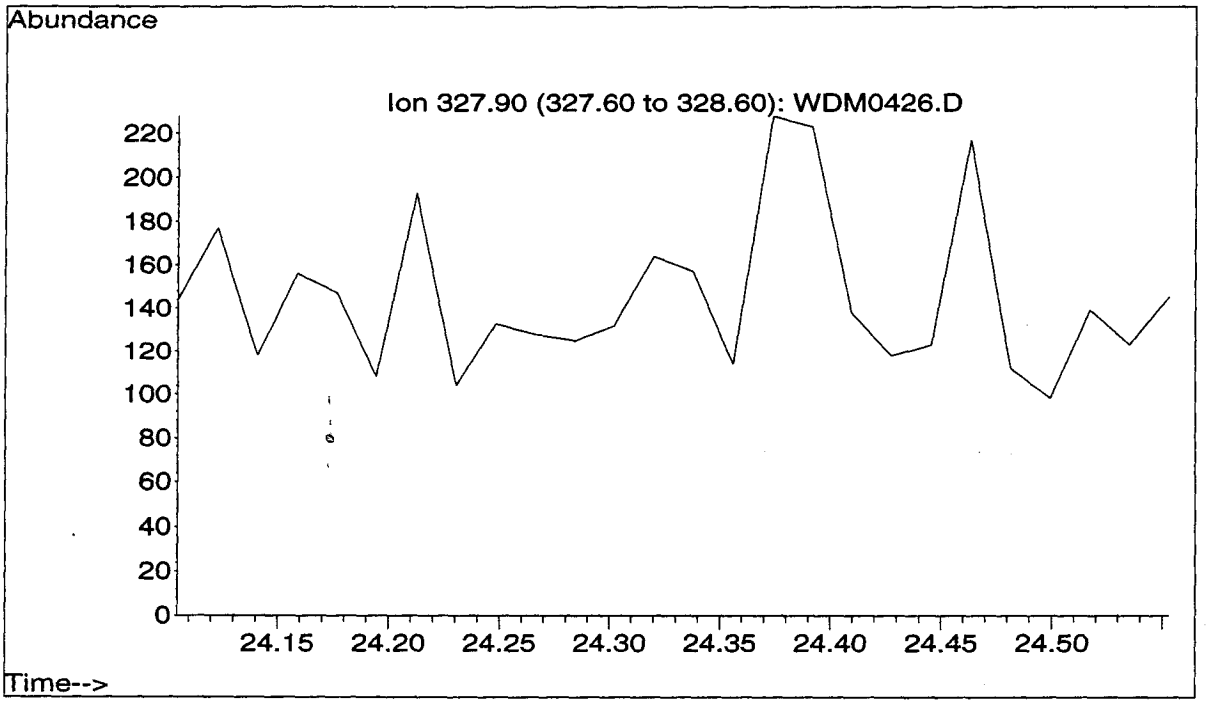
TS R.T. Lower Limit	24.14		
TS R.T. Upper Limit	24.49		
Ret Time	0.00		
Target Ion	331.9	Q1 Ion	333.9
Target Response	0	Q1 Response	0
Total Response	0	Ion Ratio	#DIV/0!

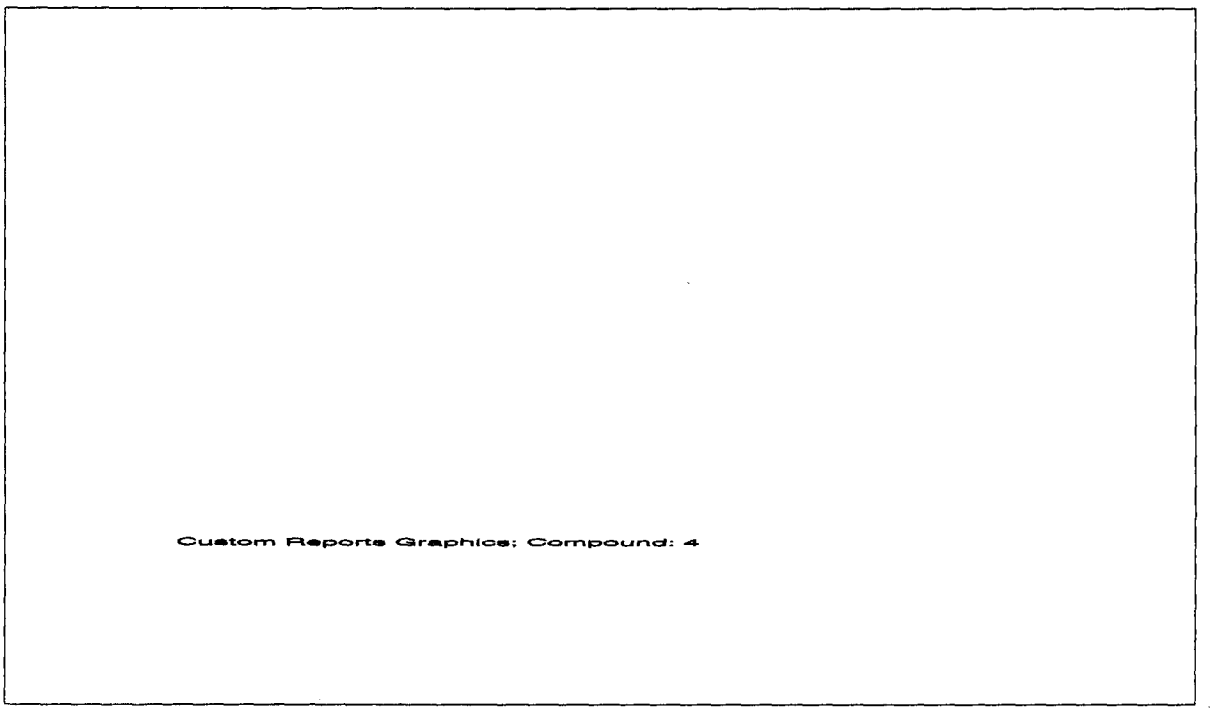




37Cl-2378-TCDD

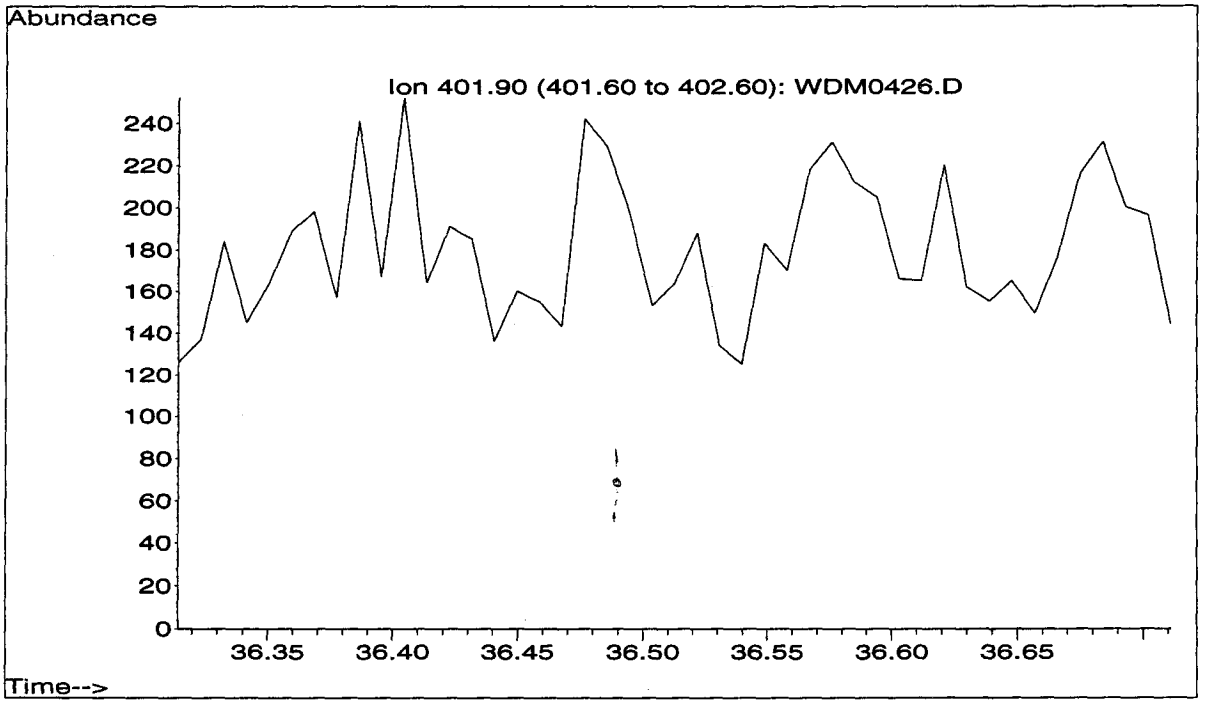
TS R.T. Lower Limit	24.10		
TS R.T. Upper Limit	24.55		
Ret Time	0.00		
Target Ion	327.9	Q1 Ion	0
Target Response	0	Q1 Response	0
Total Response	0	Ion Ratio	#DIV/0!

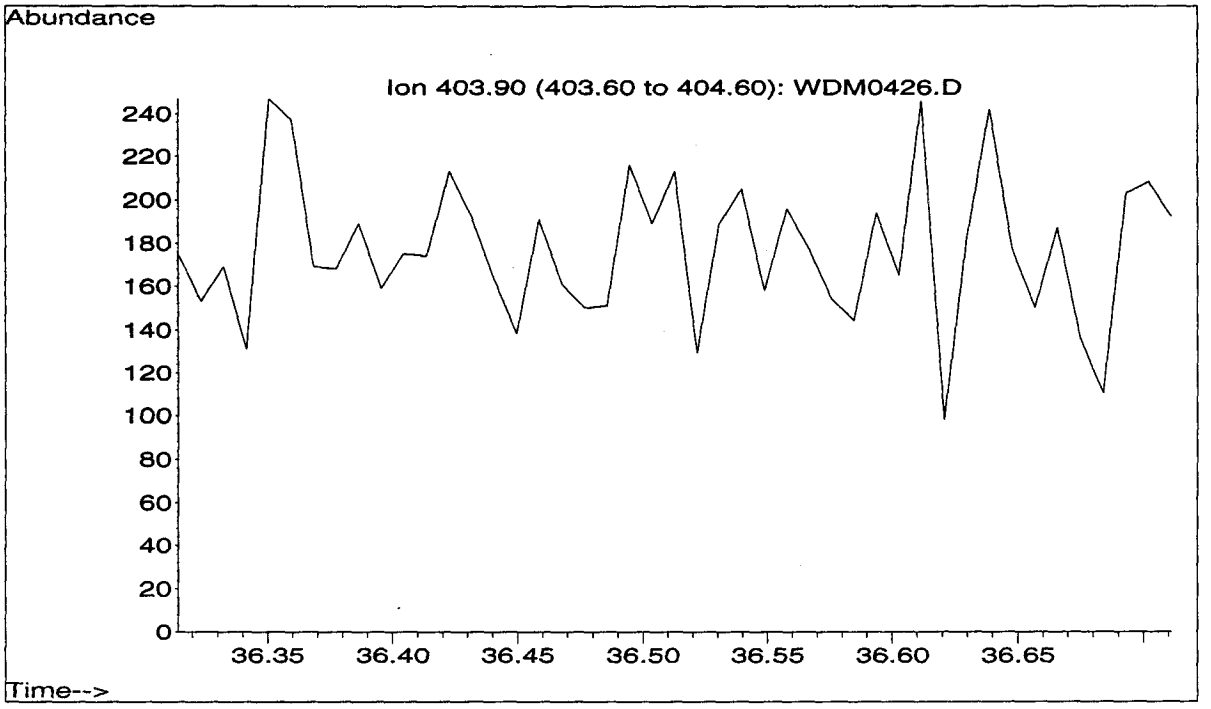




13C-123789-HxCDD

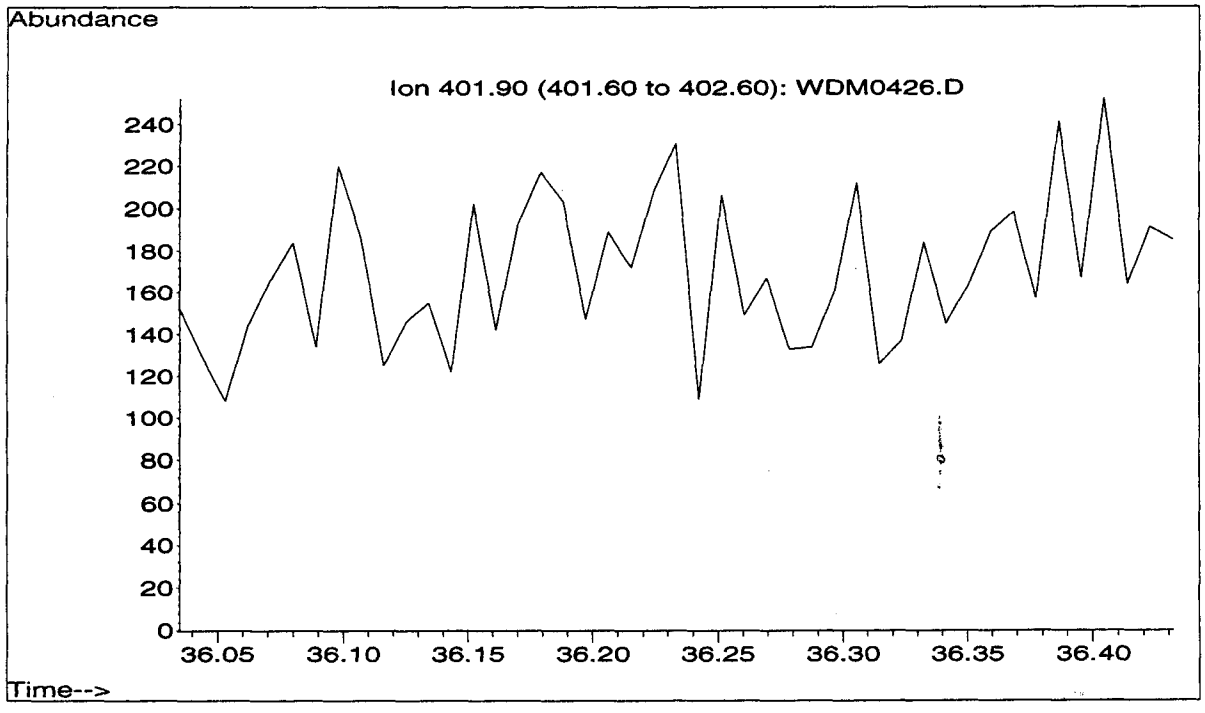
TS R.T. Lower Limit	36.30		
TS R.T. Upper Limit	36.70		
Ret Time	0.00		
Target Ion	401.9	Q1 Ion	403.9
Target Response	0	Q1 Response	0
Target Response	0	Ion Ratio	#DIV/0!

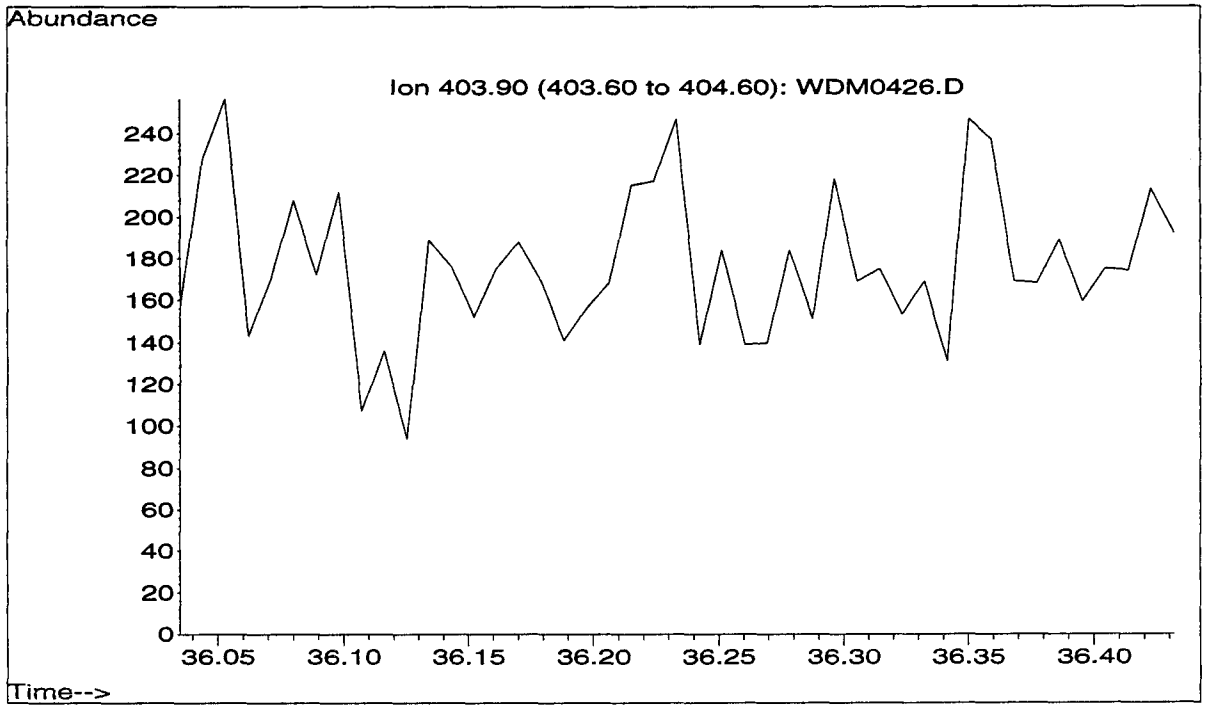




13C-123678-HxCDD-IS

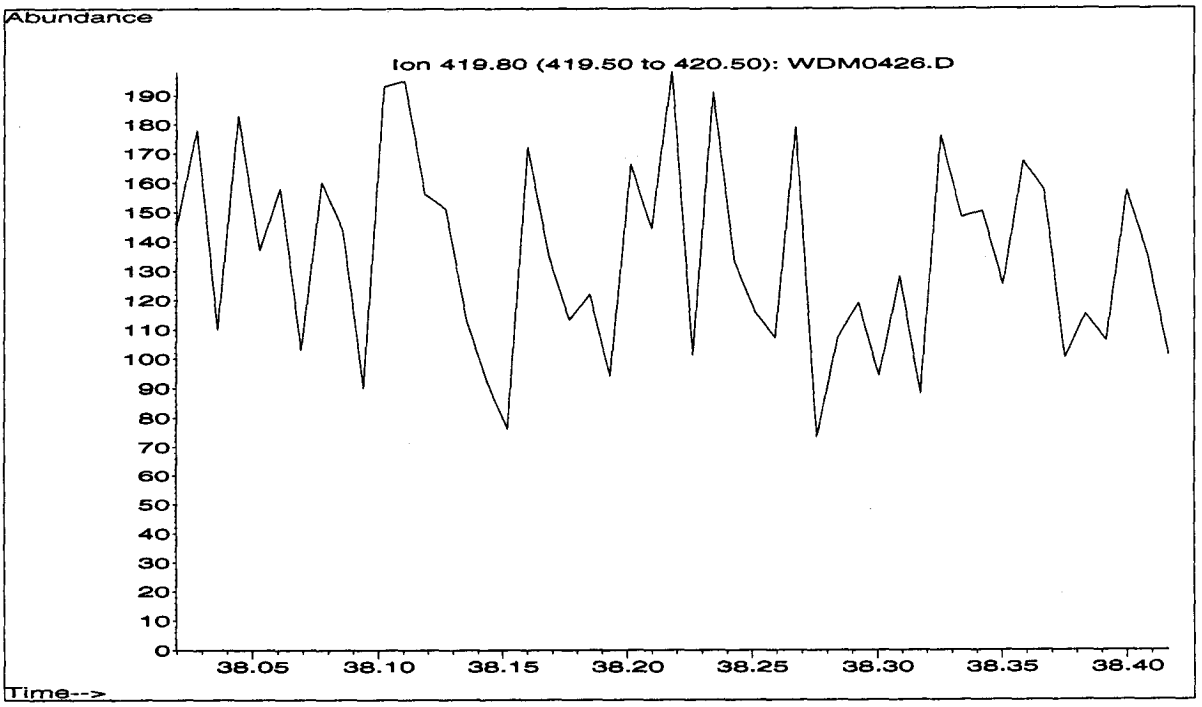
TS R.T. Lower Limit	36.02		
TS R.T. Upper Limit	36.42		
Ret Time	0.00		
Target Ion	401.9	Q1 Ion	403.9
Target Response	0	Q1 Response	0
Total Response	0	Ion Ratio	#DIV/0!

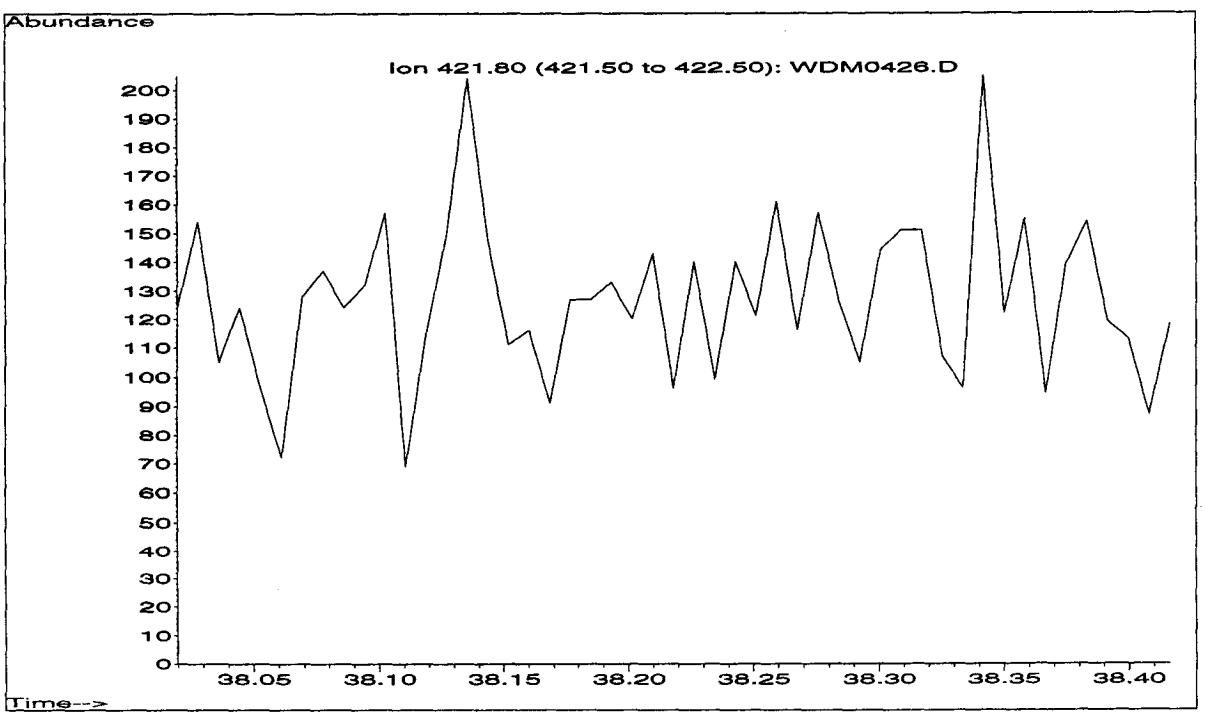




13C-1234678-HpCDF-IS

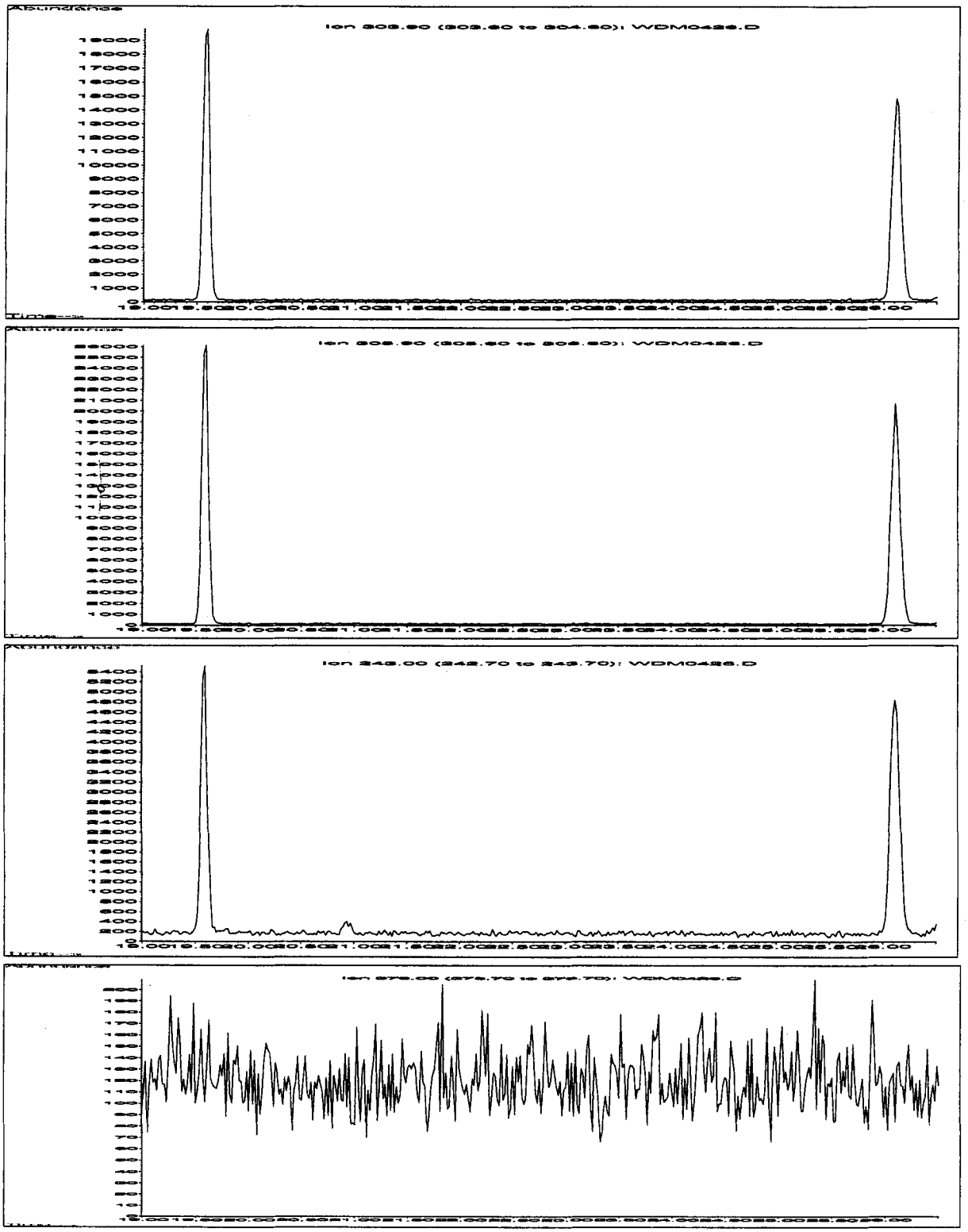
TS R.T. Lower Limit	38.01		
TS R.T. Upper Limit	38.41		
Ret Time	0.00		
Target Ion	419.8	Q1 Ion	421.8
Target Response	0	Q1 Response	0
Target Response	0	Ion Ratio	#DIV/0!





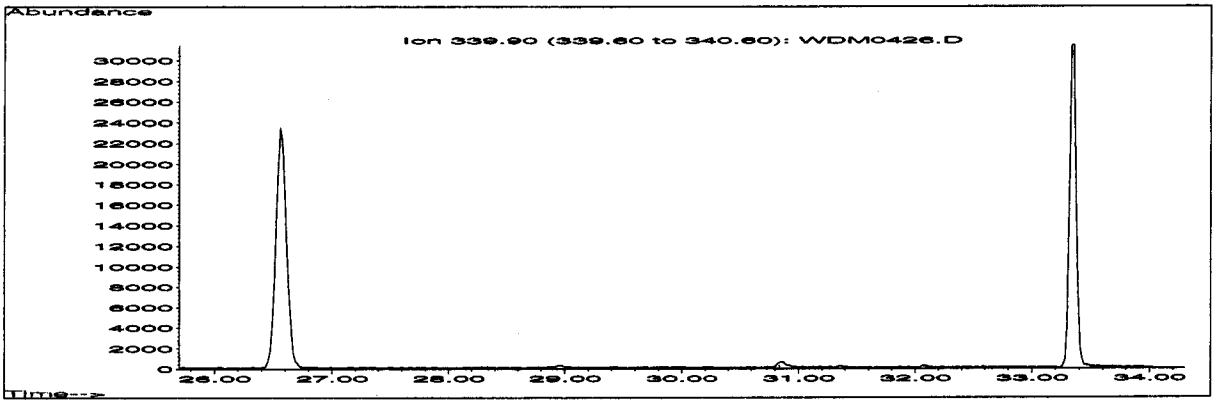
TCDF TOTAL

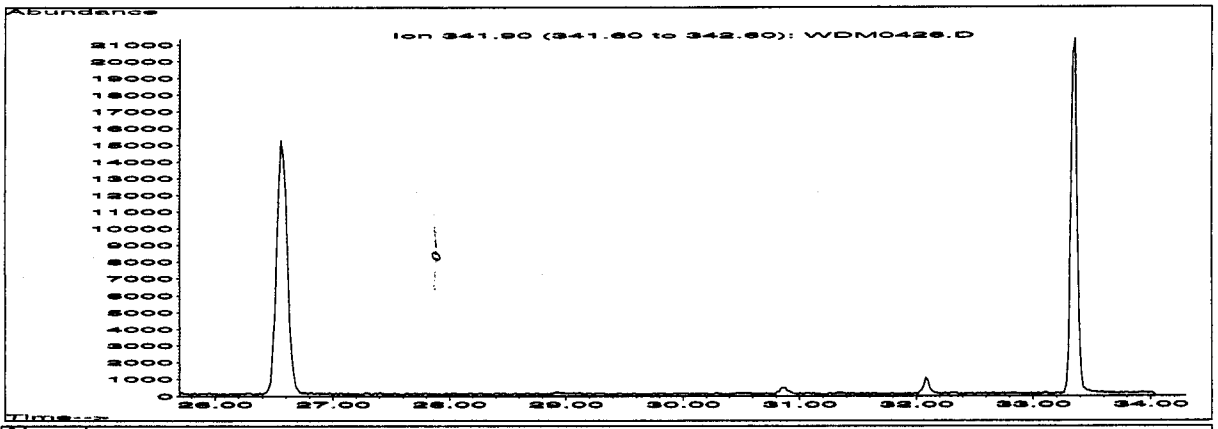
TS R.T. Lower Limit	19.00
TS R.T. Upper Limit	26.50

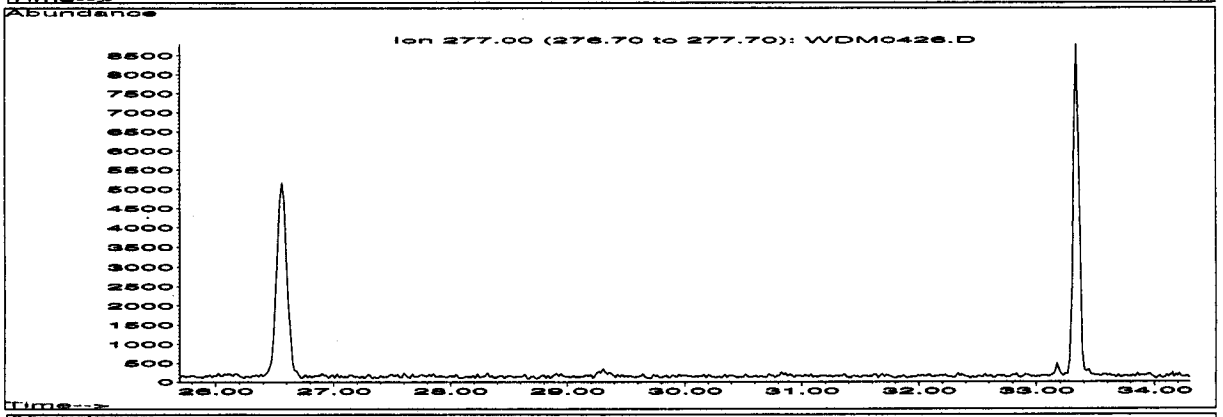


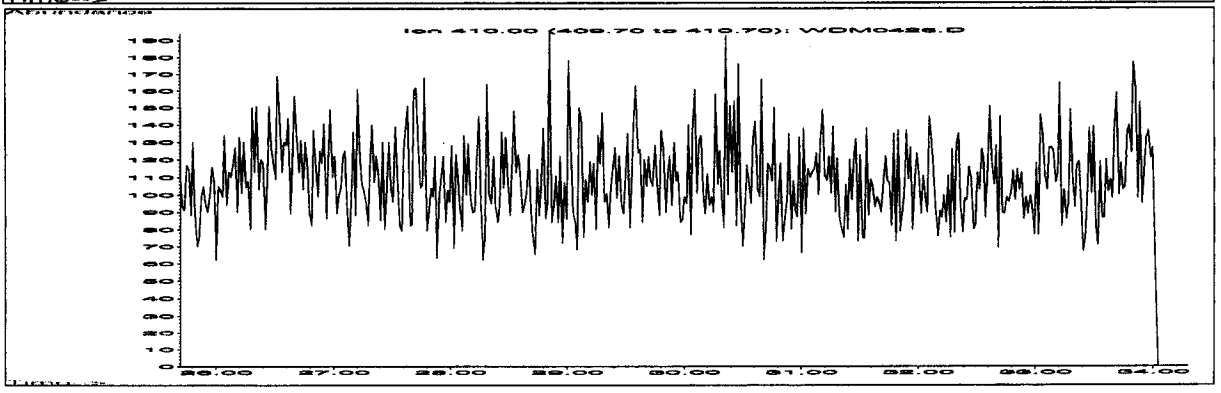
PeCDF TOTAL

TS R.T. Lower Limit	25.70
TS R.T. Upper Limit	34.30



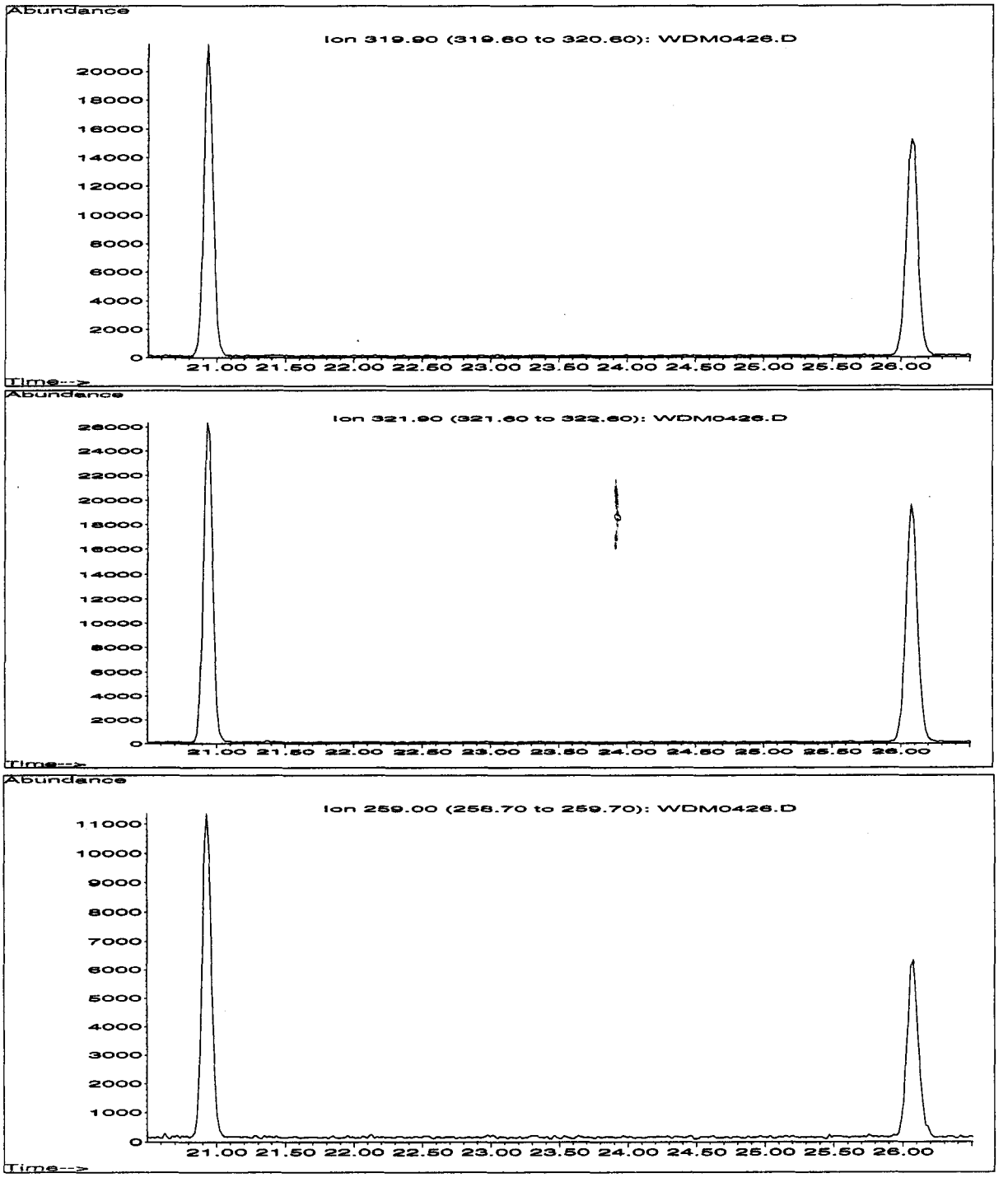






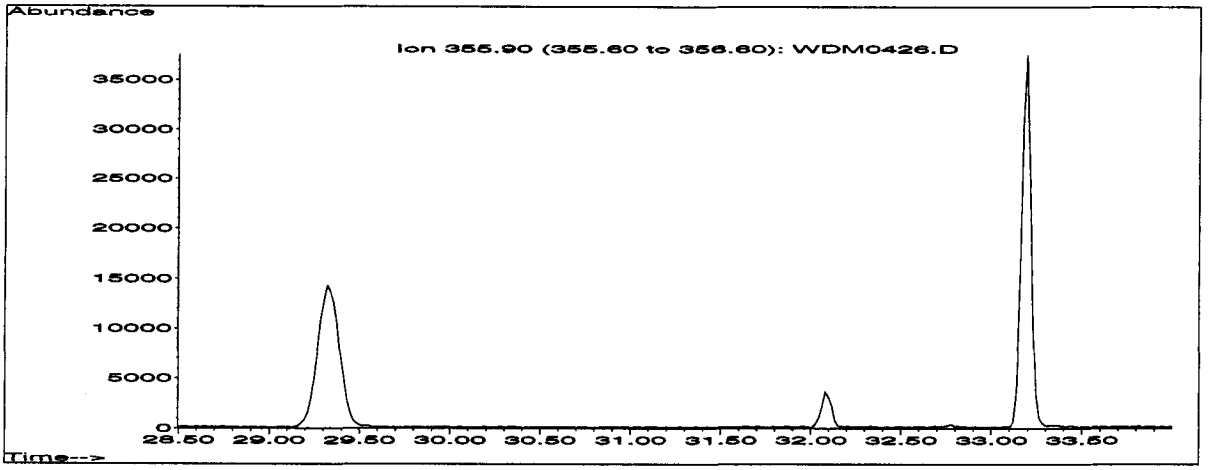
TCDD TOTAL

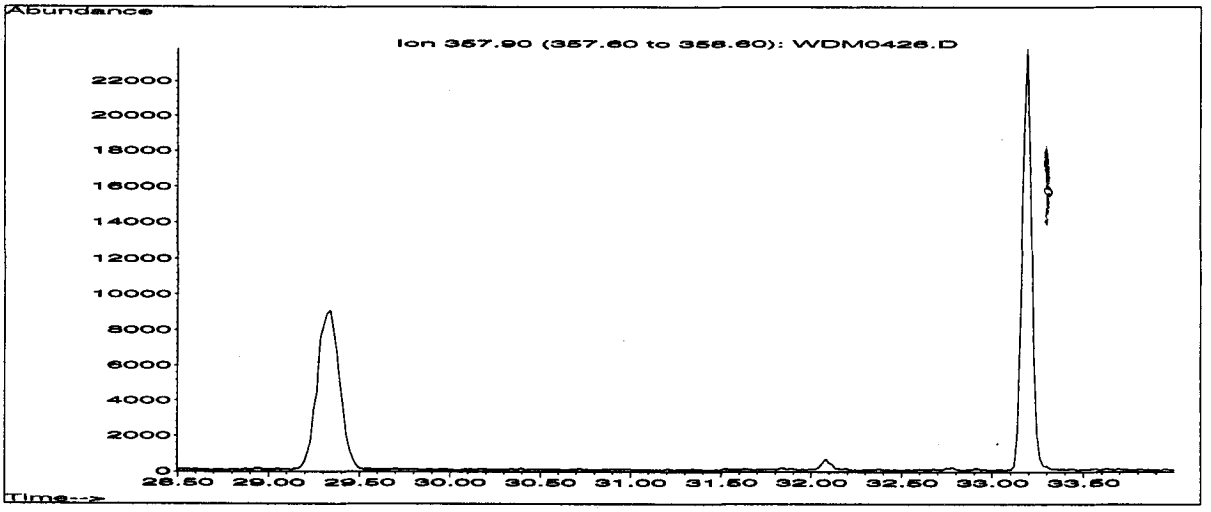
TS R.T. Lower Limit	20.50
TS R.T. Upper Limit	26.50

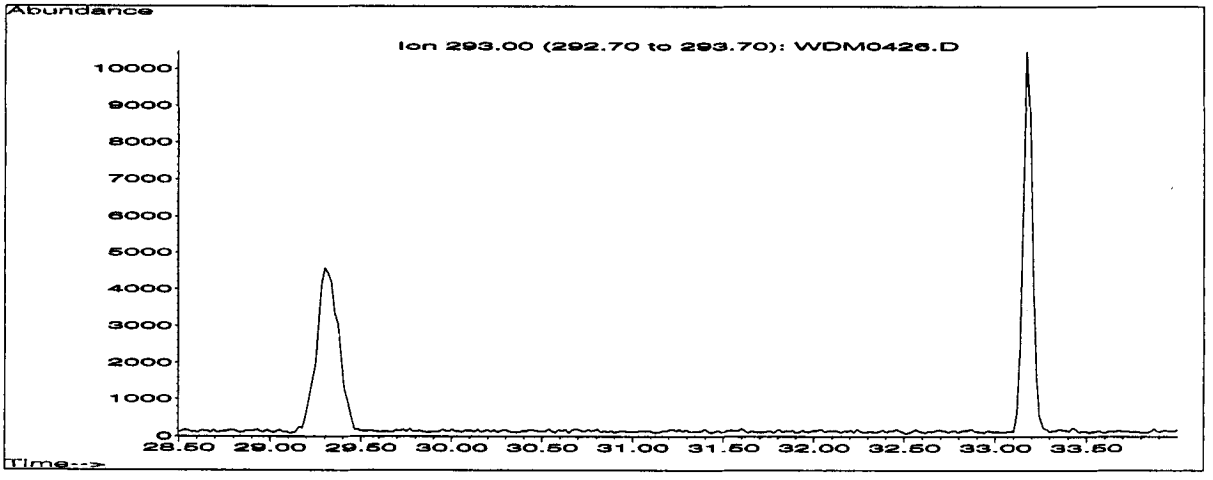


PeCDD TOTAL

TS R.T. Lower Limit	28.50
TS R.T. Upper Limit	34.00

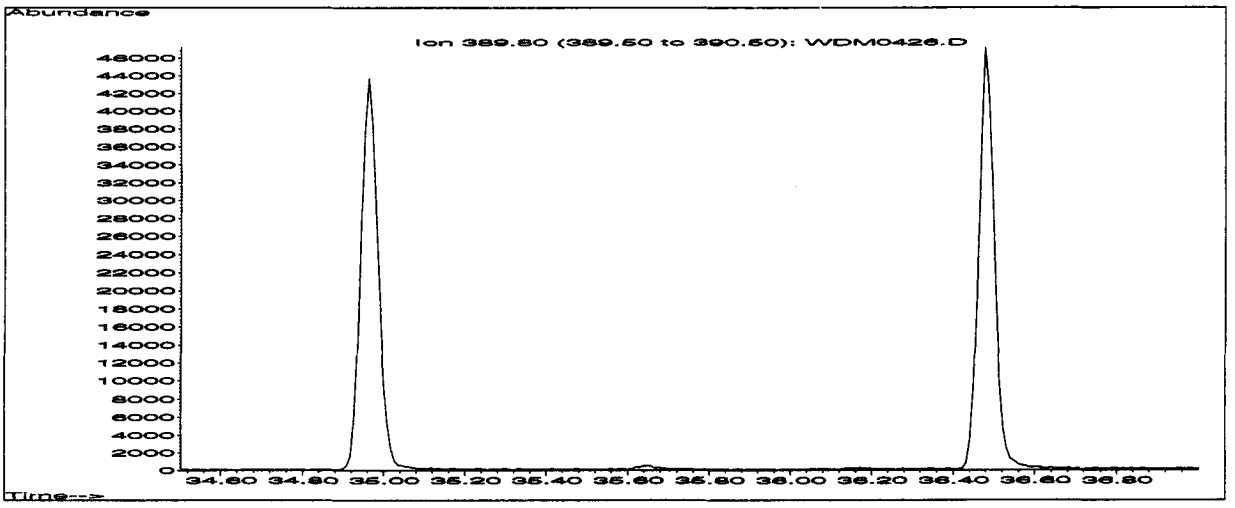


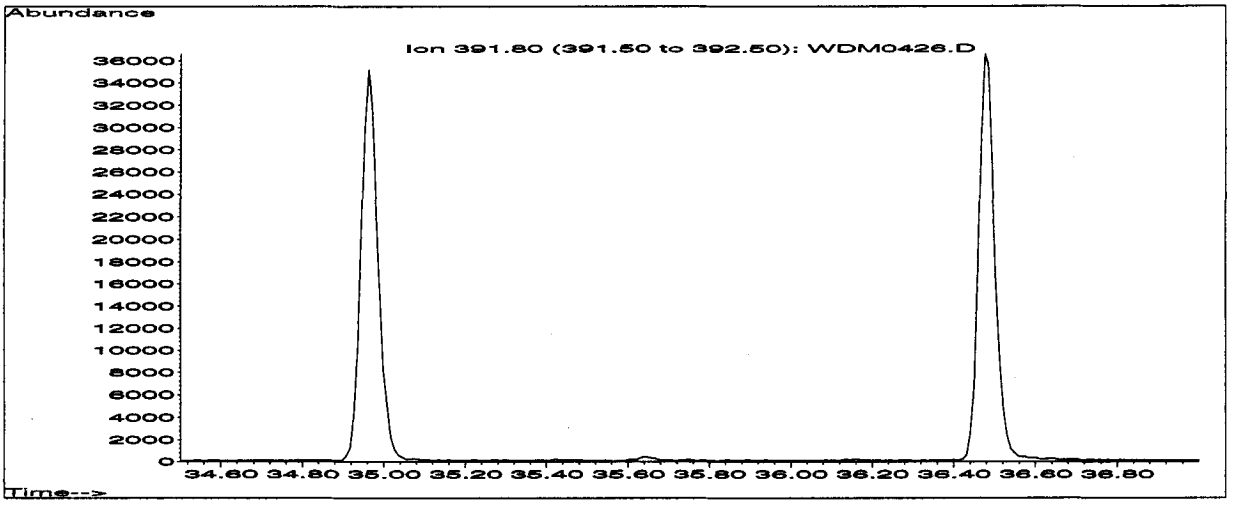


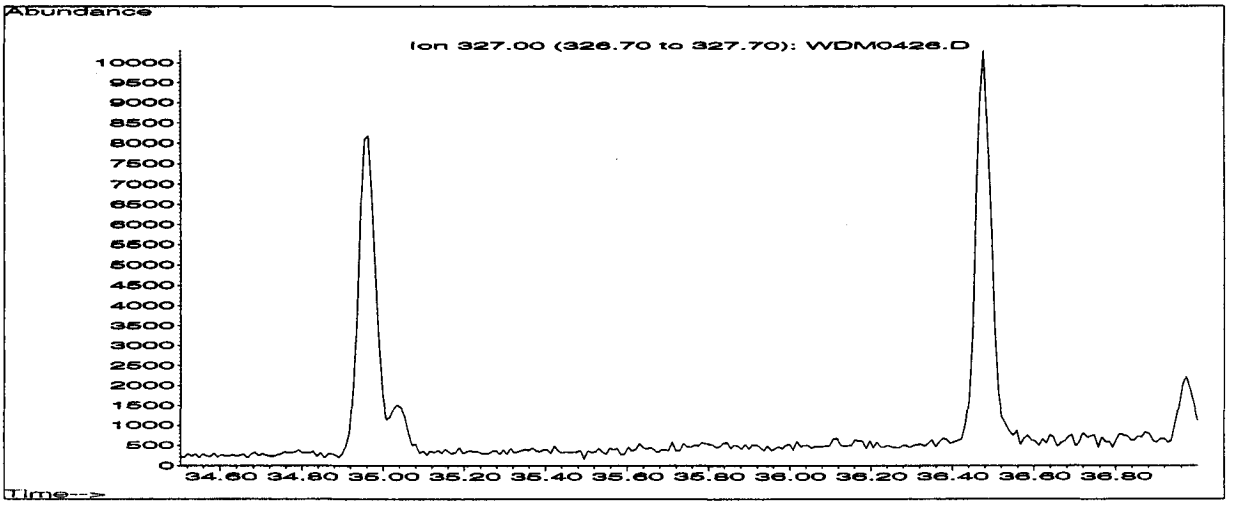


HxCDD TOTAL

TS R.T. Lower Limit	34.50
TS R.T. Upper Limit	37.00

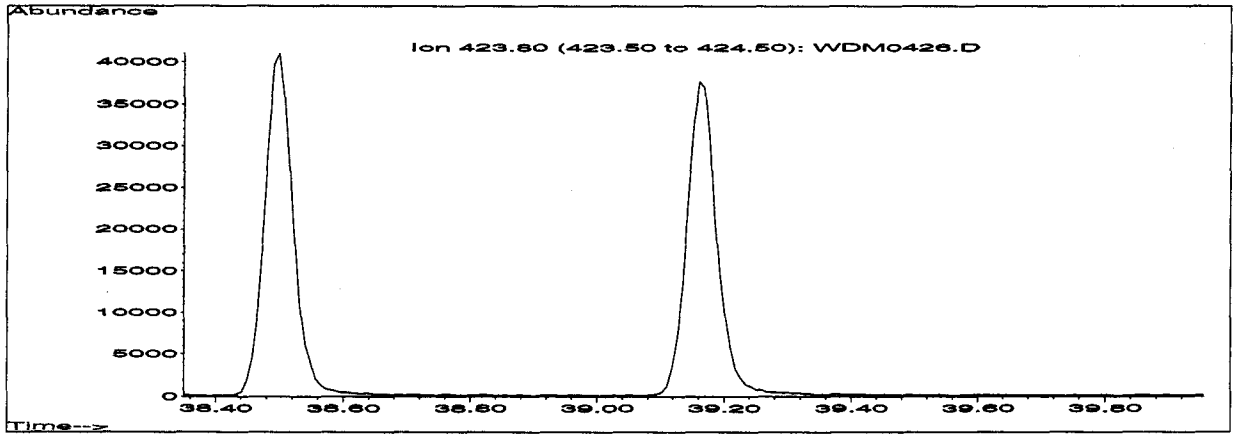


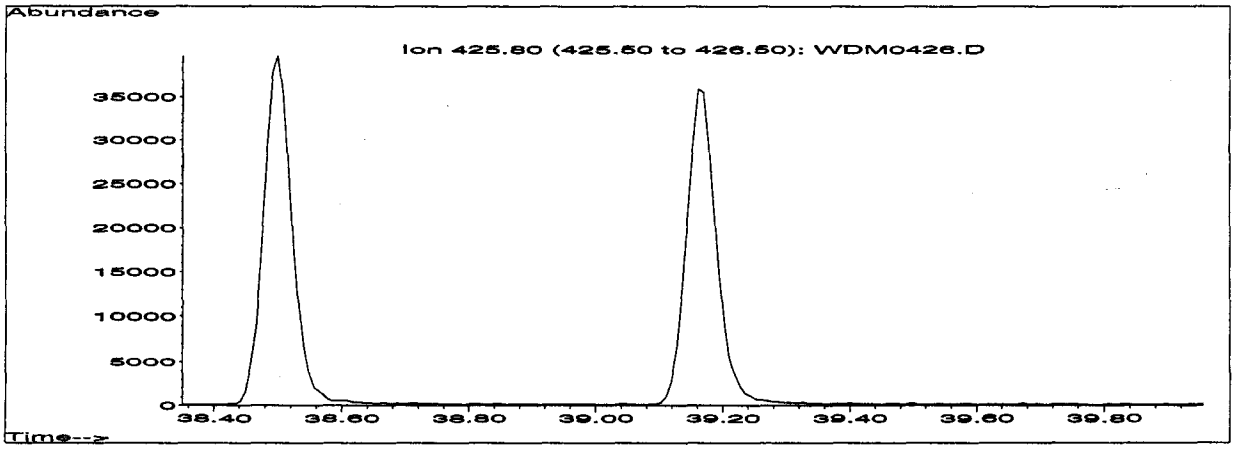


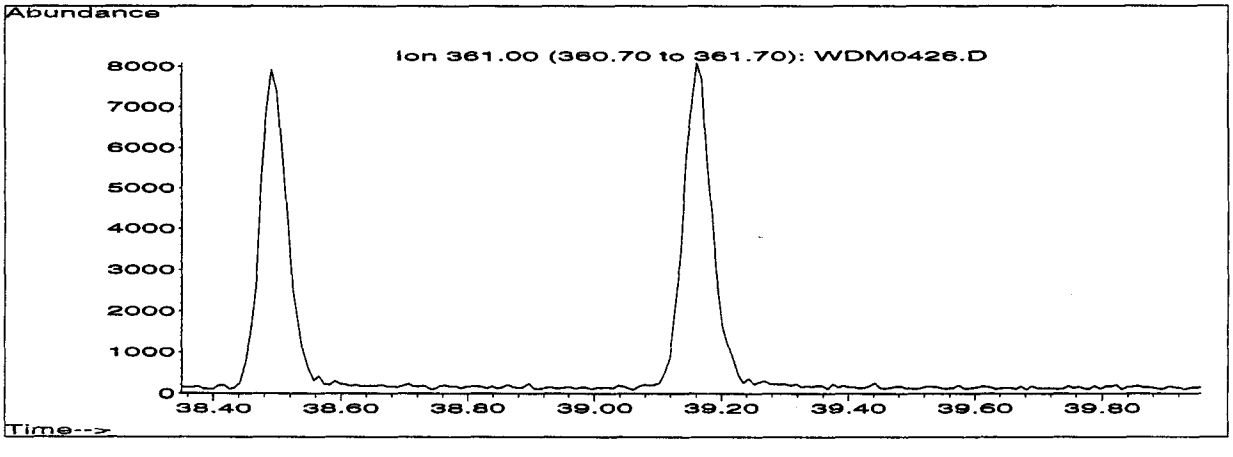


HpCDD TOTAL

TS R.T. Lower Limit	38.35
TS R.T. Upper Limit	39.95

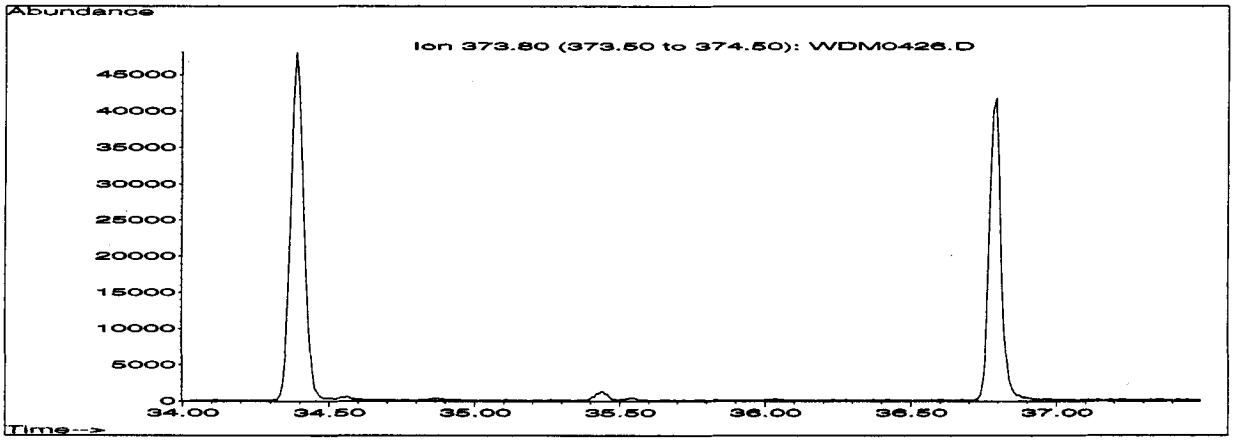


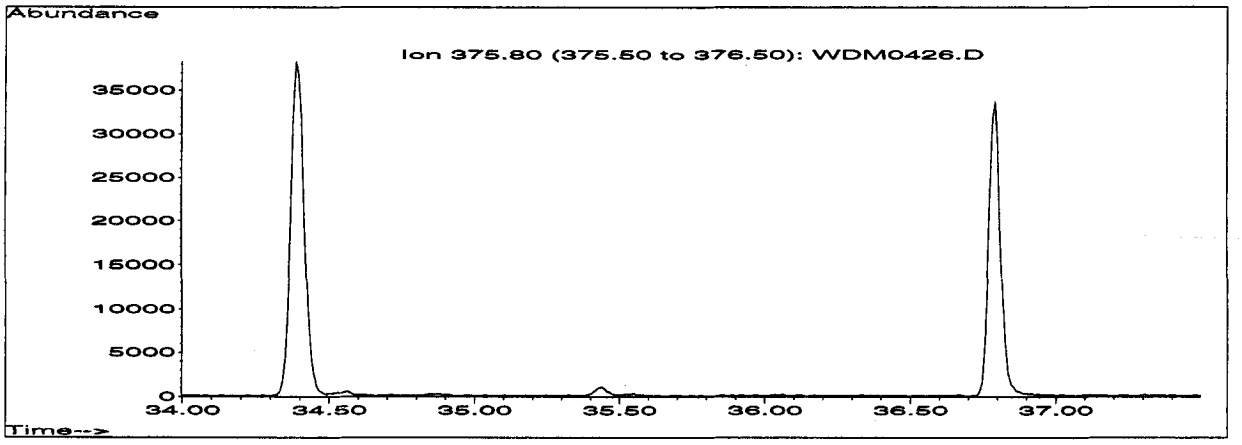


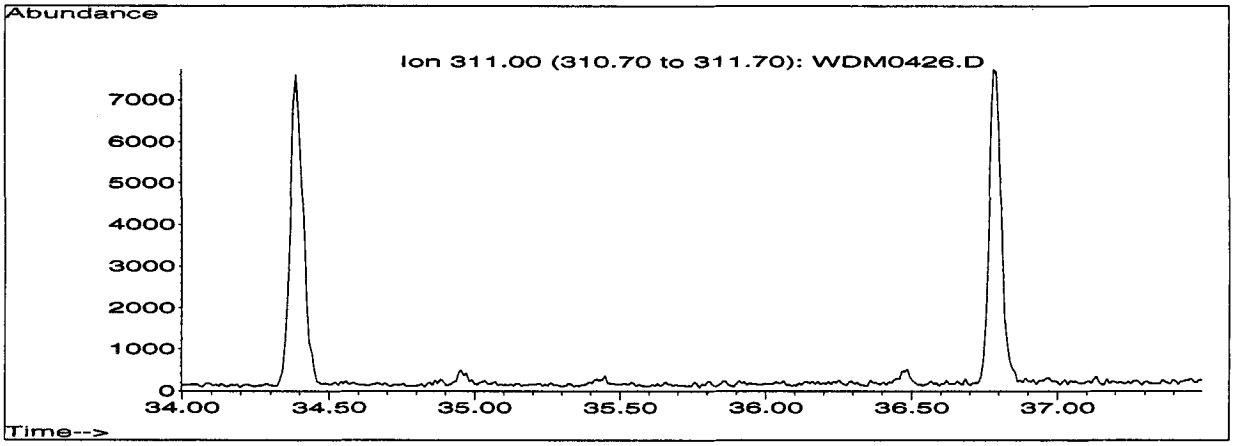


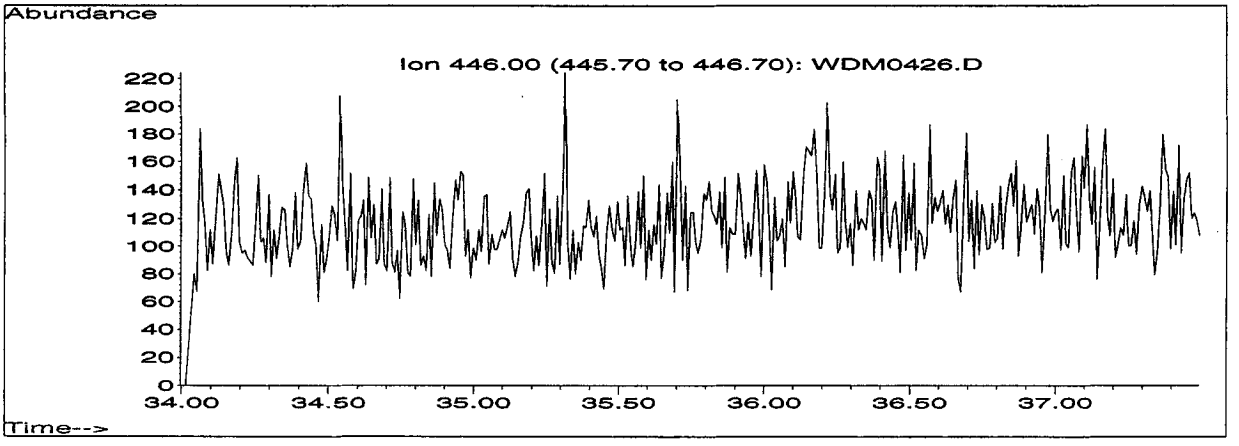
HxCDF TOTAL

TS R.T. Lower Limit	34.00
TS R.T. Upper Limit	37.50



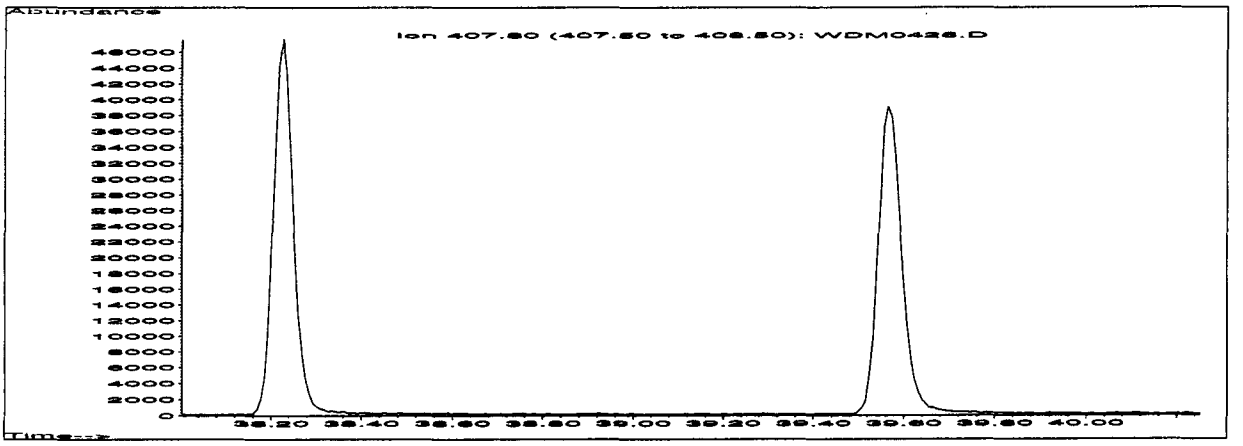


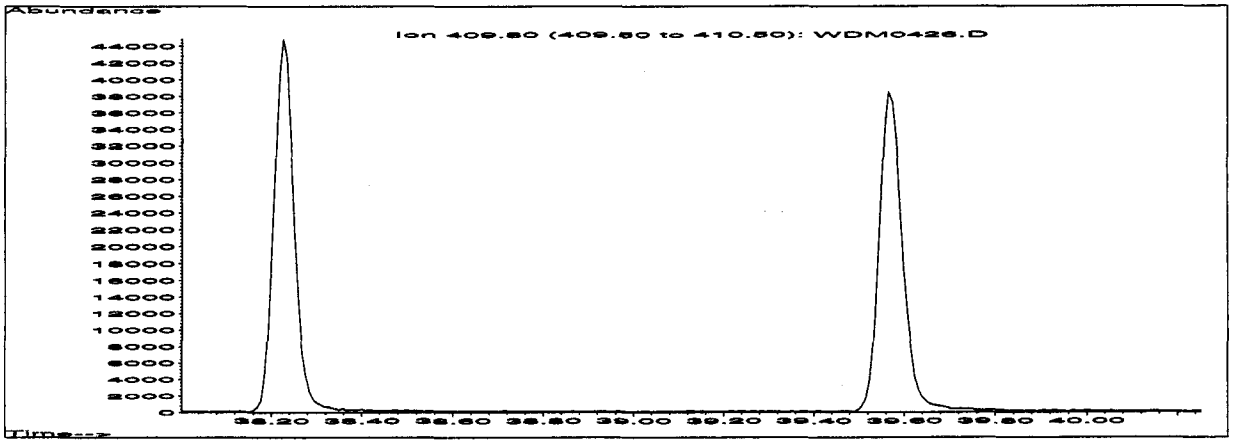


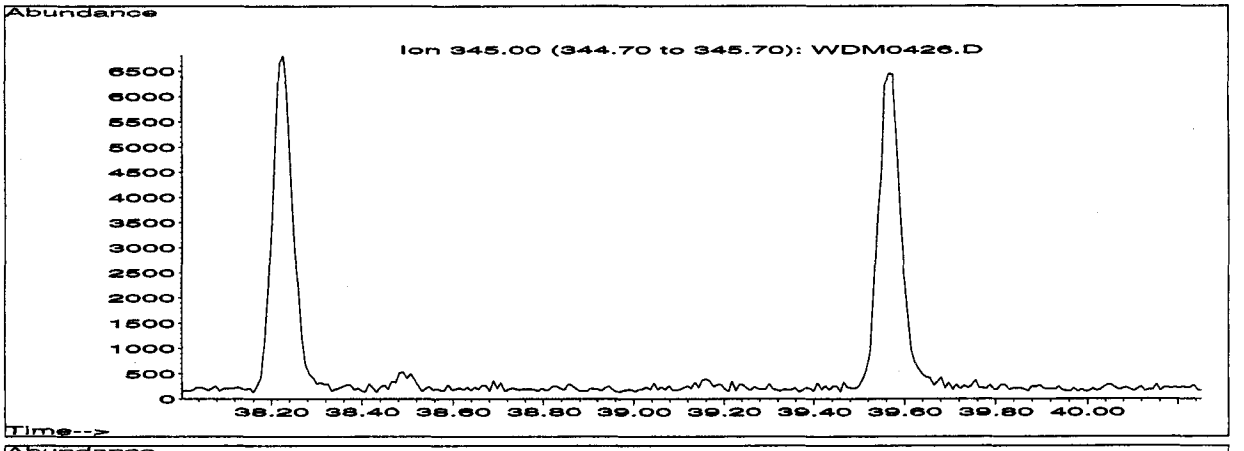


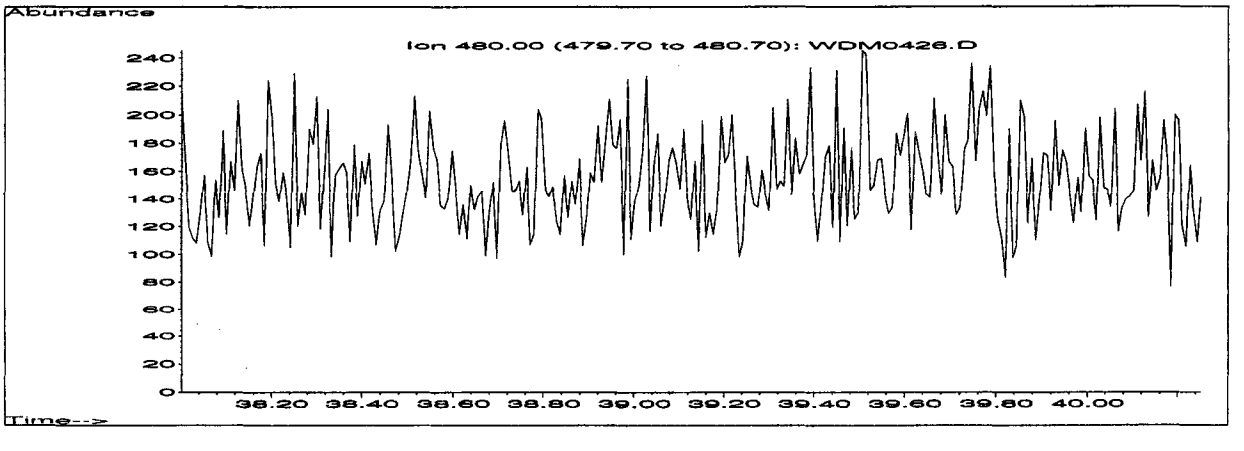
HpCDF TOTAL

TS R.T. Lower Limit	38.00
TS R.T. Upper Limit	40.25

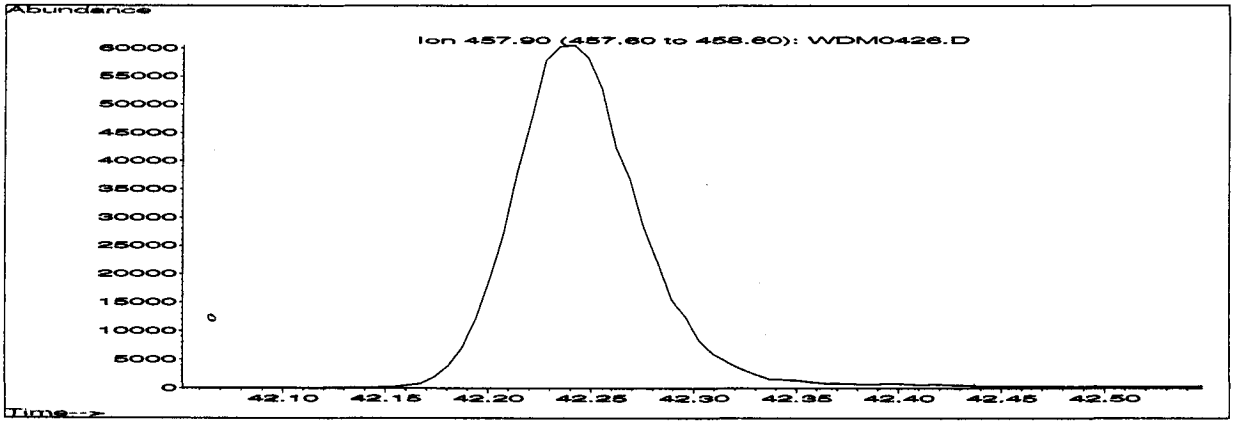


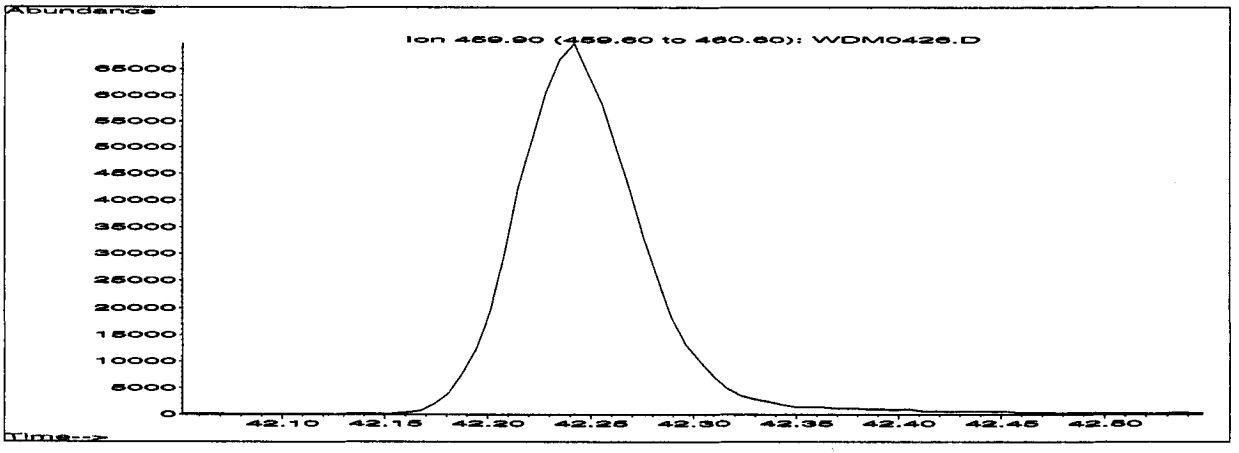


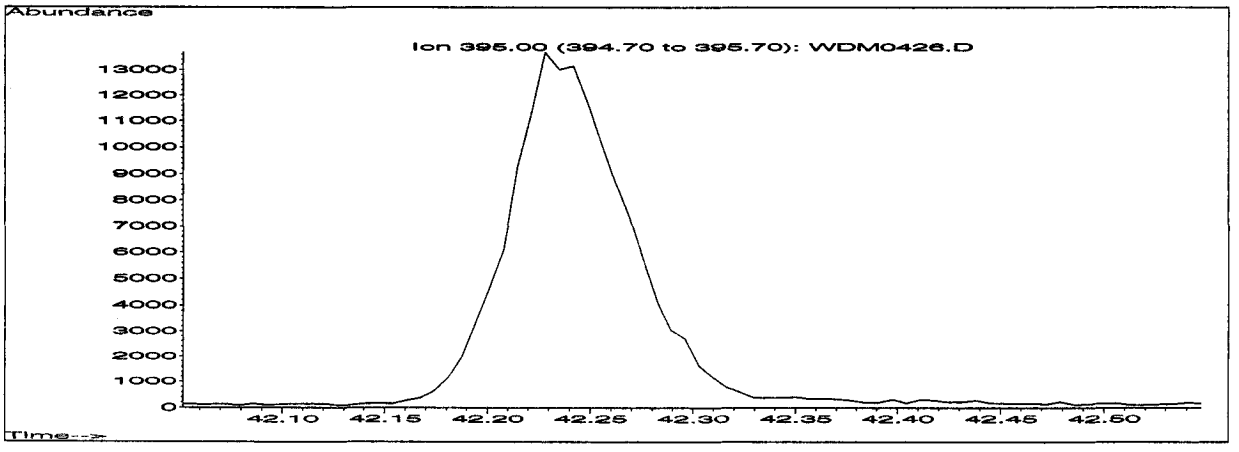




OCDD			
TS R.T. Lower Limit	42.03		
TS R.T. Upper Limit	42.53		
Ret. Time	42.24		
Target Ion	457.9	Q1 Ion	459.9
Target Response	257740	Q1 Response	288331
Total Response	546071	Ion ratio	0.89
Q2 Ion	395		
Q2 Response	55542		

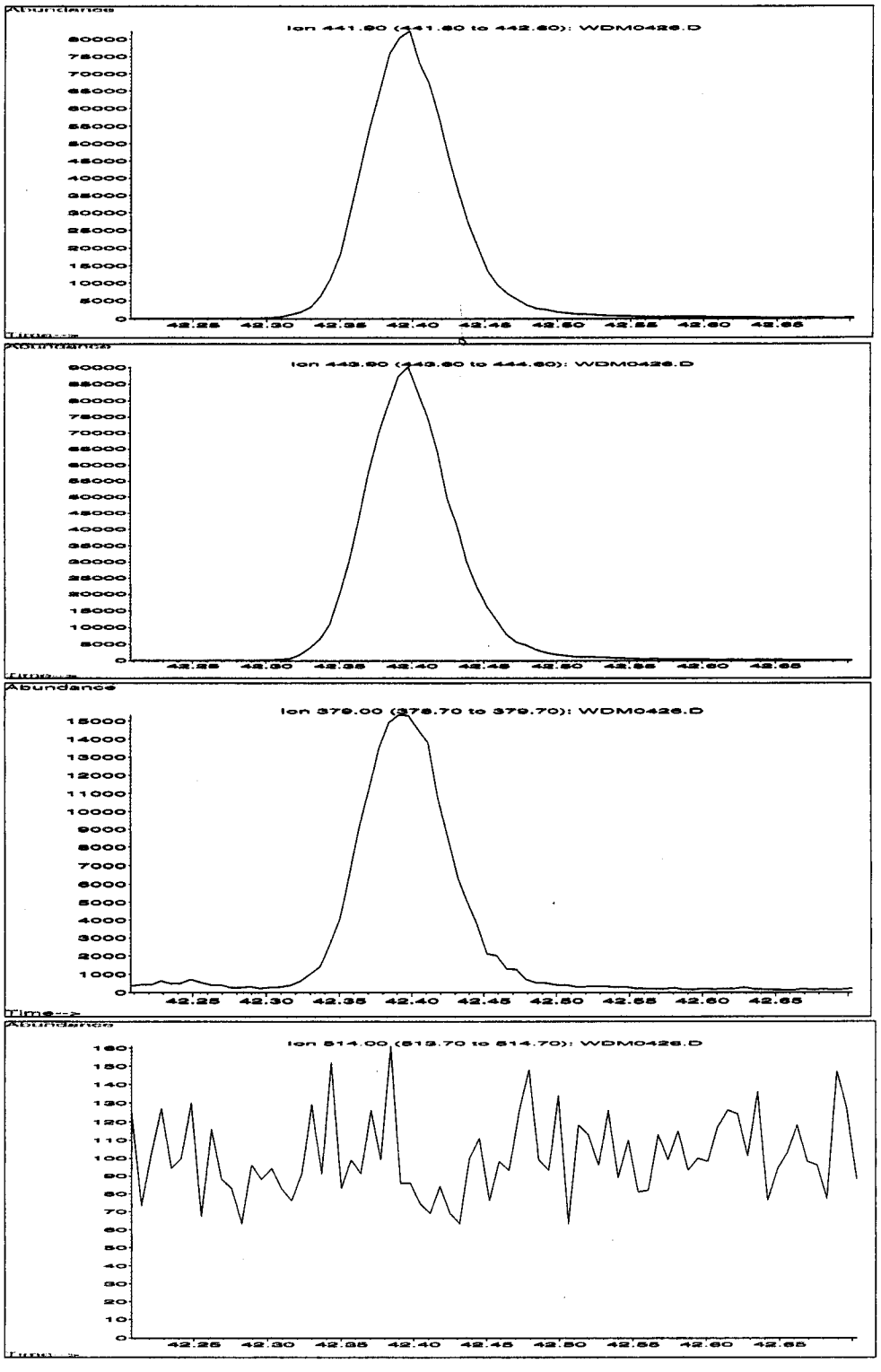






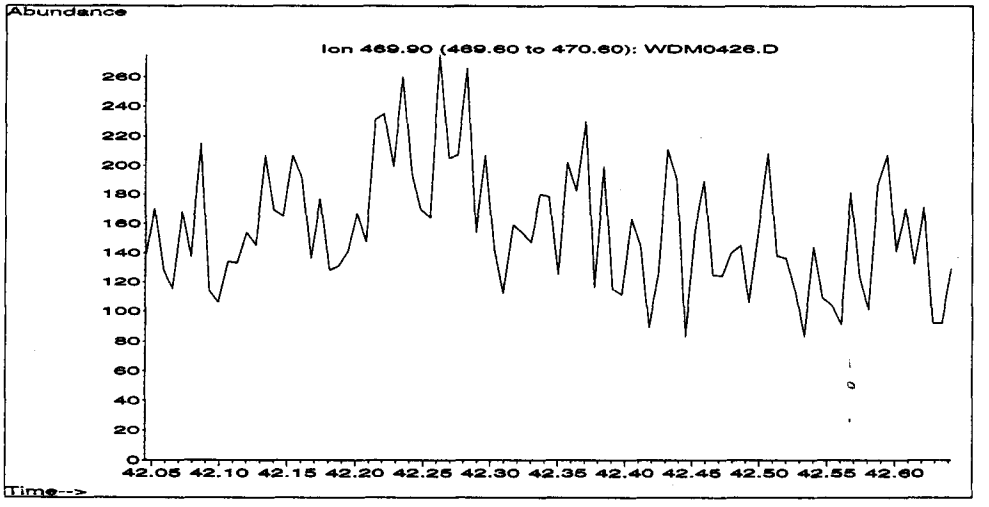
OCDF

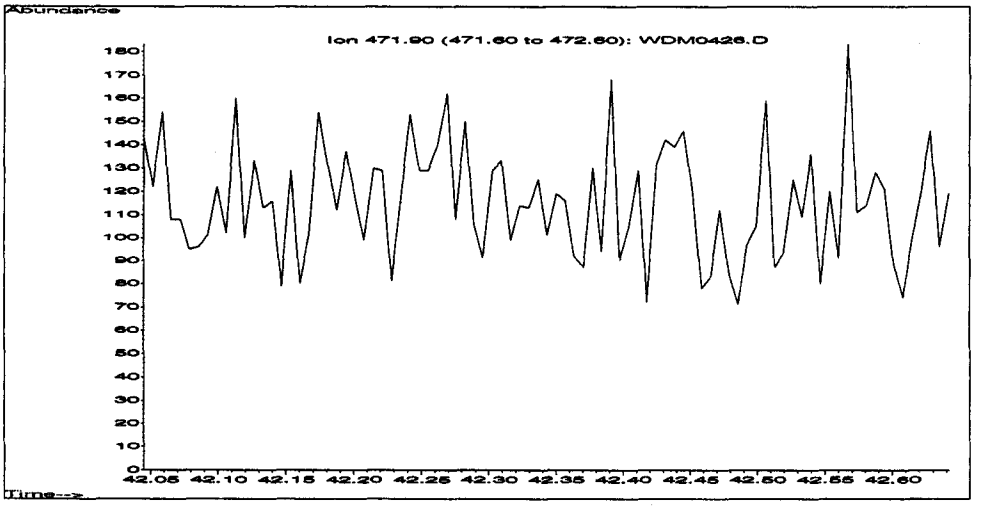
TS R.T. Lower Limit	42.18		
TS R.T. Upper Limit	42.68		
Ret Time	42.40		
Target Ion	441.9	Q1 Ion	443.9
Target Response	345152	Q1 Response	376535
Target Response	721687	Ion Ratio	0.92
Q2 Ion	379	DPE Ion	514
Q2 Response	65786	DPE Response	0



13C-OCDD-IS

RT Lower Limit	42.03		
RT Upper Limit	42.63		
Ret Time	0.00		
Target Ion	469.9	Q1 Ion	471.9
Target Response	0	Q1 Response	0
Total response	0	Ratio	#DIV/0!





Method : C:\8280\ DATA METHODS\10AP26I2.M (RTE Integrator)
Title : Dioxin Furan Total
Last Update : Tue Apr 27 15:20:45 2010
Response via : Initial Calibration

Continuing Calibration File: ST0426F.D

Maximum allowable RRF Deviation (8280A) : 30%

		Compound	AvgRF	CCRF	%Dev
1	IR	13C-1234-TCDD	1.000	1.000	0.0
2	T	13C-2378-TCDF-IS	1.338	1.315	1.7
3	T	13C-2378-TCDD-IS	0.947	0.960	-1.4
4	S	37Cl-2378-TCDD	1.312	1.413	-7.7
5	IR	13C-123789-HxCDD	1.000	1.000	0.0
6	T	13C-123678-HxCDD-IS	0.778	0.757	2.7
7	T	13C-1234678-HpCDF-IS	0.987	0.973	1.4
8	T	13C-OCDD-IS	0.659	0.639	3.0
9	IR	13C-2378-TCDF	1.000	1.000	0.0
10	MT	2378-TCDF	1.272	1.242	2.4
11	H	TCDF TOTAL	1.272	1.242	2.4
12	MT	12378-PeCDF	1.194	1.185	0.7
13	T	23478-PeCDF	1.175	1.175	-0.0
14	H	PeCDF TOTAL	1.175	1.175	-0.0
15	IR	13C-2378-TCDD	1.000	1.000	0.0
16	MT	2378-TCDD	1.254	1.167	6.9
17	H	TCDD TOTAL	1.254	1.167	6.9
18	MT	12378-PeCDD	1.160	1.118	3.6
19	H	PeCDD TOTAL	1.160	1.118	3.6
20	IR	13C-123678-HxCDD	1.000	1.000	0.0
21	T	123478-HxCDD	1.020	0.950	6.9
22	MT	123678-HxCDD	1.004	0.989	1.5
23	T	123789-HxCDD	1.068	1.053	1.5
24	H	HxCDD TOTAL	1.004	0.950	5.4
25	MT	1234678-HpCDD	1.084	1.067	1.6
26	H	HpCDD TOTAL	1.084	1.067	1.6
27	IR	13C-1234678-HpCDF	1.000	1.000	0.0
28	T	123478-HxCDF	1.002	0.992	1.0
29	MT	123678-HxCDF	1.039	1.010	2.8
30	T	234678-HxCDF	0.991	1.001	-1.0
31	T	123789-HxCDF	0.950	0.934	1.7
32	H	HxCDF TOTAL	0.950	0.934	1.7
33	MT	1234678-HpCDF	1.183	1.129	4.5
34	T	1234789-HpCDF	1.063	1.039	2.3
35	H	HpCDF TOTAL	1.063	1.039	2.3
36	IR	13C-OCDD	1.000	1.000	0.0
37	MT	OCDD	1.114	1.081	2.9
38	MT	OCDF	1.418	1.402	1.1

(#) = Out of Range

Quantitation Report (Not Reviewed)

Sample ID: ICV 10LRES007 Size: 0.000
10LRES007 ICV Inst : DB1

Data File:C:\8280\2DB\042610.B\ST0426F.D Vial: 95
Acq On :26 Apr 2010 19:56 Operator: MEO
Sample Amount: 0.00

MS Integration Params: RTEINT.P
Quant Time: Apr 27 15:19 2010 Quant Results File: 10AP26I2.RES

Quant Method : C:\8280\ DATA METHODS\10AP26I2.M (RTE Integrator)
Title : Dioxin Furan Total
Last Update : Tue Apr 27 15:18:58 2010
Response via : Initial Calibration
DataAcq Meth : TOKAS
IS QA File : 50 level for IS QA unknown. No recoveries calculated.

Recovery\Internal Stds	R.T.	QIon	Ratio	Response	Conc		Dev(Min)
1) 13C-1234-TCDD	24.05	332+334	0.83	263491	25.00	NG	0.00
5) 13C-123789-HxCDD	36.50	402+404	1.27	405406	25.00	NG	0.00
9) 13C-2378-TCDF	23.24	316+318	0.81	346554	25.00	NG	0.00
15) 13C-2378-TCDD	24.33	332+334	0.79	253043	25.00	NG	0.00
20) 13C-123678-HxCDD	36.22	402+404	1.27	306787	25.00	NG	0.00
27) 13C-1234678-HpCDF	38.21	420+422	1.07	394495	25.00	NG	0.00
36) 13C-OCDD	42.24	470+472	0.92	517934	50.00	NG	0.00

Surrogate Compound

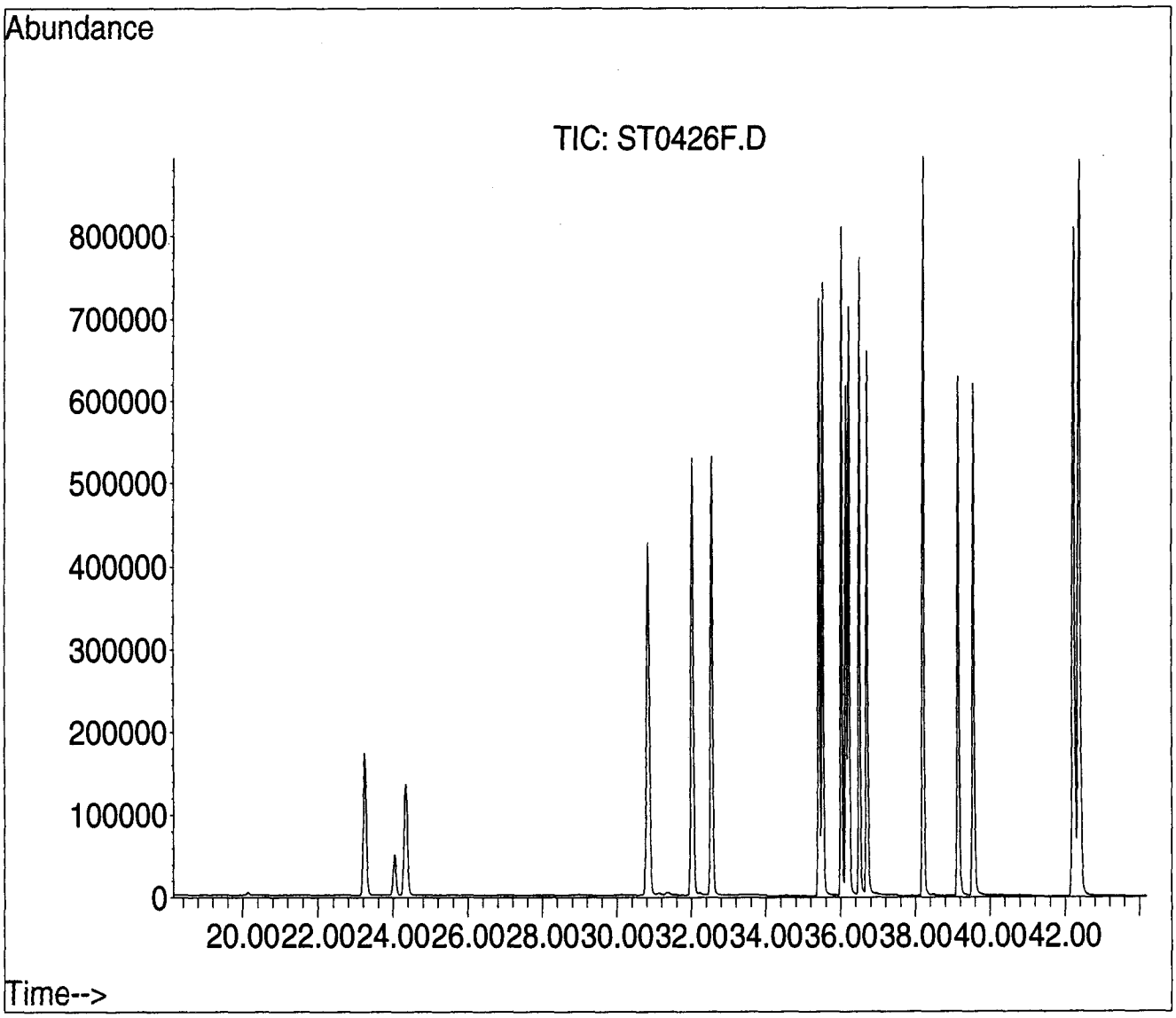
4) 37Cl-2378-TCDD	24.35	328		186112	13.462	NG	0.00
Spiked Amount = 12.500	RRF = 1.312			Recovery = 107.68%			

Target Compounds	RT	Ratio		Area	RRF	Conc	EDL	%Rec
2) 13C-2378-TCDF-IS	23.24	0.81		346554	1.338	24.577	0.0841	98.3
3) 13C-2378-TCDD-IS	24.33	0.79		253043	0.947	25.355	1.6592	101.4
6) 13C-123678-HxCDD-	36.22	1.27		306787	0.778	24.329	0.0714	97.3
7) 13C-1234678-HpCDF	38.21	1.07		394495	0.987	24.640	0.0419	98.6
8) 13C-OCDD-IS	42.24	0.92		517934	0.659	48.482	0.0556	97.0
10) 2378-TCDF	23.26	0.77		430424	1.272	24.409	0.0759	
1	22.70	0.87		4005		0.227		
2	23.26	0.76		431590		24.476		
3	24.05	1.48	#	2314		0.131		
11) TCDF TOTAL	22.00	1.48		437909	1.272	24.834		
12) 12378-PeCDF	30.84	1.53		2053584	1.194	124.123	0.0376	
13) 23478-PeCDF	32.02	1.51		2036847	1.175	125.027	0.0812	
1	30.84	1.53		2060130		126.456		
2	31.13	1.46		12166		0.747		
3	31.36	1.51		20068		1.232		
4	32.02	1.51		2036847		125.027		
5	32.24	1.38		11617		0.713		
14) PeCDF TOTAL	29.50	1.38		4140828	1.175	254.174		
16) 2378-TCDD	24.35	0.80		295314	1.254	23.269	0.0593	
1	23.24	4.92	#	33544		2.643		
2	24.35	0.79		302212		23.813		
17) TCDD TOTAL	22.50	0.79		335756	1.254	26.456		
18) 12378-PeCDD	32.56	1.57		1414944	1.160	120.547	0.0427	
1	32.56	1.58		1420090		120.986		
19) PeCDD TOTAL	30.00	1.58		1420090	1.160	120.986		
21) 123478-HxCDD	36.15	1.27		1456822	1.020	116.364	1.7473	
22) 123678-HxCDD	36.23	1.25		1516575	1.004	123.099	0.5322	
23) 123789-HxCDD	36.50	1.25		1614819	1.068	123.179	1.3445	
1	36.15	1.27		1456822		116.364		
2	36.23	1.25		1516575		123.099		
3	36.50	1.26		5323259		432.084		

24)	HxCDD TOTAL	36.50	1.26	8296656	1.004	671.547	
25)	1234678-HpCDD	39.15	1.05	1636711	1.084	123.030	0.0901
	1	38.48	0.98	3237		0.243	
	2	39.15	1.05	1636711		123.030	
26)	HpCDD TOTAL	39.35	1.05	1639948	1.084	123.274	
28)	123478-HxCDF	35.42	1.19	1957586	1.002	123.767	5.1078
29)	123678-HxCDF	35.53	1.22	1992274	1.039	121.510	0.5429
30)	234678-HxCDF	36.03	1.19	1974131	0.991	126.251	0.1647
31)	123789-HxCDF	36.71	1.20	1842858	0.950	122.925	0.1346
	1	34.53	1.24	3578		0.239	
	2	35.42	1.19	1957586		123.767	
	3	35.53	1.23	1992274		121.510	
	4	36.03	1.19	1974131		126.251	
	5	36.71	1.21	1847610		123.241	
32)	HxCDF TOTAL	36.00	1.21	7775179	0.950	495.008	
33)	1234678-HpCDF	38.22	1.05	2227745	1.183	119.358	0.1049
34)	1234789-HpCDF	39.56	1.04	2049906	1.063	122.178	0.0753
	1	38.22	1.05	2227745		119.358	
	2	38.58	1.29 #	2480		0.148	
	3	39.56	1.04	2049906		122.178	
35)	HpCDF TOTAL	39.50	1.04	4280131	1.063	241.684	
37)	OCDD	42.24	0.90	2799862	1.114	242.685	0.0648
38)	OCDF	42.39	0.92	3631905	1.418	247.334	0.1161

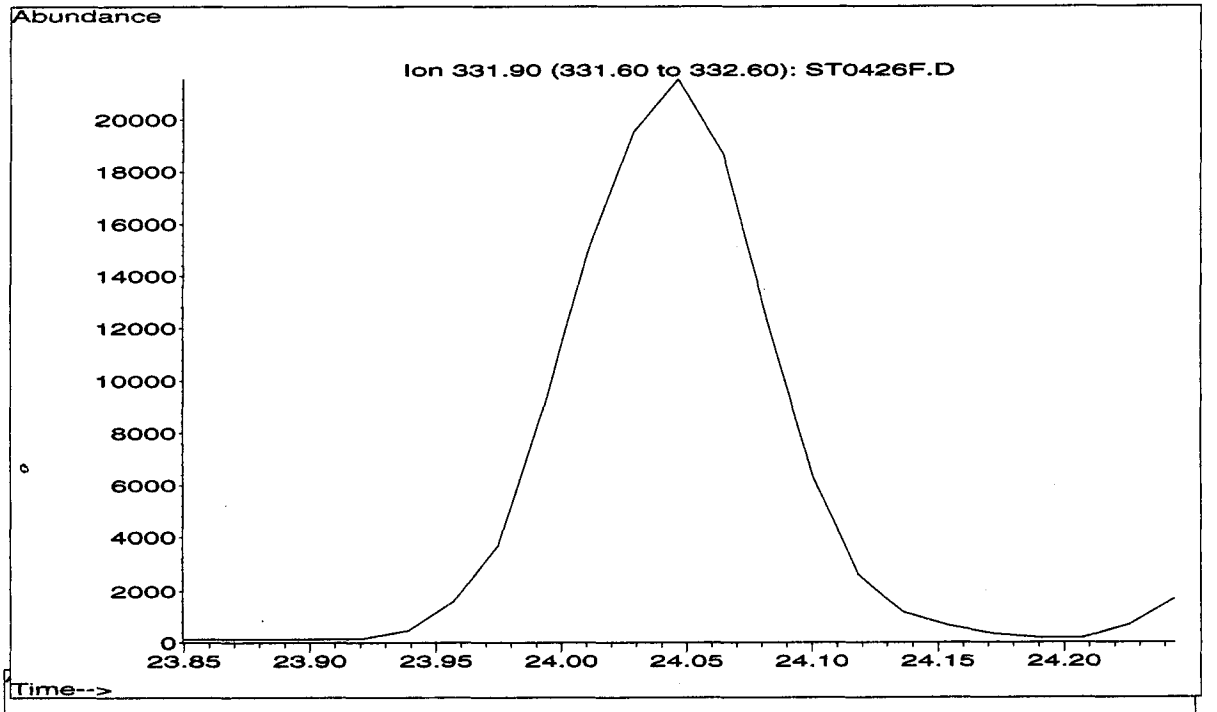
(#) = qualifier out of range•: areas and concentration based on theoretical ion ratio
(m) = manual integration
ST0426F.D 10AP26I2.M Tue Apr 27 15:19:20 2010

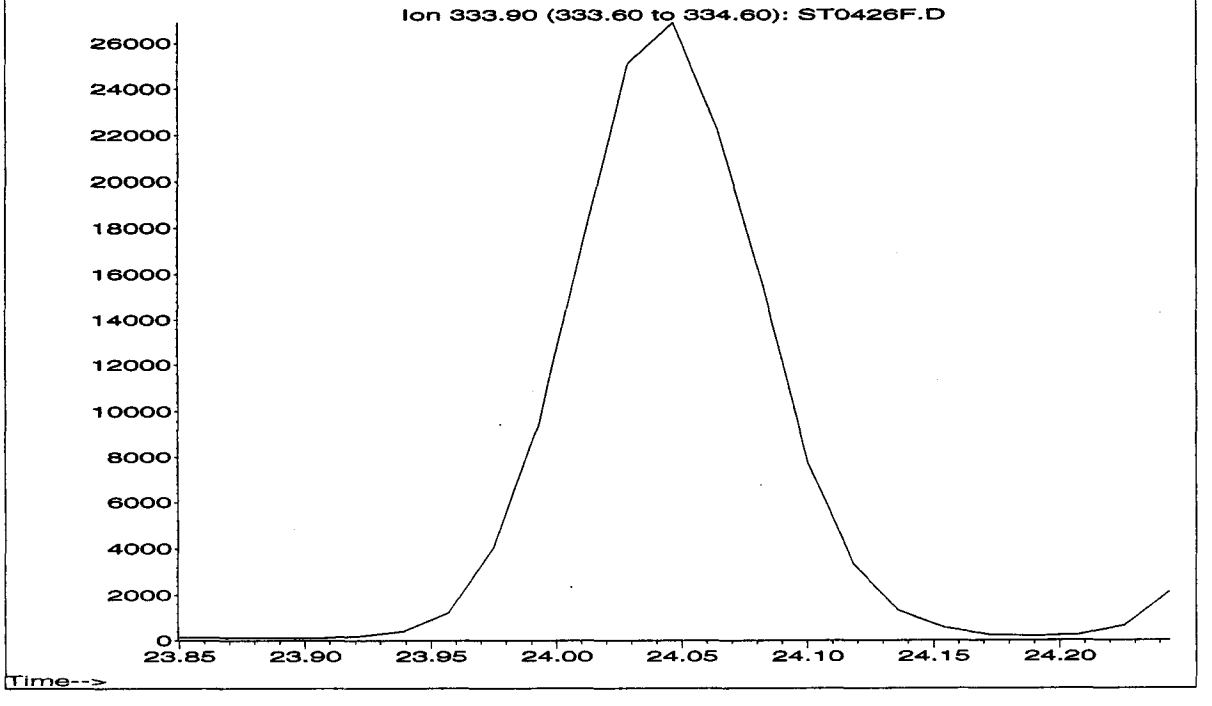
Data File Name	ST0426F.D
Data File Path	C:\8280\2DB\042610.B\
Operator	MEO
Date Acquired	4/26/2010 19:56
Acq. Method File	TOKAS
Sample Name	10LRES007 ICV
Misc Info	ICV 10LRES007
Vial Number	95
Instrument Name	2DB
Sample Multiplier	1
Sample Amount	0



13C-1234-TCDD

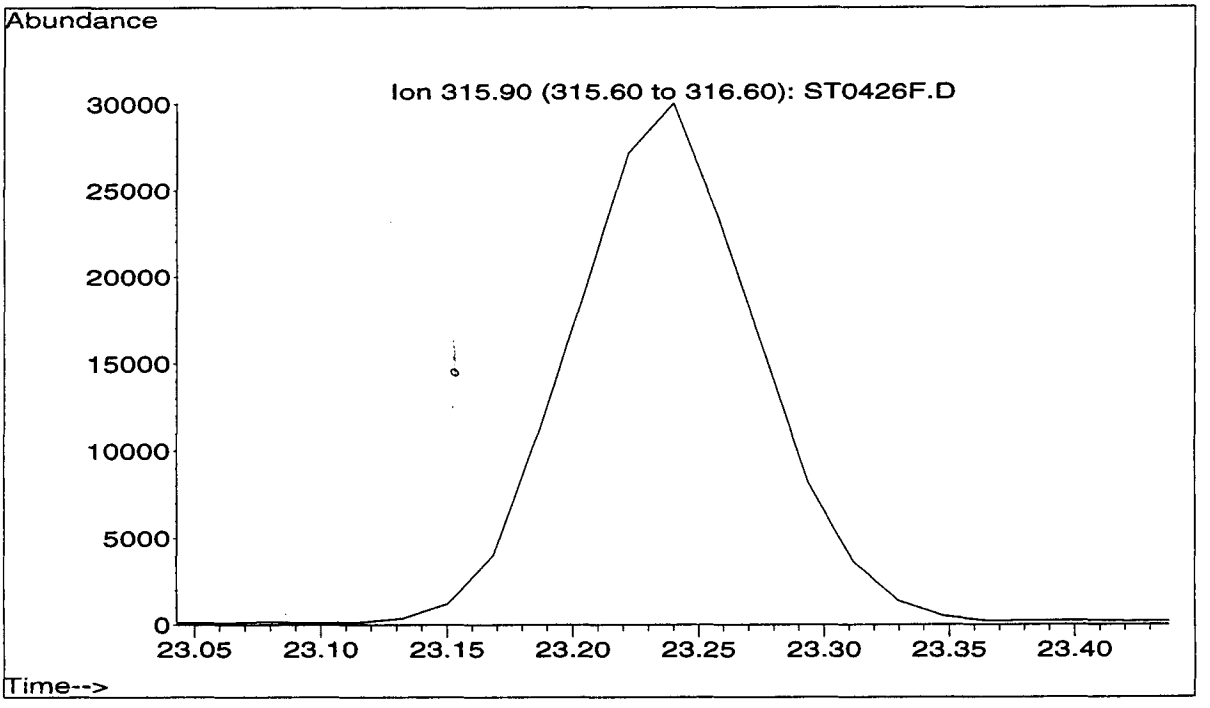
TS R.T. Lower Limit	23.85		
TS R.T. Upper Limit	24.25		
Ret Time	24.05		
Target Ion	331.9	Q1 Ion	333.9
Target Response	119256	Q1 Response	144235
Total Response	263491	Ion Ratio	0.83

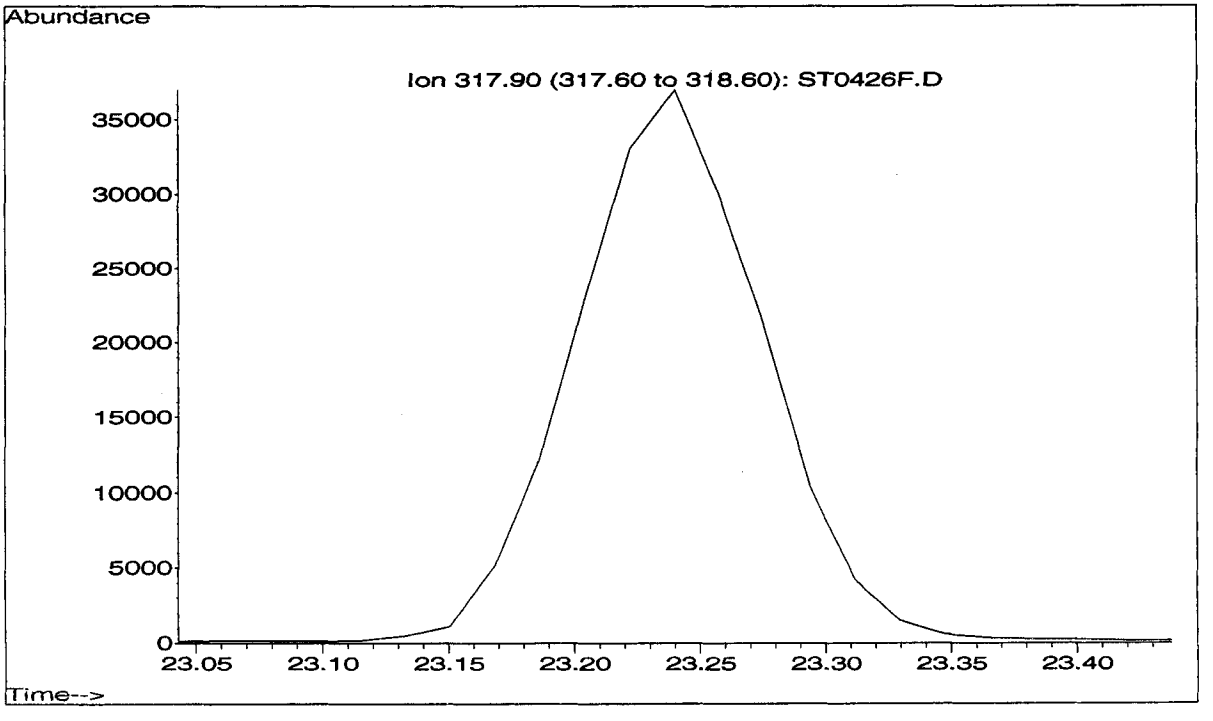




13C-2378-TCDF-IS

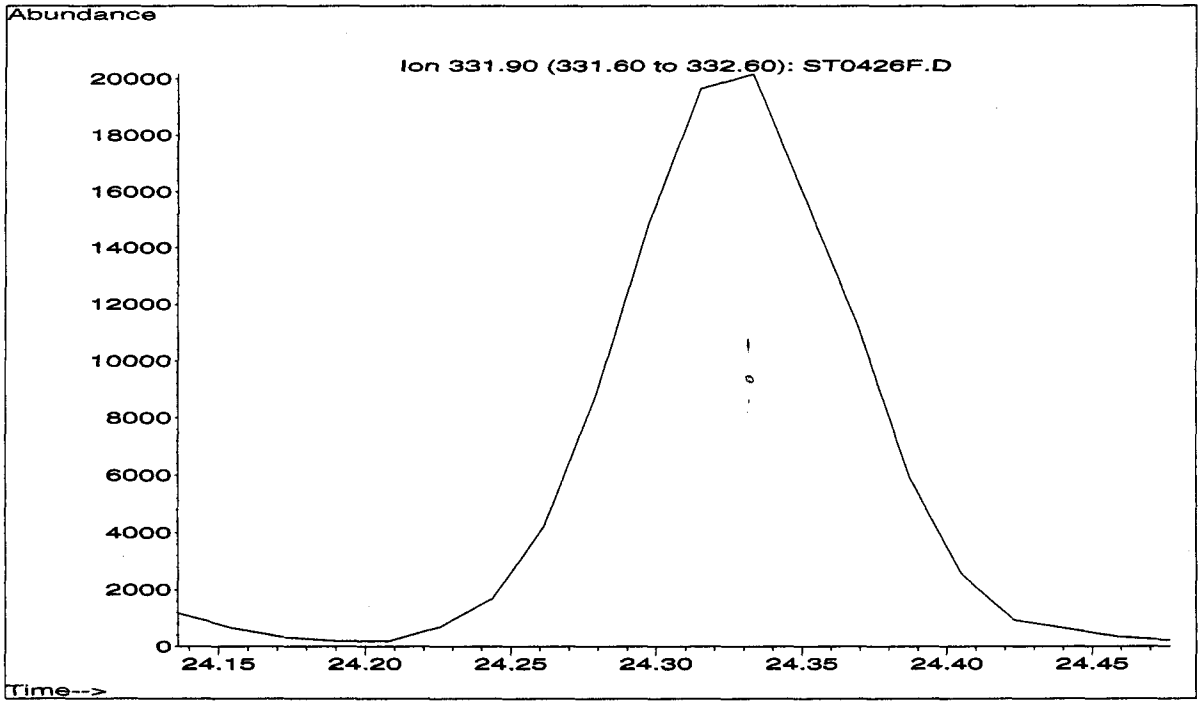
TS R.T. Lower Limit	23.04		
TS R.T. Upper Limit	23.44		
Ret Time	23.24		
Target Ion	315.9	Q1 Ion	317.9
Target Response	155245	Q1 Response	191309
Target Response	346554	Ion Ratio	0.81

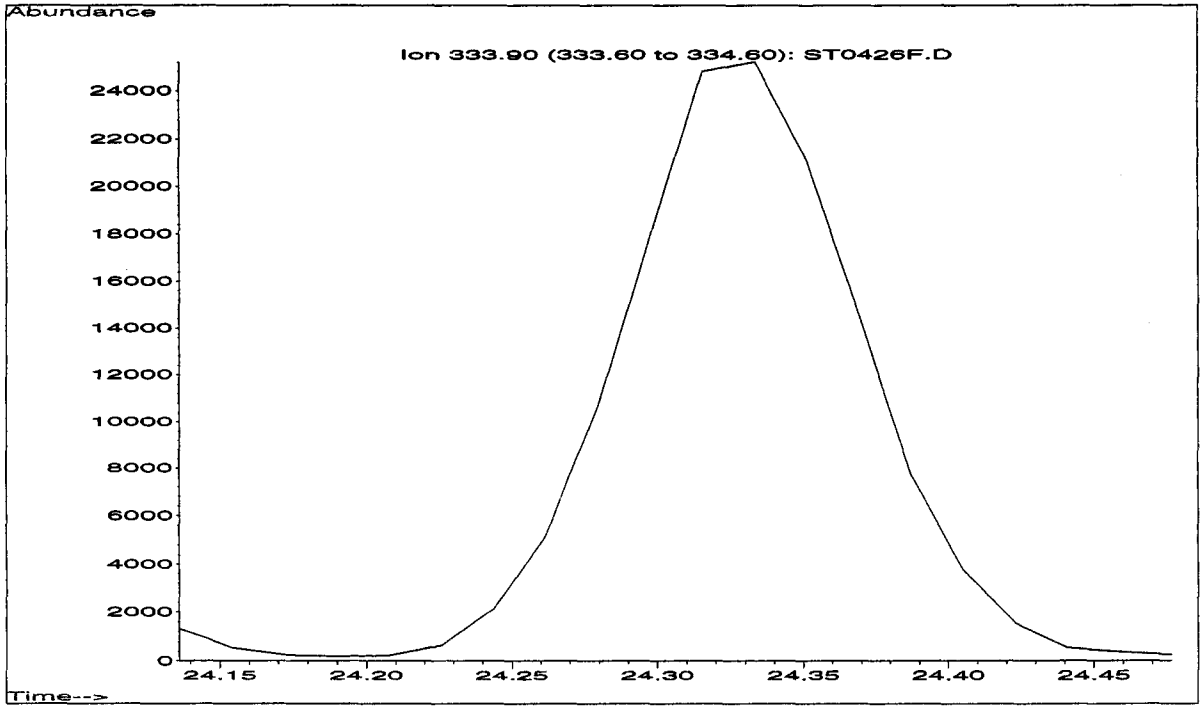




13C-2378-TCDD-IS

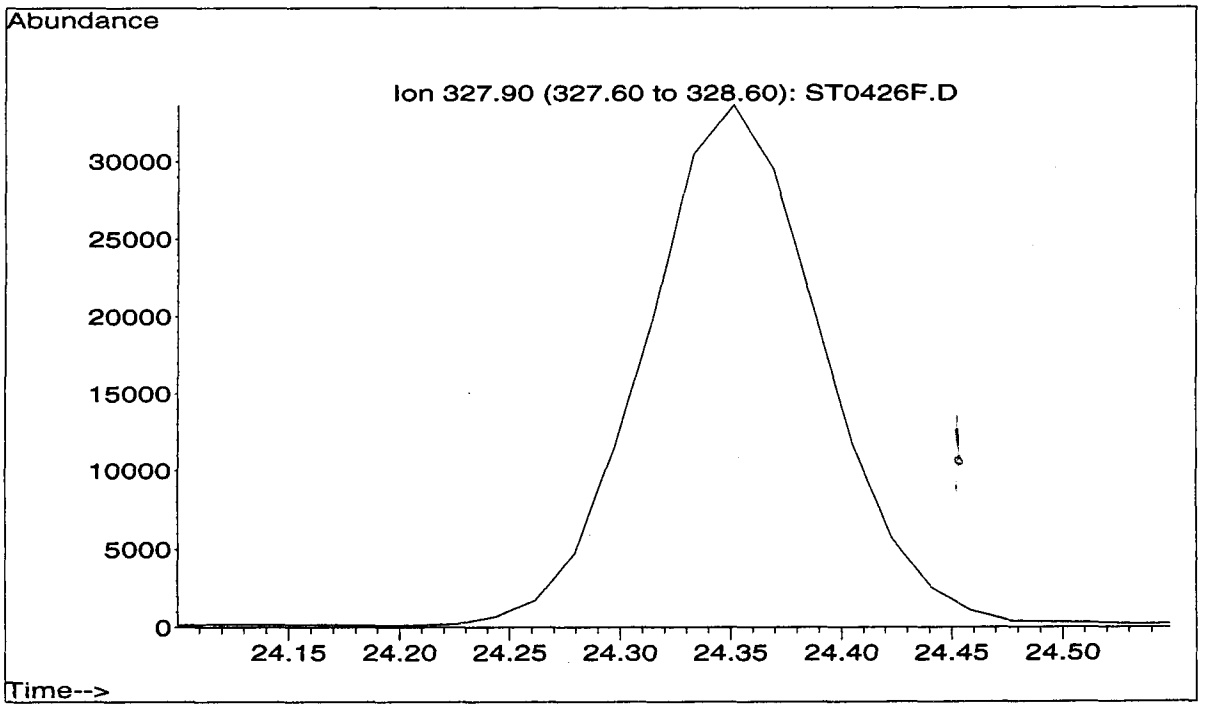
TS R.T. Lower Limit	24.13		
TS R.T. Upper Limit	24.48		
Ret Time	24.33		
Target Ion	331.9	Q1 Ion	333.9
Target Response	111376	Q1 Response	141667
Total Response	253043	Ion Ratio	0.79

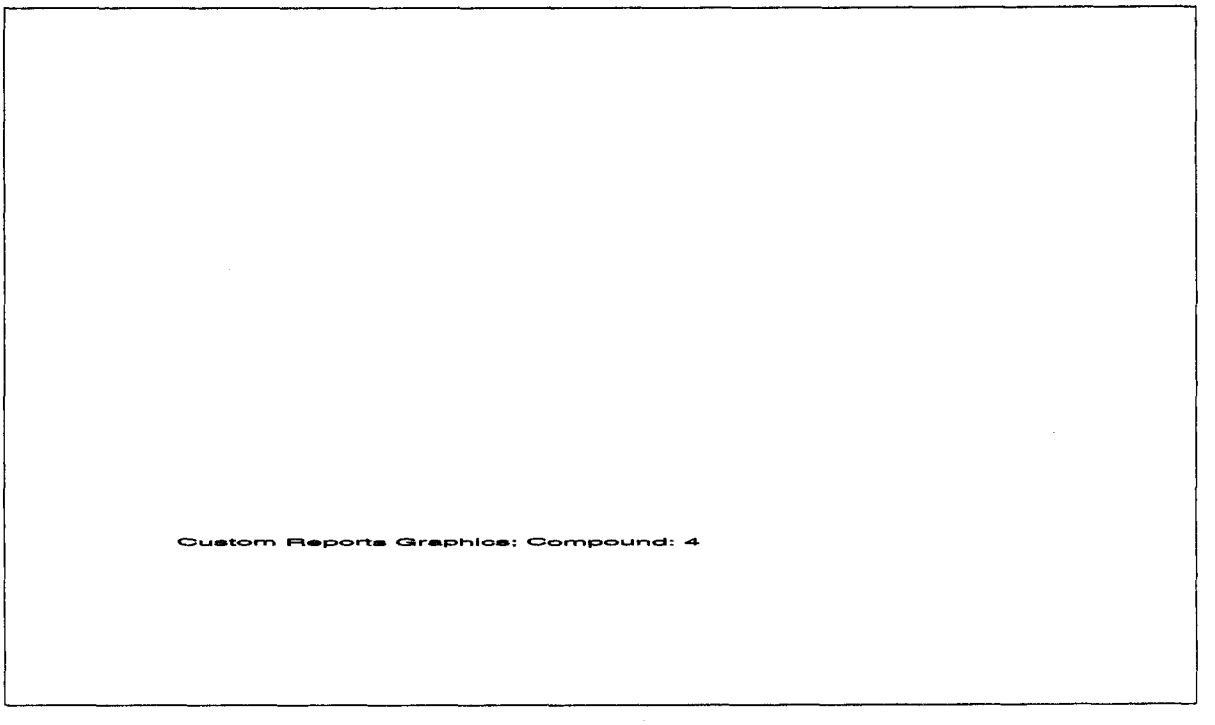




37Cl-2378-TCDD

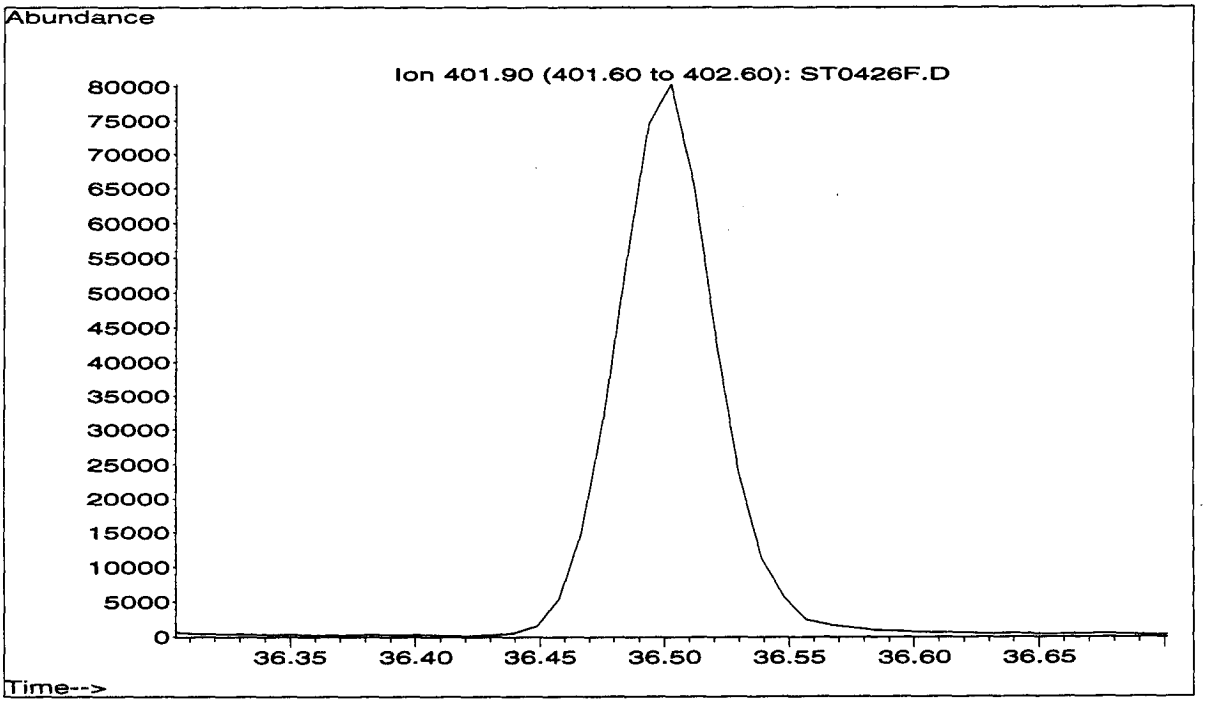
TS R.T. Lower Limit	24.10		
TS R.T. Upper Limit	24.55		
Ret Time	24.35		
Target Ion	327.9	Q1 Ion	0
Target Response	186112	Q1 Response	0
Total Response	186112	Ion Ratio	#DIV/0!

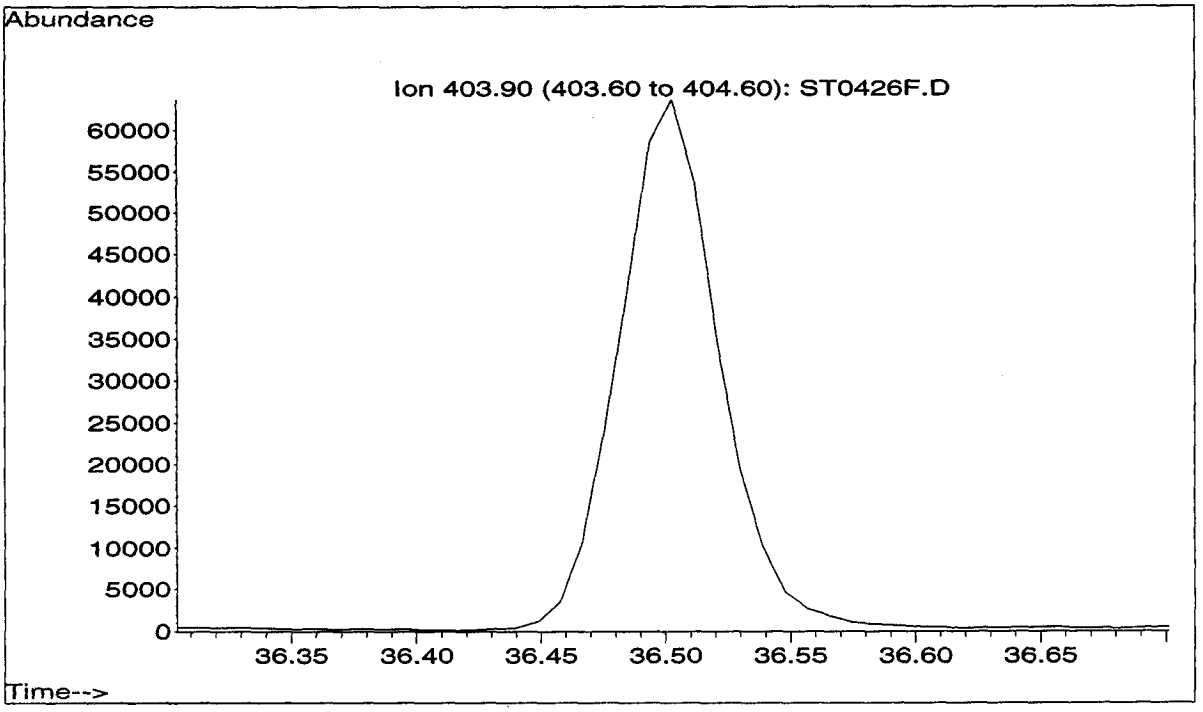




13C-123789-HxCDD

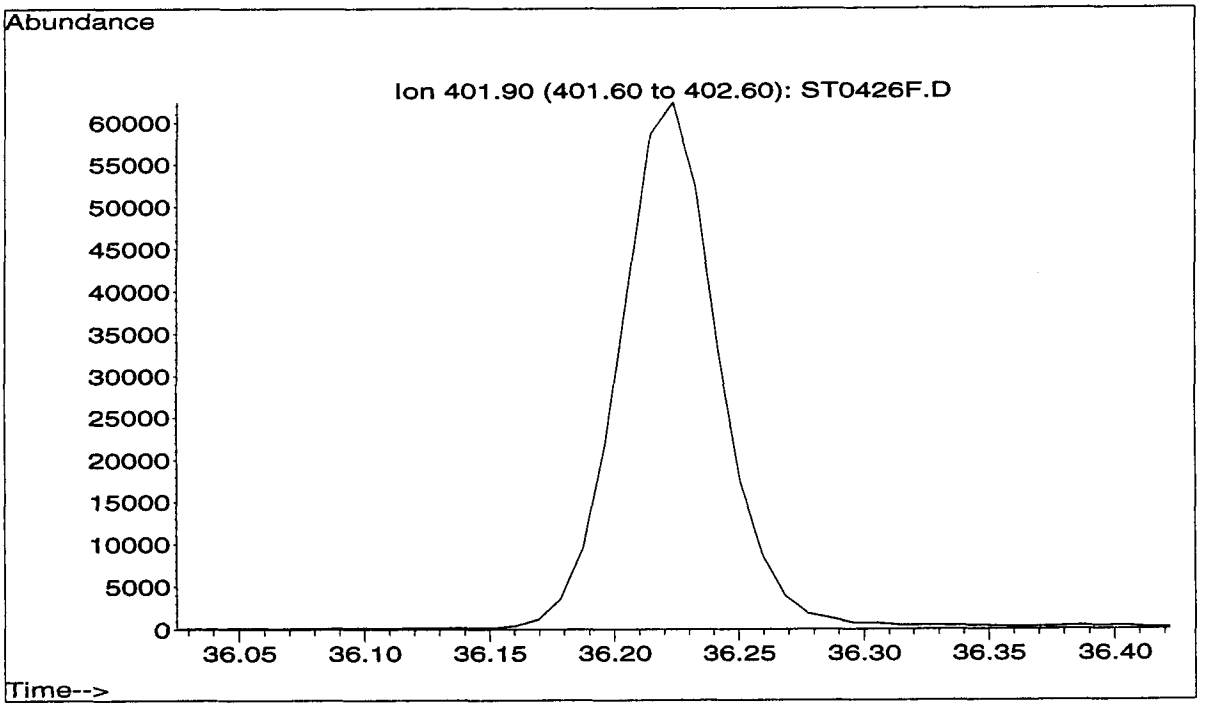
TS R.T. Lower Limit	36.30		
TS R.T. Upper Limit	36.70		
Ret Time	36.50		
Target Ion	401.9	Q1 Ion	403.9
Target Response	226851	Q1 Response	178555
Target Response	405406	Ion Ratio	1.27

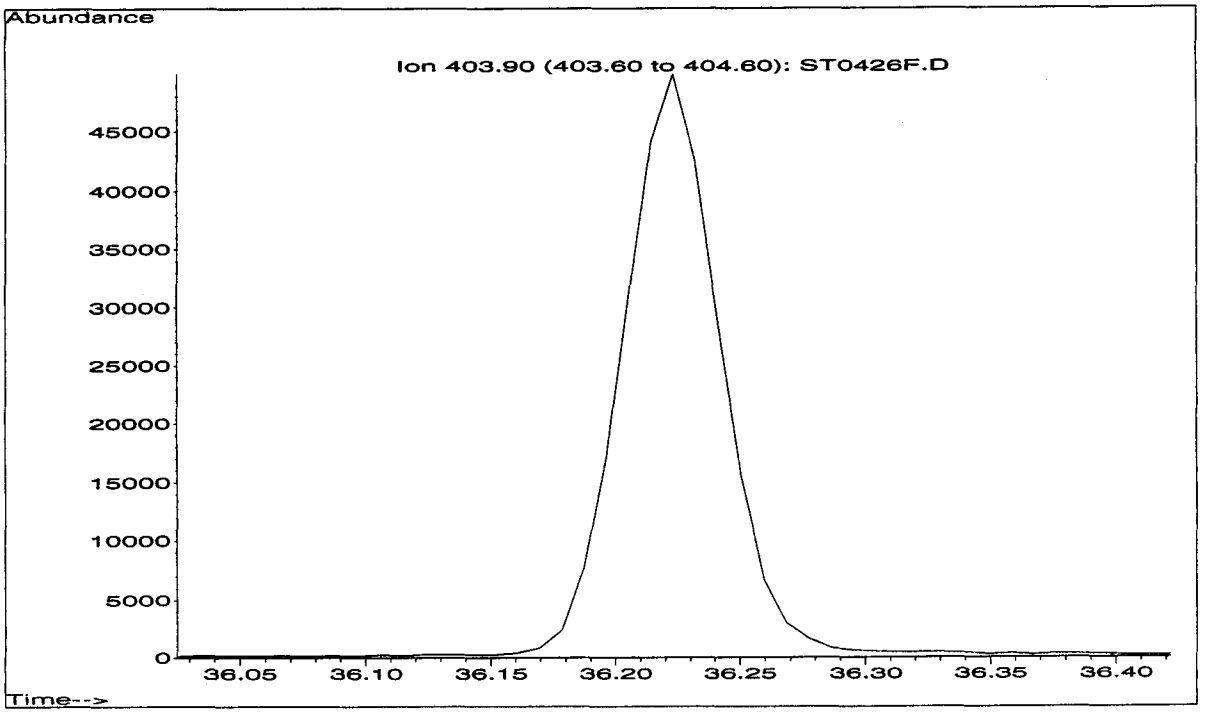




13C-123678-HxCDD-IS

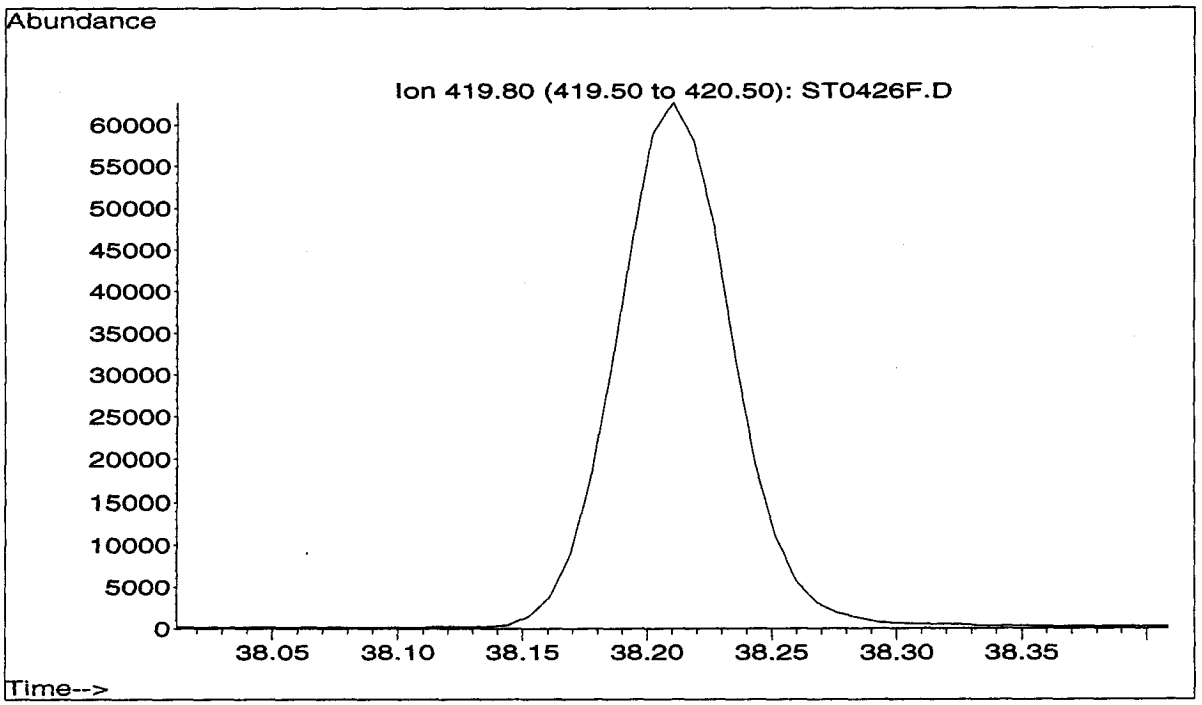
TS R.T. Lower Limit	36.02		
TS R.T. Upper Limit	36.42		
Ret Time	36.22		
Target Ion	401.9	Q1 Ion	403.9
Target Response	171479	Q1 Response	135308
Total Response	306787	Ion Ratio	1.27

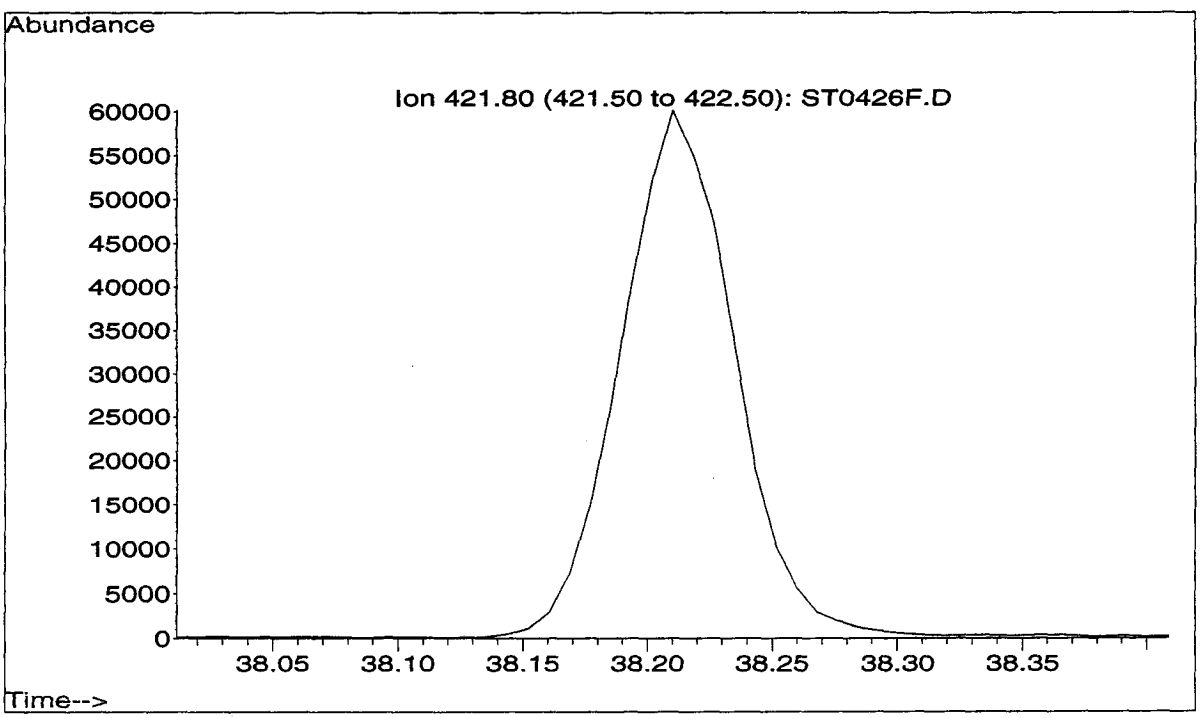




13C-1234678-HpCDF-IS

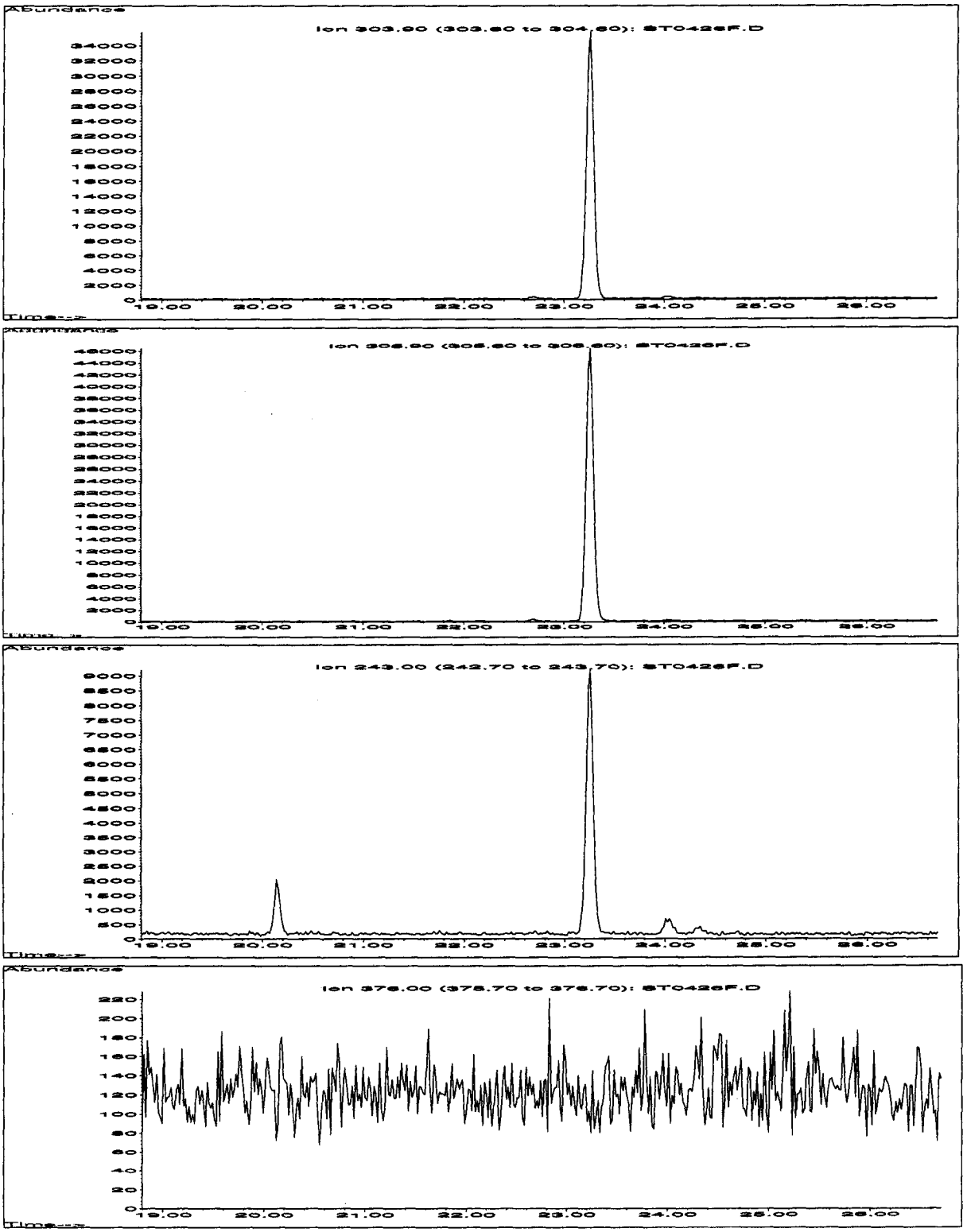
TS R.T. Lower Limit	38.01		
TS R.T. Upper Limit	38.41		
Ret Time	38.21		
Target Ion	419.8	Q1 Ion	421.8
Target Response	204115	Q1 Response	190380
Target Response	394495	Ion Ratio	1.07





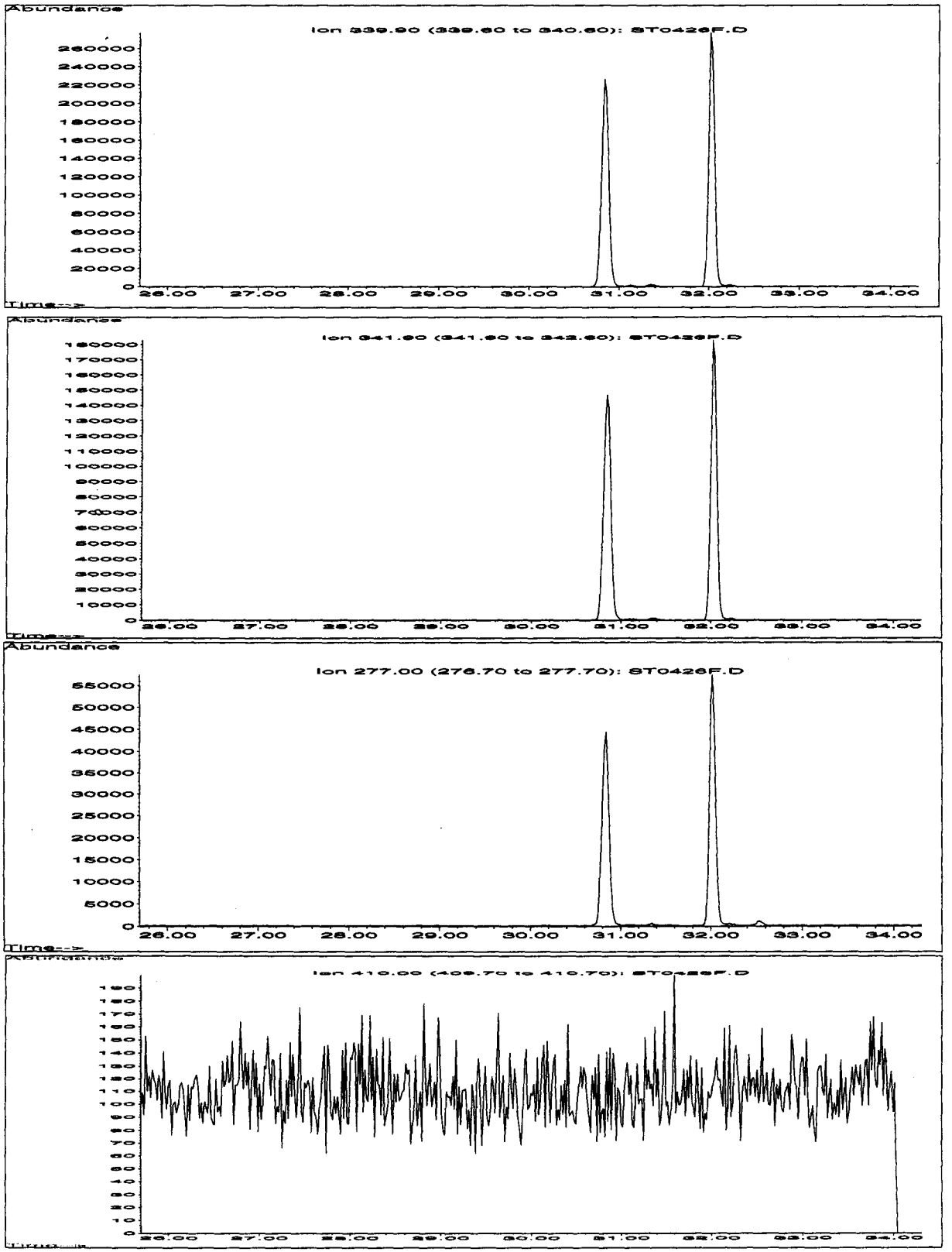
TCDF TOTAL

TS R.T. Lower Limit	18.80
TS R.T. Upper Limit	26.70



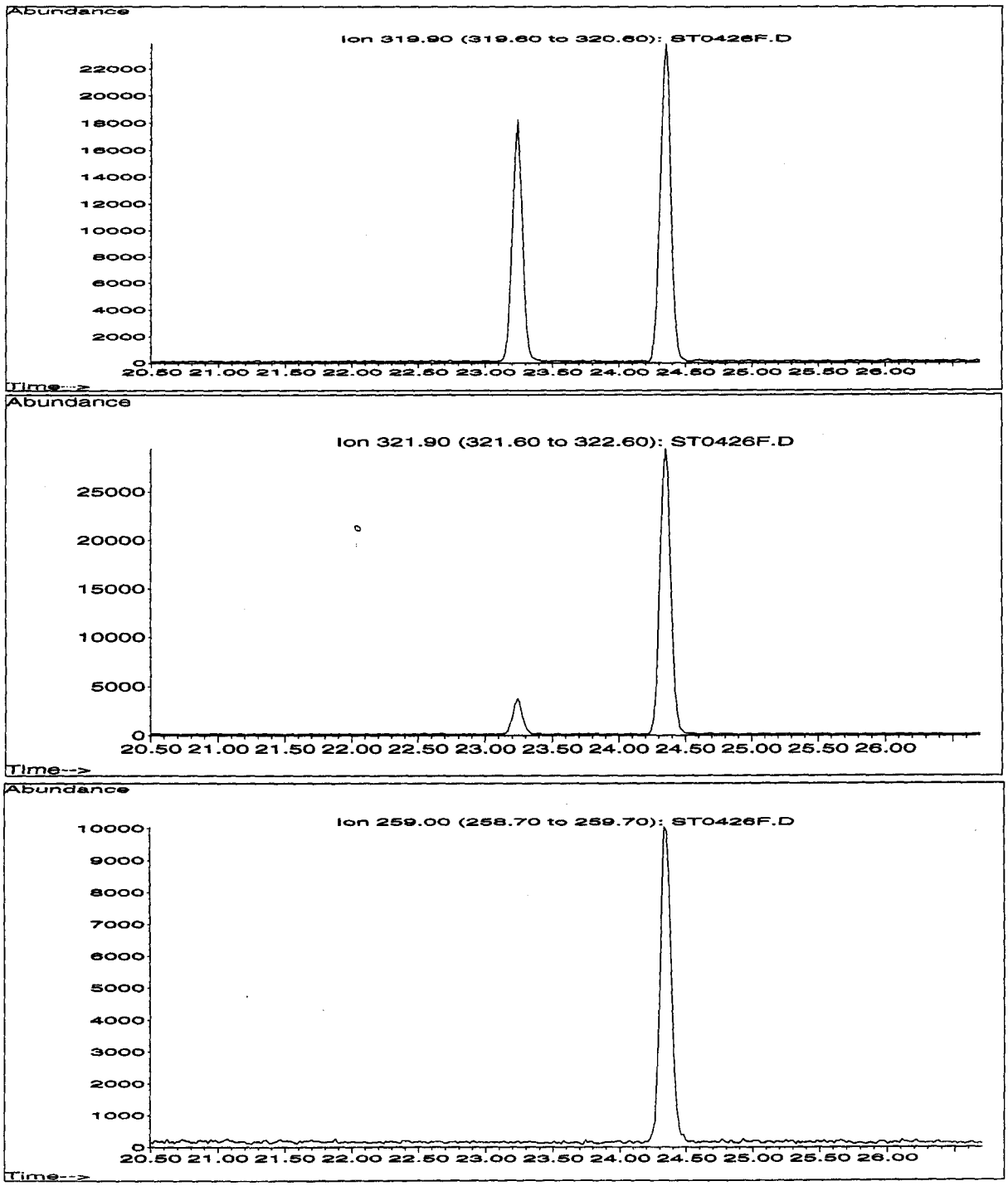
PeCDF TOTAL

TS R.T. Lower Limit	25.70
TS R.T. Upper Limit	34.30



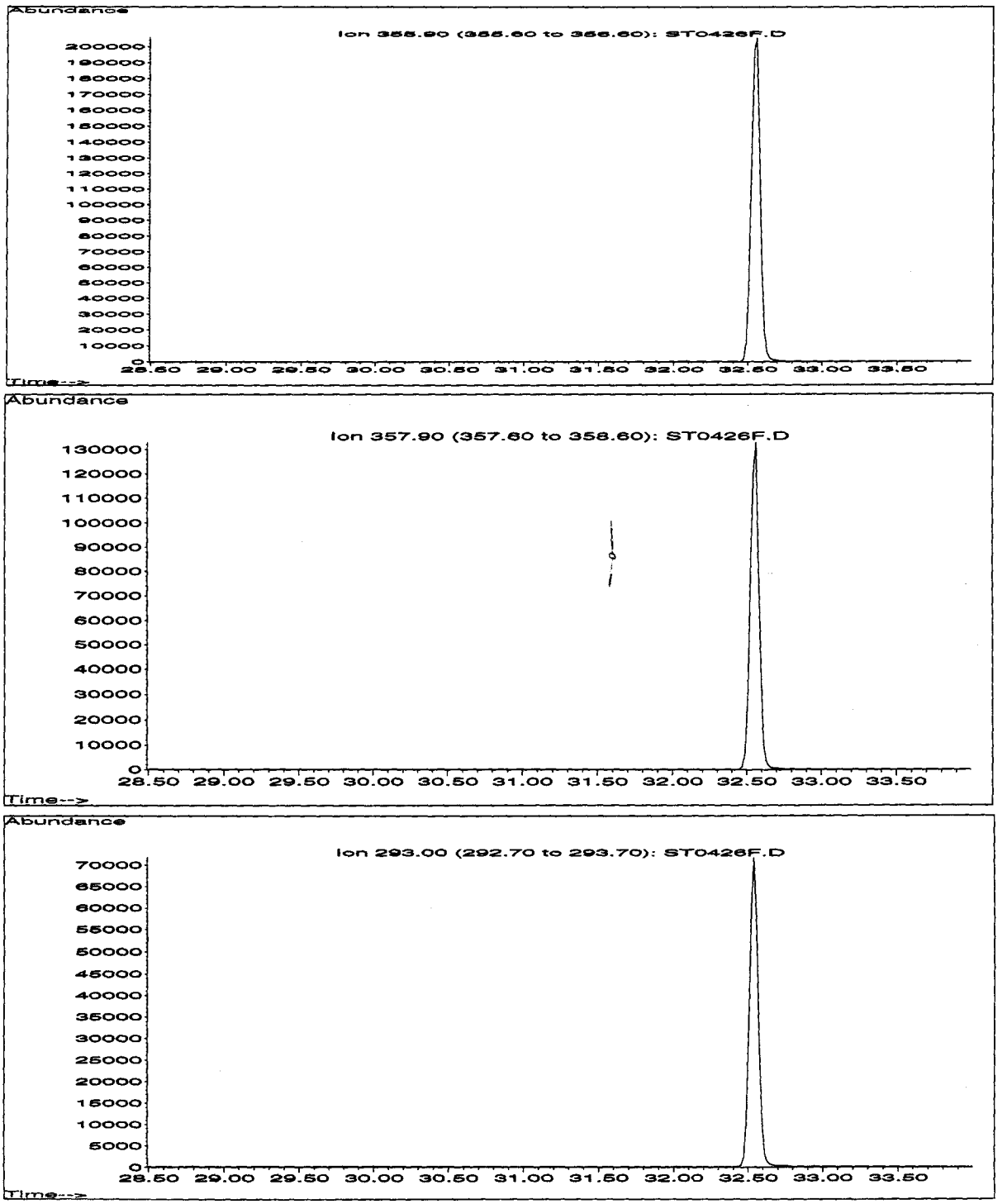
TCDD TOTAL

TS R.T. Lower Limit	20.50
TS R.T. Upper Limit	26.70



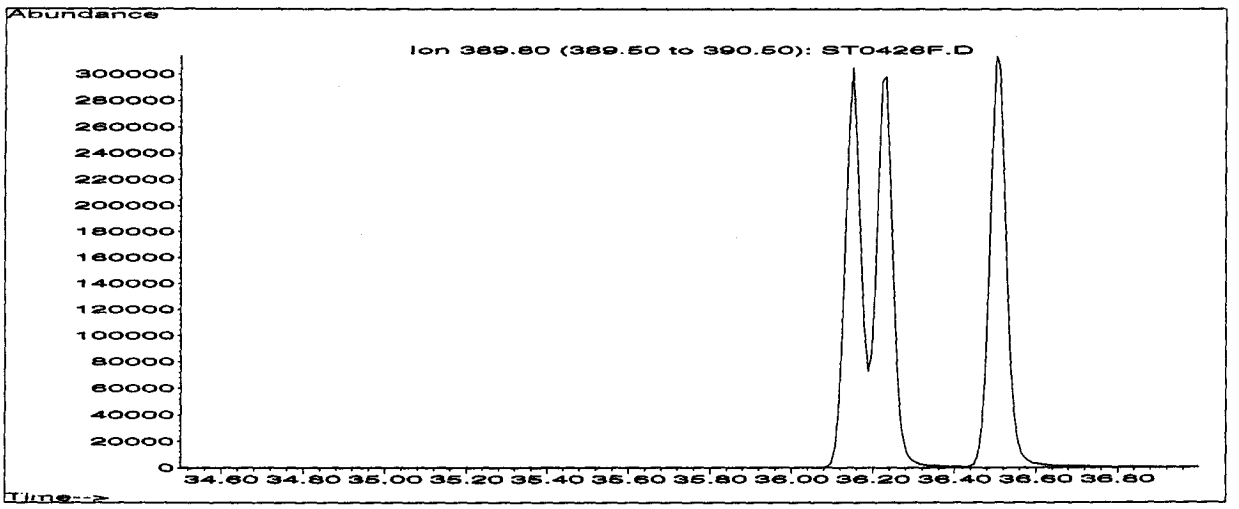
PeCDD TOTAL

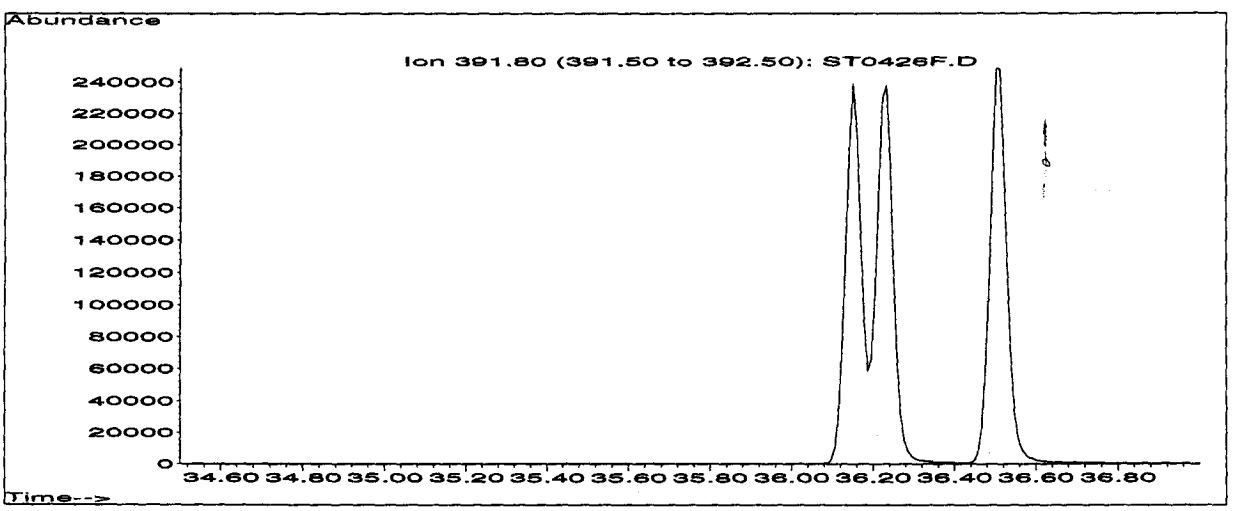
TS R.T. Lower Limit	28.50
TS R.T. Upper Limit	34.00

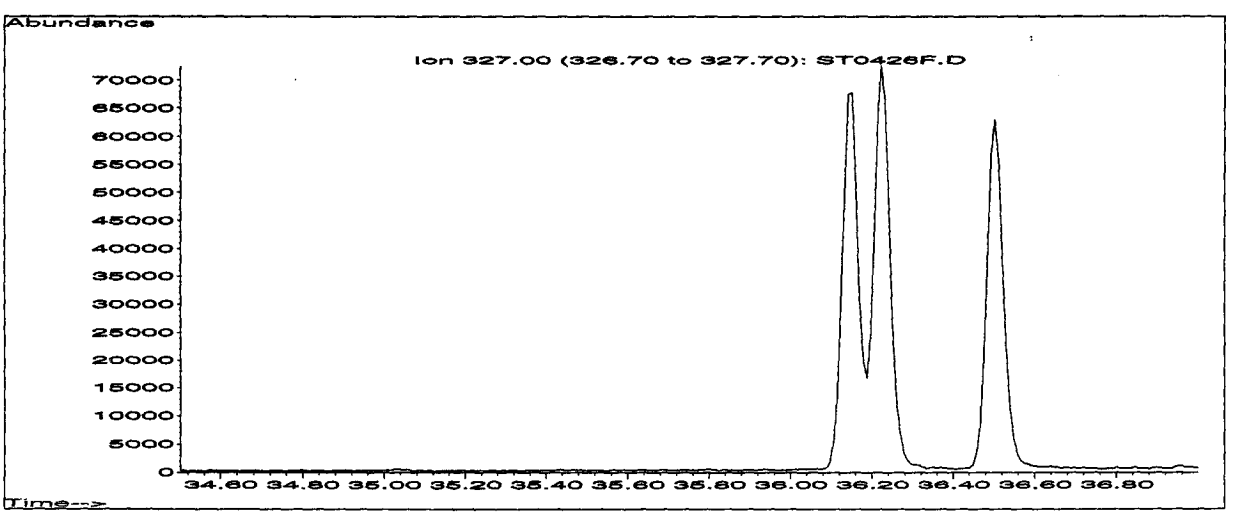


HxCDD TOTAL

TS R.T. Lower Limit	34.50
TS R.T. Upper Limit	37.00

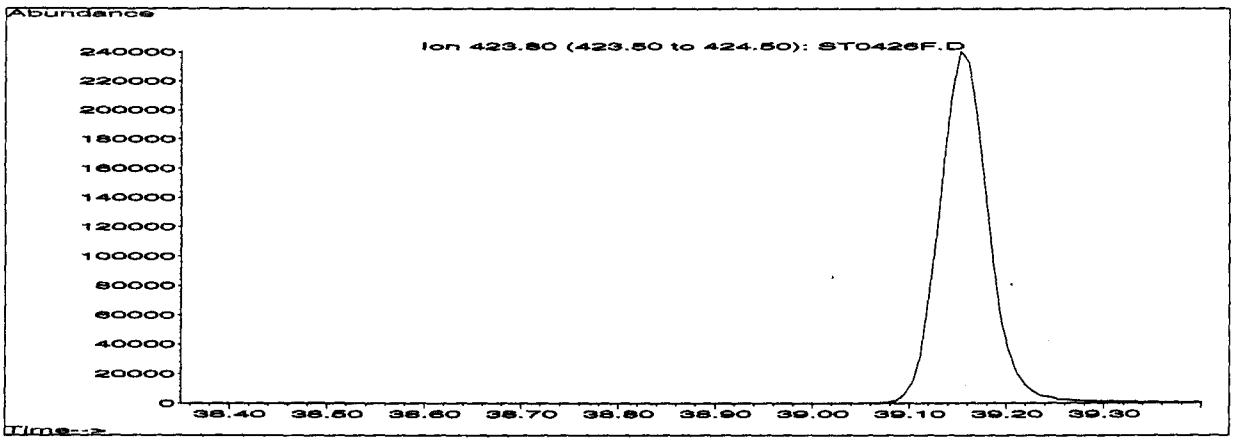


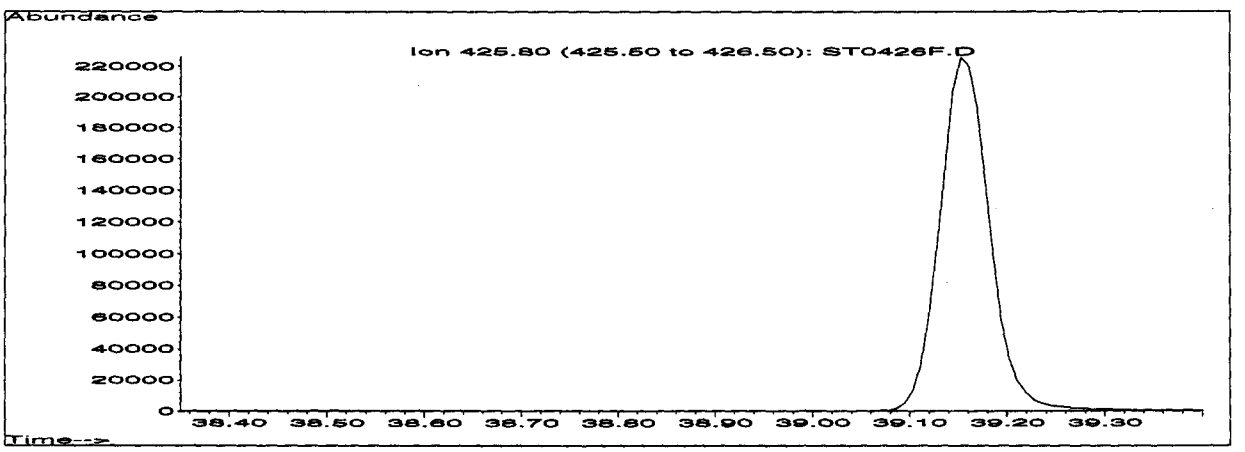


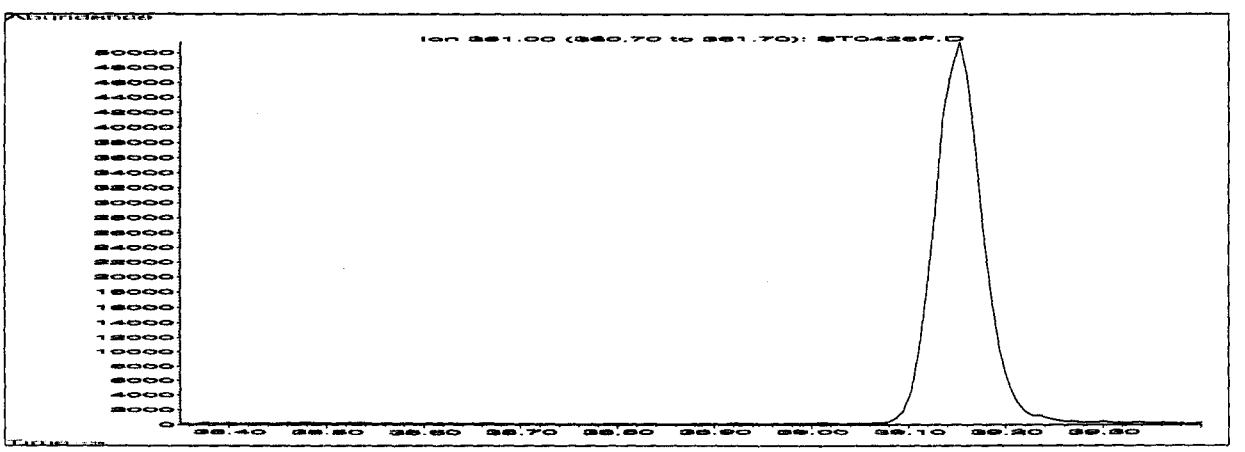


HpCDD TOTAL

TS R.T. Lower Limit	38.35
TS R.T. Upper Limit	39.40

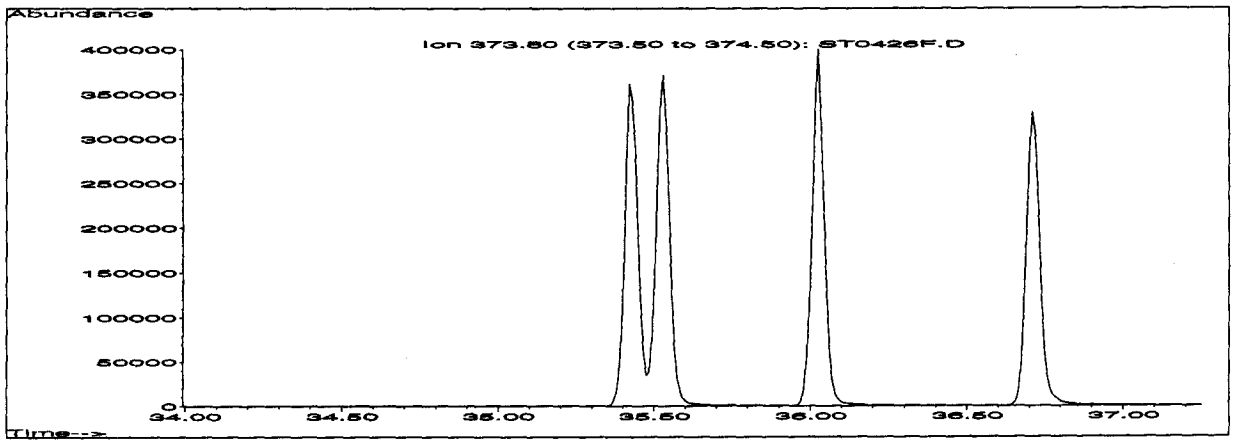


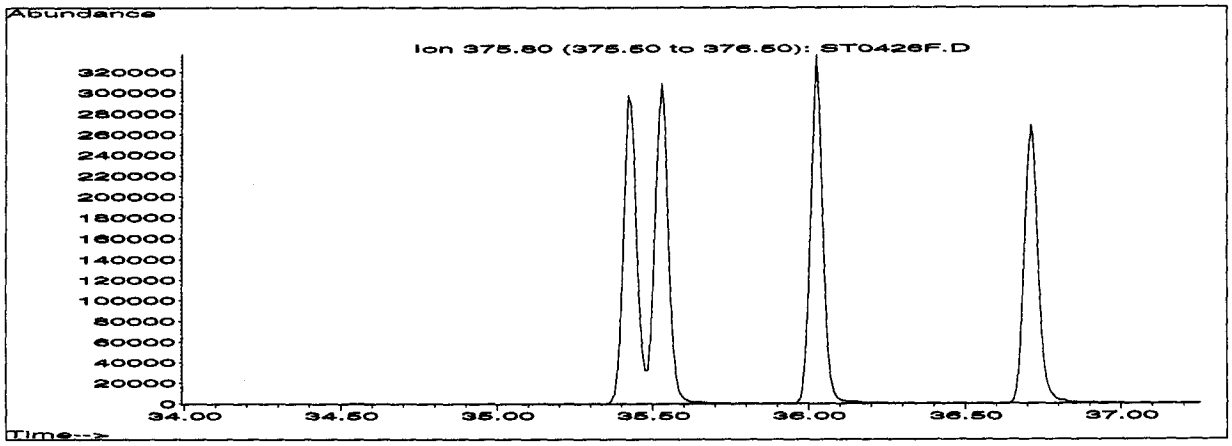


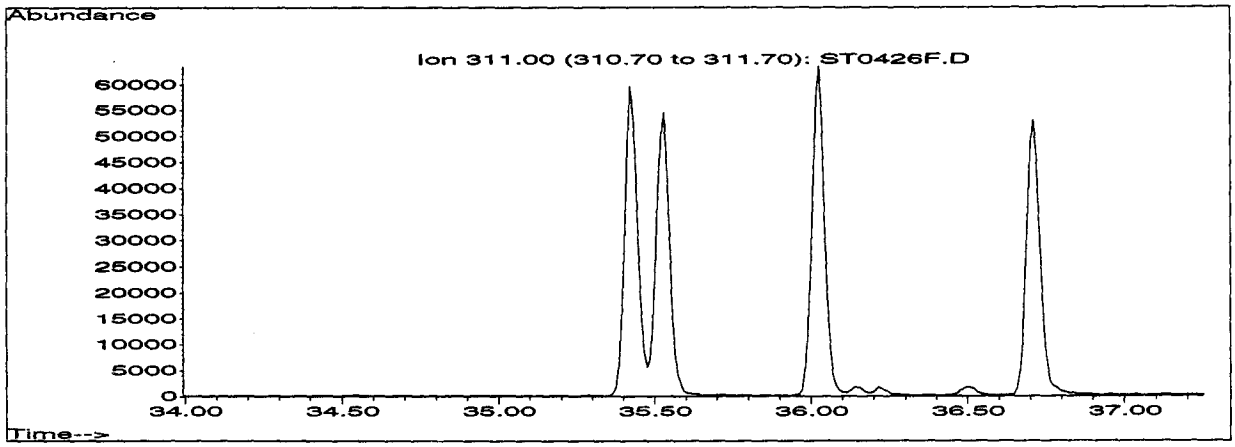


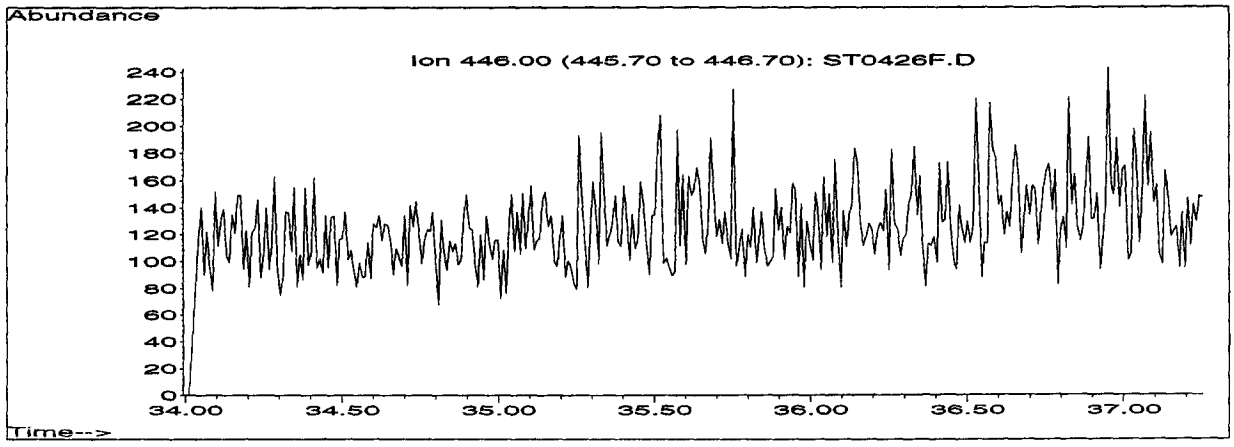
HxCDF TOTAL

TS R.T. Lower Limit	34.00
TS R.T. Upper Limit	37.25



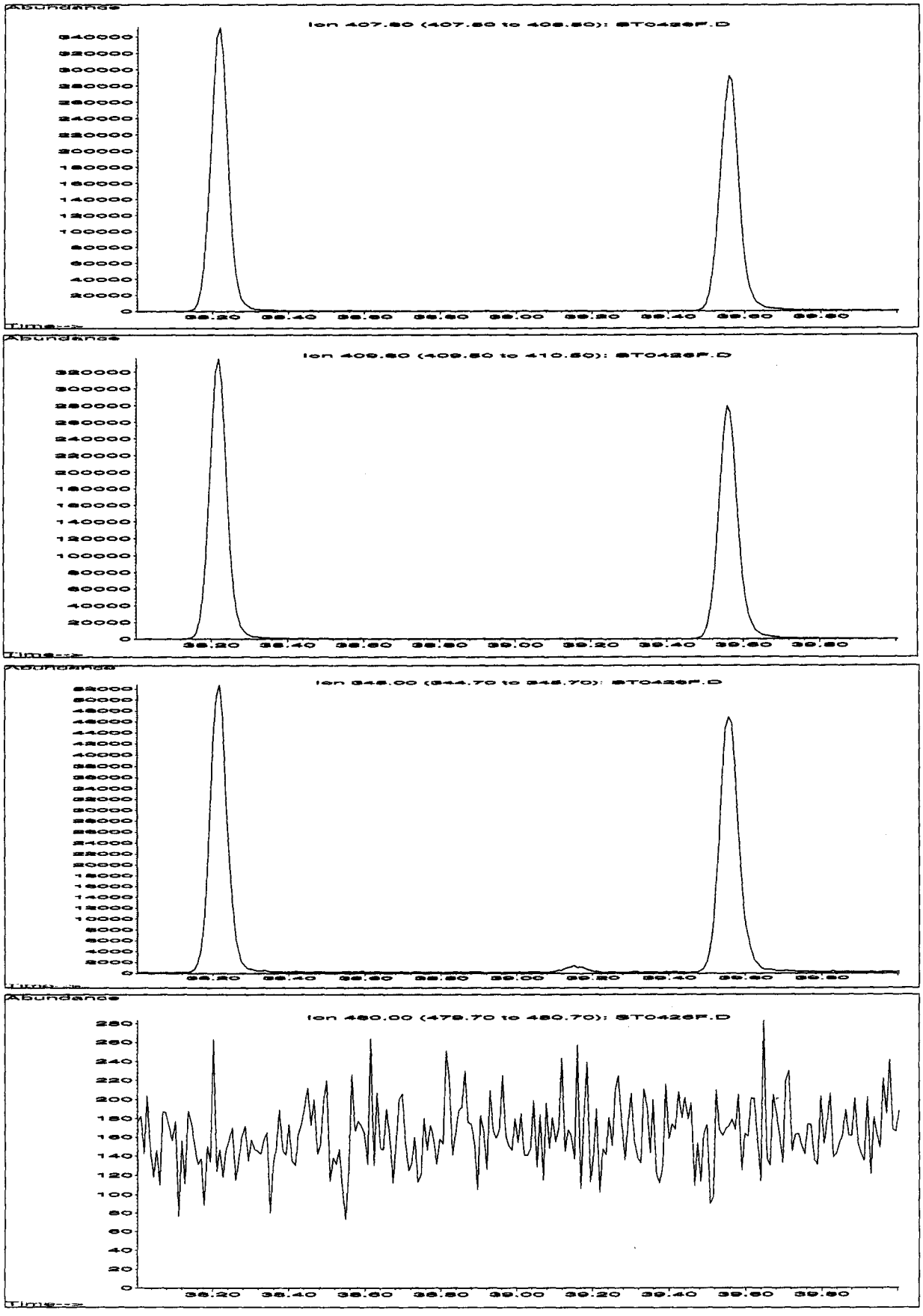






HpCDF TOTAL

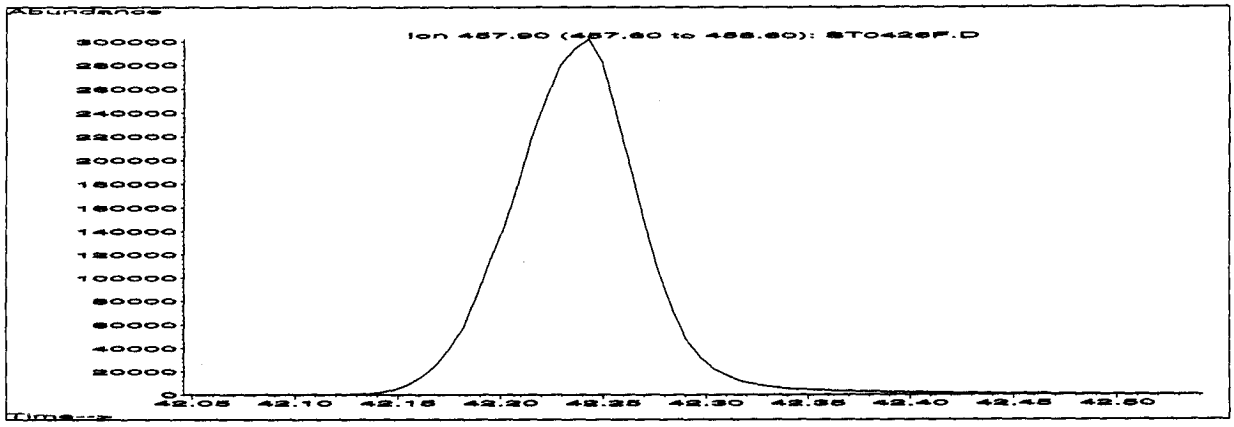
TS R.T. Lower Limit	38.00
TS R.T. Upper Limit	40.00

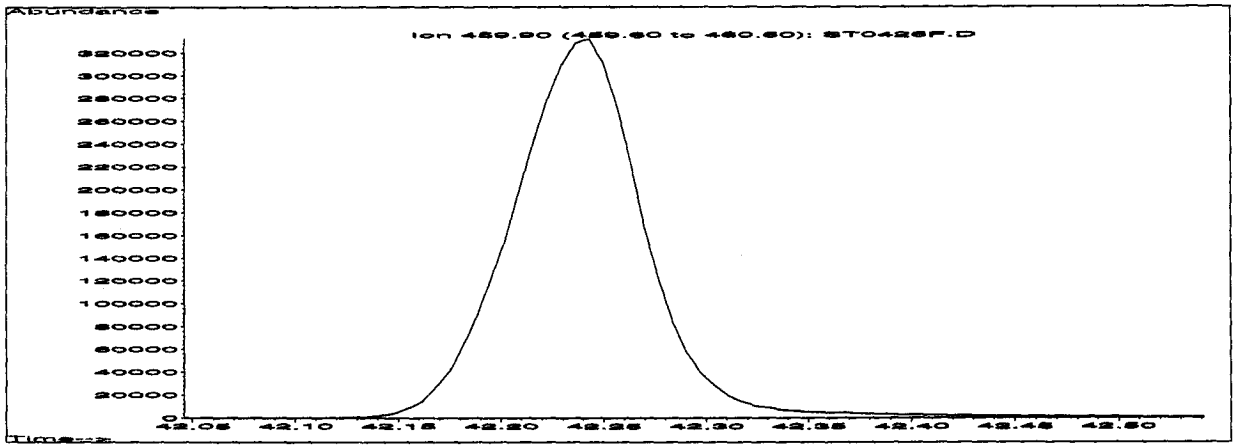


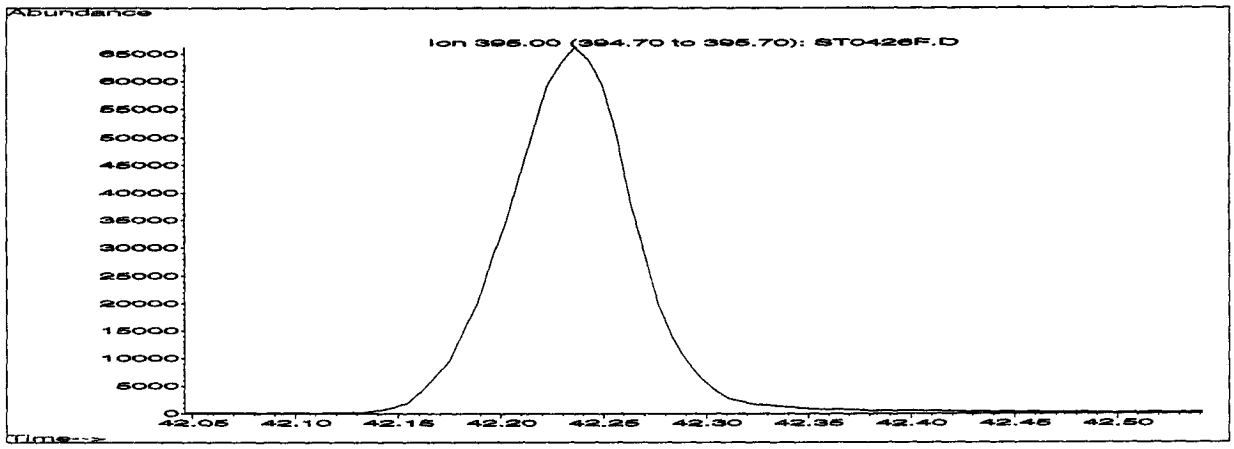
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OCDD

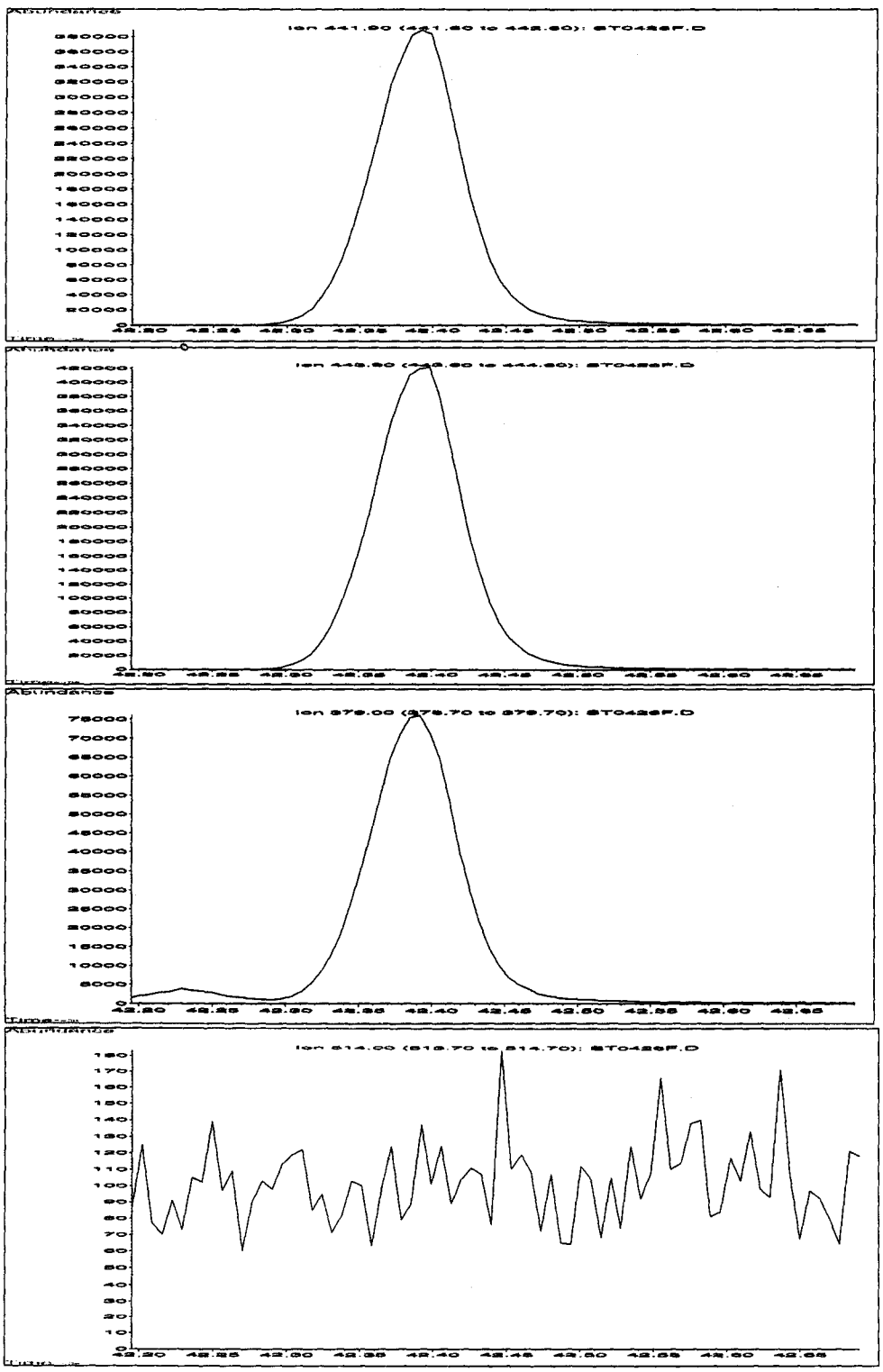
TS R.T. Lower Limit	42.04		
TS R.T. Upper Limit	42.54		
Ret. Time	42.24		
Target Ion	457.9	Q1 Ion	459.9
Target Response	1324675	Q1 Response	1475187
Total Response	2799862	Ion ratio	0.90
Q2 Ion	395		
Q2 Response	288641		





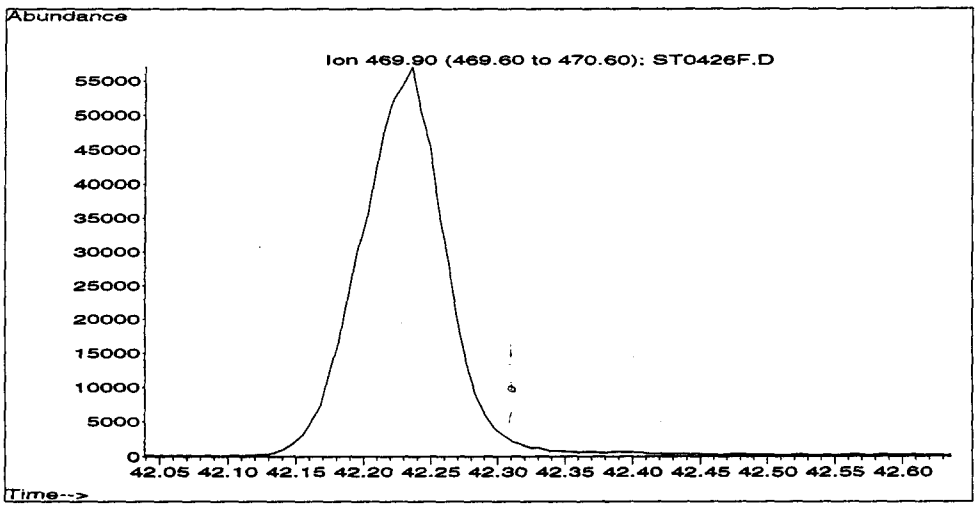


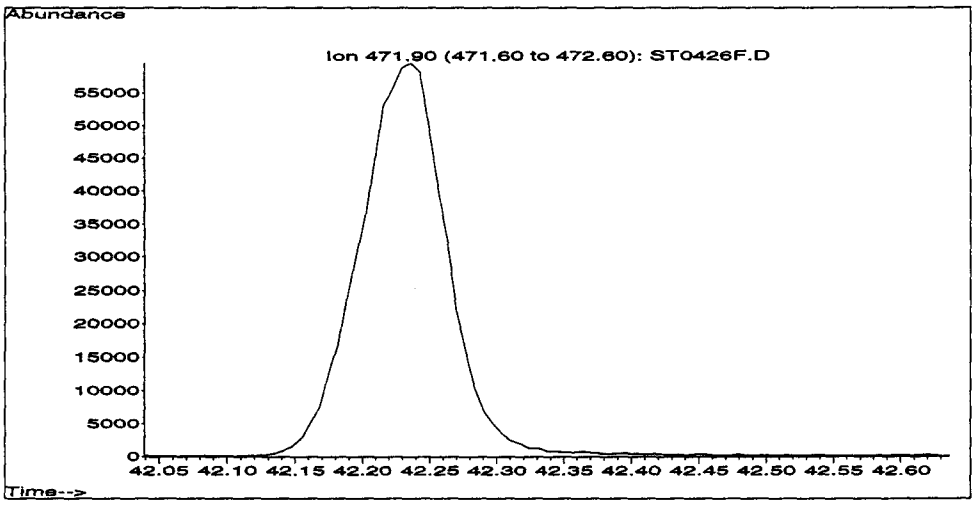
OCDF			
TS R.T. Lower Limit	42.20		
TS R.T. Upper Limit	42.70		
Ret Time	42.39		
Target Ion	441.9	Q1 Ion	443.9
Target Response	1740971	Q1 Response	1890934
Target Response	3631905	Ion Ratio	0.92
Q2 Ion	379	DPE Ion	514
Q2 Response	336067	DPE Response	0



13C-OCDD-IS

RT Lower Limit	42.03		
RT Upper Limit	42.63		
Ret Time	42.24		
Target Ion	469.9	Q1 Ion	471.9
Target Response	248805	Q1 Response	269129
Total response	517934	Ratio	0.92





Sample Extraction/Preparation Log Copies and Checklists

North Canton

TestAmerica West Sacramento
Low Resolution Prep Log
Dioxin/Furan WW Extraction

Batch: 0127096
MS Run #: 0127071
Prep Date: 5/7/2010

Shared QC Batch: N/A

Shares QC With:

Internal COC:	
Delivered to Inst.:	
Inst Receipt:	5.10.10

Box # N/A

Method: R7 8280A
Matrix: I WATER
Extraction: DB EXTRACTION: Soxhlet and Sep Funnel
QC: 01 STANDARD TEST SET
SAC: R7 - I - DB - 01

Soxhlet time on: 10:00 Soxhlet time off: 12:45
Soxhlerna

Prep Reagents		
Reagent	**Supplier**	**Lot #**
DCM	Baker	J10800
Toluene	Baker	J11N50
Hexane	Baker	149E38
H2SO4	Baker	N/A
20% DCM:Hexane	NA	359277A
65% DCM:Hexane	NA	359277C
1:1 DCM:Cyclohexane	NA	N/A
75:20:5 DCM:Hexane:Benzene	NA	N/A
Silica Gel	N/A	3592-7D
Acid Alumina	MP	19
5% Carbon:Silica Gel	N/A	N/A

Extraction Table

Sample ID	Suff	Work Order	Extraction Hold Time Expires	Sample size * 1000ml	Bottle + Sample Weight	Empty Bottle Weight	Final Volume 50uL	Final Volume Other	Analysis Hold Time Expires	Sox Ext ID	AQ Ext ID	RB ID	Rotovap ID
A0D300605 - 1		L0VEC1AA	5/27/2010	1015.35	1515.58	500.23	50ml		6/21/2010				2
A0D300605 - 2		L0VEF1AA	5/27/2010	1014.13	1513.77	499.64	50ml		6/21/2010				
A0D300605 - 3		L0VEG1AA	5/27/2010	1023.76	1522.60	498.84	50ml		6/21/2010				
A0D300605 - 4		L0VEH1AA	5/28/2010	970.26	1468.41	498.15	50ml		6/21/2010				2
A0D300605 - 4	S	L0VEH1AC	5/28/2010	976.16	1475.24	499.08	50ml		6/21/2010				2
A0D300605 - 4	D	L0VEH1AD	5/28/2010	1020.28	1519.09	498.81	50ml		6/21/2010				2
~~A0D300605 - 5~~		~~L0VEJ1AA~~	~~5/28/2010~~		~~1521.38~~	~~498.42~~	~~50ml~~		6/21/2010				2
A0D300605 - 6		L0VEL1AA	5/28/2010	988.20	1487.61	499.41	50ml	5	6/21/2010				2
G0D280478 - 1		L0M321AA	5/26/2010	1036.68	1538.30	501.62	50ml		6/21/2010				
G0E030420 - 1		L0WR31AA	5/29/2010	1045.26	1550.61	505.35	50ml		6/21/2010				2
~~G0E030422 - 1~~		~~L0WTR1AA~~	~~5/28/2010~~		~~1598.07~~	~~503.98~~	~~50ml~~		6/21/2010				2
G0E070000 - 96	B	L057J1AA	5/28/2010	1000.00			50ml		6/21/2010				2
G0E070000 - 96	C	L057J1AC	5/28/2010	1000.00		6/3 5-7-10	50ml		6/21/2010		5-7-10	5-7-10	

5.10.10 GS

5-10-10

* See attached sheet for sample volumes recorded from scale

Comments/NCMs: _____

	ID	Spike Exp Date:	Spiked By:	Witnessed By:	Date:
Internal Standard All Samples	50ml 09LVES065	9.1.10	GS		5-7-10
Spike Mix LCS/LCSD/MS/MS	50ml 09LVES069	12.7.10	GS		5-7-10
Cleanup Standard All Samples	50ml 10LVES009	3.24.11	GS		5-10-10
Recovery Standard All Samples	50ml 10L20813	4.13.11	GS		5/10/10

Liq Liq Extraction Analyst/Date	5-7-10 GS	Soxhlet Extraction Analyst/Date	5-7-10 GS

Split/Archive Analyst/Date	Option C Analyst/Date	IFB Analyst/Date	D2 Analyst/Date
—	—	5-10.10 GS	—

RQC058

TestAmerica Laboratories, Inc.
EXTRACTION BENCH WORKSHEET

Run Date: 5/10/10
Time: 12:12:41

LEV 1	LEV 2		LEV 1	LEV 2	
Y	_	Blank	Y	_	Weights/Volumes
Y	_	Check	Y	_	Spike & Surrogate Worksheet
Y	_	MS/MSD	Y	_	Vial contains correct volume
			Y	_	Labels, greenbars, worksheets
				_	computer batch: correct & all match
			_	_	Anomalies to Extraction Method

_ Expanded Deliverable
_ COC Completed
Y Bench Sheet Copied
_ Package Submitted to AnalyticalGroup
_ Bench Sheet Copied per COC

Extractionist: 013637 George Burkett

Concentrationist: 013637 George Burkett

Reviewer/Date: BURKETTG / 5/10/10

QC BATCH: 0127096

PREP DATE: 5/07/10 10:00
COMP DATE: 5/10/10 12:45

Dioxins/Furans, HRGC/LRMS (8280A)
EXTRACTION: Soxhlet and Sep Funnel

EXTR EXPR	ANL DUE	LOT#,MSRUN#/ WORK ORDER	TEST FLGS	EXT	MTH	MATRIX	INIT/FIN WT/VOL	PH"S INIT	PH"S ADJ1	PH"S ADJ2	SOLVENTS EXTRACTION	SOLVENTS VOL	SOLVENTS EXCHANGE	SOLVENTS VOL	SPIKE STANDARD/ SURROGATE ID
5/26/10	5/12/10	G0D280478-001 **LOM32-1-AA**		DB	R7	WATER	**1036.68mL** 50.00uL	NA	NA	NA	DCM/TOL	300.0	C-14	50.0	50UL 09LRES065
COMMENTS:															
5/27/10	5/14/10	A0D300605-001 **LOVEC-1-AA**	D	DB	R7	WATER	**1015.35mL** 50.00uL	NA	NA	NA	DCM/TOL	300.0	C-14	50.0	50UL 09LRES065
COMMENTS:															
5/27/10	5/14/10	A0D300605-002 **LOVEF-1-AA**	D	DB	R7	WATER	**1014.13mL** 50.00uL	NA	NA	NA	DCM/TOL	300.0	C-14	50.0	50UL 09LRES065
COMMENTS:															
5/27/10	5/14/10	A0D300605-003 **LOVEG-1-AA**	D	DB	R7	WATER	**1023.76mL** 50.00uL	NA	NA	NA	DCM/TOL	300.0	C-14	50.0	50UL 09LRES065
COMMENTS:															
5/28/10	5/14/10	A0D300605-004 **LOVEH-1-AA**	D	DB	R7	WATER	**970.26mL** 50.00uL	NA	NA	NA	DCM/TOL	300.0	C-14	50.0	50UL 09LRES065
COMMENTS:															
5/28/10	5/14/10	A0D300605-004 **LOVEH-1-ACS**	D	DB	R7	WATER	**976.16mL** 50.00uL	NA	NA	NA	DCM/TOL	300.0	C-14	50.0	50UL 09LRES069 50UL 09LRES065
COMMENTS:															
5/28/10	5/14/10	A0D300605-004 **LOVEH-1-ADD**	D	DB	R7	WATER	**1020.28mL** 50.00uL	NA	NA	NA	DCM/TOL	300.0	C-14	50.0	50UL 09LRES069 50UL 09LRES065
COMMENTS:															

RQC058

TestAmerica Laboratories, Inc.
EXTRACTION BENCH WORKSHEET

Run Date: 5/10/10
Time: 12:12:41

QC BATCH: 0127096

PREP DATE: 5/07/10 10:00
COMP DATE: 5/10/10 12:45

EXTR EXPR	ANL DUE	LOT#,MSRUN#/ WORK ORDER	TEST FLGS	EXT	MTH	MATRIX	INIT/FIN WT/VOL	INIT	PH"S ADJ1	ADJ2	SOLVENTS EXTRACTION	VOL	EXCHANGE	VOL	SPIKE STANDARD/ SURROGATE ID
		A0D300605-006													
5/28/10	5/14/10	**L0VEL-1-AA**	D	DB	R7	WATER	**988.20mL**	NA	NA	NA	DCM/TOL	300.0	C-14	50.0	
COMMENTS:							50.00uL								50UL 09LRES065
		G0E030420-001													
5/29/10	5/14/10	**L0WR3-1-AA**	R	DB	R7	WATER	**1045.26mL**	NA	NA	NA	DCM/TOL	300.0	C-14	50.0	
COMMENTS:							50.00uL								50UL 09LRES065
		G0E070000-096													
5/28/10	0/00/00	**L057J-1-AA**B		DB	R7	WATER	**1000.00mL**	NA	NA	NA	DCM/TOL	300.0	C-14	50.0	
COMMENTS:							50.00uL								50UL 09LRES065
		G0E070000-096													
5/28/10	0/00/00	**L057J-1-AC**C		DB	R7	WATER	**1000.00mL**	NA	NA	NA	DCM/TOL	300.0	C-14	50.0	50UL 09LRES069
COMMENTS:							50.00uL								50UL 09LRES065

R = RUSH C = CLP
E = EPA 600 D = EXP.DEL)
M = CLIENT REQ MS/MSD

NUMBER OF WORK ORDERS IN BATCH: 11

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

West Sacramento

Preparation Data Review Checklist

Prep Batch(es) 0127096 **Test:** 8280

Prep Date: 5.7.10 **Holding Times:** 5.26.10 / 5.29.10 **NCM:** Y (N)

A. Spike Witness/Batch setup	Spike Witness	Reviewer
1. **Holding times checked?** NCMs filed as appropriate	✓	
2. QAS checked for QC instructions (LCS, LCSD, MS,MSD, etc)	✓	
3. Amount of samples in hood match amount of samples on bench sheet. Sample IDS match.	✓	NA
4. Worksheets have been checked for required spiking compounds	✓	
5. Spiking volumes are correctly documented	✓	
6. Std ID numbers on spike labels match numbers on bench sheet	✓	NA
7. Expiration dates have been checked	✓	
8. Calibration expiration dates on pipettors have been checked		NA
9. Spiker and spike witness have signed and dated bench sheet		
B. Weights and Volumes		
1. Recorded weights are in anticipated range	NA	
2. Balance upload or raw data for weights is included	NA	
3. Weights and volumes have been transcribed correctly to LIMS.	NA	
4. Weights are not targeted to meet exact weights.	NA	
5. Each weight or volume measurement is a unique record (no dittos or line downs)	NA	
C. Standards and Reagents		
1. Lot numbers for all reagents, including clean up stages, are recorded.	NA	
2. Are dates and analysts for cleanups recorded?	NA	
3. Are correct IDs used for standards? Are expiration dates to day/month/year, when listed?	NA	
D. Documentation		
1. Are all nonconformances documented appropriately?	NA	
2. QuantIMs entry correct, including dates and times.	NA	
3. Are all fields completed?	NA	

Spike witness: _____ Date: 5/7/10

2nd Level Reviewer: _____ Date: 5/10/10

Comments:

TestAmerica West Sacramento

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Data Checklist
HRGCMS/LRGCMS Analyses

Batch #: 0127096 Method ID: 8280A

	DB-5	DB-225
Data Analyst:	MGW	NA
Date initiated:	5/12/11	
Reviewer:	[illegible]	
Date reviewed:	5/14/2011	

QA/QC verification:	Initiated DB-5	Reviewed DB-5	Initiated DB-225 (High Res Only)	Reviewed DB-225 (High Res Only)
-Daily standard package(s) present?	✓	✓	NA	
-Method Blank present?	✓	✓		
-LCS/DCS copy present and meets native recovery criteria?	✓	✓		
-Internal standard recoveries within limits?*	✓	✓		
-Ion ratios within + 15% of theoretical values?	✓	✓		
-Other QC (Dup,MS,SD) within specs?**	NA	NA		

Sample Analysis:	Initiated DB-5	Reviewed DB-5	Initiated DB-225 (High Res Only)	Reviewed DB-225 (High Res Only)
-Correct sample aliquot used?	✓	✓		
-All raw data present?	✓	✓		
-Standard target DL's used? If RL's are used specify:_____	✓	✓		
-DL's below TDL / LCL (please circle)?	✓	✓		
-All positives reported at levels greater than method blank DL's?	NA	NA		
-Correct RRF's used for method?	✓	✓		
-Internal standard amounts correct for method?	✓	✓		
-Target analytes are not saturated?	✓	✓		
-Dilution/splitting of extract taken into account?	NA	NA		
-Have dilution calculations been verified?	NA	NA		
-Has a manual calculation for the sequence(s) been verified?	✓	✓		
-Are retention times (RT) correct?	✓	✓		
-Manual integrations checked?	NA	NA		

Comments: (Use other side if necessary)

* Recovery limits:		**RPD limits:
NCASI 551:	40-120%***	50%
Method 8290:	40-135%***	20%
Method 1613:	25-150%***	50%
Method 23:	40-130%***(Cl4-Cl6), 25-130%(Cl7-8), 70-130%(surr.)	50%
PCBs:	25-150%***	50%
Method 8280:	40-120%***	
DFLM01.0:	25-150%***	
Method 1614	25-150%***	

*** Lower recoveries are acceptable if I.S. S/N ≥10:1 and DL's are <LCL for target analytes.

TestAmerica West Sacramento
Low Resolution Prep Log
Dioxin/Furan WW Extraction

Batch: 0130174
MS Run #:
Prep Date: 5/10/2010

Box # N/A

Shared QC Batch: 0130197

Shares QC With: G0D270571

Internal COC:	
Delivered to Inst.:	5.11.10
Inst Receipt:	

Method: R7 8280A
Matrix: I WATER
Extraction: DB EXTRACTION: Soxhlet and Sep Funnel
QC: 01 STANDARD TEST SET
SAC: R7 - I - DB - 01

Soxhlet time on: 1100 Soxhlet time off: 13:45

Prep Reagents		
Reagent	**Supplier**	**Lot #**
DCM	Baker	H46S09
Toluene	Baker	JLN80
Hexane	Baker	H49E39
H2SO4	Baker	N/A
20% DCM:Hexane	NA	3592-7A
65% DCM:Hexane	NA	3592-7C
1:1 DCM:Cyclohexane	NA	N/A
75:20:5 DCM:Hexane:Benzene	NA	N/A
Silica Gel	N/A	3592-7D
Acid Alumina	MP	L9
5% Carbon:Silica Gel	N/A	N/A

Extraction Table

Sample ID	Suff	Work Order	Extraction Hold Time Expires	Sample size * 1000ml	Bottle + Sample Weight	Empty Bottle Weight	Final Volume 50uL	Final Volume Other	Analysis Hold Time Expires	Sox Ext ID	AQ Ext ID	RB ID	Rotovap ID
A0D300605 - 5		L0VEJ1AA	5/28/2010	1029.45	1528.18	498.73	50uL		6/24/2010				
G0D290496 - 1		L0QG41AA	5/27/2010	1000.48	1501.65	500.06	50uL		6/24/2010				
G0D290499 - 1		L0QHW1AA	5/27/2010	1020.13	1521.75	500.44	50uL		6/24/2010				
G0E030422 - 1		L0WTR1AA	5/28/2010	1031.78	1534.68	502.85	50uL	3.1uL DCB	6/24/2010				
G0E100000 - 174	B	L09N01AA	5/28/2010	1000.00			50uL		6/24/2010		5.11.10		
G0E100000 - 174	C	L09N01AC	5/28/2010	1000.00		5.10.10	50uL		6/24/2010				

G0D290496-1 501.17
G0D290499-1 501.24

* See attached sheet for sample volumes recorded from scale

Comments/NCMs: _____

	ID	Spike Exp Date:	Spiked By:	Witnessed By:	Date:
-Internal Standard All Samples	SDML 09LRES0165	7.1.10	63		5.10.10
Spike Mix LCS/LCSD/MS/MS	SDML WWEES069	12.2.10	63		5.10.10
Cleanup Standard All Samples	SDML10LRES009	5.24.11	63		5-11.10
Recovery Standard All Samples	SDML 10LRES013	4/13/11			5/11/10

Liq Liq Extraction Analyst/Date	Soxhlet Extraction Analyst/Date
5.11.10 63	5.10.10 63

Split/Archive Analyst/Date	Option C Analyst/Date	IFB Analyst/Date	D2 Analyst/Date
—	—	5.11.10 63	—

RQC058

TestAmerica Laboratories, Inc.
EXTRACTION BENCH WORKSHEET

Run Date: 5/11/10
Time: 11:26:05

LEV 1	LEV 2		LEV 1	LEV 2	
Y	_	Blank	Y	_	Weights/Volumes
Y	_	Check	Y	_	Spike & Surrogate Worksheet
_	_	MS/MSD	Y	_	Vial contains correct volume
_	_		Y	_	Labels, greenbars, worksheets
			_	_	computer batch: correct & all match
			_	_	Anomalies to Extraction Method

_ Expanded Deliverable
_ COC Completed
Y Bench Sheet Copied
_ Package Submitted to AnalyticalGroup
_ Bench Sheet Copied per COC

Extractionist: 013637 George Burkett

Concentrationist: 013737 George Burkett

Reviewer/Date: BURKETTG / 5/11/10

QC BATCH: 0130174

PREP DATE: 5/10/10
COMP DATE: 5/10/10

Dioxins/Furans, HRGC/LRMS (8280A)
EXTRACTION: Soxhlet and Sep Funnel

EXTR EXPR	ANL DUE	LOT#,MSRUN#/ WORK ORDER	TEST FLGS	EXT	MTH	MATRIX	INIT/FIN WT/VOL	INIT	PH"S ADJ1	ADJ2	SOLVENTS EXTRACTION	VOL	EXCHANGE	VOL	SPIKE STANDARD/ SURROGATE ID
5/27/10	5/17/10	G0D290496-001 **L0QG4-1-AA**		DB	R7	WATER	**1000.48mL** 50.00uL	NA	NA	NA	DCM/TOL	300.0	C-14	50.0	50UL 09LRES065
COMMENTS:															
5/27/10	5/17/10	G0D290499-001 **L0QHW-1-AA**		DB	R7	WATER	**1020.13mL** 50.00uL	NA	NA	NA	DCM/TOL	300.0	C-14	50.0	50UL 09LRES065
COMMENTS:															
5/28/10	5/14/10	A0D300605-005 **L0VEJ-1-AA**	D	DB	R7	WATER	**1029.45mL** 50.00uL	NA	NA	NA	DCM/TOL	300.0	C-14	50.0	50UL 09LRES065
COMMENTS:															
5/28/10	5/14/10	G0E030422-001 **L0WTR-1-AA**	R	DB	R7	WATER	**1031.78mL** 50.00uL	NA	NA	NA	DCM/TOL	300.0	C-14	50.0	50UL 09LRES065
COMMENTS:															
5/28/10	0/00/00	G0E100000-174 **L09N0-1-AAB**		DB	R7	WATER	**1000.00mL** 50.00uL	NA	NA	NA	DCM/TOL	300.0	C-14	50.0	50UL 09LRES065
COMMENTS:															
5/28/10	0/00/00	G0E100000-174 **L09N0-1-ACC**		DB	R7	WATER	**1000.00mL** 50.00uL	NA	NA	NA	DCM/TOL	300.0	C-14	50.0	50UL 09LRES069 50UL 09LRES065
COMMENTS:															

R = RUSH C = CLP
E = EPA 600 D = EXP.DEL)
M = CLIENT REQ MS/MSD

NUMBER OF WORK ORDERS IN BATCH: 6

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

West Sacramento

Preparation Data Review Checklist

Prep Batch(es) 0130174 **Test:** 8260

Prep Date: 5/11/10 **Holding Times:** 5/27/10 **NCM:** Y (N)

A. Spike Witness/Batch setup	Spike Witness	Reviewer
1. **Holding times checked?** NCMs filed as appropriate	—	\
2. QAS checked for QC instructions (LCS, LCSD, MS,MSD, etc)	/	\
3. Amount of samples in hood match amount of samples on bench sheet. Sample IDS match.	/	NA
4. Worksheets have been checked for required spiking compounds	/	\
5. Spiking volumes are correctly documented	/	\
6. Std ID numbers on spike labels match numbers on bench sheet	/	NA
7. Expiration dates have been checked	/	\
8. Calibration expiration dates on pipettors have been checked	/	NA
9. Spiker and spike witness have signed and dated bench sheet	/	\
B. Weights and Volumes		\
1. Recorded weights are in anticipated range	NA	\
2. Balance upload or raw data for weights is included	NA	\
3. Weights and volumes have been transcribed correctly to LIMS.	NA	\
4. Weights are not targeted to meet exact weights.	NA	\
5. Each weight or volume measurement is a unique record (no dittos or line downs)	NA	\
C. Standards and Reagents		\
1. Lot numbers for all reagents, including clean up stages, are recorded.	NA	\
2. Are dates and analysts for cleanups recorded?	NA	\
3. Are correct IDs used for standards? Are expiration dates to day/month/year, when listed?	NA	\
D. Documentation		\
1. Are all nonconformances documented appropriately?	NA	\
2. QuantIMs entry correct, including dates and times.	NA	\
3. Are all fields completed?	NA	\

Spike witness: [signature] Date: 5/10/10

2nd Level Reviewer: [signature] Date: 5/11/10

Comments:

TestAmerica West Sacramento

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Data Checklist
HRGCMS/LRGCMS Analyses

Lot ID #: AOD300605 Method ID: 8280

Sample # _____

	DB-5	DB-225
Data Analyst:	AK	
Date initiated:	5/14/10	
Reviewer:	Murray	
Date reviewed:	5/14/2010	

QA/QC verification:	Initiated DB-5	Reviewed DB-5	Initiated DB-225 (High Res Only)	Reviewed DB-225 (High Res Only)
-Daily standard package(s) present?	✓	✓		
-Method Blank present?	✓	✓		
-LCS/DCS copy present and meets native recovery criteria?	✓	✓		
-Internal standard recoveries within limits?*	✓	✓		
-Ion ratios within + 15% of theoretical values?	✓	✓		
-Other QC (Dup,MS,SD) within specs?**	NA	NA		

Sample Analysis:	Initiated DB-5	Reviewed DB-5	Initiated DB-225 (High Res Only)	Reviewed DB-225 (High Res Only)
-Correct sample aliquot used?	✓	✓		
-All raw data present?	✓	✓		
-Standard target DL's used? If RL's are used specify:_____	✓	✓		
-DL's below (DL) LCL (please circle)?	✓	✓		
-All positives reported at levels greater than method blank DL's?	✓	✓		
-Correct RRF's used for method?	✓	✓		
-Internal standard amounts correct for method?	✓	✓		
-Target analytes are not saturated?	✓	✓		
-Dilution/splitting of extract taken into account?	NA	NA		
-Have dilution calculations been verified?	NA	NA		
-Has a manual calculation for the sequence(s) been verified?	✓	✓		
-Are retention times (RT) correct?	✓	✓		
-Manual integrations checked?	NA	NA		

Comments: (Use other side if necessary)

* Recovery limits:		**RPD limits:
NCASI 551:	40-120%***	50%
Method 8290:	40-135%***	20%
Method 1613:	25-150%***	50%
Method 23:	40-130%***(Cl4-Cl6), 25-130%(Cl7-8), 70-130%(surr.)	50%
PCBs:	25-150%***	50%
Method 8280:	40-120%***	
DFLM01.0:	25-150%***	
Method 1614	25-150%***	

*** Lower recoveries are acceptable if I.S. S/N ≥10:1 and DL's are <LCL for target analytes.

North Canton

TestAmerica Laboratories, Inc.

SAMPLE ANALYSIS REQUISTION

Laboratory **TestAmerica West Sacramento**
880 Riverside Parkway
West Sacramento, CA 95605

Lab Request SR119001

Report Package: **Expanded Deliverables**

Need Analytical Report 2010-05-14

Client Code: 385158

Project Manager: MARK LOEB

Sample I.D.	Work Order Number	Client Sample ID	Sampling Date	Analysis Required
A0D300605-1	L0VEC	13MW3	2010-04-27 7:45	WATER, 8280A, Dioxins/Furans, HRGC/LRMS
A0D300605-2	L0VEF	13MW4	2010-04-27 8:55	WATER, 8280A, Dioxins/Furans, HRGC/LRMS
A0D300605-3	L0VEG	13MWDUP	2010-04-27 9:10	WATER, 8280A, Dioxins/Furans, HRGC/LRMS
A0D300605-4	L0VEH	13MW5	2010-04-28 8:55	WATER, 8280A, Dioxins/Furans, HRGC/LRMS
A0D300605-4 S	L0VEH	13MW5 ms/msd	2010-04-28 8:55	WATER, 8280A, Dioxins/Furans, HRGC/LRMS
A0D300605-4 D	L0VEH	13MW5	2010-04-28 8:55	WATER, 8280A, Dioxins/Furans, HRGC/LRMS
A0D300605-5	L0VEJ	13MW6	2010-04-28 7:35	WATER, 8280A, Dioxins/Furans, HRGC/LRMS
A0D300605-6	L0VEL	13MW7	2010-04-28 10:55	WATER, 8280A, Dioxins/Furans, HRGC/LRMS

Please use Client Sample ID for report

Call MARK LOEB with questions at 330-497-9396

at the TAL North Canton Laboratory

Shipping Method: FED EX

Need detection limit and analysis date included in report.

Please send a signed copy of this form with the report at completion of analysis.

Relinquished by: _____ Date/Time: 4/30/10 1800

Relinquished by: _____ Date/Time: _____

Received for lab by: _____ Date/Time: 5-1-10/1115

PLEASE RETURN ORIGINAL SAMPLE ANALYSIS REQUISITION

540

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

LOT RECEIPT CHECKLIST
TestAmerica West Sacramento

CLIENT TAL-NCanton PM KD LOG # 64538

LOT# (QUANTIMS ID) A0D300605 QUOTE# NA LOCATION WHD

Checked (✓)

DATE RECEIVED 5-1-10 TIME RECEIVED 930 ☑

DELIVERED BY ☑ FEDEX ☐ ON TRAC ☐ CLIENT

☐ GOLDENSTATE ☐ UPS ☐ GO-GETTERS ☐ OTHER

☐ TAL COURIER ☐ TAL SF ☐ VALLEY LOGISTICS ☑

CUSTODY SEAL STATUS ☑ INTACT ☐ BROKEN ☐ N/A ☑

CUSTODY SEAL #(S) Strat

SHIPPPING CONTAINER(S) ☑ TAL ☐ CLIENT ☐ N/A ☑

COC #(S) NA ☑

TEMPERATURE BLANK Observed: 0° Corrected: 1

SAMPLE TEMPERATURE - (TEMPERATURES ARE IN °C)

Observed: 1, 0, 1 Average 1 Corrected Average 1

LABORATORY THERMOMETER ID:

IR UNIT: #4 ☐ #5 ☑ ☐ OTHER _____ ☑

Initials: DK Date: 5-1-10

==========

pH MEASURED ☐ YES ☐ ANOMALY ☑ N/A ☑

LABELED BY..... ☑

LABELS CHECKED BY..... ☑

PEER REVIEW _____ ☑ NA

SHORT HOLD TEST NOTIFICATION

SAMPLE RECEIVING ☑

WETCHEM ☑ N/A ☑

VOA-ENCORES ☑ N/A ☑

☐ METALS NOTIFIED OF FILTER/PRESERVE VIA VERBAL & EMAIL ☑ N/A ☑

☐ COMPLETE SHIPMENT RECEIVED IN GOOD CONDITION WITH APPROPRIATE TEMPERATURES, CONTAINERS, PRESERVATIVES ☐ N/A ☑

☑ CLOUSEAU ☑ TEMPERATURE EXCEEDED (2 °C – 6 °C)*1 ☐ N/A

☑ WET ICE ☐ BLUE ICE ☐ GEL PACK ☐ NO COOLING AGENTS USED ☐ PM NOTIFIED

Initials: DK Date: 5-1-10

Notes _____

*1 Acceptable temperature range for State of Wisconsin samples is ≤4°C.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

END OF REPORT

CompuChem

A Division Of

Liberty Analytical Corp.

11/30/2010

JANET FRAZIER

DRAPER

2206 SOUTH MAIN STREET

BLACKSBURG, VA 24060

Subject:

Report of Data - Project: RAAP HWMU13 (OBG)/B03204-08 WorkOrder: 1010107

Attn.: JANET FRAZIER

Enclosed are the results of analytical work performed in accordance with the referenced account number. This report covers sample(s) appearing on the listing.

Thank you for selecting CompuChem for your sample analysis. If you should have questions or require additional analytical services, please contact your representative at 1-800-833-5097

Sincerely,

Compuchem

a division of Liberty Analytical Corporation

Attachment

TOTAL NUMBER

OF PAGES _____

501 Madison Avenue, Cary, NC 27513 Tel: 919-379-4100 Fax: 919-379-4050

CompuChem, a division of Liberty Analytical

Client: DRAPER **Work:** 1010107

Project: RAAP HWMU13 (OBG)/B03204-08 **Sdg:** 1010107

Lab ID	Client ID	Matrix	Date Sampled	Date Received
1010107-01	13MW5	Water	10/19/2010 08:30	10/20/2010 09:36
1010107-02	13MW1	Water	10/18/2010 11:05	10/20/2010 09:36
1010107-03	13MW2	Water	10/18/2010 12:00	10/20/2010 09:36
1010107-04	13MW3	Water	10/18/2010 08:00	10/20/2010 09:36
1010107-05	13MW4	Water	10/18/2010 09:10	10/20/2010 09:36
1010107-06	13MWDUP	Water	10/19/2010 07:30	10/20/2010 09:36
1010107-07	13MW6	Water	10/18/2010 10:10	10/20/2010 09:36
1010107-08	13MW7	Water	10/19/2010 09:45	10/20/2010 09:36

CompuChem, a Division of Liberty Analytical Corporation

I. SAMPLE DATA SUMMARY PACKAGE

GC by SW-846

The sample data summary package shall contain data for all samples in one Sample Delivery Group (SDG) of the Case, as follows:

A. SDG Narrative

B. Tabulated target compound results (Form I)

C. Surrogate spike analysis results (Form II)
By matrix (Water or Soil), and
by concentration (Low, or Medium)

D. Spike results MS / MSD / LCS (Form III)

E. Blank data (Form IV)
Tabulated blank results (Form I)

LAB CODE: LIBRTY

METHOD: 8330B-8332

SDG #: 1010107

A. SDG Narrative

CompuChem

a division of Liberty Analytical Corporation
501 Madison Avenue
Cary, N.C. 27513
Tel: 919/379-4100 Fax: 919/379-4050

SDG NARRATIVE
SDG # 1010107
PROTOCOL: SW-846 8330B & 8332

SAMPLE IDENTIFICATIONS: 13MW1, 13MW2, 13MW3, 13MW4, 13MW5, 13MW6, 13MW7, 13MWDUP

The eight water samples listed above were received intact, refrigerated between 0.1 and 1.0°C, with proper documentation, in sealed shipping containers, on October 20, 2010. The samples were scheduled for the requested analyses of the explosives fraction. Methods 8330B and 8332 (Nitroglycerin only) were used to prepare and analyze the samples, with the exceptions and/or additions requested by the client. This portion of the SDG narrative deals with the explosives analysis only. All pertinent Quality Assurance notices are included in the narrative section and all pertinent Laboratory notices for SDG # 1010107 are included in the sample data sections.

Explosives

Extraction and analysis holding time requirements were met for the samples, and also meet the requirement set forth in SW-846 8330B.

No target analytes confirmed above the Quantitation Limit (QL) in the samples.

All QC criteria were met for all initial and continuing calibration standards associated to this SDG.

All of the surrogates met recovery and retention time criteria.

The associated method blank met all quality control criteria.

Duplicate matrix spikes (MS/MSD) were performed with sample 13MW5, and met recovery and precision criteria. The associated Laboratory Control Sample (LCS) prepared and analyzed along with the samples met recovery criteria.

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 above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Teresa Amentt Jennings

Teresa Amentt Jennings
GC/HPLC Data Reviewer
November 8, 2010

GC and GC/MS Column and Trap Specifications Table

SDG #: 1010107

COLUMNS

Columns Utilized	Brand Name	Coating Material	ID (mm)	Film Thickness (um)	Length (m)
	GC Laboratory				
	Restek	RTX-5	0.53	1.0	30
	Restek	RTX-SMS	0.53	1.0	30
	Restek	clpest	0.32	0.5	30
	Restek	clpest2	0.32	0.42	30
	J&W	DB-210	0.53	1.0	30
	J&W	GS-GASPRO	0.32	N/A	30
	GC Volatiles Laboratory				
	Restek	RTX-Volatiles	0.53	2.0	30
	GC/MS Volatiles Laboratory				
	Restek	RTX-VMS	0.18	1.0	20
	Supelco	SPB-624	0.32	1.8	60
	Supelco	SPB-624	0.53	3.0	75
	Phenomonex	ZB-624	0.32	1.8	60
	GC/MS Semivolatiles Laboratory				
	Restek	RTX-5MS	0.32	0.25	30
	HPLC Laboratory				
	Supelco	Supelcosil LC-PAH	4.6	5.0	15 cm
	Supelco	Discovery RP Amide C16	4.6	5.0	25 cm
✓	Restek	Pinnacle Cyano	4.6	5.0	25 cm
✓	Restek	Allure C18	4.6	5.0	25 cm

TRAPS

GC and GC/MS Volatiles Laboratory	
Supelco J (BETXTRAP™)	* 7.7 cm Carbopack C
	* 1.2 cm Carbopack B
Supelco K (Vocarb3000)	* 10 cm of Carbopack B (Graphitized Carbons)
	* 6 cm of Carboxen 1000 (Carbon molecular sieves)
	* 1 cm of Carboxen 1001 (Carbon molecular sieves)

Rev. 28

CompuChem

a division of Liberty Analytical Corporation

CompuChem's Pagination Convention

As required by the EPA CLP Statement of Work (SOW) documents, data to be delivered must be paginated (by machine or hand). In the event that the initial numbering is incorrect (a page numbered twice or a page skipped, for example), it is CompuChem's policy to add an alphabetic suffix to a page number when necessary (e.g., 100A, 100B, etc.).

CompuChem

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Notification Regarding Manual Editing/Integration Flags

In some instances, manual adjustments to the software output are necessary to provide accurate data. These manual integrations are performed by the data reviewers, GC/MS operators, or GC chemists. An Extracted Ion Current Profile (EICP) or a GC chromatographic peak has been provided for the manual integration performed on each compound to demonstrate the accuracy of that process. The manual integrations are flagged on the quantitation report in the far right column beyond the FINAL concentration for GC/MS analysis, and in the "Flags" column for GC analysis. The manual editing/integration flags are:

M - Denotes that a manual integration has been performed for this compound. The manual integration was performed in order to provide the most accurate area count possible for the peak.

H - Denotes that the data reviewer, GC/MS operator, or GC Chemist has chosen an alternate peak within the retention time window from that chosen by the software for that compound. No manual integration is performed in choosing an alternate peak. The software still performs the integration.

MH - Denotes that an alternate peak has been chosen within the retention time window from that chosen by the software for that compound and also a manual integration of the chosen peak has been performed. The manual integration was performed in order to provide the most accurate area count possible for the peak.

L - Denotes that a data reviewer or GC/MS operator has selected an alternate library search. This is typically done when an additional tentatively identified compound (TIC) has been added to the number of peaks searched. No manual integration is performed in choosing an alternate peak. The software still performs the integration.

ML - Denotes that an alternate library search has been selected and a manual integration has also been performed. This is typically done when an additional TIC has been added and the TIC peak also required a manual integration.

The EPA CLP SOW documents require additional explanations for manual editing/integration. In the accompanying raw data packages, additional codes have been applied to the "M" flag and carry the following meanings;

M1 - The compound was not found by the automatic integration routine.

M2 - The compound was incorrectly integrated by the automatic integration routine.

M3 - The co-eluting compounds were incorrectly integrated by the automatic integration routine.

These codes will appear in the GC/MS and GC raw data.

Revision 7 (12/6/2005)

CompuChem

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DATA REPORTING QUALIFIERS

On the Form I, under the column labeled "Q" for qualifier, each result is flagged with the specific data reporting qualifiers listed below, as appropriate. Up to five qualifiers may be reported on Form I for each compound. The qualifiers used are:

U : This flag indicates the compound was analyzed for but not detected. The Contract Required Quantitation Limit (CRQL), or reporting limit, will be adjusted to reflect any dilution and, for soils, the percent moisture.

J : This flag indicates an estimated value. The flag is used as detailed below:

1. When estimating a concentration for tentatively identified compounds (TICs) where a response factor of 1:1 is assumed for the TIC analyte,

2. When the mass spectral and retention time data indicate the presence of a compound that meets the volatile and semivolatile GC/MS identification criteria, and the result is less than the adjusted CRQL (or Reporting Limit) but greater than zero, and

3. When the retention time data indicate the presence of a compound that meets the pesticide and/or Aroclor or other GC or HPLC identification criteria, and the result is less than the adjusted CRQL (or Reporting Limit) but greater than zero. For example, if the CRQL (or Reporting Limit) is 10 µg/L, but a concentration of 3 µg/L is calculated, it is reported as 3J.

N : This flag indicates presumptive evidence of a compound. This flag is only used for TICs, where the identification is based on a mass spectral library search and must be used with the J flag. For generic characterization of a TIC such as "chlorinated hydrocarbon" (or for an "unknown," with no matches ≥ 85% in the SOM01.2 SOW document), the N flag is not used.

P : In the EPA's Contract Laboratory Program (CLP), this flag is used for a pesticide/Aroclor target analyte, when there is greater than 25% difference for detected concentrations between the two GC columns. The lower of the two values is reported on the Form I and flagged with a P.
For SW-846 GC and HPLC analyses, when the Relative Percent Difference (RPD) is greater than 40% and there is no evidence of chromatographic anomalies or interferences, then the lower of the two values is reported and flagged with a P. When the RPD is equal to or less than 40%, our policy is to also report the lower of the two values, although the choice could be a project specific issue. These SW-846 policies are consistent with Method 8000C. If Method 8000B is required, the higher of the two values is reported. For certain HPLC analyses, if one of the HPLC columns displays co-elution of target analytes, all results are reported from a primary column displaying no co-elution. Results are still flagged with a P if the RPD between columns is greater than 40%.

C : This flag applies to GC or HPLC results where the identification has been confirmed by GC/MS. If GC/MS confirmation was attempted but was unsuccessful, this flag is not applied; a laboratory-defined flag is used instead (see the X/Y/Z qualifier.)

DATA REPORTING QUALIFIERS (continued)

B : This flag is used when the analyte is found in the associated blank as well as in the sample. It indicates probable blank contamination and warns the data user to take appropriate action. This flag is used for a TIC as well as for a positively identified target compound. The combination of flags BU or UB is not an allowable policy. Blank contaminants are flagged B only when they are detected in the sample.

E : This flag identifies compounds whose concentrations exceed the upper level of the calibration range of the instrument for that specific analysis. If one or more compounds have a concentration greater than the upper level of the calibration range, the sample or extract will be diluted and reanalyzed. All such compounds with a concentration greater than the upper level of the calibration range will have the result flagged with an E on Form I for the original analysis.

D : If a sample or extract is reanalyzed at a higher dilution factor, for example when the concentration of an analyte exceeds the upper calibration range, the DL suffix is appended to the sample number on the Form I for the more diluted sample, and **all** reported concentrations on that Form I are flagged with the D flag. This flag alerts data users that any discrepancies between the reported concentrations may be due to dilution of the sample or extract.

NOTE 1: The D flag is not applied to compounds which are not detected in the sample analysis i.e. compounds reported with the CRQL (or Reporting Limit) and the U flag.

NOTE 2: Separate Forms I are used for reporting the original analysis (Client Sample No. XXXXX) and the more diluted sample analysis (Client Sample No. XXXXXDL) i.e. the results from both analyses are not combined on a single Form I.

A: This flag indicates that a TIC is a suspected aldol-condensation product.

S: In the SOM01.2 SOW document, this flag is used to indicate an estimated value for Aroclor target compounds where a valid 5-point initial calibration was not performed prior to the analytes detection in a sample. If an "S" flag is used for a specific Aroclor, then a reanalysis of the sample is required after a valid 5-point calibration is performed for the detected Aroclor.

X/Y/Z : Other specific flags may be required to properly define the results. If used, the flags will be fully described in the SDG Narrative. The laboratory-defined flags are limited to X, Y, and Z.

B. Form I

Organic Analysis Data Sheet (OADS)
- All samples in alphanumeric order
- Matrix Spike/Matrix Spike Duplicate
- Laboratory Control Sample(s)

1D

GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

13MW1

Lab Name: COMPUCHEM Contract: 8330B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 1010107-02

Sample wt/vol: 500.0 (g/ml) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 10/20/10

Extraction: (SepF/Cont/Sonc) SOLIDPHASE Date Extracted:10/22/10

Concentrated Extract Volume: 10000(ul) Date Analyzed: 10/22/10

Injection Volume: 10.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-35-4	1,3,5-Trinitrobenzene	2.50	U
99-65-0	1,3-Dinitrobenzene	2.50	U
606-20-2	2,6-Dinitrotoluene	5.00	U
121-14-2	2,4-Dinitrotoluene	5.00	U

1D

GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

13MW2

Lab Name: COMPUCHEM Contract: 8330B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 1010107-03

Sample wt/vol: 500.0 (g/ml) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 10/20/10

Extraction: (SepF/Cont/Sonc) SOLIDPHASE Date Extracted:10/22/10

Concentrated Extract Volume: 10000(ul) Date Analyzed: 10/22/10

Injection Volume: 10.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-35-4	1,3,5-Trinitrobenzene	2.50	U
99-65-0	1,3-Dinitrobenzene	2.50	U
606-20-2	2,6-Dinitrotoluene	5.00	U
121-14-2	2,4-Dinitrotoluene	5.00	U

FORM I PEST

1D

GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

13MW3

Lab Name: COMPUCHEM Contract: 8330B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 1010107-04

Sample wt/vol: 500.0 (g/ml) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 10/20/10

Extraction: (SepF/Cont/Sonc) SOLIDPHASE Date Extracted:10/22/10

Concentrated Extract Volume: 10000(ul) Date Analyzed: 10/22/10

Injection Volume: 10.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-35-4	1,3,5-Trinitrobenzene	2.50	U
99-65-0	1,3-Dinitrobenzene	2.50	U
606-20-2	2,6-Dinitrotoluene	5.00	U
121-14-2	2,4-Dinitrotoluene	5.00	U

FORM I PEST

1D

GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

13MW4

Lab Name: COMPUCHEM Contract: 8330B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 1010107-05

Sample wt/vol: 500.0 (g/ml) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 10/20/10

Extraction: (SepF/Cont/Sonc) SOLIDPHASE Date Extracted:10/22/10

Concentrated Extract Volume: 10000(ul) Date Analyzed: 10/22/10

Injection Volume: 10.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-35-4	1,3,5-Trinitrobenzene	2.50	U
99-65-0	1,3-Dinitrobenzene	2.50	U
606-20-2	2,6-Dinitrotoluene	5.00	U
121-14-2	2,4-Dinitrotoluene	5.00	U

FORM I PEST

1D

GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

13MW5

Lab Name: COMPUCHEM Contract: 8330B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 1010107-01

Sample wt/vol: 500.0 (g/ml) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 10/20/10

Extraction: (SepF/Cont/Sonc) SOLIDPHASE Date Extracted:10/22/10

Concentrated Extract Volume: 10000(ul) Date Analyzed: 10/22/10

Injection Volume: 10.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-35-4	1,3,5-Trinitrobenzene	2.50	U
99-65-0	1,3-Dinitrobenzene	2.50	U
606-20-2	2,6-Dinitrotoluene	5.00	U
121-14-2	2,4-Dinitrotoluene	5.00	U

FORM I PEST

1D

GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

13MW5MS

Lab Name: COMPUCHEM Contract: 8330B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 0102119-MS1

Sample wt/vol: 500.0 (g/ml) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 10/20/10

Extraction: (SepF/Cont/Sonc) SOLIDPHASE Date Extracted:10/22/10

Concentrated Extract Volume: 10000(ul) Date Analyzed: 10/22/10

Injection Volume: 10.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-35-4	1,3,5-Trinitrobenzene	6.81	
99-65-0	1,3-Dinitrobenzene	7.42	
606-20-2	2,6-Dinitrotoluene	11.64	
121-14-2	2,4-Dinitrotoluene	7.89	

FORM I PEST

1D

GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

13MW5MSD

Lab Name: COMPUCHEM Contract: 8330B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 0102119-MSD1

Sample wt/vol: 500.0 (g/ml) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 10/20/10

Extraction: (SepF/Cont/Sonc) SOLIDPHASE Date Extracted:10/22/10

Concentrated Extract Volume: 10000(ul) Date Analyzed: 10/22/10

Injection Volume: 10.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-35-4	1,3,5-Trinitrobenzene	6.98	
99-65-0	1,3-Dinitrobenzene	7.55	
606-20-2	2,6-Dinitrotoluene	11.66	
121-14-2	2,4-Dinitrotoluene	8.05	

FORM I PEST

1D

GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

13MW6

Lab Name: COMPUCHEM Contract: 8330B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 1010107-07

Sample wt/vol: 500.0 (g/ml) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 10/20/10

Extraction: (SepF/Cont/Sonc) SOLIDPHASE Date Extracted:10/22/10

Concentrated Extract Volume: 10000(ul) Date Analyzed: 10/22/10

Injection Volume: 10.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-35-4	1,3,5-Trinitrobenzene	2.50	U
99-65-0	1,3-Dinitrobenzene	2.50	U
606-20-2	2,6-Dinitrotoluene	5.00	U
121-14-2	2,4-Dinitrotoluene	5.00	U

FORM I PEST

1D

GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

13MW7

Lab Name: COMPUCHEM Contract: 8330B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 1010107-08

Sample wt/vol: 500.0 (g/ml) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 10/20/10

Extraction: (SepF/Cont/Sonc) SOLIDPHASE Date Extracted:10/22/10

Concentrated Extract Volume: 10000(ul) Date Analyzed: 10/22/10

Injection Volume: 10.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-35-4	1,3,5-Trinitrobenzene	2.50	U
99-65-0	1,3-Dinitrobenzene	2.50	U
606-20-2	2,6-Dinitrotoluene	5.00	U
121-14-2	2,4-Dinitrotoluene	5.00	U

FORM I PEST

1D

GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

13MWDUP

Lab Name: COMPUCHEM Contract: 8330B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 1010107-06

Sample wt/vol: 500.0 (g/ml) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 10/20/10

Extraction: (SepF/Cont/Sonc) SOLIDPHASE Date Extracted:10/22/10

Concentrated Extract Volume: 10000(ul) Date Analyzed: 10/22/10

Injection Volume: 10.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-35-4	1,3,5-Trinitrobenzene	2.50	U
99-65-0	1,3-Dinitrobenzene	2.50	U
606-20-2	2,6-Dinitrotoluene	5.00	U
121-14-2	2,4-Dinitrotoluene	5.00	U

FORM I PEST

1D

GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PEKLCS

Lab Name: COMPUCHEM Contract: 8330B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 0102119-BS1

Sample wt/vol: 500.0 (g/ml) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received:

Extraction: (SepF/Cont/Sonc) SOLIDPHASE Date Extracted:10/22/10

Concentrated Extract Volume: 10000(ul) Date Analyzed: 10/22/10

Injection Volume: 10.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-35-4	1,3,5-Trinitrobenzene	6.73	
99-65-0	1,3-Dinitrobenzene	7.08	
606-20-2	2,6-Dinitrotoluene	11.34	
121-14-2	2,4-Dinitrotoluene	7.84	

FORM I PEST

1D

GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

13MW1

Lab Name: COMPUCHEM Contract: 8332

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 1010107-02

Sample wt/vol: 500.0 (g/ml) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 10/20/10

Extraction: (SepF/Cont/Sonc) SOLIDPHASE Date Extracted:10/22/10

Concentrated Extract Volume: 10000(ul) Date Analyzed: 10/22/10

Injection Volume: 10.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
55-63-0	Nitroglycerin	16	U

FORM I PEST

1D

GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

13MW2

Lab Name: COMPUCHEM Contract: 8332

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 1010107-03

Sample wt/vol: 500.0 (g/ml) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 10/20/10

Extraction: (SepF/Cont/Sonc) SOLIDPHASE Date Extracted:10/22/10

Concentrated Extract Volume: 10000(ul) Date Analyzed: 10/22/10

Injection Volume: 10.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
55-63-0	Nitroglycerin	16	U

FORM I PEST

1D

GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

13MW3

Lab Name: COMPUCHEM Contract: 8332

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 1010107-04

Sample wt/vol: 500.0 (g/ml) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 10/20/10

Extraction: (SepF/Cont/Sonc) SOLIDPHASE Date Extracted:10/22/10

Concentrated Extract Volume: 10000(ul) Date Analyzed: 10/22/10

Injection Volume: 10.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
55-63-0	Nitroglycerin	16	U

FORM I PEST

1D

GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

13MW4

Lab Name: COMPUCHEM Contract: 8332

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 1010107-05

Sample wt/vol: 500.0 (g/ml) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 10/20/10

Extraction: (SepF/Cont/Sonc) SOLIDPHASE Date Extracted:10/22/10

Concentrated Extract Volume: 10000(ul) Date Analyzed: 10/22/10

Injection Volume: 10.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
55-63-0	Nitroglycerin	16	U

FORM I PEST

1D

GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

13MW5

Lab Name: COMPUCHEM Contract: 8332

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 1010107-01

Sample wt/vol: 500.0 (g/ml) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 10/20/10

Extraction: (SepF/Cont/Sonc) SOLIDPHASE Date Extracted:10/22/10

Concentrated Extract Volume: 10000(ul) Date Analyzed: 10/22/10

Injection Volume: 10.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
55-63-0	Nitroglycerin	16	U

FORM I PEST

1D

EPA SAMPLE NO.

GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

13MW5MS

Lab Name: COMPUCHEM Contract: 8332

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 0102119-MS2

Sample wt/vol: 500.0 (g/ml) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 10/20/10

Extraction: (SepF/Cont/Sonc) SOLIDPHASE Date Extracted:10/22/10

Concentrated Extract Volume: 10000(ul) Date Analyzed: 10/22/10

Injection Volume: 10.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
55-63-0	Nitroglycerin	18	

1D

GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

13MW5MSD

Lab Name: COMPUCHEM Contract: 8332

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 0102119-MSD2

Sample wt/vol: 500.0 (g/ml) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 10/20/10

Extraction: (SepF/Cont/Sonc) SOLIDPHASE Date Extracted:10/22/10

Concentrated Extract Volume: 10000(ul) Date Analyzed: 10/22/10

Injection Volume: 10.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
55-63-0	Nitroglycerin	17	

FORM I PEST

1D

GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

13MW6

Lab Name: COMPUCHEM Contract: 8332

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 1010107-07

Sample wt/vol: 500.0 (g/ml) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 10/20/10

Extraction: (SepF/Cont/Sonc) SOLIDPHASE Date Extracted:10/22/10

Concentrated Extract Volume: 10000(ul) Date Analyzed: 10/22/10

Injection Volume: 10.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
55-63-0	Nitroglycerin	16	U

FORM I PEST

1D

GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

13MW7

Lab Name: COMPUCHEM Contract: 8332

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 1010107-08

Sample wt/vol: 500.0 (g/ml) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 10/20/10

Extraction: (SepF/Cont/Sonc) SOLIDPHASE Date Extracted:10/22/10

Concentrated Extract Volume: 10000(ul) Date Analyzed: 10/22/10

Injection Volume: 10.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
55-63-0	Nitroglycerin	16	U

FORM I PEST

1D

GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

13MWDUP

Lab Name: COMPUCHEM Contract: 8332

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 1010107-06

Sample wt/vol: 500.0 (g/ml) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 10/20/10

Extraction: (SepF/Cont/Sonc) SOLIDPHASE Date Extracted:10/22/10

Concentrated Extract Volume: 10000(ul) Date Analyzed: 10/22/10

Injection Volume: 10.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
55-63-0	Nitroglycerin	16	U

FORM I PEST

1D

GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PETLCS

Lab Name: COMPUCHEM Contract: 8332

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 0102119-BS2

Sample wt/vol: 500.0 (g/ml) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: _____

Extraction: (SepF/Cont/Sonc) SOLIDPHASE Date Extracted:10/22/10

Concentrated Extract Volume: 10000(ul) Date Analyzed: 10/22/10

Injection Volume: 10.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
55-63-0	Nitroglycerin	18	

FORM I PEST

C. Form II

Surrogate spike analysis

- By level (low, medium) -

2E
WATER PESTICIDE SURROGATE RECOVERY

Lab Name: COMPUCHEM Contract: 8330B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

GC Column(1): C18 ID: 4.60 (mm)

	EPA SAMPLE NO.	S1 %REC #	S2 %REC #	S3 %REC #	S4 %REC #	S5 %REC #	S6 %REC #	TOT OUT
01	PBLKEK	67						0
02	PEKLCS	89						0
03	13MW5MS	92						0
04	13MW5MSD	93						0
05	13MW5	95						0
06	13MW1	91						0
07	13MW2	97						0
08	13MW3	95						0
09	13MW4	91						0
10	13MWDUP	90						0
11	13MW6	94						0
12	13MW7	94						0
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								

ADVISORY
QC LIMITS

S1 = 1,4-Dinitrobenzene (39-132)

Column to be used to flag recovery values
* Values outside of QC limits
D Surrogate diluted out

2E
WATER PESTICIDE SURROGATE RECOVERY

Lab Name: COMPUCHEM Contract: 8332

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

GC Column(1): PINNACLE CYANO ID: 4.60 (mm)

	EPA SAMPLE NO.	S1 %REC #	S2 %REC #	S3 %REC #	S4 %REC #	S5 %REC #	S6 %REC #	TOT OUT
01	PBLKEK	70						0
02	PETLCS	84						0
03	13MW5MS	83						0
04	13MW5MSD	82						0
05	13MW5	86						0
06	13MW1	83						0
07	13MW2	85						0
08	13MW3	81						0
09	13MW4	89						0
10	13MWDUP	94						0
11	13MW6	86						0
12	13MW7	79						0
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								

ADVISORY
QC LIMITS

S1 = 1,4-Dinitrobenzene (50-150)

Column to be used to flag recovery values
* Values outside of QC limits
D Surrogate diluted out

D. Form III

Matrix Spike/Matrix Spike Duplicate results
- By level (low, medium) -
Laboratory Control Sample(s)

3E

WATER PESTICIDE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: COMPUCHEM Contract: 8330B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix Spike - EPA Sample No.: 13MW5

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC. LIMITS REC.
1,3,5-Trinitrobenzene	8.00	0.00	6.81	85	50-150
1,3-Dinitrobenzene	8.00	0.00	7.42	93	50-150
2,6-Dinitrotoluene	12.00	0.00	11.64	97	50-150
2,4-Dinitrotoluene	8.00	0.00	7.89	99	50-150

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,3,5-Trinitrobenzene	8.00	6.98	87	2	30	50-150
1,3-Dinitrobenzene	8.00	7.55	94	2	30	50-150
2,6-Dinitrotoluene	12.00	11.66	97	0	30	50-150
2,4-Dinitrotoluene	8.00	8.05	101	2	30	50-150

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 4 outside limits
Spike Recovery: 0 out of 8 outside limits

COMMENTS: _____

_____

FORM III PEST-1

3E

WATER PESTICIDE LAB CONTROL SAMPLE

Lab Name: COMPUCHEM Contract: 8330B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

LCS ID: PEKLCS

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC #	QC. LIMITS REC.
1,3,5-Trinitrobenzene	8.00	6.73	84	50-150
1,3-Dinitrobenzene	8.00	7.08	89	50-150
2,6-Dinitrotoluene	12.00	11.34	95	50-150
2,4-Dinitrotoluene	8.00	7.84	98	50-150

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike Recovery: 0 out of 4 outside limits

COMMENTS: _____

_____

3E

WATER PESTICIDE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: COMPUCHEM Contract: 8332

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix Spike - EPA Sample No.: 13MW5

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC. LIMITS REC.
Nitroglycerin	20	0.0	18	90	50-150

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Nitroglycerin	20	17	85	6	40	50-150

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 1 outside limits
Spike Recovery: 0 out of 2 outside limits

COMMENTS: _____

_____

FORM III PEST-1

3E
WATER PESTICIDE LAB CONTROL SAMPLE

Lab Name: COMPUCHEM Contract: 8332

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

LCS ID: PETLCS

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC #	QC. LIMITS REC.
Nitroglycerin	20	18	90	50-150

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike Recovery: 0 out of 1 outside limits

COMMENTS: _____

_____

FORM III PEST-1

E. Form IV

Method Blank Results
Form IV, Form I

Method blank summary, OADS,
- In chronological order of analysis

4C

PESTICIDE METHOD BLANK SUMMARY

EPA SAMPLE NO.

PBLKEK

Lab Name: COMPUCHEM Contract: 8330B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Lab Sample ID: 0102119-BLK1 Lab File ID: 060Z0102119-BLK1

Matrix (soil/water) WATER Extraction:(SepF/Cont/Sonc) SOLIDPHASE

Sulfur Cleanup (Y/N) N Date Extracted: 10/22/10

Date Analyzed (1): 10/22/10 Date Analyzed (2):

Time Analyzed (1): 1537 Time Analyzed (2):

Instrument ID (1): A11001 Instrument ID (2):

GC Column (1): C18 ID: 4.60(mm) GC Column (2): ID:

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

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	PEKLCS	0102119-BS1	10/22/10	
02	13MW5MS	0102119-MS1	10/22/10	
03	13MW5MSD	0102119-MSD1	10/22/10	
04	13MW5	1010107-01	10/22/10	
05	13MW1	1010107-02	10/22/10	
06	13MW2	1010107-03	10/22/10	
07	13MW3	1010107-04	10/22/10	
08	13MW4	1010107-05	10/22/10	
09	13MWDUP	1010107-06	10/22/10	
10	13MW6	1010107-07	10/22/10	
11	13MW7	1010107-08	10/22/10	
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				

COMMENTS: _____

FORM IV PEST

1D

GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PBLKEK

Lab Name: COMPUCHEM Contract: 8330B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 0102119-BLK1

Sample wt/vol: 500.0 (g/ml) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: _____

Extraction: (SepF/Cont/Sonc) SOLIDPHASE Date Extracted:10/22/10

Concentrated Extract Volume: 10000(ul) Date Analyzed: 10/22/10

Injection Volume: 10.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-35-4	1,3,5-Trinitrobenzene	2.50	U
99-65-0	1,3-Dinitrobenzene	2.50	U
606-20-2	2,6-Dinitrotoluene	5.00	U
121-14-2	2,4-Dinitrotoluene	5.00	U

4C

EPA SAMPLE NO.

PESTICIDE METHOD BLANK SUMMARY

PBLKEK

Lab Name: COMPUCHEM Contract: 8332

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Lab Sample ID: 0102119-BLK1 Lab File ID: 019R0102119-BLK1

Matrix (soil/water) WATER Extraction:(SepF/Cont/Sonc) SOLIDPHASE

Sulfur Cleanup (Y/N) N Date Extracted: 10/22/10

Date Analyzed (1): 10/22/10 Date Analyzed (2):

Time Analyzed (1): 1527 Time Analyzed (2):

Instrument ID (1): A11002 Instrument ID (2):

GC Column (1): PINNACLE CYANO ID: 4.60(mm) GC Column (2): ID:

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

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	PETLCS	0102119-BS2	10/22/10	
02	13MW5MS	0102119-MS2	10/22/10	
03	13MW5MSD	0102119-MSD2	10/22/10	
04	13MW5	1010107-01	10/22/10	
05	13MW1	1010107-02	10/22/10	
06	13MW2	1010107-03	10/22/10	
07	13MW3	1010107-04	10/22/10	
08	13MW4	1010107-05	10/22/10	
09	13MWDUP	1010107-06	10/22/10	
10	13MW6	1010107-07	10/22/10	
11	13MW7	1010107-08	10/22/10	
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				

COMMENTS: _____

1D

GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PBLKEK

Lab Name: COMPUCHEM Contract: 8332

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 0102119-BLK1

Sample wt/vol: 500.0 (g/ml) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: _____

Extraction: (SepF/Cont/Sonc) SOLIDPHASE Date Extracted:10/22/10

Concentrated Extract Volume: 10000(ul) Date Analyzed: 10/22/10

Injection Volume: 10.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
55-63-0	Nitroglycerin	16	U

FORM I PEST

CompuChem, a Division of Liberty Analytical Corporation

I. SAMPLE DATA PACKAGE

GC by SW-846

The sample data package shall include data for all analyses of all samples in one Sample Delivery Group (SDG), including field samples, dilutions, reanalysis, blanks, matrix spikes, matrix spike duplicates, and laboratory control samples. The sample data package consists of the following:

A. SDG Narrative

B. Chain-of-Custody Documentation

C. SDG Data

LAB CODE: LIBRTY

METHOD: 8330B-8332

SDG #: 1010107

A. SDG Narrative

CompuChem

a division of Liberty Analytical Corporation
501 Madison Avenue
Cary, N.C. 27513
Tel: 919/379-4100 Fax: 919/379-4050

SDG NARRATIVE
SDG # 1010107
PROTOCOL: SW-846 8330B & 8332

SAMPLE IDENTIFICATIONS: 13MW1, 13MW2, 13MW3, 13MW4, 13MW5, 13MW6, 13MW7, 13MWDUP

The eight water samples listed above were received intact, refrigerated between 0.1 and 1.0°C, with proper documentation, in sealed shipping containers, on October 20, 2010. The samples were scheduled for the requested analyses of the explosives fraction. Methods 8330B and 8332 (Nitroglycerin only) were used to prepare and analyze the samples, with the exceptions and/or additions requested by the client. This portion of the SDG narrative deals with the explosives analysis only. All pertinent Quality Assurance notices are included in the narrative section and all pertinent Laboratory notices for SDG # 1010107 are included in the sample data sections.

Explosives

Extraction and analysis holding time requirements were met for the samples, and also meet the requirement set forth in SW-846 8330B.

No target analytes confirmed above the Quantitation Limit (QL) in the samples.

All QC criteria were met for all initial and continuing calibration standards associated to this SDG.

All of the surrogates met recovery and retention time criteria.

The associated method blank met all quality control criteria.

Duplicate matrix spikes (MS/MSD) were performed with sample 13MW5, and met recovery and precision criteria. The associated Laboratory Control Sample (LCS) prepared and analyzed along with the samples met recovery criteria.

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 above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Teresa Amentt Jennings

Teresa Amentt Jennings
GC/HPLC Data Reviewer
November 8, 2010

GC and GC/MS Column and Trap Specifications Table

SDG #: 1010107

COLUMNS

Columns Utilized	Brand Name	Coating Material	ID (mm)	Film Thickness (um)	Length (m)
	GC Laboratory				
	Restek	RTX-5	0.53	1.0	30
	Restek	RTX-SMS	0.53	1.0	30
	Restek	clpest	0.32	0.5	30
	Restek	clpest2	0.32	0.42	30
	J&W	DB-210	0.53	1.0	30
	J&W	GS-GASPRO	0.32	N/A	30
	GC Volatiles Laboratory				
	Restek	RTX-Volatiles	0.53	2.0	30
	GC/MS Volatiles Laboratory				
	Restek	RTX-VMS	0.18	1.0	20
	Supelco	SPB-624	0.32	1.8	60
	Supelco	SPB-624	0.53	3.0	75
	Phenomonex	ZB-624	0.32	1.8	60
	GC/MS Semivolatiles Laboratory				
	Restek	RTX-5MS	0.32	0.25	30
	HPLC Laboratory				
	Supelco	Supelcosil LC-PAH	4.6	5.0	15 cm
	Supelco	Discovery RP Amide C16	4.6	5.0	25 cm
✓	Restek	Pinnacle Cyano	4.6	5.0	25 cm
✓	Restek	Allure C18	4.6	5.0	25 cm

TRAPS

GC and GC/MS Volatiles Laboratory	
Supelco J (BETXTRAP™)	* 7.7 cm Carbopack C
	* 1.2 cm Carbopack B
Supelco K (Vocarb3000)	* 10 cm of Carbopack B (Graphitized Carbons)
	* 6 cm of Carboxen 1000 (Carbon molecular sieves)
	* 1 cm of Carboxen 1001 (Carbon molecular sieves)

Rev. 28

CompuChem

a division of Liberty Analytical Corporation

CompuChem's Pagination Convention

As required by the EPA CLP Statement of Work (SOW) documents, data to be delivered must be paginated (by machine or hand). In the event that the initial numbering is incorrect (a page numbered twice or a page skipped, for example), it is CompuChem's policy to add an alphabetic suffix to a page number when necessary (e.g., 100A, 100B, etc.).

CompuChem

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Notification Regarding Manual Editing/Integration Flags

In some instances, manual adjustments to the software output are necessary to provide accurate data. These manual integrations are performed by the data reviewers, GC/MS operators, or GC chemists. An Extracted Ion Current Profile (EICP) or a GC chromatographic peak has been provided for the manual integration performed on each compound to demonstrate the accuracy of that process. The manual integrations are flagged on the quantitation report in the far right column beyond the FINAL concentration for GC/MS analysis, and in the "Flags" column for GC analysis. The manual editing/integration flags are:

M - Denotes that a manual integration has been performed for this compound. The manual integration was performed in order to provide the most accurate area count possible for the peak.

H - Denotes that the data reviewer, GC/MS operator, or GC Chemist has chosen an alternate peak within the retention time window from that chosen by the software for that compound. No manual integration is performed in choosing an alternate peak. The software still performs the integration.

MH - Denotes that an alternate peak has been chosen within the retention time window from that chosen by the software for that compound and also a manual integration of the chosen peak has been performed. The manual integration was performed in order to provide the most accurate area count possible for the peak.

L - Denotes that a data reviewer or GC/MS operator has selected an alternate library search. This is typically done when an additional tentatively identified compound (TIC) has been added to the number of peaks searched. No manual integration is performed in choosing an alternate peak. The software still performs the integration.

ML - Denotes that an alternate library search has been selected and a manual integration has also been performed. This is typically done when an additional TIC has been added and the TIC peak also required a manual integration.

The EPA CLP SOW documents require additional explanations for manual editing/integration. In the accompanying raw data packages, additional codes have been applied to the "M" flag and carry the following meanings;

M1 - The compound was not found by the automatic integration routine.

M2 - The compound was incorrectly integrated by the automatic integration routine.

M3 - The co-eluting compounds were incorrectly integrated by the automatic integration routine.

These codes will appear in the GC/MS and GC raw data.

Revision 7 (12/6/2005)

CompuChem

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DATA REPORTING QUALIFIERS

On the Form I, under the column labeled "Q" for qualifier, each result is flagged with the specific data reporting qualifiers listed below, as appropriate. Up to five qualifiers may be reported on Form I for each compound. The qualifiers used are:

U : This flag indicates the compound was analyzed for but not detected. The Contract Required Quantitation Limit (CRQL), or reporting limit, will be adjusted to reflect any dilution and, for soils, the percent moisture.

J : This flag indicates an estimated value. The flag is used as detailed below:

1. When estimating a concentration for tentatively identified compounds (TICs) where a response factor of 1:1 is assumed for the TIC analyte,

2. When the mass spectral and retention time data indicate the presence of a compound that meets the volatile and semivolatile GC/MS identification criteria, and the result is less than the adjusted CRQL (or Reporting Limit) but greater than zero, and

3. When the retention time data indicate the presence of a compound that meets the pesticide and/or Aroclor or other GC or HPLC identification criteria, and the result is less than the adjusted CRQL (or Reporting Limit) but greater than zero. For example, if the CRQL (or Reporting Limit) is 10 µg/L, but a concentration of 3 µg/L is calculated, it is reported as 3J.

N : This flag indicates presumptive evidence of a compound. This flag is only used for TICs, where the identification is based on a mass spectral library search and must be used with the J flag. For generic characterization of a TIC such as "chlorinated hydrocarbon" (or for an "unknown," with no matches ≥ 85% in the SOM01.2 SOW document), the N flag is not used.

P : In the EPA's Contract Laboratory Program (CLP), this flag is used for a pesticide/Aroclor target analyte, when there is greater than 25% difference for detected concentrations between the two GC columns. The lower of the two values is reported on the Form I and flagged with a P.
For SW-846 GC and HPLC analyses, when the Relative Percent Difference (RPD) is greater than 40% and there is no evidence of chromatographic anomalies or interferences, then the lower of the two values is reported and flagged with a P. When the RPD is equal to or less than 40%, our policy is to also report the lower of the two values, although the choice could be a project specific issue. These SW-846 policies are consistent with Method 8000C. If Method 8000B is required, the higher of the two values is reported. For certain HPLC analyses, if one of the HPLC columns displays co-elution of target analytes, all results are reported from a primary column displaying no co-elution. Results are still flagged with a P if the RPD between columns is greater than 40%.

C : This flag applies to GC or HPLC results where the identification has been confirmed by GC/MS. If GC/MS confirmation was attempted but was unsuccessful, this flag is not applied; a laboratory-defined flag is used instead (see the X/Y/Z qualifier.)

DATA REPORTING QUALIFIERS (continued)

B : This flag is used when the analyte is found in the associated blank as well as in the sample. It indicates probable blank contamination and warns the data user to take appropriate action. This flag is used for a TIC as well as for a positively identified target compound. The combination of flags BU or UB is not an allowable policy. Blank contaminants are flagged B only when they are detected in the sample.

E : This flag identifies compounds whose concentrations exceed the upper level of the calibration range of the instrument for that specific analysis. If one or more compounds have a concentration greater than the upper level of the calibration range, the sample or extract will be diluted and reanalyzed. All such compounds with a concentration greater than the upper level of the calibration range will have the result flagged with an E on Form I for the original analysis.

D : If a sample or extract is reanalyzed at a higher dilution factor, for example when the concentration of an analyte exceeds the upper calibration range, the DL suffix is appended to the sample number on the Form I for the more diluted sample, and **all** reported concentrations on that Form I are flagged with the D flag. This flag alerts data users that any discrepancies between the reported concentrations may be due to dilution of the sample or extract.

NOTE 1: The D flag is not applied to compounds which are not detected in the sample analysis i.e. compounds reported with the CRQL (or Reporting Limit) and the U flag.

NOTE 2: Separate Forms I are used for reporting the original analysis (Client Sample No. XXXXX) and the more diluted sample analysis (Client Sample No. XXXXXDL) i.e. the results from both analyses are not combined on a single Form I.

A: This flag indicates that a TIC is a suspected aldol-condensation product.

S: In the SOM01.2 SOW document, this flag is used to indicate an estimated value for Aroclor target compounds where a valid 5-point initial calibration was not performed prior to the analytes detection in a sample. If an "S" flag is used for a specific Aroclor, then a reanalysis of the sample is required after a valid 5-point calibration is performed for the detected Aroclor.

X/Y/Z : Other specific flags may be required to properly define the results. If used, the flags will be fully described in the SDG Narrative. The laboratory-defined flags are limited to X, Y, and Z.

B. Chains-of-Custody

The laboratory shall include a copy of the Chain-of-Custody (CoC) documentation for all of the samples in the SDG. The CoC documents shall be arranged in increasing Client Sample ID number order, considering both letters and numbers.

CHAIN OF CUSTODY RECORD

Note 10-19-10

54

Laboratory: CompuChem Environmental, 501 Madison Avenue, Cary, NC 27513/Cathy Dover, Manager/1-800-833-5097

Client: Draper Aden Associates Attn: 0 Address: 0 0 Phone: 0 Fax: 0 Fax: 0	**Consultant:** Draper Aden Associates Attn: Janet C. Frazier Address: 2206 South Main Street Blacksburg, Virginia 24060 Phone: (540) 552-0444 Fax: (540) 552-0291	**Sample Site:** RAAP, Redford, Virginia **Location:** Open Burning Ground (OBG)/HWMU13 **Event:** 2nd Semiannual 2010 Monitoring Event **DAA JN:** B03204-08 **Lab JN:**	**Project Specific (PS) or Batch (B) QC:** Sample Collection for Project Complete? YES UPS 12-237-301-01- 5634-5155 5818-5969 Carrier: K 5754-0978 Tracking Number: 5605-4184 5644-9598 5713-1204	**Box 1: Matrix** SW Surface Water T Trip Blank GW Groundwater E Equipment Blank L Leachate P Product S Soil O Other **Box 2: Preservative** A HCl E NaOH B HNO_3 F ZnAc C H_2SO_4 G Other (Specify) D $Na_2S_2O_3$ H None	**Box 3: Filtered/Unfiltered** F Filtered U Unfiltered **Box 5: Sample Container Type** P Plastic V VOA AG Amber Glass CG Clear Glass **Box 4: Sample Type** G Grab C Composite

Invoice

Copy to Consultant: YES

Bill: CLIENT OTHER

Preserved and shipped on ice: YES

Box 4 - Sample Type					G	G	G	G	G	G					
Box 3 - Filtered/Unfiltered					U	U	U	U	U	U					
Required pH of Sample									<2	<2					
Box 2 - Preservative					H	H	H	H	B	B					
Box 5 - Sample Container Type					2-1L A		1-250ml P	2-1L A	1-500ml P						
Sample ID	**Date: 2010**	**Time**	**Box 1: Matrix**	**Number of Bottles**	8332/3535 - Nitroglycerine (2 AL)	8330 - Explosives	Perchlorate 314.0 (250 mL)	SVOCs 8270C (35 Zac. 2 AL)	ICP 6010B/3005A/ thallium 7000 (Metals-Total) (500 mL)	7470A (Mercury-Total)	Metals pH				
13MW1	10/18	1105	GW	6	X	X	X	X	X	X	<2				
13MW2	10/18	1200	GW	6	X	X	X	X	X	X	<2				
13MW3	10/18	0806	GW	6	X	X	X	(X)*	X	X	<2	*rec'd 1-SVOC broken for 13MW3 SD 10/20/10			
13MW4	10/18	0910	GW	6	X	X	X	X	X	X	<2				
13MWDUP	10/19	0730	GW	6	X	X	X	X	X	X	<2				
13MW5	10/19	0830	GW	6	X	X	X	X	X	X	<2	USE FOR QC			
13MW6	10/18	1010	GW	6	X	X	X	X	X	X	<2				
13MW7	10/19	0945	GW	6	X	X	X	X	X	X	<2				

GENERAL NOTES:

1. Level 4 deliverable with EDD and pdf.
2. REPORT DL/QL and estimated results. (See 4thQ. 2009, if needed). or call. JCF 10.2.20

Residual Chlorine Present? Yes ____ No ✓

10/0/07-02
-03
-04
-05
-06
10/0/07-01
-01
-08

Clients Special Instructions: Level 4 with edd and PDF. 0.6, 0.1, 0.2, 1.0, 0.9°C SN0015

Received by lab in Good Condition ✓ Yes ____ No Custody Seal Intact ✓ Yes ____ No Temperature upon arrival ^ Received on Ice ✓ Yes ____ No

Describe problems, if any:

Sampler Name (Print): KEN CODDINGTON	Date: 10-18-10	#1 Relinquished by (Signature):	Date: 10-19-10	#2 Relinquished by (Signature):	Date:	Sample Storage Time Requested:
Sampler Signature:	Time: 0600	Company Name: DAA	Time: 1700	Company Name:	Time:	
Sampler Name (Print): Chris Branscome	Date: 10/18/10	#1 Received by (Signature): Jennifer Dover	Date: 10/20/10	#2 Received by (Signature):	Date:	30 DYS ORG/6 MTHS INORG
Sampler Signature: Chris Branscome	Time: 0600	Company Name: CompuChem	Time: 0936	Company Name:	Time:	

JCF 11/5 11-2-2010

2/5

ANALYTICAL METHOD: SEE BELOW
TYPE METHOD: GC/ HPLC

Method 8330:

No.	PARAMETER	CAS RN
1.	1,3,5-trinitrobenzene (1,3,5-TNB)	99-35-4
2.	1,3-dinitrobenzene (1,3-DNB)	99-65-0
3.	2,4-dinitrotoluene (2,4-DNT)	121-14-2
4.	2,6-dinitrotoluene (2,6-DNT)	606-20-2

Method 8332:

No.	PARAMETER	CAS RN
1.	Nitroglycerin	55-63-0

.p:\admin\divisions\envr\templates\bburg eteam temp\field events\raap\sample event set up\semi-annual events\hwmu-13\hwmu13-target analyte list gw (new) 2007 10.doc
Revised July 18, 2005 – JCF
Revised November, 2005 – new permit – JCF
Revised Oct 10, 2009
Revised September, 2010, new 8260B analytes - KPO

1010107

COMPUCHEM

Client:	**DRAPER**	**Project Manager:**	**Cathy Dover**
Project:	**RAAP HWMU13 (OBG)/B03204-08**	**Project Number:**	**RAAP HWMU13 (OBG)/B03204-08**
SDG:	**1010107** **CASE:**	**Status:**	**Prepared**

Report To:
DRAPER
JANET FRAZIER
2206 SOUTH MAIN STREET
BLACKSBURG, VA 24060
Phone: (540)552-0444
Fax: -

Invoice To:
DRAPER
JANET FRAZIER
2206 SOUTH MAIN STREET
BLACKSBURG, VA 24060
Phone :(540)552-0444
Fax: -

Date Due: 11/09/2010 00:00 (20 day TAT)

Received By: Cathy Dover — Date Received: 10/20/2010 09:36

Logged In By: Cathy Dover — Date Logged In: 10/20/2010 16:12

J & B Flags?: **YES** Metals ND to? **MDL**	TICS?:**NO** Spike Level: **FULL Spike**	Deliverable: **Style 9**	EDD : **DRAPER ACCESS + ERIS**

USE 1010107-01*NOTE SAMPLING DATES*SVOC FULL SCAN 8270C=HWMU13A.SUB*8330A=DAU13*8332=NITROGLYCERIN ONLY*6020 MS MTL=Sb,As,Ba,Cd,Cr,Pb,Ni,Se,Ag & Zn + Hg 7470*PERCHLORATE 314.0--4 ug/L STD.

Analysis	Due	TAT	Expires	Received	Comments
1010107-01 13MW5 [Water] Sampled 10/19/2010 08:30 Eastern					**USE FOR QC**
6020 ICP MS	11/09/2010 16:00	20	04/17/2011 08:30	10/20/2010 09:36	
GC-8330B EXPLOSIVES	11/09/2010 16:00	20	11/02/2010 08:30	10/20/2010 09:36	SubList = GC- 8330 DAU13 (10-20-10)
GC-8332 EXPLOSIVES	11/09/2010 16:00	20	10/26/2010 08:30	10/20/2010 09:36	SubList = GC- 8332 NITRO (10-20-10)
IC 314.0 Perchlorate Water	11/09/2010 16:00	20	11/16/2010 08:30	10/20/2010 09:36	
SVOC 8270C	11/09/2010 16:00	20	10/26/2010 08:30	10/20/2010 09:36	SubList = SVapix- HWMU13A (10-21-10
7470A/7471A Mercury	11/09/2010 16:00	20	11/16/2010 08:30	10/20/2010 09:36	
1010107-02 13MW1 [Water] Sampled 10/18/2010 11:05 Eastern					
GC-8332 EXPLOSIVES	11/09/2010 16:00	20	10/25/2010 11:05	10/20/2010 09:36	SubList = GC- 8332 NITRO (10-20-10)
SVOC 8270C	11/09/2010 16:00	20	10/25/2010 11:05	10/20/2010 09:36	SubList = SVapix- HWMU13A (10-21-10
6020 ICP MS	11/09/2010 16:00	20	04/16/2011 11:05	10/20/2010 09:36	
GC-8330B EXPLOSIVES	11/09/2010 16:00	20	11/01/2010 11:05	10/20/2010 09:36	SubList = GC- 8330 DAU13 (10-20-10)
IC 314.0 Perchlorate Water	11/09/2010 16:00	20	11/15/2010 11:05	10/20/2010 09:36	
7470A/7471A Mercury	11/09/2010 16:00	20	11/15/2010 11:05	10/20/2010 09:36	

1010107

COMPUCHEM

Client:	**DRAPER**	**Project Manager:**	**Cathy Dover**
Project:	**RAAP HWMU13 (OBG)/B03204-08**	**Project Number:**	**RAAP HWMU13 (OBG)/B03204-08**
SDG:	**1010107** **CASE:**	**Status:**	**Prepared**

Analysis	Due	TAT	Expires		Comments
1010107-03 13MW2 [Water] Sampled 10/18/2010 12:00 Eastern					
7470A/7471A Mercury	11/09/2010 16:00	20	11/15/2010 12:00	10/20/2010 09:36	
6020 ICP MS	11/09/2010 16:00	20	04/16/2011 12:00	10/20/2010 09:36	
GC-8330B EXPLOSIVES	11/09/2010 16:00	20	11/01/2010 12:00	10/20/2010 09:36	SubList = GC- 8330 DAU13 (10-20-10)
GC-8332 EXPLOSIVES	11/09/2010 16:00	20	10/25/2010 12:00	10/20/2010 09:36	SubList = GC- 8332 NITRO (10-20-10)
IC 314.0 Perchlorate Water	11/09/2010 16:00	20	11/15/2010 12:00	10/20/2010 09:36	
SVOC 8270C	11/09/2010 16:00	20	10/25/2010 12:00	10/20/2010 09:36	SubList = SVapix- HWMU13A (10-21-10
1010107-04 13MW3 [Water] Sampled 10/18/2010 08:00 Eastern					
GC-8332 EXPLOSIVES	11/09/2010 16:00	20	10/25/2010 08:00	10/20/2010 09:36	SubList = GC- 8332 NITRO (10-20-10)
GC-8330B EXPLOSIVES	11/09/2010 16:00	20	11/01/2010 08:00	10/20/2010 09:36	SubList = GC- 8330 DAU13 (10-20-10)
7470A/7471A Mercury	11/09/2010 16:00	20	11/15/2010 08:00	10/20/2010 09:36	
6020 ICP MS	11/09/2010 16:00	20	04/16/2011 08:00	10/20/2010 09:36	
IC 314.0 Perchlorate Water	11/09/2010 16:00	20	11/15/2010 08:00	10/20/2010 09:36	
SVOC 8270C	11/09/2010 16:00	20	10/25/2010 08:00	10/20/2010 09:36	SubList = SVapix- HWMU13A (10-21-10
1010107-05 13MW4 [Water] Sampled 10/18/2010 09:10 Eastern					
7470A/7471A Mercury	11/09/2010 16:00	20	11/15/2010 09:10	10/20/2010 09:36	
GC-8330B EXPLOSIVES	11/09/2010 16:00	20	11/01/2010 09:10	10/20/2010 09:36	SubList = GC- 8330 DAU13 (10-20-10)
GC-8332 EXPLOSIVES	11/09/2010 16:00	20	10/25/2010 09:10	10/20/2010 09:36	SubList = GC- 8332 NITRO (10-20-10)
IC 314.0 Perchlorate Water	11/09/2010 16:00	20	11/15/2010 09:10	10/20/2010 09:36	
SVOC 8270C	11/09/2010 16:00	20	10/25/2010 09:10	10/20/2010 09:36	SubList = SVapix- HWMU13A (10-21-10
6020 ICP MS	11/09/2010 16:00	20	04/16/2011 09:10	10/20/2010 09:36	
1010107-06 13MWDUP [Water] Sampled 10/19/2010 07:30 Eastern					
GC-8332 EXPLOSIVES	11/09/2010 16:00	20	10/26/2010 07:30	10/20/2010 09:36	SubList = GC- 8332 NITRO (10-20-10)
6020 ICP MS	11/09/2010 16:00	20	04/17/2011 07:30	10/20/2010 09:36	
SVOC 8270C	11/09/2010 16:00	20	10/26/2010 07:30	10/20/2010 09:36	SubList = SVapix- HWMU13A (10-21-10
GC-8330B EXPLOSIVES	11/09/2010 16:00	20	11/02/2010 07:30	10/20/2010 09:36	SubList = GC- 8330 DAU13 (10-20-10)
IC 314.0 Perchlorate Water	11/09/2010 16:00	20	11/16/2010 07:30	10/20/2010 09:36	
7470A/7471A Mercury	11/09/2010 16:00	20	11/16/2010 07:30	10/20/2010 09:36	

1010107

COMPUCHEM

Client:	**DRAPER**	**Project Manager:**	**Cathy Dover**
Project:	**RAAP HWMU13 (OBG)/B03204-08**	**Project Number:**	**RAAP HWMU13 (OBG)/B03204-08**
SDG:	**1010107** **CASE:**	**Status:**	**Reported**

Analysis	Due	TAT	Expires		Comments
1010107-07 13MW6 [Water] Sampled 10/18/2010 10:10 Eastern					
GC-8330B EXPLOSIVES	11/09/2010 16:00	20	11/01/2010 10:10	10/20/2010 09:36	SubList = GC- 8330 DAU13 (10-20-10)
IC 314.0 Perchlorate Water	11/09/2010 16:00	20	11/15/2010 10:10	10/20/2010 09:36	
6020 ICP MS	11/09/2010 16:00	20	04/16/2011 10:10	10/20/2010 09:36	
7470A/7471A Mercury	11/09/2010 16:00	20	11/15/2010 10:10	10/20/2010 09:36	
SVOC 8270C	11/09/2010 16:00	20	10/25/2010 10:10	10/20/2010 09:36	SubList = SVapix- HWMU13A (10-21-10
GC-8332 EXPLOSIVES	11/09/2010 16:00	20	10/25/2010 10:10	10/20/2010 09:36	SubList = GC- 8332 NITRO (10-20-10)
1010107-08 13MW7 [Water] Sampled 10/19/2010 09:45 Eastern					
SVOC 8270C	11/09/2010 16:00	20	10/26/2010 09:45	10/20/2010 09:36	SubList = SVapix- HWMU13A (10-21-10
6020 ICP MS	11/09/2010 16:00	20	04/17/2011 09:45	10/20/2010 09:36	
7470A/7471A Mercury	11/09/2010 16:00	20	11/16/2010 09:45	10/20/2010 09:36	
IC 314.0 Perchlorate Water	11/09/2010 16:00	20	11/16/2010 09:45	10/20/2010 09:36	
GC-8332 EXPLOSIVES	11/09/2010 16:00	20	10/26/2010 09:45	10/20/2010 09:36	SubList = GC- 8332 NITRO (10-20-10)
GC-8330B EXPLOSIVES	11/09/2010 16:00	20	11/02/2010 09:45	10/20/2010 09:36	SubList = GC- 8330 DAU13 (10-20-10)

CompuChem, a Division of Liberty Analytical Corp.

EXTRACT COC

10-22-1

DEPT: EXTR **DATE:** 10-22-10

BATCH: 0102119

	COMPUCHEM NUMBER	CLIENT SAMPLE ID	PARAMETER	
1	0102119-BLK1	PBLKEK	8330/8332	
2	0102119-BS1	PEKLCS	8330/8332	
3	0102119-BS2	PETLCS	8330/8332	
4	0102119-MS1	13MW5MS	8330/8332	
5	0102119-MSD1	13MW5MSD	8330/8332	
6	0102119-MS2	13MW5MS	8330/8332	
7	0102119-MSD2	13MW5MSD	8330/8332	
8	1010107-01	13MW5	8330/8332	
9	1010107-02	13MW1	8330/8332	
10	1010107-03	13MW2	8330/8332	
11	1010107-04	13MW3	8330/8332	
12	1010107-05	13MW4	8330/8332	
13	1010107-06	13MWDUP	8330/8332	
14	1010107-07	13MW6	8330/8332	
15	1010107-08	13MW7	8330/8332	
16				
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28				

RELINQUISHED BY	DATE/TIME	REC. BY	REASON
T. WILLIAMS	10-22-10 1300	CC REFRIG. #3	STORAGE
CC #3	10/22/10 1815	CC #4	
CC	10/22/10 1815	CC #4	

Rev. 12/29/09:RM

TAJ 11/8/10

C. SDG Data

1. QC Summary
2. Sample Data
3. Standards Data
4. Raw QC Data

LAB CODE: LIBRTY

METHOD: 8330B-8332

SDG #: 1010107

1. QC Summary

a. Surrogate Percent Recovery Summary (Form II)

b. Matrix Spike/Matrix Spike Duplicate/
Laboratory Control Sample Summary
(Form III)

c. Method Blank Summary (Form IV)

a. Surrogate Percent Recovery Summary

(Form II)

2E
WATER PESTICIDE SURROGATE RECOVERY

Lab Name: COMPUCHEM Contract: 8330B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

GC Column(1): C18 ID: 4.60 (mm)

	EPA SAMPLE NO.	S1 %REC #	S2 %REC #	S3 %REC #	S4 %REC #	S5 %REC #	S6 %REC #	TOT OUT
01	PBLKEK	67						0
02	PEKLCS	89						0
03	13MW5MS	92						0
04	13MW5MSD	93						0
05	13MW5	95						0
06	13MW1	91						0
07	13MW2	97						0
08	13MW3	95						0
09	13MW4	91						0
10	13MWDUP	90						0
11	13MW6	94						0
12	13MW7	94						0
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								

ADVISORY
QC LIMITS

S1 = 1,4-Dinitrobenzene (39-132)

Column to be used to flag recovery values
* Values outside of QC limits
D Surrogate diluted out

2E

WATER PESTICIDE SURROGATE RECOVERY

Lab Name: COMPUCHEM Contract: 8332

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

GC Column(1): PINNACLE CYANO ID: 4.60 (mm)

	EPA SAMPLE NO.	S1 %REC #	S2 %REC #	S3 %REC #	S4 %REC #	S5 %REC #	S6 %REC #	TOT OUT
01	PBLKEK	70						0
02	PETLCS	84						0
03	13MW5MS	83						0
04	13MW5MSD	82						0
05	13MW5	86						0
06	13MW1	83						0
07	13MW2	85						0
08	13MW3	81						0
09	13MW4	89						0
10	13MWDUP	94						0
11	13MW6	86						0
12	13MW7	79						0
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								

ADVISORY QC LIMITS

S1 = 1,4-Dinitrobenzene (50-150)

Column to be used to flag recovery values
* Values outside of QC limits
D Surrogate diluted out

b. Matrix Spike/Matrix Spike Duplicate/
Laboratory Control Sample Summary

(Form III)

3E

WATER PESTICIDE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: COMPUCHEM Contract: 8330B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix Spike - EPA Sample No.: 13MW5

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC. LIMITS REC.
1,3,5-Trinitrobenzene	8.00	0.00	6.81	85	50-150
1,3-Dinitrobenzene	8.00	0.00	7.42	93	50-150
2,6-Dinitrotoluene	12.00	0.00	11.64	97	50-150
2,4-Dinitrotoluene	8.00	0.00	7.89	99	50-150

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
1,3,5-Trinitrobenzene	8.00	6.98	87	2	30	50-150
1,3-Dinitrobenzene	8.00	7.55	94	2	30	50-150
2,6-Dinitrotoluene	12.00	11.66	97	0	30	50-150
2,4-Dinitrotoluene	8.00	8.05	101	2	30	50-150

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 4 outside limits
Spike Recovery: 0 out of 8 outside limits

COMMENTS: _____

_____

FORM III PEST-1

3E

WATER PESTICIDE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: COMPUCHEM Contract: 8332

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix Spike - EPA Sample No.: 13MW5

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC. LIMITS REC.
Nitroglycerin	20	0.0	18	90	50-150

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Nitroglycerin	20	17	85	6	40	50-150

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 1 outside limits
Spike Recovery: 0 out of 2 outside limits

COMMENTS: _____

_____

FORM III PEST-1

3E
WATER PESTICIDE LAB CONTROL SAMPLE

Lab Name: COMPUCHEM Contract: 8330B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

LCS ID: PEKLCS

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC #	QC. LIMITS REC.
1,3,5-Trinitrobenzene	8.00	6.73	84	50-150
1,3-Dinitrobenzene	8.00	7.08	89	50-150
2,6-Dinitrotoluene	12.00	11.34	95	50-150
2,4-Dinitrotoluene	8.00	7.84	98	50-150

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike Recovery: 0 out of 4 outside limits

COMMENTS: _____

_____

FORM III PEST-1

3E
WATER PESTICIDE LAB CONTROL SAMPLE

Lab Name: COMPUCHEM Contract: 8332

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

LCS ID: PETLCS

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC #	QC. LIMITS REC.
Nitroglycerin	20	18	90	50-150

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike Recovery: 0 out of 1 outside limits

COMMENTS: _____

_____

FORM III PEST-1

c. Method Blank Summary (Form IV)

If more than a single form is necessary, forms shall be arranged in chronological order by date of analysis of the blanks and by instrument.

4C

PESTICIDE METHOD BLANK SUMMARY

EPA SAMPLE NO.

PBLKEK

Lab Name: COMPUCHEM Contract: 8330B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Lab Sample ID: 0102119-BLK1 Lab File ID: 060Z0102119-BLK1

Matrix (soil/water) WATER Extraction:(SepF/Cont/Sonc) SOLIDPHASE

Sulfur Cleanup (Y/N) N Date Extracted: 10/22/10

Date Analyzed (1): 10/22/10 Date Analyzed (2):

Time Analyzed (1): 1537 Time Analyzed (2):

Instrument ID (1): A11001 Instrument ID (2):

GC Column (1): C18 ID: 4.60(mm) GC Column (2): ID:

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

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	PEKLCS	0102119-BS1	10/22/10	
02	13MW5MS	0102119-MS1	10/22/10	
03	13MW5MSD	0102119-MSD1	10/22/10	
04	13MW5	1010107-01	10/22/10	
05	13MW1	1010107-02	10/22/10	
06	13MW2	1010107-03	10/22/10	
07	13MW3	1010107-04	10/22/10	
08	13MW4	1010107-05	10/22/10	
09	13MWDUP	1010107-06	10/22/10	
10	13MW6	1010107-07	10/22/10	
11	13MW7	1010107-08	10/22/10	
12				
13				
14				
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16				
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23				
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26				

COMMENTS: _____

FORM IV PEST

4C

PESTICIDE METHOD BLANK SUMMARY

EPA SAMPLE NO.

PBLKEK

Lab Name: COMPUCHEM Contract: 8332

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Lab Sample ID: 0102119-BLK1 Lab File ID: 019R0102119-BLK1

Matrix (soil/water) WATER Extraction:(SepF/Cont/Sonc) SOLIDPHASE

Sulfur Cleanup (Y/N) N Date Extracted: 10/22/10

Date Analyzed (1): 10/22/10 Date Analyzed (2):

Time Analyzed (1): 1527 Time Analyzed (2):

Instrument ID (1): A11002 Instrument ID (2):

GC Column (1): PINNACLE CYANO ID: 4.60(mm) GC Column (2): ID:

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

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
01	PETLCS	0102119-BS2	10/22/10	
02	13MW5MS	0102119-MS2	10/22/10	
03	13MW5MSD	0102119-MSD2	10/22/10	
04	13MW5	1010107-01	10/22/10	
05	13MW1	1010107-02	10/22/10	
06	13MW2	1010107-03	10/22/10	
07	13MW3	1010107-04	10/22/10	
08	13MW4	1010107-05	10/22/10	
09	13MWDUP	1010107-06	10/22/10	
10	13MW6	1010107-07	10/22/10	
11	13MW7	1010107-08	10/22/10	
12				
13				
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26				

COMMENTS: _____

FORM IV PEST

2. Sample Data

Sample data shall be arranged in packets with the Organic Analysis Data Sheet (Form I), followed by the raw data for samples. These sample packets shall be placed in increasing Client Sample ID number order, considering both letters and numbers.

a. Target Analyte Results

Tabulated results (identification and quantitation) shall be included.

b. Copies of Chromatograms

Positively identified compounds shall be labeled with the names of compounds, either directly out from the peak on the chromatogram, or on a printout of retention times on the data system printout if retention times are printed over the peak on the chromatogram. Included for each sample or sample extract, dilutions, and reanalysis. The chromatogram shall contain the following header information: Client Sample ID number, volume injected (uL), date and time of injection, GC column ID, and GC instrument ID.

c. Copies of Chromatograms from the Second Column

(if necessary)

d. Data System Printout

A printout of retention time and corresponding peak height or peak Area shall accompany each chromatogram. Where edits have been Made, initialing, dating and integration time range are required.

1D

GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

13MW1

Lab Name: COMPUCHEM Contract: 8330B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 1010107-02

Sample wt/vol: 500.0 (g/ml) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 10/20/10

Extraction: (SepF/Cont/Sonc) SOLIDPHASE Date Extracted:10/22/10

Concentrated Extract Volume: 10000(ul) Date Analyzed: 10/22/10

Injection Volume: 10.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-35-4	1,3,5-Trinitrobenzene	2.50	U
99-65-0	1,3-Dinitrobenzene	2.50	U
606-20-2	2,6-Dinitrotoluene	5.00	U
121-14-2	2,4-Dinitrotoluene	5.00	U

Data File: /chem/a11001.i/z101006i.b/065z1010107-02.d

Date : 22-OCT-2010 18:36

Client ID: 13MW1

Instrument: a11001.i

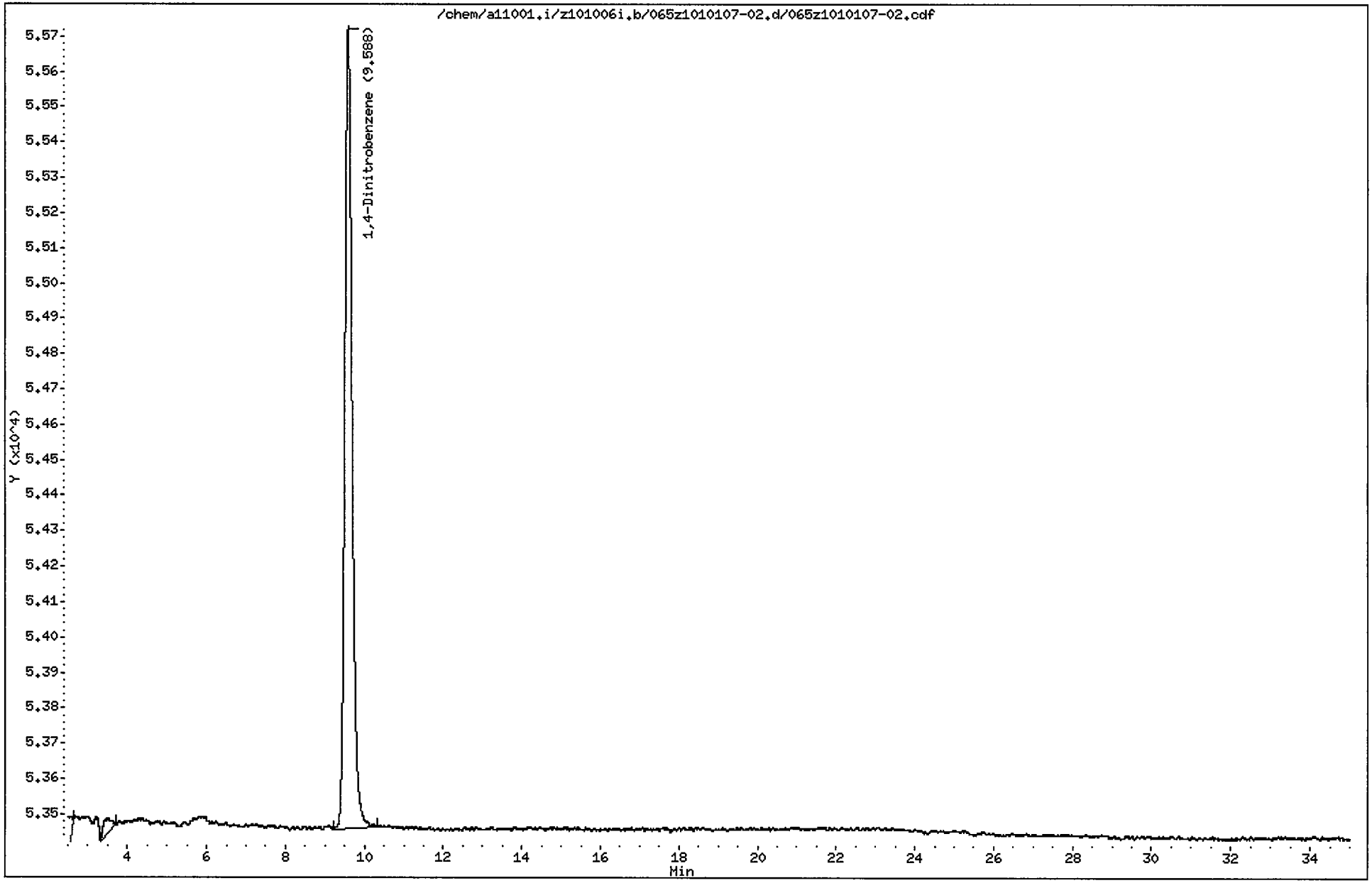
Sample Info: 1010107-02

Volume Injected (uL): 10.0

Operator: BWL

Column phase: C18

Column diameter: 4.60



CompuChem

Lab Smp Id : 1010107-02 Client Smp Id : 13MW1
Sample Type : SAMPLE Sublist : DAU13
Inj Date : 22-OCT-2010 18:36 Inst ID : A11001
Operator : BWL
Method : /chem/a11001.i/z101006i.b/8330_10uL_v3_a_split.m
Misc. Info : 13MW1

Formula: Conc=(Area/RF) * DF * (Uf * Vt/(Vi * Vo))

DF Dilution Factor: 1.0 Uf GPC Unit Factor: 1
Vt Final Volume: 10000(ul) Vi Injection Volume: 10(ul)
Vo Sample Volume: 500.0(ml)

RT	RT WINDOW		AREA	QUANT RF	COMPOUND	CONCENTRATIONS ON-COLUMN (Ng)	CONCENTRATIONS FINAL (ug/L)	ADJUSTED PQL (ug/L)	% REC	RECOVERY LIMITS	FLAGS
1.35			1260								
1.81			1204								
2.21			6366								
3.55			610								
9.59	9.34	9.74	29244	3229	1,4-Dinitrobenzene	9.056263	18.11253		90.6	39 - 132	



1D

GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

13MW1

Lab Name: COMPUCHEM Contract: 8332

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 1010107-02

Sample wt/vol: 500.0 (g/ml) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 10/20/10

Extraction: (SepF/Cont/Sonc) SOLIDPHASE Date Extracted:10/22/10

Concentrated Extract Volume: 10000(ul) Date Analyzed: 10/22/10

Injection Volume: 10.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
55-63-0	Nitroglycerin	16	U

FORM I PEST

Data File: /chem/a11002.i/r101021c.b/024r1010107-02.d

Page 1

Date : 22-OCT-2010 18:01

Client ID: 13MW1

Instrument: a11002.i

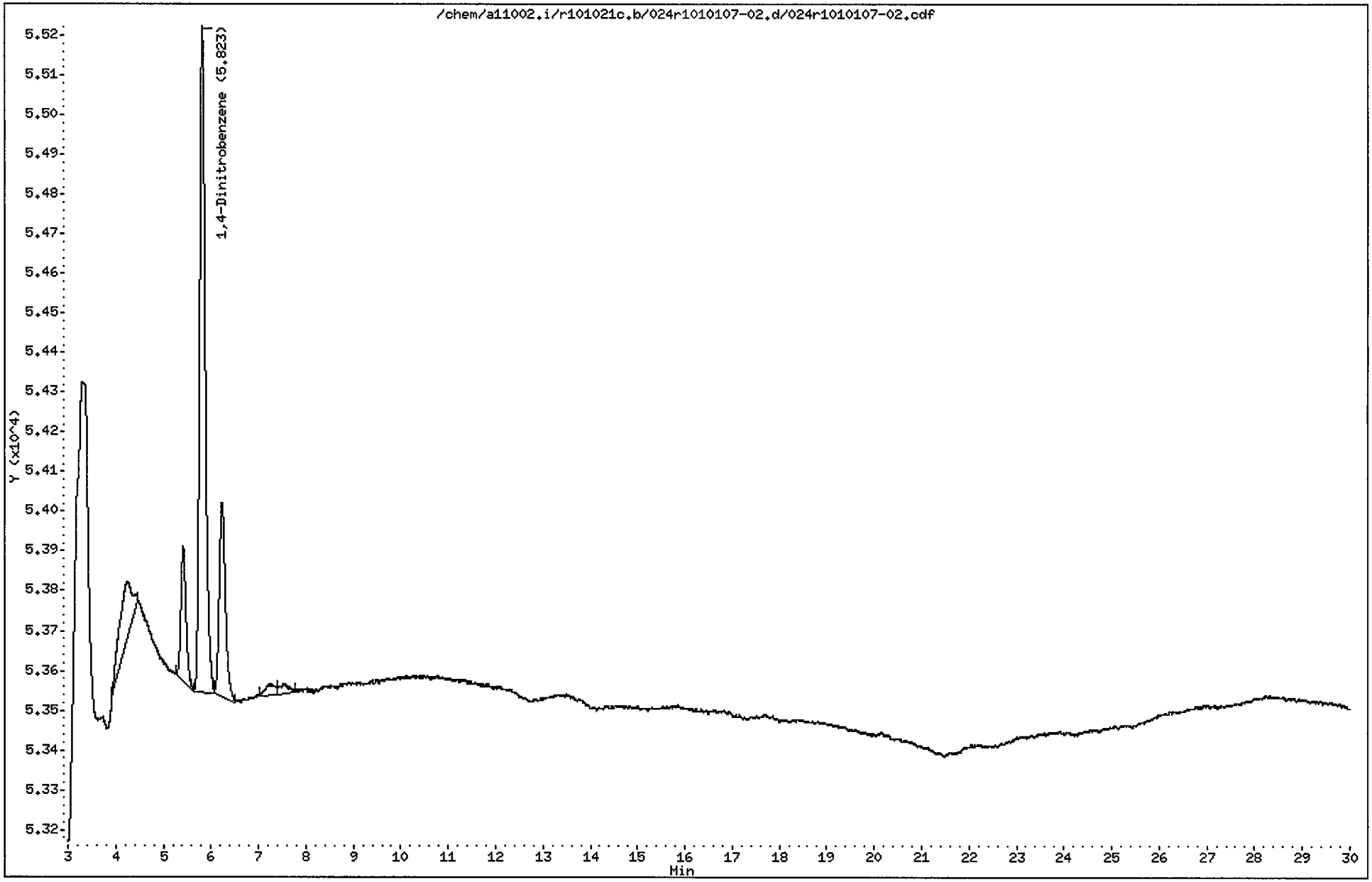
Sample Info: 1010107-02

Volume Injected (uL): 10.0

Operator: BWL

Column phase: PINNACLE CYANO

Column diameter: 4.60



CompuChem

Lab Smp Id : 1010107-02 Client Smp Id : 13MW1
Sample Type : SAMPLE Sublist : nitro
Inj Date : 22-OCT-2010 18:01 Inst ID : A11002
Operator : BWL
Method : /chem/a11002.i/r101021c.b/8332TPconf_10uL_v1.m
Misc. Info : 13MW1

Method Type: undefined

RT	RT WINDOW	AREA	QUANT RF	COMPOUND	CONCENTRATIONS ON-COLUMN (Ng)	CONCENTRATIONS FINAL (ug/L)	ADJUSTED PQL (ug/L)	% REC	RECOVERY LIMITS	FLAGS
4.28		2855								
5.42		2527								
5.82	5.30 6.30	13777	1652	1,4-Dinitrobenzene	8.339538	16.67908		83.4	50 - 150	
6.25		4382								
7.25		407								
7.54		328								



1D

GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

13MW2

Lab Name: COMPUCHEM Contract: 8330B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 1010107-03

Sample wt/vol: 500.0 (g/ml) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 10/20/10

Extraction: (SepF/Cont/Sonc) SOLIDPHASE Date Extracted:10/22/10

Concentrated Extract Volume: 10000(ul) Date Analyzed: 10/22/10

Injection Volume: 10.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-35-4	1,3,5-Trinitrobenzene	2.50	U
99-65-0	1,3-Dinitrobenzene	2.50	U
606-20-2	2,6-Dinitrotoluene	5.00	U
121-14-2	2,4-Dinitrotoluene	5.00	U

Data File: /chem/a11001.i/z101006j.b/068z1010107-03.d

Date : 22-OCT-2010 20:24

Client ID: 13MW2

Instrument: a11001.i

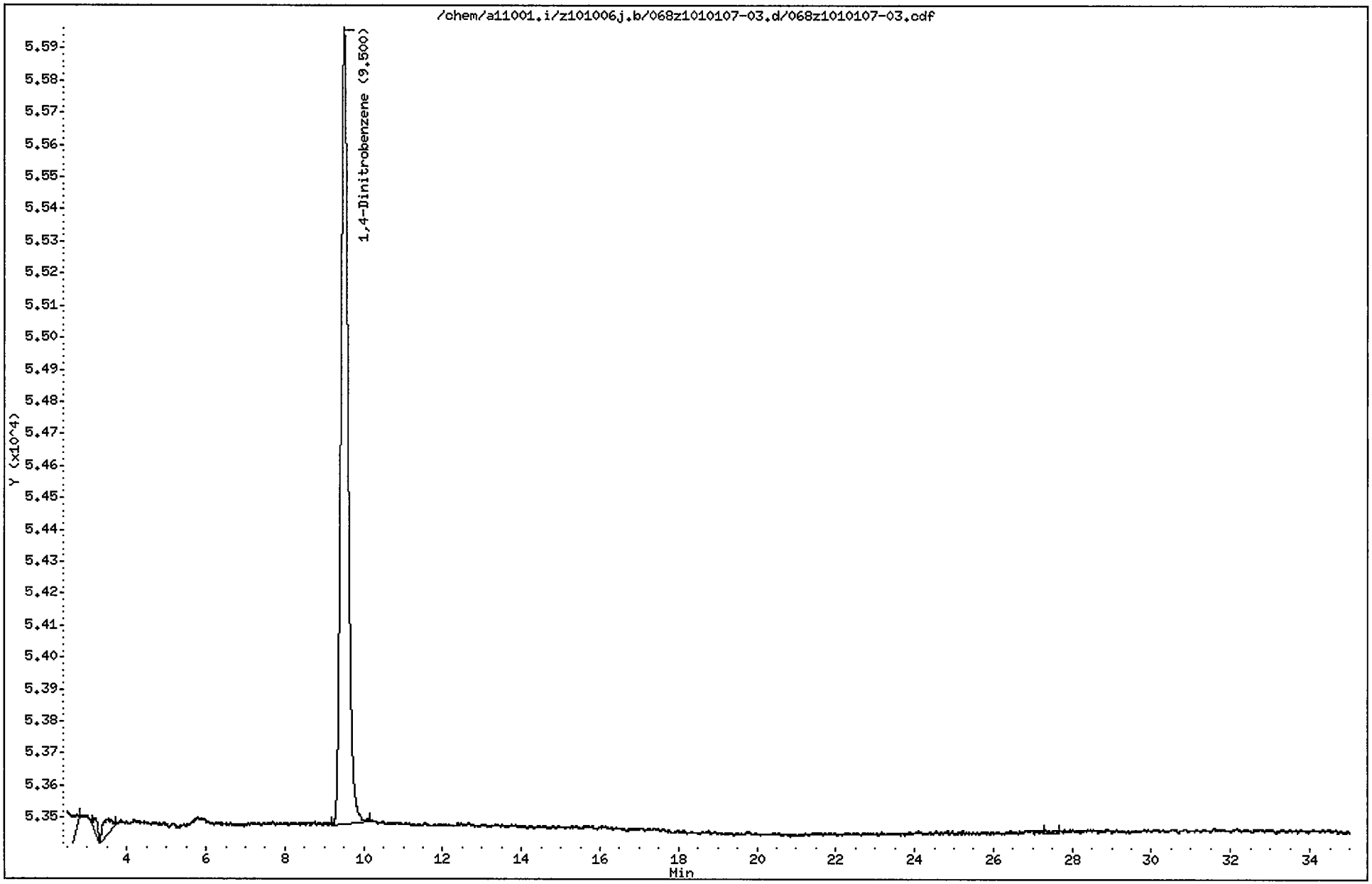
Sample Info: 1010107-03

Volume Injected (uL): 10.0

Operator: BWL

Column phase: C18

Column diameter: 4.60



CompuChem

Lab Smp Id : 1010107-03 Client Smp Id : 13MW2
Sample Type : SAMPLE Sublist : DAU13
Inj Date : 22-OCT-2010 20:24 Inst ID : A11001
Operator : BWL
Method : /chem/a11001.i/z101006j.b/8330_10uL_v3_a_split.m
Misc. Info : 13MW2

Formula: Conc=(Area/RF) * DF * (Uf * Vt/(Vi * Vo))

DF Dilution Factor: 1.0 Uf GPC Unit Factor: 1
Vt Final Volume: 10000(ul) Vi Injection Volume: 10(ul)
Vo Sample Volume: 500.0(ml)

RT	RT WINDOW		AREA	QUANT RF	COMPOUND	CONCENTRATIONS ON-COLUMN (Ng)	CONCENTRATIONS FINAL (ug/L)	ADJUSTED PQL (ug/L)	% REC	RECOVERY LIMITS	FLAGS
1.15			106								
1.33			3172								
1.72			85								
2.20			6650								
3.22			275								
3.53			773								
9.50	9.34	9.74	31326	3229	1,4-Dinitrobenzene	9.701154	19.40231		97.0	39 - 132	
27.32			119								

KEH 10/25/10

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GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

13MW2

Lab Name: COMPUCHEM Contract: 8332

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 1010107-03

Sample wt/vol: 500.0 (g/ml) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 10/20/10

Extraction: (SepF/Cont/Sonc) SOLIDPHASE Date Extracted:10/22/10

Concentrated Extract Volume: 10000(ul) Date Analyzed: 10/22/10

Injection Volume: 10.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
55-63-0	Nitroglycerin	16	U

FORM I PEST

Data File: /chem/a11002.i/r101021d.b/027r1010107-03.d

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Date : 22-OCT-2010 19:34

Client ID: 13MW2

Instrument: a11002.i

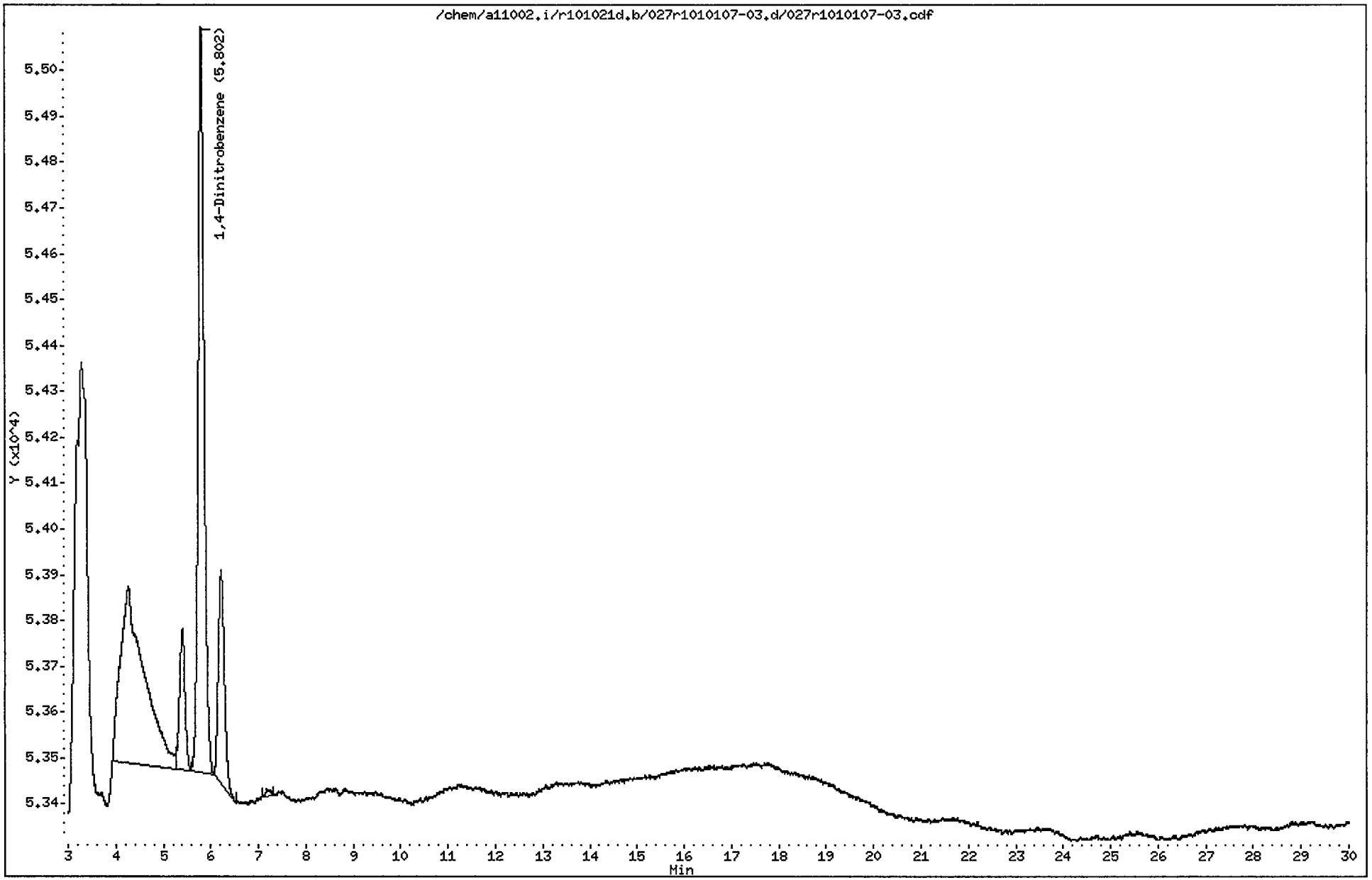
Sample Info: 1010107-03

Volume Injected (uL): 10.0

Operator: BWL

Column phase: PINNACLE CYANO

Column diameter: 4.60



CompuChem

Lab Smp Id : 1010107-03 Client Smp Id : 13MW2
Sample Type : SAMPLE Sublist : nitro
Inj Date : 22-OCT-2010 19:34 Inst ID : A11002
Operator : BWL
Method : /chem/a11002.i/r101021d.b/8332TPconf_10uL_v1.m
Misc. Info : 13MW2

Method Type: undefined

RT	RT WINDOW		AREA	QUANT RF	COMPOUND	CONCENTRATIONS ON-COLUMN (Ng)	CONCENTRATIONS FINAL (ug/L)	ADJUSTED PQL (ug/L)	% REC	RECOVERY LIMITS	FLAGS
4.26			13446								
5.41			2454								
5.80	5.30	6.30	14002	1652	1,4-Dinitrobenzene	8.475341	16.95068		84.8	50 - 150	
6.22			4173								
7.18			106								

KEH 10/25/10

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GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

13MW3

Lab Name: COMPUCHEM Contract: 8330B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 1010107-04

Sample wt/vol: 500.0 (g/ml) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 10/20/10

Extraction: (SepF/Cont/Sonc) SOLIDPHASE Date Extracted:10/22/10

Concentrated Extract Volume: 10000(ul) Date Analyzed: 10/22/10

Injection Volume: 10.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-35-4	1,3,5-Trinitrobenzene	2.50	U
99-65-0	1,3-Dinitrobenzene	2.50	U
606-20-2	2,6-Dinitrotoluene	5.00	U
121-14-2	2,4-Dinitrotoluene	5.00	U

Data File: /chem/a11001.i/z101006j.b/069z1010107-04.d

Date : 22-OCT-2010 21:00

Client ID: 13MW3

Instrument: a11001.i

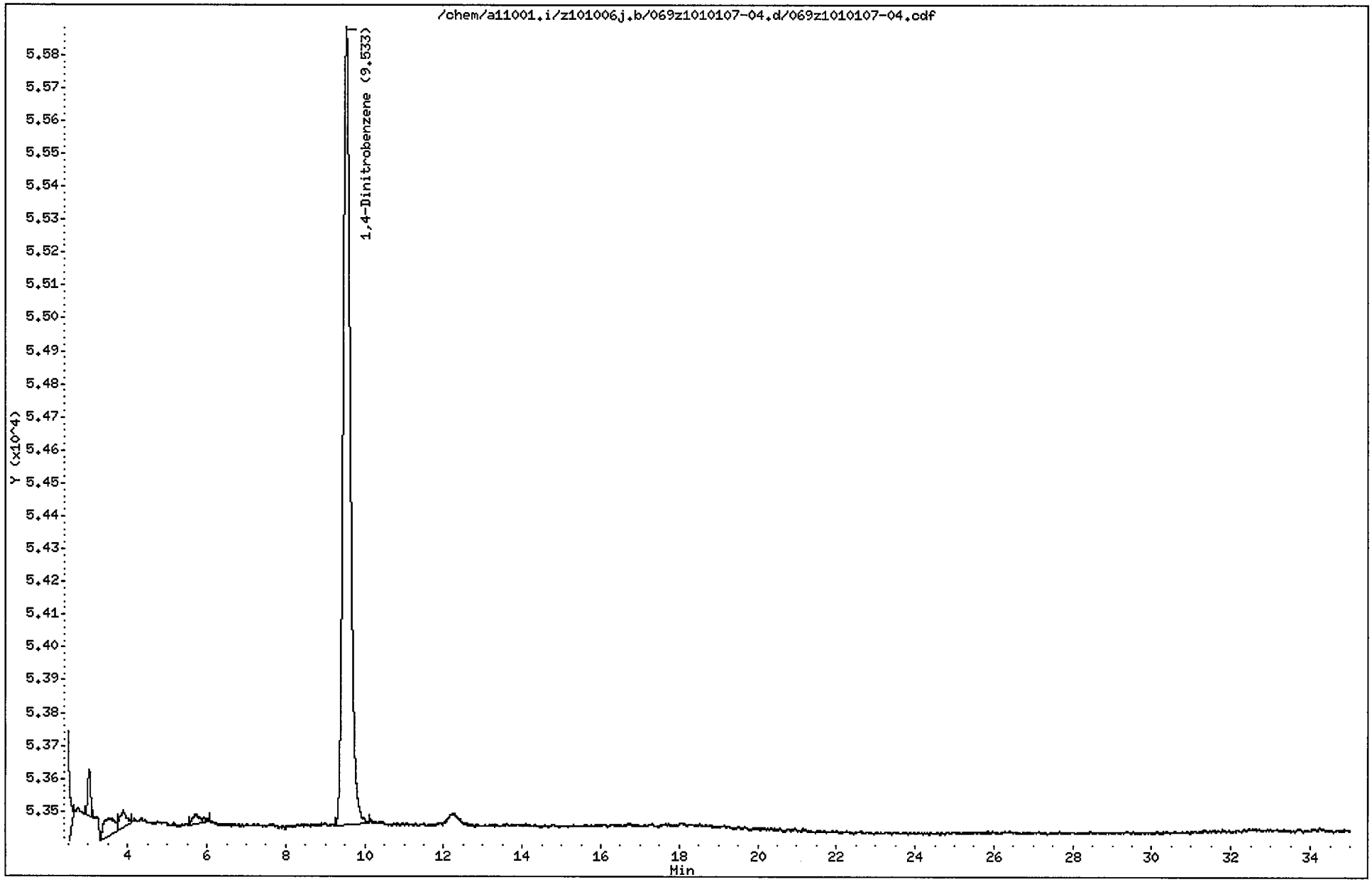
Sample Info: 1010107-04

Volume Injected (uL): 10.0

Operator: BWL

Column phase: C18

Column diameter: 4.60



CompuChem

Lab Smp Id : 1010107-04 Client Smp Id : 13MW3
Sample Type : SAMPLE Sublist : DAU13
Inj Date : 22-OCT-2010 21:00 Inst ID : A11001
Operator : BWL
Method : /chem/a11001.i/z101006j.b/8330_10uL_v3_a_split.m
Misc. Info : 13MW3

Formula: Conc=(Area/RF) * DF * (Uf * Vt/(Vi * Vo))

DF Dilution Factor: 1.0 Uf GPC Unit Factor: 1
Vt Final Volume: 10000(ul) Vi Injection Volume: 10(ul)
Vo Sample Volume: 500.0(ml)

RT	RT WINDOW		AREA	QUANT RF	COMPOUND	CONCENTRATIONS ON-COLUMN (Ng)	CONCENTRATIONS FINAL (ug/L)	ADJUSTED PQL (ug/L)	% REC	RECOVERY LIMITS	FLAGS
1.14			2742								
1.34			13551								
1.75			74								
1.97			369								
2.14			4538								
2.45			8335								
3.02			730								
3.52			999								
3.89			595								
5.73			442								
9.53	9.34	9.74	30719	3229	1,4-Dinitrobenzene	9.513132	19.02626		95.1	39 - 132	

KCH 10/25/10

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GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

13MW3

Lab Name: COMPUCHEM Contract: 8332

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 1010107-04

Sample wt/vol: 500.0 (g/ml) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 10/20/10

Extraction: (SepF/Cont/Sonc) SOLIDPHASE Date Extracted:10/22/10

Concentrated Extract Volume: 10000(ul) Date Analyzed: 10/22/10

Injection Volume: 10.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
55-63-0	Nitroglycerin	16	U

FORM I PEST

Data File: /chem/a11002.i/r101021d.b/028r1010107-04.d

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Date : 22-OCT-2010 20:05

Client ID: 13MW3

Instrument: a11002.i

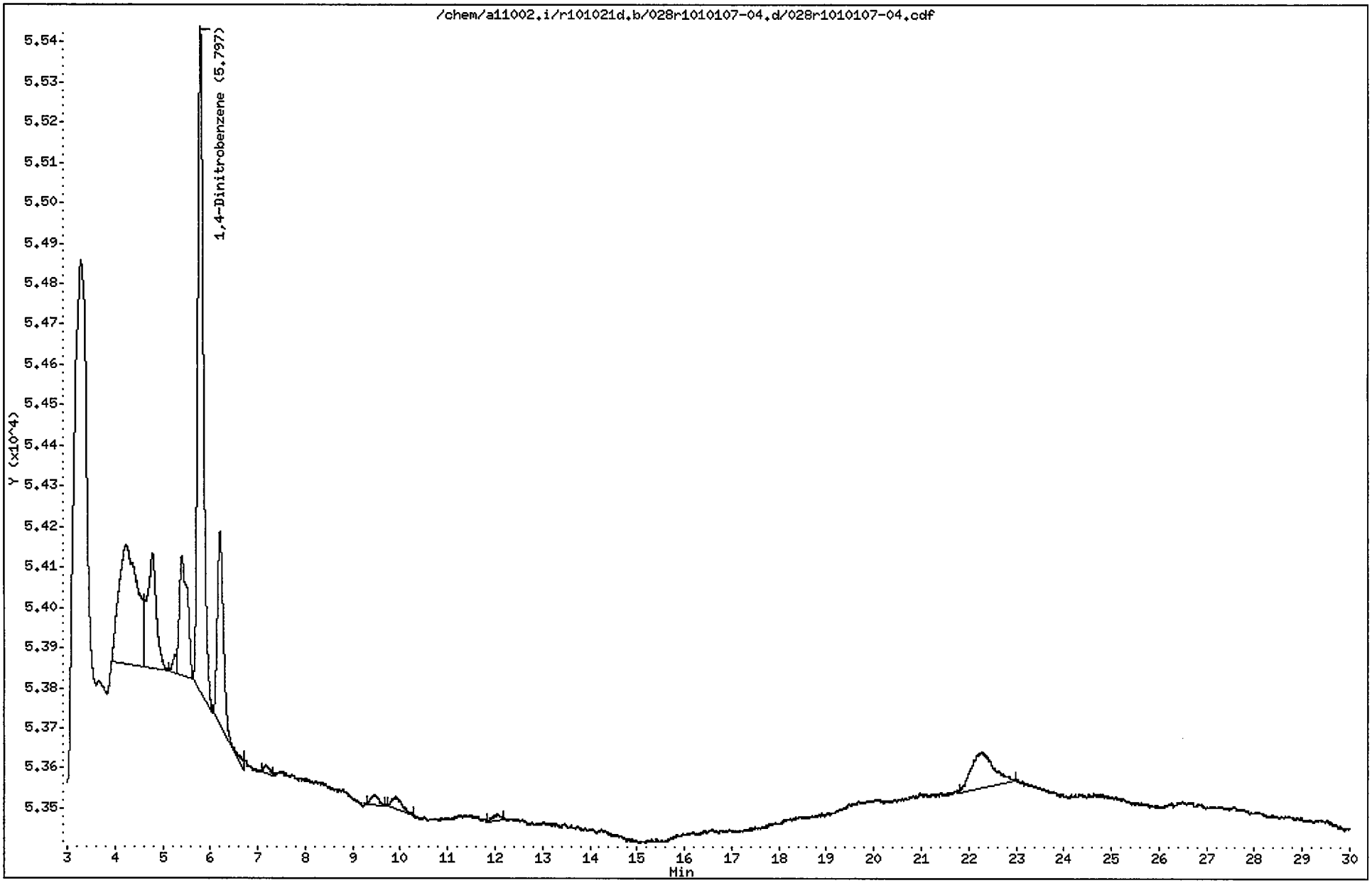
Sample Info: 1010107-04

Volume Injected (uL): 10.0

Operator: BWL

Column phase: PINNACLE CYANO

Column diameter: 4.60



CompuChem

Lab Smp Id : 1010107-04 Client Smp Id : 13MW3
Sample Type : SAMPLE Sublist : nitro
Inj Date : 22-OCT-2010 20:05 Inst ID : A11002
Operator : BWL
Method : /chem/a11002.i/r101021d.b/8332TPconf_10uL_v1.m
Misc. Info : 13MW3

Method Type: undefined

RT	RT WINDOW	AREA	QUANT RF	COMPOUND	CONCENTRATIONS ON-COLUMN (Ng)	CONCENTRATIONS FINAL (ug/L)	ADJUSTED PQL (ug/L)	% REC	RECOVERY LIMITS	FLAGS
4.24		8123								
4.79		3858								
5.27		223								
5.41		3467								
5.80	5.30 6.30	13419	1652	1,4-Dinitrobenzene	8.122441	16.24488		81.2	50 - 150	
6.21		4359								
7.17		162								
9.47		301								
9.91		455								
12.05		170								
22.28		2950								



1D

GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

13MW4

Lab Name: COMPUCHEM Contract: 8330B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 1010107-05

Sample wt/vol: 500.0 (g/ml) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 10/20/10

Extraction: (SepF/Cont/Sonc) SOLIDPHASE Date Extracted:10/22/10

Concentrated Extract Volume: 10000(ul) Date Analyzed: 10/22/10

Injection Volume: 10.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-35-4	1,3,5-Trinitrobenzene	2.50	U
99-65-0	1,3-Dinitrobenzene	2.50	U
606-20-2	2,6-Dinitrotoluene	5.00	U
121-14-2	2,4-Dinitrotoluene	5.00	U

FORM I PEST

Data File: /chem/a11001.i/z101006j.b/070z1010107-05.d

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Date : 22-OCT-2010 21:36

Client ID: 13MW4

Instrument: a11001.i

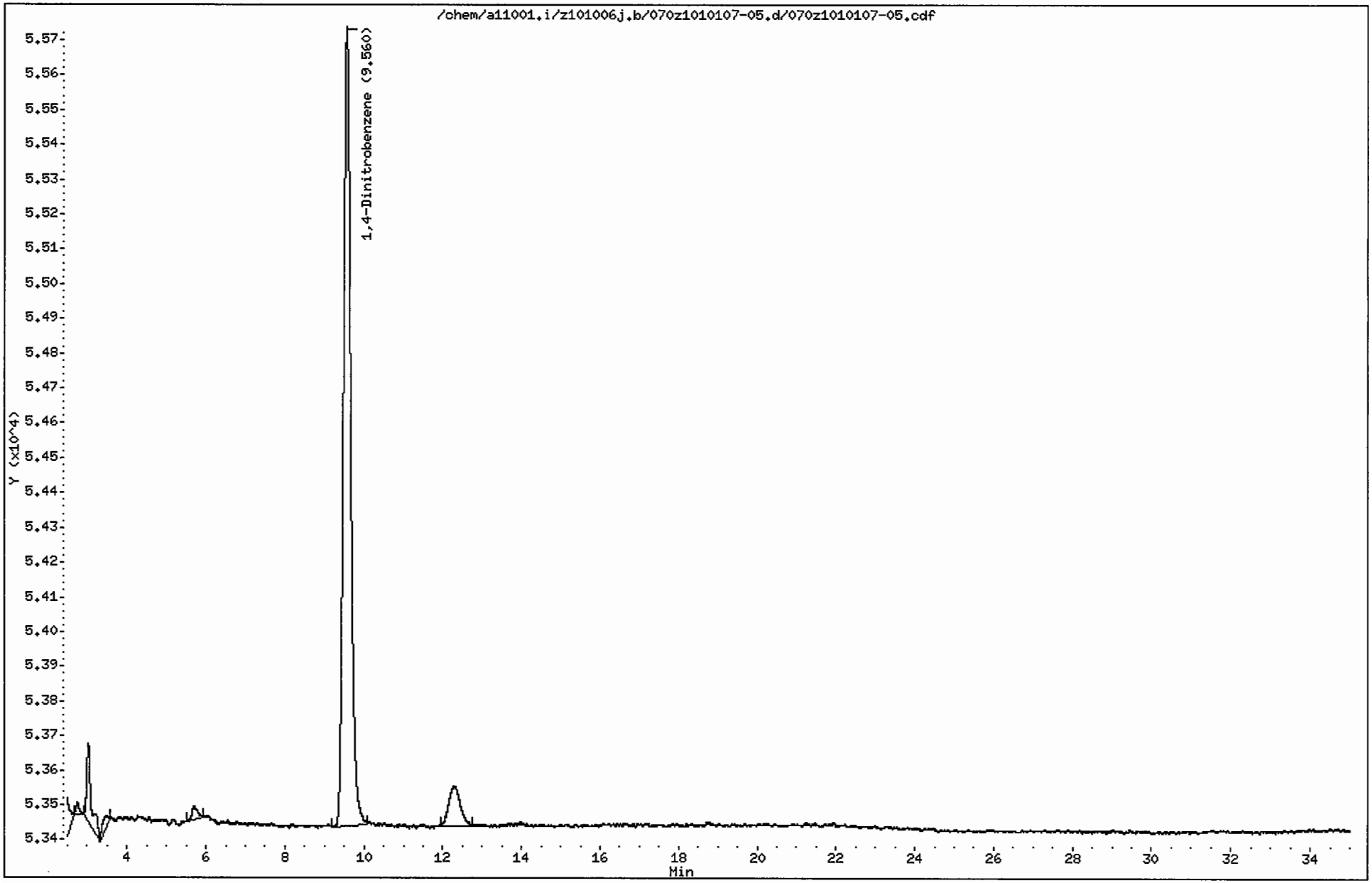
Sample Info: 1010107-05

Volume Injected (uL): 10.0

Operator: BWL

Column phase: C18

Column diameter: 4.60



CompuChem

Lab Smp Id : 1010107-05 Client Smp Id : 13MW4
Sample Type : SAMPLE Sublist : DAU13
Inj Date : 22-OCT-2010 21:36 Inst ID : A11001
Operator : BWL
Method : /chem/a11001.i/z101006j.b/8330_10uL_v3_a_split.m
Misc. Info : 13MW4

Formula: Conc=(Area/RF) * DF * (Uf * Vt/(Vi * Vo))

DF Dilution Factor: 1.0 Uf GPC Unit Factor: 1
Vt Final Volume: 10000(ul) Vi Injection Volume: 10(ul)
Vo Sample Volume: 500.0(ml)

RT	RT WINDOW		AREA	QUANT RF	COMPOUND	CONCENTRATIONS ON-COLUMN (Ng)	CONCENTRATIONS FINAL (ug/L)	ADJUSTED PQL (ug/L)	% REC	RECOVERY LIMITS	FLAGS
1.16			397								
1.38			4656								
1.96			189								
2.21			4151								
2.44			1439								
2.75			180								
3.02			1857								
3.49			341								
5.70			364								
9.56	9.34	9.74	29392	3229	1,4-Dinitrobenzene	9.102080	18.20416		91.0	39 - 132	
12.31			2339								

KCH 10/25/10

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GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

13MW4

Lab Name: COMPUCHEM Contract: 8332

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 1010107-05

Sample wt/vol: 500.0 (g/ml) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 10/20/10

Extraction: (SepF/Cont/Sonc) SOLIDPHASE Date Extracted:10/22/10

Concentrated Extract Volume: 10000(ul) Date Analyzed: 10/22/10

Injection Volume: 10.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
55-63-0	Nitroglycerin	16	U

FORM I PEST

Data File: /chem/a11002.i/r101021d.b/029r1010107-05.d

Date : 22-OCT-2010 20:36

Client ID: 13MW4

Instrument: a11002.i

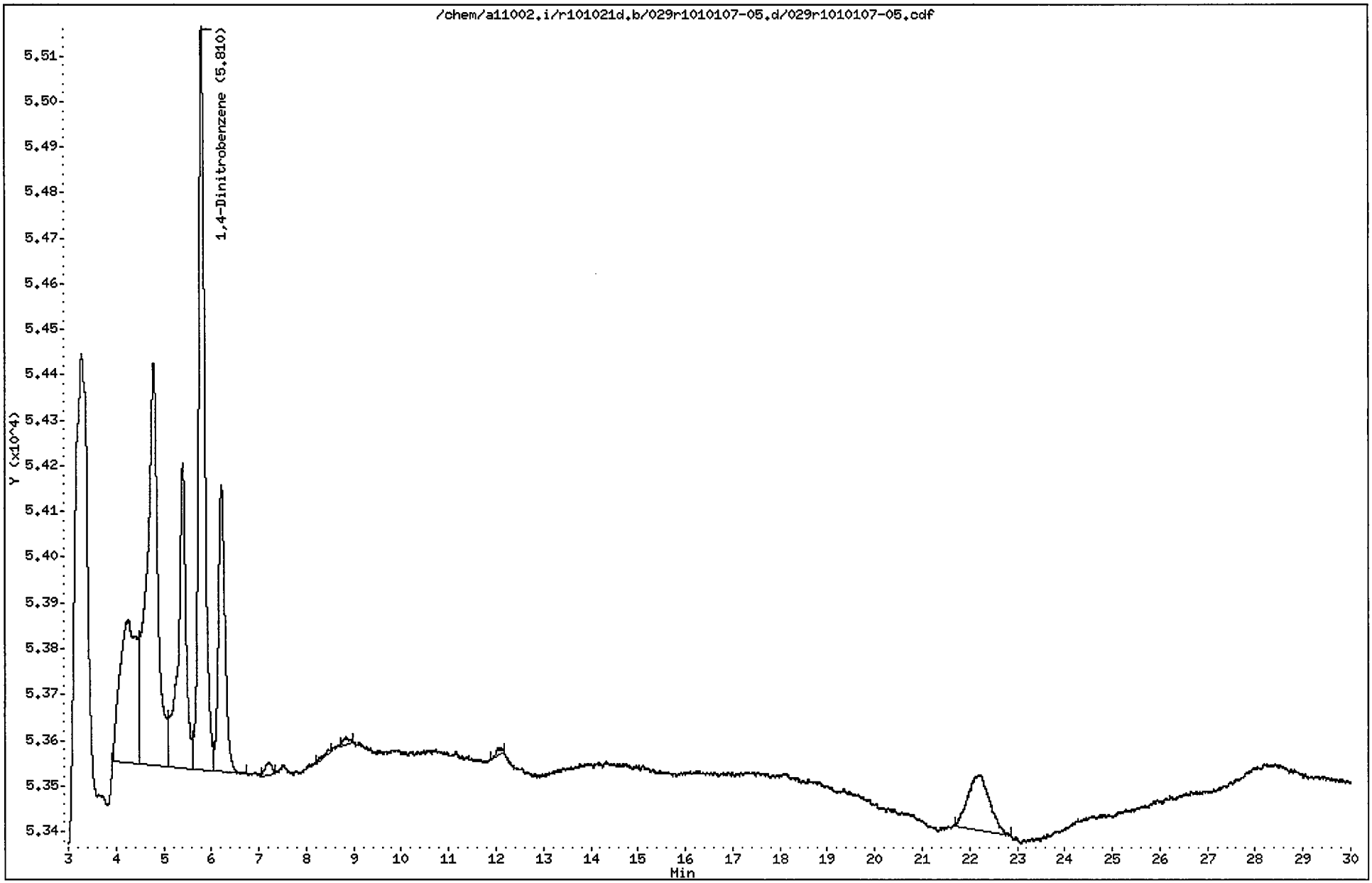
Sample Info: 1010107-05

Volume Injected (uL): 10.0

Operator: BWL

Column phase: PINNACLE CYANO

Column diameter: 4.60



CompuChem

Lab Smp Id : 1010107-05 Client Smp Id : 13MW4
Sample Type : SAMPLE Sublist : nitro
Inj Date : 22-OCT-2010 20:36 Inst ID : A11002
Operator : BWL
Method : /chem/a11002.i/r101021d.b/8332TPconf_10uL_v1.m
Misc. Info : 13MW4

Method Type: undefined

RT	RT WINDOW		AREA	QUANT RF	COMPOUND	CONCENTRATIONS ON-COLUMN (Ng)	CONCENTRATIONS FINAL (ug/L)	ADJUSTED PQL (ug/L)	% REC	RECOVERY LIMITS	FLAGS
4.27			7651								
4.80			14481								
5.41			7687								
5.81	5.30	6.30	14692	1652	1,4-Dinitrobenzene	8.893524	17.78705		88.9	50 - 150	
6.23			6105								
7.20			257								
8.47			122								
8.85			153								
12.05			145								
22.23			3831								

KEH 10/25/10

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GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

13MW5

Lab Name: COMPUCHEM Contract: 8330B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 1010107-01

Sample wt/vol: 500.0 (g/ml) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 10/20/10

Extraction: (SepF/Cont/Sonc) SOLIDPHASE Date Extracted:10/22/10

Concentrated Extract Volume: 10000(ul) Date Analyzed: 10/22/10

Injection Volume: 10.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-35-4	1,3,5-Trinitrobenzene	2.50	U
99-65-0	1,3-Dinitrobenzene	2.50	U
606-20-2	2,6-Dinitrotoluene	5.00	U
121-14-2	2,4-Dinitrotoluene	5.00	U

FORM I PEST

Data File: /chem/a11001.i/z101006i.b/064z1010107-01.d

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Date : 22-OCT-2010 18:00

Client ID: 13MW5

Instrument: a11001.i

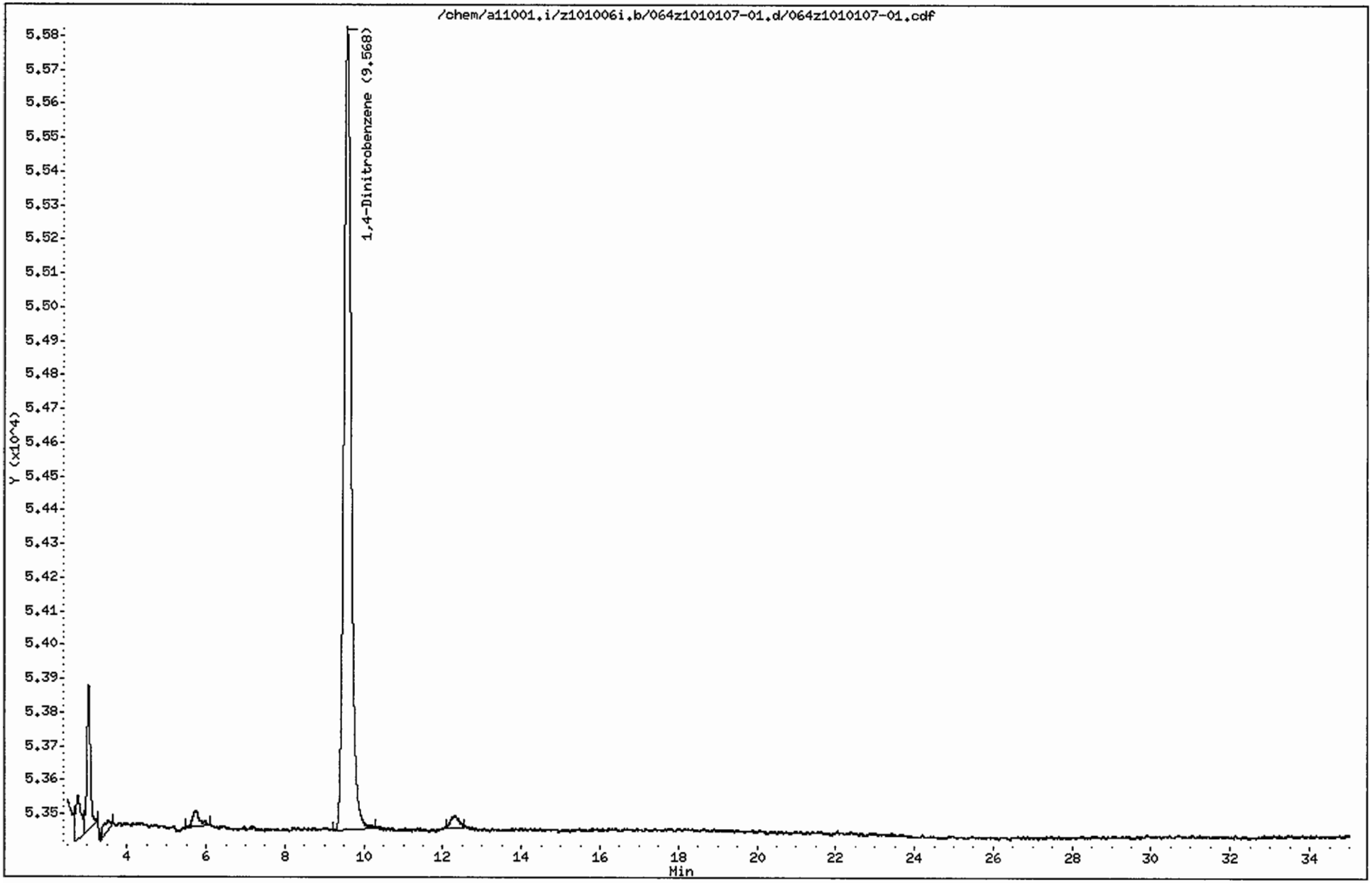
Sample Info: 1010107-01

Volume Injected (uL): 10.0

Operator: BWL

Column phase: C18

Column diameter: 4.60



CompuChem

Lab Smp Id : 1010107-01 Client Smp Id : 13MW5
Sample Type : SAMPLE Sublist : DAU13
Inj Date : 22-OCT-2010 18:00 Inst ID : A11001
Operator : BWL
Method : /chem/a11001.i/z101006i.b/8330_10uL_v3_a_split.m
Misc. Info : 13MW5

Formula: Conc=(Area/RF) * DF * (Uf * Vt/(Vi * Vo))

DF Dilution Factor: 1.0 Uf GPC Unit Factor: 1
Vt Final Volume: 10000(ul) Vi Injection Volume: 10(ul)
Vo Sample Volume: 500.0(ml)

RT	RT WINDOW		AREA	QUANT RF	COMPOUND	CONCENTRATIONS ON-COLUMN (Ng)	CONCENTRATIONS FINAL (ug/L)	ADJUSTED PQL (ug/L)	% REC	RECOVERY LIMITS	FLAGS
1.16			2596								
1.37			10353								
1.67			2963								
1.98			204								
2.21			9051								
2.76			1260								
3.03			2609								
3.53			374								
5.75			613								
9.57	9.34	9.74	30521	3229	1,4-Dinitrobenzene	9.451413	18.90283		94.5	39 - 132	
12.34			514								



1D

GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

13MW5

Lab Name: COMPUCHEM Contract: 8332

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 1010107-01

Sample wt/vol: 500.0 (g/ml) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 10/20/10

Extraction: (SepF/Cont/Sonc) SOLIDPHASE Date Extracted:10/22/10

Concentrated Extract Volume: 10000(ul) Date Analyzed: 10/22/10

Injection Volume: 10.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
55-63-0	Nitroglycerin	16	U

FORM I PEST

Data File: /chem/a11002.i/r101021c.b/023r1010107-01.d

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Date : 22-OCT-2010 17:30

Client ID: 13MW5

Instrument: a11002.i

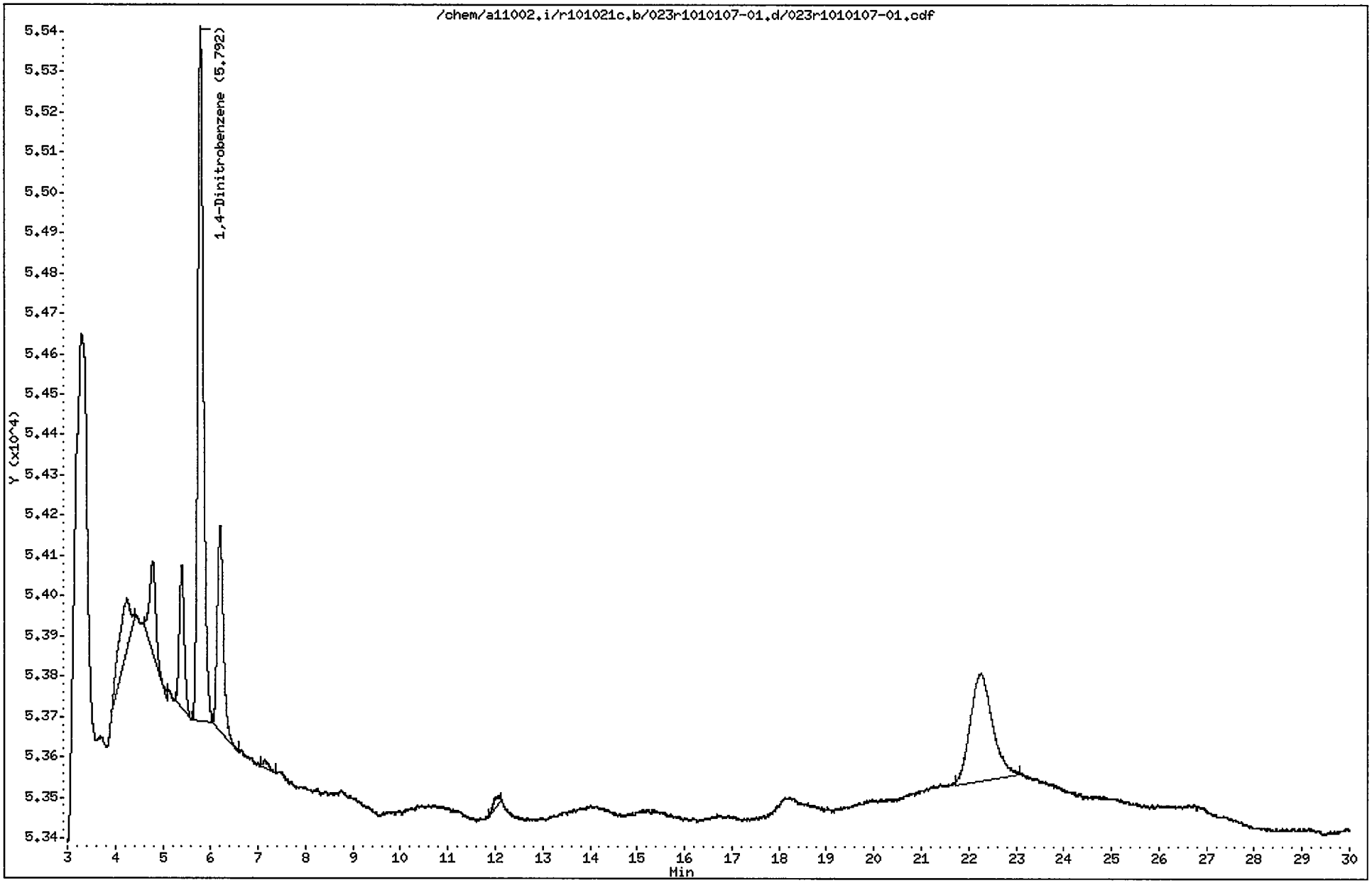
Sample Info: 1010107-01

Volume Injected (uL): 10.0

Operator: BWL

Column phase: PINNACLE CYANO

Column diameter: 4.60



CompuChem

Lab Smp Id : 1010107-01 Client Smp Id : 13MW5
Sample Type : SAMPLE Sublist : nitro
Inj Date : 22-OCT-2010 17:30 Inst ID : A11002
Operator : BWL
Method : /chem/a11002.i/r101021c.b/8332TPconf_10uL_v1.m
Misc. Info : 13MW5

Method Type: undefined

RT	RT WINDOW	AREA	QUANT RF	COMPOUND	CONCENTRATIONS ON-COLUMN (Ng)	CONCENTRATIONS FINAL (ug/L)	ADJUSTED PQL (ug/L)	% REC	RECOVERY LIMITS	FLAGS
4.24		2257								
4.79		2146								
5.40		2565								
5.79	5.30 6.30	14162	1652	1,4-Dinitrobenzene	8.572645	17.14529		85.7	50 - 150	
6.20		4494								
7.14		153								
12.02		230								
22.25		8622								

KEH 10/25/10

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GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

13MW6

Lab Name: COMPUCHEM Contract: 8330B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 1010107-07

Sample wt/vol: 500.0 (g/ml) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 10/20/10

Extraction: (SepF/Cont/Sonc) SOLIDPHASE Date Extracted:10/22/10

Concentrated Extract Volume: 10000(ul) Date Analyzed: 10/22/10

Injection Volume: 10.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-35-4	1,3,5-Trinitrobenzene	2.50	U
99-65-0	1,3-Dinitrobenzene	2.50	U
606-20-2	2,6-Dinitrotoluene	5.00	U
121-14-2	2,4-Dinitrotoluene	5.00	U

FORM I PEST

Data File: /chem/a11001.i/z101006j.b/072z1010107-07.d

Date : 22-OCT-2010 22:48

Client ID: 13MW6

Instrument: a11001.i

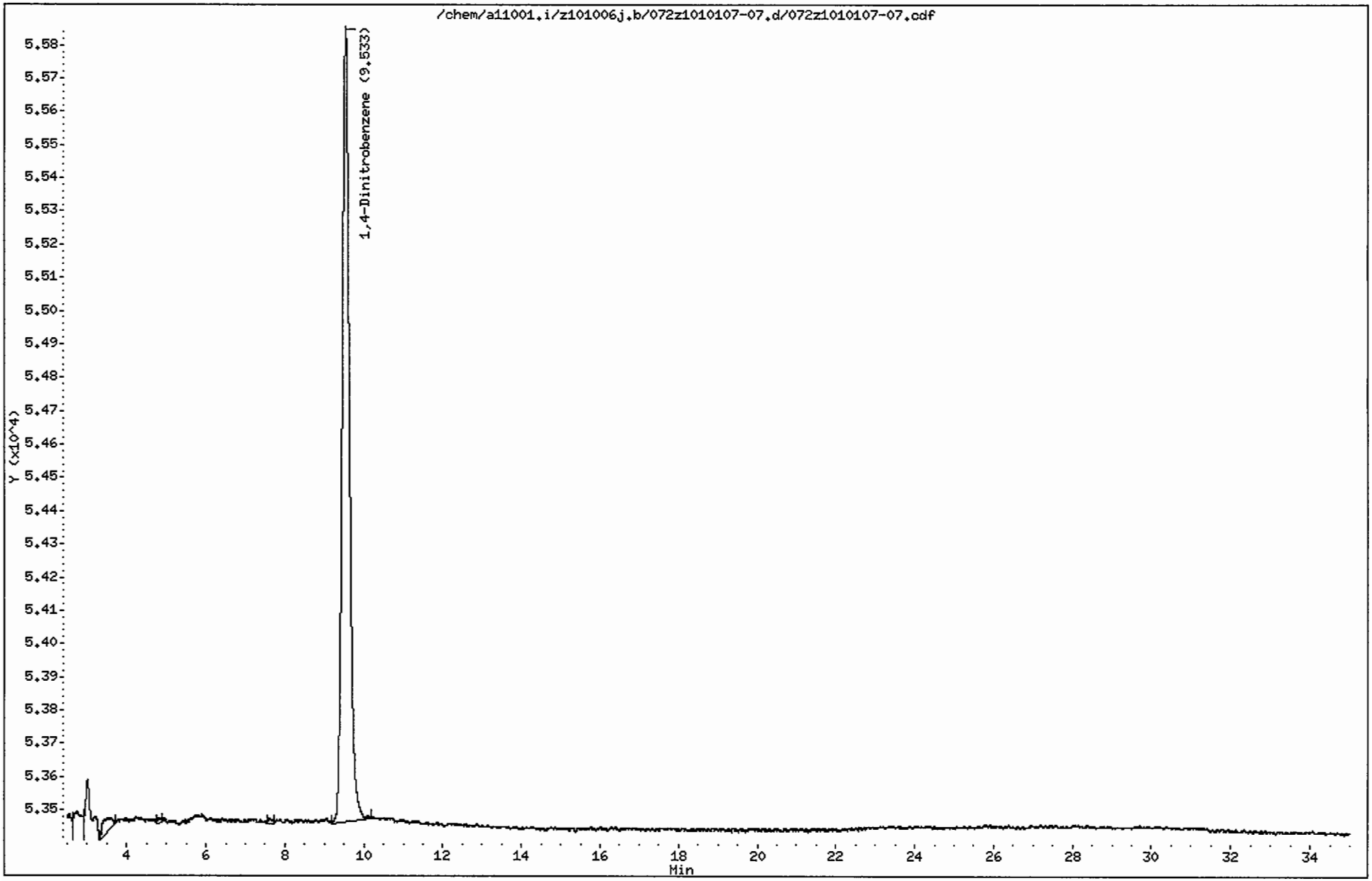
Sample Info: 1010107-07

Volume Injected (uL): 10.0

Operator: BWL

Column phase: C18

Column diameter: 4.60



CompuChem

Lab Smp Id : 1010107-07 Client Smp Id : 13MW6
Sample Type : SAMPLE Sublist : DAU13
Inj Date : 22-OCT-2010 22:48 Inst ID : A11001
Operator : BWL
Method : /chem/a11001.i/z101006j.b/8330_10uL_v3_a_split.m
Misc. Info : 13MW6

Formula: Conc=(Area/RF) * DF * (Uf * Vt/(Vi * Vo))

DF Dilution Factor: 1.0 Uf GPC Unit Factor: 1
Vt Final Volume: 10000(ul) Vi Injection Volume: 10(ul)
Vo Sample Volume: 500.0(ml)

RT	RT WINDOW		AREA	QUANT RF	COMPOUND	CONCENTRATIONS ON-COLUMN (Ng)	CONCENTRATIONS FINAL (ug/L)	ADJUSTED PQL (ug/L)	% REC	RECOVERY LIMITS	FLAGS
1.39			3569								
1.91			105								
2.20			9821								
2.75			2567								
3.01			2698								
3.55			665								
4.84			69								
7.64			109								
9.53	9.34	9.74	30515	3229	1,4-Dinitrobenzene	9.449741	18.89948		94.5	39 - 132	

JEH 10/25/10

1D

EPA SAMPLE NO.

GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

13MW6

Lab Name: COMPUCHEM Contract: 8332

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 1010107-07

Sample wt/vol: 500.0 (g/ml) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 10/20/10

Extraction: (SepF/Cont/Sonc) SOLIDPHASE Date Extracted:10/22/10

Concentrated Extract Volume: 10000(ul) Date Analyzed: 10/22/10

Injection Volume: 10.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
55-63-0	Nitroglycerin	16	U

FORM I PEST

Data File: /chem/a11002.i/r101021d.b/031r1010107-07.d

Date : 22-OCT-2010 21:38

Client ID: 13MW6

Instrument: a11002.i

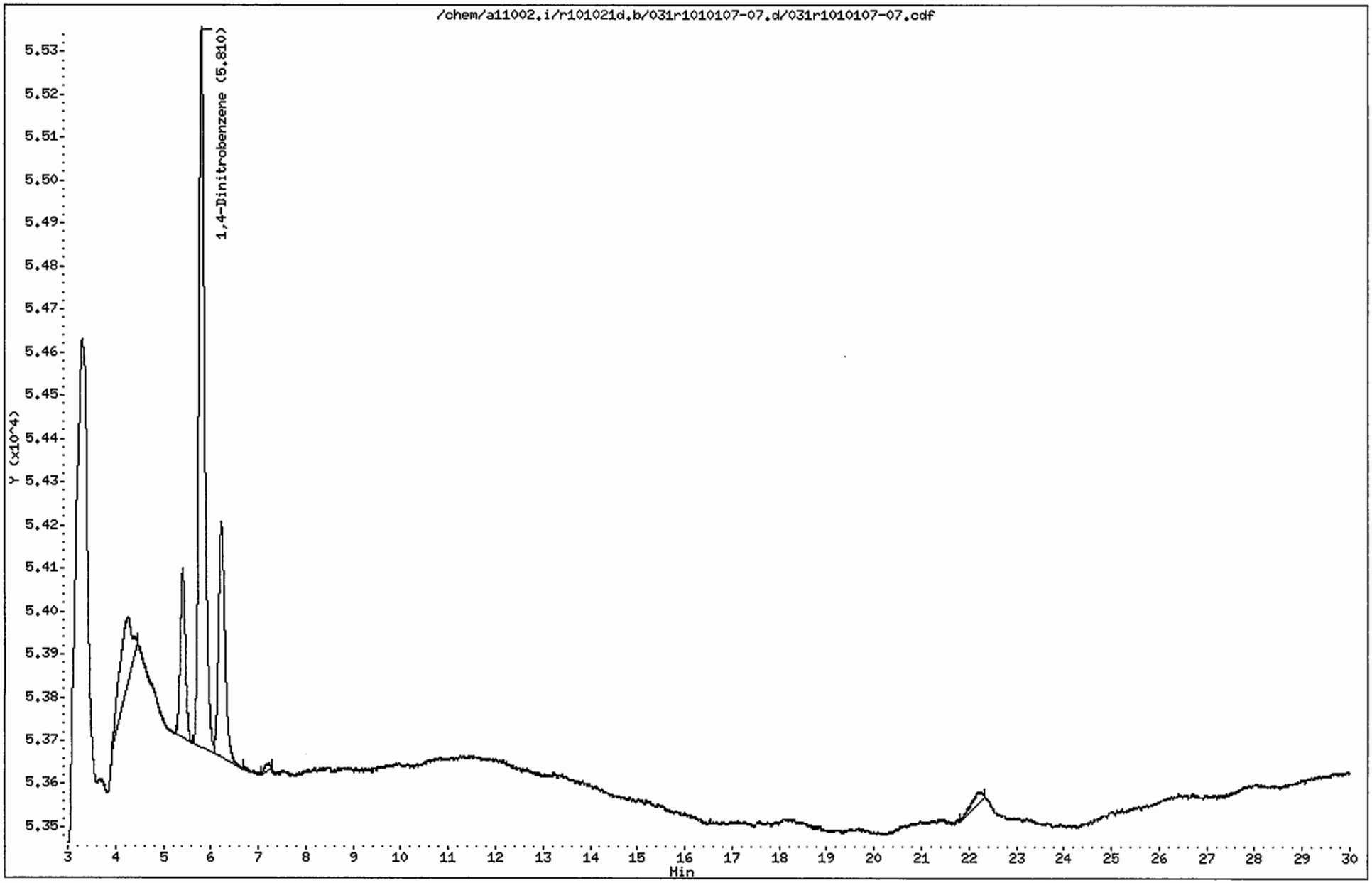
Sample Info: 1010107-07

Volume Injected (uL): 10.0

Operator: BWL

Column phase: PINNACLE CYANO

Column diameter: 4.60



CompuChem

Lab Smp Id : 1010107-07 Client Smp Id : 13MW6
Sample Type : SAMPLE Sublist : nitro
Inj Date : 22-OCT-2010 21:38 Inst ID : A11002
Operator : BWL
Method : /chem/a11002.i/r101021d.b/8332TPconf_10uL_v1.m
Misc. Info : 13MW6

Method Type: undefined

RT	RT WINDOW		AREA	QUANT RF	COMPOUND	CONCENTRATIONS ON-COLUMN (Ng)	CONCENTRATIONS FINAL (ug/L)	ADJUSTED PQL (ug/L)	% REC	RECOVERY LIMITS	FLAGS
4.26			2902								
5.41			2910								
5.81	5.30	6.30	14157	1652	1,4-Dinitrobenzene	8.569377	17.13875		85.7	50 - 150	
6.22			5106								
7.17			135								
22.21			408								

10/25/10

1D

GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

13MW7

Lab Name: COMPUCHEM Contract: 8330B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 1010107-08

Sample wt/vol: 500.0 (g/ml) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 10/20/10

Extraction: (SepF/Cont/Sonc) SOLIDPHASE Date Extracted:10/22/10

Concentrated Extract Volume: 10000(ul) Date Analyzed: 10/22/10

Injection Volume: 10.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-35-4	1,3,5-Trinitrobenzene	2.50	U
99-65-0	1,3-Dinitrobenzene	2.50	U
606-20-2	2,6-Dinitrotoluene	5.00	U
121-14-2	2,4-Dinitrotoluene	5.00	U

FORM I PEST

Data File: /chem/a11001.i/z101006j.b/073z1010107-08.d

Date : 22-OCT-2010 23:23

Client ID: 13MW7

Instrument: a11001.i

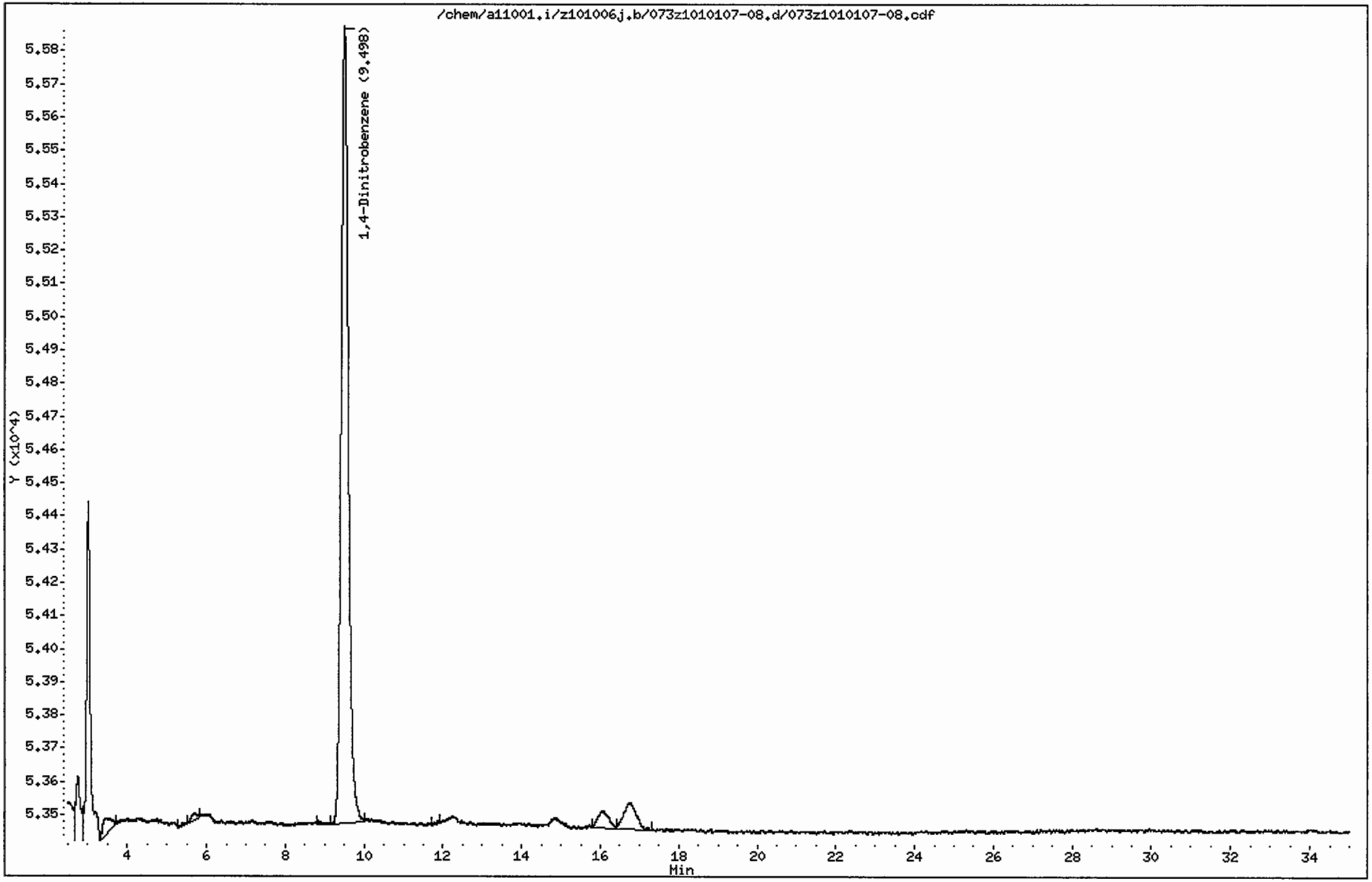
Sample Info: 1010107-08

Volume Injected (uL): 10.0

Operator: BWL

Column phase: C18

Column diameter: 4.60



CompuChem

Lab Smp Id : 1010107-08 Client Smp Id : 13MW7
Sample Type : SAMPLE Sublist : DAU13
Inj Date : 22-OCT-2010 23:23 Inst ID : A11001
Operator : BWL
Method : /chem/a11001.i/z101006j.b/8330_10uL_v3_a_split.m
Misc. Info : 13MW7

Formula: Conc=(Area/RF) * DF * (Uf * Vt/(Vi * Vo))

DF Dilution Factor: 1.0 Uf GPC Unit Factor: 1
Vt Final Volume: 10000(ul) Vi Injection Volume: 10(ul)
Vo Sample Volume: 500.0(ml)

RT	RT WINDOW	AREA	QUANT RF	COMPOUND	CONCENTRATIONS ON-COLUMN (Ng)	CONCENTRATIONS FINAL (ug/L)	ADJUSTED PQL (ug/L)	% REC	RECOVERY LIMITS	FLAGS
1.14		1173								
1.36		3767								
1.61		65								
2.20		12028								
2.75		2617								
3.02		7535								
3.50		711								
5.40		81								
5.72		228								
8.84		85								
9.50	9.34 9.74	30359	3229	1,4-Dinitrobenzene	9.401679	18.80336		94.0	39 - 132	
11.79		79								
16.09		956								
16.79		1809								

KEH 10/25/10

1D

GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

13MW7

Lab Name: COMPUCHEM Contract: 8332

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 1010107-08

Sample wt/vol: 500.0 (g/ml) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 10/20/10

Extraction: (SepF/Cont/Sonc) SOLIDPHASE Date Extracted:10/22/10

Concentrated Extract Volume: 10000(ul) Date Analyzed: 10/22/10

Injection Volume: 10.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
55-63-0	Nitroglycerin	16	U

FORM I PEST

Data File: /chem/a11002.i/r101021d.b/032r1010107-08.d

Page 1

Date : 22-OCT-2010 22:08

Client ID: 13MW7

Instrument: a11002.i

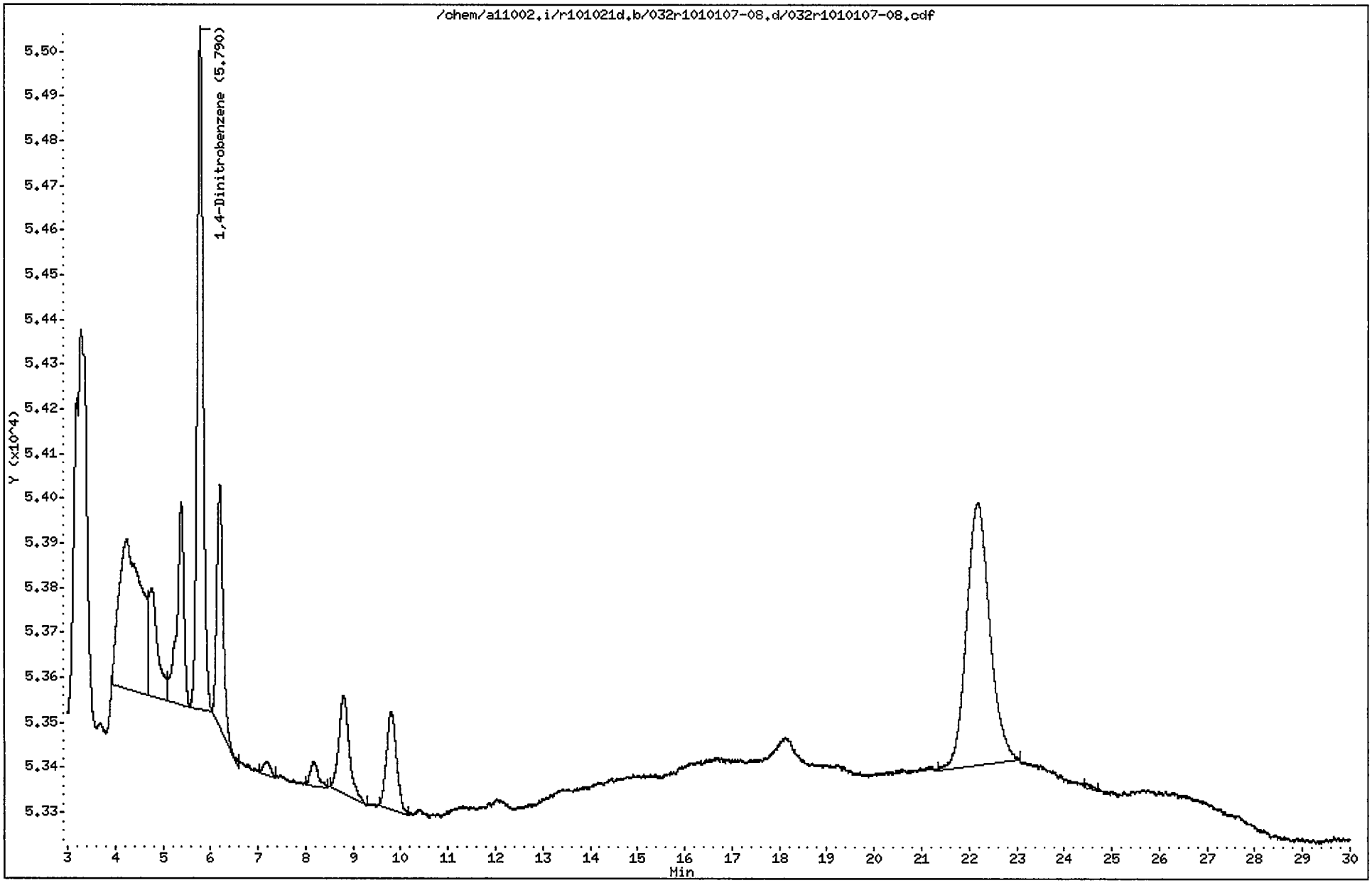
Sample Info: 1010107-08

Volume Injected (uL): 10.0

Operator: BWL

Column phase: PINNACLE CYANO

Column diameter: 4.60



CompuChem

Lab Smp Id : 1010107-08 Client Smp Id : 13MW7
Sample Type : SAMPLE Sublist : nitro
Inj Date : 22-OCT-2010 22:08 Inst ID : A11002
Operator : BWL
Method : /chem/a11002.i/r101021d.b/8332TPconf_10uL_v1.m
Misc. Info : 13MW7

Method Type: undefined

RT	RT WINDOW	AREA	QUANT RF	COMPOUND	CONCENTRATIONS ON-COLUMN (Ng)	CONCENTRATIONS FINAL (ug/L)	ADJUSTED PQL (ug/L)	% REC	RECOVERY LIMITS	FLAGS
4.26		10758								
4.78		3240								
5.39		4635								
5.79	5.30 6.30	13059	1652	1,4-Dinitrobenzene	7.904618	15.80924		79.0	50 - 150	
6.20		4987								
7.21		309								
8.16		632								
8.81		3271								
9.81		3216								
22.19		20001								
24.47		105								

KCH 10/25/10

1D

GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

13MWDUP

Lab Name: COMPUCHEM Contract: 8330B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 1010107-06

Sample wt/vol: 500.0 (g/ml) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 10/20/10

Extraction: (SepF/Cont/Sonc) SOLIDPHASE Date Extracted:10/22/10

Concentrated Extract Volume: 10000(ul) Date Analyzed: 10/22/10

Injection Volume: 10.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-35-4	1,3,5-Trinitrobenzene	2.50	U
99-65-0	1,3-Dinitrobenzene	2.50	U
606-20-2	2,6-Dinitrotoluene	5.00	U
121-14-2	2,4-Dinitrotoluene	5.00	U

Data File: /chem/a11001.i/z101006j.b/071z1010107-06.d

Page 1

Date : 22-OCT-2010 22:12

Client ID: 13MWDUP

Instrument: a11001.i

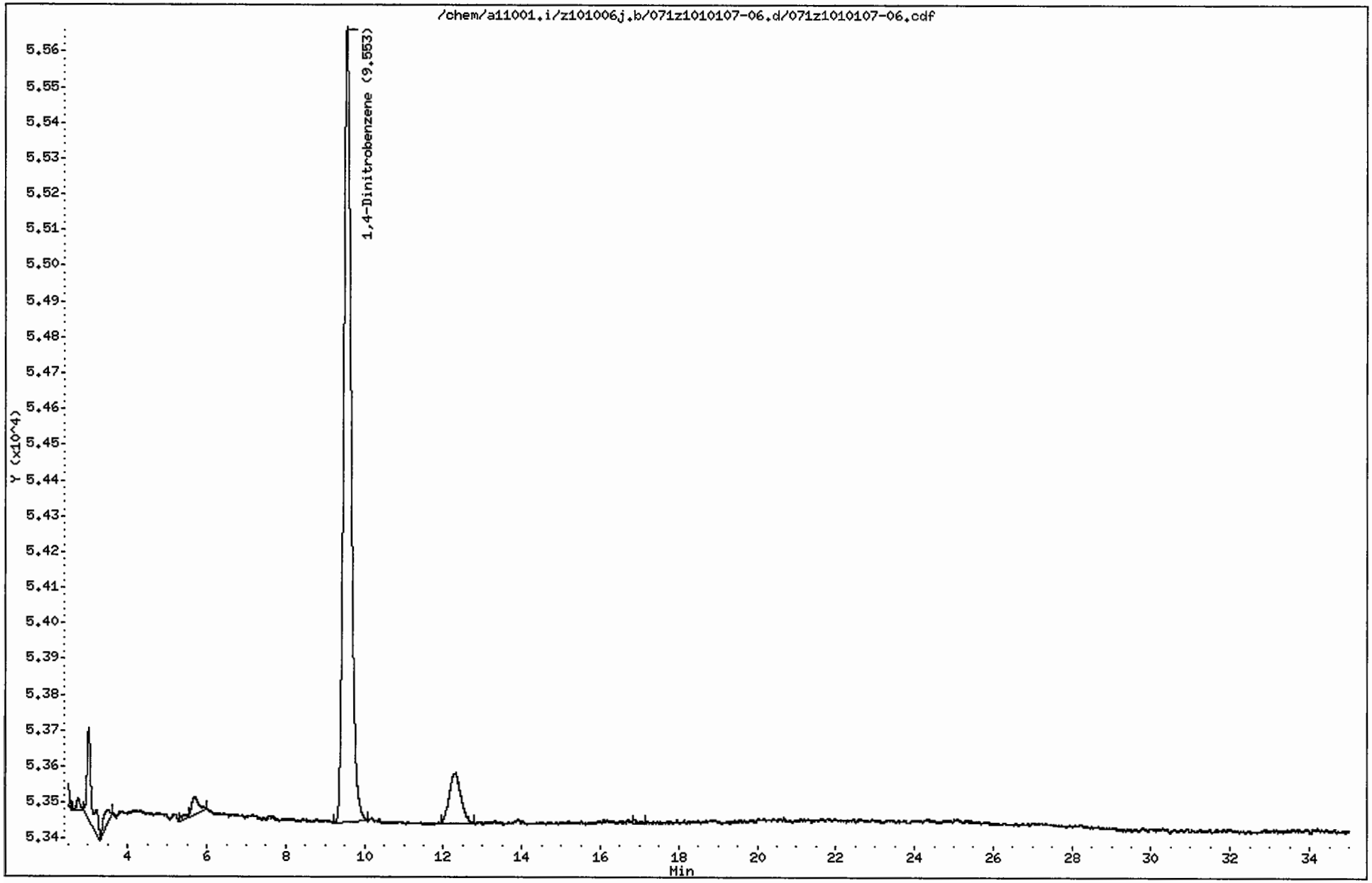
Sample Info: 1010107-06

Volume Injected (uL): 10.0

Operator: BWL

Column phase: C18

Column diameter: 4.60



CompuChem

Lab Smp Id : 1010107-06 Client Smp Id : 13MWDUP
Sample Type : SAMPLE Sublist : DAU13
Inj Date : 22-OCT-2010 22:12 Inst ID : A11001
Operator : BWL
Method : /chem/a11001.i/z101006j.b/8330_10uL_v3_a_split.m
Misc. Info : 13MWDUP

Formula: Conc=(Area/RF) * DF * (Uf * Vt/(Vi * Vo))

DF Dilution Factor: 1.0 Uf GPC Unit Factor: 1
Vt Final Volume: 10000(ul) Vi Injection Volume: 10(ul)
Vo Sample Volume: 500.0(ml)

RT	RT WINDOW		AREA	QUANT RF	COMPOUND	CONCENTRATIONS ON-COLUMN (Ng)	CONCENTRATIONS FINAL (ug/L)	ADJUSTED PQL (ug/L)	% REC	RECOVERY LIMITS	FLAGS
0.60			76								
1.14			1255								
1.31			6405								
1.79			1264								
1.95			1568								
2.20			1608								
2.75			222								
3.02			2105								
3.52			511								
5.49			121								
5.70			645								
9.55	9.34	9.74	28944	3229	1,4-Dinitrobenzene	8.963390	17.92678		89.6	39 - 132	
12.32			2961								
16.89			99								

KEH 10/25/10

1D

GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

13MWDUP

Lab Name: COMPUCHEM Contract: 8332

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 1010107-06

Sample wt/vol: 500.0 (g/ml) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 10/20/10

Extraction: (SepF/Cont/Sonc) SOLIDPHASE Date Extracted:10/22/10

Concentrated Extract Volume: 10000(ul) Date Analyzed: 10/22/10

Injection Volume: 10.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
55-63-0	Nitroglycerin	16	U

FORM I PEST

Data File: /chem/a11002.i/r101021d.b/030r1010107-06.d

Date : 22-OCT-2010 21:07

Client ID: 13MWDUP

Instrument: a11002.i

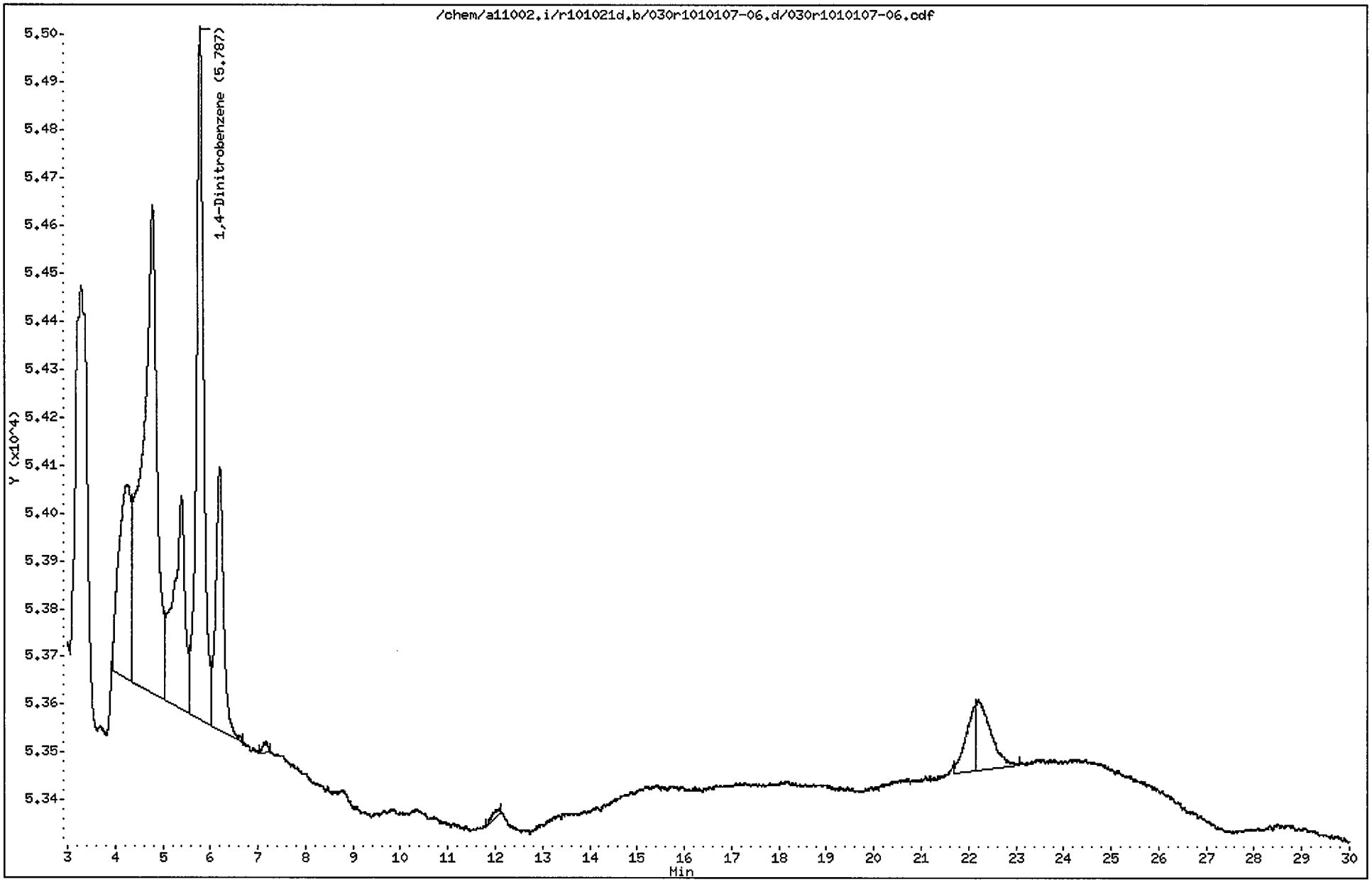
Sample Info: 1010107-06

Volume Injected (uL): 10.0

Operator: BWL

Column phase: PINNACLE CYANO

Column diameter: 4.60



CompuChem

Lab Smp Id : 1010107-06 Client Smp Id : 13MWDUP
Sample Type : SAMPLE Sublist : nitro
Inj Date : 22-OCT-2010 21:07 Inst ID : A11002
Operator : BWL
Method : /chem/a11002.i/r101021d.b/8332TPconf_10uL_v1.m
Misc. Info : 13MWDUP

Method Type: undefined

RT	RT WINDOW	AREA	QUANT RF	COMPOUND	CONCENTRATIONS ON-COLUMN (Ng)	CONCENTRATIONS FINAL (ug/L)	ADJUSTED PQL (ug/L)	% REC	RECOVERY LIMITS	FLAGS
4.23		7362								
4.79		21553								
5.39		7557								
5.79	5.30 6.30	15488	1652	1,4-Dinitrobenzene	9.375053	18.75011		93.8	50 - 150	
6.20		6441								
7.13		162								
12.02		169								
22.11		1822								
22.21		3247								

10/25/10

3. Standards Data

a. Initial Calibration Data (Form VI)

b. Continuing Verification Summary (Form VII)

c. Analytical Sequence (Form VIII)

d. Identification Summary for Single Component Analytes (Form X)

e. Identification Summary for Multicomponent Analytes (Form X) – if applicable

f. Chromatograms and Data System Printouts

a. Initial Calibration Data (Form VI)

For all GC columns, all instruments, in chronological order by GC column and instrument.

FORM 6
8330 INITIAL CALIBRATION DATA

Lab Name: COMPUCHEM Contract: 8330B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Instrument ID: A11001 Calibration Date(s): 10/06/10 10/06/10

Column: C18 ID: 4.60 (mm) Calibration Time(s): 1217 1516

LAB FILE ID: RF1.25: 002Z0J0601RF6.25: 003Z0J0601RF12.5: 004Z0J0601
RF31.25: 005Z0J060RF62.5: 006Z0J0601

COMPOUND	RF1.25	RF6.25	RF12.5	RF31.25	RF62.5
1,3,5-Trinitrobenzene	2653.600	2712.400	2731.600	2700.240	2745.120
1,3-Dinitrobenzene	3829.600	3889.200	3842.000	3832.720	3846.360
2,6-Dinitrotoluene	1656.000	1806.600	1746.600	1744.720	1719.520
2,4-Dinitrotoluene	3192.000	3620.000	3596.400	3608.080	3582.120
1,4-Dinitrobenzene	3158.800	3220.700	3232.950	3244.820	3225.920

FORM 6
8330 INITIAL CALIBRATION DATA

Lab Name: COMPUCHEM Contract: 8330B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Instrument ID: A11001 Calibration Date(s): 10/06/10 10/06/10

Column: C18 ID: 4.60 (mm) Calibration Time(s): 1217 1516

RF125: 007Z0J06010

COMPOUND	RF125	CURVE	COEFFICENT A1	%RSD OR R^2
1,3,5-Trinitrobenzene	2770.400	AVRG	2718.89333	1.5
1,3-Dinitrobenzene	3941.680	AVRG	3863.59333	1.1
2,6-Dinitrotoluene	1756.040	AVRG	1738.24667	2.8
2,4-Dinitrotoluene	3674.700	AVRG	3545.55000	5.0
1,4-Dinitrobenzene	3291.690	AVRG	3229.14667	1.3

FORM 6
8330 INITIAL CALIBRATION DATA

Lab Name: COMPUCHEM Contract: 8330B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Instrument ID: A11001 Calibration Date(s): 10/06/10 10/06/10

Column: C18 ID: 4.60 (mm) Calibration Time(s): 1217 1516

LAB FILE ID: RT1: 002Z0J06010-CRT2: 003Z0J06010-CRT3: 004Z0J06010-C
RT4: 005Z0J06010-CRT5: 006Z0J06010-C

COMPOUND	RT1	RT2	RT3	RT4	RT5
1,3,5-Trinitrobenzene	8.203	8.232	8.230	8.210	8.193
1,3-Dinitrobenzene	10.250	10.277	10.282	10.273	10.250
2,6-Dinitrotoluene	17.350	17.368	17.395	17.417	17.435
2,4-Dinitrotoluene	17.823	17.848	17.875	17.903	17.917
1,4-Dinitrobenzene	9.433	9.462	9.468	9.448	9.425

FORM 6
8330 INITIAL CALIBRATION DATA

Lab Name: COMPUCHEM Contract: 8330B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Instrument ID: A11001 Calibration Date(s): 10/06/10 10/06/10

Column: C18 ID: 4.60 (mm) Calibration Time(s): 1217 1516

RT6: 007Z0J06010-C

COMPOUND	RT6	MEAN RT	RT WINDOW FROM	RT WINDOW TO
1,3,5-Trinitrobenzene	8.168	8.206	8.006	8.406
1,3-Dinitrobenzene	10.213	10.258	10.057	10.457
2,6-Dinitrotoluene	17.410	17.396	17.096	17.696
2,4-Dinitrotoluene	17.900	17.878	17.578	18.178
1,4-Dinitrobenzene	9.393	9.438	9.238	9.638

FORM 6
8332 INITIAL CALIBRATION DATA

Lab Name: COMPUCHEM Contract: 8332

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Instrument ID: A11002 Calibration Date(s): 10/21/10 10/21/10

Column: PINNACLE CYANO ID: 4.60 (mm) Calibration Time(s): 1441 1644

LAB FILE ID: RF5: 002R0J21016-CRF10: 003R0J21016-RF20: 004R0J21016-RF50: 005R0J21016-RF100: 006R0J21016

COMPOUND	RF5	RF10	RF20	RF50	RF100
Nitroglycerin	1091.500	1150.025	1074.900	1057.355	1034.935
1,4-Dinitrobenzene	1813.500	1791.100	1515.650	1552.300	1587.590

FORM 6
8332 INITIAL CALIBRATION DATA

Lab Name: COMPUCHEM Contract: 8332

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Instrument ID: A11002 Calibration Date(s): 10/21/10 10/21/10

Column: PINNACLE CYANO ID: 4.60 (mm) Calibration Time(s): 1441 1644

COMPOUND	CURVE	COEFFICENT A1	%RSD OR R^2
Nitroglycerin	AVRG	1081.74300	4.0
1,4-Dinitrobenzene	AVRG	1652.02800	8.4

FORM 6
8332 INITIAL CALIBRATION DATA

Lab Name: COMPUCHEM Contract: 8332

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Instrument ID: A11002 Calibration Date(s): 10/21/10 10/21/10

Column: PINNACLE CYANO ID: 4.60 (mm) Calibration Time(s): 1441 1644

LAB FILE ID: RT1: 002R0J21016-CRT2: 003R0J21016-CRT3: 004R0J21016-C
RT4: 005R0J21016-CRT5: 006R0J21016-C

COMPOUND	RT1	RT2	RT3	RT4	RT5
Nitroglycerin	11.173	11.210	11.207	11.187	11.227
1,4-Dinitrobenzene	5.792	5.810	5.795	5.803	5.805

FORM 6
8332 INITIAL CALIBRATION DATA

Lab Name: COMPUCHEM Contract: 8332

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Instrument ID: A11002 Calibration Date(s): 10/21/10 10/21/10

Column: PINNACLE CYANO ID: 4.60 (mm) Calibration Time(s): 1441 1644

COMPOUND	MEAN RT	RT WINDOW FROM	RT WINDOW TO
Nitroglycerin	11.201	10.687	11.687
1,4-Dinitrobenzene	5.801	5.303	6.303

b. Continuing Calibration Summary (Form VII)

For all performance evaluation mixtures (if applicable) and Continuing calibration verification standards, on all GC columns and instruments, in chronological order by GC column and instrument.

FORM 7B
8330 CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8330B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Instrument ID: A11001 Calibration Date: 10/22/10 Time: 1422

Lab File ID: 058ZSEQ-CCV1 Init. Calib. Date(s): 10/06/10 10/06/10

Init. Calib. Times: 1217 1516

GC Column: C18 ID: 4.60 (mm)

COMPOUND	RRF OR AMOUNT	RRF31.250 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
1,3,5-Trinitrobenzene	2718.8930	2692.3360	0.01	-0.98	20.00	AVRG
1,3-Dinitrobenzene	3863.5930	3838.9040	0.01	-0.64	20.00	AVRG
2,6-Dinitrotoluene	1738.2470	1769.4220	0.01	1.79	20.00	AVRG
2,4-Dinitrotoluene	3545.5500	3675.3320	0.01	3.66	20.00	AVRG
1,4-Dinitrobenzene	3229.1470	3259.3570	0.01	0.94	20.00	AVRG

FORM VII 8330

FORM 7B
8330 CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8330B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Instrument ID: A11001 Calibration Date: 10/22/10 Time: 1912

Lab File ID: 066ZSEQ-CCV2 Init. Calib. Date(s): 10/06/10 10/06/10

Init. Calib. Times: 1217 1516

GC Column: C18 ID: 4.60 (mm)

COMPOUND	RRF OR AMOUNT	RRF31.250 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
1,3,5-Trinitrobenzene	2718.8930	2749.1200	0.01	1.11	20.00	AVRG
1,3-Dinitrobenzene	3863.5930	3928.6400	0.01	1.68	20.00	AVRG
2,6-Dinitrotoluene	1738.2470	1733.8400	0.01	-0.25	20.00	AVRG
2,4-Dinitrotoluene	3545.5500	3645.6800	0.01	2.82	20.00	AVRG
1,4-Dinitrobenzene	3229.1470	3255.7600	0.01	0.82	20.00	AVRG

FORM VII 8330

FORM 7B
8330 CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8330B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Instrument ID: A11001 Calibration Date: 10/22/10 Time: 2359

Lab File ID: 074ZSEQ-CCV3 Init. Calib. Date(s): 10/06/10 10/06/10

Init. Calib. Times: 1217 1516

GC Column: C18 ID: 4.60 (mm)

COMPOUND	RRF OR AMOUNT	RRF31.250 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
1,3,5-Trinitrobenzene	2718.8930	2707.2800	0.01	-0.43	20.00	AVRG
1,3-Dinitrobenzene	3863.5930	3751.7600	0.01	-2.89	20.00	AVRG
2,6-Dinitrotoluene	1738.2470	1731.0000	0.01	-0.42	20.00	AVRG
2,4-Dinitrotoluene	3545.5500	3575.8400	0.01	0.85	20.00	AVRG
1,4-Dinitrobenzene	3229.1470	3168.5800	0.01	-1.88	20.00	AVRG

FORM VII 8330

FORM 7B
8332 CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8332

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Instrument ID: A11002 Calibration Date: 10/22/10 Time: 1424

Lab File ID: 017RSEQ-CCV1 Init. Calib. Date(s): 10/21/10 10/21/10

Init. Calib. Times: 1441 1644

GC Column: PINNACLE CYANO ID: 4.60 (mm)

COMPOUND	RRF OR AMOUNT	RRF50.000 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
Nitroglycerin	1081.7430	1042.9195	0.01	-3.59	20.00	AVRG
1,4-Dinitrobenzene	1652.0280	1580.7880	0.01	-4.31	20.00	AVRG

FORM 7B
8332 CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8332

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Instrument ID: A11002 Calibration Date: 10/22/10 Time: 1832

Lab File ID: 025RSEQ-CCV2 Init. Calib. Date(s): 10/21/10 10/21/10

Init. Calib. Times: 1441 1644

GC Column: PINNACLE CYANO ID: 4.60 (mm)

COMPOUND	RRF OR AMOUNT	RRF50.000 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
Nitroglycerin	1081.7430	1045.7685	0.01	-3.32	20.00	AVRG
1,4-Dinitrobenzene	1652.0280	1567.0260	0.01	-5.14	20.00	AVRG

FORM VII 8332

FORM 7B
8332 CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8332

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Instrument ID: A11002 Calibration Date: 10/22/10 Time: 2239

Lab File ID: 033RSEQ-CCV3 Init. Calib. Date(s): 10/21/10 10/21/10

Init. Calib. Times: 1441 1644

GC Column: PINNACLE CYANO ID: 4.60 (mm)

COMPOUND	RRF OR AMOUNT	RRF50.000 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
Nitroglycerin	1081.7430	1046.5985	0.01	-3.25	20.00	AVRG
1,4-Dinitrobenzene	1652.0280	1562.6230	0.01	-5.41	20.00	AVRG

FORM VII 8332

c. Analytical Sequence (Form VIII)

For all GC columns, all instruments, in chronological order by GC column and instrument

8D
PESTICIDE ANALYTICAL SEQUENCE

Lab Name: COMPUCHEM Contract: 8330B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

GC Column: C18 ID: 4.60 (mm) Init. Calib. Date(s): 10/06/10 10/06/10

Instrument ID: A11001

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

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 9.44

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	RT #
01	83301ZA	0J06010-CAL1	10/06/10	1217	9.43	
02	83302ZA	0J06010-CAL2	10/06/10	1252	9.46	
03	83303ZA	0J06010-CAL3	10/06/10	1328	9.47	
04	83304ZA	0J06010-CAL4	10/06/10	1404	9.45	
05	83305ZA	0J06010-CAL5	10/06/10	1440	9.43	
06	83306ZA	0J06010-CAL6	10/06/10	1516	9.39	
07	8330MZJ	SEQ-CCV1	10/22/10	1422	9.54	
08	PIBLKZJ	SEQ-CCB1	10/22/10	1501	9.53	
09	PBLKEK	0102119-BLK1	10/22/10	1537	9.50	
10	PEKLCS	0102119-BS1	10/22/10	1613	9.50	
11	13MW5MS	0102119-MS1	10/22/10	1649	9.51	
12	13MW5MSD	0102119-MSD1	10/22/10	1725	9.53	
13	13MW5	1010107-01	10/22/10	1800	9.57	
14	13MW1	1010107-02	10/22/10	1836	9.59	
15	8330MZK	SEQ-CCV2	10/22/10	1912	9.54	
16	PIBLKZK	SEQ-CCB2	10/22/10	1948	9.51	
17	13MW2	1010107-03	10/22/10	2024	9.50	
18	13MW3	1010107-04	10/22/10	2100	9.53	
19	13MW4	1010107-05	10/22/10	2136	9.56	
20	13MWDUP	1010107-06	10/22/10	2212	9.55	
21	13MW6	1010107-07	10/22/10	2248	9.53	
22	13MW7	1010107-08	10/22/10	2323	9.50	
23	8330MZL	SEQ-CCV3	10/22/10	2359	9.52	
24	PIBLKZL	SEQ-CCB3	10/23/10	0035	9.55	
25						
26						
27						
28						
29						
30						
31						
32						

QC LIMITS
S1 = 1,4-Dinitrobenzene (+/- 0.20 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM VIII PEST

8D
PESTICIDE ANALYTICAL SEQUENCE

Lab Name: COMPUCHEM Contract: 8332

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

GC Column: PINNACLE CYANO ID: 4.60 (mm) Init. Calib. Date(s): 10/21/10 10/21/

Instrument ID: A11002

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

MEAN SURROGATE RT FROM INITIAL CALIBRATION
S1 : 5.80

	EPA SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	RT #
01	83321WA	0J21016-CAL1	10/21/10	1441	5.79	
02	83322WA	0J21016-CAL2	10/21/10	1511	5.81	
03	83323WA	0J21016-CAL3	10/21/10	1542	5.79	
04	83324WA	0J21016-CAL4	10/21/10	1613	5.80	
05	83325WA	0J21016-CAL5	10/21/10	1644	5.80	
06	8332MRD	SEQ-CCV1	10/22/10	1424	5.79	
07	PIBLKRD	SEQ-CCB1	10/22/10	1456	5.78	
08	PBLKEK	0102119-BLK1	10/22/10	1527	5.81	
09	PETLCS	0102119-BS2	10/22/10	1558	5.79	
10	13MW5MS	0102119-MS2	10/22/10	1629	5.81	
11	13MW5MSD	0102119-MSD2	10/22/10	1700	5.81	
12	13MW5	1010107-01	10/22/10	1730	5.79	
13	13MW1	1010107-02	10/22/10	1801	5.82	
14	8332MRE	SEQ-CCV2	10/22/10	1832	5.78	
15	PIBLKRE	SEQ-CCB2	10/22/10	1903	5.79	
16	13MW2	1010107-03	10/22/10	1934	5.80	
17	13MW3	1010107-04	10/22/10	2005	5.80	
18	13MW4	1010107-05	10/22/10	2036	5.81	
19	13MWDUP	1010107-06	10/22/10	2107	5.79	
20	13MW6	1010107-07	10/22/10	2138	5.81	
21	13MW7	1010107-08	10/22/10	2208	5.79	
22	8332MRF	SEQ-CCV3	10/22/10	2239	5.80	
23	PIBLKRF	SEQ-CCB3	10/22/10	2310	5.79	
24						
25						
26						
27						
28						
29						
30						
31						
32						

QC LIMITS
S1 = 1,4-Dinitrobenzene (+/- 0.50 MINUTES)

Column used to flag retention time values with an asterisk.
* Values outside of QC limits.

FORM VIII PEST

d. Identification Summary for Single Component Analytes (Form X)

For all samples with positively identified single component analytes, in order by increasing Client Sample ID number.

e. Identification Summary for Multicomponent Analytes (Form X) – if applicable

For all samples with positively identified multicomponent analytes, in order by increasing Client Sample ID number.

f. Chromatograms and Data System Printouts

For all methods, standards packages shall include
The following:

- Performance evaluation mixtures (8081 only)
- Initial Calibration Standards
- Second Source Initial Calibration Verifications (if required by client)
- Continuing Calibration Verification Standards
- The quantitation report must include the Client Sample ID number.
- The chromatograms shall include the following: Client Sample ID number for the standard, labeled standard peaks, volume injected, for each standard, date and time of injection, GC column identifier, and GC Instrument identifier

Data File: /chem/a11001.i/z101006.b/002z0J06010-CAL1.d

Page 1

Date : 06-OCT-2010 12:17

Client ID: 83301ZA

Instrument: a11001.i

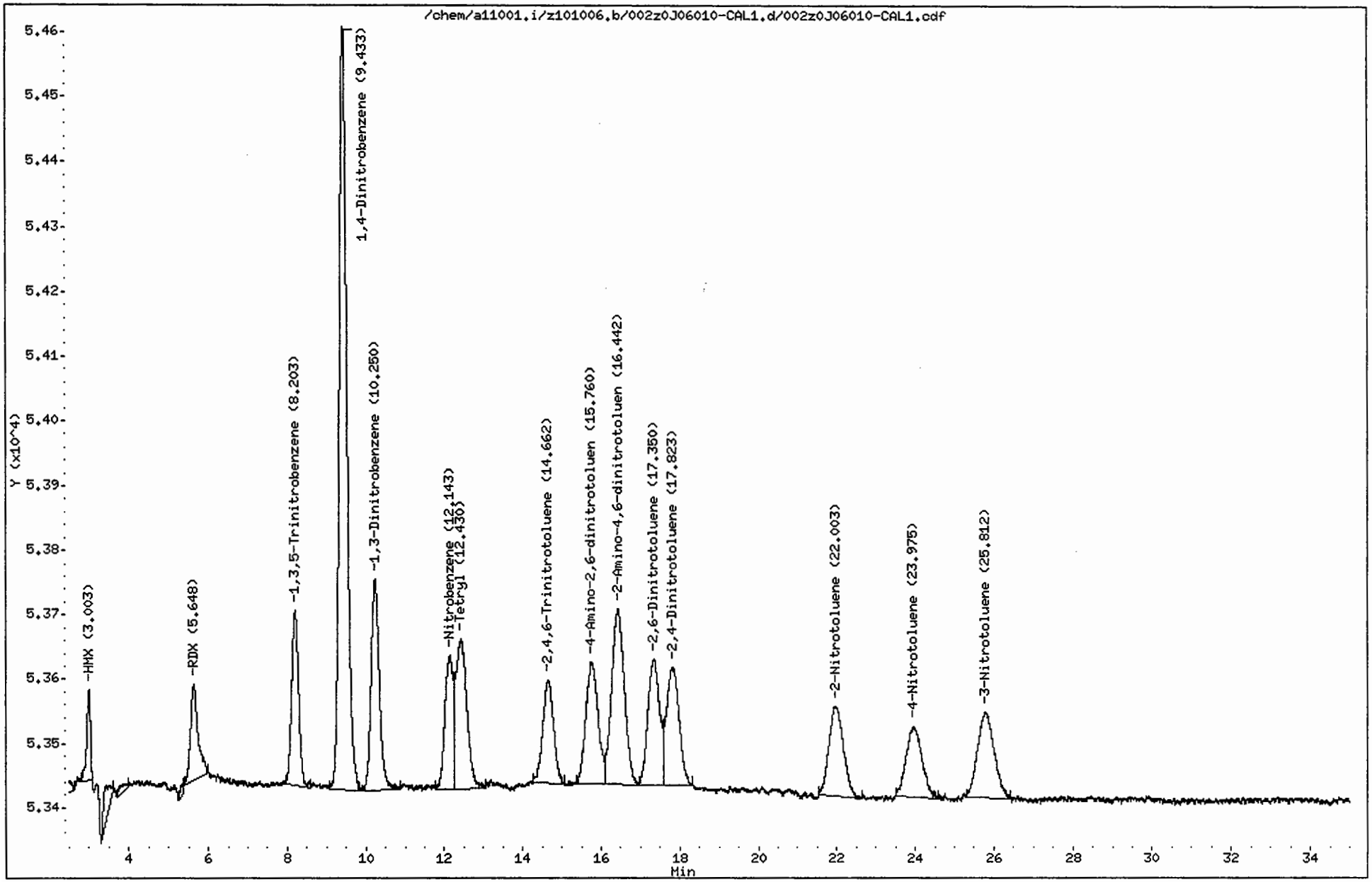
Sample Info: 0J06010-CAL1

Volume Injected (uL): 10.0

Operator: BWL

Column phase: C18

Column diameter: 4.60

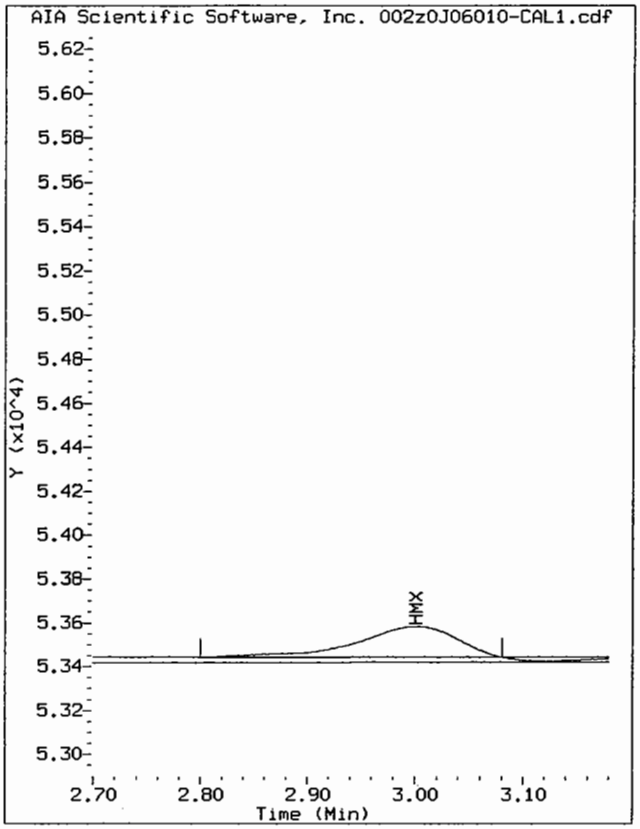


CompuChem

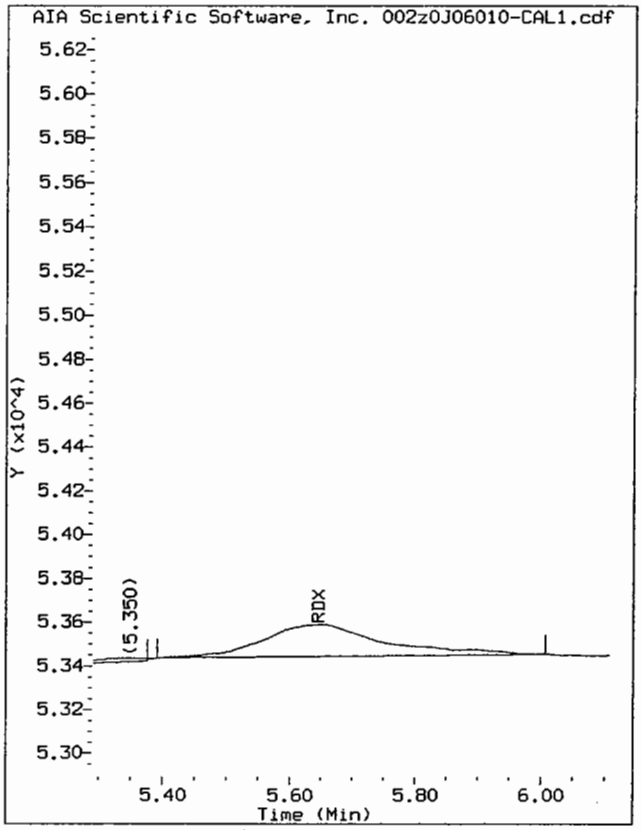
Lab Smp Id : 0J06010-CAL1 Client Smp Id : 83301ZA
Sample Type : INITIAL CAL: Level 1 Sublist : all
Inj Date : 06-OCT-2010 12:17 Inst ID : A11001
Operator : BWL
Method : /chem/a11001.i/z101006.b/8330_10uL_v3_a_split.m
Misc. Info : 83301ZA

RT	RT WINDOW		AREA	QUANT RF	COMPOUND	STD AMT ON-COLUMN (Ng)	RF	FLAGS
1.27			220					
1.78			1680					
1.99			865					
2.20			1657					
2.54			98					
3.00	2.89	3.09	910	814	HMX	1.250000	727.2000	M 2
3.42			658					
3.80			150					
5.35			91					
5.65	5.52	5.72	1954	1316	RDX	1.250000	1562.400	M 2
8.20	8.00	8.40	3317	2719	1,3,5-Trinitrobenzene	1.250000	2653.600	
9.43	9.24	9.64	15795	3229	1,4-Dinitrobenzene	5.000000	3158.800	
10.25	10.06	10.46	4788	3864	1,3-Dinitrobenzene	1.250000	3829.600	
12.14	11.96	12.36	3077	2488	Nitrobenzene	1.250000	2461.600	
12.43	12.28	12.68	4562	1789	Tetryl	2.500000	1824.400	
14.66	14.50	14.90	3016	2697	2,4,6-Trinitrotoluene	1.250000	2412.000	
15.76	15.64	16.04	4094	1732	4-Amino-2,6-dinitrotoluene	2.500000	1637.200	
16.44	16.32	16.72	6107	2589	2-Amino-4,6-dinitrotoluene	2.500000	2442.800	
17.35	17.10	17.70	4141	1738	2,6-Dinitrotoluene	2.500000	1656.000	
17.82	17.58	18.18	3990	3546	2,4-Dinitrotoluene	1.250000	3192.000	
22.00	21.69	22.29	3610	1571	2-Nitrotoluene	2.500000	1443.600	
23.98	23.65	24.25	3099	1321	4-Nitrotoluene	2.500000	1239.600	
25.81	25.46	26.06	3832	1696	3-Nitrotoluene	2.500000	1532.400	

Manually Integrated Peaks



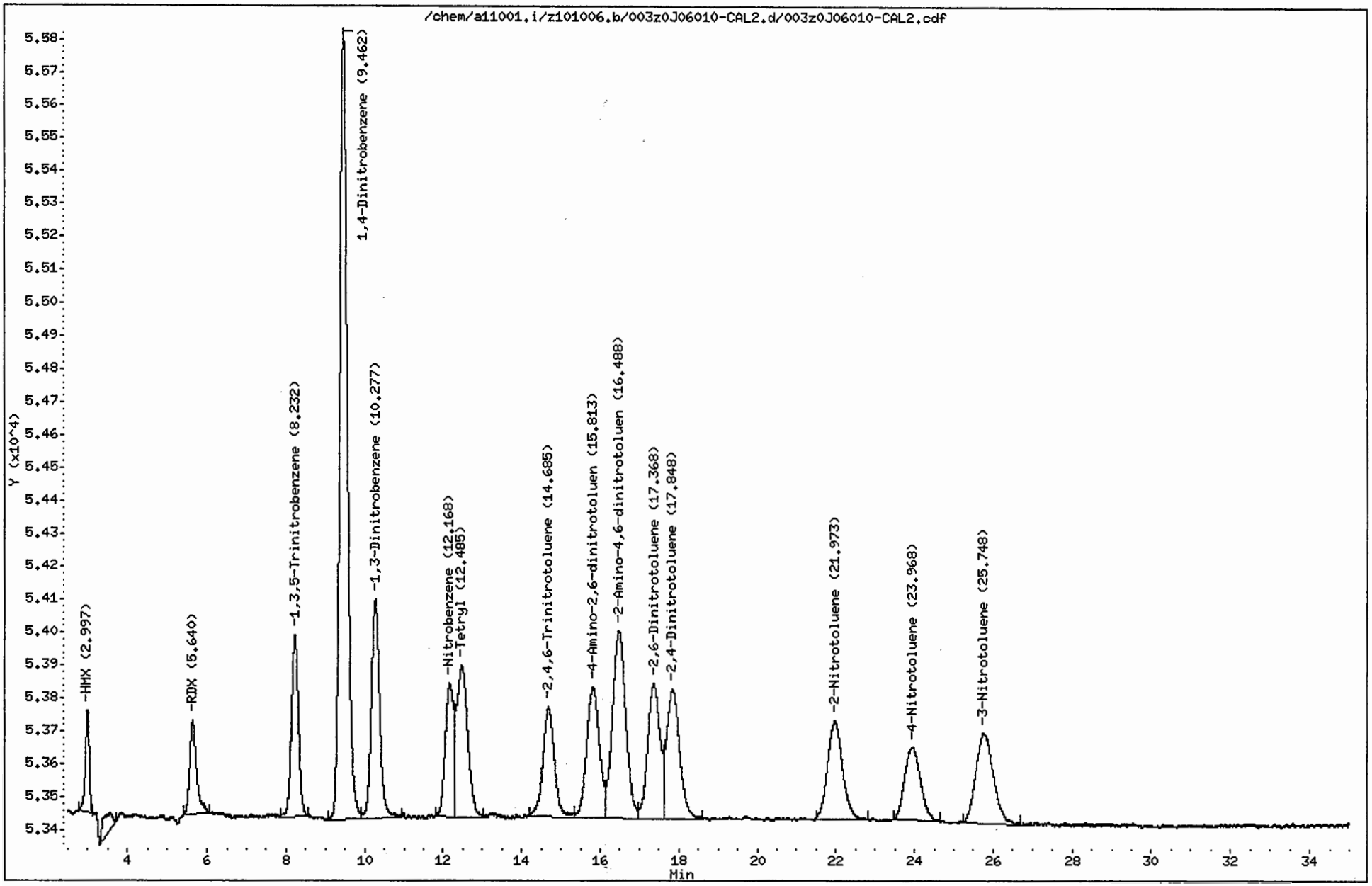
Start: 2.80 Stop: 3.08



Start: 5.39 Stop: 6.01

Data File: /chem/a11001.i/z101006.b/003z0J06010-CAL2.d
Date : 06-OCT-2010 12:52
Client ID: 83302ZA
Sample Info: 0J06010-CAL2
Volume Injected (uL): 10.0
Column phase: C18

Instrument: a11001.i
Operator: BWL
Column diameter: 4.60



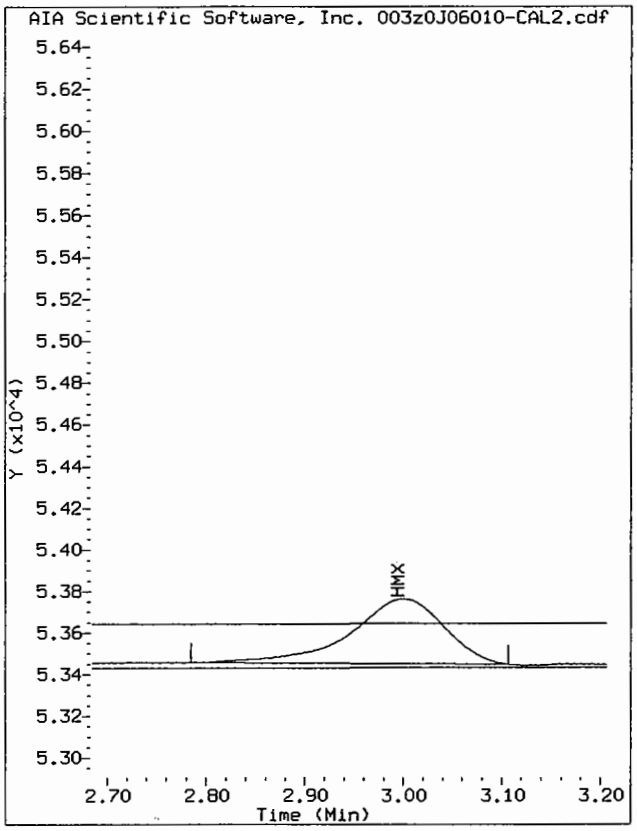
CompuChem

Lab Smp Id : 0J06010-CAL2 Client Smp Id : 83302ZA
Sample Type : INITIAL CAL: Level 2 Sublist : all
Inj Date : 06-OCT-2010 12:52 Inst ID : A11001
Operator : BWL
Method : /chem/a11001.i/z101006.b/8330_10uL_v3_a_split.m
Misc. Info : 83302ZA

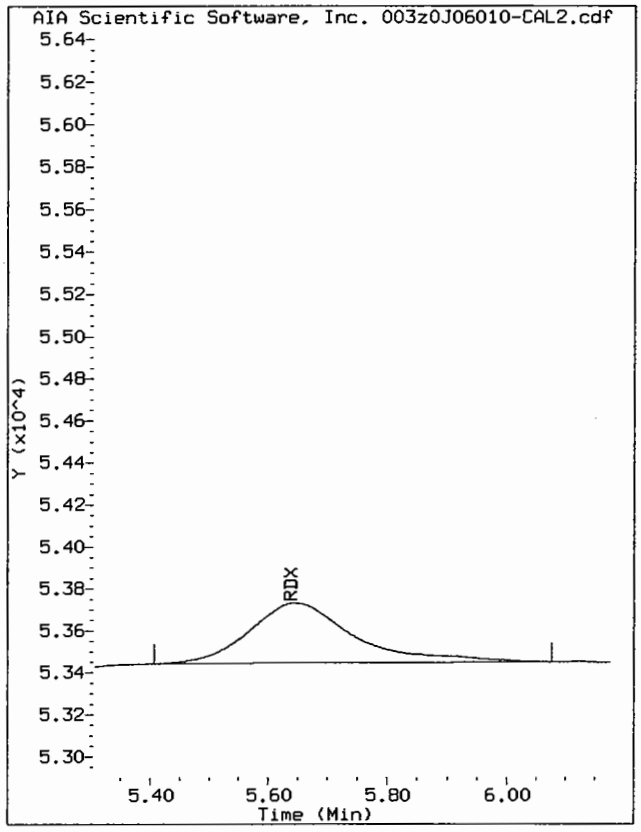
RT	RT WINDOW		AREA	QUANT RF	COMPOUND	STD AMT ON-COLUMN (Ng)	RF	FLAGS
1.28			102					
1.78			1924					
1.98			817					
2.21			1482					
3.00	2.89	3.09	2052	814	HMX	2.500000	820.4000	M
3.58			992					
5.64	5.52	5.72	3484	1316	RDX	2.500000	1393.200	M
8.23	8.00	8.40	6781	2719	1,3,5-Trinitrobenzene	2.500000	2712.400	
9.46	9.24	9.64	32208	3229	1,4-Dinitrobenzene	10.00000	3220.700	
10.28	10.06	10.46	9724	3864	1,3-Dinitrobenzene	2.500000	3889.200	
12.17	11.96	12.36	6068	2488	Nitrobenzene	2.500000	2426.800	
12.48	12.28	12.68	9027	1789	Tetryl	5.000000	1805.200	
14.68	14.50	14.90	6757	2697	2,4,6-Trinitrotoluene	2.500000	2702.800	
15.81	15.64	16.04	8917	1732	4-Amino-2,6-dinitrotoluene	5.000000	1783.200	
16.49	16.32	16.72	13402	2589	2-Amino-4,6-dinitrotoluene	5.000000	2680.400	
17.37	17.10	17.70	9033	1738	2,6-Dinitrotoluene	5.000000	1806.600	
17.85	17.58	18.18	9051	3546	2,4-Dinitrotoluene	2.500000	3620.000	
21.97	21.69	22.29	7892	1571	2-Nitrotoluene	5.000000	1578.200	
23.97	23.65	24.25	6208	1321	4-Nitrotoluene	5.000000	1241.600	
25.75	25.46	26.06	8457	1696	3-Nitrotoluene	5.000000	1691.200	

10/11/10

Manually Integrated Peaks



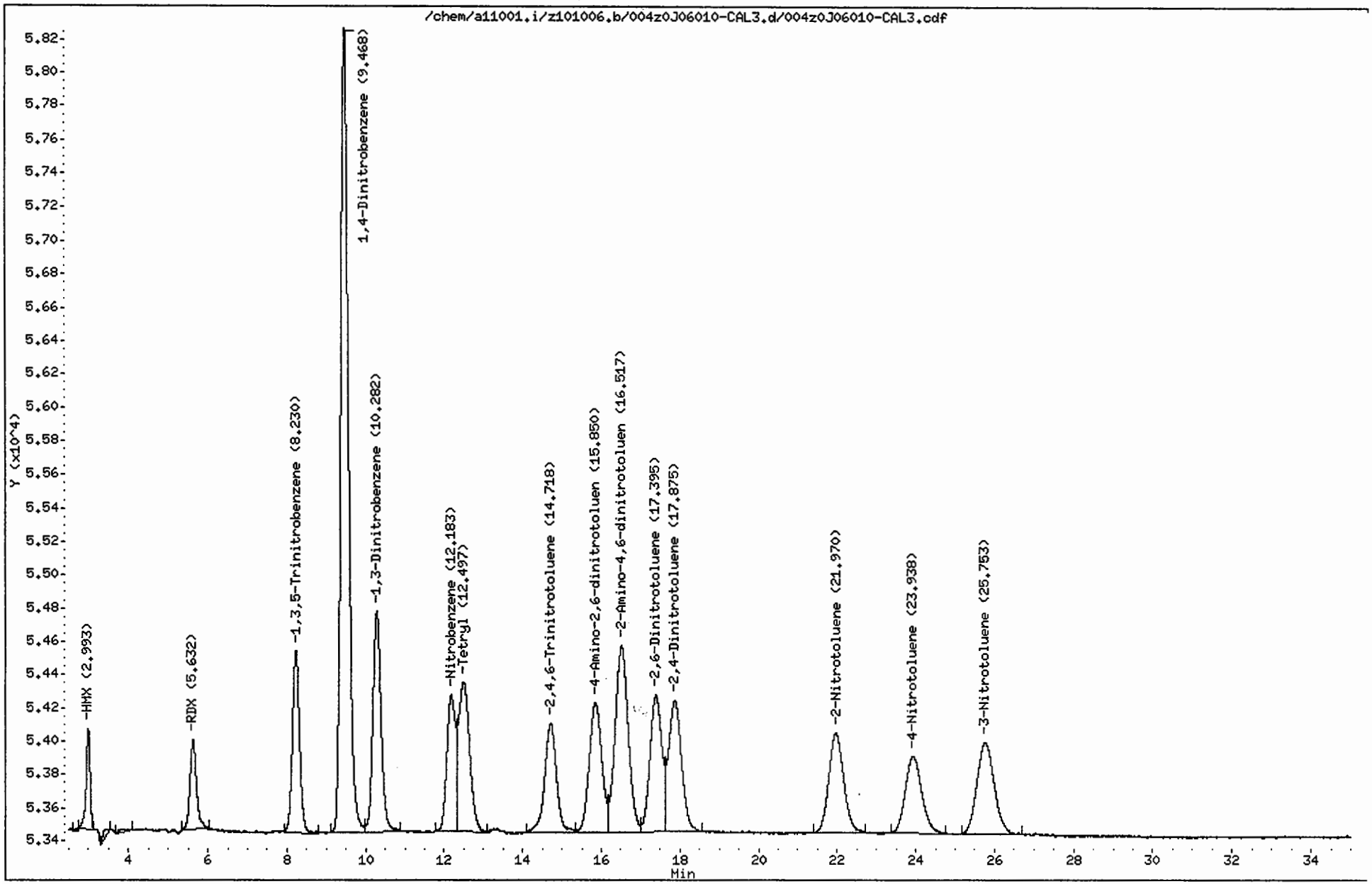
Start: 2.79 Stop: 3.11



Start: 5.41 Stop: 6.08

Data File: /chem/a11001.i/z101006.b/004z0J06010-CAL3.d
Date : 06-OCT-2010 13:28
Client ID: 83303ZA
Sample Info: 0J06010-CAL3
Volume Injected (uL): 10.0
Column phase: C18

Instrument: a11001.i
Operator: BWL
Column diameter: 4.60



CompuChem

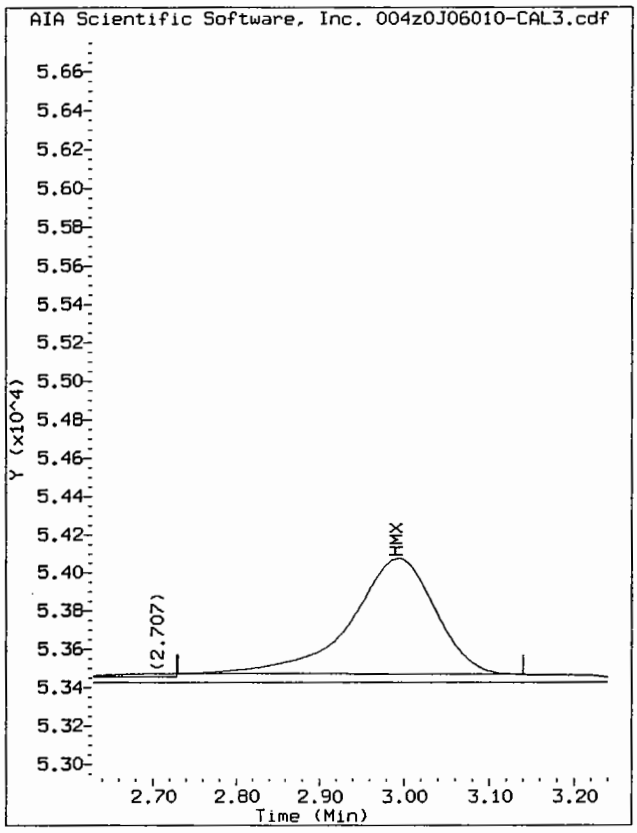
Lab Smp Id : 0J06010-CAL3 Client Smp Id : 83303ZA
Sample Type : INITIAL CAL: Level 3 Sublist : all
Inj Date : 06-OCT-2010 13:28 Inst ID : A11001
Operator : BWL
Method : /chem/a11001.i/z101006.b/8330_10uL_v3_a_split.m
Misc. Info : 83303ZA

RT	RT WINDOW		AREA	QUANT RF	COMPOUND	STD AMT ON-COLUMN (Ng)	RF	FLAGS
1.77			1947					
1.99			745					
2.20			1760					
2.71			70					
2.99	2.89	3.09	4167	814	HMX	5.000000	833.2000	M 2
3.45			417					
3.97			261					
5.63	5.52	5.72	6248	1316	RDX	5.000000	1249.400	M 2
8.23	8.00	8.40	13658	2719	1,3,5-Trinitrobenzene	5.000000	2731.600	
9.47	9.24	9.64	64659	3229	1,4-Dinitrobenzene	20.00000	3232.950	
10.28	10.06	10.46	19211	3864	1,3-Dinitrobenzene	5.000000	3842.000	
12.18	11.96	12.36	12442	2488	Nitrobenzene	5.000000	2488.200	
12.50	12.28	12.68	17867	1789	Tetryl	10.00000	1786.600	
14.72	14.50	14.90	13828	2697	2,4,6-Trinitrotoluene	5.000000	2765.400	
15.85	15.64	16.04	17547	1732	4-Amino-2,6-dinitrotoluene	10.00000	1754.600	
16.52	16.32	16.72	26028	2589	2-Amino-4,6-dinitrotoluene	10.00000	2602.700	
17.40	17.10	17.70	17467	1738	2,6-Dinitrotoluene	10.00000	1746.600	
17.88	17.58	18.18	17983	3546	2,4-Dinitrotoluene	5.000000	3596.400	
21.97	21.69	22.29	15897	1571	2-Nitrotoluene	10.00000	1589.700	
23.94	23.65	24.25	13444	1321	4-Nitrotoluene	10.00000	1344.400	
25.75	25.46	26.06	17099	1696	3-Nitrotoluene	10.00000	1709.900	

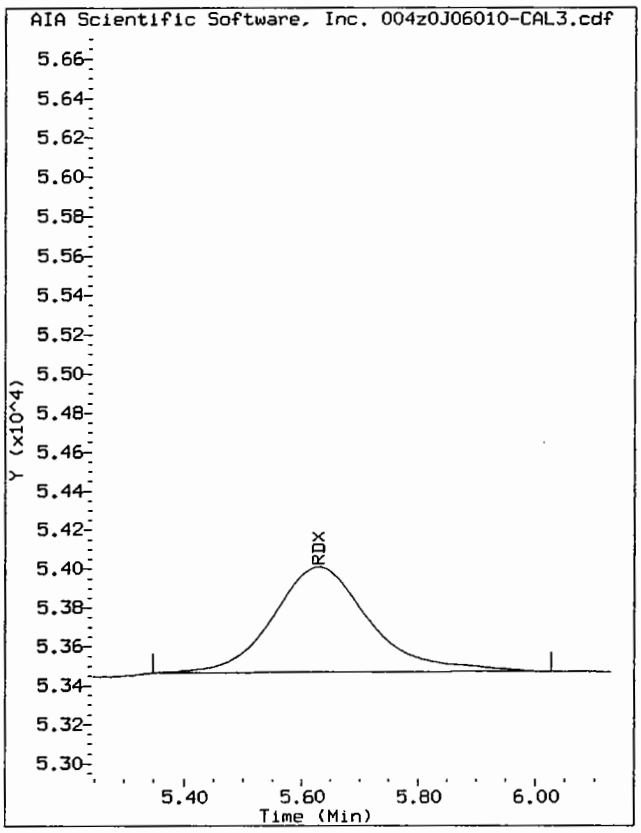
Cody/13

10.11.10

Manually Integrated Peaks



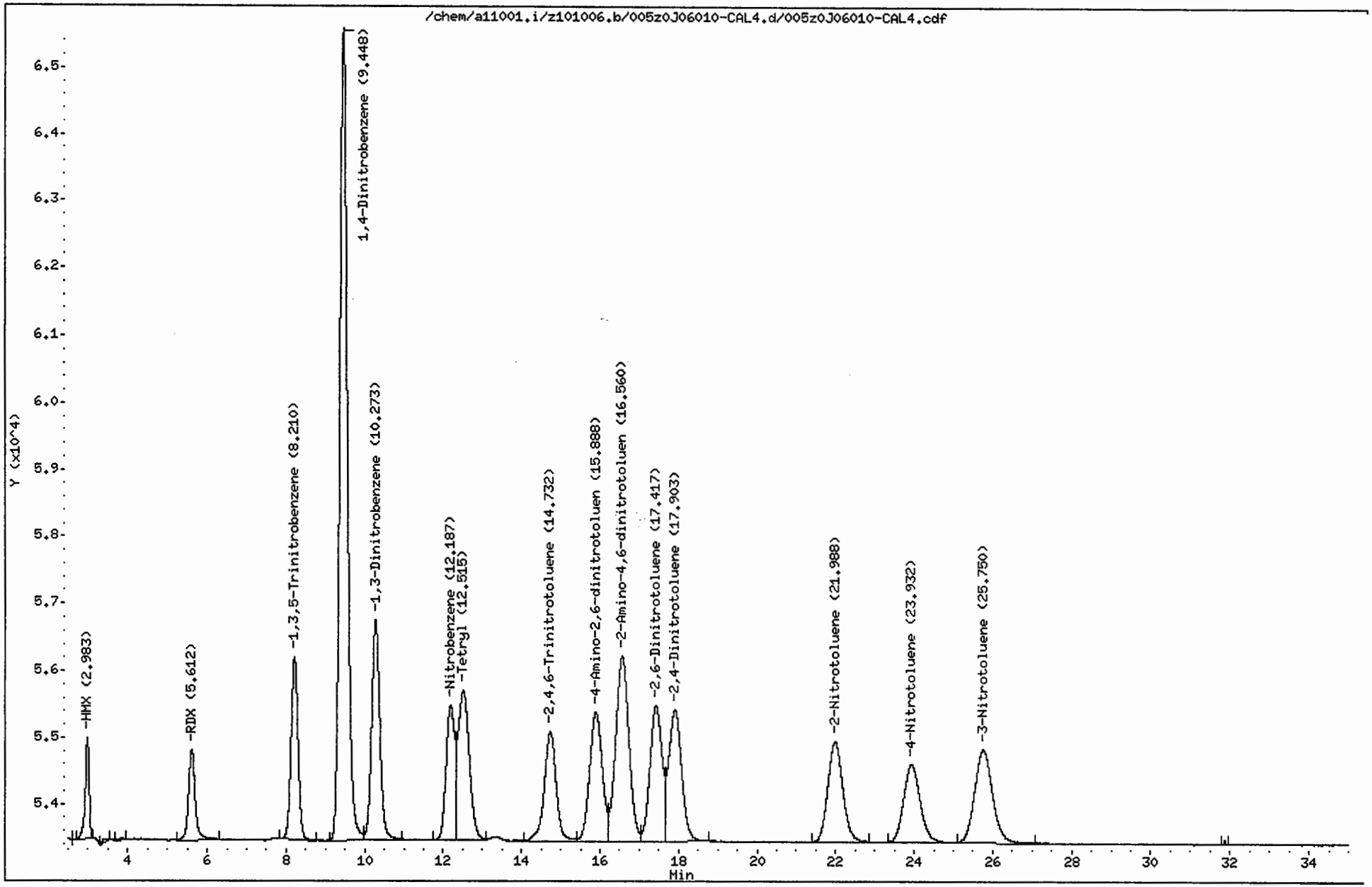
Start: 2.73 Stop: 3.14



Start: 5.35 Stop: 6.03

Data File: /chem/a11001.i/z101006.b/005z0J06010-CAL4.d
Date : 06-OCT-2010 14:04
Client ID: 83304ZA
Sample Info: 0J06010-CAL4
Volume Injected (uL): 10.0
Column phase: C18

Instrument: a11001.i
Operator: System
Column diameter: 4.60

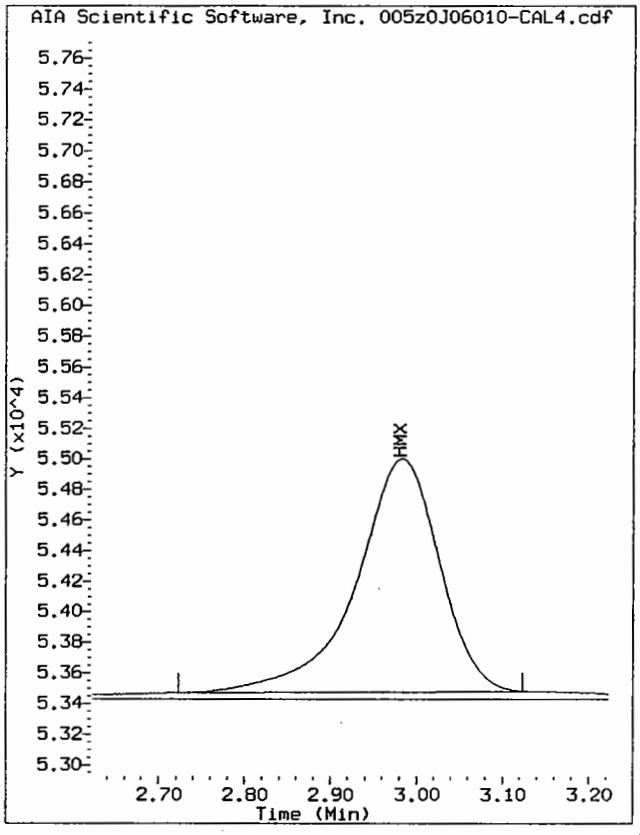


CompuChem

Lab Smp Id : 0J06010-CAL4 Client Smp Id : 83304ZA
Sample Type : INITIAL CAL: Level 4 Sublist : all
Inj Date : 06-OCT-2010 14:04 Inst ID : A11001
Operator : System
Method : /chem/a11001.i/z101006.b/8330_10uL_v3_a_split.m
Misc. Info : 83304ZA

RT	RT WINDOW		AREA	QUANT RF	COMPOUND	STD AMT ON-COLUMN (Ng)	RF	FLAGS
1.28			470					
1.59			127					
1.76			2974					
2.06			935					
2.19			5252					
2.98	2.89	3.09	10330	814	HMX	12.50000	826.4000	M
3.45			419					
3.85			176					
5.61	5.52	5.72	15942	1316	RDX	12.50000	1275.280	
8.21	8.00	8.40	33754	2719	1,3,5-Trinitrobenzene	12.50000	2700.240	
9.45	9.24	9.64	162241	3229	1,4-Dinitrobenzene	50.00000	3244.820	
10.27	10.06	10.46	47909	3864	1,3-Dinitrobenzene	12.50000	3832.720	
12.19	11.96	12.36	31334	2488	Nitrobenzene	12.50000	2506.640	
12.52	12.28	12.68	44258	1789	Tetryl	25.00000	1770.280	
14.73	14.50	14.90	34778	2697	2,4,6-Trinitrotoluene	12.50000	2782.160	
15.89	15.64	16.04	43859	1732	4-Amino-2,6-dinitrotoluene	25.00000	1754.320	
16.56	16.32	16.72	65193	2589	2-Amino-4,6-dinitrotoluene	25.00000	2607.720	
17.42	17.10	17.70	43619	1738	2,6-Dinitrotoluene	25.00000	1744.720	
17.90	17.58	18.18	45102	3546	2,4-Dinitrotoluene	12.50000	3608.080	
21.99	21.69	22.29	40090	1571	2-Nitrotoluene	25.00000	1603.600	
23.93	23.65	24.25	34326	1321	4-Nitrotoluene	25.00000	1373.000	
25.75	25.46	26.06	44135	1696	3-Nitrotoluene	25.00000	1765.400	
31.87			172					

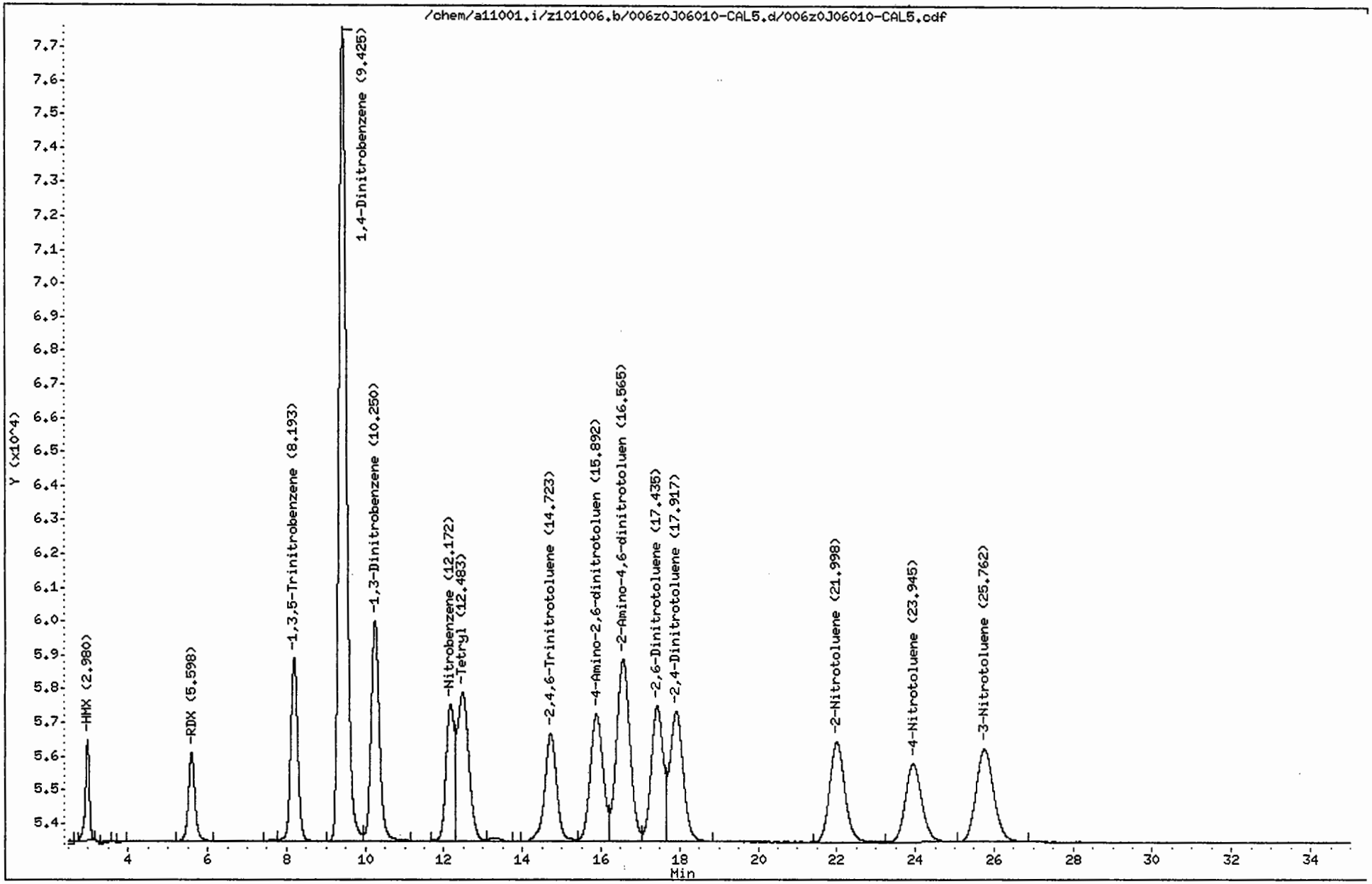
Manually Integrated Peaks



Start: 2.72 Stop: 3.12

Data File: /chem/a11001.i/z101006.b/006z0J06010-CAL5.d
Date : 06-OCT-2010 14:40
Client ID: 83305ZA
Sample Info: 0J06010-CAL5
Volume Injected (uL): 10.0
Column phase: C18

Instrument: a11001.i
Operator: BWL
Column diameter: 4.60



CompuChem

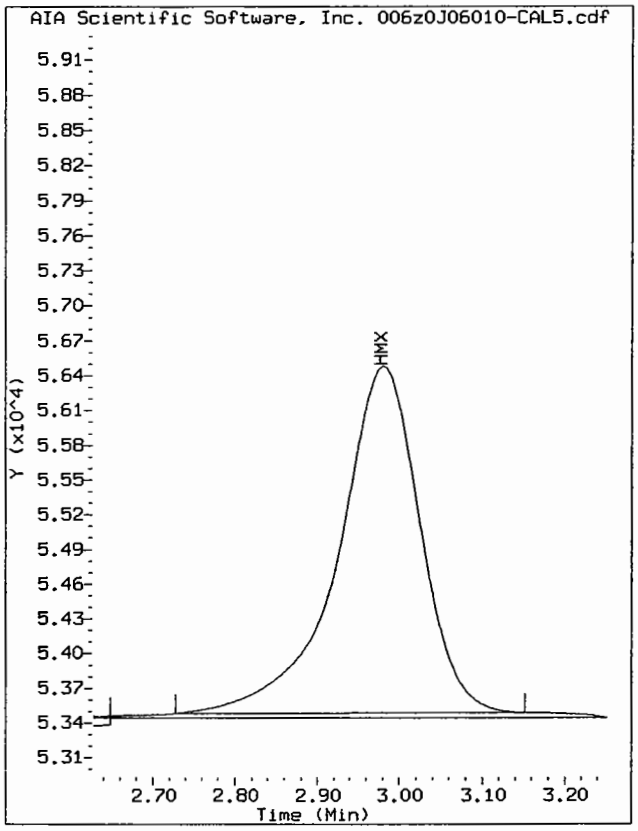
Lab Smp Id : 0J06010-CAL5 Client Smp Id : 83305ZA
Sample Type : INITIAL CAL: Level 5 Sublist : all
Inj Date : 06-OCT-2010 14:40 Inst ID : A11001
Operator : BWL
Method : /chem/a11001.i/z101006.b/8330_10uL_v3_a_split.m
Misc. Info : 83305ZA

RT	RT WINDOW		AREA	QUANT RF	COMPOUND	STD AMT ON-COLUMN (Ng)	RF	FLAGS
1.29			630					
1.59			80					
1.74			3001					
2.06			1061					
2.19			3818					
2.54			1077					
2.98	2.89	3.09	20700	814	HMX	25.00000	827.9600	M 2
3.41			546					
3.87			214					
5.60	5.52	5.72	29955	1316	RDX	25.00000	1198.200	
7.70			649					
8.19	8.00	8.40	68628	2719	1,3,5-Trinitrobenzene	25.00000	2745.120	
9.42	9.24	9.64	322592	3229	1,4-Dinitrobenzene	100.0000	3225.920	
10.25	10.06	10.46	96159	3864	1,3-Dinitrobenzene	25.00000	3846.360	
12.17	11.96	12.36	62413	2488	Nitrobenzene	25.00000	2496.520	
12.48	12.28	12.68	87855	1789	Tetryl	50.00000	1757.080	
13.30			1705					
14.72	14.50	14.90	67939	2697	2,4,6-Trinitrotoluene	25.00000	2717.560	
15.89	15.64	16.04	85594	1732	4-Amino-2,6-dinitrotoluene	50.00000	1711.860	
16.56	16.32	16.72	128532	2589	2-Amino-4,6-dinitrotoluene	50.00000	2570.620	
17.44	17.10	17.70	85977	1738	2,6-Dinitrotoluene	50.00000	1719.520	
17.92	17.58	18.18	89554	3546	2,4-Dinitrotoluene	25.00000	3582.120	
22.00	21.69	22.29	80067	1571	2-Nitrotoluene	50.00000	1601.320	
23.94	23.65	24.25	67936	1321	4-Nitrotoluene	50.00000	1358.720	
25.76	25.46	26.06	86092	1696	3-Nitrotoluene	50.00000	1721.840	

c.o.h.

10.11.10

Manually Integrated Peaks

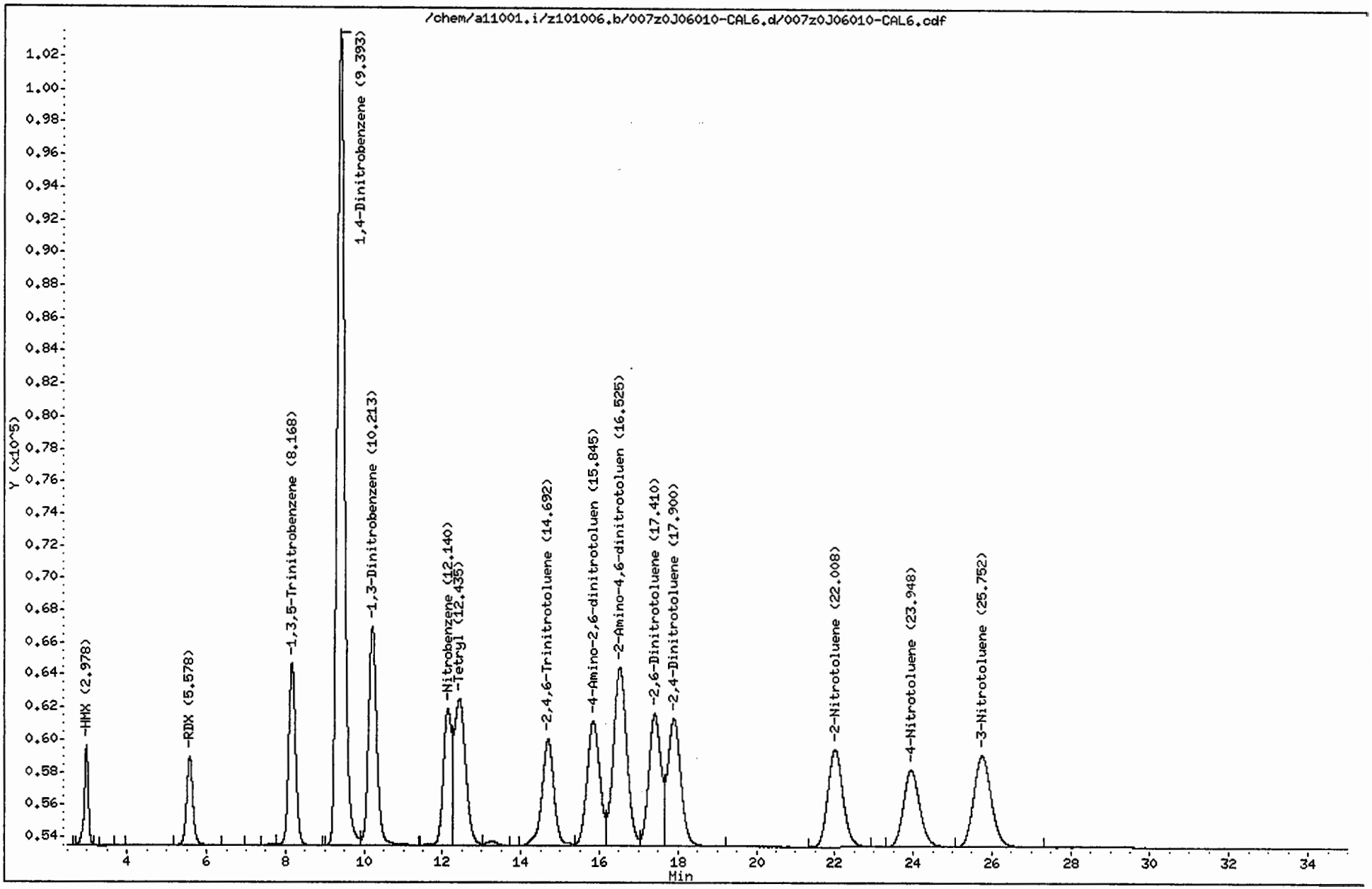


Start: 2.73 Stop: 3.15

Data File: /chem/a11001.i/z101006.b/007z0J06010-CAL6.d
Date : 06-OCT-2010 15:16
Client ID: 83306ZA
Sample Info: 0J06010-CAL6
Volume Injected (uL): 10.0
Column phase: C18

Instrument: a11001.i

Operator: BWL
Column diameter: 4.60

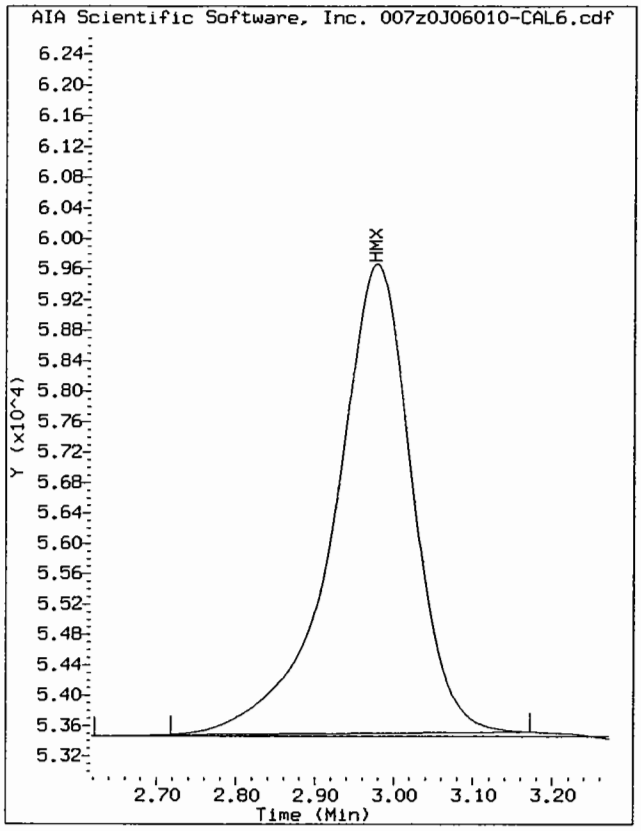


CompuChem

Lab Smp Id : 0J06010-CAL6 Client Smp Id : 83306ZA
Sample Type : INITIAL CAL: Level 6 Sublist : all
Inj Date : 06-OCT-2010 15:16 Inst ID : A11001
Operator : BWL
Method : /chem/a11001.i/z101006.b/8330_10uL_v3_a_split.m
Misc. Info : 83306ZA

RT	RT WINDOW		AREA	QUANT RF	COMPOUND	STD AMT ON-COLUMN (Ng)	RF	FLAGS
1.30			666					
1.51			302					
1.74			4125					
1.97			464					
2.06			1194					
2.42			372					
2.98	2.89	3.09	42611	814	HMX	50.00000	852.2200	M
3.39			910					
3.87			353					
5.58	5.52	5.72	61030	1316	RDX	50.00000	1220.600	
7.10			217					
7.67			1344					
8.17	8.00	8.40	138521	2719	1,3,5-Trinitrobenzene	50.00000	2770.400	
9.39	9.24	9.64	658339	3229	1,4-Dinitrobenzene	200.0000	3291.690	
10.21	10.06	10.46	197085	3864	1,3-Dinitrobenzene	50.00000	3941.680	
12.14	11.96	12.36	127491	2488	Nitrobenzene	50.00000	2549.820	
12.44	12.28	12.68	179124	1789	Tetryl	100.0000	1791.240	
13.26			4962					
14.69	14.50	14.90	140239	2697	2,4,6-Trinitrotoluene	50.00000	2804.780	
15.84	15.64	16.04	175293	1732	4-Amino-2,6-dinitrotoluene	100.0000	1752.920	
16.52	16.32	16.72	263137	2589	2-Amino-4,6-dinitrotoluene	100.0000	2631.370	
17.41	17.10	17.70	175605	1738	2,6-Dinitrotoluene	100.0000	1756.040	
17.90	17.58	18.18	183736	3546	2,4-Dinitrotoluene	50.00000	3674.700	
22.01	21.69	22.29	160744	1571	2-Nitrotoluene	100.0000	1607.440	
23.95	23.65	24.25	137047	1321	4-Nitrotoluene	100.0000	1370.460	
25.75	25.46	26.06	175479	1696	3-Nitrotoluene	100.0000	1754.780	

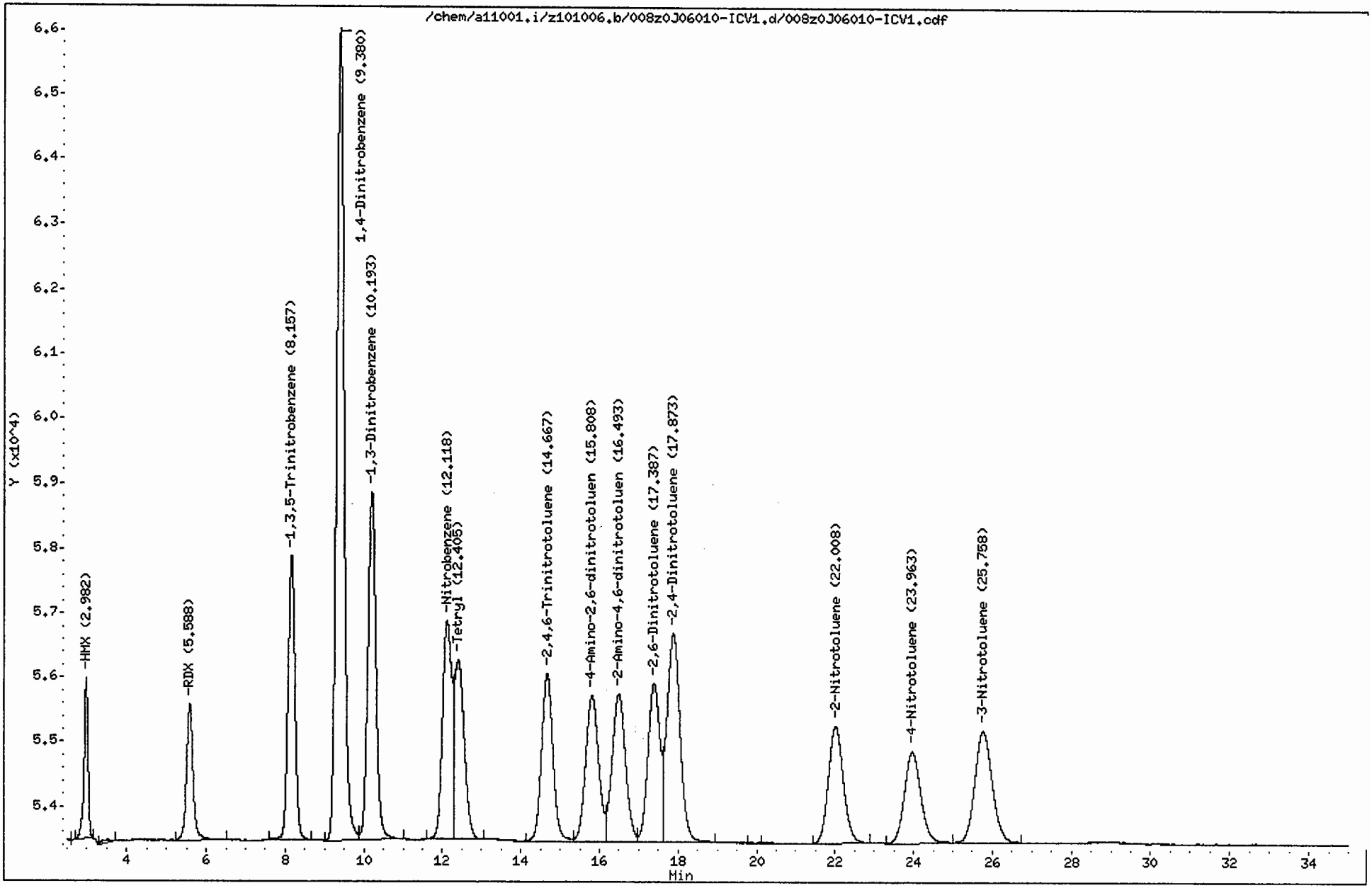
Manually Integrated Peaks



Start: 2.72 Stop: 3.17

Data File: /chem/a11001.i/z101006.b/008z0J06010-ICV1.d
Date : 06-OCT-2010 15:52
Client ID: 8330CHKZA
Sample Info: 0J06010-ICV1
Volume Injected (uL): 10.0
Column phase: C18

Instrument: a11001.i
Operator: BWL
Column diameter: 4.60



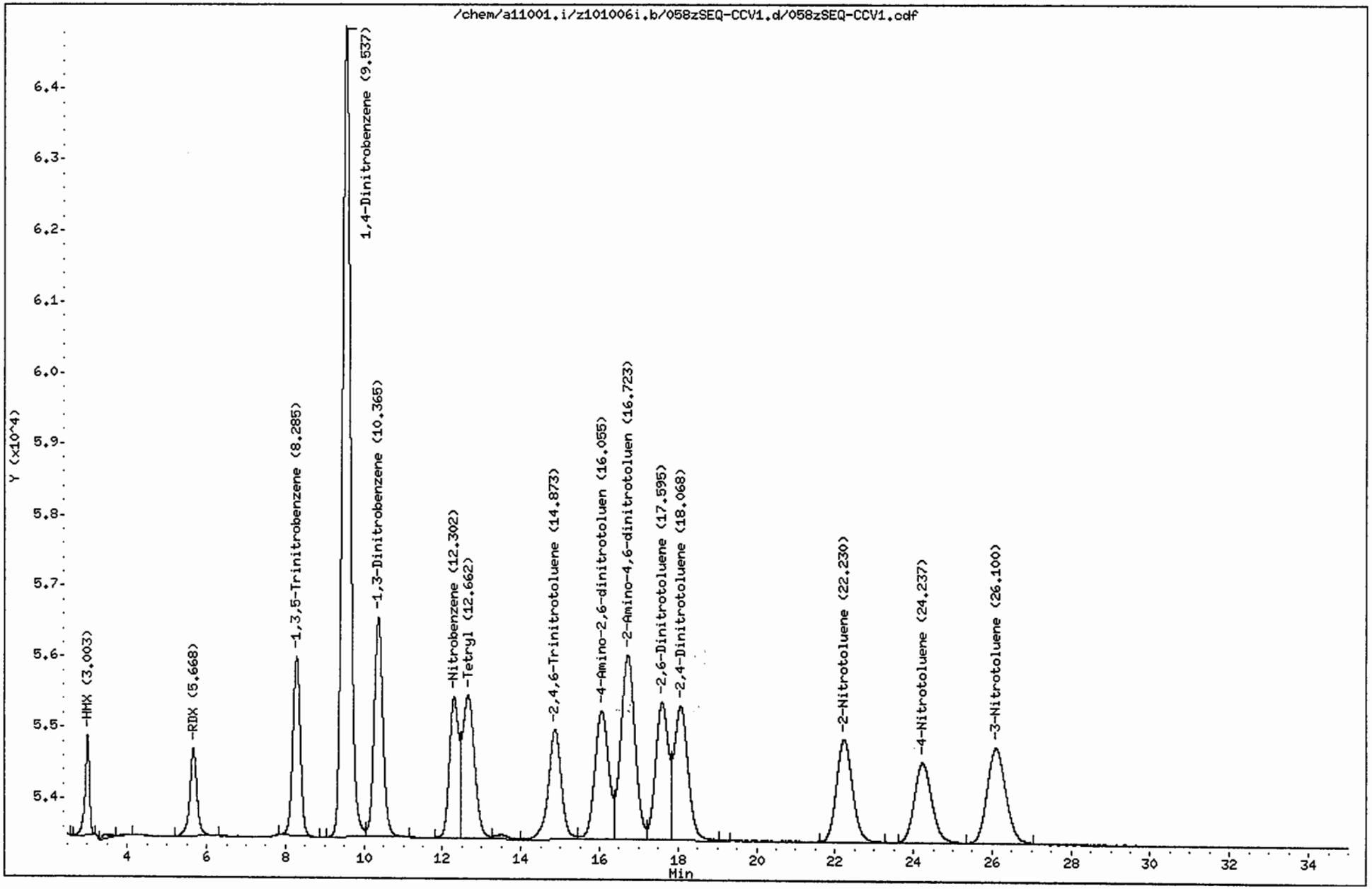
CompuChem

Lab Smp Id : 0J06010-ICV1 Client Smp Id : 8330CHKZA
Sample Type : QCCHECK Sublist : all
Inj Date : 06-OCT-2010 15:52 Inst ID : A11001
Operator : BWL Spike Sublist : qccheck
Method : /chem/a11001.i/z101006.b/8330_10uL_v3_a_split.m
Misc. Info : 8330CHKZA

RT	AREA
1.13	73
1.29	617
1.57	73
1.74	7883
2.05	897
2.19	5327
2.98	17095
3.43	816
5.59	24611
8.16	54317
9.38	165779
10.19	77213
12.12	55637
12.40	49442
14.67	52395
15.81	52347
16.49	54899
17.39	52236
17.87	75996
19.83	102
22.01	48579
23.96	41557
25.76	53768

Data File: /chem/a11001.i/z101006i.b/058zSEQ-CCV1.d
Date : 22-OCT-2010 14:22
Client ID: 8330MZJ
Sample Info: SEQ-CCV1
Volume Injected (uL): 10.0
Column phase: C18

Instrument: a11001.i
Operator: BWL
Column diameter: 4.60



CompuChem

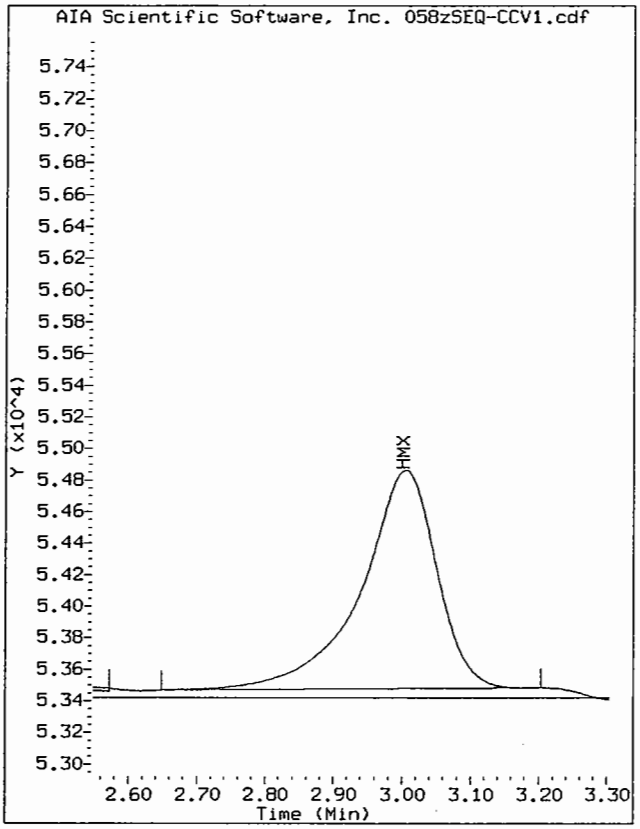
Lab Smp Id : SEQ-CCV1 Client Smp Id : 8330MZJ
Sample Type : CONT CAL: Level 4 Sublist : all
Inj Date : 22-OCT-2010 14:22 Inst ID : A11001
Operator : BWL
Method : /chem/a11001.i/z101006i.b/8330_10uL_v3_a_split.m
Misc. Info : 8330MZJ

RT	RT WINDOW		AREA	QUANT RF	COMPOUND	STD AMT ON-COLUMN (Ng)	CCAL RF	%D	%D LIMIT	FLAGS	
1.31			1944								
1.76			3363								
1.98			594								
2.21			1472								
3.00	2.89	3.09	10628	814	HMX	12.50000	850.1600	-4.4	20.0	M2	
3.46			831								
3.90			253								
5.67	5.53	5.73	15899	1316	RDX	12.50000	1271.840	3.4	20.0		
8.28	8.02	8.42	33654	2719	1,3,5-Trinitrobenzene	12.50000	2692.320	1.0	20.0		
9.54	9.25	9.65	162968	3229	1,4-Dinitrobenzene	50.00000	3259.340	-0.9	20.0		
10.36	10.07	10.47	47986	3864	1,3-Dinitrobenzene	12.50000	3838.880	0.7	20.0		
12.30	11.98	12.38	33034	2488	Nitrobenzene	12.50000	2642.640	-6.2	20.0		
12.66	12.30	12.70	42519	1789	Tetryl	25.00000	1700.720	4.9	20.0		
13.48			1149								
14.87	14.52	14.92	35202	2697	2,4,6-Trinitrotoluene	12.50000	2816.080	-4.4	20.0		
16.06	15.67	16.07	44223	1732	4-Amino-2,6-dinitrotoluene	25.00000	1768.880	-2.1	20.0		
16.72	16.34	16.74	65470	2589	2-Amino-4,6-dinitrotoluene	25.00000	2618.760	-1.1	20.0		
17.60	17.12	17.72	44236	1738	2,6-Dinitrotoluene	25.00000	1769.400	-1.8	20.0		
18.07	17.60	18.20	45942	3546	2,4-Dinitrotoluene	12.50000	3675.280	-3.6	20.0		
19.14			143								
22.23	21.73	22.33	40262	1571	2-Nitrotoluene	25.00000	1610.480	-2.5	20.0		
24.24	23.70	24.30	34486	1321	4-Nitrotoluene	25.00000	1379.400	-4.4	20.0		
26.10	25.52	26.12	43514	1696	3-Nitrotoluene	25.00000	1740.520	-2.6	20.0		

AHW 10/23/10

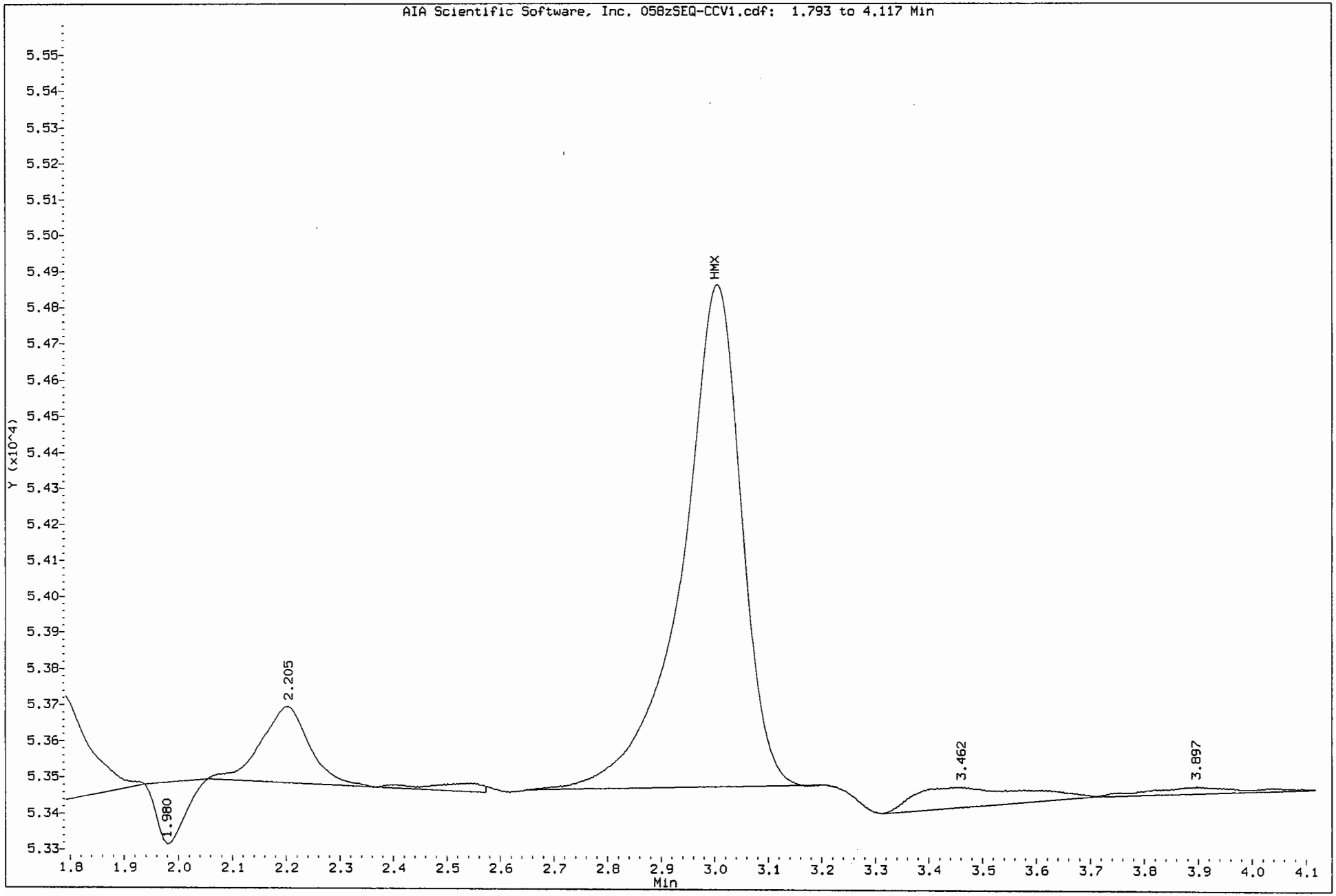
JR 10/25/10

Manually Integrated Peaks



Start: 2.65 Stop: 3.20

Data File: /chem/a11001.i/z1010061.b/058zSEQ-CCV1.d/058zSEQ-CCV1.cdf
Injection Date: 22-OCT-2010 14:22
Instrument: a11001.i
Client Sample ID: 8330MZJ



Data File: /chem/a11001.i/z101006j.b/066zSEQ-CCV2.d

Page 1

Date : 22-OCT-2010 19:12

Client ID: 8330MZK

Instrument: a11001.i

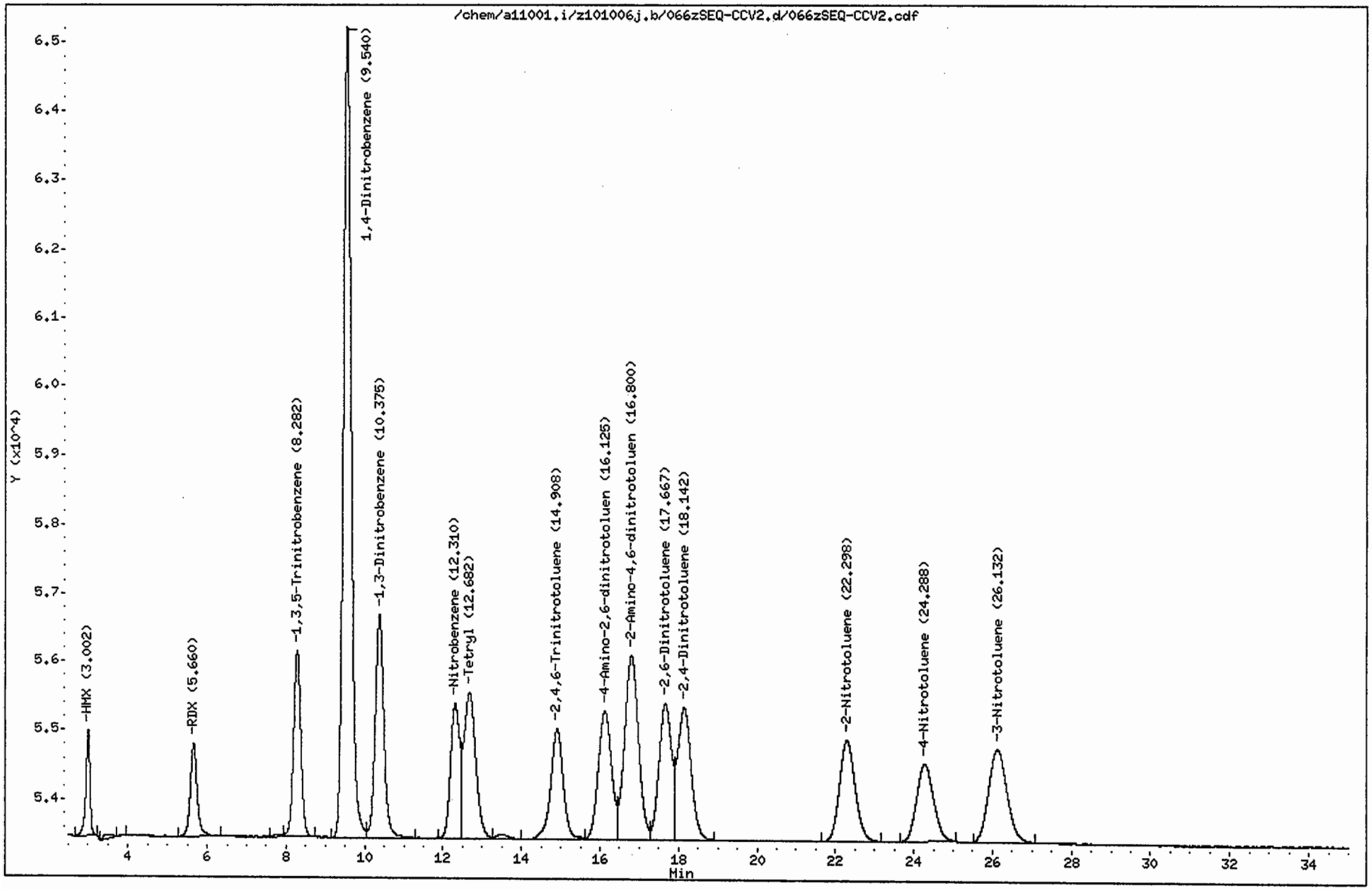
Sample Info: SEQ-CCV2

Volume Injected (uL): 10.0

Operator: BWL

Column phase: C18

Column diameter: 4.60



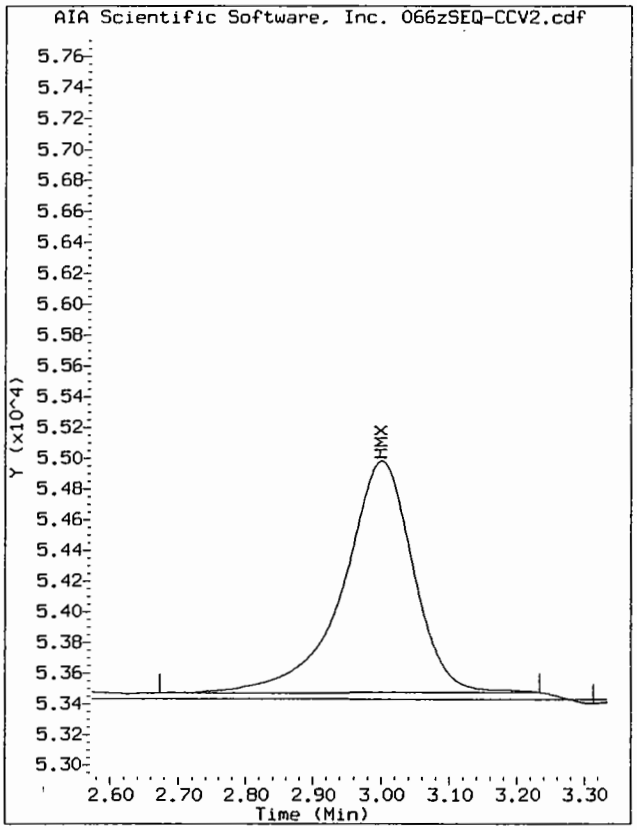
CompuChem

Lab Smp Id : SEQ-CCV2 Client Smp Id : 8330MZK
Sample Type : CONT CAL: Level 4 Sublist : all
Inj Date : 22-OCT-2010 19:12 Inst ID : A11001
Operator : BWL
Method : /chem/a11001.i/z101006j.b/8330_10uL_v3_a_split.m
Misc. Info : 8330MZK

RT	RT WINDOW		AREA	QUANT RF	COMPOUND	STD AMT ON-COLUMN (Ng)	CCAL RF	%D	%D LIMIT	FLAGS	
1.31			747								
1.51			748								
1.77			3158								
1.98			495								
2.20			1548								
3.00	2.89	3.09	10846	814	HMX	12.50000	867.6000	-6.6	20.0	M2	AHW 10/23/10
3.44			816								
3.86			131								
5.66	5.53	5.73	16206	1316	RDX	12.50000	1296.480	1.5	20.0		JM 10/25/10
7.89			458								
8.28	8.02	8.42	34364	2719	1,3,5-Trinitrobenzene	12.50000	2749.120	-1.1	20.0		
9.54	9.25	9.65	162789	3229	1,4-Dinitrobenzene	50.00000	3255.760	-0.8	20.0		
10.38	10.07	10.47	49109	3864	1,3-Dinitrobenzene	12.50000	3928.640	-1.7	20.0		
12.31	11.99	12.39	31476	2488	Nitrobenzene	12.50000	2518.000	-1.2	20.0		
12.68	12.30	12.70	43642	1789	Tetryl	25.00000	1745.680	2.4	20.0		
13.50			1124								
14.91	14.53	14.93	35012	2697	2,4,6-Trinitrotoluene	12.50000	2800.960	-3.9	20.0		
16.12	15.92	16.32	43269	1732	4-Amino-2,6-dinitrotoluene	25.00000	1730.760	0.1	20.0		
16.80	16.60	17.00	65415	2589	2-Amino-4,6-dinitrotoluene	25.00000	2616.560	-1.1	20.0		
17.67	17.14	17.74	43346	1738	2,6-Dinitrotoluene	25.00000	1733.840	0.2	20.0		
18.14	17.62	18.22	45571	3546	2,4-Dinitrotoluene	12.50000	3645.680	-2.8	20.0		
22.30	21.74	22.34	40376	1571	2-Nitrotoluene	25.00000	1615.040	-2.8	20.0		
24.29	23.71	24.31	33474	1321	4-Nitrotoluene	25.00000	1338.920	-1.4	20.0		
26.13	25.83	26.43	43358	1696	3-Nitrotoluene	25.00000	1734.280	-2.3	20.0		

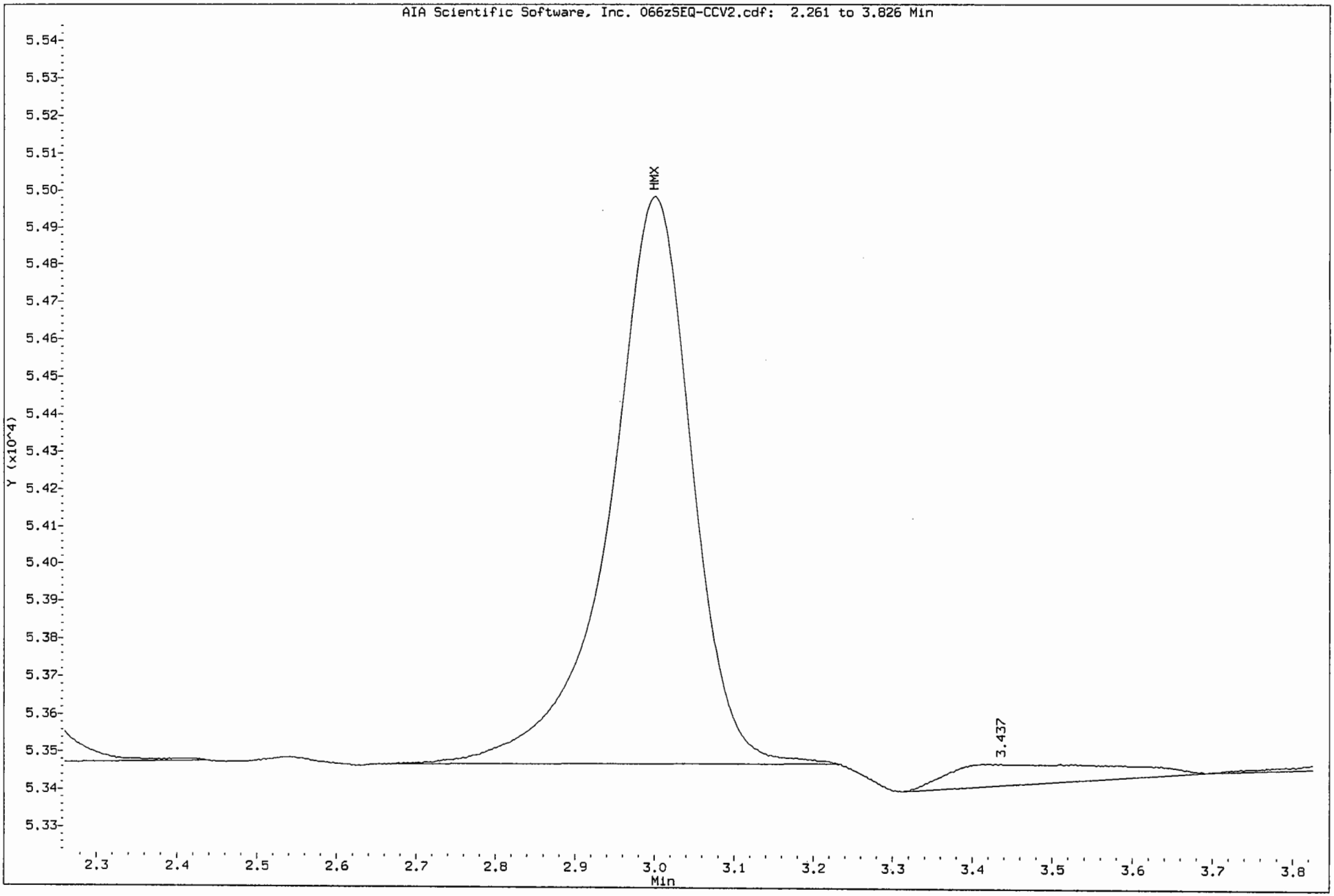
AHW 10/23/10

Manually Integrated Peaks



Start: 2.67 Stop: 3.23

Data File: /chem/a11001.i/z101006j.b/066zSEQ-CCV2.d/066zSEQ-CCV2.cdf
Injection Date: 22-OCT-2010 19:12
Instrument: a11001.i
Client Sample ID: 8330MZK



Data File: /chem/a11001.i/z101006k.b/074zSEQ-CCV3.d

Date : 22-OCT-2010 23:59

Client ID: 8330MZL

Instrument: a11001.i

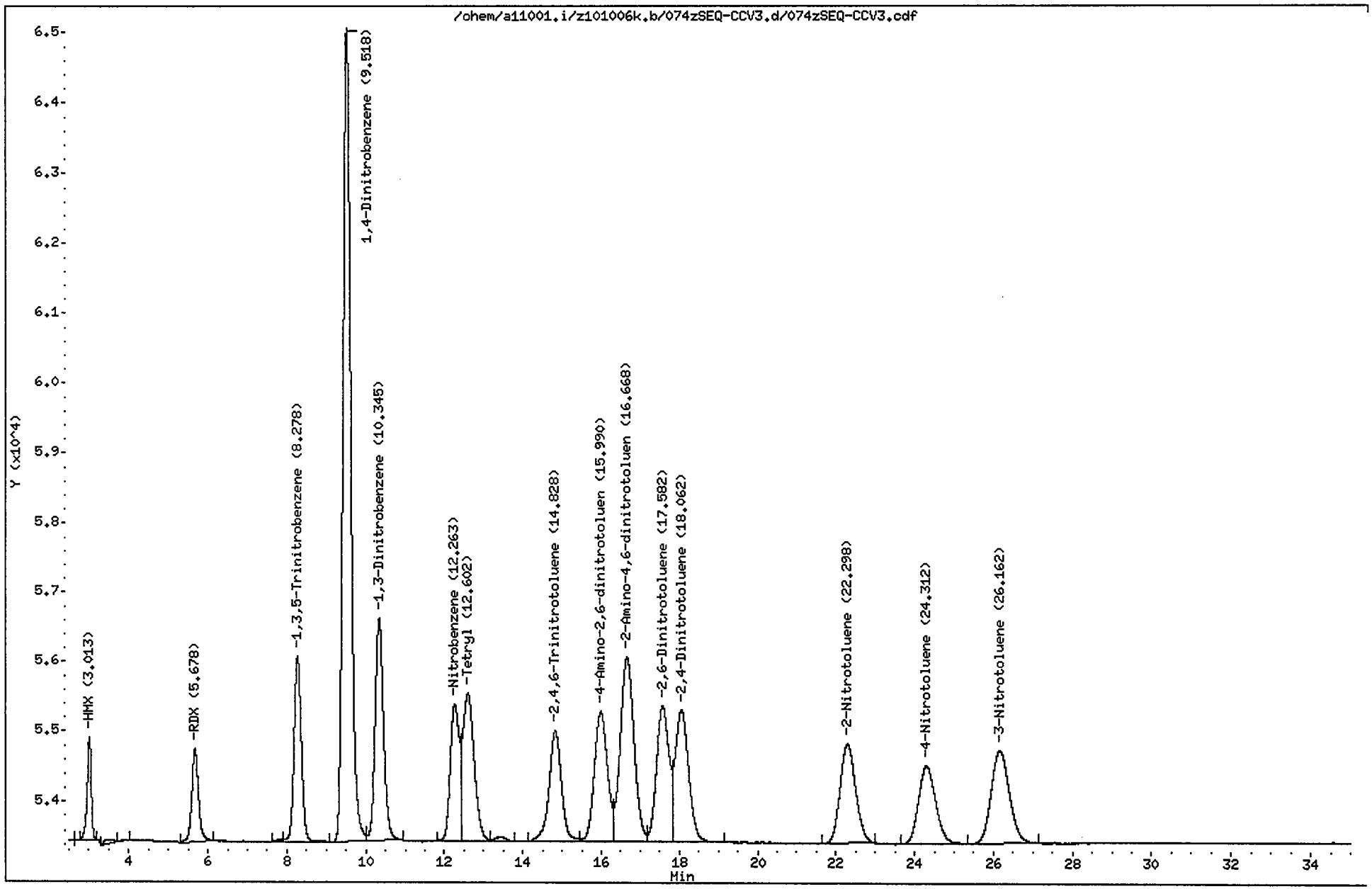
Sample Info: SEQ-CCV3

Volume Injected (uL): 10.0

Operator: BWL

Column phase: C18

Column diameter: 4.60

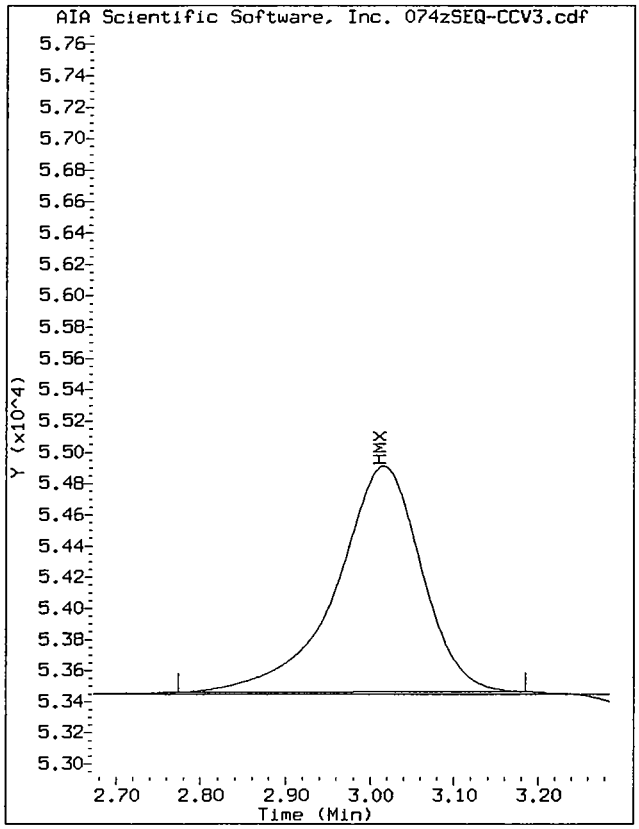


CompuChem

Lab Smp Id : SEQ-CCV3 Client Smp Id : 8330MZL
Sample Type : CONT CAL: Level 4 Sublist : all
Inj Date : 22-OCT-2010 23:59 Inst ID : A11001
Operator : BWL
Method : /chem/a11001.i/z101006k.b/8330_10uL_v3_a_split.m
Misc. Info : 8330MZL

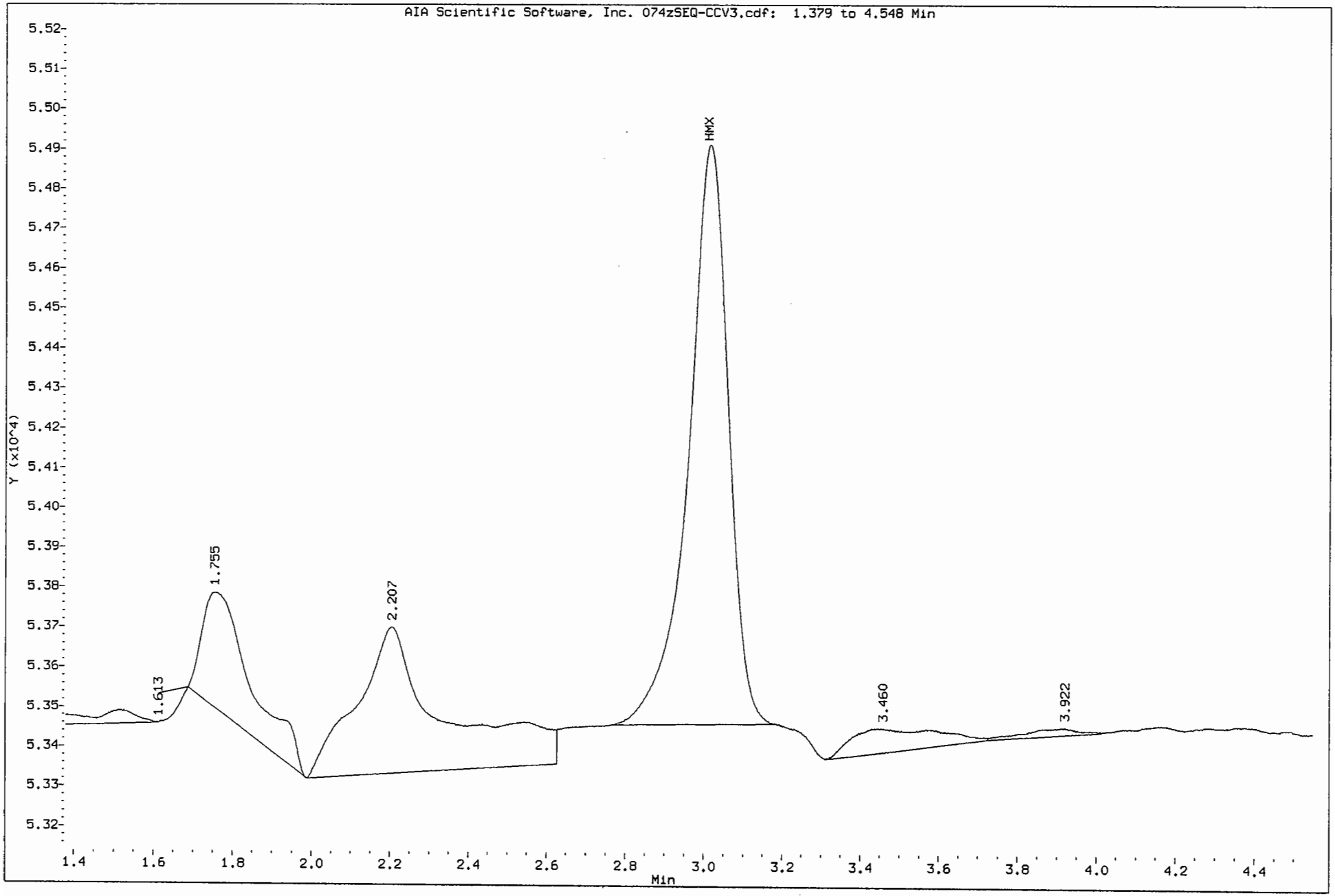
RT	RT WINDOW		AREA	QUANT RF	COMPOUND	STD AMT ON-COLUMN (Ng)	CCAL RF	%D	%D LIMIT	FLAGS	
0.97			74								
1.32			564								
1.61			230								
1.75			2560								
2.21			5729								
3.01	2.90	3.10	10213	814	HMX	12.50000	817.0400	-0.4	20.0	M2	
3.46			897								
3.92			184								
5.68	5.57	5.77	15400	1316	RDX	12.50000	1231.920	6.4	20.0		
7.83			311								
8.28	8.08	8.48	33842	2719	1,3,5-Trinitrobenzene	12.50000	2707.280	0.4	20.0		
9.52	9.33	9.73	158429	3229	1,4-Dinitrobenzene	50.00000	3168.580	1.9	20.0		
10.34	10.16	10.56	46898	3864	1,3-Dinitrobenzene	12.50000	3751.760	2.9	20.0		
12.26	12.10	12.50	30754	2488	Nitrobenzene	12.50000	2460.240	1.1	20.0		
12.60	12.45	12.85	42361	1789	Tetryl	25.00000	1694.440	5.3	20.0		
13.42			1244								
14.83	14.66	15.06	34647	2697	2,4,6-Trinitrotoluene	12.50000	2771.680	-2.8	20.0		
15.99	15.84	16.24	43241	1732	4-Amino-2,6-dinitrotoluene	25.00000	1729.640	0.1	20.0		
16.67	16.51	16.91	64409	2589	2-Amino-4,6-dinitrotoluene	25.00000	2576.360	0.5	20.0		
17.58	17.29	17.89	43276	1738	2,6-Dinitrotoluene	25.00000	1731.000	0.4	20.0		
18.06	17.77	18.37	44699	3546	2,4-Dinitrotoluene	12.50000	3575.840	-0.8	20.0		
22.30	21.94	22.54	38569	1571	2-Nitrotoluene	25.00000	1542.760	1.8	20.0		
24.31	23.95	24.55	33586	1321	4-Nitrotoluene	25.00000	1343.400	-1.7	20.0		
26.16	25.81	26.41	42242	1696	3-Nitrotoluene	25.00000	1689.680	0.4	20.0		

Manually Integrated Peaks



Start: 2.77 Stop: 3.19

Data File: /chem/a11001.i/z101006k.b/074zSEQ-CCV3.d/074zSEQ-CCV3.cdf
Injection Date: 22-OCT-2010 23:59
Instrument: a11001.i
Client Sample ID: 8330MZL



Data File: /chem/a11002.i/r101021.b/002r0J21016-CAL1.d

Page 1

Date : 21-OCT-2010 14:41

Client ID: 83321WA

Instrument: a11002.i

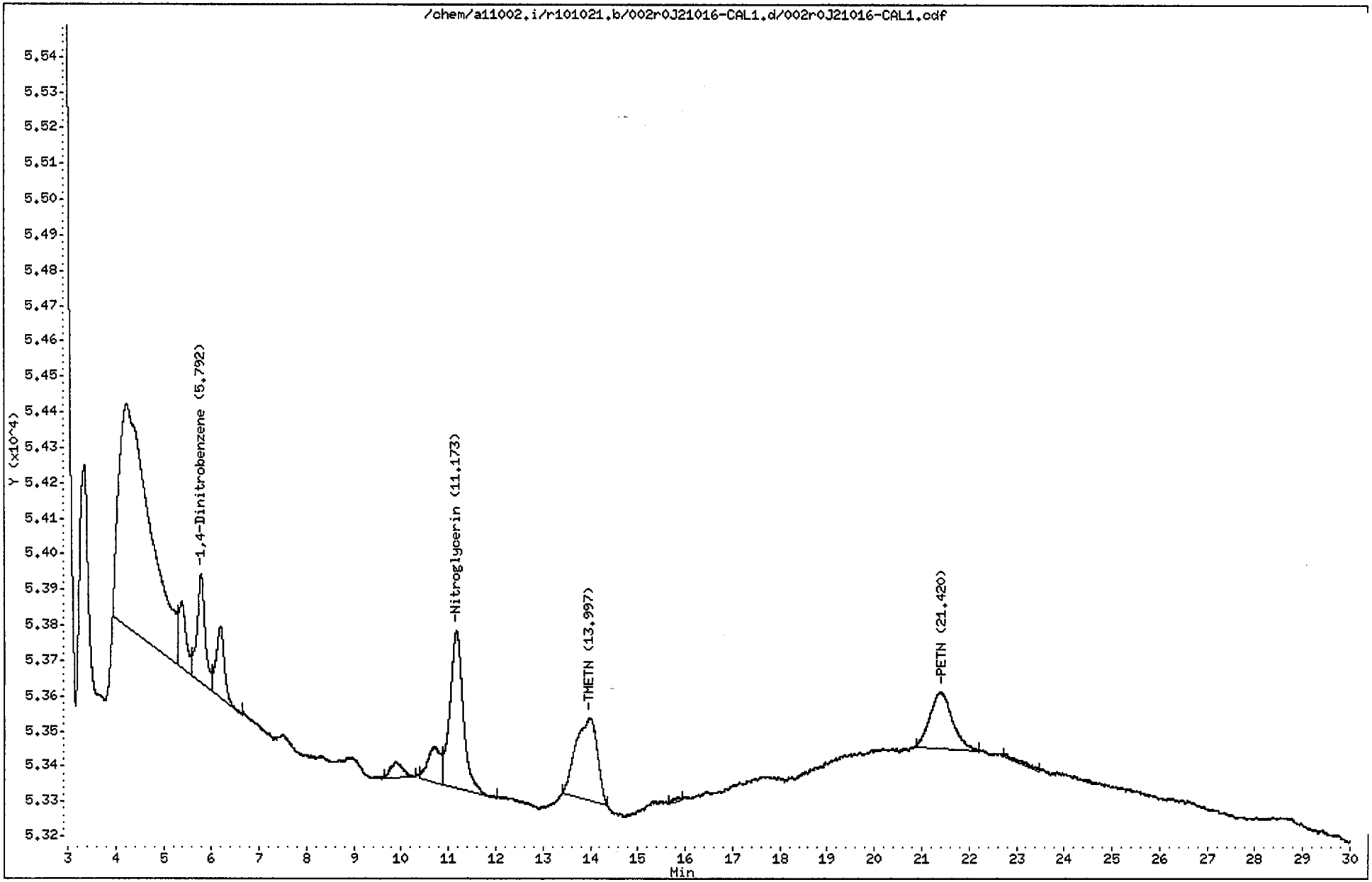
Sample Info: 0J21016-CAL1

Volume Injected (uL): 10.0

Operator: BWL

Column phase: PINNACLE CYANO

Column diameter: 4.60



CompuChem

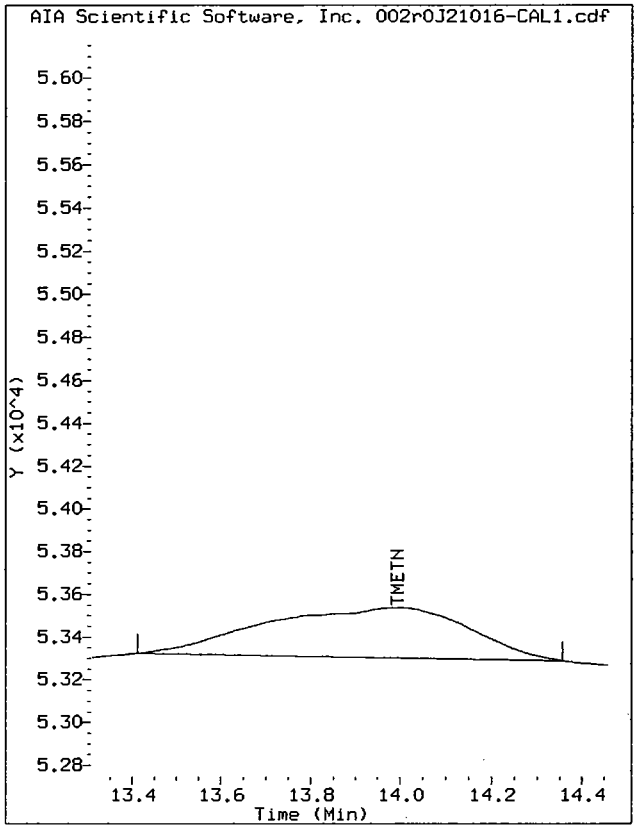
Lab Smp Id : 0J21016-CAL1 Client Smp Id : 83321WA
Sample Type : INITIAL CAL: Level 1 Sublist : all
Inj Date : 21-OCT-2010 14:41 Inst ID : A11002
Operator : BWL
Method : /chem/a11002.i/r101021.b/8332TPconf_10uL_v1.m
Misc. Info : 83321WA

RT	RT WINDOW		AREA	QUANT RF	COMPOUND	STD AMT ON-COLUMN (Ng)	RF	FLAGS
4.24			28810					
5.38			2069					
5.79	5.30	6.30	3627	1652	1,4-Dinitrobenzene	2.000000	1813.500	
6.20			2406					
9.90			804					
10.72			1961					
11.17	10.70	11.70	8732	1082	Nitroglycerin	8.000000	1091.500	
14.00	13.54	14.54	7376	1291	TMETN	5.000000	1475.000	M
15.84			115					
21.42	20.89	21.89	5233	1144	PETN	5.000000	1046.600	
22.74			300					

10/22/10

10.22.10

Manually Integrated Peaks

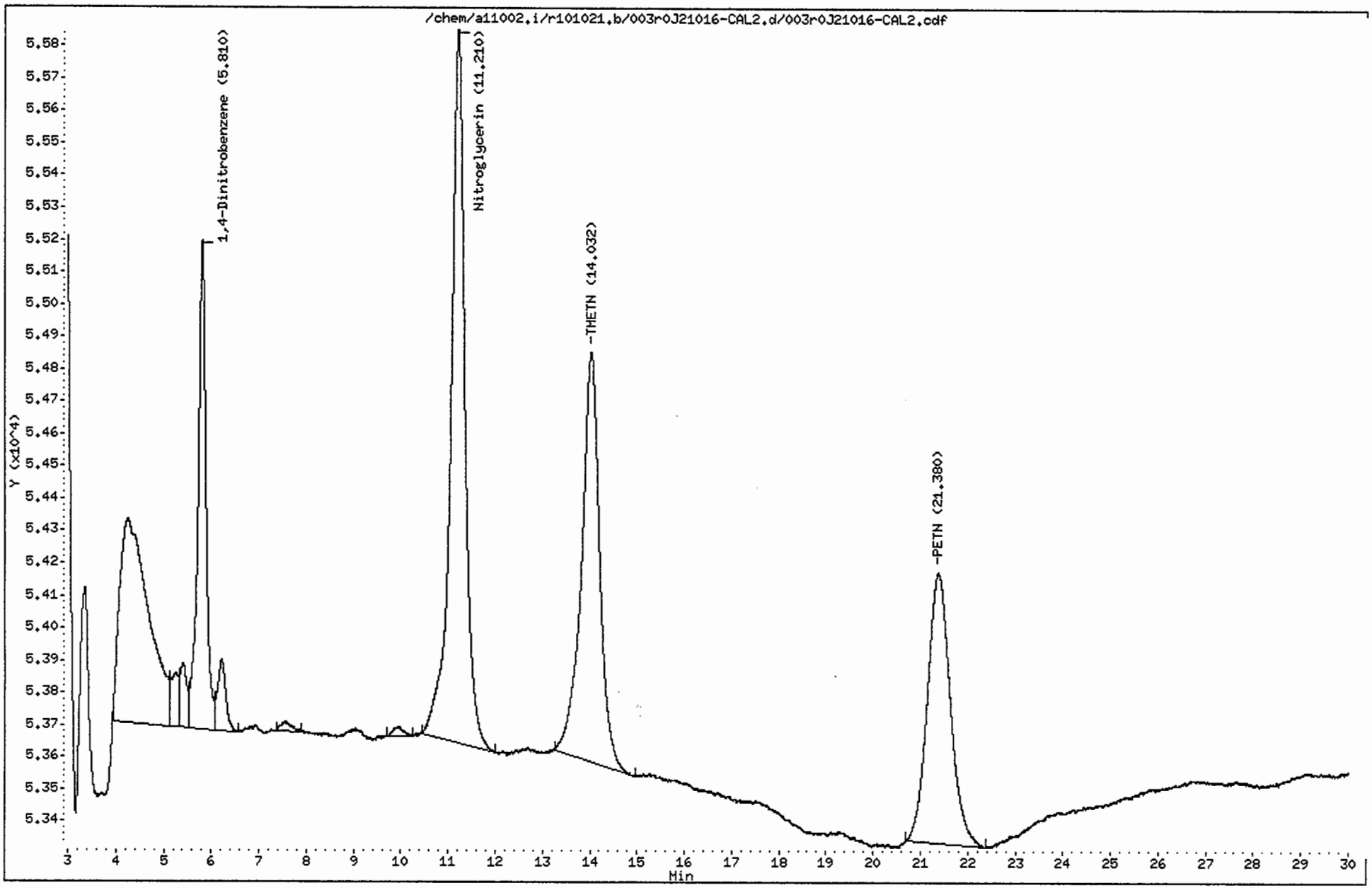


Start: 13.41 Stop: 14.36

Data File: /chem/a11002.i/r101021.b/003r0J21016-CAL2.d
Date : 21-OCT-2010 15:11
Client ID: 83322WA
Sample Info: 0J21016-CAL2
Volume Injected (uL): 10.0
Column phase: PINNACLE CYANO

Instrument: a11002.i

Operator: BWL
Column diameter: 4.60



CompuChem

Lab Smp Id : 0J21016-CAL2 Client Smp Id : 83322WA
Sample Type : INITIAL CAL: Level 2 Sublist : all
Inj Date : 21-OCT-2010 15:11 Inst ID : A11002
Operator : BWL
Method : /chem/a11002.i/r101021.b/8332TPconf_10uL_v1.m
Misc. Info : 83322WA

RT	RT WINDOW		AREA	QUANT RF	COMPOUND	STD AMT ON-COLUMN (Ng)	RF	FLAGS
4.26			26596					
5.26			1791					
5.41			2034					
5.81	5.30	6.30	17911	1652	1,4-Dinitrobenzene	10.00000	1791.100	
6.22			2614					
7.57			471					
9.97			501					
11.21	10.70	11.70	46001	1082	Nitroglycerin	40.00000	1150.025	
14.03	13.54	14.54	33977	1291	TMETN	25.00000	1359.080	
21.38	20.89	21.89	28472	1144	PETN	25.00000	1138.880	

C-12/1-

Data File: /chem/a11002.i/r101021.b/004r0J21016-CAL3.d

Page 1

Date : 21-OCT-2010 15:42

Client ID: 83323WA

Instrument: a11002.i

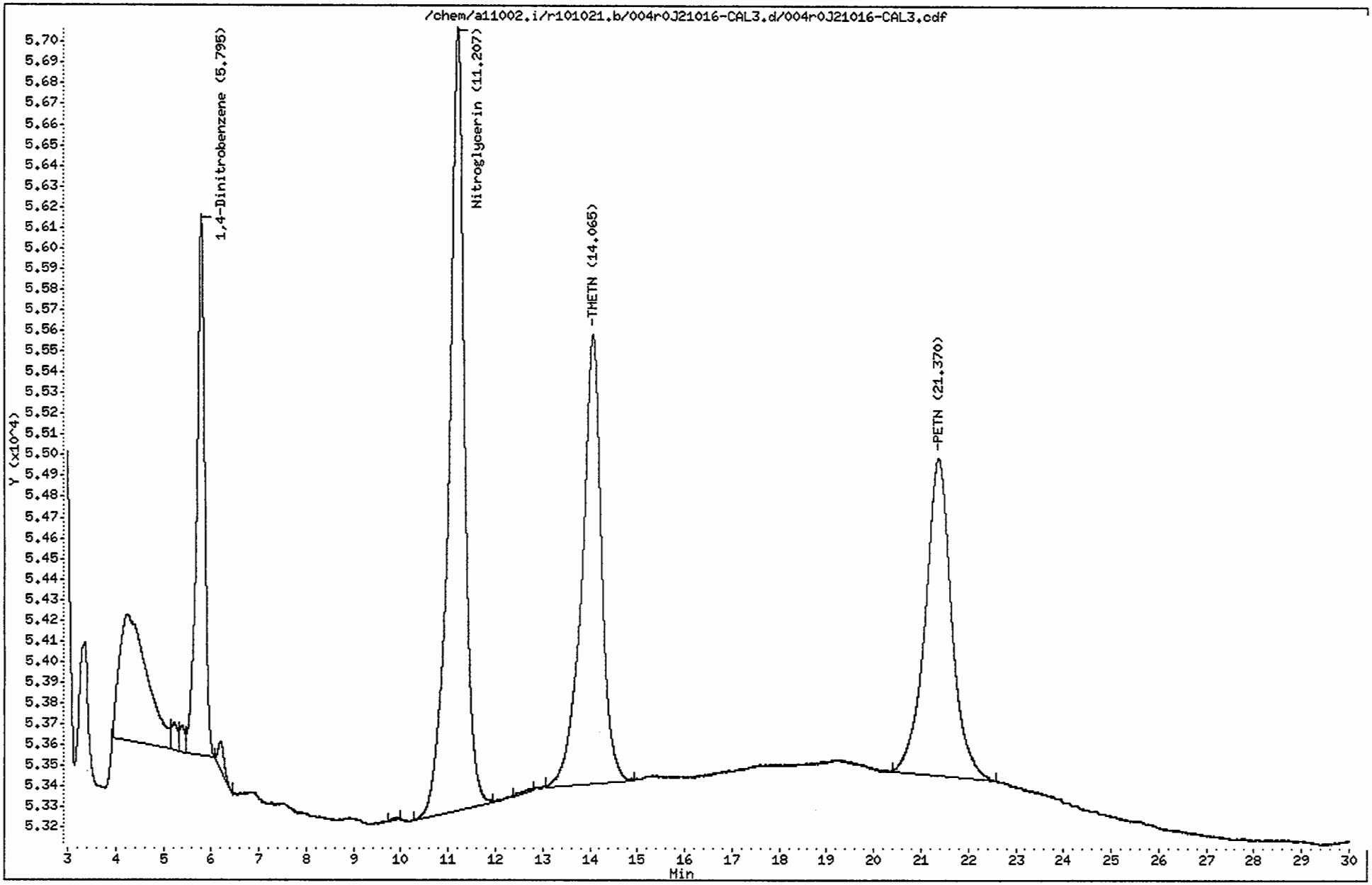
Sample Info: 0J21016-CAL3

Volume Injected (uL): 10.0

Operator: BWL

Column phase: PINNACLE CYANO

Column diameter: 4.60



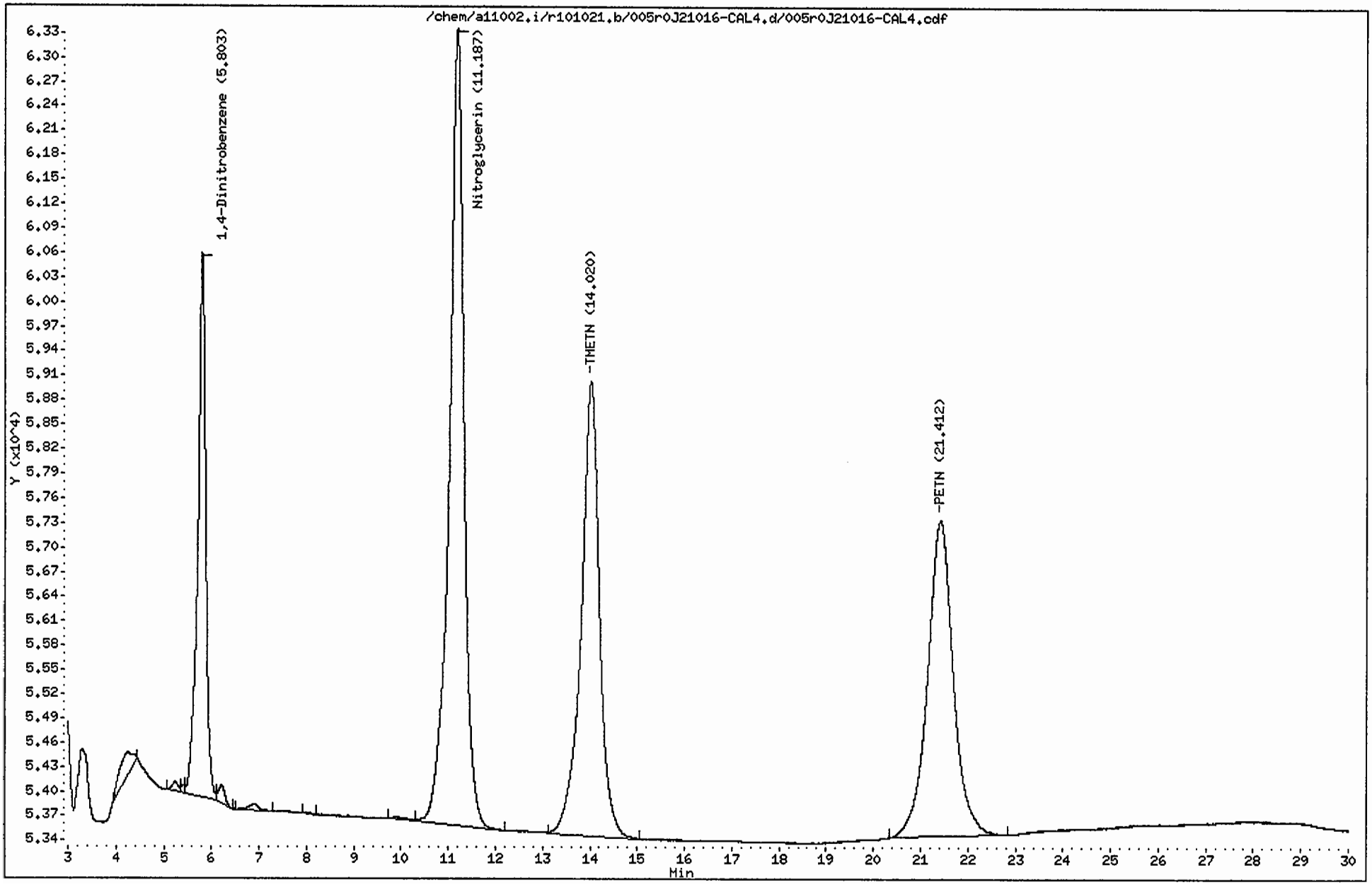
CompuChem

Lab Smp Id : 0J21016-CAL3 Client Smp Id : 83323WA
Sample Type : INITIAL CAL: Level 3 Sublist : all
Inj Date : 21-OCT-2010 15:42 Inst ID : A11002
Operator : BWL
Method : /chem/a11002.i/r101021.b/8332TPconf_10uL_v1.m
Misc. Info : 83323WA

RT	RT WINDOW		AREA	QUANT RF	COMPOUND	STD AMT ON-COLUMN (Ng)	RF	FLAGS
4.26			24881					
5.24			1148					
5.40			1048					
5.80	5.30	6.30	30314	1652	1,4-Dinitrobenzene	20.00000	1515.650	
6.20			1168					
9.88			121					
11.21	10.70	11.70	85992	1082	Nitroglycerin	80.00000	1074.900	
12.74			163					
14.06	13.54	14.54	62549	1291	TMETN	50.00000	1250.960	
21.37	20.89	21.89	59285	1144	PETN	50.00000	1185.700	

Data File: /chem/a11002.i/r101021.b/005r0J21016-CAL4.d
Date : 21-OCT-2010 16:13
Client ID: 83324WA
Sample Info: 0J21016-CAL4
Volume Injected (uL): 10.0
Column phase: PINNACLE CYANO

Instrument: a11002.i
Operator: BWL
Column diameter: 4.60



CompuChem

Lab Smp Id : 0J21016-CAL4 Client Smp Id : 83324WA
Sample Type : INITIAL CAL: Level 4 Sublist : all
Inj Date : 21-OCT-2010 16:13 Inst ID : A11002
Operator : BWL
Method : /chem/a11002.i/r101021.b/8332TPconf_10uL_v1.m
Misc. Info : 83324WA

RT	RT WINDOW		AREA	QUANT RF	COMPOUND	STD AMT ON-COLUMN (Ng)	RF	FLAGS
4.27			5765					
5.25			1042					
5.41			553					
5.80	5.30	6.30	77616	1652	1,4-Dinitrobenzene	50.00000	1552.300	
6.22			2043					
6.90			1162					
7.95			119					
9.90			643					
11.19	10.70	11.70	211472	1082	Nitroglycerin	200.0000	1057.355	
14.02	13.54	14.54	149831	1291	TMETN	125.0000	1198.648	
21.41	20.89	21.89	147106	1144	PETN	125.0000	1176.840	

Data File: /chem/a11002.i/r101021.b/006r0J21016-CAL5.d

Page 1

Date : 21-OCT-2010 16:44

Client ID: 83325WA

Instrument: a11002.i

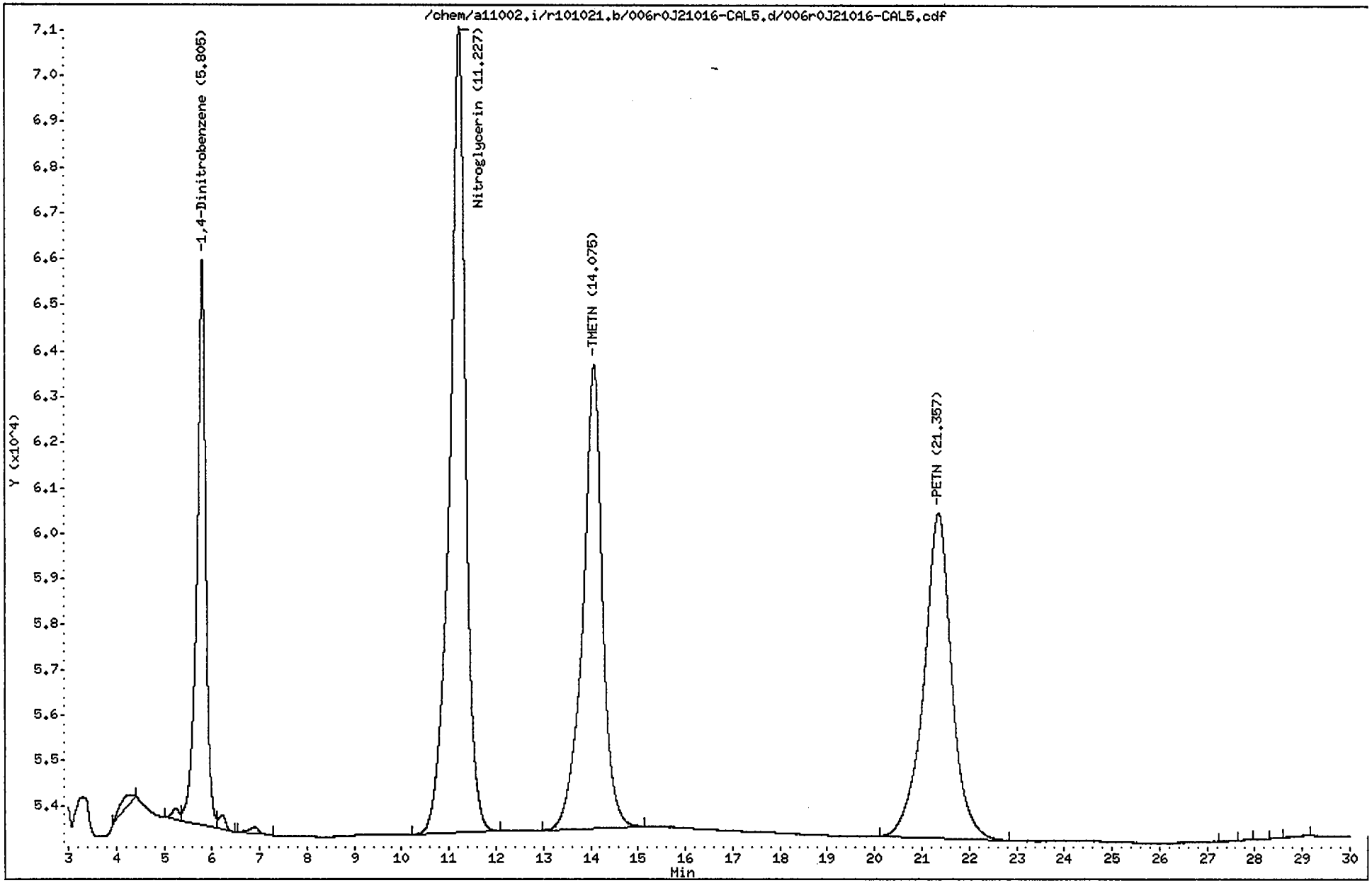
Sample Info: 0J21016-CAL5

Volume Injected (uL): 10.0

Operator: BWL

Column phase: PINNACLE CYANO

Column diameter: 4.60



CompuChem

Lab Smp Id : 0J21016-CAL5 Client Smp Id : 83325WA
Sample Type : INITIAL CAL: Level 5 Sublist : all
Inj Date : 21-OCT-2010 16:44 Inst ID : A11002
Operator : BWL
Method : /chem/a11002.i/r101021.b/8332TPconf_10uL_v1.m
Misc. Info : 83325WA

RT	RT WINDOW		AREA	QUANT RF	COMPOUND	STD AMT ON-COLUMN (Ng)	RF	FLAGS
4.27			5030					
5.25			2516					
5.80	5.30	6.30	158760	1652	1,4-Dinitrobenzene	100.0000	1587.590	
6.22			3152					
6.90			2371					
11.23	10.70	11.70	413974	1082	Nitroglycerin	400.0000	1034.935	
14.08	13.54	14.54	292460	1291	TMETN	250.0000	1169.836	
21.36	20.89	21.89	292790	1144	PETN	250.0000	1171.156	
27.57			192					
28.21			112					
29.04			296					

Data File: /chem/a11002.i/r101021.b/007r0J21016-ICV1.d

Date : 21-OCT-2010 17:15

Client ID: CHKSTDWA

Sample Info: 0J21016-ICV1

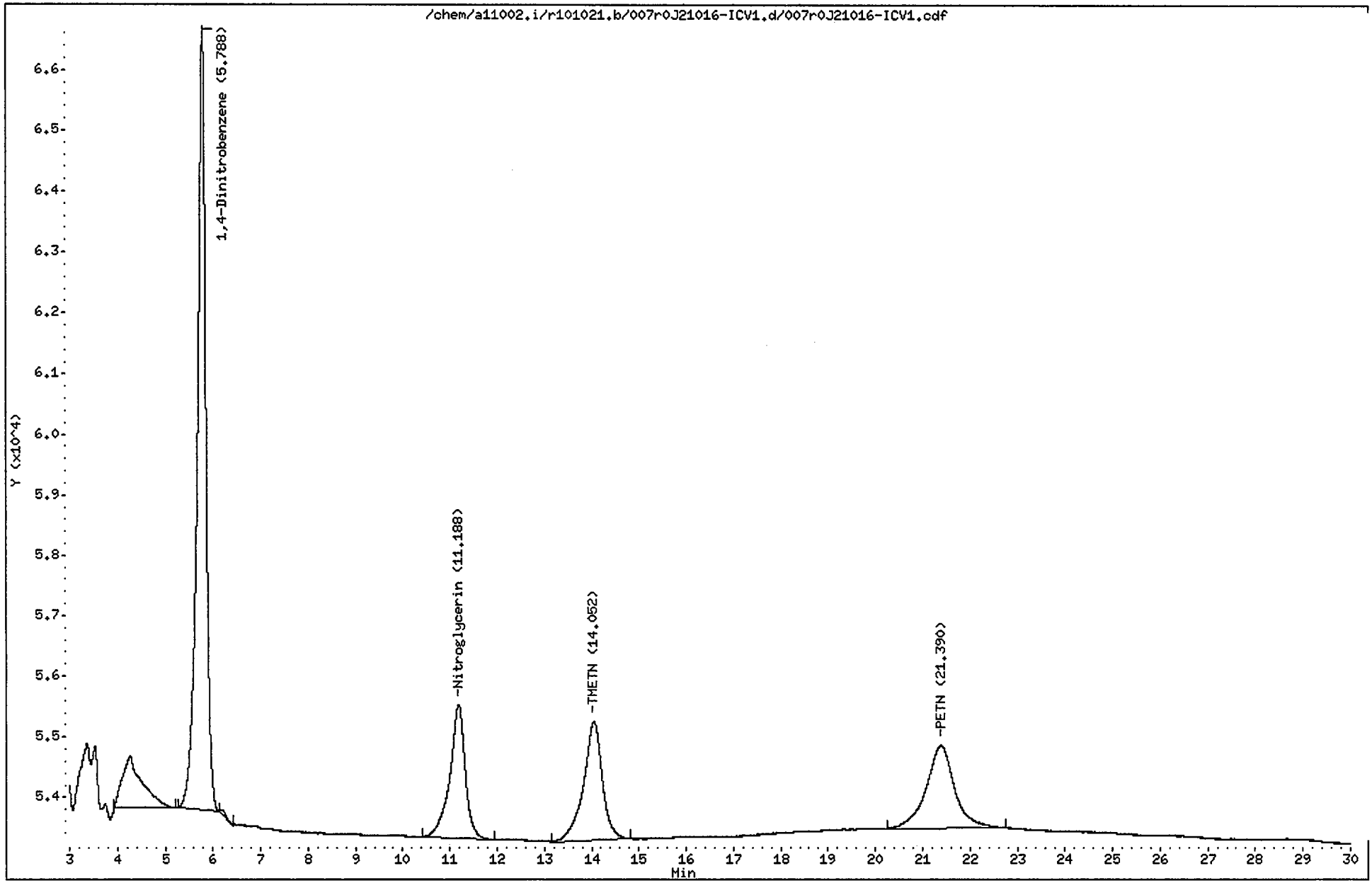
Volume Injected (uL): 10.0

Column phase: PINNACLE CYANO

Instrument: a11002.i

Operator: BWL

Column diameter: 4.60



CompuChem

Lab Smp Id : 0J21016-ICV1 Client Smp Id : CHKSTDWA
Sample Type : QCCHECK Sublist : all
Inj Date : 21-OCT-2010 17:15 Inst ID : A11002
Operator : BWL Spike Sublist : qccheck
Method : /chem/a11002.i/r101021.b/8332TPconf_10uL_v1.m
Misc. Info : CHKSTDWA

RT	AREA
4.26	25019
5.79	159977
6.19	602
11.19	50952
14.05	55489
21.39	58228

Data File: /chem/a11002.i/r101021c.b/017rSEQ-CCV1.d

Date : 22-OCT-2010 14:24

Client ID: 8332HRD

Instrument: a11002.i

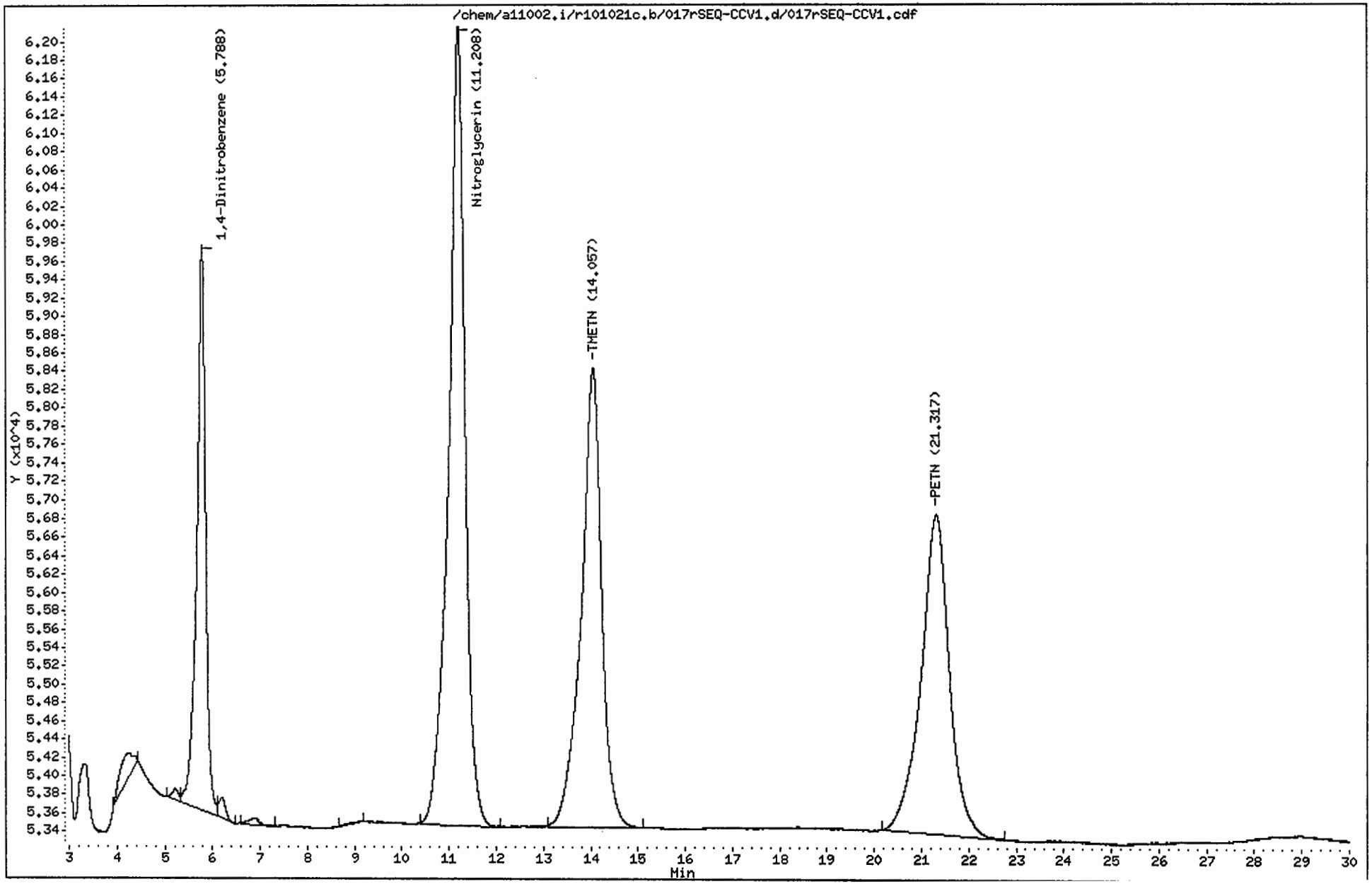
Sample Info: SEQ-CCV1

Volume Injected (uL): 10.0

Operator: BWL

Column phase: PINNACLE CYANO

Column diameter: 4.60



CompuChem

Lab Smp Id : SEQ-CCV1 Client Smp Id : 8332MRD
Sample Type : CONT CAL: Level 4 Sublist : all
Inj Date : 22-OCT-2010 14:24 Inst ID : A11002
Operator : BWL
Method : /chem/a11002.i/r101021c.b/8332TPconf_10uL_v1.m
Misc. Info : 8332MRD

RT	RT WINDOW		AREA	QUANT RF	COMPOUND	STD AMT ON-COLUMN (Ng)	CCAL RF	%D	%D LIMIT	FLAGS	
4.24			5518								
5.23			1139								
5.79	5.30	6.30	79039	1652	1,4-Dinitrobenzene	50.00000	1580.788	4.3	20.0		
6.20			2217								
6.89			1174								
9.14			285								
11.21	10.70	11.70	208584	1082	Nitroglycerin	200.0000	1042.920	3.6	20.0		
14.06	13.54	14.54	148743	1291	TMETN	125.0000	1189.947	7.8	20.0		
21.32	20.89	21.89	144733	1144	PETN	125.0000	1157.864	-1.2	20.0		

AHL
10/23/10

Data File: /chem/a11002.i/r101021d.b/025rSEQ-CCV2.d

Page 1

Date : 22-OCT-2010 18:32

Client ID: 8332MRE

Instrument: a11002.i

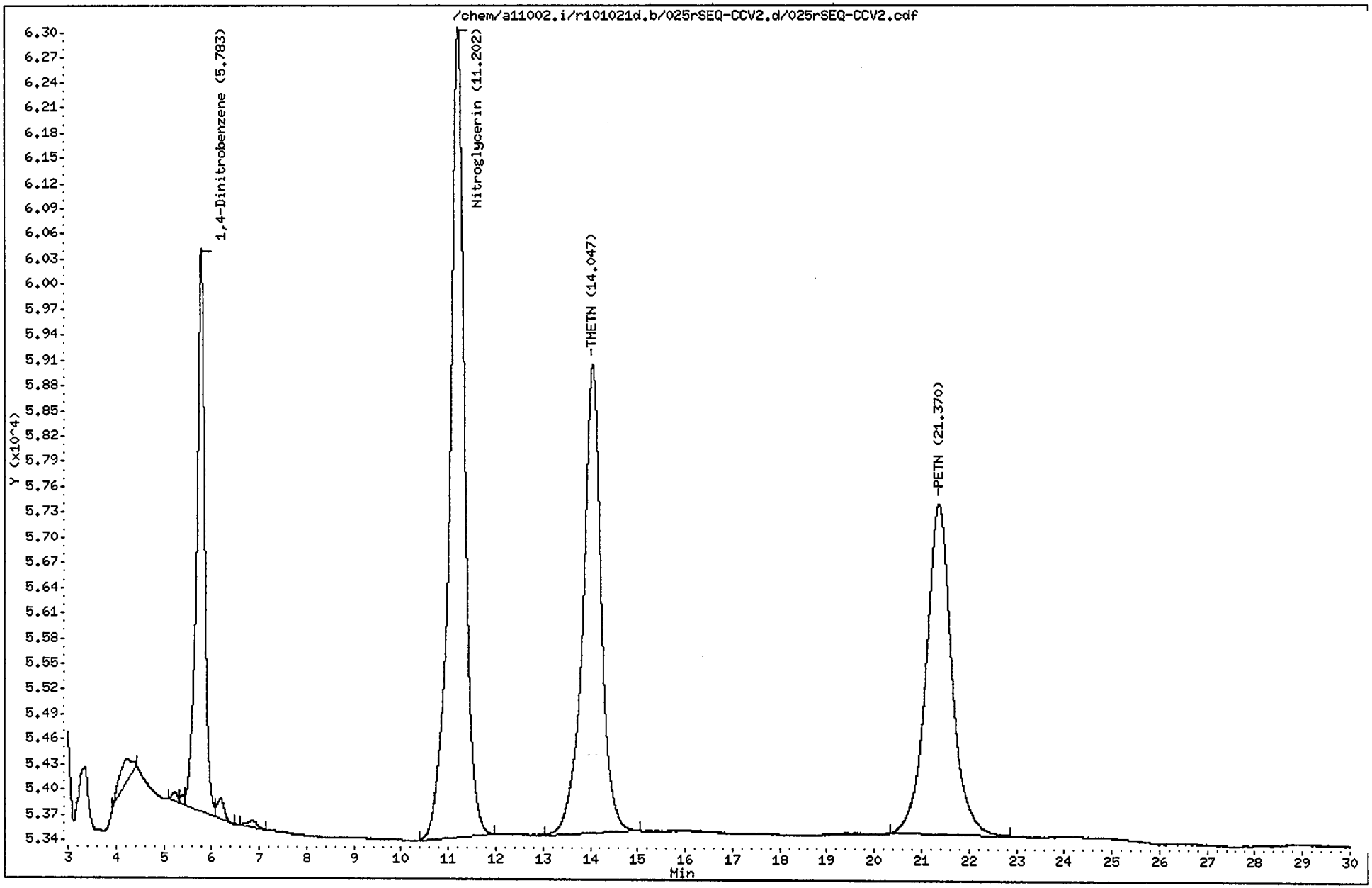
Sample Info: SEQ-CCV2

Volume Injected (uL): 10.0

Operator: BWL

Column phase: PINNACLE CYANO

Column diameter: 4.60



CompuChem

Lab Smp Id : SEQ-CCV2 Client Smp Id : 8332MRE
Sample Type : CONT CAL: Level 4 Sublist : all
Inj Date : 22-OCT-2010 18:32 Inst ID : A11002
Operator : BWL
Method : /chem/a11002.i/r101021d.b/8332TPconf_10uL_v1.m
Misc. Info : 8332MRE

RT	RT WINDOW		AREA	QUANT RF	COMPOUND	STD AMT ON-COLUMN (Ng)	CCAL RF	%D	%D LIMIT	FLAGS	
4.25			5445								
5.23			942								
5.41			643								
5.78	5.30	6.30	78351	1652	1,4-Dinitrobenzene	50.00000	1567.026	5.1	20.0		
6.20			2403								
6.88			1098								
11.20	10.70	11.70	209154	1082	Nitroglycerin	200.0000	1045.769	3.3	20.0		
14.05	13.54	14.54	149028	1291	TMETN	125.0000	1192.223	7.7	20.0		
21.37	20.89	21.89	147204	1144	PETN	125.0000	1177.634	-2.9	20.0		

AHL
10/23/10

Data File: /chem/a11002.i/r101021e.b/033rSEQ-CCV3.d

Page 1

Date : 22-OCT-2010 22:39

Client ID: 8332MRF

Instrument: a11002.i

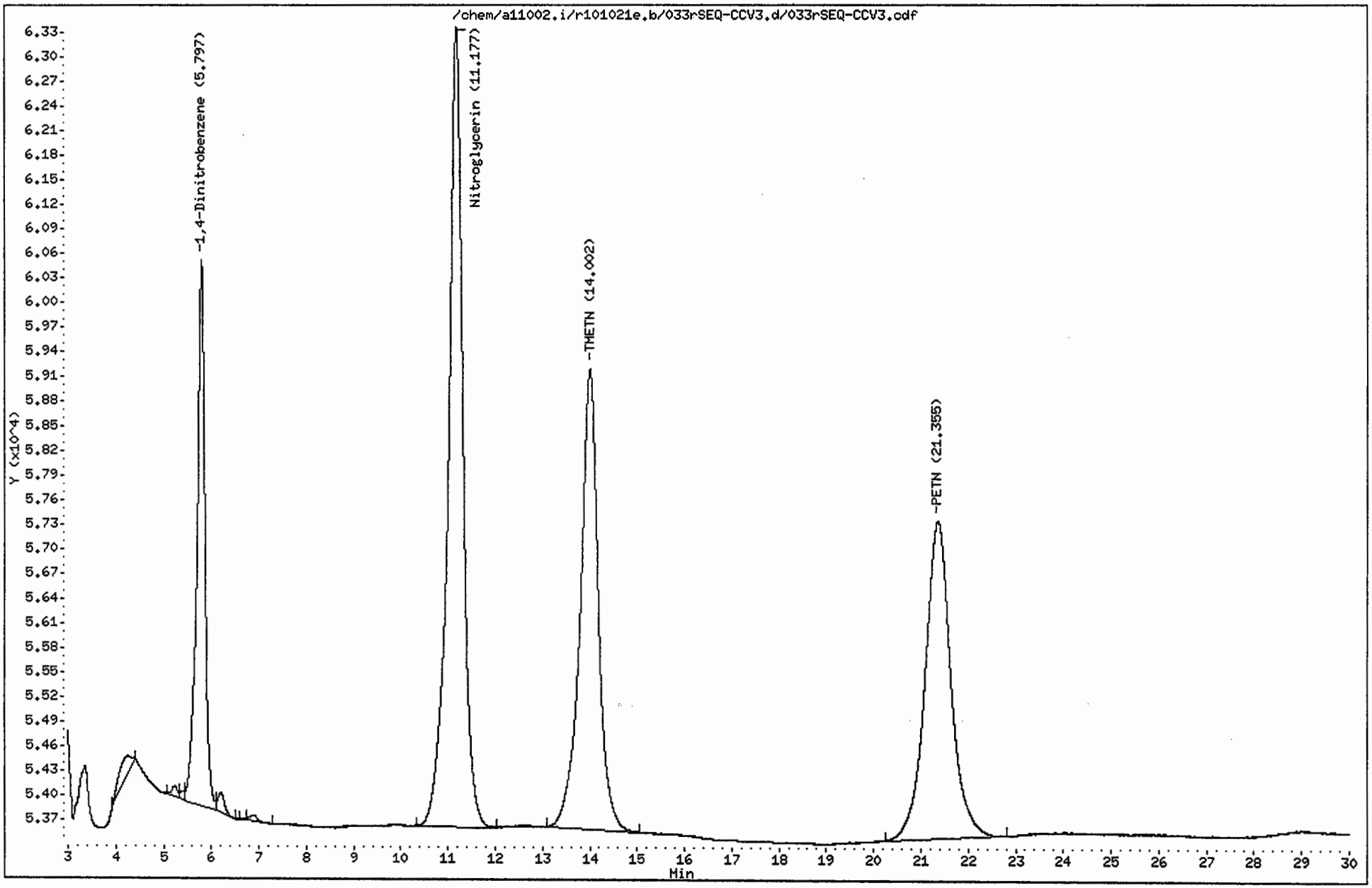
Sample Info: SEQ-CCV3

Volume Injected (uL): 10.0

Operator: BWL

Column phase: PINNACLE CYANO

Column diameter: 4.60



CompuChem

Lab Smp Id : SEQ-CCV3 Client Smp Id : 8332MRF
Sample Type : CONT CAL: Level 4 Sublist : all
Inj Date : 22-OCT-2010 22:39 Inst ID : A11002
Operator : BWL
Method : /chem/a11002.i/r101021e.b/8332TPconf_10uL_v1.m
Misc. Info : 8332MRF

RT	RT WINDOW		AREA	QUANT RF	COMPOUND	STD AMT ON-COLUMN (Ng)	CCAL RF	%D	%D LIMIT	FLAGS	
4.26			5069								
5.24			1069								
5.41			608								
5.80	5.30	6.30	78131	1652	1,4-Dinitrobenzene	50.00000	1562.623	5.4	20.0		
6.21			2564								
6.75			140								
6.89			892								
11.18	10.70	11.70	209320	1082	Nitroglycerin	200.0000	1046.599	3.3	20.0		
14.00	13.54	14.54	148690	1291	TMETN	125.0000	1189.522	7.9	20.0		
21.36	20.89	21.89	147547	1144	PETN	125.0000	1180.376	-3.2	20.0		

AHW
10/23/10

COMPUCHEM a Division of Liberty Analytical Corp
HPLC RUN LOG
LOGBOOK 5 E 11

Instrument ID A11001 DATE 10/6/10

Sequence ID: 101006 Amt. Inj. 10 µL

Column: (Primary) Confirmation Method: 8310 MIDCO (8330 8330A 8330B) 8332 Other

Maintenance:

	CCV	FILE NAME	ICV	DATE	CompuChem #	CASE/SDG#	STANDARD ID	CHEMIST	COMMENTS
1	✓	1		10/6/10	PIBLK	VJ27005		CL	
2		2	✓	/ /	OJ06010-CAL1	OH09006	8330ICA		
3		3	✓	/ /	2	05	2		
4		4	✓	/ /	3	04	3		
5		5	✓	/ /	4	03	4		
6		6	✓	/ /	5	02	5		
7		7	✓	/ /	6	OH04006	6		
8		8	✓	/ /	-ICV1	OJ04012	8330CHKZA		
9				/ /					
10				/ /					
11				/ /					
12				/ /					
13				/ /					
14				/ /					
15				/ /					
16				/ /					
17				/ /					
18				/ /					
19				/ /					
20				/ /					

The presence of the Chemist's/Analyst's employee ID number, or signature, on this run log attests that strict compliance with the method's SOP has occurred. Any SOP deviations require documentation by the responsible chemist/analyst together with the chemist's/analyst's initials and the initials of the lab supervisor and a QA department representative, signifying approval of the deviation.

CALIBRATION ID: 060704 SEQUENCE ID: OJ06010 SOLVENT LOT#: NA

REVIEWED BY: DBH DATE 10/7/10

02/25/10: jr

COMPUCHEM a Division of Liberty Analytical Corp
HPLC RUN LOG
LOGBOOK 5 E 11

Instrument ID A11001 DATE 10/22/10

Sequence ID: Z101006i Amt. Inj. 10 µL

Column: (Primary) Confirmation Method: 8310 MIDCO 8330 (8330A 8330B) 8332 Other

Maintenance:

	REJECTED	FILE NAME	REPORTED	DATE	CompuChem #	CASE/SDG#	STANDARD ID	CHEMIST	COMMENTS
1		58	✓	10/22/10	SER-CCV1	OH09003	8330MZ3	WL	
2		59	✓	/ /	↓ -CCB1	OI22W5	PIBLKZ3		
3		60	✓	/ /	0102119-BLK1	1010107			
4		61	✓	/ /	-SS1				
5		62	✓	/ /	-MS1				
6		63	✓	/ /	-MSD1				
7		64	✓	/ /	1010107-01				
8		65	✓	/ /	↓ 02				
9				/ /					
10				/ /					
11				/ /					
12				/ /					
13				/ /					
14				/ /					
15				/ /					
16				/ /					
17				/ /					
18				/ /					
19				/ /					
20				/ /					

The presence of the Chemist's/Analyst's employee ID number, or signature, on this run log attests that strict compliance with the method's SOP has occurred. Any SOP deviations require documentation by the responsible chemist/analyst together with the chemist's/analyst's initials and the initials of the lab supervisor and a QA department representative, signifying approval of the deviation.

KEH 10/25/10

CALIBRATION ID: NA SEQUENCE ID: NA SOLVENT LOT#: NA

REVIEWED BY: KEH DATE 10/25/10

02/25/10: jr

COMPUCHEM a Division of Liberty Analytical Corp
HPLC RUN LOG
LOGBOOK 5 E 11

Instrument ID A11001 DATE 10/22/10
Sequence ID: Z101006j Amt. Inj. 10 µL

Column: (Primary) Confirmation Method: 8310 MIDCO (8330 8330A 8330B) 8332 Other_____
Maintenance: _____

	REJECTED	FILE NAME	REJECTED	DATE	CompuChem #	CASE/SDG#	STANDARD ID	CHEMIST	COMMENTS
1		66	–	10/22/10	SEQ-CCV2	OH0403	B30MZK	LP	
2		67	✓	/ /	1-CCV2	OIL005	PB4CZK		
3		68	✓	/ /	101007-03	101007			
4		69	✓	/ /	04				
5		70	✓	/ /	05				
6		71	✓	/ /	06				
7		72	✓	/ /	07				
8		73	✓	/ /	08				
9				/ /					
10				/ /					
11				/ /					
12				/ /					
13				/ /					
14				/ /					
15				/ /					
16				/ /					
17				/ /					
18				/ /					
19				/ /					
20				/ /					

The presence of the Chemist's/Analyst's employee ID number, or signature, on this run log attests that strict compliance with the method's SOP has occurred. Any SOP deviations require documentation by the responsible chemist/analyst together with the chemist's/analyst's initials and the initials of the lab supervisor and a QA department representative, signifying approval of the deviation.

PKH 10/25/10

CALIBRATION ID: NA SEQUENCE ID: NA SOLVENT LOT#: NA

REVIEWED BY: PKH DATE 10/25/10

02/25/10: jr

COMPUCHEM a Division of Liberty Analytical Corp
HPLC RUN LOG
LOGBOOK 5 E 11

Instrument ID A11001 DATE 10/12/10

Sequence ID: Z101006K Amt. Inj. 10 µL

Column: (Primary) Confirmation Method: 8310 MIDCO (8330 8330A 8330B) 8332 Other

Maintenance:

	REJECTED	FILE NAME	REPORTED	DATE	CompuChem #	CASE/SDG#	STANDARD ID	CHEMIST	COMMENTS
1		74	—	10/22/10	SEQ-CCV3	OH05W3	8330MSL	CH	
2		75	✓	10/23/10	L-CCV3	OIL2W5	PIBULTL	↓	
3				/ /					
4				/ /					
5				/ /					
6				/ /					
7				/ /					
8				/ /					
9				/ /					
10				/ /					
11				/ /					
12				/ /					
13				/ /					
14				/ /					
15				/ /					
16				/ /					
17				/ /					
18				/ /					
19				/ /					
20				/ /					

The presence of the Chemist's/Analyst's employee ID number, or signature, on this run log attests that strict compliance with the method's SOP has occurred. Any SOP deviations require documentation by the responsible chemist/analyst together with the chemist's/analyst's initials and the initials of the lab supervisor and a QA department representative, signifying approval of the deviation.

KEH 10/25/10

CALIBRATION ID: NA SEQUENCE ID: NA SOLVENT LOT#: NA

REVIEWED BY: KEH DATE 10/25/10

02/25/10: jr

200

COMPUCHEM a Division of Liberty Analytical Corp
HPLC RUN LOG
LOGBOOK 5 F 9

Instrument ID A11002 DATE 10/21/10

Sequence ID: 101021 Amt. Inj. 10 µL

Column: Primary (Confirmation) Method: 8310 MIDCO 8330 8330A 8330B (8332) Other

Maintenance:

		FILE NAME		DATE	CompuChem #	CASE/SDG#	STANDARD ID	CHEMIST	COMMENTS
1	✓	1		10/21/10	PIBLK	012705		WL	
2		2		〃	0J21016-CAL1	0J21024	8332 CA		
3		3		〃	2	25	2		
4		4		〃	3	26	3		
5		5		〃	4	27	4		
6		6		〃	5	0J 04004	5		
7		7		〃	0J21016-1W1	0J04005	8332 LCS/LCSD		
8				/ /					
9				/ /					
10				/ /					
11				/ /					
12				/ /					
13				/ /					
14				/ /					
15				/ /					
16				/ /					
17				/ /					
18				/ /					
19				/ /					
20				/ /					

10/24/10

The presence of the Chemist's/Analyst's employee ID number, or signature, on this run log attests that strict compliance with the method's SOP has occurred. Any SOP deviations require documentation by the responsible chemist/analyst together with the chemist's/analyst's initials and the initials of the lab supervisor and a QA department representative, signifying approval of the deviation.

CALIBRATION ID: NA SEQUENCE ID: 0J21016 SOLVENT LOT#: NA

REVIEWED BY: KH DATE 10/22/10

02/25/10: jr

COMPUCHEM a Division of Liberty Analytical Corp
HPLC RUN LOG
LOGBOOK 5 F 9

Instrument ID A11002 DATE 10/22/10

Sequence ID: C101021C Amt. Inj. 10 µL

Column: Primary (graph 2) Confirmation Method: 8310 MIDCO 8330 8330A 8330B 8332 Other

Maintenance:

	BATCH CHANGED	FILE NAME	DATA REVIEWED	DATE	CompuChem #	CASE/SDG#	STANDARD ID	CHEMIST	COMMENTS
1		17	✓	10/22/10	SEQ-CCV1	032107	8332M RD	LD	
2		18	✓	/ /	↓ -CCB1	0IL7005	DILUENT		
3		19	✓	/ /	0102119-BLK	101007			
4		20	✓	/ /	-LCS2				
5		21	✓	/ /	-MS2				
6		22	✓	/ /	-MSD2				
7		23	✓	/ /	101021-01				
8		24	✓	/ /	↓ 02				
9				/ /					
10				/ /					
11				/ /					
12				/ /					
13				/ /					
14				/ /					
15				/ /					
16				/ /					
17				/ /					
18				/ /					
19				/ /					
20				/ /					

The presence of the Chemist's/Analyst's employee ID number, or signature, on this run log attests that strict compliance with the method's SOP has occurred. Any SOP deviations require documentation by the responsible chemist/analyst together with the chemist's/analyst's initials and the initials of the lab supervisor and a QA department representative, signifying approval of the deviation.

LD 10/25/10

CALIBRATION ID: NA SEQUENCE ID: NA SOLVENT LOT#: NA

REVIEWED BY: KCH DATE 10/25/10

02/25/10: jr

COMPUCHEM a Division of Liberty Analytical Corp
HPLC RUN LOG
LOGBOOK 5 F 9

Instrument ID A11002 DATE 10/22/10

Sequence ID: s101021d Amt. Inj. 10 µL

Column: Primary (Confirmation) Method: 8310 MIDCO 8330 8330A 8330B (8332) Other

Maintenance:

	RUN #	FILE NAME	INJ #	DATE	CompuChem #	CASE/SDG#	STANDARD ID	CHEMIST	COMMENTS
1		25	1	10/22/10	SEL-CCV2	0J2107	8332MIX	WL	
2		26	/	/ /	SCCV2	0J27W5	BLANK		
3		27	/	/ /	101010-03	101010			
4		28	/	/ /	04				
5		29	/	/ /	05				
6		30	/	/ /	06				
7		31	/	/ /	07				
8		32	/	/ /	08				
9				/ /					
10				/ /					
11				/ /					
12				/ /					
13				/ /					
14				/ /					
15				/ /					
16				/ /					
17				/ /					
18				/ /					
19				/ /					
20				/ /					

The presence of the Chemist's/Analyst's employee ID number, or signature, on this run log attests that strict compliance with the method's SOP has occurred. Any SOP deviations require documentation by the responsible chemist/analyst together with the chemist's/analyst's initials and the initials of the lab supervisor and a QA department representative, signifying approval of the deviation.

KEH 10/25/10

CALIBRATION ID: NA SEQUENCE ID: NA SOLVENT LOT#: M

REVIEWED BY: KEH DATE 10/25/10

02/25/10: jr

COMPUCHEM a Division of Liberty Analytical Corp
HPLC RUN LOG
LOGBOOK 5 F 9

Instrument ID A11002 DATE 10/22/10

Sequence ID: r101021e Amt. Inj. 10 µL

Column: Primary (Confirmation) Method: 8310 MIDCO 8330 8330A 8330B (8332) Other

Maintenance:

	REJECTED	FILE NAME	REJECTED	DATE	CompuChem #	CASE/SDG#	STANDARD ID:	CHEMIST	COMMENTS
1		33		10/22/10	5pt-ccv5	0221027	8332MRF	CL	
2		34		1	↓ ccb3	0221025	BLANK F	1	
~~3~~				/ /					
4				/ /					
5				/ /					
6				/ /					
7				/ /					
8				/ /					
9				/ /					
10				/ /					
11				/ /					
12				/ /					
13				/ /					
14				/ /					
15				/ /					
16				/ /					
17				/ /					
18				/ /					
19				/ /					
~~20~~				/ /					

The presence of the Chemist's/Analyst's employee ID number, or signature, on this run log attests that strict compliance with the method's SOP has occurred. Any SOP deviations require documentation by the responsible chemist/analyst together with the chemist's/analyst's initials and the initials of the lab supervisor and a QA department representative, signifying approval of the deviation.

PCH 10/25/10

CALIBRATION ID: NA SEQUENCE ID: NA SOLVENT LOT#: NA

REVIEWED BY: PCH DATE 10/25/10

02/25/10: jr

4. Raw QC Data

    a. Blank Data

    b. Laboratory Control Sample Data

    c. Matrix Spike Data

    d. Matrix Spike Duplicate Data

a. Blank Data

Arranged by type of blank

i) Method blanks shall be in chronological order, by extraction date.
ii) Instrument blanks shall be in chronological order, by GC column and instrument.
iii) Sulfur cleanup blanks (if needed) shall be in chronological order, by date of analysis.

- Tabulated Results (Form I)
- Chromatograms and date system printout(s) for each GC column and instrument used for analysis.

1D

GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PBLKEK

Lab Name: COMPUCHEM Contract: 8330B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 0102119-BLK1

Sample wt/vol: 500.0 (g/ml) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: _____

Extraction: (SepF/Cont/Sonc) SOLIDPHASE Date Extracted:10/22/10

Concentrated Extract Volume: 10000(ul) Date Analyzed: 10/22/10

Injection Volume: 10.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-35-4	1,3,5-Trinitrobenzene	2.50	U
99-65-0	1,3-Dinitrobenzene	2.50	U
606-20-2	2,6-Dinitrotoluene	5.00	U
121-14-2	2,4-Dinitrotoluene	5.00	U

Data File: /chem/a11001.i/z101006i.b/060z0102119-BLK1.d

Page 1

Date : 22-OCT-2010 15:37

Client ID: PBLKEK

Instrument: a11001.i

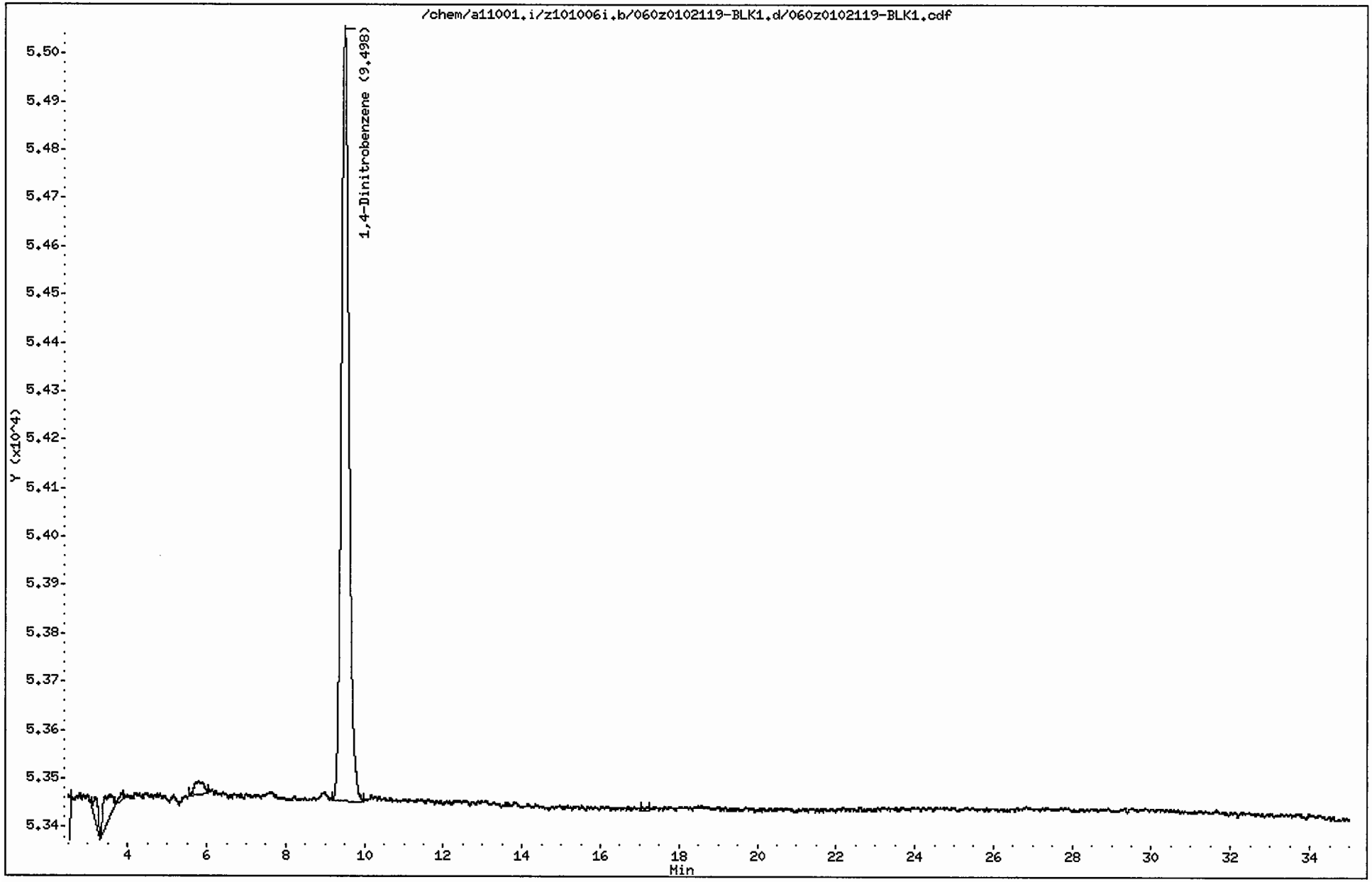
Sample Info: 0102119-BLK1

Volume Injected (uL): 10.0

Operator: System

Column phase: C18

Column diameter: 4.60



CompuChem

Lab Smp Id : 0102119-BLK1 Client Smp Id : PBLKEK
Sample Type : BLANK Sublist : DAU13
Inj Date : 22-OCT-2010 15:37 Inst ID : A11001
Operator : System
Method : /chem/a11001.i/z101006i.b/8330_10uL_v3_a_split.m
Misc. Info : PBLKEK

Formula: Conc=(Area/RF) * DF * (Uf * Vt/(Vi * Vo))

DF Dilution Factor: 1.0 Uf GPC Unit Factor: 1
Vt Final Volume: 10000(ul) Vi Injection Volume: 10(ul)
Vo Sample Volume: 500.0(ml)

RT	RT WINDOW		AREA	QUANT RF	COMPOUND	CONCENTRATIONS ON-COLUMN (Ng)	CONCENTRATIONS FINAL (ug/L)	ADJUSTED PQL (ug/L)	% REC	RECOVERY LIMITS	FLAGS
1.31			339								
1.67			84								
1.78			1456								
2.20			5367								
3.18			375								
3.44			896								
3.85			92								
5.79			445								
9.50	9.34	9.74	21487	3229	1,4-Dinitrobenzene	6.654080	13.30816		66.5	39 - 132	
17.07			71								

10/25/10

1D

GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PBLKEK

Lab Name: COMPUCHEM Contract: 8332

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 0102119-BLK1

Sample wt/vol: 500.0 (g/ml) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: _____

Extraction: (SepF/Cont/Sonc) SOLIDPHASE Date Extracted:10/22/10

Concentrated Extract Volume: 10000(ul) Date Analyzed: 10/22/10

Injection Volume: 10.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
55-63-0	Nitroglycerin	16	U

FORM I PEST

Data File: /chem/a11002.i/r101021c.b/019r0102119-BLK1.d

Date : 22-OCT-2010 15:27

Client ID: PBLKEK

Instrument: a11002.i

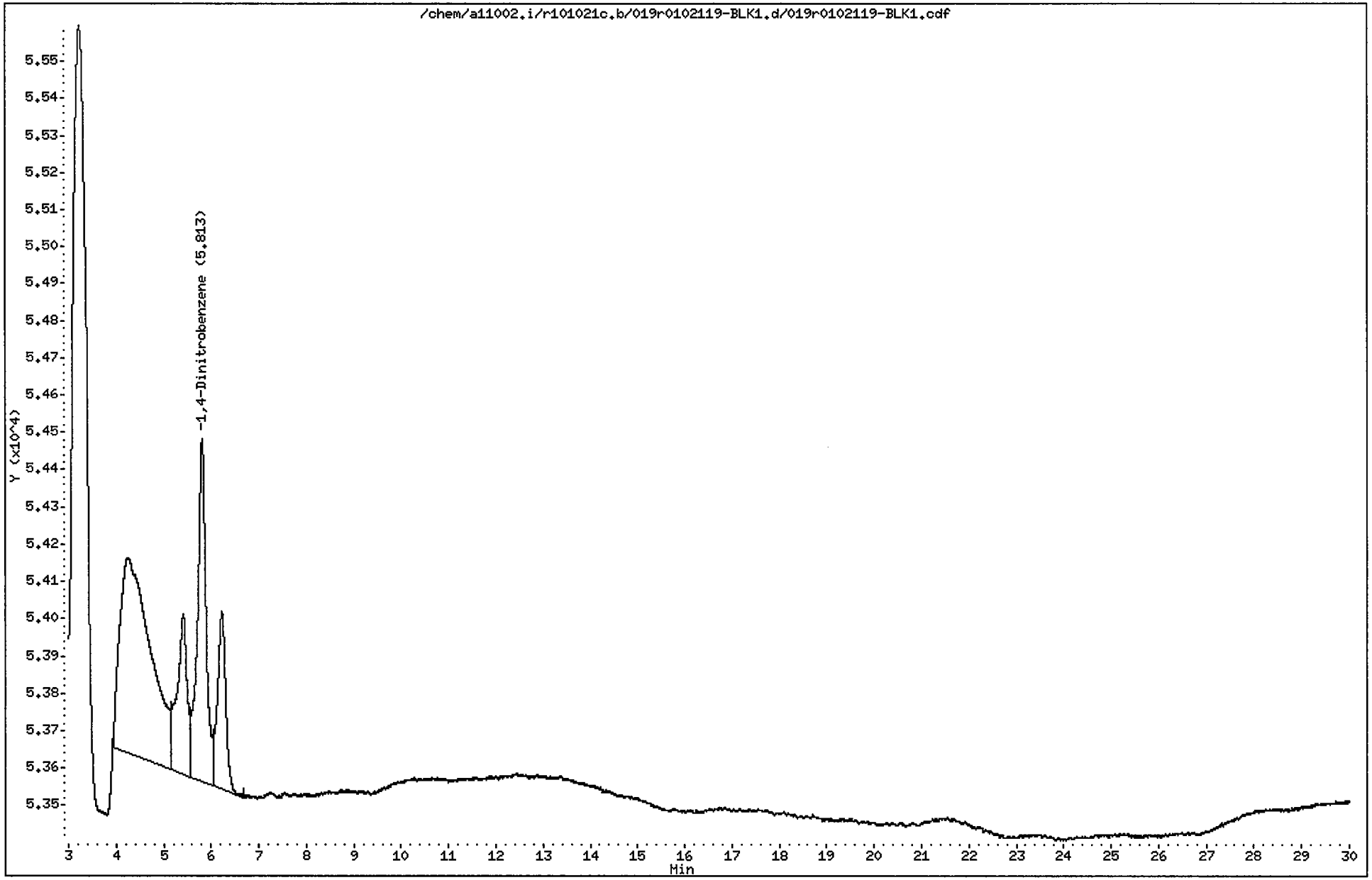
Sample Info: 0102119-BLK1

Volume Injected (uL): 10.0

Operator: BWL

Column phase: PINNACLE CYANO

Column diameter: 4.60



CompuChem

Lab Smp Id : 0102119-BLK1 Client Smp Id : PBLKEK
Sample Type : BLANK Sublist : nitro
Inj Date : 22-OCT-2010 15:27 Inst ID : A11002
Operator : BWL
Method : /chem/a11002.i/r101021c.b/8332TPconf_10uL_v1.m
Misc. Info : PBLKEK

Method Type: undefined

RT	RT WINDOW		AREA	QUANT RF	COMPOUND	CONCENTRATIONS ON-COLUMN (Ng)	CONCENTRATIONS FINAL (ug/L)	ADJUSTED PQL (ug/L)	% REC	RECOVERY LIMITS	FLAGS
4.25			23861								
5.42			6401								
5.81	5.30	6.30	11554	1652	1,4-Dinitrobenzene	6.993707	13.98741		69.9	50 - 150	
6.23			5783								

10/25/10

COMPUCHEM
EXTRACTION WORKSHEET
EXPLOSIVE IN WATER BY SOLID PHASE EXTRACTION
Method 3535 FOR METHOD 8330

ASSIGNED TO: T. WILLIAMS
EMP ID NUMBER: 1289
10-22-1
DATE/TIME EXTRACTED: 10-22-10 @ 10:50
BATCH NO.: 0102119
212

-1082

	COMPUCHEM NUMBER	CLIENT SAMPLE ID	QC SAMPLE TYPE	SAMPLE VOLUME (ml)	FINAL VOLUME (ml)	COMMENTS
1	0102119-BLK1	PBLKEK	MB	500	10.0	TMW 10-22-10
2	0102119-BS1	PEKLCS	LCS-8330	500	10.0	
3	0102119-BS2	PETLCS	LCS-8332	500	10.0	ADD 1.0mL 8332 SPIKE TO 0102119-BS2, -MS2, MSD2 LOT#0613001
4	0102119-MS1	13MW5MS	MS-8330	500	10.0	
5	0102119-MSD1	13MW5MSD	MSD-8330	500	10.0	TMW 10-22-10
6	0102119-MS2	13MW5MS	MS-8332	500	10.0	
7	0102119-MSD2	13MW5MSD	MSD-8332	500	10.0	
8	1010107-01	13MW5	SAMPLE	500	10.0	USE AS QC
9	1010107-02	13MW1	SAMPLE	500	10.0	
10	1010107-03	13MW2	SAMPLE	500	10.0	
11	1010107-04	13MW3	SAMPLE	500	10.0	
12	1010107-05	13MW4	SAMPLE	500	10.0	
13	1010107-06	13MWDUP	SAMPLE	500	10.0	
14	1010107-07	13MW6	SAMPLE	500	10.0	
15	1010107-08	13MW7	SAMPLE	500	10.0	TMW 10-22-10
16						
17						
18						
19						
20						
21						TMW 10-22-10
22						
23						
24						
25						
26						
27						

			Explosives	SURROGATE & SPIKE ADDED BY		
	SURROGATE	No.	1,4-DNB			FINAL VOLUME VERIFIED
		Amt.	1.0 ml	TMW /	10-22-10	
		Lot #	OH04005	INITIALS	DATE	SUPERVISOR REVIEWED
	SPIKE	No.	8330Full			
		Amt.	1.0 ml	Witness		
		Lot #	OJ01017	Initials	Date	

Manufacturer and lot number of reagents/solvents used CH_3CN-74046

Rev. 12/29/09:RM

1D

GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PIBLKRD

Lab Name: COMPUCHEM Contract: 8332

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: SEQ-CCB1

Sample wt/vol: 500.0 (g/ml) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: _____

Extraction: (SepF/Cont/Sonc) _____ Date Extracted:_____

Concentrated Extract Volume: 10000(ul) Date Analyzed: 10/22/10

Injection Volume: 10.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
55-63-0	Nitroglycerin	16	U

FORM I PEST

Data File: /chem/a11002.i/r101021c.b/018rSEQ-CCB1.d

Date : 22-OCT-2010 14:56

Client ID: PIBLKRD

Instrument: a11002.i

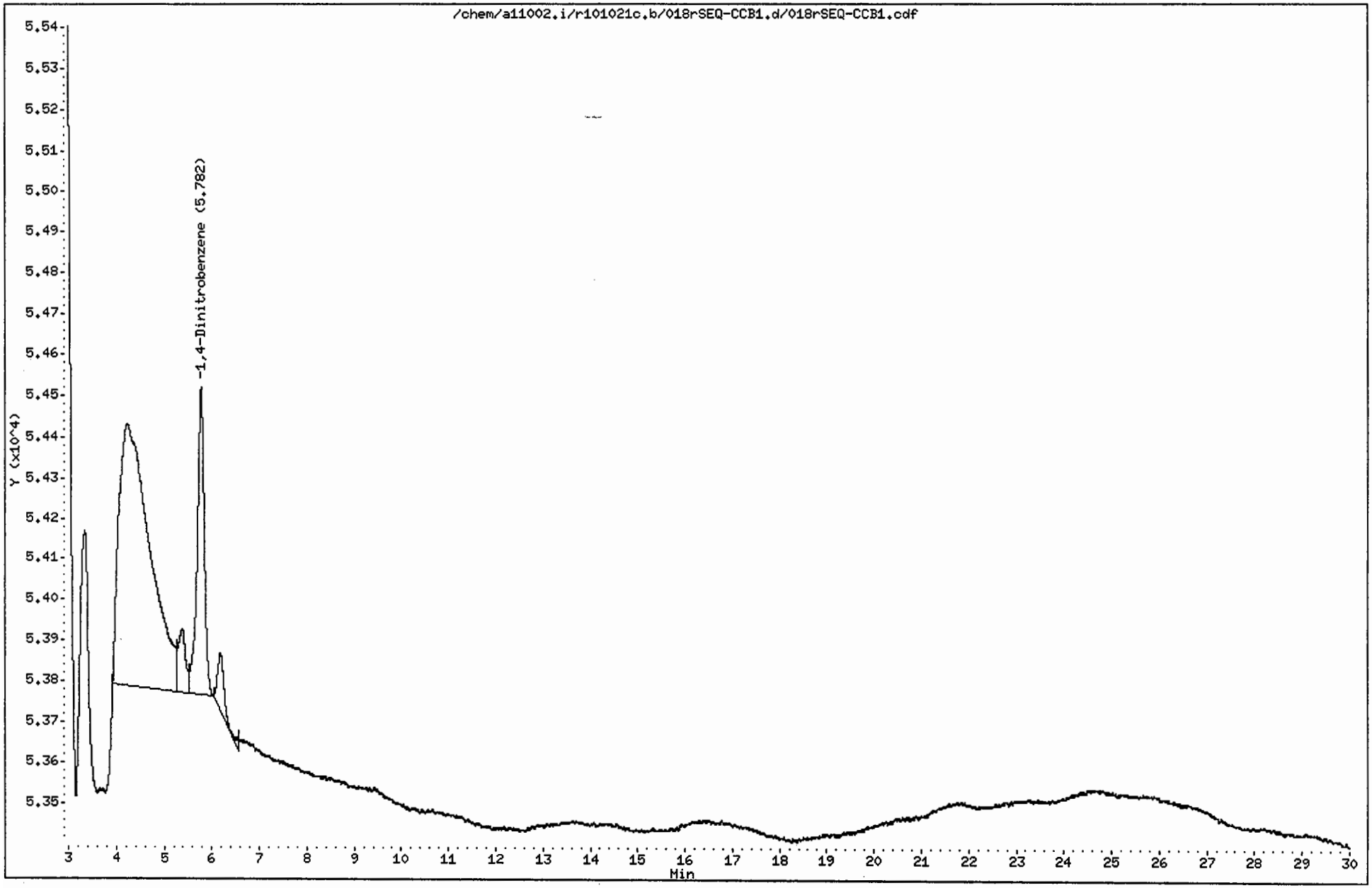
Sample Info: SEQ-CCB1

Volume Injected (uL): 10.0

Operator: BWL

Column phase: PINNACLE CYANO

Column diameter: 4.60



CompuChem

Lab Smp Id : SEQ-CCB1 Client Smp Id : PIBLKRD
Sample Type : INSTBLANK Sublist : all
Inj Date : 22-OCT-2010 14:56 Inst ID : A11002
Operator : BWL
Method : /chem/a11002.i/r101021c.b/8332TPconf_10uL_v1.m
Misc. Info : PIBLKRD

Method Type: undefined

RT	RT WINDOW		AREA	QUANT RF	COMPOUND	CONCENTRATIONS ON-COLUMN (Ng)	CONCENTRATIONS FINAL (ug/L)	ADJUSTED PQL (ug/L)	FLAGS
4.25			28981						
5.39			1677						
5.78	5.30	6.30	7765	1652	1,4-Dinitrobenzene	4.700223	9.400446		
6.19			1423						

AHW
10/23/10

1D

GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PIBLKRE

Lab Name: COMPUCHEM Contract: 8332

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: SEQ-CCB2

Sample wt/vol: 500.0 (g/ml) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: _____

Extraction: (SepF/Cont/Sonc) ____ Date Extracted:_____

Concentrated Extract Volume: 10000(ul) Date Analyzed: 10/22/10

Injection Volume: 10.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
55-63-0	Nitroglycerin	16	U

FORM I PEST

Data File: /chem/a11002.i/r101021d.b/026rSEQ-CCB2.d

Date : 22-OCT-2010 19:03

Client ID: PIBLKRE

Instrument: a11002.i

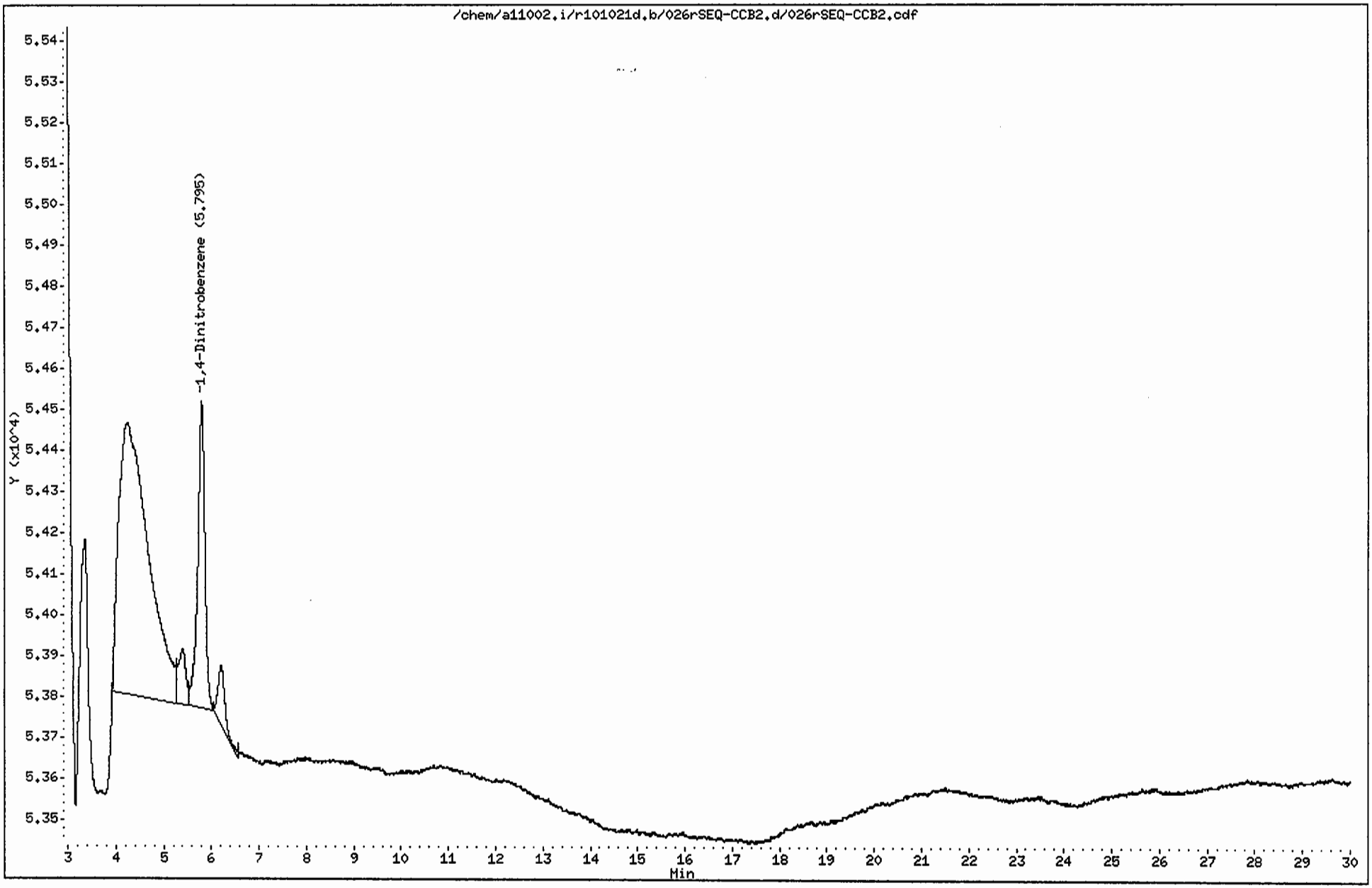
Sample Info: SEQ-CCB2

Volume Injected (uL): 10.0

Operator: BWL

Column phase: PINNACLE CYANO

Column diameter: 4.60



CompuChem

Lab Smp Id : SEQ-CCB2 Client Smp Id : PIBLKRE
Sample Type : INSTBLANK Sublist : all
Inj Date : 22-OCT-2010 19:03 Inst ID : A11002
Operator : BWL
Method : /chem/a11002.i/r101021d.b/8332TPconf_10uL_v1.m
Misc. Info : PIBLKRE

Method Type: undefined

RT	RT WINDOW		AREA	QUANT RF	COMPOUND	CONCENTRATIONS ON-COLUMN (Ng)	CONCENTRATIONS FINAL (ug/L)	ADJUSTED PQL (ug/L)	FLAGS
4.26			28647						
5.41			1472						
5.80	5.30	6.30	7706	1652	1,4-Dinitrobenzene	4.664721	9.329442		
6.21			1454						

AHW
10/23/10

1D

GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PIBLKRF

Lab Name: COMPUCHEM Contract: 8332

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: SEQ-CCB3

Sample wt/vol: 500.0 (g/ml) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: _____

Extraction: (SepF/Cont/Sonc) _____ Date Extracted:_____

Concentrated Extract Volume: 10000(ul) Date Analyzed: 10/22/10

Injection Volume: 10.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
55-63-0	Nitroglycerin	16	U

FORM I PEST

Data File: /chem/a11002.i/r101021e.b/034rSEQ-CCB3.d

Date : 22-OCT-2010 23:10

Client ID: PIBLKRF

Instrument: a11002.i

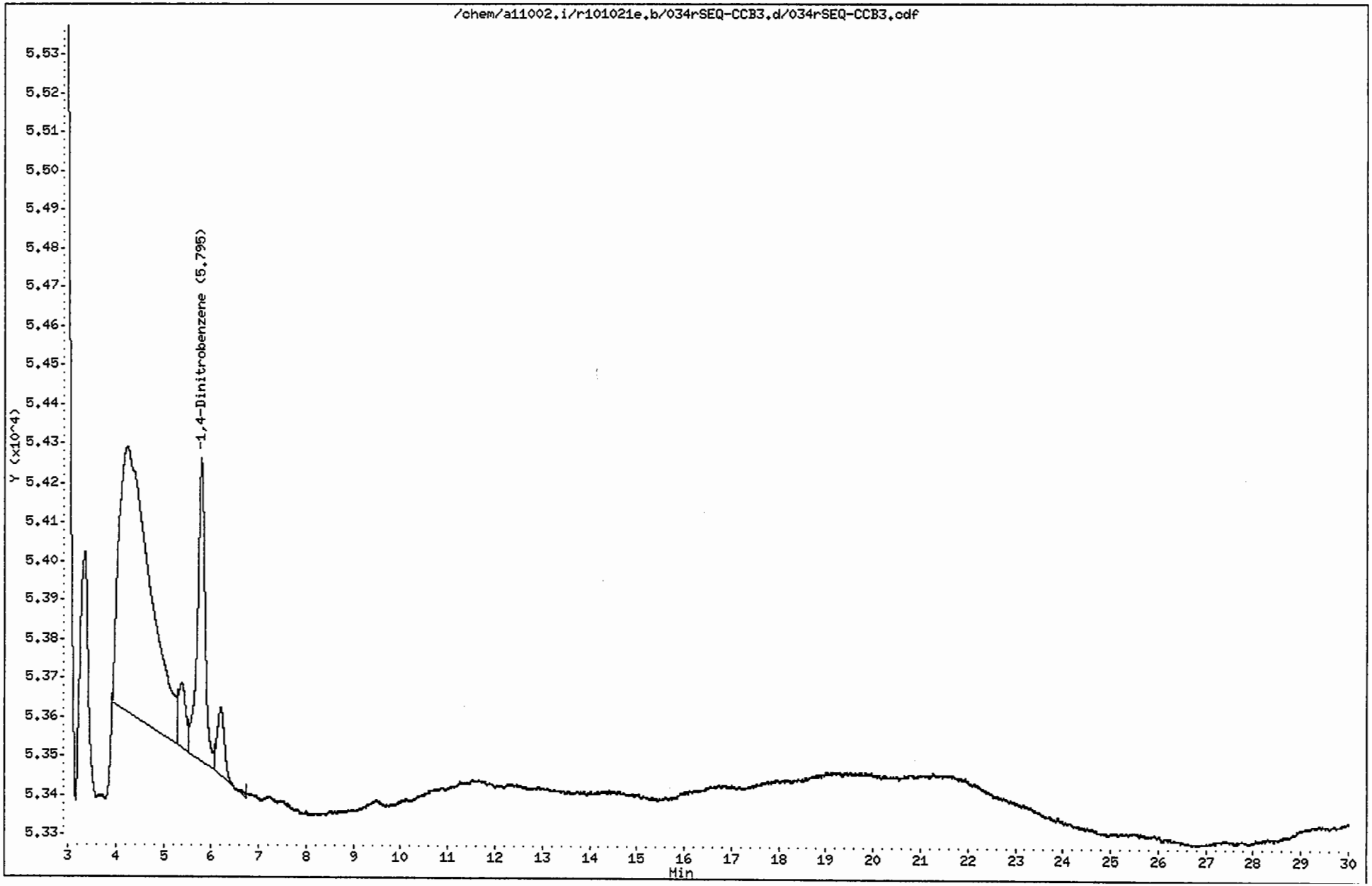
Sample Info: SEQ-CCB3

Volume Injected (uL): 10.0

Operator: BWL

Column phase: PINNACLE CYANO

Column diameter: 4.60



CompuChem

Lab Smp Id : SEQ-CCB3 Client Smp Id : PIBLKRF
Sample Type : INSTBLANK Sublist : all
Inj Date : 22-OCT-2010 23:10 Inst ID : A11002
Operator : BWL
Method : /chem/a11002.i/r101021e.b/8332TPconf_10uL_v1.m
Misc. Info : PIBLKRF

Method Type: undefined

RT	RT WINDOW		AREA	QUANT RF	COMPOUND	CONCENTRATIONS ON-COLUMN (Ng)	CONCENTRATIONS FINAL (ug/L)	ADJUSTED PQL (ug/L)	FLAGS
4.23			30863						
5.40			1872						
5.80	5.30	6.30	8589	1652	1,4-Dinitrobenzene	5.199125	10.39825		
6.21			1982						

RHW
10/23/10

1D

EPA SAMPLE NO.

GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

PIBLKZJ

Lab Name: COMPUCHEM Contract: 8330B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: SEQ-CCB1

Sample wt/vol: 500.0 (g/ml) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: _____

Extraction: (SepF/Cont/Sonc) _____ Date Extracted:_____

Concentrated Extract Volume: 10000(ul) Date Analyzed: 10/22/10

Injection Volume: 10.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-35-4	1,3,5-Trinitrobenzene	2.50	U
99-65-0	1,3-Dinitrobenzene	2.50	U
606-20-2	2,6-Dinitrotoluene	5.00	U
121-14-2	2,4-Dinitrotoluene	5.00	U

Data File: /chem/a11001.i/z101006i.b/059zSEQ-CCB1.d

Date : 22-OCT-2010 15:01

Client ID: PIBLKZJ

Instrument: a11001.i

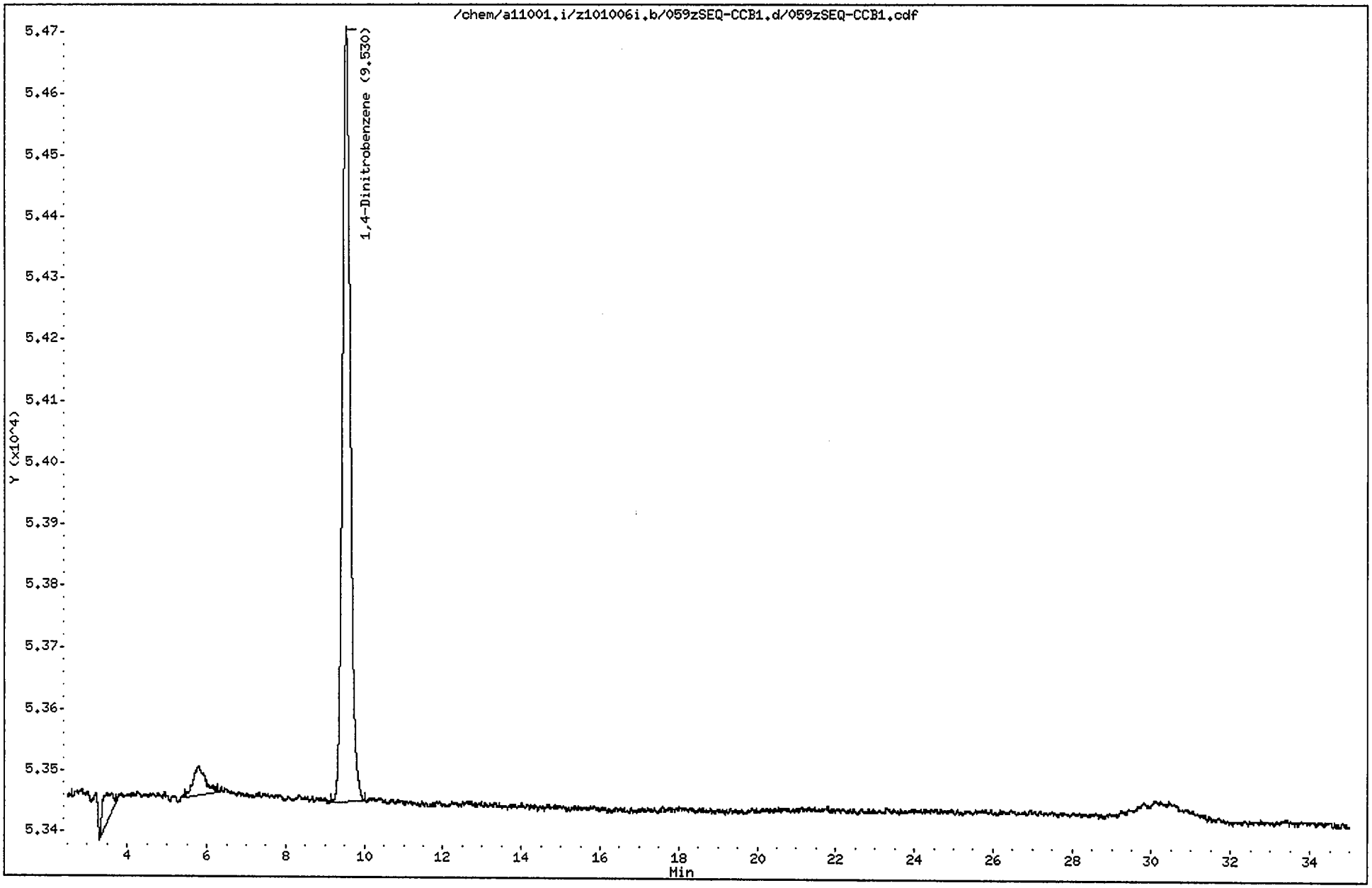
Sample Info: SEQ-CCB1

Volume Injected (uL): 10.0

Operator: BWL

Column phase: C18

Column diameter: 4.60



CompuChem

Lab Smp Id : SEQ-CCB1 Client Smp Id : PIBLKZJ
Sample Type : INSTBLANK Sublist : all
Inj Date : 22-OCT-2010 15:01 Inst ID : A11001
Operator : BWL
Method : /chem/a11001.i/z101006i.b/8330_10uL_v3_a_split.m
Misc. Info : PIBLKZJ

Formula: Conc=(Area/RF) * DF * (Uf * Vt/(Vi * Vo))

DF Dilution Factor: 1.0 Uf GPC Unit Factor: 1
Vt Final Volume: 10000(ul) Vi Injection Volume: 10(ul)
Vo Sample Volume: 500.0(ml)

RT	RT WINDOW		AREA	QUANT RF	COMPOUND	CONCENTRATIONS ON-COLUMN (Ng)	CONCENTRATIONS FINAL (ug/L)	ADJUSTED PQL (ug/L)	FLAGS
1.30			1645						
1.77			2633						
1.99			930						
2.20			1474						
3.42			835						
5.81			1003						
9.53	9.25	9.65	17559	3229	1,4-Dinitrobenzene	5.437690	10.87538		

AHW
10/23/10

1D

GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PIBLKZK

Lab Name: COMPUCHEM Contract: 8330B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: SEQ-CCB2

Sample wt/vol: 500.0 (g/ml) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: _____

Extraction: (SepF/Cont/Sonc) _____ Date Extracted:_____

Concentrated Extract Volume: 10000(ul) Date Analyzed: 10/22/10

Injection Volume: 10.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-35-4	1,3,5-Trinitrobenzene	2.50	U
99-65-0	1,3-Dinitrobenzene	2.50	U
606-20-2	2,6-Dinitrotoluene	5.00	U
121-14-2	2,4-Dinitrotoluene	5.00	U

Data File: /chem/a11001.i/z101006j.b/067zSEQ-CCB2.d

Page 1

Date : 22-OCT-2010 19:48

Client ID: PIBLKZK

Instrument: a11001.i

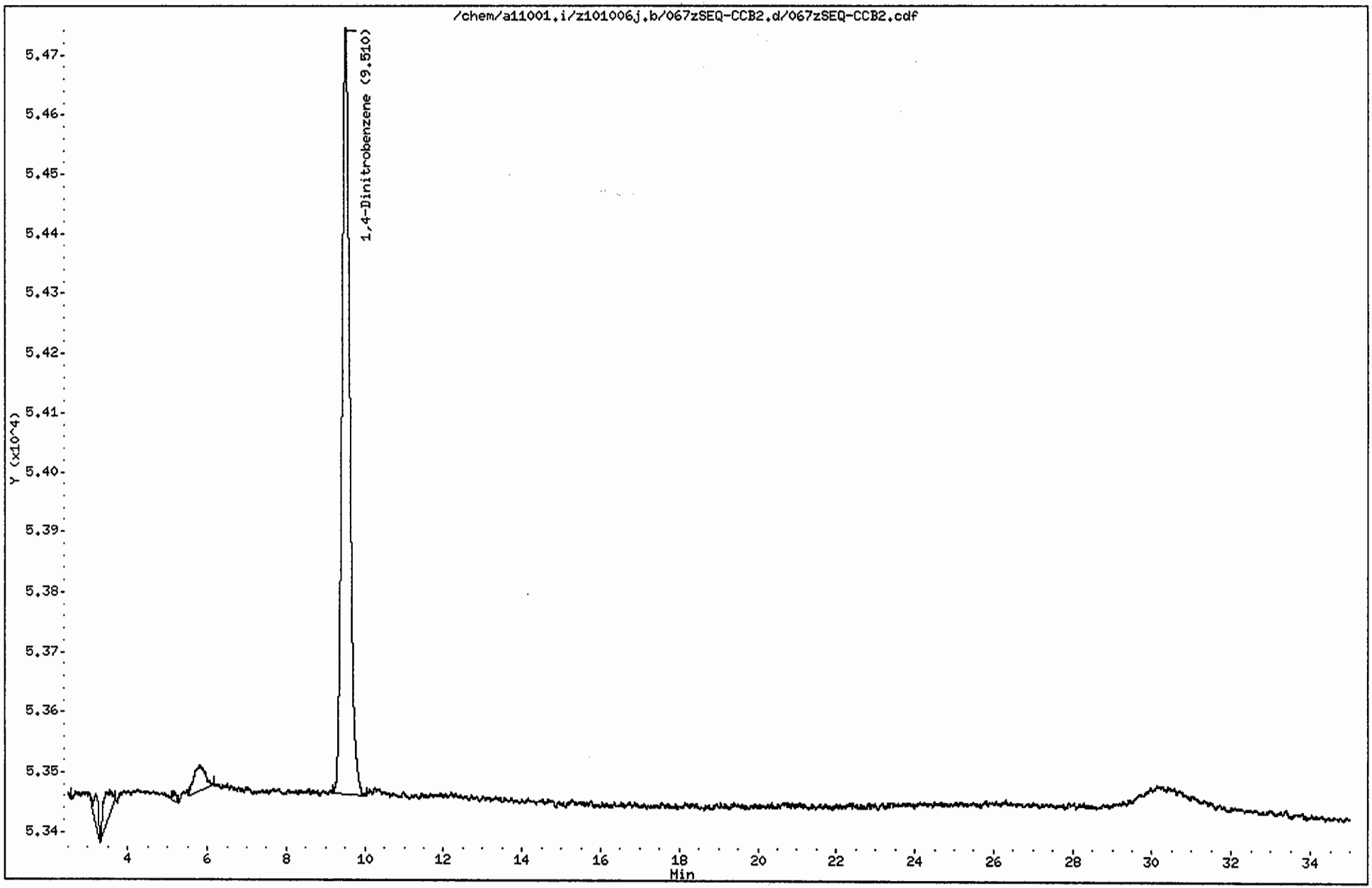
Sample Info: SEQ-CCB2

Volume Injected (uL): 10.0

Operator: BWL

Column phase: C18

Column diameter: 4.60



CompuChem

Lab Smp Id : SEQ-CCB2 Client Smp Id : PIBLKZK
Sample Type : INSTBLANK Sublist : all
Inj Date : 22-OCT-2010 19:48 Inst ID : A11001
Operator : BWL
Method : /chem/a11001.i/z101006j.b/8330_10uL_v3_a_split.m
Misc. Info : PIBLKZK

Formula: Conc=(Area/RF) * DF * (Uf * Vt/(Vi * Vo))

DF Dilution Factor: 1.0 Uf GPC Unit Factor: 1
Vt Final Volume: 10000(ul) Vi Injection Volume: 10(ul)
Vo Sample Volume: 500.0(ml)

RT	RT WINDOW		AREA	QUANT RF	COMPOUND	CONCENTRATIONS ON-COLUMN (Ng)	CONCENTRATIONS FINAL (ug/L)	ADJUSTED PQL (ug/L)	FLAGS
1.78			1700						
1.99			922						
2.20			1484						
3.18			370						
3.49			738						
5.15			101						
5.82			845						
9.51	9.25	9.65	17600	3229	1,4-Dinitrobenzene	5.450310	10.90062		

AHW
10/23/10

1D

GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PIBLKZL

Lab Name: COMPUCHEM Contract: 8330B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: SEQ-CCB3

Sample wt/vol: 500.0 (g/ml) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: _____

Extraction: (SepF/Cont/Sonc) ____ Date Extracted:_____

Concentrated Extract Volume: 10000(ul) Date Analyzed: 10/23/10

Injection Volume: 10.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-35-4	1,3,5-Trinitrobenzene	2.50	U
99-65-0	1,3-Dinitrobenzene	2.50	U
606-20-2	2,6-Dinitrotoluene	5.00	U
121-14-2	2,4-Dinitrotoluene	5.00	U

Data File: /chem/a11001.i/z101006k.b/075zSEQ-CCB3.d

Date : 23-OCT-2010 00:35

Client ID: PIBLKZL

Instrument: a11001.i

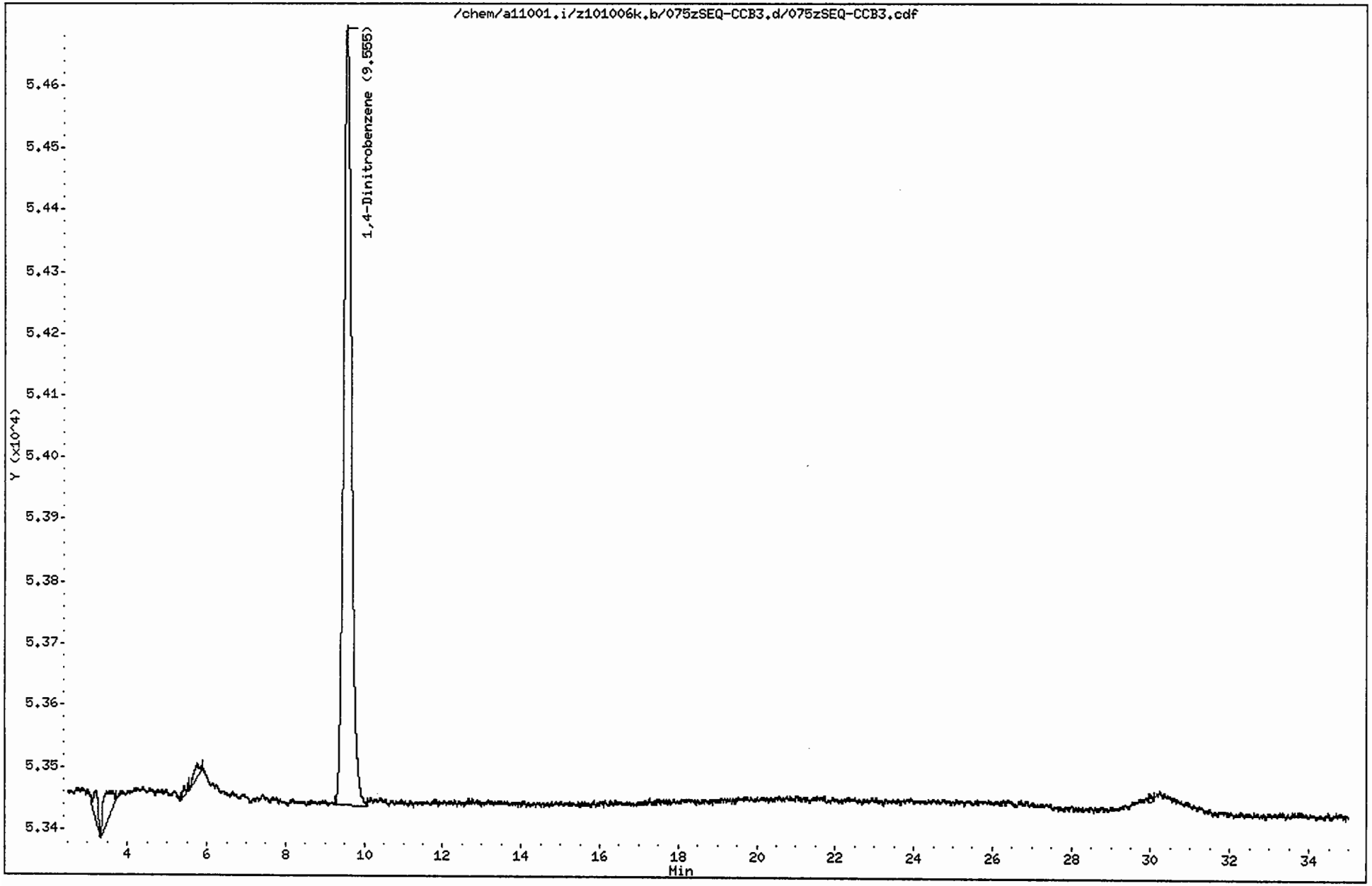
Sample Info: SEQ-CCB3

Volume Injected (uL): 10.0

Operator: BWL

Column phase: C18

Column diameter: 4.60



CompuChem

Lab Smp Id : SEQ-CCB3 Client Smp Id : PIBLKZL
Sample Type : INSTBLANK Sublist : all
Inj Date : 23-OCT-2010 00:35 Inst ID : A11001
Operator : BWL
Method : /chem/a11001.i/z101006k.b/8330_10uL_v3_a_split.m
Misc. Info : PIBLKZL

Formula: Conc=(Area/RF) * DF * (Uf * Vt/(Vi * Vo))

DF Dilution Factor: 1.0 Uf GPC Unit Factor: 1
Vt Final Volume: 10000(ul) Vi Injection Volume: 10(ul)
Vo Sample Volume: 500.0(ml)

RT	RT WINDOW		AREA	QUANT RF	COMPOUND	CONCENTRATIONS ON-COLUMN (Ng)	CONCENTRATIONS FINAL (ug/L)	ADJUSTED PQL (ug/L)	FLAGS
1.31			108						
1.78			1720						
1.99			919						
2.21			1483						
3.21			351						
3.48			794						
5.44			76						
5.76			222						
9.56	9.25	9.65	17627	3229	1,4-Dinitrobenzene	5.458594	10.91719		
29.99			50						

AHW
10/23/10

b. Laboratory Control Sample Data

Arranged in chronological order, by extraction date.

- Tabulated Results (Form I)

- Chromatograms and data system printout(s)

1D

GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PEKLCS

Lab Name: COMPUCHEM Contract: 8330B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 0102119-BS1

Sample wt/vol: 500.0 (g/ml) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received:

Extraction: (SepF/Cont/Sonc) SOLIDPHASE Date Extracted:10/22/10

Concentrated Extract Volume: 10000(ul) Date Analyzed: 10/22/10

Injection Volume: 10.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-35-4	1,3,5-Trinitrobenzene	6.73	
99-65-0	1,3-Dinitrobenzene	7.08	
606-20-2	2,6-Dinitrotoluene	11.34	
121-14-2	2,4-Dinitrotoluene	7.84	

FORM I PEST

Data File: /chem/a11001.i/z101006i.b/061z0102119-BS1.d

Page 1

Date : 22-OCT-2010 16:13

Client ID: PEKLCS

Instrument: a11001.i

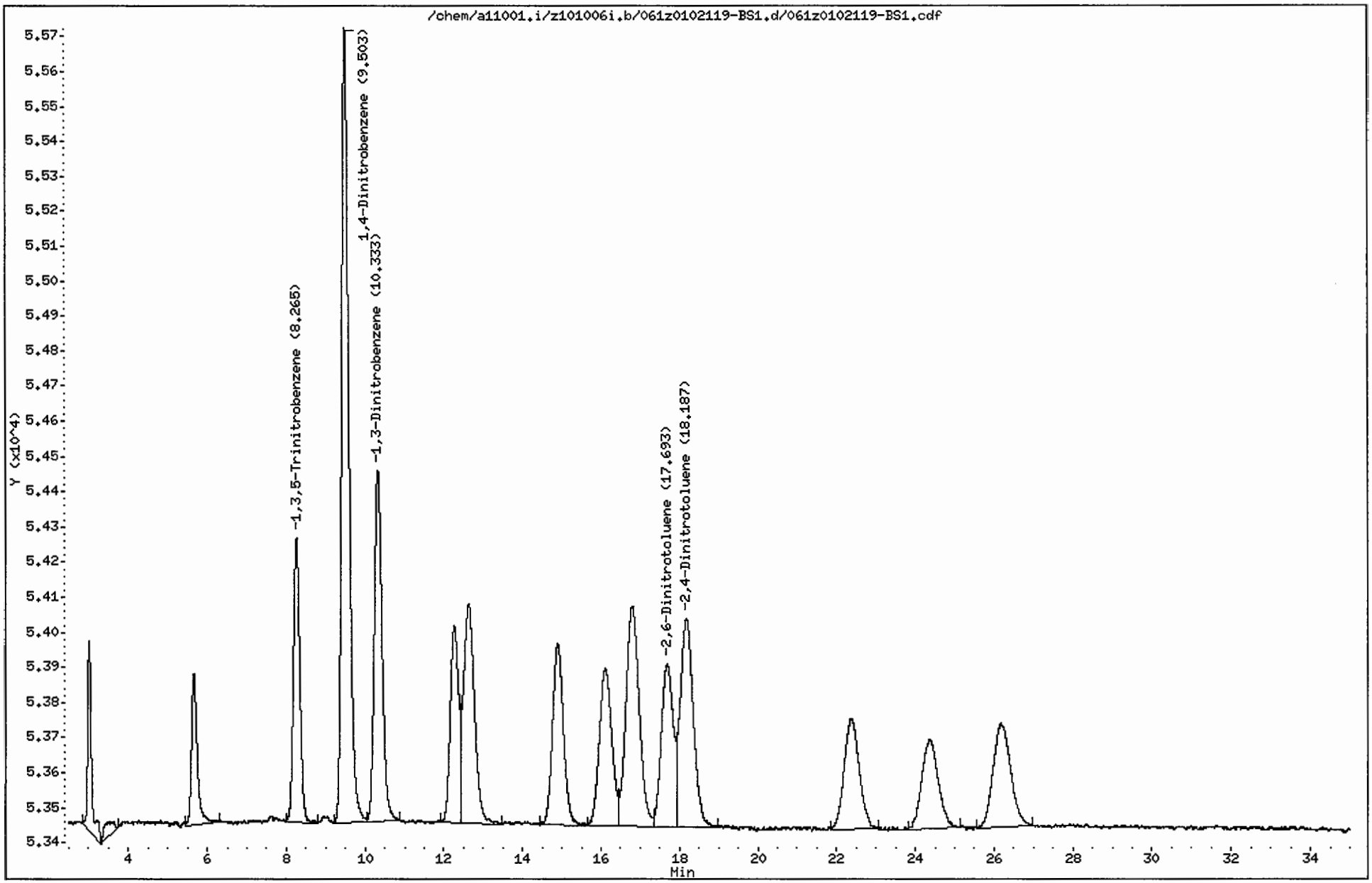
Sample Info: 0102119-BS1

Volume Injected (uL): 10.0

Operator: BWL

Column phase: C18

Column diameter: 4.60



CompuChem

Lab Smp Id : 0102119-BS1 Client Smp Id : PEKLCS
Sample Type : LCS Sublist : DAU13
Inj Date : 22-OCT-2010 16:13 Inst ID : A11001
Operator : BWL Spike Sublist : DAU13
Method : /chem/a11001.i/z101006i.b/8330_10uL_v3_a_split.m
Misc. Info : PEKLCS

Formula: Conc=(Area/RF) * DF * (Uf * Vt/(Vi * Vo))

DF Dilution Factor: 1.0 Uf GPC Unit Factor: 1
Vt Final Volume: 10000(ul) Vi Injection Volume: 10(ul)
Vo Sample Volume: 500.0(ml)

RT	RT WINDOW		AREA	QUANT RF	COMPOUND	CONCENTRATIONS ON-COLUMN (Ng)	CONCENTRATIONS FINAL (ug/L)	ADJUSTED PQL (ug/L)	% REC	RECOVERY LIMITS	FLAGS
1.29			89								
1.81			1285								
2.15			4343								
3.02			3500								
3.53			701								
5.67			4502								
8.26	8.08	8.48	9150	2719	1,3,5-Trinitrobenzene	3.365340	6.730680	2.500000	84.1	50 - 150	
9.50	9.34	9.74	28621	3229	1,4-Dinitrobenzene	8.863023	17.72605		88.6	39 - 132	
10.33	10.16	10.56	13681	3864	1,3-Dinitrobenzene	3.540745	7.081491	2.500000	88.5	50 - 150	
12.27			8529								
12.64			12085								
14.90			9955								
16.12			10051								
16.80			14828								
17.69	17.30	17.90	9858	1738	2,6-Dinitrotoluene	5.670657	11.34131	5.000000	94.5	50 - 150	
18.19	17.77	18.37	13903	3546	2,4-Dinitrotoluene	3.921253	7.842507	5.000000	98.0	50 - 150	
22.37			8381								
24.39			7464								
26.17			9264								

10/25/10

1D

GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

PETLCS

Lab Name: COMPUCHEM Contract: 8332

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 0102119-BS2

Sample wt/vol: 500.0 (g/ml) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: _____

Extraction: (SepF/Cont/Sonc) SOLIDPHASE Date Extracted:10/22/10

Concentrated Extract Volume: 10000(ul) Date Analyzed: 10/22/10

Injection Volume: 10.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
55-63-0	Nitroglycerin	18	

FORM I PEST

Data File: /chem/a11002.i/r101021c.b/020r0102119-BS2.d

Page 1

Date : 22-OCT-2010 15:58

Client ID: PETLCS

Instrument: a11002.i

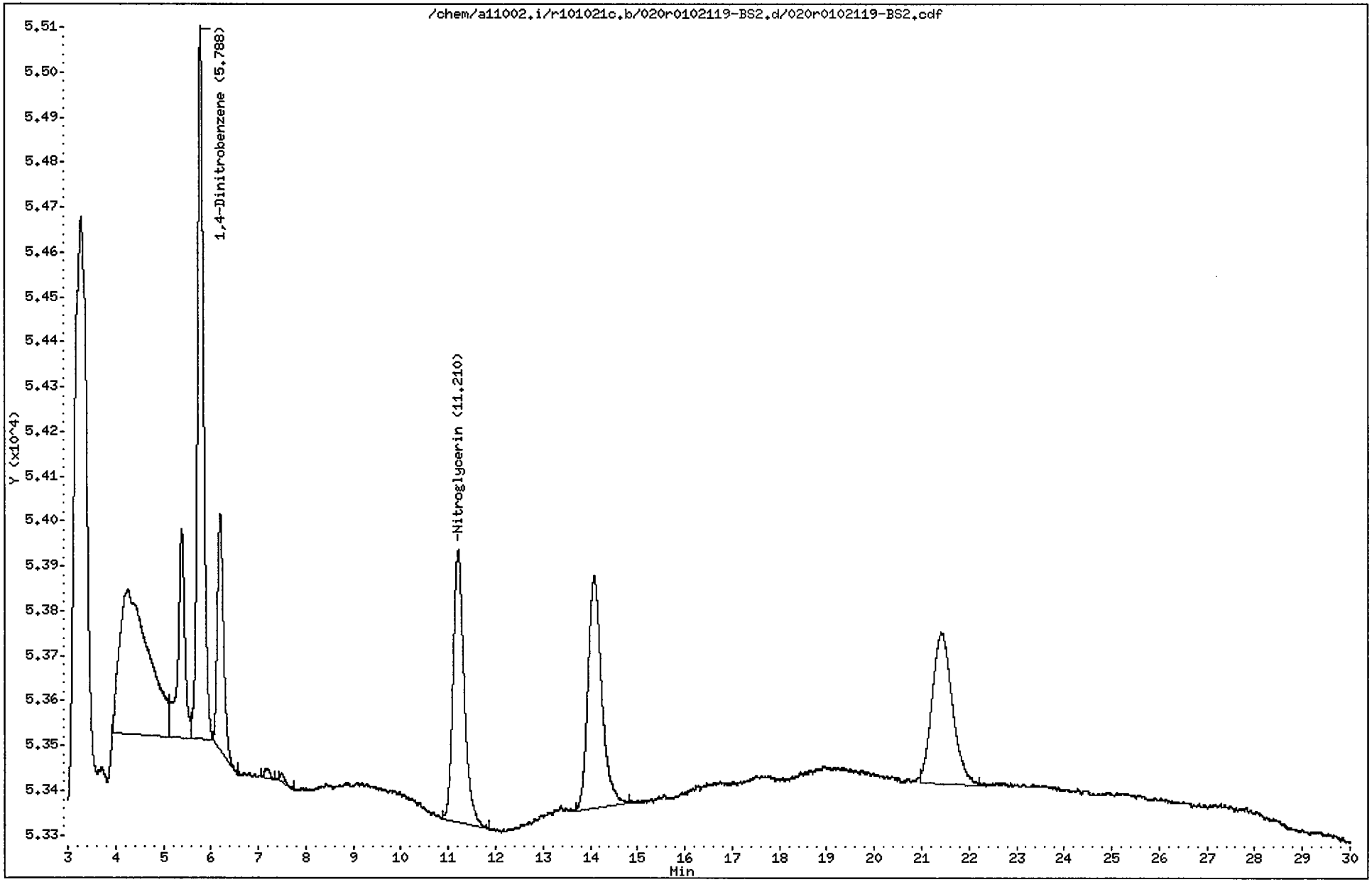
Sample Info: 0102119-BS2

Volume Injected (uL): 10.0

Operator: BWL

Column phase: PINNACLE CYANO

Column diameter: 4.60



CompuChem

Lab Smp Id : 0102119-BS2 Client Smp Id : PETLCS
Sample Type : LCS Sublist : nitro
Inj Date : 22-OCT-2010 15:58 Inst ID : A11002
Operator : BWL Spike Sublist : nitro
Method : /chem/a11002.i/r101021c.b/8332TPconf_10uL_v1.m
Misc. Info : PETLCS

Method Type: undefined

RT	RT WINDOW	AREA	QUANT RF	COMPOUND	CONCENTRATIONS ON-COLUMN (Ng)	CONCENTRATIONS FINAL (ug/L)	ADJUSTED PQL (ug/L)	% REC	RECOVERY LIMITS	FLAGS
4.27		13957								
5.39		4670								
5.79	5.30 6.30	13844	1652	1,4-Dinitrobenzene	8.380094	16.76019		83.8	50 - 150	
6.20		4742								
7.20		168								
7.50		148								
11.21	10.70 11.70	9847	1082	Nitroglycerin	9.102532	18.20506	16.00000	91.0	50 - 150	
14.09		10486								
21.41		9986								

KEH 10/25/10

c. Matrix Spike Data

- Tabulated Results (Form I)

- Chromatograms and data system printout(s)

1D

GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

13MW5MS

Lab Name: COMPUCHEM Contract: 8330B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 0102119-MS1

Sample wt/vol: 500.0 (g/ml) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 10/20/10

Extraction: (SepF/Cont/Sonc) SOLIDPHASE Date Extracted:10/22/10

Concentrated Extract Volume: 10000(ul) Date Analyzed: 10/22/10

Injection Volume: 10.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-35-4	1,3,5-Trinitrobenzene	6.81	
99-65-0	1,3-Dinitrobenzene	7.42	
606-20-2	2,6-Dinitrotoluene	11.64	
121-14-2	2,4-Dinitrotoluene	7.89	

FORM I PEST

Data File: /chem/a11001.i/z101006i.b/062z0102119-MS1.d

Date : 22-OCT-2010 16:49

Client ID: 13MW5MS

Instrument: a11001.i

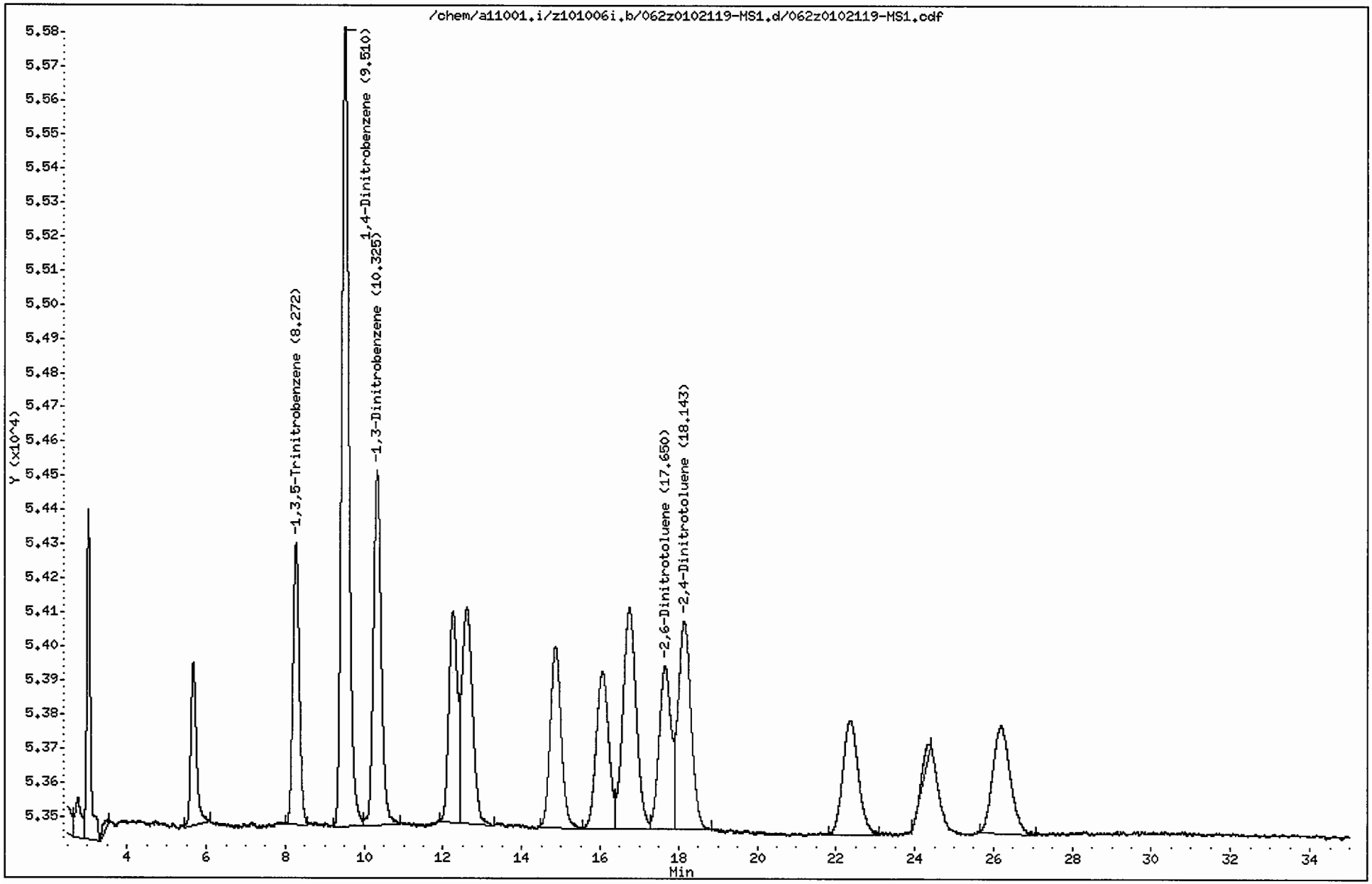
Sample Info: 0102119-MS1

Volume Injected (uL): 10.0

Operator: BWL

Column phase: C18

Column diameter: 4.60



CompuChem

Lab Smp Id : 0102119-MS1 Client Smp Id : 13MW5MS
Sample Type : MS Sublist : DAU13
Inj Date : 22-OCT-2010 16:49 Inst ID : A11001
Operator : BWL Spike Sublist : DAU13
Method : /chem/a11001.i/z101006i.b/8330_10uL_v3_a_split.m
Misc. Info : 13MW5MS

Formula: Conc=(Area/RF) * DF * (Uf * Vt/(Vi * Vo))

DF Dilution Factor: 1.0 Uf GPC Unit Factor: 1
Vt Final Volume: 10000(ul) Vi Injection Volume: 10(ul)
Vo Sample Volume: 500.0(ml)

RT	RT WINDOW		AREA	QUANT RF	COMPOUND	CONCENTRATIONS ON-COLUMN (Ng)	CONCENTRATIONS FINAL (ug/L)	ADJUSTED PQL (ug/L)	% REC	RECOVERY LIMITS	FLAGS
1.15			3186								
1.36			4719								
1.50			254								
1.67			2406								
2.21			6255								
2.76			1301								
3.02			6263								
3.49			272								
5.67			4747								
8.27	8.08	8.48	9264	2719	1,3,5-Trinitrobenzene	3.406901	6.813802	2.500000	85.2	50 - 150	
9.51	9.34	9.74	29624	3229	1,4-Dinitrobenzene	9.173631	18.34726		91.7	39 - 132	
10.32	10.16	10.56	14344	3864	1,3-Dinitrobenzene	3.712347	7.424694	2.500000	92.8	50 - 150	
12.26			9355								
12.61			12147								
14.86			10394								
16.05			10352								
16.75			15321								
17.65	17.30	17.90	10123	1738	2,6-Dinitrotoluene	5.823109	11.64622	5.000000	97.1	50 - 150	
18.14	17.77	18.37	13989	3546	2,4-Dinitrotoluene	3.945509	7.891018	5.000000	98.6	50 - 150	
22.37			9316								
24.34			763								
26.20			9694								

KEH 10/25/10

1D

EPA SAMPLE NO.

GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

13MW5MS

Lab Name: COMPUCHEM Contract: 8332

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 0102119-MS2

Sample wt/vol: 500.0 (g/ml) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 10/20/10

Extraction: (SepF/Cont/Sonc) SOLIDPHASE Date Extracted:10/22/10

Concentrated Extract Volume: 10000(ul) Date Analyzed: 10/22/10

Injection Volume: 10.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
55-63-0	Nitroglycerin	18	

FORM I PEST

Data File: /chem/a11002.i/r101021c.b/021r0102119-MS2.d

Page 1

Date : 22-OCT-2010 16:29

Client ID: 13MW5MS

Instrument: a11002.i

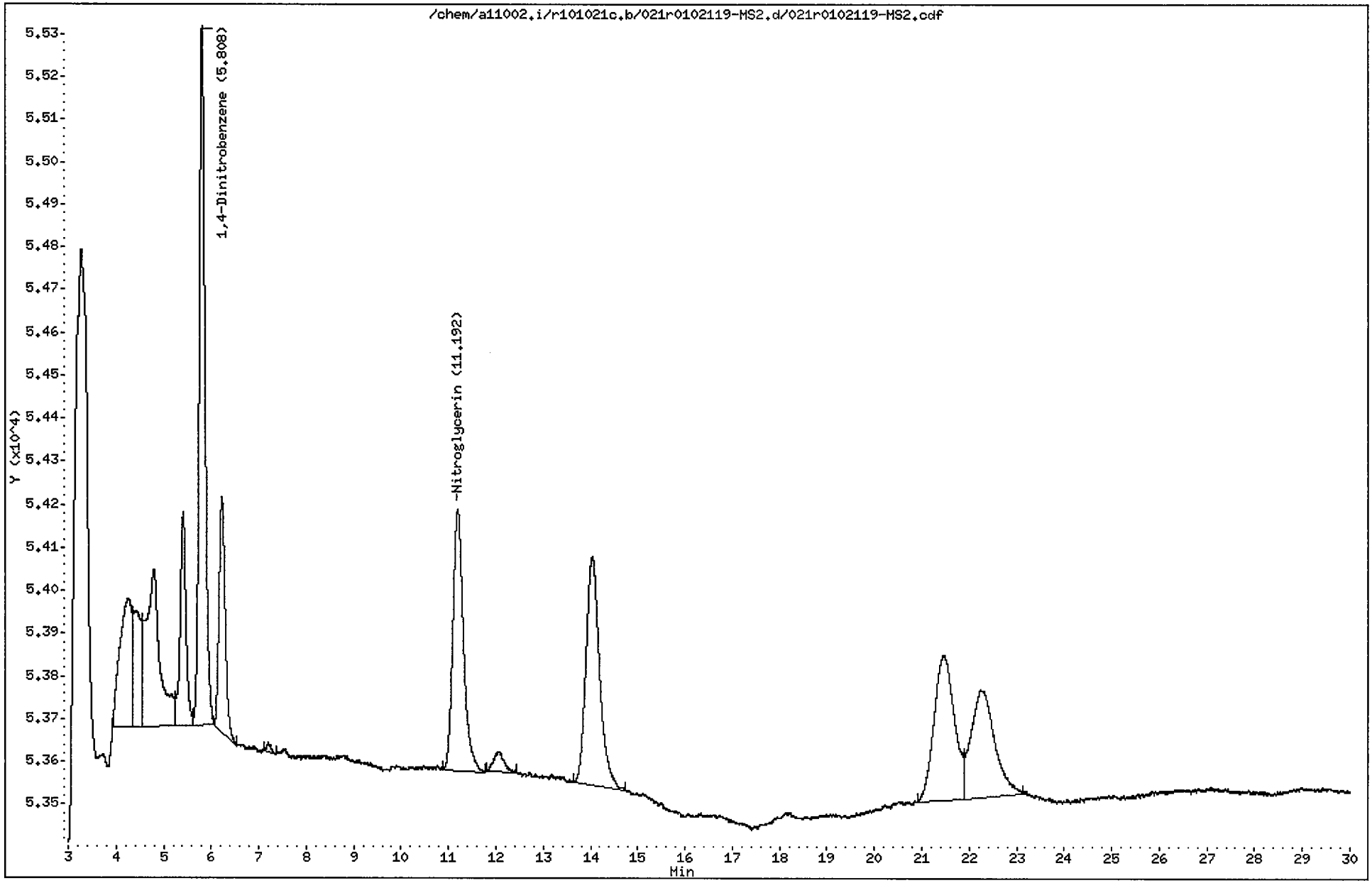
Sample Info: 0102119-MS2

Volume Injected (uL): 10.0

Operator: BWL

Column phase: PINNACLE CYANO

Column diameter: 4.60



CompuChem

Lab Smp Id : 0102119-MS2 Client Smp Id : 13MW5MS
Sample Type : MS Sublist : nitro
Inj Date : 22-OCT-2010 16:29 Inst ID : A11002
Operator : BWL Spike Sublist : nitro
Method : /chem/a11002.i/r101021c.b/8332TPconf_10uL_v1.m
Misc. Info : 13MW5MS

Method Type: undefined

RT	RT WINDOW	AREA	QUANT RF	COMPOUND	CONCENTRATIONS ON-COLUMN (Ng)	CONCENTRATIONS FINAL (ug/L)	ADJUSTED PQL (ug/L)	% REC	RECOVERY LIMITS	FLAGS
4.26		5195								
4.41		3321								
4.80		7434								
5.41		4298								
5.81	5.30 6.30	13674	1652	1,4-Dinitrobenzene	8.276978	16.55396		82.8	50 - 150	
6.23		4878								
7.21		129								
11.19	10.70 11.70	9473	1082	Nitroglycerin	8.757163	17.51433	16.00000	87.6	50 - 150	
12.08		730								
14.04		10766								
21.47		10198								
22.25		8742								

KEH 10/25/10

d. Matrix Spike Duplicate Data

- Tabulated Results (Form I)

- Chromatograms and data system printout(s)

1D

GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

13MW5MSD

Lab Name: COMPUCHEM Contract: 8330B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 0102119-MSD1

Sample wt/vol: 500.0 (g/ml) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 10/20/10

Extraction: (SepF/Cont/Sonc) SOLIDPHASE Date Extracted:10/22/10

Concentrated Extract Volume: 10000(ul) Date Analyzed: 10/22/10

Injection Volume: 10.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
99-35-4	1,3,5-Trinitrobenzene	6.98	
99-65-0	1,3-Dinitrobenzene	7.55	
606-20-2	2,6-Dinitrotoluene	11.66	
121-14-2	2,4-Dinitrotoluene	8.05	

FORM I PEST

Data File: /chem/a11001.i/z101006i.b/063z0102119-MSD1.d

Page 1

Date : 22-OCT-2010 17:25

Client ID: 13MW5MSD

Instrument: a11001.i

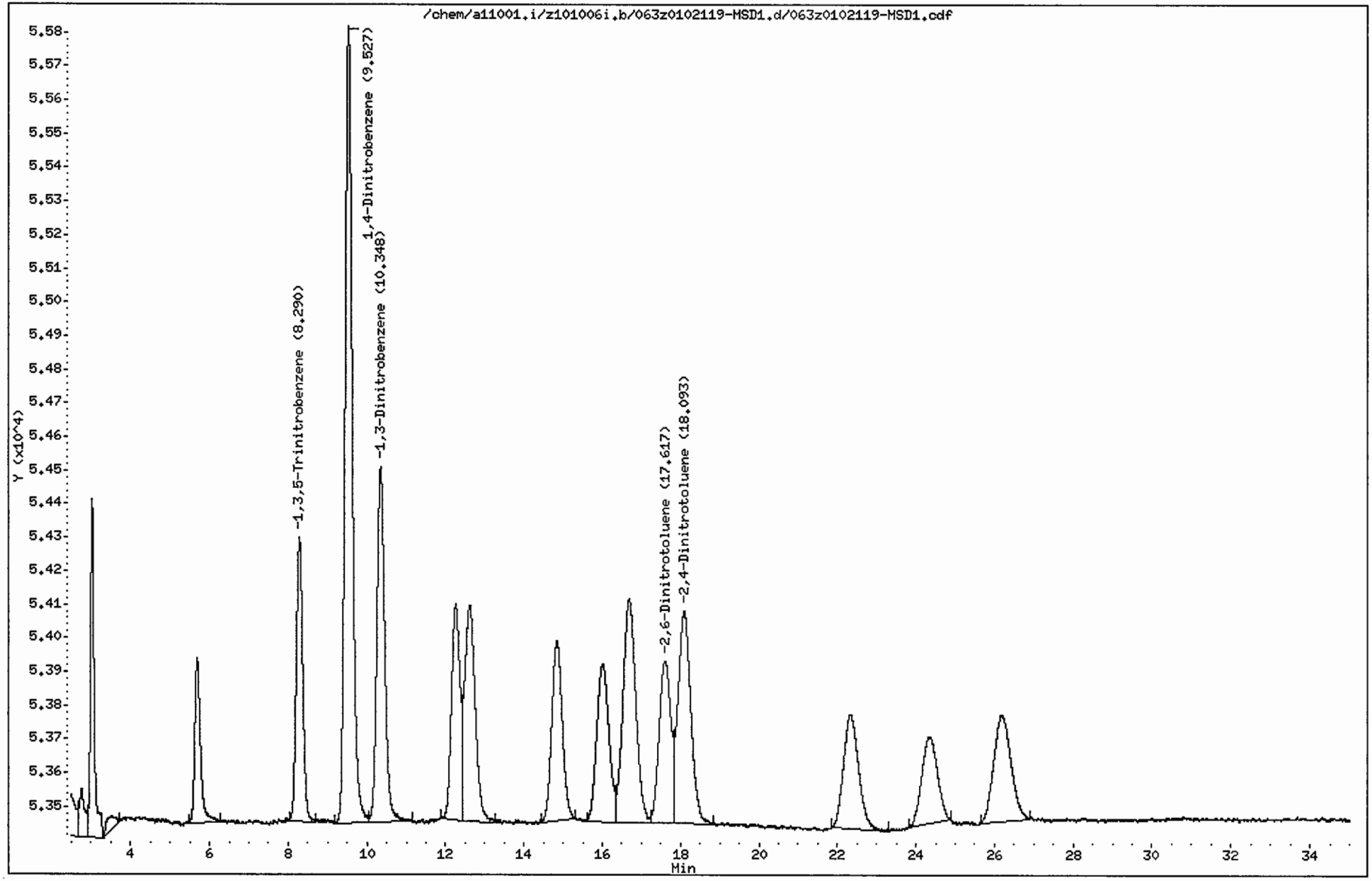
Sample Info: 0102119-MSD1

Volume Injected (uL): 10.0

Operator: System

Column phase: C18

Column diameter: 4.60



CompuChem

Lab Smp Id : 0102119-MSD1 Client Smp Id : 13MW5MSD
Sample Type : MSD Sublist : DAU13
Inj Date : 22-OCT-2010 17:25 Inst ID : A11001
Operator : System Spike Sublist : DAU13
Method : /chem/a11001.i/z101006i.b/8330_10uL_v3_a_split.m
Misc. Info : 13MW5MSD

Formula: Conc=(Area/RF) * DF * (Uf * Vt/(Vi * Vo))

DF Dilution Factor: 1.0 Uf GPC Unit Factor: 1
Vt Final Volume: 10000(ul) Vi Injection Volume: 10(ul)
Vo Sample Volume: 500.0(ml)

RT	RT WINDOW		AREA	QUANT RF	COMPOUND	CONCENTRATIONS ON-COLUMN (Ng)	CONCENTRATIONS FINAL (ug/L)	ADJUSTED PQL (ug/L)	% REC	RECOVERY LIMITS	FLAGS
1.15			2181								
1.36			6279								
1.49			226								
1.67			2732								
2.07			849								
2.21			7020								
2.76			1416								
3.03			6564								
3.55			683								
5.69			4978								
8.29	8.08	8.48	9492	2719	1,3,5-Trinitrobenzene	3.491126	6.982253	2.500000	87.3	50 - 150	
9.53	9.34	9.74	30091	3229	1,4-Dinitrobenzene	9.318561	18.63712		93.2	39 - 132	
10.35	10.16	10.56	14586	3864	1,3-Dinitrobenzene	3.775242	7.550484	2.500000	94.4	50 - 150	
12.26			9668								
12.63			12022								
14.85			9938								
16.02			10244								
16.69			15184								
17.62	17.30	17.90	10138	1738	2,6-Dinitrotoluene	5.832314	11.66463	5.000000	97.2	50 - 150	
18.09	17.77	18.37	14279	3546	2,4-Dinitrotoluene	4.027302	8.054604	5.000000	100.7	50 - 150	
22.34			9049								
24.37			7139								
26.20			9616								

KEH 10/25/10

1D

GC EXTRACTABLE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

13MW5MSD

Lab Name: COMPUCHEM Contract: 8332

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 0102119-MSD2

Sample wt/vol: 500.0 (g/ml) ML Lab File ID: _____

% Moisture: _____ decanted: (Y/N)___ Date Received: 10/20/10

Extraction: (SepF/Cont/Sonc) SOLIDPHASE Date Extracted:10/22/10

Concentrated Extract Volume: 10000(ul) Date Analyzed: 10/22/10

Injection Volume: 10.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___ Sulfur Cleanup: (Y/N) N

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
55-63-0	Nitroglycerin	17	

FORM I PEST

Data File: /chem/a11002.i/r101021c.b/022r0102119-MSD2.d

Date : 22-OCT-2010 17:00

Client ID: 13MW5MSD

Instrument: a11002.i

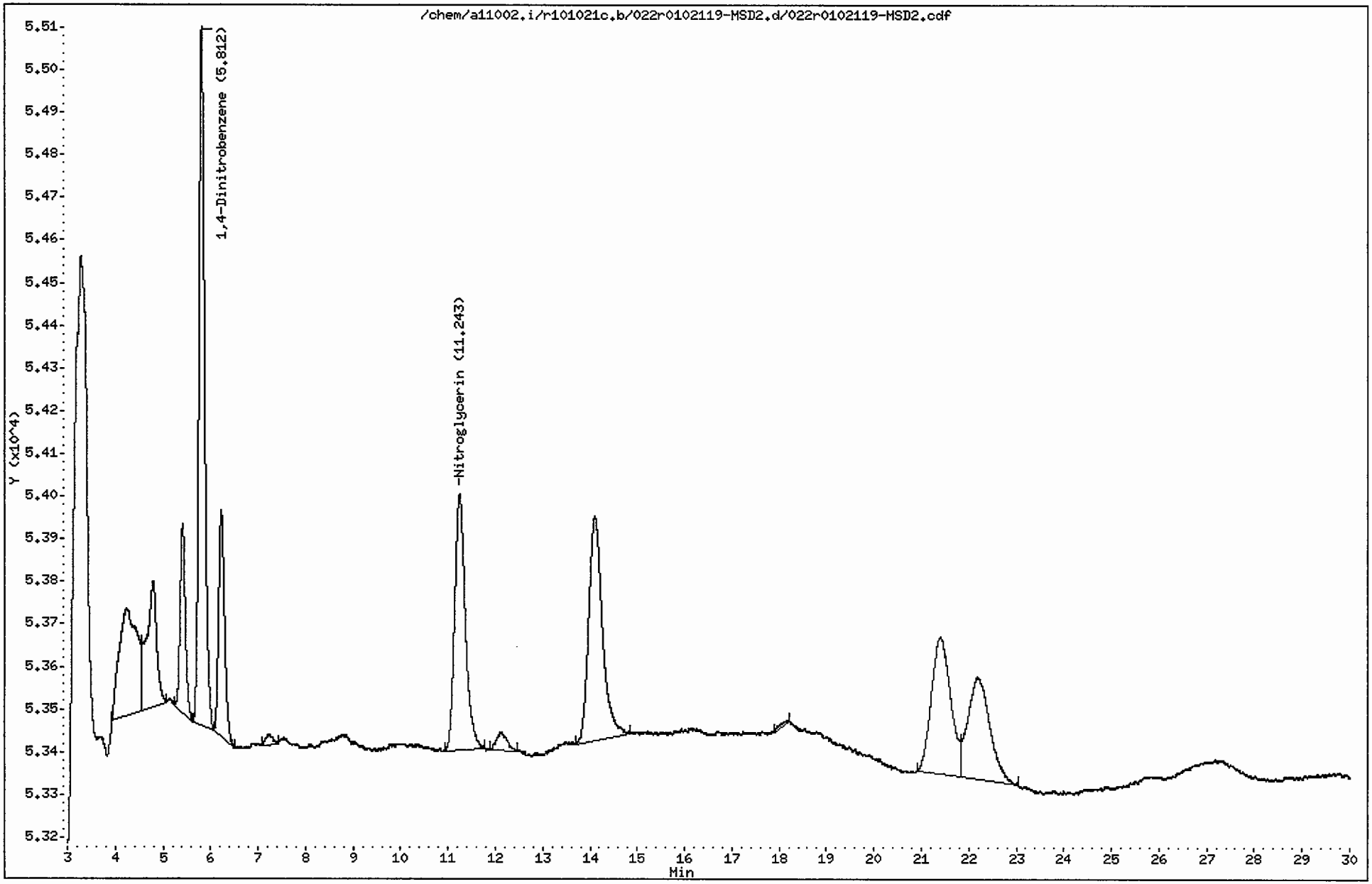
Sample Info: 0102119-MSD2

Volume Injected (uL): 10.0

Operator: BWL

Column phase: PINNACLE CYANO

Column diameter: 4.60



CompuChem

Lab Smp Id : 0102119-MSD2 Client Smp Id : 13MW5MSD
Sample Type : MSD Sublist : nitro
Inj Date : 22-OCT-2010 17:00 Inst ID : A11002
Operator : BWL Spike Sublist : nitro
Method : /chem/a11002.i/r101021c.b/8332TPconf_10uL_v1.m
Misc. Info : 13MW5MSD

Method Type: undefined

RT	RT WINDOW	AREA	QUANT RF	COMPOUND	CONCENTRATIONS ON-COLUMN (Ng)	CONCENTRATIONS FINAL (ug/L)	ADJUSTED PQL (ug/L)	% REC	RECOVERY LIMITS	FLAGS
4.25		6667								
4.80		4351								
5.41		3329								
5.81	5.30 6.30	13474	1652	1,4-Dinitrobenzene	8.156339	16.31268		81.6	50 - 150	
6.23		4599								
7.24		259								
11.24	10.70 11.70	9447	1082	Nitroglycerin	8.732897	17.46579	16.00000	87.3	50 - 150	
12.11		680								
14.11		10715								
18.13		162								
21.40		9197								
22.18		7724								

KEH 10/25/10

CompuChem

A Division Of

Liberty Analytical Corp.

11/30/2010

JANET FRAZIER

DRAPER

2206 SOUTH MAIN STREET

BLACKSBURG, VA 24060

Subject:

Report of Data - Project: RAAP HWMU13 (OBG)/B03204-08 WorkOrder: 1010107

Attn.: JANET FRAZIER

Enclosed are the results of analytical work performed in accordance with the referenced account number. This report covers sample(s) appearing on the listing.

Thank you for selecting CompuChem for your sample analysis. If you should have questions or require additional analytical services, please contact your representative at 1-800-833-5097

Sincerely,

Compuchem

a division of Liberty Analytical Corporation

Attachment

TOTAL NUMBER

OF PAGES _____

501 Madison Avenue, Cary, NC 27513 Tel: 919-379-4100 Fax: 919-379-4050

CompuChem, a division of Liberty Analytical

Client: DRAPER **Work:** 1010107

Project: RAAP HWMU13 (OBG)/B03204-08 **Sdg:** 1010107

Lab ID	Client ID	Matrix	Date Sampled	Date Received
1010107-01	13MW5	Water	10/19/2010 08:30	10/20/2010 09:36
1010107-02	13MW1	Water	10/18/2010 11:05	10/20/2010 09:36
1010107-03	13MW2	Water	10/18/2010 12:00	10/20/2010 09:36
1010107-04	13MW3	Water	10/18/2010 08:00	10/20/2010 09:36
1010107-05	13MW4	Water	10/18/2010 09:10	10/20/2010 09:36
1010107-06	13MWDUP	Water	10/19/2010 07:30	10/20/2010 09:36
1010107-07	13MW6	Water	10/18/2010 10:10	10/20/2010 09:36
1010107-08	13MW7	Water	10/19/2010 09:45	10/20/2010 09:36

CompuChem, a Division of Liberty Analytical Corporation

I. SAMPLE DATA SUMMARY PACKAGE

GC/MS by SW-846

The sample data summary package shall contain data for all samples in one Sample Delivery Group (SDG) of the Case, as follows:

A. SDG Narrative

B. Tabulated target compound results (Form I)
Tentatively identified compounds (Form I, TIC)
In order by sample.

C. Surrogate spike analysis results (Form II)
By matrix (Water or Soil), and
by concentration (Low, Medium, or High)

D. Spike results MS / MSD / LCS (Form III)

E. Blank data (Form IV)
Tabulated blank results (Form I)
Tentatively identified compounds (Form I, TIC)

F. Internal standard area response and retention time data (Form VIII)

LAB CODE: LIBRTY METHOD: 8270C

SDG #: 1010107

A. SDG Narrative

CompuChem
a division of Liberty Analytical Corporation
501 Madison Avenue
Cary, N.C. 27513
Tel: 919/379-4100 **Fax: 919/379-4050**

SDG NARRATIVE
SDG # 1010107
Project #: RAAP HWMU13 (OBG)/B03204-08
PROTOCOL: SW-846
Date: November 29, 2010

EPA Sample Number	Semivolatile Fraction	DL/RE/RX
13MWDUP	Yes	No
13MW1	Yes	No
13MW2	Yes	No
13MW3	Yes	No
13MW4	Yes	No
13MW5	Yes	No
13MW5MS	Yes	No
13MW5MSD	Yes	No
13MW6	Yes	No
13MW7	Yes	No

The ten (10) aqueous samples listed above were received, in sealed shipping containers, with proper documentation, on October 20, 2010. The cooler temperatures associated with these samples were 0.6, 0.1, 0.2, 1.0, and 0.9 °C.

With the exception of sample 13MW3, these samples were received intact. Six (6) amber liter bottles were sent for sample 13MW3, from which one (1) amber liter bottle for semivolatile fraction arrived broken. However, enough sample volume was received intact to perform the requested analyses for this sample.

The samples were scheduled for the requested analysis of the semivolatile fraction.

SW-846, 3rd Edition, Update 3, Separatory Funnel extraction (Method 3510C), and Method 8270C were used to prepare and analyze these samples, with the exceptions and/or additions requested by the client. This portion of the narrative deals with the semivolatile fraction only.

Semivolatile:

Extraction and analysis holding time requirements were met for all samples in this SDG.

Samples 13MW1, 13MW3, and 13MW5MSD were, each, extracted using 950 mL of raw sample, rather than the method-specified amount of 1000 mL. The use of this lower volume of the raw sample resulted in slightly higher Contract Required Quantitation Limits (CRQLs).

Sample 13MW5MS was extracted using 975 mL of raw sample, rather than the method-specified amount of 1000 mL. The use of this lower volume of the raw sample resulted in slightly higher Contract Required Quantitation Limits (CRQLs).

There were no semivolatile project analytes identified above the Contract Required Quantitation Limits (CRQLs) in any of these samples.

Manual integrations were performed on one or more of the process files associated with this SDG. Please see the detailed Manual Integration Summary report that is located behind this SDG narrative. The reasons have been coded with explanations provided in the notice included in the narrative section of the SDG.

All decafluorotriphenylphosphine (DFTPP) abundance criteria were met for tunes associated to this SDG. Tailing factor criteria were met for Pentachlorophenol and Benzidine. The breakdown criterion was met for DDT. These three compounds were added to the DFTPP solution and analyzed together.

Overall QC criteria were met for initial and continuing calibration standards associated to this SDG.

All of the surrogates met recovery criteria in the analyses of these samples.

All of the internal standards met response and retention time criteria in the analyses of these samples.

The associated method blanks met all quality control criteria.

Sample 13MW5 was used as the original to prepare the duplicate matrix spikes (MS/MSD) as requested. The associated MS/MSD met all accuracy criteria. With one (1) exception, the associated MS/MSD met all precision criteria. The Relative Percent Difference (RPD) of 3,3'-Dimethylbenzidine spike compound was marginally high and failed quality control criteria. This compound was flagged as an outlier in the matrix spike/matrix spike duplicate samples.

The associated Laboratory Control Samples, prepared and analyzed along with these samples, met all accuracy criteria.

An uncertainty of these test results may be estimated from the recovery of the surrogates added to the sample prior to sample preparation or from the recovery of spiked compound(s) in the associated laboratory control sample. Further information is available upon request.

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 above. Furthermore, I certify that the tests used in this report meet all requirements of the NELAC standards unless otherwise stated in the SDG narrative or QA notice. Release of the data contained in this hardcopy data package and/or in the computer-readable data submitted electronically has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

S.A. Parikh

Saroj A. Parikh
Data Reviewer II
November 29, 2010

CompuChem
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Liberty Analytical Corp.

Manual Integration Summary

Client: DRAPER
Work Order: 1010107
Sdg: DRAFT 1010107
Project: RAAP HWMU13 (OBG)/B03204-08
Case:

Analysis: SVOC 8270C
Lab Id: 0K02011-CAL1 **Client Id:** DRAFT: SSTD005Z4
Sample Type: Cal Standard
Instrument: 5972hp70

Analyte	Type	M Flag
2,4,6-Tribromophenol	SURROGATE	M
2-Fluorobiphenyl	SURROGATE	M

Sample Total: 2

Analysis: SVOC 8270C
Lab Id: 0K02011-CAL2 **Client Id:** DRAFT: SSTD010Z4
Sample Type: Cal Standard
Instrument: 5972hp70

Analyte	Type	M Flag
2,4,6-Tribromophenol	SURROGATE	M

Sample Total: 1

Analysis: SVOC 8270C
Lab Id: 0K02011-CAL5 **Client Id:** DRAFT: SSTD050Z4
Sample Type: Cal Standard
Instrument: 5972hp70

Analyte	Type	M Flag
Dibenzo(a,h)anthracene	TARGET	M

Sample Total: 1

Total Manual Integrations: 4

	GC and GC/MS Column and Trap Specifications Table							
SDG #:	1010107							
				COLUMNS				
Columns Utilized	Brand Name	Coating Material		ID (mm)	Film Thickness (um)			Length (m)
	GC Laboratory							
	Restek	RTX-5		0.53	1.0			30
	Restek	RTX-SMS		0.53	1.0			30
	Restek	clpest		0.32	0.5			30
	Restek	clpest2		0.32	0.42			30
	J&W	DB-210		0.53	1.0			30
	J&W	GS-GASPRO		0.32	N/A			30
	GC Volatiles Laboratory							
	Restek	RTX-Volatiles		0.53	2.0			30
	GC/MS Volatiles Laboratory							
	Restek	RTX-VMS		0.18	1.0			20
	Supelco	SPB-624		0.32	1.8			60
	Supelco	SPB-624		0.53	3.0			75
	Phenomonex	ZB-624		0.32	1.8			60
	GC/MS Semivolatiles Laboratory							
X	Restek	RTX-5MS		0.32	0.25			30
	Phenomonex	ZB-5MS		0.32	0.25			30
	HPLC Laboratory							
	Supelco	Supelcosil LC-PAH		4.6	5.0			15 cm
	Supelco	Discovery RP Amide C16		4.6	5.0			25 cm
	Restek	Pinnacle Cyano		4.6	5.0			25 cm
	Restek	Allure C18		4.6	5.0			25 cm
			TRAPS *					
	GC and GC/MS Volatiles Laboratory							
	Supelco J (BETXTRAP™)		* 7.7 cm Carbopack C					
			* 1.2 cm Carbopack B					
	Supelco K (Vocarb3000)		* 10 cm of Carbopack B (Graphitized Carbons)					
			* 6 cm of Carboxen 1000 (Carbon molecular sieves)					
			* 1 cm of Carboxen 1001 (Carbon molecular sieves)					

Rev. 28

* This table contains the GC columns (and volatile organic trap) used for the analysis of volatiles, semi-voaltiles, pesticides, and Aroclors by the SOM01.2 SOW.

Please see the SDG Narrative(s) for the specific fractions(s) relative to this SDG.

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CompuChem's Pagination Convention

As required by the EPA CLP Statement of Work (SOW) documents, data to be delivered must be paginated (by machine or hand). In the event that the initial numbering is incorrect (a page numbered twice or a page skipped, for example), it is CompuChem's policy to add an alphabetic suffix to a page number when necessary (e.g., 100A, 100B, etc.).

Notification Regarding Manual Editing/Integration Flags

In some instances, manual adjustments to the software output are necessary to provide accurate data. These manual integrations are performed by the data reviewers, GC/MS operators, or GC chemists. An Extracted Ion Current Profile (EICP) or a GC chromatographic peak has been provided for the manual integration performed on each compound to demonstrate the accuracy of that process. The manual integrations are flagged on the quantitation report in the far right column beyond the FINAL concentration for GC/MS analysis, and in the "Flags" column for GC analysis. The manual editing/integration flags are:

M - Denotes that a manual integration has been performed for this compound. The manual integration was performed in order to provide the most accurate area count possible for the peak.

H - Denotes that the data reviewer, GC/MS operator, or GC Chemist has chosen an alternate peak within the retention time window from that chosen by the software for that compound. No manual integration is performed in choosing an alternate peak. The software still performs the integration.

MH - Denotes that an alternate peak has been chosen within the retention time window from that chosen by the software for that compound and also a manual integration of the chosen peak has been performed. The manual integration was performed in order to provide the most accurate area count possible for the peak.

L - Denotes that a data reviewer or GC/MS operator has selected an alternate library search. This is typically done when an additional tentatively identified compound (TIC) has been added to the number of peaks searched. No manual integration is performed in choosing an alternate peak. The software still performs the integration.

ML - Denotes that an alternate library search has been selected and a manual integration has also been performed. This is typically done when an additional TIC has been added and the TIC peak also required a manual integration.

The EPA CLP SOW documents require additional explanations for manual editing/integration. In the accompanying raw data packages, additional codes have been applied to the "M" flag and carry the following meanings;

M1 - The compound was not found by the automatic integration routine.

M2 - The compound was incorrectly integrated by the automatic integration routine.

M3 - The co-eluting compounds were incorrectly integrated by the automatic integration routine.

These codes will appear in the GC/MS and GC raw data.

DATA REPORTING QUALIFIERS

On the Form I, under the column labeled "Q" for qualifier, each result is flagged with the specific data reporting qualifiers listed below, as appropriate. Up to five qualifiers may be reported on Form I for each compound. The qualifiers used are:

U : This flag indicates the compound was analyzed for but not detected. The Contract Required Quantitation Limit (CRQL), or reporting limit, will be adjusted to reflect any dilution and, for soils, the percent moisture.

J : This flag indicates an estimated value. The flag is used as detailed below:

1. When estimating a concentration for tentatively identified compounds (TICs) where a response factor of 1:1 is assumed for the TIC analyte,

2. When the mass spectral and retention time data indicate the presence of a compound that meets the volatile and semivolatile GC/MS identification criteria, and the result is less than the adjusted CRQL (or Reporting Limit) but greater than zero, and

3. When the retention time data indicate the presence of a compound that meets the pesticide and/or Aroclor or other GC or HPLC identification criteria, and the result is less than the adjusted CRQL (or Reporting Limit) but greater than zero. For example, if the CRQL (or Reporting Limit) is 10 µg/L, but a concentration of 3 µg/L is calculated, it is reported as 3J.

N : This flag indicates presumptive evidence of a compound. This flag is only used for TICs, where the identification is based on a mass spectral library search and must be used with the J flag. For generic characterization of a TIC such as "chlorinated hydrocarbon" (or for an "unknown," with no matches ≥85% in the SOM01.1 SOW), the N flag is not used.

P : In the EPA's Contract Laboratory Program (CLP), this flag is used for a pesticide/Aroclor target analyte, when there is greater than 25% difference for detected concentrations between the two GC columns. The lower of the two values is reported on the Form I and flagged with a P.
For SW-846 GC and HPLC analyses, when the Relative Percent Difference (RPD) is greater than 40% and there is no evidence of chromatographic anomalies or interferences, then the higher of the two values is reported and flagged with a P. When the RPD is equal to or less than 40%, our policy is to also report the higher of the two values, although the choice could be a project specific issue. For certain HPLC analyses, if one of the HPLC columns displays co-elution of target analytes, all results are reported from a primary column displaying no co-elution. Results are still flagged with a P if the RPD between columns is greater than 40%.

C : This flag applies to GC or HPLC results where the identification has been confirmed by GC/MS. If GC/MS confirmation was attempted but was unsuccessful, this flag is not applied; a laboratory-defined flag is used instead (see the X/Y/Z qualifier.)

DATA REPORTING QUALIFIERS (continued)

B : This flag is used when the analyte is found in the associated blank as well as in the sample. It indicates probable blank contamination and warns the data user to take appropriate action. This flag is used for a TIC as well as for a positively identified target compound. The combination of flags BU or UB is not an allowable policy. Blank contaminants are flagged B only when they are detected in the sample.

E : This flag identifies compounds whose concentrations (responses in the SOM01.1 SOW) exceed the upper level of the calibration range (exceed the response of the high ICAL standard in the SOM01.1 SOW) of the instrument for that specific analysis. If one or more compounds have a response greater than the upper level of the calibration range (greater than the response of the highest ICAL standard in the SOM01.1 SOW), the sample or extract will be diluted and reanalyzed. All such compounds with a response greater than the upper level of the calibration range (with responses greater than the response of the highest ICAL standard in the SOM01.1 SOW) will have the concentration (result in the SOM01.1 SOW) flagged with an E on Form I for the original analysis.

D : If a sample or extract is reanalyzed at a higher dilution factor, for example when the concentration (response in the SOM01.1 SOW) of an analyte exceeds the upper calibration range (exceeds the response of the highest ICAL standard in the SOM01.1 SOW), the DL suffix is appended to the sample number on the Form I for the more diluted sample, and **all** reported concentrations on that Form I are flagged with the D flag. This flag alerts data users that any discrepancies between the reported concentrations may be due to dilution of the sample or extract.

NOTE 1: The D flag is not applied to compounds which are not detected in the sample analysis i.e. compounds reported with the CRQL (or Reporting Limit) and the U flag.

NOTE 2: Separate Forms I are used for reporting the original analysis (Client Sample No. XXXXX) and the more diluted sample analysis (Client Sample No. XXXXXDL) i.e. the results from both analyses <u>are not combined</u> on a single Form I.

A: This flag indicates that a TIC is a suspected aldol-condensation product.

S: In the SOM01.1 SOW, this flag is used to indicate an estimated value for Aroclor target compounds where a valid 5-point initial calibration was not performed prior to the analytes detection in a sample. If an "S" flag is used for a specific Aroclor, then a reanalysis of the sample is required after a valid 5-point calibration is performed for the detected Aroclor.

X/Y/Z : Other specific flags may be required to properly define the results. If used, the flags will be fully described in the SDG Narrative. The laboratory-defined flags are limited to X, Y, and Z.

B. Form I and Form I - TIC

Organic Analysis Data Sheet (OADS) and Tentatively Identified Compounds (TICs)
- All samples in alphanumeric order
- Matrix Spike/Matrix Spike Duplicate
- Laboratory Control Sample(s)

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

13MWDUP

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 1010107-06

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1010107-06JA68

Level: (low/med) LOW Date Received: 10/20/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted:10/22/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/23/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
95-57-8	2-Chlorophenol	10	U
108-39-4	3-Methylphenol	8.0	U
106-44-5	4-Methylphenol	8.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
131-11-3	Dimethylphthalate	5.0	U
100-02-7	4-Nitrophenol	10	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	U
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U

(1) - Cannot be separated from Diphenylamine

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

13MWDUP

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-A

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 1010107-06

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1010107-06JA68

Level: (low/med) LOW Date Received: 10/20/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted:10/22/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/23/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
119-93-7	3,3'-Dimethylbenzidine	5.0	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

13MWDUP

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 1010107-06

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1010107-06JA68

Level: (low/med) LOW Date Received: 10/20/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted:10/22/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/23/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
98-86-2	Acetophenone	5.0	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.: 13MW1

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 1010107-02

Sample wt/vol: 950 (g/mL) ML Lab File ID: 1010107-02C68

Level: (low/med) LOW Date Received: 10/20/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted:10/22/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/23/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
95-57-8	2-Chlorophenol	10	U
108-39-4	3-Methylphenol	8.4	U
106-44-5	4-Methylphenol	8.4	U
67-72-1	Hexachloroethane	5.3	U
98-95-3	Nitrobenzene	5.3	U
120-83-2	2,4-Dichlorophenol	10	U
131-11-3	Dimethylphthalate	5.3	U
100-02-7	4-Nitrophenol	10	U
132-64-9	Dibenzofuran	5.3	U
84-66-2	Diethylphthalate	5.3	U
86-30-6	N-Nitrosodiphenylamine (1)	5.3	U
84-74-2	Di-n-butylphthalate	5.3	U
206-44-0	Fluoranthene	5.3	U
129-00-0	Pyrene	5.3	U
85-68-7	Butylbenzylphthalate	5.3	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.3	U
56-55-3	Benzo(a)anthracene	5.3	U
117-84-0	Di-n-octylphthalate	5.3	U
205-99-2	Benzo(b)fluoranthene	5.3	U
207-08-9	Benzo(k)fluoranthene	5.3	U
50-32-8	Benzo(a)pyrene	5.3	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.3	U
53-70-3	Dibenzo(a,h)anthracene	5.3	U

(1) - Cannot be separated from Diphenylamine

FORM 1 CLIENT SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

13MW1

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-A

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 1010107-02

Sample wt/vol: 950 (g/mL) ML Lab File ID: 1010107-02C68

Level: (low/med) LOW Date Received: 10/20/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted:10/22/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/23/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
119-93-7	3,3'-Dimethylbenzidine	5.3	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

13MW1

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 1010107-02

Sample wt/vol: 950 (g/mL) ML Lab File ID: 1010107-02C68

Level: (low/med) LOW Date Received: 10/20/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted:10/22/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/23/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
98-86-2	Acetophenone	5.3	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.
13MW2

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 1010107-03

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1010107-03C68

Level: (low/med) LOW Date Received: 10/20/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted:10/22/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/23/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
95-57-8	2-Chlorophenol	10	U
108-39-4	3-Methylphenol	8.0	U
106-44-5	4-Methylphenol	8.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
131-11-3	Dimethylphthalate	5.0	U
100-02-7	4-Nitrophenol	10	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	U
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U

(1) - Cannot be separated from Diphenylamine

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

13MW2

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-A

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 1010107-03

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1010107-03C68

Level: (low/med) LOW Date Received: 10/20/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted:10/22/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/23/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
119-93-7	3,3'-Dimethylbenzidine	5.0	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

13MW2

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 1010107-03

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1010107-03C68

Level: (low/med) LOW Date Received: 10/20/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted:10/22/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/23/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
98-86-2	Acetophenone	5.0	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.: 13MW3

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 1010107-04

Sample wt/vol: 950 (g/mL) ML Lab File ID: 1010107-04C68

Level: (low/med) LOW Date Received: 10/20/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted:10/22/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/23/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
95-57-8	2-Chlorophenol	10	U
108-39-4	3-Methylphenol	8.4	U
106-44-5	4-Methylphenol	8.4	U
67-72-1	Hexachloroethane	5.3	U
98-95-3	Nitrobenzene	5.3	U
120-83-2	2,4-Dichlorophenol	10	U
131-11-3	Dimethylphthalate	5.3	U
100-02-7	4-Nitrophenol	10	U
132-64-9	Dibenzofuran	5.3	U
84-66-2	Diethylphthalate	5.3	U
86-30-6	N-Nitrosodiphenylamine (1)	5.3	U
84-74-2	Di-n-butylphthalate	5.3	U
206-44-0	Fluoranthene	5.3	U
129-00-0	Pyrene	5.3	U
85-68-7	Butylbenzylphthalate	5.3	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.3	U
56-55-3	Benzo(a)anthracene	5.3	U
117-84-0	Di-n-octylphthalate	5.3	U
205-99-2	Benzo(b)fluoranthene	5.3	U
207-08-9	Benzo(k)fluoranthene	5.3	U
50-32-8	Benzo(a)pyrene	5.3	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.3	U
53-70-3	Dibenzo(a,h)anthracene	5.3	U

(1) - Cannot be separated from Diphenylamine

FORM 1 CLIENT SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

13MW3

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-A

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 1010107-04

Sample wt/vol: 950 (g/mL) ML Lab File ID: 1010107-04C68

Level: (low/med) LOW Date Received: 10/20/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted:10/22/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/23/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
119-93-7	3,3'-Dimethylbenzidine	5.3	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

13MW3

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 1010107-04

Sample wt/vol: 950 (g/mL) ML Lab File ID: 1010107-04C68

Level: (low/med) LOW Date Received: 10/20/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted:10/22/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/23/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
98-86-2	Acetophenone	5.3	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.: 13MW4

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 1010107-05

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1010107-05C68

Level: (low/med) LOW Date Received: 10/20/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted:10/22/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/23/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
95-57-8	2-Chlorophenol	10	U
108-39-4	3-Methylphenol	8.0	U
106-44-5	4-Methylphenol	8.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
131-11-3	Dimethylphthalate	5.0	U
100-02-7	4-Nitrophenol	10	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	U
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U

(1) - Cannot be separated from Diphenylamine

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

13MW4

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-A

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 1010107-05

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1010107-05C68

Level: (low/med) LOW Date Received: 10/20/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted:10/22/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/23/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
119-93-7	3,3'-Dimethylbenzidine	5.0	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.
13MW4

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 1010107-05

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1010107-05C68

Level: (low/med) LOW Date Received: 10/20/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted:10/22/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/23/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
98-86-2	Acetophenone	5.0	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.
13MW5

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 1010107-01

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1010107-01A68

Level: (low/med) LOW Date Received: 10/20/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted:10/22/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/22/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
95-57-8	2-Chlorophenol	10	U
108-39-4	3-Methylphenol	8.0	U
106-44-5	4-Methylphenol	8.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
131-11-3	Dimethylphthalate	5.0	U
100-02-7	4-Nitrophenol	10	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	1.7	J
56-55-3	Benzo(a)anthracene	5.0	U
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U

(1) - Cannot be separated from Diphenylamine

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

13MW5

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-A

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 1010107-01

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1010107-01A68

Level: (low/med) LOW Date Received: 10/20/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted:10/22/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/22/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
119-93-7	3,3'-Dimethylbenzidine	5.0	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

13MW5

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 1010107-01

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1010107-01A68

Level: (low/med) LOW Date Received: 10/20/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted:10/22/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/22/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
98-86-2	Acetophenone	5.0	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.
13MW6

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 1010107-07

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1010107-07A68

Level: (low/med) LOW Date Received: 10/20/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted:10/22/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/23/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
95-57-8	2-Chlorophenol	10	U
108-39-4	3-Methylphenol	8.0	U
106-44-5	4-Methylphenol	8.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
131-11-3	Dimethylphthalate	5.0	U
100-02-7	4-Nitrophenol	10	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	U
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U

(1) - Cannot be separated from Diphenylamine

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

13MW6

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-A

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 1010107-07

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1010107-07A68

Level: (low/med) LOW Date Received: 10/20/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted:10/22/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/23/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
119-93-7	3,3'-Dimethylbenzidine	5.0	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

13MW6

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 1010107-07

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1010107-07A68

Level: (low/med) LOW Date Received: 10/20/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted:10/22/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/23/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
98-86-2	Acetophenone	5.0	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.: 13MW7

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 1010107-08

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1010107-08A68

Level: (low/med) LOW Date Received: 10/20/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted:10/22/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/23/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
95-57-8	2-Chlorophenol	10	U
108-39-4	3-Methylphenol	8.0	U
106-44-5	4-Methylphenol	8.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
131-11-3	Dimethylphthalate	5.0	U
100-02-7	4-Nitrophenol	10	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	U
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U

(1) - Cannot be separated from Diphenylamine

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

13MW7

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-A

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 1010107-08

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1010107-08A68

Level: (low/med) LOW Date Received: 10/20/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted:10/22/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/23/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
119-93-7	3,3'-Dimethylbenzidine	5.0	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

13MW7

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 1010107-08

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1010107-08A68

Level: (low/med) LOW Date Received: 10/20/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted:10/22/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/23/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
98-86-2	Acetophenone	5.0	U

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.
13MW5MS

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 0102117-MS1

Sample wt/vol: 975 (g/mL) ML Lab File ID: 0102117-MS1A68

Level: (low/med) LOW Date Received: 10/20/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted:10/22/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/22/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	16	
95-57-8	2-Chlorophenol	33	
108-39-4	3-Methylphenol	28	
106-44-5	4-Methylphenol	28	
67-72-1	Hexachloroethane	25	
98-95-3	Nitrobenzene	34	
120-83-2	2,4-Dichlorophenol	35	
131-11-3	Dimethylphthalate	36	
100-02-7	4-Nitrophenol	16	
132-64-9	Dibenzofuran	34	
84-66-2	Diethylphthalate	35	
86-30-6	N-Nitrosodiphenylamine (1)	40	
84-74-2	Di-n-butylphthalate	38	
206-44-0	Fluoranthene	38	
129-00-0	Pyrene	40	
85-68-7	Butylbenzylphthalate	38	
117-81-7	bis(2-ethylhexyl)Phthalate	37	
56-55-3	Benzo(a)anthracene	39	
117-84-0	Di-n-octylphthalate	36	
205-99-2	Benzo(b)fluoranthene	39	
207-08-9	Benzo(k)fluoranthene	40	
50-32-8	Benzo(a)pyrene	41	
193-39-5	Indeno(1,2,3-cd)pyrene	42	
53-70-3	Dibenzo(a,h)anthracene	42	

(1) - Cannot be separated from Diphenylamine

FORM 1 CLIENT SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

13MW5MS

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-A

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 0102117-MS1

Sample wt/vol: 975 (g/mL) ML Lab File ID: 0102117-MS1A68

Level: (low/med) LOW Date Received: 10/20/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted:10/22/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/22/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
119-93-7	3,3'-Dimethylbenzidine	16	

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

13MW5MS

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 0102117-MS1

Sample wt/vol: 975 (g/mL) ML Lab File ID: 0102117-MS1A68

Level: (low/med) LOW Date Received: 10/20/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted:10/22/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/22/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
98-86-2	Acetophenone	29	

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.
13MW5MSD

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 0102117-MSD1

Sample wt/vol: 950 (g/mL) ML Lab File ID: 0102117-MSD1A68

Level: (low/med) LOW Date Received: 10/20/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted:10/22/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/22/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	17	
95-57-8	2-Chlorophenol	37	
108-39-4	3-Methylphenol	31	
106-44-5	4-Methylphenol	31	
67-72-1	Hexachloroethane	29	
98-95-3	Nitrobenzene	38	
120-83-2	2,4-Dichlorophenol	40	
131-11-3	Dimethylphthalate	40	
100-02-7	4-Nitrophenol	18	
132-64-9	Dibenzofuran	38	
84-66-2	Diethylphthalate	38	
86-30-6	N-Nitrosodiphenylamine (1)	44	
84-74-2	Di-n-butylphthalate	41	
206-44-0	Fluoranthene	42	
129-00-0	Pyrene	45	
85-68-7	Butylbenzylphthalate	41	
117-81-7	bis(2-ethylhexyl)Phthalate	40	
56-55-3	Benzo(a)anthracene	44	
117-84-0	Di-n-octylphthalate	38	
205-99-2	Benzo(b)fluoranthene	43	
207-08-9	Benzo(k)fluoranthene	44	
50-32-8	Benzo(a)pyrene	45	
193-39-5	Indeno(1,2,3-cd)pyrene	49	
53-70-3	Dibenzo(a,h)anthracene	49	

(1) - Cannot be separated from Diphenylamine

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

13MW5MSD

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-A

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 0102117-MSD1

Sample wt/vol: 950 (g/mL) ML Lab File ID: 0102117-MSD1A68

Level: (low/med) LOW Date Received: 10/20/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted:10/22/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/22/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
119-93-7	3,3'-Dimethylbenzidine	11	

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

13MW5MSD

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 0102117-MSD1

Sample wt/vol: 950 (g/mL) ML Lab File ID: 0102117-MSD1A68

Level: (low/med) LOW Date Received: 10/20/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted:10/22/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/22/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
98-86-2	Acetophenone	32	

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.
SEJLCS

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 0102117-BS1

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 0102117-BS1A68

Level: (low/med) LOW Date Received: _____

% Moisture: _____ decanted: (Y/N)___ Date Extracted:10/22/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/22/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	16	
95-57-8	2-Chlorophenol	32	
108-39-4	3-Methylphenol	26	
106-44-5	4-Methylphenol	26	
67-72-1	Hexachloroethane	22	
98-95-3	Nitrobenzene	32	
120-83-2	2,4-Dichlorophenol	34	
131-11-3	Dimethylphthalate	35	
100-02-7	4-Nitrophenol	16	
132-64-9	Dibenzofuran	33	
84-66-2	Diethylphthalate	36	
86-30-6	N-Nitrosodiphenylamine (1)	38	
84-74-2	Di-n-butylphthalate	37	
206-44-0	Fluoranthene	38	
129-00-0	Pyrene	38	
85-68-7	Butylbenzylphthalate	37	
117-81-7	bis(2-ethylhexyl)Phthalate	36	
56-55-3	Benzo(a)anthracene	38	
117-84-0	Di-n-octylphthalate	38	
205-99-2	Benzo(b)fluoranthene	39	
207-08-9	Benzo(k)fluoranthene	38	
50-32-8	Benzo(a)pyrene	39	
193-39-5	Indeno(1,2,3-cd)pyrene	37	
53-70-3	Dibenzo(a,h)anthracene	37	

(1) - Cannot be separated from Diphenylamine

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SEJLCS

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-A

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 0102117-BS1

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 0102117-BS1A68

Level: (low/med) LOW Date Received: _____

% Moisture: _____ decanted: (Y/N)___ Date Extracted:10/22/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/22/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
119-93-7	3,3'-Dimethylbenzidine	8.5	

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.
SEJLCS

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 0102117-BS1

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 0102117-BS1A68

Level: (low/med) LOW Date Received: _____

% Moisture: _____ decanted: (Y/N)___ Date Extracted:10/22/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/22/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
98-86-2	Acetophenone	28	

C. Form II

Surrogate spike analysis

- By level (low, medium, high) -

FORM 2
WATER SEMIVOLATILE SURROGATE RECOVERY

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

	CLIENT SAMPLE NO.	S1 (2FP)#	S2 (PHL)#	S3 (NBZ)#	S4 (FBP)#	S5 (TBP)#	S6 (TPH)#	S7 #	S8 #	TOT OUT
01	SBLKEJ	42	28	65	61	79	85			0
02	SEJLCS	56	36	85	82	96	98			0
03	13MW5	46	29	72	68	79	79			0
04	13MW5MS	54	36	87	86	96	99			0
05	13MW5MSD	57	37	92	88	100	103			0
06	13MW1	53	32	77	77	80	114			0
07	13MW2	50	35	81	73	98	99			0
08	13MW3	52	35	79	76	85	104			0
09	13MW4	48	31	77	71	89	98			0
10	13MWDUP	49	33	81	75	87	109			0
11	13MW6	52	34	82	75	92	99			0
12	13MW7	48	32	76	72	90	101			0
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										
24										
25										
26										
27										
28										

	QC LIMITS
S1 (2FP) = 2-Fluorophenol	(10-110)
S2 (PHL) = Phenol-d5	(10-110)
S3 (NBZ) = Nitrobenzene-d5	(35-110)
S4 (FBP) = 2-Fluorobiphenyl	(45-110)
S5 (TBP) = 2,4,6-Tribromophenol	(44-131)
S6 (TPH) = Terphenyl-d14	(49-120)

Column to be used to flag recovery values
* Values outside of contract required QC limits
D Surrogate diluted out

D. Form III

Matrix Spike/Matrix Spike Duplicate results
- By level (low, medium, high) -
Laboratory Control Sample(s)

FORM 3
WATER SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix Spike - Sample No.: 13MW5

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC. LIMITS REC.
Phenol	41.03	0	15.72	38	20-100
2-Chlorophenol	41.03	0	33.45	82	23-100
3-Methylphenol	41.03	0	28.16	69	24-100
4-Methylphenol	41.03	0	28.16	69	24-100
Hexachloroethane	41.03	0	24.88	61	28-100
Nitrobenzene	41.03	0	33.78	82	20-131
2,4-Dichlorophenol	41.03	0	35.46	86	19-109
Dimethylphthalate	41.03	0	35.73	87	53-116
4-Nitrophenol	41.03	0	15.54	38	10-100
Dibenzofuran	41.03	0	34.31	84	50-107
Diethylphthalate	41.03	0	35.47	86	52-118
N-Nitrosodiphenylamine	41.03	0	40.43	99	52-117
Di-n-butylphthalate	41.03	0	37.7	92	51-114
Fluoranthene	41.03	0	38.14	93	58-124
Pyrene	41.03	0	39.98	97	48-131
Butylbenzylphthalate	41.03	0	38.09	93	41-118
bis(2-ethylhexyl)Phthal	41.03	1.747	36.95	86	47-121
Benzo(a)anthracene	41.03	0	38.99	95	53-128
Di-n-octylphthalate	41.03	0	35.96	88	30-148
Benzo(b)fluoranthene	41.03	0	39.24	96	41-130
Benzo(k)fluoranthene	41.03	0	39.61	97	39-150
Benzo(a)pyrene	41.03	0	40.64	99	46-135
Dibenzo(a,h)anthracene	41.03	0	42.32	103	47-134

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

COMMENTS: _____

FORM 3
WATER SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix Spike - Sample No.: 13MW5

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Phenol	42.11	17.33	41	10	30	20-100
2-Chlorophenol	42.11	37.19	88	10	30	23-100
3-Methylphenol	42.11	31.34	74	11	30	24-100
4-Methylphenol	42.11	31.34	74	11	30	24-100
Hexachloroethane	42.11	28.83	68	15	30	28-100
Nitrobenzene	42.11	37.91	90	12	30	20-131
2,4-Dichlorophenol	42.11	39.86	95	12	30	19-109
Dimethylphthalate	42.11	39.58	94	10	30	53-116
4-Nitrophenol	42.11	17.75	42	13	30	10-100
Dibenzofuran	42.11	38.09	90	10	30	50-107
Diethylphthalate	42.11	38.2	91	7	30	52-118
N-Nitrosodiphenylamine	42.11	44.1	105	9	30	52-117
Di-n-butylphthalate	42.11	41.04	97	8	30	51-114
Fluoranthene	42.11	42.08	100	10	30	58-124
Pyrene	42.11	44.88	107	12	30	48-131
Butylbenzylphthalate	42.11	40.89	97	7	30	41-118
bis(2-ethylhexyl)Phthal	42.11	39.82	90	7	30	47-121
Benzo(a)anthracene	42.11	43.7	104	11	30	53-128
Di-n-octylphthalate	42.11	38.43	91	7	30	30-148
Benzo(b)fluoranthene	42.11	42.74	101	8	30	41-130
Benzo(k)fluoranthene	42.11	43.98	104	10	30	39-150
Benzo(a)pyrene	42.11	45.07	107	10	30	46-135
Dibenzo(a,h)anthracene	42.11	48.73	116	14	30	47-134

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

RPD: 0 out of 23 outside limits
Spike Recovery: 0 out of 46 outside limits

COMMENTS: _____

FORM 3
WATER SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-A

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix Spike - Sample No.: 13MW5

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC. LIMITS REC.
3,3'-Dimethylbenzidine	41.03	0	15.64	38	20-100

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
3,3'-Dimethylbenzidine	42.11	11.35	27	32*	30	20-100

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

RPD: 1 out of 1 outside limits
Spike Recovery: 0 out of 2 outside limits

COMMENTS: _____

FORM 3
WATER SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix Spike - Sample No.: 13MW5

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC. LIMITS REC.
Acetophenone	41.03	0	29.21	71	20-100

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Acetophenone	42.11	32.43	77	10	30	20-100

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

RPD: 0 out of 1 outside limits
Spike Recovery: 0 out of 2 outside limits

COMMENTS: _____

_____

FORM III SV

3C
WATER SEMIVOLATILE LAB CONTROL SAMPLE

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-C | SEJLCS |

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC #	QC. LIMITS REC.
Phenol	40	15.76	39	20-100
2-Chlorophenol	40	31.72	79	23-100
3-Methylphenol	40	26.15	65	24-100
4-Methylphenol	40	26.15	65	24-100
Hexachloroethane	40	22.24	56	28-100
Nitrobenzene	40	32.57	81	20-131
2,4-Dichlorophenol	40	33.64	84	19-109
Dimethylphthalate	40	35.09	88	53-116
4-Nitrophenol	40	16.43	41	10-100
Dibenzofuran	40	33.33	83	50-107
Diethylphthalate	40	35.67	89	52-118
N-Nitrosodiphenylamine	40	38.34	96	52-117
Di-n-butylphthalate	40	37.09	93	51-114
Fluoranthene	40	37.84	95	58-124
Pyrene	40	38.34	96	48-131
Butylbenzylphthalate	40	37.19	93	41-118
bis(2-ethylhexyl)Phthal	40	36.14	90	47-121
Benzo(a)anthracene	40	37.94	95	53-128
Di-n-octylphthalate	40	38.22	96	30-148
Benzo(b)fluoranthene	40	39.3	98	41-130
Benzo(k)fluoranthene	40	38.19	95	39-150
Benzo(a)pyrene	40	39.22	98	46-135
Dibenzo(a,h)anthracene	40	36.8	92	47-134

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

Spike Recovery: 0 out of 23 outside limits

COMMENTS: _____

3C
WATER SEMIVOLATILE LAB CONTROL SAMPLE

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-A | SEJLCS |

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC #	QC. LIMITS REC.
3,3'-Dimethylbenzidine	40	8.528	21	20-100

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

Spike Recovery: 0 out of 1 outside limits

COMMENTS: _____

FORM III SV-1

3C
WATER SEMIVOLATILE LAB CONTROL SAMPLE

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-B | SEJLCS |

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC #	QC. LIMITS REC.
Acetophenone	40	28.04	70	20-100

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

Spike Recovery: 0 out of 1 outside limits

COMMENTS: _____

FORM III SV-1

E. Form IV

Method Blank Results
Form IV, Form I, and Form I - TIC

Method blank summary, OADS, and TICs
- In chronological order of analysis

FORM 4
SEMIVOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE NO

SBLKEJ

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Lab File ID: 0102117-BLK1A68 Lab Sample ID: 0102117-BLK1

Instrument ID: 5973HP68 Date Extracted: 10/22/10

Matrix: (soil/water) WATER Date Analyzed: 11/22/10

Level:(low/med) LOW Time Analyzed: 1148

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

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	SEJLCS	0102117-BS1	0102117-BS1A	11/22/10
02	13MW5	1010107-01	1010107-01A6	11/22/10
03	13MW5MS	0102117-MS1	0102117-MS1A	11/22/10
04	13MW5MSD	0102117-MSD1	0102117-MSD1	11/22/10
05	13MW1	1010107-02	1010107-02C6	11/23/10
06	13MW2	1010107-03	1010107-03C6	11/23/10
07	13MW3	1010107-04	1010107-04C6	11/23/10
08	13MW4	1010107-05	1010107-05C6	11/23/10
09	13MWDUP	1010107-06	1010107-06JA	11/23/10
10	13MW6	1010107-07	1010107-07A6	11/23/10
11	13MW7	1010107-08	1010107-08A6	11/23/10
12				
13				
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15				
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COMMENTS:

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SBLKEJ

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 0102117-BLK1

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 0102117-BLK1A68

Level: (low/med) LOW Date Received: _____

% Moisture: _____ decanted: (Y/N)___ Date Extracted:10/22/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/22/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
95-57-8	2-Chlorophenol	10	U
108-39-4	3-Methylphenol	8.0	U
106-44-5	4-Methylphenol	8.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
131-11-3	Dimethylphthalate	5.0	U
100-02-7	4-Nitrophenol	10	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	U
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U

(1) - Cannot be separated from Diphenylamine

FORM 4
SEMIVOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE NO: SBLKEJ

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-A

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Lab File ID: 0102117-BLK1A68 Lab Sample ID: 0102117-BLK1

Instrument ID: 5973HP68 Date Extracted: 10/22/10

Matrix: (soil/water) WATER Date Analyzed: 11/22/10

Level:(low/med) LOW Time Analyzed: 1148

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

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	SEJLCS	0102117-BS1	0102117-BS1A	11/22/10
02	13MW5	1010107-01	1010107-01A6	11/22/10
03	13MW5MS	0102117-MS1	0102117-MS1A	11/22/10
04	13MW5MSD	0102117-MSD1	0102117-MSD1	11/22/10
05	13MW1	1010107-02	1010107-02C6	11/23/10
06	13MW2	1010107-03	1010107-03C6	11/23/10
07	13MW3	1010107-04	1010107-04C6	11/23/10
08	13MW4	1010107-05	1010107-05C6	11/23/10
09	13MWDUP	1010107-06	1010107-06JA	11/23/10
10	13MW6	1010107-07	1010107-07A6	11/23/10
11	13MW7	1010107-08	1010107-08A6	11/23/10
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COMMENTS:

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.
SBLKEJ

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-A

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 0102117-BLK1

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 0102117-BLK1A68

Level: (low/med) LOW Date Received: _____

% Moisture: _____ decanted: (Y/N)___ Date Extracted:10/22/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/22/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
119-93-7	3,3'-Dimethylbenzidine	5.0	U

FORM 4
SEMIVOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE NO

SBLKEJ

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Lab File ID: 0102117-BLK1A68 Lab Sample ID: 0102117-BLK1

Instrument ID: 5973HP68 Date Extracted: 10/22/10

Matrix: (soil/water) WATER Date Analyzed: 11/22/10

Level:(low/med) LOW Time Analyzed: 1148

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

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	SEJLCS	0102117-BS1	0102117-BS1A	11/22/10
02	13MW5	1010107-01	1010107-01A6	11/22/10
03	13MW5MS	0102117-MS1	0102117-MS1A	11/22/10
04	13MW5MSD	0102117-MSD1	0102117-MSD1	11/22/10
05	13MW1	1010107-02	1010107-02C6	11/23/10
06	13MW2	1010107-03	1010107-03C6	11/23/10
07	13MW3	1010107-04	1010107-04C6	11/23/10
08	13MW4	1010107-05	1010107-05C6	11/23/10
09	13MWDUP	1010107-06	1010107-06JA	11/23/10
10	13MW6	1010107-07	1010107-07A6	11/23/10
11	13MW7	1010107-08	1010107-08A6	11/23/10
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COMMENTS:

FORM 1 CLIENT SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SBLKEJ

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 0102117-BLK1

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 0102117-BLK1A68

Level: (low/med) LOW Date Received: _____

% Moisture: _____ decanted: (Y/N)___ Date Extracted:10/22/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/22/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
98-86-2	Acetophenone	5.0	U

F. Form VIII

Internal standard area and retention time data

(VOA and SV only)

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Lab File ID (Standard): 0K22004-CCV2A68 Date Analyzed: 11/22/10

Instrument ID: 5973HP68 Time Analyzed: 1023

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
	12 HOUR STD	590915	8.35	2213461	11.18	1111070	15.30
	UPPER LIMIT	1181830	8.85	4426922	11.68	2222140	15.80
	LOWER LIMIT	295457	7.85	1106731	10.68	555535	14.80
	CLIENT SAMPLE NO.						
01	SBLKEJ	698039	8.35	2588771	11.17	1380594	15.29
02	SEJLCS	680407	8.36	2343296	11.18	1097977	15.30
03	13MW5	539566	8.34	2043625	11.17	1109086	15.29
04	13MW5MS	644787	8.35	2408765	11.18	1151564	15.30
05	13MW5MSD	626804	8.35	2385893	11.18	1204283	15.30
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IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

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

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Lab File ID (Standard): 0K22004-CCV2A68 Date Analyzed: 11/22/10

Instrument ID: 5973HP68 Time Analyzed: 1023

		IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
	12 HOUR STD	1584397	18.73	920630	25.00	552494	28.13
	UPPER LIMIT	3168794	19.23	1841260	25.50	1104988	28.63
	LOWER LIMIT	792199	18.23	460315	24.50	276247	27.63
	CLIENT SAMPLE NO.						
01	SBLKEJ	2004974	18.73	1015855	25.00	606431	28.13
02	SEJLCS	1612348	18.73	913121	25.00	538262	28.13
03	13MW5	1592017	18.72	940852	25.00	627663	28.13
04	13MW5MS	1635142	18.73	890385	25.00	532030	28.14
05	13MW5MSD	1706759	18.73	902543	25.01	556349	28.14
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IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

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

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-A

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Lab File ID (Standard): 0K22004-CCV1A68 Date Analyzed: 11/22/10

Instrument ID: 5973HP68 Time Analyzed: 0941

		IS1(DCB) AREA	#	RT	#	IS2(NPT) AREA	#	RT	#	IS3(ANT) AREA	#	RT	#
	12 HOUR STD	619639		8.35		2154891		11.18		968691		15.29	
	UPPER LIMIT	1239278		8.85		4309782		11.68		1937382		15.79	
	LOWER LIMIT	309819		7.85		1077445		10.68		484345		14.79	
	CLIENT SAMPLE NO.												
01	SBLKEJ	698039		8.35		2588771		11.17		1380594		15.29	
02	SEJLCS	680407		8.36		2343296		11.18		1097977		15.30	
03	13MW5	539566		8.34		2043625		11.17		1109086		15.29	
04	13MW5MS	644787		8.35		2408765		11.18		1151564		15.30	
05	13MW5MSD	626804		8.35		2385893		11.18		1204283		15.30	
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IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

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

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-A

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Lab File ID (Standard): 0K22004-CCV1A68 Date Analyzed: 11/22/10

Instrument ID: 5973HP68 Time Analyzed: 0941

		IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
	12 HOUR STD	1341866	18.73	777195	25.00	559035	28.13
	UPPER LIMIT	2683732	19.23	1554390	25.50	1118070	28.63
	LOWER LIMIT	670933	18.23	388597	24.50	279517	27.63
	CLIENT SAMPLE NO.						
01	SBLKEJ	2004974	18.73	1015855	25.00	606431	28.13
02	SEJLCS	1612348	18.73	913121	25.00	538262	28.13
03	13MW5	1592017	18.72	940852	25.00	627663	28.13
04	13MW5MS	1635142	18.73	890385	25.00	532030	28.14
05	13MW5MSD	1706759	18.73	902543	25.01	556349	28.14
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IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

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

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Lab File ID (Standard): 0K22004-CCV3A68 Date Analyzed: 11/22/10

Instrument ID: 5973HP68 Time Analyzed: 1106

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
	12 HOUR STD	680809	8.35	2623139	11.17	1382654	15.30
	UPPER LIMIT	1361618	8.85	5246278	11.67	2765308	15.80
	LOWER LIMIT	340405	7.85	1311569	10.67	691327	14.80
	CLIENT SAMPLE NO.						
01	SBLKEJ	698039	8.35	2588771	11.17	1380594	15.29
02	SEJLCS	680407	8.36	2343296	11.18	1097977	15.30
03	13MW5	539566	8.34	2043625	11.17	1109086	15.29
04	13MW5MS	644787	8.35	2408765	11.18	1151564	15.30
05	13MW5MSD	626804	8.35	2385893	11.18	1204283	15.30
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IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

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

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Lab File ID (Standard): 0K22004-CCV3A68 Date Analyzed: 11/22/10

Instrument ID: 5973HP68 Time Analyzed: 1106

		IS4(PHN) AREA	#	RT	#	IS5(CRY) AREA	#	RT	#	IS6(PRY) AREA	#	RT	#
	12 HOUR STD	2036912		18.73		1211893		25.00		654923		28.13	
	UPPER LIMIT	4073824		19.23		2423786		25.50		1309846		28.63	
	LOWER LIMIT	1018456		18.23		605947		24.50		327461		27.63	
	CLIENT SAMPLE NO.												
01	SBLKEJ	2004974		18.73		1015855		25.00		606431		28.13	
02	SEJLCS	1612348		18.73		913121		25.00		538262		28.13	
03	13MW5	1592017		18.72		940852		25.00		627663		28.13	
04	13MW5MS	1635142		18.73		890385		25.00		532030		28.14	
05	13MW5MSD	1706759		18.73		902543		25.01		556349		28.14	
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IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

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

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Lab File ID (Standard): 0K22016-CCV2C68 Date Analyzed: 11/23/10

Instrument ID: 5973HP68 Time Analyzed: 0028

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
	12 HOUR STD	706836	8.34	2708140	11.17	1384340	15.28
	UPPER LIMIT	1413672	8.84	5416280	11.67	2768680	15.78
	LOWER LIMIT	353418	7.84	1354070	10.67	692170	14.78
	CLIENT SAMPLE NO.						
01	13MW1	593613	8.33	2083201	11.16	1120868	15.27
02	13MW2	837455	8.34	3176058	11.16	1739455	15.28
03	13MW3	755362	8.33	2759839	11.16	1494300	15.27
04	13MW4	816622	8.33	3017239	11.16	1664430	15.28
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IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

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

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Lab File ID (Standard): 0K22016-CCV2C68 Date Analyzed: 11/23/10

Instrument ID: 5973HP68 Time Analyzed: 0028

		IS4(PHN) AREA	#	RT	#	IS5(CRY) AREA	#	RT	#	IS6(PRY) AREA	#	RT	#
	12 HOUR STD	1975436		18.72		993882		24.99		638953		28.12	
	UPPER LIMIT	3950872		19.22		1987764		25.49		1277906		28.62	
	LOWER LIMIT	987718		18.22		496941		24.49		319477		27.62	
	CLIENT SAMPLE NO.												
01	13MW1	1486957		18.70		650847		24.98		332412		28.11	
02	13MW2	2584877		18.71		1404747		24.98		678337		28.12	
03	13MW3	2113621		18.70		1036833		24.98		408968		28.11	
04	13MW4	2412383		18.71		1205714		24.98		510866		28.11	
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IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

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

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-A

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Lab File ID (Standard): 0K22016-CCV1C68 Date Analyzed: 11/22/10

Instrument ID: 5973HP68 Time Analyzed: 2344

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
	12 HOUR STD	692508	8.33	2594031	11.17	1301871	15.28
	UPPER LIMIT	1385016	8.83	5188062	11.67	2603742	15.78
	LOWER LIMIT	346254	7.83	1297015	10.67	650935	14.78
	CLIENT SAMPLE NO.						
01	13MW1	593613	8.33	2083201	11.16	1120868	15.27
02	13MW2	837455	8.34	3176058	11.16	1739455	15.28
03	13MW3	755362	8.33	2759839	11.16	1494300	15.27
04	13MW4	816622	8.33	3017239	11.16	1664430	15.28
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IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

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

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-A

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Lab File ID (Standard): 0K22016-CCV1C68 Date Analyzed: 11/22/10

Instrument ID: 5973HP68 Time Analyzed: 2344

		IS4(PHN) AREA	#	RT	#	IS5(CRY) AREA	#	RT	#	IS6(PRY) AREA	#	RT	#
	12 HOUR STD	1876148		18.72		891137		24.99		630619		28.12	
	UPPER LIMIT	3752296		19.22		1782274		25.49		1261238		28.62	
	LOWER LIMIT	938074		18.22		445569		24.49		315309		27.62	
	CLIENT SAMPLE NO.												
01	13MW1	1486957		18.70		650847		24.98		332412		28.11	
02	13MW2	2584877		18.71		1404747		24.98		678337		28.12	
03	13MW3	2113621		18.70		1036833		24.98		408968		28.11	
04	13MW4	2412383		18.71		1205714		24.98		510866		28.11	
05													
06													
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IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

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

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Lab File ID (Standard): 0K22016-CCV3C68 Date Analyzed: 11/23/10

Instrument ID: 5973HP68 Time Analyzed: 0113

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
	12 HOUR STD	612365	8.33	2477186	11.16	1343977	15.27
	UPPER LIMIT	1224730	8.83	4954372	11.66	2687954	15.77
	LOWER LIMIT	306183	7.83	1238593	10.66	671989	14.77
	CLIENT SAMPLE NO.						
01	13MW1	593613	8.33	2083201	11.16	1120868	15.27
02	13MW2	837455	8.34	3176058	11.16	1739455	15.28
03	13MW3	755362	8.33	2759839	11.16	1494300	15.27
04	13MW4	816622	8.33	3017239	11.16	1664430	15.28
05							
06							
07							
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17							
18							
19							
20							

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

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

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Lab File ID (Standard): 0K22016-CCV3C68 Date Analyzed: 11/23/10

Instrument ID: 5973HP68 Time Analyzed: 0113

		IS4(PHN) AREA	#	RT	#	IS5(CRY) AREA	#	RT	#	IS6(PRY) AREA	#	RT	#
	12 HOUR STD	1827298		18.70		787805		24.98		369908		28.11	
	UPPER LIMIT	3654596		19.20		1575610		25.48		739816		28.61	
	LOWER LIMIT	913649		18.20		393903		24.48		184954		27.61	
	CLIENT SAMPLE NO.												
01	13MW1	1486957		18.70		650847		24.98		332412		28.11	
02	13MW2	2584877		18.71		1404747		24.98		678337		28.12	
03	13MW3	2113621		18.70		1036833		24.98		408968		28.11	
04	13MW4	2412383		18.71		1205714		24.98		510866		28.11	
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IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
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AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Lab File ID (Standard): 0K23010-CCV2RA68 Date Analyzed: 11/23/10

Instrument ID: 5973HP68 Time Analyzed: 1806

		IS1(DCB) AREA	#	RT	#	IS2(NPT) AREA	#	RT	#	IS3(ANT) AREA	#	RT	#
	12 HOUR STD	646943		8.31		2421351		11.15		1228135		15.26	
	UPPER LIMIT	1293886		8.81		4842702		11.65		2456270		15.76	
	LOWER LIMIT	323471		7.81		1210675		10.65		614067		14.76	
	CLIENT SAMPLE NO.												
01	13MWDUP	635814		8.31		2394188		11.14		1300480		15.26	
02	13MW6	709145		8.31		2643736		11.14		1427509		15.26	
03	13MW7	632711		8.31		2407963		11.14		1320286		15.26	
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20													

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

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

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Lab File ID (Standard): 0K23010-CCV2RA68 Date Analyzed: 11/23/10

Instrument ID: 5973HP68 Time Analyzed: 1806

		IS4(PHN) AREA	#	RT	#	IS5(CRY) AREA	#	RT	#	IS6(PRY) AREA	#	RT	#
	12 HOUR STD	1730240		18.69		1013440		24.96		651156		28.10	
	UPPER LIMIT	3460480		19.19		2026880		25.46		1302312		28.60	
	LOWER LIMIT	865120		18.19		506720		24.46		325578		27.60	
	CLIENT SAMPLE NO.												
01	13MWDUP	1810946		18.69		742675		24.96		449051		28.09	
02	13MW6	2067302		18.69		1029126		24.96		689987		28.10	
03	13MW7	1951154		18.69		938398		24.96		616375		28.09	
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18													
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IS4 (PHN) = Phenanthrene-d10
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AREA UPPER LIMIT = +100% of internal standard area
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RT UPPER LIMIT = + 0.50 minutes of internal standard RT
RT LOWER LIMIT = - 0.50 minutes of internal standard RT

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-A

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Lab File ID (Standard): 0K23010-CCV1A68 Date Analyzed: 11/23/10

Instrument ID: 5973HP68 Time Analyzed: 1642

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
	12 HOUR STD	525302	8.31	1983230	11.15	977360	15.26
	UPPER LIMIT	1050604	8.81	3966460	11.65	1954720	15.76
	LOWER LIMIT	262651	7.81	991615	10.65	488680	14.76
	CLIENT SAMPLE NO.						
01	13MWDUP	635814	8.31	2394188	11.14	1300480	15.26
02	13MW6	709145	8.31	2643736	11.14	1427509	15.26
03	13MW7	632711	8.31	2407963	11.14	1320286	15.26
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IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

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

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-A

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Lab File ID (Standard): 0K23010-CCV1A68 Date Analyzed: 11/23/10

Instrument ID: 5973HP68 Time Analyzed: 1642

		IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
	12 HOUR STD	1334599	18.69	620475	24.96	458051	28.09
	UPPER LIMIT	2669198	19.19	1240950	25.46	916102	28.59
	LOWER LIMIT	667299	18.19	310237	24.46	229025	27.59
	CLIENT SAMPLE NO.						
01	13MWDUP	1810946	18.69	742675	24.96	449051	28.09
02	13MW6	2067302	18.69	1029126	24.96	689987	28.10
03	13MW7	1951154	18.69	938398	24.96	616375	28.09
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IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

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

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Lab File ID (Standard): 0K23010-CCV3A68 Date Analyzed: 11/23/10

Instrument ID: 5973HP68 Time Analyzed: 1848

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
	12 HOUR STD	637547	8.31	2379271	11.14	1284180	15.26
	UPPER LIMIT	1275094	8.81	4758542	11.64	2568360	15.76
	LOWER LIMIT	318773	7.81	1189635	10.64	642090	14.76
	CLIENT SAMPLE NO.						
01	13MWDUP	635814	8.31	2394188	11.14	1300480	15.26
02	13MW6	709145	8.31	2643736	11.14	1427509	15.26
03	13MW7	632711	8.31	2407963	11.14	1320286	15.26
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20							

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

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

Column used to flag internal standard area values with an asterisk.
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FORM VIII SV

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Lab File ID (Standard): 0K23010-CCV3A68 Date Analyzed: 11/23/10

Instrument ID: 5973HP68 Time Analyzed: 1848

		IS4(PHN) AREA	#	RT	#	IS5(CRY) AREA	#	RT	#	IS6(PRY) AREA	#	RT	#
	12 HOUR STD	1812511		18.69		801093		24.95		492332		28.09	
	UPPER LIMIT	3625022		19.19		1602186		25.45		984664		28.59	
	LOWER LIMIT	906255		18.19		400547		24.45		246166		27.59	
	CLIENT SAMPLE NO.												
01	13MWDUP	1810946		18.69		742675		24.96		449051		28.09	
02	13MW6	2067302		18.69		1029126		24.96		689987		28.10	
03	13MW7	1951154		18.69		938398		24.96		616375		28.09	
04													
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19													
20													

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

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

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

CompuChem, a Division of Liberty Analytical Corporation

I. SAMPLE DATA PACKAGE

GC/MS by SW-846

The sample data package shall include data for all analyses of all samples in one Sample Delivery Group (SDG), including field samples, dilutions, reanalyses, blanks, matrix spikes, matrix spike duplicates, and laboratory control samples. The sample data package consists of the following:

A. SDG Narrative

B. Chain-of-Custody Documentation

C. SDG Data

LAB : LIBRTY

METHOD: 8270C

SDG #: 1010107

A. SDG Narrative

CompuChem

a division of Liberty Analytical Corporation
501 Madison Avenue
Cary, N.C. 27513
Tel: 919/379-4100 **Fax: 919/379-4050**

SDG NARRATIVE
SDG # 1010107
Project #: RAAP HWMU13 (OBG)/B03204-08
PROTOCOL: SW-846
Date: November 29, 2010

EPA Sample Number	Semivolatile Fraction	DL/RE/RX
13MWDUP	Yes	No
13MW1	Yes	No
13MW2	Yes	No
13MW3	Yes	No
13MW4	Yes	No
13MW5	Yes	No
13MW5MS	Yes	No
13MW5MSD	Yes	No
13MW6	Yes	No
13MW7	Yes	No

The ten (10) aqueous samples listed above were received, in sealed shipping containers, with proper documentation, on October 20, 2010. The cooler temperatures associated with these samples were 0.6, 0.1, 0.2, 1.0, and 0.9 °C.

With the exception of sample 13MW3, these samples were received intact. Six (6) amber liter bottles were sent for sample 13MW3, from which one (1) amber liter bottle for semivolatile fraction arrived broken. However, enough sample volume was received intact to perform the requested analyses for this sample.

The samples were scheduled for the requested analysis of the semivolatile fraction.

SW-846, 3rd Edition, Update 3, Separatory Funnel extraction (Method 3510C), and Method 8270C were used to prepare and analyze these samples, with the exceptions and/or additions requested by the client. This portion of the narrative deals with the semivolatile fraction only.

Semivolatile:

Extraction and analysis holding time requirements were met for all samples in this SDG.

Samples 13MW1, 13MW3, and 13MW5MSD were, each, extracted using 950 mL of raw sample, rather than the method-specified amount of 1000 mL. The use of this lower volume of the raw sample resulted in slightly higher Contract Required Quantitation Limits (CRQLs).

Sample 13MW5MS was extracted using 975 mL of raw sample, rather than the method-specified amount of 1000 mL. The use of this lower volume of the raw sample resulted in slightly higher Contract Required Quantitation Limits (CRQLs).

There were no semivolatile project analytes identified above the Contract Required Quantitation Limits (CRQLs) in any of these samples.

Manual integrations were performed on one or more of the process files associated with this SDG. Please see the detailed Manual Integration Summary report that is located behind this SDG narrative. The reasons have been coded with explanations provided in the notice included in the narrative section of the SDG.

All decafluorotriphenylphosphine (DFTPP) abundance criteria were met for tunes associated to this SDG. Tailing factor criteria were met for Pentachlorophenol and Benzidine. The breakdown criterion was met for DDT. These three compounds were added to the DFTPP solution and analyzed together.

Overall QC criteria were met for initial and continuing calibration standards associated to this SDG.

All of the surrogates met recovery criteria in the analyses of these samples.

All of the internal standards met response and retention time criteria in the analyses of these samples.

The associated method blanks met all quality control criteria.

Sample 13MW5 was used as the original to prepare the duplicate matrix spikes (MS/MSD) as requested. The associated MS/MSD met all accuracy criteria. With one (1) exception, the associated MS/MSD met all precision criteria. The Relative Percent Difference (RPD) of 3,3'-Dimethylbenzidine spike compound was marginally high and failed quality control criteria. This compound was flagged as an outlier in the matrix spike/matrix spike duplicate samples.

The associated Laboratory Control Samples, prepared and analyzed along with these samples, met all accuracy criteria.

An uncertainty of these test results may be estimated from the recovery of the surrogates added to the sample prior to sample preparation or from the recovery of spiked compound(s) in the associated laboratory control sample. Further information is available upon request.

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 above. Furthermore, I certify that the tests used in this report meet all requirements of the NELAC standards unless otherwise stated in the SDG narrative or QA notice. Release of the data contained in this hardcopy data package and/or in the computer-readable data submitted electronically has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

S.A. Parikh

Saroj A. Parikh
Data Reviewer II
November 29, 2010

CompuChem
A Division Of
Liberty Analytical Corp.

Manual Integration Summary

Client: DRAPER
Work Order: 1010107
Sdg: DRAFT 1010107
Project: RAAP HWMU13 (OBG)/B03204-08
Case:

Analysis: SVOC 8270C
Lab Id: 0K02011-CAL1 **Client Id:** DRAFT: SSTD005Z4
Sample Type: Cal Standard
Instrument: 5972hp70

Analyte	Type	M Flag
2,4,6-Tribromophenol	SURROGATE	M
2-Fluorobiphenyl	SURROGATE	M

Sample Total: 2

Analysis: SVOC 8270C
Lab Id: 0K02011-CAL2 **Client Id:** DRAFT: SSTD010Z4
Sample Type: Cal Standard
Instrument: 5972hp70

Analyte	Type	M Flag
2,4,6-Tribromophenol	SURROGATE	M

Sample Total: 1

Analysis: SVOC 8270C
Lab Id: 0K02011-CAL5 **Client Id:** DRAFT: SSTD050Z4
Sample Type: Cal Standard
Instrument: 5972hp70

Analyte	Type	M Flag
Dibenzo(a,h)anthracene	TARGET	M

Sample Total: 1

Total Manual Integrations: 4

GC and GC/MS Column and Trap Specifications Table

SDG #: 1010107

COLUMNS

Columns Utilized	Brand Name	Coating Material	ID (mm)	Film Thickness (um)	Length (m)
	GC Laboratory				
	Restek	RTX-5	0.53	1.0	30
	Restek	RTX-SMS	0.53	1.0	30
	Restek	clpest	0.32	0.5	30
	Restek	clpest2	0.32	0.42	30
	J&W	DB-210	0.53	1.0	30
	J&W	GS-GASPRO	0.32	N/A	30
	GC Volatiles Laboratory				
	Restek	RTX-Volatiles	0.53	2.0	30
	GC/MS Volatiles Laboratory				
	Restek	RTX-VMS	0.18	1.0	20
	Supelco	SPB-624	0.32	1.8	60
	Supelco	SPB-624	0.53	3.0	75
	Phenomonex	ZB-624	0.32	1.8	60
	GC/MS Semivolatiles Laboratory				
X	Restek	RTX-5MS	0.32	0.25	30
	Phenomonex	ZB-5MS	0.32	0.25	30
	HPLC Laboratory				
	Supelco	Supelcosil LC-PAH	4.6	5.0	15 cm
	Supelco	Discovery RP Amide C16	4.6	5.0	25 cm
	Restek	Pinnacle Cyano	4.6	5.0	25 cm
	Restek	Allure C18	4.6	5.0	25 cm

TRAPS *

GC and GC/MS Volatiles Laboratory	
Supelco J (BETXTRAP™)	* 7.7 cm Carbopack C
	* 1.2 cm Carbopack B
Supelco K (Vocarb3000)	* 10 cm of Carbopack B (Graphitized Carbons)
	* 6 cm of Carboxen 1000 (Carbon molecular sieves)
	* 1 cm of Carboxen 1001 (Carbon molecular sieves)

Rev. 28

* This table contains the GC columns (and volatile organic trap) used for the analysis of volatiles, semi-voaltiles, pesticides, and Aroclors by the SOM01.2 SOW.

Please see the SDG Narrative(s) for the specific fractions(s) relative to this SDG.

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CompuChem's Pagination Convention

As required by the EPA CLP Statement of Work (SOW) documents, data to be delivered must be paginated (by machine or hand). In the event that the initial numbering is incorrect (a page numbered twice or a page skipped, for example), it is CompuChem's policy to add an alphabetic suffix to a page number when necessary (e.g., 100A, 100B, etc.).

CompuChem

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Notification Regarding Manual Editing/Integration Flags

In some instances, manual adjustments to the software output are necessary to provide accurate data. These manual integrations are performed by the data reviewers, GC/MS operators, or GC chemists. An Extracted Ion Current Profile (EICP) or a GC chromatographic peak has been provided for the manual integration performed on each compound to demonstrate the accuracy of that process. The manual integrations are flagged on the quantitation report in the far right column beyond the FINAL concentration for GC/MS analysis, and in the "Flags" column for GC analysis. The manual editing/integration flags are:

M - Denotes that a manual integration has been performed for this compound. The manual integration was performed in order to provide the most accurate area count possible for the peak.

H - Denotes that the data reviewer, GC/MS operator, or GC Chemist has chosen an alternate peak within the retention time window from that chosen by the software for that compound. No manual integration is performed in choosing an alternate peak. The software still performs the integration.

MH - Denotes that an alternate peak has been chosen within the retention time window from that chosen by the software for that compound and also a manual integration of the chosen peak has been performed. The manual integration was performed in order to provide the most accurate area count possible for the peak.

L - Denotes that a data reviewer or GC/MS operator has selected an alternate library search. This is typically done when an additional tentatively identified compound (TIC) has been added to the number of peaks searched. No manual integration is performed in choosing an alternate peak. The software still performs the integration.

ML - Denotes that an alternate library search has been selected and a manual integration has also been performed. This is typically done when an additional TIC has been added and the TIC peak also required a manual integration.

The EPA CLP SOW documents require additional explanations for manual editing/integration. In the accompanying raw data packages, additional codes have been applied to the "M" flag and carry the following meanings;

M1 - The compound was not found by the automatic integration routine.

M2 - The compound was incorrectly integrated by the automatic integration routine.

M3 - The co-eluting compounds were incorrectly integrated by the automatic integration routine.

These codes will appear in the GC/MS and GC raw data.

DATA REPORTING QUALIFIERS

On the Form I, under the column labeled "Q" for qualifier, each result is flagged with the specific data reporting qualifiers listed below, as appropriate. Up to five qualifiers may be reported on Form I for each compound. The qualifiers used are:

U : This flag indicates the compound was analyzed for but not detected. The Contract Required Quantitation Limit (CRQL), or reporting limit, will be adjusted to reflect any dilution and, for soils, the percent moisture.

J : This flag indicates an estimated value. The flag is used as detailed below:

1. When estimating a concentration for tentatively identified compounds (TICs) where a response factor of 1:1 is assumed for the TIC analyte,

2. When the mass spectral and retention time data indicate the presence of a compound that meets the volatile and semivolatile GC/MS identification criteria, and the result is less than the adjusted CRQL (or Reporting Limit) but greater than zero, and

3. When the retention time data indicate the presence of a compound that meets the pesticide and/or Aroclor or other GC or HPLC identification criteria, and the result is less than the adjusted CRQL (or Reporting Limit) but greater than zero. For example, if the CRQL (or Reporting Limit) is 10 µg/L, but a concentration of 3 µg/L is calculated, it is reported as 3J.

N : This flag indicates presumptive evidence of a compound. This flag is only used for TICs, where the identification is based on a mass spectral library search and must be used with the J flag. For generic characterization of a TIC such as "chlorinated hydrocarbon" (or for an "unknown," with no matches ≥85% in the SOM01.1 SOW), the N flag is not used.

P : In the EPA's Contract Laboratory Program (CLP), this flag is used for a pesticide/Aroclor target analyte, when there is greater than 25% difference for detected concentrations between the two GC columns. The lower of the two values is reported on the Form I and flagged with a P.
For SW-846 GC and HPLC analyses, when the Relative Percent Difference (RPD) is greater than 40% and there is no evidence of chromatographic anomalies or interferences, then the higher of the two values is reported and flagged with a P. When the RPD is equal to or less than 40%, our policy is to also report the higher of the two values, although the choice could be a project specific issue. For certain HPLC analyses, if one of the HPLC columns displays co-elution of target analytes, all results are reported from a primary column displaying no co-elution. Results are still flagged with a P if the RPD between columns is greater than 40%.

C : This flag applies to GC or HPLC results where the identification has been confirmed by GC/MS. If GC/MS confirmation was attempted but was unsuccessful, this flag is not applied; a laboratory-defined flag is used instead (see the X/Y/Z qualifier.

DATA REPORTING QUALIFIERS (continued)

B : This flag is used when the analyte is found in the associated blank as well as in the sample. It indicates probable blank contamination and warns the data user to take appropriate action. This flag is used for a TIC as well as for a positively identified target compound. The combination of flags BU or UB is not an allowable policy. Blank contaminants are flagged B only when they are detected in the sample.

E : This flag identifies compounds whose concentrations (responses in the SOM01.1 SOW) exceed the upper level of the calibration range (exceed the response of the high ICAL standard in the SOM01.1 SOW) of the instrument for that specific analysis. If one or more compounds have a response greater than the upper level of the calibration range (greater than the response of the highest ICAL standard in the SOM01.1 SOW), the sample or extract will be diluted and reanalyzed. All such compounds with a response greater than the upper level of the calibration range (with responses greater than the response of the highest ICAL standard in the SOM01.1 SOW) will have the concentration (result in the SOM01.1 SOW) flagged with an E on Form I for the original analysis.

D : If a sample or extract is reanalyzed at a higher dilution factor, for example when the concentration (response in the SOM01.1 SOW) of an analyte exceeds the upper calibration range (exceeds the response of the highest ICAL standard in the SOM01.1 SOW), the DL suffix is appended to the sample number on the Form I for the more diluted sample, and **all** reported concentrations on that Form I are flagged with the D flag. This flag alerts data users that any discrepancies between the reported concentrations may be due to dilution of the sample or extract.

NOTE 1: The D flag is not applied to compounds which are not detected in the sample analysis i.e. compounds reported with the CRQL (or Reporting Limit) and the U flag.

NOTE 2: Separate Forms I are used for reporting the original analysis (Client Sample No. XXXXX) and the more diluted sample analysis (Client Sample No. XXXXXDL) i.e. the results from both analyses are not combined on a single Form I.

A: This flag indicates that a TIC is a suspected aldol-condensation product.

S: In the SOM01.1 SOW, this flag is used to indicate an estimated value for Aroclor target compounds where a valid 5-point initial calibration was not performed prior to the analytes detection in a sample. If an "S" flag is used for a specific Aroclor, then a reanalysis of the sample is required after a valid 5-point calibration is performed for the detected Aroclor.

X/Y/Z : Other specific flags may be required to properly define the results. If used, the flags will be fully described in the SDG Narrative. The laboratory-defined flags are limited to X, Y, and Z.

B. Chains-of-Custody

The laboratory shall include a copy of the Chain-of-Custody (CoC) documentation for all of the samples in the SDG. The CoC documents shall be arranged in increasing Client Sample ID number order, considering both letters and numbers.

CHAIN OF CUSTODY RECORD

10-19-10

92

Laboratory: CompuChem Environmental, 501 Madison Avenue, Cary, NC 27513/Cathy Dover, Manager/1-800-833-5097

Client: Draper Aden Associates Attn: 0 Address: 0 0 Phone: 0 Fax: 0 Fax: 0	**Consultant:** Draper Aden Associates Attn: Janet C. Frazier Address: 2206 South Main Street Blacksburg, Virginia 24060 Phone: (540) 552-0444 Fax: (540) 552-0291	**Sample Site:** RAAP, Radford, Virginia **Location:** Open Burning Ground (OBG)/HWMU13 **Event:** 2nd Semiannual 2010 Monitoring Event **DAA JN:** B03204-08 **Lab JN:**	Project Specific (PS) or Batch (B) QC: Sample Collection for Project Complete? YES UPS 12-237-301-01- 5634-5155 5818-5969 Carrier: K 5754-0978 Tracking Number: 1 5608-9184 5644-9598 5713-1204		

Box 1: Matrix
SW Surface Water; GW Groundwater; L Leachate; S Soil; T Trip Blank; E Equipment Blank; P Product; O Other

Box 2: Preservative
A HCl; B HNO_3; C H_2SO_4; D $Na_2S_2O_3$; E NaOH; F ZnAc; G Other (Specify); H None

Box 3: Filtered/Unfiltered
F Filtered; U Unfiltered

Box 4: Sample Type
G Grab; C Composite

Box 5: Sample Container Type
P Plastic; AG Amber Glass; V VOA; CG Clear Glass

Invoice
Copy to Consultant: YES
Bill: CLIENT OTHER
Preserved and shipped on ice: YES

Box 4 - Sample Type	G	G	G	G	G	G						
Box 3 - Filtered/Unfiltered	U	U	U	U	U	U						
Required pH of Sample					<2	<2						
Box 2 - Preservative	H	H	H	H	B	B						
Box 5 - Sample Container Type	2-1L A		1-250ml P	2-1L A	1-500ml P							

Sample ID	Date: 2010	Time	Box 1: Matrix	Number of Bottles	8332/3535 - Nitroglycerine (2 AG)	8330 - Explosives	Perchlorate 314.0 (250 mL)	SVOCs 8270C (35 Zac. 2 AG (1020 lot #22)	ICP 6010B/3005A/ thallium 7000 (Metals-Total) (500 mL)	7470A (Mercury-Total)	Metals pH	
13MW1	10/18	1105	GW	6	X	X	X	X	X	X	<2	
13MW2	10/18	1200	GW	6	X	X	X	X	X	X	<2	
13MW3	10/18	0806	GW	6	X	X	X	X*	X	X	<2	*rec'd 1-SVOC broken for 13MW3 (SD) 10/20/10
13MW4	10/18	0910	GW	6	X	X	X	X	X	X	<2	
13MWDUP	10/19	0730	GW	6	X	X	X	X	X	X	<2	
13MW5	10/19	0830	GW	6	X	X	X	X	X	X	<2	USE FOR QC
13MW6	10/18	1010	GW	6	X	X	X	X	X	X	<2	
13MW7	10/19	0945	GW	6	X	X	X	X	X	X	<2	

GENERAL NOTES:
1. Level 4 deliverable with EDD and pdf.
2. REPORT DL/QL and estimated results.
(See 4th Q. 2009, if needed).
or call.
JCF 10.2.10

Residual Chlorine Present?
Yes ____ No ✓

1010107-02	
-03	
-04	
-05	
-06	
1010107-07	
-07	
-08	

Clients Special Instructions: Level 4 with odd and PDF.

0.6, 0.1, 0.2, 1.0, 0.9°C SN0015

Received by lab in Good Condition ✓ Yes ____ No Custody Seal Intact ✓ Yes ____ No Temperature upon arrival ^ Received on Ice ✓ Yes ____ No
Describe problems, if any:

Sampler Name (Print): KEN CODDINGTON	Date: 10-18-10	#1 Relinquished by (Signature):	Date: 10-19-10	#2 Relinquished by (Signature):	Date:	Sample Storage Time Requested:
Sampler Signature:	Time: 0600	Company Name: DAA	Time: 1700	Company Name:	Time:	
Sampler Name (Print): Chris Branscome	Date: 10/18/10	#1 Received by (Signature): Jennifer Dover	Date: 10/20/10	#2 Received by (Signature):	Date:	30 DYS ORG/6 MTHS INORG
Sampler Signature: Chris Branscome	Time: 0600	Company Name: Compuchem	Time: 0930	Company Name:	Time:	

JCF 11/5

4/5

ANALYTICAL METHOD: 8270C
TYPE METHOD: GCMS
CLASS: SEMIVOLATILE

No.	PARAMETER	CAS RN	Permit QL (ug/l)
1.	2,4-dichlorophenol	120-83-2	
2.	3,3'-dimethylbenzidine	119-93-7	
3.	2-chlorophenol	95-57-8	
4.	3-methylphenol	108-39-4	
5.	4-methylphenol	106-44-5	
6.	4-nitrophenol	100-02-7	
7.	acetophenone	98-86-2	
8.	benzo(a)anthracene	56-55-3	
9.	benzo(a)pyrene	50-32-8	
10.	benzo[b]fluoranthene	205-99-2	
11.	benzo[k]fluoranthene	207-08-9	
12.	bis(2-Ethylhexyl)phthalate	117-81-7	
13.	butyl benzyl phthalate	85-68-7	
14.	dibenz(a,h)anthracene	53-70-3	
15.	dibenzofuran	132-64-9	
16.	di-n-butyl phthalate	84-74-2	
17.	diethyl phthalate	84-66-2	
18.	dimethyl phthalate	131-11-3	
19.	di-n-octyl phthalate	117-84-0	
20.	diphenylamine	122-39-4	
21.	fluoranthene	206-44-0	
22.	indeno[1,2,3-cd]pyrene	193-39-5	
23.	nitrobenzene	98-95-3	
24.	phenol	108-95-2	
25.	pyrene	129-00-0	
26.	Hexachloroethane	67-72-1	

.p:\admin\divisions\envr\templates\bburg eteam temp\field events\raap\sample event set up\semi-annual events\hwmu-13\hwmu13-target analyte list gw (new) 2007 10.doc
Revised July 18, 2005 – JCF
Revised November, 2005 – new permit – JCF
Revised Oct 10, 2009
Revised September, 2010, new 8260B analytes - KPO

WORK ORDER

1010107

Printed: 11/29/2010 6:05:25PM

COMPUCHEM

Client:	**DRAPER**	**Project Manager:**	**Cathy Dover**
Project:	**RAAP HWMU13 (OBG)/B03204-08**	**Project Number:**	**RAAP HWMU13 (OBG)/B03204-08**
SDG:	**1010107** **CASE:**	**Status:**	**Reported**

Report To:
DRAPER
JANET FRAZIER
2206 SOUTH MAIN STREET
BLACKSBURG, VA 24060
Phone: (540)552-0444
Fax: -

Invoice To:
DRAPER
JANET FRAZIER
2206 SOUTH MAIN STREET
BLACKSBURG, VA 24060
Phone :(540)552-0444
Fax: -

Date Due: 11/09/2010 00:00 (20 day TAT)

Received By: Cathy Dover — Date Received: 10/20/2010 09:36

Logged In By: Cathy Dover — Date Logged In: 10/20/2010 16:12

J & B Flags?: **YES**	TICS?:**NO**	Deliverable: **Style 9**	EDD : **DRAPER ACCESS + ERIS**
Metals ND to? **MDL**	Spike Level: **FULL Spike**		

USE 1010107-01*NOTE SAMPLING DATES*SVOC FULL SCAN 8270C=HWMU13A.SUB*8330A=DAU13*8332=NITROGLYCERIN ONLY*6020 MS MTL=Sb,As,Ba,Cd,Cr,Pb,Ni,Se,Ag & Zn + Hg 7470*PERCHLORATE 314.0--4 ug/L STD.

Analysis	Due	TAT	Expires	Received	Comments
1010107-01 13MW5 [Water] Sampled 10/19/2010 08:30 Eastern					**USE FOR QC**
6020 ICP MS	11/09/2010 16:00	20	04/17/2011 08:30	10/20/2010 09:36	
GC-8330B EXPLOSIVES	11/09/2010 16:00	20	11/02/2010 08:30	10/20/2010 09:36	SubList = GC- 8330 DAU13 (10-20-10)
GC-8332 EXPLOSIVES	11/09/2010 16:00	20	10/26/2010 08:30	10/20/2010 09:36	SubList = GC- 8332 NITRO (10-20-10)
IC 314.0 Perchlorate Water	11/09/2010 16:00	20	11/16/2010 08:30	10/20/2010 09:36	
SVOC 8270C	11/09/2010 16:00	20	10/26/2010 08:30	10/20/2010 09:36	SubList = SVapix- HWMU13A (10-21-10
7470A/7471A Mercury	11/09/2010 16:00	20	11/16/2010 08:30	10/20/2010 09:36	
1010107-02 13MW1 [Water] Sampled 10/18/2010 11:05 Eastern					
GC-8332 EXPLOSIVES	11/09/2010 16:00	20	10/25/2010 11:05	10/20/2010 09:36	SubList = GC- 8332 NITRO (10-20-10)
SVOC 8270C	11/09/2010 16:00	20	10/25/2010 11:05	10/20/2010 09:36	SubList = SVapix- HWMU13A (10-21-10
6020 ICP MS	11/09/2010 16:00	20	04/16/2011 11:05	10/20/2010 09:36	
GC-8330B EXPLOSIVES	11/09/2010 16:00	20	11/01/2010 11:05	10/20/2010 09:36	SubList = GC- 8330 DAU13 (10-20-10)
IC 314.0 Perchlorate Water	11/09/2010 16:00	20	11/15/2010 11:05	10/20/2010 09:36	
7470A/7471A Mercury	11/09/2010 16:00	20	11/15/2010 11:05	10/20/2010 09:36	

1010107

COMPUCHEM

Client:	**DRAPER**	**Project Manager:**	**Cathy Dover**
Project:	**RAAP HWMU13 (OBG)/B03204-08**	**Project Number:**	**RAAP HWMU13 (OBG)/B03204-08**
SDG:	**1010107** **CASE:**	**Status:**	**Reported**

Analysis	Due	TAT	Expires	Comments	
1010107-03 13MW2 [Water] Sampled 10/18/2010 12:00 Eastern					
7470A/7471A Mercury	11/09/2010 16:00	20	11/15/2010 12:00	10/20/2010 09:36	
6020 ICP MS	11/09/2010 16:00	20	04/16/2011 12:00	10/20/2010 09:36	
GC-8330B EXPLOSIVES	11/09/2010 16:00	20	11/01/2010 12:00	10/20/2010 09:36	SubList = GC- 8330 DAU13 (10-20-10)
GC-8332 EXPLOSIVES	11/09/2010 16:00	20	10/25/2010 12:00	10/20/2010 09:36	SubList = GC- 8332 NITRO (10-20-10)
IC 314.0 Perchlorate Water	11/09/2010 16:00	20	11/15/2010 12:00	10/20/2010 09:36	
SVOC 8270C	11/09/2010 16:00	20	10/25/2010 12:00	10/20/2010 09:36	SubList = SVapix- HWMU13A (10-21-10
1010107-04 13MW3 [Water] Sampled 10/18/2010 08:00 Eastern					
GC-8332 EXPLOSIVES	11/09/2010 16:00	20	10/25/2010 08:00	10/20/2010 09:36	SubList = GC- 8332 NITRO (10-20-10)
GC-8330B EXPLOSIVES	11/09/2010 16:00	20	11/01/2010 08:00	10/20/2010 09:36	SubList = GC- 8330 DAU13 (10-20-10)
7470A/7471A Mercury	11/09/2010 16:00	20	11/15/2010 08:00	10/20/2010 09:36	
6020 ICP MS	11/09/2010 16:00	20	04/16/2011 08:00	10/20/2010 09:36	
IC 314.0 Perchlorate Water	11/09/2010 16:00	20	11/15/2010 08:00	10/20/2010 09:36	
SVOC 8270C	11/09/2010 16:00	20	10/25/2010 08:00	10/20/2010 09:36	SubList = SVapix- HWMU13A (10-21-10
1010107-05 13MW4 [Water] Sampled 10/18/2010 09:10 Eastern					
7470A/7471A Mercury	11/09/2010 16:00	20	11/15/2010 09:10	10/20/2010 09:36	
GC-8330B EXPLOSIVES	11/09/2010 16:00	20	11/01/2010 09:10	10/20/2010 09:36	SubList = GC- 8330 DAU13 (10-20-10)
GC-8332 EXPLOSIVES	11/09/2010 16:00	20	10/25/2010 09:10	10/20/2010 09:36	SubList = GC- 8332 NITRO (10-20-10)
IC 314.0 Perchlorate Water	11/09/2010 16:00	20	11/15/2010 09:10	10/20/2010 09:36	
SVOC 8270C	11/09/2010 16:00	20	10/25/2010 09:10	10/20/2010 09:36	SubList = SVapix- HWMU13A (10-21-10
6020 ICP MS	11/09/2010 16:00	20	04/16/2011 09:10	10/20/2010 09:36	
1010107-06 13MWDUP [Water] Sampled 10/19/2010 07:30 Eastern					
GC-8332 EXPLOSIVES	11/09/2010 16:00	20	10/26/2010 07:30	10/20/2010 09:36	SubList = GC- 8332 NITRO (10-20-10)
6020 ICP MS	11/09/2010 16:00	20	04/17/2011 07:30	10/20/2010 09:36	
SVOC 8270C	11/09/2010 16:00	20	10/26/2010 07:30	10/20/2010 09:36	SubList = SVapix- HWMU13A (10-21-10
GC-8330B EXPLOSIVES	11/09/2010 16:00	20	11/02/2010 07:30	10/20/2010 09:36	SubList = GC- 8330 DAU13 (10-20-10)
IC 314.0 Perchlorate Water	11/09/2010 16:00	20	11/16/2010 07:30	10/20/2010 09:36	
7470A/7471A Mercury	11/09/2010 16:00	20	11/16/2010 07:30	10/20/2010 09:36	

1010107

COMPUCHEM

Client:	**DRAPER**	**Project Manager:**	**Cathy Dover**
Project:	**RAAP HWMU13 (OBG)/B03204-08**	**Project Number:**	**RAAP HWMU13 (OBG)/B03204-08**
SDG:	**1010107** **CASE:**	**Status:**	**Reported**

Analysis	Due	TAT	Expires		Comments
1010107-07 13MW6 [Water] Sampled 10/18/2010 10:10 Eastern					
GC-8330B EXPLOSIVES	11/09/2010 16:00	20	11/01/2010 10:10	10/20/2010 09:36	SubList = GC- 8330 DAU13 (10-20-10)
IC 314.0 Perchlorate Water	11/09/2010 16:00	20	11/15/2010 10:10	10/20/2010 09:36	
6020 ICP MS	11/09/2010 16:00	20	04/16/2011 10:10	10/20/2010 09:36	
7470A/7471A Mercury	11/09/2010 16:00	20	11/15/2010 10:10	10/20/2010 09:36	
SVOC 8270C	11/09/2010 16:00	20	10/25/2010 10:10	10/20/2010 09:36	SubList = SVapix- HWMU13A (10-21-10
GC-8332 EXPLOSIVES	11/09/2010 16:00	20	10/25/2010 10:10	10/20/2010 09:36	SubList = GC- 8332 NITRO (10-20-10)
1010107-08 13MW7 [Water] Sampled 10/19/2010 09:45 Eastern					
SVOC 8270C	11/09/2010 16:00	20	10/26/2010 09:45	10/20/2010 09:36	SubList = SVapix- HWMU13A (10-21-10
6020 ICP MS	11/09/2010 16:00	20	04/17/2011 09:45	10/20/2010 09:36	
7470A/7471A Mercury	11/09/2010 16:00	20	11/16/2010 09:45	10/20/2010 09:36	
IC 314.0 Perchlorate Water	11/09/2010 16:00	20	11/16/2010 09:45	10/20/2010 09:36	
GC-8332 EXPLOSIVES	11/09/2010 16:00	20	10/26/2010 09:45	10/20/2010 09:36	SubList = GC- 8332 NITRO (10-20-10)
GC-8330B EXPLOSIVES	11/09/2010 16:00	20	11/02/2010 09:45	10/20/2010 09:36	SubList = GC- 8330 DAU13 (10-20-10)

Client: DRAPER

Work Order 1010107

Sdg: DRAFT 1010107

Sample Summary

Project: RAAP HWMU13 (OBG)/B03204-08

Case:

Lab Number	Client Id	Sampled	Recieved	Extracted	Initial	Extract	Final	Spike	%Moist	PH	Batch	Analysis
1010107-01	DRAFT: 13MW5	10/19/10	10/20/10	10/22/10	1000	1000	1000	500			0102117	SVOC 8270C
1010107-02	DRAFT: 13MW1	10/18/10	10/20/10	10/22/10	950	1000	1000	500			0102117	SVOC 8270C
1010107-03	DRAFT: 13MW2	10/18/10	10/20/10	10/22/10	1000	1000	1000	500			0102117	SVOC 8270C
1010107-04	DRAFT: 13MW3	10/18/10	10/20/10	10/22/10	950	1000	1000	500			0102117	SVOC 8270C
1010107-05	DRAFT: 13MW4	10/18/10	10/20/10	10/22/10	1000	1000	1000	500			0102117	SVOC 8270C
1010107-06	DRAFT: 13MWDUP	10/19/10	10/20/10	10/22/10	1000	1000	1000	500			0102117	SVOC 8270C
1010107-07	DRAFT: 13MW6	10/18/10	10/20/10	10/22/10	1000	1000	1000	500			0102117	SVOC 8270C
1010107-08	DRAFT: 13MW7	10/19/10	10/20/10	10/22/10	1000	1000	1000	500			0102117	SVOC 8270C
0102117-BLK1	DRAFT: SBLKEJ	Blank		10/22/10	1000	1000	1000				0102117	SVOC 8270C
0102117-BS1	DRAFT: SEJLCS	LCS		10/22/10	1000	1000	1000	500			0102117	SVOC 8270C
0102117-BSD1	DRAFT: SEJLCSD	LCS Dup		10/22/10	1000	1000	1000	500			0102117	SVOC 8270C
0102117-MS1	DRAFT: 13MW5MS	Matrix Spike		10/22/10	975	1000	1000	500			0102117	SVOC 8270C
0102117-MSD1	DRAFT: 13MW5MSD	Matrix Spike Dup		10/22/10	950	1000	1000	500			0102117	SVOC 8270C

ASSIGNED TO: B. Patterson

EMP ID NUMBER: 2713

CompuChem
EXTRACTION WORKSHEET
SEMI-VOLATILE WATER
Method 3510C (for 8270C, 8270D or 625)

10-22-10

DATE/TIME EXTRACTED/POSTED: 10-22-10 @ 0950

H: 10/25
D: 11/09

BATCH NO.: 0102117

	COMPUCHEM SAMPLE NUMBER	CLIENT SAMPLE ID	QC SAMPLE TYPE	SAMPLE VOLUME (mL)	FINAL VOLUME (mL)	Adjusted pH ACID	Adjusted pH BASE	COMMENTS
1	0102117-BLK1	SBLKEJ	MB	1000	1.0	1.9	13.0	
2	0102117-BS1	SEJLCS	LCS	1000		1.9	13.0	
3	0102117-BSD1	SEJLCSD	LCSD	1000		1.9	13.0	
4	0102117-MS1	13MW5MS	MS	975		1.9	13.0	
5	0102117-MSD1	13MW5MSD	MSD	950		1.9	13.0	
6	1010097-01	F-15-1010	SAMPLE	1000		1.9	13.0	
7	1010097-03	F-14-1010	SAMPLE	925		1.9	13.0	
8	1010097-04	F-26-1010	SAMPLE	900		1.9	13.0	
9	1010097-06	F-16-1010	SAMPLE	925		1.9	13.0	
10	1010107-01	13MW5	SAMPLE	1000		1.9	13.0	USE AS QC
11	1010107-02	13MW1	SAMPLE	950		1.9	13.0	
12	1010107-03	13MW2	SAMPLE	1000		1.9	13.0	
13	1010107-04	13MW3	SAMPLE	950		1.9	13.0	
14	1010107-05	13MW4	SAMPLE	1000		1.9	13.0	
15	1010107-06	13MWDUP	SAMPLE	1000		1.9	13.0	
16	1010107-07	13MW6	SAMPLE	1000		1.9	13.0	
17	1010107-08	13MW7	SAMPLE	1000		1.9	13.0	
18								
19								
20								
21								
22								
23								
24								
25								
26								

		S-VOL	8270
SURROGATE	NO.	393	
	AMT.	0.5mL	
	LOT	I02003	
SPIKE	NO.		VALID I & II
	AMT.		0.5 mL
	LOT		05J1002/05J1003

FINAL VOLUME VERIFIED: [signature]

REVIEWED BY: B. Patterson

SURROGATE & SPIKE ADDED BY: BFP / 10-22-10
Initials Date

Witness NB / 10/22/10
Initials Date

Analyst initials. Extracted BFP/VG KD NB/VG N2 BFP/VG Bottle up NB/BFP

Manufacturer and lot number of reagents/solvents used [redacted], J34502, Na_2SO_4 - 2XX9-689-4, conc. H_2SO_4 - 72949, 10N NaOH - 2XX9-688-2

REV. 12/29/09: RM

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CompuChem, a Division of Liberty Analytical Corp.

EXTRACT COC

DEPT: EXTR 10-22-10 DATE: 10/22/10

BATCH: 0102117

	COMPUCHEM NUMBER	CLIENT SAMPLE ID	PARAMETER	
1	0102117-BLK1	SBLKEJ	8270C	
2	0102117-BS1	SEJLCS	8270C	
3	0102117-BSD1	SEJLCSD	8270C	
4	0102117-MS1	13MW5MS	8270C	
5	0102117-MSD1	13MW5MSD	8270C	
6	1010097-01	F-15-1010	8270C	
7	1010097-03	F-14-1010	8270C	
8	1010097-04	F-26-1010	8270C	
9	1010097-06	F-16-1010	8270C	
10	1010107-01	13MW5	8270C	
11	1010107-02	13MW1	8270C	
12	1010107-03	13MW2	8270C	
13	1010107-04	13MW3	8270C	
14	1010107-05	13MW4	8270C	
15	1010107-06	13MWDUP	8270C	
16	1010107-07	13MW6	8270C	
17	1010107-08	13MW7	8270C	
18				
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22				
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28				

RELINQUISHED BY	DATE/TIME	REC. BY	REASON
	10/22/10 1500	GC/MS Refrig #3	storage
GCMS#3	11-9-10 0030	MW	analysis
MW	11-9-10 0730	GCMS#3	storage
GCMS #3	11-22-10 1000	GCMS	analysis
GCMS	11-22-10 1100	GCMS#3	Storage
GCMS#3	11-23-10 0100	MW	analysis
MW	11-23-10 0300	GCMS#3	storage

Rev. 7/28/03:dce

Analytical Standard Parent/Mix Relationships

SDG: **Client:**

Case No: **Project:**

Received: **PM:**

Work Order: **COC:** **Bol Num:**

Standard	Std Mix	Std Mix	Pdf	Description	Prepared	Expires	Solvent	LotNum	Vendor
0F18005				DFTPP Injected Concentra	6/17/10	12/17/10		64144	-
	0F18005	0F18004		DFTPP Injected Concentra	6/17/10	12/17/10	CH2Cl2/J17S00	A060630	Restek
	0F18004	STOCK		DFTPP Injected Concentra	6/17/10	12/17/10	CH2Cl2/J17S00	A060630	Restek
0I02003				#393 8270 BNA Surrogate	9/2/10	7/31/12		073010-3[illegible]	NSI
	0I02003	STOCK		#393 8270 BNA Surrogate	9/2/10	7/31/12	Methanol	073010-3[illegible]	NSI
0J11002				8270 Validation I	10/11/10	4/11/11		64480	-
	0J11002	0B17001		8270 Validation I	10/11/10	4/11/11	MeOH/DB781	C-701-16	NSI
	0B17001	STOCK		8270 Validation I	10/11/10	4/11/11	MeOH/DB781	C-701-16	NSI
	0J11002	0C25012		8270 Validation I	10/11/10	4/11/11	MeOH/DB781	21001135[illegible]	ACCUST.
	0C25012	STOCK		8270 Validation I	10/11/10	4/11/11	MeOH/DB781	21001135[illegible]	ACCUST.
	0J11002	0F30010		8270 Validation I	10/11/10	4/11/11	MeOH/DB781	N/A	
	0F30010	STOCK		8270 Validation I	10/11/10	4/11/11	MeOH/DB781	N/A	
	0J11002	0K24005		8270 Validation I	10/11/10	4/11/11	MeOH/DB781	NA	CompuCl
	0K24005	STOCK		8270 Validation I	10/11/10	4/11/11	MeOH/DB781	NA	CompuCl
0J11003				8270 Validation II Spike	10/11/10	4/11/11		64481	-
	0J11003	0H05002		8270 Validation II Spike	10/11/10	4/11/11	MeOH/DB781	070110	Absolute
	0H05002	STOCK		8270 Validation II Spike	10/11/10	4/11/11	MeOH/DB781	070110	Absolute
	0J11003	0J01011		8270 Validation II Spike	10/11/10	4/11/11	MeOH/DB781	A074279	Restek
	0J01011	STOCK		8270 Validation II Spike	10/11/10	4/11/11	MeOH/DB781	A074279	Restek
0J21019				IS Solution Injected Concei	10/21/10	4/7/11		64495	-
	0J21019	0J21018		IS Solution Injected Concei	10/21/10	4/7/11	CH2Cl/J24S07	64495	
	0J21018	0I27002		IS Solution Injected Concei	10/21/10	4/7/11	CH2Cl/J24S07	A075995	Restek
	0I27002	STOCK		IS Solution Injected Concei	10/21/10	4/7/11	CH2Cl/J24S07	A075995	Restek
0J25003				8270I CAL@SSTD005-CAI	10/25/10	12/7/10		64346	-
	0J25003	0F30010		8270I CAL@SSTD005-CAI	10/25/10	12/7/10	CH2CL2/J18S03	N/A	
	0F30010	STOCK		8270I CAL@SSTD005-CAI	10/25/10	12/7/10	CH2CL2/J18S03	N/A	

Standard	Std Mix	Std Mix	Pdf	Description	Prepared	Expires	Solvent	LotNum	Vendor
0J25003	0J25003	0I07007		8270I CAL@SSTD005-CAI	10/25/10	12/7/10	CH2CL2/J18S03	64345	
	0I07007	0D12005		8270I CAL@SSTD005-CAI	10/25/10	12/7/10	CH2CL2/J18S03	040210	Absolute
	0D12005	STOCK		8270I CAL@SSTD005-CAI	10/25/10	12/7/10	CH2CL2/J18S03	040210	Absolute
	0I07007	0D12006		8270I CAL@SSTD005-CAI	10/25/10	12/7/10	CH2CL2/J18S03	040410	Absolute
	0D12006	STOCK		8270I CAL@SSTD005-CAI	10/25/10	12/7/10	CH2CL2/J18S03	040410	Absolute
	0I07007	0D12007		8270I CAL@SSTD005-CAI	10/25/10	12/7/10	CH2CL2/J18S03	040310	Absolute
	0D12007	STOCK		8270I CAL@SSTD005-CAI	10/25/10	12/7/10	CH2CL2/J18S03	040310	Absolute
	0I07007	0D12008		8270I CAL@SSTD005-CAI	10/25/10	12/7/10	CH2CL2/J18S03	040210	Absolute
	0D12008	STOCK		8270I CAL@SSTD005-CAI	10/25/10	12/7/10	CH2CL2/J18S03	040210	Absolute
	0I07007	0G29006		8270I CAL@SSTD005-CAI	10/25/10	12/7/10	CH2CL2/J18S03	A074578	Restek
	0G29006	STOCK		8270I CAL@SSTD005-CAI	10/25/10	12/7/10	CH2CL2/J18S03	A074578	Restek
	0I07007	9L17018		8270I CAL@SSTD005-CAI	10/25/10	12/7/10	CH2CL2/J18S03	A064576	Restek
	9L17018	STOCK		8270I CAL@SSTD005-CAI	10/25/10	12/7/10	CH2CL2/J18S03	A064576	Restek
	0J25003	0J25001		8270I CAL@SSTD005-CAI	10/25/10	12/7/10	CH2CL2/J18S03	64504	
	0J25001	0A12012		8270I CAL@SSTD005-CAI	10/25/10	12/7/10	CH2CL2/J18S03	010510-01	NSI
	0A12012	STOCK		8270I CAL@SSTD005-CAI	10/25/10	12/7/10	CH2CL2/J18S03	010510-01	NSI
	0J25001	0F15006		8270I CAL@SSTD005-CAI	10/25/10	12/7/10	CH2CL2/J18S03	64140	
	0F15006	0F15005		8270I CAL@SSTD005-CAI	10/25/10	12/7/10	CH2CL2/J18S03	414-12B	Chem Se
	0F15005	STOCK		8270I CAL@SSTD005-CAI	10/25/10	12/7/10	CH2CL2/J18S03	414-12B	Chem Se
	0J25001	0H18038		8270I CAL@SSTD005-CAI	10/25/10	12/7/10	CH2CL2/J18S03	64297	
	0H18038	0H17001		8270I CAL@SSTD005-CAI	10/25/10	12/7/10	CH2CL2/J18S03	447-31A	Chem Se
	0H17001	STOCK		8270I CAL@SSTD005-CAI	10/25/10	12/7/10	CH2CL2/J18S03	447-31A	Chem Se
0J25004				8270I CAL@SSTD010-CAI	10/25/10	12/7/10		64347	-
	0J25004	0F30010		8270I CAL@SSTD010-CAI	10/25/10	12/7/10	CH2CL2/J18S03	N/A	
	0F30010	STOCK		8270I CAL@SSTD010-CAI	10/25/10	12/7/10	CH2CL2/J18S03	N/A	
	0J25004	0I07007		8270I CAL@SSTD010-CAI	10/25/10	12/7/10	CH2CL2/J18S03	64345	
	0I07007	0D12005		8270I CAL@SSTD010-CAI	10/25/10	12/7/10	CH2CL2/J18S03	040210	Absolute
	0D12005	STOCK		8270I CAL@SSTD010-CAI	10/25/10	12/7/10	CH2CL2/J18S03	040210	Absolute
	0I07007	0D12006		8270I CAL@SSTD010-CAI	10/25/10	12/7/10	CH2CL2/J18S03	040410	Absolute
	0D12006	STOCK		8270I CAL@SSTD010-CAI	10/25/10	12/7/10	CH2CL2/J18S03	040410	Absolute
	0I07007	0D12007		8270I CAL@SSTD010-CAI	10/25/10	12/7/10	CH2CL2/J18S03	040310	Absolute

Standard	Std Mix	Std Mix	Pdf	Description	Prepared	Expires	Solvent	LotNum	Vendor
0J25004	0D12007	STOCK		8270I CAL@SSTD010-CAI	10/25/10	12/7/10	CH2CL2/J18S03	040310	Absolute
	0I07007	0D12008		8270I CAL@SSTD010-CAI	10/25/10	12/7/10	CH2CL2/J18S03	040210	Absolute
	0D12008	STOCK		8270I CAL@SSTD010-CAI	10/25/10	12/7/10	CH2CL2/J18S03	040210	Absolute
	0I07007	0G29006		8270I CAL@SSTD010-CAI	10/25/10	12/7/10	CH2CL2/J18S03	A074578	Restek
	0G29006	STOCK		8270I CAL@SSTD010-CAI	10/25/10	12/7/10	CH2CL2/J18S03	A074578	Restek
	0I07007	9L17018		8270I CAL@SSTD010-CAI	10/25/10	12/7/10	CH2CL2/J18S03	A064576	Restek
	9L17018	STOCK		8270I CAL@SSTD010-CAI	10/25/10	12/7/10	CH2CL2/J18S03	A064576	Restek
	0J25004	0J25001		8270I CAL@SSTD010-CAI	10/25/10	12/7/10	CH2CL2/J18S03	64504	
	0J25001	0A12012		8270I CAL@SSTD010-CAI	10/25/10	12/7/10	CH2CL2/J18S03	010510-01	NSI
	0A12012	STOCK		8270I CAL@SSTD010-CAI	10/25/10	12/7/10	CH2CL2/J18S03	010510-01	NSI
	0J25001	0F15006		8270I CAL@SSTD010-CAI	10/25/10	12/7/10	CH2CL2/J18S03	64140	
	0F15006	0F15005		8270I CAL@SSTD010-CAI	10/25/10	12/7/10	CH2CL2/J18S03	414-12B	Chem Se
	0F15005	STOCK		8270I CAL@SSTD010-CAI	10/25/10	12/7/10	CH2CL2/J18S03	414-12B	Chem Se
	0J25001	0H18038		8270I CAL@SSTD010-CAI	10/25/10	12/7/10	CH2CL2/J18S03	64297	
	0H18038	0H17001		8270I CAL@SSTD010-CAI	10/25/10	12/7/10	CH2CL2/J18S03	447-31A	Chem Se
	0H17001	STOCK		8270I CAL@SSTD010-CAI	10/25/10	12/7/10	CH2CL2/J18S03	447-31A	Chem Se
0J25005				8270I CAL@SSTD025-CAI	10/25/10	12/7/10		64348	-
	0J25005	0F30010		8270I CAL@SSTD025-CAI	10/25/10	12/7/10	CH2CL2/J18S03	N/A	
	0F30010	STOCK		8270I CAL@SSTD025-CAI	10/25/10	12/7/10	CH2CL2/J18S03	N/A	
	0J25005	0I07007		8270I CAL@SSTD025-CAI	10/25/10	12/7/10	CH2CL2/J18S03	64345	
	0I07007	0D12005		8270I CAL@SSTD025-CAI	10/25/10	12/7/10	CH2CL2/J18S03	040210	Absolute
	0D12005	STOCK		8270I CAL@SSTD025-CAI	10/25/10	12/7/10	CH2CL2/J18S03	040210	Absolute
	0I07007	0D12006		8270I CAL@SSTD025-CAI	10/25/10	12/7/10	CH2CL2/J18S03	040410	Absolute
	0D12006	STOCK		8270I CAL@SSTD025-CAI	10/25/10	12/7/10	CH2CL2/J18S03	040410	Absolute
	0I07007	0D12007		8270I CAL@SSTD025-CAI	10/25/10	12/7/10	CH2CL2/J18S03	040310	Absolute
	0D12007	STOCK		8270I CAL@SSTD025-CAI	10/25/10	12/7/10	CH2CL2/J18S03	040310	Absolute
	0I07007	0D12008		8270I CAL@SSTD025-CAI	10/25/10	12/7/10	CH2CL2/J18S03	040210	Absolute
	0D12008	STOCK		8270I CAL@SSTD025-CAI	10/25/10	12/7/10	CH2CL2/J18S03	040210	Absolute
	0I07007	0G29006		8270I CAL@SSTD025-CAI	10/25/10	12/7/10	CH2CL2/J18S03	A074578	Restek
	0G29006	STOCK		8270I CAL@SSTD025-CAI	10/25/10	12/7/10	CH2CL2/J18S03	A074578	Restek
	0I07007	9L17018		8270I CAL@SSTD025-CAI	10/25/10	12/7/10	CH2CL2/J18S03	A064576	Restek

Standard	Std Mix	Std Mix	Pdf	Description	Prepared	Expires	Solvent	LotNum	Vendor
0J25005	9L17018	STOCK		8270I CAL@SSTD025-CAI	10/25/10	12/7/10	CH2CL2/J18S03	A064576	Restek
	0J25005	0J25001		8270I CAL@SSTD025-CAI	10/25/10	12/7/10	CH2CL2/J18S03	64504	
	0J25001	0A12012		8270I CAL@SSTD025-CAI	10/25/10	12/7/10	CH2CL2/J18S03	010510-01	NSI
	0A12012	STOCK		8270I CAL@SSTD025-CAI	10/25/10	12/7/10	CH2CL2/J18S03	010510-01	NSI
	0J25001	0F15006		8270I CAL@SSTD025-CAI	10/25/10	12/7/10	CH2CL2/J18S03	64140	
	0F15006	0F15005		8270I CAL@SSTD025-CAI	10/25/10	12/7/10	CH2CL2/J18S03	414-12B	Chem Se
	0F15005	STOCK		8270I CAL@SSTD025-CAI	10/25/10	12/7/10	CH2CL2/J18S03	414-12B	Chem Se
	0J25001	0H18038		8270I CAL@SSTD025-CAI	10/25/10	12/7/10	CH2CL2/J18S03	64297	
	0H18038	0H17001		8270I CAL@SSTD025-CAI	10/25/10	12/7/10	CH2CL2/J18S03	447-31A	Chem Se
	0H17001	STOCK		8270I CAL@SSTD025-CAI	10/25/10	12/7/10	CH2CL2/J18S03	447-31A	Chem Se
0J25007				8270I CAL@SSTD040-CAI	10/25/10	12/7/10		64349	-
	0J25007	0F30010		8270I CAL@SSTD040-CAI	10/25/10	12/7/10	CH2CL2/J18S03	N/A	
	0F30010	STOCK		8270I CAL@SSTD040-CAI	10/25/10	12/7/10	CH2CL2/J18S03	N/A	
	0J25007	0I07007		8270I CAL@SSTD040-CAI	10/25/10	12/7/10	CH2CL2/J18S03	64345	
	0I07007	0D12005		8270I CAL@SSTD040-CAI	10/25/10	12/7/10	CH2CL2/J18S03	040210	Absolute
	0D12005	STOCK		8270I CAL@SSTD040-CAI	10/25/10	12/7/10	CH2CL2/J18S03	040210	Absolute
	0I07007	0D12006		8270I CAL@SSTD040-CAI	10/25/10	12/7/10	CH2CL2/J18S03	040410	Absolute
	0D12006	STOCK		8270I CAL@SSTD040-CAI	10/25/10	12/7/10	CH2CL2/J18S03	040410	Absolute
	0I07007	0D12007		8270I CAL@SSTD040-CAI	10/25/10	12/7/10	CH2CL2/J18S03	040310	Absolute
	0D12007	STOCK		8270I CAL@SSTD040-CAI	10/25/10	12/7/10	CH2CL2/J18S03	040310	Absolute
	0I07007	0D12008		8270I CAL@SSTD040-CAI	10/25/10	12/7/10	CH2CL2/J18S03	040210	Absolute
	0D12008	STOCK		8270I CAL@SSTD040-CAI	10/25/10	12/7/10	CH2CL2/J18S03	040210	Absolute
	0I07007	0G29006		8270I CAL@SSTD040-CAI	10/25/10	12/7/10	CH2CL2/J18S03	A074578	Restek
	0G29006	STOCK		8270I CAL@SSTD040-CAI	10/25/10	12/7/10	CH2CL2/J18S03	A074578	Restek
	0I07007	9L17018		8270I CAL@SSTD040-CAI	10/25/10	12/7/10	CH2CL2/J18S03	A064576	Restek
	9L17018	STOCK		8270I CAL@SSTD040-CAI	10/25/10	12/7/10	CH2CL2/J18S03	A064576	Restek
	0J25007	0J25001		8270I CAL@SSTD040-CAI	10/25/10	12/7/10	CH2CL2/J18S03	64504	
	0J25001	0A12012		8270I CAL@SSTD040-CAI	10/25/10	12/7/10	CH2CL2/J18S03	010510-01	NSI
	0A12012	STOCK		8270I CAL@SSTD040-CAI	10/25/10	12/7/10	CH2CL2/J18S03	010510-01	NSI
	0J25001	0F15006		8270I CAL@SSTD040-CAI	10/25/10	12/7/10	CH2CL2/J18S03	64140	
	0F15006	0F15005		8270I CAL@SSTD040-CAI	10/25/10	12/7/10	CH2CL2/J18S03	414-12B	Chem Se

Standard	Std Mix	Std Mix	Pdf	Description	Prepared	Expires	Solvent	LotNum	Vendor
0J25007	0F15005	STOCK		8270I CAL@SSTD040-CAI	10/25/10	12/7/10	CH2CL2/J18S03	414-12B	Chem Se
	0J25001	0H18038		8270I CAL@SSTD040-CAI	10/25/10	12/7/10	CH2CL2/J18S03	64297	
	0H18038	0H17001		8270I CAL@SSTD040-CAI	10/25/10	12/7/10	CH2CL2/J18S03	447-31A	Chem Se
	0H17001	STOCK		8270I CAL@SSTD040-CAI	10/25/10	12/7/10	CH2CL2/J18S03	447-31A	Chem Se
0J25008				8270I CAL@SSTD050-CAI	10/25/10	12/7/10		64350	-
	0J25008	0F30010		8270I CAL@SSTD050-CAI	10/25/10	12/7/10	CH2CL2/J18S03	N/A	
	0F30010	STOCK		8270I CAL@SSTD050-CAI	10/25/10	12/7/10	CH2CL2/J18S03	N/A	
	0J25008	0I07007		8270I CAL@SSTD050-CAI	10/25/10	12/7/10	CH2CL2/J18S03	64345	
	0I07007	0D12005		8270I CAL@SSTD050-CAI	10/25/10	12/7/10	CH2CL2/J18S03	040210	Absolute
	0D12005	STOCK		8270I CAL@SSTD050-CAI	10/25/10	12/7/10	CH2CL2/J18S03	040210	Absolute
	0I07007	0D12006		8270I CAL@SSTD050-CAI	10/25/10	12/7/10	CH2CL2/J18S03	040410	Absolute
	0D12006	STOCK		8270I CAL@SSTD050-CAI	10/25/10	12/7/10	CH2CL2/J18S03	040410	Absolute
	0I07007	0D12007		8270I CAL@SSTD050-CAI	10/25/10	12/7/10	CH2CL2/J18S03	040310	Absolute
	0D12007	STOCK		8270I CAL@SSTD050-CAI	10/25/10	12/7/10	CH2CL2/J18S03	040310	Absolute
	0I07007	0D12008		8270I CAL@SSTD050-CAI	10/25/10	12/7/10	CH2CL2/J18S03	040210	Absolute
	0D12008	STOCK		8270I CAL@SSTD050-CAI	10/25/10	12/7/10	CH2CL2/J18S03	040210	Absolute
	0I07007	0G29006		8270I CAL@SSTD050-CAI	10/25/10	12/7/10	CH2CL2/J18S03	A074578	Restek
	0G29006	STOCK		8270I CAL@SSTD050-CAI	10/25/10	12/7/10	CH2CL2/J18S03	A074578	Restek
	0I07007	9L17018		8270I CAL@SSTD050-CAI	10/25/10	12/7/10	CH2CL2/J18S03	A064576	Restek
	9L17018	STOCK		8270I CAL@SSTD050-CAI	10/25/10	12/7/10	CH2CL2/J18S03	A064576	Restek
	0J25008	0J25001		8270I CAL@SSTD050-CAI	10/25/10	12/7/10	CH2CL2/J18S03	64504	
	0J25001	0A12012		8270I CAL@SSTD050-CAI	10/25/10	12/7/10	CH2CL2/J18S03	010510-01	NSI
	0A12012	STOCK		8270I CAL@SSTD050-CAI	10/25/10	12/7/10	CH2CL2/J18S03	010510-01	NSI
	0J25001	0F15006		8270I CAL@SSTD050-CAI	10/25/10	12/7/10	CH2CL2/J18S03	64140	
	0F15006	0F15005		8270I CAL@SSTD050-CAI	10/25/10	12/7/10	CH2CL2/J18S03	414-12B	Chem Se
	0F15005	STOCK		8270I CAL@SSTD050-CAI	10/25/10	12/7/10	CH2CL2/J18S03	414-12B	Chem Se
	0J25001	0H18038		8270I CAL@SSTD050-CAI	10/25/10	12/7/10	CH2CL2/J18S03	64297	
	0H18038	0H17001		8270I CAL@SSTD050-CAI	10/25/10	12/7/10	CH2CL2/J18S03	447-31A	Chem Se
	0H17001	STOCK		8270I CAL@SSTD050-CAI	10/25/10	12/7/10	CH2CL2/J18S03	447-31A	Chem Se
0J25009				8270I CAL@SSTD060-CAI	10/25/10	12/7/10		64351	-
	0J25009	0F30010		8270I CAL@SSTD060-CAI	10/25/10	12/7/10	CH2CL2/J18S03	N/A	

Standard	Std Mix	Std Mix	Pdf	Description	Prepared	Expires	Solvent	LotNum	Vendor
0J25009	0F30010	STOCK		8270I CAL@SSTD060-CAI	10/25/10	12/7/10	CH2CL2/J18S03	N/A	
	0J25009	0I07007		8270I CAL@SSTD060-CAI	10/25/10	12/7/10	CH2CL2/J18S03	64345	
	0I07007	0D12005		8270I CAL@SSTD060-CAI	10/25/10	12/7/10	CH2CL2/J18S03	040210	Absolute
	0D12005	STOCK		8270I CAL@SSTD060-CAI	10/25/10	12/7/10	CH2CL2/J18S03	040210	Absolute
	0I07007	0D12006		8270I CAL@SSTD060-CAI	10/25/10	12/7/10	CH2CL2/J18S03	040410	Absolute
	0D12006	STOCK		8270I CAL@SSTD060-CAI	10/25/10	12/7/10	CH2CL2/J18S03	040410	Absolute
	0I07007	0D12007		8270I CAL@SSTD060-CAI	10/25/10	12/7/10	CH2CL2/J18S03	040310	Absolute
	0D12007	STOCK		8270I CAL@SSTD060-CAI	10/25/10	12/7/10	CH2CL2/J18S03	040310	Absolute
	0I07007	0D12008		8270I CAL@SSTD060-CAI	10/25/10	12/7/10	CH2CL2/J18S03	040210	Absolute
	0D12008	STOCK		8270I CAL@SSTD060-CAI	10/25/10	12/7/10	CH2CL2/J18S03	040210	Absolute
	0I07007	0G29006		8270I CAL@SSTD060-CAI	10/25/10	12/7/10	CH2CL2/J18S03	A074578	Restek
	0G29006	STOCK		8270I CAL@SSTD060-CAI	10/25/10	12/7/10	CH2CL2/J18S03	A074578	Restek
	0I07007	9L17018		8270I CAL@SSTD060-CAI	10/25/10	12/7/10	CH2CL2/J18S03	A064576	Restek
	9L17018	STOCK		8270I CAL@SSTD060-CAI	10/25/10	12/7/10	CH2CL2/J18S03	A064576	Restek
	0J25009	0J25001		8270I CAL@SSTD060-CAI	10/25/10	12/7/10	CH2CL2/J18S03	64504	
	0J25001	0A12012		8270I CAL@SSTD060-CAI	10/25/10	12/7/10	CH2CL2/J18S03	010510-01	NSI
	0A12012	STOCK		8270I CAL@SSTD060-CAI	10/25/10	12/7/10	CH2CL2/J18S03	010510-01	NSI
	0J25001	0F15006		8270I CAL@SSTD060-CAI	10/25/10	12/7/10	CH2CL2/J18S03	64140	
	0F15006	0F15005		8270I CAL@SSTD060-CAI	10/25/10	12/7/10	CH2CL2/J18S03	414-12B	Chem Se
	0F15005	STOCK		8270I CAL@SSTD060-CAI	10/25/10	12/7/10	CH2CL2/J18S03	414-12B	Chem Se
	0J25001	0H18038		8270I CAL@SSTD060-CAI	10/25/10	12/7/10	CH2CL2/J18S03	64297	
	0H18038	0H17001		8270I CAL@SSTD060-CAI	10/25/10	12/7/10	CH2CL2/J18S03	447-31A	Chem Se
	0H17001	STOCK		8270I CAL@SSTD060-CAI	10/25/10	12/7/10	CH2CL2/J18S03	447-31A	Chem Se
0K02023				8270I CAL@SSTD025-CC	11/2/10	2/2/11		64522	-
	0K02023	0F30010		8270I CAL@SSTD025-CC	11/2/10	2/2/11	CH2CL2/J24S07	N/A	
	0F30010	STOCK		8270I CAL@SSTD025-CC	11/2/10	2/2/11	CH2CL2/J24S07	N/A	
	0K02023	0K02011		8270I CAL@SSTD025-CC	11/2/10	2/2/11	CH2CL2/J24S07	64518	
	0K02011	0K02010		8270I CAL@SSTD025-CC	11/2/10	2/2/11	CH2CL2/J24S07	110110-01	NSI
	0K02010	STOCK		8270I CAL@SSTD025-CC	11/2/10	2/2/11	CH2CL2/J24S07	110110-01	NSI
	0K02023	0K02012		8270I CAL@SSTD025-CC	11/2/10	2/2/11	CH2CL2/J24S07	64519	
	0K02012	0D12005		8270I CAL@SSTD025-CC	11/2/10	2/2/11	CH2CL2/J24S07	040210	Absolute

Standard	Std Mix	Std Mix	Pdf	Description	Prepared	Expires	Solvent	LotNum	Vendor
0K02023	0D12005	STOCK		8270I CAL@SSTD025-CC	11/2/10	2/2/11	CH2CL2/J24S07	040210	Absolute
	0K02012	0D12006		8270I CAL@SSTD025-CC	11/2/10	2/2/11	CH2CL2/J24S07	040410	Absolute
	0D12006	STOCK		8270I CAL@SSTD025-CC	11/2/10	2/2/11	CH2CL2/J24S07	040410	Absolute
	0K02012	0D12007		8270I CAL@SSTD025-CC	11/2/10	2/2/11	CH2CL2/J24S07	040310	Absolute
	0D12007	STOCK		8270I CAL@SSTD025-CC	11/2/10	2/2/11	CH2CL2/J24S07	040310	Absolute
	0K02012	0D12008		8270I CAL@SSTD025-CC	11/2/10	2/2/11	CH2CL2/J24S07	040210	Absolute
	0D12008	STOCK		8270I CAL@SSTD025-CC	11/2/10	2/2/11	CH2CL2/J24S07	040210	Absolute
	0K02012	0G29006		8270I CAL@SSTD025-CC	11/2/10	2/2/11	CH2CL2/J24S07	A074578	Restek
	0G29006	STOCK		8270I CAL@SSTD025-CC	11/2/10	2/2/11	CH2CL2/J24S07	A074578	Restek
	0K02012	9L17018		8270I CAL@SSTD025-CC	11/2/10	2/2/11	CH2CL2/J24S07	A064576	Restek
	9L17018	STOCK		8270I CAL@SSTD025-CC	11/2/10	2/2/11	CH2CL2/J24S07	A064576	Restek
0K04002				IS Solution Injected Concer	11/4/10	5/4/11		64529	-
	0K04002	0K04001		IS Solution Injected Concer	11/4/10	5/4/11	CH2Cl/J24S07	64529	
	0K04001	0I27002		IS Solution Injected Concer	11/4/10	5/4/11	CH2Cl/J24S07	A075995	Restek
	0I27002	STOCK		IS Solution Injected Concer	11/4/10	5/4/11	CH2Cl/J24S07	A075995	Restek

C. SDG Data

1. QC Summary
2. Sample Data
3. Standards Data
4. Raw QC Data

LAB : LIBRTY

METHOD: 8270C

SDG #: 1010107

1. QC Summary

a. Surrogate Percent Recovery Summary (Form II SV)

b. Spike Summary - MS / MSD / LCS
(Form III SV)

c. Method Blank Summary (Form IV SV)

d. GC/MS Instrument Performance Check
(Form V SV)

e. Internal Standard Area and RT Summary
(Form VIII SV)

a. Surrogate Percent Recovery Summary

(Form II SV)

FORM 2
WATER SEMIVOLATILE SURROGATE RECOVERY

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

	CLIENT SAMPLE NO.	S1 (2FP)#	S2 (PHL)#	S3 (NBZ)#	S4 (FBP)#	S5 (TBP)#	S6 (TPH)#	S7 #	S8 #	TOT OUT
01	SBLKEJ	42	28	65	61	79	85			0
02	SEJLCS	56	36	85	82	96	98			0
03	13MW5	46	29	72	68	79	79			0
04	13MW5MS	54	36	87	86	96	99			0
05	13MW5MSD	57	37	92	88	100	103			0
06	13MW1	53	32	77	77	80	114			0
07	13MW2	50	35	81	73	98	99			0
08	13MW3	52	35	79	76	85	104			0
09	13MW4	48	31	77	71	89	98			0
10	13MWDUP	49	33	81	75	87	109			0
11	13MW6	52	34	82	75	92	99			0
12	13MW7	48	32	76	72	90	101			0
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										
24										
25										
26										
27										
28										

	QC LIMITS
S1 (2FP) = 2-Fluorophenol	(10-110)
S2 (PHL) = Phenol-d5	(10-110)
S3 (NBZ) = Nitrobenzene-d5	(35-110)
S4 (FBP) = 2-Fluorobiphenyl	(45-110)
S5 (TBP) = 2,4,6-Tribromophenol	(44-131)
S6 (TPH) = Terphenyl-d14	(49-120)

Column to be used to flag recovery values
* Values outside of contract required QC limits
D Surrogate diluted out

b. Spike Summary - MS / MSD / LCS
(Form III SV)

FORM 3
WATER SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix Spike - Sample No.: 13MW5

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC. LIMITS REC.
Phenol	41.03	0	15.72	38	20-100
2-Chlorophenol	41.03	0	33.45	82	23-100
3-Methylphenol	41.03	0	28.16	69	24-100
4-Methylphenol	41.03	0	28.16	69	24-100
Hexachloroethane	41.03	0	24.88	61	28-100
Nitrobenzene	41.03	0	33.78	82	20-131
2,4-Dichlorophenol	41.03	0	35.46	86	19-109
Dimethylphthalate	41.03	0	35.73	87	53-116
4-Nitrophenol	41.03	0	15.54	38	10-100
Dibenzofuran	41.03	0	34.31	84	50-107
Diethylphthalate	41.03	0	35.47	86	52-118
N-Nitrosodiphenylamine	41.03	0	40.43	99	52-117
Di-n-butylphthalate	41.03	0	37.7	92	51-114
Fluoranthene	41.03	0	38.14	93	58-124
Pyrene	41.03	0	39.98	97	48-131
Butylbenzylphthalate	41.03	0	38.09	93	41-118
bis(2-ethylhexyl)Phthal	41.03	1.747	36.95	86	47-121
Benzo(a)anthracene	41.03	0	38.99	95	53-128
Di-n-octylphthalate	41.03	0	35.96	88	30-148
Benzo(b)fluoranthene	41.03	0	39.24	96	41-130
Benzo(k)fluoranthene	41.03	0	39.61	97	39-150
Benzo(a)pyrene	41.03	0	40.64	99	46-135
Dibenzo(a,h)anthracene	41.03	0	42.32	103	47-134

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

COMMENTS: _____

FORM 3
WATER SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix Spike - Sample No.: 13MW5

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Phenol	42.11	17.33	41	10	30	20-100
2-Chlorophenol	42.11	37.19	88	10	30	23-100
3-Methylphenol	42.11	31.34	74	11	30	24-100
4-Methylphenol	42.11	31.34	74	11	30	24-100
Hexachloroethane	42.11	28.83	68	15	30	28-100
Nitrobenzene	42.11	37.91	90	12	30	20-131
2,4-Dichlorophenol	42.11	39.86	95	12	30	19-109
Dimethylphthalate	42.11	39.58	94	10	30	53-116
4-Nitrophenol	42.11	17.75	42	13	30	10-100
Dibenzofuran	42.11	38.09	90	10	30	50-107
Diethylphthalate	42.11	38.2	91	7	30	52-118
N-Nitrosodiphenylamine	42.11	44.1	105	9	30	52-117
Di-n-butylphthalate	42.11	41.04	97	8	30	51-114
Fluoranthene	42.11	42.08	100	10	30	58-124
Pyrene	42.11	44.88	107	12	30	48-131
Butylbenzylphthalate	42.11	40.89	97	7	30	41-118
bis(2-ethylhexyl)Phthal	42.11	39.82	90	7	30	47-121
Benzo(a)anthracene	42.11	43.7	104	11	30	53-128
Di-n-octylphthalate	42.11	38.43	91	7	30	30-148
Benzo(b)fluoranthene	42.11	42.74	101	8	30	41-130
Benzo(k)fluoranthene	42.11	43.98	104	10	30	39-150
Benzo(a)pyrene	42.11	45.07	107	10	30	46-135
Dibenzo(a,h)anthracene	42.11	48.73	116	14	30	47-134

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

RPD: 0 out of 23 outside limits
Spike Recovery: 0 out of 46 outside limits

COMMENTS: _____

FORM 3
WATER SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-A

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix Spike - Sample No.: 13MW5

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC. LIMITS REC.
3,3'-Dimethylbenzidine	41.03	0	15.64	38	20-100

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
3,3'-Dimethylbenzidine	42.11	11.35	27	32*	30	20-100

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

RPD: 1 out of 1 outside limits
Spike Recovery: 0 out of 2 outside limits

COMMENTS: _____

FORM III SV

FORM 3
WATER SEMIVOLATILE MATRIX SPIKE/MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix Spike - Sample No.: 13MW5

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC #	QC. LIMITS REC.
Acetophenone	41.03	0	29.21	71	20-100

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC #	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Acetophenone	42.11	32.43	77	10	30	20-100

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

RPD: 0 out of 1 outside limits
Spike Recovery: 0 out of 2 outside limits

COMMENTS: _____

_____

FORM III SV

3C
WATER SEMIVOLATILE LAB CONTROL SAMPLE

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-C | SEJLCS |

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC #	QC. LIMITS REC.
Phenol	40	15.76	39	20-100
2-Chlorophenol	40	31.72	79	23-100
3-Methylphenol	40	26.15	65	24-100
4-Methylphenol	40	26.15	65	24-100
Hexachloroethane	40	22.24	56	28-100
Nitrobenzene	40	32.57	81	20-131
2,4-Dichlorophenol	40	33.64	84	19-109
Dimethylphthalate	40	35.09	88	53-116
4-Nitrophenol	40	16.43	41	10-100
Dibenzofuran	40	33.33	83	50-107
Diethylphthalate	40	35.67	89	52-118
N-Nitrosodiphenylamine	40	38.34	96	52-117
Di-n-butylphthalate	40	37.09	93	51-114
Fluoranthene	40	37.84	95	58-124
Pyrene	40	38.34	96	48-131
Butylbenzylphthalate	40	37.19	93	41-118
bis(2-ethylhexyl)Phthal	40	36.14	90	47-121
Benzo(a)anthracene	40	37.94	95	53-128
Di-n-octylphthalate	40	38.22	96	30-148
Benzo(b)fluoranthene	40	39.3	98	41-130
Benzo(k)fluoranthene	40	38.19	95	39-150
Benzo(a)pyrene	40	39.22	98	46-135
Dibenzo(a,h)anthracene	40	36.8	92	47-134

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

Spike Recovery: 0 out of 23 outside limits

COMMENTS: _____

3C
WATER SEMIVOLATILE LAB CONTROL SAMPLE

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-A | SEJLCS |

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC #	QC. LIMITS REC.
3,3'-Dimethylbenzidine	40	8.528	21	20-100

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

Spike Recovery: 0 out of 1 outside limits

COMMENTS: _____

FORM III SV-1

3C
WATER SEMIVOLATILE LAB CONTROL SAMPLE

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-B | SEJLCS |

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC #	QC. LIMITS REC.
Acetophenone	40	28.04	70	20-100

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

Spike Recovery: 0 out of 1 outside limits

COMMENTS: _____

FORM III SV-1

c. Method Blank Summary (Form IV SV)

If more than a single form is necessary, forms shall be arranged in chronological order by date of analysis of the blanks and by instrument.

FORM 4
SEMIVOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE NO

SBLKEJ

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Lab File ID: 0102117-BLK1A68 Lab Sample ID: 0102117-BLK1

Instrument ID: 5973HP68 Date Extracted: 10/22/10

Matrix: (soil/water) WATER Date Analyzed: 11/22/10

Level:(low/med) LOW Time Analyzed: 1148

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

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	SEJLCS	0102117-BS1	0102117-BS1A	11/22/10
02	13MW5	1010107-01	1010107-01A6	11/22/10
03	13MW5MS	0102117-MS1	0102117-MS1A	11/22/10
04	13MW5MSD	0102117-MSD1	0102117-MSD1	11/22/10
05	13MW1	1010107-02	1010107-02C6	11/23/10
06	13MW2	1010107-03	1010107-03C6	11/23/10
07	13MW3	1010107-04	1010107-04C6	11/23/10
08	13MW4	1010107-05	1010107-05C6	11/23/10
09	13MWDUP	1010107-06	1010107-06JA	11/23/10
10	13MW6	1010107-07	1010107-07A6	11/23/10
11	13MW7	1010107-08	1010107-08A6	11/23/10
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				

COMMENTS:

FORM 4
SEMIVOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE NO

SBLKEJ

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-A

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Lab File ID: 0102117-BLK1A68 Lab Sample ID: 0102117-BLK1

Instrument ID: 5973HP68 Date Extracted: 10/22/10

Matrix: (soil/water) WATER Date Analyzed: 11/22/10

Level:(low/med) LOW Time Analyzed: 1148

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

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	SEJLCS	0102117-BS1	0102117-BS1A	11/22/10
02	13MW5	1010107-01	1010107-01A6	11/22/10
03	13MW5MS	0102117-MS1	0102117-MS1A	11/22/10
04	13MW5MSD	0102117-MSD1	0102117-MSD1	11/22/10
05	13MW1	1010107-02	1010107-02C6	11/23/10
06	13MW2	1010107-03	1010107-03C6	11/23/10
07	13MW3	1010107-04	1010107-04C6	11/23/10
08	13MW4	1010107-05	1010107-05C6	11/23/10
09	13MWDUP	1010107-06	1010107-06JA	11/23/10
10	13MW6	1010107-07	1010107-07A6	11/23/10
11	13MW7	1010107-08	1010107-08A6	11/23/10
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				

COMMENTS:

FORM 4
SEMIVOLATILE METHOD BLANK SUMMARY

CLIENT SAMPLE NO

SBLKEJ

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Lab File ID: 0102117-BLK1A68 Lab Sample ID: 0102117-BLK1

Instrument ID: 5973HP68 Date Extracted: 10/22/10

Matrix: (soil/water) WATER Date Analyzed: 11/22/10

Level:(low/med) LOW Time Analyzed: 1148

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

	SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	SEJLCS	0102117-BS1	0102117-BS1A	11/22/10
02	13MW5	1010107-01	1010107-01A6	11/22/10
03	13MW5MS	0102117-MS1	0102117-MS1A	11/22/10
04	13MW5MSD	0102117-MSD1	0102117-MSD1	11/22/10
05	13MW1	1010107-02	1010107-02C6	11/23/10
06	13MW2	1010107-03	1010107-03C6	11/23/10
07	13MW3	1010107-04	1010107-04C6	11/23/10
08	13MW4	1010107-05	1010107-05C6	11/23/10
09	13MWDUP	1010107-06	1010107-06JA	11/23/10
10	13MW6	1010107-07	1010107-07A6	11/23/10
11	13MW7	1010107-08	1010107-08A6	11/23/10
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COMMENTS:

d. GC/MS Instrument Performance Check (Form V SV)

If more than a single form is necessary, forms shall be arranged in chronological order, by instrument.

FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Lab File ID: 0K19001-TUN2C68 DFTPP Injection Date: 11/19/10

Instrument ID: 5973HP68 DFTPP Injection Time: 1318

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	37.2
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	42.7
70	Less than 2.0% of mass 69	0.2 (0.5)1
127	10.0 - 80.0% of mass 198	48.6
197	Less than 2.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.8
275	10.0 - 60.0% of mass 198	20.0
365	Greater than 1.0% of mass 198	2.18
441	Present, but less than mass 443	11.2
442	50.0 - 100.0% of mass 198	77.1
443	15.0 - 24.0% of mass 442	15.1 (19.6)2

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

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD005W7	0K19001-CALD	0K19001-CALDC6	11/19/10	1338
02	SSTD10W7	0K19001-CALE	0K19001-CALEC6	11/19/10	1421
03	SSTD025W7	0K19001-CALF	0K19001-CALFC6	11/19/10	1503
04	SSTD040W7	0K19001-CALG	0K19001-CALGC6	11/19/10	1546
05	SSTD050W7	0K19001-CALH	0K19001-CALH1C	11/19/10	1628
06	SSTD060W7	0K19001-CALI	0K19001-CALI1C	11/19/10	1711
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FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-A

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Lab File ID: 0K19001-TUN1C68 DFTPP Injection Date: 11/19/10

Instrument ID: 5973HP68 DFTPP Injection Time: 0314

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	40.1
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	45.6
70	Less than 2.0% of mass 69	0.2 (0.4)1
127	10.0 - 80.0% of mass 198	51.3
197	Less than 2.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.7
275	10.0 - 60.0% of mass 198	19.3
365	Greater than 1.0% of mass 198	2.08
441	Present, but less than mass 443	10.2
442	50.0 - 100.0% of mass 198	72.3
443	15.0 - 24.0% of mass 442	13.9 (19.3)2

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

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD005W5	0K19001-CAL1	0K19001-CAL1C6	11/19/10	0359
02	SSTD010W5	0K19001-CAL2	0K19001-CAL2C6	11/19/10	0441
03	SSTD025W5	0K19001-CAL3	0K19001-CAL3C6	11/19/10	0523
04	SSTD040W5	0K19001-CAL4	0K19001-CAL4C6	11/19/10	0606
05	SSTD050W5	0K19001-CAL5	0K19001-CAL5C6	11/19/10	0648
06	SSTD060W5	0K19001-CAL6	0K19001-CAL6C6	11/19/10	0731
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FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Lab File ID: 0K19001-TUN1C68 DFTPP Injection Date: 11/19/10

Instrument ID: 5973HP68 DFTPP Injection Time: 0314

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	40.1
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	45.6
70	Less than 2.0% of mass 69	0.2 (0.4)1
127	10.0 - 80.0% of mass 198	51.3
197	Less than 2.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.7
275	10.0 - 60.0% of mass 198	19.3
365	Greater than 1.0% of mass 198	2.08
441	Present, but less than mass 443	10.2
442	50.0 - 100.0% of mass 198	72.3
443	15.0 - 24.0% of mass 442	13.9 (19.3)2

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

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD005W6	0K19001-CAL7	0K19001-CAL7C6	11/19/10	0813
02	SSTD010W6	0K19001-CAL8	0K19001-CAL8C6	11/19/10	0855
03	SSTD025W6	0K19001-CAL9	0K19001-CAL9C6	11/19/10	0938
04	SSTD040W6	0K19001-CALA	0K19001-CALAC6	11/19/10	1020
05	SSTD050W6	0K19001-CALB	0K19001-CALBC6	11/19/10	1102
06	SSTD060W6	0K19001-CALC	0K19001-CALCC6	11/19/10	1145
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FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Lab File ID: 0K22004-TUN1A68 DFTPP Injection Date: 11/22/10

Instrument ID: 5973HP68 DFTPP Injection Time: 0921

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	40.9
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	46.2
70	Less than 2.0% of mass 69	0.3 (0.6)1
127	10.0 - 80.0% of mass 198	50.7
197	Less than 2.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.9
275	10.0 - 60.0% of mass 198	19.3
365	Greater than 1.0% of mass 198	2.14
441	Present, but less than mass 443	10.4
442	50.0 - 100.0% of mass 198	71.0
443	15.0 - 24.0% of mass 442	14.2 (20.1)2

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

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD025DP	0K22004-CCV2	0K22004-CCV2A6	11/22/10	1023
02	SBLKEJ	0102117-BLK1	0102117-BLK1A6	11/22/10	1148
03	SEJLCS	0102117-BS1	0102117-BS1A68	11/22/10	1230
04	13MW5	1010107-01	1010107-01A68	11/22/10	1355
05	13MW5MS	0102117-MS1	0102117-MS1A68	11/22/10	1438
06	13MW5MSD	0102117-MSD1	0102117-MSD1A6	11/22/10	1521
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FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-A

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Lab File ID: 0K22004-TUN1A68 DFTPP Injection Date: 11/22/10

Instrument ID: 5973HP68 DFTPP Injection Time: 0921

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	40.9
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	46.2
70	Less than 2.0% of mass 69	0.3 (0.6)1
127	10.0 - 80.0% of mass 198	50.7
197	Less than 2.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.9
275	10.0 - 60.0% of mass 198	19.3
365	Greater than 1.0% of mass 198	2.14
441	Present, but less than mass 443	10.4
442	50.0 - 100.0% of mass 198	71.0
443	15.0 - 24.0% of mass 442	14.2 (20.1)2

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

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD025DO	0K22004-CCV1	0K22004-CCV1A6	11/22/10	0941
02	SBLKEJ	0102117-BLK1	0102117-BLK1A6	11/22/10	1148
03	SEJLCS	0102117-BS1	0102117-BS1A68	11/22/10	1230
04	13MW5	1010107-01	1010107-01A68	11/22/10	1355
05	13MW5MS	0102117-MS1	0102117-MS1A68	11/22/10	1438
06	13MW5MSD	0102117-MSD1	0102117-MSD1A6	11/22/10	1521
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FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Lab File ID: 0K22004-TUN1A68 DFTPP Injection Date: 11/22/10

Instrument ID: 5973HP68 DFTPP Injection Time: 0921

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	40.9
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	46.2
70	Less than 2.0% of mass 69	0.3 (0.6)1
127	10.0 - 80.0% of mass 198	50.7
197	Less than 2.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.9
275	10.0 - 60.0% of mass 198	19.3
365	Greater than 1.0% of mass 198	2.14
441	Present, but less than mass 443	10.4
442	50.0 - 100.0% of mass 198	71.0
443	15.0 - 24.0% of mass 442	14.2 (20.1)2

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

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD025DQ	0K22004-CCV3	0K22004-CCV3A6	11/22/10	1106
02	SBLKEJ	0102117-BLK1	0102117-BLK1A6	11/22/10	1148
03	SEJLCS	0102117-BS1	0102117-BS1A68	11/22/10	1230
04	13MW5	1010107-01	1010107-01A68	11/22/10	1355
05	13MW5MS	0102117-MS1	0102117-MS1A68	11/22/10	1438
06	13MW5MSD	0102117-MSD1	0102117-MSD1A6	11/22/10	1521
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FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Lab File ID: 0K22016-TUN1C68 DFTPP Injection Date: 11/22/10

Instrument ID: 5973HP68 DFTPP Injection Time: 2321

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	33.0
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	39.5
70	Less than 2.0% of mass 69	0.2 (0.5)1
127	10.0 - 80.0% of mass 198	46.6
197	Less than 2.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.8
275	10.0 - 60.0% of mass 198	21.4
365	Greater than 1.0% of mass 198	2.28
441	Present, but less than mass 443	11.7
442	50.0 - 100.0% of mass 198	82.3
443	15.0 - 24.0% of mass 442	16.3 (19.8)2

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

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD025DS	0K22016-CCV2	0K22016-CCV2C6	11/23/10	0028
02	13MW1	1010107-02	1010107-02C68	11/23/10	0456
03	13MW2	1010107-03	1010107-03C68	11/23/10	0539
04	13MW3	1010107-04	1010107-04C68	11/23/10	0621
05	13MW4	1010107-05	1010107-05C68	11/23/10	0704
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FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-A

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Lab File ID: 0K22016-TUN1C68 DFTPP Injection Date: 11/22/10

Instrument ID: 5973HP68 DFTPP Injection Time: 2321

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	33.0
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	39.5
70	Less than 2.0% of mass 69	0.2 (0.5)1
127	10.0 - 80.0% of mass 198	46.6
197	Less than 2.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.8
275	10.0 - 60.0% of mass 198	21.4
365	Greater than 1.0% of mass 198	2.28
441	Present, but less than mass 443	11.7
442	50.0 - 100.0% of mass 198	82.3
443	15.0 - 24.0% of mass 442	16.3 (19.8)2

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

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD025DR	0K22016-CCV1	0K22016-CCV1C6	11/22/10	2344
02	13MW1	1010107-02	1010107-02C68	11/23/10	0456
03	13MW2	1010107-03	1010107-03C68	11/23/10	0539
04	13MW3	1010107-04	1010107-04C68	11/23/10	0621
05	13MW4	1010107-05	1010107-05C68	11/23/10	0704
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FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Lab File ID: 0K22016-TUN1C68 DFTPP Injection Date: 11/22/10

Instrument ID: 5973HP68 DFTPP Injection Time: 2321

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	33.0
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	39.5
70	Less than 2.0% of mass 69	0.2 (0.5)1
127	10.0 - 80.0% of mass 198	46.6
197	Less than 2.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.8
275	10.0 - 60.0% of mass 198	21.4
365	Greater than 1.0% of mass 198	2.28
441	Present, but less than mass 443	11.7
442	50.0 - 100.0% of mass 198	82.3
443	15.0 - 24.0% of mass 442	16.3 (19.8)2

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

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD025DT	0K22016-CCV3	0K22016-CCV3C6	11/23/10	0113
02	13MW1	1010107-02	1010107-02C68	11/23/10	0456
03	13MW2	1010107-03	1010107-03C68	11/23/10	0539
04	13MW3	1010107-04	1010107-04C68	11/23/10	0621
05	13MW4	1010107-05	1010107-05C68	11/23/10	0704
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FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Lab File ID: 0K23010-TUN1A68 DFTPP Injection Date: 11/23/10

Instrument ID: 5973HP68 DFTPP Injection Time: 1622

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	40.6
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	46.6
70	Less than 2.0% of mass 69	0.2 (0.5)1
127	10.0 - 80.0% of mass 198	51.2
197	Less than 2.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.6
275	10.0 - 60.0% of mass 198	19.1
365	Greater than 1.0% of mass 198	2.28
441	Present, but less than mass 443	11.2
442	50.0 - 100.0% of mass 198	77.7
443	15.0 - 24.0% of mass 442	15.2 (19.6)2

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

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD025DV	0K23010-CCV2	0K23010-CCV2RA	11/23/10	1806
02	13MWDUP	1010107-06	1010107-06JA68	11/23/10	1931
03	13MW6	1010107-07	1010107-07A68	11/23/10	2013
04	13MW7	1010107-08	1010107-08A68	11/23/10	2056
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FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-A

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Lab File ID: 0K23010-TUN1A68 DFTPP Injection Date: 11/23/10

Instrument ID: 5973HP68 DFTPP Injection Time: 1622

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	40.6
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	46.6
70	Less than 2.0% of mass 69	0.2 (0.5)1
127	10.0 - 80.0% of mass 198	51.2
197	Less than 2.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.6
275	10.0 - 60.0% of mass 198	19.1
365	Greater than 1.0% of mass 198	2.28
441	Present, but less than mass 443	11.2
442	50.0 - 100.0% of mass 198	77.7
443	15.0 - 24.0% of mass 442	15.2 (19.6)2

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

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD025DU	0K23010-CCV1	0K23010-CCV1A6	11/23/10	1642
02	13MWDUP	1010107-06	1010107-06JA68	11/23/10	1931
03	13MW6	1010107-07	1010107-07A68	11/23/10	2013
04	13MW7	1010107-08	1010107-08A68	11/23/10	2056
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FORM 5
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Lab File ID: 0K23010-TUN1A68 DFTPP Injection Date: 11/23/10

Instrument ID: 5973HP68 DFTPP Injection Time: 1622

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	40.6
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	46.6
70	Less than 2.0% of mass 69	0.2 (0.5)1
127	10.0 - 80.0% of mass 198	51.2
197	Less than 2.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.6
275	10.0 - 60.0% of mass 198	19.1
365	Greater than 1.0% of mass 198	2.28
441	Present, but less than mass 443	11.2
442	50.0 - 100.0% of mass 198	77.7
443	15.0 - 24.0% of mass 442	15.2 (19.6)2

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

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	SSTD025DW	0K23010-CCV3	0K23010-CCV3A6	11/23/10	1848
02	13MWDUP	1010107-06	1010107-06JA68	11/23/10	1931
03	13MW6	1010107-07	1010107-07A68	11/23/10	2013
04	13MW7	1010107-08	1010107-08A68	11/23/10	2056
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e. Internal Standard Area and RT Summary (Form VIII SV)

If more than a single form is necessary, forms shall be arranged in chronological order, by instrument.

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Lab File ID (Standard): 0K22004-CCV2A68 Date Analyzed: 11/22/10

Instrument ID: 5973HP68 Time Analyzed: 1023

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
	12 HOUR STD	590915	8.35	2213461	11.18	1111070	15.30
	UPPER LIMIT	1181830	8.85	4426922	11.68	2222140	15.80
	LOWER LIMIT	295457	7.85	1106731	10.68	555535	14.80
	CLIENT SAMPLE NO.						
01	SBLKEJ	698039	8.35	2588771	11.17	1380594	15.29
02	SEJLCS	680407	8.36	2343296	11.18	1097977	15.30
03	13MW5	539566	8.34	2043625	11.17	1109086	15.29
04	13MW5MS	644787	8.35	2408765	11.18	1151564	15.30
05	13MW5MSD	626804	8.35	2385893	11.18	1204283	15.30
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IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

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

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Lab File ID (Standard): 0K22004-CCV2A68 Date Analyzed: 11/22/10

Instrument ID: 5973HP68 Time Analyzed: 1023

		IS4(PHN) AREA	#	RT	#	IS5(CRY) AREA	#	RT	#	IS6(PRY) AREA	#	RT	#
	12 HOUR STD	1584397		18.73		920630		25.00		552494		28.13	
	UPPER LIMIT	3168794		19.23		1841260		25.50		1104988		28.63	
	LOWER LIMIT	792199		18.23		460315		24.50		276247		27.63	
	CLIENT SAMPLE NO.												
01	SBLKEJ	2004974		18.73		1015855		25.00		606431		28.13	
02	SEJLCS	1612348		18.73		913121		25.00		538262		28.13	
03	13MW5	1592017		18.72		940852		25.00		627663		28.13	
04	13MW5MS	1635142		18.73		890385		25.00		532030		28.14	
05	13MW5MSD	1706759		18.73		902543		25.01		556349		28.14	
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IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

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

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-A

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Lab File ID (Standard): 0K22004-CCV1A68 Date Analyzed: 11/22/10

Instrument ID: 5973HP68 Time Analyzed: 0941

		IS1(DCB)		IS2(NPT)		IS3(ANT)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	619639	8.35	2154891	11.18	968691	15.29
	UPPER LIMIT	1239278	8.85	4309782	11.68	1937382	15.79
	LOWER LIMIT	309819	7.85	1077445	10.68	484345	14.79
	CLIENT SAMPLE NO.						
01	SBLKEJ	698039	8.35	2588771	11.17	1380594	15.29
02	SEJLCS	680407	8.36	2343296	11.18	1097977	15.30
03	13MW5	539566	8.34	2043625	11.17	1109086	15.29
04	13MW5MS	644787	8.35	2408765	11.18	1151564	15.30
05	13MW5MSD	626804	8.35	2385893	11.18	1204283	15.30
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IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

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

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-A

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Lab File ID (Standard): 0K22004-CCV1A68 Date Analyzed: 11/22/10

Instrument ID: 5973HP68 Time Analyzed: 0941

		IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
	12 HOUR STD	1341866	18.73	777195	25.00	559035	28.13
	UPPER LIMIT	2683732	19.23	1554390	25.50	1118070	28.63
	LOWER LIMIT	670933	18.23	388597	24.50	279517	27.63
	CLIENT SAMPLE NO.						
01	SBLKEJ	2004974	18.73	1015855	25.00	606431	28.13
02	SEJLCS	1612348	18.73	913121	25.00	538262	28.13
03	13MW5	1592017	18.72	940852	25.00	627663	28.13
04	13MW5MS	1635142	18.73	890385	25.00	532030	28.14
05	13MW5MSD	1706759	18.73	902543	25.01	556349	28.14
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IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

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

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Lab File ID (Standard): 0K22004-CCV3A68 Date Analyzed: 11/22/10

Instrument ID: 5973HP68 Time Analyzed: 1106

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
	12 HOUR STD	680809	8.35	2623139	11.17	1382654	15.30
	UPPER LIMIT	1361618	8.85	5246278	11.67	2765308	15.80
	LOWER LIMIT	340405	7.85	1311569	10.67	691327	14.80
	CLIENT SAMPLE NO.						
01	SBLKEJ	698039	8.35	2588771	11.17	1380594	15.29
02	SEJLCS	680407	8.36	2343296	11.18	1097977	15.30
03	13MW5	539566	8.34	2043625	11.17	1109086	15.29
04	13MW5MS	644787	8.35	2408765	11.18	1151564	15.30
05	13MW5MSD	626804	8.35	2385893	11.18	1204283	15.30
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IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

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

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Lab File ID (Standard): 0K22004-CCV3A68 Date Analyzed: 11/22/10

Instrument ID: 5973HP68 Time Analyzed: 1106

		IS4(PHN) AREA	#	RT	#	IS5(CRY) AREA	#	RT	#	IS6(PRY) AREA	#	RT	#
	12 HOUR STD	2036912		18.73		1211893		25.00		654923		28.13	
	UPPER LIMIT	4073824		19.23		2423786		25.50		1309846		28.63	
	LOWER LIMIT	1018456		18.23		605947		24.50		327461		27.63	
	CLIENT SAMPLE NO.												
01	SBLKEJ	2004974		18.73		1015855		25.00		606431		28.13	
02	SEJLCS	1612348		18.73		913121		25.00		538262		28.13	
03	13MW5	1592017		18.72		940852		25.00		627663		28.13	
04	13MW5MS	1635142		18.73		890385		25.00		532030		28.14	
05	13MW5MSD	1706759		18.73		902543		25.01		556349		28.14	
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IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

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

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Lab File ID (Standard): 0K22016-CCV2C68 Date Analyzed: 11/23/10

Instrument ID: 5973HP68 Time Analyzed: 0028

		IS1(DCB) AREA	#	RT	#	IS2(NPT) AREA	#	RT	#	IS3(ANT) AREA	#	RT	#
	12 HOUR STD	706836		8.34		2708140		11.17		1384340		15.28	
	UPPER LIMIT	1413672		8.84		5416280		11.67		2768680		15.78	
	LOWER LIMIT	353418		7.84		1354070		10.67		692170		14.78	
	CLIENT SAMPLE NO.												
01	13MW1	593613		8.33		2083201		11.16		1120868		15.27	
02	13MW2	837455		8.34		3176058		11.16		1739455		15.28	
03	13MW3	755362		8.33		2759839		11.16		1494300		15.27	
04	13MW4	816622		8.33		3017239		11.16		1664430		15.28	
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IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

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

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Lab File ID (Standard): 0K22016-CCV2C68 Date Analyzed: 11/23/10

Instrument ID: 5973HP68 Time Analyzed: 0028

		IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
	12 HOUR STD	1975436	18.72	993882	24.99	638953	28.12
	UPPER LIMIT	3950872	19.22	1987764	25.49	1277906	28.62
	LOWER LIMIT	987718	18.22	496941	24.49	319477	27.62
	CLIENT SAMPLE NO.						
01	13MW1	1486957	18.70	650847	24.98	332412	28.11
02	13MW2	2584877	18.71	1404747	24.98	678337	28.12
03	13MW3	2113621	18.70	1036833	24.98	408968	28.11
04	13MW4	2412383	18.71	1205714	24.98	510866	28.11
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IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

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

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-A

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Lab File ID (Standard): 0K22016-CCV1C68 Date Analyzed: 11/22/10

Instrument ID: 5973HP68 Time Analyzed: 2344

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
	12 HOUR STD	692508	8.33	2594031	11.17	1301871	15.28
	UPPER LIMIT	1385016	8.83	5188062	11.67	2603742	15.78
	LOWER LIMIT	346254	7.83	1297015	10.67	650935	14.78
	CLIENT SAMPLE NO.						
01	13MW1	593613	8.33	2083201	11.16	1120868	15.27
02	13MW2	837455	8.34	3176058	11.16	1739455	15.28
03	13MW3	755362	8.33	2759839	11.16	1494300	15.27
04	13MW4	816622	8.33	3017239	11.16	1664430	15.28
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IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

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

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-A

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Lab File ID (Standard): 0K22016-CCV1C68 Date Analyzed: 11/22/10

Instrument ID: 5973HP68 Time Analyzed: 2344

		IS4(PHN) AREA	#	RT	#	IS5(CRY) AREA	#	RT	#	IS6(PRY) AREA	#	RT	#
	12 HOUR STD	1876148		18.72		891137		24.99		630619		28.12	
	UPPER LIMIT	3752296		19.22		1782274		25.49		1261238		28.62	
	LOWER LIMIT	938074		18.22		445569		24.49		315309		27.62	
	CLIENT SAMPLE NO.												
01	13MW1	1486957		18.70		650847		24.98		332412		28.11	
02	13MW2	2584877		18.71		1404747		24.98		678337		28.12	
03	13MW3	2113621		18.70		1036833		24.98		408968		28.11	
04	13MW4	2412383		18.71		1205714		24.98		510866		28.11	
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IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

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

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Lab File ID (Standard): 0K22016-CCV3C68 Date Analyzed: 11/23/10

Instrument ID: 5973HP68 Time Analyzed: 0113

		IS1(DCB) AREA	#	RT	#	IS2(NPT) AREA	#	RT	#	IS3(ANT) AREA	#	RT	#
	12 HOUR STD	612365		8.33		2477186		11.16		1343977		15.27	
	UPPER LIMIT	1224730		8.83		4954372		11.66		2687954		15.77	
	LOWER LIMIT	306183		7.83		1238593		10.66		671989		14.77	
	CLIENT SAMPLE NO.												
01	13MW1	593613		8.33		2083201		11.16		1120868		15.27	
02	13MW2	837455		8.34		3176058		11.16		1739455		15.28	
03	13MW3	755362		8.33		2759839		11.16		1494300		15.27	
04	13MW4	816622		8.33		3017239		11.16		1664430		15.28	
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IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

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

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Lab File ID (Standard): 0K22016-CCV3C68 Date Analyzed: 11/23/10

Instrument ID: 5973HP68 Time Analyzed: 0113

		IS4(PHN) AREA	#	RT	#	IS5(CRY) AREA	#	RT	#	IS6(PRY) AREA	#	RT	#
	12 HOUR STD	1827298		18.70		787805		24.98		369908		28.11	
	UPPER LIMIT	3654596		19.20		1575610		25.48		739816		28.61	
	LOWER LIMIT	913649		18.20		393903		24.48		184954		27.61	
	CLIENT SAMPLE NO.												
01	13MW1	1486957		18.70		650847		24.98		332412		28.11	
02	13MW2	2584877		18.71		1404747		24.98		678337		28.12	
03	13MW3	2113621		18.70		1036833		24.98		408968		28.11	
04	13MW4	2412383		18.71		1205714		24.98		510866		28.11	
05													
06													
07													
08													
09													
10													
11													
12													
13													
14													
15													
16													
17													
18													
19													
20													

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

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

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Lab File ID (Standard): 0K23010-CCV2RA68 Date Analyzed: 11/23/10

Instrument ID: 5973HP68 Time Analyzed: 1806

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
	12 HOUR STD	646943	8.31	2421351	11.15	1228135	15.26
	UPPER LIMIT	1293886	8.81	4842702	11.65	2456270	15.76
	LOWER LIMIT	323471	7.81	1210675	10.65	614067	14.76
	CLIENT SAMPLE NO.						
01	13MWDUP	635814	8.31	2394188	11.14	1300480	15.26
02	13MW6	709145	8.31	2643736	11.14	1427509	15.26
03	13MW7	632711	8.31	2407963	11.14	1320286	15.26
04							
05							
06							
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

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

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Lab File ID (Standard): 0K23010-CCV2RA68 Date Analyzed: 11/23/10

Instrument ID: 5973HP68 Time Analyzed: 1806

		IS4(PHN) AREA	#	RT	#	IS5(CRY) AREA	#	RT	#	IS6(PRY) AREA	#	RT	#
	12 HOUR STD	1730240		18.69		1013440		24.96		651156		28.10	
	UPPER LIMIT	3460480		19.19		2026880		25.46		1302312		28.60	
	LOWER LIMIT	865120		18.19		506720		24.46		325578		27.60	
	CLIENT SAMPLE NO.												
01	13MWDUP	1810946		18.69		742675		24.96		449051		28.09	
02	13MW6	2067302		18.69		1029126		24.96		689987		28.10	
03	13MW7	1951154		18.69		938398		24.96		616375		28.09	
04													
05													
06													
07													
08													
09													
10													
11													
12													
13													
14													
15													
16													
17													
18													
19													
20													

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

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

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-A

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Lab File ID (Standard): 0K23010-CCV1A68 Date Analyzed: 11/23/10

Instrument ID: 5973HP68 Time Analyzed: 1642

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
	12 HOUR STD	525302	8.31	1983230	11.15	977360	15.26
	UPPER LIMIT	1050604	8.81	3966460	11.65	1954720	15.76
	LOWER LIMIT	262651	7.81	991615	10.65	488680	14.76
	CLIENT SAMPLE NO.						
01	13MWDUP	635814	8.31	2394188	11.14	1300480	15.26
02	13MW6	709145	8.31	2643736	11.14	1427509	15.26
03	13MW7	632711	8.31	2407963	11.14	1320286	15.26
04							
05							
06							
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

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

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-A

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Lab File ID (Standard): 0K23010-CCV1A68 Date Analyzed: 11/23/10

Instrument ID: 5973HP68 Time Analyzed: 1642

		IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
	12 HOUR STD	1334599	18.69	620475	24.96	458051	28.09
	UPPER LIMIT	2669198	19.19	1240950	25.46	916102	28.59
	LOWER LIMIT	667299	18.19	310237	24.46	229025	27.59
	CLIENT SAMPLE NO.						
01	13MWDUP	1810946	18.69	742675	24.96	449051	28.09
02	13MW6	2067302	18.69	1029126	24.96	689987	28.10
03	13MW7	1951154	18.69	938398	24.96	616375	28.09
04							
05							
06							
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

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

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Lab File ID (Standard): 0K23010-CCV3A68 Date Analyzed: 11/23/10

Instrument ID: 5973HP68 Time Analyzed: 1848

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
	12 HOUR STD	637547	8.31	2379271	11.14	1284180	15.26
	UPPER LIMIT	1275094	8.81	4758542	11.64	2568360	15.76
	LOWER LIMIT	318773	7.81	1189635	10.64	642090	14.76
	CLIENT SAMPLE NO.						
01	13MWDUP	635814	8.31	2394188	11.14	1300480	15.26
02	13MW6	709145	8.31	2643736	11.14	1427509	15.26
03	13MW7	632711	8.31	2407963	11.14	1320286	15.26
04							
05							
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16							
17							
18							
19							
20							

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

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

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

FORM VIII SV

FORM 8
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Lab File ID (Standard): 0K23010-CCV3A68 Date Analyzed: 11/23/10

Instrument ID: 5973HP68 Time Analyzed: 1848

		IS4(PHN) AREA	#	RT	#	IS5(CRY) AREA	#	RT	#	IS6(PRY) AREA	#	RT	#
	12 HOUR STD	1812511		18.69		801093		24.95		492332		28.09	
	UPPER LIMIT	3625022		19.19		1602186		25.45		984664		28.59	
	LOWER LIMIT	906255		18.19		400547		24.45		246166		27.59	
	CLIENT SAMPLE NO.												
01	13MWDUP	1810946		18.69		742675		24.96		449051		28.09	
02	13MW6	2067302		18.69		1029126		24.96		689987		28.10	
03	13MW7	1951154		18.69		938398		24.96		616375		28.09	
04													
05													
06													
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09													
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11													
12													
13													
14													
15													
16													
17													
18													
19													
20													

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

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

Column used to flag internal standard area values with an asterisk.
* Values outside of QC limits.

2. Sample Data

Sample data shall be arranged in packets with the Organic Analysis Data Sheet (Form I SV and Form I SV-TIC), followed by the raw data for semivolatile samples. These sample packets shall be placed in increasing Client Sample ID number order, considering both letters and numbers.

a. Target Analyte Results (Form I SV)
   Tabulated results (identification and quantitation) shall be included.

b. Tentatively Identified Compounds (Form I SV-TIC)
   Lists the client specified number of organic compounds that are non-surrogate/non-internal standard compounds and are not listed on the target compound list. This form shall be included even if no compounds are found.

c. Reconstructed Ion Chromatograms
   Include for each sample or sample extract, including dilutions and reanalyses. The RIC shall contain the following header information: Client Sample ID number, date and time of analysis, GC/MS instrument identifier, lab file identifier, and analyst ID.

d. Quantitation Report showing calculations for target analytes
   - Include a printout of the Enhanced Ion Current Profile (EICP) for all manual changes to all compounds, internal standards, and surrogate compounds.

e. Copies of raw spectra and copies of background-subtracted mass spectra of target analytes identified in the sample.
   - The spectra shall include the following information: Client Sample ID number, Lab file ID, date and time of analysis, and instrument ID.
   - The compound name must be clearly marked.

f. Quantitation Report showing calculations for TICs

g. Copies of mass spectra of organic compounds not listed on the target compound list (TICs) with associated best-match spectra.
   - The spectra shall be labeled as follows: Client Sample ID number, lab file ID, date and time of analysis, and instrument ID.
   - The compound name must be clearly marked.

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.
13MWDUP

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 1010107-06

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1010107-06JA68

Level: (low/med) LOW Date Received: 10/20/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted:10/22/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/23/10

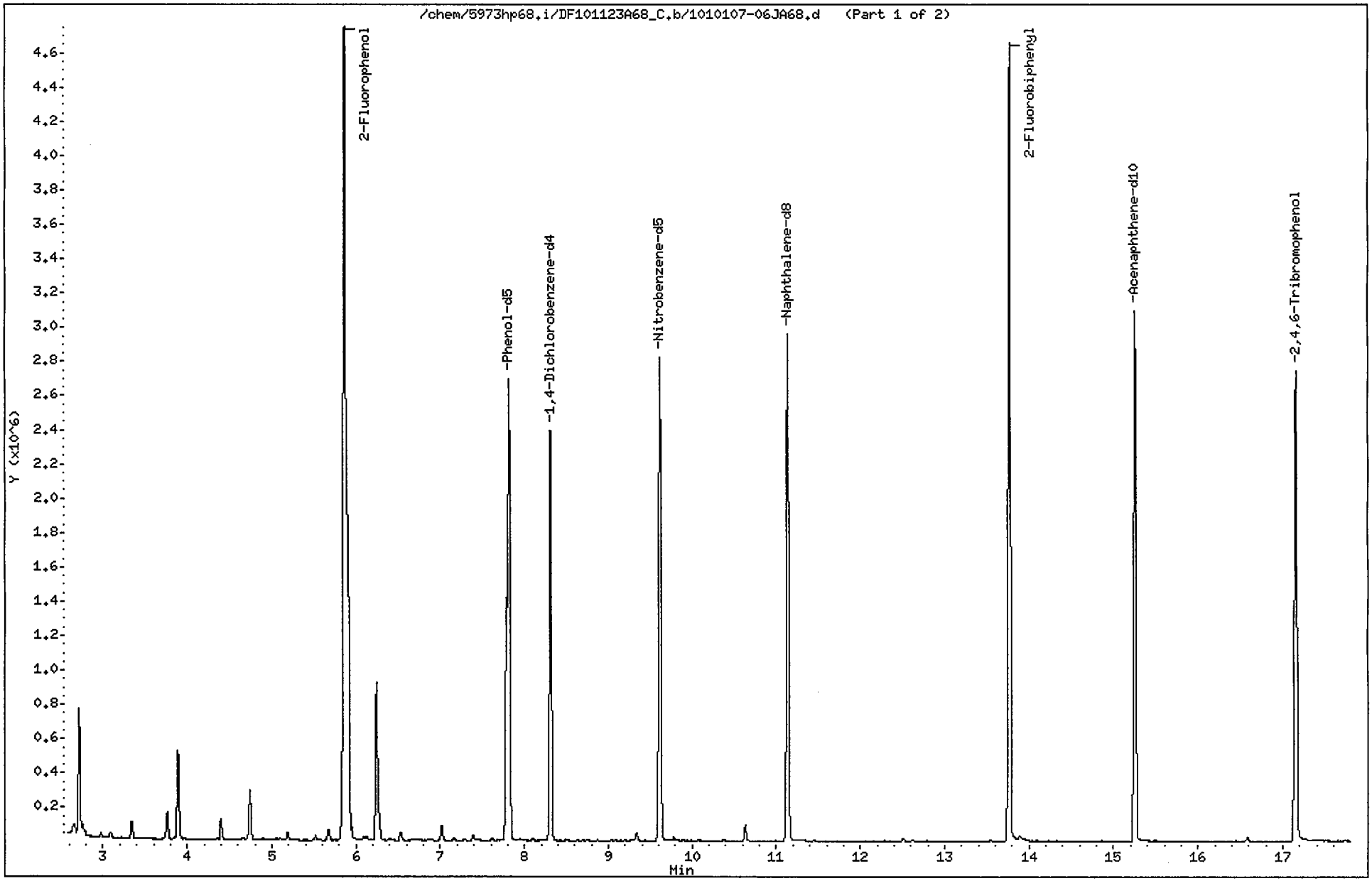
Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

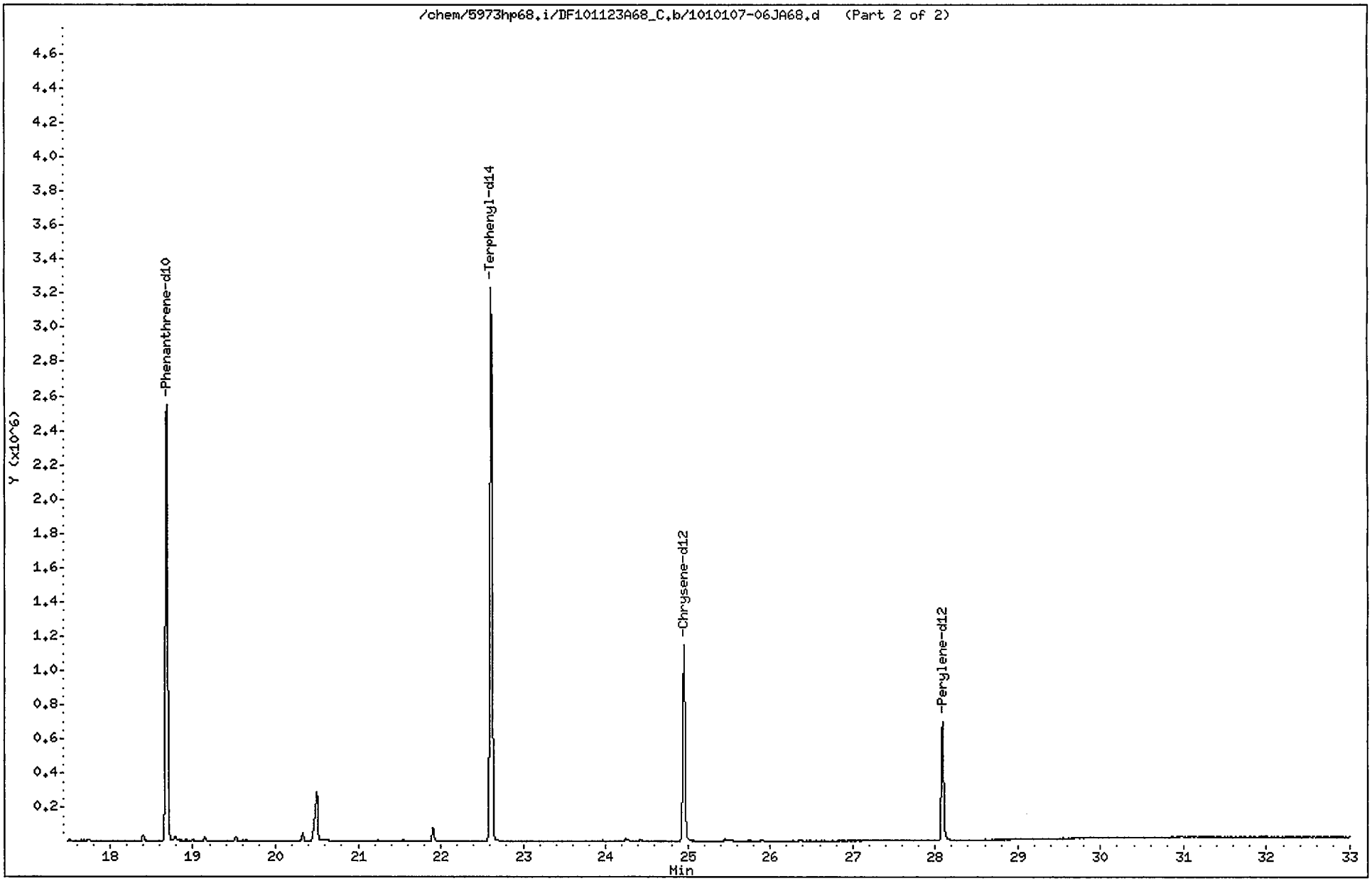
CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
95-57-8	2-Chlorophenol	10	U
108-39-4	3-Methylphenol	8.0	U
106-44-5	4-Methylphenol	8.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
131-11-3	Dimethylphthalate	5.0	U
100-02-7	4-Nitrophenol	10	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	U
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U

(1) - Cannot be separated from Diphenylamine

Data File: /chem/5973hp68.i/DF101123A68_C.b/1010107-06JA68.d
Date : 23-NOV-2010 19:31
Client ID: 13MWDUP
Instrument: 5973hp68.i
Sample Info: 1010107-06:OWS
Volume Injected (uL): 2.0
Operator: OWS
Column phase: RTX-5MS
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101123A68_C.b/1010107-06JA68.d
Date : 23-NOV-2010 19:31
Client ID: 13MWDUP
Instrument: 5973hp68.i
Sample Info: 1010107-06:OWS
Volume Injected (uL): 2.0
Operator: OWS
Column phase: RTX-5MS
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101123A68_C.b/1010107-06JA68.d
Report Date: 29-Nov-2010 16:04

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Data file : /chem/5973hp68.i/DF101123A68_C.b/1010107-06JA68.d
Lab Smp Id: 1010107-06 Client Smp ID: 13MWDUP
Inj Date : 23-NOV-2010 19:31
Operator : OWS Inst ID: 5973hp68.i
Smp Info : 1010107-06:OWS
Misc Info : 13MWDUP
Comment : 2008 MDLS SOIL/ 2007 WATER
Method : /chem/5973hp68.i/DF101123A68_C.b/8270CMASTERDODv5.m
Meth Date : 29-Nov-2010 16:04 byrd Quant Type: ISTD
Cal Date : 19-NOV-2010 17:11 Cal File: 0K19001-CALI1C68.d
Als bottle: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: HWMU13A_C.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Vo	1000.00000	Volume of sample extracted (mL)
Vi	2.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	CONCENTRATIONS FINAL (ug/L)	SIMILARITY	
*	1 1,4-Dichlorobenzene-d4	152	8.314	8.314	(1.000)	635814	40.0000			
*	2 Naphthalene-d8	136	11.140	11.145	(1.000)	2394188	40.0000			
*	3 Acenaphthene-d10	164	15.259	15.264	(1.000)	1300480	40.0000			
*	4 Phenanthrene-d10	188	18.689	18.694	(1.000)	1810946	40.0000			
*	5 Chrysene-d12	240	24.955	24.960	(1.000)	742675	40.0000			
*	6 Perylene-d12	264	28.091	28.096	(1.000)	449051	40.0000			
$	7 2-Fluorophenol	112	5.862	5.846	(0.705)	2158121	97.7930	49		
$	8 Phenol-d5	99	7.823	7.833	(0.941)	1926248	66.7388	33		
$	9 Nitrobenzene-d5	82	9.618	9.617	(0.863)	1844750	80.8660	40		
$	10 2-Fluorobiphenyl	172	13.774	13.774	(0.903)	2856906	74.9853	37		
$	11 2,4,6-Tribromophenol	330	17.156	17.150	(1.124)	603081	173.804	87		(A)
$	12 Terphenyl-d14	244	22.615	22.610	(0.906)	1861383	108.954	54		
	24 Phenol	94	Compound Not Detected.							
	25 2-Chlorophenol	128	Compound Not Detected.							
	34 Hexachloroethane	117	Compound Not Detected.							

Data File: /chem/5973hp68.i/DF101123A68_C.b/1010107-06JA68.d
Report Date: 29-Nov-2010 16:04

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	CONCENTRATIONS FINAL (ug/L)	SIMILARITY
39	3-Methylphenol	108	Compound Not Detected.						
40	4-Methylphenol	108	Compound Not Detected.						
41	Nitrobenzene	77	Compound Not Detected.						
48	2,4-Dichlorophenol	162	Compound Not Detected.						
73	Dimethylphthalate	163	Compound Not Detected.						
81	4-Nitrophenol	139	Compound Not Detected.						
79	Dibenzofuran	168	Compound Not Detected.						
87	Diethylphthalate	149	Compound Not Detected.						
93	N-Nitrosodiphenylamine	169	Compound Not Detected.						
116	Di-n-butylphthalate	149	Compound Not Detected.						
121	Fluoranthene	202	Compound Not Detected.						
123	Pyrene	202	Compound Not Detected.						
130	Butylbenzylphthalate	149	Compound Not Detected.						
135	bis(2-ethylhexyl)Phthalate	149	Compound Not Detected.						
133	Benzo(a)anthracene	228	Compound Not Detected.						
136	Di-n-octylphthalate	149	Compound Not Detected.						
137	Benzo(b)fluoranthene	252	Compound Not Detected.						
138	Benzo(k)fluoranthene	252	Compound Not Detected.						
140	Benzo(a)pyrene	252	Compound Not Detected.						
142	Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.						
143	Dibenzo(a,h)anthracene	278	Compound Not Detected.						

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

13MWDUP

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-A

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 1010107-06

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1010107-06JA68

Level: (low/med) LOW Date Received: 10/20/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted:10/22/10

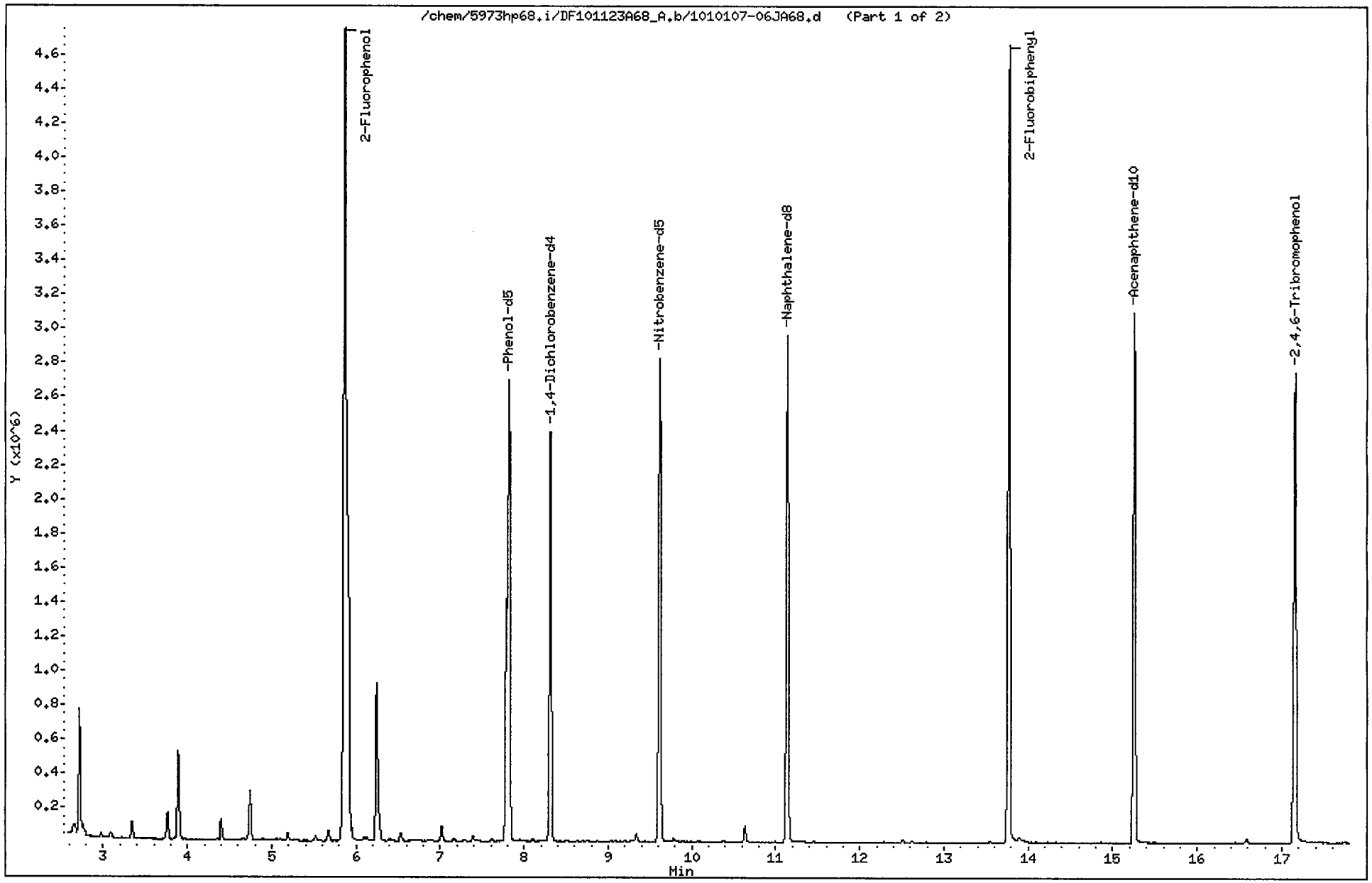
Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/23/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

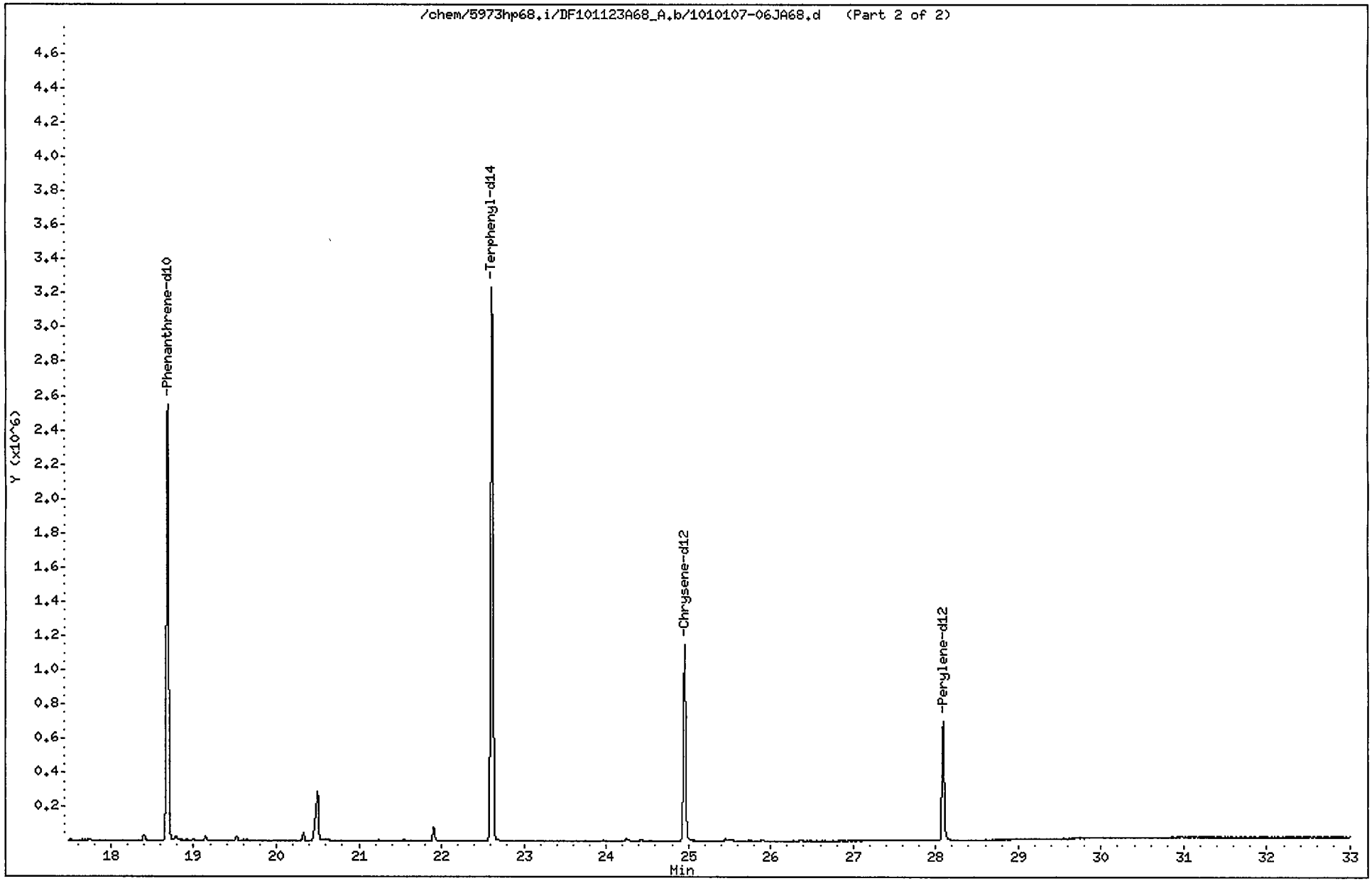
GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
119-93-7	3,3'-Dimethylbenzidine	5.0	U

Data File: /chem/5973hp68.i/DF101123A68_A.b/1010107-06JA68.d
Date : 23-NOV-2010 19:31
Client ID: 13MWDUP
Instrument: 5973hp68.i
Sample Info: 1010107-06:OWS
Volume Injected (uL): 2.0
Operator: OWS
Column phase: RTX-5MS
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101123A68_A.b/1010107-06JA68.d
Date : 23-NOV-2010 19:31
Client ID: 13MWDUP
Instrument: 5973hp68.i
Sample Info: 1010107-06:OWS
Volume Injected (uL): 2.0
Operator: OWS
Column phase: RTX-5MS
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101123A68_A.b/1010107-06JA68.d
Report Date: 29-Nov-2010 16:13

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Semivolatile Report SW-846 Method 8270C Appendix IX

Data file : /chem/5973hp68.i/DF101123A68_A.b/1010107-06JA68.d
Lab Smp Id: 1010107-06 Client Smp ID: 13MWDUP
Inj Date : 23-NOV-2010 19:31
Operator : OWS Inst ID: 5973hp68.i
Smp Info : 1010107-06:OWS
Misc Info : 13MWDUP
Comment : 2008 MDLS SOIL/ 2007 WATER
Method : /chem/5973hp68.i/DF101123A68_A.b/8270CMASTERDODv5.m
Meth Date : 29-Nov-2010 16:12 byrd Quant Type: ISTD
Cal Date : 19-NOV-2010 07:31 Cal File: 0K19001-CAL6C68.d
Als bottle: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: HWMU13A_A.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Vo	1000.00000	Volume of sample extracted (mL)
Vi	2.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	CONCENTRATIONS FINAL (ug/L)	SIMILARITY
*	1 1,4-Dichlorobenzene-d4	152	8.314	8.314	(1.000)	635814	40.0000		
*	2 Naphthalene-d8	136	11.140	11.145	(1.000)	2394188	40.0000		
*	3 Acenaphthene-d10	164	15.259	15.264	(1.000)	1300480	40.0000		
*	4 Phenanthrene-d10	188	18.689	18.694	(1.000)	1810946	40.0000		
*	5 Chrysene-d12	240	24.955	24.960	(1.000)	742675	40.0000		
*	6 Perylene-d12	264	28.091	28.091	(1.000)	449051	40.0000		
	129 3,3'-Dimethylbenzidine	212	Compound Not Detected.						

6 u/kg/w

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

13MWDUP

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 1010107-06

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1010107-06JA68

Level: (low/med) LOW Date Received: 10/20/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted:10/22/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/23/10

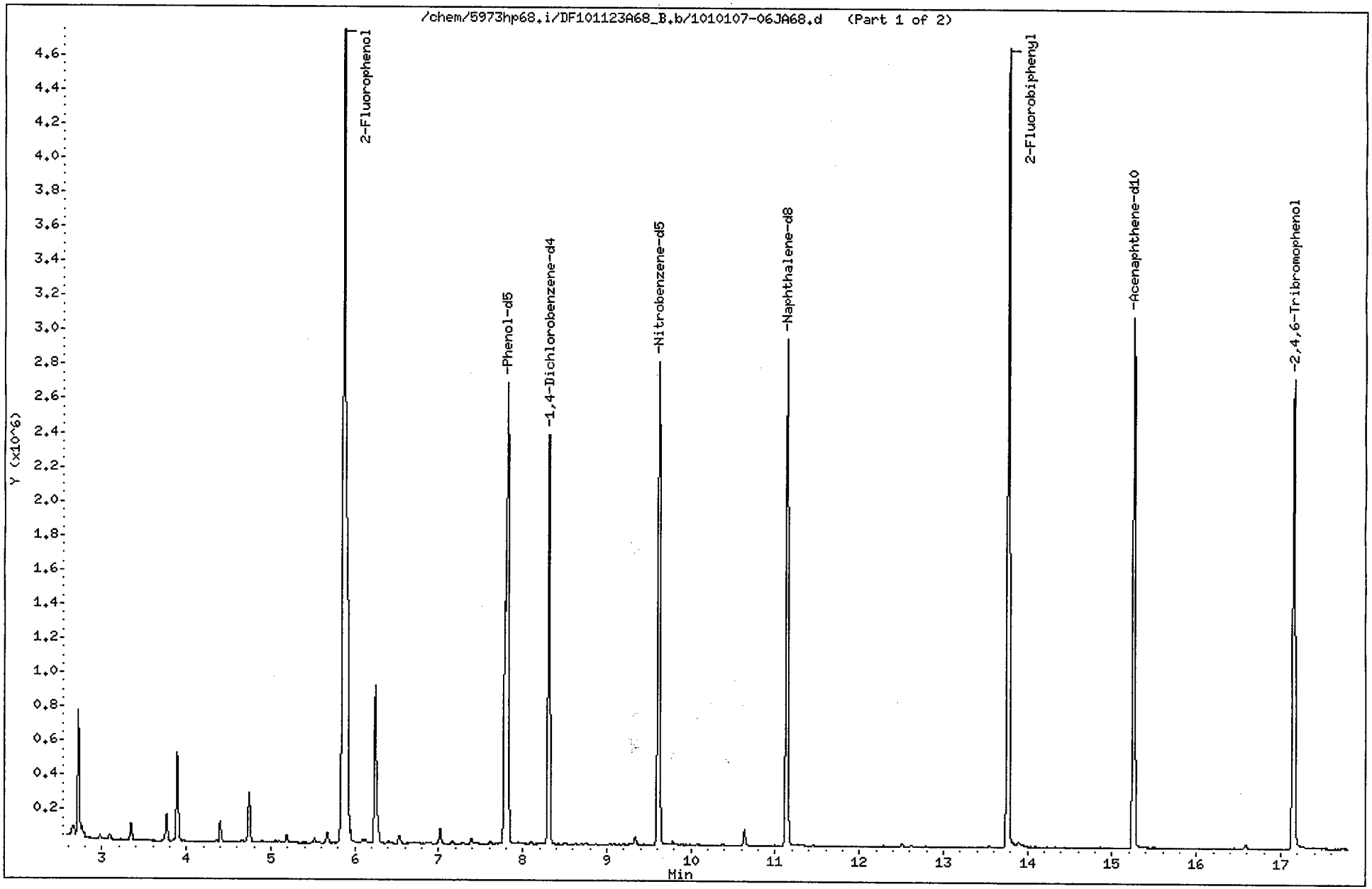
Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
98-86-2	Acetophenone	5.0	U

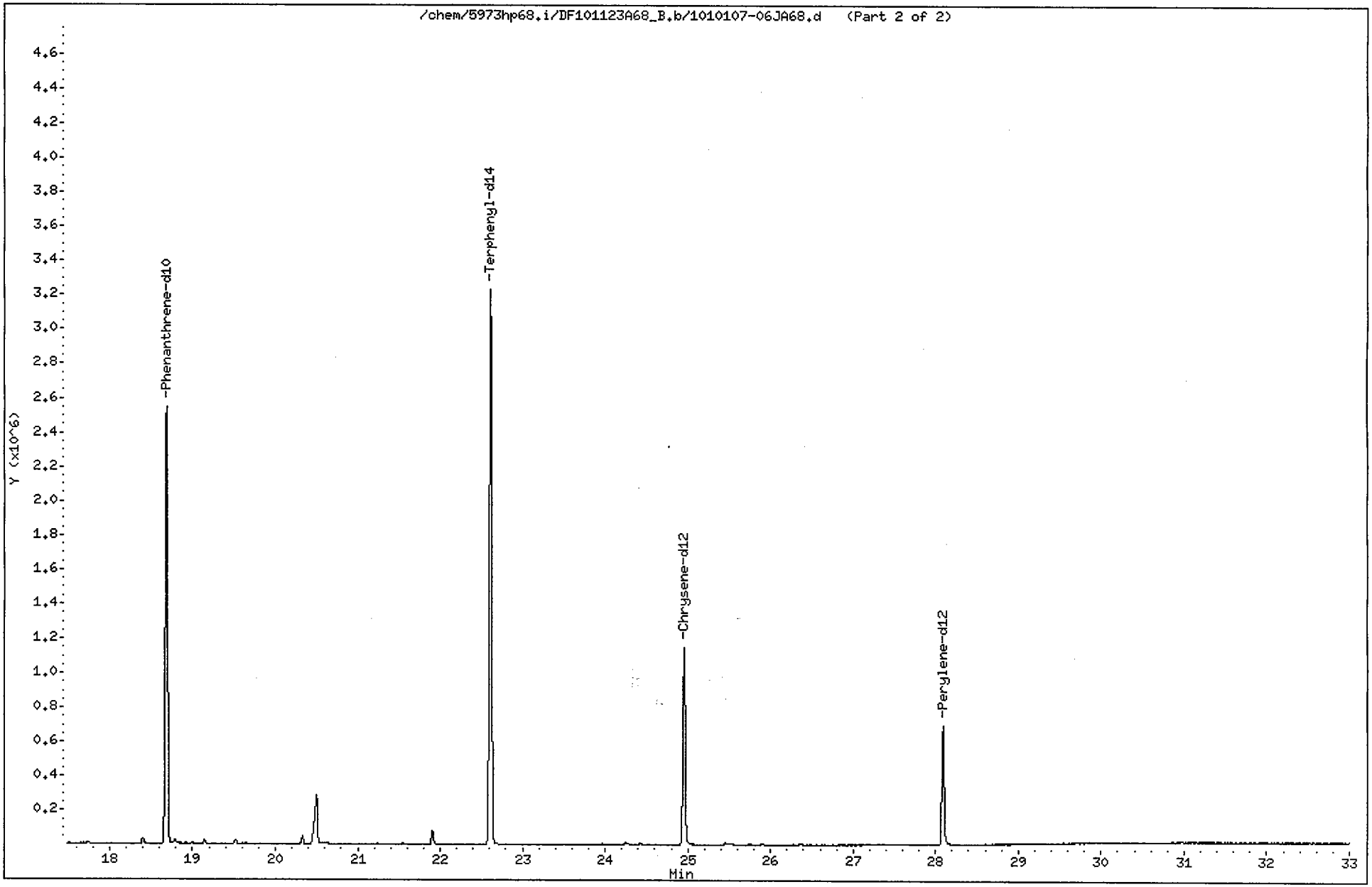
Data File: /chem/5973hp68.i/DF101123A68_B.b/1010107-06JA68.d
Date : 23-NOV-2010 19:31
Client ID: 13MWDUP
Sample Info: 1010107-06:OWS
Volume Injected (uL): 2.0
Column phase: RTX-5MS

Instrument: 5973hp68.i
Operator: OWS
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101123A68_B.b/1010107-06JA68.d
Date : 23-NOV-2010 19:31
Client ID: 13MWDUP
Sample Info: 1010107-06:OWS
Volume Injected (uL): 2.0
Column phase: RTX-5MS

Instrument: 5973hp68.i
Operator: OWS
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101123A68_B.b/1010107-06JA68.d
Report Date: 29-Nov-2010 16:07

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Data file : /chem/5973hp68.i/DF101123A68_B.b/1010107-06JA68.d
Lab Smp Id: 1010107-06 Client Smp ID: 13MWDUP
Inj Date : 23-NOV-2010 19:31
Operator : OWS Inst ID: 5973hp68.i
Smp Info : 1010107-06:OWS
Misc Info : 13MWDUP
Comment : 2008 MDLS SOIL/ 2007 WATER
Method : /chem/5973hp68.i/DF101123A68_B.b/8270CMASTERDODv5.m
Meth Date : 29-Nov-2010 16:05 byrd Quant Type: ISTD
Cal Date : 19-NOV-2010 11:45 Cal File: 0K19001-CALCC68.d
Als bottle: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: HWMU13A_B.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Vo	1000.00000	Volume of sample extracted (mL)
Vi	2.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	CONCENTRATIONS FINAL (ug/L)	SIMILARITY
* 1 1,4-Dichlorobenzene-d4	152	8.314	8.314	(1.000)	635814	40.0000		
* 2 Naphthalene-d8	136	11.140	11.140	(1.000)	2394188	40.0000		
* 3 Acenaphthene-d10	164	15.259	15.259	(1.000)	1300480	40.0000		
* 4 Phenanthrene-d10	188	18.689	18.689	(1.000)	1810946	40.0000		
* 5 Chrysene-d12	240	24.955	24.955	(1.000)	742675	40.0000		
* 6 Perylene-d12	264	28.091	28.091	(1.000)	449051	40.0000		
33 Acetophenone	105	Compound Not Detected.						

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.: 13MW1

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 1010107-02

Sample wt/vol: 950 (g/mL) ML Lab File ID: 1010107-02C68

Level: (low/med) LOW Date Received: 10/20/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted:10/22/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/23/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

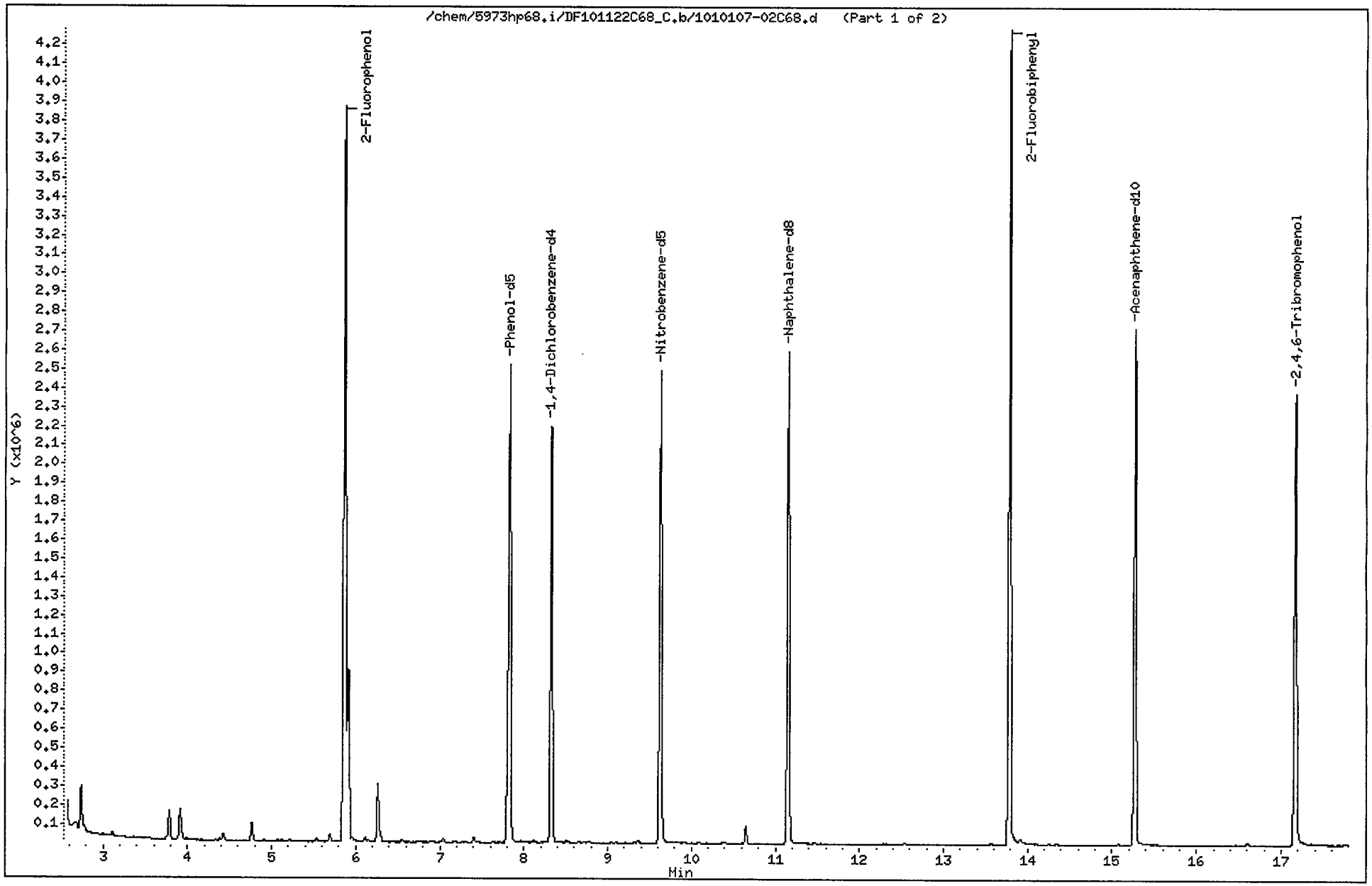
GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
95-57-8	2-Chlorophenol	10	U
108-39-4	3-Methylphenol	8.4	U
106-44-5	4-Methylphenol	8.4	U
67-72-1	Hexachloroethane	5.3	U
98-95-3	Nitrobenzene	5.3	U
120-83-2	2,4-Dichlorophenol	10	U
131-11-3	Dimethylphthalate	5.3	U
100-02-7	4-Nitrophenol	10	U
132-64-9	Dibenzofuran	5.3	U
84-66-2	Diethylphthalate	5.3	U
86-30-6	N-Nitrosodiphenylamine (1)	5.3	U
84-74-2	Di-n-butylphthalate	5.3	U
206-44-0	Fluoranthene	5.3	U
129-00-0	Pyrene	5.3	U
85-68-7	Butylbenzylphthalate	5.3	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.3	U
56-55-3	Benzo(a)anthracene	5.3	U
117-84-0	Di-n-octylphthalate	5.3	U
205-99-2	Benzo(b)fluoranthene	5.3	U
207-08-9	Benzo(k)fluoranthene	5.3	U
50-32-8	Benzo(a)pyrene	5.3	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.3	U
53-70-3	Dibenzo(a,h)anthracene	5.3	U

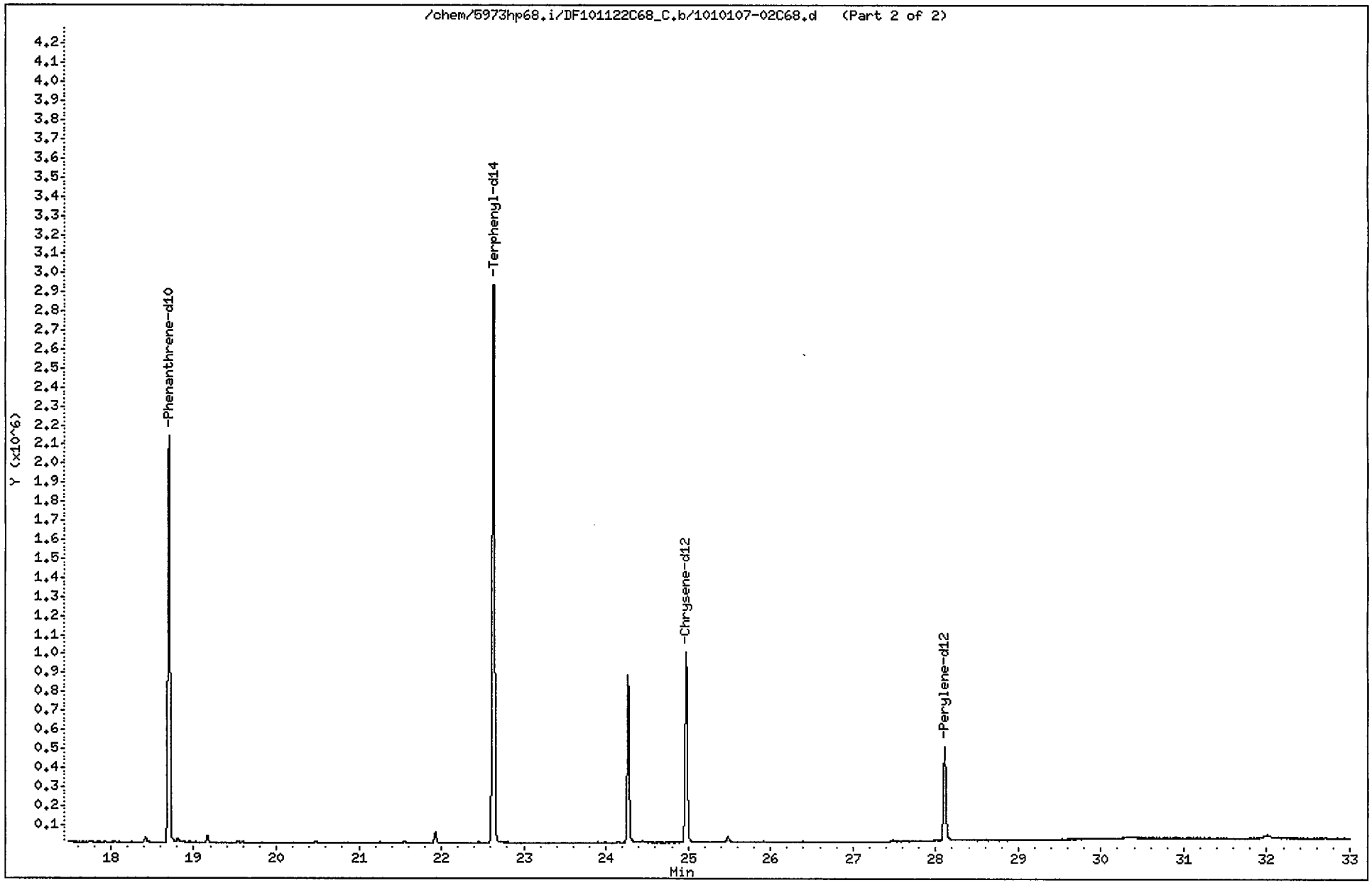
(1) - Cannot be separated from Diphenylamine

Data File: /chem/5973hp68.i/DF101122C68_C.b/1010107-02C68.d
Date : 23-NOV-2010 04:56
Client ID: 13MW1
Sample Info: 1010107-02:MEW
Volume Injected (uL): 2.0
Column phase: RTX-5MS

Instrument: 5973hp68.i
Operator: MEW
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101122C68_C.b/1010107-02C68.d
Date : 23-NOV-2010 04:56
Client ID: 13MW1
Instrument: 5973hp68.i
Sample Info: 1010107-02:MEW
Volume Injected (uL): 2.0
Operator: MEW
Column phase: RTX-5MS
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101122C68_C.b/1010107-02C68.d
Report Date: 29-Nov-2010 14:04

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Data file : /chem/5973hp68.i/DF101122C68_C.b/1010107-02C68.d
Lab Smp Id: 1010107-02 Client Smp ID: 13MW1
Inj Date : 23-NOV-2010 04:56
Operator : MEW Inst ID: 5973hp68.i
Smp Info : 1010107-02:MEW
Misc Info : 13MW1
Comment : 2008 MDLS SOIL/ 2007 WATER
Method : /chem/5973hp68.i/DF101122C68_C.b/8270CMASTERDODv5.m
Meth Date : 29-Nov-2010 14:02 byrd Quant Type: ISTD
Cal Date : 19-NOV-2010 17:11 Cal File: 0K19001-CALI1C68.d
Als bottle: 9
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: HWMU13A_C.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Vo	950.00000	Volume of sample extracted (mL)
Vi	2.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	CONCENTRATIONS FINAL (ug/L)	SIMILARITY
*	1 1,4-Dichlorobenzene-d4	152	8.330	8.335	(1.000)	593613	40.0000		
*	2 Naphthalene-d8	136	11.156	11.167	(1.000)	2083201	40.0000		
*	3 Acenaphthene-d10	164	15.275	15.280	(1.000)	1120868	40.0000		
*	4 Phenanthrene-d10	188	18.704	18.715	(1.000)	1486957	40.0000		
*	5 Chrysene-d12	240	24.976	24.987	(1.000)	650847	40.0000		
*	6 Perylene-d12	264	28.112	28.117	(1.000)	332412	40.0000		
$	7 2-Fluorophenol	112	5.867	5.862	(0.704)	2201750	106.863	56	
$	8 Phenol-d5	99	7.833	7.849	(0.940)	1746244	64.8034	34	
$	9 Nitrobenzene-d5	82	9.633	9.639	(0.864)	1527376	76.9487	40	
$	10 2-Fluorobiphenyl	172	13.790	13.795	(0.903)	2523780	76.8565	40	
$	11 2,4,6-Tribromophenol	330	17.171	17.171	(1.124)	480338	160.613	84	(A)
$	12 Terphenyl-d14	244	22.631	22.631	(0.906)	1700800	113.601	60	
	24 Phenol	94	Compound Not Detected.						
	25 2-Chlorophenol	128	Compound Not Detected.						
	34 Hexachloroethane	117	Compound Not Detected.						

Data File: /chem/5973hp68.i/DF101122C68_C.b/1010107-02C68.d
Report Date: 29-Nov-2010 14:04

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	CONCENTRATIONS FINAL (ug/L)	SIMILARITY
39 3-Methylphenol	108	Compound Not Detected.						
40 4-Methylphenol	108	Compound Not Detected.						
41 Nitrobenzene	77	Compound Not Detected.						
48 2,4-Dichlorophenol	162	Compound Not Detected.						
73 Dimethylphthalate	163	Compound Not Detected.						
81 4-Nitrophenol	139	Compound Not Detected.						
79 Dibenzofuran	168	Compound Not Detected.						
87 Diethylphthalate	149	Compound Not Detected.						
93 N-Nitrosodiphenylamine	169	Compound Not Detected.						
116 Di-n-butylphthalate	149	Compound Not Detected.						
121 Fluoranthene	202	Compound Not Detected.						
123 Pyrene	202	Compound Not Detected.						
130 Butylbenzylphthalate	149	Compound Not Detected.						
135 bis(2-ethylhexyl)Phthalate	149	Compound Not Detected.						
133 Benzo(a)anthracene	228	Compound Not Detected.						
136 Di-n-octylphthalate	149	Compound Not Detected.						
137 Benzo(b)fluoranthene	252	Compound Not Detected.						
138 Benzo(k)fluoranthene	252	Compound Not Detected.						
140 Benzo(a)pyrene	252	Compound Not Detected.						
142 Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.						
143 Dibenzo(a,h)anthracene	278	Compound Not Detected.						

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

13MW1

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-A

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 1010107-02

Sample wt/vol: 950 (g/mL) ML Lab File ID: 1010107-02C68

Level: (low/med) LOW Date Received: 10/20/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted:10/22/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/23/10

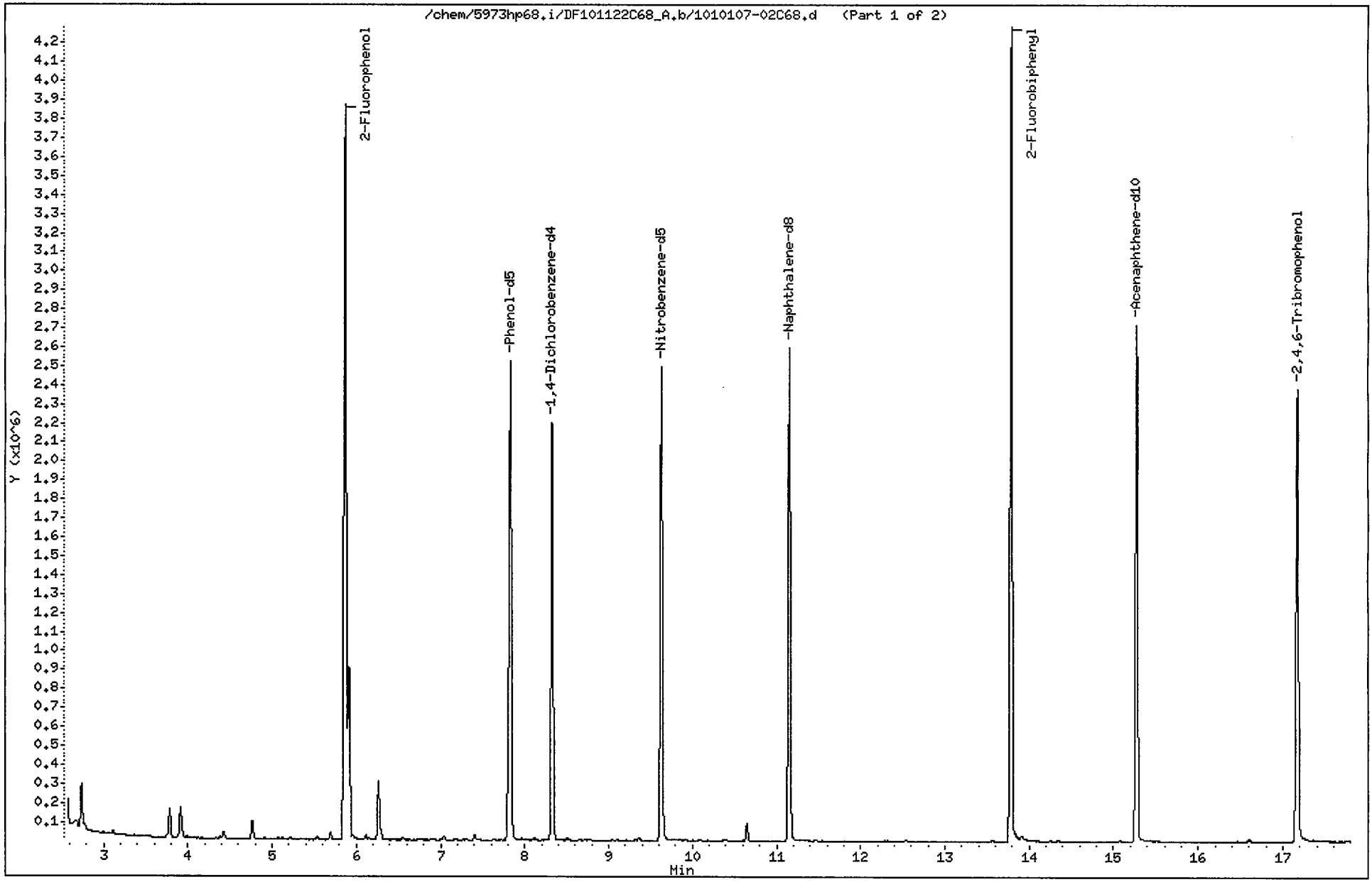
Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
119-93-7	3,3'-Dimethylbenzidine	5.3	U

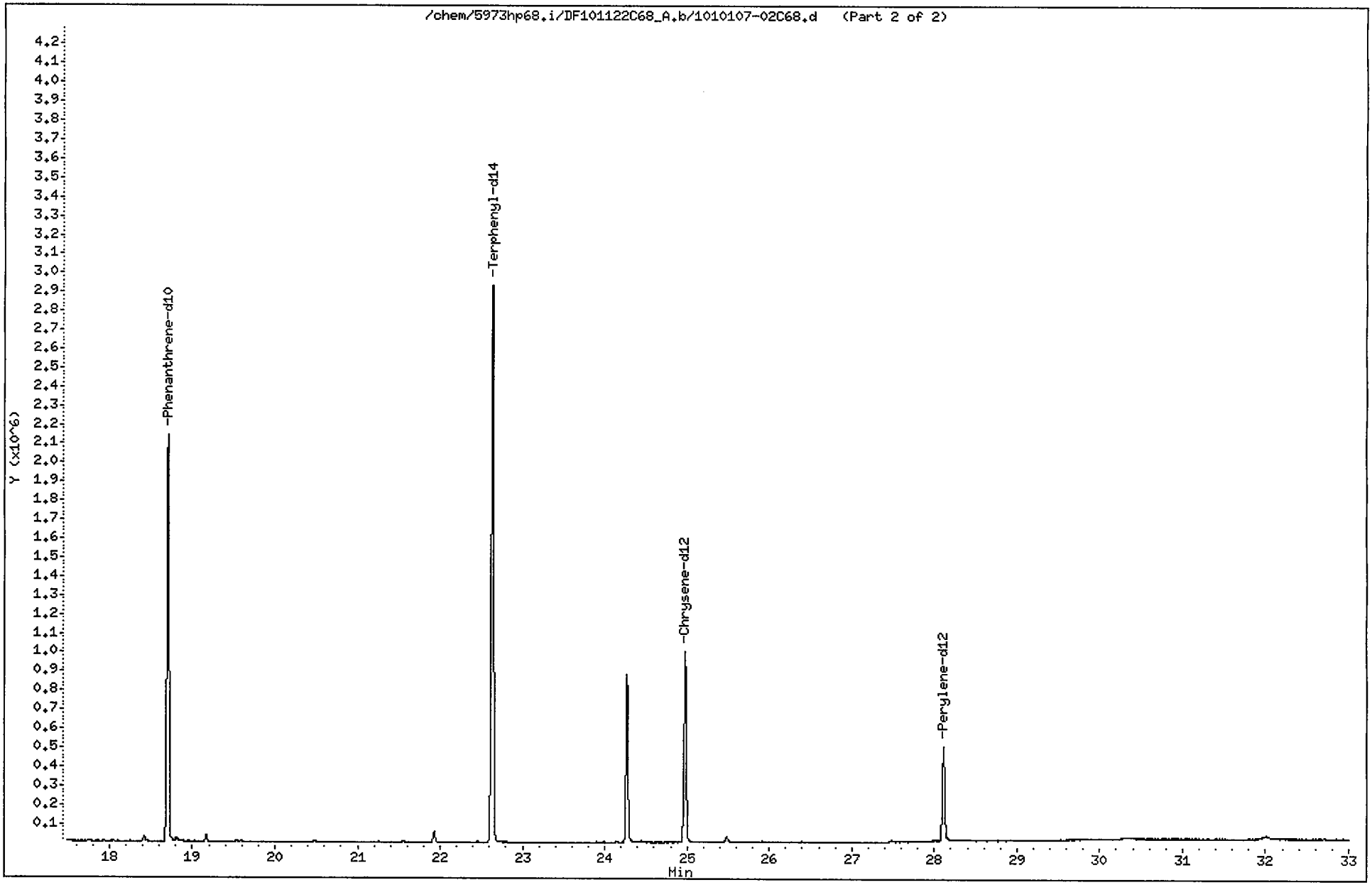
Data File: /chem/5973hp68.i/DF101122C68_A.b/1010107-02C68.d
Date : 23-NOV-2010 04:56
Client ID: 13MW1
Sample Info: 1010107-02:MEW
Volume Injected (uL): 2.0
Column phase: RTX-5MS

Instrument: 5973hp68.i
Operator: MEW
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101122C68_A.b/1010107-02C68.d
Date : 23-NOV-2010 04:56
Client ID: 13MW1
Sample Info: 1010107-02:MEW
Volume Injected (uL): 2.0
Column phase: RTX-5MS

Instrument: 5973hp68.i
Operator: MEW
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101122C68_A.b/1010107-02C68.d
Report Date: 29-Nov-2010 13:05

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Data file : /chem/5973hp68.i/DF101122C68_A.b/1010107-02C68.d
Lab Smp Id: 1010107-02 Client Smp ID: 13MW1
Inj Date : 23-NOV-2010 04:56
Operator : MEW Inst ID: 5973hp68.i
Smp Info : 1010107-02:MEW
Misc Info : 13MW1
Comment : 2008 MDLS SOIL/ 2007 WATER
Method : /chem/5973hp68.i/DF101122C68_A.b/8270CMASTERDODv5.m
Meth Date : 29-Nov-2010 13:05 byrd Quant Type: ISTD
Cal Date : 19-NOV-2010 07:31 Cal File: 0K19001-CAL6C68.d
Als bottle: 9
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: HWMU13A_A.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Vo	950.00000	Volume of sample extracted (mL)
Vi	2.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	CONCENTRATIONS FINAL (ug/L)	SIMILARITY
* 1 1,4-Dichlorobenzene-d4	152	8.330	8.330	(1.000)	593613	40.0000		
* 2 Naphthalene-d8	136	11.156	11.167	(1.000)	2083201	40.0000		
* 3 Acenaphthene-d10	164	15.275	15.280	(1.000)	1120868	40.0000		
* 4 Phenanthrene-d10	188	18.704	18.720	(1.000)	1486957	40.0000		
* 5 Chrysene-d12	240	24.976	24.987	(1.000)	650847	40.0000		
* 6 Perylene-d12	264	28.112	28.117	(1.000)	332412	40.0000		
129 3,3'-Dimethylbenzidine	212	Compound Not Detected.						

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.
13MW1

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 1010107-02

Sample wt/vol: 950 (g/mL) ML Lab File ID: 1010107-02C68

Level: (low/med) LOW Date Received: 10/20/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted:10/22/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/23/10

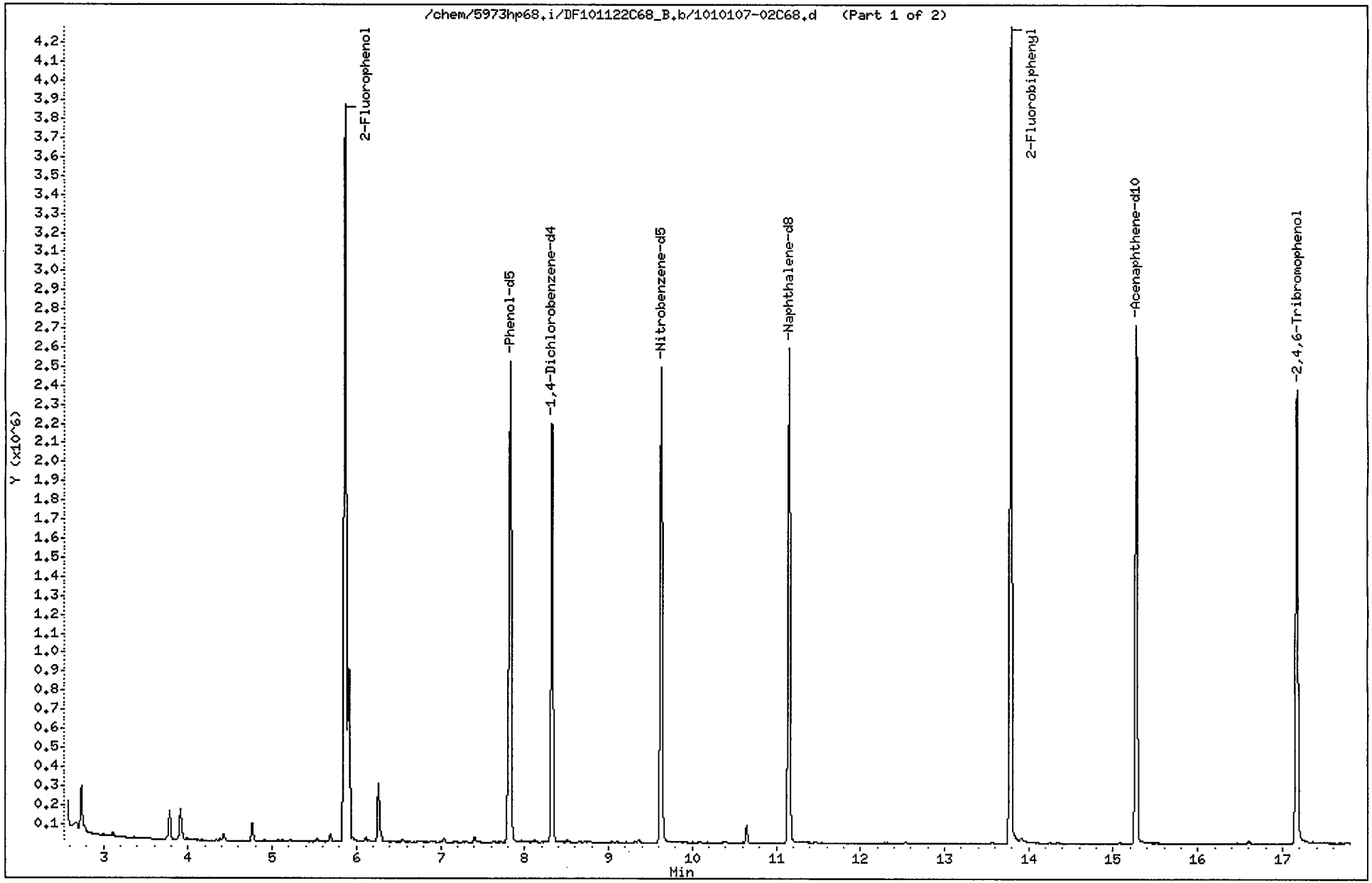
Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

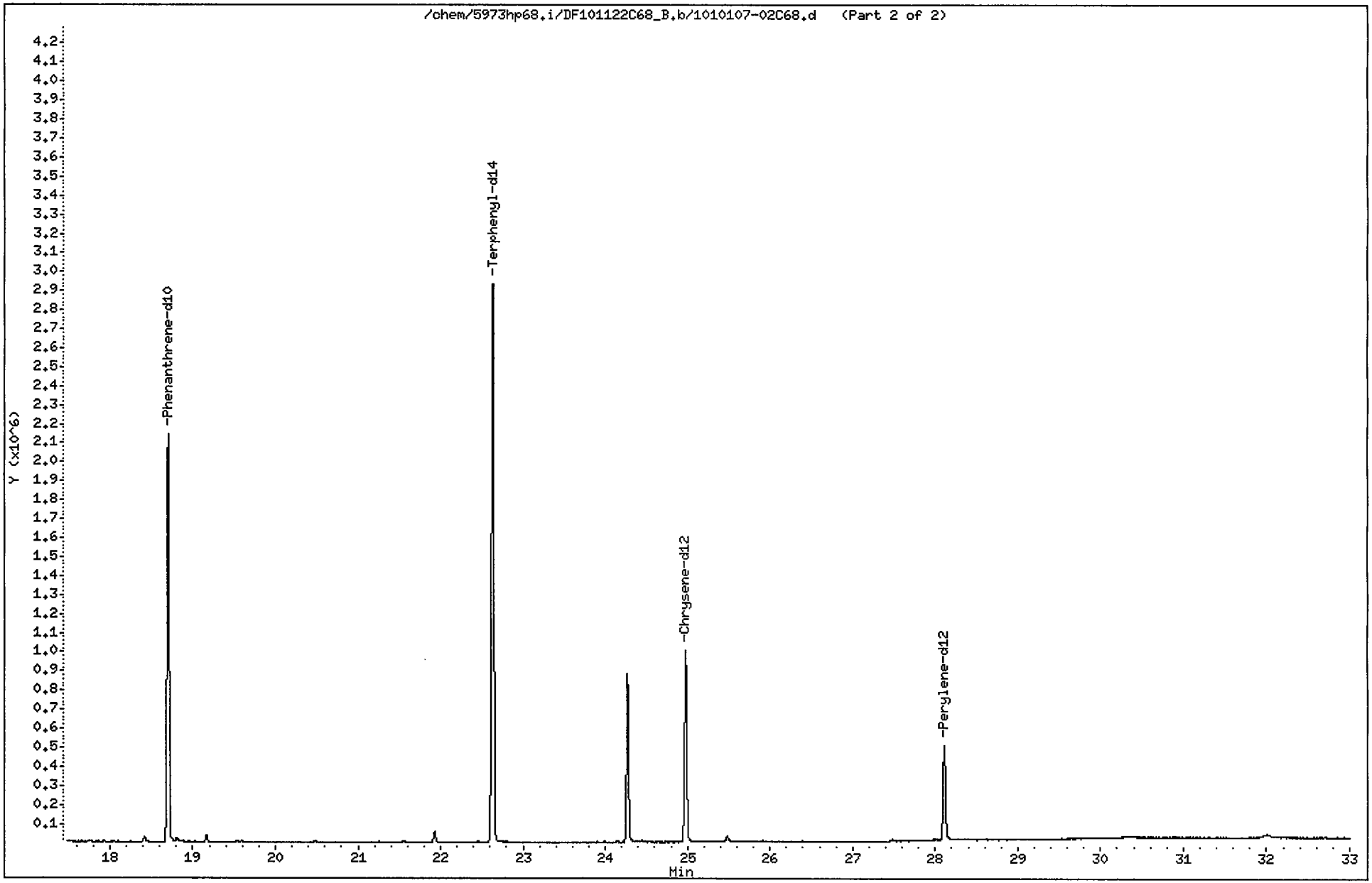
CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
98-86-2	Acetophenone	5.3	U

Data File: /chem/5973hp68.i/DF101122C68_B.b/1010107-02C68.d
Date : 23-NOV-2010 04:56
Client ID: 13MW1
Sample Info: 1010107-02:MEW
Volume Injected (uL): 2.0
Column phase: RTX-5MS

Instrument: 5973hp68.i
Operator: MEW
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101122C68_B.b/1010107-02C68.d
Date : 23-NOV-2010 04:56
Client ID: 13MW1
Instrument: 5973hp68.i
Sample Info: 1010107-02:MEW
Volume Injected (uL): 2.0
Operator: MEW
Column phase: RTX-5MS
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101122C68_B.b/1010107-02C68.d
Report Date: 29-Nov-2010 13:06

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Data file : /chem/5973hp68.i/DF101122C68_B.b/1010107-02C68.d
Lab Smp Id: 1010107-02 Client Smp ID: 13MW1
Inj Date : 23-NOV-2010 04:56
Operator : MEW Inst ID: 5973hp68.i
Smp Info : 1010107-02:MEW
Misc Info : 13MW1
Comment : 2008 MDLS SOIL/ 2007 WATER
Method : /chem/5973hp68.i/DF101122C68_B.b/8270CMASTERDODv5.m
Meth Date : 29-Nov-2010 13:05 byrd Quant Type: ISTD
Cal Date : 19-NOV-2010 11:45 Cal File: 0K19001-CALCC68.d
Als bottle: 9
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: HWMU13A_B.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Vo	950.00000	Volume of sample extracted (mL)
Vi	2.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	CONCENTRATIONS FINAL (ug/L)	SIMILARITY
* 1 1,4-Dichlorobenzene-d4	152	8.330	8.330	(1.000)	593613	40.0000		
* 2 Naphthalene-d8	136	11.156	11.156	(1.000)	2083201	40.0000		
* 3 Acenaphthene-d10	164	15.275	15.275	(1.000)	1120868	40.0000		
* 4 Phenanthrene-d10	188	18.704	18.705	(1.000)	1486957	40.0000		
* 5 Chrysene-d12	240	24.976	24.976	(1.000)	650847	40.0000		
* 6 Perylene-d12	264	28.112	28.112	(1.000)	332412	40.0000		
33 Acetophenone	105	Compound Not Detected.						

FORM 1 CLIENT SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

13MW2

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 1010107-03

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1010107-03C68

Level: (low/med) LOW Date Received: 10/20/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted:10/22/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/23/10

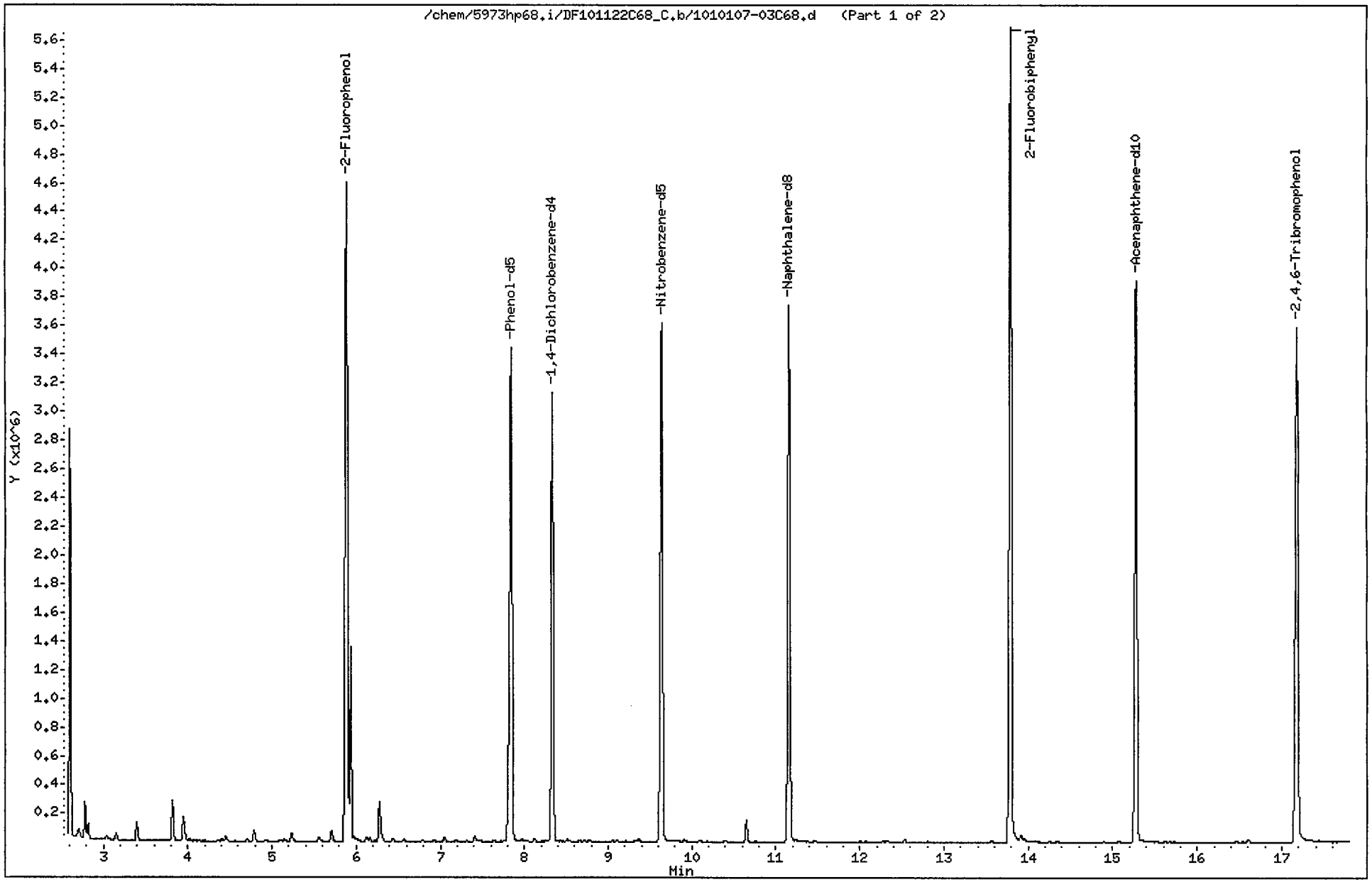
Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
95-57-8	2-Chlorophenol	10	U
108-39-4	3-Methylphenol	8.0	U
106-44-5	4-Methylphenol	8.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
131-11-3	Dimethylphthalate	5.0	U
100-02-7	4-Nitrophenol	10	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	U
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U

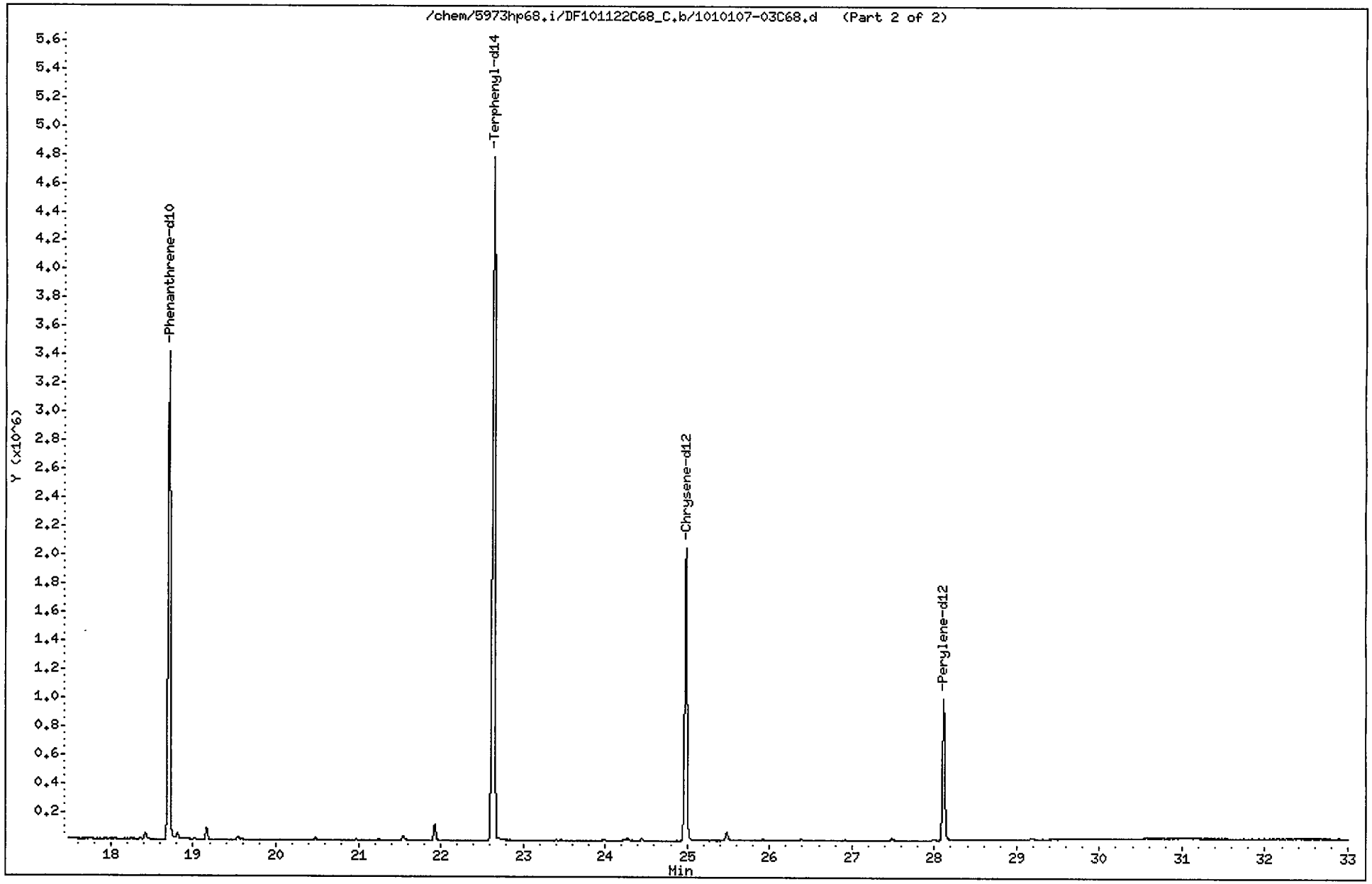
(1) - Cannot be separated from Diphenylamine

Data File: /chem/5973hp68.i/DF101122C68_C.b/1010107-03C68.d
Date : 23-NOV-2010 05:39
Client ID: 13MW2
Instrument: 5973hp68.i
Sample Info: 1010107-03:MEW
Volume Injected (uL): 2.0
Operator: MEW
Column phase: RTX-5MS
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101122C68_C.b/1010107-03C68.d
Date : 23-NOV-2010 05:39
Client ID: 13MW2
Sample Info: 1010107-03:MEW
Volume Injected (uL): 2.0
Column phase: RTX-5MS

Instrument: 5973hp68.i
Operator: MEW
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101122C68_C.b/1010107-03C68.d
Report Date: 29-Nov-2010 14:04

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Data file : /chem/5973hp68.i/DF101122C68_C.b/1010107-03C68.d
Lab Smp Id: 1010107-03 Client Smp ID: 13MW2
Inj Date : 23-NOV-2010 05:39
Operator : MEW Inst ID: 5973hp68.i
Smp Info : 1010107-03:MEW
Misc Info : 13MW2
Comment : 2008 MDLS SOIL/ 2007 WATER
Method : /chem/5973hp68.i/DF101122C68_C.b/8270CMASTERDODv5.m
Meth Date : 29-Nov-2010 14:02 byrd Quant Type: ISTD
Cal Date : 19-NOV-2010 17:11 Cal File: 0K19001-CALI1C68.d
Als bottle: 10
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: HWMU13A_C.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Vo	1000.00000	Volume of sample extracted (mL)
Vi	2.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	FINAL (ug/L)	SIMILARITY
*	1 1,4-Dichlorobenzene-d4	152	8.335	8.335	(1.000)	837455	40.0000		
*	2 Naphthalene-d8	136	11.156	11.167	(1.000)	3176058	40.0000		
*	3 Acenaphthene-d10	164	15.280	15.280	(1.000)	1739455	40.0000		
*	4 Phenanthrene-d10	188	18.710	18.715	(1.000)	2584877	40.0000		
*	5 Chrysene-d12	240	24.982	24.987	(1.000)	1404747	40.0000		
*	6 Perylene-d12	264	28.118	28.117	(1.000)	678337	40.0000		
$	7 2-Fluorophenol	112	5.888	5.862	(0.706)	2922612	100.548	50	
$	8 Phenol-d5	99	7.844	7.849	(0.941)	2687802	70.7021	35	
$	9 Nitrobenzene-d5	82	9.644	9.639	(0.864)	2439620	80.6158	40	
$	10 2-Fluorobiphenyl	172	13.795	13.795	(0.903)	3737741	73.3466	37	
$	11 2,4,6-Tribromophenol	330	17.182	17.171	(1.124)	905192	195.036	98	(A)
$	12 Terphenyl-d14	244	22.642	22.631	(0.906)	3192720	98.8032	49	
	24 Phenol	94	Compound Not Detected.						
	25 2-Chlorophenol	128	Compound Not Detected.						
	34 Hexachloroethane	117	Compound Not Detected.						

calculate

Data File: /chem/5973hp68.i/DF101122C68_C.b/1010107-03C68.d
Report Date: 29-Nov-2010 14:04

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	CONCENTRATIONS FINAL (ug/L)	SIMILARITY
39 3-Methylphenol	108	Compound Not Detected.						
40 4-Methylphenol	108	Compound Not Detected.						
41 Nitrobenzene	77	Compound Not Detected.						
48 2,4-Dichlorophenol	162	Compound Not Detected.						
73 Dimethylphthalate	163	Compound Not Detected.						
81 4-Nitrophenol	139	Compound Not Detected.						
79 Dibenzofuran	168	Compound Not Detected.						
87 Diethylphthalate	149	Compound Not Detected.						
93 N-Nitrosodiphenylamine	169	Compound Not Detected.						
116 Di-n-butylphthalate	149	Compound Not Detected.						
121 Fluoranthene	202	Compound Not Detected.						
123 Pyrene	202	Compound Not Detected.						
130 Butylbenzylphthalate	149	Compound Not Detected.						
135 bis(2-ethylhexyl)Phthalate	149	Compound Not Detected.						
133 Benzo(a)anthracene	228	Compound Not Detected.						
136 Di-n-octylphthalate	149	Compound Not Detected.						
137 Benzo(b)fluoranthene	252	Compound Not Detected.						
138 Benzo(k)fluoranthene	252	Compound Not Detected.						
140 Benzo(a)pyrene	252	Compound Not Detected.						
142 Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.						
143 Dibenzo(a,h)anthracene	278	Compound Not Detected.						

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

13MW2

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-A

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 1010107-03

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1010107-03C68

Level: (low/med) LOW Date Received: 10/20/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted:10/22/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/23/10

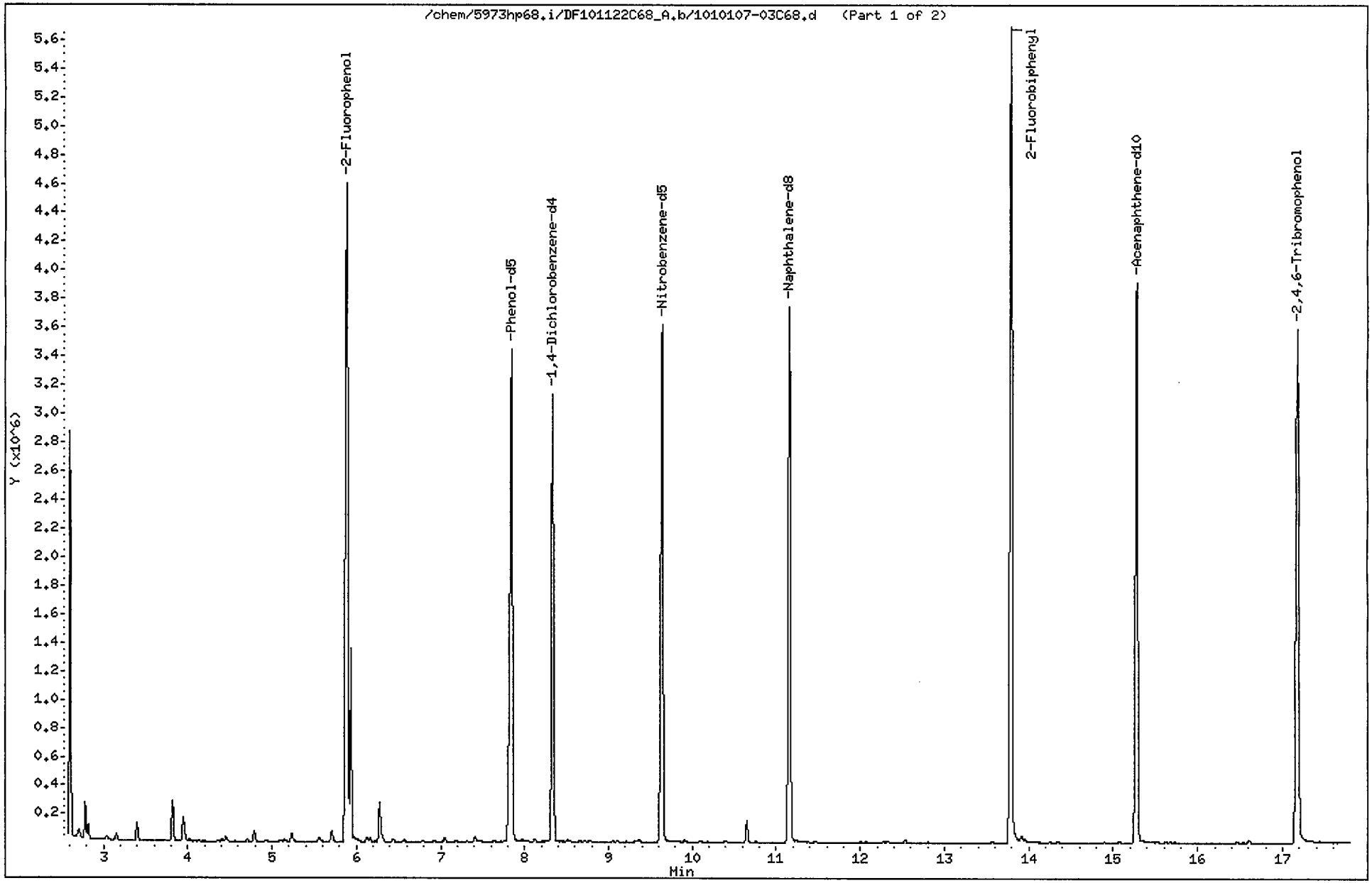
Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
119-93-7	3,3'-Dimethylbenzidine	5.0	U

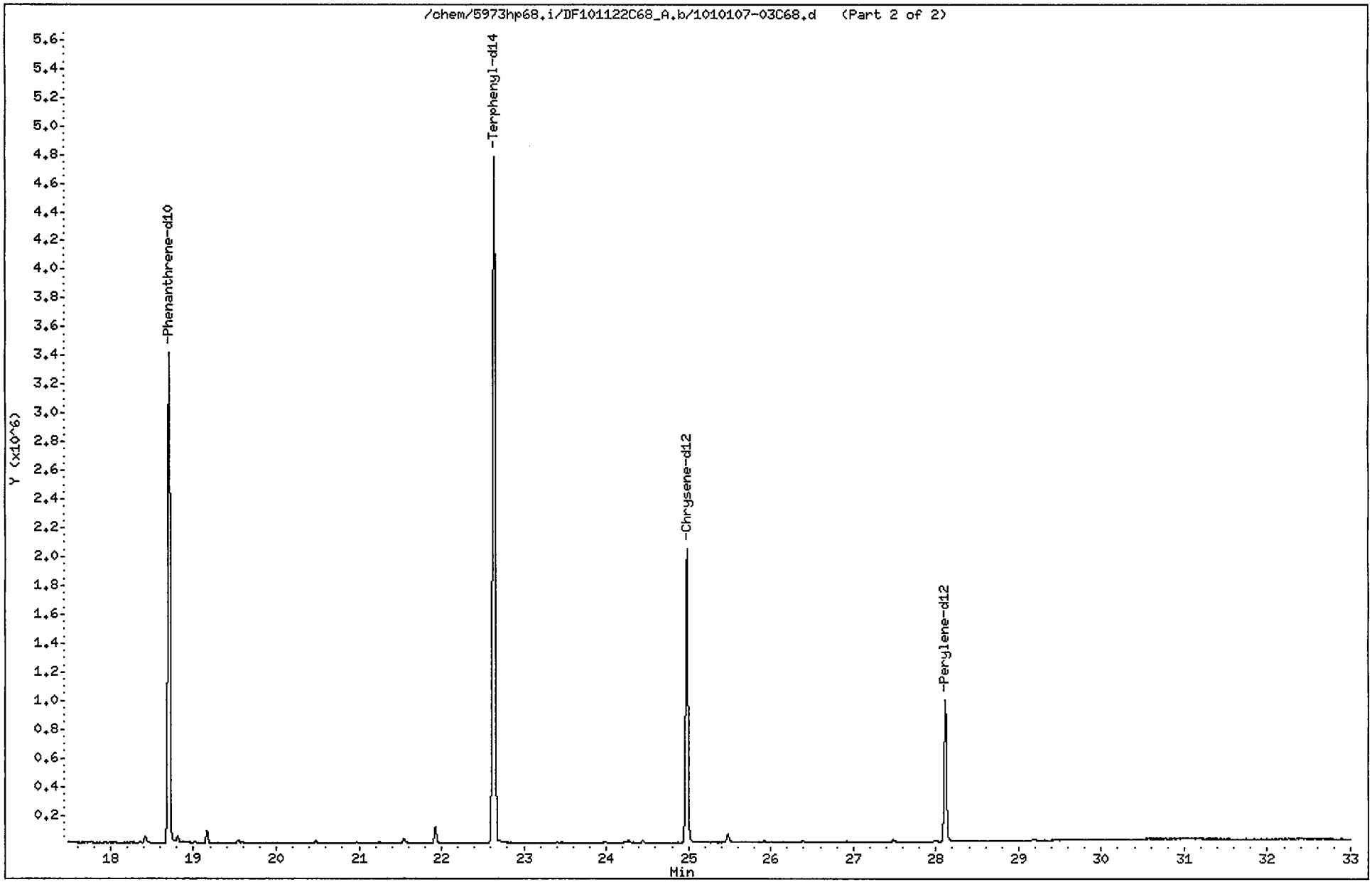
Data File: /chem/5973hp68.i/DF101122C68_A.b/1010107-03C68.d
Date : 23-NOV-2010 05:39
Client ID: 13MW2
Sample Info: 1010107-03:MEW
Volume Injected (uL): 2.0
Column phase: RTX-5MS

Instrument: 5973hp68.i
Operator: MEW
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101122C68_A.b/1010107-03C68.d
Date : 23-NOV-2010 05:39
Client ID: 13MW2
Sample Info: 1010107-03:MEW
Volume Injected (uL): 2.0
Column phase: RTX-5MS

Instrument: 5973hp68.i
Operator: MEW
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101122C68_A.b/1010107-03C68.d
Report Date: 29-Nov-2010 13:05

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Data file : /chem/5973hp68.i/DF101122C68_A.b/1010107-03C68.d
Lab Smp Id: 1010107-03 Client Smp ID: 13MW2
Inj Date : 23-NOV-2010 05:39
Operator : MEW Inst ID: 5973hp68.i
Smp Info : 1010107-03:MEW
Misc Info : 13MW2
Comment : 2008 MDLS SOIL/ 2007 WATER
Method : /chem/5973hp68.i/DF101122C68_A.b/8270CMASTERDODv5.m
Meth Date : 29-Nov-2010 13:05 byrd Quant Type: ISTD
Cal Date : 19-NOV-2010 07:31 Cal File: 0K19001-CAL6C68.d
Als bottle: 10
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: HWMU13A_A.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Vo	1000.00000	Volume of sample extracted (mL)
Vi	2.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	CONCENTRATIONS FINAL (ug/L)	SIMILARITY
* 1 1,4-Dichlorobenzene-d4	152	8.335	8.330	(1.000)	837455	40.0000		
* 2 Naphthalene-d8	136	11.156	11.167	(1.000)	3176058	40.0000		
* 3 Acenaphthene-d10	164	15.280	15.280	(1.000)	1739455	40.0000		
* 4 Phenanthrene-d10	188	18.710	18.720	(1.000)	2584877	40.0000		
* 5 Chrysene-d12	240	24.982	24.987	(1.000)	1404747	40.0000		
* 6 Perylene-d12	264	28.118	28.117	(1.000)	678337	40.0000		
129 3,3'-Dimethylbenzidine	212	Compound Not Detected.						

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

13MW2

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 1010107-03

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1010107-03C68

Level: (low/med) LOW Date Received: 10/20/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted:10/22/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/23/10

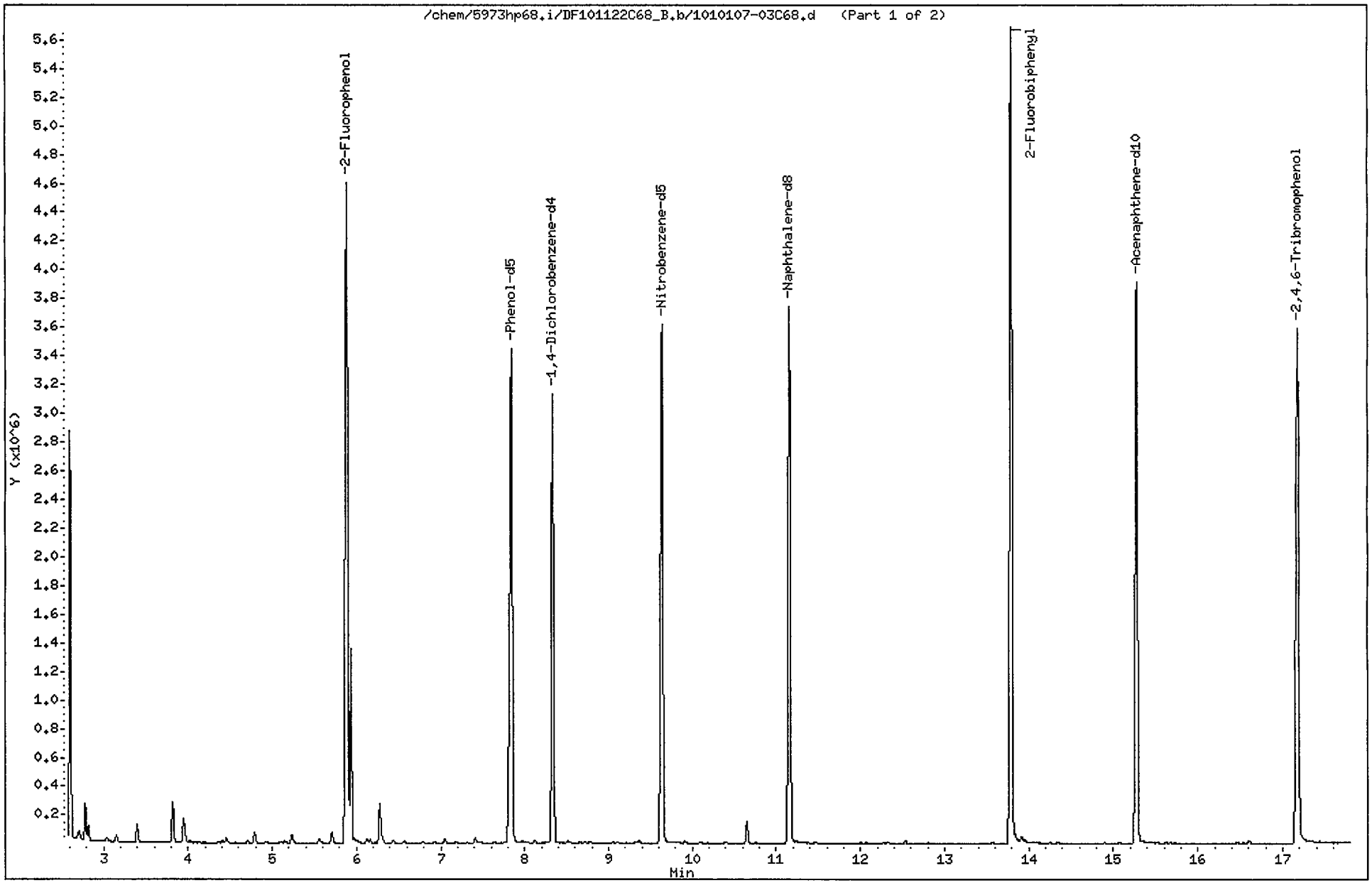
Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

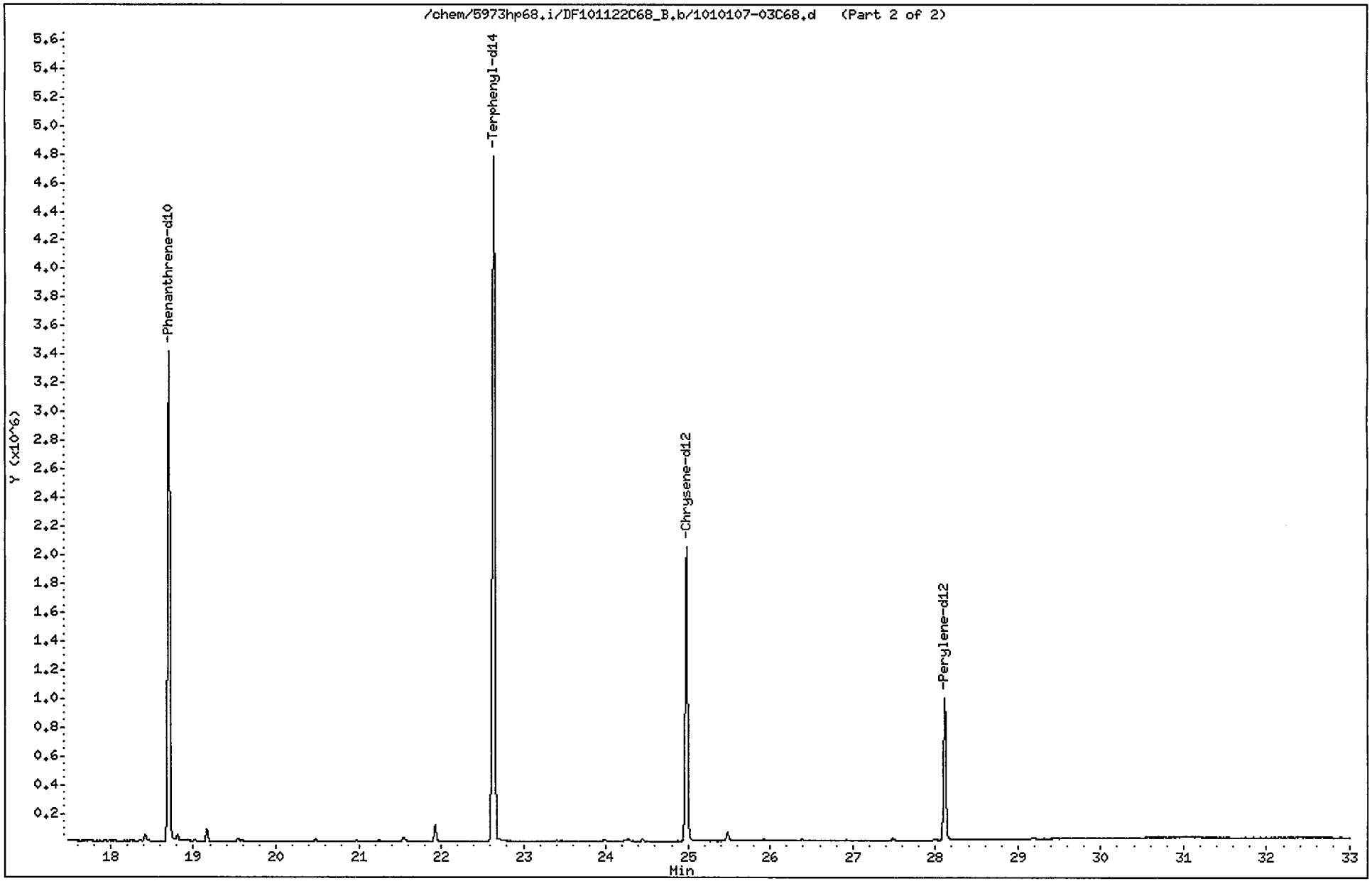
CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
98-86-2	Acetophenone	5.0	U

Data File: /chem/5973hp68.i/DF101122C68_B.b/1010107-03C68.d
Date : 23-NOV-2010 05:39
Client ID: 13MW2
Sample Info: 1010107-03:MEW
Volume Injected (uL): 2.0
Column phase: RTX-5MS

Instrument: 5973hp68.i
Operator: MEW
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101122C68_B.b/1010107-03C68.d
Date : 23-NOV-2010 05:39
Client ID: 13MW2
Instrument: 5973hp68.i
Sample Info: 1010107-03:MEW
Volume Injected (uL): 2.0
Operator: MEW
Column phase: RTX-5MS
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101122C68_B.b/1010107-03C68.d
Report Date: 29-Nov-2010 13:06

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Data file : /chem/5973hp68.i/DF101122C68_B.b/1010107-03C68.d
Lab Smp Id: 1010107-03 Client Smp ID: 13MW2
Inj Date : 23-NOV-2010 05:39
Operator : MEW Inst ID: 5973hp68.i
Smp Info : 1010107-03:MEW
Misc Info : 13MW2
Comment : 2008 MDLS SOIL/ 2007 WATER
Method : /chem/5973hp68.i/DF101122C68_B.b/8270CMASTERDODv5.m
Meth Date : 29-Nov-2010 13:05 byrd Quant Type: ISTD
Cal Date : 19-NOV-2010 11:45 Cal File: 0K19001-CALCC68.d
Als bottle: 10
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: HWMU13A_B.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Vo	1000.00000	Volume of sample extracted (mL)
Vi	2.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	CONCENTRATIONS FINAL (ug/L)	SIMILARITY
* 1 1,4-Dichlorobenzene-d4	152	8.335	8.330	(1.000)	837455	40.0000		
* 2 Naphthalene-d8	136	11.156	11.156	(1.000)	3176058	40.0000		
* 3 Acenaphthene-d10	164	15.280	15.275	(1.000)	1739455	40.0000		
* 4 Phenanthrene-d10	188	18.710	18.705	(1.000)	2584877	40.0000		
* 5 Chrysene-d12	240	24.982	24.976	(1.000)	1404747	40.0000		
* 6 Perylene-d12	264	28.118	28.112	(1.000)	678337	40.0000		
33 Acetophenone	105	Compound Not Detected.						

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

13MW3

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 1010107-04

Sample wt/vol: 950 (g/mL) ML Lab File ID: 1010107-04C68

Level: (low/med) LOW Date Received: 10/20/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted:10/22/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/23/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

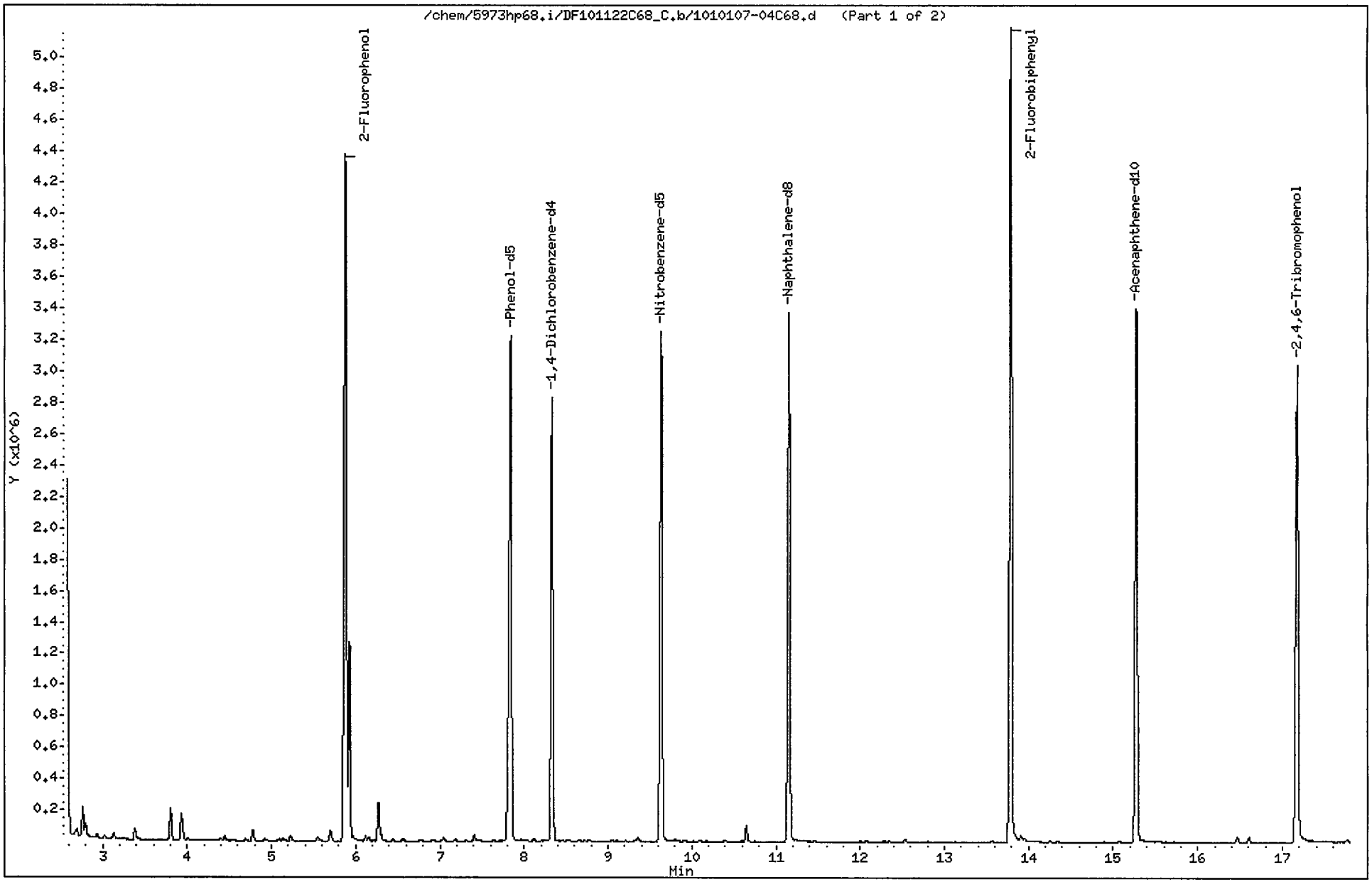
GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
95-57-8	2-Chlorophenol	10	U
108-39-4	3-Methylphenol	8.4	U
106-44-5	4-Methylphenol	8.4	U
67-72-1	Hexachloroethane	5.3	U
98-95-3	Nitrobenzene	5.3	U
120-83-2	2,4-Dichlorophenol	10	U
131-11-3	Dimethylphthalate	5.3	U
100-02-7	4-Nitrophenol	10	U
132-64-9	Dibenzofuran	5.3	U
84-66-2	Diethylphthalate	5.3	U
86-30-6	N-Nitrosodiphenylamine (1)	5.3	U
84-74-2	Di-n-butylphthalate	5.3	U
206-44-0	Fluoranthene	5.3	U
129-00-0	Pyrene	5.3	U
85-68-7	Butylbenzylphthalate	5.3	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.3	U
56-55-3	Benzo(a)anthracene	5.3	U
117-84-0	Di-n-octylphthalate	5.3	U
205-99-2	Benzo(b)fluoranthene	5.3	U
207-08-9	Benzo(k)fluoranthene	5.3	U
50-32-8	Benzo(a)pyrene	5.3	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.3	U
53-70-3	Dibenzo(a,h)anthracene	5.3	U

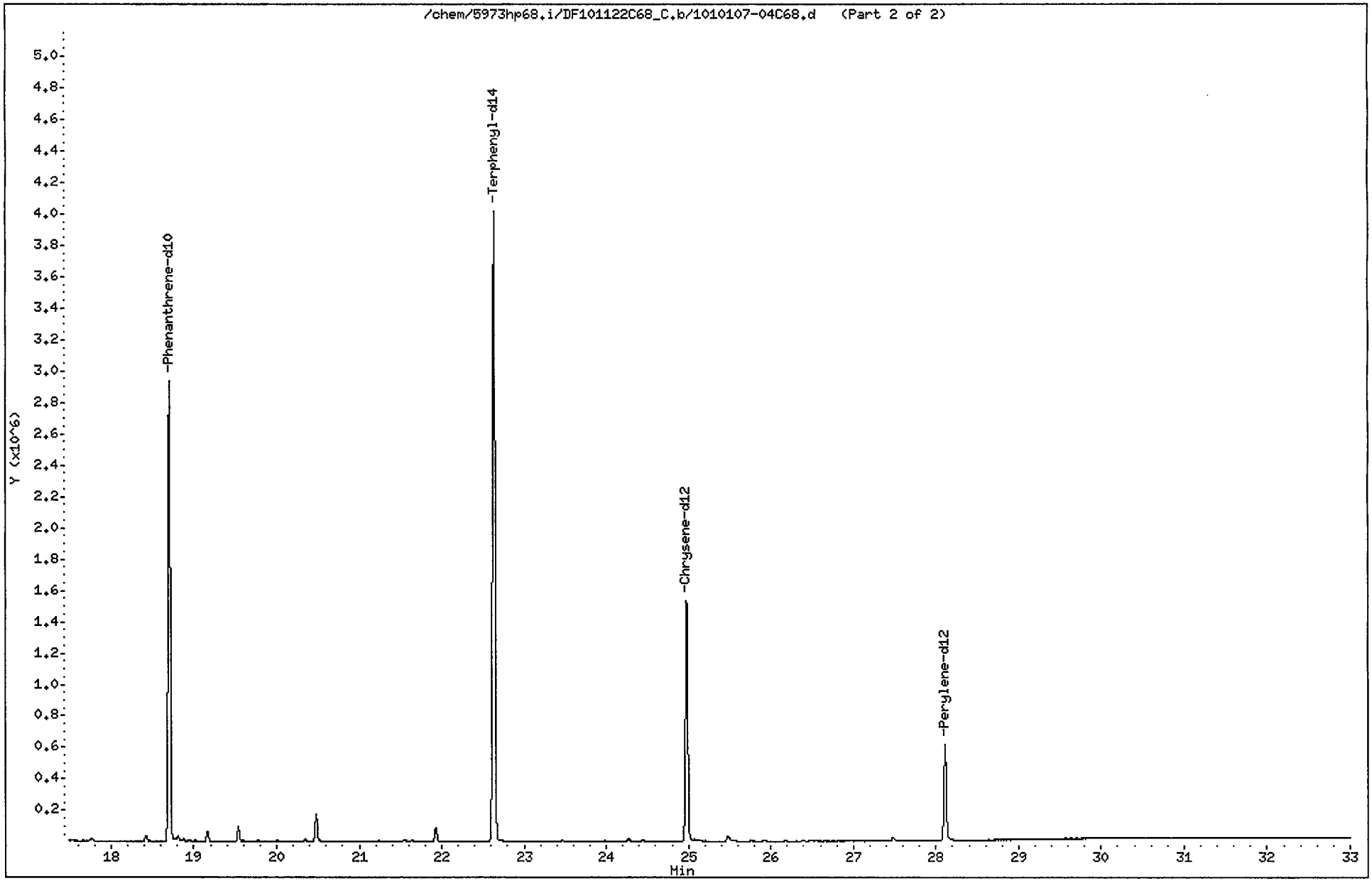
(1) - Cannot be separated from Diphenylamine

Data File: /chem/5973hp68.i/DF101122C68_C.b/1010107-04C68.d
Date : 23-NOV-2010 06:21
Client ID: 13MW3
Sample Info: 1010107-04:MEW
Volume Injected (uL): 2.0
Column phase: RTX-5MS

Instrument: 5973hp68.i
Operator: MEW
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101122C68_C.b/1010107-04C68.d
Date : 23-NOV-2010 06:21
Client ID: 13MW3
Instrument: 5973hp68.i
Sample Info: 1010107-04:MEW
Volume Injected (uL): 2.0
Operator: MEW
Column phase: RTX-5MS
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101122C68_C.b/1010107-04C68.d
Report Date: 29-Nov-2010 14:04

CompuChem

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Data file : /chem/5973hp68.i/DF101122C68_C.b/1010107-04C68.d
Lab Smp Id: 1010107-04 Client Smp ID: 13MW3
Inj Date : 23-NOV-2010 06:21
Operator : MEW Inst ID: 5973hp68.i
Smp Info : 1010107-04:MEW
Misc Info : 13MW3
Comment : 2008 MDLS SOIL/ 2007 WATER
Method : /chem/5973hp68.i/DF101122C68_C.b/8270CMASTERDODv5.m
Meth Date : 29-Nov-2010 14:02 byrd Quant Type: ISTD
Cal Date : 19-NOV-2010 17:11 Cal File: 0K19001-CALI1C68.d
Als bottle: 11
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: HWMU13A_C.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Vo	950.00000	Volume of sample extracted (mL)
Vi	2.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	FINAL (ug/L)	SIMILARITY
*	1 1,4-Dichlorobenzene-d4	152	8.330	8.335	(1.000)	755362	40.0000		
*	2 Naphthalene-d8	136	11.156	11.167	(1.000)	2759839	40.0000		
*	3 Acenaphthene-d10	164	15.275	15.280	(1.000)	1494300	40.0000		
*	4 Phenanthrene-d10	188	18.704	18.715	(1.000)	2113621	40.0000		
*	5 Chrysene-d12	240	24.976	24.987	(1.000)	1036833	40.0000		
*	6 Perylene-d12	264	28.112	28.117	(1.000)	408968	40.0000		
$	7 2-Fluorophenol	112	5.878	5.862	(0.706)	2730593	104.151	55	
$	8 Phenol-d5	99	7.844	7.849	(0.942)	2430945	70.8952	37	
$	9 Nitrobenzene-d5	82	9.639	9.639	(0.864)	2089872	79.4735	42	
$	10 2-Fluorobiphenyl	172	13.795	13.795	(0.903)	3328755	76.0375	40	
$	11 2,4,6-Tribromophenol	330	17.177	17.171	(1.125)	676016	169.554	89	(A)
$	12 Terphenyl-d14	244	22.642	22.631	(0.907)	2471363	103.618	54	
	24 Phenol	94	Compound Not Detected.						
	25 2-Chlorophenol	128	Compound Not Detected.						
	34 Hexachloroethane	117	Compound Not Detected.						

Data File: /chem/5973hp68.i/DF101122C68_C.b/1010107-04C68.d
Report Date: 29-Nov-2010 14:04

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	CONCENTRATIONS FINAL (ug/L)	SIMILARITY
39 3-Methylphenol	108	Compound Not Detected.						
40 4-Methylphenol	108	Compound Not Detected.						
41 Nitrobenzene	77	Compound Not Detected.						
48 2,4-Dichlorophenol	162	Compound Not Detected.						
73 Dimethylphthalate	163	Compound Not Detected.						
81 4-Nitrophenol	139	Compound Not Detected.						
79 Dibenzofuran	168	Compound Not Detected.						
87 Diethylphthalate	149	Compound Not Detected.						
93 N-Nitrosodiphenylamine	169	Compound Not Detected.						
116 Di-n-butylphthalate	149	Compound Not Detected.						
121 Fluoranthene	202	Compound Not Detected.						
123 Pyrene	202	Compound Not Detected.						
130 Butylbenzylphthalate	149	Compound Not Detected.						
135 bis(2-ethylhexyl)Phthalate	149	Compound Not Detected.						
133 Benzo(a)anthracene	228	Compound Not Detected.						
136 Di-n-octylphthalate	149	Compound Not Detected.						
137 Benzo(b)fluoranthene	252	Compound Not Detected.						
138 Benzo(k)fluoranthene	252	Compound Not Detected.						
140 Benzo(a)pyrene	252	Compound Not Detected.						
142 Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.						
143 Dibenzo(a,h)anthracene	278	Compound Not Detected.						

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

13MW3

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-A

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 1010107-04

Sample wt/vol: 950 (g/mL) ML Lab File ID: 1010107-04C68

Level: (low/med) LOW Date Received: 10/20/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted:10/22/10

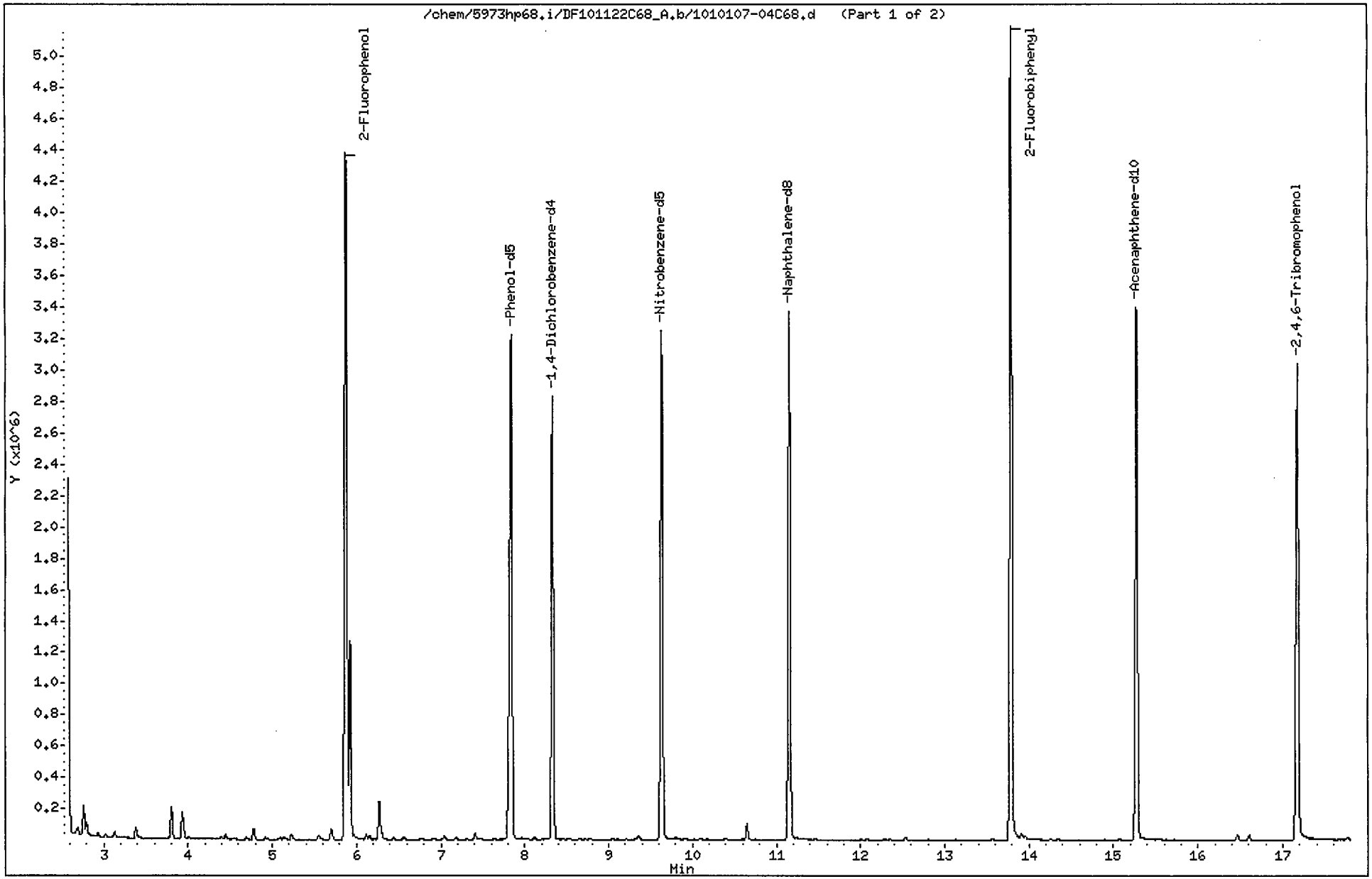
Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/23/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

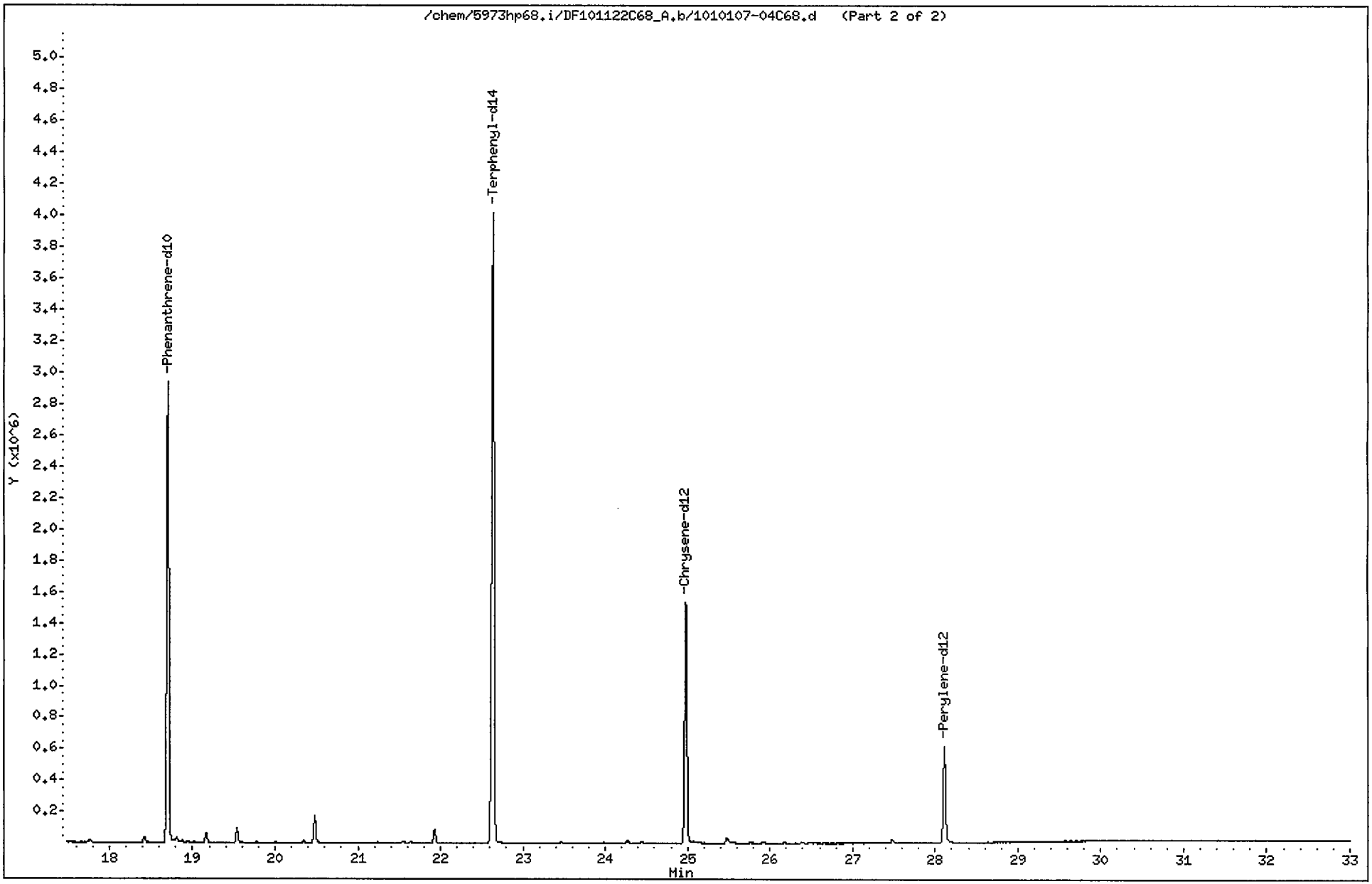
CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
119-93-7	3,3'-Dimethylbenzidine	5.3	U

Data File: /chem/5973hp68.i/DF101122C68_A.b/1010107-04C68.d
Date : 23-NOV-2010 06:21
Client ID: 13MW3
Instrument: 5973hp68.i
Sample Info: 1010107-04:MEW
Volume Injected (uL): 2.0
Operator: MEW
Column phase: RTX-5MS
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101122C68_A.b/1010107-04C68.d
Date : 23-NOV-2010 06:21
Client ID: 13MW3
Sample Info: 1010107-04:MEW
Volume Injected (uL): 2.0
Column phase: RTX-5MS

Instrument: 5973hp68.i
Operator: MEW
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101122C68_A.b/1010107-04C68.d
Report Date: 29-Nov-2010 13:05

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Data file : /chem/5973hp68.i/DF101122C68_A.b/1010107-04C68.d
Lab Smp Id: 1010107-04 Client Smp ID: 13MW3
Inj Date : 23-NOV-2010 06:21
Operator : MEW Inst ID: 5973hp68.i
Smp Info : 1010107-04:MEW
Misc Info : 13MW3
Comment : 2008 MDLS SOIL/ 2007 WATER
Method : /chem/5973hp68.i/DF101122C68_A.b/8270CMASTERDODv5.m
Meth Date : 29-Nov-2010 13:05 byrd Quant Type: ISTD
Cal Date : 19-NOV-2010 07:31 Cal File: 0K19001-CAL6C68.d
Als bottle: 11
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: HWMU13A_A.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Vo	950.00000	Volume of sample extracted (mL)
Vi	2.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	CONCENTRATIONS FINAL (ug/L)	SIMILARITY
* 1	1,4-Dichlorobenzene-d4	152	8.330	8.330	(1.000)	755362	40.0000		
* 2	Naphthalene-d8	136	11.156	11.167	(1.000)	2759839	40.0000		
* 3	Acenaphthene-d10	164	15.275	15.280	(1.000)	1494300	40.0000		
* 4	Phenanthrene-d10	188	18.704	18.720	(1.000)	2113621	40.0000		
* 5	Chrysene-d12	240	24.976	24.987	(1.000)	1036833	40.0000		
* 6	Perylene-d12	264	28.112	28.117	(1.000)	408968	40.0000		
129	3,3'-Dimethylbenzidine	212	Compound Not Detected.						

Gulardo

FORM 1 CLIENT SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

13MW3

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 1010107-04

Sample wt/vol: 950 (g/mL) ML Lab File ID: 1010107-04C68

Level: (low/med) LOW Date Received: 10/20/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted:10/22/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/23/10

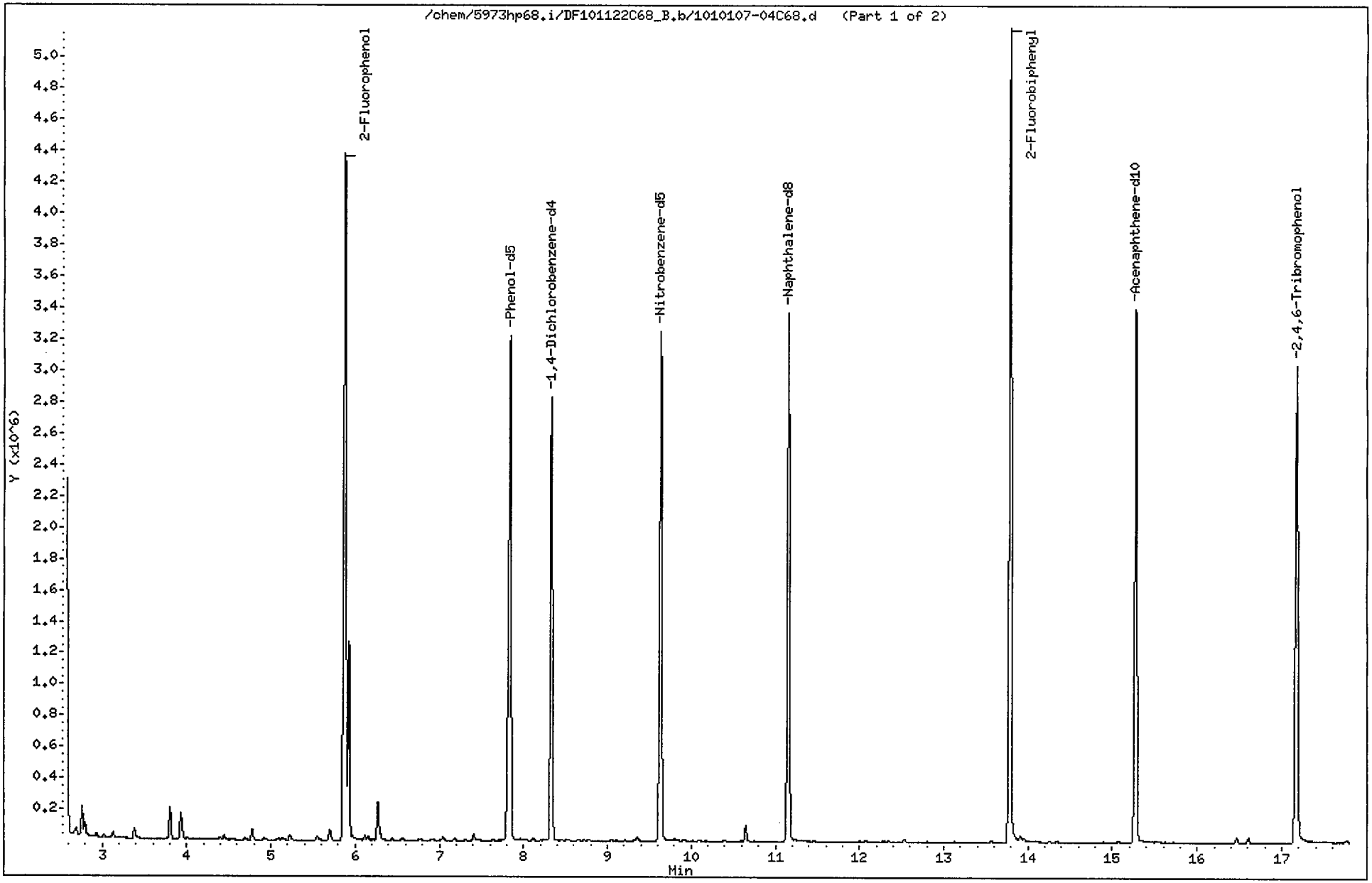
Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
98-86-2	Acetophenone	5.3	U

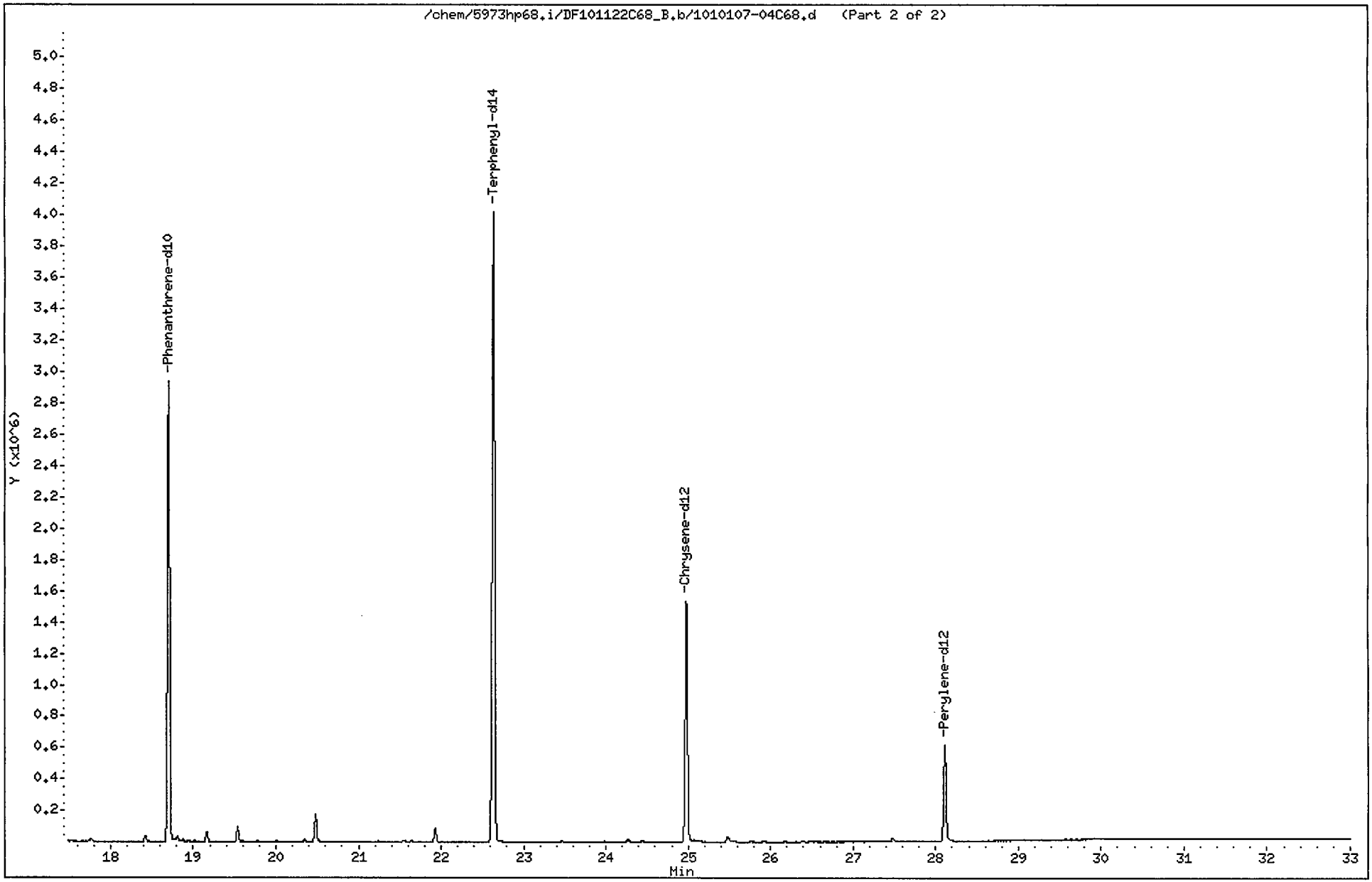
Data File: /chem/5973hp68.i/DF101122C68_B.b/1010107-04C68.d
Date : 23-NOV-2010 06:21
Client ID: 13MW3
Sample Info: 1010107-04:MEW
Volume Injected (uL): 2.0
Column phase: RTX-5MS

Instrument: 5973hp68.i
Operator: MEW
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101122C68_B.b/1010107-04C68.d
Date : 23-NOV-2010 06:21
Client ID: 13MW3
Sample Info: 1010107-04:MEW
Volume Injected (uL): 2.0
Column phase: RTX-5MS

Instrument: 5973hp68.i
Operator: MEW
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101122C68_B.b/1010107-04C68.d
Report Date: 29-Nov-2010 13:06

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Data file : /chem/5973hp68.i/DF101122C68_B.b/1010107-04C68.d
Lab Smp Id: 1010107-04 Client Smp ID: 13MW3
Inj Date : 23-NOV-2010 06:21
Operator : MEW Inst ID: 5973hp68.i
Smp Info : 1010107-04:MEW
Misc Info : 13MW3
Comment : 2008 MDLS SOIL/ 2007 WATER
Method : /chem/5973hp68.i/DF101122C68_B.b/8270CMASTERDODv5.m
Meth Date : 29-Nov-2010 13:05 byrd Quant Type: ISTD
Cal Date : 19-NOV-2010 11:45 Cal File: 0K19001-CALCC68.d
Als bottle: 11
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: HWMU13A_B.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Vo	950.00000	Volume of sample extracted (mL)
Vi	2.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	CONCENTRATIONS FINAL (ug/L)	SIMILARITY
* 1 1,4-Dichlorobenzene-d4	152	8.330	8.330	(1.000)	755362	40.0000		
* 2 Naphthalene-d8	136	11.156	11.156	(1.000)	2759839	40.0000		
* 3 Acenaphthene-d10	164	15.275	15.275	(1.000)	1494300	40.0000		
* 4 Phenanthrene-d10	188	18.704	18.705	(1.000)	2113621	40.0000		
* 5 Chrysene-d12	240	24.976	24.976	(1.000)	1036833	40.0000		
* 6 Perylene-d12	264	28.112	28.112	(1.000)	408968	40.0000		
33 Acetophenone	105	Compound Not Detected.						

FORM 1 CLIENT SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

13MW4

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 1010107-05

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1010107-05C68

Level: (low/med) LOW Date Received: 10/20/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted:10/22/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/23/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

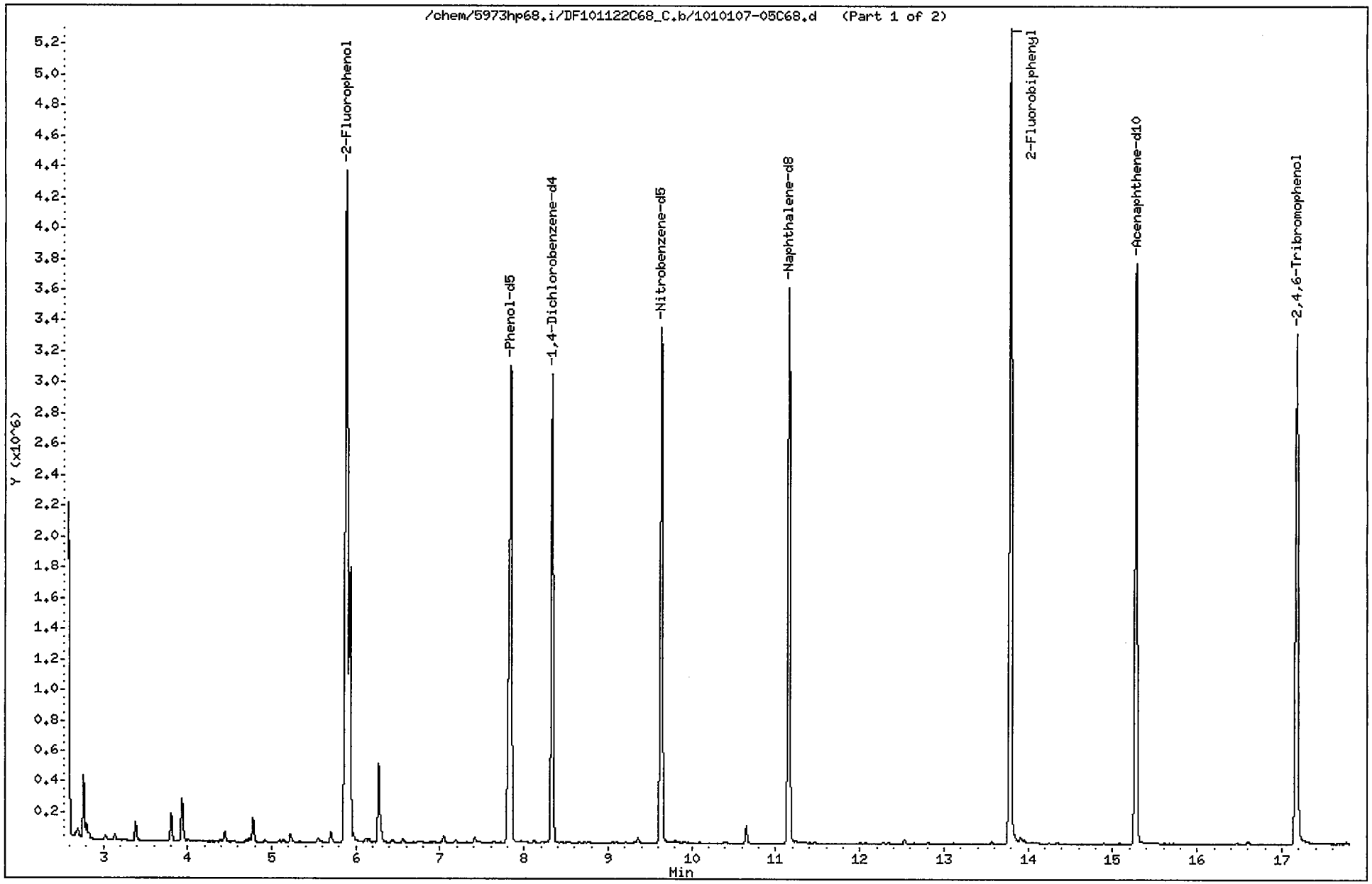
GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
95-57-8	2-Chlorophenol	10	U
108-39-4	3-Methylphenol	8.0	U
106-44-5	4-Methylphenol	8.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
131-11-3	Dimethylphthalate	5.0	U
100-02-7	4-Nitrophenol	10	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	U
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U

(1) - Cannot be separated from Diphenylamine

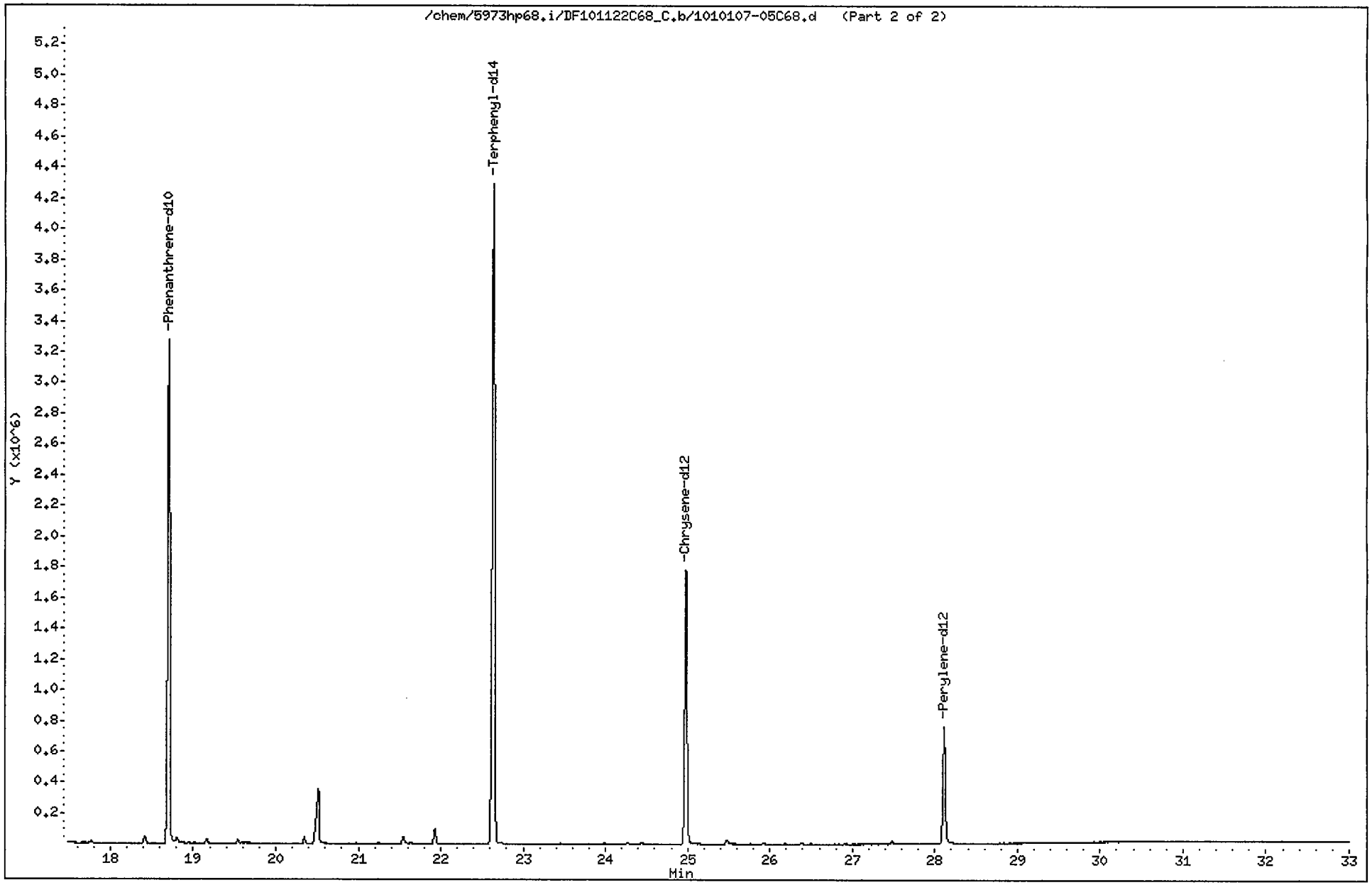
Data File: /chem/5973hp68.i/DF101122C68_C.b/1010107-05C68.d
Date : 23-NOV-2010 07:04
Client ID: 13MW4
Sample Info: 1010107-05:MEW
Volume Injected (uL): 2.0
Column phase: RTX-5MS

Instrument: 5973hp68.i
Operator: MEW
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101122C68_C.b/1010107-05C68.d
Date : 23-NOV-2010 07:04
Client ID: 13MW4
Sample Info: 1010107-05:MEW
Volume Injected (uL): 2.0
Column phase: RTX-5MS

Instrument: 5973hp68.i
Operator: MEW
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101122C68_C.b/1010107-05C68.d
Report Date: 29-Nov-2010 14:04

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Data file : /chem/5973hp68.i/DF101122C68_C.b/1010107-05C68.d
Lab Smp Id: 1010107-05 Client Smp ID: 13MW4
Inj Date : 23-NOV-2010 07:04
Operator : MEW Inst ID: 5973hp68.i
Smp Info : 1010107-05:MEW
Misc Info : 13MW4
Comment : 2008 MDLS SOIL/ 2007 WATER
Method : /chem/5973hp68.i/DF101122C68_C.b/8270CMASTERDODv5.m
Meth Date : 29-Nov-2010 14:02 byrd Quant Type: ISTD
Cal Date : 19-NOV-2010 17:11 Cal File: 0K19001-CALI1C68.d
Als bottle: 12
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: HWMU13A_C.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Vo	1000.00000	Volume of sample extracted (mL)
Vi	2.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	CONCENTRATIONS FINAL (ug/L)	SIMILARITY
* 1 1,4-Dichlorobenzene-d4	152	8.330	8.335	(1.000)	816622	40.0000		
* 2 Naphthalene-d8	136	11.156	11.167	(1.000)	3017239	40.0000		
* 3 Acenaphthene-d10	164	15.280	15.280	(1.000)	1664430	40.0000		
* 4 Phenanthrene-d10	188	18.710	18.715	(1.000)	2412383	40.0000		
* 5 Chrysene-d12	240	24.976	24.987	(1.000)	1205714	40.0000		
* 6 Perylene-d12	264	28.112	28.117	(1.000)	510866	40.0000		
$ 7 2-Fluorophenol	112	5.883	5.862	(0.706)	2699616	95.2452	48	
$ 8 Phenol-d5	99	7.838	7.849	(0.941)	2318881	62.5538	31	
$ 9 Nitrobenzene-d5	82	9.639	9.639	(0.864)	2206970	76.7668	38	
$ 10 2-Fluorobiphenyl	172	13.795	13.795	(0.903)	3465761	71.0750	36	
$ 11 2,4,6-Tribromophenol	330	17.177	17.171	(1.124)	790345	177.967	89	(A)
$ 12 Terphenyl-d14	244	22.642	22.631	(0.907)	2722151	98.1468	49	
24 Phenol	94	Compound Not Detected.						
25 2-Chlorophenol	128	Compound Not Detected.						
34 Hexachloroethane	117	Compound Not Detected.						

Data File: /chem/5973hp68.i/DF101122C68_C.b/1010107-05C68.d
Report Date: 29-Nov-2010 14:04

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	CONCENTRATIONS FINAL (ug/L)	SIMILARITY
39	3-Methylphenol	108	Compound Not Detected.						
40	4-Methylphenol	108	Compound Not Detected.						
41	Nitrobenzene	77	Compound Not Detected.						
48	2,4-Dichlorophenol	162	Compound Not Detected.						
73	Dimethylphthalate	163	Compound Not Detected.						
81	4-Nitrophenol	139	Compound Not Detected.						
79	Dibenzofuran	168	Compound Not Detected.						
87	Diethylphthalate	149	Compound Not Detected.						
93	N-Nitrosodiphenylamine	169	Compound Not Detected.						
116	Di-n-butylphthalate	149	Compound Not Detected.						
121	Fluoranthene	202	Compound Not Detected.						
123	Pyrene	202	Compound Not Detected.						
130	Butylbenzylphthalate	149	Compound Not Detected.						
135	bis(2-ethylhexyl)Phthalate	149	Compound Not Detected.						
133	Benzo(a)anthracene	228	Compound Not Detected.						
136	Di-n-octylphthalate	149	Compound Not Detected.						
137	Benzo(b)fluoranthene	252	Compound Not Detected.						
138	Benzo(k)fluoranthene	252	Compound Not Detected.						
140	Benzo(a)pyrene	252	Compound Not Detected.						
142	Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.						
143	Dibenzo(a,h)anthracene	278	Compound Not Detected.						

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.

FORM 1 CLIENT SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

13MW4

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-A

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 1010107-05

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1010107-05C68

Level: (low/med) LOW Date Received: 10/20/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted:10/22/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/23/10

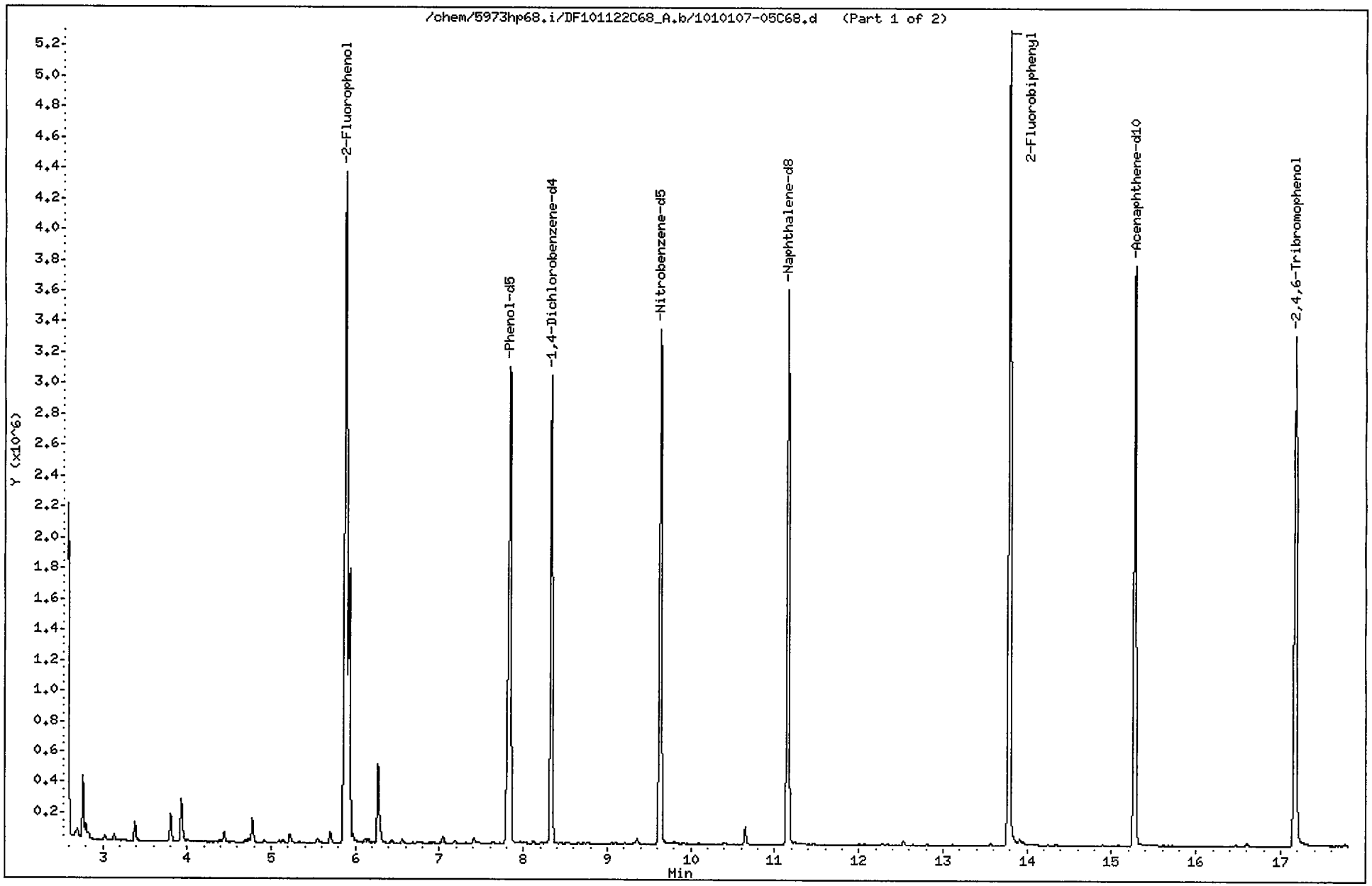
Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
119-93-7	3,3'-Dimethylbenzidine	5.0	U

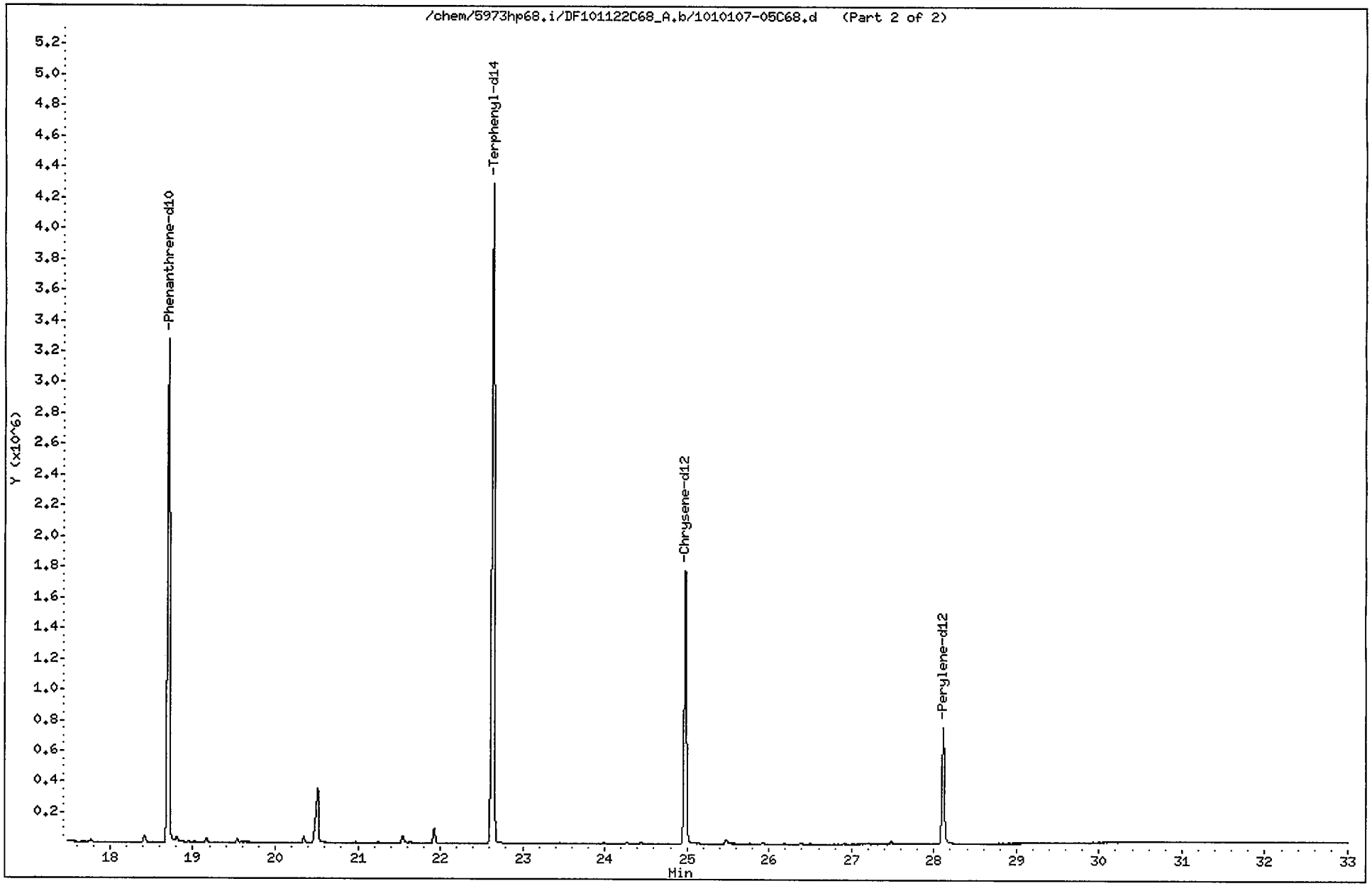
Data File: /chem/5973hp68.i/DF101122C68_A.b/1010107-05C68.d
Date : 23-NOV-2010 07:04
Client ID: 13MW4
Sample Info: 1010107-05:MEW
Volume Injected (uL): 2.0
Column phase: RTX-5MS

Instrument: 5973hp68.i
Operator: MEW
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101122C68_A.b/1010107-05C68.d
Date : 23-NOV-2010 07:04
Client ID: 13MW4
Sample Info: 1010107-05:MEW
Volume Injected (uL): 2.0
Column phase: RTX-5MS

Instrument: 5973hp68.i
Operator: MEW
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101122C68_A.b/1010107-05C68.d
Report Date: 29-Nov-2010 13:05

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Data file : /chem/5973hp68.i/DF101122C68_A.b/1010107-05C68.d
Lab Smp Id: 1010107-05 Client Smp ID: 13MW4
Inj Date : 23-NOV-2010 07:04
Operator : MEW Inst ID: 5973hp68.i
Smp Info : 1010107-05:MEW
Misc Info : 13MW4
Comment : 2008 MDLS SOIL/ 2007 WATER
Method : /chem/5973hp68.i/DF101122C68_A.b/8270CMASTERDODv5.m
Meth Date : 29-Nov-2010 13:05 byrd Quant Type: ISTD
Cal Date : 19-NOV-2010 07:31 Cal File: 0K19001-CAL6C68.d
Als bottle: 12
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: HWMU13A_A.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Vo	1000.00000	Volume of sample extracted (mL)
Vi	2.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	CONCENTRATIONS FINAL (ug/L)	SIMILARITY
* 1 1,4-Dichlorobenzene-d4	152	8.330	8.330	(1.000)	816622	40.0000		
* 2 Naphthalene-d8	136	11.156	11.167	(1.000)	3017239	40.0000		
* 3 Acenaphthene-d10	164	15.280	15.280	(1.000)	1664430	40.0000		
* 4 Phenanthrene-d10	188	18.710	18.720	(1.000)	2412383	40.0000		
* 5 Chrysene-d12	240	24.976	24.987	(1.000)	1205714	40.0000		
* 6 Perylene-d12	264	28.112	28.117	(1.000)	510866	40.0000		
129 3,3'-Dimethylbenzidine	212	Compound Not Detected.						

on/ref

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

13MW4

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 1010107-05

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1010107-05C68

Level: (low/med) LOW Date Received: 10/20/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted:10/22/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/23/10

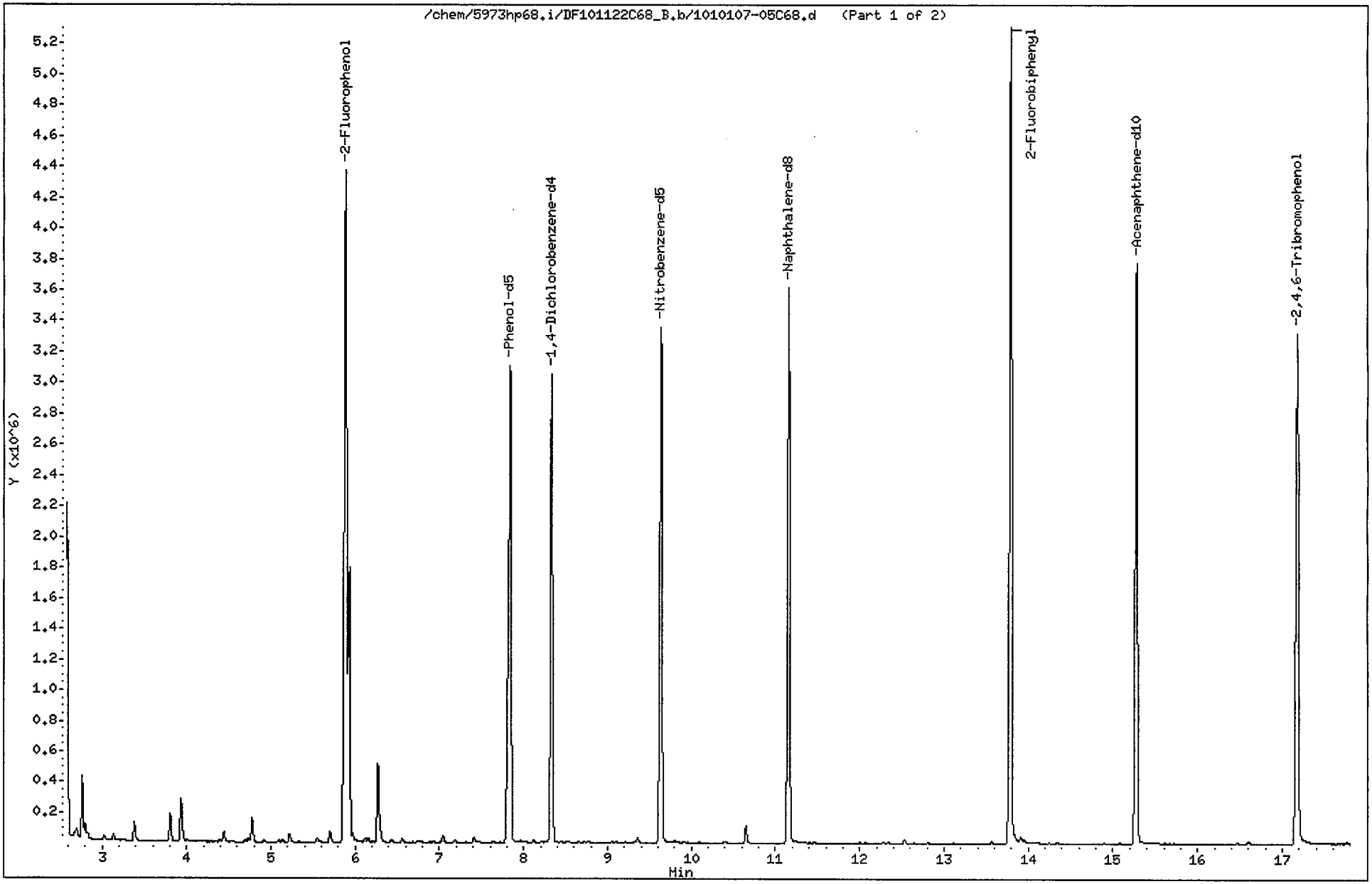
Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

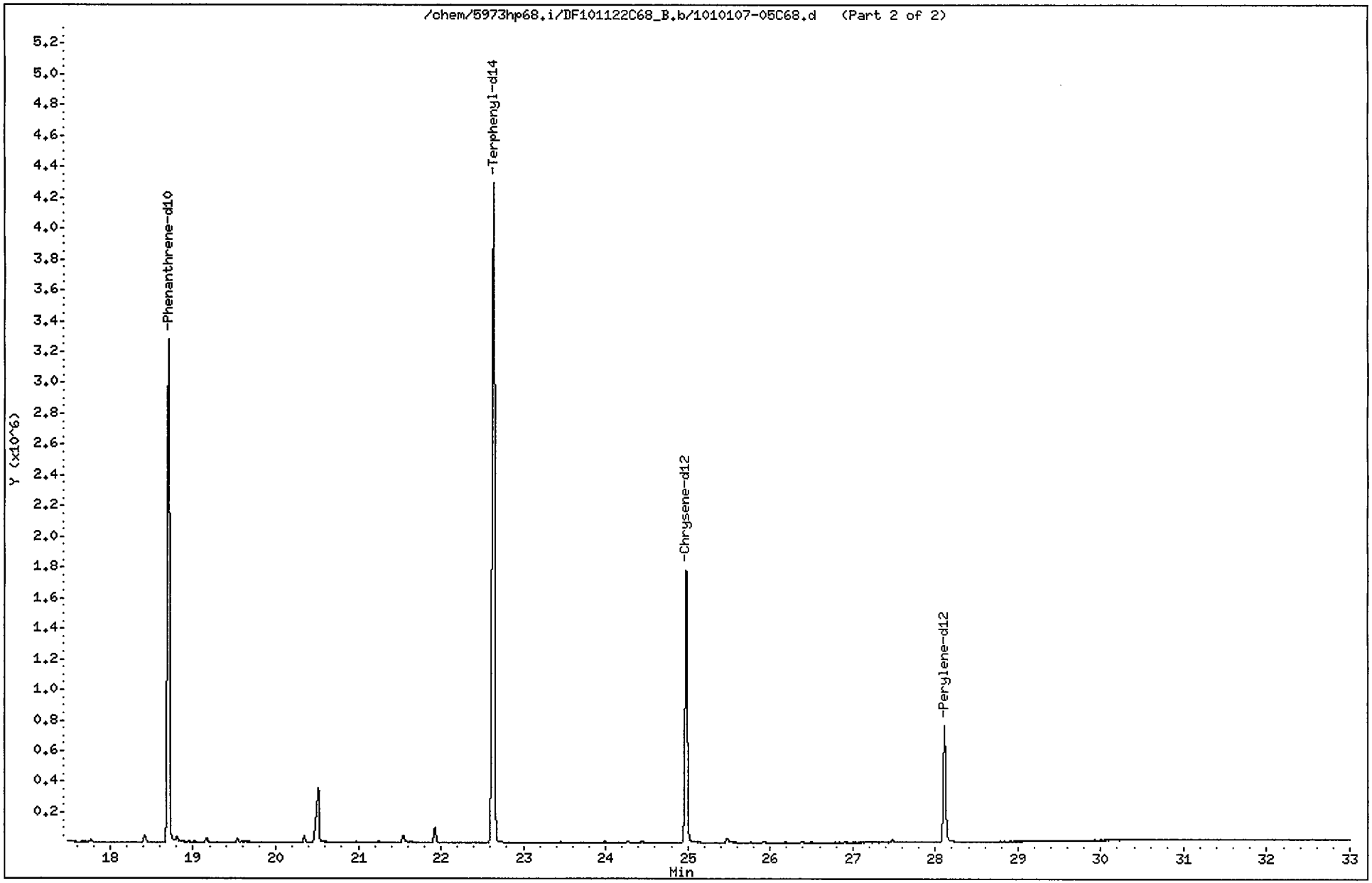
CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
98-86-2	Acetophenone	5.0	U

Data File: /chem/5973hp68.i/DF101122C68_B.b/1010107-05C68.d
Date : 23-NOV-2010 07:04
Client ID: 13MW4
Sample Info: 1010107-05:MEW
Volume Injected (uL): 2.0
Column phase: RTX-5MS

Instrument: 5973hp68.i
Operator: MEW
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101122C68_B.b/1010107-05C68.d
Date : 23-NOV-2010 07:04
Client ID: 13MW4
Instrument: 5973hp68.i
Sample Info: 1010107-05:MEW
Volume Injected (uL): 2.0
Operator: MEW
Column phase: RTX-5MS
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101122C68_B.b/1010107-05C68.d
Report Date: 29-Nov-2010 13:06

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Data file : /chem/5973hp68.i/DF101122C68_B.b/1010107-05C68.d
Lab Smp Id: 1010107-05 Client Smp ID: 13MW4
Inj Date : 23-NOV-2010 07:04
Operator : MEW Inst ID: 5973hp68.i
Smp Info : 1010107-05:MEW
Misc Info : 13MW4
Comment : 2008 MDLS SOIL/ 2007 WATER
Method : /chem/5973hp68.i/DF101122C68_B.b/8270CMASTERDODv5.m
Meth Date : 29-Nov-2010 13:05 byrd Quant Type: ISTD
Cal Date : 19-NOV-2010 11:45 Cal File: 0K19001-CALCC68.d
Als bottle: 12
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: HWMU13A_B.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Vo	1000.00000	Volume of sample extracted (mL)
Vi	2.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	CONCENTRATIONS FINAL (ug/L)	SIMILARITY
* 1 1,4-Dichlorobenzene-d4	152	8.330	8.330	(1.000)	816622	40.0000		
* 2 Naphthalene-d8	136	11.156	11.156	(1.000)	3017239	40.0000		
* 3 Acenaphthene-d10	164	15.280	15.275	(1.000)	1664430	40.0000		
* 4 Phenanthrene-d10	188	18.710	18.705	(1.000)	2412383	40.0000		
* 5 Chrysene-d12	240	24.976	24.976	(1.000)	1205714	40.0000		
* 6 Perylene-d12	264	28.112	28.112	(1.000)	510866	40.0000		
33 Acetophenone	105	Compound Not Detected.						

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.: 13MW5

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 1010107-01

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1010107-01A68

Level: (low/med) LOW Date Received: 10/20/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted:10/22/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/22/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

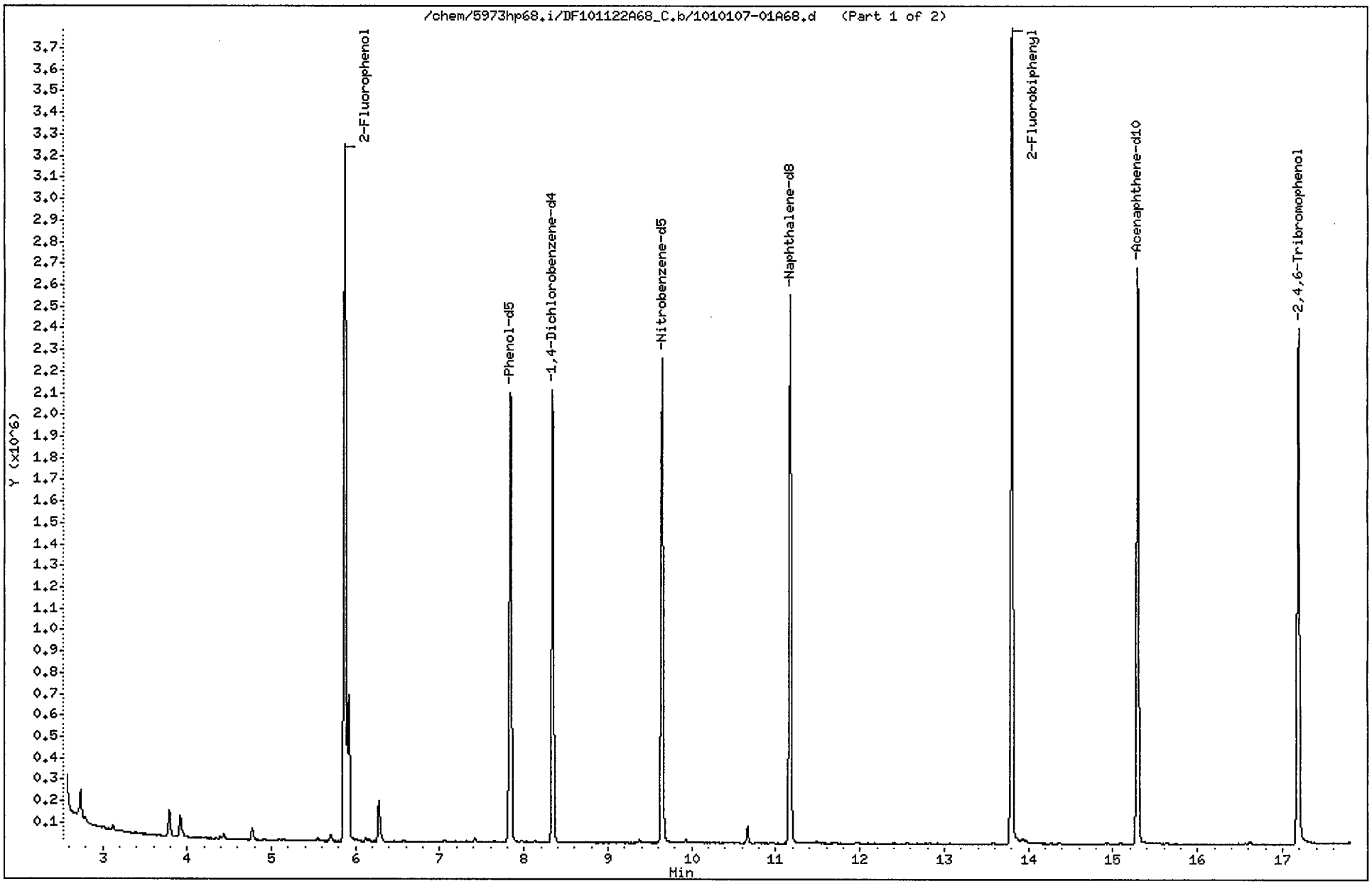
GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
95-57-8	2-Chlorophenol	10	U
108-39-4	3-Methylphenol	8.0	U
106-44-5	4-Methylphenol	8.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
131-11-3	Dimethylphthalate	5.0	U
100-02-7	4-Nitrophenol	10	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	1.7	J
56-55-3	Benzo(a)anthracene	5.0	U
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U

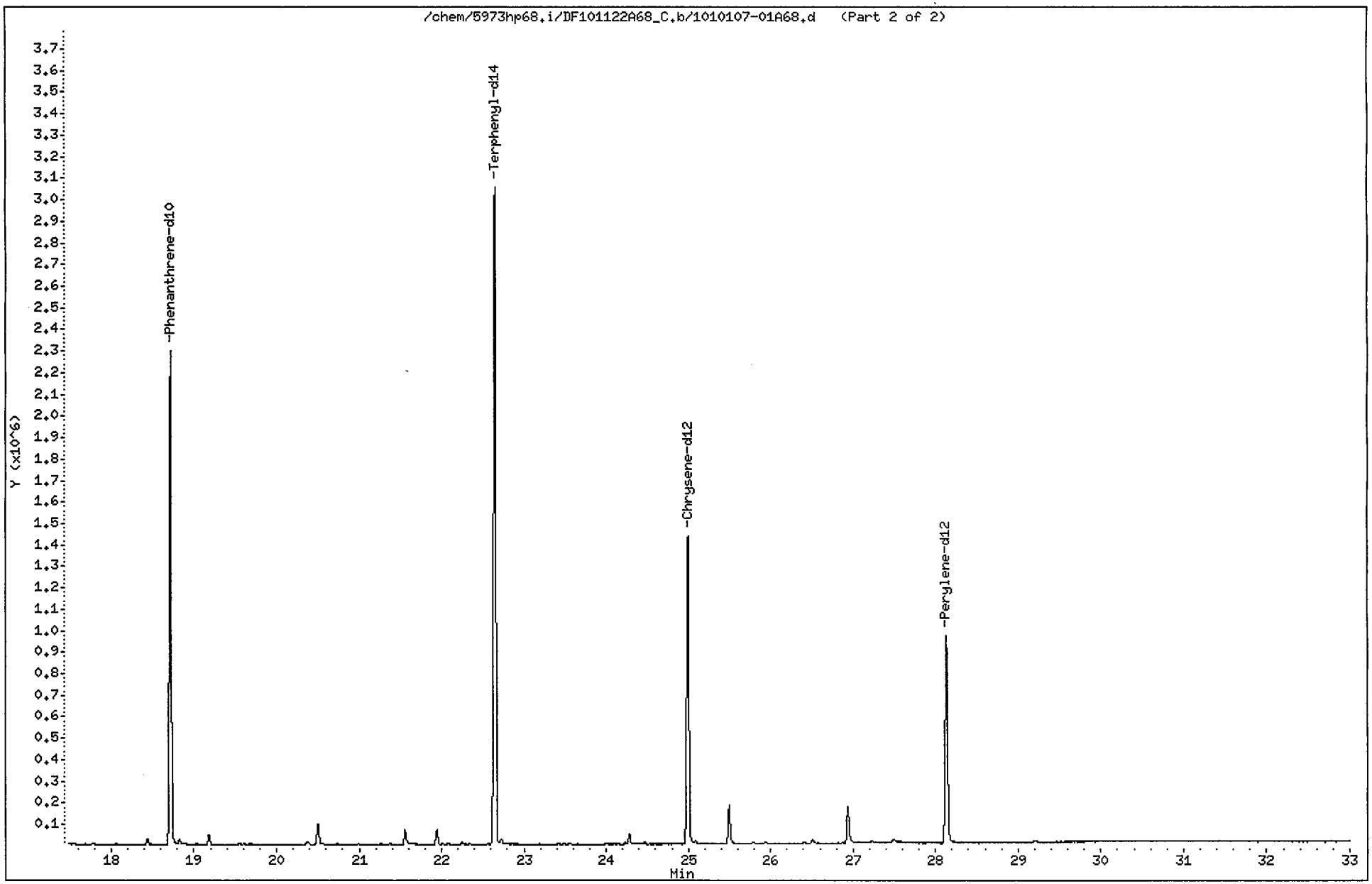
(1) - Cannot be separated from Diphenylamine

Data File: /chem/5973hp68.i/DF101122A68_C.b/1010107-01A68.d
Date : 22-NOV-2010 13:55
Client ID: 13MW5
Sample Info: 1010107-01:OWS
Volume Injected (uL): 2.0
Column phase: RTX-5MS

Instrument: 5973hp68.i
Operator: OWS
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101122A68_C.b/1010107-01A68.d
Date : 22-NOV-2010 13:55
Client ID: 13MW5
Instrument: 5973hp68.i
Sample Info: 1010107-01:OWS
Volume Injected (uL): 2.0
Operator: OWS
Column phase: RTX-5MS
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101122A68_C.b/1010107-01A68.d
Report Date: 29-Nov-2010 13:48

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Data file : /chem/5973hp68.i/DF101122A68_C.b/1010107-01A68.d
Lab Smp Id: 1010107-01 Client Smp ID: 13MW5
Inj Date : 22-NOV-2010 13:55
Operator : OWS Inst ID: 5973hp68.i
Smp Info : 1010107-01:OWS
Misc Info : 13MW5
Comment : 2008 MDLS SOIL/ 2007 WATER
Method : /chem/5973hp68.i/DF101122A68_C.b/8270CMASTERDODv5.m
Meth Date : 29-Nov-2010 13:47 byrd Quant Type: ISTD
Cal Date : 19-NOV-2010 17:11 Cal File: 0K19001-CALI1C68.d
Als bottle: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: HWMU13A_C.sub
Target Version: 3.50
Processing Host: einstein

Concentration Formula: Amt * DF * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Vo	1000.00000	Volume of sample extracted (mL)
Vi	2.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	CONCENTRATIONS FINAL (ug/L)	SIMILARITY
*	1 1,4-Dichlorobenzene-d4	152	8.341	8.346	(1.000)	539566	40.0000		
*	2 Naphthalene-d8	136	11.172	11.177	(1.000)	2043625	40.0000		
*	3 Acenaphthene-d10	164	15.291	15.296	(1.000)	1109086	40.0000		
*	4 Phenanthrene-d10	188	18.721	18.731	(1.000)	1592017	40.0000		
*	5 Chrysene-d12	240	24.998	25.003	(1.000)	940852	40.0000		
*	6 Perylene-d12	264	28.134	28.134	(1.000)	627663	40.0000		
$	7 2-Fluorophenol	112	5.872	5.873	(0.704)	1727112	92.2227	46	
$	8 Phenol-d5	99	7.838	7.860	(0.940)	1403564	57.3039	29	
$	9 Nitrobenzene-d5	82	9.644	9.650	(0.863)	1404956	72.1519	36	
$	10 2-Fluorobiphenyl	172	13.806	13.806	(0.903)	2222407	68.3978	34	
$	11 2,4,6-Tribromophenol	330	17.187	17.187	(1.124)	466450	157.626	79	
$	12 Terphenyl-d14	244	22.652	22.647	(0.906)	1718788	79.4162	40	
	24 Phenol	94	Compound Not Detected.						
	25 2-Chlorophenol	128	Compound Not Detected.						

Data File: /chem/5973hp68.i/DF101122A68_C.b/1010107-01A68.d
Report Date: 29-Nov-2010 13:48

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	CONCENTRATIONS FINAL (ug/L)	SIMILARITY
34 Hexachloroethane	117	Compound Not Detected.						
39 3-Methylphenol	108	Compound Not Detected.						
40 4-Methylphenol	108	Compound Not Detected.						
41 Nitrobenzene	77	Compound Not Detected.						
48 2,4-Dichlorophenol	162	Compound Not Detected.						
73 Dimethylphthalate	163	Compound Not Detected.						
81 4-Nitrophenol	139	Compound Not Detected.						
79 Dibenzofuran	168	Compound Not Detected.						
87 Diethylphthalate	149	Compound Not Detected.						
93 N-Nitrosodiphenylamine	169	Compound Not Detected.						
116 Di-n-butylphthalate	149	Compound Not Detected.						
121 Fluoranthene	202	Compound Not Detected.						
123 Pyrene	202	Compound Not Detected.						
130 Butylbenzylphthalate	149	Compound Not Detected.						
135 bis(2-ethylhexyl)Phthalate	149	25.495	25.500	(1.020)	76835	3.49453	1.7	8790(a)
133 Benzo(a)anthracene	228	Compound Not Detected.						
136 Di-n-octylphthalate	149	Compound Not Detected.						
137 Benzo(b)fluoranthene	252	Compound Not Detected.						
138 Benzo(k)fluoranthene	252	Compound Not Detected.						
140 Benzo(a)pyrene	252	Compound Not Detected.						
142 Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.						
143 Dibenzo(a,h)anthracene	278	Compound Not Detected.						

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Data File: /chem/5973hp68.i/DF101122A68_C.b/1010107-01A68.d

Date : 22-NOV-2010 13:55

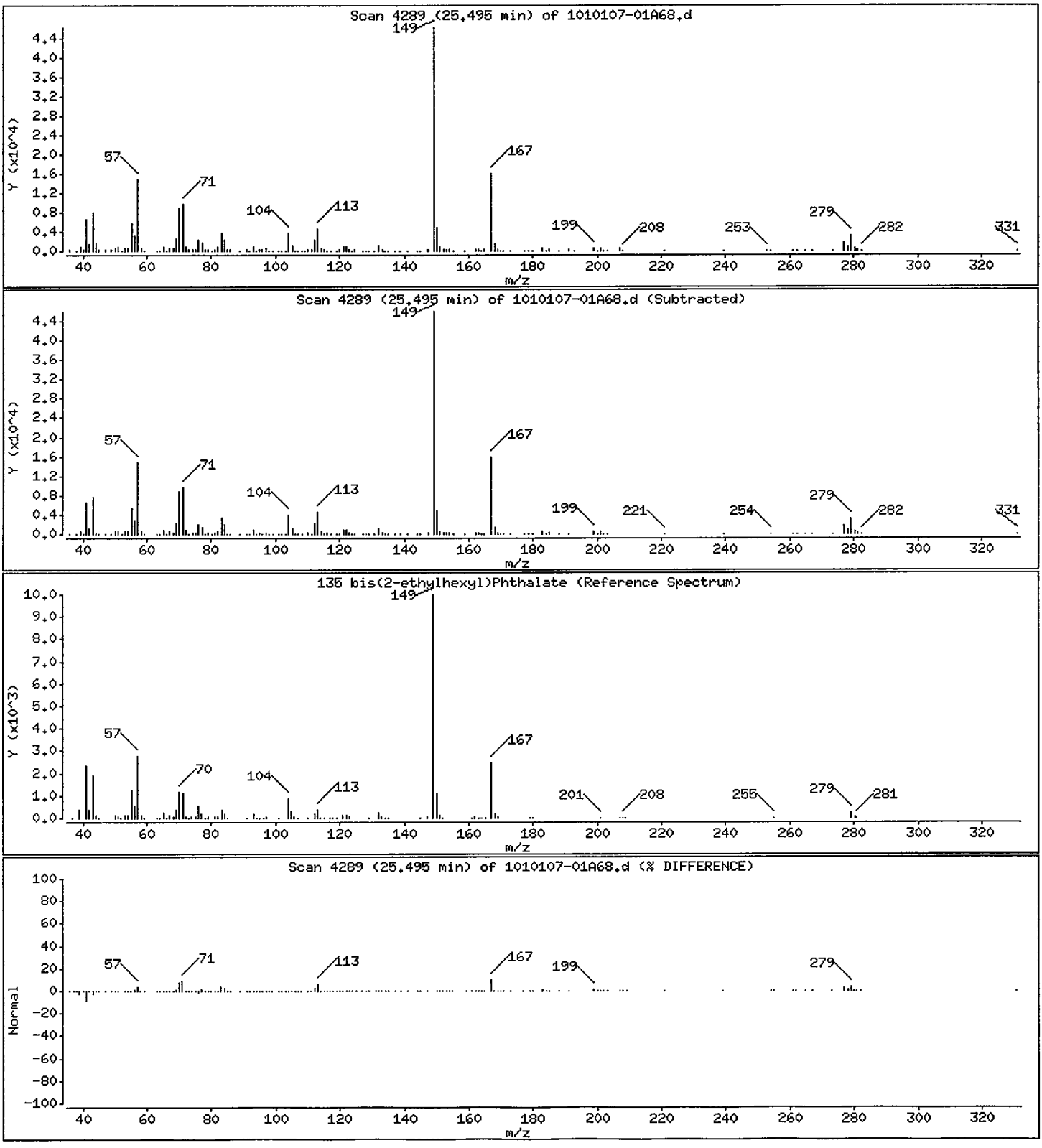
Client ID: 13MW5 Instrument: 5973hp68.i

Sample Info: 1010107-01:OWS

Volume Injected (uL): 2.0 Operator: OWS

Column phase: RTX-5MS Column diameter: 0.32

135 bis(2-ethylhexyl)Phthalate Concentration: 1.7 ug/L



FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

13MW5

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-A

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 1010107-01

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1010107-01A68

Level: (low/med) LOW Date Received: 10/20/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted:10/22/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/22/10

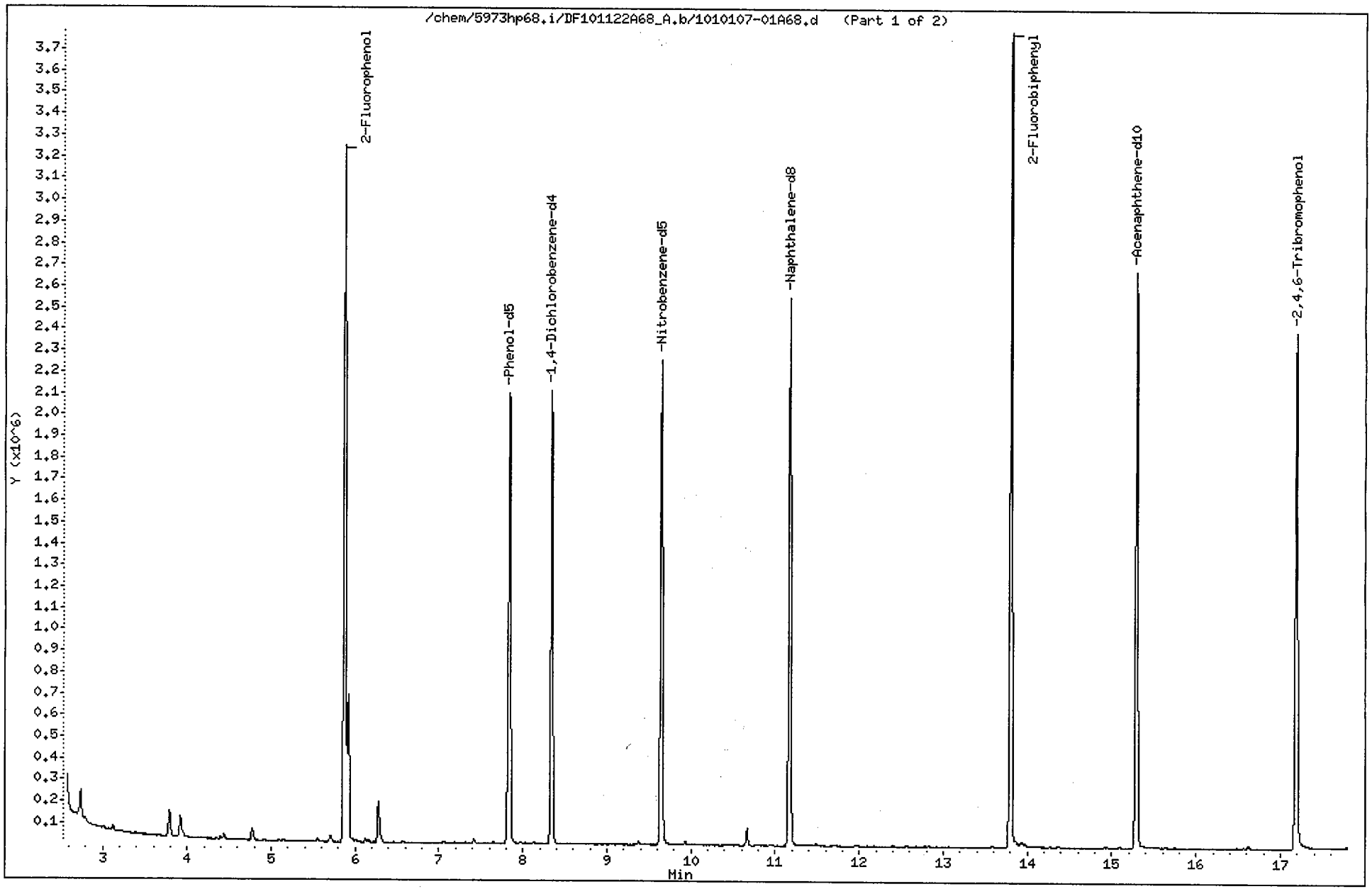
Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
119-93-7	3,3'-Dimethylbenzidine	5.0	U

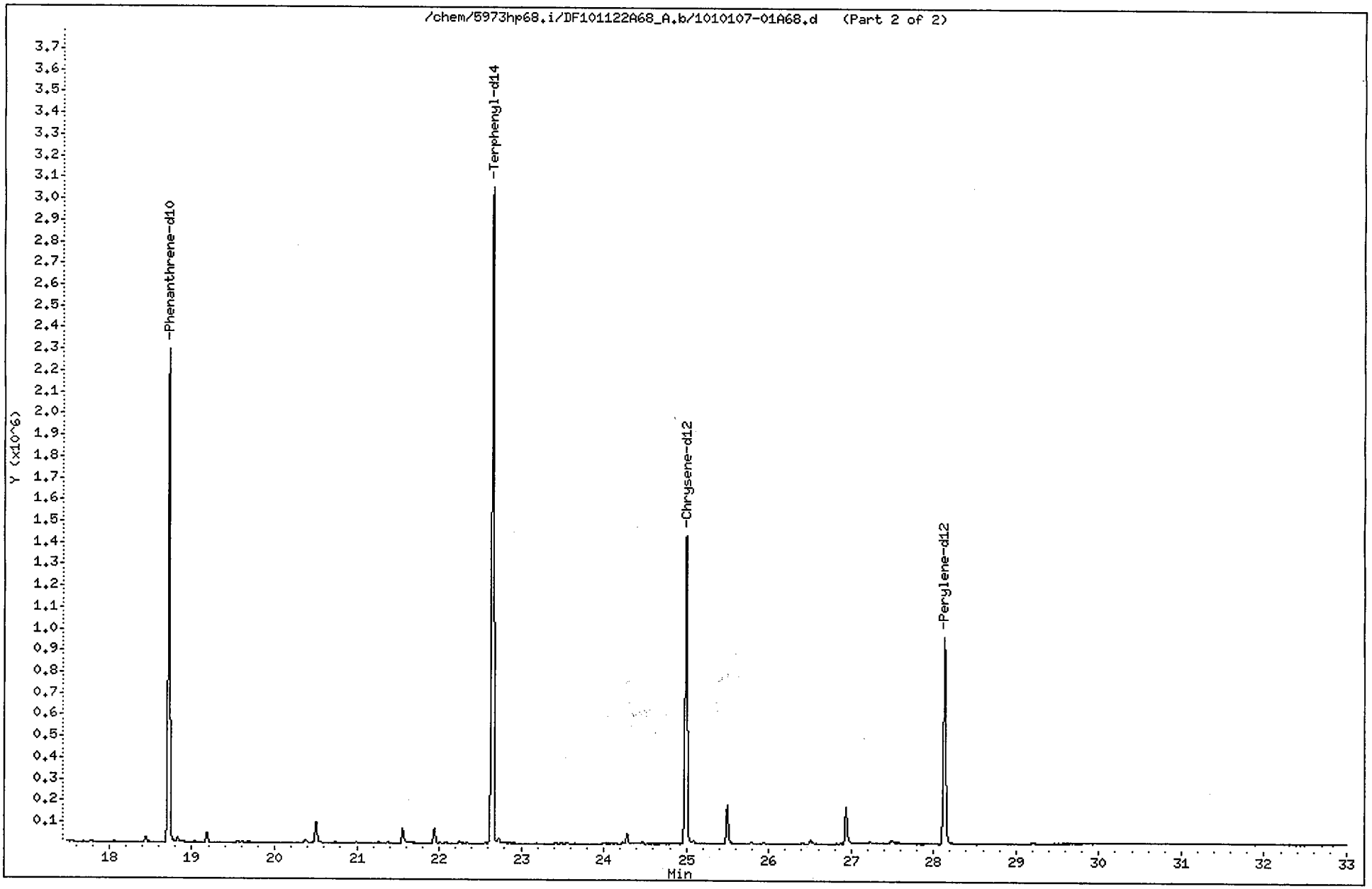
Data File: /chem/5973hp68.i/DF101122A68_A.b/1010107-01A68.d
Date : 22-NOV-2010 13:55
Client ID: 13MW5
Sample Info: 1010107-01:OWS
Volume Injected (uL): 2.0
Column phase: RTX-5MS

Instrument: 5973hp68.i
Operator: OWS
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101122A68_A.b/1010107-01A68.d
Date : 22-NOV-2010 13:55
Client ID: 13MW5
Sample Info: 1010107-01:OWS
Volume Injected (uL): 2.0
Column phase: RTX-5MS

Instrument: 5973hp68.i
Operator: OWS
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101122A68_A.b/1010107-01A68.d
Report Date: 29-Nov-2010 11:34

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Data file : /chem/5973hp68.i/DF101122A68_A.b/1010107-01A68.d
Lab Smp Id: 1010107-01 Client Smp ID: 13MW5
Inj Date : 22-NOV-2010 13:55
Operator : OWS Inst ID: 5973hp68.i
Smp Info : 1010107-01:OWS
Misc Info : 13MW5
Comment : 2008 MDLS SOIL/ 2007 WATER
Method : /chem/5973hp68.i/DF101122A68_A.b/8270CMASTERDODv5.m
Meth Date : 29-Nov-2010 11:34 byrd Quant Type: ISTD
Cal Date : 19-NOV-2010 07:31 Cal File: 0K19001-CAL6C68.d
Als bottle: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: HWMU13A_A.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Vo	1000.00000	Volume of sample extracted (mL)
Vi	2.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	CONCENTRATIONS FINAL (ug/L)	SIMILARITY
* 1 1,4-Dichlorobenzene-d4	152	8.341	8.346	(1.000)	539566	40.0000		
* 2 Naphthalene-d8	136	11.172	11.178	(1.000)	2043625	40.0000		
* 3 Acenaphthene-d10	164	15.291	15.291	(1.000)	1109086	40.0000		
* 4 Phenanthrene-d10	188	18.721	18.732	(1.000)	1592017	40.0000		
* 5 Chrysene-d12	240	24.998	24.998	(1.000)	940852	40.0000		
* 6 Perylene-d12	264	28.134	28.134	(1.000)	627663	40.0000		
129 3,3'-Dimethylbenzidine	212	Compound Not Detected.						

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

13MW5

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 1010107-01

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1010107-01A68

Level: (low/med) LOW Date Received: 10/20/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted:10/22/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/22/10

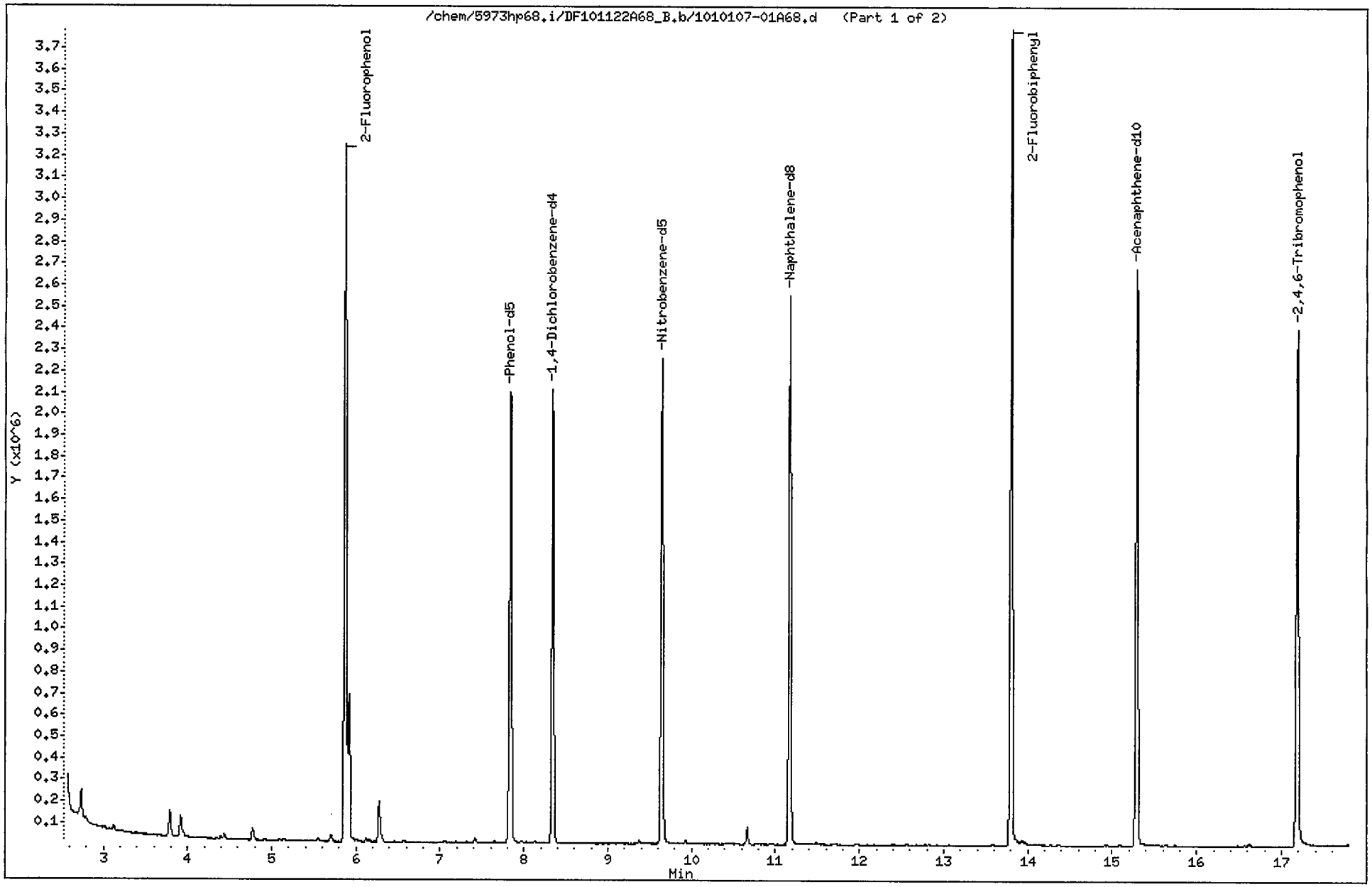
Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
98-86-2	Acetophenone	5.0	U

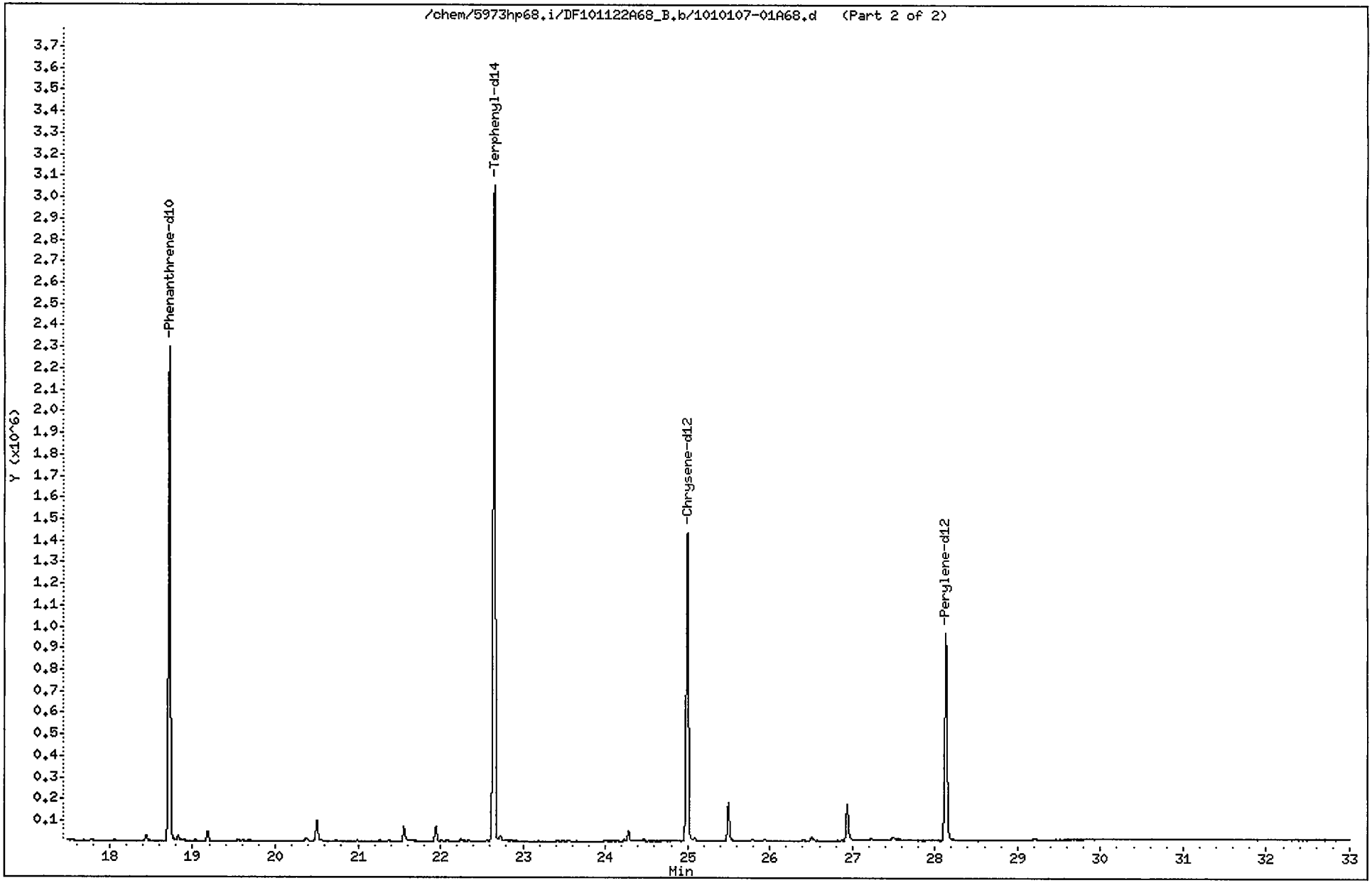
Data File: /chem/5973hp68.i/DF101122A68_B.b/1010107-01A68.d
Date : 22-NOV-2010 13:55
Client ID: 13MW5
Sample Info: 1010107-01:OWS
Volume Injected (uL): 2.0
Column phase: RTX-5MS

Instrument: 5973hp68.i
Operator: OWS
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101122A68_B.b/1010107-01A68.d
Date : 22-NOV-2010 13:55
Client ID: 13MW5
Sample Info: 1010107-01:OWS
Volume Injected (uL): 2.0
Column phase: RTX-5MS

Instrument: 5973hp68.i
Operator: OWS
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101122A68_B.b/1010107-01A68.d
Report Date: 29-Nov-2010 12:06

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Data file : /chem/5973hp68.i/DF101122A68_B.b/1010107-01A68.d
Lab Smp Id: 1010107-01 Client Smp ID: 13MW5
Inj Date : 22-NOV-2010 13:55
Operator : OWS Inst ID: 5973hp68.i
Smp Info : 1010107-01:OWS
Misc Info : 13MW5
Comment : 2008 MDLS SOIL/ 2007 WATER
Method : /chem/5973hp68.i/DF101122A68_B.b/8270CMASTERDODv5.m
Meth Date : 29-Nov-2010 12:05 byrd Quant Type: ISTD
Cal Date : 19-NOV-2010 11:45 Cal File: 0K19001-CALCC68.d
Als bottle: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: HWMU13A_B.sub
Target Version: 3.50
Processing Host: einstein

Concentration Formula: Amt * DF * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Vo	1000.00000	Volume of sample extracted (mL)
Vi	2.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	CONCENTRATIONS FINAL (ug/L)	SIMILARITY
* 1 1,4-Dichlorobenzene-d4	152	8.341	8.346	(1.000)	539566	40.0000		
* 2 Naphthalene-d8	136	11.172	11.172	(1.000)	2043625	40.0000		
* 3 Acenaphthene-d10	164	15.291	15.296	(1.000)	1109086	40.0000		
* 4 Phenanthrene-d10	188	18.721	18.726	(1.000)	1592017	40.0000		
* 5 Chrysene-d12	240	24.998	24.998	(1.000)	940852	40.0000		
* 6 Perylene-d12	264	28.134	28.134	(1.000)	627663	40.0000		
33 Acetophenone	105	Compound Not Detected.						

04/29/11

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.
13MW6

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 1010107-07

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1010107-07A68

Level: (low/med) LOW Date Received: 10/20/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted:10/22/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/23/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

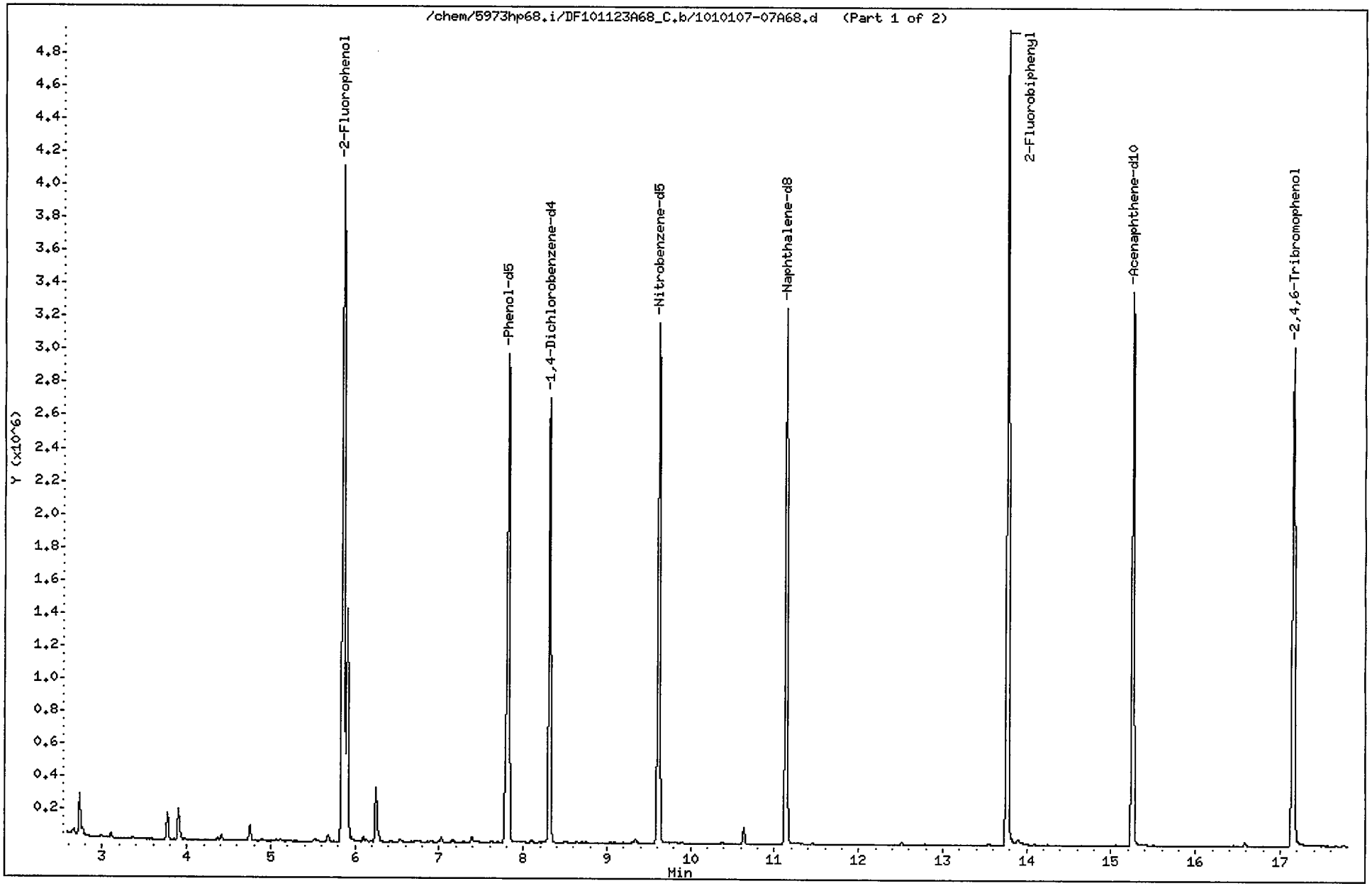
GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
95-57-8	2-Chlorophenol	10	U
108-39-4	3-Methylphenol	8.0	U
106-44-5	4-Methylphenol	8.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
131-11-3	Dimethylphthalate	5.0	U
100-02-7	4-Nitrophenol	10	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	U
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U

(1) - Cannot be separated from Diphenylamine

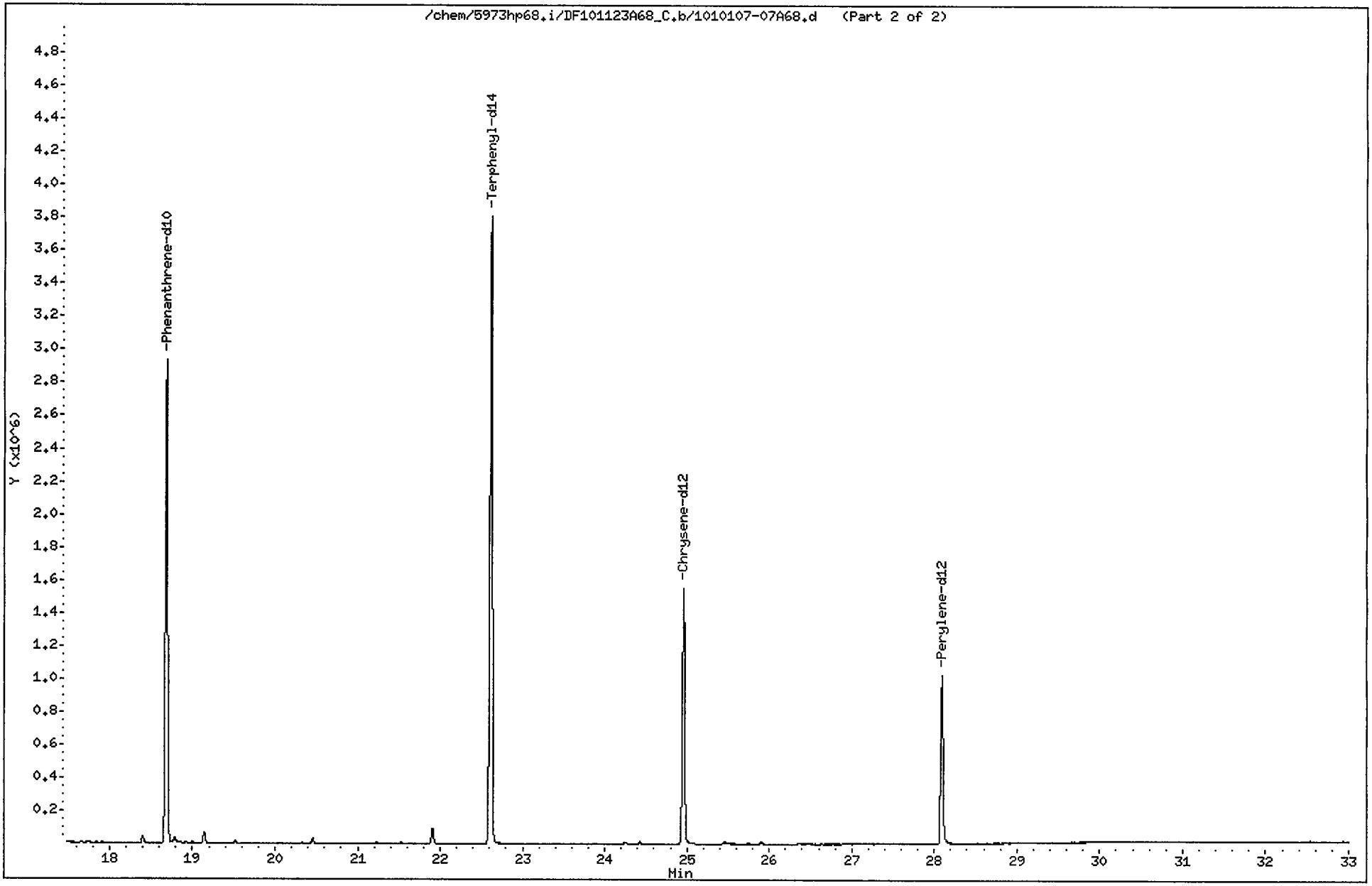
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Date : 23-NOV-2010 20:13
Client ID: 13MW6
Sample Info: 1010107-07:OWS
Volume Injected (uL): 2.0
Column phase: RTX-5MS

Instrument: 5973hp68.i
Operator: OWS
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101123A68_C.b/1010107-07A68.d
Date : 23-NOV-2010 20:13
Client ID: 13MW6
Sample Info: 1010107-07:OWS
Volume Injected (uL): 2.0
Column phase: RTX-5MS

Instrument: 5973hp68.i
Operator: OWS
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101123A68_C.b/1010107-07A68.d
Report Date: 29-Nov-2010 16:04

CompuChem

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Data file : /chem/5973hp68.i/DF101123A68_C.b/1010107-07A68.d
Lab Smp Id: 1010107-07 Client Smp ID: 13MW6
Inj Date : 23-NOV-2010 20:13
Operator : OWS Inst ID: 5973hp68.i
Smp Info : 1010107-07:OWS
Misc Info : 13MW6
Comment : 2008 MDLS SOIL/ 2007 WATER
Method : /chem/5973hp68.i/DF101123A68_C.b/8270CMASTERDODv5.m
Meth Date : 29-Nov-2010 16:04 byrd Quant Type: ISTD
Cal Date : 19-NOV-2010 17:11 Cal File: 0K19001-CALI1C68.d
Als bottle: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: HWMU13A_C.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Vo	1000.00000	Volume of sample extracted (mL)
Vi	2.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	CONCENTRATIONS FINAL (ug/L)	SIMILARITY
* 1 1,4-Dichlorobenzene-d4	152	8.314	8.314	(1.000)	709145	40.0000		
* 2 Naphthalene-d8	136	11.140	11.145	(1.000)	2643736	40.0000		
* 3 Acenaphthene-d10	164	15.259	15.264	(1.000)	1427509	40.0000		
* 4 Phenanthrene-d10	188	18.689	18.694	(1.000)	2067302	40.0000		
* 5 Chrysene-d12	240	24.960	24.960	(1.000)	1029126	40.0000		
* 6 Perylene-d12	264	28.096	28.096	(1.000)	689987	40.0000		
$ 7 2-Fluorophenol	112	5.862	5.846	(0.705)	2584582	105.007	52	
$ 8 Phenol-d5	99	7.822	7.833	(0.941)	2205525	68.5131	34	
$ 9 Nitrobenzene-d5	82	9.623	9.617	(0.864)	2059264	81.7486	41	
$ 10 2-Fluorobiphenyl	172	13.774	13.774	(0.903)	3154094	75.4188	38	
$ 11 2,4,6-Tribromophenol	330	17.161	17.150	(1.125)	703636	184.739	92	(A)
$ 12 Terphenyl-d14	244	22.620	22.610	(0.906)	2335480	98.6542	49	
24 Phenol	94	Compound Not Detected.						
25 2-Chlorophenol	128	Compound Not Detected.						
34 Hexachloroethane	117	Compound Not Detected.						

Data File: /chem/5973hp68.i/DF101123A68_C.b/1010107-07A68.d
Report Date: 29-Nov-2010 16:04

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	CONCENTRATIONS FINAL (ug/L)	SIMILARITY
39 3-Methylphenol	108	Compound Not Detected.						
40 4-Methylphenol	108	Compound Not Detected.						
41 Nitrobenzene	77	Compound Not Detected.						
48 2,4-Dichlorophenol	162	Compound Not Detected.						
73 Dimethylphthalate	163	Compound Not Detected.						
81 4-Nitrophenol	139	Compound Not Detected.						
79 Dibenzofuran	168	Compound Not Detected.						
87 Diethylphthalate	149	Compound Not Detected.						
93 N-Nitrosodiphenylamine	169	Compound Not Detected.						
116 Di-n-butylphthalate	149	Compound Not Detected.						
121 Fluoranthene	202	Compound Not Detected.						
123 Pyrene	202	Compound Not Detected.						
130 Butylbenzylphthalate	149	Compound Not Detected.						
135 bis(2-ethylhexyl)Phthalate	149	Compound Not Detected.						
133 Benzo(a)anthracene	228	Compound Not Detected.						
136 Di-n-octylphthalate	149	Compound Not Detected.						
137 Benzo(b)fluoranthene	252	Compound Not Detected.						
138 Benzo(k)fluoranthene	252	Compound Not Detected.						
140 Benzo(a)pyrene	252	Compound Not Detected.						
142 Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.						
143 Dibenzo(a,h)anthracene	278	Compound Not Detected.						

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

13MW6

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-A

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 1010107-07

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1010107-07A68

Level: (low/med) LOW Date Received: 10/20/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted:10/22/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/23/10

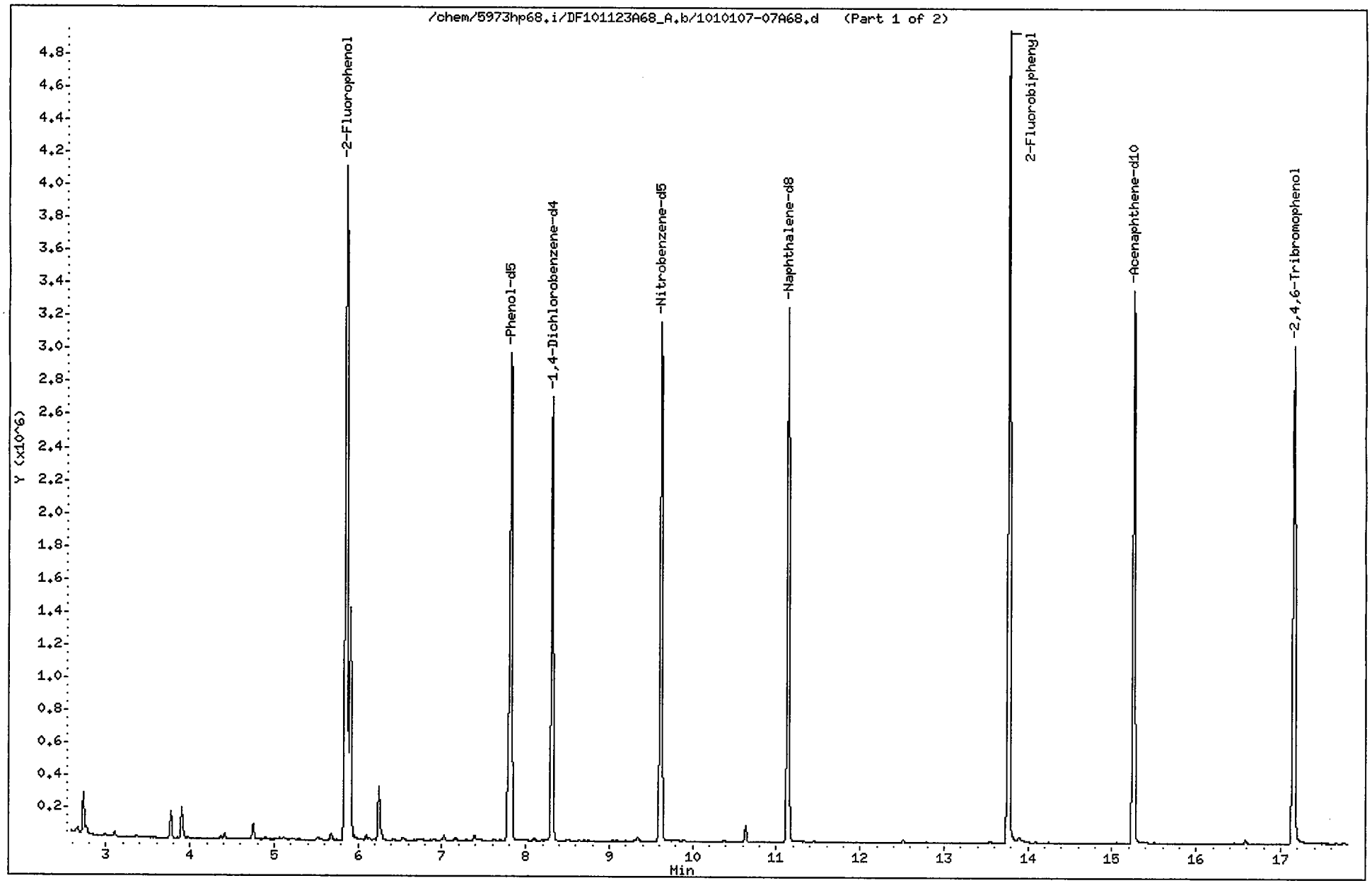
Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
119-93-7	3,3'-Dimethylbenzidine	5.0	U

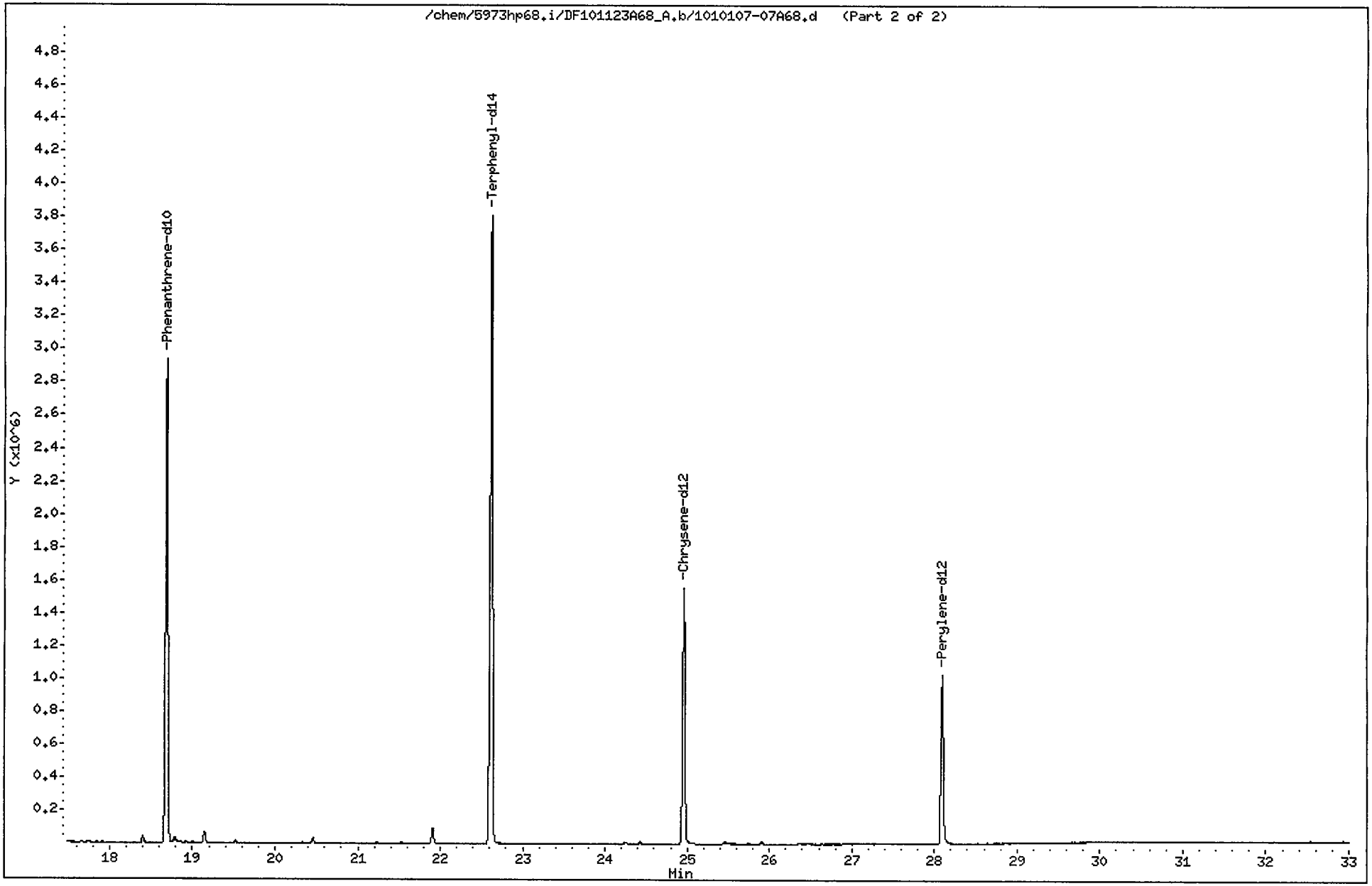
Data File: /chem/5973hp68.i/DF101123A68_A.b/1010107-07A68.d
Date : 23-NOV-2010 20:13
Client ID: 13MW6
Sample Info: 1010107-07:OWS
Volume Injected (uL): 2.0
Column phase: RTX-5MS

Instrument: 5973hp68.i
Operator: OWS
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101123A68_A.b/1010107-07A68.d
Date : 23-NOV-2010 20:13
Client ID: 13MW6
Sample Info: 1010107-07:DWS
Volume Injected (uL): 2.0
Column phase: RTX-5MS

Instrument: 5973hp68.i
Operator: DWS
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101123A68_A.b/1010107-07A68.d
Report Date: 29-Nov-2010 16:13

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Data file : /chem/5973hp68.i/DF101123A68_A.b/1010107-07A68.d
Lab Smp Id: 1010107-07 Client Smp ID: 13MW6
Inj Date : 23-NOV-2010 20:13
Operator : OWS Inst ID: 5973hp68.i
Smp Info : 1010107-07:OWS
Misc Info : 13MW6
Comment : 2008 MDLS SOIL/ 2007 WATER
Method : /chem/5973hp68.i/DF101123A68_A.b/8270CMASTERDODv5.m
Meth Date : 29-Nov-2010 16:12 byrd Quant Type: ISTD
Cal Date : 19-NOV-2010 07:31 Cal File: 0K19001-CAL6C68.d
Als bottle: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: HWMU13A_A.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Vo	1000.00000	Volume of sample extracted (mL)
Vi	2.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	CONCENTRATIONS FINAL (ug/L)	SIMILARITY
* 1 1,4-Dichlorobenzene-d4	152	8.314	8.314	(1.000)	709145	40.0000		
* 2 Naphthalene-d8	136	11.140	11.145	(1.000)	2643736	40.0000		
* 3 Acenaphthene-d10	164	15.259	15.264	(1.000)	1427509	40.0000		
* 4 Phenanthrene-d10	188	18.689	18.694	(1.000)	2067302	40.0000		
* 5 Chrysene-d12	240	24.960	24.960	(1.000)	1029126	40.0000		
* 6 Perylene-d12	264	28.096	28.091	(1.000)	689987	40.0000		
129 3,3'-Dimethylbenzidine	212	Compound Not Detected.						

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

13MW6

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 1010107-07

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1010107-07A68

Level: (low/med) LOW Date Received: 10/20/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted:10/22/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/23/10

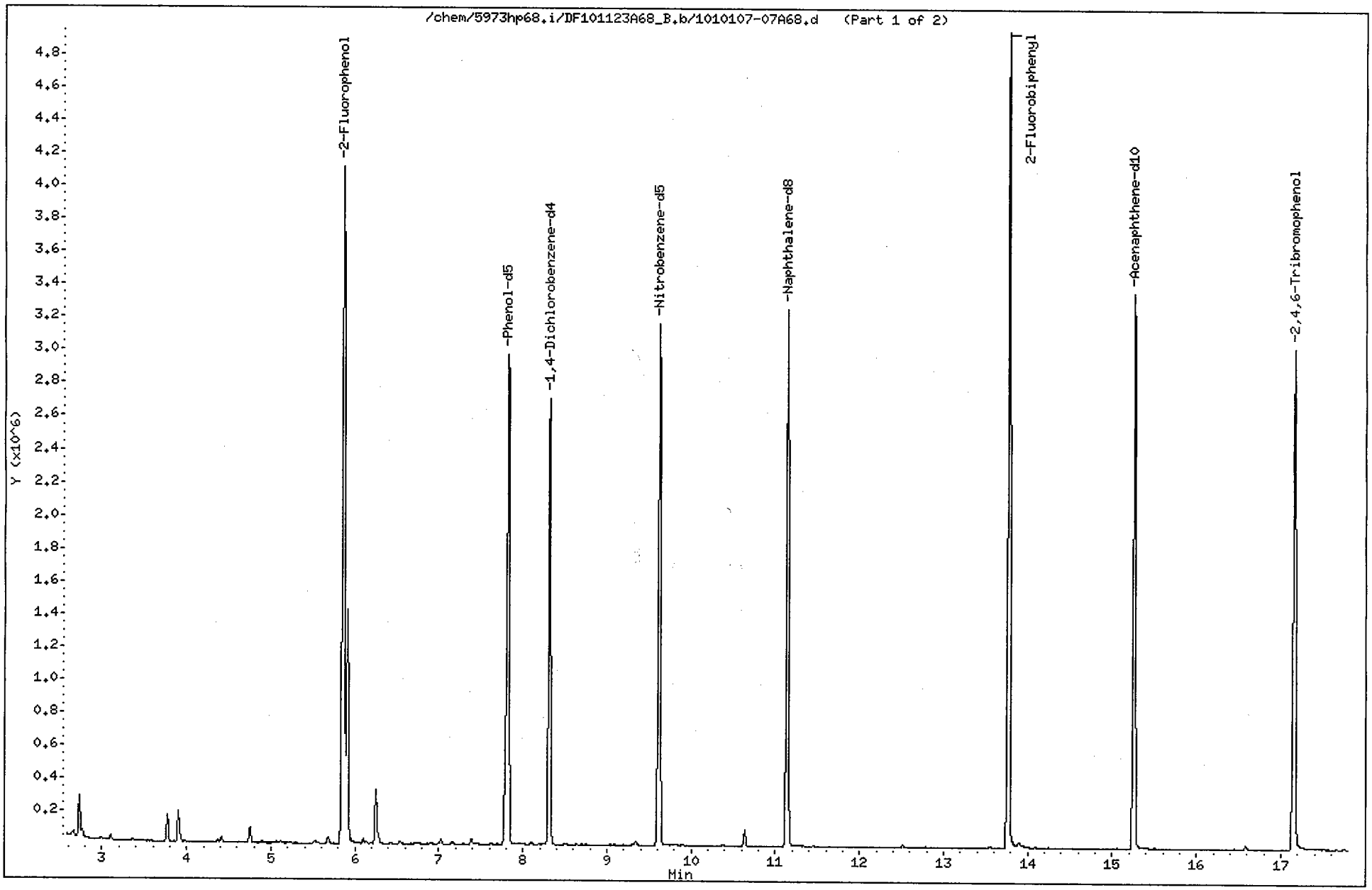
Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
98-86-2	Acetophenone	5.0	U

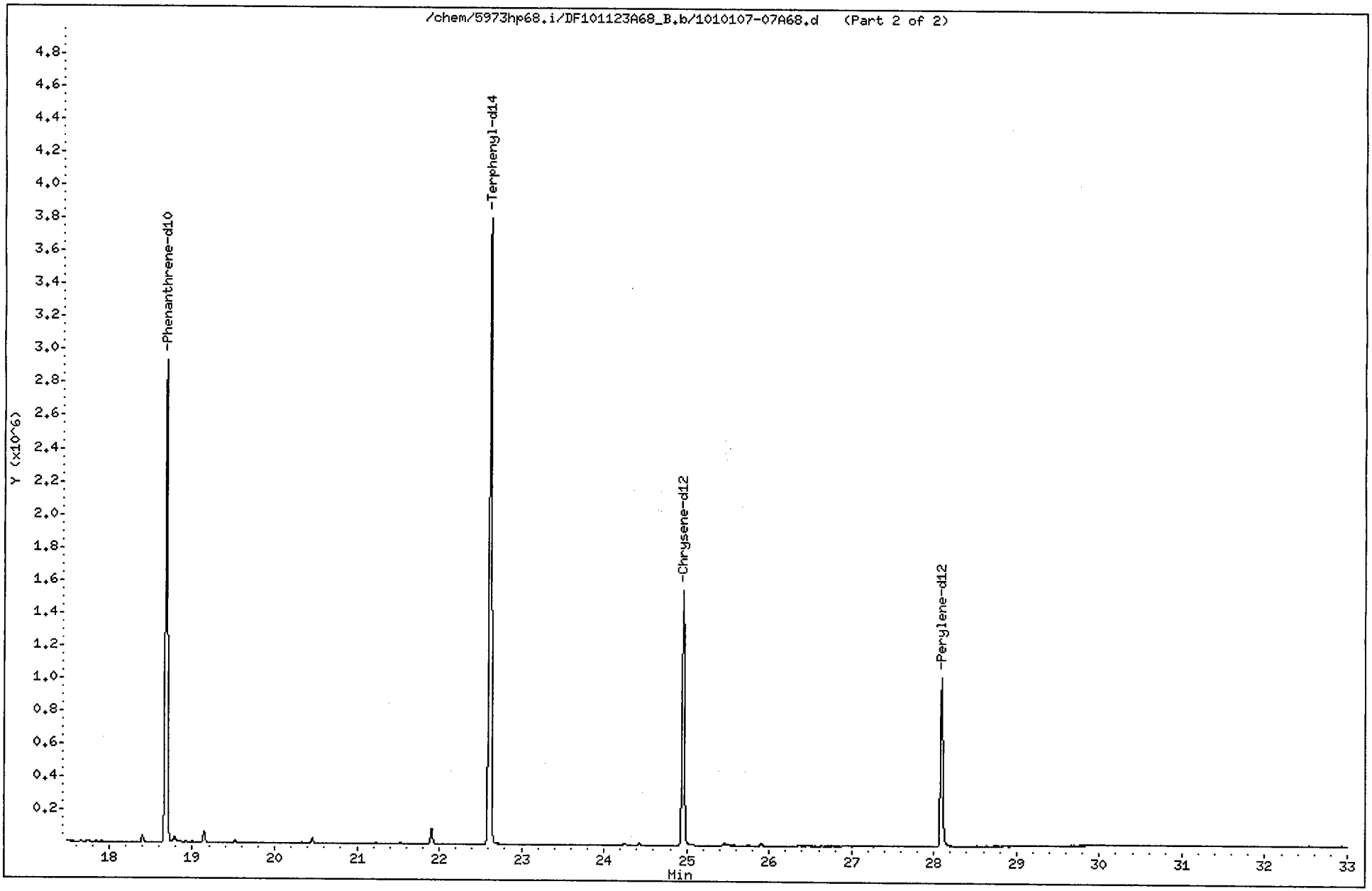
Data File: /chem/5973hp68.i/DF101123A68_B.b/1010107-07A68.d
Date : 23-NOV-2010 20:13
Client ID: 13MW6
Sample Info: 1010107-07:OWS
Volume Injected (uL): 2.0
Column phase: RTX-5MS

Instrument: 5973hp68.i
Operator: OWS
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101123A68_B.b/1010107-07A68.d
Date : 23-NOV-2010 20:13
Client ID: 13MW6
Sample Info: 1010107-07:OWS
Volume Injected (uL): 2.0
Column phase: RTX-5MS

Instrument: 5973hp68.i
Operator: OWS
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101123A68_B.b/1010107-07A68.d
Report Date: 29-Nov-2010 16:07

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Data file : /chem/5973hp68.i/DF101123A68_B.b/1010107-07A68.d
Lab Smp Id: 1010107-07 Client Smp ID: 13MW6
Inj Date : 23-NOV-2010 20:13
Operator : OWS Inst ID: 5973hp68.i
Smp Info : 1010107-07:OWS
Misc Info : 13MW6
Comment : 2008 MDLS SOIL/ 2007 WATER
Method : /chem/5973hp68.i/DF101123A68_B.b/8270CMASTERDODv5.m
Meth Date : 29-Nov-2010 16:05 byrd Quant Type: ISTD
Cal Date : 19-NOV-2010 11:45 Cal File: 0K19001-CALCC68.d
Als bottle: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: HWMU13A_B.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Vo	1000.00000	Volume of sample extracted (mL)
Vi	2.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	CONCENTRATIONS FINAL (ug/L)	SIMILARITY
*	1 1,4-Dichlorobenzene-d4	152	8.314	8.314	(1.000)	709145	40.0000		
*	2 Naphthalene-d8	136	11.140	11.140	(1.000)	2643736	40.0000		
*	3 Acenaphthene-d10	164	15.259	15.259	(1.000)	1427509	40.0000		
*	4 Phenanthrene-d10	188	18.689	18.689	(1.000)	2067302	40.0000		
*	5 Chrysene-d12	240	24.960	24.955	(1.000)	1029126	40.0000		
*	6 Perylene-d12	264	28.096	28.091	(1.000)	689987	40.0000		
	33 Acetophenone	105	Compound Not Detected.						

outlab

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.
13MW7

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 1010107-08

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1010107-08A68

Level: (low/med) LOW Date Received: 10/20/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted:10/22/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/23/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

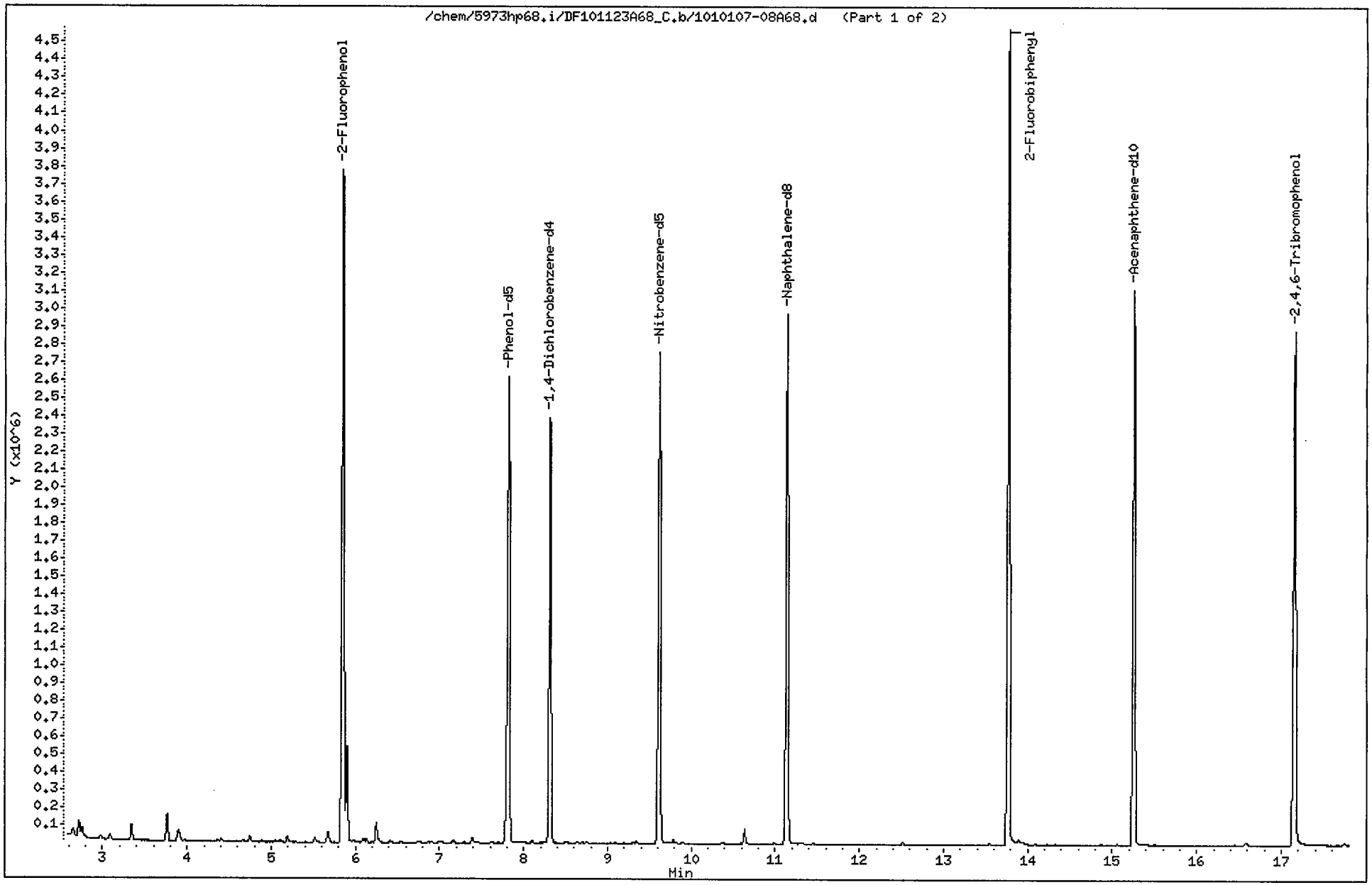
GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
95-57-8	2-Chlorophenol	10	U
108-39-4	3-Methylphenol	8.0	U
106-44-5	4-Methylphenol	8.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
131-11-3	Dimethylphthalate	5.0	U
100-02-7	4-Nitrophenol	10	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	U
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U

(1) - Cannot be separated from Diphenylamine

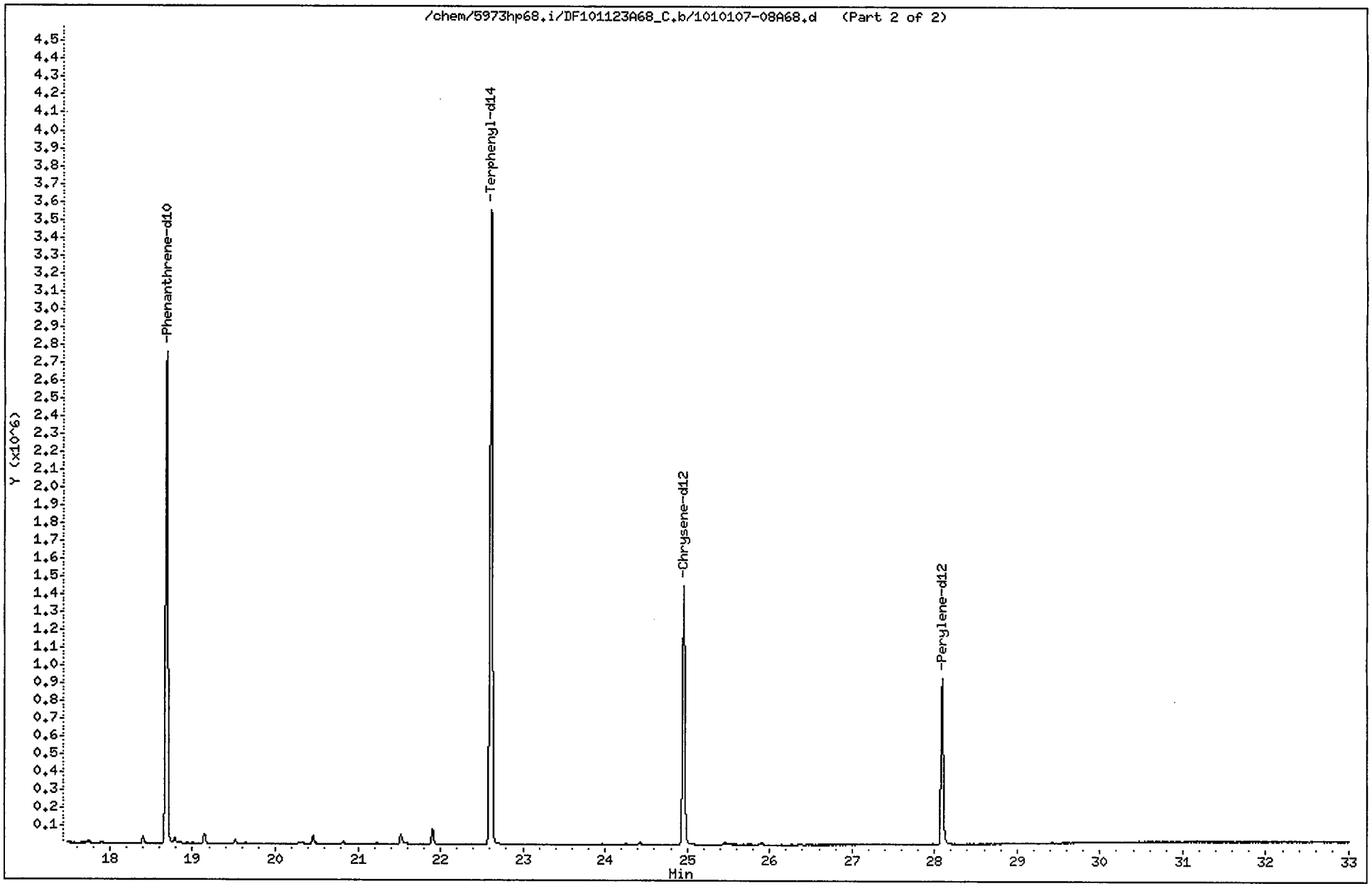
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Date : 23-NOV-2010 20:56
Client ID: 13MW7
Sample Info: 1010107-08:OWS
Volume Injected (uL): 2.0
Column phase: RTX-5MS

Instrument: 5973hp68.i
Operator: OWS
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101123A68_C.b/1010107-08A68.d
Date : 23-NOV-2010 20:56
Client ID: 13MW7
Sample Info: 1010107-08:OWS
Volume Injected (uL): 2.0
Column phase: RTX-5MS

Instrument: 5973hp68.i
Operator: OWS
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101123A68_C.b/1010107-08A68.d
Report Date: 29-Nov-2010 16:04

CompuChem

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Data file : /chem/5973hp68.i/DF101123A68_C.b/1010107-08A68.d
Lab Smp Id: 1010107-08 Client Smp ID: 13MW7
Inj Date : 23-NOV-2010 20:56
Operator : OWS Inst ID: 5973hp68.i
Smp Info : 1010107-08:OWS
Misc Info : 13MW7
Comment : 2008 MDLS SOIL/ 2007 WATER
Method : /chem/5973hp68.i/DF101123A68_C.b/8270CMASTERDODv5.m
Meth Date : 29-Nov-2010 16:04 byrd Quant Type: ISTD
Cal Date : 19-NOV-2010 17:11 Cal File: 0K19001-CALI1C68.d
Als bottle: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: HWMU13A_C.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Vo	1000.00000	Volume of sample extracted (mL)
Vi	2.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	FINAL (ug/L)	SIMILARITY
*	1 1,4-Dichlorobenzene-d4	152	8.314	8.314	(1.000)	632711	40.0000		
*	2 Naphthalene-d8	136	11.140	11.145	(1.000)	2407963	40.0000		
*	3 Acenaphthene-d10	164	15.259	15.264	(1.000)	1320286	40.0000		
*	4 Phenanthrene-d10	188	18.689	18.694	(1.000)	1951154	40.0000		
*	5 Chrysene-d12	240	24.955	24.960	(1.000)	938398	40.0000		
*	6 Perylene-d12	264	28.091	28.096	(1.000)	616375	40.0000		
$	7 2-Fluorophenol	112	5.851	5.846	(0.704)	2130992	97.0372	48	
$	8 Phenol-d5	99	7.817	7.833	(0.940)	1856946	64.6533	32	
$	9 Nitrobenzene-d5	82	9.618	9.617	(0.863)	1746137	76.1053	38	
$	10 2-Fluorobiphenyl	172	13.774	13.774	(0.903)	2778207	71.8258	36	
$	11 2,4,6-Tribromophenol	330	17.156	17.150	(1.124)	630855	179.081	90	(A)
$	12 Terphenyl-d14	244	22.615	22.610	(0.906)	2185270	101.234	51	
	24 Phenol	94	Compound Not Detected.						
	25 2-Chlorophenol	128	Compound Not Detected.						
	34 Hexachloroethane	117	Compound Not Detected.						

04/256

Data File: /chem/5973hp68.i/DF101123A68_C.b/1010107-08A68.d
Report Date: 29-Nov-2010 16:04

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	CONCENTRATIONS FINAL (ug/L)	SIMILARITY
39	3-Methylphenol	108	Compound Not Detected.						
40	4-Methylphenol	108	Compound Not Detected.						
41	Nitrobenzene	77	Compound Not Detected.						
48	2,4-Dichlorophenol	162	Compound Not Detected.						
73	Dimethylphthalate	163	Compound Not Detected.						
81	4-Nitrophenol	139	Compound Not Detected.						
79	Dibenzofuran	168	Compound Not Detected.						
87	Diethylphthalate	149	Compound Not Detected.						
93	N-Nitrosodiphenylamine	169	Compound Not Detected.						
116	Di-n-butylphthalate	149	Compound Not Detected.						
121	Fluoranthene	202	Compound Not Detected.						
123	Pyrene	202	Compound Not Detected.						
130	Butylbenzylphthalate	149	Compound Not Detected.						
135	bis(2-ethylhexyl)Phthalate	149	Compound Not Detected.						
133	Benzo(a)anthracene	228	Compound Not Detected.						
136	Di-n-octylphthalate	149	Compound Not Detected.						
137	Benzo(b)fluoranthene	252	Compound Not Detected.						
138	Benzo(k)fluoranthene	252	Compound Not Detected.						
140	Benzo(a)pyrene	252	Compound Not Detected.						
142	Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.						
143	Dibenzo(a,h)anthracene	278	Compound Not Detected.						

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

13MW7

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-A

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 1010107-08

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1010107-08A68

Level: (low/med) LOW Date Received: 10/20/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted:10/22/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/23/10

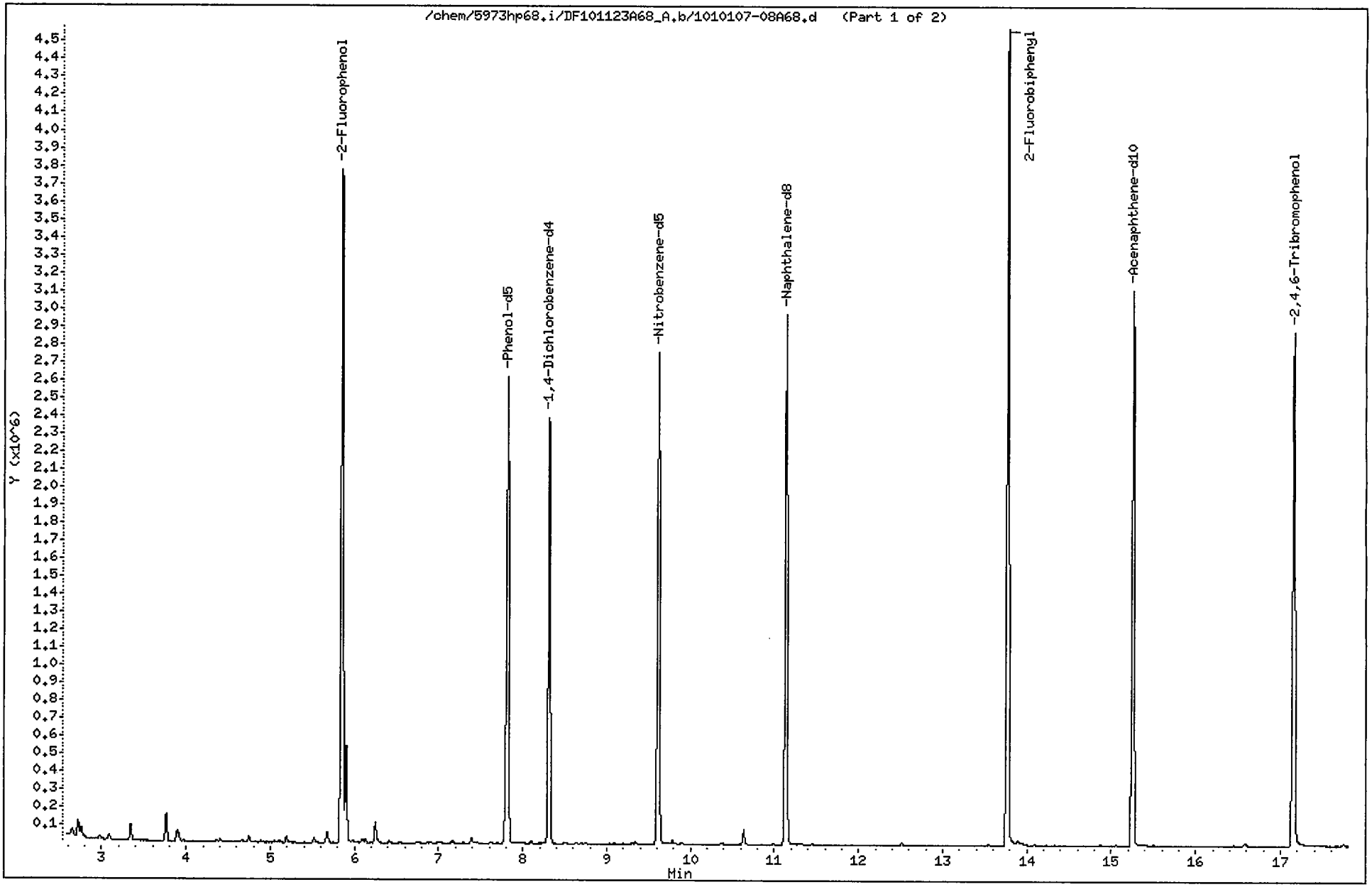
Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

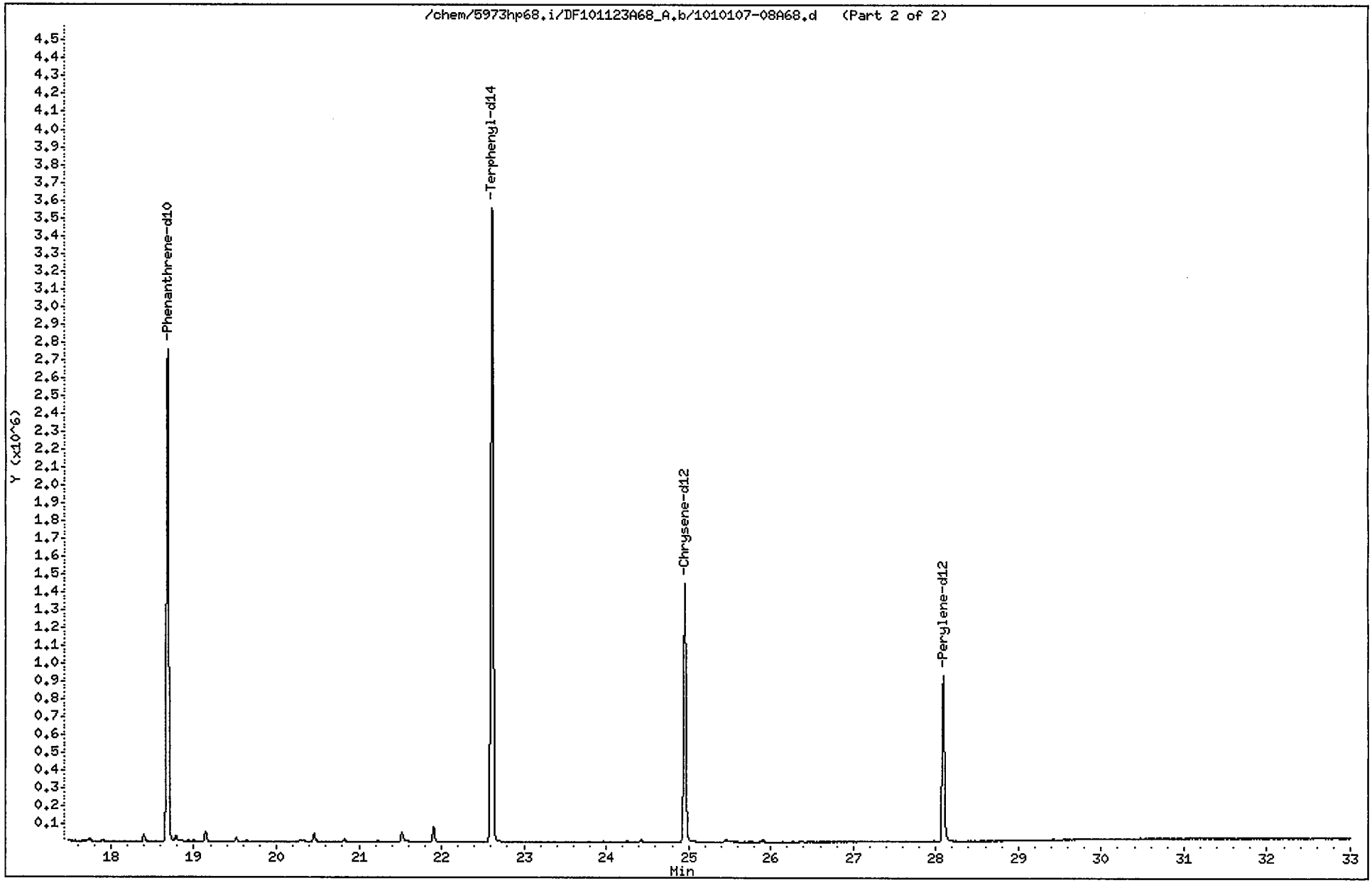
CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
119-93-7	3,3'-Dimethylbenzidine	5.0	U

Data File: /chem/5973hp68.i/DF101123A68_A.b/1010107-08A68.d
Date : 23-NOV-2010 20:56
Client ID: 13MW7
Sample Info: 1010107-08:OWS
Volume Injected (uL): 2.0
Column phase: RTX-5MS

Instrument: 5973hp68.i
Operator: OWS
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101123A68_A.b/1010107-08A68.d
Date : 23-NOV-2010 20:56
Client ID: 13MW7
Instrument: 5973hp68.i
Sample Info: 1010107-08:OWS
Volume Injected (uL): 2.0
Operator: OWS
Column phase: RTX-5MS
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101123A68_A.b/1010107-08A68.d
Report Date: 29-Nov-2010 16:13

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Data file : /chem/5973hp68.i/DF101123A68_A.b/1010107-08A68.d
Lab Smp Id: 1010107-08 Client Smp ID: 13MW7
Inj Date : 23-NOV-2010 20:56
Operator : OWS Inst ID: 5973hp68.i
Smp Info : 1010107-08:OWS
Misc Info : 13MW7
Comment : 2008 MDLS SOIL/ 2007 WATER
Method : /chem/5973hp68.i/DF101123A68_A.b/8270CMASTERDODv5.m
Meth Date : 29-Nov-2010 16:12 byrd Quant Type: ISTD
Cal Date : 19-NOV-2010 07:31 Cal File: 0K19001-CAL6C68.d
Als bottle: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: HWMU13A_A.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Vo	1000.00000	Volume of sample extracted (mL)
Vi	2.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	CONCENTRATIONS FINAL (ug/L)	SIMILARITY
* 1 1,4-Dichlorobenzene-d4	152	8.314	8.314	(1.000)	632711	40.0000		
* 2 Naphthalene-d8	136	11.140	11.145	(1.000)	2407963	40.0000		
* 3 Acenaphthene-d10	164	15.259	15.264	(1.000)	1320286	40.0000		
* 4 Phenanthrene-d10	188	18.689	18.694	(1.000)	1951154	40.0000		
* 5 Chrysene-d12	240	24.955	24.960	(1.000)	938398	40.0000		
* 6 Perylene-d12	264	28.091	28.091	(1.000)	616375	40.0000		
129 3,3'-Dimethylbenzidine	212	Compound Not Detected.						

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

13MW7

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 1010107-08

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 1010107-08A68

Level: (low/med) LOW Date Received: 10/20/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted:10/22/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/23/10

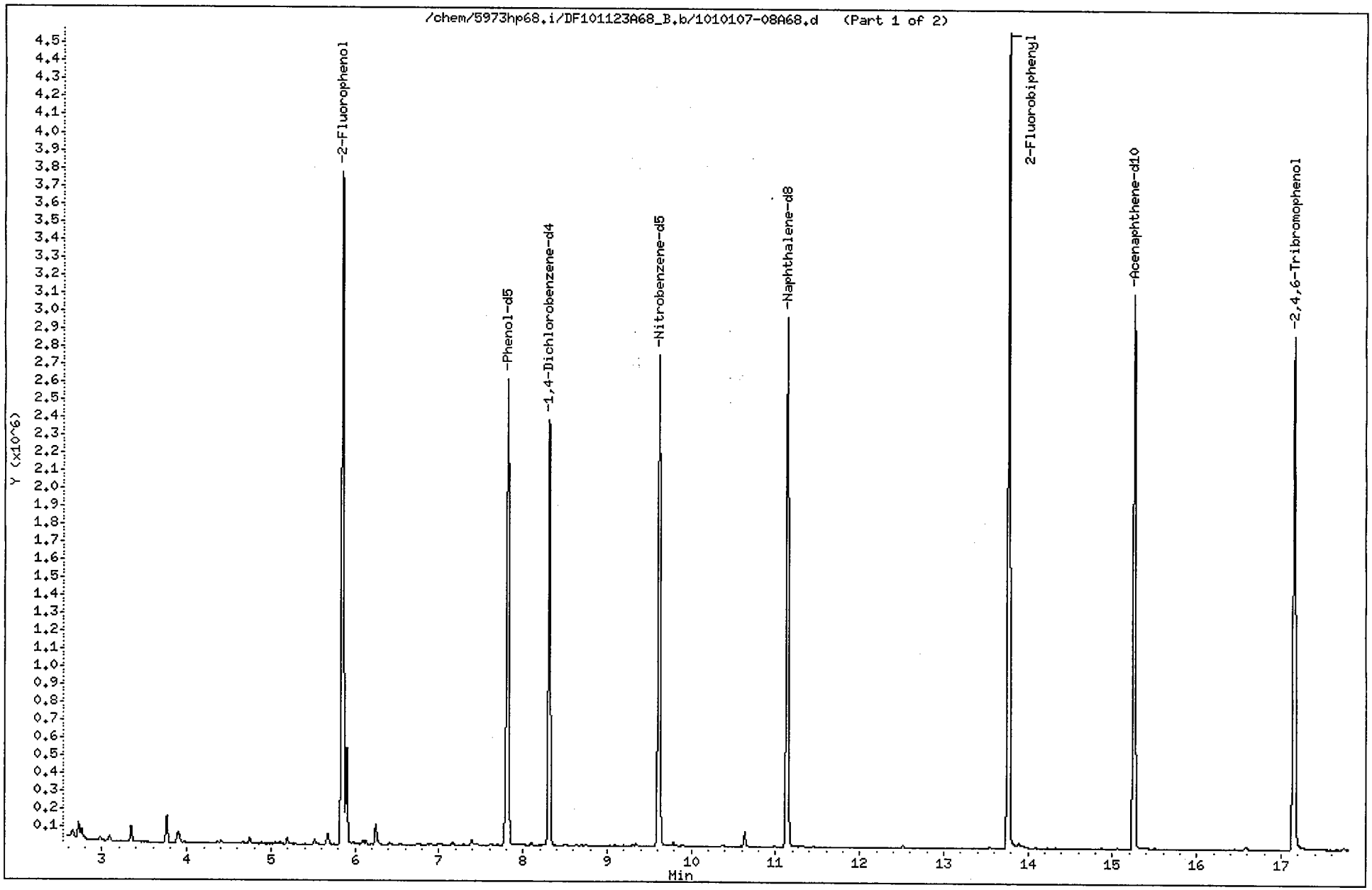
Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
98-86-2	Acetophenone	5.0	U

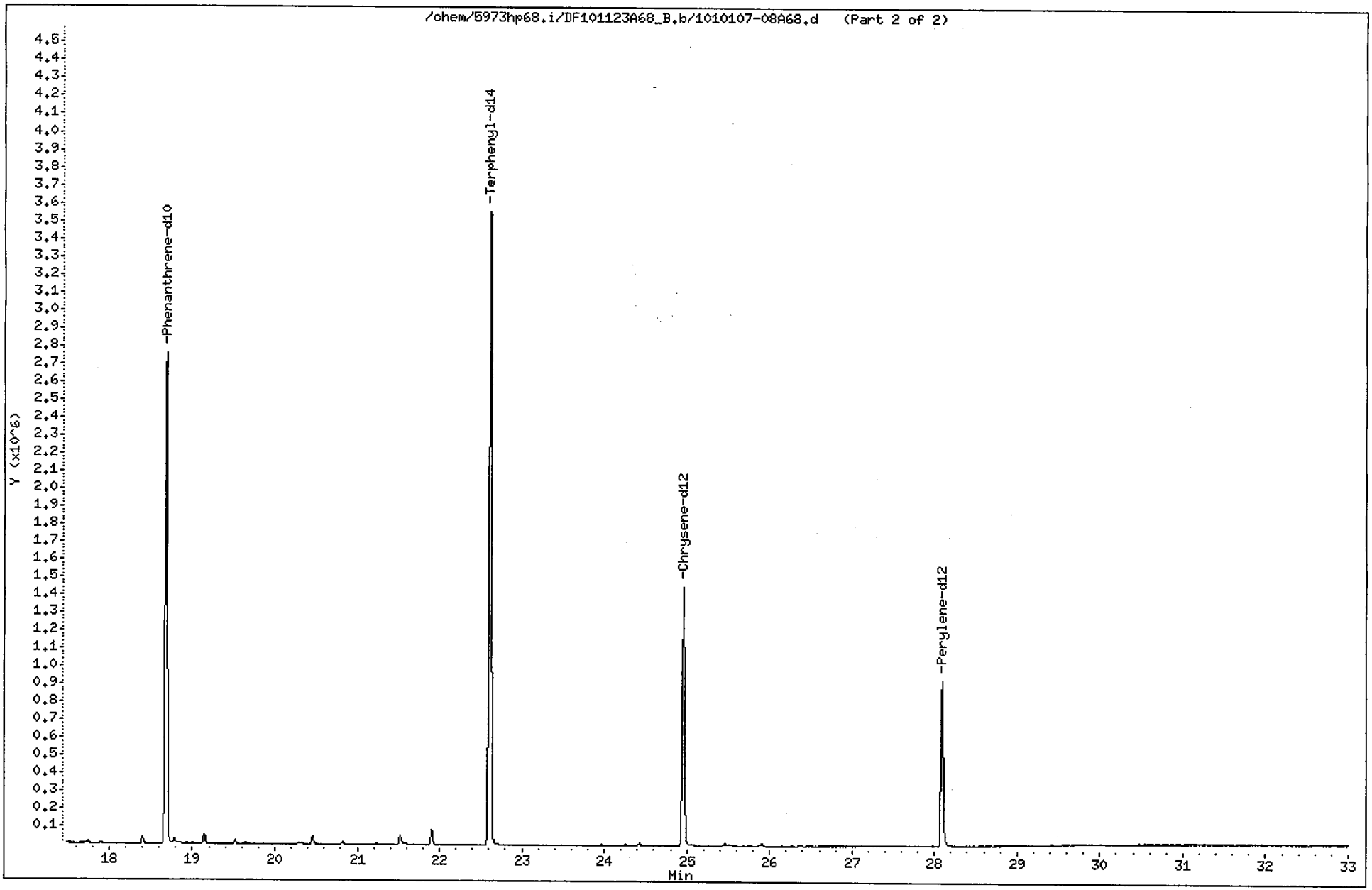
Data File: /chem/5973hp68.i/DF101123A68_B.b/1010107-08A68.d
Date : 23-NOV-2010 20:56
Client ID: 13MW7
Sample Info: 1010107-08:OWS
Volume Injected (uL): 2.0
Column phase: RTX-5MS

Instrument: 5973hp68.i
Operator: OWS
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101123A68_B.b/1010107-08A68.d
Date : 23-NOV-2010 20:56
Client ID: 13MW7
Sample Info: 1010107-08:OWS
Volume Injected (uL): 2.0
Column phase: RTX-5MS

Instrument: 5973hp68.i
Operator: OWS
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101123A68_B.b/1010107-08A68.d
Report Date: 29-Nov-2010 16:07

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Data file : /chem/5973hp68.i/DF101123A68_B.b/1010107-08A68.d
Lab Smp Id: 1010107-08 Client Smp ID: 13MW7
Inj Date : 23-NOV-2010 20:56
Operator : OWS Inst ID: 5973hp68.i
Smp Info : 1010107-08:OWS
Misc Info : 13MW7
Comment : 2008 MDLS SOIL/ 2007 WATER
Method : /chem/5973hp68.i/DF101123A68_B.b/8270CMASTERDODv5.m
Meth Date : 29-Nov-2010 16:05 byrd Quant Type: ISTD
Cal Date : 19-NOV-2010 11:45 Cal File: 0K19001-CALCC68.d
Als bottle: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: HWMU13A_B.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Vo	1000.00000	Volume of sample extracted (mL)
Vi	2.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	CONCENTRATIONS FINAL (ug/L)	SIMILARITY
* 1 1,4-Dichlorobenzene-d4	152	8.314	8.314	(1.000)	632711	40.0000		
* 2 Naphthalene-d8	136	11.140	11.140	(1.000)	2407963	40.0000		
* 3 Acenaphthene-d10	164	15.259	15.259	(1.000)	1320286	40.0000		
* 4 Phenanthrene-d10	188	18.689	18.689	(1.000)	1951154	40.0000		
* 5 Chrysene-d12	240	24.955	24.955	(1.000)	938398	40.0000		
* 6 Perylene-d12	264	28.091	28.091	(1.000)	616375	40.0000		
33 Acetophenone	105	Compound Not Detected.						

Cu/Leh

3. Standards Data

a. Initial Calibration Data (Form VI SV)

b. Continuing Calibration Data (Form VII SV)

a. Initial Calibration Data (Form VI SV)

If more than one instrument is used, forms shall be arranged in order by instrument. Multiple initial calibrations from the same instrument shall be in chronological order. Within each initial calibration, the standards are in order by level, from lowest to highest.

(1) Reconstructed Ion Chromatograms and quantitation reports for the initial (five-point) calibration. Spectra not required.

(2) EICPs displaying each manual integration.

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Instrument ID: 5973HP68 Calibration Date(s): 11/19/10 11/19/10

Column: RTX-5MS ID: 0.32 (mm) Calibration Time(s): 1338 1711

LAB FILE ID: RF10: 0K19001-CALDRF20: 0K19001-CALERF50: 0K19001-CALF
RF80: 0K19001-CALGRF100: 0K19001-CALRF120: 0K19001-CAL

COMPOUND	RF10	RF20	RF50	RF80	RF100	RF120
Phenol	2.201	1.864	1.861	1.563	1.522	1.470
2-Chlorophenol	1.551	1.304	1.244	1.033	0.994	0.951
3-Methylphenol	1.568	1.341	1.319	1.104	1.100	1.132
4-Methylphenol	1.568	1.341	1.319	1.104	1.100	1.132
Hexachloroethane	0.682	0.580	0.608	0.529	0.515	0.501
Nitrobenzene	0.454	0.401	0.401	0.369	0.367	0.358
2,4-Dichlorophenol	0.304	0.262	0.254	0.229	0.225	0.223
Dimethylphthalate	1.339	1.117	1.112	1.030	1.024	0.992
4-Nitrophenol	0.166	0.147	0.195	0.196	0.201	0.204
Dibenzofuran	1.657	1.466	1.400	1.300	1.278	1.230
Diethylphthalate	1.236	0.994	0.963	0.882	0.864	0.805
N-Nitrosodiphenylamine	0.645	0.578	0.541	0.503	0.493	0.483
Di-n-butylphthalate	1.317	1.174	1.116	1.032	1.028	0.950
Fluoranthene	1.052	0.959	0.943	0.850	0.875	0.797
Pyrene	1.836	1.637	1.567	1.593	1.482	1.558
Butylbenzylphthalate	0.804	0.745	0.726	0.729	0.686	0.697
bis(2-ethylhexyl)Phthalate	1.036	0.976	0.937	0.935	0.861	0.864
Benzo(a)anthracene	1.078	0.988	0.984	0.951	0.937	0.935
Di-n-octylphthalate	2.395	2.136	2.263	1.872	1.956	1.922
Benzo(b)fluoranthene	1.201	1.087	1.117	1.047	1.065	1.056
Benzo(k)fluoranthene	1.205	1.088	1.155	1.053	1.058	1.064
Benzo(a)pyrene	0.972	0.914	0.950	0.906	0.925	0.916
Indeno(1,2,3-cd)pyrene	0.542	0.527	0.592	0.625	0.626	0.653
Dibenzo(a,h)anthracene	0.563	0.548	0.608	0.625	0.638	0.680
2-Fluorophenol	1.596	1.366	1.480	1.317	1.300	1.272
Phenol-d5	2.149	1.836	1.923	1.681	1.665	1.640
Nitrobenzene-d5	0.432	0.383	0.388	0.363	0.362	0.359
2-Fluorobiphenyl	1.388	1.257	1.157	1.108	1.085	1.036
2,4,6-Tribromophenol	0.112	0.096	0.109	0.106	0.109	0.108
Terphenyl-d14	1.024	0.913	0.893	0.926	0.861	0.903

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Instrument ID: 5973HP68 Calibration Date(s): 11/19/10 11/19/10

Column: RTX-5MS ID: 0.32 (mm) Calibration Time(s): 1338 1711

COMPOUND	CURVE	COEFFICENT A1	%RSD OR R^2	MAX %RSD OR R^2
Phenol	AVRG	1.74681805	16.077	30.000
2-Chlorophenol	AVRG	1.17960068	19.529	15.000
3-Methylphenol	AVRG	1.26080010	14.654	15.000
4-Methylphenol	AVRG	1.26080010	14.654	15.000
Hexachloroethane	AVRG	0.56924871	12.066	15.000
Nitrobenzene	AVRG	0.39180001	9.033	15.000
2,4-Dichlorophenol	AVRG	0.24963397	12.594	30.000
Dimethylphthalate	AVRG	1.10228020	11.454	15.000
4-Nitrophenol	AVRG	0.18477778	12.402	15.000
Dibenzofuran	AVRG	1.38845078	11.314	15.000
Diethylphthalate	AVRG	0.95737680	15.938	15.000
N-Nitrosodiphenylamine	AVRG	0.54042587	11.472	30.000
Di-n-butylphthalate	AVRG	1.10277501	11.837	15.000
Fluoranthene	AVRG	0.91267221	9.975	30.000
Pyrene	AVRG	1.61224887	7.506	15.000
Butylbenzylphthalate	AVRG	0.73112516	5.713	15.000
bis(2-ethylhexyl)Phthalate	AVRG	0.93477984	7.152	15.000
Benzo(a)anthracene	AVRG	0.97871782	5.458	15.000
Di-n-octylphthalate	AVRG	2.09064716	10.005	30.000
Benzo(b)fluoranthene	AVRG	1.09556609	5.234	15.000
Benzo(k)fluoranthene	AVRG	1.10410297	5.626	15.000
Benzo(a)pyrene	AVRG	0.93032529	2.707	30.000
Indeno(1,2,3-cd)pyrene	AVRG	0.59410886	8.463	15.000
Dibenzo(a,h)anthracene	AVRG	0.61065041	8.009	15.000
2-Fluorophenol	AVRG	1.38834704	9.027	15.000
Phenol-d5	AVRG	1.81578081	10.868	15.000
Nitrobenzene-d5	AVRG	0.38113029	7.276	15.000
2-Fluorobiphenyl	AVRG	1.17186119	11.102	15.000
2,4,6-Tribromophenol	AVRG	0.10672637	5.314	15.000
Terphenyl-d14	AVRG	0.92013567	6.040	15.000

Average %RSD test result.

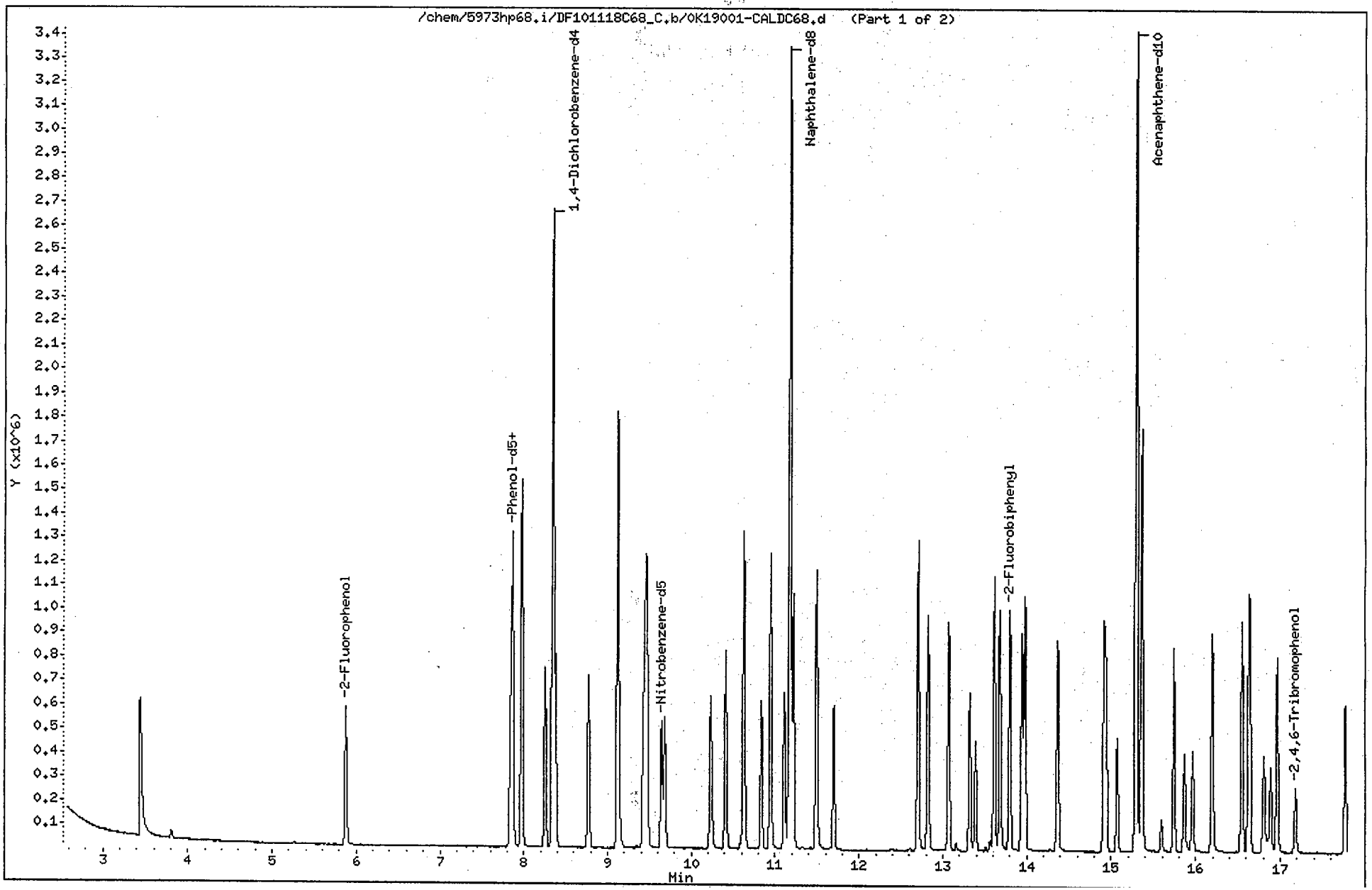
Calculate Average %RSD: 11.43666458
Maximum Average %RSD: 15.00000000

Note: Passes Average %RSD Test.

FORM VI SV

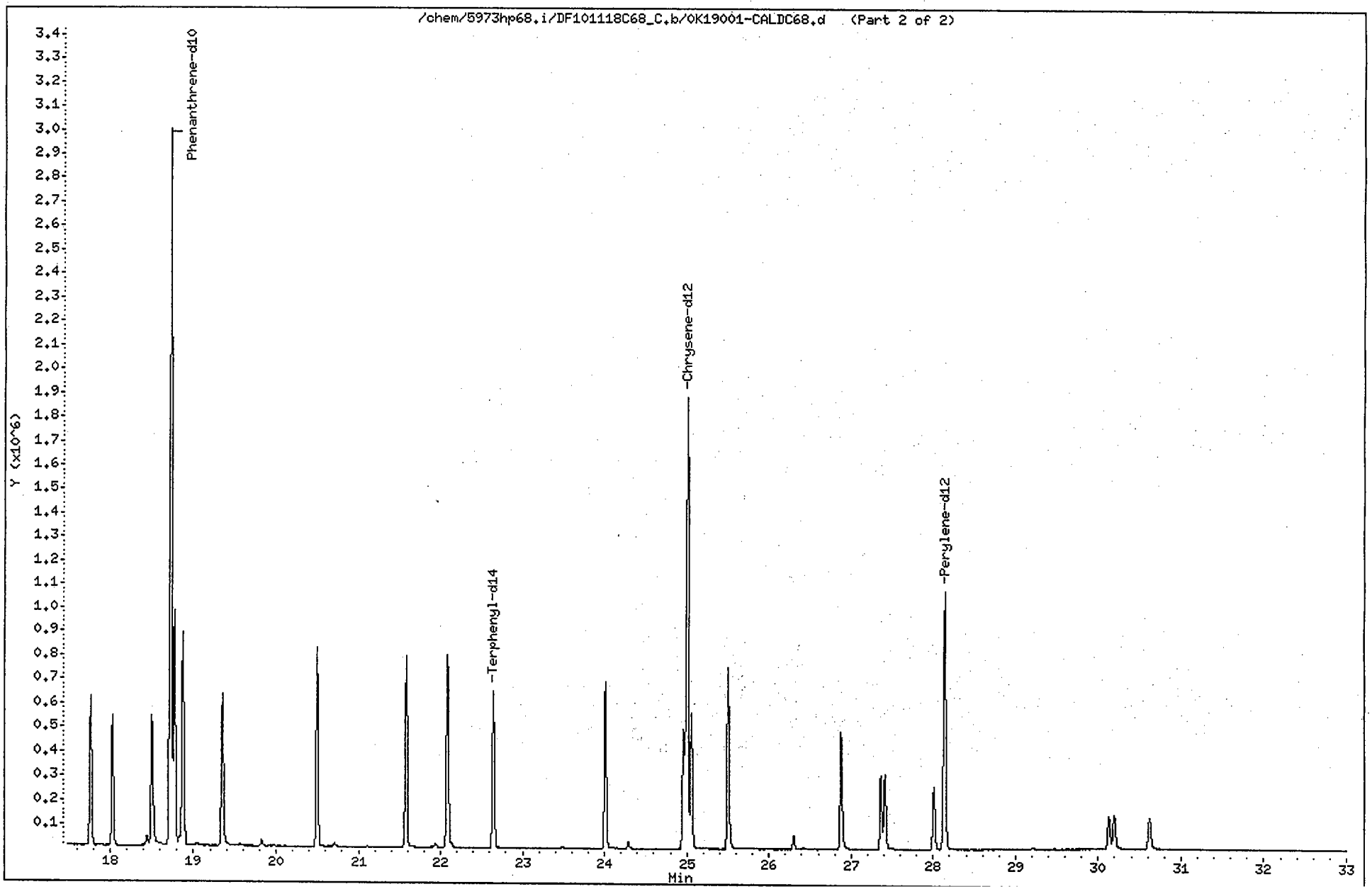
Data File: /chem/5973hp68.i/DF101118C68_C.b/0K19001-CALDC68.d
Date : 19-NOV-2010 13:38
Client ID: SSTD005W7
Sample Info: 0K19001-CALD:SLP
Volume Injected (uL): 2.0
Column phase: RTX-5MS

Instrument: 5973hp68.i
Operator: SLP
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101118C68_C.b/0K19001-CALDC68.d
Date : 19-NOV-2010 13:38
Client ID: SSTD005W7
Sample Info: 0K19001-CALD:SLP
Volume Injected (uL): 2.0
Column phase: RTX-5MS

Instrument: 5973hp68.i
Operator: SLP
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101118C68_C.b/0K19001-CALDC68.d
Report Date: 29-Nov-2010 10:17

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Data file : /chem/5973hp68.i/DF101118C68_C.b/0K19001-CALDC68.d
Lab Smp Id: 0K19001-CALD Client Smp ID: SSTD005W7
Inj Date : 19-NOV-2010 13:38
Operator : SLP Inst ID: 5973hp68.i
Smp Info : 0K19001-CALD:SLP
Misc Info : SSTD005W7
Comment : 2008 MDLS SOIL/ 2007 WATER
Method : /chem/5973hp68.i/DF101118C68_C.b/8270CMASTERDODv5.m
Meth Date : 26-Nov-2010 15:19 spruskin Quant Type: ISTD
Cal Date : 19-NOV-2010 13:38 Cal File: 0K19001-CALDC68.d
Als bottle: 14 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: Short.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Vo	1000.00000	Volume of sample extracted (mL)
Vi	2.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	AMOUNTS ON-COL (NG)	SIMILARITY
*	1 1,4-Dichlorobenzene-d4	152	8.346	8.357	(1.000)	698923	40.0000		
*	2 Naphthalene-d8	136	11.177	11.193	(1.000)	2703654	40.0000		
*	3 Acenaphthene-d10	164	15.296	15.307	(1.000)	1486011	40.0000		
*	4 Phenanthrene-d10	188	18.731	18.747	(1.000)	2150054	40.0000		
*	5 Chrysene-d12	240	25.003	25.014	(1.000)	1251863	40.0000		
*	6 Perylene-d12	264	28.139	28.144	(1.000)	685724	40.0000		
$	7 2-Fluorophenol	112	5.872	5.883	(0.704)	278872	10.0000	10	
$	8 Phenol-d5	99	7.838	7.892	(0.939)	375495	10.0000	10	
$	9 Nitrobenzene-d5	82	9.644	9.671	(0.863)	292218	10.0000	10	
$	10 2-Fluorobiphenyl	172	13.800	13.827	(0.902)	515762	10.0000	10	
$	11 2,4,6-Tribromophenol	330	17.182	17.209	(1.123)	41758	10.0000	10	
$	12 Terphenyl-d14	244	22.642	22.663	(0.906)	320556	10.0000	10	
	13 N-Nitrosodimethylamine	42	3.452	3.463	(0.414)	123418	10.0000	10	7349
	14 Pyridine	79	3.436	3.431	(0.412)	333706	10.0000	10	8644
	24 Phenol	94	7.865	7.929	(0.942)	769319	20.0000	20	

Data File: /chem/5973hp68.i/DF101118C68_C.b/0K19001-CALDC68.d
Report Date: 29-Nov-2010 10:17

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	AMOUNTS ON-COL (NG)	SIMILARITY
26 Bis(2-chloroethyl)ether	93	7.967	7.988	(0.955)	308005	10.0000	10	
25 2-Chlorophenol	128	7.977	8.004	(0.956)	541882	20.0000	20	8749
27 1,3-Dichlorobenzene	146	8.255	8.271	(0.989)	289539	10.0000	10	
28 1,4-Dichlorobenzene	146	8.378	8.394	(1.004)	292417	10.0000	10	
29 1,2-Dichlorobenzene	146	8.773	8.784	(1.051)	278278	10.0000	10	
32 2-Methylphenol	108	9.120	9.158	(1.093)	510578	20.0000	20	
31 2,2'-oxybis(1-Chloropropane)	45	9.131	9.131	(1.094)	388526	10.0000	10	8014
39 3-Methylphenol	108	9.468	9.521	(1.134)	547882	20.0000	20	
40 4-Methylphenol	108	9.468	9.521	(1.134)	547882	20.0000	20	
38 N-Nitroso-di-N-propylamine	70	9.446	9.564	(1.132)	219588	10.0000	10	9062
34 Hexachloroethane	117	9.420	9.430	(1.129)	119199	10.0000	10	9304
41 Nitrobenzene	77	9.681	9.719	(0.866)	306635	10.0000	10	8445
43 Isophorone	82	10.232	10.344	(0.915)	560557	10.0000	10	8213
44 2-Nitrophenol	139	10.408	10.440	(0.931)	264449	20.0000	20	8495
45 2,4-Dimethylphenol	122	10.627	10.681	(0.951)	427154	20.0000	20	8787
46 Bis(2-chloroethoxy)methane	93	10.835	10.878	(0.969)	344526	10.0000	10	8805
48 2,4-Dichlorophenol	162	10.942	10.985	(0.979)	411629	20.0000	20	
49 1,2,4-Trichlorobenzene	180	11.113	11.124	(0.994)	215051	10.0000	10	
51 Naphthalene	128	11.215	11.241	(1.003)	762150	10.0000	10	8926
53 4-Chloroaniline	127	11.492	11.525	(1.028)	621105	20.0000	20	7603
55 Hexachlorobutadiene	225	11.701	11.712	(1.047)	109462	10.0000	10	9445
60 4-Chloro-3-methylphenol	107	12.705	12.743	(1.137)	440303	20.0000	20	9002
61 2-Methylnaphthalene	141	12.823	12.844	(1.147)	405312	10.0000	10	(H)
62 1-Methylnaphthalene	142	13.068	13.090	(1.169)	456152	10.0000	10	
63 1,2,4,5-Tetrachlorobenzene	216	13.325	13.341	(0.871)	196772	10.0000	10	9255
64 Hexachlorocyclopentadiene	237	13.389	13.400	(0.875)	108219	10.0000	10	9191
66 2,4,6-Trichlorophenol	196	13.613	13.645	(0.890)	267685	20.0000	20	
67 2,4,5-Trichlorophenol	196	13.683	13.720	(0.895)	279173	20.0000	20	
69 1,1'-Biphenyl	154	13.977	14.003	(0.914)	551400	10.0000	10	9187
68 2-Chloronaphthalene	162	13.945	13.971	(0.912)	451340	10.0000	10	
70 2-Nitroaniline	65	14.367	14.420	(0.939)	268847	20.0000	20	8745
73 Dimethylphthalate	163	14.938	14.986	(0.977)	497406	10.0000	10	9157
75 2,6-Dinitrotoluene	165	15.072	15.109	(0.985)	99073	10.0000	10	9508
72 Acenaphthylene	152	14.917	14.938	(0.975)	671550	10.0000	10	9442
77 3-Nitroaniline	138	15.360	15.424	(1.004)	214109	20.0000	20	8077
76 Acenaphthene	154	15.360	15.387	(1.004)	403351	10.0000	10	9088
78 2,4-Dinitrophenol	184	15.590	15.649	(1.019)	28053	20.0000	20	
81 4-Nitrophenol	139	15.868	15.937	(1.037)	123304	20.0000	20	8694
83 2,4-Dinitrotoluene	165	15.964	16.017	(1.044)	122282	10.0000	10	0(M)
85 2,3,4,6-Tetrachlorophenol	232	16.194	16.231	(1.059)	180054	20.0000	20	9473
79 Dibenzofuran	168	15.740	15.772	(1.029)	615673	10.0000	10	8955
87 Diethylphthalate	149	16.626	16.669	(1.087)	459088	10.0000	10	9020
88 4-Chlorophenyl-phenylether	204	16.642	16.664	(1.088)	232068	10.0000	10	8054
86 Fluorene	166	16.546	16.578	(1.082)	493257	10.0000	10	8038
91 4-Nitroaniline	138	16.808	16.920	(1.099)	150956	20.0000	20	8966
92 4,6-Dinitro-2-methylphenol	198	16.888	16.963	(0.902)	76884	20.0000	20	9075
93 N-Nitrosodiphenylamine	169	16.963	17.006	(0.906)	346496	10.0000	10	9199

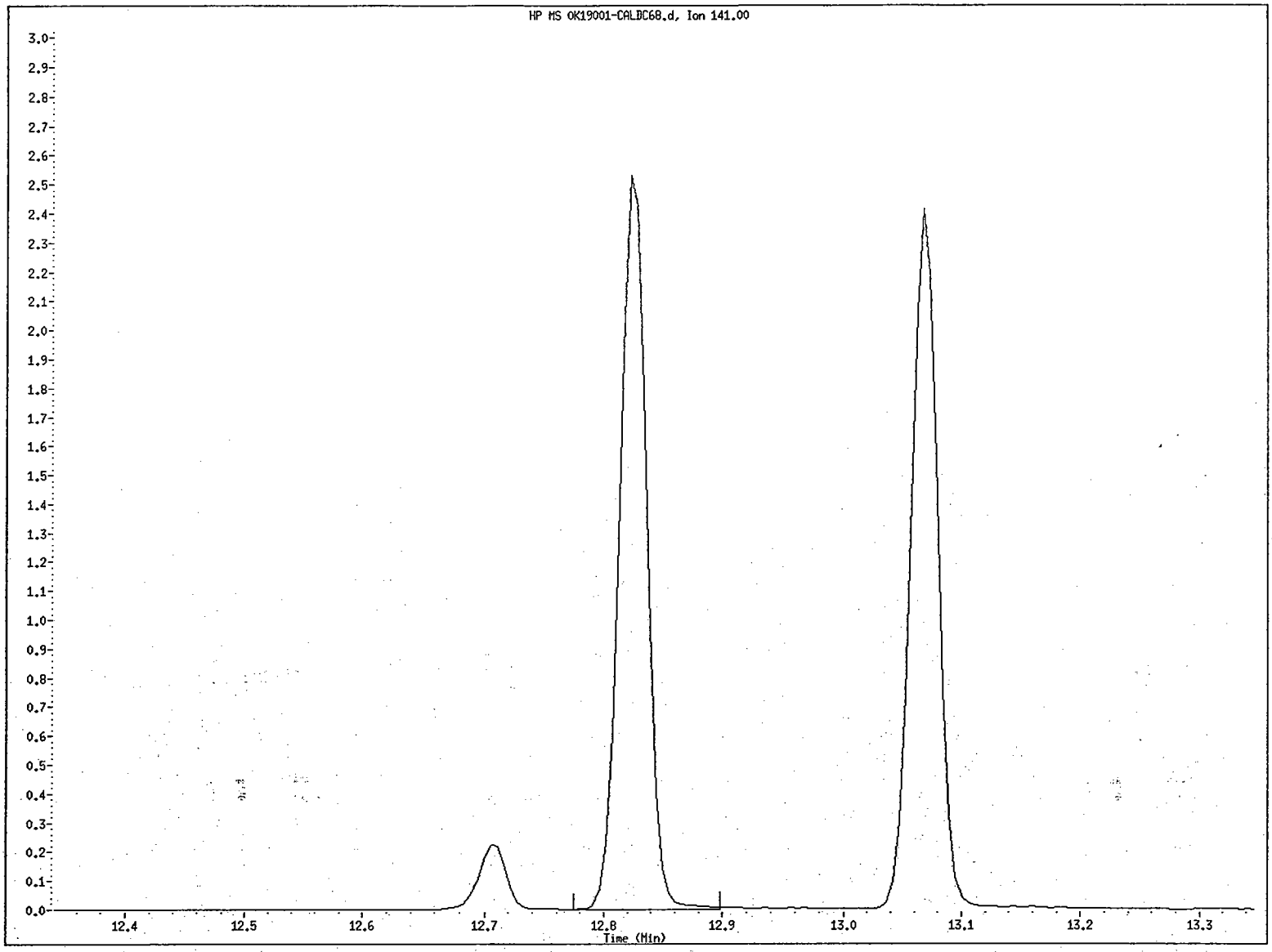
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Report Date: 29-Nov-2010 10:17

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	AMOUNTS ON-COL (NG)	SIMILARITY	
98 4-Bromophenyl-phenylether	248	17.770	17.786	(0.949)	118571	10.0000	10	8933	
104 Hexachlorobenzene	284	18.031	18.058	(0.963)	108712	10.0000	10	9189	
108 Pentachlorophenol	266	18.501	18.534	(0.988)	100412	20.0000	20	8707	
111 Phenanthrene	178	18.774	18.806	(1.002)	610718	10.0000	10		(H)
112 Anthracene	178	18.875	18.908	(1.008)	608069	10.0000	10		
114 Carbazole	167	19.351	19.378	(1.033)	480828	10.0000	10	9771	
116 Di-n-butylphthalate	149	20.499	20.516	(1.094)	707920	10.0000	10	9405	
121 Fluoranthene	202	21.584	21.611	(1.152)	565648	10.0000	10	9448	
123 Pyrene	202	22.086	22.113	(0.883)	574770	10.0000	10	9315	
130 Butylbenzylphthalate	149	24.009	24.025	(0.960)	251554	10.0000	10	9152	
135 bis(2-ethylhexyl)Phthalate	149	25.500	25.511	(1.020)	324120	10.0000	10	8877	
133 Benzo(a)anthracene	228	24.960	24.982	(0.998)	337225	10.0000	10		
134 Chrysene	228	25.056	25.078	(1.002)	327908	10.0000	10		
136 Di-n-octylphthalate	149	26.878	26.889	(0.955)	410595	10.0000	10		
137 Benzo(b)fluoranthene	252	27.364	27.386	(0.972)	205829	10.0000	10		(H)
138 Benzo(k)fluoranthene	252	27.412	27.439	(0.974)	206570	10.0000	10		
140 Benzo(a)pyrene	252	28.011	28.032	(0.995)	166546	10.0000	10		
142 Indeno(1,2,3-cd)pyrene	276	30.132	30.153	(1.071)	92934	10.0000	10	8932	
143 Dibenzo(a,h)anthracene	278	30.196	30.212	(1.073)	96584	10.0000	10	8292	
144 Benzo(g,h,i)perylene	276	30.623	30.650	(1.088)	98579	10.0000	10	9649	

QC Flag Legend

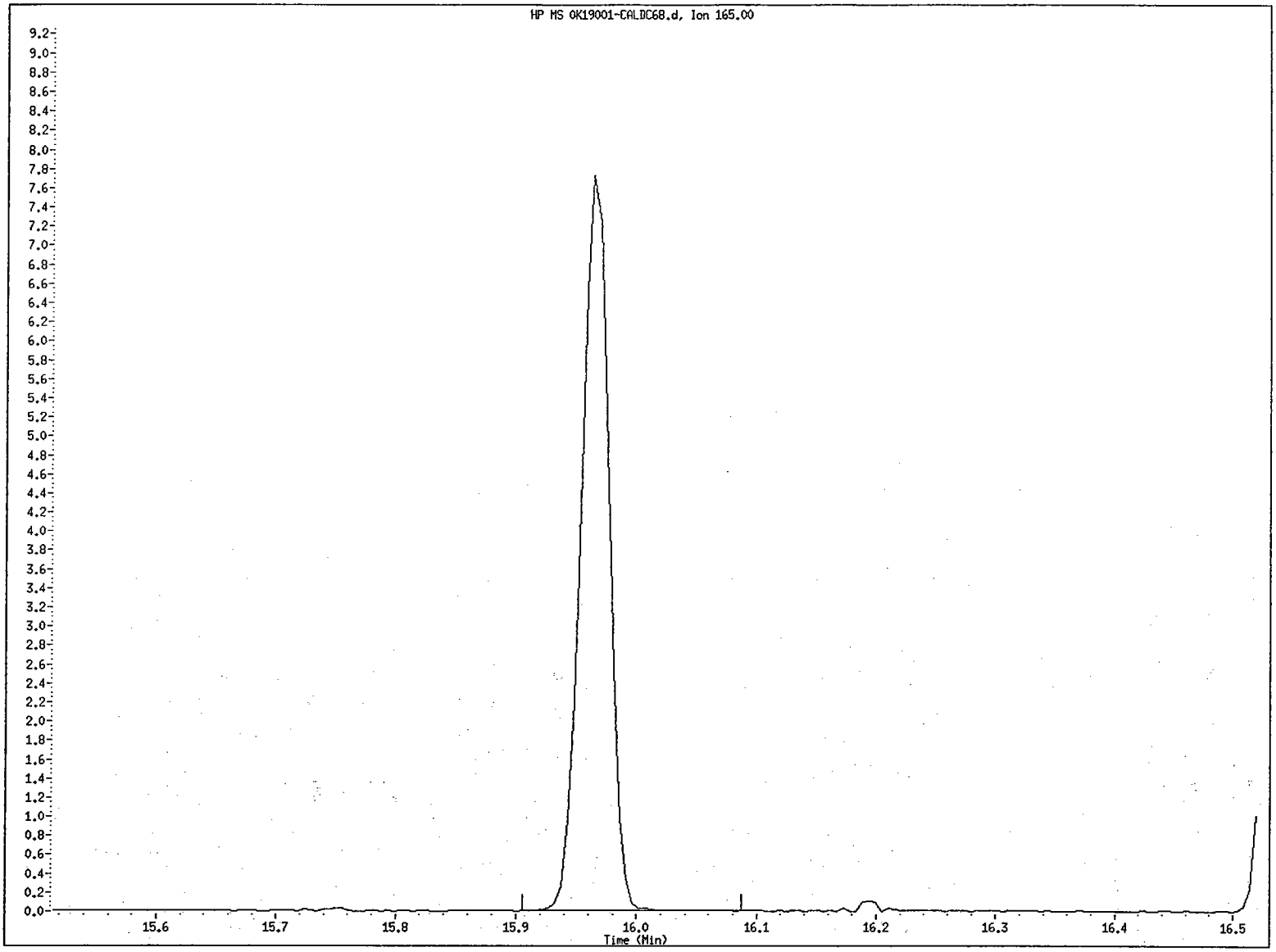
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H - Operator selected an alternate compound hit.

2-Methylnaphthalene CAS Number 91-57-6 Area = 405312 User selected hit



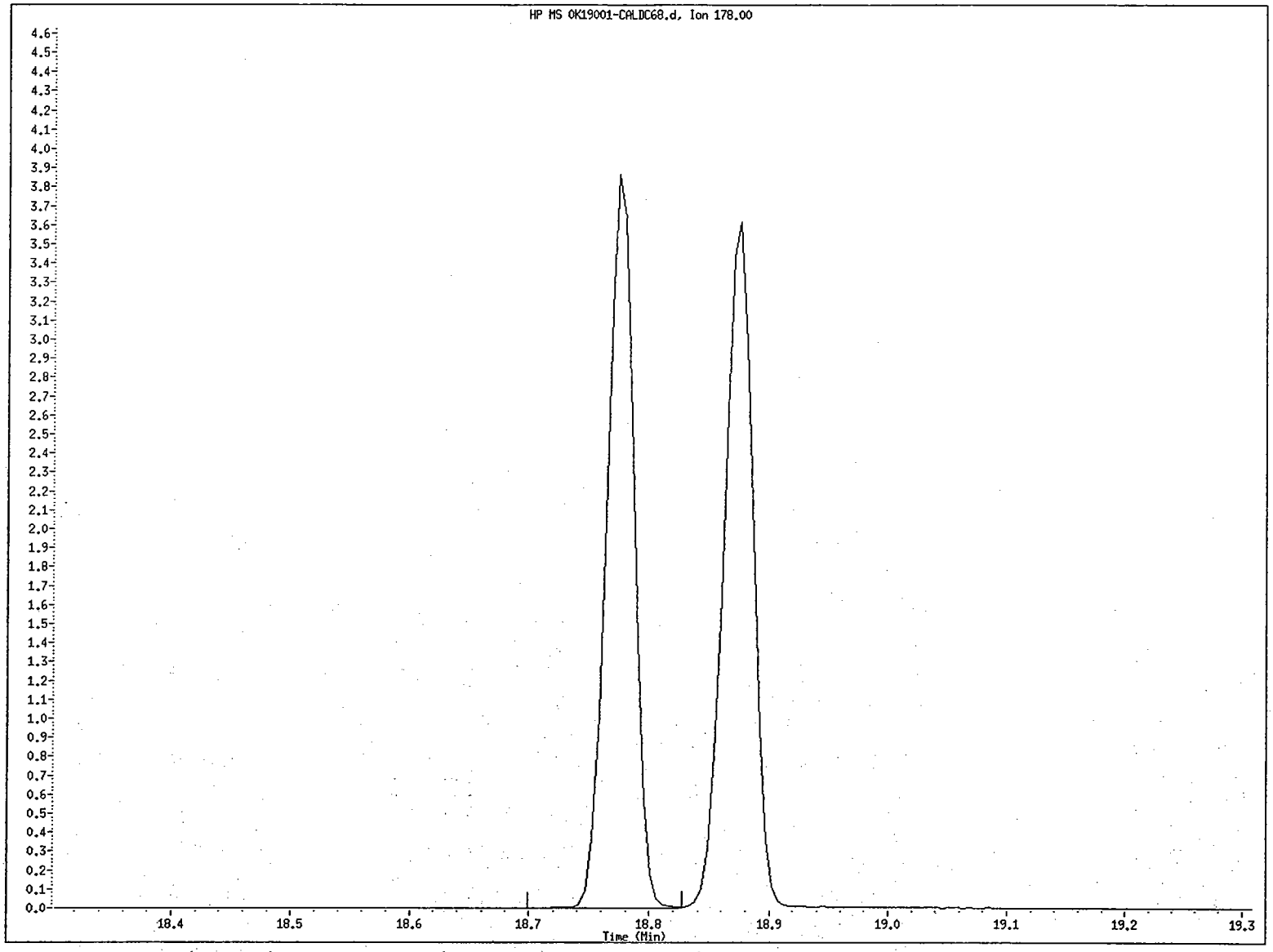
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Injection Date and Time: 19-NOV-2010 13:38
Retention Time: 12.82
Operator ID: SLP

2,4-Dinitrotoluene CAS Number 121-14-2 Area = 122282 Manually integrated



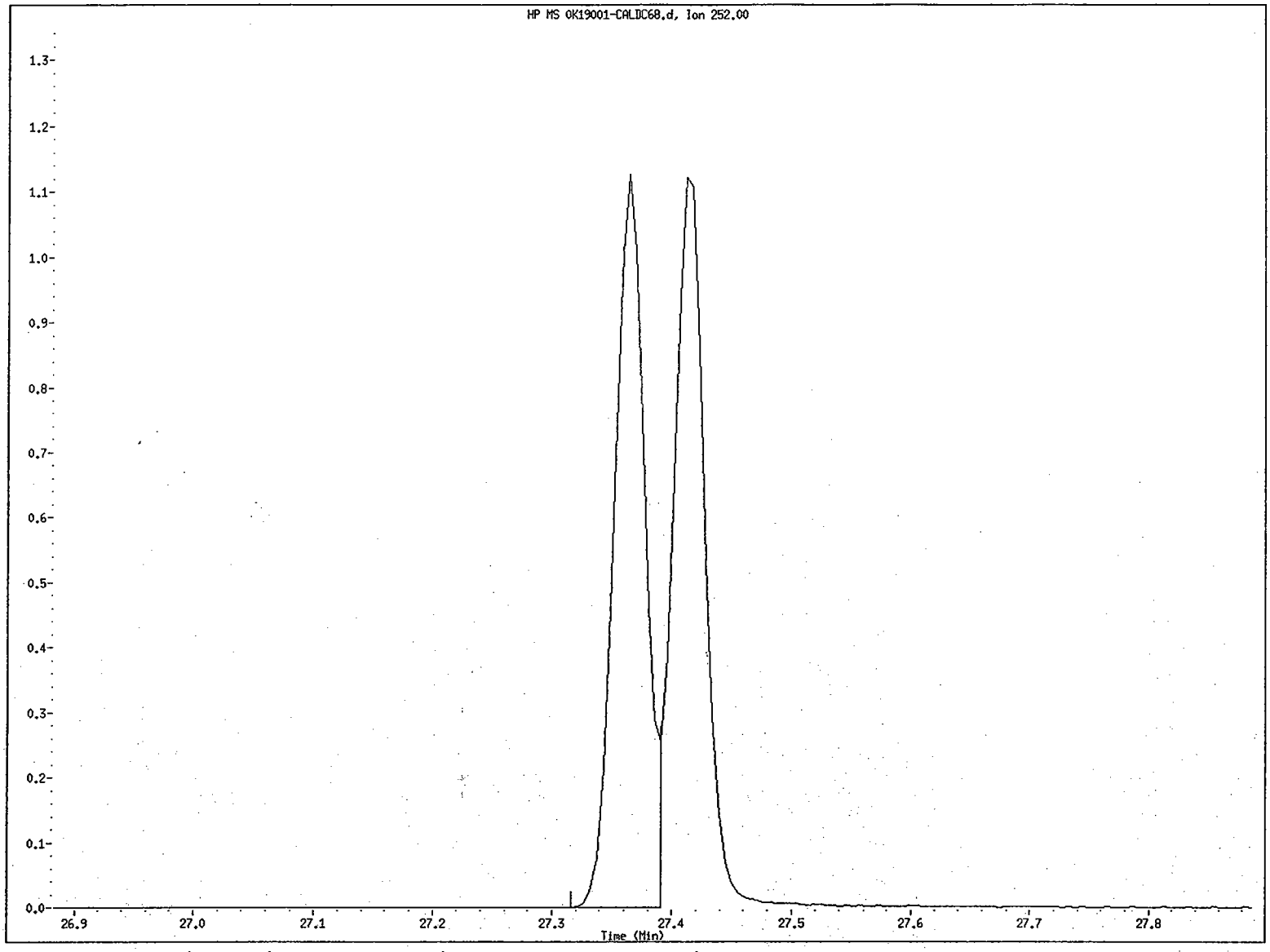
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Injection Date and Time: 19-NOV-2010 13:38
Retention Time: 15.96
Operator ID: SLP

Phenanthrene CAS Number 85-01-8 Area = 610718 User selected hit



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Instrument ID: 5973hp68.i
Injection Date and Time: 19-NOV-2010 13:38
Retention Time: 18.77
Operator ID: SLP

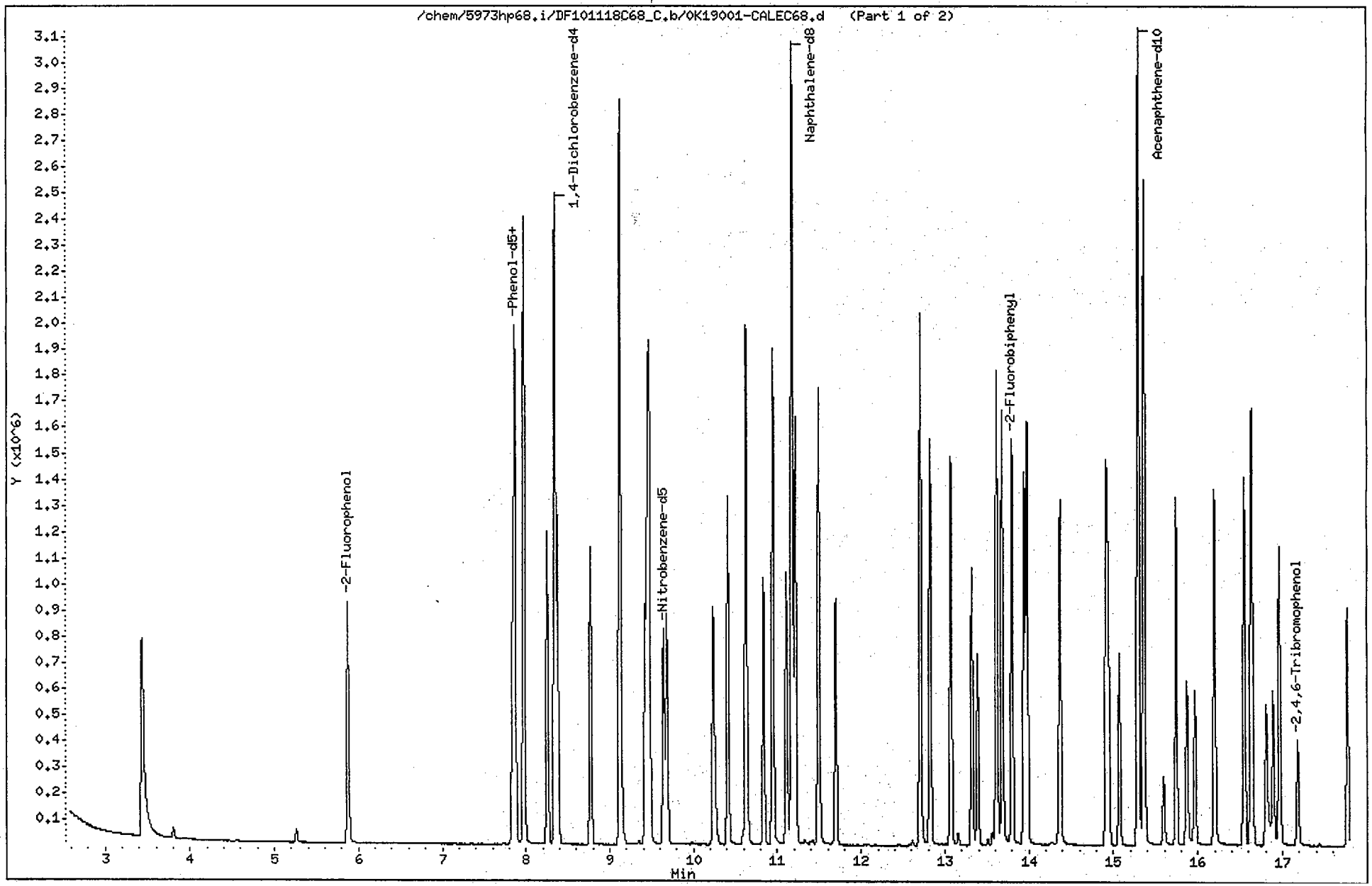
Benzo(b)fluoranthene CAS Number 205-99-2 Area = 205829 User selected hit



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Instrument ID: 5973hp68.i
Injection Date and Time: 19-NOV-2010 13:38
Retention Time: 27.36
Operator ID: SLP

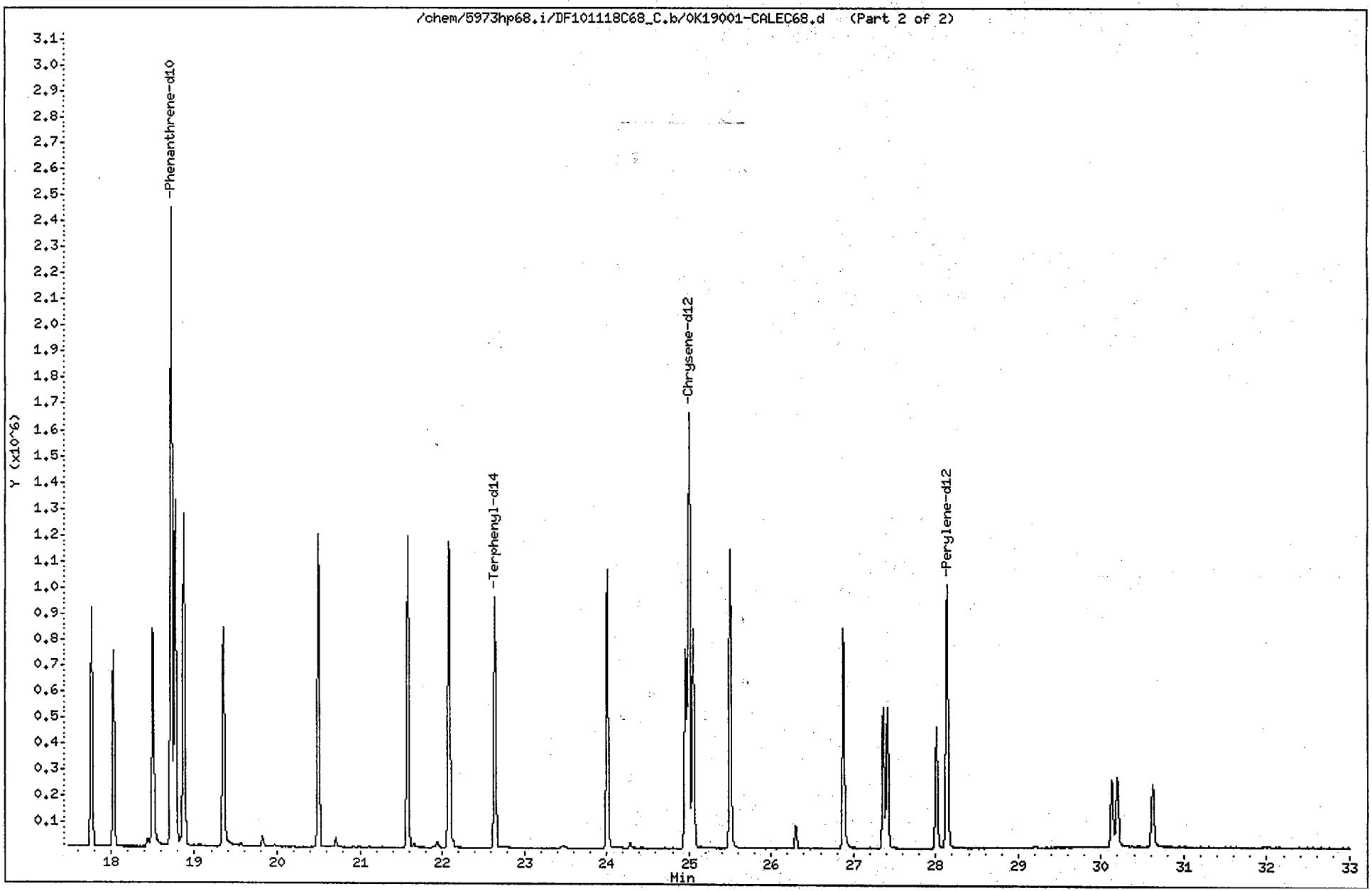
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Date : 19-NOV-2010 14:21
Client ID: SSTD10W7
Sample Info: 0K19001-CALE:SLP
Volume Injected (uL): 2.0
Column phase: RTX-5MS

Instrument: 5973hp68.i
Operator: SLP
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101118C68_C.b/0K19001-CALEC68.d
Date : 19-NOV-2010 14:21
Client ID: SSTD10W7
Sample Info: 0K19001-CALE:SLP
Volume Injected (uL): 2.0
Column phase: RTX-5MS

Instrument: 5973hp68.i
Operator: SLP
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101118C68_C.b/0K19001-CALEC68.d
Report Date: 29-Nov-2010 10:17

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Data file : /chem/5973hp68.i/DF101118C68_C.b/0K19001-CALEC68.d
Lab Smp Id: 0K19001-CALE Client Smp ID: SSTD10W7
Inj Date : 19-NOV-2010 14:21
Operator : SLP Inst ID: 5973hp68.i
Smp Info : 0K19001-CALE:SLP
Misc Info : SSTD010W7
Comment : 2008 MDLS SOIL/ 2007 WATER
Method : /chem/5973hp68.i/DF101118C68_C.b/8270CMASTERDODv5.m
Meth Date : 26-Nov-2010 15:19 spruskin Quant Type: ISTD
Cal Date : 19-NOV-2010 14:21 Cal File: 0K19001-CALEC68.d
Als bottle: 15 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: Short.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Vo	1000.00000	Volume of sample extracted (mL)
Vi	2.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	AMOUNTS ON-COL (NG)	SIMILARITY
* 1	1,4-Dichlorobenzene-d4	152	8.346	8.357	(1.000)	650677	40.0000		
* 2	Naphthalene-d8	136	11.177	11.193	(1.000)	2504412	40.0000		
* 3	Acenaphthene-d10	164	15.296	15.307	(1.000)	1314386	40.0000		
* 4	Phenanthrene-d10	188	18.731	18.747	(1.000)	1755177	40.0000		
* 5	Chrysene-d12	240	25.003	25.014	(1.000)	1057215	40.0000		
* 6	Perylene-d12	264	28.139	28.144	(1.000)	653289	40.0000		
$ 7	2-Fluorophenol	112	5.872	5.883	(0.704)	444293	20.0000	18	
$ 8	Phenol-d5	99	7.844	7.892	(0.940)	597406	20.0000	18	
$ 9	Nitrobenzene-d5	82	9.644	9.671	(0.863)	479252	20.0000	19	
$ 10	2-Fluorobiphenyl	172	13.800	13.827	(0.902)	826312	20.0000	19	
$ 11	2,4,6-Tribromophenol	330	17.182	17.209	(1.123)	63070	20.0000	18	
$ 12	Terphenyl-d14	244	22.642	22.663	(0.906)	482562	20.0000	19	
13	N-Nitrosodimethylamine	42	3.447	3.463	(0.413)	200335	20.0000	19	7364
14	Pyridine	79	3.431	3.431	(0.411)	585738	20.0000	19	8626
24	Phenol	94	7.870	7.929	(0.943)	1212826	40.0000	37	

4.26.10

Data File: /chem/5973hp68.i/DF101118C68_C.b/0K19001-CALEC68.d
Report Date: 29-Nov-2010 10:17

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	AMOUNTS ON-COL (NG)	SIMILARITY
26 Bis(2-chloroethyl)ether	93	7.972	7.988	(0.955)	483369	20.0000	18	
25 2-Chlorophenol	128	7.977	8.004	(0.956)	848485	40.0000	36	8729
27 1,3-Dichlorobenzene	146	8.255	8.271	(0.989)	468740	20.0000	19	
28 1,4-Dichlorobenzene	146	8.378	8.394	(1.004)	468878	20.0000	18	
29 1,2-Dichlorobenzene	146	8.773	8.784	(1.051)	445076	20.0000	18	
32 2-Methylphenol	108	9.126	9.158	(1.093)	793677	40.0000	36	
31 2,2'-oxybis(1-Chloropropane)	45	9.137	9.131	(1.095)	596544	20.0000	18	8039
39 3-Methylphenol	108	9.468	9.521	(1.134)	872529	40.0000	37	
40 4-Methylphenol	108	9.468	9.521	(1.134)	872529	40.0000	37	
38 N-Nitroso-di-N-propylamine	70	9.446	9.564	(1.132)	352505	20.0000	18	9155
34 Hexachloroethane	117	9.425	9.430	(1.129)	188885	20.0000	18	9217
41 Nitrobenzene	77	9.687	9.719	(0.867)	502738	20.0000	19	8443
43 Isophorone	82	10.237	10.344	(0.916)	913931	20.0000	19	8202
44 2-Nitrophenol	139	10.408	10.440	(0.931)	435323	40.0000	38	8501
45 2,4-Dimethylphenol	122	10.632	10.681	(0.951)	669405	40.0000	37	8806
46 Bis(2-chloroethoxy)methane	93	10.835	10.878	(0.969)	563182	20.0000	19	7446
48 2,4-Dichlorophenol	162	10.948	10.985	(0.979)	657142	40.0000	37	
49 1,2,4-Trichlorobenzene	180	11.113	11.124	(0.994)	347684	20.0000	19	
51 Naphthalene	128	11.220	11.241	(1.004)	1227838	20.0000	19	9049
53 4-Chloroaniline	127	11.492	11.525	(1.028)	910689	40.0000	35	7603
55 Hexachlorobutadiene	225	11.701	11.712	(1.047)	175086	20.0000	18	9432
60 4-Chloro-3-methylphenol	107	12.710	12.743	(1.137)	709913	40.0000	37	8957
61 2-Methylnaphthalene	141	12.828	12.844	(1.148)	647829	20.0000	18	(H)
62 1-Methylnaphthalene	142	13.068	13.090	(1.169)	731037	20.0000	18	
63 1,2,4,5-Tetrachlorobenzene	216	13.325	13.341	(0.871)	321702	20.0000	19	9281
64 Hexachlorocyclopentadiene	237	13.389	13.400	(0.875)	180459	20.0000	19	9198
66 2,4,6-Trichlorophenol	196	13.613	13.645	(0.890)	428356	40.0000	38	
67 2,4,5-Trichlorophenol	196	13.683	13.720	(0.895)	453705	40.0000	38	
69 1,1'-Biphenyl	154	13.982	14.003	(0.914)	880042	20.0000	19	9377
68 2-Chloronaphthalene	162	13.945	13.971	(0.912)	721006	20.0000	19	
70 2-Nitroaniline	65	14.372	14.420	(0.940)	417411	40.0000	37	8700
73 Dimethylphthalate	163	14.944	14.986	(0.977)	733849	20.0000	18	8994
75 2,6-Dinitrotoluene	165	15.072	15.109	(0.985)	155142	20.0000	19	9449
72 Acenaphthylene	152	14.917	14.938	(0.975)	1051677	20.0000	19	9452
77 3-Nitroaniline	138	15.366	15.424	(1.005)	308172	40.0000	36	8262
76 Acenaphthene	154	15.366	15.387	(1.005)	623961	20.0000	19	9234
78 2,4-Dinitrophenol	184	15.595	15.649	(1.020)	56798	40.0000	43	
81 4-Nitrophenol	139	15.873	15.937	(1.038)	193356	40.0000	38	8683
83 2,4-Dinitrotoluene	165	15.964	16.017	(1.044)	183077	20.0000	18	9940
85 2,3,4,6-Tetrachlorophenol	232	16.194	16.231	(1.059)	275865	40.0000	37	9441
79 Dibenzofuran	168	15.745	15.772	(1.029)	963189	20.0000	19	8853
87 Diethylphthalate	149	16.626	16.669	(1.087)	653432	20.0000	18	9080
88 4-Chlorophenyl-phenylether	204	16.642	16.664	(1.088)	348432	20.0000	18	8757
86 Fluorene	166	16.552	16.578	(1.082)	739103	20.0000	18	7965
91 4-Nitroaniline	138	16.813	16.920	(1.099)	209022	40.0000	35	9004
92 4,6-Dinitro-2-methylphenol	198	16.893	16.963	(0.902)	133635	40.0000	41	9174
93 N-Nitrosodiphenylamine	169	16.968	17.006	(0.906)	507388	20.0000	19	9164

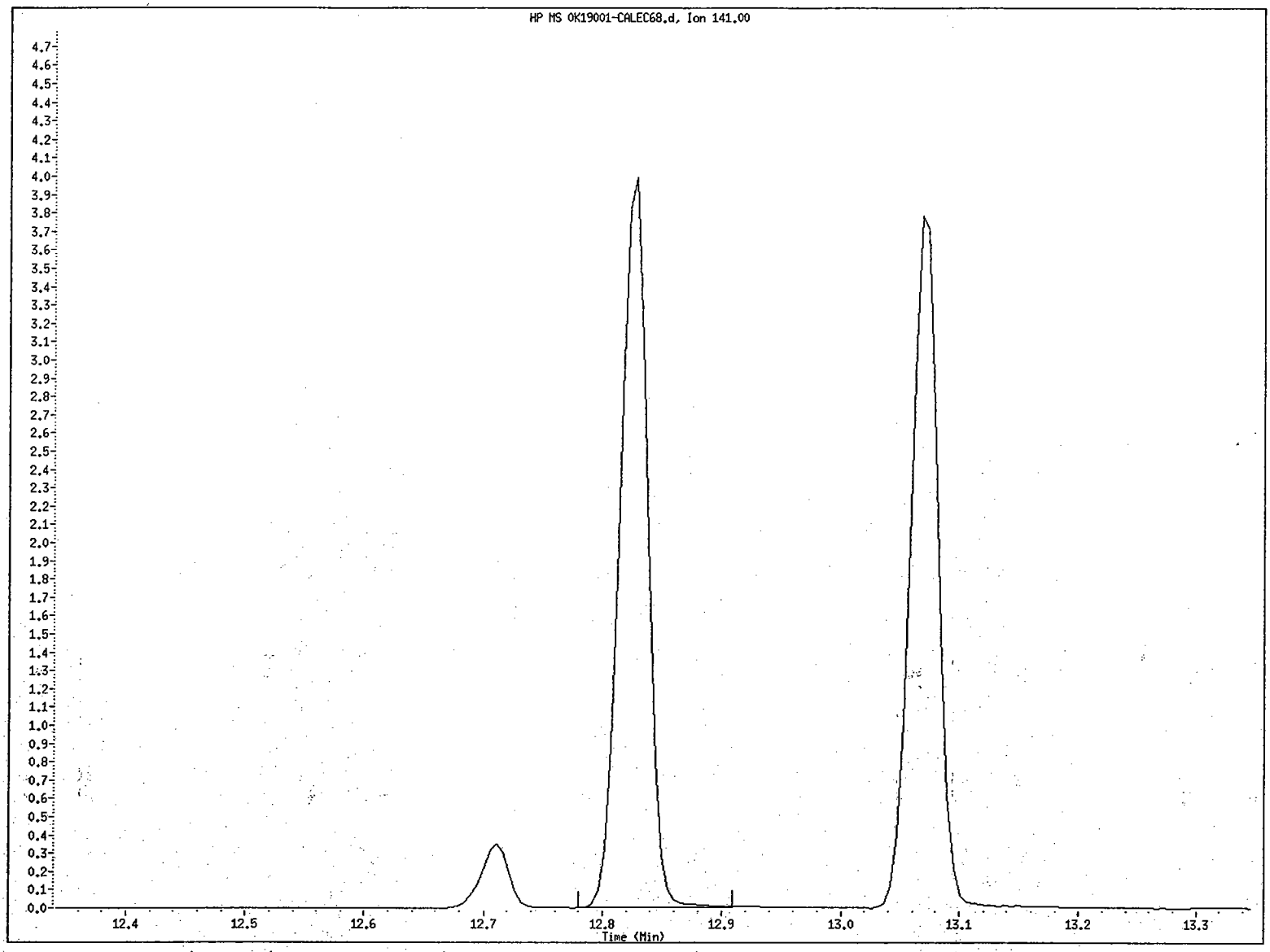
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Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	ON-COL (NG)	SIMILARITY	
98 4-Bromophenyl-phenylether	248	17.770	17.786	(0.949)	173384	20.0000	19	8972	
104 Hexachlorobenzene	284	18.037	18.058	(0.963)	157692	20.0000	19	9271	
108 Pentachlorophenol	266	18.501	18.534	(0.988)	159445	40.0000	39	8699	
111 Phenanthrene	178	18.774	18.806	(1.002)	861021	20.0000	18		(H)
112 Anthracene	178	18.875	18.908	(1.008)	864978	20.0000	19		
114 Carbazole	167	19.356	19.378	(1.033)	674594	20.0000	18	9671	
116 Di-n-butylphthalate	149	20.499	20.516	(1.094)	1030542	20.0000	19	9434	
121 Fluoranthene	202	21.584	21.611	(1.152)	842012	20.0000	19	9450	
123 Pyrene	202	22.086	22.113	(0.883)	865152	20.0000	19	9308	
130 Butylbenzylphthalate	149	24.009	24.025	(0.960)	393792	20.0000	19	9129	
135 bis(2-ethylhexyl)Phthalate	149	25.500	25.511	(1.020)	515961	20.0000	19	8866	
133 Benzo(a)anthracene	228	24.960	24.982	(0.998)	522016	20.0000	19		
134 Chrysene	228	25.056	25.078	(1.002)	497718	20.0000	19		
136 Di-n-octylphthalate	149	26.878	26.889	(0.955)	697730	20.0000	19		
137 Benzo(b)fluoranthene	252	27.364	27.386	(0.972)	355055	20.0000	19		(H)
138 Benzo(k)fluoranthene	252	27.418	27.439	(0.974)	355381	20.0000	19		
140 Benzo(a)pyrene	252	28.011	28.032	(0.995)	298390	20.0000	19		
142 Indeno(1,2,3-cd)pyrene	276	30.132	30.153	(1.071)	172073	20.0000	20	8818	
143 Dibenzo(a,h)anthracene	278	30.196	30.212	(1.073)	179092	20.0000	20	8213	
144 Benzo(g,h,i)perylene	276	30.623	30.650	(1.088)	180375	20.0000	20	9604	

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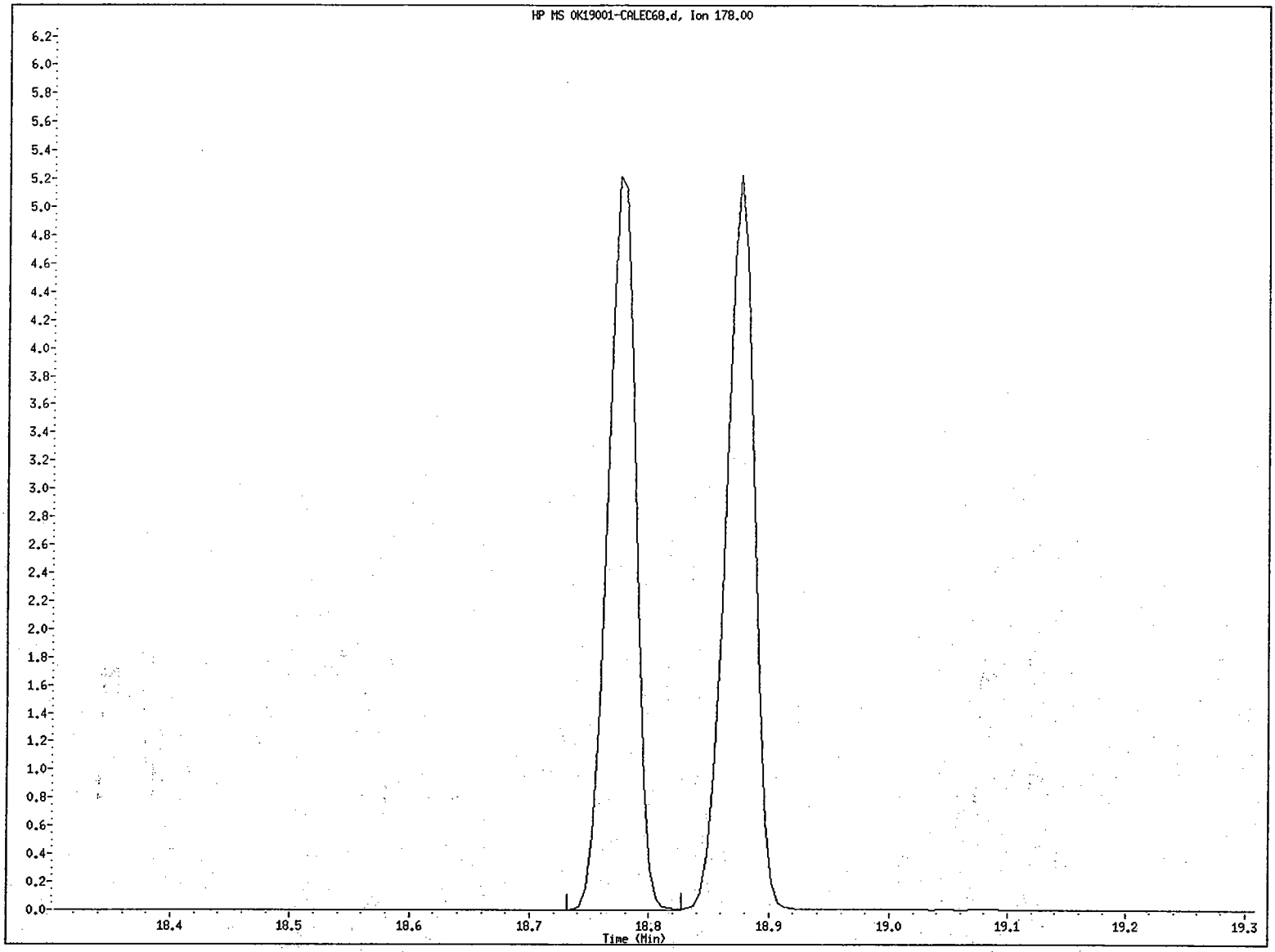
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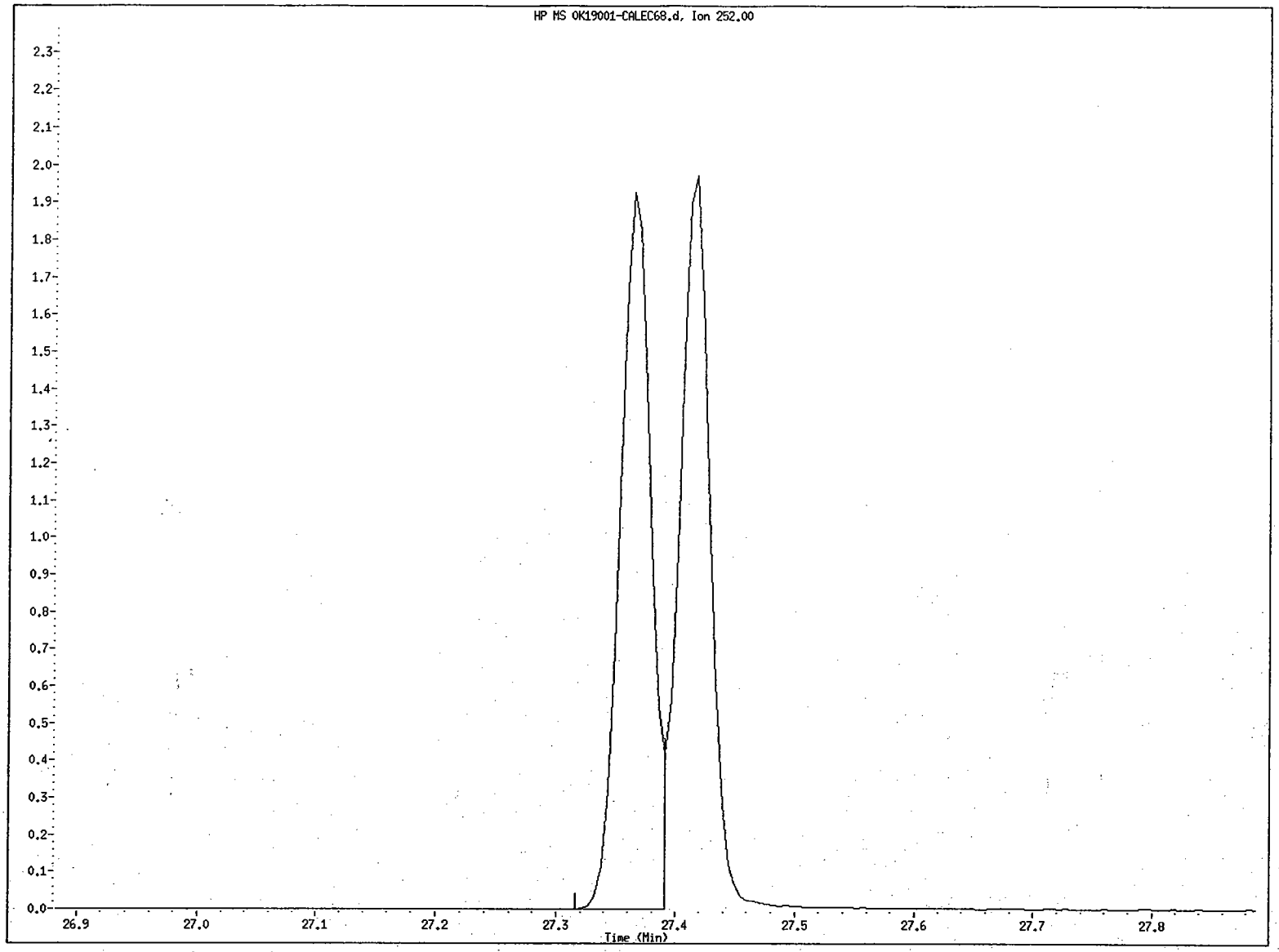
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Retention Time: 12.83
Operator ID: SLP

Phenanthrene CAS Number 85-01-8 Area = 861021 User selected hit



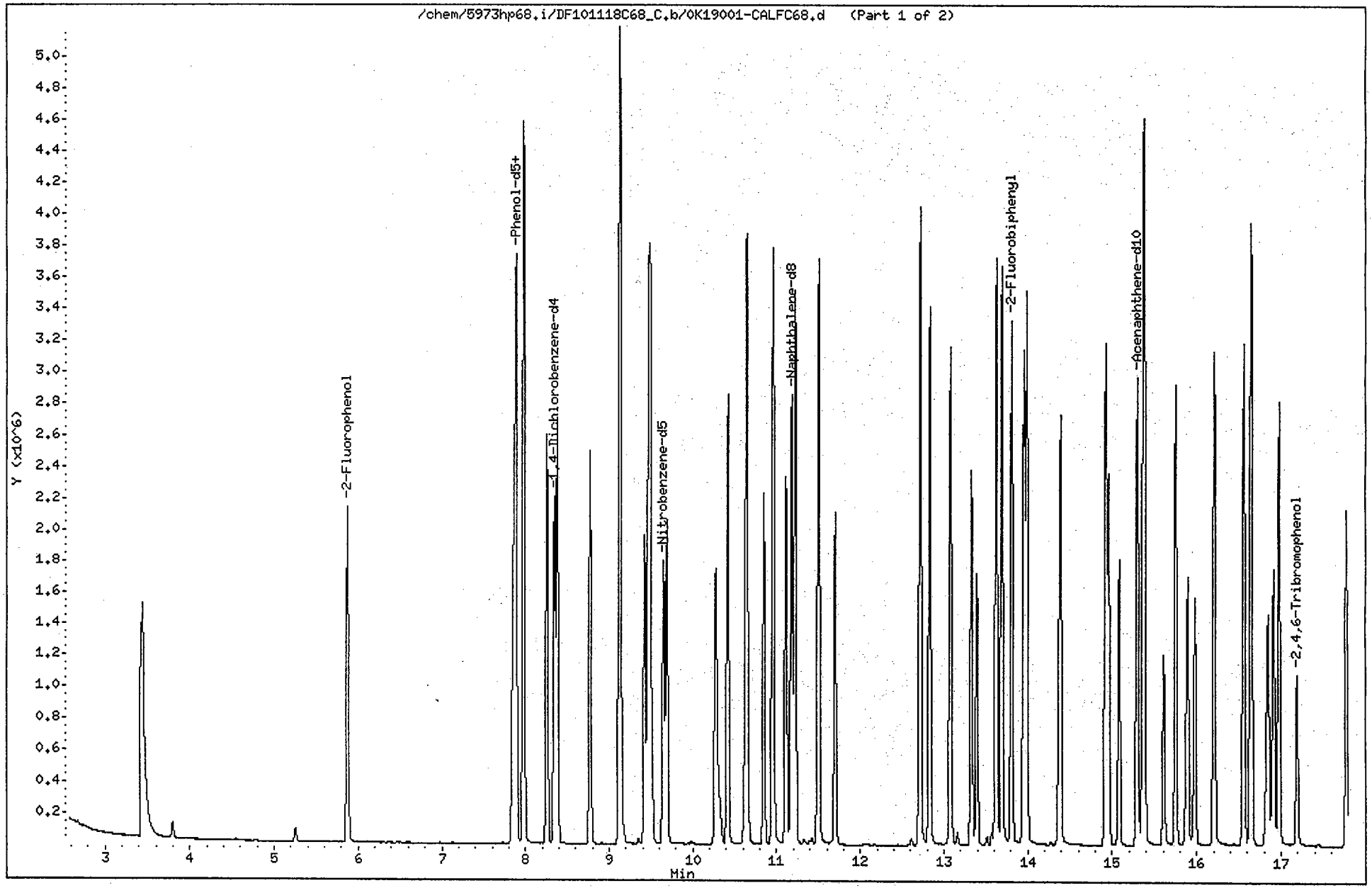
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Retention Time: 18.77
Operator ID: SLP

Benzo(b)fluoranthene CAS Number 205-99-2 Area = 355055 User selected hit



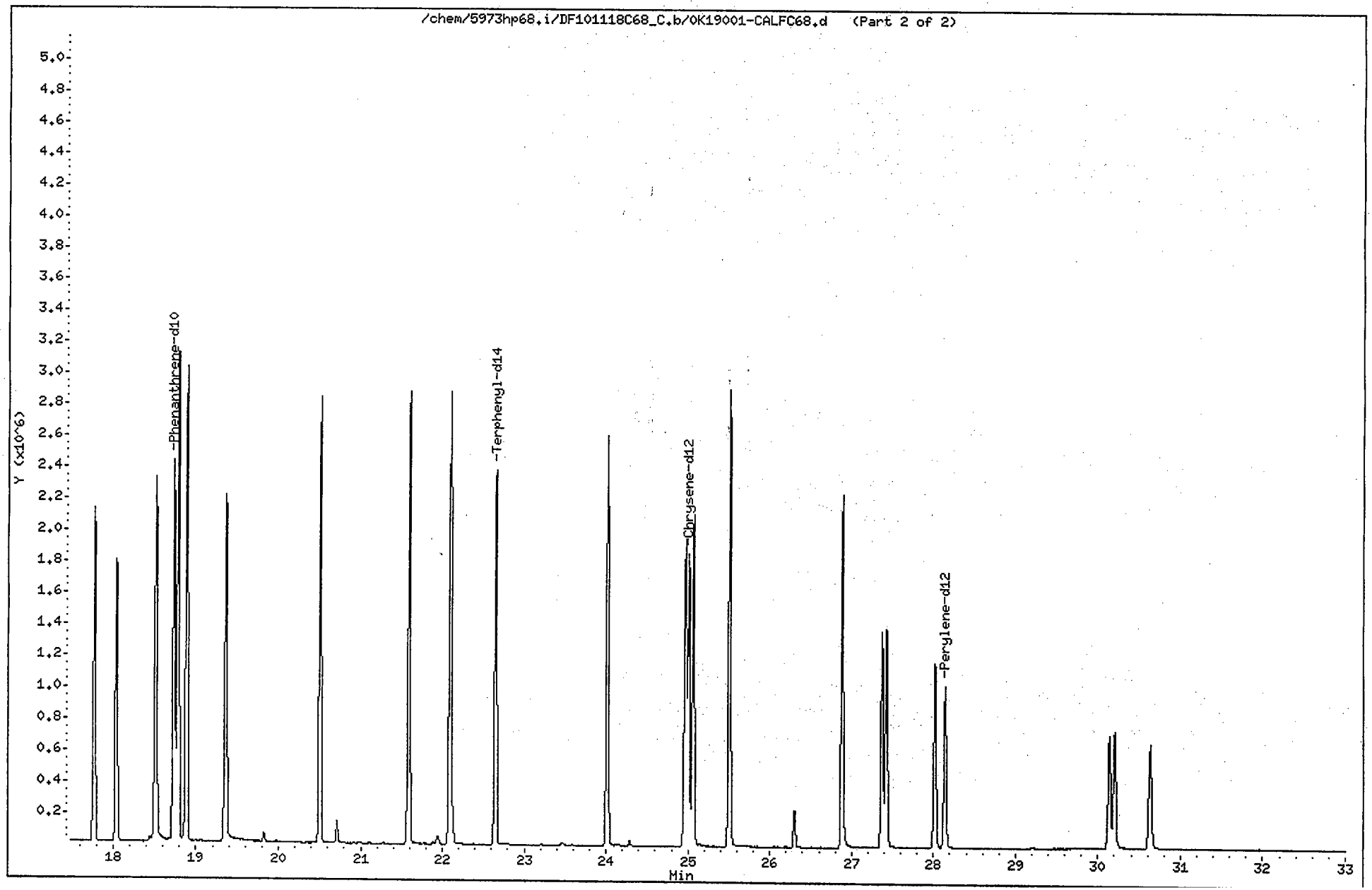
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Injection Date and Time: 19-NOV-2010 14:21
Retention Time: 27.36
Operator ID: SLP

Data File: /chem/5973hp68.i/DF101118C68_C.b/0K19001-CALFC68.d
Date : 19-NOV-2010 15:03
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Instrument: 5973hp68.i
Sample Info: 0K19001-CALF:SLP
Volume Injected (uL): 2.0
Operator: SLP
Column phase: RTX-5MS
Column diameter: 0.32



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Date : 19-NOV-2010 15:03
Client ID: SSTD025W7
Sample Info: 0K19001-CALF:SLP
Volume Injected (uL): 2.0
Column phase: RTX-5MS

Instrument: 5973hp68.i
Operator: SLP
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101118C68_C.b/0K19001-CALFC68.d
Report Date: 29-Nov-2010 10:17

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Semivolatile Report SW-846 Method 8270C Appendix IX

Data file : /chem/5973hp68.i/DF101118C68_C.b/0K19001-CALFC68.d
Lab Smp Id: 0K19001-CALF Client Smp ID: SSTD025W7
Inj Date : 19-NOV-2010 15:03
Operator : SLP Inst ID: 5973hp68.i
Smp Info : 0K19001-CALF:SLP
Misc Info : SSTD025W7
Comment : 2008 MDLS SOIL/ 2007 WATER
Method : /chem/5973hp68.i/DF101118C68_C.b/8270CMASTERDODv5.m
Meth Date : 26-Nov-2010 15:19 spruskin Quant Type: ISTD
Cal Date : 19-NOV-2010 15:03 Cal File: 0K19001-CALFC68.d
Als bottle: 13 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: Short.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Vo	1000.00000	Volume of sample extracted (mL)
Vi	2.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	AMOUNTS ON-COL (NG)	SIMILARITY
* 1	1,4-Dichlorobenzene-d4	152	8.346	8.357	(1.000)	581870	40.0000		
* 2	Naphthalene-d8	136	11.183	11.193	(1.000)	2350915	40.0000		
* 3	Acenaphthene-d10	164	15.296	15.307	(1.000)	1297393	40.0000		
* 4	Phenanthrene-d10	188	18.731	18.747	(1.000)	1892650	40.0000		
* 5	Chrysene-d12	240	25.008	25.014	(1.000)	1174630	40.0000		
* 6	Perylene-d12	264	28.144	28.144	(1.000)	684787	40.0000		
$ 7	2-Fluorophenol	112	5.872	5.883	(0.704)	1076373	50.0000	50	
$ 8	Phenol-d5	99	7.860	7.892	(0.942)	1398858	50.0000	49	
$ 9	Nitrobenzene-d5	82	9.655	9.671	(0.863)	1139064	50.0000	48	
$ 10	2-Fluorobiphenyl	172	13.811	13.827	(0.903)	1876793	50.0000	46	
$ 11	2,4,6-Tribromophenol	330	17.187	17.209	(1.124)	176737	50.0000	52	
$ 12	Terphenyl-d14	244	22.652	22.663	(0.906)	1311379	50.0000	47	
13	N-Nitrosodimethylamine	42	3.452	3.463	(0.414)	460408	50.0000	48	7342
14	Pyridine	79	3.420	3.431	(0.410)	1432725	50.0000	52	8657
24	Phenol	94	7.892	7.929	(0.946)	2706675	100.000	94	

Data File: /chem/5973hp68.i/DF101118C68_C.b/0K19001-CALFC68.d
Report Date: 29-Nov-2010 10:17

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	AMOUNTS ON-COL (NG)	SIMILARITY
26 Bis(2-chloroethyl)ether	93	7.977	7.988	(0.956)	1011910	50.0000	45	
25 2-Chlorophenol	128	7.988	8.004	(0.957)	1810167	100.000	91	8716
27 1,3-Dichlorobenzene	146	8.260	8.271	(0.990)	1066381	50.0000	48	
28 1,4-Dichlorobenzene	146	8.383	8.394	(1.004)	1065327	50.0000	48	
29 1,2-Dichlorobenzene	146	8.773	8.784	(1.051)	1018899	50.0000	48	
32 2-Methylphenol	108	9.137	9.158	(1.095)	1664622	100.000	90	
31 2,2'-oxybis(1-Chloropropane)	45	9.142	9.131	(1.095)	1146217	50.0000	42	8115
39 3-Methylphenol	108	9.489	9.521	(1.137)	1918354	100.000	94	
40 4-Methylphenol	108	9.489	9.521	(1.137)	1918354	100.000	94	
38 N-Nitroso-di-N-propylamine	70	9.468	9.564	(1.134)	783131	50.0000	47	8977(M)
34 Hexachloroethane	117	9.425	9.430	(1.129)	442084	50.0000	49	9143
41 Nitrobenzene	77	9.692	9.719	(0.867)	1178941	50.0000	48	8456
43 Isophorone	82	10.274	10.344	(0.919)	2176384	50.0000	48	7942
44 2-Nitrophenol	139	10.419	10.440	(0.932)	1049845	100.000	98	8469
45 2,4-Dimethylphenol	122	10.648	10.681	(0.952)	1535106	100.000	93	8810
46 Bis(2-chloroethoxy)methane	93	10.851	10.878	(0.970)	1287825	50.0000	47	8699
48 2,4-Dichlorophenol	162	10.958	10.985	(0.980)	1493385	100.000	93	
49 1,2,4-Trichlorobenzene	180	11.113	11.124	(0.994)	811031	50.0000	47	
51 Naphthalene	128	11.225	11.241	(1.004)	2767967	50.0000	46	9196
53 4-Chloroaniline	127	11.503	11.525	(1.029)	2133315	100.000	92	7581
55 Hexachlorobutadiene	225	11.701	11.712	(1.046)	404337	50.0000	47	9422
60 4-Chloro-3-methylphenol	107	12.721	12.743	(1.138)	1619579	100.000	93	8908
61 2-Methylnaphthalene	141	12.833	12.844	(1.148)	1477550	50.0000	46	
62 1-Methylnaphthalene	142	13.079	13.090	(1.170)	1666156	50.0000	46	
63 1,2,4,5-Tetrachlorobenzene	216	13.330	13.341	(0.871)	743567	50.0000	46	9302
64 Hexachlorocyclopentadiene	237	13.394	13.400	(0.876)	450550	50.0000	49	9403
66 2,4,6-Trichlorophenol	196	13.624	13.645	(0.891)	1004593	100.000	93	
67 2,4,5-Trichlorophenol	196	13.693	13.720	(0.895)	1081774	100.000	95	
69 1,1'-Biphenyl	154	13.987	14.003	(0.914)	1985708	50.0000	45	9420
68 2-Chloronaphthalene	162	13.955	13.971	(0.912)	1668554	50.0000	46	
70 2-Nitroaniline	65	14.393	14.420	(0.941)	1043301	100.000	96	8681
73 Dimethylphthalate	163	14.960	14.986	(0.978)	1802765	50.0000	47	8964
75 2,6-Dinitrotoluene	165	15.082	15.109	(0.986)	428025	50.0000	52	9459
72 Acenaphthylene	152	14.922	14.938	(0.976)	2468883	50.0000	46	9469
77 3-Nitroaniline	138	15.387	15.424	(1.006)	801563	100.000	96	8426
76 Acenaphthene	154	15.371	15.387	(1.005)	1380694	50.0000	44	9467
78 2,4-Dinitrophenol	184	15.611	15.649	(1.021)	272119	100.000	150	
81 4-Nitrophenol	139	15.900	15.937	(1.039)	631493	100.000	120	8274
83 2,4-Dinitrotoluene	165	15.980	16.017	(1.045)	535474	50.0000	53	9740
85 2,3,4,6-Tetrachlorophenol	232	16.210	16.231	(1.060)	706228	100.000	98	9467
79 Dibenzofuran	168	15.756	15.772	(1.030)	2269917	50.0000	46	8859
87 Diethylphthalate	149	16.642	16.669	(1.088)	1561678	50.0000	45	8369
88 4-Chlorophenyl-phenylether	204	16.653	16.664	(1.089)	801713	50.0000	45	9477
86 Fluorene	166	16.562	16.578	(1.083)	1799088	50.0000	47	7908
91 4-Nitroaniline	138	16.851	16.920	(1.102)	646385	100.000	110	8990
92 4,6-Dinitro-2-methylphenol	198	16.920	16.963	(0.903)	495541	100.000	120	9148
93 N-Nitrosodiphenylamine	169	16.979	17.006	(0.906)	1279032	50.0000	46	8952

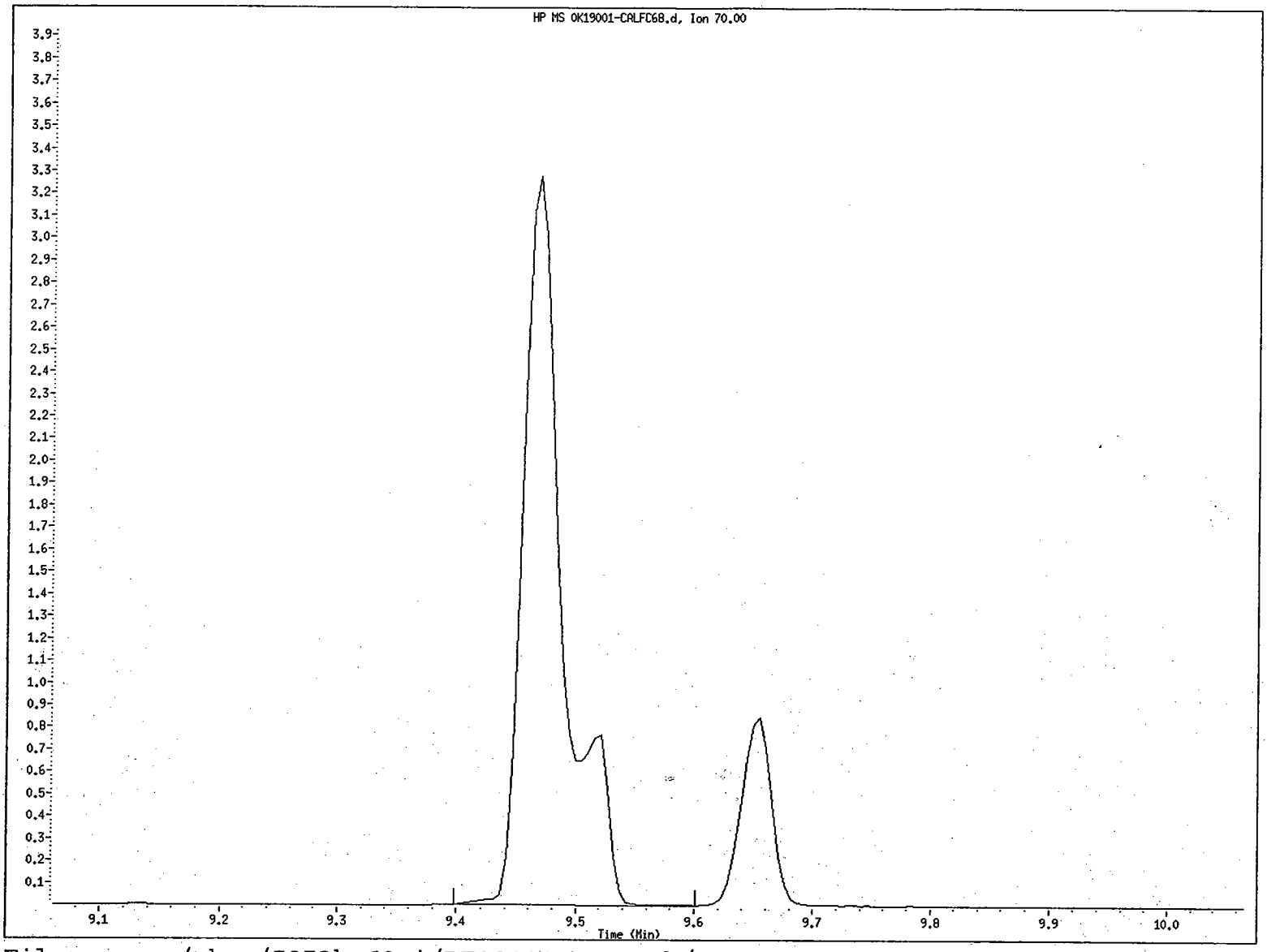
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Report Date: 29-Nov-2010 10:17

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	AMOUNTS ON-COL (NG)	SIMILARITY
98	4-Bromophenyl-phenylether	248	17.775	17.786	(0.949)	446490	50.0000	47	8856
104	Hexachlorobenzene	284	18.047	18.058	(0.963)	410581	50.0000	47	9334
108	Pentachlorophenol	266	18.518	18.534	(0.989)	495986	100.000	110	8542
111	Phenanthrene	178	18.790	18.806	(1.003)	2224278	50.0000	46	
112	Anthracene	178	18.886	18.908	(1.008)	2232085	50.0000	46	
114	Carbazole	167	19.362	19.378	(1.034)	1873208	50.0000	48	9786
116	Di-n-butylphthalate	149	20.505	20.516	(1.095)	2639713	50.0000	46	9420
121	Fluoranthene	202	21.595	21.611	(1.153)	2230562	50.0000	48	9491
123	Pyrene	202	22.097	22.113	(0.884)	2300746	50.0000	47	9369
130	Butylbenzylphthalate	149	24.015	24.025	(0.960)	1065941	50.0000	48	9135
135	bis(2-ethylhexyl)Phthalate	149	25.505	25.511	(1.020)	1376235	50.0000	48	8842
133	Benzo(a)anthracene	228	24.966	24.982	(0.998)	1445018	50.0000	48	
134	Chrysene	228	25.067	25.078	(1.002)	1348799	50.0000	47	
136	Di-n-octylphthalate	149	26.883	26.889	(0.955)	1936999	50.0000	50	
137	Benzo(b)fluoranthene	252	27.375	27.386	(0.973)	956552	50.0000	49	
138	Benzo(k)fluoranthene	252	27.428	27.439	(0.975)	989000	50.0000	50	
140	Benzo(a)pyrene	252	28.016	28.032	(0.995)	812962	50.0000	50	
142	Indeno(1,2,3-cd)pyrene	276	30.142	30.153	(1.071)	506759	50.0000	53	8883
143	Dibenzo(a,h)anthracene	278	30.201	30.212	(1.073)	520738	50.0000	53	8159
144	Benzo(g,h,i)perylene	276	30.634	30.650	(1.088)	518548	50.0000	52	9692

QC Flag Legend

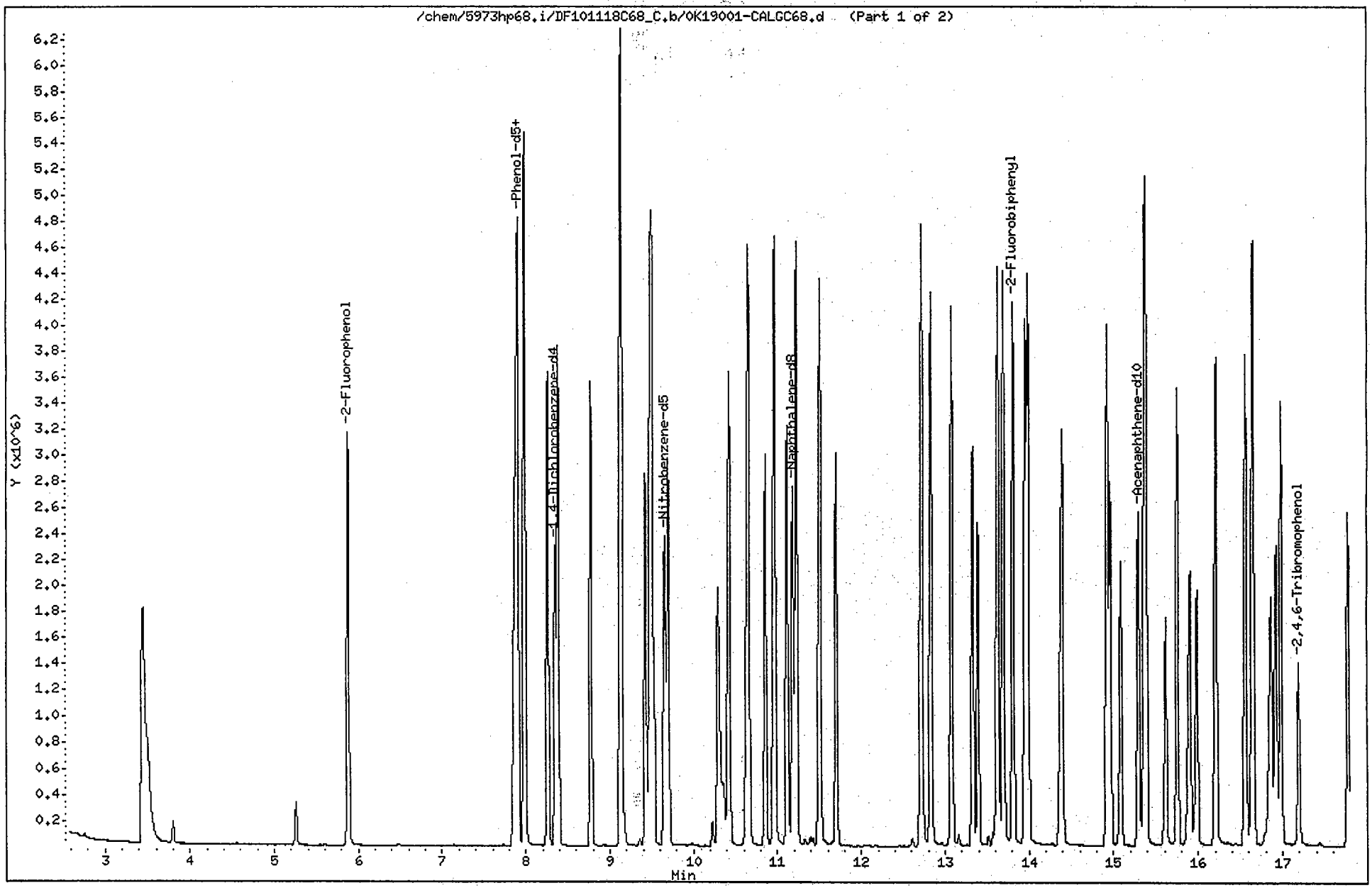
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N-Nitroso-di-N-propylamine CAS Number 621-64-7 Area = 783131 Manually integrat



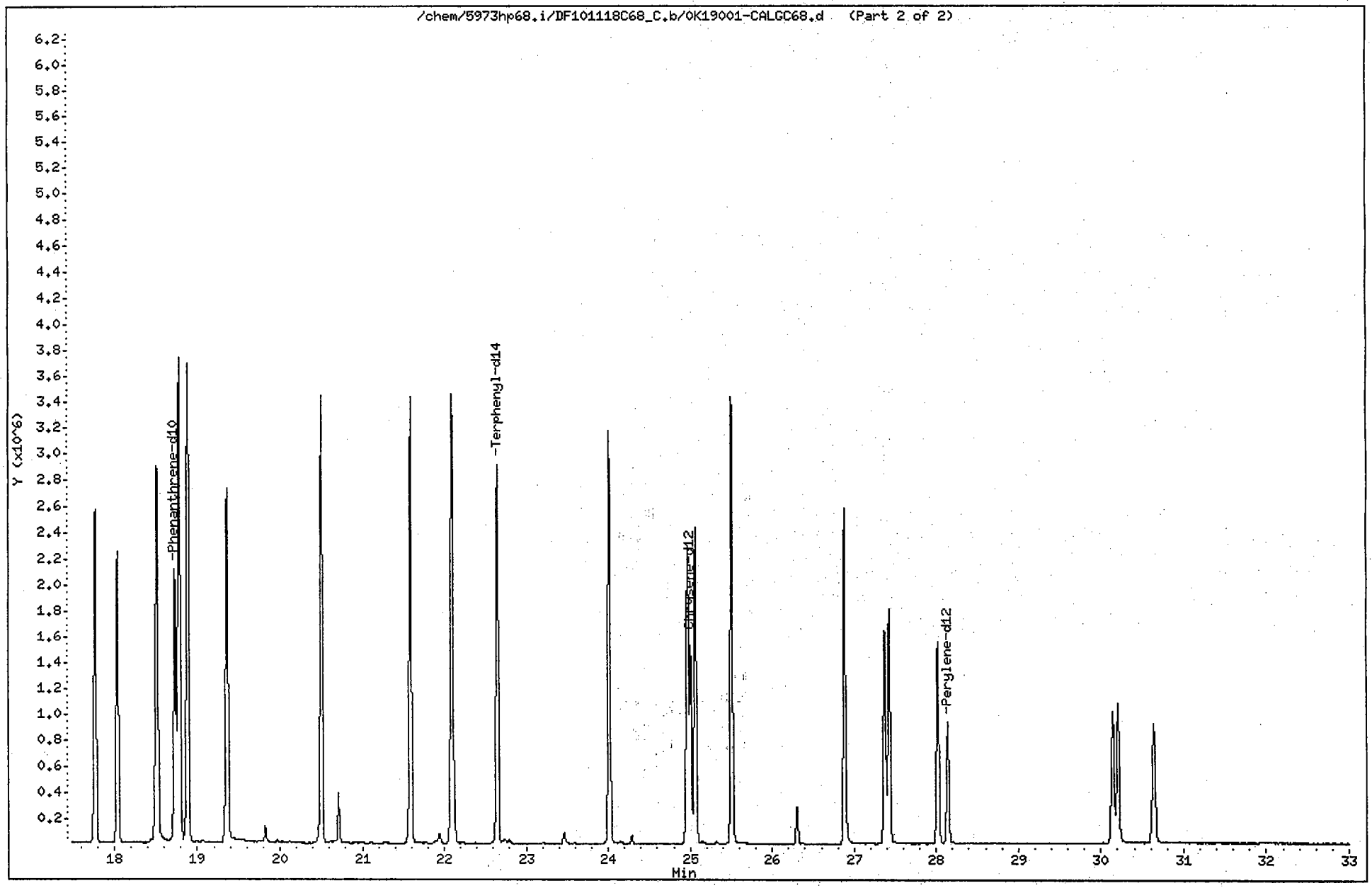
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Instrument ID: 5973hp68.i
Injection Date and Time: 19-NOV-2010 15:03
Retention Time: 9.47
Operator ID: SLP

Data File: /chem/5973hp68.i/DF101118C68_C.b/0K19001-CALGC68.d
Date : 19-NOV-2010 15:46
Client ID: SSTD040W7
Instrument: 5973hp68.i
Sample Info: 0K19001-CALG:SLP
Volume Injected (uL): 2.0
Operator: SLP
Column phase: RTX-5MS
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101118C68_C.b/0K19001-CALGC68.d
Date : 19-NOV-2010 15:46
Client ID: SSTD040W7
Sample Info: 0K19001-CALC:SLP
Volume Injected (uL): 2.0
Column phase: RTX-5MS

Instrument: 5973hp68.i
Operator: SLP
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101118C68_C.b/0K19001-CALGC68.d
Report Date: 29-Nov-2010 10:17

CompuChem

Semivolatile Report SW-846 Method 8270C Appendix IX

Data file : /chem/5973hp68.i/DF101118C68_C.b/0K19001-CALGC68.d
Lab Smp Id: 0K19001-CALG Client Smp ID: SSTD040W7
Inj Date : 19-NOV-2010 15:46
Operator : SLP Inst ID: 5973hp68.i
Smp Info : 0K19001-CALG:SLP
Misc Info : SSTD040W7
Comment : 2008 MDLS SOIL/ 2007 WATER
Method : /chem/5973hp68.i/DF101118C68_C.b/8270CMASTERDODv5.m
Meth Date : 26-Nov-2010 15:19 spruskin Quant Type: ISTD
Cal Date : 19-NOV-2010 15:46 Cal File: 0K19001-CALGC68.d
Als bottle: 14 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: Short.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Vo	1000.00000	Volume of sample extracted (mL)
Vi	2.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	AMOUNTS ON-COL (NG)	SIMILARITY
*	1 1,4-Dichlorobenzene-d4	152	8.351	8.357	(1.000)	619196	40.0000		
*	2 Naphthalene-d8	136	11.188	11.193	(1.000)	2350975	40.0000		
*	3 Acenaphthene-d10	164	15.302	15.307	(1.000)	1147177	40.0000		
*	4 Phenanthrene-d10	188	18.737	18.747	(1.000)	1686184	40.0000		
*	5 Chrysene-d12	240	25.008	25.014	(1.000)	921384	40.0000		
*	6 Perylene-d12	264	28.144	28.144	(1.000)	598077	40.0000		
$	7 2-Fluorophenol	112	5.878	5.883	(0.704)	1630780	80.0000	73	
$	8 Phenol-d5	99	7.870	7.892	(0.942)	2081788	80.0000	71	
$	9 Nitrobenzene-d5	82	9.660	9.671	(0.863)	1707114	80.0000	74	
$	10 2-Fluorobiphenyl	172	13.816	13.827	(0.903)	2542146	80.0000	72	
$	11 2,4,6-Tribromophenol	330	17.193	17.209	(1.124)	242960	80.0000	80	
$	12 Terphenyl-d14	244	22.652	22.663	(0.906)	1706711	80.0000	79	
	13 N-Nitrosodimethylamine	42	3.458	3.463	(0.414)	710370	80.0000	72	7326
	14 Pyridine	79	3.431	3.431	(0.411)	2234812	80.0000	77	8662(M)
	24 Phenol	94	7.908	7.929	(0.947)	3870956	160.000	130	

Data File: /chem/5973hp68.i/DF101118C68_C.b/0K19001-CALGC68.d
Report Date: 29-Nov-2010 10:17

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	AMOUNTS ON-COL (NG)	SIMILARITY
26 Bis(2-chloroethyl)ether	93	7.977	7.988	(0.955)	1437757	80.0000	64	
25 2-Chlorophenol	128	7.993	8.004	(0.957)	2559229	160.000	130	8753
27 1,3-Dichlorobenzene	146	8.266	8.271	(0.990)	1586835	80.0000	70	
28 1,4-Dichlorobenzene	146	8.389	8.394	(1.004)	1580221	80.0000	70	
29 1,2-Dichlorobenzene	146	8.779	8.784	(1.051)	1510431	80.0000	70	
32 2-Methylphenol	108	9.147	9.158	(1.095)	2293673	160.000	120	
31 2,2'-oxybis(1-Chloropropane)	45	9.131	9.131	(1.093)	1505179	80.0000	57	8175
39 3-Methylphenol	108	9.505	9.521	(1.138)	2735453	160.000	130	
40 4-Methylphenol	108	9.505	9.521	(1.138)	2735453	160.000	130	
38 N-Nitroso-di-N-propylamine	70	9.484	9.564	(1.136)	1142449	80.0000	68	9080(M)
34 Hexachloroethane	117	9.425	9.430	(1.129)	654937	80.0000	70	9190
41 Nitrobenzene	77	9.703	9.719	(0.867)	1736536	80.0000	73	8405
43 Isophorone	82	10.296	10.344	(0.920)	2907133	80.0000	68	8161(MH)
44 2-Nitrophenol	139	10.429	10.440	(0.932)	1542292	160.000	150	8425
45 2,4-Dimethylphenol	122	10.659	10.681	(0.953)	2066813	160.000	130	8784
46 Bis(2-chloroethoxy)methane	93	10.857	10.878	(0.970)	1878679	80.0000	71	8409
48 2,4-Dichlorophenol	162	10.969	10.985	(0.980)	2151568	160.000	140	
49 1,2,4-Trichlorobenzene	180	11.119	11.124	(0.994)	1193736	80.0000	72	
51 Naphthalene	128	11.231	11.241	(1.004)	3933305	80.0000	69	9288
53 4-Chloroaniline	127	11.509	11.525	(1.029)	2724953	160.000	120	7561
55 Hexachlorobutadiene	225	11.706	11.712	(1.046)	598201	80.0000	72	9371
60 4-Chloro-3-methylphenol	107	12.727	12.743	(1.138)	2174165	160.000	130	8093
61 2-Methylnaphthalene	141	12.839	12.844	(1.148)	2049194	80.0000	68	
62 1-Methylnaphthalene	142	13.079	13.090	(1.169)	2296503	80.0000	68	
63 1,2,4,5-Tetrachlorobenzene	216	13.336	13.341	(0.872)	1042222	80.0000	75	9425
64 Hexachlorocyclopentadiene	237	13.394	13.400	(0.875)	685657	80.0000	84	9443
66 2,4,6-Trichlorophenol	196	13.629	13.645	(0.891)	1373587	160.000	150	
67 2,4,5-Trichlorophenol	196	13.699	13.720	(0.895)	1433548	160.000	150	
69 1,1'-Biphenyl	154	13.993	14.003	(0.914)	2645586	80.0000	71	9508
68 2-Chloronaphthalene	162	13.961	13.971	(0.912)	2214717	80.0000	72	
70 2-Nitroaniline	65	14.399	14.420	(0.941)	1384553	160.000	150	8678
73 Dimethylphthalate	163	14.965	14.986	(0.978)	2364005	80.0000	72	8973
75 2,6-Dinitrotoluene	165	15.088	15.109	(0.986)	573279	80.0000	79	9447
72 Acenaphthylene	152	14.928	14.938	(0.976)	3198780	80.0000	70	9463
77 3-Nitroaniline	138	15.398	15.424	(1.006)	1082199	160.000	150	8269
76 Acenaphthene	154	15.376	15.387	(1.005)	1806122	80.0000	68	9511
78 2,4-Dinitrophenol	184	15.622	15.649	(1.021)	455537	160.000	240	
81 4-Nitrophenol	139	15.911	15.937	(1.040)	900185	160.000	180	8677
83 2,4-Dinitrotoluene	165	15.991	16.017	(1.045)	735571	80.0000	82	9021
85 2,3,4,6-Tetrachlorophenol	232	16.215	16.231	(1.060)	957763	160.000	150	9502
79 Dibenzofuran	168	15.761	15.772	(1.030)	2981989	80.0000	71	8856
87 Diethylphthalate	149	16.648	16.669	(1.088)	2023734	80.0000	69	8122
88 4-Chlorophenyl-phenylether	204	16.653	16.664	(1.088)	1039160	80.0000	69	9425
86 Fluorene	166	16.562	16.578	(1.082)	2344473	80.0000	71	7911
91 4-Nitroaniline	138	16.872	16.920	(1.103)	900234	160.000	160	8996
92 4,6-Dinitro-2-methylphenol	198	16.931	16.963	(0.904)	741307	160.000	190	9068
93 N-Nitrosodiphenylamine	169	16.984	17.006	(0.906)	1696500	80.0000	71	8716

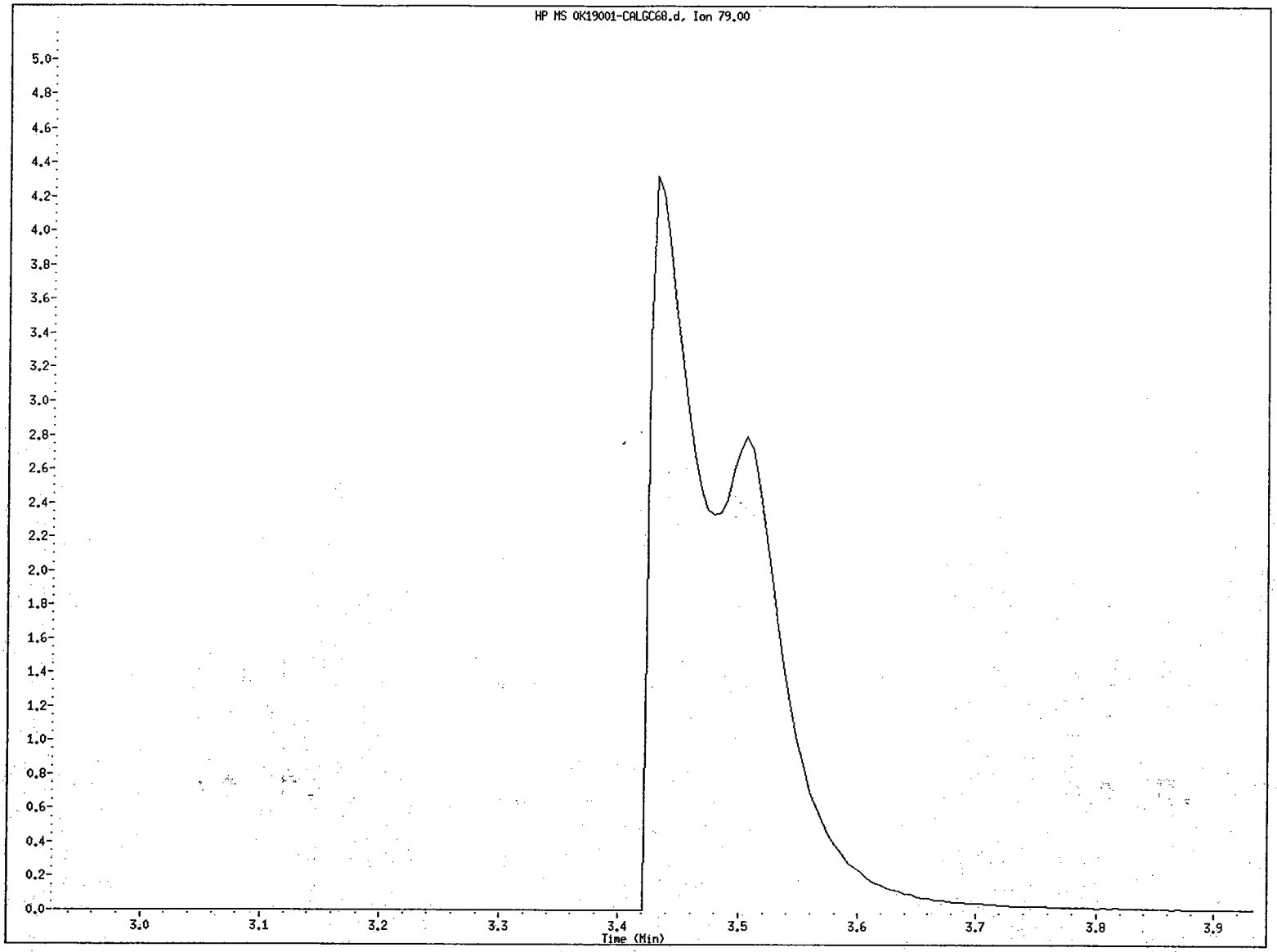
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Report Date: 29-Nov-2010 10:17

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	AMOUNTS ON-COL (NG)	SIMILARITY
98	4-Bromophenyl-phenylether	248	17.780	17.786	(0.949)	596961	80.0000	72	8770
104	Hexachlorobenzene	284	18.047	18.058	(0.963)	552242	80.0000	73	9322
108	Pentachlorophenol	266	18.523	18.534	(0.989)	701000	160.000	170	8466
111	Phenanthrene	178	18.790	18.806	(1.003)	2931784	80.0000	71	
112	Anthracene	178	18.892	18.908	(1.008)	2952369	80.0000	71	
114	Carbazole	167	19.367	19.378	(1.034)	2493546	80.0000	74	9803
116	Di-n-butylphthalate	149	20.510	20.516	(1.095)	3479729	80.0000	71	9382
121	Fluoranthene	202	21.600	21.611	(1.153)	2865089	80.0000	71	9560
123	Pyrene	202	22.102	22.113	(0.884)	2936115	80.0000	77	9460
130	Butylbenzylphthalate	149	24.020	24.025	(0.960)	1343892	80.0000	78	9110
135	bis(2-ethylhexyl)Phthalate	149	25.505	25.511	(1.020)	1722478	80.0000	77	8841
133	Benzo(a)anthracene	228	24.971	24.982	(0.999)	1751751	80.0000	76	
134	Chrysene	228	25.067	25.078	(1.002)	1618366	80.0000	74	
136	Di-n-octylphthalate	149	26.884	26.889	(0.955)	2239831	80.0000	69	
137	Benzo(b)fluoranthene	252	27.380	27.386	(0.973)	1252432	80.0000	75	
138	Benzo(k)fluoranthene	252	27.428	27.439	(0.975)	1260077	80.0000	75	
140	Benzo(a)pyrene	252	28.021	28.032	(0.996)	1084006	80.0000	78	
142	Indeno(1,2,3-cd)pyrene	276	30.142	30.153	(1.071)	748003	80.0000	88	8832
143	Dibenzo(a,h)anthracene	278	30.206	30.212	(1.073)	747937	80.0000	85	7600
144	Benzo(g,h,i)perylene	276	30.644	30.650	(1.089)	755114	80.0000	85	9738

QC Flag Legend

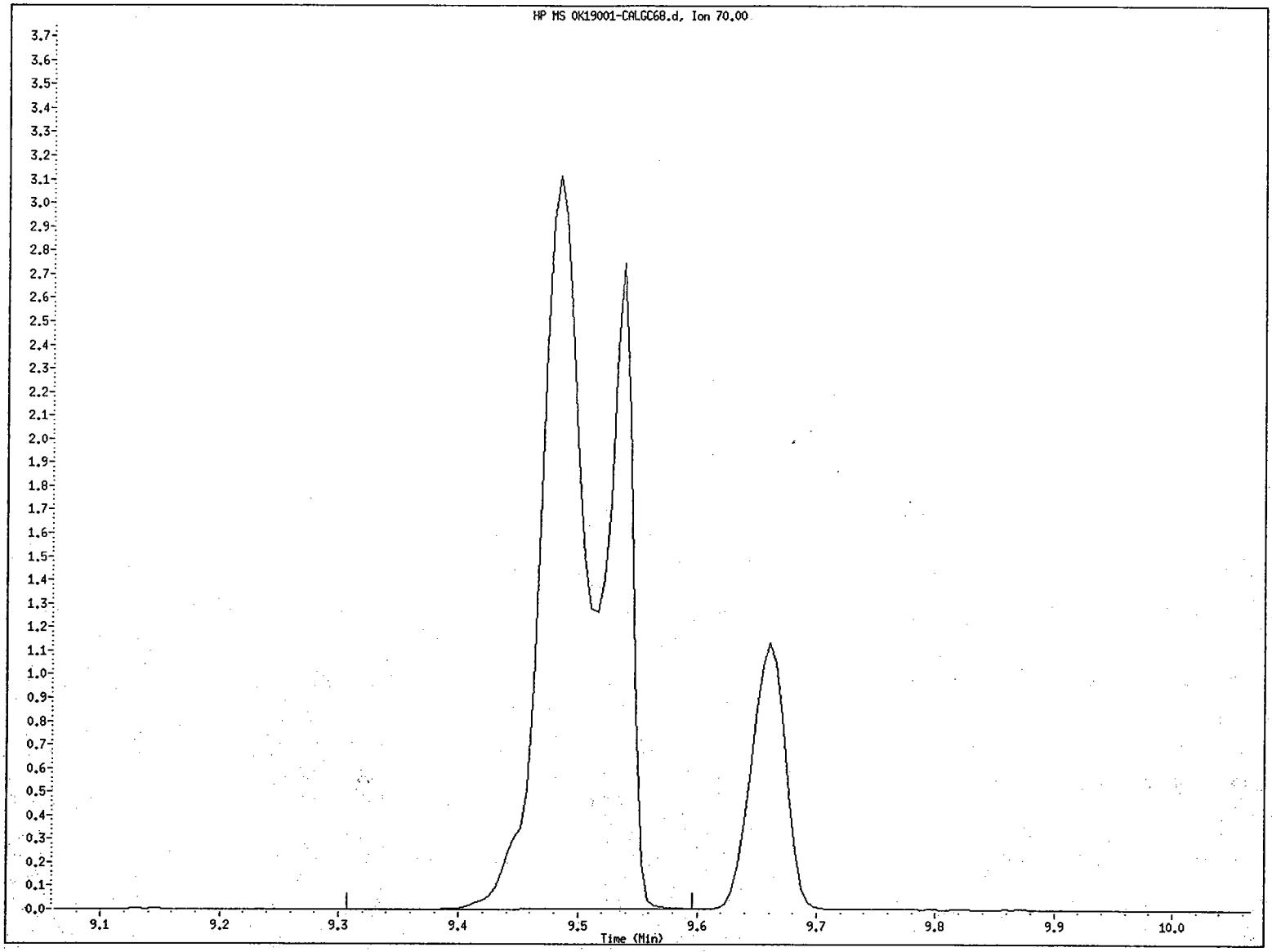
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

Pyridine CAS Number 110-86-1 Area = 2234812 Manually integrated



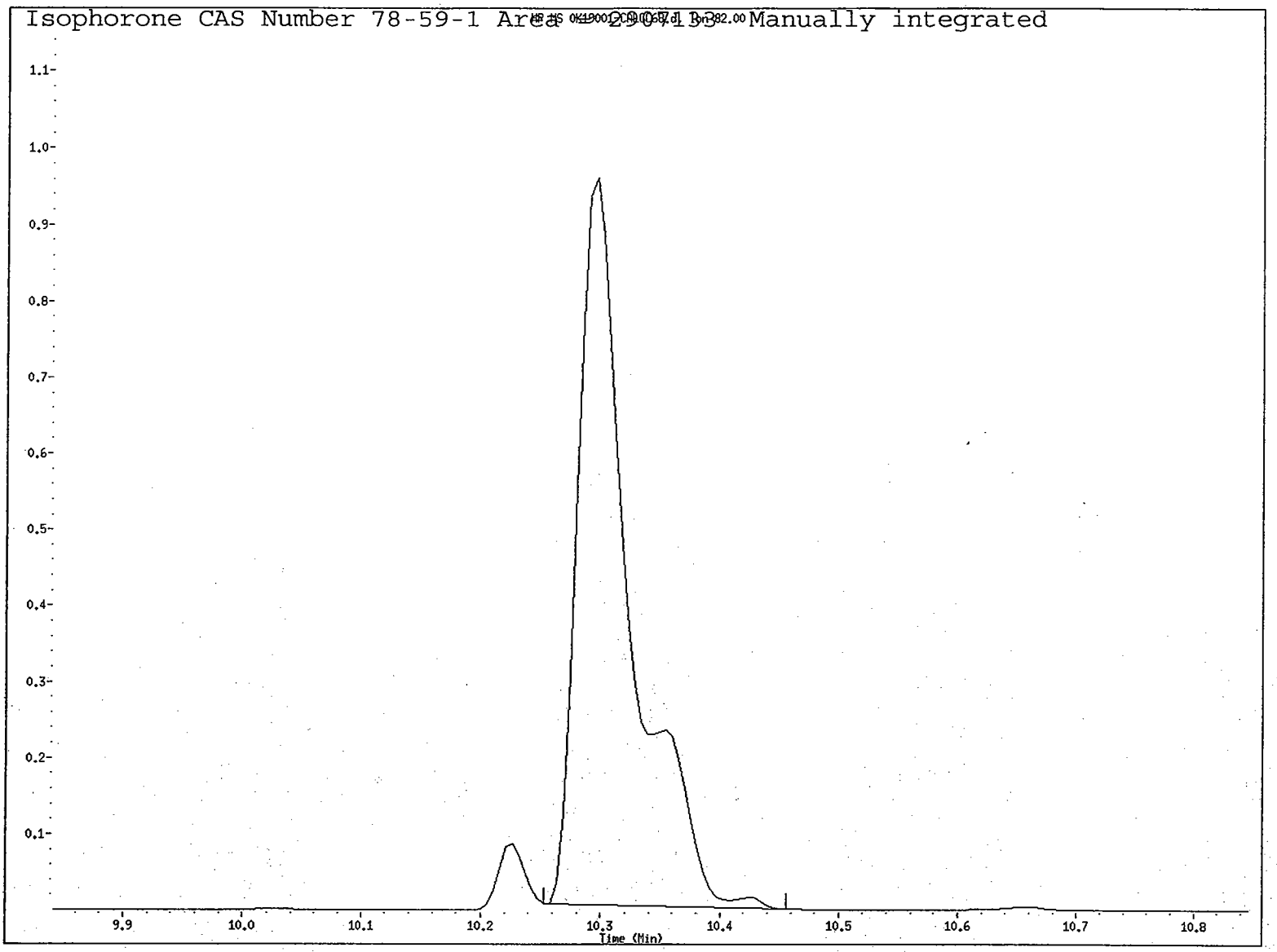
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Client ID: SSTD040W7
Instrument ID: 5973hp68.i
Injection Date and Time: 19-NOV-2010 15:46
Retention Time: 3.43
Operator ID: SLP

N-Nitroso-di-N-propylamine CAS Number 621-64-7 Area = 1142449 Manually integra



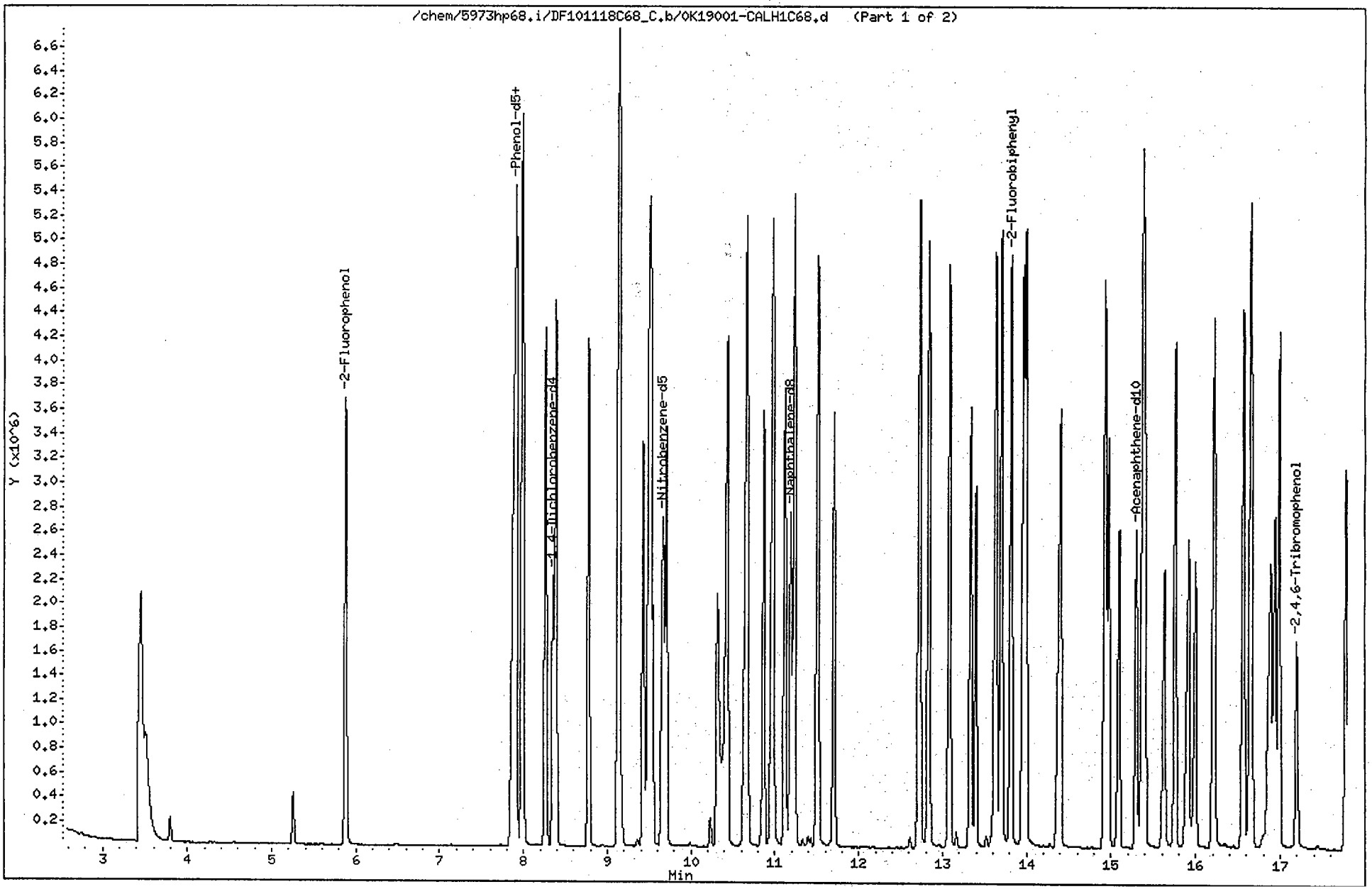
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Injection Date and Time: 19-NOV-2010 15:46
Retention Time: 9.48
Operator ID: SLP

Isophorone CAS Number 78-59-1 Area = 2907133 User selected hit



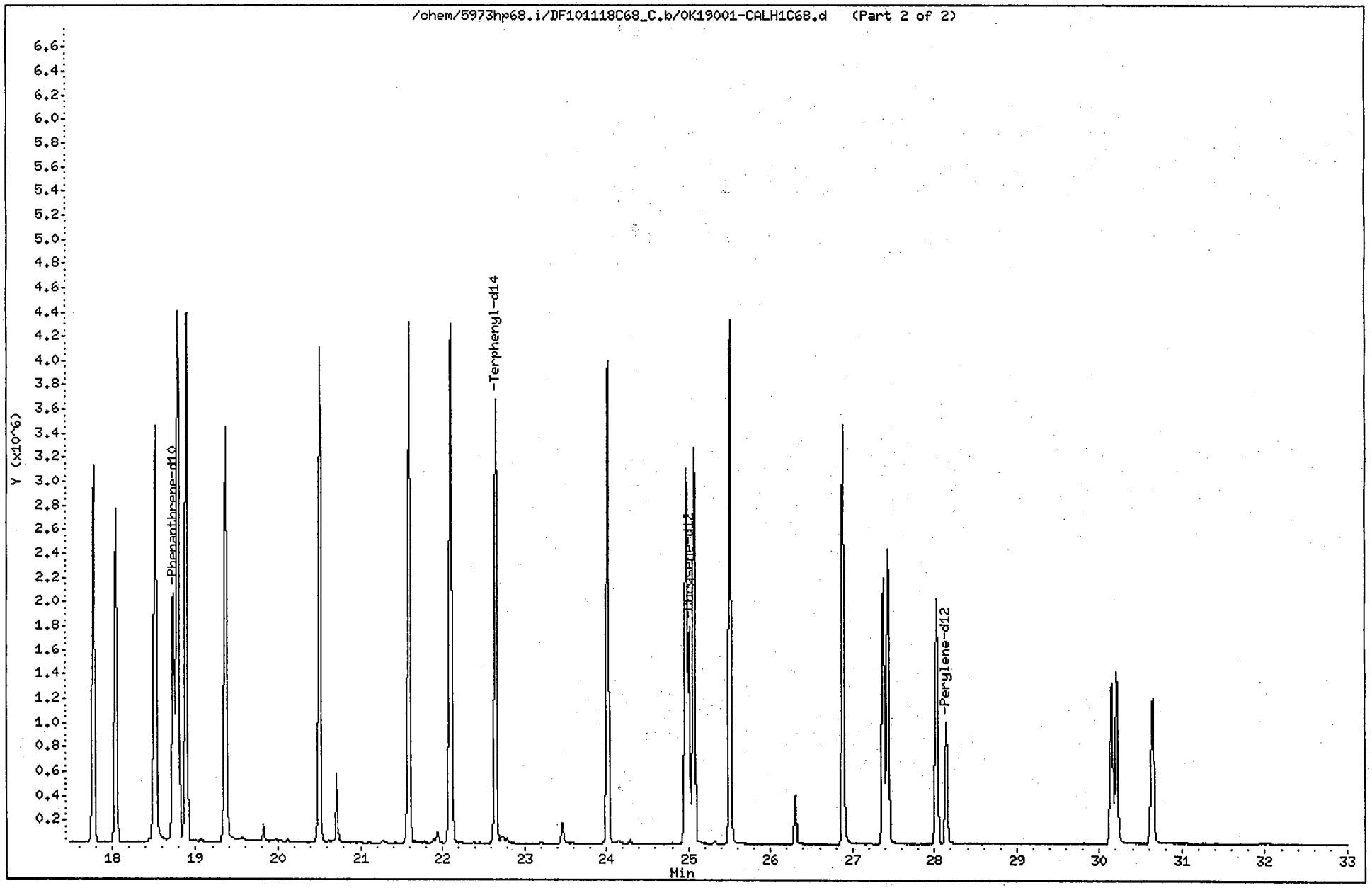
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Injection Date and Time: 19-NOV-2010 15:46
Retention Time: 10.30
Operator ID: SLP

Data File: /chem/5973hp68.i/DF101118C68_C.b/0K19001-CALH1C68.d
Date : 19-NOV-2010 16:28
Client ID: SSTD050W7
Instrument: 5973hp68.i
Sample Info: 0K19001-CALH:SLP
Volume Injected (uL): 2.0
Operator: SLP
Column phase: RTX-5MS
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101118C68_C.b/0K19001-CALH1C68.d
Date : 19-NOV-2010 16:28
Client ID: SSTD050W7
Sample Info: 0K19001-CALH:SLP
Volume Injected (uL): 2.0
Column phase: RTX-5MS

Instrument: 5973hp68.i
Operator: SLP
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101118C68_C.b/0K19001-CALH1C68.d
Report Date: 29-Nov-2010 10:17

CompuChem

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Data file : /chem/5973hp68.i/DF101118C68_C.b/0K19001-CALH1C68.d
Lab Smp Id: 0K19001-CALH Client Smp ID: SSTD050W7
Inj Date : 19-NOV-2010 16:28
Operator : SLP Inst ID: 5973hp68.i
Smp Info : 0K19001-CALH:SLP
Misc Info : SSTD050W7
Comment : 2008 MDLS SOIL/ 2007 WATER
Method : /chem/5973hp68.i/DF101118C68_C.b/8270CMASTERDODv5.m
Meth Date : 26-Nov-2010 15:19 spruskin Quant Type: ISTD
Cal Date : 19-NOV-2010 16:28 Cal File: 0K19001-CALH1C68.d
Als bottle: 18 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: Short.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Vo	1000.00000	Volume of sample extracted (mL)
Vi	2.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	AMOUNTS ON-COL (NG)	SIMILARITY
* 1 1,4-Dichlorobenzene-d4	152	8.351	8.357	(1.000)	613701	40.0000		
* 2 Naphthalene-d8	136	11.188	11.193	(1.000)	2363499	40.0000		
* 3 Acenaphthene-d10	164	15.302	15.307	(1.000)	1164104	40.0000		
* 4 Phenanthrene-d10	188	18.742	18.747	(1.000)	1732496	40.0000		
* 5 Chrysene-d12	240	25.014	25.014	(1.000)	1059994	40.0000		
* 6 Perylene-d12	264	28.144	28.144	(1.000)	657243	40.0000		
$ 7 2-Fluorophenol	112	5.878	5.883	(0.704)	1994488	100.000	92	
$ 8 Phenol-d5	99	7.881	7.892	(0.944)	2554264	100.000	90	
$ 9 Nitrobenzene-d5	82	9.665	9.671	(0.864)	2137907	100.000	94	
$ 10 2-Fluorobiphenyl	172	13.822	13.827	(0.903)	3156743	100.000	90	
$ 11 2,4,6-Tribromophenol	330	17.198	17.209	(1.124)	317274	100.000	100	
$ 12 Terphenyl-d14	244	22.658	22.663	(0.906)	2281408	100.000	93	
13 N-Nitrosodimethylamine	42	3.458	3.463	(0.414)	877185	100.000	92	7310
14 Pyridine	79	3.426	3.431	(0.410)	2803278	100.000	98	8619(M)
24 Phenol	94	7.919	7.929	(0.948)	4669407	200.000	170	

Data File: /chem/5973hp68.i/DF101118C68_C.b/0K19001-CALH1C68.d
Report Date: 29-Nov-2010 10:17

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	AMOUNTS ON-COL (NG)	SIMILARITY
26 Bis(2-chloroethyl)ether	93	7.983	7.988	(0.956)	1676305	100.000	79	
25 2-Chlorophenol	128	7.999	8.004	(0.958)	3051735	200.000	160	7859
27 1,3-Dichlorobenzene	146	8.266	8.271	(0.990)	1922306	100.000	88	
28 1,4-Dichlorobenzene	146	8.389	8.394	(1.004)	1907476	100.000	88	
29 1,2-Dichlorobenzene	146	8.779	8.784	(1.051)	1831883	100.000	88	
32 2-Methylphenol	108	9.153	9.158	(1.096)	2727893	200.000	160	
31 2,2'-oxybis(1-Chloropropane)	45	9.131	9.131	(1.093)	1704933	100.000	70	8121
39 3-Methylphenol	108	9.516	9.521	(1.139)	3376895	200.000	170	
40 4-Methylphenol	108	9.516	9.521	(1.139)	3376895	200.000	170	
38 N-Nitroso-di-N-propylamine	70	9.548	9.564	(1.143)	1427620	100.000	88	9063(M)
34 Hexachloroethane	117	9.425	9.430	(1.129)	789815	100.000	88	9161
41 Nitrobenzene	77	9.708	9.719	(0.868)	2168990	100.000	92	8404
43 Isophorone	82	10.312	10.344	(0.922)	3725710	100.000	89	8217(M)
44 2-Nitrophenol	139	10.435	10.440	(0.933)	1948356	200.000	190	8410
45 2,4-Dimethylphenol	122	10.670	10.681	(0.954)	2588058	200.000	170	8777
46 Bis(2-chloroethoxy)methane	93	10.867	10.878	(0.971)	2316959	100.000	90	7862
48 2,4-Dichlorophenol	162	10.974	10.985	(0.981)	2660100	200.000	180	
49 1,2,4-Trichlorobenzene	180	11.124	11.124	(0.994)	1466281	100.000	90	
51 Naphthalene	128	11.236	11.241	(1.004)	4780436	100.000	86	9287
53 4-Chloroaniline	127	11.514	11.525	(1.029)	3279072	200.000	160	7514
55 Hexachlorobutadiene	225	11.706	11.712	(1.046)	743997	100.000	91	9358
60 4-Chloro-3-methylphenol	107	12.737	12.743	(1.138)	2680942	200.000	170	8154
61 2-Methylnaphthalene	141	12.839	12.844	(1.148)	2515331	100.000	86	
62 1-Methylnaphthalene	142	13.085	13.090	(1.169)	2827247	100.000	86	
63 1,2,4,5-Tetrachlorobenzene	216	13.336	13.341	(0.872)	1299525	100.000	94	9399
64 Hexachlorocyclopentadiene	237	13.400	13.400	(0.876)	852853	100.000	100	9546
66 2,4,6-Trichlorophenol	196	13.640	13.645	(0.891)	1712035	200.000	180	
67 2,4,5-Trichlorophenol	196	13.710	13.720	(0.896)	1792415	200.000	180	
69 1,1'-Biphenyl	154	13.998	14.003	(0.915)	3222339	100.000	88	9476
68 2-Chloronaphthalene	162	13.961	13.971	(0.912)	2729541	100.000	89	
70 2-Nitroaniline	65	14.404	14.420	(0.941)	1745190	200.000	190	8672
73 Dimethylphthalate	163	14.976	14.986	(0.979)	2979544	100.000	91	8928
75 2,6-Dinitrotoluene	165	15.099	15.109	(0.987)	738058	100.000	100	9442
72 Acenaphthylene	152	14.933	14.938	(0.976)	3997506	100.000	89	9508
77 3-Nitroaniline	138	15.408	15.424	(1.007)	1373500	200.000	190	8359
76 Acenaphthene	154	15.382	15.387	(1.005)	2246638	100.000	87	9571
78 2,4-Dinitrophenol	184	15.633	15.649	(1.022)	650314	200.000	300	
81 4-Nitrophenol	139	15.921	15.937	(1.040)	1168337	200.000	220	8446
83 2,4-Dinitrotoluene	165	16.001	16.017	(1.046)	958366	100.000	100	9500
85 2,3,4,6-Tetrachlorophenol	232	16.220	16.231	(1.060)	1224781	200.000	190	9476
79 Dibenzofuran	168	15.766	15.772	(1.030)	3719638	100.000	90	8836
87 Diethylphthalate	149	16.653	16.669	(1.088)	2513850	100.000	87	8157
88 4-Chlorophenyl-phenylether	204	16.658	16.664	(1.089)	1274645	100.000	86	9301
86 Fluorene	166	16.573	16.578	(1.083)	2913508	100.000	90	7760
91 4-Nitroaniline	138	16.894	16.920	(1.104)	1143582	200.000	200	8975
92 4,6-Dinitro-2-methylphenol	198	16.947	16.963	(0.904)	1007889	200.000	240	9172
93 N-Nitrosodiphenylamine	169	16.995	17.006	(0.907)	2136056	100.000	89	8381

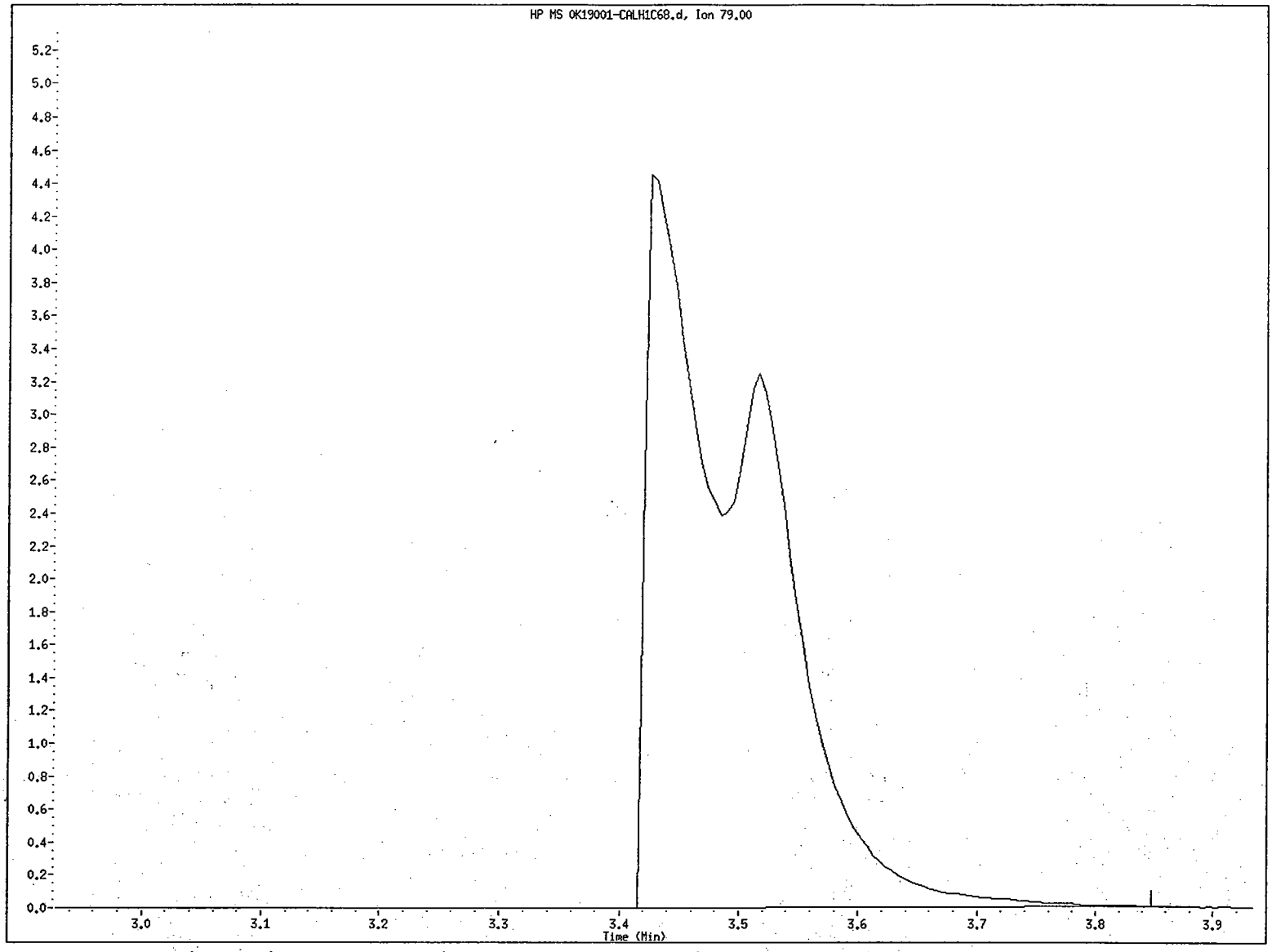
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Report Date: 29-Nov-2010 10:17

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	AMOUNTS ON-COL (NG)	SIMILARITY
98 4-Bromophenyl-phenylether	248	17.780	17.786	(0.949)	751338	100.000	90	8772(H)
104 Hexachlorobenzene	284	18.053	18.058	(0.963)	699346	100.000	92	9367
108 Pentachlorophenol	266	18.528	18.534	(0.989)	925667	200.000	210	8401
111 Phenanthrene	178	18.801	18.806	(1.003)	3722001	100.000	90	
112 Anthracene	178	18.902	18.908	(1.009)	3704705	100.000	89	
114 Carbazole	167	19.372	19.378	(1.034)	3162106	100.000	93	9796
116 Di-n-butylphthalate	149	20.516	20.516	(1.095)	4451561	100.000	91	9364
121 Fluoranthene	202	21.605	21.611	(1.153)	3790122	100.000	94	9602
123 Pyrene	202	22.108	22.113	(0.884)	3927064	100.000	91	9512
130 Butylbenzylphthalate	149	24.025	24.025	(0.960)	1816951	100.000	93	9133
135 bis(2-ethylhexyl)Phthalate	149	25.511	25.511	(1.020)	2281615	100.000	91	8822
133 Benzo(a)anthracene	228	24.976	24.982	(0.999)	2484068	100.000	95	
134 Chrysene	228	25.078	25.078	(1.003)	2292094	100.000	93	
136 Di-n-octylphthalate	149	26.889	26.889	(0.955)	3213195	100.000	92	
137 Benzo(b)fluoranthene	252	27.386	27.386	(0.973)	1750430	100.000	96	
138 Benzo(k)fluoranthene	252	27.439	27.439	(0.975)	1739347	100.000	95	
140 Benzo(a)pyrene	252	28.027	28.032	(0.996)	1519962	100.000	99	
142 Indeno(1,2,3-cd)pyrene	276	30.153	30.153	(1.071)	1028236	100.000	110	8942
143 Dibenzo(a,h)anthracene	278	30.212	30.212	(1.073)	1048748	100.000	110	7311
144 Benzo(g,h,i)perylene	276	30.650	30.650	(1.089)	1024526	100.000	100	9782

QC Flag Legend

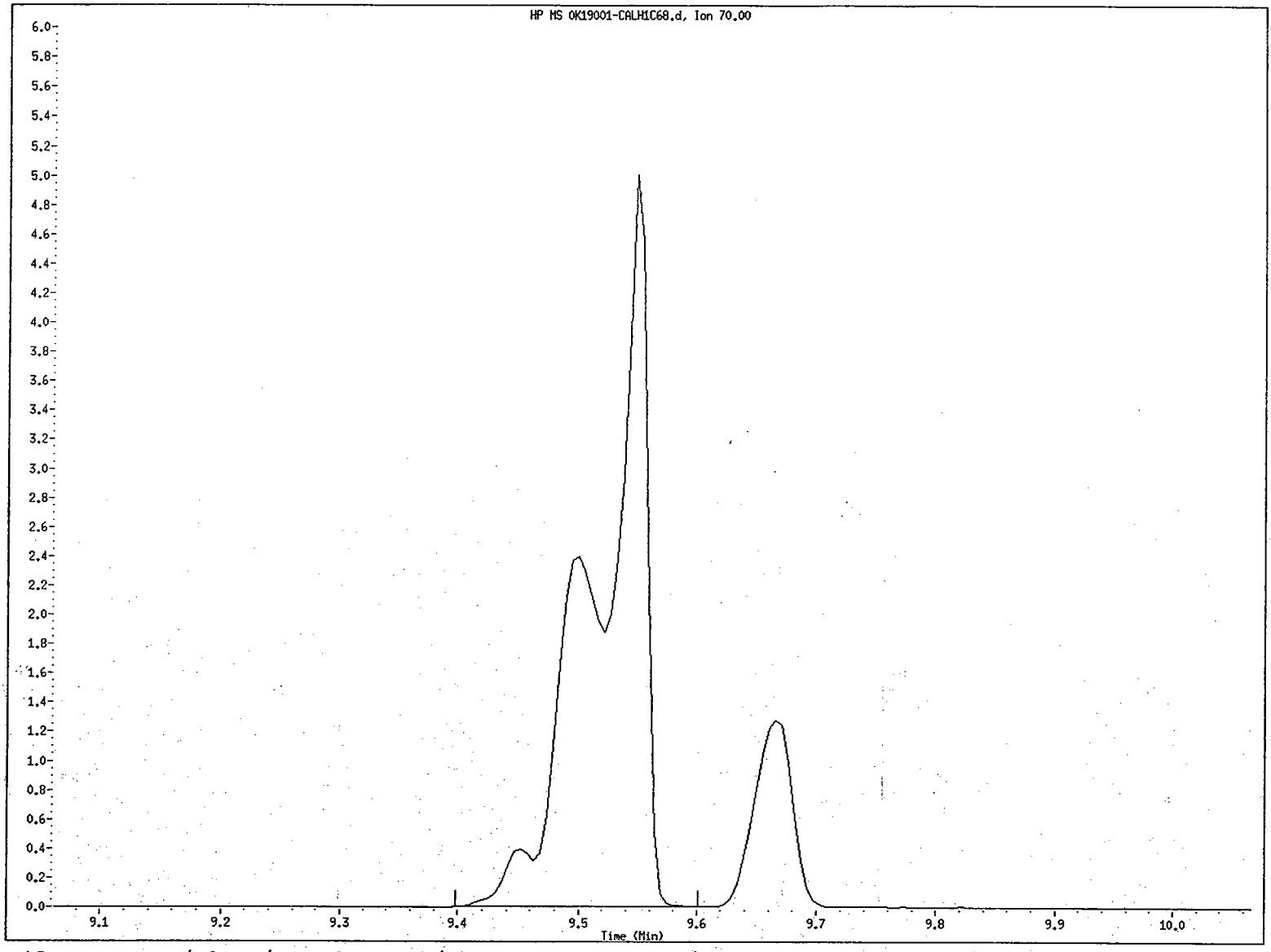
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

Pyridine CAS Number 110-86-1 Area = 2803278 Manually integrated



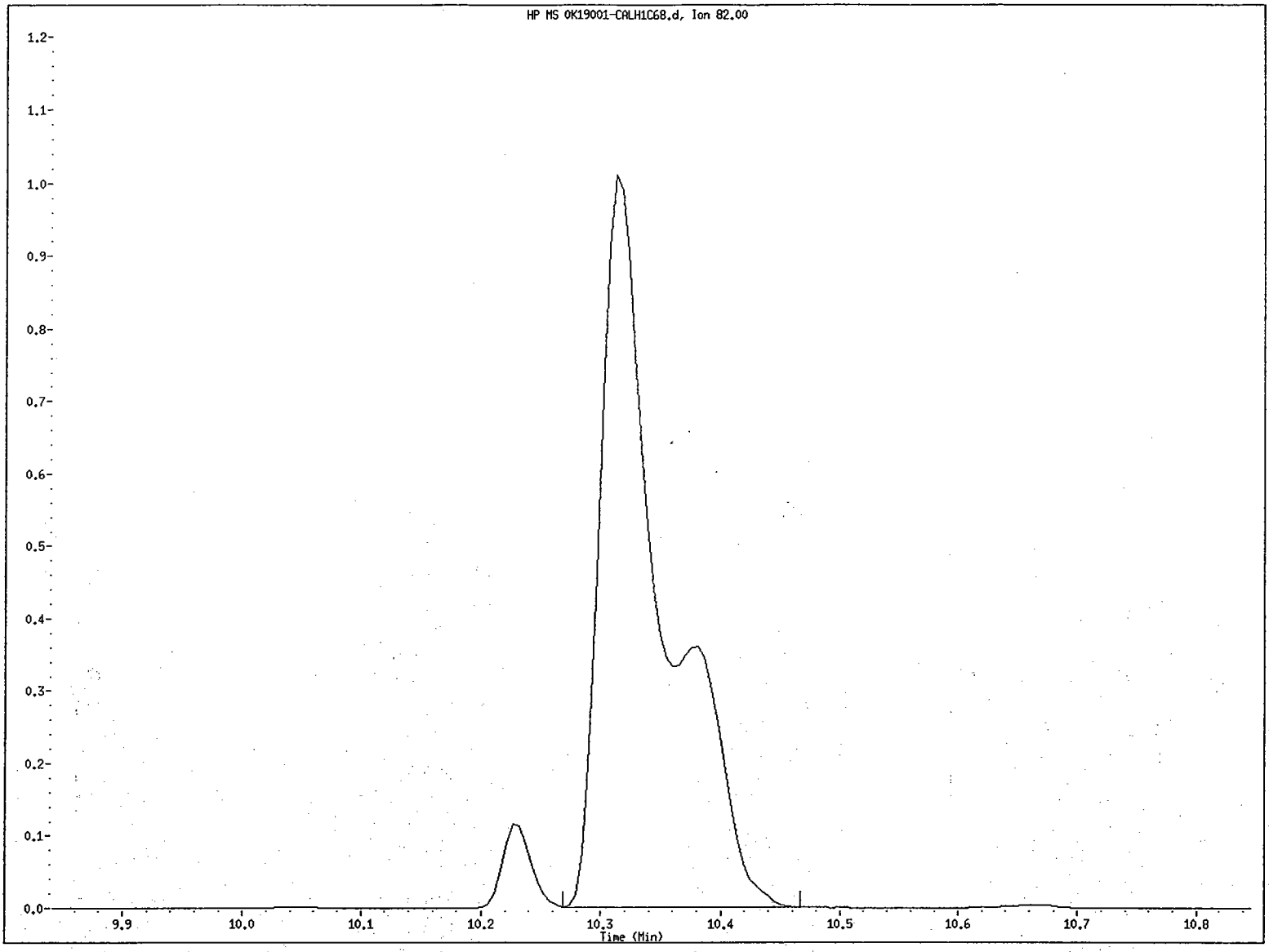
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Instrument ID: 5973hp68.i
Injection Date and Time: 19-NOV-2010 16:28
Retention Time: 3.43
Operator ID: SLP

N-Nitroso-di-N-propylamine CAS Number 621-64-7 Area = 1427620 Manually integra



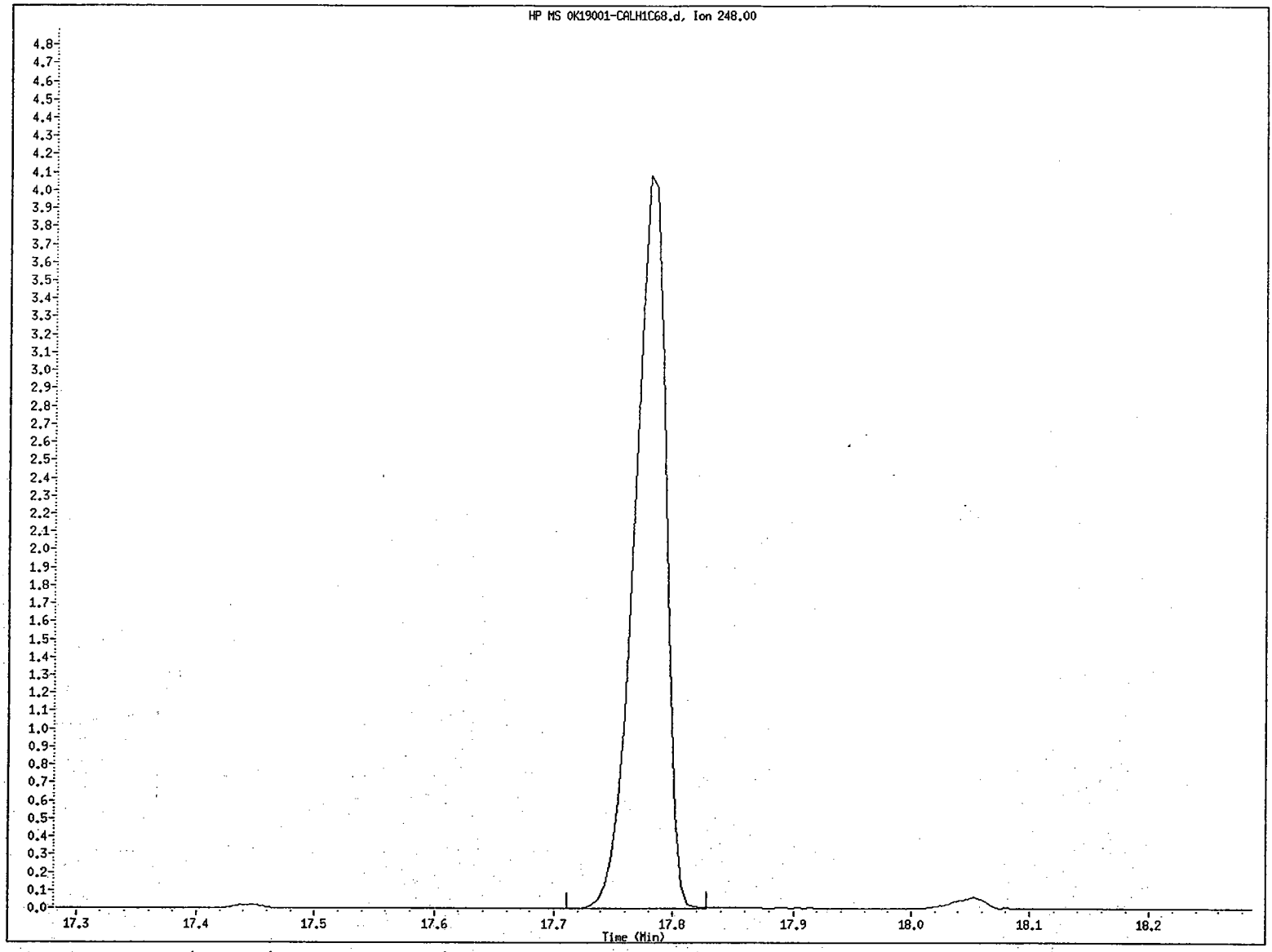
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Client ID: SSTD050W7
Instrument ID: 5973hp68.i
Injection Date and Time: 19-NOV-2010 16:28
Retention Time: 9.55
Operator ID: SLP

Isophorone CAS Number 78-59-1 Area = 3725710 Manually integrated



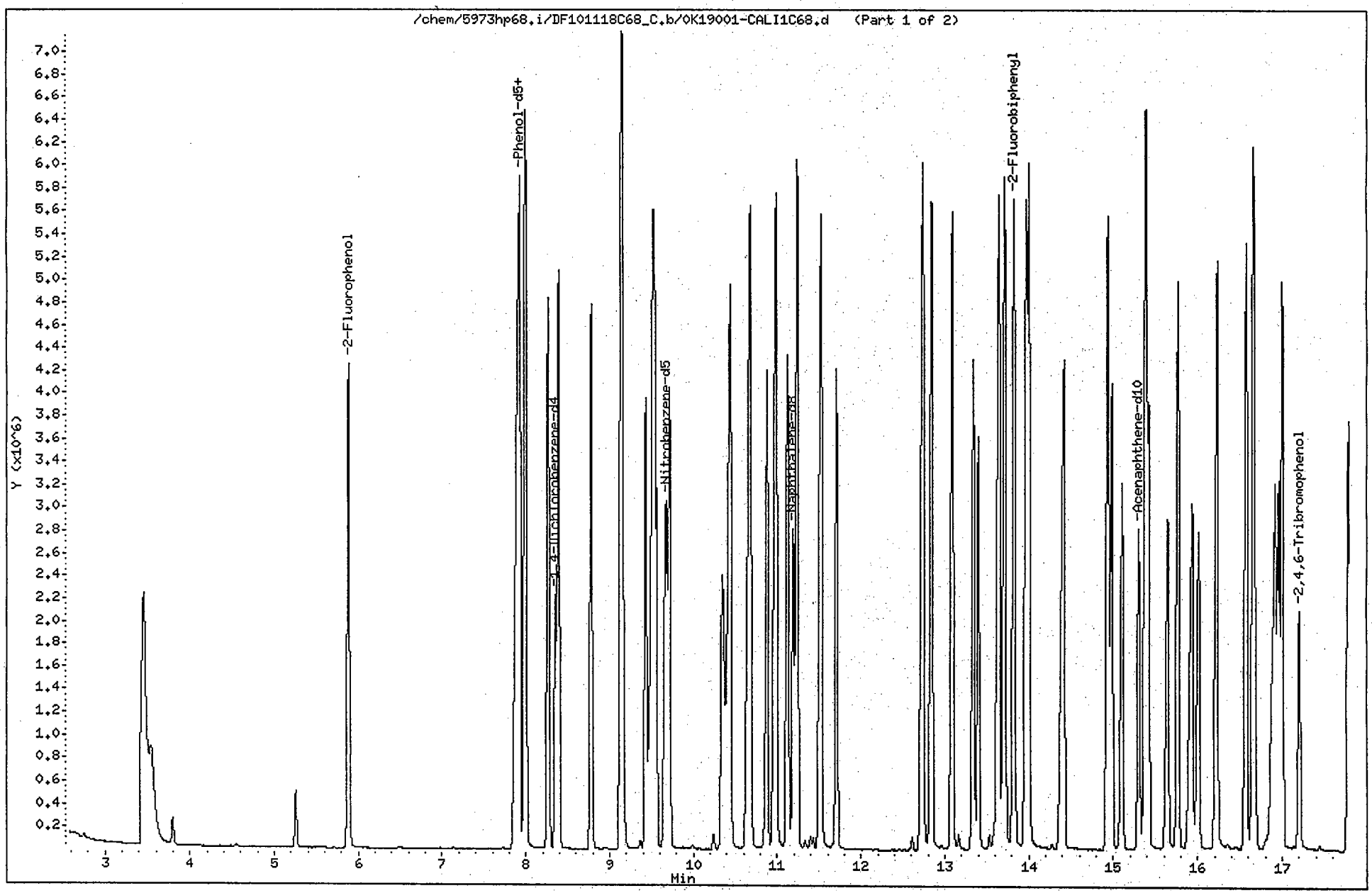
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Client ID: SSTD050W7
Instrument ID: 5973hp68.i
Injection Date and Time: 19-NOV-2010 16:28
Retention Time: 10.31
Operator ID: SLP

4-Bromophenyl-phenylether CAS Number 101-55-3 Area = 751338 User selected hit



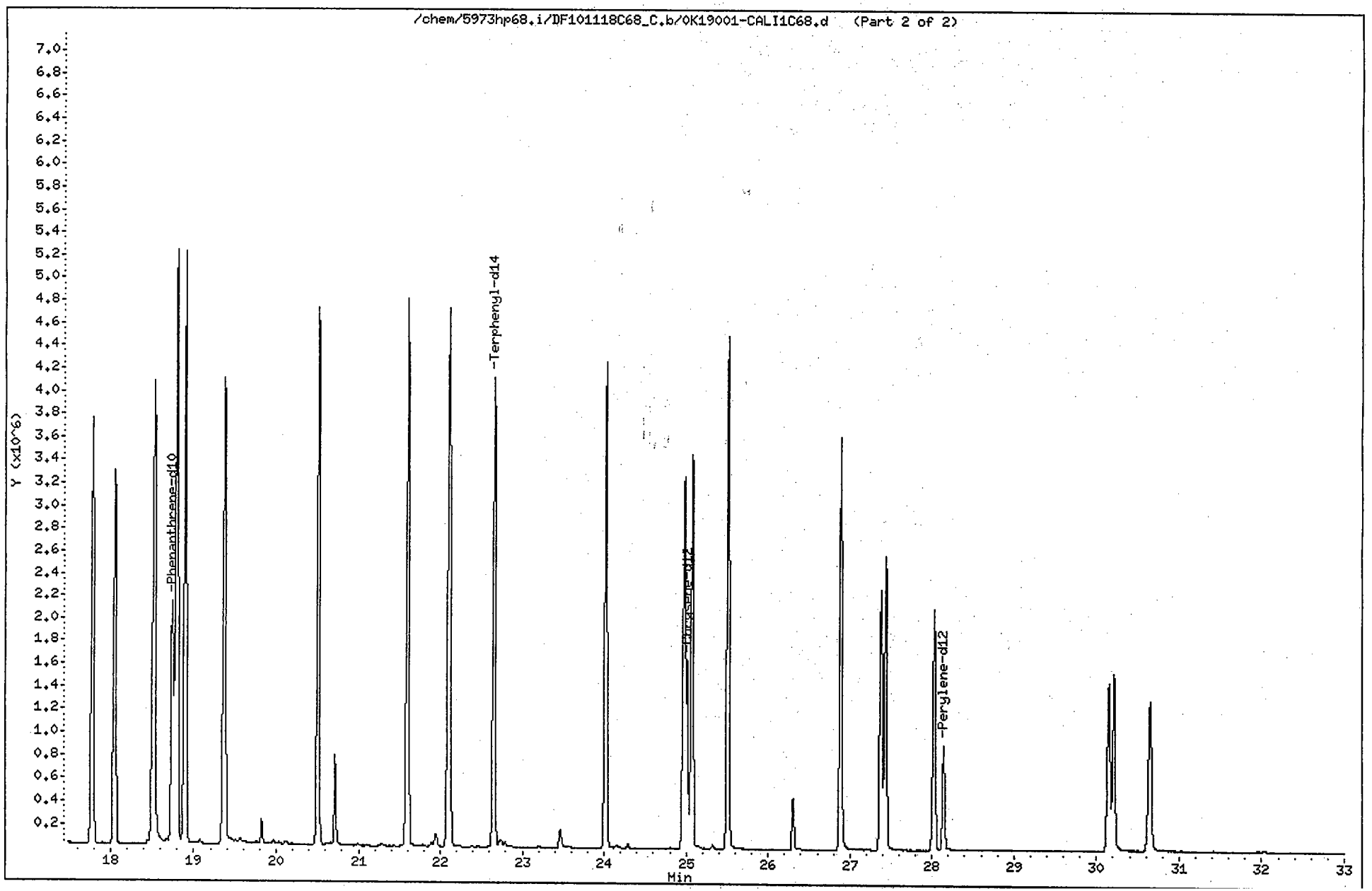
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Client ID: SSTD050W7
Instrument ID: 5973hp68.i
Injection Date and Time: 19-NOV-2010 16:28
Retention Time: 17.78
Operator ID: SLP

Data File: /chem/5973hp68.i/DF101118C68_C.b/0K19001-CALI1C68.d
Date : 19-NOV-2010 17:11
Client ID: SSTD060W7
Instrument: 5973hp68.i
Sample Info: 0K19001-CALI:SLP
Volume Injected (uL): 2.0
Operator: SLP
Column phase: RTX-5MS
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101118C68_C.b/0K19001-CALI1C68.d
Date : 19-NOV-2010 17:11
Client ID: SSTD060W7
Sample Info: 0K19001-CALI:SLP
Volume Injected (uL): 2.0
Column phase: RTX-5MS

Instrument: 5973hp68.i
Operator: SLP
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101118C68_C.b/0K19001-CALI1C68.d
Report Date: 29-Nov-2010 10:17

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Data file : /chem/5973hp68.i/DF101118C68_C.b/0K19001-CALI1C68.d
Lab Smp Id: 0K19001-CALI Client Smp ID: SSTD060W7
Inj Date : 19-NOV-2010 17:11
Operator : SLP Inst ID: 5973hp68.i
Smp Info : 0K19001-CALI:SLP
Misc Info : SSTD060W7
Comment : 2008 MDLS SOIL/ 2007 WATER
Method : /chem/5973hp68.i/DF101118C68_C.b/8270CMASTERDODv5.m
Meth Date : 26-Nov-2010 15:19 spruskin Quant Type: ISTD
Cal Date : 19-NOV-2010 17:11 Cal File: 0K19001-CALI1C68.d
Als bottle: 19 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: Short.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Vo	1000.00000	Volume of sample extracted (mL)
Vi	2.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	AMOUNTS ON-COL (NG)	SIMILARITY
* 1	1,4-Dichlorobenzene-d4	152	8.357	8.357	(1.000)	623717	40.0000		
* 2	Naphthalene-d8	136	11.193	11.193	(1.000)	2469094	40.0000		
* 3	Acenaphthene-d10	164	15.307	15.307	(1.000)	1272094	40.0000		
* 4	Phenanthrene-d10	188	18.747	18.747	(1.000)	1843982	40.0000		
* 5	Chrysene-d12	240	25.014	25.014	(1.000)	951898	40.0000		
* 6	Perylene-d12	264	28.144	28.144	(1.000)	584812	40.0000		
$ 7	2-Fluorophenol	112	5.883	5.883	(0.704)	2379602	120.000	110	
$ 8	Phenol-d5	99	7.892	7.892	(0.944)	3069262	120.000	110	
$ 9	Nitrobenzene-d5	82	9.671	9.671	(0.864)	2660872	120.000	110	
$ 10	2-Fluorobiphenyl	172	13.827	13.827	(0.903)	3951964	120.000	110	
$ 11	2,4,6-Tribromophenol	330	17.209	17.209	(1.124)	412513	120.000	120	
$ 12	Terphenyl-d14	244	22.663	22.663	(0.906)	2579985	120.000	120	
13	N-Nitrosodimethylamine	42	3.463	3.463	(0.414)	1069521	120.000	110	7303
14	Pyridine	79	3.431	3.431	(0.411)	3480822	120.000	120	8605(M)
24	Phenol	94	7.929	7.929	(0.949)	5502053	240.000	200	

Data File: /chem/5973hp68.i/DF101118C68_C.b/0K19001-CALI1C68.d
Report Date: 29-Nov-2010 10:17

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	ON-COL (NG)	SIMILARITY
26 Bis(2-chloroethyl)ether	93	7.988	7.988	(0.956)	1907099	120.000	93	
25 2-Chlorophenol	128	8.004	8.004	(0.958)	3558105	240.000	190	7640
27 1,3-Dichlorobenzene	146	8.271	8.271	(0.990)	2274678	120.000	100	
28 1,4-Dichlorobenzene	146	8.394	8.394	(1.004)	2259563	120.000	100	
29 1,2-Dichlorobenzene	146	8.784	8.784	(1.051)	2177828	120.000	100	
32 2-Methylphenol	108	9.158	9.158	(1.096)	3203340	240.000	190	
31 2,2'-oxybis(1-Chloropropane)	45	9.131	9.131	(1.093)	1932546	120.000	83	8208
39 3-Methylphenol	108	9.521	9.521	(1.139)	4237654	240.000	220	
40 4-Methylphenol	108	9.521	9.521	(1.139)	4237654	240.000	220	
38 N-Nitroso-di-N-propylamine	70	9.564	9.564	(1.144)	1759534	120.000	110	9156(M)
34 Hexachloroethane	117	9.430	9.430	(1.128)	937943	120.000	100	9122
41 Nitrobenzene	77	9.719	9.719	(0.868)	2652318	120.000	110	8370
43 Isophorone	82	10.344	10.344	(0.924)	4832576	120.000	110	8151(H)
44 2-Nitrophenol	139	10.440	10.440	(0.933)	2350464	240.000	220	8380
45 2,4-Dimethylphenol	122	10.681	10.681	(0.954)	3122123	240.000	200	8772
46 Bis(2-chloroethoxy)methane	93	10.878	10.878	(0.972)	2849656	120.000	110	7996
48 2,4-Dichlorophenol	162	10.985	10.985	(0.981)	3302519	240.000	210	
49 1,2,4-Trichlorobenzene	180	11.124	11.124	(0.994)	1803507	120.000	110	
51 Naphthalene	128	11.241	11.241	(1.004)	5748112	120.000	100	9262
53 4-Chloroaniline	127	11.525	11.525	(1.030)	4131603	240.000	200	7494
55 Hexachlorobutadiene	225	11.712	11.712	(1.046)	904034	120.000	110	9244
60 4-Chloro-3-methylphenol	107	12.743	12.743	(1.138)	3336069	240.000	210	7572
61 2-Methylnaphthalene	141	12.844	12.844	(1.147)	3096057	120.000	100	
62 1-Methylnaphthalene	142	13.090	13.090	(1.169)	3500667	120.000	100	
63 1,2,4,5-Tetrachlorobenzene	216	13.341	13.341	(0.872)	1638475	120.000	110	9496
64 Hexachlorocyclopentadiene	237	13.400	13.400	(0.875)	1083422	120.000	120	9545
66 2,4,6-Trichlorophenol	196	13.645	13.645	(0.891)	2199056	240.000	220	
67 2,4,5-Trichlorophenol	196	13.720	13.720	(0.896)	2220845	240.000	210	
69 1,1'-Biphenyl	154	14.003	14.003	(0.915)	3925432	120.000	100	9321
68 2-Chloronaphthalene	162	13.971	13.971	(0.913)	3393991	120.000	100	
70 2-Nitroaniline	65	14.420	14.420	(0.942)	2219294	240.000	220	8654
73 Dimethylphthalate	163	14.986	14.986	(0.979)	3787086	120.000	110	8588
75 2,6-Dinitrotoluene	165	15.109	15.109	(0.987)	967344	120.000	120	9390
72 Acenaphthylene	152	14.938	14.938	(0.976)	4995690	120.000	100	9395
77 3-Nitroaniline	138	15.424	15.424	(1.008)	1788004	240.000	230	8274
76 Acenaphthene	154	15.387	15.387	(1.005)	2839485	120.000	100	9632
78 2,4-Dinitrophenol	184	15.649	15.649	(1.022)	912704	240.000	350	(A)
81 4-Nitrophenol	139	15.937	15.937	(1.041)	1557112	240.000	260	8506
83 2,4-Dinitrotoluene	165	16.017	16.017	(1.046)	1246283	120.000	120	9077
85 2,3,4,6-Tetrachlorophenol	232	16.231	16.231	(1.060)	1570921	240.000	230	9369
79 Dibenzofuran	168	15.772	15.772	(1.030)	4695346	120.000	110	8841
87 Diethylphthalate	149	16.669	16.669	(1.089)	3073718	120.000	100	8298
88 4-Chlorophenyl-phenylether	204	16.664	16.664	(1.089)	1592857	120.000	100	9250
86 Fluorene	166	16.578	16.578	(1.083)	3649936	120.000	100	7682
91 4-Nitroaniline	138	16.920	16.920	(1.105)	1528269	240.000	250	9013
92 4,6-Dinitro-2-methylphenol	198	16.963	16.963	(0.905)	1310948	240.000	280	9187
93 N-Nitrosodiphenylamine	169	17.006	17.006	(0.907)	2671386	120.000	110	8517

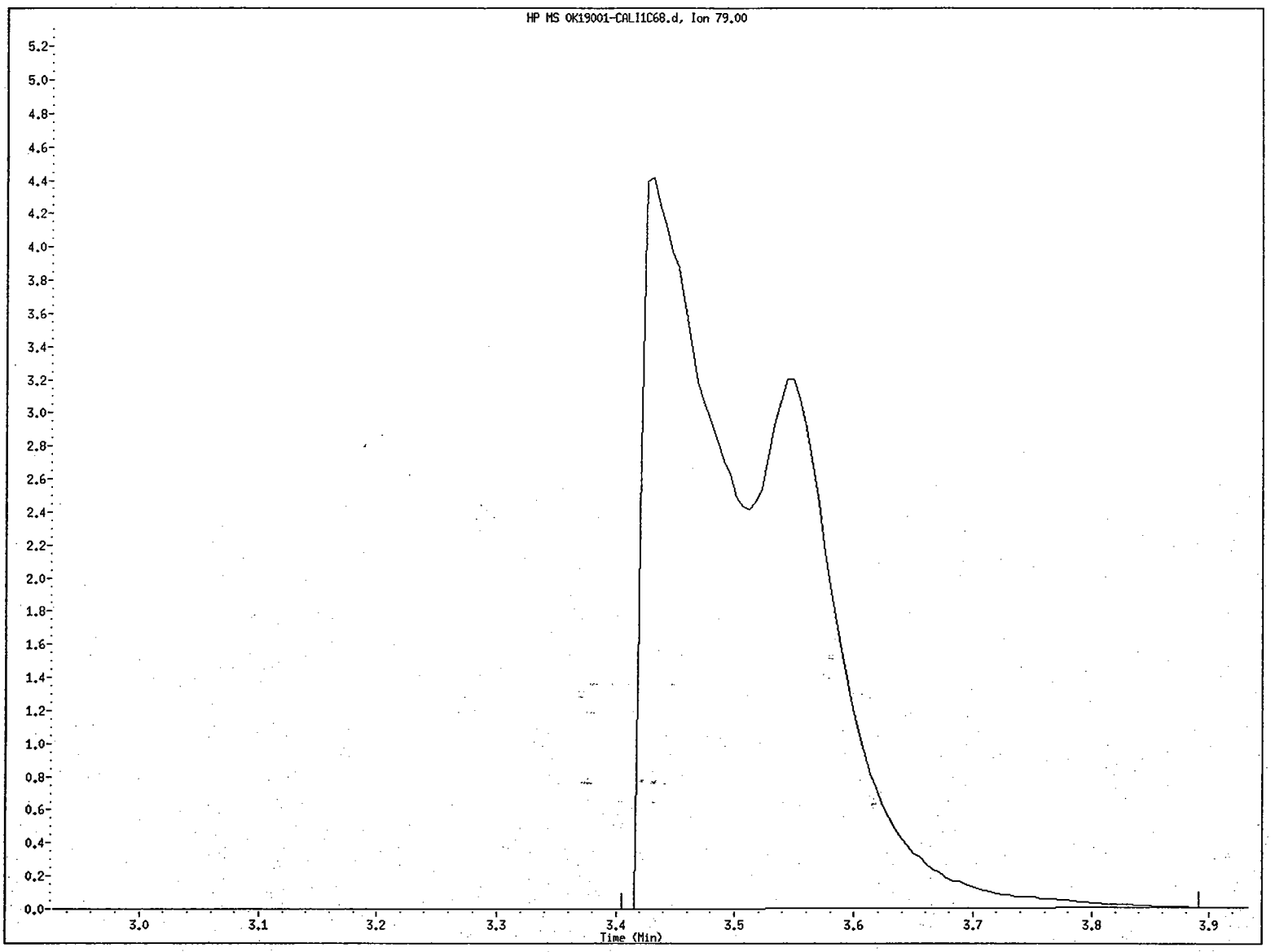
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Report Date: 29-Nov-2010 10:17

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	AMOUNTS ON-COL (NG)	SIMILARITY
98	4-Bromophenyl-phenylether	248	17.786	17.786	(0.949)	952182	120.000	110	8681(H)
104	Hexachlorobenzene	284	18.058	18.058	(0.963)	885913	120.000	110	9443
108	Pentachlorophenol	266	18.534	18.534	(0.989)	1186046	240.000	250	8330
111	Phenanthrene	178	18.806	18.806	(1.003)	4586581	120.000	110	
112	Anthracene	178	18.908	18.908	(1.009)	4571786	120.000	100	
114	Carbazole	167	19.378	19.378	(1.034)	4077619	120.000	110	9795
116	Di-n-butylphthalate	149	20.516	20.516	(1.094)	5255042	120.000	100	9366
121	Fluoranthene	202	21.611	21.611	(1.153)	4407605	120.000	100	9608
123	Pyrene	202	22.113	22.113	(0.884)	4449480	120.000	120	9561
130	Butylbenzylphthalate	149	24.025	24.025	(0.960)	1990746	120.000	110	9104
135	bis(2-ethylhexyl)Phthalate	149	25.511	25.511	(1.020)	2467153	120.000	110	8809
133	Benzo(a)anthracene	228	24.982	24.982	(0.999)	2670395	120.000	110	
134	Chrysene	228	25.078	25.078	(1.003)	2475346	120.000	110	
136	Di-n-octylphthalate	149	26.889	26.889	(0.955)	3371582	120.000	110	
137	Benzo(b)fluoranthene	252	27.386	27.386	(0.973)	1852532	120.000	120	
138	Benzo(k)fluoranthene	252	27.439	27.439	(0.975)	1867177	120.000	120	
140	Benzo(a)pyrene	252	28.032	28.032	(0.996)	1606906	120.000	120	
142	Indeno(1,2,3-cd)pyrene	276	30.153	30.153	(1.071)	1144961	120.000	130	8941
143	Dibenzo(a,h)anthracene	278	30.212	30.212	(1.073)	1193577	120.000	130	9002
144	Benzo(g,h,i)perylene	276	30.650	30.650	(1.089)	1151933	120.000	130	9720

QC Flag Legend

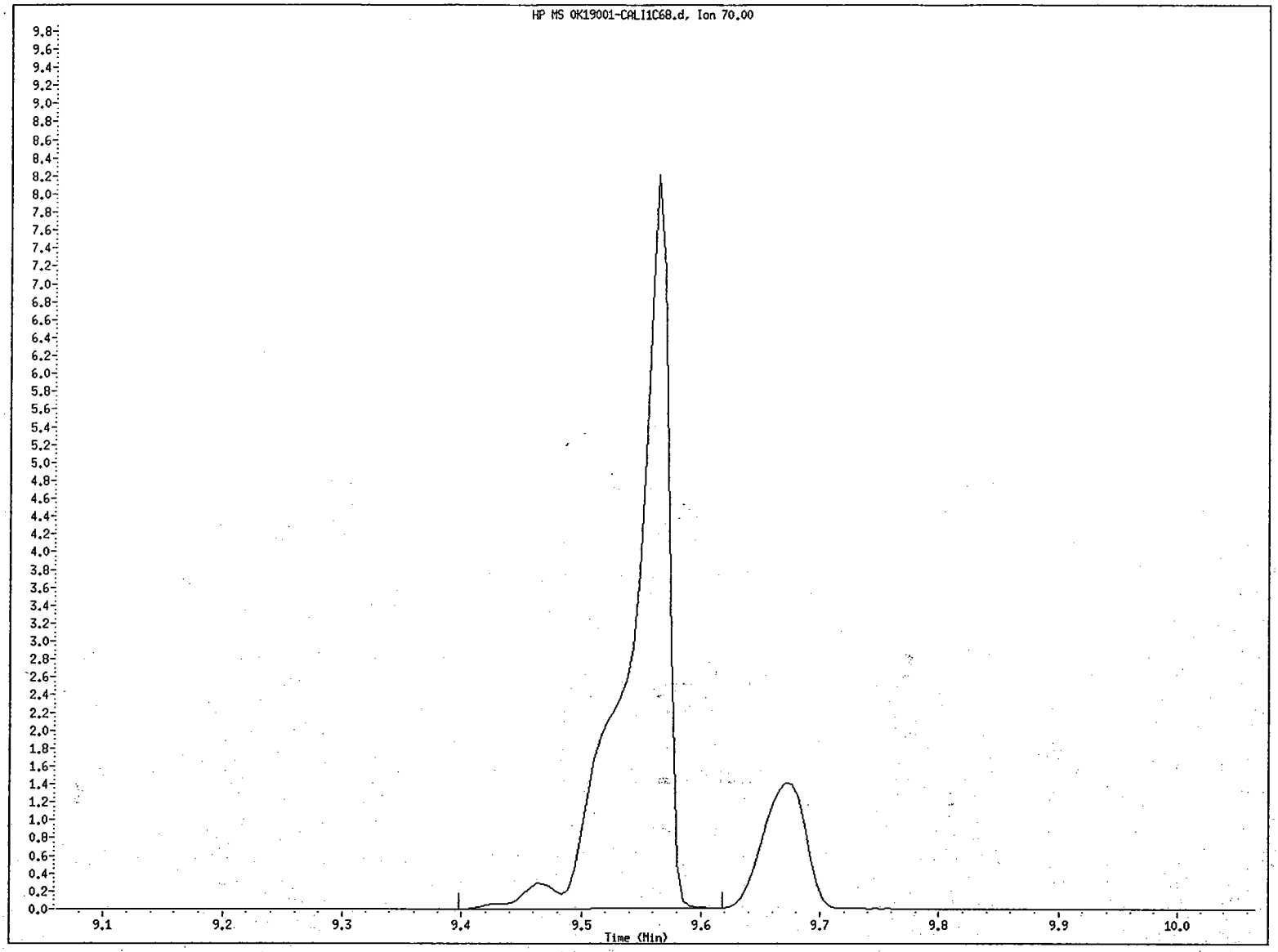
A - Target compound detected but, quantitated amount exceeded maximum amount.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

Pyridine CAS Number 110-86-1 Area = 3480822 Manually integrated



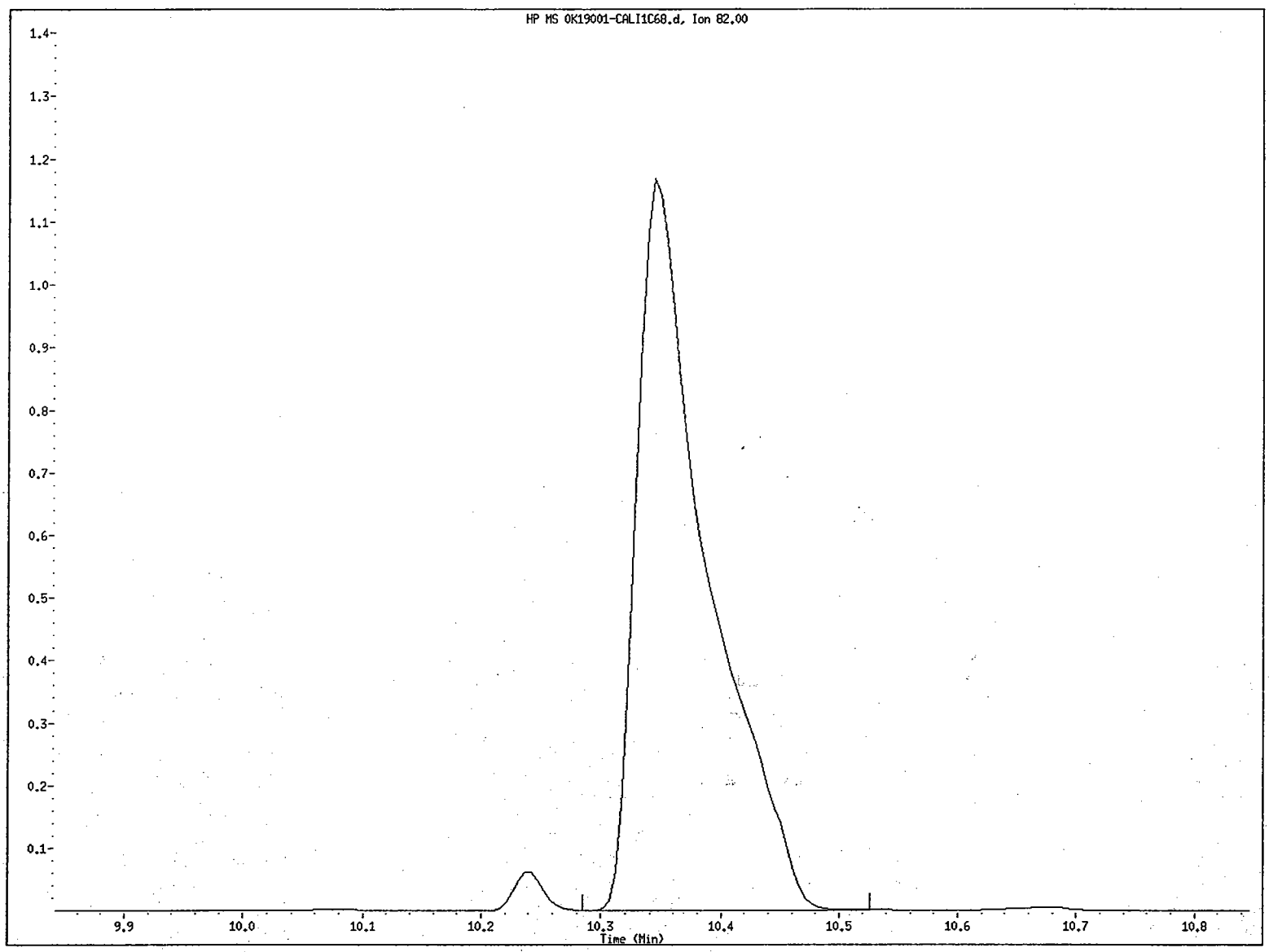
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Client ID: SSTD060W7
Instrument ID: 5973hp68.i
Injection Date and Time: 19-NOV-2010 17:11
Retention Time: 3.43
Operator ID: SLP

N-Nitroso-di-N-propylamine CAS Number 621-64-7 Area = 1759534 Manually integra



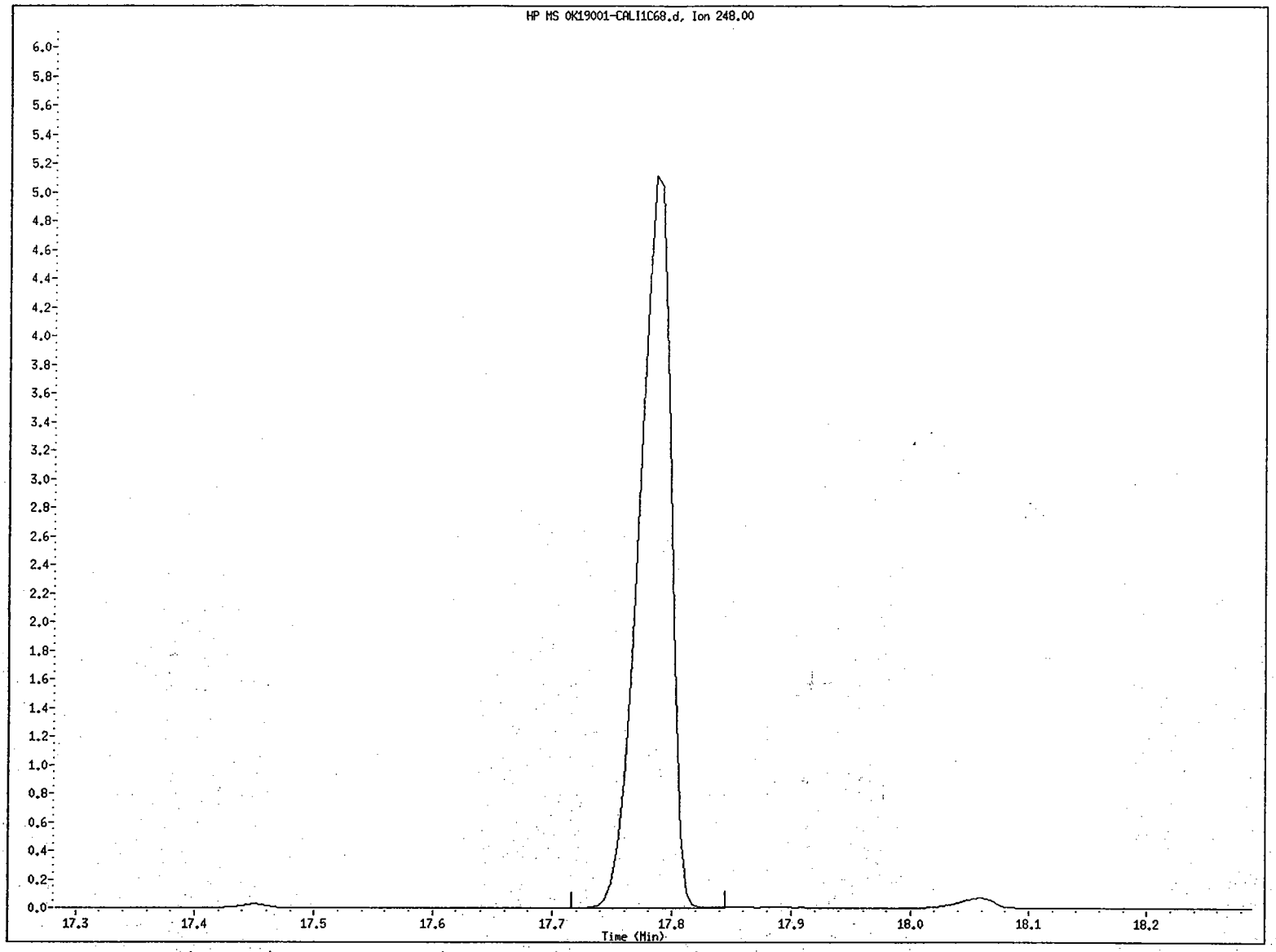
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Client ID: SSTD060W7
Instrument ID: 5973hp68.i
Injection Date and Time: 19-NOV-2010 17:11
Retention Time: 9.56
Operator ID: SLP

Isophorone CAS Number 78-59-1 Area = 4832576 User selected hit



File name: /chem/5973hp68.i/DF101118C68_C.b/0K19001-CALI1C68.d
Client ID: SSTD060W7
Instrument ID: 5973hp68.i
Injection Date and Time: 19-NOV-2010 17:11
Retention Time: 10.34
Operator ID: SLP

4-Bromophenyl-phenylether CAS Number 101-55-3 Area = 952182 User selected hit



File name: /chem/5973hp68.i/DF101118C68_C.b/0K19001-CALI1C68.d
Client ID: SSTD060W7
Instrument ID: 5973hp68.i
Injection Date and Time: 19-NOV-2010 17:11
Retention Time: 17.79
Operator ID: SLP

COMPUCHEM a Division of Liberty Analytical Corp
GC/MS SEMIVOLATILE RUN LOG
LOGBOOK 4Z(4) 2 (5973hp68)

DATE 11/19/10 INITIAL TIME OF TUNE 0314 SHIFT/S (A) ____ (B) ____ (C) ✓
TIME TUNE EXPIRES 1514 METHOD 8270C APIX

PREVENTIVE MAINTENANCE none

	SEQUENCE#	REPORT	FILENAME	RUN	DATE	TIME	CLIENT ID	SDG#	AMOUNT INJECTED	CHEMIST	COMMENTS
1	0K19001		0K19001-TUNIC168	/	11/19/10	0314	DFTPPW5	—	2µL	MEW	SCD=LCD
2	F101118C		-CAL1	/	/ /	0359	SSTD005W5	—			0J21003 11/24/11
3			-CAL2	/	/ /	0441	010	—			4
4			-CAL3	/	/ /	0523	025	—			5
5			-CAL4	/	/ /	0606	040	—			0K15011
6			-CAL5	/	/ /	0648	050	—			0J21005
7			-CAL6	/	/ /	0731	060	—			0K16006
8			-CAL A 9	/	/ /	0813	SSTD005W6	—			0K19003
9			-CAL B 8	/	/ /	0855	010	—			4
10			-CAL C 9	/	/ /	0938	025	—			5
11			-CAL D A	/	/ /	1020	040	—			6
12			-CAL E B	/	/ /	1102	050	—			7
13	*		-CAL F C	/	/ /	1145	060	—			8
14	**		-SCV1 50ng/µL	/	/ /	1753	SSTD025VAL1	—			0J05003 11/25/11
15			-SCV2	/	/ /	1835	2	—			4
16			-SCV3	/	/ /	1917	3	—			5
17			-SCV4	/	/ /	2000	4	—			6
18			-CAL G	/	/ /	1338	SSTD005W7			SAP	0K09013 2/2/11
19	*		-CAL H B	/	/ /	1421	010				0K02014
20	*		-CAL I R	/	/ /	1503	025				5
21			-CAL J G	/	/ /	1546	040				7
22			-CAL K H	/	/ /	1628	050				8
23			-CAL L P	/	/ /	1711	060				9
24	*		-TUN2 50ng/µL	/	/ /	1318	DFTPPW7				

0J21003, 0K15011, 0J21005, 0K16006, 0K19003, SOP.SCD

0K09013, SOP.SCD

DFTPP Lot #/Exp. Date: OF18005 12/17/10
Calibration STD Lot#/Exp. Date: See Comments
Internal STD Lot#/Exp. Date: 0K17011 5/17/11
Methylene Chloride Lot#/Exp. Date: J395008 11/28/11
Column Type: RTX-5MS 0.32mm

The presence of the Chemist's/Analyst's employee ID number, or signature, on this run log attests that strict compliance with the method's SOP has occurred. Any SOP deviations require documentation by the responsible chemist/analyst together with the chemist's/analyst's initials and the initials of the lab supervisor and a QA department representative, signifying approval of the deviation.

REVIEWED BY: _____ DATE 11/22/10

10/06/08: jr

F101118C68_C

~~Continued on next page~~

Sublist START

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-A

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Instrument ID: 5973HP68 Calibration Date(s): 11/19/10 11/19/10

Column: RTX-5MS ID: 0.32 (mm) Calibration Time(s): 0359 0731

LAB FILE ID: RF10: 0K19001-CAL1RF20: 0K19001-CAL2RF50: 0K19001-CAL3
RF80: 0K19001-CAL4RF100: 0K19001-CALRF120: 0K19001-CAL

COMPOUND	RF10	RF20	RF50	RF80	RF100	RF120
3,3'-Dimethylbenzidine	0.598	0.674	0.639	0.583	0.589	0.535

FORM VI SV

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-A

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Instrument ID: 5973HP68 Calibration Date(s): 11/19/10 11/19/10

Column: RTX-5MS ID: 0.32 (mm) Calibration Time(s): 0359 0731

COMPOUND	CURVE	COEFFICENT A1	%RSD OR R^2	MAX %RSD OR R^2
3,3'-Dimethylbenzidine	AVRG	0.60306863	7.973	15.000

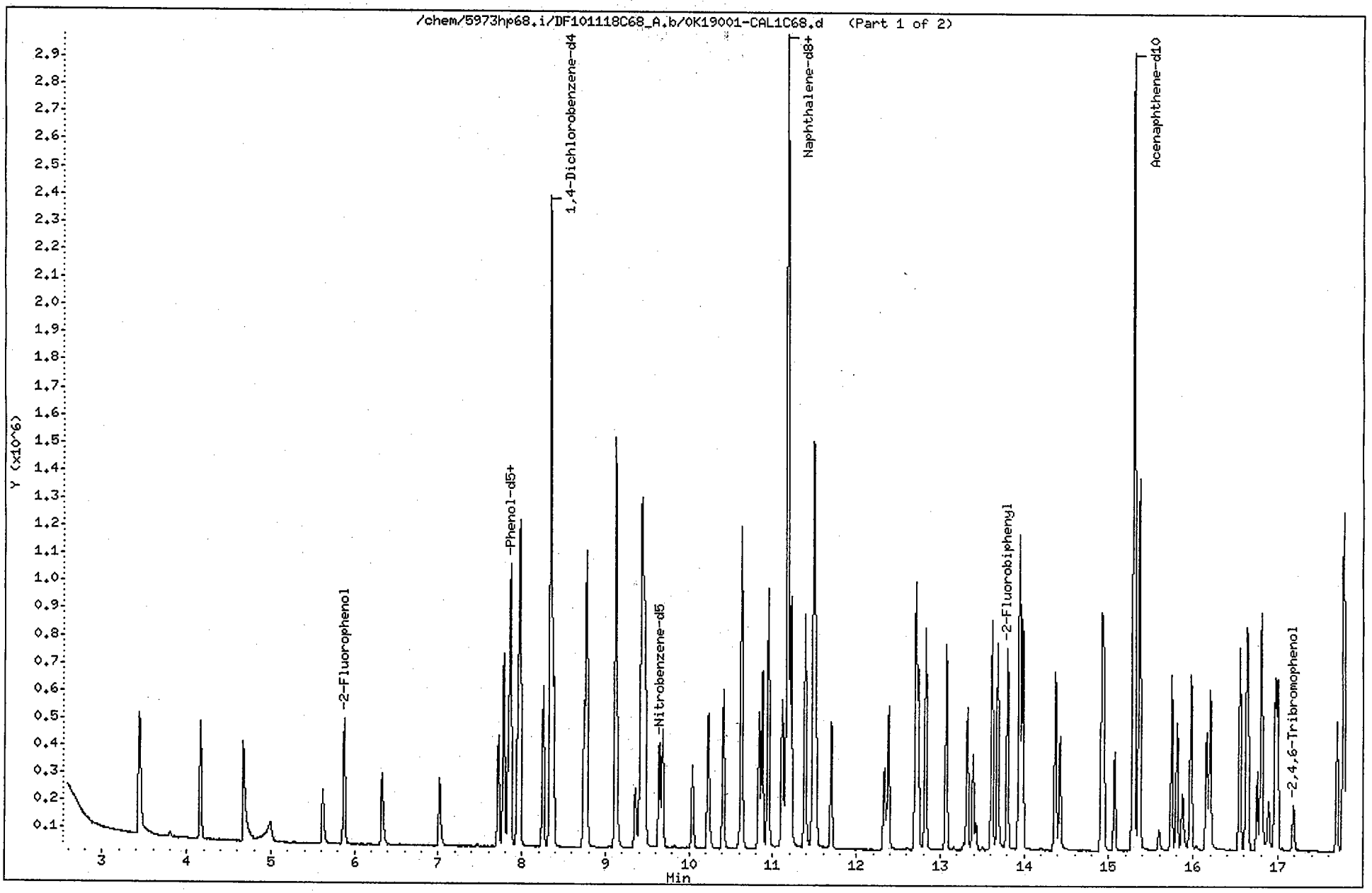
Average %RSD test result.

Calculate Average %RSD: 7.079454422
Maximum Average %RSD: 15.00000000

Note: Passes Average %RSD Test.

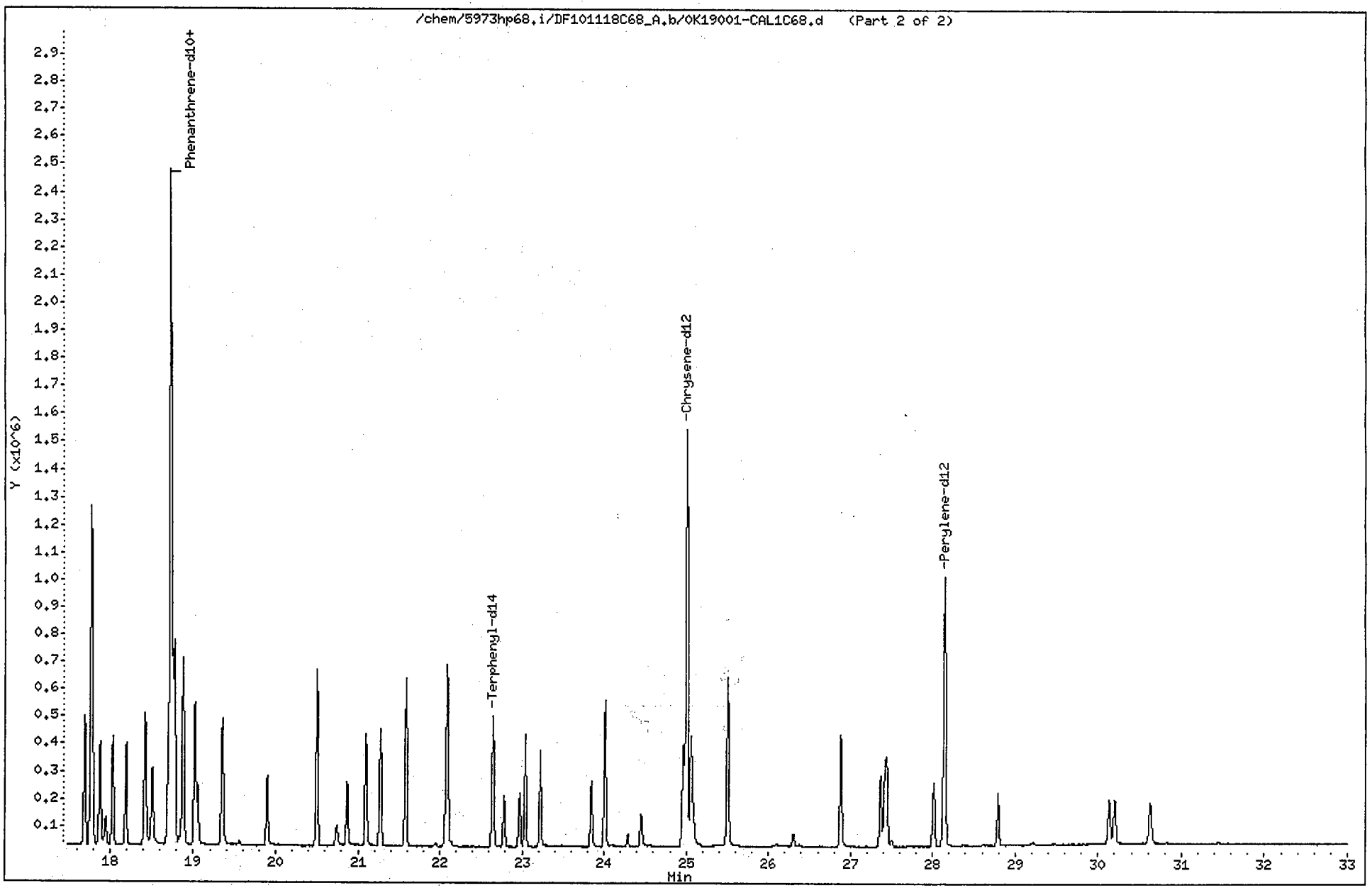
Data File: /chem/5973hp68.i/DF101118C68_A.b/0K19001-CAL1C68.d
Date : 19-NOV-2010 03:59
Client ID: SSTD005W5
Sample Info: 0K19001-CAL1:MEW
Volume Injected (uL): 2.0
Column phase: RTX-5MS

Instrument: 5973hp68.i
Operator: MEW
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101118C68_A.b/0K19001-CAL1C68.d
Date : 19-NOV-2010 03:59
Client ID: SSTD005W5
Sample Info: 0K19001-CAL1:MEW
Volume Injected (uL): 2.0
Column phase: RTX-5MS

Instrument: 5973hp68.i
Operator: MEW
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101118C68_A.b/0K19001-CAL1C68.d
Report Date: 29-Nov-2010 10:09

CompuChem

Semivolatile Report SW-846 Method 8270C Appendix IX

Data file : /chem/5973hp68.i/DF101118C68_A.b/0K19001-CAL1C68.d
Lab Smp Id: 0K19001-CAL1 Client Smp ID: SSTD005W5
Inj Date : 19-NOV-2010 03:59
Operator : MEW Inst ID: 5973hp68.i
Smp Info : 0K19001-CAL1:MEW
Misc Info : SSTD005W5
Comment : 2008 MDLS SOIL/ 2007 WATER
Method : /chem/5973hp68.i/DF101118C68_A.b/8270CMASTERDODv5.m
Meth Date : 27-Nov-2010 07:30 spruskin Quant Type: ISTD
Cal Date : 19-NOV-2010 03:59 Cal File: 0K19001-CAL1C68.d
Als bottle: 2 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SLP1119.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Vt/(Vo * Vi) * CpndVariable

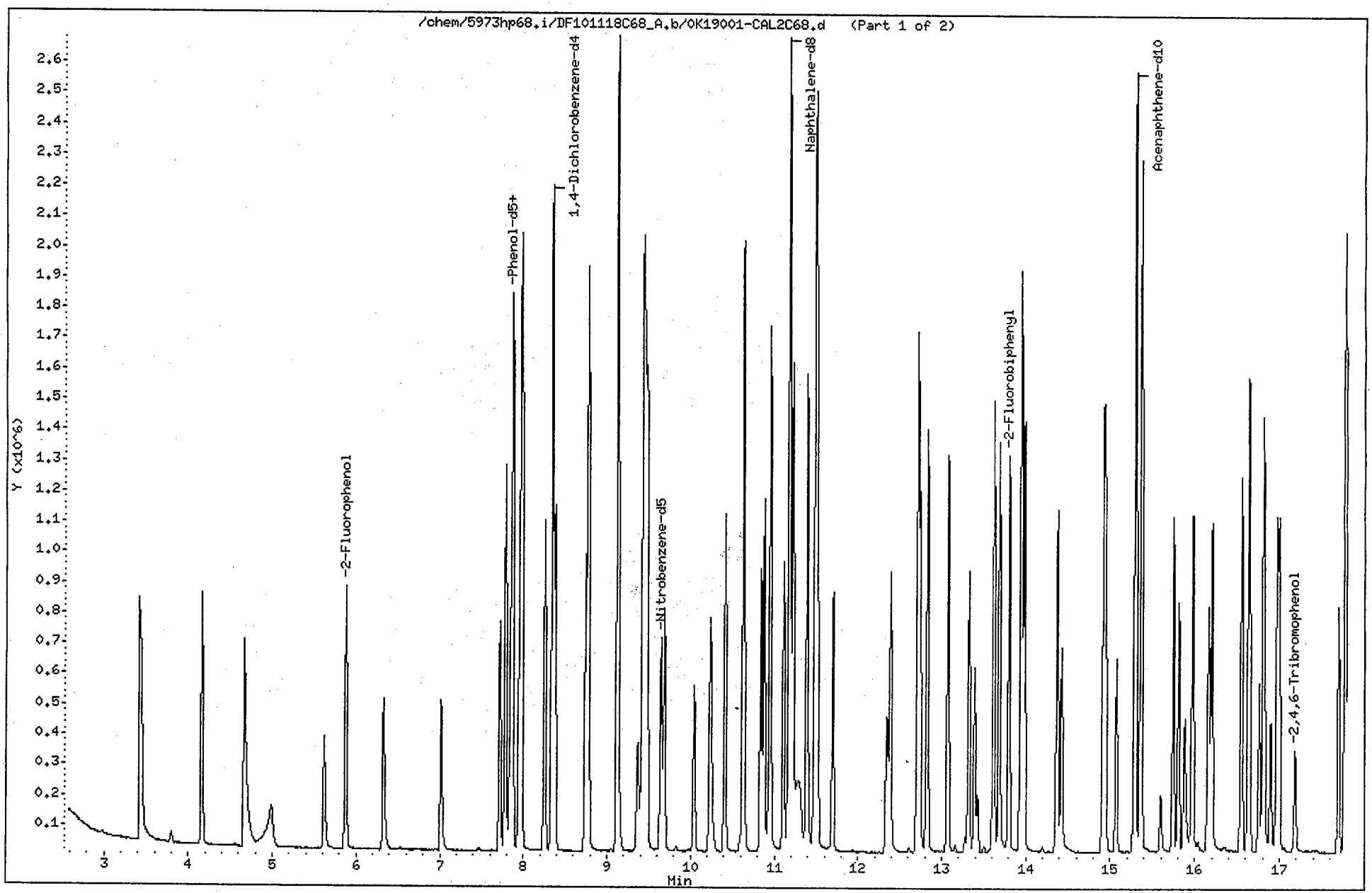
Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Vo	1000.00000	Volume of sample extracted (mL)
Vi	2.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	ON-COL (NG)	SIMILARITY
* 1 1,4-Dichlorobenzene-d4	152	8.341	8.351	(1.000)	608751	40.0000		
* 2 Naphthalene-d8	136	11.172	11.188	(1.000)	2287934	40.0000		
* 3 Acenaphthene-d10	164	15.296	15.302	(1.000)	1224845	40.0000		
* 4 Phenanthrene-d10	188	18.731	18.758	(1.000)	1677542	40.0000		
* 5 Chrysene-d12	240	25.003	25.019	(1.000)	952275	40.0000		
* 6 Perylene-d12	264	28.144	28.144	(1.000)	632837	40.0000		
30 Benzyl Alcohol	108	8.773	8.821	(1.052)	150454	10.0000	10	
129 3,3'-Dimethylbenzidine	212	23.844	23.865	(0.954)	142332	10.0000	10	9488
132 3,3'-Dichlorobenzidine	252	25.083	25.099	(1.003)	53520	10.0000	10	8571

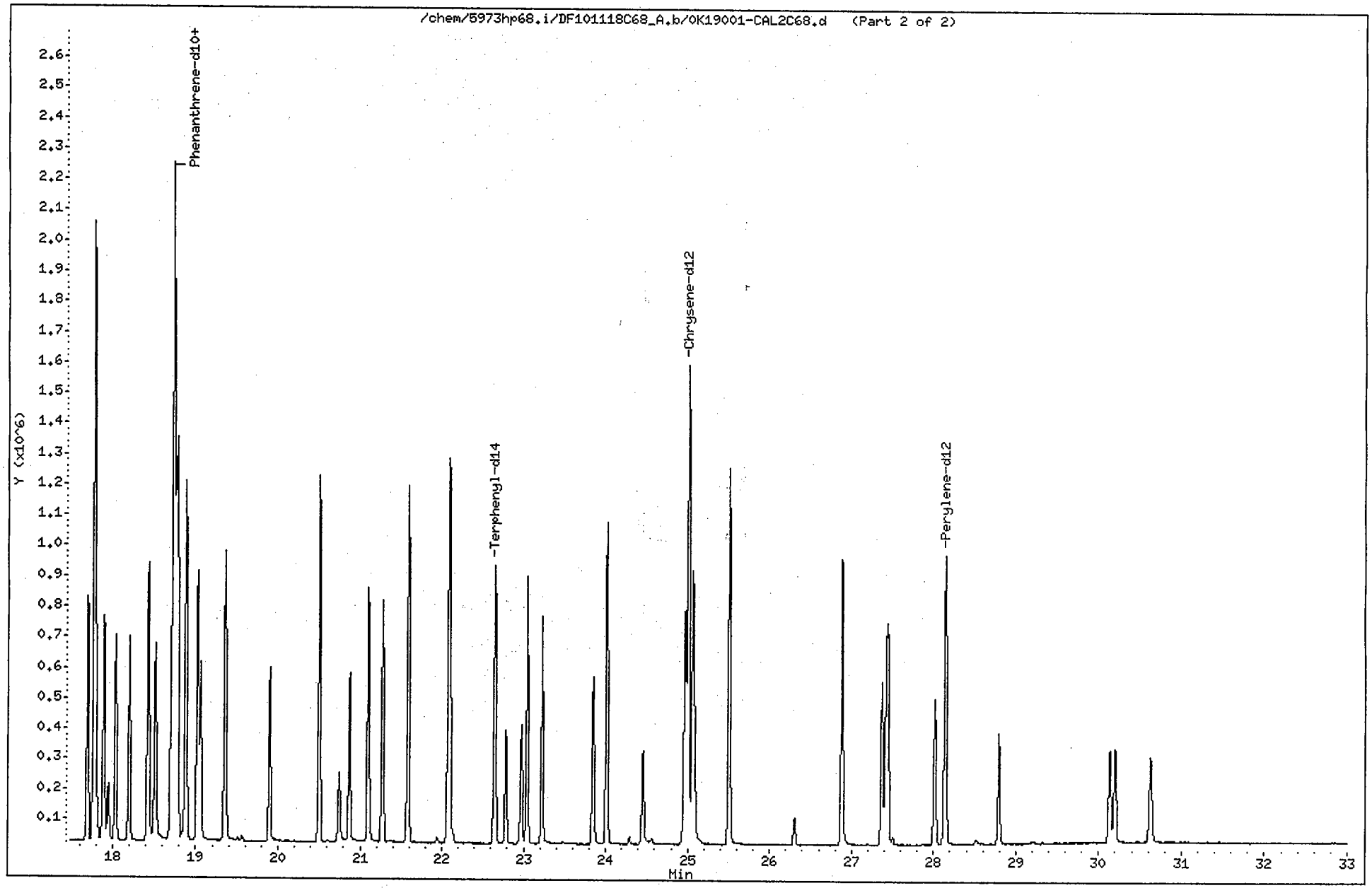
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Date : 19-NOV-2010 04:41
Client ID: SSTD010W5
Sample Info: 0K19001-CAL2:MEW
Volume Injected (uL): 2.0
Column phase: RTX-5MS

Instrument: 5973hp68.i
Operator: MEW
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101118C68_A.b/0K19001-CAL2C68.d
Date : 19-NOV-2010 04:41
Client ID: SSTD010W5
Sample Info: 0K19001-CAL2:MEW
Volume Injected (uL): 2.0
Column phase: RTX-5MS

Instrument: 5973hp68.i
Operator: MEW
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101118C68_A.b/0K19001-CAL2C68.d
Report Date: 29-Nov-2010 10:09

CompuChem

Semivolatile Report SW-846 Method 8270C Appendix IX

Data file : /chem/5973hp68.i/DF101118C68_A.b/0K19001-CAL2C68.d
Lab Smp Id: 0K19001-CAL2 Client Smp ID: SSTD010W5
Inj Date : 19-NOV-2010 04:41
Operator : MEW Inst ID: 5973hp68.i
Smp Info : 0K19001-CAL2:MEW
Misc Info : SSTD010W5
Comment : 2008 MDLS SOIL/ 2007 WATER
Method : /chem/5973hp68.i/DF101118C68_A.b/8270CMASTERDODv5.m
Meth Date : 27-Nov-2010 07:30 spruskin Quant Type: ISTD
Cal Date : 19-NOV-2010 04:41 Cal File: 0K19001-CAL2C68.d
Als bottle: 3 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SLP1119.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Vt/(Vo * Vi) * CpndVariable

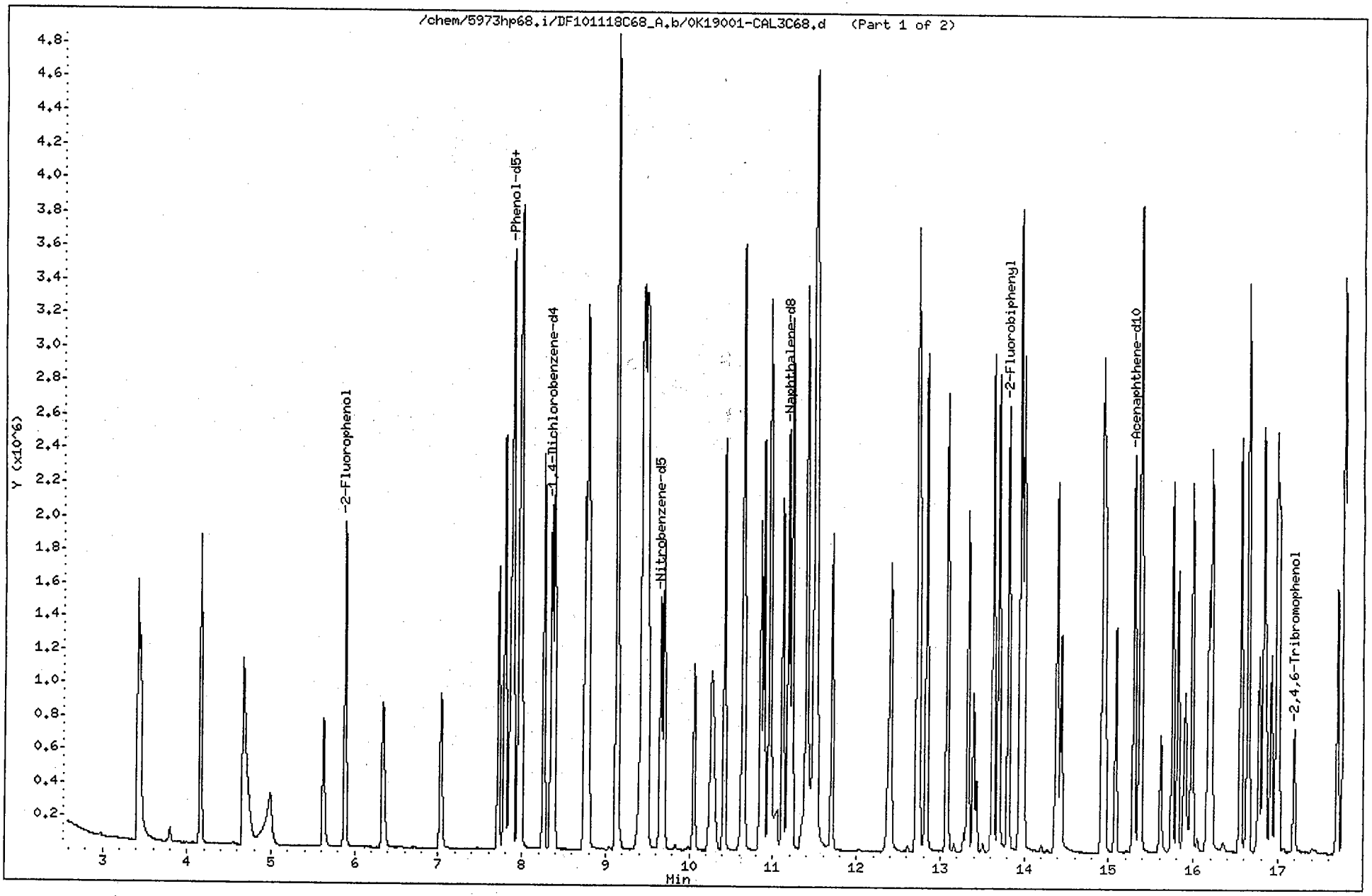
Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Vo	1000.00000	Volume of sample extracted (mL)
Vi	2.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	ON-COL (NG)	SIMILARITY
* 1	1,4-Dichlorobenzene-d4	152	8.346	8.351	(1.000)	558915	40.0000		
* 2	Naphthalene-d8	136	11.177	11.188	(1.000)	2106708	40.0000		
* 3	Acenaphthene-d10	164	15.296	15.302	(1.000)	1064222	40.0000		
* 4	Phenanthrene-d10	188	18.731	18.758	(1.000)	1524586	40.0000		
* 5	Chrysene-d12	240	25.008	25.019	(1.000)	1010024	40.0000		
* 6	Perylene-d12	264	28.144	28.144	(1.000)	618377	40.0000		
30	Benzyl Alcohol	108	8.779	8.821	(1.052)	276068	20.0000	20	
129	3,3'-Dimethylbenzidine	212	23.849	23.865	(0.954)	340457	20.0000	21	9516
132	3,3'-Dichlorobenzidine	252	25.083	25.099	(1.003)	134559	20.0000	22	8611

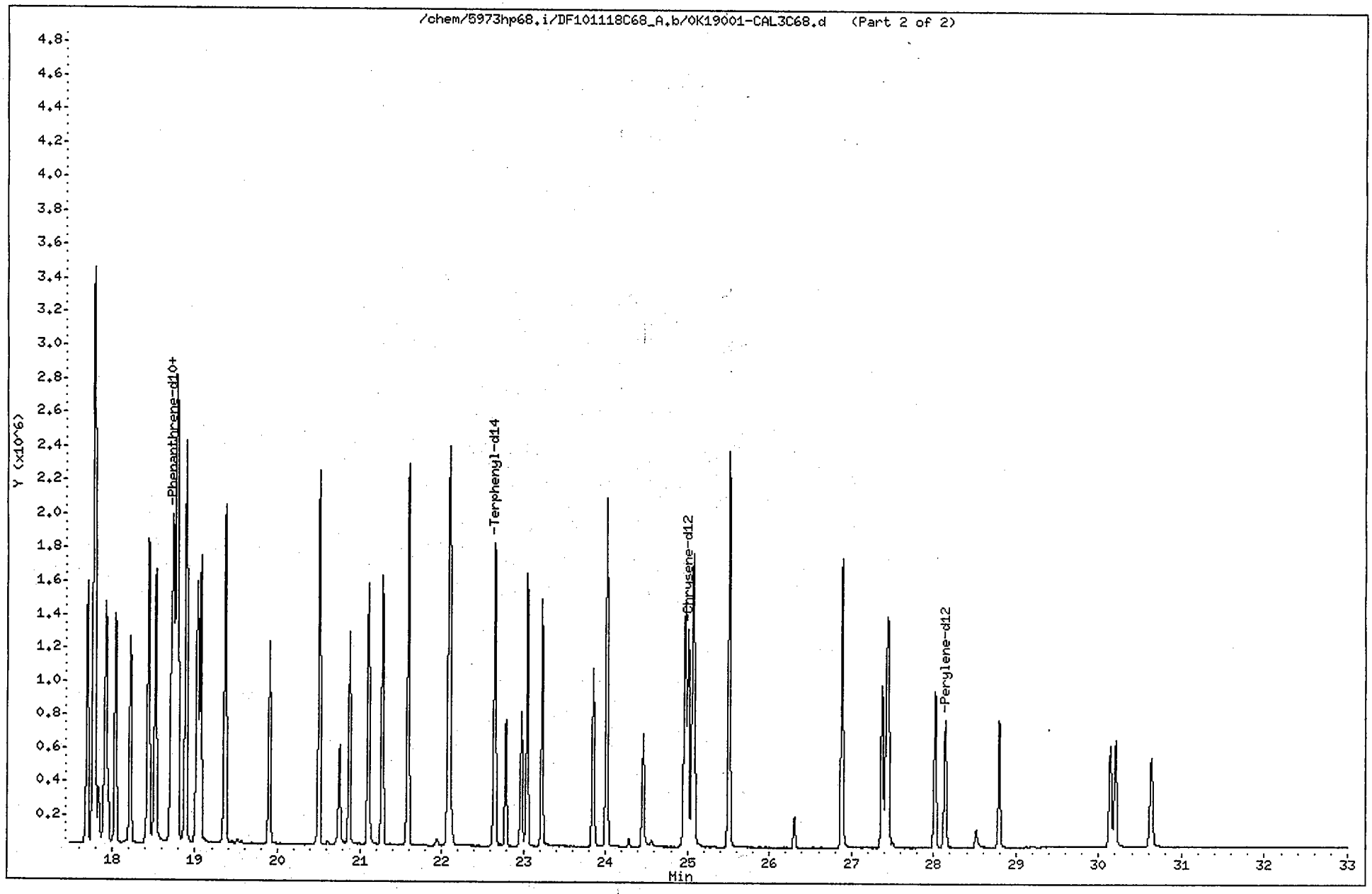
Data File: /chem/5973hp68.i/DF101118C68_A.b/0K19001-CAL3C68.d
Date : 19-NOV-2010 05:23
Client ID: SSTD025W5
Sample Info: 0K19001-CAL3:MEW
Volume Injected (uL): 2.0
Column phase: RTX-5MS

Instrument: 5973hp68.i
Operator: MEW
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101118C68_A.b/0K19001-CAL3C68.d
Date : 19-NOV-2010 05:23
Client ID: SSTD025W5
Sample Info: 0K19001-CAL3:MEW
Volume Injected (uL): 2.0
Column phase: RTX-5MS

Instrument: 5973hp68.i
Operator: MEW
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101118C68_A.b/0K19001-CAL3C68.d
Report Date: 29-Nov-2010 10:09

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Data file : /chem/5973hp68.i/DF101118C68_A.b/0K19001-CAL3C68.d
Lab Smp Id: 0K19001-CAL3 Client Smp ID: SSTD025W5
Inj Date : 19-NOV-2010 05:23
Operator : MEW Inst ID: 5973hp68.i
Smp Info : 0K19001-CAL3:MEW
Misc Info : SSTD025W5
Comment : 2008 MDLS SOIL/ 2007 WATER
Method : /chem/5973hp68.i/DF101118C68_A.b/8270CMASTERDODv5.m
Meth Date : 27-Nov-2010 07:30 spruskin Quant Type: ISTD
Cal Date : 19-NOV-2010 05:23 Cal File: 0K19001-CAL3C68.d
Als bottle: 4 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SLP1119.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Vo	1000.00000	Volume of sample extracted (mL)
Vi	2.00000	Volume injected (uL)

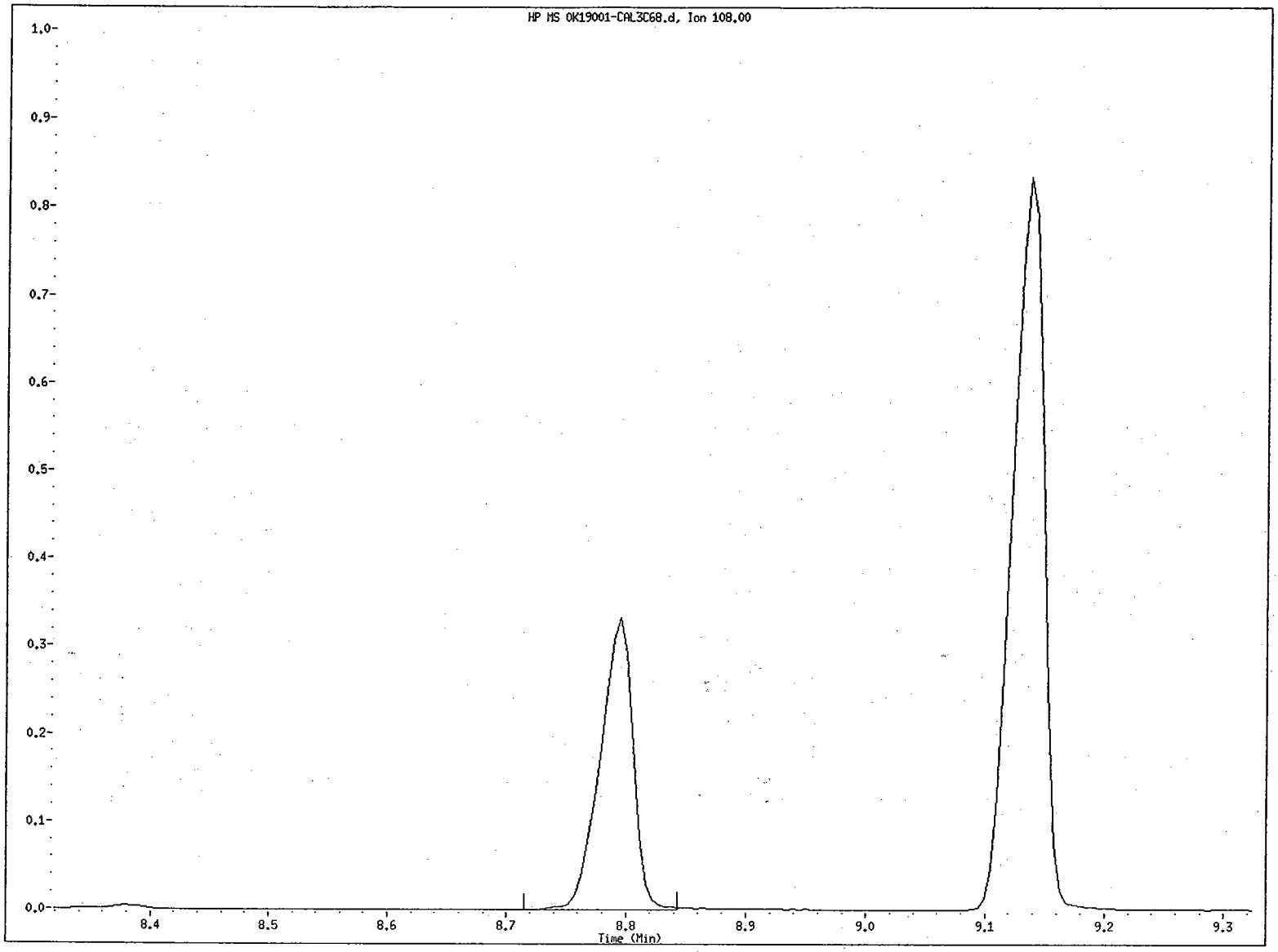
Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	ON-COL (NG)	SIMILARITY
* 1	1,4-Dichlorobenzene-d4	152	8.346	8.351	(1.000)	535754	40.0000		
* 2	Naphthalene-d8	136	11.183	11.188	(1.000)	2017480	40.0000		
* 3	Acenaphthene-d10	164	15.296	15.302	(1.000)	989792	40.0000		
* 4	Phenanthrene-d10	188	18.737	18.758	(1.000)	1376102	40.0000		
* 5	Chrysene-d12	240	25.008	25.019	(1.000)	808796	40.0000		
* 6	Perylene-d12	264	28.144	28.144	(1.000)	496601	40.0000		
30	Benzyl Alcohol	108	8.795	8.821	(1.054)	630950	50.0000	48	(H)
129	3,3'-Dimethylbenzidine	212	23.849	23.865	(0.954)	646153	50.0000	50	9508
132	3,3'-Dichlorobenzidine	252	25.083	25.099	(1.003)	284498	50.0000	55	8588

QC Flag Legend

H - Operator selected an alternate compound hit.

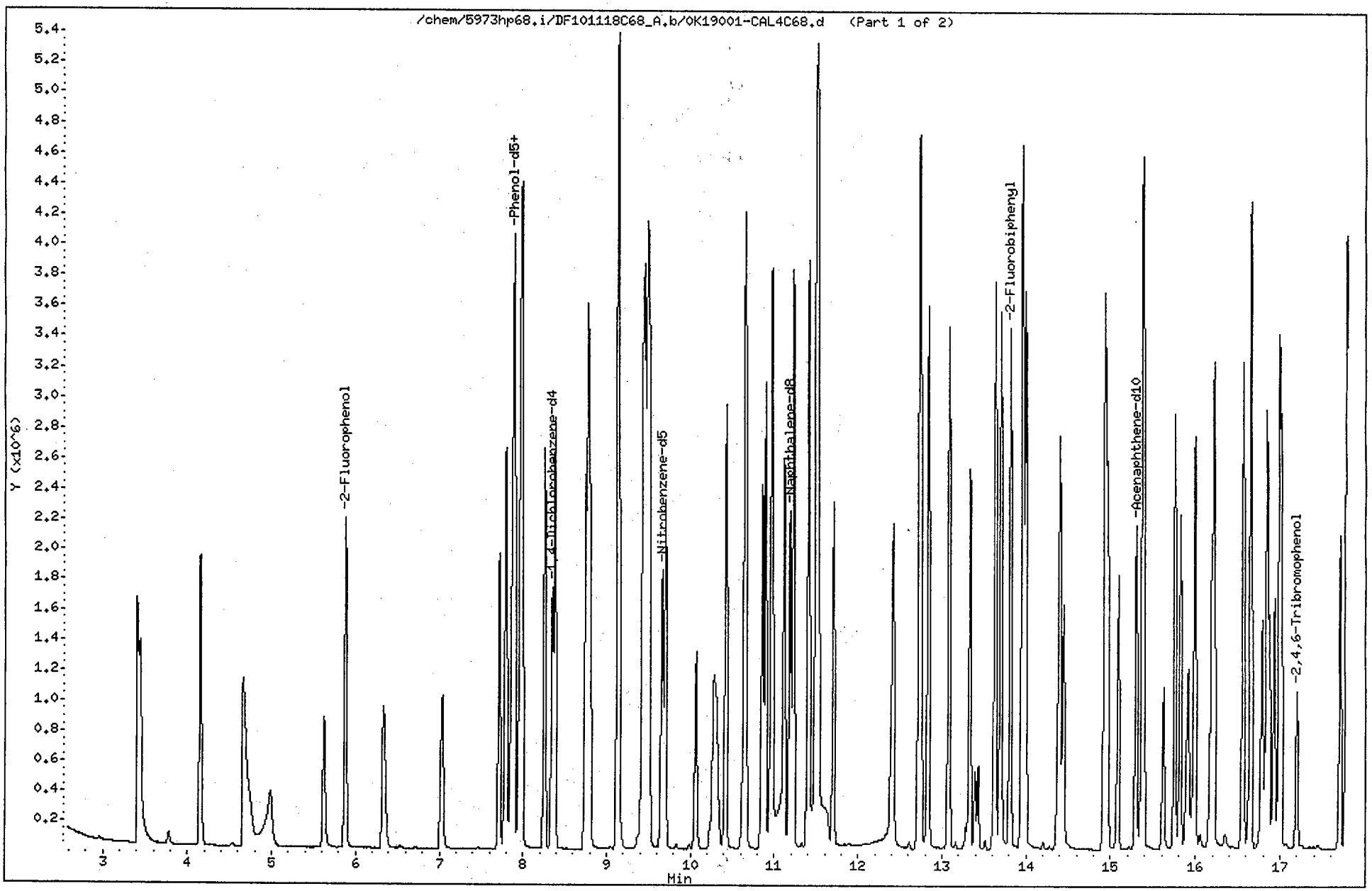
Benzyl Alcohol CAS Number 100-51-6 Area = 630950 User selected hit



File name: /chem/5973hp68.i/DF101118C68_A.b/0K19001-CAL3C68.d
Client ID: SSTD025W5
Instrument ID: 5973hp68.i
Injection Date and Time: 19-NOV-2010 05:23
Retention Time: 8.79
Operator ID: MEW

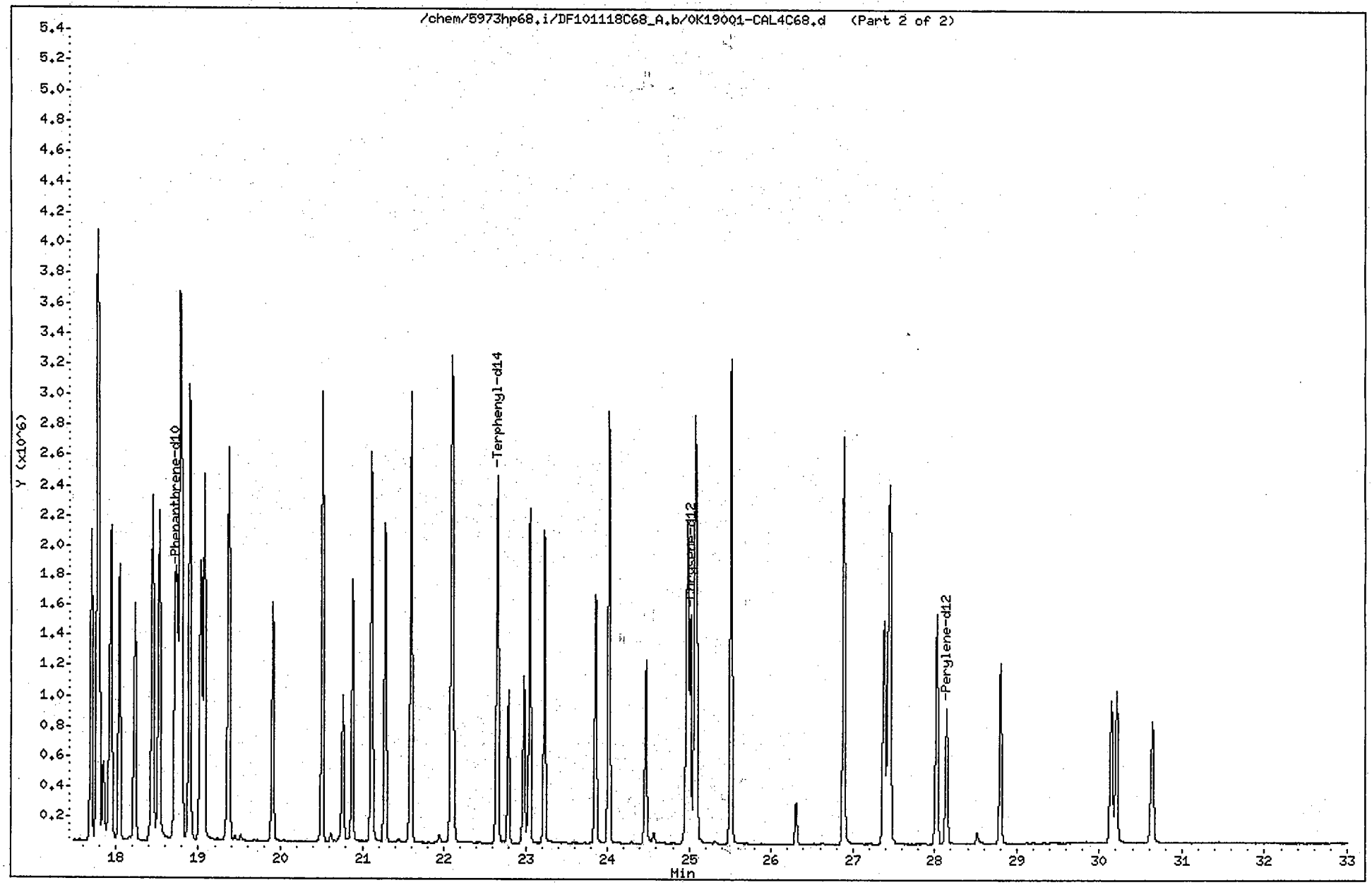
Data File: /chem/5973hp68.i/DF101118C68_A.b/0K19001-CAL4C68.d
Date : 19-NOV-2010 06:06
Client ID: SSTD040W5
Sample Info: 0K19001-CAL4:MEW
Volume Injected (uL): 2.0
Column phase: RTX-5MS

Instrument: 5973hp68.i
Operator: MEW
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101118C68_A.b/0K19001-CAL4C68.d
Date : 19-NOV-2010 06:06
Client ID: SSTD040W5
Sample Info: 0K19001-CAL4:MEW
Volume Injected (uL): 2.0
Column phase: RTX-5MS

Instrument: 5973hp68.i
Operator: MEW
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101118C68_A.b/0K19001-CAL4C68.d
Report Date: 29-Nov-2010 10:09

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Data file : /chem/5973hp68.i/DF101118C68_A.b/0K19001-CAL4C68.d
Lab Smp Id: 0K19001-CAL4 Client Smp ID: SSTD040W5
Inj Date : 19-NOV-2010 06:06
Operator : MEW Inst ID: 5973hp68.i
Smp Info : 0K19001-CAL4:MEW
Misc Info : SSTD040W5
Comment : 2008 MDLS SOIL/ 2007 WATER
Method : /chem/5973hp68.i/DF101118C68_A.b/8270CMASTERDODv5.m
Meth Date : 27-Nov-2010 07:30 spruskin Quant Type: ISTD
Cal Date : 19-NOV-2010 06:06 Cal File: 0K19001-CAL4C68.d
Als bottle: 5 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SLP1119.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Vt/(Vo * Vi) * CpndVariable

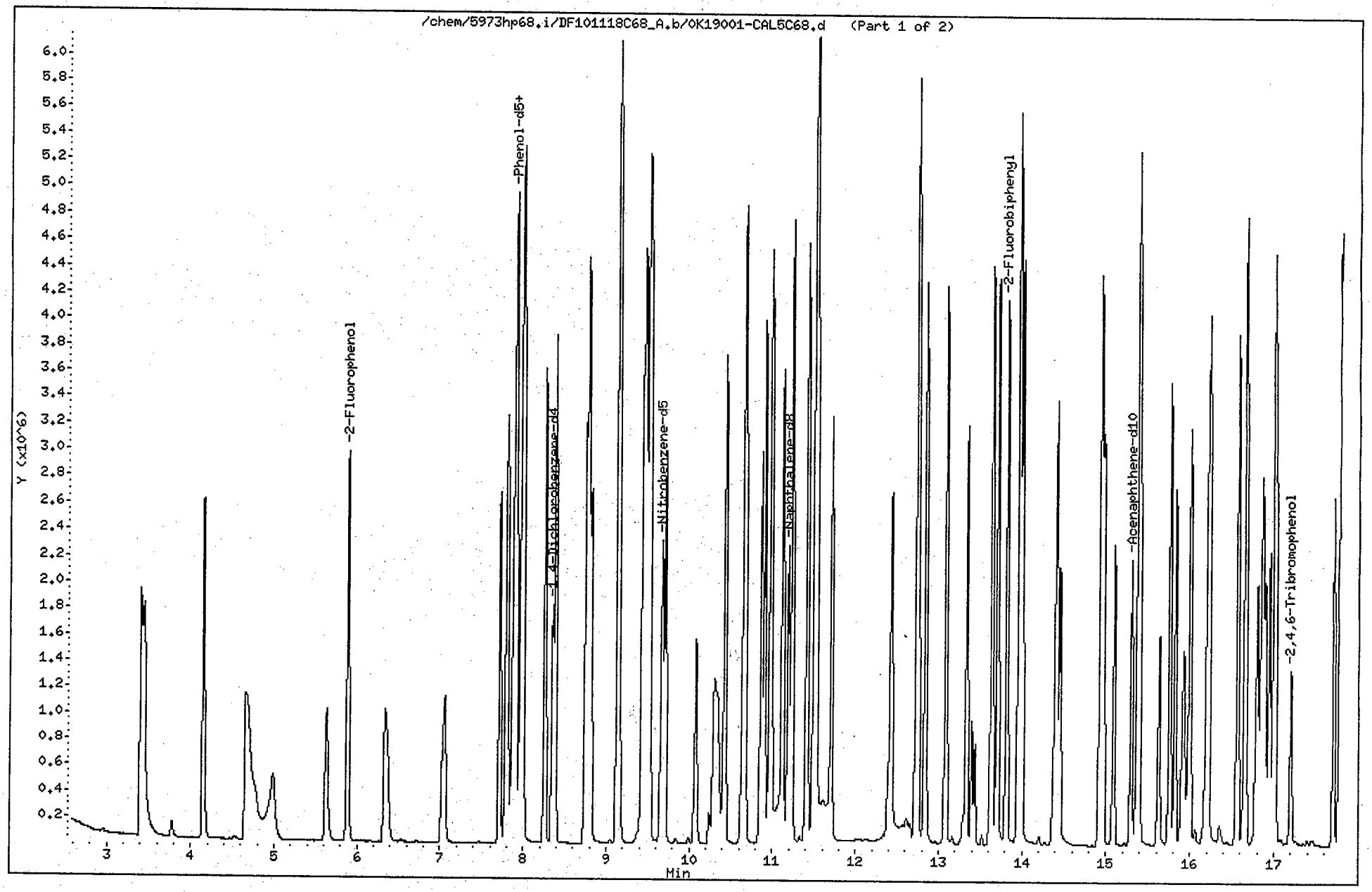
Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Vo	1000.00000	Volume of sample extracted (mL)
Vi	2.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	ON-COL (NG)	SIMILARITY
* 1 1,4-Dichlorobenzene-d4	152	8.346	8.351	(1.000)	452594	40.0000		
* 2 Naphthalene-d8	136	11.183	11.188	(1.000)	1787083	40.0000		
* 3 Acenaphthene-d10	164	15.302	15.302	(1.000)	921424	40.0000		
* 4 Phenanthrene-d10	188	18.742	18.758	(1.000)	1254534	40.0000		
* 5 Chrysene-d12	240	25.014	25.019	(1.000)	903563	40.0000		
* 6 Perylene-d12	264	28.144	28.144	(1.000)	573697	40.0000		
30 Benzyl Alcohol	108	8.800	8.821	(1.054)	811003	80.0000	75	
129 3,3'-Dimethylbenzidine	212	23.854	23.865	(0.954)	1053488	80.0000	75	9542
132 3,3'-Dichlorobenzidine	252	25.094	25.099	(1.003)	517632	80.0000	86	8495

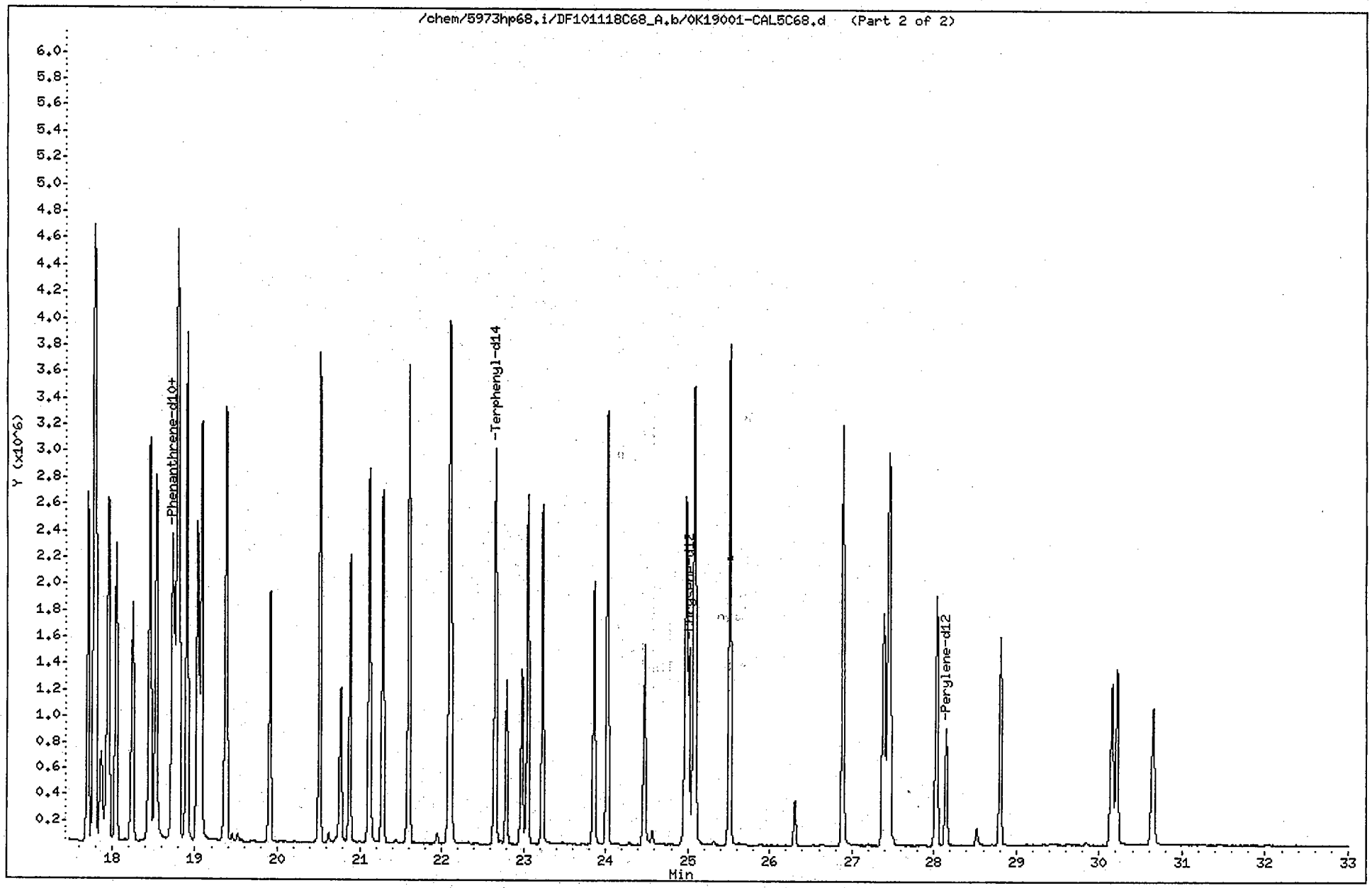
Data File: /chem/5973hp68.i/DF101118C68_A.b/0K19001-CAL5C68.d
Date : 19-NOV-2010 06:48
Client ID: SSTD050W5
Sample Info: 0K19001-CAL5:MEW
Volume Injected (uL): 2.0
Column phase: RTX-5MS

Instrument: 5973hp68.i
Operator: MEW
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101118C68_A.b/0K19001-CAL5C68.d
Date : 19-NOV-2010 06:48
Client ID: SSTD050W5
Sample Info: 0K19001-CAL5:MEW
Volume Injected (uL): 2.0
Column phase: RTX-5MS

Instrument: 5973hp68.i
Operator: MEW
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101118C68_A.b/0K19001-CAL5C68.d
Report Date: 29-Nov-2010 10:09

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Data file : /chem/5973hp68.i/DF101118C68_A.b/0K19001-CAL5C68.d
Lab Smp Id: 0K19001-CAL5 Client Smp ID: SSTD050W5
Inj Date : 19-NOV-2010 06:48
Operator : MEW Inst ID: 5973hp68.i
Smp Info : 0K19001-CAL5:MEW
Misc Info : SSTD050W5
Comment : 2008 MDLS SOIL/ 2007 WATER
Method : /chem/5973hp68.i/DF101118C68_A.b/8270CMASTERDODv5.m
Meth Date : 27-Nov-2010 07:30 spruskin Quant Type: ISTD
Cal Date : 19-NOV-2010 06:48 Cal File: 0K19001-CAL5C68.d
Als bottle: 6 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SLP1119.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Vt/(Vo * Vi) * CpndVariable

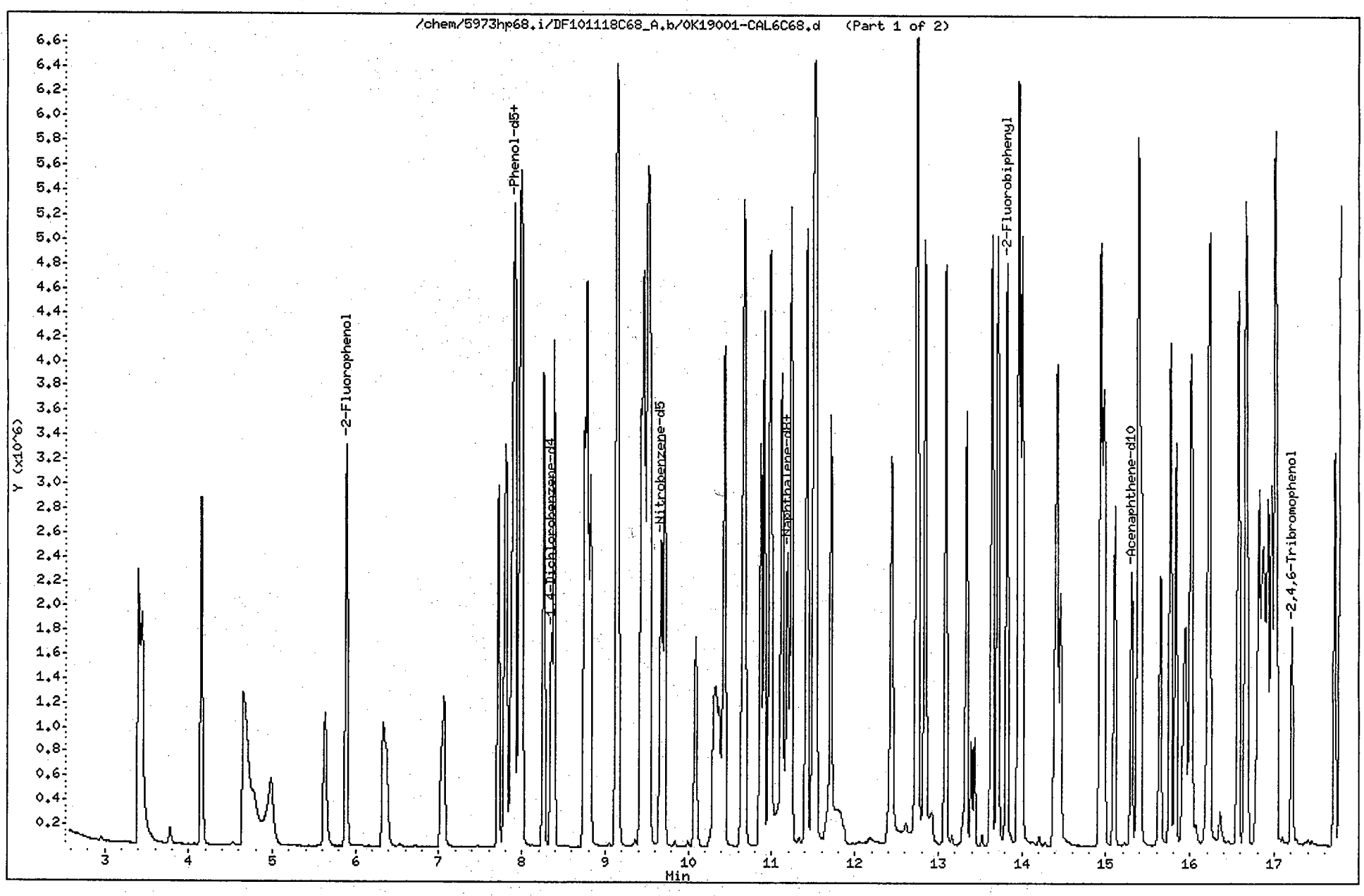
Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Vo	1000.00000	Volume of sample extracted (mL)
Vi	2.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	ON-COL (NG)	SIMILARITY
* 1 1,4-Dichlorobenzene-d4	152	8.346	8.351	(1.000)	501103	40.0000		
* 2 Naphthalene-d8	136	11.183	11.188	(1.000)	1908442	40.0000		
* 3 Acenaphthene-d10	164	15.302	15.302	(1.000)	922056	40.0000		
* 4 Phenanthrene-d10	188	18.747	18.758	(1.000)	1281397	40.0000		
* 5 Chrysene-d12	240	25.014	25.019	(1.000)	883115	40.0000		
* 6 Perylene-d12	264	28.144	28.144	(1.000)	583390	40.0000		
30 Benzyl Alcohol	108	8.816	8.821	(1.056)	1137502	100.000	96	
129 3,3'-Dimethylbenzidine	212	23.860	23.865	(0.954)	1300062	100.000	96	9545
132 3,3'-Dichlorobenzidine	252	25.094	25.099	(1.003)	631370	100.000	110	8556

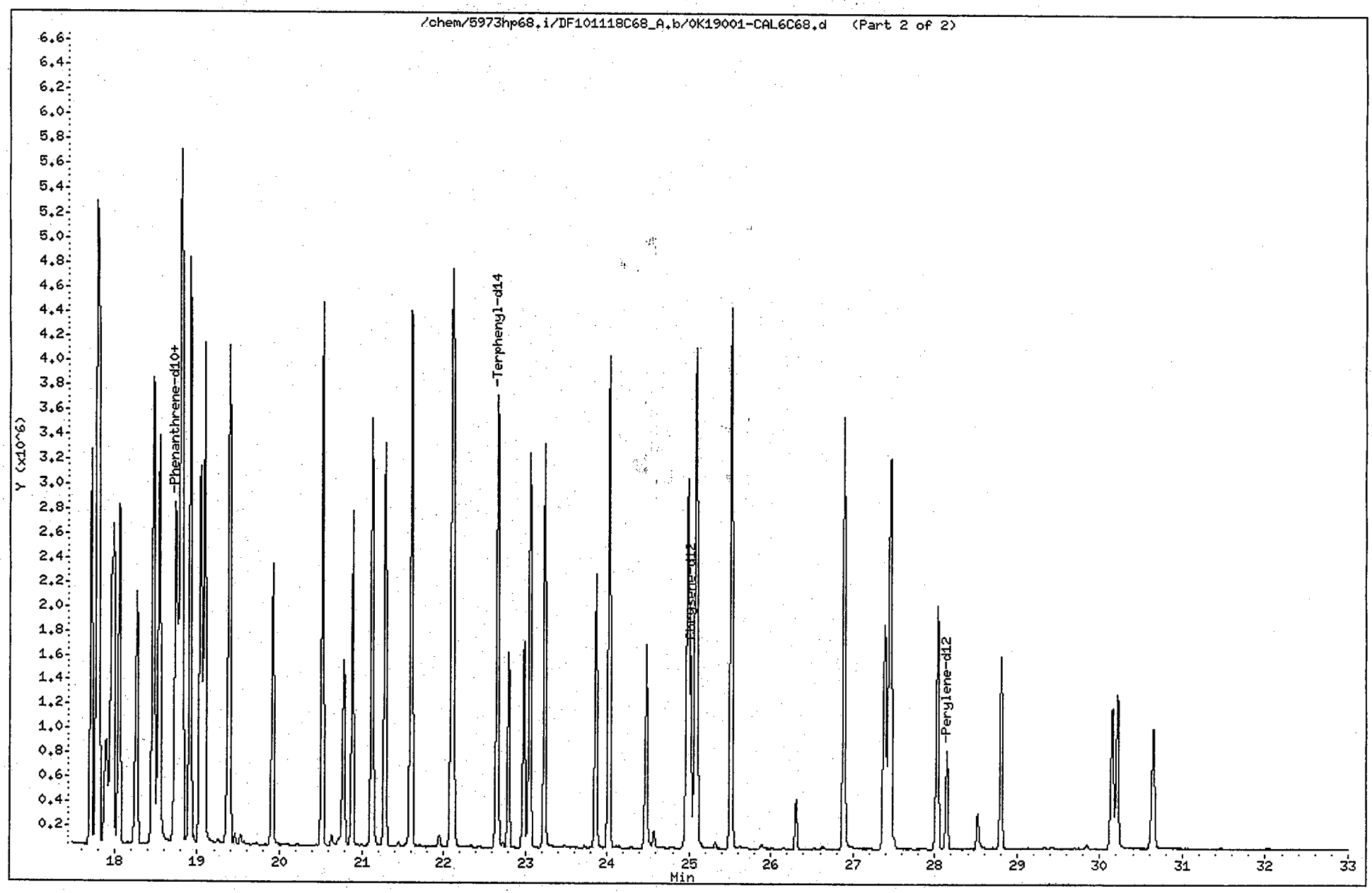
Data File: /chem/5973hp68.i/DF101118C68_A.b/0K19001-CAL6C68.d
Date : 19-NOV-2010 07:31
Client ID: SSTD060W5
Sample Info: 0K19001-CAL6:MEW
Volume Injected (uL): 2.0
Column phase: RTX-5MS

Instrument: 5973hp68.i
Operator: MEW
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101118C68_A.b/0K19001-CAL6C68.d
Date : 19-NOV-2010 07:31
Client ID: SSTD060W5
Sample Info: 0K19001-CAL6:MEW
Volume Injected (uL): 2.0
Column phase: RTX-5MS

Instrument: 5973hp68.i
Operator: MEW
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101118C68_A.b/0K19001-CAL6C68.d
Report Date: 29-Nov-2010 10:09

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Semivolatile Report SW-846 Method 8270C Appendix IX

Data file : /chem/5973hp68.i/DF101118C68_A.b/0K19001-CAL6C68.d
Lab Smp Id: 0K19001-CAL6 Client Smp ID: SSTD060W5
Inj Date : 19-NOV-2010 07:31
Operator : MEW Inst ID: 5973hp68.i
Smp Info : 0K19001-CAL6:MEW
Misc Info : SSTD060W5
Comment : 2008 MDLS SOIL/ 2007 WATER
Method : /chem/5973hp68.i/DF101118C68_A.b/8270CMASTERDODv5.m
Meth Date : 27-Nov-2010 07:30 spruskin Quant Type: ISTD
Cal Date : 19-NOV-2010 07:31 Cal File: 0K19001-CAL6C68.d
Als bottle: 7 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SLP1119.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Vo	1000.00000	Volume of sample extracted (mL)
Vi	2.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	ON-COL (NG)	SIMILARITY
* 1	1,4-Dichlorobenzene-d4	152	8.351	8.351	(1.000)	478600	40.0000		
* 2	Naphthalene-d8	136	11.188	11.188	(1.000)	1858153	40.0000		
* 3	Acenaphthene-d10	164	15.302	15.302	(1.000)	983051	40.0000		
* 4	Phenanthrene-d10	188	18.758	18.758	(1.000)	1478307	40.0000		
* 5	Chrysene-d12	240	25.019	25.019	(1.000)	913546	40.0000		
* 6	Perylene-d12	264	28.144	28.144	(1.000)	509385	40.0000		
30	Benzyl Alcohol	108	8.821	8.821	(1.056)	1308861	120.000	120	
129	3,3'-Dimethylbenzidine	212	23.865	23.865	(0.954)	1467482	120.000	110	9552
132	3,3'-Dichlorobenzidine	252	25.099	25.099	(1.003)	705020	120.000	120	8522

COMPUCHEM a Division of Liberty Analytical Corp
GC/MS SEMIVOLATILE RUN LOG
LOGBOOK 4Z(4) 2 (5973hp68)

DATE 11/19/10 INITIAL TIME OF TUNE 0314
TIME TUNE EXPIRES 1514
SHIFT/S (A) ____ (B) ____ (C) ✓
METHOD 8270C APIX

336

PREVENTIVE MAINTENANCE none

	SEQUENCE#		FILENAME		DATE	TIME	CLIENT ID	SDG#	AMOUNT INJECTED	CHEMIST	COMMENTS
1	0K19001		0K19001-TUNIC168	/	11/19/10	0314	DFTPPW5	—	2µL	MEW	SCD=LCD
2	F101118C		-CAL1	/	/ /	0359	SSTD005W5	—			0J21003 1/24/11
3			-CAL2	/	/ /	0441	010	—			4
4			-CAL3	/	/ /	0523	025	—			5
5			-CAL4	/	/ /	0606	040	—			0K15011
6			-CAL5	/	/ /	0648	050	—			0J21004
7			-CAL6	/	/ /	0731	060	—			0K16018
8			-CALA 9	/	/ /	0813	SSTD005W6	—			0LL9003
9			-CALB 8	/	/ /	0855	010	—			4
10			-CALC 9	/	/ /	0938	025	—			5
11			-CALD A	/	/ /	1020	040	—			6
12			-CALE B	/	/ /	1102	050	—			7
13			-CALF C	/	/ /	1145	060	—			8
14			-SCV1 1/26	/	/ /	1753	SSTD025VAL1	—			0J05003 1/25/11
15			-SCV2	/	/ /	1835	2	—			4
16			-SCV3	/	/ /	1917	3	—			5
17			-SCV4	/	/ /	2000	4	—			6
18			-CALGD	/	/ /	1338	SSTD005W7			SCP	0K09013 2/2/11
19			-CALHB	/	/ /	1421	010				0K09014
20			-CALIR	/	/ /	1503	025				4
21			-CALJG	/	/ /	1546	040				5
22			-CALKH	/	/ /	1628	050				7
23			-CALLP	/	/ /	1711	060				8
24			-TUN2 1/26	/	/ /	1318	DFTPPW7				9

DFTPP Lot #/Exp. Date: OF18005 12/17/10
Calibration STD Lot#/Exp. Date: See Comments
Internal STD Lot#/Exp. Date: 0K17011 5/17/11
Methylene Chloride Lot#/Exp. Date: J395008 11/28/11
Column Type: RTX-5MS 0.32mm

The presence of the Chemist's/Analyst's employee ID number, or signature, on this run log attests that strict compliance with the method's SOP has occurred. Any SOP deviations require documentation by the responsible chemist/analyst together with the chemist's/analyst's initials and the initials of the lab supervisor and a QA department representative, signifying approval of the deviation.

REVIEWED BY: _____ DATE 11/22/10

10/06/08: jr

R101118C69-A

continued on next page

Sub/Ist SLP119

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Instrument ID: 5973HP68 Calibration Date(s): 11/19/10 11/19/10

Column: RTX-5MS ID: 0.32 (mm) Calibration Time(s): 0813 1145

LAB FILE ID: RF10: 0K19001-CAL7RF20: 0K19001-CAL8RF50: 0K19001-CAL9
RF80: 0K19001-CALARF100: 0K19001-CALRF120: 0K19001-CAL

COMPOUND	RF10	RF20	RF50	RF80	RF100	RF120
Acetophenone	0.645	0.627	0.580	0.537	0.521	0.501

FORM 6
SEMIVOLATILE INITIAL CALIBRATION DATA

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Instrument ID: 5973HP68 Calibration Date(s): 11/19/10 11/19/10

Column: RTX-5MS ID: 0.32 (mm) Calibration Time(s): 0813 1145

COMPOUND	CURVE	COEFFICENT A1	%RSD OR R^2	MAX %RSD OR R^2
Acetophenone	AVRG	0.56865761	10.341	15.000

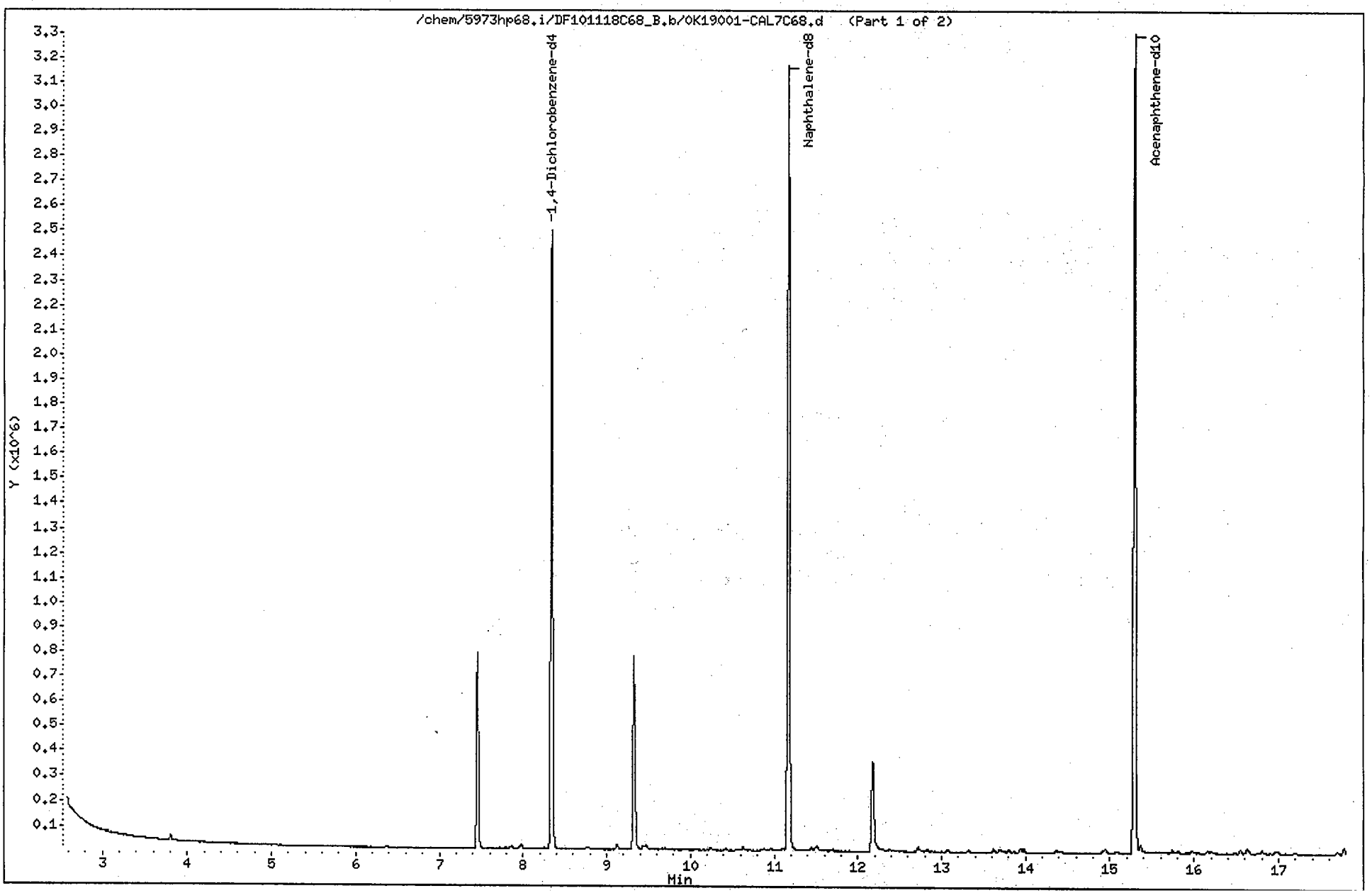
Average %RSD test result.

Calculate Average %RSD: 8.987723351
Maximum Average %RSD: 15.00000000

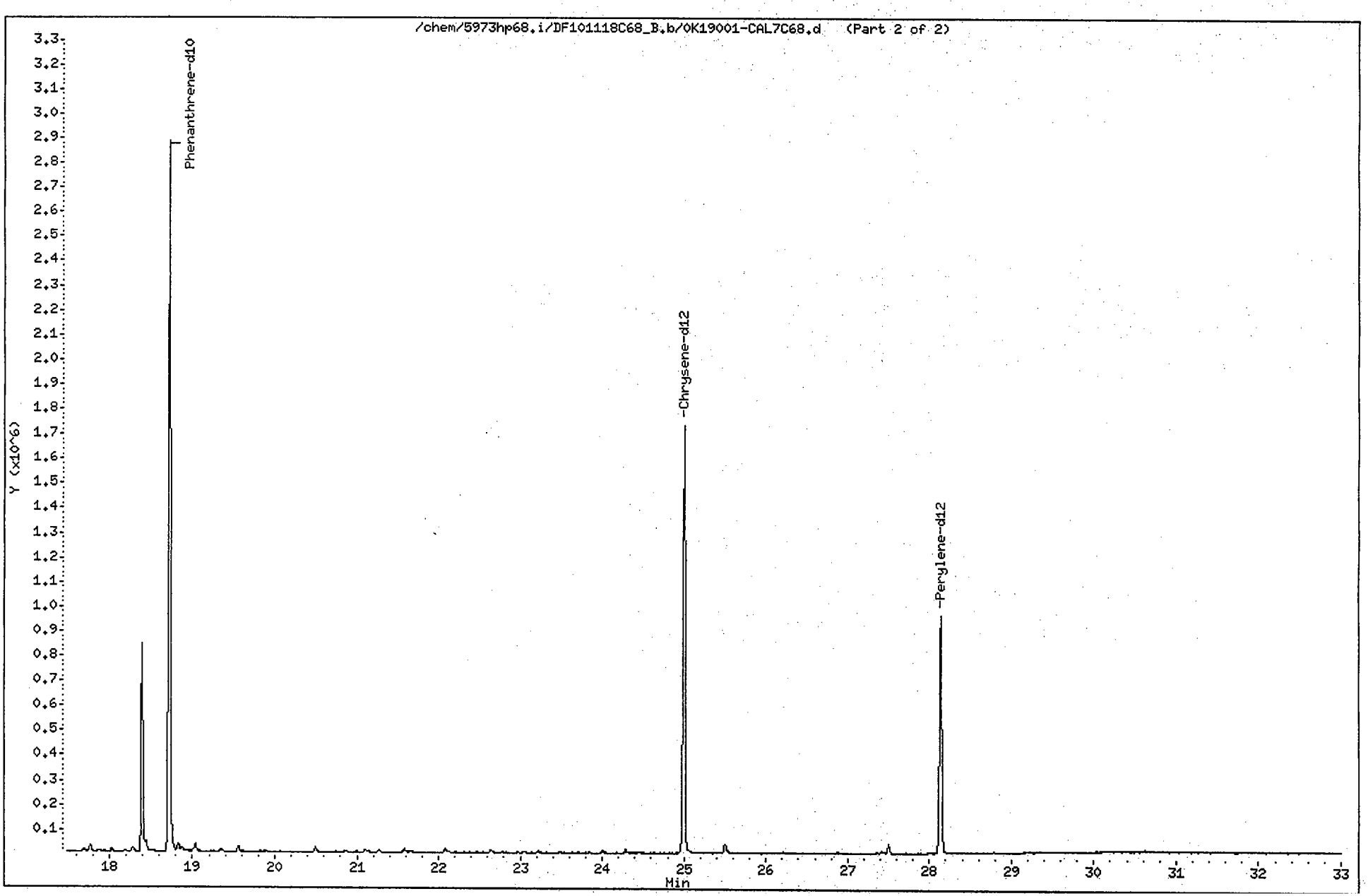
Note: Passes Average %RSD Test.

Data File: /chem/5973hp68.i/DF101118C68_B.b/0K19001-CAL7C68.d
Date : 19-NOV-2010 08:13
Client ID: SSTD005W6
Sample Info: 0K19001-CAL7:MEW
Volume Injected (uL): 2.0
Column phase: RTX-5MS

Instrument: 5973hp68.i
Operator: MEW
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101118C68_B.b/0K19001-CAL7C68.d
Date : 19-NOV-2010 08:13
Client ID: SSTD005W6
Instrument: 5973hp68.i
Sample Info: 0K19001-CAL7:MEW
Volume Injected (uL): 2.0
Operator: MEW
Column phase: RTX-5MS
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101118C68_B.b/0K19001-CAL7C68.d
Report Date: 29-Nov-2010 10:14

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Semivolatile Report SW-846 Method 8270C Appendix IX

Data file : /chem/5973hp68.i/DF101118C68_B.b/0K19001-CAL7C68.d
Lab Smp Id: 0K19001-CAL7 Client Smp ID: SSTD005W6
Inj Date : 19-NOV-2010 08:13
Operator : MEW Inst ID: 5973hp68.i
Smp Info : 0K19001-CAL7:MEW
Misc Info : SSTD005W6
Comment : 2008 MDLS SOIL/ 2007 WATER
Method : /chem/5973hp68.i/DF101118C68_B.b/8270CMASTERDODv5.m
Meth Date : 29-Nov-2010 10:14 keng Quant Type: ISTD
Cal Date : 19-NOV-2010 08:13 Cal File: 0K19001-CAL7C68.d
Als bottle: 8 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: Spike.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Vo	1000.00000	Volume of sample extracted (mL)
Vi	2.00000	Volume injected (uL)

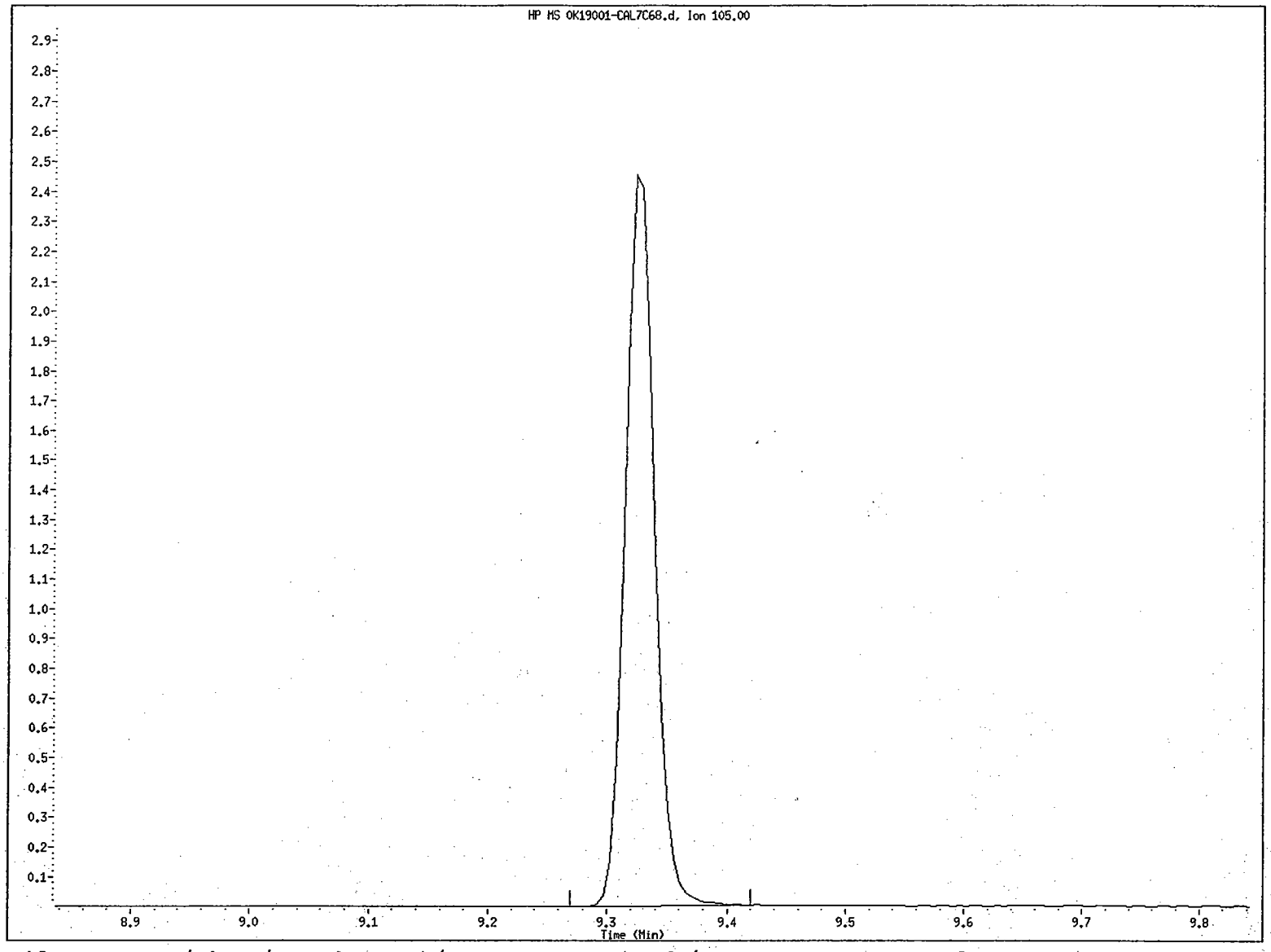
Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	AMOUNTS ON-COL (NG)	SIMILARITY
* 1	1,4-Dichlorobenzene-d4	152	8.346	8.346	(1.000)	648212	40.0000		
* 2	Naphthalene-d8	136	11.172	11.172	(1.000)	2591208	40.0000		
* 3	Acenaphthene-d10	164	15.296	15.296	(1.000)	1394886	40.0000		
* 4	Phenanthrene-d10	188	18.726	18.726	(1.000)	2074106	40.0000		
* 5	Chrysene-d12	240	25.003	25.003	(1.000)	1131636	40.0000		
* 6	Perylene-d12	264	28.139	28.139	(1.000)	614031	40.0000		
21	Benzaldehyde	77	7.454	7.470	(0.893)	293756	10.0000	10	8998
33	Acetophenone	105	9.323	9.339	(0.835)	418106	10.0000	10	0(M)
57	Caprolactam	113	12.182	12.299	(1.090)	110247	10.0000	10	8990
106	Atrazine	215	18.400	18.448	(0.983)	84892	10.0000	10	0(M)

QC Flag Legend

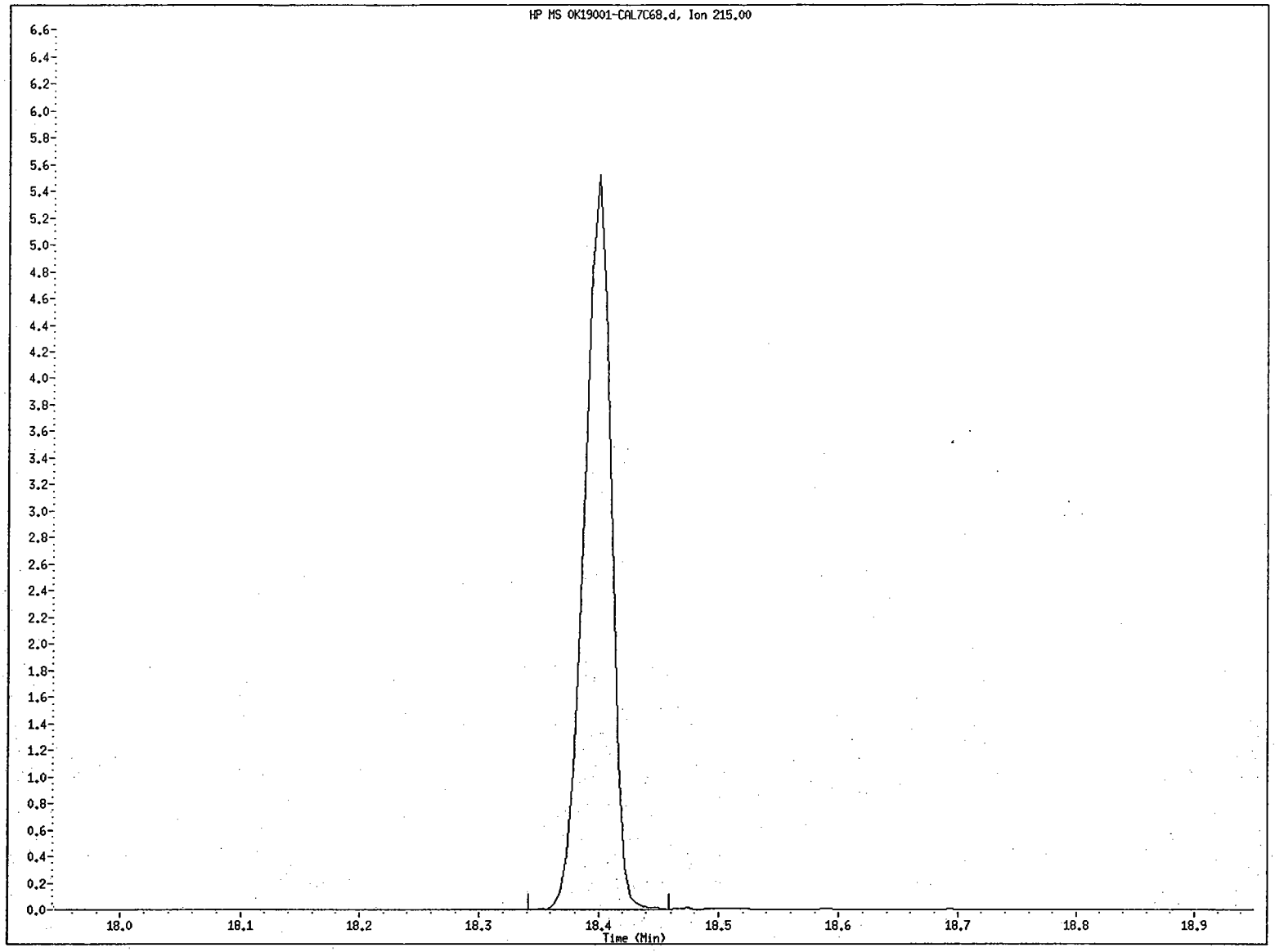
M - Compound response manually integrated.

Acetophenone CAS Number 98-86-2 Area = 418106 Manually integrated



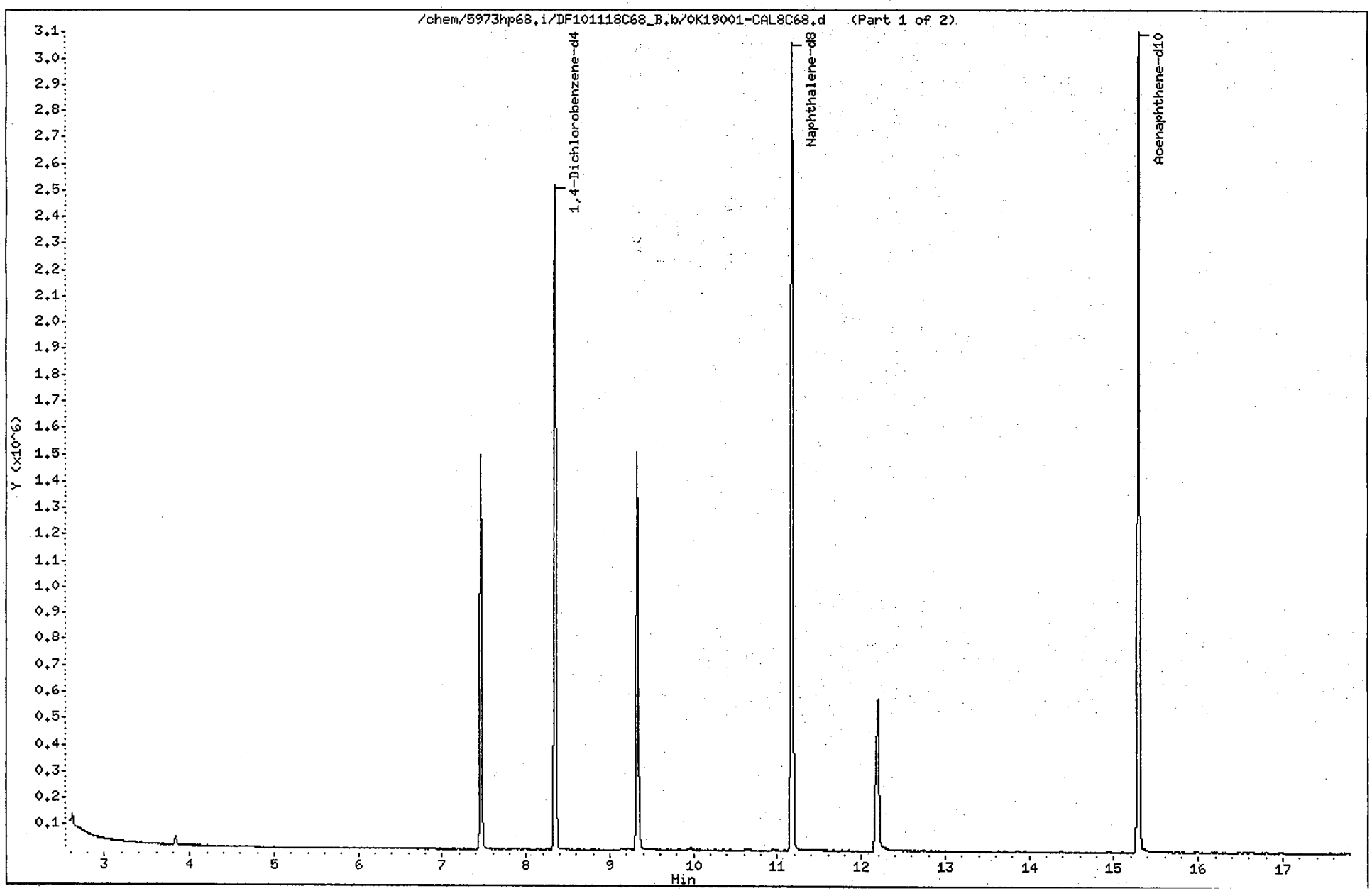
File name: /chem/5973hp68.i/DF101118C68_B.b/0K19001-CAL7C68.d
Client ID: SSTD005W6
Instrument ID: 5973hp68.i
Injection Date and Time: 19-NOV-2010 08:13
Retention Time: 9.32
Operator ID: MEW

Atrazine CAS Number 1912-24-9 Area = 84892 Manually integrated

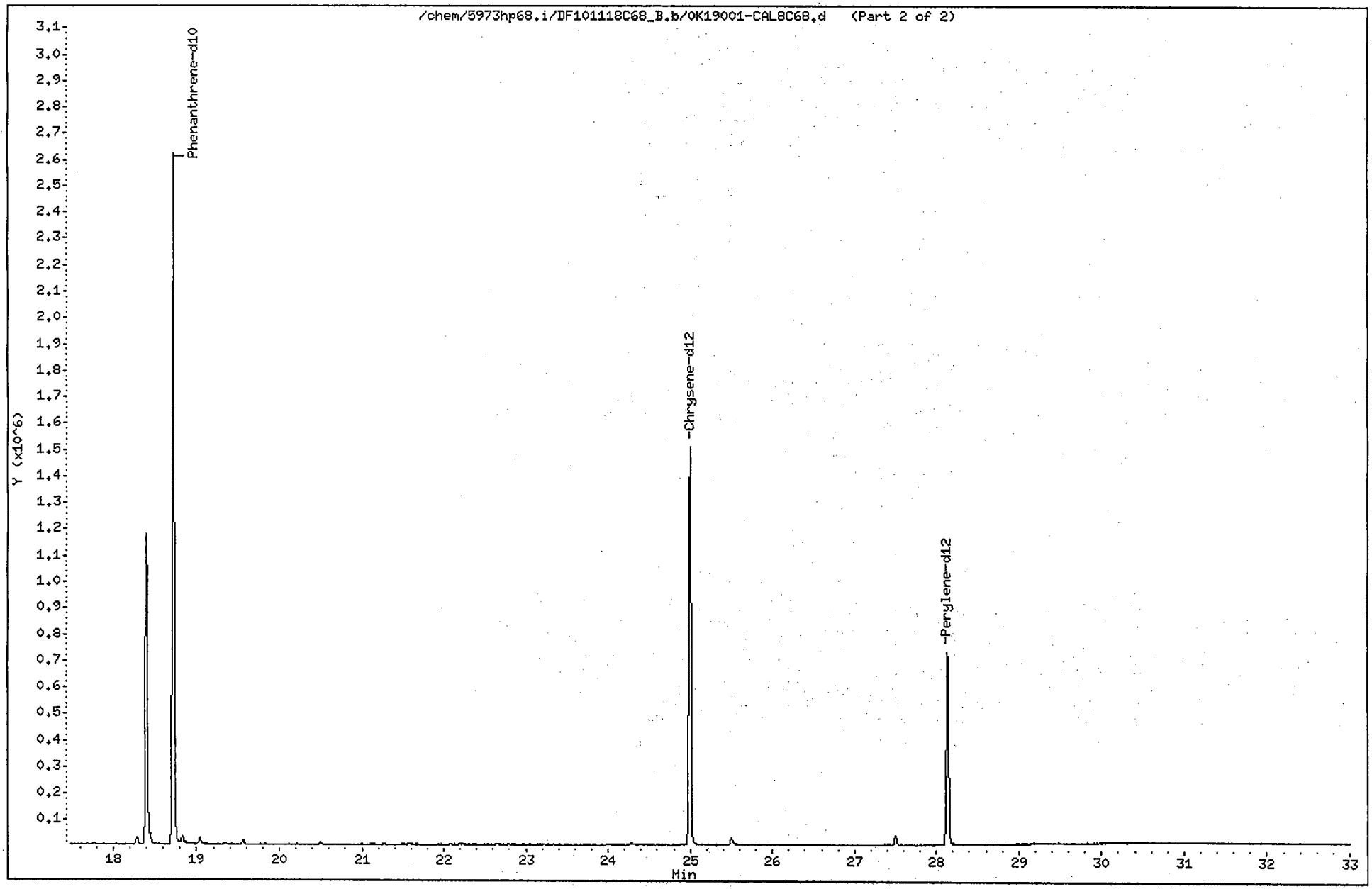


File name: /chem/5973hp68.i/DF101118C68_B.b/0K19001-CAL7C68.d
Client ID: SSTD005W6
Instrument ID: 5973hp68.i
Injection Date and Time: 19-NOV-2010 08:13
Retention Time: 18.40
Operator ID: MEW

Data File: /chem/5973hp68.i/DF101118C68_B.b/0K19001-CAL8C68.d
Date : 19-NOV-2010 08:55
Client ID: SSTD010W6
Instrument: 5973hp68.i
Sample Info: 0K19001-CAL8:MEW
Volume Injected (uL): 2.0
Operator: MEW
Column phase: RTX-5MS
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101118C68_B.b/0K19001-CAL8C68.d
Date : 19-NOV-2010 08:55
Client ID: SSTD010W6
Instrument: 5973hp68.i
Sample Info: 0K19001-CAL8:MEW
Volume Injected (uL): 2.0
Operator: MEW
Column phase: RTX-5MS
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101118C68_B.b/0K19001-CAL8C68.d
Report Date: 29-Nov-2010 10:14

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Data file : /chem/5973hp68.i/DF101118C68_B.b/0K19001-CAL8C68.d
Lab Smp Id: 0K19001-CAL8 Client Smp ID: SSTD010W6
Inj Date : 19-NOV-2010 08:55
Operator : MEW Inst ID: 5973hp68.i
Smp Info : 0K19001-CAL8:MEW
Misc Info : SSTD010W6
Comment : 2008 MDLS SOIL/ 2007 WATER
Method : /chem/5973hp68.i/DF101118C68_B.b/8270CMASTERDODv5.m
Meth Date : 29-Nov-2010 10:14 keng Quant Type: ISTD
Cal Date : 19-NOV-2010 08:55 Cal File: 0K19001-CAL8C68.d
Als bottle: 9 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: Spike.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Vo	1000.00000	Volume of sample extracted (mL)
Vi	2.00000	Volume injected (uL)

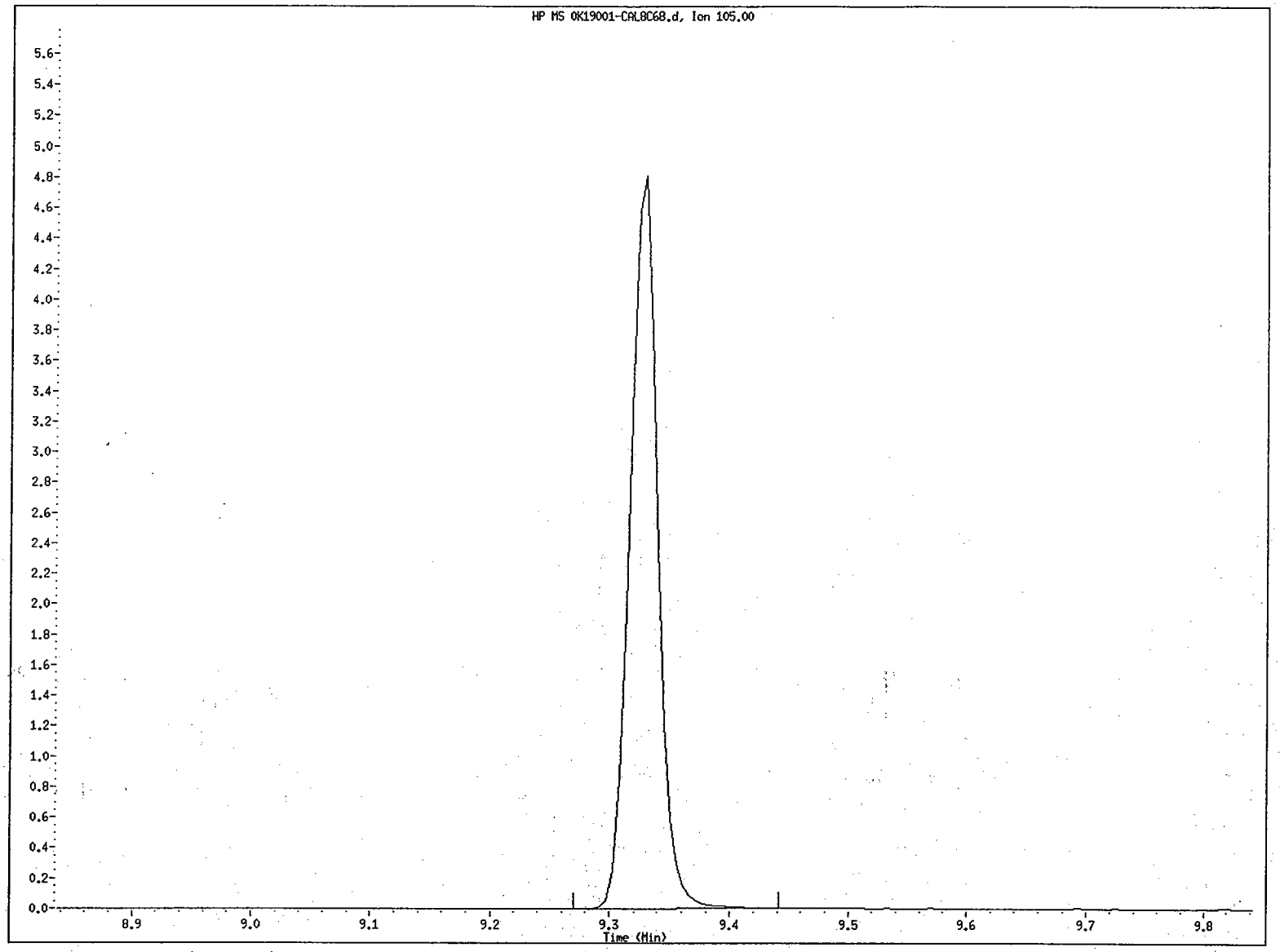
Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	ON-COL (NG)	SIMILARITY
* 1	1,4-Dichlorobenzene-d4	152	8.351	8.346	(1.000)	672243	40.0000		
* 2	Naphthalene-d8	136	11.177	11.172	(1.000)	2518799	40.0000		
* 3	Acenaphthene-d10	164	15.296	15.296	(1.000)	1314631	40.0000		
* 4	Phenanthrene-d10	188	18.726	18.726	(1.000)	1811331	40.0000		
* 5	Chrysene-d12	240	24.998	25.003	(1.000)	986826	40.0000		
* 6	Perylene-d12	264	28.134	28.139	(1.000)	463399	40.0000		
21	Benzaldehyde	77	7.459	7.470	(0.893)	554873	20.0000	19	8984
33	Acetophenone	105	9.329	9.339	(0.835)	790103	20.0000	20	0(M) /
57	Caprolactam	113	12.203	12.299	(1.092)	202186	20.0000	19	9047
106	Atrazine	215	18.405	18.448	(0.983)	128854	20.0000	18	0(M) /

QC Flag Legend

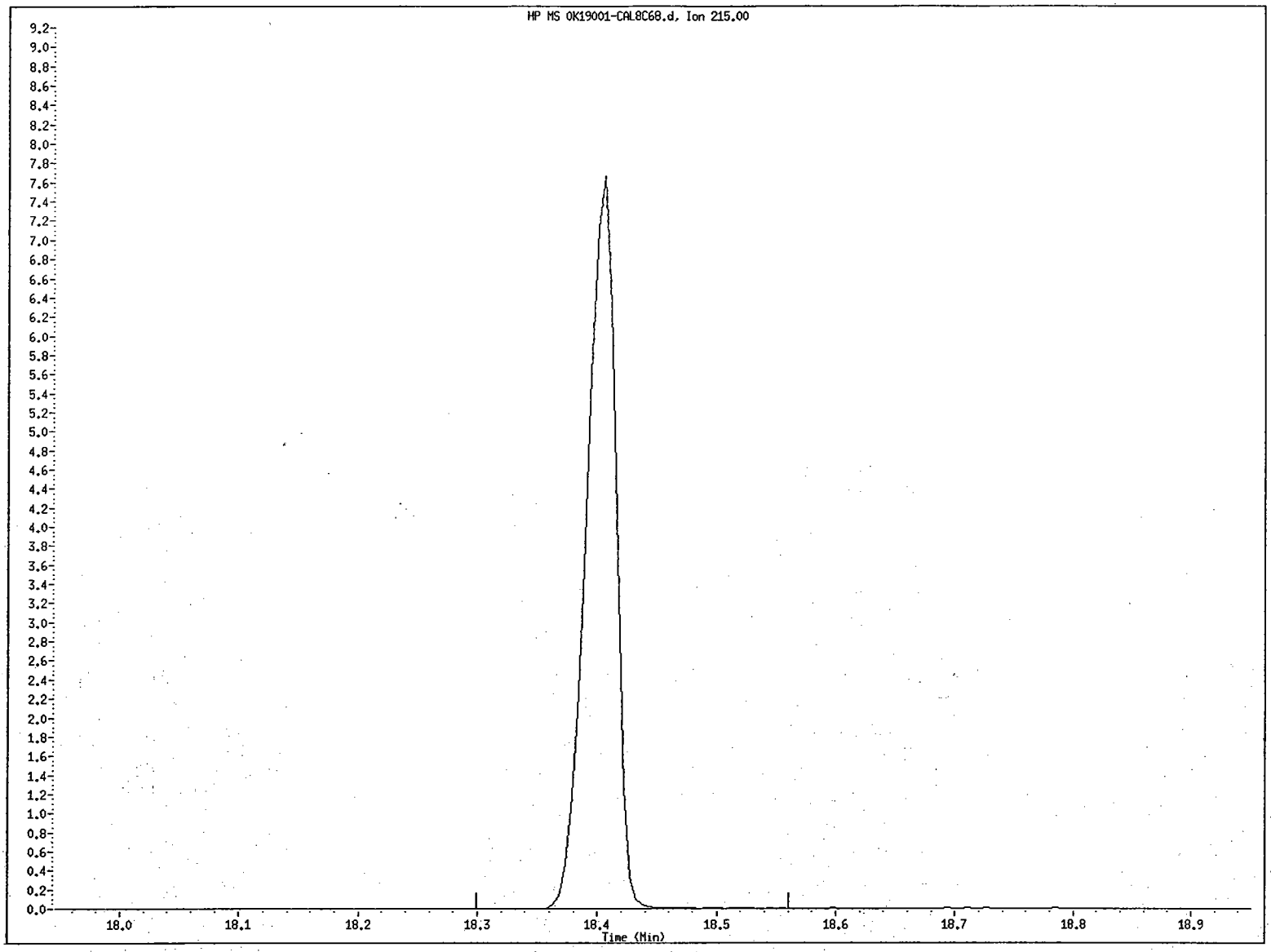
M - Compound response manually integrated.

Acetophenone CAS Number 98-86-2 Area = 790103 Manually integrated



File name: /chem/5973hp68.i/DF101118C68_B.b/0K19001-CAL8C68.d
Client ID: SSTD010W6
Instrument ID: 5973hp68.i
Injection Date and Time: 19-NOV-2010 08:55
Retention Time: 9.33
Operator ID: MEW

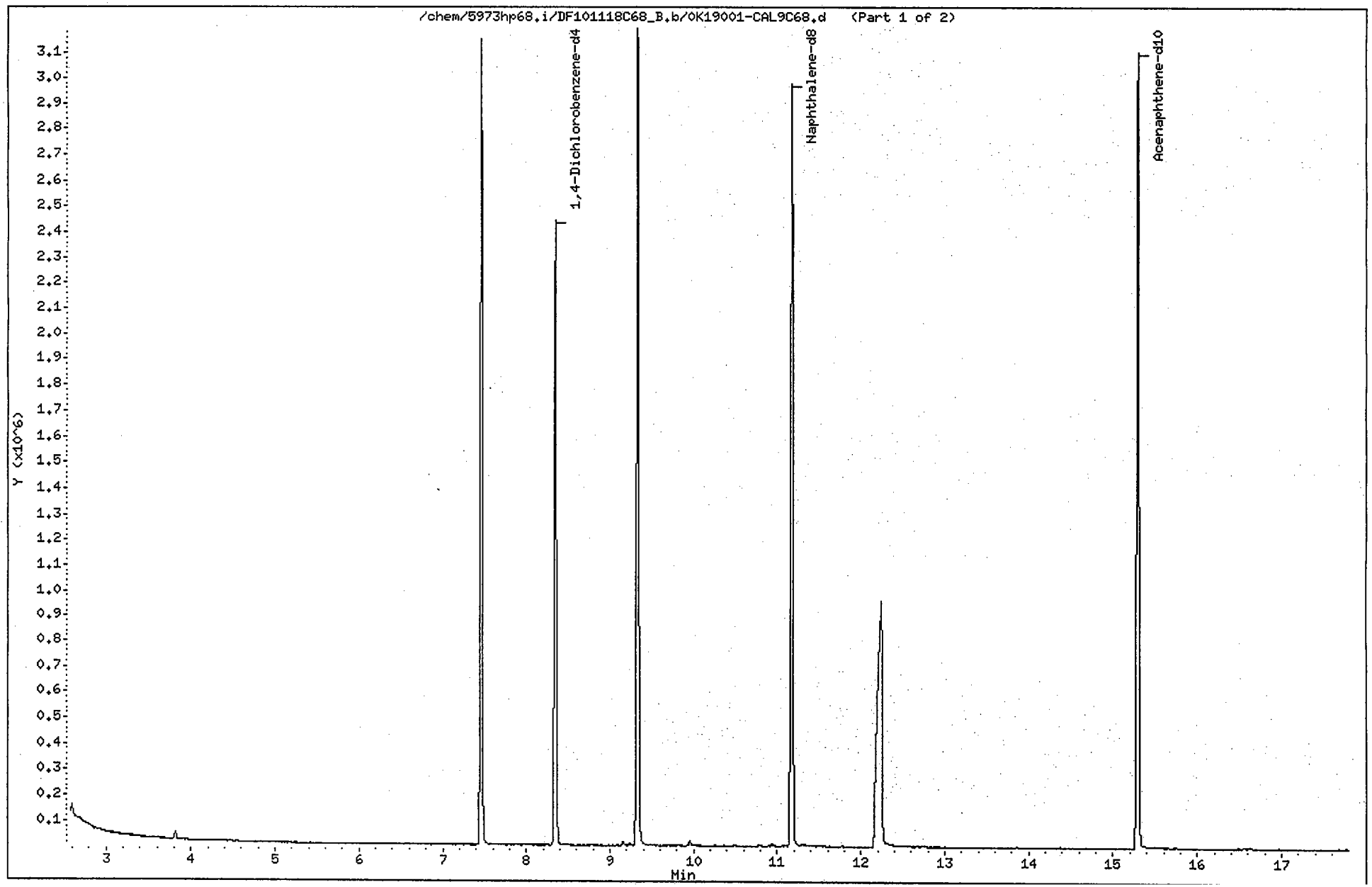
Atrazine CAS Number 1912-24-9 Area = 128854 Manually integrated



File name: /chem/5973hp68.i/DF101118C68_B.b/0K19001-CAL8C68.d
Client ID: SSTD010W6
Instrument ID: 5973hp68.i
Injection Date and Time: 19-NOV-2010 08:55
Retention Time: 18.41
Operator ID: MEW

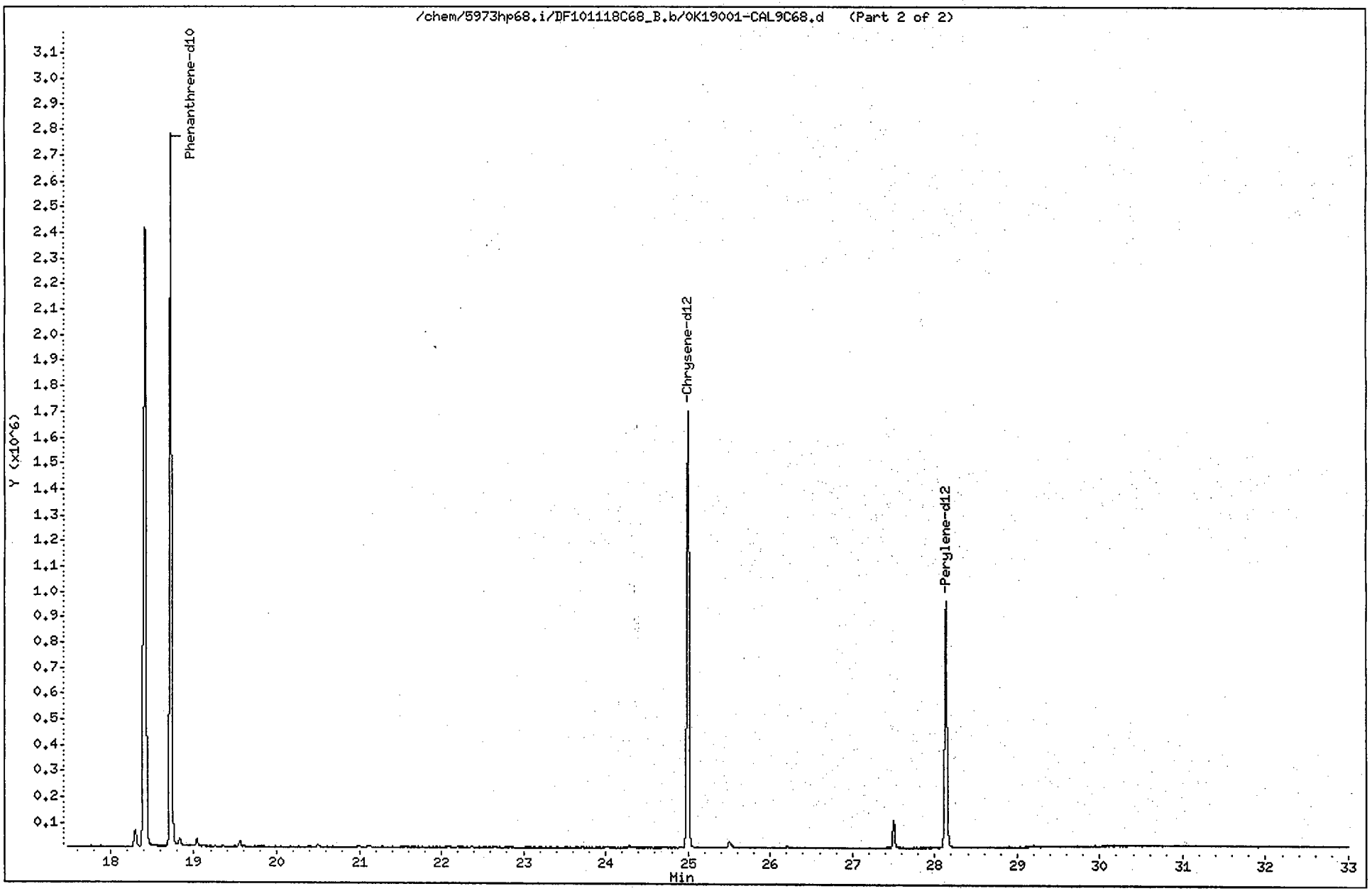
Data File: /chem/5973hp68.i/DF101118C68_B.b/0K19001-CAL9C68.d
Date : 19-NOV-2010 09:38
Client ID: SSTD025W6
Sample Info: 0K19001-CAL9:MEW
Volume Injected (uL): 2.0
Column phase: RTX-5MS

Instrument: 5973hp68.i
Operator: MEW
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101118C68_B.b/0K19001-CAL9C68.d
Date : 19-NOV-2010 09:38
Client ID: SSTD025W6
Sample Info: 0K19001-CAL9:MEW
Volume Injected (uL): 2.0
Column phase: RTX-5MS

Instrument: 5973hp68.i
Operator: MEW
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101118C68_B.b/0K19001-CAL9C68.d
Report Date: 29-Nov-2010 10:14

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Data file : /chem/5973hp68.i/DF101118C68_B.b/0K19001-CAL9C68.d
Lab Smp Id: 0K19001-CAL9 Client Smp ID: SSTD025W6
Inj Date : 19-NOV-2010 09:38
Operator : MEW Inst ID: 5973hp68.i
Smp Info : 0K19001-CAL9:MEW
Misc Info : SSTD025W6
Comment : 2008 MDLS SOIL/ 2007 WATER
Method : /chem/5973hp68.i/DF101118C68_B.b/8270CMASTERDODv5.m
Meth Date : 29-Nov-2010 10:14 keng Quant Type: ISTD
Cal Date : 19-NOV-2010 09:38 Cal File: 0K19001-CAL9C68.d
Als bottle: 10 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: Spike.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Vo	1000.00000	Volume of sample extracted (mL)
Vi	2.00000	Volume injected (uL)

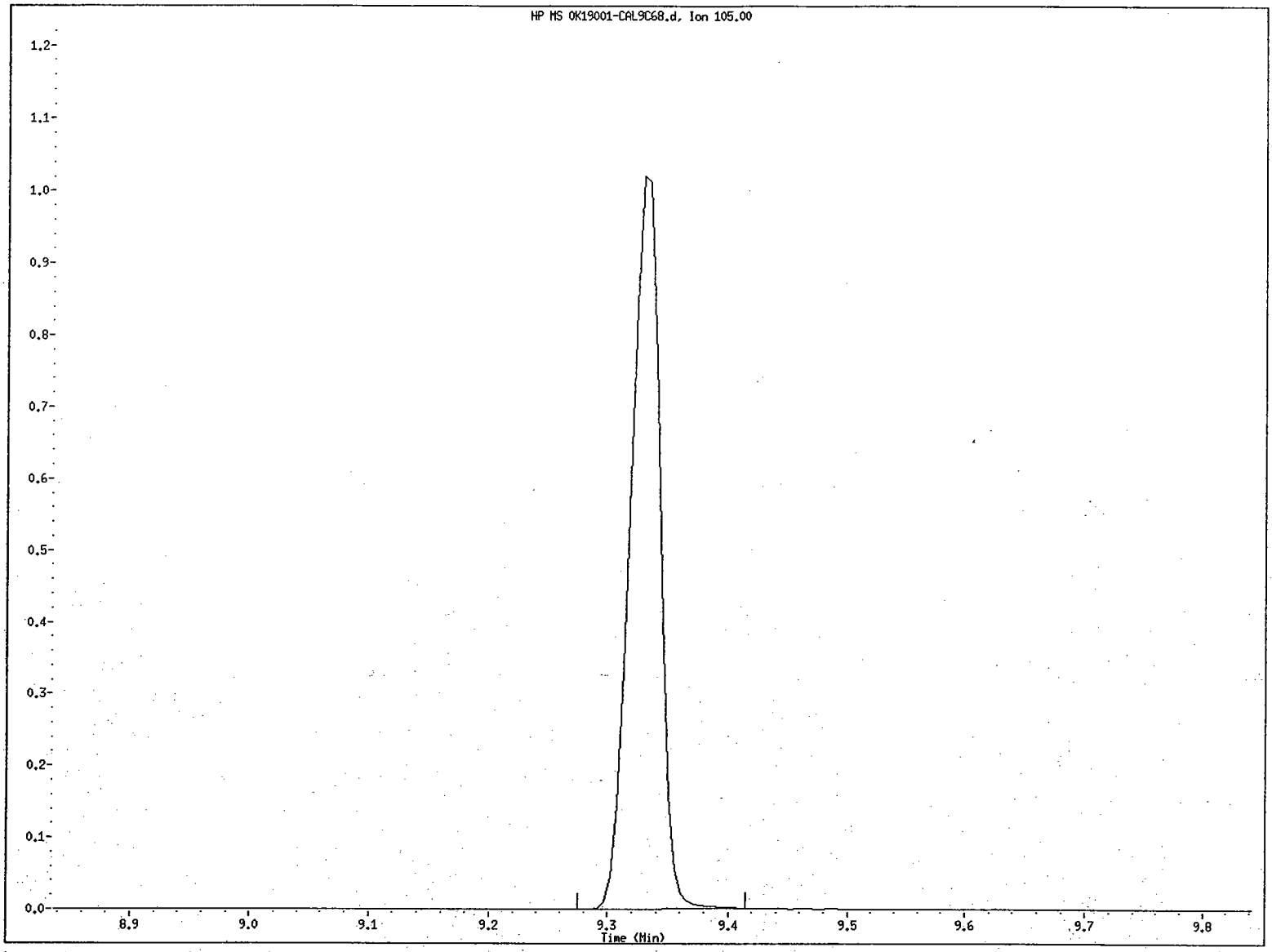
Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	AMOUNTS ON-COL (NG)	SIMILARITY
* 1 1,4-Dichlorobenzene-d4	152	8.346	8.346	(1.000)	632998	40.0000		
* 2 Naphthalene-d8	136	11.172	11.172	(1.000)	2403952	40.0000		
* 3 Acenaphthene-d10	164	15.296	15.296	(1.000)	1303118	40.0000		
* 4 Phenanthrene-d10	188	18.726	18.726	(1.000)	1946317	40.0000		
* 5 Chrysene-d12	240	25.003	25.003	(1.000)	1106129	40.0000		
* 6 Perylene-d12	264	28.139	28.139	(1.000)	612891	40.0000		
21 Benzaldehyde	77	7.464	7.470	(0.894)	1216719	50.0000	46	8931
33 Acetophenone	105	9.329	9.339	(0.835)	1743042	50.0000	47	9699(M)
57 Caprolactam	113	12.240	12.299	(1.096)	501528	50.0000	50	9000
106 Atrazine	215	18.427	18.448	(0.984)	344165	50.0000	47	0(M)

QC Flag Legend

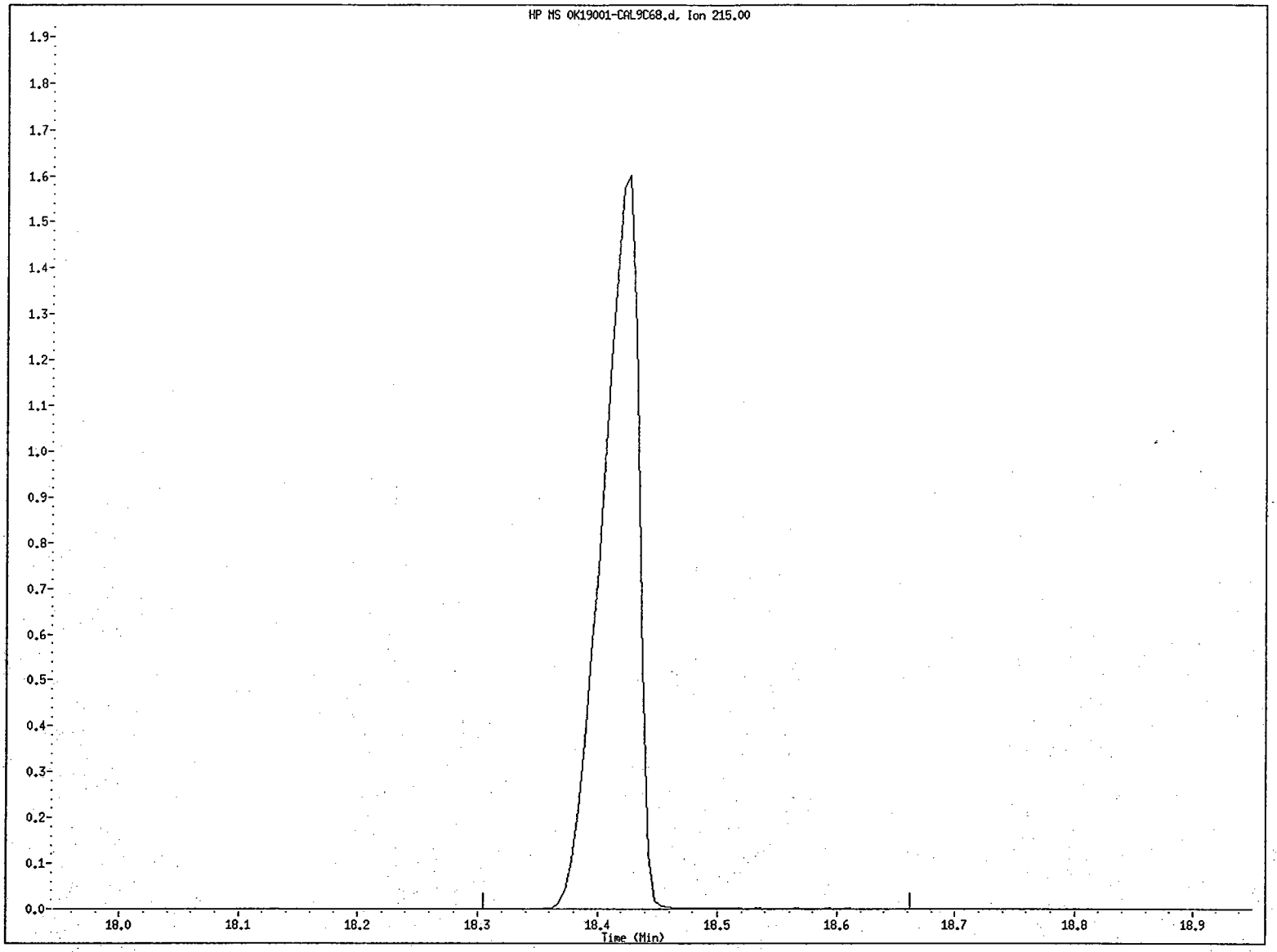
M - Compound response manually integrated.

Acetophenone CAS Number 98-86-2 Area = 1743042 Manually integrated



File name: /chem/5973hp68.i/DF101118C68_B.b/0K19001-CAL9C68.d
Client ID: SSTD025W6
Instrument ID: 5973hp68.i
Injection Date and Time: 19-NOV-2010 09:38
Retention Time: 9.33
Operator ID: MEW

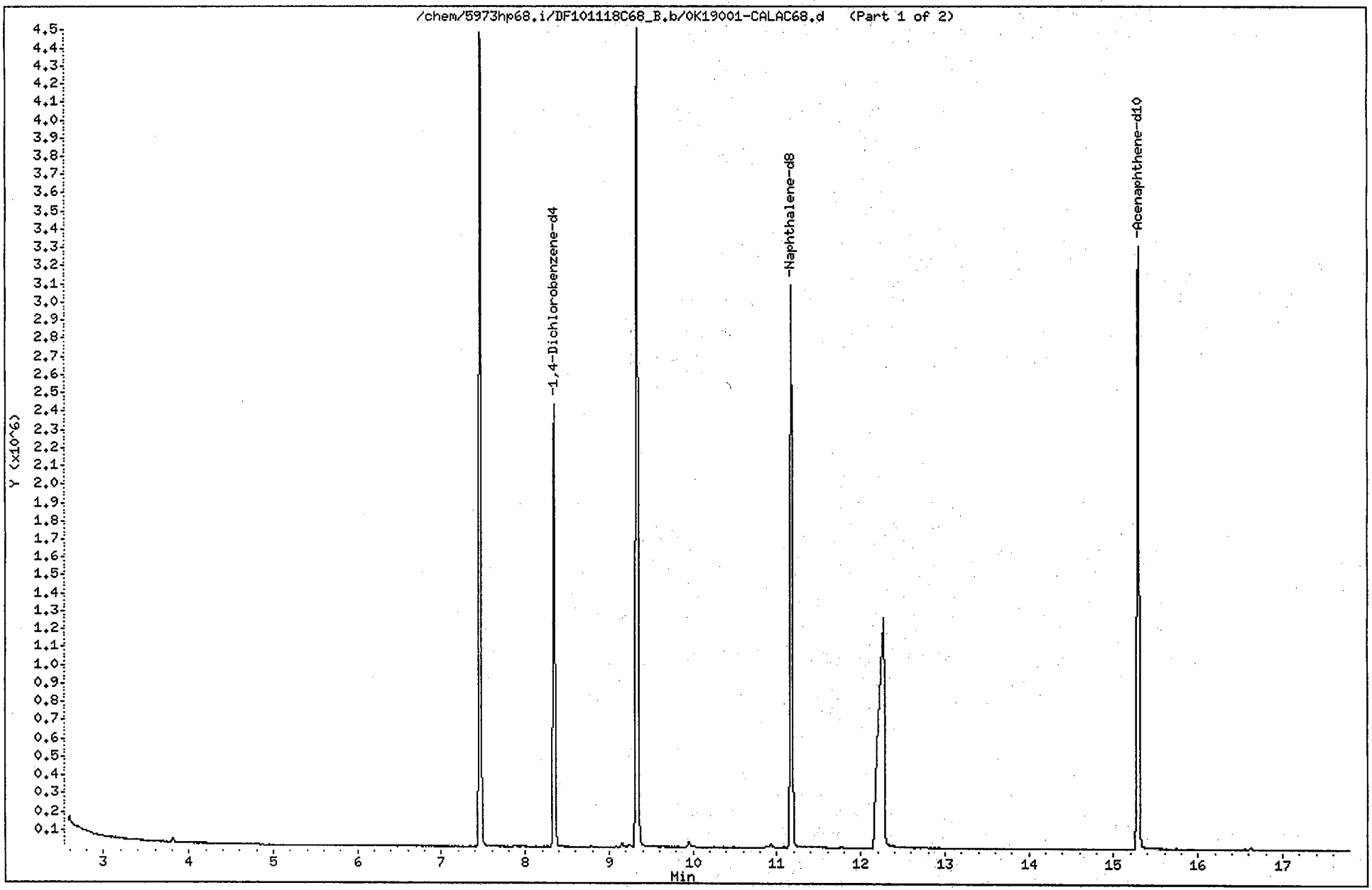
Atrazine CAS Number 1912-24-9 Area = 344165 Manually integrated



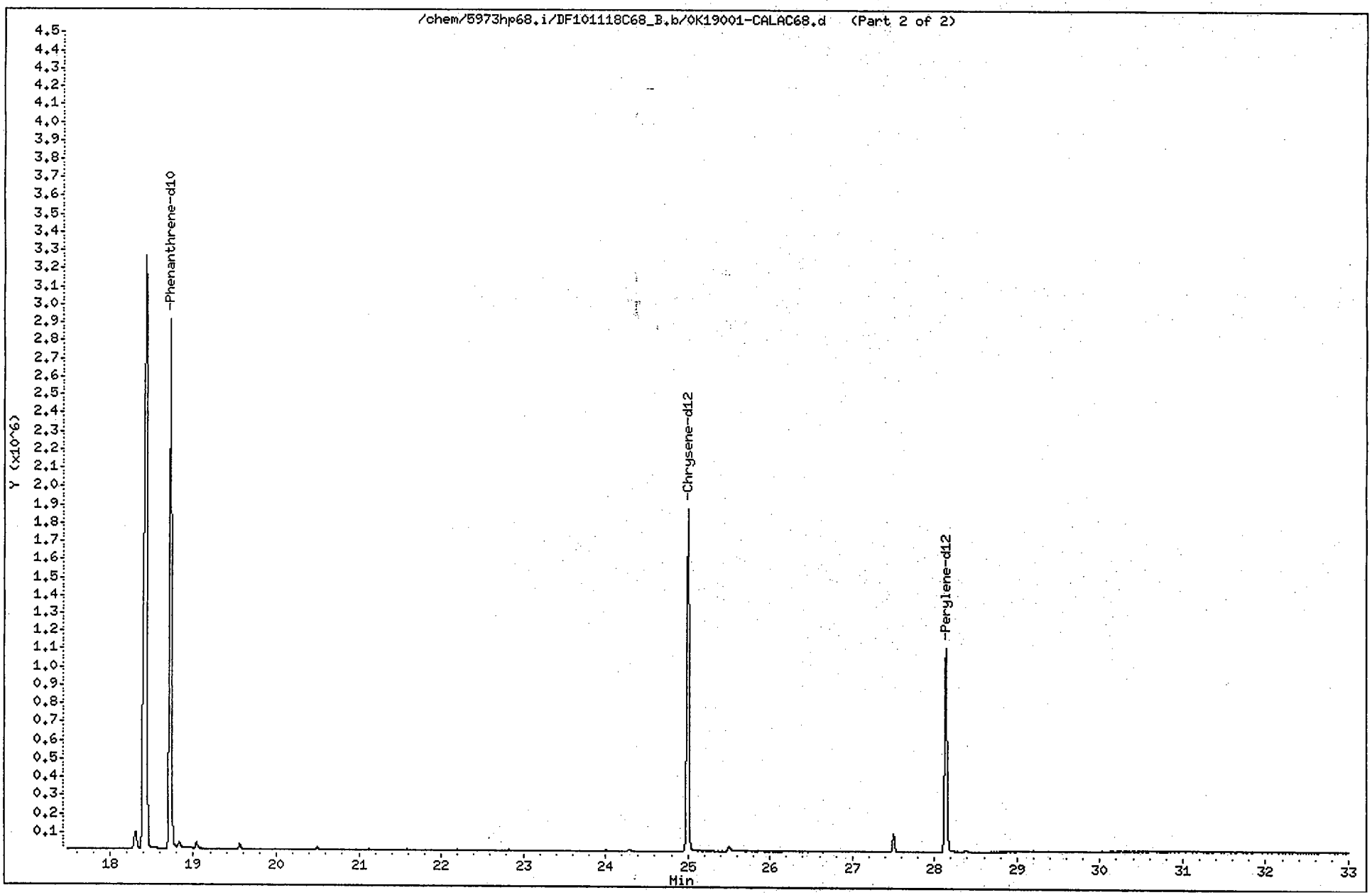
File name: /chem/5973hp68.i/DF101118C68_B.b/0K19001-CAL9C68.d
Client ID: SSTD025W6
Instrument ID: 5973hp68.i
Injection Date and Time: 19-NOV-2010 09:38
Retention Time: 18.43
Operator ID: MEW

Data File: /chem/5973hp68.i/DF101118C68_B.b/0K19001-CALAC68.d
Date : 19-NOV-2010 10:20
Client ID: SSTD040W6
Sample Info: 0K19001-CALA:MEW
Volume Injected (uL): 2.0
Column phase: RTX-5MS

Instrument: 5973hp68.i
Operator: MEW
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101118C68_B.b/0K19001-CALAC68.d
Date : 19-NOV-2010 10:20
Client ID: SSTD040W6
Instrument: 5973hp68.i
Sample Info: 0K19001-CALA:MEW
Volume Injected (uL): 2.0
Operator: MEW
Column phase: RTX-5MS
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101118C68_B.b/0K19001-CALAC68.d
Report Date: 29-Nov-2010 10:14

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Data file : /chem/5973hp68.i/DF101118C68_B.b/0K19001-CALAC68.d
Lab Smp Id: 0K19001-CALA Client Smp ID: SSTD040W6
Inj Date : 19-NOV-2010 10:20
Operator : MEW Inst ID: 5973hp68.i
Smp Info : 0K19001-CALA:MEW
Misc Info : SSTD040W6
Comment : 2008 MDLS SOIL/ 2007 WATER
Method : /chem/5973hp68.i/DF101118C68_B.b/8270CMASTERDODv5.m
Meth Date : 29-Nov-2010 10:14 keng Quant Type: ISTD
Cal Date : 19-NOV-2010 10:20 Cal File: 0K19001-CALAC68.d
Als bottle: 11 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: Spike.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Vo	1000.00000	Volume of sample extracted (mL)
Vi	2.00000	Volume injected (uL)

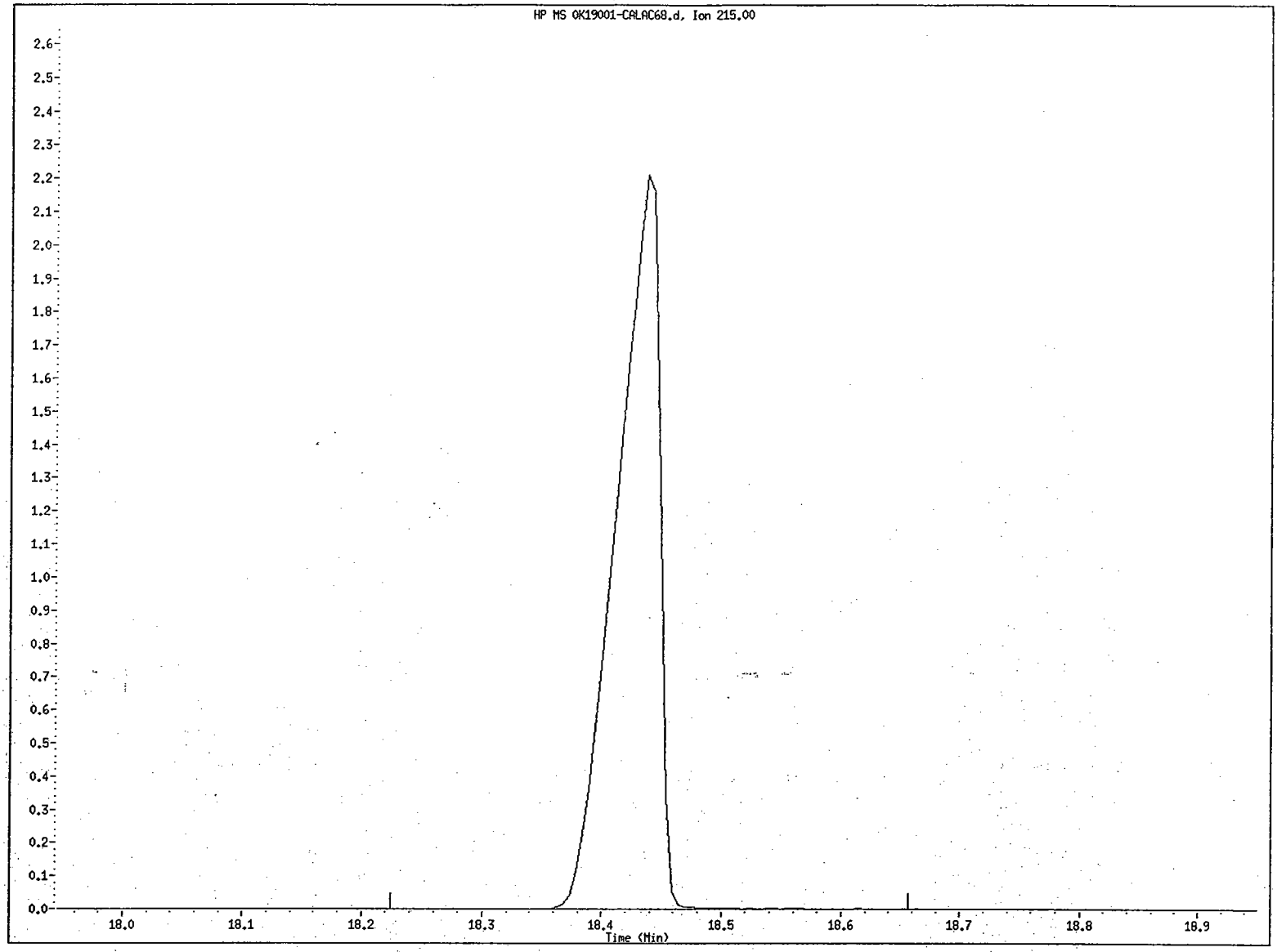
Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	ON-COL (NG)	SIMILARITY
* 1 1,4-Dichlorobenzene-d4	152	8.346	8.346	(1.000)	630048	40.0000		
* 2 Naphthalene-d8	136	11.172	11.172	(1.000)	2508821	40.0000		
* 3 Acenaphthene-d10	164	15.296	15.296	(1.000)	1394862	40.0000		
* 4 Phenanthrene-d10	188	18.731	18.726	(1.000)	2118145	40.0000		
* 5 Chrysene-d12	240	25.003	25.003	(1.000)	1241354	40.0000		
* 6 Perylene-d12	264	28.139	28.139	(1.000)	732786	40.0000		
21 Benzaldehyde	77	7.465	7.470	(0.894)	1871622	80.0000	73	8966
33 Acetophenone	105	9.340	9.339	(0.836)	2693517	80.0000	72	9682
57 Caprolactam	113	12.273	12.299	(1.099)	792401	80.0000	77	8994
106 Atrazine	215	18.438	18.448	(0.984)	552976	80.0000	72	3534(M)

QC Flag Legend

M - Compound response manually integrated.

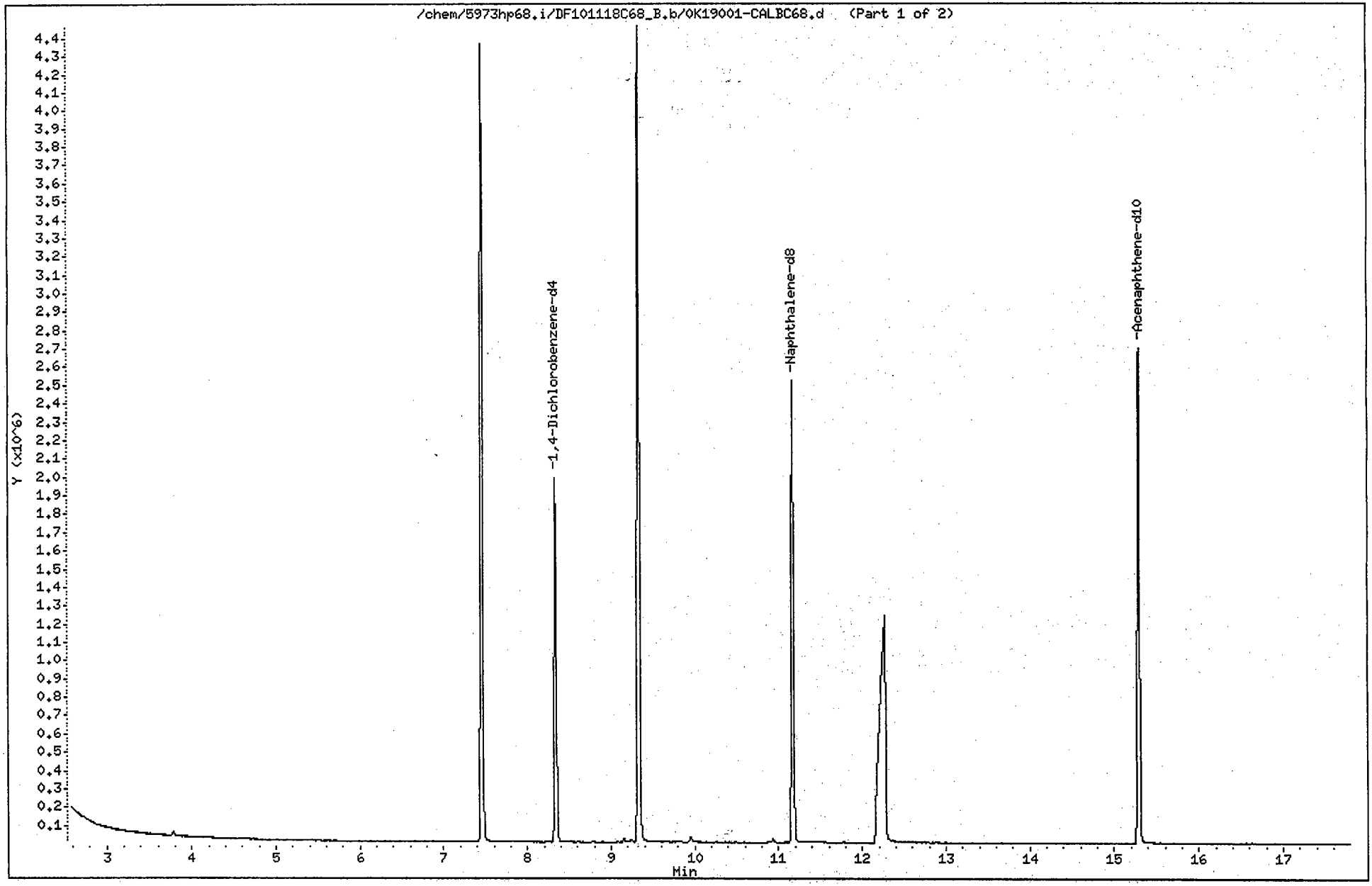
Atrazine CAS Number 1912-24-9 Area = 552976 Manually integrated



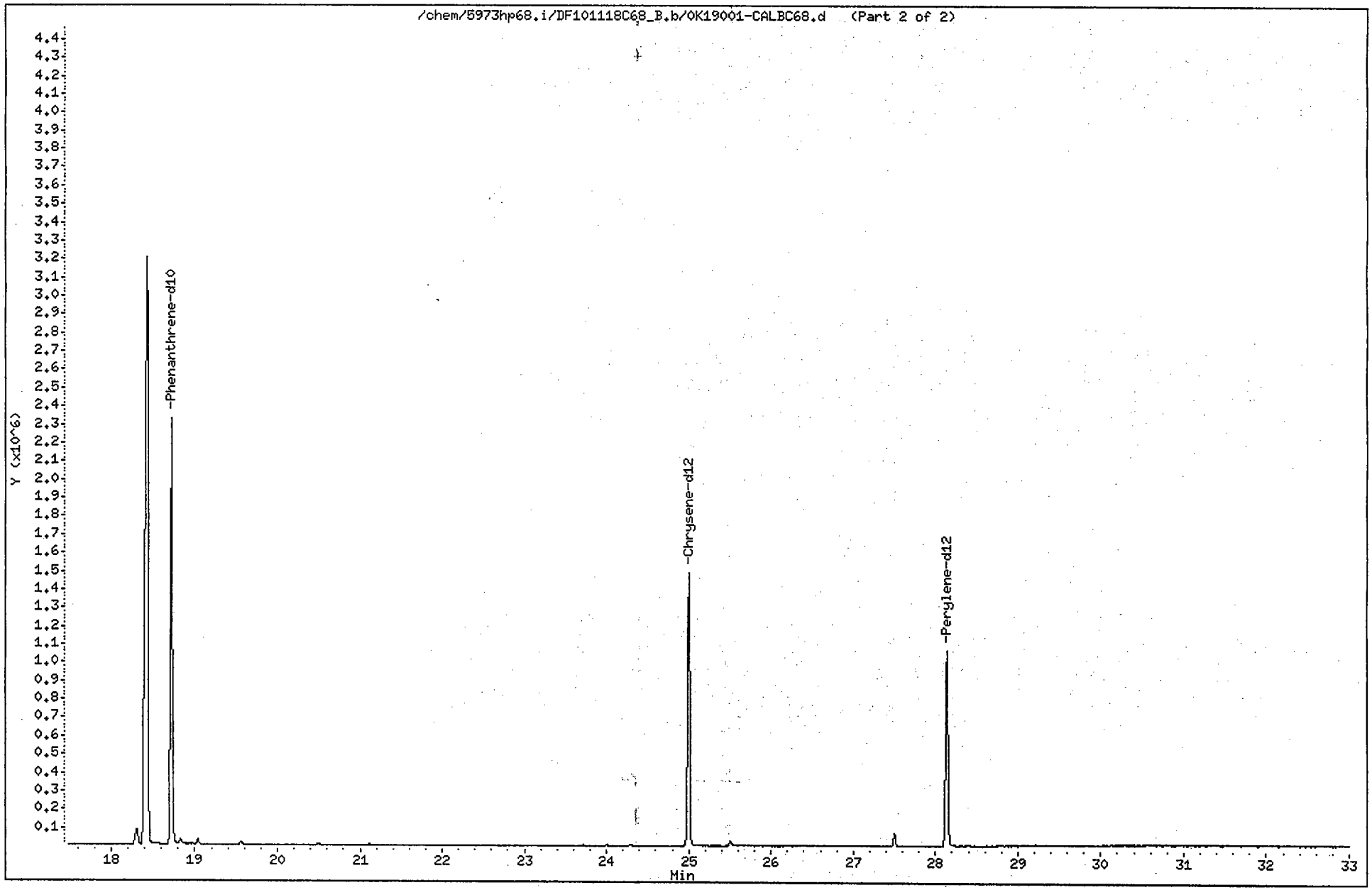
File name: /chem/5973hp68.i/DF101118C68_B.b/0K19001-CALAC68.d
Client ID: SSTD040W6
Instrument ID: 5973hp68.i
Injection Date and Time: 19-NOV-2010 10:20
Retention Time: 18.44
Operator ID: MEW

Data File: /chem/5973hp68.i/DF101118C68_B.b/0K19001-CALBC68.d
Date : 19-NOV-2010 11:02
Client ID: SSTD050W6
Sample Info: 0K19001-CALB:MEW
Volume Injected (uL): 2.0
Column phase: RTX-5MS

Instrument: 5973hp68.i
Operator: MEW
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101118C68_B.b/0K19001-CALBC68.d
Date : 19-NOV-2010 11:02
Client ID: SSTD050W6
Instrument: 5973hp68.i
Sample Info: 0K19001-CALB:MEW
Volume Injected (uL): 2.0
Operator: MEW
Column phase: RTX-5MS
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101118C68_B.b/0K19001-CALBC68.d
Report Date: 29-Nov-2010 10:14

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Data file : /chem/5973hp68.i/DF101118C68_B.b/0K19001-CALBC68.d
Lab Smp Id: 0K19001-CALB Client Smp ID: SSTD050W6
Inj Date : 19-NOV-2010 11:02
Operator : MEW Inst ID: 5973hp68.i
Smp Info : 0K19001-CALB:MEW
Misc Info : SSTD050W6
Comment : 2008 MDLS SOIL/ 2007 WATER
Method : /chem/5973hp68.i/DF101118C68_B.b/8270CMASTERDODv5.m
Meth Date : 29-Nov-2010 10:14 keng Quant Type: ISTD
Cal Date : 19-NOV-2010 11:02 Cal File: 0K19001-CALBC68.d
Als bottle: 12 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: Spike.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Vo	1000.00000	Volume of sample extracted (mL)
Vi	2.00000	Volume injected (uL)

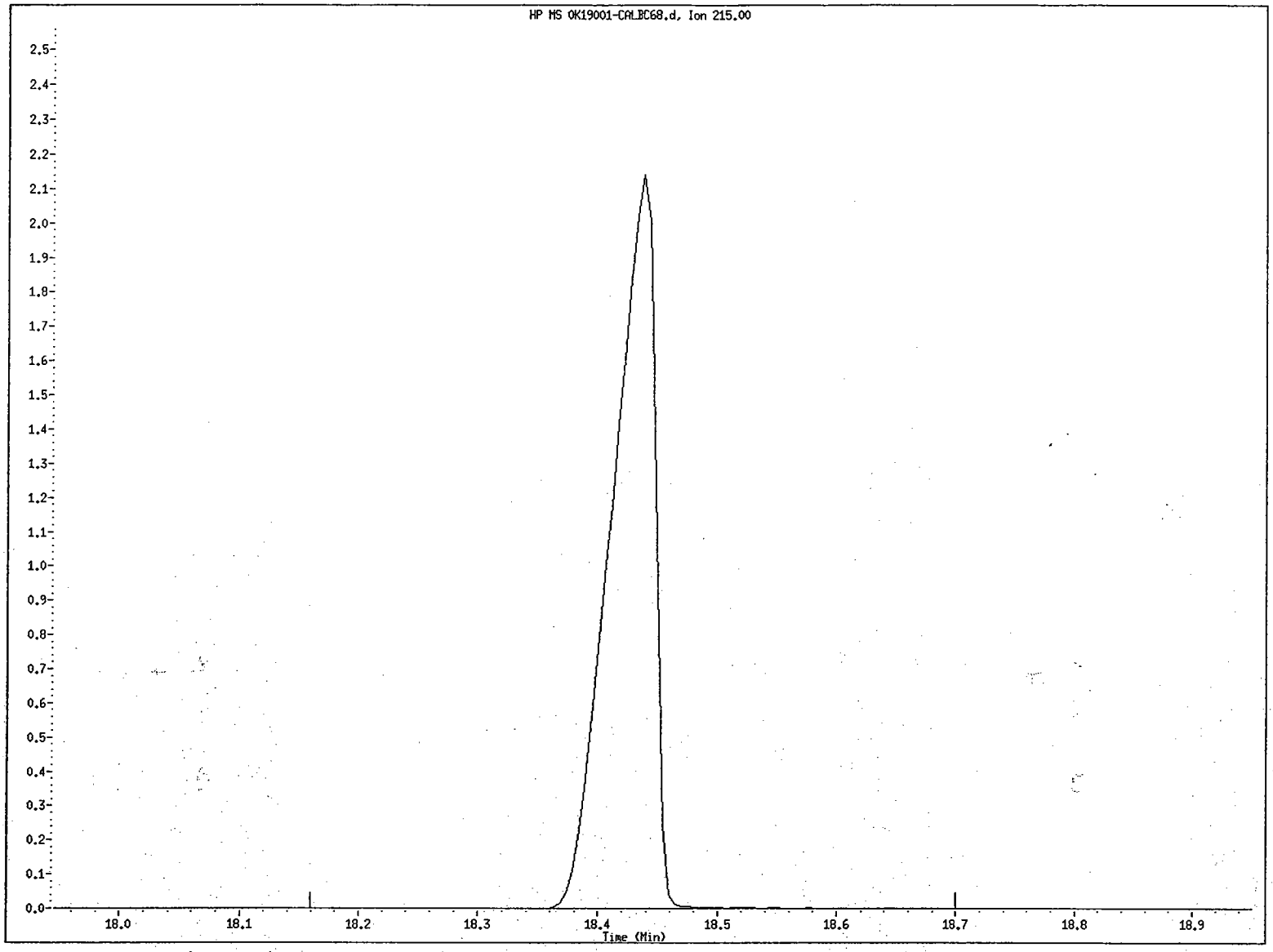
Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	ON-COL (NG)	SIMILARITY
* 1 1,4-Dichlorobenzene-d4	152	8.341	8.346	(1.000)	522573	40.0000		
* 2 Naphthalene-d8	136	11.172	11.172	(1.000)	1997290	40.0000		
* 3 Acenaphthene-d10	164	15.296	15.296	(1.000)	1127997	40.0000		
* 4 Phenanthrene-d10	188	18.726	18.726	(1.000)	1622625	40.0000		
* 5 Chrysene-d12	240	25.003	25.003	(1.000)	973583	40.0000		
* 6 Perylene-d12	264	28.139	28.139	(1.000)	692501	40.0000		
21 Benzaldehyde	77	7.464	7.470	(0.895)	1814557	100.000	88	8943
33 Acetophenone	105	9.334	9.339	(0.835)	2601074	100.000	89	9670
57 Caprolactam	113	12.272	12.299	(1.099)	773270	100.000	96	9011
106 Atrazine	215	18.437	18.448	(0.985)	536081	100.000	93	2216(M)

QC Flag Legend

M - Compound response manually integrated.

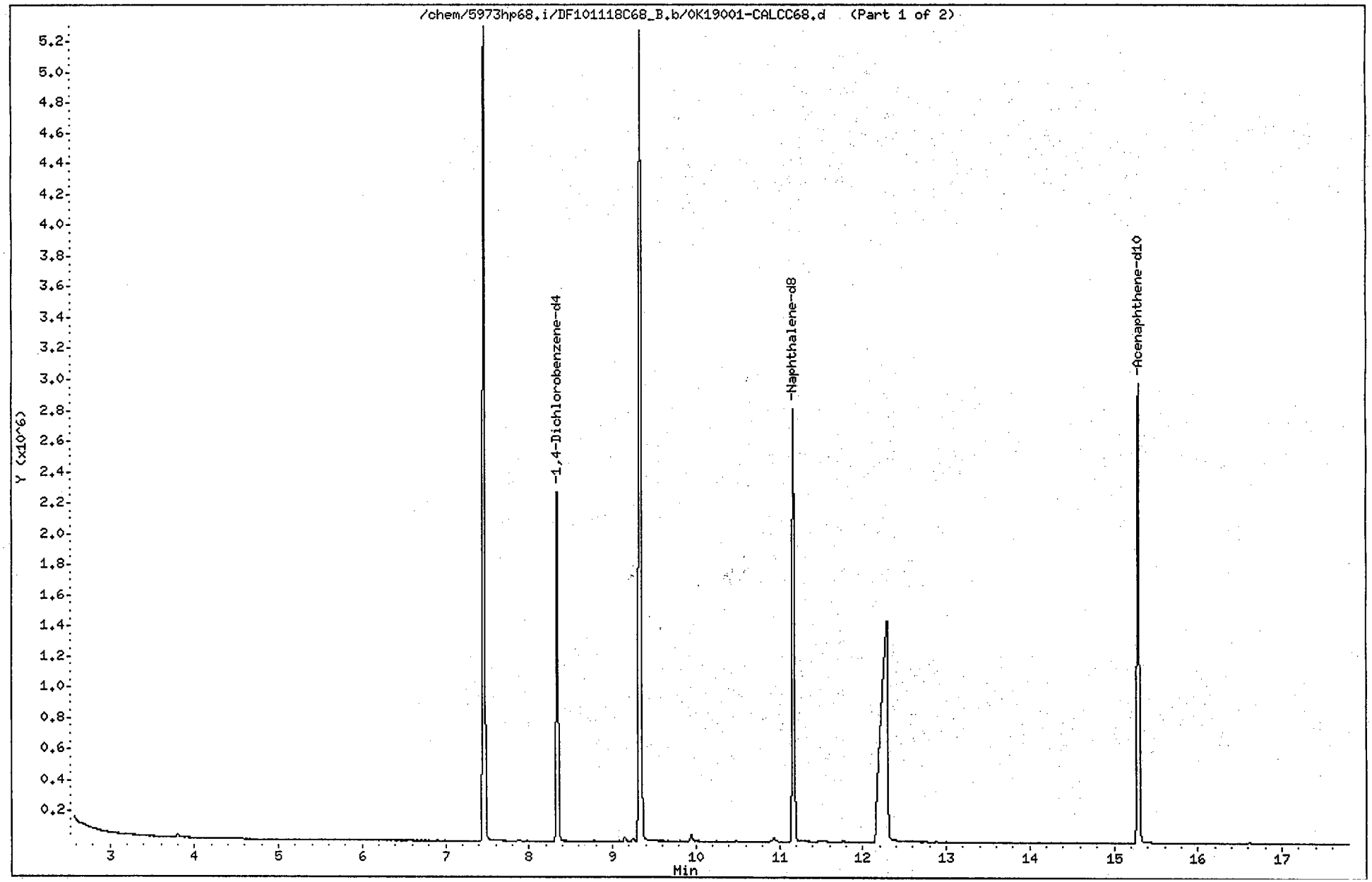
Atrazine CAS Number 1912-24-9 Area = 536081 Manually integrated



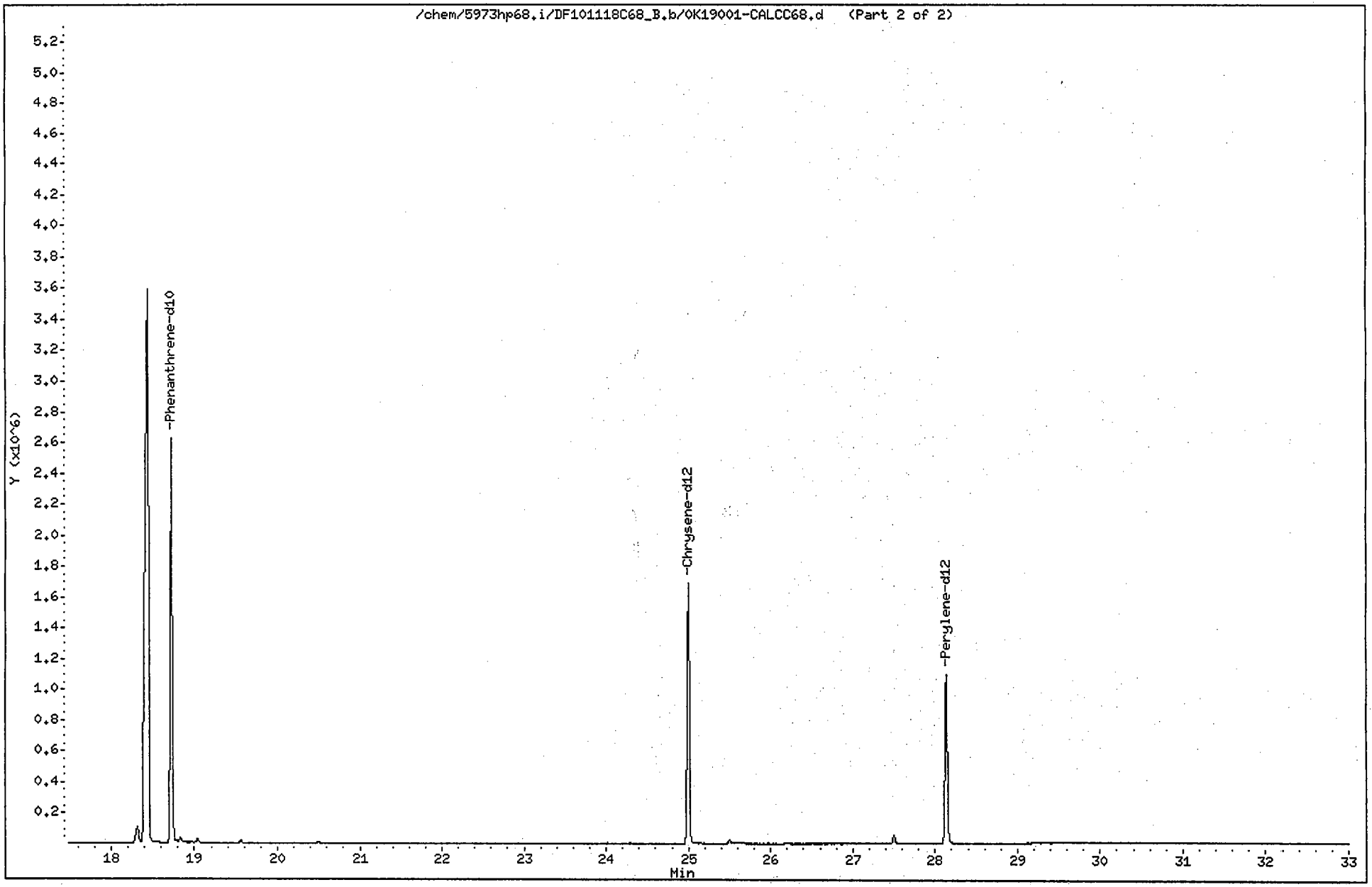
File name: /chem/5973hp68.i/DF101118C68_B.b/0K19001-CALBC68.d
Client ID: SSTD050W6
Instrument ID: 5973hp68.i
Injection Date and Time: 19-NOV-2010 11:02
Retention Time: 18.44
Operator ID: MEW

Data File: /chem/5973hp68.i/DF101118C68_B.b/0K19001-CALCC68.d
Date : 19-NOV-2010 11:45
Client ID: SSTD060W6
Sample Info: 0K19001-CALC:MEW
Volume Injected (uL): 2.0
Column phase: RTX-5MS

Instrument: 5973hp68.i
Operator: MEW
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101118C68_B.b/0K19001-CALCC68.d
Date : 19-NOV-2010 11:45
Client ID: SSTD060W6
Instrument: 5973hp68.i
Sample Info: 0K19001-CALC:MEW
Volume Injected (uL): 2.0
Operator: MEW
Column phase: RTX-5MS
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101118C68_B.b/0K19001-CALCC68.d
Report Date: 29-Nov-2010 10:14

CompuChem

Semivolatile Report SW-846 Method 8270C Appendix IX

Data file : /chem/5973hp68.i/DF101118C68_B.b/0K19001-CALCC68.d
Lab Smp Id: 0K19001-CALC Client Smp ID: SSTD060W6
Inj Date : 19-NOV-2010 11:45
Operator : MEW Inst ID: 5973hp68.i
Smp Info : 0K19001-CALC:MEW
Misc Info : SSTD060W6
Comment : 2008 MDLS SOIL/ 2007 WATER
Method : /chem/5973hp68.i/DF101118C68_B.b/8270CMASTERDODv5.m
Meth Date : 29-Nov-2010 10:14 keng Quant Type: ISTD
Cal Date : 19-NOV-2010 11:45 Cal File: 0K19001-CALCC68.d
Als bottle: 13 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: Spike.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Vo	1000.00000	Volume of sample extracted (mL)
Vi	2.00000	Volume injected (uL)

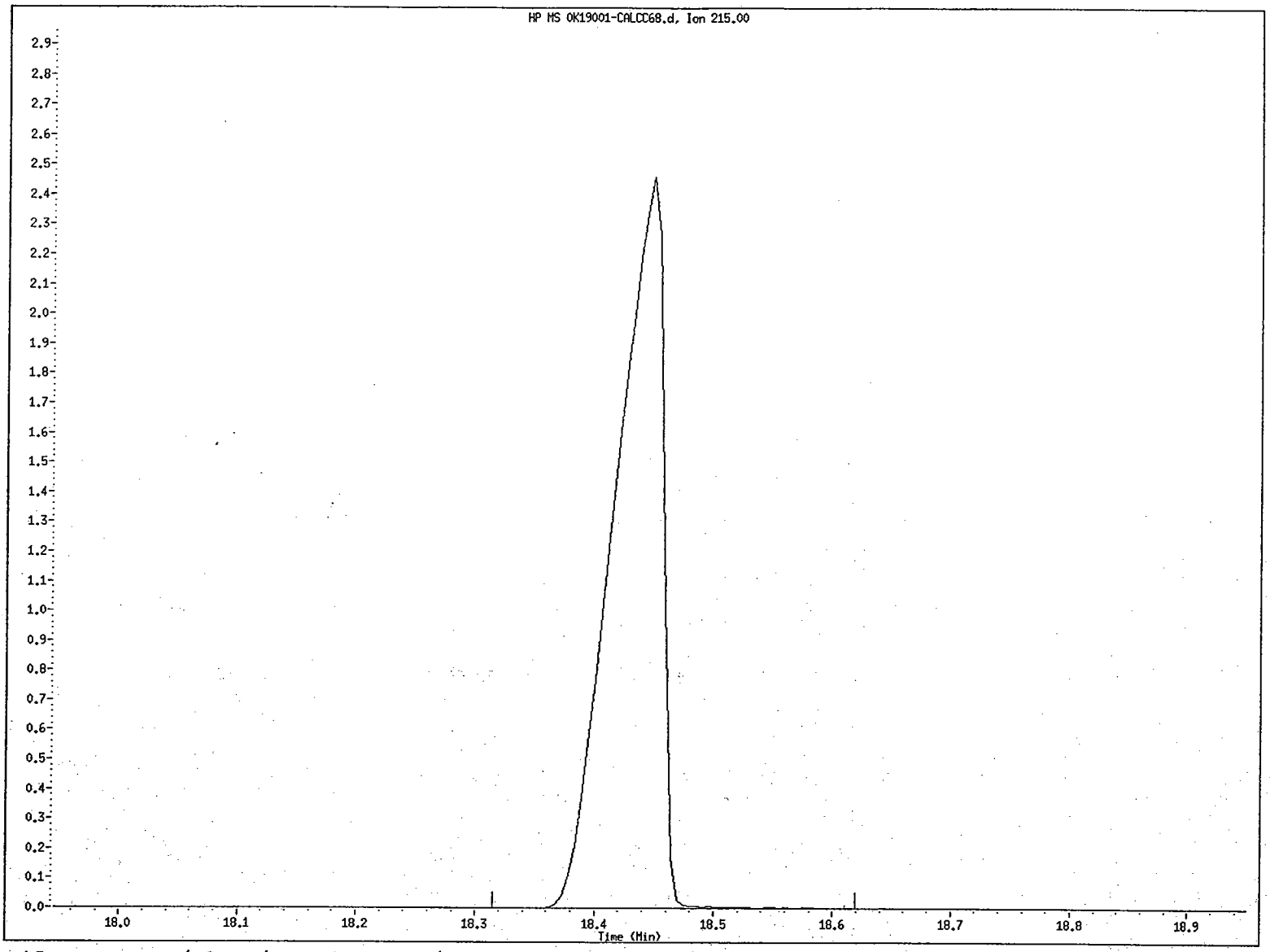
Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	ON-COL (NG)	SIMILARITY
* 1	1,4-Dichlorobenzene-d4	152	8.346	8.346	(1.000)	602936	40.0000		
* 2	Naphthalene-d8	136	11.172	11.172	(1.000)	2247237	40.0000		
* 3	Acenaphthene-d10	164	15.296	15.296	(1.000)	1238787	40.0000		
* 4	Phenanthrene-d10	188	18.726	18.726	(1.000)	1848140	40.0000		
* 5	Chrysene-d12	240	25.003	25.003	(1.000)	1119024	40.0000		
* 6	Perylene-d12	264	28.139	28.139	(1.000)	714417	40.0000		
21	Benzaldehyde	77	7.470	7.470	(0.895)	2364835	120.000	100	8960
33	Acetophenone	105	9.339	9.339	(0.836)	3380088	120.000	100	9670
57	Caprolactam	113	12.299	12.299	(1.101)	1047962	120.000	120	9003
106	Atrazine	215	18.448	18.448	(0.985)	695204	120.000	110	4559(M)

QC Flag Legend

M - Compound response manually integrated.

Atrazine CAS Number 1912-24-9 Area = 695204 Manually integrated



File name: /chem/5973hp68.i/DF101118C68_B.b/0K19001-CALCC68.d
Client ID: SSTD060W6
Instrument ID: 5973hp68.i
Injection Date and Time: 19-NOV-2010 11:45
Retention Time: 18.45
Operator ID: MEW

COMPUCHEM a Division of Liberty Analytical Corp
GC/MS SEMIVOLATILE RUN LOG
LOGBOOK 4Z(4) 2 (5973hp68)

DATE 11/19/10 INITIAL TIME OF TUNE 0314 SHIFT/S (A) ____ (B) ____ (C) ✓
TIME TUNE EXPIRES 1514 METHOD 8270C APIX

PREVENTIVE MAINTENANCE none

	SEQUENCE#		FILENAME		DATE	TIME	CLIENT ID	SDG#	AMOUNT INJECTED	CHEMIST	COMMENTS
1	OK19001		OK19001-TUNIC68	/	11/19/10	0314	DFTPPW5	—	2µL	MEW	SCD=LCD
2	F101118C		-CAL1	/	/ /	0359	SSTD005W5	—			0J21003 11/21/11
3			-CAL2	/	/ /	0441	010	—			4
4			-CAL3	/	/ /	0523	025	—			5
5			-CAL4	/	/ /	0606	040	—			OK15011
6			-CAL5	/	/ /	0648	050	—			0J21004
7			-CAL6	/	/ /	0731	060	—			01C16014
8			-CALA 9	/	/ /	0813	SSTD005W6	—			0CC9003
9			-CALB 8	/	/ /	0855	010	—			4
10			-CALC 9	/	/ /	0938	025	—			5
11			-CALD A	/	/ /	1020	040	—			6
12			-CALE B	/	/ /	1102	050	—			7
*			-CALF C	/	/ /	1145	060	—			8
** 14			-SCV1 11/16	/	/ /	1753	SSTD025VAL1	—			0J05003 11/5/11
15			-SCV2	/	/ /	1835	2	—			4
16			-SCV3	/	/ /	1917	3	—			5
17			-SCV4	/	/ /	2000	4	—			6
18			-CALG D	/	/ /	1338	SSTD005W7			SG	OK09013 2/2/11
19			-CALH B	/	/ /	1421	010				OK09014
* 20			-CALI F	/	/ /	1503	025				5
* 21			-CALJ G	/	/ /	1546	040				7
22			-CALK H	/	/ /	1628	050				8
23			-CALL D	/	/ /	1711	060				9
* 24			-TUA2 11/16	/	/ /	1318	DFTPPW7				

DFTPP Lot #/Exp. Date: OF18005 12/17/10
Calibration STD Lot#/Exp. Date: See Comments
Internal STD Lot#/Exp. Date: OK17011 5/17/11
Methylene Chloride Lot#/Exp. Date: J395008 11/28/11
Column Type: RTX-5MS 0.32mm

The presence of the Chemist's/Analyst's employee ID number, or signature, on this run log attests that strict compliance with the method's SOP has occurred. Any SOP deviations require documentation by the responsible chemist/analyst together with the chemist's/analyst's initials and the initials of the lab supervisor and a QA department representative, signifying approval of the deviation.

REVIEWED BY: _____ DATE 11/22/10

10/06/08: jr

F101118C68_B Continued on next page

sublist split

b. Continuing Calibration Data (Form VII SV)

If more than one instrument is used, forms shall be arranged in order by instrument. If multiple continuing calibrations from the same instrument are used, they shall be in chronological order.

(1) Reconstructed Ion Chromatograms and quantitation reports for all continuing (12-hour) calibrations. Spectra not required.

(2) EICPs displaying each manual integration.

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8270C-HWMU13A-C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Instrument ID: 5973HP68 Calibration Date: 11/22/10 Time: 1023

Lab File ID: 0K22004-CCV2A6 Init. Calib. Date(s): 11/19/10 11/19/10

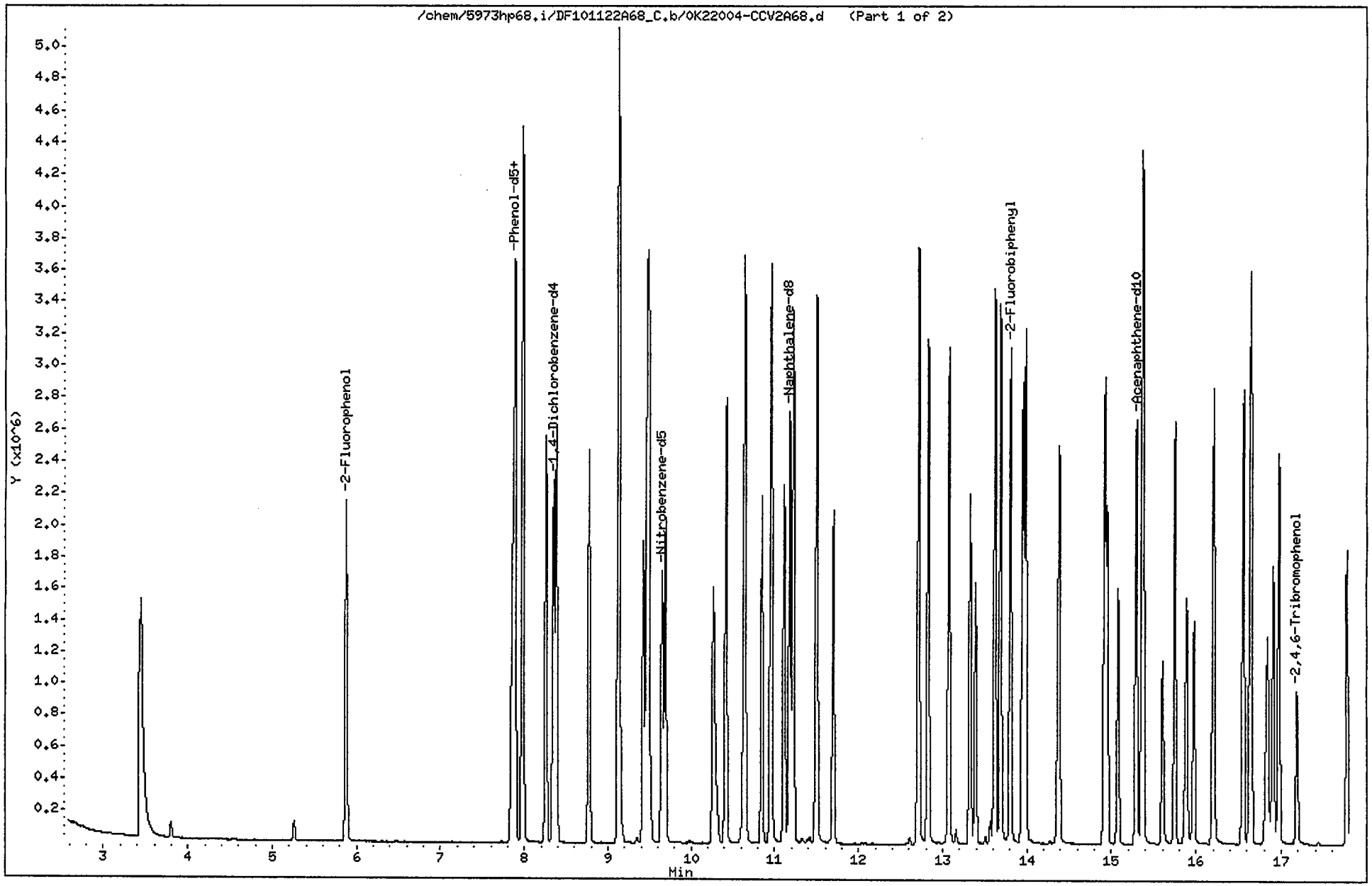
Init. Calib. Times: 1338 1711

GC Column: RTX-5MS ID: 0.32 (mm)

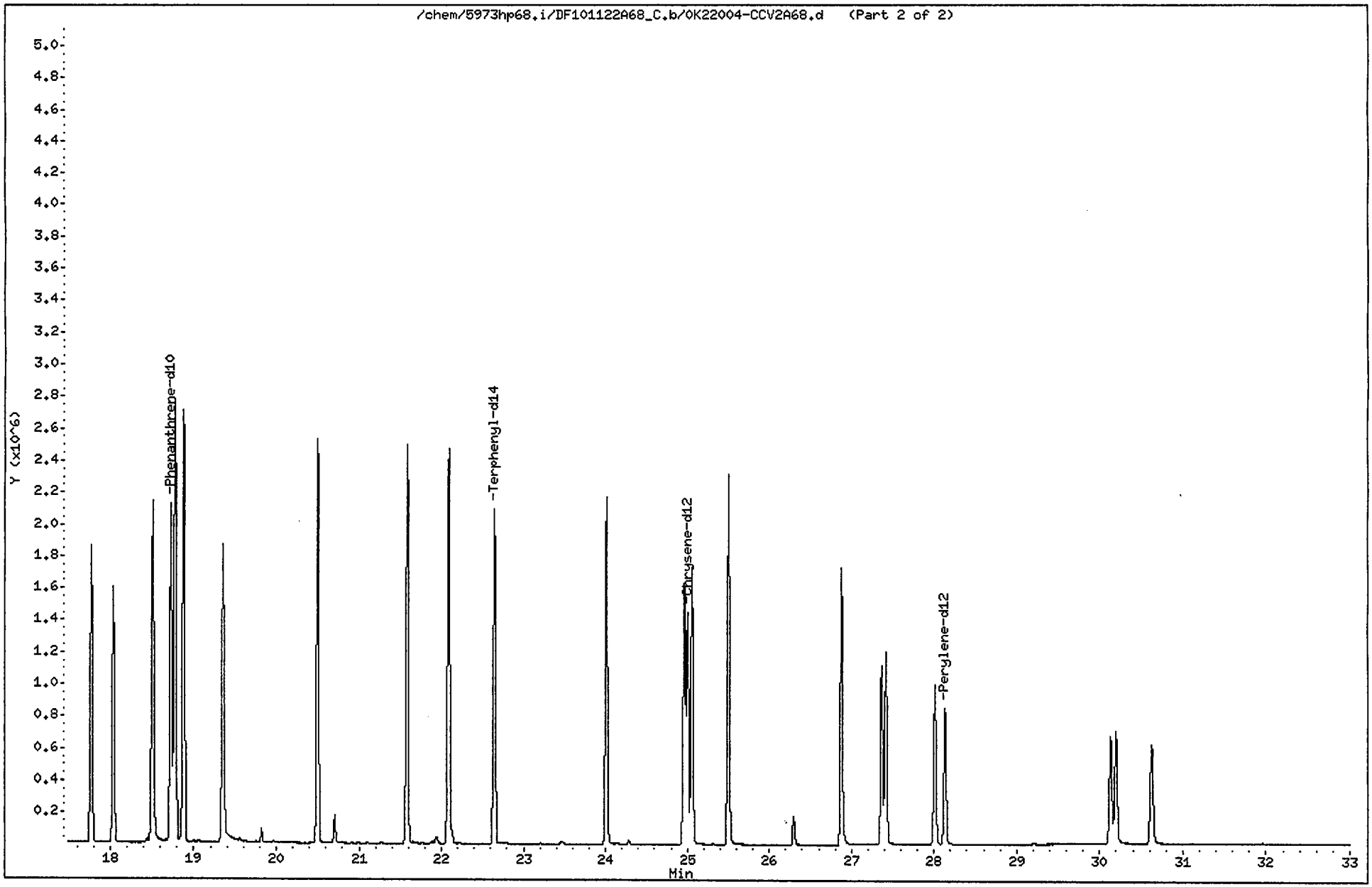
COMPOUND	RRF OR AMOUNT	RRF50.000 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
Phenol	1.7470000	1.7833157	0.01	2.08	20.00	AVRG
2-Chlorophenol	1.1800000	1.2133393	0.01	2.82	50.00	AVRG
3-Methylphenol	1.2610000	1.2438689	0.01	-1.36	50.00	AVRG
4-Methylphenol	1.2610000	1.2438689	0.01	-1.36	50.00	AVRG
Hexachloroethane	0.5690000	0.5858156	0.01	2.96	50.00	AVRG
Nitrobenzene	0.3920000	0.4110048	0.01	4.85	50.00	AVRG
2,4-Dichlorophenol	0.2500000	0.2565320	0.01	2.61	20.00	AVRG
Dimethylphthalate	1.1020000	1.1253944	0.01	2.12	50.00	AVRG
4-Nitrophenol	0.1850000	0.1936440	0.05	4.67	50.00	AVRG
Dibenzofuran	1.3880000	1.4386370	0.01	3.65	50.00	AVRG
Diethylphthalate	0.9570000	0.9924610	0.01	3.70	50.00	AVRG
N-Nitrosodiphenylamine	0.5400000	0.5552467	0.01	2.82	20.00	AVRG
Di-n-butylphthalate	1.1030000	1.1670535	0.01	5.81	50.00	AVRG
Fluoranthene	0.9130000	0.9481785	0.01	3.85	20.00	AVRG
Pyrene	1.6120000	1.6763816	0.01	3.99	50.00	AVRG
Butylbenzylphthalate	0.7310000	0.7483250	0.01	2.37	50.00	AVRG
bis(2-ethylhexyl)Phthalate	0.9350000	0.9415205	0.01	0.70	50.00	AVRG
Benzo(a)anthracene	0.9790000	1.0151657	0.01	3.69	50.00	AVRG
Di-n-octylphthalate	2.0910000	2.1364011	0.01	2.17	20.00	AVRG
Benzo(b)fluoranthene	1.0960000	1.1428439	0.01	4.27	50.00	AVRG
Benzo(k)fluoranthene	1.1040000	1.1774448	0.01	6.65	50.00	AVRG
Benzo(a)pyrene	0.9300000	0.9808295	0.01	5.46	20.00	AVRG
Indeno(1,2,3-cd)pyrene	0.5940000	0.6874587	0.01	15.73	50.00	AVRG
Dibenzo(a,h)anthracene	0.6100000	0.7038440	0.01	15.38	50.00	AVRG
2-Fluorophenol	1.3880000	1.4350680	0.01	3.39	50.00	AVRG
Phenol-d5	1.8160000	1.8333574	0.01	0.96	50.00	AVRG
Nitrobenzene-d5	0.3810000	0.3994823	0.01	4.85	50.00	AVRG
2-Fluorobiphenyl	1.1720000	1.2480459	0.01	6.49	50.00	AVRG
2,4,6-Tribromophenol	0.1070000	0.1148054	0.01	7.29	50.00	AVRG
Terphenyl-d14	0.9200000	0.9648289	0.01	4.87	50.00	AVRG

FORM VII SV

Data File: /chem/5973hp68.i/DF101122A68_C.b/0K22004-CCV2A68.d
Date : 22-NOV-2010 10:23
Client ID: SSTD025DP
Instrument: 5973hp68.i
Sample Info: 0K22004-CCV2:OWS
Volume Injected (uL): 2.0
Operator: OWS
Column phase: RTX-5MS
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101122A68_C.b/0K22004-CCV2A68.d
Date : 22-NOV-2010 10:23
Client ID: SSTD025DP
Instrument: 5973hp68.i
Sample Info: 0K22004-CCV2:OWS
Volume Injected (uL): 2.0
Operator: OWS
Column phase: RTX-5MS
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101122A68_C.b/0K22004-CCV2A68.d
Report Date: 29-Nov-2010 12:24

CompuChem

Semivolatile Report SW-846 Method 8270C Appendix IX

Data file : /chem/5973hp68.i/DF101122A68_C.b/0K22004-CCV2A68.d
Lab Smp Id: 0K22004-CCV2 Client Smp ID: SSTD025DP
Inj Date : 22-NOV-2010 10:23
Operator : OWS Inst ID: 5973hp68.i
Smp Info : 0K22004-CCV2:OWS
Misc Info : SSTD025DP
Comment : 2008 MDLS SOIL/ 2007 WATER
Method : /chem/5973hp68.i/DF101122A68_C.b/8270CMASTERDODv5.m
Meth Date : 29-Nov-2010 12:15 byrd Quant Type: ISTD
Cal Date : 19-NOV-2010 17:11 Cal File: 0K19001-CALI1C68.d
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: Short.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Vo	1000.00000	Volume of sample extracted (mL)
Vi	2.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	AMOUNTS ON-COL (NG)	SIMILARITY
*	1 1,4-Dichlorobenzene-d4	152	8.346	8.346	(1.000)	590915	40.0000		
*	2 Naphthalene-d8	136	11.177	11.177	(1.000)	2213461	40.0000		
*	3 Acenaphthene-d10	164	15.296	15.296	(1.000)	1111070	40.0000		
*	4 Phenanthrene-d10	188	18.731	18.731	(1.000)	1584397	40.0000		
*	5 Chrysene-d12	240	25.003	25.003	(1.000)	920630	40.0000		
*	6 Perylene-d12	264	28.134	28.134	(1.000)	552494	40.0000		
$	7 2-Fluorophenol	112	5.873	5.873	(0.704)	1060004	50.0000	52	
$	8 Phenol-d5	99	7.860	7.860	(0.942)	1354198	50.0000	50	
$	9 Nitrobenzene-d5	82	9.650	9.650	(0.863)	1105298	50.0000	52	
$	10 2-Fluorobiphenyl	172	13.806	13.806	(0.903)	1733333	50.0000	53	
$	11 2,4,6-Tribromophenol	330	17.187	17.187	(1.124)	159446	50.0000	54	
$	12 Terphenyl-d14	244	22.647	22.647	(0.906)	1110313	50.0000	52	
	13 N-Nitrosodimethylamine	42	3.453	3.453	(0.414)	449836	50.0000	50	7308
	14 Pyridine	79	3.426	3.426	(0.410)	1397895	50.0000	51	8620
	24 Phenol	94	7.892	7.892	(0.946)	2634470	100.000	100	

Data File: /chem/5973hp68.i/DF101122A68_C.b/0K22004-CCV2A68.d
Report Date: 29-Nov-2010 12:24

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	AMOUNTS ON-COL (NG)	SIMILARITY
26 Bis(2-chloroethyl)ether	93	7.972	7.972	(0.955)	1008355	50.0000	52	
25 2-Chlorophenol	128	7.988	7.988	(0.957)	1792451	100.000	100	8710
27 1,3-Dichlorobenzene	146	8.261	8.261	(0.990)	1058613	50.0000	52	
28 1,4-Dichlorobenzene	146	8.383	8.383	(1.004)	1053050	50.0000	51	
29 1,2-Dichlorobenzene	146	8.773	8.773	(1.051)	1000449	50.0000	51	
32 2-Methylphenol	108	9.131	9.131	(1.094)	1630319	100.000	100	
31 2,2'-oxybis(1-Chloropropane)	45	9.142	9.142	(1.095)	1127016	50.0000	51	8075
39 3-Methylphenol	108	9.489	9.489	(1.137)	1837552	100.000	99	
40 4-Methylphenol	108	9.489	9.489	(1.137)	1837552	100.000	99	
38 N-Nitroso-di-N-propylamine	70	9.463	9.463	(1.134)	681117	50.0000	44	8940
34 Hexachloroethane	117	9.425	9.425	(1.129)	432709	50.0000	51	9133
41 Nitrobenzene	77	9.692	9.692	(0.867)	1137179	50.0000	52	8413
43 Isophorone	82	10.264	10.264	(0.918)	2006853	50.0000	52	8048
44 2-Nitrophenol	139	10.419	10.419	(0.932)	1016352	100.000	110	8448
45 2,4-Dimethylphenol	122	10.643	10.643	(0.952)	1379867	100.000	100	8783
46 Bis(2-chloroethoxy)methane	93	10.846	10.846	(0.970)	1232408	50.0000	52	8621
48 2,4-Dichlorophenol	162	10.958	10.958	(0.980)	1419559	100.000	100	
49 1,2,4-Trichlorobenzene	180	11.113	11.113	(0.994)	779148	50.0000	52	
51 Naphthalene	128	11.226	11.226	(1.004)	2650685	50.0000	52	9232
53 4-Chloroaniline	127	11.503	11.503	(1.029)	1960411	100.000	100	7550
55 Hexachlorobutadiene	225	11.701	11.701	(1.047)	391814	50.0000	52	9434
60 4-Chloro-3-methylphenol	107	12.716	12.716	(1.138)	1474491	100.000	100	8906
61 2-Methylnaphthalene	141	12.828	12.828	(1.148)	1386271	50.0000	52	
62 1-Methylnaphthalene	142	13.074	13.074	(1.170)	1560332	50.0000	52	
63 1,2,4,5-Tetrachlorobenzene	216	13.330	13.330	(0.871)	694045	50.0000	53	9338
64 Hexachlorocyclopentadiene	237	13.389	13.389	(0.875)	430314	50.0000	54	9332
66 2,4,6-Trichlorophenol	196	13.619	13.619	(0.890)	918434	100.000	100	
67 2,4,5-Trichlorophenol	196	13.688	13.688	(0.895)	965767	100.000	110	
69 1,1'-Biphenyl	154	13.982	13.982	(0.914)	1826536	50.0000	54	9475
68 2-Chloronaphthalene	162	13.950	13.950	(0.912)	1514335	50.0000	53	
70 2-Nitroaniline	65	14.383	14.383	(0.940)	915382	100.000	100	8681
73 Dimethylphthalate	163	14.954	14.954	(0.978)	1562990	50.0000	51	8913
75 2,6-Dinitrotoluene	165	15.077	15.077	(0.986)	372656	50.0000	53	9478
72 Acenaphthylene	152	14.922	14.922	(0.976)	2178995	50.0000	52	9482
77 3-Nitroaniline	138	15.382	15.382	(1.006)	692103	100.000	100	8556
76 Acenaphthene	154	15.371	15.371	(1.005)	1239671	50.0000	52	9402
78 2,4-Dinitrophenol	184	15.606	15.606	(1.020)	276836	100.000	120	
81 4-Nitrophenol	139	15.889	15.889	(1.039)	537880	100.000	100	8596
83 2,4-Dinitrotoluene	165	15.975	15.975	(1.044)	469780	50.0000	53	8922
85 2,3,4,6-Tetrachlorophenol	232	16.204	16.204	(1.059)	638189	100.000	110	9473
79 Dibenzofuran	168	15.750	15.750	(1.030)	1998033	50.0000	52	8882
87 Diethylphthalate	149	16.637	16.637	(1.088)	1378367	50.0000	52	8466
88 4-Chlorophenyl-phenylether	204	16.648	16.648	(1.088)	710387	50.0000	52	9421
86 Fluorene	166	16.557	16.557	(1.082)	1566761	50.0000	52	7952
91 4-Nitroaniline	138	16.840	16.840	(1.101)	550953	100.000	100	8988
92 4,6-Dinitro-2-methylphenol	198	16.910	16.910	(0.903)	465058	100.000	120	9020
93 N-Nitrosodiphenylamine	169	16.974	16.974	(0.906)	1099664	50.0000	51	9063

Data File: /chem/5973hp68.i/DF101122A68_C.b/0K22004-CCV2A68.d
Report Date: 29-Nov-2010 12:24

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	AMOUNTS ON-COL (NG)	SIMILARITY
98 4-Bromophenyl-phenylether	248	17.775	17.775	(0.949)	392381	50.0000	53	8816
104 Hexachlorobenzene	284	18.037	18.037	(0.963)	358856	50.0000	52	9192
108 Pentachlorophenol	266	18.512	18.512	(0.988)	441430	100.000	110	8564
111 Phenanthrene	178	18.779	18.779	(1.003)	1934664	50.0000	52	
112 Anthracene	178	18.881	18.881	(1.008)	1949413	50.0000	52	
114 Carbazole	167	19.356	19.356	(1.033)	1605489	50.0000	52	9782
116 Di-n-butylphthalate	149	20.500	20.500	(1.094)	2311345	50.0000	53	9424
121 Fluoranthene	202	21.589	21.589	(1.153)	1877864	50.0000	52	9491
123 Pyrene	202	22.092	22.092	(0.884)	1929159	50.0000	52	9382
130 Butylbenzylphthalate	149	24.009	24.009	(0.960)	861163	50.0000	51	9127
135 bis(2-ethylhexyl)Phthalate	149	25.500	25.500	(1.020)	1083490	50.0000	50	8838
133 Benzo(a)anthracene	228	24.960	24.960	(0.998)	1168240	50.0000	52	
134 Chrysene	228	25.057	25.057	(1.002)	1096201	50.0000	52	
136 Di-n-octylphthalate	149	26.878	26.878	(0.955)	1475436	50.0000	51	
137 Benzo(b)fluoranthene	252	27.364	27.364	(0.973)	789268	50.0000	52	
138 Benzo(k)fluoranthene	252	27.418	27.418	(0.975)	813164	50.0000	53	
140 Benzo(a)pyrene	252	28.011	28.011	(0.996)	677378	50.0000	53	
142 Indeno(1,2,3-cd)pyrene	276	30.132	30.132	(1.071)	474771	50.0000	58	8899
143 Dibenzo(a,h)anthracene	278	30.196	30.196	(1.073)	486087	50.0000	58	7711
144 Benzo(g,h,i)perylene	276	30.629	30.629	(1.089)	495067	50.0000	59	9694

22 Gpo 11/24/10

COMPUCHEM a Division of Liberty Analytical Corp
GC/MS SEMIVOLATILE RUN LOG
LOGBOOK 4Z(4) 2 (5973hp68)

DATE 11/19/10 INITIAL TIME OF TUNE 0921 SHIFT/S (A) ✓ (B)____ (C)____
TIME TUNE EXPIRES 2121 METHOD 8270C APIX

PREVENTIVE MAINTENANCE None (C)

	SEQUENCE		FILENAME		DATE	TIME	CLIENT ID	SDG#	AMOUNT INJECTED	CHEMIST	COMMENTS
1	0K19001		0K19001-TUN3		11/19/10	0921	DFTPP DO	—	2ml	ams	SCD=LCS
2	F61118C		CCV1		1	0941	APIX 5570025 DO	—			APIX-025 OJ21005 11/21/11
3			CCV2		1	1023	8270 5570 025 DO	—			8270-025 01C02006 16 2/24
4	0K22004		CCV3		1	1606	APIX SPI 5570 025 DO	—			APIX SPI-025 0K19005 1/21/11
5	F101122A		0162117-BLK1		1	1148	SBLKEJ	101107			
6			BS1		1	1230	SEBLCS				
7			BSD1		1	1313	SEBLCSD				
8			101107-61		1	1355	13MW5				
9			0162117-MS1		1	1438	MS				
10			MSD1		1	1521	MSD				
11			0161902-BLK1		1	1603	SBLKDN	101086			
12			BS1		1	1646	SDNLCS				
13			BSD1		1	1728	SDNLCSD				
14			101086-01		1	1810	MW 4				
15			02		1	1853	13				
16			09		1	1935	1				
17			03		1	2017	14				
18											
19							MW 11/22/10				
20											
21											
22											
23											
24											

DFTPP Lot #/Exp. Date: OF18005 12-17-10
Calibration STD Lot#/Exp. Date: See Comments
Internal STD Lot#/Exp. Date: 0K17011 5-17-11
Methylene Chloride Lot#/Exp. Date: J39508 1-28-11
Column Type: RTX-5MS 30.32mm

The presence of the Chemist's/Analyst's employee ID number, or signature, on this run log attests that strict compliance with the method's SOP has occurred. Any SOP deviations require documentation by the responsible chemist/analyst together with the chemist's/analyst's initials and the initials of the lab supervisor and a QA department representative, signifying approval of the deviation.

REVIEWED BY: ams DATE 11-23-10

F101122A68C
SCL/LIST SHORT

10/06/08: jr

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8270C-HWMU13A-A

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Instrument ID: 5973HP68 Calibration Date: 11/22/10 Time: 0941

Lab File ID: 0K22004-CCV1A6 Init. Calib. Date(s): 11/19/10 11/19/10

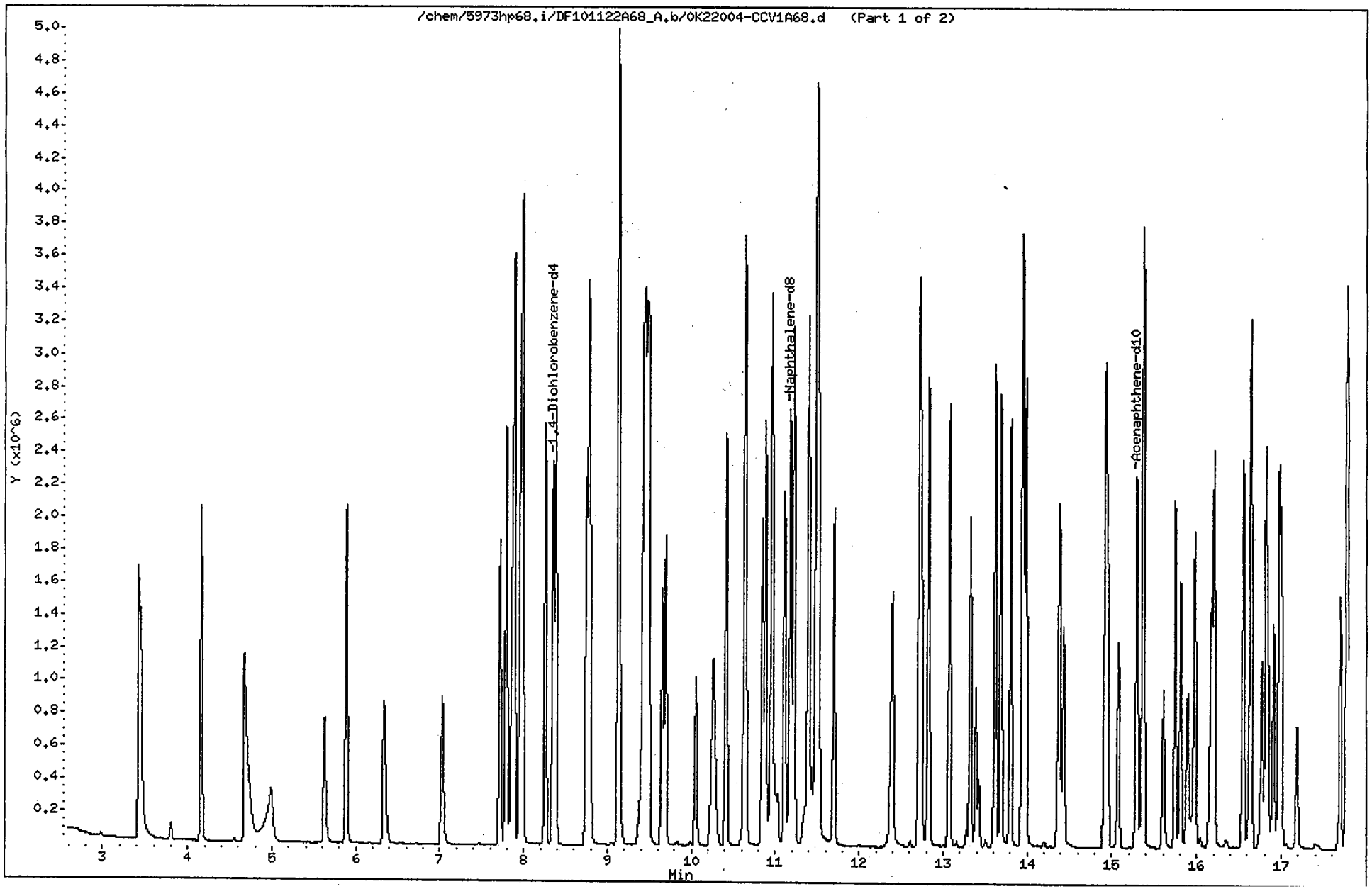
Init. Calib. Times: 0359 0731

GC Column: RTX-5MS ID: 0.32 (mm)

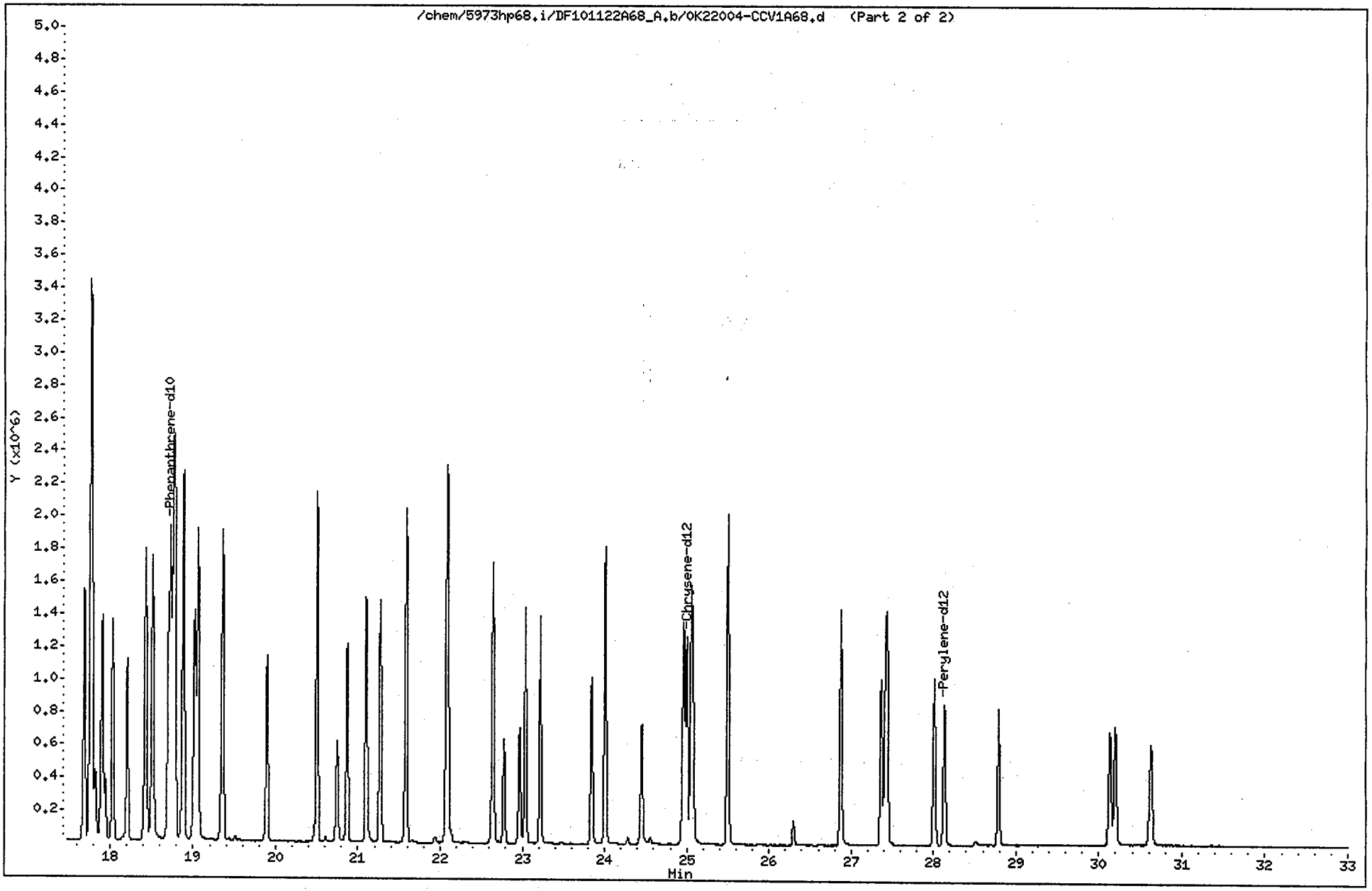
COMPOUND	$\overline{\text{RRF}}$ OR AMOUNT	RRF50.000 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
3,3'-Dimethylbenzidine	0.6030000	0.6257446	0.01	3.77	50.00	AVRG

FORM VII SV

Data File: /chem/5973hp68.i/DF101122A68_A.b/0K22004-CCV1A68.d
Date : 22-NOV-2010 09:41
Client ID: SSTD025DO
Instrument: 5973hp68.i
Sample Info: 0K22004-CCV1:OWS
Volume Injected (uL): 2.0
Operator: OWS
Column phase: RTX-5MS
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101122A68_A.b/0K22004-CCV1A68.d
Date : 22-NOV-2010 09:41
Client ID: SSTD025DO
Instrument: 5973hp68.i
Sample Info: 0K22004-CCV1:OWS
Volume Injected (uL): 2.0
Operator: OWS
Column phase: RTX-5MS
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101122A68_A.b/0K22004-CCV1A68.d
Report Date: 29-Nov-2010 11:29

CompuChem

Semivolatile Report SW-846 Method 8270C Appendix IX

Data file : /chem/5973hp68.i/DF101122A68_A.b/0K22004-CCV1A68.d
Lab Smp Id: 0K22004-CCV1 Client Smp ID: SSTD025DO
Inj Date : 22-NOV-2010 09:41
Operator : OWS Inst ID: 5973hp68.i
Smp Info : 0K22004-CCV1:OWS
Misc Info : SSTD025DO
Comment : 2008 MDLS SOIL/ 2007 WATER
Method : /chem/5973hp68.i/DF101122A68_A.b/8270CMASTERDODv5.m
Meth Date : 29-Nov-2010 11:29 byrd Quant Type: ISTD
Cal Date : 19-NOV-2010 07:31 Cal File: 0K19001-CAL6C68.d
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SLP1119.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Vo	1000.00000	Volume of sample extracted (mL)
Vi	2.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	AMOUNTS ON-COL (NG)	SIMILARITY
* 1	1,4-Dichlorobenzene-d4	152	8.346	8.346	(1.000)	619639	40.0000		
* 2	Naphthalene-d8	136	11.178	11.178	(1.000)	2154891	40.0000		
* 3	Acenaphthene-d10	164	15.291	15.291	(1.000)	968691	40.0000		
* 4	Phenanthrene-d10	188	18.732	18.732	(1.000)	1341866	40.0000		
* 5	Chrysene-d12	240	24.998	24.998	(1.000)	777195	40.0000		
* 6	Perylene-d12	264	28.134	28.134	(1.000)	559035	40.0000		
30	Benzyl Alcohol	108	8.795	8.795	(1.054)	629925	50.0000	43	
129	3,3'-Dimethylbenzidine	212	23.844	23.844	(0.954)	607907	50.0000	52	9534
132	3,3'-Dichlorobenzidine	252	25.078	25.078	(1.003)	293878	50.0000	57	8545

22 QNS 11/22/10

COMPUCHEM a Division of Liberty Analytical Corp
GC/MS SEMIVOLATILE RUN LOG
LOGBOOK 4Z(4) 2 (5973hp68)

DATE 11/19/10 INITIAL TIME OF TUNE 0921 SHIFT/S (A) ✓ (B)____ (C)____
TIME TUNE EXPIRES 2121 METHOD 8270C APIX

PREVENTIVE MAINTENANCE None (A)

	SEQUENCE#		FILENAME		DATE	TIME	CLIENT ID	SDG#	AMOUNT INJECTED	CHEMIST	COMMENTS
1	0K1901		0K1901-RUN3	/	11/19/10	0921	DFTPP DO	—	2ml	ms	SCD=LCD
2	F61118C		CCV1	/	/ /	0941	APIX 5ST0025 DO	—			APIX-025 OJ2105
3			CCV2	/	/ /	1023	8270 5ST0 025 DO	—			8270-025 01C0206
4	0E22004		CCV3	/	/ /	1106	APIXSPIKESTD 025 DO	—			APIXSPIK-025 0K19005
5	F10122A	✓	0102117-BLK1	X	/ /	1148	5BLKEJ	10/0107			
6			BS1	/	/ /	1230	5EJLCS				
7			BSD1	SF	/ /	1313	5EJLCSD				
8			10/0107-61	SL	/ /	1355	13MW5				
9			0102117-MS1	SF	/ /	1438	MS				
10			MSD1	SF	/ /	1521	MSD				
11			0161902-BLK1	/	/ /	1603	5BLKDN	10/0086			
12			BS1	SF	/ /	1646	5DNLCS				
13			BSD1	SF	/ /	1728	5DNLCSD				
14		X	10/0086-61	SC	/ /	1810	MW4				
15		X	02	SC	/ /	1853	13				
16			09	SC	/ /	1935	1				
17		X	03	SC	/ /	2017	14				
18					/ /						
19					/ /		MW 11/22/10				
20					/ /						
21					/ /						
22					/ /						
23					/ /						
24					/ /						

DFTPP Lot #/Exp. Date: OF1805 12-17-10 Calibration STD Lot#/Exp. Date: See Comments Internal STD Lot#/Exp. Date: 0K17011 5-17-11 Methylene Chloride Lot#/Exp. Date: J39508 11-28-11 Column Type: RTX-5MS 30.32mm

The presence of the Chemist's/Analyst's employee ID number, or signature, on this run log attests that strict compliance with the method's SOP has occurred. Any SOP deviations require documentation by the responsible chemist/analyst together with the chemist's/analyst's initials and the initials of the lab supervisor and a QA department representative, signifying approval of the deviation.

REVIEWED BY: ms DATE 11-23-10

10/06/08: jr

F10122A 66 A
Sublist SLP1119

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8270C-HWMU13A-B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Instrument ID: 5973HP68 Calibration Date: 11/22/10 Time: 1106

Lab File ID: 0K22004-CCV3A6 Init. Calib. Date(s): 11/19/10 11/19/10

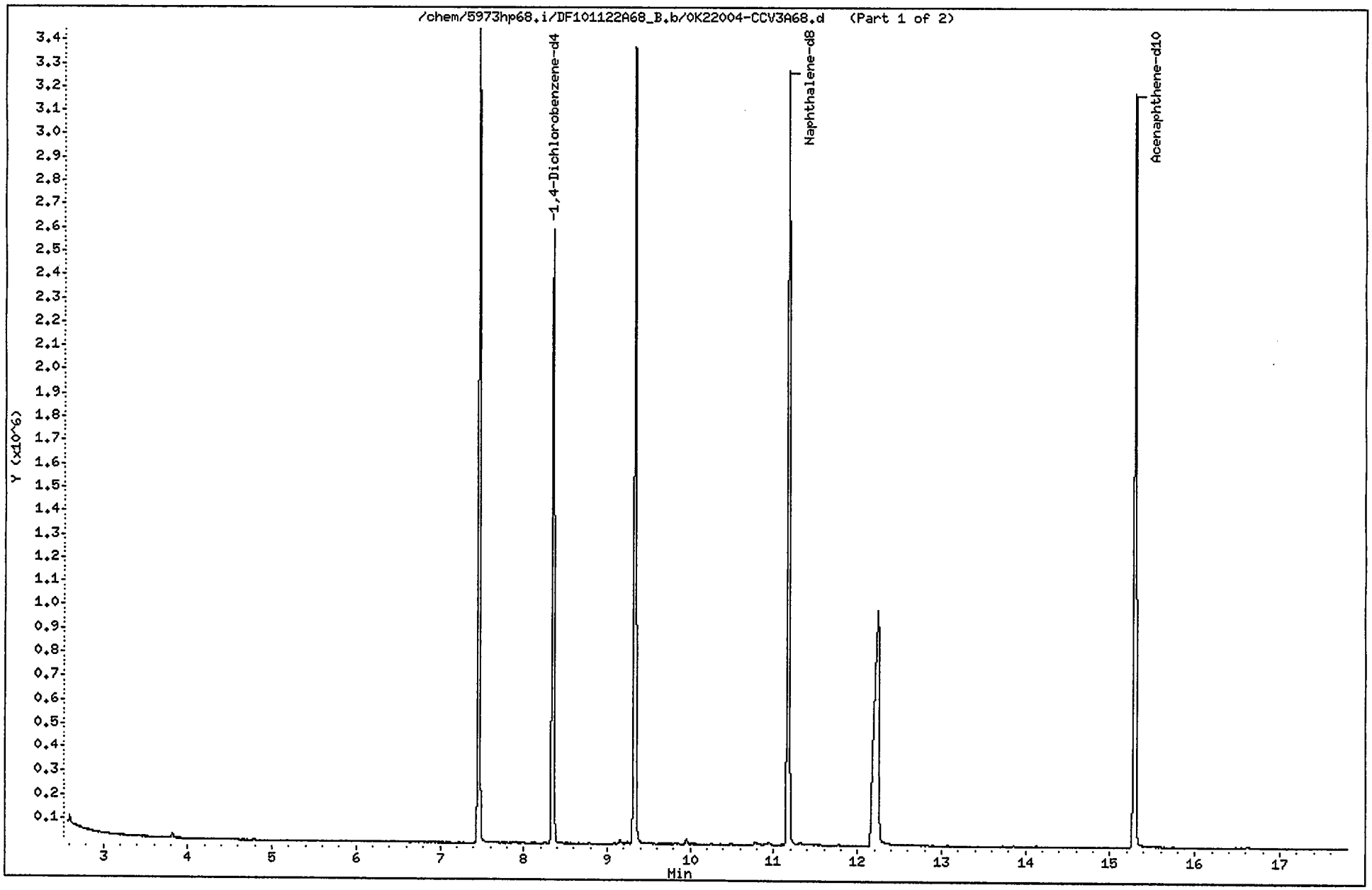
Init. Calib. Times: 0813 1145

GC Column: RTX-5MS ID: 0.32 (mm)

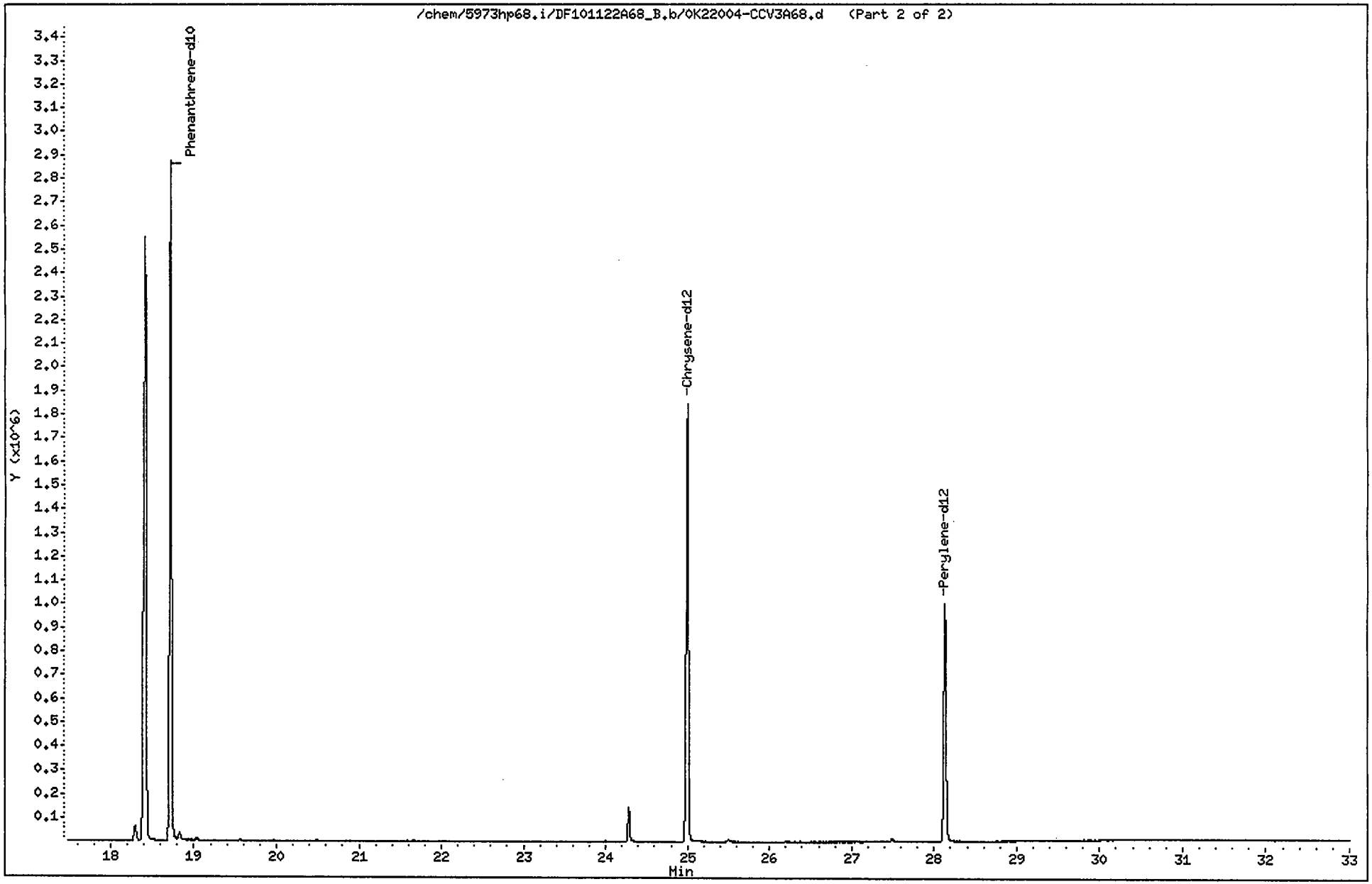
COMPOUND	RRF OR AMOUNT	RRF50.000 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
Acetophenone	0.5680000	0.5642043	0.01	-0.67	50.00	AVRG

FORM VII SV

Data File: /chem/5973hp68.i/DF101122A68_B.b/0K22004-CCV3A68.d
Date : 22-NOV-2010 11:06
Client ID: SSTD025DQ
Instrument: 5973hp68.i
Sample Info: 0K22004-CCV3:OWS
Volume Injected (uL): 2.0
Operator: OWS
Column phase: RTX-5MS
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101122A68_B.b/0K22004-CCV3A68.d
Date : 22-NOV-2010 11:06
Client ID: SSTD025DQ
Instrument: 5973hp68.i
Sample Info: 0K22004-CCV3:OWS
Volume Injected (uL): 2.0
Operator: OWS
Column phase: RTX-5MS
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101122A68_B.b/0K22004-CCV3A68.d
Report Date: 29-Nov-2010 11:50

CompuChem

Semivolatile Report SW-846 Method 8270C Appendix IX

Data file : /chem/5973hp68.i/DF101122A68_B.b/0K22004-CCV3A68.d
Lab Smp Id: 0K22004-CCV3 Client Smp ID: SSTD025DQ
Inj Date : 22-NOV-2010 11:06
Operator : OWS Inst ID: 5973hp68.i
Smp Info : 0K22004-CCV3:OWS
Misc Info : SSTD025DQ
Comment : 2008 MDLS SOIL/ 2007 WATER
Method : /chem/5973hp68.i/DF101122A68_B.b/8270CMASTERDODv5.m
Meth Date : 29-Nov-2010 11:50 byrd Quant Type: ISTD
Cal Date : 19-NOV-2010 11:45 Cal File: 0K19001-CALCC68.d
Als bottle: 4 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: Spike.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Vo	1000.00000	Volume of sample extracted (mL)
Vi	2.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	AMOUNTS ON-COL (NG)	SIMILARITY
* 1 1,4-Dichlorobenzene-d4	152	8.346	8.346	(1.000)	680809	40.0000		
* 2 Naphthalene-d8	136	11.172	11.172	(1.000)	2623139	40.0000		
* 3 Acenaphthene-d10	164	15.296	15.296	(1.000)	1382654	40.0000		
* 4 Phenanthrene-d10	188	18.726	18.726	(1.000)	2036912	40.0000		
* 5 Chrysene-d12	240	24.998	24.998	(1.000)	1211893	40.0000		
* 6 Perylene-d12	264	28.134	28.134	(1.000)	654923	40.0000		
21 Benzaldehyde	77	7.464	7.464	(0.894)	1304664	50.0000	50	8919
33 Acetophenone	105	9.329	9.329	(0.835)	1849983	50.0000	50	9676
57 Caprolactam	113	12.246	12.246	(1.096)	514417	50.0000	49	8989
106 Atrazine	215	18.421	18.421	(0.984)	356570	50.0000	50	8908

22 smp 11/24/10

COMPUCHEM a Division of Liberty Analytical Corp
GC/MS SEMIVOLATILE RUN LOG
LOGBOOK 4Z(4) 2 (5973hp68)

DATE 11/19/10 INITIAL TIME OF TUNE 0921 SHIFT/S (A) ✓ (B)____ (C)____
TIME TUNE EXPIRES 2121 METHOD 8270C APIX

PREVENTIVE MAINTENANCE None (B)

	SEQUENCE#	FILENAME		DATE	TIME	CLIENT ID	SDG#	AMOUNT INJECTED	CHEMIST	COMMENTS
1	0K19001	0K19001-Run3	/	11/19/10	0921	DFTPP DO	—	2uL	ChS	SCD=LCS
2	F61118C	CCal	/	/ /	0941	APIX 5570025 DO	—			APIX-025 OJ21105 4/24/11
3		CCal2	/	/ /	1023	8270 5570 025 DO	—			8270-025 01C02006 16 4/24/11
4	0622004	CCal3	/	/ /	1106	APIXSPIKESTD 025 DO	—			APIXSPIKE025 0K14005 1/24/11
5	R101122A	0162117-BLK1	X	/ /	1148	SBLKEJ	10/0107			
6		BS1	/	/ /	1230	SESLCS				
7		BSD1	SF	/ /	1313	SESLCSD				
8		10/0107-61	SL	/ /	1355	13MWS				
9		0162117-MS1	SF	/ /	1438	MS				
10		MSD1	SF	/ /	1521	MSD				
11		0161902-BLK1	/	/ /	1603	SBLKDN	10/0086			
12		BS1	SF	/ /	1646	SDNLCS				
13		BSD1	SP	/ /	1728	SDNLCSD				
14		10/0086-61	SC	/ /	1810	MW 4				
15		02	SC	/ /	1853	13				
16		09	SC	/ /	1935	1				
17		03	SC	/ /	2017	14				
18				/ /						
19				/ /		MW 11/22/10				
20				/ /						
21				/ /						
22				/ /						
23				/ /						
24				/ /						

DFTPP Lot #/Exp. Date: OF18005 12-17-10
Calibration STD Lot#/Exp. Date: See Comments
Internal STD Lot#/Exp. Date: 0K17011 5-17-11
Methylene Chloride Lot#/Exp. Date: JJ9508 11-28-11
Column Type: RTX-5MS / 0.32mm

The presence of the Chemist's/Analyst's employee ID number, or signature, on this run log attests that strict compliance with the method's SOP has occurred. Any SOP deviations require documentation by the responsible chemist/analyst together with the chemist's/analyst's initials and the initials of the lab supervisor and a QA department representative, signifying approval of the deviation.

REVIEWED BY: ChS DATE 11-23-10

10/06/08: jr

R101122A06 B
Sublist SPIKE

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8270C-HWMU13A-C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Instrument ID: 5973HP68 Calibration Date: 11/23/10 Time: 0028

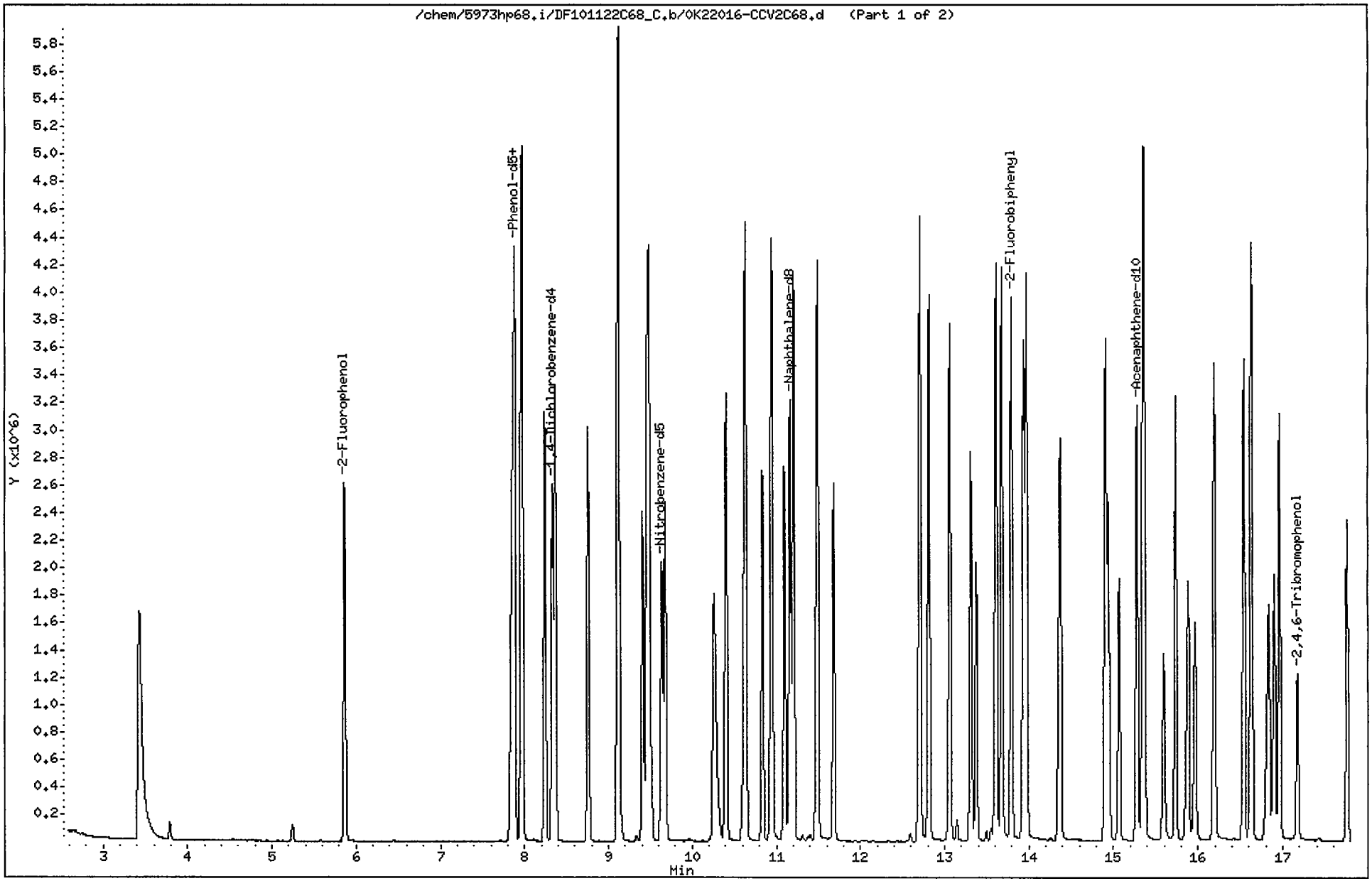
Lab File ID: 0K22016-CCV2C6 Init. Calib. Date(s): 11/19/10 11/19/10

Init. Calib. Times: 1338 1711

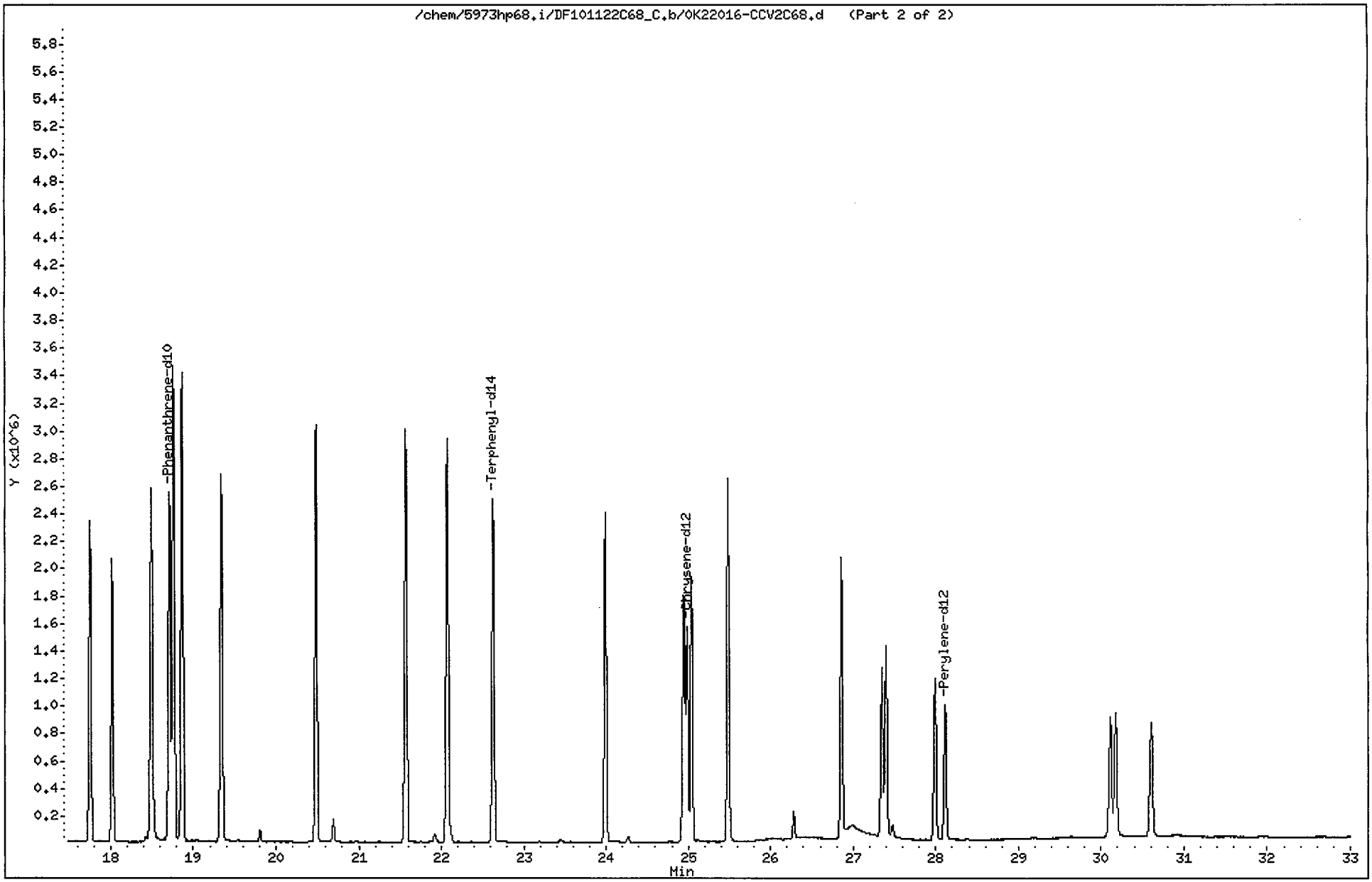
GC Column: RTX-5MS ID: 0.32 (mm)

COMPOUND	RRF OR AMOUNT	RRF50.000 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
Phenol	1.7470000	1.8480734	0.01	5.78	20.00	AVRG
2-Chlorophenol	1.1800000	1.2564601	0.01	6.48	50.00	AVRG
3-Methylphenol	1.2610000	1.3419169	0.01	6.42	50.00	AVRG
4-Methylphenol	1.2610000	1.3419169	0.01	6.42	50.00	AVRG
Hexachloroethane	0.5690000	0.6050637	0.01	6.34	50.00	AVRG
Nitrobenzene	0.3920000	0.4215360	0.01	7.53	50.00	AVRG
2,4-Dichlorophenol	0.2500000	0.2757942	0.01	10.32	20.00	AVRG
Dimethylphthalate	1.1020000	1.2074069	0.01	9.56	50.00	AVRG
4-Nitrophenol	0.1850000	0.2238043	0.05	20.98	50.00	AVRG
Dibenzofuran	1.3880000	1.5149261	0.01	9.14	50.00	AVRG
Diethylphthalate	0.9570000	1.0157279	0.01	6.14	50.00	AVRG
N-Nitrosodiphenylamine	0.5400000	0.5927336	0.01	9.76	20.00	AVRG
Di-n-butylphthalate	1.1030000	1.1921804	0.01	8.08	50.00	AVRG
Fluoranthene	0.9130000	0.9468281	0.01	3.70	20.00	AVRG
Pyrene	1.6120000	1.8724243	0.01	16.16	50.00	AVRG
Butylbenzylphthalate	0.7310000	0.7982324	0.01	9.20	50.00	AVRG
bis(2-ethylhexyl)Phthalate	0.9350000	1.0262490	0.01	9.76	50.00	AVRG
Benzo(a)anthracene	0.9790000	1.0777577	0.01	10.09	50.00	AVRG
Di-n-octylphthalate	2.0910000	2.1873671	0.01	4.61	20.00	AVRG
Benzo(b)fluoranthene	1.0960000	1.1413747	0.01	4.14	50.00	AVRG
Benzo(k)fluoranthene	1.1040000	1.1512534	0.01	4.28	50.00	AVRG
Benzo(a)pyrene	0.9300000	1.0312145	0.01	10.88	20.00	AVRG
Indeno(1,2,3-cd)pyrene	0.5940000	0.8081371	0.01	36.05	50.00	AVRG
Dibenzo(a,h)anthracene	0.6100000	0.8130839	0.01	33.29	50.00	AVRG
2-Fluorophenol	1.3880000	1.5003763	0.01	8.10	50.00	AVRG
Phenol-d5	1.8160000	1.9349416	0.01	6.55	50.00	AVRG
Nitrobenzene-d5	0.3810000	0.4068212	0.01	6.78	50.00	AVRG
2-Fluorobiphenyl	1.1720000	1.3196429	0.01	12.60	50.00	AVRG
2,4,6-Tribromophenol	0.1070000	0.1239337	0.01	15.82	50.00	AVRG
Terphenyl-d14	0.9200000	1.0899040	0.01	18.47	50.00	AVRG

Data File: /chem/5973hp68.i/DF101122C68_C.b/0K22016-CCV2C68.d
Date : 23-NOV-2010 00:28
Client ID: SSTD025DS
Instrument: 5973hp68.i
Sample Info: 0K22016-CCV2:MEW
Volume Injected (uL): 2.0
Operator: MEW
Column phase: RTX-5MS
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101122C68_C.b/0K22016-CCV2C68.d
Date : 23-NOV-2010 00:28
Client ID: SSTD025DS
Instrument: 5973hp68.i
Sample Info: 0K22016-CCV2:MEW
Volume Injected (uL): 2.0
Operator: MEW
Column phase: RTX-5MS
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101122C68_C.b/0K22016-CCV2C68.d
Report Date: 29-Nov-2010 14:28

CompuChem

Semivolatile Report SW-846 Method 8270C Appendix IX

Data file : /chem/5973hp68.i/DF101122C68_C.b/0K22016-CCV2C68.d
Lab Smp Id: 0K22016-CCV2 Client Smp ID: SSTD025DS
Inj Date : 23-NOV-2010 00:28
Operator : MEW Inst ID: 5973hp68.i
Smp Info : 0K22016-CCV2:MEW
Misc Info : 8270-025
Comment : 2008 MDLS SOIL/ 2007 WATER
Method : /chem/5973hp68.i/DF101122C68_C.b/8270CMASTERDODv5.m
Meth Date : 29-Nov-2010 14:02 byrd Quant Type: ISTD
Cal Date : 19-NOV-2010 17:11 Cal File: 0K19001-CALI1C68.d
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: Short.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Vo	1000.00000	Volume of sample extracted (mL)
Vi	2.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	AMOUNTS ON-COL (NG)	SIMILARITY
*	1 1,4-Dichlorobenzene-d4	152	8.335	8.335	(1.000)	706836	40.0000		
*	2 Naphthalene-d8	136	11.167	11.167	(1.000)	2708140	40.0000		
*	3 Acenaphthene-d10	164	15.280	15.280	(1.000)	1384340	40.0000		
*	4 Phenanthrene-d10	188	18.715	18.715	(1.000)	1975436	40.0000		
*	5 Chrysene-d12	240	24.987	24.987	(1.000)	993882	40.0000		
*	6 Perylene-d12	264	28.117	28.117	(1.000)	638953	40.0000		
$	7 2-Fluorophenol	112	5.862	5.862	(0.703)	1325650	50.0000	54	
$	8 Phenol-d5	99	7.849	7.849	(0.942)	1709608	50.0000	53	
$	9 Nitrobenzene-d5	82	9.639	9.639	(0.863)	1377161	50.0000	53	
$	10 2-Fluorobiphenyl	172	13.795	13.795	(0.903)	2283543	50.0000	56	
$	11 2,4,6-Tribromophenol	330	17.171	17.171	(1.124)	214458	50.0000	58	
$	12 Terphenyl-d14	244	22.631	22.631	(0.906)	1354045	50.0000	59	
	13 N-Nitrosodimethylamine	42	3.442	3.442	(0.413)	558097	50.0000	52	7246
	14 Pyridine	79	3.415	3.415	(0.410)	1801306	50.0000	55	8618
	24 Phenol	94	7.886	7.886	(0.946)	3265712	100.000	100	

on 4/29/11

Data File: /chem/5973hp68.i/DF101122C68_C.b/0K22016-CCV2C68.d
Report Date: 29-Nov-2010 14:28

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	ON-COL (NG)	SIMILARITY
26 Bis(2-chloroethyl)ether	93	7.956	7.956	(0.954)	1241058	50.0000	53	
25 2-Chlorophenol	128	7.972	7.972	(0.956)	2220278	100.000	110	8686
27 1,3-Dichlorobenzene	146	8.244	8.244	(0.989)	1320701	50.0000	54	
28 1,4-Dichlorobenzene	146	8.367	8.367	(1.004)	1321201	50.0000	54	
29 1,2-Dichlorobenzene	146	8.757	8.757	(1.051)	1256833	50.0000	54	
32 2-Methylphenol	108	9.126	9.126	(1.095)	2014799	100.000	100	
31 2,2'-oxybis(1-Chloropropane)	45	9.110	9.110	(1.093)	1320887	50.0000	50	8022
39 3-Methylphenol	108	9.484	9.484	(1.138)	2371288	100.000	110	
40 4-Methylphenol	108	9.484	9.484	(1.138)	2371288	100.000	110	
38 N-Nitroso-di-N-propylamine	70	9.457	9.457	(1.135)	725888	50.0000	40	9004(H)
34 Hexachloroethane	117	9.409	9.409	(1.129)	534601	50.0000	53	9110
41 Nitrobenzene	77	9.681	9.681	(0.867)	1426973	50.0000	54	8360
43 Isophorone	82	10.258	10.258	(0.919)	2611832	50.0000	55	7888
44 2-Nitrophenol	139	10.408	10.408	(0.932)	1288096	100.000	110	8403
45 2,4-Dimethylphenol	122	10.638	10.638	(0.953)	1870325	100.000	110	8754
46 Bis(2-chloroethoxy)methane	93	10.835	10.835	(0.970)	1589726	50.0000	55	7977
48 2,4-Dichlorophenol	162	10.947	10.947	(0.980)	1867223	100.000	110	
49 1,2,4-Trichlorobenzene	180	11.097	11.097	(0.994)	1009691	50.0000	55	
51 Naphthalene	128	11.209	11.209	(1.004)	3365045	50.0000	54	9219
53 4-Chloroaniline	127	11.492	11.492	(1.029)	2581843	100.000	110	7484
55 Hexachlorobutadiene	225	11.685	11.685	(1.046)	505357	50.0000	55	9385
60 4-Chloro-3-methylphenol	107	12.710	12.710	(1.138)	1931757	100.000	110	8582
61 2-Methylnaphthalene	141	12.817	12.817	(1.148)	1808266	50.0000	55	
62 1-Methylnaphthalene	142	13.063	13.063	(1.170)	2024023	50.0000	55	
63 1,2,4,5-Tetrachlorobenzene	216	13.314	13.314	(0.871)	925857	50.0000	57	9425
64 Hexachlorocyclopentadiene	237	13.378	13.378	(0.876)	549823	50.0000	55	9494
66 2,4,6-Trichlorophenol	196	13.608	13.608	(0.891)	1218414	100.000	110	
67 2,4,5-Trichlorophenol	196	13.683	13.683	(0.895)	1280060	100.000	110	
69 1,1'-Biphenyl	154	13.971	13.971	(0.914)	2382357	50.0000	56	9390
68 2-Chloronaphthalene	162	13.939	13.939	(0.912)	2001386	50.0000	56	
70 2-Nitroaniline	65	14.372	14.372	(0.941)	1163084	100.000	110	8636
73 Dimethylphthalate	163	14.938	14.938	(0.978)	2089327	50.0000	55	8966
75 2,6-Dinitrotoluene	165	15.066	15.066	(0.986)	466273	50.0000	53	9442
72 Acenaphthylene	152	14.906	14.906	(0.976)	2860619	50.0000	55	9459
77 3-Nitroaniline	138	15.371	15.371	(1.006)	932117	100.000	110	8301
76 Acenaphthene	154	15.355	15.355	(1.005)	1603378	50.0000	54	9481
78 2,4-Dinitrophenol	184	15.595	15.595	(1.021)	358712	100.000	120	
81 4-Nitrophenol	139	15.889	15.889	(1.040)	774553	100.000	120	8565
83 2,4-Dinitrotoluene	165	15.964	15.964	(1.045)	598197	50.0000	54	9413
85 2,3,4,6-Tetrachlorophenol	232	16.194	16.194	(1.060)	837209	100.000	110	9473
79 Dibenzofuran	168	15.739	15.739	(1.030)	2621466	50.0000	54	8832
87 Diethylphthalate	149	16.626	16.626	(1.088)	1757641	50.0000	53	8322
88 4-Chlorophenyl-phenylether	204	16.632	16.632	(1.088)	916527	50.0000	54	9406
86 Fluorene	166	16.541	16.541	(1.083)	2034789	50.0000	54	7937
91 4-Nitroaniline	138	16.840	16.840	(1.102)	800155	100.000	120	8798
92 4,6-Dinitro-2-methylphenol	198	16.904	16.904	(0.903)	592848	100.000	120	9192
93 N-Nitrosodiphenylamine	169	16.963	16.963	(0.906)	1463634	50.0000	55	8865

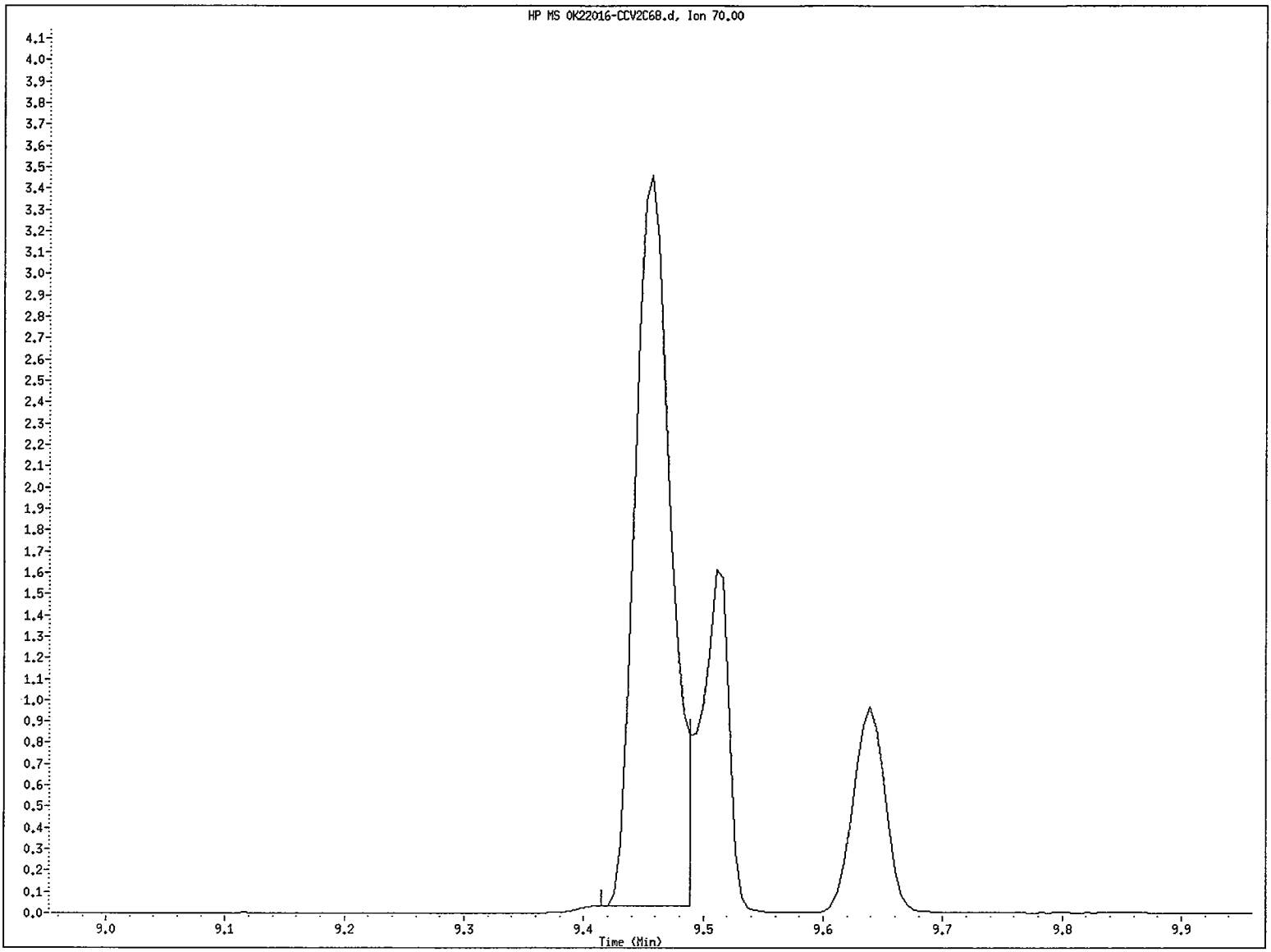
Data File: /chem/5973hp68.i/DF101122C68_C.b/0K22016-CCV2C68.d
Report Date: 29-Nov-2010 14:28

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	ON-COL (NG)	SIMILARITY
98	4-Bromophenyl-phenylether	248	17.759	17.759	(0.949)	513140	50.0000	55	8732
104	Hexachlorobenzene	284	18.026	18.026	(0.963)	469483	50.0000	55	9322
108	Pentachlorophenol	266	18.501	18.501	(0.989)	574738	100.000	120	8412
111	Phenanthrene	178	18.769	18.769	(1.003)	2518520	50.0000	54	
112	Anthracene	178	18.870	18.870	(1.008)	2545948	50.0000	55	
114	Carbazole	167	19.346	19.346	(1.034)	2188604	50.0000	57	9795
116	Di-n-butylphthalate	149	20.489	20.489	(1.095)	2943845	50.0000	54	9340
121	Fluoranthene	202	21.573	21.573	(1.153)	2337998	50.0000	52	9522
123	Pyrene	202	22.075	22.075	(0.883)	2326211	50.0000	58	9426
130	Butylbenzylphthalate	149	23.999	23.999	(0.960)	991686	50.0000	54	9123
135	bis(2-ethylhexyl)Phthalate	149	25.484	25.484	(1.020)	1274963	50.0000	55	8833
133	Benzo(a)anthracene	228	24.950	24.950	(0.999)	1338955	50.0000	55	
134	Chrysene	228	25.046	25.046	(1.002)	1255571	50.0000	55	
136	Di-n-octylphthalate	149	26.862	26.862	(0.955)	1747031	50.0000	52	
137	Benzo(b)fluoranthene	252	27.348	27.348	(0.973)	911606	50.0000	52	
138	Benzo(k)fluoranthene	252	27.402	27.402	(0.975)	919496	50.0000	52	
140	Benzo(a)pyrene	252	27.995	27.995	(0.996)	823622	50.0000	55	
142	Indeno(1,2,3-cd)pyrene	276	30.115	30.115	(1.071)	645452	50.0000	68	8952
143	Dibenzo(a,h)anthracene	278	30.180	30.180	(1.073)	649403	50.0000	66	7811
144	Benzo(g,h,i)perylene	276	30.607	30.607	(1.089)	672167	50.0000	69	9731

QC Flag Legend

H - Operator selected an alternate compound hit.

N-Nitroso-di-N-propylamine CAS Number 621-64-7 Area = 725888 User selected hit



File name: /chem/5973hp68.i/DF101122C68_C.b/0K22016-CCV2C68.d
Client ID: SSTD025DS
Instrument ID: 5973hp68.i
Injection Date and Time: 23-NOV-2010 00:28
Retention Time: 9.46
Operator ID: MEW

COMPUCHEM a Division of Liberty Analytical Corp
GC/MS SEMIVOLATILE RUN LOG
LOGBOOK 4Z(4) 2 (5973hp68)

DATE 11/22/10 INITIAL TIME OF TUNE 2321 SHIFT/S (A) ____ (B) ____ (C) ✓
TIME TUNE EXPIRES 1121 METHOD 8270C APIX

PREVENTIVE MAINTENANCE front, liner, septum

	SEQUENCE#	LOC	FILENAME	TYP	DATE	TIME	CLIENT ID	SDG#	AMOUNT INJECTED	CHEMIST	COMMENTS
1	0K220116		0K220116-TUNIC68	/	11/22/10	2321	DFTPPDR	–	2µL	MEW	SCD=LCD
2	F101122C		-CCV1C68	/	/ /	2344	SSTD025DR MW 11-23-10	–			0J21005 1/21/11
3			-CCV2C68	/	11/23/10	0028	DS	–			0K020116 2/2/11
4			-CCV3C68	/	/ /	0113	DT	–			0K19005 1/21/11
5			0102117-BLK1JC68	/	/ /	0206	SBLKEJ	VARIOUS			
6		/	0101902-BS1JC68	SP	/ /	0249	SDNLCS				
7		/	-BSD1JC68	SE	/ /	0331	SDNLCSD				
8		/	0102117-BSD1JC68	SF	/ /	0414	SEJLCSD				
9			1010107-02C68	/	/ /	0456	13MW1	1010107			
10			-03	/	/ /	0539	2				
11			-04	/	/ /	0621	~~4~~ 3 MW 11-23-10				
12			-05	/	/ /	0704	4				
13		/	-06	1H	/ /	0746	DUP				
14		/	10100860-01JC68	RY	/ /	—	MW-4	10100860			
15	Not Run	/	-02J	RY	/ /	—	-13				Not Run
16		/	-09J	RY	/ /	—	-1				
17		/	-03J	SL	/ /	1057	-14				
18					/ /						
19					/ /						
20					/ /						
21					/ /						
22					/ /						
23					/ /						
24					/ /						11-23-10

DFTPP Lot #/Exp. Date: OF18005 12/17/10
Calibration STD Lot#/Exp. Date: See Comments
Internal STD Lot#/Exp. Date: 0K17011 5/17/11
Methylene Chloride Lot#/Exp. Date: J39508 11/28/11
Column Type: RTX-5ms 0.32mm

The presence of the Chemist's/Analyst's employee ID number, or signature, on this run log attests that strict compliance with the method's SOP has occurred. Any SOP deviations require documentation by the responsible chemist/analyst together with the chemist's/analyst's initials and the initials of the lab supervisor and a QA department representative, signifying approval of the deviation.

REVIEWED BY: CMS DATE 11-23-10
10/06/08: jr

F101122C68_C
suggest SHORT

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8270C-HWMU13A-A

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Instrument ID: 5973HP68 Calibration Date: 11/22/10 Time: 2344

Lab File ID: 0K22016-CCV1C6 Init. Calib. Date(s): 11/19/10 11/19/10

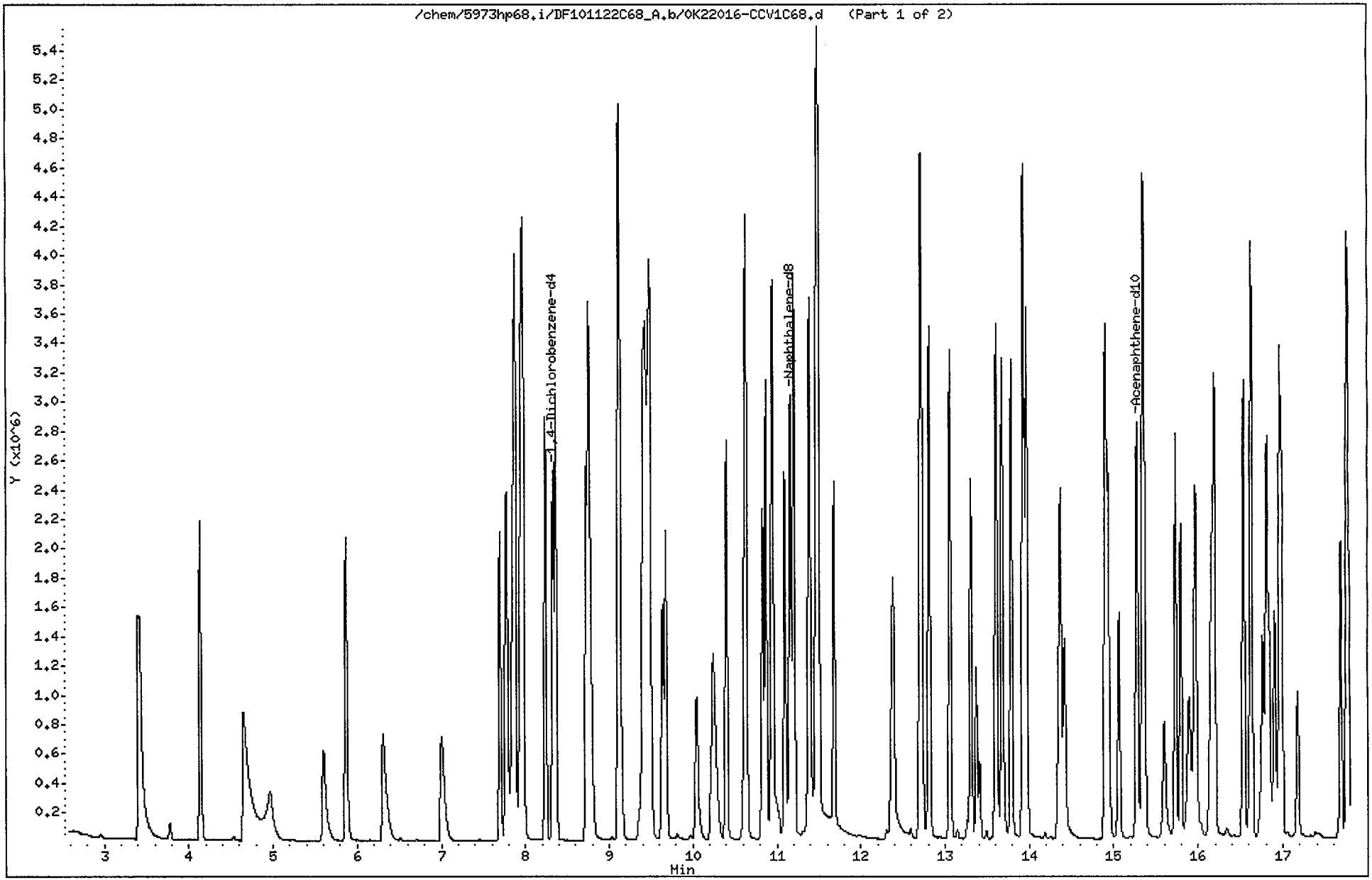
Init. Calib. Times: 0359 0731

GC Column: RTX-5MS ID: 0.32 (mm)

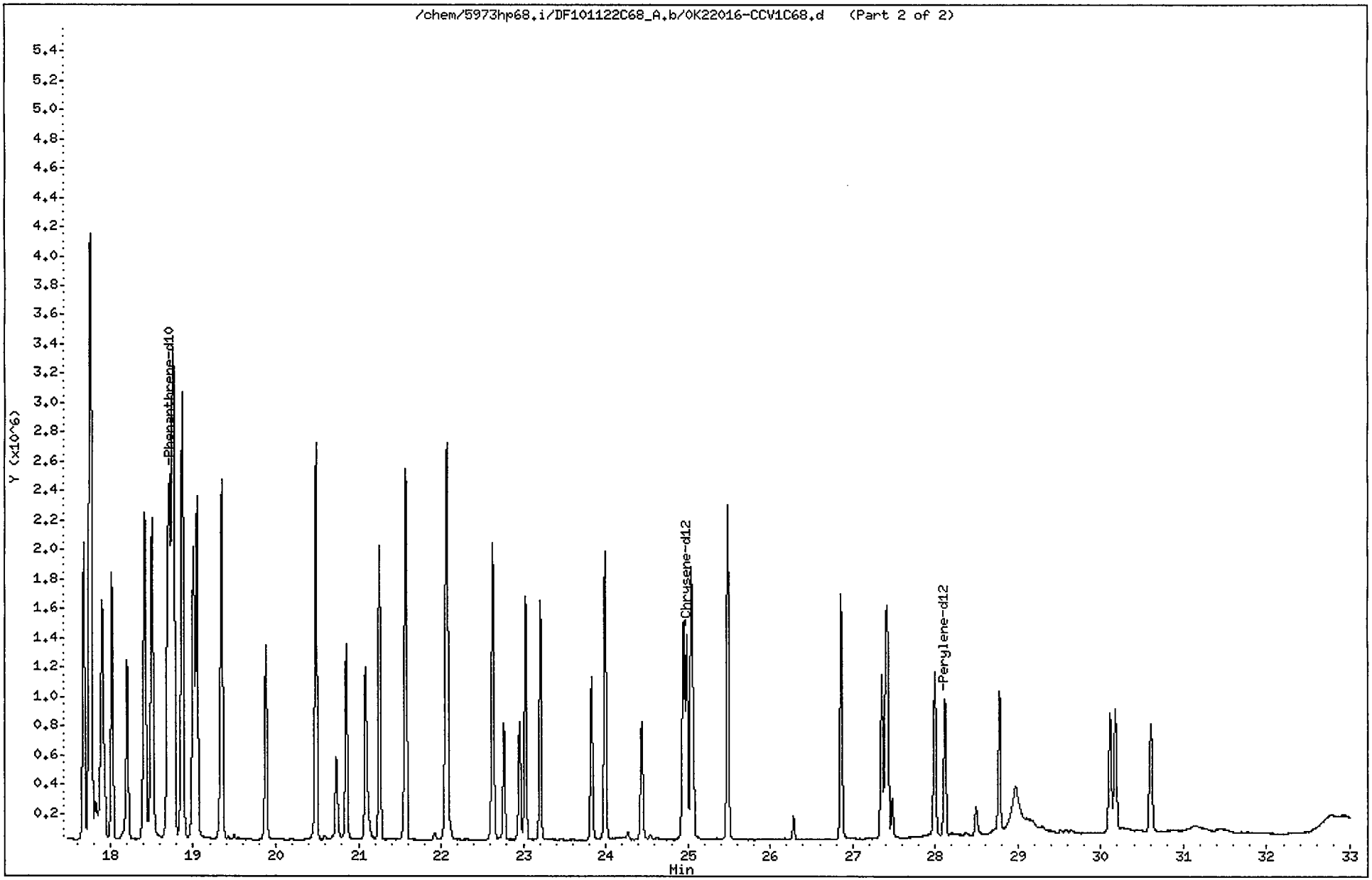
COMPOUND	RRF OR AMOUNT	RRF50.000 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
3,3'-Dimethylbenzidine	0.6030000	0.6570411	0.01	8.96	50.00	AVRG

FORM VII SV

Data File: /chem/5973hp68.i/DF101122C68_A.b/0K22016-CCV1C68.d
Date : 22-NOV-2010 23:44
Client ID: SSTD025DR
Instrument: 5973hp68.i
Sample Info: 0K22016-CCV1:MEW
Volume Injected (uL): 2.0
Operator: MEW
Column phase: RTX-5MS
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101122C68_A.b/0K22016-CCV1C68.d
Date : 22-NOV-2010 23:44
Client ID: SSTD025DR
Instrument: 5973hp68.i
Sample Info: 0K22016-CCV1:MEW
Volume Injected (uL): 2.0
Operator: MEW
Column phase: RTX-5MS
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101122C68_A.b/0K22016-CCV1C68.d
Report Date: 29-Nov-2010 12:43

CompuChem

Semivolatile Report SW-846 Method 8270C Appendix IX

Data file : /chem/5973hp68.i/DF101122C68_A.b/0K22016-CCV1C68.d
Lab Smp Id: 0K22016-CCV1 Client Smp ID: SSTD025DR
Inj Date : 22-NOV-2010 23:44
Operator : MEW Inst ID: 5973hp68.i
Smp Info : 0K22016-CCV1:MEW
Misc Info : APIX-025
Comment : 2008 MDLS SOIL/ 2007 WATER
Method : /chem/5973hp68.i/DF101122C68_A.b/8270CMASTERDODv5.m
Meth Date : 29-Nov-2010 12:42 byrd Quant Type: ISTD
Cal Date : 19-NOV-2010 07:31 Cal File: 0K19001-CAL6C68.d
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SLP1119.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Vo	1000.00000	Volume of sample extracted (mL)
Vi	2.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	AMOUNTS ON-COL (NG)	SIMILARITY
* 1 1,4-Dichlorobenzene-d4	152	8.330	8.330	(1.000)	692508	40.0000		
* 2 Naphthalene-d8	136	11.167	11.167	(1.000)	2594031	40.0000		
* 3 Acenaphthene-d10	164	15.280	15.280	(1.000)	1301871	40.0000		
* 4 Phenanthrene-d10	188	18.720	18.720	(1.000)	1876148	40.0000		
* 5 Chrysene-d12	240	24.987	24.987	(1.000)	891137	40.0000		
* 6 Perylene-d12	264	28.117	28.117	(1.000)	630619	40.0000		
30 Benzyl Alcohol	108	8.779	8.779	(1.054)	823818	50.0000	51	
129 3,3'-Dimethylbenzidine	212	23.828	23.828	(0.954)	731892	50.0000	54	9504
132 3,3'-Dichlorobenzidine	252	25.067	25.067	(1.003)	343852	50.0000	58	8399

COMPUCHEM a Division of Liberty Analytical Corp
GC/MS SEMIVOLATILE RUN LOG
LOGBOOK 4Z(4) 2 (5973hp68)

DATE 11/22/10 INITIAL TIME OF TUNE 2321 SHIFT/S (A) ____ (B) ____ (C) ✓
TIME TUNE EXPIRES 1121 METHOD 8270C APIX

PREVENTIVE MAINTENANCE front, liner, septum

	SEQUENCE#	REJECTED	FILENAME	REINJECTED	DATE	TIME	CLIENT ID	SDG#	AMOUNT INJECTED	CHEMIST	COMMENTS
1	OK220116		OK220116-TUNIC608	/	11/22/10	2321	DFTPPDR	—	2µL	MEW	SCD=LCD
2	F101122C		-CCV1C608	/	/ /	2344	SSTD025DBR MW 11-23-10	—			0321005 1/21/11
3			-CCV2C608	/	11/23/10	0028	DS	—			OK020116 2/2/11
4			-CCV3C608	/	/ /	0113	DT	—			OK19005 1/21/11
5			0102117-BLK1JC608	/	/ /	0206	SBLKEJ	VARIOUS			
6		/	0101902-BS1JC608	SP	/ /	0249	SDNLCS				
7		/	-BSD1JC608	SE	/ /	0331	SDNLCSD				
8		/	0102117-BSD1JC608	SF	/ /	0414	SEJLCSD				
9			1010107-02C608	/	/ /	0456	13MW1	1010107			
10			-03	/	/ /	0539	2				
11			-04	/	/ /	0621	43 MW 11-23-10				
12			-05	/	/ /	0704	4				
13		/	-06	1H	/ /	0746	DUP				
14		/	10100860-01JC608	RU	/ /	—	MW-4	10100860			
15	Not Run	/	-02J	RU	/ /	—	-13				Not Run
16		/	-09J	RU	/ /	—	-1				
17		/	-03J	SL	/ /	1057	-14				
18					/ /						
19					/ /						
20					/ /						
21					/ /						
22					/ /						
23					/ /						
24					/ /						11-23-10

DFTPP Lot #/Exp. Date: OF18005 12/17/10
Calibration STD Lot#/Exp. Date: See Comments
Internal STD Lot#/Exp. Date: OK17011 5/17/11
Methylene Chloride Lot#/Exp. Date: J39S08 11/28/11
Column Type: RTX-5MS 0.32mm

The presence of the Chemist's/Analyst's employee ID number, or signature, on this run log attests that strict compliance with the method's SOP has occurred. Any SOP deviations require documentation by the responsible chemist/analyst together with the chemist's/analyst's initials and the initials of the lab supervisor and a QA department representative, signifying approval of the deviation.

REVIEWED BY: [signature] DATE 11-23-10

F101122C-A
Subset SLP 11/9

10/06/08: jr

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8270C-HWMU13A-B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Instrument ID: 5973HP68 Calibration Date: 11/23/10 Time: 0113

Lab File ID: 0K22016-CCV3C6 Init. Calib. Date(s): 11/19/10 11/19/10

Init. Calib. Times: 0813 1145

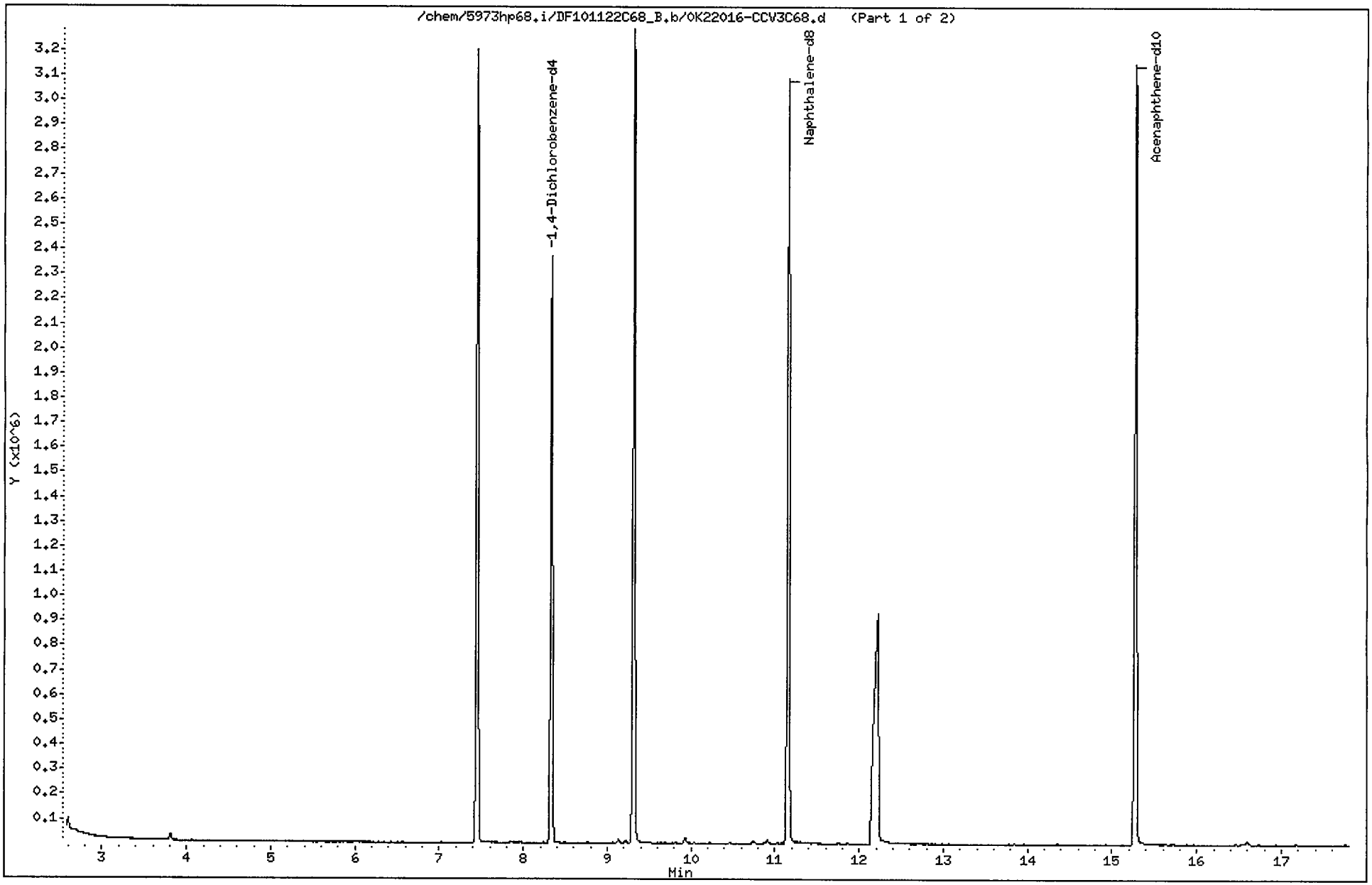
GC Column: RTX-5MS ID: 0.32 (mm)

COMPOUND	RRF OR AMOUNT	RRF50.000 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
Acetophenone	0.5680000	0.5760407	0.01	1.42	50.00	AVRG

FORM VII SV

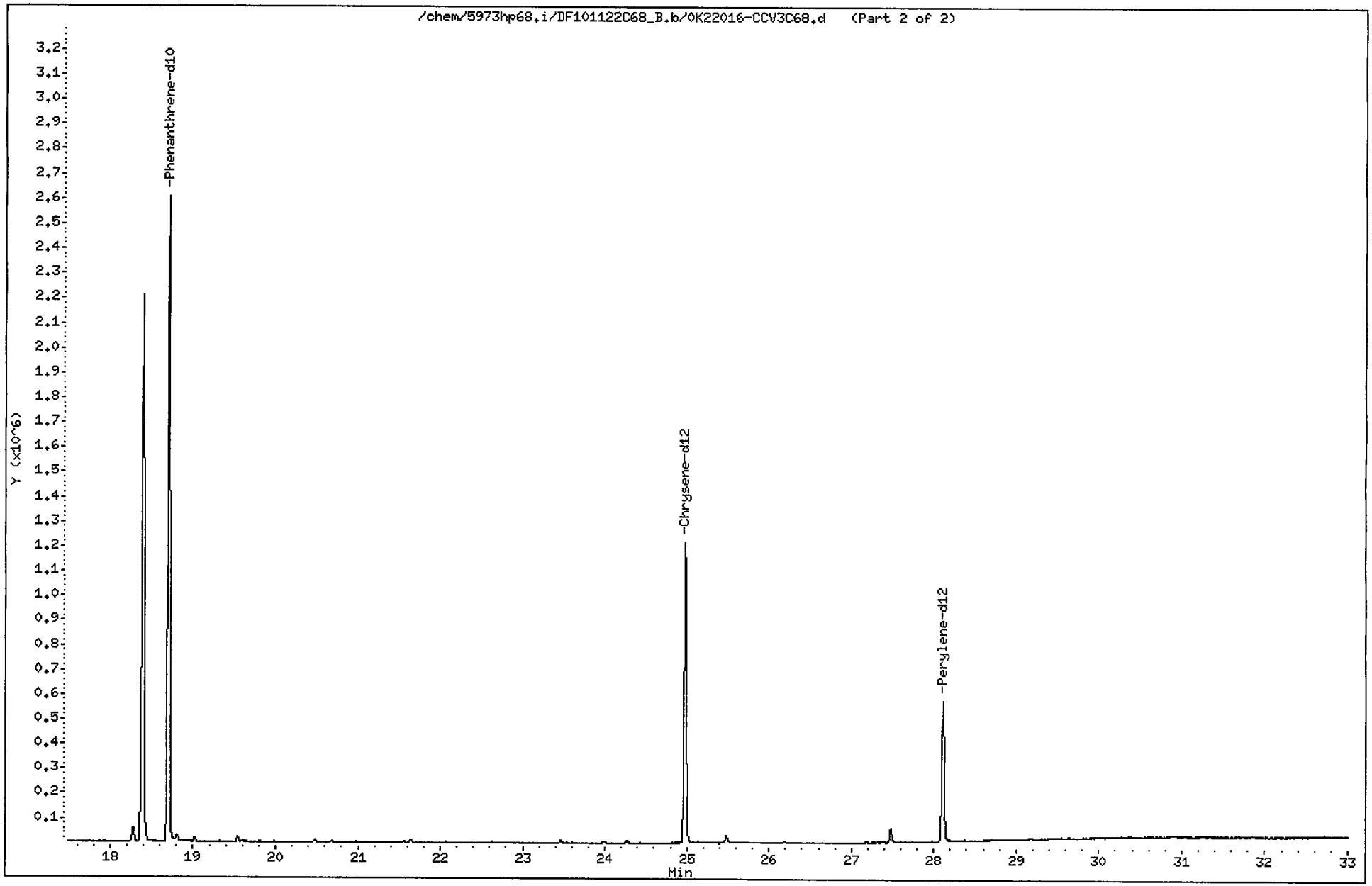
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Date : 23-NOV-2010 01:13
Client ID: SSTD025DT
Sample Info: 0K22016-CCV3:MEW
Volume Injected (uL): 2.0
Column phase: RTX-5MS

Instrument: 5973hp68.i
Operator: MEW
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101122C68_B.b/0K22016-CCV3C68.d
Date : 23-NOV-2010 01:13
Client ID: SSTD025DT
Sample Info: 0K22016-CCV3:MEW
Volume Injected (uL): 2.0
Column phase: RTX-5MS

Instrument: 5973hp68.i
Operator: MEW
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101122C68_B.b/0K22016-CCV3C68.d
Report Date: 29-Nov-2010 12:53

CompuChem

Semivolatile Report SW-846 Method 8270C Appendix IX

Data file : /chem/5973hp68.i/DF101122C68_B.b/0K22016-CCV3C68.d
Lab Smp Id: 0K22016-CCV3 Client Smp ID: SSTD025DT
Inj Date : 23-NOV-2010 01:13
Operator : MEW Inst ID: 5973hp68.i
Smp Info : 0K22016-CCV3:MEW
Misc Info : APIXSPK-025
Comment : 2008 MDLS SOIL/ 2007 WATER
Method : /chem/5973hp68.i/DF101122C68_B.b/8270CMASTERDODv5.m
Meth Date : 29-Nov-2010 12:53 byrd Quant Type: ISTD
Cal Date : 19-NOV-2010 11:45 Cal File: 0K19001-CALCC68.d
Als bottle: 4 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: Spike.sub
Target Version: 3.50
Processing Host: einstein

Concentration Formula: Amt * DF * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Vo	1000.00000	Volume of sample extracted (mL)
Vi	2.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	AMOUNTS ON-COL (NG)	SIMILARITY
* 1 1,4-Dichlorobenzene-d4	152	8.330	8.330	(1.000)	612365	40.0000		
* 2 Naphthalene-d8	136	11.156	11.156	(1.000)	2477186	40.0000		
* 3 Acenaphthene-d10	164	15.275	15.275	(1.000)	1343977	40.0000		
* 4 Phenanthrene-d10	188	18.705	18.705	(1.000)	1827298	40.0000		
* 5 Chrysene-d12	240	24.976	24.976	(1.000)	787805	40.0000		
* 6 Perylene-d12	264	28.112	28.112	(1.000)	369908	40.0000		
21 Benzaldehyde	77	7.449	7.449	(0.894)	1218679	50.0000	52	8869
33 Acetophenone	105	9.313	9.313	(0.835)	1783700	50.0000	51	9685
57 Caprolactam	113	12.219	12.219	(1.095)	479848	50.0000	48	8978
106 Atrazine	215	18.400	18.400	(0.984)	305740	50.0000	48	8896

COMPUCHEM a Division of Liberty Analytical Corp
GC/MS SEMIVOLATILE RUN LOG
LOGBOOK 4Z(4) 2 (5973hp68)

DATE 11/22/10 INITIAL TIME OF TUNE 2321 SHIFT/S (A) ____ (B) ____ (C) ✓
TIME TUNE EXPIRES 1121 METHOD 8270C APIX

PREVENTIVE MAINTENANCE front, liner, septum

	SEQUENCE#		FILENAME		DATE	TIME	CLIENT ID	SDG#	AMOUNT INJECTED	CHEMIST	COMMENTS
1	OK220116		OK220116-TUNIC608	/	11/22/10	2321	DFTPPDR	—	2µL	MEW	SCD=LCD
2	FI01122C		-CCV1C608	/	↓	2344	SSTD025DR MW 11-23-10	—			QJ21005 1/21/11
3			-CCV2C608	/	11/23/10	0028	DS	—			OK020116 2/2/11
4			-CCV3C608	/	↓	0113	DT	—			OK19005 1/21/11
5			0102117-BLK1JC608	/	↓	0206	SBLKEJ	VARIOUS			
6		/	0101902-BS1JC608	SP	↓	0249	SDNLCS	↓			
7		/	↓ -BSD1JC608	SP	↓	0331	SDNLCSD	↓			
8		/	0102117-BSD1JC608	SF	↓	0414	SEJLCSD	↓			
9			1010107-02C608	/	↓	0456	13MW1	1010107			
10			-03	/	↓	0539	2	↓			
11			-04	/	↓	0621	43 MW 11-23-10	↓			
12			-05	/	↓	0704	4	↓			
13		/	↓ -06 ↓	IH	↓	0746	↓ DUP	↓			
14		/	1010086-01JC608	RY	↓	—	MW-4	1010086			
15	Not Run	/	-02J	RY	↓	—	-13	↓			Not Run
16		/	-09J	RY	↓	—	-1	↓			
17		/	↓ -03J ↓	SL	↓	1057	↓ -14	↓	↓	↓	
18					↓						
19					↓						
20					↓						
21					↓						
22					↓						
23					↓						
24					↓						11-23-10

DFTPP Lot #/Exp. Date: OF18005 12/17/10
Calibration STD Lot#/Exp. Date: See Comments
Internal STD Lot#/Exp. Date: OK17011 5/17/11
Methylene Chloride Lot#/Exp. Date: J39S08 11/28/11
Column Type: RTX-5MS 0.32mm

The presence of the Chemist's/Analyst's employee ID number, or signature, on this run log attests that strict compliance with the method's SOP has occurred. Any SOP deviations require documentation by the responsible chemist/analyst together with the chemist's/analyst's initials and the initials of the lab supervisor and a QA department representative, signifying approval of the deviation.

REVIEWED BY: [signature] DATE 11-23-10

10/06/08: jr

FI01122C68_B
Sub list SPIKE

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8270C-HWMU13A-C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Instrument ID: 5973HP68 Calibration Date: 11/23/10 Time: 1806

Lab File ID: 0K23010-CCV2RA Init. Calib. Date(s): 11/19/10 11/19/10

Init. Calib. Times: 1338 1711

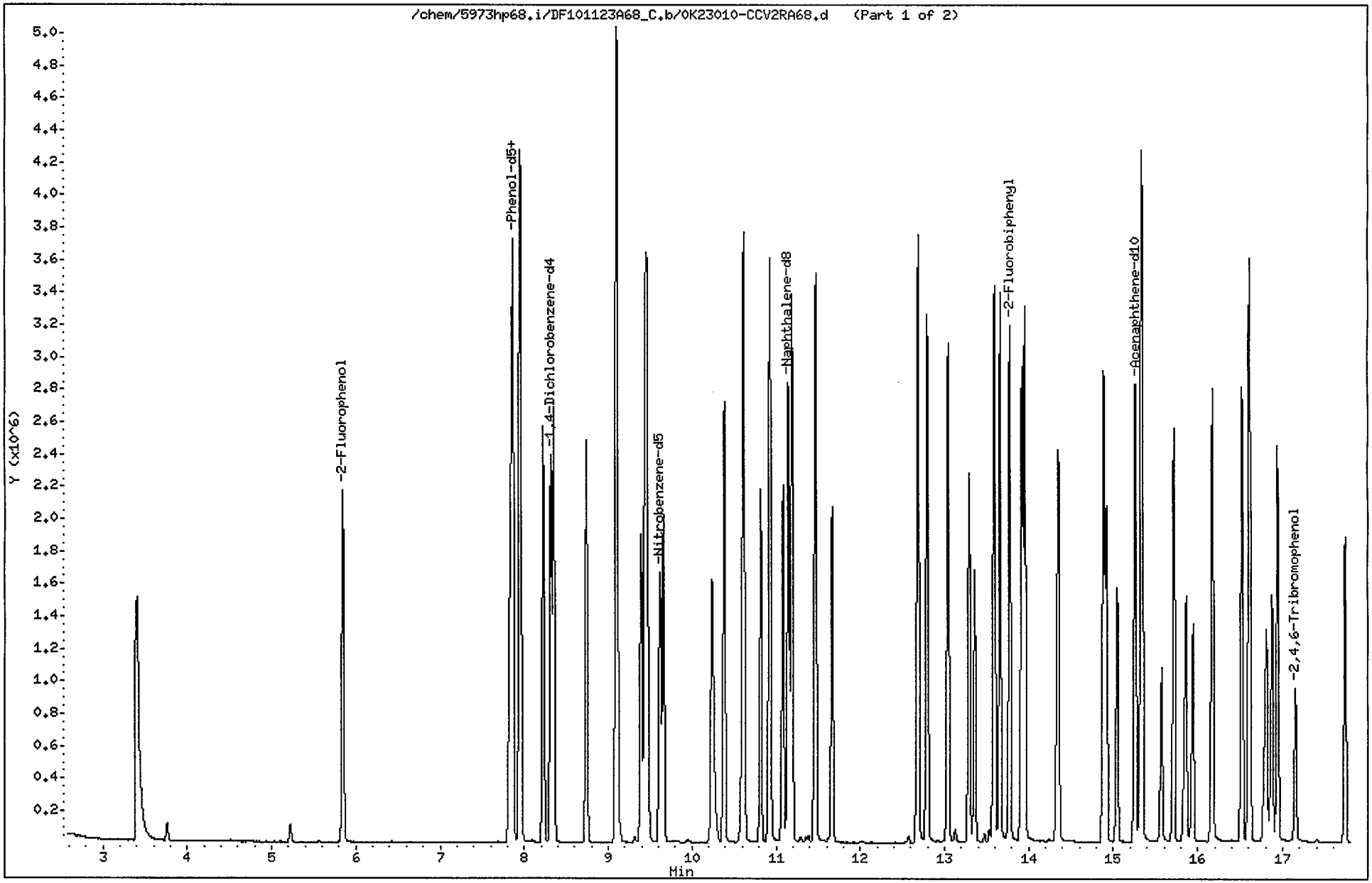
GC Column: RTX-5MS ID: 0.32 (mm)

COMPOUND	RRF OR AMOUNT	RRF50.000 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
Phenol	1.7470000	1.6495308	0.01	-5.58	20.00	AVRG
2-Chlorophenol	1.1800000	1.1275646	0.01	-4.44	50.00	AVRG
3-Methylphenol	1.2610000	1.1721453	0.01	-7.05	50.00	AVRG
4-Methylphenol	1.2610000	1.1721453	0.01	-7.05	50.00	AVRG
Hexachloroethane	0.5690000	0.5362352	0.01	-5.76	50.00	AVRG
Nitrobenzene	0.3920000	0.3747105	0.01	-4.41	50.00	AVRG
2,4-Dichlorophenol	0.2500000	0.2412671	0.01	-3.49	20.00	AVRG
Dimethylphthalate	1.1020000	1.0528080	0.01	-4.46	50.00	AVRG
4-Nitrophenol	0.1850000	0.1818266	0.05	-1.72	50.00	AVRG
Dibenzofuran	1.3880000	1.3125723	0.01	-5.43	50.00	AVRG
Diethylphthalate	0.9570000	0.9128371	0.01	-4.61	50.00	AVRG
N-Nitrosodiphenylamine	0.5400000	0.5113168	0.01	-5.31	20.00	AVRG
Di-n-butylphthalate	1.1030000	1.0956959	0.01	-0.66	50.00	AVRG
Fluoranthene	0.9130000	0.8687646	0.01	-4.84	20.00	AVRG
Pyrene	1.6120000	1.5172048	0.01	-5.88	50.00	AVRG
Butylbenzylphthalate	0.7310000	0.6917793	0.01	-5.36	50.00	AVRG
bis(2-ethylhexyl)Phthalate	0.9350000	0.8934488	0.01	-4.44	50.00	AVRG
Benzo(a)anthracene	0.9790000	0.9208265	0.01	-5.94	50.00	AVRG
Di-n-octylphthalate	2.0910000	1.8539656	0.01	-11.34	20.00	AVRG
Benzo(b)fluoranthene	1.0960000	0.9817064	0.01	-10.43	50.00	AVRG
Benzo(k)fluoranthene	1.1040000	1.0501791	0.01	-4.88	50.00	AVRG
Benzo(a)pyrene	0.9300000	0.8856397	0.01	-4.77	20.00	AVRG
Indeno(1,2,3-cd)pyrene	0.5940000	0.6398823	0.01	7.72	50.00	AVRG
Dibenzo(a,h)anthracene	0.6100000	0.6521522	0.01	6.91	50.00	AVRG
2-Fluorophenol	1.3880000	1.3447553	0.01	-3.12	50.00	AVRG
Phenol-d5	1.8160000	1.7131339	0.01	-5.66	50.00	AVRG
Nitrobenzene-d5	0.3810000	0.3650111	0.01	-4.20	50.00	AVRG
2-Fluorobiphenyl	1.1720000	1.1619719	0.01	-0.86	50.00	AVRG
2,4,6-Tribromophenol	0.1070000	0.1032701	0.01	-3.48	50.00	AVRG
Terphenyl-d14	0.9200000	0.8658068	0.01	-5.89	50.00	AVRG

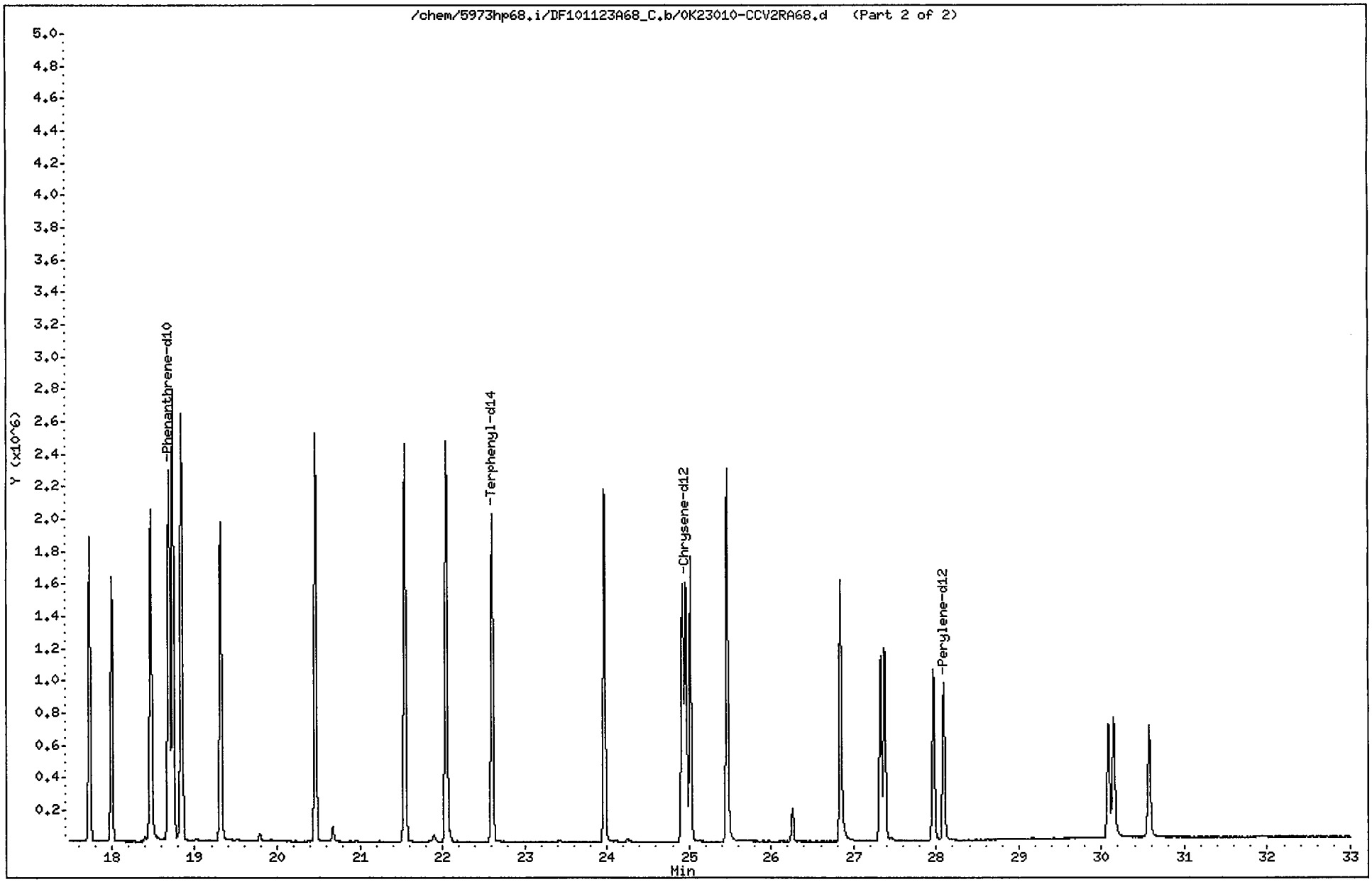
FORM VII SV

Data File: /chem/5973hp68.i/DF101123A68_C.b/0K23010-CCV2RA68.d
Date : 23-NOV-2010 18:06
Client ID: SSTD025DV
Sample Info: 0K23010-CCV2:OWS
Volume Injected (uL): 2.0
Column phase: RTX-5MS

Instrument: 5973hp68.i
Operator: OWS
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101123A68_C.b/0K23010-CCV2RA68.d
Date : 23-NOV-2010 18:06
Client ID: SSTD025DV
Instrument: 5973hp68.i
Sample Info: 0K23010-CCV2:OWS
Volume Injected (uL): 2.0
Operator: OWS
Column phase: RTX-5MS
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101123A68_C.b/0K23010-CCV2RA68.d
Report Date: 29-Nov-2010 15:59

CompuChem

Semivolatile Report SW-846 Method 8270C Appendix IX

Data file : /chem/5973hp68.i/DF101123A68_C.b/0K23010-CCV2RA68.d
Lab Smp Id: 0K23010-CCV2 Client Smp ID: SSTD025DV
Inj Date : 23-NOV-2010 18:06
Operator : OWS Inst ID: 5973hp68.i
Smp Info : 0K23010-CCV2:OWS
Misc Info : SSTD025DV
Comment : 2008 MDLS SOIL/ 2007 WATER
Method : /chem/5973hp68.i/DF101123A68_C.b/8270CMASTERDODv5.m
Meth Date : 29-Nov-2010 15:59 byrd Quant Type: ISTD
Cal Date : 19-NOV-2010 17:11 Cal File: 0K19001-CALI1C68.d
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: Short.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Vo	1000.00000	Volume of sample extracted (mL)
Vi	2.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	ON-COL (NG)	SIMILARITY	
*	1 1,4-Dichlorobenzene-d4	152	8.314	8.314	(1.000)	646943	40.0000			
*	2 Naphthalene-d8	136	11.145	11.145	(1.000)	2421351	40.0000			
*	3 Acenaphthene-d10	164	15.264	15.264	(1.000)	1228135	40.0000			(H)
*	4 Phenanthrene-d10	188	18.694	18.694	(1.000)	1730240	40.0000			
*	5 Chrysene-d12	240	24.960	24.960	(1.000)	1013440	40.0000			
*	6 Perylene-d12	264	28.096	28.096	(1.000)	651156	40.0000			
$	7 2-Fluorophenol	112	5.846	5.846	(0.703)	1087475	50.0000	48		
$	8 Phenol-d5	99	7.833	7.833	(0.942)	1385375	50.0000	47		
$	9 Nitrobenzene-d5	82	9.617	9.617	(0.863)	1104775	50.0000	48		
$	10 2-Fluorobiphenyl	172	13.774	13.774	(0.898)	1783823	50.0000	50		
$	11 2,4,6-Tribromophenol	330	17.150	17.150	(1.118)	158537	50.0000	48		
$	12 Terphenyl-d14	244	22.610	22.610	(0.906)	1096804	50.0000	47		
	13 N-Nitrosodimethylamine	42	3.415	3.415	(0.411)	443167	50.0000	45	7255	
	14 Pyridine	79	3.388	3.388	(0.408)	1428180	50.0000	47	8626	
	24 Phenol	94	7.865	7.865	(0.946)	2667881	100.000	94		(H)

Data File: /chem/5973hp68.i/DF101123A68_C.b/0K23010-CCV2RA68.d
Report Date: 29-Nov-2010 15:59

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	ON-COL (NG)	SIMILARITY
26	Bis(2-chloroethyl)ether	93	7.940	7.940	(0.955)	1020750	50.0000	48	
25	2-Chlorophenol	128	7.956	7.956	(0.957)	1823675	100.000	96	8710
27	1,3-Dichlorobenzene	146	8.228	8.228	(0.990)	1071375	50.0000	48	
28	1,4-Dichlorobenzene	146	8.351	8.351	(1.004)	1066901	50.0000	48	
29	1,2-Dichlorobenzene	146	8.741	8.741	(1.051)	1019006	50.0000	48	
32	2-Methylphenol	108	9.104	9.104	(1.095)	1647800	100.000	94	
31	2,2'-oxybis(1-Chloropropane)	45	9.094	9.094	(1.094)	1095786	50.0000	45	8001
39	3-Methylphenol	108	9.462	9.462	(1.138)	1895778	100.000	93	
40	4-Methylphenol	108	9.462	9.462	(1.138)	1895778	100.000	93	
38	N-Nitroso-di-N-propylamine	70	9.436	9.436	(1.135)	704692	50.0000	42	8891
34	Hexachloroethane	117	9.388	9.388	(1.129)	433642	50.0000	47	9182
41	Nitrobenzene	77	9.660	9.660	(0.867)	1134132	50.0000	48	8396
43	Isophorone	82	10.237	10.237	(0.919)	2056747	50.0000	48	8102
44	2-Nitrophenol	139	10.387	10.387	(0.932)	1021446	100.000	98	8428
45	2,4-Dimethylphenol	122	10.616	10.616	(0.953)	1480622	100.000	98	8770
46	Bis(2-chloroethoxy)methane	93	10.819	10.819	(0.971)	1254212	50.0000	48	8238
48	2,4-Dichlorophenol	162	10.926	10.926	(0.980)	1460481	100.000	97	
49	1,2,4-Trichlorobenzene	180	11.081	11.081	(0.994)	781828	50.0000	48	
51	Naphthalene	128	11.193	11.193	(1.004)	2692110	50.0000	49	9223
53	4-Chloroaniline	127	11.471	11.471	(1.029)	2024399	100.000	99	7519
55	Hexachlorobutadiene	225	11.669	11.669	(1.047)	393190	50.0000	48	9396
60	4-Chloro-3-methylphenol	107	12.689	12.689	(1.139)	1525773	100.000	96	7947
61	2-Methylnaphthalene	141	12.796	12.796	(1.148)	1432773	50.0000	49	
62	1-Methylnaphthalene	142	13.042	13.042	(1.170)	1599806	50.0000	48	
63	1,2,4,5-Tetrachlorobenzene	216	13.293	13.293	(0.866)	716290	50.0000	50	9329
64	Hexachlorocyclopentadiene	237	13.357	13.357	(0.870)	438684	50.0000	50	9407
66	2,4,6-Trichlorophenol	196	13.592	13.592	(0.886)	941904	100.000	98	(H)
67	2,4,5-Trichlorophenol	196	13.661	13.661	(0.890)	976965	100.000	97	
69	1,1'-Biphenyl	154	13.950	13.950	(0.909)	1882894	50.0000	50	9428
68	2-Chloronaphthalene	162	13.918	13.918	(0.907)	1554354	50.0000	50	
70	2-Nitroaniline	65	14.351	14.351	(0.935)	887499	100.000	92	8663
73	Dimethylphthalate	163	14.922	14.922	(0.972)	1616238	50.0000	48	8950
75	2,6-Dinitrotoluene	165	15.045	15.045	(0.981)	355319	50.0000	46	9430
72	Acenaphthylene	152	14.885	14.885	(0.970)	2241139	50.0000	49	9444
77	3-Nitroaniline	138	15.350	15.350	(1.000)	703441	100.000	93	8329
76	Acenaphthene	154	15.333	15.333	(0.999)	1266282	50.0000	48	9466
78	2,4-Dinitrophenol	184	15.569	15.569	(1.015)	250012	100.000	99	(H)
81	4-Nitrophenol	139	15.862	15.862	(1.034)	558269	100.000	98	8482
83	2,4-Dinitrotoluene	165	15.942	15.942	(1.039)	440792	50.0000	45	9653
85	2,3,4,6-Tetrachlorophenol	232	16.172	16.172	(1.054)	641650	100.000	97	9494
79	Dibenzofuran	168	15.718	15.718	(1.024)	2015020	50.0000	47	8852
87	Diethylphthalate	149	16.605	16.605	(1.082)	1401359	50.0000	48	8321
88	4-Chlorophenyl-phenylether	204	16.610	16.610	(1.083)	718209	50.0000	47	9384
86	Fluorene	166	16.519	16.519	(1.077)	1572646	50.0000	47	7973
91	4-Nitroaniline	138	16.813	16.813	(1.096)	576201	100.000	98	9000
92	4,6-Dinitro-2-methylphenol	198	16.877	16.877	(0.903)	416148	100.000	97	9256
93	N-Nitrosodiphenylamine	169	16.941	16.941	(0.906)	1105876	50.0000	47	8860

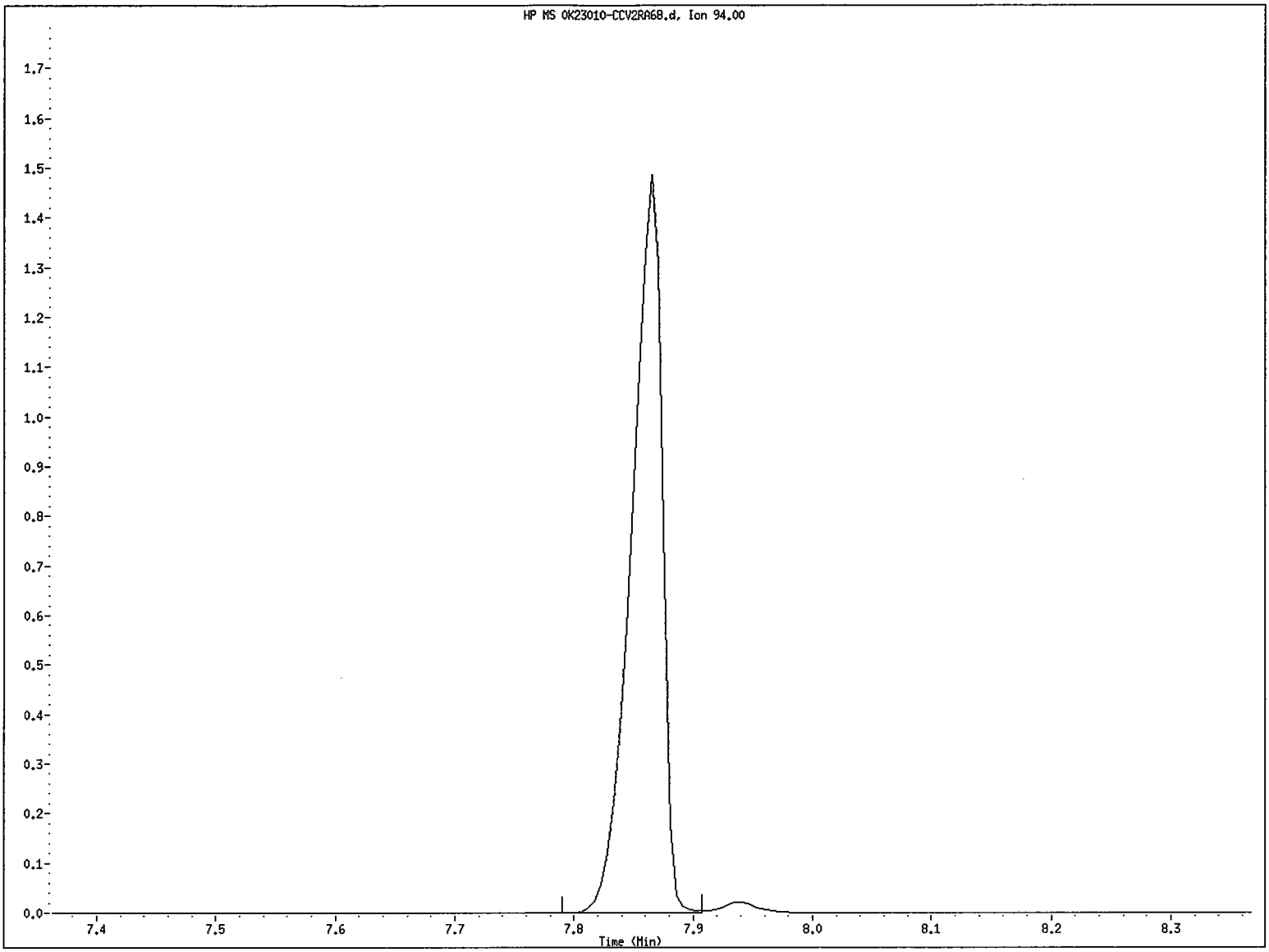
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Report Date: 29-Nov-2010 15:59

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	AMOUNTS ON-COL (NG)	SIMILARITY	
98	4-Bromophenyl-phenylether	248	17.737	17.737	(0.949)	391920	50.0000	48	8778	
104	Hexachlorobenzene	284	18.005	18.005	(0.963)	367502	50.0000	49	9358	
108	Pentachlorophenol	266	18.475	18.475	(0.988)	436971	100.000	100	8579	
111	Phenanthrene	178	18.747	18.747	(1.003)	1946590	50.0000	48		
112	Anthracene	178	18.849	18.849	(1.008)	1954045	50.0000	48		
114	Carbazole	167	19.324	19.324	(1.034)	1575449	50.0000	47	9820	
116	Di-n-butylphthalate	149	20.467	20.467	(1.095)	2369771	50.0000	50	9381	
121	Fluoranthene	202	21.552	21.552	(1.153)	1878964	50.0000	48	9533	
123	Pyrene	202	22.054	22.054	(0.884)	1921995	50.0000	47	9422	
130	Butylbenzylphthalate	149	23.972	23.972	(0.960)	876346	50.0000	47	9101	
135	bis(2-ethylhexyl)Phthalate	149	25.462	25.462	(1.020)	1131821	50.0000	48	8838	
133	Benzo(a)anthracene	228	24.923	24.923	(0.999)	1166503	50.0000	47		
134	Chrysene	228	25.019	25.019	(1.002)	1108971	50.0000	48		
136	Di-n-octylphthalate	149	26.841	26.841	(0.955)	1509026	50.0000	44		
137	Benzo(b)fluoranthene	252	27.327	27.327	(0.973)	799055	50.0000	45		(H)
138	Benzo(k)fluoranthene	252	27.375	27.375	(0.974)	854788	50.0000	48		
140	Benzo(a)pyrene	252	27.968	27.968	(0.995)	720862	50.0000	48		
142	Indeno(1,2,3-cd)pyrene	276	30.089	30.089	(1.071)	520829	50.0000	54	9032	
143	Dibenzo(a,h)anthracene	278	30.148	30.148	(1.073)	530816	50.0000	53	8071	
144	Benzo(g,h,i)perylene	276	30.575	30.575	(1.088)	550999	50.0000	56	9751	

QC Flag Legend

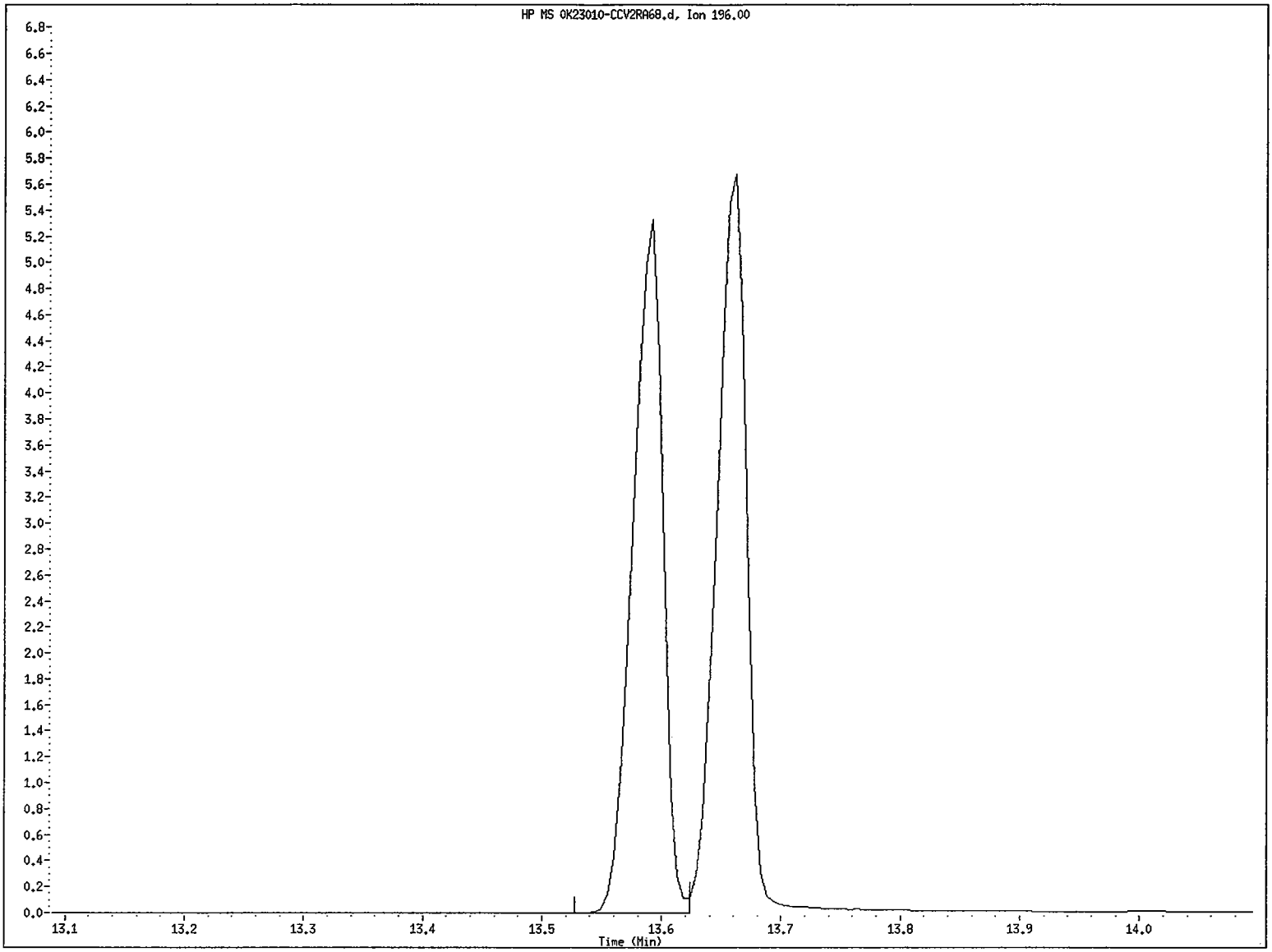
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Phenol CAS Number 108-95-2 Area = 2667881 User selected hit



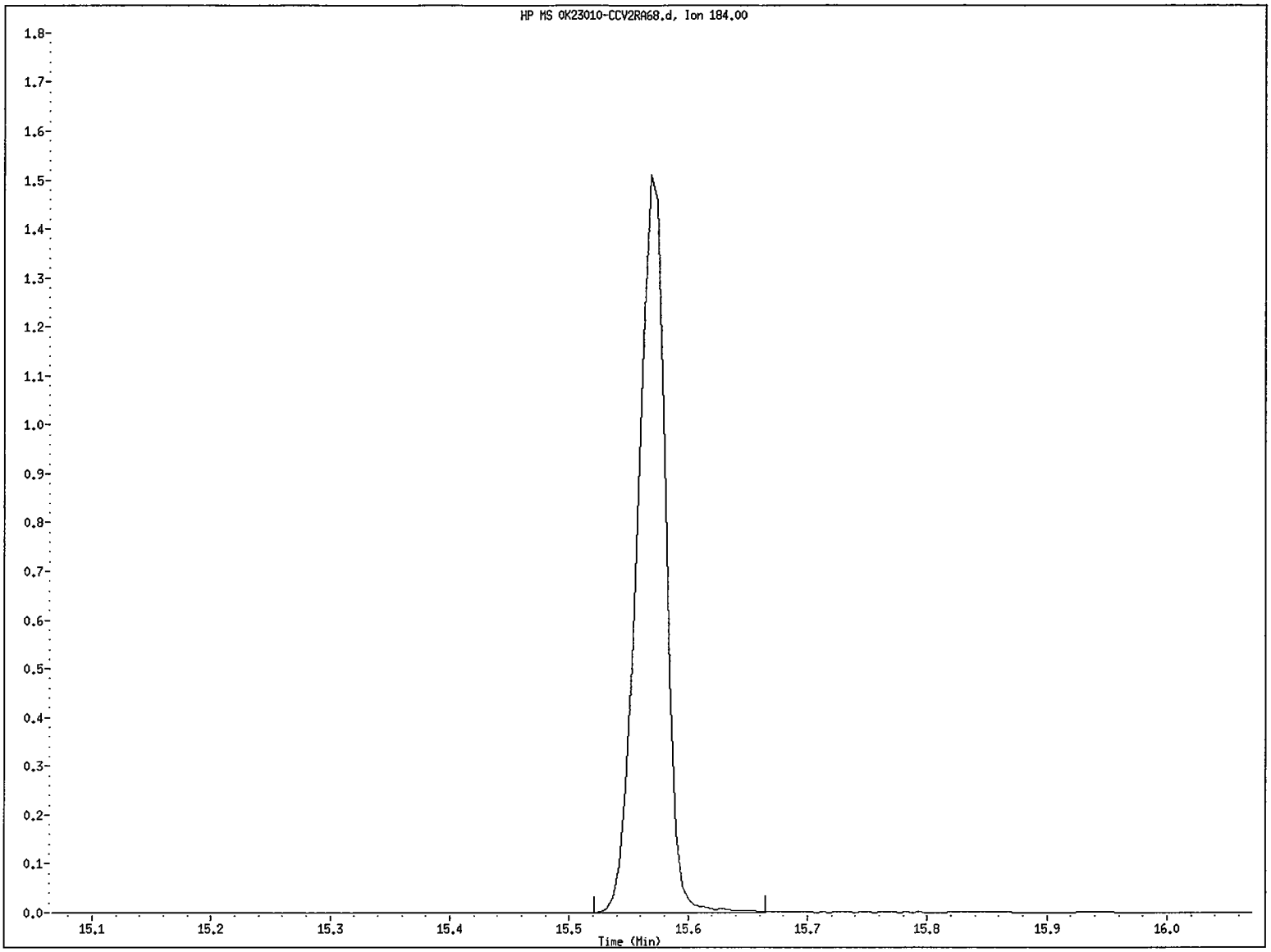
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Client ID: SSTD025DV
Instrument ID: 5973hp68.i
Injection Date and Time: 23-NOV-2010 18:06
Retention Time: 7.87
Operator ID: OWS

2,4,6-Trichlorophenol CAS Number 88-06-2 Area = 941904 User selected hit



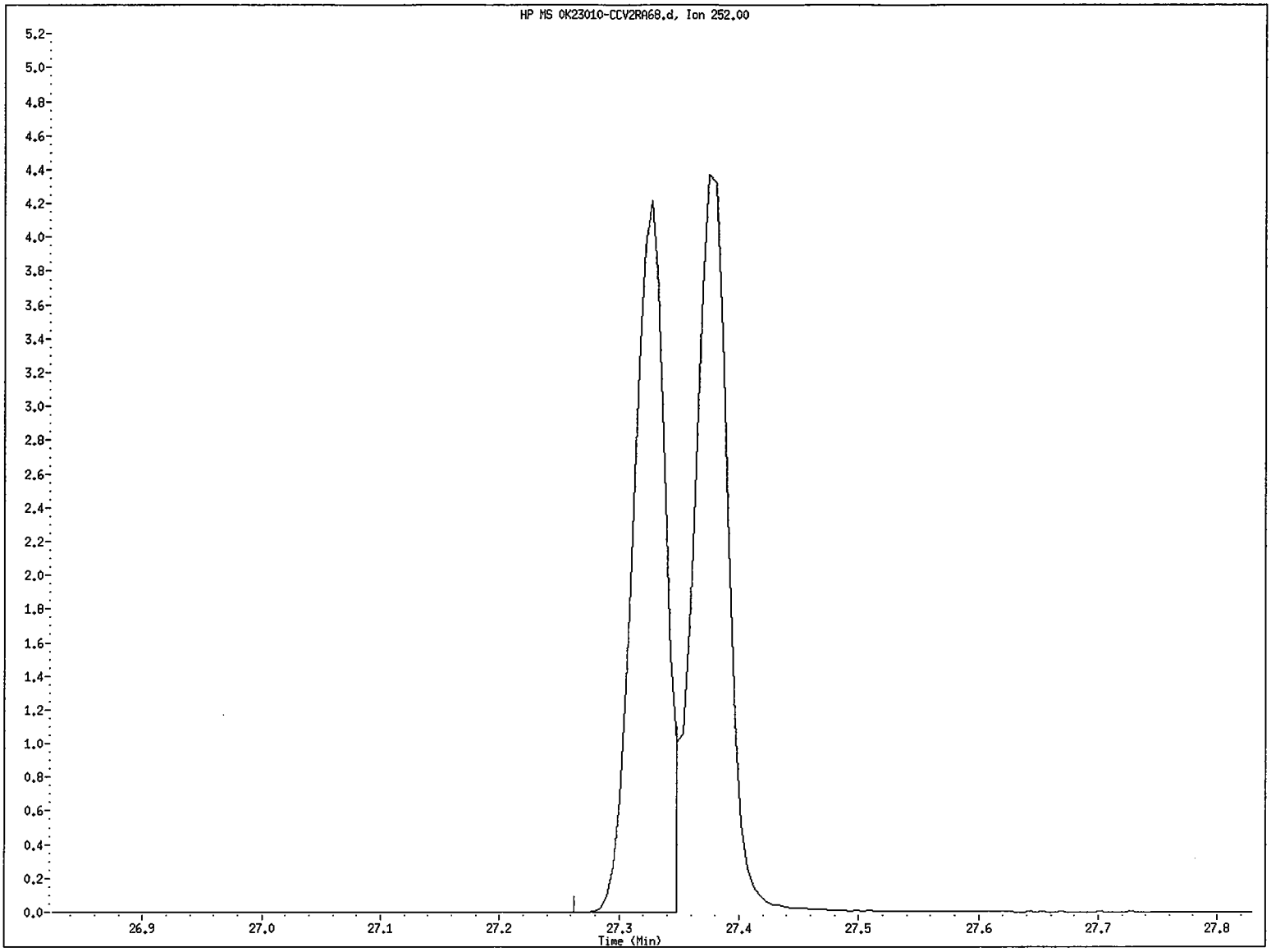
File name: /chem/5973hp68.i/DF101123A68_C.b/0K23010-CCV2RA68.d
Client ID: SSTD025DV
Instrument ID: 5973hp68.i
Injection Date and Time: 23-NOV-2010 18:06
Retention Time: 13.59
Operator ID: OWS

2,4-Dinitrophenol CAS Number 51-28-5 Area = 250012 User selected hit



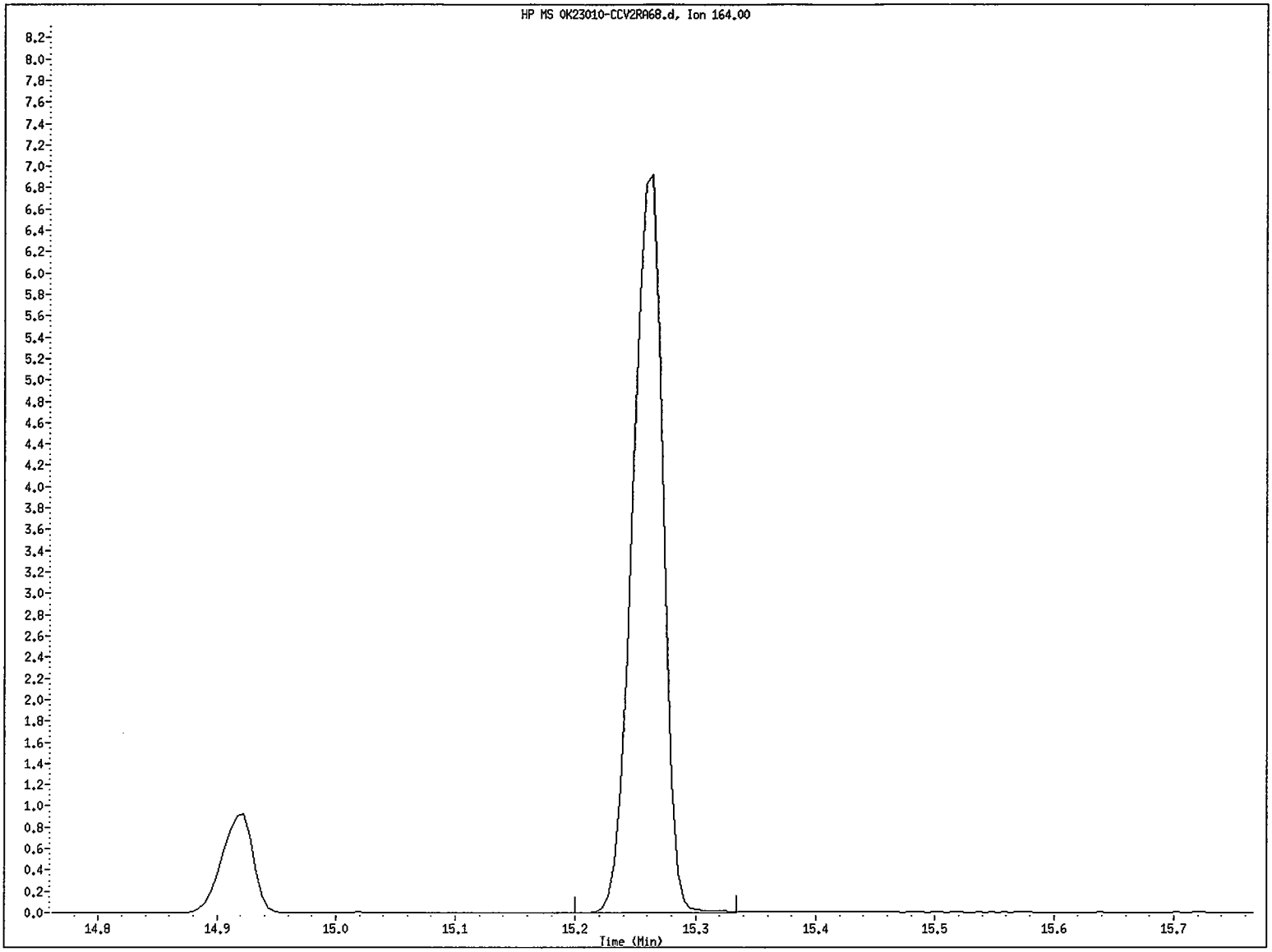
File name: /chem/5973hp68.i/DF101123A68_C.b/0K23010-CCV2RA68.d
Client ID: SSTD025DV
Instrument ID: 5973hp68.i
Injection Date and Time: 23-NOV-2010 18:06
Retention Time: 15.57
Operator ID: OWS

Benzo(b)fluoranthene CAS Number 205-99-2 Area = 799055 User selected hit



File name: /chem/5973hp68.i/DF101123A68_C.b/0K23010-CCV2RA68.d
Client ID: SSTD025DV
Instrument ID: 5973hp68.i
Injection Date and Time: 23-NOV-2010 18:06
Retention Time: 27.33
Operator ID: OWS

Acenaphthene-d10 CAS Number 15067-26-2 Area = 1228135 User selected hit



File name: /chem/5973hp68.i/DF101123A68_C.b/0K23010-CCV2RA68.d
Client ID: SSTD025DV
Instrument ID: 5973hp68.i
Injection Date and Time: 23-NOV-2010 18:06
Retention Time: 15.26
Operator ID: OWS

COMPUCHEM a Division of Liberty Analytical Corp
GC/MS SEMIVOLATILE RUN LOG
LOGBOOK 4Z(4) 2 (5973hp68)

DATE 11/23/10 INITIAL TIME OF TUNE 1622 SHIFT/S (A) K (B)____ (C)____
TIME TUNE EXPIRES 0422 METHOD 8270C APIK

PREVENTIVE MAINTENANCE F-C-S-S

	SEQUENCE#	REJECTED	FILENAME	EDITED	DATE	TIME	CLIENT ID	SDG#	AMOUNT INJECTED	CHEMIST	COMMENTS
1	OK23010		OK23010-Tun1	/	11/23/10	1622	DFTPP DM	—	2µL	ws	SCD=LCD
2	F101123A		CC1	/	/ /	1642	SSTD025 DM APIK	—			QT21005 1-21-11
3		/	2	WS	/ /	1724	DV 8270	—			OK02016 2-2-11
4			2R	/	/ /	1806	~~DW~~ ws 11-23-10 DV 8270	—		ws 11-23-10	~~OK19005~~ OK02016 2-2-11
5			3	/	/ /	1848	DW APIX SPK	—			OK19005 1-21-11
6			1010107-065	SL	/ /	1931	13MWDUP	1010107			
7			07	/	/ /	2013	13MW6				
8			08	/	/ /	2056	13MW7				
9			06J2	/	/ /	2138	13MWDUP				
10					/ /						
11					/ /						
12					/ /						
13					/ /						
14					/ /						
15					/ /						
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22					/ /						
23					/ /						
24					/ /						

MW 11/23/10

DFTPP Lot #/Exp. Date: OF18005 12-17-10
Calibration STD Lot#/Exp. Date: SEE comments
Internal STD Lot#/Exp. Date: OK17011 5-17-11
Methylene Chloride Lot#/Exp. Date: J39508 11-28-11
Column Type: RTX-5ms/0.32mm

The presence of the Chemist's/Analyst's employee ID number, or signature, on this run log attests that strict compliance with the method's SOP has occurred. Any SOP deviations require documentation by the responsible chemist/analyst together with the chemist's/analyst's initials and the initials of the lab supervisor and a QA department representative, signifying approval of the deviation.

REVIEWED BY: _____ DATE 11-24-10

10/06/08: jr

Supervisor/Manager Review: _____ pages 150 to 170 Date 11-24-10

F101123AGC_C SGCMS+ SHORT

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8270C-HWMU13A-A

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Instrument ID: 5973HP68 Calibration Date: 11/23/10 Time: 1642

Lab File ID: 0K23010-CCV1A6 Init. Calib. Date(s): 11/19/10 11/19/10

Init. Calib. Times: 0359 0731

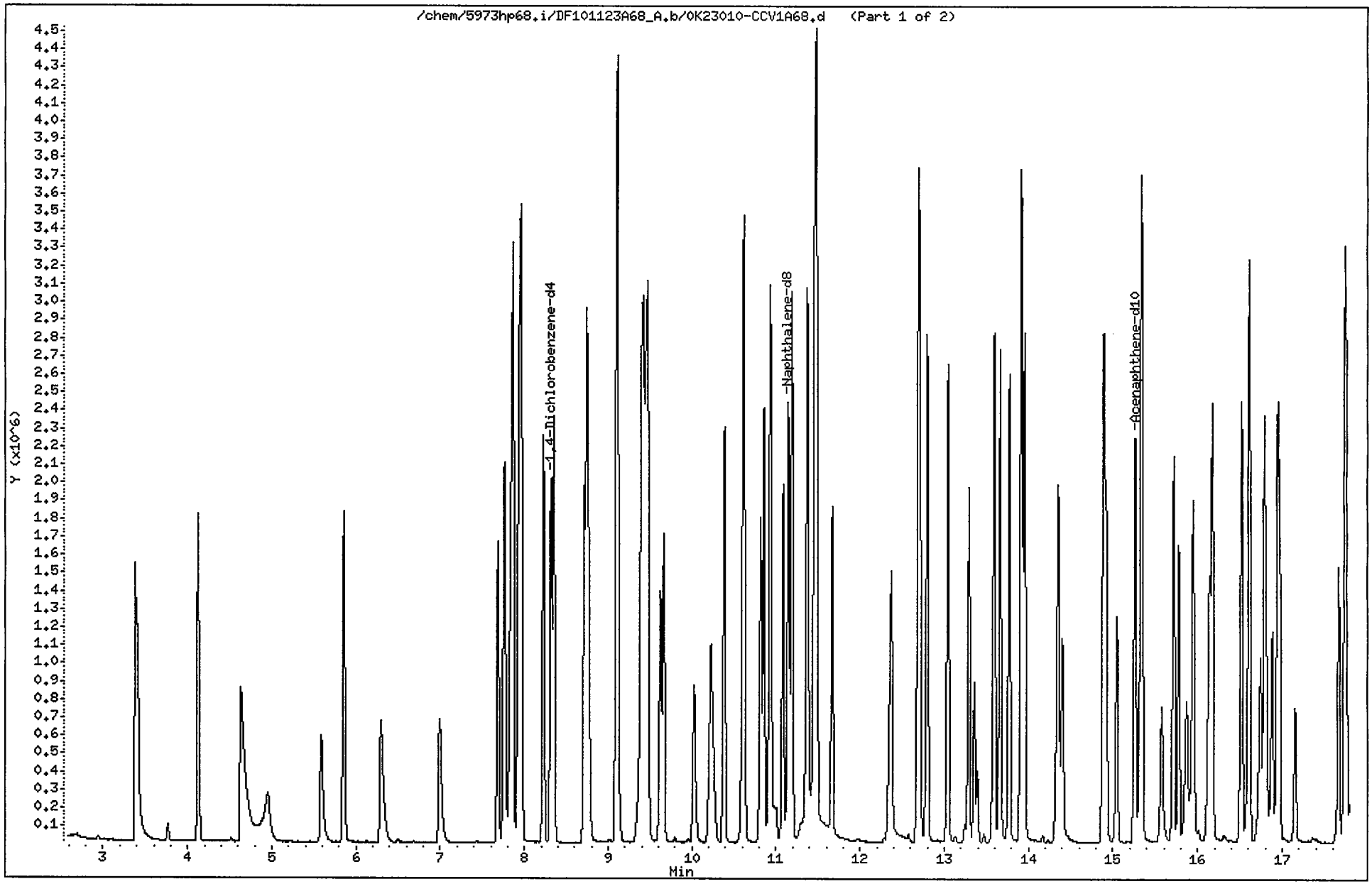
GC Column: RTX-5MS ID: 0.32 (mm)

COMPOUND	RRF OR AMOUNT	RRF50.000 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
3,3'-Dimethylbenzidine	0.6030000	0.6008790	0.01	-0.35	50.00	AVRG

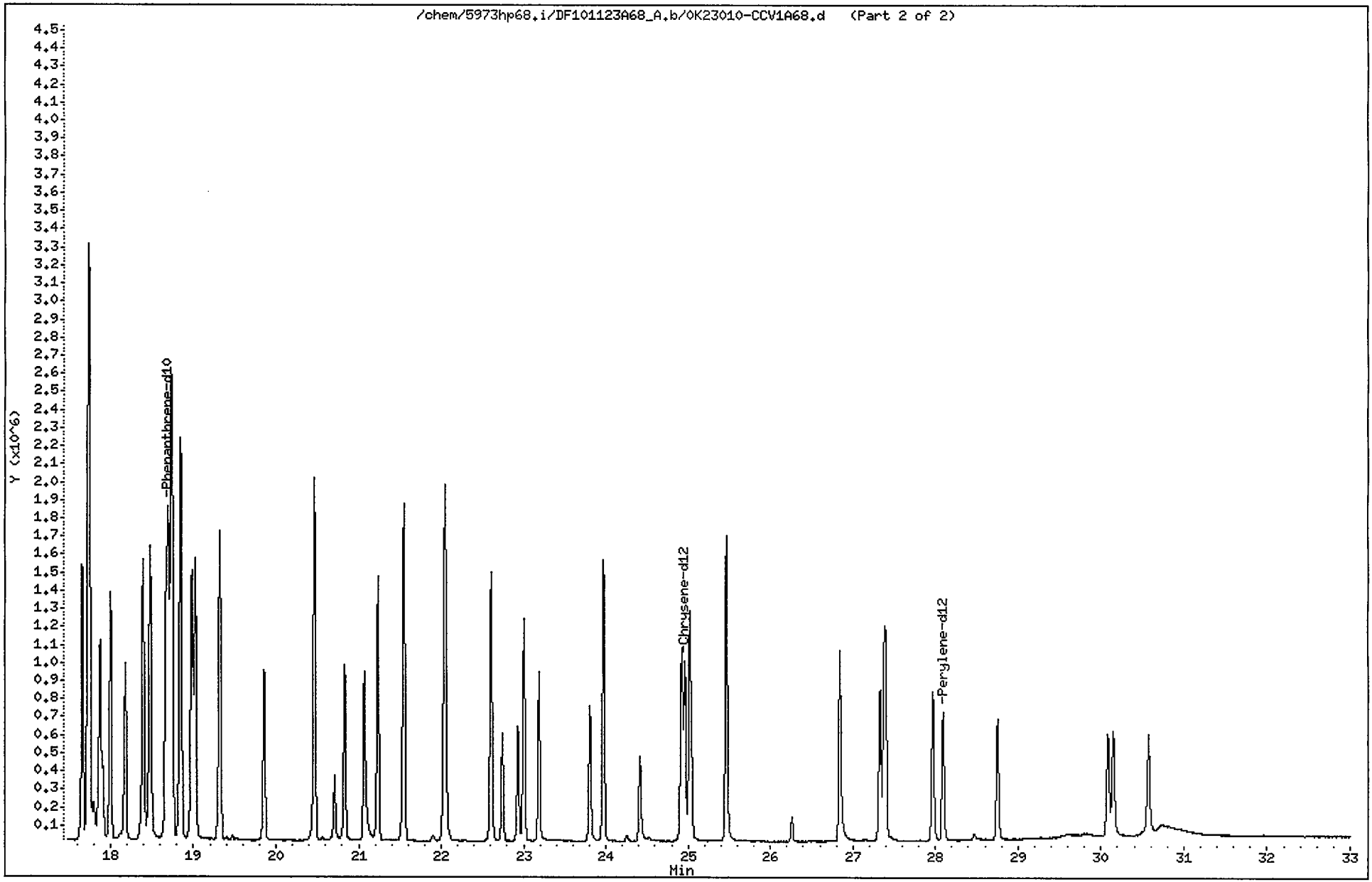
FORM VII SV

Data File: /chem/5973hp68.i/DF101123A68_A.b/0K23010-CCV1A68.d
Date : 23-NOV-2010 16:42
Client ID: SSTD025DU
Sample Info: 0K23010-CCV1:OWS
Volume Injected (uL): 2.0
Column phase: RTX-5MS

Instrument: 5973hp68.i
Operator: OWS
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101123A68_A.b/0K23010-CCV1A68.d
Date : 23-NOV-2010 16:42
Client ID: SSTD025DU
Instrument: 5973hp68.i
Sample Info: 0K23010-CCV1:OWS
Volume Injected (uL): 2.0
Operator: OWS
Column phase: RTX-5MS
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101123A68_A.b/0K23010-CCV1A68.d
Report Date: 29-Nov-2010 16:12

CompuChem

Semivolatile Report SW-846 Method 8270C Appendix IX

Data file : /chem/5973hp68.i/DF101123A68_A.b/0K23010-CCV1A68.d
Lab Smp Id: 0K23010-CCV1 Client Smp ID: SSTD025DU
Inj Date : 23-NOV-2010 16:42
Operator : OWS Inst ID: 5973hp68.i
Smp Info : 0K23010-CCV1:OWS
Misc Info : SSTD025DU
Comment : 2008 MDLS SOIL/ 2007 WATER
Method : /chem/5973hp68.i/DF101123A68_A.b/8270CMASTERDODv5.m
Meth Date : 29-Nov-2010 16:12 byrd Quant Type: ISTD
Cal Date : 19-NOV-2010 07:31 Cal File: 0K19001-CAL6C68.d
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SLP1119.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Vo	1000.00000	Volume of sample extracted (mL)
Vi	2.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	ON-COL (NG)	SIMILARITY
* 1 1,4-Dichlorobenzene-d4	152	8.314	8.314	(1.000)	525302	40.0000		
* 2 Naphthalene-d8	136	11.145	11.145	(1.000)	1983230	40.0000		
* 3 Acenaphthene-d10	164	15.264	15.264	(1.000)	977360	40.0000		
* 4 Phenanthrene-d10	188	18.694	18.694	(1.000)	1334599	40.0000		
* 5 Chrysene-d12	240	24.960	24.960	(1.000)	620475	40.0000		
* 6 Perylene-d12	264	28.091	28.091	(1.000)	458051	40.0000		
30 Benzyl Alcohol	108	8.763	8.763	(1.054)	612897	50.0000	50	
129 3,3'-Dimethylbenzidine	212	23.806	23.806	(0.954)	466038	50.0000	50	9531
132 3,3'-Dichlorobenzidine	252	25.041	25.041	(1.003)	236289	50.0000	57	8541

COMPUCHEM a Division of Liberty Analytical Corp
GC/MS SEMIVOLATILE RUN LOG
LOGBOOK 4Z(4) 2 (5973hp68)

DATE 11/23/10 INITIAL TIME OF TUNE 1622 SHIFT/S (A) K (B)____(C)____
TIME TUNE EXPIRES 0422 METHOD 8270C APIK

PREVENTIVE MAINTENANCE F-C-5-5 A

	SEQUENCE#	MS DATA FILE	FILENAME	MS DATA FILE	DATE	TIME	CLIENT ID	SDG#	AMOUNT INJECTED	CHEMIST	COMMENTS
1	OK23010		OK23010-TUN1	/	11/23/10	1622	DFTPP DM	—	2µL	AW	SCD=LCD
2	F101123A		CC1	/	/ /	1642	5STD025 DM APIK	—			QT21005 1-21-11
3		/	2	VS	/ /	1724	DV 8270	—			OK02016 2-2-11
4			2R	/	/ /	1806	~~DV~~ DV 8270 AW 11-23-10	—		AW 11-23-10	~~OK19005~~ OK02016 2-2-11
5			3	/	/ /	1848	DW APIK SPK	—			OK19005 1-21-11
6			1010107-06S	SL	/ /	1931	L3MWDUP	1010107			
7			07	/	/ /	2013	L3MW6				
8			08	/	/ /	2056	L3MW7				
9			06JZ	/	/ /	2138	L3MWDUP				
10					/ /						
11					/ /						
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13					/ /						
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24					/ /						

MW 11/23/10

DFTPP Lot #/Exp. Date: OF18005 12-17-10
Calibration STD Lot#/Exp. Date: SEE comments
Internal STD Lot#/Exp. Date: OK17011 5-17-11
Methylene Chloride Lot#/Exp. Date: J39508 11-28-11
Column Type: RTX-5ms/0.32mm

The presence of the Chemist's/Analyst's employee ID number, or signature, on this run log attests that strict compliance with the method's SOP has occurred. Any SOP deviations require documentation by the responsible chemist/analyst together with the chemist's/analyst's initials and the initials of the lab supervisor and a QA department representative, signifying approval of the deviation.

REVIEWED BY: _____ DATE 11-24-10

10/06/08: jr

170

Supervisor/Manager Review: _____ pages 150 to 170 Date 11-24-10

F101123A68
SUBLIST SCP1119

FORM 7B
SEMIVOLATILE CALIBRATION VERIFICATION SUMMARY

Lab Name: COMPUCHEM Contract: 8270C-HWMU13A-B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Instrument ID: 5973HP68 Calibration Date: 11/23/10 Time: 1848

Lab File ID: 0K23010-CCV3A6 Init. Calib. Date(s): 11/19/10 11/19/10

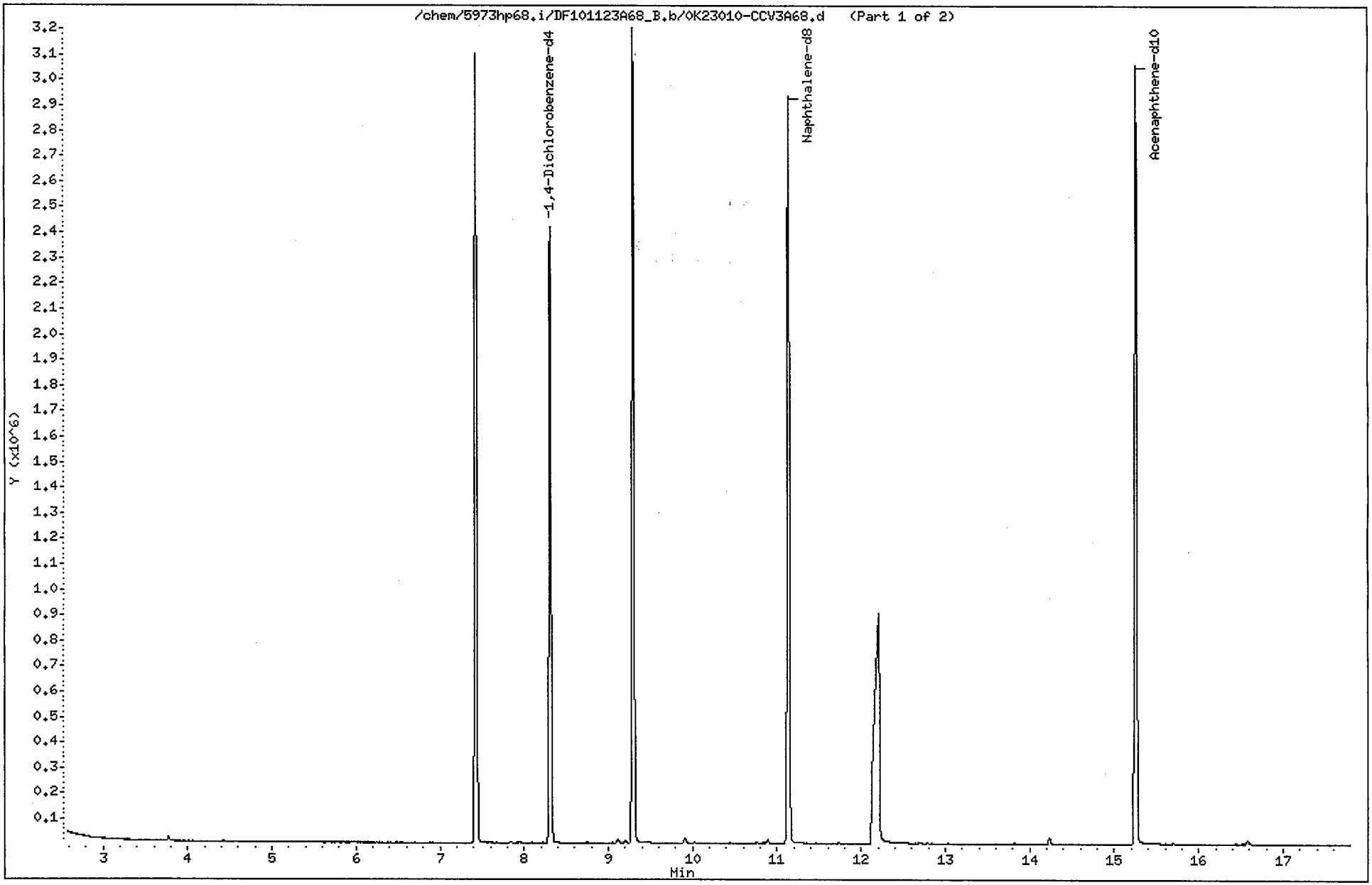
Init. Calib. Times: 0813 1145

GC Column: RTX-5MS ID: 0.32 (mm)

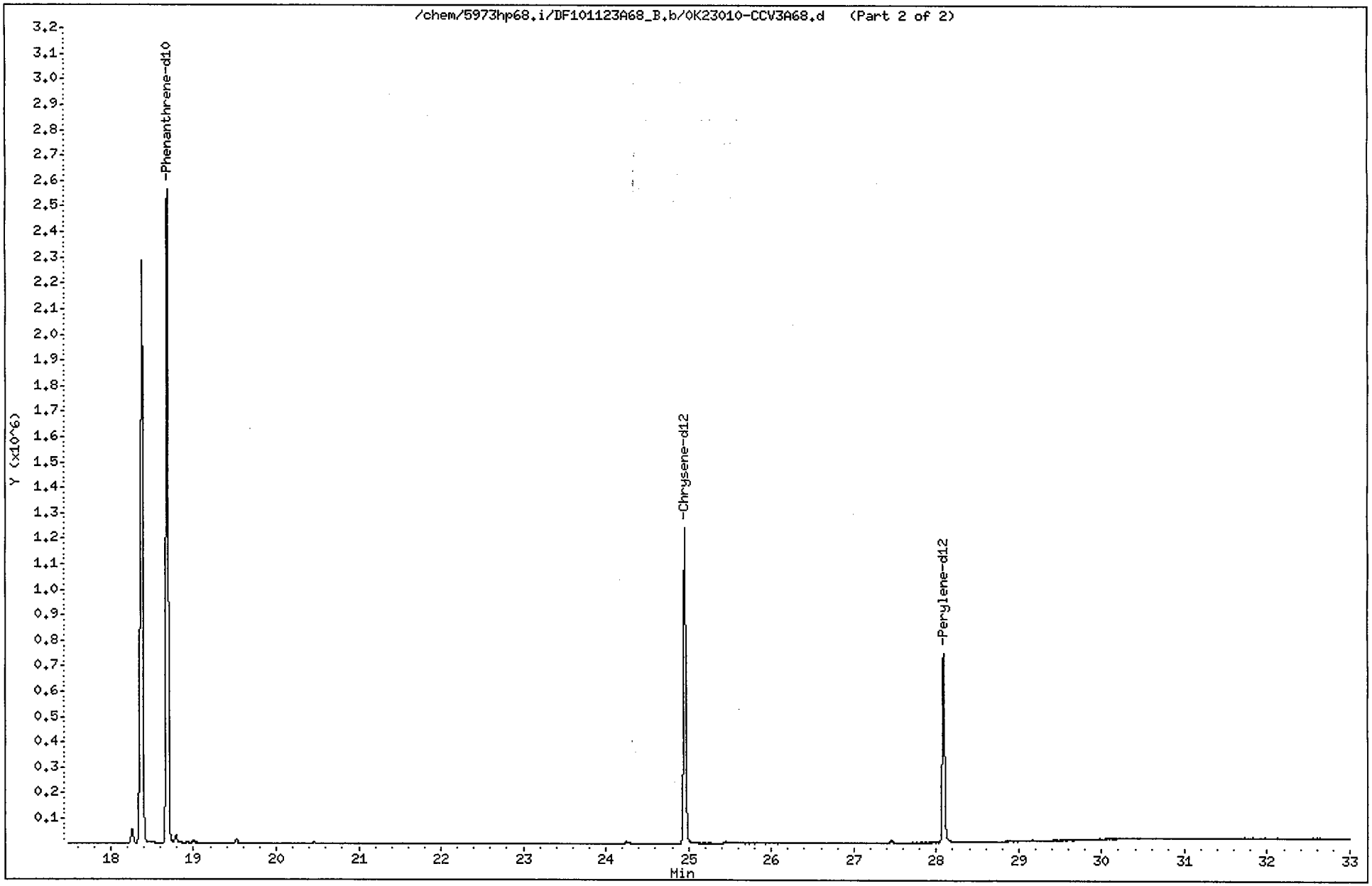
COMPOUND	RRF OR AMOUNT	RRF50.000 OR AMOUNT	MIN RRF	%D OR %DRIFT	MAX %D OR %DRIFT	CURV TYPE
Acetophenone	0.5680000	0.5817594	0.01	2.42	50.00	AVRG

FORM VII SV

Data File: /chem/5973hp68.i/DF101123A68_B.b/0K23010-CCV3A68.d
Date : 23-NOV-2010 18:48
Client ID: SSTD025DW
Instrument: 5973hp68.i
Sample Info: 0K23010-CCV3:OWS
Volume Injected (uL): 2.0
Operator: OWS
Column phase: RTX-5MS
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101123A68_B.b/0K23010-CCV3A68.d
Date : 23-NOV-2010 18:48
Client ID: SSTD025DW
Instrument: 5973hp68.i
Sample Info: 0K23010-CCV3:OWS
Volume Injected (uL): 2.0
Operator: OWS
Column phase: RTX-5MS
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101123A68_B.b/0K23010-CCV3A68.d
Report Date: 29-Nov-2010 16:05

CompuChem

Semivolatile Report SW-846 Method 8270C Appendix IX

Data file : /chem/5973hp68.i/DF101123A68_B.b/0K23010-CCV3A68.d
Lab Smp Id: 0K23010-CCV3 Client Smp ID: SSTD025DW
Inj Date : 23-NOV-2010 18:48
Operator : OWS Inst ID: 5973hp68.i
Smp Info : 0K23010-CCV3:OWS
Misc Info : SSTD025DW
Comment : 2008 MDLS SOIL/ 2007 WATER
Method : /chem/5973hp68.i/DF101123A68_B.b/8270CMASTERDODv5.m
Meth Date : 29-Nov-2010 16:05 byrd Quant Type: ISTD
Cal Date : 19-NOV-2010 11:45 Cal File: 0K19001-CALCC68.d
Als bottle: 4 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: Spike.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Vo	1000.00000	Volume of sample extracted (mL)
Vi	2.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (NG)	AMOUNTS ON-COL (NG)	SIMILARITY
* 1 1,4-Dichlorobenzene-d4	152	8.314	8.314	(1.000)	637547	40.0000		
* 2 Naphthalene-d8	136	11.140	11.140	(1.000)	2379271	40.0000		
* 3 Acenaphthene-d10	164	15.259	15.259	(1.000)	1284180	40.0000		
* 4 Phenanthrene-d10	188	18.689	18.689	(1.000)	1812511	40.0000		
* 5 Chrysene-d12	240	24.955	24.955	(1.000)	801093	40.0000		
* 6 Perylene-d12	264	28.091	28.091	(1.000)	492332	40.0000		
21 Benzaldehyde	77	7.427	7.427	(0.893)	1177492	50.0000	48	8888
33 Acetophenone	105	9.297	9.297	(0.835)	1730204	50.0000	51	9689
57 Caprolactam	113	12.208	12.208	(1.096)	505478	50.0000	53	8986
106 Atrazine	215	18.389	18.389	(0.984)	341026	50.0000	54	8922

COMPUCHEM a Division of Liberty Analytical Corp
GC/MS SEMIVOLATILE RUN LOG
LOGBOOK 4Z(4) 2 (5973hp68)

DATE 11/23/10 INITIAL TIME OF TUNE 1622 SHIFT/S (A) K (B)____(C)____
TIME TUNE EXPIRES 0422 METHOD 8270C APIK

PREVENTIVE MAINTENANCE F-C-5-S

	SEQUENCE#	INJ LOC	FILENAME	DATA PATH	DATE	TIME	CLIENT ID	SDG#	AMOUNT INJECTED	CHEMIST	COMMENTS
1	OK23010		OK23010-TUN1	/	11/23/10	1622	DFTPP DM	—	2µL	AW	SCD=LCD
2	F101123A		CC1	/	/ /	1642	SSTD025 DM APIK	—			QT21005 1-21-11
3		/	2	VS	/ /	1724	DV 8270	—			OK02016 2-2-11
4			2R	/	/ /	1806	~~DW~~ DV 8270 (was 11-23-10)	—		(was 11-23-10)	~~OK19005~~ OK02016 2-2-11
5			3	/	/ /	1848	DW APIK SPK	—			OK19005 1-21-11
6			1010107-065	SL	/ /	1931	13mwDup	1010107			
7			07	/	/ /	2013	13mw6				
8			08	/	/ /	2056	13mw7				
9			06J2	/	/ /	2138	13mwDup				
10					/ /						
11					/ /						
12					/ /						
13					/ /						
14					/ /						
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23					/ /						
24					/ /						

MW 11/23/10

DFTPP Lot #/Exp. Date: OF18005 12-17-10 Calibration STD Lot#/Exp. Date: SEE comments Internal STD Lot#/Exp. Date: OK17011 5-17-11 Methylene Chloride Lot#/Exp. Date: J39508 11-28-11 Column Type: ZB-5ms 60.32mm

The presence of the Chemist's/Analyst's employee ID number, or signature, on this run log attests that strict compliance with the method's SOP has occurred. Any SOP deviations require documentation by the responsible chemist/analyst together with the chemist's/analyst's initials and the initials of the lab supervisor and a QA department representative, signifying approval of the deviation.

REVIEWED BY: _____ DATE 11-24-10

10/06/08: jr

Supervisor/Manager Review: _____ pages 150 to 170 Date 11-24-10

F101123A68_B SubList SPIKE

4. Raw QC Data

   a. DFTPP/PFTBA Data

   b. Blank Data

   c. Laboratory Control Sample Data

   d. Matrix Spike Data

   e. Matrix Spike Duplicate Data

a. DFTPP/PFTBA Data

For each 12 hour period, per instrument utilized, include:

- Bar Graph spectrum and Tabulated Relative Abundances

- Mass listing

- Reconstructed ion chromatogram

- Tailing Factors for Benzidine and Pentachlorophenol

- Determination of DDT Breakdown

-PFTBA (FC-43) Scan

Data File: /chem/5973hp68.i/DF101118C68_C.b/0K19001-TUN2C68.d

Date : 19-NOV-2010 13:18

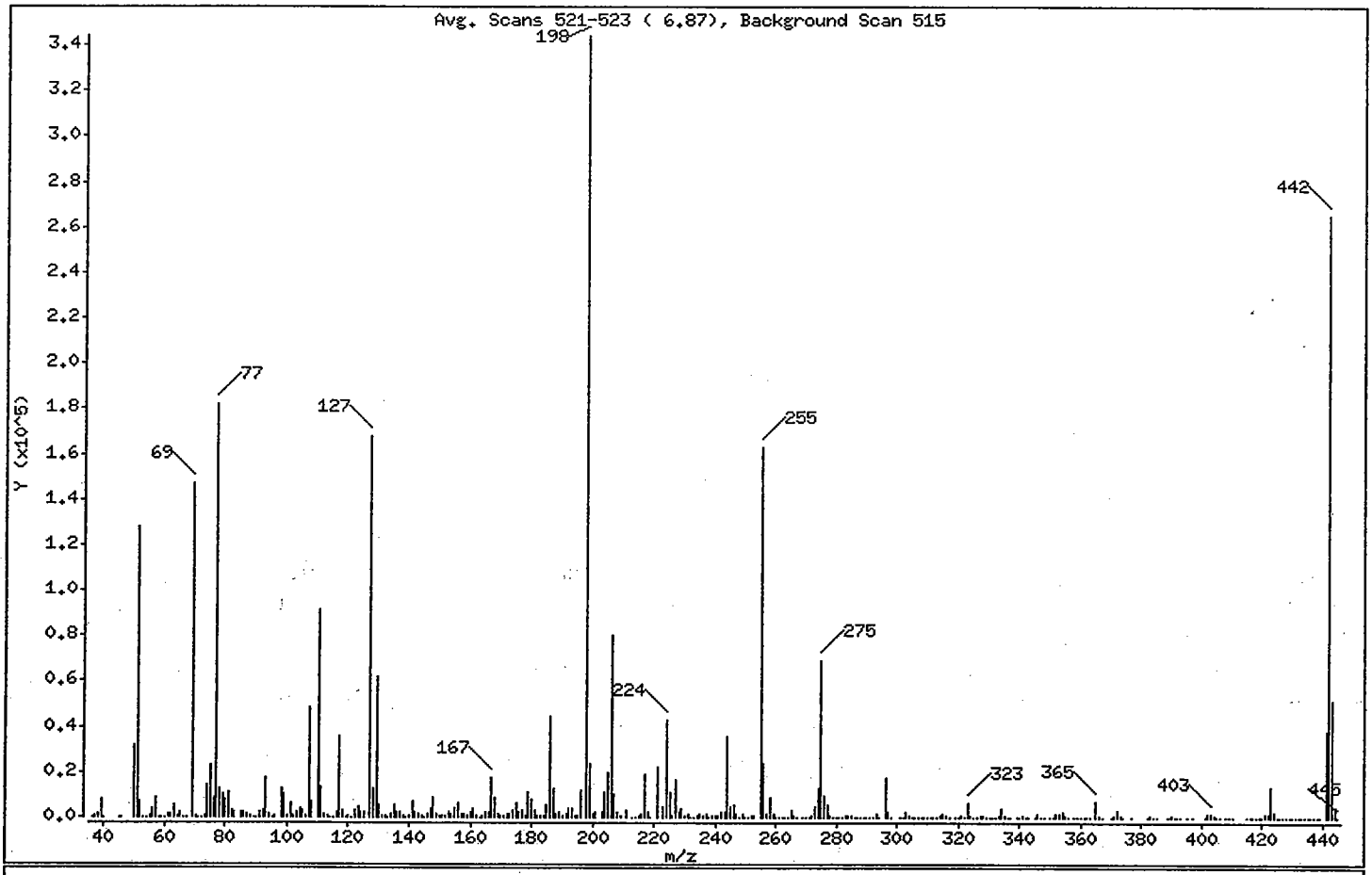
Client ID: DFTPPW7 Instrument: 5973hp68.i

Sample Info: 0K19001-TUN2:MEW

Volume Injected (uL): 2.0 Operator: MEW

Column phase: RTX-5MS Column diameter: 0.32

1 Decafluorotriphenylphosphine



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	37.24
68	Less than 2.00% of mass 69	0.00 (0.00)
69	Mass 69 relative abundance	42.66
70	Less than 2.00% of mass 69	0.21 (0.50)
127	10.00 - 80.00% of mass 198	48.63
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.84
275	10.00 - 60.00% of mass 198	20.05
365	Greater than 1.00% of mass 198	2.18
441	Present, but less than mass 443	11.17
442	50.00 - 100.00% of mass 198	77.13
443	15.00 - 24.00% of mass 442	15.10 (19.58)

Data File: /chem/5973hp68.i/DF101118C68_C.b/0K19001-TUN2C68.d

Date : 19-NOV-2010 13:18

Client ID: DFTPPW7 Instrument: 5973hp68.i

Sample Info: 0K19001-TUN2:MEW

Volume Injected (uL): 2.0 Operator: MEW

Column phase: RTX-5MS Column diameter: 0.32

Data File: 0K19001-TUN2C68.d

Spectrum: Avg. Scans 521-523 (6.87), Background Scan 515

Location of Maximum: 198.00

Number of points: 359

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1	138.00	678	234.00	1092	330.00	78
37.00	398	139.00	354	235.00	1266	331.00	26
38.00	1200	140.00	790	236.00	921	332.00	347
39.00	8032	141.00	7334	237.00	1323	333.00	555
40.00	244	142.00	2719	238.00	206	334.00	3814
45.00	295	143.00	1793	239.00	681	335.00	1015
46.00	47	144.00	503	240.00	528	336.00	107
50.00	32080	145.00	370	241.00	1064	337.00	17
51.00	128120	146.00	1384	242.00	2391	339.00	95
52.00	6996	147.00	3914	243.00	2462	340.00	118
53.00	296	148.00	8574	244.00	35760	341.00	711
54.00	17	149.00	1721	245.00	4814	342.00	220
55.00	476	150.00	471	246.00	5727	343.00	16
56.00	3592	151.00	1082	247.00	1213	345.00	20
57.00	8840	152.00	547	248.00	344	346.00	1375
58.00	255	153.00	2466	249.00	1225	347.00	332
59.00	57	154.00	1879	250.00	285	348.00	17
60.00	106	155.00	4302	251.00	305	350.00	71
61.00	1439	156.00	6366	252.00	419	351.00	59
62.00	1891	157.00	1442	253.00	831	352.00	1783
63.00	5429	158.00	1271	255.00	162560	353.00	1494
64.00	658	159.00	1125	256.00	23792	354.00	2130
65.00	2688	160.00	2361	257.00	1874	355.00	449
66.00	260	161.00	3965	258.00	8700	356.00	39
67.00	159	162.00	1137	259.00	1494	358.00	29
69.00	146752	163.00	304	260.00	289	359.00	169
70.00	737	164.00	485	261.00	260	360.00	17
71.00	17	165.00	2766	262.00	62	361.00	31
72.00	44	166.00	2511	263.00	73	362.00	19
73.00	926	167.00	17200	264.00	267	363.00	19
74.00	14683	168.00	8407	265.00	3459	365.00	7486
75.00	23344	169.00	1435	266.00	405	366.00	1129
76.00	8423	170.00	517	267.00	113	367.00	72
77.00	181632	171.00	724	269.00	82	370.00	223
78.00	12400	172.00	1247	270.00	208	371.00	509

Data File: /chem/5973hp68.i/DF101118C68_C.b/0K19001-TUN2C68.d

Date : 19-NOV-2010 13:18

Client ID: DFTPPW7 Instrument: 5973hp68.i

Sample Info: 0K19001-TUN2:MEW

Volume Injected (uL): 2.0 Operator: MEW

Column phase: RTX-5MS Column diameter: 0.32

Data File: 0K19001-TUN2C68.d

Spectrum: Avg. Scans 521-523 (6.87), Background Scan 515

Location of Maximum: 198.00

Number of points: 359

m/z	Y	m/z	Y	m/z	Y	m/z	Y
79.00	10165	173.00	1813	271.00	383	372.00	3448
80.00	7751	174.00	3481	272.00	485	373.00	798
81.00	11239	175.00	6314	273.00	4754	374.00	90
82.00	2959	176.00	2003	274.00	12649	377.00	107
83.00	2710	177.00	3101	275.00	68976	382.00	19
85.00	2539	178.00	960	276.00	9200	383.00	883
86.00	2380	179.00	11045	277.00	5193	384.00	233
87.00	1439	180.00	7722	278.00	811	385.00	65
88.00	625	181.00	3444	279.00	212	389.00	21
89.00	221	182.00	617	280.00	17	390.00	444
90.00	116	183.00	399	281.00	35	391.00	370
91.00	2374	184.00	951	282.00	141	392.00	227
92.00	2835	185.00	5653	283.00	616	393.00	48
93.00	17296	186.00	44472	284.00	470	395.00	19
94.00	1280	187.00	12421	285.00	1087	397.00	76
95.00	218	188.00	1329	286.00	208	401.00	242
96.00	863	189.00	2400	287.00	24	402.00	1241
98.00	12455	190.00	454	288.00	52	403.00	1812
99.00	10606	191.00	1258	289.00	254	404.00	645
100.00	920	192.00	3976	290.00	173	405.00	99
101.00	6423	193.00	4129	291.00	175	406.00	16
102.00	433	194.00	972	292.00	251	408.00	55
103.00	2318	195.00	447	293.00	1405	409.00	18
104.00	3877	196.00	11529	294.00	370	410.00	96
105.00	3429	198.00	344000	296.00	17632	415.00	69
106.00	481	199.00	23536	297.00	2564	416.00	52
107.00	48328	200.00	1944	298.00	166	417.00	25
108.00	7285	201.00	2132	301.00	263	418.00	23
110.00	91448	203.00	2139	302.00	354	419.00	20
111.00	13589	204.00	11136	303.00	2231	420.00	24
112.00	1613	205.00	19576	304.00	615	421.00	1804
113.00	585	206.00	80400	305.00	80	422.00	1751
114.00	148	207.00	10509	306.00	19	423.00	13224
115.00	158	208.00	2509	307.00	32	424.00	2690
116.00	2543	209.00	818	308.00	273	425.00	345

Data File: /chem/5973hp68.i/DF101118C68_C.b/0K19001-TUN2C68.d

Date : 19-NOV-2010 13:18

Client ID: DFTPPW7 Instrument: 5973hp68.i

Sample Info: 0K19001-TUN2:MEW

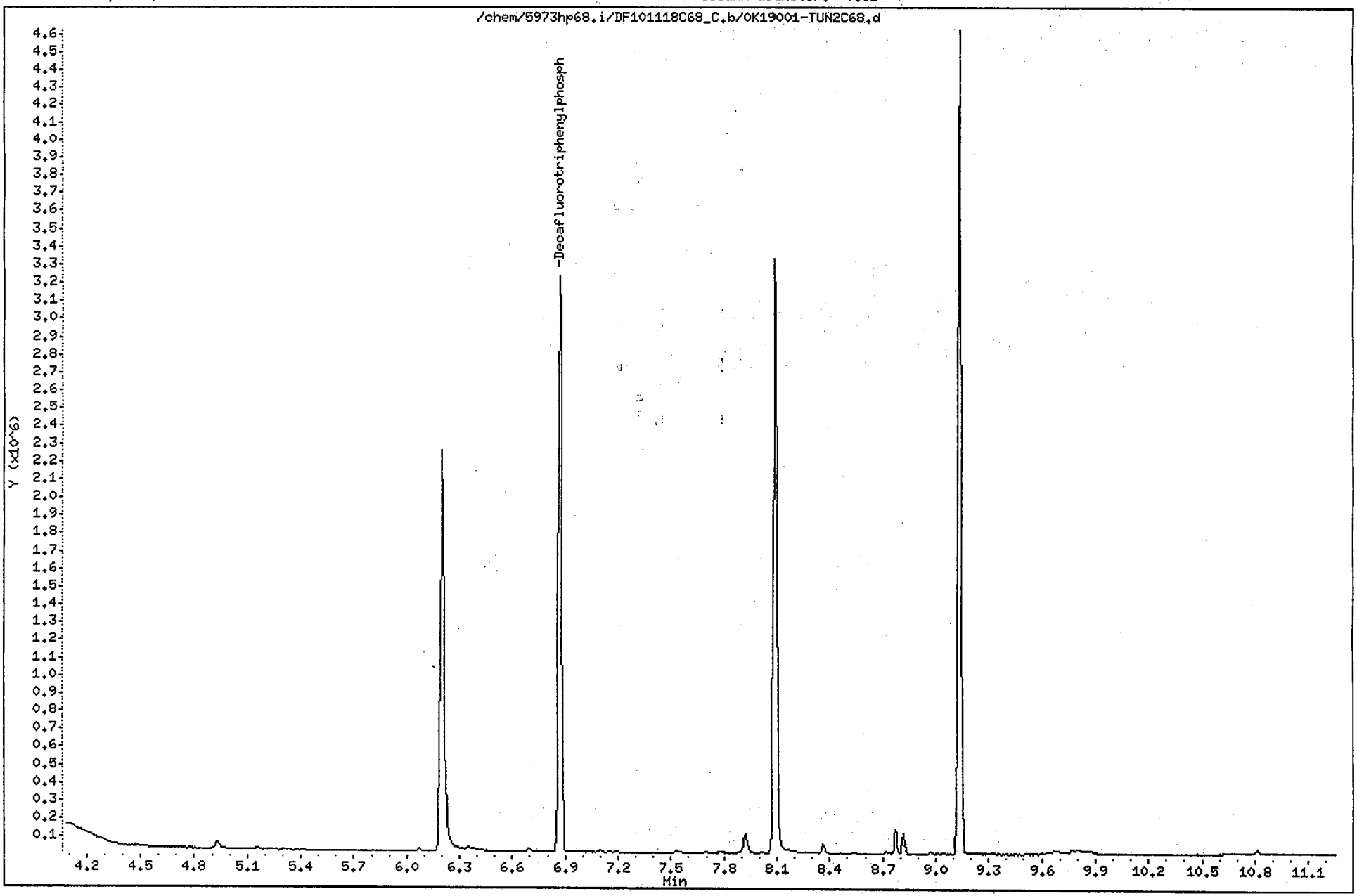
Volume Injected (uL): 2.0 Operator: MEW

Column phase: RTX-5MS Column diameter: 0.32

Data File: 0K19001-TUN2C68.d
Spectrum: Avg. Scans 521-523 (6.87), Background Scan 515
Location of Maximum: 198.00
Number of points: 359

m/z	Y	m/z	Y	m/z	Y	m/z	Y
117.00	36120	211.00	3406	309.00	203	426.00	177
118.00	2921	213.00	272	310.00	336	427.00	155
119.00	207	214.00	116	311.00	83	428.00	105
120.00	623	215.00	814	312.00	72	429.00	298
121.00	145	216.00	1827	313.00	236	430.00	172
122.00	2946	217.00	19136	314.00	928	431.00	331
123.00	4431	218.00	2741	315.00	1919	432.00	195
124.00	1996	219.00	346	316.00	1146	433.00	207
125.00	2084	221.00	22264	317.00	191	434.00	87
127.00	167296	223.00	4548	319.00	48	435.00	22
128.00	12812	224.00	43072	320.00	70	436.00	18
129.00	61840	225.00	10797	321.00	602	437.00	17
130.00	5367	226.00	1182	322.00	349	438.00	17
131.00	975	227.00	16456	323.00	6442	439.00	76
132.00	556	228.00	2429	324.00	1184	441.00	38432
133.00	228	229.00	3730	325.00	165	442.00	265344
134.00	1696	230.00	552	326.00	127	443.00	51952
135.00	5204	231.00	1543	327.00	928	444.00	4878
136.00	2049	232.00	372	328.00	597	445.00	309
137.00	2776	233.00	316	329.00	118		

Data File: /chem/5973hp68.i/DF101118C68_C.b/0K19001-TUN2C68.d
Date : 19-NOV-2010 13:18
Client ID: DFTPPW7
Instrument: 5973hp68.i
Sample Info: 0K19001-TUN2:MEW
Volume Injected (uL): 2.0
Operator: MEW
Column phase: RTX-5MS
Column diameter: 0.32



TAILING FACTOR and DEGRADATION SUMMARY RESULTS

DECAFLUOROTRIPHENYLPHOSPHINE Ion Abundance/Ratio Criteria Chart

Ion	Abundance Criteria	Base Peak	Other	Test
198	Base Peak, 100% relative abundance	100.00		PASS
51	10 - 80% of mass 198	37.24		PASS
68	Less than 2% of mass 69	0.00	(0.00)	PASS
69	Mass 69 relative abundance	42.66		PASS
70	Less than 2% of mass 69	0.21	(0.50)	PASS
127	10 - 80% of mass 198	48.63		PASS
197	0 - 2% of mass 198	0.00		PASS
199	5 - 9% of mass 198	6.84		PASS
275	10 - 60% of mass 198	20.05		PASS
365	Greater than 0.75% of mass 198	2.18		PASS
441	Present, but less than mass 443	11.17	(73.98)	PASS
442	50 - 100 % of mass 198	77.13		PASS
443	15 - 24% of mass 442	15.10	(19.58)	PASS

TAILING ANALYSIS SUMMARY

Compound	Tail Factor	Max Allowed	Test
Pentachlorophenol	1.4	5.0	PASS
Benzidine	1.1	3.0	PASS

DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

Compound	Response	%Breakdown	Max Allowed	Test
4,4-DDT	1026579			N/A
4,4-DDE	5408	0.5	20.0	PASS
4,4-DDD	25560	2.4	20.0	PASS
4,4-DDD + DDE	30968	2.9	20.0	PASS

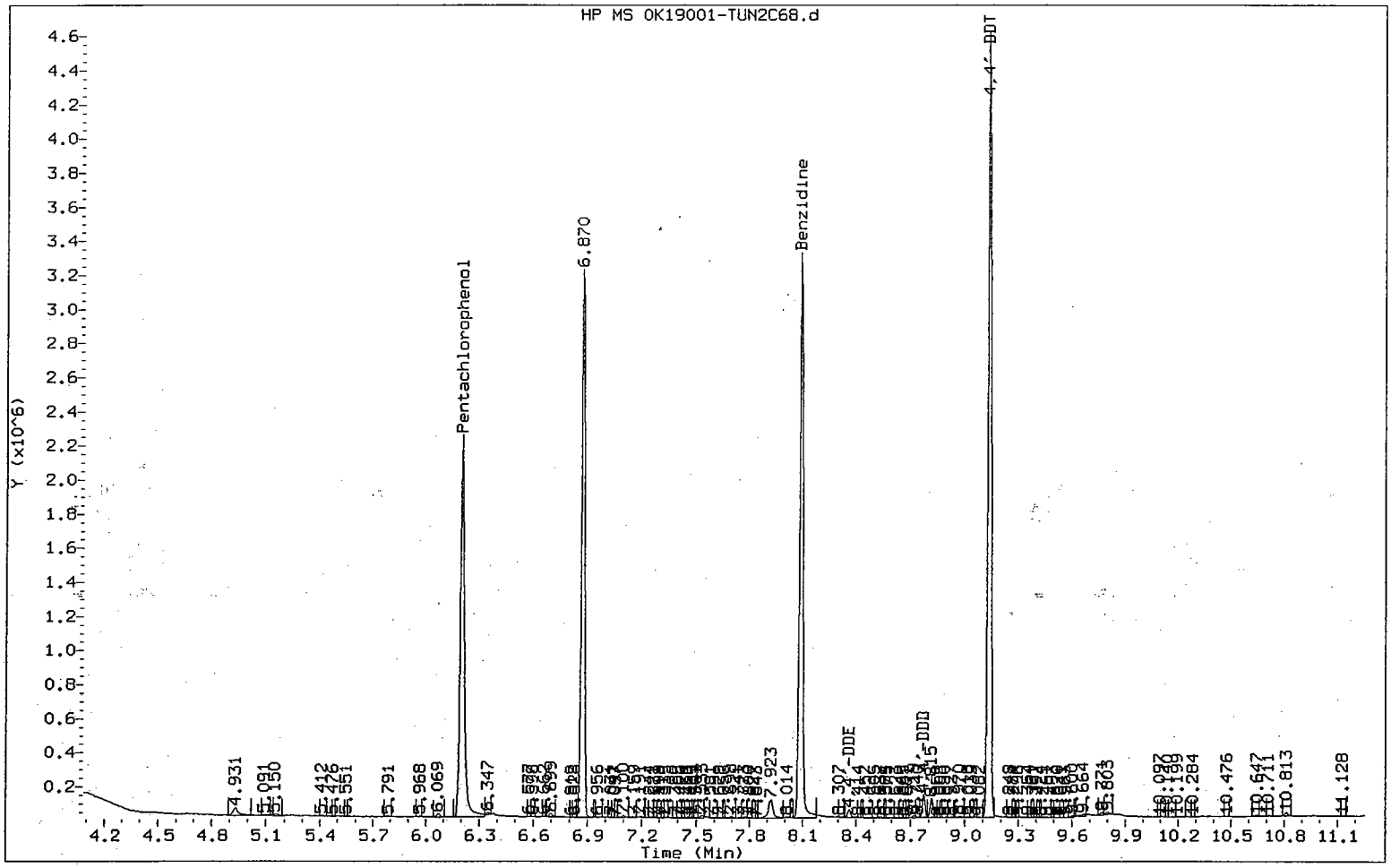
Tuning Sample, /chem/5973hp68.i/DF101118C68_C.b/0K19001-TUN2C68.d/0K19001-TUN2C6

*** PASSED ***

TAILING FACTOR and DEGRADATION SAMPLE AND GRAPHIC REPORT

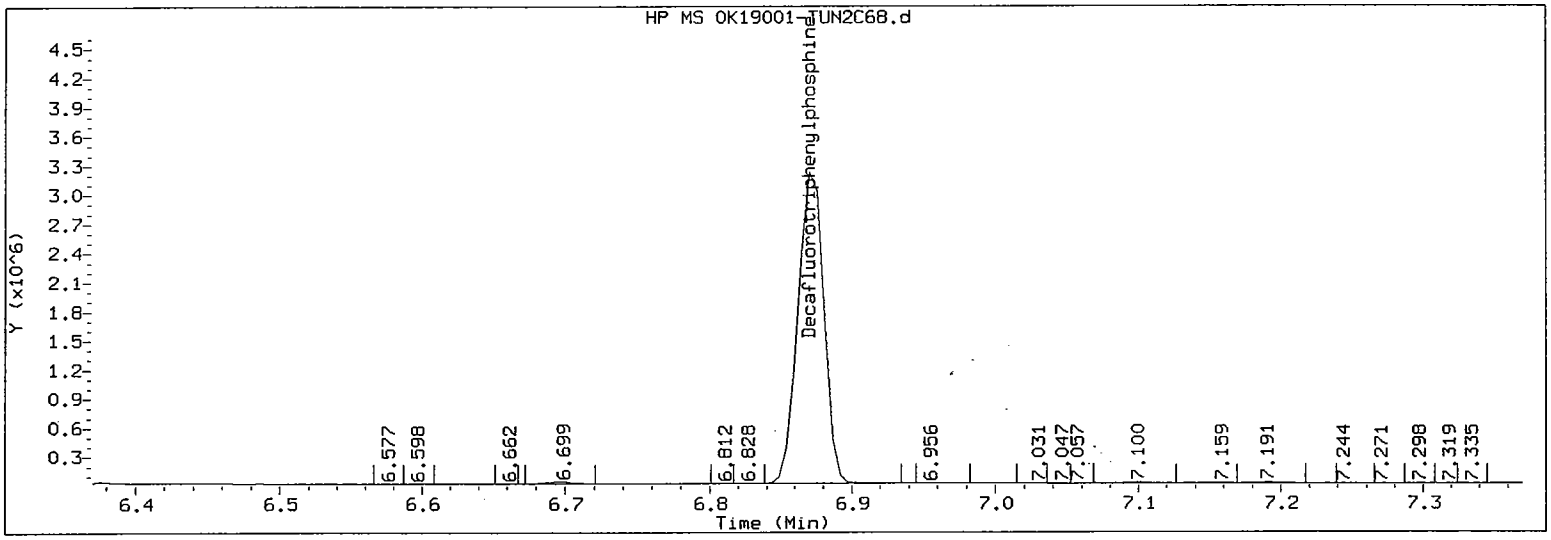
Report Date: 11/26/2010 15:36

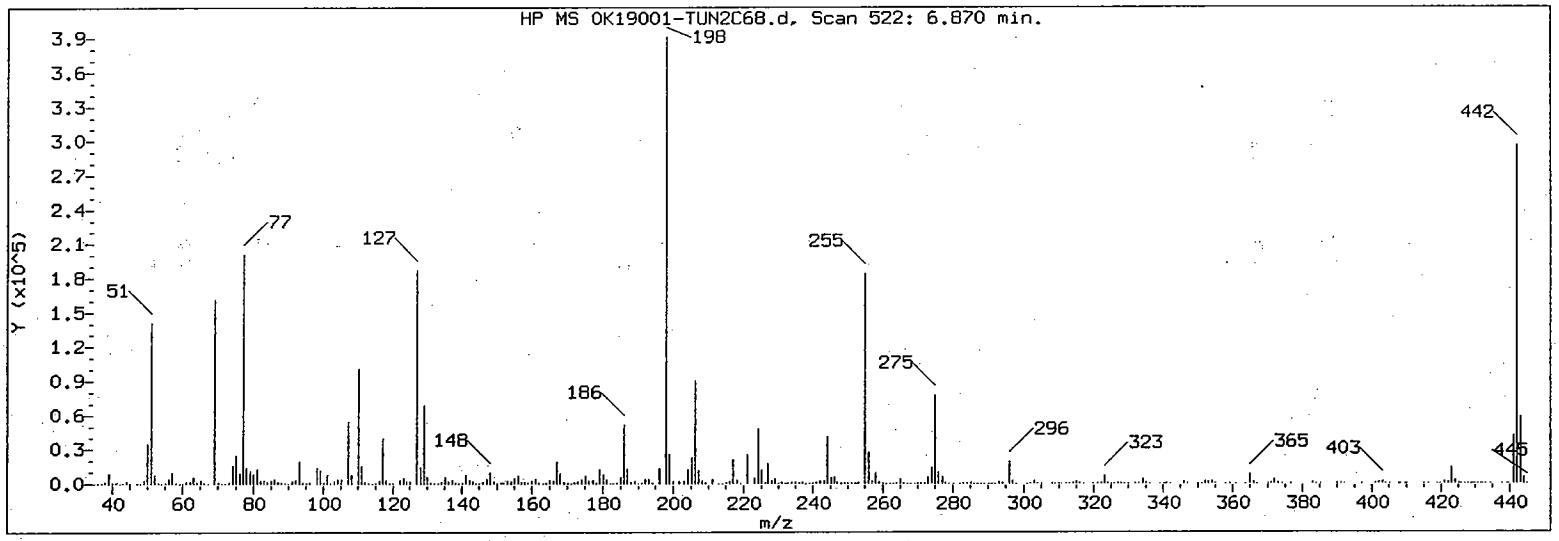
Datafile Analyzed: /chem/5973hp68.i/DF101118C68_C.b/0K19001-TUN2C68.d/0K19001-TU
Method Used: /chem/5973hp68.i/DF101118C68_C.b/dftpp8270C.m Inst: 5973hp68
Injection Date: 19-NOV-2010 13:18 Operator: MEW
Sample Info: 0K19001-TUN2 0K19001-TUN2:MEW
Misc Info: DFTPPW7



Report Date: 11/26/2010 15:36

Datafile Analyzed: /chem/5973hp68.i/DF101118C68_C.b/0K19001-TUN2C68.d/0K19001-TU
Method Used: /chem/5973hp68.i/DF101118C68_C.b/dftpp8270C.m Inst: 5973hp68
Injection Date: 19-NOV-2010 13:18 Operator: MEW
Sample Info: 0K19001-TUN2 0K19001-TUN2:MEW
Misc Info: DFTPPW7



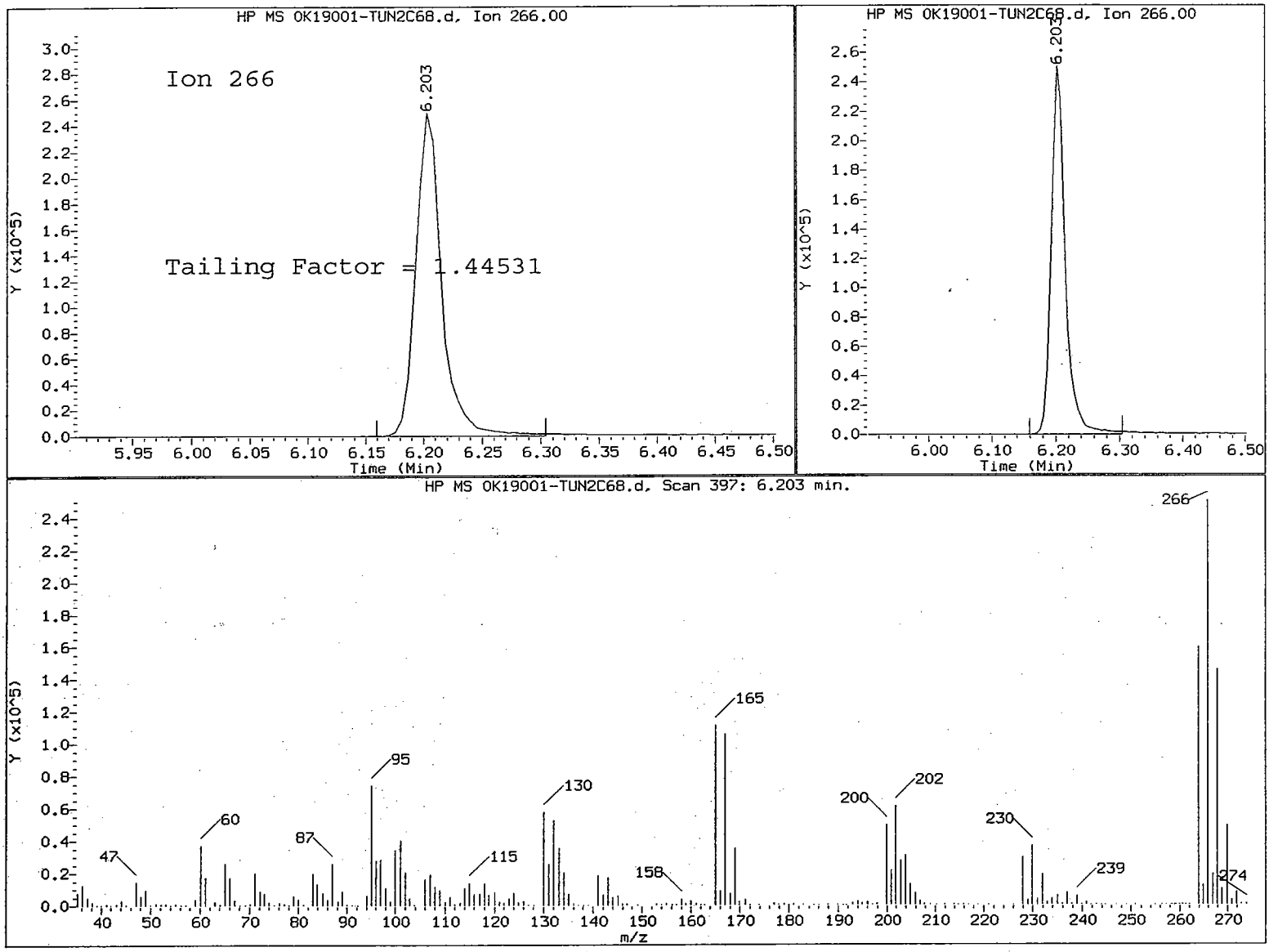


DECAFLUOROTRIPHENYLPHOSPHINE Ion Abundance/Ratio Criteria Chart

Ion	Abundance Criteria	Base Peak	Other	Test
198	Base Peak, 100% relative abundance	100.00		PASS
51	10 - 80% of mass 198	37.24		PASS
68	Less than 2% of mass 69	0.00	(0.00)	PASS
69	Mass 69 relative abundance	42.66		PASS
70	Less than 2% of mass 69	0.21	(0.50)	PASS
127	10 - 80% of mass 198	48.63		PASS
197	0 - 2% of mass 198	0.00		PASS
199	5 - 9% of mass 198	6.84		PASS
275	10 - 60% of mass 198	20.05		PASS
365	Greater than 0.75% of mass 198	2.18		PASS
441	Present, but less than mass 443	11.17	(73.98)	PASS
442	50 - 100% of mass 198	77.13		PASS
443	15 - 24% of mass 442	15.10	(19.58)	PASS

Report Date: 11/26/2010 15:36

Datafile Analyzed: /chem/5973hp68.i/DF101118C68_C.b/0K19001-TUN2C68.d/0K19001-TU
Method Used: /chem/5973hp68.i/DF101118C68.b/dftpp8270C.m/BrkDwnTF.m Inst: 5973h
Injection Date: 19-NOV-2010 13:18 Operator:
Sample Info: DFTPP 0K19001-TUN2:MEW
Misc Info:



Pentachlorophenol
==========

Exp. RT = 6.325
Found RT = 6.203

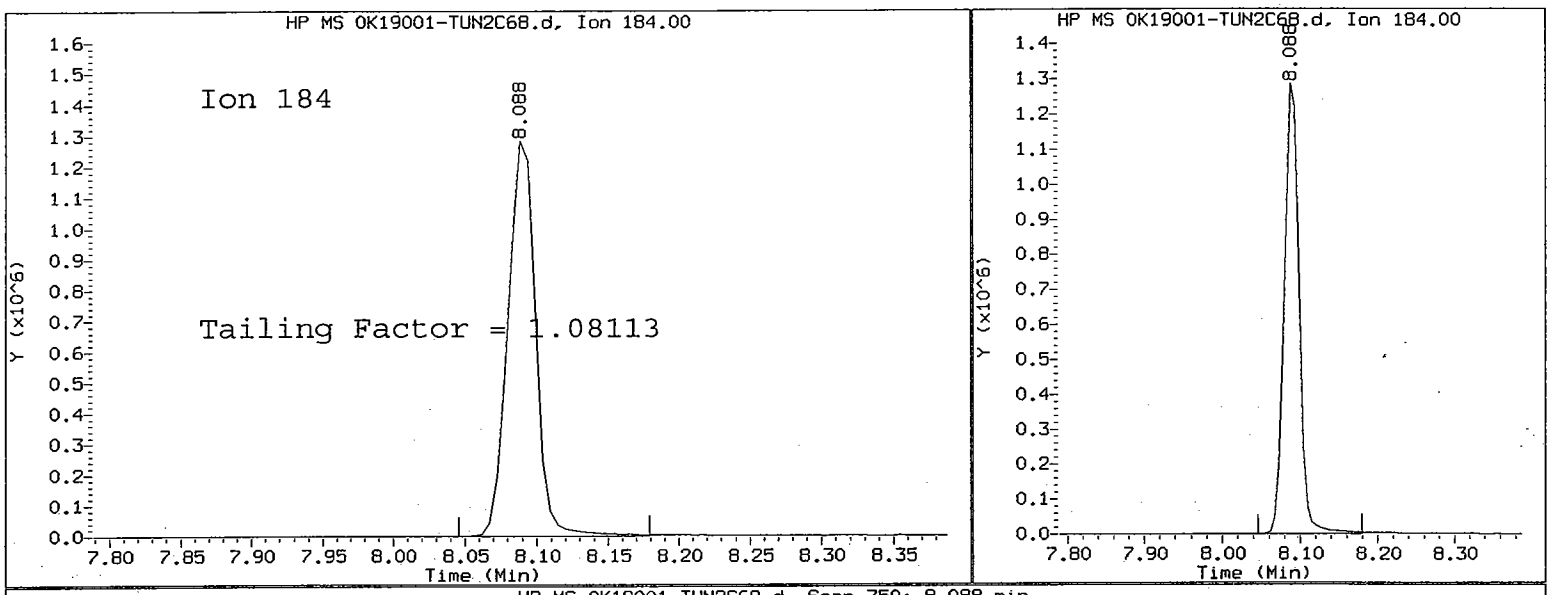
Mass	Area	Ratio
266	383373	100.00

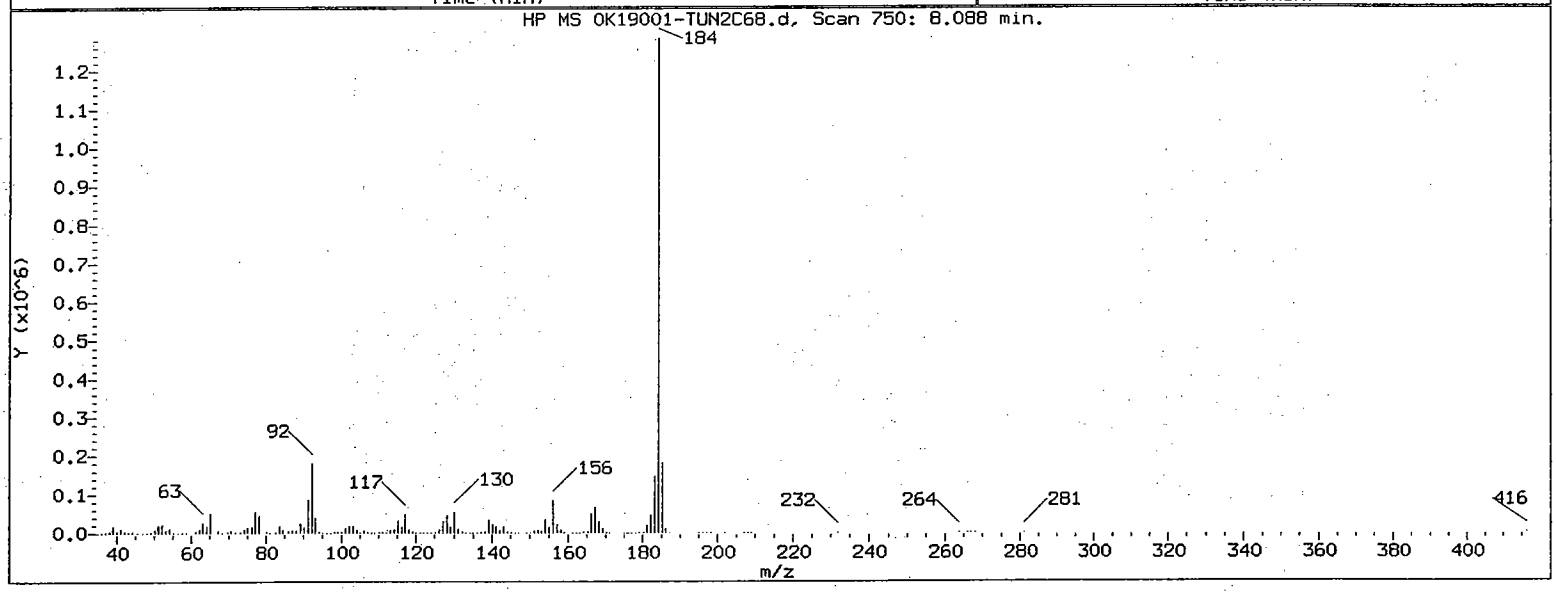
Tailing factor for Pentachlorophenol OK

Tailing Factor = 1.4 Maximum Allowed = 5.0

Report Date: 11/26/2010 15:36

Datafile Analyzed: /chem/5973hp68.i/DF101118C68_C.b/0K19001-TUN2C68.d/0K19001-TU
Method Used: /chem/5973hp68.i/DF101118C68.b/dftpp8270C.m/BrkDwnTF.m Inst: 5973h
Injection Date: 19-NOV-2010 13:18 Operator:
Sample Info: DFTPP 0K19001-TUN2:MEW
Misc Info:





Benzidine
=========
Exp. RT = 8.201
Found RT = 8.088

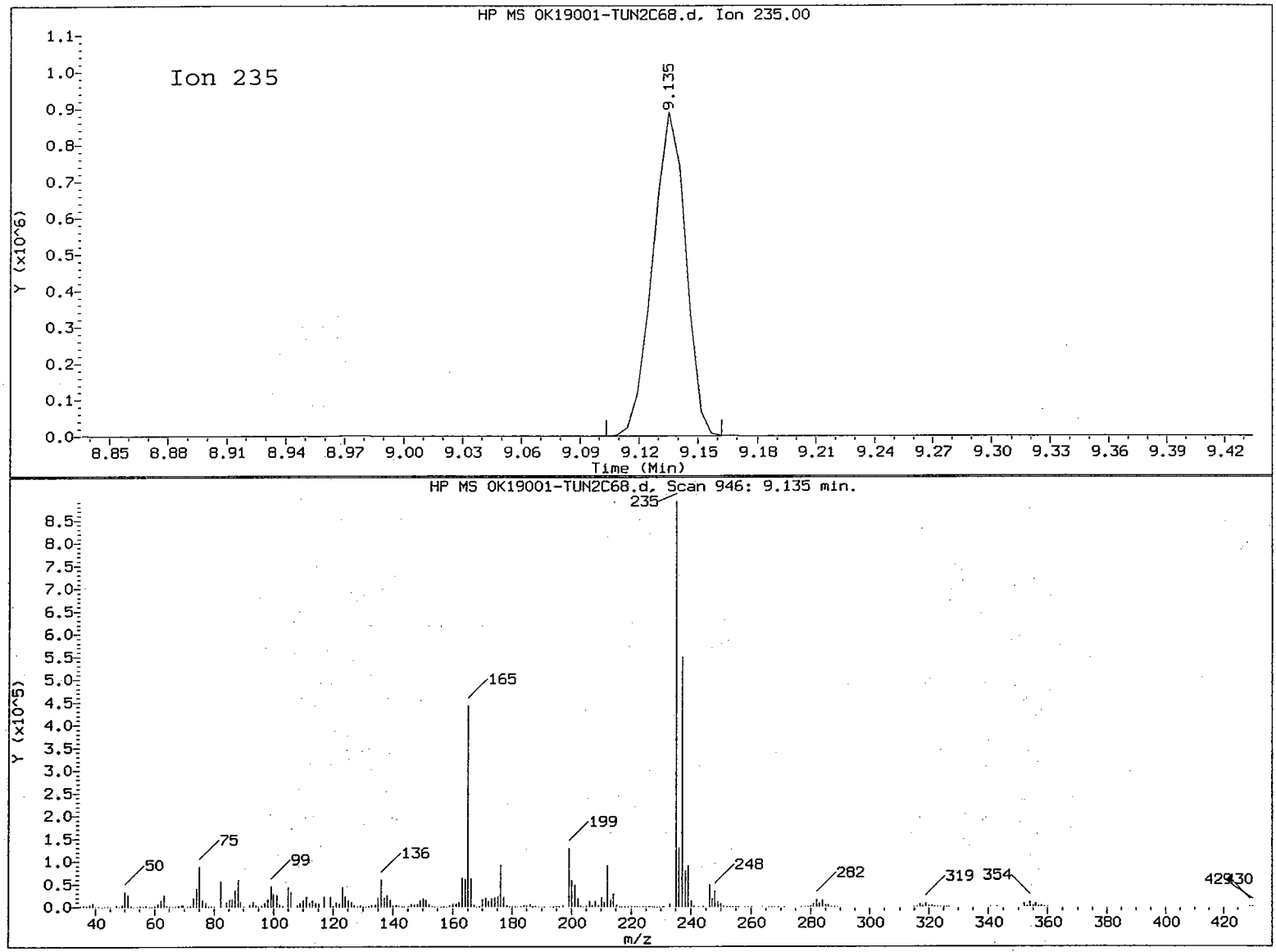
Mass	Area	Ratio
184	1727900	100.00

Tailing factor for Benzidine OK

Tailing Factor = 1.1 Maximum Allowed = 3.0

Report Date: 11/26/2010 15:36

Datafile Analyzed: /chem/5973hp68.i/DF101118C68_C.b/0K19001-TUN2C68.d/0K19001-TU
Method Used: /chem/5973hp68.i/DF101118C68.b/dftpp8270C.m/BrkDwnTF.m Inst: 5973h
Injection Date: 19-NOV-2010 13:18 Operator:
Sample Info: DFTPP 0K19001-TUN2:MEW
Misc Info:

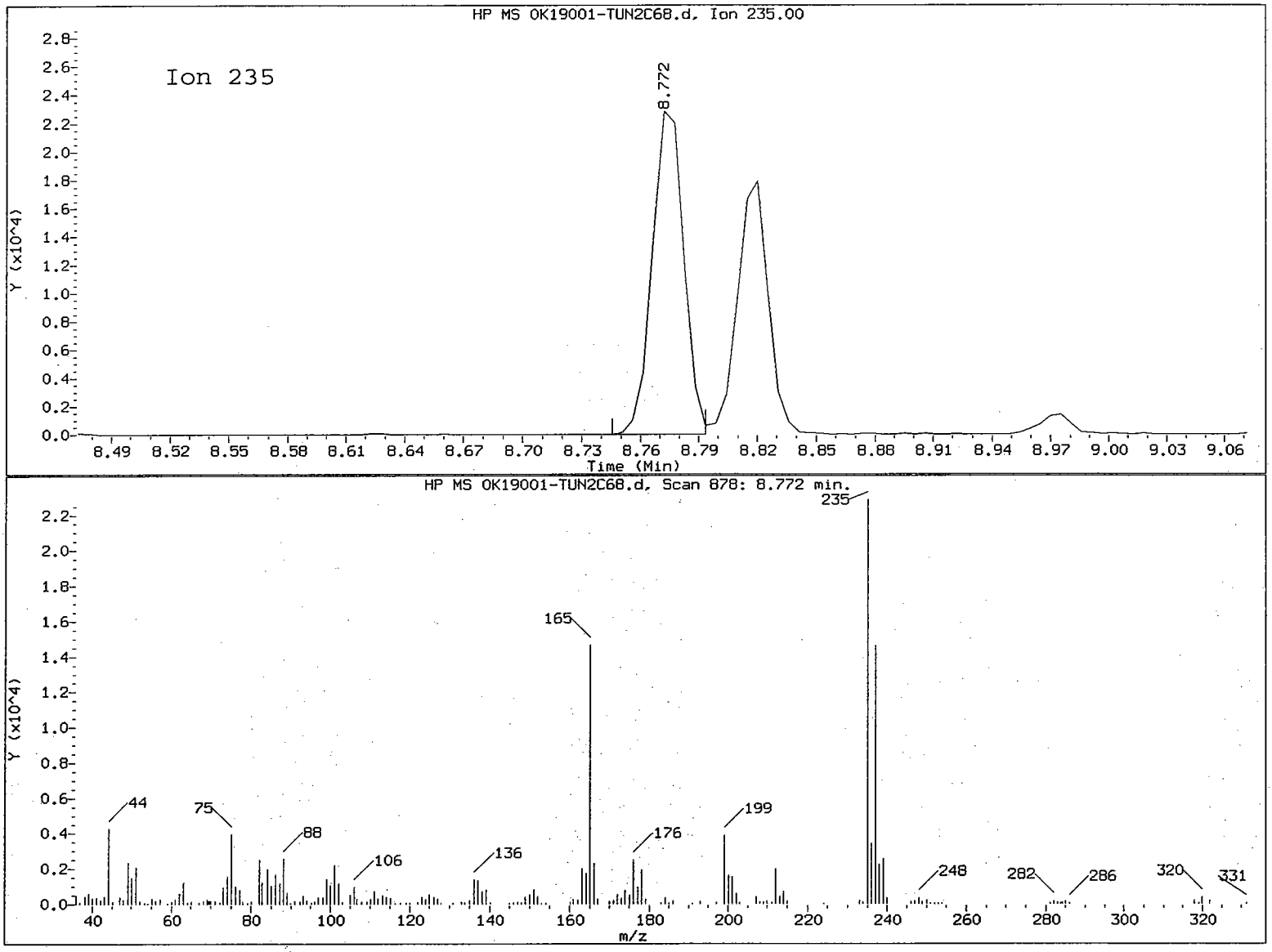


4,4'-DDT
========
Exp. RT = 9.248
Found RT = 9.135

Mass	Area	Ratio
235	1026579	100.00

Report Date: 11/26/2010 15:36

Datafile Analyzed: /chem/5973hp68.i/DF101118C68_C.b/0K19001-TUN2C68.d/0K19001-TU
Method Used: /chem/5973hp68.i/DF101118C68.b/dftpp8270C.m/BrkDwnTF.m Inst: 5973h
Injection Date: 19-NOV-2010 13:18 Operator:
Sample Info: DFTPP 0K19001-TUN2:MEW
Misc Info:

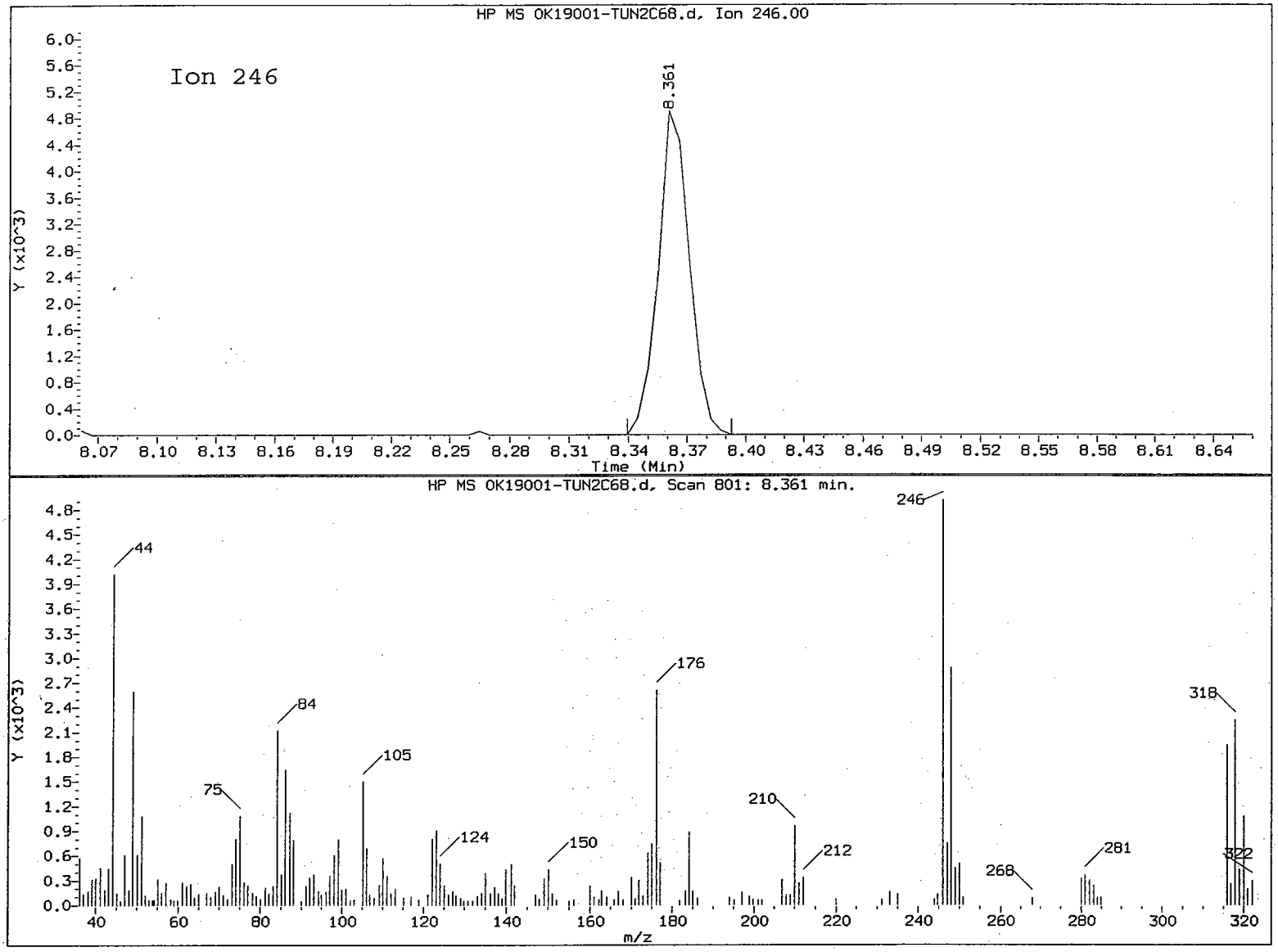


4,4'-DDD
========
Exp. RT = 8.900
Found RT = 8.772

Mass	Area	Ratio
235	25560	100.00

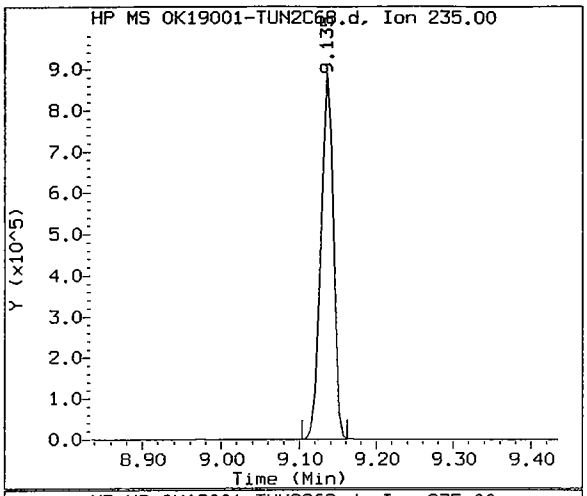
Report Date: 11/26/2010 15:36

Datafile Analyzed: /chem/5973hp68.i/DF101118C68_C.b/0K19001-TUN2C68.d/0K19001-TU
Method Used: /chem/5973hp68.i/DF101118C68.b/dftpp8270C.m/BrkDwnTF.m Inst: 5973h
Injection Date: 19-NOV-2010 13:18 Operator:
Sample Info: DFTPP 0K19001-TUN2:MEW
Misc Info:

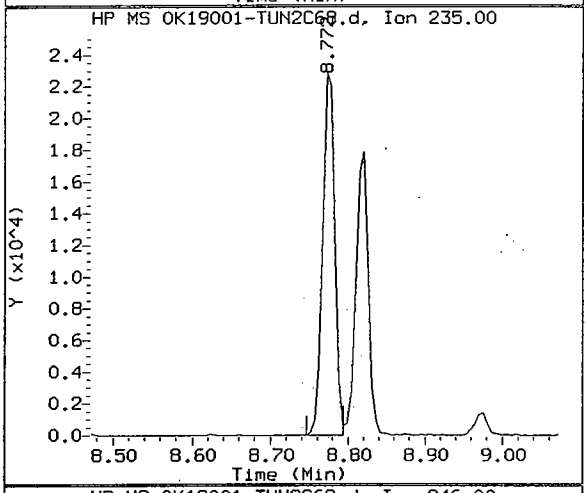


4,4'-DDE
========
Exp. RT = 8.440
Found RT = 8.361

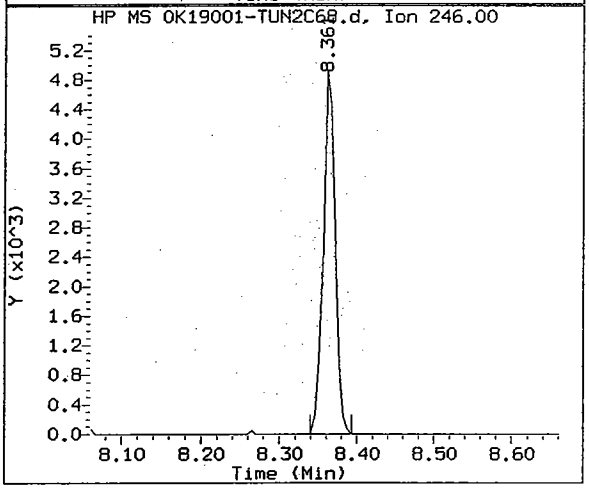
Mass	Area	Ratio
246	5408	100.00



Compound: 4,4'-DDT
Quant Mass: 235
RT: 9.135
Area: 1026579



Compound: 4,4'-DDD
Quant Mass: 235
RT: 8.772
Area: 25560



Compound: 4,4'-DDE
Quant Mass: 246
RT: 8.361
Area: 5408

DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

Compound	Response	%Breakdown	Max Allowed	Test
4,4-DDT	1026579			N/A
4,4-DDE	5408	0.5	20.0	PASS
4,4-DDD	25560	2.4	20.0	PASS
4,4-DDD + DDE	30968	2.9	20.0	PASS

****

TUNE SAMPLE *** PASSED *** DDT BREAKDOWN TEST

****

Data File: /chem/5973hp68.i/DF101118C68_A.b/0K19001-TUN1C68.d

Date : 19-NOV-2010 03:14

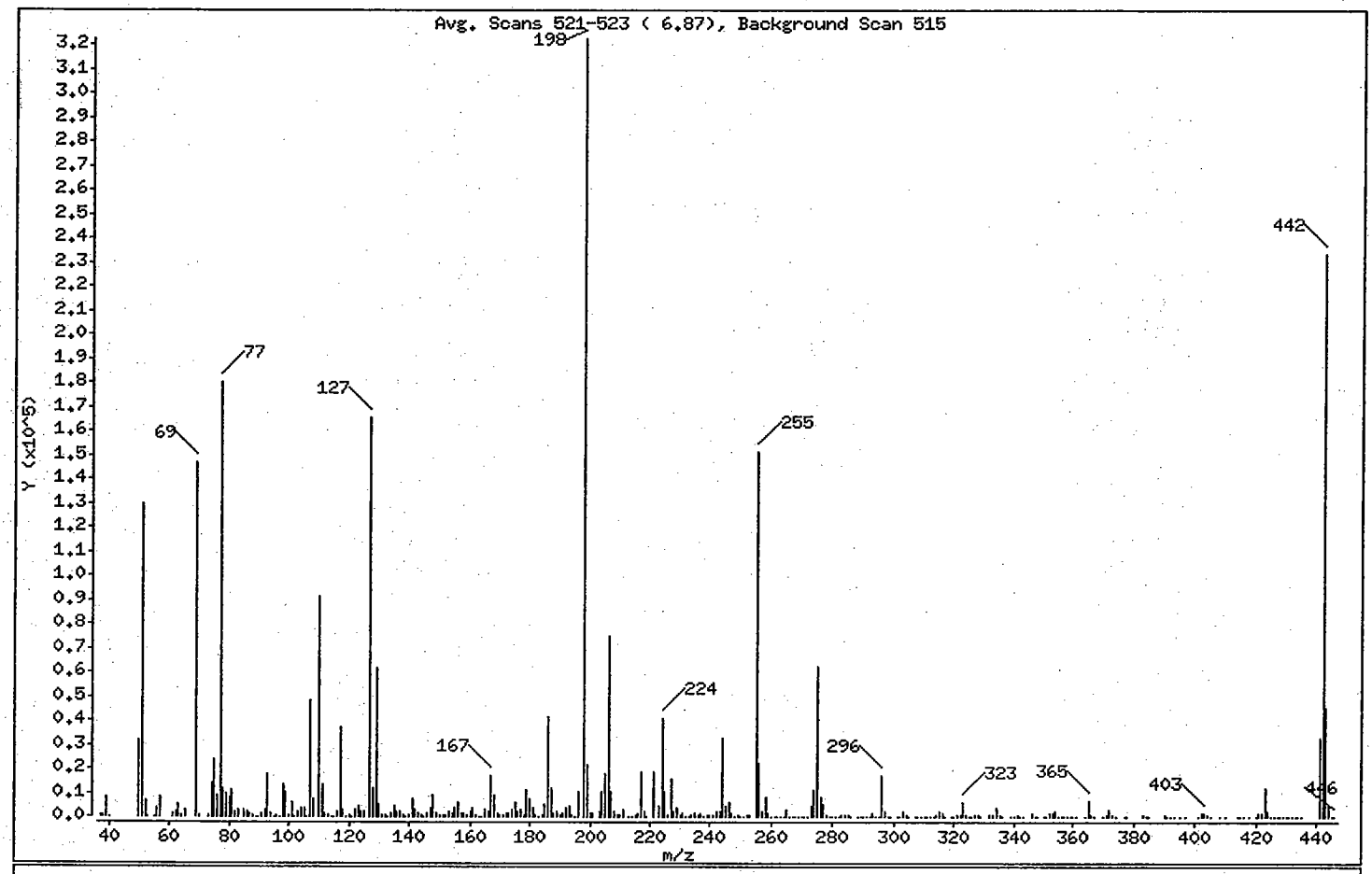
Client ID: DFTPPW5 Instrument: 5973hp68.i

Sample Info: 0K19001-TUN1:MEW

Volume Injected (uL): 2.0 Operator: MEW

Column phase: RTX-5MS Column diameter: 0.32

1 Decafluorotriphenylphosphine



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	40.13
68	Less than 2.00% of mass 69	0.00 (0.00)
69	Mass 69 relative abundance	45.62
70	Less than 2.00% of mass 69	0.17 (0.38)
127	10.00 - 80.00% of mass 198	51.27
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.68
275	10.00 - 60.00% of mass 198	19.33
365	Greater than 1.00% of mass 198	2.08
441	Present, but less than mass 443	10.21
442	50.00 - 100.00% of mass 198	72.34
443	15.00 - 24.00% of mass 442	13.93 (19.26)

Data File: /chem/5973hp68.i/DF101118C68_A.b/0K19001-TUN1C68.d

Date : 19-NOV-2010 03:14

Client ID: DFTPPW5 Instrument: 5973hp68.i

Sample Info: 0K19001-TUN1:MEW

Volume Injected (uL): 2.0 Operator: MEW

Column phase: RTX-5MS Column diameter: 0.32

Data File: 0K19001-TUN1C68.d

Spectrum: Avg. Scans 521-523 (6.87), Background Scan 515

Location of Maximum: 198.00

Number of points: 340

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	424	144.00	567	235.00	1221	326.00	121
38.00	1044	145.00	318	236.00	783	327.00	964
39.00	7818	146.00	1402	237.00	1205	328.00	557
40.00	52	147.00	3910	238.00	251	329.00	129
50.00	32176	148.00	8922	239.00	654	332.00	409
51.00	129424	149.00	1720	240.00	417	333.00	581
52.00	6546	150.00	499	241.00	926	334.00	3555
53.00	162	151.00	919	242.00	2129	335.00	950
55.00	58	152.00	754	243.00	2360	336.00	114
56.00	3592	153.00	2518	244.00	32320	339.00	115
57.00	8483	154.00	1737	245.00	4292	340.00	41
61.00	1597	155.00	4055	246.00	5639	341.00	624
62.00	1973	156.00	6243	247.00	1185	342.00	205
63.00	5532	157.00	1351	248.00	296	343.00	20
64.00	563	158.00	1214	249.00	992	346.00	1461
65.00	2722	159.00	1010	250.00	232	347.00	172
69.00	147072	160.00	2277	251.00	332	348.00	28
70.00	560	161.00	3803	252.00	378	350.00	36
73.00	535	162.00	1108	253.00	869	351.00	148
74.00	14171	163.00	189	255.00	151168	352.00	1693
75.00	23448	164.00	317	256.00	21960	353.00	1183
76.00	8601	165.00	2806	257.00	1873	354.00	1959
77.00	179904	166.00	2399	258.00	8293	355.00	362
78.00	11915	167.00	16688	259.00	1373	356.00	37
79.00	9706	168.00	8546	260.00	218	357.00	39
80.00	7845	169.00	1305	261.00	351	358.00	17
81.00	11291	170.00	533	262.00	31	359.00	148
82.00	2537	171.00	652	263.00	142	360.00	19
83.00	2666	172.00	1237	264.00	167	361.00	83
85.00	2653	173.00	1756	265.00	3284	364.00	18
86.00	2409	174.00	3208	266.00	235	365.00	6712
87.00	1359	175.00	5874	267.00	89	366.00	970
88.00	523	176.00	1859	268.00	91	367.00	64
89.00	200	177.00	2799	269.00	105	370.00	194
90.00	59	178.00	974	270.00	209	371.00	394

Data File: /chem/5973hp68.i/DF101118C68_A.b/0K19001-TUN1C68.d

Date : 19-NOV-2010 03:14

Client ID: DFTPPW5 Instrument: 5973hp68.i

Sample Info: 0K19001-TUN1:MEW

Volume Injected (uL): 2.0 Operator: MEW

Column phase: RTX-5MS Column diameter: 0.32

Data File: 0K19001-TUN1C68.d

Spectrum: Avg. Scans 521-523 (6.87), Background Scan 515

Location of Maximum: 198.00

Number of points: 340

m/z	Y	m/z	Y	m/z	Y	m/z	Y
91.00	1811	179.00	10778	271.00	345	372.00	2977
92.00	2609	180.00	7319	272.00	307	373.00	727
93.00	17552	181.00	3569	273.00	4229	374.00	87
94.00	1236	182.00	688	274.00	11457	377.00	90
95.00	132	183.00	276	275.00	62320	378.00	34
96.00	592	184.00	935	276.00	8144	383.00	802
97.00	302	185.00	5404	277.00	5094	384.00	203
98.00	13055	186.00	41792	278.00	1012	385.00	74
99.00	10376	187.00	11640	279.00	253	390.00	454
100.00	803	188.00	1217	280.00	77	391.00	249
101.00	6244	189.00	2351	281.00	92	392.00	237
102.00	358	190.00	537	282.00	119	393.00	44
103.00	2035	191.00	1174	283.00	610	395.00	45
104.00	3881	192.00	3547	284.00	481	397.00	17
105.00	3402	193.00	4085	285.00	852	401.00	202
106.00	102	194.00	925	286.00	151	402.00	1196
107.00	48040	195.00	231	288.00	48	403.00	1784
108.00	7479	196.00	10474	289.00	245	404.00	593
110.00	91440	198.00	322496	290.00	184	405.00	64
111.00	13177	199.00	21544	291.00	135	408.00	23
112.00	1621	200.00	1595	292.00	280	410.00	37
113.00	415	201.00	1531	293.00	1228	414.00	22
114.00	19	203.00	2064	294.00	296	415.00	114
115.00	48	204.00	10523	295.00	223	416.00	35
116.00	2509	205.00	17688	296.00	17136	418.00	17
117.00	37192	206.00	75136	297.00	2467	420.00	37
118.00	2712	207.00	10342	298.00	201	421.00	1512
119.00	248	208.00	2505	299.00	44	422.00	1476
120.00	558	209.00	636	301.00	243	423.00	11660
121.00	225	210.00	820	302.00	342	424.00	2284
122.00	2934	211.00	3133	303.00	1953	425.00	304
123.00	4685	213.00	191	304.00	606	426.00	47
124.00	1994	214.00	122	305.00	75	427.00	109
125.00	2089	215.00	747	307.00	26	428.00	133
127.00	165312	216.00	1557	308.00	200	429.00	125

Data File: /chem/5973hp68.i/DF101118C68_A.b/0K19001-TUN1C68.d

Date : 19-NOV-2010 03:14

Client ID: DFTPPW5 Instrument: 5973hp68.i

Sample Info: 0K19001-TUN1:MEW

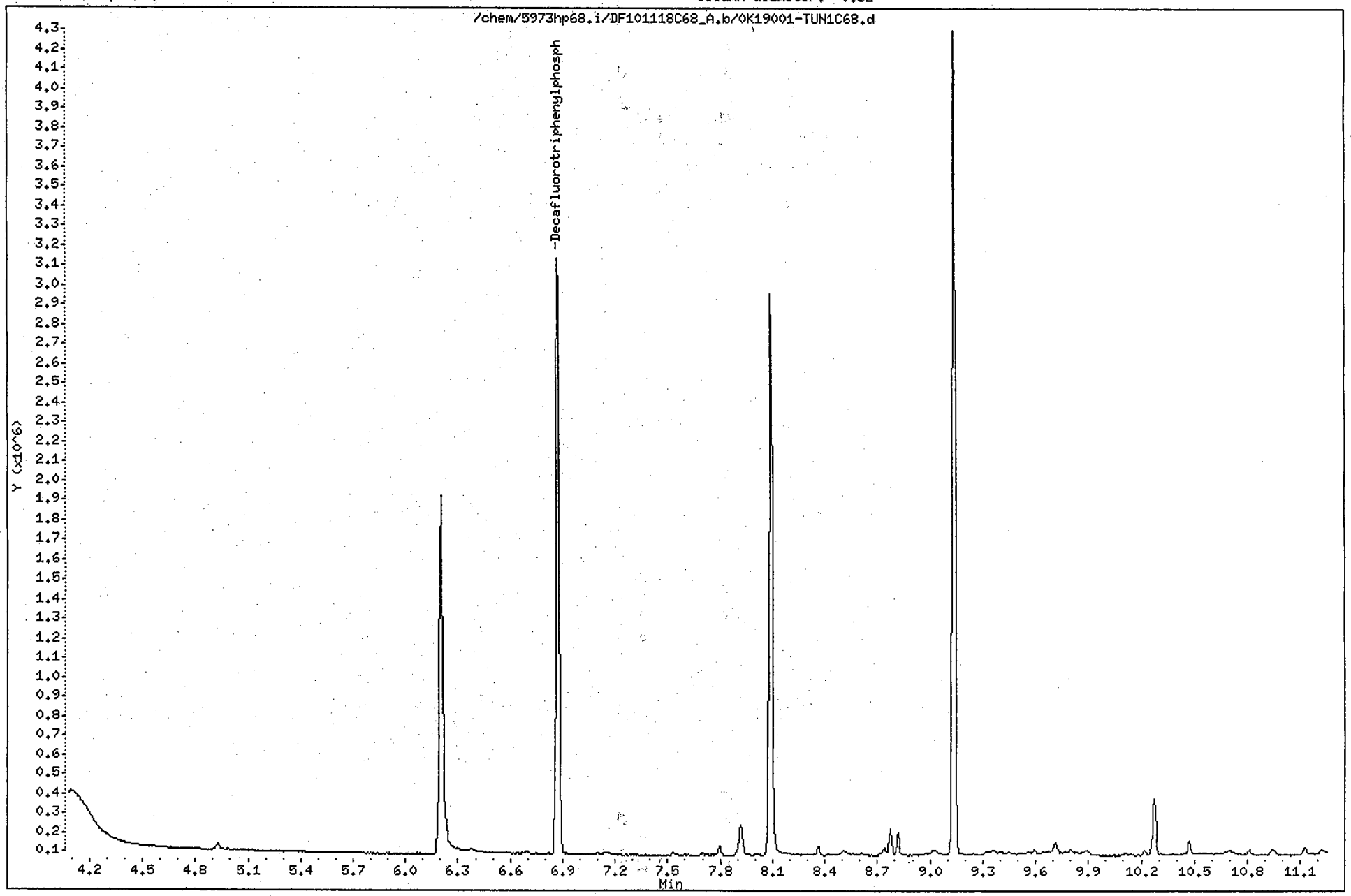
Volume Injected (uL): 2.0 Operator: MEW

Column phase: RTX-5MS Column diameter: 0.32

Data File: 0K19001-TUN1C68.d
Spectrum: Avg. Scans 521-523 (6.87), Background Scan 515
Location of Maximum: 198.00
Number of points: 340

m/z	Y	m/z	Y	m/z	Y	m/z	Y
128.00	12189	217.00	18736	309.00	172	430.00	141
129.00	61744	218.00	2320	310.00	275	431.00	210
130.00	5154	219.00	207	311.00	64	432.00	113
131.00	934	221.00	18560	312.00	35	433.00	209
132.00	465	223.00	4497	313.00	179	434.00	63
133.00	167	224.00	40712	314.00	791	435.00	86
134.00	1659	225.00	10136	315.00	1896	441.00	32912
135.00	4777	226.00	808	316.00	1120	442.00	233280
136.00	1898	227.00	15924	317.00	180	443.00	44920
137.00	2573	228.00	2265	319.00	60	444.00	4243
138.00	464	229.00	3550	320.00	58	445.00	271
139.00	267	230.00	532	321.00	544	446.00	43
140.00	823	231.00	1324	322.00	371		
141.00	7445	232.00	130	323.00	5701		
142.00	2633	233.00	312	324.00	1000		
143.00	1622	234.00	933	325.00	93		

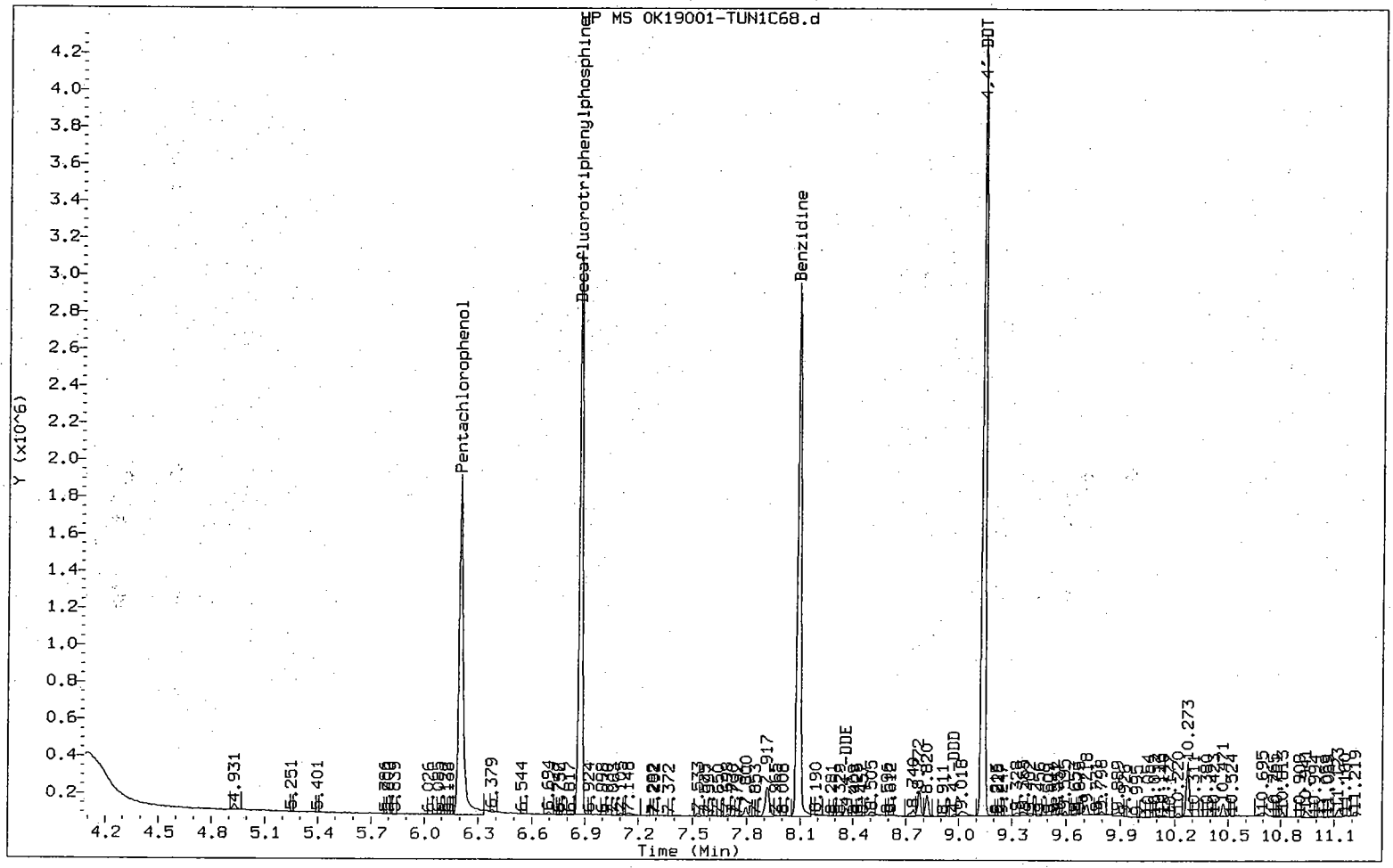
Data File: /chem/5973hp68.i/DF101118C68_A.b/0K19001-TUN1C68.d
Date : 19-NOV-2010 03:14
Client ID: DFTPPW5
Instrument: 5973hp68.i
Sample Info: 0K19001-TUN1:MEW
Volume Injected (uL): 2.0
Operator: MEW
Column phase: RTX-5MS
Column diameter: 0.32



TAILING FACTOR and DEGRADATION SAMPLE AND GRAPHIC REPORT

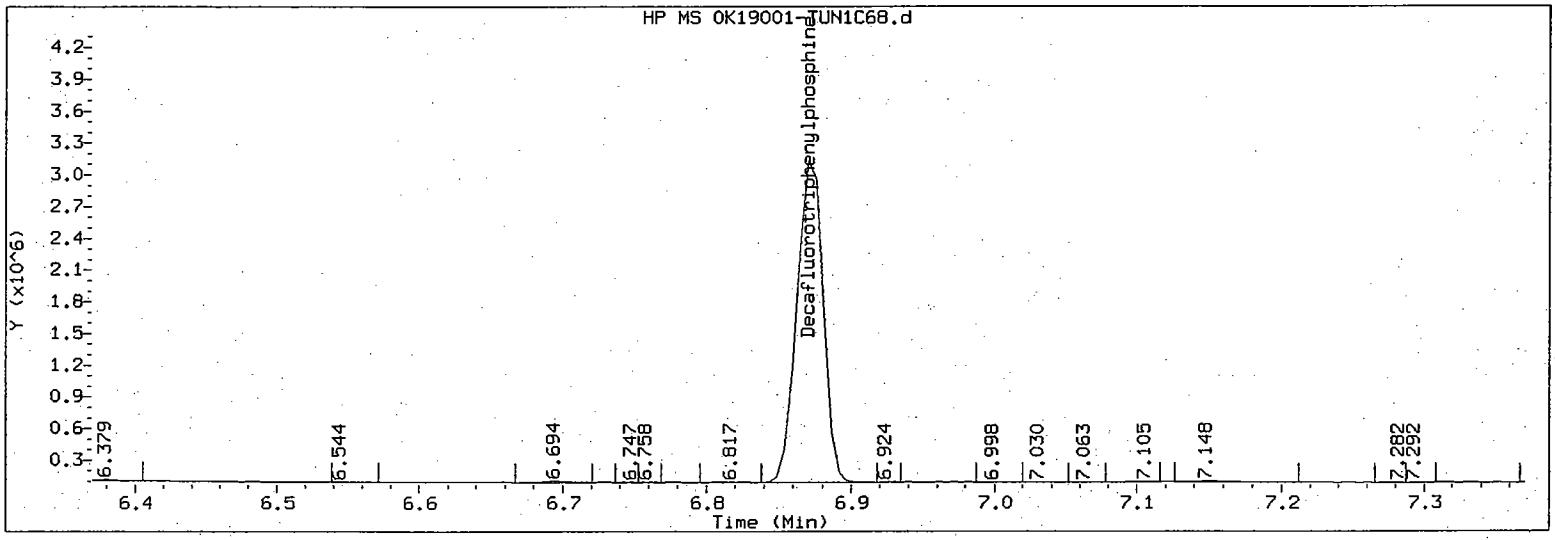
Report Date: 11/29/2010 10:10

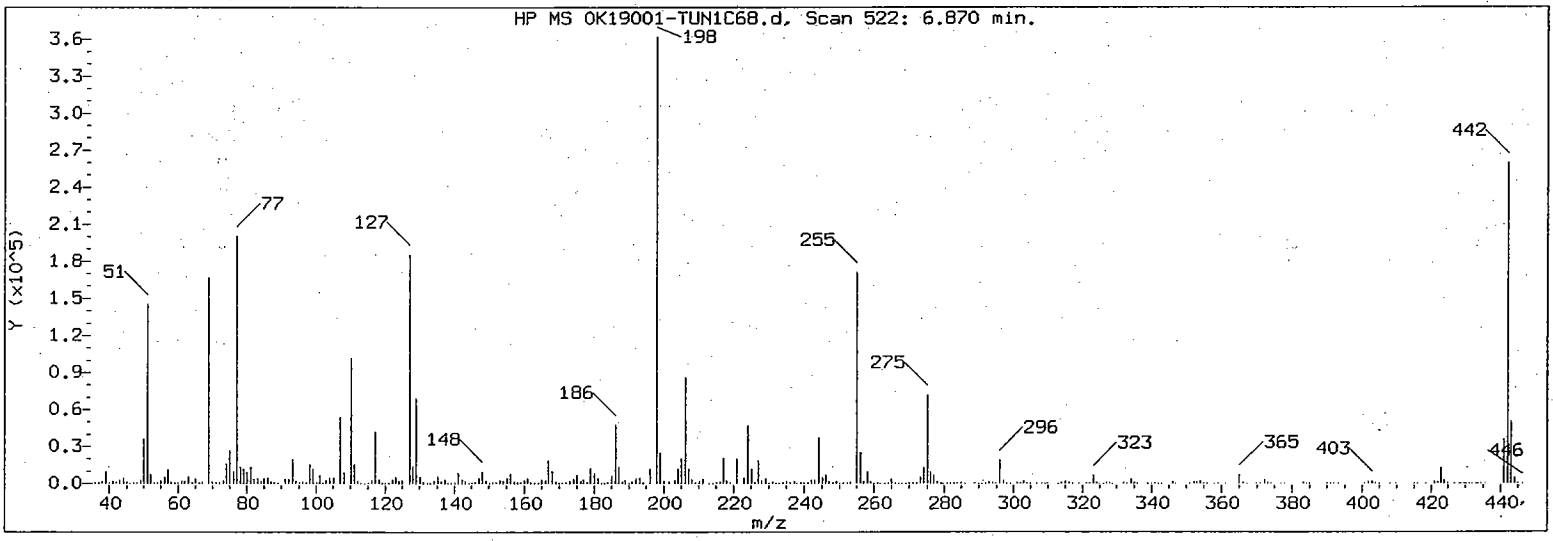
Datafile Analyzed: /chem/5973hp68.i/DF101118C68_A.b/0K19001-TUN1C68.d/0K19001-TU
Method Used: /chem/5973hp68.i/DF101118C68_A.b/dftpp8270C.m Inst: 5973hp68
Injection Date: 19-NOV-2010 03:14 Operator: MEW
Sample Info: 0K19001-TUN1 0K19001-TUN1:MEW
Misc Info: DFTPPW5



Report Date: 11/29/2010 10:10

Datafile Analyzed: /chem/5973hp68.i/DF101118C68_A.b/0K19001-TUN1C68.d/0K19001-TU
Method Used: /chem/5973hp68.i/DF101118C68_A.b/dftpp8270C.m Inst: 5973hp68
Injection Date: 19-NOV-2010 03:14 Operator: MEW
Sample Info: 0K19001-TUN1 0K19001-TUN1:MEW
Misc Info: DFTPPW5



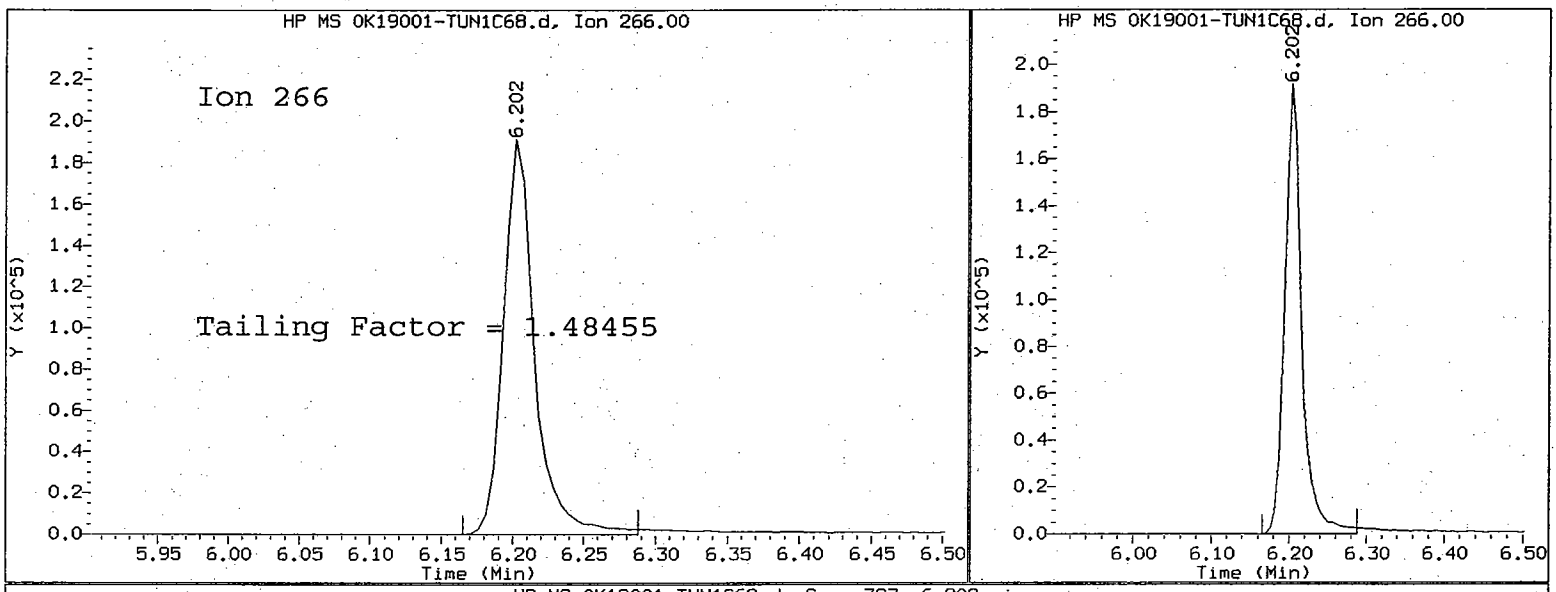


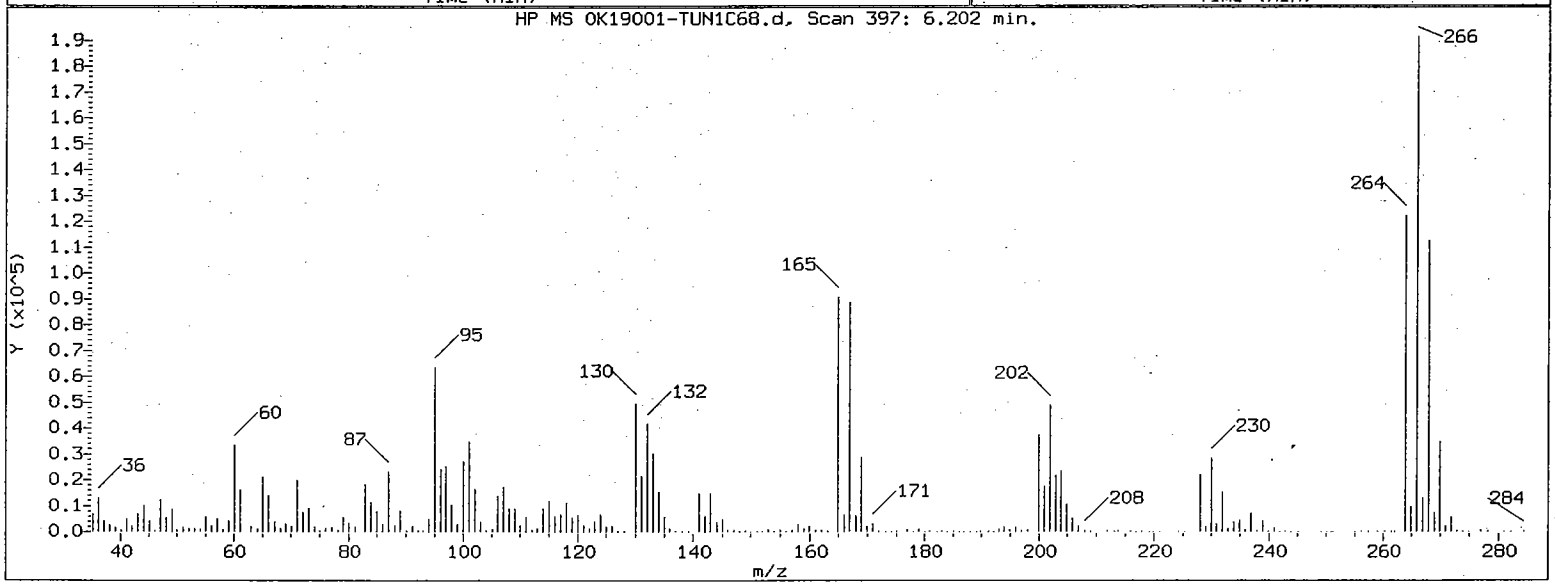
DECAFLUOROTRIPHENYLPHOSPHINE Ion Abundance/Ratio Criteria Chart

Ion	Abundance Criteria	Base Peak	Other	Test
198	Base Peak, 100% relative abundance	100.00		PASS
51	10 - 80% of mass 198	40.13		PASS
68	Less than 2% of mass 69	0.00	(0.00)	PASS
69	Mass 69 relative abundance	45.62		PASS
70	Less than 2% of mass 69	0.17	(0.38)	PASS
127	10 - 80% of mass 198	51.27		PASS
197	0 - 2% of mass 198	0.00		PASS
199	5 - 9% of mass 198	6.68		PASS
275	10 - 60% of mass 198	19.33		PASS
365	Greater than 0.75% of mass 198	2.08		PASS
441	Present, but less than mass 443	10.21	(73.27)	PASS
442	50 - 100% of mass 198	72.34		PASS
443	15 - 24% of mass 442	13.93	(19.26)	PASS

Report Date: 11/29/2010 10:10

Datafile Analyzed: /chem/5973hp68.i/DF101118C68_A.b/0K19001-TUN1C68.d/0K19001-TU
Method Used: /chem/5973hp68.i/DF101118C68.b/dftpp8270C.m/BrkDwnTF.m Inst: 5973h
Injection Date: 19-NOV-2010 03:14 Operator:
Sample Info: DFTPP 0K19001-TUN1:MEW
Misc Info:





Pentachlorophenol
==========
Exp. RT = 6.325
Found RT = 6.202

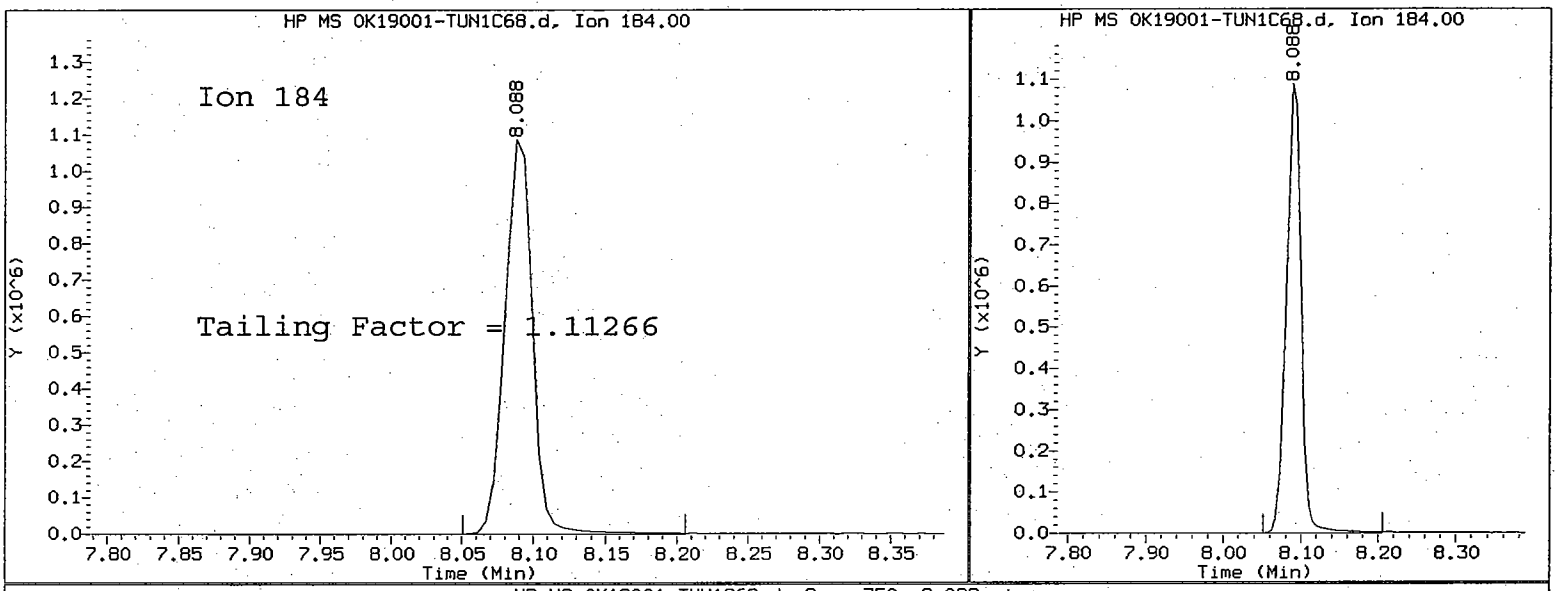
Mass	Area	Ratio
266	292829	100.00

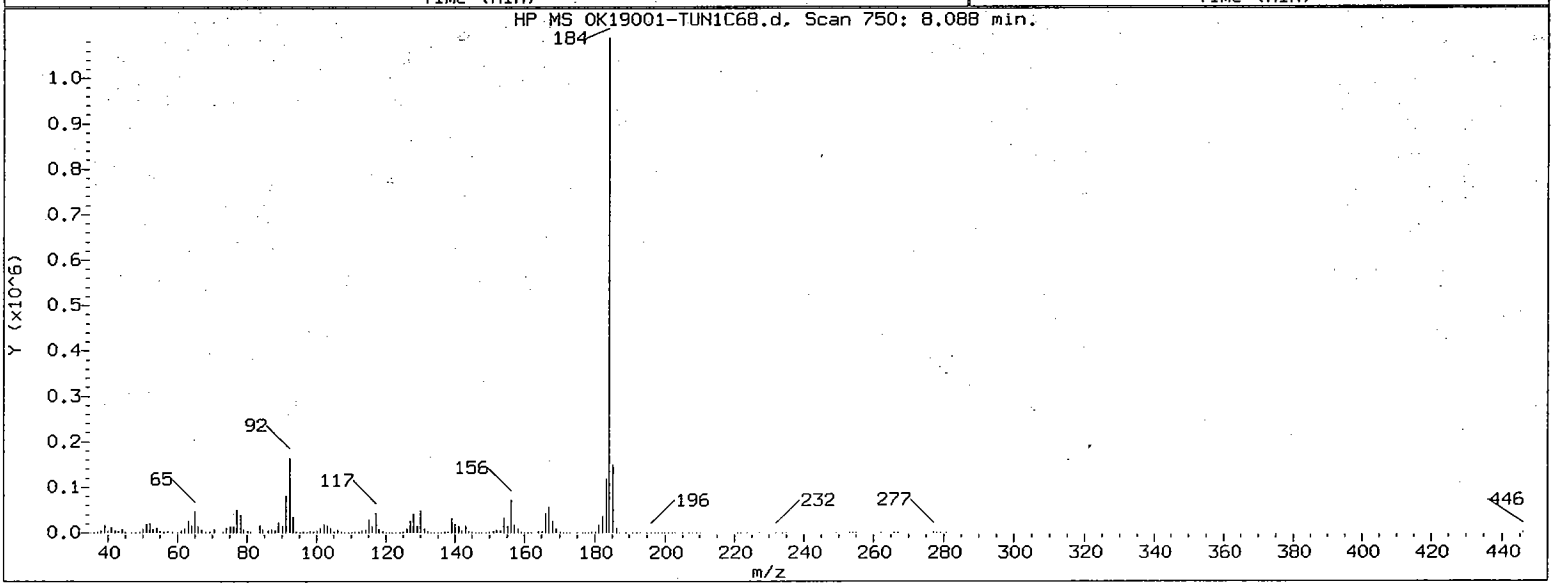
Tailing factor for Pentachlorophenol OK

Tailing Factor = 1.5 Maximum Allowed = 5.0

Report Date: 11/29/2010 10:10

Datafile Analyzed: /chem/5973hp68.i/DF101118C68_A.b/0K19001-TUN1C68.d/0K19001-TU
Method Used: /chem/5973hp68.i/DF101118C68.b/dftpp8270C.m/BrkDwnTF.m Inst: 5973h
Injection Date: 19-NOV-2010 03:14 Operator:
Sample Info: DFTPP 0K19001-TUN1:MEW
Misc Info:





Benzidine
=========
Exp. RT = 8.201
Found RT = 8.088

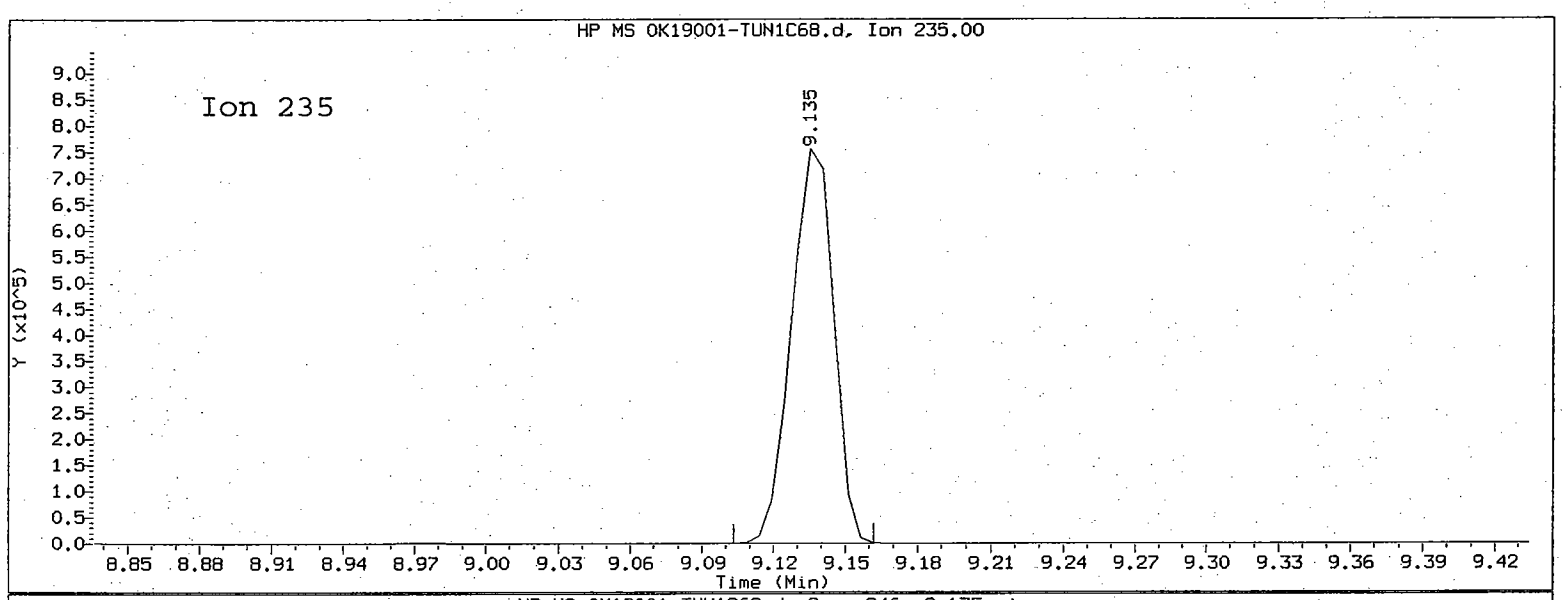
Mass	Area	Ratio
184	1467503	100.00

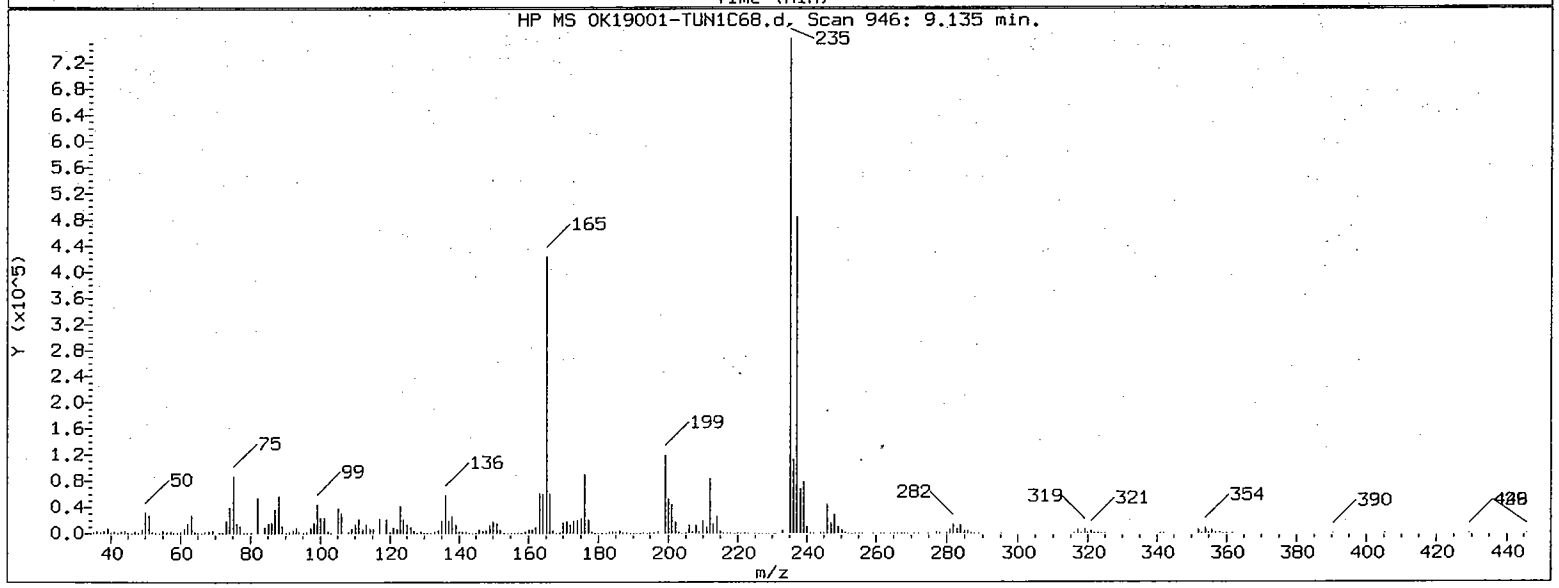
Tailing factor for Benzidine OK

Tailing Factor = 1.1 Maximum Allowed = 3.0

Report Date: 11/29/2010 10:10

Datafile Analyzed: /chem/5973hp68.i/DF101118C68_A.b/0K19001-TUN1C68.d/0K19001-TU
Method Used: /chem/5973hp68.i/DF101118C68.b/dftpp8270C.m/BrkDwnTF.m Inst: 5973h
Injection Date: 19-NOV-2010 03:14 Operator:
Sample Info: DFTPP 0K19001-TUN1:MEW
Misc Info:



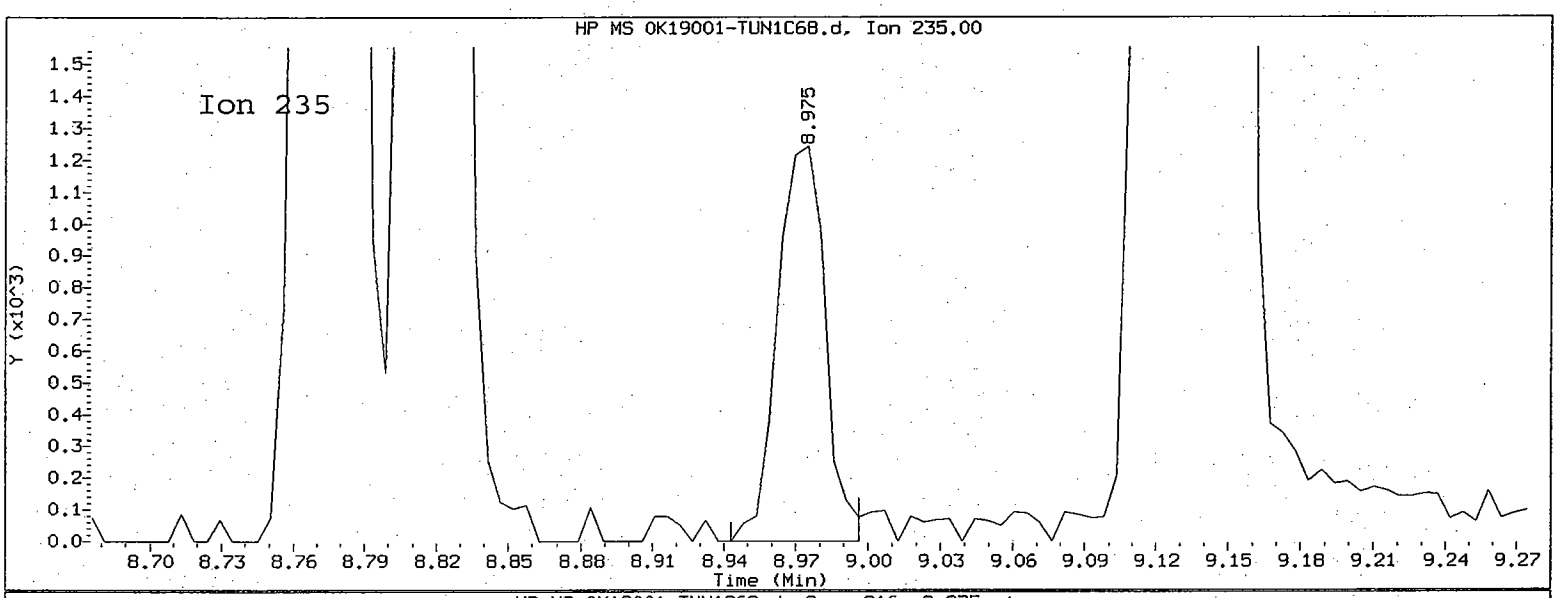


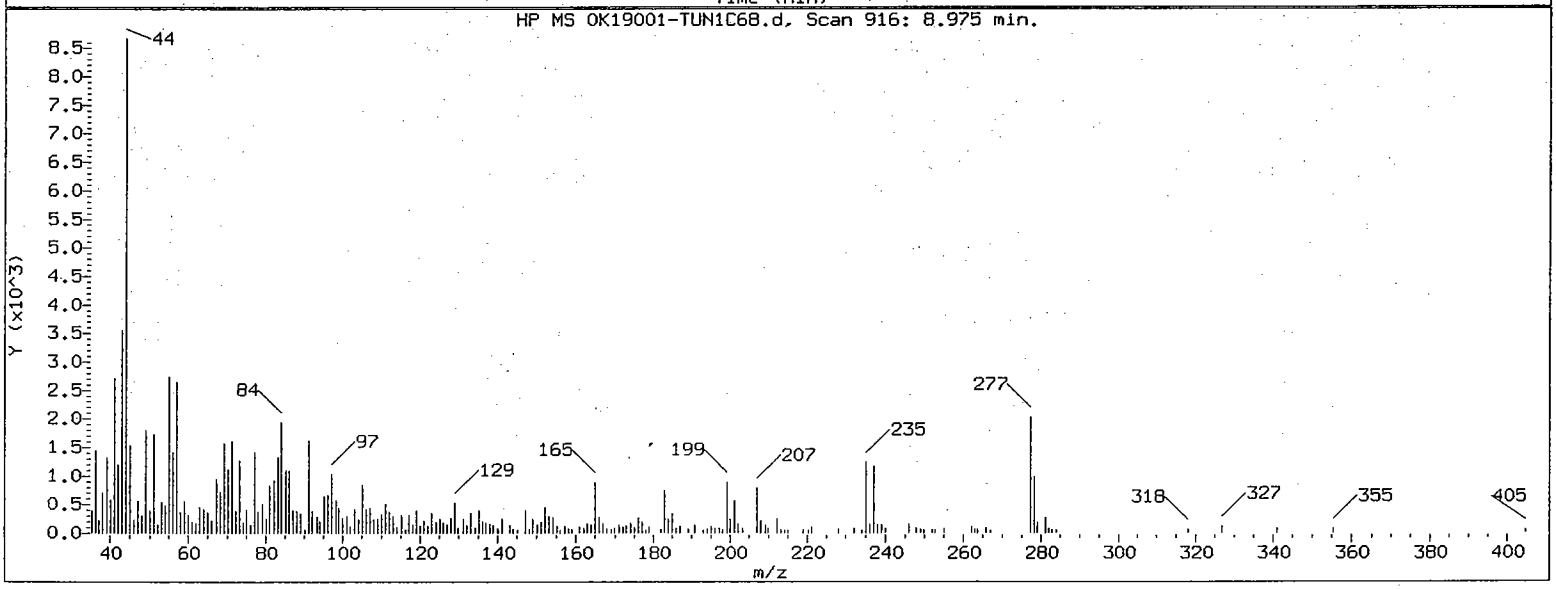
4,4'-DDT
========
Exp. RT = 9.248
Found RT = 9.135

Mass	Area	Ratio
235	926180	100.00

Report Date: 11/29/2010 10:10

Datafile Analyzed: /chem/5973hp68.i/DF101118C68_A.b/0K19001-TUN1C68.d/0K19001-TU
Method Used: /chem/5973hp68.i/DF101118C68.b/dftpp8270C.m/BrkDwnTF.m Inst: 5973h
Injection Date: 19-NOV-2010 03:14 Operator:
Sample Info: DFTPP 0K19001-TUN1:MEW
Misc Info:



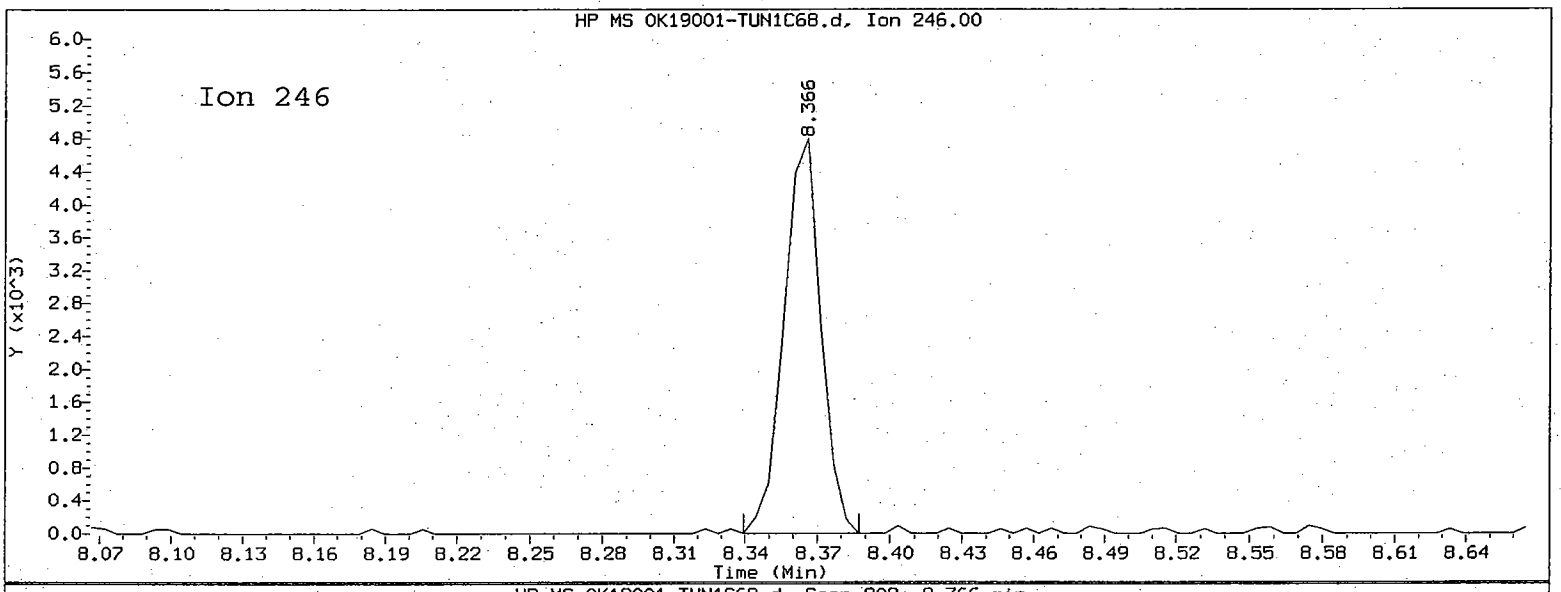


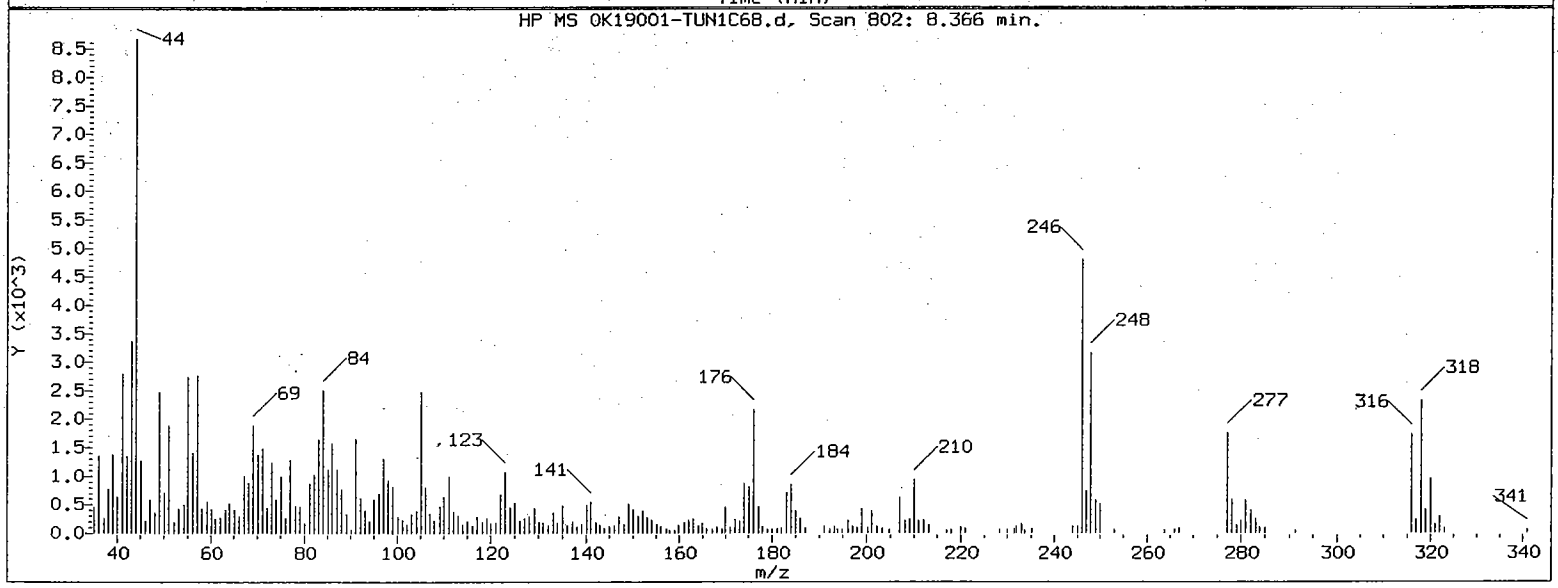
4,4'-DDD
========
Exp. RT = 8.900
Found RT = 8.975

Mass	Area	Ratio
235	1718	100.00

Report Date: 11/29/2010 10:10

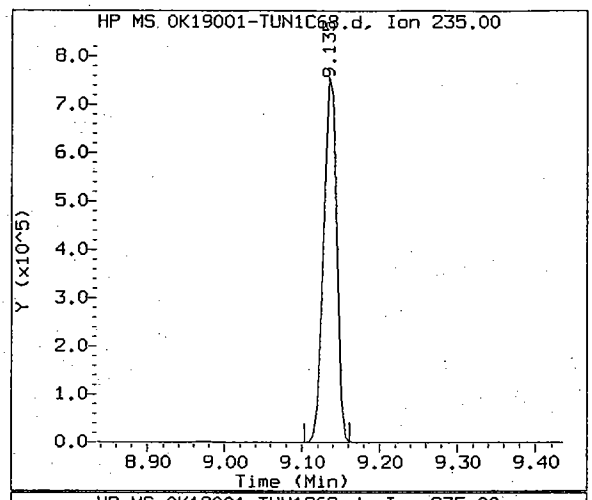
Datafile Analyzed: /chem/5973hp68.i/DF101118C68_A.b/0K19001-TUN1C68.d/0K19001-TU
Method Used: /chem/5973hp68.i/DF101118C68.b/dftpp8270C.m/BrkDwnTF.m Inst: 5973h
Injection Date: 19-NOV-2010 03:14 Operator:
Sample Info: DFTPP 0K19001-TUN1:MEW
Misc Info:



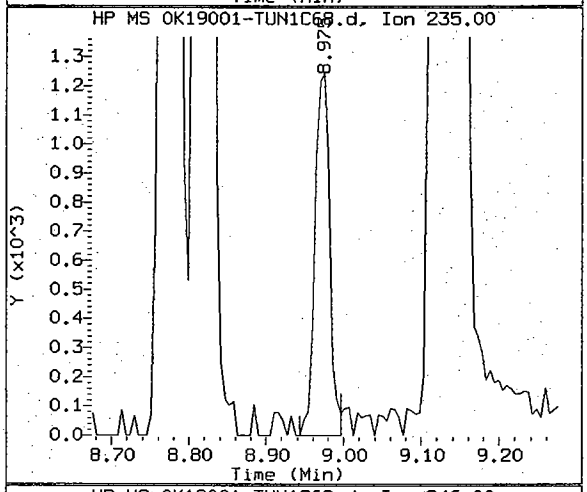


4,4'-DDE
========
Exp. RT = 8.440
Found RT = 8.366

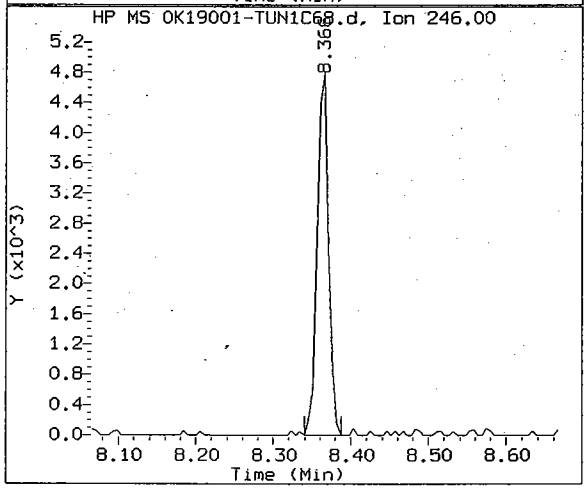
Mass	Area	Ratio
246	5082	100.00



Compound: 4,4'-DDT
Quant Mass: 235
RT: 9.135
Area: 926180



Compound: 4,4'-DDD
Quant Mass: 235
RT: 8.975
Area: 1718



Compound: 4,4'-DDE
Quant Mass: 246
RT: 8.366
Area: 5082

DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

Compound	Response	%Breakdown	Max Allowed	Test
4,4-DDT	926180			N/A
4,4-DDE	5082	0.5	20.0	PASS
4,4-DDD	1718	0.2	20.0	PASS
4,4-DDD + DDE	6800	0.7	20.0	PASS

****

TUNE SAMPLE *** PASSED *** DDT BREAKDOWN TEST

****

TAILING FACTOR and DEGRADATION SUMMARY RESULTS

DECAFLUOROTRIPHENYLPHOSPHINE Ion Abundance/Ratio Criteria Chart

Ion	Abundance Criteria	Base Peak	Other	Test
198	Base Peak, 100% relative abundance	100.00		PASS
51	10 - 80% of mass 198	40.13		PASS
68	Less than 2% of mass 69	0.00	(0.00)	PASS
69	Mass 69 relative abundance	45.62		PASS
70	Less than 2% of mass 69	0.17	(0.38)	PASS
127	10 - 80% of mass 198	51.27		PASS
197	0 - 2% of mass 198	0.00		PASS
199	5 - 9% of mass 198	6.68		PASS
275	10 - 60% of mass 198	19.33		PASS
365	Greater than 0.75% of mass 198	2.08		PASS
441	Present, but less than mass 443	10.21	(73.27)	PASS
442	50 - 100 % of mass 198	72.34		PASS
443	15 - 24% of mass 442	13.93	(19.26)	PASS

TAILING ANALYSIS SUMMARY

Compound	Tail Factor	Max Allowed	Test
Pentachlorophenol	1.5	5.0	PASS
Benzidine	1.1	3.0	PASS

DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

Compound	Response	%Breakdown	Max Allowed	Test
4,4-DDT	926180			N/A
4,4-DDE	5082	0.5	20.0	PASS
4,4-DDD	1718	0.2	20.0	PASS
4,4-DDD + DDE	6800	0.7	20.0	PASS

Tuning Sample, /chem/5973hp68.i/DF101118C68_A.b/0K19001-TUN1C68.d/0K19001-TUN1C6

*** PASSED ***

Data File: /chem/5973hp68.i/DF101118C68_B.b/0K19001-TUN1C68.d

Date : 19-NOV-2010 03:14

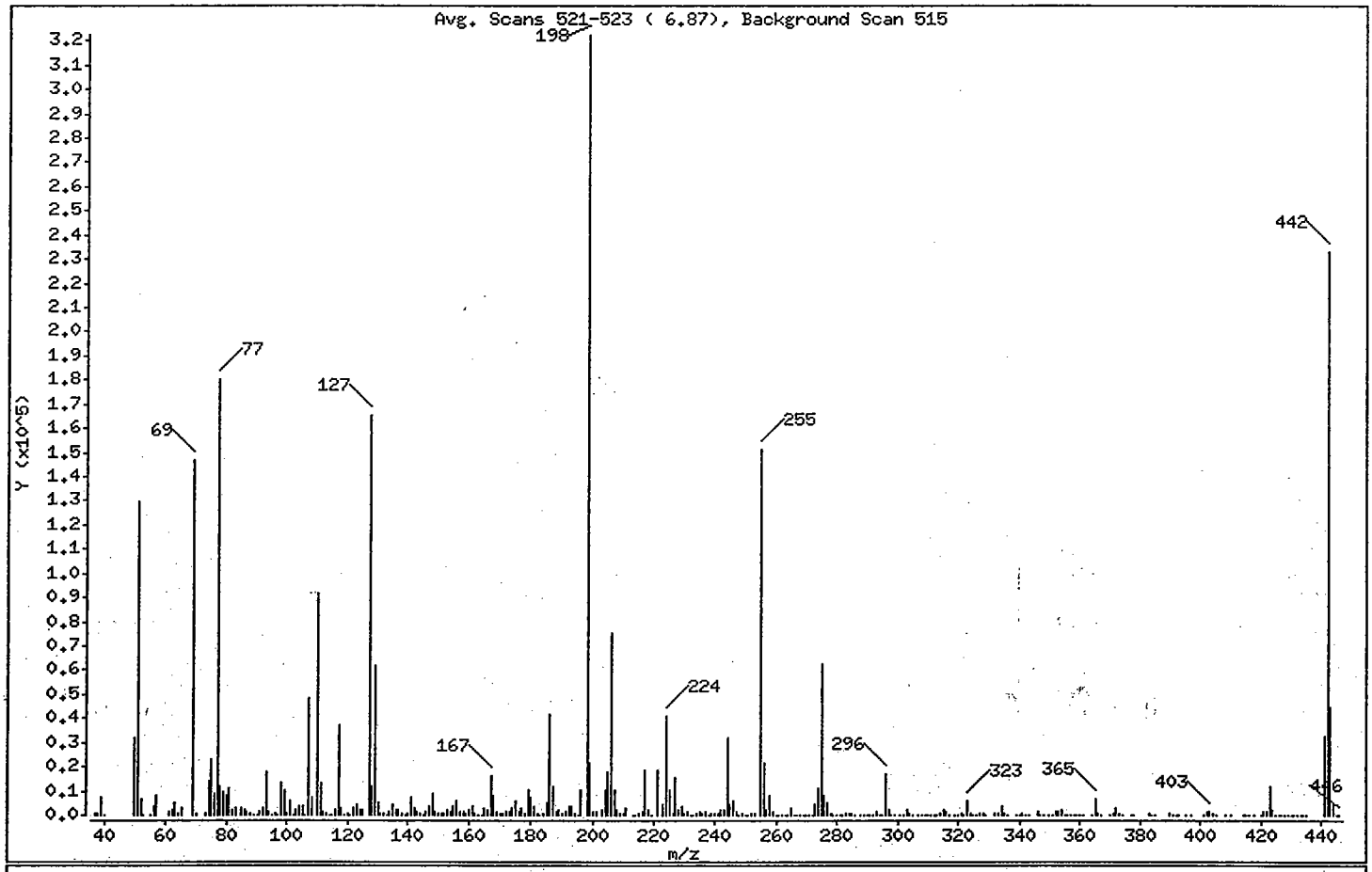
Client ID: DFTPPW5 Instrument: 5973hp68.i

Sample Info: 0K19001-TUN1:MEW

Volume Injected (uL): 2.0 Operator: MEW

Column phase: RTX-5MS Column diameter: 0.32

1 Decafluorotriphenylphosphine



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	40.13
68	Less than 2.00% of mass 69	0.00 (0.00)
69	Mass 69 relative abundance	45.62
70	Less than 2.00% of mass 69	0.17 (0.38)
127	10.00 - 80.00% of mass 198	51.27
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.68
275	10.00 - 60.00% of mass 198	19.33
365	Greater than 1.00% of mass 198	2.08
441	Present, but less than mass 443	10.21
442	50.00 - 100.00% of mass 198	72.34
443	15.00 - 24.00% of mass 442	13.93 (19.26)

Data File: /chem/5973hp68.i/DF101118C68_B.b/0K19001-TUN1C68.d

Date : 19-NOV-2010 03:14

Client ID: DFTPPW5 Instrument: 5973hp68.i

Sample Info: 0K19001-TUN1:MEW

Volume Injected (uL): 2.0 Operator: MEW

Column phase: RTX-5MS Column diameter: 0.32

Data File: 0K19001-TUN1C68.d

Spectrum: Avg. Scans 521-523 (6.87), Background Scan 515

Location of Maximum: 198.00

Number of points: 340

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	424	144.00	567	235.00	1221	326.00	121
38.00	1044	145.00	318	236.00	783	327.00	964
39.00	7818	146.00	1402	237.00	1205	328.00	557
40.00	52	147.00	3910	238.00	251	329.00	129
50.00	32176	148.00	8922	239.00	654	332.00	409
51.00	129424	149.00	1720	240.00	417	333.00	581
52.00	6546	150.00	499	241.00	926	334.00	3555
53.00	162	151.00	919	242.00	2129	335.00	950
55.00	58	152.00	754	243.00	2360	336.00	114
56.00	3592	153.00	2518	244.00	32320	339.00	115
57.00	8483	154.00	1737	245.00	4292	340.00	41
61.00	1597	155.00	4055	246.00	5639	341.00	624
62.00	1973	156.00	6243	247.00	1185	342.00	205
63.00	5532	157.00	1351	248.00	296	343.00	20
64.00	563	158.00	1214	249.00	992	346.00	1461
65.00	2722	159.00	1010	250.00	232	347.00	172
69.00	147072	160.00	2277	251.00	332	348.00	28
70.00	560	161.00	3803	252.00	378	350.00	36
73.00	535	162.00	1108	253.00	869	351.00	148
74.00	14171	163.00	189	255.00	151168	352.00	1693
75.00	23448	164.00	317	256.00	21960	353.00	1183
76.00	8601	165.00	2806	257.00	1873	354.00	1959
77.00	179904	166.00	2399	258.00	8293	355.00	362
78.00	11915	167.00	16688	259.00	1373	356.00	37
79.00	9706	168.00	8546	260.00	218	357.00	39
80.00	7845	169.00	1305	261.00	351	358.00	17
81.00	11291	170.00	533	262.00	31	359.00	148
82.00	2537	171.00	652	263.00	142	360.00	19
83.00	2666	172.00	1237	264.00	167	361.00	83
85.00	2653	173.00	1756	265.00	3284	364.00	18
86.00	2409	174.00	3208	266.00	235	365.00	6712
87.00	1359	175.00	5874	267.00	89	366.00	970
88.00	523	176.00	1859	268.00	91	367.00	64
89.00	200	177.00	2799	269.00	105	370.00	194
90.00	59	178.00	974	270.00	209	371.00	394

Data File: /chem/5973hp68.i/DF101118C68_B.b/0K19001-TUN1C68.d

Date : 19-NOV-2010 03:14

Client ID: DFTPPW5 Instrument: 5973hp68.i

Sample Info: 0K19001-TUN1:MEW

Volume Injected (uL): 2.0 Operator: MEW

Column phase: RTX-5MS Column diameter: 0.32

Data File: 0K19001-TUN1C68.d
Spectrum: Avg. Scans 521-523 (6.87), Background Scan 515
Location of Maximum: 198.00
Number of points: 340

m/z	Y	m/z	Y	m/z	Y	m/z	Y
91.00	1811	179.00	10778	271.00	345	372.00	2977
92.00	2609	180.00	7319	272.00	307	373.00	727
93.00	17552	181.00	3569	273.00	4229	374.00	87
94.00	1236	182.00	688	274.00	11457	377.00	90
95.00	132	183.00	276	275.00	62320	378.00	34
96.00	592	184.00	935	276.00	8144	383.00	802
97.00	302	185.00	5404	277.00	5094	384.00	203
98.00	13055	186.00	41792	278.00	1012	385.00	74
99.00	10376	187.00	11640	279.00	253	390.00	454
100.00	803	188.00	1217	280.00	77	391.00	249
101.00	6244	189.00	2351	281.00	92	392.00	237
102.00	358	190.00	537	282.00	119	393.00	44
103.00	2035	191.00	1174	283.00	610	395.00	45
104.00	3881	192.00	3547	284.00	481	397.00	17
105.00	3402	193.00	4085	285.00	852	401.00	202
106.00	102	194.00	925	286.00	151	402.00	1196
107.00	48040	195.00	231	288.00	48	403.00	1784
108.00	7479	196.00	10474	289.00	245	404.00	593
110.00	91440	198.00	322496	290.00	184	405.00	64
111.00	13177	199.00	21544	291.00	135	408.00	23
112.00	1621	200.00	1595	292.00	280	410.00	37
113.00	415	201.00	1531	293.00	1228	414.00	22
114.00	19	203.00	2064	294.00	296	415.00	114
115.00	48	204.00	10523	295.00	223	416.00	35
116.00	2509	205.00	17688	296.00	17136	418.00	17
117.00	37192	206.00	75136	297.00	2467	420.00	37
118.00	2712	207.00	10342	298.00	201	421.00	1512
119.00	248	208.00	2505	299.00	44	422.00	1476
120.00	558	209.00	636	301.00	243	423.00	11660
121.00	225	210.00	820	302.00	342	424.00	2284
122.00	2934	211.00	3133	303.00	1953	425.00	304
123.00	4685	213.00	191	304.00	606	426.00	47
124.00	1994	214.00	122	305.00	75	427.00	109
125.00	2089	215.00	747	307.00	26	428.00	133
127.00	165312	216.00	1557	308.00	200	429.00	125

Data File: /chem/5973hp68.i/DF101118C68_B.b/0K19001-TUN1C68.d

Date : 19-NOV-2010 03:14

Client ID: DFTPPW5 Instrument: 5973hp68.i

Sample Info: 0K19001-TUN1:MEW

Volume Injected (uL): 2.0 Operator: MEW

Column phase: RTX-5MS Column diameter: 0.32

Data File: 0K19001-TUN1C68.d

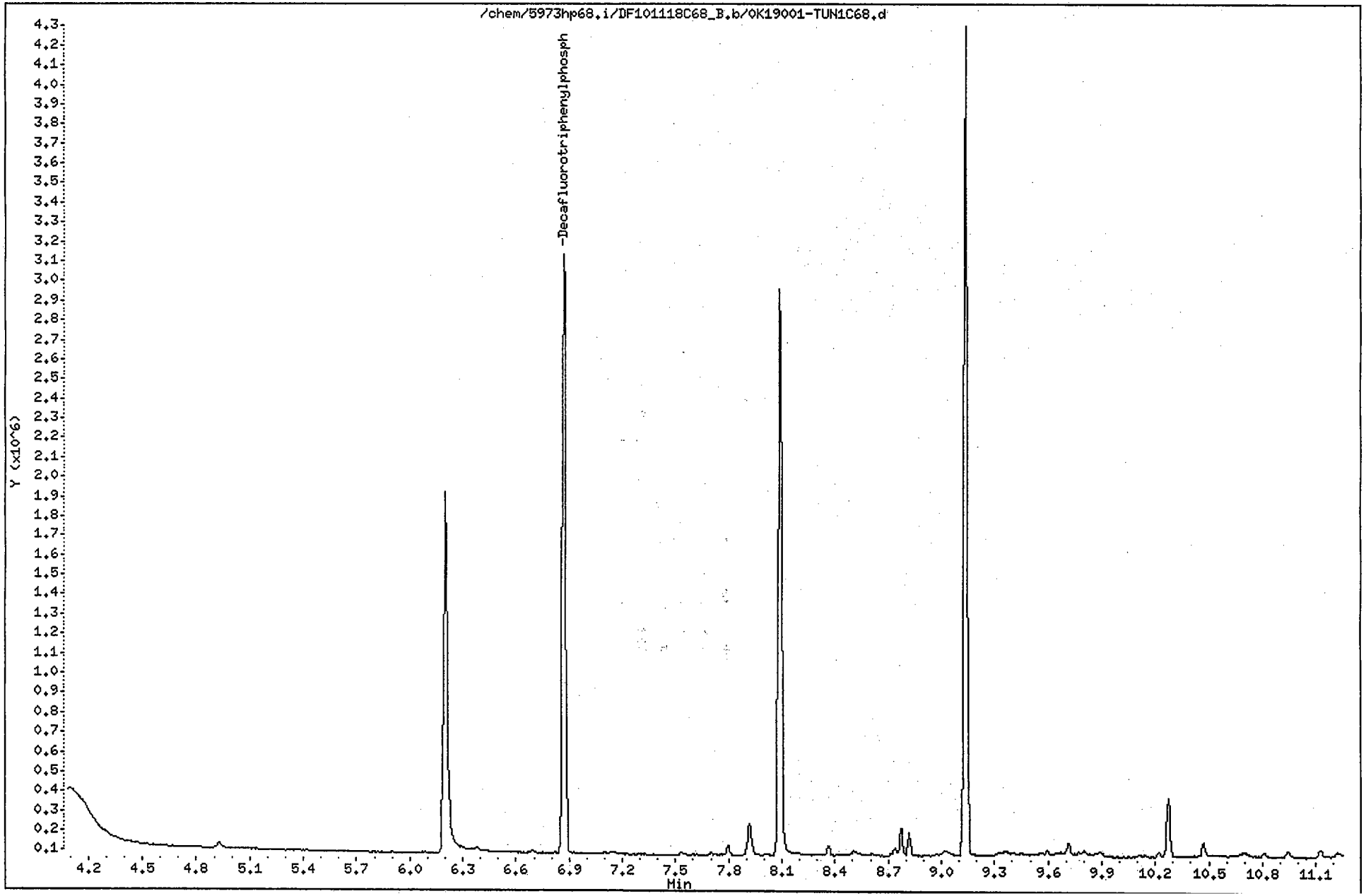
Spectrum: Avg. Scans 521-523 (6.87), Background Scan 515

Location of Maximum: 198.00

Number of points: 340

m/z	Y	m/z	Y	m/z	Y	m/z	Y
128.00	12189	217.00	18736	309.00	172	430.00	141
129.00	61744	218.00	2320	310.00	275	431.00	210
130.00	5154	219.00	207	311.00	64	432.00	113
131.00	934	221.00	18560	312.00	35	433.00	209
132.00	465	223.00	4497	313.00	179	434.00	63
133.00	167	224.00	40712	314.00	791	435.00	86
134.00	1659	225.00	10136	315.00	1896	441.00	32912
135.00	4777	226.00	808	316.00	1120	442.00	233280
136.00	1898	227.00	15924	317.00	180	443.00	44920
137.00	2573	228.00	2265	319.00	60	444.00	4243
138.00	464	229.00	3550	320.00	58	445.00	271
139.00	267	230.00	532	321.00	544	446.00	43
140.00	823	231.00	1324	322.00	371		
141.00	7445	232.00	130	323.00	5701		
142.00	2633	233.00	312	324.00	1000		
143.00	1622	234.00	933	325.00	93		

Data File: /chem/5973hp68.i/DF101118C68_B.b/0K19001-TUN1C68.d
Date : 19-NOV-2010 03:14
Client ID: DFTPPW5
Instrument: 5973hp68.i
Sample Info: 0K19001-TUN1:MEW
Volume Injected (uL): 2.0
Operator: MEW
Column phase: RTX-5MS
Column diameter: 0.32



TAILING FACTOR and DEGRADATION SUMMARY RESULTS

DECAFLUOROTRIPHENYLPHOSPHINE Ion Abundance/Ratio Criteria Chart

Ion	Abundance Criteria	Base Peak	Other	Test
198	Base Peak, 100% relative abundance	100.00		PASS
51	10 - 80% of mass 198	40.13		PASS
68	Less than 2% of mass 69	0.00	(0.00)	PASS
69	Mass 69 relative abundance	45.62		PASS
70	Less than 2% of mass 69	0.17	(0.38)	PASS
127	10 - 80% of mass 198	51.27		PASS
197	0 - 2% of mass 198	0.00		PASS
199	5 - 9% of mass 198	6.68		PASS
275	10 - 60% of mass 198	19.33		PASS
365	Greater than 0.75% of mass 198	2.08		PASS
441	Present, but less than mass 443	10.21	(73.27)	PASS
442	50 - 100 % of mass 198	72.34		PASS
443	15 - 24% of mass 442	13.93	(19.26)	PASS

TAILING ANALYSIS SUMMARY

Compound	Tail Factor	Max Allowed	Test
Pentachlorophenol	1.5	5.0	PASS
Benzidine	1.1	3.0	PASS

DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

Compound	Response	%Breakdown	Max Allowed	Test
4,4-DDT	926180			N/A
4,4-DDE	5082	0.5	20.0	PASS
4,4-DDD	1718	0.2	20.0	PASS
4,4-DDD + DDE	6800	0.7	20.0	PASS

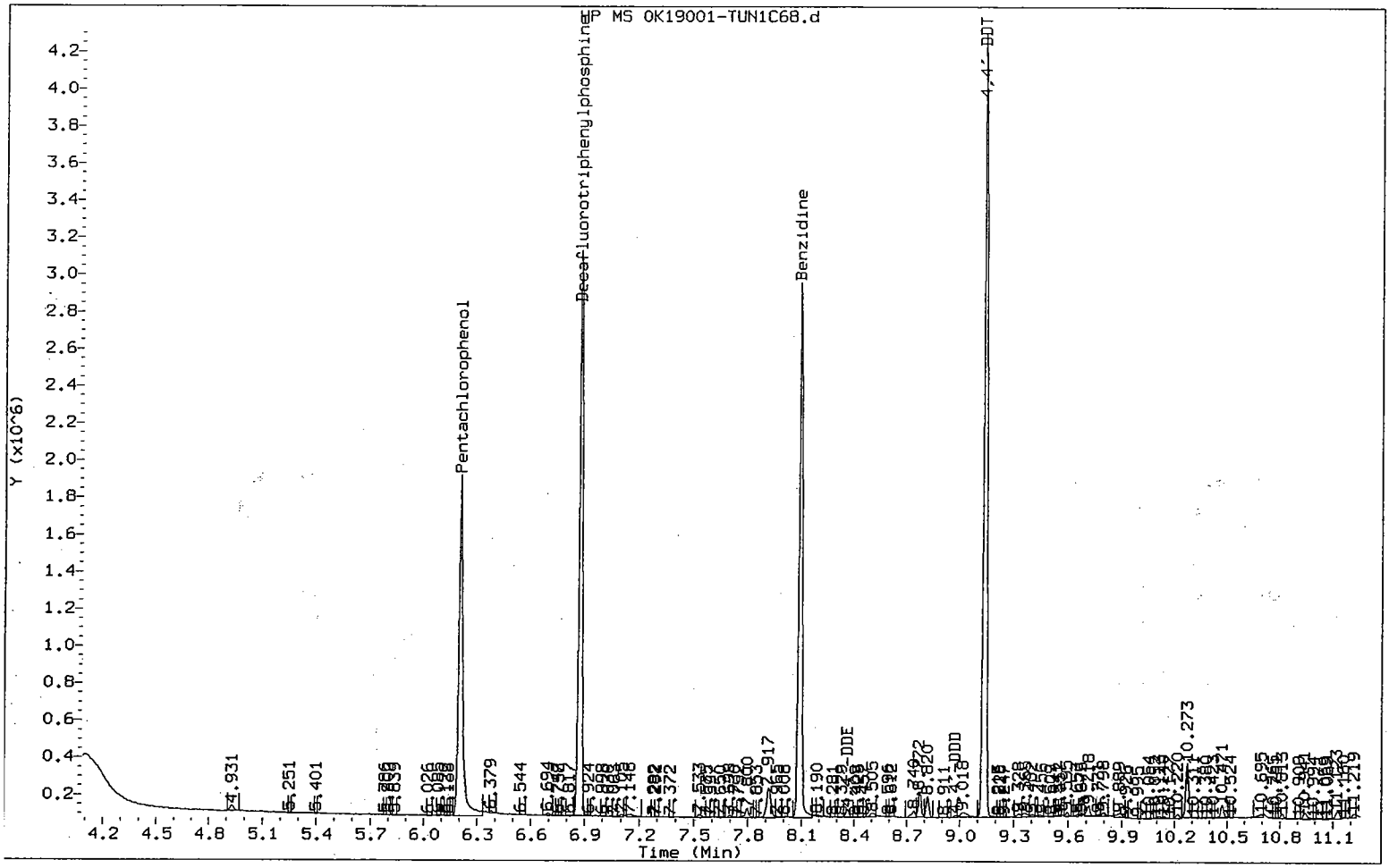
Tuning Sample, /chem/5973hp68.i/DF101118C68_B.b/0K19001-TUN1C68.d/0K19001-TUN1C6

*** PASSED ***

TAILING FACTOR and DEGRADATION SAMPLE AND GRAPHIC REPORT

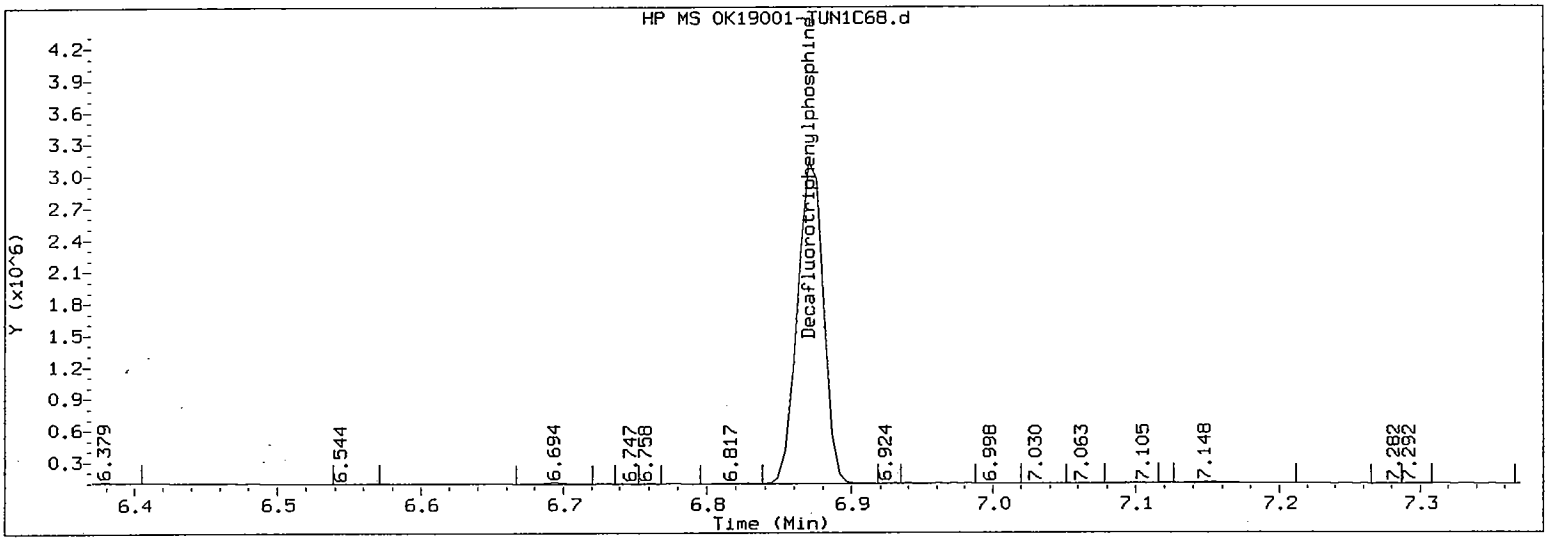
Report Date: 11/26/2010 15:32

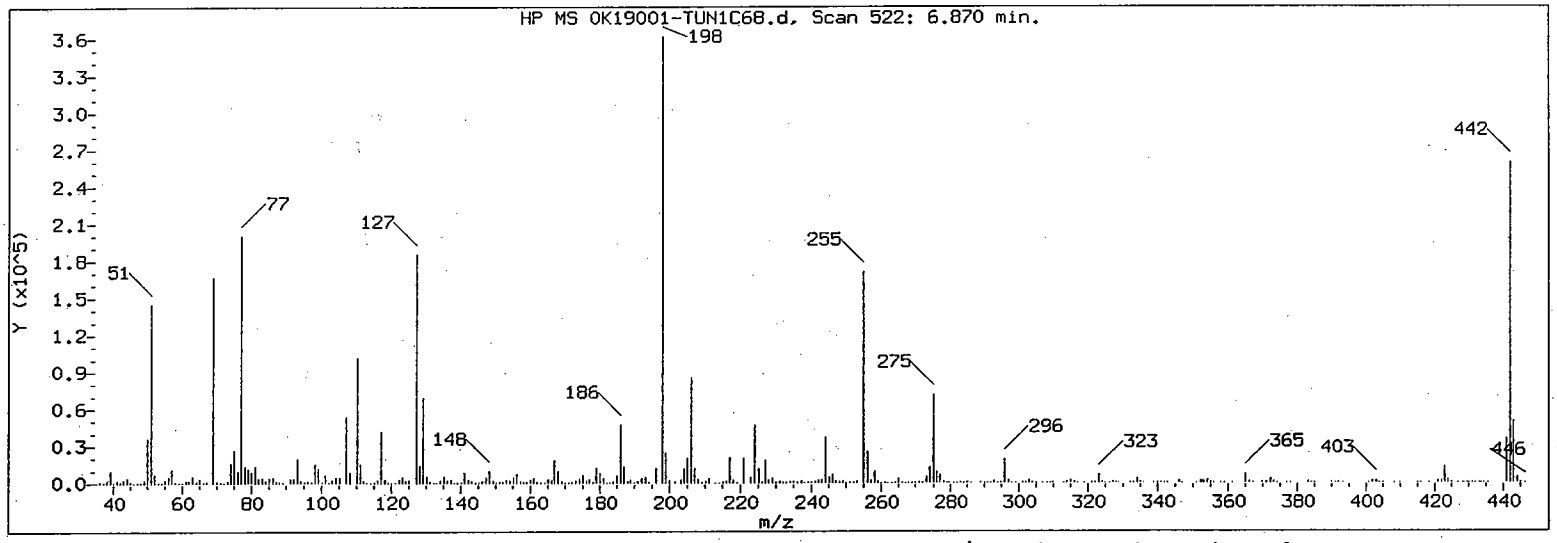
Datafile Analyzed: /chem/5973hp68.i/DF101118C68_B.b/0K19001-TUN1C68.d/0K19001-TU
Method Used: /chem/5973hp68.i/DF101118C68_B.b/dftpp8270C.m Inst: 5973hp68
Injection Date: 19-NOV-2010 03:14 Operator: MEW
Sample Info: 0K19001-TUN1 0K19001-TUN1:MEW
Misc Info: DFTPPW5



Report Date: 11/26/2010 15:32

Datafile Analyzed: /chem/5973hp68.i/DF101118C68_B.b/0K19001-TUN1C68.d/0K19001-TU
Method Used: /chem/5973hp68.i/DF101118C68_B.b/dftpp8270C.m Inst: 5973hp68
Injection Date: 19-NOV-2010 03:14 Operator: MEW
Sample Info: 0K19001-TUN1 0K19001-TUN1:MEW
Misc Info: DFTPPW5



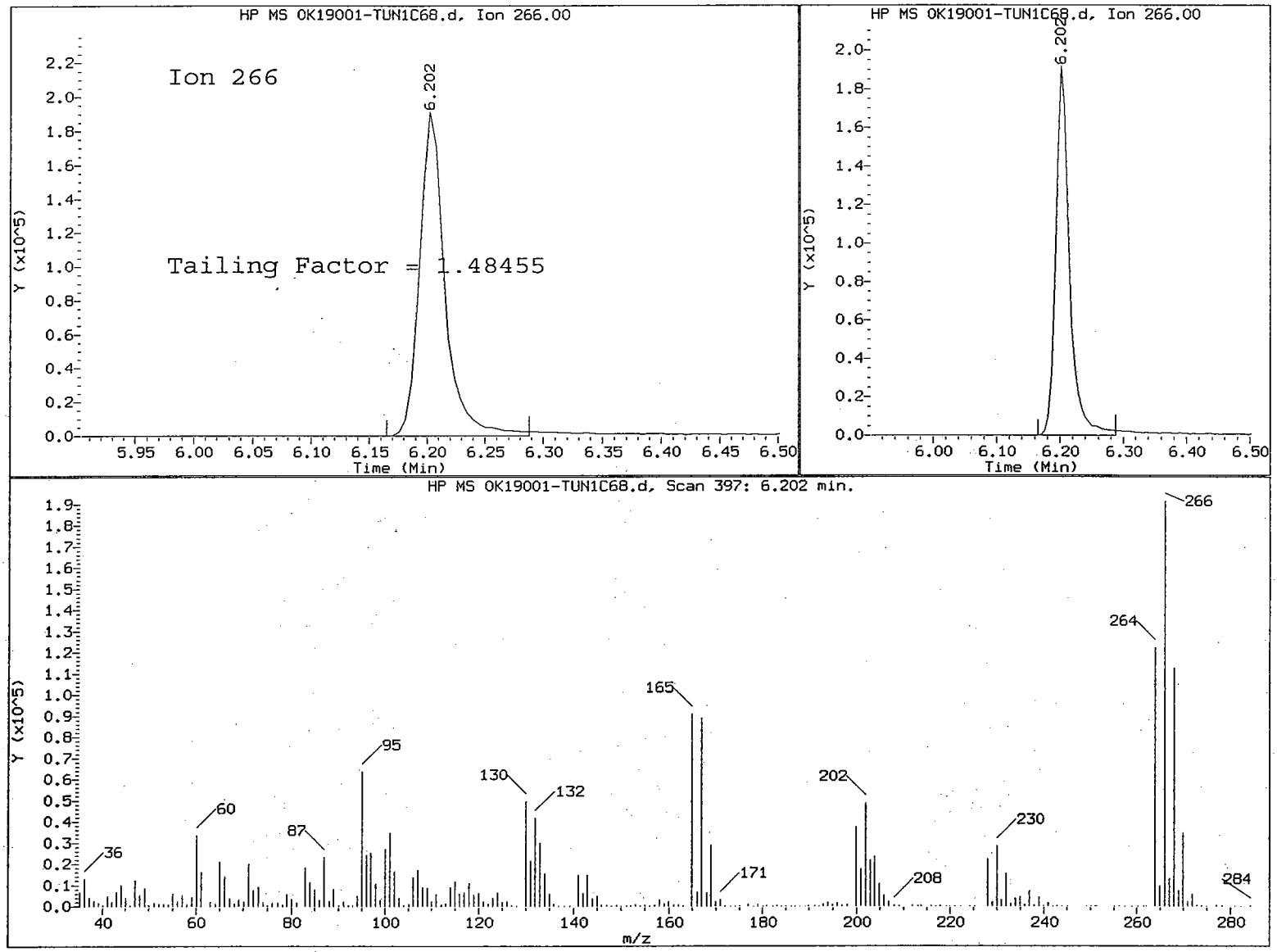


DECAFLUOROTRIPHENYLPHOSPHINE Ion Abundance/Ratio Criteria Chart

Ion	Abundance Criteria	Base Peak	Other	Test
198	Base Peak, 100% relative abundance	100.00		PASS
51	10 - 80% of mass 198	40.13		PASS
68	Less than 2% of mass 69	0.00	(0.00)	PASS
69	Mass 69 relative abundance	45.62		PASS
70	Less than 2% of mass 69	0.17	(0.38)	PASS
127	10 - 80% of mass 198	51.27		PASS
197	0 - 2% of mass 198	0.00		PASS
199	5 - 9% of mass 198	6.68		PASS
275	10 - 60% of mass 198	19.33		PASS
365	Greater than 0.75% of mass 198	2.08		PASS
441	Present, but less than mass 443	10.21	(73.27)	PASS
442	50 - 100% of mass 198	72.34		PASS
443	15 - 24% of mass 442	13.93	(19.26)	PASS

Report Date: 11/26/2010 15:32

Datafile Analyzed: /chem/5973hp68.i/DF101118C68_B.b/0K19001-TUN1C68.d/0K19001-TU
Method Used: /chem/5973hp68.i/DF101118C68.b/dftpp8270C.m/BrkDwnTF.m Inst: 5973h
Injection Date: 19-NOV-2010 03:14 Operator:
Sample Info: DFTPP 0K19001-TUN1:MEW
Misc Info:



Pentachlorophenol
==========
Exp. RT = 6.325
Found RT = 6.202

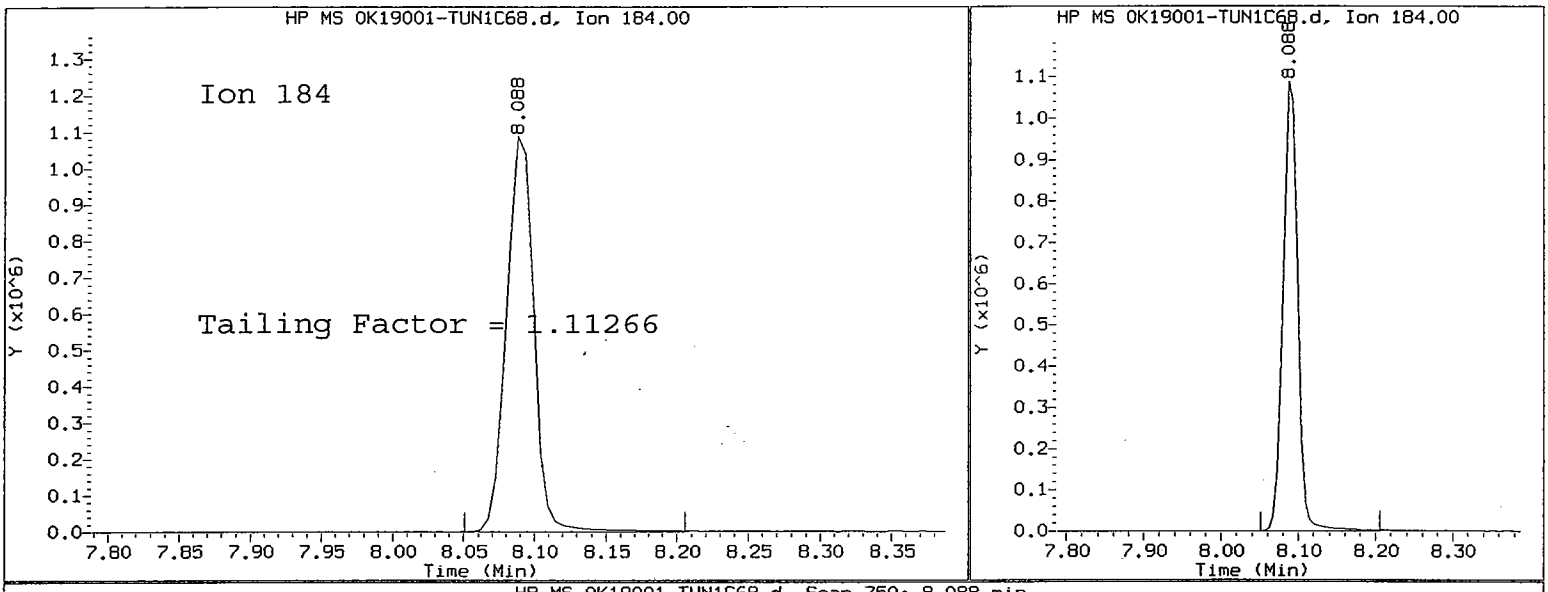
Mass	Area	Ratio
266	292829	100.00

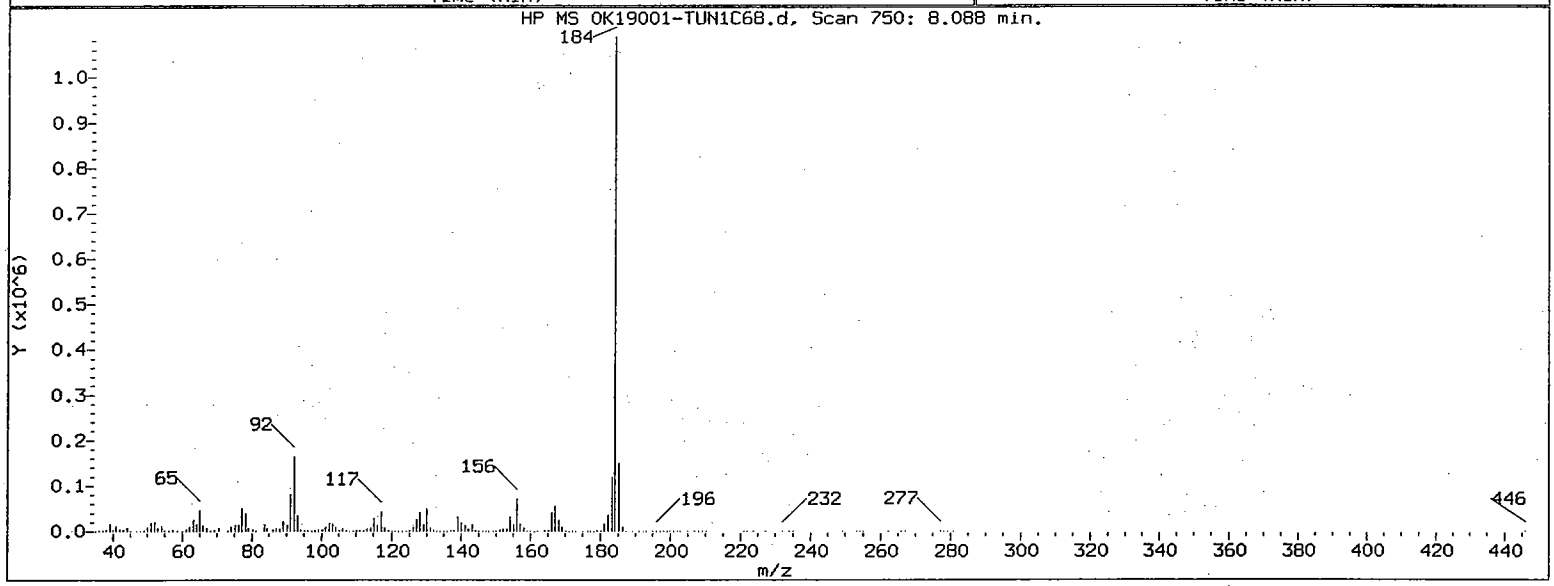
Tailing factor for Pentachlorophenol OK

Tailing Factor = 1.5 Maximum Allowed = 5.0

Report Date: 11/26/2010 15:32

Datafile Analyzed: /chem/5973hp68.i/DF101118C68_B.b/0K19001-TUN1C68.d/0K19001-TU
Method Used: /chem/5973hp68.i/DF101118C68.b/dftpp8270C.m/BrkDwnTF.m Inst: 5973h
Injection Date: 19-NOV-2010 03:14 Operator:
Sample Info: DFTPP 0K19001-TUN1:MEW
Misc Info:





Benzidine
=========
Exp. RT = 8.201
Found RT = 8.088

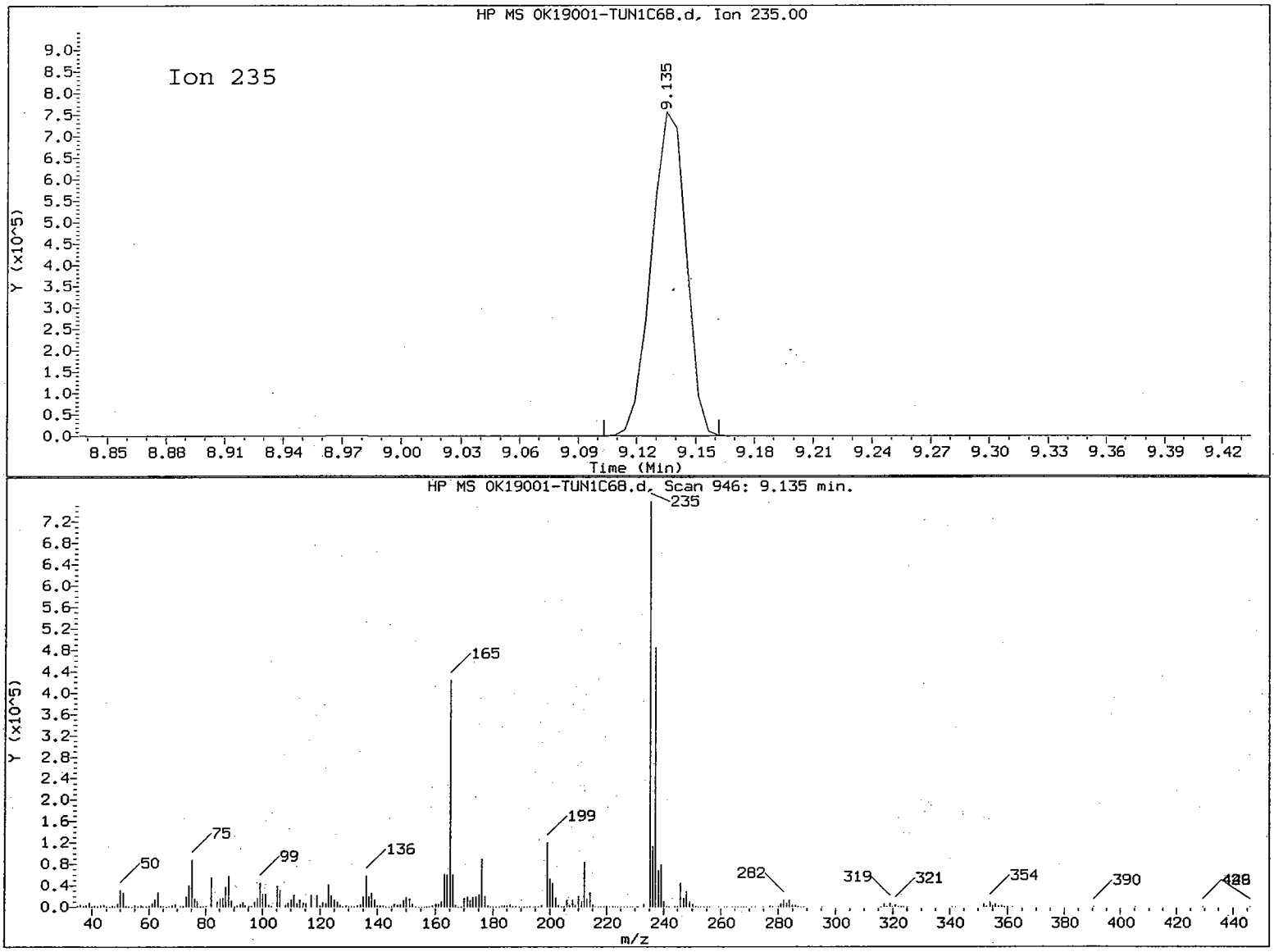
Mass	Area	Ratio
184	1467503	100.00

Tailing factor for Benzidine OK

Tailing Factor = 1.1 Maximum Allowed = 3.0

Report Date: 11/26/2010 15:32

Datafile Analyzed: /chem/5973hp68.i/DF101118C68_B.b/0K19001-TUN1C68.d/0K19001-TU
Method Used: /chem/5973hp68.i/DF101118C68.b/dftpp8270C.m/BrkDwnTF.m Inst: 5973h
Injection Date: 19-NOV-2010 03:14 Operator:
Sample Info: DFTPP 0K19001-TUN1:MEW
Misc Info:

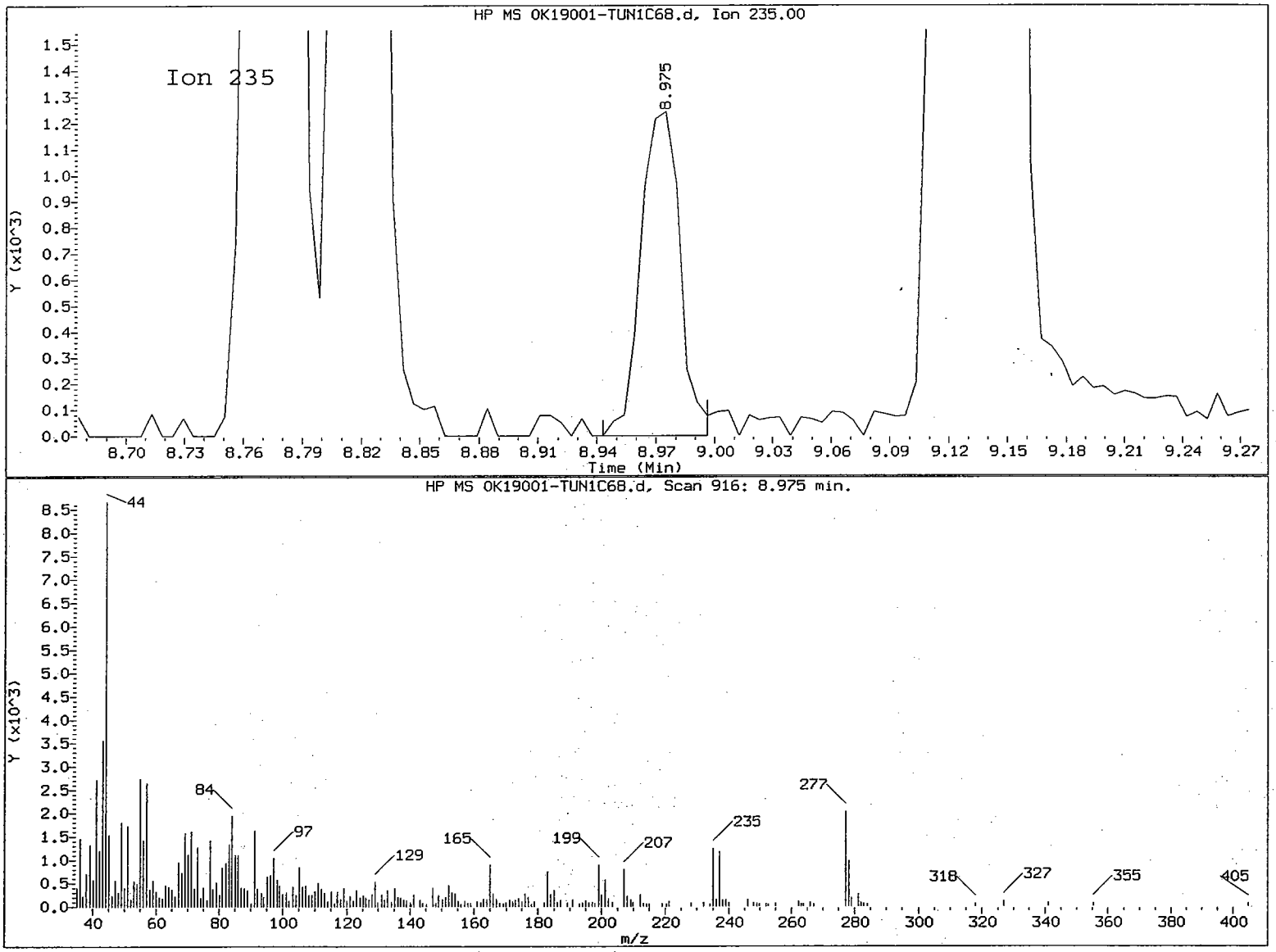


4,4'-DDT
========
Exp. RT = 9.248
Found RT = 9.135

Mass	Area	Ratio
235	926180	100.00

Report Date: 11/26/2010 15:32

Datafile Analyzed: /chem/5973hp68.i/DF101118C68_B.b/0K19001-TUN1C68.d/0K19001-TU
Method Used: /chem/5973hp68.i/DF101118C68.b/dftpp8270C.m/BrkDwnTF.m Inst: 5973h
Injection Date: 19-NOV-2010 03:14 Operator:
Sample Info: DFTPP 0K19001-TUN1:MEW
Misc Info:

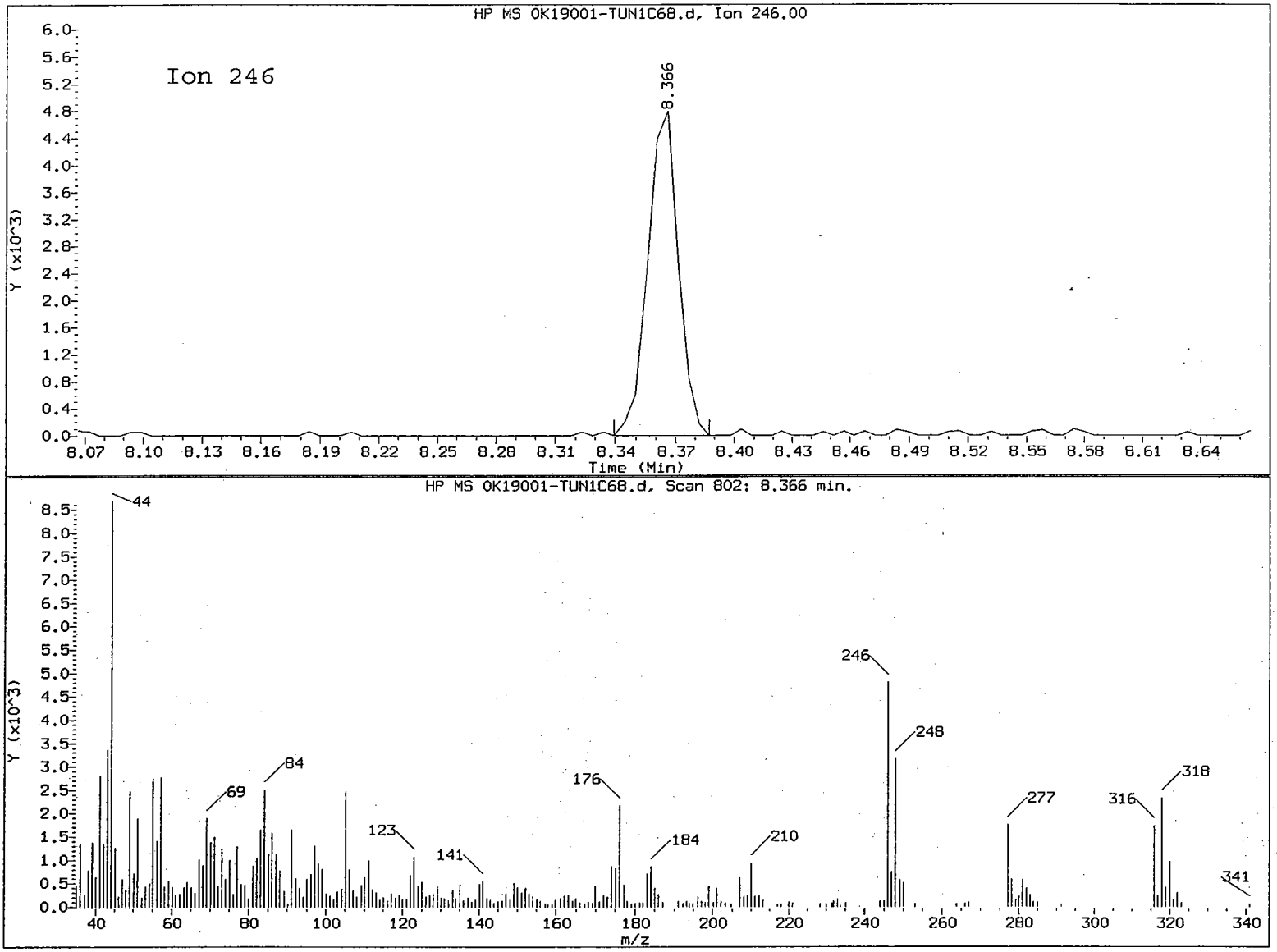


4,4'-DDD
========
Exp. RT = 8.900
Found RT = 8.975

Mass	Area	Ratio
235	1718	100.00

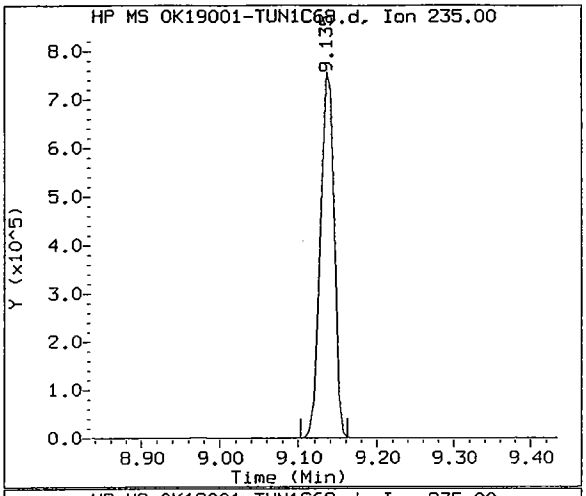
Report Date: 11/26/2010 15:32

Datafile Analyzed: /chem/5973hp68.i/DF101118C68_B.b/0K19001-TUN1C68.d/0K19001-TU
Method Used: /chem/5973hp68.i/DF101118C68.b/dftpp8270C.m/BrkDwnTF.m Inst: 5973h
Injection Date: 19-NOV-2010 03:14 Operator:
Sample Info: DFTPP 0K19001-TUN1:MEW
Misc Info:

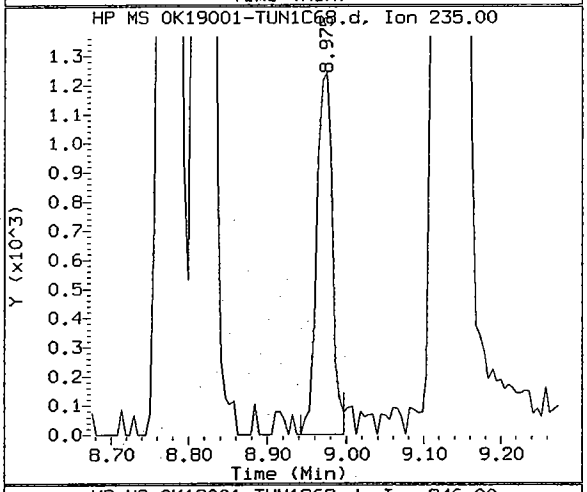


4,4'-DDE
========
Exp. RT = 8.440
Found RT = 8.366

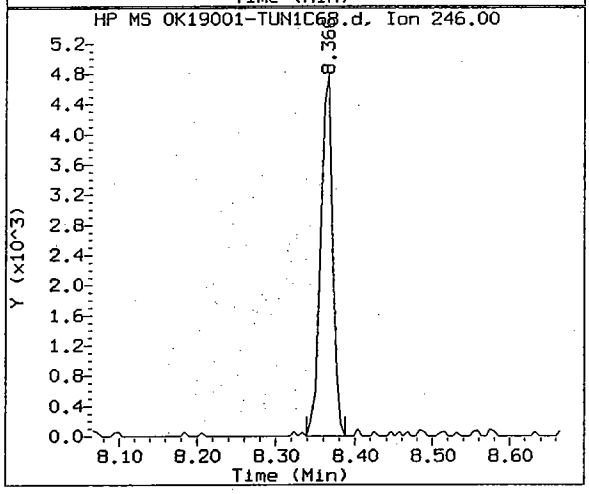
Mass	Area	Ratio
246	5082	100.00



Compound: 4,4'-DDT
Quant Mass: 235
RT: 9.135
Area: 926180



Compound: 4,4'-DDD
Quant Mass: 235
RT: 8.975
Area: 1718



Compound: 4,4'-DDE
Quant Mass: 246
RT: 8.366
Area: 5082

DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

Compound	Response	%Breakdown	Max Allowed	Test
4,4-DDT	926180			N/A
4,4-DDE	5082	0.5	20.0	PASS
4,4-DDD	1718	0.2	20.0	PASS
4,4-DDD + DDE	6800	0.7	20.0	PASS

****

TUNE SAMPLE *** PASSED *** DDT BREAKDOWN TEST

****

Data File: /chem/5973hp68.i/DF101122A68_C.b/0K22004-TUN1A68.d

Date : 22-NOV-2010 09:21

Client ID: DFTPPDO

Instrument: 5973hp68.i

Sample Info: 0K22004-TUN3:SLP

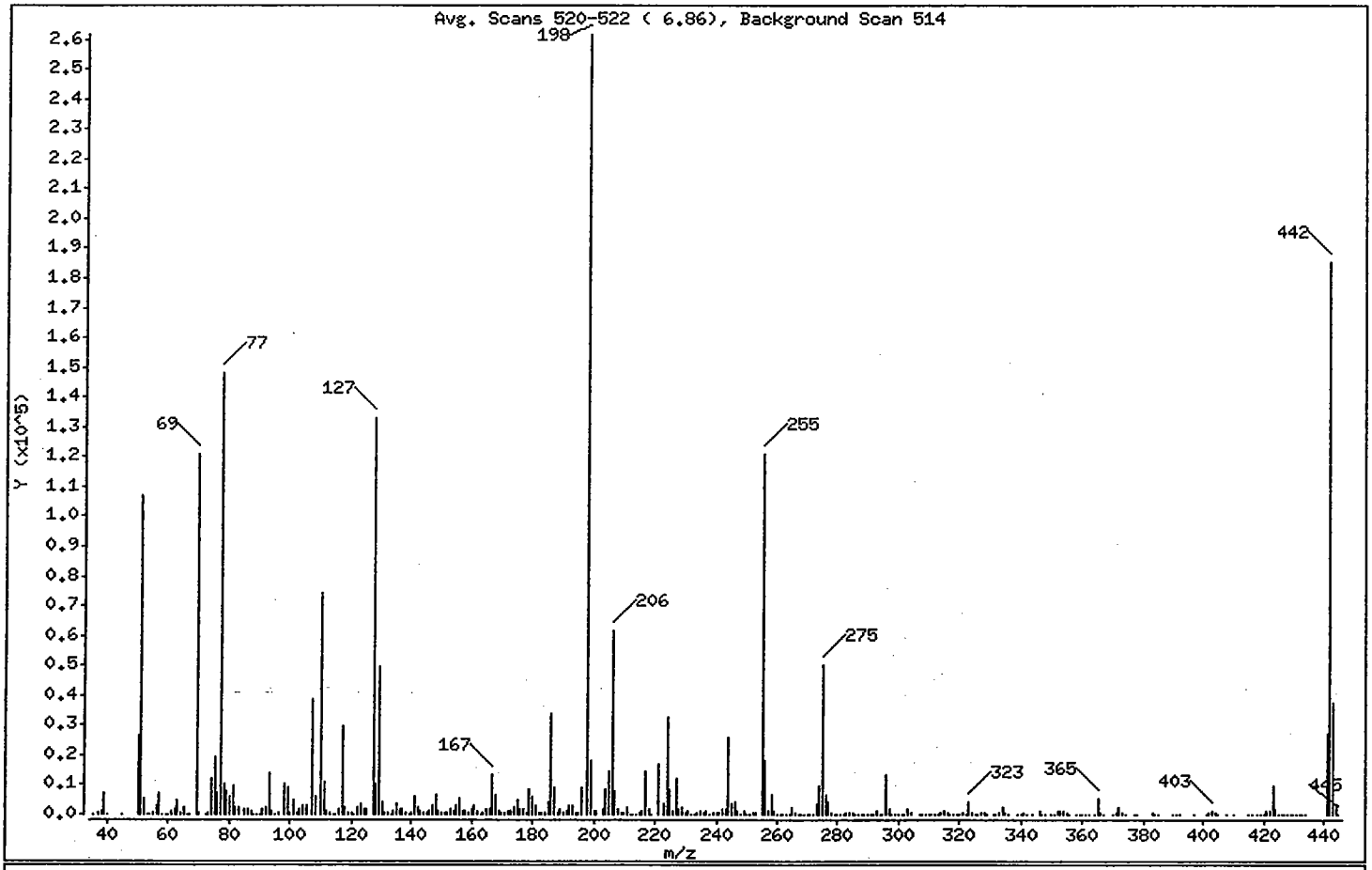
Volume Injected (uL): 2.0

Operator: SLP

Column phase: RTX-5MS

Column diameter: 0.32

1 Decafluorotriphenylphosphine



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	40.87
68	Less than 2.00% of mass 69	0.00 (0.00)
69	Mass 69 relative abundance	46.21
70	Less than 2.00% of mass 69	0.26 (0.56)
127	10.00 - 80.00% of mass 198	50.70
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.86
275	10.00 - 60.00% of mass 198	19.27
365	Greater than 1.00% of mass 198	2.14
441	Present, but less than mass 443	10.35
442	50.00 - 100.00% of mass 198	70.96
443	15.00 - 24.00% of mass 442	14.23 (20.06)

Data File: /chem/5973hp68.i/DF101122A68_C.b/0K22004-TUN1A68.d

Date : 22-NOV-2010 09:21

Client ID: DFTPPDO Instrument: 5973hp68.i

Sample Info: 0K22004-TUN3:SLP

Volume Injected (uL): 2.0 Operator: SLP

Column phase: RTX-5MS Column diameter: 0.32

Data File: 0K22004-TUN1A68.d

Spectrum: Avg. Scans 520-522 (6.86), Background Scan 514

Location of Maximum: 198.00

Number of points: 347

m/z	Y	m/z	Y	m/z	Y	m/z	Y
35.00	101	138.00	312	229.00	2706	319.00	19
37.00	338	139.00	242	230.00	305	320.00	63
38.00	1129	140.00	517	231.00	1298	321.00	425
39.00	6993	141.00	5906	232.00	232	322.00	162
40.00	266	142.00	2174	233.00	224	323.00	4470
45.00	148	143.00	1283	234.00	797	324.00	891
50.00	26872	144.00	357	235.00	920	325.00	105
51.00	106912	145.00	398	236.00	676	326.00	64
52.00	5462	146.00	979	237.00	991	327.00	723
53.00	191	147.00	3144	238.00	180	328.00	356
54.00	13	148.00	6666	239.00	477	329.00	59
55.00	546	149.00	1505	240.00	382	331.00	19
56.00	2997	150.00	419	241.00	705	332.00	294
57.00	7368	151.00	807	242.00	1639	333.00	386
58.00	178	152.00	462	243.00	1798	334.00	2695
59.00	100	153.00	1646	244.00	26152	335.00	728
60.00	52	154.00	1356	245.00	3680	336.00	101
61.00	1392	155.00	3272	246.00	4484	339.00	54
62.00	1557	156.00	5252	247.00	968	340.00	48
63.00	4766	157.00	1158	248.00	261	341.00	532
64.00	613	158.00	1193	249.00	954	342.00	162
65.00	2212	159.00	845	250.00	209	344.00	18
66.00	90	160.00	1724	251.00	298	346.00	968
67.00	109	161.00	2890	252.00	382	347.00	240
69.00	120880	162.00	934	253.00	634	348.00	18
70.00	682	163.00	295	255.00	120576	350.00	50
72.00	58	164.00	362	256.00	18240	351.00	111
73.00	801	165.00	2101	257.00	1456	352.00	1312
74.00	11906	166.00	1934	258.00	6488	353.00	1028
75.00	19048	167.00	13237	259.00	1032	354.00	1471
76.00	6956	168.00	6617	260.00	217	355.00	364
77.00	148288	169.00	1060	261.00	268	356.00	20
78.00	10566	170.00	356	262.00	51	358.00	25
79.00	8069	171.00	540	263.00	95	359.00	117
80.00	6342	172.00	1094	264.00	158	360.00	23

Data File: /chem/5973hp68.i/DF101122A68_C.b/OK22004-TUN1A68.d

Date : 22-NOV-2010 09:21

Client ID: DFTPPDO Instrument: 5973hp68.i

Sample Info: OK22004-TUN3:SLP

Volume Injected (uL): 2.0 Operator: SLP

Column phase: RTX-5MS Column diameter: 0.32

Data File: OK22004-TUN1A68.d

Spectrum: Avg. Scans 520-522 (6.86), Background Scan 514

Location of Maximum: 198.00

Number of points: 347

m/z	Y	m/z	Y	m/z	Y	m/z	Y
81.00	9379	173.00	1376	265.00	2550	361.00	33
82.00	2380	174.00	2502	266.00	316	362.00	18
83.00	2230	175.00	4847	267.00	87	364.00	17
85.00	1680	176.00	1601	268.00	28	365.00	5591
86.00	2097	177.00	2040	269.00	68	366.00	835
87.00	1074	178.00	733	270.00	91	367.00	83
88.00	193	179.00	8485	271.00	267	370.00	104
89.00	234	180.00	5947	272.00	254	371.00	325
90.00	37	181.00	2798	273.00	3459	372.00	2234
91.00	2021	182.00	499	274.00	9435	373.00	560
92.00	2302	183.00	351	275.00	50408	374.00	90
93.00	14057	184.00	821	276.00	6813	377.00	86
94.00	1025	185.00	4273	277.00	4366	378.00	19
95.00	168	186.00	33608	278.00	680	383.00	602
96.00	620	187.00	9250	279.00	105	384.00	182
98.00	10367	188.00	863	280.00	45	385.00	72
99.00	8877	189.00	1789	281.00	21	390.00	247
100.00	698	190.00	396	282.00	131	391.00	274
101.00	5054	191.00	955	283.00	477	392.00	145
102.00	312	192.00	2938	284.00	371	397.00	36
103.00	1860	193.00	3307	285.00	811	401.00	168
104.00	3120	194.00	741	286.00	135	402.00	904
105.00	2928	195.00	412	287.00	20	403.00	1464
107.00	38408	196.00	8818	288.00	43	404.00	537
108.00	6154	198.00	261568	289.00	129	405.00	67
110.00	74184	199.00	17944	290.00	140	408.00	21
111.00	11063	200.00	1246	291.00	151	410.00	28
112.00	1398	201.00	1325	292.00	211	415.00	68
113.00	453	203.00	1679	293.00	915	416.00	25
114.00	124	204.00	8676	294.00	259	418.00	17
115.00	126	205.00	14447	295.00	99	419.00	39
116.00	1983	206.00	61680	296.00	13048	420.00	24
117.00	29456	207.00	7697	297.00	1872	421.00	1247
118.00	2146	208.00	1767	298.00	141	422.00	1245
119.00	325	209.00	692	299.00	42	423.00	9437

Data File: /chem/5973hp68.i/DF101122A68_C.b/0K22004-TUN1A68.d

Date : 22-NOV-2010 09:21

Client ID: DFTPPDO Instrument: 5973hp68.i

Sample Info: 0K22004-TUN3:SLP

Volume Injected (uL): 2.0 Operator: SLP

Column phase: RTX-5MS Column diameter: 0.32

Data File: 0K22004-TUN1A68.d

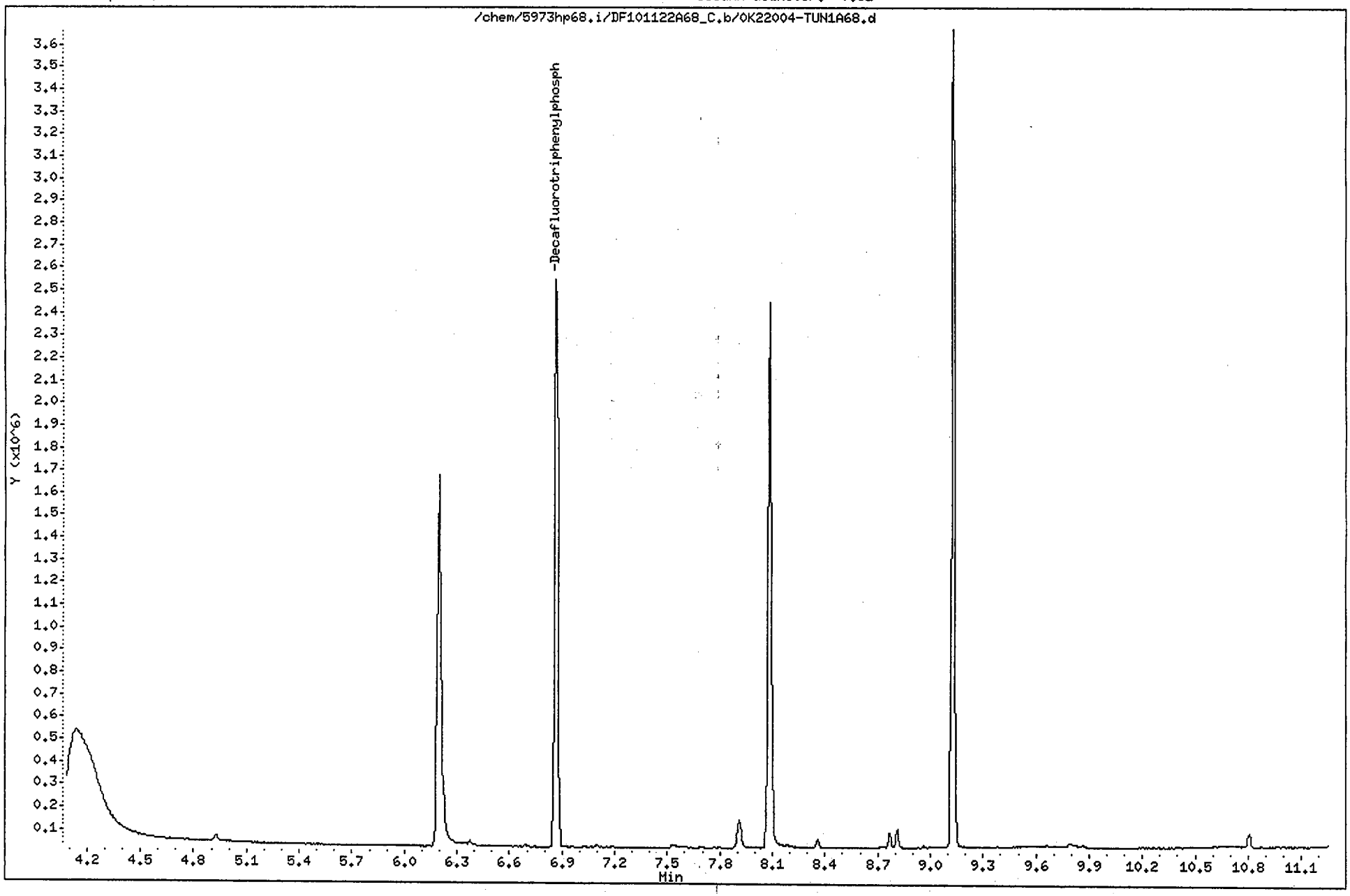
Spectrum: Avg. Scans 520-522 (6.86), Background Scan 514

Location of Maximum: 198.00

Number of points: 347

m/z	Y	m/z	Y	m/z	Y	m/z	Y
120.00	530	210.00	526	300.00	34	424.00	1910
121.00	58	211.00	2421	301.00	213	425.00	234
122.00	2370	212.00	143	302.00	245	426.00	84
123.00	3530	213.00	174	303.00	1551	427.00	133
124.00	1625	214.00	38	304.00	463	428.00	84
125.00	1618	215.00	559	307.00	38	429.00	232
127.00	132608	216.00	1260	308.00	218	430.00	45
128.00	10416	217.00	14593	309.00	137	431.00	234
129.00	49440	218.00	1998	310.00	159	432.00	123
130.00	4251	219.00	276	311.00	18	433.00	47
131.00	778	221.00	16712	312.00	26	434.00	31
132.00	372	223.00	3390	313.00	192	441.00	27072
133.00	151	224.00	32536	314.00	584	442.00	185600
134.00	1384	225.00	8238	315.00	1494	443.00	37232
135.00	3807	226.00	937	316.00	870	444.00	3388
136.00	1516	227.00	12267	317.00	177	445.00	205
137.00	2027	228.00	1703	318.00	44		

Data File: /chem/5973hp68.i/DF101122A68_C.b/0K22004-TUN1A68.d
Date : 22-NOV-2010 09:21
Client ID: DFTPPDO
Instrument: 5973hp68.i
Sample Info: 0K22004-TUN3:SLP
Volume Injected (uL): 2.0
Operator: SLP
Column phase: RTX-5MS
Column diameter: 0.32



TAILING FACTOR and DEGRADATION SUMMARY RESULTS

DECAFLUOROTRIPHENYLPHOSPHINE Ion Abundance/Ratio Criteria Chart

Ion	Abundance Criteria	Base Peak	Other	Test
198	Base Peak, 100% relative abundance	100.00		PASS
51	10 - 80% of mass 198	40.87		PASS
68	Less than 2% of mass 69	0.00	(0.00)	PASS
69	Mass 69 relative abundance	46.21		PASS
70	Less than 2% of mass 69	0.26	(0.56)	PASS
127	10 - 80% of mass 198	50.70		PASS
197	0 - 2% of mass 198	0.00		PASS
199	5 - 9% of mass 198	6.86		PASS
275	10 - 60% of mass 198	19.27		PASS
365	Greater than 0.75% of mass 198	2.14		PASS
441	Present, but less than mass 443	10.35	(72.72)	PASS
442	50 - 100 % of mass 198	70.96		PASS
443	15 - 24% of mass 442	14.23	(20.06)	PASS

TAILING ANALYSIS SUMMARY

Compound	Tail Factor	Max Allowed	Test
Pentachlorophenol	1.9	5.0	PASS
Benzidine	1.0	3.0	PASS

DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

Compound	Response	%Breakdown	Max Allowed	Test
4,4-DDT	780956			N/A
4,4-DDE	4147	0.5	20.0	PASS
4,4-DDD	14741	1.9	20.0	PASS
4,4-DDD + DDE	18888	2.4	20.0	PASS

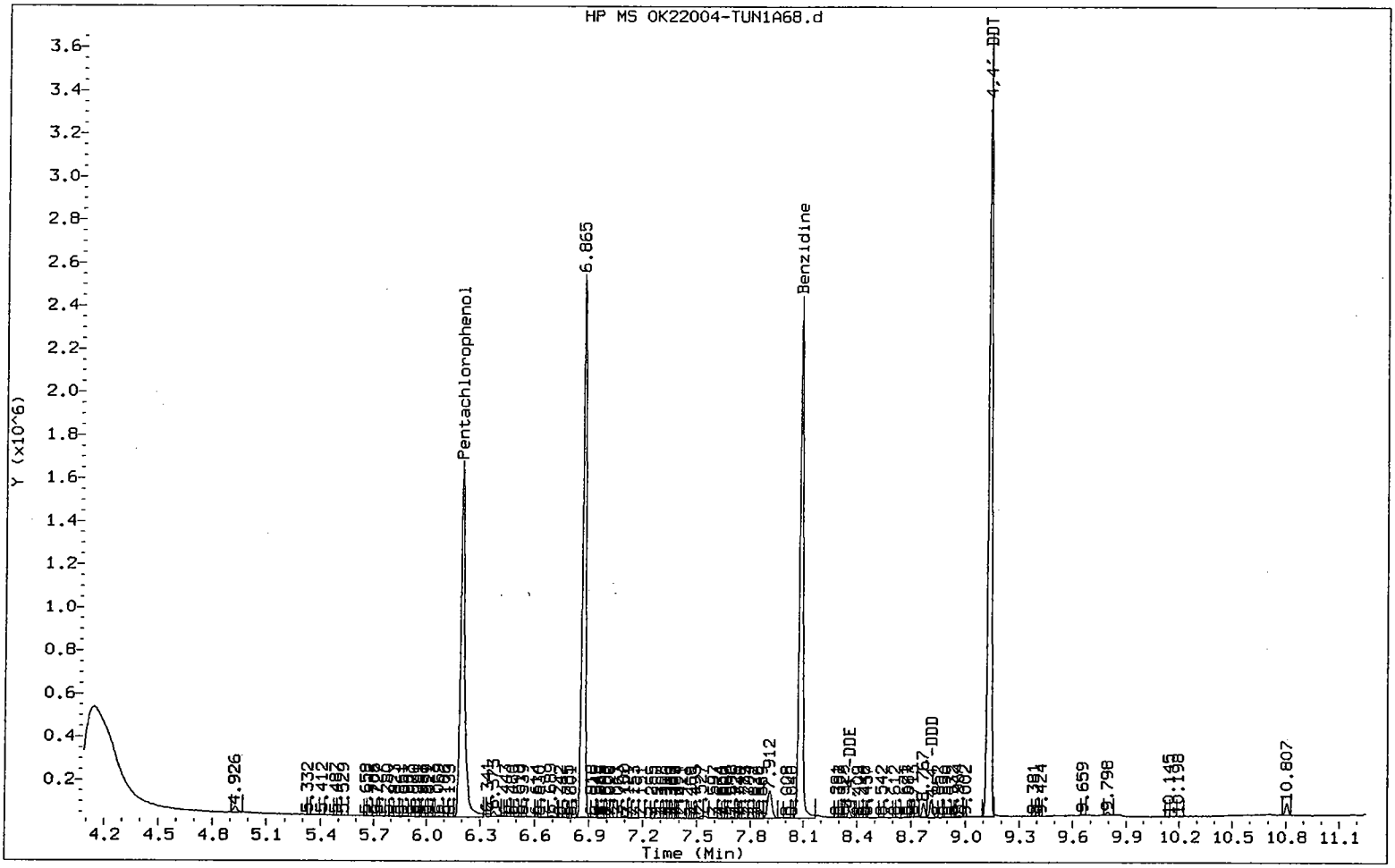
Tuning Sample, /chem/5973hp68.i/DF101122A68_C.b/0K22004-TUN1A68.d/0K22004-TUN1A6

*** PASSED ***

TAILING FACTOR and DEGRADATION SAMPLE AND GRAPHIC REPORT

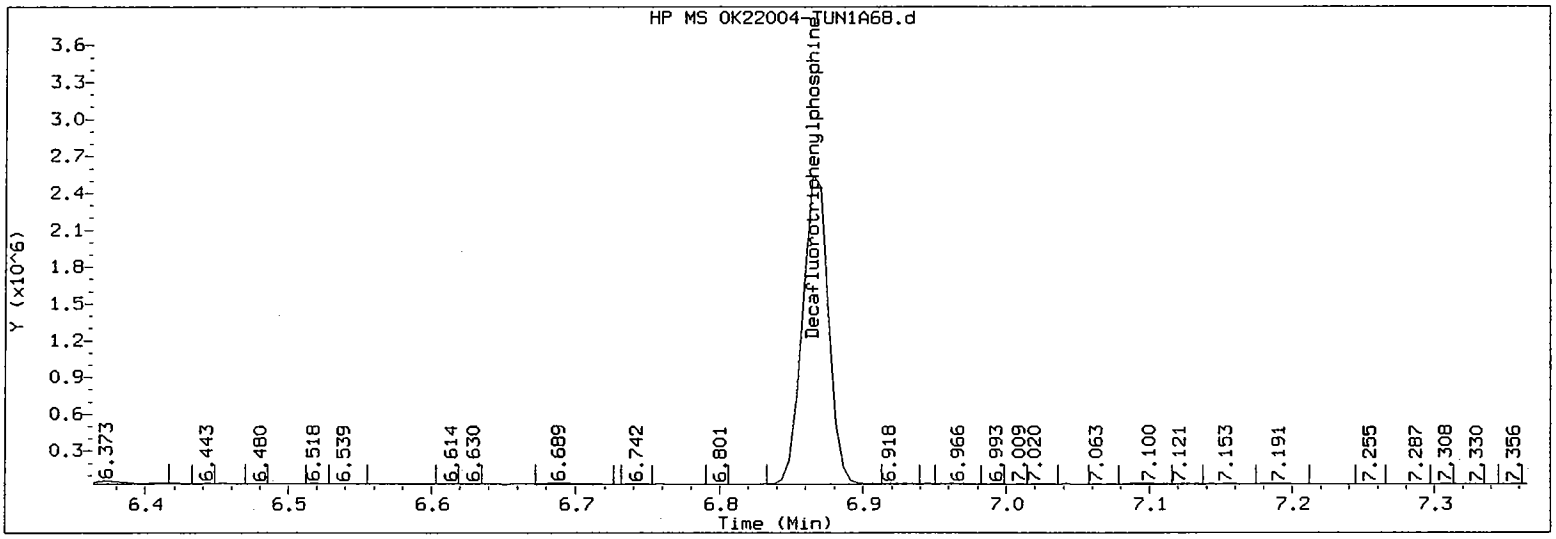
Report Date: 11/27/2010 08:37

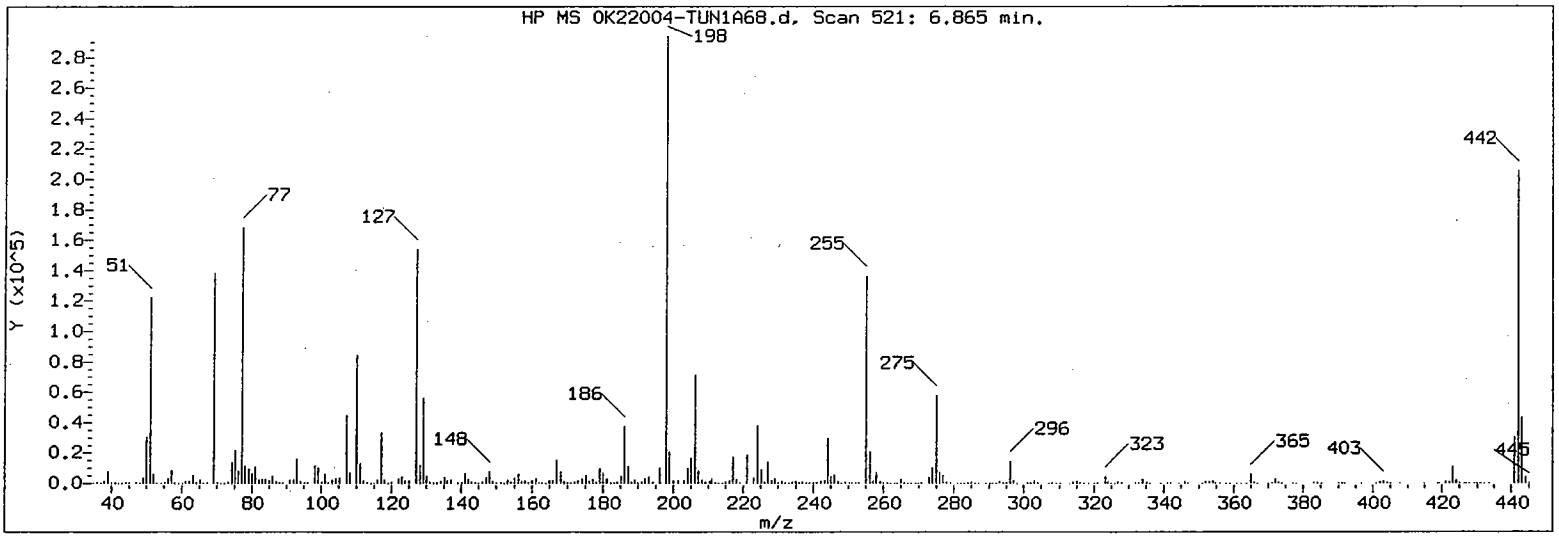
Datafile Analyzed: /chem/5973hp68.i/DF101122A68_C.b/0K22004-TUN1A68.d/0K22004-TU
Method Used: /chem/5973hp68.i/DF101122A68_C.b/dftpp8270C.m Inst: 5973hp68
Injection Date: 22-NOV-2010 09:21 Operator: SLP
Sample Info: 0K22004-TUN3 0K22004-TUN3:SLP
Misc Info: DFTPPDO



Report Date: 11/27/2010 08:37

Datafile Analyzed: /chem/5973hp68.i/DF101122A68_C.b/0K22004-TUN1A68.d/0K22004-TU
Method Used: /chem/5973hp68.i/DF101122A68_C.b/dftpp8270C.m Inst: 5973hp68
Injection Date: 22-NOV-2010 09:21 Operator: SLP
Sample Info: 0K22004-TUN3 0K22004-TUN3:SLP
Misc Info: DFTPPDO



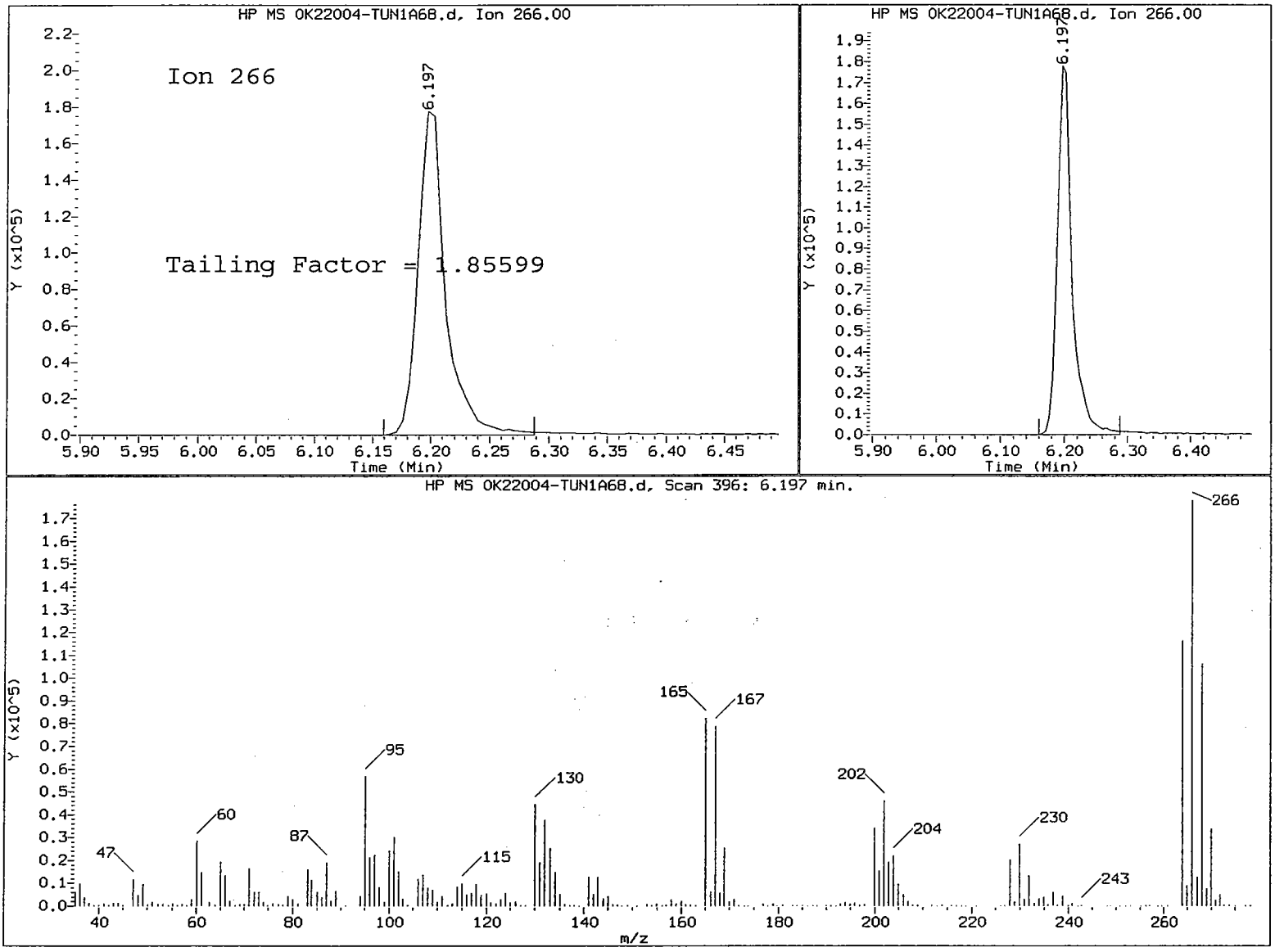


DECAFLUOROTRIPHENYLPHOSPHINE Ion Abundance/Ratio Criteria Chart

Ion	Abundance Criteria	Base Peak	Other	Test
198	Base Peak, 100% relative abundance	100.00		PASS
51	10 - 80% of mass 198	40.87		PASS
68	Less than 2% of mass 69	0.00	(0.00)	PASS
69	Mass 69 relative abundance	46.21		PASS
70	Less than 2% of mass 69	0.26	(0.56)	PASS
127	10 - 80% of mass 198	50.70		PASS
197	0 - 2% of mass 198	0.00		PASS
199	5 - 9% of mass 198	6.86		PASS
275	10 - 60% of mass 198	19.27		PASS
365	Greater than 0.75% of mass 198	2.14		PASS
441	Present, but less than mass 443	10.35	(72.72)	PASS
442	50 - 100% of mass 198	70.96		PASS
443	15 - 24% of mass 442	14.23	(20.06)	PASS

Report Date: 11/27/2010 08:37

Datafile Analyzed: /chem/5973hp68.i/DF101122A68_C.b/0K22004-TUN1A68.d/0K22004-TU
Method Used: /chem/5973hp68.i/DF101122A68.b/dftpp8270C.m/BrkDwnTF.m Inst: 5973h
Injection Date: 22-NOV-2010 09:21 Operator:
Sample Info: DFTPP 0K22004-TUN3:SLP
Misc Info:



Pentachlorophenol
==========

Exp. RT = 6.325
Found RT = 6.197

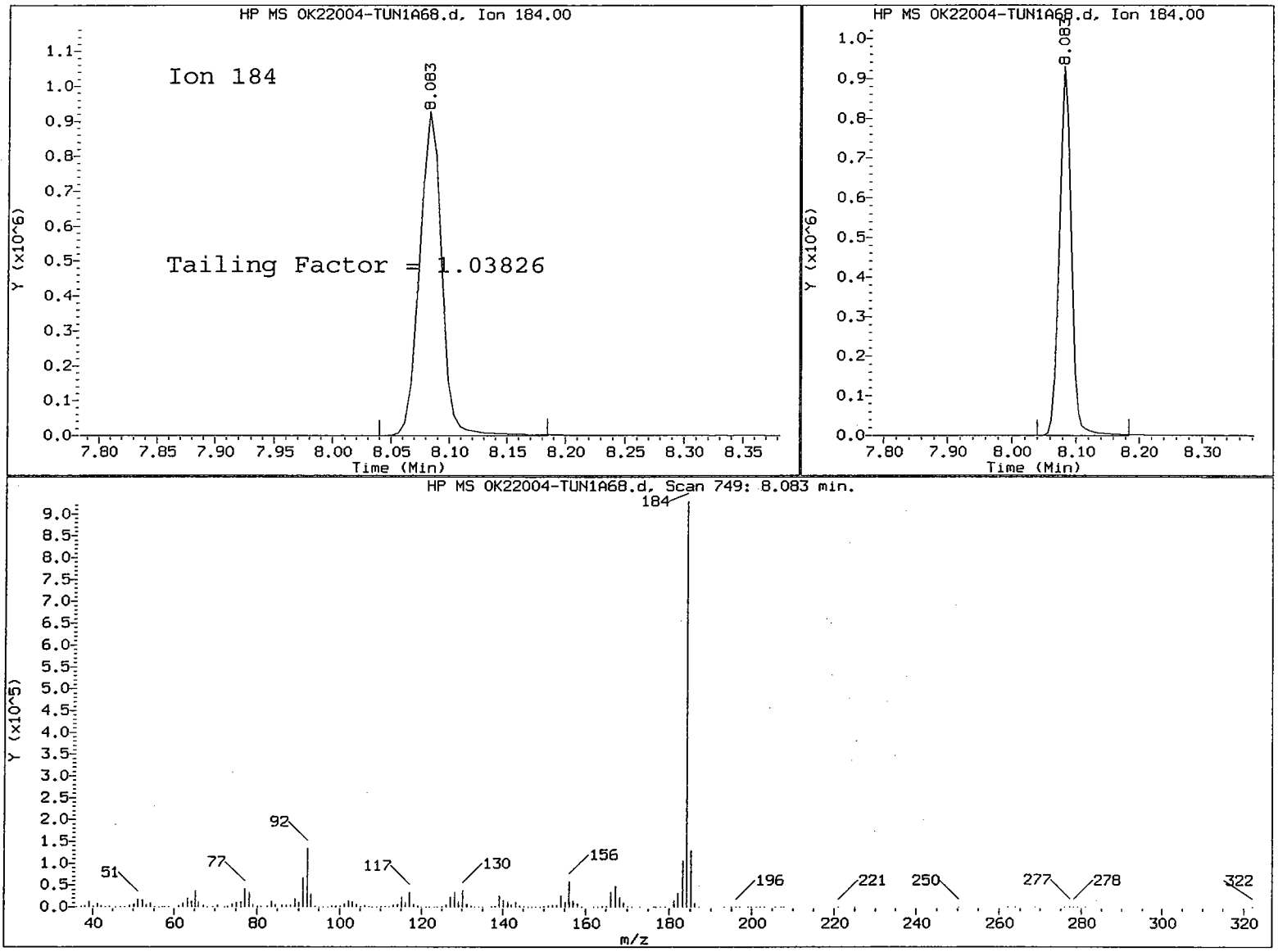
Mass	Area	Ratio
266	290524	100.00

Tailing factor for Pentachlorophenol OK

Tailing Factor = 1.9 Maximum Allowed = 5.0

Report Date: 11/27/2010 08:37

Datafile Analyzed: /chem/5973hp68.i/DF101122A68_C.b/0K22004-TUN1A68.d/0K22004-TU
Method Used: /chem/5973hp68.i/DF101122A68.b/dftpp8270C.m/BrkDwnTF.m Inst: 5973h
Injection Date: 22-NOV-2010 09:21 Operator:
Sample Info: DFTPP 0K22004-TUN3:SLP
Misc Info:



Benzidine
=========
Exp. RT = 8.201
Found RT = 8.083

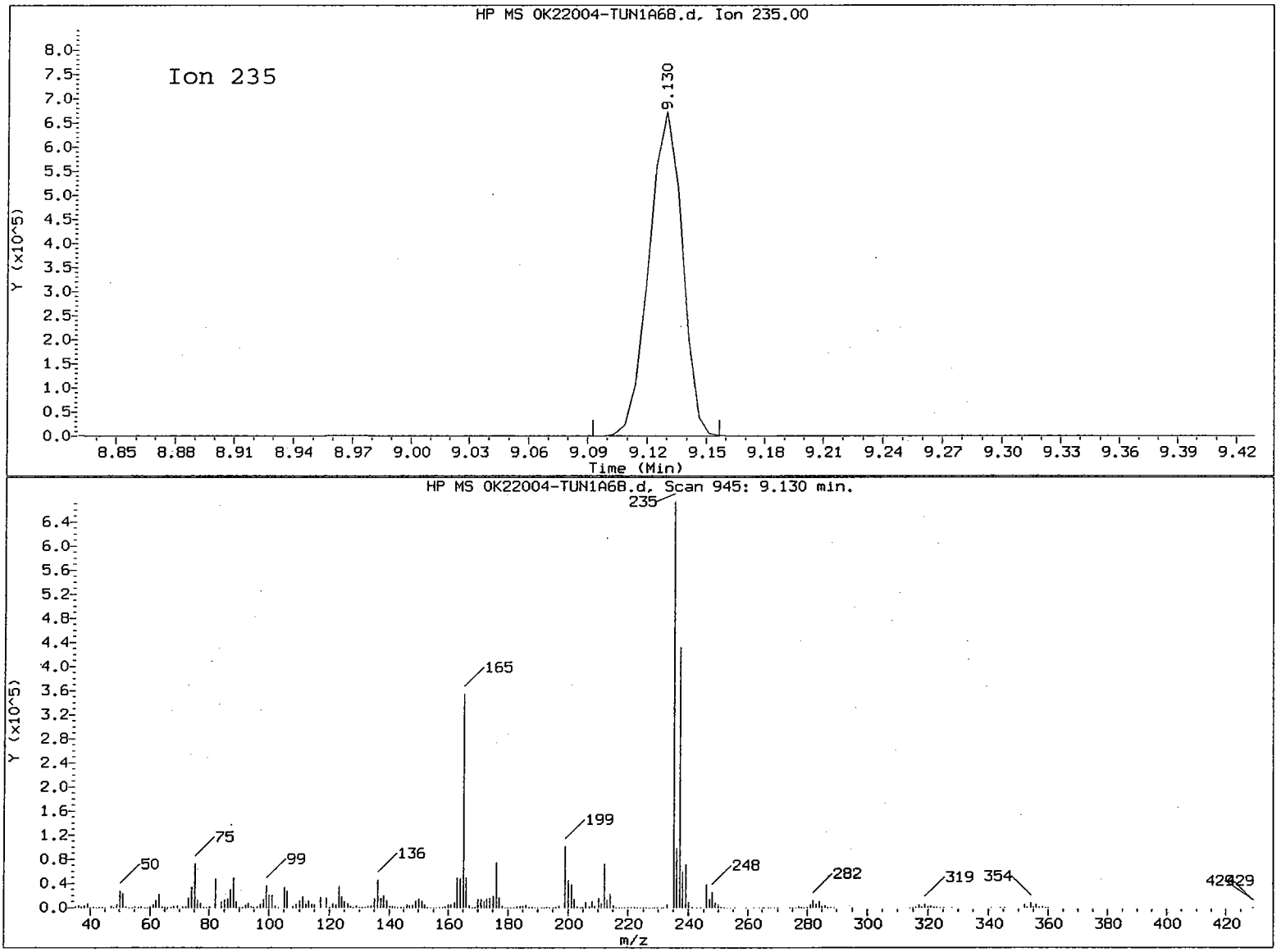
Mass	Area	Ratio
184	1225841	100.00

Tailing factor for Benzidine OK

Tailing Factor = 1.0 Maximum Allowed = 3.0

Report Date: 11/27/2010 08:37

Datafile Analyzed: /chem/5973hp68.i/DF101122A68_C.b/0K22004-TUN1A68.d/0K22004-TU
Method Used: /chem/5973hp68.i/DF101122A68.b/dftpp8270C.m/BrkDwnTF.m Inst: 5973h
Injection Date: 22-NOV-2010 09:21 Operator:
Sample Info: DFTPP 0K22004-TUN3:SLP
Misc Info:

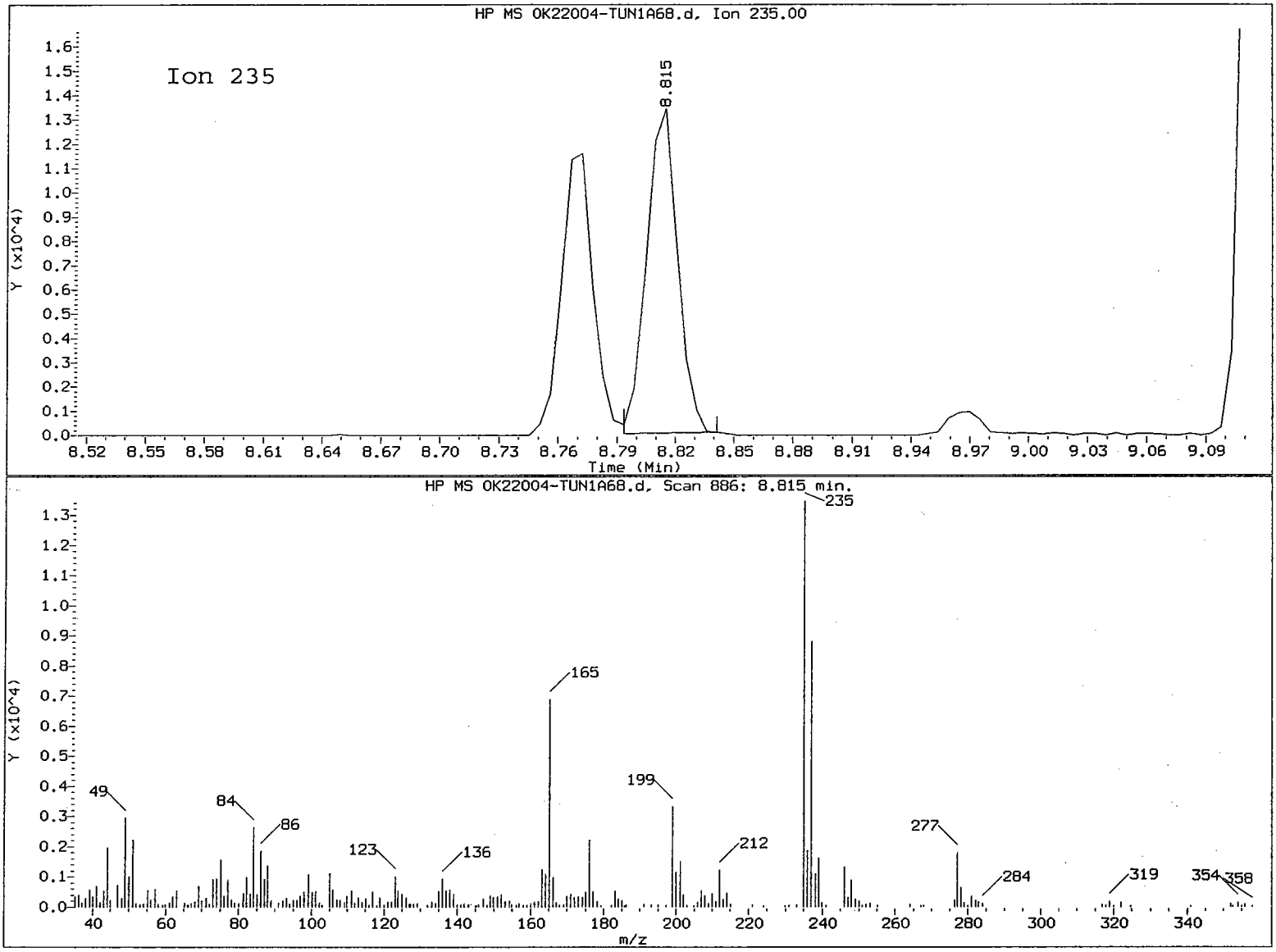


4,4'-DDT
========
Exp. RT = 9.248
Found RT = 9.130

Mass	Area	Ratio
235	780956	100.00

Report Date: 11/27/2010 08:37

Datafile Analyzed: /chem/5973hp68.i/DF101122A68_C.b/0K22004-TUN1A68.d/0K22004-TU
Method Used: /chem/5973hp68.i/DF101122A68.b/dftpp8270C.m/BrkDwnTF.m Inst: 5973h
Injection Date: 22-NOV-2010 09:21 Operator:
Sample Info: DFTPP 0K22004-TUN3:SLP
Misc Info:

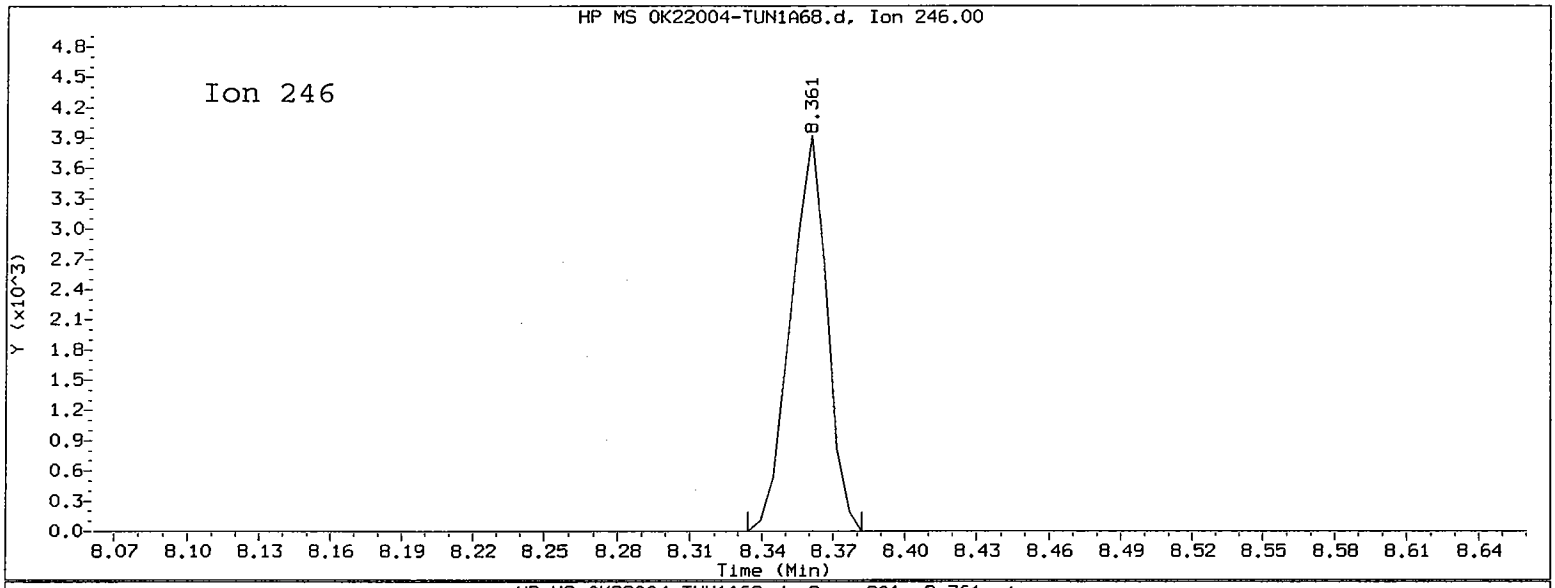


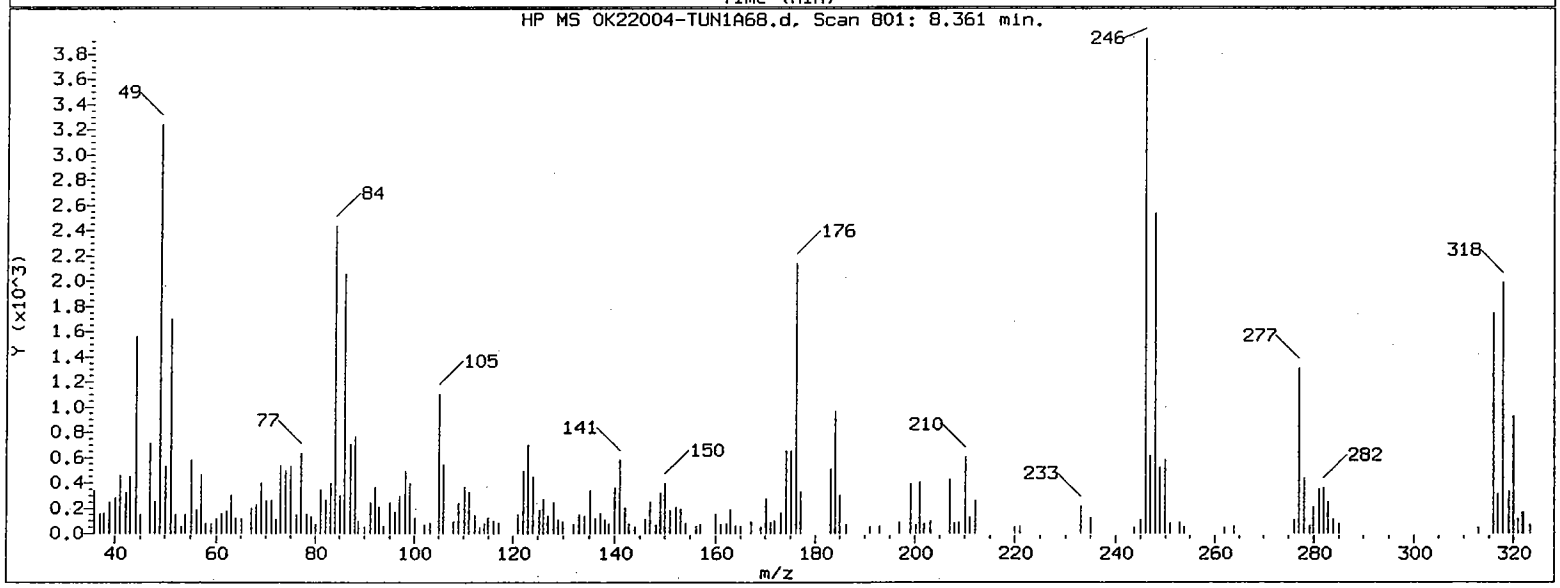
4,4'-DDD
========
Exp. RT = 8.900
Found RT = 8.815

Mass	Area	Ratio
235	14741	100.00

Report Date: 11/27/2010 08:37

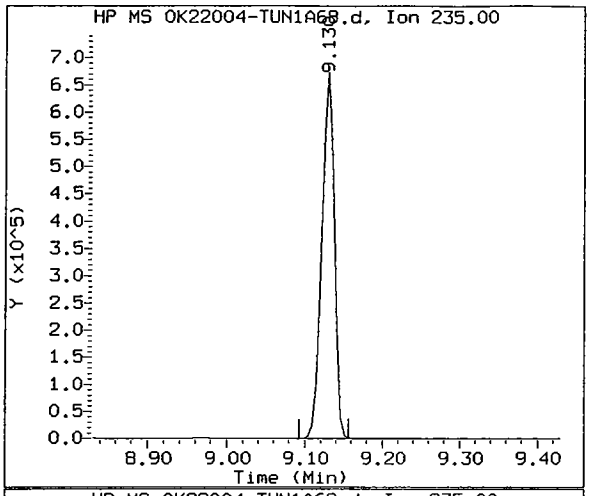
Datafile Analyzed: /chem/5973hp68.i/DF101122A68_C.b/0K22004-TUN1A68.d/0K22004-TU
Method Used: /chem/5973hp68.i/DF101122A68.b/dftpp8270C.m/BrkDwnTF.m Inst: 5973h
Injection Date: 22-NOV-2010 09:21 Operator:
Sample Info: DFTPP 0K22004-TUN3:SLP
Misc Info:



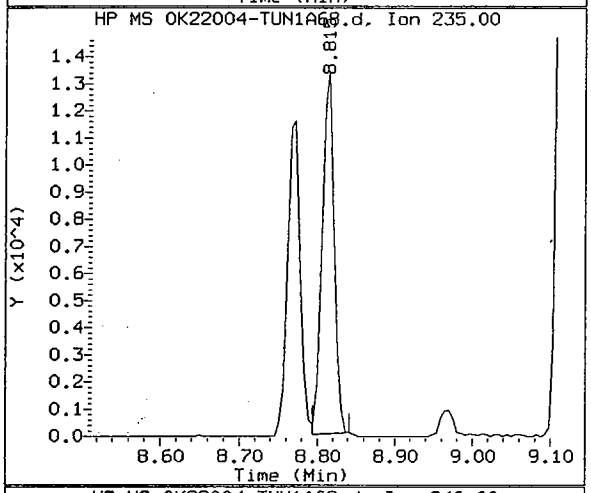


4,4'-DDE
========
Exp. RT = 8.440
Found RT = 8.361

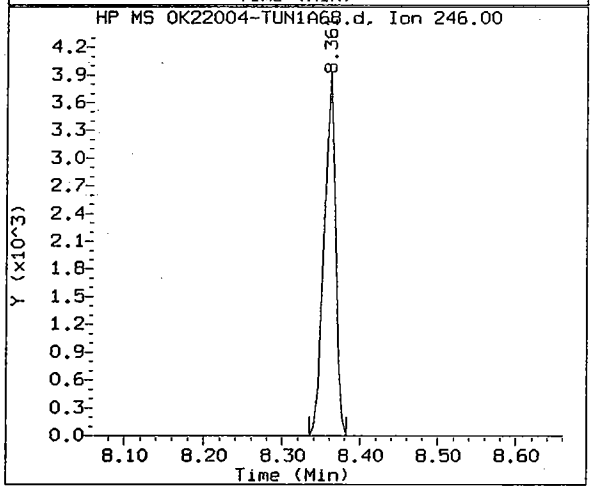
Mass	Area	Ratio
246	4147	100.00



Compound: 4,4'-DDT
Quant Mass: 235
RT: 9.130
Area: 780956



Compound: 4,4'-DDD
Quant Mass: 235
RT: 8.815
Area: 14741



Compound: 4,4'-DDE
Quant Mass: 246
RT: 8.361
Area: 4147

DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

Compound	Response	%Breakdown	Max Allowed	Test
4,4-DDT	780956			N/A
4,4-DDE	4147	0.5	20.0	PASS
4,4-DDD	14741	1.9	20.0	PASS
4,4-DDD + DDE	18888	2.4	20.0	PASS

****
TUNE SAMPLE *** PASSED *** DDT BREAKDOWN TEST
****

Data File: /chem/5973hp68.i/DF101122A68_A.b/0K22004-TUN1A68.d

Date : 22-NOV-2010 09:21

Client ID: DFTPPDO

Instrument: 5973hp68.i

Sample Info: 0K22004-TUN3:SLP

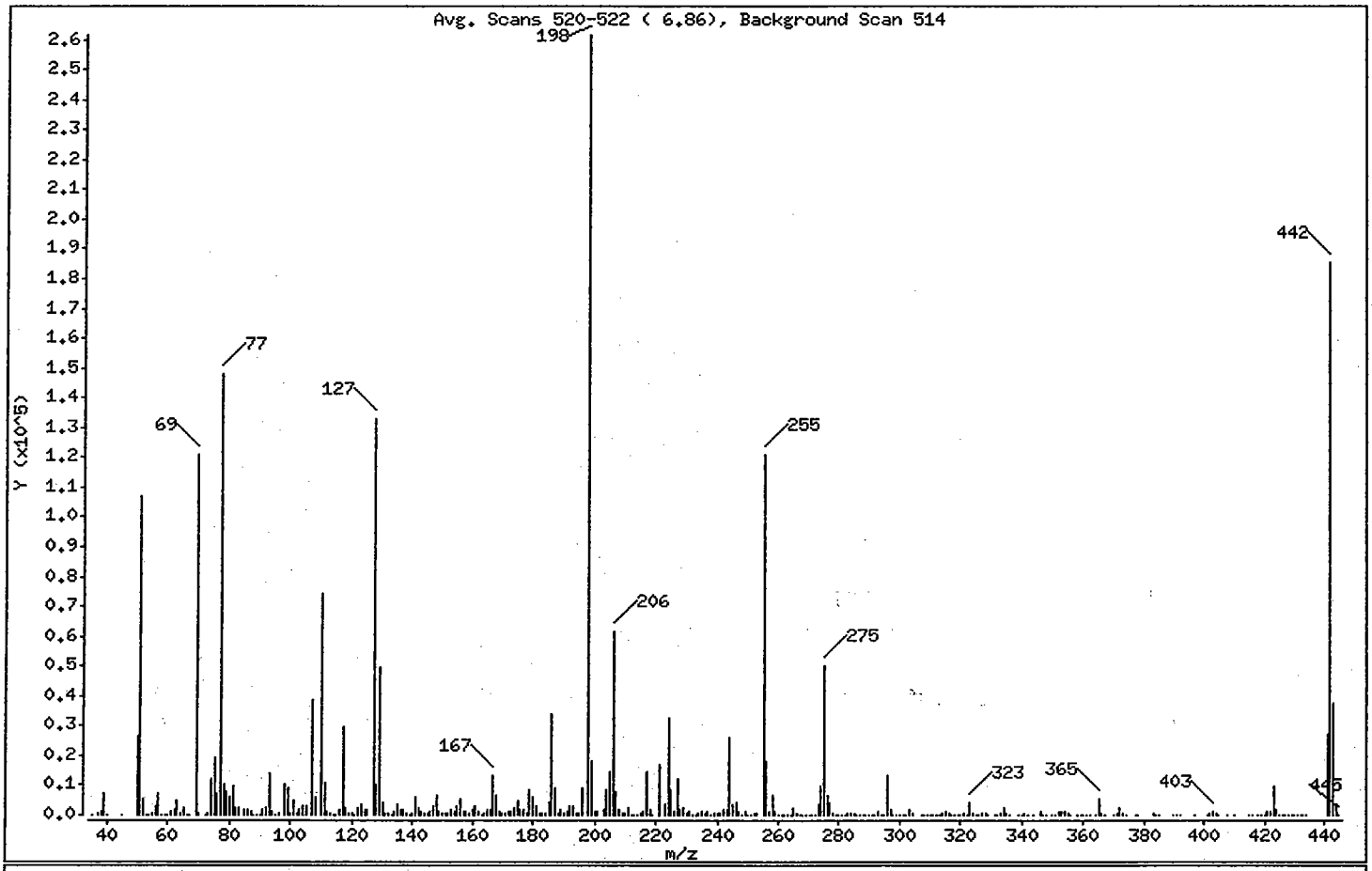
Volume Injected (uL): 2.0

Operator: SLP

Column phase: RTX-5MS

Column diameter: 0.32

1 Decafluorotriphenylphosphine



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	40.87
68	Less than 2.00% of mass 69	0.00 (0.00)
69	Mass 69 relative abundance	46.21
70	Less than 2.00% of mass 69	0.26 (0.56)
127	10.00 - 80.00% of mass 198	50.70
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.86
275	10.00 - 60.00% of mass 198	19.27
365	Greater than 1.00% of mass 198	2.14
441	Present, but less than mass 443	10.35
442	50.00 - 100.00% of mass 198	70.96
443	15.00 - 24.00% of mass 442	14.23 (20.06)

Data File: /chem/5973hp68.i/DF101122A68_A.b/0K22004-TUN1A68.d

Date : 22-NOV-2010 09:21

Client ID: DFTPPDO Instrument: 5973hp68.i

Sample Info: 0K22004-TUN3:SLP

Volume Injected (uL): 2.0 Operator: SLP

Column phase: RTX-5MS Column diameter: 0.32

Data File: 0K22004-TUN1A68.d

Spectrum: Avg. Scans 520-522 (6.86), Background Scan 514

Location of Maximum: 198.00

Number of points: 347

m/z	Y	m/z	Y	m/z	Y	m/z	Y
35.00	101	138.00	312	229.00	2706	319.00	19
37.00	338	139.00	242	230.00	305	320.00	63
38.00	1129	140.00	517	231.00	1298	321.00	425
39.00	6993	141.00	5906	232.00	232	322.00	162
40.00	266	142.00	2174	233.00	224	323.00	4470
45.00	148	143.00	1283	234.00	797	324.00	891
50.00	26872	144.00	357	235.00	920	325.00	105
51.00	106912	145.00	398	236.00	676	326.00	64
52.00	5462	146.00	979	237.00	991	327.00	723
53.00	191	147.00	3144	238.00	180	328.00	356
54.00	13	148.00	6666	239.00	477	329.00	59
55.00	546	149.00	1505	240.00	382	331.00	19
56.00	2997	150.00	419	241.00	705	332.00	294
57.00	7368	151.00	807	242.00	1639	333.00	386
58.00	178	152.00	462	243.00	1798	334.00	2695
59.00	100	153.00	1646	244.00	26152	335.00	728
60.00	52	154.00	1356	245.00	3680	336.00	101
61.00	1392	155.00	3272	246.00	4484	339.00	54
62.00	1557	156.00	5252	247.00	968	340.00	48
63.00	4766	157.00	1158	248.00	261	341.00	532
64.00	613	158.00	1193	249.00	954	342.00	162
65.00	2212	159.00	845	250.00	209	344.00	18
66.00	90	160.00	1724	251.00	298	346.00	968
67.00	109	161.00	2890	252.00	382	347.00	240
69.00	120880	162.00	934	253.00	634	348.00	18
70.00	682	163.00	295	255.00	120576	350.00	50
72.00	58	164.00	362	256.00	18240	351.00	111
73.00	801	165.00	2101	257.00	1456	352.00	1312
74.00	11906	166.00	1934	258.00	6488	353.00	1028
75.00	19048	167.00	13237	259.00	1032	354.00	1471
76.00	6956	168.00	6617	260.00	217	355.00	364
77.00	148288	169.00	1060	261.00	268	356.00	20
78.00	10566	170.00	356	262.00	51	358.00	25
79.00	8069	171.00	540	263.00	95	359.00	117
80.00	6342	172.00	1094	264.00	158	360.00	23

Data File: /chem/5973hp68.i/DF101122A68_A.b/0K22004-TUN1A68.d

Date : 22-NOV-2010 09:21

Client ID: DFTPPDO Instrument: 5973hp68.i

Sample Info: 0K22004-TUN3:SLP

Volume Injected (uL): 2.0 Operator: SLP

Column phase: RTX-5MS Column diameter: 0.32

Data File: 0K22004-TUN1A68.d

Spectrum: Avg. Scans 520-522 (6.86), Background Scan 514

Location of Maximum: 198.00

Number of points: 347

m/z	Y	m/z	Y	m/z	Y	m/z	Y
81.00	9379	173.00	1376	265.00	2550	361.00	33
82.00	2380	174.00	2502	266.00	316	362.00	18
83.00	2230	175.00	4847	267.00	87	364.00	17
85.00	1680	176.00	1601	268.00	28	365.00	5591
86.00	2097	177.00	2040	269.00	68	366.00	835
87.00	1074	178.00	733	270.00	91	367.00	83
88.00	193	179.00	8485	271.00	267	370.00	104
89.00	234	180.00	5947	272.00	254	371.00	325
90.00	37	181.00	2798	273.00	3459	372.00	2234
91.00	2021	182.00	499	274.00	9435	373.00	560
92.00	2302	183.00	351	275.00	50408	374.00	90
93.00	14057	184.00	821	276.00	6813	377.00	86
94.00	1025	185.00	4273	277.00	4366	378.00	19
95.00	168	186.00	33608	278.00	680	383.00	602
96.00	620	187.00	9250	279.00	105	384.00	182
98.00	10367	188.00	863	280.00	45	385.00	72
99.00	8877	189.00	1789	281.00	21	390.00	247
100.00	698	190.00	396	282.00	131	391.00	274
101.00	5054	191.00	955	283.00	477	392.00	145
102.00	312	192.00	2938	284.00	371	397.00	36
103.00	1860	193.00	3307	285.00	811	401.00	168
104.00	3120	194.00	741	286.00	135	402.00	904
105.00	2928	195.00	412	287.00	20	403.00	1464
107.00	38408	196.00	8818	288.00	43	404.00	537
108.00	6154	198.00	261568	289.00	129	405.00	67
110.00	74184	199.00	17944	290.00	140	408.00	21
111.00	11063	200.00	1246	291.00	151	410.00	28
112.00	1398	201.00	1325	292.00	211	415.00	68
113.00	453	203.00	1679	293.00	915	416.00	25
114.00	124	204.00	8676	294.00	259	418.00	17
115.00	126	205.00	14447	295.00	99	419.00	39
116.00	1983	206.00	61680	296.00	13048	420.00	24
117.00	29456	207.00	7697	297.00	1872	421.00	1247
118.00	2146	208.00	1767	298.00	141	422.00	1245
119.00	325	209.00	692	299.00	42	423.00	9437

Data File: /chem/5973hp68.i/DF101122A68_A.b/0K22004-TUN1A68.d

Date : 22-NOV-2010 09:21

Client ID: DFTPPDO

Instrument: 5973hp68.i

Sample Info: 0K22004-TUN3:SLP

Volume Injected (uL): 2.0

Operator: SLP

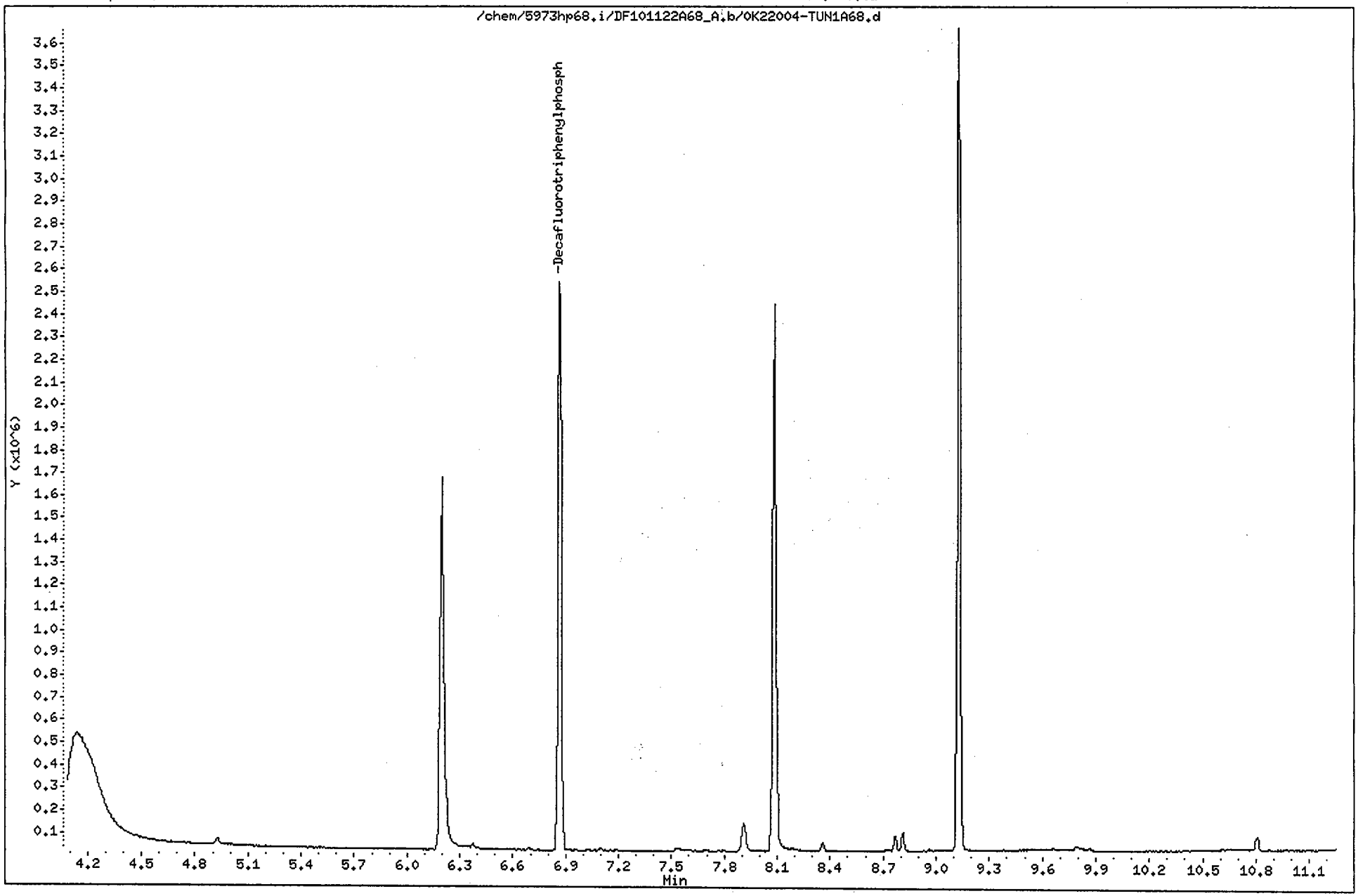
Column phase: RTX-5MS

Column diameter: 0.32

Data File: 0K22004-TUN1A68.d
Spectrum: Avg. Scans 520-522 (6.86), Background Scan 514
Location of Maximum: 198.00
Number of points: 347

m/z	Y	m/z	Y	m/z	Y	m/z	Y
120.00	530	210.00	526	300.00	34	424.00	1910
121.00	58	211.00	2421	301.00	213	425.00	234
122.00	2370	212.00	143	302.00	245	426.00	84
123.00	3530	213.00	174	303.00	1551	427.00	133
124.00	1625	214.00	38	304.00	463	428.00	84
125.00	1618	215.00	559	307.00	38	429.00	232
127.00	132608	216.00	1260	308.00	218	430.00	45
128.00	10416	217.00	14593	309.00	137	431.00	234
129.00	49440	218.00	1998	310.00	159	432.00	123
130.00	4251	219.00	276	311.00	18	433.00	47
131.00	778	221.00	16712	312.00	26	434.00	31
132.00	372	223.00	3390	313.00	192	441.00	27072
133.00	151	224.00	32536	314.00	584	442.00	185600
134.00	1384	225.00	8238	315.00	1494	443.00	37232
135.00	3807	226.00	937	316.00	870	444.00	3388
136.00	1516	227.00	12267	317.00	177	445.00	205
137.00	2027	228.00	1703	318.00	44		

Data File: /chem/5973hp68.i/DF101122A68_A.b/0K22004-TUN1A68.d
Date : 22-NOV-2010 09:21
Client ID: DFTPPDO
Instrument: 5973hp68.i
Sample Info: 0K22004-TUN3:SLP
Volume Injected (uL): 2.0
Operator: SLP
Column phase: RTX-5MS
Column diameter: 0.32



TAILING FACTOR and DEGRADATION SUMMARY RESULTS

DECAFLUOROTRIPHENYLPHOSPHINE Ion Abundance/Ratio Criteria Chart

Ion	Abundance Criteria	Base Peak	Other	Test
198	Base Peak, 100% relative abundance	100.00		PASS
51	10 - 80% of mass 198	40.87		PASS
68	Less than 2% of mass 69	0.00	(0.00)	PASS
69	Mass 69 relative abundance	46.21		PASS
70	Less than 2% of mass 69	0.26	(0.56)	PASS
127	10 - 80% of mass 198	50.70		PASS
197	0 - 2% of mass 198	0.00		PASS
199	5 - 9% of mass 198	6.86		PASS
275	10 - 60% of mass 198	19.27		PASS
365	Greater than 0.75% of mass 198	2.14		PASS
441	Present, but less than mass 443	10.35	(72.72)	PASS
442	50 - 100 % of mass 198	70.96		PASS
443	15 - 24% of mass 442	14.23	(20.06)	PASS

TAILING ANALYSIS SUMMARY

Compound	Tail Factor	Max Allowed	Test
Pentachlorophenol	1.9	5.0	PASS
Benzidine	1.0	3.0	PASS

DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

Compound	Response	%Breakdown	Max Allowed	Test
4,4-DDT	780956			N/A
4,4-DDE	4147	0.5	20.0	PASS
4,4-DDD	14741	1.9	20.0	PASS
4,4-DDD + DDE	18888	2.4	20.0	PASS

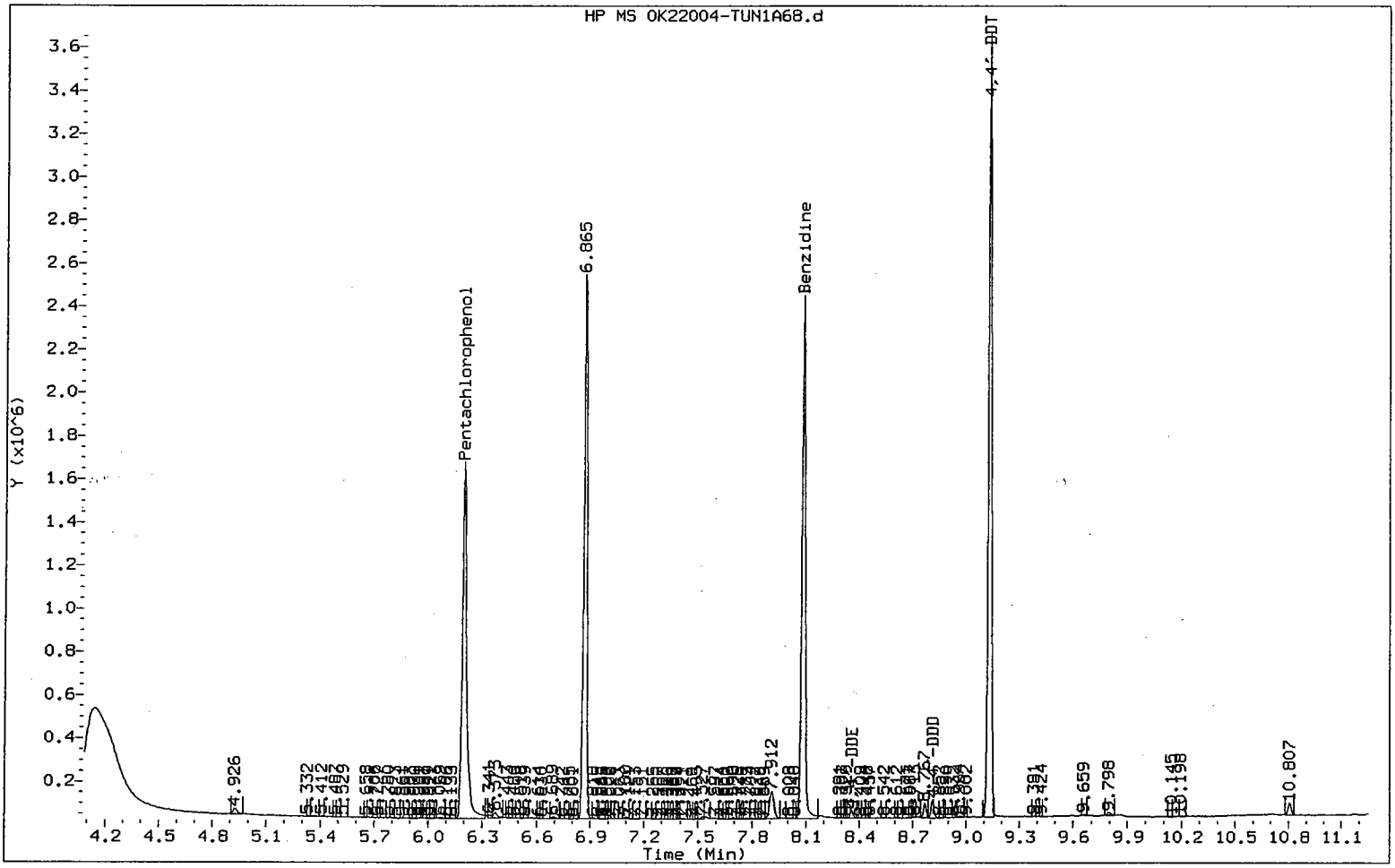
Tuning Sample, /chem/5973hp68.i/DF101122A68_A.b/0K22004-TUN1A68.d/0K22004-TUN1A6

*** PASSED ***

TAILING FACTOR and DEGRADATION SAMPLE AND GRAPHIC REPORT

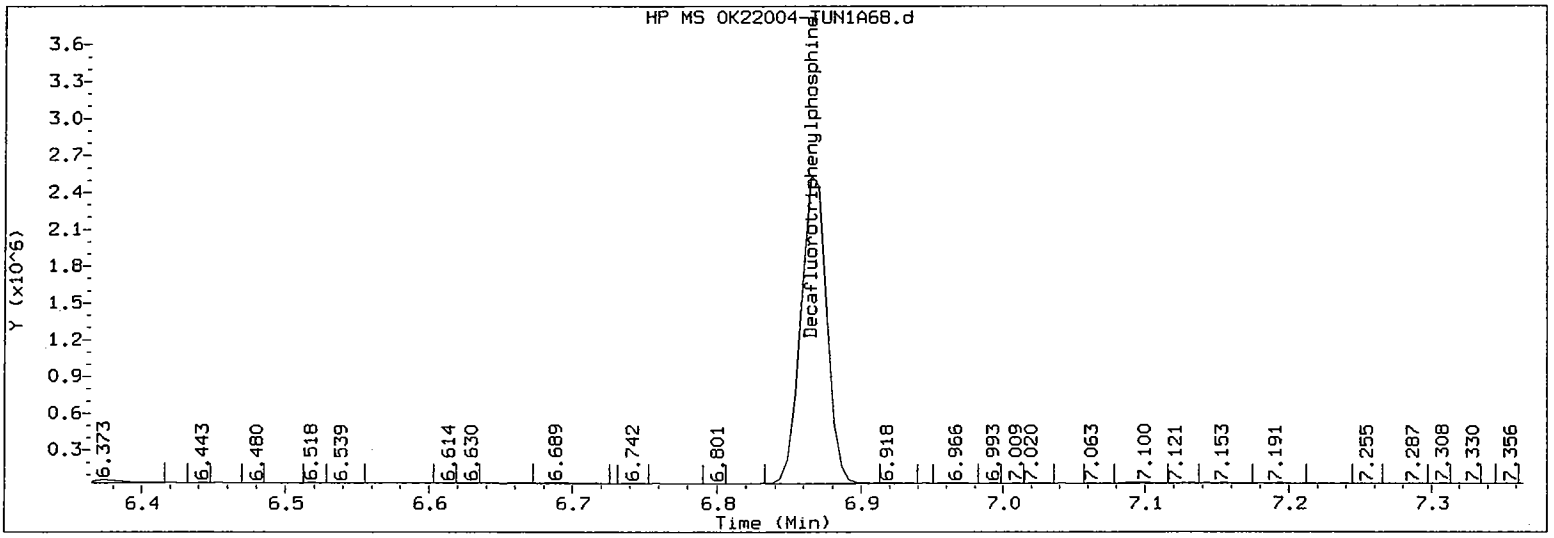
Report Date: 11/27/2010 07:33

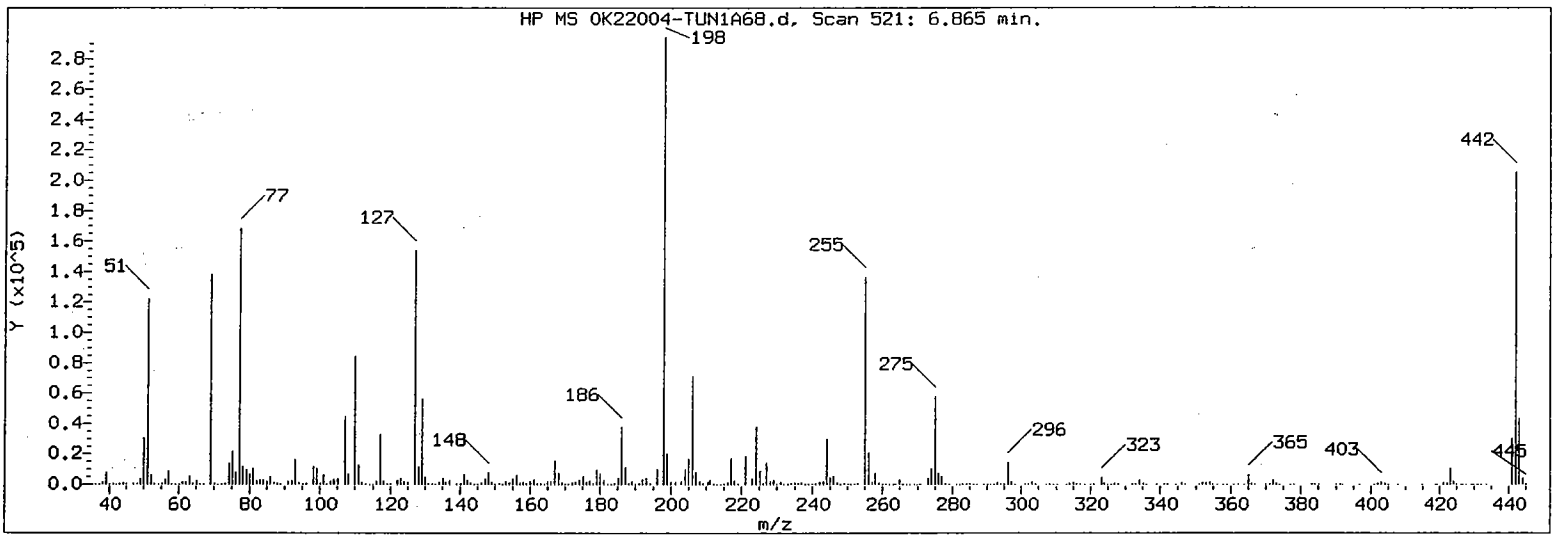
Datafile Analyzed: /chem/5973hp68.i/DF101122A68_A.b/0K22004-TUN1A68.d/0K22004-TU
Method Used: /chem/5973hp68.i/DF101122A68_A.b/dftpp8270C.m Inst: 5973hp68
Injection Date: 22-NOV-2010 09:21 Operator: SLP
Sample Info: 0K22004-TUN3 0K22004-TUN3:SLP
Misc Info: DFTPPDO



Report Date: 11/27/2010 07:33

Datafile Analyzed: /chem/5973hp68.i/DF101122A68_A.b/0K22004-TUN1A68.d/0K22004-TU
Method Used: /chem/5973hp68.i/DF101122A68_A.b/dftpp8270C.m Inst: 5973hp68.
Injection Date: 22-NOV-2010 09:21 Operator: SLP
Sample Info: 0K22004-TUN3 0K22004-TUN3:SLP
Misc Info: DFTPPDO



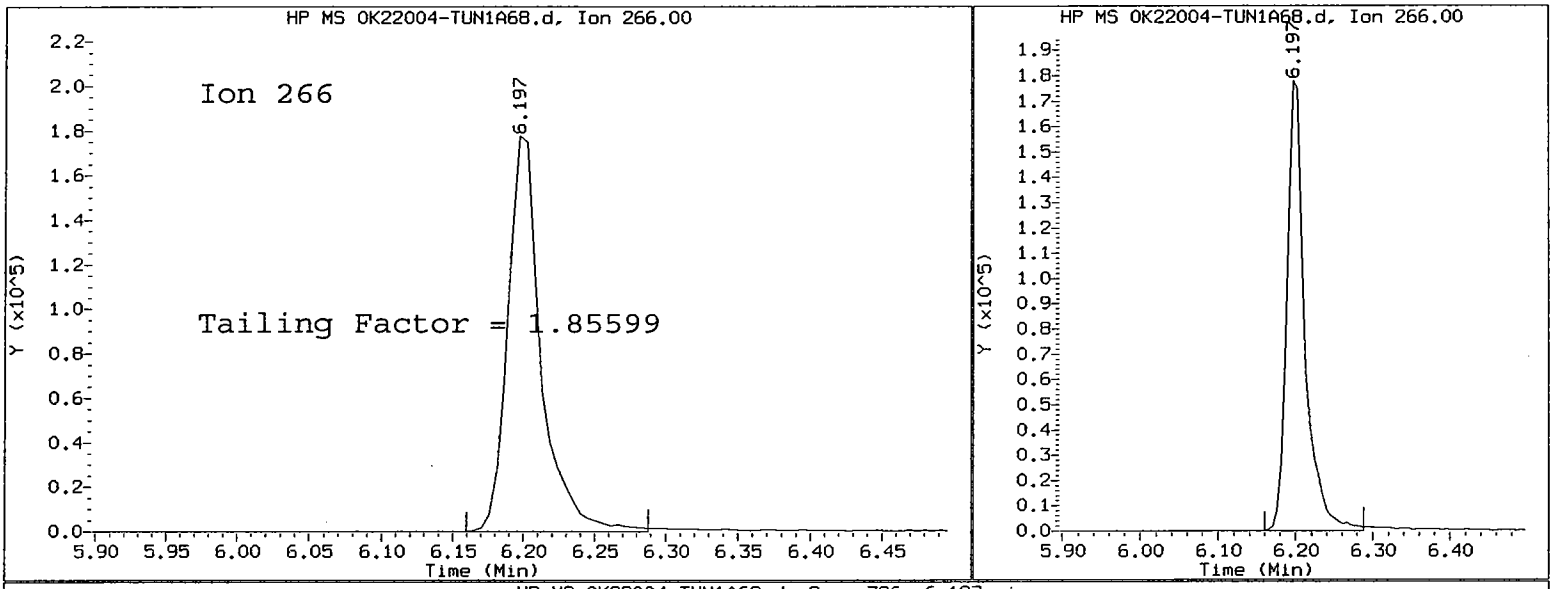


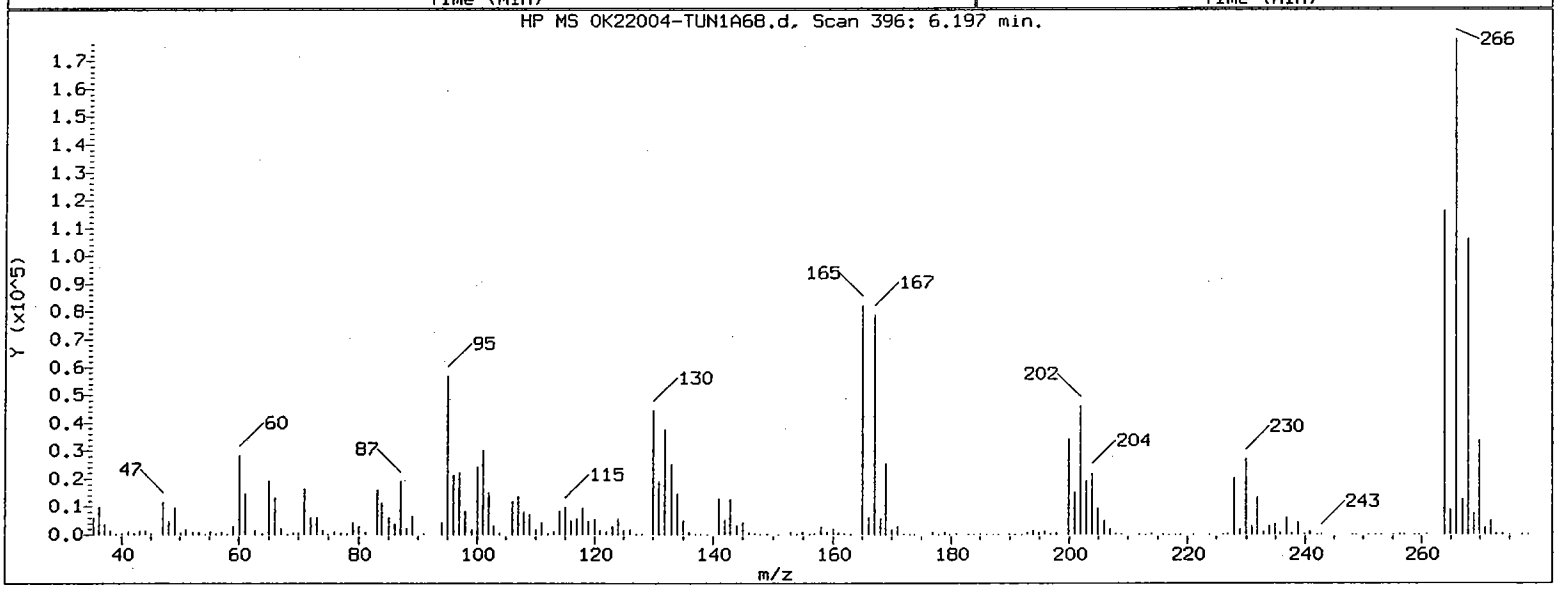
DECAFLUOROTRIPHENYLPHOSPHINE Ion Abundance/Ratio Criteria Chart

Ion	Abundance Criteria	Base Peak	Other	Test
198	Base Peak, 100% relative abundance	100.00		PASS
51	10 - 80% of mass 198	40.87		PASS
68	Less than 2% of mass 69	0.00	(0.00)	PASS
69	Mass 69 relative abundance	46.21		PASS
70	Less than 2% of mass 69	0.26	(0.56)	PASS
127	10 - 80% of mass 198	50.70		PASS
197	0 - 2% of mass 198	0.00		PASS
199	5 - 9% of mass 198	6.86		PASS
275	10 - 60% of mass 198	19.27		PASS
365	Greater than 0.75% of mass 198	2.14		PASS
441	Present, but less than mass 443	10.35	(72.72)	PASS
442	50 - 100% of mass 198	70.96		PASS
443	15 - 24% of mass 442	14.23	(20.06)	PASS

Report Date: 11/27/2010 07:33

Datafile Analyzed: /chem/5973hp68.i/DF101122A68_A.b/0K22004-TUN1A68.d/0K22004-TU
Method Used: /chem/5973hp68.i/DF101122A68.b/dftpp8270C.m/BrkDwnTF.m Inst: 5973h
Injection Date: 22-NOV-2010 09:21 Operator:
Sample Info: DFTPP 0K22004-TUN3:SLP
Misc Info:





Pentachlorophenol
==========
Exp. RT = 6.325
Found RT = 6.197

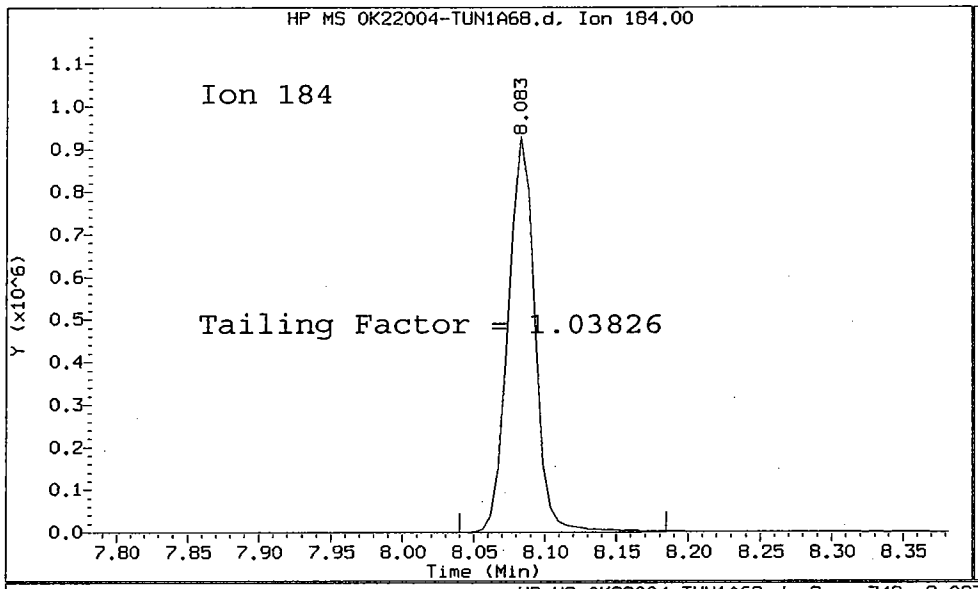
Mass	Area	Ratio
266	290524	100.00

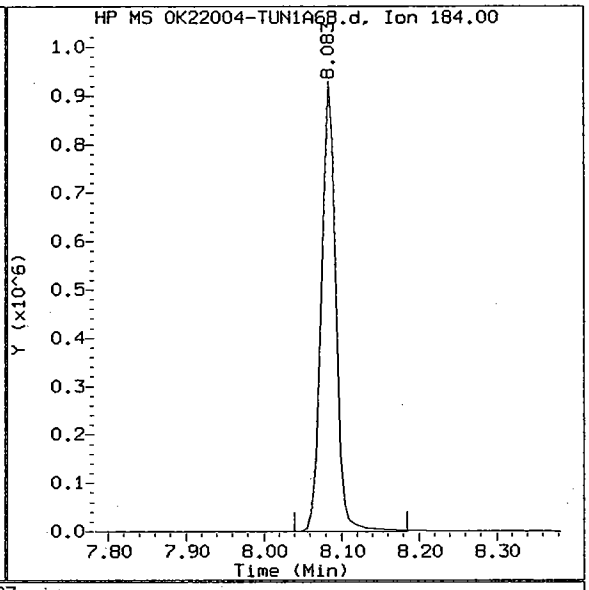
Tailing factor for Pentachlorophenol OK

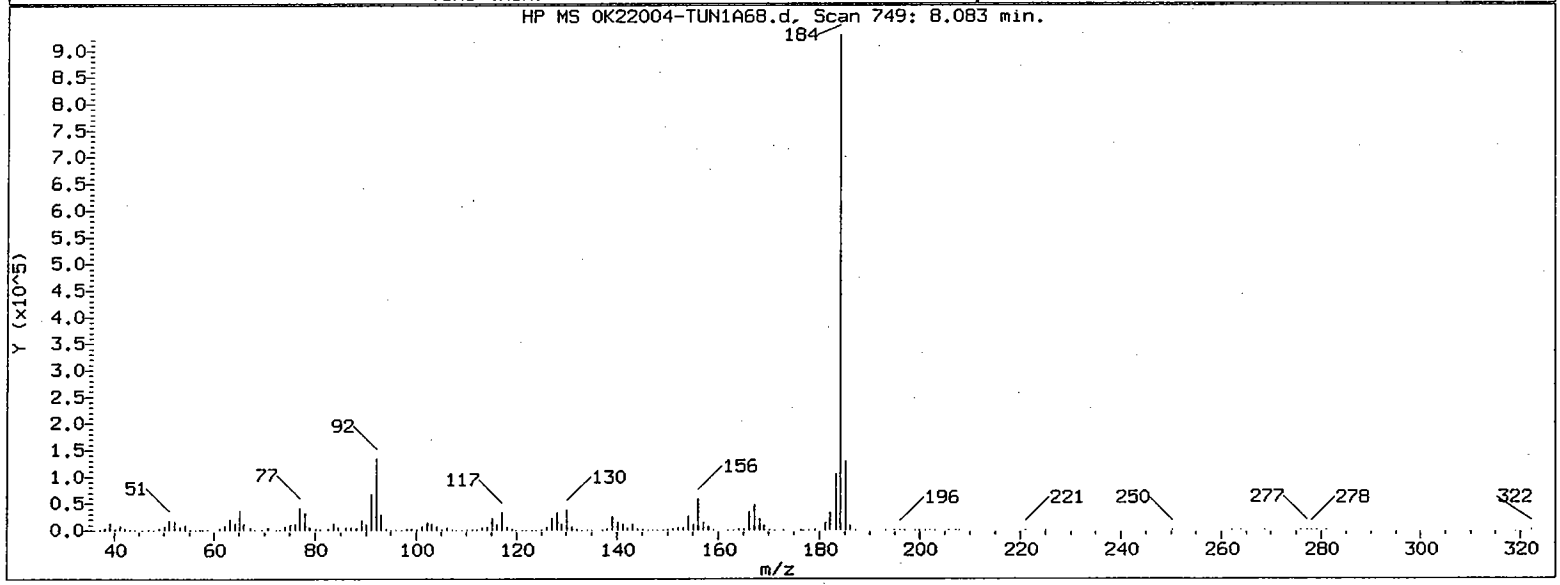
Tailing Factor = 1.9 Maximum Allowed = 5.0

Report Date: 11/27/2010 07:33

Datafile Analyzed: /chem/5973hp68.i/DF101122A68_A.b/0K22004-TUN1A68.d/0K22004-TU
Method Used: /chem/5973hp68.i/DF101122A68.b/dftpp8270C.m/BrkDwnTF.m Inst: 5973h
Injection Date: 22-NOV-2010 09:21 Operator:
Sample Info: DFTPP 0K22004-TUN3:SLP
Misc Info:







Benzidine
=========
Exp. RT = 8.201
Found RT = 8.083

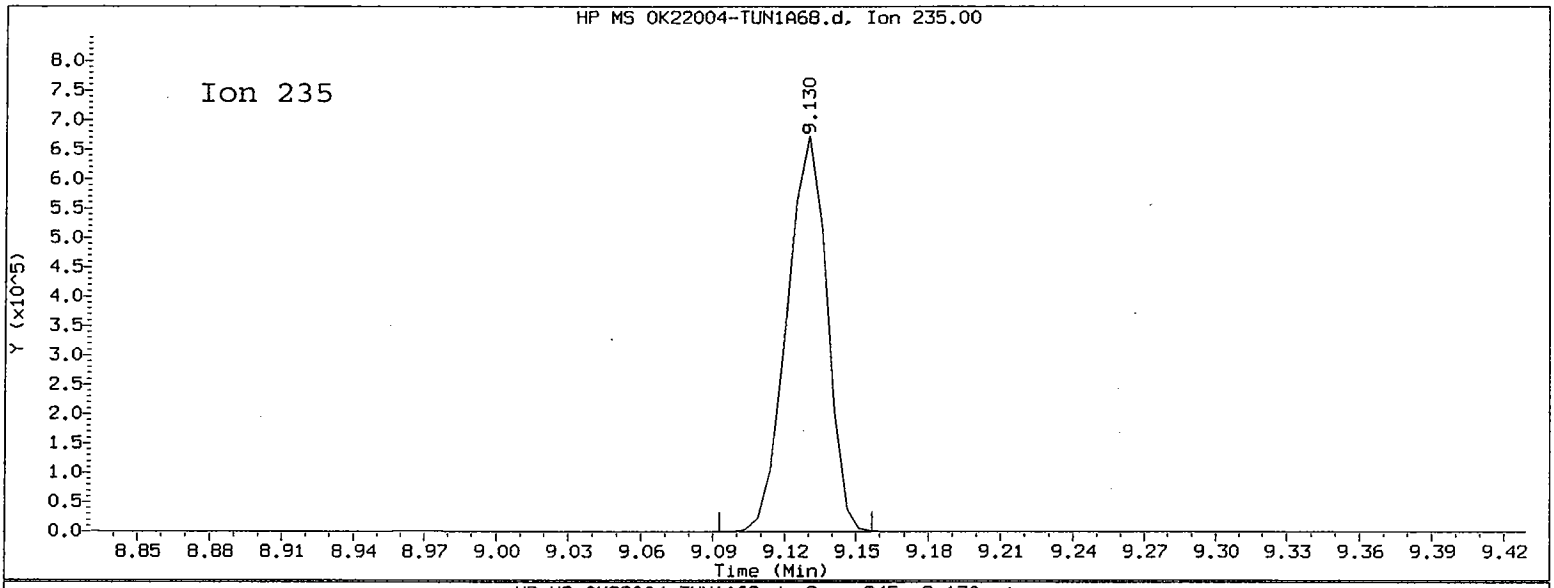
Mass	Area	Ratio
184	1225841	100.00

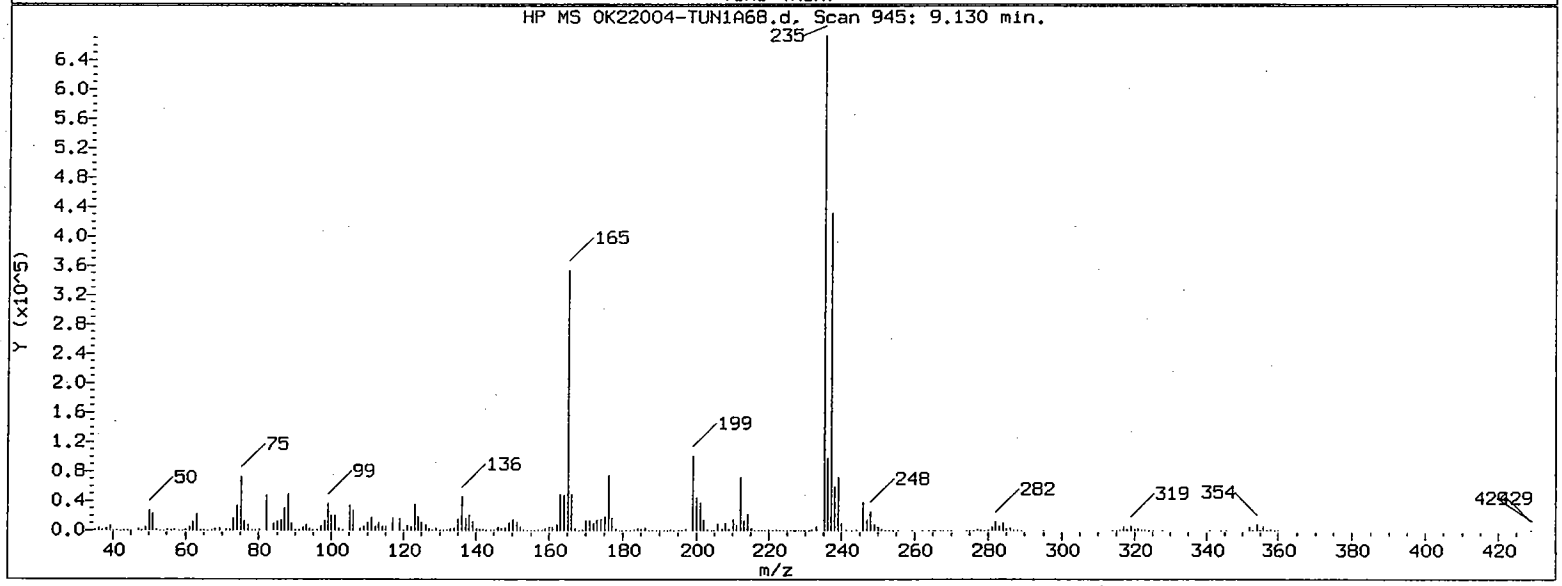
Tailing factor for Benzidine OK

Tailing Factor = 1.0 Maximum Allowed = 3.0

Report Date: 11/27/2010 07:33

Datafile Analyzed: /chem/5973hp68.i/DF101122A68_A.b/0K22004-TUN1A68.d/0K22004-TU
Method Used: /chem/5973hp68.i/DF101122A68.b/dftpp8270C.m/BrkDwnTF.m Inst: 5973h
Injection Date: 22-NOV-2010 09:21 Operator:
Sample Info: DFTPP 0K22004-TUN3:SLP
Misc Info:



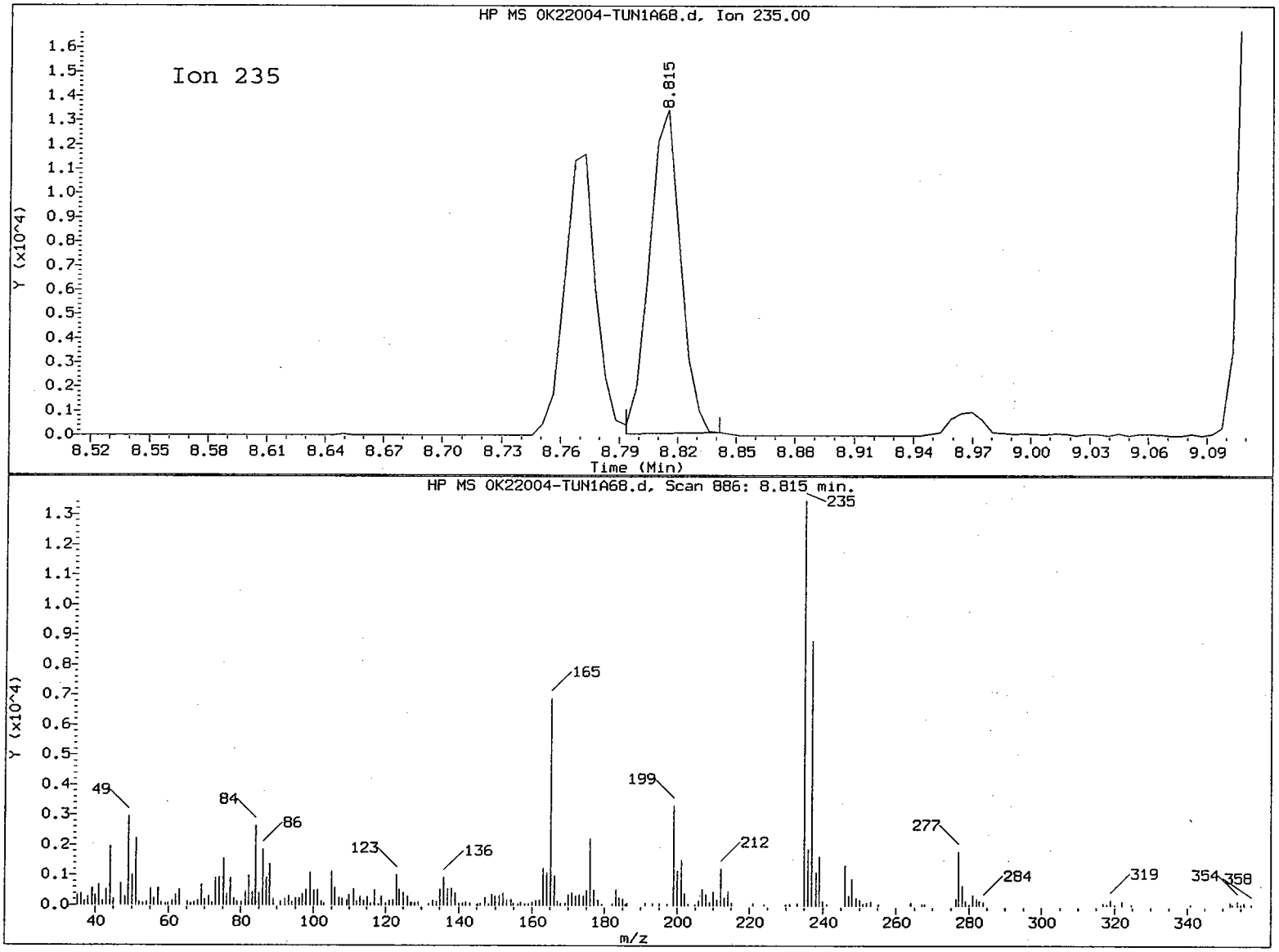


4,4'-DDT
========
Exp. RT = 9.248
Found RT = 9.130

Mass	Area	Ratio
235	780956	100.00

Report Date: 11/27/2010 07:33

Datafile Analyzed: /chem/5973hp68.i/DF101122A68_A.b/0K22004-TUN1A68.d/0K22004-TU
Method Used: /chem/5973hp68.i/DF101122A68.b/dftpp8270C.m/BrkDwnTF.m Inst: 5973h
Injection Date: 22-NOV-2010 09:21 Operator:
Sample Info: DFTPP 0K22004-TUN3:SLP
Misc Info:

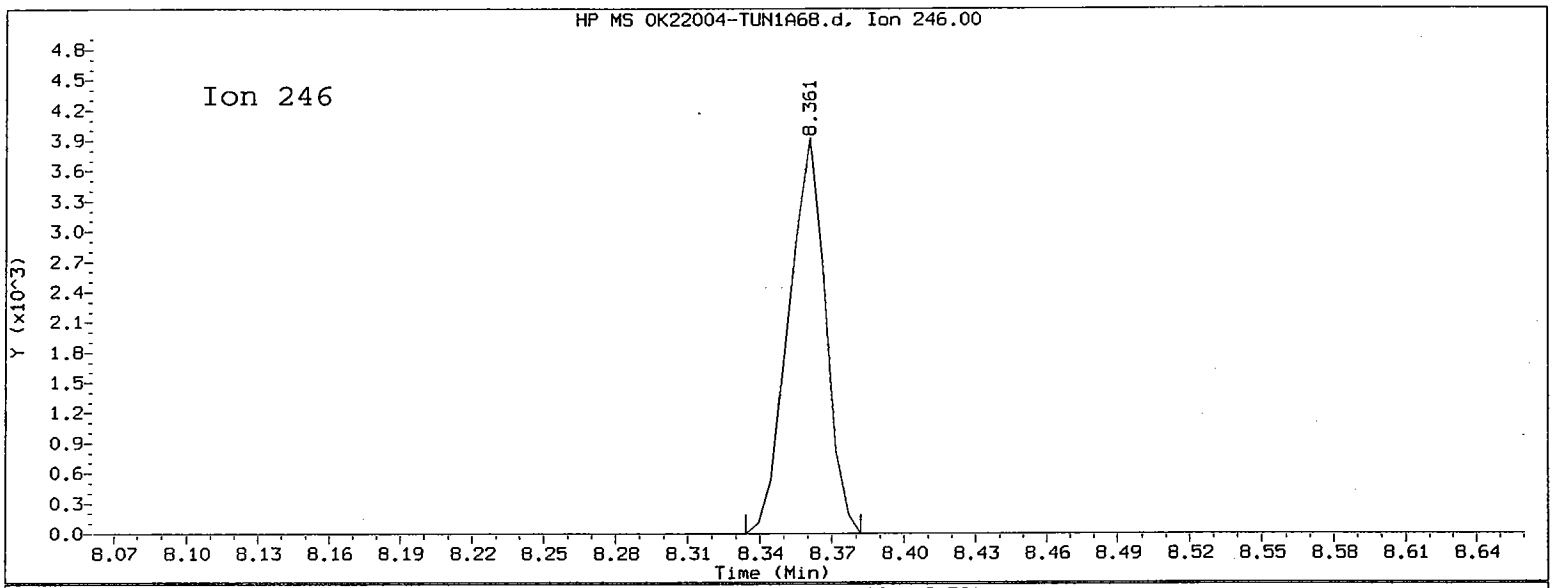


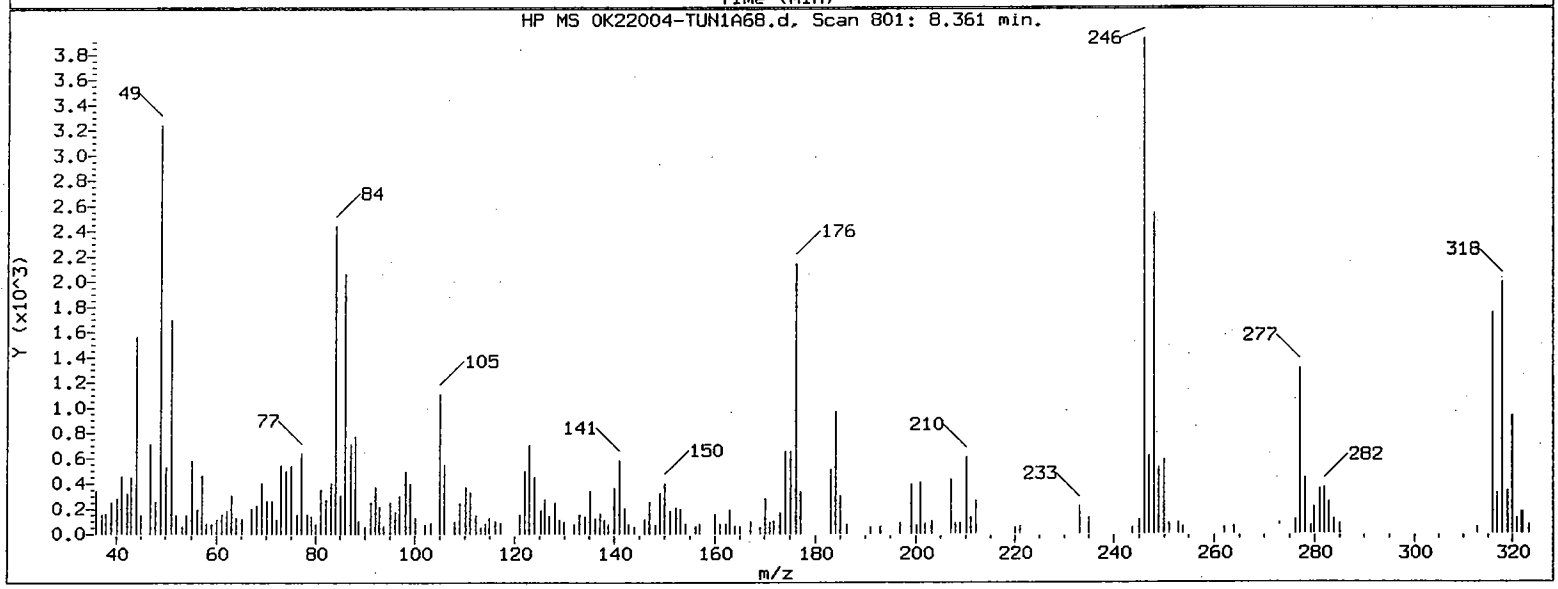
4,4'-DDD
========
Exp. RT = 8.900
Found RT = 8.815

Mass	Area	Ratio
235	14741	100.00

Report Date: 11/27/2010 07:33

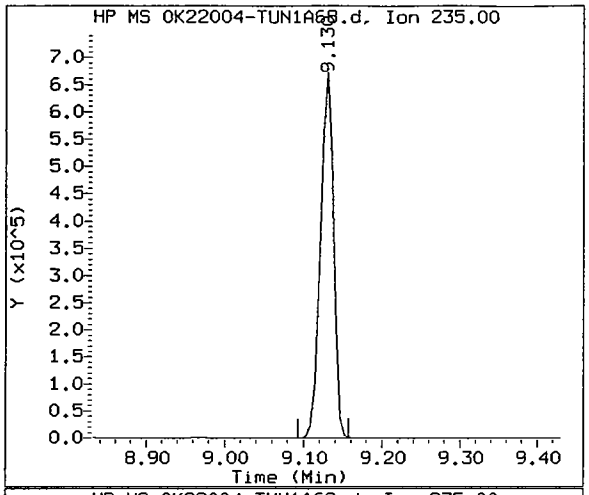
Datafile Analyzed: /chem/5973hp68.i/DF101122A68_A.b/0K22004-TUN1A68.d/0K22004-TU
Method Used: /chem/5973hp68.i/DF101122A68.b/dftpp8270C.m/BrkDwnTF.m Inst: 5973h
Injection Date: 22-NOV-2010 09:21 Operator:
Sample Info: DFTPP 0K22004-TUN3:SLP
Misc Info:



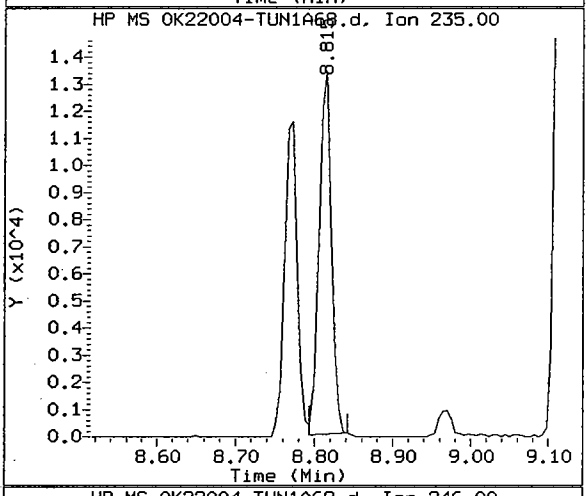


4,4'-DDE
========
Exp. RT = 8.440
Found RT = 8.361

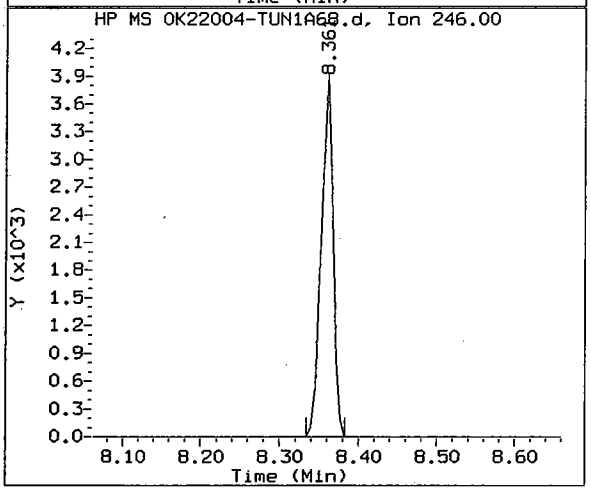
Mass	Area	Ratio
246	4147	100.00



Compound: 4,4'-DDT
Quant Mass: 235
RT: 9.130
Area: 780956



Compound: 4,4'-DDD
Quant Mass: 235
RT: 8.815
Area: 14741



Compound: 4,4'-DDE
Quant Mass: 246
RT: 8.361
Area: 4147

DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

Compound	Response	%Breakdown	Max Allowed	Test
4,4-DDT	780956			N/A
4,4-DDE	4147	0.5	20.0	PASS
4,4-DDD	14741	1.9	20.0	PASS
4,4-DDD + DDE	18888	2.4	20.0	PASS

****
TUNE SAMPLE *** PASSED *** DDT BREAKDOWN TEST
****

Data File: /chem/5973hp68.i/DF101122A68_B.b/0K22004-TUN1A68.d

Date : 22-NOV-2010 09:21

Client ID: DFTPPDO

Instrument: 5973hp68.i

Sample Info: 0K22004-TUN3:SLP

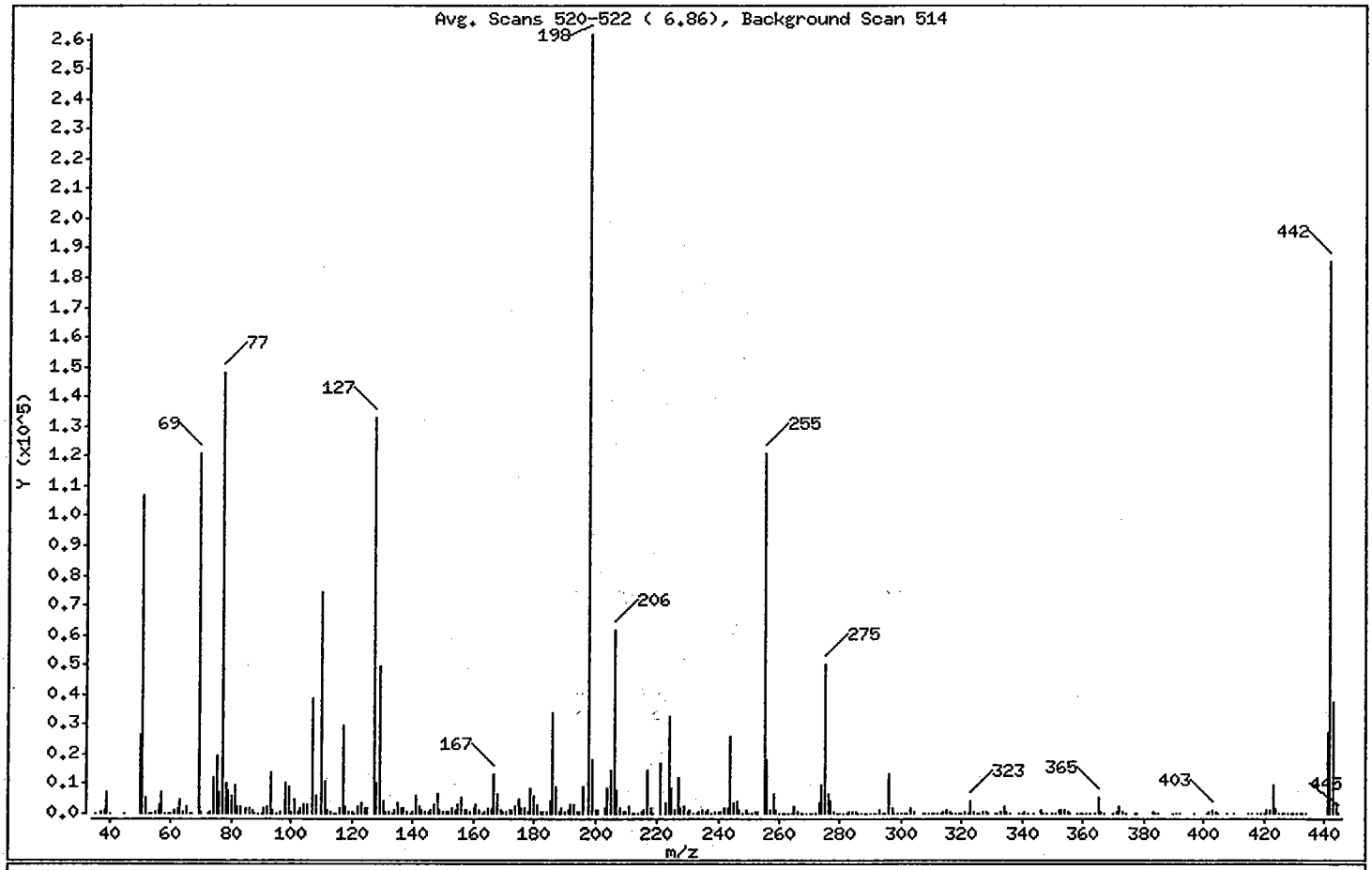
Volume Injected (uL): 2.0

Operator: SLP

Column phase: RTX-5MS

Column diameter: 0.32

1 Decafluorotriphenylphosphine



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	40.87
68	Less than 2.00% of mass 69	0.00 (0.00)
69	Mass 69 relative abundance	46.21
70	Less than 2.00% of mass 69	0.26 (0.56)
127	10.00 - 80.00% of mass 198	50.70
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.86
275	10.00 - 60.00% of mass 198	19.27
365	Greater than 1.00% of mass 198	2.14
441	Present, but less than mass 443	10.35
442	50.00 - 100.00% of mass 198	70.96
443	15.00 - 24.00% of mass 442	14.23 (20.06)

Data File: /chem/5973hp68.i/DF101122A68_B.b/0K22004-TUN1A68.d

Date : 22-NOV-2010 09:21

Client ID: DFTPPDO

Instrument: 5973hp68.i

Sample Info: 0K22004-TUN3:SLP

Volume Injected (uL): 2.0

Operator: SLP

Column phase: RTX-5MS

Column diameter: 0.32

Data File: 0K22004-TUN1A68.d

Spectrum: Avg. Scans 520-522 (6.86), Background Scan 514

Location of Maximum: 198.00

Number of points: 347

m/z	Y	m/z	Y	m/z	Y	m/z	Y
35.00	101	138.00	312	229.00	2706	319.00	19
37.00	338	139.00	242	230.00	305	320.00	63
38.00	1129	140.00	517	231.00	1298	321.00	425
39.00	6993	141.00	5906	232.00	232	322.00	162
40.00	266	142.00	2174	233.00	224	323.00	4470
45.00	148	143.00	1283	234.00	797	324.00	891
50.00	26872	144.00	357	235.00	920	325.00	105
51.00	106912	145.00	398	236.00	676	326.00	64
52.00	5462	146.00	979	237.00	991	327.00	723
53.00	191	147.00	3144	238.00	180	328.00	356
54.00	13	148.00	6666	239.00	477	329.00	59
55.00	546	149.00	1505	240.00	382	331.00	19
56.00	2997	150.00	419	241.00	705	332.00	294
57.00	7368	151.00	807	242.00	1639	333.00	386
58.00	178	152.00	462	243.00	1798	334.00	2695
59.00	100	153.00	1646	244.00	26152	335.00	728
60.00	52	154.00	1356	245.00	3680	336.00	101
61.00	1392	155.00	3272	246.00	4484	339.00	54
62.00	1557	156.00	5252	247.00	968	340.00	48
63.00	4766	157.00	1158	248.00	261	341.00	532
64.00	613	158.00	1193	249.00	954	342.00	162
65.00	2212	159.00	845	250.00	209	344.00	18
66.00	90	160.00	1724	251.00	298	346.00	968
67.00	109	161.00	2890	252.00	382	347.00	240
69.00	120880	162.00	934	253.00	634	348.00	18
70.00	682	163.00	295	255.00	120576	350.00	50
72.00	58	164.00	362	256.00	18240	351.00	111
73.00	801	165.00	2101	257.00	1456	352.00	1312
74.00	11906	166.00	1934	258.00	6488	353.00	1028
75.00	19048	167.00	13237	259.00	1032	354.00	1471
76.00	6956	168.00	6617	260.00	217	355.00	364
77.00	148288	169.00	1060	261.00	268	356.00	20
78.00	10566	170.00	356	262.00	51	358.00	25
79.00	8069	171.00	540	263.00	95	359.00	117
80.00	6342	172.00	1094	264.00	158	360.00	23

Data File: /chem/5973hp68.i/DF101122A68_B.b/0K22004-TUN1A68.d

Date : 22-NOV-2010 09:21

Client ID: DFTPPDO Instrument: 5973hp68.i

Sample Info: 0K22004-TUN3:SLP

Volume Injected (uL): 2.0 Operator: SLP

Column phase: RTX-5MS Column diameter: 0.32

Data File: 0K22004-TUN1A68.d
Spectrum: Avg. Scans 520-522 (6.86), Background Scan 514
Location of Maximum: 198.00
Number of points: 347

m/z	Y	m/z	Y	m/z	Y	m/z	Y
81.00	9379	173.00	1376	265.00	2550	361.00	33
82.00	2380	174.00	2502	266.00	316	362.00	18
83.00	2230	175.00	4847	267.00	87	364.00	17
85.00	1680	176.00	1601	268.00	28	365.00	5591
86.00	2097	177.00	2040	269.00	68	366.00	835
87.00	1074	178.00	733	270.00	91	367.00	83
88.00	193	179.00	8485	271.00	267	370.00	104
89.00	234	180.00	5947	272.00	254	371.00	325
90.00	37	181.00	2798	273.00	3459	372.00	2234
91.00	2021	182.00	499	274.00	9435	373.00	560
92.00	2302	183.00	351	275.00	50408	374.00	90
93.00	14057	184.00	821	276.00	6813	377.00	86
94.00	1025	185.00	4273	277.00	4366	378.00	19
95.00	168	186.00	33608	278.00	680	383.00	602
96.00	620	187.00	9250	279.00	105	384.00	182
98.00	10367	188.00	863	280.00	45	385.00	72
99.00	8877	189.00	1789	281.00	21	390.00	247
100.00	698	190.00	396	282.00	131	391.00	274
101.00	5054	191.00	955	283.00	477	392.00	145
102.00	312	192.00	2938	284.00	371	397.00	36
103.00	1860	193.00	3307	285.00	811	401.00	168
104.00	3120	194.00	741	286.00	135	402.00	904
105.00	2928	195.00	412	287.00	20	403.00	1464
107.00	38408	196.00	8818	288.00	43	404.00	537
108.00	6154	198.00	261568	289.00	129	405.00	67
110.00	74184	199.00	17944	290.00	140	408.00	21
111.00	11063	200.00	1246	291.00	151	410.00	28
112.00	1398	201.00	1325	292.00	211	415.00	68
113.00	453	203.00	1679	293.00	915	416.00	25
114.00	124	204.00	8676	294.00	259	418.00	17
115.00	126	205.00	14447	295.00	99	419.00	39
116.00	1983	206.00	61680	296.00	13048	420.00	24
117.00	29456	207.00	7697	297.00	1872	421.00	1247
118.00	2146	208.00	1767	298.00	141	422.00	1245
119.00	325	209.00	692	299.00	42	423.00	9437

Data File: /chem/5973hp68.i/DF101122A68_B.b/0K22004-TUN1A68.d

Date : 22-NOV-2010 09:21

Client ID: DFTPPDO Instrument: 5973hp68.i

Sample Info: 0K22004-TUN3:SLP

Volume Injected (uL): 2.0 Operator: SLP

Column phase: RTX-5MS Column diameter: 0.32

Data File: 0K22004-TUN1A68.d

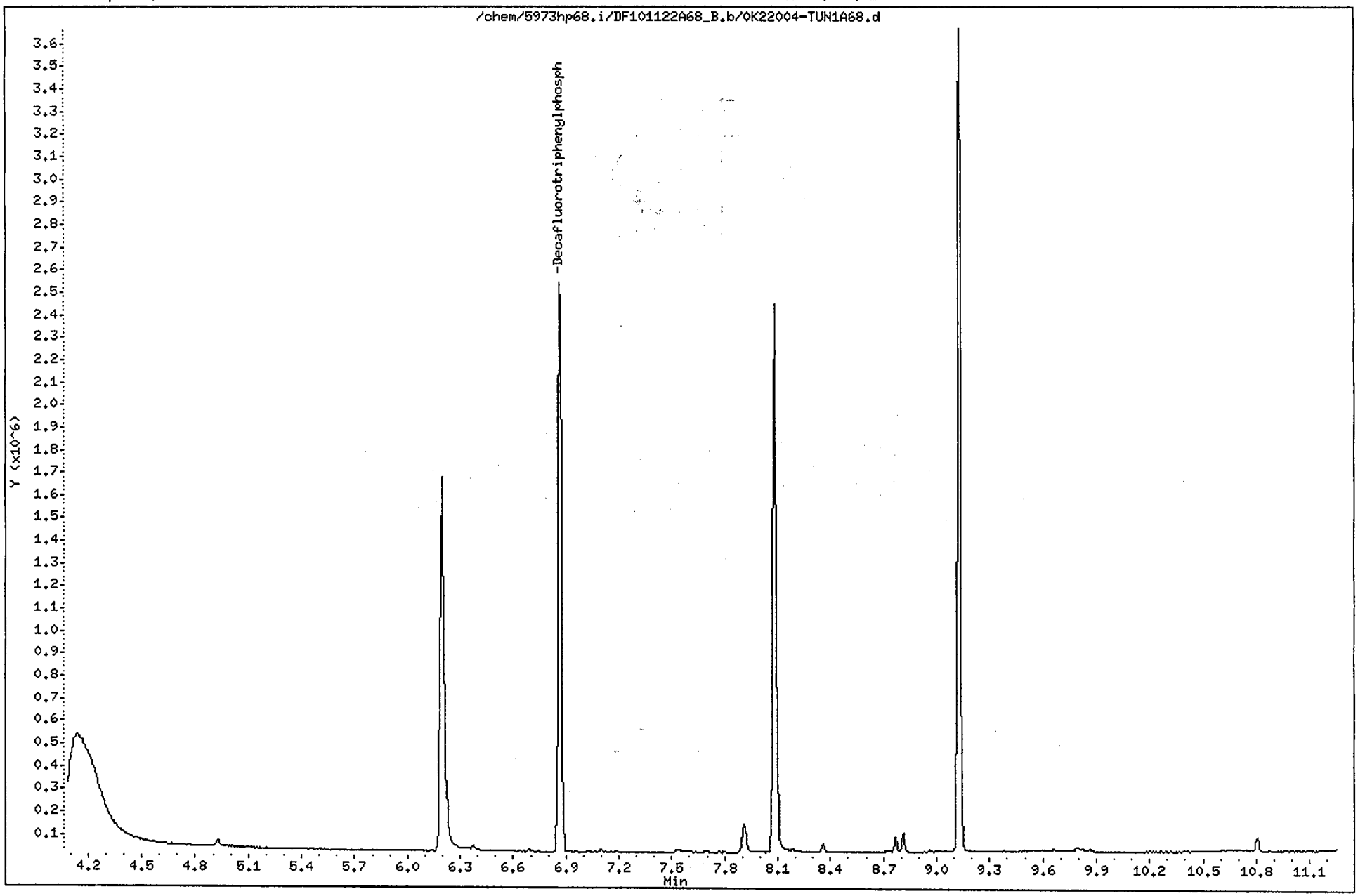
Spectrum: Avg. Scans 520-522 (6.86), Background Scan 514

Location of Maximum: 198.00

Number of points: 347

m/z	Y	m/z	Y	m/z	Y	m/z	Y
120.00	530	210.00	526	300.00	34	424.00	1910
121.00	58	211.00	2421	301.00	213	425.00	234
122.00	2370	212.00	143	302.00	245	426.00	84
123.00	3530	213.00	174	303.00	1551	427.00	133
124.00	1625	214.00	38	304.00	463	428.00	84
125.00	1618	215.00	559	307.00	38	429.00	232
127.00	132608	216.00	1260	308.00	218	430.00	45
128.00	10416	217.00	14593	309.00	137	431.00	234
129.00	49440	218.00	1998	310.00	159	432.00	123
130.00	4251	219.00	276	311.00	18	433.00	47
131.00	778	221.00	16712	312.00	26	434.00	31
132.00	372	223.00	3390	313.00	192	441.00	27072
133.00	151	224.00	32536	314.00	584	442.00	185600
134.00	1384	225.00	8238	315.00	1494	443.00	37232
135.00	3807	226.00	937	316.00	870	444.00	3388
136.00	1516	227.00	12267	317.00	177	445.00	205
137.00	2027	228.00	1703	318.00	44		

Data File: /chem/5973hp68.i/DF101122A68_B.b/0K22004-TUN1A68.d
Date : 22-NOV-2010 09:21
Client ID: DFTPPDO
Instrument: 5973hp68.i
Sample Info: 0K22004-TUN3:SLP
Volume Injected (uL): 2.0
Operator: SLP
Column phase: RTX-5MS
Column diameter: 0.32



TAILING FACTOR and DEGRADATION SUMMARY RESULTS

DECAFLUOROTRIPHENYLPHOSPHINE Ion Abundance/Ratio Criteria Chart

Ion	Abundance Criteria	Base Peak	Other	Test
198	Base Peak, 100% relative abundance	100.00		PASS
51	10 - 80% of mass 198	40.87		PASS
68	Less than 2% of mass 69	0.00	(0.00)	PASS
69	Mass 69 relative abundance	46.21		PASS
70	Less than 2% of mass 69	0.26	(0.56)	PASS
127	10 - 80% of mass 198	50.70		PASS
197	0 - 2% of mass 198	0.00		PASS
199	5 - 9% of mass 198	6.86		PASS
275	10 - 60% of mass 198	19.27		PASS
365	Greater than 0.75% of mass 198	2.14		PASS
441	Present, but less than mass 443	10.35	(72.72)	PASS
442	50 - 100 % of mass 198	70.96		PASS
443	15 - 24% of mass 442	14.23	(20.06)	PASS

TAILING ANALYSIS SUMMARY

Compound	Tail Factor	Max Allowed	Test
Pentachlorophenol	1.9	5.0	PASS
Benzidine	1.0	3.0	PASS

DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

Compound	Response	%Breakdown	Max Allowed	Test
4,4-DDT	780956			N/A
4,4-DDE	4147	0.5	20.0	PASS
4,4-DDD	14741	1.9	20.0	PASS
4,4-DDD + DDE	18888	2.4	20.0	PASS

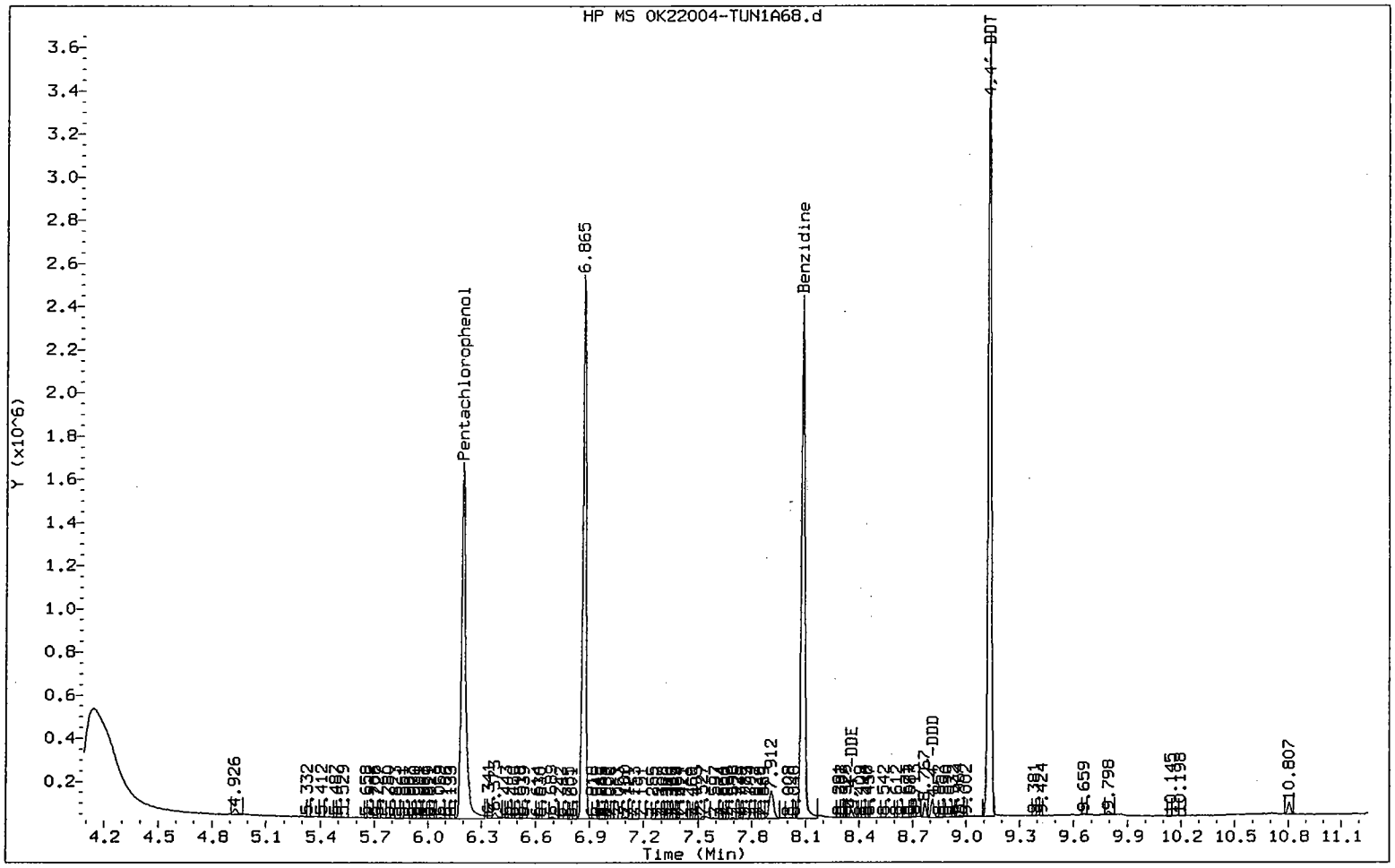
Tuning Sample, /chem/5973hp68.i/DF101122A68_B.b/0K22004-TUN1A68.d/0K22004-TUN1A6

*** PASSED ***

TAILING FACTOR and DEGRADATION SAMPLE AND GRAPHIC REPORT

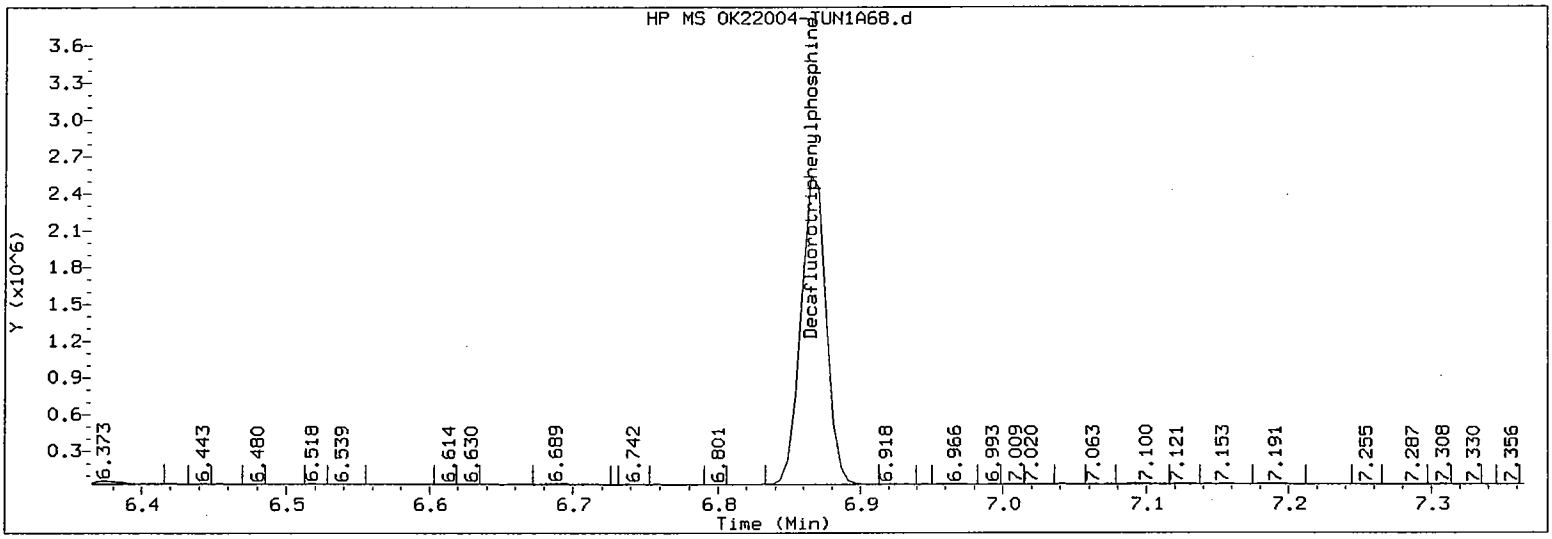
Report Date: 11/27/2010 08:05

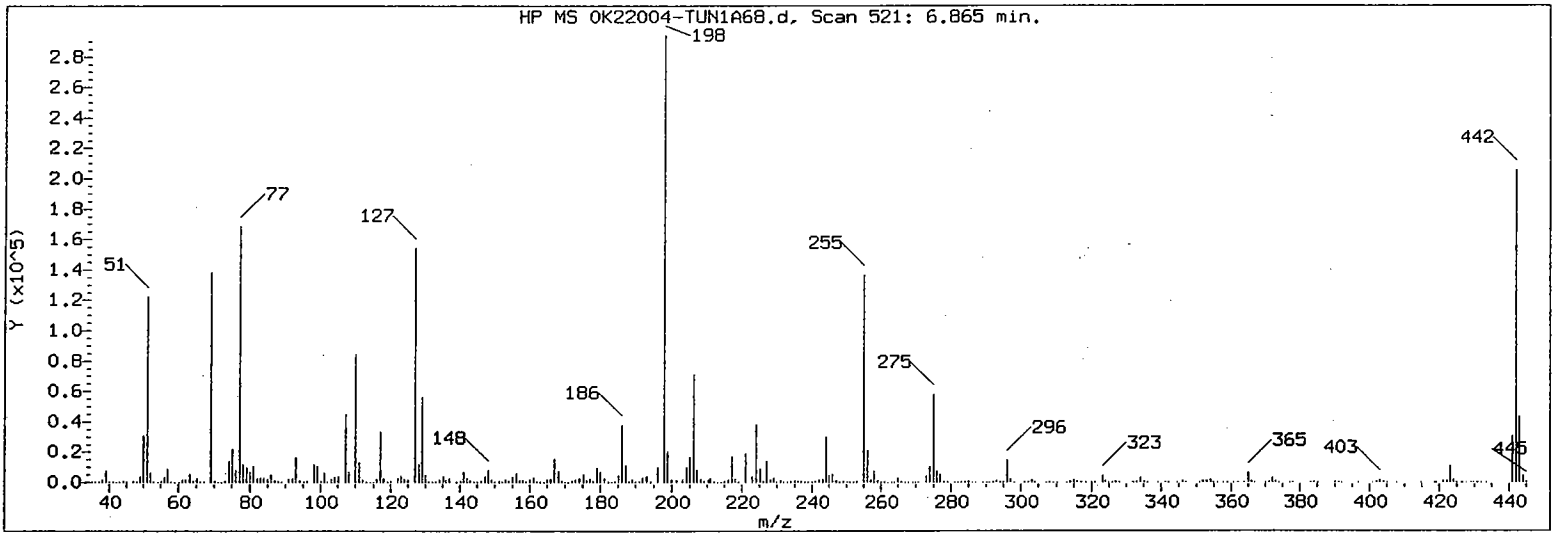
Datafile Analyzed: /chem/5973hp68.i/DF101122A68_B.b/0K22004-TUN1A68.d/0K22004-TU
Method Used: /chem/5973hp68.i/DF101122A68_B.b/dftpp8270C.m Inst: 5973hp68
Injection Date: 22-NOV-2010 09:21 Operator: SLP
Sample Info: 0K22004-TUN3 0K22004-TUN3:SLP
Misc Info: DFTPPDO



Report Date: 11/27/2010 08:05

Datafile Analyzed: /chem/5973hp68.i/DF101122A68_B.b/0K22004-TUN1A68.d/0K22004-TU
Method Used: /chem/5973hp68.i/DF101122A68_B.b/dftpp8270C.m Inst: 5973hp68
Injection Date: 22-NOV-2010 09:21 Operator: SLP
Sample Info: 0K22004-TUN3 0K22004-TUN3:SLP
Misc Info: DFTPPDO



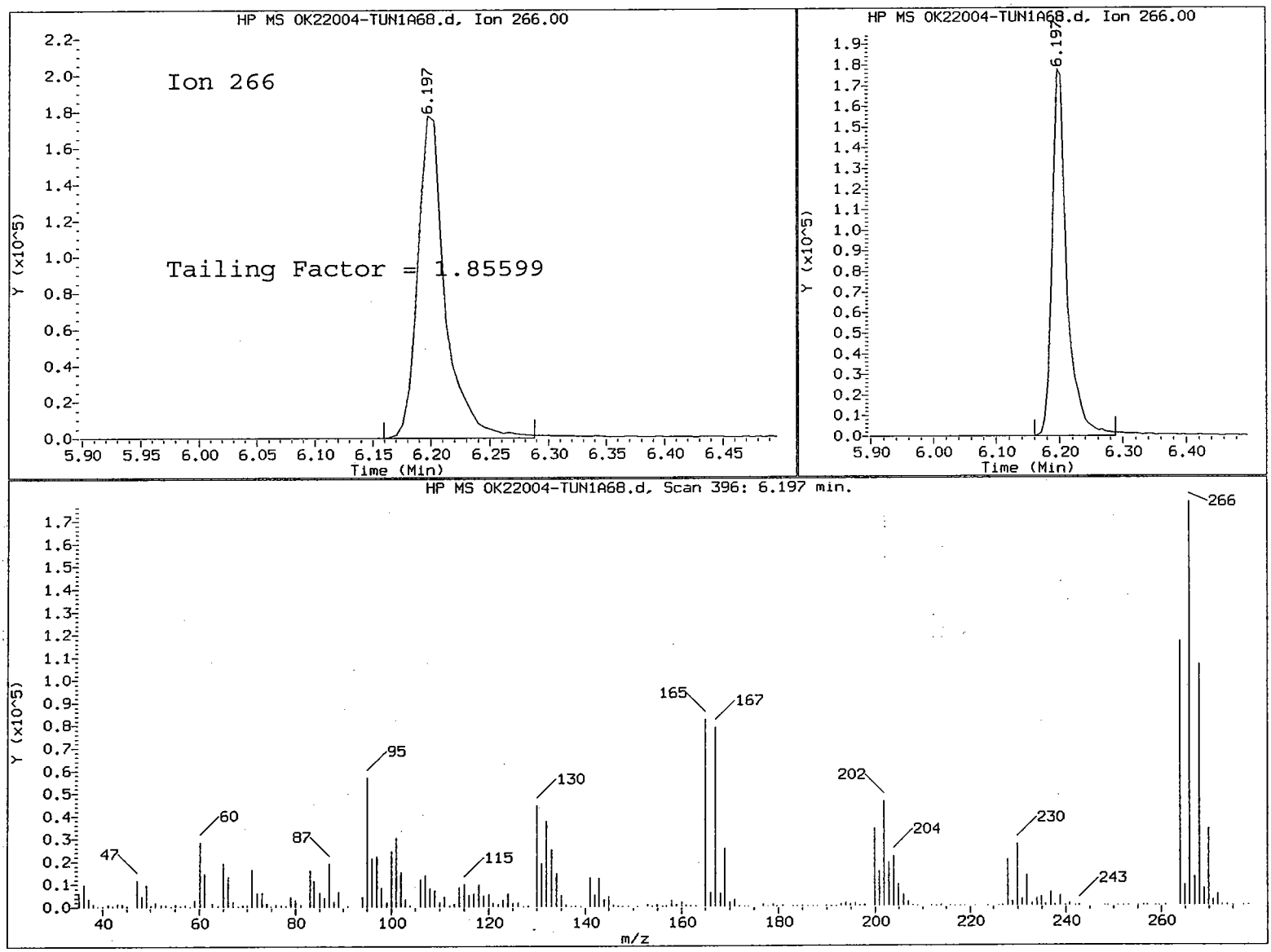


DECAFLUOROTRIPHENYLPHOSPHINE Ion Abundance/Ratio Criteria Chart

Ion	Abundance Criteria	Base Peak	Other	Test
198	Base Peak, 100% relative abundance	100.00		PASS
51	10 - 80% of mass 198	40.87		PASS
68	Less than 2% of mass 69	0.00	(0.00)	PASS
69	Mass 69 relative abundance	46.21		PASS
70	Less than 2% of mass 69	0.26	(0.56)	PASS
127	10 - 80% of mass 198	50.70		PASS
197	0 - 2% of mass 198	0.00		PASS
199	5 - 9% of mass 198	6.86		PASS
275	10 - 60% of mass 198	19.27		PASS
365	Greater than 0.75% of mass 198	2.14		PASS
441	Present, but less than mass 443	10.35	(72.72)	PASS
442	50 - 100% of mass 198	70.96		PASS
443	15 - 24% of mass 442	14.23	(20.06)	PASS

Report Date: 11/27/2010 08:05

Datafile Analyzed: /chem/5973hp68.i/DF101122A68_B.b/0K22004-TUN1A68.d/0K22004-TU
Method Used: /chem/5973hp68.i/DF101122A68.b/dftpp8270C.m/BrkDwnTF.m Inst: 5973h
Injection Date: 22-NOV-2010 09:21 Operator:
Sample Info: DFTPP 0K22004-TUN3:SLP
Misc Info:



Pentachlorophenol
==========

Exp. RT = 6.325
Found RT = 6.197

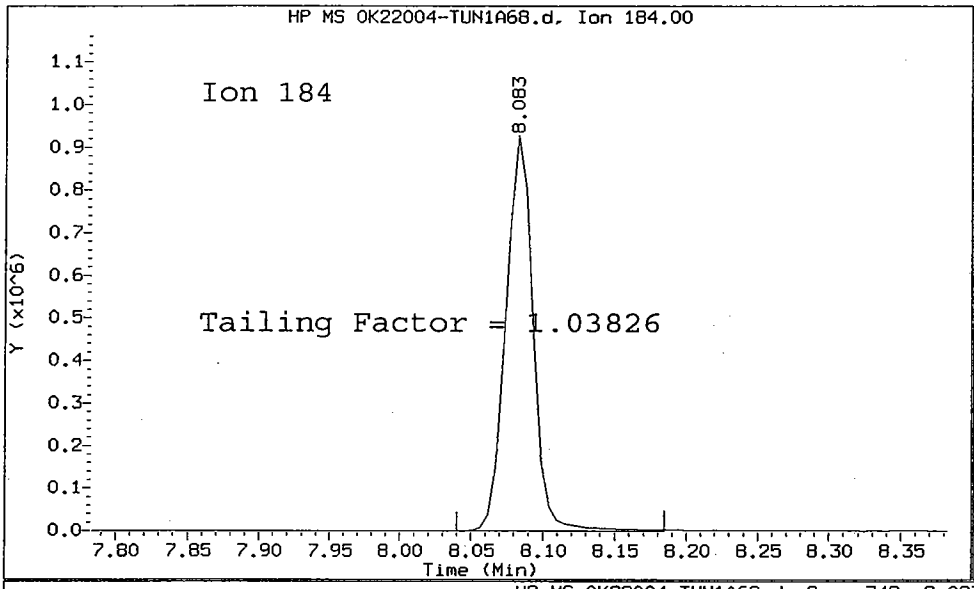
Mass	Area	Ratio
266	290524	100.00

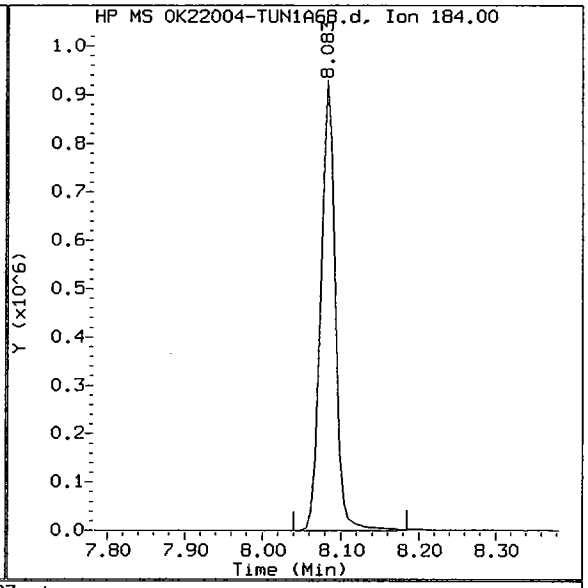
Tailing factor for Pentachlorophenol OK

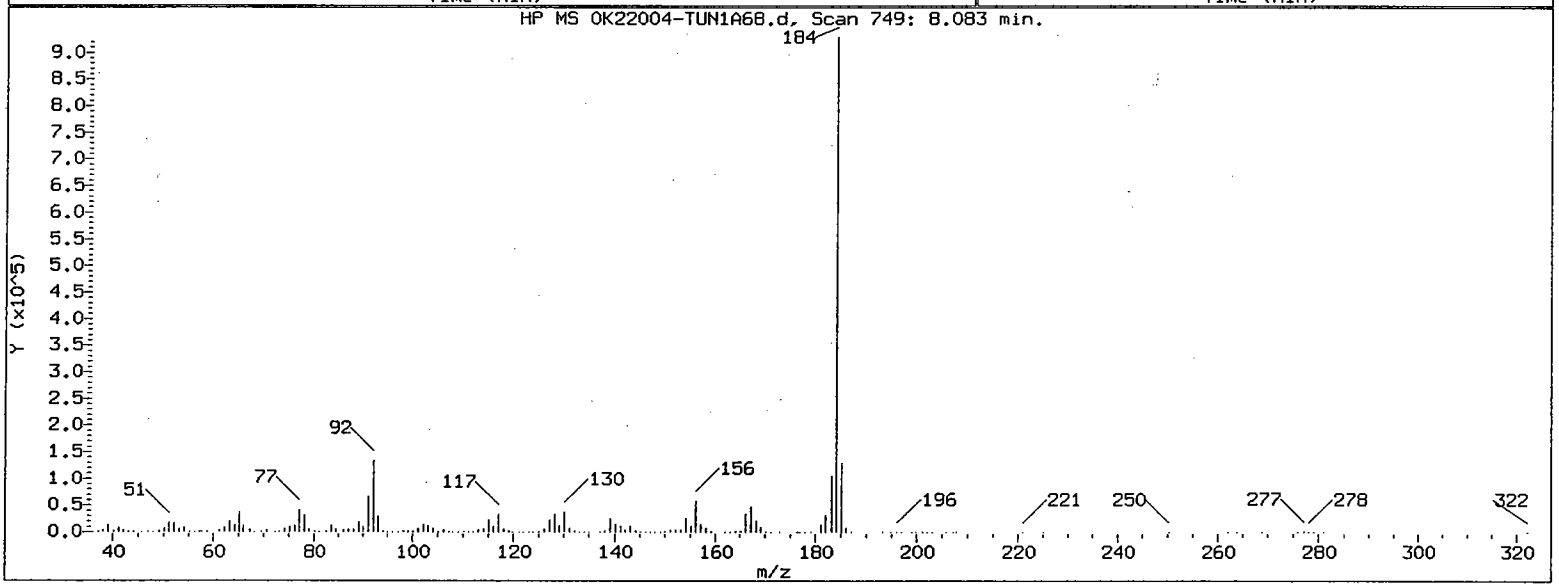
Tailing Factor = 1.9 Maximum Allowed = 5.0

Report Date: 11/27/2010 08:05

Datafile Analyzed: /chem/5973hp68.i/DF101122A68_B.b/0K22004-TUN1A68.d/0K22004-TU
Method Used: /chem/5973hp68.i/DF101122A68.b/dftpp8270C.m/BrkDwnTF.m Inst: 5973h
Injection Date: 22-NOV-2010 09:21 Operator:
Sample Info: DFTPP 0K22004-TUN3:SLP
Misc Info:







Benzidine
=========
Exp. RT = 8.201
Found RT = 8.083

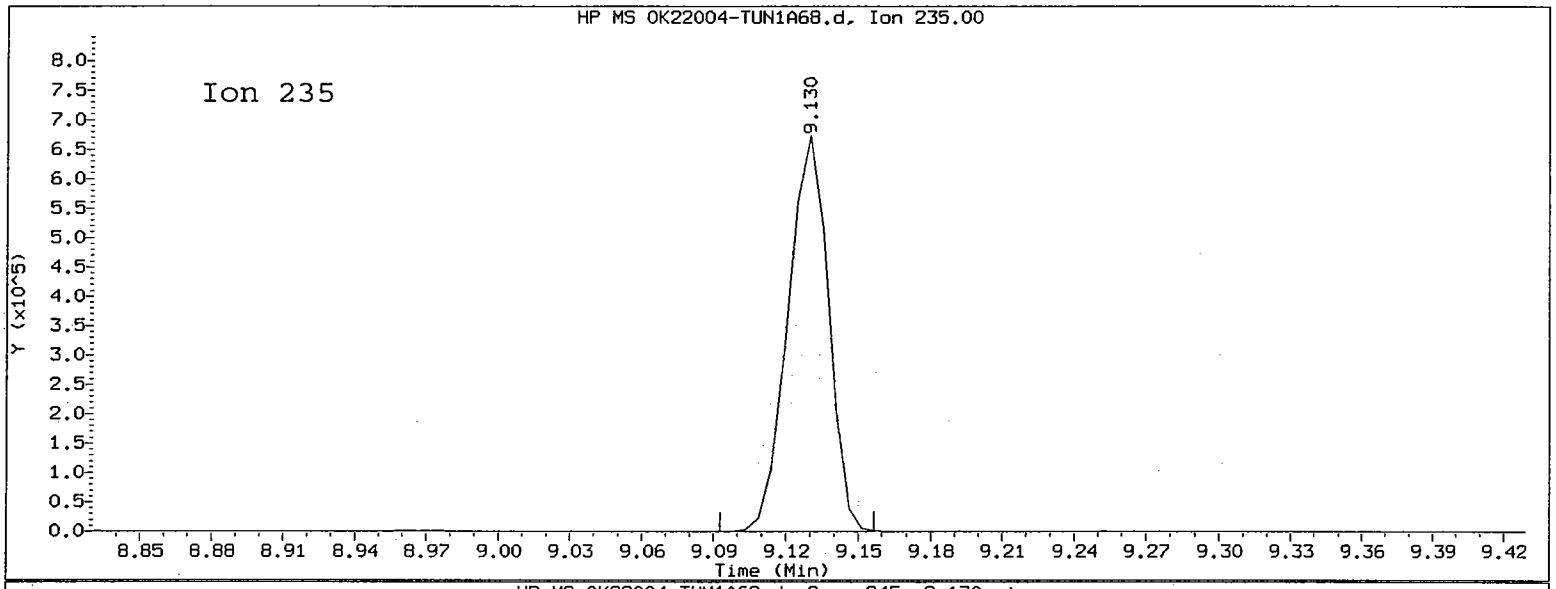
Mass	Area	Ratio
184	1225841	100.00

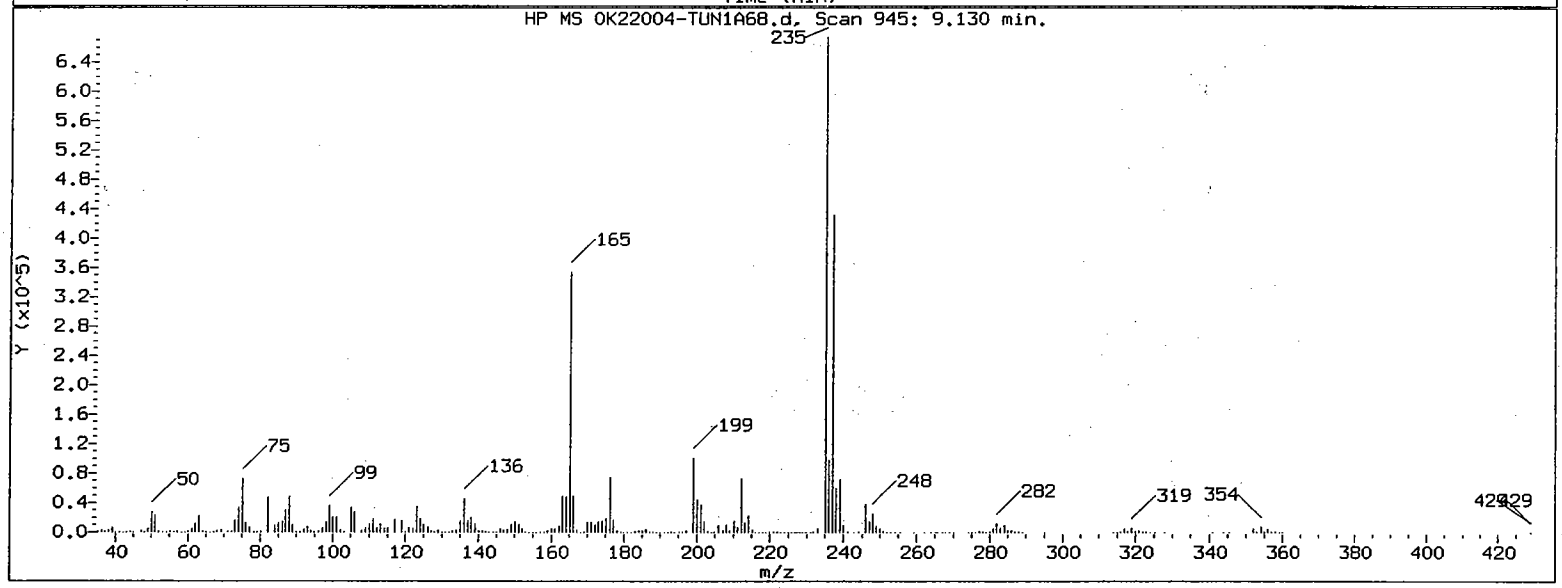
Tailing factor for Benzidine OK

Tailing Factor = 1.0 Maximum Allowed = 3.0

Report Date: 11/27/2010 08:05

Datafile Analyzed: /chem/5973hp68.i/DF101122A68_B.b/0K22004-TUN1A68.d/0K22004-TU
Method Used: /chem/5973hp68.i/DF101122A68.b/dftpp8270C.m/BrkDwnTF.m Inst: 5973h
Injection Date: 22-NOV-2010 09:21 Operator:
Sample Info: DFTPP 0K22004-TUN3:SLP
Misc Info:



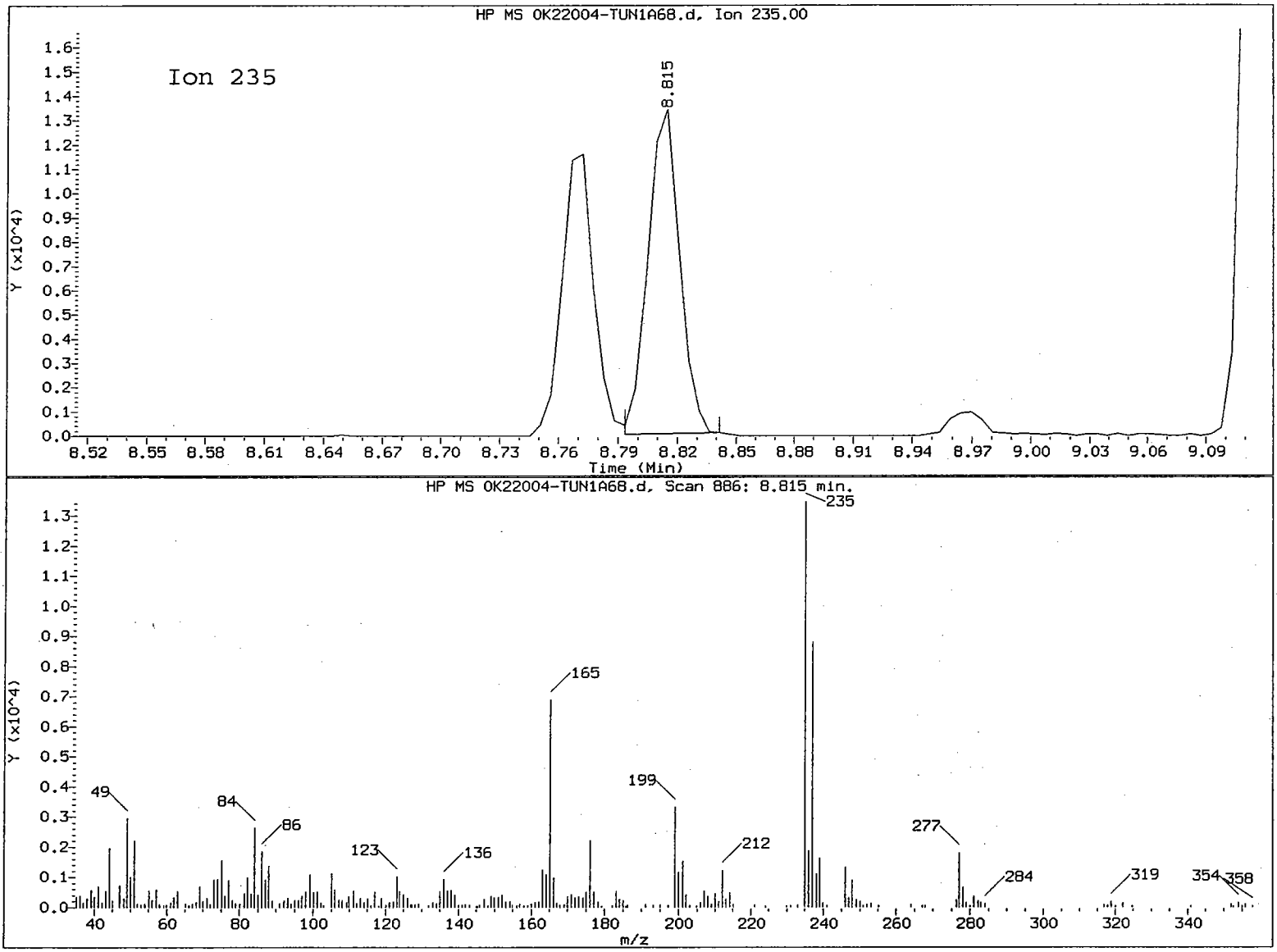


4,4'-DDT
========
Exp. RT = 9.248
Found RT = 9.130

Mass	Area	Ratio
235	780956	100.00

Report Date: 11/27/2010 08:05

Datafile Analyzed: /chem/5973hp68.i/DF101122A68_B.b/0K22004-TUN1A68.d/0K22004-TU
Method Used: /chem/5973hp68.i/DF101122A68.b/dftpp8270C.m/BrkDwnTF.m Inst: 5973h
Injection Date: 22-NOV-2010 09:21 Operator:
Sample Info: DFTPP 0K22004-TUN3:SLP
Misc Info:

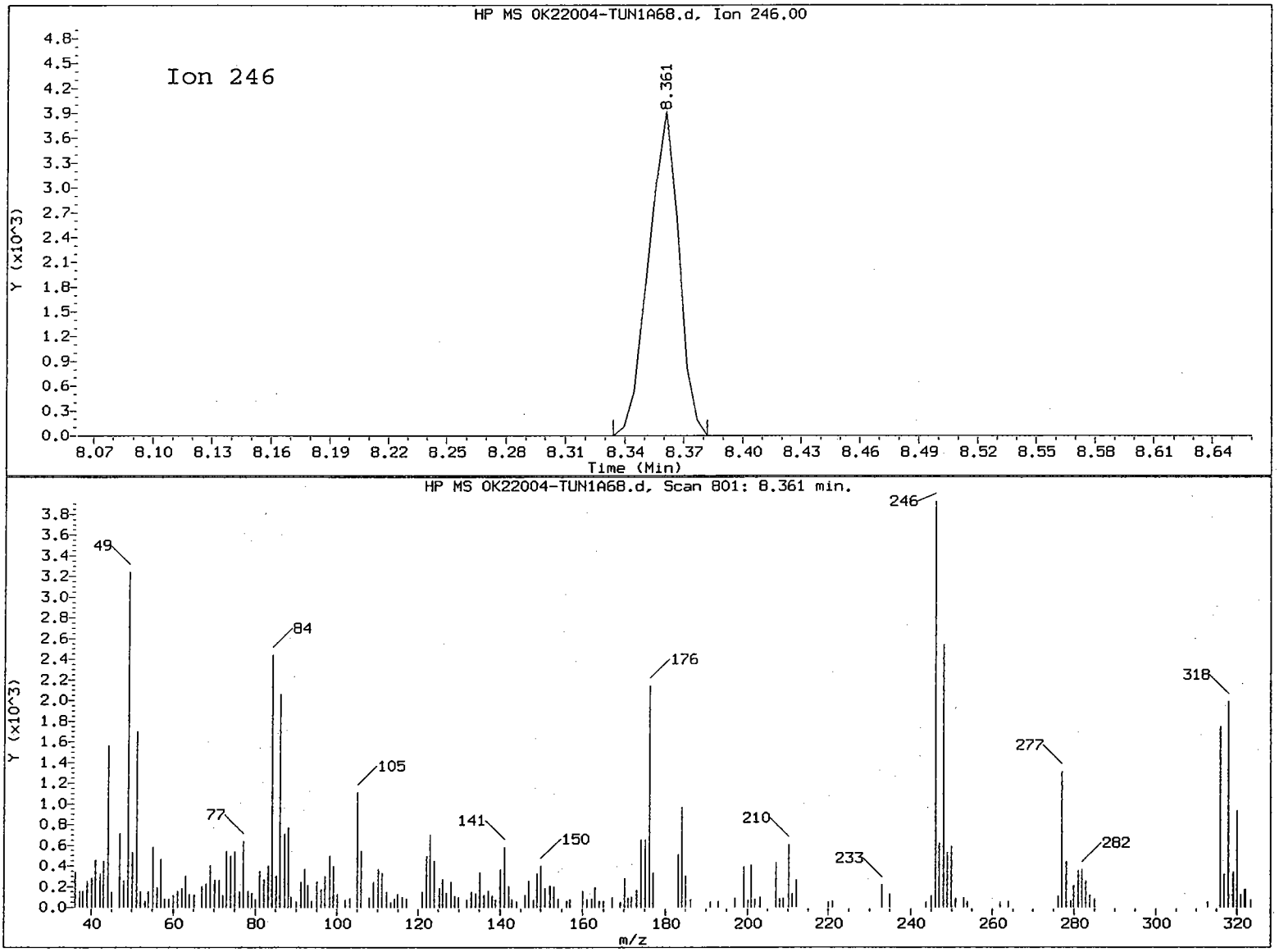


4,4'-DDD
========
Exp. RT = 8.900
Found RT = 8.815

Mass	Area	Ratio
235	14741	100.00

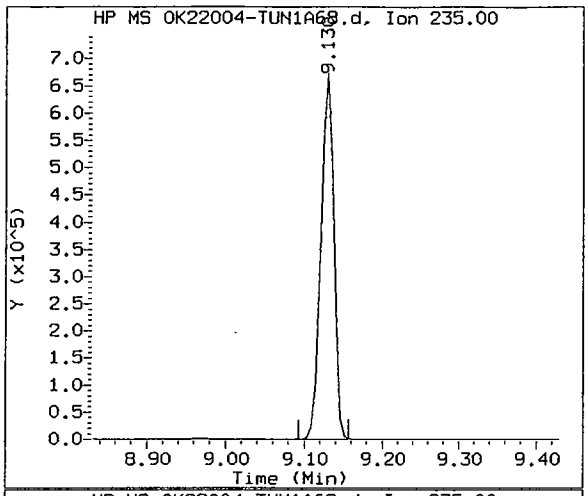
Report Date: 11/27/2010 08:05

Datafile Analyzed: /chem/5973hp68.i/DF101122A68_B.b/0K22004-TUN1A68.d/0K22004-TU
Method Used: /chem/5973hp68.i/DF101122A68.b/dftpp8270C.m/BrkDwnTF.m Inst: 5973h
Injection Date: 22-NOV-2010 09:21 Operator:
Sample Info: DFTPP 0K22004-TUN3:SLP
Misc Info:

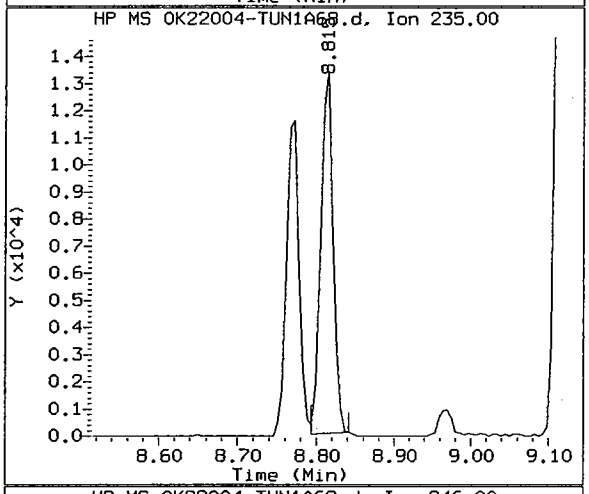


4,4'-DDE
========
Exp. RT = 8.440
Found RT = 8.361

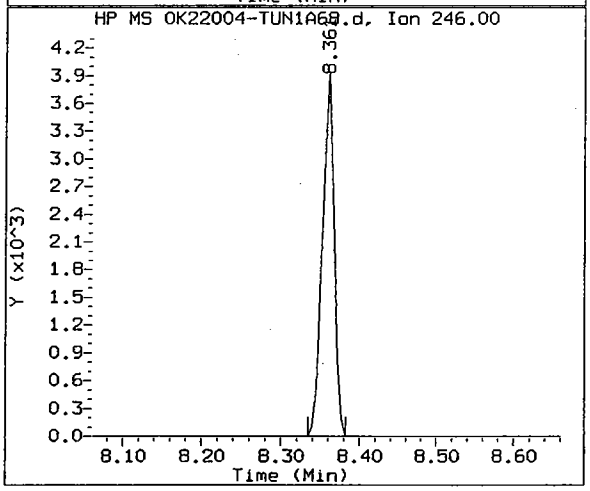
Mass	Area	Ratio
246	4147	100.00



Compound: 4,4'-DDT
Quant Mass: 235
RT: 9.130
Area: 780956



Compound: 4,4'-DDD
Quant Mass: 235
RT: 8.815
Area: 14741



Compound: 4,4'-DDE
Quant Mass: 246
RT: 8.361
Area: 4147

DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

Compound	Response	%Breakdown	Max Allowed	Test
4,4-DDT	780956			N/A
4,4-DDE	4147	0.5	20.0	PASS
4,4-DDD	14741	1.9	20.0	PASS
4,4-DDD + DDE	18888	2.4	20.0	PASS

****
TUNE SAMPLE *** PASSED *** DDT BREAKDOWN TEST
****

Data File: /chem/5973hp68.i/DF101122C68_C.b/0K22016-TUN1C68.d

Date : 22-NOV-2010 23:21

Client ID: DFTPPDR

Instrument: 5973hp68.i

Sample Info: 0K22016-TUN1:MEW

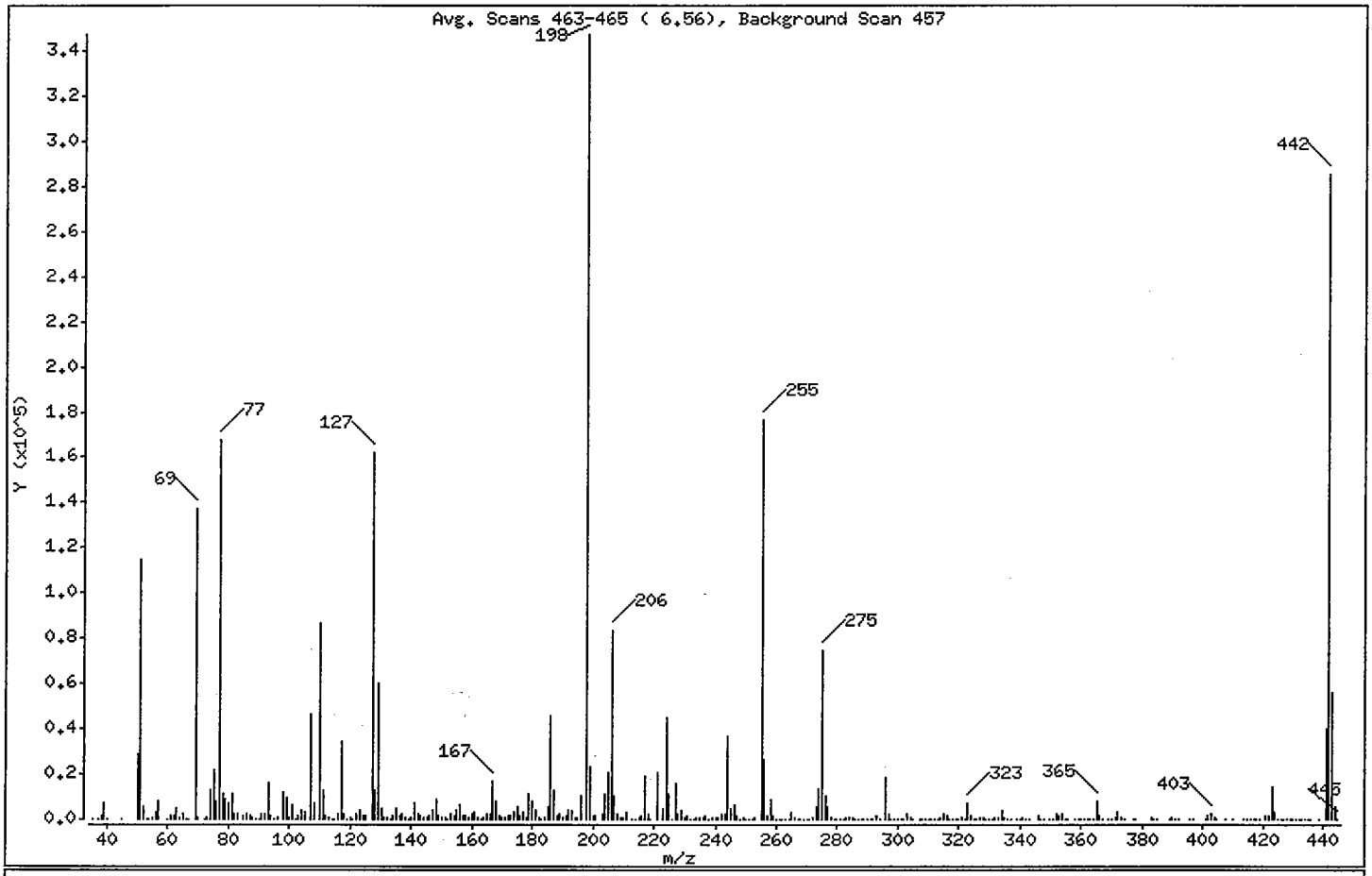
Volume Injected (uL): 2.0

Operator: MEW

Column phase: RTX-5MS

Column diameter: 0.32

1 Decafluorotriphenylphosphine



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	33.03
68	Less than 2.00% of mass 69	0.00 (0.00)
69	Mass 69 relative abundance	39.45
70	Less than 2.00% of mass 69	0.19 (0.48)
127	10.00 - 80.00% of mass 198	46.56
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.78
275	10.00 - 60.00% of mass 198	21.43
365	Greater than 1.00% of mass 198	2.28
441	Present, but less than mass 443	11.66
442	50.00 - 100.00% of mass 198	82.31
443	15.00 - 24.00% of mass 442	16.27 (19.76)

Data File: /chem/5973hp68.i/DF101122C68_C.b/0K22016-TUN1C68.d

Date : 22-NOV-2010 23:21

Client ID: DFTPPDR Instrument: 5973hp68.i

Sample Info: 0K22016-TUN1:MEW

Volume Injected (uL): 2.0 Operator: MEW

Column phase: RTX-5MS Column diameter: 0.32

Data File: 0K22016-TUN1C68.d

Spectrum: Avg. Scans 463-465 (6.56), Background Scan 457

Location of Maximum: 198.00

Number of points: 354

m/z	Y	m/z	Y	m/z	Y	m/z	Y
35.00	74	142.00	2616	236.00	924	328.00	600
37.00	391	143.00	1640	237.00	1367	329.00	124
38.00	1243	144.00	544	238.00	230	330.00	47
39.00	7259	145.00	467	239.00	650	331.00	21
40.00	187	146.00	1291	240.00	536	332.00	517
45.00	182	147.00	3630	241.00	1088	333.00	639
50.00	29256	148.00	8435	242.00	2405	334.00	4014
51.00	114688	149.00	1710	243.00	2693	335.00	1161
52.00	5978	150.00	457	244.00	36528	336.00	193
53.00	203	151.00	1022	245.00	4953	337.00	34
54.00	43	152.00	204	246.00	6083	339.00	142
55.00	444	153.00	2234	247.00	1218	340.00	142
56.00	3399	154.00	1671	248.00	332	341.00	839
57.00	7919	155.00	4091	249.00	1056	342.00	202
60.00	126	156.00	6131	250.00	289	343.00	41
61.00	1526	157.00	1385	251.00	334	346.00	1534
62.00	1715	158.00	1430	252.00	389	347.00	240
63.00	4860	159.00	1087	253.00	973	348.00	39
64.00	629	160.00	2300	255.00	176064	350.00	25
65.00	2526	161.00	3561	256.00	26264	351.00	127
66.00	202	162.00	1043	257.00	1802	352.00	2052
67.00	292	163.00	345	258.00	9051	353.00	1412
69.00	136960	164.00	493	259.00	1414	354.00	2250
70.00	651	165.00	2476	260.00	315	355.00	396
72.00	88	166.00	2444	261.00	364	356.00	90
73.00	1105	167.00	16984	262.00	86	358.00	17
74.00	12947	168.00	7719	263.00	128	359.00	163
75.00	21752	169.00	1379	264.00	320	360.00	36
76.00	7775	170.00	481	265.00	3525	361.00	52
77.00	167360	171.00	629	266.00	631	362.00	23
78.00	11468	172.00	1206	267.00	134	363.00	19
79.00	9121	173.00	1790	268.00	76	364.00	76
80.00	7423	174.00	3143	269.00	42	365.00	7921
81.00	10865	175.00	5940	270.00	218	366.00	1271
82.00	2571	176.00	1958	271.00	376	367.00	113

Data File: /chem/5973hp68.i/DF101122C68_C.b/0K22016-TUN1C68.d

Date : 22-NOV-2010 23:21

Client ID: DFTPPDR Instrument: 5973hp68.i

Sample Info: 0K22016-TUN1:MEW

Volume Injected (uL): 2.0 Operator: MEW

Column phase: RTX-5MS Column diameter: 0.32

Data File: 0K22016-TUN1C68.d

Spectrum: Avg. Scans 463-465 (6.56), Background Scan 457

Location of Maximum: 198.00

Number of points: 354

m/z	Y	m/z	Y	m/z	Y	m/z	Y
83.00	2451	177.00	2839	272.00	513	369.00	22
85.00	1598	178.00	908	273.00	5327	370.00	178
86.00	2465	179.00	11014	274.00	13564	371.00	565
87.00	1237	180.00	7938	275.00	74400	372.00	3554
88.00	597	181.00	3943	276.00	10101	373.00	891
89.00	300	182.00	615	277.00	5653	374.00	107
90.00	48	183.00	400	278.00	1035	377.00	125
91.00	2342	184.00	917	279.00	247	378.00	17
92.00	2539	185.00	5654	280.00	18	383.00	900
93.00	16201	186.00	45664	281.00	65	384.00	264
94.00	1210	187.00	12699	282.00	129	385.00	82
95.00	123	188.00	1300	283.00	643	389.00	26
96.00	837	189.00	2429	284.00	555	390.00	463
98.00	12246	190.00	503	285.00	1028	391.00	391
99.00	9763	191.00	1447	286.00	179	392.00	293
100.00	822	192.00	3957	287.00	17	396.00	18
101.00	6018	193.00	4202	288.00	77	397.00	17
102.00	286	194.00	882	289.00	253	401.00	246
103.00	1933	195.00	814	290.00	218	402.00	1465
104.00	3671	196.00	10627	291.00	149	403.00	2081
105.00	3593	198.00	347200	292.00	269	404.00	697
107.00	46440	199.00	23544	293.00	1378	405.00	172
108.00	7359	200.00	1808	294.00	377	408.00	18
110.00	86856	201.00	1741	296.00	18664	410.00	82
111.00	13017	203.00	2280	297.00	2489	414.00	17
112.00	1527	204.00	11421	298.00	218	415.00	80
113.00	492	205.00	20616	299.00	21	416.00	21
114.00	94	206.00	83456	300.00	83	417.00	21
115.00	228	207.00	10554	301.00	279	418.00	20
116.00	2381	208.00	2650	302.00	238	419.00	48
117.00	34344	209.00	844	303.00	2255	421.00	1972
118.00	2563	210.00	402	304.00	687	422.00	1768
119.00	249	211.00	3457	305.00	116	423.00	14067
120.00	534	213.00	268	307.00	18	424.00	2854
121.00	216	214.00	111	308.00	303	425.00	332

Data File: /chem/5973hp68.i/DF101122C68_C.b/0K22016-TUN1C68.d

Date : 22-NOV-2010 23:21

Client ID: DFTPPDR Instrument: 5973hp68.i

Sample Info: 0K22016-TUN1:MEW

Volume Injected (uL): 2.0 Operator: MEW

Column phase: RTX-5MS Column diameter: 0.32

Data File: 0K22016-TUN1C68.d

Spectrum: Avg. Scans 463-465 (6.56), Background Scan 457

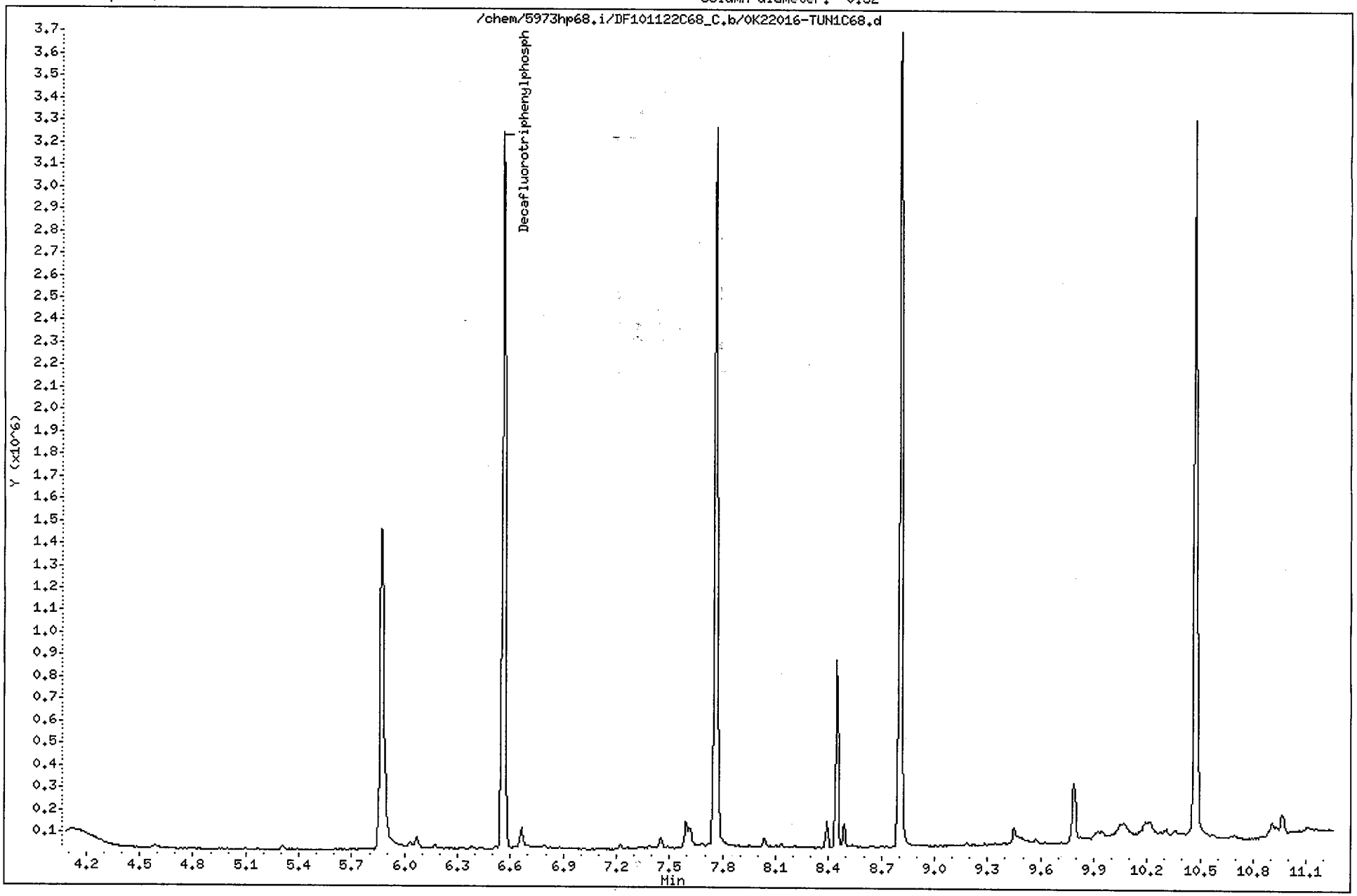
Location of Maximum: 198.00

Number of points: 354

m/z	Y	m/z	Y	m/z	Y	m/z	Y
122.00	2784	215.00	947	309.00	201	426.00	103
123.00	4103	216.00	1754	310.00	310	427.00	133
124.00	1940	217.00	19584	311.00	135	428.00	94
125.00	1895	218.00	2585	312.00	42	429.00	156
127.00	161664	219.00	304	313.00	270	430.00	244
128.00	12464	221.00	20880	314.00	930	431.00	264
129.00	60320	223.00	4697	315.00	2162	432.00	399
130.00	5065	224.00	45192	316.00	1299	433.00	201
131.00	1026	225.00	11495	317.00	226	434.00	152
132.00	473	226.00	312	318.00	17	435.00	136
133.00	305	227.00	16376	319.00	39	436.00	43
134.00	1660	228.00	2481	320.00	94	439.00	66
135.00	4556	229.00	3936	321.00	555	441.00	40480
136.00	1801	230.00	608	322.00	231	442.00	285824
137.00	2284	231.00	1624	323.00	6908	443.00	56488
138.00	644	232.00	384	324.00	1239	444.00	5510
139.00	339	233.00	371	325.00	102	445.00	261
140.00	633	234.00	1035	326.00	94		
141.00	7117	235.00	1143	327.00	1184		

Data File: /chem/5973hp68.i/DF101122C68_C.b/0K22016-TUN1C68.d
Date : 22-NOV-2010 23:21
Client ID: DFTPPDR
Sample Info: 0K22016-TUN1:MEW
Volume Injected (uL): 2.0
Column phase: RTX-5MS

Instrument: 5973hp68.i
Operator: MEW
Column diameter: 0.32



TAILING FACTOR and DEGRADATION SUMMARY RESULTS

DECAFLUOROTRIPHENYLPHOSPHINE Ion Abundance/Ratio Criteria Chart

Ion	Abundance Criteria	Base Peak	Other	Test
198	Base Peak, 100% relative abundance	100.00		PASS
51	10 - 80% of mass 198	33.03		PASS
68	Less than 2% of mass 69	0.00	(0.00)	PASS
69	Mass 69 relative abundance	39.45		PASS
70	Less than 2% of mass 69	0.19	(0.48)	PASS
127	10 - 80% of mass 198	46.56		PASS
197	0 - 2% of mass 198	0.00		PASS
199	5 - 9% of mass 198	6.78		PASS
275	10 - 60% of mass 198	21.43		PASS
365	Greater than 0.75% of mass 198	2.28		PASS
441	Present, but less than mass 443	11.66	(71.67)	PASS
442	50 - 100 % of mass 198	82.31		PASS
443	15 - 24% of mass 442	16.27	(19.76)	PASS

TAILING ANALYSIS SUMMARY

Compound	Tail Factor	Max Allowed	Test
Pentachlorophenol	1.4	5.0	PASS
Benzidine	0.8	3.0	PASS

DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

Compound	Response	%Breakdown	Max Allowed	Test
4,4-DDT	731603			N/A
4,4-DDE	4152	0.6	20.0	PASS
4,4-DDD	159729	17.9	20.0	PASS
4,4-DDD + DDE	163881	18.3	20.0	PASS

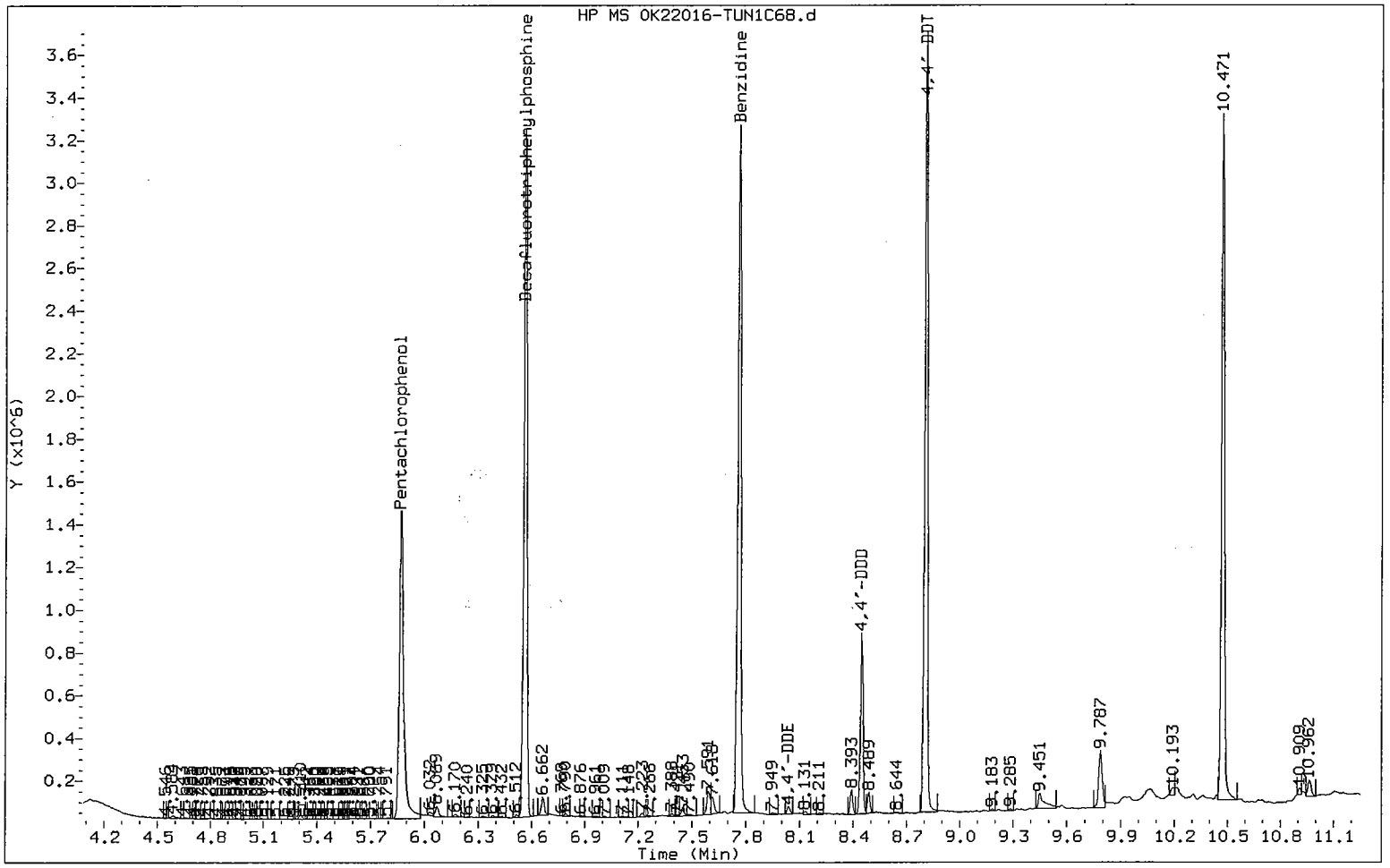
Tuning Sample, /chem/5973hp68.i/DF101122C68_C.b/0K22016-TUN1C68.d/0K22016-TUN1C6

*** PASSED ***

TAILING FACTOR and DEGRADATION SAMPLE AND GRAPHIC REPORT

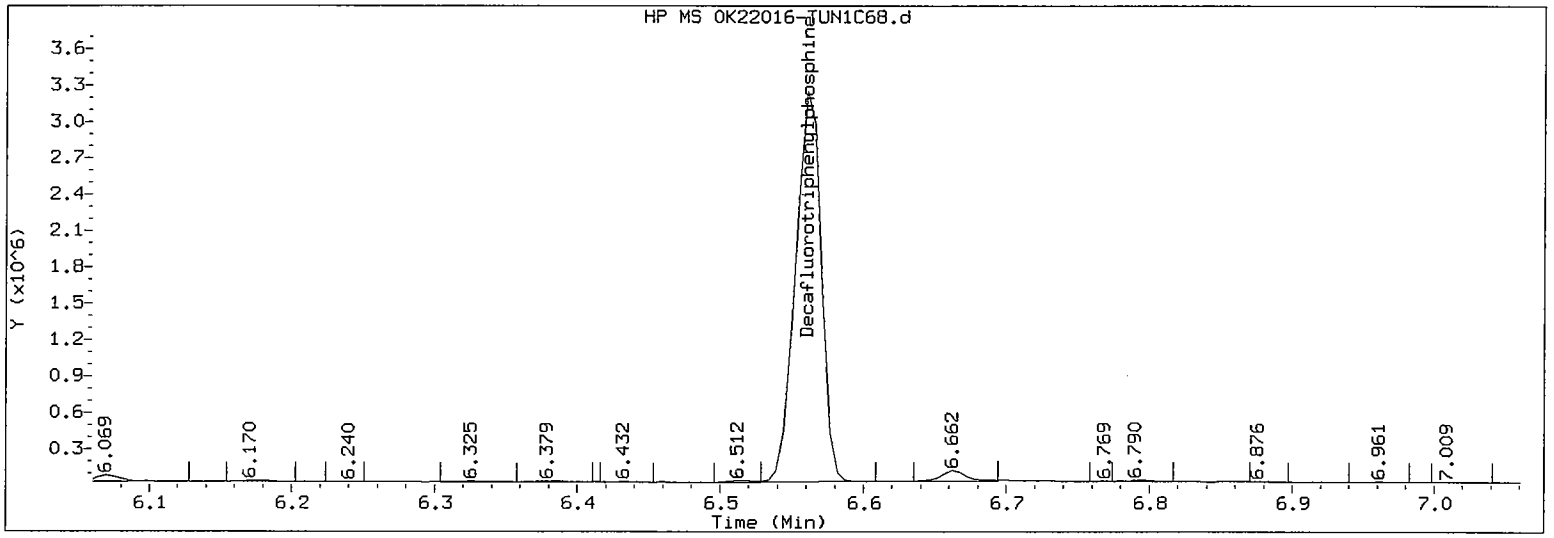
Report Date: 11/27/2010 09:45

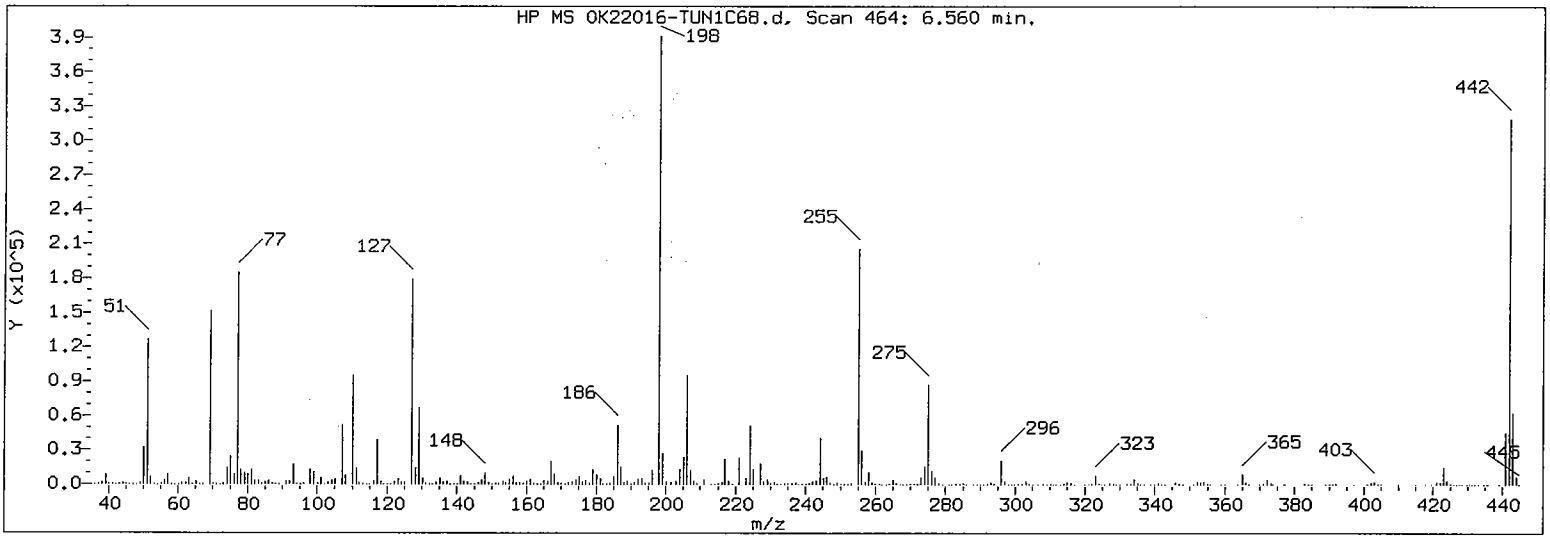
Datafile Analyzed: /chem/5973hp68.i/DF101122C68_C.b/0K22016-TUN1C68.d/0K22016-TU
Method Used: /chem/5973hp68.i/DF101122C68_C.b/dftpp8270C.m Inst: 5973hp68
Injection Date: 22-NOV-2010 23:21 Operator: MEW
Sample Info: 0K22016-TUN1 0K22016-TUN1:MEW
Misc Info: DFTPPDR



Report Date: 11/27/2010 09:45

Datafile Analyzed: /chem/5973hp68.i/DF101122C68_C.b/0K22016-TUN1C68.d/0K22016-TU
Method Used: /chem/5973hp68.i/DF101122C68_C.b/dftpp8270C.m Inst: 5973hp68
Injection Date: 22-NOV-2010 23:21 Operator: MEW
Sample Info: 0K22016-TUN1 0K22016-TUN1:MEW
Misc Info: DFTPPDR



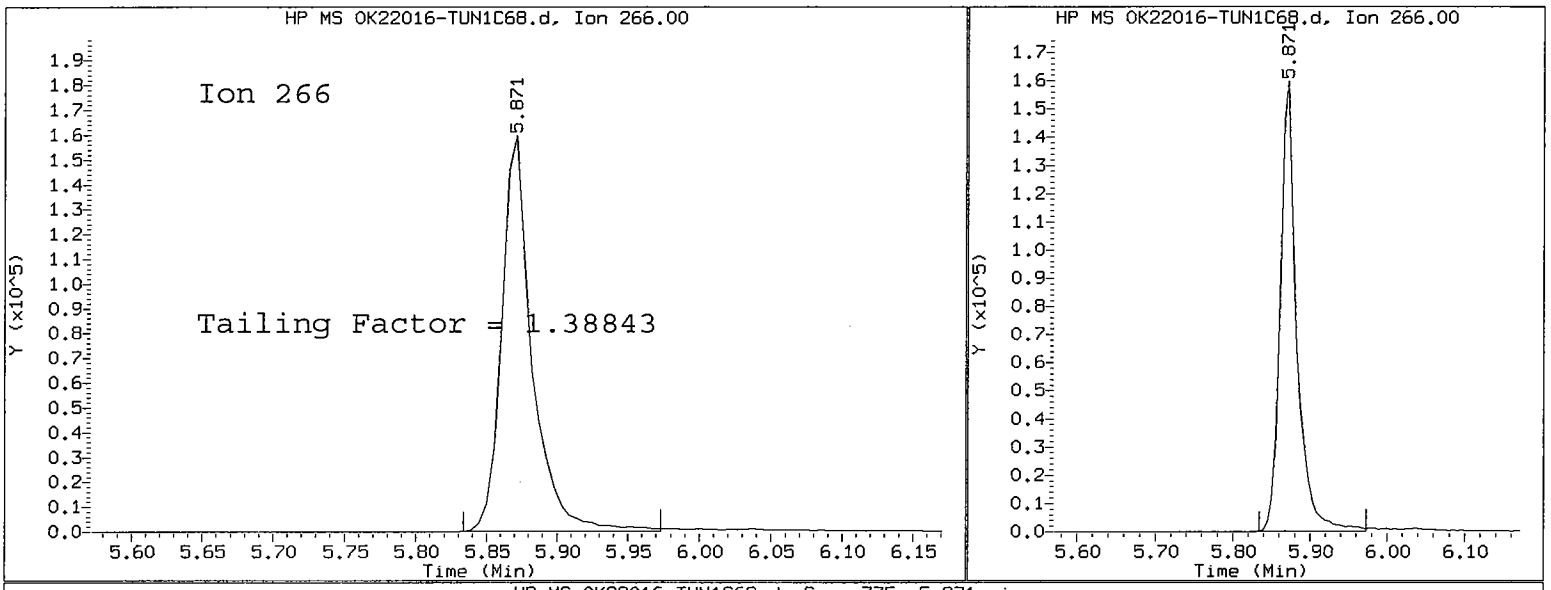


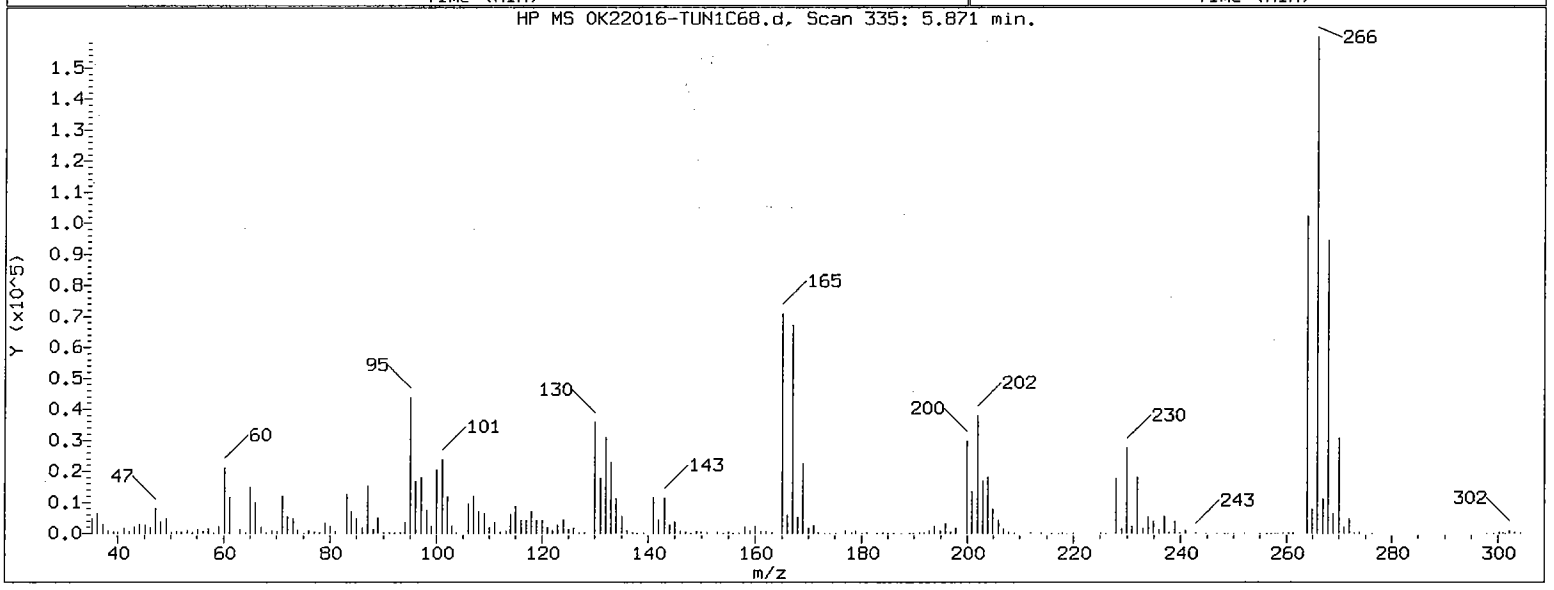
DECAFLUOROTRIPHENYLPHOSPHINE Ion Abundance/Ratio Criteria Chart

Ion	Abundance Criteria	Base Peak	Other	Test
198	Base Peak, 100% relative abundance	100.00		PASS
51	10 - 80% of mass 198	33.03		PASS
68	Less than 2% of mass 69	0.00	(0.00)	PASS
69	Mass 69 relative abundance	39.45		PASS
70	Less than 2% of mass 69	0.19	(0.48)	PASS
127	10 - 80% of mass 198	46.56		PASS
197	0 - 2% of mass 198	0.00		PASS
199	5 - 9% of mass 198	6.78		PASS
275	10 - 60% of mass 198	21.43		PASS
365	Greater than 0.75% of mass 198	2.28		PASS
441	Present, but less than mass 443	11.66	(71.67)	PASS
442	50 - 100% of mass 198	82.31		PASS
443	15 - 24% of mass 442	16.27	(19.76)	PASS

Report Date: 11/27/2010 09:45

Datafile Analyzed: /chem/5973hp68.i/DF101122C68_C.b/0K22016-TUN1C68.d/0K22016-TU
Method Used: /chem/5973hp68.i/DF101122C68.b/dftpp8270C.m/BrkDwnTF.m Inst: 5973h
Injection Date: 22-NOV-2010 23:21 Operator:
Sample Info: DFTPP 0K22016-TUN1:MEW
Misc Info:





Pentachlorophenol
==========
Exp. RT = 6.325
Found RT = 5.871

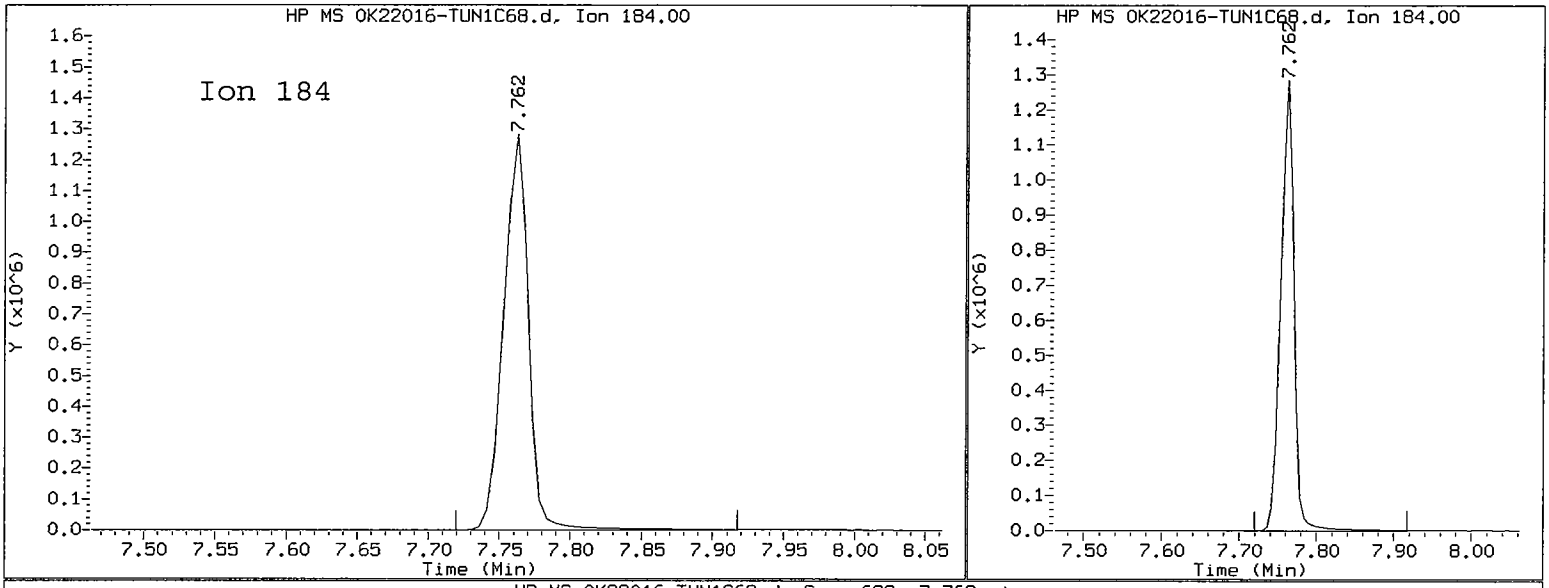
Mass	Area	Ratio
266	240816	100.00

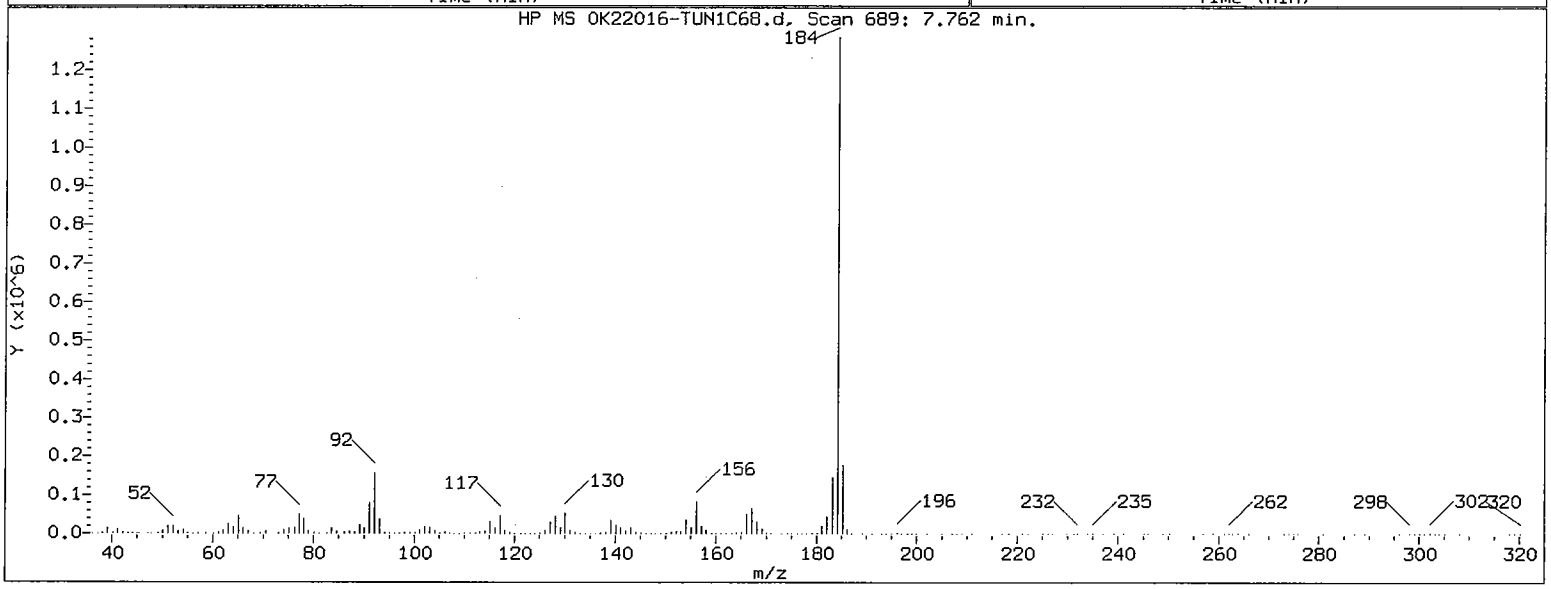
Tailing factor for Pentachlorophenol OK

Tailing Factor = 1.4 Maximum Allowed = 5.0

Report Date: 11/27/2010 09:45

Datafile Analyzed: /chem/5973hp68.i/DF101122C68_C.b/0K22016-TUN1C68.d/0K22016-TU
Method Used: /chem/5973hp68.i/DF101122C68.b/dftpp8270C.m/BrkDwnTF.m Inst: 5973h
Injection Date: 22-NOV-2010 23:21 Operator:
Sample Info: DFTPP 0K22016-TUN1:MEW
Misc Info:





Benzidine
=========
Exp. RT = 8.201
Found RT = 7.762

Mass	Area	Ratio
184	1561378	100.00

Tailing factor for Benzidine OK

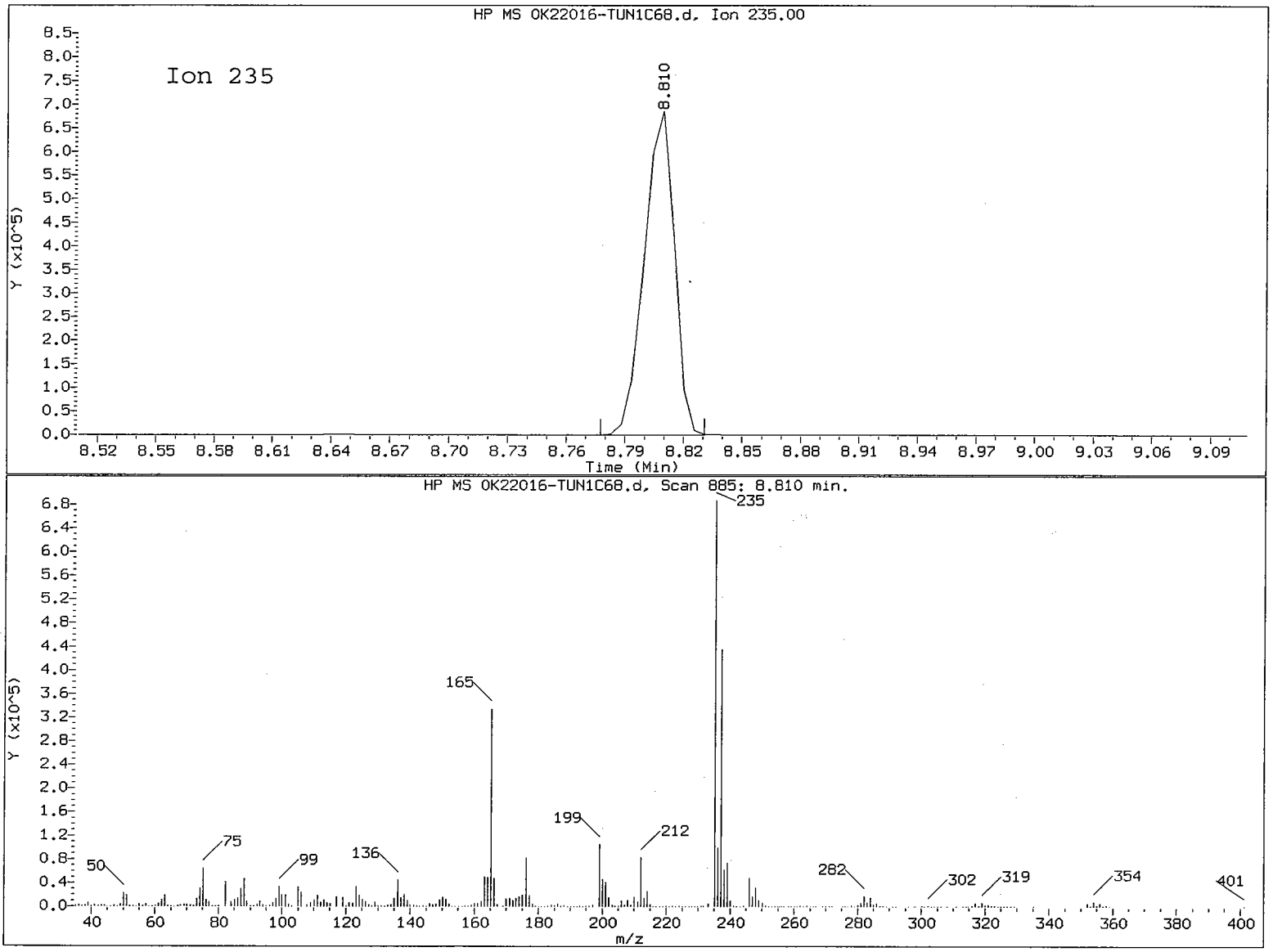
Tailing Factor = 0.8 Maximum Allowed = 3.0

If Tailing Factor < 1.0, then it is assumed that the peak is not tailing and a Tailing Factor of zero is reported.

Tailing Factor = 0.78431

Report Date: 11/27/2010 09:45

Datafile Analyzed: /chem/5973hp68.i/DF101122C68_C.b/0K22016-TUN1C68.d/0K22016-TU
Method Used: /chem/5973hp68.i/DF101122C68.b/dftpp8270C.m/BrkDwnTF.m Inst: 5973h
Injection Date: 22-NOV-2010 23:21 Operator:
Sample Info: DFTPP 0K22016-TUN1:MEW
Misc Info:

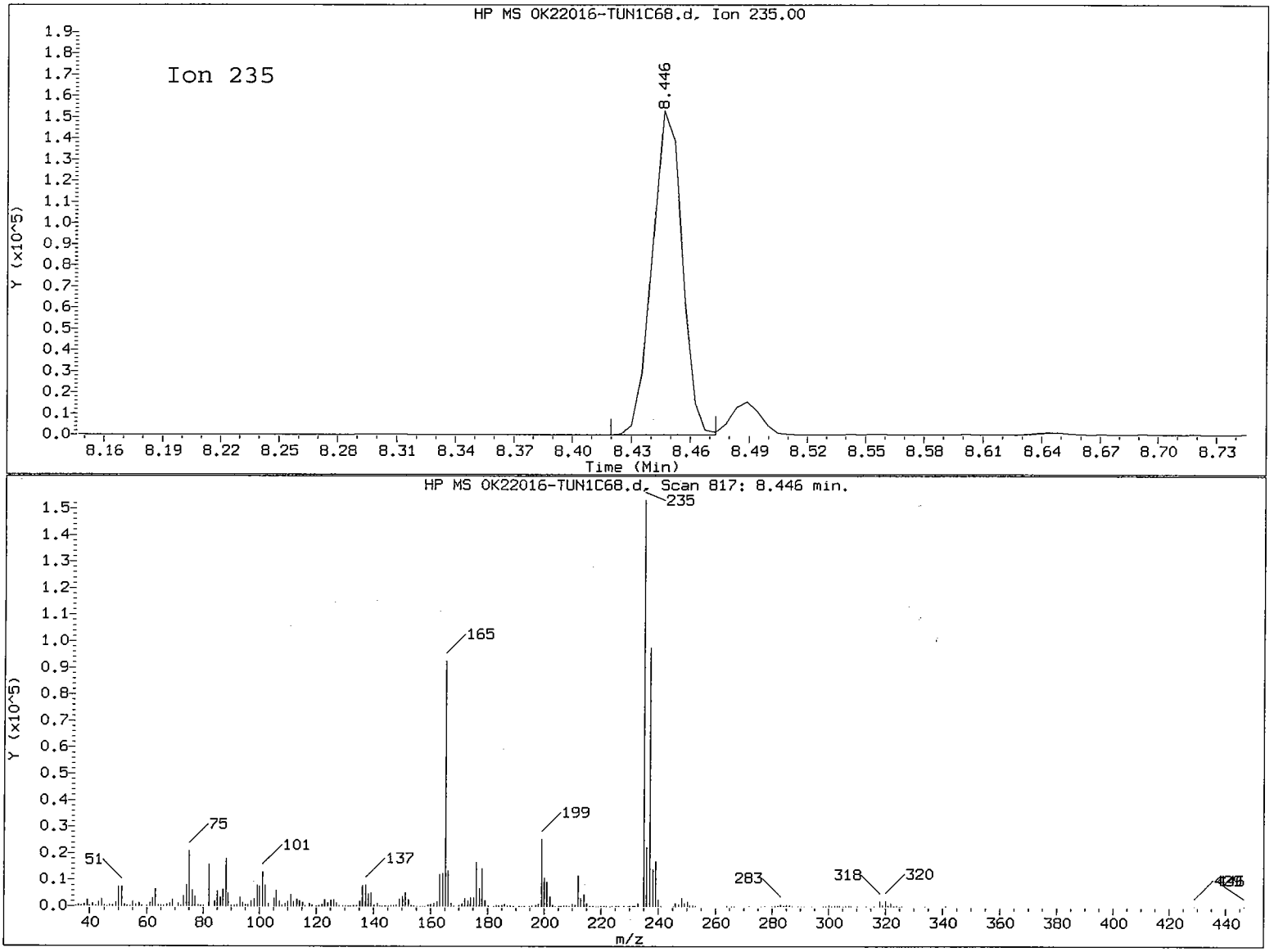


4,4'-DDT
========
Exp. RT = 9.248
Found RT = 8.810

Mass	Area	Ratio
235	731603	100.00

Report Date: 11/27/2010 09:45

Datafile Analyzed: /chem/5973hp68.i/DF101122C68_C.b/0K22016-TUN1C68.d/0K22016-TU
Method Used: /chem/5973hp68.i/DF101122C68.b/dftpp8270C.m/BrkDwnTF.m Inst: 5973h
Injection Date: 22-NOV-2010 23:21 Operator:
Sample Info: DFTPP 0K22016-TUN1:MEW
Misc Info:

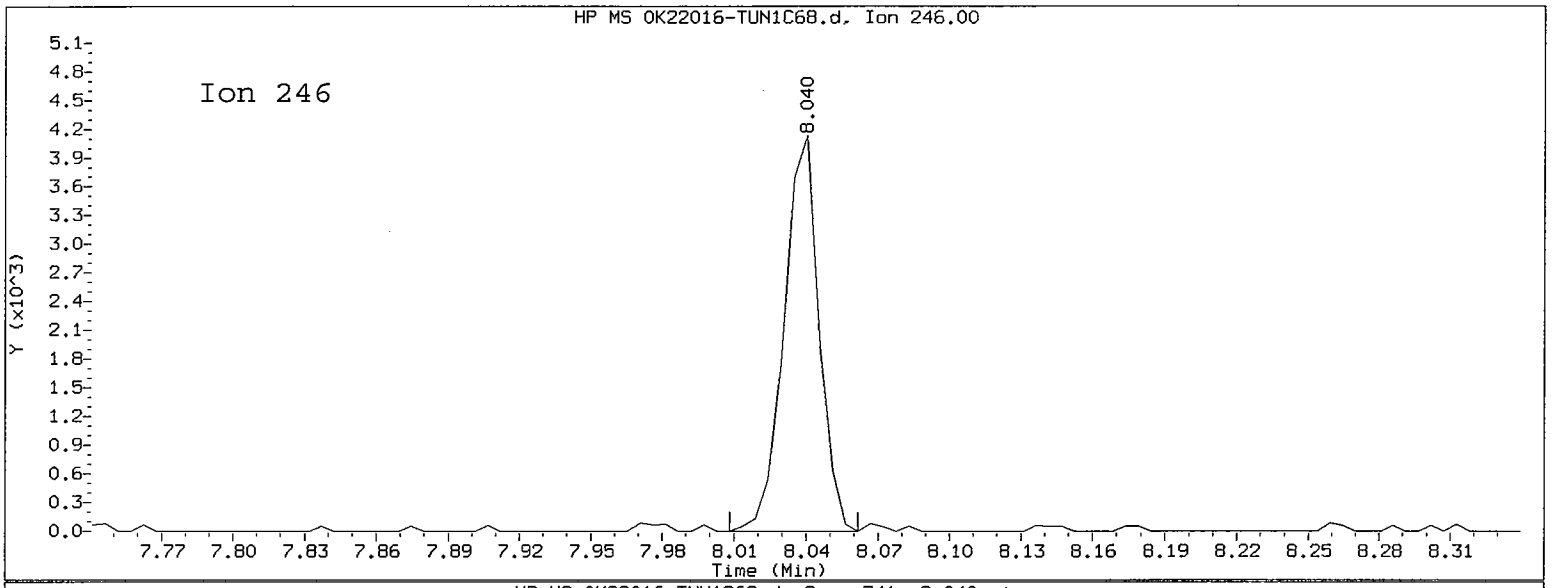


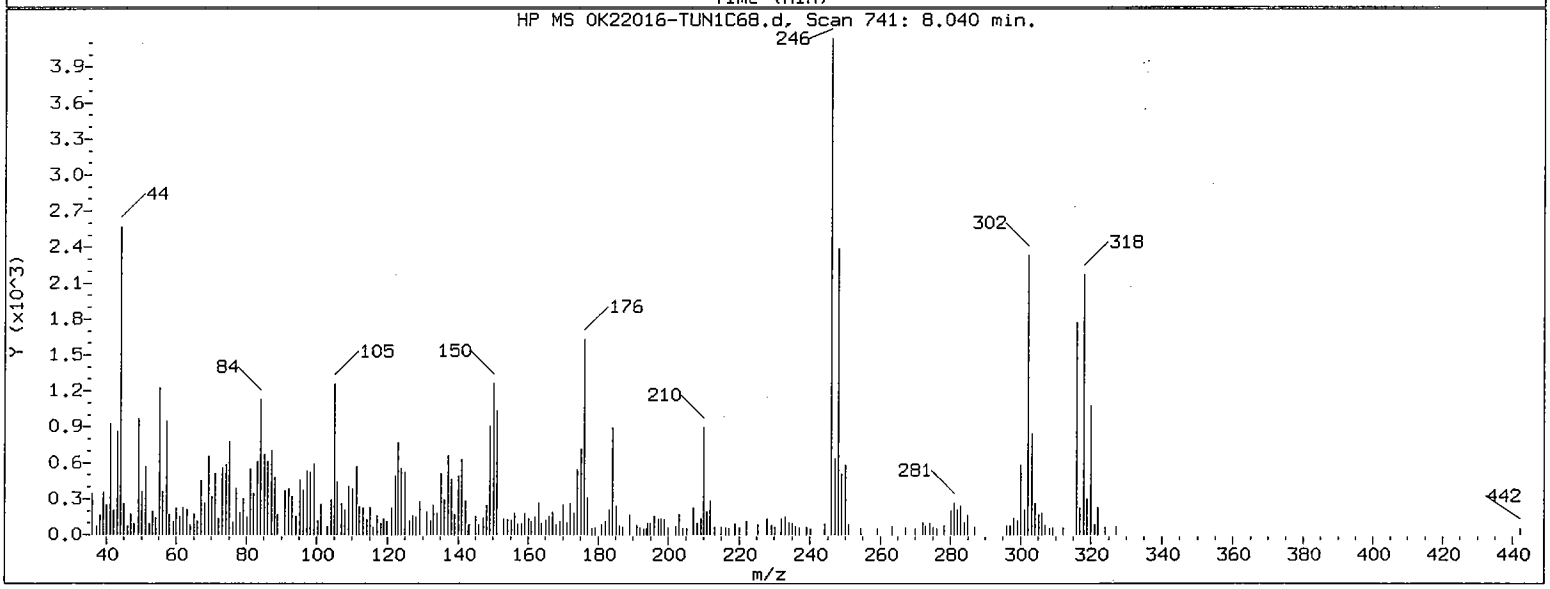
4,4'-DDD
========
Exp. RT = 8.900
Found RT = 8.446

Mass	Area	Ratio
235	159729	100.00

Report Date: 11/27/2010 09:45

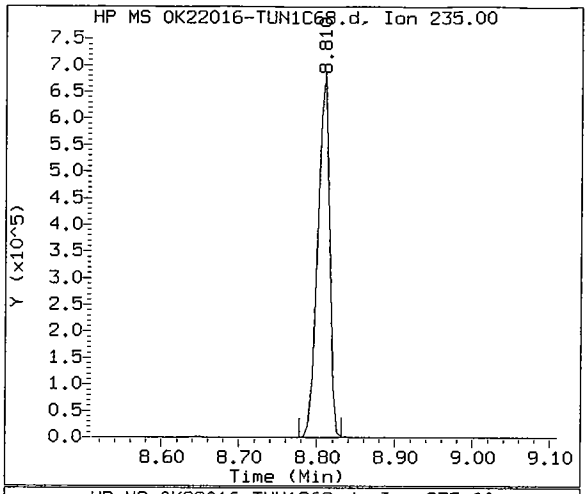
Datafile Analyzed: /chem/5973hp68.i/DF101122C68_C.b/0K22016-TUN1C68.d/0K22016-TU
Method Used: /chem/5973hp68.i/DF101122C68.b/dftpp8270C.m/BrkDwnTF.m Inst: 5973h
Injection Date: 22-NOV-2010 23:21 Operator:
Sample Info: DFTPP 0K22016-TUN1:MEW
Misc Info:



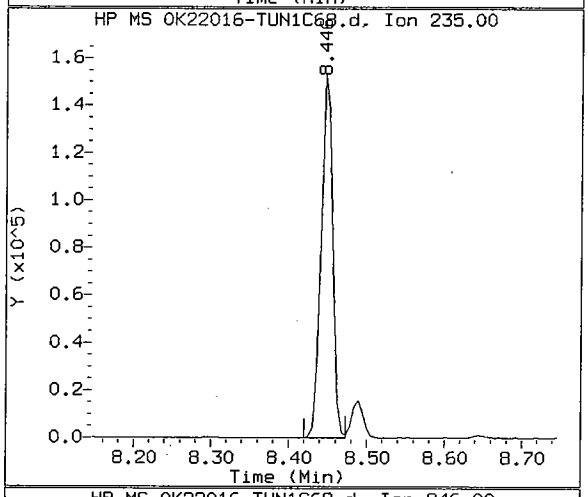


4,4'-DDE
========
Exp. RT = 8.440
Found RT = 8.040

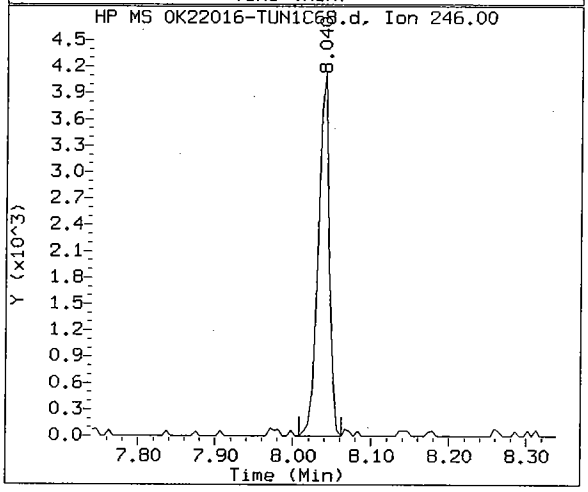
Mass	Area	Ratio
246	4152	100.00



Compound: 4,4'-DDT
Quant Mass: 235
RT: 8.810
Area: 731603



Compound: 4,4'-DDD
Quant Mass: 235
RT: 8.446
Area: 159729



Compound: 4,4'-DDE
Quant Mass: 246
RT: 8.040
Area: 4152

DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

Compound	Response	%Breakdown	Max Allowed	Test
4,4-DDT	731603			N/A
4,4-DDE	4152	0.6	20.0	PASS
4,4-DDD	159729	17.9	20.0	PASS
4,4-DDD + DDE	163881	18.3	20.0	PASS

****

TUNE SAMPLE *** PASSED *** DDT BREAKDOWN TEST

****

Data File: /chem/5973hp68.i/DF101122C68_A.b/0K22016-TUN1C68.d

Date : 22-NOV-2010 23:21

Client ID: DFTPPDR

Instrument: 5973hp68.i

Sample Info: 0K22016-TUN1:MEW

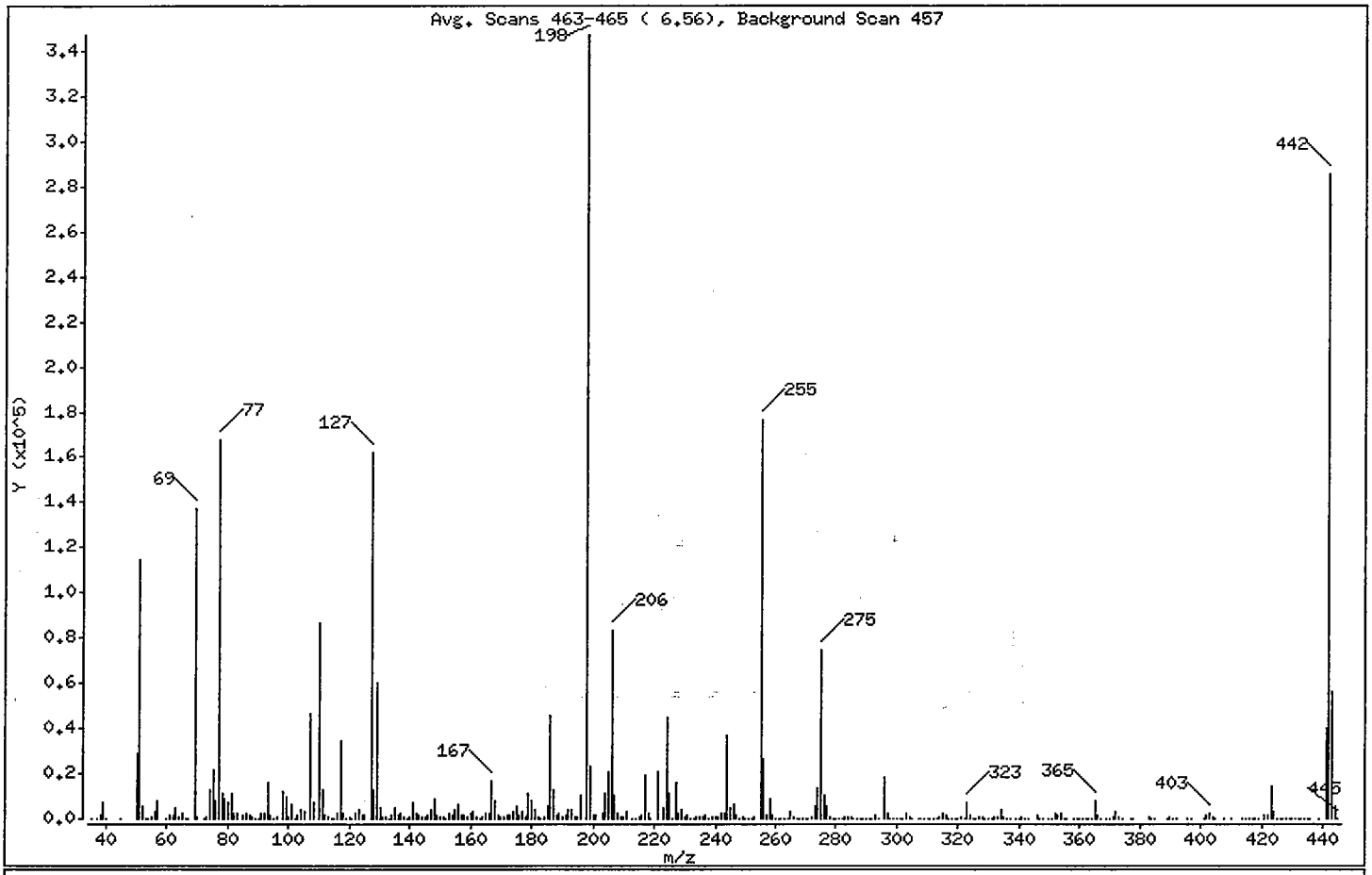
Volume Injected (uL): 2.0

Operator: MEW

Column phase: RTX-5MS

Column diameter: 0.32

1 Decafluorotriphenylphosphine



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	33.03
68	Less than 2.00% of mass 69	0.00 (0.00)
69	Mass 69 relative abundance	39.45
70	Less than 2.00% of mass 69	0.19 (0.48)
127	10.00 - 80.00% of mass 198	46.56
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.78
275	10.00 - 60.00% of mass 198	21.43
365	Greater than 1.00% of mass 198	2.28
441	Present, but less than mass 443	11.66
442	50.00 - 100.00% of mass 198	82.31
443	15.00 - 24.00% of mass 442	16.27 (19.76)

Data File: /chem/5973hp68.i/DF101122C68_A.b/0K22016-TUN1C68.d

Date : 22-NOV-2010 23:21

Client ID: DFTPPDR Instrument: 5973hp68.i

Sample Info: 0K22016-TUN1:MEW

Volume Injected (uL): 2.0 Operator: MEW

Column phase: RTX-5MS Column diameter: 0.32

Data File: 0K22016-TUN1C68.d

Spectrum: Avg. Scans 463-465 (6.56), Background Scan 457

Location of Maximum: 198.00

Number of points: 354

m/z	Y	m/z	Y	m/z	Y	m/z	Y
35.00	74	142.00	2616	236.00	924	328.00	600
37.00	391	143.00	1640	237.00	1367	329.00	124
38.00	1243	144.00	544	238.00	230	330.00	47
39.00	7259	145.00	467	239.00	650	331.00	21
40.00	187	146.00	1291	240.00	536	332.00	517
45.00	182	147.00	3630	241.00	1088	333.00	639
50.00	29256	148.00	8435	242.00	2405	334.00	4014
51.00	114688	149.00	1710	243.00	2693	335.00	1161
52.00	5978	150.00	457	244.00	36528	336.00	193
53.00	203	151.00	1022	245.00	4953	337.00	34
54.00	43	152.00	204	246.00	6083	339.00	142
55.00	444	153.00	2234	247.00	1218	340.00	142
56.00	3399	154.00	1671	248.00	332	341.00	839
57.00	7919	155.00	4091	249.00	1056	342.00	202
60.00	126	156.00	6131	250.00	289	343.00	41
61.00	1526	157.00	1385	251.00	334	346.00	1534
62.00	1715	158.00	1430	252.00	389	347.00	240
63.00	4860	159.00	1087	253.00	973	348.00	39
64.00	629	160.00	2300	255.00	176064	350.00	25
65.00	2526	161.00	3561	256.00	26264	351.00	127
66.00	202	162.00	1043	257.00	1802	352.00	2052
67.00	292	163.00	345	258.00	9051	353.00	1412
69.00	136960	164.00	493	259.00	1414	354.00	2250
70.00	651	165.00	2476	260.00	315	355.00	396
72.00	88	166.00	2444	261.00	364	356.00	90
73.00	1105	167.00	16984	262.00	86	358.00	17
74.00	12947	168.00	7719	263.00	128	359.00	163
75.00	21752	169.00	1379	264.00	320	360.00	36
76.00	7775	170.00	481	265.00	3525	361.00	52
77.00	167360	171.00	629	266.00	631	362.00	23
78.00	11468	172.00	1206	267.00	134	363.00	19
79.00	9121	173.00	1790	268.00	76	364.00	76
80.00	7423	174.00	3143	269.00	42	365.00	7921
81.00	10865	175.00	5940	270.00	218	366.00	1271
82.00	2571	176.00	1958	271.00	376	367.00	113

Data File: /chem/5973hp68.i/DF101122C68_A.b/0K22016-TUN1C68.d

Date : 22-NOV-2010 23:21

Client ID: DFTPPDR Instrument: 5973hp68.i

Sample Info: 0K22016-TUN1:MEW

Volume Injected (uL): 2.0 Operator: MEW

Column phase: RTX-5MS Column diameter: 0.32

Data File: 0K22016-TUN1C68.d

Spectrum: Avg. Scans 463-465 (6.56), Background Scan 457

Location of Maximum: 198.00

Number of points: 354

m/z	Y	m/z	Y	m/z	Y	m/z	Y
83.00	2451	177.00	2839	272.00	513	369.00	22
85.00	1598	178.00	908	273.00	5327	370.00	178
86.00	2465	179.00	11014	274.00	13564	371.00	565
87.00	1237	180.00	7938	275.00	74400	372.00	3554
88.00	597	181.00	3943	276.00	10101	373.00	891
89.00	300	182.00	615	277.00	5653	374.00	107
90.00	48	183.00	400	278.00	1035	377.00	125
91.00	2342	184.00	917	279.00	247	378.00	17
92.00	2539	185.00	5654	280.00	18	383.00	900
93.00	16201	186.00	45664	281.00	65	384.00	264
94.00	1210	187.00	12699	282.00	129	385.00	82
95.00	123	188.00	1300	283.00	643	389.00	26
96.00	837	189.00	2429	284.00	555	390.00	463
98.00	12246	190.00	503	285.00	1028	391.00	391
99.00	9763	191.00	1447	286.00	179	392.00	293
100.00	822	192.00	3957	287.00	17	396.00	18
101.00	6018	193.00	4202	288.00	77	397.00	17
102.00	286	194.00	882	289.00	253	401.00	246
103.00	1933	195.00	814	290.00	218	402.00	1465
104.00	3671	196.00	10627	291.00	149	403.00	2081
105.00	3593	198.00	347200	292.00	269	404.00	697
107.00	46440	199.00	23544	293.00	1378	405.00	172
108.00	7359	200.00	1808	294.00	377	408.00	18
110.00	86856	201.00	1741	296.00	18664	410.00	82
111.00	13017	203.00	2280	297.00	2489	414.00	17
112.00	1527	204.00	11421	298.00	218	415.00	80
113.00	492	205.00	20616	299.00	21	416.00	21
114.00	94	206.00	83456	300.00	83	417.00	21
115.00	228	207.00	10554	301.00	279	418.00	20
116.00	2381	208.00	2650	302.00	238	419.00	48
117.00	34344	209.00	844	303.00	2255	421.00	1972
118.00	2563	210.00	402	304.00	687	422.00	1768
119.00	249	211.00	3457	305.00	116	423.00	14067
120.00	534	213.00	268	307.00	18	424.00	2854
121.00	216	214.00	111	308.00	303	425.00	332

Data File: /chem/5973hp68.i/DF101122C68_A.b/0K22016-TUN1C68.d

Date : 22-NOV-2010 23:21

Client ID: DFTPPDR Instrument: 5973hp68.i

Sample Info: 0K22016-TUN1:MEW

Volume Injected (uL): 2.0 Operator: MEW

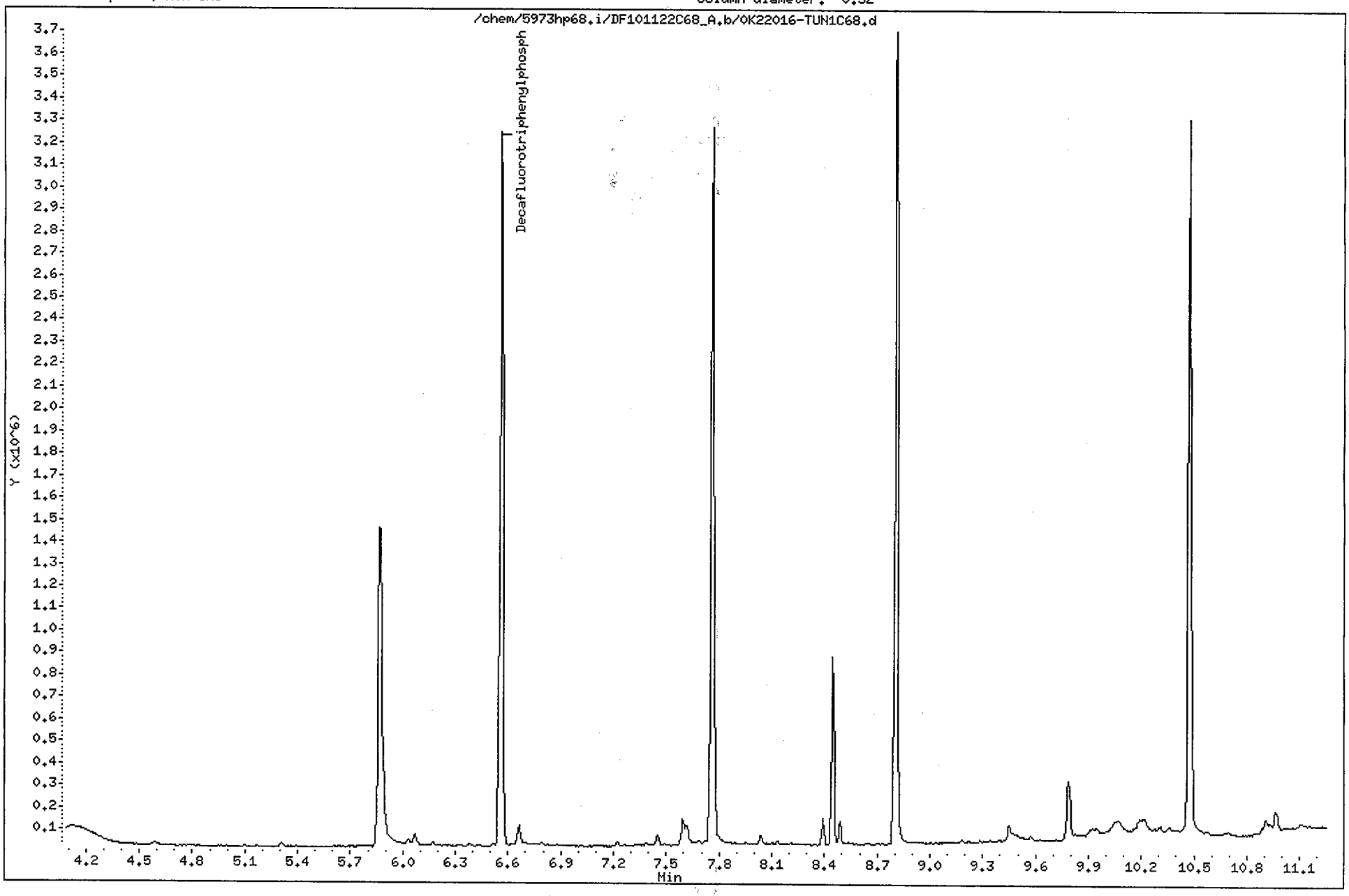
Column phase: RTX-5MS Column diameter: 0.32

Data File: 0K22016-TUN1C68.d
Spectrum: Avg. Scans 463-465 (6.56), Background Scan 457
Location of Maximum: 198.00
Number of points: 354

m/z	Y	m/z	Y	m/z	Y	m/z	Y
122.00	2784	215.00	947	309.00	201	426.00	103
123.00	4103	216.00	1754	310.00	310	427.00	133
124.00	1940	217.00	19584	311.00	135	428.00	94
125.00	1895	218.00	2585	312.00	42	429.00	156
127.00	161664	219.00	304	313.00	270	430.00	244
128.00	12464	221.00	20880	314.00	930	431.00	264
129.00	60320	223.00	4697	315.00	2162	432.00	399
130.00	5065	224.00	45192	316.00	1299	433.00	201
131.00	1026	225.00	11495	317.00	226	434.00	152
132.00	473	226.00	312	318.00	17	435.00	136
133.00	305	227.00	16376	319.00	39	436.00	43
134.00	1660	228.00	2481	320.00	94	439.00	66
135.00	4556	229.00	3936	321.00	555	441.00	40480
136.00	1801	230.00	608	322.00	231	442.00	285824
137.00	2284	231.00	1624	323.00	6908	443.00	56488
138.00	644	232.00	384	324.00	1239	444.00	5510
139.00	339	233.00	371	325.00	102	445.00	261
140.00	633	234.00	1035	326.00	94		
141.00	7117	235.00	1143	327.00	1184		

Data File: /chem/5973hp68.i/DF101122C68_A.b/0K22016-TUN1C68.d
Date : 22-NOV-2010 23:21
Client ID: DFTPPDR
Sample Info: 0K22016-TUN1:MEW
Volume Injected (uL): 2.0
Column phase: RTX-5MS

Instrument: 5973hp68.i
Operator: MEW
Column diameter: 0.32



TAILING FACTOR and DEGRADATION SUMMARY RESULTS

DECAFLUOROTRIPHENYLPHOSPHINE Ion Abundance/Ratio Criteria Chart

Ion	Abundance Criteria	Base Peak	Other	Test
198	Base Peak, 100% relative abundance	100.00		PASS
51	10 - 80% of mass 198	33.03		PASS
68	Less than 2% of mass 69	0.00	(0.00)	PASS
69	Mass 69 relative abundance	39.45		PASS
70	Less than 2% of mass 69	0.19	(0.48)	PASS
127	10 - 80% of mass 198	46.56		PASS
197	0 - 2% of mass 198	0.00		PASS
199	5 - 9% of mass 198	6.78		PASS
275	10 - 60% of mass 198	21.43		PASS
365	Greater than 0.75% of mass 198	2.28		PASS
441	Present, but less than mass 443	11.66	(71.67)	PASS
442	50 - 100 % of mass 198	82.31		PASS
443	15 - 24% of mass 442	16.27	(19.76)	PASS

TAILING ANALYSIS SUMMARY

Compound	Tail Factor	Max Allowed	Test
Pentachlorophenol	1.4	5.0	PASS
Benzidine	0.8	3.0	PASS

DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

Compound	Response	%Breakdown	Max Allowed	Test
4,4-DDT	731603			N/A
4,4-DDE	4152	0.6	20.0	PASS
4,4-DDD	159729	17.9	20.0	PASS
4,4-DDD + DDE	163881	18.3	20.0	PASS

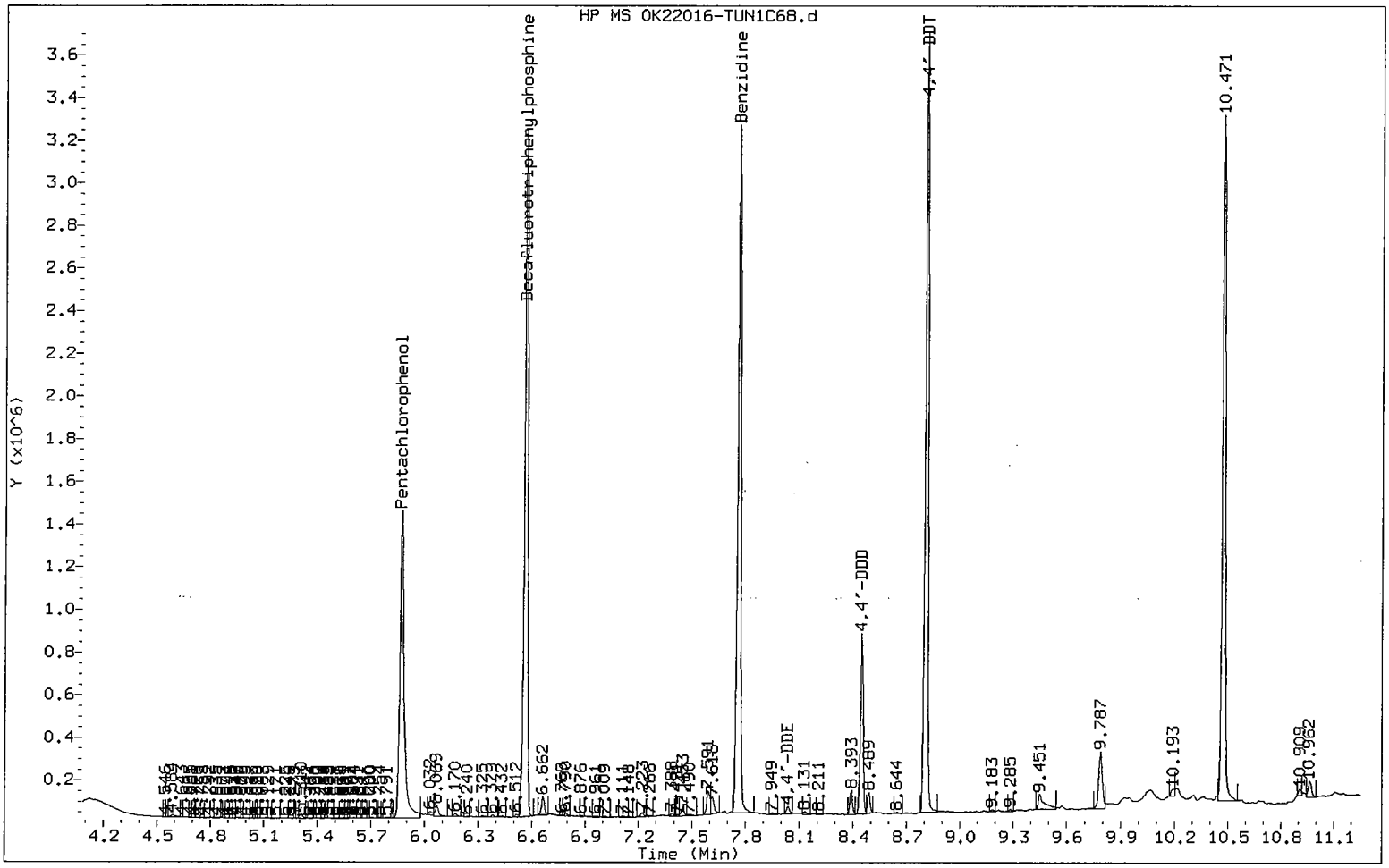
Tuning Sample, /chem/5973hp68.i/DF101122C68_A.b/0K22016-TUN1C68.d/0K22016-TUN1C6

*** PASSED ***

TAILING FACTOR and DEGRADATION SAMPLE AND GRAPHIC REPORT

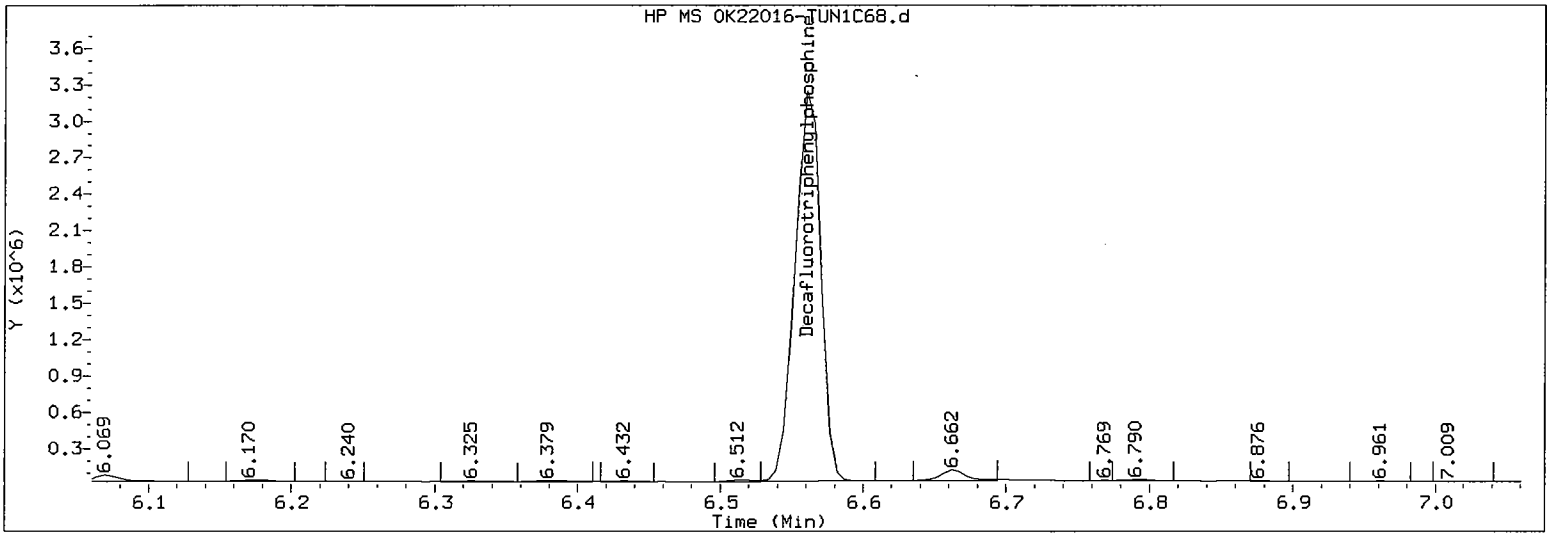
Report Date: 11/27/2010 09:01

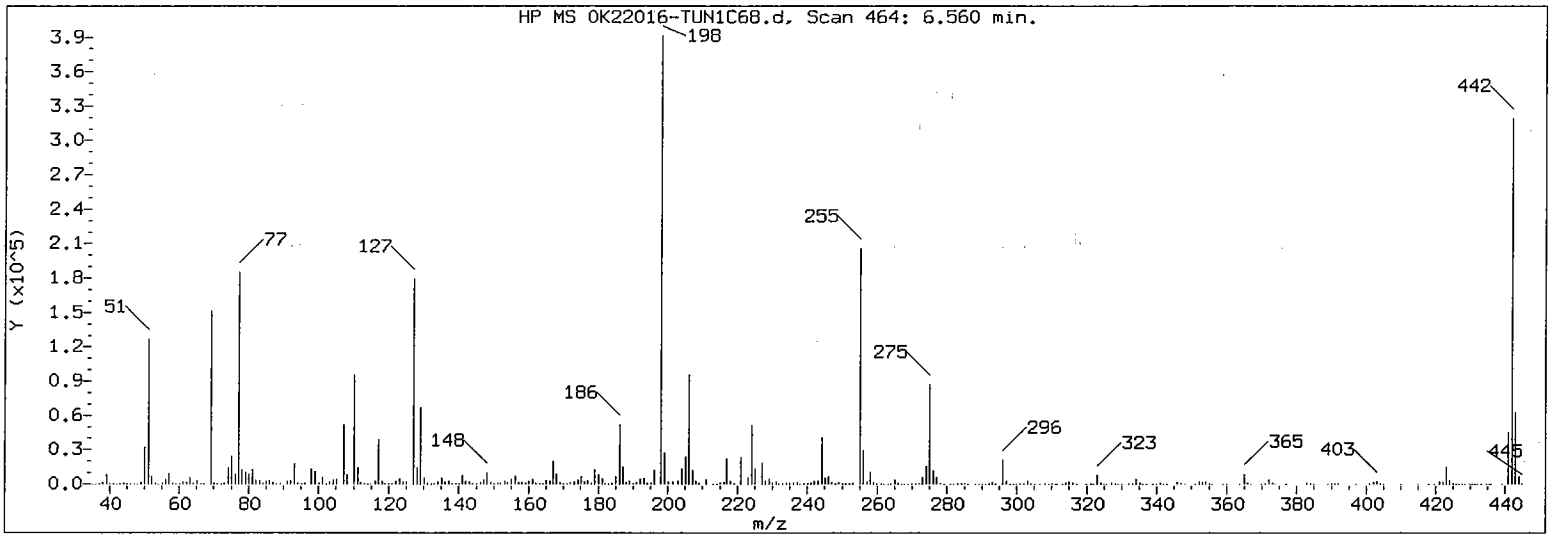
Datafile Analyzed: /chem/5973hp68.i/DF101122C68_A.b/0K22016-TUN1C68.d/0K22016-TU
Method Used: /chem/5973hp68.i/DF101122C68_A.b/dftpp8270C.m Inst: 5973hp68
Injection Date: 22-NOV-2010 23:21 Operator: MEW
Sample Info: 0K22016-TUN1 0K22016-TUN1:MEW
Misc Info: DFTPPDR



Report Date: 11/27/2010 09:01

Datafile Analyzed: /chem/5973hp68.i/DF101122C68_A.b/0K22016-TUN1C68.d/0K22016-TU
Method Used: /chem/5973hp68.i/DF101122C68_A.b/dftpp8270C.m Inst: 5973hp68
Injection Date: 22-NOV-2010 23:21 Operator: MEW
Sample Info: 0K22016-TUN1 0K22016-TUN1:MEW
Misc Info: DFTPPDR



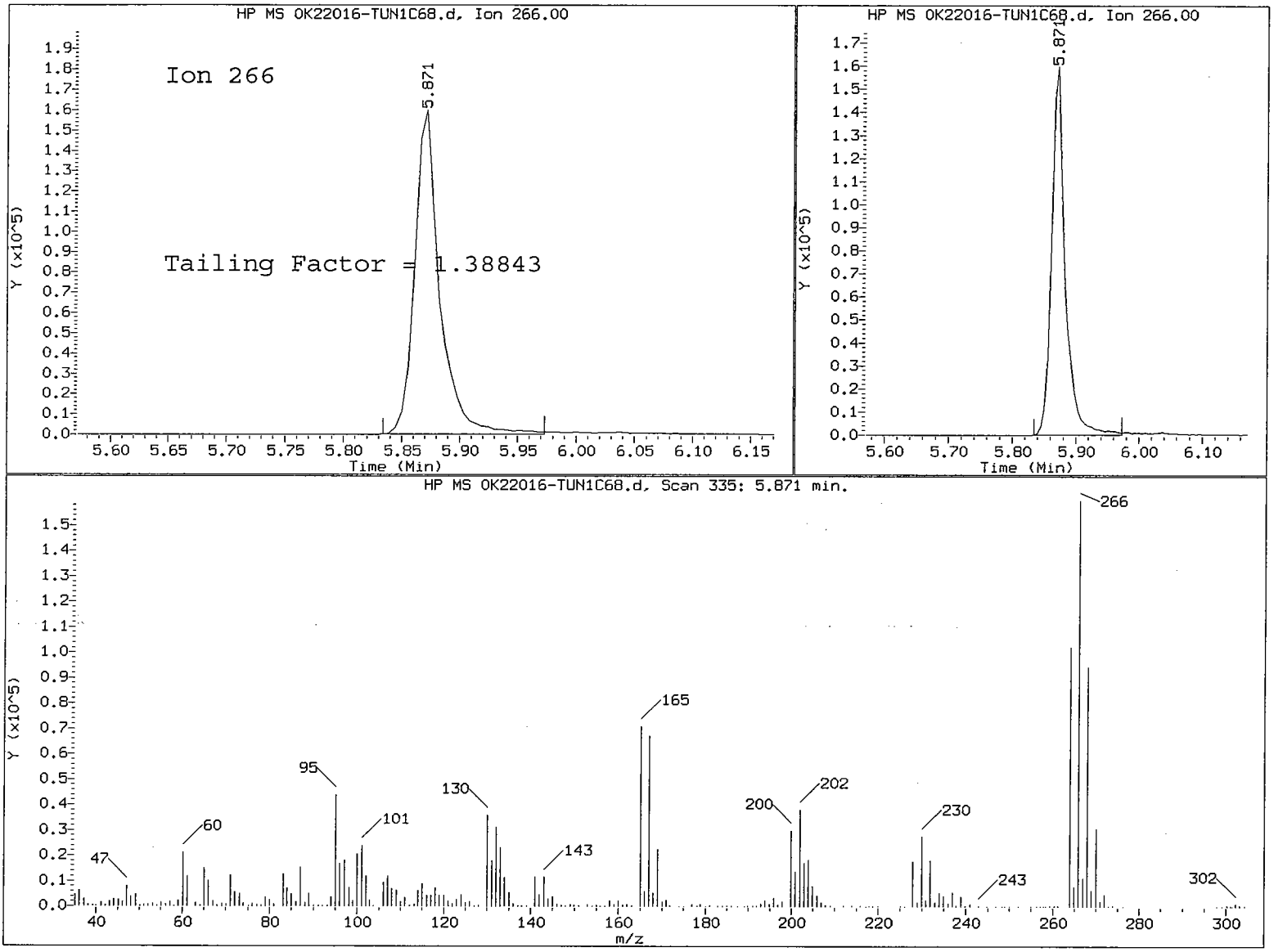


DECAFLUOROTRIPHENYLPHOSPHINE Ion Abundance/Ratio Criteria Chart

Ion	Abundance Criteria	Base Peak	Other	Test
198	Base Peak, 100% relative abundance	100.00		PASS
51	10 - 80% of mass 198	33.03		PASS
68	Less than 2% of mass 69	0.00	(0.00)	PASS
69	Mass 69 relative abundance	39.45		PASS
70	Less than 2% of mass 69	0.19	(0.48)	PASS
127	10 - 80% of mass 198	46.56		PASS
197	0 - 2% of mass 198	0.00		PASS
199	5 - 9% of mass 198	6.78		PASS
275	10 - 60% of mass 198	21.43		PASS
365	Greater than 0.75% of mass 198	2.28		PASS
441	Present, but less than mass 443	11.66	(71.67)	PASS
442	50 - 100% of mass 198	82.31		PASS
443	15 - 24% of mass 442	16.27	(19.76)	PASS

Report Date: 11/27/2010 09:01

Datafile Analyzed: /chem/5973hp68.i/DF101122C68_A.b/0K22016-TUN1C68.d/0K22016-TU
Method Used: /chem/5973hp68.i/DF101122C68.b/dftpp8270C.m/BrkDwnTF.m Inst: 5973h
Injection Date: 22-NOV-2010 23:21 Operator:
Sample Info: DFTPP 0K22016-TUN1:MEW
Misc Info:



Pentachlorophenol
==========

Exp. RT = 6.325
Found RT = 5.871

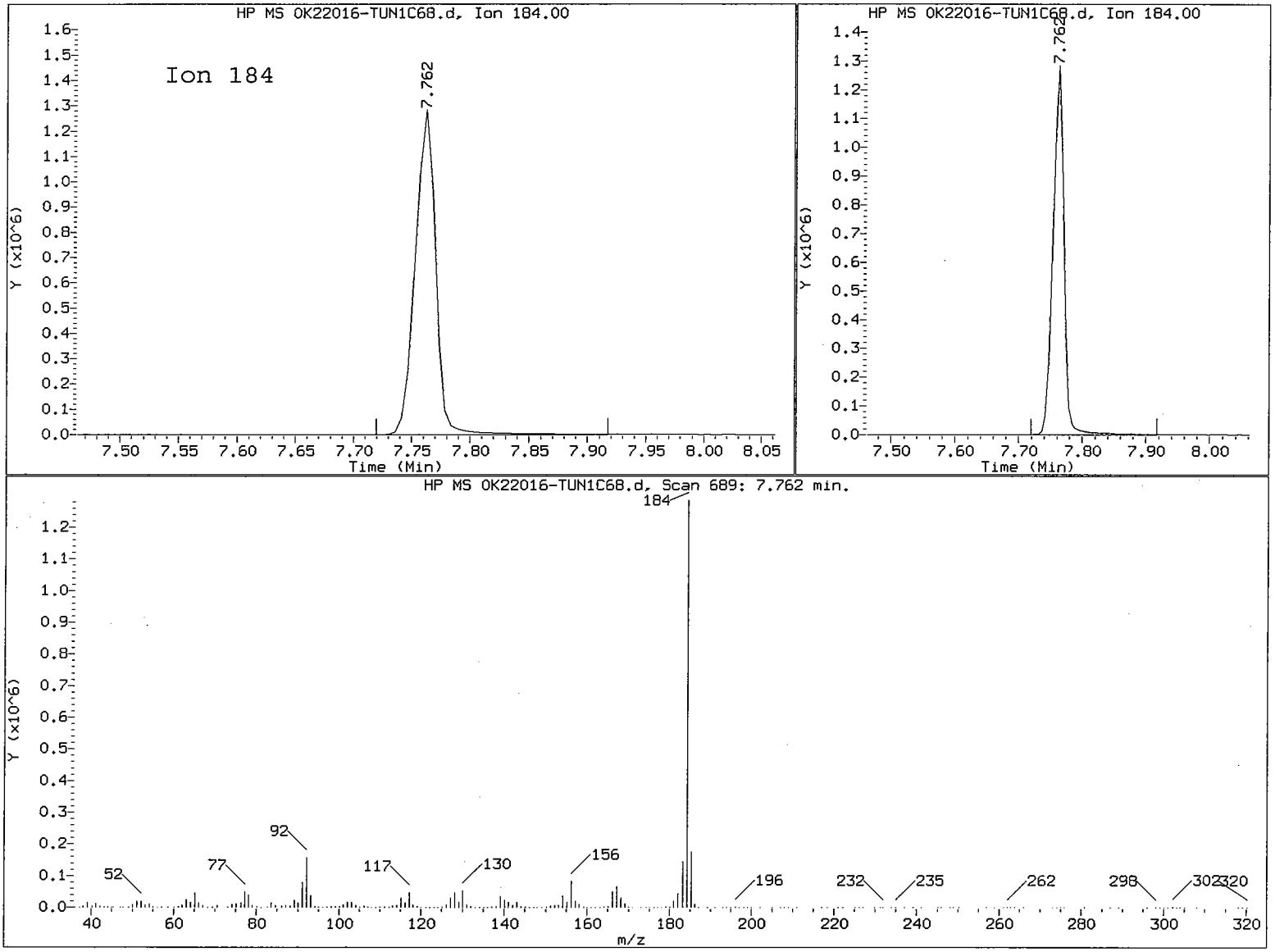
Mass	Area	Ratio
266	240816	100.00

Tailing factor for Pentachlorophenol OK

Tailing Factor = 1.4 Maximum Allowed = 5.0

Report Date: 11/27/2010 09:01

Datafile Analyzed: /chem/5973hp68.i/DF101122C68_A.b/0K22016-TUN1C68.d/0K22016-TU
Method Used: /chem/5973hp68.i/DF101122C68.b/dftpp8270C.m/BrkDwnTF.m Inst: 5973h
Injection Date: 22-NOV-2010 23:21 Operator:
Sample Info: DFTPP 0K22016-TUN1:MEW
Misc Info:



Benzidine
=========
Exp. RT = 8.201
Found RT = 7.762

Mass	Area	Ratio
184	1561378	100.00

Tailing factor for Benzidine OK

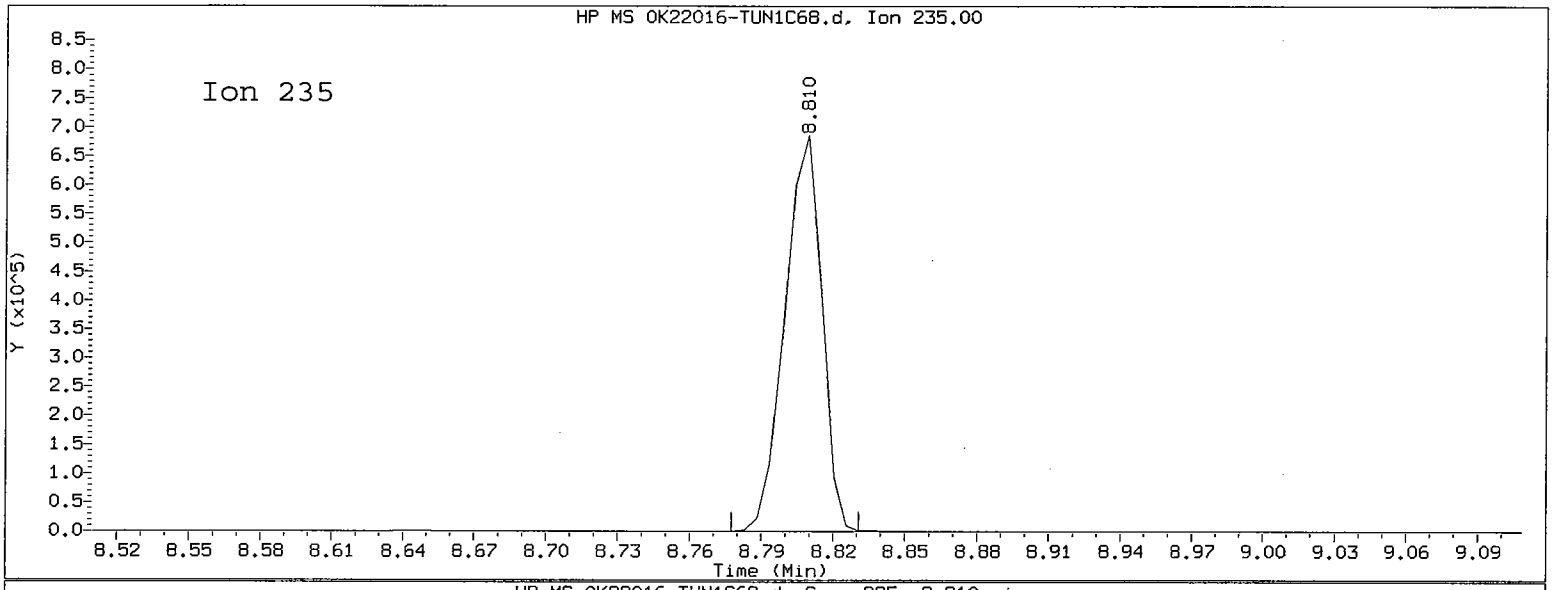
Tailing Factor = 0.8 Maximum Allowed = 3.0

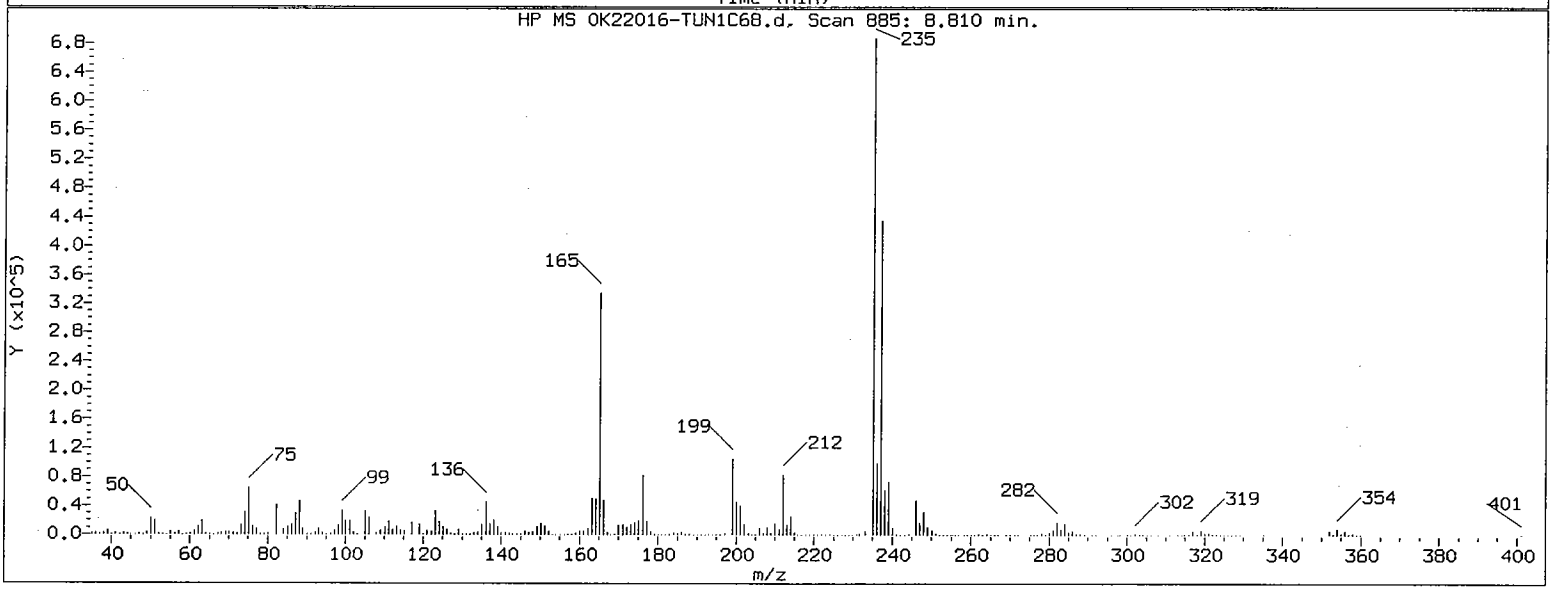
If Tailing Factor < 1.0, then it is assumed that the peak is not tailing and a Tailing Factor of zero is reported.

Tailing Factor = 0.78431

Report Date: 11/27/2010 09:01

Datafile Analyzed: /chem/5973hp68.i/DF101122C68_A.b/0K22016-TUN1C68.d/0K22016-TU
Method Used: /chem/5973hp68.i/DF101122C68.b/dftpp8270C.m/BrkDwnTF.m Inst: 5973h
Injection Date: 22-NOV-2010 23:21 Operator:
Sample Info: DFTPP 0K22016-TUN1:MEW
Misc Info:



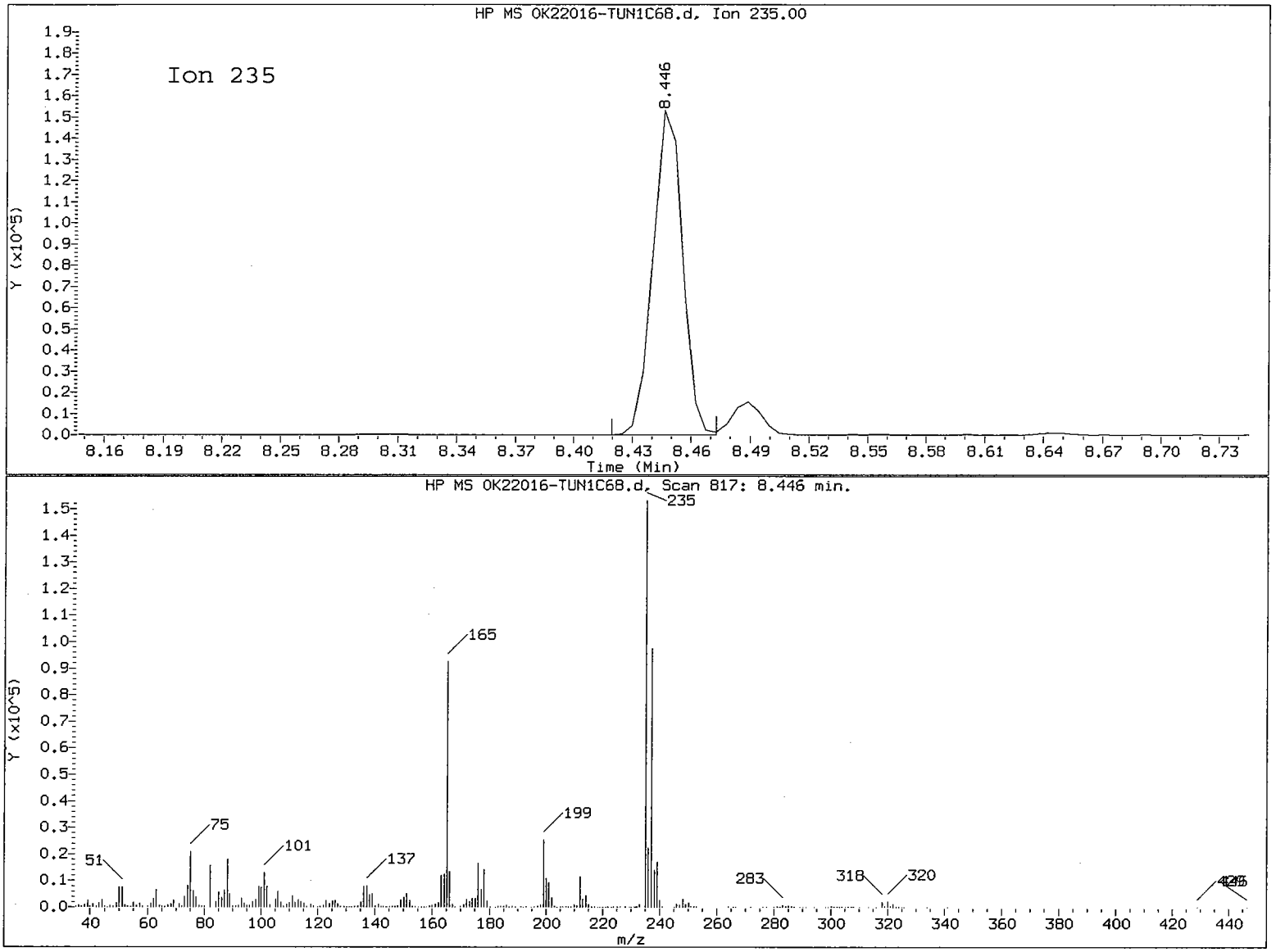


4,4'-DDT
========
Exp. RT = 9.248
Found RT = 8.810

Mass	Area	Ratio
235	731603	100.00

Report Date: 11/27/2010 09:01

Datafile Analyzed: /chem/5973hp68.i/DF101122C68_A.b/0K22016-TUN1C68.d/0K22016-TU
Method Used: /chem/5973hp68.i/DF101122C68.b/dftpp8270C.m/BrkDwnTF.m Inst: 5973h
Injection Date: 22-NOV-2010 23:21 Operator:
Sample Info: DFTPP 0K22016-TUN1:MEW
Misc Info:

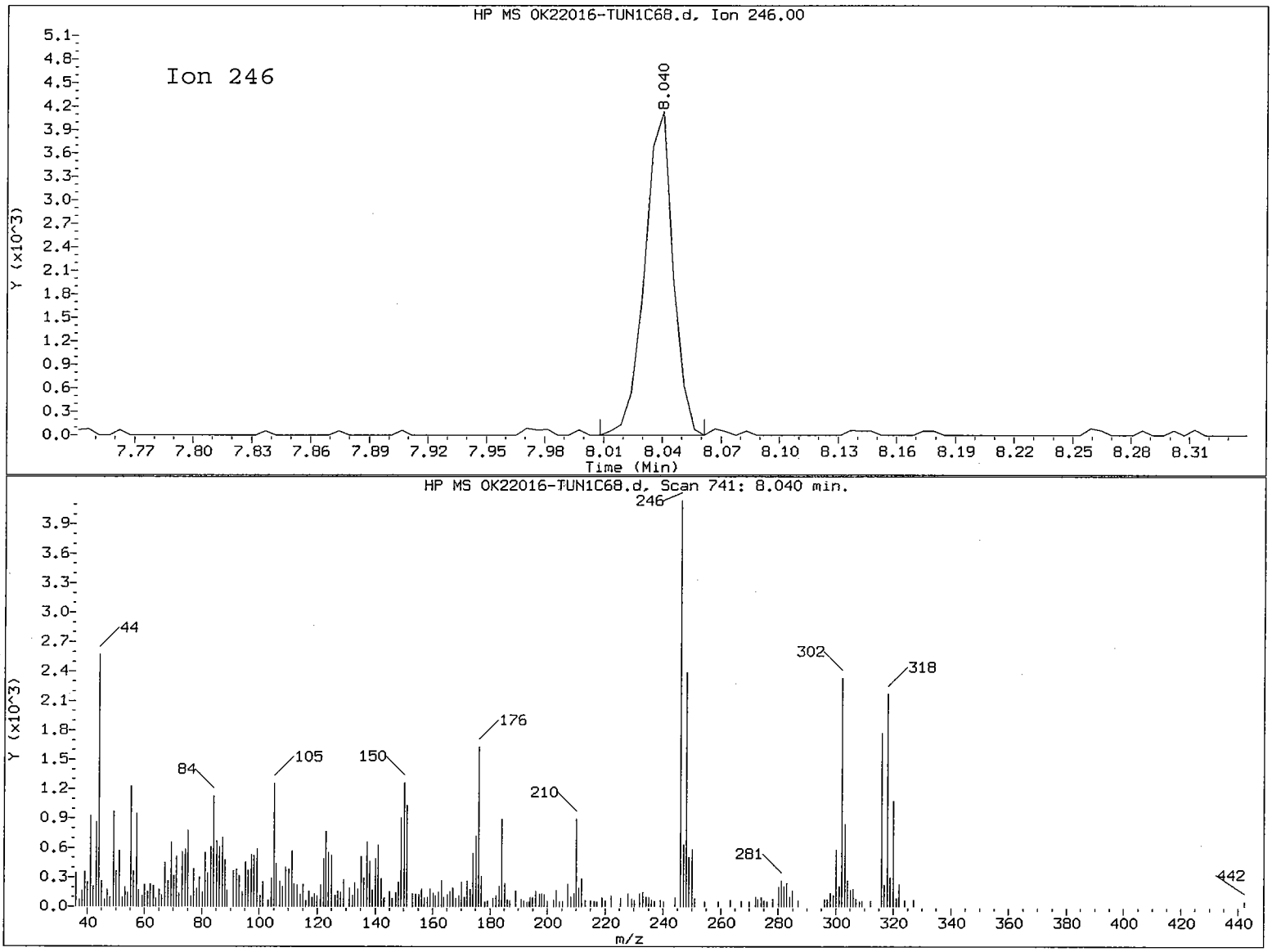


4,4'-DDD
========
Exp. RT = 8.900
Found RT = 8.446

Mass	Area	Ratio
235	159729	100.00

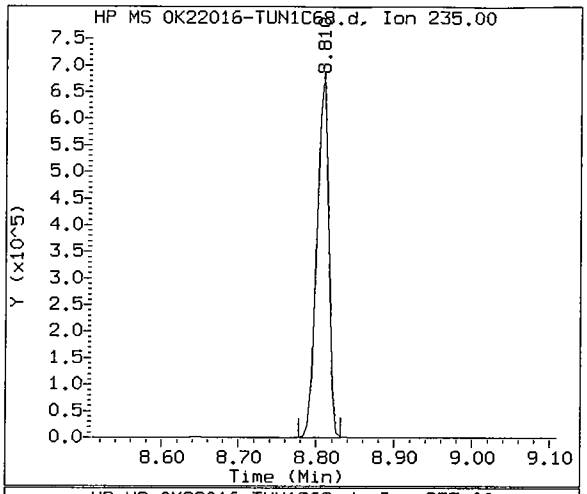
Report Date: 11/27/2010 09:01

Datafile Analyzed: /chem/5973hp68.i/DF101122C68_A.b/0K22016-TUN1C68.d/0K22016-TU
Method Used: /chem/5973hp68.i/DF101122C68.b/dftpp8270C.m/BrkDwnTF.m Inst: 5973h
Injection Date: 22-NOV-2010 23:21 Operator:
Sample Info: DFTPP 0K22016-TUN1:MEW
Misc Info:

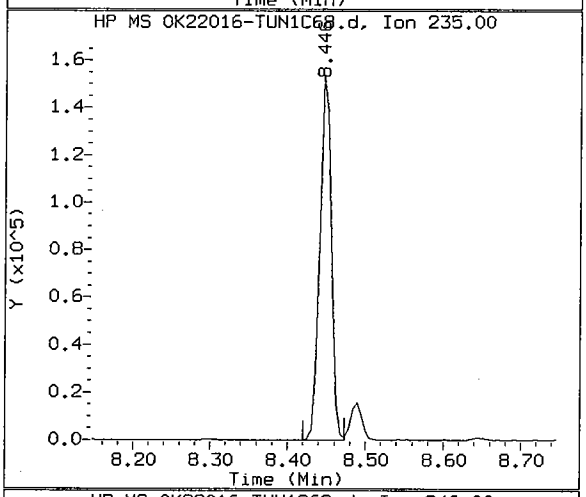


4,4'-DDE
========
Exp. RT = 8.440
Found RT = 8.040

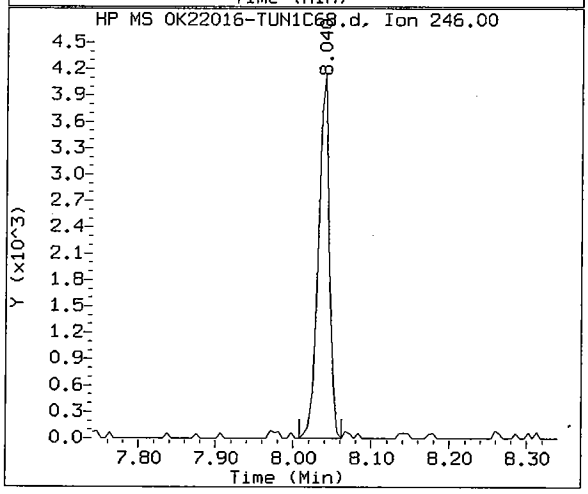
Mass	Area	Ratio
246	4152	100.00



Compound: 4,4'-DDT
Quant Mass: 235
RT: 8.810
Area: 731603



Compound: 4,4'-DDD
Quant Mass: 235
RT: 8.446
Area: 159729



Compound: 4,4'-DDE
Quant Mass: 246
RT: 8.040
Area: 4152

DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

Compound	Response	%Breakdown	Max Allowed	Test
4,4-DDT	731603			N/A
4,4-DDE	4152	0.6	20.0	PASS
4,4-DDD	159729	17.9	20.0	PASS
4,4-DDD + DDE	163881	18.3	20.0	PASS

****

TUNE SAMPLE *** PASSED *** DDT BREAKDOWN TEST

****

Data File: /chem/5973hp68.i/DF101122C68_B.b/0K22016-TUN1C68.d

Date : 22-NOV-2010 23:21

Client ID: DFTPPDR

Instrument: 5973hp68.i

Sample Info: 0K22016-TUN1:MEW

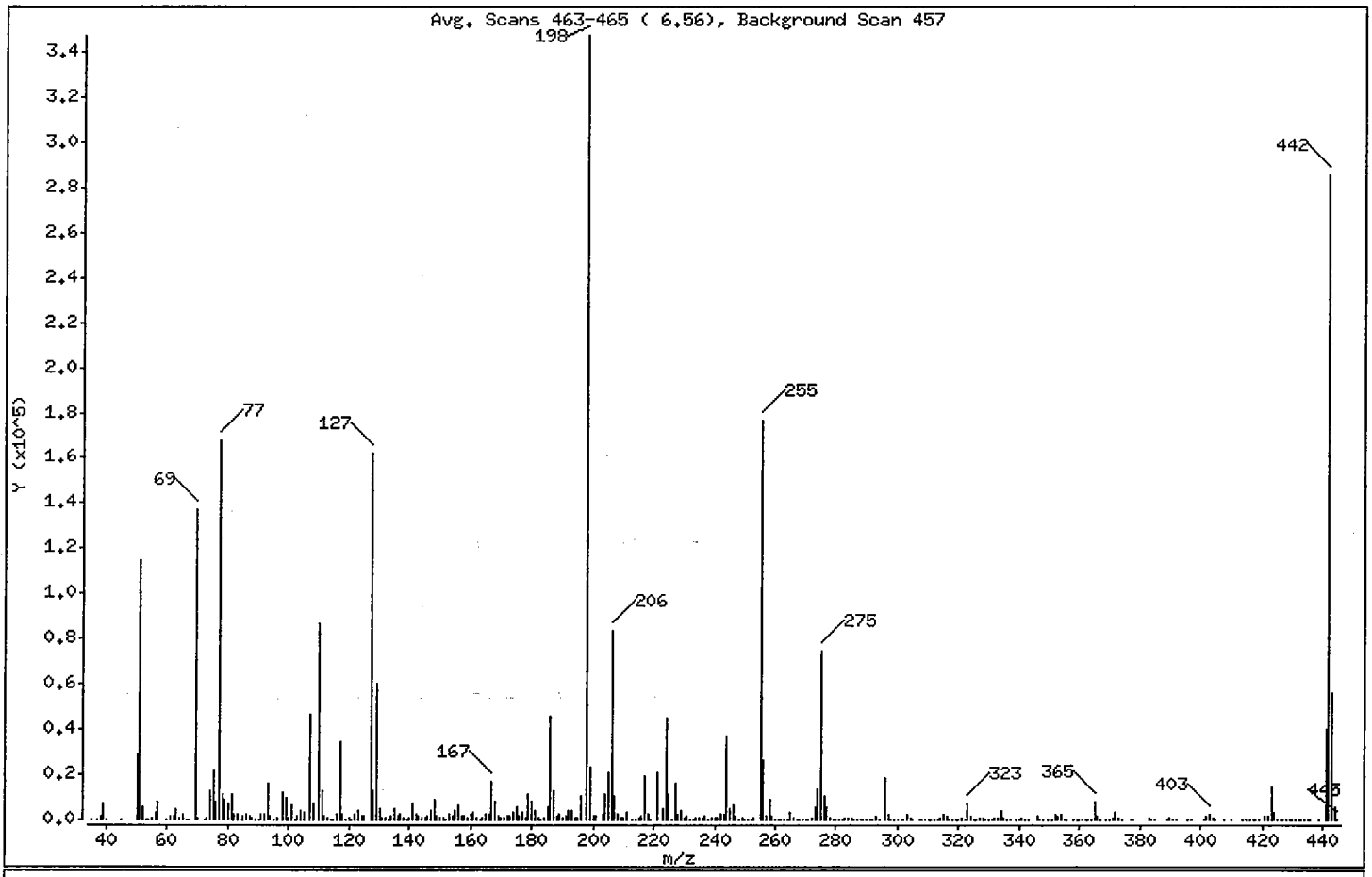
Volume Injected (uL): 2.0

Operator: MEW

Column phase: RTX-5MS

Column diameter: 0.32

1 Decafluorotriphenylphosphine



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	33.03
68	Less than 2.00% of mass 69	0.00 (0.00)
69	Mass 69 relative abundance	39.45
70	Less than 2.00% of mass 69	0.19 (0.48)
127	10.00 - 80.00% of mass 198	46.56
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.78
275	10.00 - 60.00% of mass 198	21.43
365	Greater than 1.00% of mass 198	2.28
441	Present, but less than mass 443	11.66
442	50.00 - 100.00% of mass 198	82.31
443	15.00 - 24.00% of mass 442	16.27 (19.76)

Data File: /chem/5973hp68.i/DF101122C68_B.b/0K22016-TUN1C68.d

Date : 22-NOV-2010 23:21

Client ID: DFTPPDR Instrument: 5973hp68.i

Sample Info: 0K22016-TUN1:MEW

Volume Injected (uL): 2.0 Operator: MEW

Column phase: RTX-5MS Column diameter: 0.32

Data File: 0K22016-TUN1C68.d
Spectrum: Avg. Scans 463-465 (6.56), Background Scan 457
Location of Maximum: 198.00
Number of points: 354

m/z	Y	m/z	Y	m/z	Y	m/z	Y
35.00	74	142.00	2616	236.00	924	328.00	600
37.00	391	143.00	1640	237.00	1367	329.00	124
38.00	1243	144.00	544	238.00	230	330.00	47
39.00	7259	145.00	467	239.00	650	331.00	21
40.00	187	146.00	1291	240.00	536	332.00	517
45.00	182	147.00	3630	241.00	1088	333.00	639
50.00	29256	148.00	8435	242.00	2405	334.00	4014
51.00	114688	149.00	1710	243.00	2693	335.00	1161
52.00	5978	150.00	457	244.00	36528	336.00	193
53.00	203	151.00	1022	245.00	4953	337.00	34
54.00	43	152.00	204	246.00	6083	339.00	142
55.00	444	153.00	2234	247.00	1218	340.00	142
56.00	3399	154.00	1671	248.00	332	341.00	839
57.00	7919	155.00	4091	249.00	1056	342.00	202
60.00	126	156.00	6131	250.00	289	343.00	41
61.00	1526	157.00	1385	251.00	334	346.00	1534
62.00	1715	158.00	1430	252.00	389	347.00	240
63.00	4860	159.00	1087	253.00	973	348.00	39
64.00	629	160.00	2300	255.00	176064	350.00	25
65.00	2526	161.00	3561	256.00	26264	351.00	127
66.00	202	162.00	1043	257.00	1802	352.00	2052
67.00	292	163.00	345	258.00	9051	353.00	1412
69.00	136960	164.00	493	259.00	1414	354.00	2250
70.00	651	165.00	2476	260.00	315	355.00	396
72.00	88	166.00	2444	261.00	364	356.00	90
73.00	1105	167.00	16984	262.00	86	358.00	17
74.00	12947	168.00	7719	263.00	128	359.00	163
75.00	21752	169.00	1379	264.00	320	360.00	36
76.00	7775	170.00	481	265.00	3525	361.00	52
77.00	167360	171.00	629	266.00	631	362.00	23
78.00	11468	172.00	1206	267.00	134	363.00	19
79.00	9121	173.00	1790	268.00	76	364.00	76
80.00	7423	174.00	3143	269.00	42	365.00	7921
81.00	10865	175.00	5940	270.00	218	366.00	1271
82.00	2571	176.00	1958	271.00	376	367.00	113

Data File: /chem/5973hp68.i/DF101122C68_B.b/0K22016-TUN1C68.d

Date : 22-NOV-2010 23:21

Client ID: DFTPPDR Instrument: 5973hp68.i

Sample Info: 0K22016-TUN1:MEW

Volume Injected (uL): 2.0 Operator: MEW

Column phase: RTX-5MS Column diameter: 0.32

Data File: 0K22016-TUN1C68.d

Spectrum: Avg. Scans 463-465 (6.56), Background Scan 457

Location of Maximum: 198.00

Number of points: 354

m/z	Y	m/z	Y	m/z	Y	m/z	Y
83.00	2451	177.00	2839	272.00	513	369.00	22
85.00	1598	178.00	908	273.00	5327	370.00	178
86.00	2465	179.00	11014	274.00	13564	371.00	565
87.00	1237	180.00	7938	275.00	74400	372.00	3554
88.00	597	181.00	3943	276.00	10101	373.00	891
89.00	300	182.00	615	277.00	5653	374.00	107
90.00	48	183.00	400	278.00	1035	377.00	125
91.00	2342	184.00	917	279.00	247	378.00	17
92.00	2539	185.00	5654	280.00	18	383.00	900
93.00	16201	186.00	45664	281.00	65	384.00	264
94.00	1210	187.00	12699	282.00	129	385.00	82
95.00	123	188.00	1300	283.00	643	389.00	26
96.00	837	189.00	2429	284.00	555	390.00	463
98.00	12246	190.00	503	285.00	1028	391.00	391
99.00	9763	191.00	1447	286.00	179	392.00	293
100.00	822	192.00	3957	287.00	17	396.00	18
101.00	6018	193.00	4202	288.00	77	397.00	17
102.00	286	194.00	882	289.00	253	401.00	246
103.00	1933	195.00	814	290.00	218	402.00	1465
104.00	3671	196.00	10627	291.00	149	403.00	2081
105.00	3593	198.00	347200	292.00	269	404.00	697
107.00	46440	199.00	23544	293.00	1378	405.00	172
108.00	7359	200.00	1808	294.00	377	408.00	18
110.00	86856	201.00	1741	296.00	18664	410.00	82
111.00	13017	203.00	2280	297.00	2489	414.00	17
112.00	1527	204.00	11421	298.00	218	415.00	80
113.00	492	205.00	20616	299.00	21	416.00	21
114.00	94	206.00	83456	300.00	83	417.00	21
115.00	228	207.00	10554	301.00	279	418.00	20
116.00	2381	208.00	2650	302.00	238	419.00	48
117.00	34344	209.00	844	303.00	2255	421.00	1972
118.00	2563	210.00	402	304.00	687	422.00	1768
119.00	249	211.00	3457	305.00	116	423.00	14067
120.00	534	213.00	268	307.00	18	424.00	2854
121.00	216	214.00	111	308.00	303	425.00	332

Data File: /chem/5973hp68.i/DF101122C68_B.b/0K22016-TUN1C68.d

Date : 22-NOV-2010 23:21

Client ID: DFTPPDR Instrument: 5973hp68.i

Sample Info: 0K22016-TUN1:MEW

Volume Injected (uL): 2.0 Operator: MEW

Column phase: RTX-5MS Column diameter: 0.32

Data File: 0K22016-TUN1C68.d

Spectrum: Avg. Scans 463-465 (6.56), Background Scan 457

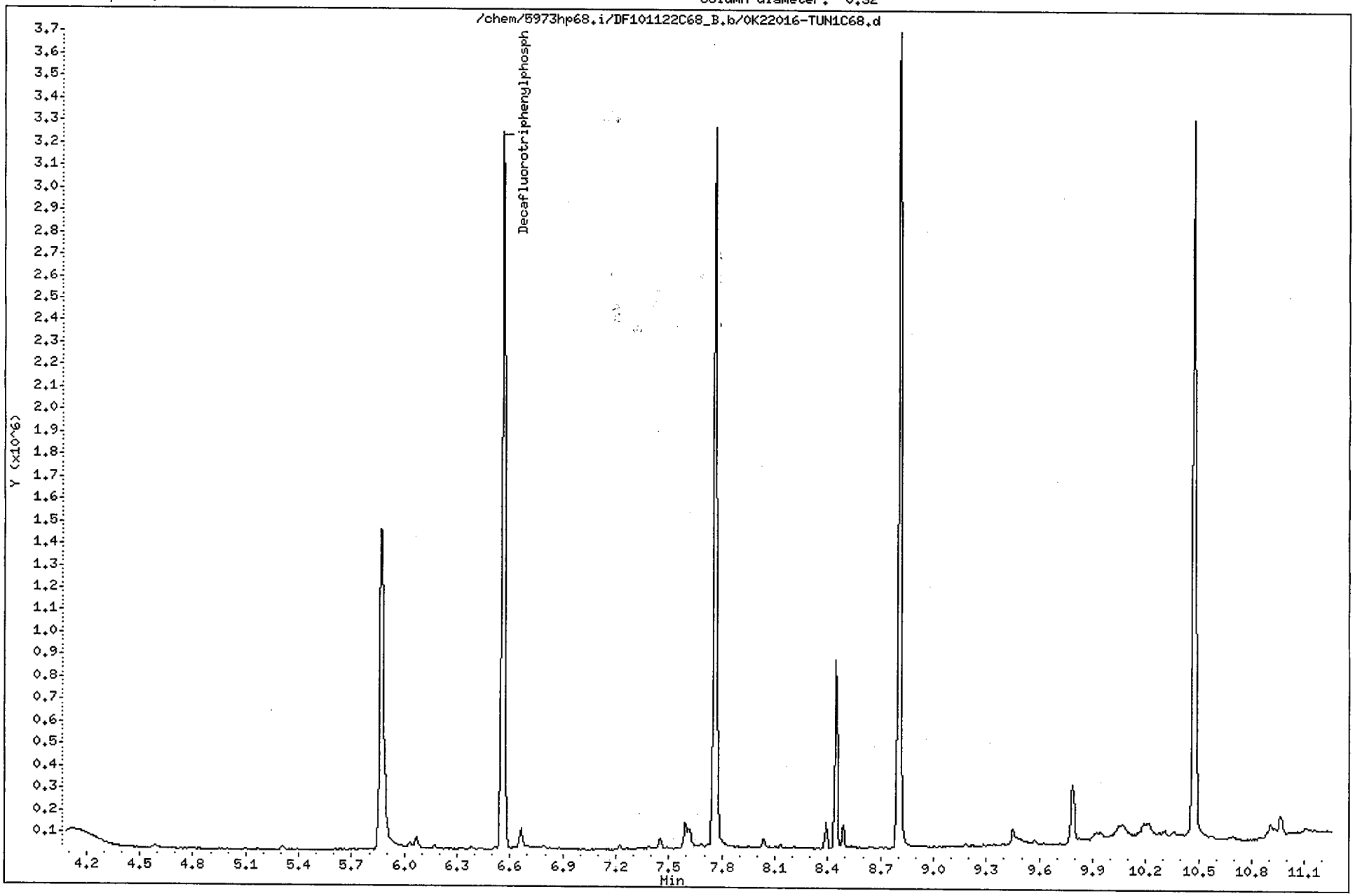
Location of Maximum: 198.00

Number of points: 354

m/z	Y	m/z	Y	m/z	Y	m/z	Y
122.00	2784	215.00	947	309.00	201	426.00	103
123.00	4103	216.00	1754	310.00	310	427.00	133
124.00	1940	217.00	19584	311.00	135	428.00	94
125.00	1895	218.00	2585	312.00	42	429.00	156
127.00	161664	219.00	304	313.00	270	430.00	244
128.00	12464	221.00	20880	314.00	930	431.00	264
129.00	60320	223.00	4697	315.00	2162	432.00	399
130.00	5065	224.00	45192	316.00	1299	433.00	201
131.00	1026	225.00	11495	317.00	226	434.00	152
132.00	473	226.00	312	318.00	17	435.00	136
133.00	305	227.00	16376	319.00	39	436.00	43
134.00	1660	228.00	2481	320.00	94	439.00	66
135.00	4556	229.00	3936	321.00	555	441.00	40480
136.00	1801	230.00	608	322.00	231	442.00	285824
137.00	2284	231.00	1624	323.00	6908	443.00	56488
138.00	644	232.00	384	324.00	1239	444.00	5510
139.00	339	233.00	371	325.00	102	445.00	261
140.00	633	234.00	1035	326.00	94		
141.00	7117	235.00	1143	327.00	1184		

Data File: /chem/5973hp68.i/DF101122C68_B.b/0K22016-TUN1C68.d
Date : 22-NOV-2010 23:21
Client ID: DFTPPDR
Sample Info: 0K22016-TUN1:MEW
Volume Injected (uL): 2.0
Column phase: RTX-5MS

Instrument: 5973hp68.i
Operator: MEW
Column diameter: 0.32



TAILING FACTOR and DEGRADATION SUMMARY RESULTS

DECAFLUOROTRIPHENYLPHOSPHINE Ion Abundance/Ratio Criteria Chart

Ion	Abundance Criteria	Base Peak	Other	Test
198	Base Peak, 100% relative abundance	100.00		PASS
51	10 - 80% of mass 198	33.03		PASS
68	Less than 2% of mass 69	0.00	(0.00)	PASS
69	Mass 69 relative abundance	39.45		PASS
70	Less than 2% of mass 69	0.19	(0.48)	PASS
127	10 - 80% of mass 198	46.56		PASS
197	0 - 2% of mass 198	0.00		PASS
199	5 - 9% of mass 198	6.78		PASS
275	10 - 60% of mass 198	21.43		PASS
365	Greater than 0.75% of mass 198	2.28		PASS
441	Present, but less than mass 443	11.66	(71.67)	PASS
442	50 - 100 % of mass 198	82.31		PASS
443	15 - 24% of mass 442	16.27	(19.76)	PASS

TAILING ANALYSIS SUMMARY

Compound	Tail Factor	Max Allowed	Test
Pentachlorophenol	1.4	5.0	PASS
Benzidine	0.8	3.0	PASS

DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

Compound	Response	%Breakdown	Max Allowed	Test
4,4-DDT	731603			N/A
4,4-DDE	4152	0.6	20.0	PASS
4,4-DDD	159729	17.9	20.0	PASS
4,4-DDD + DDE	163881	18.3	20.0	PASS

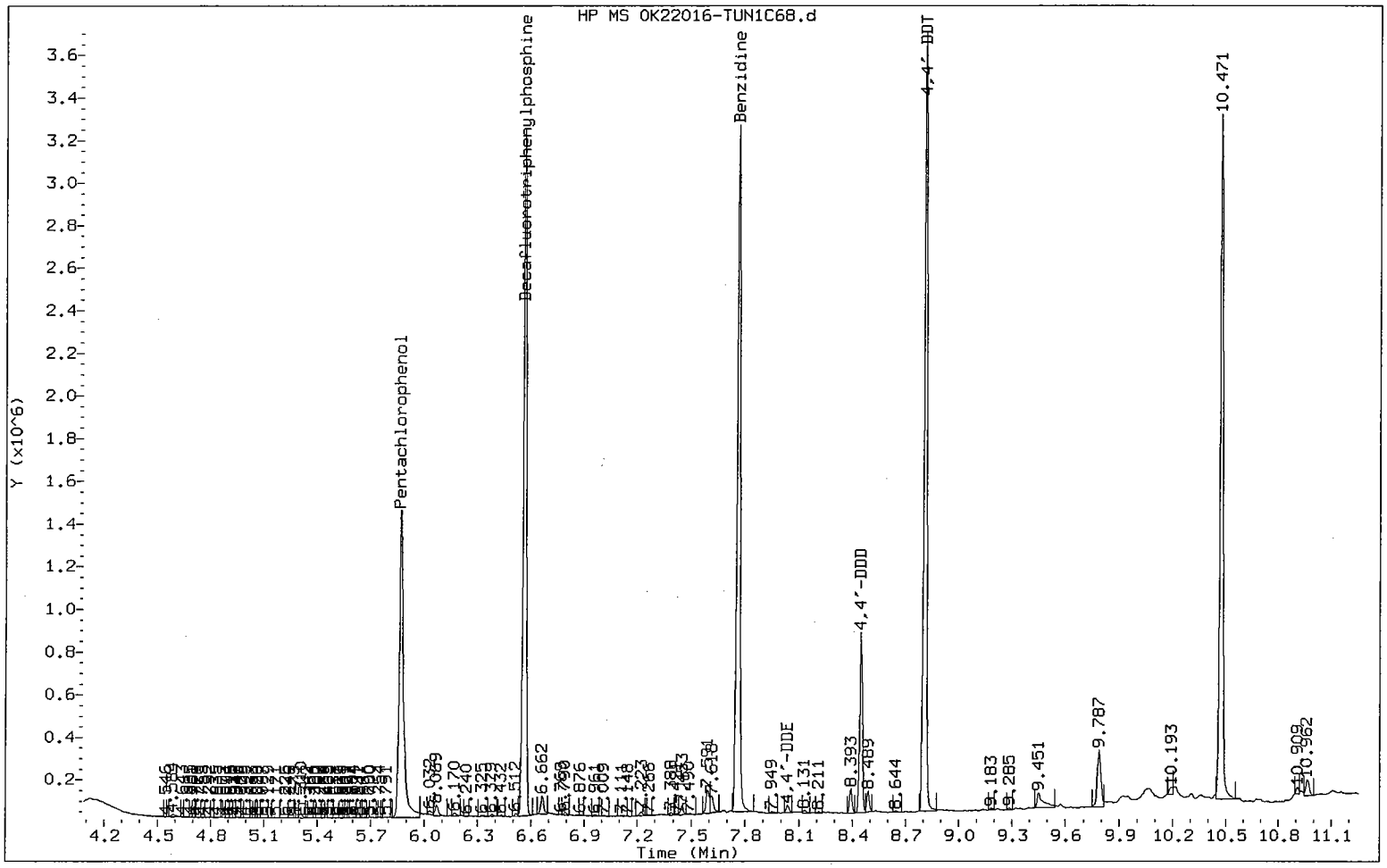
Tuning Sample, /chem/5973hp68.i/DF101122C68_B.b/0K22016-TUN1C68.d/0K22016-TUN1C6

*** PASSED ***

TAILING FACTOR and DEGRADATION SAMPLE AND GRAPHIC REPORT

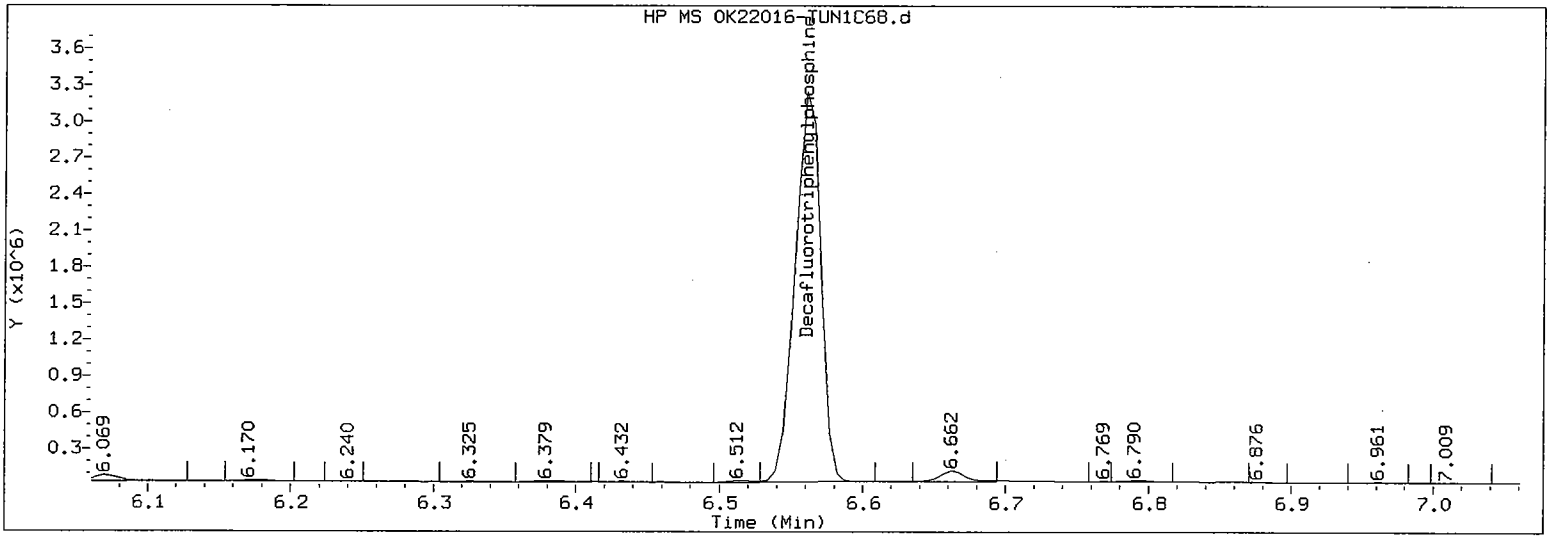
Report Date: 11/27/2010 09:28

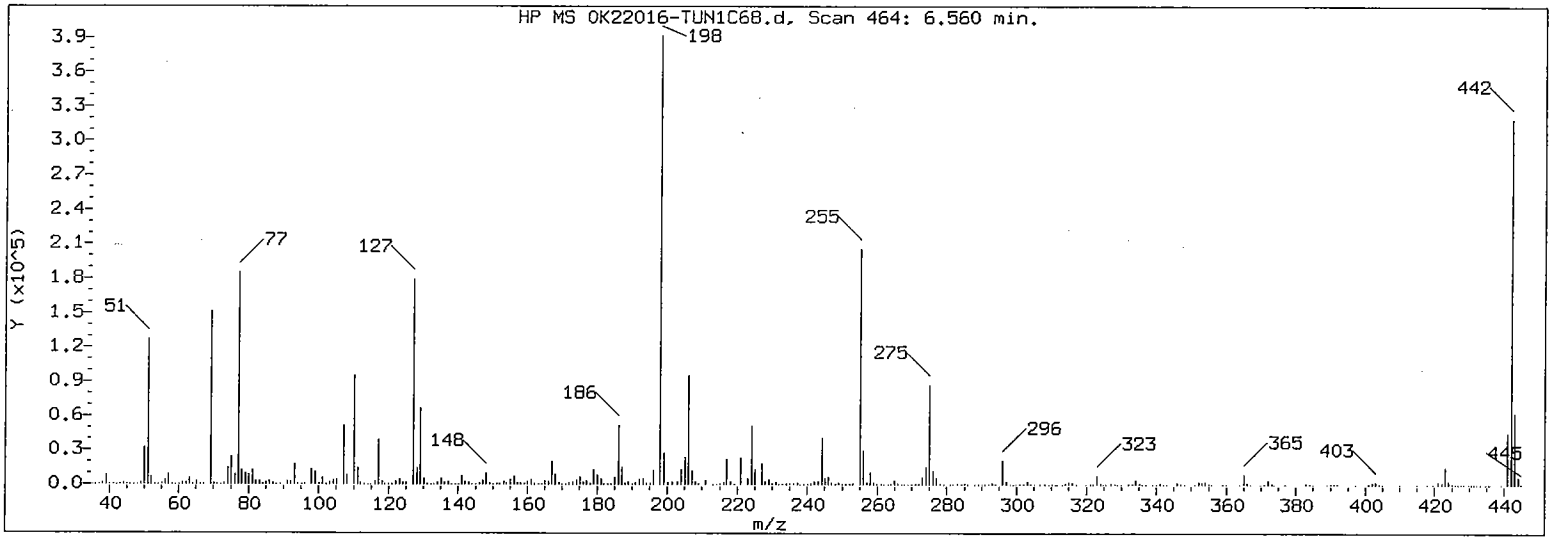
Datafile Analyzed: /chem/5973hp68.i/DF101122C68_B.b/0K22016-TUN1C68.d/0K22016-TU
Method Used: /chem/5973hp68.i/DF101122C68_B.b/dftpp8270C.m Inst: 5973hp68
Injection Date: 22-NOV-2010 23:21 Operator: MEW
Sample Info: 0K22016-TUN1 0K22016-TUN1:MEW
Misc Info: DFTPPDR



Report Date: 11/27/2010 09:28

Datafile Analyzed: /chem/5973hp68.i/DF101122C68_B.b/0K22016-TUN1C68.d/0K22016-TU
Method Used: /chem/5973hp68.i/DF101122C68_B.b/dftpp8270C.m Inst: 5973hp68
Injection Date: 22-NOV-2010 23:21 Operator: MEW
Sample Info: 0K22016-TUN1 0K22016-TUN1:MEW
Misc Info: DFTPPDR



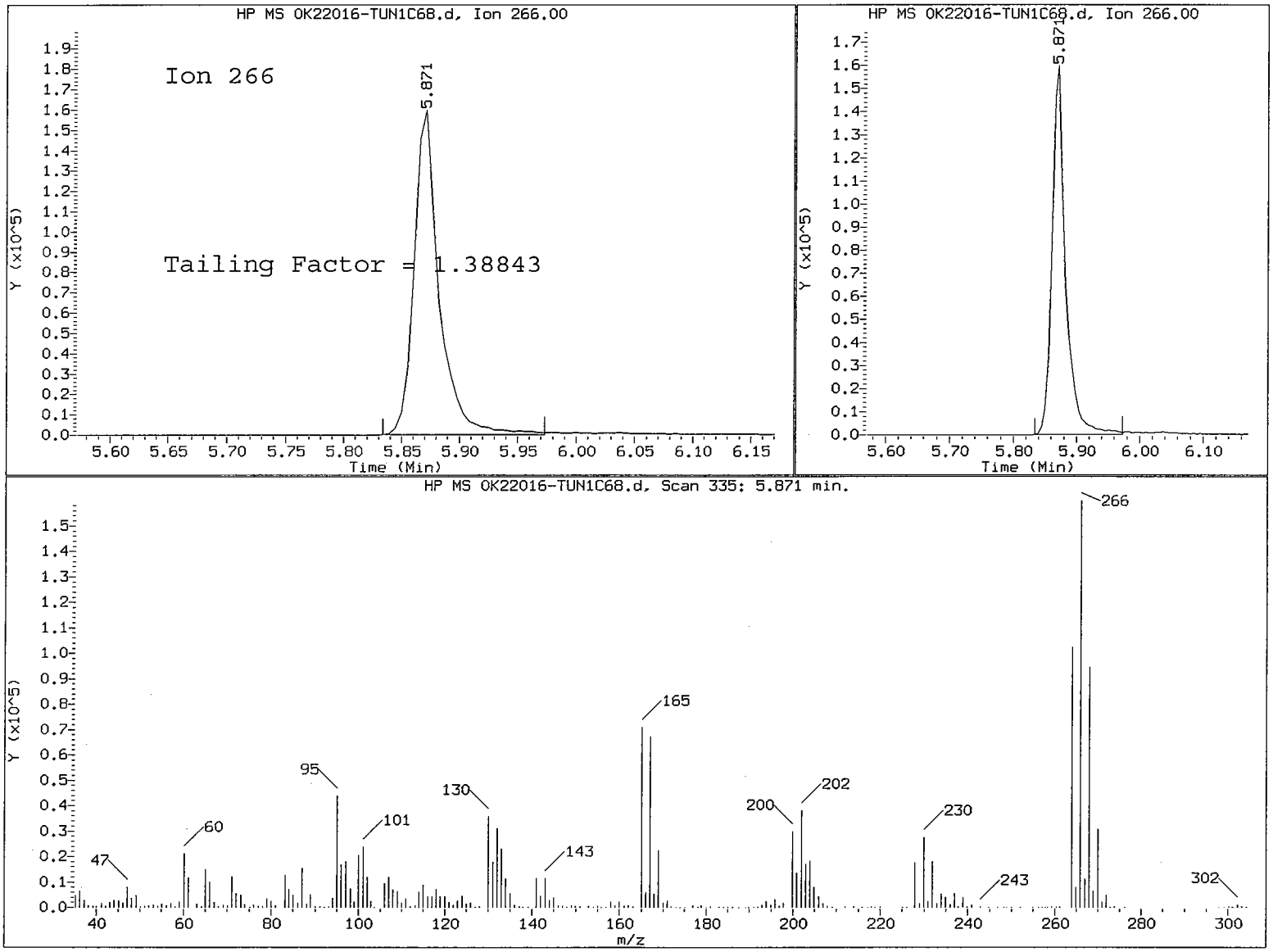


DECAFLUOROTRIPHENYLPHOSPHINE Ion Abundance/Ratio Criteria Chart

Ion	Abundance Criteria	Base Peak	Other	Test
198	Base Peak, 100% relative abundance	100.00		PASS
51	10 - 80% of mass 198	33.03		PASS
68	Less than 2% of mass 69	0.00	(0.00)	PASS
69	Mass 69 relative abundance	39.45		PASS
70	Less than 2% of mass 69	0.19	(0.48)	PASS
127	10 - 80% of mass 198	46.56		PASS
197	0 - 2% of mass 198	0.00		PASS
199	5 - 9% of mass 198	6.78		PASS
275	10 - 60% of mass 198	21.43		PASS
365	Greater than 0.75% of mass 198	2.28		PASS
441	Present, but less than mass 443	11.66	(71.67)	PASS
442	50 - 100% of mass 198	82.31		PASS
443	15 - 24% of mass 442	16.27	(19.76)	PASS

Report Date: 11/27/2010 09:28

Datafile Analyzed: /chem/5973hp68.i/DF101122C68_B.b/0K22016-TUN1C68.d/0K22016-TU
Method Used: /chem/5973hp68.i/DF101122C68.b/dftpp8270C.m/BrkDwnTF.m Inst: 5973h
Injection Date: 22-NOV-2010 23:21 Operator:
Sample Info: DFTPP 0K22016-TUN1:MEW
Misc Info:



Pentachlorophenol
==========

Exp. RT = 6.325
Found RT = 5.871

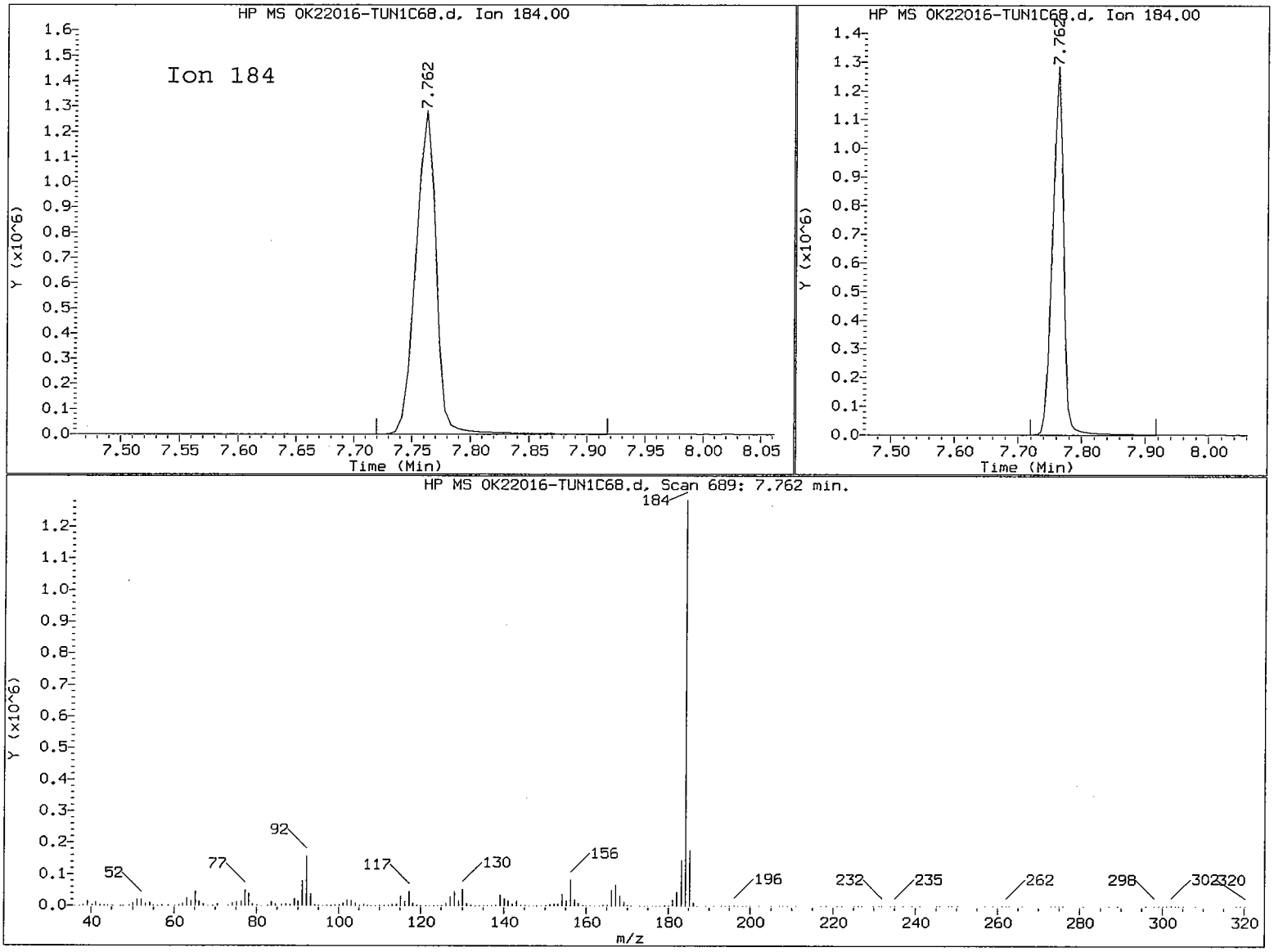
Mass	Area	Ratio
266	240816	100.00

Tailing factor for Pentachlorophenol OK

Tailing Factor = 1.4 Maximum Allowed = 5.0

Report Date: 11/27/2010 09:28

Datafile Analyzed: /chem/5973hp68.i/DF101122C68_B.b/0K22016-TUN1C68.d/0K22016-TU
Method Used: /chem/5973hp68.i/DF101122C68.b/dftpp8270C.m/BrkDwnTF.m Inst: 5973h
Injection Date: 22-NOV-2010 23:21 Operator:
Sample Info: DFTPP 0K22016-TUN1:MEW
Misc Info:



Benzidine
=========
Exp. RT = 8.201
Found RT = 7.762

Mass	Area	Ratio
184	1561378	100.00

Tailing factor for Benzidine OK

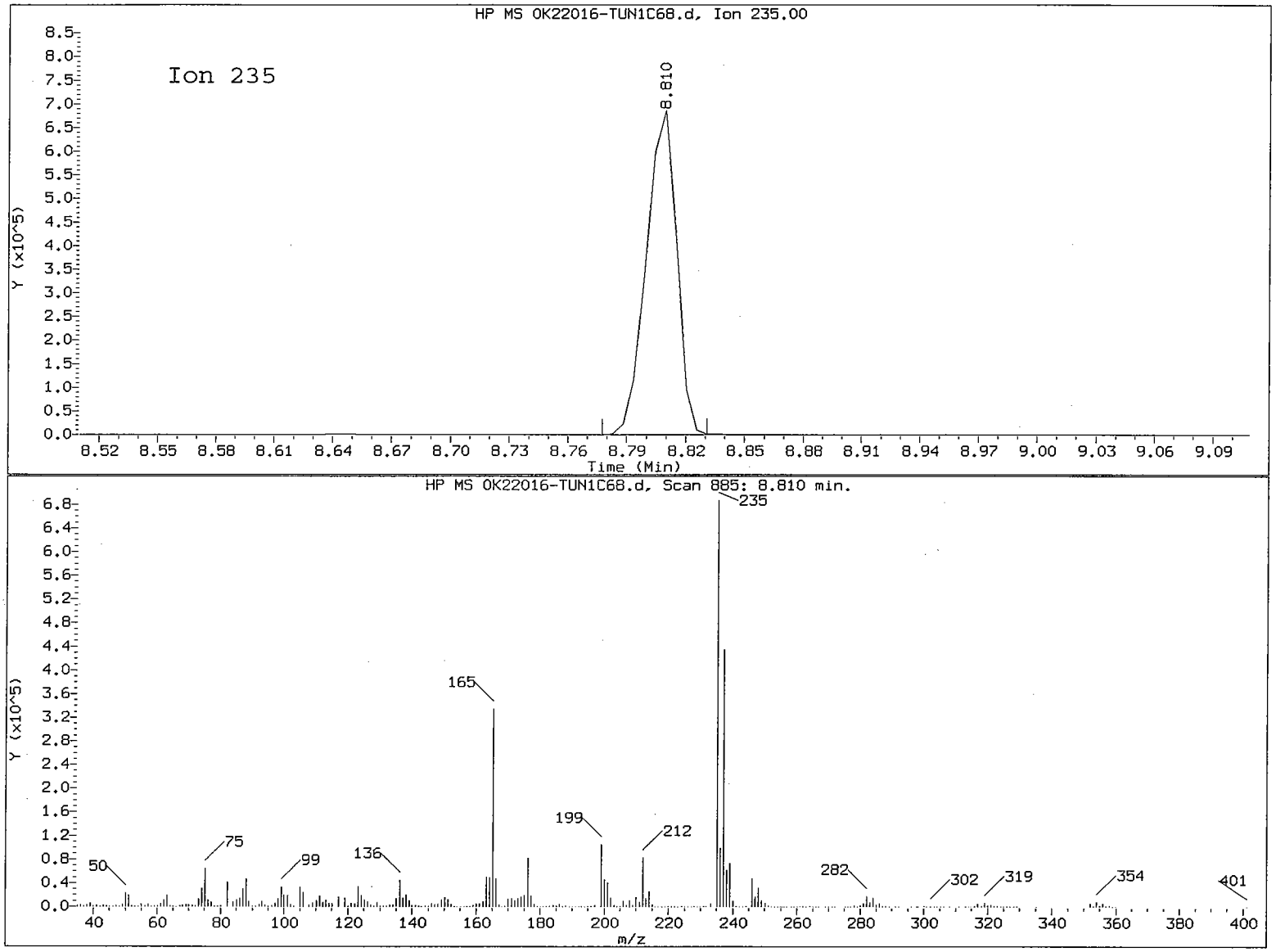
Tailing Factor = 0.8 Maximum Allowed = 3.0

If Tailing Factor < 1.0, then it is assumed that the peak is not tailing and a Tailing Factor of zero is reported.

Tailing Factor = 0.78431

Report Date: 11/27/2010 09:28

Datafile Analyzed: /chem/5973hp68.i/DF101122C68_B.b/0K22016-TUN1C68.d/0K22016-TU
Method Used: /chem/5973hp68.i/DF101122C68.b/dftpp8270C.m/BrkDwnTF.m Inst: 5973h
Injection Date: 22-NOV-2010 23:21 Operator:
Sample Info: DFTPP 0K22016-TUN1:MEW
Misc Info:

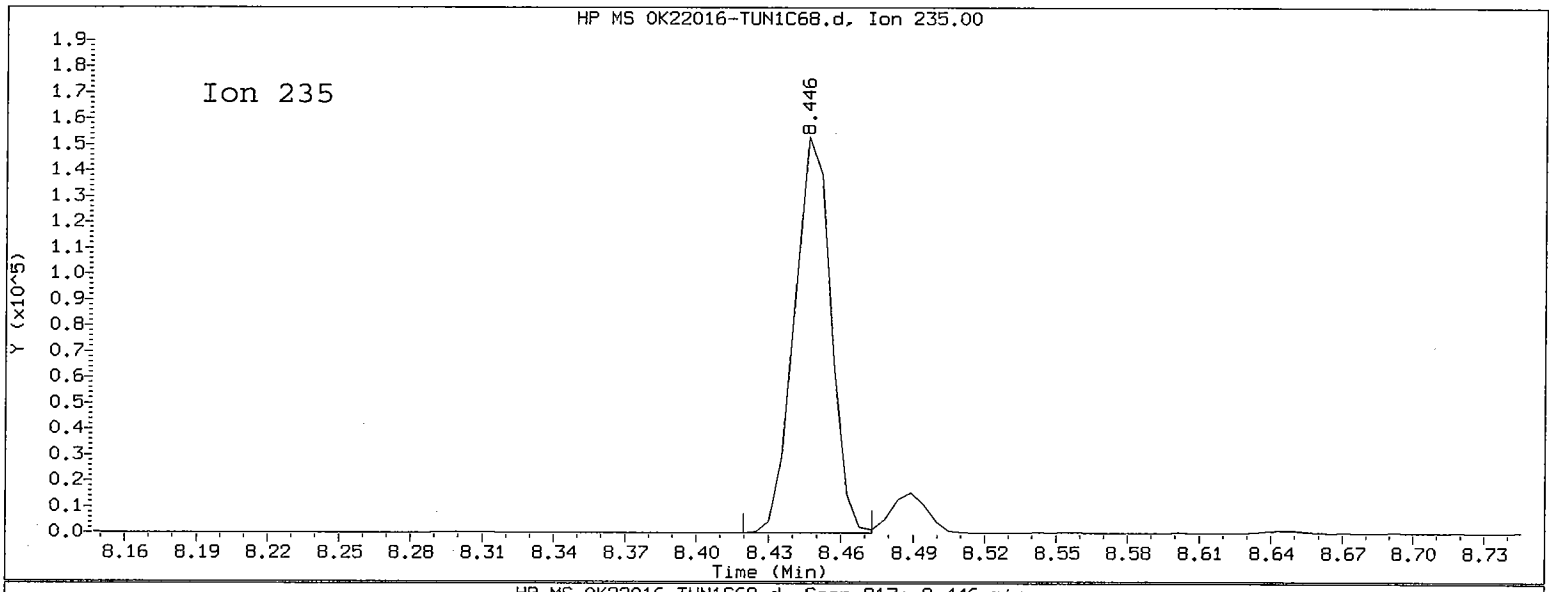


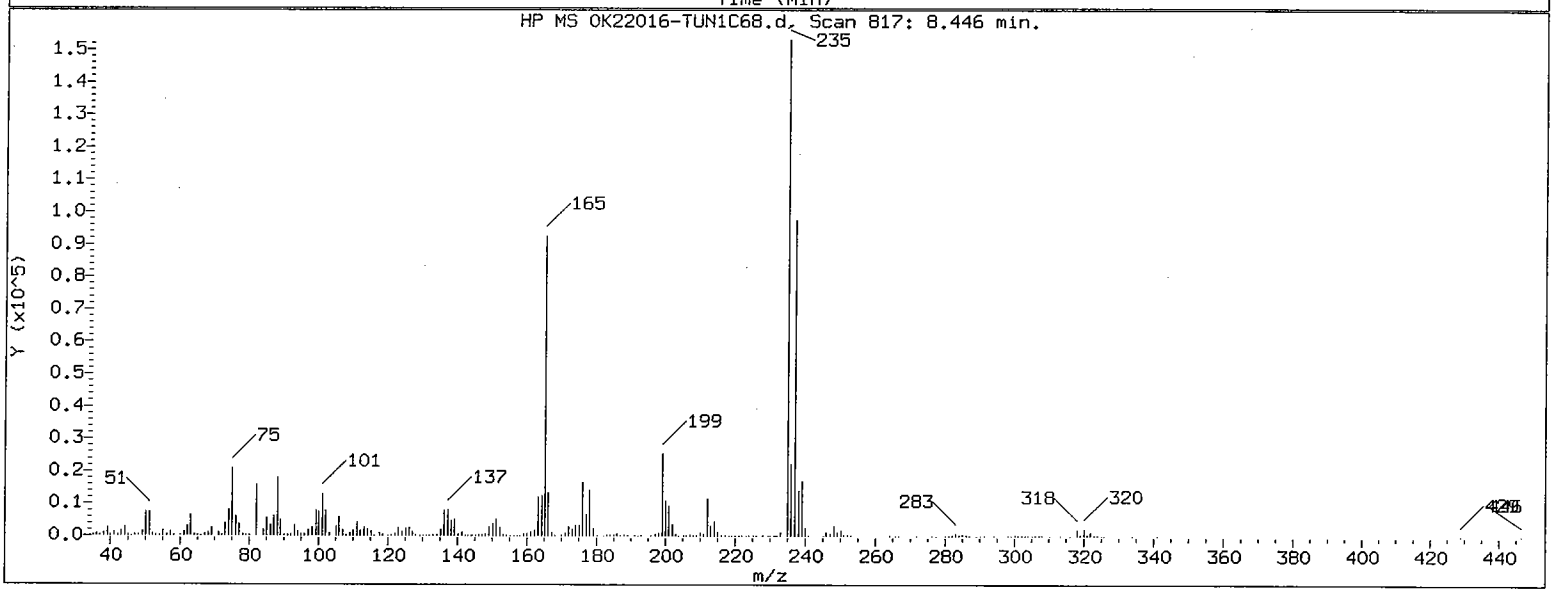
4,4'-DDT
========
Exp. RT = 9.248
Found RT = 8.810

Mass	Area	Ratio
235	731603	100.00

Report Date: 11/27/2010 09:28

Datafile Analyzed: /chem/5973hp68.i/DF101122C68_B.b/0K22016-TUN1C68.d/0K22016-TU
Method Used: /chem/5973hp68.i/DF101122C68.b/dftpp8270C.m/BrkDwnTF.m Inst: 5973h
Injection Date: 22-NOV-2010 23:21 Operator:
Sample Info: DFTPP 0K22016-TUN1:MEW
Misc Info:



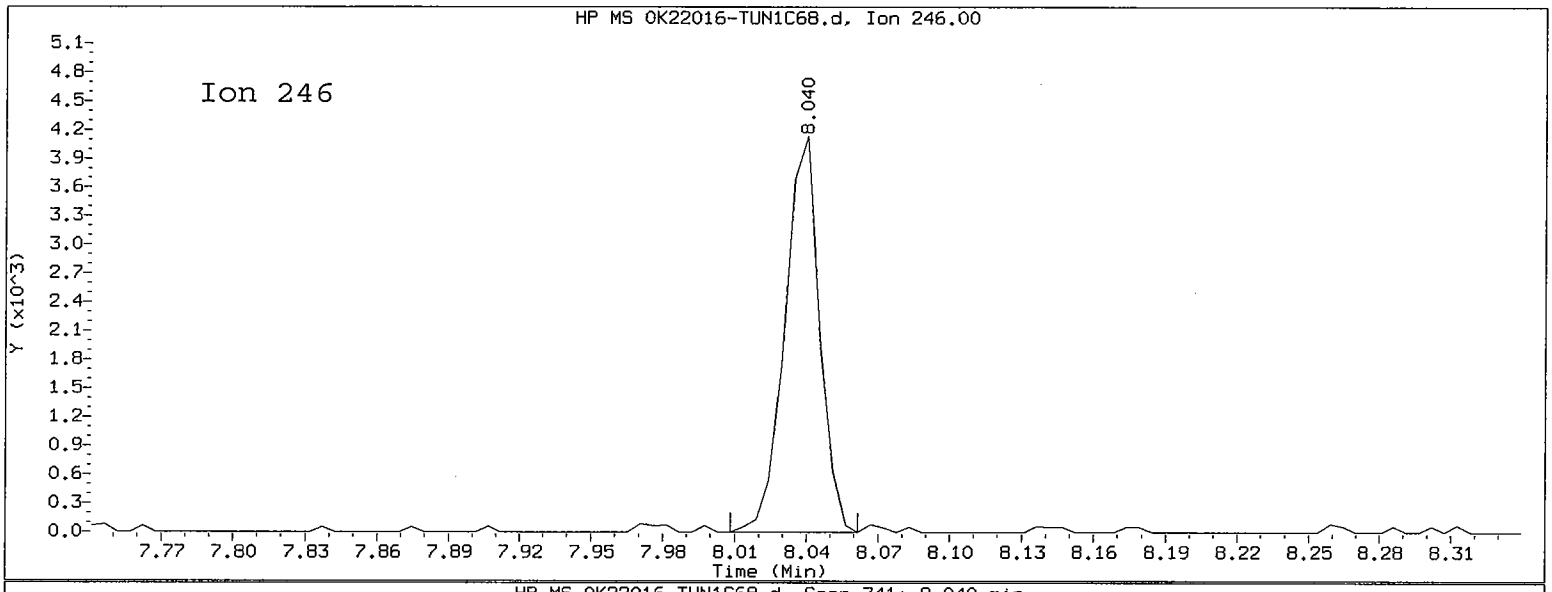


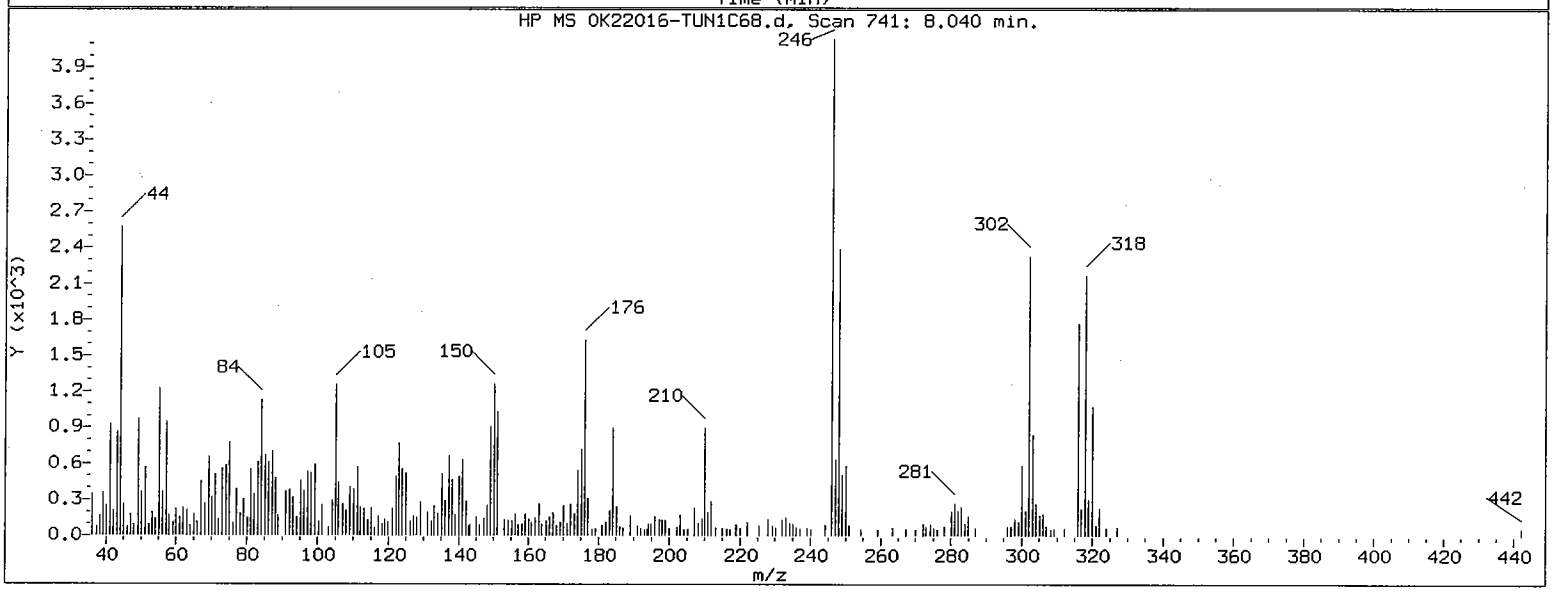
4,4'-DDD
========
Exp. RT = 8.900
Found RT = 8.446

Mass	Area	Ratio
235	159729	100.00

Report Date: 11/27/2010 09:28

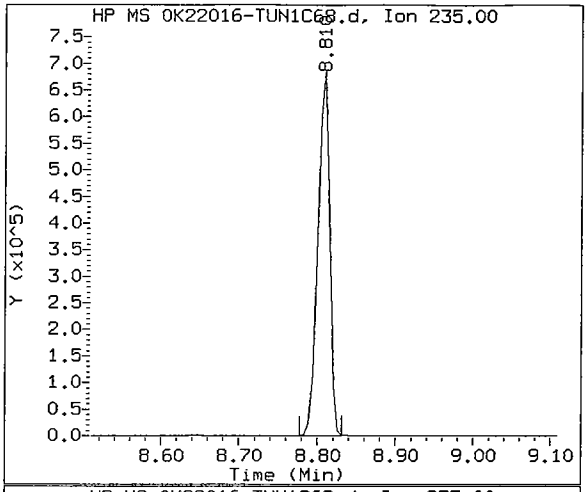
Datafile Analyzed: /chem/5973hp68.i/DF101122C68_B.b/0K22016-TUN1C68.d/0K22016-TU
Method Used: /chem/5973hp68.i/DF101122C68.b/dftpp8270C.m/BrkDwnTF.m Inst: 5973h
Injection Date: 22-NOV-2010 23:21 Operator:
Sample Info: DFTPP 0K22016-TUN1:MEW
Misc Info:



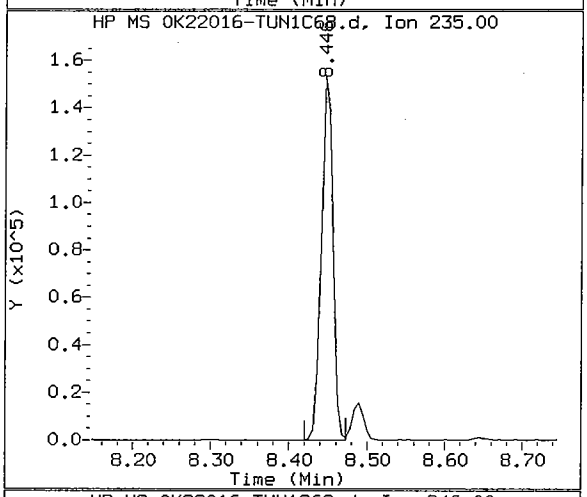


4,4'-DDE
========
Exp. RT = 8.440
Found RT = 8.040

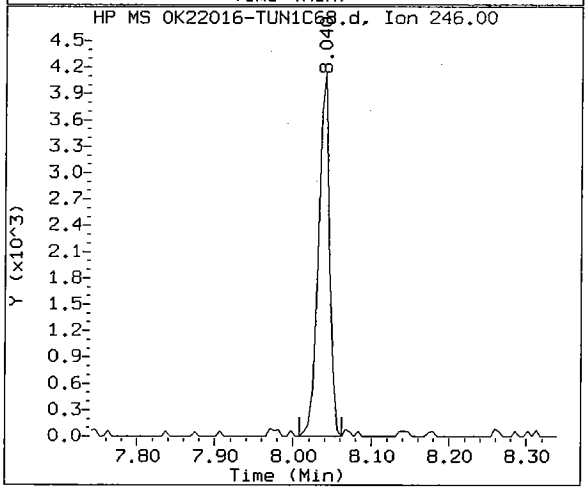
Mass	Area	Ratio
246	4152	100.00



Compound: 4,4'-DDT
Quant Mass: 235
RT: 8.810
Area: 731603



Compound: 4,4'-DDD
Quant Mass: 235
RT: 8.446
Area: 159729



Compound: 4,4'-DDE
Quant Mass: 246
RT: 8.040
Area: 4152

DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

Compound	Response	%Breakdown	Max Allowed	Test
4,4-DDT	731603			N/A
4,4-DDE	4152	0.6	20.0	PASS
4,4-DDD	159729	17.9	20.0	PASS
4,4-DDD + DDE	163881	18.3	20.0	PASS

****
TUNE SAMPLE *** PASSED *** DDT BREAKDOWN TEST
****

Data File: /chem/5973hp68.i/DF101123A68_C.b/0K23010-TUN1A68.d

Date : 23-NOV-2010 16:22

Client ID: DFTPPDU

Instrument: 5973hp68.i

Sample Info: 0K23010-TUN1:OWS

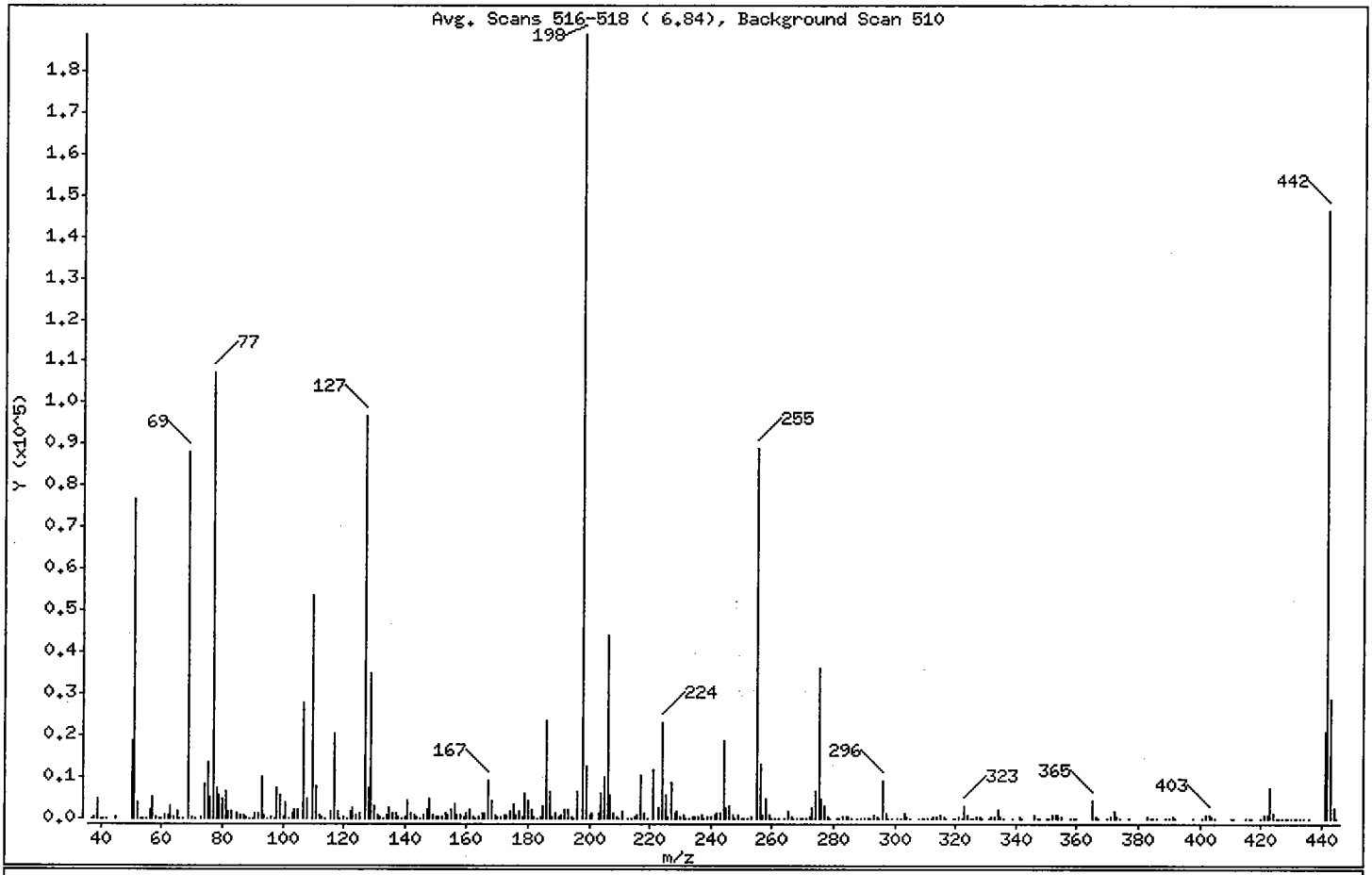
Volume Injected (uL): 2.0

Operator: OWS

Column phase: RTX-5MS

Column diameter: 0.32

1 Decafluorotriphenylphosphine



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	40.59
68	Less than 2.00% of mass 69	0.00 (0.00)
69	Mass 69 relative abundance	46.60
70	Less than 2.00% of mass 69	0.21 (0.46)
127	10.00 - 80.00% of mass 198	51.16
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.64
275	10.00 - 60.00% of mass 198	19.13
365	Greater than 1.00% of mass 198	2.28
441	Present, but less than mass 443	11.20
442	50.00 - 100.00% of mass 198	77.72
443	15.00 - 24.00% of mass 442	15.20 (19.56)

Data File: /chem/5973hp68.i/DF101123A68_C.b/0K23010-TUN1A68.d

Date : 23-NOV-2010 16:22

Client ID: DFTPPDU Instrument: 5973hp68.i

Sample Info: 0K23010-TUN1:OWS

Volume Injected (uL): 2.0 Operator: OWS

Column phase: RTX-5MS Column diameter: 0.32

Data File: 0K23010-TUN1A68.d
Spectrum: Avg. Scans 516-518 (6.84), Background Scan 510
Location of Maximum: 198.00
Number of points: 337

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	177	135.00	2751	225.00	5840	317.00	117
38.00	610	136.00	1104	226.00	435	319.00	26
39.00	4998	137.00	1431	227.00	8856	320.00	50
40.00	198	138.00	234	228.00	1226	321.00	331
41.00	32	139.00	183	229.00	1909	322.00	173
42.00	1	140.00	343	230.00	344	323.00	3225
45.00	238	141.00	4332	231.00	749	324.00	714
50.00	18792	142.00	1341	232.00	175	325.00	54
51.00	76552	143.00	972	233.00	214	326.00	60
52.00	3937	144.00	296	234.00	581	327.00	546
53.00	145	145.00	213	235.00	648	328.00	290
54.00	15	146.00	772	236.00	419	329.00	71
55.00	179	147.00	2059	237.00	699	331.00	17
56.00	2207	148.00	4835	238.00	136	332.00	283
57.00	5152	149.00	977	239.00	319	333.00	305
58.00	221	150.00	265	240.00	304	334.00	2095
59.00	119	151.00	524	241.00	712	335.00	579
60.00	41	152.00	426	242.00	1252	336.00	44
61.00	863	153.00	1223	243.00	1317	339.00	79
62.00	1053	154.00	884	244.00	18824	341.00	385
63.00	3257	155.00	2341	245.00	2589	342.00	127
64.00	431	156.00	3506	246.00	3126	346.00	722
65.00	1601	157.00	854	247.00	656	347.00	124
66.00	81	158.00	741	248.00	165	348.00	21
67.00	44	159.00	564	249.00	752	350.00	18
69.00	87888	160.00	1348	250.00	162	351.00	85
70.00	400	161.00	2100	251.00	208	352.00	951
71.00	68	162.00	587	252.00	207	353.00	691
73.00	545	163.00	197	253.00	477	354.00	919
74.00	8371	164.00	253	255.00	88776	355.00	250
75.00	13501	165.00	1489	256.00	13119	358.00	17
76.00	5107	166.00	1429	257.00	968	359.00	115
77.00	107032	167.00	9235	258.00	4832	360.00	53
78.00	7199	168.00	4209	259.00	654	365.00	4291
79.00	5727	169.00	672	260.00	93	366.00	594

Data File: /chem/5973hp68.i/DF101123A68_C.b/0K23010-TUN1A68.d

Date : 23-NOV-2010 16:22

Client ID: DFTPPDU Instrument: 5973hp68.i

Sample Info: 0K23010-TUN1:OWS

Volume Injected (uL): 2.0 Operator: OWS

Column phase: RTX-5MS Column diameter: 0.32

Data File: 0K23010-TUN1A68.d

Spectrum: Avg. Scans 516-518 (6.84), Background Scan 510

Location of Maximum: 198.00

Number of points: 337

m/z	Y	m/z	Y	m/z	Y	m/z	Y
80.00	4759	170.00	363	261.00	201	367.00	17
81.00	6561	171.00	380	262.00	26	370.00	139
82.00	1541	172.00	730	264.00	160	371.00	310
83.00	1560	173.00	1004	265.00	1879	372.00	1731
85.00	1199	174.00	1830	266.00	226	373.00	475
86.00	952	175.00	3516	267.00	40	374.00	83
87.00	740	176.00	1074	268.00	146	377.00	47
88.00	258	177.00	1653	269.00	17	383.00	492
89.00	127	178.00	536	270.00	157	384.00	158
90.00	19	179.00	5884	271.00	182	385.00	30
91.00	1355	180.00	4307	272.00	267	386.00	18
92.00	1500	181.00	2031	273.00	2511	389.00	17
93.00	10087	182.00	381	274.00	6711	390.00	213
94.00	773	183.00	198	275.00	36080	391.00	237
95.00	166	184.00	594	276.00	4756	392.00	125
96.00	530	185.00	3004	277.00	2908	398.00	23
97.00	13	186.00	23344	278.00	464	401.00	143
98.00	7272	187.00	6451	279.00	121	402.00	793
99.00	5867	188.00	611	281.00	40	403.00	1059
100.00	458	189.00	1369	282.00	110	404.00	320
101.00	3795	190.00	313	283.00	342	405.00	52
102.00	129	191.00	739	284.00	266	410.00	53
103.00	1297	192.00	2104	285.00	597	411.00	18
104.00	2327	193.00	2211	286.00	133	415.00	92
105.00	2228	194.00	507	288.00	42	416.00	16
107.00	27880	195.00	98	289.00	155	417.00	16
108.00	4616	196.00	6532	290.00	159	420.00	44
110.00	53560	198.00	188608	291.00	97	421.00	1086
111.00	7722	199.00	12525	292.00	177	422.00	910
112.00	993	200.00	873	293.00	729	423.00	7240
113.00	358	201.00	1206	294.00	249	424.00	1422
114.00	111	203.00	1130	295.00	171	425.00	214
116.00	1528	204.00	6279	296.00	9336	426.00	167
117.00	20512	205.00	10057	297.00	1270	427.00	115
118.00	1562	206.00	44024	298.00	78	428.00	160

Data File: /chem/5973hp68.i/DF101123A68_C.b/0K23010-TUN1A68.d

Date : 23-NOV-2010 16:22

Client ID: DFTPPDU Instrument: 5973hp68.i

Sample Info: 0K23010-TUN1:OWS

Volume Injected (uL): 2.0 Operator: OWS

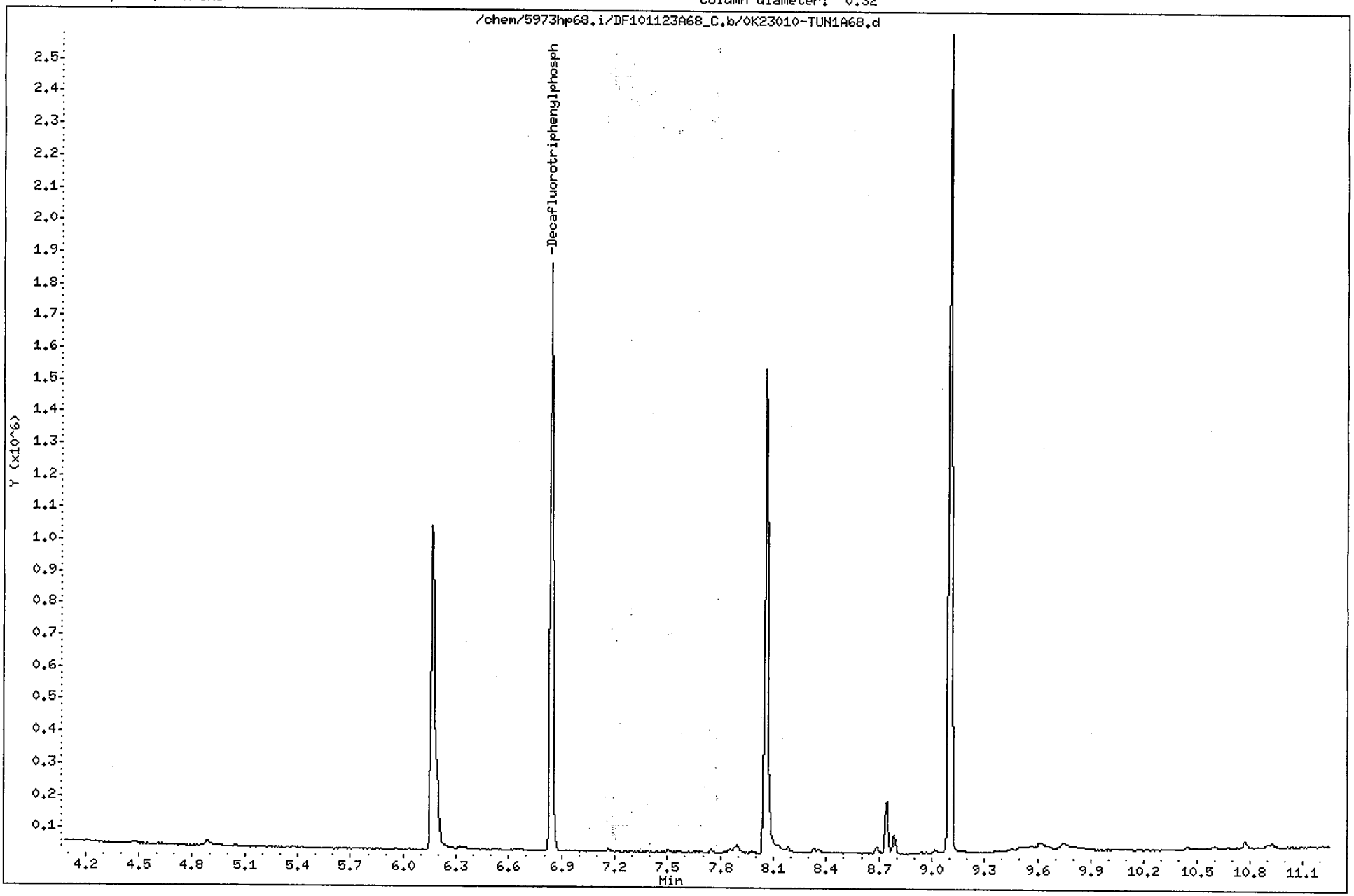
Column phase: RTX-5MS Column diameter: 0.32

Data File: 0K23010-TUN1A68.d
Spectrum: Avg. Scans 516-518 (6.84), Background Scan 510
Location of Maximum: 198.00
Number of points: 337

m/z	Y	m/z	Y	m/z	Y	m/z	Y
119.00	156	207.00	5567	299.00	39	429.00	144
120.00	311	208.00	1242	301.00	158	430.00	154
121.00	71	209.00	400	302.00	167	431.00	89
122.00	1657	210.00	198	303.00	1201	432.00	136
123.00	2464	211.00	1657	304.00	351	433.00	108
124.00	1086	213.00	134	305.00	41	434.00	50
125.00	1255	214.00	57	308.00	147	436.00	19
127.00	96488	215.00	441	309.00	112	441.00	21120
128.00	7370	216.00	930	310.00	136	442.00	146560
129.00	35008	217.00	10554	311.00	38	443.00	28664
130.00	3143	218.00	1414	312.00	18	444.00	2450
131.00	667	219.00	197	313.00	240	445.00	183
132.00	365	221.00	11848	314.00	480		
133.00	143	223.00	2474	315.00	1085		
134.00	788	224.00	22896	316.00	626		

Data File: /chem/5973hp68.i/DF101123A68_C.b/0K23010-TUN1A68.d
Date : 23-NOV-2010 16:22
Client ID: DFTPPDU
Sample Info: 0K23010-TUN1:OWS
Volume Injected (uL): 2.0
Column phase: RTX-5MS

Instrument: 5973hp68.i
Operator: OWS
Column diameter: 0.32



TAILING FACTOR and DEGRADATION SUMMARY RESULTS

DECAFLUOROTRIPHENYLPHOSPHINE Ion Abundance/Ratio Criteria Chart

Ion	Abundance Criteria	Base Peak	Other	Test
198	Base Peak, 100% relative abundance	100.00		PASS
51	10 - 80% of mass 198	40.59		PASS
68	Less than 2% of mass 69	0.00	(0.00)	PASS
69	Mass 69 relative abundance	46.60		PASS
70	Less than 2% of mass 69	0.21	(0.46)	PASS
127	10 - 80% of mass 198	51.16		PASS
197	0 - 2% of mass 198	0.00		PASS
199	5 - 9% of mass 198	6.64		PASS
275	10 - 60% of mass 198	19.13		PASS
365	Greater than 0.75% of mass 198	2.28		PASS
441	Present, but less than mass 443	11.20	(73.70)	PASS
442	50 - 100 % of mass 198	77.72		PASS
443	15 - 24% of mass 442	15.20	(19.56)	PASS

TAILING ANALYSIS SUMMARY

Compound	Tail Factor	Max Allowed	Test
Pentachlorophenol	1.7	5.0	PASS
Benzidine	1.5	3.0	PASS

DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

Compound	Response	%Breakdown	Max Allowed	Test
4,4-DDT	520103			N/A
4,4-DDE	1441	0.3	20.0	PASS
4,4-DDD	32802	5.9	20.0	PASS
4,4-DDD + DDE	34243	6.2	20.0	PASS

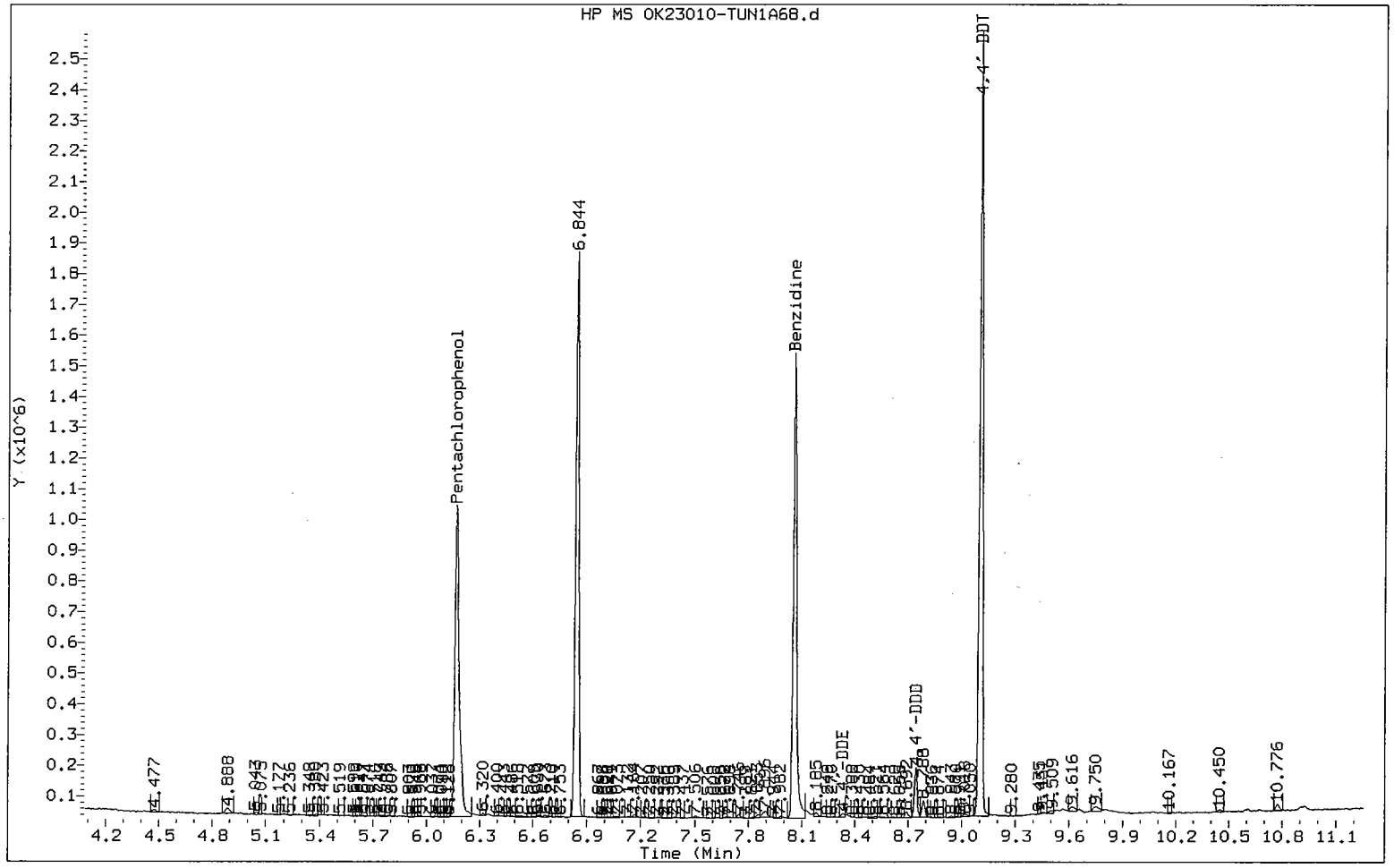
Tuning Sample, /chem/5973hp68.i/DF101123A68_C.b/0K23010-TUN1A68.d/0K23010-TUN1A6

*** PASSED ***

TAILING FACTOR and DEGRADATION SAMPLE AND GRAPHIC REPORT

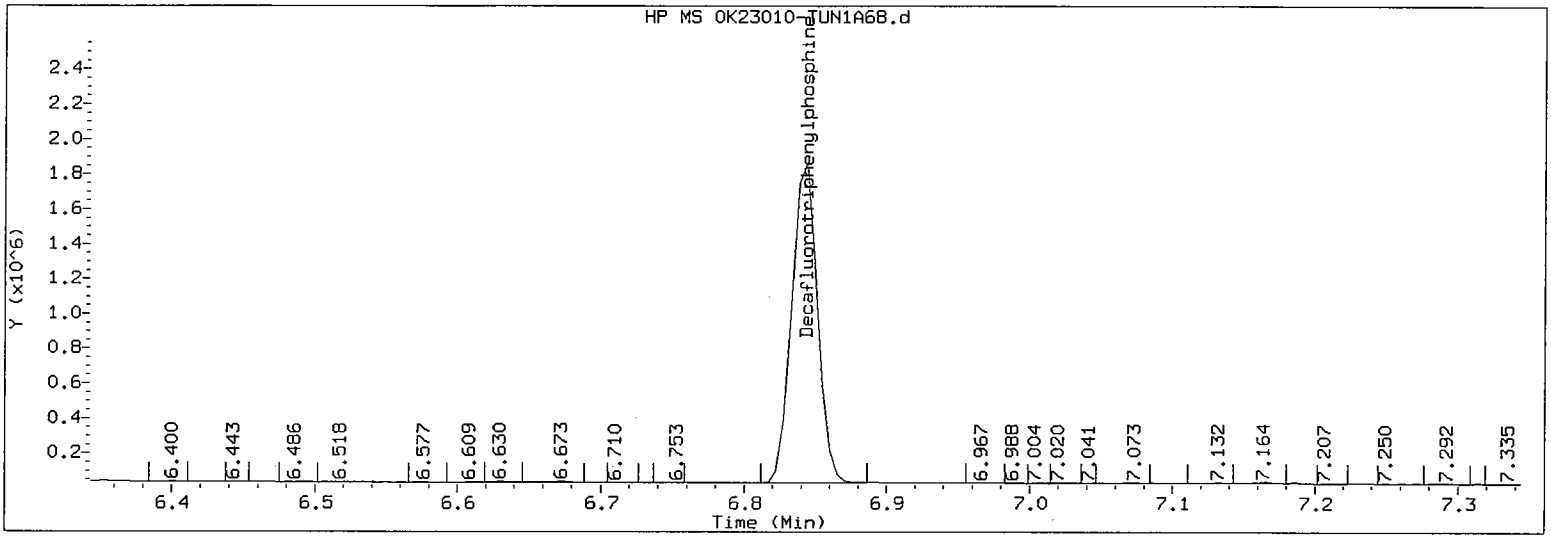
Report Date: 11/27/2010 11:00

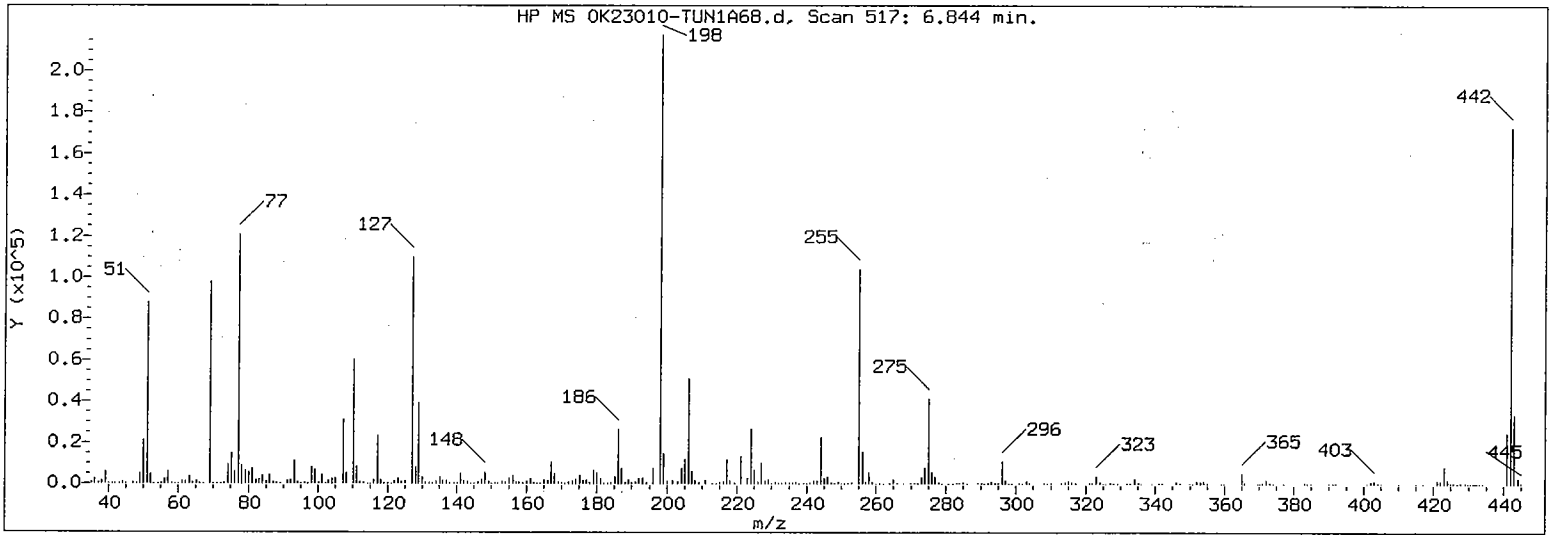
Datafile Analyzed: /chem/5973hp68.i/DF101123A68_C.b/0K23010-TUN1A68.d/0K23010-TU
Method Used: /chem/5973hp68.i/DF101123A68_C.b/dftpp8270C.m Inst: 5973hp68
Injection Date: 23-NOV-2010 16:22 Operator: OWS
Sample Info: 0K23010-TUN1 0K23010-TUN1:OWS
Misc Info: DFTPPDU



Report Date: 11/27/2010 11:00

Datafile Analyzed: /chem/5973hp68.i/DF101123A68_C.b/0K23010-TUN1A68.d/0K23010-TU
Method Used: /chem/5973hp68.i/DF101123A68_C.b/dftpp8270C.m Inst: 5973hp68
Injection Date: 23-NOV-2010 16:22 Operator: OWS
Sample Info: 0K23010-TUN1 0K23010-TUN1:OWS
Misc Info: DFTPPDU



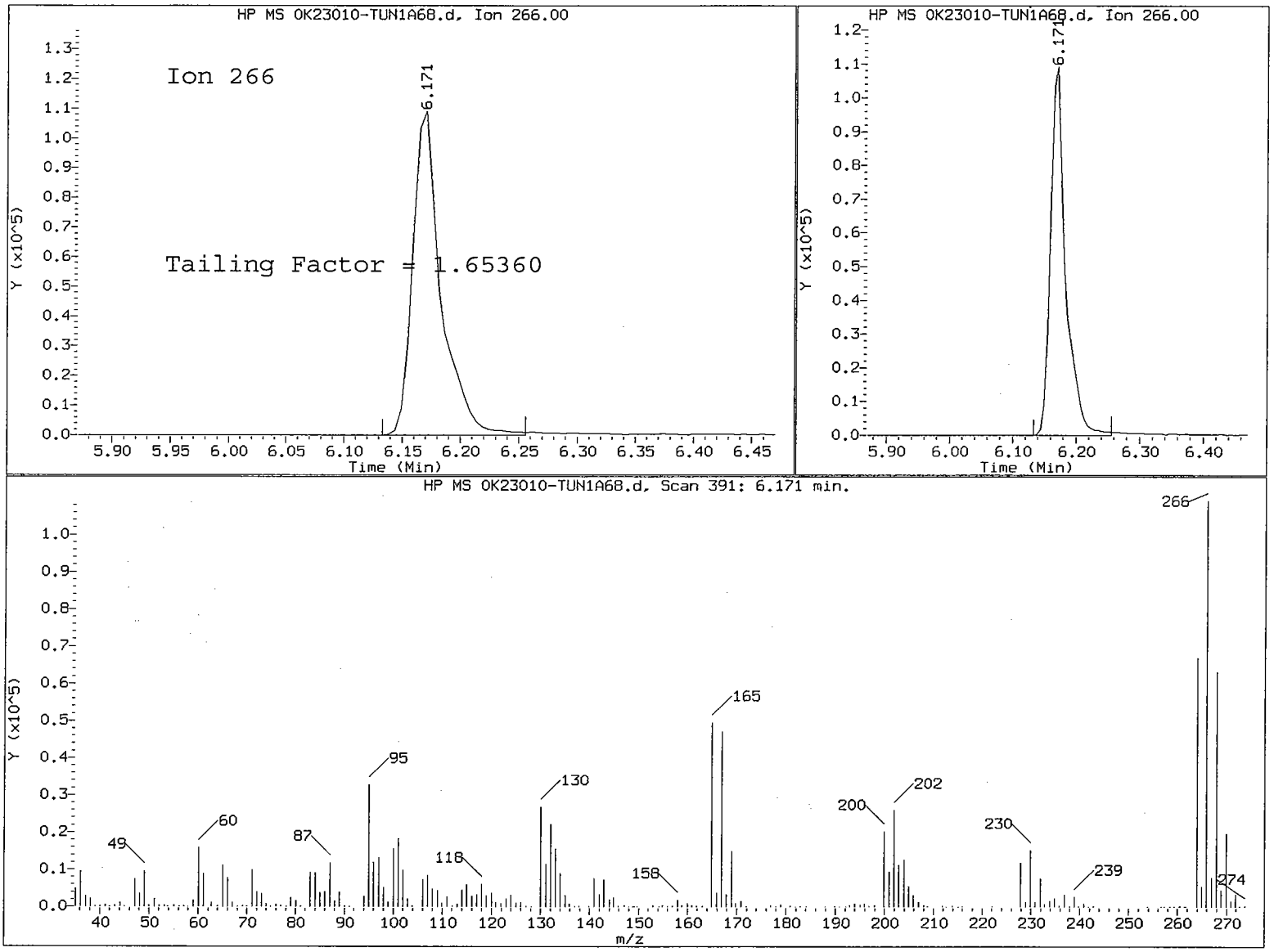


DECAFLUOROTRIPHENYLPHOSPHINE Ion Abundance/Ratio Criteria Chart

Ion	Abundance Criteria	Base Peak	Other	Test
198	Base Peak, 100% relative abundance	100.00		PASS
51	10 - 80% of mass 198	40.59		PASS
68	Less than 2% of mass 69	0.00	(0.00)	PASS
69	Mass 69 relative abundance	46.60		PASS
70	Less than 2% of mass 69	0.21	(0.46)	PASS
127	10 - 80% of mass 198	51.16		PASS
197	0 - 2% of mass 198	0.00		PASS
199	5 - 9% of mass 198	6.64		PASS
275	10 - 60% of mass 198	19.13		PASS
365	Greater than 0.75% of mass 198	2.28		PASS
441	Present, but less than mass 443	11.20	(73.70)	PASS
442	50 - 100% of mass 198	77.72		PASS
443	15 - 24% of mass 442	15.20	(19.56)	PASS

Report Date: 11/27/2010 11:00

Datafile Analyzed: /chem/5973hp68.i/DF101123A68_C.b/0K23010-TUN1A68.d/0K23010-TU
Method Used: /chem/5973hp68.i/DF101123A68.b/dftpp8270C.m/BrkDwnTF.m Inst: 5973h
Injection Date: 23-NOV-2010 16:22 Operator:
Sample Info: DFTPP 0K23010-TUN1:OWS
Misc Info:



Pentachlorophenol
==========

Exp. RT = 6.325
Found RT = 6.171

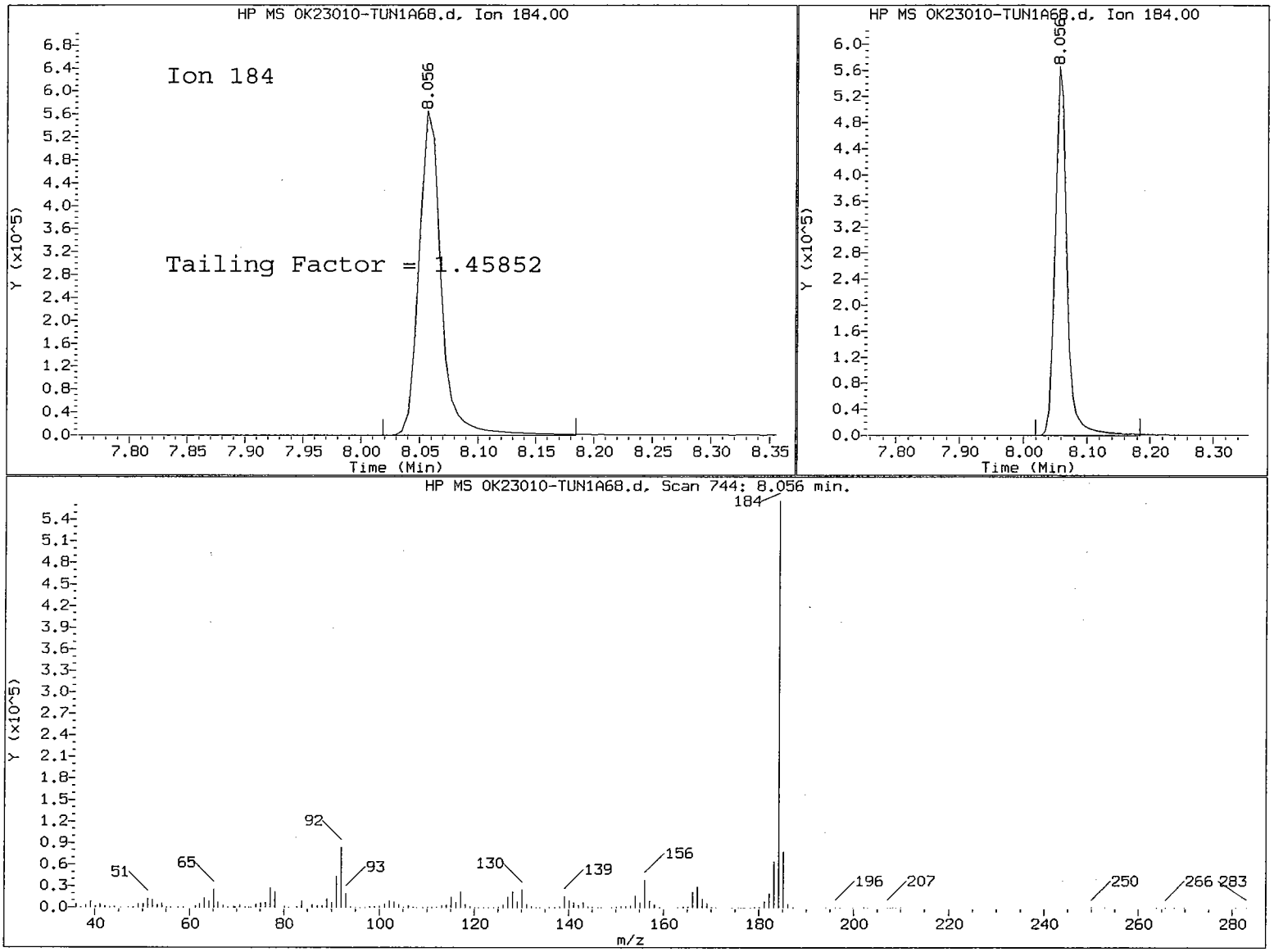
Mass	Area	Ratio
266	183872	100.00

Tailing factor for Pentachlorophenol OK

Tailing Factor = 1.7 Maximum Allowed = 5.0

Report Date: 11/27/2010 11:00

Datafile Analyzed: /chem/5973hp68.i/DF101123A68_C.b/0K23010-TUN1A68.d/0K23010-TU
Method Used: /chem/5973hp68.i/DF101123A68.b/dftpp8270C.m/BrkDwnTF.m Inst: 5973h
Injection Date: 23-NOV-2010 16:22 Operator:
Sample Info: DFTPP 0K23010-TUN1:OWS
Misc Info:



Benzidine
=========
Exp. RT = 8.201
Found RT = 8.056

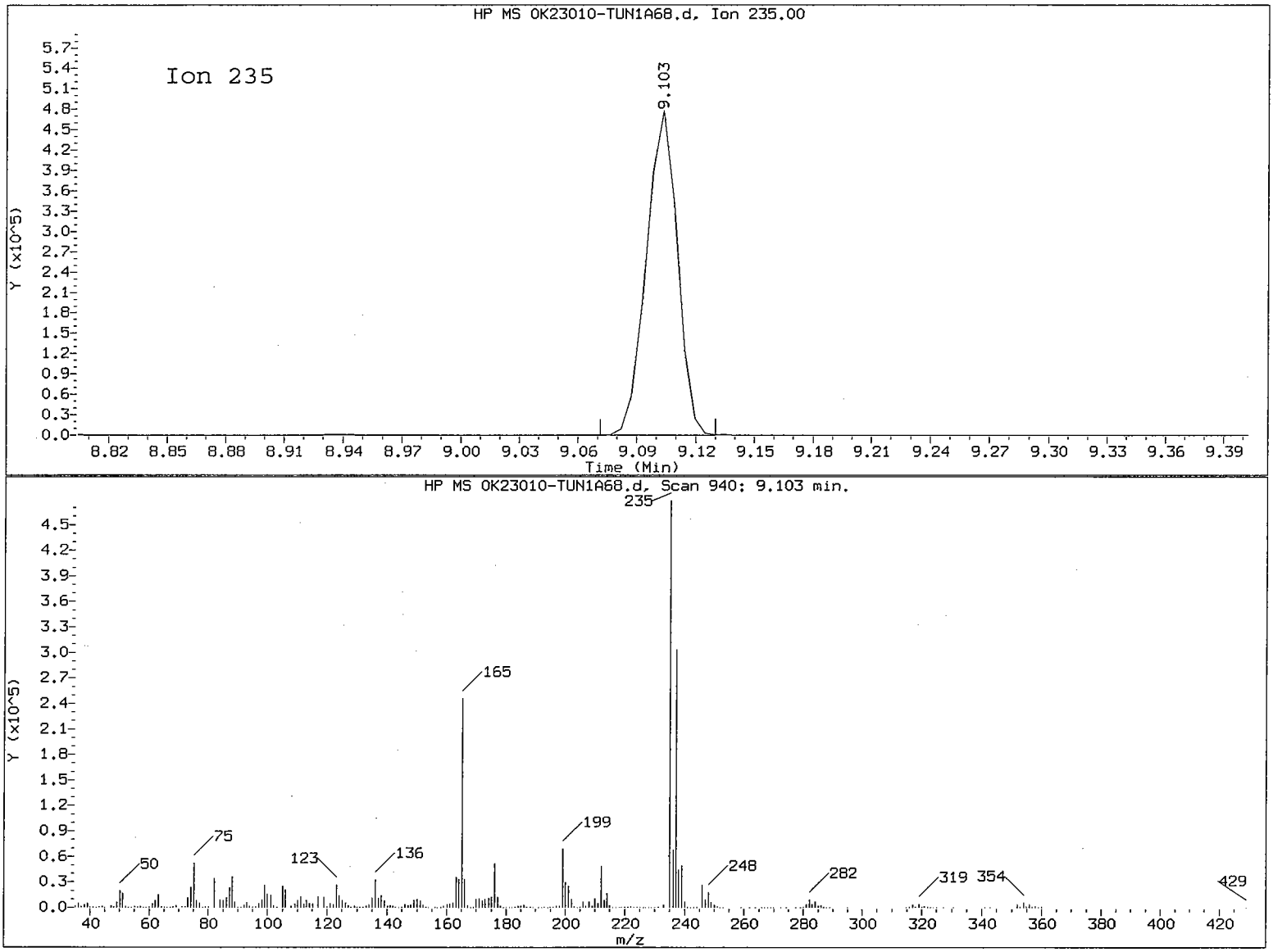
Mass	Area	Ratio
184	746829	100.00

Tailing factor for Benzidine OK

Tailing Factor = 1.5 Maximum Allowed = 3.0

Report Date: 11/27/2010 11:00

Datafile Analyzed: /chem/5973hp68.i/DF101123A68_C.b/0K23010-TUN1A68.d/0K23010-TU
Method Used: /chem/5973hp68.i/DF101123A68.b/dftpp8270C.m/BrkDwnTF.m Inst: 5973h
Injection Date: 23-NOV-2010 16:22 Operator:
Sample Info: DFTPP 0K23010-TUN1:OWS
Misc Info:

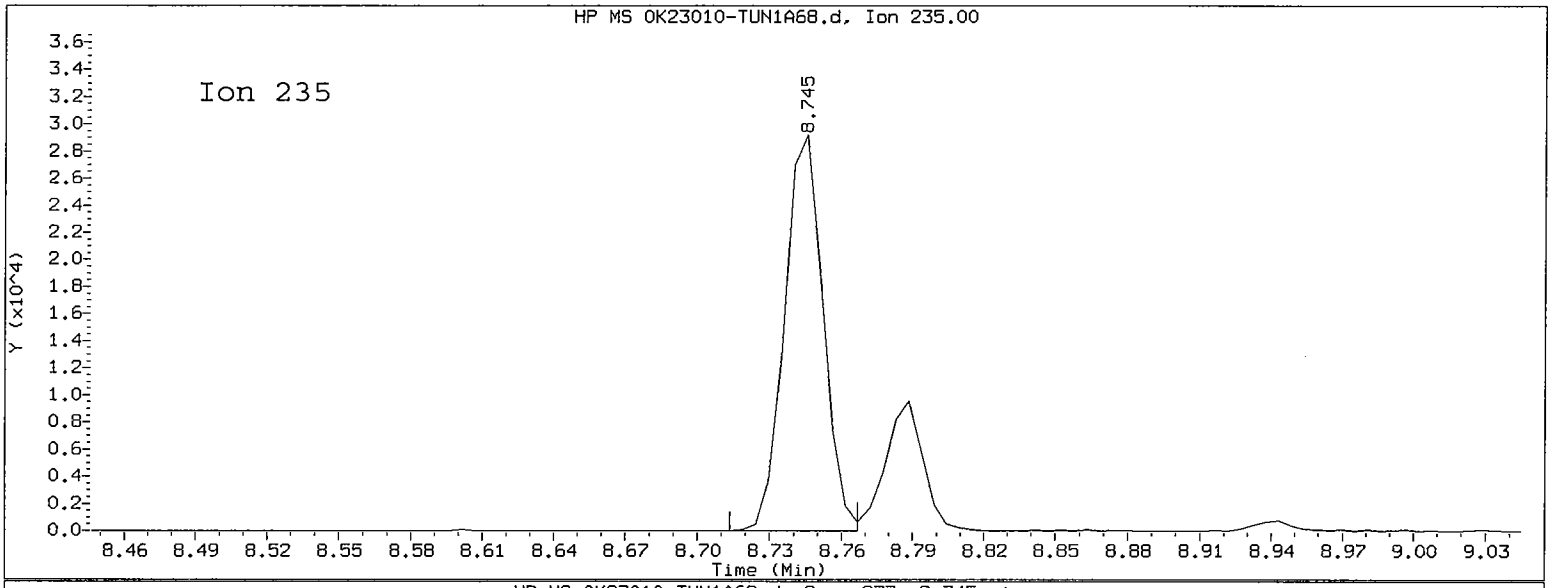


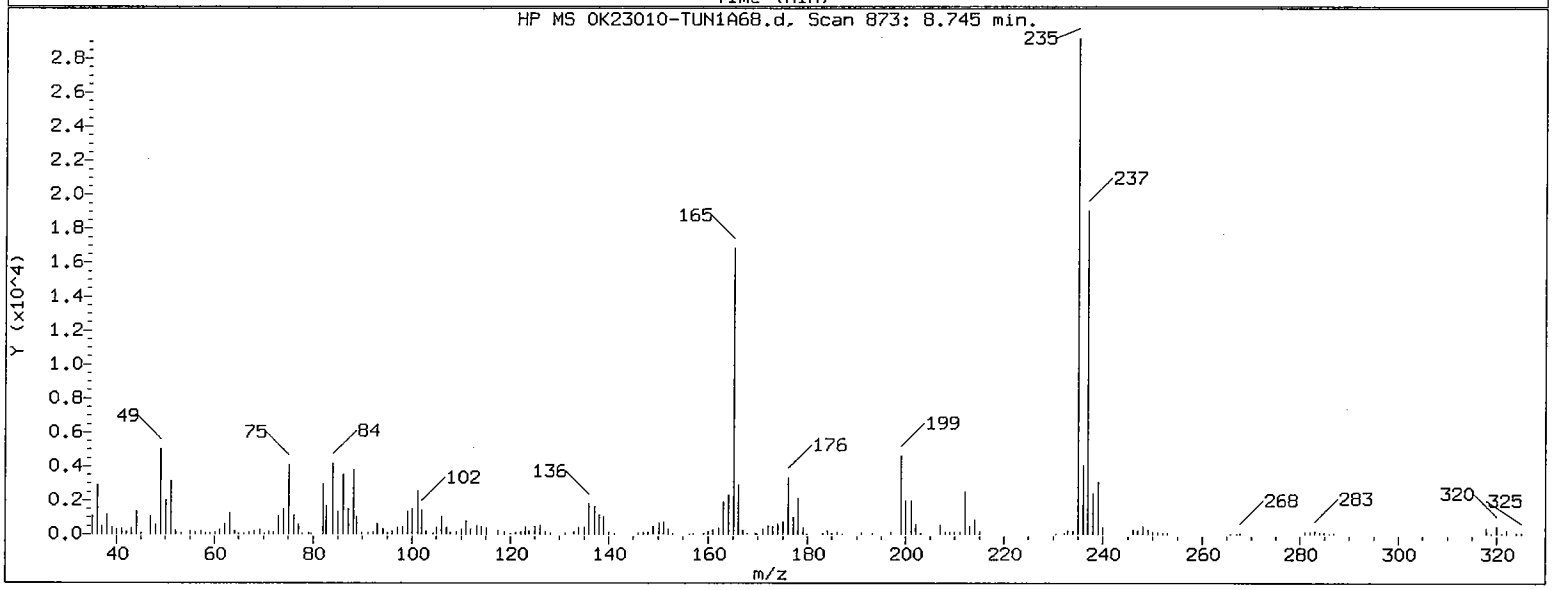
4,4'-DDT
========
Exp. RT = 9.248
Found RT = 9.103

Mass	Area	Ratio
235	520103	100.00

Report Date: 11/27/2010 11:00

Datafile Analyzed: /chem/5973hp68.i/DF101123A68_C.b/0K23010-TUN1A68.d/0K23010-TU
Method Used: /chem/5973hp68.i/DF101123A68.b/dftpp8270C.m/BrkDwnTF.m Inst: 5973h
Injection Date: 23-NOV-2010 16:22 Operator:
Sample Info: DFTPP 0K23010-TUN1:OWS
Misc Info:



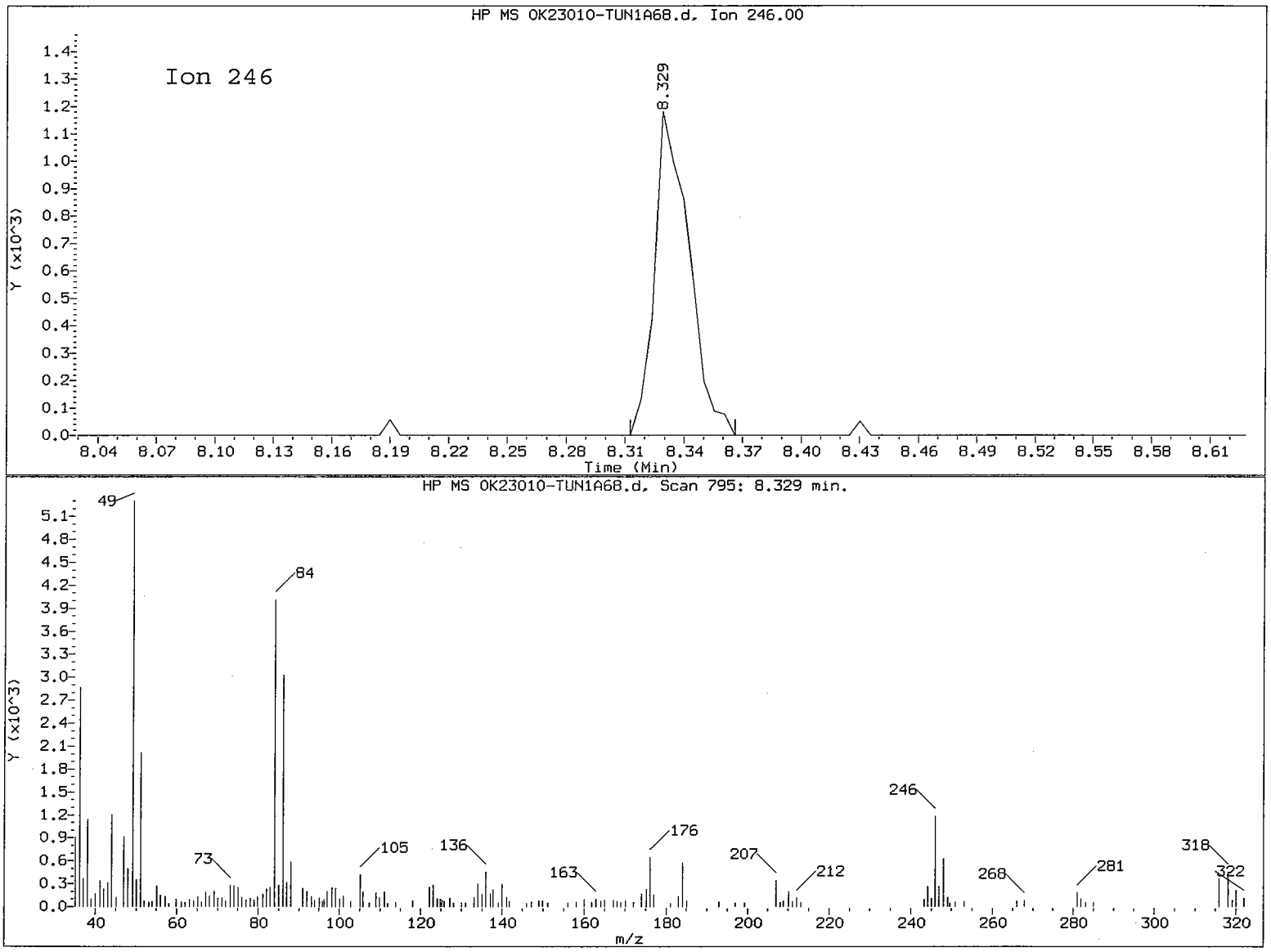


4,4'-DDD
========
Exp. RT = 8.900
Found RT = 8.745

Mass	Area	Ratio
235	32802	100.00

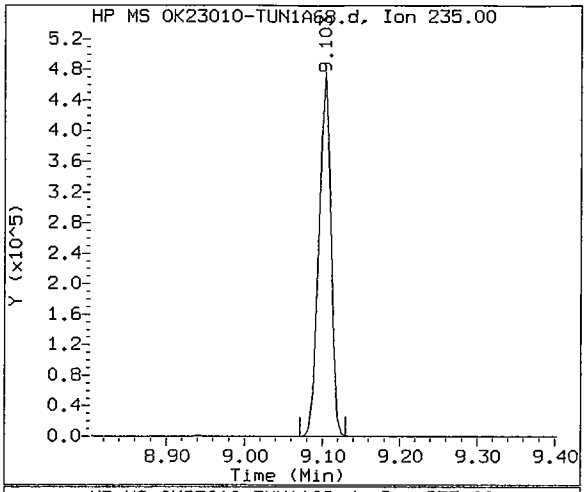
Report Date: 11/27/2010 11:00

Datafile Analyzed: /chem/5973hp68.i/DF101123A68_C.b/0K23010-TUN1A68.d/0K23010-TU
Method Used: /chem/5973hp68.i/DF101123A68.b/dftpp8270C.m/BrkDwnTF.m Inst: 5973h
Injection Date: 23-NOV-2010 16:22 Operator:
Sample Info: DFTPP 0K23010-TUN1:OWS
Misc Info:

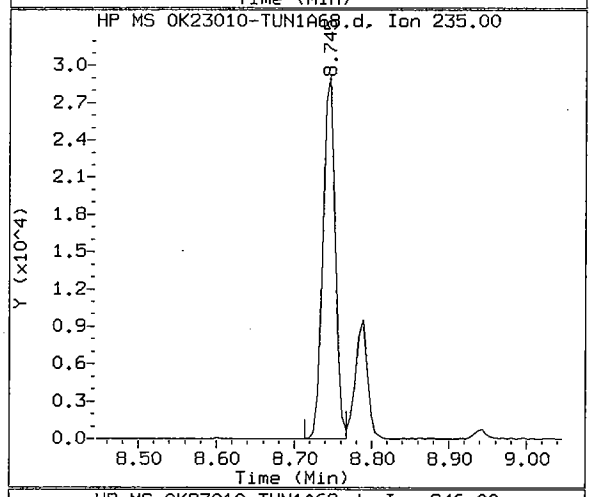


4,4'-DDE
========
Exp. RT = 8.440
Found RT = 8.329

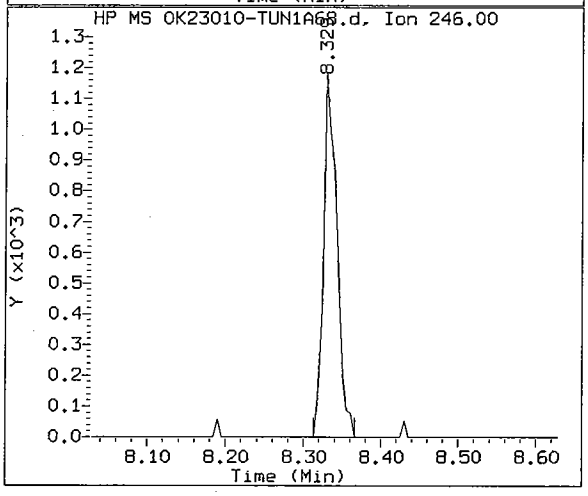
Mass	Area	Ratio
246	1441	100.00



Compound: 4,4'-DDT
Quant Mass: 235
RT: 9.103
Area: 520103



Compound: 4,4'-DDD
Quant Mass: 235
RT: 8.745
Area: 32802



Compound: 4,4'-DDE
Quant Mass: 246
RT: 8.329
Area: 1441

DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

Compound	Response	%Breakdown	Max Allowed	Test
4,4-DDT	520103			N/A
4,4-DDE	1441	0.3	20.0	PASS
4,4-DDD	32802	5.9	20.0	PASS
4,4-DDD + DDE	34243	6.2	20.0	PASS

****

TUNE SAMPLE *** PASSED *** DDT BREAKDOWN TEST

****

Data File: /chem/5973hp68.i/DF101123A68_A.b/0K23010-TUN1A68.d

Date : 23-NOV-2010 16:22

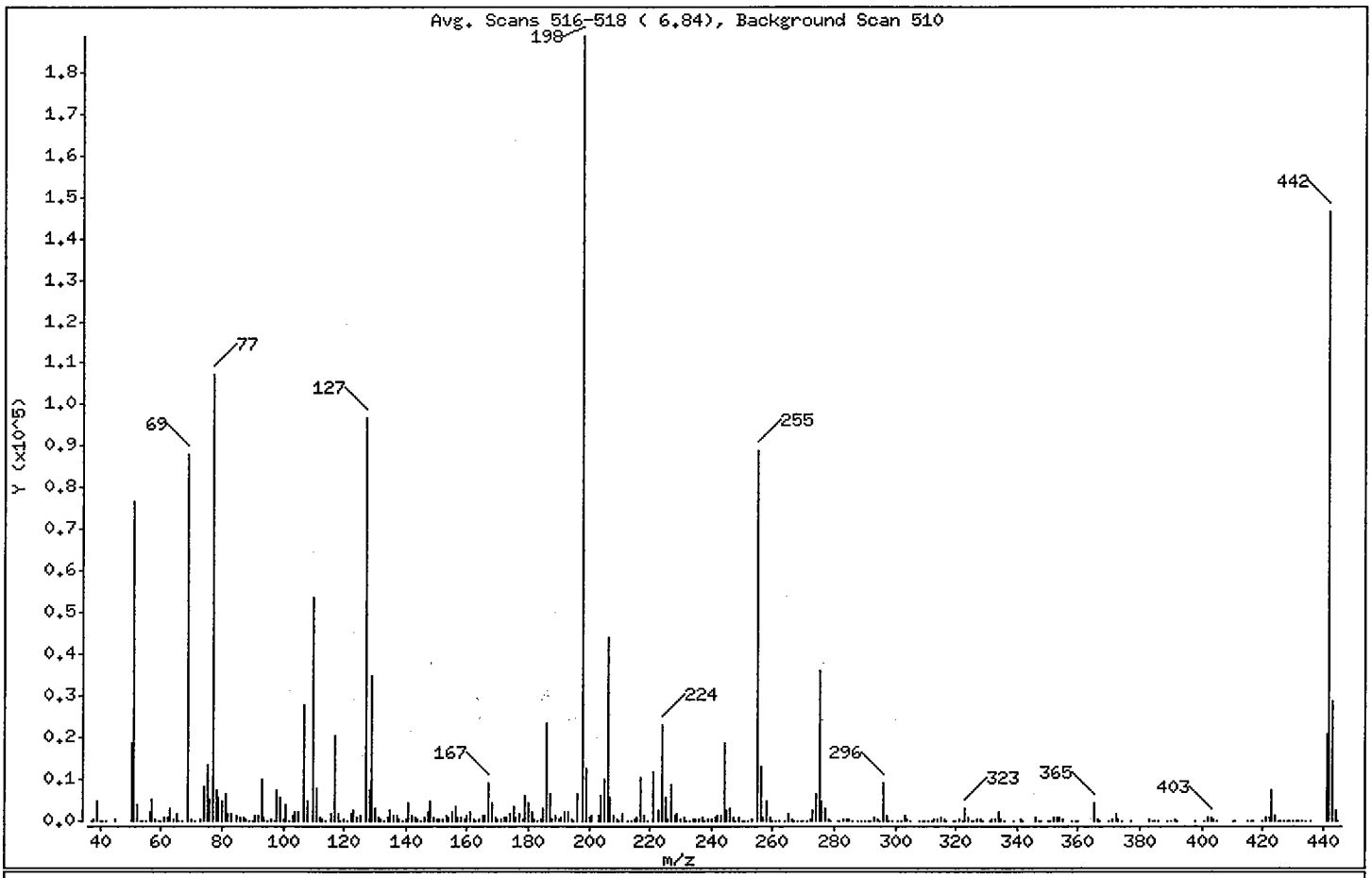
Client ID: DFTPPDU Instrument: 5973hp68.i

Sample Info: 0K23010-TUN1:OWS

Volume Injected (uL): 2.0 Operator: OWS

Column phase: RTX-5MS Column diameter: 0.32

1 Decafluorotriphenylphosphine



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	40.59
68	Less than 2.00% of mass 69	0.00 (0.00)
69	Mass 69 relative abundance	46.60
70	Less than 2.00% of mass 69	0.21 (0.46)
127	10.00 - 80.00% of mass 198	51.16
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.64
275	10.00 - 60.00% of mass 198	19.13
365	Greater than 1.00% of mass 198	2.28
441	Present, but less than mass 443	11.20
442	50.00 - 100.00% of mass 198	77.72
443	15.00 - 24.00% of mass 442	15.20 (19.56)

Data File: /chem/5973hp68.i/DF101123A68_A.b/0K23010-TUN1A68.d

Date : 23-NOV-2010 16:22

Client ID: DFTPPDU Instrument: 5973hp68.i

Sample Info: 0K23010-TUN1:OWS

Volume Injected (uL): 2.0 Operator: OWS

Column phase: RTX-5MS Column diameter: 0.32

Data File: 0K23010-TUN1A68.d

Spectrum: Avg. Scans 516-518 (6.84), Background Scan 510

Location of Maximum: 198.00

Number of points: 337

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	177	135.00	2751	225.00	5840	317.00	117
38.00	610	136.00	1104	226.00	435	319.00	26
39.00	4998	137.00	1431	227.00	8856	320.00	50
40.00	198	138.00	234	228.00	1226	321.00	331
41.00	32	139.00	183	229.00	1909	322.00	173
42.00	1	140.00	343	230.00	344	323.00	3225
45.00	238	141.00	4332	231.00	749	324.00	714
50.00	18792	142.00	1341	232.00	175	325.00	54
51.00	76552	143.00	972	233.00	214	326.00	60
52.00	3937	144.00	296	234.00	581	327.00	546
53.00	145	145.00	213	235.00	648	328.00	290
54.00	15	146.00	772	236.00	419	329.00	71
55.00	179	147.00	2059	237.00	699	331.00	17
56.00	2207	148.00	4835	238.00	136	332.00	283
57.00	5152	149.00	977	239.00	319	333.00	305
58.00	221	150.00	265	240.00	304	334.00	2095
59.00	119	151.00	524	241.00	712	335.00	579
60.00	41	152.00	426	242.00	1252	336.00	44
61.00	863	153.00	1223	243.00	1317	339.00	79
62.00	1053	154.00	884	244.00	18824	341.00	385
63.00	3257	155.00	2341	245.00	2589	342.00	127
64.00	431	156.00	3506	246.00	3126	346.00	722
65.00	1601	157.00	854	247.00	656	347.00	124
66.00	81	158.00	741	248.00	165	348.00	21
67.00	44	159.00	564	249.00	752	350.00	18
69.00	87888	160.00	1348	250.00	162	351.00	85
70.00	400	161.00	2100	251.00	208	352.00	951
71.00	68	162.00	587	252.00	207	353.00	691
73.00	545	163.00	197	253.00	477	354.00	919
74.00	8371	164.00	253	255.00	88776	355.00	250
75.00	13501	165.00	1489	256.00	13119	358.00	17
76.00	5107	166.00	1429	257.00	968	359.00	115
77.00	107032	167.00	9235	258.00	4832	360.00	53
78.00	7199	168.00	4209	259.00	654	365.00	4291
79.00	5727	169.00	672	260.00	93	366.00	594

Data File: /chem/5973hp68.i/DF101123A68_A.b/0K23010-TUN1A68.d

Date : 23-NOV-2010 16:22

Client ID: DFTPPDU Instrument: 5973hp68.i

Sample Info: 0K23010-TUN1:OWS

Volume Injected (uL): 2.0 Operator: OWS

Column phase: RTX-5MS Column diameter: 0.32

Data File: 0K23010-TUN1A68.d

Spectrum: Avg. Scans 516-518 (6.84), Background Scan 510

Location of Maximum: 198.00

Number of points: 337

m/z	Y	m/z	Y	m/z	Y	m/z	Y
80.00	4759	170.00	363	261.00	201	367.00	17
81.00	6561	171.00	380	262.00	26	370.00	139
82.00	1541	172.00	730	264.00	160	371.00	310
83.00	1560	173.00	1004	265.00	1879	372.00	1731
85.00	1199	174.00	1830	266.00	226	373.00	475
86.00	952	175.00	3516	267.00	40	374.00	83
87.00	740	176.00	1074	268.00	146	377.00	47
88.00	258	177.00	1653	269.00	17	383.00	492
89.00	127	178.00	536	270.00	157	384.00	158
90.00	19	179.00	5884	271.00	182	385.00	30
91.00	1355	180.00	4307	272.00	267	386.00	18
92.00	1500	181.00	2031	273.00	2511	389.00	17
93.00	10087	182.00	381	274.00	6711	390.00	213
94.00	773	183.00	198	275.00	36080	391.00	237
95.00	166	184.00	594	276.00	4756	392.00	125
96.00	530	185.00	3004	277.00	2908	398.00	23
97.00	13	186.00	23344	278.00	464	401.00	143
98.00	7272	187.00	6451	279.00	121	402.00	793
99.00	5867	188.00	611	281.00	40	403.00	1059
100.00	458	189.00	1369	282.00	110	404.00	320
101.00	3795	190.00	313	283.00	342	405.00	52
102.00	129	191.00	739	284.00	266	410.00	53
103.00	1297	192.00	2104	285.00	597	411.00	18
104.00	2327	193.00	2211	286.00	133	415.00	92
105.00	2228	194.00	507	288.00	42	416.00	16
107.00	27880	195.00	98	289.00	155	417.00	16
108.00	4616	196.00	6532	290.00	159	420.00	44
110.00	53560	198.00	188608	291.00	97	421.00	1086
111.00	7722	199.00	12525	292.00	177	422.00	910
112.00	993	200.00	873	293.00	729	423.00	7240
113.00	358	201.00	1206	294.00	249	424.00	1422
114.00	111	203.00	1130	295.00	171	425.00	214
116.00	1528	204.00	6279	296.00	9336	426.00	167
117.00	20512	205.00	10057	297.00	1270	427.00	115
118.00	1562	206.00	44024	298.00	78	428.00	160

Data File: /chem/5973hp68.i/DF101123A68_A.b/OK23010-TUN1A68.d

Date : 23-NOV-2010 16:22

Client ID: DFTPPDU Instrument: 5973hp68.i

Sample Info: OK23010-TUN1:OWS

Volume Injected (uL): 2.0 Operator: OWS

Column phase: RTX-5MS Column diameter: 0.32

Data File: OK23010-TUN1A68.d

Spectrum: Avg. Scans 516-518 (6.84), Background Scan 510

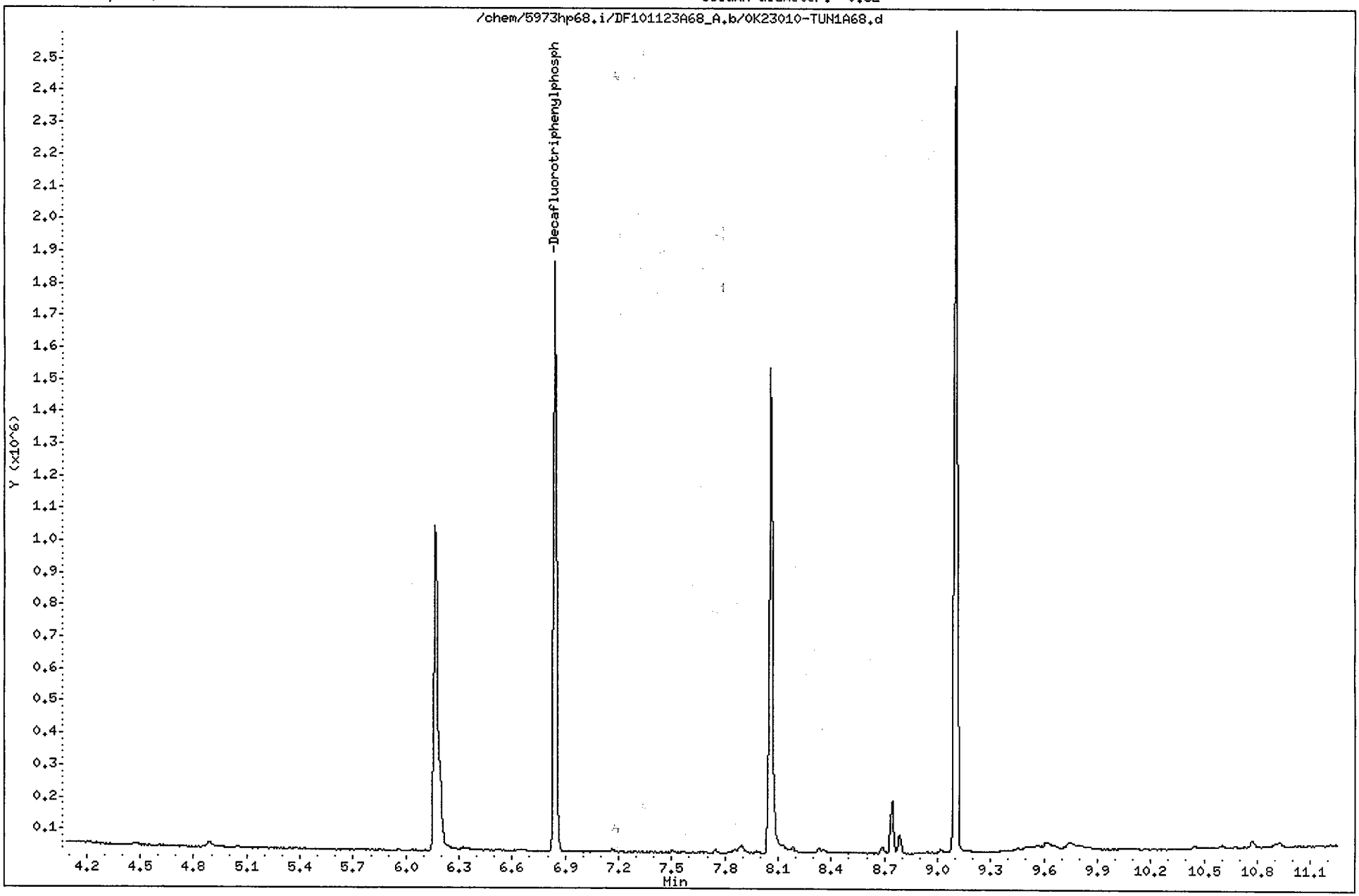
Location of Maximum: 198.00

Number of points: 337

m/z	Y	m/z	Y	m/z	Y	m/z	Y
119.00	156	207.00	5567	299.00	39	429.00	144
120.00	311	208.00	1242	301.00	158	430.00	154
121.00	71	209.00	400	302.00	167	431.00	89
122.00	1657	210.00	198	303.00	1201	432.00	136
123.00	2464	211.00	1657	304.00	351	433.00	108
124.00	1086	213.00	134	305.00	41	434.00	50
125.00	1255	214.00	57	308.00	147	436.00	19
127.00	96488	215.00	441	309.00	112	441.00	21120
128.00	7370	216.00	930	310.00	136	442.00	146560
129.00	35008	217.00	10554	311.00	38	443.00	28664
130.00	3143	218.00	1414	312.00	18	444.00	2450
131.00	667	219.00	197	313.00	240	445.00	183
132.00	365	221.00	11848	314.00	480		
133.00	143	223.00	2474	315.00	1085		
134.00	788	224.00	22896	316.00	626		

Data File: /chem/5973hp68.i/DF101123A68_A.b/0K23010-TUN1A68.d
Date : 23-NOV-2010 16:22
Client ID: DFTPPDU
Sample Info: 0K23010-TUN1:OWS
Volume Injected (uL): 2.0
Column phase: RTX-5MS

Instrument: 5973hp68.i
Operator: OWS
Column diameter: 0.32



TAILING FACTOR and DEGRADATION SUMMARY RESULTS

DECAFLUOROTRIPHENYLPHOSPHINE Ion Abundance/Ratio Criteria Chart

Ion	Abundance Criteria	Base Peak	Other	Test
198	Base Peak, 100% relative abundance	100.00		PASS
51	10 - 80% of mass 198	40.59		PASS
68	Less than 2% of mass 69	0.00	(0.00)	PASS
69	Mass 69 relative abundance	46.60		PASS
70	Less than 2% of mass 69	0.21	(0.46)	PASS
127	10 - 80% of mass 198	51.16		PASS
197	0 - 2% of mass 198	0.00		PASS
199	5 - 9% of mass 198	6.64		PASS
275	10 - 60% of mass 198	19.13		PASS
365	Greater than 0.75% of mass 198	2.28		PASS
441	Present, but less than mass 443	11.20	(73.70)	PASS
442	50 - 100 % of mass 198	77.72		PASS
443	15 - 24% of mass 442	15.20	(19.56)	PASS

TAILING ANALYSIS SUMMARY

Compound	Tail Factor	Max Allowed	Test
Pentachlorophenol	1.7	5.0	PASS
Benzidine	1.5	3.0	PASS

DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

Compound	Response	%Breakdown	Max Allowed	Test
4,4-DDT	520103			N/A
4,4-DDE	1441	0.3	20.0	PASS
4,4-DDD	32802	5.9	20.0	PASS
4,4-DDD + DDE	34243	6.2	20.0	PASS

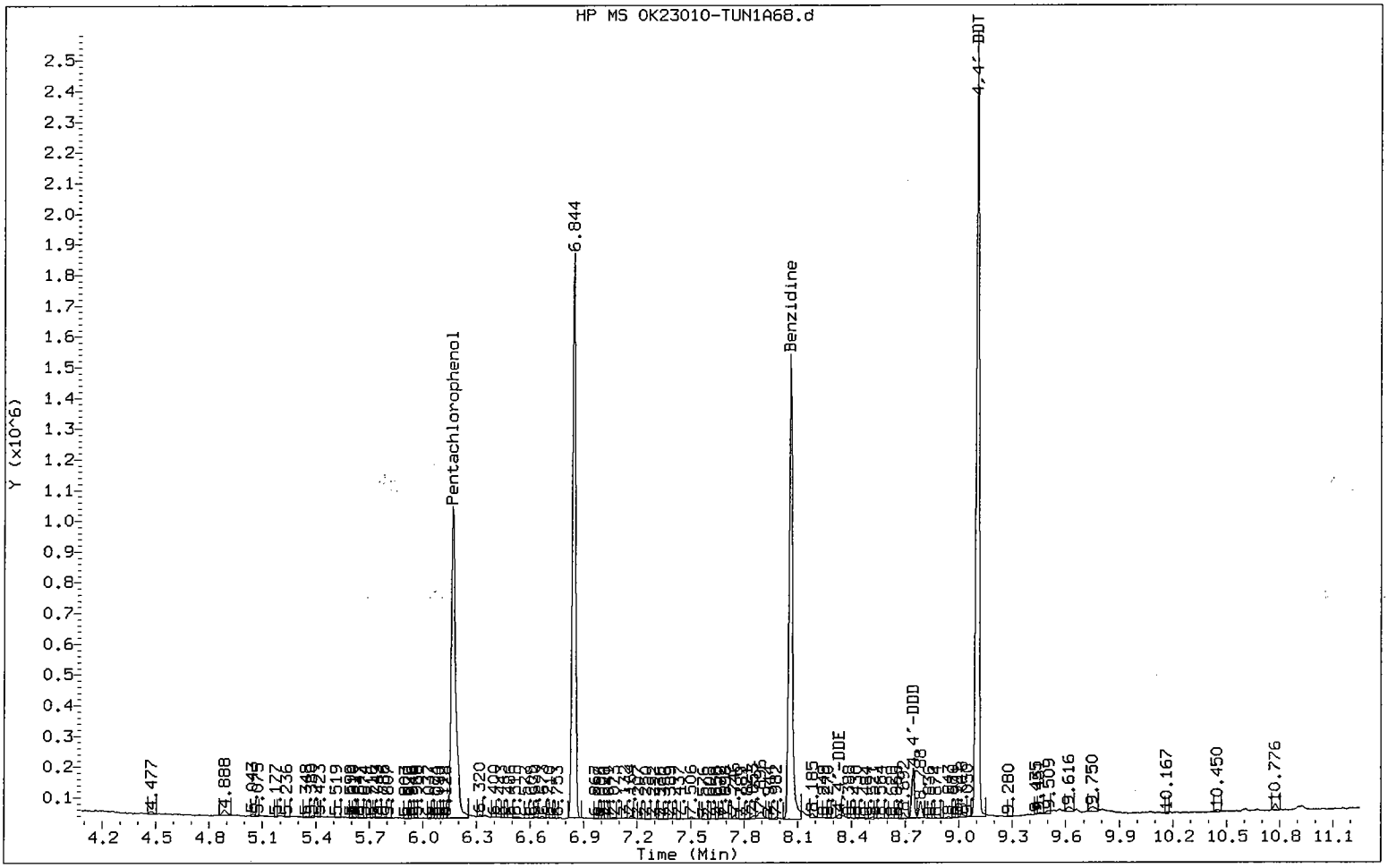
Tuning Sample, /chem/5973hp68.i/DF101123A68_A.b/0K23010-TUN1A68.d/0K23010-TUN1A6

*** PASSED ***

TAILING FACTOR and DEGRADATION SAMPLE AND GRAPHIC REPORT

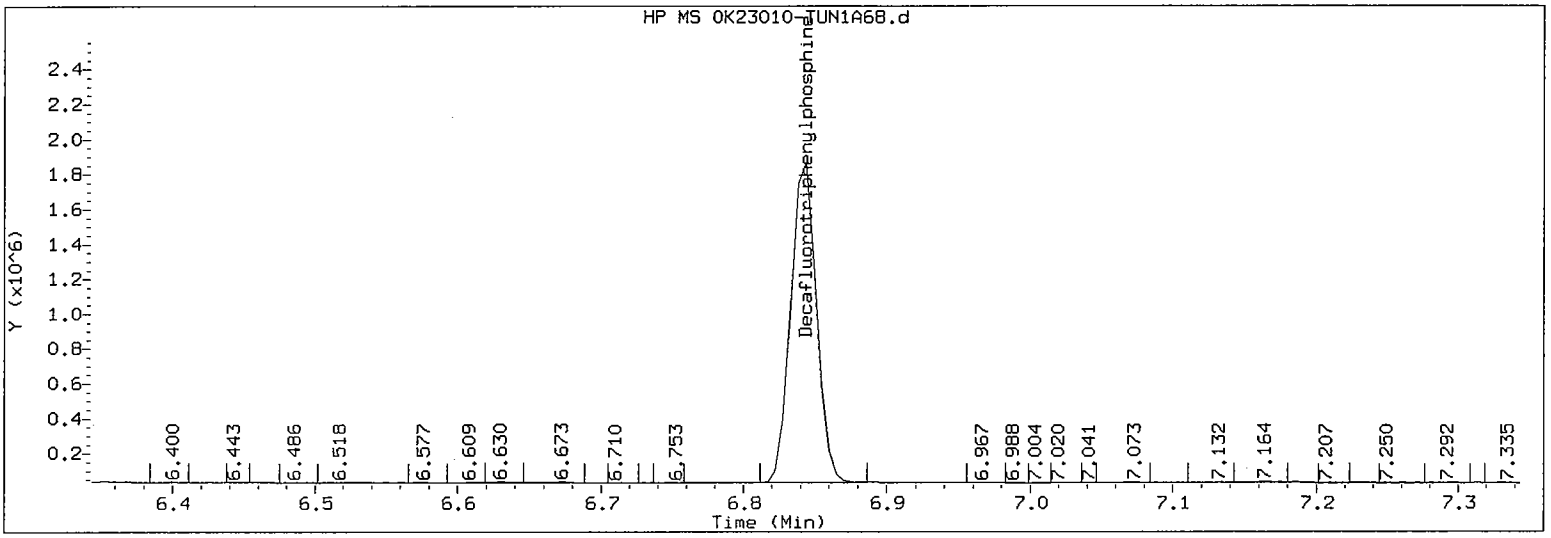
Report Date: 11/27/2010 10:09

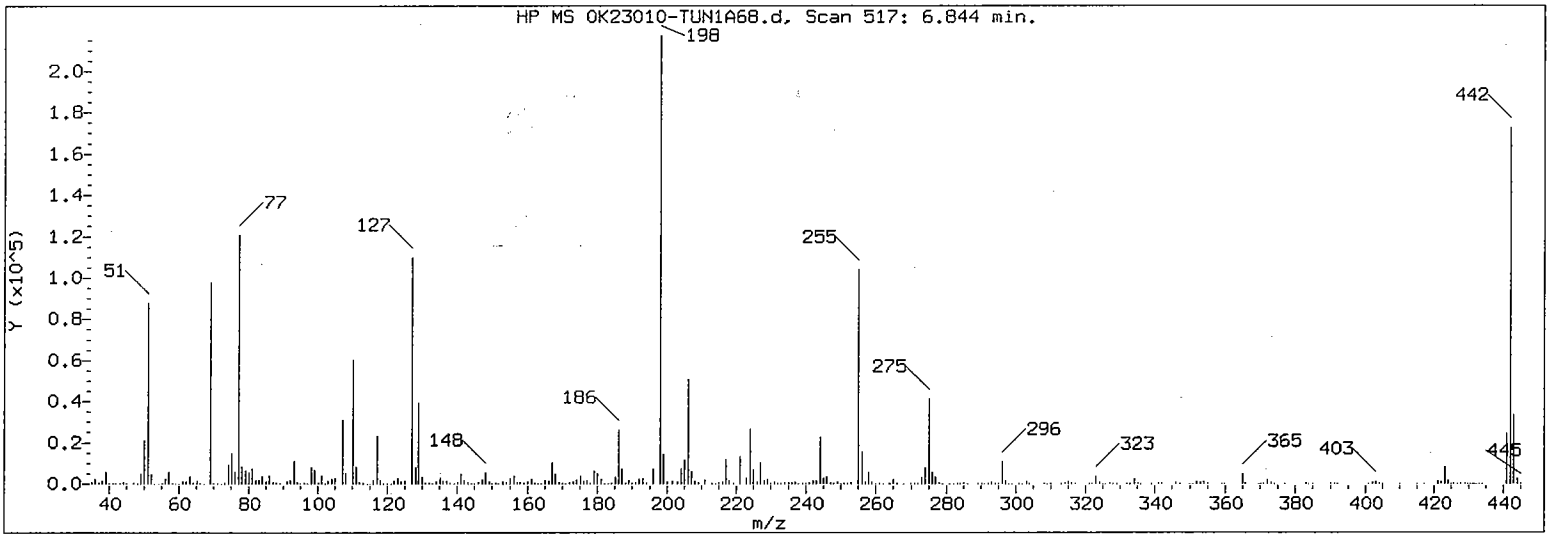
Datafile Analyzed: /chem/5973hp68.i/DF101123A68_A.b/0K23010-TUN1A68.d/0K23010-TU
Method Used: /chem/5973hp68.i/DF101123A68_A.b/dftpp8270C.m Inst: 5973hp68
Injection Date: 23-NOV-2010 16:22 Operator: OWS
Sample Info: 0K23010-TUN1 0K23010-TUN1:OWS
Misc Info: DFTPPDU



Report Date: 11/27/2010 10:09

Datafile Analyzed: /chem/5973hp68.i/DF101123A68_A.b/0K23010-TUN1A68.d/0K23010-TU
Method Used: /chem/5973hp68.i/DF101123A68_A.b/dftpp8270C.m Inst: 5973hp68
Injection Date: 23-NOV-2010 16:22 Operator: OWS
Sample Info: 0K23010-TUN1 0K23010-TUN1:OWS
Misc Info: DFTPPDU



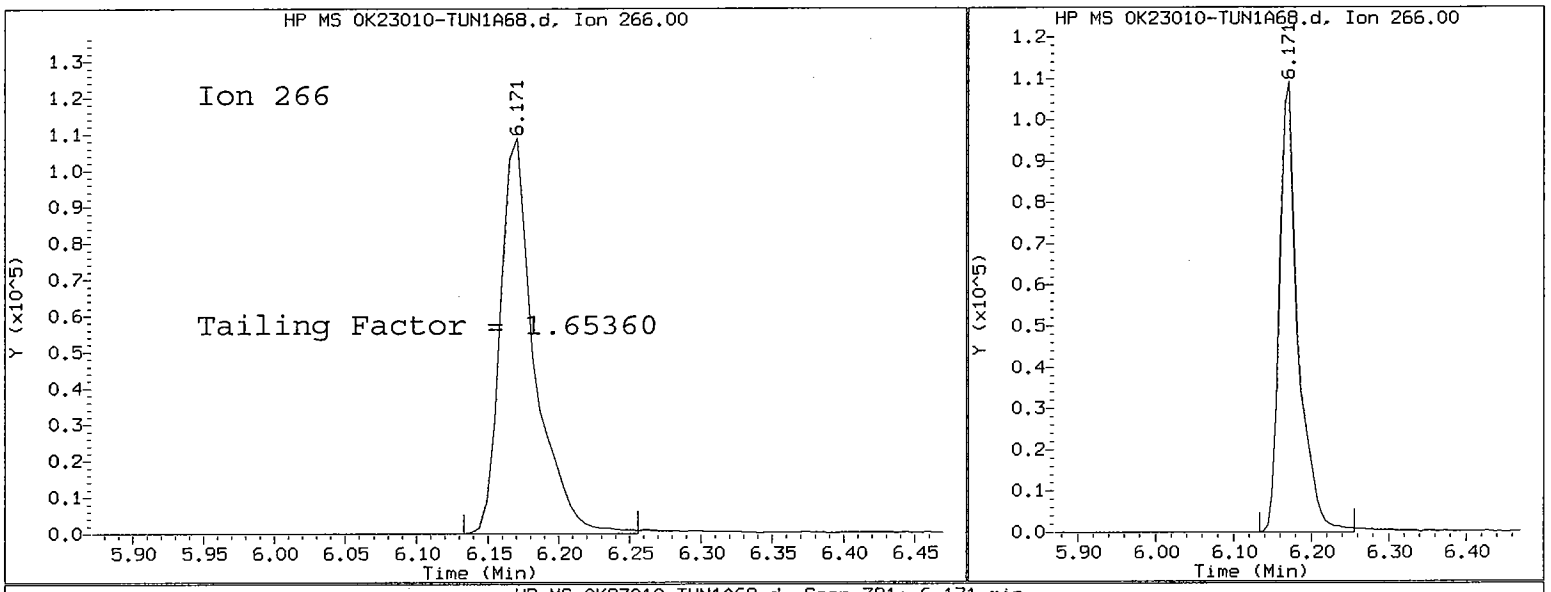


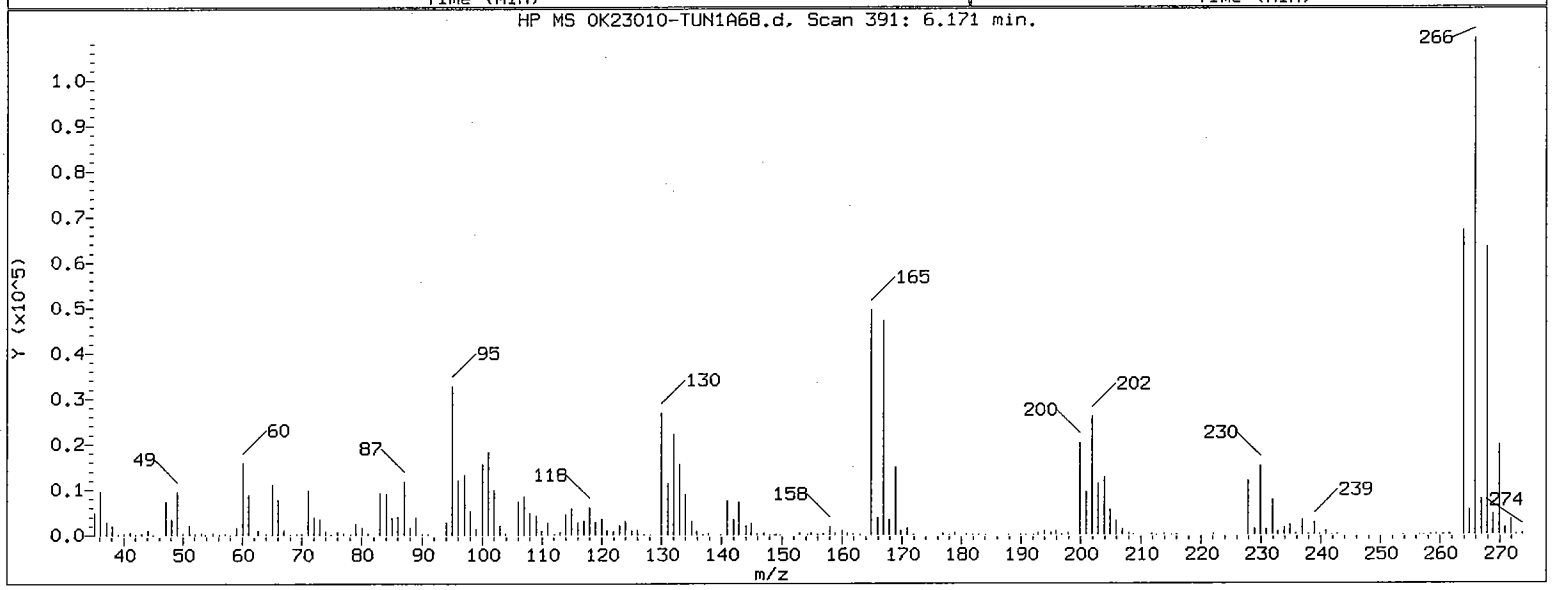
DECAFLUOROTRIPHENYLPHOSPHINE Ion Abundance/Ratio Criteria Chart

Ion	Abundance Criteria	Base Peak	Other	Test
198	Base Peak, 100% relative abundance	100.00		PASS
51	10 - 80% of mass 198	40.59		PASS
68	Less than 2% of mass 69	0.00	(0.00)	PASS
69	Mass 69 relative abundance	46.60		PASS
70	Less than 2% of mass 69	0.21	(0.46)	PASS
127	10 - 80% of mass 198	51.16		PASS
197	0 - 2% of mass 198	0.00		PASS
199	5 - 9% of mass 198	6.64		PASS
275	10 - 60% of mass 198	19.13		PASS
365	Greater than 0.75% of mass 198	2.28		PASS
441	Present, but less than mass 443	11.20	(73.70)	PASS
442	50 - 100% of mass 198	77.72		PASS
443	15 - 24% of mass 442	15.20	(19.56)	PASS

Report Date: 11/27/2010 10:09

Datafile Analyzed: /chem/5973hp68.i/DF101123A68_A.b/0K23010-TUN1A68.d/0K23010-TU
Method Used: /chem/5973hp68.i/DF101123A68.b/dftpp8270C.m/BrkDwnTF.m Inst: 5973h
Injection Date: 23-NOV-2010 16:22 Operator:
Sample Info: DFTPP 0K23010-TUN1:OWS
Misc Info:





Pentachlorophenol
==========
Exp. RT = 6.325
Found RT = 6.171

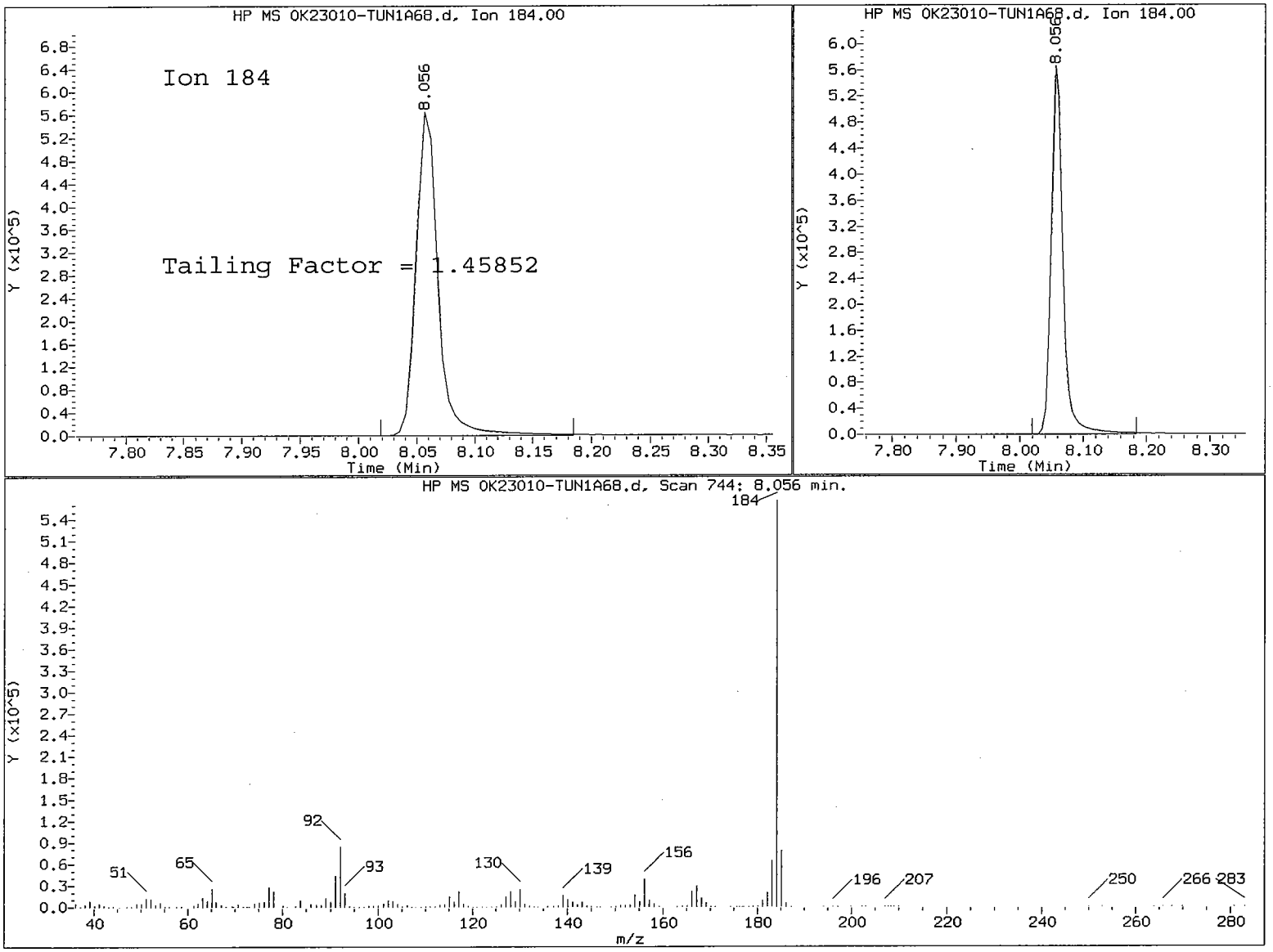
Mass	Area	Ratio
266	183872	100.00

Tailing factor for Pentachlorophenol OK

Tailing Factor = 1.7 Maximum Allowed = 5.0

Report Date: 11/27/2010 10:09

Datafile Analyzed: /chem/5973hp68.i/DF101123A68_A.b/0K23010-TUN1A68.d/0K23010-TU
Method Used: /chem/5973hp68.i/DF101123A68.b/dftpp8270C.m/BrkDwnTF.m Inst: 5973h
Injection Date: 23-NOV-2010 16:22 Operator:
Sample Info: DFTPP 0K23010-TUN1:OWS
Misc Info:



Benzidine
=========
Exp. RT = 8.201
Found RT = 8.056

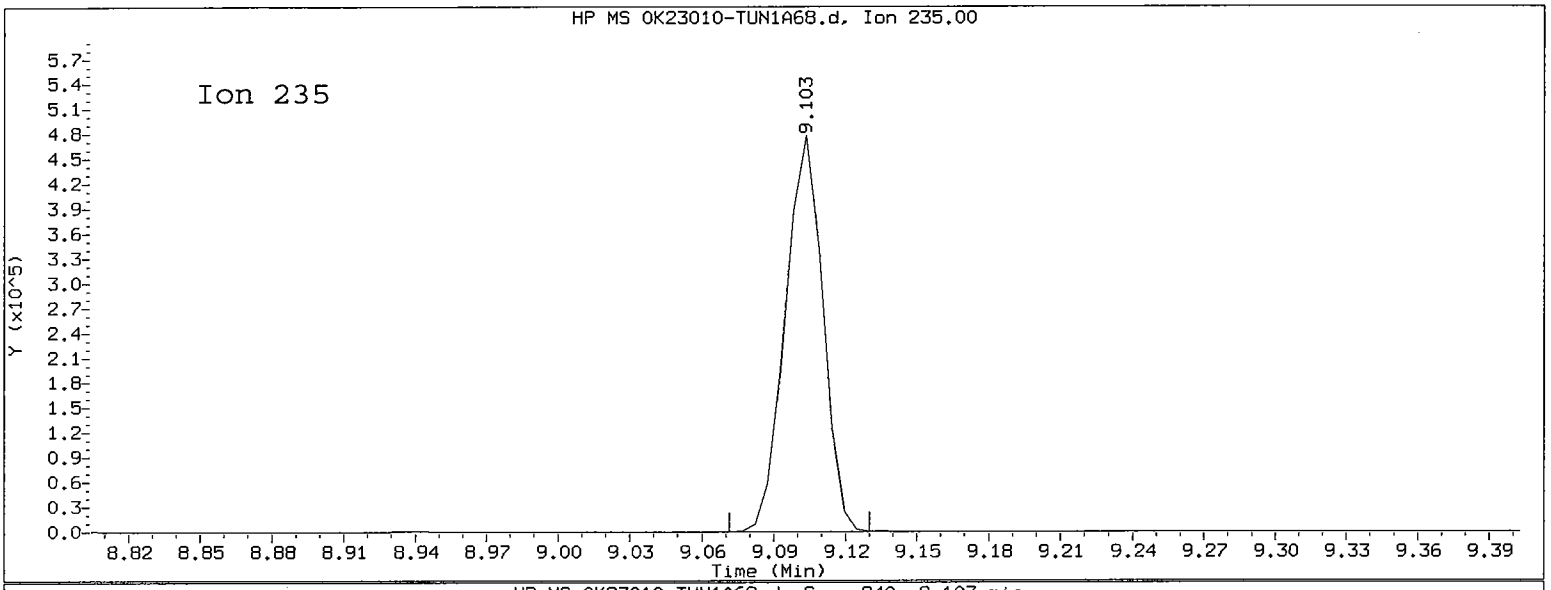
Mass	Area	Ratio
184	746829	100.00

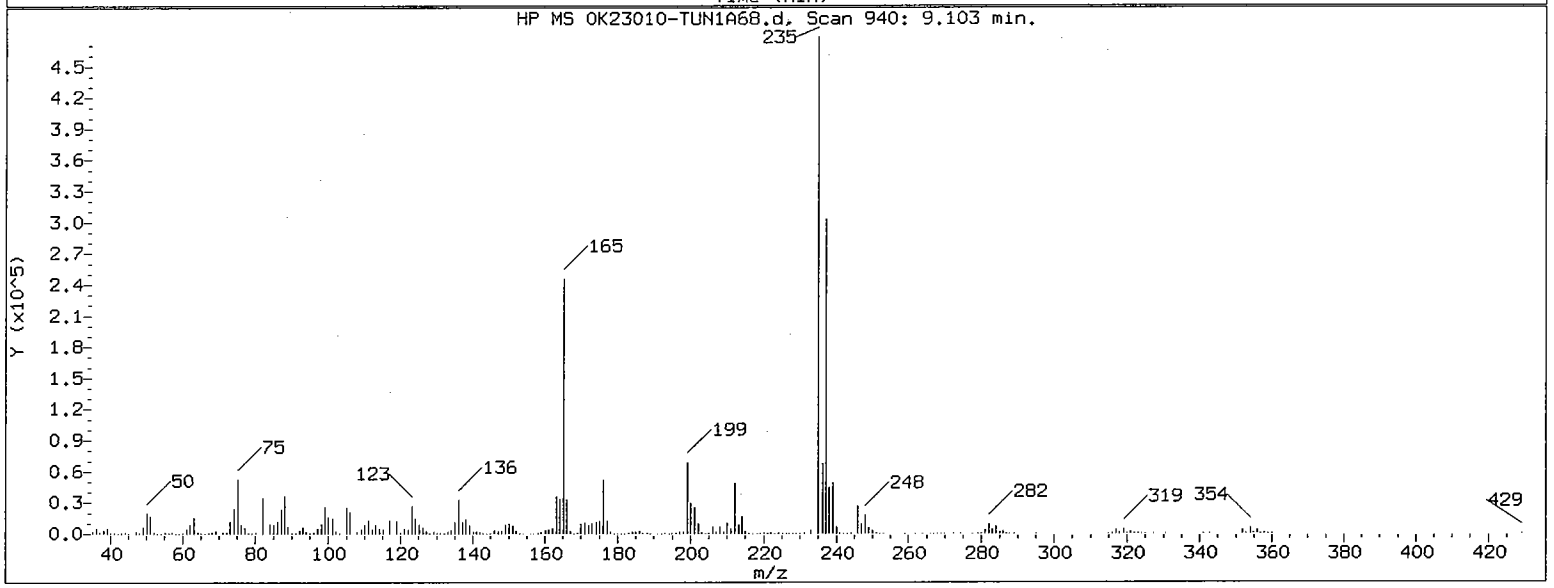
Tailing factor for Benzidine OK

Tailing Factor = 1.5 Maximum Allowed = 3.0

Report Date: 11/27/2010 10:09

Datafile Analyzed: /chem/5973hp68.i/DF101123A68_A.b/0K23010-TUN1A68.d/0K23010-TU
Method Used: /chem/5973hp68.i/DF101123A68.b/dftpp8270C.m/BrkDwnTF.m Inst: 5973h
Injection Date: 23-NOV-2010 16:22 Operator:
Sample Info: DFTPP 0K23010-TUN1:OWS
Misc Info:



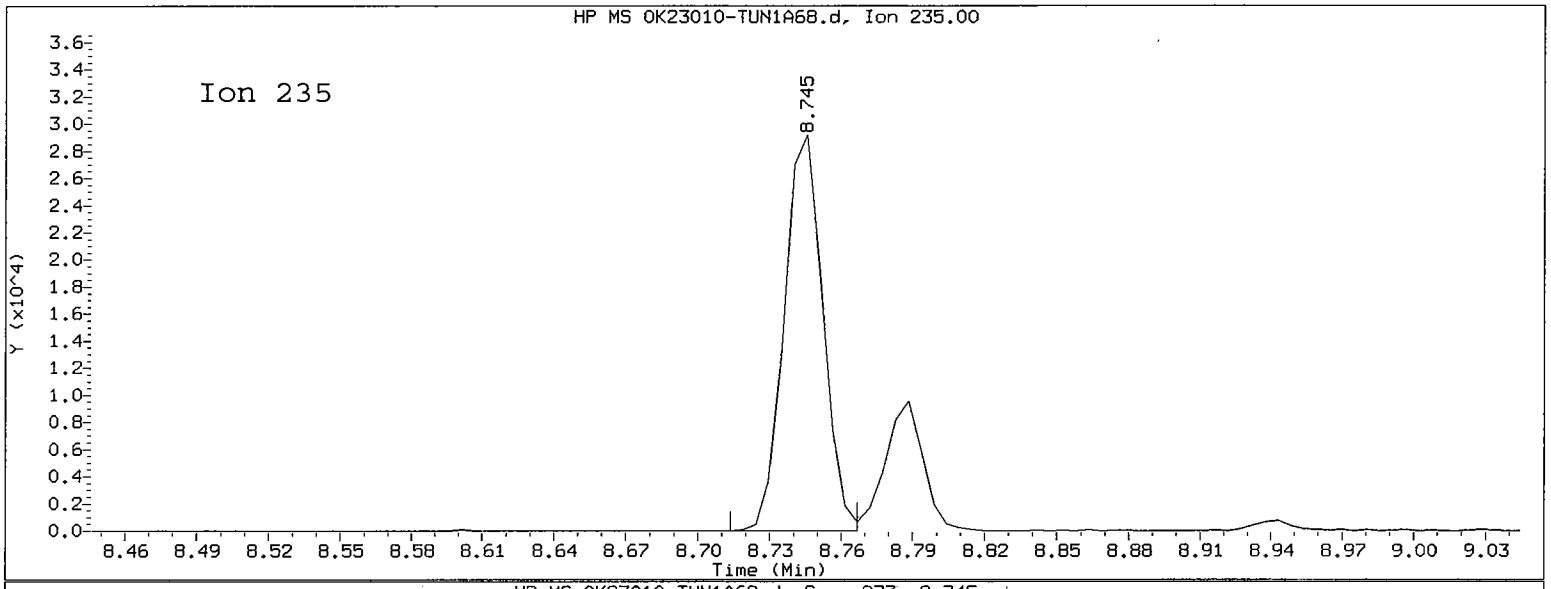


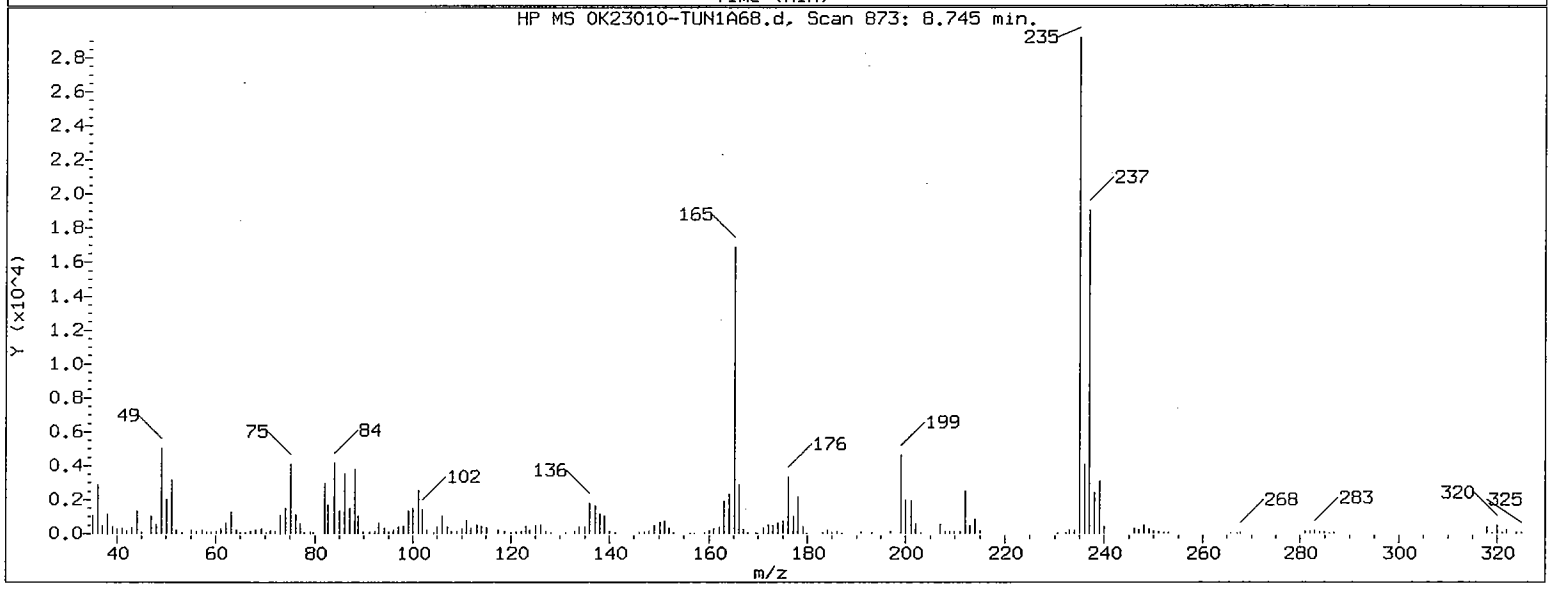
4,4'-DDT
========
Exp. RT = 9.248
Found RT = 9.103

Mass	Area	Ratio
235	520103	100.00

Report Date: 11/27/2010 10:09

Datafile Analyzed: /chem/5973hp68.i/DF101123A68_A.b/0K23010-TUN1A68.d/0K23010-TU
Method Used: /chem/5973hp68.i/DF101123A68.b/dftpp8270C.m/BrkDwnTF.m Inst: 5973h
Injection Date: 23-NOV-2010 16:22 Operator:
Sample Info: DFTPP 0K23010-TUN1:OWS
Misc Info:



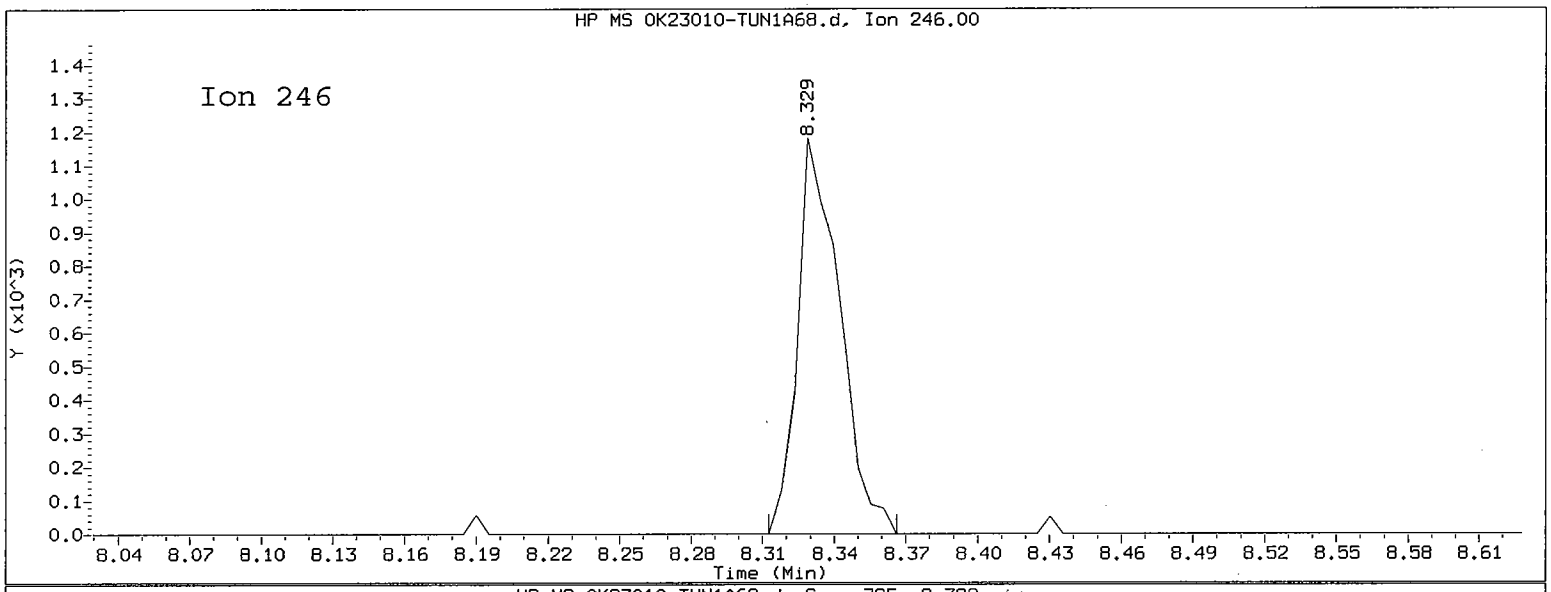


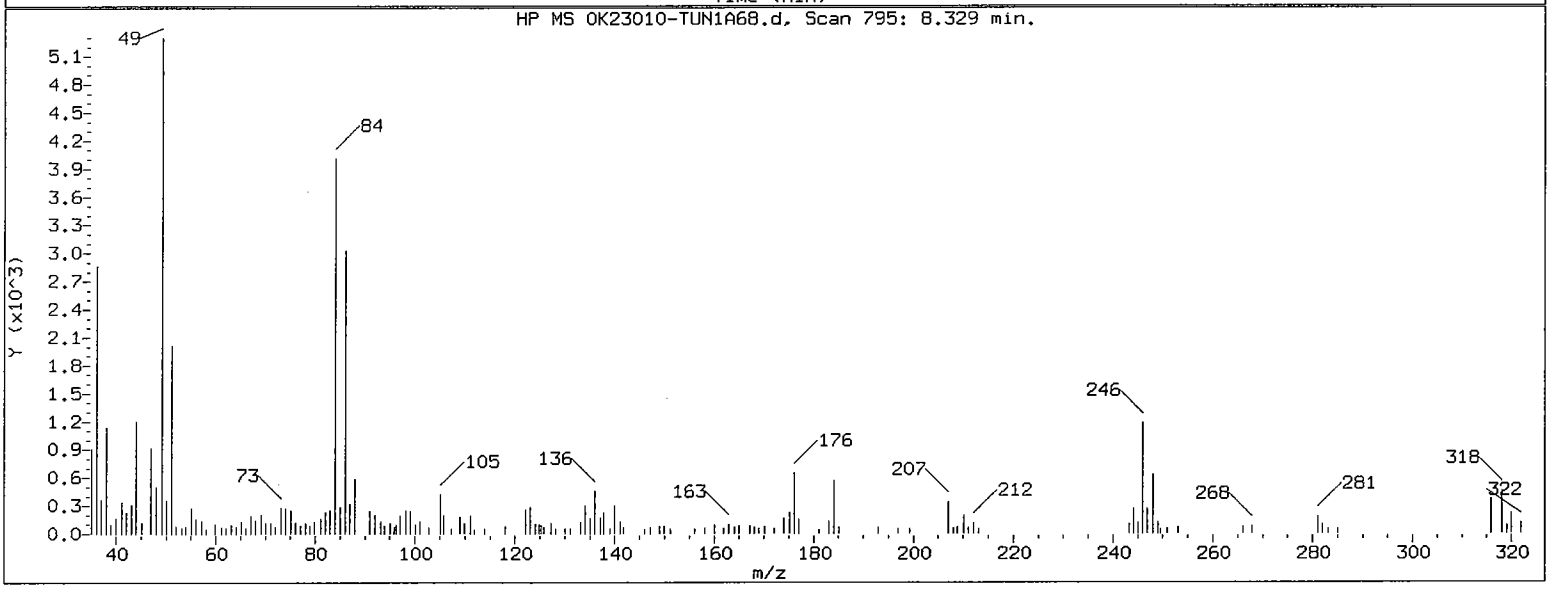
4,4'-DDD
========
Exp. RT = 8.900
Found RT = 8.745

Mass	Area	Ratio
235	32802	100.00

Report Date: 11/27/2010 10:09

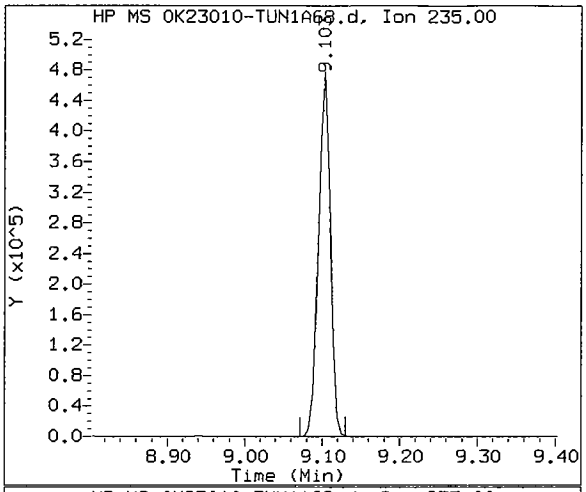
Datafile Analyzed: /chem/5973hp68.i/DF101123A68_A.b/0K23010-TUN1A68.d/0K23010-TU
Method Used: /chem/5973hp68.i/DF101123A68.b/dftpp8270C.m/BrkDwnTF.m Inst: 5973h
Injection Date: 23-NOV-2010 16:22 Operator:
Sample Info: DFTPP 0K23010-TUN1:OWS
Misc Info:



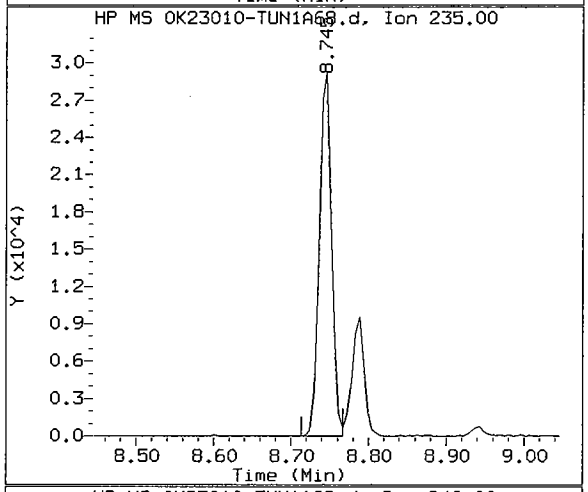


4,4'-DDE
========
Exp. RT = 8.440
Found RT = 8.329

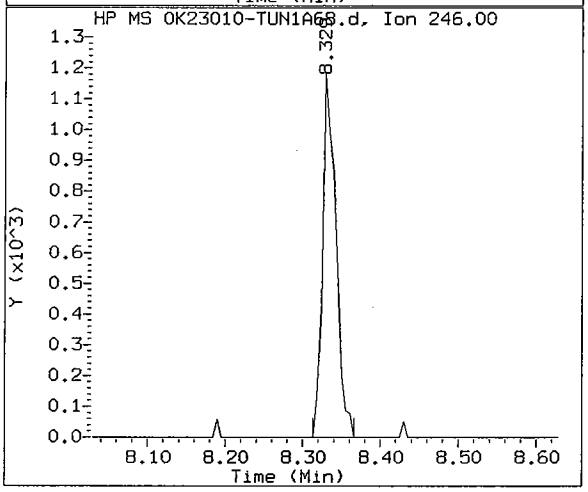
Mass	Area	Ratio
246	1441	100.00



Compound: 4,4'-DDT
Quant Mass: 235
RT: 9.103
Area: 520103



Compound: 4,4'-DDD
Quant Mass: 235
RT: 8.745
Area: 32802



Compound: 4,4'-DDE
Quant Mass: 246
RT: 8.329
Area: 1441

DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

Compound	Response	%Breakdown	Max Allowed	Test
4,4-DDT	520103			N/A
4,4-DDE	1441	0.3	20.0	PASS
4,4-DDD	32802	5.9	20.0	PASS
4,4-DDD + DDE	34243	6.2	20.0	PASS

****
TUNE SAMPLE *** PASSED *** DDT BREAKDOWN TEST
****

Data File: /chem/5973hp68.i/DF101123A68_B.b/0K23010-TUN1A68.d

Date : 23-NOV-2010 16:22

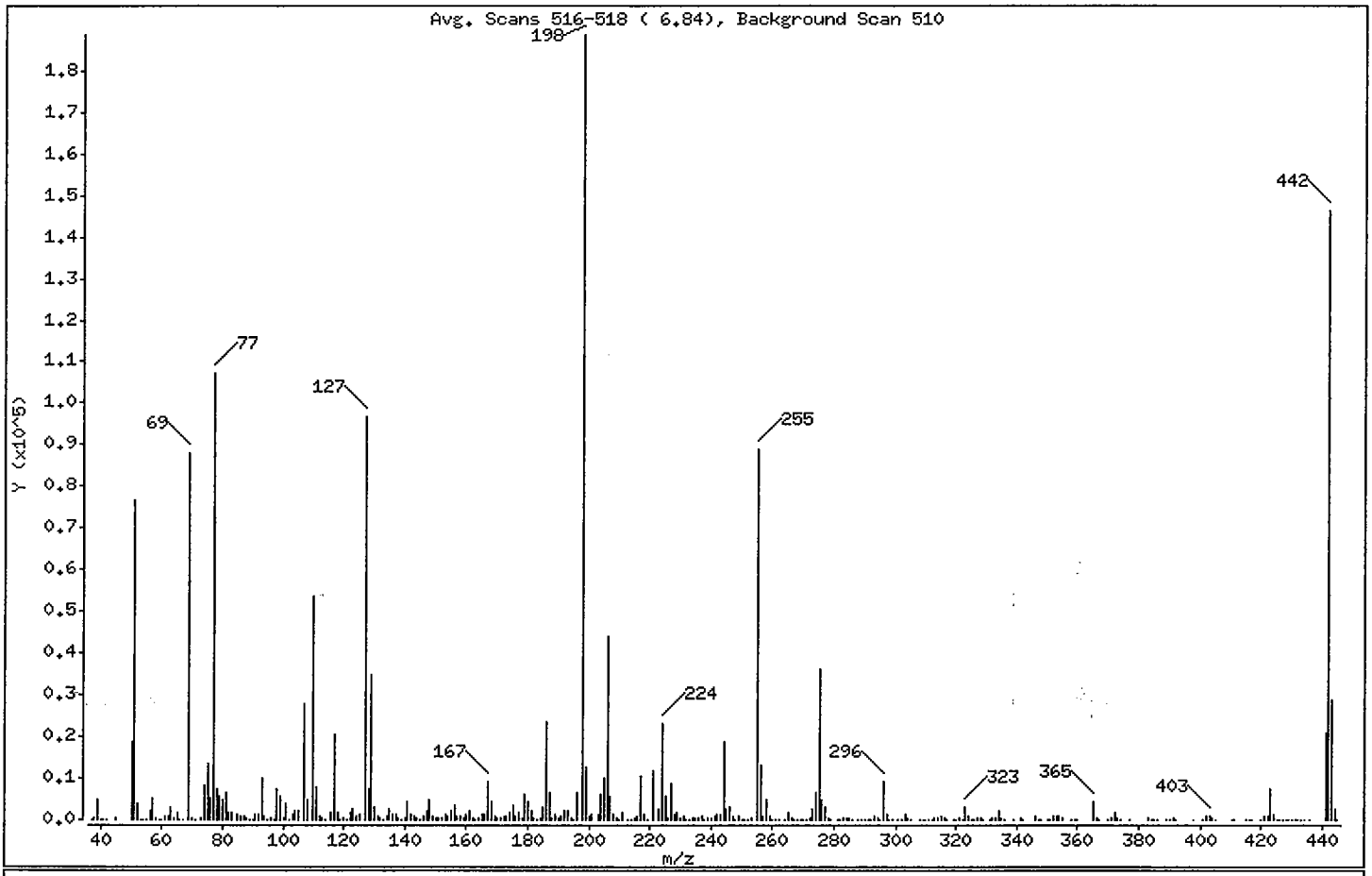
Client ID: DFTPPDU Instrument: 5973hp68.i

Sample Info: 0K23010-TUN1:OWS

Volume Injected (uL): 2.0 Operator: OWS

Column phase: RTX-5MS Column diameter: 0.32

1 Decafluorotriphenylphosphine



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	40.59
68	Less than 2.00% of mass 69	0.00 (0.00)
69	Mass 69 relative abundance	46.60
70	Less than 2.00% of mass 69	0.21 (0.46)
127	10.00 - 80.00% of mass 198	51.16
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.64
275	10.00 - 60.00% of mass 198	19.13
365	Greater than 1.00% of mass 198	2.28
441	Present, but less than mass 443	11.20
442	50.00 - 100.00% of mass 198	77.72
443	15.00 - 24.00% of mass 442	15.20 (19.56)

Data File: /chem/5973hp68.i/DF101123A68_B.b/OK23010-TUN1A68.d

Date : 23-NOV-2010 16:22

Client ID: DFTPPDU

Instrument: 5973hp68.i

Sample Info: OK23010-TUN1:OWS

Volume Injected (uL): 2.0

Operator: OWS

Column phase: RTX-5MS

Column diameter: 0.32

Data File: OK23010-TUN1A68.d

Spectrum: Avg. Scans 516-518 (6.84), Background Scan 510

Location of Maximum: 198.00

Number of points: 337

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	177	135.00	2751	225.00	5840	317.00	117
38.00	610	136.00	1104	226.00	435	319.00	26
39.00	4998	137.00	1431	227.00	8856	320.00	50
40.00	198	138.00	234	228.00	1226	321.00	331
41.00	32	139.00	183	229.00	1909	322.00	173
42.00	1	140.00	343	230.00	344	323.00	3225
45.00	238	141.00	4332	231.00	749	324.00	714
50.00	18792	142.00	1341	232.00	175	325.00	54
51.00	76552	143.00	972	233.00	214	326.00	60
52.00	3937	144.00	296	234.00	581	327.00	546
53.00	145	145.00	213	235.00	648	328.00	290
54.00	15	146.00	772	236.00	419	329.00	71
55.00	179	147.00	2059	237.00	699	331.00	17
56.00	2207	148.00	4835	238.00	136	332.00	283
57.00	5152	149.00	977	239.00	319	333.00	305
58.00	221	150.00	265	240.00	304	334.00	2095
59.00	119	151.00	524	241.00	712	335.00	579
60.00	41	152.00	426	242.00	1252	336.00	44
61.00	863	153.00	1223	243.00	1317	339.00	79
62.00	1053	154.00	884	244.00	18824	341.00	385
63.00	3257	155.00	2341	245.00	2589	342.00	127
64.00	431	156.00	3506	246.00	3126	346.00	722
65.00	1601	157.00	854	247.00	656	347.00	124
66.00	81	158.00	741	248.00	165	348.00	21
67.00	44	159.00	564	249.00	752	350.00	18
69.00	87888	160.00	1348	250.00	162	351.00	85
70.00	400	161.00	2100	251.00	208	352.00	951
71.00	68	162.00	587	252.00	207	353.00	691
73.00	545	163.00	197	253.00	477	354.00	919
74.00	8371	164.00	253	255.00	88776	355.00	250
75.00	13501	165.00	1489	256.00	13119	358.00	17
76.00	5107	166.00	1429	257.00	968	359.00	115
77.00	107032	167.00	9235	258.00	4832	360.00	53
78.00	7199	168.00	4209	259.00	654	365.00	4291
79.00	5727	169.00	672	260.00	93	366.00	594

Data File: /chem/5973hp68.i/DF101123A68_B.b/0K23010-TUN1A68.d

Date : 23-NOV-2010 16:22

Client ID: DFTPPDU Instrument: 5973hp68.i

Sample Info: 0K23010-TUN1:OWS

Volume Injected (uL): 2.0 Operator: OWS

Column phase: RTX-5MS Column diameter: 0.32

Data File: 0K23010-TUN1A68.d
Spectrum: Avg. Scans 516-518 (6.84), Background Scan 510
Location of Maximum: 198.00
Number of points: 337

m/z	Y	m/z	Y	m/z	Y	m/z	Y
80.00	4759	170.00	363	261.00	201	367.00	17
81.00	6561	171.00	380	262.00	26	370.00	139
82.00	1541	172.00	730	264.00	160	371.00	310
83.00	1560	173.00	1004	265.00	1879	372.00	1731
85.00	1199	174.00	1830	266.00	226	373.00	475
86.00	952	175.00	3516	267.00	40	374.00	83
87.00	740	176.00	1074	268.00	146	377.00	47
88.00	258	177.00	1653	269.00	17	383.00	492
89.00	127	178.00	536	270.00	157	384.00	158
90.00	19	179.00	5884	271.00	182	385.00	30
91.00	1355	180.00	4307	272.00	267	386.00	18
92.00	1500	181.00	2031	273.00	2511	389.00	17
93.00	10087	182.00	381	274.00	6711	390.00	213
94.00	773	183.00	198	275.00	36080	391.00	237
95.00	166	184.00	594	276.00	4756	392.00	125
96.00	530	185.00	3004	277.00	2908	398.00	23
97.00	13	186.00	23344	278.00	464	401.00	143
98.00	7272	187.00	6451	279.00	121	402.00	793
99.00	5867	188.00	611	281.00	40	403.00	1059
100.00	458	189.00	1369	282.00	110	404.00	320
101.00	3795	190.00	313	283.00	342	405.00	52
102.00	129	191.00	739	284.00	266	410.00	53
103.00	1297	192.00	2104	285.00	597	411.00	18
104.00	2327	193.00	2211	286.00	133	415.00	92
105.00	2228	194.00	507	288.00	42	416.00	16
107.00	27880	195.00	98	289.00	155	417.00	16
108.00	4616	196.00	6532	290.00	159	420.00	44
110.00	53560	198.00	188608	291.00	97	421.00	1086
111.00	7722	199.00	12525	292.00	177	422.00	910
112.00	993	200.00	873	293.00	729	423.00	7240
113.00	358	201.00	1206	294.00	249	424.00	1422
114.00	111	203.00	1130	295.00	171	425.00	214
116.00	1528	204.00	6279	296.00	9336	426.00	167
117.00	20512	205.00	10057	297.00	1270	427.00	115
118.00	1562	206.00	44024	298.00	78	428.00	160

Data File: /chem/5973hp68.i/DF101123A68_B.b/0K23010-TUN1A68.d

Date : 23-NOV-2010 16:22

Client ID: DFTPPDU Instrument: 5973hp68.i

Sample Info: 0K23010-TUN1:OWS

Volume Injected (uL): 2.0 Operator: OWS

Column phase: RTX-5MS Column diameter: 0.32

Data File: 0K23010-TUN1A68.d

Spectrum: Avg. Scans 516-518 (6.84), Background Scan 510

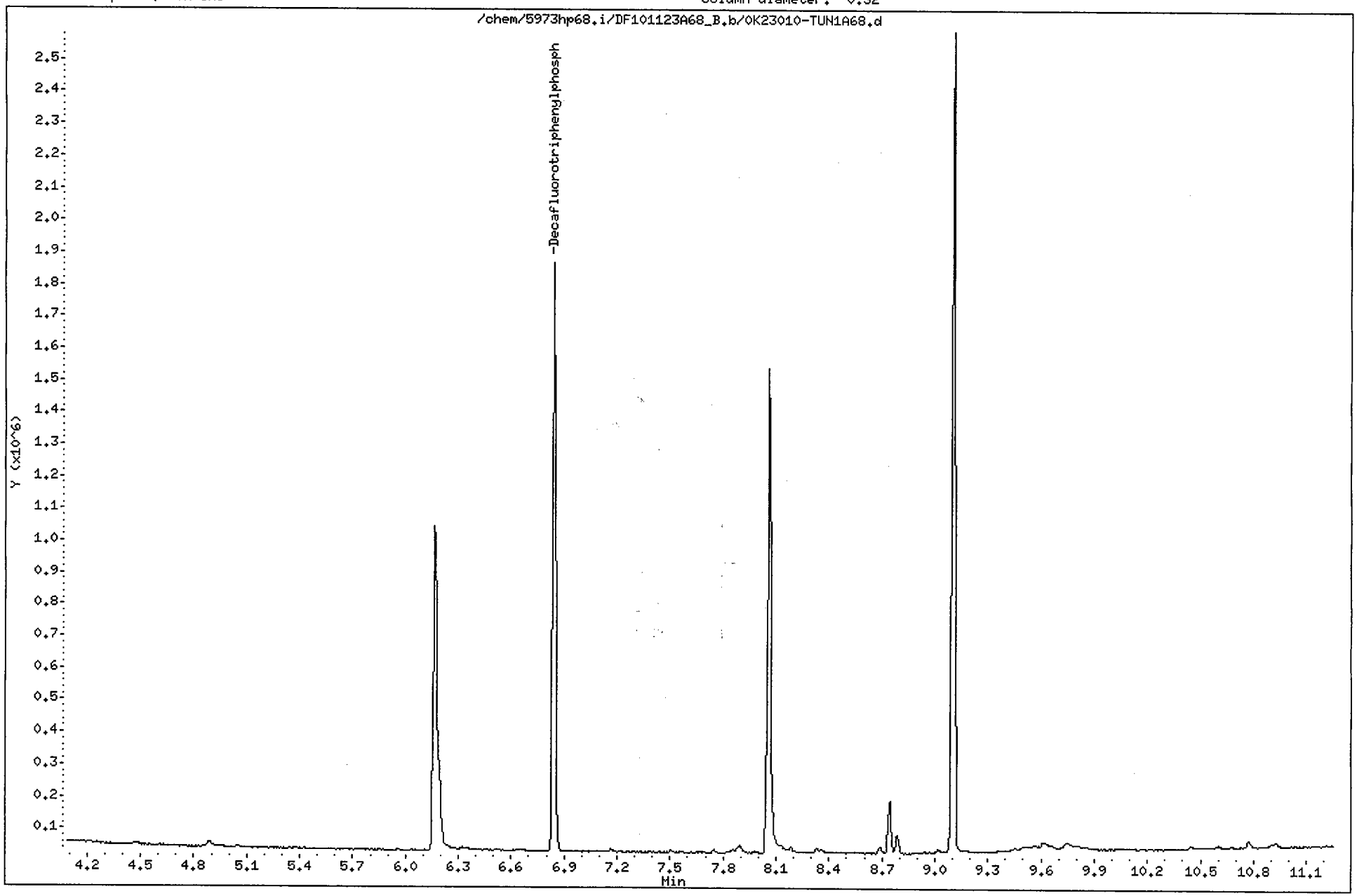
Location of Maximum: 198.00

Number of points: 337

m/z	Y	m/z	Y	m/z	Y	m/z	Y
119.00	156	207.00	5567	299.00	39	429.00	144
120.00	311	208.00	1242	301.00	158	430.00	154
121.00	71	209.00	400	302.00	167	431.00	89
122.00	1657	210.00	198	303.00	1201	432.00	136
123.00	2464	211.00	1657	304.00	351	433.00	108
124.00	1086	213.00	134	305.00	41	434.00	50
125.00	1255	214.00	57	308.00	147	436.00	19
127.00	96488	215.00	441	309.00	112	441.00	21120
128.00	7370	216.00	930	310.00	136	442.00	146560
129.00	35008	217.00	10554	311.00	38	443.00	28664
130.00	3143	218.00	1414	312.00	18	444.00	2450
131.00	667	219.00	197	313.00	240	445.00	183
132.00	365	221.00	11848	314.00	480		
133.00	143	223.00	2474	315.00	1085		
134.00	788	224.00	22896	316.00	626		

Data File: /chem/5973hp68.i/DF101123A68_B.b/0K23010-TUN1A68.d
Date : 23-NOV-2010 16:22
Client ID: DFTPPDU
Sample Info: 0K23010-TUN1:OWS
Volume Injected (uL): 2.0
Column phase: RTX-5MS

Instrument: 5973hp68.i
Operator: OWS
Column diameter: 0.32



TAILING FACTOR and DEGRADATION SUMMARY RESULTS

DECAFLUOROTRIPHENYLPHOSPHINE Ion Abundance/Ratio Criteria Chart

Ion	Abundance Criteria	Base Peak	Other	Test
198	Base Peak, 100% relative abundance	100.00		PASS
51	10 - 80% of mass 198	40.59		PASS
68	Less than 2% of mass 69	0.00	(0.00)	PASS
69	Mass 69 relative abundance	46.60		PASS
70	Less than 2% of mass 69	0.21	(0.46)	PASS
127	10 - 80% of mass 198	51.16		PASS
197	0 - 2% of mass 198	0.00		PASS
199	5 - 9% of mass 198	6.64		PASS
275	10 - 60% of mass 198	19.13		PASS
365	Greater than 0.75% of mass 198	2.28		PASS
441	Present, but less than mass 443	11.20	(73.70)	PASS
442	50 - 100 % of mass 198	77.72		PASS
443	15 - 24% of mass 442	15.20	(19.56)	PASS

TAILING ANALYSIS SUMMARY

Compound	Tail Factor	Max Allowed	Test
Pentachlorophenol	1.7	5.0	PASS
Benzidine	1.5	3.0	PASS

DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

Compound	Response	%Breakdown	Max Allowed	Test
4,4-DDT	520103			N/A
4,4-DDE	1441	0.3	20.0	PASS
4,4-DDD	32802	5.9	20.0	PASS
4,4-DDD + DDE	34243	6.2	20.0	PASS

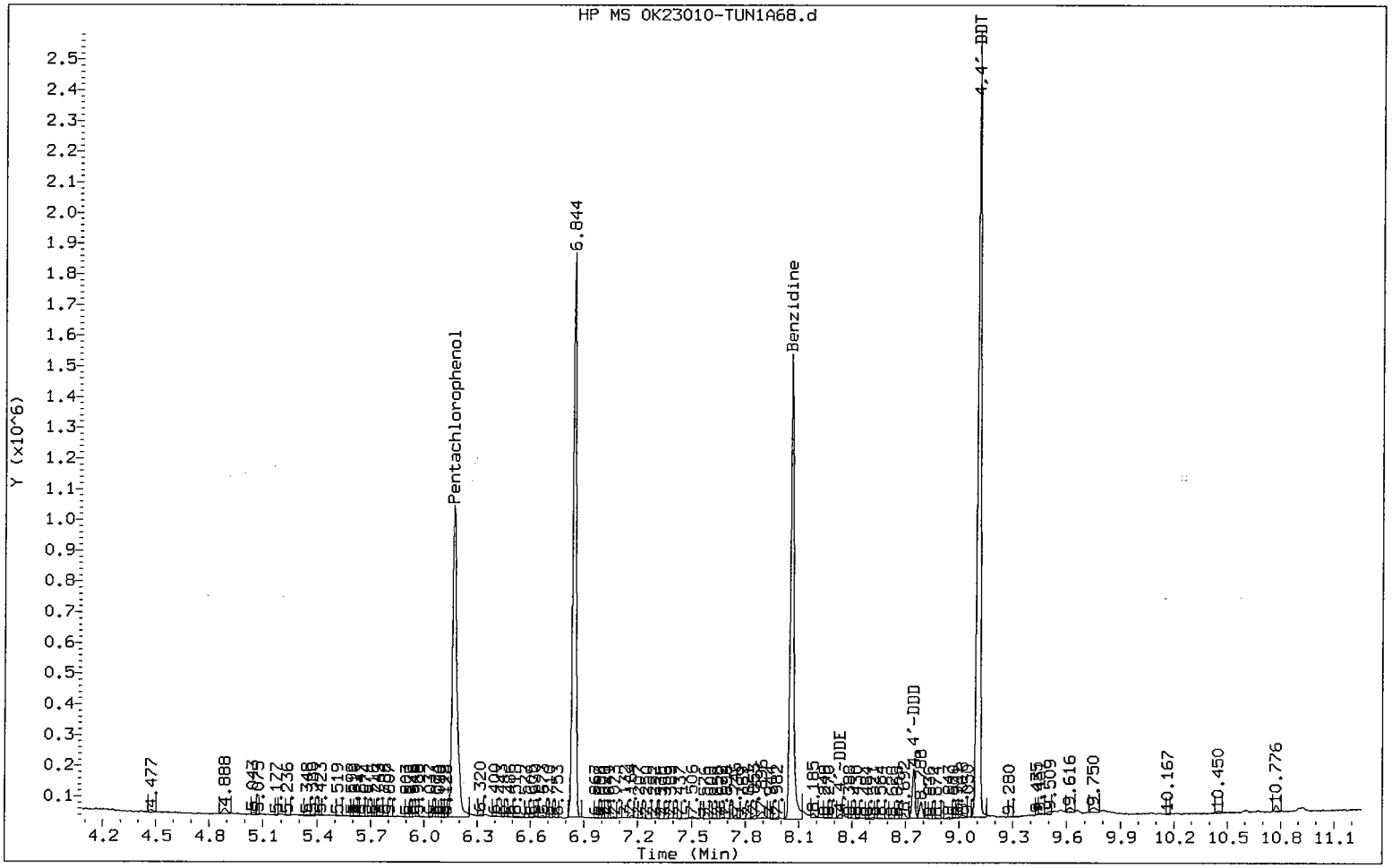
Tuning Sample, /chem/5973hp68.i/DF101123A68_B.b/0K23010-TUN1A68.d/0K23010-TUN1A6

*** PASSED ***

TAILING FACTOR and DEGRADATION SAMPLE AND GRAPHIC REPORT

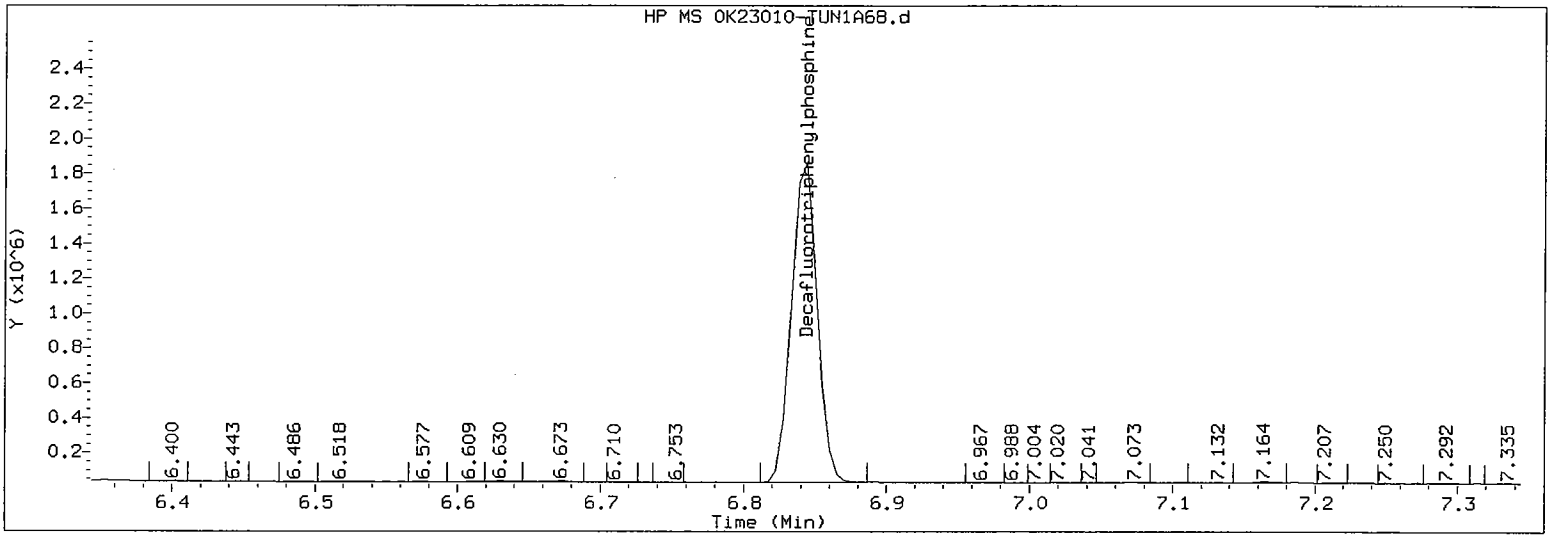
Report Date: 11/27/2010 10:51

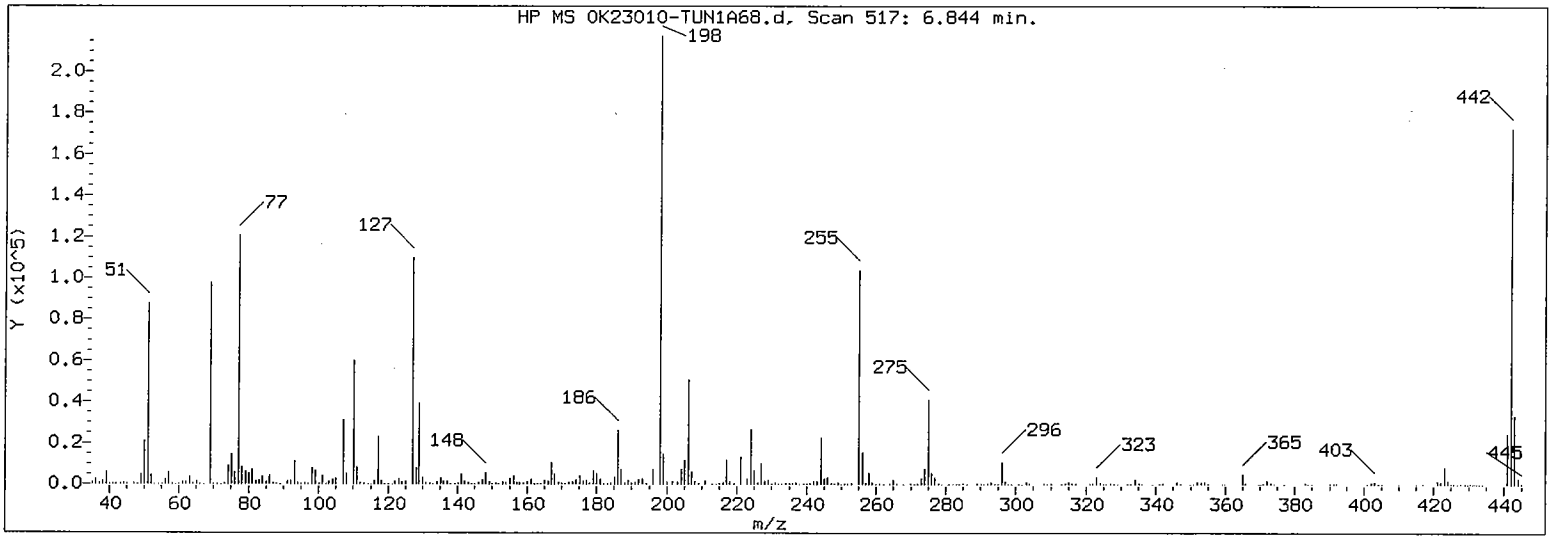
Datafile Analyzed: /chem/5973hp68.i/DF101123A68_B.b/0K23010-TUN1A68.d/0K23010-TU
Method Used: /chem/5973hp68.i/DF101123A68_B.b/dftpp8270C.m Inst: 5973hp68
Injection Date: 23-NOV-2010 16:22 Operator: OWS
Sample Info: 0K23010-TUN1 0K23010-TUN1:OWS
Misc Info: DFTPPDU



Report Date: 11/27/2010 10:51

Datafile Analyzed: /chem/5973hp68.i/DF101123A68_B.b/0K23010-TUN1A68.d/0K23010-TU
Method Used: /chem/5973hp68.i/DF101123A68_B.b/dftpp8270C.m Inst: 5973hp68
Injection Date: 23-NOV-2010 16:22 Operator: OWS
Sample Info: 0K23010-TUN1 0K23010-TUN1:OWS
Misc Info: DFTPPDU



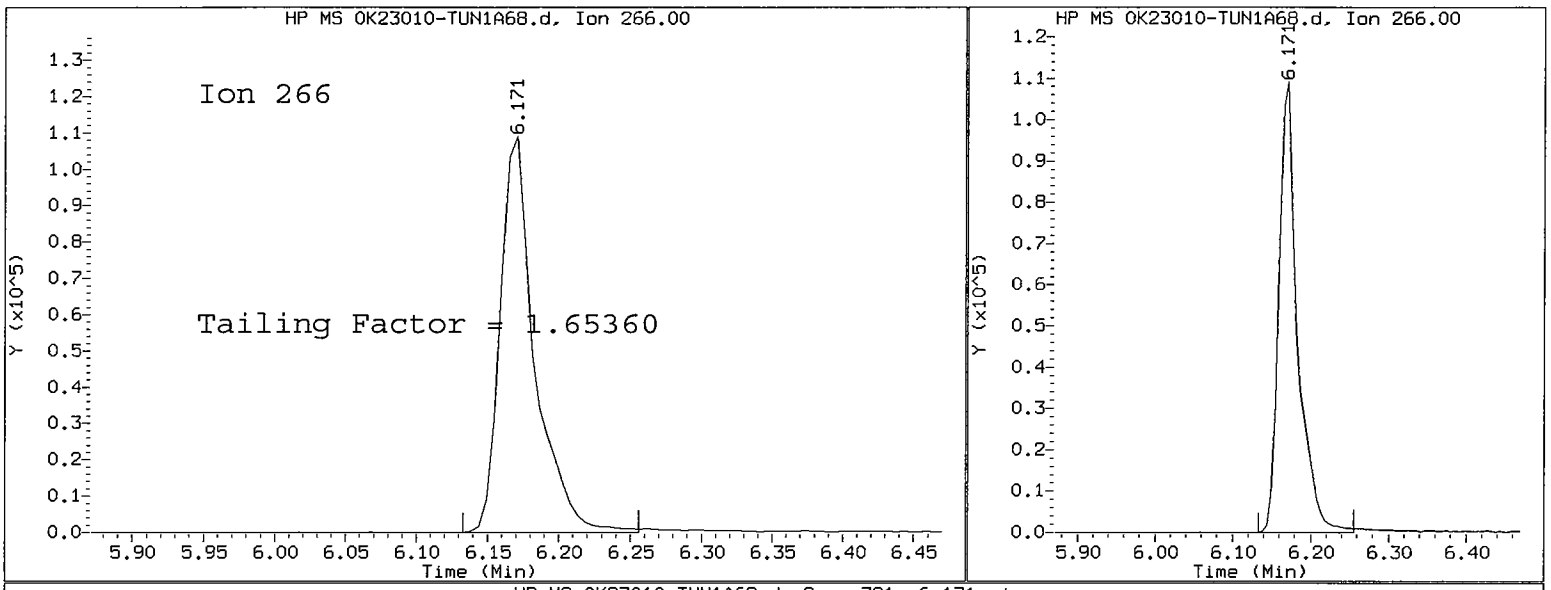


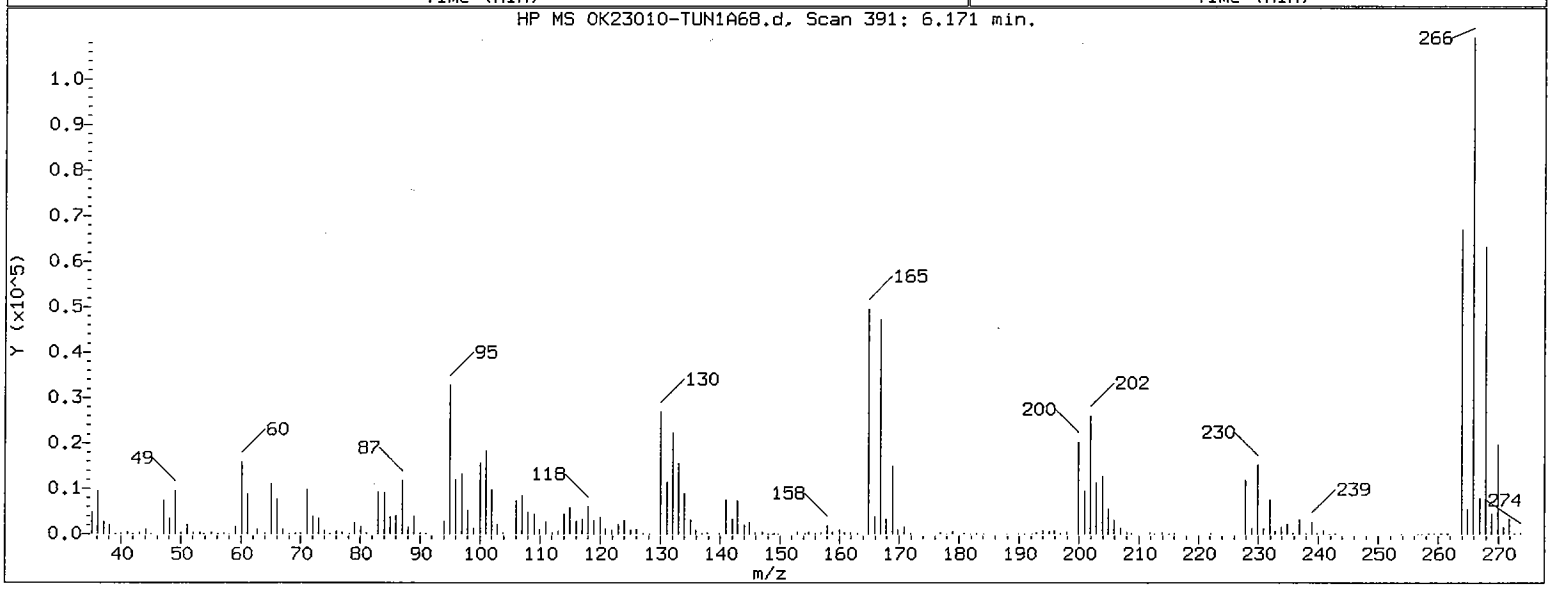
DECAFLUOROTRIPHENYLPHOSPHINE Ion Abundance/Ratio Criteria Chart

Ion	Abundance Criteria	Base Peak	Other	Test
198	Base Peak, 100% relative abundance	100.00		PASS
51	10 - 80% of mass 198	40.59		PASS
68	Less than 2% of mass 69	0.00	(0.00)	PASS
69	Mass 69 relative abundance	46.60		PASS
70	Less than 2% of mass 69	0.21	(0.46)	PASS
127	10 - 80% of mass 198	51.16		PASS
197	0 - 2% of mass 198	0.00		PASS
199	5 - 9% of mass 198	6.64		PASS
275	10 - 60% of mass 198	19.13		PASS
365	Greater than 0.75% of mass 198	2.28		PASS
441	Present, but less than mass 443	11.20	(73.70)	PASS
442	50 - 100% of mass 198	77.72		PASS
443	15 - 24% of mass 442	15.20	(19.56)	PASS

Report Date: 11/27/2010 10:51

Datafile Analyzed: /chem/5973hp68.i/DF101123A68_B.b/0K23010-TUN1A68.d/0K23010-TU
Method Used: /chem/5973hp68.i/DF101123A68.b/dftpp8270C.m/BrkDwnTF.m Inst: 5973h
Injection Date: 23-NOV-2010 16:22 Operator:
Sample Info: DFTPP 0K23010-TUN1:OWS
Misc Info:





Pentachlorophenol
==========
Exp. RT = 6.325
Found RT = 6.171

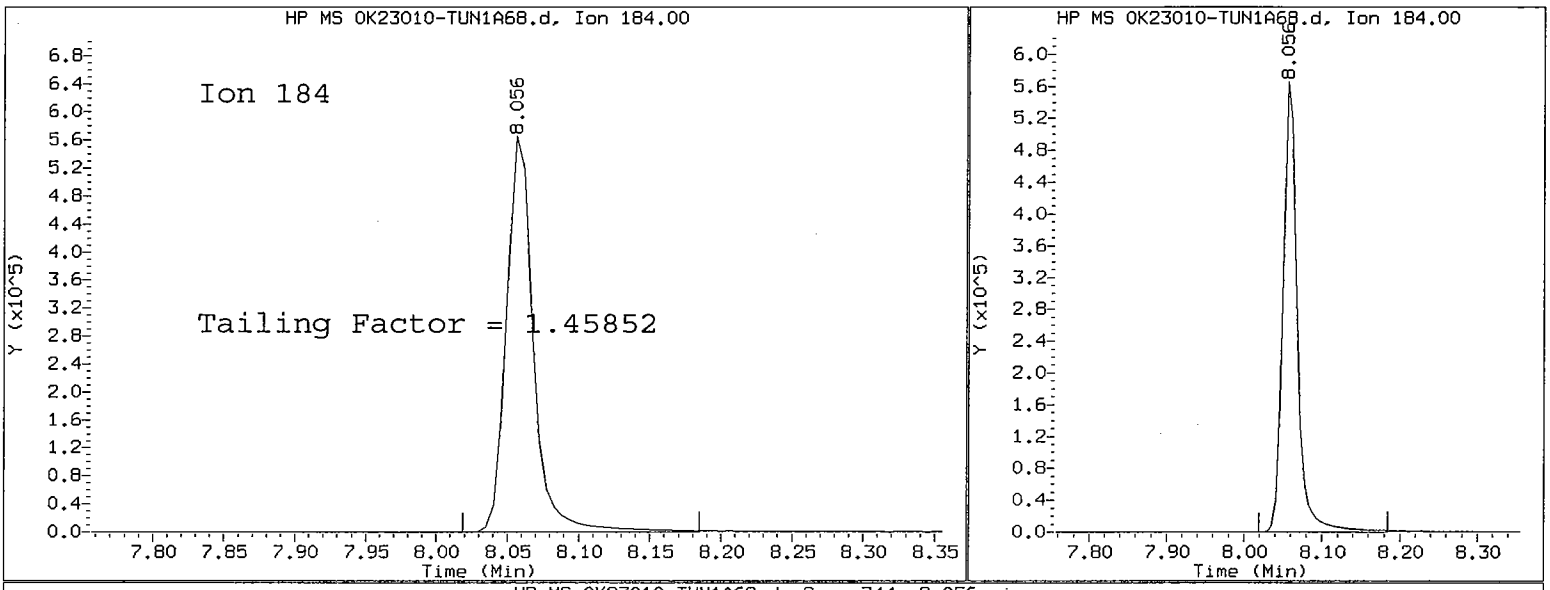
Mass	Area	Ratio
266	183872	100.00

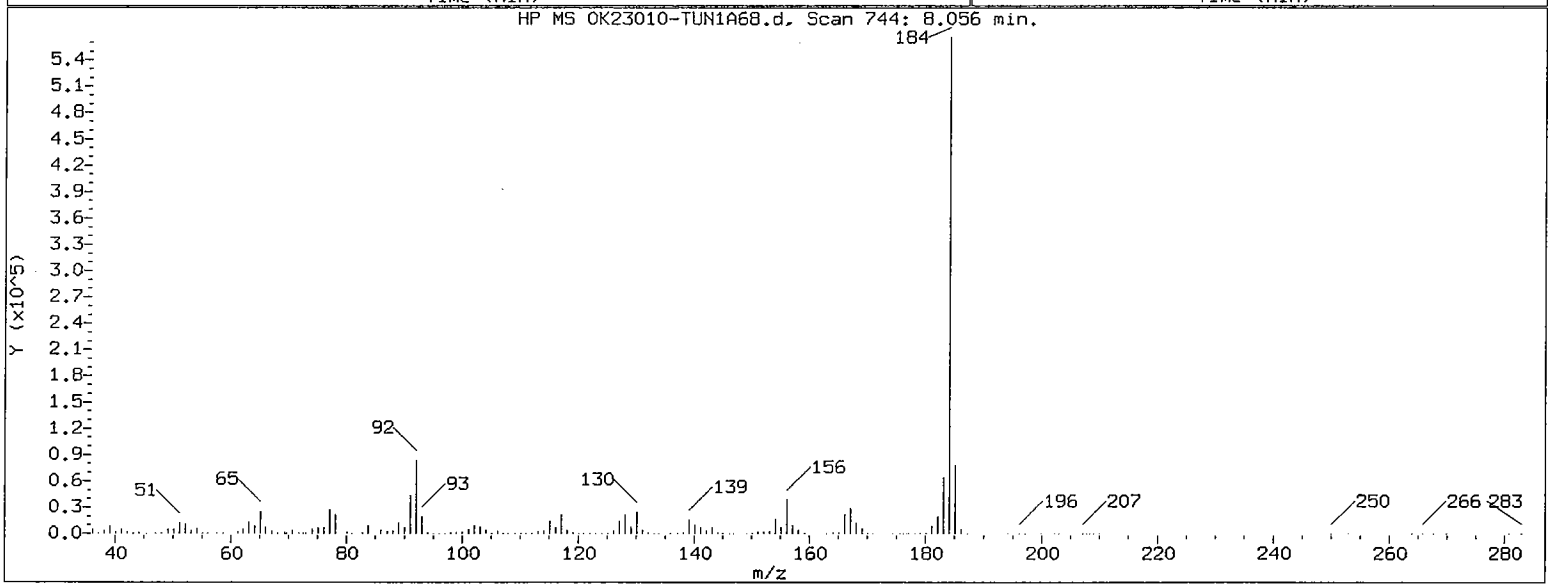
Tailing factor for Pentachlorophenol OK

Tailing Factor = 1.7 Maximum Allowed = 5.0

Report Date: 11/27/2010 10:51

Datafile Analyzed: /chem/5973hp68.i/DF101123A68_B.b/0K23010-TUN1A68.d/0K23010-TU
Method Used: /chem/5973hp68.i/DF101123A68.b/dftpp8270C.m/BrkDwnTF.m Inst: 5973h
Injection Date: 23-NOV-2010 16:22 Operator:
Sample Info: DFTPP 0K23010-TUN1:OWS
Misc Info:





Benzidine
==========
 Exp. RT = 8.201
Found RT = 8.056

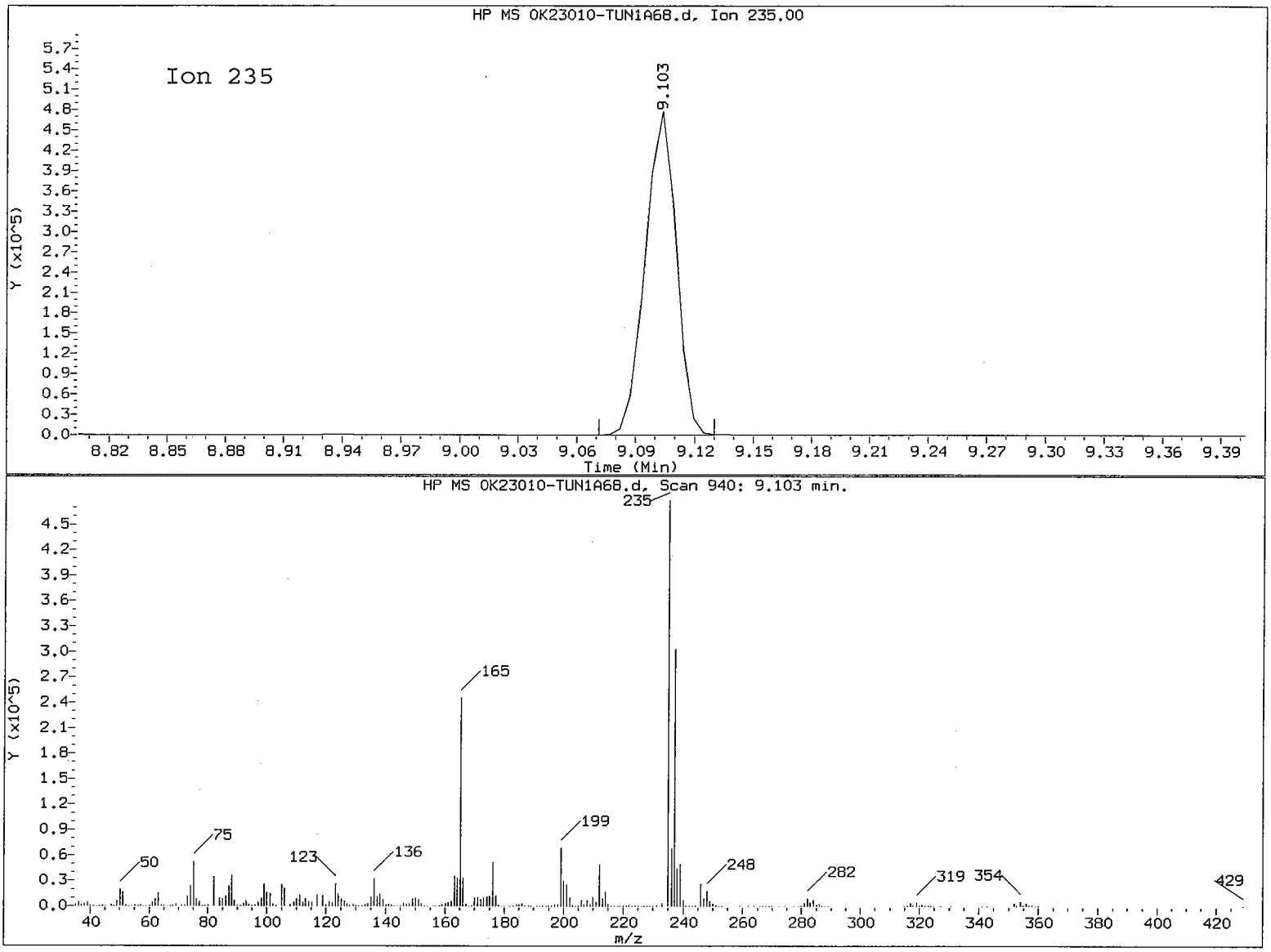
Mass	Area	Ratio
184	746829	100.00

Tailing factor for Benzidine OK

Tailing Factor = 1.5 Maximum Allowed = 3.0

Report Date: 11/27/2010 10:51

Datafile Analyzed: /chem/5973hp68.i/DF101123A68_B.b/0K23010-TUN1A68.d/0K23010-TU
Method Used: /chem/5973hp68.i/DF101123A68.b/dftpp8270C.m/BrkDwnTF.m Inst: 5973h
Injection Date: 23-NOV-2010 16:22 Operator:
Sample Info: DFTPP 0K23010-TUN1:OWS
Misc Info:

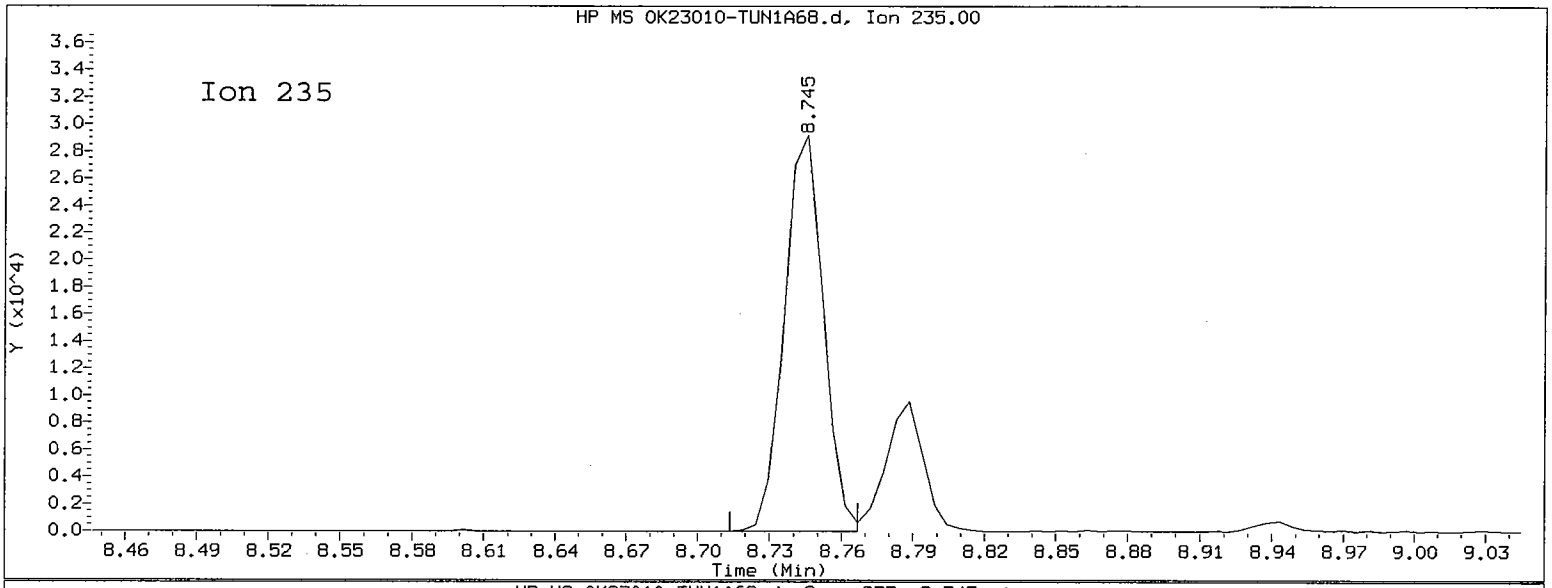


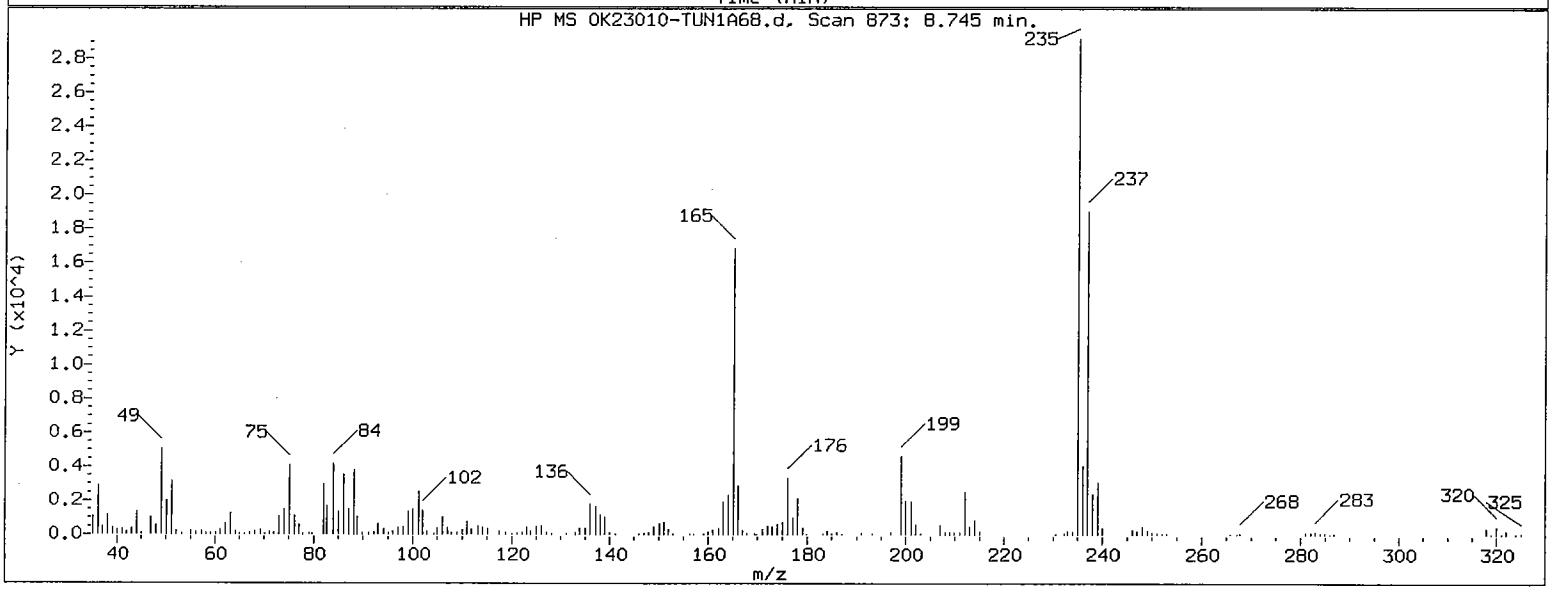
4,4'-DDT
========
Exp. RT = 9.248
Found RT = 9.103

Mass	Area	Ratio
235	520103	100.00

Report Date: 11/27/2010 10:51

Datafile Analyzed: /chem/5973hp68.i/DF101123A68_B.b/0K23010-TUN1A68.d/0K23010-TU
Method Used: /chem/5973hp68.i/DF101123A68.b/dftpp8270C.m/BrkDwnTF.m Inst: 5973h
Injection Date: 23-NOV-2010 16:22 Operator:
Sample Info: DFTPP 0K23010-TUN1:OWS
Misc Info:



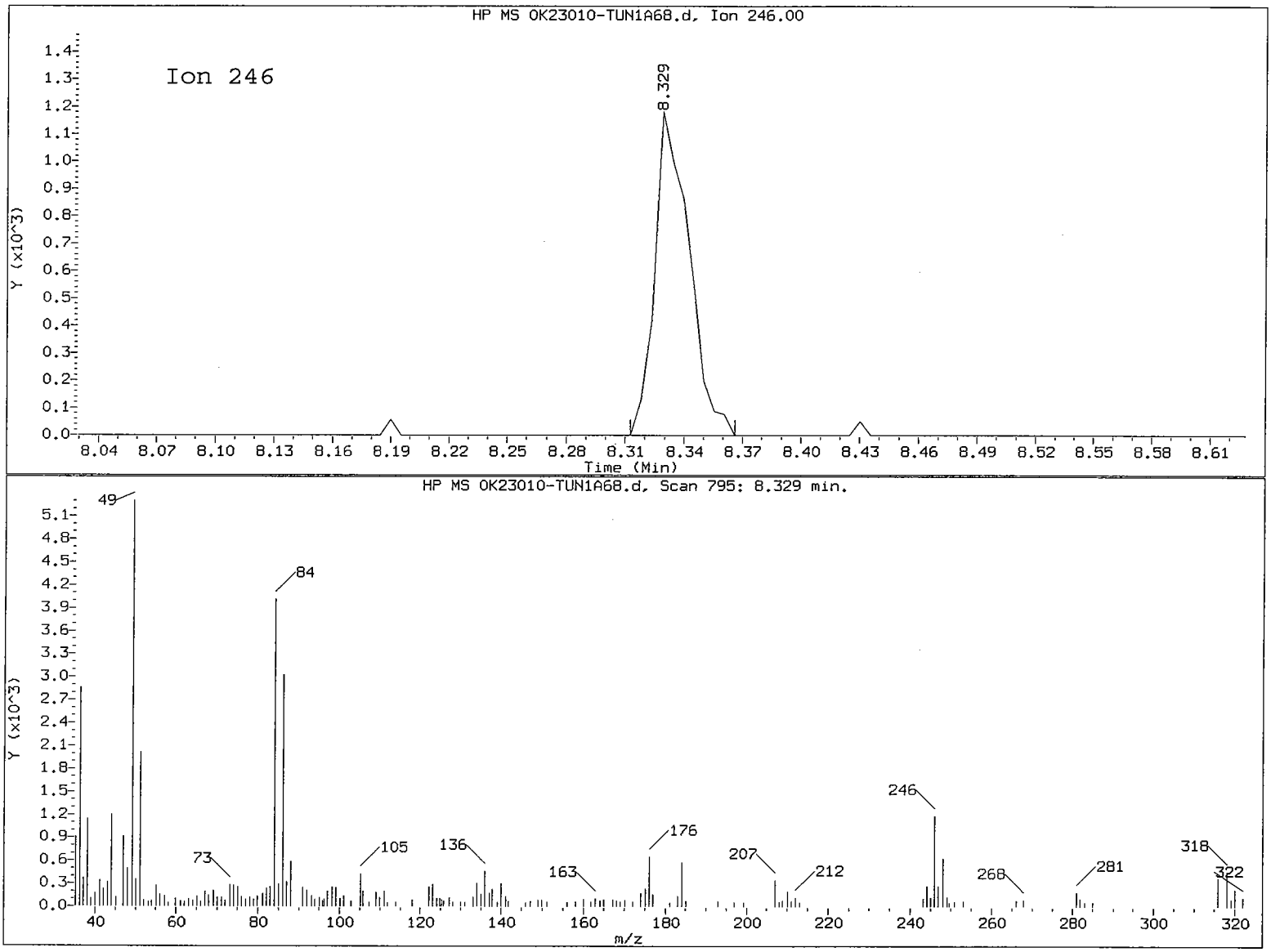


4,4'-DDD
========
Exp. RT = 8.900
Found RT = 8.745

Mass	Area	Ratio
235	32802	100.00

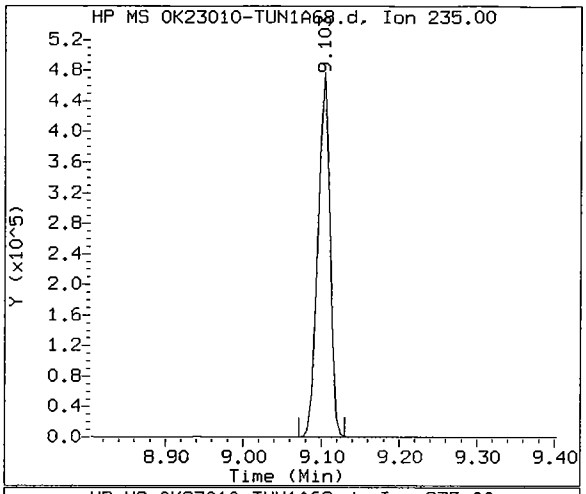
Report Date: 11/27/2010 10:51

Datafile Analyzed: /chem/5973hp68.i/DF101123A68_B.b/0K23010-TUN1A68.d/0K23010-TU
Method Used: /chem/5973hp68.i/DF101123A68.b/dftpp8270C.m/BrkDwnTF.m Inst: 5973h
Injection Date: 23-NOV-2010 16:22 Operator:
Sample Info: DFTPP 0K23010-TUN1:OWS
Misc Info:

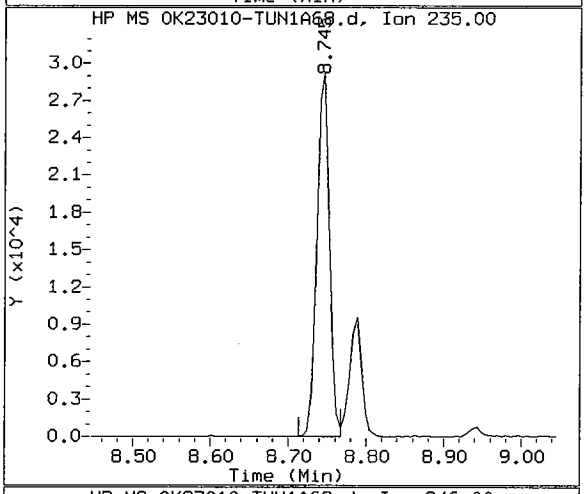


4,4'-DDE
========
Exp. RT = 8.440
Found RT = 8.329

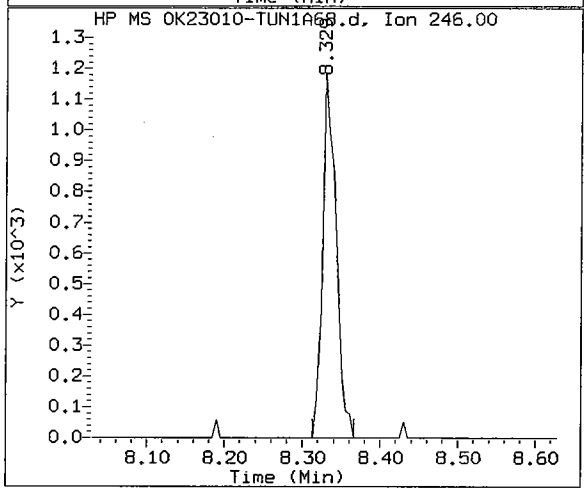
Mass	Area	Ratio
246	1441	100.00



Compound: 4,4'-DDT
Quant Mass: 235
RT: 9.103
Area: 520103



Compound: 4,4'-DDD
Quant Mass: 235
RT: 8.745
Area: 32802



Compound: 4,4'-DDE
Quant Mass: 246
RT: 8.329
Area: 1441

DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

Compound	Response	%Breakdown	Max Allowed	Test
4,4-DDT	520103			N/A
4,4-DDE	1441	0.3	20.0	PASS
4,4-DDD	32802	5.9	20.0	PASS
4,4-DDD + DDE	34243	6.2	20.0	PASS

****
TUNE SAMPLE *** PASSED *** DDT BREAKDOWN TEST
****

b. Blank Data

Arranged in chronological order, by extraction date.

- Tabulated Results (Form I SV)
- Tentatively Identified Compounds (Form I SV-TIC)
- Reconstructed Ion Chromatogram and quantitation report.
- Target compound spectra with lab-generated standard spectra.
- Quantitation/Calculation of TIC concentrations.
- GC/MS library search spectra for TICs.

FORM 1 CLIENT SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SBLKEJ

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 0102117-BLK1

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 0102117-BLK1A68

Level: (low/med) LOW Date Received: _____

% Moisture: _____ decanted: (Y/N)___ Date Extracted:10/22/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/22/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

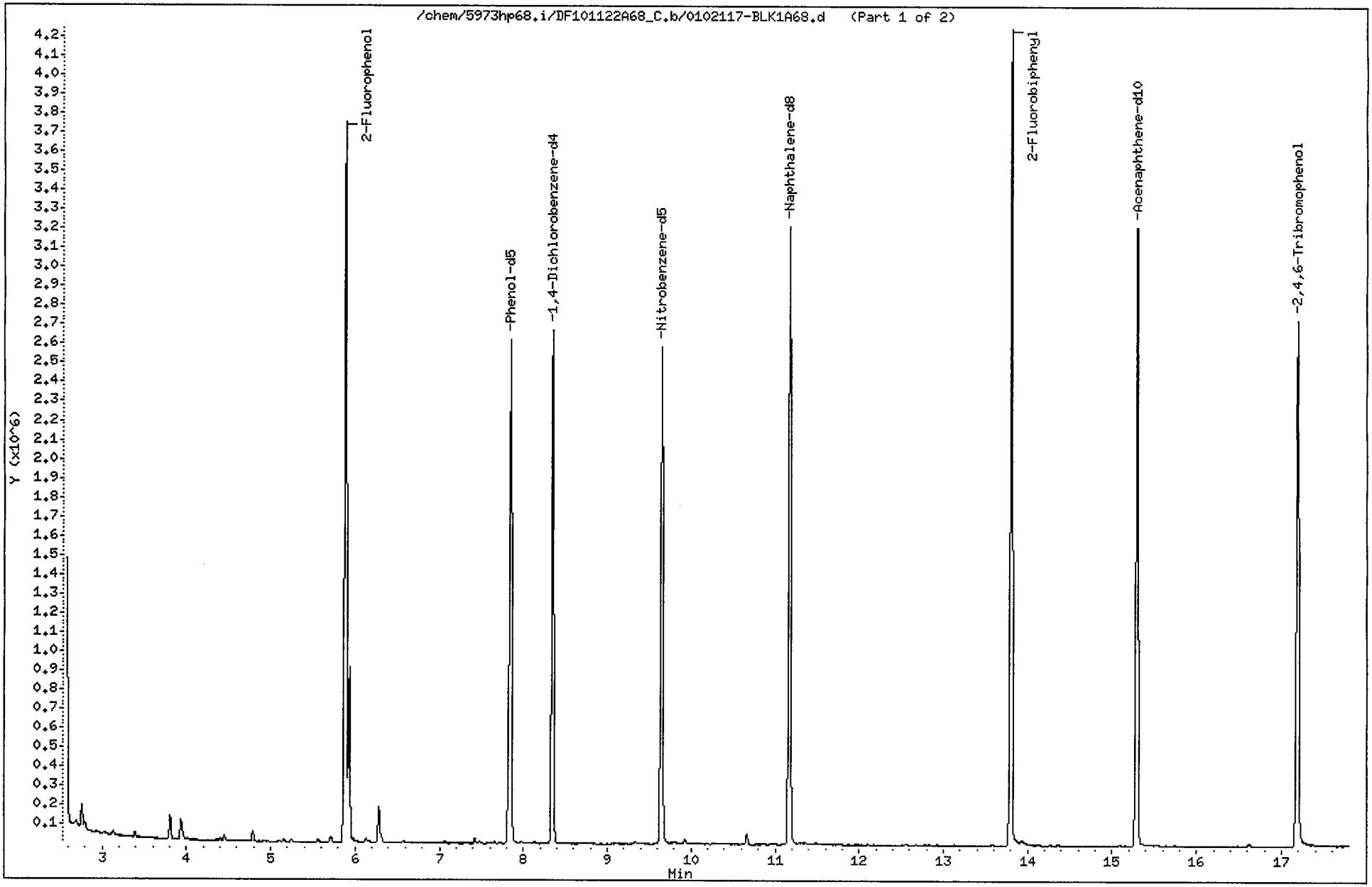
GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	10	U
95-57-8	2-Chlorophenol	10	U
108-39-4	3-Methylphenol	8.0	U
106-44-5	4-Methylphenol	8.0	U
67-72-1	Hexachloroethane	5.0	U
98-95-3	Nitrobenzene	5.0	U
120-83-2	2,4-Dichlorophenol	10	U
131-11-3	Dimethylphthalate	5.0	U
100-02-7	4-Nitrophenol	10	U
132-64-9	Dibenzofuran	5.0	U
84-66-2	Diethylphthalate	5.0	U
86-30-6	N-Nitrosodiphenylamine (1)	5.0	U
84-74-2	Di-n-butylphthalate	5.0	U
206-44-0	Fluoranthene	5.0	U
129-00-0	Pyrene	5.0	U
85-68-7	Butylbenzylphthalate	5.0	U
117-81-7	bis(2-ethylhexyl)Phthalate	5.0	U
56-55-3	Benzo(a)anthracene	5.0	U
117-84-0	Di-n-octylphthalate	5.0	U
205-99-2	Benzo(b)fluoranthene	5.0	U
207-08-9	Benzo(k)fluoranthene	5.0	U
50-32-8	Benzo(a)pyrene	5.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U
53-70-3	Dibenzo(a,h)anthracene	5.0	U

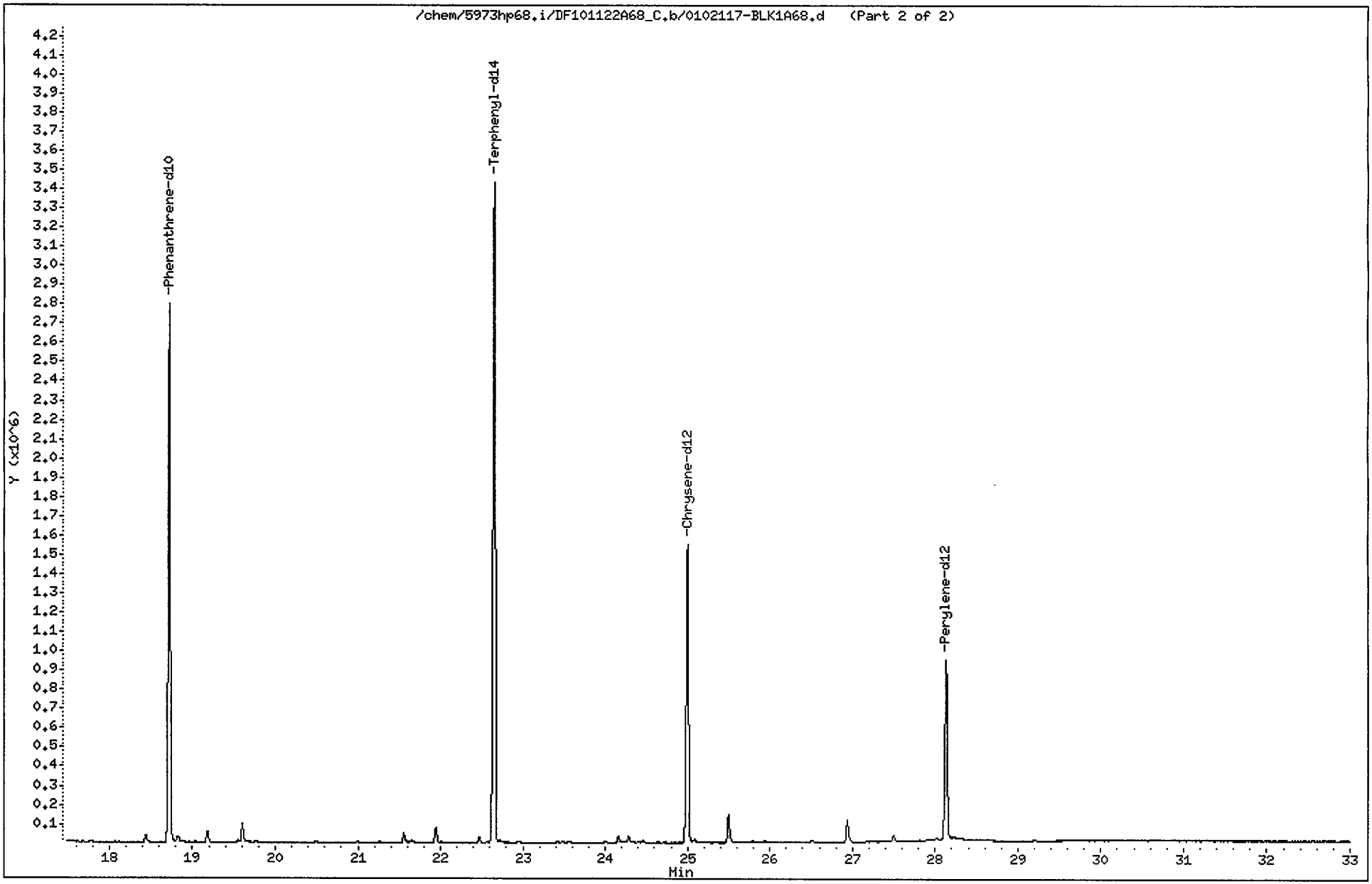
(1) - Cannot be separated from Diphenylamine

Data File: /chem/5973hp68.i/DF101122A68_C.b/0102117-BLK1A68.d
Date : 22-NOV-2010 11:48
Client ID: SBLKEJ
Sample Info: 0102117-BLK1:OWS
Volume Injected (uL): 2.0
Column phase: RTX-5MS

Instrument: 5973hp68.i
Operator: OWS
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101122A68_C.b/0102117-BLK1A68.d
Date : 22-NOV-2010 11:48
Client ID: SBLKEJ
Instrument: 5973hp68.i
Sample Info: 0102117-BLK1:OWS
Volume Injected (uL): 2.0
Operator: OWS
Column phase: RTX-5MS
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101122A68_C.b/0102117-BLK1A68.d
Report Date: 29-Nov-2010 13:48

CompuChem

Semivolatile Report SW-846 Method 8270C Appendix IX

Data file : /chem/5973hp68.i/DF101122A68_C.b/0102117-BLK1A68.d
Lab Smp Id: 0102117-BLK1 Client Smp ID: SBLKEJ
Inj Date : 22-NOV-2010 11:48
Operator : OWS Inst ID: 5973hp68.i
Smp Info : 0102117-BLK1:OWS
Misc Info : SBLKEJ
Comment : 2008 MDLS SOIL/ 2007 WATER
Method : /chem/5973hp68.i/DF101122A68_C.b/8270CMASTERDODv5.m
Meth Date : 29-Nov-2010 13:47 byrd Quant Type: ISTD
Cal Date : 19-NOV-2010 17:11 Cal File: 0K19001-CALI1C68.d
Als bottle: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: HWMU13A_C.sub
Target Version: 3.50
Processing Host: einstein

Concentration Formula: Amt * DF * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Vo	1000.00000	Volume of sample extracted (mL)
Vi	2.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	CONCENTRATIONS FINAL (ug/L)	SIMILARITY
*	1 1,4-Dichlorobenzene-d4	152	8.346	8.346	(1.000)	698039	40.0000		
*	2 Naphthalene-d8	136	11.172	11.177	(1.000)	2588771	40.0000		
*	3 Acenaphthene-d10	164	15.291	15.296	(1.000)	1380594	40.0000		
*	4 Phenanthrene-d10	188	18.726	18.731	(1.000)	2004974	40.0000		
*	5 Chrysene-d12	240	24.998	25.003	(1.000)	1015855	40.0000		
*	6 Perylene-d12	264	28.134	28.134	(1.000)	606431	40.0000		
$	7 2-Fluorophenol	112	5.883	5.873	(0.705)	2053841	84.7713	42	
$	8 Phenol-d5	99	7.849	7.860	(0.940)	1800876	56.8330	28	
$	9 Nitrobenzene-d5	82	9.649	9.650	(0.864)	1607565	65.1721	32	
$	10 2-Fluorobiphenyl	172	13.806	13.806	(0.903)	2459757	60.8149	30	
$	11 2,4,6-Tribromophenol	330	17.193	17.187	(1.124)	582389	158.101	79	
$	12 Terphenyl-d14	244	22.652	22.647	(0.906)	1986532	85.0104	42	
	24 Phenol	94	Compound Not Detected.						
	25 2-Chlorophenol	128	Compound Not Detected.						

Data File: /chem/5973hp68.i/DF101122A68_C.b/0102117-BLK1A68.d
Report Date: 29-Nov-2010 13:48

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	CONCENTRATIONS FINAL (ug/L)	SIMILARITY
34 Hexachloroethane	117	Compound Not Detected.						
39 3-Methylphenol	108	Compound Not Detected.						
40 4-Methylphenol	108	Compound Not Detected.						
41 Nitrobenzene	77	Compound Not Detected.						
48 2,4-Dichlorophenol	162	Compound Not Detected.						
73 Dimethylphthalate	163	Compound Not Detected.						
81 4-Nitrophenol	139	Compound Not Detected.						
79 Dibenzofuran	168	Compound Not Detected.						
87 Diethylphthalate	149	Compound Not Detected.						
93 N-Nitrosodiphenylamine	169	Compound Not Detected.						
116 Di-n-butylphthalate	149	Compound Not Detected.						
121 Fluoranthene	202	Compound Not Detected.						
123 Pyrene	202	Compound Not Detected.						
130 Butylbenzylphthalate	149	Compound Not Detected.						
135 bis(2-ethylhexyl)Phthalate	149	Compound Not Detected.						
133 Benzo(a)anthracene	228	Compound Not Detected.						
136 Di-n-octylphthalate	149	Compound Not Detected.						
137 Benzo(b)fluoranthene	252	Compound Not Detected.						
138 Benzo(k)fluoranthene	252	Compound Not Detected.						
140 Benzo(a)pyrene	252	Compound Not Detected.						
142 Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.						
143 Dibenzo(a,h)anthracene	278	Compound Not Detected.						

ASSIGNED TO: B. Patterson

EMP ID NUMBER: 2713

CompuChem
EXTRACTION WORKSHEET
SEMI-VOLATILE WATER
Method 3510C (for 8270C, 8270D or 625)

10-22-10

DATE/TIME EXTRACTED/POSTED: 10-22-10 @ 0950

H: 10/25
D: 11/09

BATCH NO.: 0102117

604

	COMPUCHEM SAMPLE NUMBER	CLIENT SAMPLE ID	QC SAMPLE TYPE	SAMPLE VOLUME (mL)	FINAL VOLUME (mL)	Adjusted pH A/N	Adjusted pH BASE	COMMENTS
1	0102117-BLK1	SBLKEJ	MB	1000	1.0	1.9	13.0	
2	0102117-BS1	SEJLCS	LCS	1000		1.9	13.0	
3	0102117-BSD1	SEJLCSD	LCSD	1000		1.9	13.0	
4	0102117-MS1	13MW5MS	MS	975		1.9	13.0	
5	0102117-MSD1	13MW5MSD	MSD	950		1.9	13.0	
6	1010097-01	F-15-1010	SAMPLE	1000		1.9	13.0	
7	1010097-03	F-14-1010	SAMPLE	925		1.9	13.0	
8	1010097-04	F-26-1010	SAMPLE	900		1.9	13.0	
9	1010097-06	F-16-1010	SAMPLE	925		1.9	13.0	
10	1010107-01	13MW5	SAMPLE	1000		1.9	13.0	USE AS QC
11	1010107-02	13MW1	SAMPLE	950		1.9	13.0	
12	1010107-03	13MW2	SAMPLE	1000		1.9	13.0	
13	1010107-04	13MW3	SAMPLE	950		1.9	13.0	
14	1010107-05	13MW4	SAMPLE	1000		1.9	13.0	
15	1010107-06	13MWDUP	SAMPLE	1000		1.9	13.0	
16	1010107-07	13MW6	SAMPLE	1000		1.9	13.0	
17	1010107-08	13MW7	SAMPLE	1000		1.9	13.0	
18								
19								
20								
21								
22								
23								
24								
25								
26								

NB 10/22/10

NB 10/22/10

NB 10/22/10

		8270	8270
SURROGATE	NO.	393	
	AMT.	0.5mL	
	LOT	I02003	
SPIKE	NO.		VALID I & II
	AMT.		0.5 mL
	LOT		OJ11002 / OJ11003

FINAL VOLUME VERIFIED: [signature]

REVIEWED BY: B. Patterson

SURROGATE & SPIKE ADDED BY: BFP / 10-22-10
Initials Date

Analyst initials. Extracted BFP/VG KD NB/VG N2 BFP/VG Bottle up NB/BFP

Witness NB / 10/22/10
Initials Date

Manufacturer and lot number of reagents/solvents used [redacted] J34502, Na_2SO_4 - 2xx9-689-4, conc. H_2SO_4 - 72949, 10N NaOH - 2xx9-688-2

REV. 12/29/09: RM

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SBLKEJ

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-A

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 0102117-BLK1

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 0102117-BLK1A68

Level: (low/med) LOW Date Received: _____

% Moisture: _____ decanted: (Y/N)___ Date Extracted:10/22/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/22/10

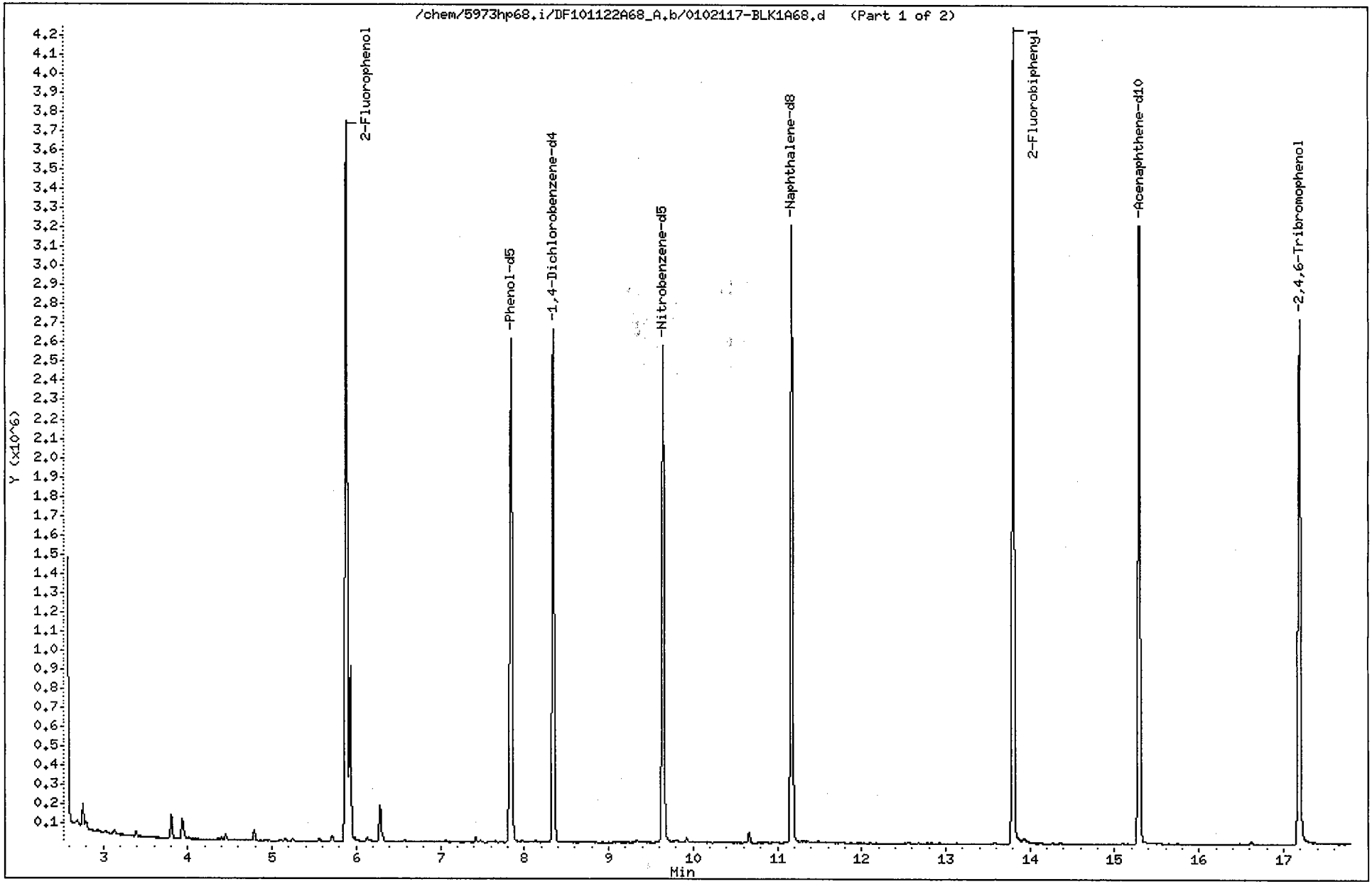
Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
119-93-7	3,3'-Dimethylbenzidine	5.0	U

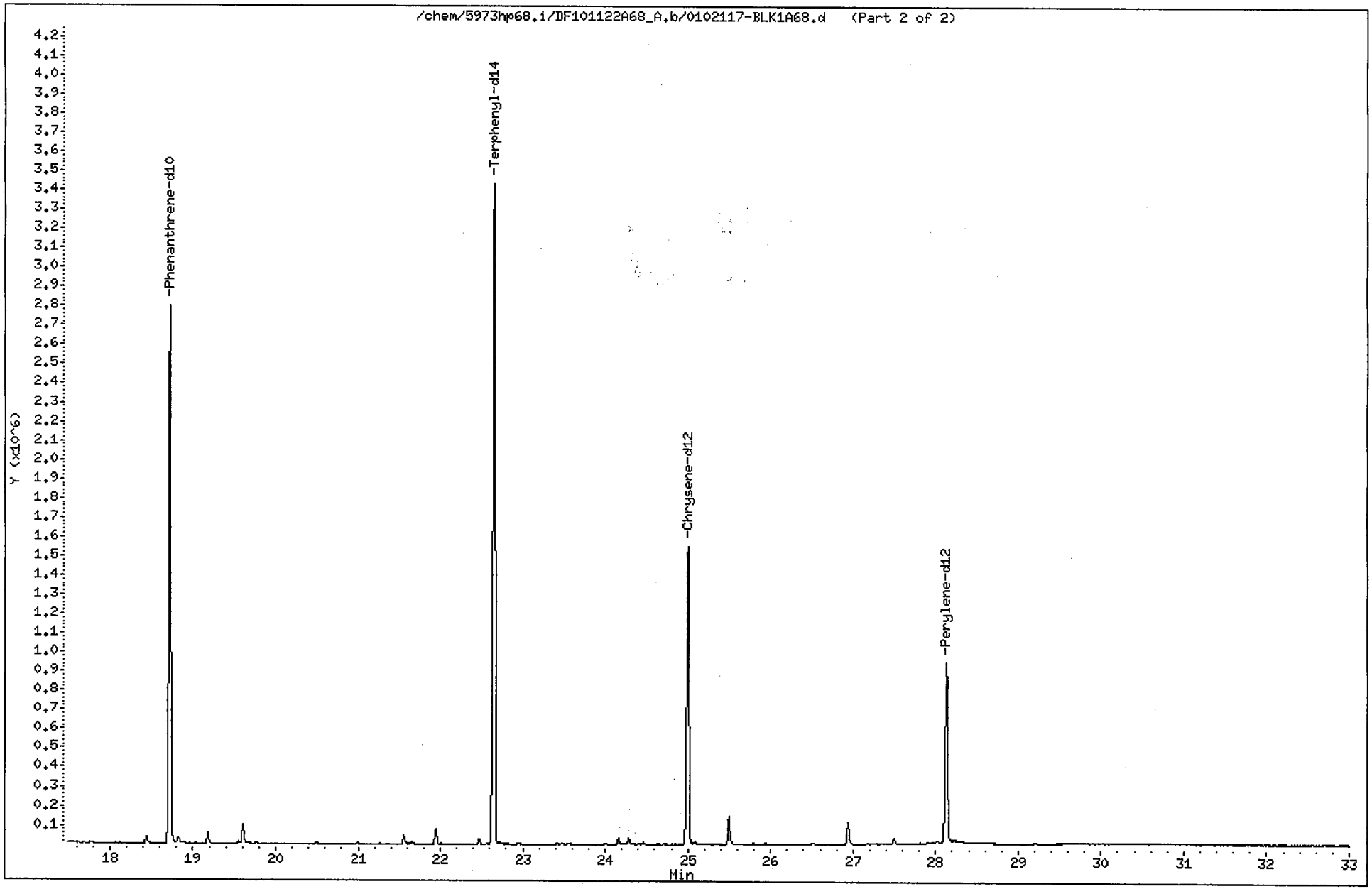
Data File: /chem/5973hp68.i/DF101122A68_A.b/0102117-BLK1A68.d
Date : 22-NOV-2010 11:48
Client ID: SBLKEJ
Sample Info: 0102117-BLK1:OWS
Volume Injected (uL): 2.0
Column phase: RTX-5MS

Instrument: 5973hp68.i
Operator: OWS
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101122A68_A.b/0102117-BLK1A68.d
Date : 22-NOV-2010 11:48
Client ID: SBLKEJ
Sample Info: 0102117-BLK1:DWS
Volume Injected (uL): 2.0
Column phase: RTX-5MS

Instrument: 5973hp68.i
Operator: DWS
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101122A68_A.b/0102117-BLK1A68.d
Report Date: 29-Nov-2010 11:34

CompuChem

Semivolatile Report SW-846 Method 8270C Appendix IX

Data file : /chem/5973hp68.i/DF101122A68_A.b/0102117-BLK1A68.d
Lab Smp Id: 0102117-BLK1 Client Smp ID: SBLKEJ
Inj Date : 22-NOV-2010 11:48
Operator : OWS Inst ID: 5973hp68.i
Smp Info : 0102117-BLK1:OWS
Misc Info : SBLKEJ
Comment : 2008 MDLS SOIL/ 2007 WATER
Method : /chem/5973hp68.i/DF101122A68_A.b/8270CMASTERDODv5.m
Meth Date : 29-Nov-2010 11:34 byrd Quant Type: ISTD
Cal Date : 19-NOV-2010 07:31 Cal File: 0K19001-CAL6C68.d
Als bottle: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: HWMU13A_A.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Vo	1000.00000	Volume of sample extracted (mL)
Vi	2.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	CONCENTRATIONS FINAL (ug/L)	SIMILARITY
* 1 1,4-Dichlorobenzene-d4	152	8.346	8.346	(1.000)	698039	40.0000		
* 2 Naphthalene-d8	136	11.172	11.178	(1.000)	2588771	40.0000		
* 3 Acenaphthene-d10	164	15.291	15.291	(1.000)	1380594	40.0000		
* 4 Phenanthrene-d10	188	18.726	18.732	(1.000)	2004974	40.0000		
* 5 Chrysene-d12	240	24.998	24.998	(1.000)	1015855	40.0000		
* 6 Perylene-d12	264	28.134	28.134	(1.000)	606431	40.0000		
129 3,3'-Dimethylbenzidine	212	Compound Not Detected.						

12/2/10

10-22-10

ASSIGNED TO: B. Patterson

EMP ID NUMBER: 2713

CompuChem
EXTRACTION WORKSHEET
SEMI-VOLATILE WATER
Method 3510C (for 8270C, 8270D or 625)

DATE/TIME EXTRACTED/POSTED: 10-22-10 @ 0950

H: 10/25
D: 11/09

BATCH NO.: 0102117

609

079A

	COMPUCHEM NUMBER	CLIENT SAMPLE ID	QC SAMPLE TYPE	SAMPLE VOLUME (mL)	FINAL VOLUME (mL)	Adjusted pH A/N	Adjusted pH BASE	COMMENTS
1	0102117-BLK1	SBLKEJ	MB	1000	1.0	1.9	13.0	
2	0102117-BS1	SEJLCS	LCS	1000		1.9	13.0	
3	0102117-BSD1	SEJLCSD	LCSD	1000		1.9	13.0	
4	0102117-MS1	13MW5MS	MS	975		1.9	13.0	
5	0102117-MSD1	13MW5MSD	MSD	950		1.9	13.0	
6	1010097-01	F-15-1010	SAMPLE	1000		1.9	13.0	
7	1010097-03	F-14-1010	SAMPLE	925		1.9	13.0	
8	1010097-04	F-26-1010	SAMPLE	900		1.9	13.0	
9	1010097-06	F-16-1010	SAMPLE	925		1.9	13.0	
10	1010107-01	13MW5	SAMPLE	1000		1.9	13.0	USE AS QC
11	1010107-02	13MW1	SAMPLE	950		1.9	13.0	
12	1010107-03	13MW2	SAMPLE	1000		1.9	13.0	
13	1010107-04	13MW3	SAMPLE	950		1.9	13.0	
14	1010107-05	13MW4	SAMPLE	1000		1.9	13.0	
15	1010107-06	13MWDUP	SAMPLE	1000		1.9	13.0	
16	1010107-07	13MW6	SAMPLE	1000		1.9	13.0	
17	1010107-08	13MW7	SAMPLE	1000		1.9	13.0	
18								
19								
20								
21								
22								
23								
24								
25								
26								

AS 10/22/10

AS 10/22/10

AS 10/22/10

		S-VOL	8270
SURROGATE	NO.	393	
	AMT.	0.5mL	
	LOT	I02003	
SPIKE	NO.		VALID I & II
	AMT.		0.5 mL
	LOT		OJ11002/OJ11003

FINAL VOLUME VERIFIED: [signature]

REVIEWED BY: B. Patterson

SURROGATE & SPIKE ADDED BY: BFP / 10-22-10
Initials Date

Analyst initials. Extracted BFP/VG KD NB/VG N2 BFP/VG Bottle up NB/BFP

Witness NB / 10/22/10
Initials Date

Manufacturer and lot number of reagents/solvents used [redacted] J34502, Na_2SO_4 - 2XX9-689-4, conc. H_2SO_4 - 72949, 10N NaOH - 2XX9-688-2

REV. 12/29/09: RM

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.
SBLKEJ

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 0102117-BLK1

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 0102117-BLK1A68

Level: (low/med) LOW Date Received: _____

% Moisture: _____ decanted: (Y/N)___ Date Extracted:10/22/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/22/10

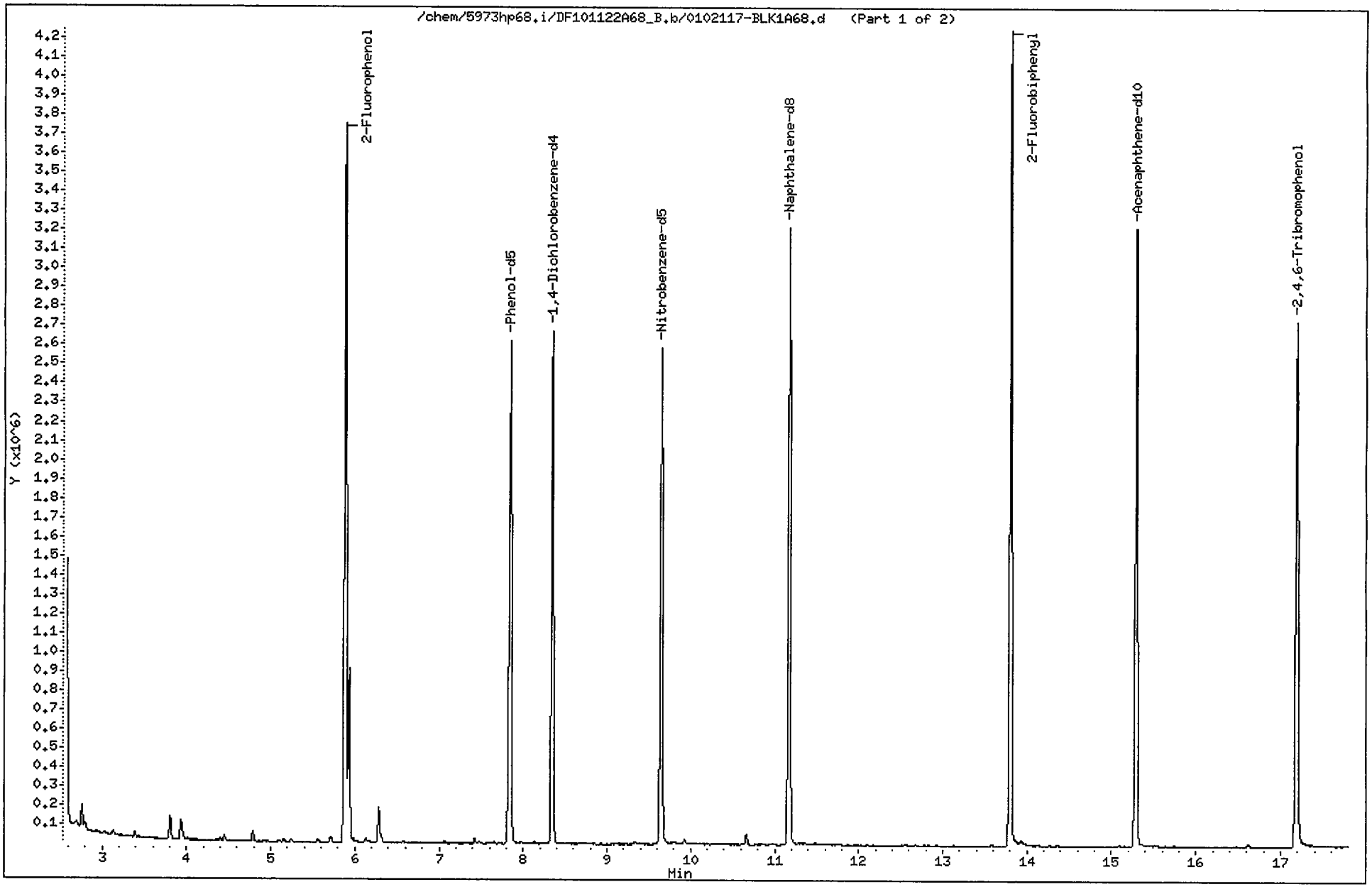
Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
98-86-2	Acetophenone	5.0	U

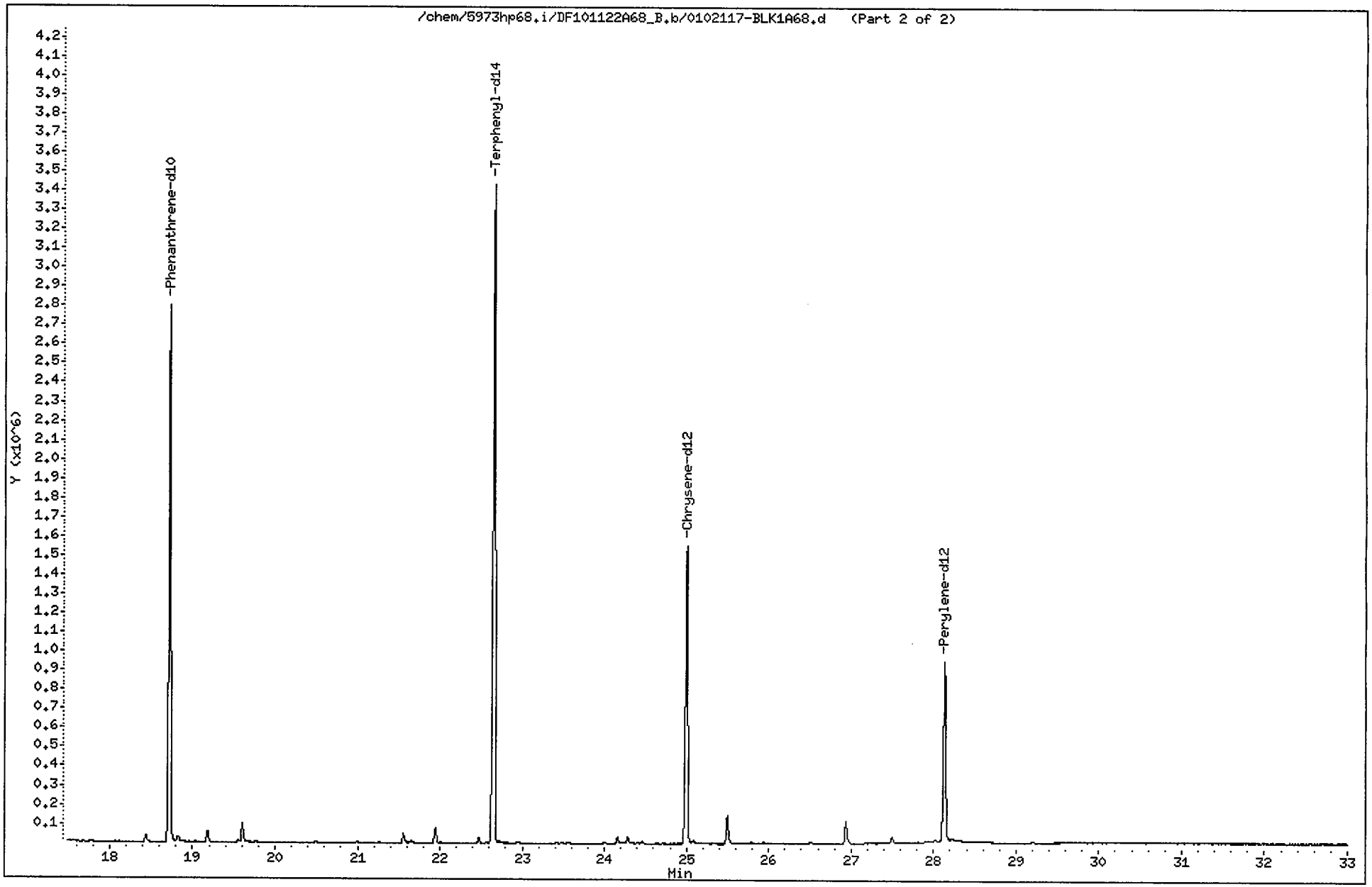
Data File: /chem/5973hp68.i/DF101122A68_B.b/0102117-BLK1A68.d
Date : 22-NOV-2010 11:48
Client ID: SBLKEJ
Sample Info: 0102117-BLK1:OWS
Volume Injected (uL): 2.0
Column phase: RTX-5MS

Instrument: 5973hp68.i
Operator: OWS
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101122A68_B.b/0102117-BLK1A68.d
Date : 22-NOV-2010 11:48
Client ID: SBLKEJ
Sample Info: 0102117-BLK1:OWS
Volume Injected (uL): 2.0
Column phase: RTX-5MS

Instrument: 5973hp68.i
Operator: OWS
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101122A68_B.b/0102117-BLK1A68.d
Report Date: 29-Nov-2010 12:06

CompuChem

Semivolatile Report SW-846 Method 8270C Appendix IX

Data file : /chem/5973hp68.i/DF101122A68_B.b/0102117-BLK1A68.d
Lab Smp Id: 0102117-BLK1 Client Smp ID: SBLKEJ
Inj Date : 22-NOV-2010 11:48
Operator : OWS Inst ID: 5973hp68.i
Smp Info : 0102117-BLK1:OWS
Misc Info : SBLKEJ
Comment : 2008 MDLS SOIL/ 2007 WATER
Method : /chem/5973hp68.i/DF101122A68_B.b/8270CMASTERDODv5.m
Meth Date : 29-Nov-2010 12:05 byrd Quant Type: ISTD
Cal Date : 19-NOV-2010 11:45 Cal File: 0K19001-CALCC68.d
Als bottle: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: HWMU13A_B.sub
Target Version: 3.50
Processing Host: einstein

Concentration Formula: Amt * DF * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Vo	1000.00000	Volume of sample extracted (mL)
Vi	2.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	CONCENTRATIONS FINAL (ug/L)	SIMILARITY
* 1 1,4-Dichlorobenzene-d4	152	8.346	8.346	(1.000)	698039	40.0000		
* 2 Naphthalene-d8	136	11.172	11.172	(1.000)	2588771	40.0000		
* 3 Acenaphthene-d10	164	15.291	15.296	(1.000)	1380594	40.0000		
* 4 Phenanthrene-d10	188	18.726	18.726	(1.000)	2004974	40.0000		
* 5 Chrysene-d12	240	24.998	24.998	(1.000)	1015855	40.0000		
* 6 Perylene-d12	264	28.134	28.134	(1.000)	606431	40.0000		
33 Acetophenone	105	Compound Not Detected.						

b 4/22/11

ASSIGNED TO: B. Patterson

EMP ID NUMBER: 2713

CompuChem
EXTRACTION WORKSHEET
SEMI-VOLATILE WATER
Method 3510C (for 8270C, 8270D or 625)

10-22-10

DATE/TIME EXTRACTED/POSTED: 10-22-10 @ 0950

H: 10/25
D: 11/09

BATCH NO.: 0102117

614

	COMPUCHEM NUMBER	CLIENT SAMPLE ID	QC SAMPLE TYPE	SAMPLE VOLUME (mL)	079A FINAL VOLUME (mL)	Adjusted pH A/N	Adjusted pH BASE	COMMENTS
1	0102117-BLK1	SBLKEJ	MB	1000	1.0	1.9	13.0	
2	0102117-BS1	SEJLCS	LCS	1000		1.9	13.0	
3	0102117-BSD1	SEJLCSD	LCSD	1000		1.9	13.0	
4	0102117-MS1	13MW5MS	MS	975		1.9	13.0	
5	0102117-MSD1	13MW5MSD	MSD	950		1.9	13.0	
6	1010097-01	F-15-1010	SAMPLE	1000		1.9	13.0	
7	1010097-03	F-14-1010	SAMPLE	925		1.9	13.0	
8	1010097-04	F-26-1010	SAMPLE	900		1.9	13.0	
9	1010097-06	F-16-1010	SAMPLE	925		1.9	13.0	
10	1010107-01	13MW5	SAMPLE	1000		1.9	13.0	USE AS QC
11	1010107-02	13MW1	SAMPLE	950		1.9	13.0	
12	1010107-03	13MW2	SAMPLE	1000		1.9	13.0	
13	1010107-04	13MW3	SAMPLE	950		1.9	13.0	
14	1010107-05	13MW4	SAMPLE	1000		1.9	13.0	
15	1010107-06	13MWDUP	SAMPLE	1000		1.9	13.0	
16	1010107-07	13MW6	SAMPLE	1000		1.9	13.0	
17	1010107-08	13MW7	SAMPLE	1000		1.9	13.0	
18								
19								
20								
21								
22								
23								
24								
25								
26								

NB 10/22/10

NB 10/22/10

NB 10/22/10

		S-VOL	8270
SURROGATE	NO.	393	
	AMT.	0.5mL	
	LOT	I02003	
SPIKE	NO.		VALID I & II
	AMT.		0.5 mL
	LOT		OJ11002 / OJ11003

FINAL VOLUME VERIFIED: [signature]

REVIEWED BY: B. Patterson

SURROGATE & SPIKE ADDED BY: BFP / 10-22-10
Initials Date

Analyst initials. Extracted BFP/VG KD NB/VG N2 BFP/VG Bottle up NB/BFP

Witness NB / 10/22/10
Initials Date

Manufacturer and lot number of reagents/solvents used [redacted] J34502, Na_2SO_4 - 2xx9-689-4, conc. H_2SO_4 - 72949, 10N NaOH - 2xx9-688-2

REV. 12/29/09: RM

c. Laboratory Control Sample Data

Arranged in chronological order, by extraction date.

- Tabulated Results (Form I SV)

- Reconstructed Ion Chromatogram and quantitation report

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

SEJLCS

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 0102117-BS1

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 0102117-BS1A68

Level: (low/med) LOW Date Received: _____

% Moisture: _____ decanted: (Y/N)___ Date Extracted:10/22/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/22/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

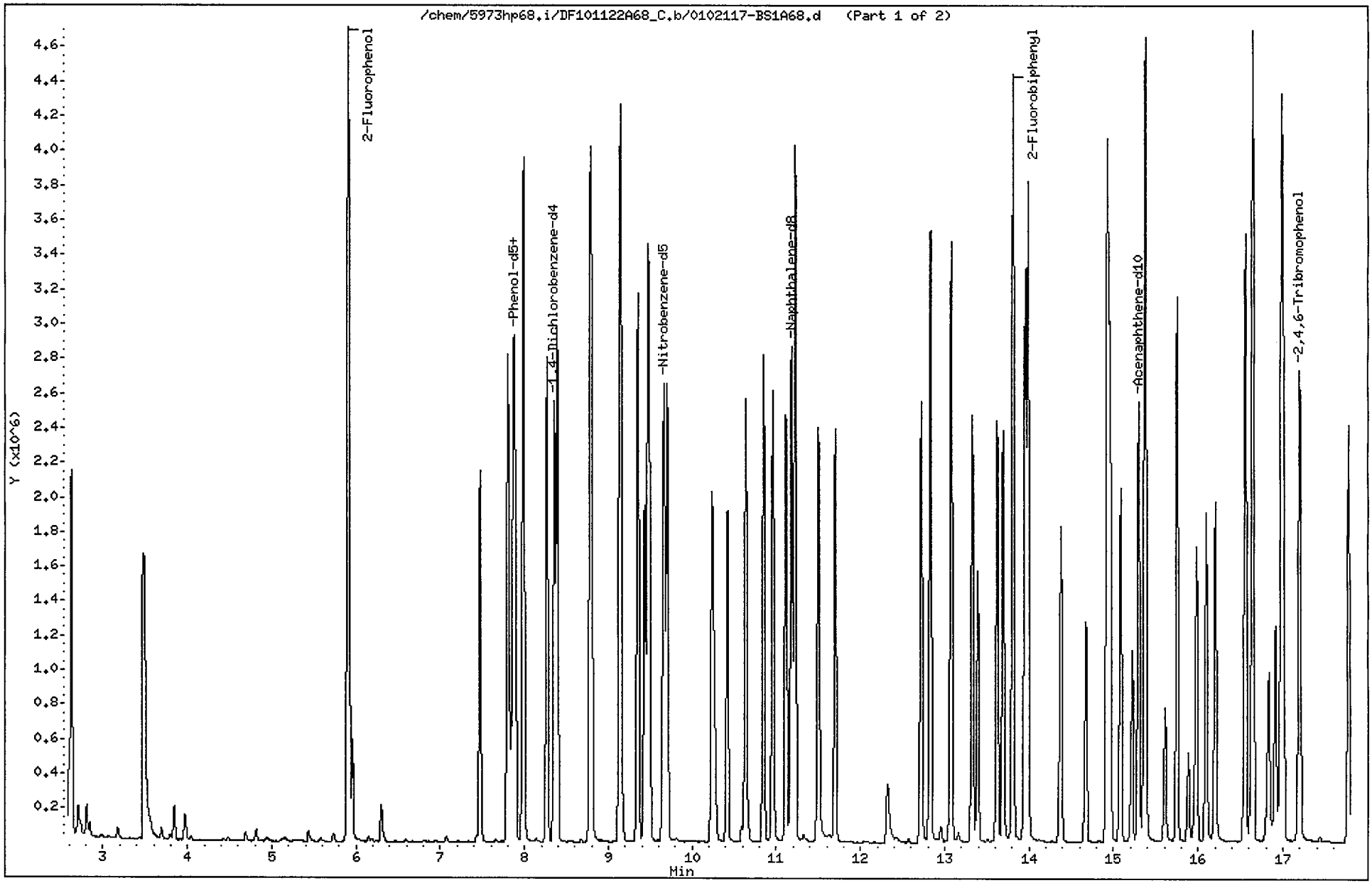
GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	16	
95-57-8	2-Chlorophenol	32	
108-39-4	3-Methylphenol	26	
106-44-5	4-Methylphenol	26	
67-72-1	Hexachloroethane	22	
98-95-3	Nitrobenzene	32	
120-83-2	2,4-Dichlorophenol	34	
131-11-3	Dimethylphthalate	35	
100-02-7	4-Nitrophenol	16	
132-64-9	Dibenzofuran	33	
84-66-2	Diethylphthalate	36	
86-30-6	N-Nitrosodiphenylamine (1)	38	
84-74-2	Di-n-butylphthalate	37	
206-44-0	Fluoranthene	38	
129-00-0	Pyrene	38	
85-68-7	Butylbenzylphthalate	37	
117-81-7	bis(2-ethylhexyl)Phthalate	36	
56-55-3	Benzo(a)anthracene	38	
117-84-0	Di-n-octylphthalate	38	
205-99-2	Benzo(b)fluoranthene	39	
207-08-9	Benzo(k)fluoranthene	38	
50-32-8	Benzo(a)pyrene	39	
193-39-5	Indeno(1,2,3-cd)pyrene	37	
53-70-3	Dibenzo(a,h)anthracene	37	

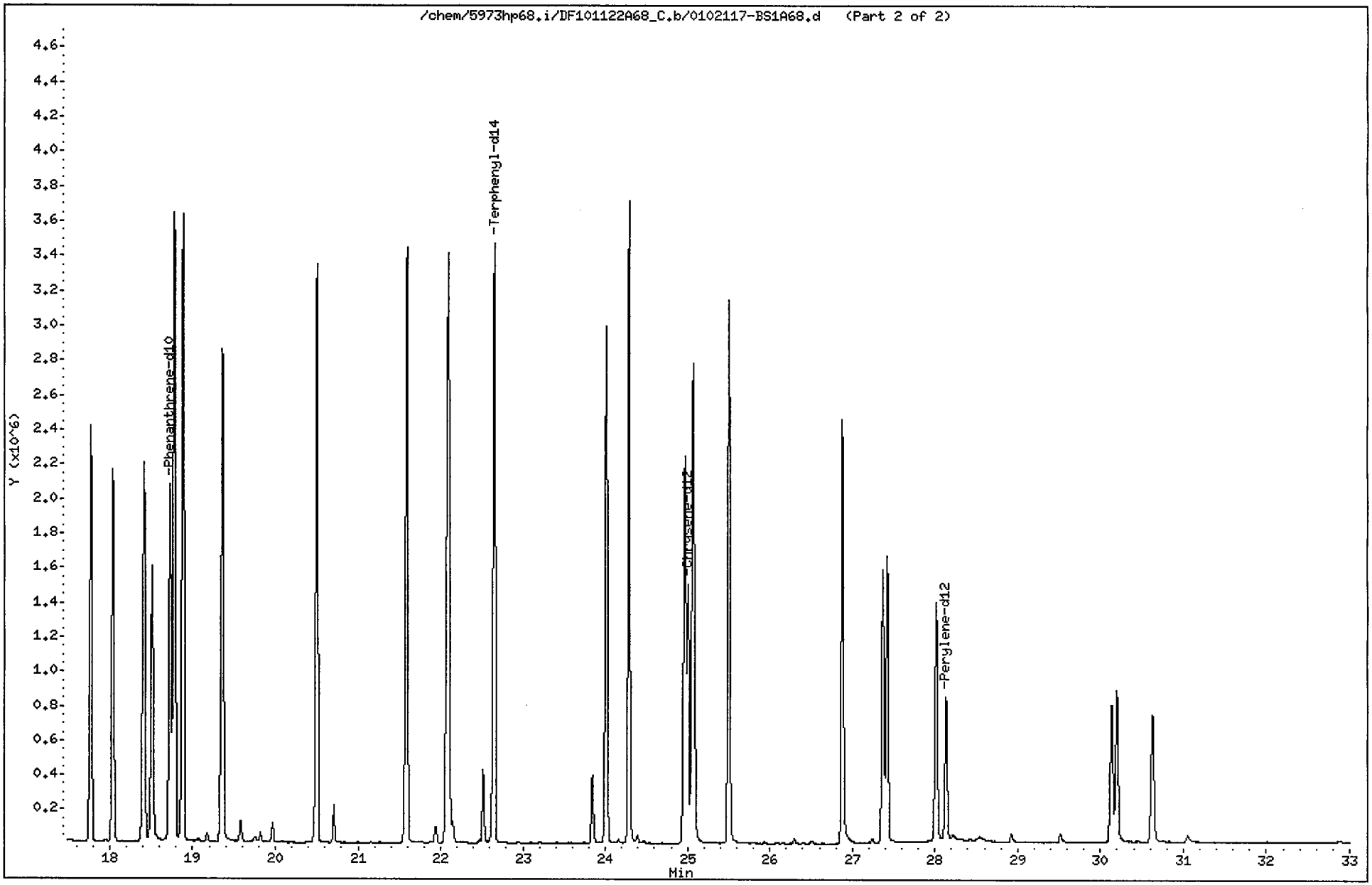
(1) - Cannot be separated from Diphenylamine

Data File: /chem/5973hp68.i/DF101122A68_C.b/0102117-BS1A68.d
Date : 22-NOV-2010 12:30
Client ID: SEJLCS
Sample Info: 0102117-BS1:OWS
Volume Injected (uL): 2.0
Column phase: RTX-5MS

Instrument: 5973hp68.i
Operator: OWS
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101122A68_C.b/0102117-BS1A68.d
Date : 22-NOV-2010 12:30
Client ID: SEJLCS
Instrument: 5973hp68.i
Sample Info: 0102117-BS1:OWS
Volume Injected (uL): 2.0
Operator: OWS
Column phase: RTX-5MS
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101122A68_C.b/0102117-BS1A68.d
Report Date: 29-Nov-2010 13:48

CompuChem

Semivolatile Report SW-846 Method 8270C Appendix IX

Data file : /chem/5973hp68.i/DF101122A68_C.b/0102117-BS1A68.d
Lab Smp Id: 0102117-BS1 Client Smp ID: SEJLCS
Inj Date : 22-NOV-2010 12:30
Operator : OWS Inst ID: 5973hp68.i
Smp Info : 0102117-BS1:OWS
Misc Info : SEJLCS
Comment : 2008 MDLS SOIL/ 2007 WATER
Method : /chem/5973hp68.i/DF101122A68_C.b/8270CMASTERDODv5.m
Meth Date : 29-Nov-2010 13:47 byrd Quant Type: ISTD
Cal Date : 19-NOV-2010 17:11 Cal File: 0K19001-CALI1C68.d
Als bottle: 6 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: HWMU13A_C.sub
Target Version: 3.50
Processing Host: einstein

Concentration Formula: Amt * DF * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Vo	1000.00000	Volume of sample extracted (mL)
Vi	2.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	FINAL (ug/L)	SIMILARITY	
*	1 1,4-Dichlorobenzene-d4	152	8.357	8.346	(1.000)	680407	40.0000			
*	2 Naphthalene-d8	136	11.183	11.177	(1.000)	2343296	40.0000			
*	3 Acenaphthene-d10	164	15.302	15.296	(1.000)	1097977	40.0000			
*	4 Phenanthrene-d10	188	18.731	18.731	(1.000)	1612348	40.0000			
*	5 Chrysene-d12	240	25.003	25.003	(1.000)	913121	40.0000			
*	6 Perylene-d12	264	28.134	28.134	(1.000)	538262	40.0000			
$	7 2-Fluorophenol	112	5.905	5.873	(0.707)	2635184	111.585	56		
$	8 Phenol-d5	99	7.871	7.860	(0.942)	2230138	72.2037	36		
$	9 Nitrobenzene-d5	82	9.666	9.650	(0.864)	1889057	84.6066	42		
$	10 2-Fluorobiphenyl	172	13.811	13.806	(0.903)	2653748	82.4993	41		
$	11 2,4,6-Tribromophenol	330	17.198	17.187	(1.124)	564757	192.778	96		(A)
$	12 Terphenyl-d14	244	22.653	22.647	(0.906)	2049965	97.5947	49		
	24 Phenol	94	7.892	7.892	(0.944)	936365	31.5129	16		
	25 2-Chlorophenol	128	7.993	7.988	(0.957)	1272784	63.4324	32	8670	

64/66

Data File: /chem/5973hp68.i/DF101122A68_C.b/0102117-BS1A68.d
Report Date: 29-Nov-2010 13:48

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	FINAL (ug/L)	SIMILARITY
34 Hexachloroethane	117	9.430	9.425	(1.128)	430734	44.4834	22	9173
39 3-Methylphenol	108	9.484	9.489	(1.135)	1121527	52.2943	26	
40 4-Methylphenol	108	9.484	9.489	(1.135)	1121527	52.2943	26	
41 Nitrobenzene	77	9.703	9.692	(0.868)	1495173	65.1418	32	8403
48 2,4-Dichlorophenol	162	10.958	10.958	(0.980)	983854	67.2759	34	
73 Dimethylphthalate	163	14.960	14.954	(0.978)	2123395	70.1787	35	9519
81 4-Nitrophenol	139	15.884	15.889	(1.038)	166631	32.8528	16	7858
79 Dibenzofuran	168	15.756	15.750	(1.030)	2540741	66.6648	33	8863
87 Diethylphthalate	149	16.643	16.637	(1.088)	1874820	71.3417	36	8587
93 N-Nitrosodiphenylamine	169	16.984	16.974	(0.907)	1670516	76.6859	38	8776
116 Di-n-butylphthalate	149	20.505	20.500	(1.095)	3297517	74.1825	37	9383
121 Fluoranthene	202	21.595	21.589	(1.153)	2784070	75.6775	38	9574
123 Pyrene	202	22.097	22.092	(0.884)	2822214	76.6813	38	9430
130 Butylbenzylphthalate	149	24.015	24.009	(0.960)	1241463	74.3830	37	9096
135 bis(2-ethylhexyl)Phthalate	149	25.500	25.500	(1.020)	1542498	72.2848	36	8850
133 Benzo(a)anthracene	228	24.966	24.960	(0.999)	1695476	75.8867	38	
136 Di-n-octylphthalate	149	26.878	26.878	(0.955)	2150493	76.4405	38	
137 Benzo(b)fluoranthene	252	27.370	27.364	(0.973)	1158729	78.5977	39	
138 Benzo(k)fluoranthene	252	27.423	27.418	(0.975)	1134908	76.3866	38	
140 Benzo(a)pyrene	252	28.016	28.011	(0.996)	981962	78.4379	39	
142 Indeno(1,2,3-cd)pyrene	276	30.137	30.132	(1.071)	588712	73.6382	37	8900
143 Dibenzo(a,h)anthracene	278	30.196	30.196	(1.073)	604757	73.5961	37	7604

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.

FORM 1 CLIENT SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SEJLCS

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-A

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 0102117-BS1

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 0102117-BS1A68

Level: (low/med) LOW Date Received: _____

% Moisture: _____ decanted: (Y/N)___ Date Extracted:10/22/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/22/10

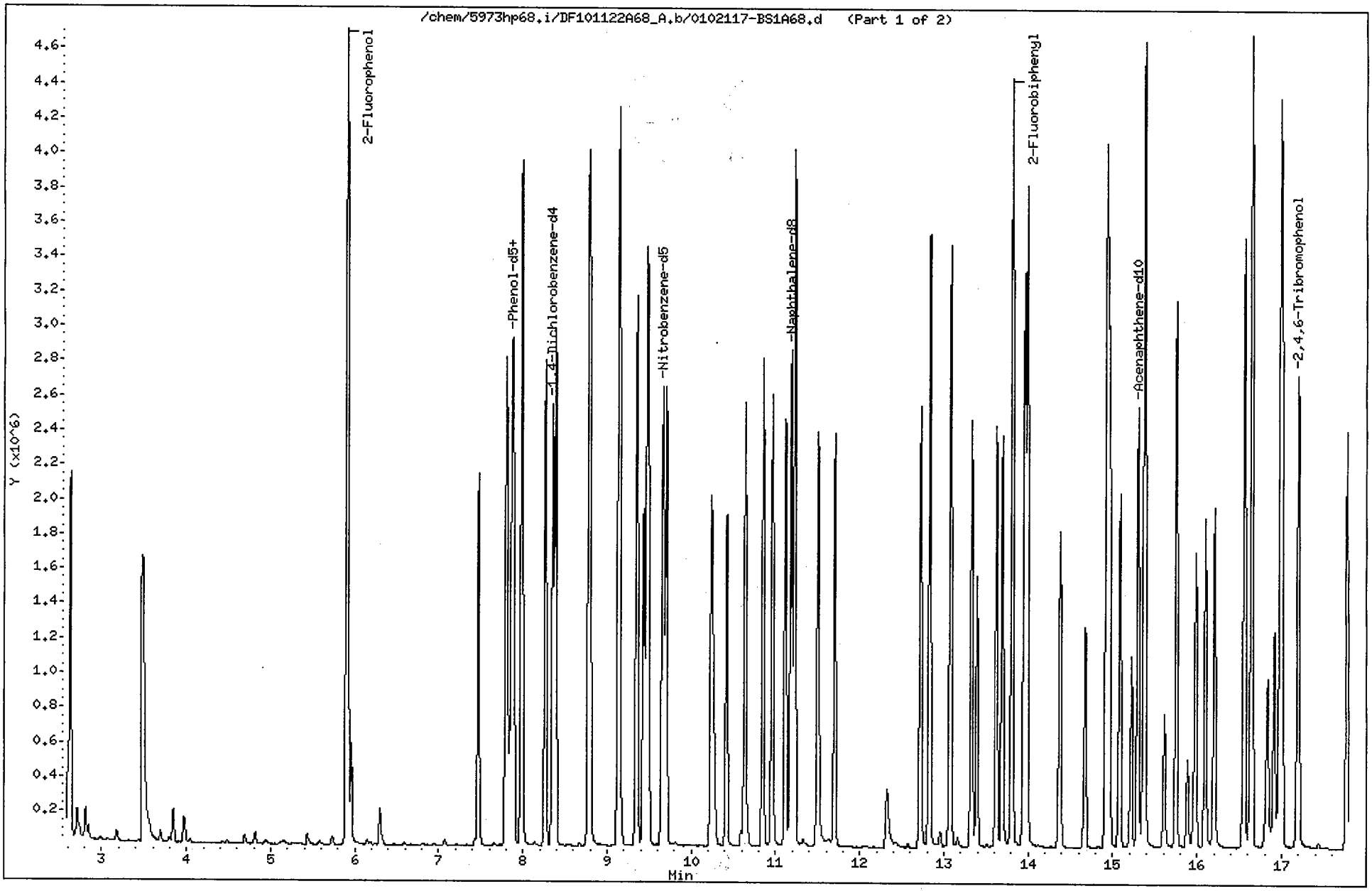
Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
119-93-7	3,3'-Dimethylbenzidine	8.5	

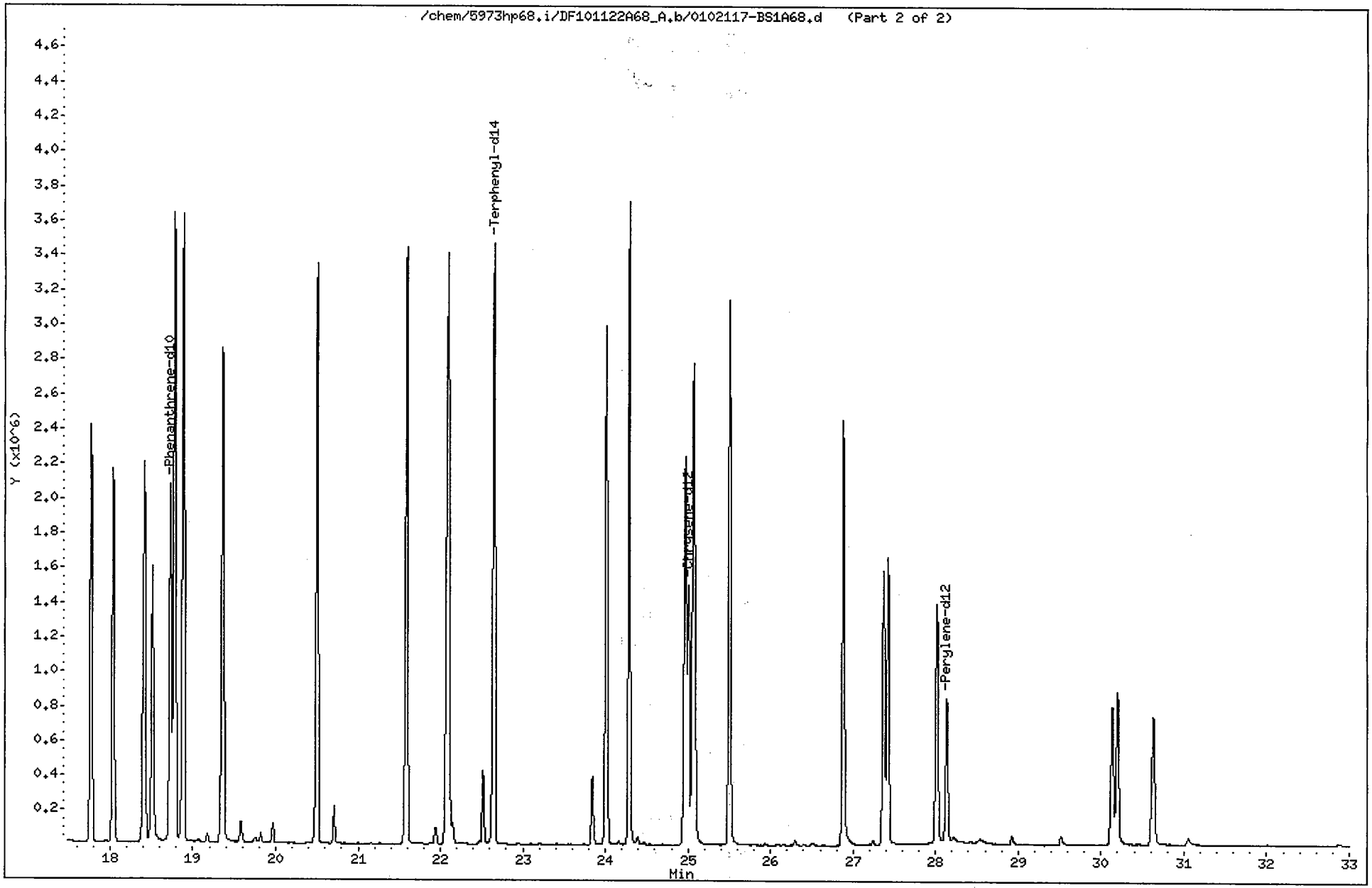
Data File: /chem/5973hp68.i/DF101122A68_A.b/0102117-BS1A68.d
Date : 22-NOV-2010 12:30
Client ID: SEJLCS
Sample Info: 0102117-BS1:OWS
Volume Injected (uL): 2.0
Column phase: RTX-5MS

Instrument: 5973hp68.i
Operator: OWS
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101122A68_A.b/0102117-BS1A68.d
Date : 22-NOV-2010 12:30
Client ID: SEJLCS
Sample Info: 0102117-BS1:OWS
Volume Injected (uL): 2.0
Column phase: RTX-5MS

Instrument: 5973hp68.i
Operator: OWS
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101122A68_A.b/0102117-BS1A68.d
Report Date: 29-Nov-2010 11:34

CompuChem

Semivolatile Report SW-846 Method 8270C Appendix IX

Data file : /chem/5973hp68.i/DF101122A68_A.b/0102117-BS1A68.d
Lab Smp Id: 0102117-BS1 Client Smp ID: SEJLCS
Inj Date : 22-NOV-2010 12:30
Operator : OWS Inst ID: 5973hp68.i
Smp Info : 0102117-BS1:OWS
Misc Info : SEJLCS
Comment : 2008 MDLS SOIL/ 2007 WATER
Method : /chem/5973hp68.i/DF101122A68_A.b/8270CMASTERDODv5.m
Meth Date : 29-Nov-2010 11:34 byrd Quant Type: ISTD
Cal Date : 19-NOV-2010 07:31 Cal File: 0K19001-CAL6C68.d
Als bottle: 6 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: HWMU13A_A.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Vo	1000.00000	Volume of sample extracted (mL)
Vi	2.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	CONCENTRATIONS FINAL (ug/L)	SIMILARITY
*	1 1,4-Dichlorobenzene-d4	152	8.357	8.346	(1.000)	680407	40.0000		
*	2 Naphthalene-d8	136	11.183	11.178	(1.000)	2343296	40.0000		
*	3 Acenaphthene-d10	164	15.302	15.291	(1.000)	1097977	40.0000		
*	4 Phenanthrene-d10	188	18.731	18.732	(1.000)	1612348	40.0000		
*	5 Chrysene-d12	240	25.003	24.998	(1.000)	913121	40.0000		
*	6 Perylene-d12	264	28.134	28.134	(1.000)	538262	40.0000		
	129 3,3'-Dimethylbenzidine	212	23.844	23.844	(0.954)	234810	17.0562	8.5	9478

FORM 1 CLIENT SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

SEJLCS

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 0102117-BS1

Sample wt/vol: 1000 (g/mL) ML Lab File ID: 0102117-BS1A68

Level: (low/med) LOW Date Received: _____

% Moisture: _____ decanted: (Y/N)___ Date Extracted:10/22/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/22/10

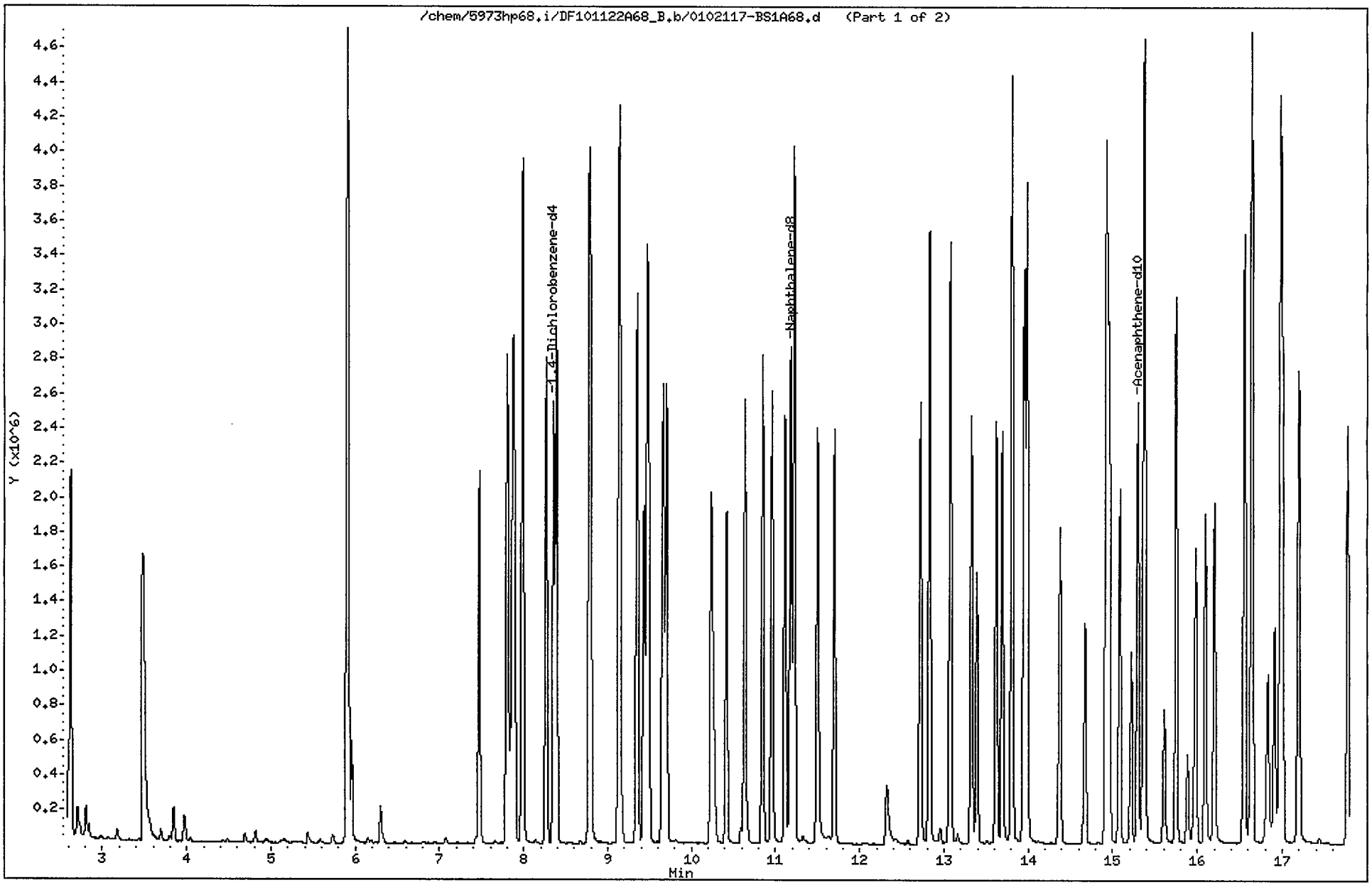
Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

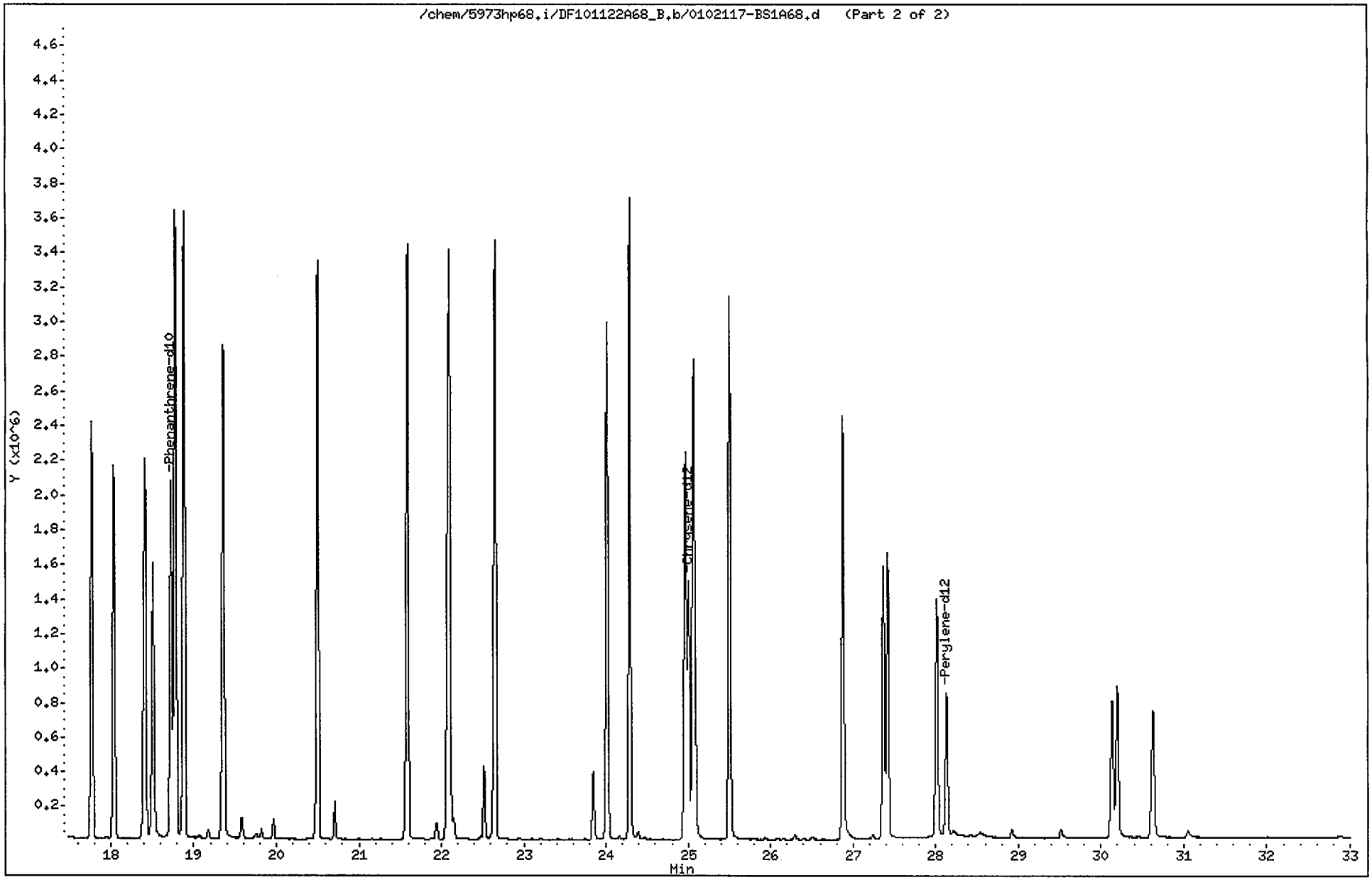
CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
98-86-2	Acetophenone	28	

Data File: /chem/5973hp68.i/DF101122A68_B.b/0102117-BS1A68.d
Date : 22-NOV-2010 12:30
Client ID: SEJLCS
Sample Info: 0102117-BS1:OWS
Volume Injected (uL): 2.0
Column phase: RTX-5MS

Instrument: 5973hp68.i
Operator: OWS
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101122A68_B.b/0102117-BS1A68.d
Date : 22-NOV-2010 12:30
Client ID: SEJLCS
Instrument: 5973hp68.i
Sample Info: 0102117-BS1:OWS
Volume Injected (uL): 2.0
Operator: OWS
Column phase: RTX-5MS
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101122A68_B.b/0102117-BS1A68.d
Report Date: 29-Nov-2010 12:06

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Data file : /chem/5973hp68.i/DF101122A68_B.b/0102117-BS1A68.d
Lab Smp Id: 0102117-BS1 Client Smp ID: SEJLCS
Inj Date : 22-NOV-2010 12:30
Operator : OWS Inst ID: 5973hp68.i
Smp Info : 0102117-BS1:OWS
Misc Info : SEJLCS
Comment : 2008 MDLS SOIL/ 2007 WATER
Method : /chem/5973hp68.i/DF101122A68_B.b/8270CMASTERDODv5.m
Meth Date : 29-Nov-2010 12:05 byrd Quant Type: ISTD
Cal Date : 19-NOV-2010 11:45 Cal File: 0K19001-CALCC68.d
Als bottle: 6 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: HWMU13A_B.sub
Target Version: 3.50
Processing Host: einstein

Concentration Formula: Amt * DF * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Vo	1000.00000	Volume of sample extracted (mL)
Vi	2.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	CONCENTRATIONS FINAL (ug/L)	SIMILARITY
* 1	1,4-Dichlorobenzene-d4	152	8.357	8.346	(1.000)	680407	40.0000		
* 2	Naphthalene-d8	136	11.183	11.172	(1.000)	2343296	40.0000		
* 3	Acenaphthene-d10	164	15.302	15.296	(1.000)	1097977	40.0000		
* 4	Phenanthrene-d10	188	18.731	18.726	(1.000)	1612348	40.0000		
* 5	Chrysene-d12	240	25.003	24.998	(1.000)	913121	40.0000		
* 6	Perylene-d12	264	28.134	28.134	(1.000)	538262	40.0000		
33	Acetophenone	105	9.350	9.329	(0.836)	1867992	56.0734	28	9701

ou/hyl.

d. Matrix Spike Data

- Tabulated Results (Form I SV)

- Reconstructed Ion Chromatogram and quantitation report

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

13MW5MS

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 0102117-MS1

Sample wt/vol: 975 (g/mL) ML Lab File ID: 0102117-MS1A68

Level: (low/med) LOW Date Received: 10/20/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted:10/22/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/22/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

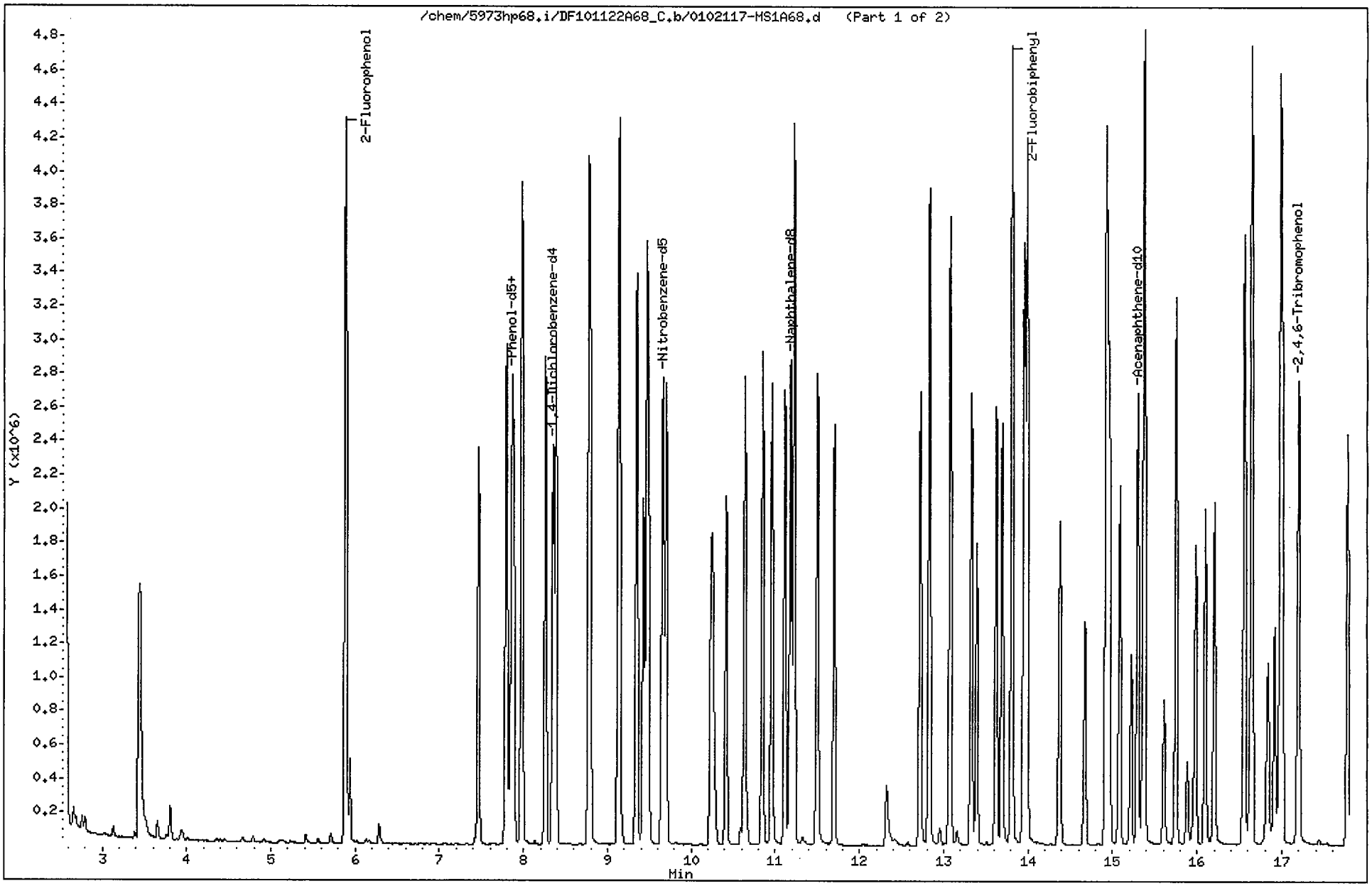
GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	16	
95-57-8	2-Chlorophenol	33	
108-39-4	3-Methylphenol	28	
106-44-5	4-Methylphenol	28	
67-72-1	Hexachloroethane	25	
98-95-3	Nitrobenzene	34	
120-83-2	2,4-Dichlorophenol	35	
131-11-3	Dimethylphthalate	36	
100-02-7	4-Nitrophenol	16	
132-64-9	Dibenzofuran	34	
84-66-2	Diethylphthalate	35	
86-30-6	N-Nitrosodiphenylamine (1)	40	
84-74-2	Di-n-butylphthalate	38	
206-44-0	Fluoranthene	38	
129-00-0	Pyrene	40	
85-68-7	Butylbenzylphthalate	38	
117-81-7	bis(2-ethylhexyl)Phthalate	37	
56-55-3	Benzo(a)anthracene	39	
117-84-0	Di-n-octylphthalate	36	
205-99-2	Benzo(b)fluoranthene	39	
207-08-9	Benzo(k)fluoranthene	40	
50-32-8	Benzo(a)pyrene	41	
193-39-5	Indeno(1,2,3-cd)pyrene	42	
53-70-3	Dibenzo(a,h)anthracene	42	

(1) - Cannot be separated from Diphenylamine

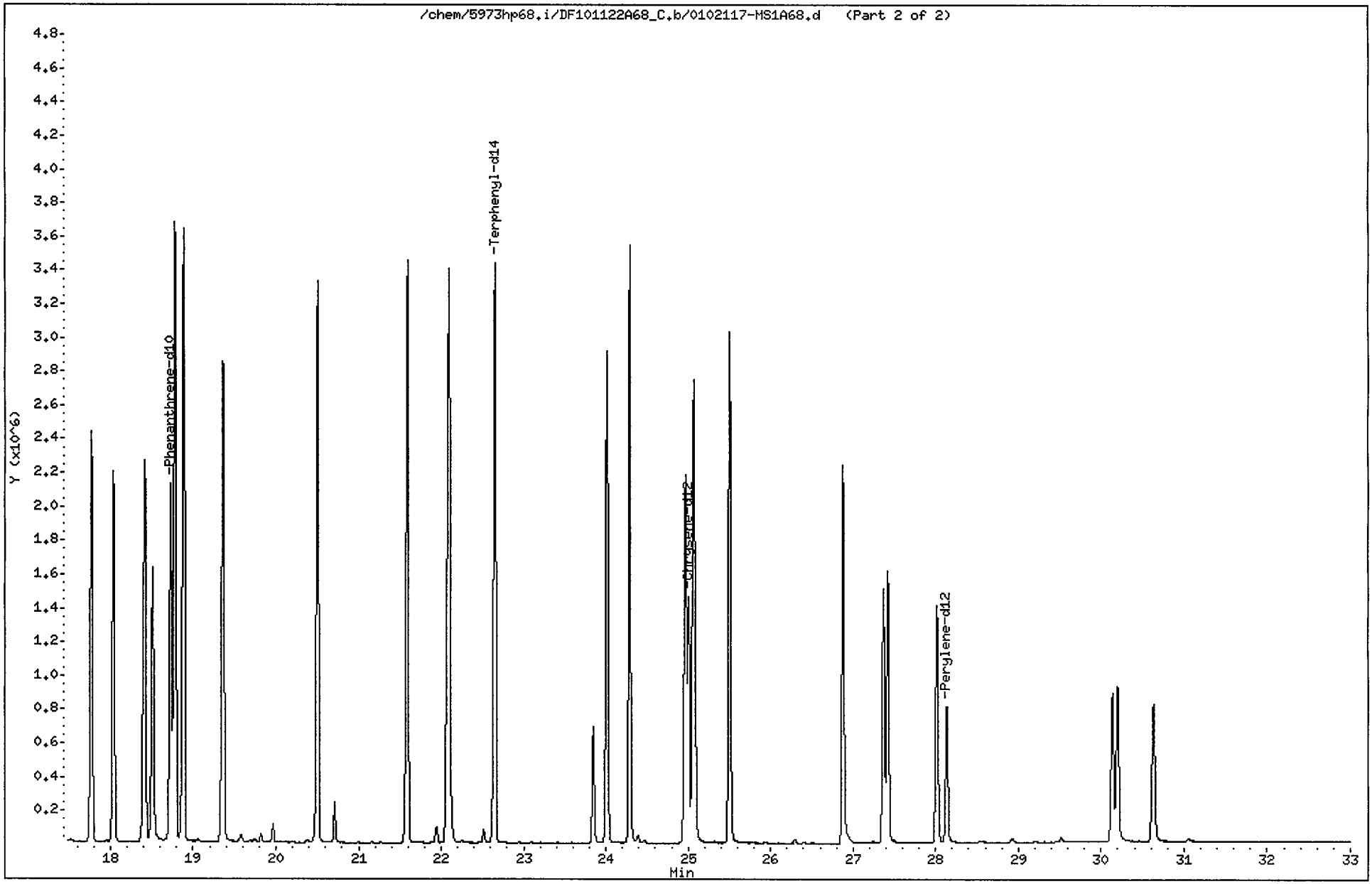
Data File: /chem/5973hp68.i/DF101122A68_C.b/0102117-MS1A68.d
Date : 22-NOV-2010 14:38
Client ID: 13MW5MS
Sample Info: 0102117-MS1:OWS
Volume Injected (uL): 2.0
Column phase: RTX-5MS

Instrument: 5973hp68.i
Operator: OWS
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101122A68_C.b/0102117-MS1A68.d
Date : 22-NOV-2010 14:38
Client ID: 13MW5MS
Sample Info: 0102117-MS1:OWS
Volume Injected (uL): 2.0
Column phase: RTX-5MS

Instrument: 5973hp68.i
Operator: OWS
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101122A68_C.b/0102117-MS1A68.d
Report Date: 29-Nov-2010 13:48

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Data file : /chem/5973hp68.i/DF101122A68_C.b/0102117-MS1A68.d
Lab Smp Id: 0102117-MS1 Client Smp ID: 13MW5MS
Inj Date : 22-NOV-2010 14:38
Operator : OWS Inst ID: 5973hp68.i
Smp Info : 0102117-MS1:OWS
Misc Info : 13MW5MS
Comment : 2008 MDLS SOIL/ 2007 WATER
Method : /chem/5973hp68.i/DF101122A68_C.b/8270CMASTERDODv5.m
Meth Date : 29-Nov-2010 13:47 byrd Quant Type: ISTD
Cal Date : 19-NOV-2010 17:11 Cal File: 0K19001-CALI1C68.d
Als bottle: 9 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: HWMU13A_C.sub
Target Version: 3.50
Processing Host: einstein

Concentration Formula: Amt * DF * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Vo	975.00000	Volume of sample extracted (mL)
Vi	2.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	CONCENTRATIONS FINAL (ug/L)	SIMILARITY	
*	1 1,4-Dichlorobenzene-d4	152	8.351	8.346	(1.000)	644787	40.0000			
*	2 Naphthalene-d8	136	11.183	11.177	(1.000)	2408765	40.0000			
*	3 Acenaphthene-d10	164	15.302	15.296	(1.000)	1151564	40.0000			
*	4 Phenanthrene-d10	188	18.731	18.731	(1.000)	1635142	40.0000			
*	5 Chrysene-d12	240	25.003	25.003	(1.000)	890385	40.0000			
*	6 Perylene-d12	264	28.139	28.134	(1.000)	532030	40.0000			
$	7 2-Fluorophenol	112	5.889	5.873	(0.705)	2436214	108.858	56		
$	8 Phenol-d5	99	7.865	7.860	(0.942)	2082613	71.1523	36		
$	9 Nitrobenzene-d5	82	9.660	9.650	(0.864)	1990959	86.7470	44		
$	10 2-Fluorobiphenyl	172	13.811	13.806	(0.903)	2912026	86.3159	44		
$	11 2,4,6-Tribromophenol	330	17.198	17.187	(1.124)	588271	191.460	98		(A)
$	12 Terphenyl-d14	244	22.652	22.647	(0.906)	2026236	98.9282	51		
	24 Phenol	94	7.887	7.892	(0.944)	863107	30.6521	16		
	25 2-Chlorophenol	128	7.988	7.988	(0.956)	1240341	65.2304	33	8682	

Data File: /chem/5973hp68.i/DF101122A68_C.b/0102117-MS1A68.d
Report Date: 29-Nov-2010 13:48

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	CONCENTRATIONS FINAL (ug/L)	SIMILARITY
34 Hexachloroethane	117	9.425	9.425	(1.129)	445191	48.5163	25	9199
39 3-Methylphenol	108	9.484	9.489	(1.136)	1115839	54.9034	28	
40 4-Methylphenol	108	9.484	9.489	(1.136)	1115839	54.9034	28	
41 Nitrobenzene	77	9.703	9.692	(0.868)	1554077	65.8679	34	8365
48 2,4-Dichlorophenol	162	10.958	10.958	(0.980)	1039333	69.1380	35	
73 Dimethylphthalate	163	14.960	14.954	(0.978)	2211296	69.6830	36	9480
81 4-Nitrophenol	139	15.884	15.889	(1.038)	161152	30.2941	16	8652
79 Dibenzofuran	168	15.756	15.750	(1.030)	2674707	66.9141	34	8863
87 Diethylphthalate	149	16.642	16.637	(1.088)	1906505	69.1715	35	8585
93 N-Nitrosodiphenylamine	169	16.984	16.974	(0.907)	1741643	78.8365	40	8756
116 Di-n-butylphthalate	149	20.505	20.500	(1.095)	3314455	73.5241	38	9371
121 Fluoranthene	202	21.595	21.589	(1.153)	2774473	74.3653	38	9570
123 Pyrene	202	22.097	22.092	(0.884)	2797558	77.9523	40	9418
130 Butylbenzylphthalate	149	24.015	24.009	(0.960)	1208744	74.2719	38	9104
135 bis(2-ethylhexyl)Phthalate	149	25.500	25.500	(1.020)	1499376	72.0582	37	8847
133 Benzo(a)anthracene	228	24.966	24.960	(0.999)	1656472	76.0342	39	
136 Di-n-octylphthalate	149	26.878	26.878	(0.955)	1950094	70.1292	36	
137 Benzo(b)fluoranthene	252	27.370	27.364	(0.973)	1115076	76.5226	39	
138 Benzo(k)fluoranthene	252	27.423	27.418	(0.975)	1134171	77.2312	40	
140 Benzo(a)pyrene	252	28.016	28.011	(0.996)	980620	79.2483	41	
142 Indeno(1,2,3-cd)pyrene	276	30.137	30.132	(1.071)	652239	82.5400	42	8911
143 Dibenzo(a,h)anthracene	278	30.201	30.196	(1.073)	670290	82.5266	42	7723

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

13MW5MS

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-A

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 0102117-MS1

Sample wt/vol: 975 (g/mL) ML Lab File ID: 0102117-MS1A68

Level: (low/med) LOW Date Received: 10/20/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted:10/22/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/22/10

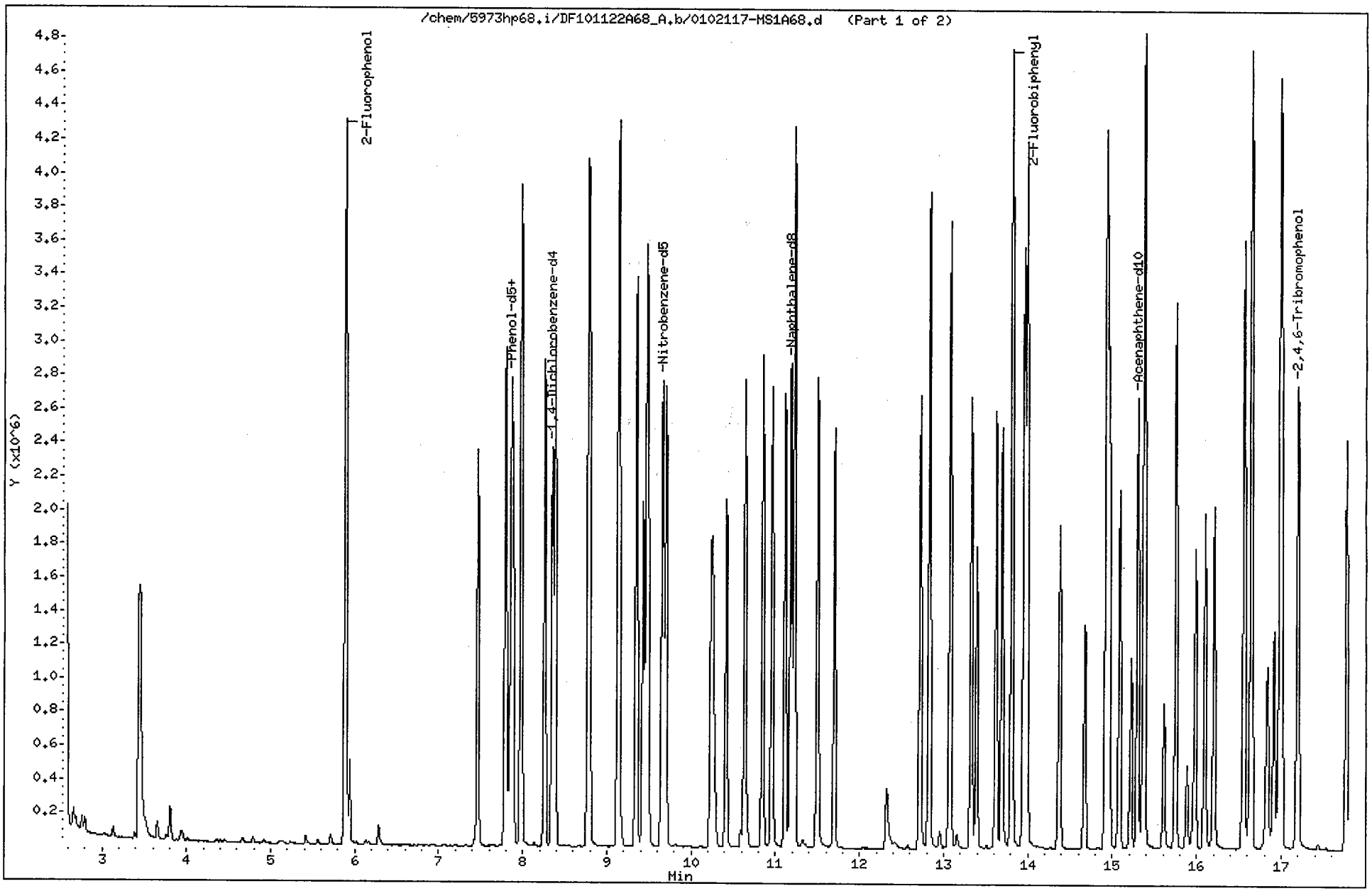
Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
119-93-7	3,3'-Dimethylbenzidine	16	

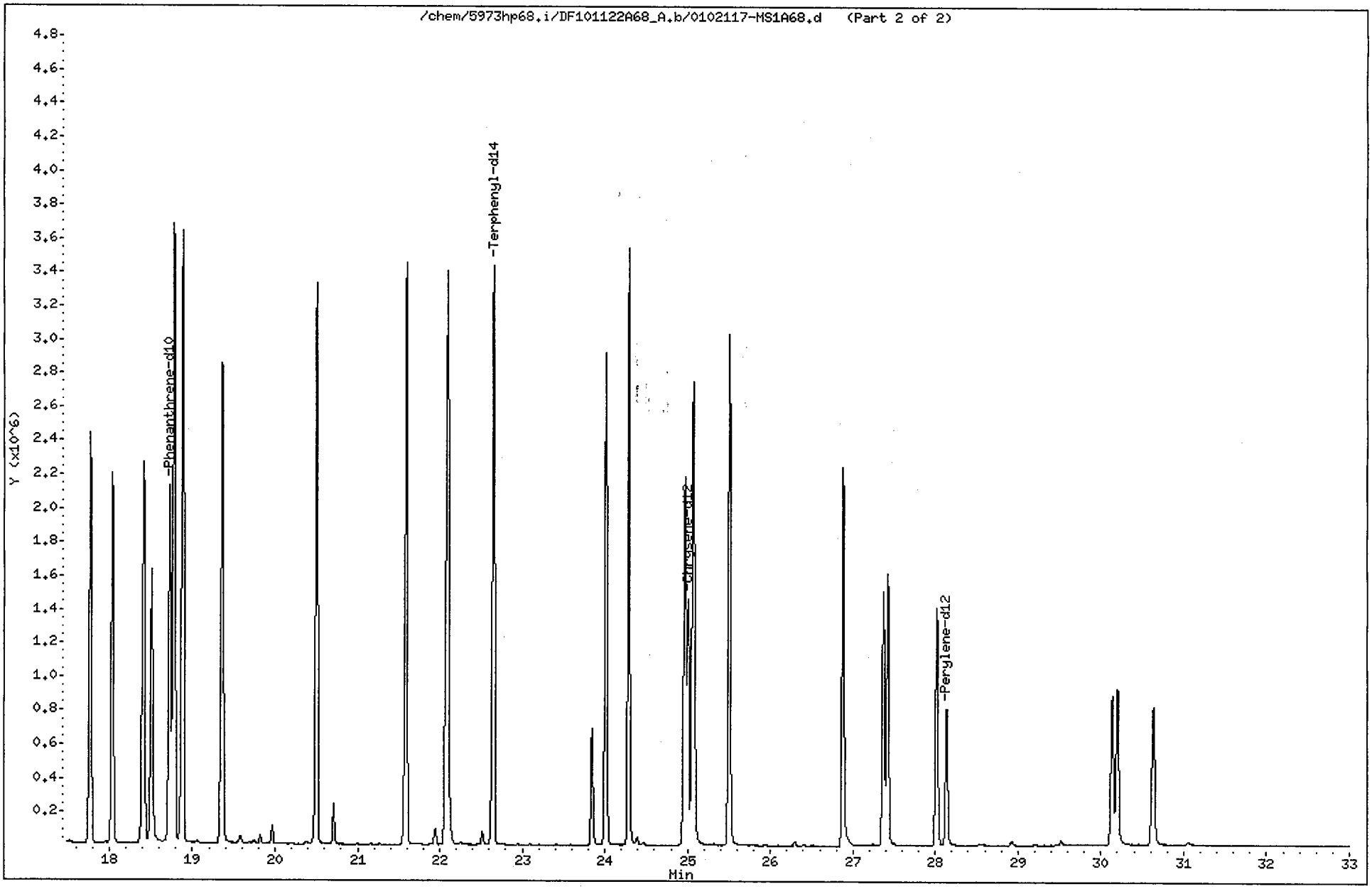
Data File: /chem/5973hp68.i/DF101122A68_A.b/0102117-MS1A68.d
Date : 22-NOV-2010 14:38
Client ID: 13MW5MS
Sample Info: 0102117-MS1:OWS
Volume Injected (uL): 2.0
Column phase: RTX-5MS

Instrument: 5973hp68.i
Operator: OWS
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101122A68_A.b/0102117-MS1A68.d
Date : 22-NOV-2010 14:38
Client ID: 13MW5MS
Sample Info: 0102117-MS1:OWS
Volume Injected (uL): 2.0
Column phase: RTX-5MS

Instrument: 5973hp68.i
Operator: OWS
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101122A68_A.b/0102117-MS1A68.d
Report Date: 29-Nov-2010 11:34

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Semivolatile Report SW-846 Method 8270C Appendix IX

Data file : /chem/5973hp68.i/DF101122A68_A.b/0102117-MS1A68.d
Lab Smp Id: 0102117-MS1 Client Smp ID: 13MW5MS
Inj Date : 22-NOV-2010 14:38
Operator : OWS Inst ID: 5973hp68.i
Smp Info : 0102117-MS1:OWS
Misc Info : 13MW5MS
Comment : 2008 MDLS SOIL/ 2007 WATER
Method : /chem/5973hp68.i/DF101122A68_A.b/8270CMASTERDODv5.m
Meth Date : 29-Nov-2010 11:34 byrd Quant Type: ISTD
Cal Date : 19-NOV-2010 07:31 Cal File: 0K19001-CAL6C68.d
Als bottle: 9 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: HWMU13A_A.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Vo	975.00000	Volume of sample extracted (mL)
Vi	2.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	FINAL (ug/L)	SIMILARITY
* 1	1,4-Dichlorobenzene-d4	152	8.351	8.346	(1.000)	644787	40.0000		
* 2	Naphthalene-d8	136	11.183	11.178	(1.000)	2408765	40.0000		
* 3	Acenaphthene-d10	164	15.302	15.291	(1.000)	1151564	40.0000		
* 4	Phenanthrene-d10	188	18.731	18.732	(1.000)	1635142	40.0000		
* 5	Chrysene-d12	240	25.003	24.998	(1.000)	890385	40.0000		
* 6	Perylene-d12	264	28.139	28.134	(1.000)	532030	40.0000		
129	3,3'-Dimethylbenzidine	212	23.844	23.844	(0.954)	409285	30.4889	16	9492

FORM 1 CLIENT SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

13MW5MS

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 0102117-MS1

Sample wt/vol: 975 (g/mL) ML Lab File ID: 0102117-MS1A68

Level: (low/med) LOW Date Received: 10/20/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted:10/22/10

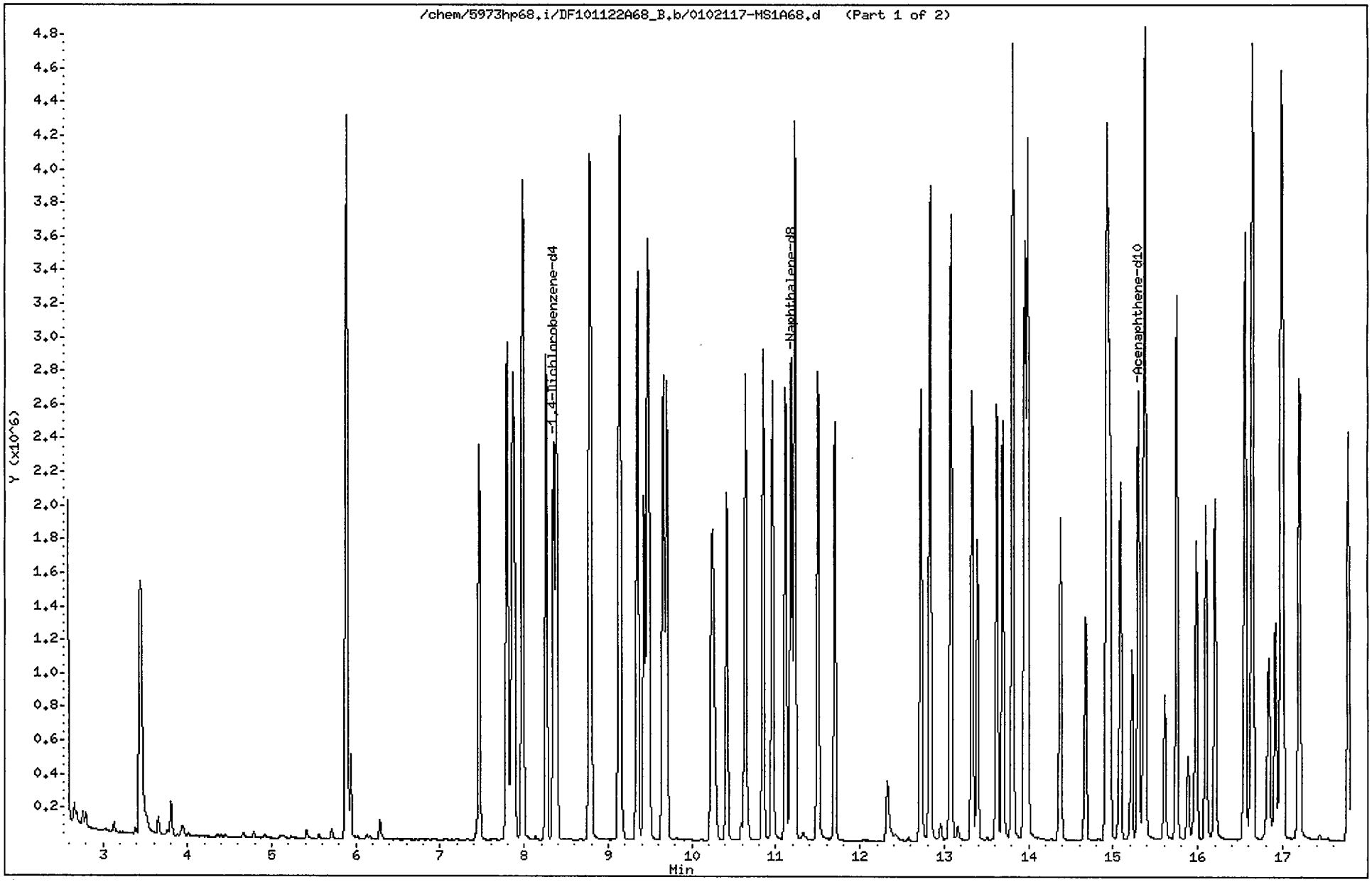
Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/22/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

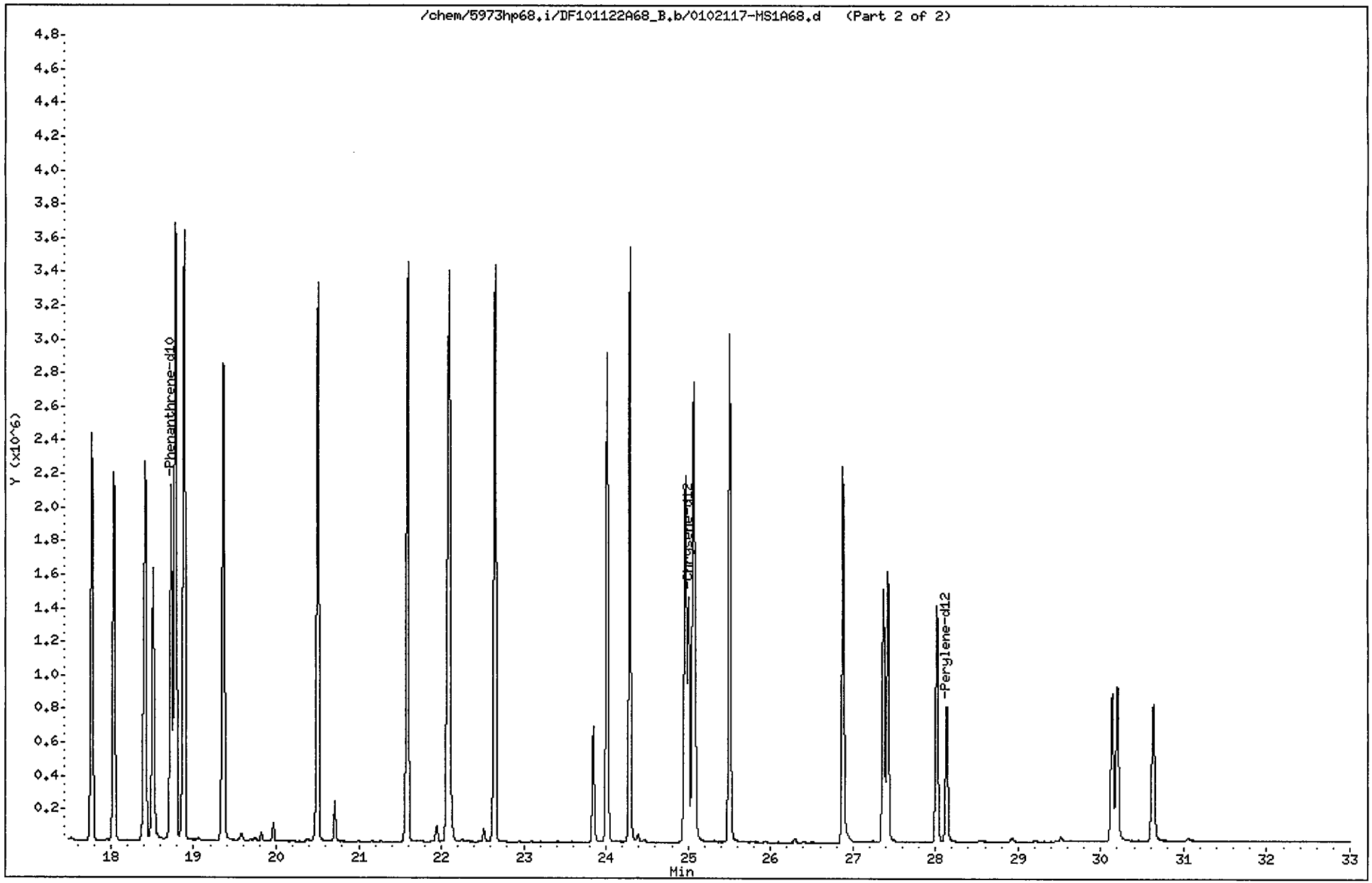
CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
98-86-2	Acetophenone	29	

Data File: /chem/5973hp68.i/DF101122A68_B.b/0102117-MS1A68.d
Date : 22-NOV-2010 14:38
Client ID: 13MW5MS
Instrument: 5973hp68.i
Sample Info: 0102117-MS1:OWS
Volume Injected (uL): 2.0
Operator: OWS
Column phase: RTX-5MS
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101122A68_B.b/0102117-MS1A68.d
Date : 22-NOV-2010 14:38
Client ID: 13MW5MS
Sample Info: 0102117-MS1:OWS
Volume Injected (uL): 2.0
Column phase: RTX-5MS

Instrument: 5973hp68.i
Operator: OWS
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101122A68_B.b/0102117-MS1A68.d
Report Date: 29-Nov-2010 12:06

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Semivolatile Report SW-846 Method 8270C Appendix IX

Data file : /chem/5973hp68.i/DF101122A68_B.b/0102117-MS1A68.d
Lab Smp Id: 0102117-MS1 Client Smp ID: 13MW5MS
Inj Date : 22-NOV-2010 14:38
Operator : OWS Inst ID: 5973hp68.i
Smp Info : 0102117-MS1:OWS
Misc Info : 13MW5MS
Comment : 2008 MDLS SOIL/ 2007 WATER
Method : /chem/5973hp68.i/DF101122A68_B.b/8270CMASTERDODv5.m
Meth Date : 29-Nov-2010 12:05 byrd Quant Type: ISTD
Cal Date : 19-NOV-2010 11:45 Cal File: 0K19001-CALCC68.d
Als bottle: 9 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: HWMU13A_B.sub
Target Version: 3.50
Processing Host: einstein

Concentration Formula: Amt * DF * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Vo	975.00000	Volume of sample extracted (mL)
Vi	2.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	FINAL (ug/L)	SIMILARITY
* 1 1,4-Dichlorobenzene-d4	152	8.351	8.346	(1.000)	644787	40.0000		
* 2 Naphthalene-d8	136	11.183	11.172	(1.000)	2408765	40.0000		
* 3 Acenaphthene-d10	164	15.302	15.296	(1.000)	1151564	40.0000		
* 4 Phenanthrene-d10	188	18.731	18.726	(1.000)	1635142	40.0000		
* 5 Chrysene-d12	240	25.003	24.998	(1.000)	890385	40.0000		
* 6 Perylene-d12	264	28.139	28.134	(1.000)	532030	40.0000		
33 Acetophenone	105	9.350	9.329	(0.836)	1950728	56.9654	29	9695

e. Matrix Spike Duplicate Data

- Tabulated Results (Form I SV)

- Reconstructed Ion Chromatogram and quantitation report

FORM 1 CLIENT SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

13MW5MSD

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-C

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 0102117-MSD1

Sample wt/vol: 950 (g/mL) ML Lab File ID: 0102117-MSD1A68

Level: (low/med) LOW Date Received: 10/20/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted:10/22/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/22/10

Injection Volume: 2.0(uL) Dilution Factor: 1.0

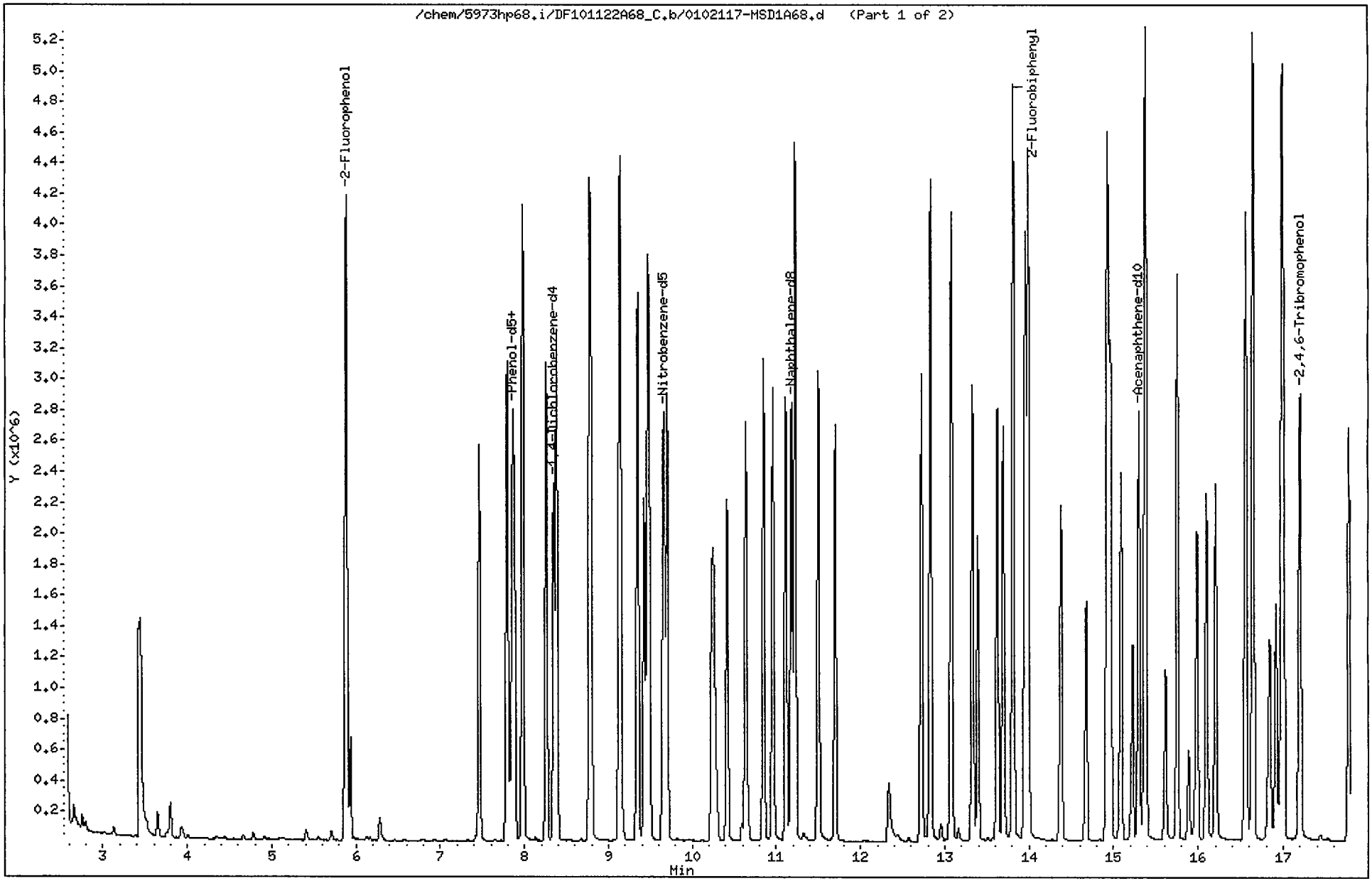
GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
108-95-2	Phenol	17	
95-57-8	2-Chlorophenol	37	
108-39-4	3-Methylphenol	31	
106-44-5	4-Methylphenol	31	
67-72-1	Hexachloroethane	29	
98-95-3	Nitrobenzene	38	
120-83-2	2,4-Dichlorophenol	40	
131-11-3	Dimethylphthalate	40	
100-02-7	4-Nitrophenol	18	
132-64-9	Dibenzofuran	38	
84-66-2	Diethylphthalate	38	
86-30-6	N-Nitrosodiphenylamine (1)	44	
84-74-2	Di-n-butylphthalate	41	
206-44-0	Fluoranthene	42	
129-00-0	Pyrene	45	
85-68-7	Butylbenzylphthalate	41	
117-81-7	bis(2-ethylhexyl)Phthalate	40	
56-55-3	Benzo(a)anthracene	44	
117-84-0	Di-n-octylphthalate	38	
205-99-2	Benzo(b)fluoranthene	43	
207-08-9	Benzo(k)fluoranthene	44	
50-32-8	Benzo(a)pyrene	45	
193-39-5	Indeno(1,2,3-cd)pyrene	49	
53-70-3	Dibenzo(a,h)anthracene	49	

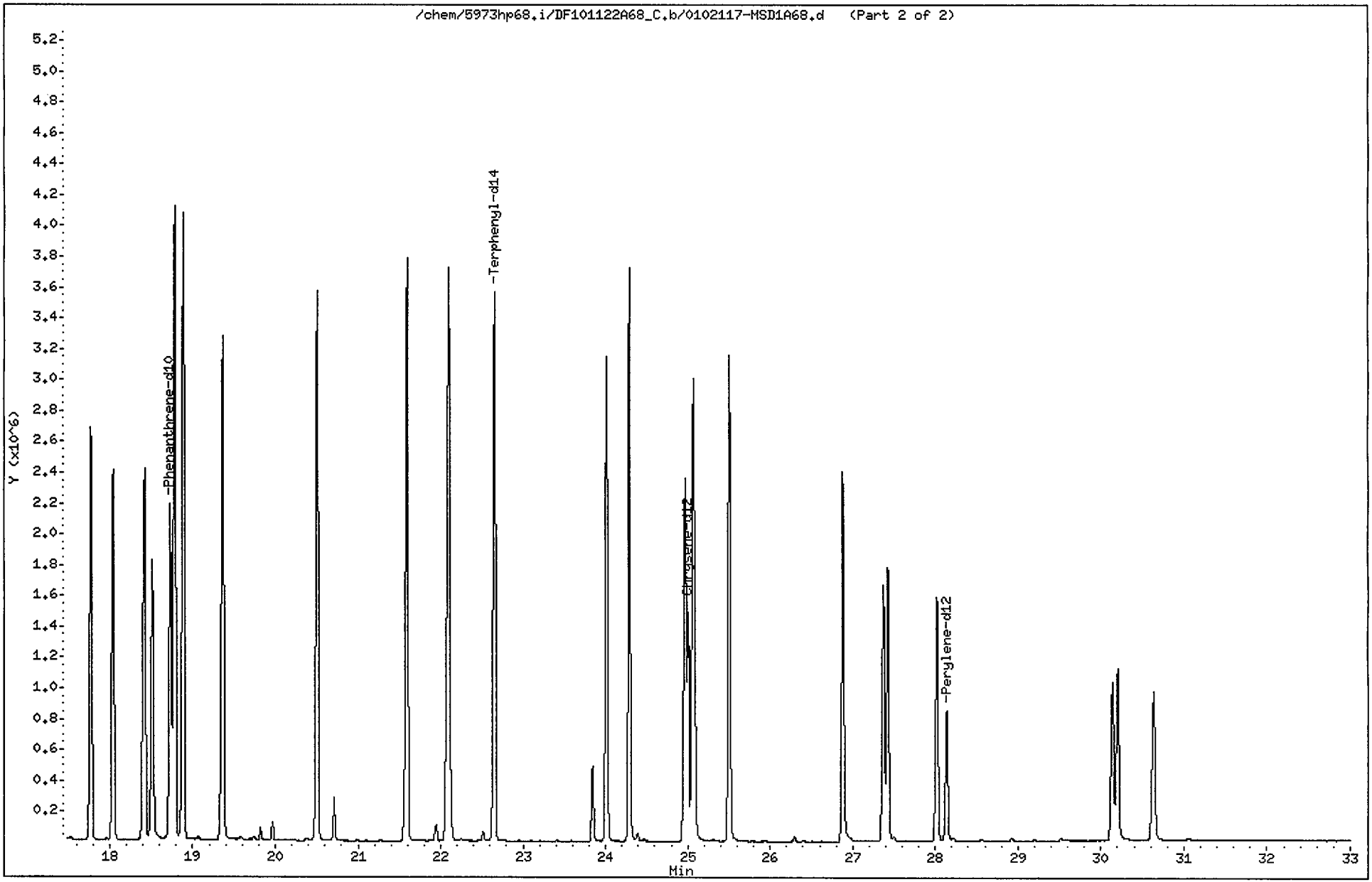
(1) - Cannot be separated from Diphenylamine

Data File: /chem/5973hp68.i/DF101122A68_C.b/0102117-MSD1A68.d
Date : 22-NOV-2010 15:21
Client ID: 13MW5MSD
Sample Info: 0102117-MSD1:OWS
Volume Injected (uL): 2.0
Column phase: RTX-5MS

Instrument: 5973hp68.i
Operator: OWS
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101122A68_C.b/0102117-MSD1A68.d
Date : 22-NOV-2010 15:21
Client ID: 13MW5MSD
Instrument: 5973hp68.i
Sample Info: 0102117-MSD1:OWS
Volume Injected (uL): 2.0
Operator: OWS
Column phase: RTX-5MS
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101122A68_C.b/0102117-MSD1A68.d
Report Date: 29-Nov-2010 13:48

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Semivolatile Report SW-846 Method 8270C Appendix IX

Data file : /chem/5973hp68.i/DF101122A68_C.b/0102117-MSD1A68.d
Lab Smp Id: 0102117-MSD1 Client Smp ID: 13MW5MSD
Inj Date : 22-NOV-2010 15:21
Operator : OWS Inst ID: 5973hp68.i
Smp Info : 0102117-MSD1:OWS
Misc Info : 13MW5MSD
Comment : 2008 MDLS SOIL/ 2007 WATER
Method : /chem/5973hp68.i/DF101122A68_C.b/8270CMASTERDODv5.m
Meth Date : 29-Nov-2010 13:47 byrd Quant Type: ISTD
Cal Date : 19-NOV-2010 17:11 Cal File: 0K19001-CALI1C68.d
Als bottle: 10 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: HWMU13A_C.sub
Target Version: 3.50
Processing Host: einstein

Concentration Formula: Amt * DF * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Vo	950.00000	Volume of sample extracted (mL)
Vi	2.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	FINAL (ug/L)	SIMILARITY	
*	1 1,4-Dichlorobenzene-d4	152	8.346	8.346	(1.000)	626804	40.0000			
*	2 Naphthalene-d8	136	11.183	11.177	(1.000)	2385893	40.0000			
*	3 Acenaphthene-d10	164	15.302	15.296	(1.000)	1204283	40.0000			
*	4 Phenanthrene-d10	188	18.731	18.731	(1.000)	1706759	40.0000			
*	5 Chrysene-d12	240	25.009	25.003	(1.000)	902543	40.0000			
*	6 Perylene-d12	264	28.139	28.134	(1.000)	556349	40.0000			
$	7 2-Fluorophenol	112	5.883	5.873	(0.705)	2486254	114.281	60		
$	8 Phenol-d5	99	7.865	7.860	(0.942)	2094454	73.6098	39		
$	9 Nitrobenzene-d5	82	9.660	9.650	(0.864)	2080407	91.5132	48		
$	10 2-Fluorobiphenyl	172	13.817	13.806	(0.903)	3087984	87.5246	46		
$	11 2,4,6-Tribromophenol	330	17.204	17.187	(1.124)	645988	201.041	100		(A)
$	12 Terphenyl-d14	244	22.653	22.647	(0.906)	2135922	102.879	54		
	24 Phenol	94	7.887	7.892	(0.945)	901246	32.9249	17		
	25 2-Chlorophenol	128	7.988	7.988	(0.957)	1305991	70.6535	37	8665	

outside

Data File: /chem/5973hp68.i/DF101122A68_C.b/0102117-MSD1A68.d
Report Date: 29-Nov-2010 13:48

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	CONCENTRATIONS FINAL (ug/L)	SIMILARITY
34 Hexachloroethane	117	9.425	9.425	(1.129)	488628	54.7778	29	9156
39 3-Methylphenol	108	9.484	9.489	(1.136)	1176319	59.5398	31	
40 4-Methylphenol	108	9.484	9.489	(1.136)	1176319	59.5398	31	
41 Nitrobenzene	77	9.703	9.692	(0.868)	1683232	72.0259	38	8361
48 2,4-Dichlorophenol	162	10.958	10.958	(0.980)	1127611	75.7294	40	
73 Dimethylphthalate	163	14.965	14.954	(0.978)	2495476	75.1957	40	9403
81 4-Nitrophenol	139	15.889	15.889	(1.038)	187577	33.7180	18	7440
79 Dibenzofuran	168	15.756	15.750	(1.030)	3025631	72.3797	38	8878
87 Diethylphthalate	149	16.643	16.637	(1.088)	2092001	72.5789	38	8652
93 N-Nitrosodiphenylamine	169	16.990	16.974	(0.907)	1932355	83.7989	44	8731
116 Di-n-butylphthalate	149	20.505	20.500	(1.095)	3669275	77.9796	41	9393
121 Fluoranthene	202	21.595	21.589	(1.153)	3113600	79.9532	42	9568
123 Pyrene	202	22.102	22.092	(0.884)	3101898	85.2683	45	9515
130 Butylbenzylphthalate	149	24.015	24.009	(0.960)	1281801	77.7000	41	9113
135 bis(2-ethylhexyl)Phthalate	149	25.500	25.500	(1.020)	1595864	75.6621	40	8853
133 Benzo(a)anthracene	228	24.971	24.960	(0.999)	1833750	83.0376	44	
136 Di-n-octylphthalate	149	26.878	26.878	(0.955)	2123097	73.0133	38	
137 Benzo(b)fluoranthene	252	27.375	27.364	(0.973)	1237350	81.2020	43	
138 Benzo(k)fluoranthene	252	27.423	27.418	(0.975)	1283311	83.5670	44	
140 Benzo(a)pyrene	252	28.016	28.011	(0.996)	1108123	85.6379	45	
142 Indeno(1,2,3-cd)pyrene	276	30.142	30.132	(1.071)	767778	92.9142	49	8967
143 Dibenzo(a,h)anthracene	278	30.201	30.196	(1.073)	786363	92.5855	49	7585

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.

FORM 1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.
13MW5MSD

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-A

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 0102117-MSD1

Sample wt/vol: 950 (g/mL) ML Lab File ID: 0102117-MSD1A68

Level: (low/med) LOW Date Received: 10/20/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted:10/22/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/22/10

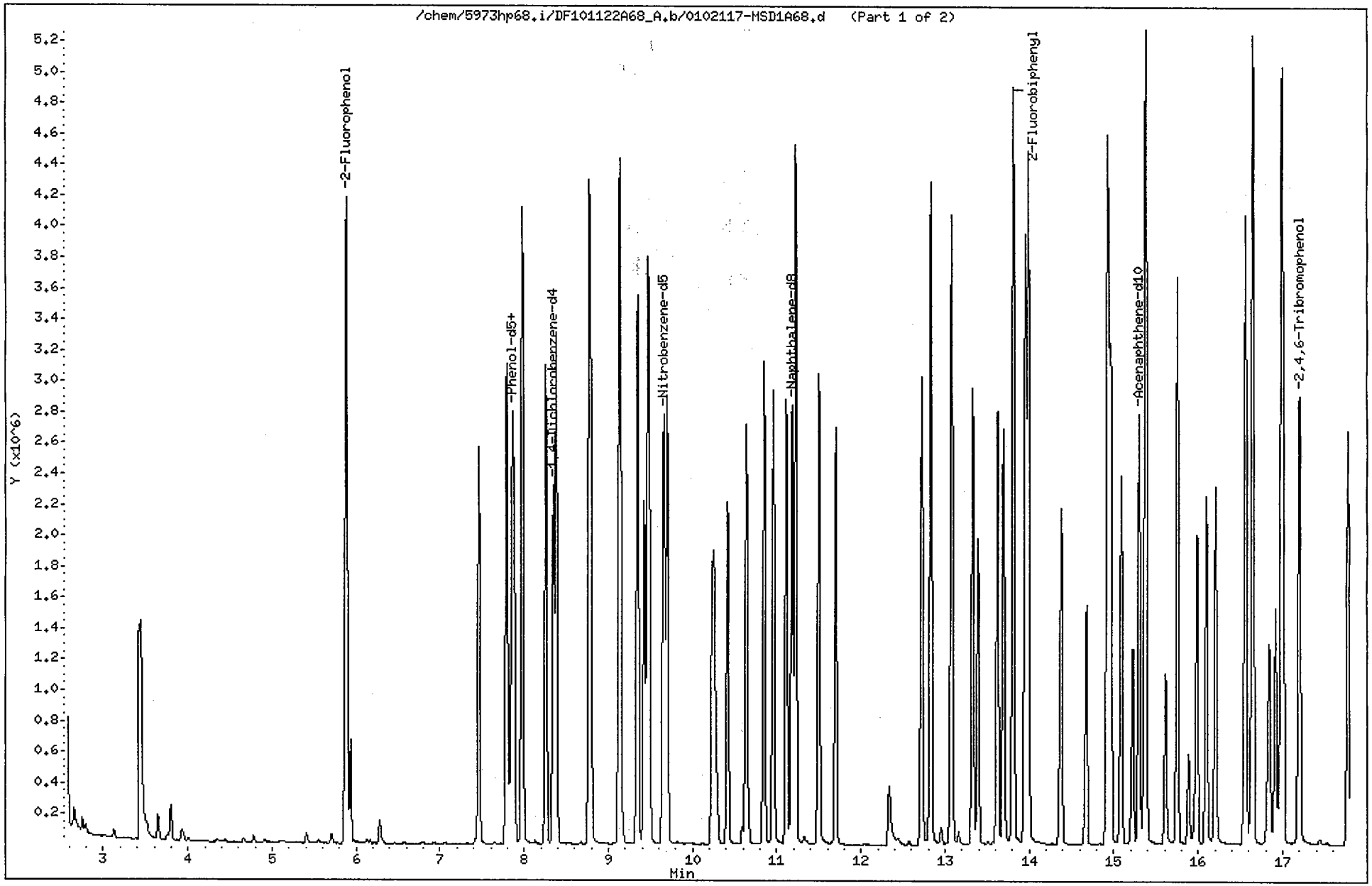
Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
119-93-7	3,3'-Dimethylbenzidine	11	

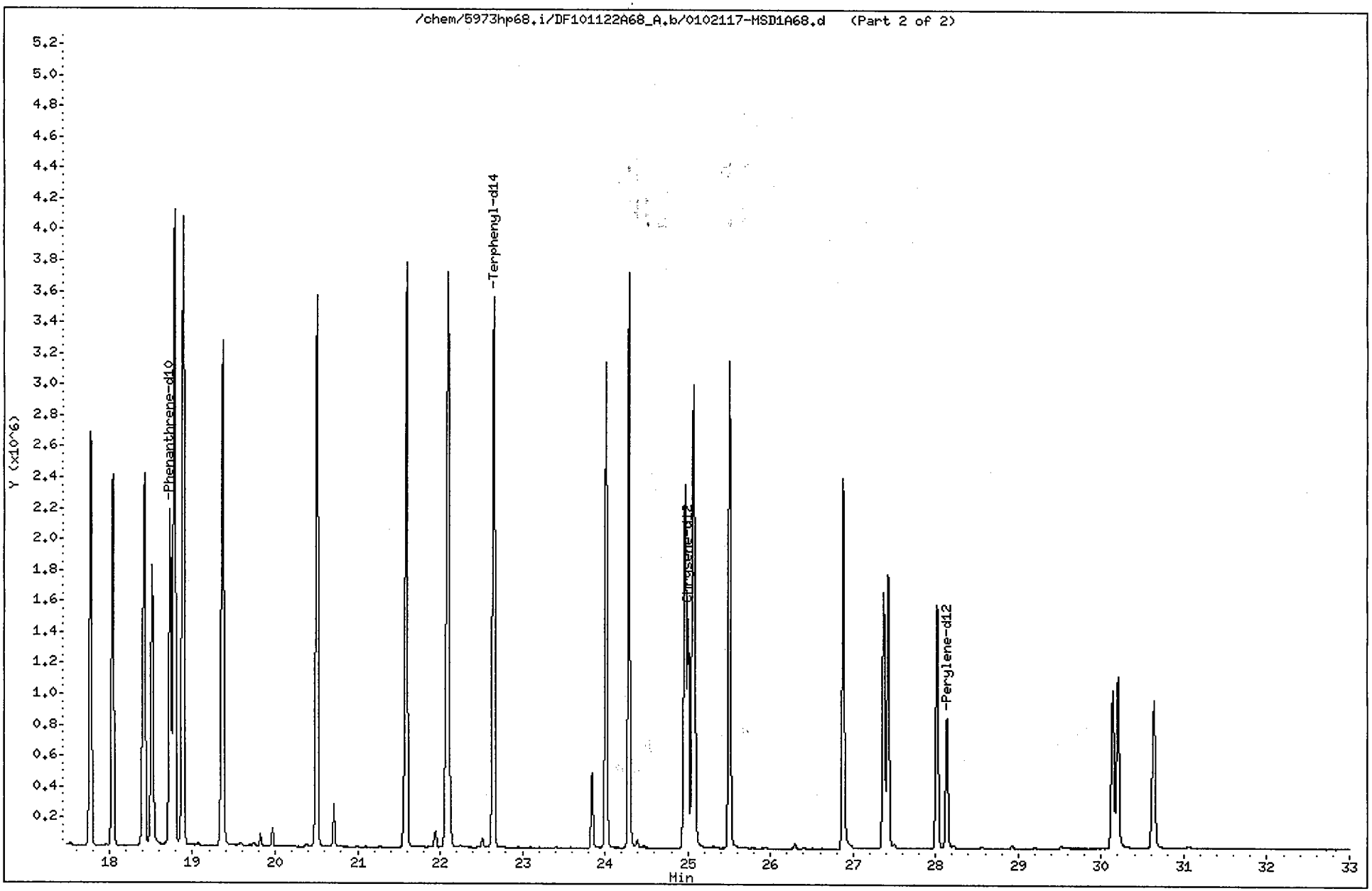
Data File: /chem/5973hp68.i/DF101122A68_A.b/0102117-MSD1A68.d
Date : 22-NOV-2010 15:21
Client ID: 13MW5MSD
Sample Info: 0102117-MSD1:OWS
Volume Injected (uL): 2.0
Column phase: RTX-5MS

Instrument: 5973hp68.i
Operator: OWS
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101122A68_A.b/0102117-MSD1A68.d
Date : 22-NOV-2010 15:21
Client ID: 13MW5MSD
Sample Info: 0102117-MSD1:OWS
Volume Injected (uL): 2.0
Column phase: RTX-5MS

Instrument: 5973hp68.i
Operator: OWS
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101122A68_A.b/0102117-MSD1A68.d
Report Date: 29-Nov-2010 11:34

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Data file : /chem/5973hp68.i/DF101122A68_A.b/0102117-MSD1A68.d
Lab Smp Id: 0102117-MSD1 Client Smp ID: 13MW5MSD
Inj Date : 22-NOV-2010 15:21
Operator : OWS Inst ID: 5973hp68.i
Smp Info : 0102117-MSD1:OWS
Misc Info : 13MW5MSD
Comment : 2008 MDLS SOIL/ 2007 WATER
Method : /chem/5973hp68.i/DF101122A68_A.b/8270CMASTERDODv5.m
Meth Date : 29-Nov-2010 11:34 byrd Quant Type: ISTD
Cal Date : 19-NOV-2010 07:31 Cal File: 0K19001-CAL6C68.d
Als bottle: 10 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: HWMU13A_A.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Vo	950.00000	Volume of sample extracted (mL)
Vi	2.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	FINAL (ug/L)	SIMILARITY
* 1 1,4-Dichlorobenzene-d4	152	8.346	8.346	(1.000)	626804	40.0000		
* 2 Naphthalene-d8	136	11.183	11.178	(1.000)	2385893	40.0000		
* 3 Acenaphthene-d10	164	15.302	15.291	(1.000)	1204283	40.0000		
* 4 Phenanthrene-d10	188	18.731	18.732	(1.000)	1706759	40.0000		
* 5 Chrysene-d12	240	25.009	24.998	(1.000)	902543	40.0000		
* 6 Perylene-d12	264	28.139	28.134	(1.000)	556349	40.0000		
129 3,3'-Dimethylbenzidine	212	23.844	23.844	(0.953)	293380	21.5604	11	9520

6/1/11

FORM 1 CLIENT SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

13MW5MSD

Lab Name: COMPUCHEM Method: 8270C-HWMU13A-B

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix: (soil/water) WATER Lab Sample ID: 0102117-MSD1

Sample wt/vol: 950 (g/mL) ML Lab File ID: 0102117-MSD1A68

Level: (low/med) LOW Date Received: 10/20/10

% Moisture: _____ decanted: (Y/N)___ Date Extracted:10/22/10

Concentrated Extract Volume: 1000(uL) Date Analyzed: 11/22/10

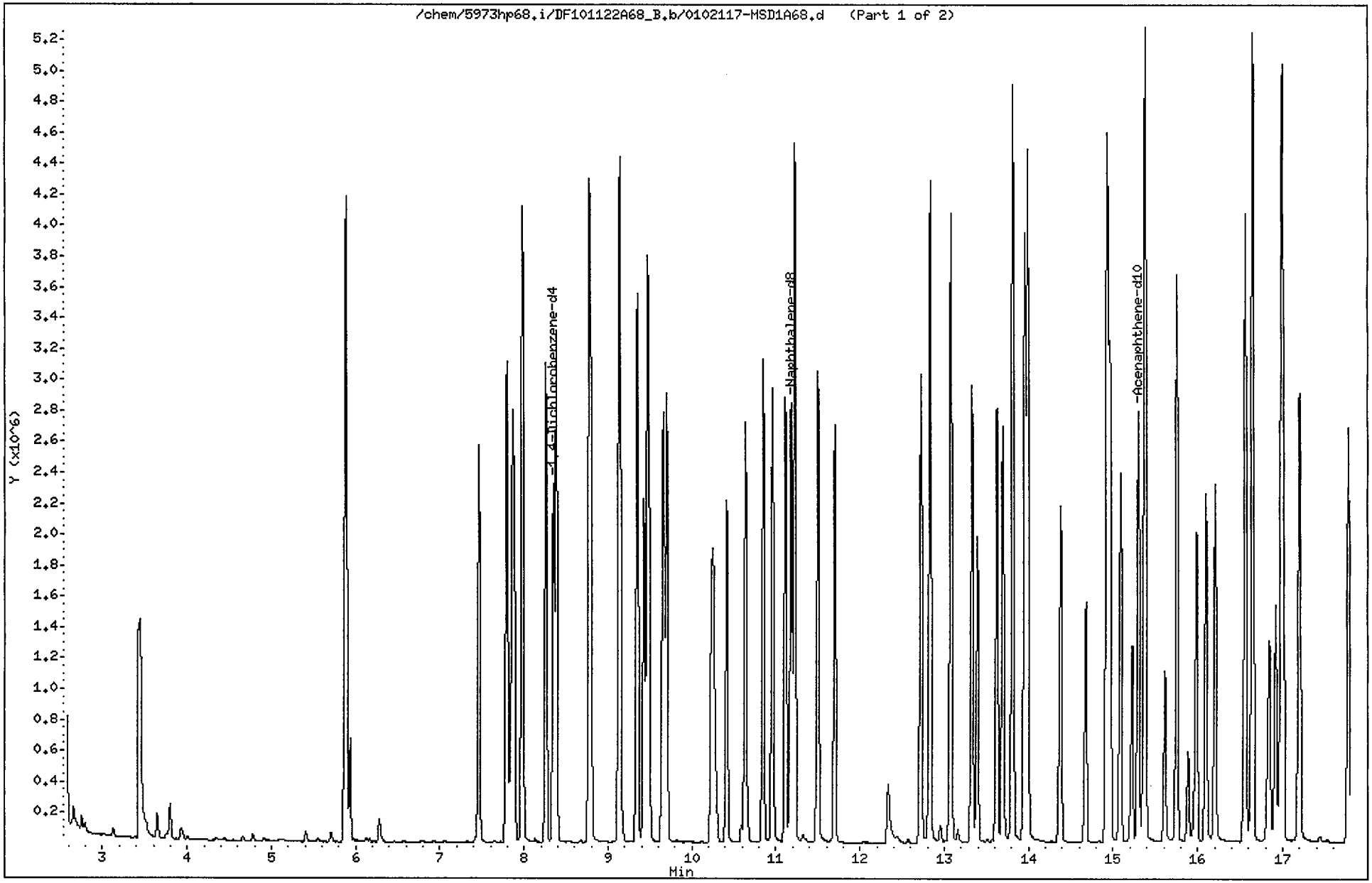
Injection Volume: 2.0(uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: ___

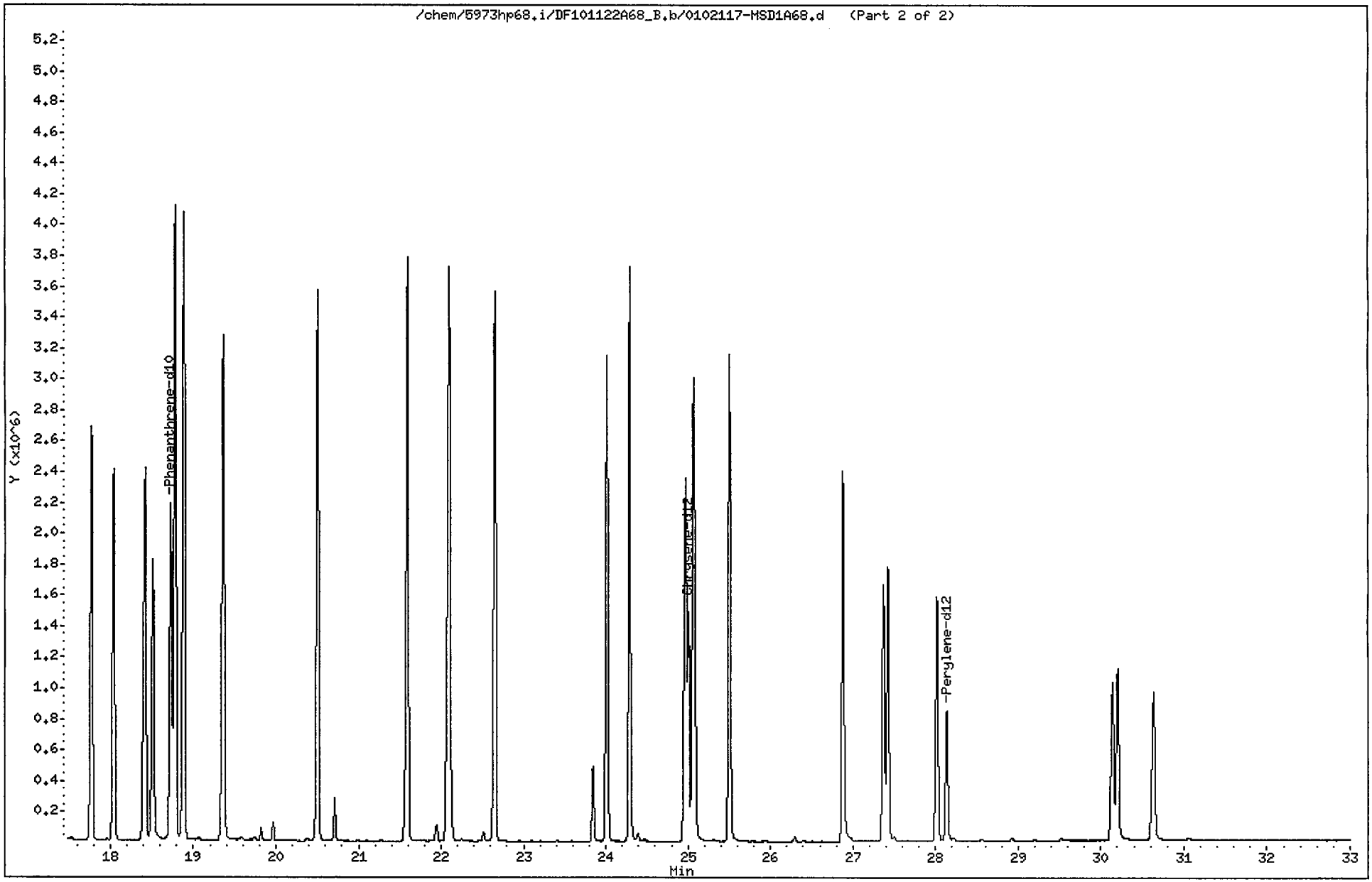
CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
98-86-2	Acetophenone	32	

Data File: /chem/5973hp68.i/DF101122A68_B.b/0102117-MSD1A68.d
Date : 22-NOV-2010 15:21
Client ID: 13MW5MSD
Sample Info: 0102117-MSD1:OWS
Volume Injected (uL): 2.0
Column phase: RTX-5MS

Instrument: 5973hp68.i
Operator: OWS
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101122A68_B.b/0102117-MSD1A68.d
Date : 22-NOV-2010 15:21
Client ID: 13MW5MSD
Instrument: 5973hp68.i
Sample Info: 0102117-MSD1:OWS
Volume Injected (uL): 2.0
Operator: OWS
Column phase: RTX-5MS
Column diameter: 0.32



Data File: /chem/5973hp68.i/DF101122A68_B.b/0102117-MSD1A68.d
Report Date: 29-Nov-2010 12:06

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Data file : /chem/5973hp68.i/DF101122A68_B.b/0102117-MSD1A68.d
Lab Smp Id: 0102117-MSD1 Client Smp ID: 13MW5MSD
Inj Date : 22-NOV-2010 15:21
Operator : OWS Inst ID: 5973hp68.i
Smp Info : 0102117-MSD1:OWS
Misc Info : 13MW5MSD
Comment : 2008 MDLS SOIL/ 2007 WATER
Method : /chem/5973hp68.i/DF101122A68_B.b/8270CMASTERDODv5.m
Meth Date : 29-Nov-2010 12:05 byrd Quant Type: ISTD
Cal Date : 19-NOV-2010 11:45 Cal File: 0K19001-CALCC68.d
Als bottle: 10 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: HWMU13A_B.sub
Target Version: 3.50
Processing Host: einstein

Concentration Formula: Amt * DF * Vt/(Vo * Vi) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Vo	950.00000	Volume of sample extracted (mL)
Vi	2.00000	Volume injected (uL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (NG)	CONCENTRATIONS FINAL (ug/L)	SIMILARITY
* 1 1,4-Dichlorobenzene-d4	152	8.346	8.346	(1.000)	626804	40.0000		
* 2 Naphthalene-d8	136	11.183	11.172	(1.000)	2385893	40.0000		
* 3 Acenaphthene-d10	164	15.302	15.296	(1.000)	1204283	40.0000		
* 4 Phenanthrene-d10	188	18.731	18.726	(1.000)	1706759	40.0000		
* 5 Chrysene-d12	240	25.009	24.998	(1.000)	902543	40.0000		
* 6 Perylene-d12	264	28.139	28.134	(1.000)	556349	40.0000		
33 Acetophenone	105	9.350	9.329	(0.836)	2089715	61.6092	32	9695

tn/29L

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Type I Data Package

Prepared for:

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

Project: RAAP - Radford, VA - HWMU13/Open Burning Ground
Water Samples
Collected on 10/18/10-10/19/10

SDG# RAD40

GROUP	SAMPLE NUMBERS
1217221	6117032-6117043

PA Cert. # 36-00037
NY Cert. # 10670
NJ Cert. # PA011
NC Cert. # 521
TX Cert. # T104704194-08A-TX

Through our technical processes and second person review of data, we have established that our data/deliverables are in compliance with the methods and project requirements unless otherwise noted or previously resolved with the client.

Authorized by: Dana M Kauffman **Date** 11/12/10

Dana M. Kauffman
Manager

Any questions or concerns you might have regarding this data package should be directed to your client representative, Barbara Weyandt at Ext. 1576.

Total Number of Pages 356

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Sample Reference List for SDG Number RAD40
with a Data Package Type of I
11200 - Draper Aden Associates, Inc.
Project: RAAP - Radford, VA - HWMU13/Open Burning Ground

Lab Sample Number	Lab Sample Code	Client Sample Description
6117032	13MW1	13MW1 Grab Groundwater Sample 2nd Semiannual 2010 Appendix IX Monitoring Event
6117033	13MW2	13MW2 Grab Groundwater Sample 2nd Semiannual 2010 Appendix IX Monitoring Event
6117034	13MW3	13MW3 Grab Groundwater Sample 2nd Semiannual 2010 Appendix IX Monitoring Event
6117035	13MW4	13MW4 Grab Groundwater Sample 2nd Semiannual 2010 Appendix IX Monitoring Event
6117036	13MWD	13MWDUP Grab Groundwater Sample 2nd Semiannual 2010 Appendix IX Monitoring Event
6117037	13MW5	13MW5 Unspiked Grab Groundwater Sample 2nd Semiannual 2010 Appendix IX Monitoring Event
6117038	13MW5	13MW5_Matrix_Spike Grab Groundwater Sample 2nd Semiannual 2010 Appendix IX Monitoring Event
6117039	13MW5	13MW5_Matrix_Spike_Dup Grab Groundwater Sample 2nd Semiannual 2010 Appendix IX Monitoring Event
6117040	13MW6	13MW6 Grab Groundwater Sample 2nd Semiannual 2010 Appendix IX Monitoring Event
6117041	13MW7	13MW7 Grab Groundwater Sample 2nd Semiannual 2010 Appendix IX Monitoring Event
6117042	13MT1	Trip_Blank_1 Water Sample 2nd Semiannual 2010 Appendix IX Monitoring Event
6117043	13MT2	Trip_Blank_2 Water Sample 2nd Semiannual 2010 Appendix IX Monitoring Event

acct#11200 Gp# 1217221 Barb Wagner JVE 9/21/2010

CHAIN OF CUSTODY RECORD Sample# 6117032-43

Laboratory: Lancaster Laboratories, 2425 New Holland Pike, Lancaster, PA, 17605-2425/ ~~Kay~~ Hower, Manager/ (717) 656-2300

Client: Draper Aden Associates Attn: 0 Address: 0 0 Phone: 0 Fax: 0 Fax: 0	Consultant: Draper Aden Associates Attn: Janet C. Frazier Address: 2206 South Main Street Blacksburg, Virginia 24060 Phone: (540) 552-0444 Fax: (540) 552-0291	Sample Site: RAAP, Radford, Virginia Location: Open Burning Ground (OBG)/HWMU13 Event: 2nd Semiannual 2010 Appendix IX Monitoring Event DAA JN: B03204-08 Lab JN:	Project Specific (PS) or Batch (B) QC: ~~Sample Collection~~ for Project Complete? YES Carrier: UPS 1Z-237-301-01-5878-3017 Tracking Number:		

Box 1: Matrix		Box 2: Preservative		Box 3: Filtered/Unfiltered	Box 4: Sample Type	Invoice
SW Surface Water	T Trip Blank	A HCl	E NaOH	F Filtered	G Grab	Copy to Consultant: YES
GW Groundwater	E Equipment Blank	B HNO_3	F ZnAc	U Unfiltered	C Composite	Bill: CLIENT OTHER
L Leachate	P Product	C H_2SO_4	G Other (Specify)	Box 5: Sample Container Type		Preserved and shipped on ice: YES
S Soil	O Other	D $Na_2S_2O_3$	H None	P Plastic V VOA AG Amber Glass CG Clear Glass		

Box 4 - Sample Type					G							
Box 3 - Filtered/Unfiltered					U							
Required pH of Sample					<2							
Box 2 - Preservative					A							
Box 5 - Sample Container Type					3-40 ml V							
Sample ID	Date: 2010	Time	Box 1: Matrix	Number of Bottles	8260B/5030B 25 ml Purge							
13MW1	10/18	1105	GW	3	X							
13MW2	10/18	1200	GW	3	X							
13MW3	10/18	0800	GW	3	X							
13MW4	10/18	0910	GW	3	X							
13MWDUP	10/19	0730	GW	3	X							
13MW5	10/19	0830	GW	3	X							
13MW6	10/18	1010	GW	3	X							
13MW7	10/19	0945	GW	3	X							
Trip Blank 1			GW	2	X							
Trip Blank 2			GW	2	X							

GENERAL NOTES:
1. Level 1 deliverable with EDD and pdf.
2. REPORT DL/QL and estimated results.
3. See attached target analyte list.

* Note New analytes added to list. JVE 10-2-2010

1 per day of sample collection. JVE 10-2-2010

Clients Special Instructions: Level 1 with edd. See attached target analyte list.

Received by lab in Good Condition ✓ Yes ____ No Custody Seal Intact ✓ Yes ____ No Temperature upon arrival 0.8°C Received on ice ✓ Yes ____ No
Describe problems, if any:

Sampler Name (Print): KEN CODDINGTON	Date: 10-18-10	#1 Relinquished by (Signature):	Date: 10-19-10	#2 Relinquished by (Signature):	Date:	Sample Storage Time Requested:
Sampler Signature:	Time: 0600	Company Name: DAA	Time: 1700	Company Name:	Time:	
Sampler Name (Print): Chris Branscome	Date: 10/18/10	#1 Received by (Signature):	Date:	#2 Received by (Signature):	Date: 10/20/10	30 DY5 ORG/6 MTHS INORG
Sampler Signature: Chris Branscome	Time: 0600	Company Name:	Time:	Company Name: LI	Time: 935	

7223 5429

JVE 10.2.2010

1/2

acct*11200
Cp*1217221
Sample*6117032-43

HWMU13
Radford Army Ammunition Plant
2nd Semiannual 2010 Monitoring Event
DAA JN: B03204-08

ANALYTICAL METHOD: 8260B/5030B 25 ml purge volume
TYPE METHOD: GCMS
CLASS: VOLATILE

NO.	PARAMETER	CAS RN	Permit QL (ug/l)
1.	1,1-Dichloroethene	75-35-4	
2.	1,2-Dichloroethane	107-06-2	
3.	Benzene	71-43-2	
4.	Benzyl Chloride	100-44-7	
5.	Bromomethane	74-83-9	
6.	Carbon tetrachloride	56-23-5	
7.	Chlorobenzene	108-90-7	
8.	Chloroform	67-66-3	
9.	Hexachloroethane	67-72-1	
10.	Methyl chloride	74-87-3	
11.	Methylene chloride	75-09-2	
12.	Naphthalene	91-20-3	
13.	Tetrachloroethene	127-18-4	
14.	Toluene (methyl benzene)	108-88-3	
15.	Trichloroethene	79-01-6	
16.	Vinyl chloride	75-01-4	
17.	1,1-Dichloroethane	75-34-3	
18.	1,1,1-Trichloroethane	71-55-6	
19.	Trichlorofluoromethane	75-69-4	

New! JCF 10-2-2010

25 ml purge
Update 2/1/2011

.p:\admin\divisions\envr\templates\bburg eteam temp\field events\raap\sample event set up\semi-annual events\hwmu-13\hwmu13-target analyte list gw (new) 2007 10.doc
Revised July 18, 2005 – JCF
Revised November, 2005 – new permit – JCF
Revised Oct 10, 2009
Revised September, 2010, new 8260B analytes - KPO

Lancaster Laboratories

Environmental Sample Administration
Receipt Documentation Log

Client/Project: Draper Aden

Date of Receipt: 10/20/10

Time of Receipt: 935

Source Code: 607

Unpacker Emp. No.: 2308

Shipping Container Sealed: (YES) NO

Custody Seal Present * : (YES) NO

* Custody seal was intact unless otherwise noted in the discrepancy section

Package: (Chilled) Not Chilled

Temperature of Shipping Containers							
Cooler #	Thermometer ID	Temperature (°C)	Temp Bottle (TB) or Surface Temp (ST)	Wet Ice (WI) or Dry Ice (DI) or Ice Packs (IP)	Ice Present? Y/N	Loose (L) Bagged Ice (B) or NA	Comments
1	042951	1.8°C	TB	WI	Y	B	
2	↓	0.8°C	↓	↓	↓	↓	
3							
4							
5							
6							

Number of Trip Blanks received NOT listed on chain of custody: 0

Paperwork Discrepancy/Unpacking Problems:

13MWDup time=920 and date=10/18/10, Trip blank 1 and 2 date=10/4/10 only received 3 vials for MW-11

Sample Administration Internal Chain of Custody			
Name	Date	Time	Reason for Transfer
[illegible]	10/20/10	1406	Unpacking to storage
Tammy Helsel	10/20/10	1445	Place in Storage or (Entry)
			Entry
			Entry

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GC/MS Volatiles pH Log

Batch: G102942AA

LLI#	pH	Date Checked	Initials/ Employee #	Comments
6117032	≤2	10/22/2010	HB/1996	38A
6117033	≤2	10/22/2010	HB/1996	38A
6117034	≤2	10/22/2010	HB/1996	38A
6117035	≤2	10/22/2010	HB/1996	38A
6117036	≤2	10/22/2010	HB/1996	38A
6117037	≤2	10/22/2010	HB/1996	38A
6117038	≤2	10/22/2010	HB/1996	38A MS
6117039	≤2	10/22/2010	HB/1996	38A MSD
6117038	≤2	10/22/2010	HB/1996	38B MS
6117039	≤2	10/22/2010	HB/1996	38B MSD
6117040	≤2	10/22/2010	HB/1996	38A
6117041	≤2	10/22/2010	HB/1996	38A
6117042	≤2	10/22/2010	HB/1996	38A
6117043	≤2	10/22/2010	HB/1996	38A

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01163 GC/MS VOA Water Prep

An undiluted aliquot of the water sample or a dilution of the sample is purged with an inert gas and the volatiles are collected on an adsorbent trap that is subsequently desorbed onto a gas chromatographic column.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 5030B, December 1996.

02898 EPA SW846/8260 (water-25ml) #1

The water sample is purged and the volatile compounds are collected on a sorbent trap that is subsequently desorbed onto the GC/MS system for chromatographic and mass spectral analysis.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 8260B, December 1996.

Lancaster Laboratories

ANALYTICAL RESULTS

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

Prepared for:

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

October 29, 2010

Project: RAAP - Radford, VA - HWMU13/Open Burning Ground

Submittal Date: 10/20/2010
Group Number: 1217221
SDG: RAD40
State of Sample Origin: VA

Client Sample Description	Lancaster Labs (LLI) #
13MW1 Grab Groundwater Sample	6117032
13MW2 Grab Groundwater Sample	6117033
13MW3 Grab Groundwater Sample	6117034
13MW4 Grab Groundwater Sample	6117035
13MWDUP Grab Groundwater Sample	6117036
13MW5 Unspiked Grab Groundwater Sample	6117037
13MW5_Matrix_Spike Grab Groundwater Sample	6117038
13MW5_Matrix_Spike_Dup Grab Groundwater Sample	6117039
13MW6 Grab Groundwater Sample	6117040
13MW7 Grab Groundwater Sample	6117041
Trip_Blank_1 Water Sample	6117042
Trip_Blank_2 Water Sample	6117043

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO	Draper Aden Associates, Inc.	Attn: Janet Frazier
1 COPY TO	Data Package Group	

Lancaster Laboratories, Inc.
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

Lancaster Laboratories

Questions? Contact your Client Services Representative
Barbara A Weyandt at (717) 656-2300 Ext. 1576

Respectfully Submitted,

Robin C. Runkle
Senior Specialist

RAD48 0008

Lancaster Laboratories, Inc.
2425 New Holland Pike
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Lancaster, PA 17605-2425
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Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	**BMQL**	Below Minimum Quantitation Level
N.D.	none detected	**MPN**	Most Probable Number
TNTC	Too Numerous To Count	**CP Units**	cobalt-chloroplatinate units
IU	International Units	**NTU**	nephelometric turbidity units
umhos/cm	micromhos/cm	**ng**	nanogram(s)
C	degrees Celsius	**F**	degrees Fahrenheit
meq	milliequivalents	**lb.**	pound(s)
g	gram(s)	**kg**	kilogram(s)
ug	microgram(s)	**mg**	milligram(s)
ml	milliliter(s)	**l**	liter(s)
m3	cubic meter(s)	**ul**	microliter(s)

< less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

> greater than

J estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

ppm parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.

ppb parts per billion

Dry weight basis Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers

A	TIC is a possible aldol-condensation product
B	Analyte was also detected in the blank
C	Pesticide result confirmed by GC/MS
D	Compound quantitated on a diluted sample
E	Concentration exceeds the calibration range of the instrument
N	Presumptive evidence of a compound (TICs only)
P	Concentration difference between primary and confirmation columns >25%
U	Compound was not detected
X,Y,Z	Defined in case narrative

Inorganic Qualifiers

B	Value is <CRDL, but ≥IDL
E	Estimated due to interference
M	Duplicate injection precision not met
N	Spike sample not within control limits
S	Method of standard additions (MSA) used for calculation
U	Compound was not detected
W	Post digestion spike out of control limits
*****	Duplicate analysis not within control limits
+	Correlation coefficient for MSA <0.995

Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

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Lancaster Laboratories

Sample Description: 13MW1 Grab Groundwater Sample
2nd Semiannual 2010 Appendix IX Monitoring Event
RAAP - Radford, VA - HWMU13/Open Burning Ground

LLI Sample # WW 6117032
LLI Group # 1217221
Account # 11200

Project Name: RAAP - Radford, VA - HWMU13/Open Burning Ground

Collected: 10/18/2010 11:05 by KC

Submitted: 10/20/2010 09:35
Reported: 10/29/2010 09:30

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

13MW1 SDG#: RAD40-01

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	SW-846 8260B 25mL purge		ug/l	ug/l	ug/l	
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Benzyl Chloride	100-44-7	N.D.	0.1	0.5	1
02898	Bromomethane	74-83-9	N.D.	0.1	0.5	1
02898	Carbon Tetrachloride	56-23-5	N.D.	0.1	1.0	1
02898	Chlorobenzene	108-90-7	N.D.	0.1	0.5	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	Chloromethane	74-87-3	N.D.	0.2	0.5	1
02898	1,1-Dichloroethane	75-34-3	N.D.	0.1	1.0	1
02898	1,2-Dichloroethane	107-06-2	N.D.	0.1	0.5	1
02898	1,1-Dichloroethene	75-35-4	N.D.	0.1	0.5	1
02898	Hexachloroethane	67-72-1	N.D.	0.1	0.5	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	1.0	1
02898	Naphthalene	91-20-3	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	1.0	1
02898	Toluene	108-88-3	N.D.	0.1	1.0	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	1.0	1
02898	Trichloroethene	79-01-6	N.D.	0.1	1.0	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	1.0	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	G102942AA	10/21/2010 20:34	Sara E Johnson	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G102942AA	10/21/2010 20:34	Sara E Johnson	1

RAD40 0010

*=This limit was used in the evaluation of the final result

Lancaster Laboratories, Inc.
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

Lancaster Laboratories

Sample Description: 13MW2 Grab Groundwater Sample
2nd Semiannual 2010 Appendix IX Monitoring Event
RAAP - Radford, VA - HWMU13/Open Burning Ground

LLI Sample # WW 6117033
LLI Group # 1217221
Account # 11200

Project Name: RAAP - Radford, VA - HWMU13/Open Burning Ground

Collected: 10/18/2010 12:00 by KC

Submitted: 10/20/2010 09:35
Reported: 10/29/2010 09:30

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

13MW2 SDG#: RAD40-02

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B 25mL purge**		ug/l	ug/l	ug/l	
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Benzyl Chloride	100-44-7	N.D.	0.1	0.5	1
02898	Bromomethane	74-83-9	N.D.	0.1	0.5	1
02898	Carbon Tetrachloride	56-23-5	N.D.	0.1	1.0	1
02898	Chlorobenzene	108-90-7	N.D.	0.1	0.5	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	Chloromethane	74-87-3	N.D.	0.2	0.5	1
02898	1,1-Dichloroethane	75-34-3	N.D.	0.1	1.0	1
02898	1,2-Dichloroethane	107-06-2	N.D.	0.1	0.5	1
02898	1,1-Dichloroethene	75-35-4	N.D.	0.1	0.5	1
02898	Hexachloroethane	67-72-1	N.D.	0.1	0.5	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	1.0	1
02898	Naphthalene	91-20-3	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	1.0	1
02898	Toluene	108-88-3	N.D.	0.1	1.0	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	1.0	1
02898	Trichloroethene	79-01-6	N.D.	0.1	1.0	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	1.0	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	G102942AA	10/21/2010 20:55	Sara E Johnson	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G102942AA	10/21/2010 20:55	Sara E Johnson	1

RAD40 0011

Lancaster Laboratories, Inc.
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

Sample Description: 13MW3 Grab Groundwater Sample
2nd Semiannual 2010 Appendix IX Monitoring Event
RAAP - Radford, VA - HWMU13/Open Burning Ground

LLI Sample # WW 6117034
LLI Group # 1217221
Account # 11200

Project Name: RAAP - Radford, VA - HWMU13/Open Burning Ground

Collected: 10/18/2010 08:00 by KC

Submitted: 10/20/2010 09:35
Reported: 10/29/2010 09:30

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

13MW3 SDG#: RAD40-03

CAT No.	Analysis Name	CAS Number	As Received Result		As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B 25mL purge**		**ug/l**		**ug/l**	**ug/l**	
02898	Benzene	71-43-2	N.D.		0.1	0.5	1
02898	Benzyl Chloride	100-44-7	N.D.		0.1	0.5	1
02898	Bromomethane	74-83-9	N.D.		0.1	0.5	1
02898	Carbon Tetrachloride	56-23-5	4.2		0.1	1.0	1
02898	Chlorobenzene	108-90-7	N.D.		0.1	0.5	1
02898	Chloroform	67-66-3	0.6		0.1	0.5	1
02898	Chloromethane	74-87-3	N.D.		0.2	0.5	1
02898	1,1-Dichloroethane	75-34-3	N.D.		0.1	1.0	1
02898	1,2-Dichloroethane	107-06-2	N.D.		0.1	0.5	1
02898	1,1-Dichloroethene	75-35-4	N.D.		0.1	0.5	1
02898	Hexachloroethane	67-72-1	N.D.		0.1	0.5	1
02898	Methylene Chloride	75-09-2	N.D.		0.2	1.0	1
02898	Naphthalene	91-20-3	N.D.		0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.		0.1	1.0	1
02898	Toluene	108-88-3	N.D.		0.1	1.0	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.		0.1	1.0	1
02898	Trichloroethene	79-01-6	0.6	J	0.1	1.0	1
02898	Trichlorofluoromethane	75-69-4	0.2	J	0.1	1.0	1
02898	Vinyl Chloride	75-01-4	N.D.		0.1	0.5	1

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	G102942AA	10/21/2010 21:17	Sara E Johnson	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G102942AA	10/21/2010 21:17	Sara E Johnson	1

RAD40 0012

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Lancaster Laboratories

Sample Description: 13MW4 Grab Groundwater Sample
2nd Semiannual 2010 Appendix IX Monitoring Event
RAAP - Radford, VA - HWMU13/Open Burning Ground

LLI Sample # WW 6117035
LLI Group # 1217221
Account # 11200

Project Name: RAAP - Radford, VA - HWMU13/Open Burning Ground

Collected: 10/18/2010 09:10 by KC

Submitted: 10/20/2010 09:35
Reported: 10/29/2010 09:30

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

13MW4 SDG#: RAD40-04

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B 25mL purge**		ug/l	ug/l	ug/l	
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Benzyl Chloride	100-44-7	N.D.	0.1	0.5	1
02898	Bromomethane	74-83-9	N.D.	0.1	0.5	1
02898	Carbon Tetrachloride	56-23-5	N.D.	0.1	1.0	1
02898	Chlorobenzene	108-90-7	N.D.	0.1	0.5	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	Chloromethane	74-87-3	N.D.	0.2	0.5	1
02898	1,1-Dichloroethane	75-34-3	N.D.	0.1	1.0	1
02898	1,2-Dichloroethane	107-06-2	N.D.	0.1	0.5	1
02898	1,1-Dichloroethene	75-35-4	N.D.	0.1	0.5	1
02898	Hexachloroethane	67-72-1	N.D.	0.1	0.5	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	1.0	1
02898	Naphthalene	91-20-3	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	1.0	1
02898	Toluene	108-88-3	N.D.	0.1	1.0	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	1.0	1
02898	Trichloroethene	79-01-6	2.7	0.1	1.0	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	1.0	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	G102942AA	10/21/2010 21:38	Sara E Johnson	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G102942AA	10/21/2010 21:38	Sara E Johnson	1

RAD40 0013

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Lancaster Laboratories

Sample Description: 13MWDUP Grab Groundwater Sample
2nd Semiannual 2010 Appendix IX Monitoring Event
RAAP - Radford, VA - HWMU13/Open Burning Ground

LLI Sample # WW 6117036
LLI Group # 1217221
Account # 11200

Project Name: RAAP - Radford, VA - HWMU13/Open Burning Ground

Collected: 10/19/2010 07:30 by KC

Submitted: 10/20/2010 09:35
Reported: 10/29/2010 09:30

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

13MWD SDG#: RAD40-05FD

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B 25mL purge**		ug/l	ug/l	ug/l	
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Benzyl Chloride	100-44-7	N.D.	0.1	0.5	1
02898	Bromomethane	74-83-9	N.D.	0.1	0.5	1
02898	Carbon Tetrachloride	56-23-5	N.D.	0.1	1.0	1
02898	Chlorobenzene	108-90-7	N.D.	0.1	0.5	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	Chloromethane	74-87-3	N.D.	0.2	0.5	1
02898	1,1-Dichloroethane	75-34-3	N.D.	0.1	1.0	1
02898	1,2-Dichloroethane	107-06-2	N.D.	0.1	0.5	1
02898	1,1-Dichloroethene	75-35-4	N.D.	0.1	0.5	1
02898	Hexachloroethane	67-72-1	N.D.	0.1	0.5	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	1.0	1
02898	Naphthalene	91-20-3	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	1.0	1
02898	Toluene	108-88-3	N.D.	0.1	1.0	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	1.0	1
02898	Trichloroethene	79-01-6	2.5	0.1	1.0	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	1.0	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	G102942AA	10/21/2010 22:00	Sara E Johnson	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G102942AA	10/21/2010 22:00	Sara E Johnson	1

RAD40 0014

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Lancaster Laboratories

Sample Description: 13MW5 Unspiked Grab Groundwater Sample
2nd Semiannual 2010 Appendix IX Monitoring Event
RAAP - Radford, VA - HWMU13/Open Burning Ground

LLI Sample # WW 6117037
LLI Group # 1217221
Account # 11200

Project Name: RAAP - Radford, VA - HWMU13/Open Burning Ground

Collected: 10/19/2010 08:30 by KC

Submitted: 10/20/2010 09:35
Reported: 10/29/2010 09:30

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

13MW5 SDG#: RAD40-06BKG

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B 25mL purge**		ug/l	ug/l	ug/l	
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Benzyl Chloride	100-44-7	N.D.	0.1	0.5	1
02898	Bromomethane	74-83-9	N.D.	0.1	0.5	1
02898	Carbon Tetrachloride	56-23-5	N.D.	0.1	1.0	1
02898	Chlorobenzene	108-90-7	N.D.	0.1	0.5	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	Chloromethane	74-87-3	N.D.	0.2	0.5	1
02898	1,1-Dichloroethane	75-34-3	N.D.	0.1	1.0	1
02898	1,2-Dichloroethane	107-06-2	N.D.	0.1	0.5	1
02898	1,1-Dichloroethene	75-35-4	N.D.	0.1	0.5	1
02898	Hexachloroethane	67-72-1	N.D.	0.1	0.5	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	1.0	1
02898	Naphthalene	91-20-3	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	1.0	1
02898	Toluene	108-88-3	N.D.	0.1	1.0	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	1.0	1
02898	Trichloroethene	79-01-6	N.D.	0.1	1.0	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	1.0	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	G102942AA	10/21/2010 22:22	Sara E Johnson	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G102942AA	10/21/2010 22:22	Sara E Johnson	1

RAD48 2015

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Lancaster Laboratories

Sample Description: 13MW5_Matrix_Spike Grab Groundwater Sample
2nd Semiannual 2010 Appendix IX Monitoring Event
RAAP - Radford, VA - HWMU13/Open Burning Ground

LLI Sample # WW 6117038
LLI Group # 1217221
Account # 11200

Project Name: RAAP - Radford, VA - HWMU13/Open Burning Ground

Collected: 10/19/2010 08:30 by KC

Submitted: 10/20/2010 09:35
Reported: 10/29/2010 09:30

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

13MW5 SDG#: RAD40-06MS

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	SW-846 8260B 25mL purge		ug/l	ug/l	ug/l	
02898	Benzene	71-43-2	5.1	0.1	0.5	1
02898	Benzyl Chloride	100-44-7	4.6	0.1	0.5	1
02898	Bromomethane	74-83-9	4.4	0.1	0.5	1
02898	Carbon Tetrachloride	56-23-5	5.5	0.1	1.0	1
02898	Chlorobenzene	108-90-7	5.1	0.1	0.5	1
02898	Chloroform	67-66-3	5.2	0.1	0.5	1
02898	Chloromethane	74-87-3	4.2	0.2	0.5	1
02898	1,1-Dichloroethane	75-34-3	5.2	0.1	1.0	1
02898	1,2-Dichloroethane	107-06-2	5.2	0.1	0.5	1
02898	1,1-Dichloroethene	75-35-4	5.1	0.1	0.5	1
02898	Hexachloroethane	67-72-1	4.6	0.1	0.5	1
02898	Methylene Chloride	75-09-2	4.8	0.2	1.0	1
02898	Naphthalene	91-20-3	5.0	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	5.2	0.1	1.0	1
02898	Toluene	108-88-3	5.2	0.1	1.0	1
02898	1,1,1-Trichloroethane	71-55-6	5.2	0.1	1.0	1
02898	Trichloroethene	79-01-6	5.3	0.1	1.0	1
02898	Trichlorofluoromethane	75-69-4	5.5	0.1	1.0	1
02898	Vinyl Chloride	75-01-4	4.7	0.1	0.5	1

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	G102942AA	10/21/2010 22:43	Sara E Johnson	1
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	G102942AA	10/21/2010 23:26	Sara E Johnson	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G102942AA	10/21/2010 22:43	Sara E Johnson	1
01163	GC/MS VOA Water Prep	SW-846 5030B	2	G102942AA	10/21/2010 23:26	Sara E Johnson	1

RAD40 0016

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Lancaster Laboratories

Sample Description: 13MW5_Matrix_Spike_Dup Grab Groundwater Sample
2nd Semiannual 2010 Appendix IX Monitoring Event
RAAP - Radford, VA - HWMU13/Open Burning Ground

LLI Sample # WW 6117039
LLI Group # 1217221
Account # 11200

Project Name: RAAP - Radford, VA - HWMU13/Open Burning Ground

Collected: 10/19/2010 08:30 by KC

Submitted: 10/20/2010 09:35
Reported: 10/29/2010 09:30

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

13MW5 SDG#: RAD40-06MSD

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	SW-846 8260B 25mL purge		ug/l	ug/l	ug/l	
02898	Benzene	71-43-2	5.4	0.1	0.5	1
02898	Benzyl Chloride	100-44-7	4.9	0.1	0.5	1
02898	Bromomethane	74-83-9	4.6	0.1	0.5	1
02898	Carbon Tetrachloride	56-23-5	5.8	0.1	1.0	1
02898	Chlorobenzene	108-90-7	5.4	0.1	0.5	1
02898	Chloroform	67-66-3	5.5	0.1	0.5	1
02898	Chloromethane	74-87-3	4.4	0.2	0.5	1
02898	1,1-Dichloroethane	75-34-3	5.5	0.1	1.0	1
02898	1,2-Dichloroethane	107-06-2	5.5	0.1	0.5	1
02898	1,1-Dichloroethene	75-35-4	5.4	0.1	0.5	1
02898	Hexachloroethane	67-72-1	4.6	0.1	0.5	1
02898	Methylene Chloride	75-09-2	5.1	0.2	1.0	1
02898	Naphthalene	91-20-3	5.3	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	5.6	0.1	1.0	1
02898	Toluene	108-88-3	5.5	0.1	1.0	1
02898	1,1,1-Trichloroethane	71-55-6	5.5	0.1	1.0	1
02898	Trichloroethene	79-01-6	5.6	0.1	1.0	1
02898	Trichlorofluoromethane	75-69-4	5.7	0.1	1.0	1
02898	Vinyl Chloride	75-01-4	4.9	0.1	0.5	1

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	G102942AA	10/21/2010 23:05	Sara E Johnson	1
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	G102942AA	10/21/2010 23:47	Sara E Johnson	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G102942AA	10/21/2010 23:05	Sara E Johnson	1
01163	GC/MS VOA Water Prep	SW-846 5030B	2	G102942AA	10/21/2010 23:47	Sara E Johnson	1

RAD40 0017

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Lancaster Laboratories

Sample Description: 13MW6 Grab Groundwater Sample
2nd Semiannual 2010 Appendix IX Monitoring Event
RAAP - Radford, VA - HWMU13/Open Burning Ground

LLI Sample # WW 6117040
LLI Group # 1217221
Account # 11200

Project Name: RAAP - Radford, VA - HWMU13/Open Burning Ground

Collected: 10/18/2010 10:10 by KC

Submitted: 10/20/2010 09:35
Reported: 10/29/2010 09:30

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

13MW6 SDG#: RAD40-07

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B 25mL purge**		ug/l	ug/l	ug/l	
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Benzyl Chloride	100-44-7	N.D.	0.1	0.5	1
02898	Bromomethane	74-83-9	N.D.	0.1	0.5	1
02898	Carbon Tetrachloride	56-23-5	N.D.	0.1	1.0	1
02898	Chlorobenzene	108-90-7	N.D.	0.1	0.5	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	Chloromethane	74-87-3	N.D.	0.2	0.5	1
02898	1,1-Dichloroethane	75-34-3	N.D.	0.1	1.0	1
02898	1,2-Dichloroethane	107-06-2	N.D.	0.1	0.5	1
02898	1,1-Dichloroethene	75-35-4	N.D.	0.1	0.5	1
02898	Hexachloroethane	67-72-1	N.D.	0.1	0.5	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	1.0	1
02898	Naphthalene	91-20-3	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	1.0	1
02898	Toluene	108-88-3	N.D.	0.1	1.0	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	1.0	1
02898	Trichloroethene	79-01-6	N.D.	0.1	1.0	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	1.0	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	G102942AA	10/22/2010 00:08	Sara E Johnson	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G102942AA	10/22/2010 00:08	Sara E Johnson	1

RAD40 0018

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Lancaster Laboratories

Sample Description: 13MW7 Grab Groundwater Sample
2nd Semiannual 2010 Appendix IX Monitoring Event
RAAP - Radford, VA - HWMU13/Open Burning Ground

LLI Sample # WW 6117041
LLI Group # 1217221
Account # 11200

Project Name: RAAP - Radford, VA - HWMU13/Open Burning Ground

Collected: 10/19/2010 09:45 by KC

Submitted: 10/20/2010 09:35
Reported: 10/29/2010 09:30

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

13MW7 SDG#: RAD40-08

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Benzyl Chloride	100-44-7	N.D.	0.1	0.5	1
02898	Bromomethane	74-83-9	N.D.	0.1	0.5	1
02898	Carbon Tetrachloride	56-23-5	N.D.	0.1	1.0	1
02898	Chlorobenzene	108-90-7	N.D.	0.1	0.5	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	Chloromethane	74-87-3	N.D.	0.2	0.5	1
02898	1,1-Dichloroethane	75-34-3	N.D.	0.1	1.0	1
02898	1,2-Dichloroethane	107-06-2	N.D.	0.1	0.5	1
02898	1,1-Dichloroethene	75-35-4	N.D.	0.1	0.5	1
02898	Hexachloroethane	67-72-1	N.D.	0.1	0.5	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	1.0	1
02898	Naphthalene	91-20-3	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	0.1 J	0.1	1.0	1
02898	Toluene	108-88-3	N.D.	0.1	1.0	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	1.0	1
02898	Trichloroethene	79-01-6	1.4	0.1	1.0	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	1.0	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	G102942AA	10/22/2010 00:30	Sara E Johnson	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G102942AA	10/22/2010 00:30	Sara E Johnson	1

RAD40 0019

Lancaster Laboratories, Inc.
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

Sample Description: Trip_Blank_1 Water Sample
2nd Semiannual 2010 Appendix IX Monitoring Event
RAAP - Radford, VA - HWMU13/Open Burning Ground

LLI Sample # WW 6117042
LLI Group # 1217221
Account # 11200

Project Name: RAAP - Radford, VA - HWMU13/Open Burning Ground

Collected: 10/04/2010

Submitted: 10/20/2010 09:35
Reported: 10/29/2010 09:30

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

13MT1 SDG#: RAD40-09TB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B 25mL purge**		ug/l	ug/l	ug/l	
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Benzyl Chloride	100-44-7	N.D.	0.1	0.5	1
02898	Bromomethane	74-83-9	N.D.	0.1	0.5	1
02898	Carbon Tetrachloride	56-23-5	N.D.	0.1	1.0	1
02898	Chlorobenzene	108-90-7	N.D.	0.1	0.5	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	Chloromethane	74-87-3	N.D.	0.2	0.5	1
02898	1,1-Dichloroethane	75-34-3	N.D.	0.1	1.0	1
02898	1,2-Dichloroethane	107-06-2	N.D.	0.1	0.5	1
02898	1,1-Dichloroethene	75-35-4	N.D.	0.1	0.5	1
02898	Hexachloroethane	67-72-1	N.D.	0.1	0.5	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	1.0	1
02898	Naphthalene	91-20-3	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	1.0	1
02898	Toluene	108-88-3	N.D.	0.1	1.0	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	1.0	1
02898	Trichloroethene	79-01-6	N.D.	0.1	1.0	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	1.0	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	G102942AA	10/22/2010 00:51	Sara E Johnson	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G102942AA	10/22/2010 00:51	Sara E Johnson	1

RAD40 0020

Lancaster Laboratories, Inc.
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

Sample Description: Trip_Blank_2 Water Sample
2nd Semiannual 2010 Appendix IX Monitoring Event
RAAP - Radford, VA - HWMU13/Open Burning Ground

LLI Sample # WW 6117043
LLI Group # 1217221
Account # 11200

Project Name: RAAP - Radford, VA - HWMU13/Open Burning Ground

Collected: 10/04/2010

Submitted: 10/20/2010 09:35
Reported: 10/29/2010 09:30

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

13MT2 SDG#: RAD40-10TB*

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	SW-846 8260B 25mL purge		ug/l	ug/l	ug/l	
02898	Benzene	71-43-2	N.D.	0.1	0.5	1
02898	Benzyl Chloride	100-44-7	N.D.	0.1	0.5	1
02898	Bromomethane	74-83-9	N.D.	0.1	0.5	1
02898	Carbon Tetrachloride	56-23-5	N.D.	0.1	1.0	1
02898	Chlorobenzene	108-90-7	N.D.	0.1	0.5	1
02898	Chloroform	67-66-3	N.D.	0.1	0.5	1
02898	Chloromethane	74-87-3	N.D.	0.2	0.5	1
02898	1,1-Dichloroethane	75-34-3	N.D.	0.1	1.0	1
02898	1,2-Dichloroethane	107-06-2	N.D.	0.1	0.5	1
02898	1,1-Dichloroethene	75-35-4	N.D.	0.1	0.5	1
02898	Hexachloroethane	67-72-1	N.D.	0.1	0.5	1
02898	Methylene Chloride	75-09-2	N.D.	0.2	1.0	1
02898	Naphthalene	91-20-3	N.D.	0.1	0.5	1
02898	Tetrachloroethene	127-18-4	N.D.	0.1	1.0	1
02898	Toluene	108-88-3	N.D.	0.1	1.0	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	1.0	1
02898	Trichloroethene	79-01-6	N.D.	0.1	1.0	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	1.0	1
02898	Vinyl Chloride	75-01-4	N.D.	0.1	0.5	1

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	G102942AA	10/22/2010 01:12	Sara E Johnson	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G102942AA	10/22/2010 01:12	Sara E Johnson	1

RAD40 0021

Lancaster Laboratories, Inc.
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

*=This limit was used in the evaluation of the final result

Volatiles by GC/MS Data

Case Narrative
Conformance/Nonconformance Summary

CASE NARRATIVE
Client: Draper Aden Associates, Inc.
SDG#: RAD40

LANCASTER LABORATORIES
VOLATILES BY GC/MS

SAMPLE NUMBERS:

		Matrix	
LL #'s	Sample Code	Water	Comments
6117032	13MW1	X	
6117033	13MW2	X	
6117034	13MW3	X	
6117035	13MW4	X	
6117036	13MWD	X	
6117037	13MW5	X	Unspiked
6117038	13MW5MS	X	Matrix Spike
6117039	13MW5MSD	X	Matrix Spike Dup
6117038	13MW5MS1	X	Matrix Spike
6117039	13MW5MSD1	X	Matrix Spike Dup
6117040	13MW6	X	
6117041	13MW7	X	
6117042	13MT1	X	Client Blank
6117043	13MT2	X	Client Blank

LABORATORY SUBMITTED QC:

VBLKG71	VBLKG71	X	Method Blank
LCS1G71	LCS1G71	X	Lab Control Sample
LCSG71	LCSG71	X	Lab Control Sample

SAMPLE PREPARATION:

No sample preparation was necessary for the VOA fraction.

ANALYSIS:

No problems were encountered during the analysis of these samples.

RAD40 5824

QUALITY CONTROL and NONCONFORMANCE SUMMARY:

Please note that US EPA Methods for organic compounds do not require action by the laboratory based on out-of-specification MS/MSD results.

All QC is within specifications.

DATA INTERPRETATION:

No further interpretation is necessary for the data submitted.

Case Narrative reviewed and approved by:

Date 11/12/10

Dana M. Kauffman
Manager, Data Deliverables

Lancaster Laboratories ♦ 2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425
♦ Phone: 717-656-2300 ♦ Fax: 717-656-2681 ♦ http:// www.LancasterLabs.com

Quality Control and Calibration Summary Forms

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKG71

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: VBLKG71

Sample wt/vol: 25.00(g/mL) mL Lab File ID: HP16334.i/10oct21b.b/gc21b51.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 10/21/10

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)	MDL ug/L	Q
75-71-8	Dichlorodifluoromethane		0.1	U
115-10-6	Dimethyl ether		0.1	U
74-87-3	Chloromethane		0.2	U
75-01-4	Vinyl Chloride		0.1	U
106-99-0	1,3-Butadiene		0.1	U
74-83-9	Bromomethane		0.1	U
75-00-3	Chloroethane		0.1	U
75-43-4	Dichlorofluoromethane		0.2	U
75-69-4	Trichlorofluoromethane		0.1	U
60-29-7	Ethyl Ether		0.1	U
354-23-4	Freon 123a		0.2	U
107-02-8	Acrolein		5.0	U
75-35-4	1,1-Dichloroethene		0.1	U
76-13-1	Freon 113		0.2	U
67-64-1	Acetone		3.0	U
74-88-4	Methyl Iodide		0.1	U
75-15-0	Carbon Disulfide		0.4	U
75-05-8	Acetonitrile		7.0	U
107-05-1	Allyl Chloride		0.1	U
79-20-9	Methyl Acetate		0.3	U
75-09-2	Methylene Chloride		0.2	U
540-59-0	1,2-Dichloroethene (Total)		0.1	U
75-65-0	t-Butyl Alcohol		4.0	U
107-13-1	Acrylonitrile		1.0	U
1634-04-4	Methyl Tertiary Butyl Ether		0.1	U
156-60-5	trans-1,2-Dichloroethene		0.1	U
110-54-3	n-Hexane		0.1	U
75-34-3	1,1-Dichloroethane		0.1	U
108-05-4	Vinyl Acetate		0.2	U
108-20-3	di-Isopropyl Ether		0.1	U

RAD48 0827

FORM I VOA

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKG71

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: VBLKG71

Sample wt/vol: 25.00(g/mL) mL Lab File ID: HP16334.i/10oct21b.b/gc21b51.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 10/21/10

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)	MDL ug/L	Q
126-99-8	2-Chloro-1,3-Butadiene		0.1	U
637-92-3	Ethyl t-Butyl Ether		0.1	U
156-59-2	cis-1,2-Dichloroethene		0.1	U
594-20-7	2,2-Dichloropropane		0.1	U
78-93-3	2-Butanone		1.0	U
107-12-0	Propionitrile		2.0	U
126-98-7	Methacrylonitrile		1.0	U
74-97-5	Bromochloromethane		0.1	U
109-99-9	Tetrahydrofuran		2.0	U
67-66-3	Chloroform		0.1	U
71-55-6	1,1,1-Trichloroethane		0.1	U
110-82-7	Cyclohexane		0.1	U
563-58-6	1,1-Dichloropropene		0.1	U
56-23-5	Carbon Tetrachloride		0.1	U
78-83-1	Isobutyl Alcohol		10	U
71-43-2	Benzene		0.1	U
107-06-2	1,2-Dichloroethane		0.1	U
994-05-8	t-Amyl Methyl Ether		0.1	U
142-82-5	n-Heptane		0.2	U
71-36-3	n-Butanol		20	U
79-01-6	Trichloroethene		0.1	U
108-87-2	Methylcyclohexane		0.1	U
78-87-5	1,2-Dichloropropane		0.1	U
80-62-6	Methyl Methacrylate		0.1	U
74-95-3	Dibromomethane		0.1	U
123-91-1	1,4-Dioxane		20	U
75-27-4	Bromodichloromethane		0.1	U
79-46-9	2-Nitropropane		1.0	U
110-75-8	2-Chloroethyl Vinyl Ether		0.1	U
10061-01-5	cis-1,3-Dichloropropene		0.1	U

RAD48 0028

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKG71

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: VBLKG71

Sample wt/vol: 25.00(g/mL) mL Lab File ID: HP16334.i/10oct21b.b/gc21b51.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 10/21/10

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)	MDL ug/L	Q
108-10-1	4-Methyl-2-Pentanone		1.0	U
108-88-3	Toluene		0.1	U
10061-02-6	trans-1,3-Dichloropropene		0.1	U
97-63-2	Ethyl Methacrylate		0.1	U
79-00-5	1,1,2-Trichloroethane		0.1	U
127-18-4	Tetrachloroethene		0.1	U
142-28-9	1,3-Dichloropropane		0.1	U
591-78-6	2-Hexanone		1.0	U
124-48-1	Dibromochloromethane		0.1	U
106-93-4	1,2-Dibromoethane		0.1	U
108-90-7	Chlorobenzene		0.1	U
630-20-6	1,1,1,2-Tetrachloroethane		0.1	U
100-41-4	Ethylbenzene		0.1	U
1330-20-7	Xylene (Total)		0.1	U
179601-23-1	m+p-Xylene		0.1	U
95-47-6	o-Xylene		0.1	U
100-42-5	Styrene		0.1	U
75-25-2	Bromoform		0.1	U
98-82-8	Isopropylbenzene		0.1	U
1476-11-5	cis-1,4-Dichloro-2-Butene		0.4	U
108-94-1	Cyclohexanone		5.0	U
79-34-5	1,1,2,2-Tetrachloroethane		0.1	U
108-86-1	Bromobenzene		0.1	U
110-57-6	trans-1,4-Dichloro-2-Butene		1.0	U
96-18-4	1,2,3-Trichloropropane		0.3	U
103-65-1	n-Propylbenzene		0.1	U
95-49-8	2-Chlorotoluene		0.1	U
108-67-8	1,3,5-Trimethylbenzene		0.1	U
106-43-4	4-Chlorotoluene		0.1	U
98-06-6	tert-Butylbenzene		0.1	U

RAD48 0029

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKG71

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: VBLKG71

Sample wt/vol: 25.00(g/mL) mL Lab File ID: HP16334.i/10oct21b.b/gc21b51.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 10/21/10

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)	MDL ug/L	Q
76-01-7	Pentachloroethane		0.2	U
95-63-6	1,2,4-Trimethylbenzene		0.1	U
135-98-8	sec-Butylbenzene		0.1	U
99-87-6	p-Isopropyltoluene		0.1	U
541-73-1	1,3-Dichlorobenzene		0.1	U
106-46-7	1,4-Dichlorobenzene		0.1	U
526-73-8	1,2,3-Trimethylbenzene		0.1	U
100-44-7	Benzyl Chloride		0.1	U
104-51-8	n-Butylbenzene		0.1	U
95-50-1	1,2-Dichlorobenzene		0.1	U
67-72-1	Hexachloroethane		0.1	U
96-12-8	1,2-Dibromo-3-Chloropropane		0.2	U
120-82-1	1,2,4-Trichlorobenzene		0.1	U
87-68-3	Hexachlorobutadiene		0.1	U
91-20-3	Naphthalene		0.1	U
87-61-6	1,2,3-Trichlorobenzene		0.1	U

RAD48 0038

2A

WATER VOLATILE SURROGATE RECOVERY

Lab Name: Lancaster Laboratories Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: RAD40

	LAB SAMPLE ID	S1 (DBF) #	S2 (DCA) #	S3 (TOL) #	S4 (BFB) #	TOT OUT
01	6117032	107	102	99	95	0
02	6117033	108	103	99	94	0
03	6117034	108	102	99	94	0
04	6117035	108	102	99	94	0
05	6117036	109	103	99	93	0
06	6117037	108	102	98	94	0
07	6117038MS	106	101	101	98	0
08	6117039MSD	107	99	101	99	0
09	6117038MS1	106	102	102	99	0
10	6117039MSD1	106	102	102	97	0
11	6117040	107	101	99	95	0
12	6117041	108	102	99	95	0
13	6117042	108	102	100	94	0
14	6117043	108	100	99	94	0
15	VBLKG71	108	103	99	95	0
16	LCS1G71	107	102	102	98	0
17	LCSG71	106	100	100	99	0

	QC LIMITS
S1 (DBF) = Dibromofluoromethane	(77-114)
S2 (DCA) = 1,2-Dichloroethane-d4	(74-113)
S3 (TOL) = Toluene-d8	(77-110)
S4 (BFB) = 4-Bromofluorobenzene	(78-110)

Column to be used to flag recovery values

* values outside of QC limits

D sample diluted, values outside of QC limits

Lancaster Laboratories, Inc.
GC/MS Volatiles Matrix Spike/Spike Duplicate Recoveries

Unspiked: gc21s56.d
13MW5 6117037
Method: SW-846 8260B (25ML)
Instrument: HP16334

Matrix Spike: gc21s57.d
13MW5MS 6117038
Matrix/Level: WL
Dilution Factor: 1.00

Spike Duplicate: gc21s58.d
13MW5MSD 6117039
Batch: G102942AA

COMPOUND NAME	MS SPIKE	MSD SPIKE	US CONC UG/L	MS CONC UG/L	MSD CONC UG/L	MS REC %	MSD REC %	Range LOWER-UPPER	INSPEC	RPD %	RPD MAX
Chloromethane	5.00	5.00	ND	4.20	4.42	84	88	55-152	YES	5	30
Vinyl Chloride	5.00	5.00	ND	4.67	4.89	93	98	57-150	YES	4	30
Bromomethane	5.00	5.00	ND	4.44	4.61	89	92	66-137	YES	4	30
Trichlorofluoromethane	5.00	5.00	ND	5.53	5.67	111	113	81-149	YES	2	30
1,1-Dichloroethene	5.00	5.00	ND	5.08	5.42	102	108	88-137	YES	7	30
Methylene Chloride	5.00	5.00	ND	4.81	5.07	96	101	84-122	YES	5	30
1,1-Dichloroethane	5.00	5.00	ND	5.17	5.49	103	110	89-128	YES	6	30
Chloroform	5.00	5.00	ND	5.15	5.49	103	110	86-136	YES	6	30
1,1,1-Trichloroethane	5.00	5.00	ND	5.15	5.46	103	109	81-152	YES	6	30
Carbon Tetrachloride	5.00	5.00	ND	5.48	5.82	110	116	86-152	YES	6	30
Benzene	5.00	5.00	ND	5.12	5.44	102	109	87-126	YES	6	30
1,2-Dichloroethane	5.00	5.00	ND	5.20	5.52	104	110	83-143	YES	6	30
Trichloroethene	5.00	5.00	ND	5.26	5.56	105	111	85-131	YES	5	30
Toluene	5.00	5.00	ND	5.16	5.49	103	110	83-127	YES	6	30
Tetrachloroethene	5.00	5.00	ND	5.24	5.56	105	111	86-129	YES	6	30
Chlorobenzene	5.00	5.00	ND	5.12	5.42	102	108	87-120	YES	6	30
Benzyl Chloride	5.00	5.00	ND	4.56	4.93	91	99	62-125	YES	8	30
Naphthalene	5.00	5.00	ND	4.96	5.29	99	106	55-132	YES	6	30

N/C = Could not calculate

Lab Chronicle: _____ Ent. by _____

RAD40 8832

_____ Ver. by _____

Lancaster Laboratories, Inc.
GC/MS Volatiles Matrix Spike/Spike Duplicate Recoveries

Unspiked: gc21s56.d
13MW5 6117037
Method: SW-846 8260B (25ML)
Instrument: HP16334

Matrix Spike: gc21s59.d
13MW5MS1 6117038
Matrix/Level: WL
Dilution Factor: 1.00

Spike Duplicate: gc21s60.d
13MW5MSD1 6117039
Batch: G102942AA

COMPOUND NAME	MS SPIKE	MSD SPIKE	US CONC UG/L	MS CONC UG/L	MSD CONC UG/L	MS REC %	MSD REC %	Range LOWER-UPPER	INSPEC	RPD %	RPD MAX
Hexachloroethane	5.00	5.00	ND	4.62	4.59	92	92	70-130	YES	0	30

N/C = Could not calculate

Lab Chronicle: _____ Ent. by 8833

_____ Ver. by _____

_____

Lancaster Laboratories, Inc.
GC/MS Volatiles Laboratory Control Sample Recovery

File: gc21l01.d
Inst: HP16334
Dilution Factor: 1.0

Injected: 10/21/10 at 19:31
Sample: LCSG71

Method: SW-846 8260B (25ML)
Matrix/Level: WL
Batch: G102942AA

COMPOUND NAME	SPIKE LEVEL	LCS CONC UG/L	LCS REC %	Range LOWER-UPPER	INSPEC
Dichlorodifluoromethane	5.00	3.32	66	39-120	YES
Chloromethane	5.00	4.01	80	55-135	YES
Vinyl Chloride	5.00	4.25	85	55-126	YES
1,3-Butadiene	5.00	3.51	70	44-188	YES
Bromomethane	5.00	4.21	84	66-124	YES
Chloroethane	5.00	4.21	84	67-124	YES
Dichlorofluoromethane	5.00	4.95	99	76-131	YES
Trichlorofluoromethane	5.00	4.97	99	71-126	YES
Ethyl Ether	5.00	5.08	102	63-121	YES
Freon 123a	5.00	5.16	103	78-120	YES
Acrolein	37.50	25.26	67	32-129	YES
1,1-Dichloroethene	5.00	4.57	91	80-123	YES
Freon 113	5.00	4.86	97	78-132	YES
Acetone	37.50	35.61	95	74-137	YES
Methyl Iodide	5.00	4.75	95	71-120	YES
Carbon Disulfide	5.00	4.74	95	73-133	YES
Allyl Chloride	5.00	4.58	92	74-121	YES
Methyl Acetate	5.00	4.97	99	76-120	YES
Methylene Chloride	5.00	4.66	93	80-120	YES
t-Butyl Alcohol	50.00	55.25	111	61-127	YES
Acrylonitrile	25.00	24.02	96	76-135	YES
trans-1,2-Dichloroethene	5.00	4.78	96	80-120	YES
1,2-Dichloroethene (Total)	10.00	9.55	95	80-120	YES
Methyl Tertiary Butyl Ether	5.00	4.59	92	73-120	YES
n-Hexane	5.00	4.49	90	70-120	YES
1,1-Dichloroethane	5.00	4.75	95	80-120	YES
di-Isopropyl Ether	5.00	4.80	96	80-120	YES
2-Chloro-1,3-Butadiene	5.00	5.06	101	80-127	YES
Ethyl t-Butyl Ether	5.00	4.49	90	72-120	YES
2,2-Dichloropropane	5.00	4.75	95	75-122	YES
cis-1,2-Dichloroethene	5.00	4.77	95	80-120	YES
2-Butanone	37.50	35.05	93	71-149	YES
Propionitrile	37.50	34.00	91	76-133	YES
Methacrylonitrile	37.50	32.30	86	75-134	YES
Bromochloromethane	5.00	4.84	97	80-120	YES
Tetrahydrofuran	25.00	21.60	86	77-128	YES
Chloroform	5.00	4.92	98	80-120	YES
1,1,1-Trichloroethane	5.00	4.90	98	80-121	YES
Cyclohexane	5.00	4.76	95	77-122	YES
1,1-Dichloropropene	5.00	4.79	96	80-120	YES
Carbon Tetrachloride	5.00	5.03	101	80-129	YES
Isobutyl Alcohol	125.00	146.89	118	78-142	YES
Benzene	5.00	4.88	98	80-120	YES
1,2-Dichloroethane	5.00	5.06	101	80-127	YES
t-Amyl Methyl Ether	5.00	4.53	91	74-120	YES
n-Heptane	5.00	4.70	94	71-126	YES
n-Butanol	250.00	253.97	102	71-121	YES
Trichloroethene	5.00	4.85	97	80-120	YES
Methylcyclohexane	5.00	4.66	93	78-128	YES
1,2-Dichloropropane	5.00	4.99	100	80-120	YES
Dibromomethane	5.00	5.05	101	80-120	YES
1,4-Dioxane	125.00	163.88	131	75-154	YES
Methyl Methacrylate	5.00	4.15	83	58-139	YES
Bromodichloromethane	5.00	4.98	100	80-120	YES
2-Nitropropane	5.00	3.78	76	65-146	YES
cis-1,3-Dichloropropene	5.00	4.46	89	74-120	YES
4-Methyl-2-Pentanone	25.00	25.37	101	70-123	YES
Toluene	5.00	4.89	98	80-120	YES

N/C = Could not calculate

Lab Chronicle: _____ Ent. by RAD40 0834

_____ Ver. by _____

Lancaster Laboratories, Inc.
GC/MS Volatiles Laboratory Control Sample Recovery

File: gc21l01.d
Inst: HP16334
Dilution Factor: 1.0

Injected: 10/21/10 at 19:31
Sample: LCSG71

Method: SW-846 8260B (25ML)
Matrix/Level: WL
Batch: G102942AA

COMPOUND NAME	SPIKE LEVEL	LCS CONC UG/L	LCS REC %	Range LOWER-UPPER	INSPEC
trans-1,3-Dichloropropene	5.00	4.65	93	80-120	YES
Ethyl Methacrylate	5.00	4.80	96	72-120	YES
1,1,2-Trichloroethane	5.00	5.01	100	80-120	YES
Tetrachloroethene	5.00	4.84	97	80-120	YES
1,3-Dichloropropane	5.00	5.01	100	80-120	YES
2-Hexanone	25.00	25.31	101	75-124	YES
Dibromochloromethane	5.00	4.88	98	80-120	YES
1,2-Dibromoethane	5.00	5.01	100	80-120	YES
Chlorobenzene	5.00	4.91	98	80-120	YES
1,1,1,2-Tetrachloroethane	5.00	5.04	101	80-120	YES
Ethylbenzene	5.00	4.96	99	80-120	YES
m+p-Xylene	10.00	9.92	99	80-120	YES
Xylene (Total)	15.00	14.86	99	80-120	YES
o-Xylene	5.00	4.94	99	80-120	YES
Styrene	5.00	5.13	103	80-120	YES
Bromoform	5.00	4.97	99	70-128	YES
Isopropylbenzene	5.00	4.88	98	80-120	YES
1,1,2,2-Tetrachloroethane	5.00	5.23	105	80-125	YES
Bromobenzene	5.00	4.80	96	80-120	YES
trans-1,4-Dichloro-2-Butene	25.00	21.85	87	14-166	YES
1,2,3-Trichloropropane	5.00	5.08	102	80-120	YES
n-Propylbenzene	5.00	4.84	97	80-120	YES
2-Chlorotoluene	5.00	4.79	96	80-120	YES
4-Chlorotoluene	5.00	4.86	97	80-120	YES
1,3,5-Trimethylbenzene	5.00	4.88	98	80-120	YES
Pentachloroethane	5.00	5.20	104	80-120	YES
tert-Butylbenzene	5.00	5.10	102	80-120	YES
1,2,4-Trimethylbenzene	5.00	4.96	99	80-120	YES
sec-Butylbenzene	5.00	4.82	96	80-120	YES
1,3-Dichlorobenzene	5.00	4.89	98	80-120	YES
p-Isopropyltoluene	5.00	4.85	97	80-120	YES
1,4-Dichlorobenzene	5.00	4.82	96	80-120	YES
1,2,3-Trimethylbenzene	5.00	5.04	101	80-120	YES
Benzyl Chloride	5.00	4.81	96	70-128	YES
n-Butylbenzene	5.00	4.96	99	80-120	YES
1,2-Dichlorobenzene	5.00	4.89	98	80-120	YES
1,2-Dibromo-3-Chloropropane	5.00	4.29	86	70-133	YES
1,2,4-Trichlorobenzene	5.00	4.66	93	71-120	YES
Hexachlorobutadiene	5.00	4.63	93	79-120	YES
Naphthalene	5.00	4.80	96	77-120	YES
1,2,3-Trichlorobenzene	5.00	4.74	95	71-120	YES

N/C = Could not calculate

Lab Chronicle: _____ Ent. by _____

_____ Ver. by _____

_____

RAD48 8835

Lancaster Laboratories, Inc.
GC/MS Volatiles Laboratory Control Sample Recovery

File: gc21l02.d
Inst: HP16334
Dilution Factor: 1.0

Injected: 10/21/10 at 19:53
Sample: LCS1G71

Method: SW-846 8260B (25ML)
Matrix/Level: WL
Batch: G102942AA

COMPOUND NAME	SPIKE LEVEL	LCS CONC UG/L	LCS REC %	Range LOWER-UPPER	INSPEC
Dimethyl ether	5.00	4.58	92	71-120	YES
Acetonitrile	37.50	40.66	108	64-162	YES
Vinyl Acetate	12.50	10.52	84	57-157	YES
2-Chloroethyl Vinyl Ether	5.00	5.62	112	83-128	YES
Cyclohexanone	125.00	130.10	104	58-125	YES
cis-1,4-Dichloro-2-Butene	12.50	11.91	95	10-187	YES
Hexachloroethane	5.00	4.68	94	80-120	YES

N/C = Could not calculate

Lab Chronicle: _____ Ent. by RAD40 0836

_____ Ver. by _____

VOLATILE METHOD BLANK SUMMARY

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_RAD40____

Lab File ID: gc21b51.d Lab Sample ID: VBLKG71

Date Analyzed: 10/21/10 Time Analyzed: 19:10

Matrix (soil/water) WATER Level: (low/med) LOW

Instrument ID: HP16334

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

	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	LCSG71	gc21l01.d	19:31
02	LCS1G71	gc21l02.d	19:53
03	6117032	gc21s51.d	20:34
04	6117033	gc21s52.d	20:55
05	6117034	gc21s53.d	21:17
06	6117035	gc21s54.d	21:38
07	6117036	gc21s55.d	22:00
08	6117037	gc21s56.d	22:22
09	6117038MS	gc21s57.d	22:43
10	6117039MSD	gc21s58.d	23:05
11	6117038MS1	gc21s59.d	23:26
12	6117039MSD1	gc21s60.d	23:47
13	6117040	gc21s61.d	00:08
14	6117041	gc21s62.d	00:30
15	6117042	gc21s63.d	00:51
16	6117043	gc21s64.d	01:12

COMMENTS: G102942AA

RAD40 0037

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_RAD40___

Lab File ID: gc15t02.d BFB Injection Date: 10/15/10

Instrument ID: HP16334 BFB Injection Time: 10:41

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	15.74
75	30.0 - 60.0% of mass 95	44.58
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	7.05
173	Less than 2.0% of mass 174	0.38 (0.43)1
174	Greater than 50.0% of mass 95	90.11
175	5.0 - 9.0% of mass 174	6.49 (7.21)1
176	Greater than 95.0%, but less than 101.0% of mass 174	87.27 (96.85)1
177	5.0 - 9.0% of mass 176	5.76 (6.60)2

1-Value is % mass 174 2-Value is % mass 176

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

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD25	gc15i01.d	10/15/10	11:09
02	VSTD10	gc15i02.d	10/15/10	11:31
03	VSTD5	gc15i03.d	10/15/10	11:53
04	VSTD2	gc15i04.d	10/15/10	12:14
05	VSTD1	gc15i05.d	10/15/10	12:36
06	VSTD.5	gc15i06.d	10/15/10	13:02
07	MDL0.1 - MDL0.1	gc15m01.d	10/15/10	13:24
08	VBLKG65	gc15b01.d	10/15/10	13:45
09	LCSG65	gc15l01.d	10/15/10	14:06
10	LCDG65	gc15l02.d	10/15/10	14:27
11	MDL0.3 - MDL0.3	gc15m02.d	10/15/10	14:48
12	6111452	gc15s01.d	10/15/10	15:18
13	6111452MS	gc15s02.d	10/15/10	15:39
14	6111453	gc15s03.d	10/15/10	16:02
15	6111454	gc15s04.d	10/15/10	16:23
16	6111456	gc15s05.d	10/15/10	16:45
17	6111458	gc15s06.d	10/15/10	17:06
18	6111460	gc15s07.d	10/15/10	17:27
19	6111462	gc15s08.d	10/15/10	17:48
20	6111464	gc15s09.d	10/15/10	18:10
21	6111466	gc15s10.d	10/15/10	18:31
22	6111468	gc15s11.d	10/15/10	18:52

RAD48 0038

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_RAD40___

Lab File ID: gc15t02.d BFB Injection Date: 10/15/10

Instrument ID: HP16334 BFB Injection Time: 10:41

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	15.74
75	30.0 - 60.0% of mass 95	44.58
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	7.05
173	Less than 2.0% of mass 174	0.38 (0.43)1
174	Greater than 50.0% of mass 95	90.11
175	5.0 - 9.0% of mass 174	6.49 (7.21)1
176	Greater than 95.0%, but less than 101.0% of mass 174	87.27 (96.85)1
177	5.0 - 9.0% of mass 176	5.76 (6.60)2

1-Value is % mass 174 2-Value is % mass 176

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

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
23	6111470	gc15s12.d	10/15/10	19:14
24	6111921	gc15s13.d	10/15/10	19:35
25	6111924	gc15s14.d	10/15/10	19:56
26	6111925	gc15s15.d	10/15/10	20:17

RAD40 0039

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.: RAD40___

Lab File ID: gc21t02.d BFB Injection Date: 10/21/10

Instrument ID: HP16334 BFB Injection Time: 14:19

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	16.74
75	30.0 - 60.0% of mass 95	47.63
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.82
173	Less than 2.0% of mass 174	0.40 (0.43)1
174	Greater than 50.0% of mass 95	94.50
175	5.0 - 9.0% of mass 174	6.86 (7.26)1
176	Greater than 95.0%, but less than 101.0% of mass 174	91.69 (97.03)1
177	5.0 - 9.0% of mass 176	5.95 (6.49)2

1-Value is % mass 174 2-Value is % mass 176

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

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD25	gc21i01.d	10/21/10	14:53
02	VSTD10	gc21i02.d	10/21/10	15:14
03	VSTD5	gc21i03.d	10/21/10	15:35
04	VSTD2	gc21i04.d	10/21/10	15:56
05	MDL0.1 - MDL0.1	gc21m01.d	10/21/10	17:01
06	VSTD10	gc21c51.d	10/21/10	17:22
07	VSTD1	gc21i07.d	10/21/10	17:56
08	VSTD.5	gc21i08.d	10/21/10	18:18
09	VBLKG71	gc21b51.d	10/21/10	19:10
10	LCSG71	gc21l01.d	10/21/10	19:31
11	LCS1G71	gc21l02.d	10/21/10	19:53
12	6117032	gc21s51.d	10/21/10	20:34
13	6117033	gc21s52.d	10/21/10	20:55
14	6117034	gc21s53.d	10/21/10	21:17
15	6117035	gc21s54.d	10/21/10	21:38
16	6117036	gc21s55.d	10/21/10	22:00
17	6117037	gc21s56.d	10/21/10	22:22
18	6117038MS	gc21s57.d	10/21/10	22:43
19	6117039MSD	gc21s58.d	10/21/10	23:05
20	6117038MS1	gc21s59.d	10/21/10	23:26
21	6117039MSD1	gc21s60.d	10/21/10	23:47
22	6117040	gc21s61.d	10/22/10	00:08

RAD40 0040

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_RAD40___

Lab File ID: gc21t02.d BFB Injection Date: 10/21/10

Instrument ID: HP16334 BFB Injection Time: 14:19

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	16.74
75	30.0 - 60.0% of mass 95	47.63
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.82
173	Less than 2.0% of mass 174	0.40 (0.43)1
174	Greater than 50.0% of mass 95	94.50
175	5.0 - 9.0% of mass 174	6.86 (7.26)1
176	Greater than 95.0%, but less than 101.0% of mass 174	91.69 (97.03)1
177	5.0 - 9.0% of mass 176	5.95 (6.49)2

1-Value is % mass 174 2-Value is % mass 176

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

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
23	6117041	gc21s62.d	10/22/10	00:30
24	6117042	gc21s63.d	10/22/10	00:51
25	6117043	gc21s64.d	10/22/10	01:12

RAD40 2041

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP16334 Calibration Date(s): 10/15/10 10/15/10

Heated Purge: (Y/N) Y Calibration Times: 11:09 13:02

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .25

LAB FILE ID: RRF 0.5 gc15i06.d RRF 1 = gc15i05.d RRF 2 = gc15i04.d
RRF 5 = gc15i03.d RRF 10= gc15i02.d RRF 25= gc15i01.d RRF =

COMPOUND	RRF 0.5	RRF 1	RRF 2	RRF 5	RRF 10	RRF 25	RRF	$\overline{RRF}$	% RSD	CAL. METHOD	
Dichlorodifluoromethane	0.4675	0.4625	0.4434	0.4143	0.4619	0.4591		0.4514	4	AVG	
Chloromethane	#0.4243	0.4056	0.3868	0.3695	0.3865	0.3907		0.3939	5	AVG	#
Vinyl Chloride	*0.4015	0.3887	0.3770	0.3619	0.3856	0.3866		0.3835	3	AVG	*
1,3-Butadiene	0.4852	0.5143	0.4749	0.4399	0.4546	0.4104		0.4632	8	AVG	
Bromomethane	0.3063	0.2938	0.2774	0.2659	0.2723	0.2652		0.2802	6	AVG	
Chloroethane	0.2255	0.2375	0.2188	0.2050	0.2100	0.2058		0.2171	6	AVG	
Dichlorofluoromethane	0.5055	0.4879	0.4748	0.4591	0.4751	0.4755		0.4796	3	AVG	
Trichlorofluoromethane	0.4949	0.4855	0.4654	0.4386	0.4826	0.4790		0.4743	4	AVG	
Ethyl Ether	0.1703	0.1725	0.1768	0.1777	0.1815	0.1833		0.1770	3	AVG	
Freon 123a	0.3155	0.3044	0.2922	0.2819	0.2981	0.2984		0.2984	4	AVG	
Acrolein	2.5123	2.7177	2.7762	2.7514	3.0378	3.0627		2.8097	7	AVG	
1,1-Dichloroethene	*0.2558	0.2448	0.2452	0.2313	0.2473	0.2465		0.2452	3	AVG	*
Freon 113	0.2564	0.2559	0.2587	0.2354	0.2586	0.2574		0.2537	4	AVG	
Acetone	1.2072	1.1510	1.2488	1.1815	1.2643	1.1952		1.2080	4	AVG	
Methyl Iodide	0.4750	0.4785	0.4817	0.4672	0.4889	0.4929		0.4807	2	AVG	
Carbon Disulfide	0.7137	0.6979	0.7072	0.6856	0.7195	0.7520		0.7127	3	AVG	
Allyl Chloride	0.3671	0.3456	0.3478	0.3645	0.3703	0.3813		0.3628	4	AVG	
Methyl Acetate	0.0835	0.0539	0.0653	0.0683	0.0710	0.0702		0.0687	14	AVG	
Methylene Chloride	0.2963	0.2831	0.2727	0.2567	0.2630	0.2615		0.2722	6	AVG	
t-Butyl Alcohol	1.2497	1.1299	1.1364	1.1187	1.1677	1.1943		1.1661	4	AVG	
Acrylonitrile	3.6568	4.2917	4.6358	4.7567	5.2640	5.4530		4.6763	14	AVG	
trans-1,2-Dichloroethene	0.2826	0.2843	0.2823	0.2711	0.2831	0.2834		0.2811	2	AVG	
1,2-Dichloroethene (Total)	0.2938	0.2962	0.2909	0.2827	0.2938	0.2950		0.2921	2	AVG	
Methyl Tertiary Butyl Ether	0.5594	0.5469	0.5613	0.5352	0.5638	0.5535		0.5533	2	AVG	
n-Hexane	0.3724	0.3689	0.3741	0.3470	0.3891	0.3812		0.3721	4	AVG	
1,1-Dichloroethane	#0.4807	0.4797	0.4750	0.4540	0.4717	0.4721		0.4722	2	AVG	#
di-Isopropyl Ether	0.7971	0.8012	0.8128	0.7986	0.8274	0.8280		0.8109	2	AVG	
2-Chloro-1,3-Butadiene	0.3324	0.3423	0.3533	0.3456	0.3681	0.3765		0.3530	5	AVG	
Ethyl t-Butyl Ether	0.7201	0.7195	0.7233	0.7134	0.7414	0.7372		0.7258	2	AVG	
2,2-Dichloropropane	0.3679	0.3707	0.3751	0.3677	0.3859	0.3890		0.3760	2	AVG	
cis-1,2-Dichloroethene	0.3050	0.3082	0.2995	0.2943	0.3045	0.3066		0.3030	2	AVG	
2-Butanone	5.7185	6.2854	6.1153	6.0602	6.5462	6.6643		6.2316	6	AVG	
Propionitrile	1.4181	1.5587	1.6901	1.6423	1.8604	1.8921		1.6769	11	AVG	
Methacrylonitrile	6.3612	7.2702	7.1823	7.0627	7.6796	7.7085		7.2108	7	AVG	
Bromochloromethane	0.1252	0.1230	0.1245	0.1270	0.1297	0.1327		0.1270	3	AVG	
Tetrahydrofuran	1.8276	2.0361	2.0349	1.9641	2.1318	2.1080		2.0171	5	AVG	
Chloroform	*0.4714	0.4792	0.4741	0.4615	0.4797	0.4808		0.4744	2	AVG	*
1,1,1-Trichloroethane	0.4079	0.4060	0.4082	0.4017	0.4186	0.4199		0.4104	2	AVG	
Cyclohexane	0.4602	0.4540	0.4567	0.4234	0.4649	0.4566		0.4526	3	AVG	
1,1-Dichloropropene	0.3691	0.3688	0.3604	0.3537	0.3751	0.3779		0.3675	2	AVG	
Carbon Tetrachloride	0.3452	0.3454	0.3488	0.3458	0.3689	0.3756		0.3549	4	AVG	
Isobutyl Alcohol	0.4031	0.3518	0.3597	0.3578	0.3916	0.3950		0.3765	6	AVG	
Benzene	1.0925	1.0828	1.0780	1.0471	1.0899	1.0998		1.0817	2	AVG	
1,2-Dichloroethane	0.2565	0.2592	0.2590	0.2490	0.2599	0.2583		0.2570	2	AVG	
1,2-Dichloroethane(mz98)	0.0232	0.0239	0.0249	0.0244	0.0262	0.0261		0.0248	5	AVG	
t-Amyl Methyl Ether	0.6089	0.6179	0.6191	0.6132	0.6404	0.6372		0.6228	2	AVG	
n-Heptane	0.4165	0.3854	0.3862	0.3583	0.4032	0.3993		0.3915	5	AVG	
n-Butanol	0.2402	0.2887	0.2985	0.3276	0.3661	0.3612		0.3137	15	AVG	
Trichloroethene	0.2928	0.2953	0.2936	0.2875	0.2979	0.3012		0.2947	2	AVG	
Methylcyclohexane	0.5082	0.4817	0.4942	0.4818	0.5226	0.5260		0.5024	4	AVG	
1,2-Dichloropropane	*0.2585	0.2703	0.2718	0.2678	0.2795	0.2805		0.2714	3	AVG	*
Dibromomethane	0.1207	0.1184	0.1227	0.1184	0.1244	0.1247		0.1215	2	AVG	

Minimum RRF for SPCC(#) = 0.10
(0.30 for Chlorobenzene, 1,1,2,2-Tetrachloroethane)
Maximum %RSD for CCC(*) = 30%

RAD49 6842

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP16334 Calibration Date(s): 10/15/10 10/15/10

Heated Purge: (Y/N) Y Calibration Times: 11:09 13:02

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .25

LAB FILE ID: RRF 0.5 gc15i06.d RRF 1 = gc15i05.d RRF 2 = gc15i04.d
RRF 5 = gc15i03.d RRF 10= gc15i02.d RRF 25= gc15i01.d RRF =

COMPOUND	RRF 0.5	RRF 1	RRF 2	RRF 5	RRF 10	RRF 25	RRF	$\overline{RRF}$	% RSD	CAL. METHOD	
1,4-Dioxane	0.0734	0.0720	0.0823	0.0778	0.0921	0.0760		0.0789	9	AVG	
Methyl Methacrylate	9.5498	11.561	12.125	12.578	14.222	14.332		12.394	14	AVG	
Bromodichloromethane	0.2830	0.2922	0.2962	0.3008	0.3207	0.3315		0.3040	6	AVG	
2-Nitropropane	3.4605	3.9853	3.6968	3.5620	3.9033	3.8959		3.7506	6	AVG	
cis-1,3-Dichloropropene	0.3198	0.3368	0.3408	0.3484	0.3714	0.3831		0.3500	7	AVG	
4-Methyl-2-Pentanone	0.1132	0.1175	0.1267	0.1225	0.1329	0.1317		0.1241	6	AVG	
Toluene	*0.9627	0.9596	0.9516	0.9246	0.9733	0.9857		0.9596	2	AVG	*
trans-1,3-Dichloropropene	0.3394	0.3703	0.3723	0.3833	0.4161	0.4288		0.3850	8	AVG	
Ethyl Methacrylate	0.2218	0.2694	0.2584	0.2761	0.3044	0.3121		0.2737	12	AVG	
1,1,2-Trichloroethane	0.2278	0.2273	0.2328	0.2264	0.2399	0.2351		0.2315	2	AVG	
Tetrachloroethene	0.4620	0.4584	0.4630	0.4425	0.4704	0.4784		0.4624	3	AVG	
1,3-Dichloropropane	0.3926	0.3949	0.3979	0.3816	0.4051	0.4011		0.3955	2	AVG	
2-Hexanone	0.1062	0.1122	0.1151	0.1129	0.1209	0.1201		0.1146	5	AVG	
Dibromochloromethane	0.2327	0.2734	0.2562	0.2640	0.2907	0.3045		0.2702	9	AVG	
1,2-Dibromoethane	0.2001	0.2103	0.2100	0.2058	0.2215	0.2203		0.2113	4	AVG	
Chlorobenzene	#1.1013	1.0981	1.0897	1.0600	1.1156	1.1305		1.0992	2	AVG	#
1,1,1,2-Tetrachloroethane	0.3381	0.3674	0.3585	0.3604	0.3881	0.4005		0.3688	6	AVG	
Ethylbenzene	*1.7933	1.8086	1.8207	1.7917	1.9112	1.9647		1.8484	4	AVG	*
m+p-Xylene	0.7117	0.7230	0.7209	0.7119	0.7647	0.7935		0.7376	5	AVG	
Xylene (Total)	0.7057	0.7207	0.7199	0.7119	0.7618	0.7908		0.7351	5	AVG	
o-Xylene	0.6937	0.7162	0.7181	0.7118	0.7559	0.7855		0.7302	5	AVG	
Styrene	0.8969	1.0534	1.0294	1.0790	1.1876	1.2575		1.0840	12	AVG	
Bromoform	#0.1110	0.1299	0.1261	0.1366	0.1545	0.1699		0.1380	15	AVG	#
Isopropylbenzene	1.8022	1.8524	1.8616	1.8193	1.9320	1.9922		1.8766	4	AVG	
1,1,2,2-Tetrachloroethane	#0.4452	0.4302	0.4382	0.4356	0.4623	0.4648		0.4460	3	AVG	#
Bromobenzene	0.7938	0.7738	0.7723	0.7665	0.8019	0.8404		0.7915	3	AVG	
trans-1,4-Dichloro-2-Butene	3.1609	3.5746	3.7776	4.1973	4.8979	5.5625		4.1951	21	2NDDEG	
1,2,3-Trichloropropane	0.1112	0.1257	0.1224	0.1232	0.1298	0.1312		0.1239	6	AVG	
n-Propylbenzene	3.7540	3.8369	3.8222	3.8250	4.0419	4.1353		3.9025	4	AVG	
2-Chlorotoluene	0.7818	0.7861	0.7973	0.7822	0.8170	0.8429		0.8012	3	AVG	
4-Chlorotoluene	0.8089	0.8146	0.8114	0.7892	0.8307	0.8569		0.8186	3	AVG	
1,3,5-Trimethylbenzene	2.5223	2.5992	2.6132	2.6497	2.8220	2.9420		2.6914	6	AVG	
Pentachloroethane	0.3993	0.4278	0.4375	0.4839	0.5138	0.5665		0.4715	13	AVG	
tert-Butylbenzene	0.5673	0.5939	0.5996	0.5965	0.6390	0.6704		0.6111	6	AVG	
1,2,4-Trimethylbenzene	2.5757	2.7374	2.7588	2.8432	3.0422	3.2173		2.8624	8	AVG	
sec-Butylbenzene	3.4094	3.4881	3.4815	3.5040	3.7047	3.8302		3.5696	5	AVG	
1,3-Dichlorobenzene	1.5591	1.5930	1.6048	1.6188	1.7179	1.8228		1.6527	6	AVG	
p-Isopropyltoluene	2.9081	3.0300	3.0692	3.1171	3.3378	3.5504		3.1688	7	AVG	
1,4-Dichlorobenzene	1.7473	1.7191	1.6796	1.6466	1.7006	1.7594		1.7088	2	AVG	
1,2,3-Trimethylbenzene	1.1773	1.1964	1.2082	1.2542	1.2914	1.3687		1.2494	6	AVG	
Benzyl Chloride	0.1468	0.1696	0.1844	0.1944	0.2171	0.2216		0.1890	15	AVG	
n-Butylbenzene	1.4480	1.5052	1.5487	1.5438	1.6526	1.7272		1.5709	6	AVG	
1,2-Dichlorobenzene	1.4720	1.4510	1.4486	1.4184	1.4732	1.5158		1.4632	2	AVG	
1,2-Dibromo-3-Chloropropane	2.2688	3.1907	2.9900	3.1057	3.5213	3.6990		3.1293	16	1STDEG	
1,2,4-Trichlorobenzene	1.1590	1.1145	1.1355	1.1240	1.1712	1.2209		1.1542	3	AVG	
Hexachlorobutadiene	0.6557	0.6585	0.6267	0.6138	0.6415	0.6806		0.6461	4	AVG	
Naphthalene	1.4436	1.4275	1.4643	1.4726	1.5811	1.5906		1.4966	5	AVG	
1,2,3-Trichlorobenzene	0.9158	0.8610	0.8794	0.8536	0.8971	0.9145		0.8869	3	AVG	
Dibromofluoromethane	0.2238	0.2220	0.2241	0.2250	0.2263	0.2257		0.2245	1	AVG	
Dibromofluoromethane(mz111)	0.2256	0.2266	0.2289	0.2294	0.2301	0.2311		0.2286	1	AVG	
1,2-Dichloroethane-d4	0.0451	0.0447	0.0447	0.0434	0.0449	0.0446		0.0446	1	AVG	

Minimum RRF for SPCC(#) = 0.10
(0.30 for Chlorobenzene, 1,1,2,2-Tetrachloroethane)
Maximum %RSD for CCC(*) = 30%

RAD40 0043

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP16334 Calibration Date(s): 10/15/10 10/15/10

Heated Purge: (Y/N) Y Calibration Times: 11:09 13:02

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .25

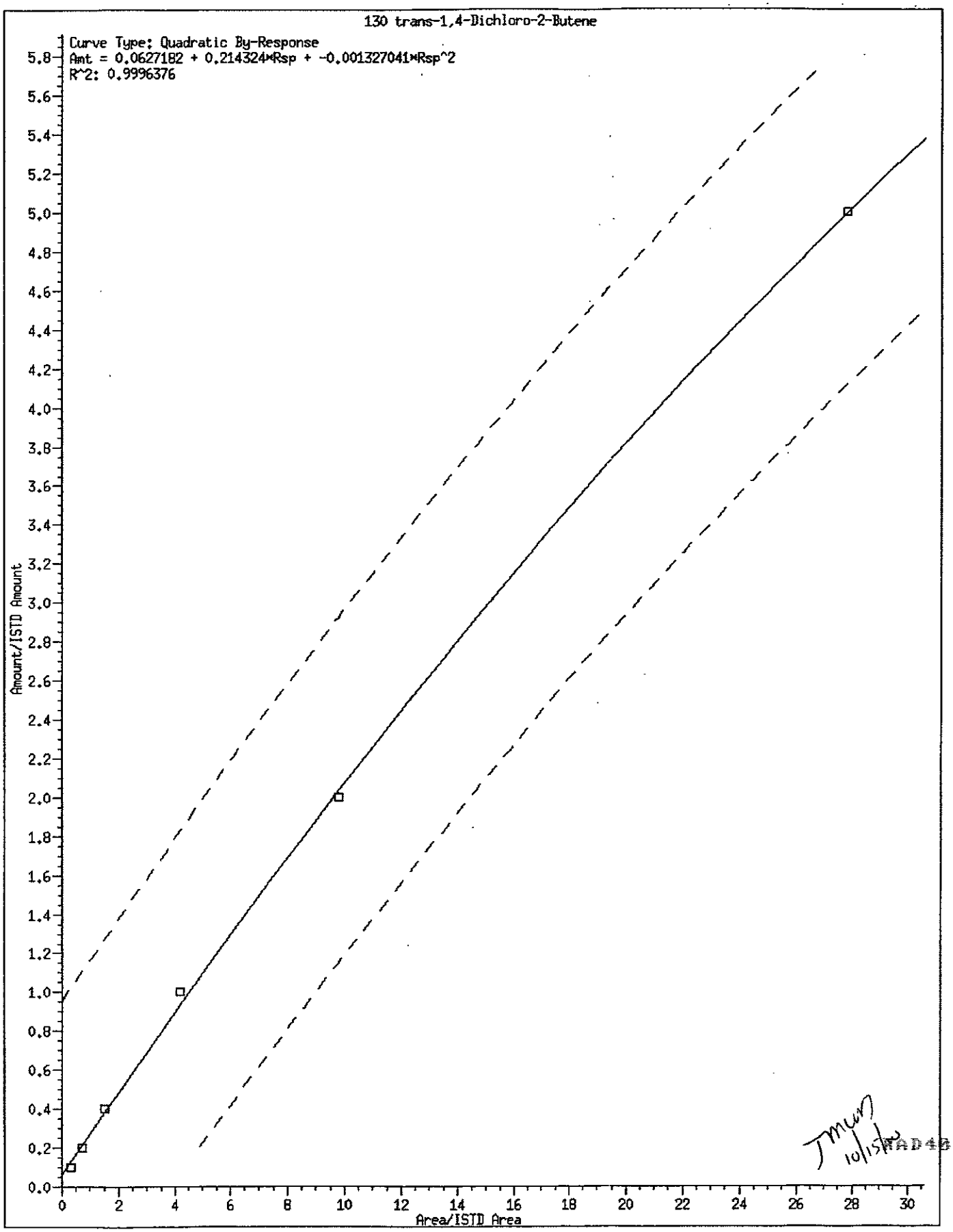
LAB FILE ID: RRF 0.5 gc15i06.d RRF 1 = gc15i05.d RRF 2 = gc15i04.d
RRF 5 = gc15i03.d RRF 10= gc15i02.d RRF 25= gc15i01.d RRF =

COMPOUND	RRF 0.5	RRF 1	RRF 2	RRF 5	RRF 10	RRF 25	RRF	$\overline{RRF}$	% RSD	CAL. METHOD
1,2-Dichloroethane-d4(mz65)	0.1960	0.1941	0.1965	0.1917	0.1921	0.1903		0.1934	1	AVG
1,2-Dichloroethane-d4(mz104)	0.0284	0.0283	0.0283	0.0282	0.0284	0.0280		0.0282	1	AVG
Toluene-d8	1.3425	1.3388	1.3441	1.3309	1.3355	1.3270		1.3364	0	AVG
Toluene-d8(mz100)	0.8798	0.8733	0.8743	0.8741	0.8803	0.8813		0.8772	0	AVG
4-Bromofluorobenzene	0.4642	0.4658	0.4591	0.4542	0.4589	0.4534		0.4593	1	AVG
4-Bromofluorobenzene(mz174)	0.4244	0.4247	0.4255	0.4195	0.4219	0.4152		0.4219	1	AVG

Average %RSD 5

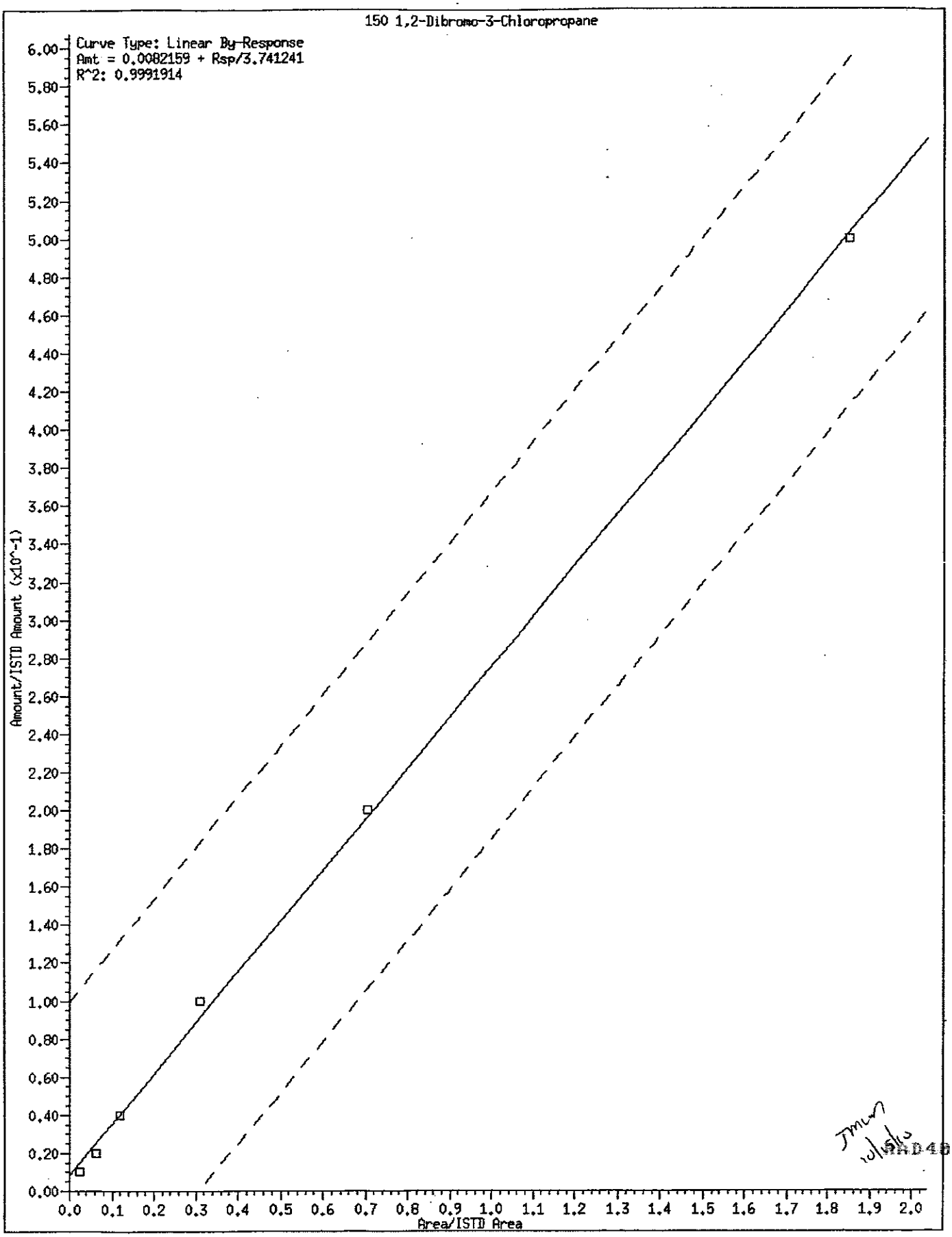
Minimum RRF for SPCC(#) = 0.10
(0.30 for Chlorobenzene, 1,1,2,2-Tetrachloroethane)
Maximum %RSD for CCC(*) = 30%

RAD48 0044



10/15/

RAD48 0845


150 1,2-Dibromo-3-Chloropropane
Curve Type: Linear By-Response
Amt = 0.0082159 + Rsp/3.741241
R^2: 0.9991914
Amount/ISTD Amount (x10^-1)
Area/ISTD Area
0.00
0.20
0.40
0.60
0.80
1.00
1.20
1.40
1.60
1.80
2.00
2.20
2.40
2.60
2.80
3.00
3.20
3.40
3.60
3.80
4.00
4.20
4.40
4.60
4.80
5.00
5.20
5.40
5.60
5.80
6.00
0.0 0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1.0 1.1 1.2 1.3 1.4 1.5 1.6 1.7 1.8 1.9 2.0

SAD48 0046

Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem2/HP16334.i/10oct15a.b/gc15i01.d VSTD025
/chem2/HP16334.i/10oct15a.b/gc15i02.d VSTD010
/chem2/HP16334.i/10oct15a.b/gc15i03.d VSTD005
/chem2/HP16334.i/10oct15a.b/gc15i04.d VSTD002
/chem2/HP16334.i/10oct15a.b/gc15i05.d VSTD001
/chem2/HP16334.i/10oct15a.b/gc15i06.d VSTD0.5

Area Summary

File ID:

Internal Standard Name	gc15i01.d	gc15i02.d	gc15i03.d	gc15i04.d	gc15i05.d	gc15i06.d	Avg. Area	%RSD	In Spec
t-Butyl Alcohol-d10	95697	94058	96874	95084	87033	95908	94109	4	Yes
Fluorobenzene	2619622	2581730	2611927	2572722	2465707	2456857	2551428	3	Yes
Chlorobenzene-d5	1945719	1902183	1938302	1883864	1796279	1781865	1874702	4	Yes
1,4-Dichlorobenzene-d4	1125980	1111048	1124588	1112755	1045831	1047324	1094588	3	Yes

%RSD of internal standard area is flagged out of spec if greater than 30.

RT Summary

File ID:

Internal Standard Name	gc15i01.d	gc15i02.d	gc15i03.d	gc15i04.d	gc15i05.d	gc15i06.d	Avg. RT
t-Butyl Alcohol-d10	4.385	4.379	4.391	4.379	4.373	4.379	4.381
Fluorobenzene	7.842	7.836	7.836	7.836	7.836	7.829	7.836
Chlorobenzene-d5	11.250	11.250	11.249	11.250	11.250	11.249	11.250
1,4-Dichlorobenzene-d4	13.103	13.103	13.103	13.103	13.103	13.103	13.103

* indicates the retention time is greater than 30 seconds from the average RT.

Report generated on 10/15/2010 at 13:36.

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP16334 ICV Date: 10/15/10 Time: 14:06

Lab File ID: gc15101.d Init. Calib. Date(s): 10/15/10 10/15/10

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .25

	COMPOUND	RRF	RRF	ACTUAL CONC.	TRUE CONC.	% DRIFT	
	Dichlorodifluoromethane	0.4514	0.3726	4.13	5	-17	
#	Chloromethane	0.3939	0.3701	4.70	5	-6	#
*	Vinyl Chloride	0.3835	0.3799	4.95	5	-1	*
	1,3-Butadiene	0.4632	0.3398	3.67	5	-27	
	Bromomethane	0.2802	0.2620	4.68	5	-6	
	Chloroethane	0.2171	0.2046	4.71	5	-6	
	Dichlorofluoromethane	0.4796	0.4904	5.11	5	2	
	Trichlorofluoromethane	0.4743	0.4802	5.06	5	1	
	Ethyl Ether	0.1770	0.1566	4.42	5	-12	
	Freon 123a	0.2984	0.3104	5.20	5	4	
	Acrolein	2.8097	2.4170	32.26	37.5	-14	
*	1,1-Dichloroethene	0.2452	0.2399	4.89	5	-2	*
	Freon 113	0.2537	0.2581	5.08	5	2	
	Acetone	1.2080	1.1739	36.44	37.5	-3	
	Methyl Iodide	0.4807	0.4919	5.12	5	2	
	Carbon Disulfide	0.7127	0.7063	4.96	5	-1	
	Allyl Chloride	0.3628	0.3571	4.92	5	-2	
	Methyl Acetate	0.0687	0.0689	5.01	5	0	
	Methylene Chloride	0.2722	0.2608	4.79	5	-4	
	t-Butyl Alcohol	1.1661	1.0727	45.99	50	-8	
	Acrylonitrile	4.6763	4.9507	26.47	25	6	
	trans-1,2-Dichloroethene	0.2811	0.2786	4.95	5	-1	
	1,2-Dichloroethene (Total)	0.2921	0.2904	9.94	10	-1	
	Methyl Tertiary Butyl Ether	0.5533	0.5508	4.98	5	0	
	n-Hexane	0.3721	0.3742	5.03	5	1	
#	1,1-Dichloroethane	0.4722	0.4696	4.97	5	-1	#
	di-Isopropyl Ether	0.8109	0.8260	5.09	5	2	
	2-Chloro-1,3-Butadiene	0.3530	0.3726	5.28	5	6	
	Ethyl t-Butyl Ether	0.7258	0.7350	5.06	5	1	
	2,2-Dichloropropane	0.3760	0.3746	4.98	5	0	
	cis-1,2-Dichloroethene	0.3030	0.3022	4.99	5	0	
	2-Butanone	6.2316	6.4617	38.88	37.5	4	
	Propionitrile	1.6769	1.6320	36.49	37.5	-3	
	Methacrylonitrile	7.2108	7.6216	39.64	37.5	6	
	Bromochloromethane	0.1270	0.1255	4.94	5	-1	
	Tetrahydrofuran	2.0171	2.0884	25.88	25	4	

Minimum RRF for SPCC(#)=0.10 (0.30 for Chlorobenzene, 1,1,2,2-Tetrachloroethane)
Maximum %Drift for CCC(*)=20%

RAD48 0048

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP16334 ICV Date: 10/15/10 Time: 14:06

Lab File ID: gc15101.d Init. Calib. Date(s): 10/15/10 10/15/10

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .25

	COMPOUND	RRF	RRF	ACTUAL CONC.	TRUE CONC.	% DRIFT	
*	Chloroform	0.4744	0.4733	4.99	5	0	*
	1,1,1-Trichloroethane	0.4104	0.4072	4.96	5	-1	
	Cyclohexane	0.4526	0.4599	5.08	5	2	
	1,1-Dichloropropene	0.3575	0.3735	5.08	5	2	
	Carbon Tetrachloride	0.3549	0.3547	5.00	5	0	
	Isobutyl Alcohol	0.3765	0.3736	124.04	125	-1	
	Benzene	1.0817	1.0818	5.00	5	0	
	1,2-Dichloroethane	0.2570	0.2581	5.02	5	0	
	t-Amyl Methyl Ether	0.6228	0.6175	4.96	5	-1	
	n-Heptane	0.3915	0.3947	5.04	5	1	
	n-Butanol	0.3137	0.3014	240.18	250	-4	
	Trichloroethene	0.2947	0.2963	5.03	5	1	
	Methylcyclohexane	0.5024	0.5008	4.98	5	0	
*	1,2-Dichloropropane	0.2714	0.2751	5.07	5	1	*
	Dibromomethane	0.1215	0.1222	5.03	5	1	
	1,4-Dioxane	0.0789	0.0795	125.91	125	1	
	Methyl Methacrylate	12.3940	13.8486	5.59	5	12	
	Bromodichloromethane	0.3040	0.3026	4.98	5	0	
	2-Nitropropane	3.7506	3.9105	5.21	5	4	
	cis-1,3-Dichloropropene	0.3500	0.3434	4.90	5	-2	
	4-Methyl-2-Pentanone	0.1241	0.1145	23.07	25	-8	
*	Toluene	0.9596	0.9677	5.04	5	1	*
	trans-1,3-Dichloropropene	0.3850	0.3808	4.95	5	-1	
	Ethyl Methacrylate	0.2737	0.2827	5.16	5	3	
	1,1,2-Trichloroethane	0.2315	0.2311	4.99	5	0	
	Tetrachloroethene	0.4624	0.4629	5.00	5	0	
	1,3-Dichloropropane	0.3955	0.3977	5.03	5	1	
	2-Hexanone	0.1146	0.1118	24.40	25	-2	
	Dibromochloromethane	0.2702	0.2559	4.74	5	-5	
	1,2-Dibromoethane	0.2113	0.2141	5.07	5	1	
#	Chlorobenzene	1.0992	1.0932	4.97	5	-1	#
	1,1,1,2-Tetrachloroethane	0.3688	0.3692	5.01	5	0	
*	Ethylbenzene	1.8484	1.8648	5.04	5	1	*
	m+p-Xylene	0.7376	0.7440	10.09	10	1	
	Xylene (Total)	0.7351	0.5437	15.15	15	1	
	o-Xylene	0.7302	0.7392	5.06	5	1	

RAD48 0849

Minimum RRF for SPCC(#)=0.10 (0.30 for Chlorobenzene, 1,1,2,2-Tetrachloroethane)
Maximum %Drift for CCC(*)=20%

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP16334 ICV Date: 10/15/10 Time: 14:06

Lab File ID: gc15101.d Init. Calib. Date(s): 10/15/10 10/15/10

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .25

	COMPOUND	RRF	RRF	ACTUAL CONC.	TRUE CONC.	% DRIFT	
	Styrene	1.0840	1.1336	5.23	5	5	
#	Bromoform	0.1380	0.1255	4.55	5	-9	#
	Isopropylbenzene	1.8766	1.8853	5.02	5	0	
#	1,1,2,2-Tetrachloroethane	0.4460	0.4344	4.87	5	-3	#
	Bromobenzene	0.7915	0.7807	4.93	5	-1	
	trans-1,4-Dichloro-2-Butene	4.1951	3.9005	23.78	25	-5	
	1,2,3-Trichloropropane	0.1239	0.1221	4.93	5	-1	
	n-Propylbenzene	3.9025	3.9155	5.02	5	0	
	2-Chlorotoluene	0.8012	0.8012	5.00	5	0	
	4-Chlorotoluene	0.8186	0.8155	4.98	5	0	
	1,3,5-Trimethylbenzene	2.6914	2.7142	5.04	5	1	
	Pentachloroethane	0.4715	0.4823	5.12	5	2	
	tert-Butylbenzene	0.6111	0.6059	4.96	5	-1	
	1,2,4-Trimethylbenzene	2.8624	2.9122	5.09	5	2	
	sec-Butylbenzene	3.5696	3.5675	5.00	5	0	
	1,3-Dichlorobenzene	1.6527	1.6487	4.99	5	0	
	p-Isopropyltoluene	3.1688	3.1884	5.03	5	1	
	1,4-Dichlorobenzene	1.7088	1.6624	4.86	5	-3	
	1,2,3-Trimethylbenzene	1.2494	1.2574	5.03	5	1	
	Benzyl Chloride	0.1890	0.1882	4.98	5	0	
	n-Butylbenzene	1.5709	1.5830	5.04	5	1	
	1,2-Dichlorobenzene	1.4632	1.4203	4.85	5	-3	
	1,2-Dibromo-3-Chloropropane	3.1293	3.2356	4.74	5	-5	
	1,2,4-Trichlorobenzene	1.1542	1.1085	4.80	5	-4	
	Hexachlorobutadiene	0.6461	0.6110	4.73	5	-5	
	Naphthalene	1.4966	1.4250	4.76	5	-5	
	1,2,3-Trichlorobenzene	0.8869	0.8422	4.75	5	-5	

Average %Drift 3

RAD40 6850

Minimum RRF for SPCC(#)=0.10 (0.30 for Chlorobenzene, 1,1,2,2-Tetrachloroethane)
Maximum %Drift for CCC(*)=20%

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP16334 Calibration Date(s): 10/21/10 10/21/10

Heated Purge: (Y/N) Y Calibration Times: 14:53 18:18

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .25

LAB FILE ID: RRF 0.5 gc21i08.d RRF 1 = gc21i07.d RRF 2 = gc21i04.d
RRF 5 = gc21i03.d RRF 10= gc21i02.d RRF 25= gc21i01.d RRF =

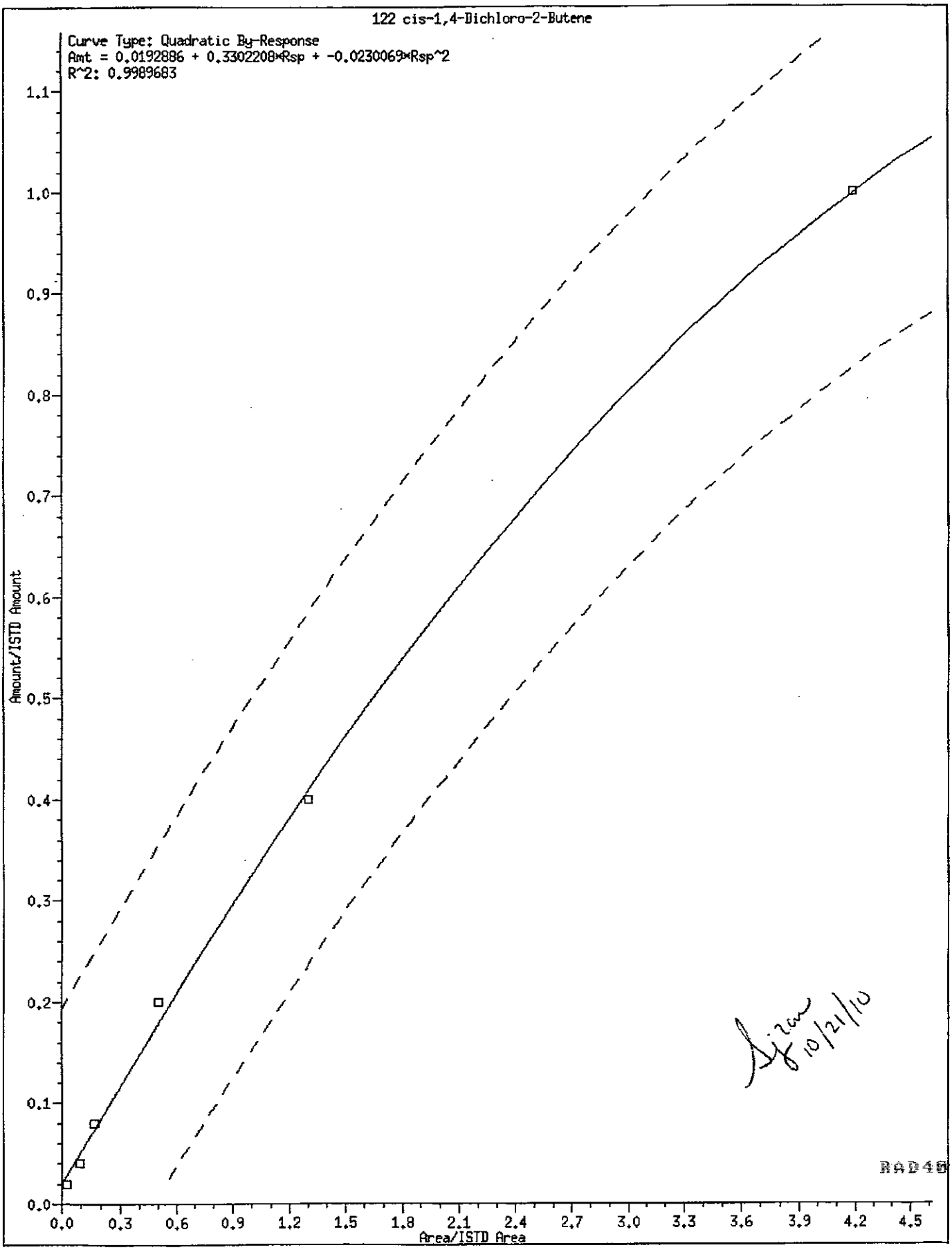
COMPOUND	RRF 0.5	RRF 1	RRF 2	RRF 5	RRF 10	RRF 25	RRF	$\overline{RRF}$	% RSD	CAL. METHOD
Dimethyl ether	0.3159	0.2968	0.3376	0.3257	0.3509	0.3214		0.3247	6	AVG
Acetonitrile	1.2964	1.2489	1.4554	1.5652	1.6028	1.6467		1.4692	11	AVG
Vinyl Acetate	0.1824	0.1973	0.2088	0.2366	0.2587	N/A		0.2168	14	AVG
2-Chloroethyl Vinyl Ether	0.0708	0.0874	0.0905	0.0996	0.1048	N/A		0.0906	14	AVG
cis-1,4-Dichloro-2-Butene	1.4412	2.2706	2.0602	2.5156	3.2538	4.1924		2.6223	37	2NDDEG
Cyclohexanone	0.3221	0.3361	0.3597	0.3937	0.4314	0.4375		0.3801	13	AVG
Hexachloroethane	0.1497	0.1639	0.1907	0.2150	0.2302	0.2491		0.1998	19	2NDDEG

Average %RSD 16

Minimum RRF for SPCC(#) = 0.10
(0.30 for Chlorobenzene, 1,1,2,2-Tetrachloroethane)
Maximum %RSD for CCC(*) = 30%

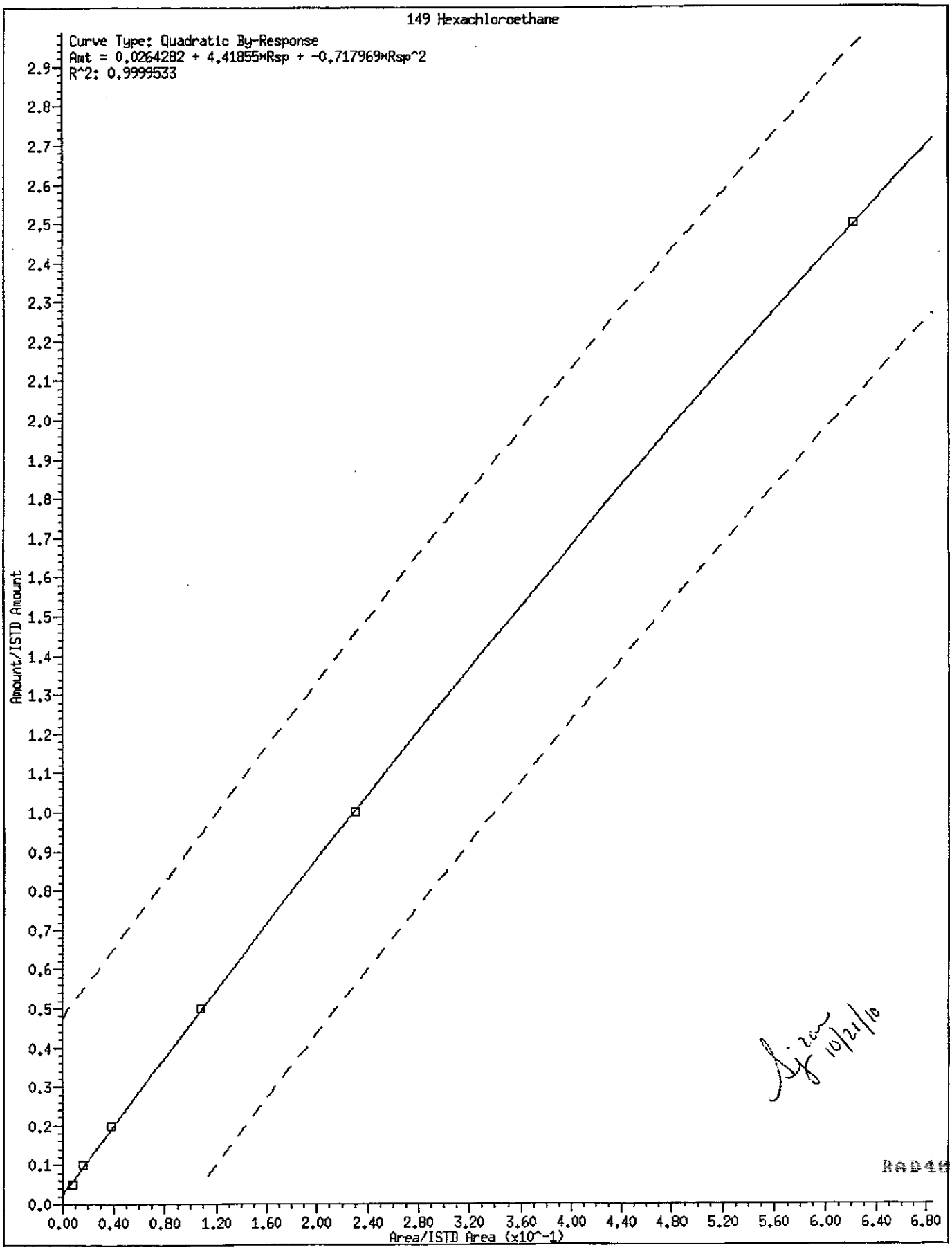
RAD48 0051

FORM VI VOA



10/21/10

RAD40 0052



10/21/10

RAD48 0853

Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem2/HP16334.i/10oct21b.b/gc21i01.d VSTD025
/chem2/HP16334.i/10oct21b.b/gc21i02.d VSTD010
/chem2/HP16334.i/10oct21b.b/gc21i03.d VSTD005
/chem2/HP16334.i/10oct21b.b/gc21i04.d VSTD002
/chem2/HP16334.i/10oct21b.b/gc21i07.d VSTD001
/chem2/HP16334.i/10oct21b.b/gc21i08.d VSTD0.5

Area Summary

File ID:

Internal Standard Name	gc21i01.d	gc21i02.d	gc21i03.d	gc21i04.d	gc21i07.d	gc21i08.d	Avg. Area	%RSD	In Spec
t-Butyl Alcohol-d10	119604	118735	115540	118755	143219	122402	123042	8	Yes
Fluorobenzene	2749217	2750346	2748610	2740187	2980019	2745345	2785621	3	Yes
Chlorobenzene-d5	2083320	2060410	2055269	2027648	2197923	2023664	2074706	3	Yes
1,4-Dichlorobenzene-d4	1176140	1170342	1165625	1159760	1246320	1145849	1177339	3	Yes

%RSD of internal standard area is flagged out of spec if greater than 30.

RT Summary

File ID:

Internal Standard Name	gc21i01.d	gc21i02.d	gc21i03.d	gc21i04.d	gc21i07.d	gc21i08.d	Avg. RT
t-Butyl Alcohol-d10	4.379	4.379	4.373	4.379	4.373	4.385	4.378
Fluorobenzene	7.835	7.836	7.829	7.836	7.823	7.836	7.833
Chlorobenzene-d5	11.249	11.250	11.250	11.250	11.243	11.250	11.248
1,4-Dichlorobenzene-d4	13.103	13.103	13.103	13.103	13.103	13.103	13.103

* indicates the retention time is greater than 30 seconds from the average RT.

Report generated on 10/21/2010 at 19:38.

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP16334 ICV Date: 10/21/10 Time: 19:53

Lab File ID: gc21102.d Init. Calib. Date(s): 10/21/10 10/21/10

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .25

COMPOUND	RRF	RRF	ACTUAL CONC.	TRUE CONC.	% DRIFT
Dimethyl ether	0.3247	0.2973	4.58	5	-8
Acetonitrile	1.4692	1.5931	40.66	37.5	8
Vinyl Acetate	0.2168	0.1824	10.52	12.5	-16
2-Chloroethyl Vinyl Ether	0.0906	0.1019	5.62	5	12
Cyclohexanone	0.3801	0.3956	130.10	125	4
cis-1,4-Dichloro-2-Butene	2.6223	2.7876	11.91	12.5	-5
Hexachloroethane	0.1998	0.2032	4.68	5	-6

Average %Drift 8

Minimum RRF for SPCC(#)=0.10 (0.30 for Chlorobenzene, 1,1,2,2-Tetrachloroethane)
Maximum %Drift for CCC(*)=20%

RAD48 0055

FORM VII VOA

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP16334 Calibration Date: 10/21/10 Time: 17:22

Lab File ID: gc21c51.d Init. Calib. Date(s): 10/15/10 10/15/10

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .25

	COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT	
	Dichlorodifluoromethane	0.4514	0.4300	9.53	10	-5	
#	Chloromethane	0.3939	0.3493	8.87	10	-11	#
*	Vinyl Chloride	0.3835	0.3443	8.98	10	-10	*
	1,3-Butadiene	0.4632	0.3188	6.88	10	-31	
	Bromomethane	0.2802	0.2594	9.26	10	-7	
	Chloroethane	0.2171	0.1897	8.74	10	-13	
	Dichlorofluoromethane	0.4796	0.4766	9.94	10	-1	
	Trichlorofluoromethane	0.4743	0.4922	10.38	10	4	
	Ethyl Ether	0.1770	0.1841	10.40	10	4	
	Freon 123a	0.2984	0.3086	10.34	10	3	
	Acrolein	2.8097	2.4813	441.57	500	-12	
*	1,1-Dichloroethene	0.2452	0.2414	9.85	10	-2	*
	Freon 113	0.2537	0.2587	10.20	10	2	
	Acetone	1.2080	1.1909	98.58	100	-1	
	Methyl Iodide	0.4807	0.4689	9.76	10	-2	
	Carbon Disulfide	0.7127	0.7814	10.97	10	10	
	Allyl Chloride	0.3628	0.3962	10.92	10	9	
	Methyl Acetate	0.0687	0.0770	11.20	10	12	
	Methylene Chloride	0.2722	0.2638	9.69	10	-3	
	t-Butyl Alcohol	1.1661	1.3473	231.08	200	16	
	Acrylonitrile	4.6763	4.8442	51.79	50	4	
	trans-1,2-Dichloroethene	0.2811	0.2781	9.89	10	-1	
	1,2-Dichloroethene (Total)	0.2921	0.2889	19.78	20	-1	
	Methyl Tertiary Butyl Ether	0.5533	0.5344	9.66	10	-3	
	n-Hexane	0.3721	0.3728	10.02	10	0	
#	1,1-Dichloroethane	0.4722	0.4715	9.99	10	0	#
	di-Isopropyl Ether	0.8109	0.8237	10.16	10	2	
	2-Chloro-1,3-Butadiene	0.3530	0.3669	10.39	10	4	
	Ethyl t-Butyl Ether	0.7258	0.6953	9.58	10	-4	
	2,2-Dichloropropane	0.3760	0.3744	9.95	10	0	
	cis-1,2-Dichloroethene	0.3030	0.2997	9.89	10	-1	
	2-Butanone	6.2316	6.2072	99.61	100	0	
	Propionitrile	1.6769	1.8461	220.18	200	10	
	Methacrylonitrile	7.2108	6.5422	90.73	100	-9	
	Bromochloromethane	0.1270	0.1303	10.26	10	3	
	Tetrahydrofuran	2.0171	1.8516	91.80	100	-8	

RAD40 8856

Minimum RRF for SPCC(#)=0.10 (0.30 for Chlorobenzene, 1,1,2,2-Tetrachloroethane)
Maximum %Drift for CCC(*)=20%

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP16334 Calibration Date: 10/21/10 Time: 17:22

Lab File ID: gc21c51.d Init. Calib. Date(s): 10/15/10 10/15/10

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .25

	COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT	
*	Chloroform	0.4744	0.4884	10.29	10	3	*
	1,1,1-Trichloroethane	0.4104	0.4155	10.12	10	1	
	Cyclohexane	0.4526	0.4580	10.12	10	1	
	1,1-Dichloropropene	0.3675	0.3739	10.17	10	2	
	Carbon Tetrachloride	0.3549	0.3828	10.78	10	8	
	Isobutyl Alcohol	0.3765	0.4627	614.43	500	23	
	Benzene	1.0817	1.0997	10.17	10	2	
	1,2-Dichloroethane	0.2570	0.2753	10.71	10	7	
	1,2-Dichloroethane(mz98)	0.0248	0.0263	10.61	10	6	
	t-Amyl Methyl Ether	0.6228	0.6052	9.72	10	-3	
	n-Heptane	0.3915	0.4028	10.29	10	3	
	n-Butanol	0.3137	0.3806	1213.18	1000	21	
	Trichloroethene	0.2947	0.2994	10.16	10	2	
	Methylcyclohexane	0.5024	0.5130	10.21	10	2	
*	1,2-Dichloropropane	0.2714	0.2853	10.51	10	5	*
	Dibromomethane	0.1215	0.1292	10.63	10	6	
	1,4-Dioxane	0.0789	0.1047	663.08	500	33	
	Methyl Methacrylate	12.394	11.5420	9.31	10	-7	
	Bromodichloromethane	0.3040	0.3311	10.89	10	9	
	2-Nitropropane	3.7506	3.5431	94.47	100	-6	
	cis-1,3-Dichloropropene	0.3500	0.3715	10.61	10	6	
	4-Methyl-2-Pentanone	0.1241	0.1424	114.73	100	15	
*	Toluene	0.9596	0.9778	10.19	10	2	*
	trans-1,3-Dichloropropene	0.3850	0.4227	10.98	10	10	
	Ethyl Methacrylate	0.2737	0.2928	10.70	10	7	
	1,1,2-Trichloroethane	0.2315	0.2435	10.52	10	5	
	Tetrachloroethene	0.4624	0.4712	10.19	10	2	
	1,3-Dichloropropane	0.3955	0.4170	10.54	10	5	
	2-Hexanone	0.1146	0.1295	113.07	100	13	
	Dibromochloromethane	0.2702	0.2990	11.06	10	11	
	1,2-Dibromoethane	0.2113	0.2229	10.55	10	5	
#	Chlorobenzene	1.0992	1.1361	10.34	10	3	#
	1,1,1,2-Tetrachloroethane	0.3688	0.3942	10.69	10	7	
*	Ethylbenzene	1.8484	1.9539	10.57	10	6	*
	m+p-Xylene	0.7376	0.7800	21.15	20	6	
	Xylene (Total)	0.7351	0.7757	31.65	30	6	

RAD40 8857

Minimum RRF for SPCC(#)=0.10 (0.30 for Chlorobenzene, 1,1,2,2-Tetrachloroethane)
Maximum %Drift for CCC(*)=20%

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP16334 Calibration Date: 10/21/10 Time: 17:22

Lab File ID: gc21c51.d Init. Calib. Date(s): 10/15/10 10/15/10

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .25

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF50	CONC.	CONC.	DRIFT	
o-Xylene	0.7302	0.7669	10.50	10	5	
Styrene	1.0840	1.2097	11.16	10	12	
Bromoform	0.1380	0.1613	11.69	10	17	#
Isopropylbenzene	1.8766	1.9681	10.49	10	5	
1,1,2,2-Tetrachloroethane	0.4460	0.4879	10.94	10	9	#
Bromobenzene	0.7915	0.8103	10.24	10	2	
trans-1,4-Dichloro-2-Butene	4.1951	4.6675	97.39	100	-3	
1,2,3-Trichloropropane	0.1239	0.1351	10.90	10	9	
n-Propylbenzene	3.9025	4.0892	10.48	10	5	
2-Chlorotoluene	0.8012	0.8197	10.23	10	2	
4-Chlorotoluene	0.8186	0.8379	10.23	10	2	
1,3,5-Trimethylbenzene	2.6914	2.8406	10.55	10	6	
Pentachloroethane	0.4715	0.5328	11.30	10	13	
tert-Butylbenzene	0.6111	0.6666	10.91	10	9	
1,2,4-Trimethylbenzene	2.8624	3.0730	10.74	10	7	
sec-Butylbenzene	3.5696	3.7484	10.50	10	5	
1,3-Dichlorobenzene	1.6527	1.7508	10.59	10	6	
p-Isopropyltoluene	3.1688	3.3791	10.66	10	7	
1,4-Dichlorobenzene	1.7088	1.7426	10.20	10	2	
1,2,3-Trimethylbenzene	1.2494	1.3259	10.61	10	6	
Benzyl Chloride	0.1890	0.2046	10.83	10	8	
n-Butylbenzene	1.5709	1.6826	10.71	10	7	
1,2-Dichlorobenzene	1.4632	1.5178	10.37	10	4	
1,2-Dibromo-3-Chloropropane	3.1293	3.2060	8.98	10	-10	
1,2,4-Trichlorobenzene	1.1542	1.1910	10.32	10	3	
Hexachlorobutadiene	0.6461	0.6600	10.21	10	2	
Naphthalene	1.4966	1.6066	10.73	10	7	
1,2,3-Trichlorobenzene	0.8869	0.9318	10.51	10	5	
Dibromofluoromethane	0.2245	0.2408	10.73	10	7	
Dibromofluoromethane(mz111)	0.2286	0.2435	10.65	10	7	
1,2-Dichloroethane-d4	0.0446	0.0440	9.88	10	-1	
1,2-Dichloroethane-d4(mz104)	0.0282	0.0285	10.08	10	1	
1,2-Dichloroethane-d4(mz65)	0.1934	0.2034	10.51	10	5	
Toluene-d8	1.3364	1.3386	10.02	10	0	
Toluene-d8(mz100)	0.8772	0.8664	9.88	10	-1	

RAD40 0858

Minimum RRF for SPCC(#)=0.10 (0.30 for Chlorobenzene, 1,1,2,2-Tetrachloroethane)
Maximum %Drift for CCC(*)=20%

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP16334 Calibration Date: 10/21/10 Time: 17:22

Lab File ID: gc21c51.d Init. Calib. Date(s): 10/15/10 10/15/10

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .25

COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT
4-Bromofluorobenzene	0.4593	0.4524	9.85	10	-1
4-Bromofluorobenzene(mz174)	0.4219	0.4185	9.92	10	-1

Average %Drift 6

RAD40 0059

Minimum RRF for SPCC(#)=0.10 (0.30 for Chlorobenzene, 1,1,2,2-Tetrachloroethane)
Maximum %Drift for CCC(*)=20%

Lancaster Laboratories

Continuing Calibration Internal Standard Check

Initial Calibration Standards:

/chem2/HP16334.i/10oct15a.b/gc15i06.d
/chem2/HP16334.i/10oct15a.b/gc15i05.d
/chem2/HP16334.i/10oct15a.b/gc15i04.d
/chem2/HP16334.i/10oct15a.b/gc15i03.d
/chem2/HP16334.i/10oct15a.b/gc15i02.d
/chem2/HP16334.i/10oct15a.b/gc15i01.d

File /chem2/HP16334.i/10oct15a.b/gc15i03.d is Mid Level Calibration Standard used for comparison.

Current Continuing Calibration Standard:

/chem2/HP16334.i/10oct21b.b/gc21c51.d

RT Summary

Internal Standard Name	File ID: gc21c51.d	ICAL RT	In Spec
t-Butyl Alcohol-d10	4.379	4.391	Yes
Fluorobenzene	7.829	7.836	Yes
Chlorobenzene-d5	11.249	11.249	Yes
1,4-Dichlorobenzene-d4	13.103	13.103	Yes

A "No" indicates the retention time is greater than 30 seconds from the referenced ICAL standard.

Area Summary

Internal Standard Name	File ID: gc21c51.d	ICAL Area	Low Limit	High Limit	In Spec
t-Butyl Alcohol-d10	124105	96874	48437	193748	Yes
Fluorobenzene	2844645	2611927	1305964	5223854	Yes
Chlorobenzene-d5	2109605	1938302	969151	3876604	Yes
1,4-Dichlorobenzene-d4	1263864	1124588	562294	2249176	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

RAD48 0868

Comments: _____

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_RAD40___

Lab File ID (Standard): gc21c51.d Date Analyzed: 10/21/10

Instrument ID: HP16334 Time Analyzed: 17:22

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

	IS1(FBZ) AREA #	RT #	IS2(CBZ) AREA #	RT #	IS3(DCB) AREA #	RT #	IS4(TBA) AREA #	RT #
	12 HOUR STD	2844645	7.829	2109605	11.249	1263864	13.103	124105	4.379
	UPPER LIMIT	5689290	8.329	4219210	11.749	2527728	13.603	248210	4.879
	LOWER LIMIT	1422322	7.329	1054802	10.749	631932	12.603	62052	3.879
	LAB SAMPLE ID								
01	MDL0.1 - MD	2690942	7.836	1981799	11.250	1123641	13.103	112649	4.385
02	VBLKG71	2620881	7.823	1945189	11.250	1111685	13.103	123120	4.367
03	LCSG71	2865966	7.830	2102584	11.250	1267864	13.103	123352	4.379
04	LCS1G71	2938661	7.829	2187178	11.250	1227745	13.103	131714	4.379
05	6117032	2819421	7.824	2079584	11.250	1179006	13.103	130102	4.367
06	6117033	2783938	7.829	2053655	11.250	1168934	13.103	124347	4.385
07	6117034	2699512	7.835	1991402	11.249	1134223	13.109	118567	4.379
08	6117035	2697635	7.836	1984921	11.250	1120433	13.103	119133	4.397
09	6117036	2689839	7.836	1985549	11.250	1121452	13.103	119244	4.373
10	6117037	2687661	7.835	1977307	11.249	1114095	13.109	118528	4.391
11	6117038MS	2857889	7.830	2084743	11.250	1261680	13.103	131096	4.379
12	6117039MSD	2860949	7.836	2094978	11.250	1256028	13.103	132495	4.373
13	6117038MS1	2969072	7.836	2190846	11.250	1242744	13.103		
14	6117039MSD1	2867536	7.829	2127730	11.249	1192047	13.103		
15	6117040	2790906	7.836	2055478	11.250	1171801	13.109	124891	4.391
16	6117041	2689639	7.829	1987011	11.250	1136027	13.109	116520	4.373
17	6117042	2764035	7.836	2028288	11.250	1144230	13.109	119312	4.373
18	6117043	2722174	7.830	2000304	11.250	1135886	13.103	113581	4.367

IS1 (FBZ)=Fluorobenzene
IS2 (CBZ)=Chlorobenzene-d5
IS3 (DCB)=1,4-Dichlorobenzene-d4
IS4 (TBA)=t-Butyl Alcohol-d10

UPPER LIMIT = + 100%
of internal standard area.
LOWER LIMIT = - 50%
of internal standard area.

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

RAD40 0061

FORM VIII VOA

Sample Data

Lancaster Laboratories

LOQ and MDL by Analysis Number

COMPONENT NAME	MDL	LOQ	DEFAULT UNITS
02898: EPA SW846/8260 (water-25ml) #1			
1,2-Dichloroethene (Total)	0.1	0.5	ug/l
Ethanol	50	250	ug/l
Cyclohexanone	5.0	25	ug/l
Benzyl Chloride	0.1	0.5	ug/l
Dichlorodifluoromethane	0.1	0.5	ug/l
Chloromethane	0.2	0.5	ug/l
Vinyl Chloride	0.1	0.5	ug/l
Bromomethane	0.1	0.5	ug/l
Chloroethane	0.1	0.5	ug/l
Trichlorofluoromethane	0.1	0.5	ug/l
Acrolein	5.0	25	ug/l
1,1-Dichloroethene	0.1	0.5	ug/l
Freon 113	0.2	0.5	ug/l
Acetone	3.0	5.0	ug/l
Methyl Iodide	0.1	0.5	ug/l
Carbon Disulfide	0.4	0.5	ug/l
Acetonitrile	7.0	20	ug/l
Allyl Chloride	0.1	0.5	ug/l
Methylene Chloride	0.2	0.5	ug/l
t-Butyl Alcohol	4.0	10	ug/l
Acrylonitrile	1.0	5.0	ug/l
trans-1,2-Dichloroethene	0.1	0.5	ug/l
Methyl Tertiary Butyl Ether	0.1	0.5	ug/l
n-Hexane	0.1	0.5	ug/l
1,1-Dichloroethane	0.1	0.5	ug/l
2-Chloro-1,3-Butadiene	0.1	0.5	ug/l
Vinyl Acetate	0.2	0.5	ug/l
di-Isopropyl Ether	0.1	0.5	ug/l
Ethyl t-butyl ether	0.1	0.5	ug/l
2,2-Dichloropropane	0.1	0.5	ug/l
cis-1,2-Dichloroethene	0.1	0.5	ug/l
2-Butanone	1.0	5.0	ug/l
Propionitrile	2.0	10	ug/l
Bromochloromethane	0.1	0.5	ug/l
Methacrylonitrile	1.0	5.0	ug/l
Tetrahydrofuran	2.0	5.0	ug/l
Chloroform	0.1	0.5	ug/l
1,1,1-Trichloroethane	0.1	0.5	ug/l
Cyclohexane	0.1	0.5	ug/l
Carbon Tetrachloride	0.1	0.5	ug/l
1,1-Dichloropropene	0.1	0.5	ug/l
Benzene	0.1	0.5	ug/l
1,2-Dichloroethane	0.1	0.5	ug/l
Isobutyl Alcohol	10	25	ug/l
t-Amyl methyl ether	0.1	0.5	ug/l
Trichloroethene	0.1	0.5	ug/l
n-Heptane	0.2	0.5	ug/l
1,2-Dichloropropane	0.1	0.5	ug/l
Dibromomethane	0.1	0.5	ug/l
Methyl Methacrylate	0.1	0.5	ug/l
1,4-Dioxane	20	100	ug/l
Bromodichloromethane	0.1	0.5	ug/l
2-Nitropropane	1.0	5.0	ug/l
2-Chloroethyl vinyl ether	0.1	0.5	ug/l
cis-1,3-Dichloropropene	0.1	0.5	ug/l
4-Methyl-2-Pentanone	1.0	5.0	ug/l
Toluene	0.1	0.5	ug/l
1,1,2-Trichloroethane	0.1	0.5	ug/l
trans-1,3-Dichloropropene	0.1	0.5	ug/l

RAD48 8863

COMPONENT_NAME	MDL	LOQ	DEFAULT_UNITS
02898: EPA SW846/8260 (water-25ml) #1			
Ethyl Methacrylate	0.1	0.5	ug/l
Tetrachloroethene	0.1	0.5	ug/l
1,3-Dichloropropane	0.1	0.5	ug/l
2-Hexanone	1.0	5.0	ug/l
Dibromochloromethane	0.1	0.5	ug/l
1,2-Dibromoethane	0.1	0.5	ug/l
Chlorobenzene	0.1	0.5	ug/l
1,1,1,2-Tetrachloroethane	0.1	0.5	ug/l
Ethylbenzene	0.1	0.5	ug/l
m+p-Xylene	0.1	0.5	ug/l
o-Xylene	0.1	0.5	ug/l
Styrene	0.1	0.5	ug/l
Bromoform	0.1	0.5	ug/l
Isopropylbenzene	0.1	0.5	ug/l
1,1,2,2-Tetrachloroethane	0.1	0.5	ug/l
Bromobenzene	0.1	0.5	ug/l
1,2,3-Trichloropropane	0.3	1.0	ug/l
trans-1,4-Dichloro-2-butene	1.0	5.0	ug/l
n-Propylbenzene	0.1	0.5	ug/l
2-Chlorotoluene	0.1	0.5	ug/l
1,3,5-Trimethylbenzene	0.1	0.5	ug/l
4-Chlorotoluene	0.1	0.5	ug/l
tert-Butylbenzene	0.1	0.5	ug/l
Pentachloroethane	0.2	0.5	ug/l
1,2,4-Trimethylbenzene	0.1	0.5	ug/l
sec-Butylbenzene	0.1	0.5	ug/l
p-Isopropyltoluene	0.1	0.5	ug/l
1,3-Dichlorobenzene	0.1	0.5	ug/l
1,4-Dichlorobenzene	0.1	0.5	ug/l
n-Butylbenzene	0.1	0.5	ug/l
1,2-Dichlorobenzene	0.1	0.5	ug/l
1,2-Dibromo-3-chloropropane	0.2	0.5	ug/l
1,2,4-Trichlorobenzene	0.1	0.5	ug/l
Ethyl ether	0.1	0.5	ug/l
n-Butanol	20	50	ug/l
Hexachlorobutadiene	0.1	0.5	ug/l
Naphthalene	0.1	0.5	ug/l
Xylene (Total)	0.1	0.5	ug/l
1,2,3-Trichlorobenzene	0.1	0.5	ug/l
Dichlorofluoromethane	0.2	0.5	ug/l
Methyl Acetate	0.3	1.0	ug/l
Methylcyclohexane	0.1	0.5	ug/l
cis-1,4-Dichloro-2-butene	0.4	1.0	ug/l
Freon 123a	0.2	0.5	ug/l
1,2,3-Trimethylbenzene	0.1	0.5	ug/l
Hexachloroethane	0.1	0.5	ug/l
Dimethyl ether	0.1	0.5	ug/l
1,3-Butadiene	0.1	0.5	ug/l

RAD48 8864

XXXXX

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

6117032

Data file: /chem2/HP16334.i/10oct21b.b/gc21s51.d
Data file Sample Info. Line: XXXXX;6117032;1;0;;;DRAPER;
Date, time and analyst ID of latest file update: 25-Oct-2010 11:32 jml01693

Injection date and time: **21-OCT-2010 20:34**
Instrument ID: **HP16334.i** Batch: **G102942AA**

Blank Data file reference: **/chem2/HP16334.i/10oct21b.b/gc21b51.d**

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: **1415**
Calibration date and time (Last Method Edit): 25-OCT-2010 11:22
Mid Level Daily Calibration Standard Reference: **/chem2/HP16334.i/10oct21b.b/gc21c51.d**

Bottle Code: **38A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
36) t-Butyl Alcohol-d10	4.367(0.012)	456	65	130102 (5)	50.00	
77) Fluorobenzene	7.824(0.006)	1023	96	2819421 (-1)	10.00	
110) Chlorobenzene-d5	11.250(0.000)	1585	117	2079584 (-1)	10.00	
143) 1,4-Dichlorobenzene-d4	13.103(0.000)	1889	152	1179006 (-7)	10.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
61) Dibromofluoromethane	(1)	6.921(0.000)	113	677600	10.707	107%		77 - 114
70) 1,2-Dichloroethane-d4	(1)	7.378(0.000)	102	128203	10.203	102%		74 - 113
97) Toluene-d8	(2)	9.823(0.000)	98	2759511	9.929	99%		77 - 110
126) 4-Bromofluorobenzene	(2)	12.231(0.000)	95	902883	9.453	95%		78 - 110

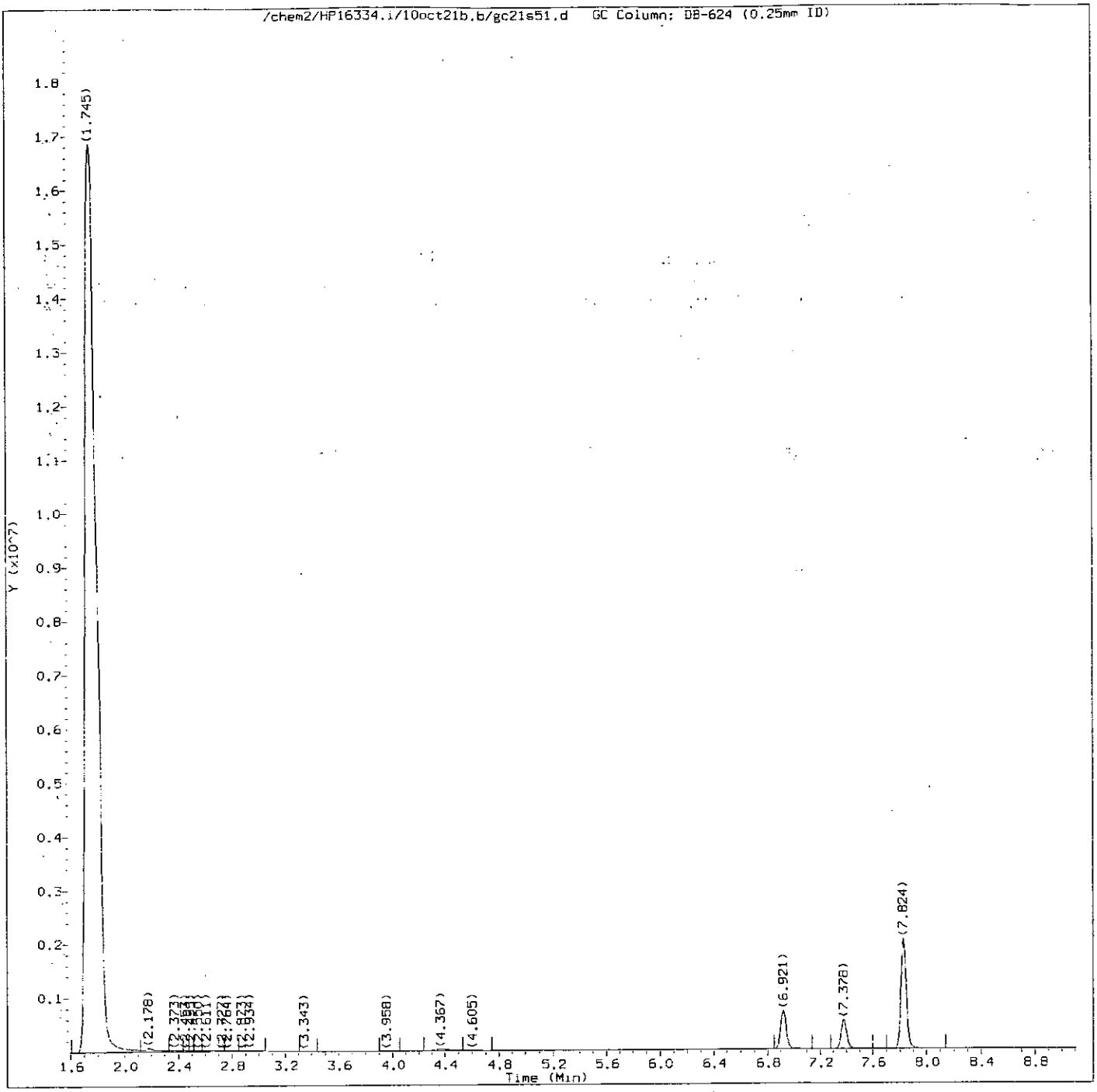
Target Compounds	I S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
5) Chloromethane	(1)			Not Detected					0.2
6) Vinyl Chloride	(1)			Not Detected					0.1
10) Bromomethane	(1)			Not Detected					0.1
15) Trichlorofluoromethane	(1)			Not Detected					0.1
24) 1,1-Dichloroethene	(1)			Not Detected					0.1
34) Methylene Chloride	(1)			Not Detected					0.2
45) 1,1-Dichloroethane	(1)			Not Detected					0.1
58) Chloroform	(1)			Not Detected					0.1
63) 1,1,1-Trichloroethane	(1)			Not Detected					0.1
66) Carbon Tetrachloride	(1)			Not Detected					0.1
72) Benzene	(1)			Not Detected					0.1
74) 1,2-Dichloroethane	(1)			Not Detected					0.1
83) Trichloroethene	(1)			Not Detected					0.1
101) Toluene	(2)			Not Detected					0.1
105) Tetrachloroethene	(2)			Not Detected					0.1
112) Chlorobenzene	(2)			Not Detected					0.1
146) Benzyl Chloride	(3)			Not Detected					0.1
149) Hexachloroethane	(1)			Not Detected					0.1
155) Naphthalene	(3)			Not Detected					0.1

Total number of targets = 19

Comments:_____

Digitally signed by Jason M. Long on 10/25/2010 at 11:36. Target 3.5 esignature user ID: jml01693 RAD48 8865

Auditor:_____ Date: 10/27/10



Total Ion Chromatogram (TIC)

Target Revision 3.5

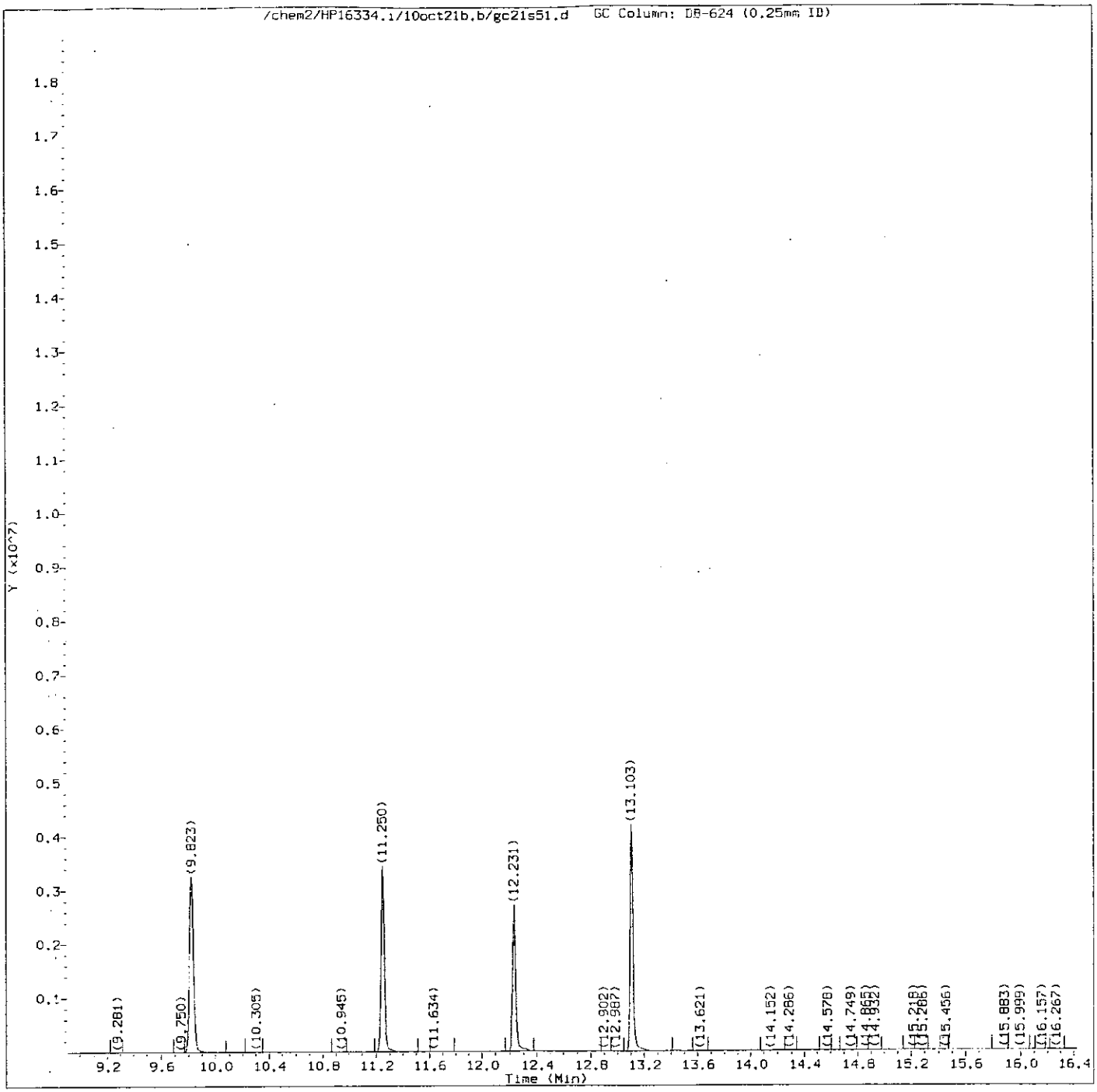
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Injection date and time: 21-OCT-2010 20:34 Analyst ID: SEJ02002

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: 1415
Calibration date and time: 25-OCT-2010 11:22
Date, time and analyst ID of latest file update: 25-Oct-2010 11:32 jml01693

Sample Name: XXXXX Lab Sample ID: 6117032

RAD48 0866

Digitally signed by Jason M. Long
on 10/25/2010 at 11:36.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/10oct21b.b/gc21s51.d Instrument ID: HP16334.i
Injection date and time: 21-OCT-2010 20:34 Analyst ID: SEJ02002

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: 1415
Calibration date and time: 25-OCT-2010 11:22
Date, time and analyst ID of latest file update: 25-Oct-2010 11:32 jml01693

Sample Name: XXXXX Lab Sample ID: 6117032

RAD48 0867

Digitally signed by Jason M. Long
on 10/25/2010 at 11:36.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/10oct21b.b/gc21s51.d Instrument ID: HP16334.i
Injection date and time: 21-OCT-2010 20:34 Analyst ID: SEJ02002

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: 1415
Calibration date and time: 25-OCT-2010 11:22
Date, time and analyst ID of latest file update: 25-Oct-2010 11:32 jml01693

Sample Name: XXXXX Lab Sample ID: 6117032

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
36)*t-Butyl Alcohol-d10	(4)	4.367	65	130102	50.000
61)$Dibromofluoromethane	(1)	6.921	113	677600	10.707
70)$1,2-Dichloroethane-d4	(1)	7.378	102	128203	10.203
77)*Fluorobenzene	(1)	7.824	96	2819421	10.000
97)$Toluene-d8	(2)	9.823	98	2759511	9.929
110)*Chlorobenzene-d5	(2)	11.250	117	2079584	10.000
126)$4-Bromofluorobenzene	(2)	12.231	95	902883	9.453
143)*1,4-Dichlorobenzene-d4	(3)	13.103	152	1179006	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

RAD48 0868

Digitally signed by Jason M. Long
on 10/25/2010 at 11:36.
Target 3.5 esignature user ID: jml01693

XXXXX

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

6117033

Data file: /chem2/HP16334.i/10oct21b.b/gc21s52.d
Data file Sample Info. Line: XXXXX;6117033;1;0;;;DRAPER;
Date, time and analyst ID of latest file update: 25-Oct-2010 11:33 jml01693

Injection date and time: **21-OCT-2010 20:55**
Instrument ID: **HP16334.i** Batch: **G102942AA**

Blank Data file reference: **/chem2/HP16334.i/10oct21b.b/gc21b51.d**

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: **1415**
Calibration date and time (Last Method Edit): 25-OCT-2010 11:22
Mid Level Daily Calibration Standard Reference: **/chem2/HP16334.i/10oct21b.b/gc21c51.d**

Bottle Code: **38A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
36) t-Butyl Alcohol-d10	4.385(-0.006)	459	65	124347 (0)	50.00	
77) Fluorobenzene	7.829(0.000)	1024	96	2783938 (-2)	10.00	
110) Chlorobenzene-d5	11.249(0.000)	1585	117	2053655 (-3)	10.00	
143) 1,4-Dichlorobenzene-d4	13.103(0.000)	1889	152	1168934 (-8)	10.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
61) Dibromofluoromethane	(1)	6.927(0.000)	113	675935	10.817	108%		77 - 114
70) 1,2-Dichloroethane-d4	(1)	7.384(0.000)	102	127760	10.297	103%		74 - 113
97) Toluene-d8	(2)	9.823(0.000)	98	2717704	9.902	99%		77 - 110
126) 4-Bromofluorobenzene	(2)	12.231(0.000)	95	889818	9.434	94%		78 - 110

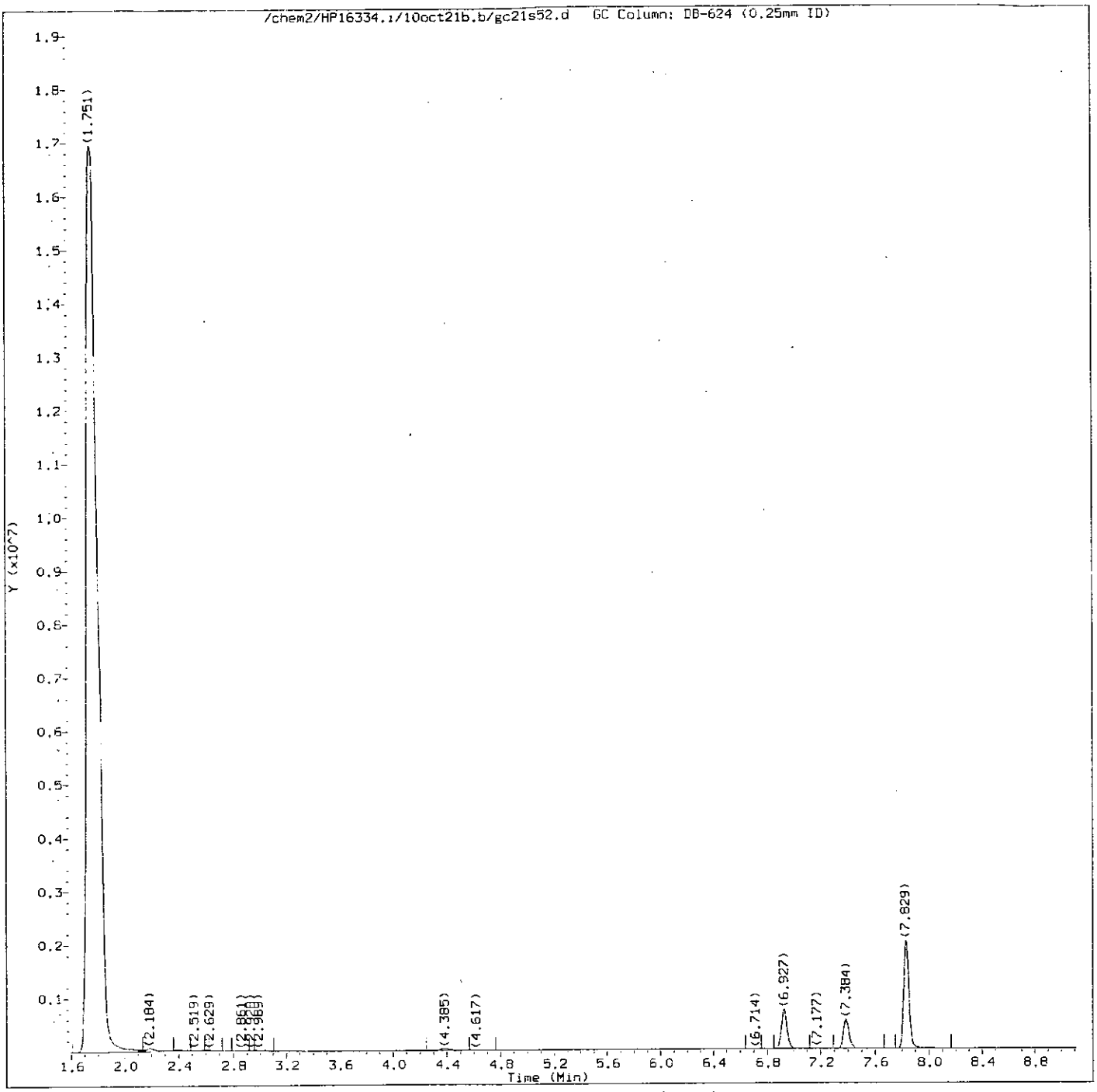
Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
5) Chloromethane	(1)			Not Detected					0.2
6) Vinyl Chloride	(1)			Not Detected					0.1
10) Bromomethane	(1)			Not Detected					0.1
15) Trichlorofluoromethane	(1)			Not Detected					0.1
24) 1,1-Dichloroethene	(1)			Not Detected					0.1
34) Methylene Chloride	(1)			Not Detected					0.2
45) 1,1-Dichloroethane	(1)			Not Detected					0.1
58) Chloroform	(1)			Not Detected					0.1
63) 1,1,1-Trichloroethane	(1)			Not Detected					0.1
66) Carbon Tetrachloride	(1)			Not Detected					0.1
72) Benzene	(1)			Not Detected					0.1
74) 1,2-Dichloroethane	(1)			Not Detected					0.1
83) Trichloroethene	(1)			Not Detected					0.1
101) Toluene	(2)			Not Detected					0.1
105) Tetrachloroethene	(2)			Not Detected					0.1
112) Chlorobenzene	(2)			Not Detected					0.1
146) Benzyl Chloride	(3)			Not Detected					0.1
149) Hexachloroethane	(1)			Not Detected					0.1
155) Naphthalene	(3)			Not Detected					0.1

Total number of targets = 19

Comments:_____

Digitally signed by Jason M. Long on 10/25/2010 at 11:36. Target 3.5 esignature user ID: jml01693 RAD48 0869

Auditor:_____ Date: 10/27/10



Total Ion Chromatogram (TIC)

Target Revision 3.5

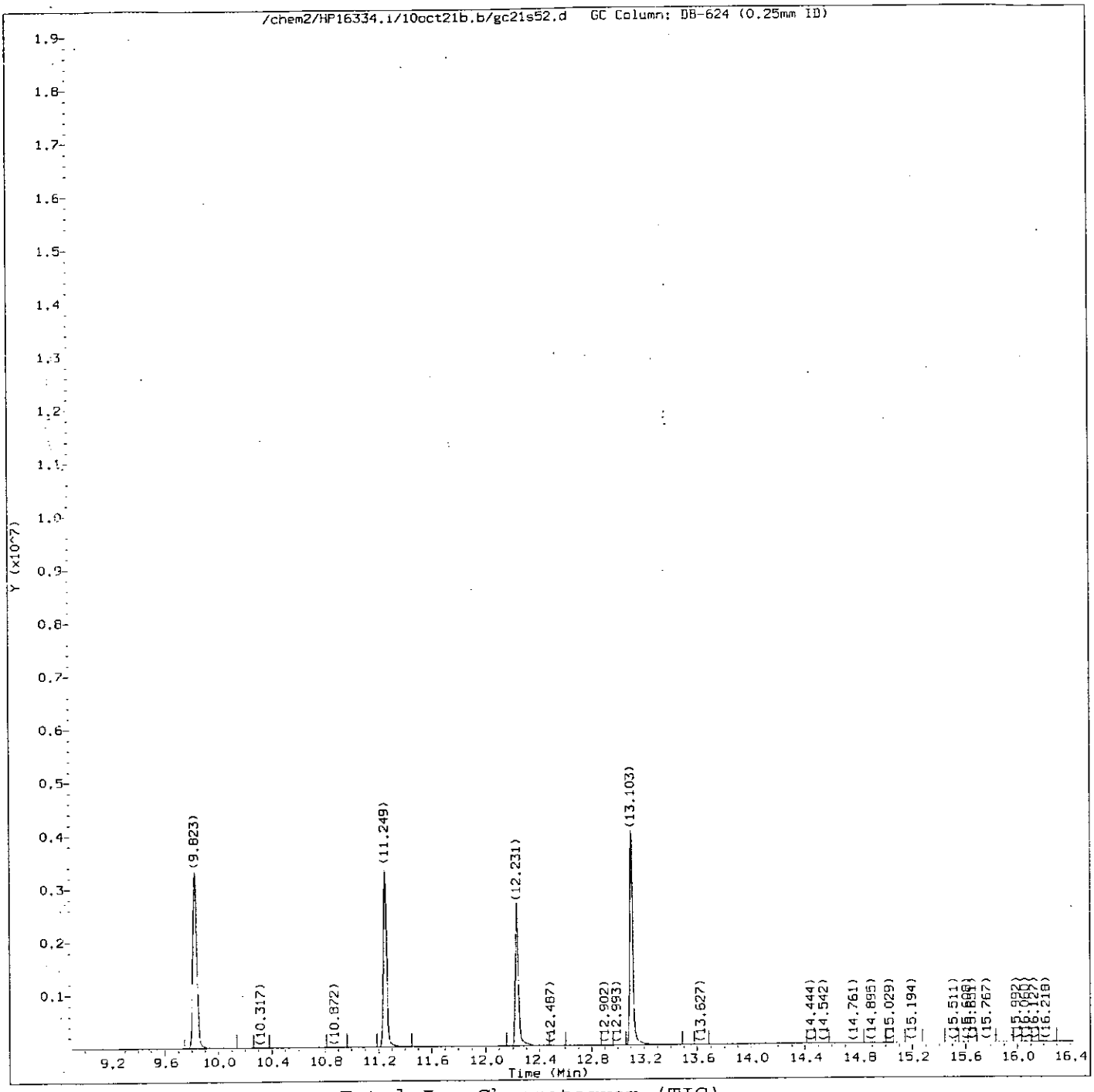
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Injection date and time: 21-OCT-2010 20:55 Analyst ID: SEJ02002

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: 1415
Calibration date and time: 25-OCT-2010 11:22
Date, time and analyst ID of latest file update: 25-Oct-2010 11:33 jml01693

Sample Name: XXXXX Lab Sample ID: 6117033

RAD48 0878

Digitally signed by Jason M. Long
on 10/25/2010 at 11:36.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/10oct21b.b/gc21s52.d Instrument ID: HP16334.i
Injection date and time: 21-OCT-2010 20:55 Analyst ID: SEJ02002

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: 1415
Calibration date and time: 25-OCT-2010 11:22
Date, time and analyst ID of latest file update: 25-Oct-2010 11:33 jml01693

Sample Name: XXXXX Lab Sample ID: 6117033

RAD48 8871

Digitally signed by Jason M. Long
on 10/25/2010 at 11:36.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/10oct21b.b/gc21s52.d Instrument ID: HP16334.i
Injection date and time: 21-OCT-2010 20:55 Analyst ID: SEJ02002

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: 1415
Calibration date and time: 25-OCT-2010 11:22
Date, time and analyst ID of latest file update: 25-Oct-2010 11:33 jml01693

Sample Name: XXXXX Lab Sample ID: 6117033

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
36)*t-Butyl Alcohol-d10	(4)	4.385	65	124347	50.000
61)$Dibromofluoromethane	(1)	6.927	113	675935	10.817
70)$1,2-Dichloroethane-d4	(1)	7.384	102	127760	10.297
77)*Fluorobenzene	(1)	7.829	96	2783938	10.000
97)$Toluene-d8	(2)	9.823	98	2717704	9.902
110)*Chlorobenzene-d5	(2)	11.249	117	2053655	10.000
126)$4-Bromofluorobenzene	(2)	12.231	95	889818	9.434
143)*1,4-Dichlorobenzene-d4	(3)	13.103	152	1168934	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

RAD48 0872

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on 10/25/2010 at 11:36.
Target 3.5 esignature user ID: jml01693

XXXXX

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

6117034

Data file: /chem2/HP16334.i/10oct21b.b/gc21s53.d
Data file Sample Info. Line: XXXXX;6117034;1;0;;;DRAPER;
Date, time and analyst ID of latest file update: 25-Oct-2010 11:33 jml01693

Injection date and time: **21-OCT-2010 21:17**
Instrument ID: **HP16334.i** Batch: **G102942AA**

Blank Data file reference: **/chem2/HP16334.i/10oct21b.b/gc21b51.d**

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: **1415**
Calibration date and time (Last Method Edit): 25-OCT-2010 11:22
Mid Level Daily Calibration Standard Reference: **/chem2/HP16334.i/10oct21b.b/gc21c51.d**

Bottle Code: **38A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
36) t-Butyl Alcohol-d10	4.379(0.000)	458	65	118567 (-4)	50.00	
77) Fluorobenzene	7.835(-0.006)	1025	96	2699512 (-5)	10.00	
110) Chlorobenzene-d5	11.249(0.000)	1585	117	1991402 (-6)	10.00	
143) 1,4-Dichlorobenzene-d4	12.109(-0.006)	1890	152	1134223 (-10)	10.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
61) Dibromofluoromethane	(1)	6.927(0.001)	113	656656	10.837	108%		77 - 114
70) 1,2-Dichloroethane-d4	(1)	7.384(0.001)	102	123207	10.241	102%		74 - 113
97) Toluene-d8	(2)	9.823(0.000)	98	2630373	9.883	99%		77 - 110
126) 4-Bromofluorobenzene	(2)	12.231(0.000)	95	858989	9.392	94%		76 - 110

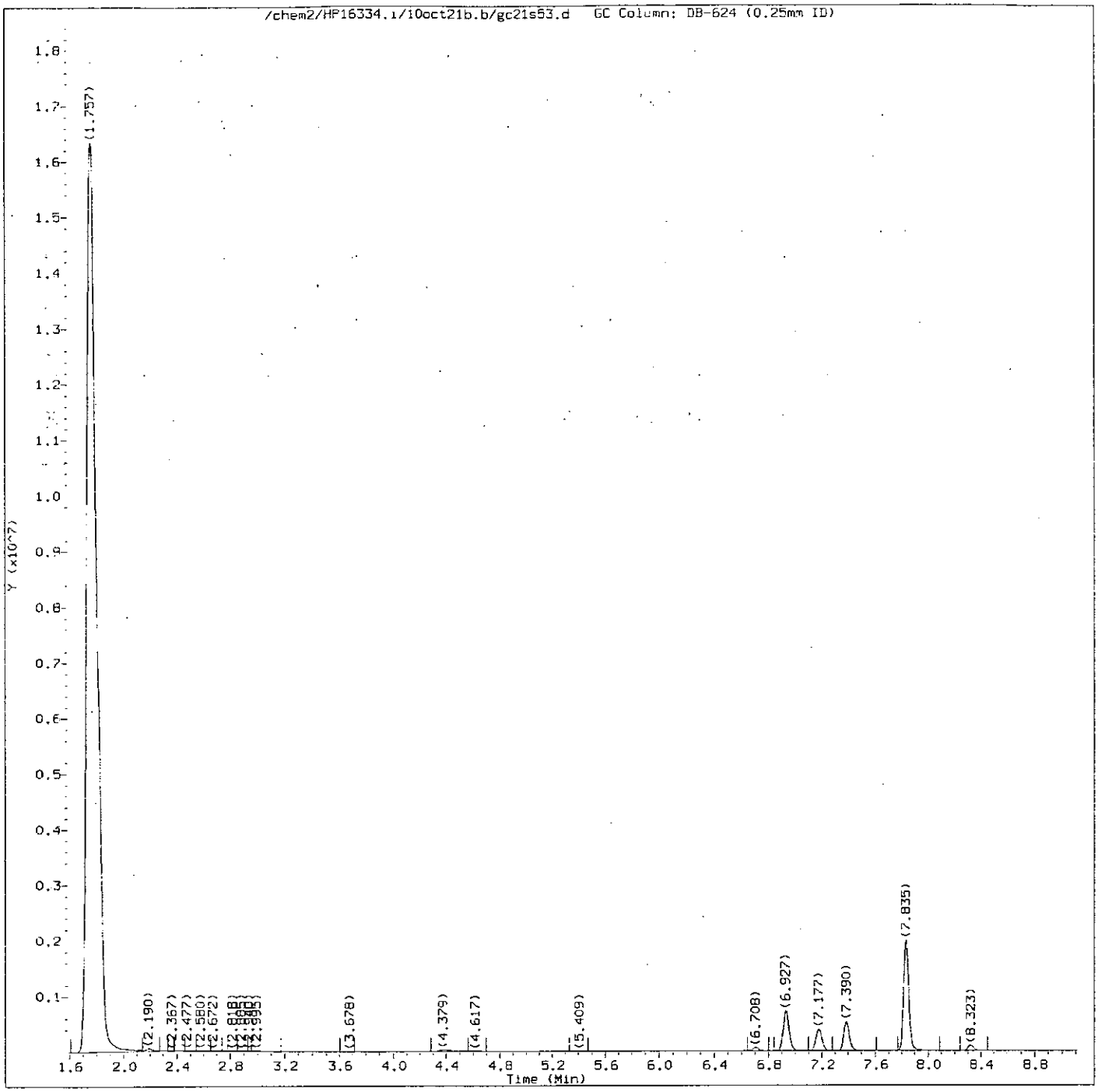
Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
5) Chloromethane	(1)			Not Detected					0.2
6) Vinyl Chloride	(1)			Not Detected					0.1
10) Bromomethane	(1)			Not Detected					0.1
15) Trichlorofluoromethane	(1)	3.062(-0.001)	101	20177	0.158	0.16			0.1
24) 1,1-Dichloroethene	(1)			Not Detected					0.1
34) Methylene Chloride	(1)			Not Detected					0.2
45) 1,1-Dichloroethane	(1)			Not Detected					0.1
58) Chloroform	(1)	6.708(-0.000)	83	70602	0.551	0.55			0.1
63) 1,1,1-Trichloroethane	(1)			Not Detected					0.1
66) Carbon Tetrachloride	(1)	7.177(0.000)	117	405170	4.229	4.23			0.1
72) Benzene	(1)			Not Detected					0.1
74) 1,2-Dichloroethane	(1)			Not Detected					0.1
83) Trichloroethene	(1)	8.323(-0.000)	95	50152	0.630	0.63			0.1
101) Toluene	(2)			Not Detected					0.1
105) Tetrachloroethene	(2)			Not Detected					0.1
112) Chlorobenzene	(2)			Not Detected					0.1
146) Benzyl Chloride	(3)			Not Detected					0.1
149) Hexachloroethane	(1)			Not Detected					0.1
155) Naphthalene	(3)			Not Detected					0.1

Total number of targets = 19

Comments:_____

Digitally signed by Jason M. Long on 10/25/2010 at 11:36. Target 3.5 esignature user ID: jml01693 BAD48 8873

Auditor:_____ Date: 10/25/10



Total Ion Chromatogram (TIC)

Target Revision 3.5

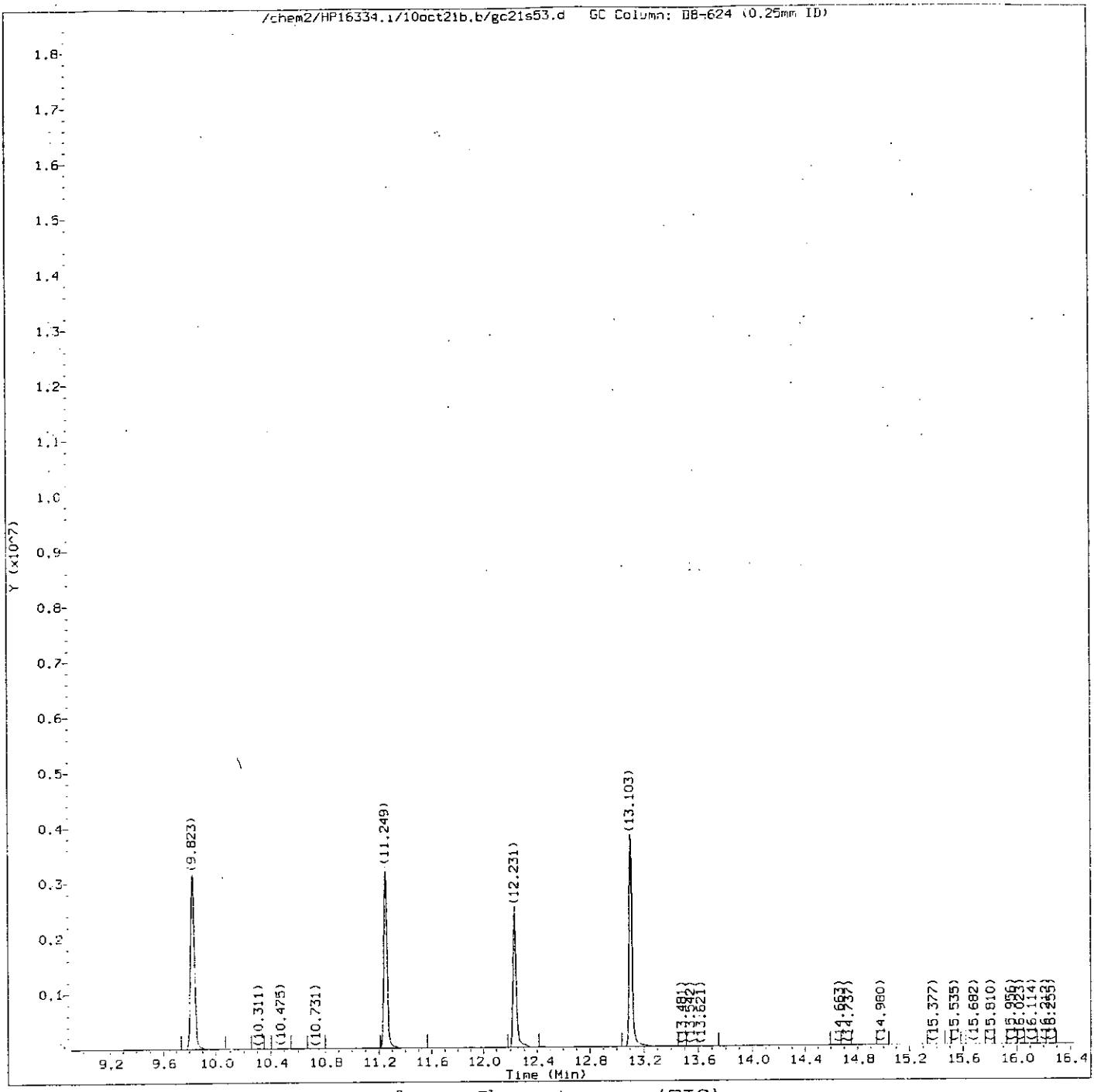
Data File: /chem2/HP16334.i/10oct21b.b/gc21s53.d Instrument ID: HP16334.i
Injection date and time: 21-OCT-2010 21:17 Analyst ID: SEJ02002

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: 1415
Calibration date and time: 25-OCT-2010 11:22
Date, time and analyst ID of latest file update: 25-Oct-2010 11:33 jml01693

Sample Name: XXXXX Lab Sample ID: 6117034

RAD48 0074

Digitally signed by Jason M. Long
on 10/25/2010 at 11:36.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/10oct21b.b/gc21s53.d Instrument ID: HP16334.i
Injection date and time: 21-OCT-2010 21:17 Analyst ID: SEJ02002

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: 1415
Calibration date and time: 25-OCT-2010 11:22
Date, time and analyst ID of latest file update: 25-Oct-2010 11:33 jml01693

Sample Name: XXXXX Lab Sample ID: 6117034

RAD40 0875

Digitally signed by Jason M. Long
on 10/25/2010 at 11:36.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/10oct21b.b/gc21s53.d Instrument ID: HP16334.i
Injection date and time: 21-OCT-2010 21:17 Analyst ID: SEJ02002

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: 1415
Calibration date and time: 25-OCT-2010 11:22
Date, time and analyst ID of latest file update: 25-Oct-2010 11:33 jml01693

Sample Name: XXXXX Lab Sample ID: 6117034

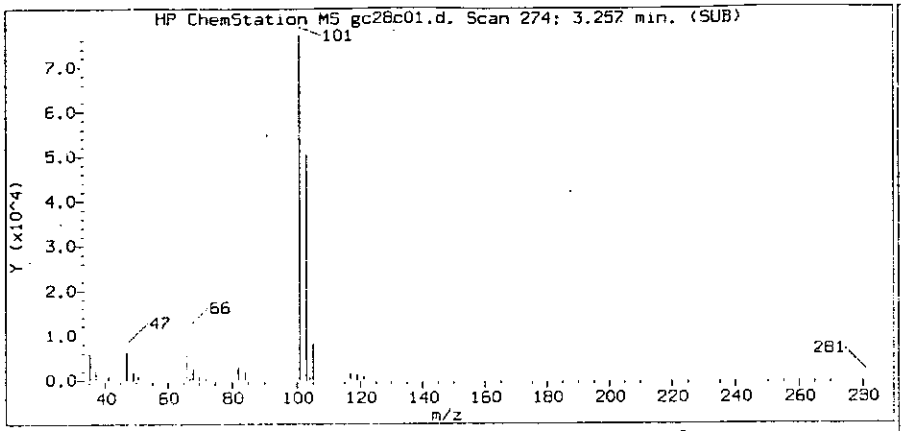
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
15) Trichlorofluoromethane	(1)	3.062	101	20177	0.158
36)*t-Butyl Alcohol-d10	(4)	4.379	65	118567	50.000
58) Chloroform	(1)	6.708	83	70602	0.551
61)$Dibromofluoromethane	(1)	6.927	113	656656	10.837
66) Carbon Tetrachloride	(1)	7.177	117	405170	4.229
70)$1,2-Dichloroethane-d4	(1)	7.384	102	123207	10.241
77)*Fluorobenzene	(1)	7.835	96	2699512	10.000
83) Trichloroethene	(1)	8.323	95	50152	0.630
97)$Toluene-d8	(2)	9.823	98	2630373	9.883
110)*Chlorobenzene-d5	(2)	11.249	117	1991402	10.000
126)$4-Bromofluorobenzene	(2)	12.231	95	858989	9.392
143)*1,4-Dichlorobenzene-d4	(3)	13.109	152	1134223	10.000

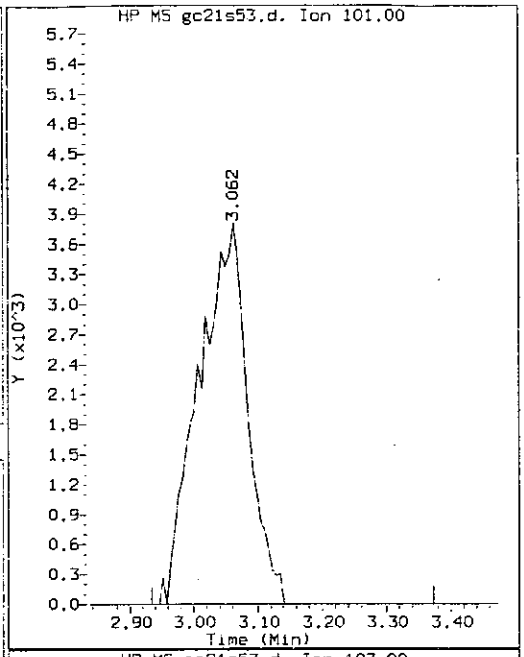
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

RAD48 0876

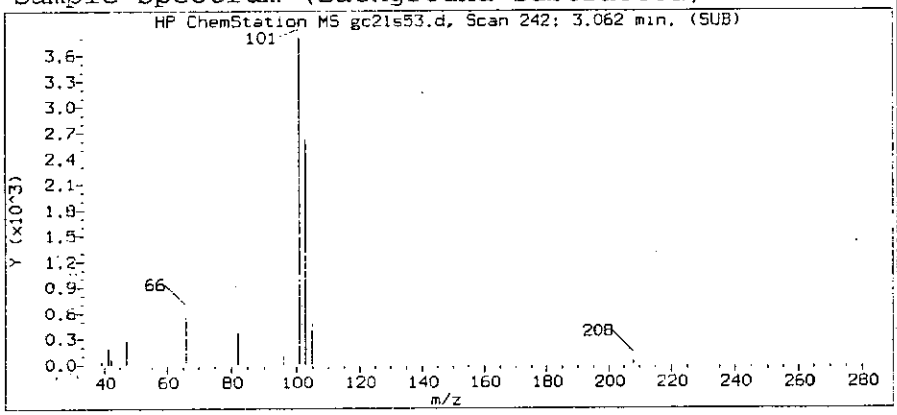
Digitally signed by Jason M. Long
on 10/25/2010 at 11:36.
Target 3.5 esignature user ID: jml01693

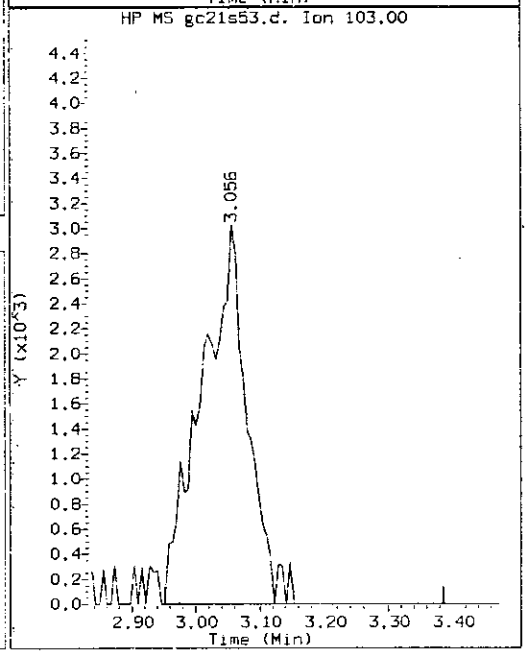
Reference Standard Spectrum for Trichlorofluoromethane



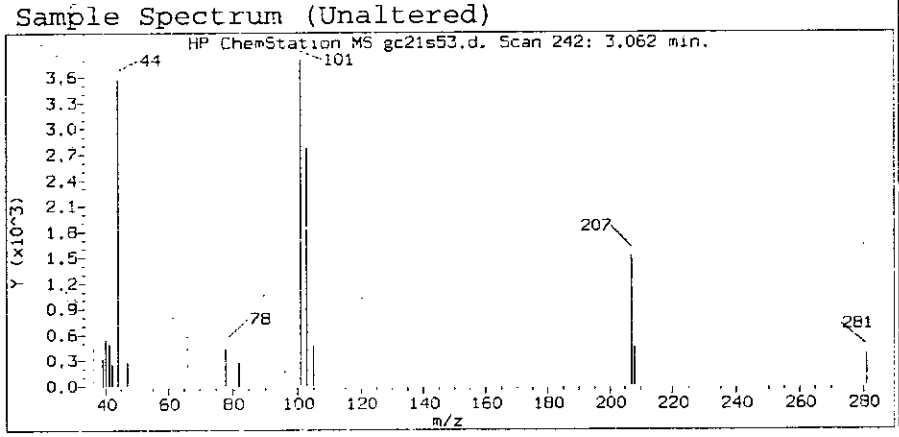


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem2/HP16334.i/10oct21b.b/gc21s53.d Instrument ID: HP16334.i
Injection date and time: 21-OCT-2010 21:17 Analyst ID: SEJ02002

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: 1415
Calibration date and time: 25-OCT-2010 11:22
Date, time and analyst ID of latest file update: 25-Oct-2010 11:33 jml01693

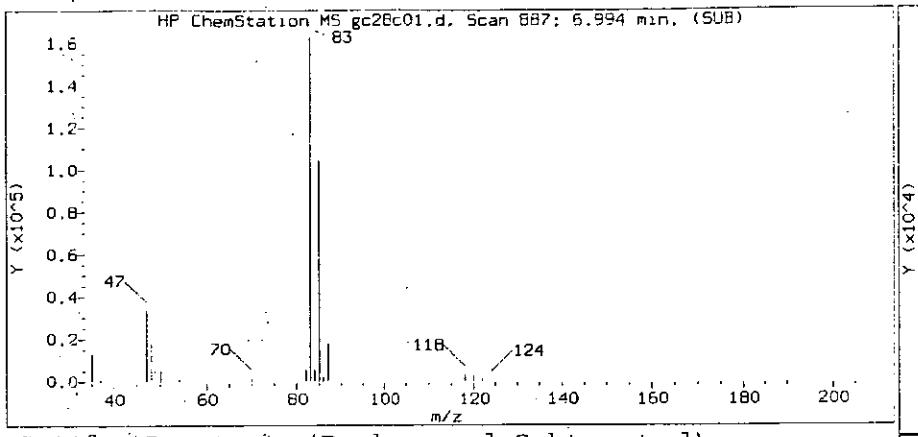
Sample Name: XXXXX Lab Sample ID: 6117034

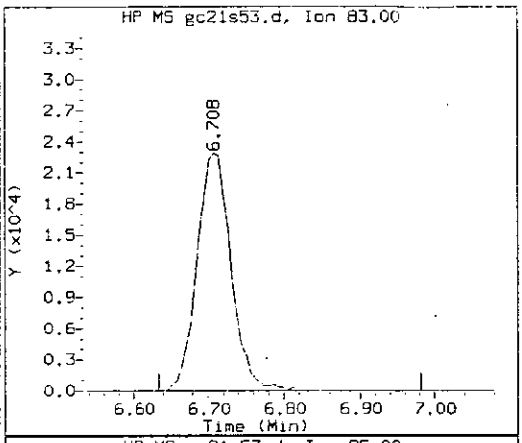
Compound Number	: 15
Compound Name	: Trichlorofluoromethane
Scan Number	: 242
Retention Time (minutes)	: 3.062
Relative Retention Time	: -0.001
Quant Ion	: 101.00
Area (flag)	: 20177
On-Column Amount (ng)	: 0.1576

RAD48 0077

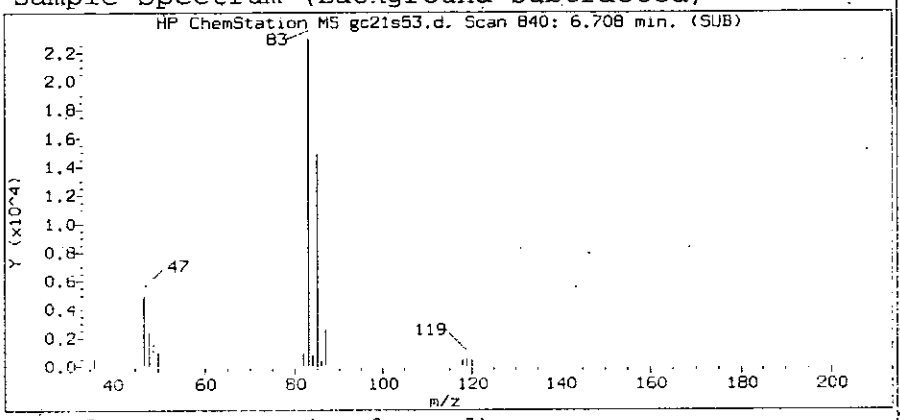
Digitally signed by Jason M. Long on 10/25/2010 at 11:36.
Target 3.5 esignature user ID: jml01693

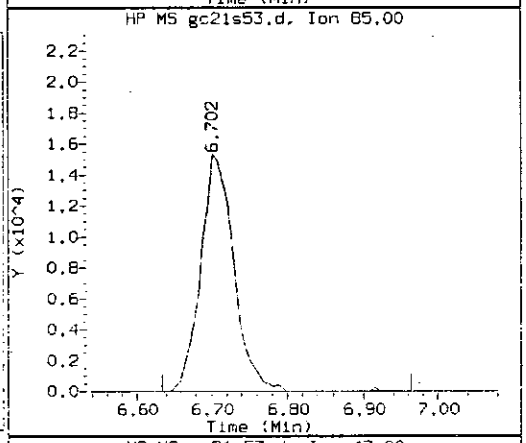
Reference Standard Spectrum for Chloroform



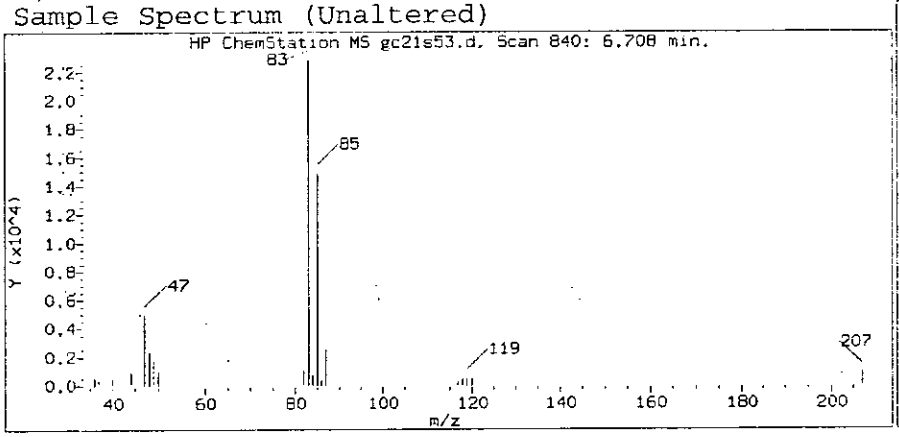


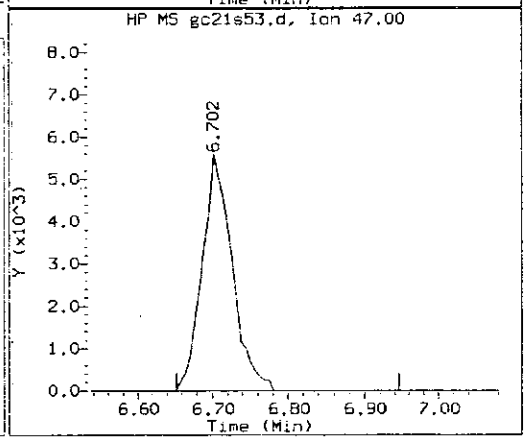
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP16334.i/10oct21b.b/gc21s53.d Instrument ID: HP16334.i
Injection date and time: 21-OCT-2010 21:17 Analyst ID: SEJ02002

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: 1415
Calibration date and time: 25-OCT-2010 11:22
Date, time and analyst ID of latest file update: 25-Oct-2010 11:33 jm101693

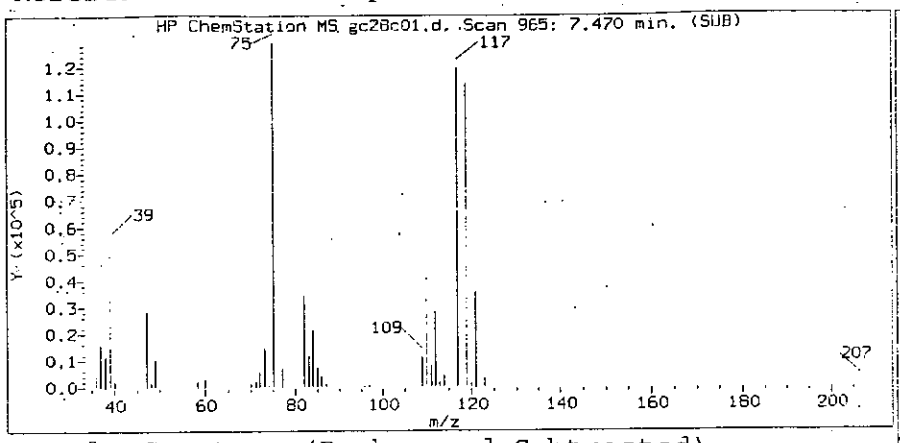
Sample Name: XXXXX Lab Sample ID: 6117034

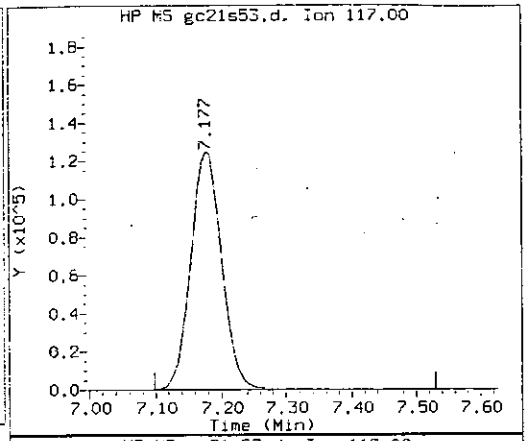
Compound Number	: 58
Compound Name	: Chloroform
Scan Number	: 840
Retention Time (minutes)	: 6.708
Relative Retention Time	: -0.000
Quant Ion	: 83.00
Area (flag)	: 70602
On-Column Amount (ng)	: 0.5512

RAD48 0878

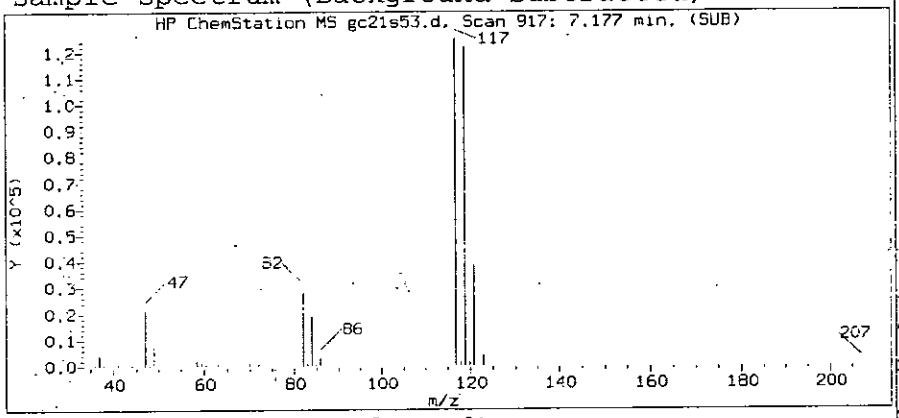
Digitally signed by Jason M. Long on 10/25/2010 at 11:36.
Target 3.5 esignature user ID: jm101693

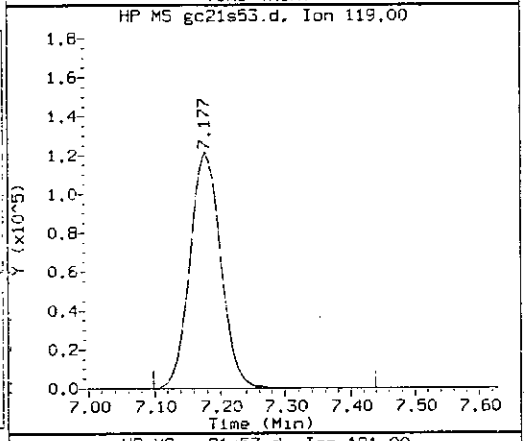
Reference Standard Spectrum for Carbon Tetrachloride



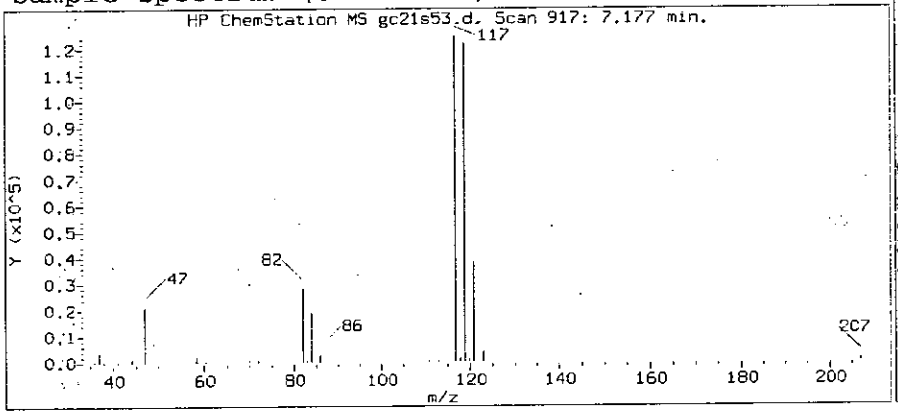


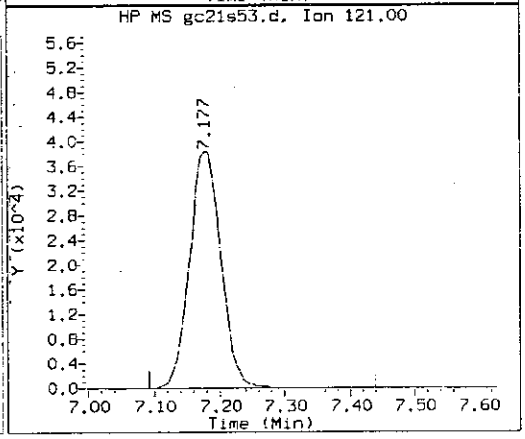
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP16334.i/10oct21b.b/gc21s53.d Instrument ID: HP16334.i
Injection date and time: 21-OCT-2010 21:17 Analyst ID: SEJ02002

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: 1415
Calibration date and time: 25-OCT-2010 11:22
Date, time and analyst ID of latest file update: 25-Oct-2010 11:33 jml01693

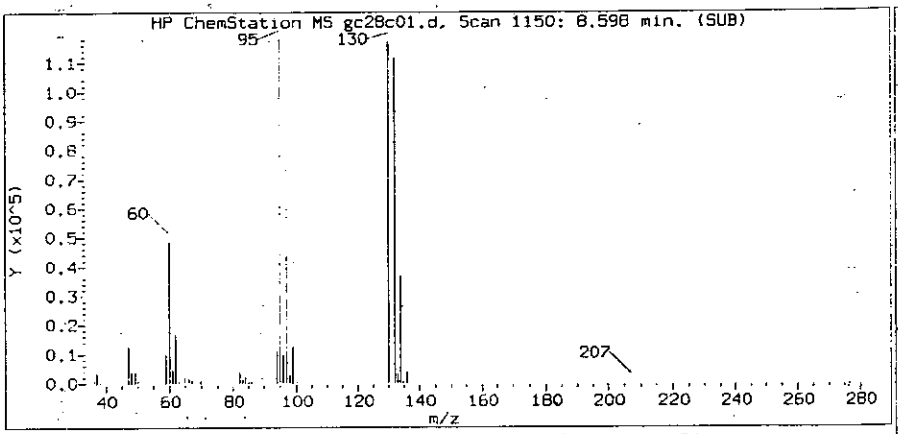
Sample Name: XXXXX Lab Sample ID: 6117034

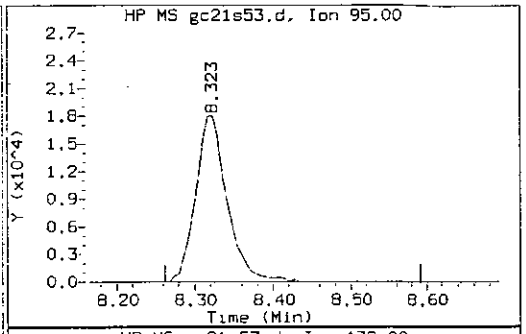
Compound Number	: 66
Compound Name	: Carbon Tetrachloride
Scan Number	: 917
Retention Time (minutes)	: 7.177
Relative Retention Time	: 0.000
Quant Ion	: 117.00
Area (flag)	: 405170
On-Column Amount (ng)	: 4.2286

RAD48 0079

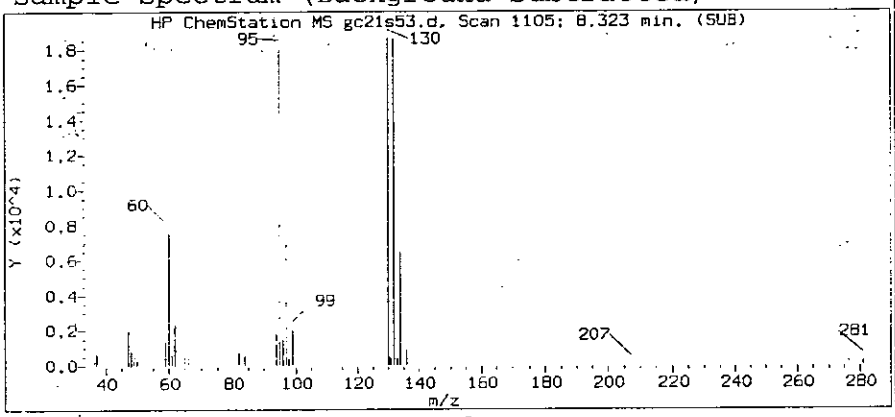
Digitally signed by Jason M. Long on 10/25/2010 at 11:36.
Target 3.5 esignature user ID: jml01693

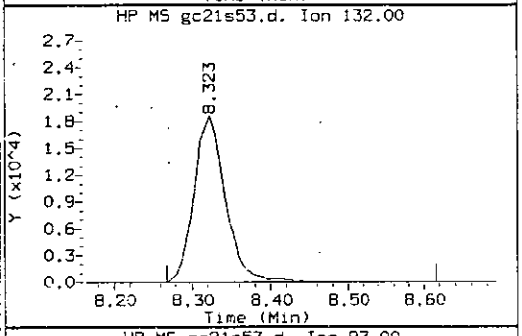
Reference Standard Spectrum for Trichloroethene

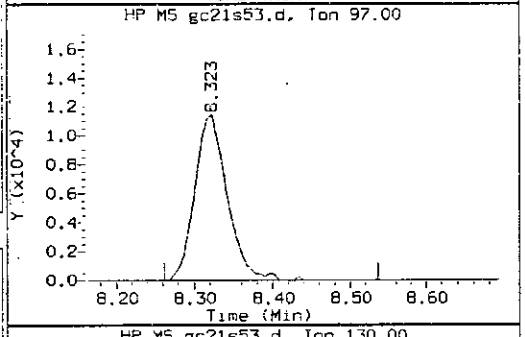




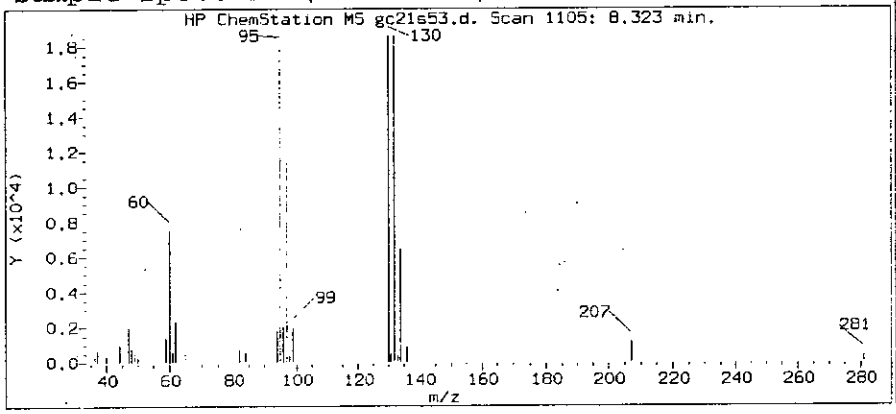
Sample Spectrum (Background Subtracted)

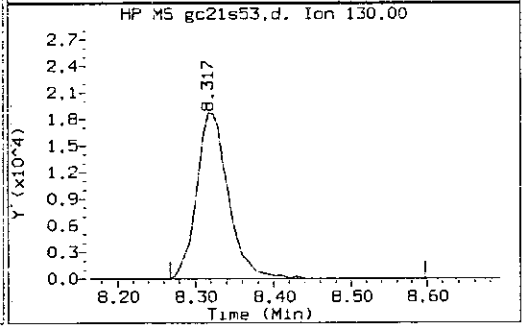






Sample Spectrum (Unaltered)





Data File: /chem2/HP16334.i/10oct21b.b/gc21s53.d Instrument ID: HP16334.i
Injection date and time: 21-OCT-2010 21:17 Analyst ID: SEJ02002

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: 1415
Calibration date and time: 25-OCT-2010 11:22
Date, time and analyst ID of latest file update: 25-Oct-2010 11:33 jml01693

Sample Name: XXXXX Lab Sample ID: 6117034

Compound Number	: 83
Compound Name	: Trichloroethene
Scan Number	: 1105
Retention Time (minutes)	: 8.323
Relative Retention Time	: -0.000
Quant Ion	: 95.00
Area (flag)	: 50152
On-Column Amount (ng)	: 0.6304

RAD40 0080

Digitally signed by Jason M. Long on 10/25/2010 at 11:36.
Target 3.5 esignature user ID: jml01693

XXXXX

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

6117035

Data file: /chem2/HP16334.i/10oct21b.b/gc21s54.d
Data file Sample Info, Line: XXXXX;6117035;1;0;;;DRAPER;
Date, time and analyst ID of latest file update: 25-Oct-2010 11:33 jml01693

Injection date and time: **21-OCT-2010 21:38**
Instrument ID: **HP16334.i** Batch: **G102942AA**

Blank Data file reference: **/chem2/HP16334.i/10oct21b.b/gc21b51.d**

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: **1415**
Calibration date and time (Last Method Edit): 25-OCT-2010 11:22
Mid Level Daily Calibration Standard Reference: **/chem2/HP16334.i/10oct21b.b/gc21c51.d**

Bottle Code: **38A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
36) t-Butyl Alcohol-d10	4.397(-0.018)	461	65	119133 (-4)	50.00	
77) Fluorobenzene	7.836(-0.006)	1025	96	2697635 (-5)	10.00	
110) Chlorobenzene-d5	11.250(0.000)	1585	117	1984921 (-6)	10.00	
143) 1,4-Dichlorobenzene-d4	13.103(0.000)	1889	152	1120433 (-11)	10.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc (on-column)	%Rec.	QC flags	QC Limits
61) Dibromofluoromethane	(1)	6.927(0.001)	113	656064	10.835	108%		77 - 114
70) 1,2-Dichloroethane-d4	(1)	7.385(0.001)	102	122216	10.165	102%		74 - 113
97) Toluene-d8	(2)	9.823(0.000)	98	2630171	9.915	99%		77 - 110
126) 4-Bromofluorobenzene	(2)	12.231(0.000)	95	858537	9.417	94%		78 - 110

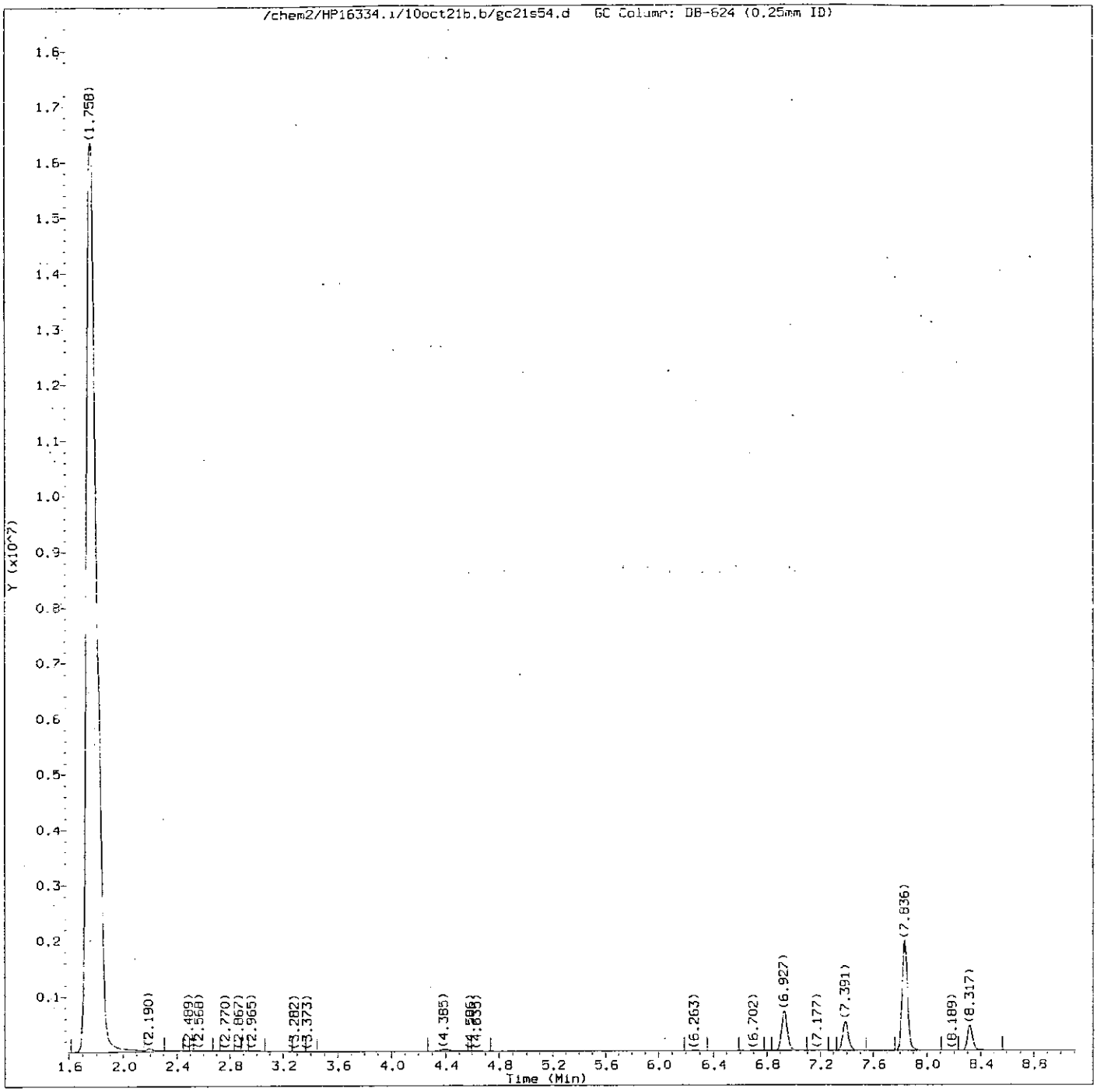
Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
5) Chloromethane	(1)			Not Detected					0.2
6) Vinyl Chloride	(1)			Not Detected					0.1
10) Bromomethane	(1)			Not Detected					0.1
15) Trichlorofluoromethane	(1)			Not Detected					0.1
24) 1,1-Dichloroethene	(1)			Not Detected					0.1
34) Methylene Chloride	(1)			Not Detected					0.2
45) 1,1-Dichloroethane	(1)			Not Detected					0.1
58) Chloroform	(1)			Not Detected					0.1
63) 1,1,1-Trichloroethane	(1)			Not Detected					0.1
66) Carbon Tetrachloride	(1)			Not Detected					0.1
72) Benzene	(1)			Not Detected					0.1
74) 1,2-Dichloroethane	(1)			Not Detected					0.1
83) Trichloroethene	(1)	8.317(0.000)	95	217990	2.742	2.74			0.1
101) Toluene	(2)			Not Detected					0.1
105) Tetrachloroethene	(2)			Not Detected					0.1
112) Chlorobenzene	(2)			Not Detected					0.1
146) Benzyl Chloride	(3)			Not Detected					0.1
149) Hexachloroethane	(1)			Not Detected					0.1
155) Naphthalene	(3)			Not Detected					0.1

Total number of targets = 19

Comments: _____

Digitally signed by Jason M. Long on 10/25/2010 at 11:36. Target 3.5 esignature user ID: jml01693 RAD48 0881

Auditor: _____ Date: 10/27/10



Total Ion Chromatogram (TIC)

Target Revision 3.5

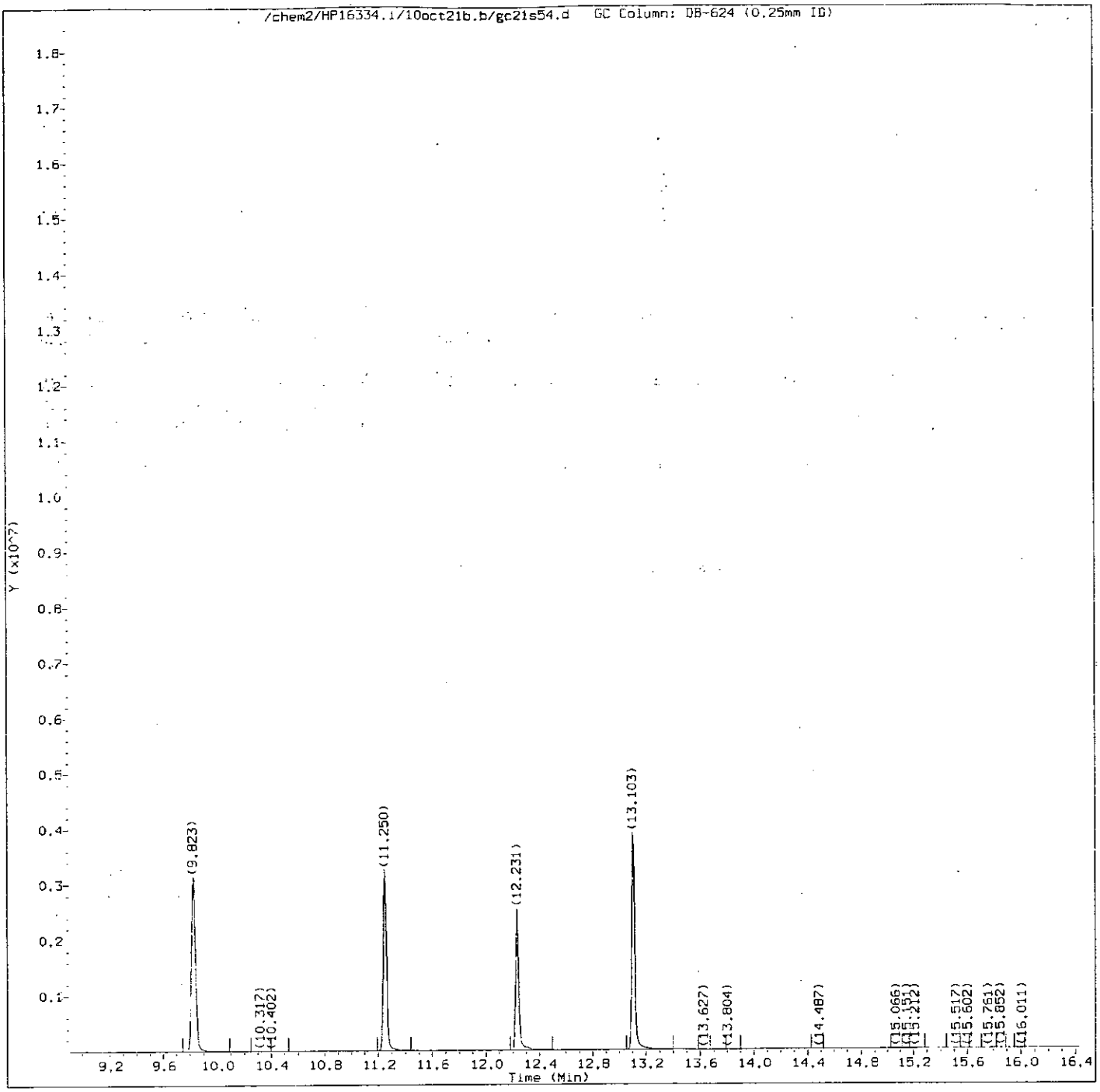
Data File: /chem2/HP16334.i/10oct21b.b/gc21s54.d Instrument ID: HP16334.i
Injection date and time: 21-OCT-2010 21:38 Analyst ID: SEJ02002

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: 1415
Calibration date and time: 25-OCT-2010 11:22
Date, time and analyst ID of latest file update: 25-Oct-2010 11:33 jml01693

Sample Name: XXXXX Lab Sample ID: 6117035

RAD40 8882

Digitally signed by Jason M. Long
on 10/25/2010 at 11:36.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/10oct21b.b/gc21s54.d Instrument ID: HP16334.i
Injection date and time: 21-OCT-2010 21:38 Analyst ID: SEJ02002

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: 1415
Calibration date and time: 25-OCT-2010 11:22
Date, time and analyst ID of latest file update: 25-Oct-2010 11:33 jml01693

Sample Name: XXXXX Lab Sample ID: 6117035

RAD48 0883

Digitally signed by Jason M. Long
on 10/25/2010 at 11:36.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/10oct21b.b/gc21s54.d Instrument ID: HP16334.i
Injection date and time: 21-OCT-2010 21:38 Analyst ID: SEJ02002

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: 1415
Calibration date and time: 25-OCT-2010 11:22
Date, time and analyst ID of latest file update: 25-Oct-2010 11:33 jml01693

Sample Name: XXXXX Lab Sample ID: 6117035

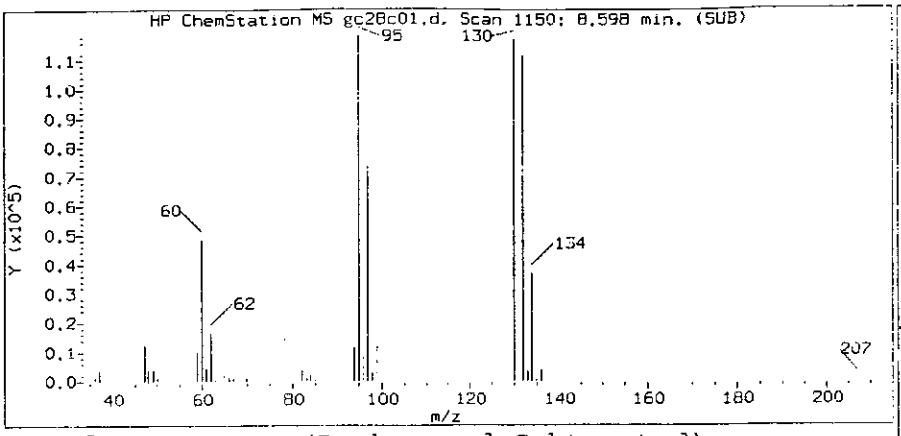
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
36)*t-Butyl Alcohol-d10	(4)	4.397	65	119133	50.000
61)$Dibromofluoromethane	(1)	6.927	113	656064	10.835
70)$1,2-Dichloroethane-d4	(1)	7.385	102	122216	10.165
77)*Fluorobenzene	(1)	7.836	96	2697635	10.000
83) Trichloroethene	(1)	8.317	95	217990	2.742
97)$Toluene-d8	(2)	9.823	98	2630171	9.915
110)*Chlorobenzene-d5	(2)	11.250	117	1984921	10.000
126)$4-Bromofluorobenzene	(2)	12.231	95	858537	9.417
143)*1,4-Dichlorobenzene-d4	(3)	13.103	152	1120433	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

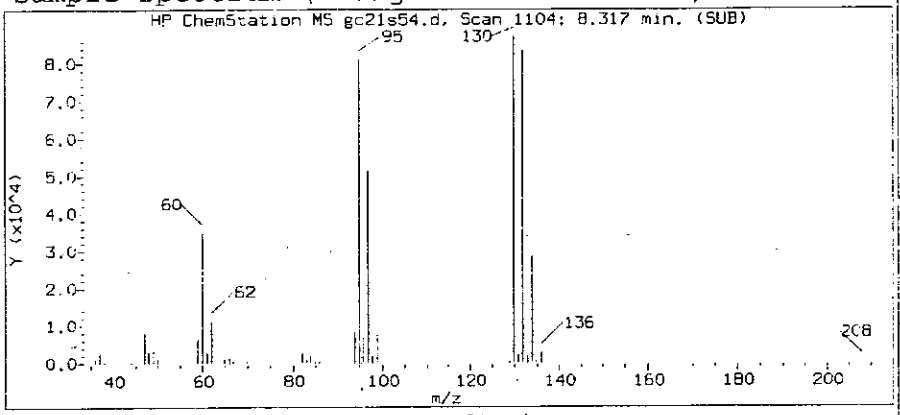
RAD40 8884

Digitally signed by Jason M. Long
on 10/25/2010 at 11:36.
Target 3.5 esignature user ID: jml01693

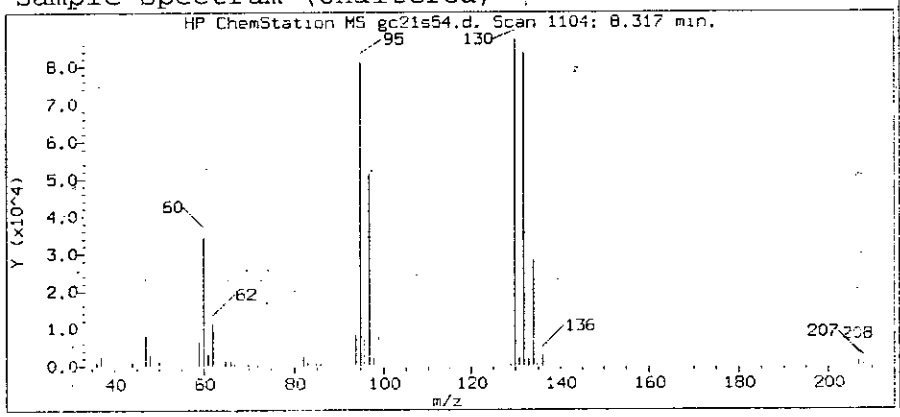
Reference Standard Spectrum for Trichloroethene

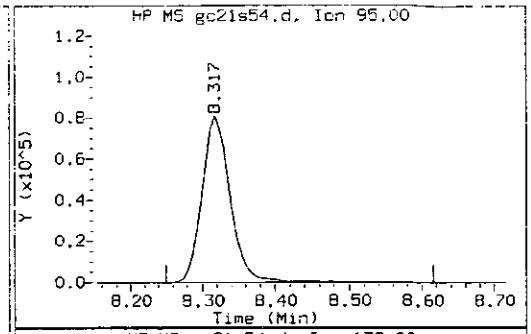


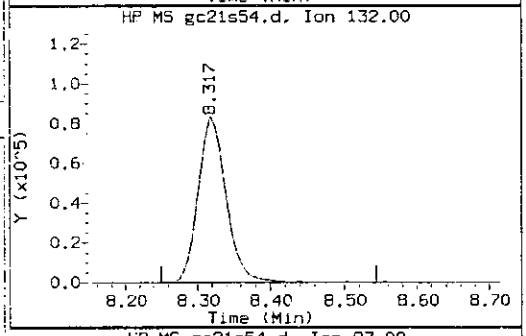
Sample Spectrum (Background Subtracted)

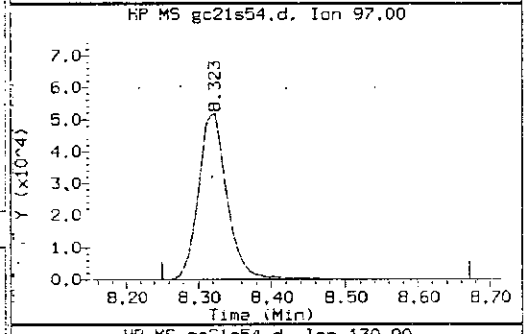


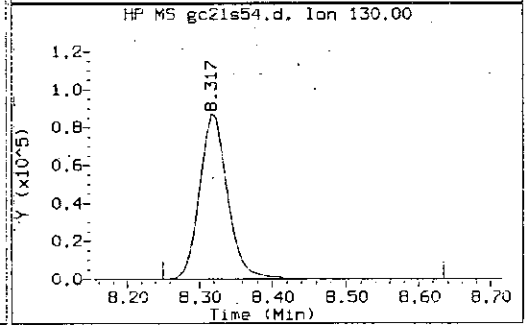
Sample Spectrum (Unaltered)











Data File: /chem2/HP16334.i/10oct21b.b/gc21s54.d Instrument ID: HP16334.i
Injection date and time: 21-OCT-2010 21:38 Analyst ID: SEJ02002

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: 1415
Calibration date and time: 25-OCT-2010 11:22
Date, time and analyst ID of latest file update: 25-Oct-2010 11:33 jml01693

Sample Name: XXXXX Lab Sample ID: 6117035

Compound Number	: 83
Compound Name	: Trichloroethene
Scan Number	: 1104
Retention Time (minutes)	: 8.317
Relative Retention Time	: 0.000
Quant Ion	: 95.00
Area (flag)	: 217990
On-Column Amount (ng)	: 2.7418

RAD40 0885

Digitally signed by Jason M. Long on 10/25/2010 at 11:36.
Target 3.5 esignature user ID: jml01693

XXXXX

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

6117036

Data file: /chem2/HP16334.i/10oct21b.b/gc21s55.d
Data file Sample Info. Line: XXXXX;6117036;1;0;;;DRAPER;
Date, time and analyst ID of latest file update: 25-Oct-2010 11:34 jm101693

Injection date and time: **21-OCT-2010 22:00**
Instrument ID: **HP16334.i** Batch: **G102942AA**

Blank Data file reference: **/chem2/HP16334.i/10oct21b.b/gc21b51.d**

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: **1415**
Calibration date and time (Last Method Edit): 25-OCT-2010 11:22
Mid Level Daily Calibration Standard Reference: **/chem2/HP16334.i/10oct21b.b/gc21c51.d**

Bottle Code: **38A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
36) t-Butyl Alcohol-d10	4.373(0.006)	457	65	119244 (-4)	50.00	
77) Fluorobenzene	7.836(-0.006)	1025	96	2689839 (-5)	10.00	
110) Chlorobenzene-d5	11.250(0.000)	1585	117	1985549 (-6)	10.00	
143) 1,4-Dichlorobenzene-d4	13.103(0.000)	1889	152	1121452 (-11)	10.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
61) Dibromofluoromethane	(1)	6.927(0.001)	113	655222	10.854	109%		77 - 114
70) 1,2-Dichloroethane-d4	(1)	7.391(0.000)	102	122984	10.259	103%		74 - 113
97) Toluene-d8	(2)	9.823(0.000)	98	2621654	9.880	99%		77 - 110
126) 4-Bromofluorobenzene	(2)	12.231(0.000)	95	849340	9.314	93%		78 - 110

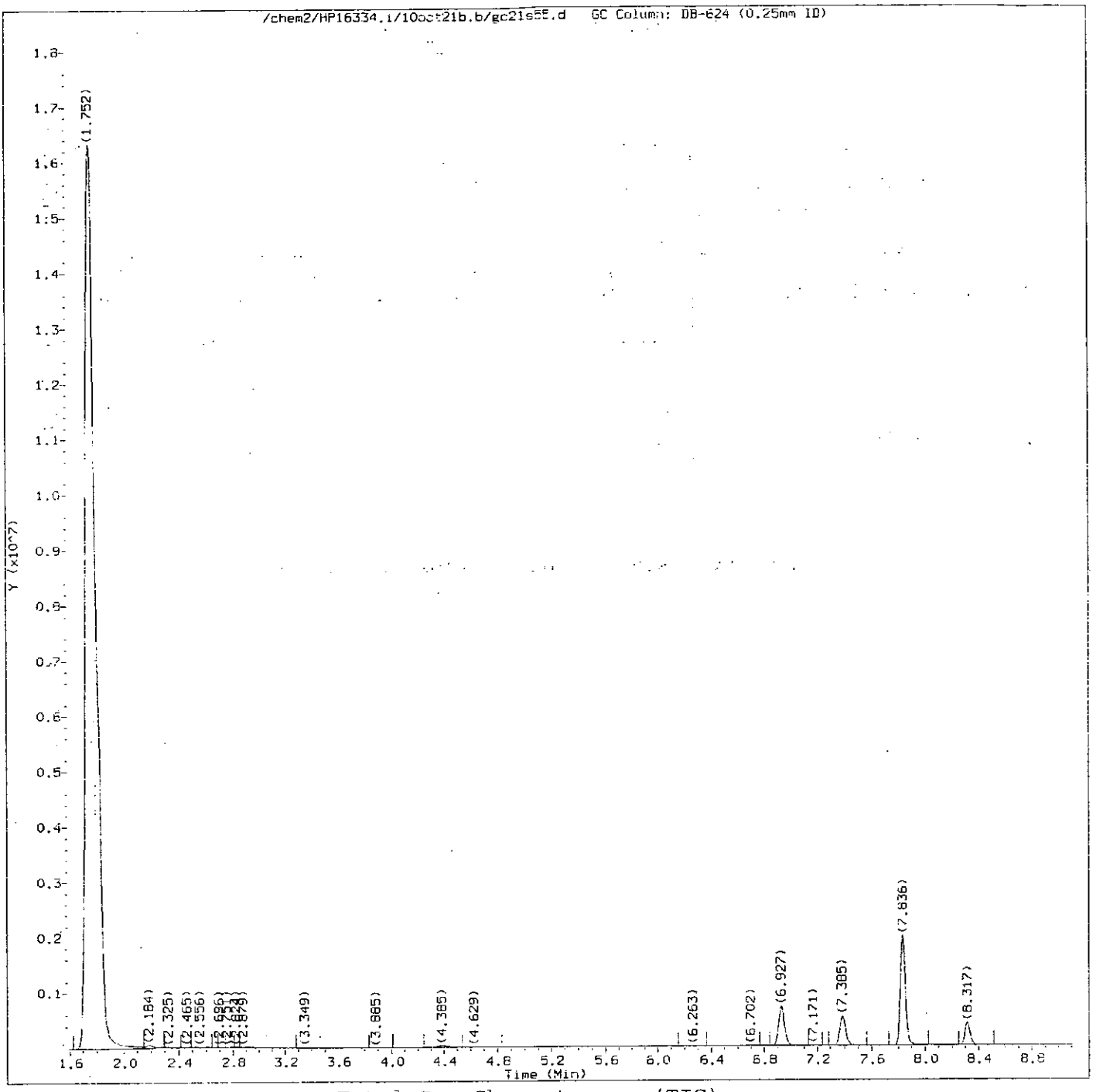
Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
5) Chloromethane	(1)			Not Detected					0.2
6) Vinyl Chloride	(1)			Not Detected					0.1
10) Bromomethane	(1)			Not Detected					0.1
15) Trichlorofluoromethane	(1)			Not Detected					0.1
24) 1,1-Dichloroethene	(1)			Not Detected					0.1
34) Methylene Chloride	(1)			Not Detected					0.2
45) 1,1-Dichloroethane	(1)			Not Detected					0.1
58) Chloroform	(1)			Not Detected					0.1
63) 1,1,1-Trichloroethane	(1)			Not Detected					0.1
66) Carbon Tetrachloride	(1)			Not Detected					0.1
72) Benzene	(1)			Not Detected					0.1
74) 1,2-Dichloroethane	(1)			Not Detected					0.1
83) Trichloroethene	(1)	8.317(0.000)	95	197425	2.490	2.49			0.1
101) Toluene	(2)			Not Detected					0.1
105) Tetrachloroethene	(2)			Not Detected					0.1
112) Chlorobenzene	(2)			Not Detected					0.1
146) Benzyl Chloride	(3)			Not Detected					0.1
149) Hexachloroethane	(3)			Not Detected					0.1
155) Naphthalene	(3)			Not Detected					0.1

Total number of targets = 19

Comments: _____

Digitally signed by Jason M. Long on 10/25/2010 at 11:36. Target 3.5 esignature user ID: jm101693 RAD48 9886

Auditor: _____ Date: 10-26-10



Total Ion Chromatogram (TIC)

Target Revision 3.5

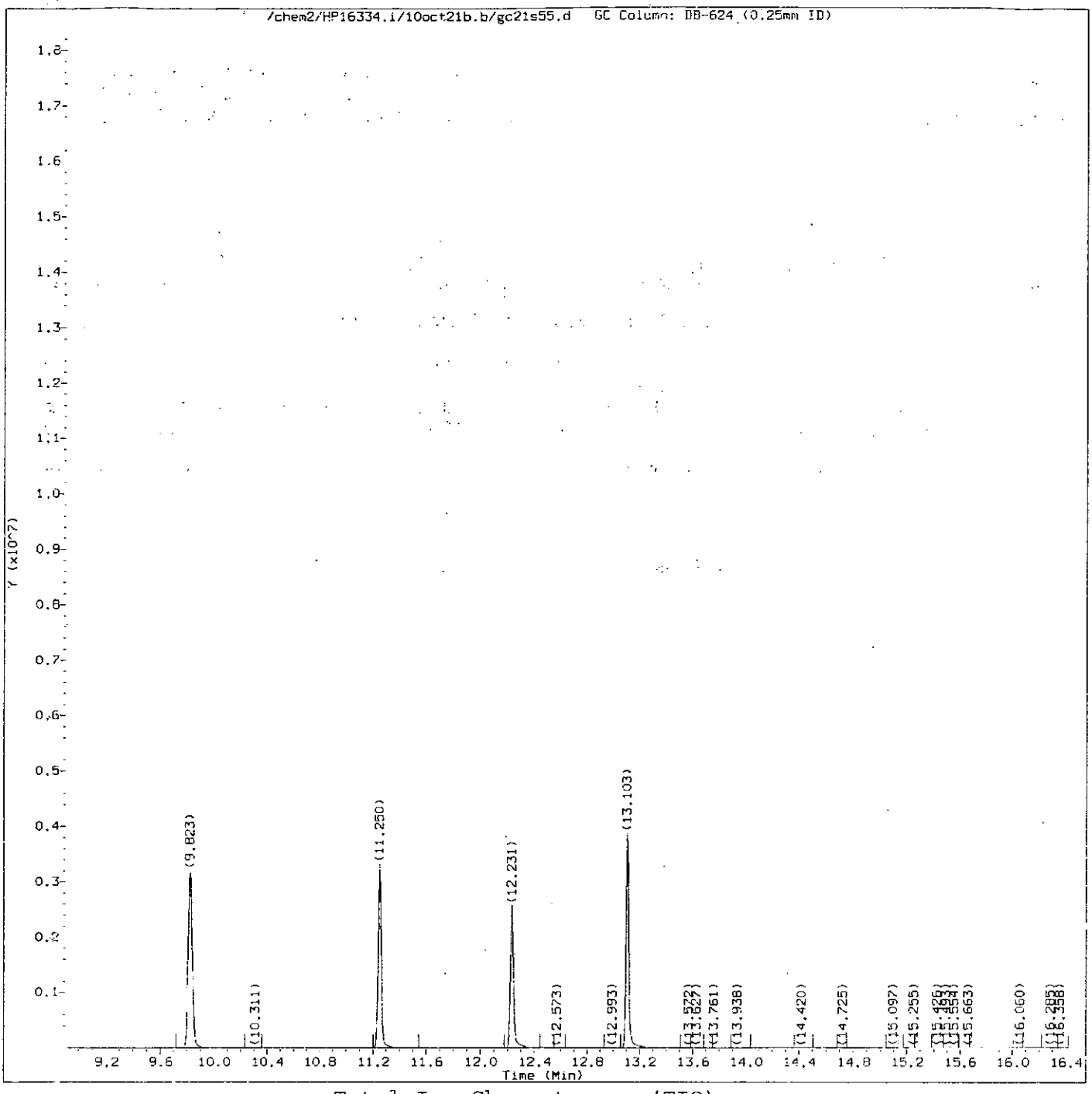
Data File: /chem2/HP16334.i/10oct21b.b/gc21s55.d Instrument ID: HP16334.i
Injection date and time: 21-OCT-2010 22:00 Analyst ID: SEJ02002

Method used: /chem2/HP16334.i/10oct21b.b/g8260w35.m Sublist used: 1415
Calibration date and time: 25-OCT-2010 11:22
Date, time and analyst ID of latest file update: 25-Oct-2010 11:34 jml01693

Sample Name: XXXXX Lab Sample ID: 6117036

RAD48 0887

Digitally signed by Jason M. Long
on 10/25/2010 at 11:36.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/10oct21b.b/gc21s55.d Instrument ID: HP16334.i
Injection date and time: 21-OCT-2010 22:00 Analyst ID: SEJ02002

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: 1415
Calibration date and time: 25-OCT-2010 11:22
Date, time and analyst ID of latest file update: 25-Oct-2010 11:34 jml01693

Sample Name: XXXXX Lab Sample ID: 6117036

RAD48 2888

Digitally signed by Jason M. Long
on 10/25/2010 at 11:36.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/10oct21b.b/gc21s55.d Instrument ID: HP16334.i
Injection date and time: 21-OCT-2010 22:00 Analyst ID: SEJ02002

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: 1415
Calibration date and time: 25-OCT-2010 11:22
Date, time and analyst ID of latest file update: 25-Oct-2010 11:34 jml01693

Sample Name: XXXXX Lab Sample ID: 6117036

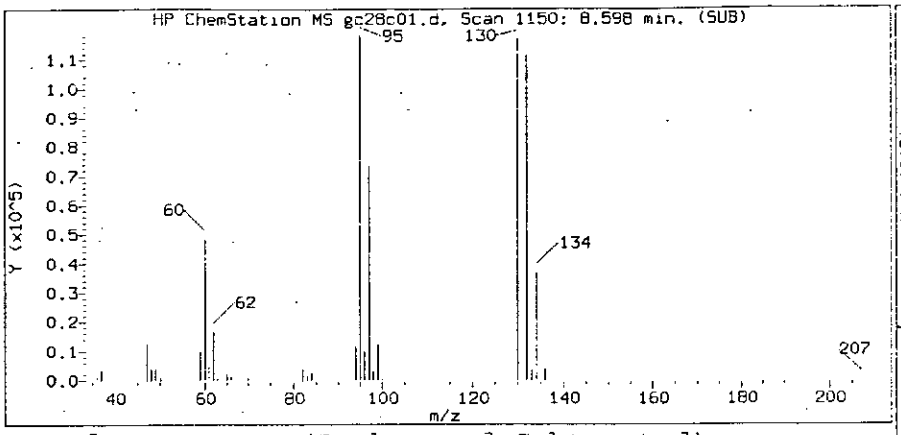
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
36)*t-Butyl Alcohol-d10	(4)	4.373	65	119244	50.000
61)$Dibromofluoromethane	(1)	6.927	113	655322	10.854
70)$1,2-Dichloroethane-d4	(1)	7.391	102	122984	10.259
77)*Fluorobenzene	(1)	7.836	96	2689839	10.000
83) Trichloroethene	(1)	8.317	95	197425	2.490
97)$Toluene-d8	(2)	9.823	98	2621654	9.880
110)*Chlorobenzene-d5	(2)	11.250	117	1985549	10.000
126)$4-Bromofluorobenzene	(2)	12.231	95	849340	9.314
143)*1,4-Dichlorobenzene-d4	(3)	13.103	152	1121452	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

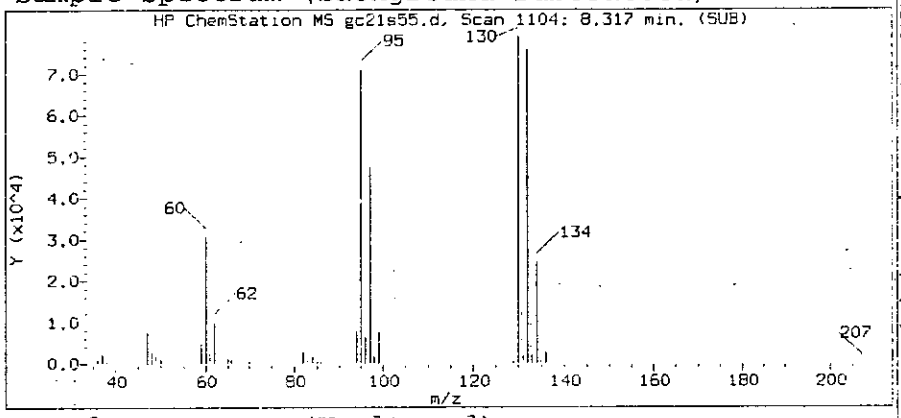
RAD40 0089

Digitally signed by Jason M. Long
on 10/25/2010 at 11:36.
Target 3.5 esignature user ID: jml01693

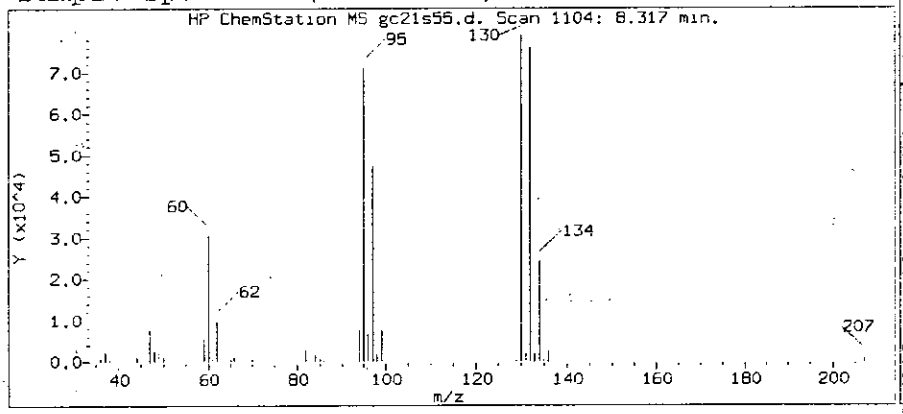
Reference Standard Spectrum for Trichloroethene

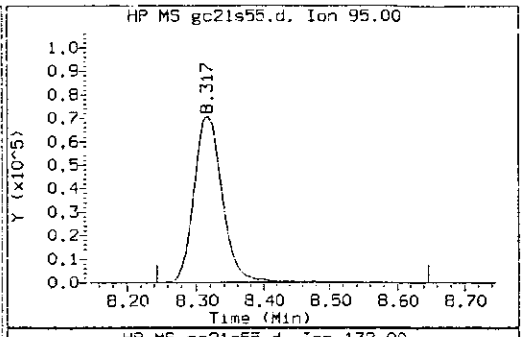


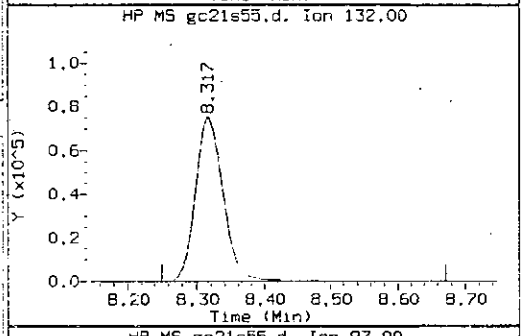
Sample Spectrum (Background Subtracted)

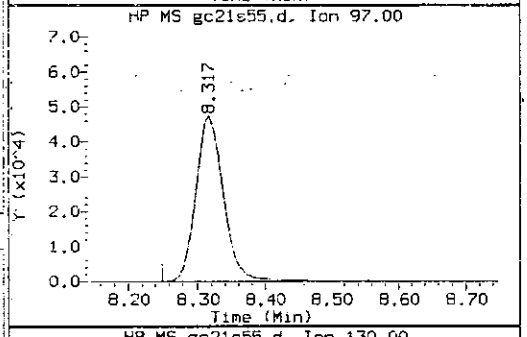


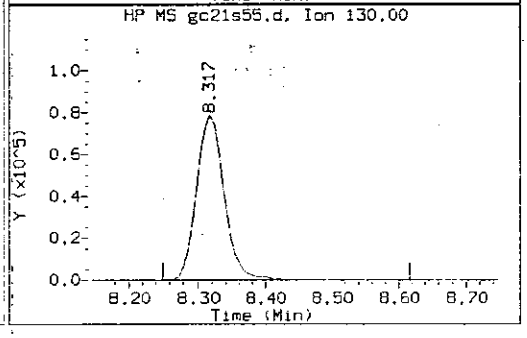
Sample Spectrum (Unaltered)











Data File: /chem2/HP16334.i/10oct21b.b/gc21s55.d Instrument ID: HP16334.i
Injection date and time: 21-OCT-2010 22:00 Analyst ID: SEJ02002

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: 1415
Calibration date and time: 25-OCT-2010 11:22
Date, time and analyst ID of latest file update: 25-Oct-2010 11:34 jml01693

Sample Name: XXXXX Lab Sample ID: 6117036

Compound Number	: 83
Compound Name	: Trichloroethene
Scan Number	: 1104
Retention Time (minutes)	: 8.317
Relative Retention Time	: 0.000
Quant Ion	: 95.00
Area (flag)	: 197425
On-Column Amount (ng)	: 2.4904

RAD48 0898

Digitally signed by Jason M. Long on 10/25/2010 at 11:36.
Target 3.5 esignature user ID: jml01693

XXXXX

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

6117037

Data file: /chem2/HP16334.i/10oct21b.b/gc21s56.d
Data file Sample Info. Line: XXXXX;6117037;1;0;;;DRAPER;
Date, time and analyst ID of latest file update: 25-Oct-2010 11:34 jm101693

Injection date and time: **21-OCT-2010 22:22**
Instrument ID: **HP16334.i** Batch: **G102942AA**

Blank Data file reference: **/chem2/HP16334.i/10oct21b.b/gc21b51.d**

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: **1415**
Calibration date and time (Last Method Edit): 25-OCT-2010 11:22
Mid Level Daily Calibration Standard Reference: **/chem2/HP16334.i/10oct21b.b/gc21c51.d**

Bottle Code: **38A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
36) t-Butyl Alcohol-d10	4.391 (-0.012)	460	65	118528 (-4)	50.00	
77) Fluorobenzene	7.835 (-0.006)	1025	96	2687661 (-6)	10.00	
110) Chlorobenzene-d5	11.249 (0.000)	1585	117	1977307 (-6)	10.00	
143) 1,4-Dichlorobenzene-d4	13.109 (-0.006)	1890	152	1114095 (-12)	10.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
61) Dibromofluoromethane	(1)	6.927 (0.001)	113	653729	10.837	108%		77 - 114
70) 1,2-Dichloroethane-d4	(1)	7.384 (0.001)	102	122508	10.228	102%		74 - 113
97) Toluene-d8	(2)	9.823 (0.000)	98	2600941	9.842	98%		77 - 110
126) 4-Bromofluorobenzene	(2)	12.231 (0.000)	95	850690	9.367	94%		78 - 110

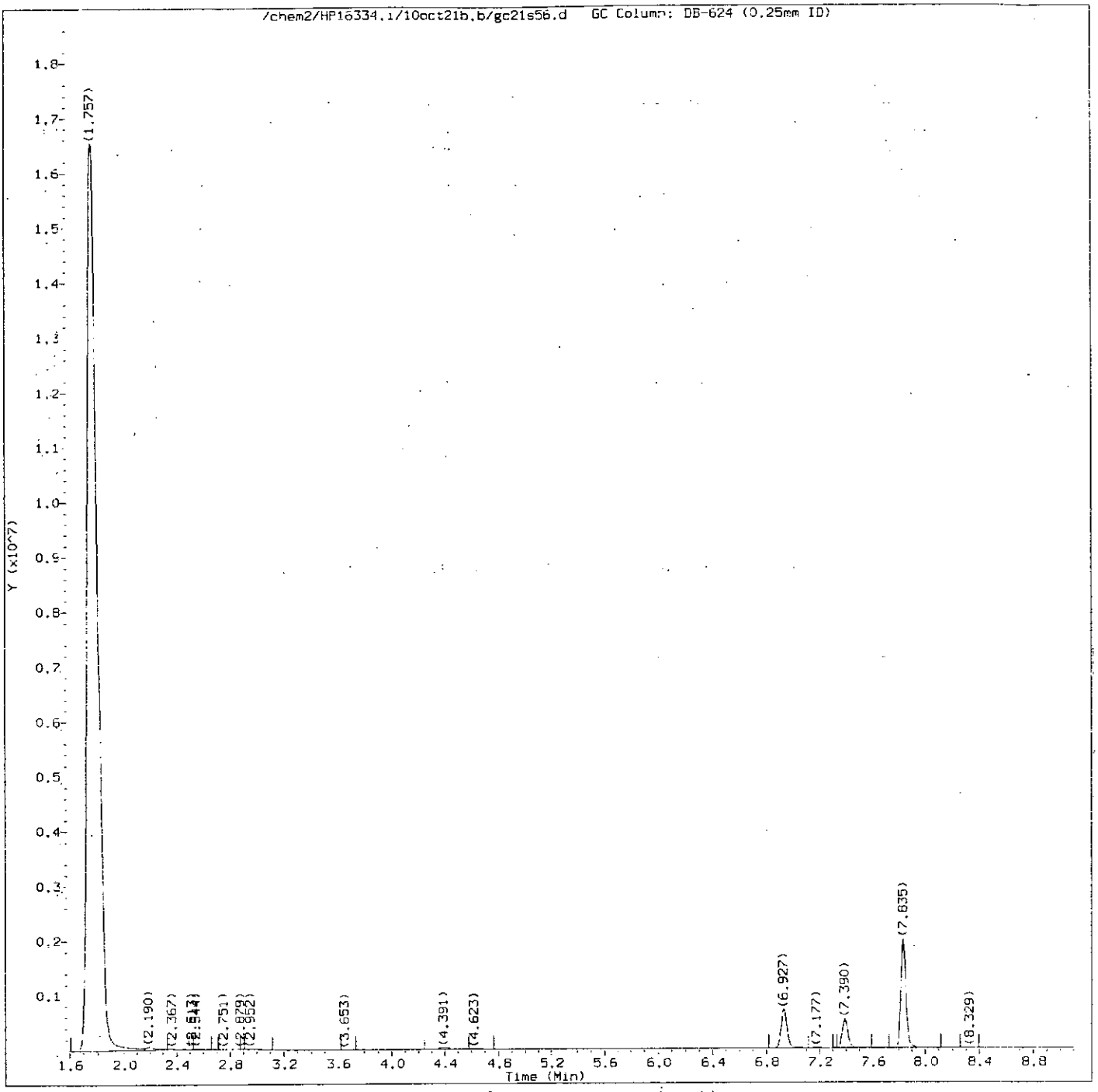
Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
5) Chloromethane	(1)			Not Detected					0.2
6) Vinyl Chloride	(1)			Not Detected					0.1
10) Bromomethane	(1)			Not Detected					0.1
15) Trichlorofluoromethane	(1)			Not Detected					0.1
24) 1,1-Dichloroethene	(1)			Not Detected					0.1
34) Methylene Chloride	(1)			Not Detected					0.2
45) 1,1-Dichloroethane	(1)			Not Detected					0.1
58) Chloroform	(1)			Not Detected					0.1
63) 1,1,1-Trichloroethane	(1)			Not Detected					0.1
66) Carbon Tetrachloride	(1)			Not Detected					0.1
72) Benzene	(1)			Not Detected					0.1
74) 1,2-Dichloroethane	(1)			Not Detected					0.1
83) Trichloroethene	(1)			Not Detected					0.1
101) Toluene	(2)			Not Detected					0.1
105) Tetrachloroethene	(2)			Not Detected					0.1
112) Chlorobenzene	(2)			Not Detected					0.1
146) Benzyl Chloride	(3)			Not Detected					0.1
149) Hexachloroethane	(1)			Not Detected					0.1
155) Naphthalene	(3)			Not Detected					0.1

Total number of targets = 19

Comments: _____

Digitally signed by Jason M. Long on 10/25/2010 at 11:36. Target 3.5 esignature user ID: jm101693 RAD48 0891

Auditor: _____ Date: 10/26/10



Total Ion Chromatogram (TIC)

Target Revision 3.5

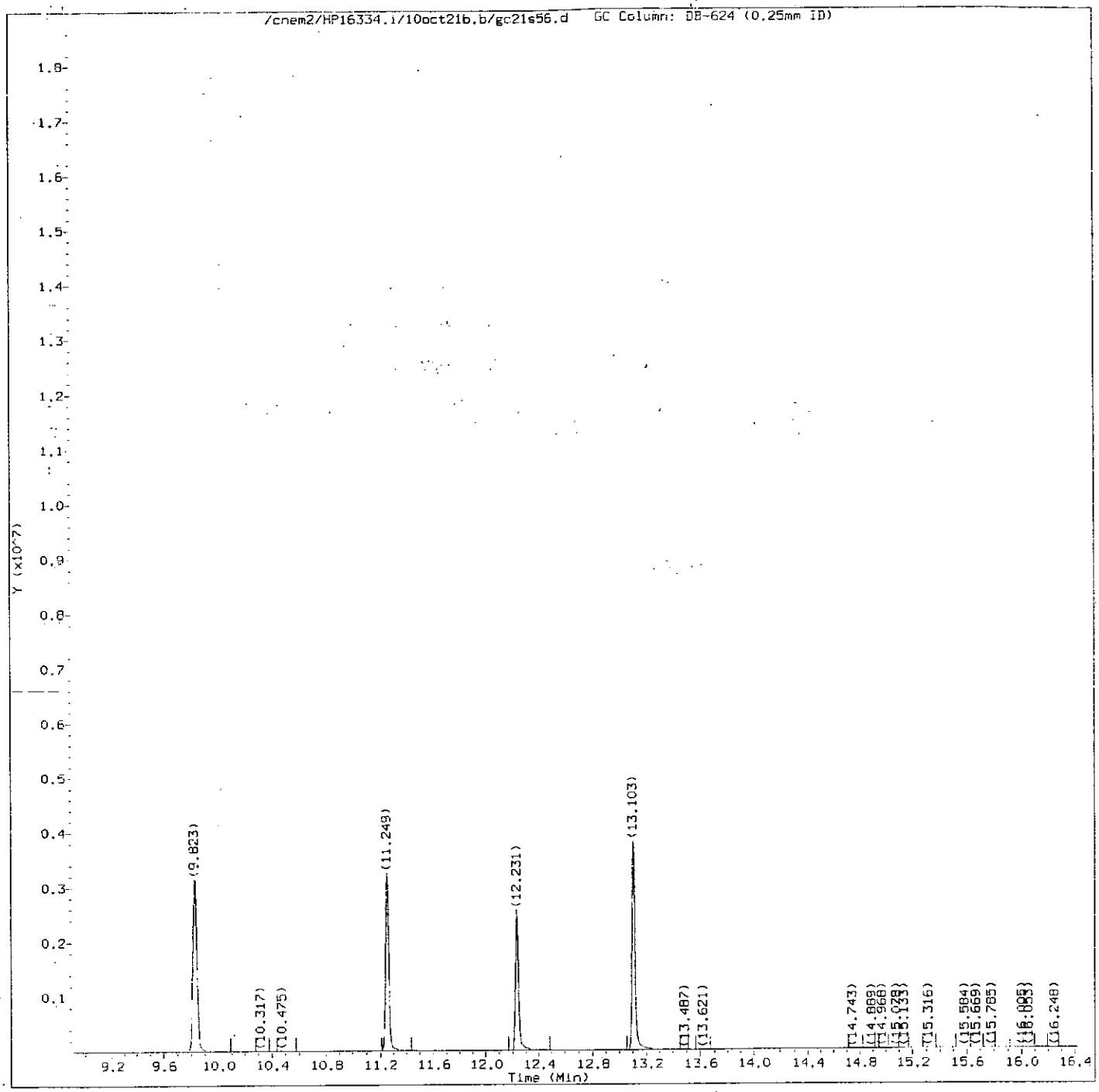
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Injection date and time: 21-OCT-2010 22:22 Analyst ID: SEJ02002

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: 1415
Calibration date and time: 25-OCT-2010 11:22
Date, time and analyst ID of latest file update: 25-Oct-2010 11:34 jml01693

Sample Name: XXXXX Lab Sample ID: 6117037

RAD40 0892

Digitally signed by Jason M. Long
on 10/25/2010 at 11:36.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/10oct21b.b/gc21s56.d Instrument ID: HP16334.i
Injection date and time: 21-OCT-2010 22:22 Analyst ID: SEJ02002

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: 1415
Calibration date and time: 25-OCT-2010 11:22
Date, time and analyst ID of latest file update: 25-Oct-2010 11:34 jml01693

Sample Name: XXXXX Lab Sample ID: 6117037

RAD40 0093

Digitally signed by Jason M. Long
on 10/25/2010 at 11:36.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/10oct21b.b/gc21s56.d Instrument ID: HP16334.i
Injection date and time: 21-OCT-2010 22:22 Analyst ID: SEJ02002

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: 1415
Calibration date and time: 25-OCT-2010 11:22
Date, time and analyst ID of latest file update: 25-Oct-2010 11:34 jml01693

Sample Name: XXXXX Lab Sample ID: 6117037

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
36)*t-Butyl Alcohol-d10	(4)	4.391	65	118528	50.000
61)$Dibromofluoromethane	(1)	6.927	113	653729	10.837
70)$1,2-Dichloroethane-d4	(1)	7.384	102	122508	10.228
77)*Fluorobenzene	(1)	7.835	96	2687661	10.000
97)$Toluene-d8	(2)	9.823	98	2600941	9.842
110)*Chlorobenzene-d5	(2)	11.249	117	1977307	10.000
126)$4-Bromofluorobenzene	(2)	12.231	95	850690	9.367
143)*1,4-Dichlorobenzene-d4	(3)	13.109	152	1114095	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

RAD40 0894

Digitally signed by Jason M. Long
on 10/25/2010 at 11:36.
Target 3.5 esignature user ID: jml01693

XXXXX

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

6117040

Data file: /chem2/HP16334.i/10oct21b.b/gc21s61.d
Data file Sample Info. Line: XXXXX;6117040;1;0;;;DRAPER;
Date, time and analyst ID of latest file update: 25-Oct-2010 11:35 jm101693

Injection date and time: **22-OCT-2010 00:08**
Instrument ID: **HP16334.i** Batch: **G102942AA**

Blank Data file reference: **/chem2/HP16334.i/10oct21b.b/gc21b51.d**

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: **1415**
Calibration date and time (Last Method Edit): 25-OCT-2010 11:22
Mid Level Daily Calibration Standard Reference: **/chem2/HP16334.i/10oct21b.b/gc21c51.d**

Bottle Code: **38A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
36) t-Butyl Alcohol-d10	4.391(-0.012)	460	65	124891 (1)	50.00	
77) Fluorobenzene	7.836(-0.006)	1025	96	2790905 (-2)	10.00	
110) Chlorobenzene-d5	11.250(0.000)	1585	117	2055478 (-3)	10.00	
143) 1,4-Dichlorobenzene-d4	13.109(-0.006)	1890	152	1171801 (-7)	10.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
61) Dibromofluoromethane	(1)	6.933(0.000)	113	668725	10.675	107%		77 - 114
70) 1,2-Dichloroethane-d4	(1)	7.384(0.001)	102	125796	10.113	101%		74 - 113
97) Toluene-d8	(2)	9.829(-0.001)	98	2720923	9.905	99%		77 - 110
126) 4-Bromofluorobenzene	(2)	12.231(0.000)	95	894610	9.476	95%		78 - 110

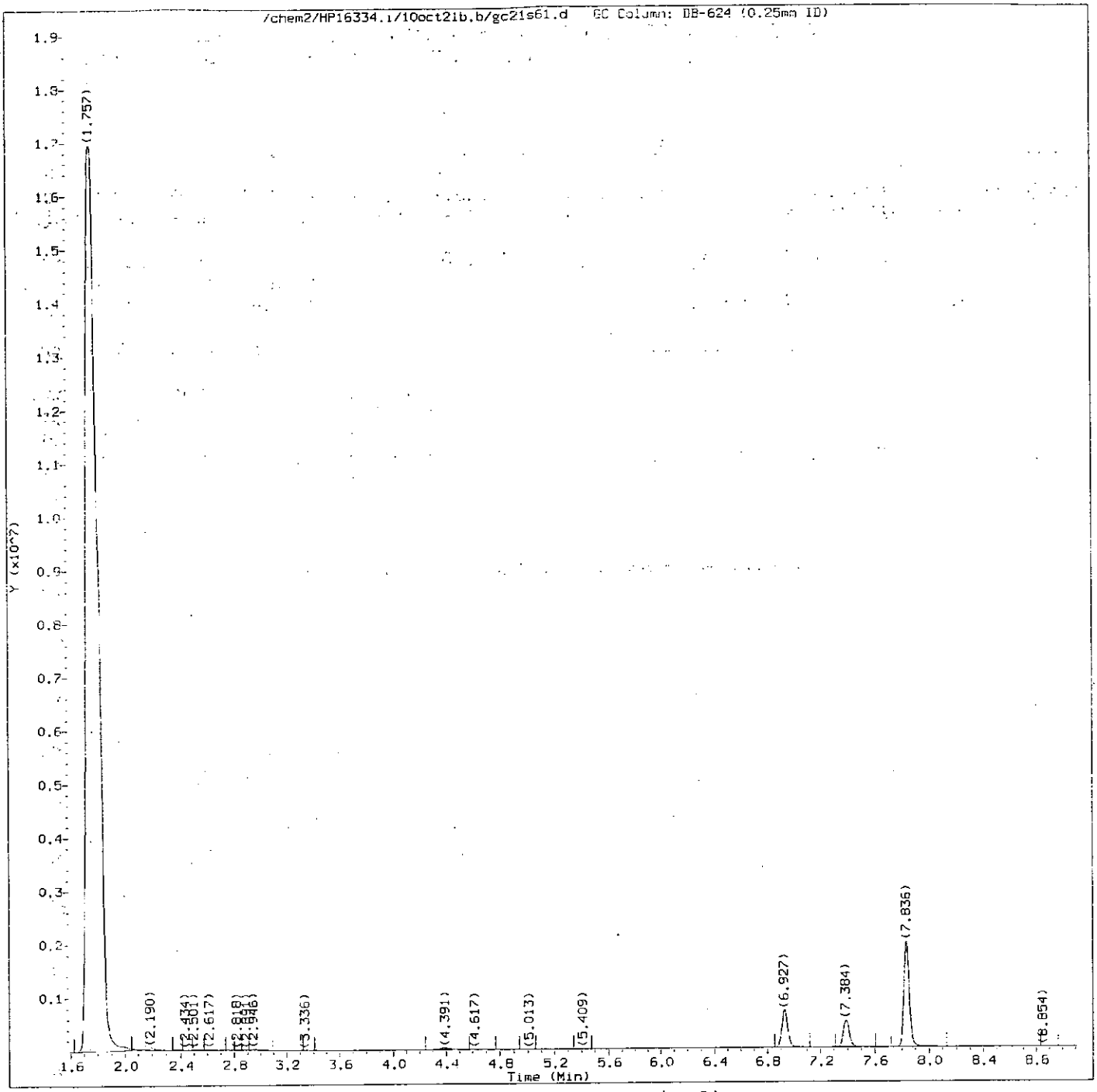
Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
5) Chloromethane	(1)			Not Detected					0.2
6) Vinyl Chloride	(1)			Not Detected					0.1
10) Bromomethane	(1)			Not Detected					0.1
15) Trichlorofluoromethane	(1)			Not Detected					0.1
24) 1,1-Dichloroethene	(1)			Not Detected					0.1
34) Methylene Chloride	(1)			Not Detected					0.2
45) 1,1-Dichloroethane	(1)			Not Detected					0.1
59) Chloroform	(1)			Not Detected					0.1
63) 1,1,1-Trichloroethane	(1)			Not Detected					0.1
66) Carbon Tetrachloride	(1)			Not Detected					0.1
72) Benzene	(1)			Not Detected					0.1
74) 1,2-Dichloroethane	(1)			Not Detected					0.1
83) Trichloroethene	(1)			Not Detected					0.1
101) Toluene	(2)			Not Detected					0.1
105) Tetrachloroethene	(2)			Not Detected					0.1
112) Chlorobenzene	(2)			Not Detected					0.1
146) Benzyl Chloride	(3)			Not Detected					0.1
149) Hexachloroethane	(1)			Not Detected					0.1
155) Naphthalene	(3)			Not Detected					0.1

Total number of targets = 19

Comments: _____

Digitally signed by Jason M. Long on 10/25/2010 at 11:37. Target 3.5 esignature user ID: jm101693 RAD48 0895

Auditor: _____ Date: 10/27/10



Total Ion Chromatogram (TIC)

Target Revision 3.5

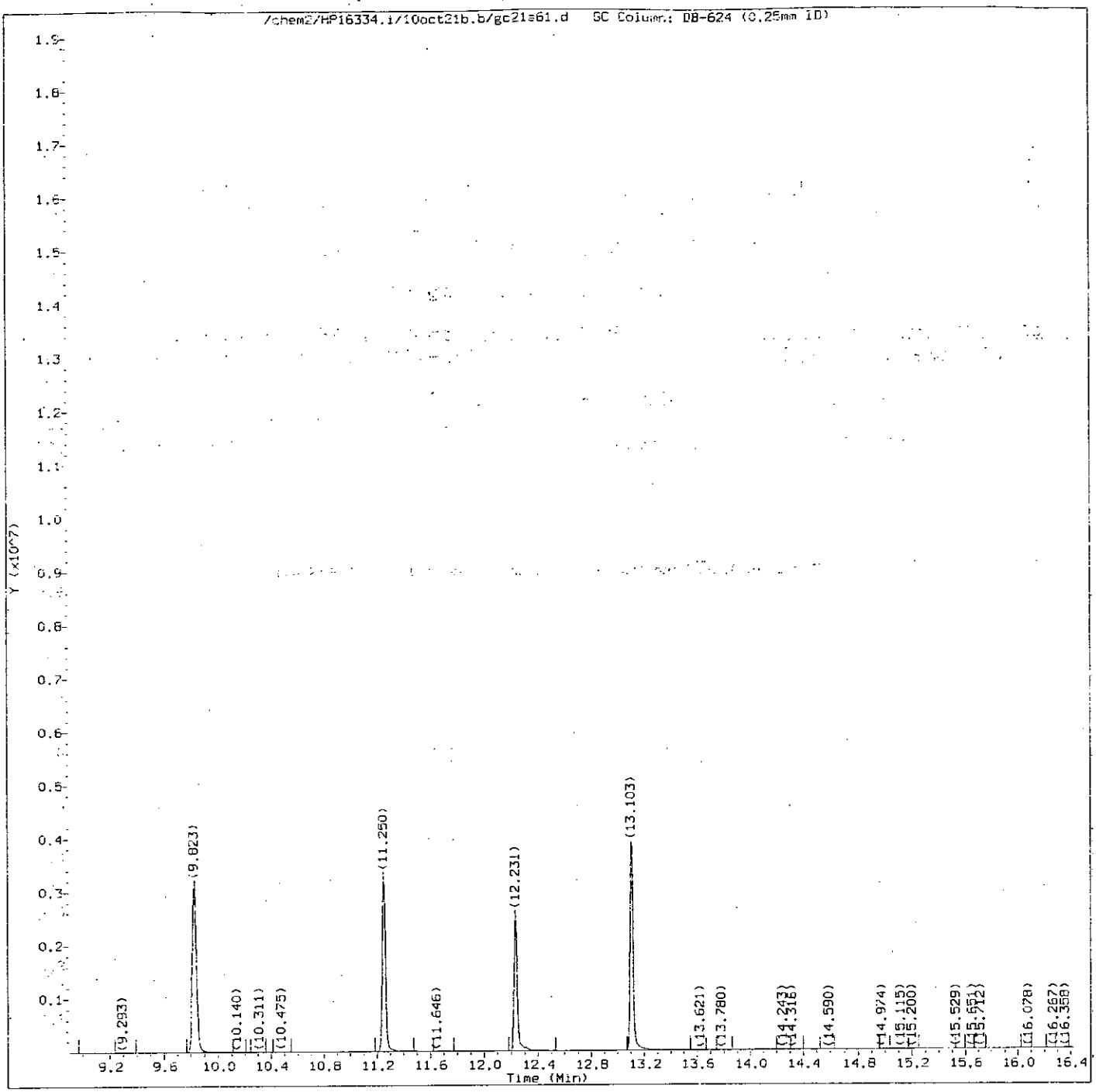
Data File: /chem2/HP16334.i/10oct21b.b/gc21s61.d Instrument ID: HP16334.i
Injection date and time: 22-OCT-2010 00:08 Analyst ID: SEJ02002

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: 1415
Calibration date and time: 25-OCT-2010 11:22
Date, time and analyst ID of latest file update: 25-Oct-2010 11:35 jml01693

Sample Name: XXXXX Lab Sample ID: 6117040

RA948 8896

Digitally signed by Jason M. Long
on 10/25/2010 at 11:37.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/10oct21b.b/gc21s61.d Instrument ID: HP16334.i
Injection date and time: 22-OCT-2010 00:08 Analyst ID: SEJ02002

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: 1415
Calibration date and time: 25-OCT-2010 11:22
Date, time and analyst ID of latest file update: 25-Oct-2010 11:35 jml01693

Sample Name: XXXXX Lab Sample ID: 6117040

RAD48 8897

Digitally signed by Jason M. Long
on 10/25/2010 at 11:37..
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/10oct21b.b/gc21s61.d Instrument ID: HP16334.i
Injection date and time: 22-OCT-2010 00:08 Analyst ID: SEJ02002

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: 1415
Calibration date and time: 25-OCT-2010 11:22
Date, time and analyst ID of latest file update: 25-Oct-2010 11:35 jml01693

Sample Name: XXXXX Lab Sample ID: 6117040

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
36)*t-Butyl Alcohol-d10	(4)	4.391	65	124891	50.000
61)$Dibromofluoromethane	(1)	6.933	113	668725	10.675
70)$1,2-Dichloroethane-d4	(1)	7.384	102	125796	10.113
77)*Fluorobenzene	(1)	7.836	96	2790906	10.000
97)$Toluene-d8	(2)	9.829	98	2720923	9.905
110)*Chlorobenzene-d5	(2)	11.250	117	2055478	10.000
126)$4-Bromofluorobenzene	(2)	12.231	95	894610	9.476
143)*1,4-Dichlorobenzene-d4	(3)	13.109	152	1171801	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

RAD40 0098

Digitally signed by Jason M. Long
on 10/25/2010 at 11:37.
Target 3.5 esignature user ID: jml01693

XXXXX

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles 6117041

Data file: /chem2/HP16334.i/10oct21b.b/gc21s62.d
Data file Sample Info. Line: XXXXX;6117041;1;0;;;DRAPER;
Date, time and analyst ID of latest file update: 25-Oct-2010 11:35 jml01693

Injection date and time: **22-OCT-2010 00:30**
Instrument ID: **HP16334.i** Batch: **G102942AA**

Blank Data file reference: **/chem2/HP16334.i/10oct21b.b/gc21b51.d**

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: **1415**
Calibration date and time (Last Method Edit): 25-OCT-2010 11:22
Mid Level Daily Calibration Standard Reference: **/chem2/HP16334.i/10oct21b.b/gc21c51.d**

Bottle Code: **38A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
36) t-Butyl Alcohol-d10	4.373(0.006)	457	65	116520 (-6)	50.00	
77) Fluorobenzene	7.829(0.000)	1024	96	2689639 (-5)	10.00	
110) Chlorobenzene-d5	11.250(0.000)	1585	117	1987011 (-6)	10.00	
143) 1,4-Dichlorobenzene-d4	13.109(-0.006)	1890	152	1136027 (-10)	10.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
61) Dibromofluoromethane	(1)	6.927(0.000)	113	650106	10.769	108%		77 - 114
70) 1,2-Dichloroethane-d4	(1)	7.384(0.000)	102	122083	10.185	102%		74 - 113
97) Toluene-d8	(2)	9.823(0.000)	98	2627109	9.893	99%		77 - 110
126) 4-Bromofluorobenzene	(2)	12.233(0.000)	95	864953	9.478	95%		78 - 110

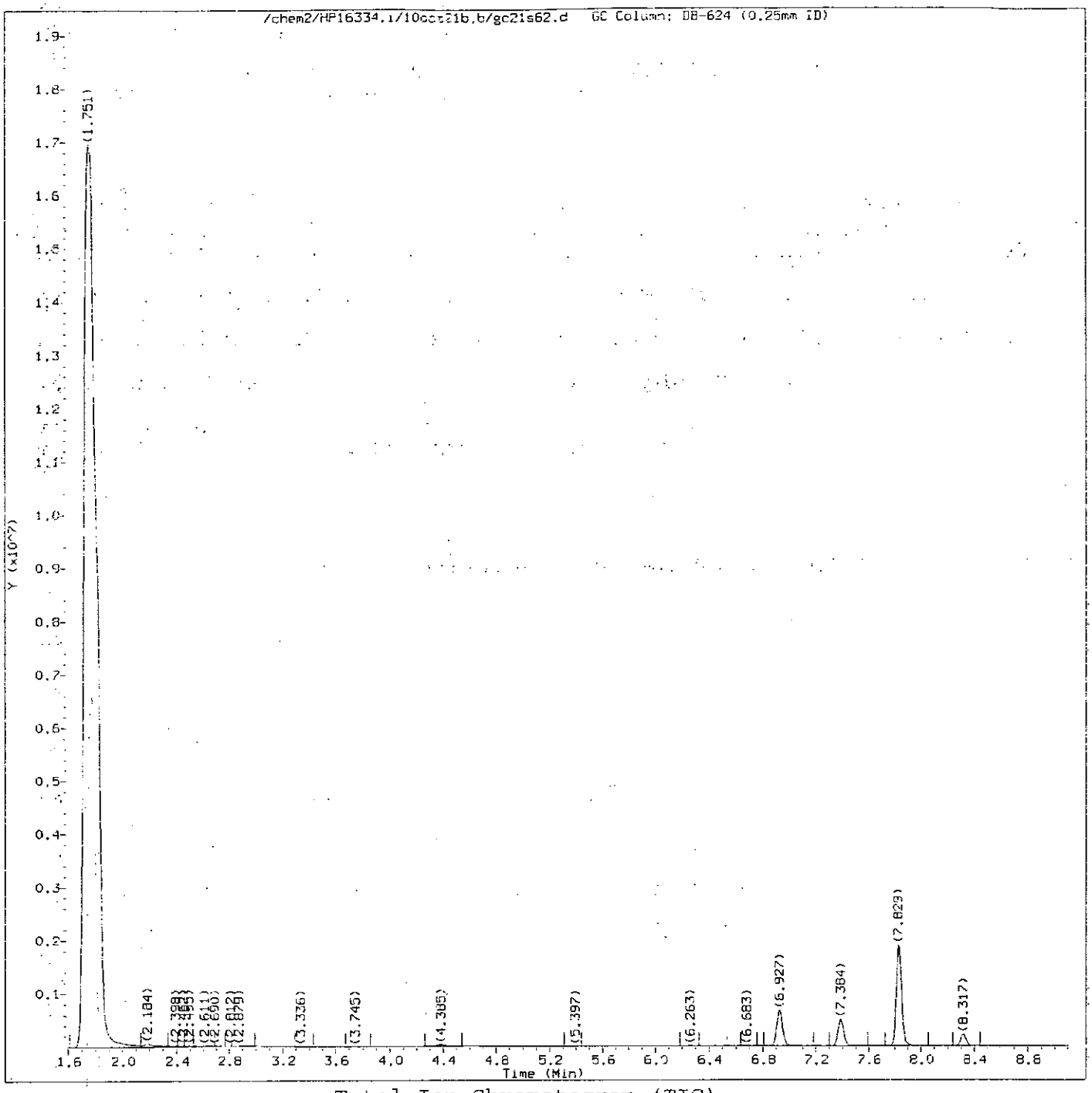
Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
5) Chloromethane	(1)			Not Detected					0.2
6) Vinyl Chloride	(1)			Not Detected					0.1
10) Bromomethane	(1)			Not Detected					0.1
15) Trichlorofluoromethane	(1)			Not Detected					0.1
24) 1,1-Dichloroethene	(1)			Not Detected					0.1
34) Methylene Chloride	(1)			Not Detected					0.2
45) 1,1-Dichloroethane	(1)			Not Detected					0.1
58) Chloroform	(1)			Not Detected					0.1
63) 1,1,1-Trichloroethane	(1)			Not Detected					0.1
66) Carbon Tetrachloride	(1)			Not Detected					0.1
72) Benzene	(1)			Not Detected					0.1
74) 1,2-Dichloroethane	(1)			Not Detected					0.1
83) Trichloroethene	(1)	8.317(-0.000)	95	111885	1.411	1.41			0.1
101) Toluene	(2)			Not Detected					0.1
105) Tetrachloroethene	(2)	10.469(-0.000)	166	11443	0.125	0.12			0.1
112) Chlorobenzene	(2)			Not Detected					0.1
146) Benzyl Chloride	(3)			Not Detected					0.1
149) Hexachloroethane	(1)			Not Detected					0.1
155) Naphthalene	(3)			Not Detected					0.1

Total number of targets = 19

Comments:

Digitally signed by Jason M. Long on 10/25/2010 at 11:37. Target 3.5 esignature user ID: jml01693 RAD48 8899

Auditor: Date: 10/25/10



Total Ion Chromatogram (TIC)

Target Revision 3.5

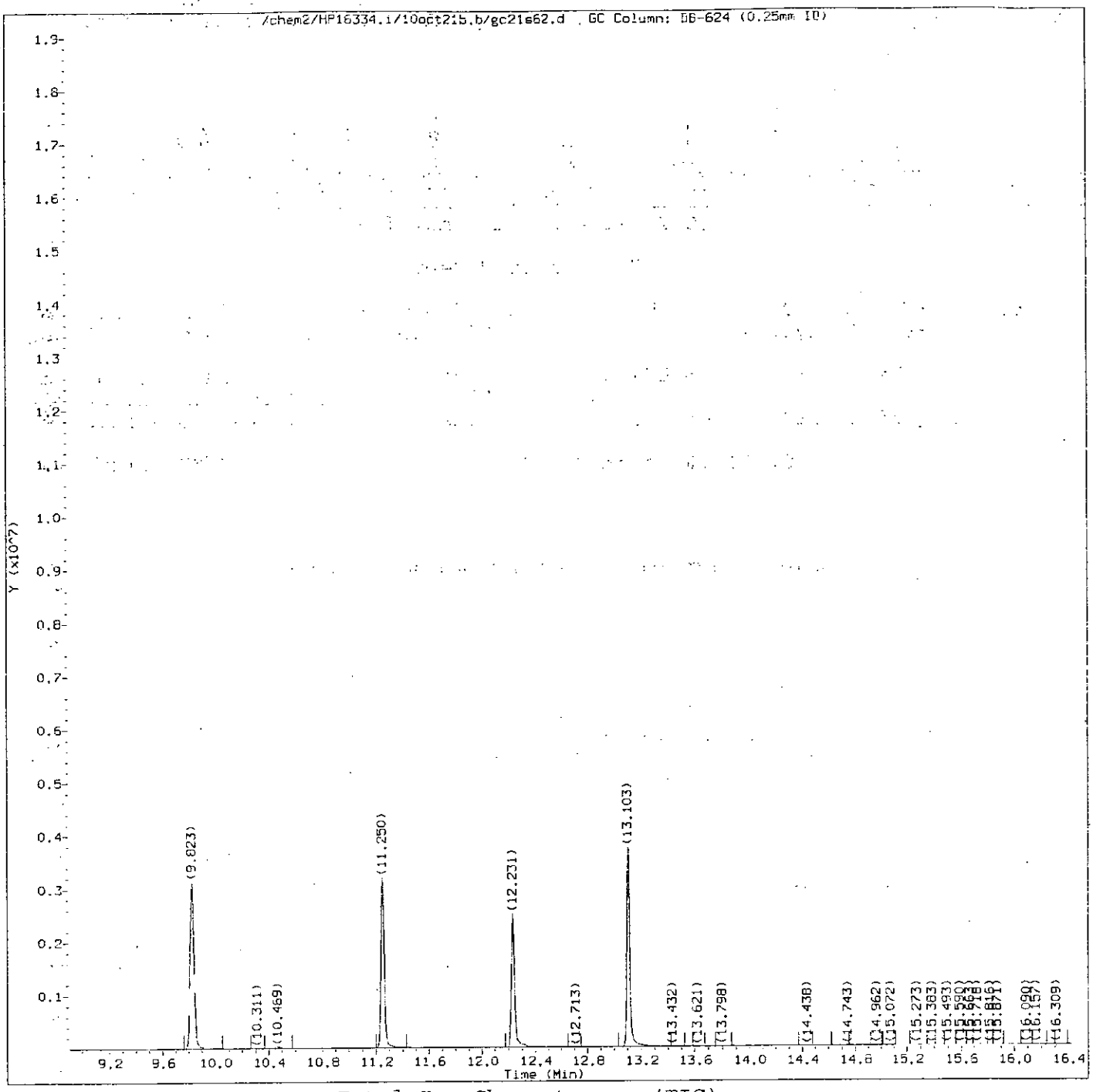
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Injection date and time: 22-OCT-2010 00:30 Analyst ID: SEJ02002

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: 1415
Calibration date and time: 25-OCT-2010 11:22
Date, time and analyst ID of latest file update: 25-Oct-2010 11:35 jml01693

Sample Name: XXXXX Lab Sample ID: 6117041

RAD40 0186

Digitally signed by Jason M. Long
on 10/25/2010 at 11:37.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/10oct21b.b/gc21s62.d Instrument ID: HP16334.i
Injection date and time: 22-OCT-2010 00:30 Analyst ID: SEJ02002

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: 1415
Calibration date and time: 25-OCT-2010 11:22
Date, time and analyst ID of latest file update: 25-Oct-2010 11:35 jml01693

Sample Name: XXXXX Lab Sample ID: 6117041

RAD48 8181

Digitally signed by Jason M. Long
on 10/25/2010 at 11:37.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/10oct21b.b/gc21s62.d Instrument ID: HP16334.i
Injection date and time: 22-OCT-2010 00:30 Analyst ID: SEJ02002

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: 1415
Calibration date and time: 25-OCT-2010 11:22
Date, time and analyst ID of latest file update: 25-Oct-2010 11:35 jml01693

Sample Name: XXXXX Lab Sample ID: 6117041

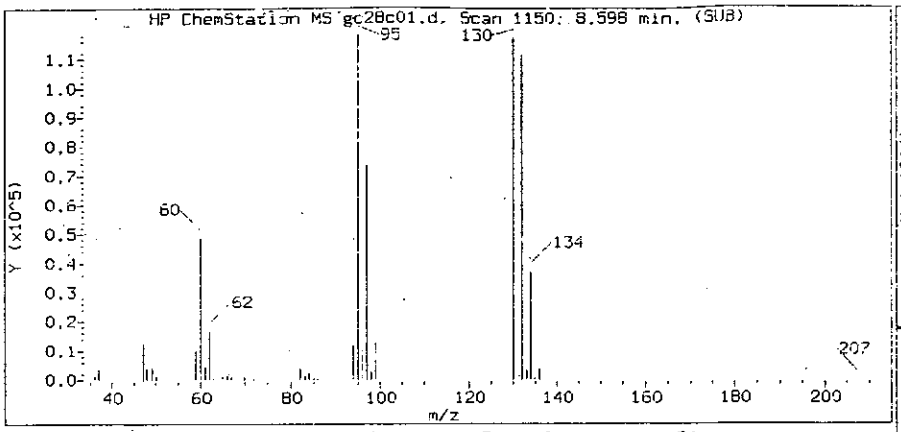
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
36)*t-Butyl Alcohol-d10	(4)	4.373	65	116520	50.000
61)$Dibromofluoromethane	(1)	6.927	113	650106	10.769
70)$1,2-Dichloroethane-d4	(1)	7.384	102	122083	10.185
77)*Fluorobenzene	(1)	7.829	96	2689639	10.000
83) Trichloroethene	(1)	8.317	95	111885	1.411
97)$Toluene-d8	(2)	9.823	98	2627109	9.893
105) Tetrachloroethene	(2)	10.469	166	11442	0.125
110)*Chlorobenzene-d5	(2)	11.250	117	1987011	10.000
126)$4-Bromofluorobenzene	(2)	12.231	95	864953	9.478
143)*1,4-Dichlorobenzene-d4	(3)	13.109	152	1136027	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

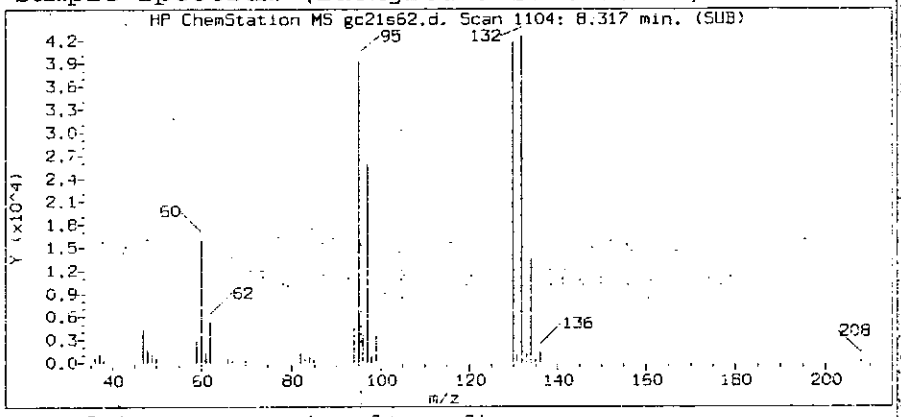
RAD40 8102

Digitally signed by Jason M. Long
on 10/25/2010 at 11:37.
Target 3.5 esignature user ID: jml01693

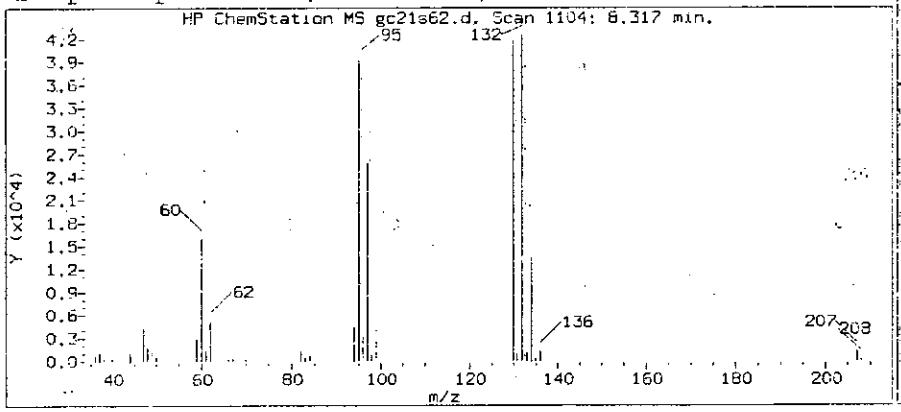
Reference Standard Spectrum for Trichloroethene

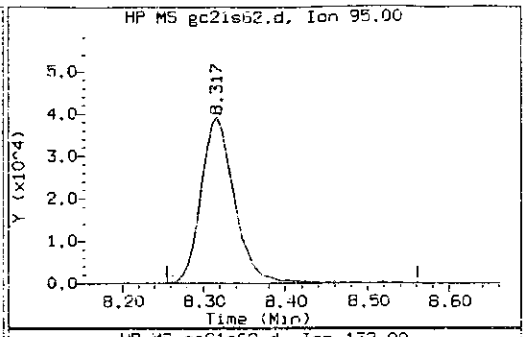


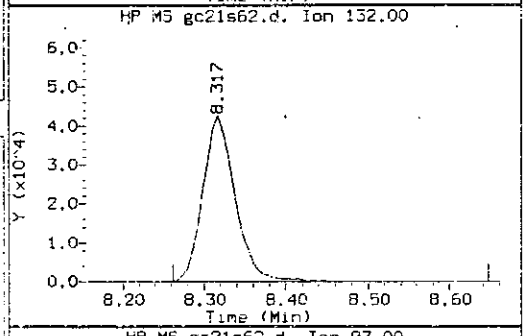
Sample Spectrum (Background Subtracted)

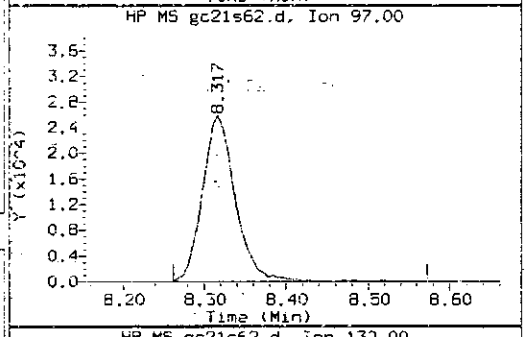


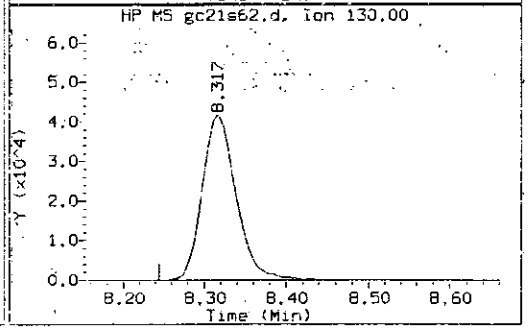
Sample Spectrum (Unaltered)











Data File: /chem2/HP16334.i/10oct21b.b/gc21s62.d Instrument ID: HP16334.i
Injection date and time: 22-OCT-2010 00:30 Analyst ID: SEJ02002

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: 1415
Calibration date and time: 25-OCT-2010 11:22
Date, time and analyst ID of latest file update: 25-Oct-2010 11:35 jml01693

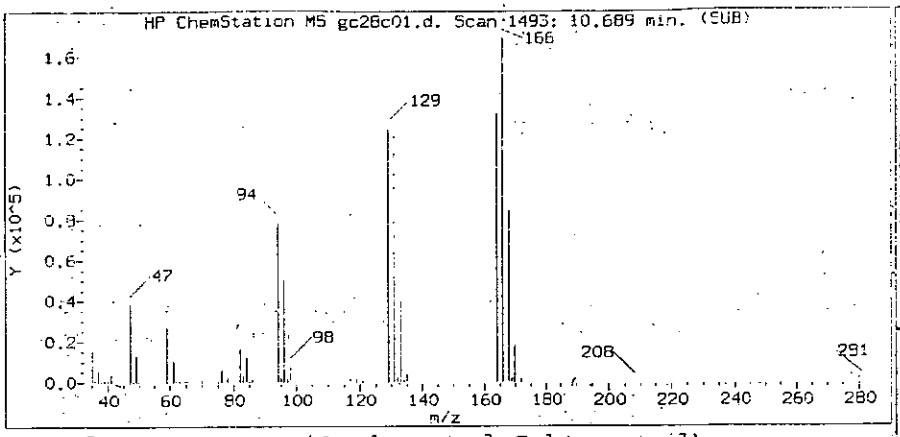
Sample Name: XXXXX Lab Sample ID: 6117041

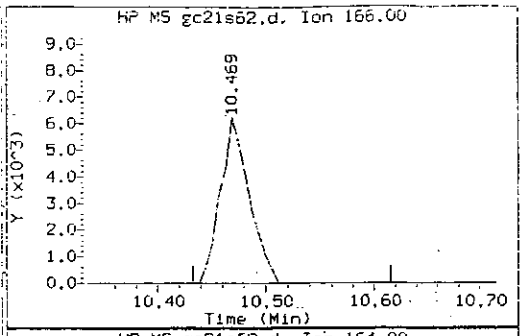
Compound Number	: 83
Compound Name	: Trichloroethene
Scan Number	: 1104
Retention Time (minutes)	: 8.317
Relative Retention Time	: -0.000
Quant Ion	: 95.00
Area (flag)	: 111885
On-Column Amount (ng)	: 1.4115

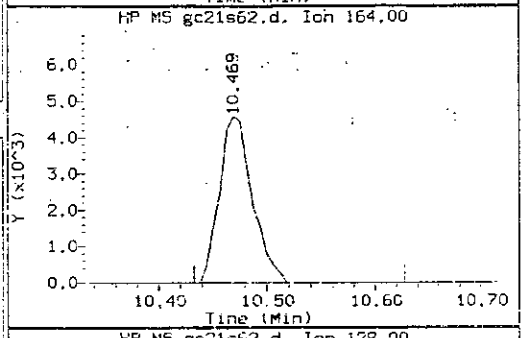
RAD48 0103

Digitally signed by Jason M. Long on 10/25/2010 at 11:37.
Target 3.5 esignature user ID: jml01693

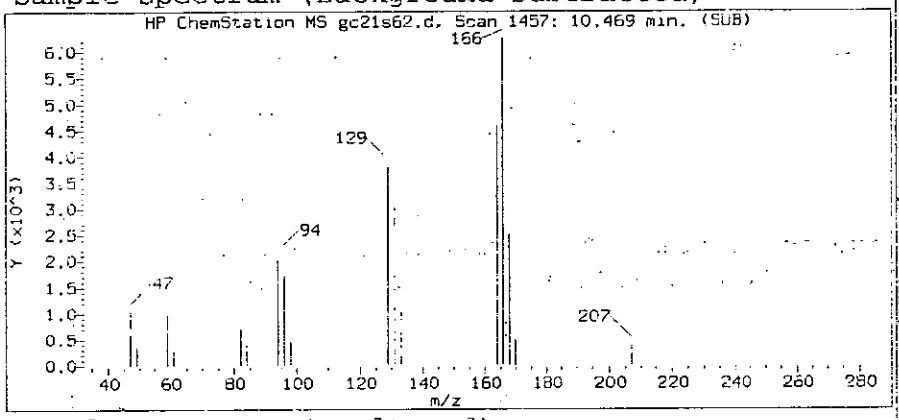
Reference Standard Spectrum for Tetrachloroethene

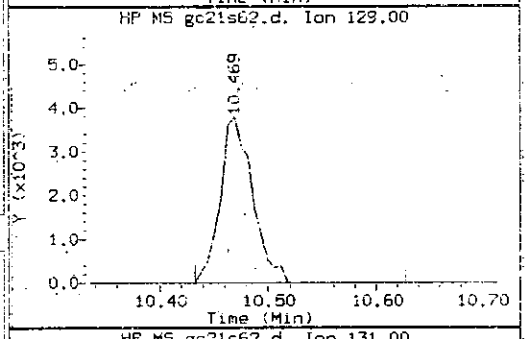




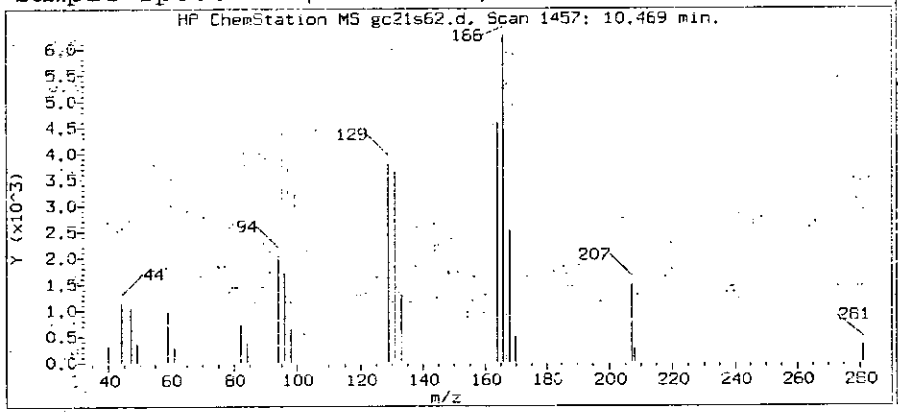


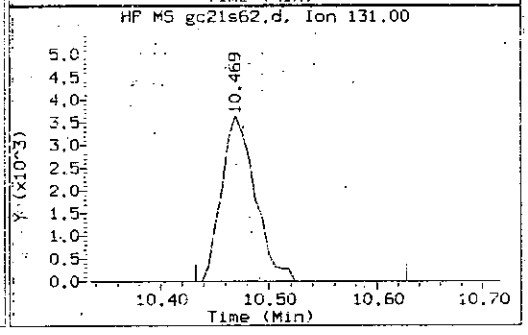
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP16334.i/10oct21b.b/gc21s62.d Instrument ID: HP16334.i
Injection date and time: 22-OCT-2010 00:30 Analyst ID: SEJ02002

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: 1415
Calibration date and time: 25-OCT-2010 11:22
Date, time and analyst ID of latest file update: 25-Oct-2010 11:35 jml01693

Sample Name: XXXXX Lab Sample ID: 6117041

Compound Number	: 105
Compound Name	: Tetrachloroethene
Scan Number	: 1457
Retention Time (minutes)	: 10.469
Relative Retention Time	: -0.000
Quant Ion	: 166.00
Area (flag)	: 11443
On-Column Amount (ng)	: 0.1245

RAD48 8184

Digitally signed by Jason M. Long on 10/25/2010 at 11:37.
Target 3.5 esignature user ID: jml01693

XXXXX

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles 6117042

Data file: /chem2/HP16334.i/10oct21b.b/gc21s63.d
Data file Sample Info. Line: XXXXX;6117042;1;0;;;DRAPER;
Date, time and analyst ID of latest file update: 25-Oct-2010 11:35 jml01693

Injection date and time: **22-OCT-2010 00:51**
Instrument ID: **HP16334.i** Batch: **G102942AA**

Blank Data file reference: **/chem2/HP16334.i/10oct21b.b/gc21b51.d**

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: **1415**
Calibration date and time (Last Method Edit): 25-OCT-2010 11:22
Mid Level Daily Calibration Standard Reference: **/chem2/HP16334.i/10oct21b.b/gc21c51.d**

Bottle Code: **38A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
36) t-Butyl Alcohol-d10	4.373(0.006)	457	65	119312 (-4)	50.00	
77) Fluorobenzene	7.836(-0.006)	1025	96	2764035 (-3)	10.00	
110) Chlorobenzene-d5	11.250(0.000)	1585	117	2028288 (-4)	10.00	
143) 1,4-Dichlorobenzene-d4	13.109(-0.006)	1890	152	1144230 (-9)	10.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
61) Dibromofluoromethane	(1)	6.927(0.001)	113	670781	10.812	108%		77 - 114
70) 1,2-Dichloroethane-d4	(1)	7.384(0.001)	102	1260?1	10.235	102%		74 - 113
97) Toluene-d8	(2)	9.323(0.000)	98	2697511	9.951	100%		77 - 110
126) 4-Bromofluorobenzene	(2)	12.231(0.000)	95	877?60	9.415	94%		78 - 110

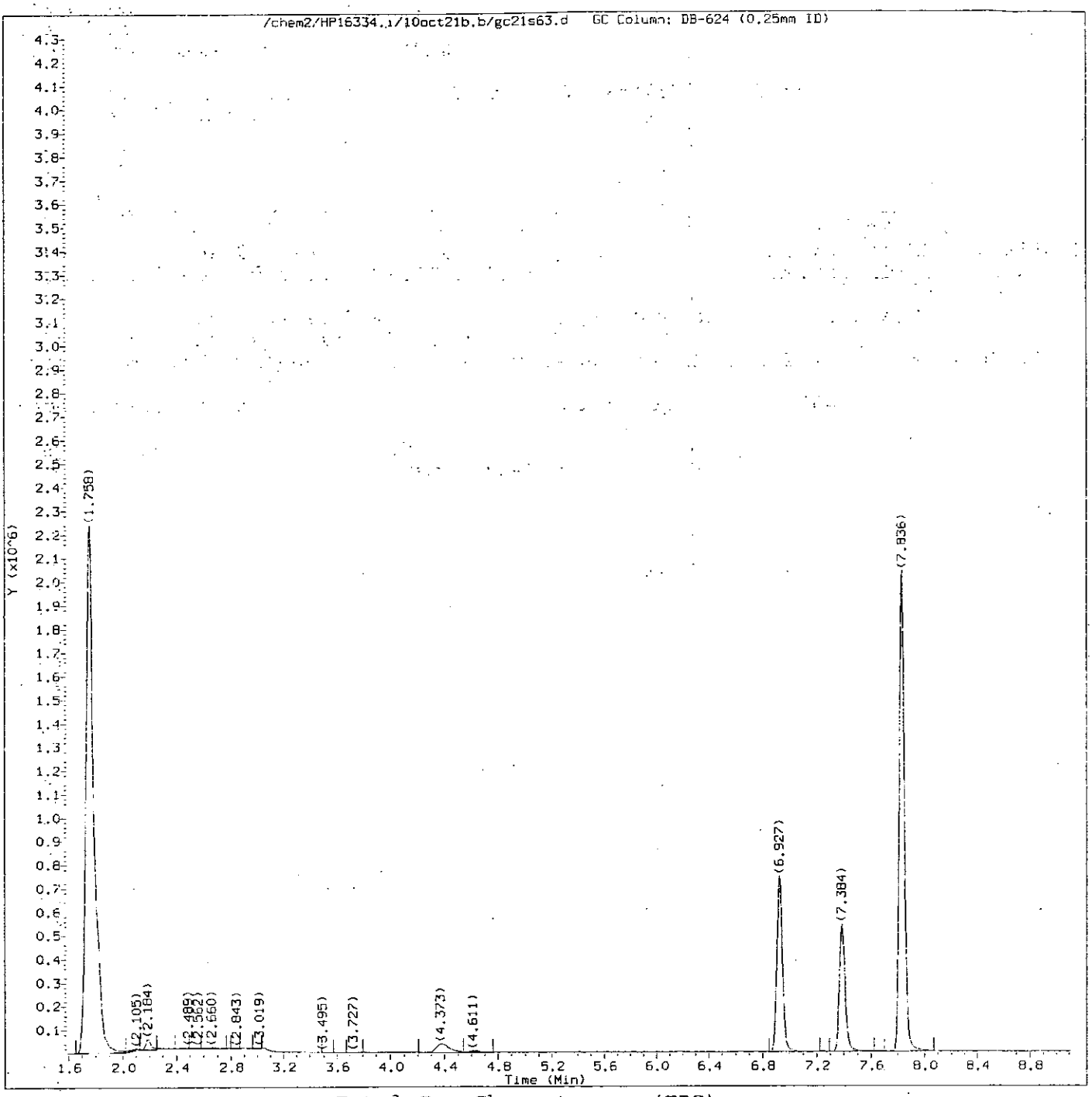
Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
5) Chloromethane	(1)			Not Detected					0.2
6) Vinyl Chloride	(1)			Not Detected					0.1
10) Bromomethane	(1)			Not Detected					0.1
15) Trichlorofluoromethane	(1)			Not Detected					0.1
24) 1,1-Dichloroethene	(1)			Not Detected					0.1
34) Methylene Chloride	(1)			Not Detected					0.2
45) 1,1-Dichloroethane	(1)			Not Detected					0.1
58) Chloroform	(1)			Not Detected					0.1
63) 1,1,1-Trichloroethane	(1)			Not Detected					0.1
66) Carbon Tetrachloride	(1)			Not Detected					0.1
72) Benzene	(1)			Not Detected					0.1
74) 1,2-Dichloroethane	(1)			Not Detected					0.1
83) Trichloroethene	(1)			Not Detected					0.1
101) Toluene	(2)			Not Detected					0.1
105) Tetrachloroethene	(2)			Not Detected					0.1
112) Chlorobenzene	(2)			Not Detected					0.1
146) Benzyl Chloride	(3)			Not Detected					0.1
149) Hexachloroethane	(1)			Not Detected					0.1
155) Naphthalene	(3)			Not Detected					0.1

Total number of targets = 19

Comments:

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Auditor: Date: 10/25/10



Total Ion Chromatogram (TIC)

Target Revision 3.5

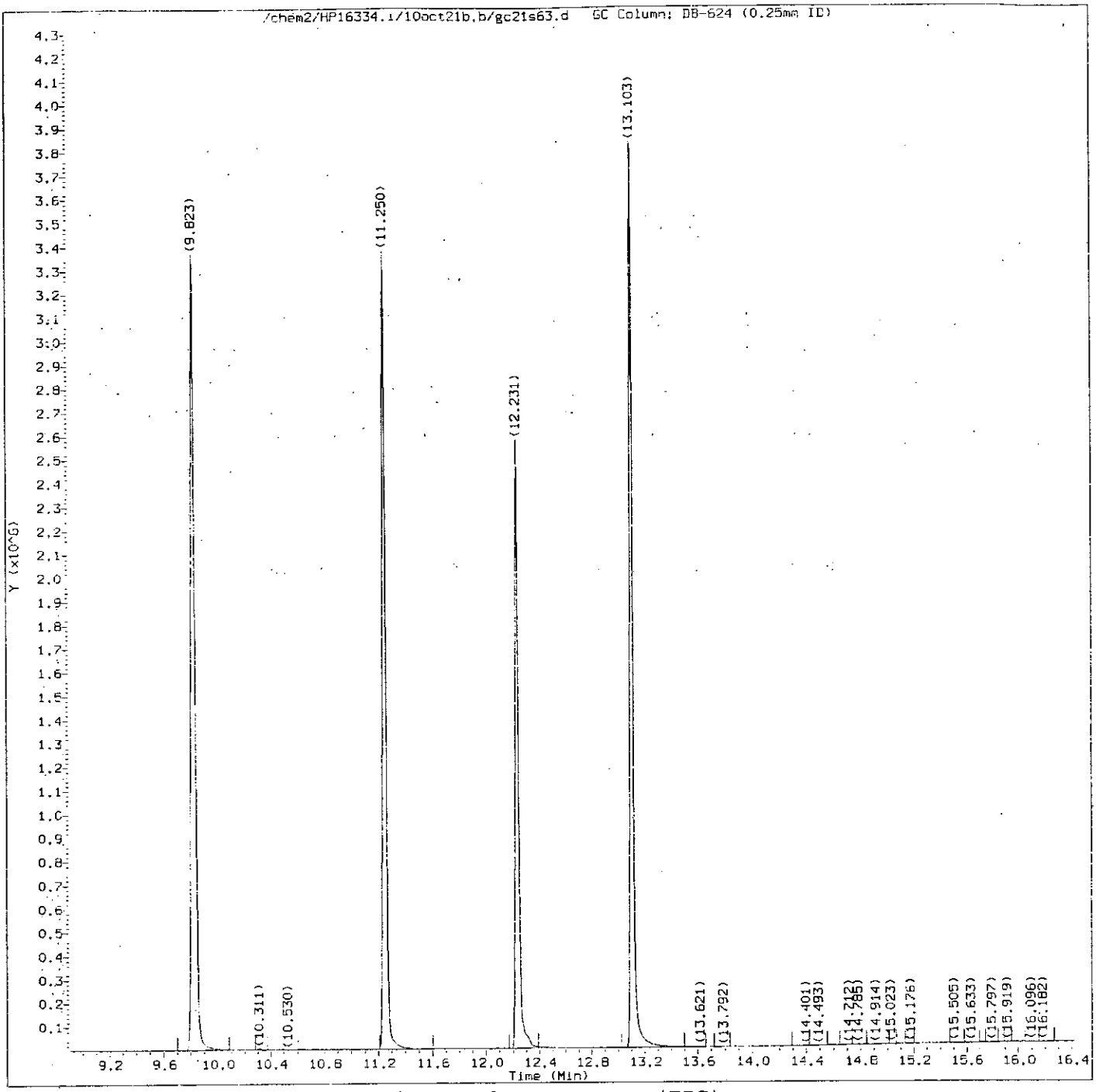
Data File: /chem2/HP16334.i/10oct21b.b/gc21s63.d Instrument ID: HP16334.i
Injection date and time: 22-OCT-2010 00:51 Analyst ID: SEJ02002

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: 1415
Calibration date and time: 25-OCT-2010 11:22
Date, time and analyst ID of latest file update: 25-Oct-2010 11:35 jml01693

Sample Name: XXXXX Lab Sample ID: 6117042

RAD40 0186

Digitally signed by Jason M. Long
on 10/25/2010 at 11:37.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/10oct21b.b/gc21s63.d Instrument ID: HP16334.i
Injection date and time: 22-OCT-2010 00:51 Analyst ID: SEJ02002

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: 1415
Calibration date and time: 25-OCT-2010 11:22
Date, time and analyst ID of latest file update: 25-Oct-2010 11:35 jml01693

Sample Name: XXXXX Lab Sample ID: 6117042

RAD48 0187

Digitally signed by Jason M. Long
on 10/25/2010 at 11:37.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/10oct21b.b/gc21s63.d Instrument ID: HP16334.i
Injection date and time: 22-OCT-2010 00:51 Analyst ID: SEJ02002

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: 1415
Calibration date and time: 25-OCT-2010 11:22
Date, time and analyst ID of latest file update: 25-Oct-2010 11:35 jml01693

Sample Name: XXXXX Lab Sample ID: 6117042

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
36)*t-Butyl Alcohol-d10	(4)	4.373	65	119312	50.000
61)$Dibromofluoromethane	(1)	6.927	113	670781	10.812
70)$1,2-Dichloroethane-d4	(1)	7.384	102	126081	10.235
77)*Fluorobenzene	(1)	7.836	96	2764035	10.000
97)$Toluene-d8	(2)	9.823	98	2697511	9.951
110)*Chlorobenzene-d5	(2)	11.250	117	2028288	10.000
126)$4-Bromofluorobenzene	(2)	12.231	95	877050	9.415
143)*1,4-Dichlorobenzene-d4	(3)	13.109	152	1144230	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

RAD40 8108

Digitally signed by Jason M. Long
on 10/25/2010 at 11:37.
Target 3.5 esignature user ID: jml01693

XXXXX

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

6117043

Data file: /chem2/HP16334.i/10oct21b.b/gc21s64.d
Data file Sample Info. Line: XXXXX;6117043;1;0;;;DRAPER;
Date, time and analyst ID of latest file update: 25-Oct-2010 11:35 jml01693

Injection date and time: **22-OCT-2010 01:12**
Instrument ID: **HP16334.i** Batch: **G102942AA**

Blank Data file reference: **/chem2/HP16334.i/10oct21b.b/gc21b51.d**

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: **1415**
Calibration date and time (Last Method Edit): 25-OCT-2010 11:22
Mid Level Daily Calibration Standard Reference: **/chem2/HP16334.i/10oct21b.b/gc21c51.d**

Bottle Code: **38A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
36) t-Butyl Alcohol-d10	4.367(0.012)	456	65	113581 (-8)	50.00	
77) Fluorobenzene	7.830(0.000)	1024	96	2722174 (-4)	10.00	
110) Chlorobenzene-d5	11.250(0.000)	1585	117	2000304 (-5)	10.00	
143) 1,4-Dichlorobenzene-d4	13.103(0.000)	1889	152	1135886 (-10)	10.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
61) Dibromofluoromethane	(1)	6.921(0.001)	113	659320	10.791	108%		77 - 114
70) 1,2-Dichloroethane-d4	(1)	7.385(0.000)	102	121247	9.994	100%		74 - 113
97) Toluene-d8	(2)	9.823(0.000)	98	2635647	9.859	99%		77 - 110
126) 4-Bromofluorobenzene	(2)	12.231(0.000)	95	860323	9.364	94%		78 - 110

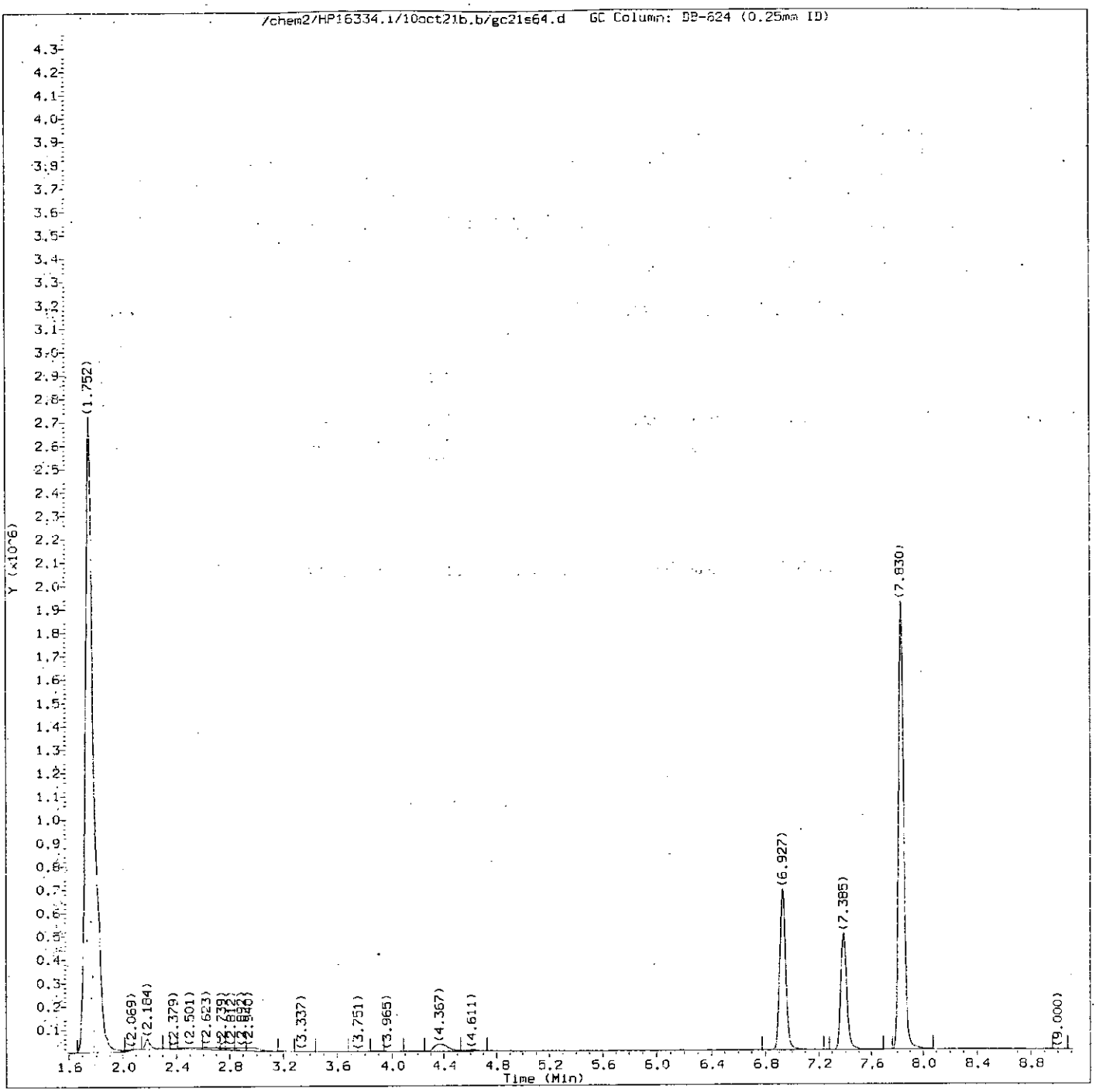
Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
5) Chloromethane	(1)			Not Detected					0.2
6) Vinyl Chloride	(1)			Not Detected					0.1
10) Bromomethane	(1)			Not Detected					0.1
15) Trichlorofluoromethane	(1)			Not Detected					0.1
24) 1,1-Dichloroethene	(1)			Not Detected					0.1
34) Methylene Chloride	(1)			Not Detected					0.2
45) 1,1-Dichloroethane	(1)			Not Detected					0.1
58) Chloroform	(1)			Not Detected					0.1
63) 1,1,1-Trichloroethane	(1)			Not Detected					0.1
66) Carbon Tetrachloride	(1)			Not Detected					0.1
72) Benzene	(1)			Not Detected					0.1
74) 1,2-Dichloroethane	(1)			Not Detected					0.1
83) Trichloroethene	(1)			Not Detected					0.1
101) Toluene	(2)			Not Detected					0.1
105) Tetrachloroethene	(2)			Not Detected					0.1
112) Chlorobenzene	(2)			Not Detected					0.1
146) Benzyl Chloride	(3)			Not Detected					0.1
149) Hexachloroethane	(1)			Not Detected					0.1
155) Naphthalene	(3)			Not Detected					0.1

Total number of targets = 19

Comments: _____

Digitally signed by Jason M. Long on 10/25/2010 at 11:37. Target 3.5 esignature user ID: jml01693 RAD48 5189

Auditor: _____ Date: 10/27/10



Total Ion Chromatogram (TIC)

Target Revision 3.5

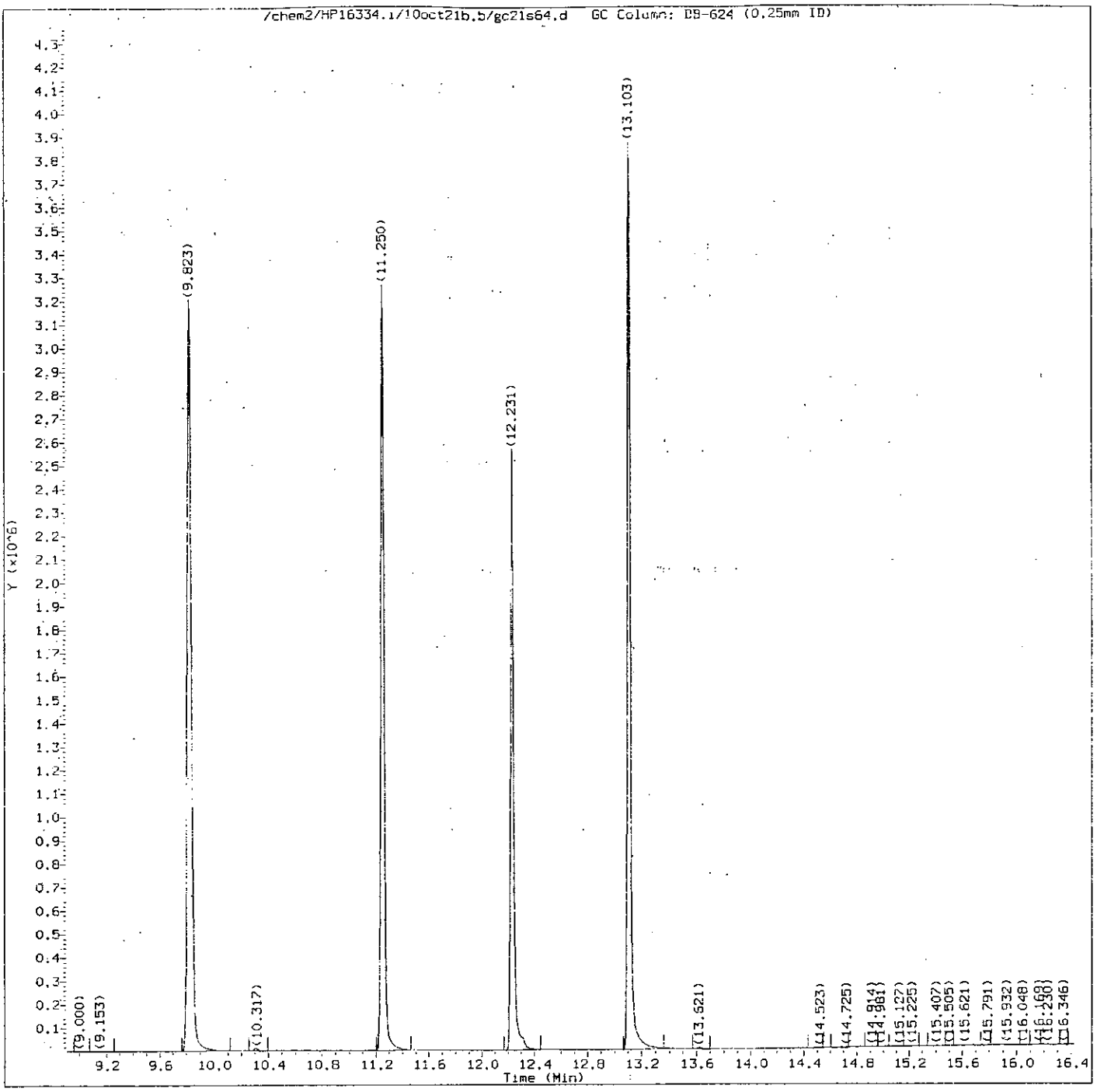
Data File: /chem2/HP16334.i/10oct21b.b/gc21s64.d Instrument ID: HP16334.i
Injection date and time: 22-OCT-2010 01:12 Analyst ID: SEJ02002

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: 1415
Calibration date and time: 25-OCT-2010 11:22
Date, time and analyst ID of latest file update: 25-Oct-2010 11:35 jml01693

Sample Name: XXXXX Lab Sample ID: 6117043

RAD40 0110

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on 10/25/2010 at 11:37.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/10oct21b.b/gc21s64.d Instrument ID: HP16334.i
Injection date and time: 22-OCT-2010 01:12 Analyst ID: SEJ02002

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: 1415
Calibration date and time: 25-OCT-2010 11:22
Date, time and analyst ID of latest file update: 25-Oct-2010 11:35 jml01693

Sample Name: XXXXX Lab Sample ID: 6117043

RAD48 8111

Digitally signed by Jason M. Long
on 10/25/2010 at 11:37.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/10oct21b.b/gc21s64.d Instrument ID: HP16334.i
Injection date and time: 22-OCT-2010 01:12 Analyst ID: SEJ02002

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: 1415
Calibration date and time: 25-OCT-2010 11:22
Date, time and analyst ID of latest file update: 25-Oct-2010 11:35 jml01693

Sample Name: XXXXX Lab Sample ID: 6117043

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
36)*t-Butyl Alcohol-d10	(4)	4.367	65	113581	50.000
61)$Dibromofluoromethane	(1)	6.921	113	659320	10.791
70)$1,2-Dichloroethane-d4	(1)	7.385	102	121247	9.994
77)*Fluorobenzene	(1)	7.830	96	2722174	10.000
97)$Toluene-d8	(2)	9.823	98	2635647	9.859
110)*Chlorobenzene-d5	(2)	11.250	117	2000304	10.000
126)$4-Bromofluorobenzene	(2)	12.231	95	850323	9.364
143)*1,4-Dichlorobenzene-d4	(3)	13.103	152	1135886	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

BAD48 0112

Digitally signed by Jason M. Long
on 10/25/2010 at 11:37.
Target 3.5 esignature user ID: jml01693

Standards Data

Lancaster Laboratories
Runlog for Hewelet Packard GC/MS System HP16334 **HP #29**

** Shift #1 Analyst:___JML_____** Shift #2 Analyst:_____** Shift #3 Analyst:_____*

Comment Code:

R =	Reinjection necessary	X =	Sample sent to be reextracted
S =	Surrogate problem	I =	Internal Standard problem
NU =	Not used	F =	Further dilution required
MR =	Meets requirements	IUO =	Internal use only
Cz =	Confirms z, (z = S, I or X)	T =	Injected outside valid tune period

Other problems or comments are as follows:

_____

_____8260_25ML_WATERS_____

_____

_____

Data Directory Path is - c:\msdchem\1\data\10OCT15A\

FILE	SAMPLE	LLI#	DATE	TIME	BATCH	D.F.	NOTES
GC15T01.D	50ngBFB	BFB MAY12-10	15 Oct 2010	10:27			NU
GC15T02.D	50ngBFB	BFB MAY12-10	15 Oct 2010	10:41			MR
GC15X01.D	BLK	BLK	15 Oct 2010	10:48			NU
GC15I01.D	VSTD025	VSTD025	15 Oct 2010	11:09			MR
GC15I02.D	VSTD010	VSTD010	15 Oct 2010	11:31			MR
GC15I03.D	VSTD005	VSTD005	15 Oct 2010	11:53			MR
GC15I04.D	VSTD002	VSTD002	15 Oct 2010	12:14			MR
GC15I05.D	VSTD001	VSTD001	15 Oct 2010	12:36			MR
GC15I06.D	VSTD0.5	VSTD0.5	15 Oct 2010	13:02			MR
GC15M01.D	MDL0.1	MDL0.1	15 Oct 2010	13:24			MR
GC15B01.D	VBLKG65	VBLKG65	15 Oct 2010	13:45	G102881AA		MR
GC15L01.D	LCSG65	LCSG65	15 Oct 2010	14:06	G102881AA		MR
GC15L02.D	LCDG65	LCDG65	15 Oct 2010	14:27	G102881AA		MR
GC15M02.D	MDL0.3	MDL0.3	15 Oct 2010	14:48			MR

Lancaster Laboratories
Runlog for Hewelet Packard GC/MS System HP16334 **HP #29**

** Shift #1 Analyst:_____** Shift #2 Analyst:_SEJ_____** Shift #3 Analyst:_____*

Comment Code: R = Reinjection necessary X = Sample sent to be reextracted
S = Surrogate problem I = Internal Standard problem
NU = Not used F = Further dilution required
MR = Meets requirements IUO = Internal use only
Cz = Confirms z, (z = S, I or X) T = Injected outside valid tune period

Other problems or comments are as follows:

_____8260 25ML WATERS_____
_____
_____
_____

Data Directory Path is - c:\msdchem\1\data\10OCT21B\

FILE	SAMPLE	LLI#	DATE	TIME	BATCH	D.F.	NOTES
GC21T02.D	50ng BFB	BFB MAY12-10	21 Oct 2010	14:19			MR
GC21X01.D	BLK	BLK	21 Oct 2010	14:32			NU
GC21I01.D	VSTD025	VSTD025	21 Oct 2010	14:53			MR
GC21I02.D	VSTD010	VSTD010	21 Oct 2010	15:14			MR
GC21I03.D	VSTD005	VSTD005	21 Oct 2010	15:35			MR
GC21I04.D	VSTD002	VSTD002	21 Oct 2010	15:56			MR
GC21I05.D	VSTD001	VSTD001	21 Oct 2010	16:17			NU
GC21I06.D	VSTD0.5	VSTD0.5	21 Oct 2010	16:39			NU
GC21M01.D	MDL0.1	MDL0.1	21 Oct 2010	17:01			MR
GC21C51.D	VSTD010	VSTD010	21 Oct 2010	17:22			MR
GC21I07.D	VSTD001	VSTD001	21 Oct 2010	17:56			MR
GC21I08.D	VSTD0.5	VSTD0.5	21 Oct 2010	18:18			MR
GC21B51.D	VBLKG71	VBLKG71	21 Oct 2010	19:10	G102942AA		MR
GC21L01.D	LCSG71	LCSG71	21 Oct 2010	19:31	G102942AA		MR
GC21L02.D	LCS1G71	LCS1G71	21 Oct 2010	19:53	G102942AA		MR

Lancaster Laboratories
Runlog for Hewelet Packard GC/MS System HP16334 **HP #29**

** Shift #1 Analyst:_____** Shift #2 Analyst:_SEJ_____** Shift #3 Analyst:__HB_____*

Comment Code: R = Reinjection necessary X = Sample sent to be reextracted
S = Surrogate problem I = Internal Standard problem
NU = Not used F = Further dilution required
MR = Meets requirements IUO = Internal use only
Cz = Confirms z, (z = S, I or X) T = Injected outside valid tune period

Other problems or comments are as follows:

_____8260 25ML WATERS_____
_____
_____
_____

Data Directory Path is - c:\msdchem\1\data\10OCT21B\

FILE	SAMPLE	LLI#	DATE	TIME	BATCH	D.F.	NOTES
GC21T02.D	50ng BFB	BFB MAY12-10	21 Oct 2010	14:19			MR
GC21X01.D	BLK	BLK	21 Oct 2010	14:32			NU
GC21I01.D	VSTD025	VSTD025	21 Oct 2010	14:53			MR
GC21I02.D	VSTD010	VSTD010	21 Oct 2010	15:14			MR
GC21I03.D	VSTD005	VSTD005	21 Oct 2010	15:35			MR
GC21I04.D	VSTD002	VSTD002	21 Oct 2010	15:56			MR
GC21I05.D	VSTD001	VSTD001	21 Oct 2010	16:17			NU
GC21I06.D	VSTD0.5	VSTD0.5	21 Oct 2010	16:39			NU
GC21M01.D	MDL0.1	MDL0.1	21 Oct 2010	17:01			MR
GC21C51.D	VSTD010	VSTD010	21 Oct 2010	17:22			MR
GC21I07.D	VSTD001	VSTD001	21 Oct 2010	17:56			MR
GC21I08.D	VSTD0.5	VSTD0.5	21 Oct 2010	18:18			MR
GC21B51.D	VBLKG71	VBLKG71	21 Oct 2010	19:10	G102942AA		MR
GC21L01.D	LCSG71	LCSG71	21 Oct 2010	19:31	G102942AA		MR
GC21L02.D	LCS1G71	LCS1G71	21 Oct 2010	19:53	G102942AA		MR
GC21S51.D	XXXXX	6117032	21 Oct 2010	20:34	G102942AA		MR
GC21S52.D	XXXXX	6117033	21 Oct 2010	20:55	G102942AA		MR
GC21S53.D	XXXXX	6117034	21 Oct 2010	21:17	G102942AA		MR
GC21S54.D	XXXXX	6117035	21 Oct 2010	21:38	G102942AA		MR
GC21S55.D	XXXXX	6117036	21 Oct 2010	22:00	G102942AA		MR
GC21S56.D	XXXXX	6117037	21 Oct 2010	22:22	G102942AA		MR
GC21S57.D	XXXXXMS	6117038MS	21 Oct 2010	22:43	G102942AA		MR
GC21S58.D	XXXXXMSD	6117039MSD	21 Oct 2010	23:05	G102942AA		MR
GC21S59.D	XXXXXMS1	6117038	21 Oct 2010	23:26	G102942AA		MR
GC21S60.D	XXXXXMSD1	6117039	21 Oct 2010	23:47	G102942AA		MR
GC21S61.D	XXXXX	6117040	22 Oct 2010	00:08	G102942AA		MR
GC21S62.D	XXXXX	6117041	22 Oct 2010	00:30	G102942AA		MR
GC21S63.D	XXXXX	6117042	22 Oct 2010	00:51	G102942AA		MR
GC21S64.D	XXXXX	6117043	22 Oct 2010	01:12	G102942AA		MR

RAD40 8116

Data File: /chem2/HP16334.i/10oct15a.b/gc15t02.d

Page 1

Date : 15-OCT-2010 10:41

Client ID: 50ngBFB

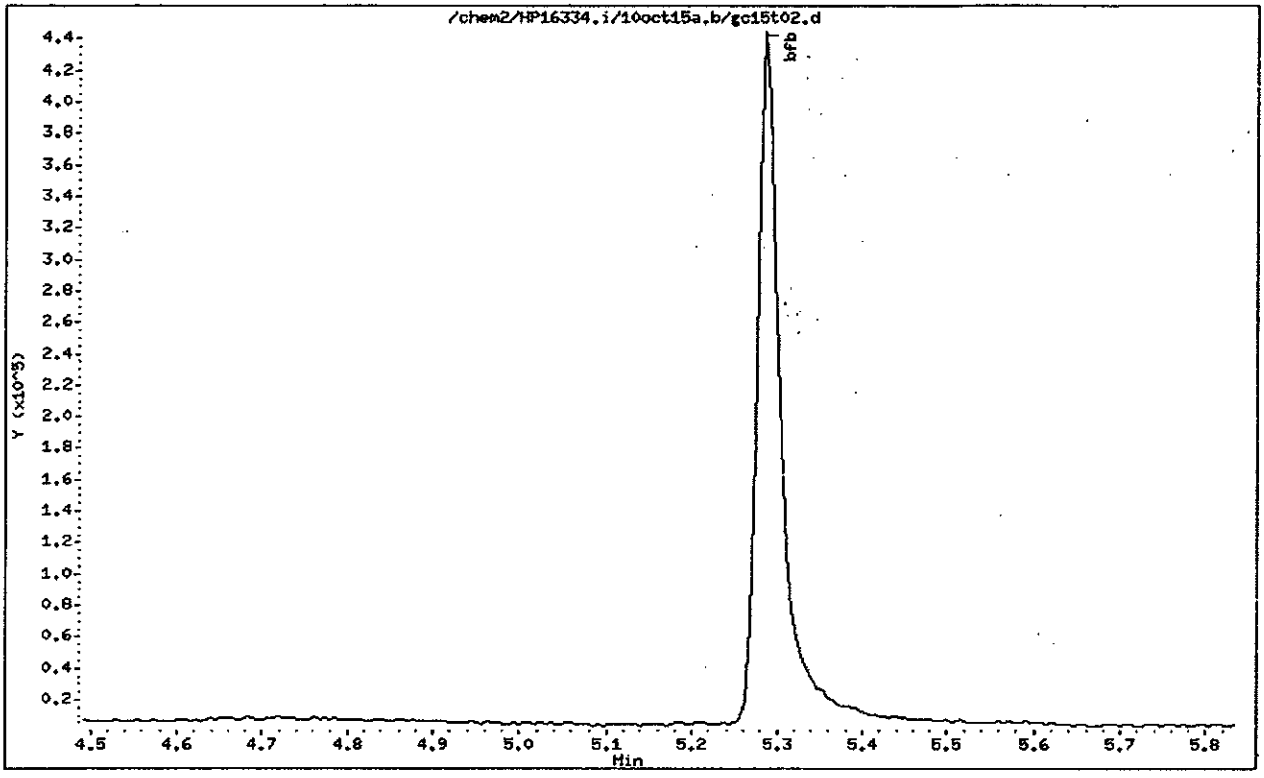
Instrument: HP16334.i

Sample Info: 50ngBFB;BFB HAY12-10;1;3;;

Operator: JHL01693

Column phase: DB-624

Column diameter: 0.25



RAD40 0117

Digitally signed by Jason M. Long on 10/15/2010 at 11:31.
Target 3.5 esignature user ID: jml01693

Data File: /chem2/HP16334.i/10oct15a.b/go15t02.d

Date : 15-OCT-2010 10:41

Client ID: 50ngBFB

Instrument: HP16334.i

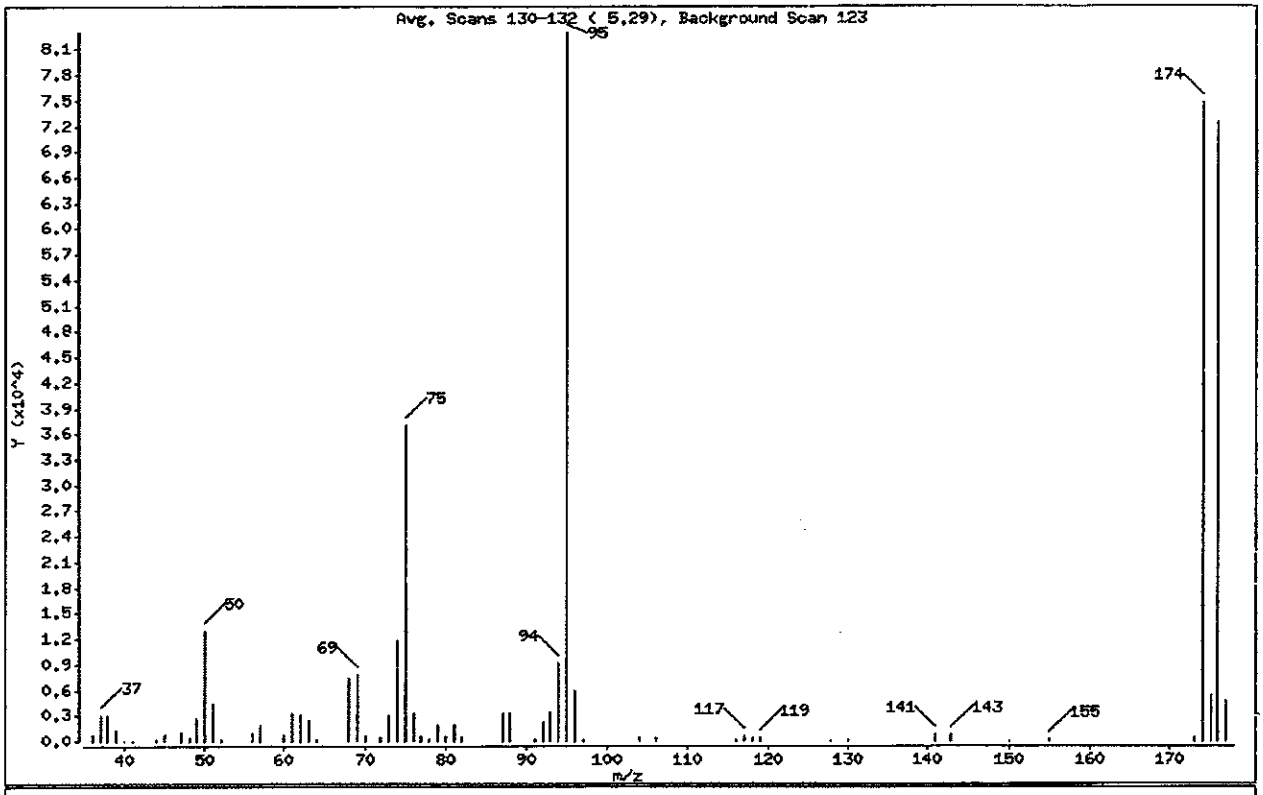
Sample Info: 50ngBFB;BFB MAY12-10:1;3;;

Operator: JML01693

Column phase: DB-624

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	15.74
75	30.00 - 60.00% of mass 95	44.58
96	5.00 - 9.00% of mass 95	7.05
173	Less than 2.00% of mass 174	0.38 (0.43)
174	50.00 - 100.00% of mass 95	90.11
175	5.00 - 9.00% of mass 174	6.49 (7.21)
176	95.00 - 101.00% of mass 174	87.27 (96.85)
177	5.00 - 9.00% of mass 176	5.76 (6.60)

RAD40 5118

Digitally signed by Jason M. Long on 10/15/2010 at 11:31.
Target 3.5 esignature user ID: jml01693

Data File: /chem2/HP16334.i/10oct15a.b/gc15t02.d

Date : 15-OCT-2010 10:41

Client ID: 50ngBFB

Instrument: HP16334.i

Sample Info: 50ngBFB;BFB MAY12-10;1;3;;

Operator: JML01693

Column phase: DB-624

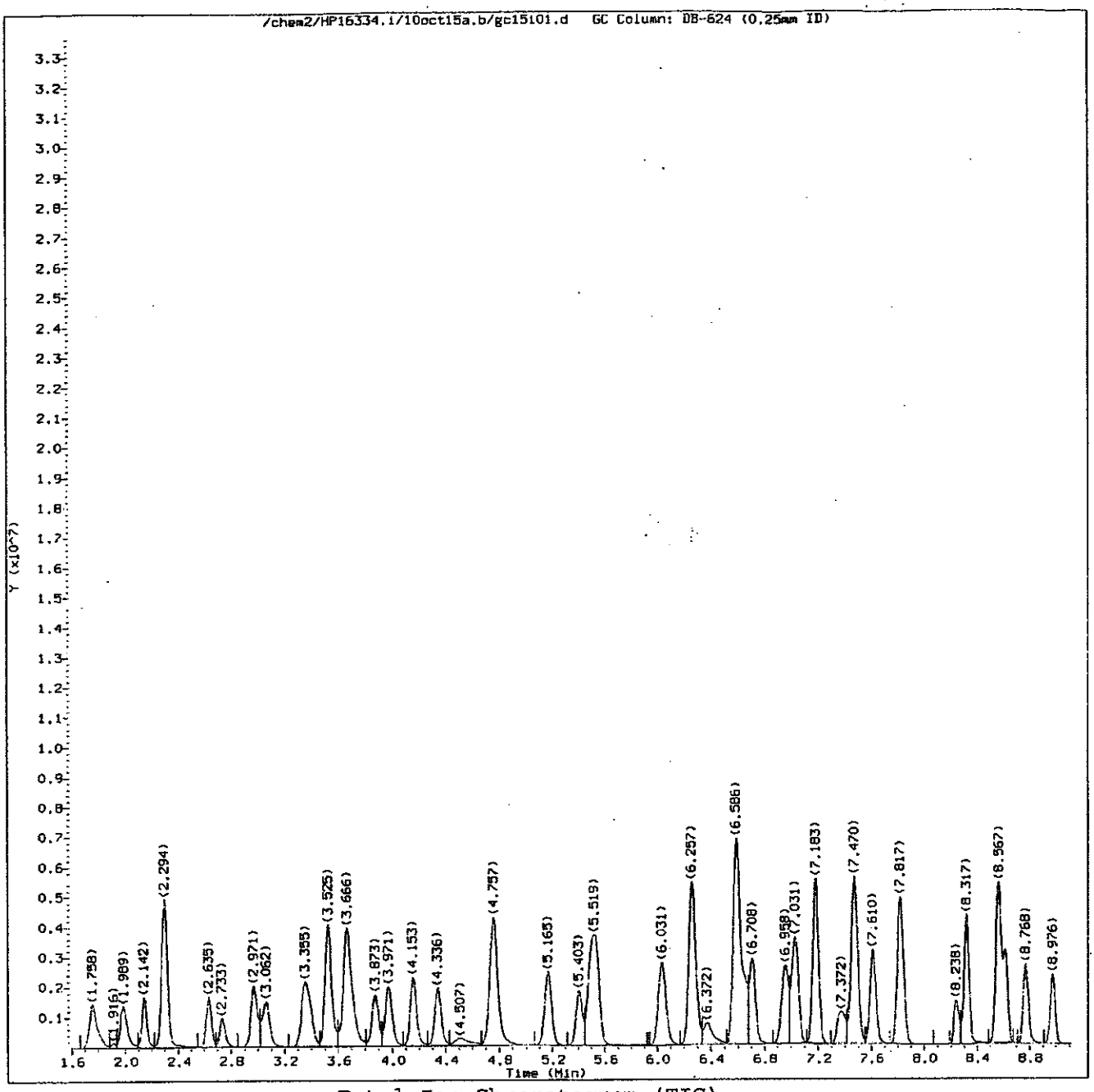
Column diameter: 0.25

Data File: gc15t02.d
Spectrum: Avg. Scans 130-132 (5.29), Background Scan 123
Location of Maximum: 95.00
Number of points: 61

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	764	60.00	750	80.00	598	118.00	330
37.00	3095	61.00	3318	81.00	1935	119.00	434
38.00	2971	62.00	3014	82.00	444	128.00	87
39.00	1299	63.00	2482	87.00	3319	130.00	236
40.00	64	64.00	206	88.00	3259	141.00	705
41.00	88	68.00	7367	91.00	221	143.00	813
44.00	141	69.00	7805	92.00	2244	150.00	87
45.00	676	70.00	504	93.00	3433	155.00	96
47.00	935	72.00	390	94.00	9119	173.00	319
48.00	408	73.00	3111	95.00	82984	174.00	74776
49.00	2713	74.00	11911	96.00	5852	175.00	5389
50.00	13064	75.00	36992	97.00	188	176.00	72424
51.00	4337	76.00	3295	104.00	361	177.00	4783
52.00	157	77.00	638	106.00	294		
56.00	1042	78.00	265	116.00	233		
57.00	1886	79.00	1861	117.00	490		

RAD48 0119

Digitally signed by Jason M. Long on 10/15/2010 at 11:31.
Target 3.5 esignature user ID: jm101693



Total Ion Chromatogram (TIC)

Target Revision 3.5

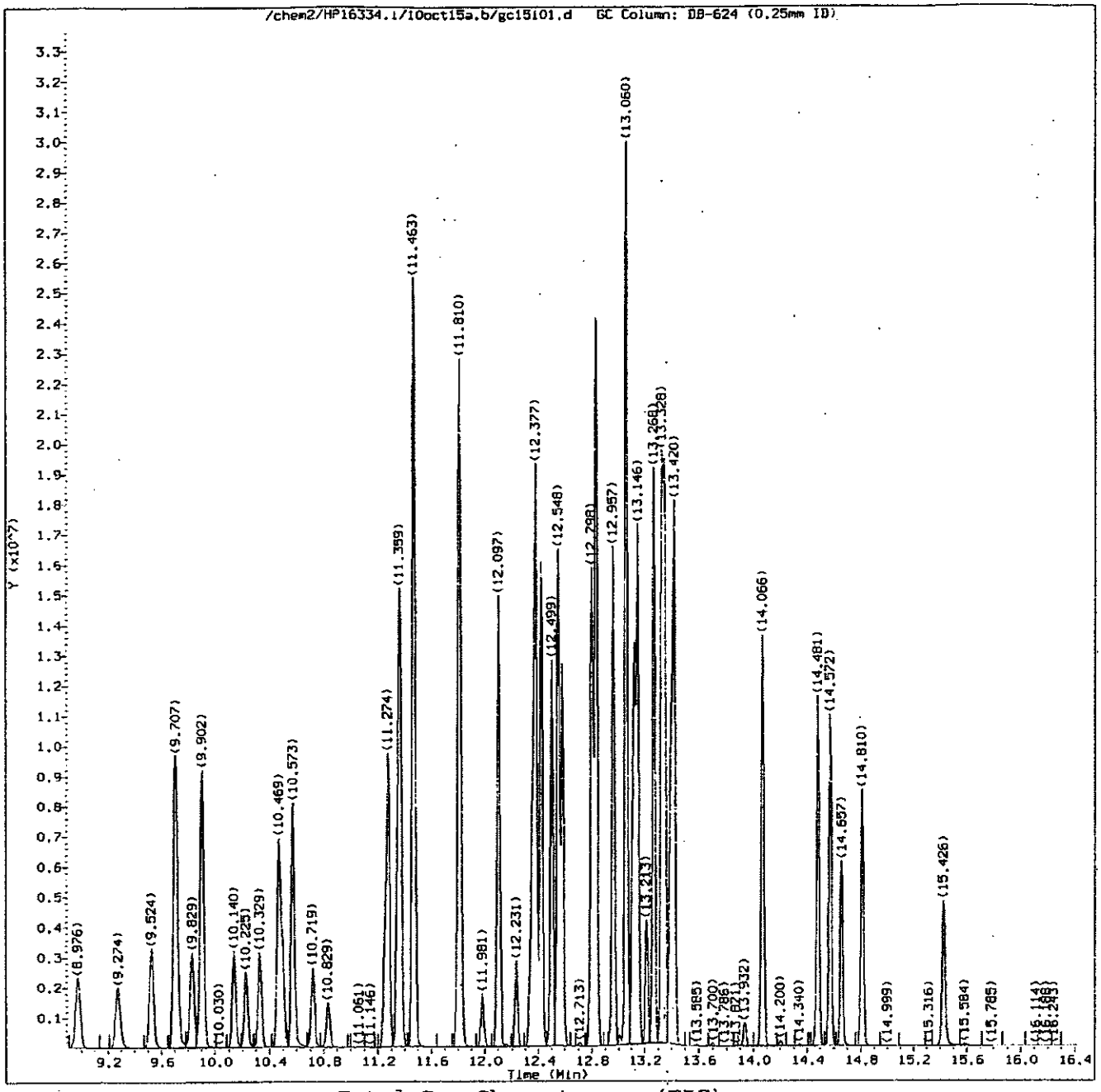
Data File: /chem2/HP16334.i/10oct15a.b/gc15i01.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 11:09 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 15-OCT-2010 13:36
Date, time and analyst ID of latest file update: 15-Oct-2010 13:36 jml01693

Sample Name: VSTD025 Lab Sample ID: VSTD025

RAD48 8120

Digitally signed by Jason M. Long
on 10/15/2010 at 13:37.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/10oct15a.b/gc15i01.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 11:09 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 15-OCT-2010 13:36
Date, time and analyst ID of latest file update: 15-Oct-2010 13:36 jml01693

Sample Name: VSTD025 Lab Sample ID: VSTD025

RAD48 8121

Digitally signed by Jason M. Long
on 10/15/2010 at 13:37.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/10oct15a.b/gc15i01.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 11:09 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 15-OCT-2010 13:36
Date, time and analyst ID of latest file update: 15-Oct-2010 13:36 jml01693

Sample Name: VSTD025 Lab Sample ID: VSTD025

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
2) Dichlorodifluoromethane	(1)	1.989	85	3006542	25.423
5) Chloromethane	(1)	2.142	50	2558575	24.796
6) Vinyl Chloride	(1)	2.282	62	2531657	25.197
9) 1,3-Butadiene	(1)	2.300	39	2687722	22.150
10) Bromomethane	(1)	2.635	94	1737119	23.668
11) Chloroethane	(1)	2.733	64	1347886	23.702
13) Dichlorofluoromethane	(1)	2.965	67	3114194	24.785
15) Trichlorofluoromethane	(1)	3.062	101	3136938	25.245
17) Ethyl Ether	(1)	3.343	59	1200581	25.893
18) Freon 123a	(1)	3.379	67	1954512	25.001
23) Acrolein	(4)	3.525	56	7327260	1362.560
24) 1,1-Dichloroethene	(1)	3.660	96	1614588	25.140
25) Freon 113	(1)	3.678	101	1685703	25.359
26) Acetone	(4)	3.727	58	571904	247.361
27) Methyl Iodide	(1)	3.873	142	3227959	25.633
29) Carbon Disulfide	(1)	3.971	76	4924612	26.379
32) Allyl Chloride	(1)	4.153	41	2497349	26.278
33) Methyl Acetate	(1)	4.184	43	459493	25.534
34) Methylene Chloride	(1)	4.336	84	1712844	24.021
36)*t-Butyl Alcohol-d10	(4)	4.385	65	95697	50.000
38) t-Butyl Alcohol	(4)	4.519	59	1142947	512.096
39) Acrylonitrile	(4)	4.739	53	1304585	145.760
41) trans-1,2-Dichloroethene	(1)	4.763	96	1856073	25.202
40) Methyl Tertiary Butyl Ether	(1)	4.763	73	3625198	25.009
37) 1,2-Dichloroethene (Total)	(1)		96	3864146	50.501
44) n-Hexane	(1)	5.165	57	2496244	25.609
45) 1,1-Dichloroethane	(1)	5.403	63	3091873	24.995
47) di-Isopropyl Ether	(1)	5.495	45	5422900	25.530
48) 2-Chloro-1,3-Butadiene	(1)	5.537	53	2465958	26.665
49) Ethyl t-Butyl Ether	(1)	6.031	59	4828078	25.393
51) 2,2-Dichloropropane	(1)	6.257	77	2547785	25.863
50) cis-1,2-Dichloroethene	(1)	6.257	96	2008073	25.299
52) 2-Butanone	(4)	6.275	43	3188778	267.358
53) Propionitrile	(4)	6.379	54	1810655	564.147
55) Methacrylonitrile	(4)	6.586	67	3688385	267.256
56) Bromochloromethane	(1)	6.592	128	868955	26.116
57) Tetrahydrofuran	(4)	6.653	71	1008634	261.267
58) Chloroform	(1)	6.708	83	3148543	25.333

* = Compound is an internal standard.

RAD48 8122

Digitally signed by Jason M. Long
on 10/15/2010 at 13:37.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/10oct15a.b/gc15i01.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 11:09 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 15-OCT-2010 13:36
Date, time and analyst ID of latest file update: 15-Oct-2010 13:36 jml01693

Sample Name: VSTD025 Lab Sample ID: VSTD025

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
62)$Dibromofluoromethane(mz111)	(1)	6.933	111	605324	10.108
61)$Dibromofluoromethane	(1)	6.933	113	591170	10.054
63) 1,1,1-Trichloroethane	(1)	6.964	97	2750134	25.581
64) Cyclohexane	(1)	7.031	56	2990025	25.217
65) 1,1-Dichloropropene	(1)	7.183	75	2474806	25.707
66) Carbon Tetrachloride	(1)	7.183	117	2459642	26.453
67) Isobutyl Alcohol	(4)	7.354	41	944918	1311.312
68)$1,2-Dichloroethane-d4(mz104)	(1)	7.391	104	73263	9.899
69)$1,2-Dichloroethane-d4(mz65)	(1)	7.391	65	498451	9.837
70)$1,2-Dichloroethane-d4	(1)	7.397	102	116730	9.998
72) Benzene	(1)	7.464	78	7202573	25.418
74) 1,2-Dichloroethane	(1)	7.494	62	1691325	25.124
73) 1,2-Dichloroethane(mz98)	(1)	7.494	98	170902	26.333
75) t-Amyl Methyl Ether	(1)	7.610	73	4172884	25.577
76) n-Heptane	(1)	7.811	43	2614833M	25.497
77)*Fluorobenzene	(1)	7.842	96	2619622	10.000
81) n-Butanol	(4)	8.238	56	1728172	2878.371
83) Trichloroethene	(1)	8.317	95	1972778	25.552
84) Methylcyclohexane	(1)	8.567	83	3444749	26.173
85) 1,2-Dichloropropane	(1)	8.616	63	1836981	25.837
87) Methyl Methacrylate	(4)	8.768	69	685785	28.908
88) Dibromomethane	(1)	8.768	93	816345	25.639
89) 1,4-Dioxane	(4)	8.799	88	181856	1203.870
90) Bromodichloromethane	(1)	8.976	83	2170738	27.254
91) 2-Nitropropane	(4)	9.274	41	1864150	259.685
94) cis-1,3-Dichloropropene	(1)	9.524	75	2508983	27.362
96) 4-Methyl-2-Pentanone	(1)	9.701	43	8625774	265.363
97)$Toluene-d8	(2)	9.829	98	2581898	9.929
98)$Toluene-d8(mz100)	(2)	9.829	100	1714725	10.047
101) Toluene	(2)	9.902	92	4794558	25.679
102) trans-1,3-Dichloropropene	(2)	10.140	75	2085812	27.842
103) Ethyl Methacrylate	(2)	10.225	69	1518349	28.509
104) 1,1,2-Trichloroethane	(2)	10.329	97	1143501	25.382
105) Tetrachloroethene	(2)	10.469	166	2326991	25.861
106) 1,3-Dichloropropane	(2)	10.500	76	1950833	25.350
107) 2-Hexanone	(2)	10.573	43	5843395	262.136
108) Dibromochloromethane	(2)	10.719	129	1481239	28.169
109) 1,2-Dibromoethane	(2)	10.829	107	1071651	26.061

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

RAD46 8123

Digitally signed by Jason M. Long
on 10/15/2010 at 13:37.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/10oct15a.b/gc15i01.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 11:09 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 15-OCT-2010 13:36
Date, time and analyst ID of latest file update: 15-Oct-2010 13:36 jml01693

Sample Name: VSTD025 Lab Sample ID: VSTD025

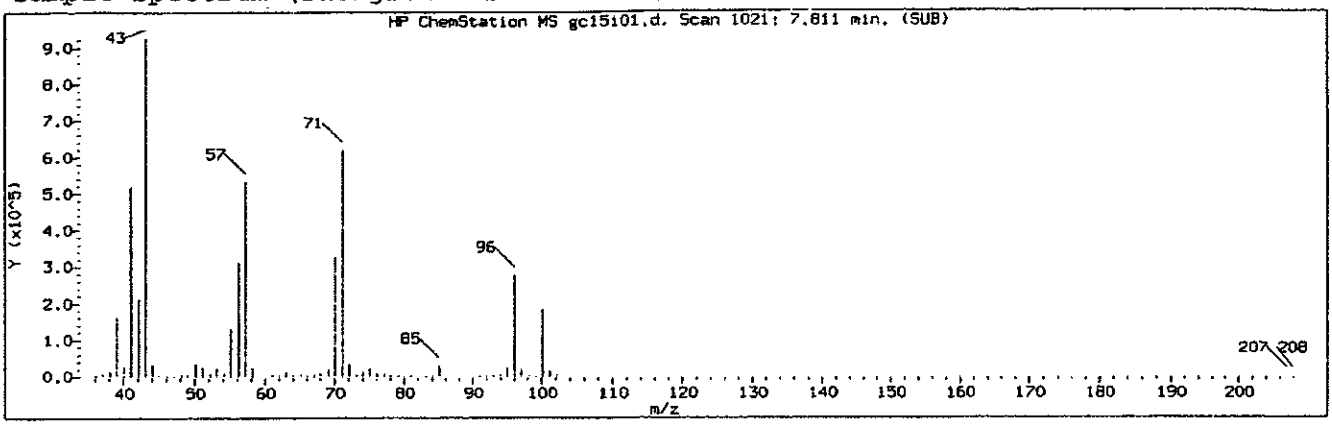
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
110)*Chlorobenzene-d5	(2)	11.250	117	1945719	10.000
112) Chlorobenzene	(2)	11.274	112	5498870	25.711
113) 1,1,1,2-Tetrachloroethane	(2)	11.347	131	1948236	27.148
114) Ethylbenzene	(2)	11.365	91	9557101	26.574
117) m+p-Xylene	(2)	11.463	106	7719310	53.786
115) Xylene (Total)	(2)		106	11540458	80.680
118) o-Xylene	(2)	11.804	106	3821148	26.894
119) Styrene	(2)	11.817	104	6116703	29.001
120) Bromoform	(2)	11.981	173	826582	30.787
121) Isopropylbenzene	(2)	12.097	105	9690483	26.539
126)$4-Bromofluorobenzene	(2)	12.231	95	882215	9.872
127)$4-Bromofluorobenzene(mz174)	(2)	12.231	174	807853	9.842
128) 1,1,2,2-Tetrachloroethane	(3)	12.335	83	1308501M	26.053
129) Bromobenzene	(3)	12.359	156	2365559	26.545
130) trans-1,4-Dichloro-2-Butene	(4)	12.377	53	2661580M	249.855
131) 1,2,3-Trichloropropane	(3)	12.377	110	369448	26.480
132) n-Propylbenzene	(3)	12.420	91	11640611	26.491
133) 2-Chlorotoluene	(3)	12.499	126	2372650	26.301
134) 1,3,5-Trimethylbenzene	(3)	12.548	105	8281446	27.327
135) 4-Chlorotoluene	(3)	12.579	126	2412189	26.169
137) tert-Butylbenzene	(3)	12.798	134	1887106M	27.425
138) Pentachloroethane	(3)	12.829	167	1594782	30.041
139) 1,2,4-Trimethylbenzene	(3)	12.835	105	9056601	28.100
140) sec-Butylbenzene	(3)	12.957	105	10781720	26.825
141) p-Isopropyltoluene	(3)	13.054	119	9994202	28.011
142) 1,3-Dichlorobenzene	(3)	13.060	146	5131002	27.572
143)*1,4-Dichlorobenzene-d4	(3)	13.103	152	1125980	10.000
144) 1,4-Dichlorobenzene	(3)	13.121	146	4952568	25.741
145) 1,2,3-Trimethylbenzene	(3)	13.146	120	3852948	27.369
146) Benzyl Chloride	(3)	13.219	126	623860	29.317
147) n-Butylbenzene	(3)	13.347	92	4862011	27.487
148) 1,2-Dichlorobenzene	(3)	13.396	146	4266922	25.899
150) 1,2-Dibromo-3-Chloropropane	(4)	13.938	155	176993	25.129
153) 1,2,4-Trichlorobenzene	(3)	14.481	180	3436696	26.445
154) Hexachlorobutadiene	(3)	14.572	225	1915919	26.334
155) Naphthalene	(3)	14.657	128	4477531	26.570
156) 1,2,3-Trichlorobenzene	(3)	14.810	180	2574354	25.779

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

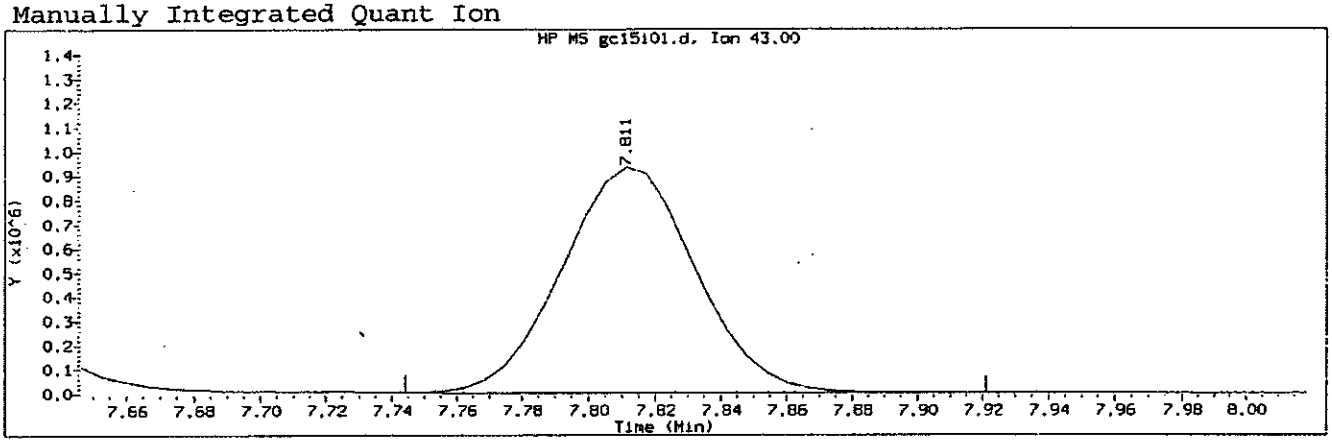
RAD48 8124

Digitally signed by Jason M. Long
on 10/15/2010 at 13:37.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10oct15a.b/gc15i01.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 11:09 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 15-OCT-2010 13:36
Date, time and analyst ID of latest file update: 15-Oct-2010 13:36 jml01693

Sample Name: VSTD025 Lab Sample ID: VSTD025

Compound Number : 76
Compound Name : n-Heptane
Scan Number : 1021
Retention Time (minutes): 7.811
Quant Ion : 43.00
Area (flag) : 2614833M
On-Column Amount (ng) : 25.4965
Integration start scan : 1009 Integration stop scan: 1038
Y at integration start : 1711 Y at integration end: 1711

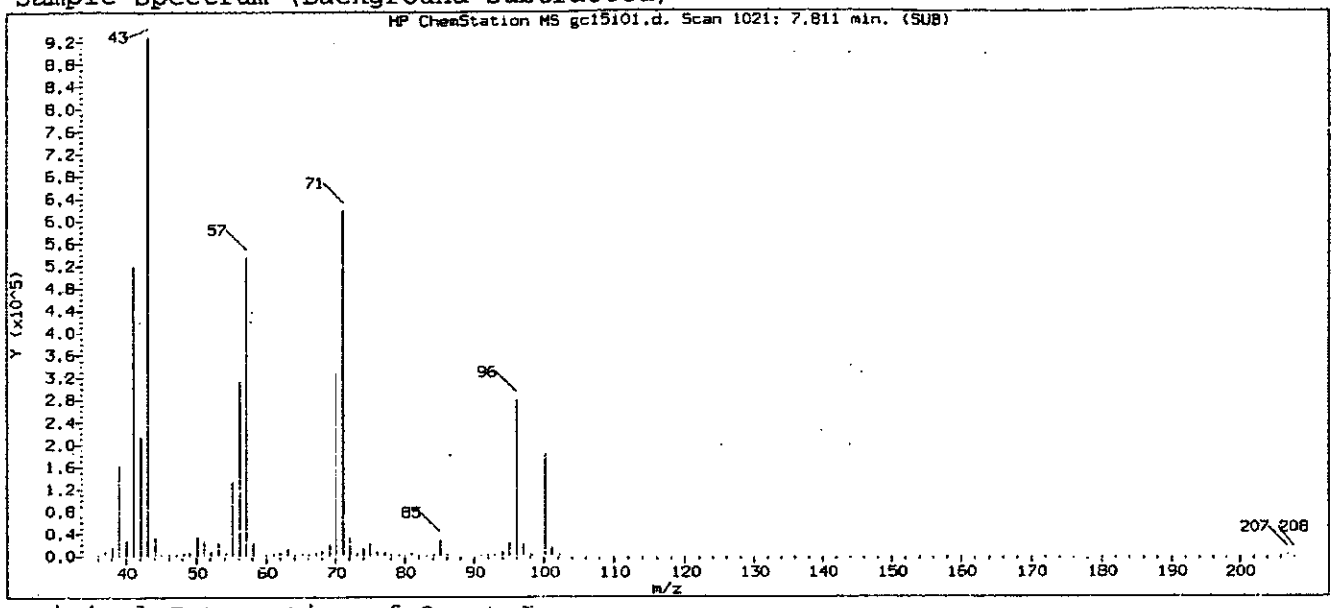
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long
on 10/15/2010 at 13:37.
Target 3.5 esignature user ID: jml01693

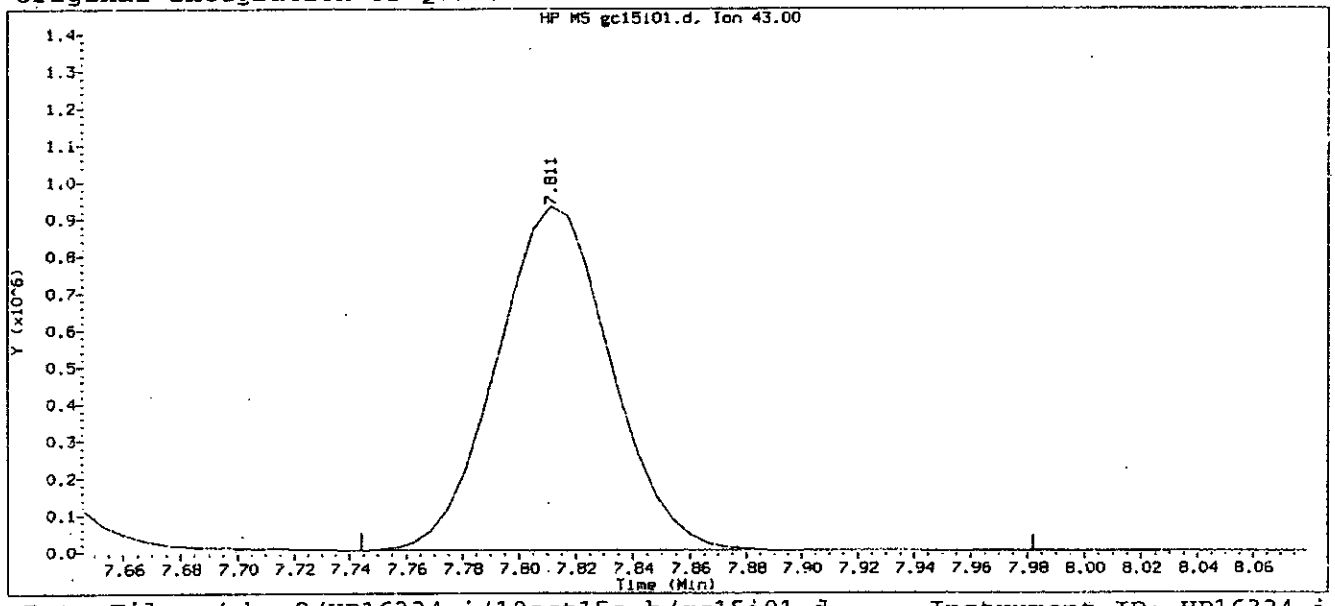
GC/MS audit/management approval: _____ 10/21/10

RAD48 8125

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10oct15a.b/gc15i01.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 11:09 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 15-OCT-2010 11:27
Date, time and analyst ID of latest file update: 15-Oct-2010 11:27 Automation

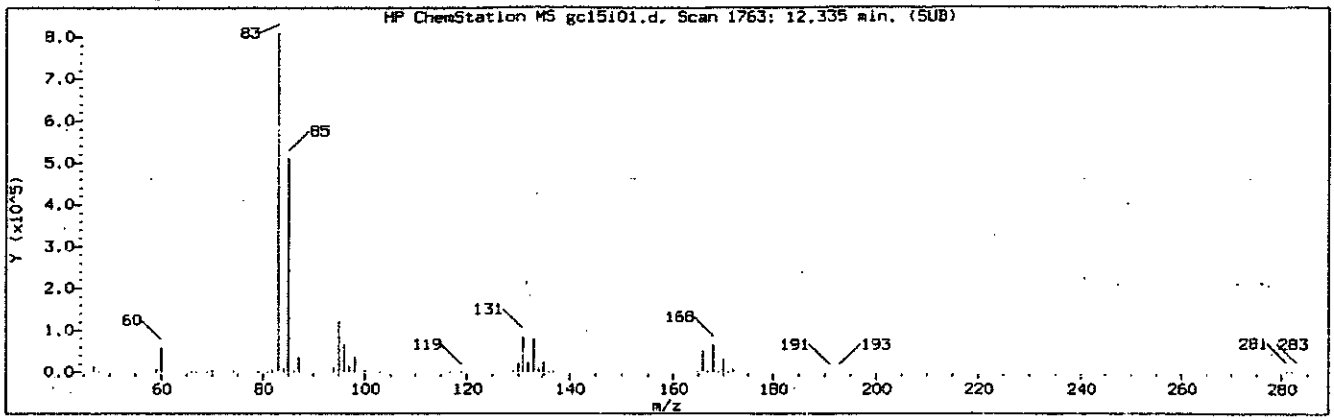
Sample Name: VSTD025 Lab Sample ID: VSTD025

Compound Number	: 76		
Compound Name	: n-Heptane		
Scan Number	: 1021		
Retention Time (minutes)	: 7.811		
Quant Ion	: 43.00		
Area	: 2589728		
On-column Amount (ng)	: 28.9678		
Integration start scan	: 1009	Integration stop scan:	1048
Y at integration start	: 6089	Y at integration end:	894

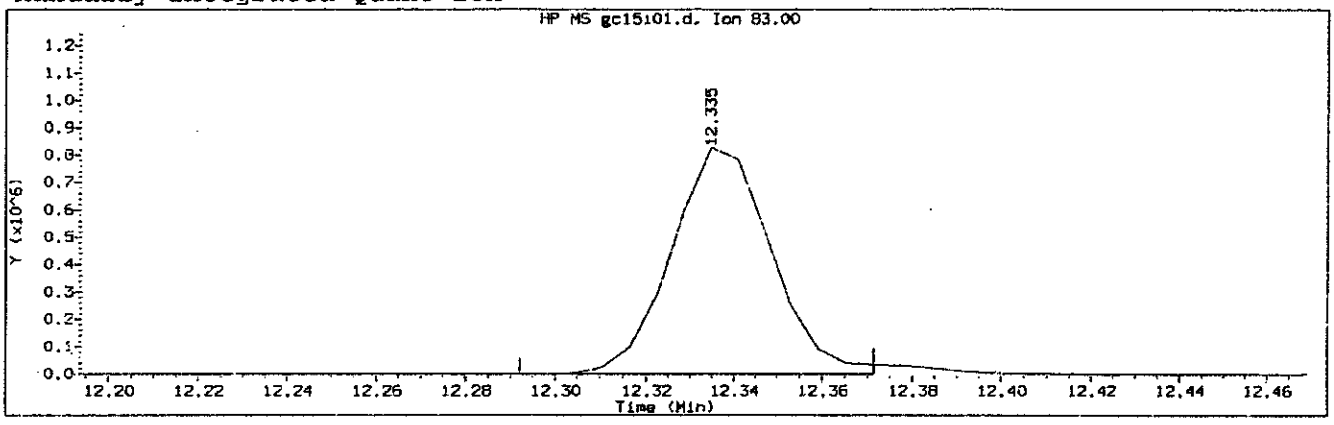
RAD48 0126

Digitally signed by Jason M. Long on 10/15/2010 at 13:37.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10oct15a.b/gc15i01.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 11:09 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 15-OCT-2010 13:36
Date, time and analyst ID of latest file update: 15-Oct-2010 13:36 jml01693

Sample Name: VSTD025 Lab Sample ID: VSTD025

Compound Number : 128
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1763
Retention Time (minutes): 12.335
Quant Ion : 83.00
Area (flag) : 1308501M
On-Column Amount (ng) : 26.0528
Integration start scan : 1755 Integration stop scan: 1768
Y at integration start : 0 Y at integration end: 0

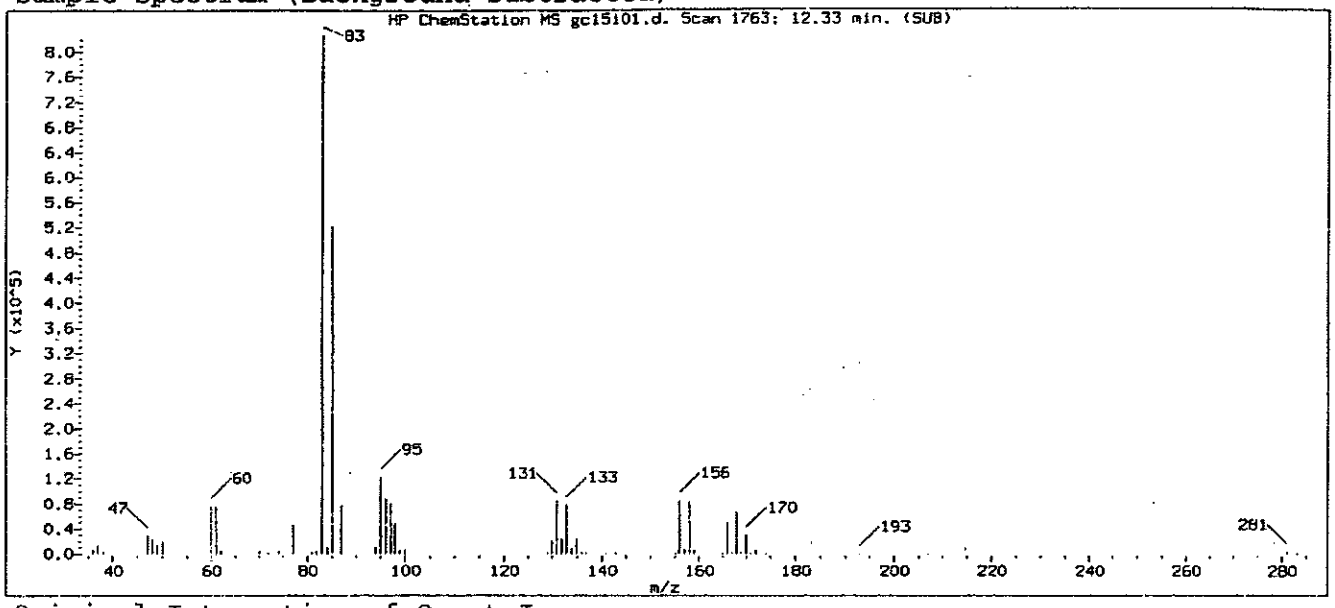
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long on 10/15/2010 at 13:37. Target 3.5 esignature user ID: jml01693

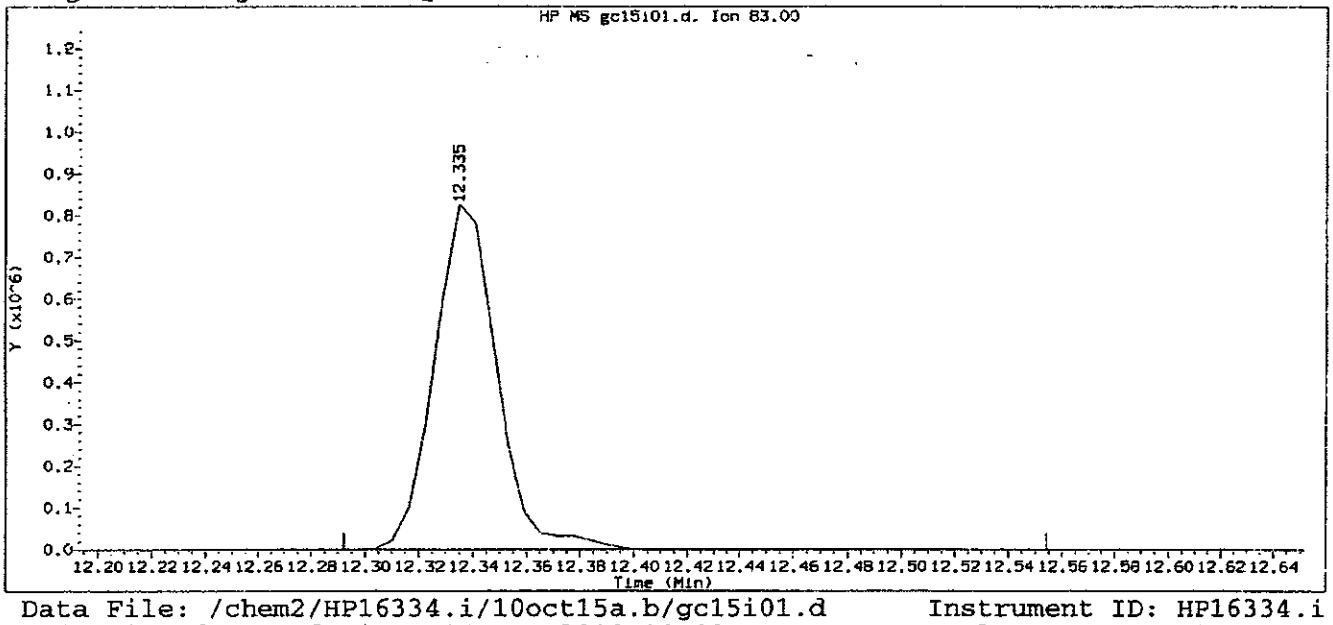
GC/MS audit/management approval: _____ 10/21/10

RAD48 0127

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10oct15a.b/gc15i01.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 11:09 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 15-OCT-2010 11:27
Date, time and analyst ID of latest file update: 15-Oct-2010 11:27 Automation

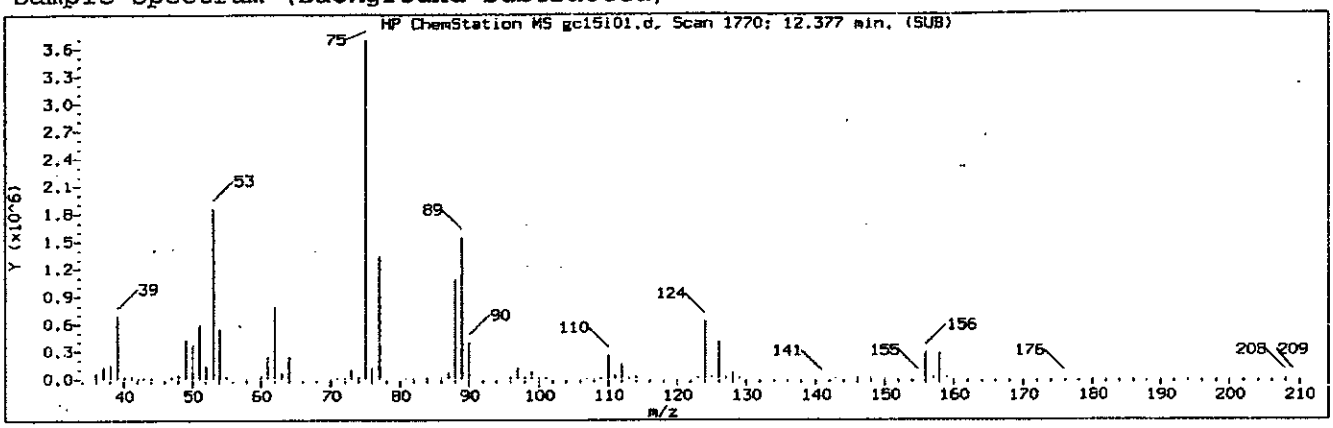
Sample Name: VSTD025 Lab Sample ID: VSTD025

Compound Number : 128
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1763
Retention Time (minutes): 12.335
Quant Ion : 83.00
Area : 1340154
On-column Amount (ng) : 27.1657
Integration start scan : 1755 Integration stop scan: 1798
Y at integration start : 0 Y at integration end: 0

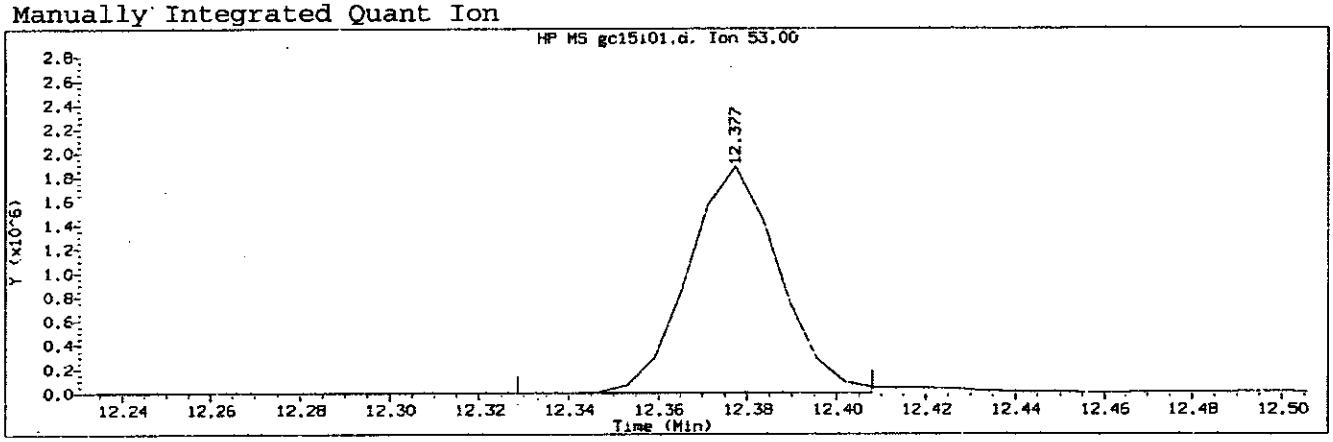
RAD48 8128

Digitally signed by Jason M. Long on 10/15/2010 at 13:37.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10oct15a.b/gc15i01.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 11:09 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 15-OCT-2010 13:36
Date, time and analyst ID of latest file update: 15-Oct-2010 13:36 jml01693

Sample Name: VSTD025 Lab Sample ID: VSTD025

Compound Number : 130
Compound Name : trans-1,4-Dichloro-2-Butene
Scan Number : 1770
Retention Time (minutes): 12.377
Quant Ion : 53.00
Area (flag) : 2661580M
On-Column Amount (ng) : 249.8552
Integration start scan : 1761 Integration stop scan: 1774
Y at integration start : 0 Y at integration end: 0

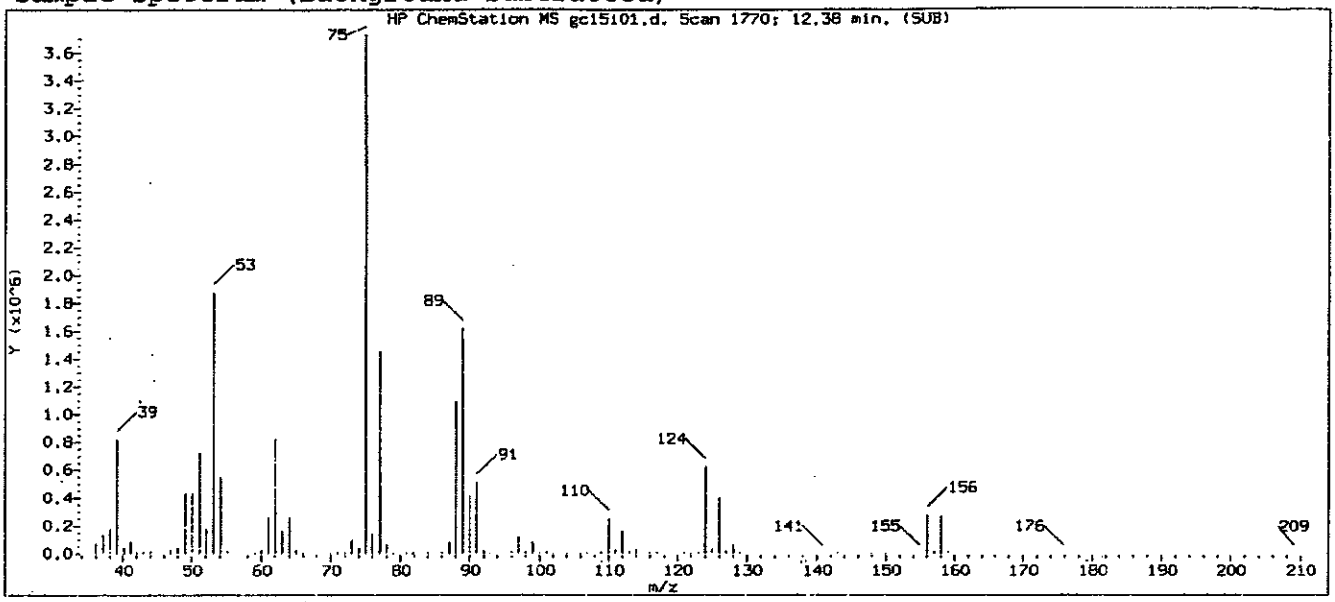
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long on 10/15/2010 at 13:37. Target 3.5 esignature user ID: jml01693

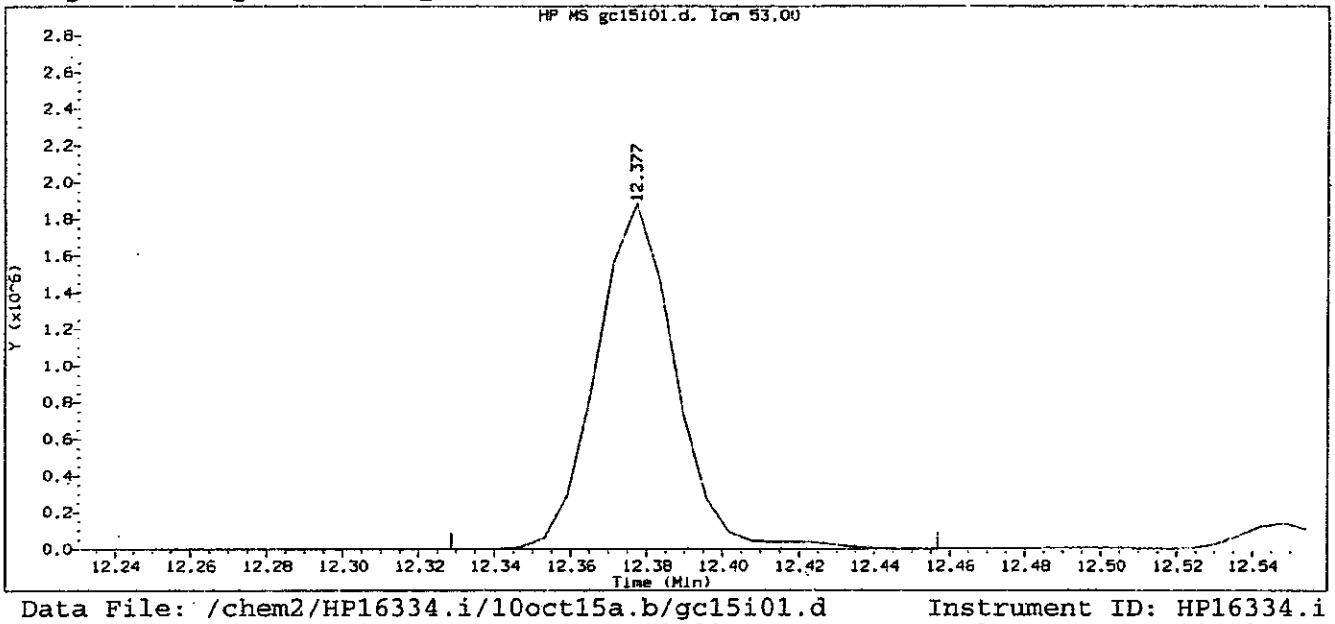
GC/MS audit/management approval: _____ 10/21/10

RAD48 0129

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10oct15a.b/gc15i01.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 11:09 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 15-OCT-2010 11:27
Date, time and analyst ID of latest file update: 15-Oct-2010 11:27 Automation

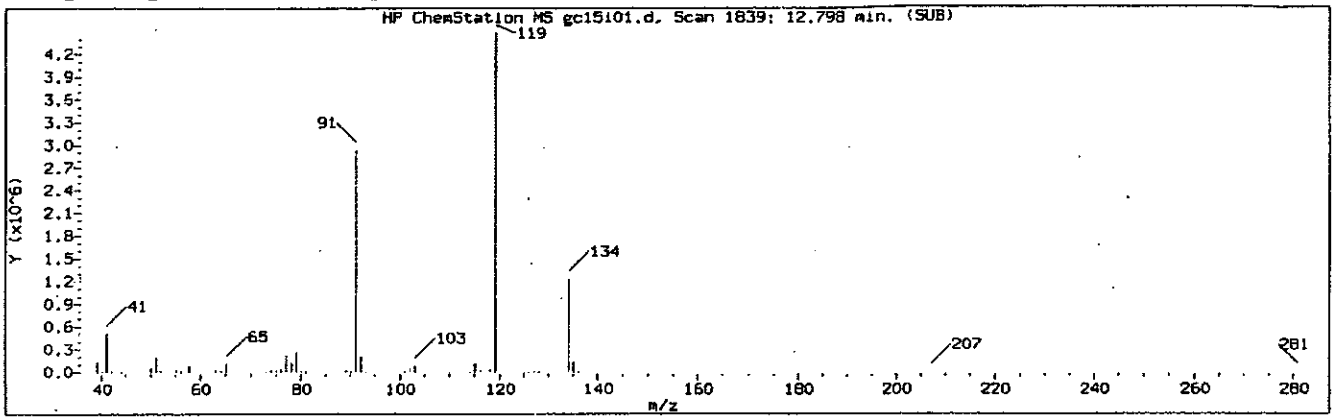
Sample Name: VSTD025 Lab Sample ID: VSTD025

Compound Number : 130
Compound Name : trans-1,4-Dichloro-2-Butene
Scan Number : 1770
Retention Time (minutes): 12.377
Quant Ion : 53.00
Area : 2716344
On-column Amount (ng) : 249.9904
Integration start scan : 1761 Integration stop scan: 1782
Y at integration start : 0 Y at integration end: 0

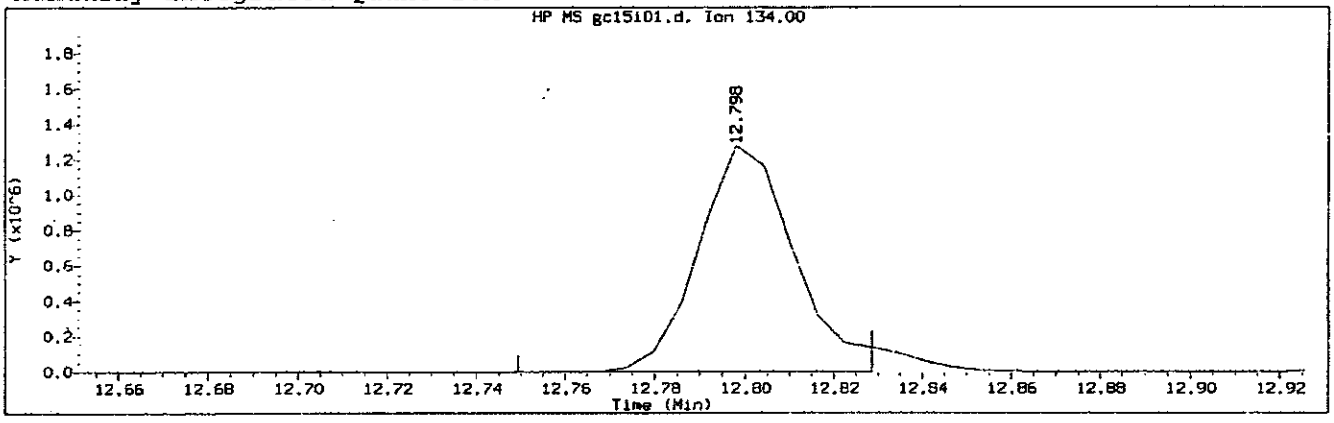
RAD48 2136

Digitally signed by Jason M. Long on 10/15/2010 at 13:37.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10oct15a.b/gc15i01.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 11:09 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 15-OCT-2010 13:36
Date, time and analyst ID of latest file update: 15-Oct-2010 13:36 jml01693

Sample Name: VSTD025 Lab Sample ID: VSTD025

Compound Number : 137
Compound Name : tert-Butylbenzene
Scan Number : 1839
Retention Time (minutes): 12.798
Quant Ion : 134.00
Area (flag) : 1887106M
On-Column Amount (ng) : 27.4247
Integration start scan : 1830 Integration stop scan: 1843
Y at integration start : 0 Y at integration end: 0

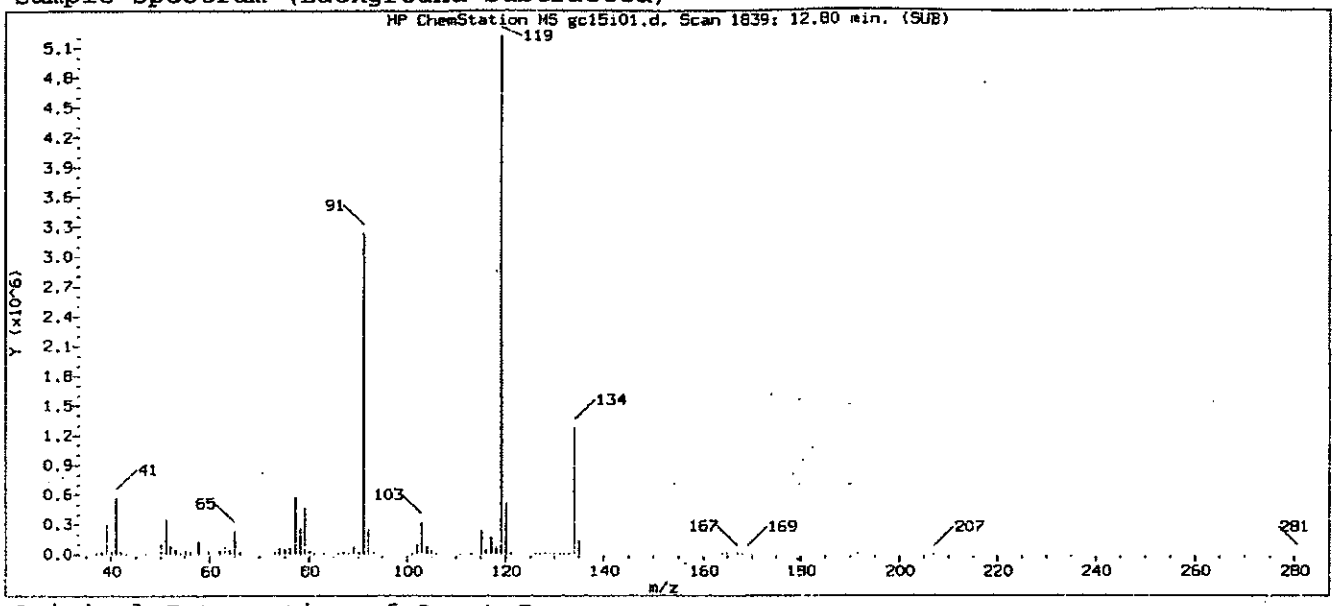
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long on 10/15/2010 at 13:37. Target 3.5 esignature user ID: jml01693

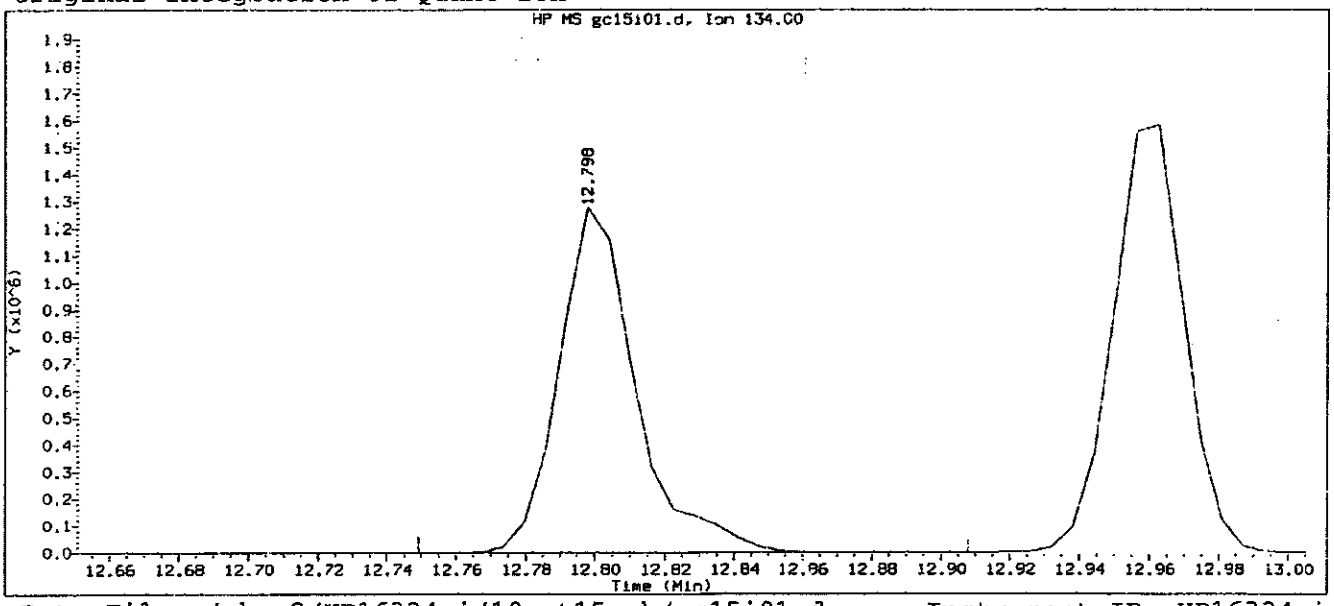
GC/MS audit/management approval: _____ 10/21/10

RAD40 8131

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10oct15a.b/gc15i01.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 11:09 Analyst ID: JML01693

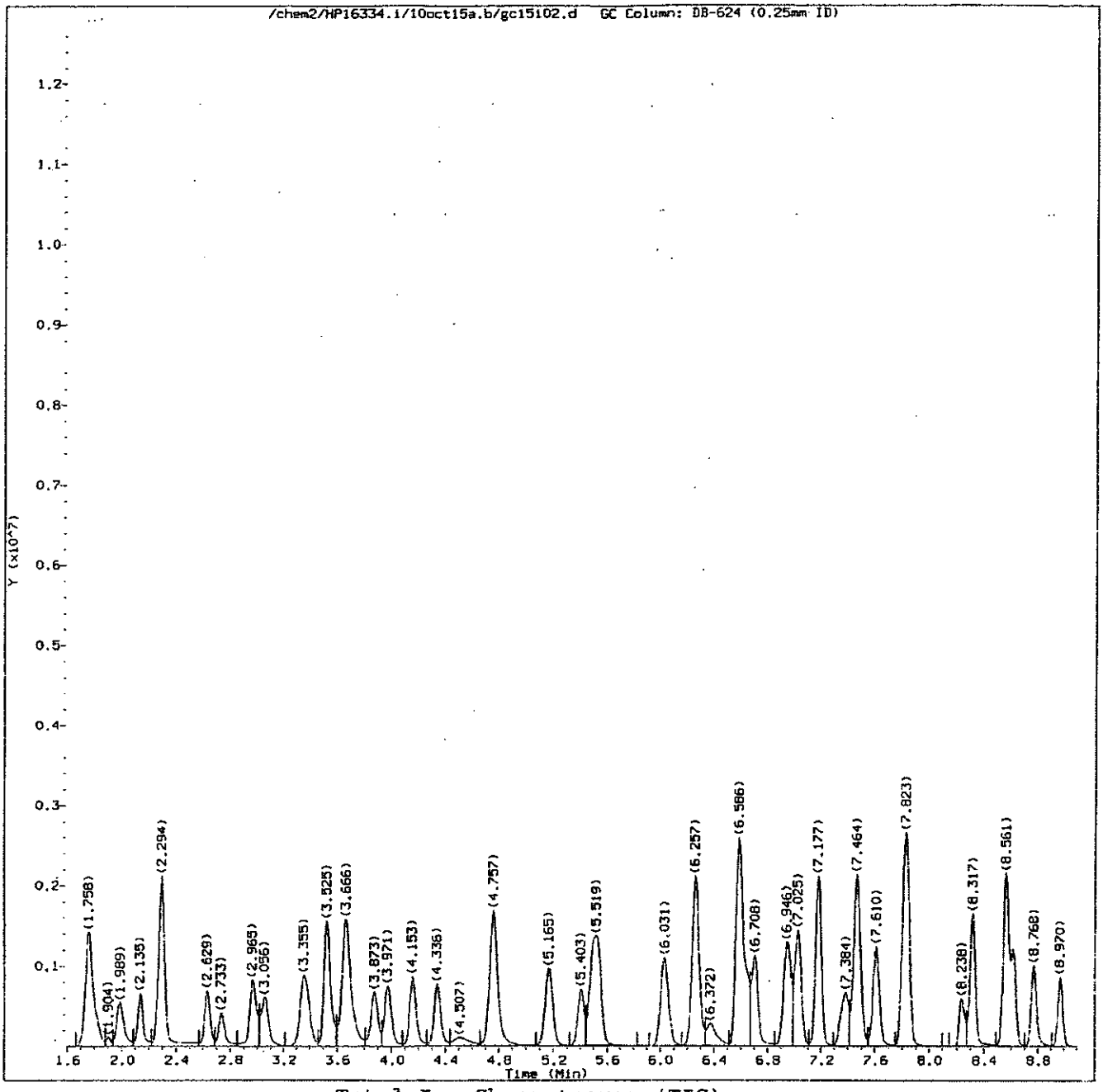
Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 15-OCT-2010 11:27
Date, time and analyst ID of latest file update: 15-Oct-2010 11:27 Automation

Sample Name: VSTD025 Lab Sample ID: VSTD025

Compound Number	: 137		
Compound Name	: tert-Butylbenzene		
Scan Number	: 1839		
Retention Time (minutes)	: 12.798		
Quant Ion	: 134.00		
Area	: 1959586		
On-column Amount (ng)	: 26.5998		
Integration start scan	: 1830	Integration stop scan:	1856
Y at integration start	: 0	Y at integration end:	0

RAD48 8132

Digitally signed by Jason M. Long on 10/15/2010 at 13:37.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

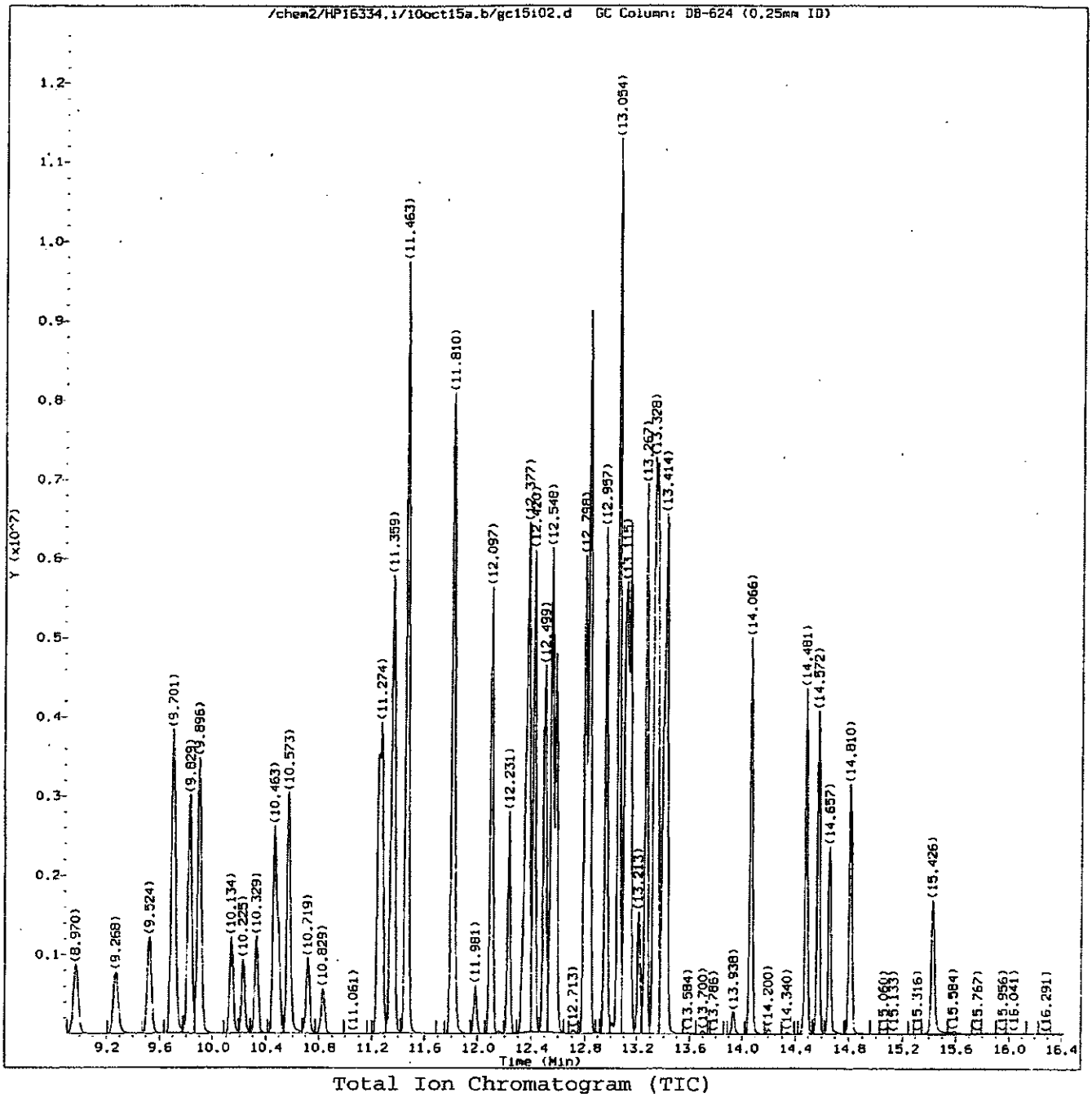
Data File: /chem2/HP16334.i/10oct15a.b/gc15i02.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 11:31 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 15-OCT-2010 13:36
Date, time and analyst ID of latest file update: 15-Oct-2010 13:36 jml01693

Sample Name: VSTD010 Lab Sample ID: VSTD010

RAD46 0133

Digitally signed by Jason M. Long
on 10/15/2010 at 13:37.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/10oct15a.b/gc15i02.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 11:31 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 15-OCT-2010 13:36
Date, time and analyst ID of latest file update: 15-Oct-2010 13:36 jml01693

Sample Name: VSTD010 Lab Sample ID: VSTD010

RAD48 8134

Digitally signed by Jason M. Long
on 10/15/2010 at 13:37.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/10oct15a.b/gc15i02.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 11:31 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 15-OCT-2010 13:36
Date, time and analyst ID of latest file update: 15-Oct-2010 13:36 jml01693

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
2) Dichlorodifluoromethane	(1)	1.989	85	1192514	10.232
5) Chloromethane	(1)	2.135	50	997893	9.813
6) Vinyl Chloride	(1)	2.276	62	995624	10.055
9) 1,3-Butadiene	(1)	2.300	39	1173704	9.815
10) Bromomethane	(1)	2.629	94	703123	9.720
11) Chloroethane	(1)	2.733	64	542050	9.671
13) Dichlorofluoromethane	(1)	2.965	67	1226460	9.904
15) Trichlorofluoromethane	(1)	3.056	101	1246029	10.175
17) Ethyl Ether	(1)	3.343	59	468537	10.253
18) Freon 123a	(1)	3.373	67	769637	9.989
23) Acrolein	(4)	3.525	56	2857317	540.599
24) 1,1-Dichloroethene	(1)	3.660	96	638544	10.089
25) Freon 113	(1)	3.678	101	667706	10.192
26) Acetone	(4)	3.727	58	237835	104.661
27) Methyl Iodide	(1)	3.873	142	1262298	10.171
29) Carbon Disulfide	(1)	3.971	76	1857564	10.096
32) Allyl Chloride	(1)	4.153	41	956046	10.207
33) Methyl Acetate	(1)	4.190	43	183322	10.337
34) Methylene Chloride	(1)	4.342	84	678892	9.660
36)*t-Butyl Alcohol-d10	(4)	4.379	65	94058	50.000
38) t-Butyl Alcohol	(4)	4.507	59	439315	200.265
39) Acrylonitrile	(4)	4.739	53	495125	56.284
40) Methyl Tertiary Butyl Ether	(1)	4.757	73	1455486	10.188
41) trans-1,2-Dichloroethene	(1)	4.763	96	730800	10.068
37) 1,2-Dichloroethene (Total)	(1)		96	1516938	20.118
44) n-Hexane	(1)	5.172	57	1004465	10.456
45) 1,1-Dichloroethane	(1)	5.403	63	1217711	9.989
47) di-Isopropyl Ether	(1)	5.495	45	2136159	10.204
48) 2-Chloro-1,3-Butadiene	(1)	5.537	53	950228	10.426
49) Ethyl t-Butyl Ether	(1)	6.031	59	1914065	10.215
51) 2,2-Dichloropropane	(1)	6.257	77	996178	10.261
50) cis-1,2-Dichloroethene	(1)	6.257	96	786138	10.050
52) 2-Butanone	(4)	6.275	43	1231449	105.048
53) Propionitrile	(4)	6.379	54	699943	221.882
55) Methacrylonitrile	(4)	6.586	67	1444659	106.502
56) Bromochloromethane	(1)	6.592	128	334838	10.211
57) Tetrahydrofuran	(4)	6.647	71	401022	105.687
58) Chloroform	(1)	6.708	83	1238466	10.111

* = Compound is an internal standard.

RAD48 0135

Digitally signed by Jason M. Long
on 10/15/2010 at 13:37.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/10oct15a.b/gc15i02.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 11:31 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 15-OCT-2010 13:36
Date, time and analyst ID of latest file update: 15-Oct-2010 13:36 jml01693

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
62)$Dibromofluoromethane(mz111)	(1)	6.927	111	594049	10.065
61)$Dibromofluoromethane	(1)	6.933	113	584186	10.081
63) 1,1,1-Trichloroethane	(1)	6.958	97	1080781	10.201
64) Cyclohexane	(1)	7.025	56	1200159	10.270
65) 1,1-Dichloropropene	(1)	7.177	75	968425	10.207
66) Carbon Tetrachloride	(1)	7.183	117	952449	10.394
67) Isobutyl Alcohol	(4)	7.360	41	368344M	520.077
70)$1,2-Dichloroethane-d4	(1)	7.391	102	116010	10.082
68)$1,2-Dichloroethane-d4(mz104)	(1)	7.391	104	73231	10.040
69)$1,2-Dichloroethane-d4(mz65)	(1)	7.391	65	496053	9.933
72) Benzene	(1)	7.464	78	2813856	10.076
74) 1,2-Dichloroethane	(1)	7.494	62	670901	10.112
73) 1,2-Dichloroethane(mz98)	(1)	7.494	98	67688	10.583
75) t-Amyl Methyl Ether	(1)	7.610	73	1653435	10.283
76) n-Heptane	(1)	7.811	43	1040944M	10.299
77)*Fluorobenzene	(1)	7.836	96	2581730	10.000
81) n-Butanol	(4)	8.238	56	688640	1166.956
83) Trichloroethene	(1)	8.317	95	769078	10.108
84) Methylcyclohexane	(1)	8.561	83	1349209	10.402
85) 1,2-Dichloropropane	(1)	8.616	63	721702	10.300
87) Methyl Methacrylate	(4)	8.768	69	267532	11.474
88) Dibromomethane	(1)	8.768	93	321217	10.237
89) 1,4-Dioxane	(4)	8.793	88	86623	583.429
90) Bromodichloromethane	(1)	8.970	83	827969	10.548
91) 2-Nitropropane	(4)	9.268	41	734270	104.070
94) cis-1,3-Dichloropropene	(1)	9.524	75	958828	10.610
96) 4-Methyl-2-Pentanone	(1)	9.701	43	3431212	107.107
97)$Toluene-d8	(2)	9.829	98	2540401	9.993
98)$Toluene-d8(mz100)	(2)	9.829	100	1674558	10.036
101) Toluene	(2)	9.896	92	1851487	10.143
102) trans-1,3-Dichloropropene	(2)	10.134	75	791453	10.806
103) Ethyl Methacrylate	(2)	10.225	69	579105	11.122
104) 1,1,2-Trichloroethane	(2)	10.329	97	456395	10.362
105) Tetrachloroethene	(2)	10.469	166	894778	10.172
106) 1,3-Dichloropropane	(2)	10.494	76	770526	10.242
107) 2-Hexanone	(2)	10.573	43	2300353	105.556
108) Dibromochloromethane	(2)	10.719	129	552933	10.756
109) 1,2-Dibromoethane	(2)	10.829	107	421362	10.482

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

RRD48 0136

Digitally signed by Jason M. Long
on 10/15/2010 at 13:37.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/10oct15a.b/gc15i02.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 11:31 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 15-OCT-2010 13:36
Date, time and analyst ID of latest file update: 15-Oct-2010 13:36 jml01693

Sample Name: VSTD010 Lab Sample ID: VSTD010

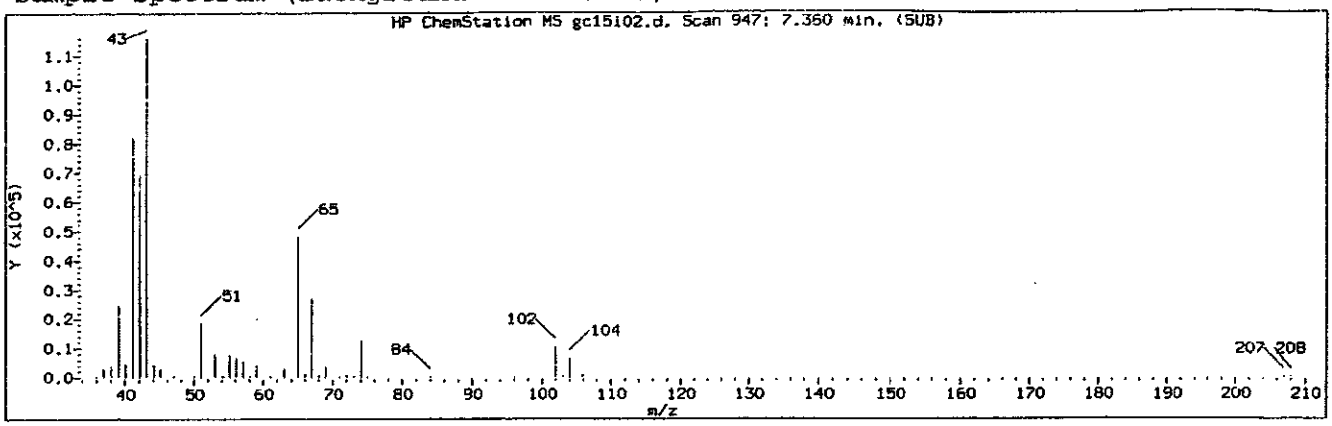
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
110)*Chlorobenzene-d5	(2)	11.250	117	1902183	10.000
112) Chlorobenzene	(2)	11.274	112	2122125	10.150
113) 1,1,1,2-Tetrachloroethane	(2)	11.347	131	738231	10.522
114) Ethylbenzene	(2)	11.365	91	3635404	10.340
117) m+p-Xylene	(2)	11.463	106	2909254	20.735
115) Xylene (Total)	(2)		106	4347120	31.087
118) o-Xylene	(2)	11.804	106	1437866	10.352
119) Styrene	(2)	11.817	104	2259101	10.956
120) Bromoform	(2)	11.981	173	293808	11.194
121) Isopropylbenzene	(2)	12.097	105	3674977	10.295
126)$4-Bromofluorobenzene	(2)	12.231	95	872917	9.992
127)$4-Bromofluorobenzene(mz174)	(2)	12.231	174	802550	10.001
128) 1,1,2,2-Tetrachloroethane	(3)	12.335	83	513608M	10.364
129) Bromobenzene	(3)	12.359	156	890950	10.132
130) trans-1,4-Dichloro-2-Butene	(4)	12.377	53	921367M	101.742
131) 1,2,3-Trichloropropane	(3)	12.377	110	144209	10.475
132) n-Propylbenzene	(3)	12.420	91	4490759	10.357
133) 2-Chlorotoluene	(3)	12.499	126	907687	10.197
134) 1,3,5-Trimethylbenzene	(3)	12.548	105	3135390	10.485
135) 4-Chlorotoluene	(3)	12.579	126	922946	10.147
137) tert-Butylbenzene	(3)	12.798	134	709966M	10.456
138) Pentachloroethane	(3)	12.829	167	570826	10.897
139) 1,2,4-Trimethylbenzene	(3)	12.835	105	3379995	10.628
140) sec-Butylbenzene	(3)	12.957	105	4116074	10.378
141) p-Isopropyltoluene	(3)	13.054	119	3708490	10.534
142) 1,3-Dichlorobenzene	(3)	13.060	146	1908684	10.394
143)*1,4-Dichlorobenzene-d4	(3)	13.103	152	1111048	10.000
144) 1,4-Dichlorobenzene	(3)	13.121	146	1889503	9.952
145) 1,2,3-Trimethylbenzene	(3)	13.146	120	1434857	10.337
146) Benzyl Chloride	(3)	13.219	126	241208	11.487
147) n-Butylbenzene	(3)	13.347	92	1836172	10.520
148) 1,2-Dichlorobenzene	(3)	13.396	146	1636831	10.069
150) 1,2-Dibromo-3-Chloropropane	(4)	13.938	155	66242	9.823
153) 1,2,4-Trichlorobenzene	(3)	14.481	180	1301205	10.147
154) Hexachlorobutadiene	(3)	14.572	225	712785	9.929
155) Naphthalene	(3)	14.657	128	1756623	10.564
156) 1,2,3-Trichlorobenzene	(3)	14.810	180	996760	10.115

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

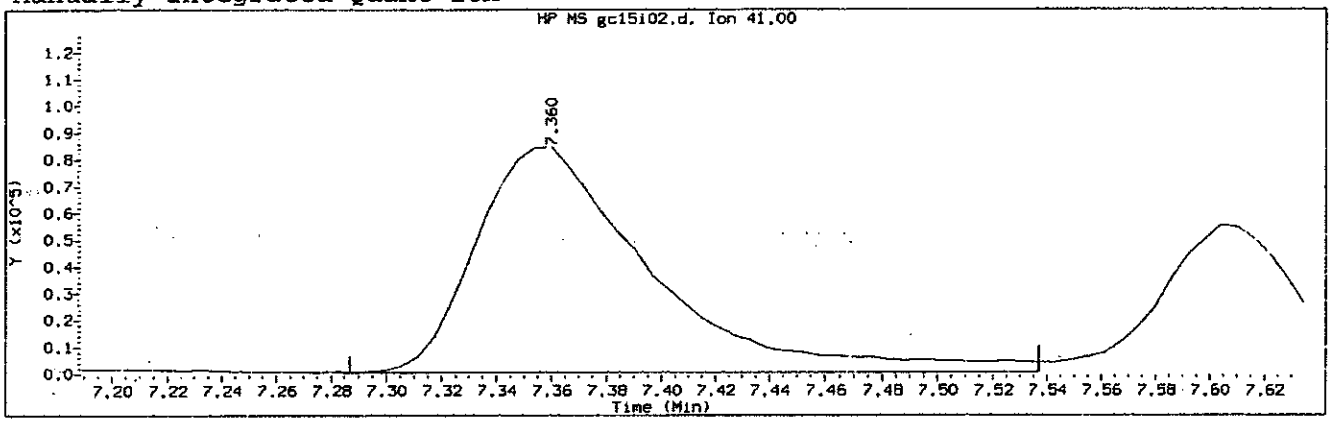
RAD48 8137

Digitally signed by Jason M. Long
on 10/15/2010 at 13:37.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10oct15a.b/gc15i02.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 11:31 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 15-OCT-2010 13:36
Date, time and analyst ID of latest file update: 15-Oct-2010 13:36 jml01693

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number	: 67		
Compound Name	: Isobutyl Alcohol		
Scan Number	: 947		
Retention Time (minutes)	: 7.360		
Quant Ion	: 41.00		
Area (flag)	: 368344M		
On-Column Amount (ng)	: 520.0775		
Integration start scan	: 934	Integration stop scan:	975
Y at integration start	: 607	Y at integration end:	607

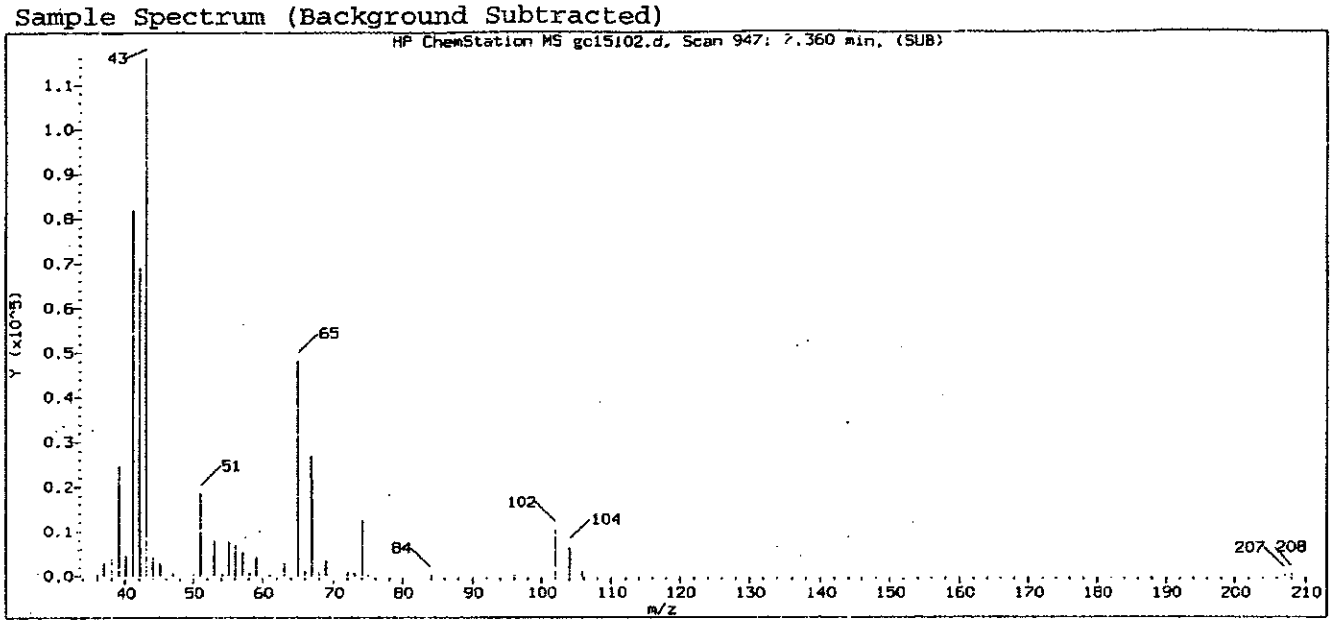
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long
on 10/15/2010 at 13:37.
Target 3.5 esignature user ID: jml01693

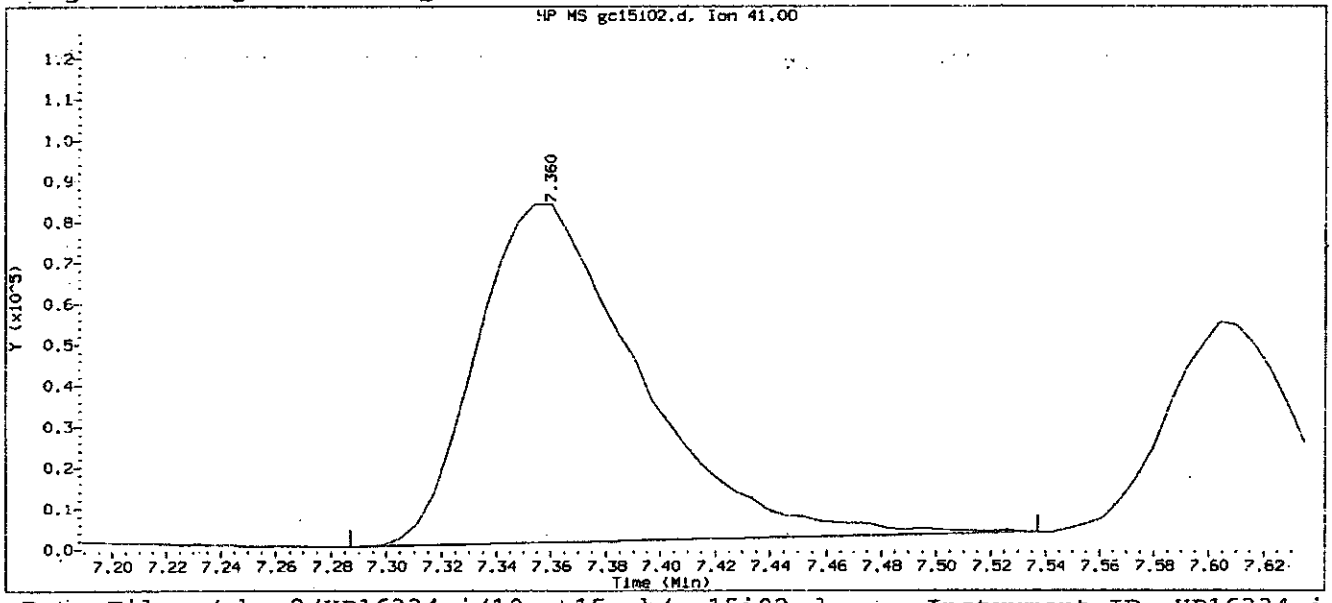
GC/MS audit/management approval: 10/21/10

RAD48 8138

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10oct15a.b/gc15i02.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 11:31 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 15-OCT-2010 11:49
Date, time and analyst ID of latest file update: 15-Oct-2010 11:49 Automation

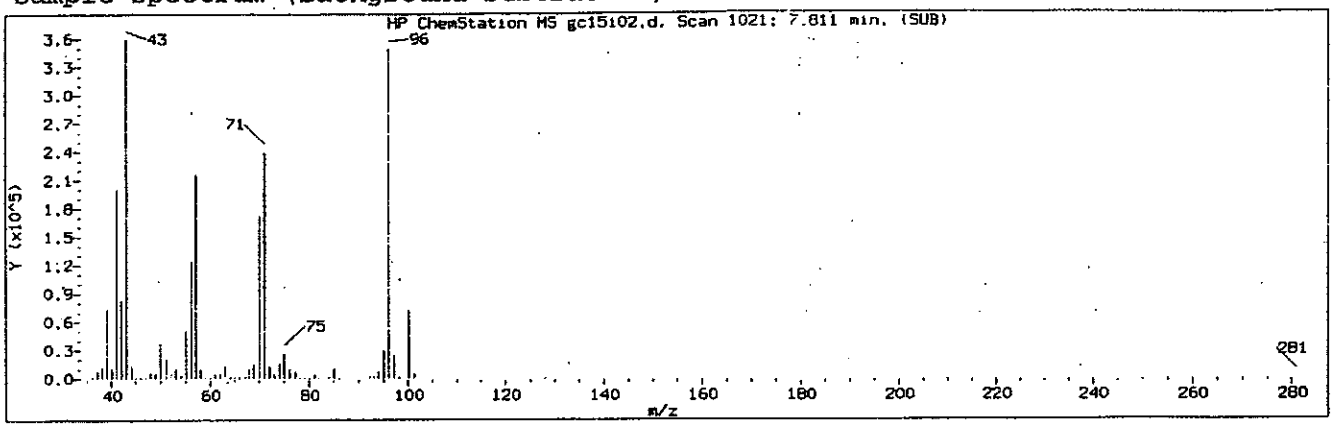
Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number	: 67		
Compound Name	: Isobutyl Alcohol		
Scan Number	: 947		
Retention Time (minutes)	: 7.360		
Quant Ion	: 41.00		
Area	: 340490		
On-column Amount (ng)	: 478.2267		
Integration start scan	: 934	Integration stop scan:	975
Y at integration start	: 618	Y at integration end:	4222

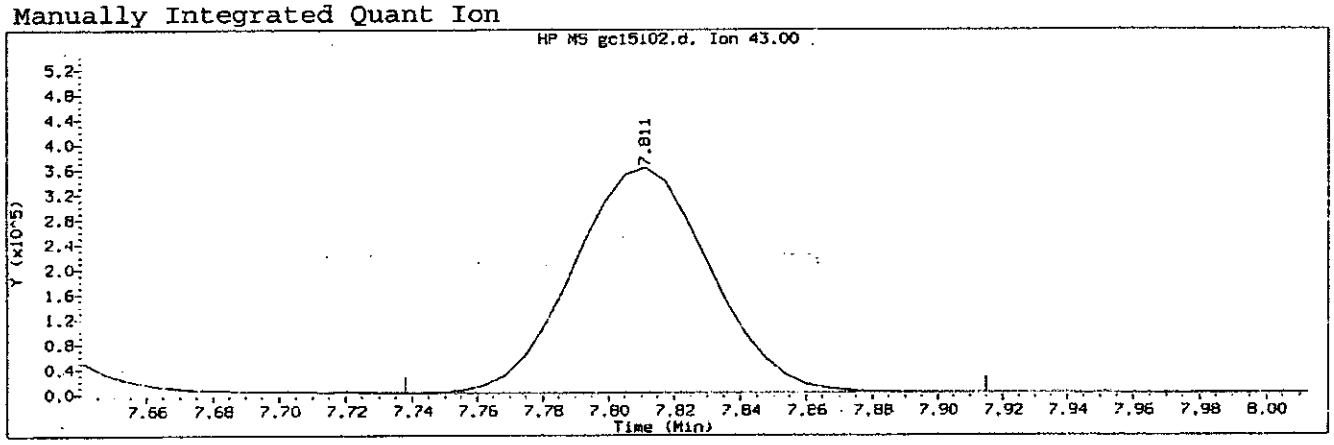
RAD40 0139

Digitally signed by Jason M. Long on 10/15/2010 at 13:37.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10oct15a.b/gc15i02.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 11:31 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 15-OCT-2010 13:36
Date, time and analyst ID of latest file update: 15-Oct-2010 13:36 jml01693

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number : 76
Compound Name : n-Heptane
Scan Number : 1021
Retention Time (minutes): 7.811
Quant Ion : 43.00
Area (flag) : 1040944M
On-Column Amount (ng) : 10.2989
Integration start scan : 1008 Integration stop scan: 1037
Y at integration start : 1687 Y at integration end: 1687

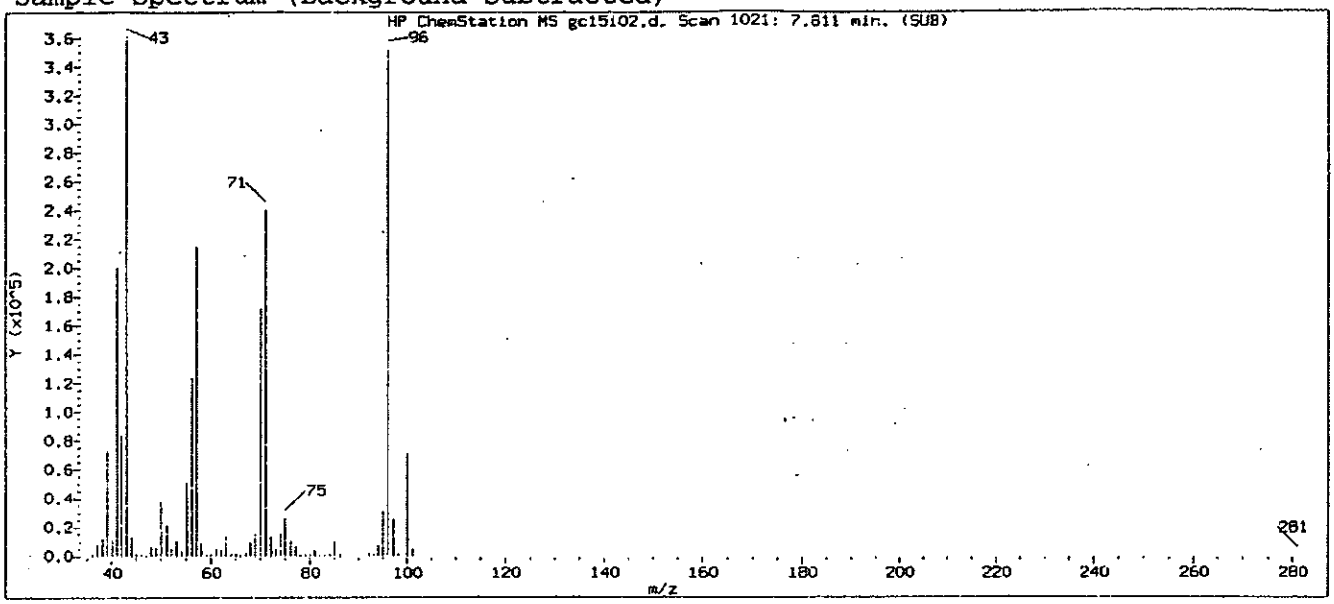
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long on 10/15/2010 at 13:37. Target 3.5 esignature user ID: jml01693

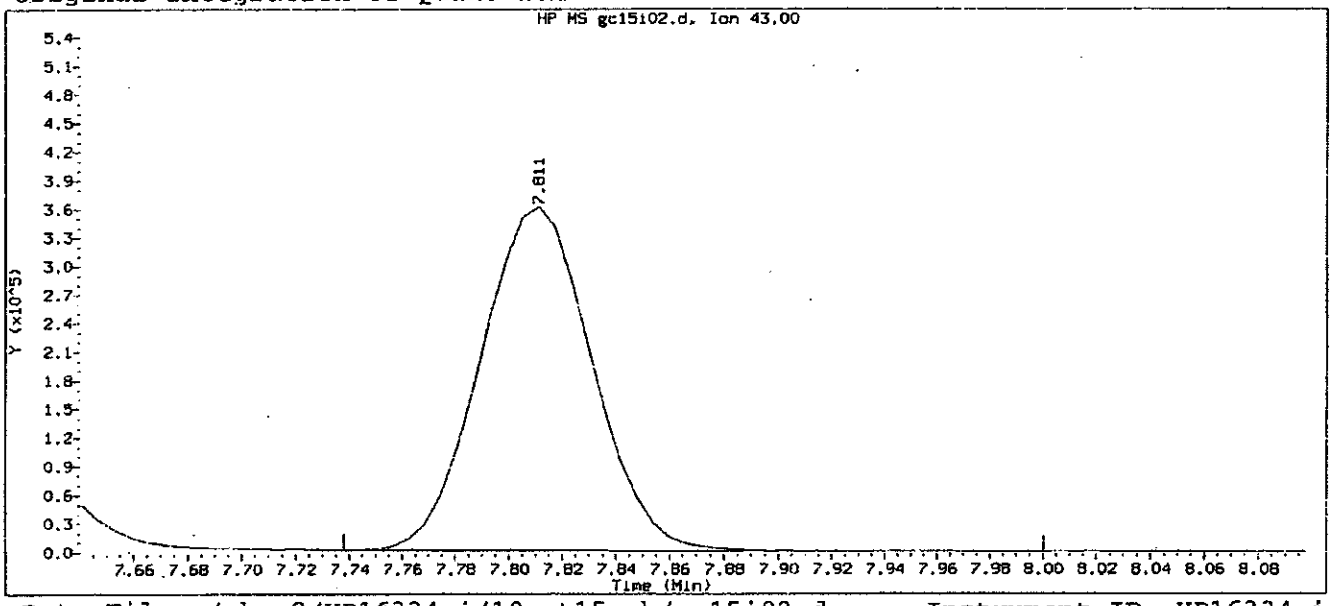
GC/MS audit/management approval: 10/21/10

RAD48 0148

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10oct15a.b/gc15i02.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 11:31 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 15-OCT-2010 11:49
Date, time and analyst ID of latest file update: 15-Oct-2010 11:49 Automation

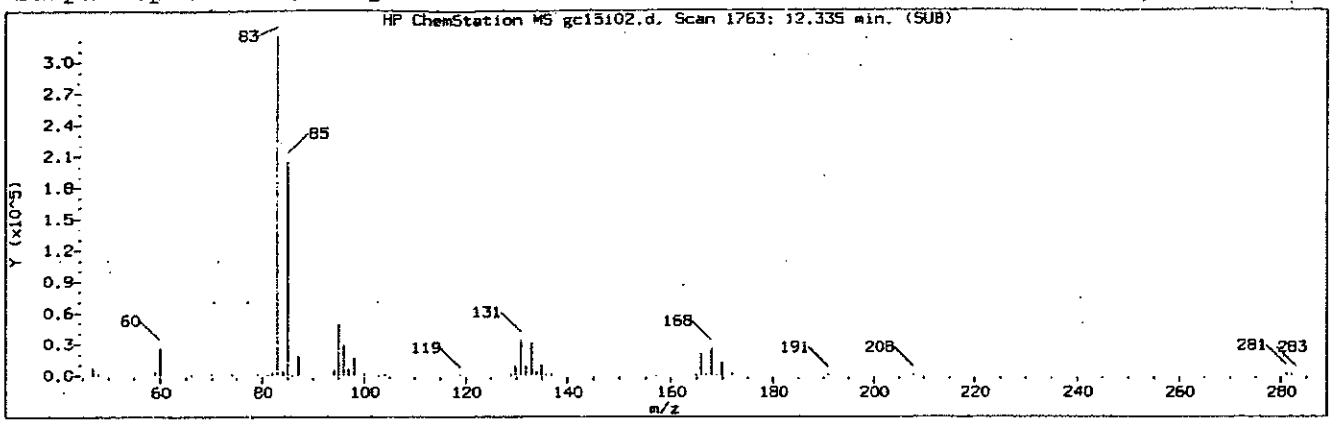
Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number	: 76		
Compound Name	: n-Heptane		
Scan Number	: 1021		
Retention Time (minutes)	: 7.811		
Quant Ion	: 43.00		
Area	: 1037646		
On-column Amount (ng)	: 10.0331		
Integration start scan	: 1008	Integration stop scan:	1051
Y at integration start	: 2864	Y at integration end:	609

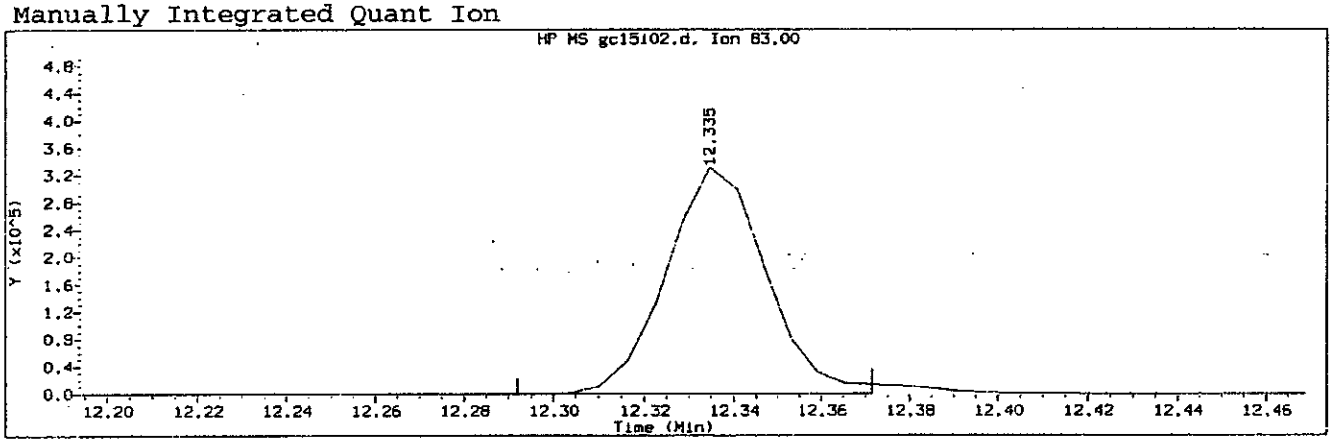
RAD48 6141

Digitally signed by Jason M. Long on 10/15/2010 at 13:37.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10oct15a.b/gc15i02.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 11:31 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 15-OCT-2010 13:36
Date, time and analyst ID of latest file update: 15-Oct-2010 13:36 jml01693

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number : 128
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1763
Retention Time (minutes): 12.335
Quant Ion : 83.00
Area (flag) : 513608M
On-Column Amount (ng) : 10.3636
Integration start scan : 1755 Integration stop scan: 1768
Y at integration start : 0 Y at integration end: 0

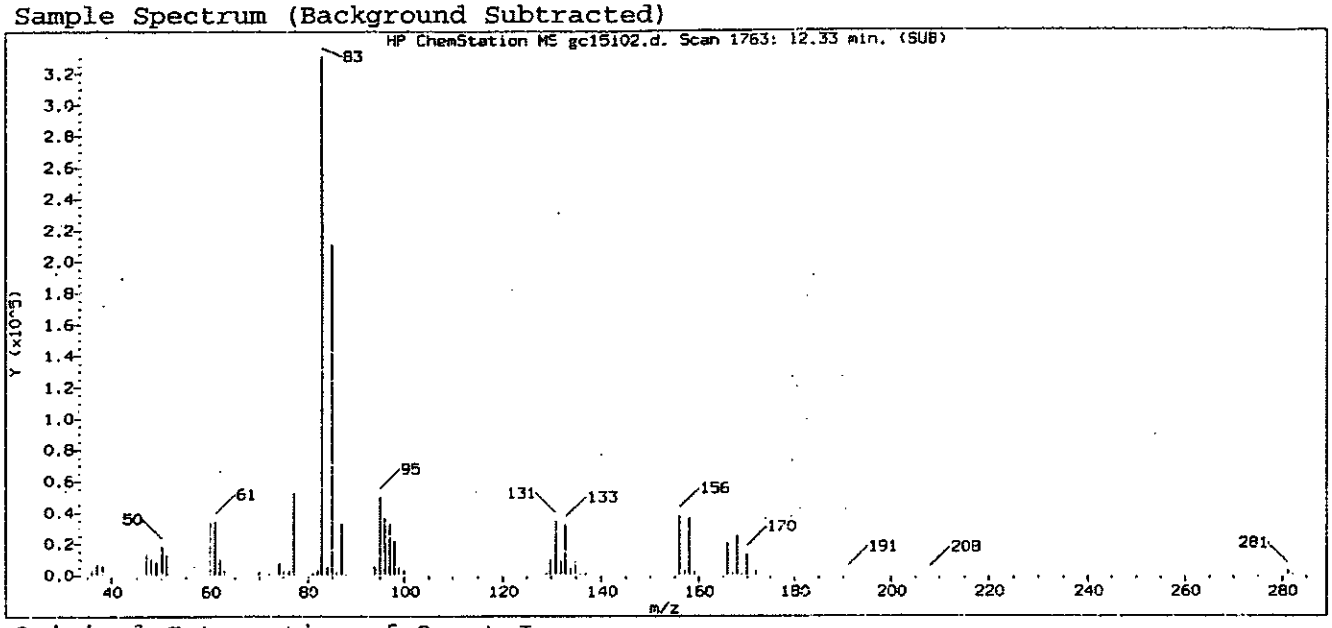
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long
on 10/15/2010 at 13:37.
Target 3.5 esignature user ID: jml01693

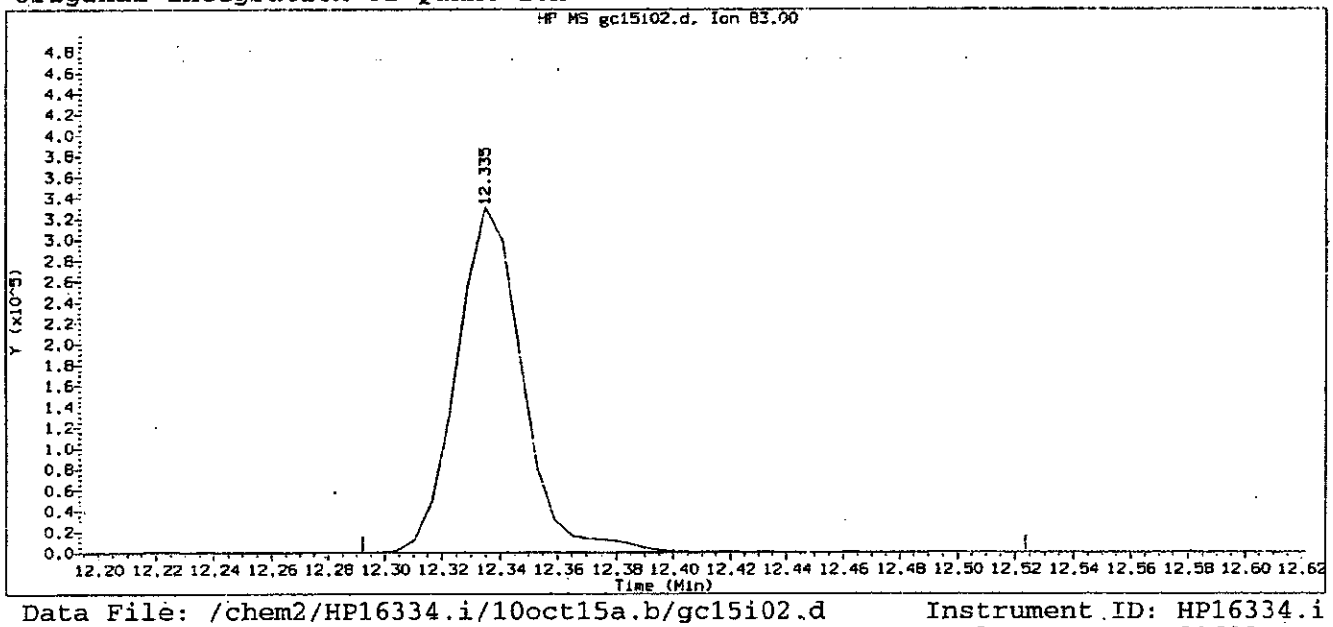
GC/MS audit/management approval: 10/21/10

RAD48 0142

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10oct15a.b/gc15i02.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 11:31 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 15-OCT-2010 11:49
Date, time and analyst ID of latest file update: 15-Oct-2010 11:49 Automation

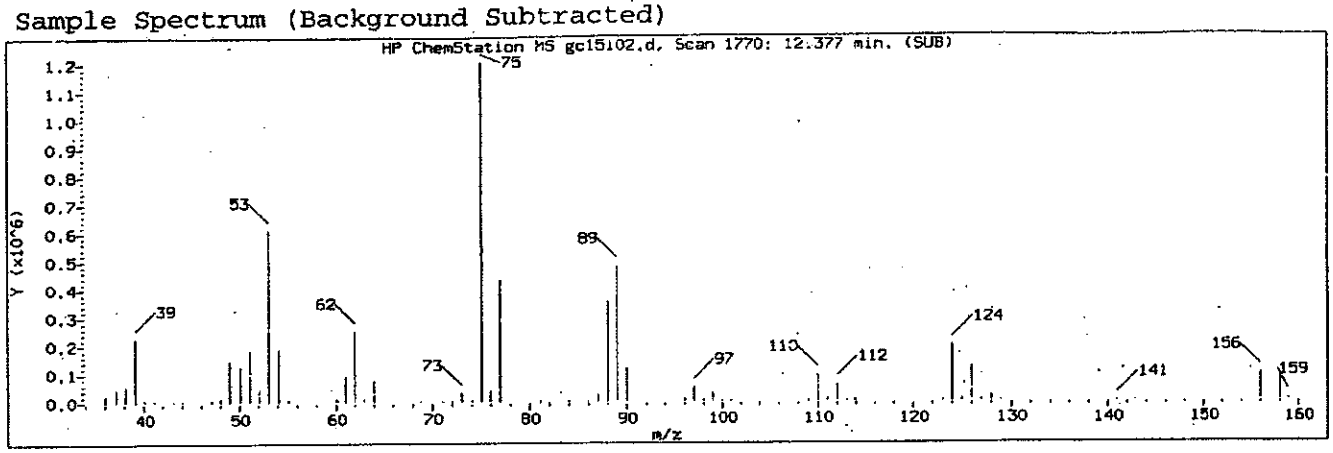
Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number : 128
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1763
Retention Time (minutes): 12.335
Quant Ion : 83.00
Area : 525453
On-column Amount (ng) : 10.0863
Integration start scan : 1755 Integration stop scan: 1793
Y at integration start : 0 Y at integration end: 0

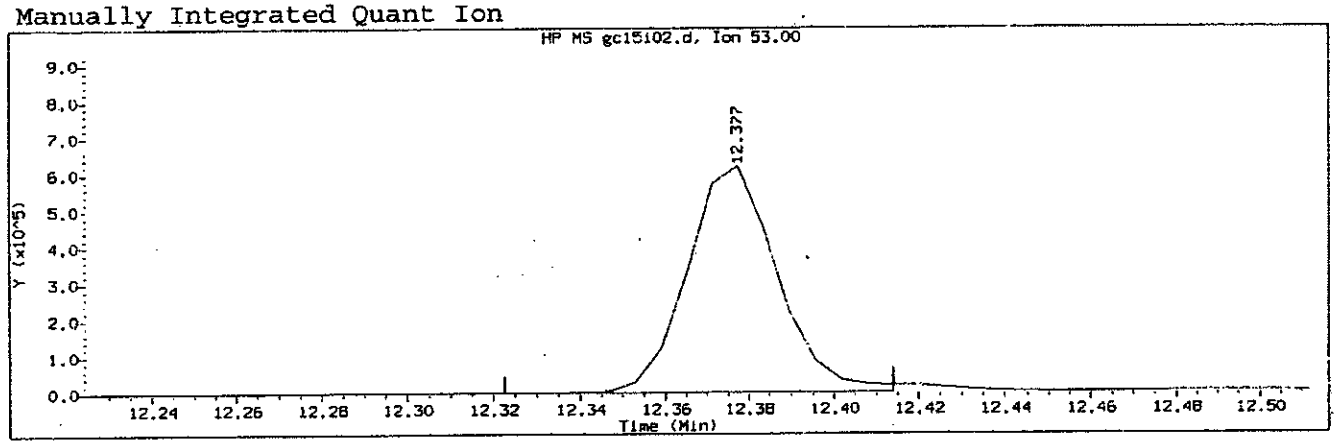
RAD48 8143

Digitally signed by Jason M. Long on 10/15/2010 at 13:37.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10oct15a.b/gc15i02.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 11:31 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 15-OCT-2010 13:36
Date, time and analyst ID of latest file update: 15-Oct-2010 13:36 jml01693

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number	: 130		
Compound Name	: trans-1,4-Dichloro-2-Butene		
Scan Number	: 1770		
Retention Time (minutes)	: 12.377		
Quant Ion	: 53.00		
Area (flag)	: 921367M		
On-Column Amount (ng)	: 101.7421		
Integration start scan	: 1760	Integration stop scan:	1775
Y at integration start	: 0	Y at integration end:	0

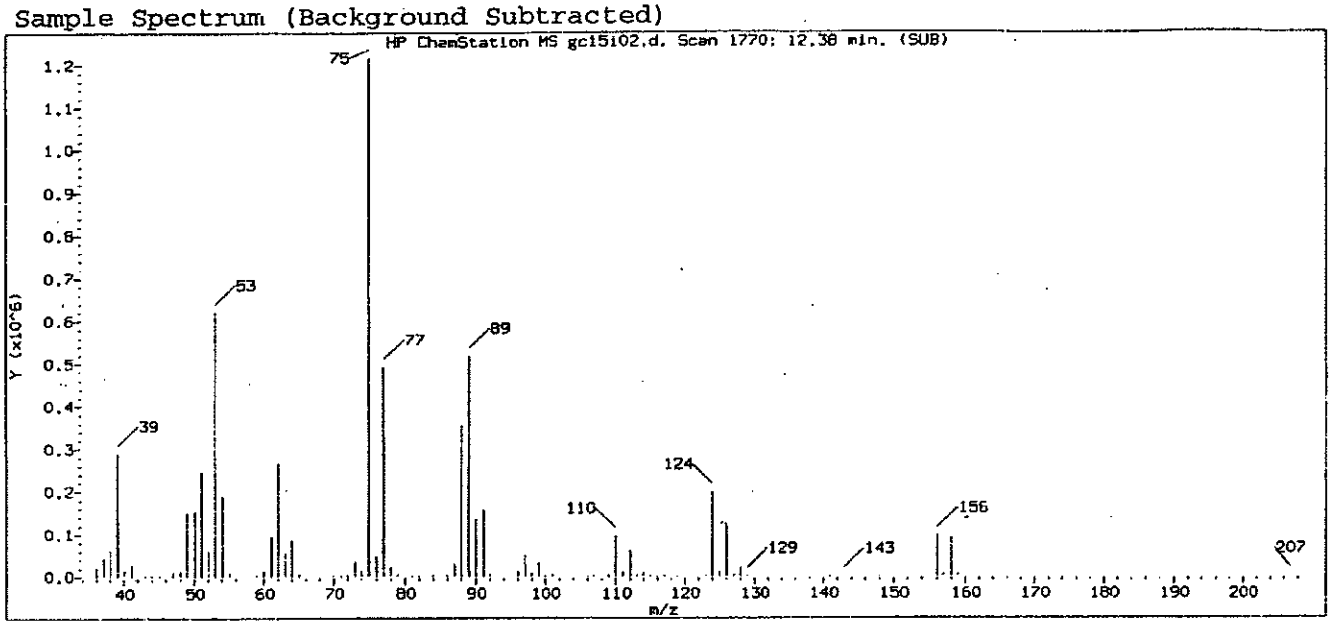
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long on 10/15/2010 at 13:37. Target 3.5 esignature user ID: jml01693

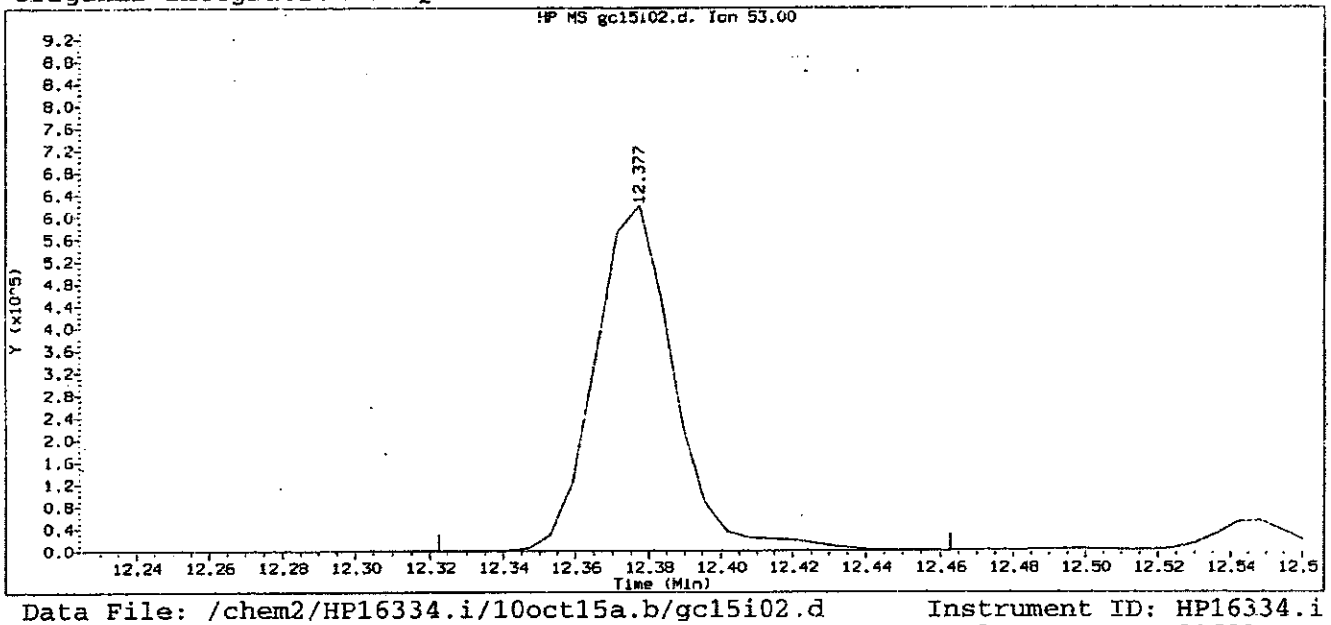
GC/MS audit/management approval: _____ 10/21/10

RAD48 0144

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10oct15a.b/gc15i02.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 11:31 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 15-OCT-2010 11:49
Date, time and analyst ID of latest file update: 15-Oct-2010 11:49 Automation

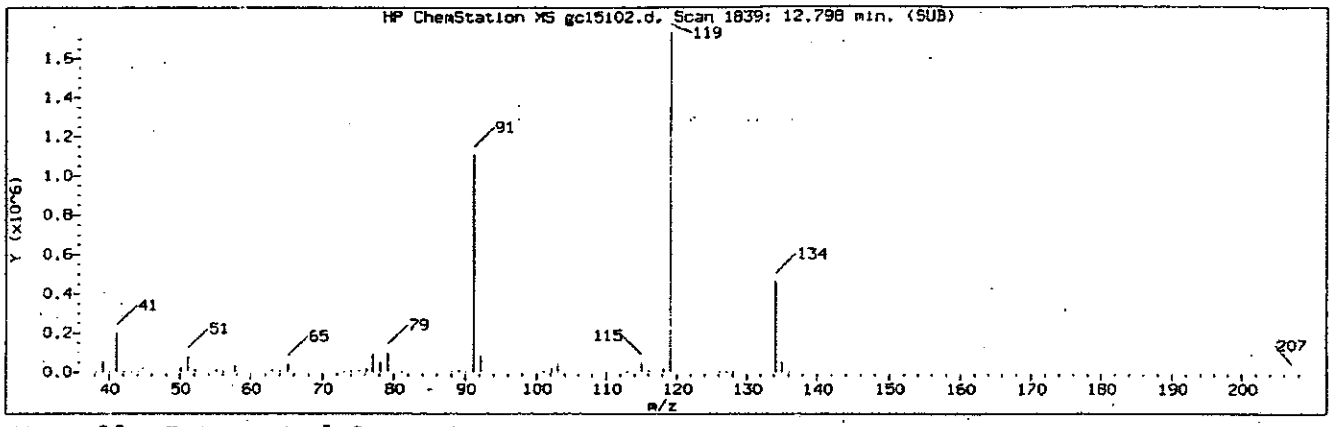
Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number : 130
Compound Name : trans-1,4-Dichloro-2-Butene
Scan Number : 1770
Retention Time (minutes): 12.377
Quant Ion : 53.00
Area : 939648
On-column Amount (ng) : 94.6249
Integration start scan : 1760 Integration stop scan: 1783
Y at integration start : 0 Y at integration end: 0

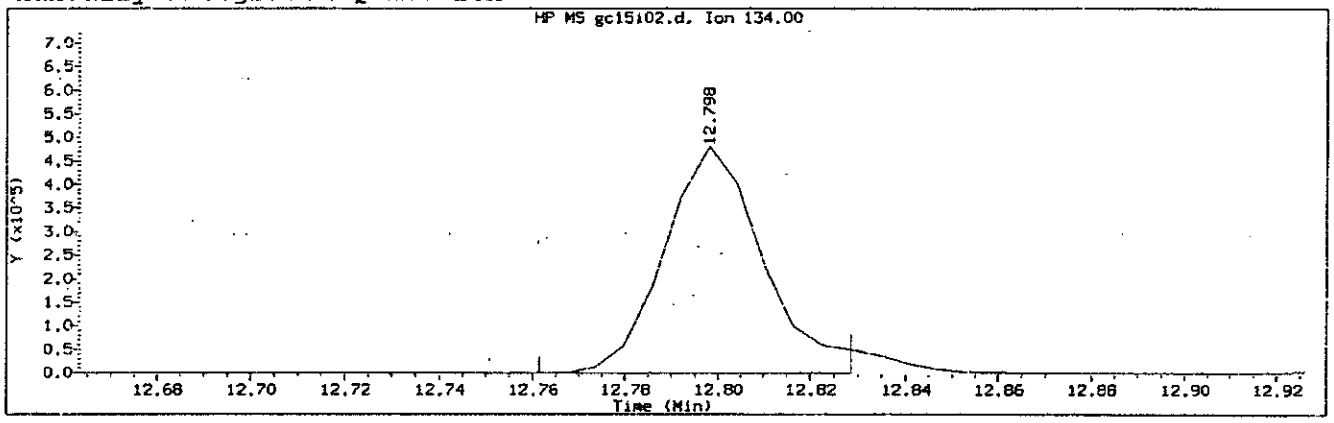
RAD48 8145

Digitally signed by Jason M. Long on 10/15/2010 at 13:37.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10oct15a.b/gc15i02.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 11:31 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 15-OCT-2010 13:36
Date, time and analyst ID of latest file update: 15-Oct-2010 13:36 jml01693

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number : 137
Compound Name : tert-Butylbenzene
Scan Number : 1839
Retention Time (minutes): 12.798
Quant Ion : 134.00
Area (flag) : 709966M
On-Column Amount (ng) : 10.4564
Integration start scan : 1832 Integration stop scan: 1843
Y at integration start : 0 Y at integration end: 0

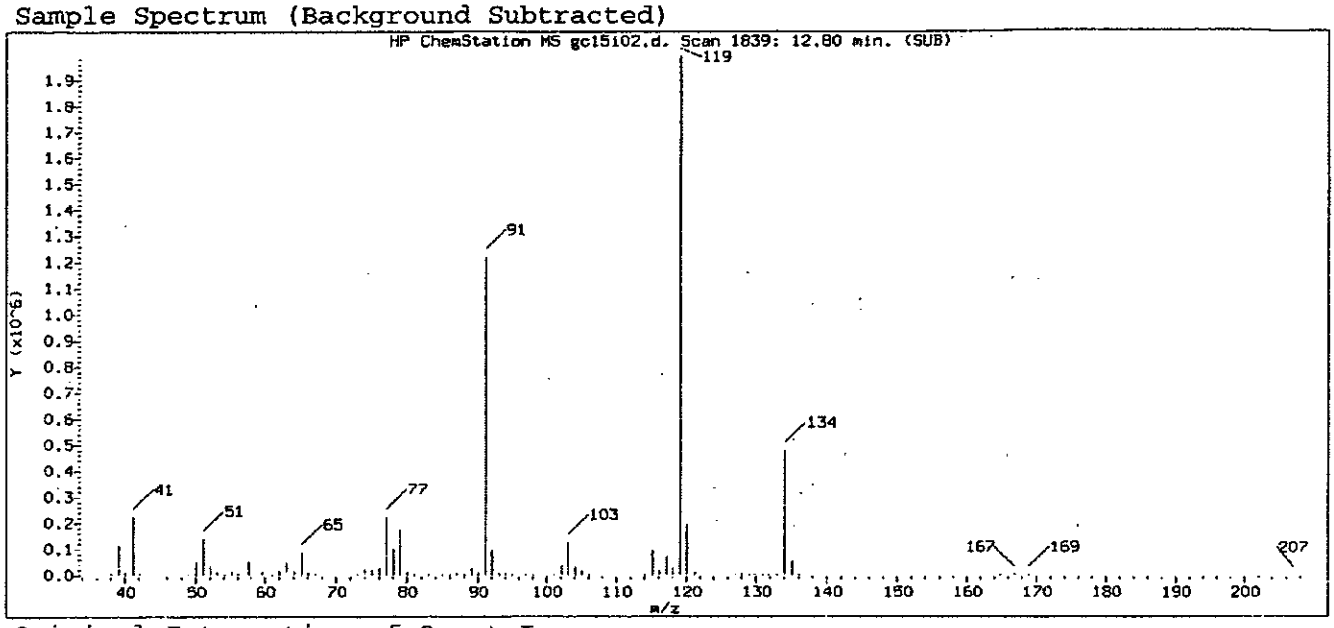
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long
on 10/15/2010 at 13:37.
Target 3.5 esignature user ID: jml01693

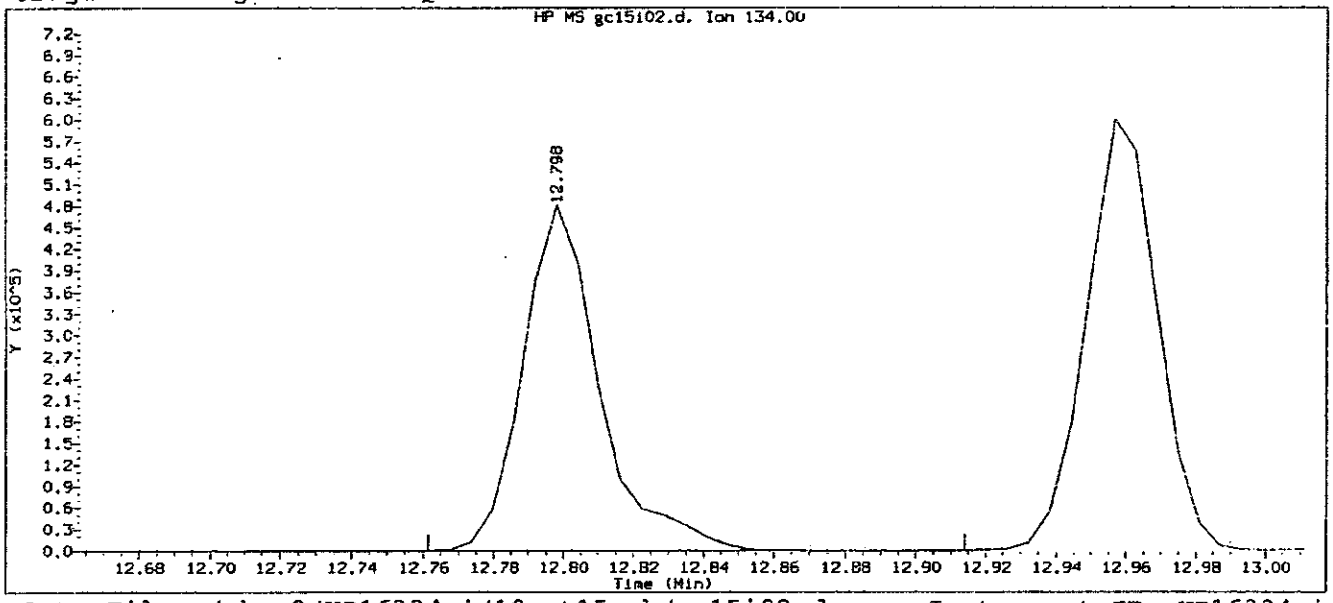
GC/MS audit/management approval: _____ 10/21/10

RAD48 8146

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10oct15a.b/gc15i02.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 11:31 Analyst ID: JML01693

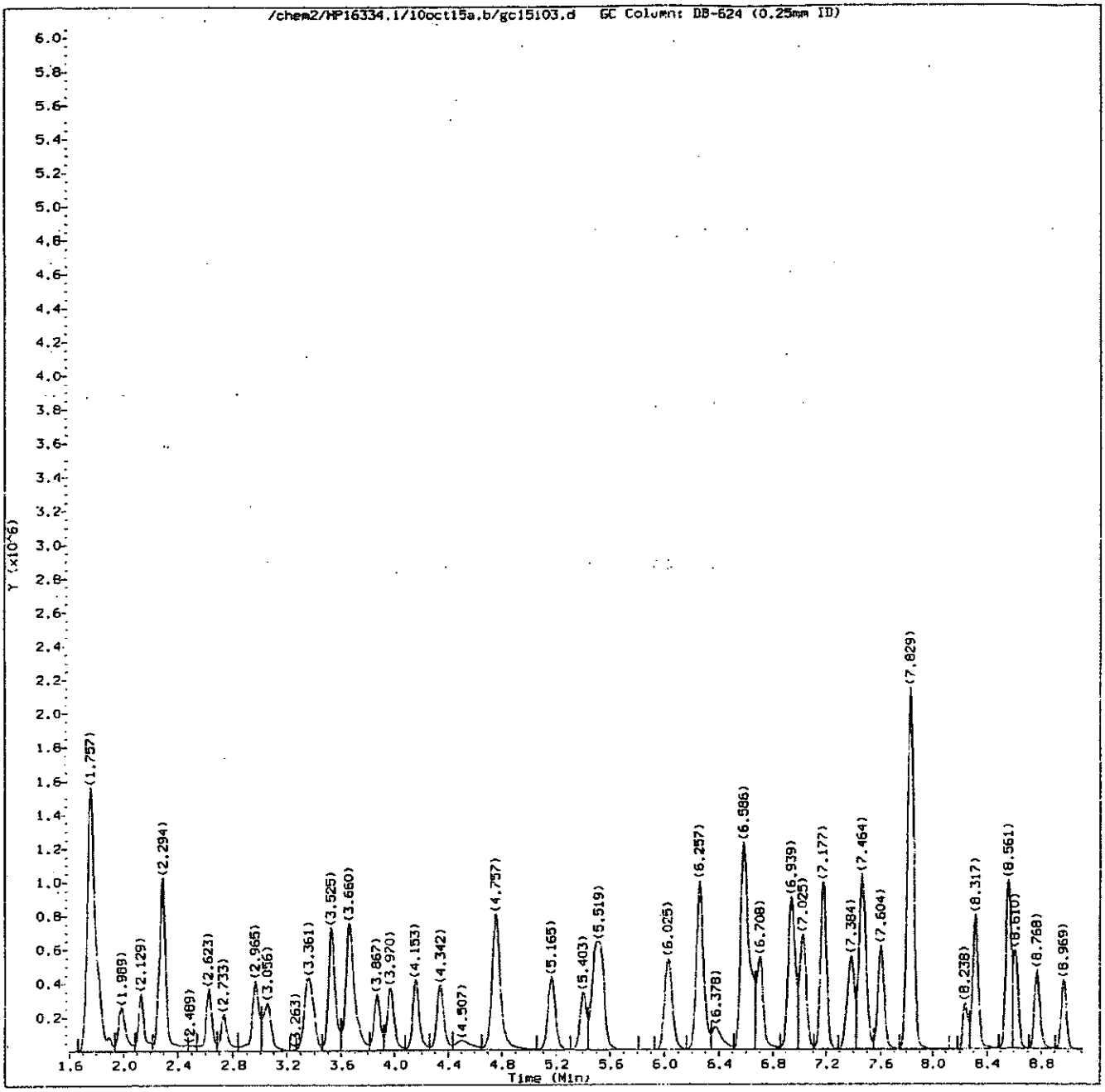
Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 15-OCT-2010 11:49
Date, time and analyst ID of latest file update: 15-Oct-2010 11:49 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number	: 137		
Compound Name	: tert-Butylbenzene		
Scan Number	: 1839		
Retention Time (minutes)	: 12.798		
Quant Ion	: 134.00		
Area	: 734795		
On-column Amount (ng)	: 9.9322		
Integration start scan	: 1832	Integration stop scan:	1857
Y at integration start	: 0	Y at integration end:	0

RAD40 8147

Digitally signed by Jason M. Long on 10/15/2010 at 13:37.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

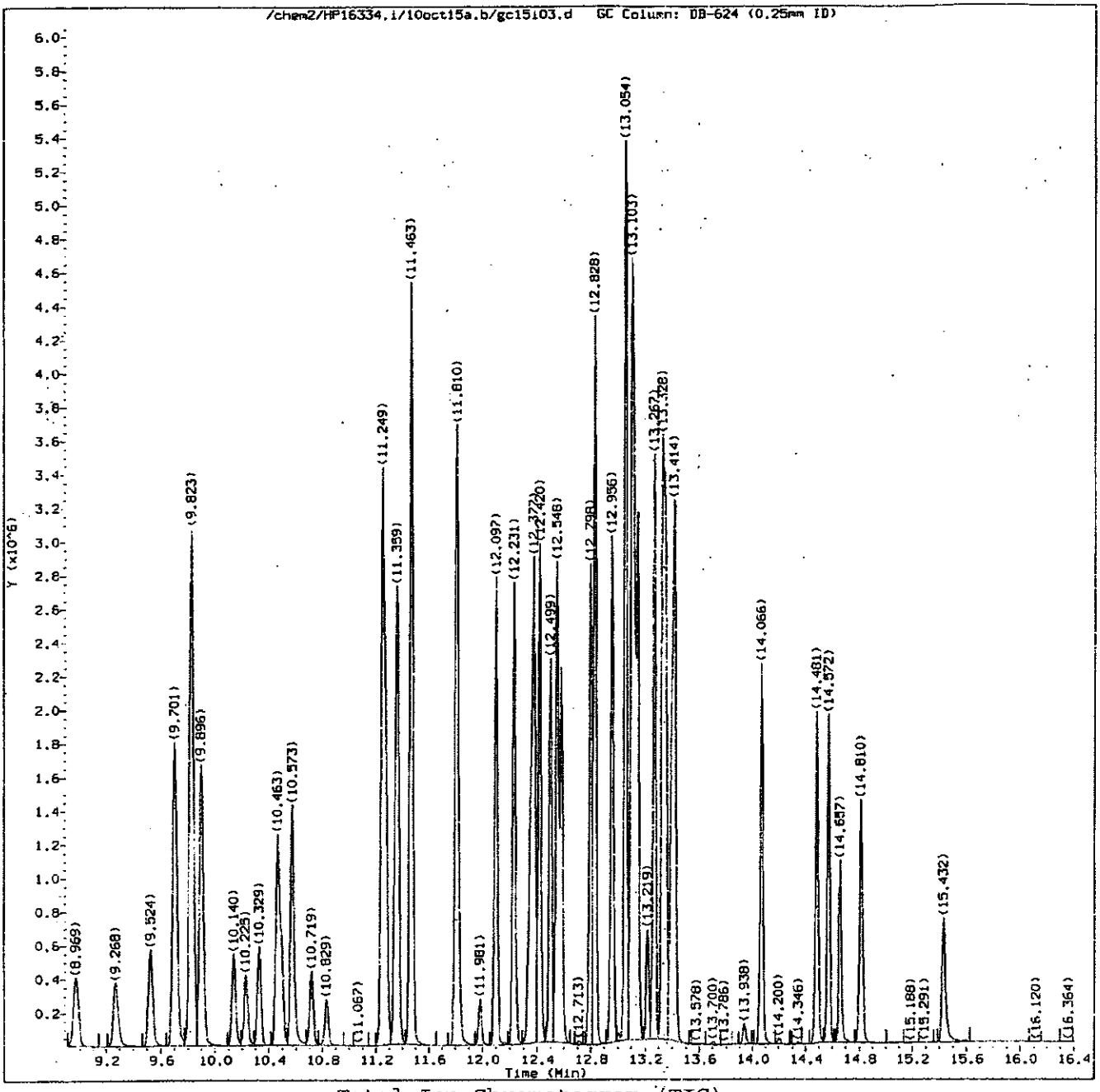
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Injection date and time: 15-OCT-2010 11:53 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 15-OCT-2010 13:36
Date, time and analyst ID of latest file update: 15-Oct-2010 13:36 jml01693

Sample Name: VSTD005 Lab Sample ID: VSTD005

RAD48 8148

Digitally signed by Jason M. Long
on 10/15/2010 at 13:37.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/10oct15a.b/gc15i03.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 11:53 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 15-OCT-2010 13:36
Date, time and analyst ID of latest file update: 15-Oct-2010 13:36 jml01693

Sample Name: VSTD005 Lab Sample ID: VSTD005

RAD46 8149

Digitally signed by Jason M. Long
on 10/15/2010 at 13:37.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/10oct15a.b/gc15i03.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 11:53 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 15-OCT-2010 13:36
Date, time and analyst ID of latest file update: 15-Oct-2010 13:36 jml01693

Sample Name: VSTD005 Lab Sample ID: VSTD005

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
2) Dichlorodifluoromethane	(1)	1.989	85	541019	4.588
5) Chloromethane	(1)	2.129	50	482579	4.691
6) Vinyl Chloride	(1)	2.263	62	472628	4.718
9) 1,3-Butadiene	(1)	2.294	39	574491	4.748
10) Bromomethane	(1)	2.629	94	347295	4.746
11) Chloroethane	(1)	2.733	64	267699	4.721
13) Dichlorofluoromethane	(1)	2.958	67	599566	4.786
15) Trichlorofluoromethane	(1)	3.056	101	572806	4.623
17) Ethyl Ether	(1)	3.342	59	232010	5.018
18) Freon 123a	(1)	3.373	67	368178	4.723
23) Acrolein	(4)	3.525	56	1332703	244.815
24) 1,1-Dichloroethene	(1)	3.653	96	302038	4.717
25) Freon 113	(1)	3.678	101	307473	4.639
26) Acetone	(4)	3.733	58	114452	48.901
27) Methyl Iodide	(1)	3.873	142	610186	4.860
29) Carbon Disulfide	(1)	3.970	76	895395	4.810
32) Allyl Chloride	(1)	4.153	41	476061	5.024
33) Methyl Acetate	(1)	4.196	43	89158	4.969
34) Methylene Chloride	(1)	4.336	84	335262	4.716
36)*t-Butyl Alcohol-d10	(4)	4.391	65	96874	50.000
38) t-Butyl Alcohol	(4)	4.507	59	216746	95.933
39) Acrylonitrile	(4)	4.745	53	230398	25.429
40) Methyl Tertiary Butyl Ether	(1)	4.757	73	698923	4.836
41) trans-1,2-Dichloroethene	(1)	4.763	96	354101	4.822
37) 1,2-Dichloroethene (Total)	(1)		96	738425	9.678
44) n-Hexane	(1)	5.165	57	453127	4.662
45) 1,1-Dichloroethane	(1)	5.403	63	592916	4.807
47) di-Isopropyl Ether	(1)	5.495	45	1042987	4.925
48) 2-Chloro-1,3-Butadiene	(1)	5.537	53	451313	4.895
49) Ethyl t-Butyl Ether	(1)	6.025	59	931618	4.914
51) 2,2-Dichloropropane	(1)	6.257	77	480258	4.889
50) cis-1,2-Dichloroethene	(1)	6.257	96	384324	4.856
52) 2-Butanone	(4)	6.275	43	587073	48.624
53) Propionitrile	(4)	6.378	54	318190	97.934
55) Methacrylonitrile	(4)	6.580	67	684192	48.973
56) Bromochloromethane	(1)	6.592	128	165874	5.000
57) Tetrahydrofuran	(4)	6.647	71	190269	48.687
58) Chloroform	(1)	6.708	83	602646	4.863

* = Compound is an internal standard.

RAD40 0158

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on 10/15/2010 at 13:37.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/10oct15a.b/gc15i03.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 11:53 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 15-OCT-2010 13:36
Date, time and analyst ID of latest file update: 15-Oct-2010 13:36 jml01693

Sample Name: VSTD005 Lab Sample ID: VSTD005

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
62)$Dibromofluoromethane(mz111)	(1)	6.927	111	599165	10.034
61)$Dibromofluoromethane	(1)	6.933	113	587645	10.024
63) 1,1,1-Trichloroethane	(1)	6.958	97	524599	4.894
64) Cyclohexane	(1)	7.025	56	552948	4.677
65) 1,1-Dichloropropene	(1)	7.183	75	461870	4.812
66) Carbon Tetrachloride	(1)	7.183	117	451582	4.871
67) Isobutyl Alcohol	(4)	7.354	41	173309	237.588
70)$1,2-Dichloroethane-d4	(1)	7.384	102	113425	9.744
69)$1,2-Dichloroethane-d4(mz65)	(1)	7.390	65	500666	9.910
68)$1,2-Dichloroethane-d4(mz104)	(1)	7.390	104	73745	9.994
72) Benzene	(1)	7.464	78	1367533	4.840
74) 1,2-Dichloroethane	(1)	7.488	62	325180	4.845
73) 1,2-Dichloroethane(mz98)	(1)	7.488	98	31824	4.918
75) t-Amyl Methyl Ether	(1)	7.604	73	800861	4.923
76) n-Heptane	(1)	7.811	43	467953M	4.576
77)*Fluorobenzene	(1)	7.836	96	2611927	10.000
81) n-Butanol	(4)	8.238	56	317364	522.166
83) Trichloroethene	(1)	8.317	95	375507	4.878
84) Methylcyclohexane	(1)	8.561	83	629222	4.795
85) 1,2-Dichloropropane	(1)	8.610	63	349766	4.934
87) Methyl Methacrylate	(4)	8.768	69	121846	5.074
88) Dibromomethane	(1)	8.768	93	154649	4.871
89) 1,4-Dioxane	(4)	8.793	88	37662	246.290
90) Bromodichloromethane	(1)	8.969	83	392790	4.946
91) 2-Nitropropane	(4)	9.268	41	345063	47.485
94) cis-1,3-Dichloropropene	(1)	9.524	75	454944	4.976
96) 4-Methyl-2-Pentanone	(1)	9.701	43	1599318M	49.346
97)$Toluene-d8	(2)	9.823	98	2579626	9.958
98)$Toluene-d8(mz100)	(2)	9.823	100	1694286	9.965
101) Toluene	(2)	9.896	92	896090	4.818
102) trans-1,3-Dichloropropene	(2)	10.140	75	371472	4.978
103) Ethyl Methacrylate	(2)	10.225	69	267560	5.043
104) 1,1,2-Trichloroethane	(2)	10.329	97	219410	4.889
105) Tetrachloroethene	(2)	10.463	166	428864	4.784
106) 1,3-Dichloropropane	(2)	10.494	76	369856	4.824
107) 2-Hexanone	(2)	10.573	43	1093906	49.261
108) Dibromochloromethane	(2)	10.719	129	255885	4.885
109) 1,2-Dibromoethane	(2)	10.829	107	199415	4.868

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 10/15/2010 at 13:37.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/10oct15a.b/gc15i03.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 11:53 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 15-OCT-2010 13:36
Date, time and analyst ID of latest file update: 15-Oct-2010 13:36 jml01693

Sample Name: VSTD005 Lab Sample ID: VSTD005

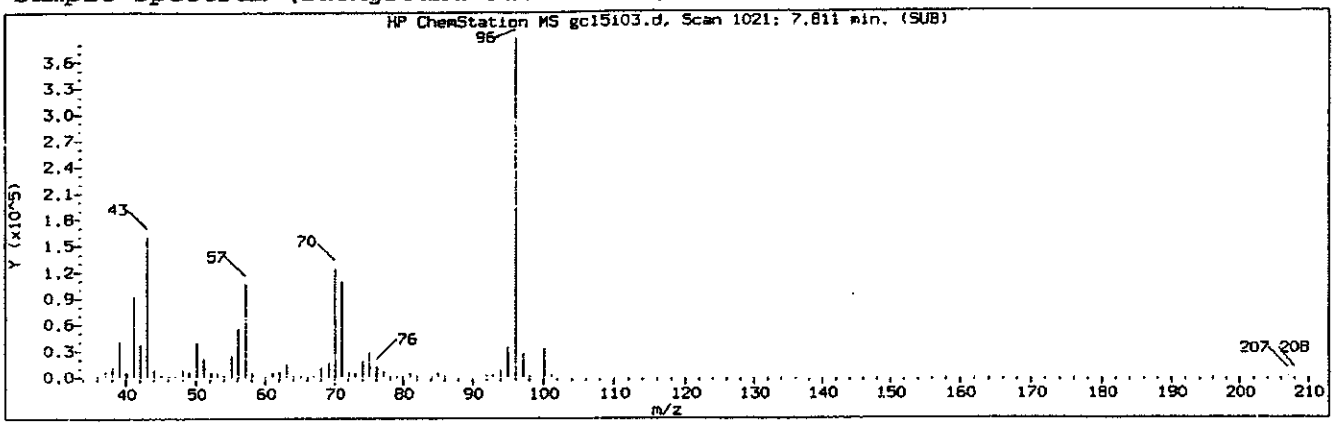
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
110) *Chlorobenzene-d5	(2)	11.249	117	1938302	10.000
112) Chlorobenzene	(2)	11.274	112	1027337	4.822
113) 1,1,1,2-Tetrachloroethane	(2)	11.347	131	349239	4.885
114) Ethylbenzene	(2)	11.365	91	1736460	4.847
117) m+p-Xylene	(2)	11.463	106	1379963	9.652
115) Xylene (Total)	(2)		106	2069808	14.526
118) o-Xylene	(2)	11.804	106	689845	4.874
119) Styrene	(2)	11.816	104	1045756	4.977
120) Bromoform	(2)	11.981	173	132387	4.950
121) Isopropylbenzene	(2)	12.097	105	1763163	4.847
126) $4-Bromofluorobenzene	(2)	12.231	95	880468	9.890
127) $4-Bromofluorobenzene(mz174)	(2)	12.231	174	813090	9.944
128) 1,1,2,2-Tetrachloroethane	(3)	12.335	83	244927M	4.883
129) Bromobenzene	(3)	12.359	156	431010	4.842
130) trans-1,4-Dichloro-2-Butene	(4)	12.377	53	406609M	46.946
131) 1,2,3-Trichloropropane	(3)	12.377	110	69248	4.969
132) n-Propylbenzene	(3)	12.420	91	2150757	4.901
133) 2-Chlorotoluene	(3)	12.499	126	439801	4.881
134) 1,3,5-Trimethylbenzene	(3)	12.548	105	1489904	4.923
135) 4-Chlorotoluene	(3)	12.578	126	443790	4.820
137) tert-Butylbenzene	(3)	12.798	134	335410M	4.880
138) Pentachloroethane	(3)	12.828	167	272088	5.132
139) 1,2,4-Trimethylbenzene	(3)	12.835	105	1598705	4.966
140) sec-Butylbenzene	(3)	12.956	105	1970250	4.908
141) p-Isopropyltoluene	(3)	13.054	119	1752716	4.918
142) 1,3-Dichlorobenzene	(3)	13.060	146	910233	4.897
143) *1,4-Dichlorobenzene-d4	(3)	13.103	152	1124588	10.000
144) 1,4-Dichlorobenzene	(3)	13.121	146	925856	4.818
145) 1,2,3-Trimethylbenzene	(3)	13.145	120	705243	5.019
146) Benzyl Chloride	(3)	13.219	126	109301	5.143
147) n-Butylbenzene	(3)	13.347	92	868060	4.914
148) 1,2-Dichlorobenzene	(3)	13.395	146	797550	4.847
150) 1,2-Dibromo-3-Chloropropane	(4)	13.938	155	30086	4.561
153) 1,2,4-Trichlorobenzene	(3)	14.487	180	632026	4.869
154) Hexachlorobutadiene	(3)	14.572	225	345141	4.750
155) Naphthalene	(3)	14.657	128	828037	4.920
156) 1,2,3-Trichlorobenzene	(3)	14.810	180	479957	4.812

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

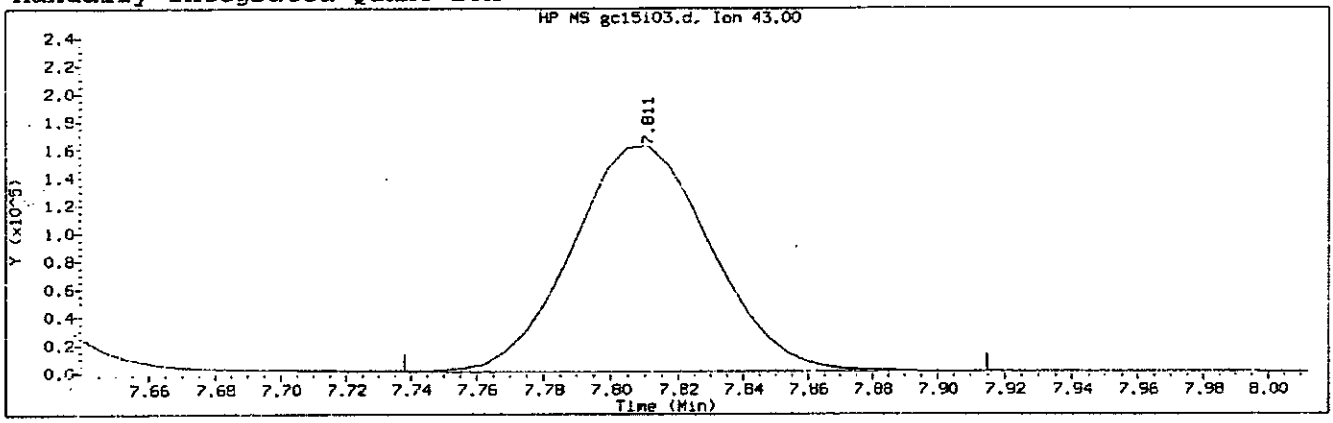
RAD40 0152

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on 10/15/2010 at 13:37.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10oct15a.b/gc15i03.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 11:53 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 15-OCT-2010 13:36
Date, time and analyst ID of latest file update: 15-Oct-2010 13:36 jml01693

Sample Name: VSTD005 Lab Sample ID: VSTD005

Compound Number	: 76		
Compound Name	: n-Heptane		
Scan Number	: 1021		
Retention Time (minutes)	: 7.811		
Quant Ion	: 43.00		
Area (flag)	: 467953M		
On-Column Amount (ng)	: 4.5763		
Integration start scan	: 1008	Integration stop scan:	1037
Y at integration start	: 953	Y at integration end:	953

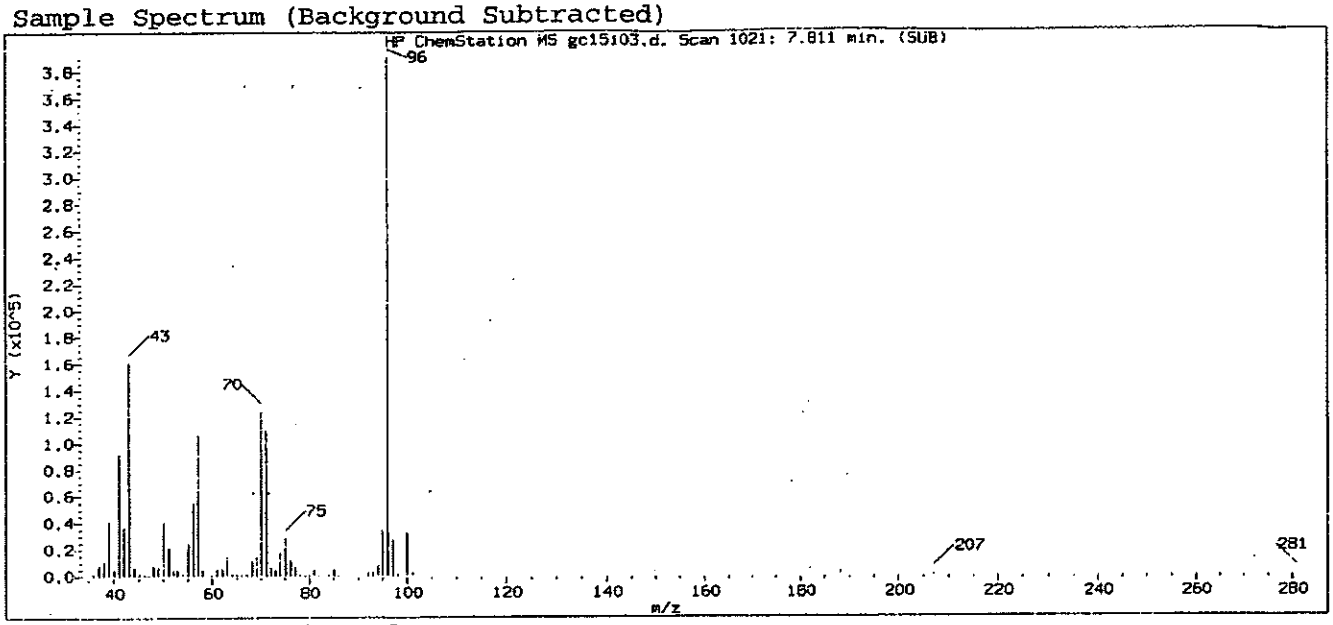
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long on 10/15/2010 at 13:37. Target 3.5 esignature user ID: jml01693

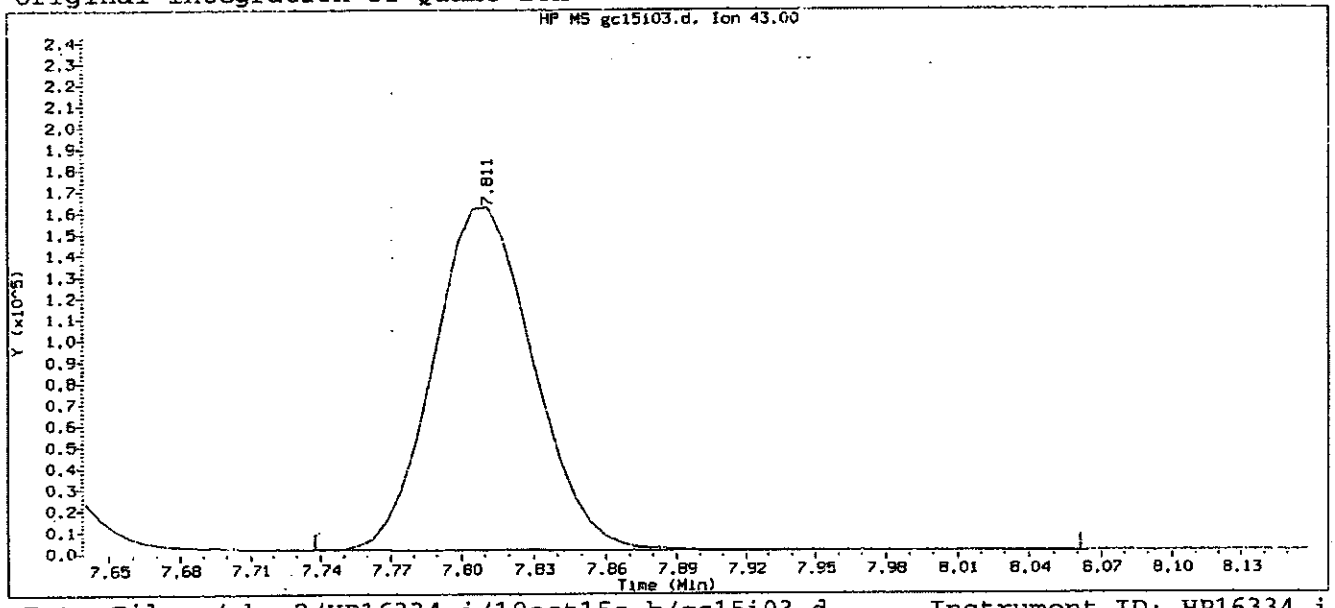
GC/MS audit/management approval: _____ 10/21/10

RAD40 0153

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10oct15a.b/gc15i03.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 11:53 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 15-OCT-2010 12:11
Date, time and analyst ID of latest file update: 15-Oct-2010 12:11 Automation

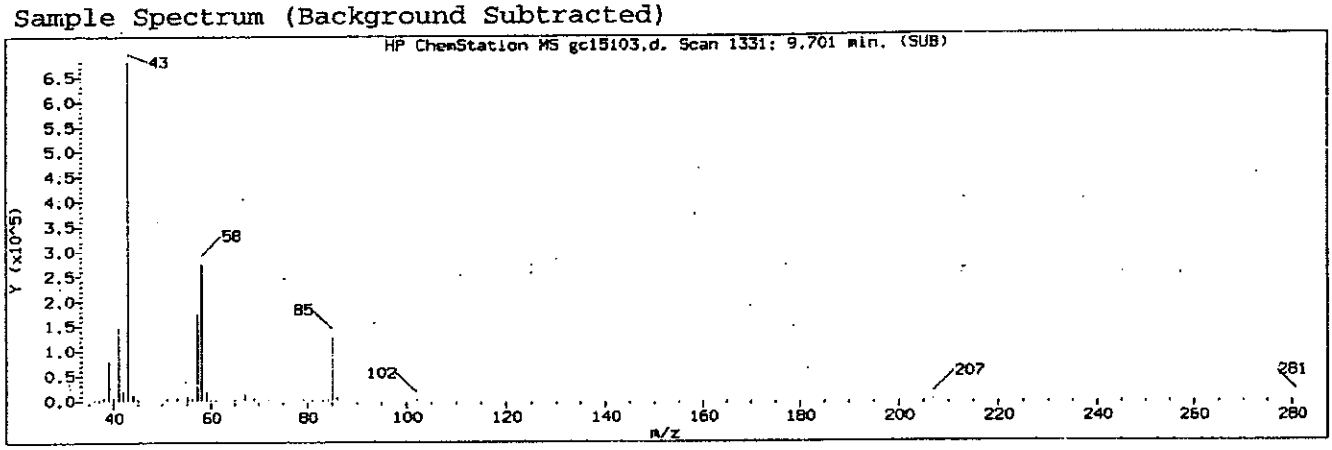
Sample Name: VSTD005 Lab Sample ID: VSTD005

Compound Number	: 76		
Compound Name	: n-Heptane		
Scan Number	: 1021		
Retention Time (minutes)	: 7.811		
Quant Ion	: 43.00		
Area	: 467548		
On-column Amount (ng)	: 4.6275		
Integration start scan	: 1008	Integration stop scan:	1061
Y at integration start	: 1402	Y at integration end:	282

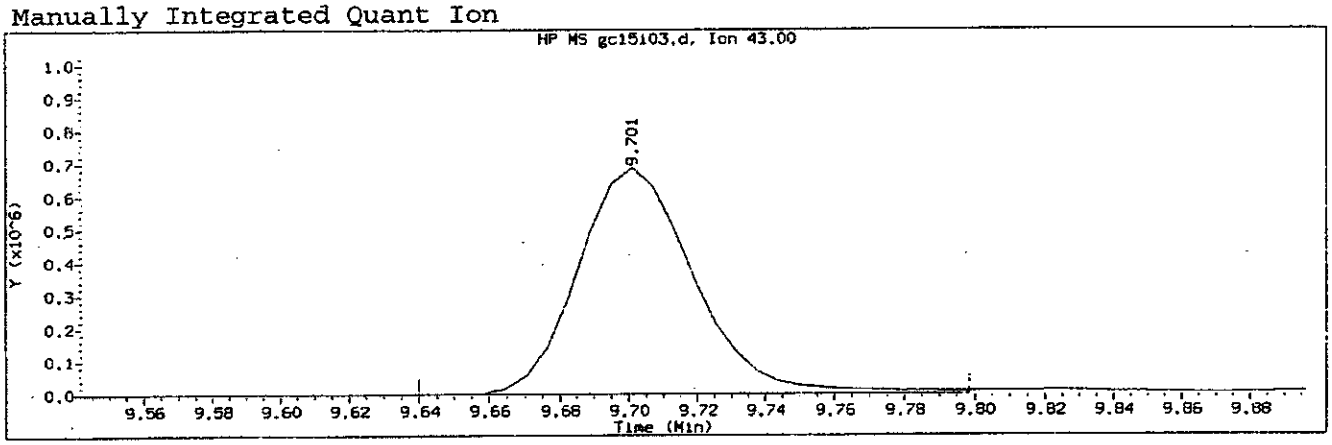
RAD48 0154

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Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10oct15a.b/gc15i03.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 11:53 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 15-OCT-2010 13:36
Date, time and analyst ID of latest file update: 15-Oct-2010 13:36 jml01693

Sample Name: VSTD005 Lab Sample ID: VSTD005

Compound Number	: 96		
Compound Name	: 4-Methyl-2-Pentanone		
Scan Number	: 1331		
Retention Time (minutes)	: 9.701		
Quant Ion	: 43.00		
Area (flag)	: 1599318M		
On-Column Amount (ng)	: 49.3463		
Integration start scan	: 1320	Integration stop scan:	1346
Y at integration start	: 0	Y at integration end:	0

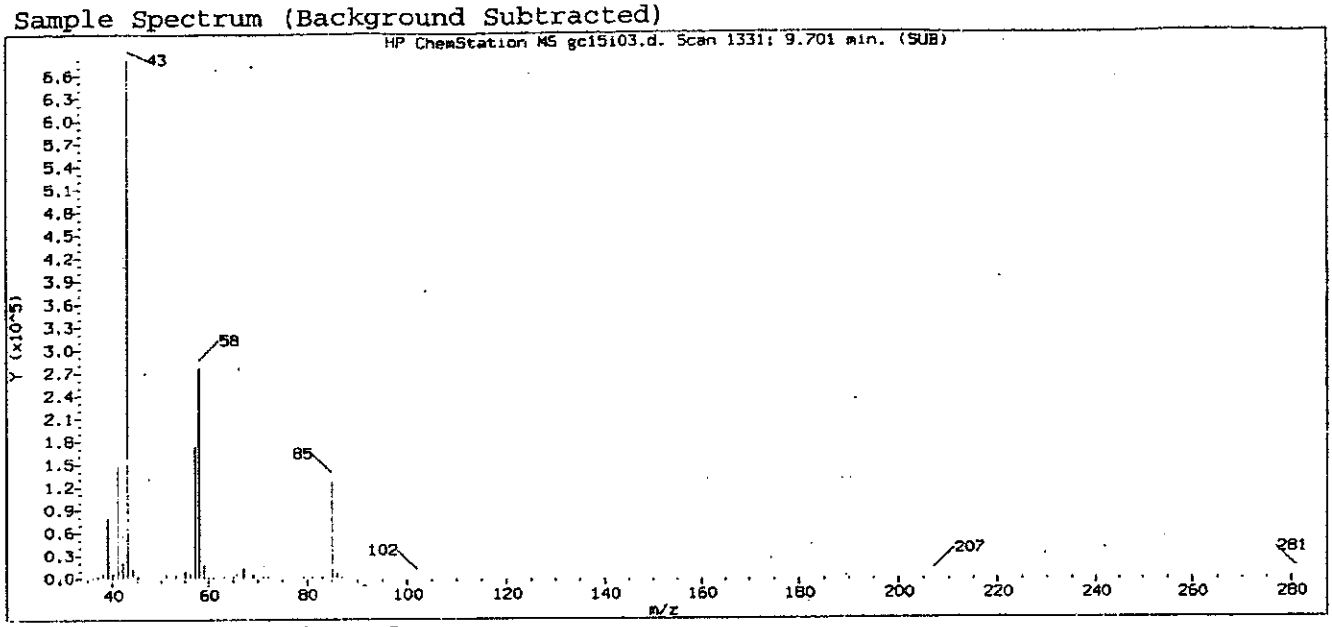
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long
on 10/15/2010 at 13:37.
Target 3.5 esignature user ID: jml01693

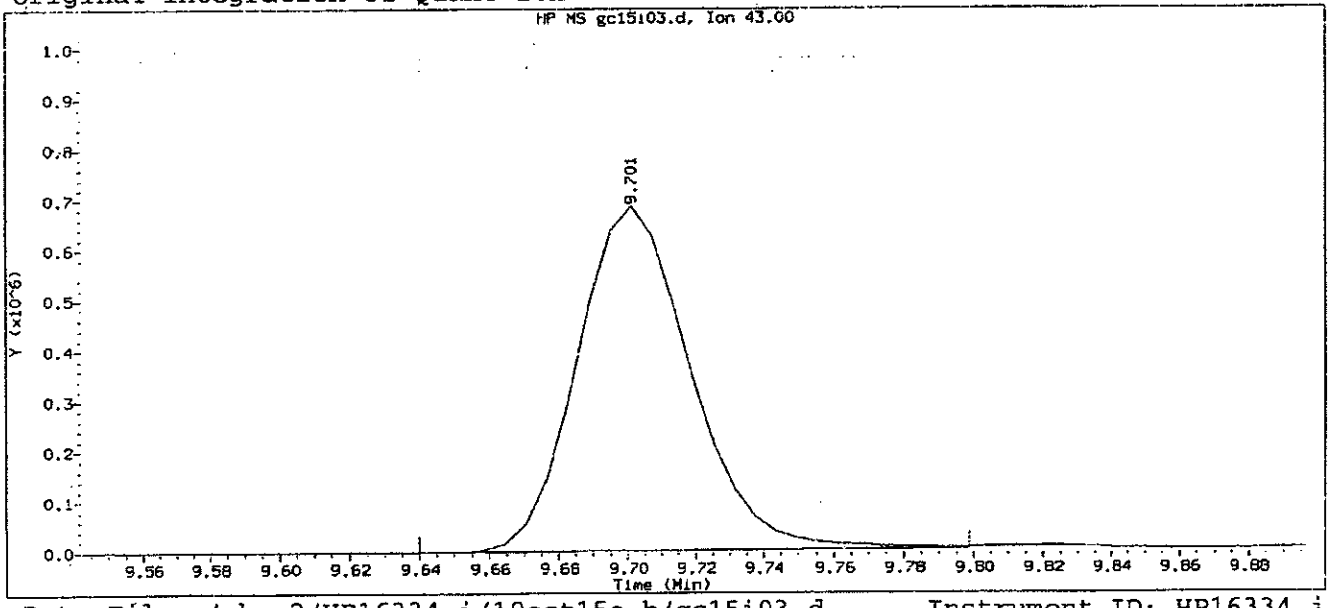
GC/MS audit/management approval: _____ 10/21/10

RAD48 8155

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10oct15a.b/gc15i03.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 11:53 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 15-OCT-2010 12:11
Date, time and analyst ID of latest file update: 15-Oct-2010 12:11 Automation

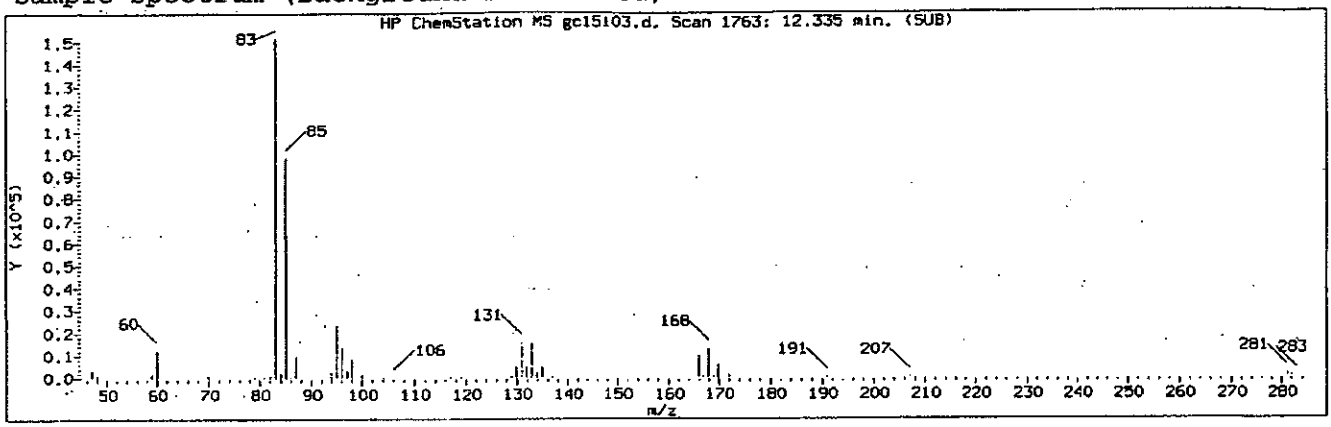
Sample Name: VSTD005 Lab Sample ID: VSTD005

Compound Number	: 96		
Compound Name	: 4-Methyl-2-Pentanone		
Scan Number	: 1331		
Retention Time (minutes)	: 9.701		
Quant Ion	: 43.00		
Area	: 1568825		
On-column Amount (ng)	: 46.8345		
Integration start scan	: 1320	Integration stop scan:	1346
Y at integration start	: 282	Y at integration end:	5819

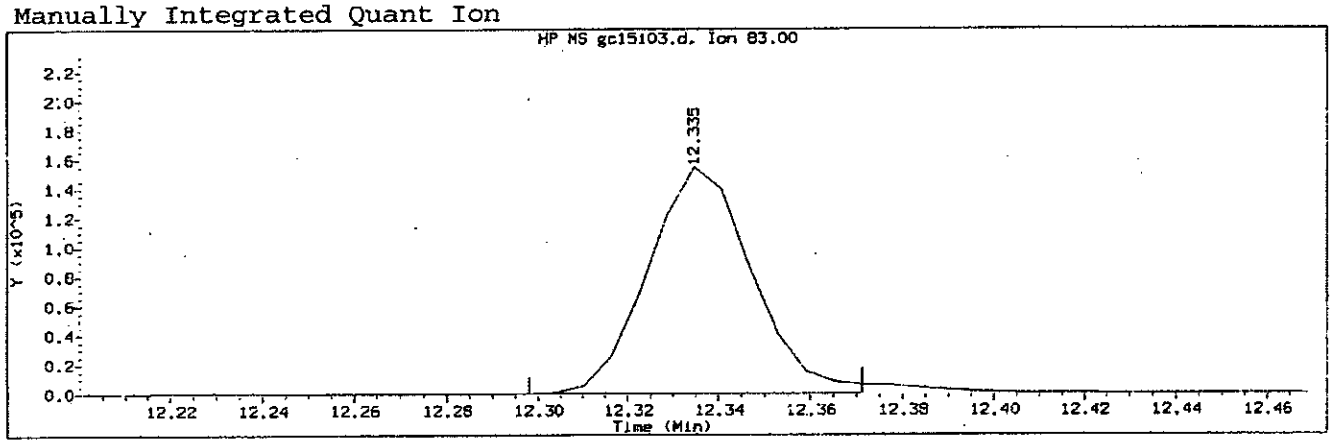
RAD40 0156

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Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10oct15a.b/gc15i03.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 11:53 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 15-OCT-2010 13:36
Date, time and analyst ID of latest file update: 15-Oct-2010 13:36 jml01693

Sample Name: VSTD005 Lab Sample ID: VSTD005

Compound Number	: 128		
Compound Name	: 1,1,2,2-Tetrachloroethane		
Scan Number	: 1763		
Retention Time (minutes)	: 12.335		
Quant Ion	: 83.00		
Area (flag)	: 244927M		
On-Column Amount (ng)	: 4.8826		
Integration start scan	: 1756	Integration stop scan:	1768
Y at integration start	: 0	Y at integration end:	0

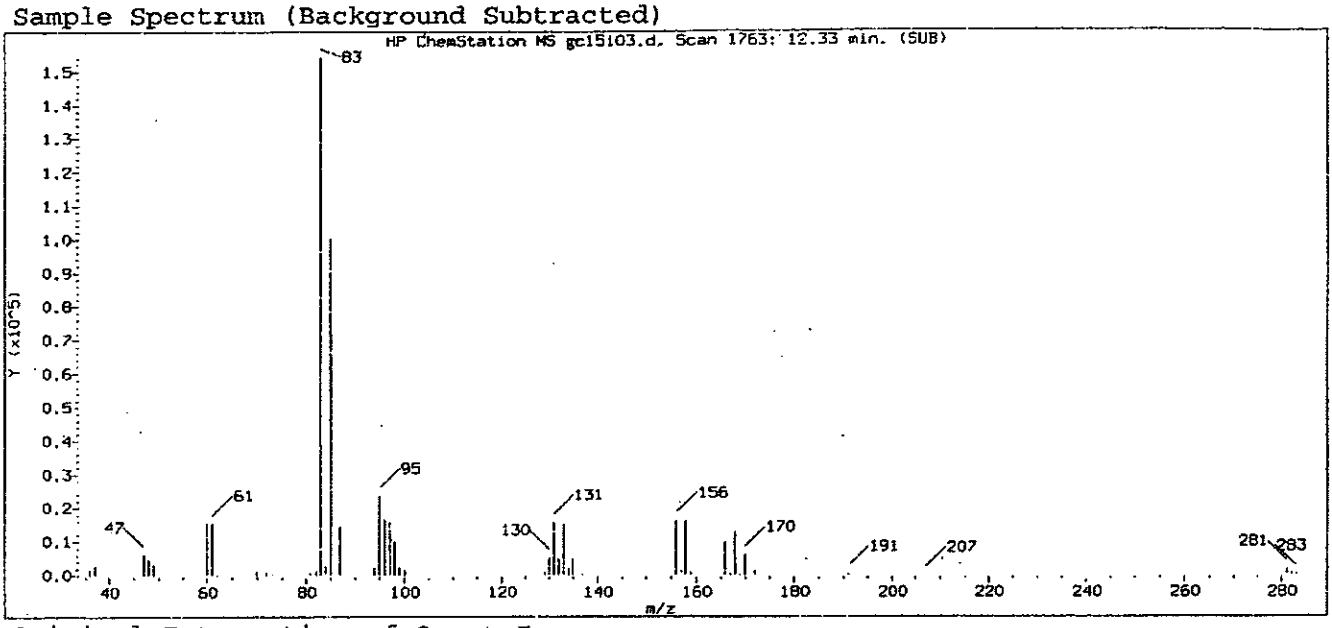
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long
on 10/15/2010 at 13:37.
Target 3.5 esignature user ID: jml01693

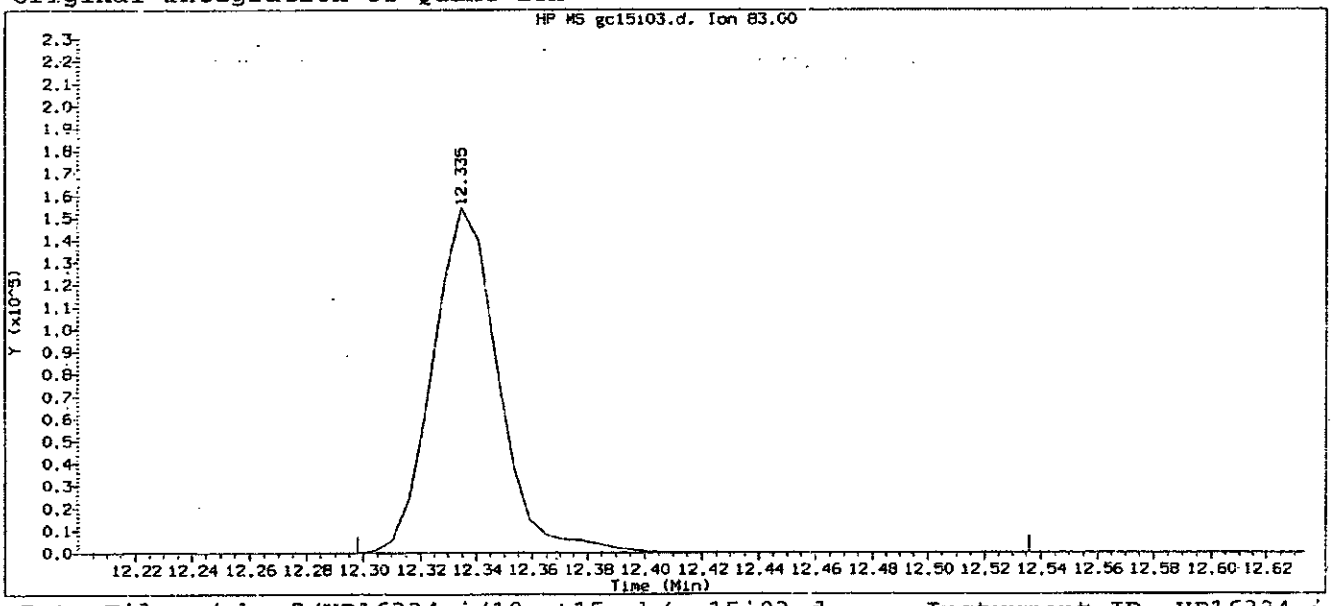
GC/MS audit/management approval: _____ 10/15/10

RAD48 0157

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10oct15a.b/gc15i03.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 11:53 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 15-OCT-2010 12:11
Date, time and analyst ID of latest file update: 15-Oct-2010 12:11 Automation

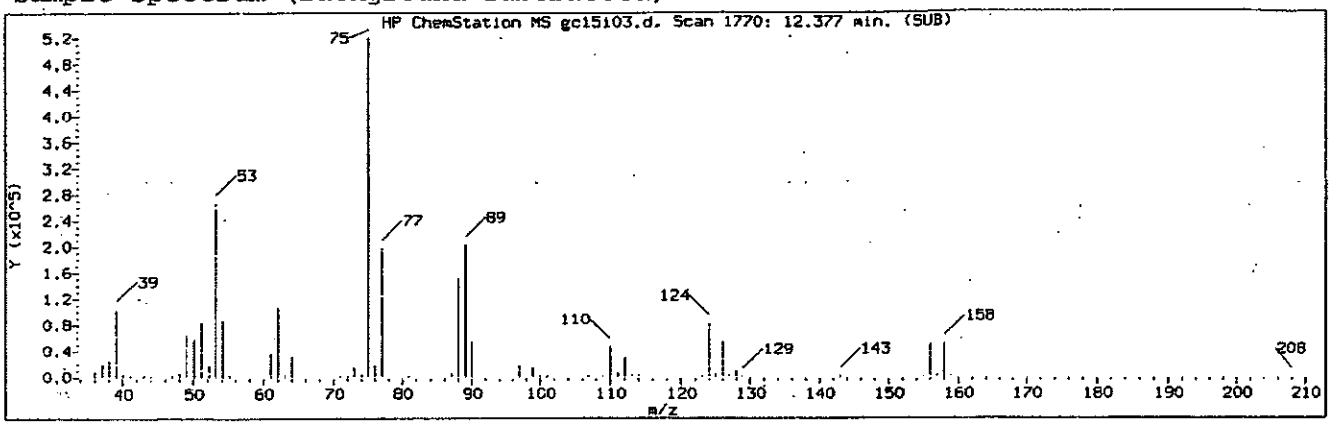
Sample Name: VSTD005 Lab Sample ID: VSTD005

Compound Number	: 128		
Compound Name	: 1,1,2,2-Tetrachloroethane		
Scan Number	: 1763		
Retention Time (minutes)	: 12.335		
Quant Ion	: 83.00		
Area	: 250543		
On-column Amount (ng)	: 4.8690		
Integration start scan	: 1756	Integration stop scan:	1795
Y at integration start	: 0	Y at integration end:	0

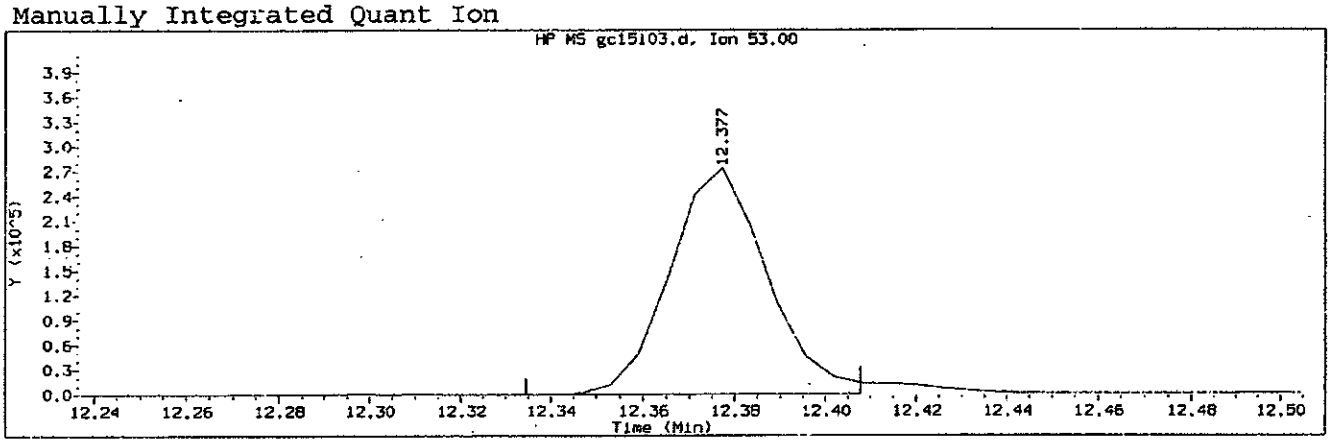
RAD40 8158

Digitally signed by Jason M. Long on 10/15/2010 at 13:37.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10oct15a.b/gc15i03.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 11:53 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 15-OCT-2010 13:36
Date, time and analyst ID of latest file update: 15-Oct-2010 13:36 jml01693

Sample Name: VSTD005 Lab Sample ID: VSTD005

Compound Number	: 130		
Compound Name	: trans-1,4-Dichloro-2-Butene		
Scan Number	: 1770		
Retention Time (minutes)	: 12.377		
Quant Ion	: 53.00		
Area (flag)	: 406609M		
On-Column Amount (ng)	: 46.9461		
Integration start scan	: 1762	Integration stop scan:	1774
Y at integration start	: 0	Y at integration end:	0

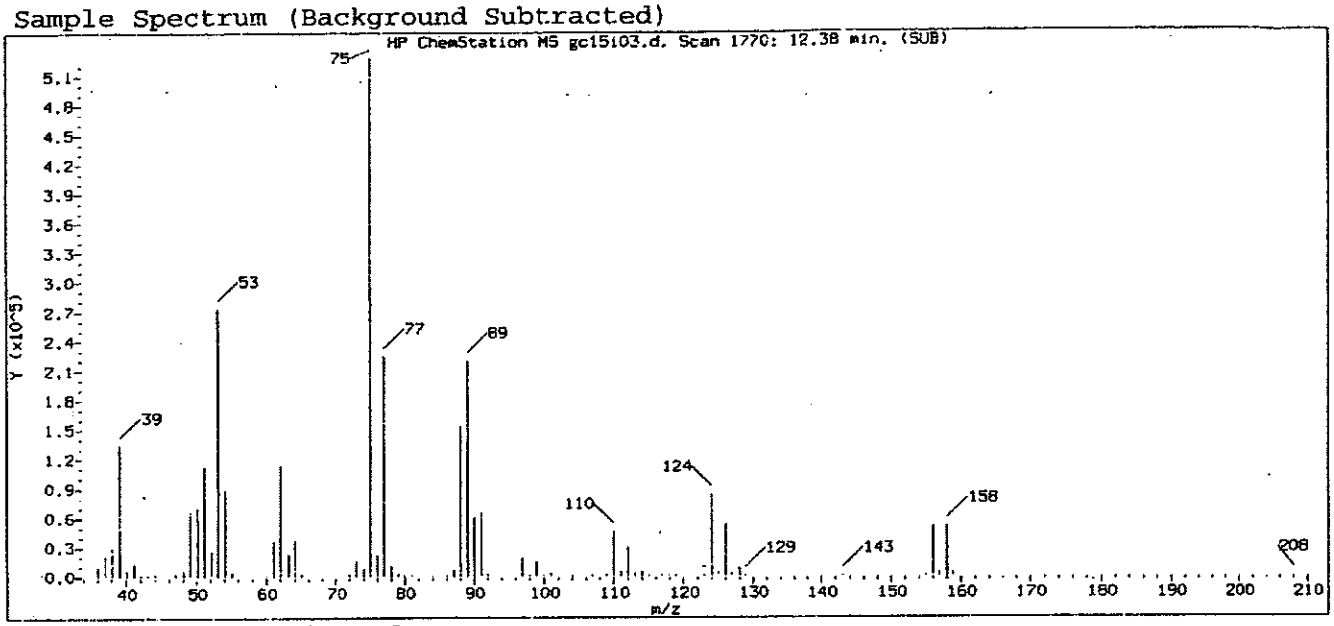
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long
on 10/15/2010 at 13:37.
Target 3.5 esignature user ID: jml01693

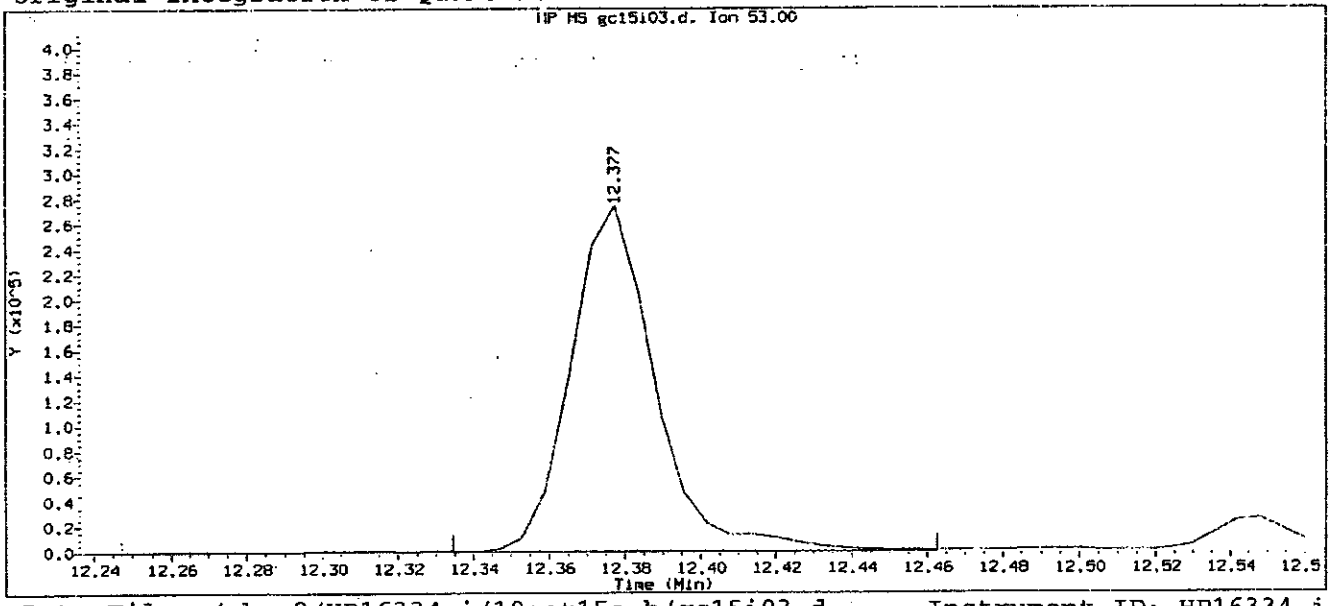
GC/MS audit/management approval: _____

RAD40 8159

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10oct15a.b/gc15i03.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 11:53 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 15-OCT-2010 12:11
Date, time and analyst ID of latest file update: 15-Oct-2010 12:11 Automation

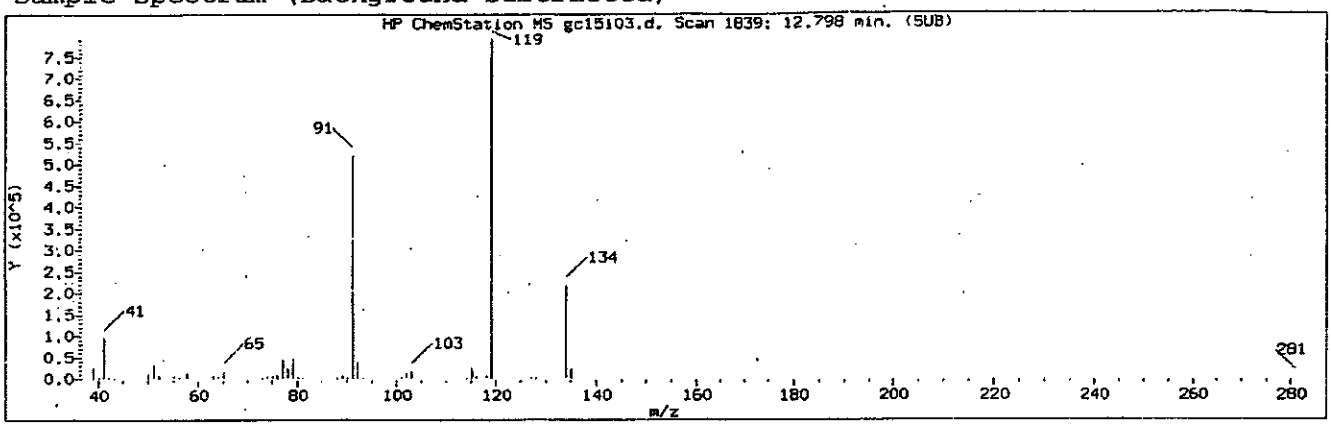
Sample Name: VSTD005 Lab Sample ID: VSTD005

Compound Number : 130
Compound Name : trans-1,4-Dichloro-2-Butene
Scan Number : 1770
Retention Time (minutes): 12.377
Quant Ion : 53.00
Area : 422389
On-column Amount (ng) : 44.1298
Integration start scan : 1762 Integration stop scan: 1783
Y at integration start : 0 Y at integration end: 0

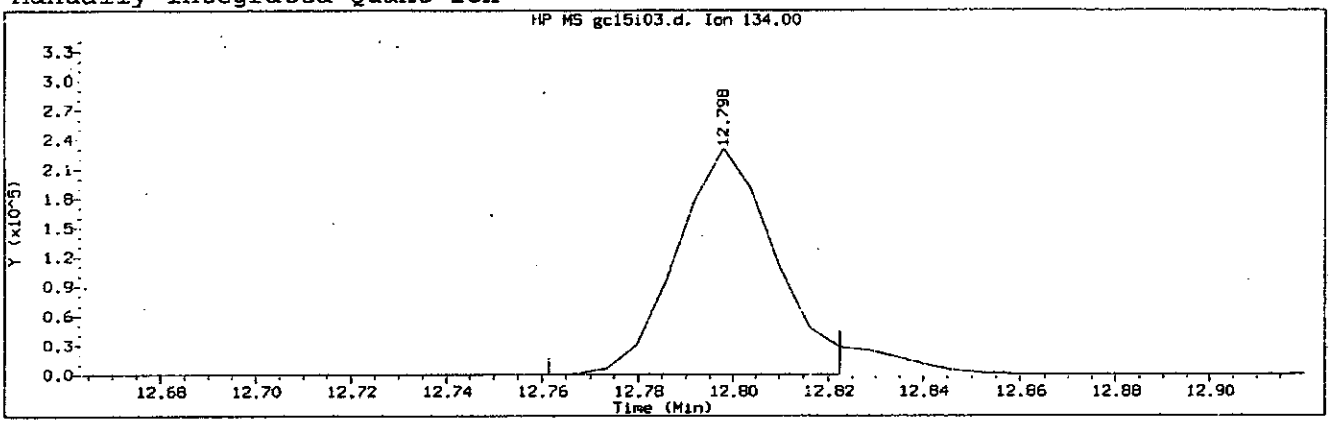
RAD48 0160

Digitally signed by Jason M. Long on 10/15/2010 at 13:37.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10oct15a.b/gc15i03.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 11:53 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 15-OCT-2010 13:36
Date, time and analyst ID of latest file update: 15-Oct-2010 13:36 jml01693

Sample Name: VSTD005 Lab Sample ID: VSTD005

Compound Number	: 137		
Compound Name	: tert-Butylbenzene		
Scan Number	: 1839		
Retention Time (minutes)	: 12.798		
Quant Ion	: 134.00		
Area (flag)	: 335410M		
On-Column Amount (ng)	: 4.8804		
Integration start scan	: 1832	Integration stop scan:	1842
Y at integration start	: 0	Y at integration end:	0

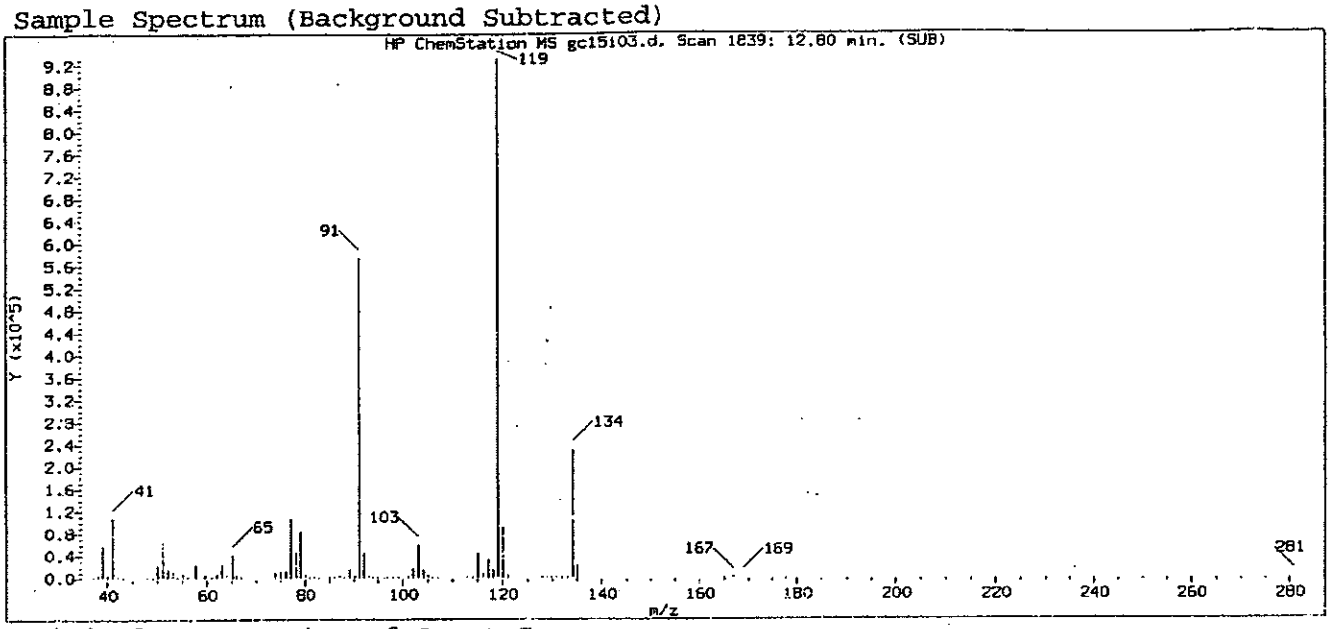
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long
on 10/15/2010 at 13:37.
Target 3.5 esignature user ID: jml01693

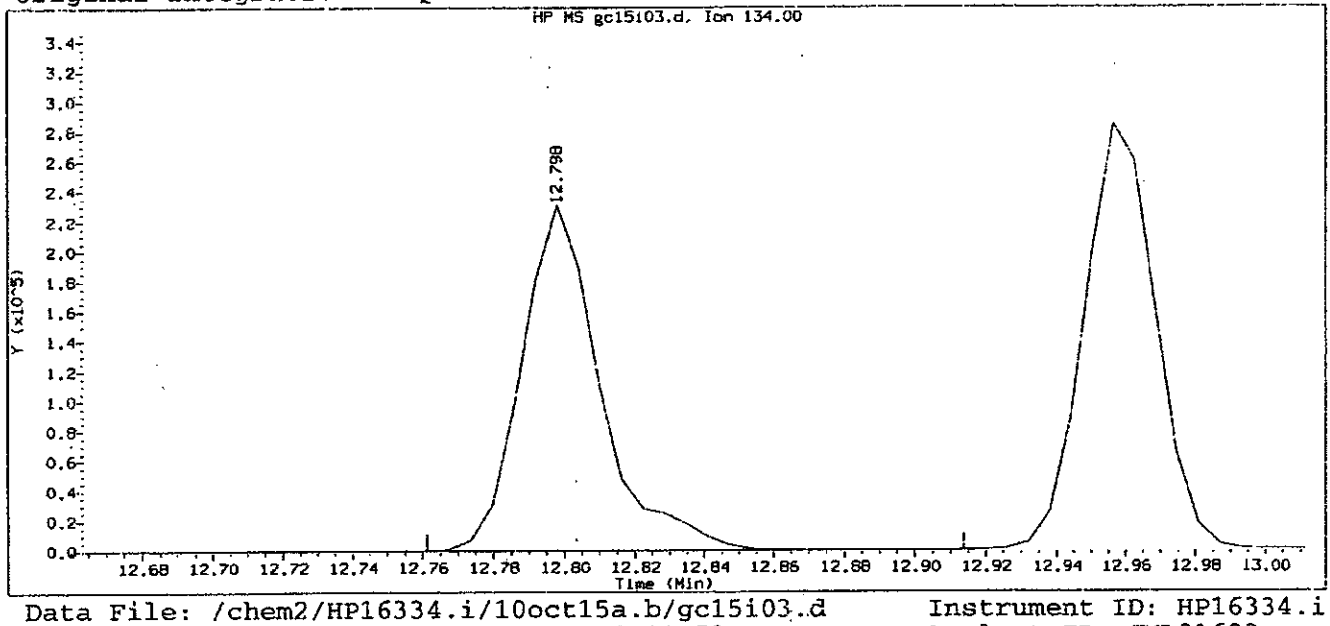
GC/MS audit/management approval: _____ 10/21/10

RAD40 0161

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10oct15a.b/gc15i03.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 11:53 Analyst ID: JML01693

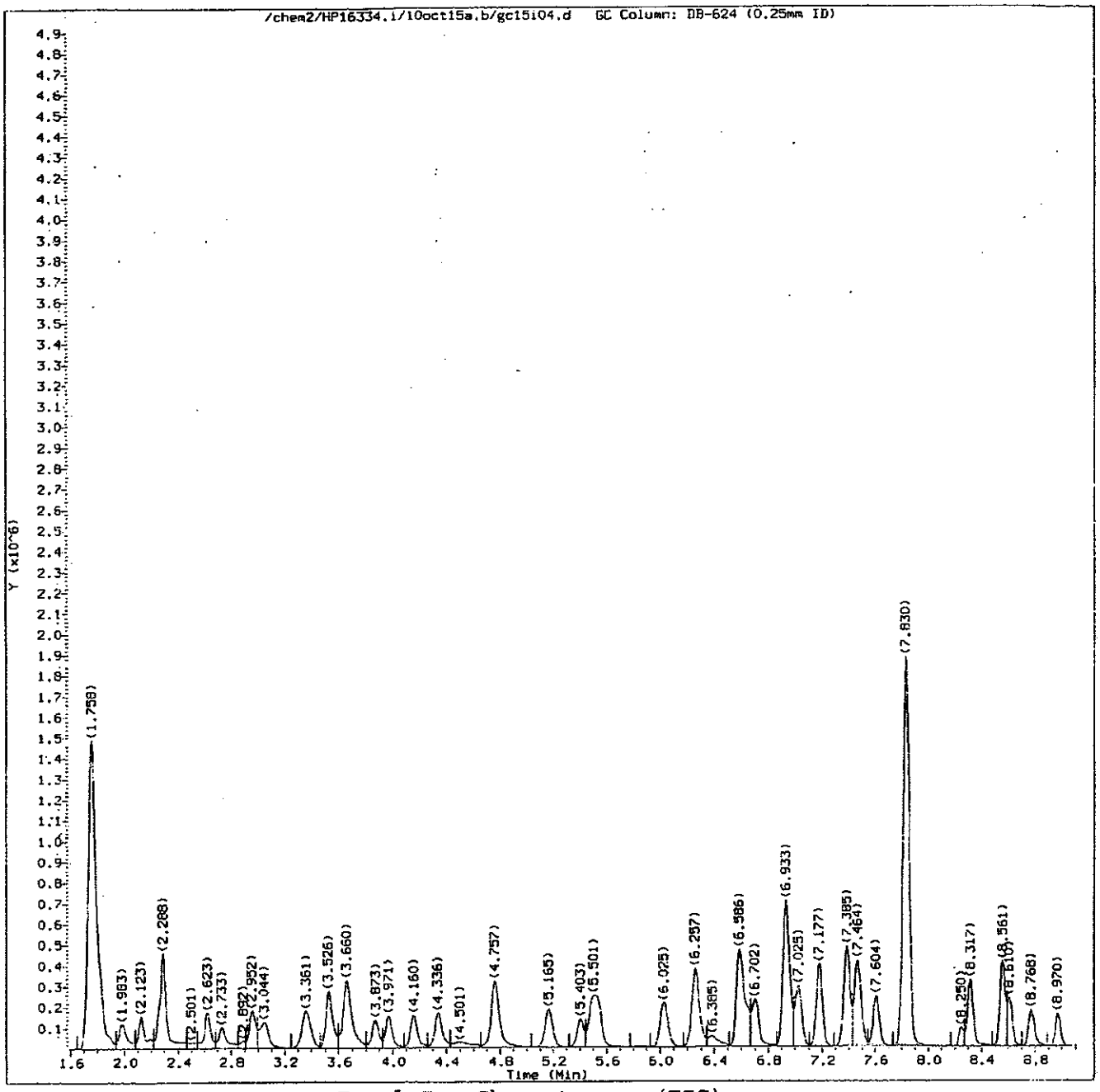
Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 15-OCT-2010 12:11
Date, time and analyst ID of latest file update: 15-Oct-2010 12:11 Automation

Sample Name: VSTD005 Lab Sample ID: VSTD005

Compound Number	: 137		
Compound Name	: tert-Butylbenzene		
Scan Number	: 1839		
Retention Time (minutes)	: 12.798		
Quant Ion	: 134.00		
Area	: 356838		
On-column Amount (ng)	: 4.8967		
Integration start scan	: 1832	Integration stop scan:	1857
Y at integration start	: 0	Y at integration end:	0

RAD40 #162

Digitally signed by Jason M. Long on 10/15/2010 at 13:37.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

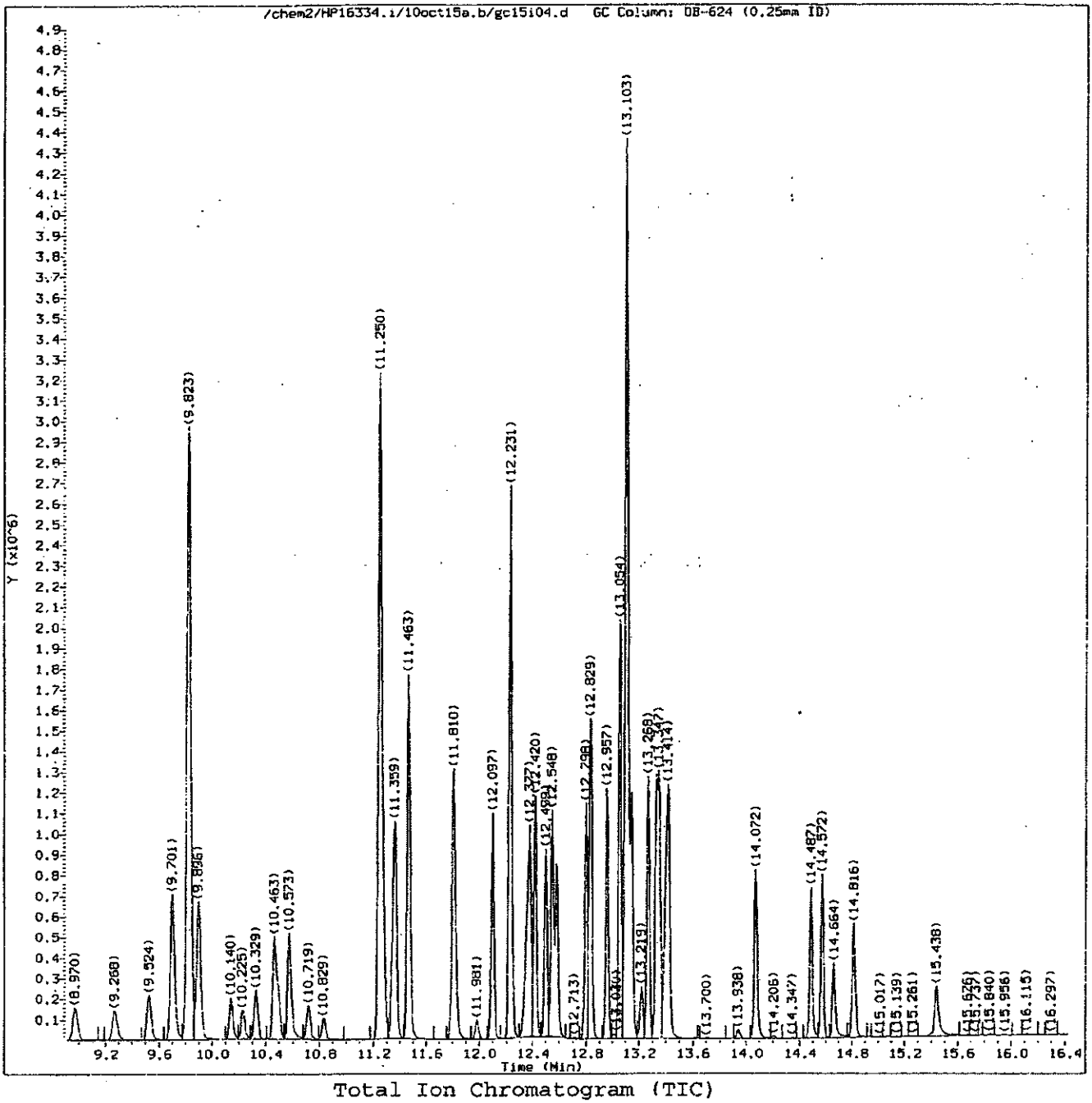
Data File: /chem2/HP16334.i/10oct15a.b/gc15i04.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 12:14 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 15-OCT-2010 13:36
Date, time and analyst ID of latest file update: 15-Oct-2010 13:36 jml01693

Sample Name: VSTD002 Lab Sample ID: VSTD002

RAD48 0163

Digitally signed by Jason M. Long
on 10/15/2010 at 13:37.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/10oct15a.b/gc15i04.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 12:14 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 15-OCT-2010 13:36
Date, time and analyst ID of latest file update: 15-Oct-2010 13:36 jml01693

Sample Name: VSTD002 Lab Sample ID: VSTD002

RAD40 0164

Digitally signed by Jason M. Long
on 10/15/2010 at 13:37.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/10oct15a.b/gc15i04.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 12:14 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 15-OCT-2010 13:36
Date, time and analyst ID of latest file update: 15-Oct-2010 13:36 jml01693

Sample Name: VSTD002 Lab Sample ID: VSTD002

	Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
2)	Dichlorodifluoromethane	(1)	1.983	85	228166	1.965
5)	Chloromethane	(1)	2.123	50	199015	1.964
6)	Vinyl Chloride	(1)	2.257	62	194002	1.966
9)	1,3-Butadiene	(1)	2.288	39	244332	2.050
10)	Bromomethane	(1)	2.623	94	142719	1.980
11)	Chloroethane	(1)	2.733	64	112568	2.016
13)	Dichlorofluoromethane	(1)	2.952	67	244290	1.980
15)	Trichlorofluoromethane	(1)	3.050	101	239479M	1.962
17)	Ethyl Ether	(1)	3.343	59	90968	1.998
18)	Freon 123a	(1)	3.373	67	150365	1.958
23)	Acrolein	(4)	3.526	56	527940	98.807
24)	1,1-Dichloroethene	(1)	3.654	96	126178	2.001
25)	Freon 113	(1)	3.666	101	133104	2.039
26)	Acetone	(4)	3.739	58	47495	20.675
27)	Methyl Iodide	(1)	3.867	142	247856	2.004
29)	Carbon Disulfide	(1)	3.971	76	363891	1.985
32)	Allyl Chloride	(1)	4.160	41	178960	1.917
33)	Methyl Acetate	(1)	4.202	43	33603M	1.901
34)	Methylene Chloride	(1)	4.336	84	140295	2.003
36)*	t-Butyl Alcohol-d10	(4)	4.379	65	95084	50.000
38)	t-Butyl Alcohol	(4)	4.507	59	86445	38.981
39)	Acrylonitrile	(4)	4.751	53	88159	9.913
40)	Methyl Tertiary Butyl Ether	(1)	4.757	73	288835	2.029
41)	trans-1,2-Dichloroethene	(1)	4.763	96	145267	2.008
37)	1,2-Dichloroethene (Total)	(1)		96	299356	3.985
44)	n-Hexane	(1)	5.165	57	192473	2.011
45)	1,1-Dichloroethane	(1)	5.403	63	244401	2.012
47)	di-Isopropyl Ether	(1)	5.489	45	418218	2.005
48)	2-Chloro-1,3-Butadiene	(1)	5.537	53	181790	2.002
49)	Ethyl t-Butyl Ether	(1)	6.025	59	372178	1.993
51)	2,2-Dichloropropane	(1)	6.251	77	192994	1.995
50)	cis-1,2-Dichloroethene	(1)	6.257	96	154089	1.977
52)	2-Butanone	(4)	6.281	43	232585	19.626
53)	Propionitrile	(4)	6.391	54	128558	40.313
55)	Methacrylonitrile	(4)	6.586	67	273168M	19.921
56)	Bromochloromethane	(1)	6.598	128	64051	1.960
57)	Tetrahydrofuran	(4)	6.647	71	77396	20.177
58)	Chloroform	(1)	6.708	83	243962	1.999

M = Compound was manually integrated.
* = Compound is an internal standard.

RAD48 0165

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on 10/15/2010 at 13:37.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/10oct15a.b/gc15i04.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 12:14 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 15-OCT-2010 13:36
Date, time and analyst ID of latest file update: 15-Oct-2010 13:36 jml01693

Sample Name: VSTD002 Lab Sample ID: VSTD002

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
61)$Dibromofluoromethane	(1)	6.927	113	576487	9.983
62)$Dibromofluoromethane(mz111)	(1)	6.933	111	589009	10.015
63) 1,1,1-Trichloroethane	(1)	6.952	97	210022	1.989
64) Cyclohexane	(1)	7.025	56	234987	2.018
65) 1,1-Dichloropropene	(1)	7.177	75	185452	1.962
66) Carbon Tetrachloride	(1)	7.183	117	179450	1.965
67) Isobutyl Alcohol	(4)	7.354	41	68402	95.537
69)$1,2-Dichloroethane-d4(mz65)	(1)	7.385	65	505457	10.157
70)$1,2-Dichloroethane-d4	(1)	7.385	102	114940	10.024
68)$1,2-Dichloroethane-d4(mz104)	(1)	7.391	104	72700	10.002
72) Benzene	(1)	7.464	78	554691	1.993
73) 1,2-Dichloroethane(mz98)	(1)	7.488	98	12792	2.007
74) 1,2-Dichloroethane	(1)	7.488	62	133287	2.016
75) t-Amyl Methyl Ether	(1)	7.604	73	318542	1.988
76) n-Heptane	(1)	7.811	43	198739M	1.973
77)*Fluorobenzene	(1)	7.836	96	2572722	10.000
81) n-Butanol	(4)	8.244	56	113535	190.318
83) Trichloroethene	(1)	8.317	95	151071	1.992
84) Methylcyclohexane	(1)	8.555	83	254313	1.967
85) 1,2-Dichloropropane	(1)	8.616	63	139845	2.003
88) Dibromomethane	(1)	8.768	93	63112	2.018
87) Methyl Methacrylate	(4)	8.775	69	46117	1.957
89) 1,4-Dioxane	(4)	8.793	88	15660	104.336
90) Bromodichloromethane	(1)	8.970	83	152425	1.949
91) 2-Nitropropane	(4)	9.268	41	140604	19.713
94) cis-1,3-Dichloropropene	(1)	9.524	75	175371	1.947
96) 4-Methyl-2-Pentanone	(1)	9.701	43	651978	20.423
97)$Toluene-d8	(2)	9.823	98	2532163	10.057
98)$Toluene-d8(mz100)	(2)	9.823	100	1647110	9.967
101) Toluene	(2)	9.896	92	358538	1.983
102) trans-1,3-Dichloropropene	(2)	10.140	75	140279	1.934
103) Ethyl Methacrylate	(2)	10.225	69	97375	1.888
104) 1,1,2-Trichloroethane	(2)	10.329	97	87705	2.011
105) Tetrachloroethene	(2)	10.463	166	174451	2.002
106) 1,3-Dichloropropane	(2)	10.494	76	149916	2.012
107) 2-Hexanone	(2)	10.573	43	433509	20.086
108) Dibromochloromethane	(2)	10.719	129	96532	1.896
109) 1,2-Dibromoethane	(2)	10.829	107	79137	1.988

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

RAD48 0166

Digitally signed by Jason M. Long
on 10/15/2010 at 13:37.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/10oct15a.b/gc15i04.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 12:14 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 15-OCT-2010 13:36
Date, time and analyst ID of latest file update: 15-Oct-2010 13:36 jml01693

Sample Name: VSTD002 Lab Sample ID: VSTD002

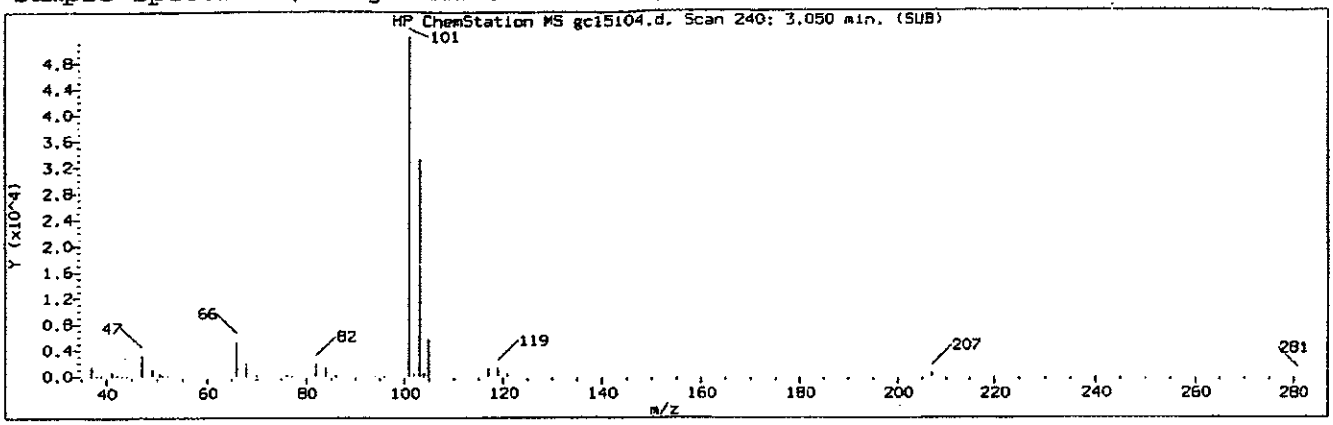
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
110)*Chlorobenzene-d5	(2)	11.250	117	1883864	10.000
112) Chlorobenzene	(2)	11.274	112	410565	1.983
113) 1,1,1,2-Tetrachloroethane	(2)	11.347	131	135064	1.944
114) Ethylbenzene	(2)	11.365	91	685976	1.970
117) m+p-Xylene	(2)	11.463	106	543208	3.909
115) Xylene (Total)	(2)		106	813769	5.876
118) o-Xylene	(2)	11.804	106	270561	1.967
119) Styrene	(2)	11.817	104	387860	1.899
120) Bromoform	(2)	11.981	173	47502	1.827
121) Isopropylbenzene	(2)	12.097	105	701397	1.984
126)$4-Bromofluorobenzene	(2)	12.231	95	864821M	9.995
127)$4-Bromofluorobenzene(mz174)	(2)	12.231	174	801554	10.086
128) 1,1,2,2-Tetrachloroethane	(3)	12.335	83	97525M	1.965
129) Bromobenzene	(3)	12.359	156	171874	1.952
130) trans-1,4-Dichloro-2-Butene	(4)	12.377	53	143675M	19.177
131) 1,2,3-Trichloropropane	(3)	12.377	110	27241	1.976
132) n-Propylbenzene	(3)	12.420	91	850635	1.959
133) 2-Chlorotoluene	(3)	12.499	126	177433	1.990
134) 1,3,5-Trimethylbenzene	(3)	12.548	105	581576	1.942
135) 4-Chlorotoluene	(3)	12.585	126	180578	1.982
137) tert-Butylbenzene	(3)	12.798	134	133449M	1.962
138) Pentachloroethane	(3)	12.829	167	97374	1.856
139) 1,2,4-Trimethylbenzene	(3)	12.835	105	613972	1.928
140) sec-Butylbenzene	(3)	12.957	105	774802	1.951
141) p-Isopropyltoluene	(3)	13.054	119	683045	1.937
142) 1,3-Dichlorobenzene	(3)	13.060	146	357148	1.942
143)*1,4-Dichlorobenzene-d4	(3)	13.103	152	1112755	10.000
144) 1,4-Dichlorobenzene	(3)	13.121	146	373800	1.966
145) 1,2,3-Trimethylbenzene	(3)	13.146	120	268880	1.934
146) Benzyl Chloride	(3)	13.219	126	41039	1.951
147) n-Butylbenzene	(3)	13.347	92	344665M	1.972
148) 1,2-Dichlorobenzene	(3)	13.396	146	322382	1.980
150) 1,2-Dibromo-3-Chloropropane	(4)	13.938	155	11372	2.009
153) 1,2,4-Trichlorobenzene	(3)	14.487	180	252701	1.968
154) Hexachlorobutadiene	(3)	14.572	225	139473	1.940
155) Naphthalene	(3)	14.664	128	325882	1.957
156) 1,2,3-Trichlorobenzene	(3)	14.816	180	195704	1.983

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

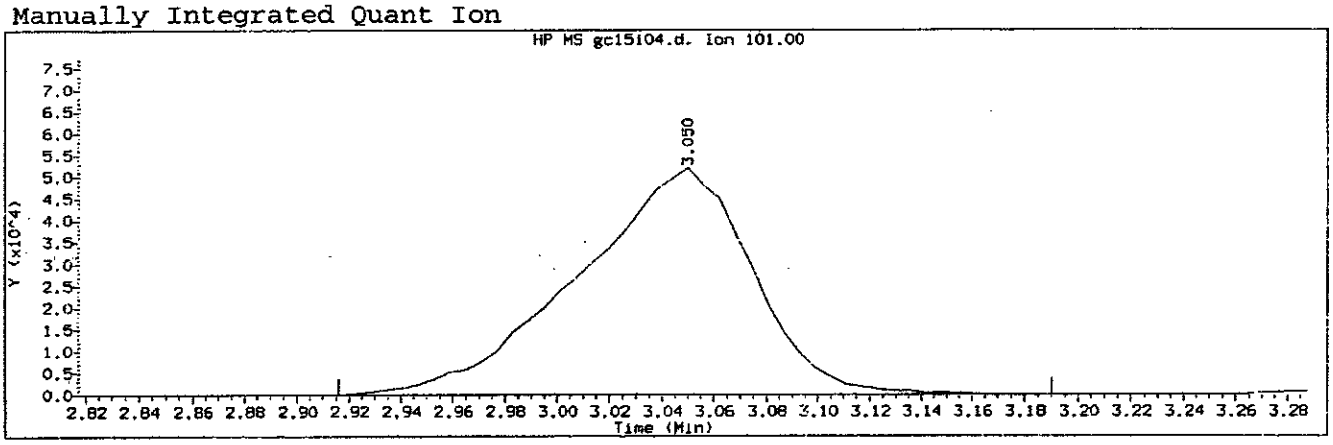
RAD48 8167

Digitally signed by Jason M. Long
on 10/15/2010 at 13:37.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10oct15a.b/gc15i04.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 12:14 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 15-OCT-2010 13:36
Date, time and analyst ID of latest file update: 15-Oct-2010 13:36 jml01693

Sample Name: VSTD002 Lab Sample ID: VSTD002

Compound Number : 15
Compound Name : Trichlorofluoromethane
Scan Number : 240
Retention Time (minutes): 3.050
Quant Ion : 101.00
Area (flag) : 239479M
On-Column Amount (ng) : 1.9624
Integration start scan : 217 Integration stop scan: 262
Y at integration start : 0 Y at integration end: 0

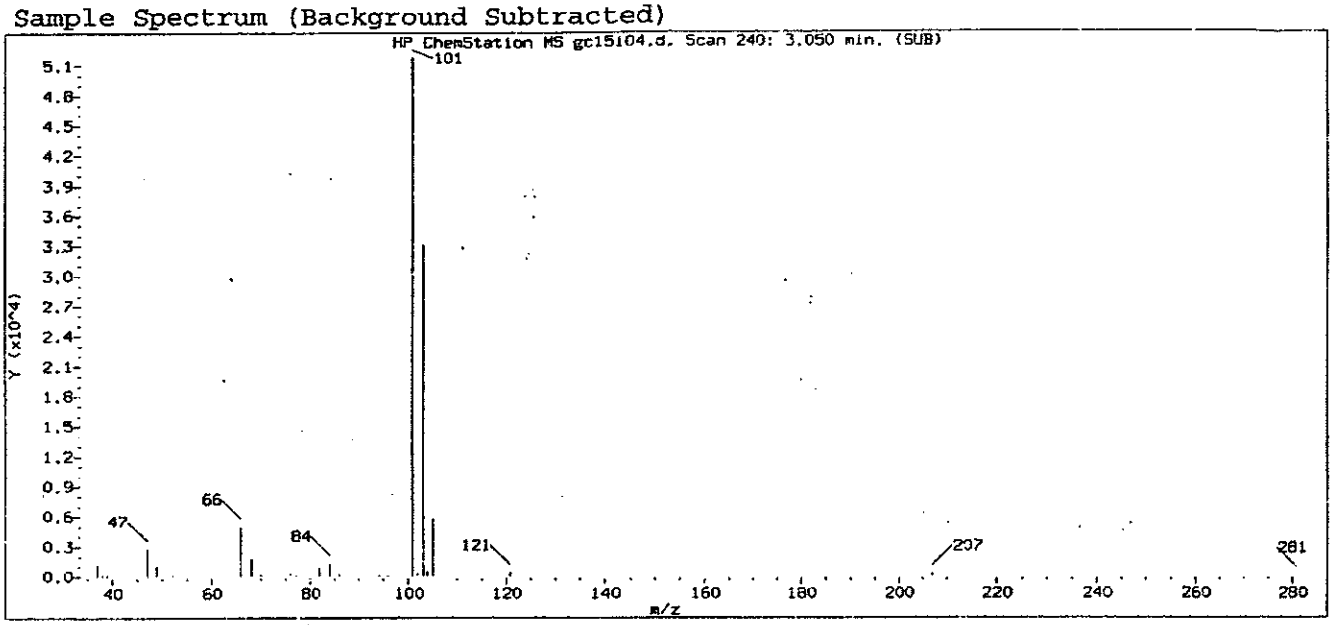
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long on 10/15/2010 at 13:37. Target 3.5 esignature user ID: jml01693

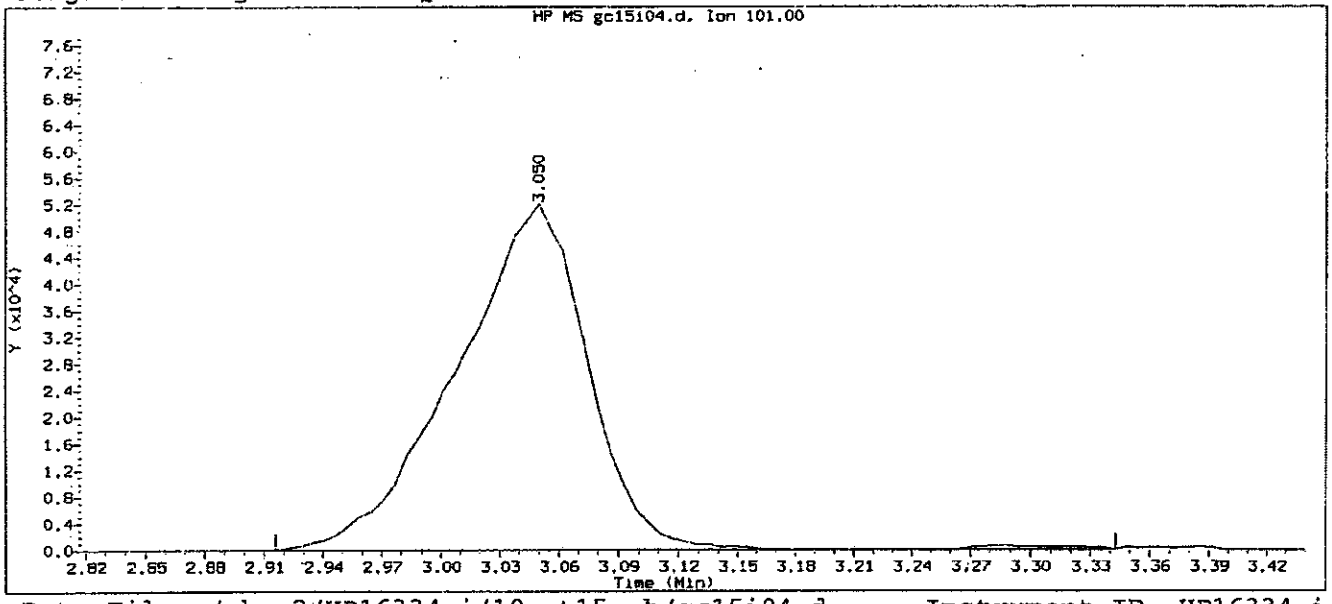
GC/MS audit/management approval: _____ 10/21/10

RAD48 8168

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10oct15a.b/gc15i04.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 12:14 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 15-OCT-2010 12:32
Date, time and analyst ID of latest file update: 15-Oct-2010 12:32 Automation

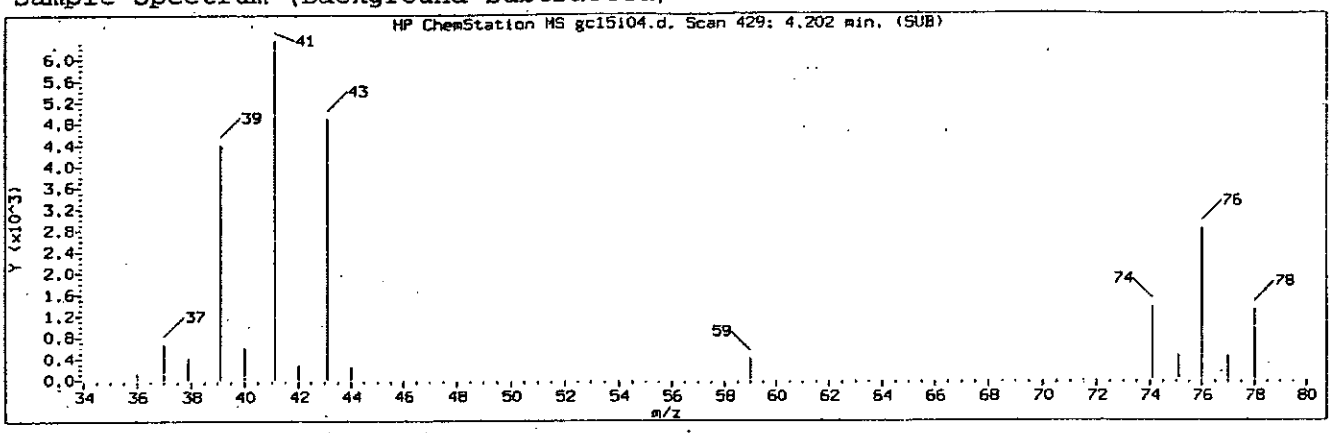
Sample Name: VSTD002 Lab Sample ID: VSTD002

Compound Number	: 15		
Compound Name	: Trichlorofluoromethane		
Scan Number	: 240		
Retention Time (minutes)	: 3.050		
Quant Ion	: 101.00		
Area	: 241405		
On-column Amount (ng)	: 2.0078		
Integration start scan	: 217	Integration stop scan:	287
Y at integration start	: 0	Y at integration end:	0

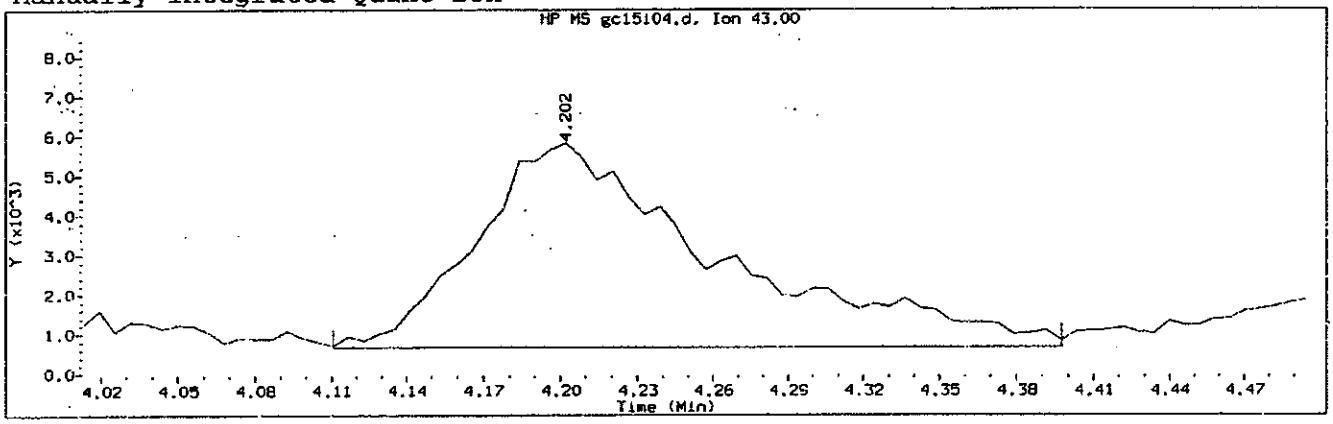
RAD48 8169

Digitally signed by Jason M. Long on 10/15/2010 at 13:37.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10oct15a.b/gc15i04.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 12:14 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 15-OCT-2010 13:36
Date, time and analyst ID of latest file update: 15-Oct-2010 13:36 jml01693

Sample Name: VSTD002 Lab Sample ID: VSTD002

Compound Number	: 33		
Compound Name	: Methyl Acetate		
Scan Number	: 429		
Retention Time (minutes)	: 4.202		
Quant Ion	: 43.00		
Area (flag)	: 33603M		
On-Column Amount (ng)	: 1.9014		
Integration start scan	: 413	Integration stop scan:	460
Y at integration start	: 678	Y at integration end:	678

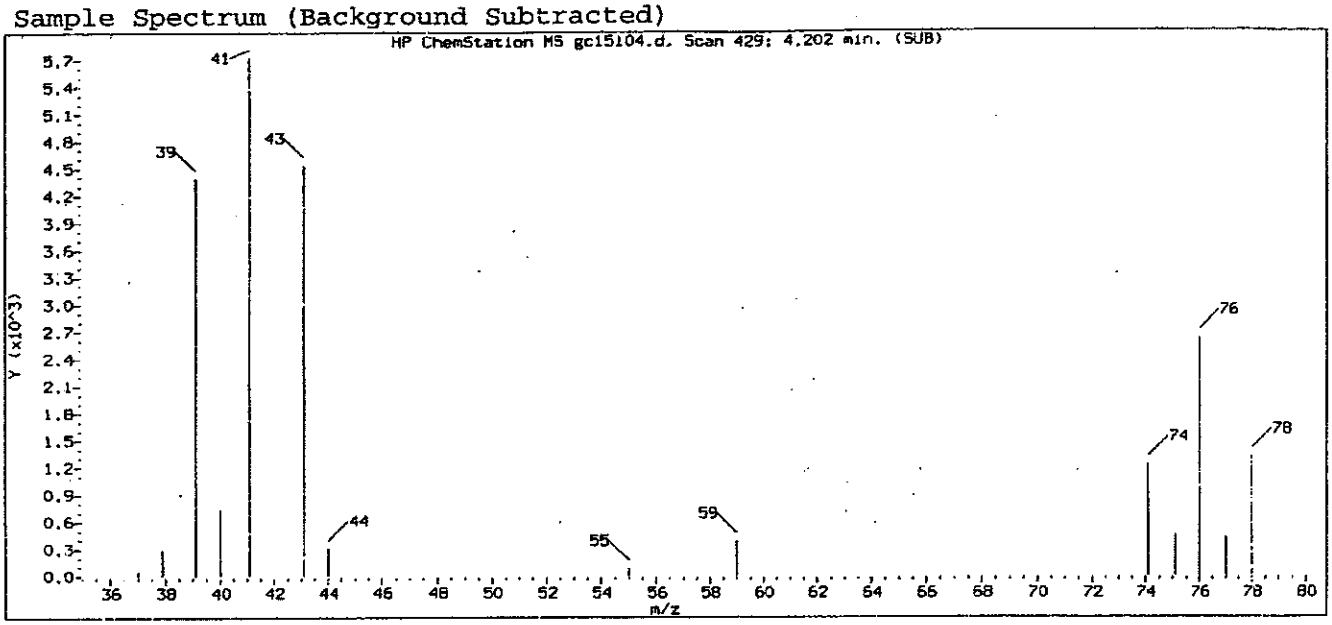
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long
on 10/15/2010 at 13:37.
Target 3.5 esignature user ID: jml01693

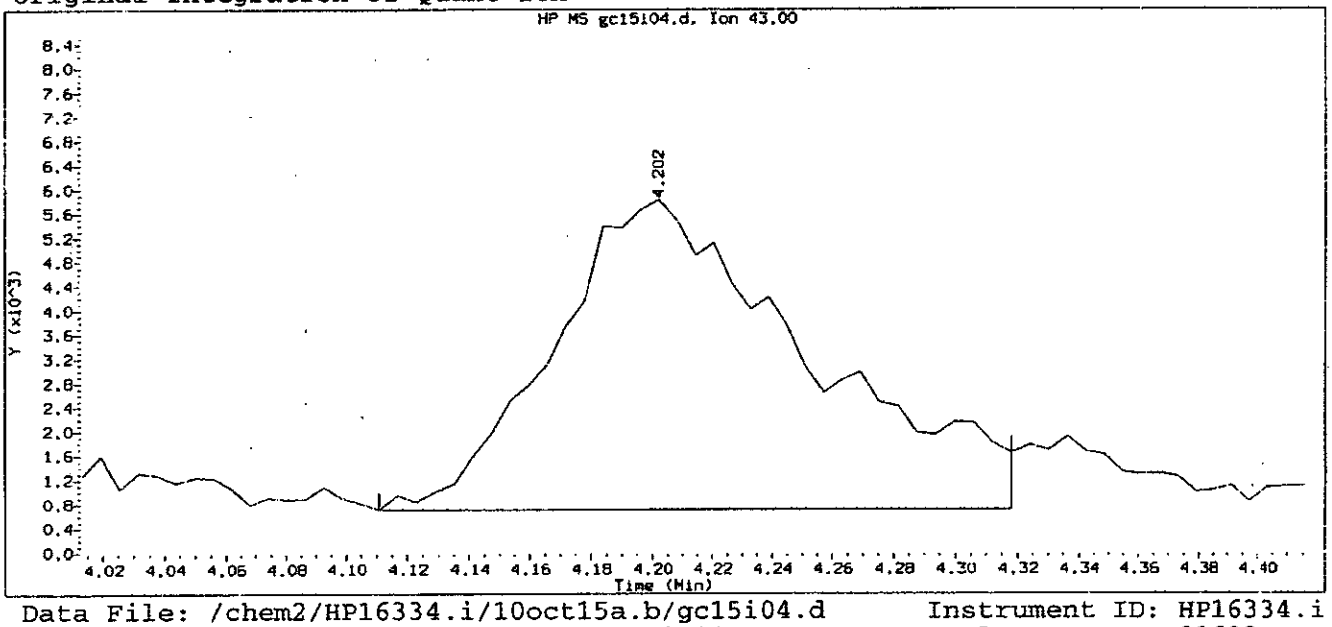
GC/MS audit/management approval: _____ 10/21/10

RAD46 8170

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10oct15a.b/gc15i04.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 12:14 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 15-OCT-2010 12:32
Date, time and analyst ID of latest file update: 15-Oct-2010 12:32 Automation

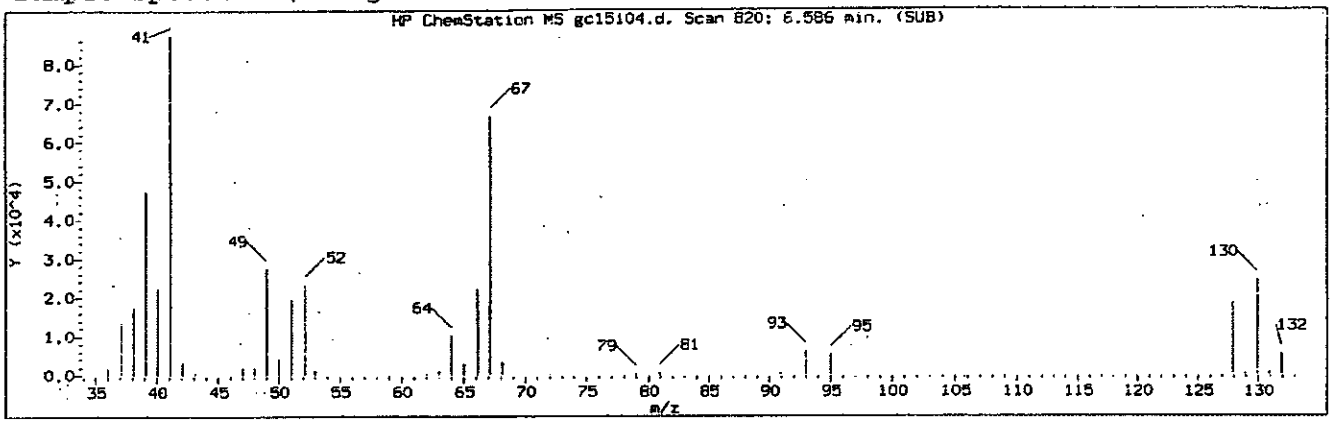
Sample Name: VSTD002 Lab Sample ID: VSTD002

Compound Number	: 33		
Compound Name	: Methyl Acetate		
Scan Number	: 429		
Retention Time (minutes)	: 4.202		
Quant Ion	: 43.00		
Area	: 29765		
On-column Amount (ng)	: 1.7314		
Integration start scan	: 413	Integration stop scan:	447
Y at integration start	: 709	Y at integration end:	709

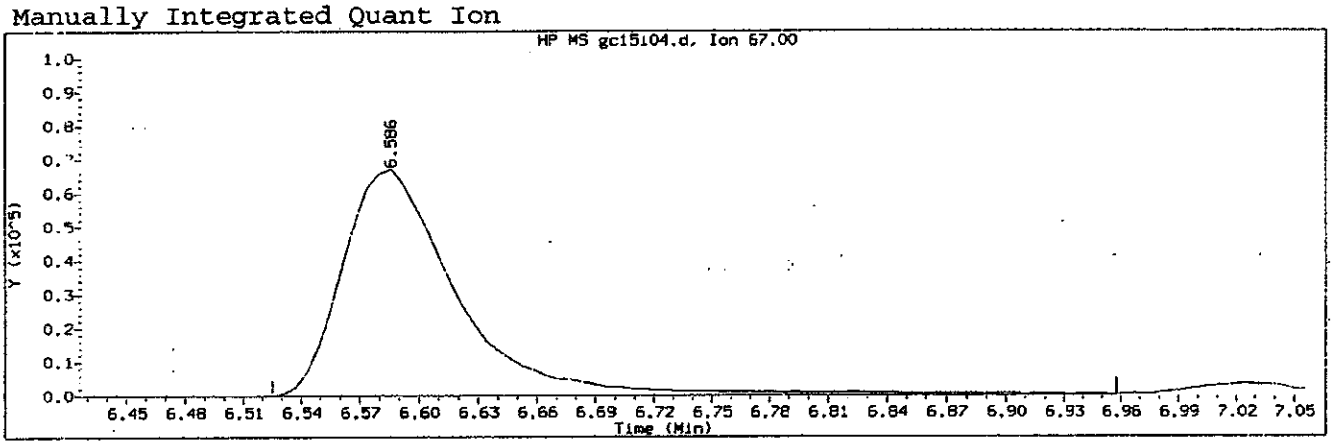
RAD48 0171

Digitally signed by Jason M. Long on 10/15/2010 at 13:37.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10oct15a.b/gc15i04.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 12:14 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 15-OCT-2010 13:36
Date, time and analyst ID of latest file update: 15-Oct-2010 13:36 jml01693

Sample Name: VSTD002 Lab Sample ID: VSTD002

Compound Number	: 55		
Compound Name	: Methacrylonitrile		
Scan Number	: 820		
Retention Time (minutes)	: 6.586		
Quant Ion	: 67.00		
Area (flag)	: 273168M		
On-Column Amount (ng)	: 19.9210		
Integration start scan	: 809	Integration stop scan:	880
Y at integration start	: 0	Y at integration end:	0

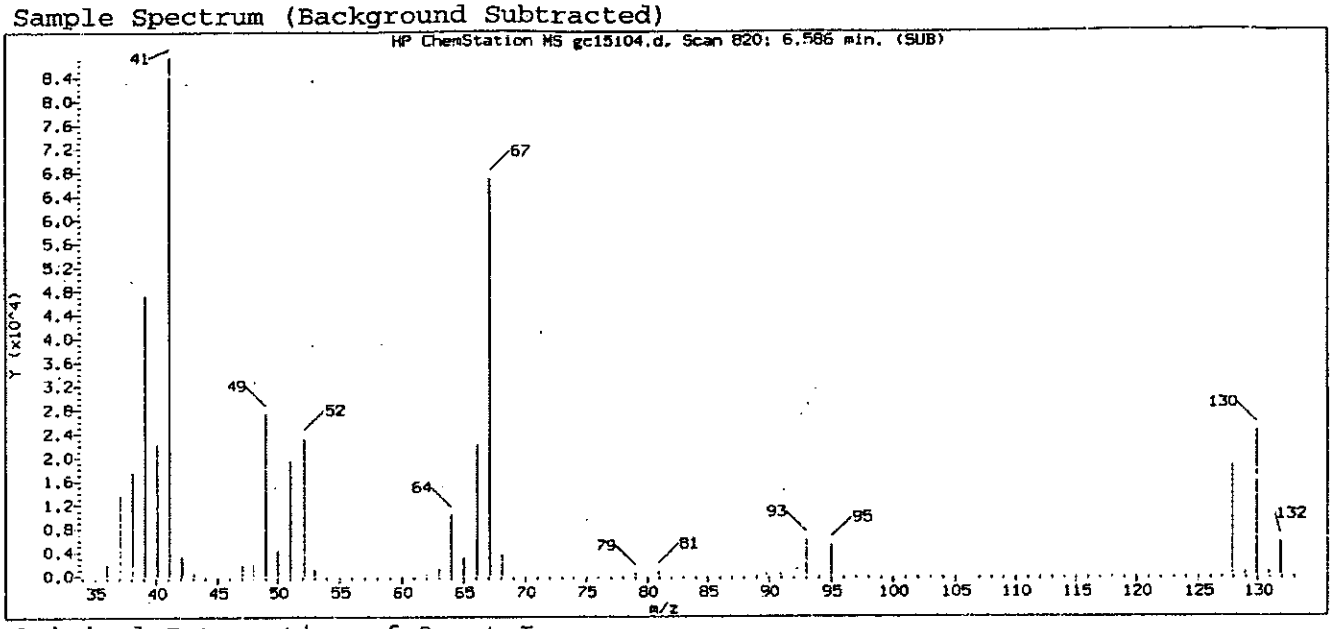
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long
on 10/15/2010 at 13:37.
Target 3.5 esignature user ID: jml01693

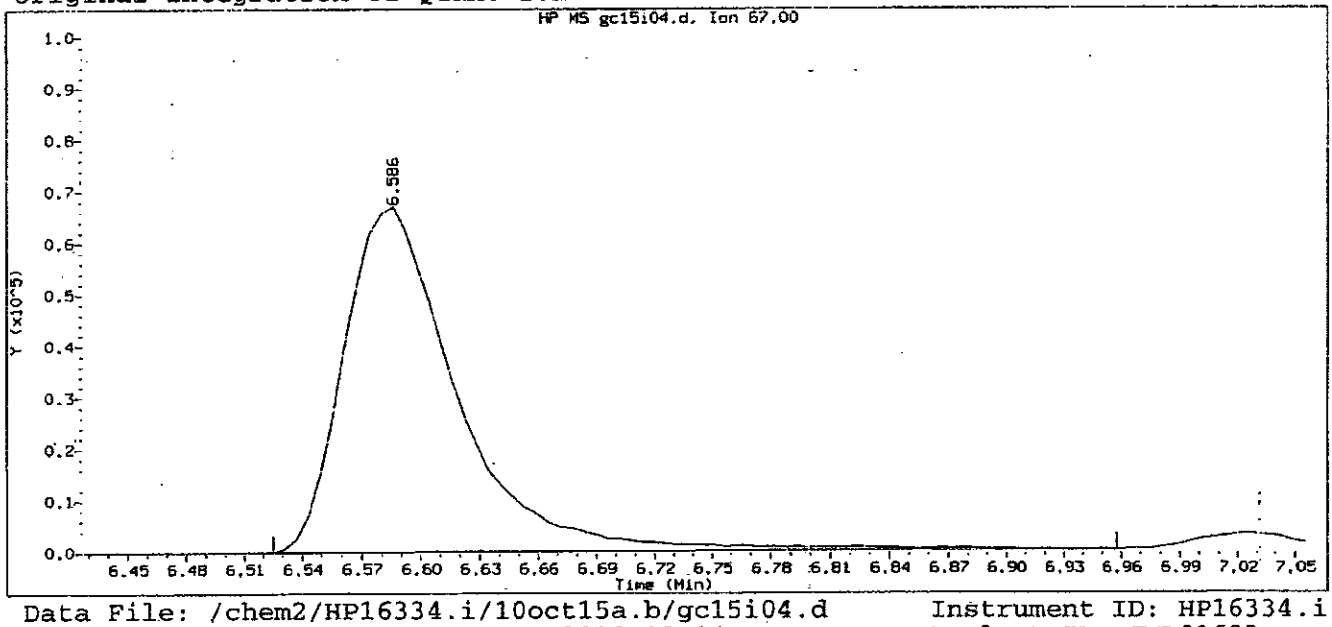
GC/MS audit/management approval: _____ 10/21/10

RAD48 8172

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10oct15a.b/gc15i04.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 12:14 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 15-OCT-2010 12:32
Date, time and analyst ID of latest file update: 15-Oct-2010 12:32 Automation

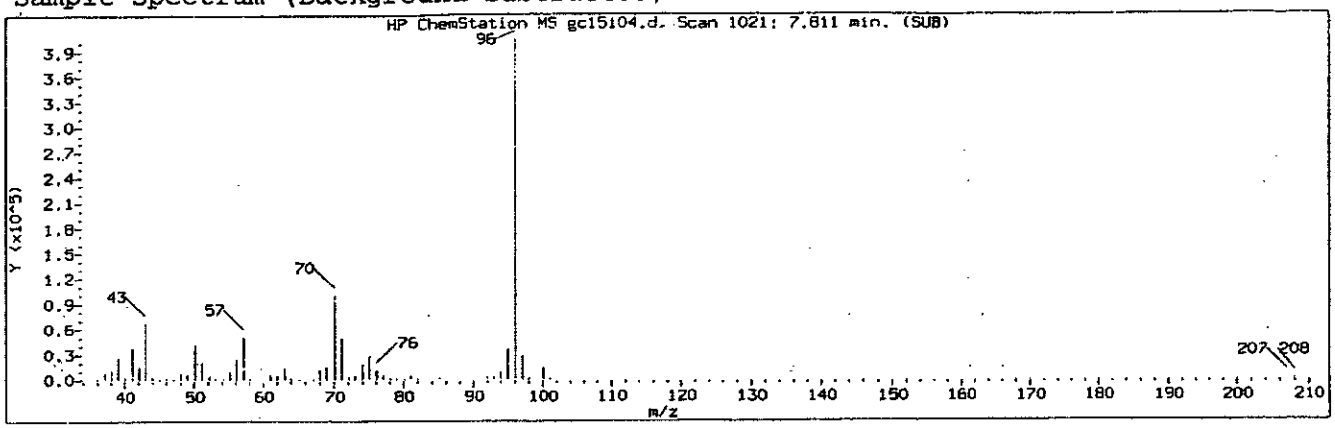
Sample Name: VSTD002 Lab Sample ID: VSTD002

Compound Number	: 55		
Compound Name	: Methacrylonitrile		
Scan Number	: 820		
Retention Time (minutes)	: 6.586		
Quant Ion	: 67.00		
Area	: 268858		
On-column Amount (ng)	: 19.1572		
Integration start scan	: 809	Integration stop scan:	880
Y at integration start	: 0	Y at integration end:	327

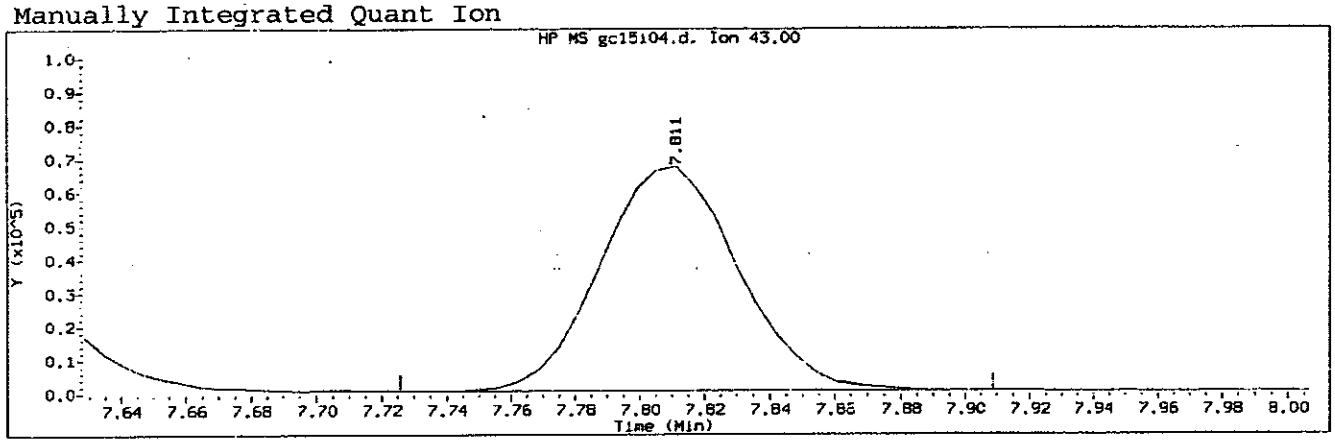
RAD40 #173

Digitally signed by Jason M. Long on 10/15/2010 at 13:37.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10oct15a.b/gc15i04.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 12:14 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 15-OCT-2010 13:36
Date, time and analyst ID of latest file update: 15-Oct-2010 13:36 jml01693

Sample Name: VSTD002 Lab Sample ID: VSTD002

Compound Number	: 76		
Compound Name	: n-Heptane		
Scan Number	: 1021		
Retention Time (minutes)	: 7.811		
Quant Ion	: 43.00		
Area (flag)	: 198739M		
On-Column Amount (ng)	: 1.9732		
Integration start scan	: 1006	Integration stop scan:	1036
Y at integration start	: 582	Y at integration end:	582

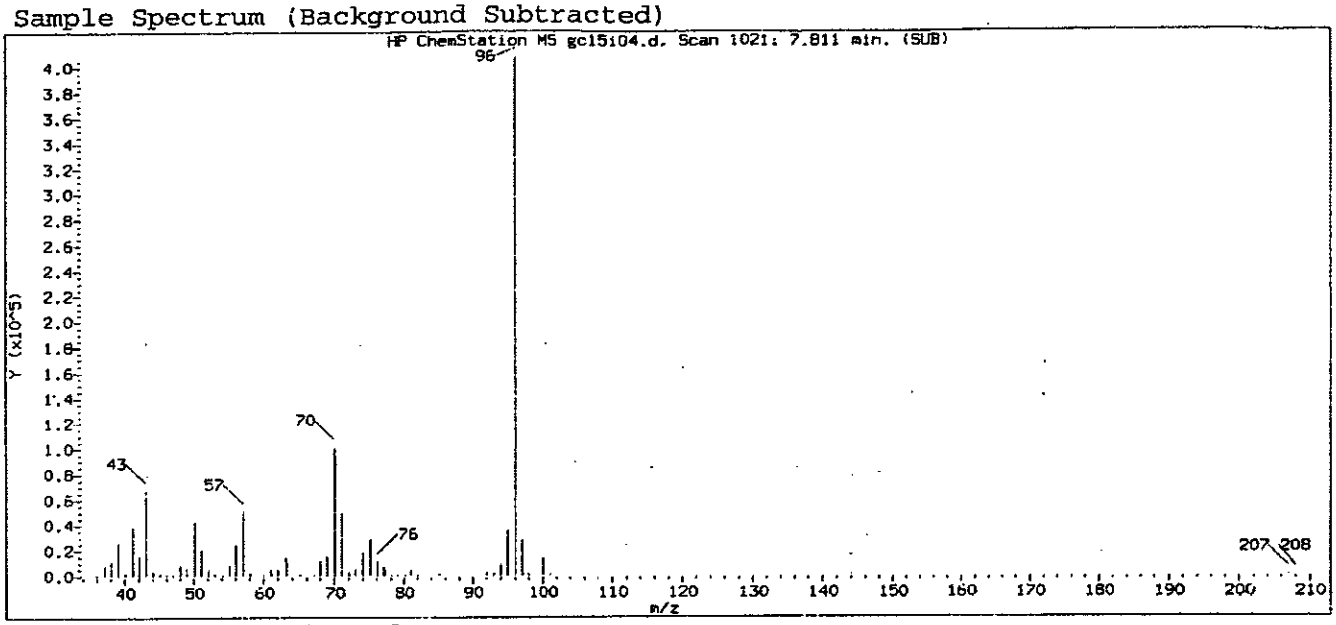
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long
on 10/15/2010 at 13:37.
Target 3.5 esignature user ID: jml01693

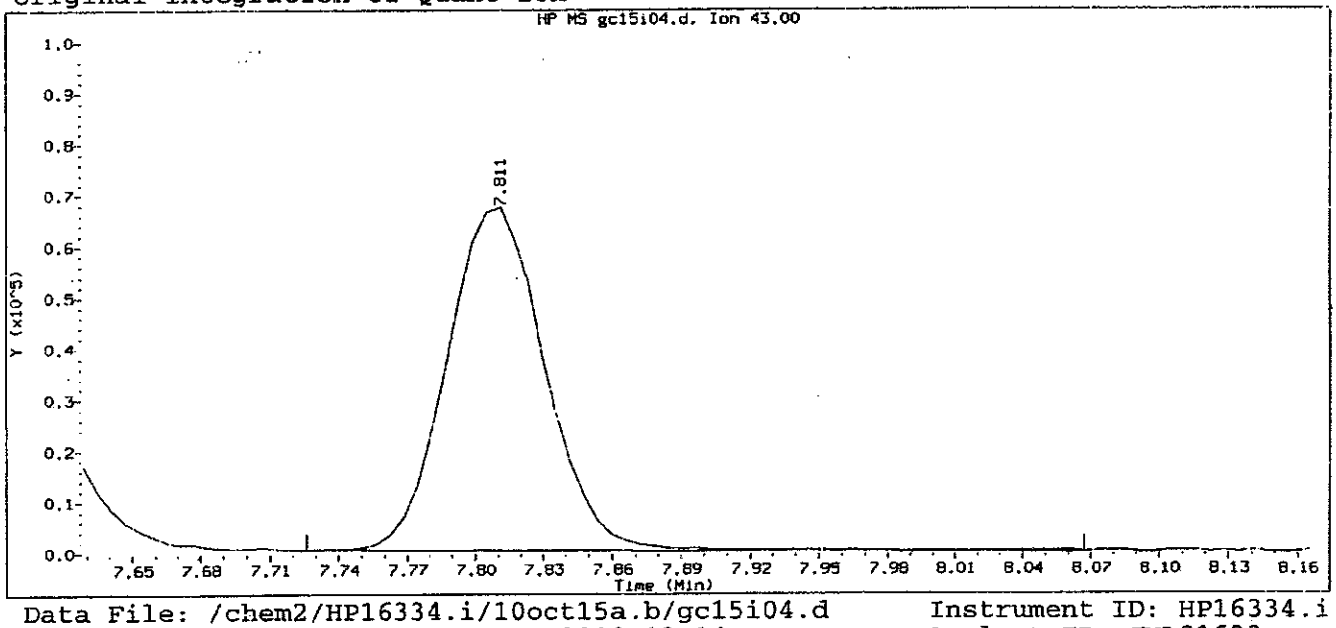
GC/MS audit/management approval: _____ 10/21/10

RAD48 6174

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10oct15a.b/gc15i04.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 12:14 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 15-OCT-2010 12:32
Date, time and analyst ID of latest file update: 15-Oct-2010 12:32 Automation

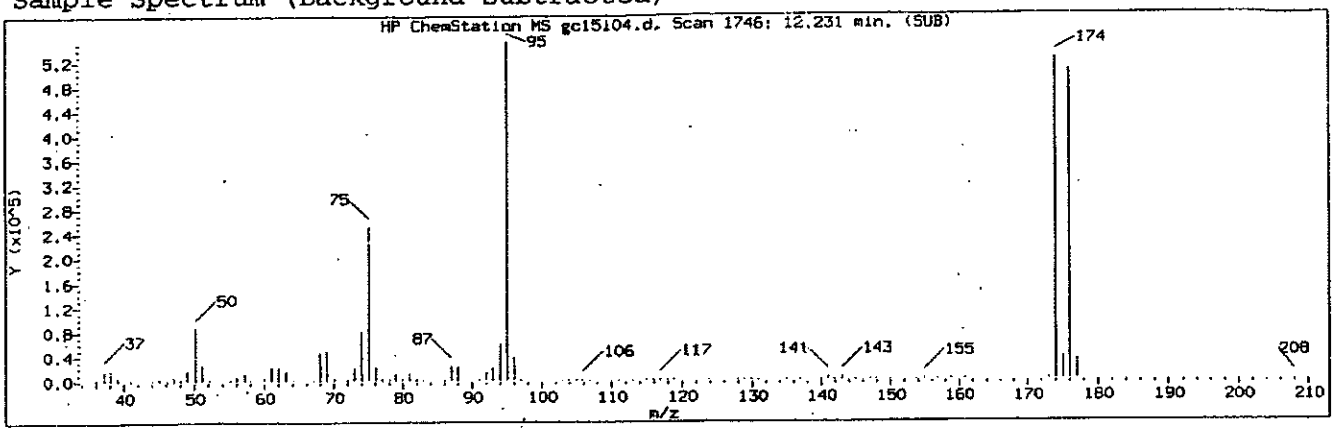
Sample Name: VSTD002 Lab Sample ID: VSTD002

Compound Number	: 76		
Compound Name	: n-Heptane		
Scan Number	: 1021		
Retention Time (minutes)	: 7.811		
Quant Ion	: 43.00		
Area	: 202306		
On-column Amount (ng)	: 2.0245		
Integration start scan	: 1006	Integration stop scan:	1062
Y at integration start	: 659	Y at integration end:	0

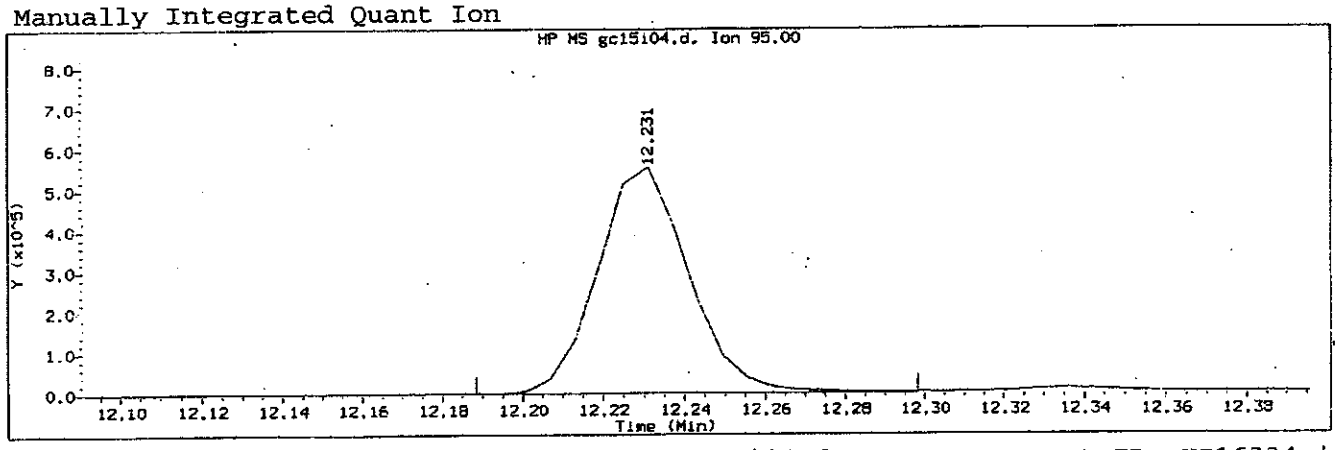
RAB48 8175

Digitally signed by Jason M. Long on 10/15/2010 at 13:37.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10oct15a.b/gc15i04.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 12:14 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 15-OCT-2010 13:36
Date, time and analyst ID of latest file update: 15-Oct-2010 13:36 jml01693

Sample Name: VSTD002 Lab Sample ID: VSTD002

Compound Number	: 126		
Compound Name	: 4-Bromofluorobenzene		
Scan Number	: 1746		
Retention Time (minutes)	: 12.231		
Quant Ion	: 95.00		
Area (flag)	: 864821M		
On-Column Amount (ng)	: 9.9952		
Integration start scan	: 1738	Integration stop scan:	1756
Y at integration start	: 0	Y at integration end:	0

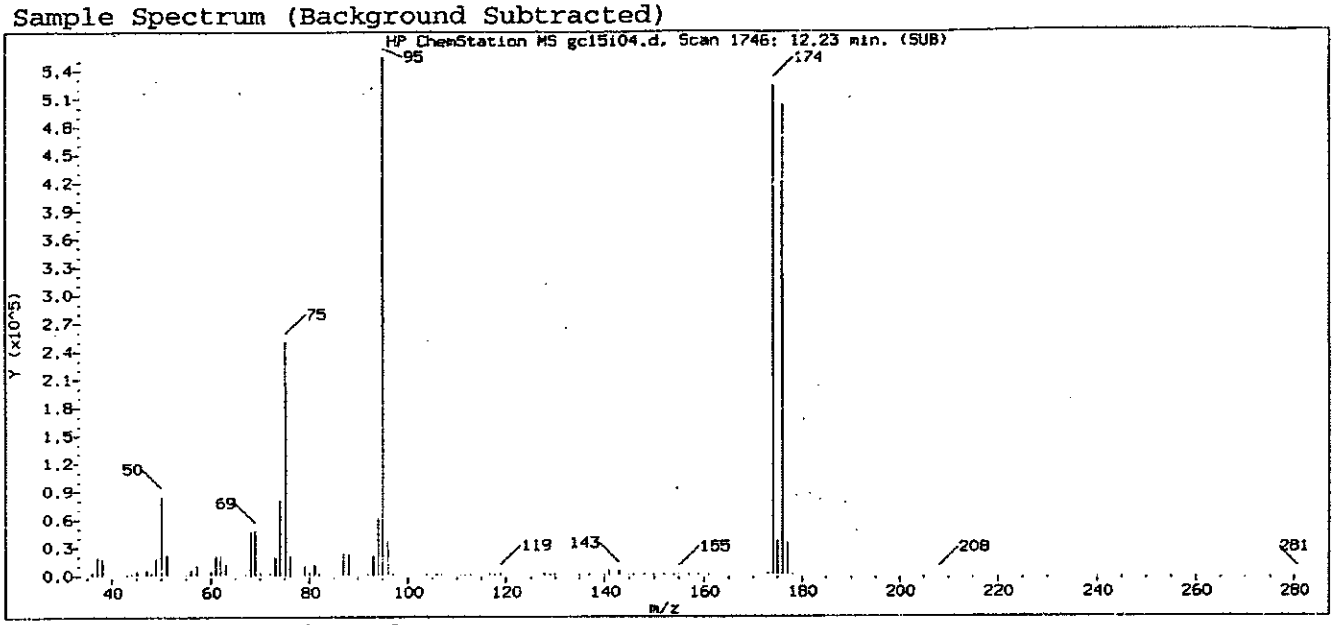
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long
on 10/15/2010 at 13:37.
Target 3.5 esignature user ID: jml01693

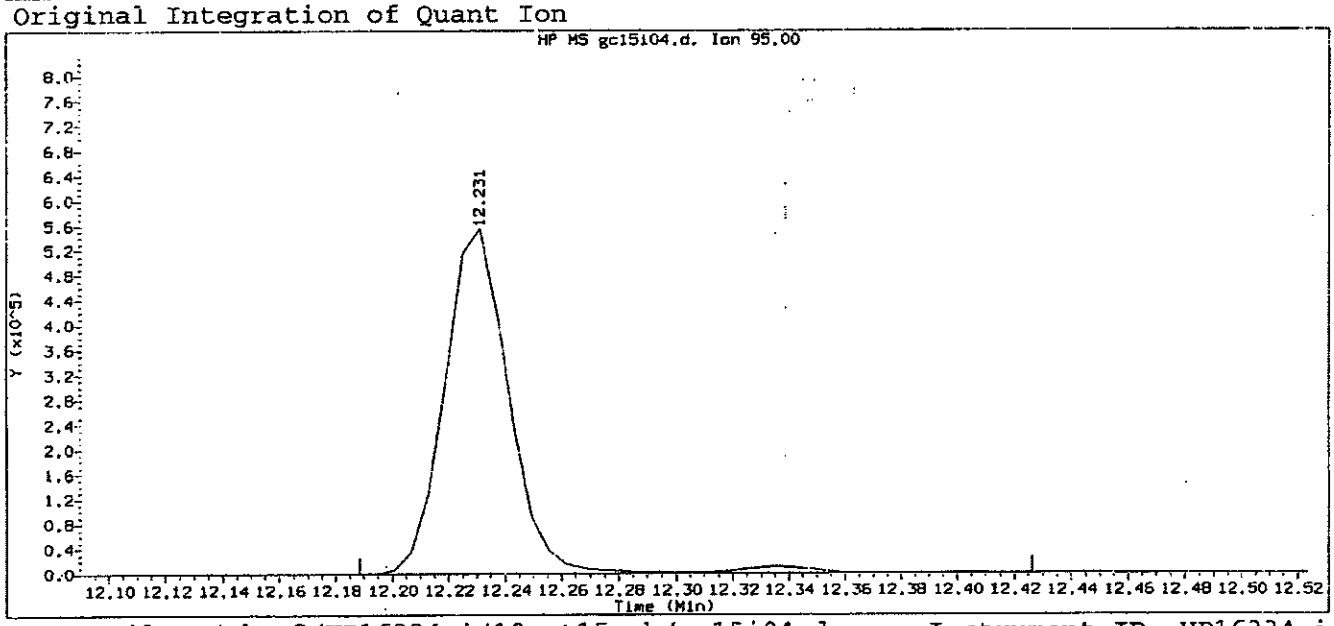
GC/MS audit/management approval: _____ 10/21/10

RAD40 8176

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10oct15a.b/gc15i04.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 12:14 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 15-OCT-2010 12:32
Date, time and analyst ID of latest file update: 15-Oct-2010 12:32 Automation

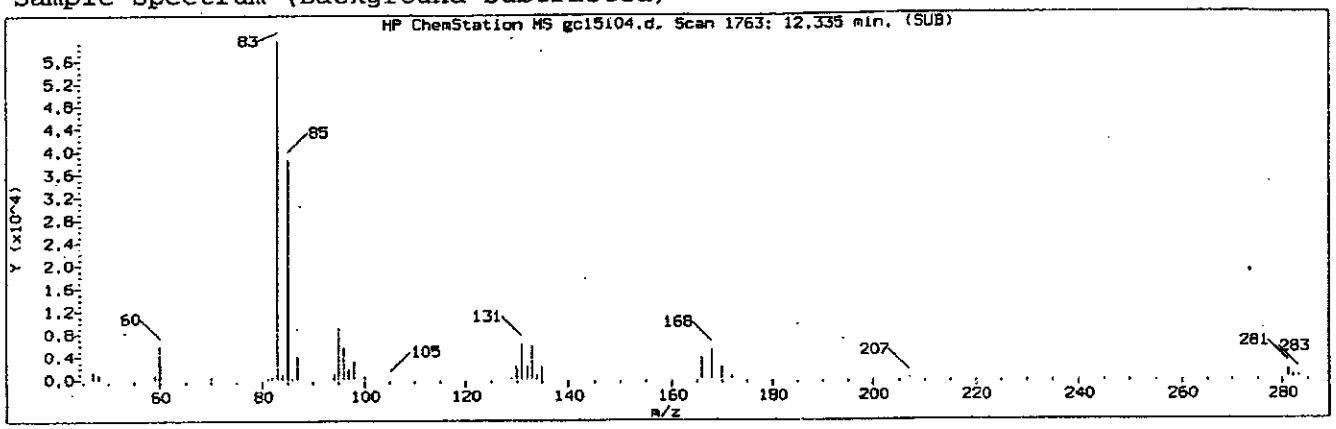
Sample Name: VSTD002 Lab Sample ID: VSTD002

Compound Number	: 126		
Compound Name	: 4-Bromofluorobenzene		
Scan Number	: 1746		
Retention Time (minutes)	: 12.231		
Quant Ion	: 95.00		
Area	: 887113		
On-column Amount (ng)	: 10.2511		
Integration start scan	: 1738	Integration stop scan:	1777
Y at integration start	: 0	Y at integration end:	0

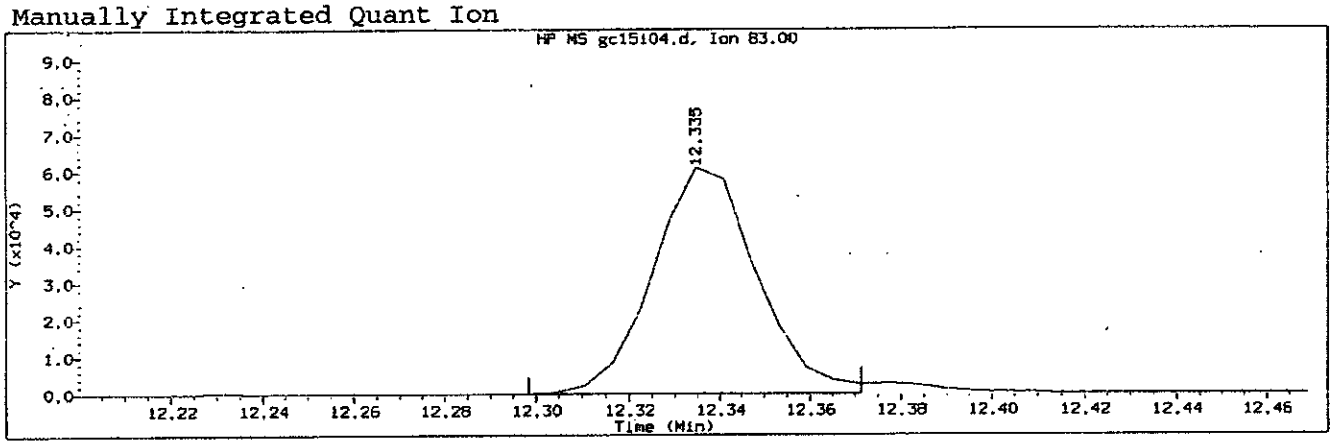
RAD48 0177

Digitally signed by Jason M. Long on 10/15/2010 at 13:37.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10oct15a.b/gc15i04.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 12:14 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 15-OCT-2010 13:36
Date, time and analyst ID of latest file update: 15-Oct-2010 13:36 jml01693

Sample Name: VSTD002 Lab Sample ID: VSTD002

Compound Number	: 128		
Compound Name	: 1,1,2,2-Tetrachloroethane		
Scan Number	: 1763		
Retention Time (minutes)	: 12.335		
Quant Ion	: 83.00		
Area (flag)	: 97525M		
On-Column Amount (ng)	: 1.9648		
Integration start scan	: 1756	Integration stop scan:	1768
Y at integration start	: 0	Y at integration end:	0

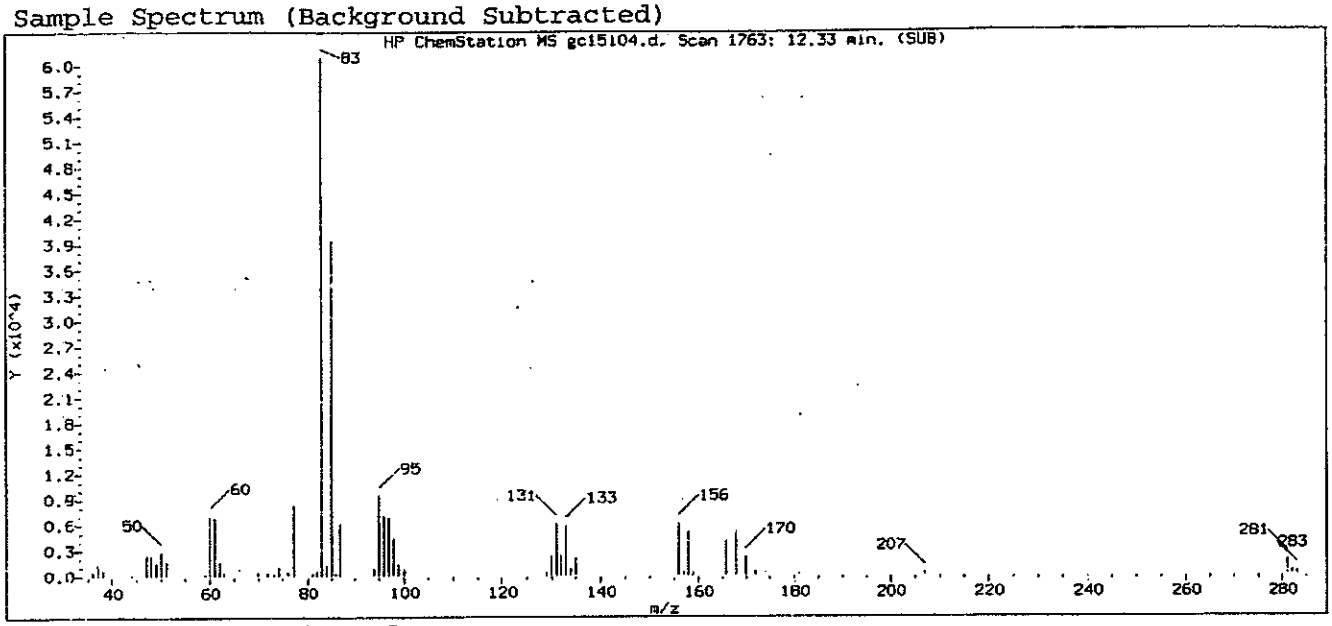
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long
on 10/15/2010 at 13:37.
Target 3.5 esignature user ID: jml01693

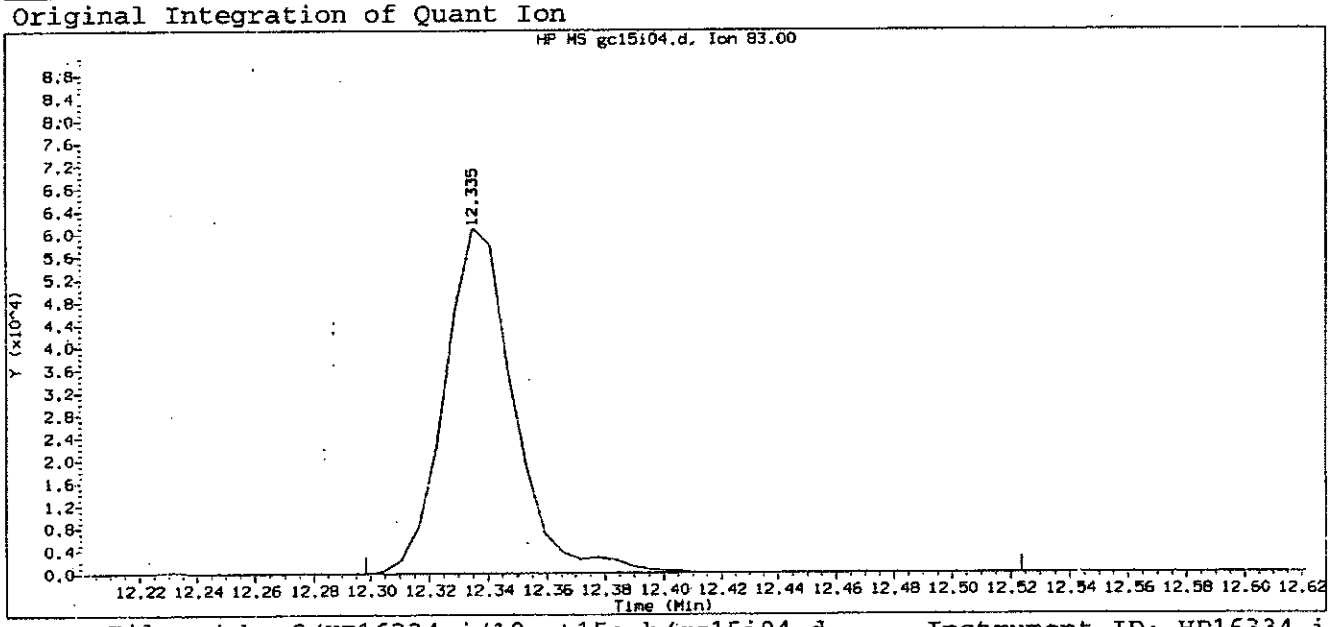
GC/MS audit/management approval: _____ 10/21/10

RAD48 0178

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10oct15a.b/gc15i04.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 12:14 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 15-OCT-2010 12:32
Date, time and analyst ID of latest file update: 15-Oct-2010 12:32 Automation

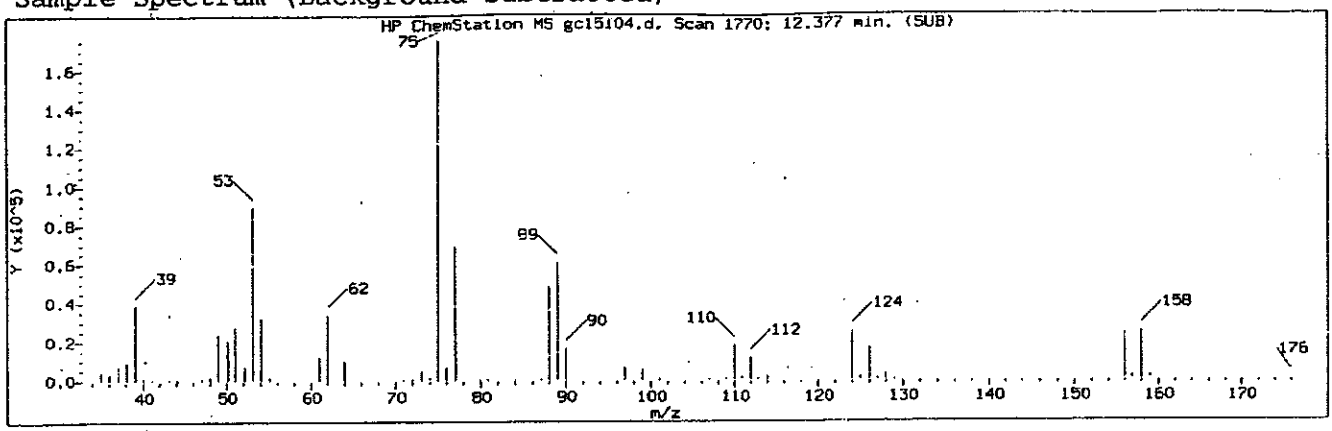
Sample Name: VSTD002 Lab Sample ID: VSTD002

Compound Number : 128
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1763
Retention Time (minutes): 12.335
Quant Ion : 83.00
Area : 100307
On-column Amount (ng) : 1.9775
Integration start scan : 1756 Integration stop scan: 1793
Y at integration start : 0 Y at integration end: 0

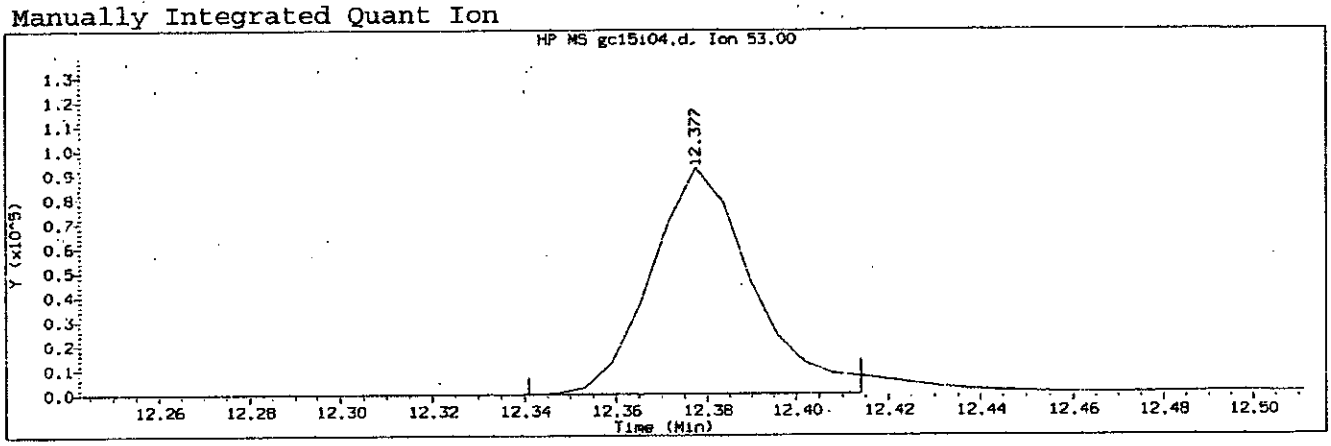
RAD48 8179

Digitally signed by Jason M. Long on 10/15/2010 at 13:37.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10oct15a.b/gc15i04.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 12:14 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 15-OCT-2010 13:36
Date, time and analyst ID of latest file update: 15-Oct-2010 13:36 jml01693

Sample Name: VSTD002 Lab Sample ID: VSTD002

Compound Number	: 130		
Compound Name	: trans-1,4-Dichloro-2-Butene		
Scan Number	: 1770		
Retention Time (minutes)	: 12.377		
Quant Ion	: 53.00		
Area (flag)	: 143675M		
On-Column Amount (ng)	: 19.1769		
Integration start scan	: 1763	Integration stop scan:	1775
Y at integration start	: 0	Y at integration end:	0

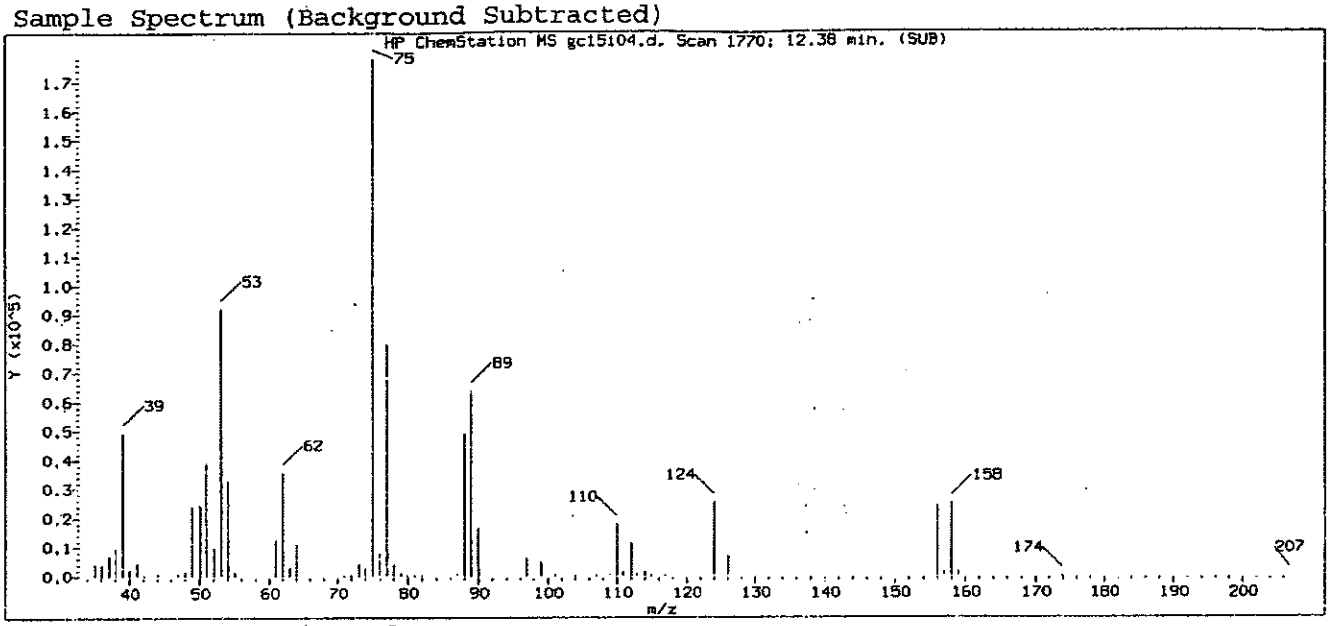
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long on 10/15/2010 at 13:37. Target 3.5 esignature user ID: jml01693

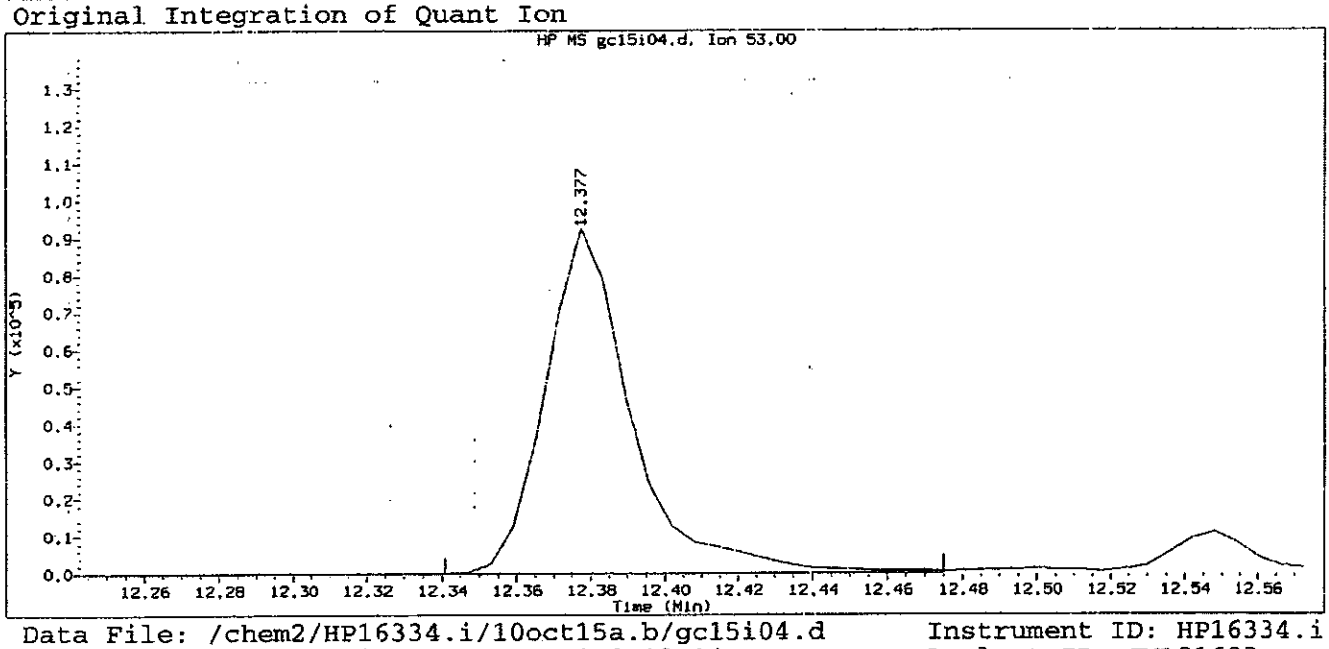
GC/MS audit/management approval: _____ 10/21/10

RAD48 0188

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10oct15a.b/gc15i04.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 12:14 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 15-OCT-2010 12:32
Date, time and analyst ID of latest file update: 15-Oct-2010 12:32 Automation

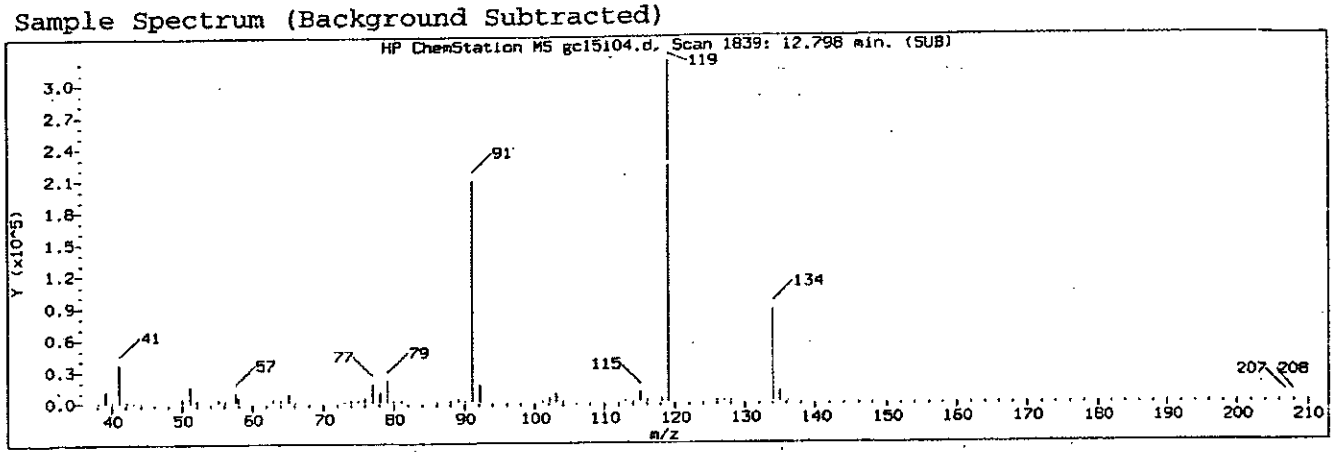
Sample Name: VSTD002 Lab Sample ID: VSTD002

Compound Number : 130
Compound Name : trans-1,4-Dichloro-2-Butene
Scan Number : 1770
Retention Time (minutes): 12.377
Quant Ion : 53.00
Area : 150815
On-column Amount (ng) : 16.8863
Integration start scan : 1763 Integration stop scan: 1785
Y at integration start : 0 Y at integration end: 0

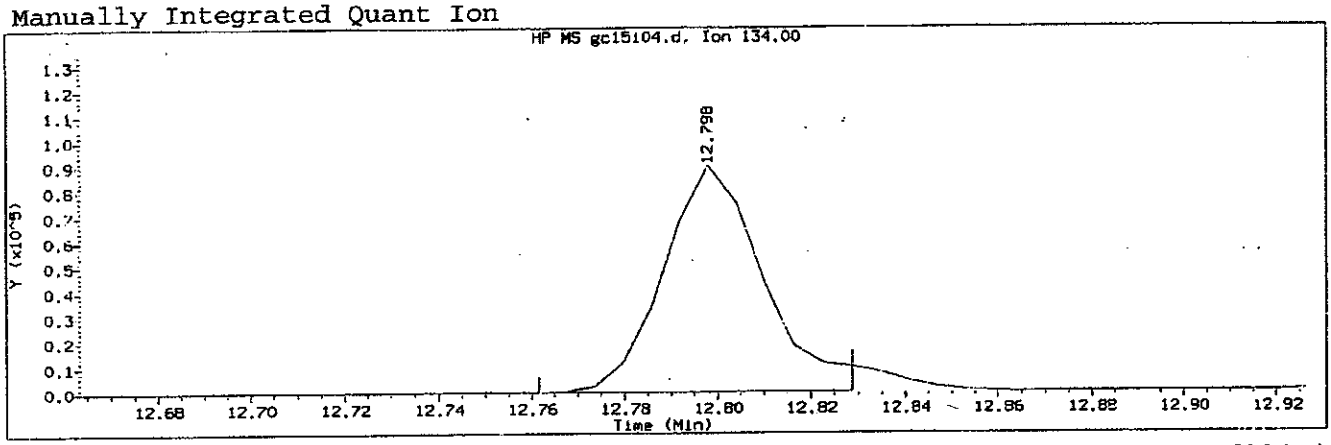
RAD48 6181

Digitally signed by Jason M. Long on 10/15/2010 at 13:37.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10oct15a.b/gc15i04.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 12:14 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 15-OCT-2010 13:36
Date, time and analyst ID of latest file update: 15-Oct-2010 13:36 jml01693

Sample Name: VSTD002 Lab Sample ID: VSTD002

Compound Number	: 137		
Compound Name	: tert-Butylbenzene		
Scan Number	: 1839		
Retention Time (minutes)	: 12.798		
Quant Ion	: 134.00		
Area (flag)	: 133449M		
On-Column Amount (ng)	: 1.9624		
Integration start scan	: 1832	Integration stop scan:	1843
Y at integration start	: 0	Y at integration end:	0

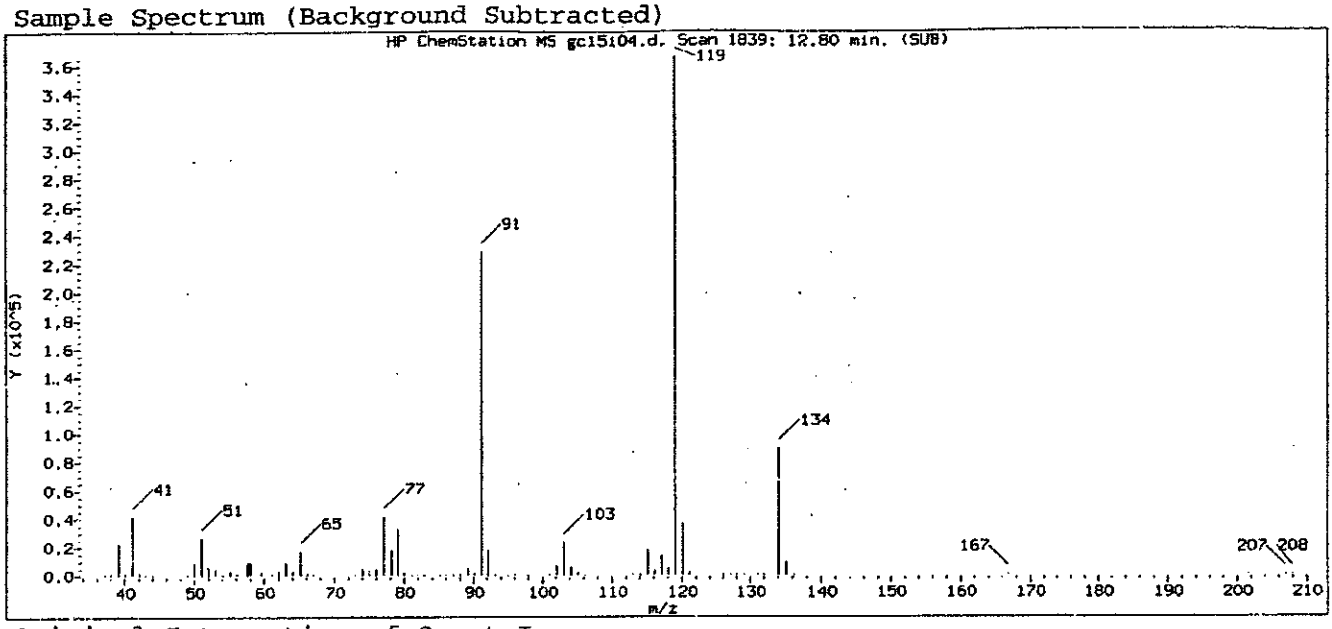
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long
on 10/15/2010 at 13:37.
Target 3.5 esignature user ID: jml01693

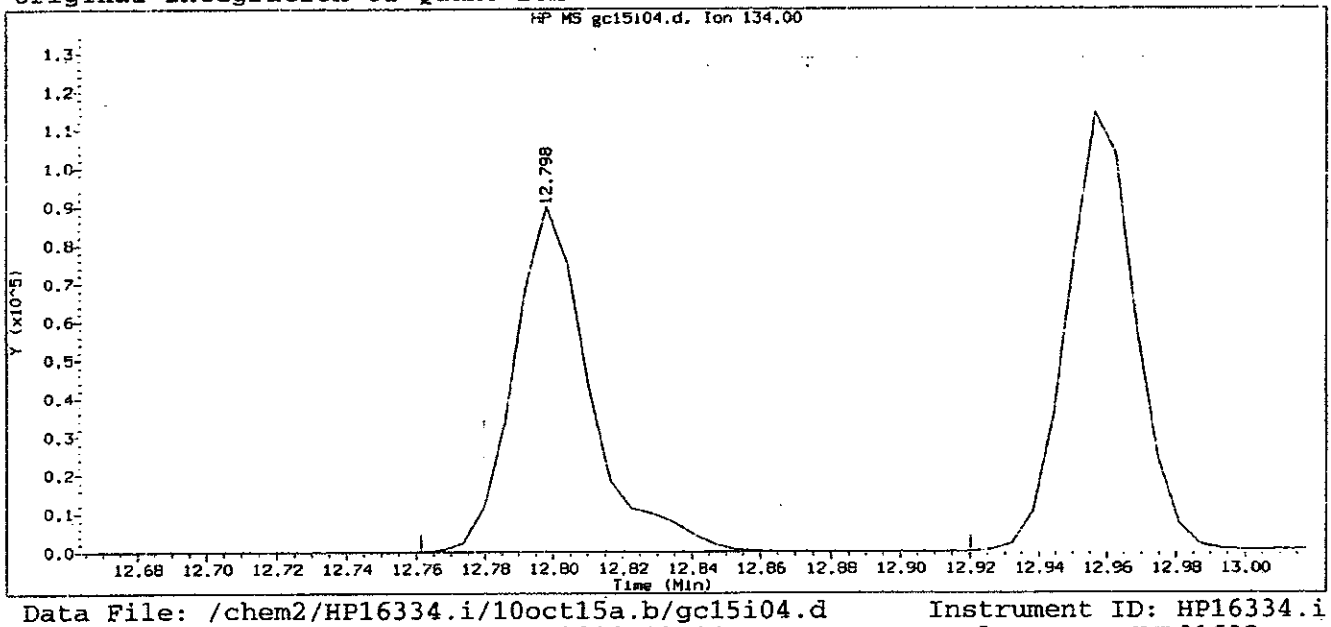
GC/MS audit/management approval: _____ 10/21/10

RAD40 8182

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10oct15a.b/gc15i04.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 12:14 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 15-OCT-2010 12:32
Date, time and analyst ID of latest file update: 15-Oct-2010 12:32 Automation

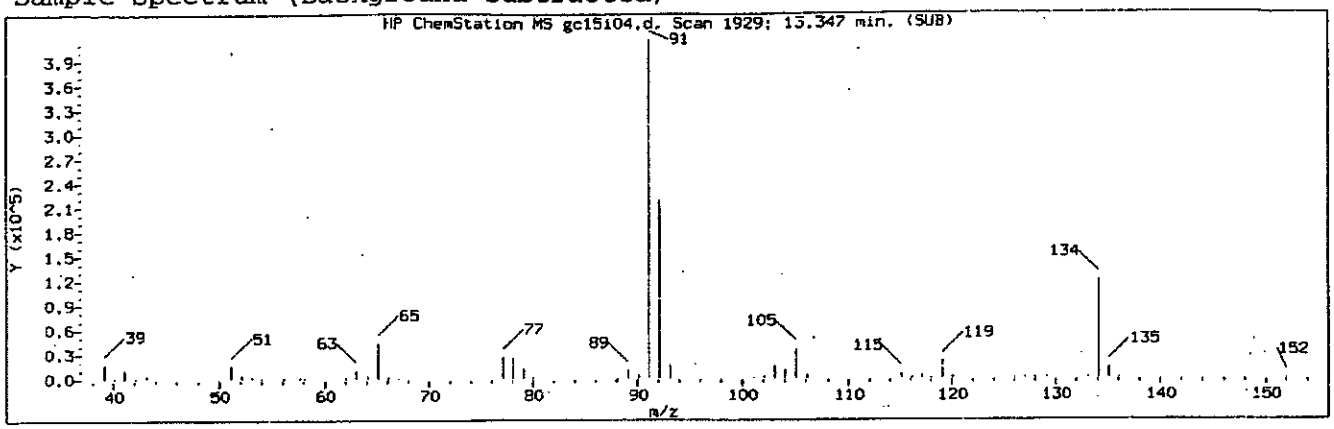
Sample Name: VSTD002 Lab Sample ID: VSTD002

Compound Number	: 137		
Compound Name	: tert-Butylbenzene		
Scan Number	: 1839		
Retention Time (minutes)	: 12.798		
Quant Ion	: 134.00		
Area	: 138882		
On-column Amount (ng)	: 1.9440		
Integration start scan	: 1832	Integration stop scan:	1858
Y at integration start	: 0	Y at integration end:	0

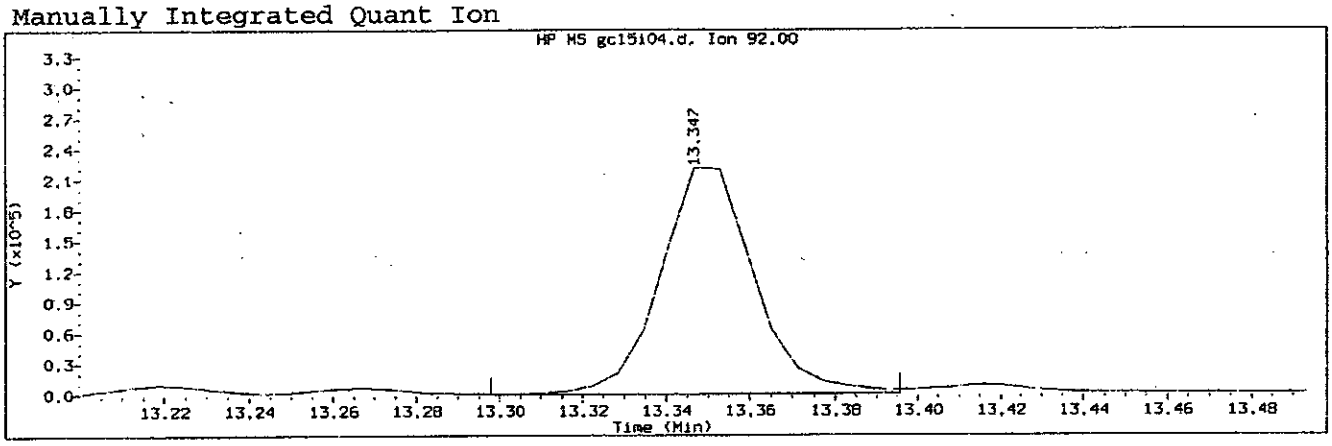
RAD48 #183

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Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10oct15a.b/gc15i04.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 12:14 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 15-OCT-2010 13:36
Date, time and analyst ID of latest file update: 15-Oct-2010 13:36 jml01693

Sample Name: VSTD002 Lab Sample ID: VSTD002

Compound Number : 147
Compound Name : n-Butylbenzene
Scan Number : 1929
Retention Time (minutes): 13.347
Quant Ion : 92.00
Area (flag) : 344665M
On-Column Amount (ng) : 1.9717
Integration start scan : 1920 Integration stop scan: 1936
Y at integration start : 152 Y at integration end: 202

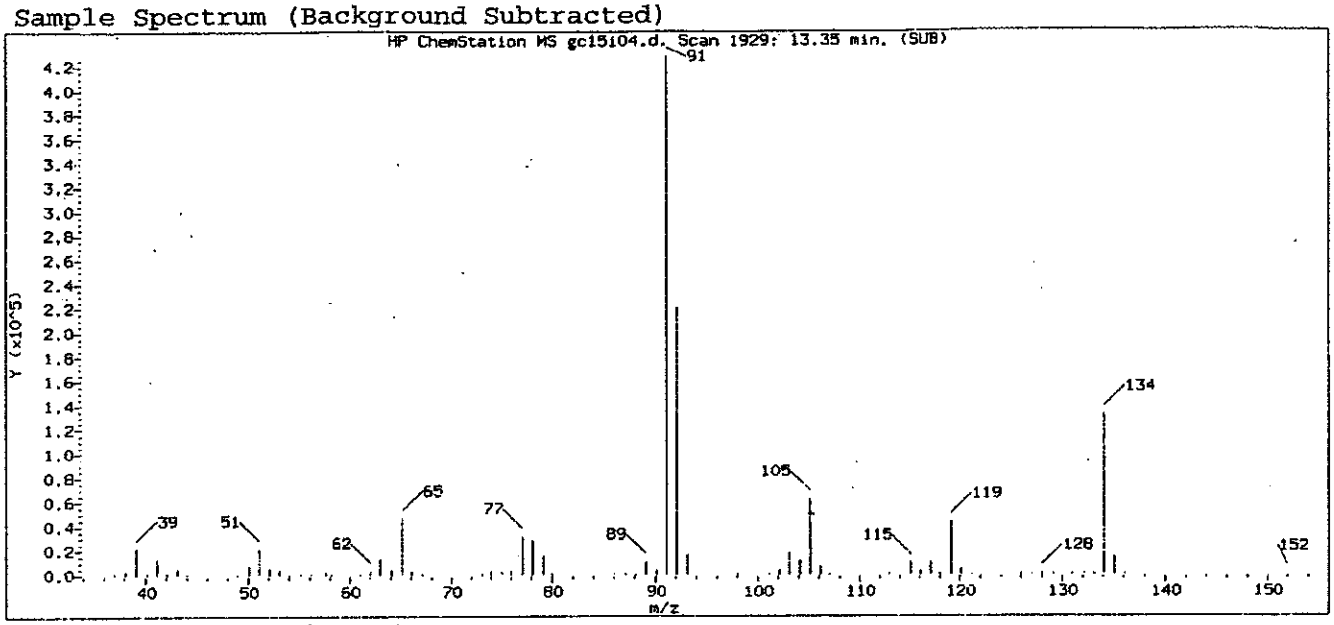
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long on 10/15/2010 at 13:37. Target 3.5 esignature user ID: jml01693

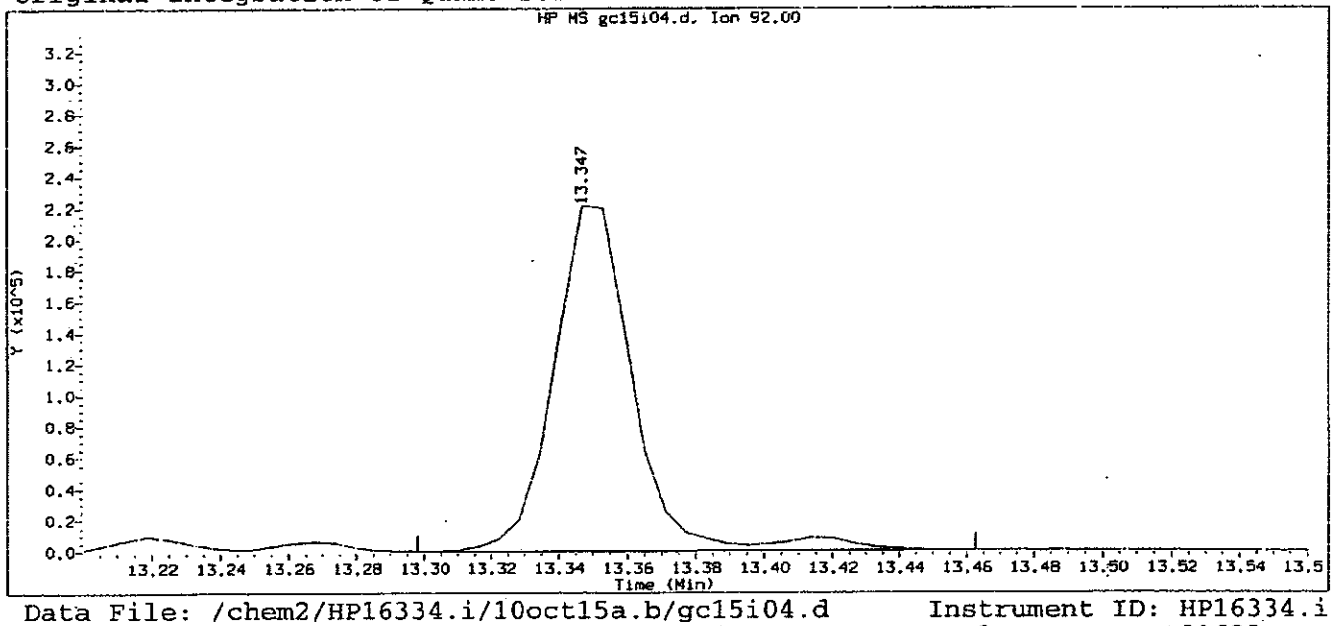
GC/MS audit/management approval: _____ 10/21/10

RAD48 6184

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10oct15a.b/gc15i04.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 12:14 Analyst ID: JML01693

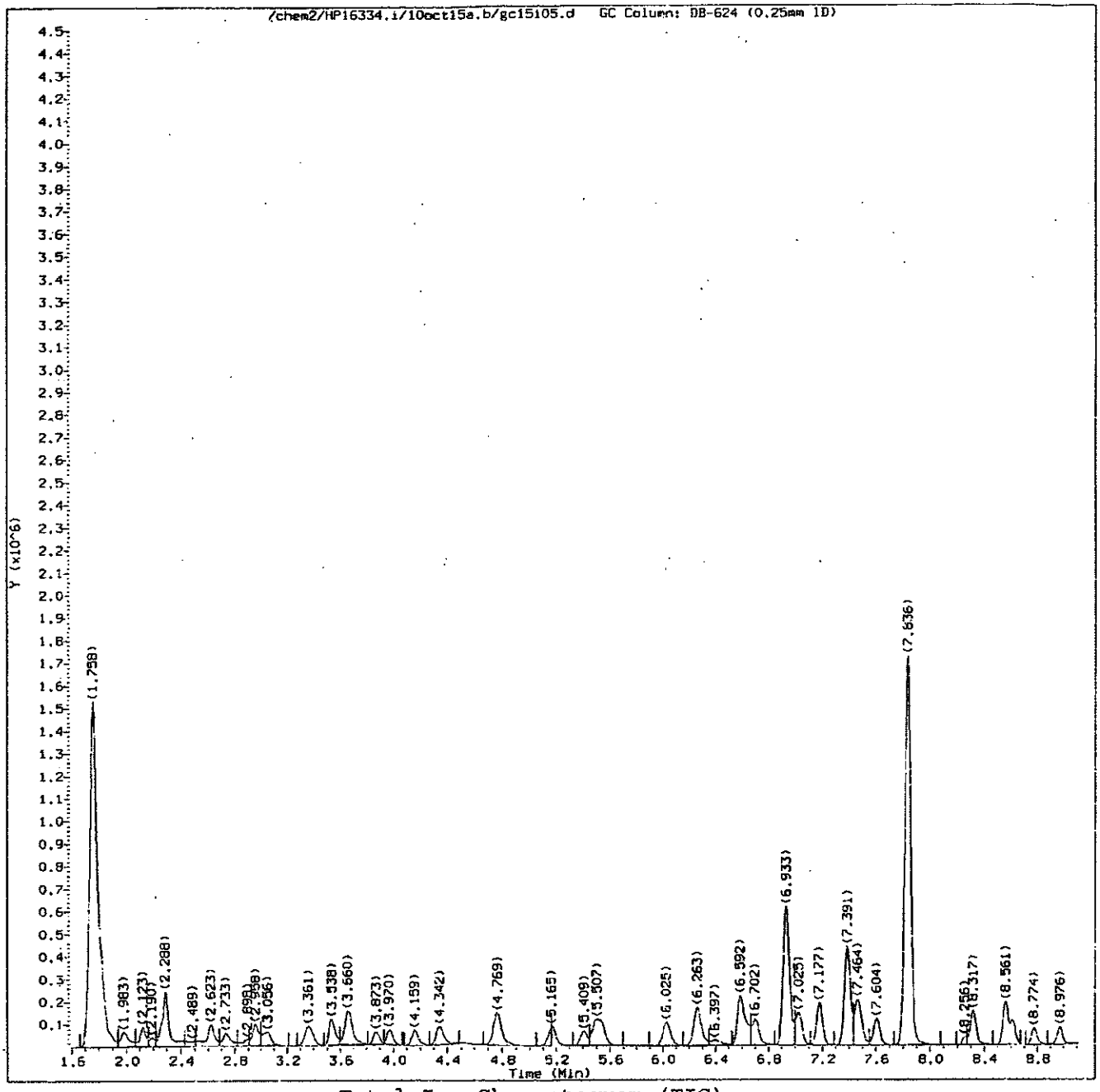
Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 15-OCT-2010 12:32
Date, time and analyst ID of latest file update: 15-Oct-2010 12:32 Automation

Sample Name: VSTD002 Lab Sample ID: VSTD002

Compound Number	: 147		
Compound Name	: n-Butylbenzene		
Scan Number	: 1929		
Retention Time (minutes)	: 13.347		
Quant Ion	: 92.00		
Area	: 358671		
On-column Amount (ng)	: 1.9728		
Integration start scan	: 1920	Integration stop scan:	1947
Y at integration start	: 152	Y at integration end:	237

RAD48 0185

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Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

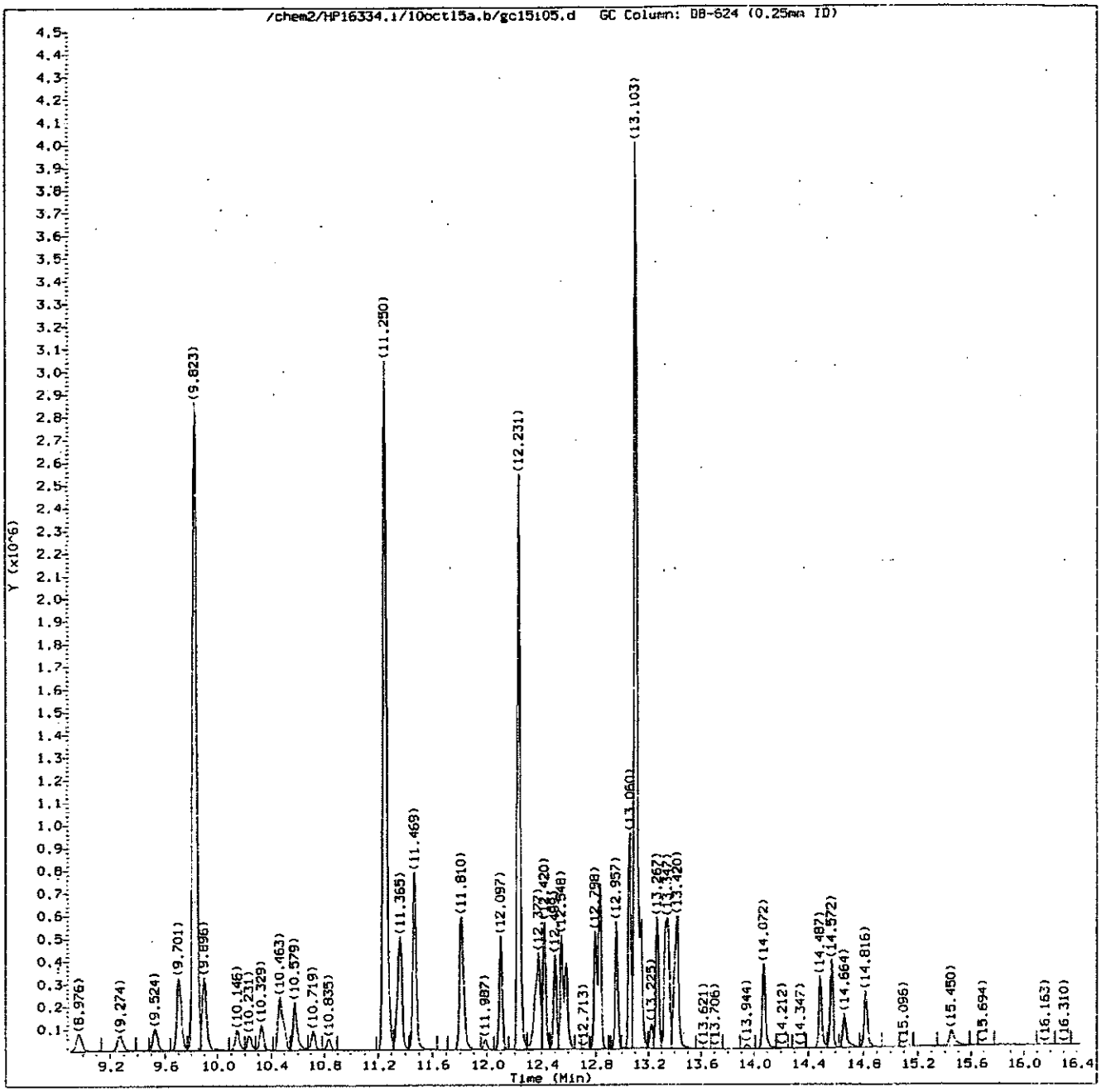
Data File: /chem2/HP16334.i/10oct15a.b/gc15i05.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 12:36 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 15-OCT-2010 13:36
Date, time and analyst ID of latest file update: 15-Oct-2010 13:36 jml01693

Sample Name: VSTD001 Lab Sample ID: VSTD001

RAD40 0186

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on 10/15/2010 at 13:37.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/10oct15a.b/gc15i05.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 12:36 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 15-OCT-2010 13:36
Date, time and analyst ID of latest file update: 15-Oct-2010 13:36 jml01693

Sample Name: VSTD001 Lab Sample ID: VSTD001

RAD40 8187

Digitally signed by Jason M. Long
on 10/15/2010 at 13:37.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/10oct15a.b/gc15i05.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 12:36 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 15-OCT-2010 13:36
Date, time and analyst ID of latest file update: 15-Oct-2010 13:36 jml01693

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
2) Dichlorodifluoromethane	(1)	1.983	85	114029	1.024
5) Chloromethane	(1)	2.123	50	100014	1.030
6) Vinyl Chloride	(1)	2.257	62	95841M	1.013
9) 1,3-Butadiene	(1)	2.288	39	126802	1.110
10) Bromomethane	(1)	2.623	94	72453	1.049
11) Chloroethane	(1)	2.733	64	58571	1.094
13) Dichlorofluoromethane	(1)	2.952	67	120307	1.017
15) Trichlorofluoromethane	(1)	3.056	101	119720	1.024
17) Ethyl Ether	(1)	3.343	59	42531	0.975
18) Freon 123a	(1)	3.367	67	75056	1.020
23) Acrolein	(4)	3.532	56	236533	48.364
24) 1,1-Dichloroethene	(1)	3.660	96	60372	0.999
25) Freon 113	(1)	3.678	101	63098	1.008
26) Acetone	(4)	3.739	58	20035	9.528
27) Methyl Iodide	(1)	3.873	142	117983	0.995
29) Carbon Disulfide	(1)	3.970	76	172073	0.979
32) Allyl Chloride	(1)	4.159	41	85224	0.953
33) Methyl Acetate	(1)	4.214	43	13283	0.784
34) Methylene Chloride	(1)	4.342	84	69796	1.040
36)*t-Butyl Alcohol-d10	(4)	4.373	65	87033	50.000
38) t-Butyl Alcohol	(4)	4.501	59	39335M	19.378
40) Methyl Tertiary Butyl Ether	(1)	4.751	73	134847	0.988
41) trans-1,2-Dichloroethene	(1)	4.769	96	70100	1.011
39) Acrylonitrile	(4)	4.769	53	37352	4.589
37) 1,2-Dichloroethene (Total)	(1)		96	146085	2.028
44) n-Hexane	(1)	5.171	57	90966	0.991
45) 1,1-Dichloroethane	(1)	5.409	63	118281	1.016
47) di-Isopropyl Ether	(1)	5.495	45	197542	0.988
48) 2-Chloro-1,3-Butadiene	(1)	5.543	53	84402	0.970
49) Ethyl t-Butyl Ether	(1)	6.025	59	177416	0.991
51) 2,2-Dichloropropane	(1)	6.251	77	91404	0.986
50) cis-1,2-Dichloroethene	(1)	6.263	96	75985	1.017
52) 2-Butanone	(4)	6.293	43	109407	10.086
53) Propionitrile	(4)	6.403	54	54263	18.590
55) Methacrylonitrile	(4)	6.592	67	126550	10.082
56) Bromochloromethane	(1)	6.598	128	30330	0.968
57) Tetrahydrofuran	(4)	6.647	71	35441	10.094
58) Chloroform	(1)	6.708	83	118155	1.010

M = Compound was manually integrated.
* = Compound is an internal standard.

RAD48 8138

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Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/10oct15a.b/gc15i05.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 12:36 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 15-OCT-2010 13:36
Date, time and analyst ID of latest file update: 15-Oct-2010 13:36 jml01693

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
61)$Dibromofluoromethane	(1)	6.927	113	547265	9.888
62)$Dibromofluoromethane(mz111)	(1)	6.933	111	558666	9.911
63) 1,1,1-Trichloroethane	(1)	6.958	97	100108	0.989
64) Cyclohexane	(1)	7.031	56	111939	1.003
65) 1,1-Dichloropropene	(1)	7.177	75	90934	1.004
66) Carbon Tetrachloride	(1)	7.177	117	85167	0.973
67) Isobutyl Alcohol	(4)	7.360	41	30617M	46.718
70)$1,2-Dichloroethane-d4	(1)	7.391	102	110269	10.034
68)$1,2-Dichloroethane-d4(mz104)	(1)	7.391	104	69662	10.000
69)$1,2-Dichloroethane-d4(mz65)	(1)	7.391	65	478477	10.032
72) Benzene	(1)	7.464	78	266979	1.001
74) 1,2-Dichloroethane	(1)	7.500	62	63904	1.009
73) 1,2-Dichloroethane(mz98)	(1)	7.500	98	5904	0.966
75) t-Amyl Methyl Ether	(1)	7.610	73	152366	0.992
76) n-Heptane	(1)	7.811	43	95034M	0.984
77)*Fluorobenzene	(1)	7.836	96	2465707	10.000
81) n-Butanol	(4)	8.256	56	50247	92.020
83) Trichloroethene	(1)	8.323	95	72802	1.002
84) Methylcyclohexane	(1)	8.561	83	118776	0.959
85) 1,2-Dichloropropane	(1)	8.616	63	66647	0.996
88) Dibromomethane	(1)	8.768	93	29195	0.974
87) Methyl Methacrylate	(4)	8.787	69	20124	0.933
89) 1,4-Dioxane	(4)	8.799	88	6263	45.588
90) Bromodichloromethane	(1)	8.970	83	72040	0.961
91) 2-Nitropropane	(4)	9.274	41	69371	10.626
94) cis-1,3-Dichloropropene	(1)	9.530	75	83036	0.962
96) 4-Methyl-2-Pentanone	(1)	9.701	43	289792	9.472
97)$Toluene-d8	(2)	9.823	98	2404846	10.017
98)$Toluene-d8(mz100)	(2)	9.823	100	1568611	9.955
101) Toluene	(2)	9.896	92	172372	1.000
102) trans-1,3-Dichloropropene	(2)	10.146	75	66516	0.962
103) Ethyl Methacrylate	(2)	10.231	69	48392	0.984
104) 1,1,2-Trichloroethane	(2)	10.329	97	40828	0.982
105) Tetrachloroethene	(2)	10.463	166	82340	0.991
106) 1,3-Dichloropropane	(2)	10.500	76	70928	0.998
107) 2-Hexanone	(2)	10.579	43	201487	9.791
108) Dibromochloromethane	(2)	10.719	129	49118	1.012
109) 1,2-Dibromoethane	(2)	10.835	107	37768	0.995

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 10/15/2010 at 13:37.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/10oct15a.b/gc15i05.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 12:36 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 15-OCT-2010 13:36
Date, time and analyst ID of latest file update: 15-Oct-2010 13:36 jml01693

Sample Name: VSTD001 Lab Sample ID: VSTD001

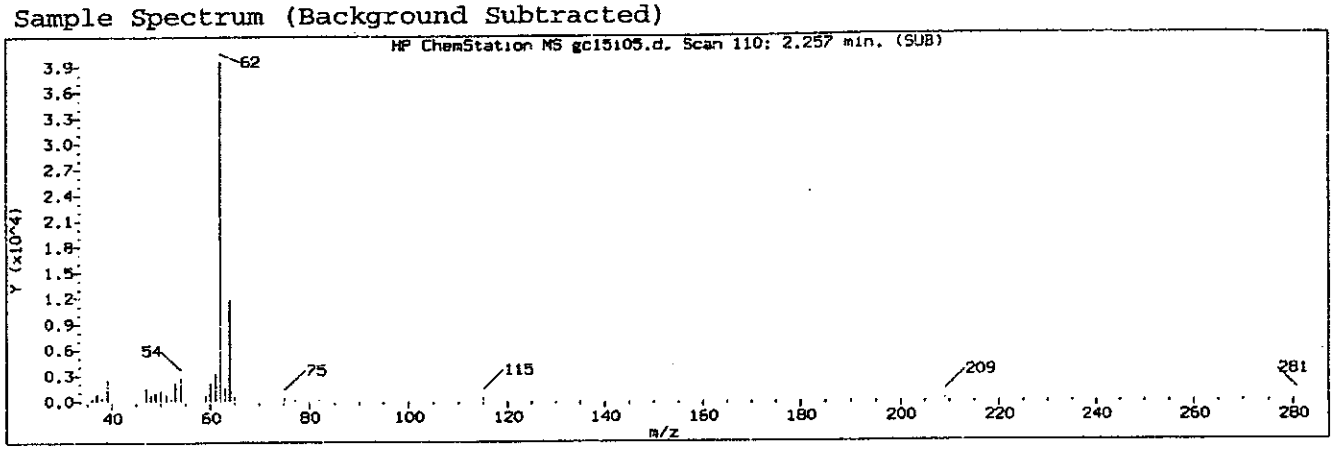
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
110)*Chlorobenzene-d5	(2)	11.250	117	1796279	10.000
112) Chlorobenzene	(2)	11.274	112	197247	0.999
113) 1,1,1,2-Tetrachloroethane	(2)	11.347	131	66002	0.996
114) Ethylbenzene	(2)	11.365	91	324867	0.978
117) m+p-Xylene	(2)	11.469	106	259730	1.960
115) Xylene (Total)	(2)		106	388385	2.941
118) o-Xylene	(2)	11.804	106	128655	0.981
119) Styrene	(2)	11.823	104	189226	0.972
120) Bromoform	(2)	11.987	173	23333	0.941
121) Isopropylbenzene	(2)	12.097	105	332745	0.987
126)$4-Bromofluorobenzene	(2)	12.231	95	836788	10.143
127)$4-Bromofluorobenzene(mz174)	(2)	12.231	174	762791	10.066
128) 1,1,2,2-Tetrachloroethane	(3)	12.335	83	44991M	0.964
129) Bromobenzene	(3)	12.359	156	80930	0.978
130) trans-1,4-Dichloro-2-Butene	(4)	12.377	53	62221M	10.763
131) 1,2,3-Trichloropropane	(3)	12.377	110	13143	1.014
132) n-Propylbenzene	(3)	12.420	91	401271	0.983
133) 2-Chlorotoluene	(3)	12.499	126	82212	0.981
134) 1,3,5-Trimethylbenzene	(3)	12.548	105	271834	0.966
135) 4-Chlorotoluene	(3)	12.585	126	85198	0.995
137) tert-Butylbenzene	(3)	12.798	134	62113M	0.972
138) Pentachloroethane	(3)	12.829	167	44744	0.907
139) 1,2,4-Trimethylbenzene	(3)	12.835	105	286237	0.956
140) sec-Butylbenzene	(3)	12.957	105	364801	0.977
141) p-Isopropyltoluene	(3)	13.054	119	316889	0.956
142) 1,3-Dichlorobenzene	(3)	13.060	146	166601	0.964
143)*1,4-Dichlorobenzene-d4	(3)	13.103	152	1045831	10.000
144) 1,4-Dichlorobenzene	(3)	13.121	146	179784	1.006
145) 1,2,3-Trimethylbenzene	(3)	13.146	120	125122	0.958
146) Benzyl Chloride	(3)	13.225	126	17741	0.898
147) n-Butylbenzene	(3)	13.353	92	157414M	0.958
148) 1,2-Dichlorobenzene	(3)	13.402	146	151746	0.992
150) 1,2-Dibromo-3-Chloropropane	(4)	13.944	155	5554	1.264
153) 1,2,4-Trichlorobenzene	(3)	14.487	180	116559	0.966
154) Hexachlorobutadiene	(3)	14.572	225	68869	1.019
155) Naphthalene	(3)	14.664	128	149291	0.954
156) 1,2,3-Trichlorobenzene	(3)	14.816	180	90050	0.971

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

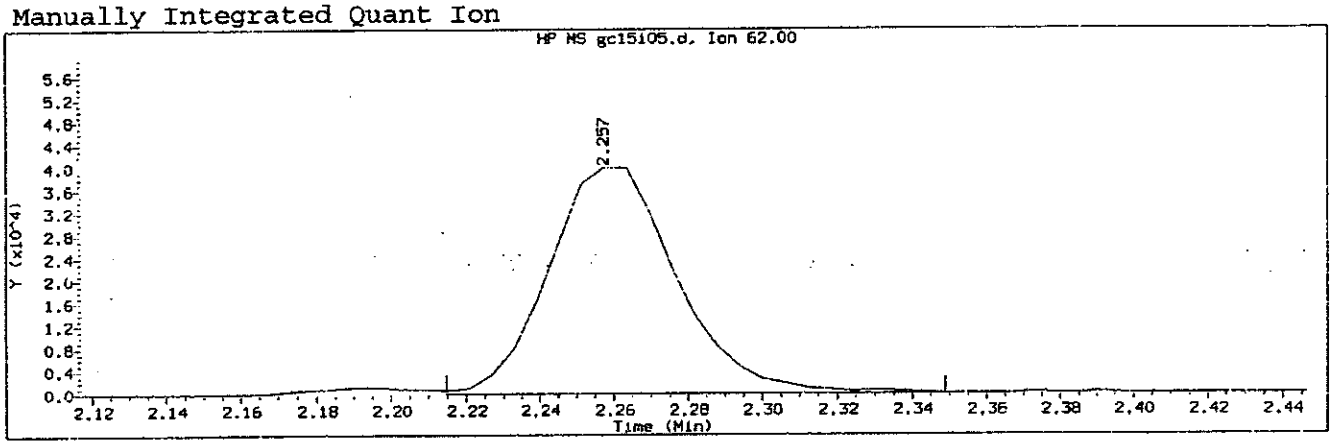
RAD40 0190

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on 10/15/2010 at 13:37.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10oct15a.b/gc15i05.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 12:36 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 15-OCT-2010 13:36
Date, time and analyst ID of latest file update: 15-Oct-2010 13:36 jml01693

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number	: 6		
Compound Name	: Vinyl Chloride		
Scan Number	: 110		
Retention Time (minutes)	: 2.257		
Quant Ion	: 62.00		
Area (flag)	: 95841M		
On-Column Amount (ng)	: 1.0134		
Integration start scan	: 102	Integration stop scan:	124
Y at integration start	: 0	Y at integration end:	0

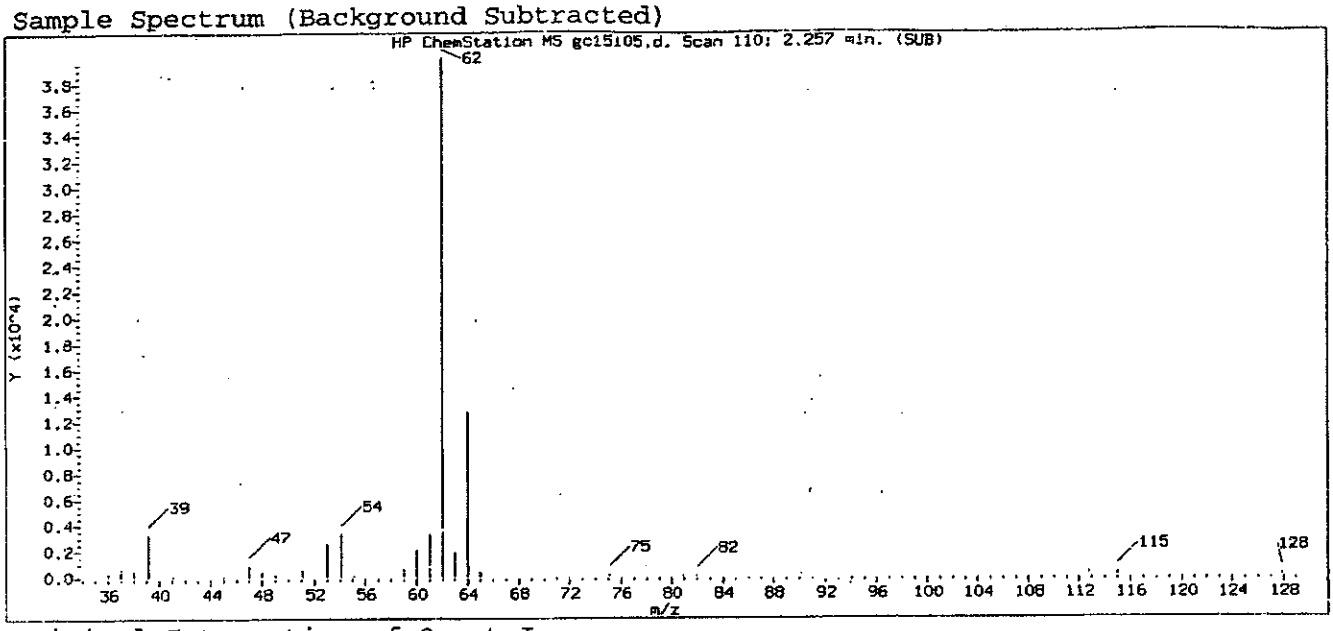
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long on 10/15/2010 at 13:37. Target 3.5 esignature user ID: jml01693

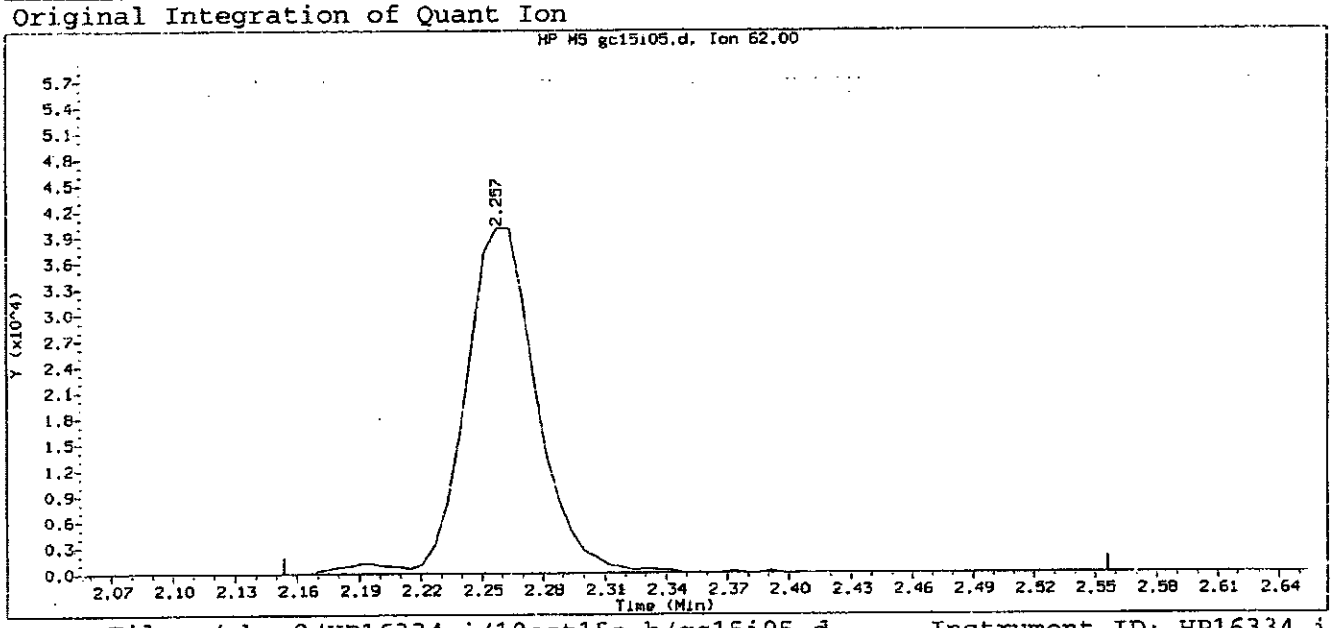
GC/MS audit/management approval: _____ 10/21/10

RAD48 0191

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10oct15a.b/gc15i05.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 12:36 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 15-OCT-2010 12:54
Date, time and analyst ID of latest file update: 15-Oct-2010 12:54 Automation

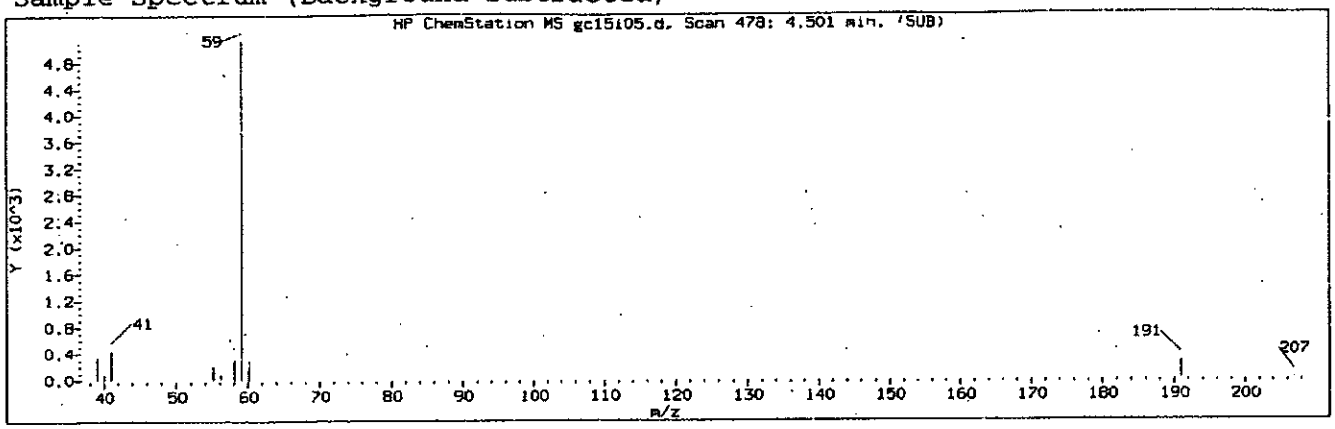
Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number : 6
Compound Name : Vinyl Chloride
Scan Number : 110
Retention Time (minutes): 2.257
Quant Ion : 62.00
Area : 98178
On-column Amount (ng) : 1.0427
Integration start scan : 92 Integration stop scan: 158
Y at integration start : 0 Y at integration end: 0

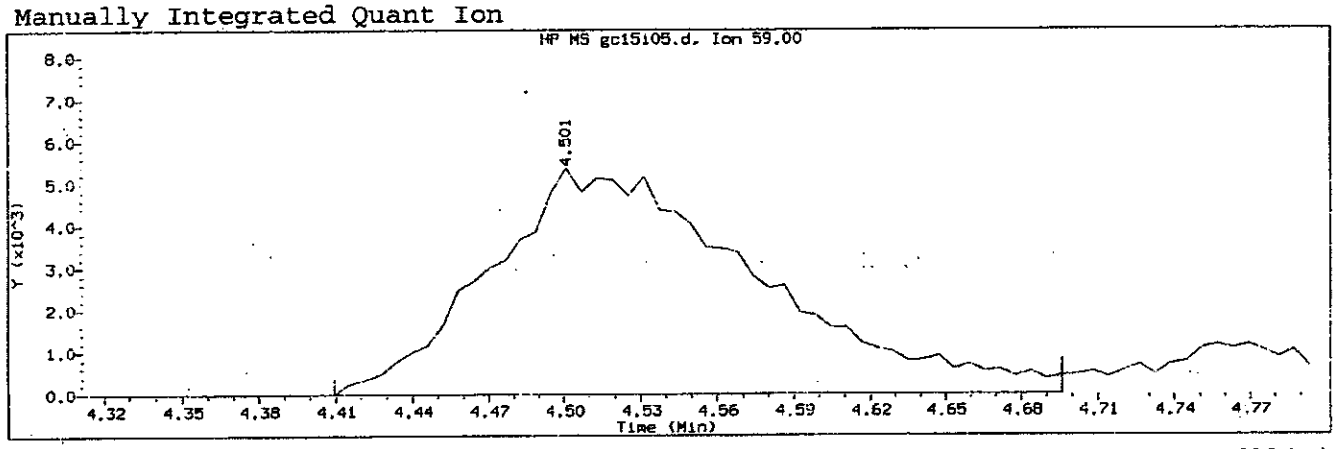
RAD40 0192

Digitally signed by Jason M. Long on 10/15/2010 at 13:37.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10oct15a.b/gc15i05.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 12:36 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 15-OCT-2010 13:36
Date, time and analyst ID of latest file update: 15-Oct-2010 13:36 jml01693

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number	: 38		
Compound Name	: t-Butyl Alcohol		
Scan Number	: 478		
Retention Time (minutes)	: 4.501		
Quant Ion	: 59.00		
Area (flag)	: 39335M		
On-Column Amount (ng)	: 19.3785		
Integration start scan	: 462	Integration stop scan:	509
Y at integration start	: 0	Y at integration end:	0

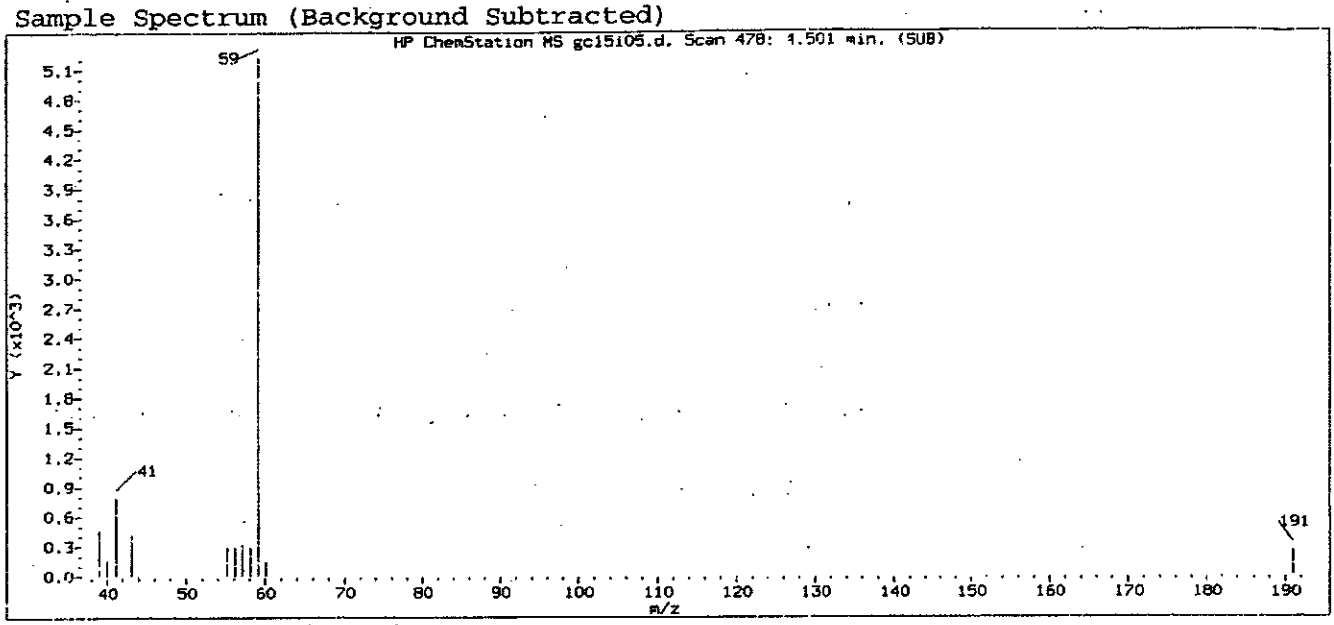
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long
on 10/15/2010 at 13:37.
Target 3.5 esignature user ID: jml01693

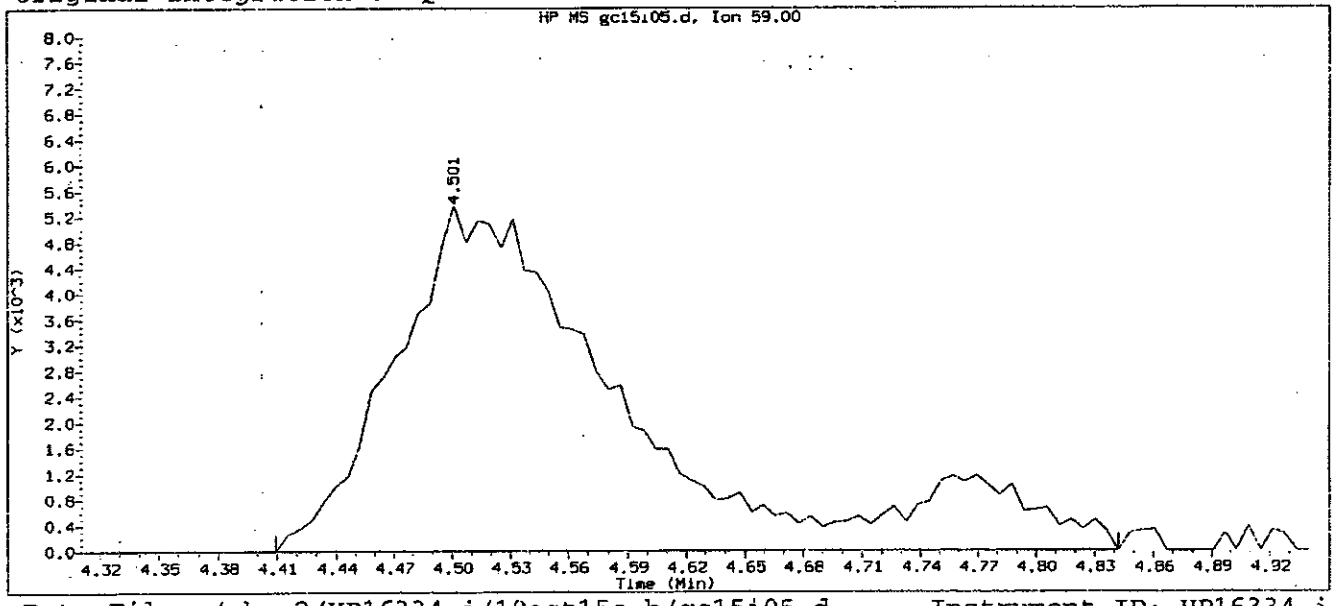
GC/MS audit/management approval: _____ 10/21/10

RAD40 0193

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10oct15a.b/gc15i05.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 12:36 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 15-OCT-2010 12:54
Date, time and analyst ID of latest file update: 15-Oct-2010 12:54 Automation

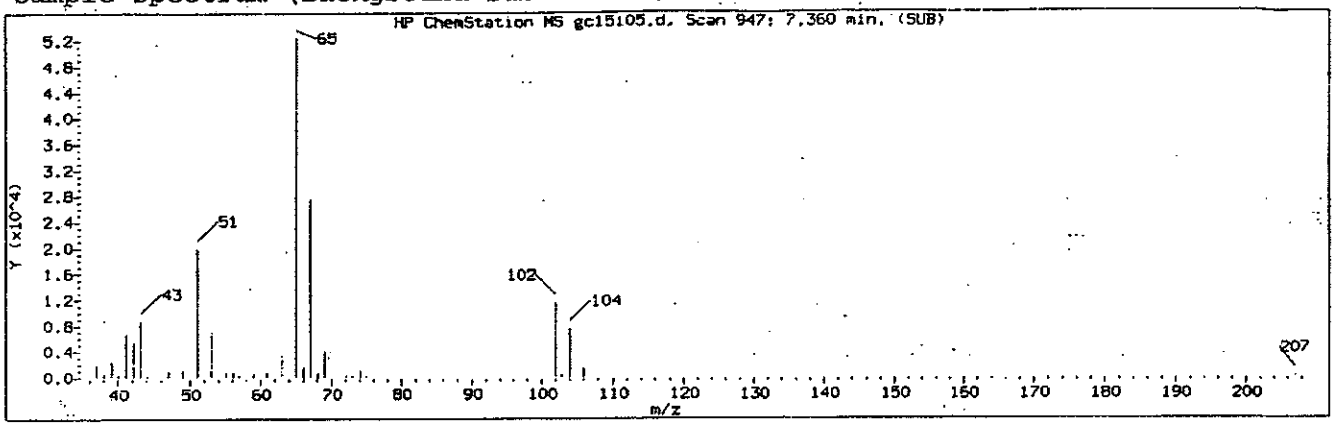
Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number	: 38		
Compound Name	: t-Butyl Alcohol		
Scan Number	: 478		
Retention Time (minutes)	: 4.501		
Quant Ion	: 59.00		
Area	: 45123		
On-column Amount (ng)	: 21.9193		
Integration start scan	: 462	Integration stop scan:	533
Y at integration start	: 0	Y at integration end:	0

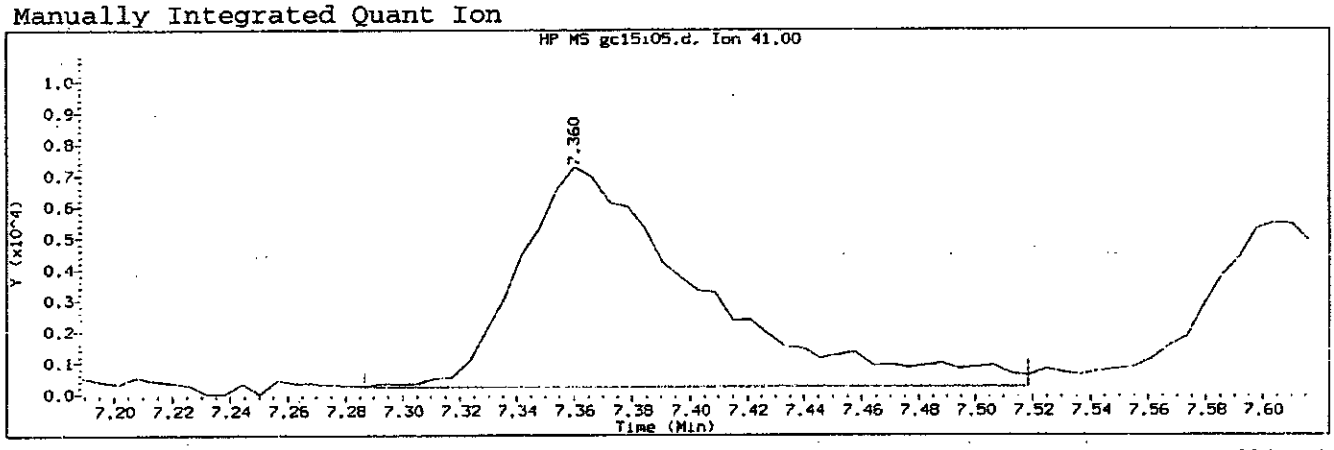
RAD48 2194

Digitally signed by Jason M. Long on 10/15/2010 at 13:37.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10oct15a.b/gc15i05.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 12:36 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 15-OCT-2010 13:36
Date, time and analyst ID of latest file update: 15-Oct-2010 13:36 jml01693

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number	: 67		
Compound Name	: Isobutyl Alcohol		
Scan Number	: 947		
Retention Time (minutes)	: 7.360		
Quant Ion	: 41.00		
Area (flag)	: 30617M		
On-Column Amount (ng)	: 46.7185		
Integration start scan	: 934	Integration stop scan:	972
Y at integration start	: 233	Y at integration end:	233

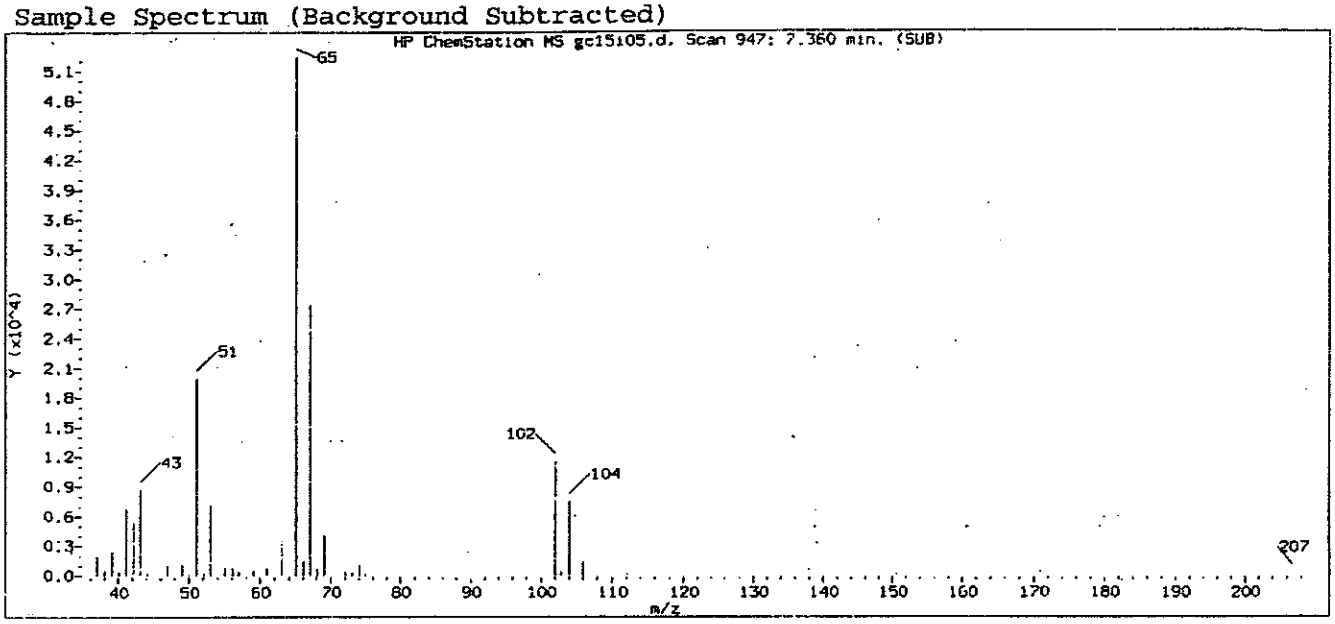
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long on 10/15/2010 at 13:37. Target 3.5 esignature user ID: jml01693

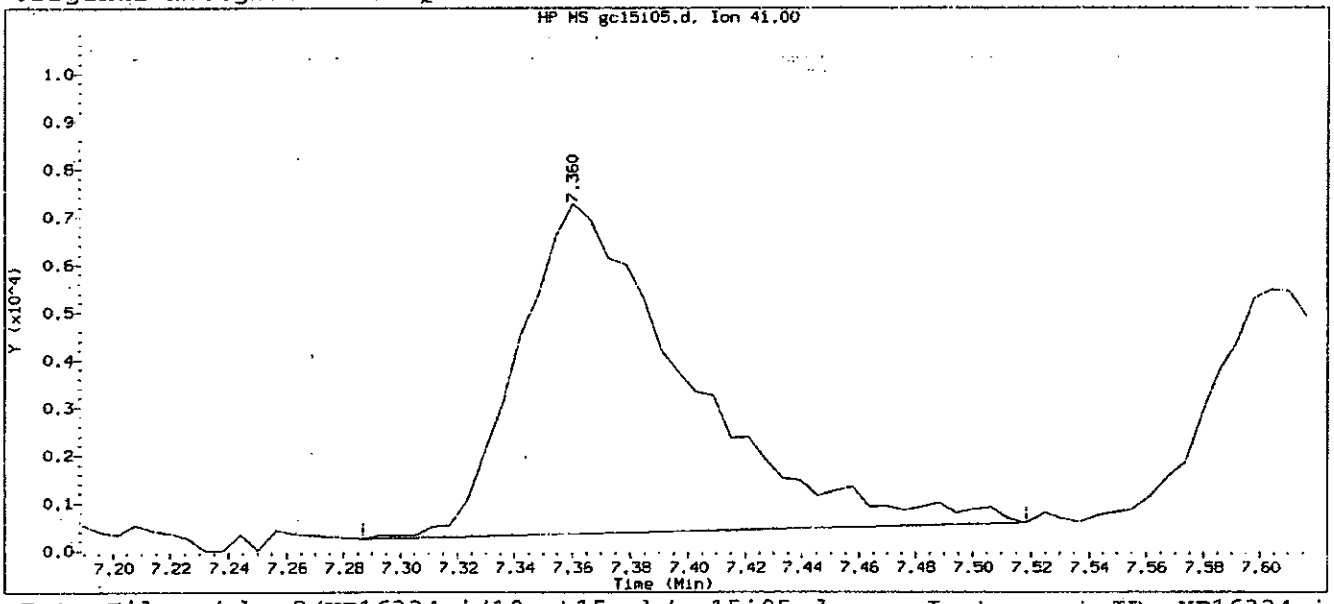
GC/MS audit/management approval: _____ 10/21/10

RAD48 8195

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10oct15a.b/gc15i05.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 12:36 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 15-OCT-2010 12:54
Date, time and analyst ID of latest file update: 15-Oct-2010 12:54 Automation

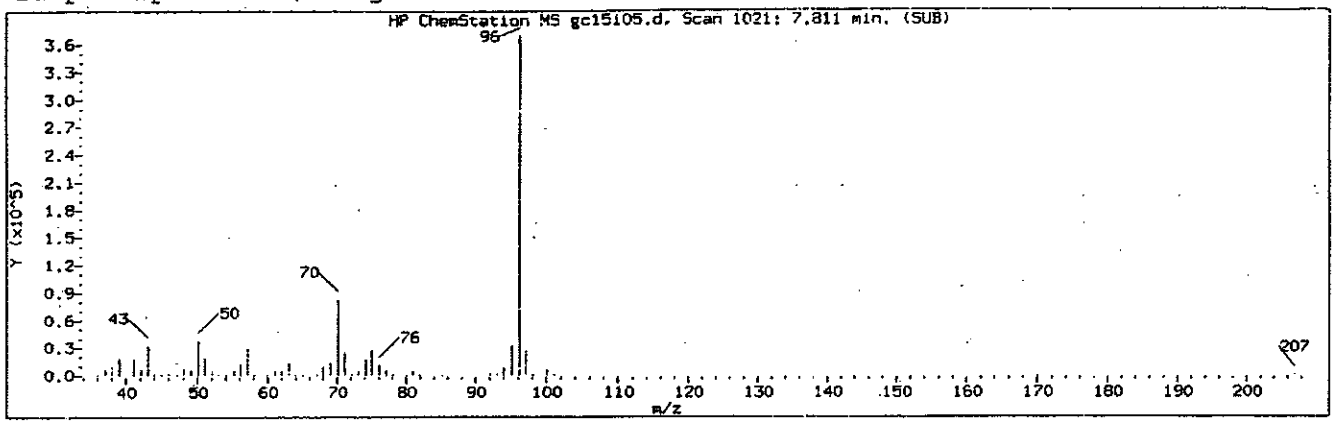
Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number	: 67		
Compound Name	: Isobutyl Alcohol		
Scan Number	: 947		
Retention Time (minutes)	: 7.360		
Quant Ion	: 41.00		
Area	: 27977		
On-column Amount (ng)	: 44.0223		
Integration start scan	: 934	Integration stop scan:	972
Y at integration start	: 253	Y at integration end:	583

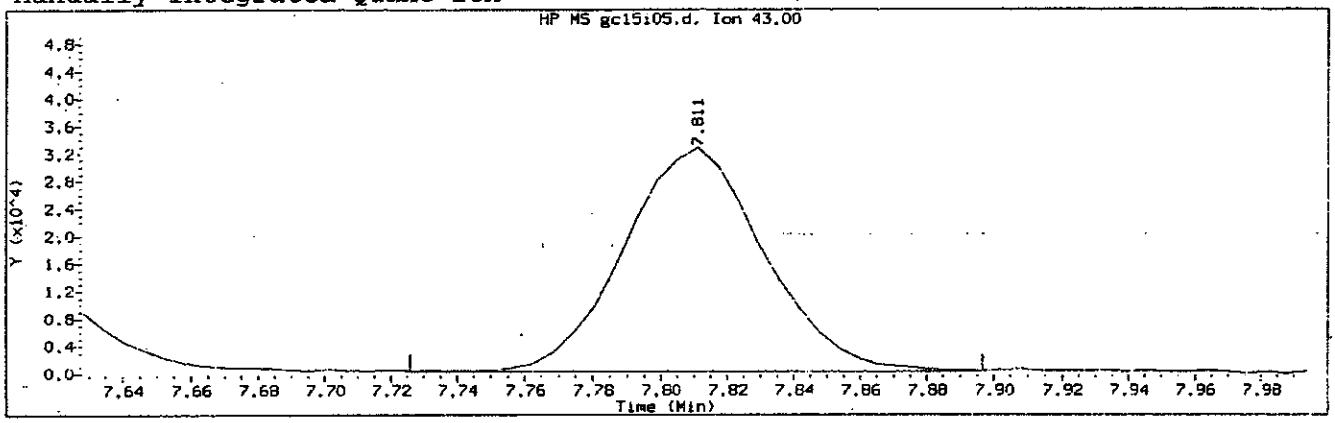
BAD40 0196

Digitally signed by Jason M. Long on 10/15/2010 at 13:37.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10oct15a.b/gc15i05.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 12:36 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 15-OCT-2010 13:36
Date, time and analyst ID of latest file update: 15-Oct-2010 13:36 jml01693

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number	: 76		
Compound Name	: n-Heptane		
Scan Number	: 1021		
Retention Time (minutes)	: 7.811		
Quant Ion	: 43.00		
Area (flag)	: 95034M		
On-Column Amount (ng)	: 0.9845		
Integration start scan	: 1006	Integration stop scan:	1034
Y at integration start	: 299	Y at integration end:	299

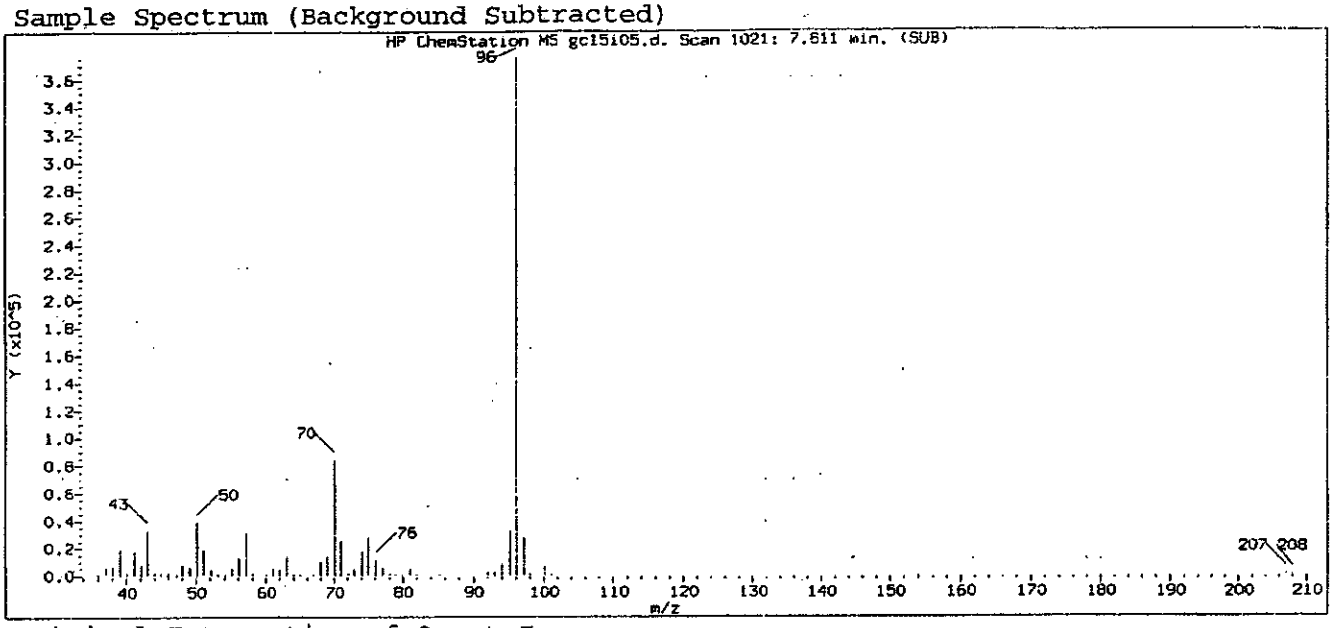
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long on 10/15/2010 at 13:37. Target 3.5 esignature user ID: jml01693

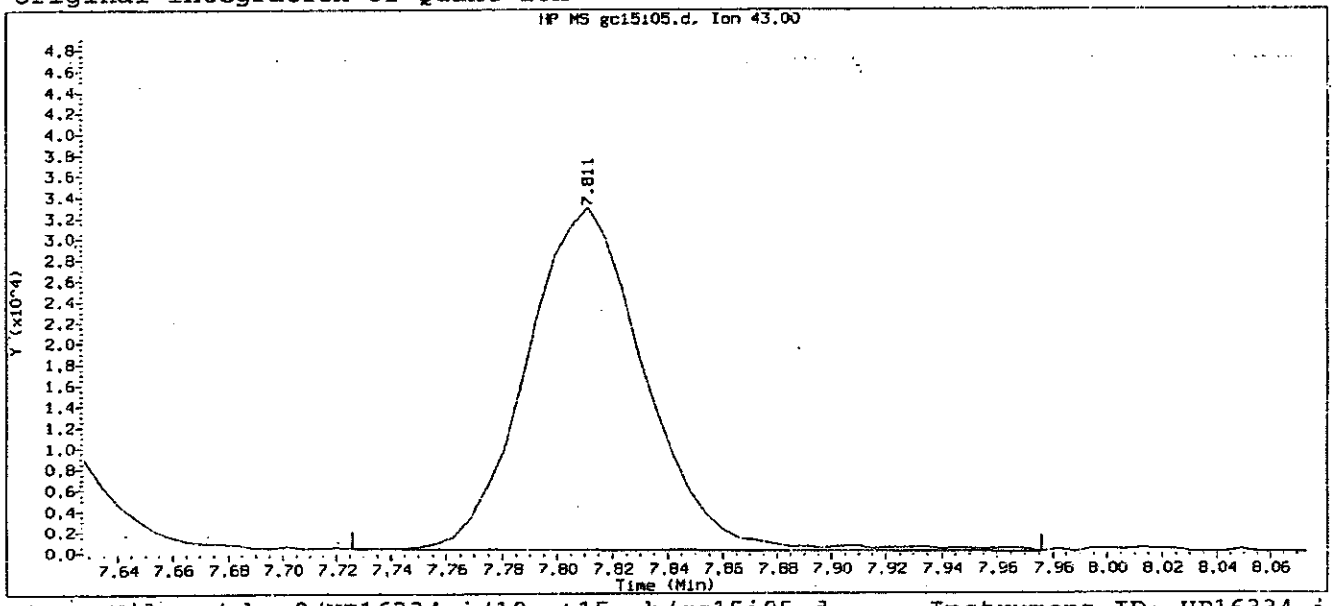
GC/MS audit/management approval: _____ 10/15/10

RAD48 8197

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10oct15a.b/gc15i05.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 12:36 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 15-OCT-2010 12:54
Date, time and analyst ID of latest file update: 15-Oct-2010 12:54 Automation

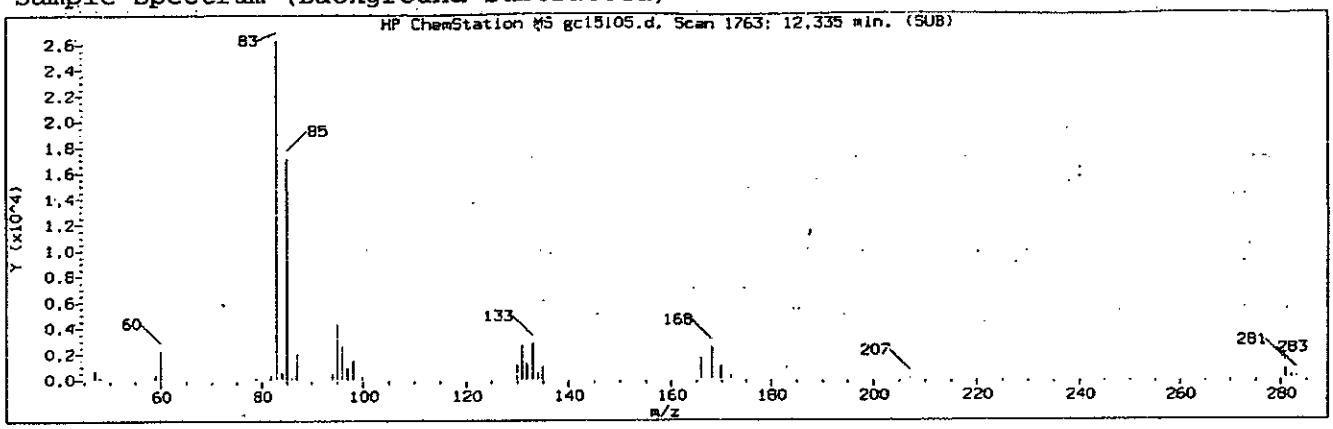
Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number	: 76		
Compound Name	: n-Heptane		
Scan Number	: 1021		
Retention Time (minutes)	: 7.811		
Quant Ion	: 43.00		
Area	: 97039		
On-column Amount (ng)	: 1.0106		
Integration start scan	: 1006	Integration stop scan:	1047
Y at integration start	: 387	Y at integration end:	0

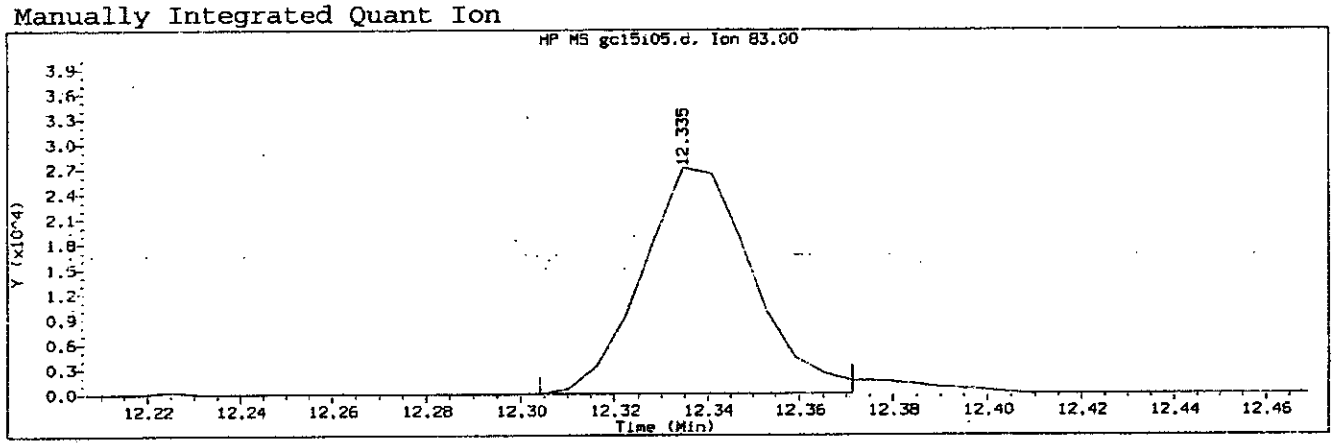
RAD48 0198

Digitally signed by Jason M. Long on 10/15/2010 at 13:37.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10oct15a.b/gc15i05.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 12:36 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 15-OCT-2010 13:36
Date, time and analyst ID of latest file update: 15-Oct-2010 13:36 jml01693

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number	: 128		
Compound Name	: 1,1,2,2-Tetrachloroethane		
Scan Number	: 1763		
Retention Time (minutes)	: 12.335		
Quant Ion	: 83.00		
Area (flag)	: 44991M		
On-Column Amount (ng)	: 0.9644		
Integration start scan	: 1757	Integration stop scan:	1768
Y at integration start	: 0	Y at integration end:	0

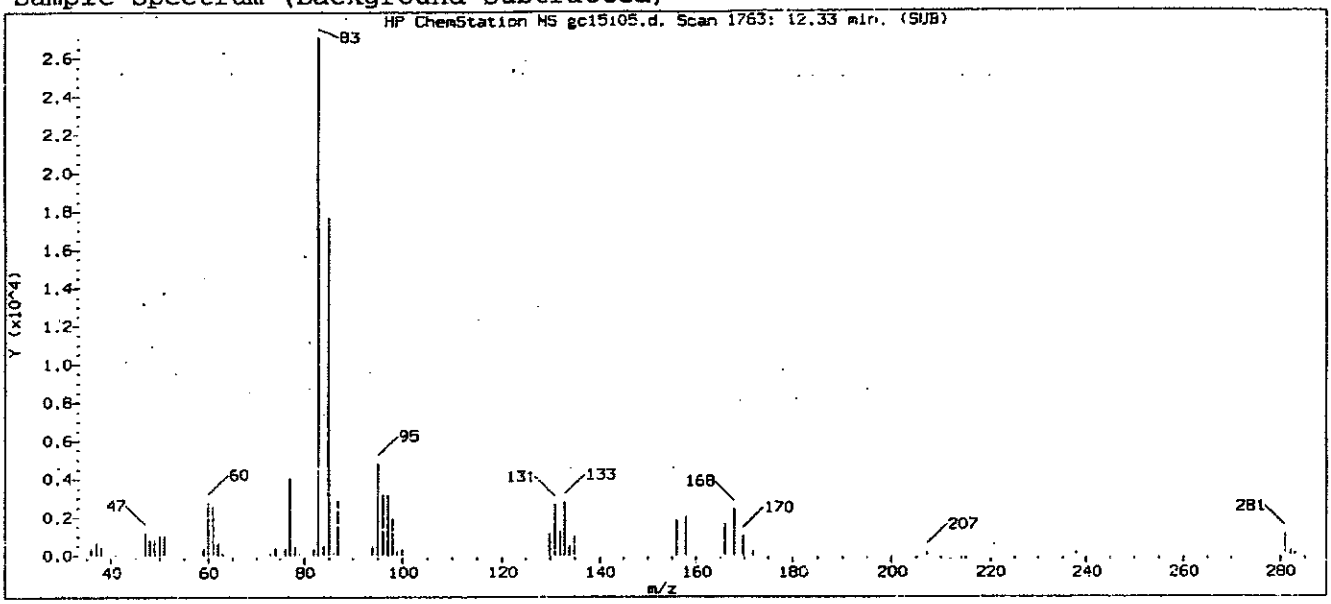
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long
on 10/15/2010 at 13:37.
Target 3.5 esignature user ID: jml01693.

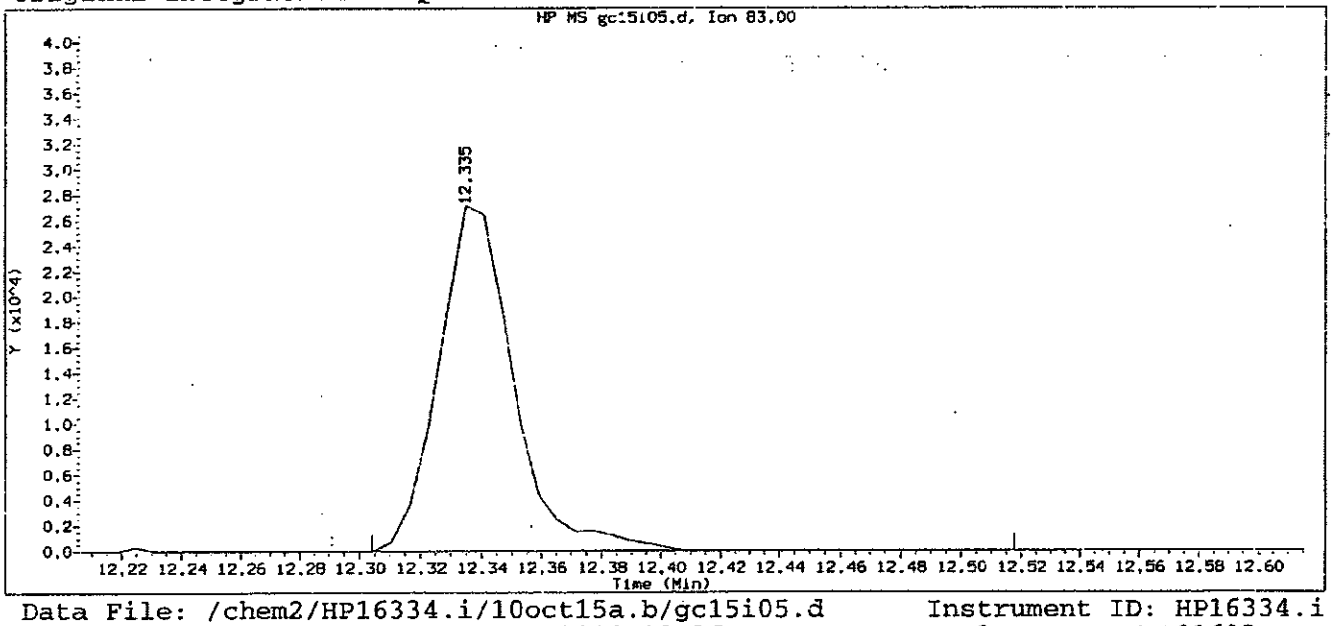
GC/MS audit/management approval: _____ 10/21/10

RAD40 8199

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10oct15a.b/gc15i05.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 12:36 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 15-OCT-2010 12:54
Date, time and analyst ID of latest file update: 15-Oct-2010 12:54 Automation

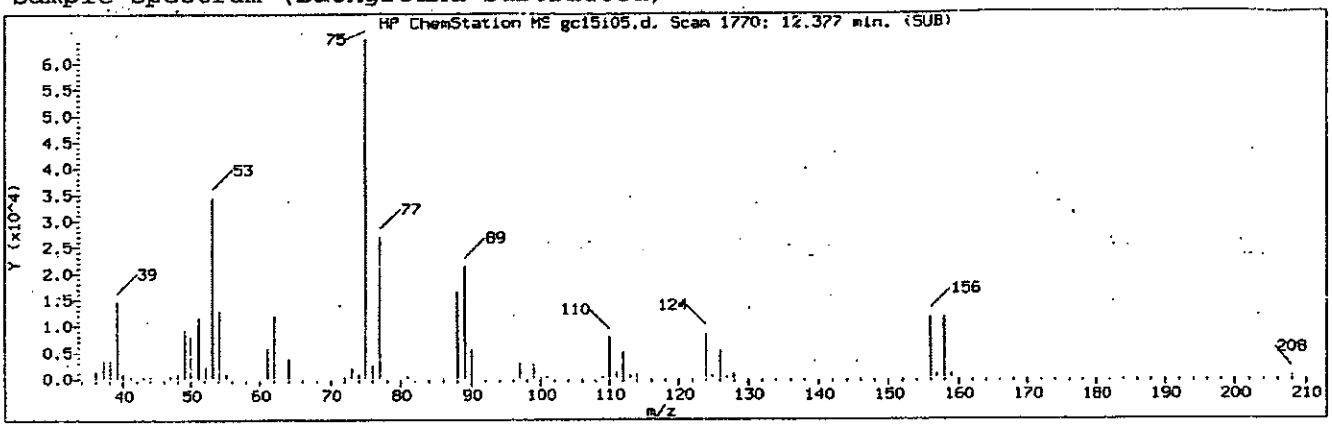
Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number	: 128		
Compound Name	: 1,1,2,2-Tetrachloroethane		
Scan Number	: 1763		
Retention Time (minutes)	: 12.335		
Quant Ion	: 83.00		
Area	: 46641		
On-column Amount (ng)	: 0.9826		
Integration start scan	: 1757	Integration stop scan:	1792
Y at integration start	: 0	Y at integration end:	0

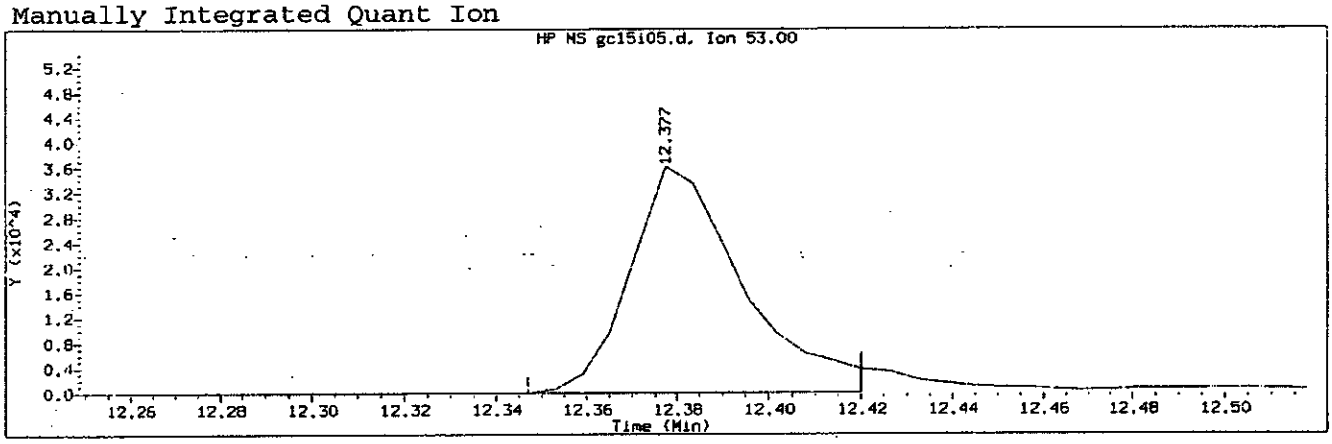
RAD40 8200

Digitally signed by Jason M. Long on 10/15/2010 at 13:37.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10oct15a.b/gc15i05.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 12:36 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 15-OCT-2010 13:36
Date, time and analyst ID of latest file update: 15-Oct-2010 13:36 jml01693

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number	: 130		
Compound Name	: trans-1,4-Dichloro-2-Butene		
Scan Number	: 1770		
Retention Time (minutes)	: 12.377		
Quant Ion	: 53.00		
Area (flag)	: 62221M		
On-Column Amount (ng)	: 10.7631		
Integration start scan	: 1764	Integration stop scan:	1776
Y at integration start	: 0	Y at integration end:	0

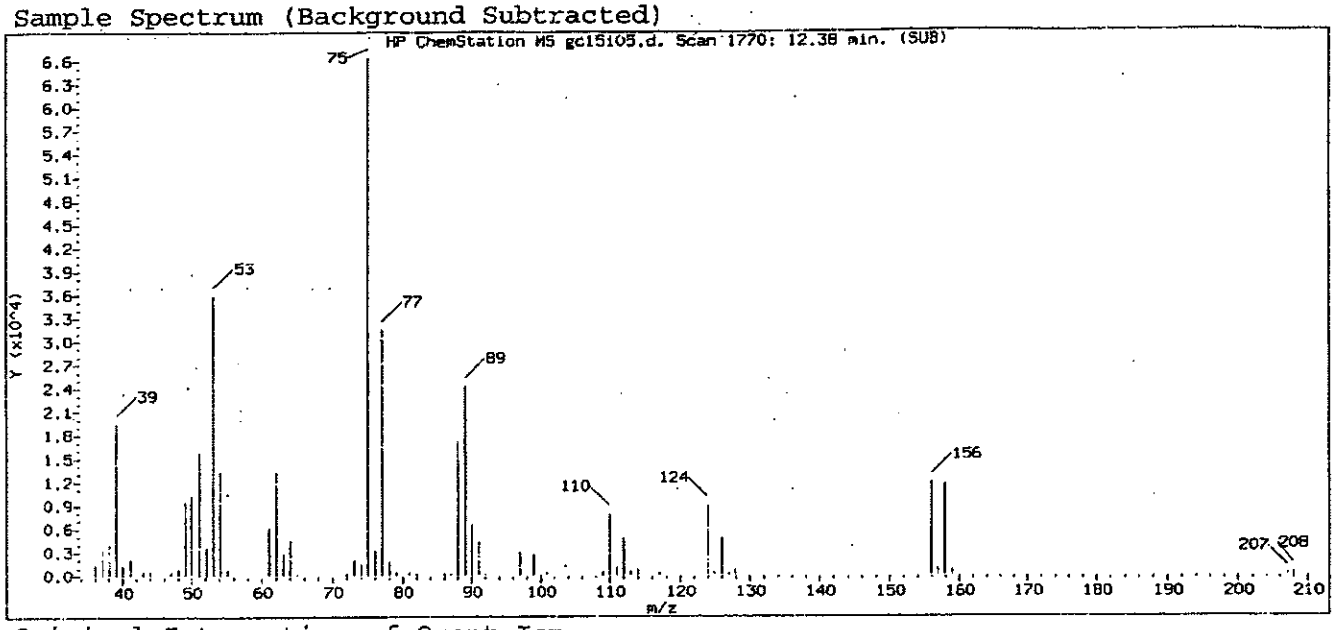
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long on 10/15/2010 at 13:37. Target 3.5 esignature user ID: jml01693

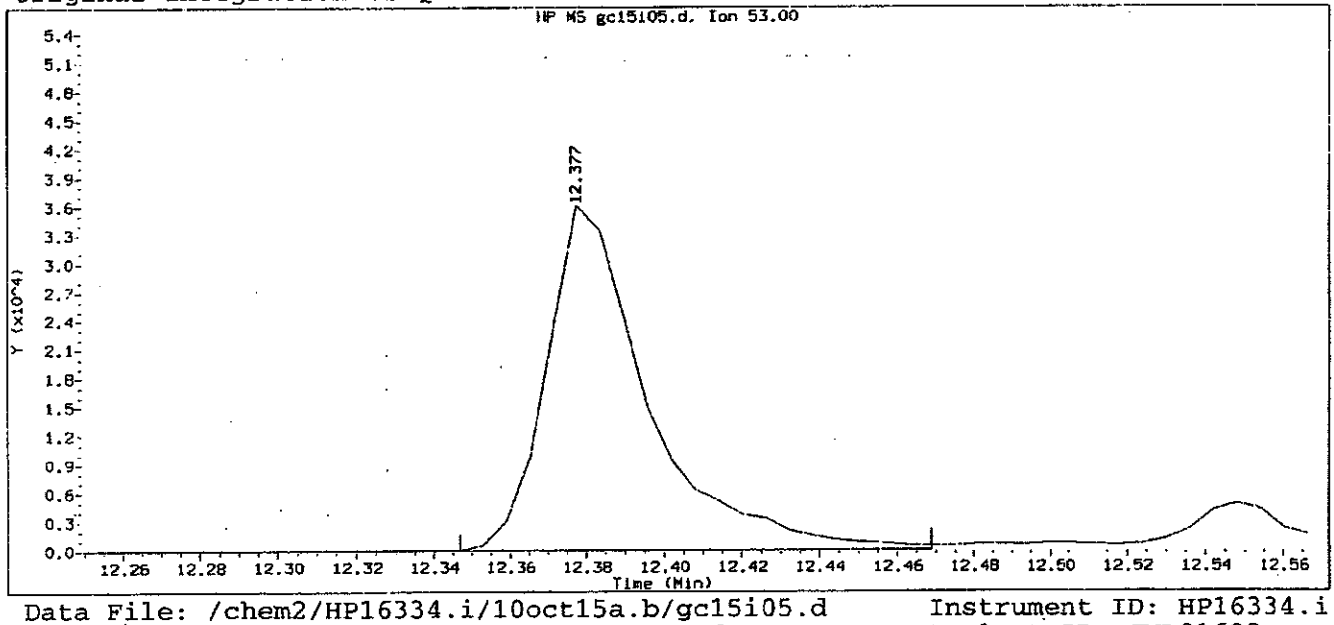
GC/MS audit/management approval: _____

RAD48 6201

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10oct15a.b/gc15i05.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 12:36 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 15-OCT-2010 12:54
Date, time and analyst ID of latest file update: 15-Oct-2010 12:54 Automation

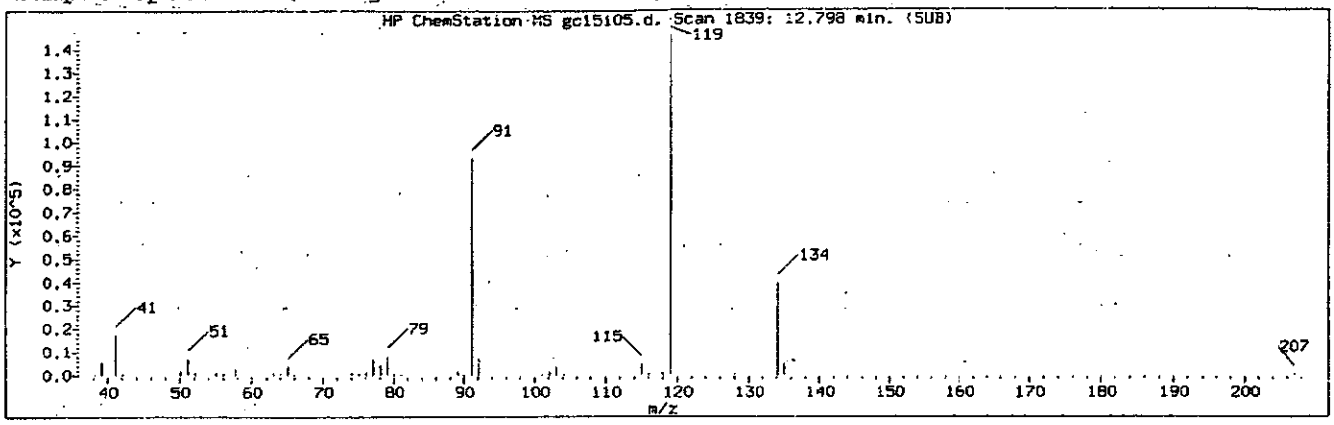
Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number	: 130		
Compound Name	: trans-1,4-Dichloro-2-Butene		
Scan Number	: 1770		
Retention Time (minutes)	: 12.377		
Quant Ion	: 53.00		
Area	: 66016		
On-column Amount (ng)	: 8.3987		
Integration start scan	: 1764	Integration stop scan:	1784
Y at integration start	: 0	Y at integration end:	0

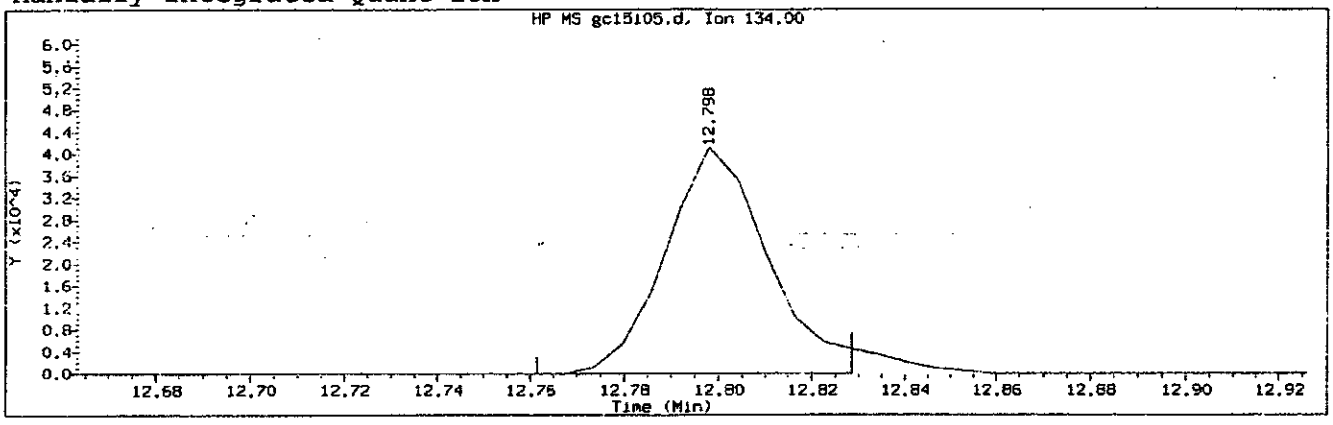
RAD40 0282

Digitally signed by Jason M. Long on 10/15/2010 at 13:37.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10oct15a.b/gc15i05.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 12:36 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 15-OCT-2010 13:36
Date, time and analyst ID of latest file update: 15-Oct-2010 13:36 jml01693

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number	: 137		
Compound Name	: tert-Butylbenzene		
Scan Number	: 1839		
Retention Time (minutes)	: 12.798		
Quant Ion	: 134.00		
Area (flag)	: 62113M		
On-Column Amount (ng)	: 0.9718		
Integration start scan	: 1832	Integration stop scan:	1843
Y at integration start	: 0	Y at integration end:	0

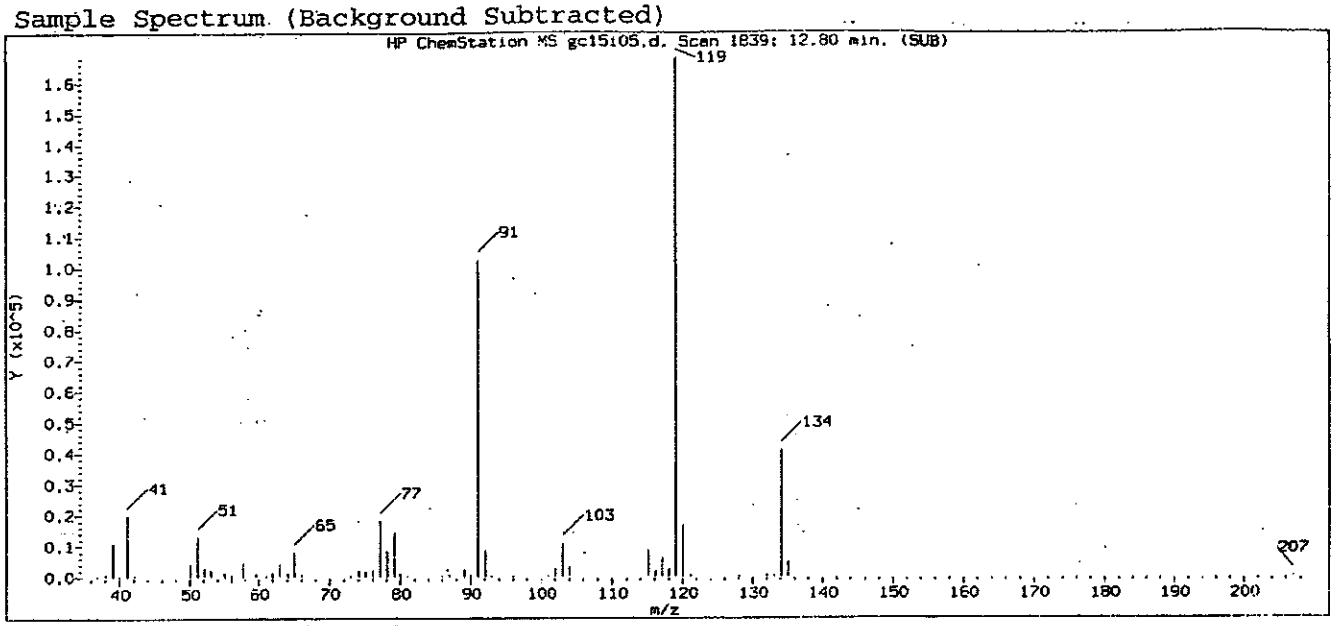
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long
on 10/15/2010 at 13:37.
Target 3.5 esignature user ID: jml01693

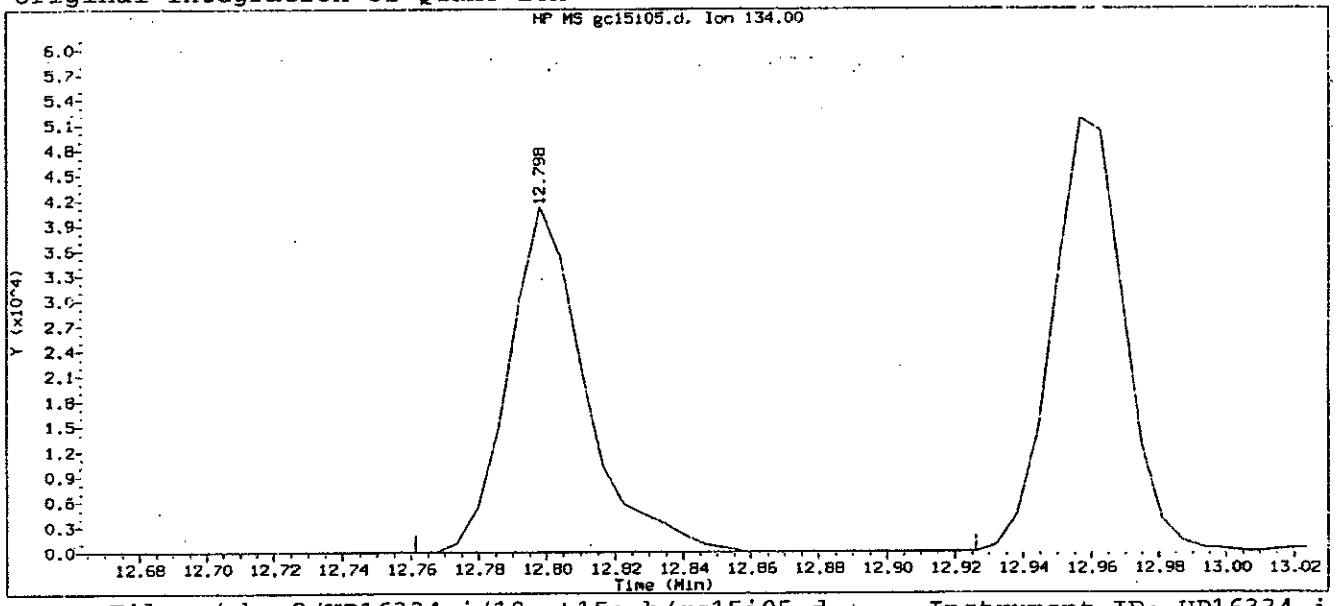
GC/MS audit/management approval: _____ 10/21/10

RAD48 0283

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10oct15a.b/gc15i05.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 12:36 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 15-OCT-2010 12:54
Date, time and analyst ID of latest file update: 15-Oct-2010 12:54 Automation

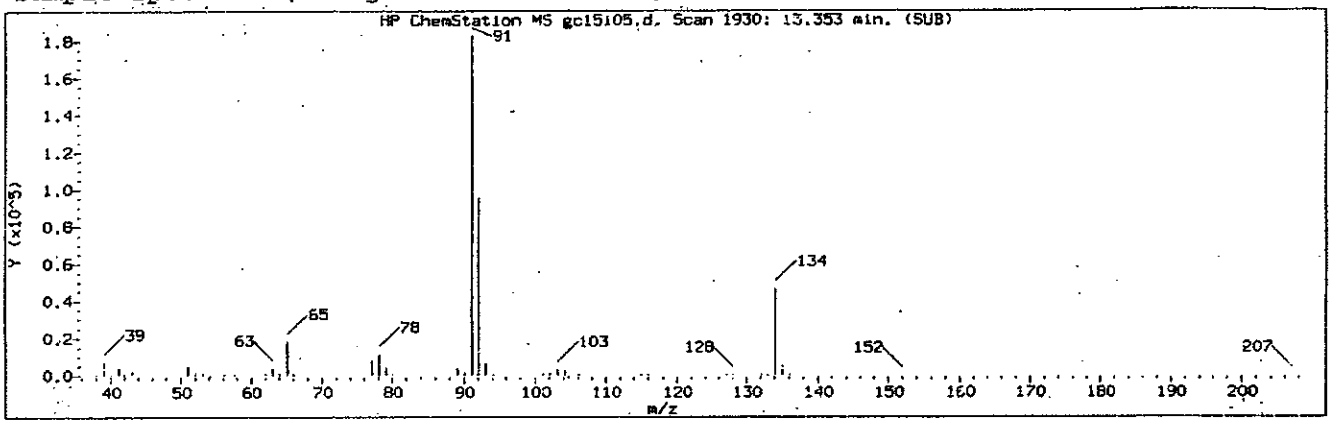
Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number : 137
Compound Name : tert-Butylbenzene
Scan Number : 1839
Retention Time (minutes): 12.798
Quant Ion : 134.00
Area : 64544
On-column Amount (ng) : 0.9688
Integration start scan : 1832 Integration stop scan: 1859
Y at integration start : 0 Y at integration end: 0

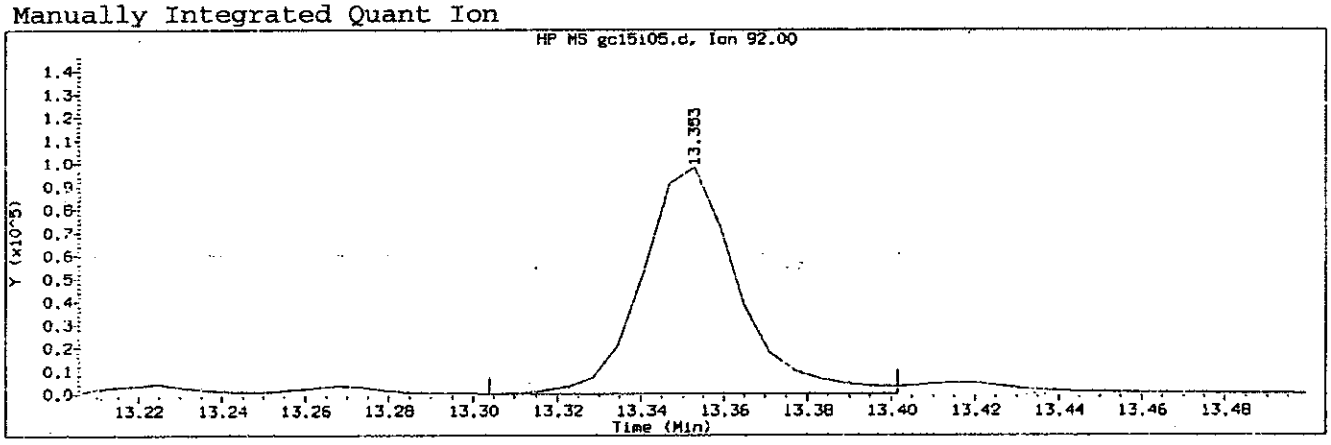
RAD48 0204

Digitally signed by Jason M. Long on 10/15/2010 at 13:37.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10oct15a.b/gc15i05.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 12:36 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 15-OCT-2010 13:36
Date, time and analyst ID of latest file update: 15-Oct-2010 13:36 jml01693

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number : 147
Compound Name : n-Butylbenzene
Scan Number : 1930
Retention Time (minutes): 13.353
Quant Ion : 92.00
Area (flag) : 157414M
On-Column Amount (ng) : 0.9581
Integration start scan : 1921 Integration stop scan: 1937
Y at integration start : 0 Y at integration end: 0

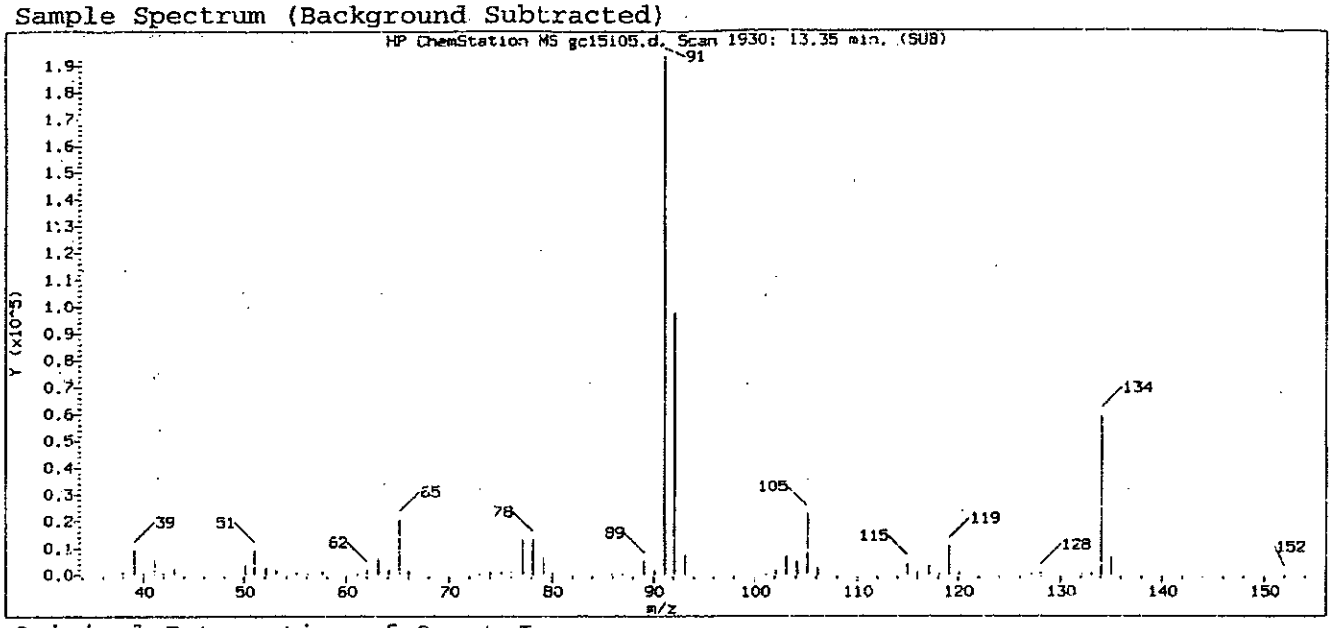
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long
on 10/15/2010 at 13:37.
Target 3.5 esignature user ID: jml01693

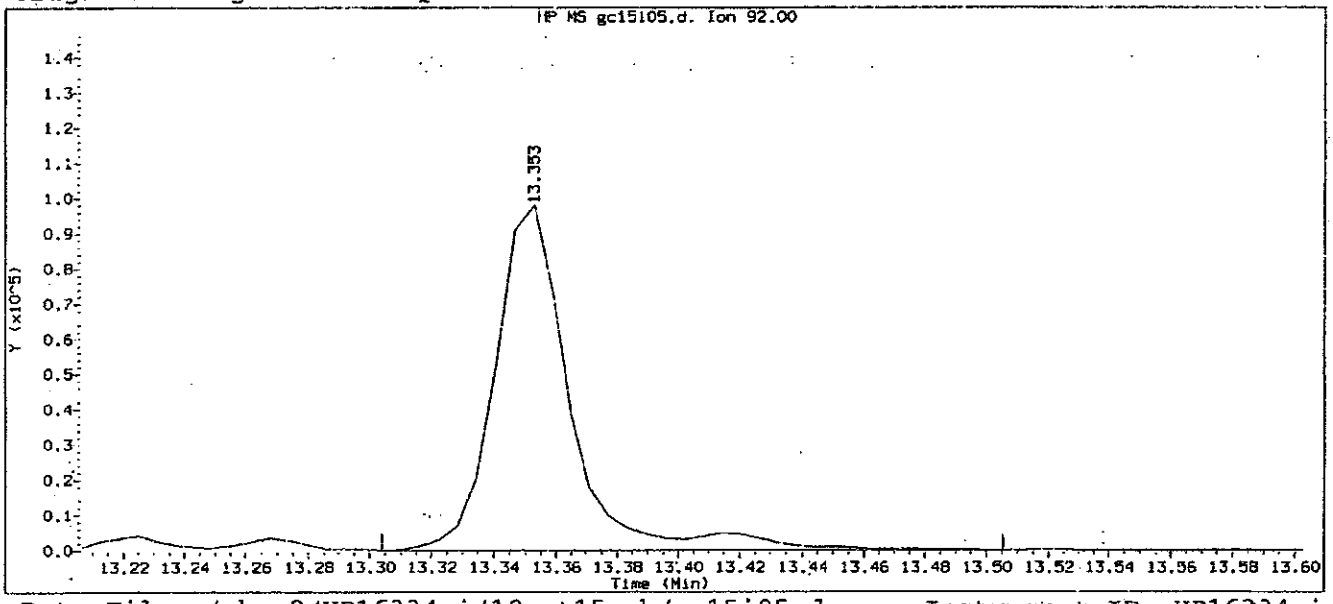
GC/MS audit/management approval: _____ 10/21/10

RAD40 0285

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10oct15a.b/gc15i05.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 12:36 Analyst ID: JML01693

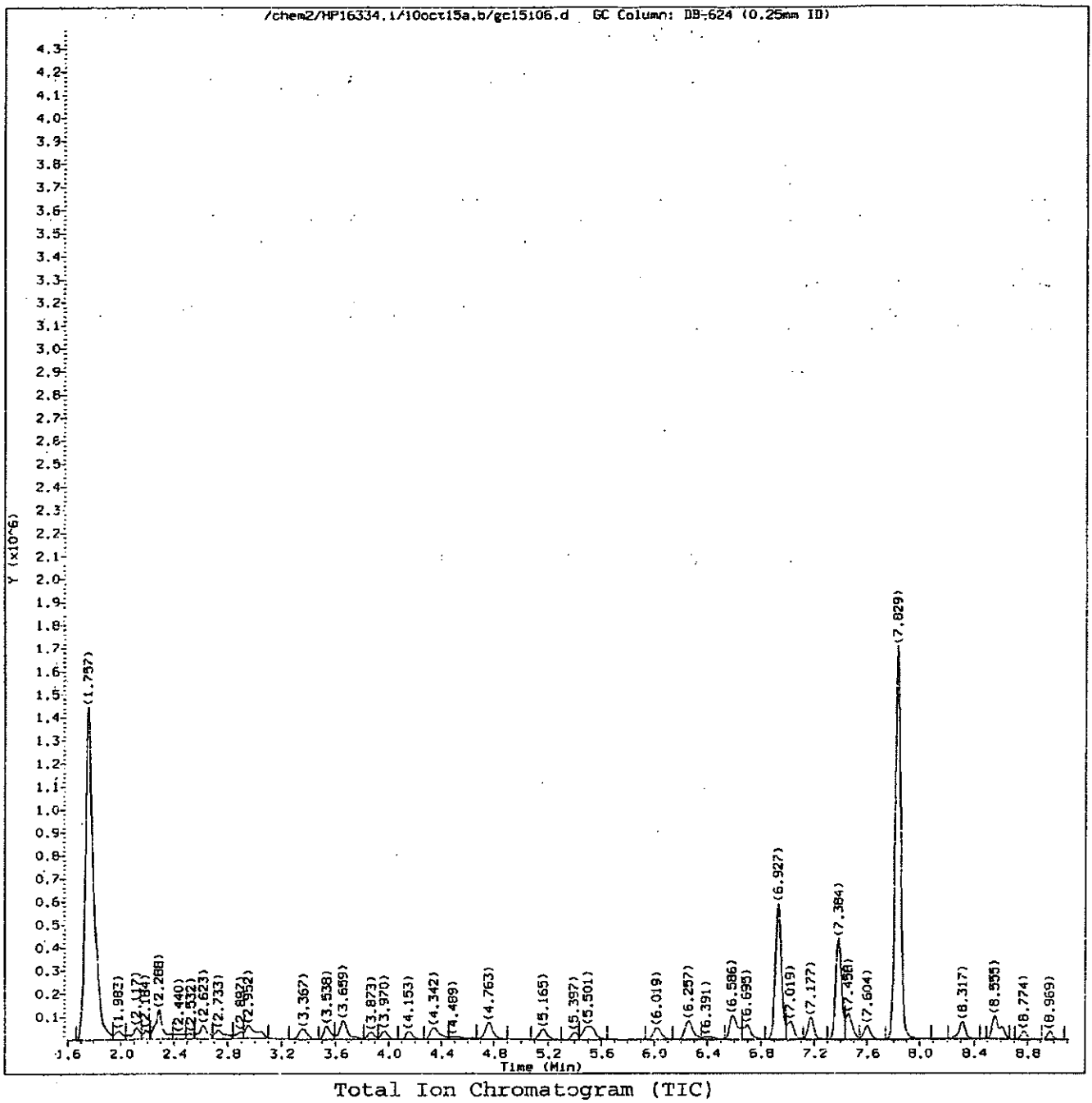
Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 15-OCT-2010 12:54
Date, time and analyst ID of latest file update: 15-Oct-2010 12:54 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number	: 147		
Compound Name	: n-Butylbenzene		
Scan Number	: 1930		
Retention Time (minutes)	: 13.353		
Quant Ion	: 92.00		
Area	: 166693		
On-column Amount (ng)	: 0.9803		
Integration start scan	: 1921	Integration stop scan:	1954
Y at integration start	: 0	Y at integration end:	0

RAD48 0286

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Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

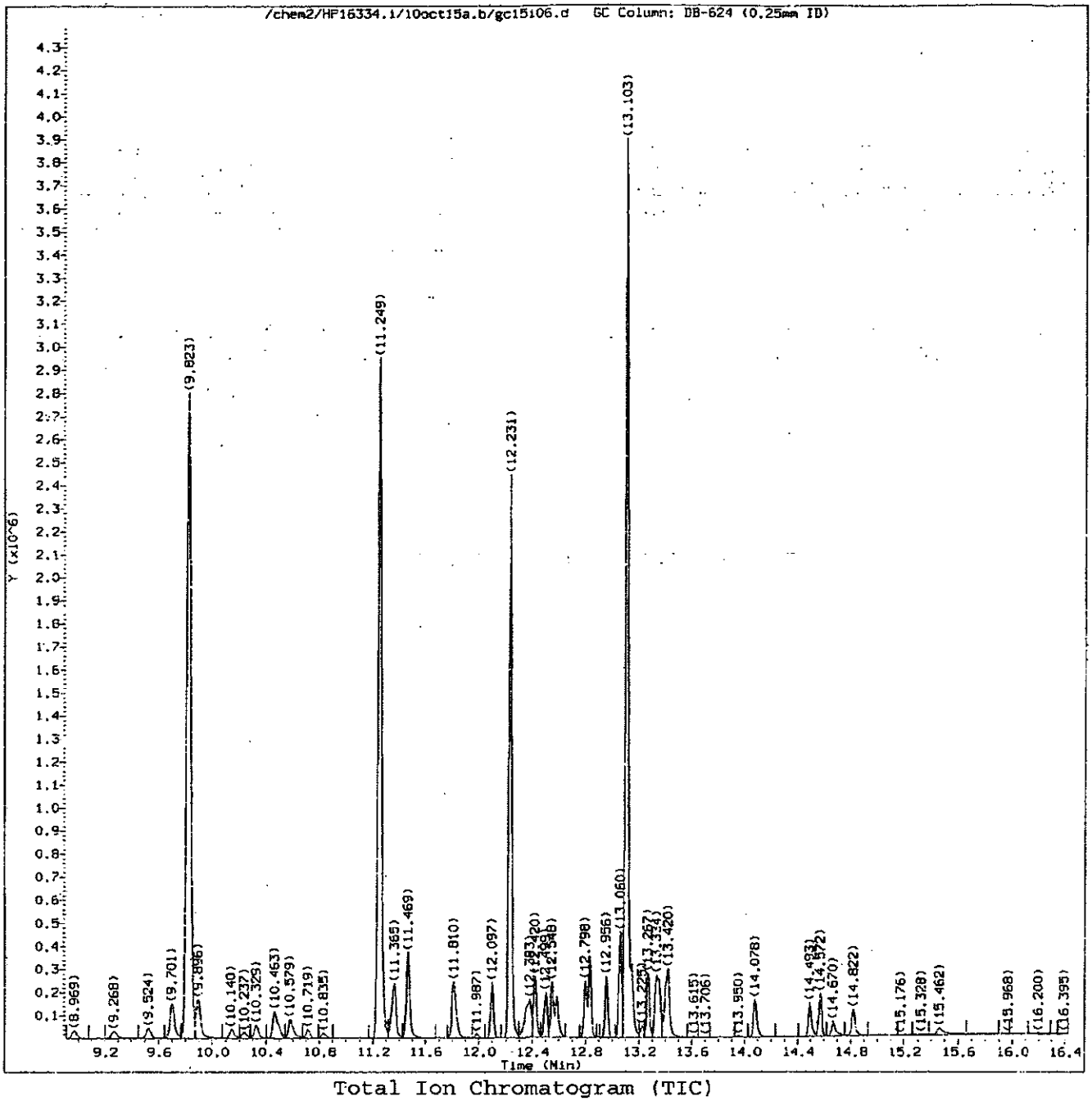
Data File: /chem2/HP16334.i/10oct15a.b/gc15i06.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 13:02 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 15-OCT-2010 13:36
Date, time and analyst ID of latest file update: 15-Oct-2010 13:36 jml01693

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

RAD48 0297

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on 10/15/2010 at 13:37.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/10oct15a.b/gc15i06.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 13:02 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 15-OCT-2010 13:36
Date, time and analyst ID of latest file update: 15-Oct-2010 13:36 jml01693

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

RAD40 0288

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Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/10oct15a.b/gc15i06.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 13:02 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 15-OCT-2010 13:36
Date, time and analyst ID of latest file update: 15-Oct-2010 13:36 jml01693

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
2) Dichlorodifluoromethane	(1)	1.989	85	57424	0.518
5) Chloromethane	(1)	2.123	50	52120	0.539
6) Vinyl Chloride	(1)	2.257	62	49317	0.523
9) 1,3-Butadiene	(1)	2.288	39	59607	0.524
10) Bromomethane	(1)	2.617	94	37632	0.547
11) Chloroethane	(1)	2.733	64	27697	0.519
13) Dichlorofluoromethane	(1)	2.952	67	62102	0.527
15) Trichlorofluoromethane	(1)	3.050	101	60789	0.522
17) Ethyl Ether	(1)	3.349	59	20916	0.481
18) Freon 123a	(1)	3.367	67	38752	0.529
23) Acrolein	(4)	3.538	56	120473	22.354
24) 1,1-Dichloroethene	(1)	3.659	96	31417	0.522
25) Freon 113	(1)	3.659	101	31503	0.505
26) Acetone	(4)	3.751	58	11578	4.997
27) Methyl Iodide	(1)	3.867	142	58352	0.494
29) Carbon Disulfide	(1)	3.970	76	87677	0.501
32) Allyl Chloride	(1)	4.153	41	45099	0.506
33) Methyl Acetate	(1)	4.214	43	10263	0.608
34) Methylene Chloride	(1)	4.330	84	36395	0.544
36)*t-Butyl Alcohol-d10	(4)	4.379	65	95908	50.000
38) t-Butyl Alcohol	(4)	4.507	59	23972M	10.717
40) Methyl Tertiary Butyl Ether	(1)	4.745	73	68716	0.505
41) trans-1,2-Dichloroethene	(1)	4.757	96	34716	0.503
39) Acrylonitrile	(4)	4.769	53	17536	1.955
37) 1,2-Dichloroethene (Total)	(1)		96	72177	1.006
44) n-Hexane	(1)	5.165	57	45743	0.500
45) 1,1-Dichloroethane	(1)	5.397	63	59051	0.509
47) di-Isopropyl Ether	(1)	5.482	45	97918	0.492
48) 2-Chloro-1,3-Butadiene	(1)	5.537	53	40827	0.471
49) Ethyl t-Butyl Ether	(1)	6.019	59	88456	0.496
51) 2,2-Dichloropropane	(1)	6.250	77	45196	0.489
50) cis-1,2-Dichloroethene	(1)	6.257	96	37461	0.503
52) 2-Butanone	(4)	6.293	43	54845	4.588
53) Propionitrile	(4)	6.403	54	27201	8.456
55) Methacrylonitrile	(4)	6.586	67	61009	4.411
56) Bromochloromethane	(1)	6.586	128	15380	0.493
57) Tetrahydrofuran	(4)	6.653	71	17528	4.530
58) Chloroform	(1)	6.708	83	57910	0.497

M = Compound was manually integrated.
* = Compound is an internal standard.

RAD40 #289

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Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/10oct15a.b/gc15i06.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 13:02 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 15-OCT-2010 13:36
Date, time and analyst ID of latest file update: 15-Oct-2010 13:36 jml01693

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
62)$Dibromofluoromethane(mz111)	(1)	6.927	111	554221	9.867
61)$Dibromofluoromethane	(1)	6.927	113	549752	9.969
63) 1,1,1-Trichloroethane	(1)	6.945	97	50109	0.497
64) Cyclohexane	(1)	7.025	56	56537	0.508
65) 1,1-Dichloropropene	(1)	7.177	75	45338	0.502
66) Carbon Tetrachloride	(1)	7.177	117	42409	0.486
67) Isobutyl Alcohol	(4)	7.360	41	19331	26.768
70)$1,2-Dichloroethane-d4	(1)	7.384	102	110775	10.117
68)$1,2-Dichloroethane-d4(mz104)	(1)	7.384	104	69857	10.064
69)$1,2-Dichloroethane-d4(mz65)	(1)	7.384	65	481446	10.131
72) Benzene	(1)	7.458	78	134207	0.505
74) 1,2-Dichloroethane	(1)	7.488	62	31514	0.499
73) 1,2-Dichloroethane(mz98)	(1)	7.488	98	2845	0.467
75) t-Amyl Methyl Ether	(1)	7.604	73	74803	0.489
76) n-Heptane	(1)	7.805	43	51165	0.532
77)*Fluorobenzene	(1)	7.829	96	2456857	10.000
81) n-Butanol	(4)	8.268	56	23033	38.278
83) Trichloroethene	(1)	8.317	95	35969	0.497
84) Methylcyclohexane	(1)	8.555	83	62428	0.506
85) 1,2-Dichloropropane	(1)	8.616	63	31759	0.476
88) Dibromomethane	(1)	8.768	93	14829	0.497
87) Methyl Methacrylate	(4)	8.780	69	9159	0.385
89) 1,4-Dioxane	(4)	8.799	88	3519	23.244
90) Bromodichloromethane	(1)	8.969	83	34760	0.465
91) 2-Nitropropane	(4)	9.268	41	33189	4.613
94) cis-1,3-Dichloropropene	(1)	9.524	75	39285	0.457
96) 4-Methyl-2-Pentanone	(1)	9.701	43	139052	4.561
97)$Toluene-d8	(2)	9.823	98	2392097	10.045
98)$Toluene-d8(mz100)	(2)	9.823	100	1567657	10.030
101) Toluene	(2)	9.896	92	85772	0.502
102) trans-1,3-Dichloropropene	(2)	10.140	75	30235	0.441
103) Ethyl Methacrylate	(2)	10.237	69	19761	0.405
104) 1,1,2-Trichloroethane	(2)	10.329	97	20292	0.492
105) Tetrachloroethene	(2)	10.463	166	41160	0.500
106) 1,3-Dichloropropane	(2)	10.494	76	34976	0.496
107) 2-Hexanone	(2)	10.585	43	94653	4.637
108) Dibromochloromethane	(2)	10.719	129	20728	0.430
109) 1,2-Dibromoethane	(2)	10.835	107	17832	0.474

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

RAD48 8210

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Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/10oct15a.b/gc15i06.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 13:02 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 15-OCT-2010 13:36
Date, time and analyst ID of latest file update: 15-Oct-2010 13:36 jml01693

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

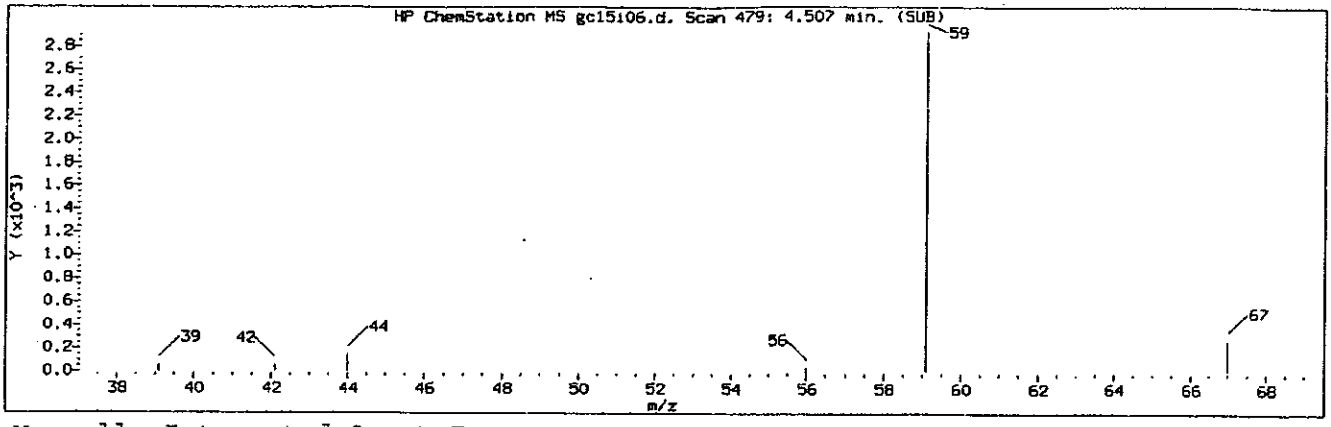
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
110) *Chlorobenzene-d5	(2)	11.249	117	1781865	10.000
112) Chlorobenzene	(2)	11.274	112	98114	0.501
113) 1,1,1,2-Tetrachloroethane	(2)	11.347	131	30121	0.458
114) Ethylbenzene	(2)	11.365	91	159775	0.485
117) m+p-Xylene	(2)	11.469	106	126817	0.965
115) Xylene (Total)	(2)		106	188624	1.440
118) o-Xylene	(2)	11.804	106	61807	0.475
119) Styrene	(2)	11.823	104	79910	0.414
120) Bromoform	(2)	11.987	173	9887	0.402
121) Isopropylbenzene	(2)	12.097	105	160564	0.480
126) $4-Bromofluorobenzene	(2)	12.231	95	827224	10.108
127) $4-Bromofluorobenzene(mz174)	(2)	12.231	174	756274	10.061
128) 1,1,2,2-Tetrachloroethane	(3)	12.335	83	23315	0.499
129) Bromobenzene	(3)	12.359	156	41569	0.501
130) trans-1,4-Dichloro-2-Butene	(4)	12.383	53	30316	6.517
131) 1,2,3-Trichloropropane	(3)	12.383	110	5823	0.449
132) n-Propylbenzene	(3)	12.420	91	196585	0.481
133) 2-Chlorotoluene	(3)	12.505	126	40938	0.488
134) 1,3,5-Trimethylbenzene	(3)	12.548	105	132085	0.469
135) 4-Chlorotoluene	(3)	12.585	126	42361	0.494
137) tert-Butylbenzene	(3)	12.798	134	29705M	0.464
138) Pentachloroethane	(3)	12.828	167	20910	0.423
139) 1,2,4-Trimethylbenzene	(3)	12.835	105	134879	0.450
140) sec-Butylbenzene	(3)	12.956	105	178535	0.478
142) 1,3-Dichlorobenzene	(3)	13.060	146	81645	0.472
141) p-Isopropyltoluene	(3)	13.060	119	152286	0.459
143) *1,4-Dichlorobenzene-d4	(3)	13.103	152	1047324	10.000
144) 1,4-Dichlorobenzene	(3)	13.121	146	91501	0.511
145) 1,2,3-Trimethylbenzene	(3)	13.145	120	61650M	0.471
146) Benzyl Chloride	(3)	13.231	126	7687	0.388
147) n-Butylbenzene	(3)	13.353	92	75824M	0.461
148) 1,2-Dichlorobenzene	(3)	13.401	146	77085	0.503
150) 1,2-Dibromo-3-Chloropropane	(4)	13.944	155	2176	0.714
153) 1,2,4-Trichlorobenzene	(3)	14.493	180	60694	0.502
154) Hexachlorobutadiene	(3)	14.572	225	34336	0.507
155) Naphthalene	(3)	14.670	128	75597	0.482
156) 1,2,3-Trichlorobenzene	(3)	14.822	180	47958	0.516

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

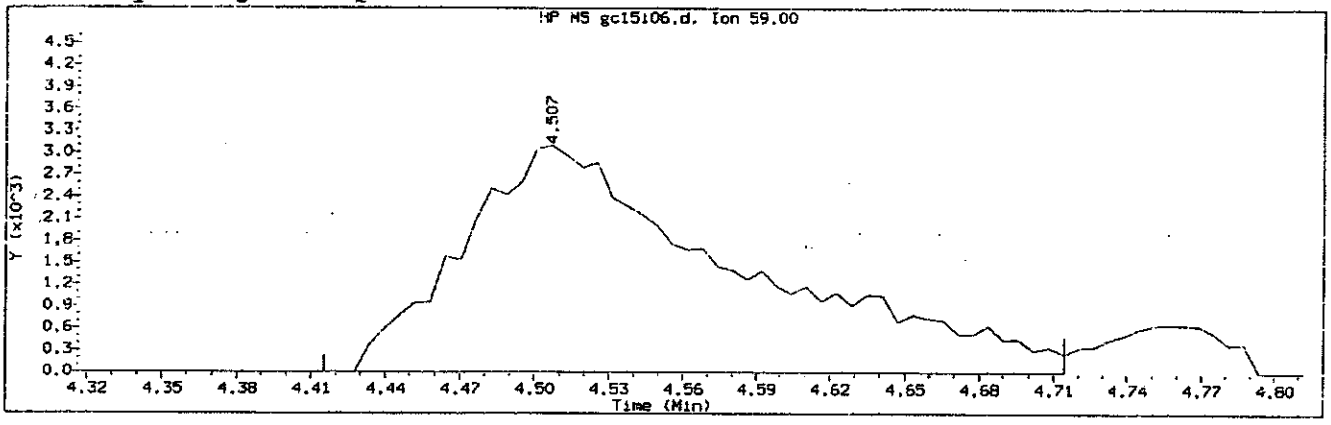
RAD48 0211

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on 10/15/2010 at 13:37.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10oct15a.b/gc15i06.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 13:02 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 15-OCT-2010 13:36
Date, time and analyst ID of latest file update: 15-Oct-2010 13:36 jml01693

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compound Number	: 38		
Compound Name	: t-Butyl Alcohol		
Scan Number	: 479		
Retention Time (minutes)	: 4.507		
Quant Ion	: 59.00		
Area (flag)	: 23972M		
On-Column Amount (ng)	: 10.7170		
Integration start scan	: 463	Integration stop scan:	512
Y at integration start	: 0	Y at integration end:	0

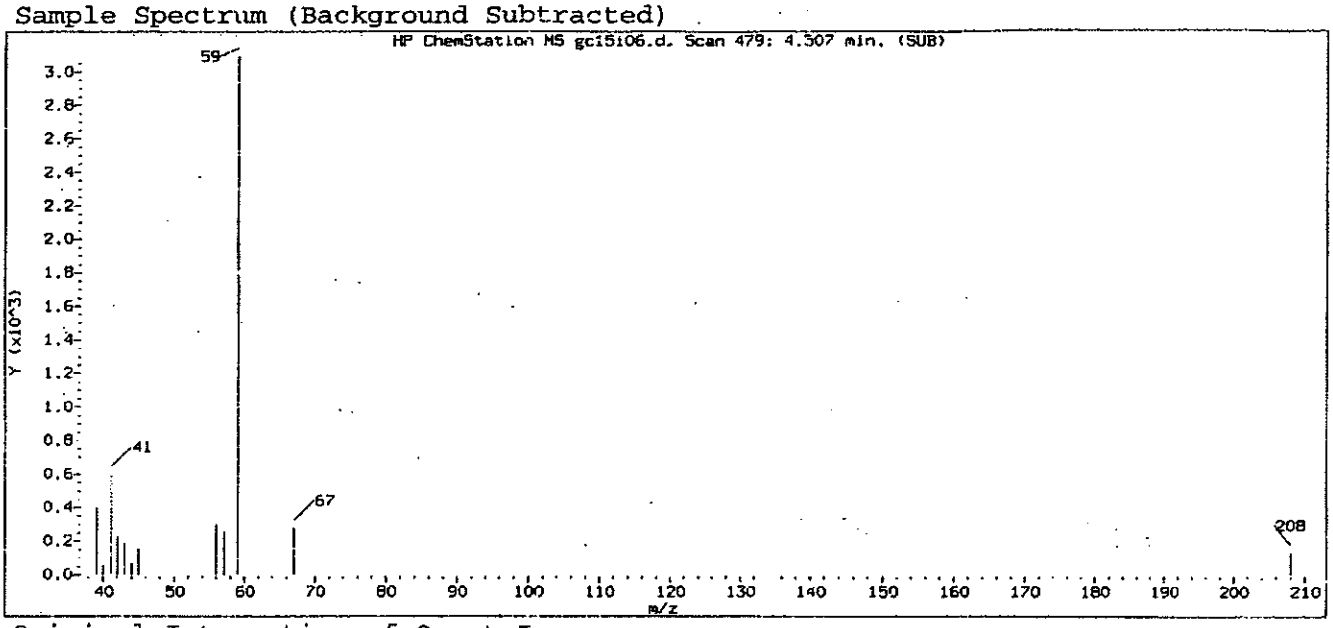
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long
on 10/15/2010 at 13:37.
Target 3.5 esignature user ID: jml01693

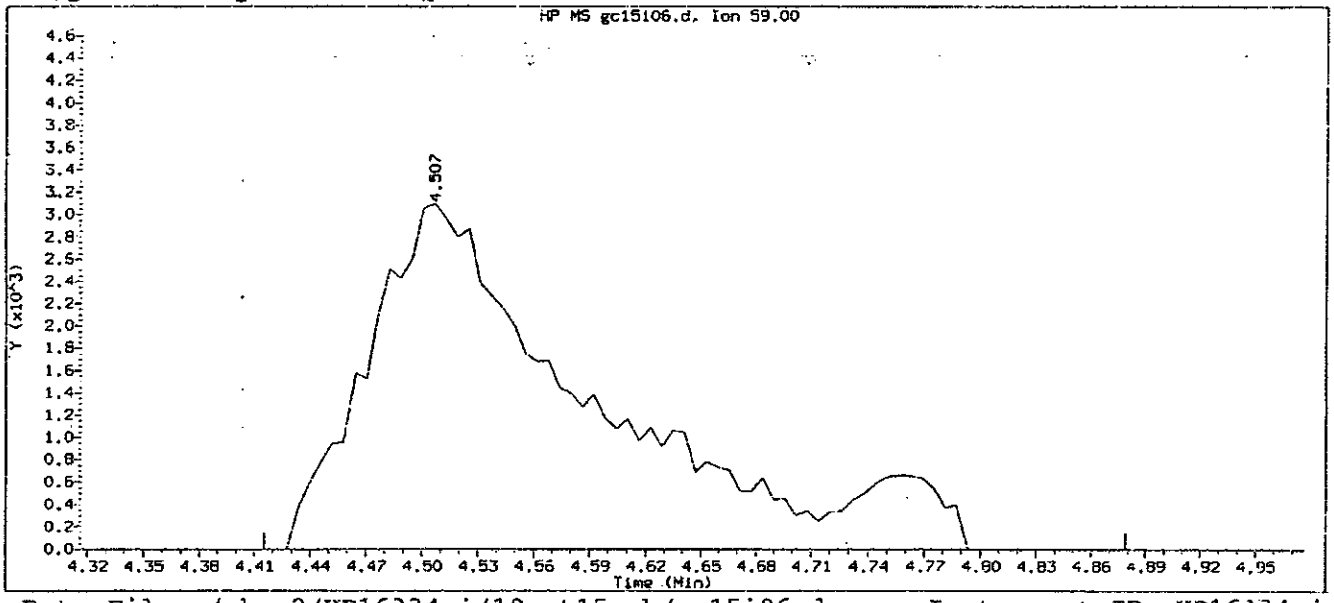
GC/MS audit/management approval: 10/21/10

RAD48 0212

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10oct15a.b/gc15i06.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 13:02 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 15-OCT-2010 13:20
Date, time and analyst ID of latest file update: 15-Oct-2010 13:20 Automation

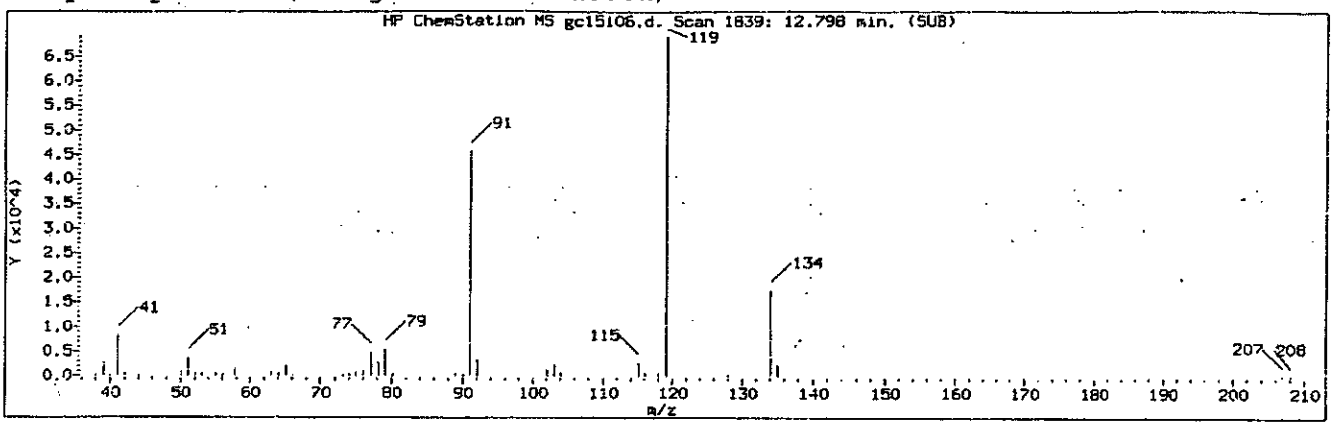
Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compound Number	: 38		
Compound Name	: t-Butyl Alcohol		
Scan Number	: 479		
Retention Time (minutes)	: 4.507		
Quant Ion	: 59.00		
Area	: 26218		
On-column Amount (ng)	: 11.5283		
Integration start scan	: 463	Integration stop scan:	539
Y at integration start	: 0	Y at integration end:	0

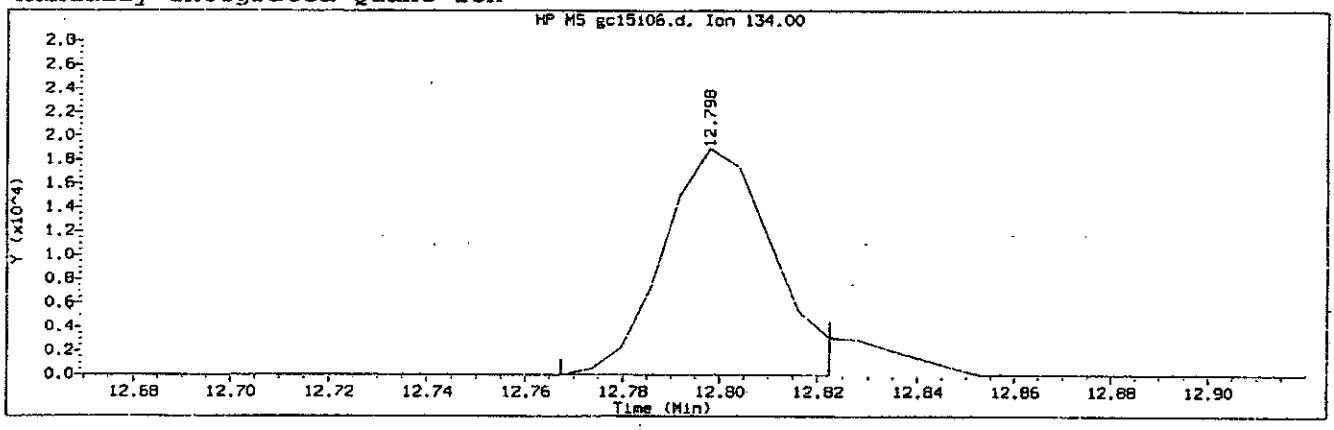
RAD40 0213

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Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10oct15a.b/gc15i06.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 13:02 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 15-OCT-2010 13:36
Date, time and analyst ID of latest file update: 15-Oct-2010 13:36 jml01693

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compound Number : 137
Compound Name : tert-Butylbenzene
Scan Number : 1839
Retention Time (minutes): 12.798
Quant Ion : 134.00
Area (flag) : 29705M
On-Column Amount (ng) : 0.4641
Integration start scan : 1833 Integration stop scan: 1842
Y at integration start : 0 Y at integration end: 0

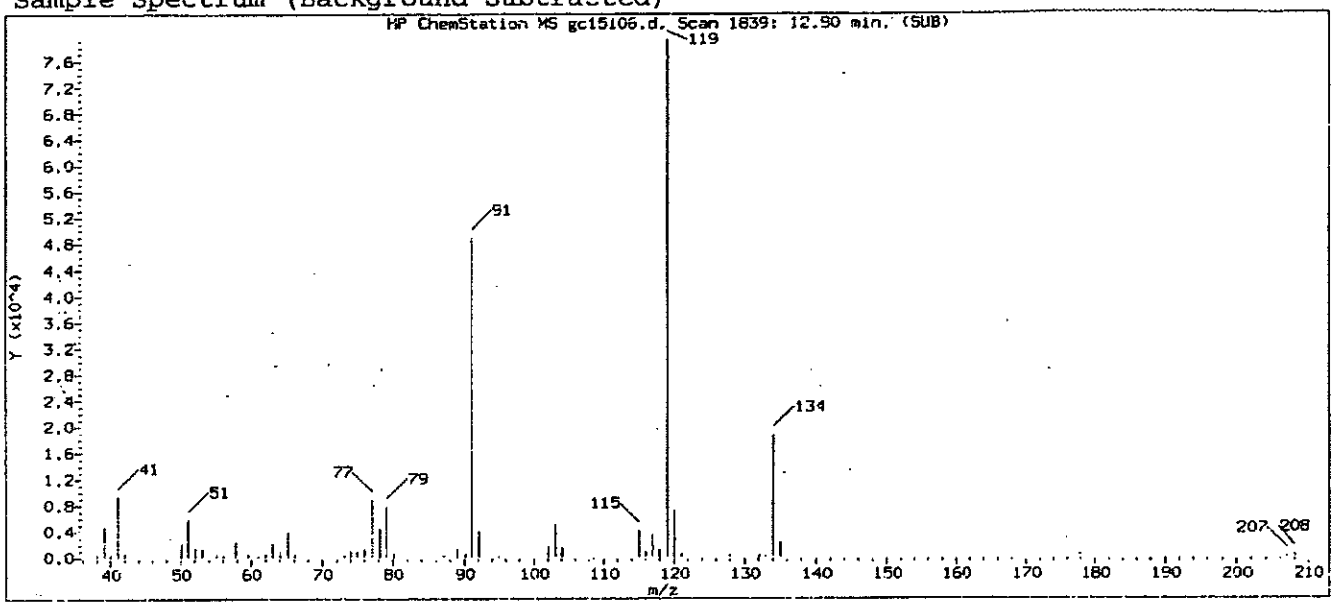
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long
on 10/15/2010 at 13:37.
Target 3.5 esignature user ID: jml01693

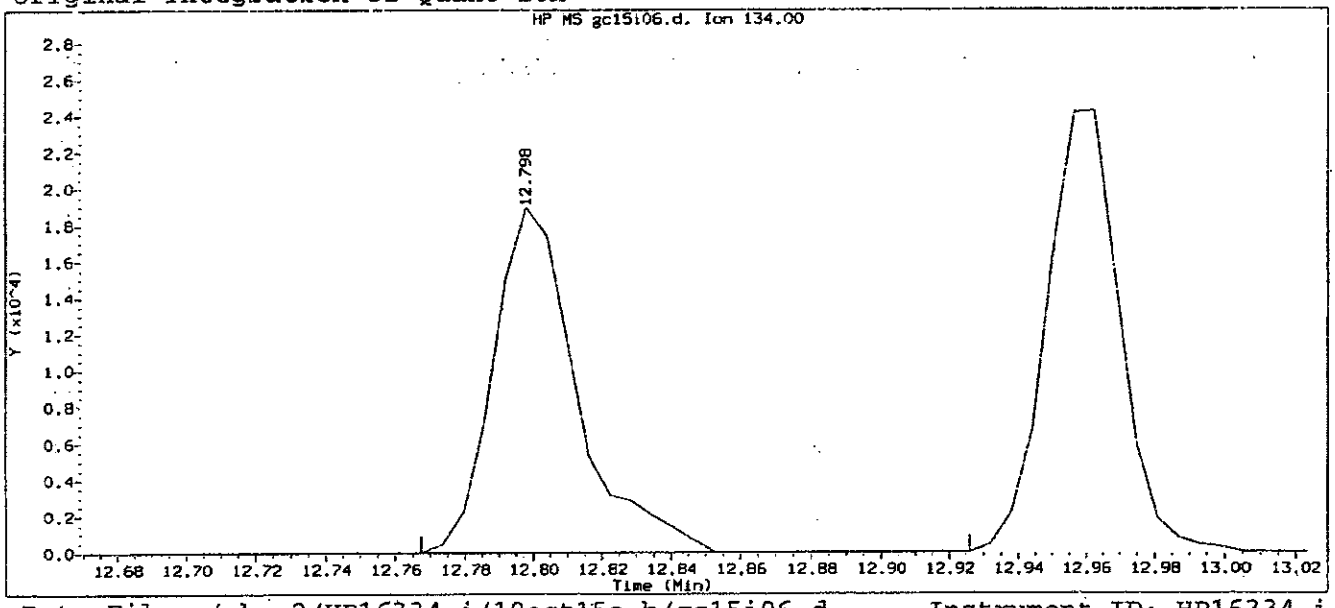
GC/MS audit/management approval: _____ 10/21/10

RAD48 0214

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10oct15a.b/gc15i06.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 13:02 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 15-OCT-2010 13:20
Date, time and analyst ID of latest file update: 15-Oct-2010 13:20 Automation

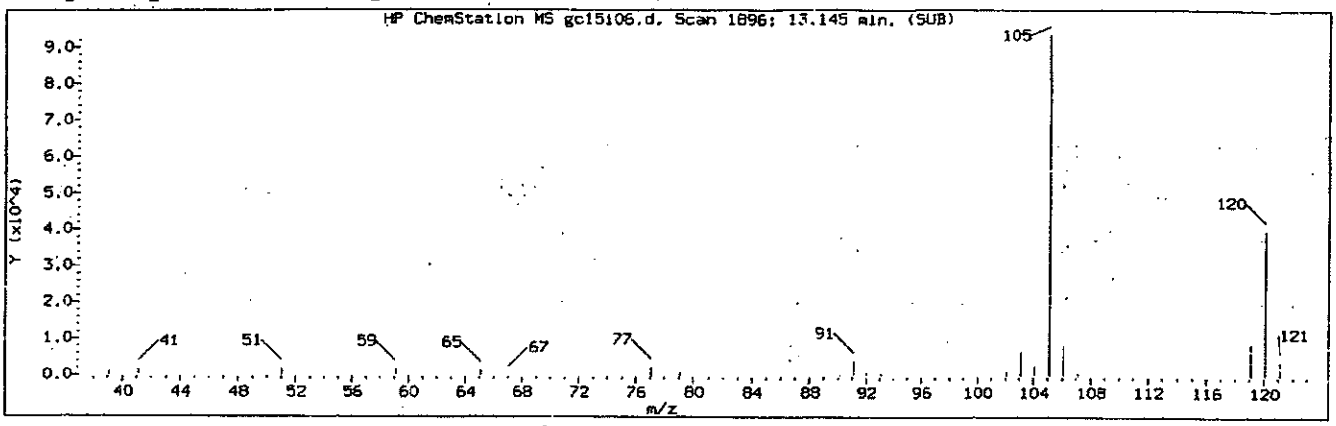
Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compound Number	: 137		
Compound Name	: tert-Butylbenzene		
Scan Number	: 1839		
Retention Time (minutes)	: 12.798		
Quant Ion	: 134.00		
Area	: 32242		
On-column Amount (ng)	: 0.4972		
Integration start scan	: 1833	Integration stop scan:	1859
Y at integration start	: 0	Y at integration end:	0

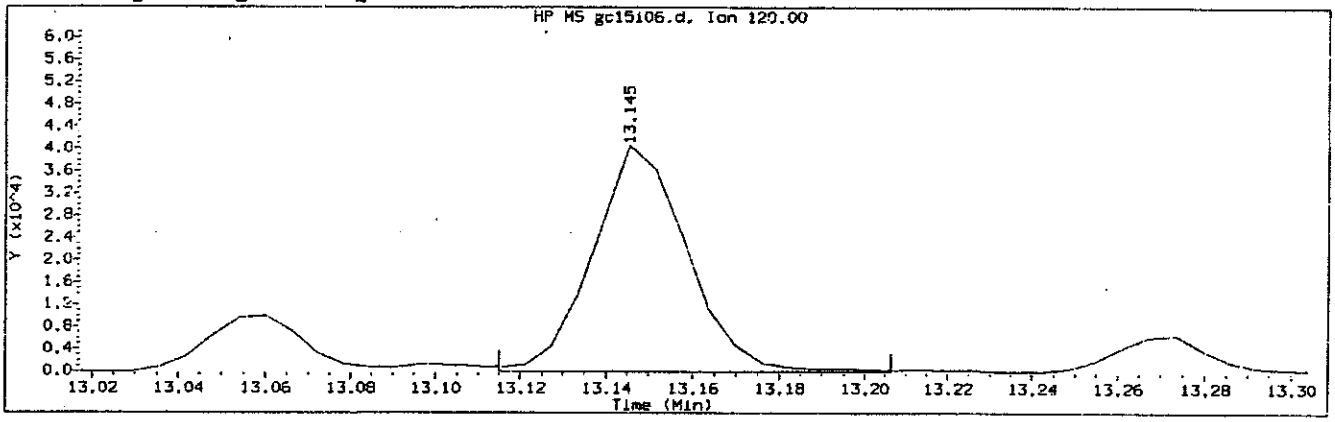
RAD40 8215

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Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10oct15a.b/gc15i06.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 13:02 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 15-OCT-2010 13:36
Date, time and analyst ID of latest file update: 15-Oct-2010 13:36 jml01693

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compound Number	: 145		
Compound Name	: 1,2,3-Trimethylbenzene		
Scan Number	: 1896		
Retention Time (minutes)	: 13.145		
Quant Ion	: 120.00		
Area (flag)	: 61650M		
On-Column Amount (ng)	: 0.4711		
Integration start scan	: 1890	Integration stop scan:	1905
Y at integration start	: 0	Y at integration end:	0

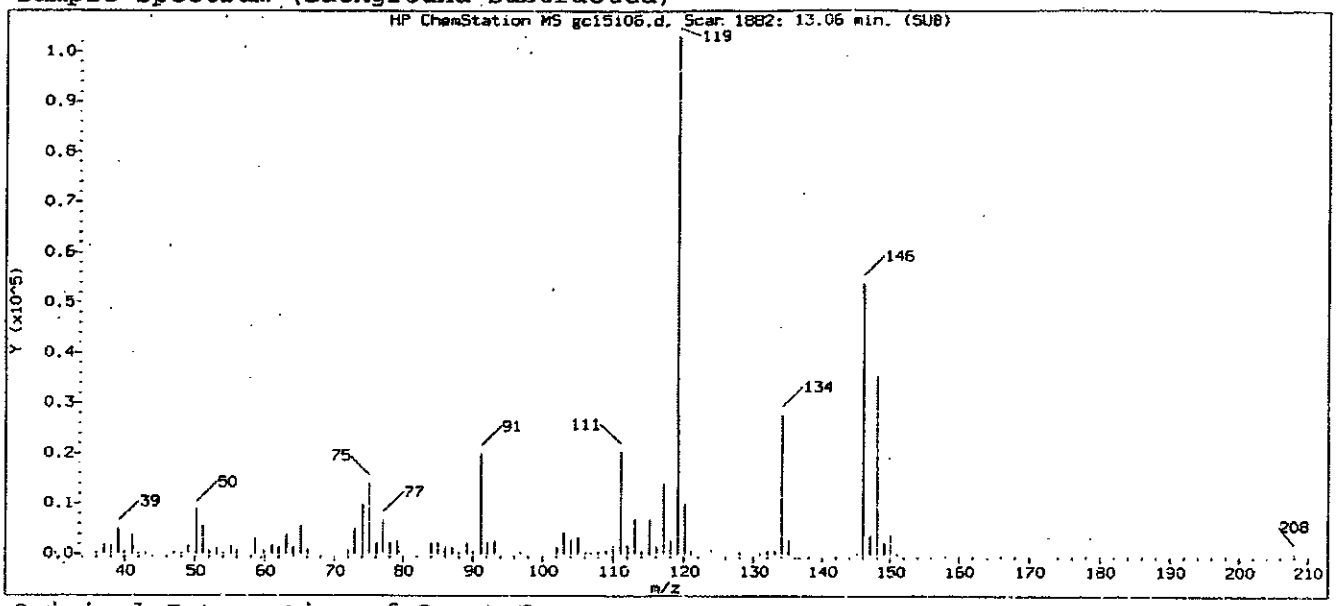
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long on 10/15/2010 at 13:37. Target 3.5 esignature user ID: jml01693

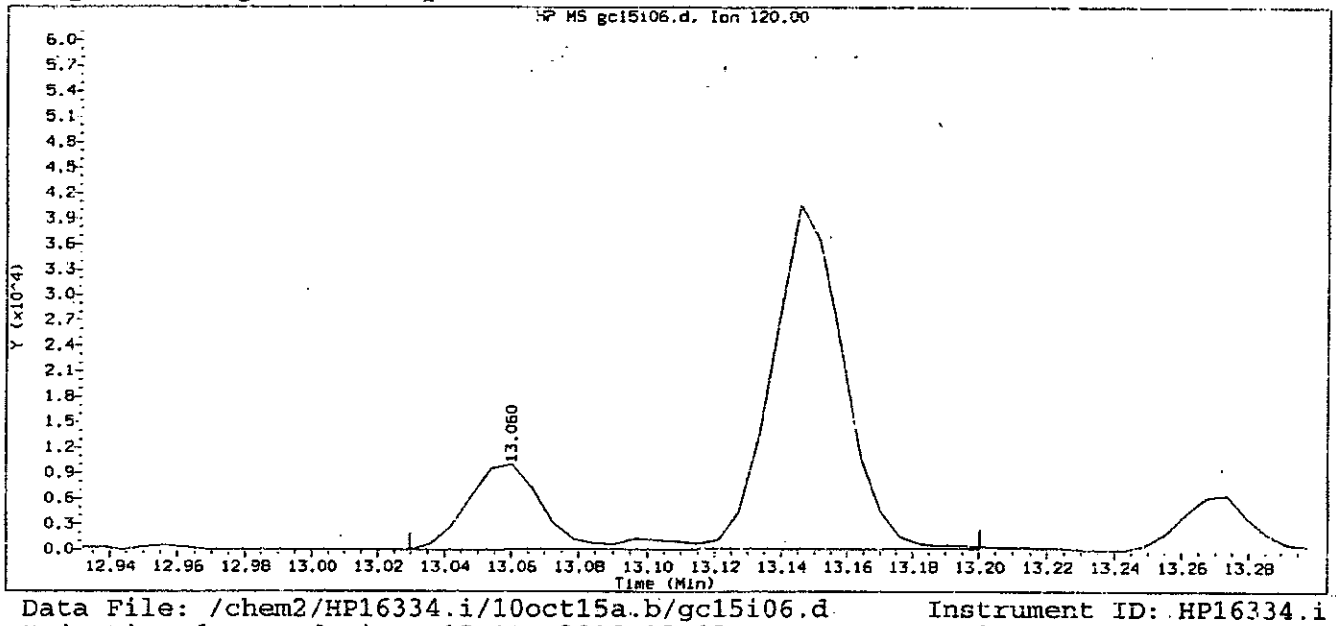
GC/MS audit/management approval: 10/21/10

RAD48 0216

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10oct15a.b/gc15i06.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 13:02 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 15-OCT-2010 13:20
Date, time and analyst ID of latest file update: 15-Oct-2010 13:20 Automation

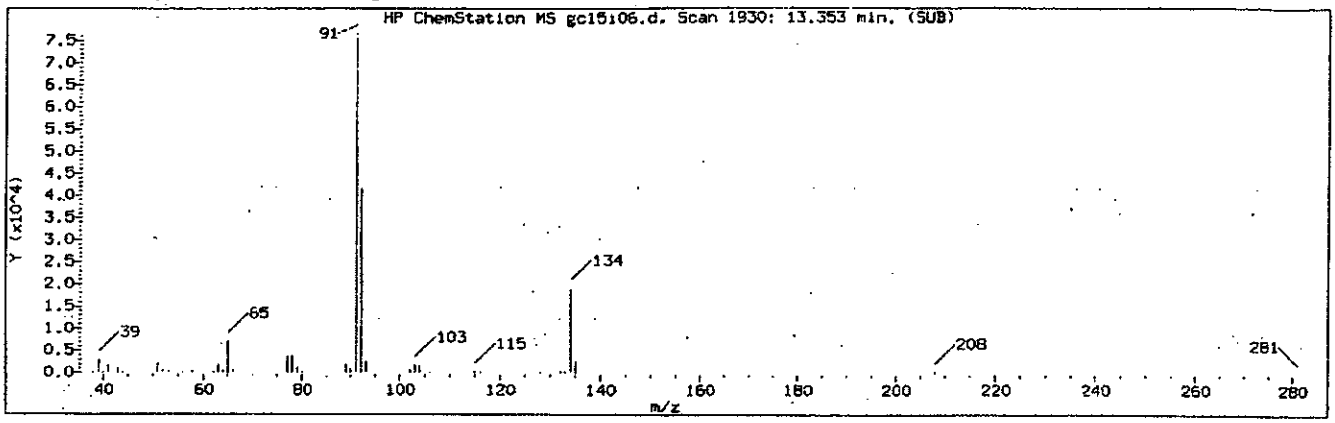
Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compound Number	: 145		
Compound Name	: 1,2,3-Trimethylbenzene		
Scan Number	: 1882		
Retention Time (minutes)	: 13.060		
Quant Ion	: 120.00		
Area	: 77211		
On-column Amount (ng)	: 0.5676		
Integration start scan	: 1876	Integration stop scan:	1904
Y at integration start	: 0	Y at integration end:	219

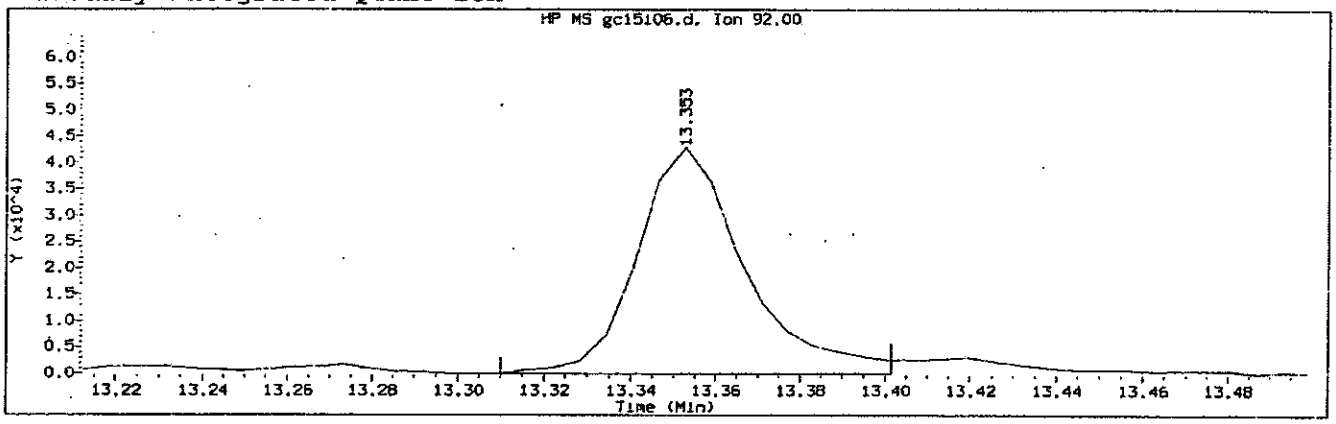
RAD48 0217

Digitally signed by Jason M. Long on 10/15/2010 at 13:37.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10oct15a.b/gc15i06.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 13:02 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 15-OCT-2010 13:36
Date, time and analyst ID of latest file update: 15-Oct-2010 13:36 jml01693

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compound Number	: 147		
Compound Name	: n-Butylbenzene		
Scan Number	: 1930		
Retention Time (minutes)	: 13.353		
Quant Ion	: 92.00		
Area (flag)	: 75824M		
On-Column Amount (ng)	: 0.4609		
Integration start scan	: 1922	Integration stop scan:	1937
Y at integration start	: 0	Y at integration end:	0

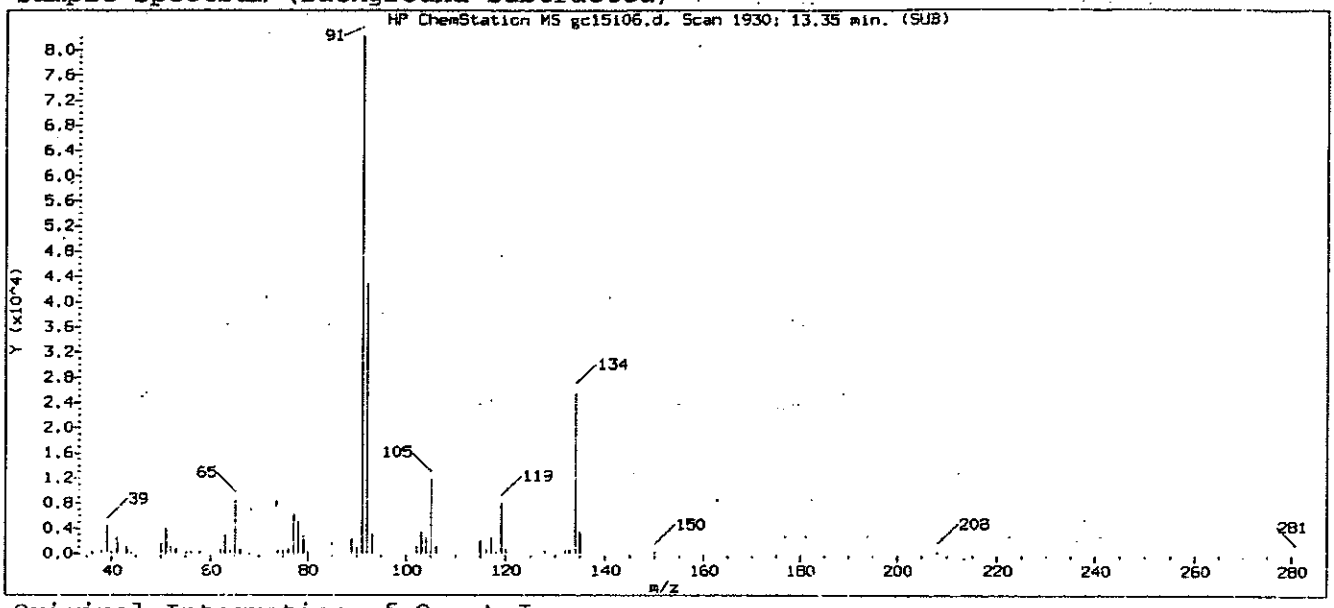
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long
on 10/15/2010 at 13:37.
Target 3.5 esignature user ID: jml01693

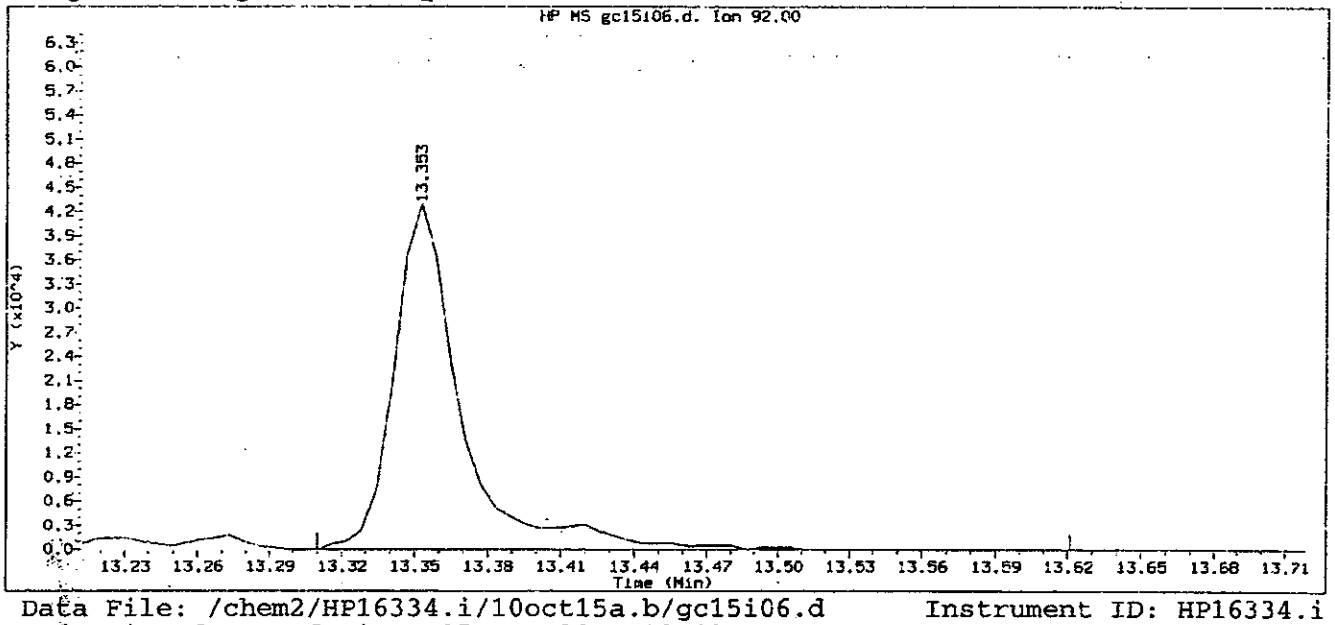
GC/MS audit/management approval: _____ 10/21/10

RAD40 0218

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10oct15a.b/gc15i06.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 13:02 Analyst ID: JML01693

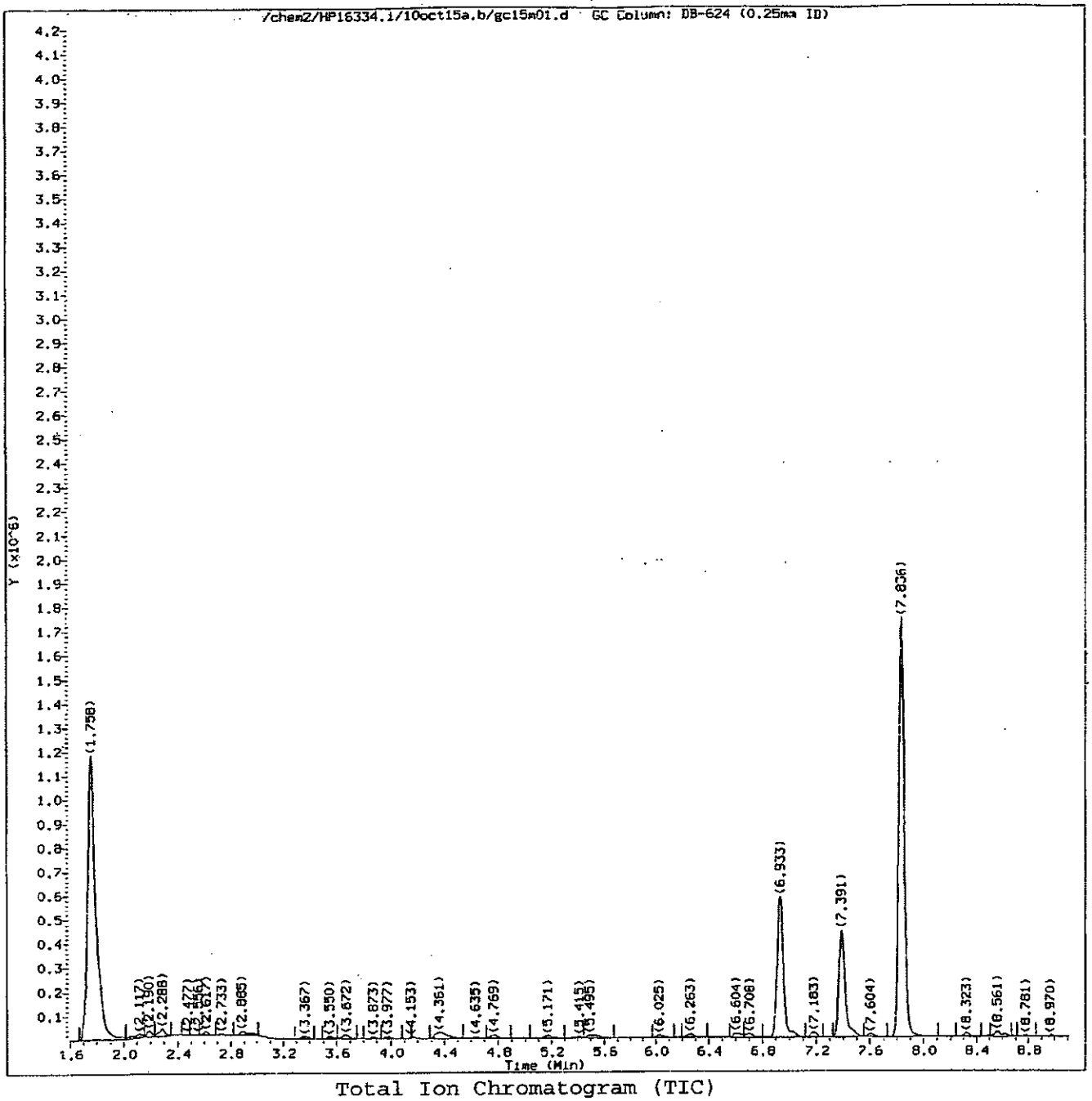
Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 15-OCT-2010 13:20
Date, time and analyst ID of latest file update: 15-Oct-2010 13:20 Automation

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compound Number	: 147		
Compound Name	: n-Butylbenzene		
Scan Number	: 1930		
Retention Time (minutes)	: 13.353		
Quant Ion	: 92.00		
Area	: 82594		
On-column Amount (ng)	: 0.4952		
Integration start scan	: 1922	Integration stop scan:	1973
Y at integration start	: 0	Y at integration end:	0

RAD40 8219

Digitally signed by Jason M. Long on 10/15/2010 at 13:37.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

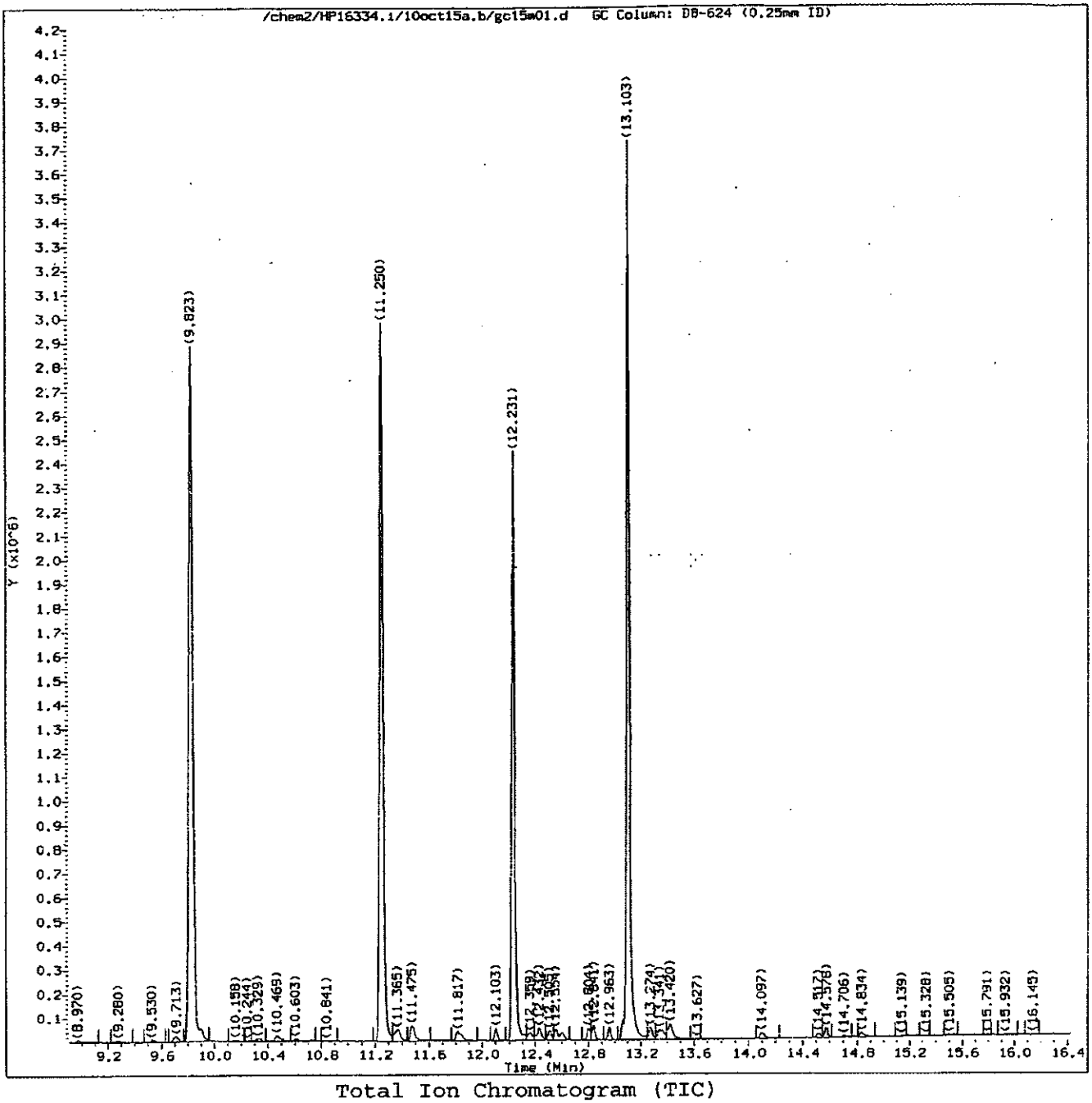
Data File: /chem2/HP16334.i/10oct15a.b/gc15m01.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 13:24 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 15-OCT-2010 13:39
Date, time and analyst ID of latest file update: 15-Oct-2010 13:51 jml01693

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

RAD48 2220

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on 10/15/2010 at 13:52.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/10oct15a.b/gc15m01.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 13:24 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 15-OCT-2010 13:39
Date, time and analyst ID of latest file update: 15-Oct-2010 13:51 jml01693

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

RAD40 8221

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on 10/15/2010 at 13:52.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/10oct15a.b/gc15m01.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 13:24 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 15-OCT-2010 13:39
Date, time and analyst ID of latest file update: 15-Oct-2010 13:51 jml01693

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
2) Dichlorodifluoromethane	(1)	1.983	85	11417	0.102
5) Chloromethane	(1)	2.117	50	13621	0.139
6) Vinyl Chloride	(1)	2.251	62	10594	0.111
9) 1,3-Butadiene	(1)	2.288	39	13966M	0.121
10) Bromomethane	(1)	2.617	94	10030	0.144
11) Chloroethane	(1)	2.733	64	5591M	0.104
13) Dichlorofluoromethane	(1)	2.952	67	13587	0.114
15) Trichlorofluoromethane	(1)	3.050	101	12251	0.104
17) Ethyl Ether	(1)	3.343	59	4019	0.091
18) Freon 123a	(1)	3.367	67	8170	0.110
23) Acrolein	(4)	3.556	56	22117	4.380
24) 1,1-Dichloroethene	(1)	3.672	96	8217	0.135
25) Freon 113	(1)	3.684	101	6788	0.108
26) Acetone	(4)	3.788	58	1305M	0.601
27) Methyl Iodide	(1)	3.873	142	12814	0.107
29) Carbon Disulfide	(1)	3.977	76	19785	0.112
32) Allyl Chloride	(1)	4.153	41	9734M	0.108
33) Methyl Acetate	(1)	4.220	43	1006	0.059
34) Methylene Chloride	(1)	4.342	84	12262	0.181
36)*t-Butyl Alcohol-d10	(4)	4.385	65	89862	50.000
38) t-Butyl Alcohol	(4)	4.531	59	3820	1.823
40) Methyl Tertiary Butyl Ether	(1)	4.757	73	14247	0.104
41) trans-1,2-Dichloroethene	(1)	4.775	96	8955	0.128
37) 1,2-Dichloroethene (Total)	(1)		96	17390	0.240
39) Acrylonitrile	(4)	4.800	53	429	0.051
44) n-Hexane	(1)	5.171	57	10369	0.112
45) 1,1-Dichloroethane	(1)	5.403	63	12593	0.107
47) di-Isopropyl Ether	(1)	5.507	45	20607	0.102
48) 2-Chloro-1,3-Butadiene	(1)	5.556	53	8110	0.092
49) Ethyl t-Butyl Ether	(1)	6.025	59	17446	0.097
51) 2,2-Dichloropropane	(1)	6.257	77	10082	0.108
50) cis-1,2-Dichloroethene	(1)	6.269	96	8435	0.112
52) 2-Butanone	(4)	6.348	43	10815	0.966
53) Propionitrile	(4)	6.458	54	2922	0.970
56) Bromochloromethane	(1)	6.598	128	3018	0.096
55) Methacrylonitrile	(4)	6.604	67	10922	0.843
57) Tetrahydrofuran	(4)	6.659	71	2954	0.815
58) Chloroform	(1)	6.708	83	13003	0.110

M = Compound was manually integrated.
* = Compound is an internal standard.

RAD48 8222

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on 10/15/2010 at 13:52.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/10oct15a.b/gc15m01.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 13:24 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 15-OCT-2010 13:39
Date, time and analyst ID of latest file update: 15-Oct-2010 13:51 jml01693

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
61) $Dibromofluoromethane	(1)	6.927	113	555423	9.951
63) 1,1,1-Trichloroethane	(1)	6.958	97	10852	0.106
64) Cyclohexane	(1)	7.019	56	12208	0.108
66) Carbon Tetrachloride	(1)	7.171	117	9169	0.104
65) 1,1-Dichloropropene	(1)	7.183	75	9948	0.109
67) Isobutyl Alcohol	(4)	7.366	41	4364	6.449
70) $1,2-Dichloroethane-d4	(1)	7.384	102	109553	9.885
72) Benzene	(1)	7.464	78	31115	0.116
74) 1,2-Dichloroethane	(1)	7.500	62	6600	0.103
75) t-Amyl Methyl Ether	(1)	7.616	73	15614	0.101
76) n-Heptane	(1)	7.811	43	11520	0.118
77) *Fluorobenzene	(1)	7.836	96	2486782	10.000
81) n-Butanol	(4)	8.305	56	2380	4.221
83) Trichloroethene	(1)	8.317	95	8009	0.109
84) Methylcyclohexane	(1)	8.561	83	12193	0.098
85) 1,2-Dichloropropane	(1)	8.616	63	7119	0.105
88) Dibromomethane	(1)	8.768	93	3040	0.101
87) Methyl Methacrylate	(4)	8.811	69	854	0.038
89) 1,4-Dioxane	(4)	8.817	88	107M	0.756
90) Bromodichloromethane	(1)	8.976	83	7093	0.094
91) 2-Nitropropane	(4)	9.280	41	6646	0.986
94) cis-1,3-Dichloropropene	(1)	9.536	75	7569	0.087
96) 4-Methyl-2-Pentanone	(1)	9.713	43	24455	0.793
97) $Toluene-d8	(2)	9.823	98	2426704	9.879
101) Toluene	(2)	9.902	92	19741	0.112
102) trans-1,3-Dichloropropene	(2)	10.158	75	5860	0.083
103) Ethyl Methacrylate	(2)	10.256	69	3142	0.062
104) 1,1,2-Trichloroethane	(2)	10.329	97	4240	0.100
105) Tetrachloroethene	(2)	10.469	166	9016	0.106
106) 1,3-Dichloropropane	(2)	10.506	76	7106	0.098
107) 2-Hexanone	(2)	10.616	43	15552	0.739
108) Dibromochloromethane	(2)	10.725	129	4004	0.081
109) 1,2-Dibromoethane	(2)	10.841	107	3261	0.084
110) *Chlorobenzene-d5	(2)	11.250	117	1837956	10.000
112) Chlorobenzene	(2)	11.274	112	22398	0.111
113) 1,1,1,2-Tetrachloroethane	(2)	11.347	131	6791	0.100
114) Ethylbenzene	(2)	11.371	91	33880	0.100
117) m+p-Xylene	(2)	11.475	106	26983	0.199

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 10/15/2010 at 13:52.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/10oct15a.b/gc15m01.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 13:24 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 15-OCT-2010 13:39
Date, time and analyst ID of latest file update: 15-Oct-2010 13:51 jml01693

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

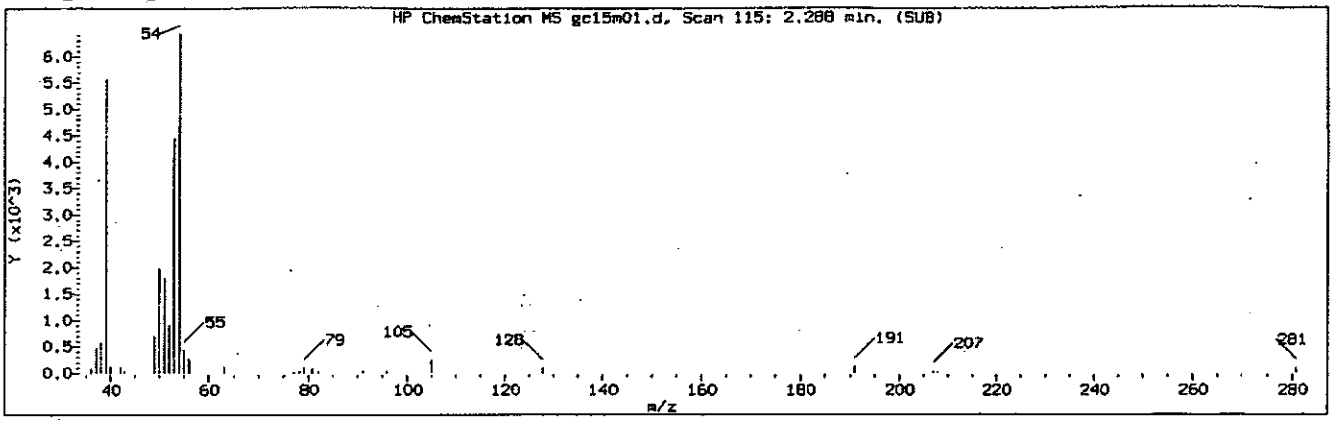
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
115) Xylene (Total)	(2)		106	39523	0.292
118) o-Xylene	(2)	11.817	106	12540	0.093
119) Styrene	(2)	11.841	104	14599	0.073
120) Bromoform	(2)	11.993	173	1734	0.068
121) Isopropylbenzene	(2)	12.103	105	33358	0.097
126) $4-Bromofluorobenzene	(2)	12.231	95	827340	9.801
128) 1,1,2,2-Tetrachloroethane	(3)	12.347	83	4515	0.097
129) Bromobenzene	(3)	12.365	156	8530	0.103
131) 1,2,3-Trichloropropane	(3)	12.383	110	1060	0.082
130) trans-1,4-Dichloro-2-Butene	(4)	12.414	53	4397	3.660
132) n-Propylbenzene	(3)	12.432	91	39356	0.097
133) 2-Chlorotoluene	(3)	12.512	126	8749	0.105
134) 1,3,5-Trimethylbenzene	(3)	12.554	105	26645	0.095
135) 4-Chlorotoluene	(3)	12.603	126	9572	0.112
137) tert-Butylbenzene	(3)	12.804	134	6635	0.104
138) Pentachloroethane	(3)	12.829	167	3901	0.079
139) 1,2,4-Trimethylbenzene	(3)	12.841	105	26710	0.089
140) sec-Butylbenzene	(3)	12.963	105	36967	0.099
141) p-Isopropyltoluene	(3)	13.060	119	30572M	0.093
142) 1,3-Dichlorobenzene	(3)	13.060	146	16965	0.098
143) *1,4-Dichlorobenzene-d4	(3)	13.103	152	1042972	10.000
144) 1,4-Dichlorobenzene	(3)	13.121	146	21455	0.120
145) 1,2,3-Trimethylbenzene	(3)	13.152	120	12077M	0.093
146) Benzyl Chloride	(3)	13.243	126	914	0.046
147) n-Butylbenzene	(3)	13.365	92	16425	0.100
148) 1,2-Dichlorobenzene	(3)	13.414	146	15657	0.103
150) 1,2-Dibromo-3-Chloropropane	(4)	13.975	155	96	0.425
153) 1,2,4-Trichlorobenzene	(3)	14.517	180	13365	0.111
154) Hexachlorobutadiene	(3)	14.578	225	7731	0.115
155) Naphthalene	(3)	14.706	128	14300	0.092
156) 1,2,3-Trichlorobenzene	(3)	14.834	180	9553	0.103

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

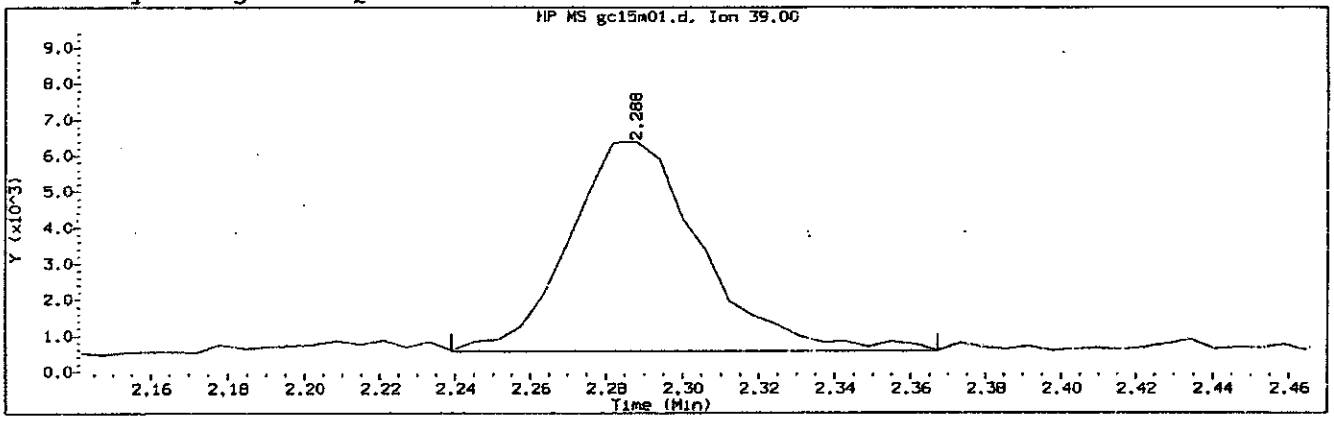
Digitally signed by Jason M. Long
on 10/15/2010 at 13:52.
Target 3.5 esignature user ID: jml01693

RAD48 0224

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10oct15a.b/gc15m01.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 13:24 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 15-OCT-2010 13:39
Date, time and analyst ID of latest file update: 15-Oct-2010 13:51 jml01693

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compound Number	: 9		
Compound Name	: 1,3-Butadiene		
Scan Number	: 115		
Retention Time (minutes)	: 2.288		
Quant Ion	: 39.00		
Area (flag)	: 13966M		
On-Column Amount (ng)	: 0.1212		
Integration start scan	: 106	Integration stop scan:	127
Y at integration start	: 578	Y at integration end:	578

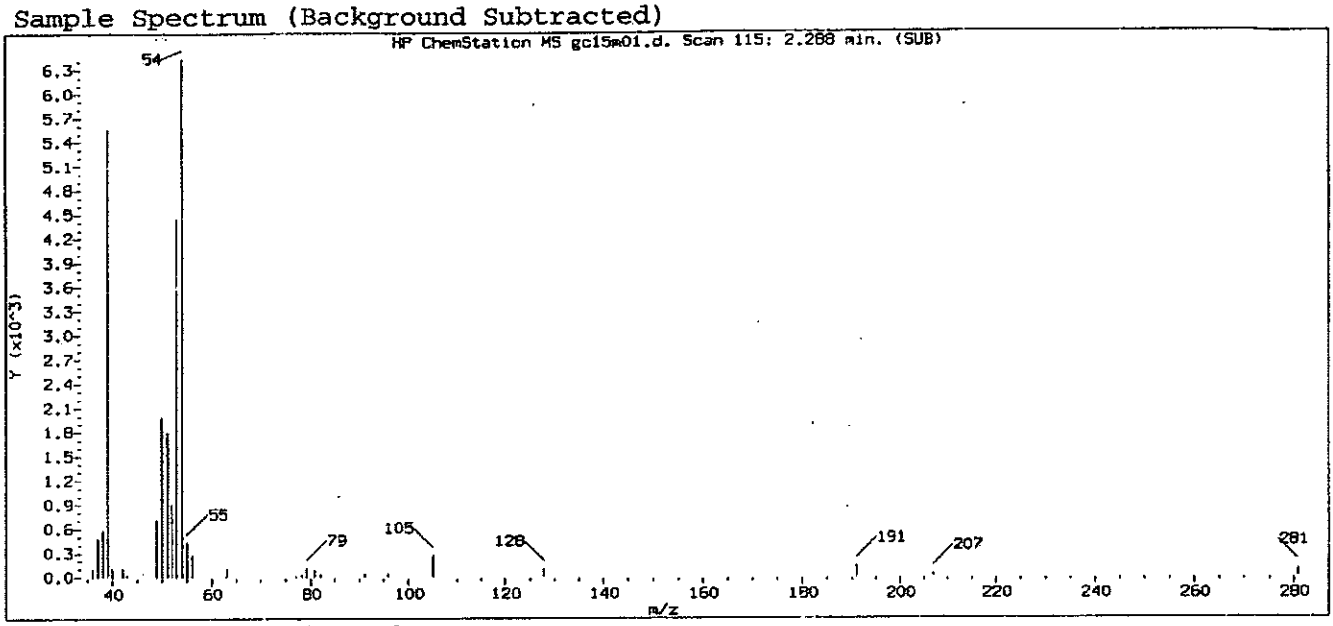
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long
on 10/15/2010 at 13:52.
Target 3.5 esignature user ID: jml01693

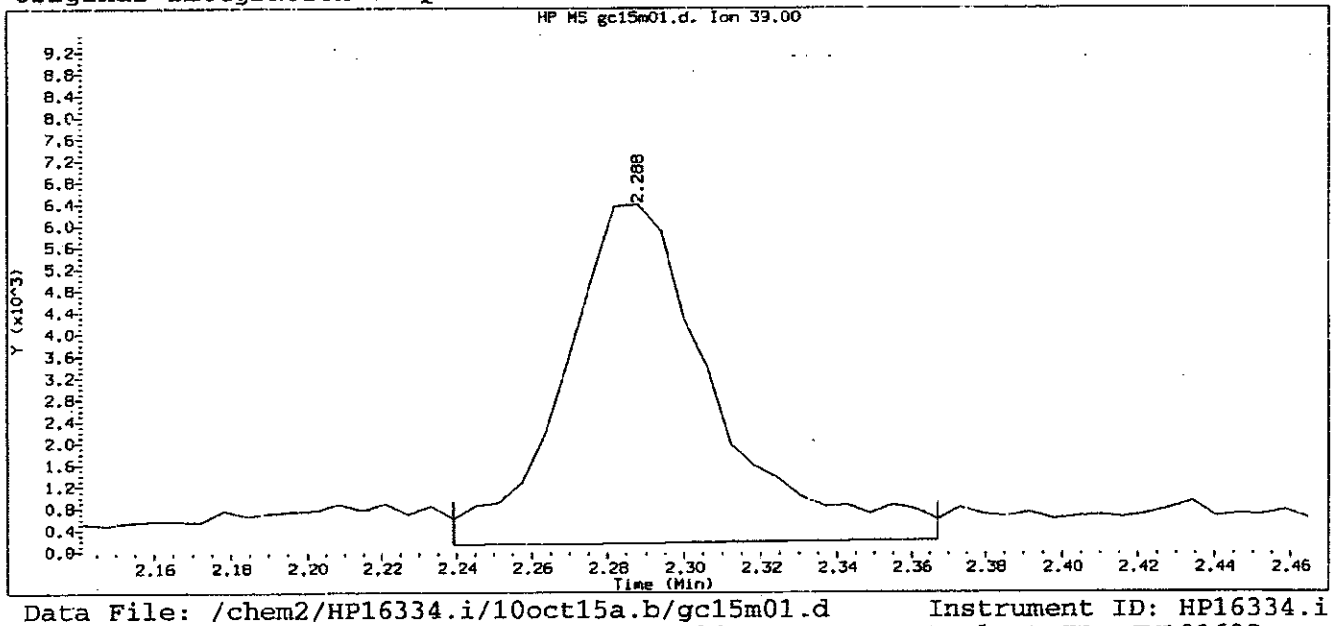
GC/MS audit/management approval: _____ 10/21/10

RAD49 8225

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10oct15a.b/gc15m01.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 13:24 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 15-OCT-2010 13:39
Date, time and analyst ID of latest file update: 15-Oct-2010 13:42 Automation

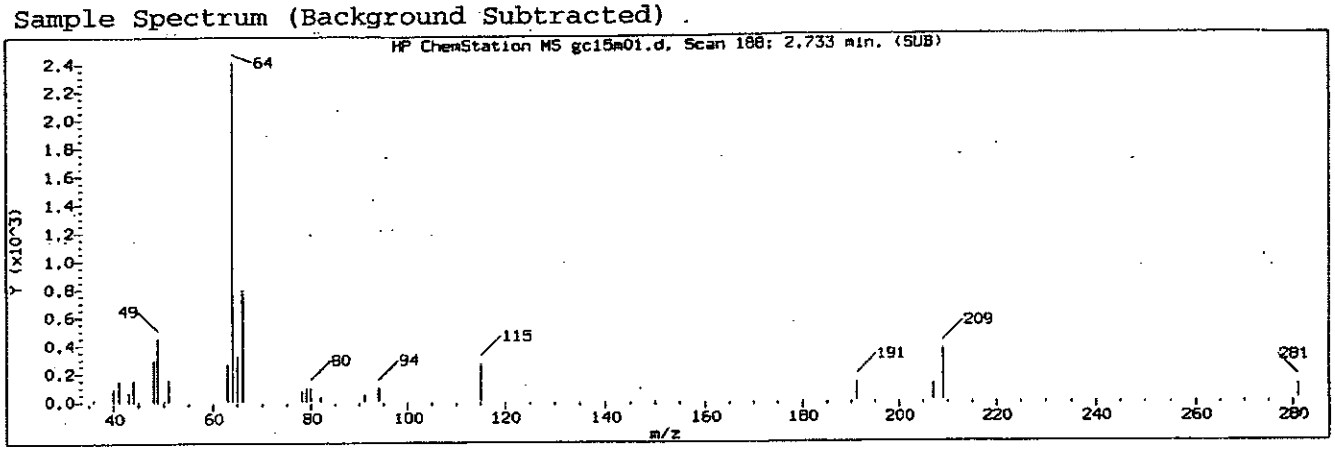
Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compound Number	: 9		
Compound Name	: 1,3-Butadiene		
Scan Number	: 115		
Retention Time (minutes)	: 2.288		
Quant Ion	: 39.00		
Area	: 17140		
On-column Amount (ng)	: 0.1488		
Integration start scan	: 106	Integration stop scan:	127
Y at integration start	: 124	Y at integration end:	204

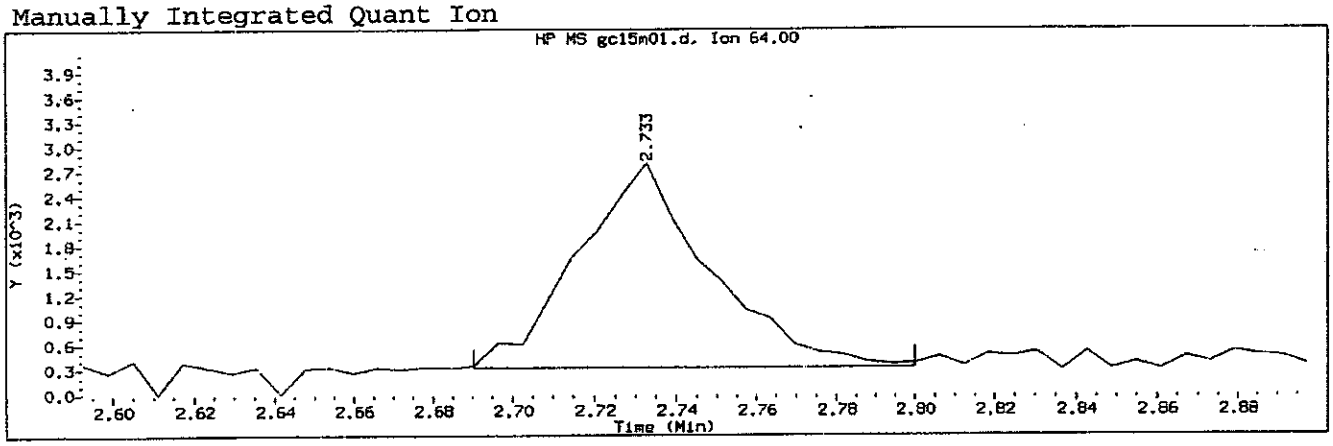
RAD48 0226

Digitally signed by Jason M. Long on 10/15/2010 at 13:52.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10oct15a.b/gc15m01.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 13:24 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 15-OCT-2010 13:39
Date, time and analyst ID of latest file update: 15-Oct-2010 13:51 jml01693

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

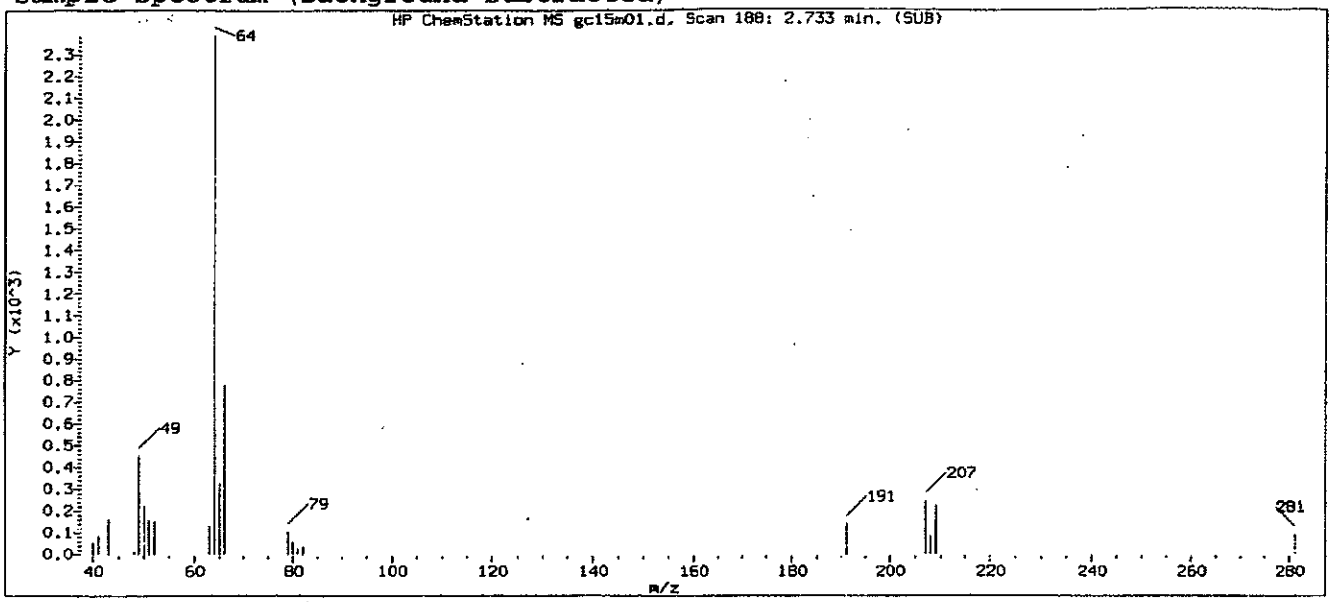
Compound Number	: 11		
Compound Name	: Chloroethane		
Scan Number	: 188		
Retention Time (minutes)	: 2.733		
Quant Ion	: 64.00		
Area (flag)	: 5591M		
On-Column Amount (ng)	: 0.1036		
Integration start scan	: 180	Integration stop scan:	198
Y at integration start	: 313	Y at integration end:	313

Reason for manual integration: improper integration

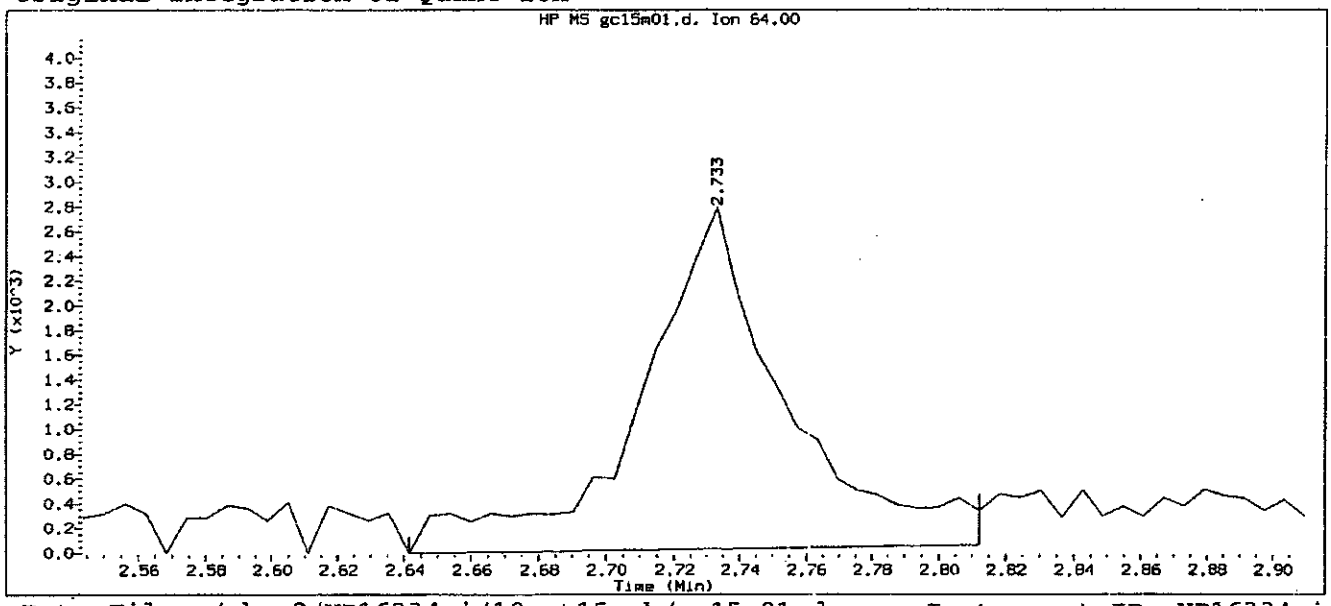
Analyst responsible for change: Digitally signed by Jason M. Long
on 10/15/2010 at 13:52.
Target 3.5 esignature user ID: jml01693

GC/MS audit/management approval: 10/21/10

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10oct15a.b/gc15m01.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 13:24 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 15-OCT-2010 13:39
Date, time and analyst ID of latest file update: 15-Oct-2010 13:42 Automation

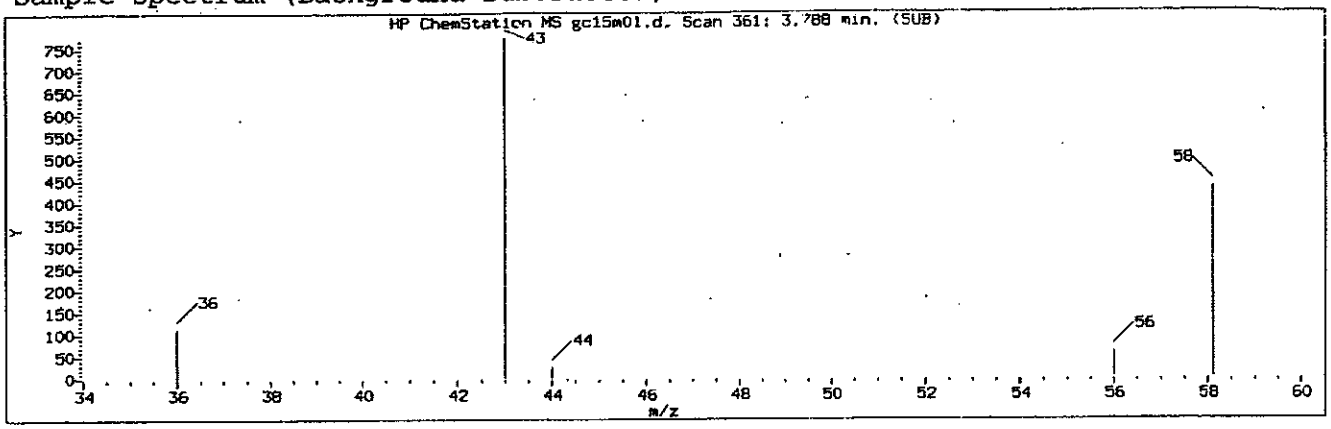
Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compound Number	: 11		
Compound Name	: Chloroethane		
Scan Number	: 188		
Retention Time (minutes)	: 2.733		
Quant Ion	: 64.00		
Area	: 8441		
On-column Amount (ng)	: 0.1564		
Integration start scan	: 172	Integration stop scan:	200
Y at integration start	: 0	Y at integration end:	65

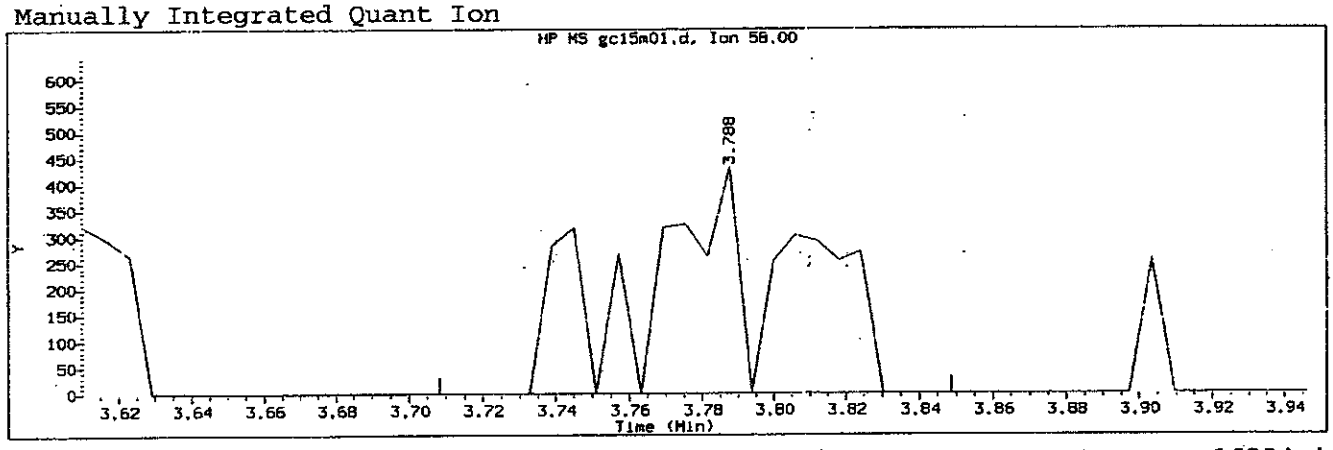
RAD40 0228

Digitally signed by Jason M. Long on 10/15/2010 at 13:52.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10oct15a.b/gc15m01.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 13:24 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 15-OCT-2010 13:39
Date, time and analyst ID of latest file update: 15-Oct-2010 13:51 jml01693

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compound Number	: 26		
Compound Name	: Acetone		
Scan Number	: 361		
Retention Time (minutes)	: 3.788		
Quant Ion	: 58.00		
Area (flag)	: 1305M		
On-Column Amount (ng)	: 0.6015		
Integration start scan	: 347	Integration stop scan:	370
Y at integration start	: 0	Y at integration end:	0

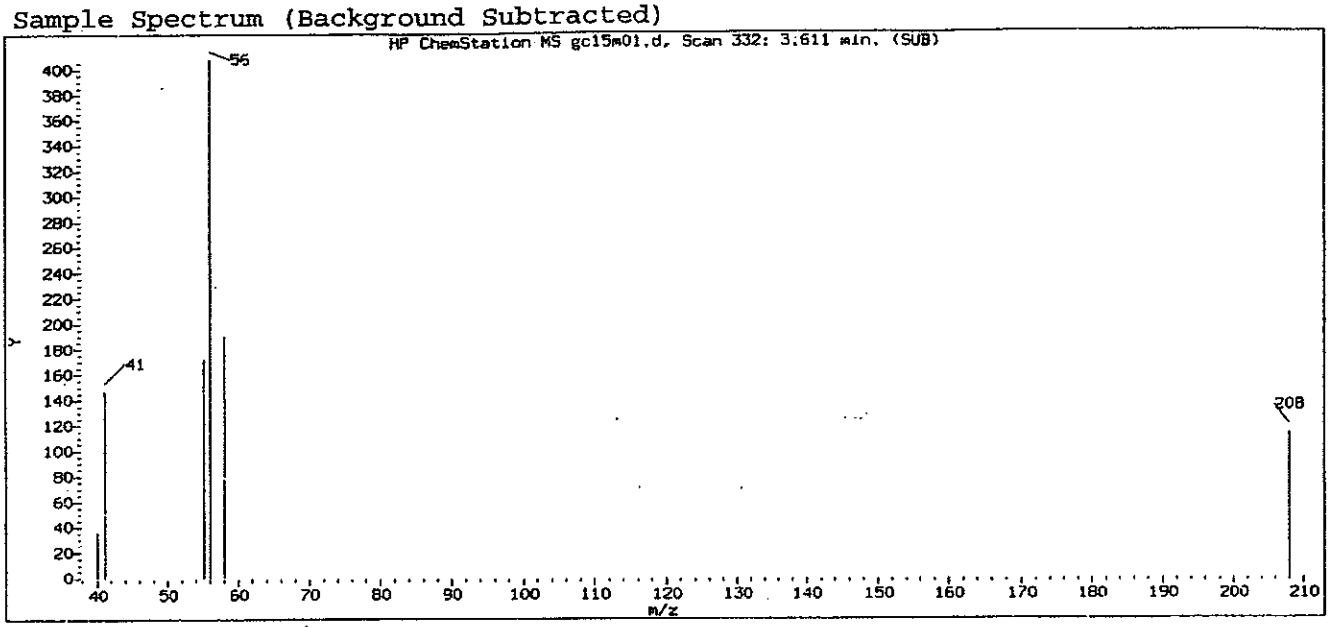
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long
on 10/15/2010 at 13:52.
Target 3.5 esignature user ID: jml01693

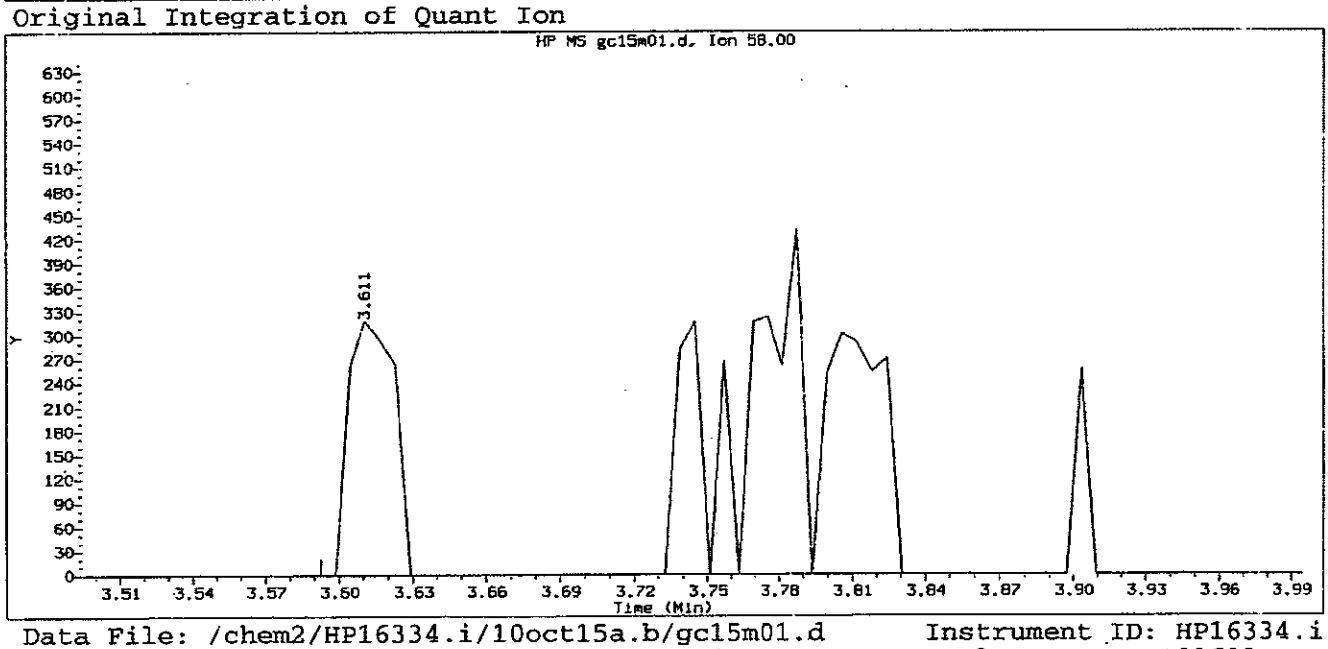
GC/MS audit/management approval: _____ 10/21/10

RAD48 8229

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10oct15a.b/gc15m01.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 13:24 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 15-OCT-2010 13:39
Date, time and analyst ID of latest file update: 15-Oct-2010 13:42 Automation

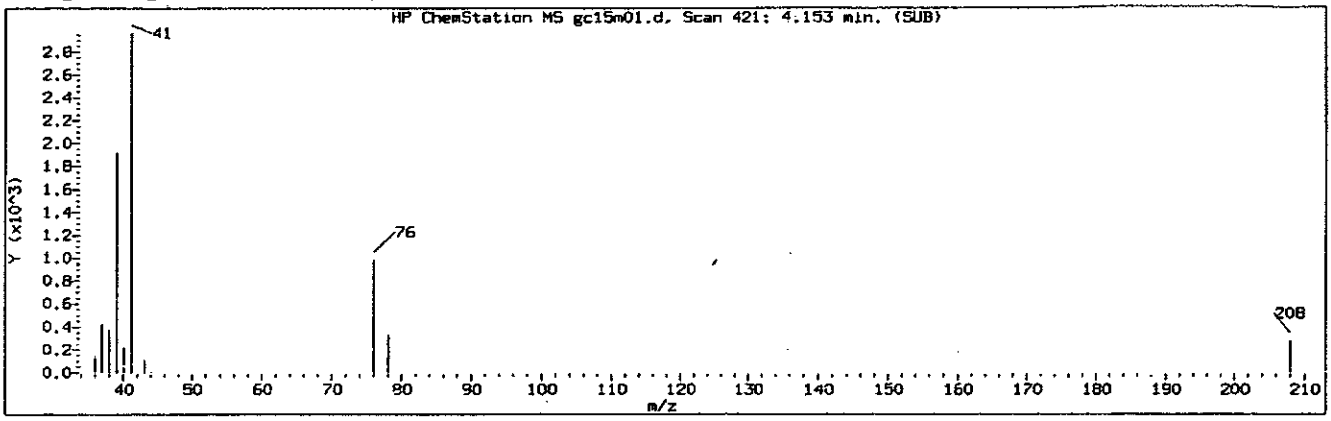
Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compound Number	: 26		
Compound Name	: Acetone		
Scan Number	: 332		
Retention Time (minutes)	: 3.611		
Quant Ion	: 58.00		
Area	: 1722		
On-column Amount (ng)	: 0.7932		
Integration start scan	: 328	Integration stop scan:	378
Y at integration start	: 0	Y at integration end:	0

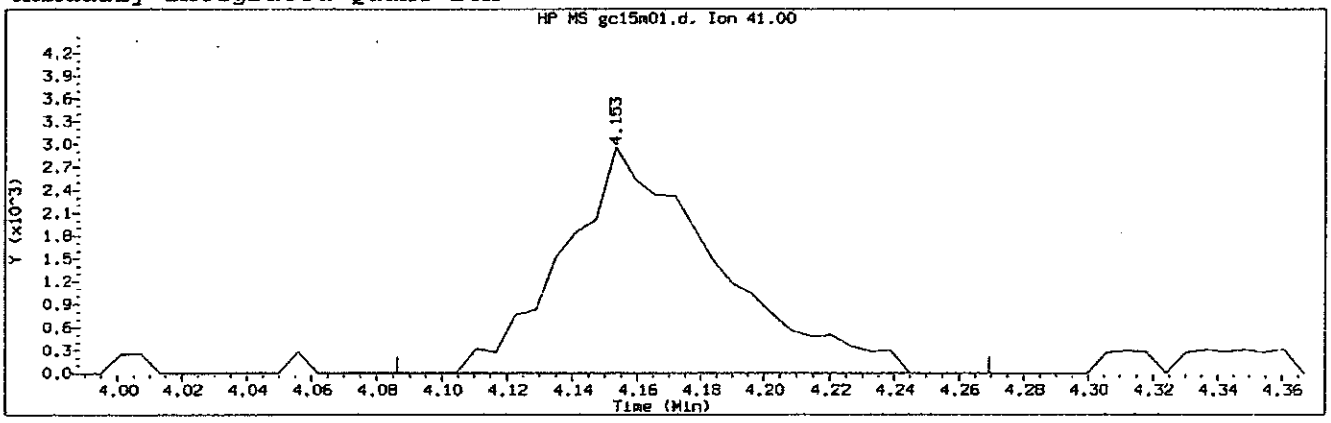
RAD48 0230

Digitally signed by Jason M. Long on 10/15/2010 at 13:52.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10oct15a.b/gc15m01.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 13:24 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 15-OCT-2010 13:39
Date, time and analyst ID of latest file update: 15-Oct-2010 13:51 jml01693

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compound Number	: 32		
Compound Name	: Allyl Chloride		
Scan Number	: 421		
Retention Time (minutes)	: 4.153		
Quant Ion	: 41.00		
Area (flag)	: 9734M		
On-Column Amount (ng)	: 0.1079		
Integration start scan	: 409	Integration stop scan:	439
Y at integration start	: 0	Y at integration end:	0

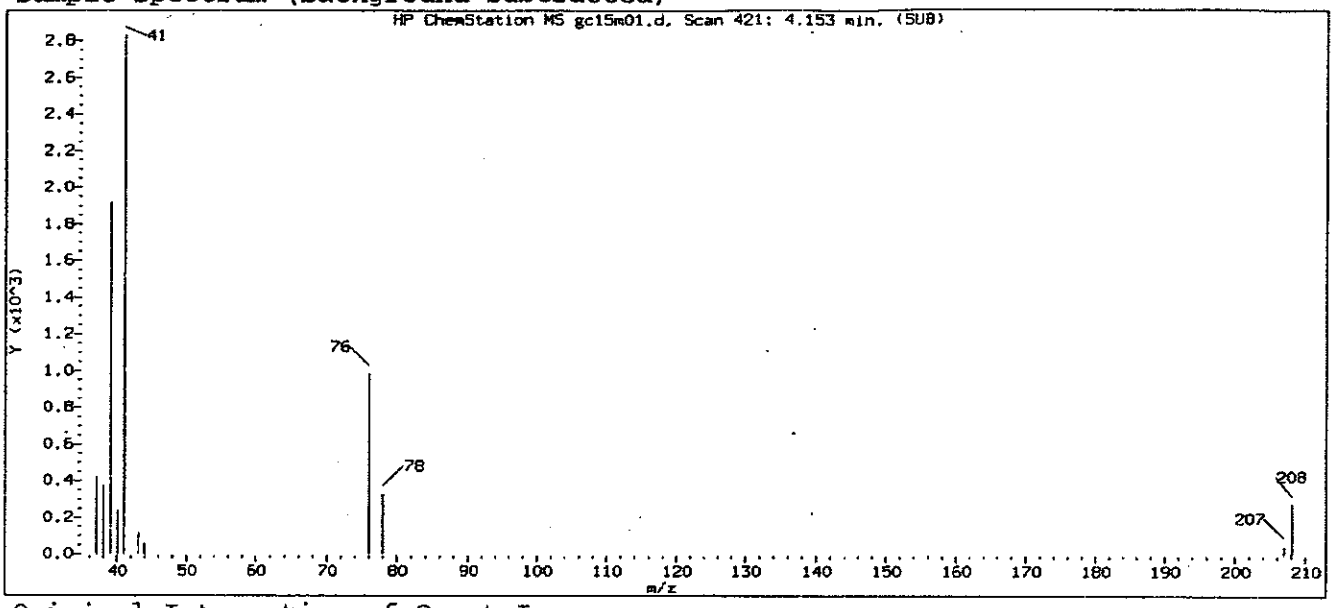
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long on 10/15/2010 at 13:52. Target 3.5 esignature user ID: jml01693

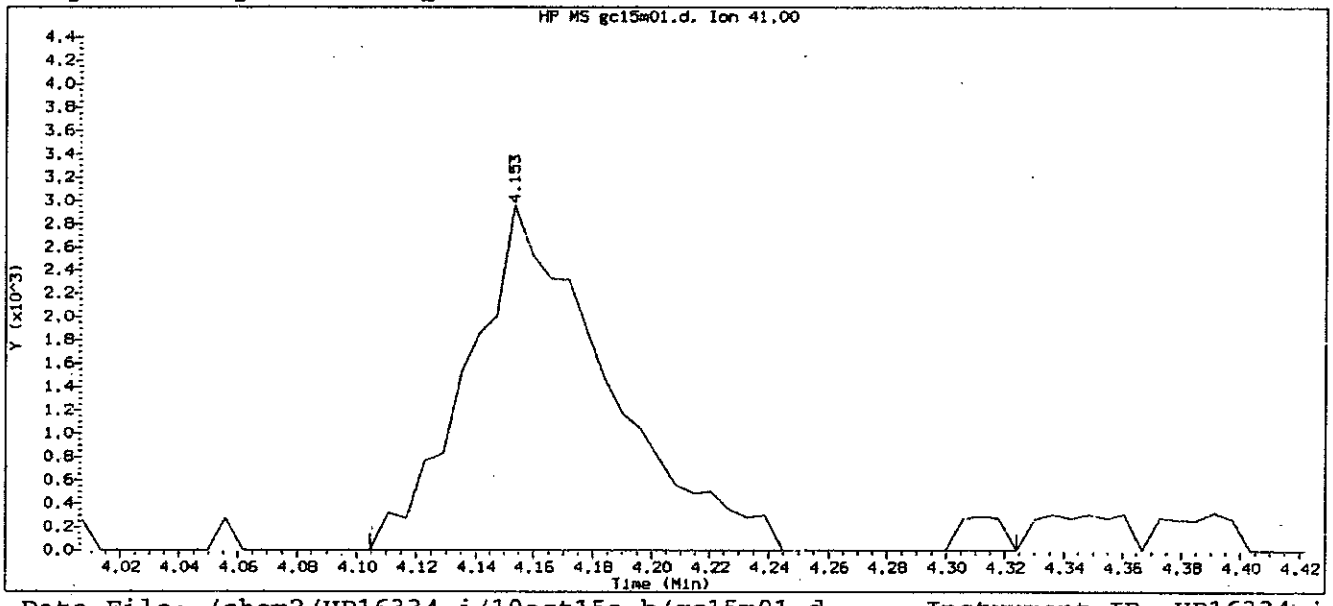
GC/MS audit/management approval: _____ 10/21/10

RAD48 8231

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10oct15a.b/gc15m01.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 13:24 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 15-OCT-2010 13:39
Date, time and analyst ID of latest file update: 15-Oct-2010 13:42 Automation

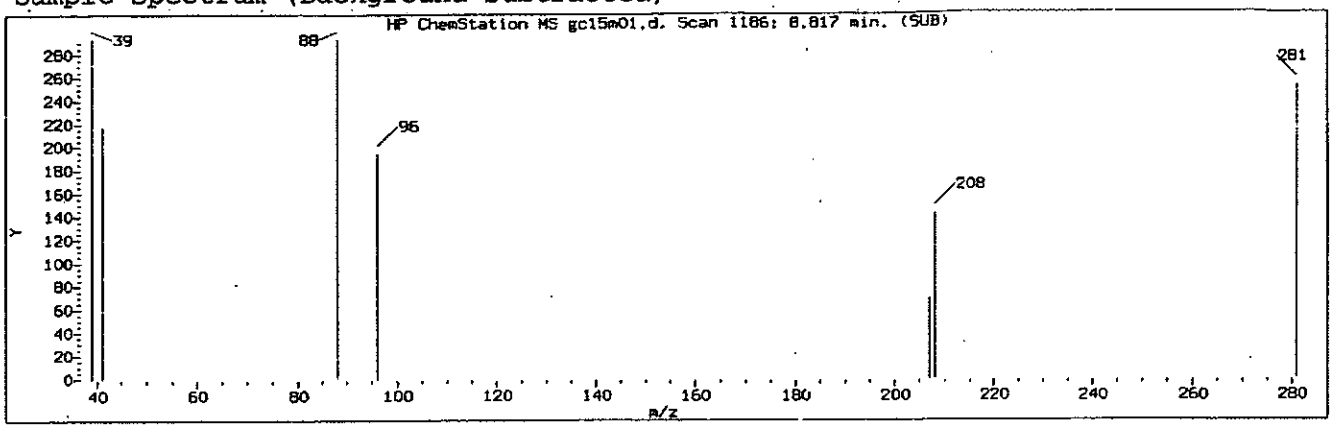
Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compound Number	: 32		
Compound Name	: Allyl Chloride		
Scan Number	: 421		
Retention Time (minutes)	: 4.153		
Quant Ion	: 41.00		
Area	: 10042		
On-column Amount (ng)	: 0.1113		
Integration start scan	: 412	Integration stop scan:	448
Y at integration start	: 0	Y at integration end:	0

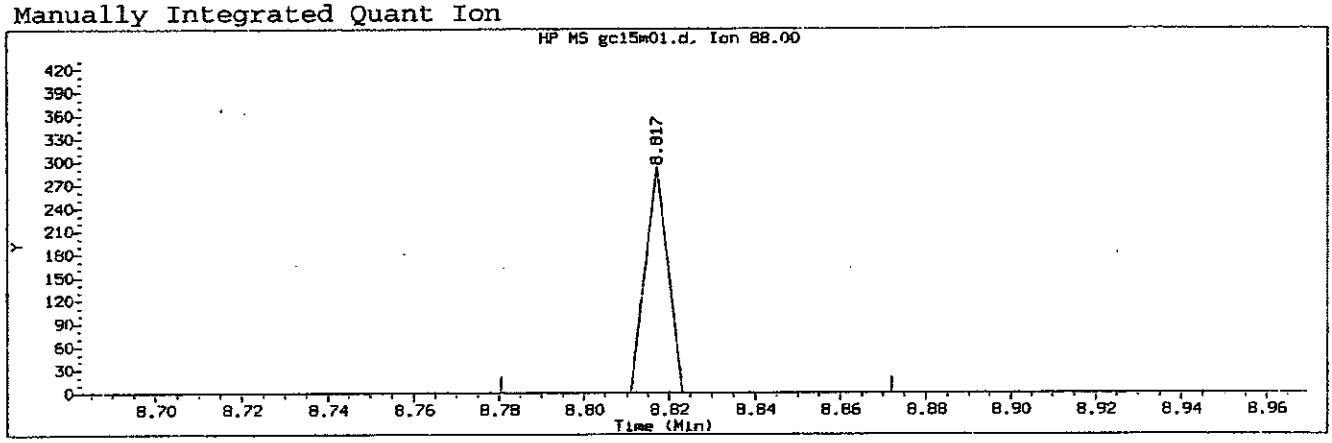
RAD48 0232

Digitally signed by Jason M. Long on 10/15/2010 at 13:52.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10oct15a.b/gc15m01.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 13:24 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 15-OCT-2010 13:39
Date, time and analyst ID of latest file update: 15-Oct-2010 13:51 jml01693

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compound Number : 89
Compound Name : 1,4-Dioxane
Scan Number : 1186
Retention Time (minutes): 8.817
Quant Ion : 88.00
Area (flag) : 107M
On-Column Amount (ng) : 0.7555
Integration start scan : 1179 Integration stop scan: 1194
Y at integration start : 0 Y at integration end: 0

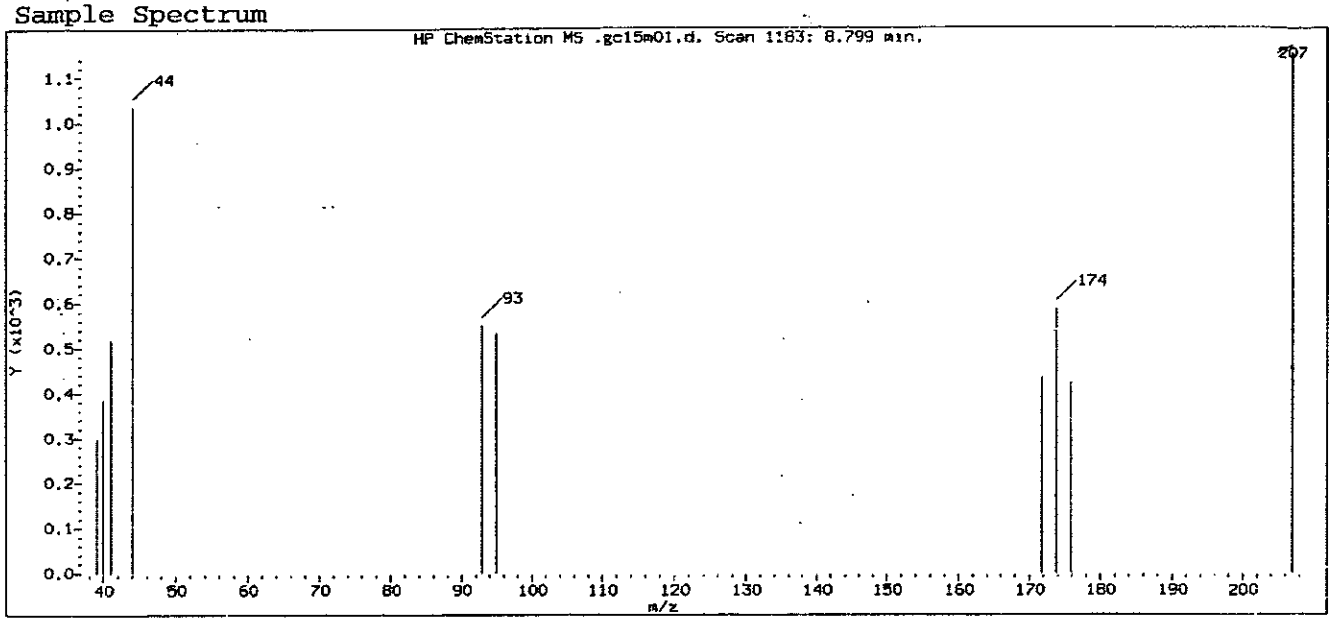
Reason for manual integration: missed peak

Analyst responsible for change: Digitally signed by Jason M. Long
on 10/15/2010 at 13:52.
Target 3.5 esignature user ID: jml01693

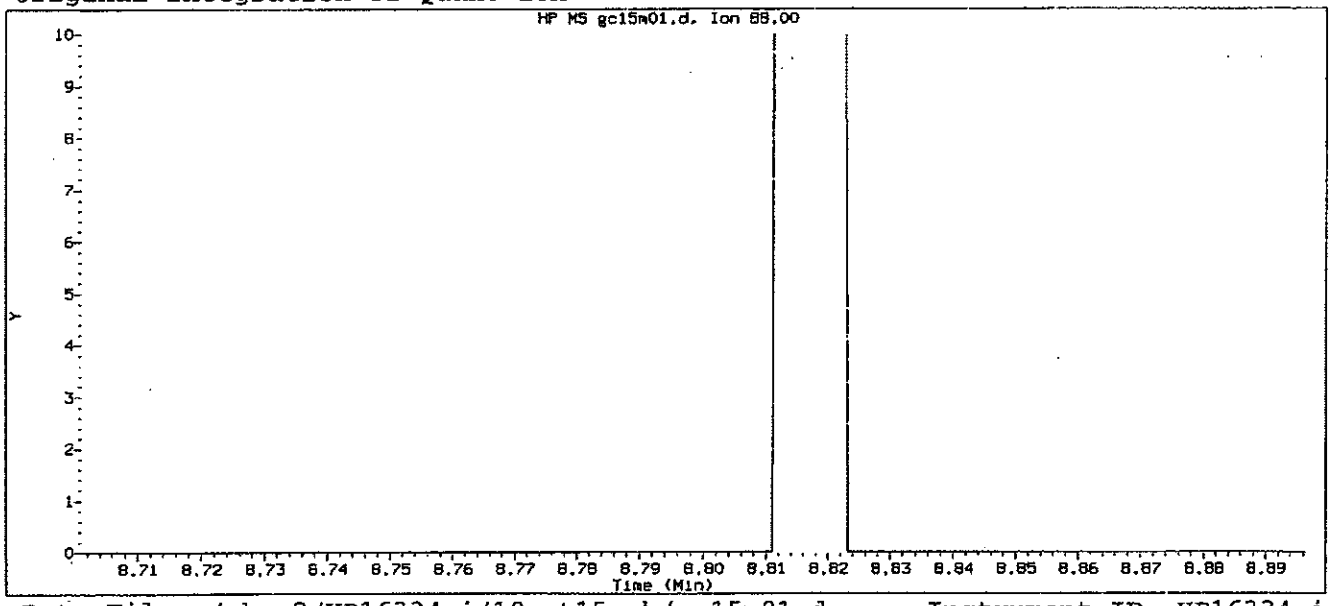
GC/MS audit/management approval: _____ 10/21/10

RAD48 0233

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10oct15a.b/gc15m01.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 13:24 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 15-OCT-2010 13:39
Date, time and analyst ID of latest file update: 15-Oct-2010 13:42 Automation

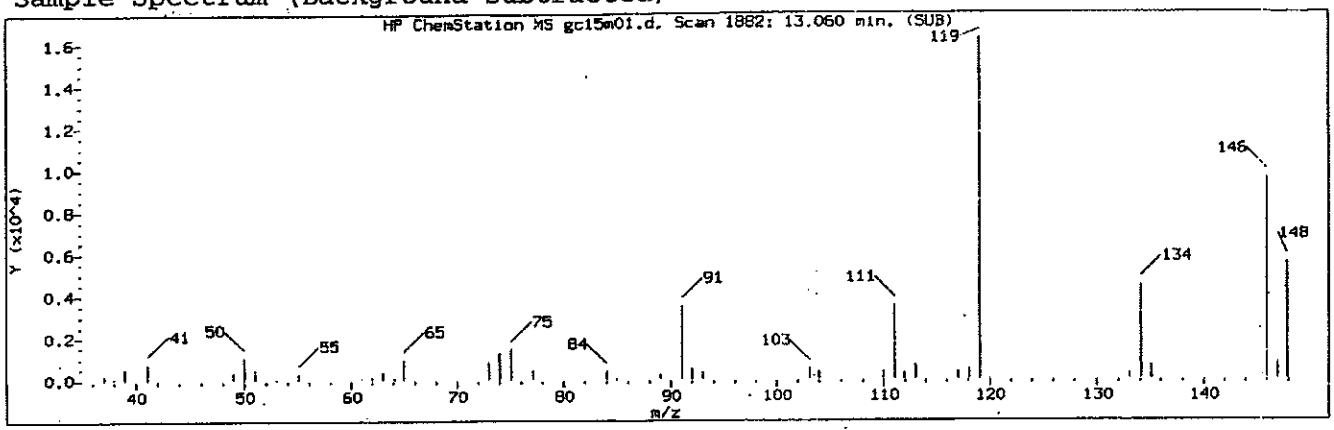
Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compound Number : 89
Compound Name : 1,4-Dioxane
Expected RT (minutes) : 8.799
Quant Ion : 88

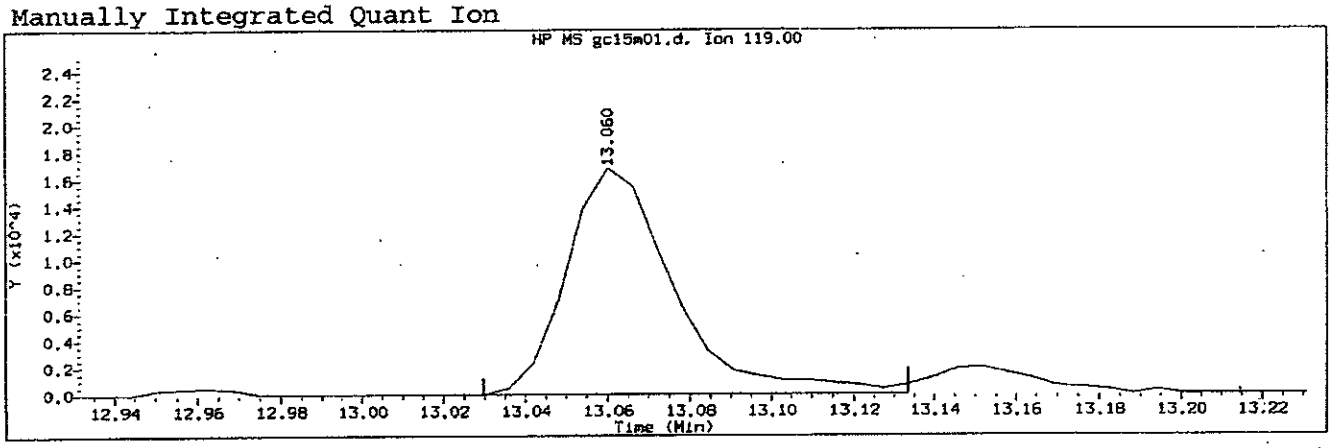
RAD40 0234

Digitally signed by Jason M. Long on 10/15/2010 at 13:52.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10oct15a.b/gc15m01.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 13:24 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 15-OCT-2010 13:39
Date, time and analyst ID of latest file update: 15-Oct-2010 13:51 jml01693

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compound Number	: 141		
Compound Name	: p-Isopropyltoluene		
Scan Number	: 1882		
Retention Time (minutes)	: 13.060		
Quant Ion	: 119.00		
Area (flag)	: 30572M		
On-Column Amount (ng)	: 0.0925		
Integration start scan	: 1876	Integration stop scan:	1893
Y at integration start	: 0	Y at integration end:	0

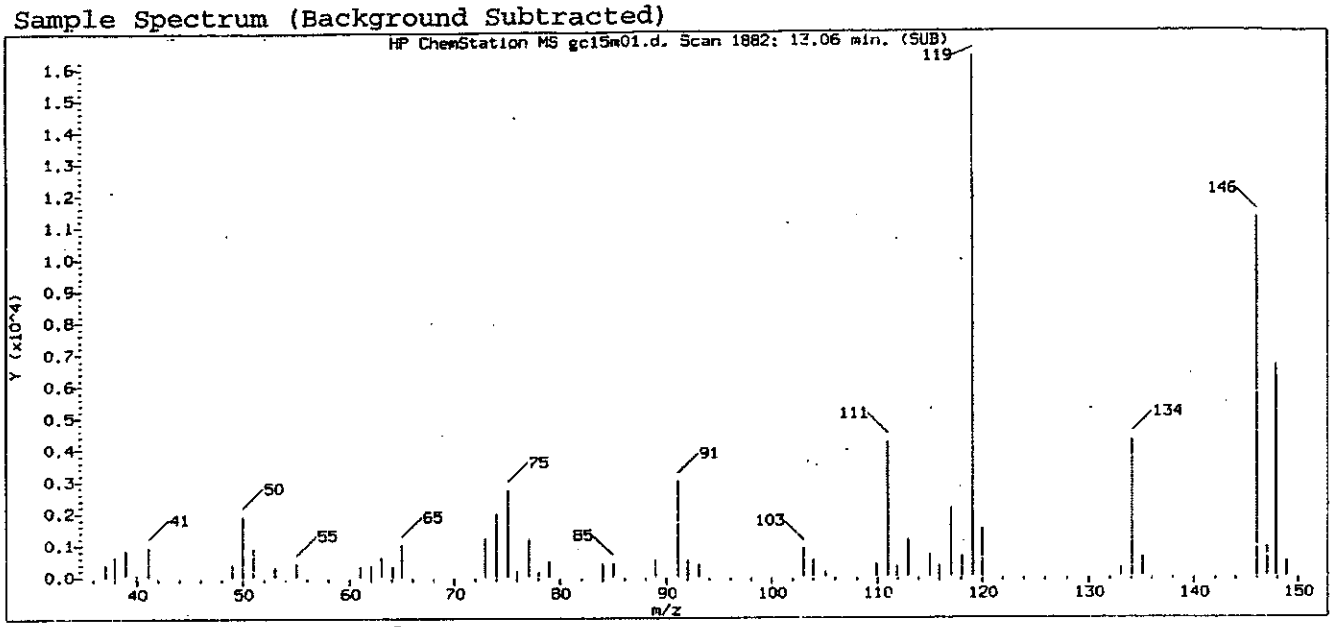
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long
on 10/15/2010 at 13:52.
Target 3.5 esignature user ID: jml01693

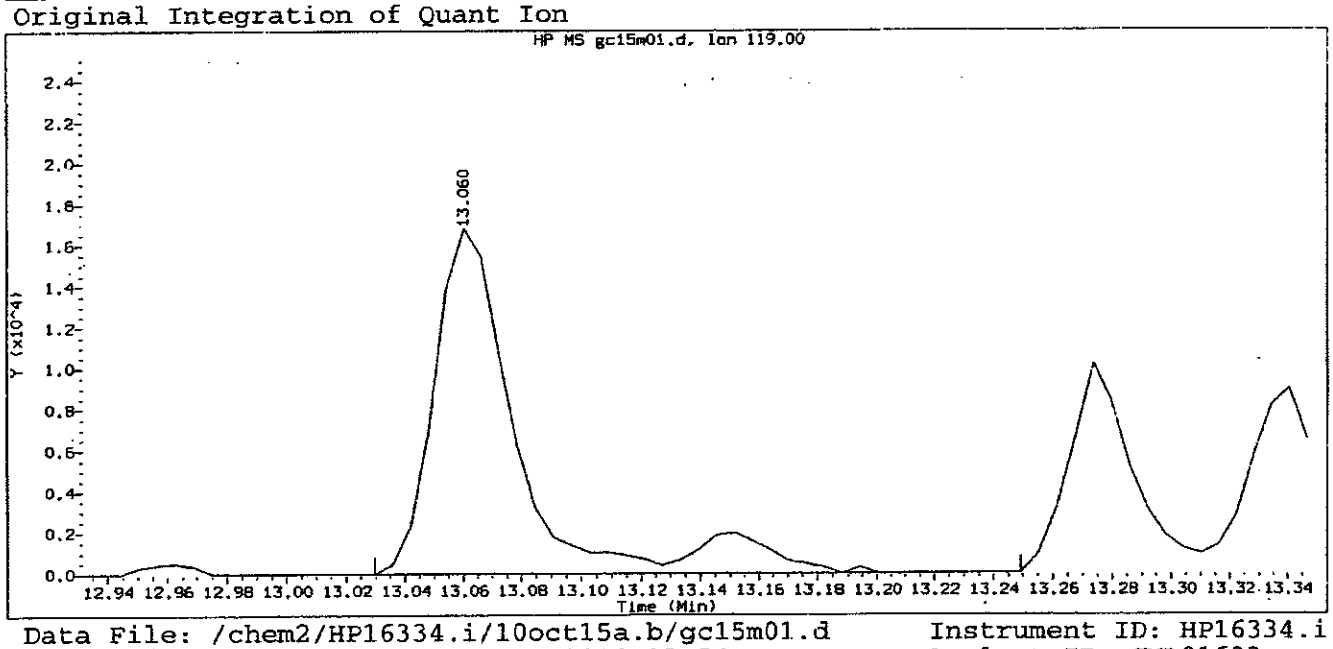
GC/MS audit/management approval: _____ 10/21/10

RAD48 8235

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10oct15a.b/gc15m01.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 13:24 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 15-OCT-2010 13:39
Date, time and analyst ID of latest file update: 15-Oct-2010 13:42 Automation

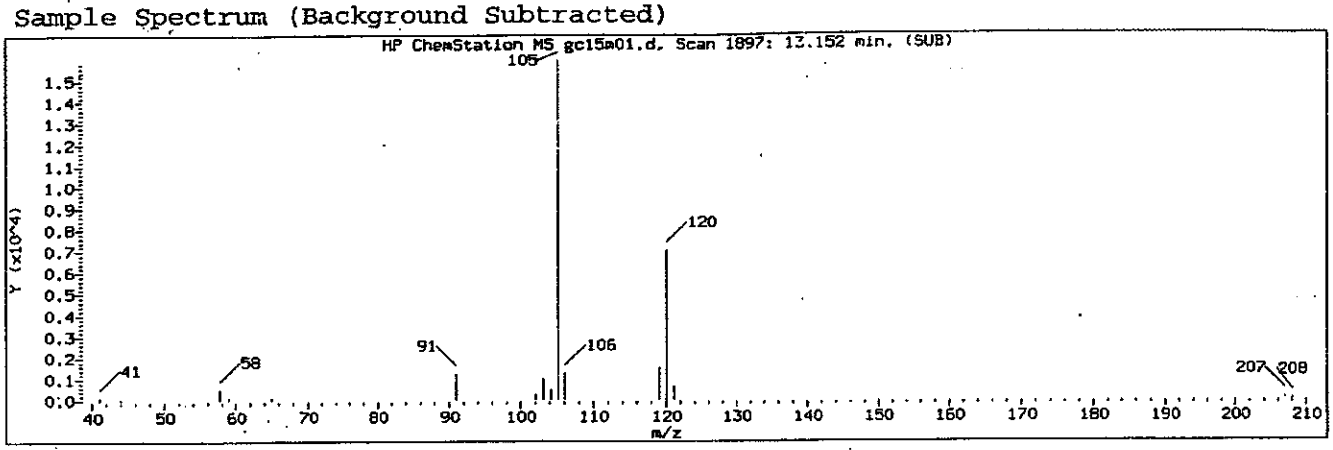
Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compound Number	: 141		
Compound Name	: p-Isopropyltoluene		
Scan Number	: 1882		
Retention Time (minutes)	: 13.060		
Quant Ion	: 119.00		
Area	: 34018		
On-column Amount (ng)	: 0.1029		
Integration start scan	: 1876	Integration stop scan:	1912
Y at integration start	: 0	Y at integration end:	0

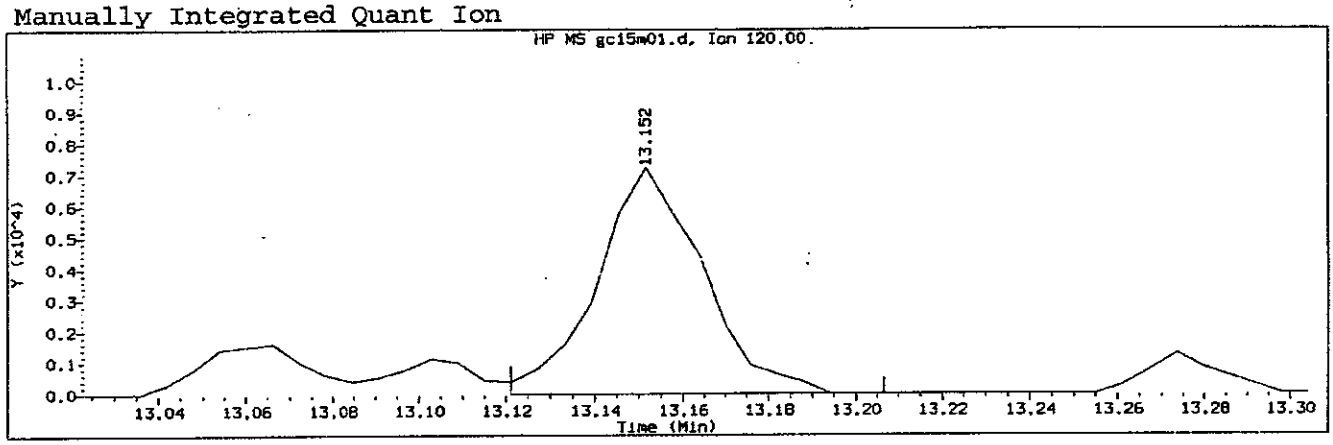
RAD40 0236

Digitally signed by Jason M. Long on 10/15/2010 at 13:52.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10oct15a.b/gc15m01.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 13:24 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 15-OCT-2010 13:39
Date, time and analyst ID of latest file update: 15-Oct-2010 13:51 jml01693

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compound Number	: 145		
Compound Name	: 1,2,3-Trimethylbenzene		
Scan Number	: 1897		
Retention Time (minutes)	: 13.152		
Quant Ion	: 120.00		
Area (flag)	: 12077M		
On-Column Amount (ng)	: 0.0927		
Integration start scan	: 1891	Integration stop scan:	1905
Y at integration start	: 0	Y at integration end:	0

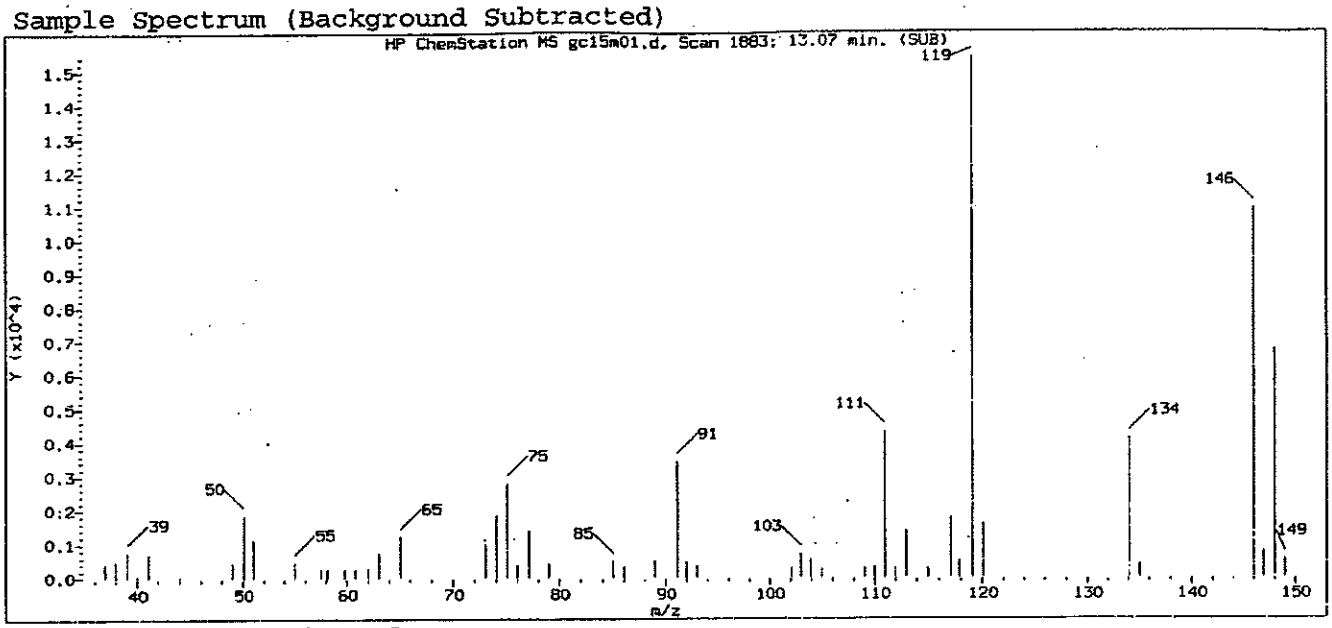
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long on 10/15/2010 at 13:52. Target 3.5 esignature user ID: jml01693

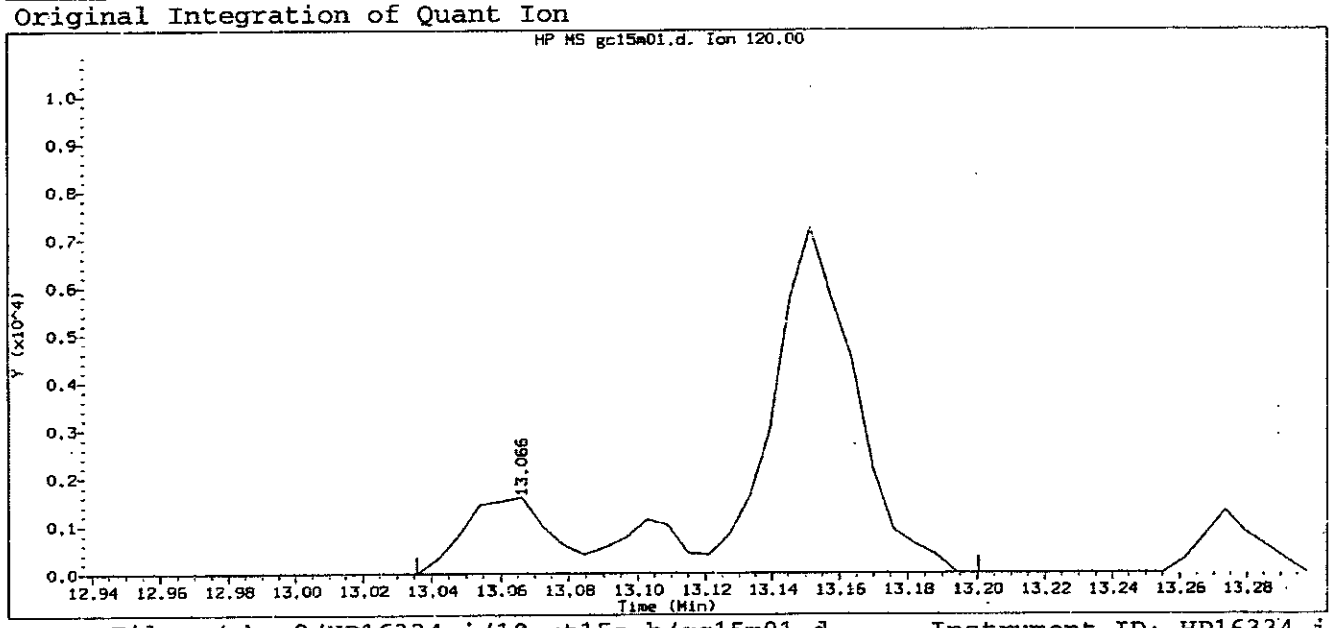
GC/MS audit/management approval: _____ 10/21/10

RAD40 0237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10oct15a.b/gc15m01.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 13:24 Analyst ID: JML01693

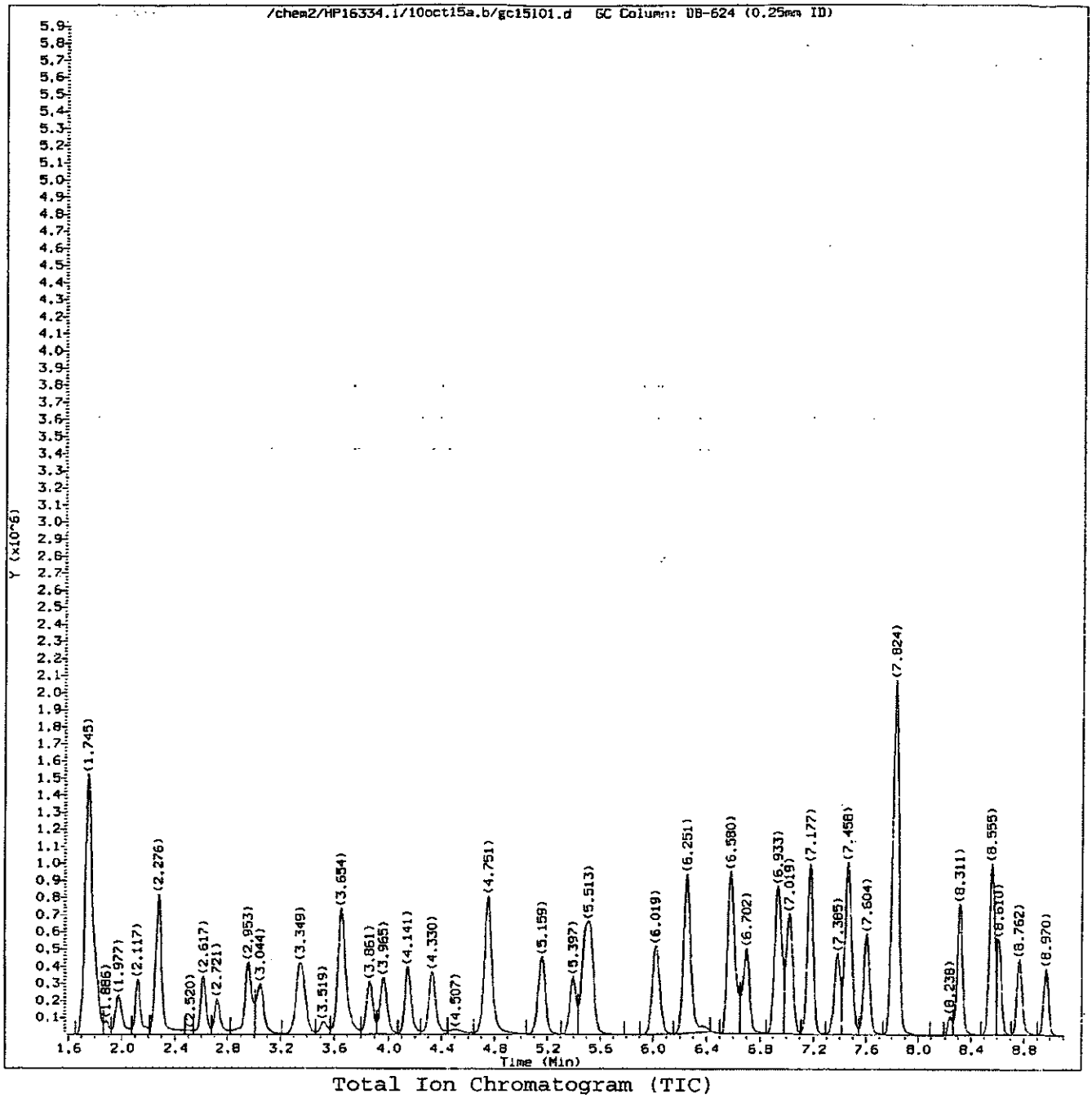
Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 15-OCT-2010 13:39
Date, time and analyst ID of latest file update: 15-Oct-2010 13:42 Automation

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compound Number	: 145		
Compound Name	: 1,2,3-Trimethylbenzene		
Scan Number	: 1883		
Retention Time (minutes)	: 13.066		
Quant Ion	: 120.00		
Area	: 16277		
On-column Amount (ng)	: 0.1249		
Integration start scan	: 1877	Integration stop scan:	1904
Y at integration start	: 0	Y at integration end:	0

RAD40 0238

Digitally signed by Jason M. Long on 10/15/2010 at 13:52.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

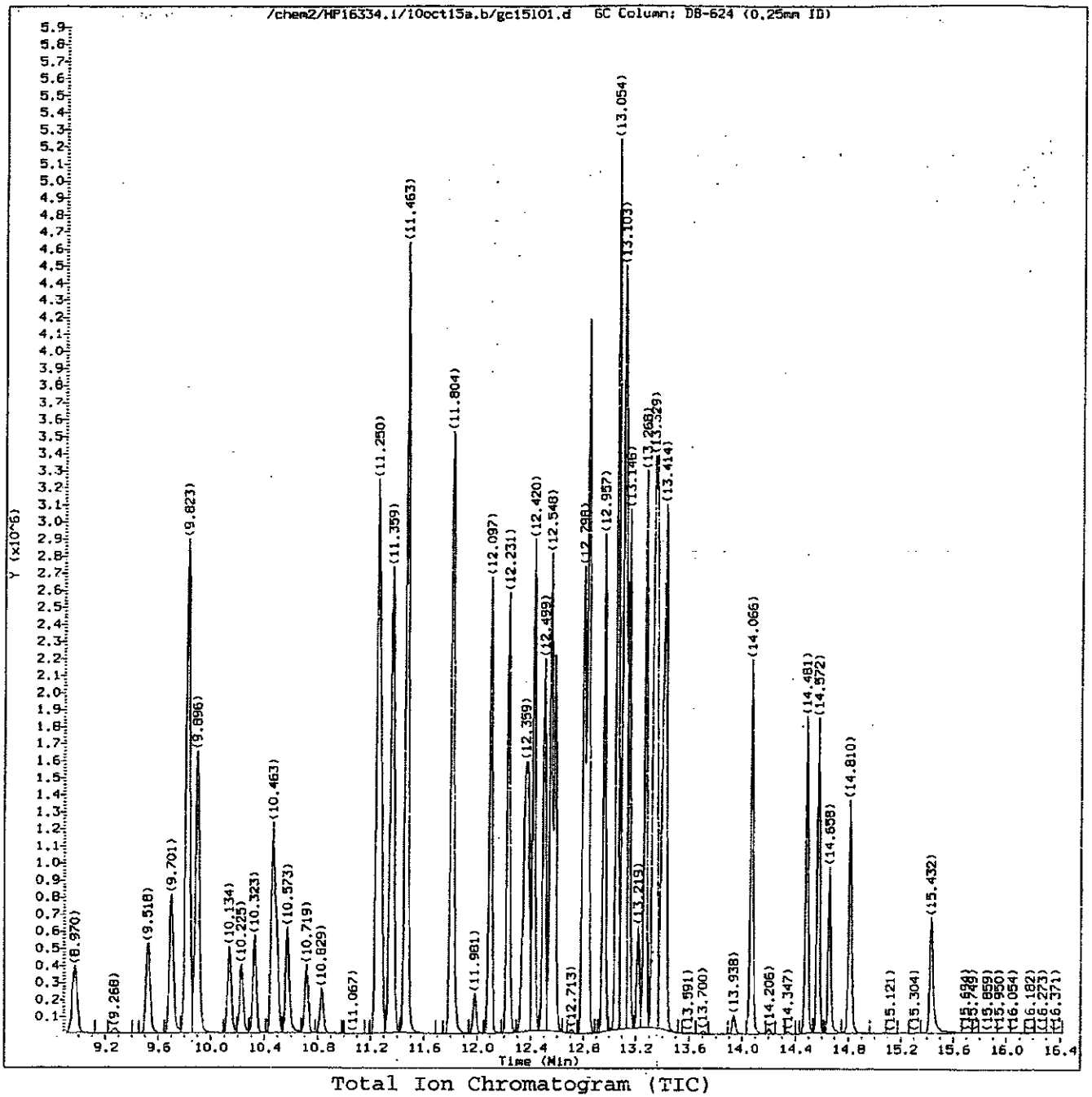
Data File: /chem2/HP16334.i/10oct15a.b/gc15101.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 14:06 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 15-OCT-2010 13:39
Date, time and analyst ID of latest file update: 15-Oct-2010 14:34 jml01693

Sample Name: LCSG65 Lab Sample ID: LCSG65

RAD40 8239

Digitally signed by Jason M. Long
on 10/15/2010 at 14:35.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/10oct15a.b/gc15101.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 14:06 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 15-OCT-2010 13:39
Date, time and analyst ID of latest file update: 15-Oct-2010 14:34 jml01693

Sample Name: LCSG65 Lab Sample ID: LCSG65

RAD48 8248

Digitally signed by Jason M. Long
on 10/15/2010 at 14:35.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/10oct15a.b/gc15l01.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 14:06 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 15-OCT-2010 13:39
Date, time and analyst ID of latest file update: 15-Oct-2010 14:34 jml01693

Sample Name: LCSG65 Lab Sample ID: LCSG65

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
2) Dichlorodifluoromethane	(1)	1.977	85	463749	4.127
5) Chloromethane	(1)	2.117	50	460578	4.698
6) Vinyl Chloride	(1)	2.258	62	472756	4.952
9) 1,3-Butadiene	(1)	2.282	39	422930	3.668
10) Bromomethane	(1)	2.617	94	326061	4.675
11) Chloroethane	(1)	2.721	64	254620	4.712
13) Dichlorofluoromethane	(1)	2.953	67	610302	5.112
15) Trichlorofluoromethane	(1)	3.044	101	597679	5.062
17) Ethyl Ether	(1)	3.337	59	194941	4.425
18) Freon 123a	(1)	3.361	67	386309	5.201
23) Acrolein	(4)	3.519	56	152992	32.258
24) 1,1-Dichloroethene	(1)	3.647	96	298570	4.893
25) Freon 113	(1)	3.666	101	321162	5.085
26) Acetone	(4)	3.727	58	74307	36.442
27) Methyl Iodide	(1)	3.861	142	612231	5.117
29) Carbon Disulfide	(1)	3.965	76	879022	4.955
32) Allyl Chloride	(1)	4.141	41	444471	4.922
33) Methyl Acetate	(1)	4.184	43	85708	5.013
34) Methylene Chloride	(1)	4.330	84	324623	4.791
36)*t-Butyl Alcohol-d10	(4)	4.373	65	84399	50.000
38) t-Butyl Alcohol	(4)	4.507	59	90534	45.994
39) Acrylonitrile	(4)	4.733	53	208915	26.466
40) Methyl Tertiary Butyl Ether	(1)	4.745	73	685499	4.977
41) trans-1,2-Dichloroethene	(1)	4.751	96	346686	4.954
37) 1,2-Dichloroethene (Total)	(1)		96	722736	9.940
44) n-Hexane	(1)	5.159	57	465726	5.029
45) 1,1-Dichloroethane	(1)	5.391	63	584378	4.972
47) di-Isopropyl Ether	(1)	5.489	45	1027969	5.093
48) 2-Chloro-1,3-Butadiene	(1)	5.531	53	463726	5.277
49) Ethyl t-Butyl Ether	(1)	6.019	59	914750	5.063
51) 2,2-Dichloropropane	(1)	6.251	77	466214	4.981
50) cis-1,2-Dichloroethene	(1)	6.251	96	376050	4.986
52) 2-Butanone	(4)	6.269	43	409019	38.884
53) Propionitrile	(4)	6.379	54	103303	36.495
55) Methacrylonitrile	(4)	6.580	67	482439	39.636
56) Bromochloromethane	(1)	6.586	128	156197	4.941
57) Tetrahydrofuran	(4)	6.653	71	88130	25.884
58) Chloroform	(1)	6.702	83	589051	4.988

* = Compound is an internal standard.

RAD48 8241

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on 10/15/2010 at 14:35.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/10oct15a.b/gc15101.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 14:06 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 15-OCT-2010 13:39
Date, time and analyst ID of latest file update: 15-Oct-2010 14:34 jml01693

Sample Name: LCSG65 Lab Sample ID: LCSG65

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
61)$Dibromofluoromethane	(1)	6.927	113	557638	9.981
63) 1,1,1-Trichloroethane	(1)	6.952	97	506765	4.961
64) Cyclohexane	(1)	7.019	56	572359	5.080
65) 1,1-Dichloropropene	(1)	7.177	75	464797	5.081
66) Carbon Tetrachloride	(1)	7.177	117	441491	4.997
67) Isobutyl Alcohol	(4)	7.354	41	78828M	124.038
70)$1,2-Dichloroethane-d4	(1)	7.385	102	107939	9.730
72) Benzene	(1)	7.458	78	1346364	5.001
74) 1,2-Dichloroethane	(1)	7.482	62	321207	5.022
75) t-Amyl Methyl Ether	(1)	7.604	73	768451	4.957
76) n-Heptane	(1)	7.805	43	491249M	5.041
77)*Fluorobenzene	(1)	7.830	96	2489079	10.000
81) n-Butanol	(4)	8.238	56	127177	240.176
83) Trichloroethene	(1)	8.311	95	368757	5.027
84) Methylcyclohexane	(1)	8.555	83	623244	4.984
85) 1,2-Dichloropropane	(1)	8.610	63	342414	5.069
87) Methyl Methacrylate	(4)	8.762	69	116881	5.587
88) Dibromomethane	(1)	8.762	93	152044	5.026
89) 1,4-Dioxane	(4)	8.793	88	16775	125.914
90) Bromodichloromethane	(1)	8.970	83	376556	4.976
91) 2-Nitropropane	(4)	9.268	41	33004	5.213
94) cis-1,3-Dichloropropene	(1)	9.524	75	427347	4.905
96) 4-Methyl-2-Pentanone	(1)	9.701	43	712643	23.074
97)$Toluene-d8	(2)	9.823	98	2441967	10.023
101) Toluene	(2)	9.896	92	882097	5.042
102) trans-1,3-Dichloropropene	(2)	10.134	75	347130	4.946
103) Ethyl Methacrylate	(2)	10.225	69	257715	5.165
104) 1,1,2-Trichloroethane	(2)	10.329	97	210646	4.990
105) Tetrachloroethene	(2)	10.463	166	421935	5.005
106) 1,3-Dichloropropane	(2)	10.494	76	362498	5.028
107) 2-Hexanone	(2)	10.573	43	509545	24.397
108) Dibromochloromethane	(2)	10.719	129	233291	4.735
109) 1,2-Dibromoethane	(2)	10.829	107	195193	5.066
110)*Chlorobenzene-d5	(2)	11.250	117	1823015	10.000
112) Chlorobenzene	(2)	11.274	112	996423	4.973
113) 1,1,1,2-Tetrachloroethane	(2)	11.347	131	336554	5.005
114) Ethylbenzene	(2)	11.366	91	1699803	5.045
117) m+p-Xylene	(2)	11.463	106	1356326	10.087

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 10/15/2010 at 14:35.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/10oct15a.b/gc15101.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 14:06 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 15-OCT-2010 13:39
Date, time and analyst ID of latest file update: 15-Oct-2010 14:34 jml01693

Sample Name: LCSG65 Lab Sample ID: LCSG65

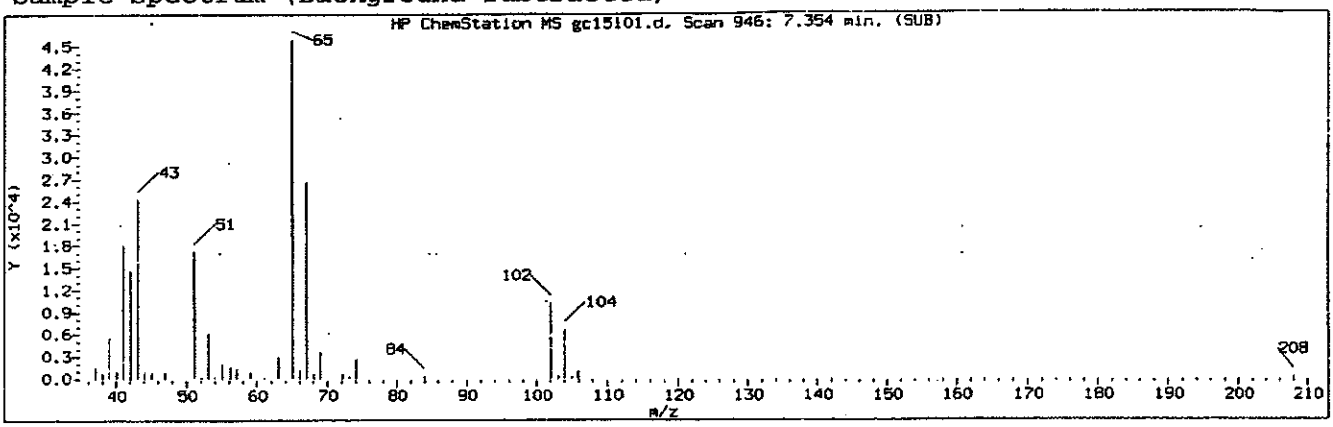
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
115) Xylene (Total)	(2)		106	2030126	15.148
118) o-Xylene	(2)	11.804	106	673800	5.062
119) Styrene	(2)	11.817	104	1033302	5.229
120) Bromoform	(2)	11.981	173	114369	4.546
121) Isopropylbenzene	(2)	12.097	105	1718425	5.023
126)$4-Bromofluorobenzene	(2)	12.231	95	832471	9.942
128) 1,1,2,2-Tetrachloroethane	(3)	12.335	83	231017M	4.870
129) Bromobenzene	(3)	12.359	156	415141	4.932
131) 1,2,3-Trichloropropane	(3)	12.377	110	64946	4.928
130) trans-1,4-Dichloro-2-Butene	(4)	12.377	53	164601M	23.783
132) n-Propylbenzene	(3)	12.420	91	2082134	5.017
133) 2-Chlorotoluene	(3)	12.499	126	426023	5.000
134) 1,3,5-Trimethylbenzene	(3)	12.548	105	1443304	5.042
135) 4-Chlorotoluene	(3)	12.579	126	433627	4.981
137) tert-Butylbenzene	(3)	12.798	134	322170M	4.957
138) Pentachloroethane	(3)	12.829	167	256482	5.115
139) 1,2,4-Trimethylbenzene	(3)	12.835	105	1548599	5.087
140) sec-Butylbenzene	(3)	12.957	105	1897070	4.997
141) p-Isopropyltoluene	(3)	13.054	119	1695466	5.031
142) 1,3-Dichlorobenzene	(3)	13.060	146	876720	4.988
143)*1,4-Dichlorobenzene-d4	(3)	13.103	152	1063527	10.000
144) 1,4-Dichlorobenzene	(3)	13.121	146	884009	4.864
145) 1,2,3-Trimethylbenzene	(3)	13.146	120	668648	5.032
146) Benzyl Chloride	(3)	13.219	126	100094	4.980
147) n-Butylbenzene	(3)	13.347	92	841768	5.038
148) 1,2-Dichlorobenzene	(3)	13.396	146	755264	4.854
150) 1,2-Dibromo-3-Chloropropane	(4)	13.938	155	27308	4.735
153) 1,2,4-Trichlorobenzene	(3)	14.481	180	589447	4.802
154) Hexachlorobutadiene	(3)	14.572	225	324928	4.728
155) Naphthalene	(3)	14.658	128	757768	4.761
156) 1,2,3-Trichlorobenzene	(3)	14.810	180	447875	4.748

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

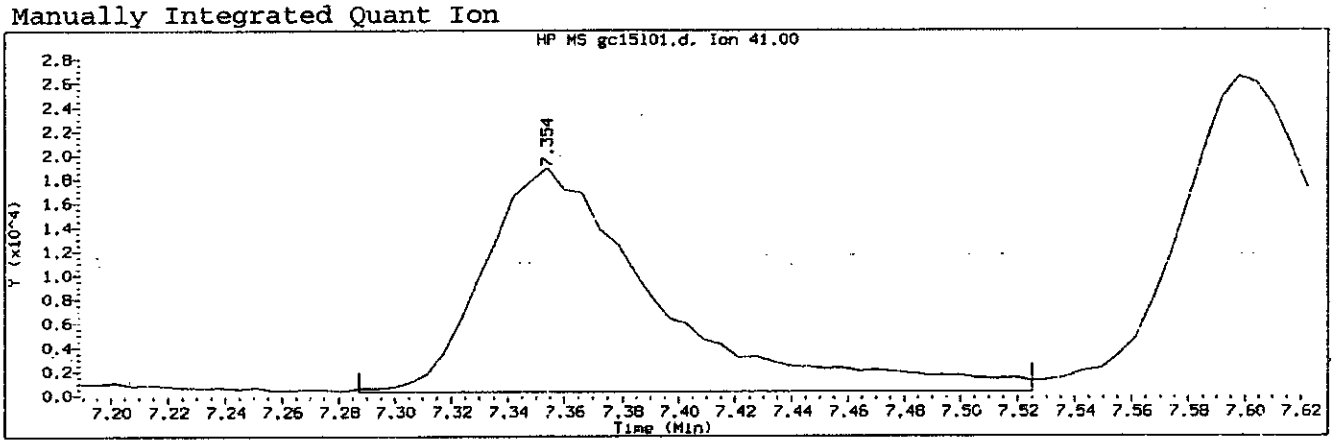
Digitally signed by Jason M. Long
on 10/15/2010 at 14:35.
Target 3.5 esignature user ID: jml01693

RAD40 8243

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10oct15a.b/gc15101.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 14:06 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 15-OCT-2010 13:39
Date, time and analyst ID of latest file update: 15-Oct-2010 14:34 jml01693

Sample Name: LCSG65 Lab Sample ID: LCSG65

Compound Number	: 67		
Compound Name	: Isobutyl Alcohol		
Scan Number	: 946		
Retention Time (minutes)	: 7.354		
Quant Ion	: 41.00		
Area (flag)	: 78828M		
On-Column Amount (ng)	: 124.0382		
Integration start scan	: 934	Integration stop scan:	973
Y at integration start	: 263	Y at integration end:	263

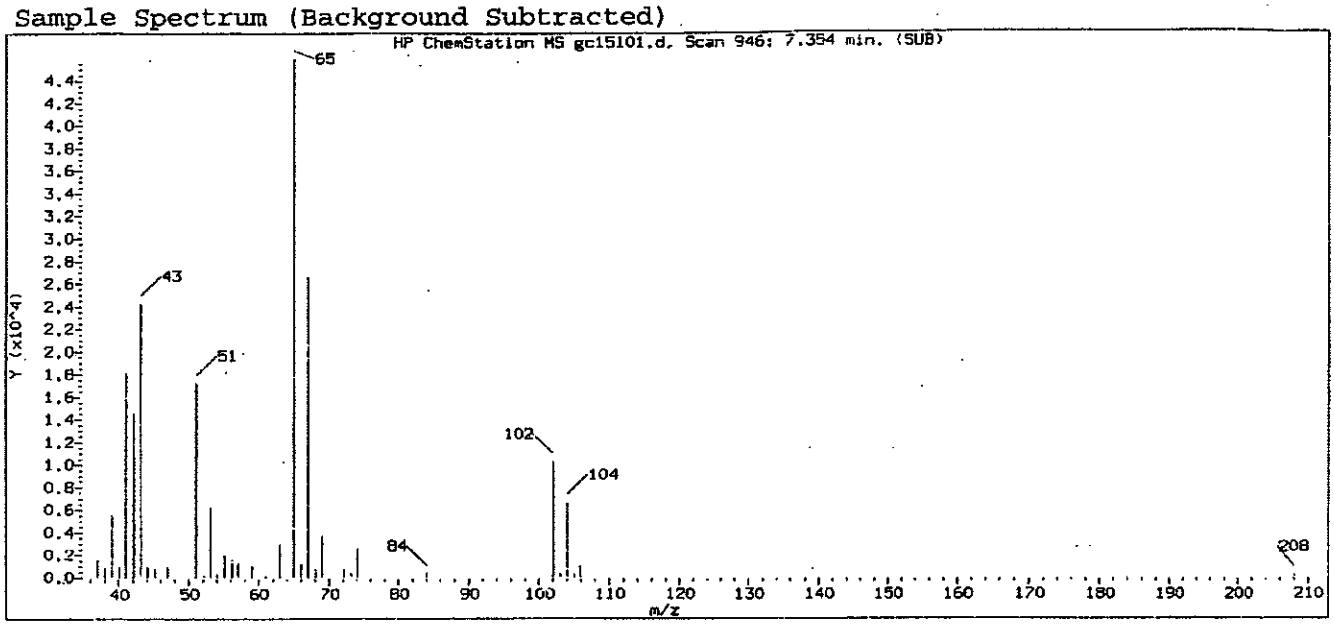
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long
on 10/15/2010 at 14:35.
Target 3.5 esignature user ID: jml01693

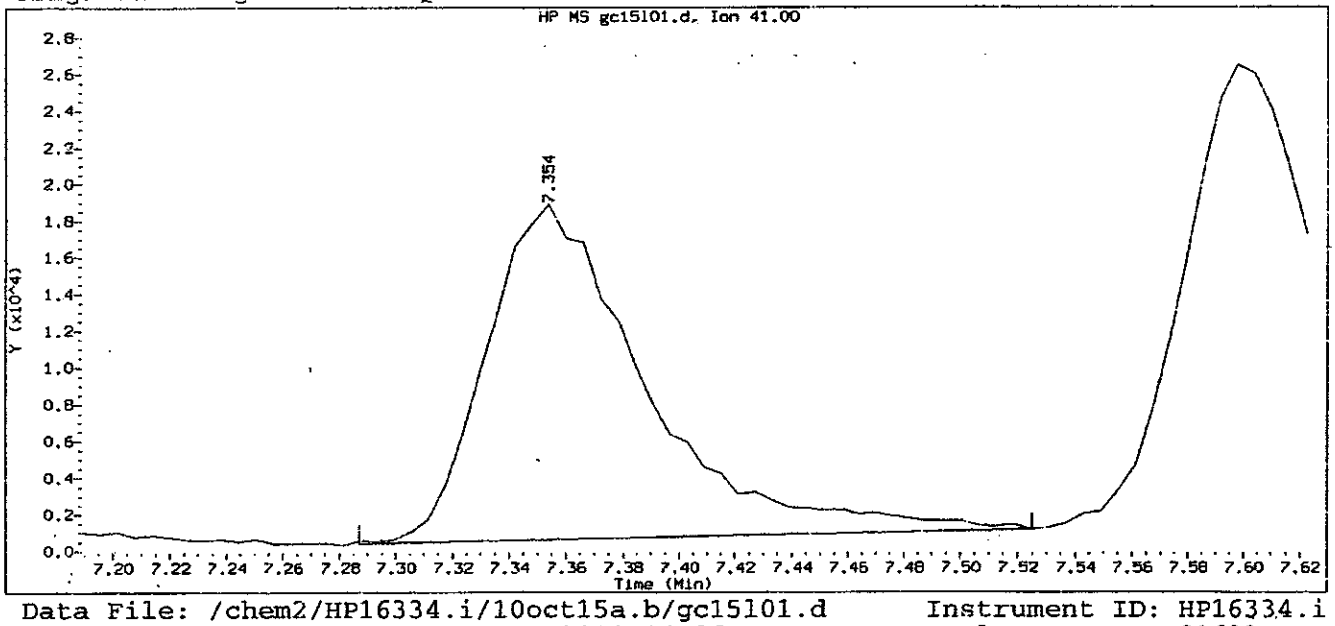
GC/MS audit/management approval: _____ 10/21/10

RAD48 8244

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10oct15a.b/gc15101.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 14:06 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 15-OCT-2010 13:39
Date, time and analyst ID of latest file update: 15-Oct-2010 14:24 Automation

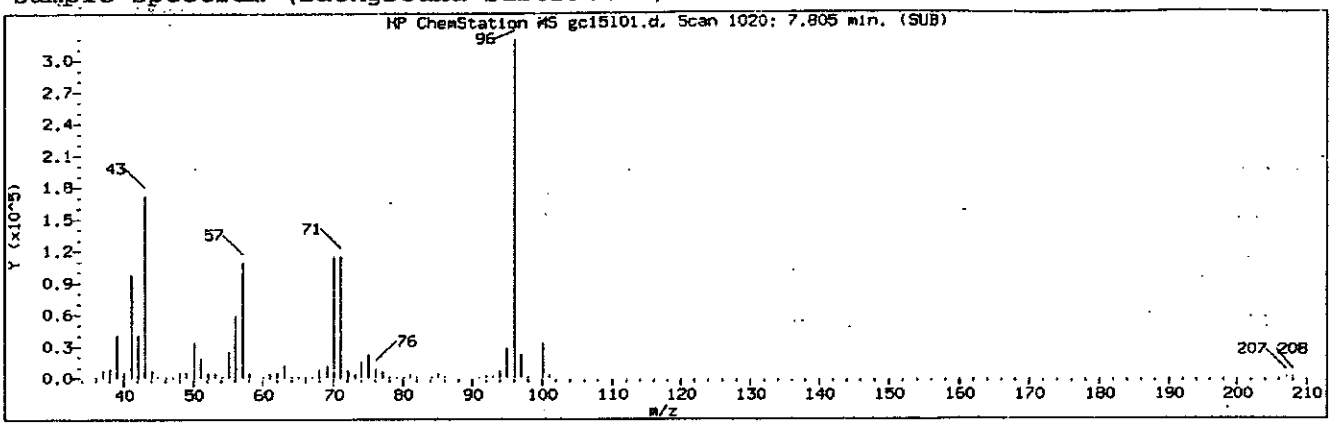
Sample Name: LCSG65 Lab Sample ID: LCSG65

Compound Number : 67
Compound Name : Isobutyl Alcohol
Scan Number : 946
Retention Time (minutes): 7.354
Quant Ion : 41.00
Area : 71066
On-column Amount (ng) : 111.8232
Integration start scan : 934 Integration stop scan: 973
Y at integration start : 400 Y at integration end: 1183

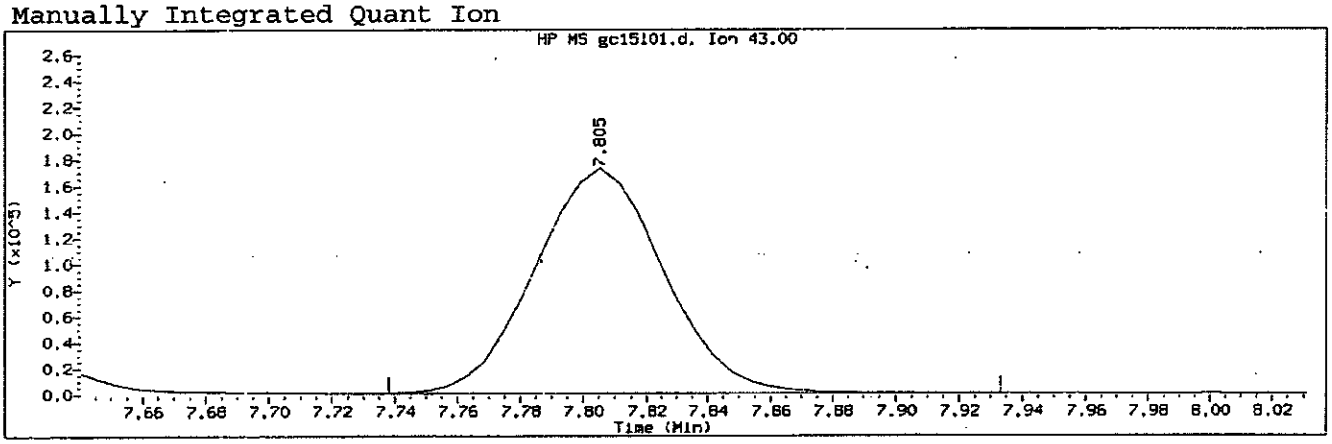
RAD48 8245

Digitally signed by Jason M. Long on 10/15/2010 at 14:35.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10oct15a.b/gc15101.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 14:06 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 15-OCT-2010 13:39
Date, time and analyst ID of latest file update: 15-Oct-2010 14:34 jml01693

Sample Name: LCSG65 Lab Sample ID: LCSG65

Compound Number	: 76		
Compound Name	: n-Heptane		
Scan Number	: 1020		
Retention Time (minutes)	: 7.805		
Quant Ion	: 43.00		
Area (flag)	: 491249M		
On-Column Amount (ng)	: 5.0413		
Integration start scan	: 1008	Integration stop scan:	1040
Y at integration start	: 765	Y at integration end:	765

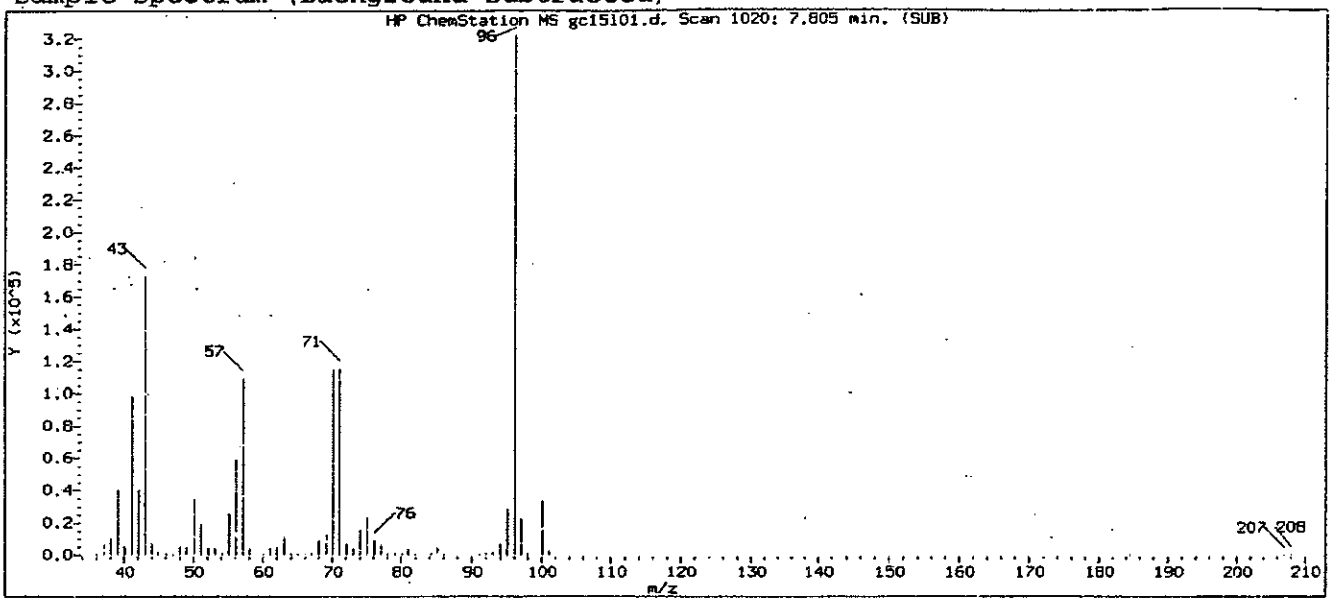
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long
on 10/15/2010 at 14:35.
Target 3.5 esignature user ID: jml01693

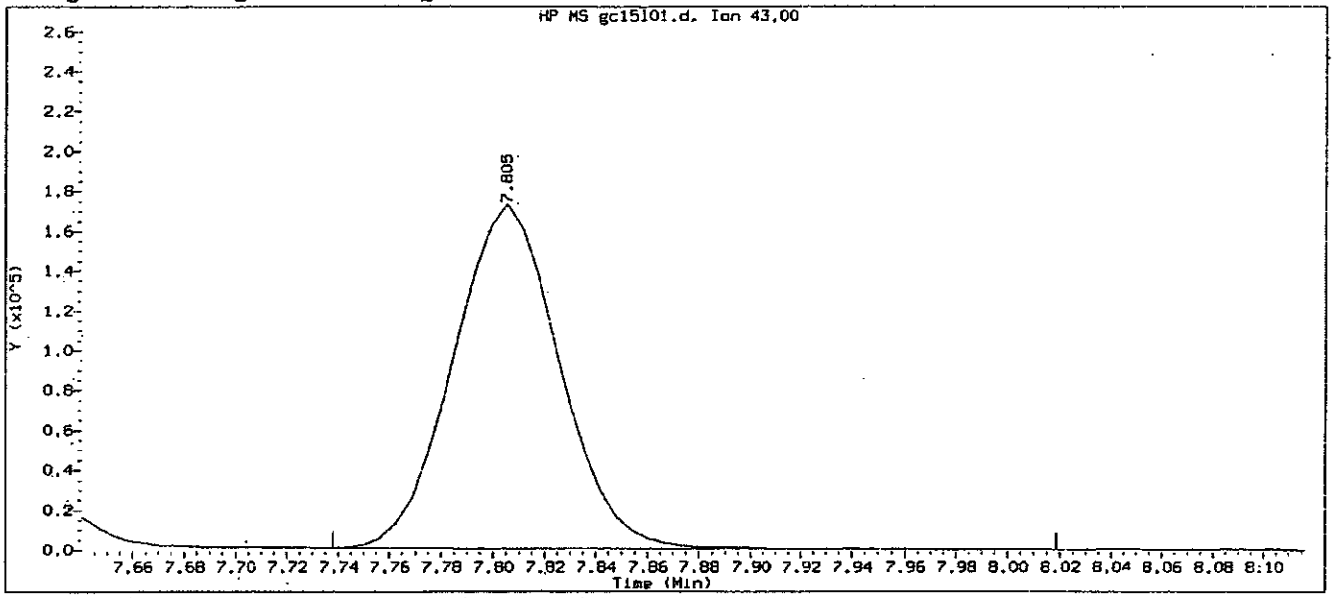
GC/MS audit/management approval: _____ 10/21/10

RAD40 0245

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10oct15a.b/gc15101.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 14:06 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 15-OCT-2010 13:39
Date, time and analyst ID of latest file update: 15-Oct-2010 14:24 Automation

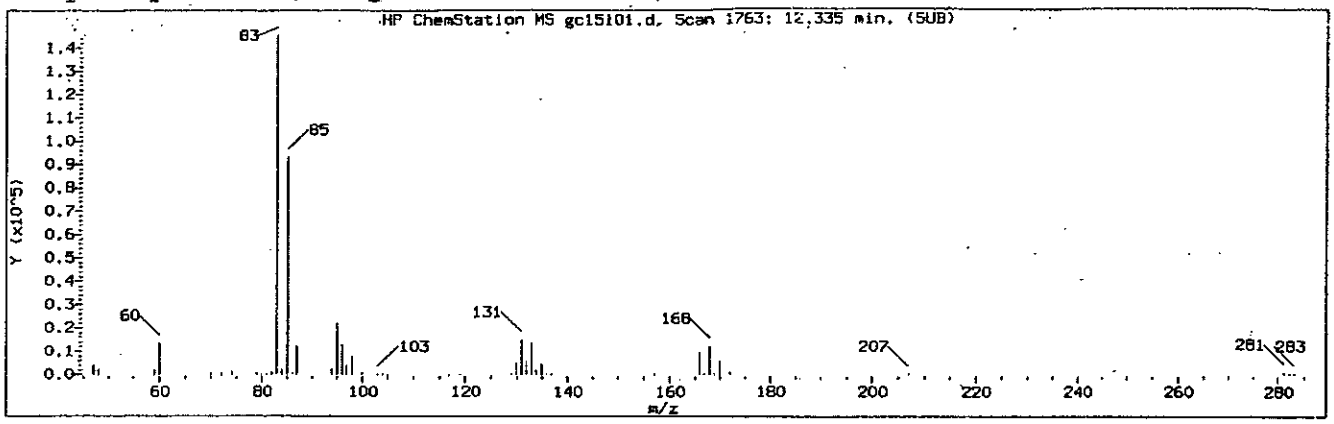
Sample Name: LCSG65 Lab Sample ID: LCSG65

Compound Number : 76
Compound Name : n-Heptane
Scan Number : 1020
Retention Time (minutes): 7.805
Quant Ion : 43.00
Area : 492059
On-column Amount (ng) : 5.0496
Integration start scan : 1008 Integration stop scan: 1054
Y at integration start : 1029 Y at integration end: 290

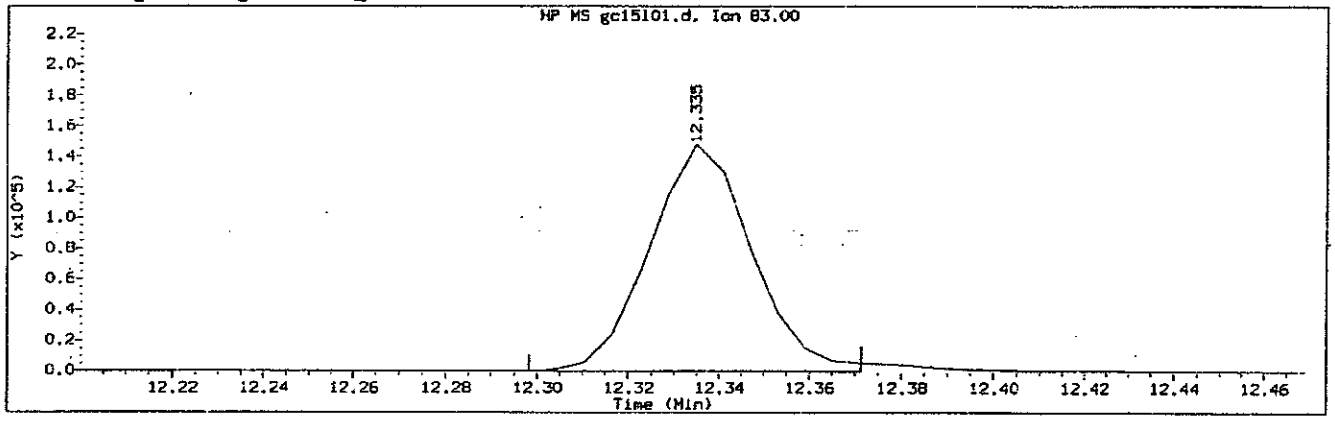
RAD48 0247

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Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10oct15a.b/gc15101.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 14:06 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 15-OCT-2010 13:39
Date, time and analyst ID of latest file update: 15-Oct-2010 14:34 jml01693

Sample Name: LCSG65 Lab Sample ID: LCSG65

Compound Number : 128
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1763
Retention Time (minutes): 12.335
Quant Ion : 83.00
Area (flag) : 231017M
On-Column Amount (ng) : 4.8697
Integration start scan : 1756 Integration stop scan: 1768
Y at integration start : 0 Y at integration end: 0

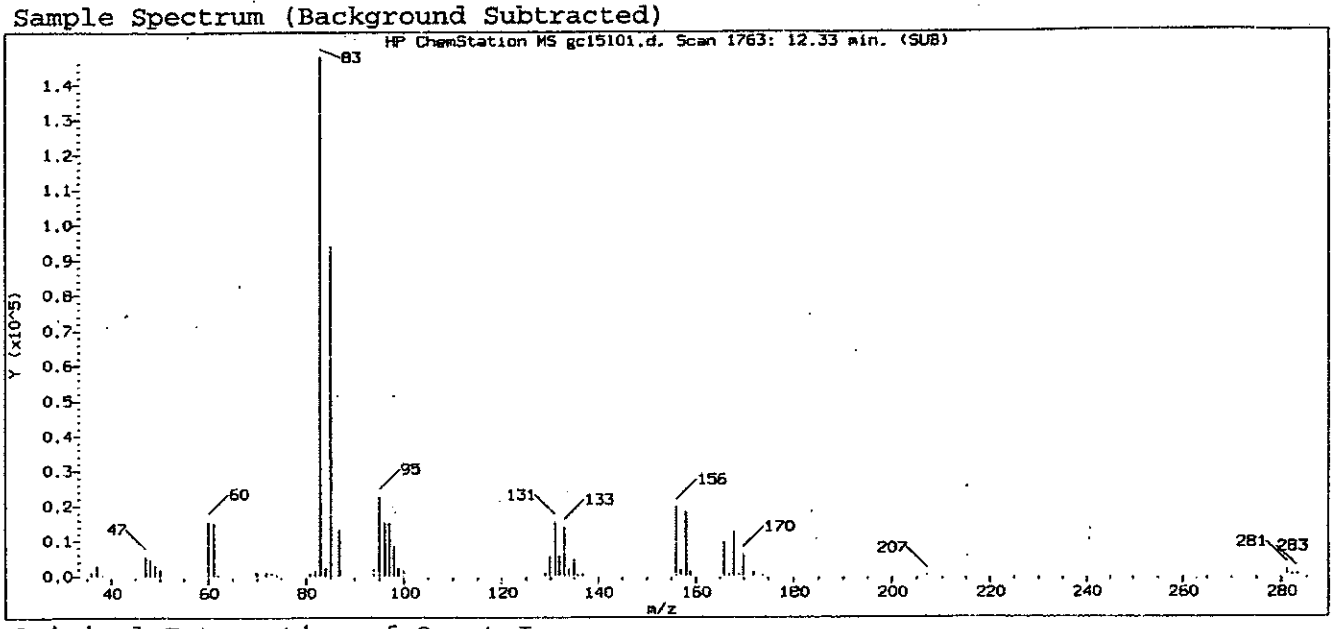
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long
on 10/15/2010 at 14:35.
Target 3.5 esignature user ID: jml01693

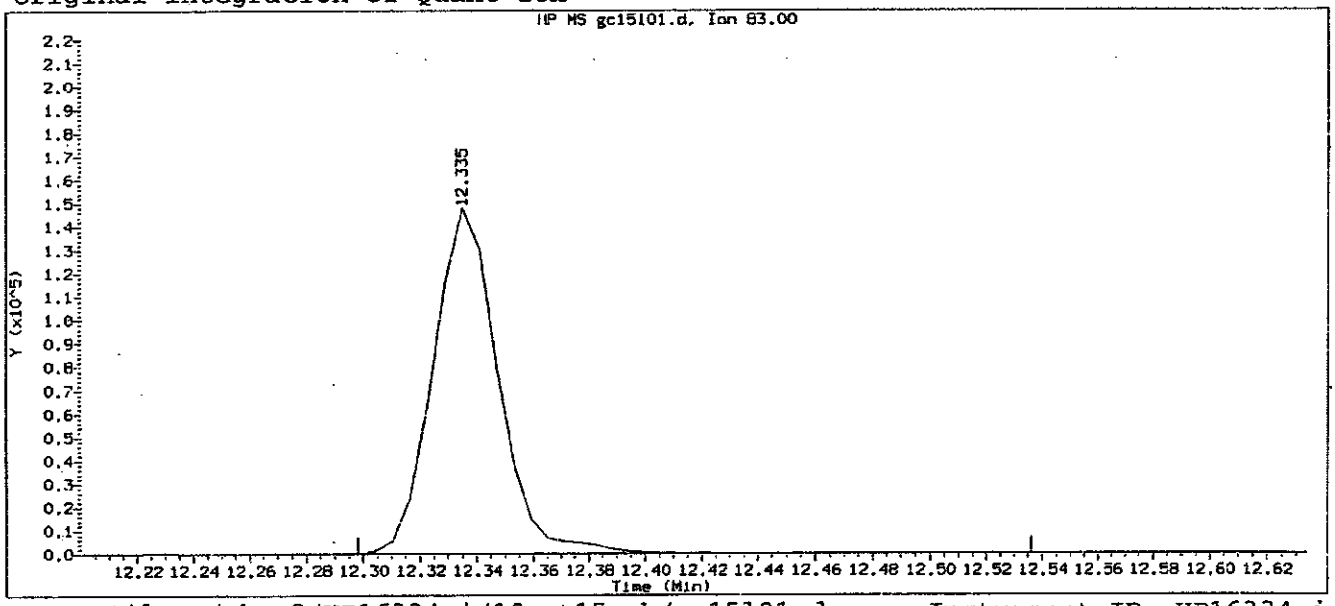
GC/MS audit/management approval: 10/21/10

RAD48 8240

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10oct15a.b/gc15101.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 14:06 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 15-OCT-2010 13:39
Date, time and analyst ID of latest file update: 15-Oct-2010 14:24 Automation

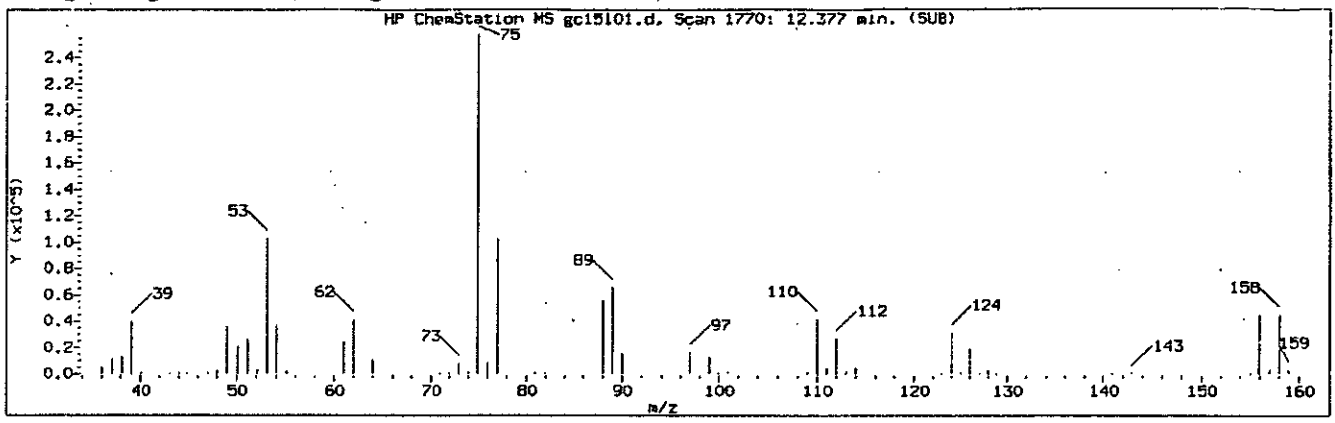
Sample Name: LCSG65 Lab Sample ID: LCSG65

Compound Number	: 128		
Compound Name	: 1,1,2,2-Tetrachloroethane		
Scan Number	: 1763		
Retention Time (minutes)	: 12.335		
Quant Ion	: 83.00		
Area	: 235883		
On-column Amount (ng)	: 4.9723		
Integration start scan	: 1756	Integration stop scan:	1795
Y at integration start	: 0	Y at integration end:	0

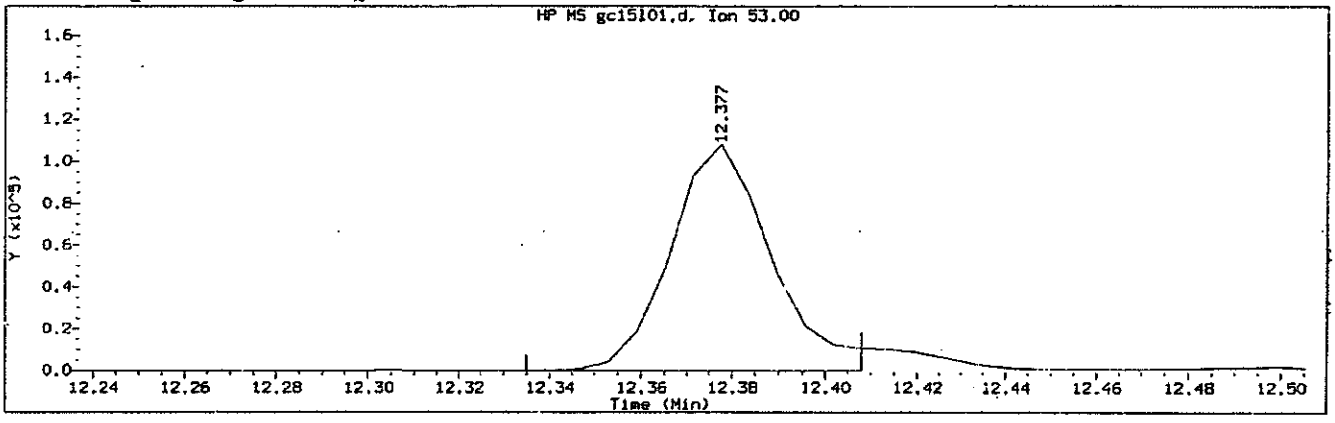
RAD48 0249

Digitally signed by Jason M. Long on 10/15/2010 at 14:35.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10oct15a.b/gc15101.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 14:06 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 15-OCT-2010 13:39
Date, time and analyst ID of latest file update: 15-Oct-2010 14:34 jml01693

Sample Name: LCSG65 Lab Sample ID: LCSG65

Compound Number : 130
Compound Name : trans-1,4-Dichloro-2-Butene
Scan Number : 1770
Retention Time (minutes): 12.377
Quant Ion : 53.00
Area (flag) : 164601M
On-Column Amount (ng) : 23.7831
Integration start scan : 1762 Integration stop scan: 1774
Y at integration start : 0 Y at integration end: 0

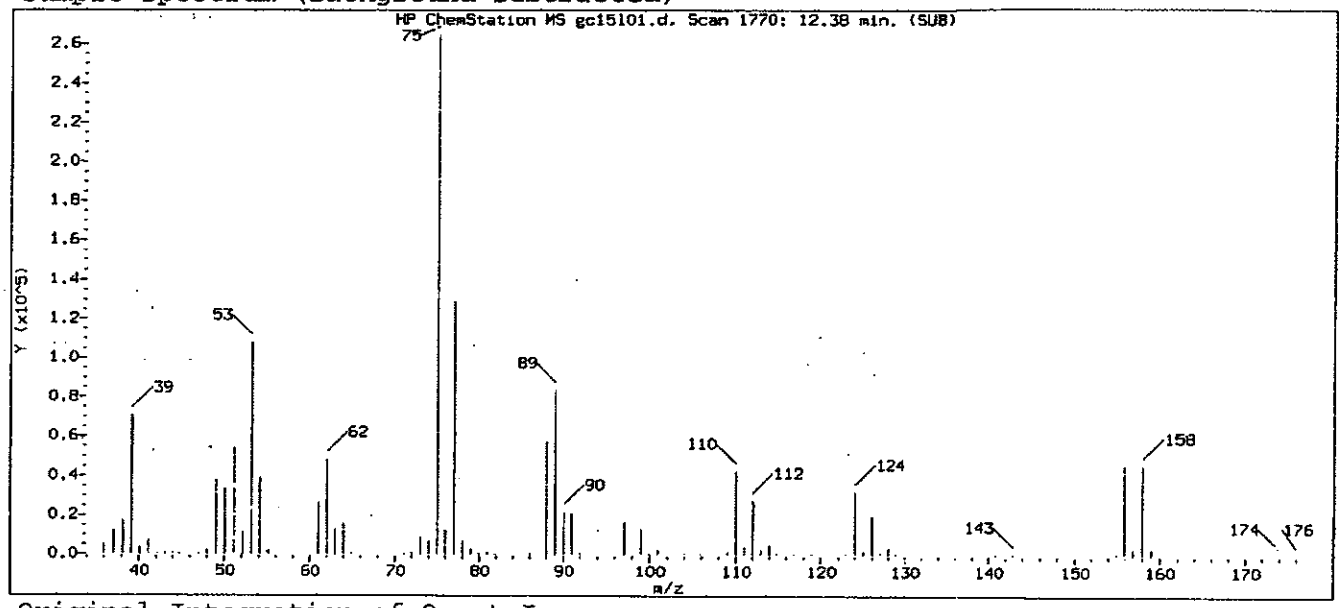
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long on 10/15/2010 at 14:35. Target 3.5 esignature user ID: jml01693

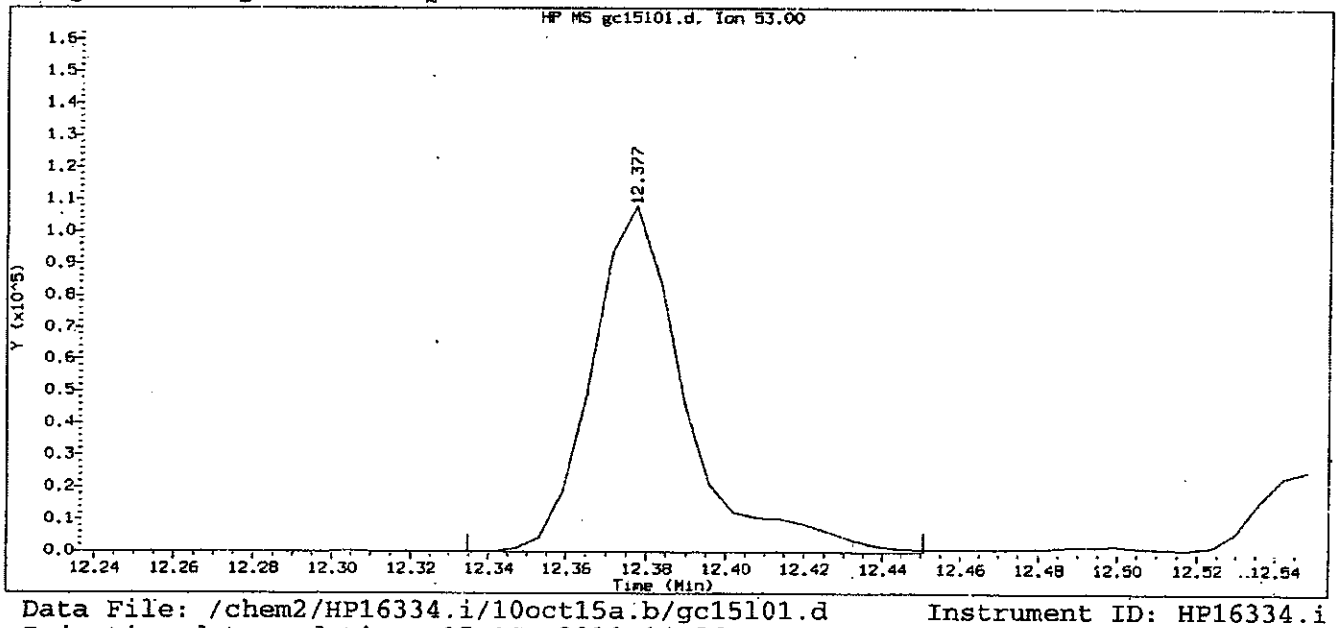
GC/MS audit/management approval: _____ 10/21/10

RAD40 0250

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10oct15a.b/gc15101.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 14:06 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 15-OCT-2010 13:39
Date, time and analyst ID of latest file update: 15-Oct-2010 14:24 Automation

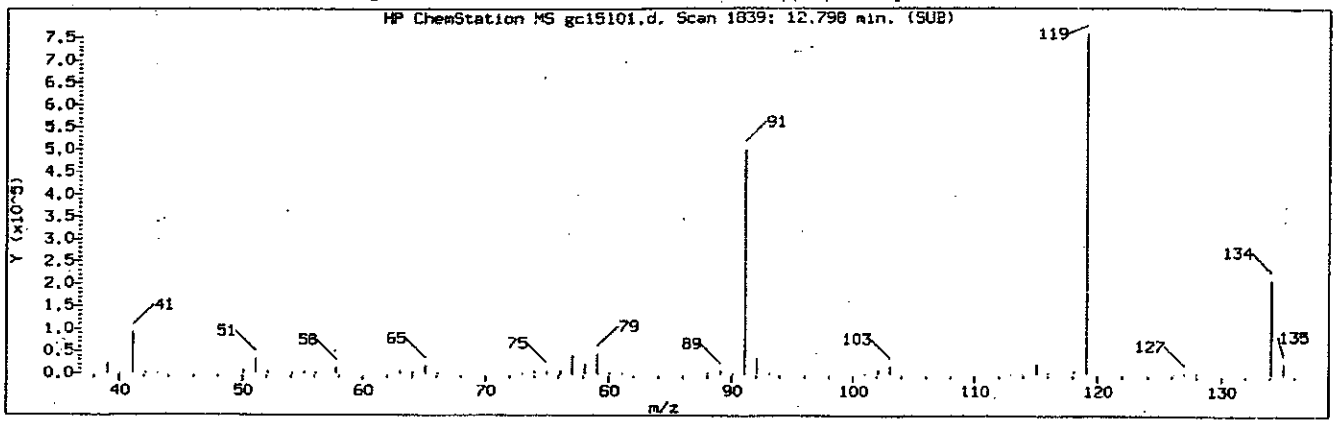
Sample Name: LCSG65 Lab Sample ID: LCSG65

Compound Number	: 130		
Compound Name	: trans-1,4-Dichloro-2-Butene		
Scan Number	: 1770		
Retention Time (minutes)	: 12.377		
Quant Ion	: 53.00		
Area	: 176342		
On-column Amount (ng)	: 25.2364		
Integration start scan	: 1762	Integration stop scan:	1781
Y at integration start	: 0	Y at integration end:	0

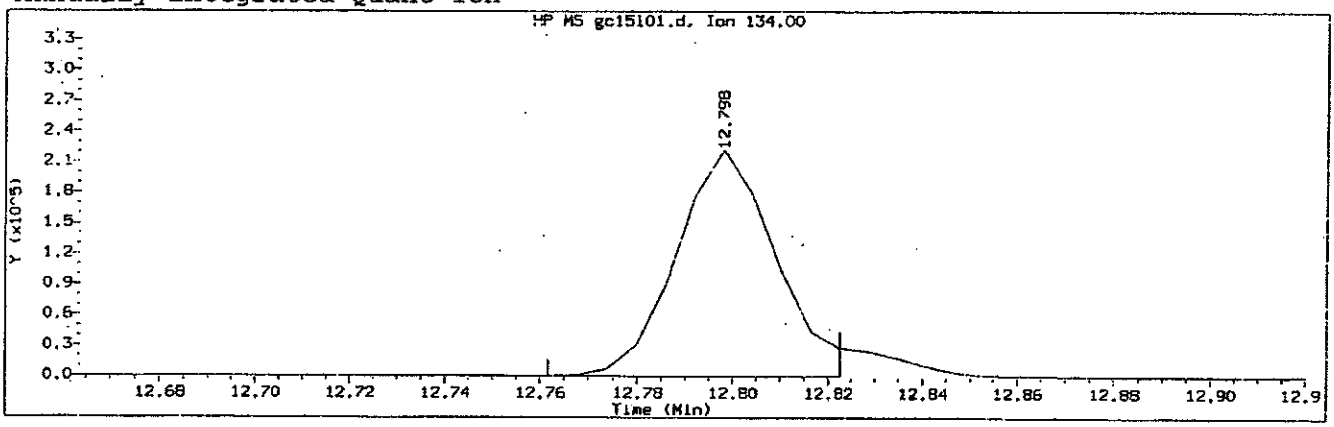
RAD40 6251

Digitally signed by Jason M. Long on 10/15/2010 at 14:35.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10oct15a.b/gc15101.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 14:06 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 15-OCT-2010 13:39
Date, time and analyst ID of latest file update: 15-Oct-2010 14:34 jml01693

Sample Name: LCSG65 Lab Sample ID: LCSG65

Compound Number	: 137		
Compound Name	: tert-Butylbenzene		
Scan Number	: 1839		
Retention Time (minutes)	: 12.798		
Quant Ion	: 134.00		
Area (flag)	: 322170M		
On-Column Amount (ng)	: 4.9569		
Integration start scan	: 1832	Integration stop scan:	1842
Y at integration start	: 0	Y at integration end:	0

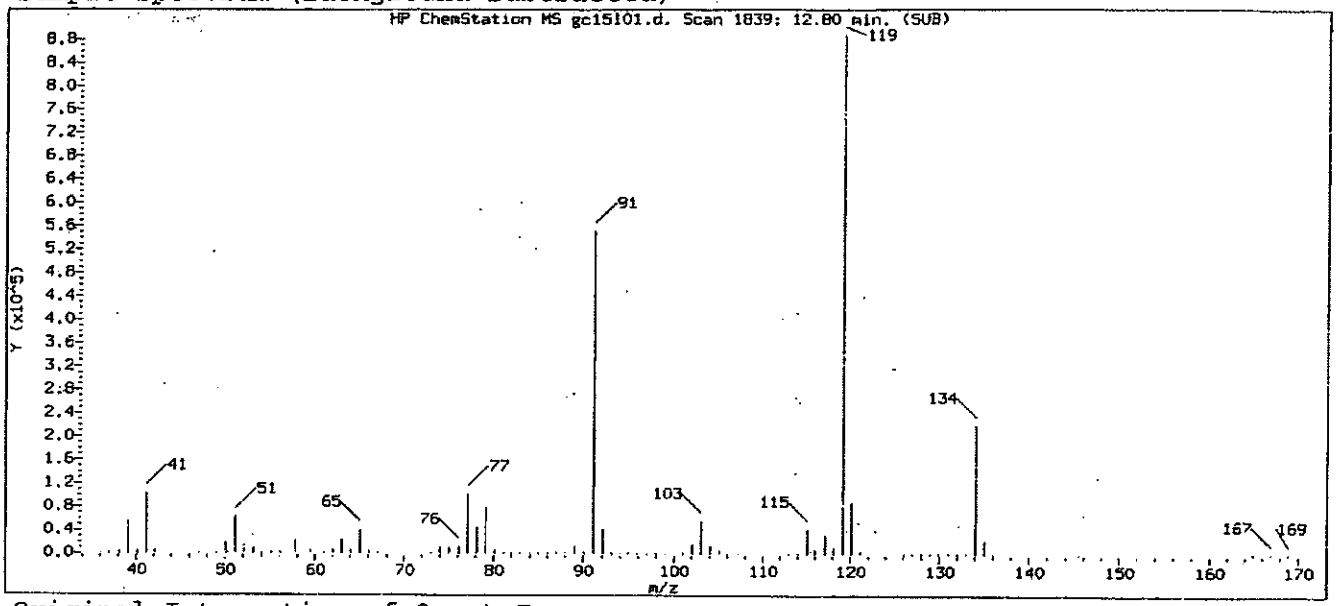
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long
on 10/15/2010 at 14:35.
Target 3.5 esignature user ID: jml01693

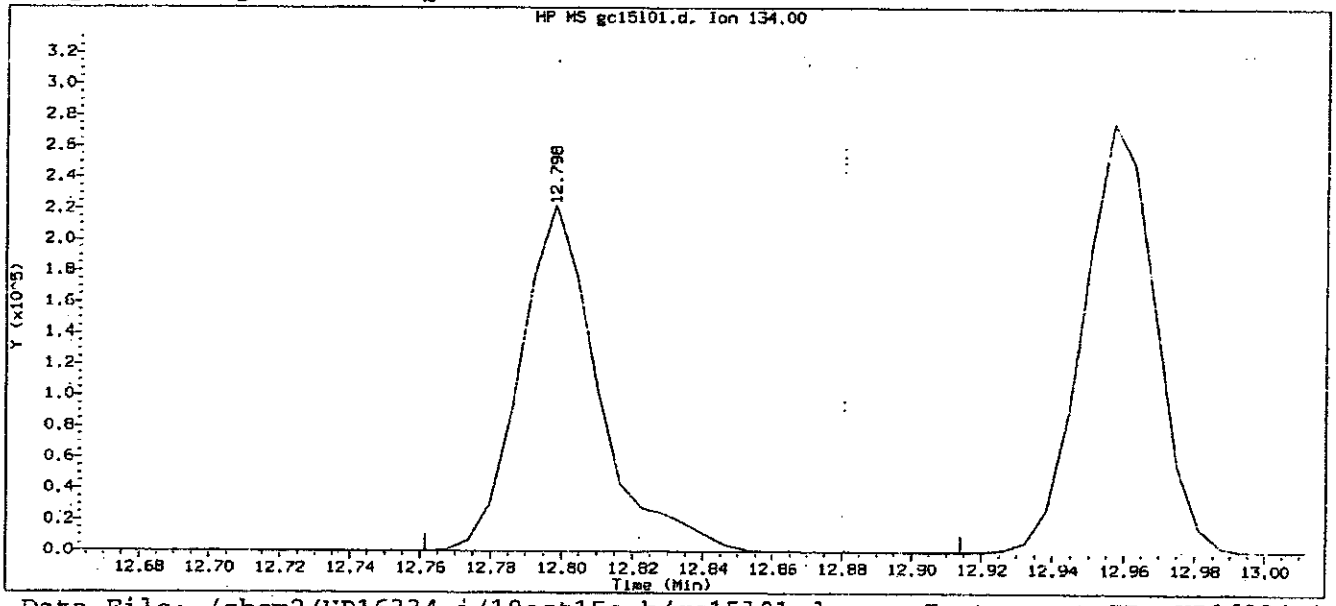
GC/MS audit/management approval: _____ 10/21/10

RAD48 0852

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10oct15a.b/gc15101.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 14:06 Analyst ID: JML01693

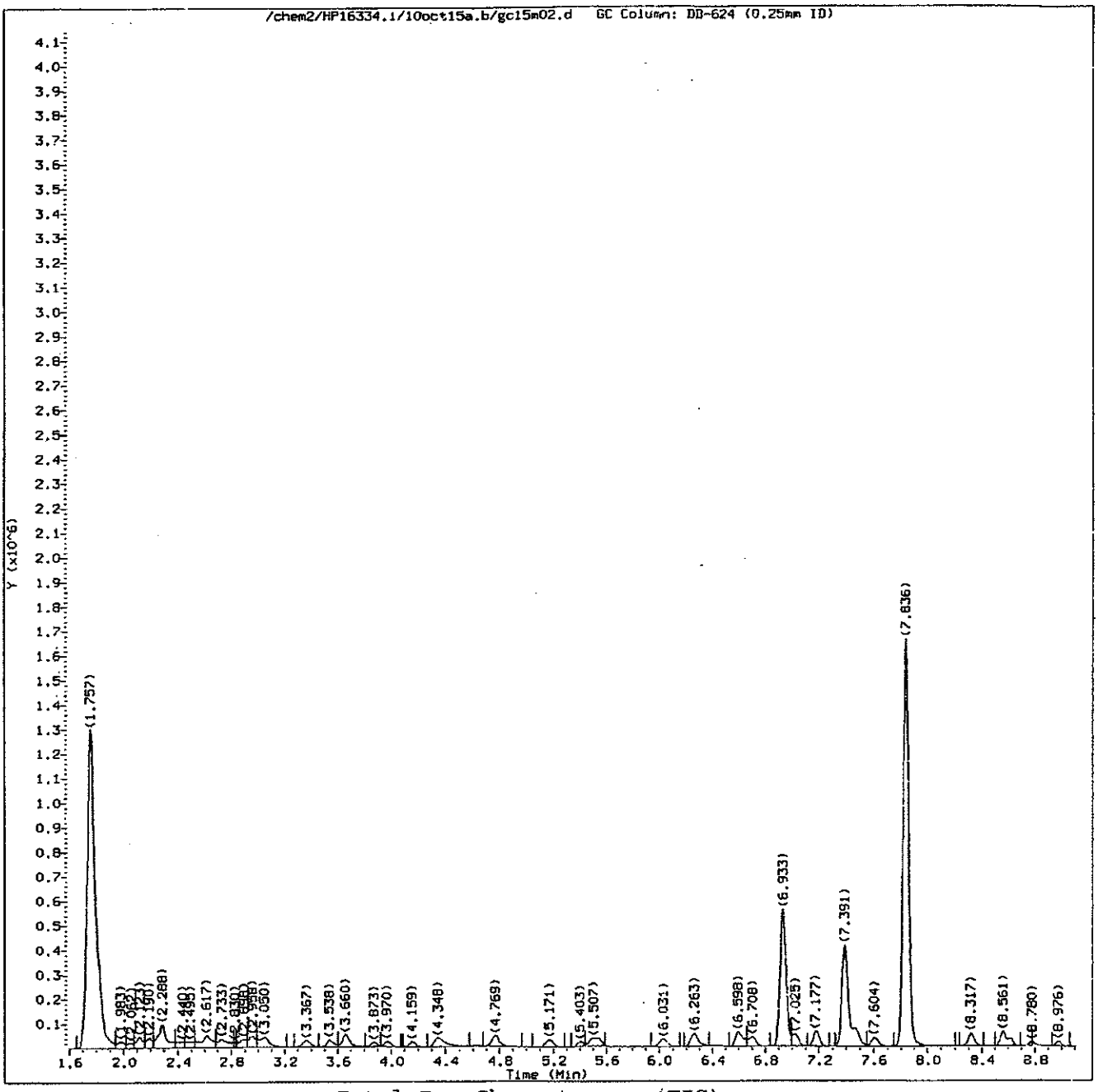
Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 15-OCT-2010 13:39
Date, time and analyst ID of latest file update: 15-Oct-2010 14:24 Automation

Sample Name: LCSG65 Lab Sample ID: LCSG65

Compound Number	: 137		
Compound Name	: tert-Butylbenzene		
Scan Number	: 1839		
Retention Time (minutes)	: 12.798		
Quant Ion	: 134.00		
Area	: 343622		
On-column Amount (ng)	: 5.2870		
Integration start scan	: 1832	Integration stop scan:	1857
Y at integration start	: 0	Y at integration end:	0

RAD48 8253

Digitally signed by Jason M. Long on 10/15/2010 at 14:35.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

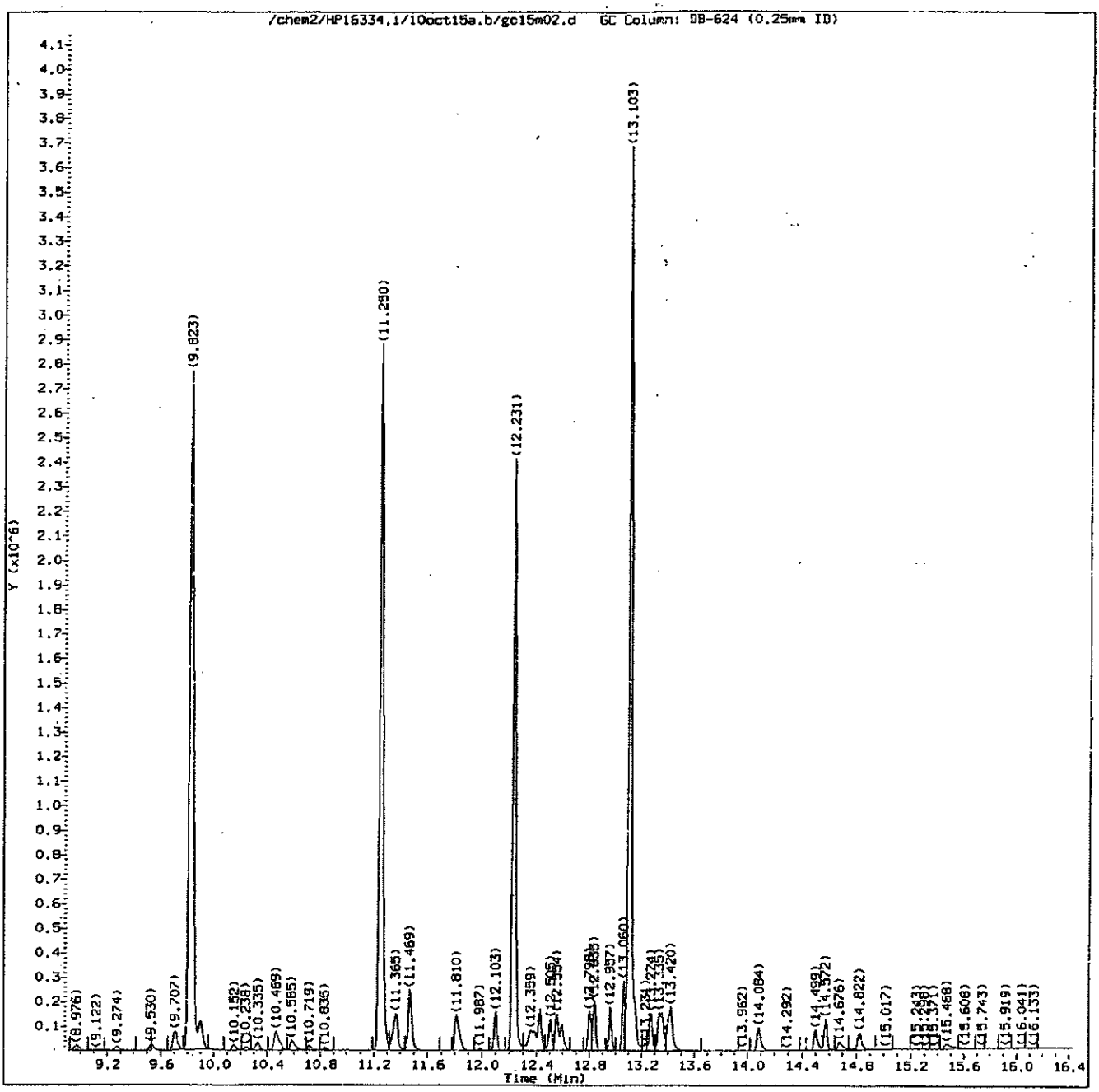
Data File: /chem2/HP16334.i/10oct15a.b/gc15m02.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 14:48 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: MA14D
Calibration date and time: 15-OCT-2010 15:13
Date, time and analyst ID of latest file update: 15-Oct-2010 15:13 jml01693

Sample Name: MDL0.3 Lab Sample ID: MDL0.3

RAD48 8Z54

Digitally signed by Jason M. Long
on 10/15/2010 at 15:13.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/10oct15a.b/gc15m02.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 14:48 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: MA14D
Calibration date and time: 15-OCT-2010 15:13
Date, time and analyst ID of latest file update: 15-Oct-2010 15:13 jml01693

Sample Name: MDL0.3 Lab Sample ID: MDL0.3

RAD40 0255

Digitally signed by Jason M. Long
on 10/15/2010 at 15:13.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/10oct15a.b/gc15m02.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 14:48 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: MA14D
Calibration date and time: 15-OCT-2010 15:13
Date, time and analyst ID of latest file update: 15-Oct-2010 15:13 jml01693

Sample Name: MDL0.3 Lab Sample ID: MDL0.3

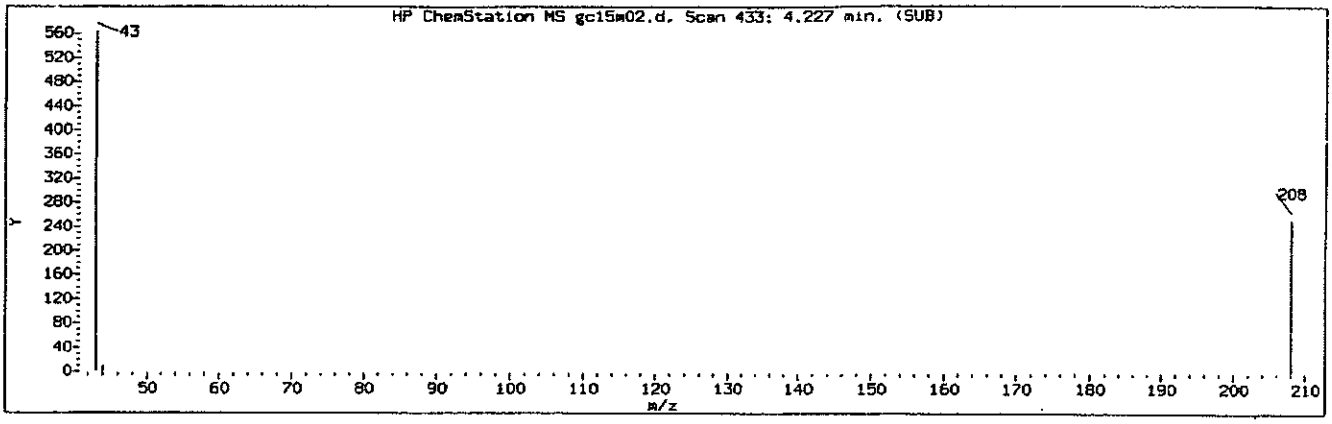
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
33) Methyl Acetate	(1)	4.227	43	1859M	0.113
36)*t-Butyl Alcohol-d10	(4)	4.385	65	85840	50.000
61)$Dibromofluoromethane	(1)	6.927	113	532822	9.904
70)$1,2-Dichloroethane-d4	(1)	7.384	102	105447	9.872
77)*Fluorobenzene	(1)	7.836	96	2396775	10.000
89) 1,4-Dioxane	(4)	8.811	88	1346	9.934
97)$Toluene-d8	(2)	9.823	98	2338476	10.019
110)*Chlorobenzene-d5	(2)	11.250	117	1746506	10.000
126)$4-Bromofluorobenzene	(2)	12.231	95	800730	9.982
143)*1,4-Dichlorobenzene-d4	(3)	13.103	152	1011564	10.000

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

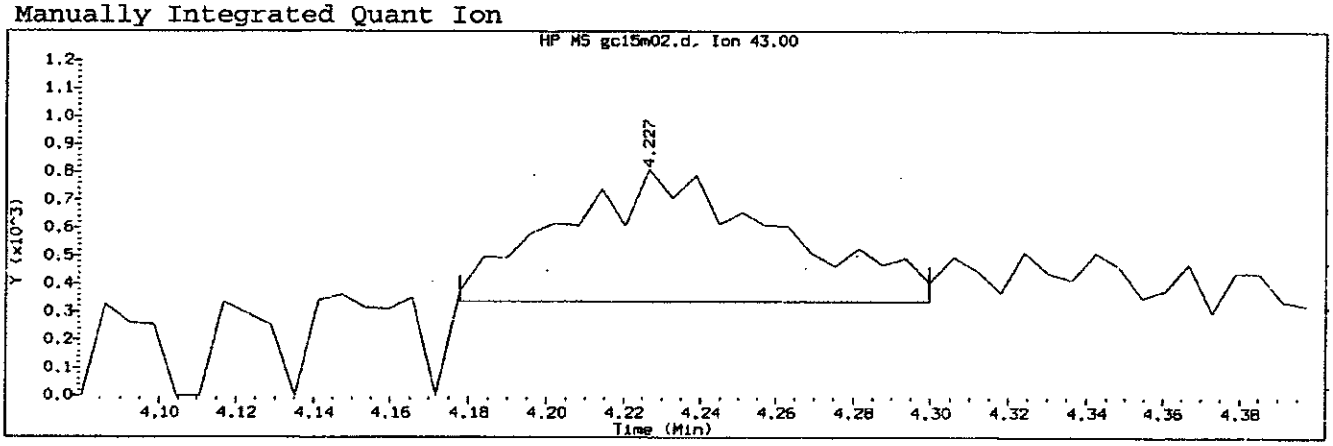
Digitally signed by Jason M. Long
on 10/15/2010 at 15:13.
Target 3.5 esignature user ID: jml01693

RAD40 0256

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10oct15a.b/gc15m02.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 14:48 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: MA14D
Calibration date and time: 15-OCT-2010 15:13
Date, time and analyst ID of latest file update: 15-Oct-2010 15:13 jml01693

Sample Name: MDL0.3 Lab Sample ID: MDL0.3

Compound Number	: 33		
Compound Name	: Methyl Acetate		
Scan Number	: 433		
Retention Time (minutes)	: 4.227		
Quant Ion	: 43.00		
Area (flag)	: 1859M		
On-Column Amount (ng)	: 0.1130		
Integration start scan	: 424	Integration stop scan:	444
Y at integration start	: 337	Y at integration end:	337

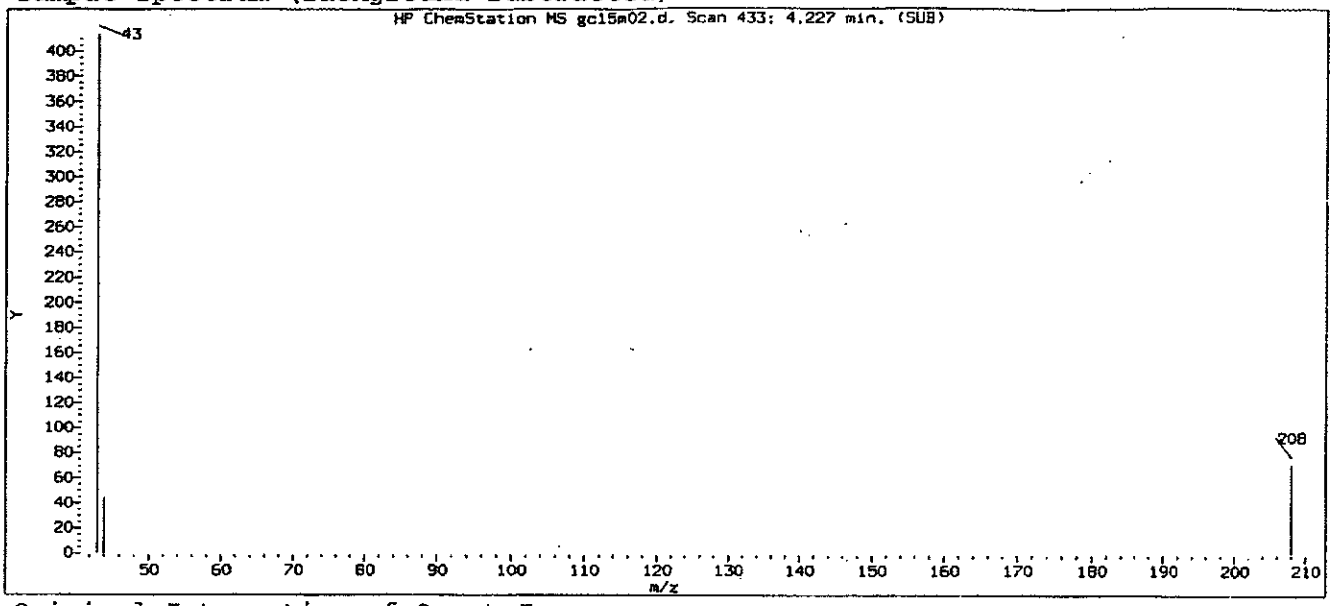
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long
on 10/15/2010 at 15:13.
Target 3.5 esignature user ID: jml01693

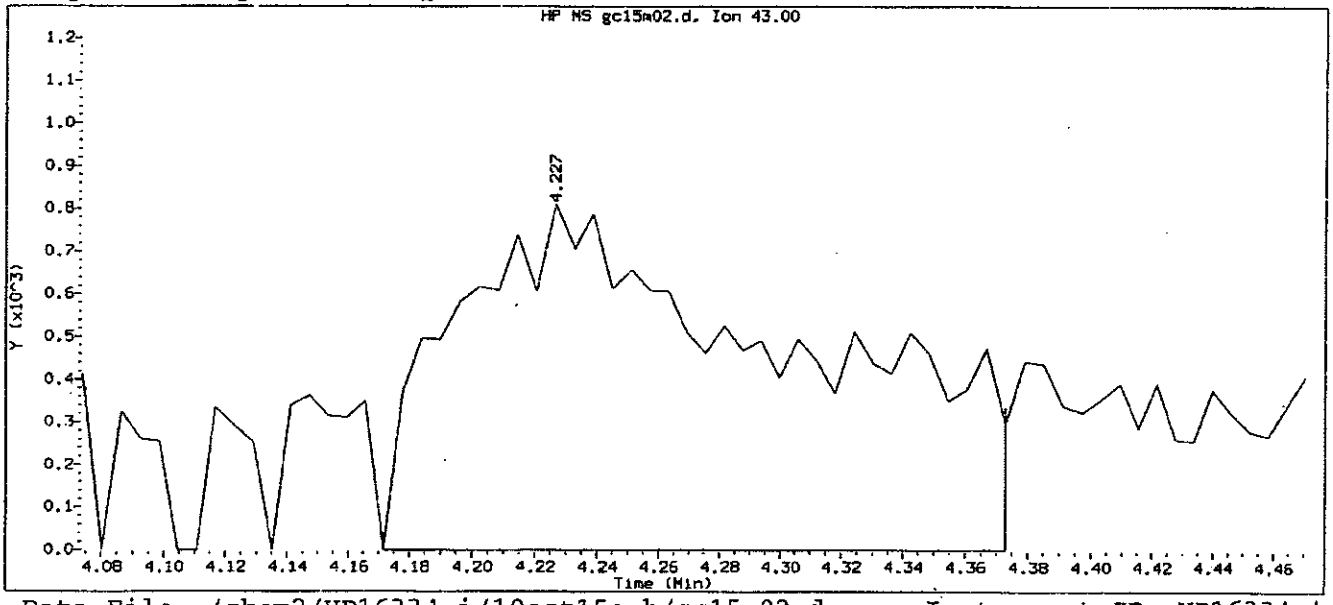
GC/MS audit/management approval: _____ 10/21/10

RAD48 0257

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10oct15a.b/gc15m02.d Instrument ID: HP16334.i
Injection date and time: 15-OCT-2010 14:48 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct15a.b/g8260w25.m Sublist used: MA14D
Calibration date and time: 15-OCT-2010 15:13
Date, time and analyst ID of latest file update: 15-Oct-2010 15:13 jml01693

Sample Name: MDL0.3 Lab Sample ID: MDL0.3

Compound Number	: 33		
Compound Name	: Methyl Acetate		
Scan Number	: 433		
Retention Time (minutes)	: 4.227		
Quant Ion	: 43.00		
Area	: 6276		
On-column Amount (ng)	: 0.3812		
Integration start scan	: 423	Integration stop scan:	456
Y at integration start	: 0	Y at integration end:	0

RAD40 0258

Digitally signed by Jason M. Long on 10/15/2010 at 15:13.
Target 3.5 esignature user ID: jml01693

Data File: /chem2/HP16334.i/10oct21b.b/gc21t02.d

Date : 21-OCT-2010 14:19

Client ID: 50ng BFB

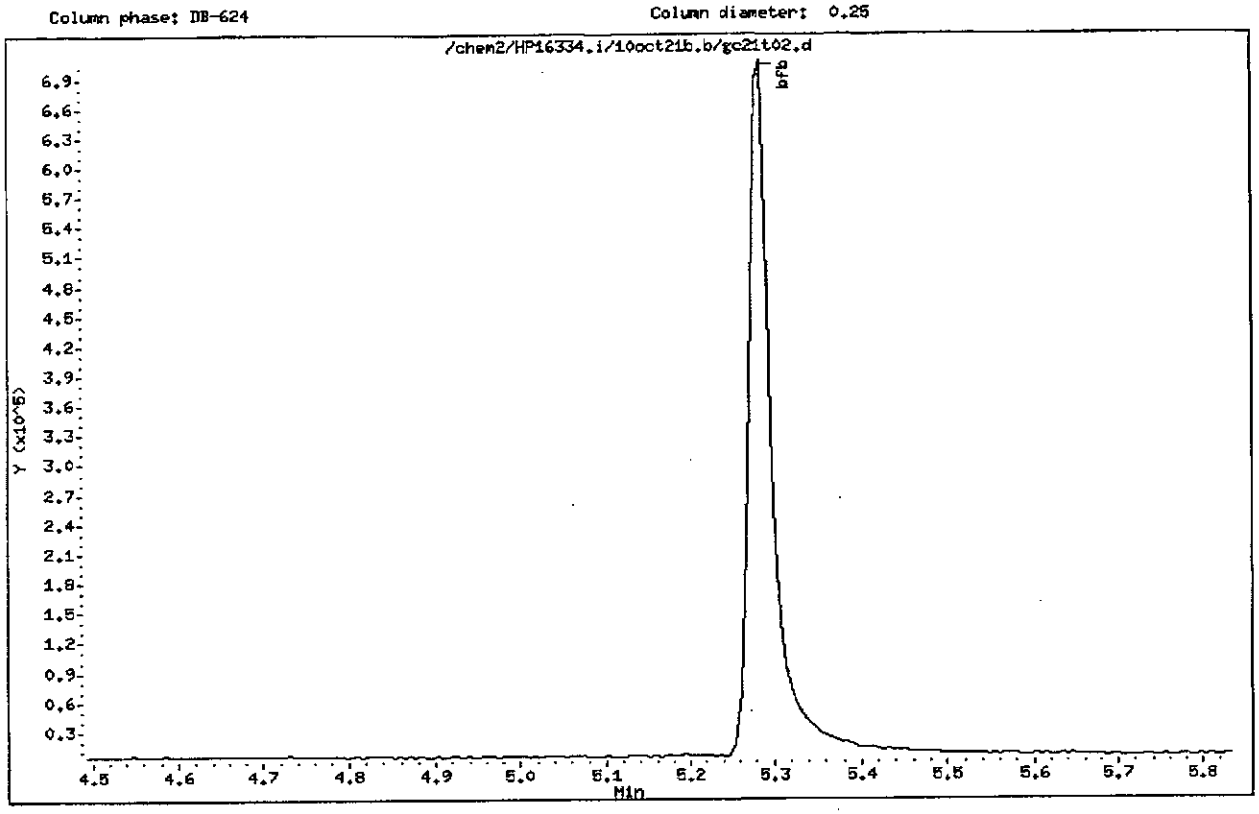
Instrument: HP16334.i

Sample Info: 50ng BFB;BFB MAY12-10;1;3;;

Operator: JHL01693

Column phase: DB-624

Column diameter: 0.25



Digitally signed by Jason M. Long on 10/21/2010 at 15:14.
Target 3.5 esignature user ID: jml01693

RAD48 0259

Data File: /chem2/HP16334.i/10oct21b.b/gc21t02.d

Date : 21-OCT-2010 14:19

Client ID: 50ng BFB

Instrument: HP16334.i

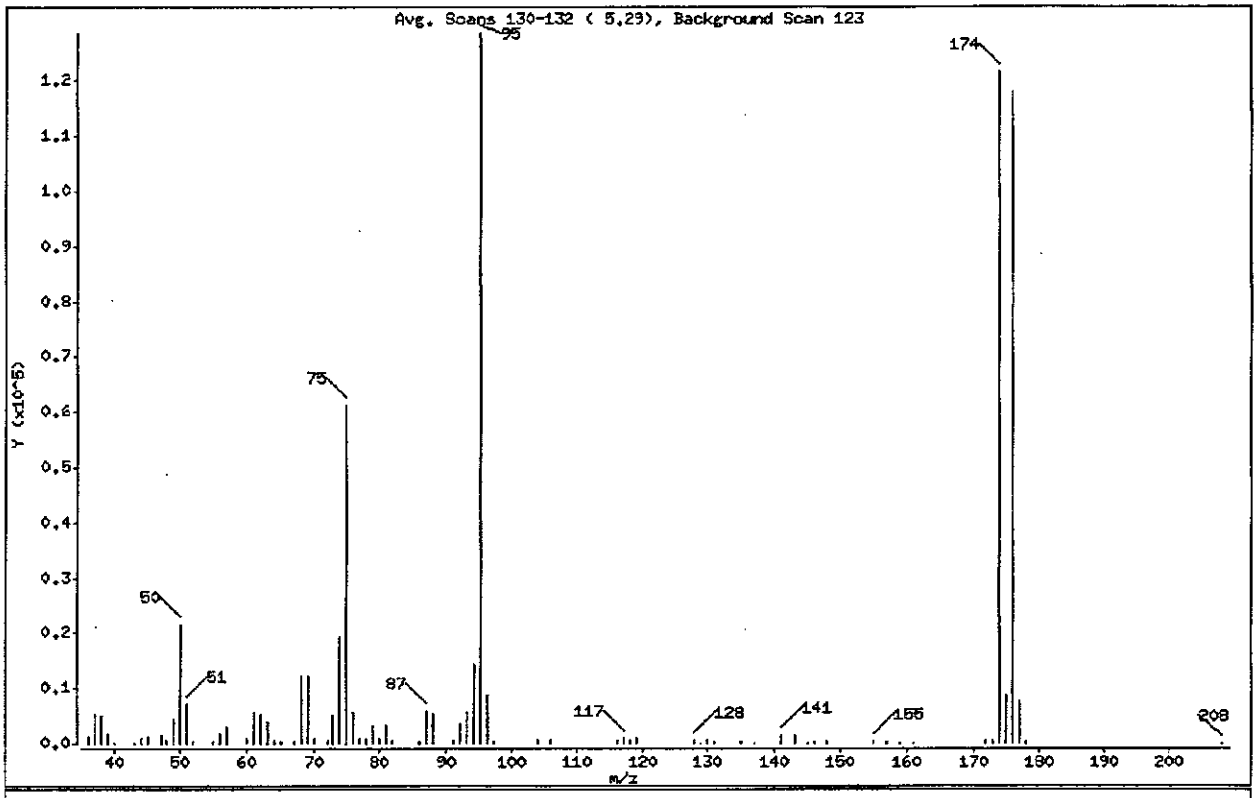
Sample Info: 50ng BFB;BFB MAY12-10;1;3;;

Operator: JML01693

Column phase: DB-624

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	16.74
75	30.00 - 60.00% of mass 95	47.63
96	5.00 - 9.00% of mass 95	6.82
173	Less than 2.00% of mass 174	0.40 (0.43)
174	50.00 - 100.00% of mass 95	94.50
175	5.00 - 9.00% of mass 174	6.86 (7.26)
176	95.00 - 101.00% of mass 174	91.69 (97.03)
177	5.00 - 9.00% of mass 176	5.95 (6.49)

RAD40 0260

Digitally signed by Jason M. Long on 10/21/2010 at 15:14.
Target 3.5 esignature user ID: jml01693

Data File: /chem2/HP16334.i/10oct21b.b/gc21t02.d

Date : 21-OCT-2010 14:19

Client ID: 50ng BFB

Instrument: HP16334.i

Sample Info: 50ng BFB;BFB MAY12-10;1;3;;

Operator: JML01693

Column phase: DB-624

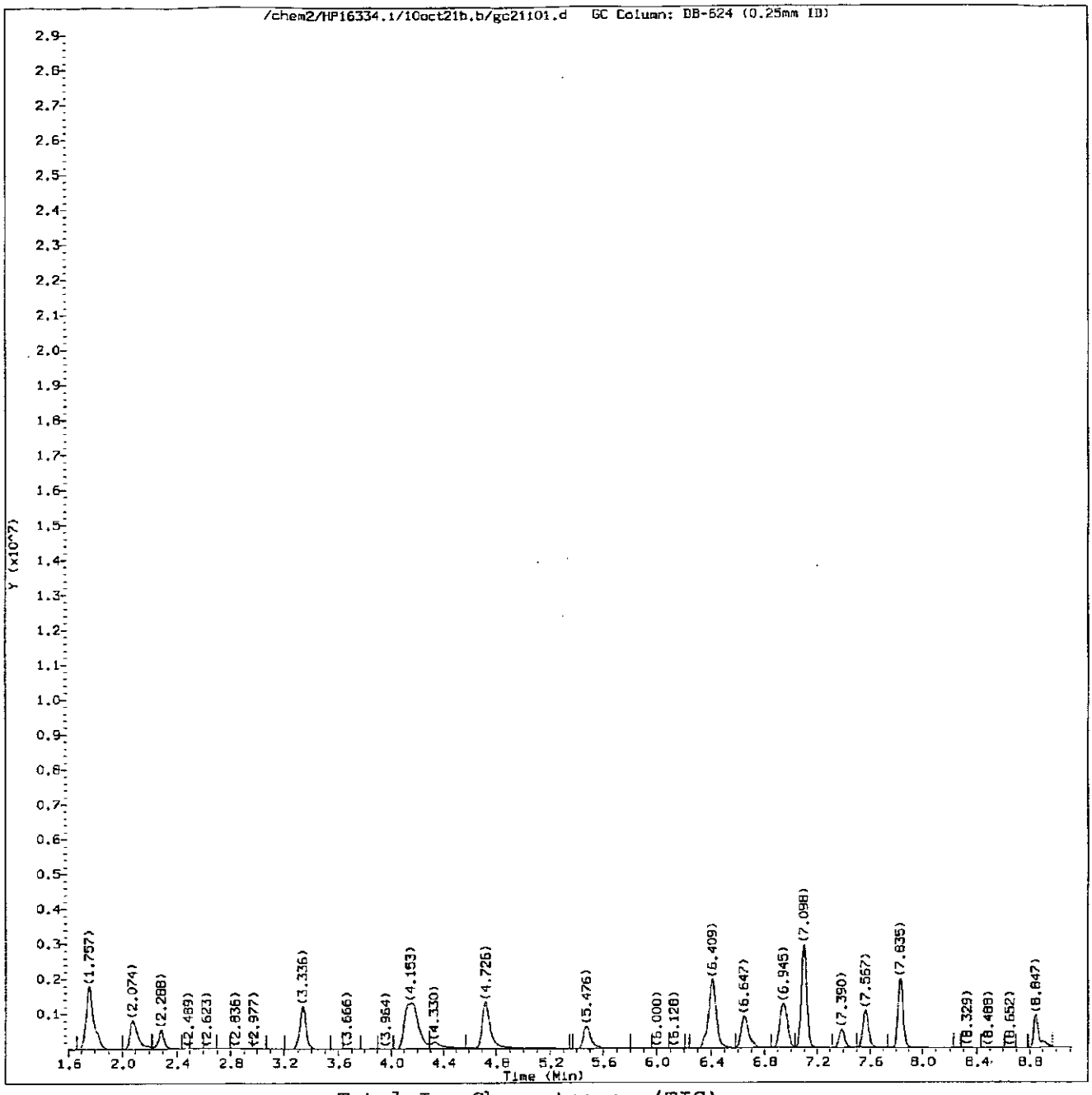
Column diameter: 0.25

Data File: gc21t02.d
Spectrum: Avg. Scans 130-132 (5.29), Background Scan 123
Location of Maximum: 95.00
Number of points: 77

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1106	63.00	3990	88.00	5340	141.00	1418
37.00	5190	64.00	544	91.00	518	143.00	1408
38.00	5062	65.00	387	92.00	3486	145.00	99
39.00	1807	67.00	205	93.00	5485	146.00	176
40.00	34	68.00	12090	94.00	14559	148.00	343
43.00	86	69.00	12112	95.00	128688	155.00	267
44.00	771	70.00	1007	96.00	8781	157.00	223
45.00	1103	72.00	528	97.00	308	159.00	97
47.00	1502	73.00	5120	104.00	485	161.00	85
48.00	701	74.00	19600	106.00	617	172.00	502
49.00	4521	75.00	61296	116.00	659	173.00	520
50.00	21544	76.00	5533	117.00	911	174.00	121608
51.00	7039	77.00	882	118.00	510	175.00	8823
52.00	323	78.00	818	119.00	763	176.00	118000
55.00	228	79.00	3330	128.00	574	177.00	7661
56.00	1652	80.00	1020	129.00	113	178.00	185
57.00	2869	81.00	3326	130.00	525	208.00	60
60.00	1032	82.00	666	131.00	369		
61.00	5496	86.00	187	135.00	204		
62.00	5408	87.00	6018	137.00	138		

RAD48 8261

Digitally signed by Jason M. Long on 10/21/2010 at 15:14.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

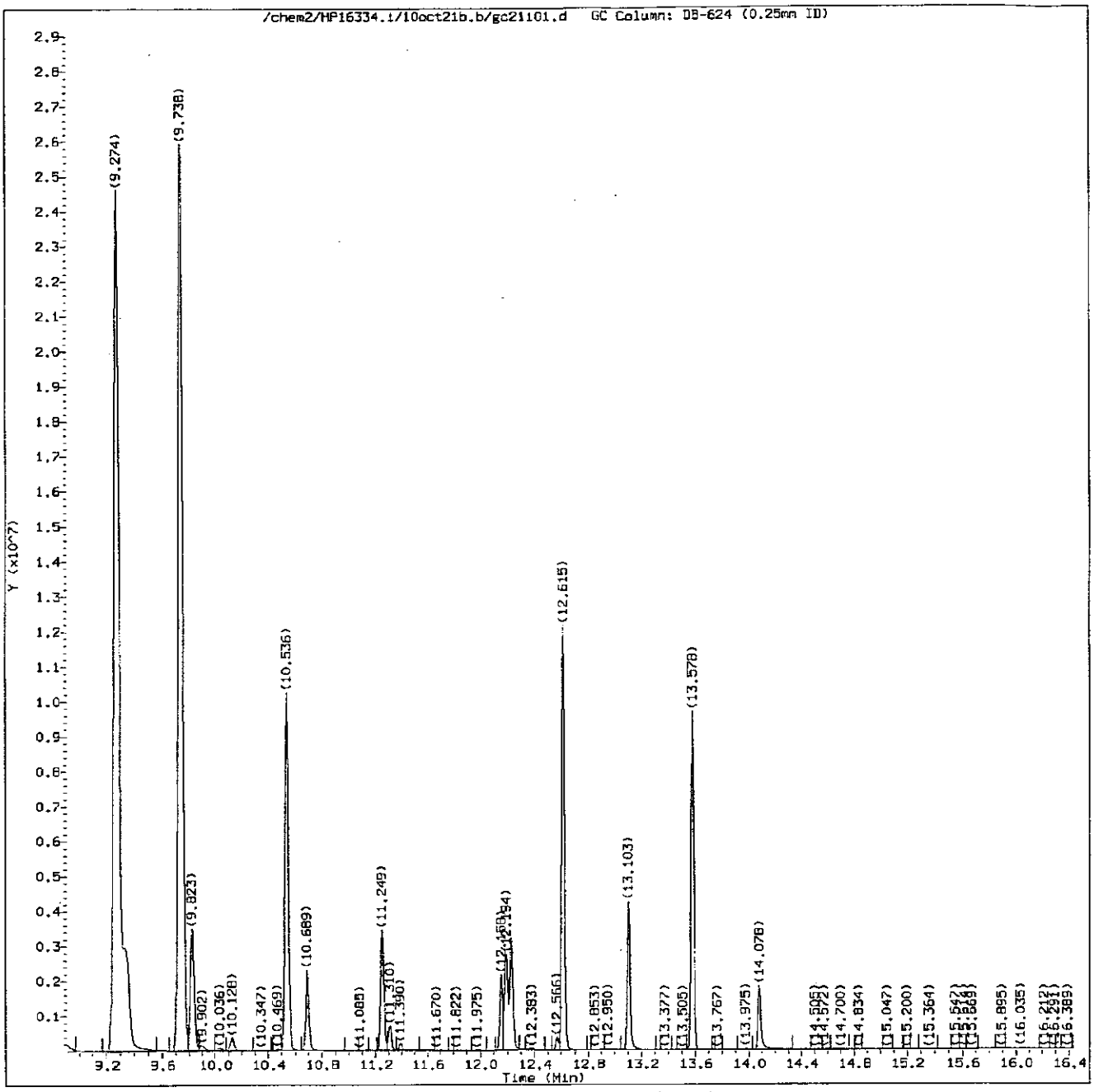
Target Revision 3.5

Data File: /chem2/HP16334.i/10oct21b.b/gc21i01.d Instrument ID: HP16334.i
Injection date and time: 21-OCT-2010 14:53 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: SMONLY
Calibration date and time: 21-OCT-2010 18:45
Date, time and analyst ID of latest file update: 21-Oct-2010 18:45 sej02002

Sample Name: VSTD025 Lab Sample ID: VSTD025

Digitally signed by Sara E. Johnson
on 10/21/2010 at 18:56.
Target 3.5 esignature user ID: sej02002



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/10oct21b.b/gc21i01.d Instrument ID: HP16334.i
Injection date and time: 21-OCT-2010 14:53 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: SMONLY
Calibration date and time: 21-OCT-2010 18:45
Date, time and analyst ID of latest file update: 21-Oct-2010 18:45 sej02002

Sample Name: VSTD025 Lab Sample ID: VSTD025

RAD40 8263

Digitally signed by Sara E. Johnson
on 10/21/2010 at 18:56.
Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/10oct21b.b/gc21i01.d Instrument ID: HP16334.i
Injection date and time: 21-OCT-2010 14:53 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: SMONLY
Calibration date and time: 21-OCT-2010 18:45
Date, time and analyst ID of latest file update: 21-Oct-2010 18:45 sej02002

Sample Name: VSTD025 Lab Sample ID: VSTD025

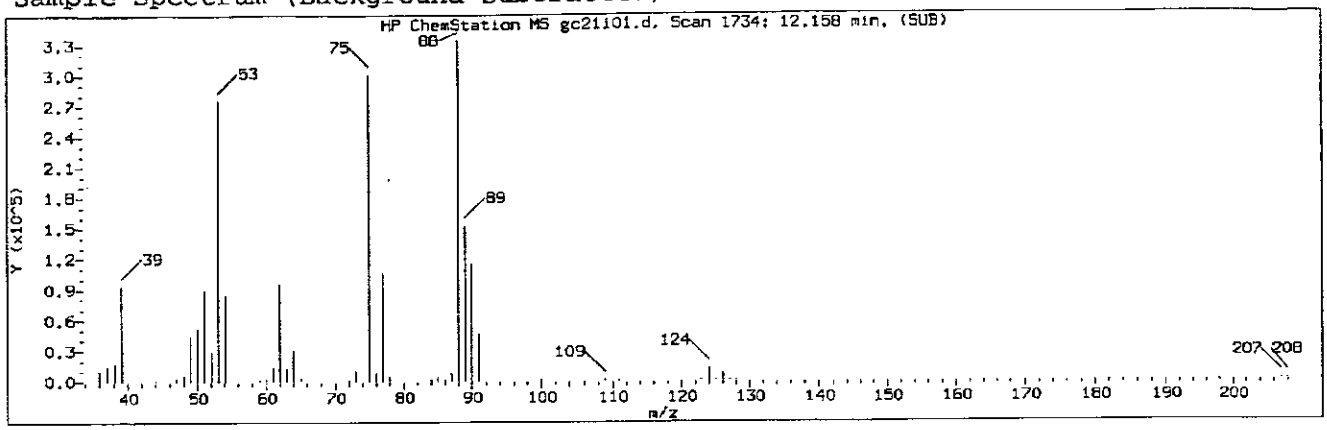
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(1)	2.074	45	2208999	24.744
31) Acetonitrile	(4)	4.123	41	3939153	1120.818
36)*t-Butyl Alcohol-d10	(4)	4.379	65	119604	50.000
46) Vinyl Acetate	(1)	5.476	43	1982540	31.531
77)*Fluorobenzene	(1)	7.835	96	2749217	10.000
93) 2-Chloroethyl Vinyl Ether	(1)	9.353	63	772408	29.813
110)*Chlorobenzene-d5	(2)	11.249	117	2083320	10.000
122) cis-1,4-Dichloro-2-Butene	(4)	12.158	88	501423A	79.937
125) Cyclohexanone	(4)	12.194	55	1308187	1438.731
143)*1,4-Dichlorobenzene-d4	(3)	13.103	152	1176140	10.000
149) Hexachloroethane	(1)	13.578	117	1711959	31.174

A = User selected an alternate hit.
* = Compound is an internal standard.

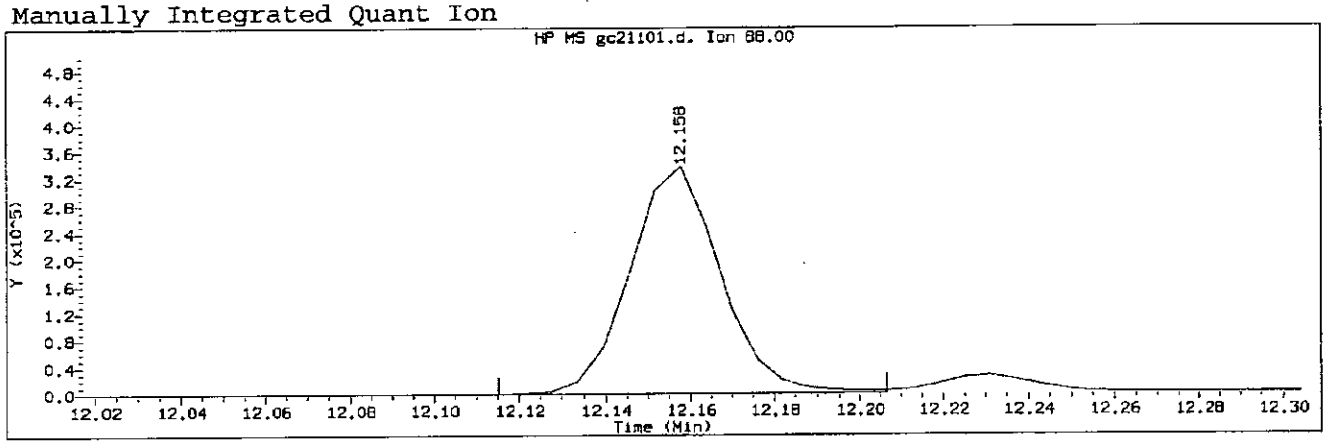
Digitally signed by Sara E. Johnson
on 10/21/2010 at 18:56.
Target 3.5 esignature user ID: sej02002

RAD40 0264

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10oct21b.b/gc21i01.d Instrument ID: HP16334.i
Injection date and time: 21-OCT-2010 14:53 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: SMONLY
Calibration date and time: 21-OCT-2010 18:45
Date, time and analyst ID of latest file update: 21-Oct-2010 18:45 sej02002

Sample Name: VSTD025 Lab Sample ID: VSTD025

Compound Number	: 122		
Compound Name	: cis-1,4-Dichloro-2-Butene		
Scan Number	: 1734		
Retention Time (minutes)	: 12.158		
Quant Ion	: 88.00		
Area (flag)	: 501423A		
On-Column Amount (ng)	: 79.9371		
Integration start scan	: 1726	Integration stop scan:	1741
Y at integration start	: 0	Y at integration end:	0

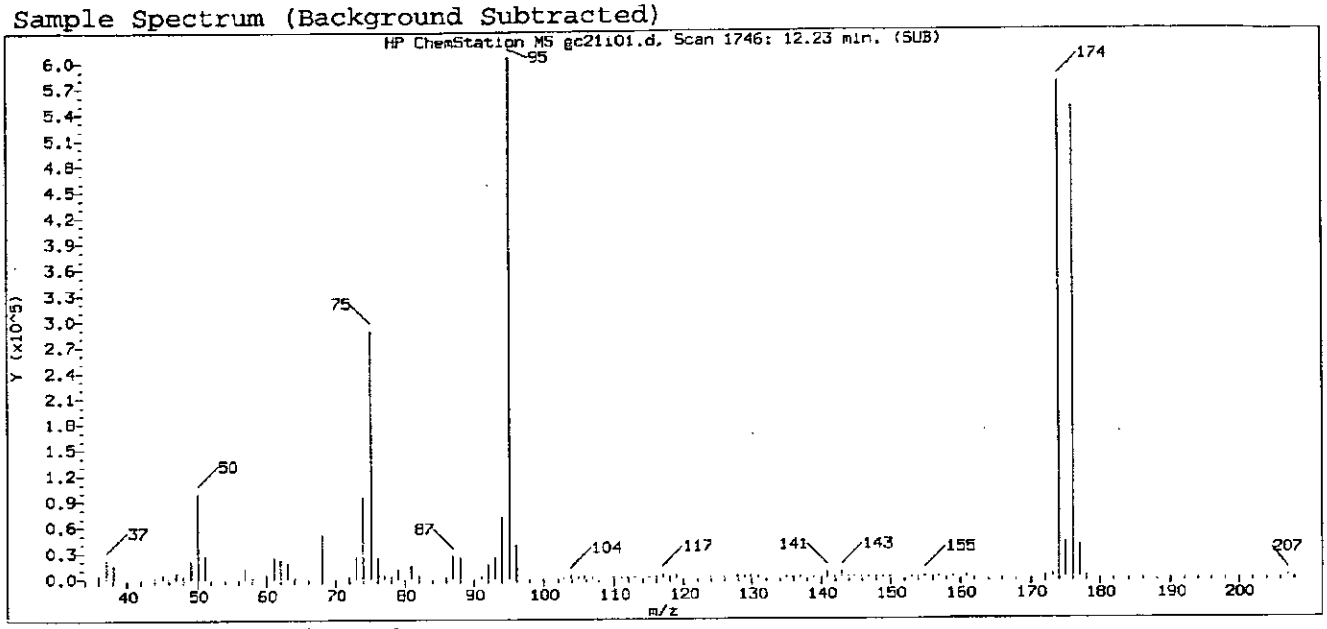
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Sara E. Johnson
on 10/21/2010 at 18:56.
Target 3.5 esignature user ID: sej02002

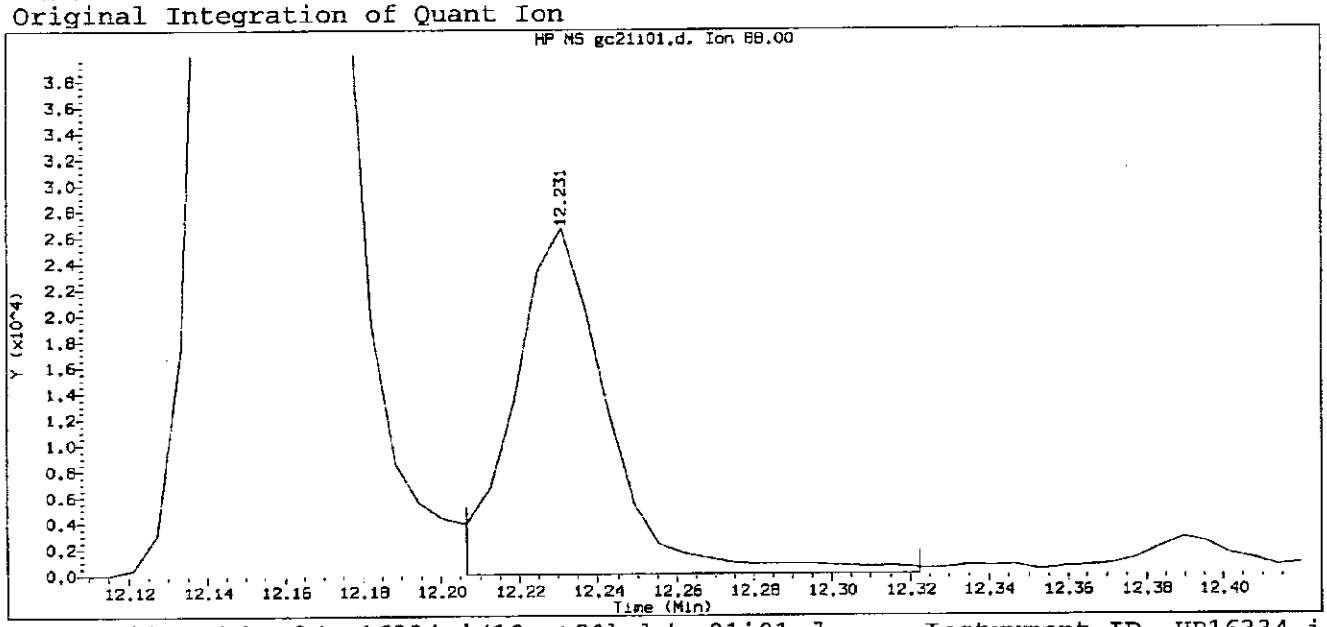
GC/MS audit/management approval: 10/22/10

RAD40 0265

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10oct21b.b/gc21i01.d Instrument ID: HP16334.i
Injection date and time: 21-OCT-2010 14:53 Analyst ID: JML01693

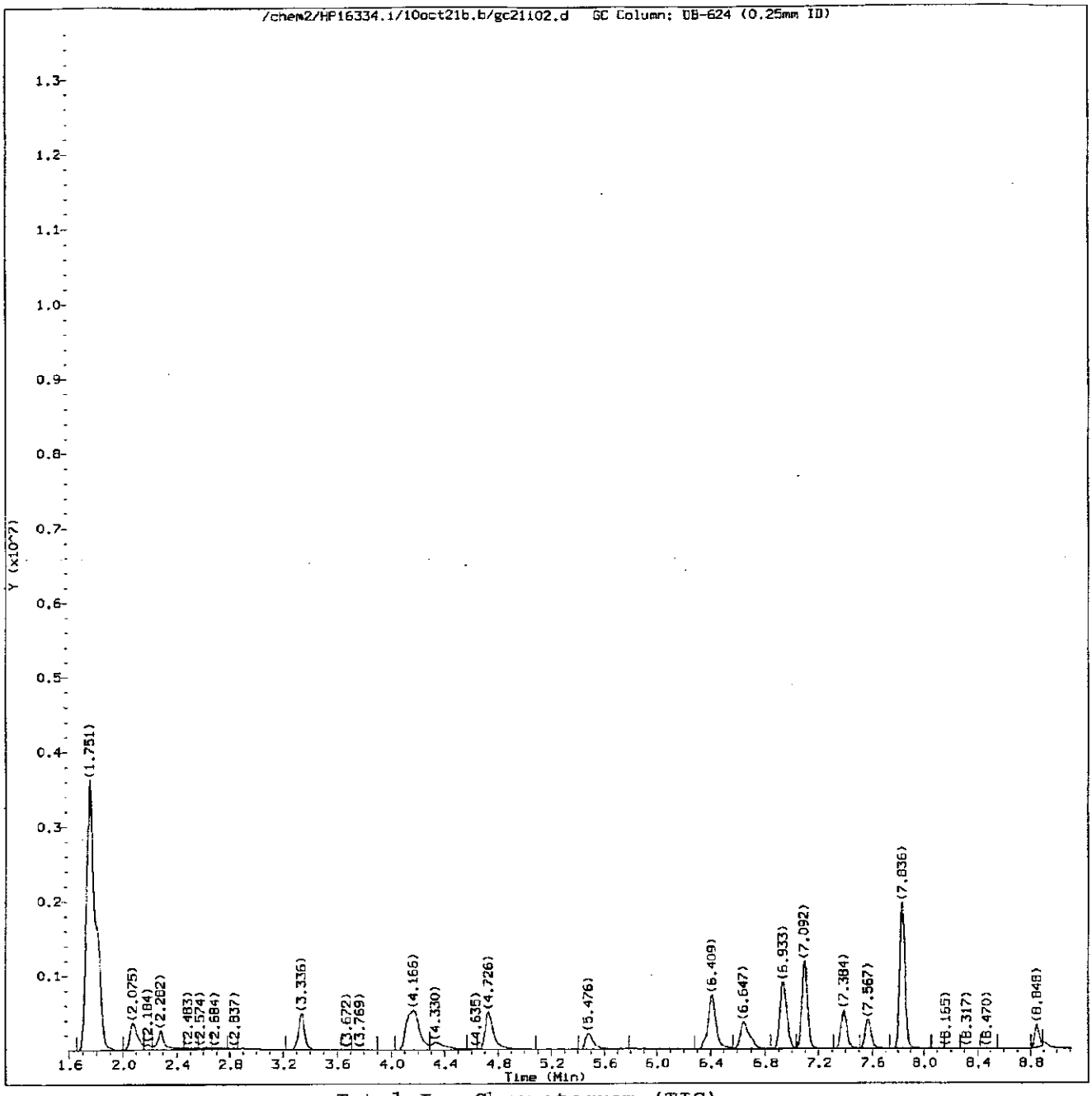
Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: SMONLY
Calibration date and time: 21-OCT-2010 15:11
Date, time and analyst ID of latest file update: 21-Oct-2010 15:11 Automation

Sample Name: VSTD025 Lab Sample ID: VSTD025

Compound Number	: 122		
Compound Name	: cis-1,4-Dichloro-2-Butene		
Scan Number	: 1746		
Retention Time (minutes)	: 12.231		
Quant Ion	: 88.00		
Area	: 44314		
On-column Amount (ng)	: 50.0000		
Integration start scan	: 1741	Integration stop scan:	1760
Y at integration start	: 0	Y at integration end:	0

RAD40 0266

Digitally signed by Sara E. Johnson on 10/21/2010 at 18:56.
Target 3.5 esignature user ID: sej02002



Total Ion Chromatogram (TIC)

Target Revision 3.5

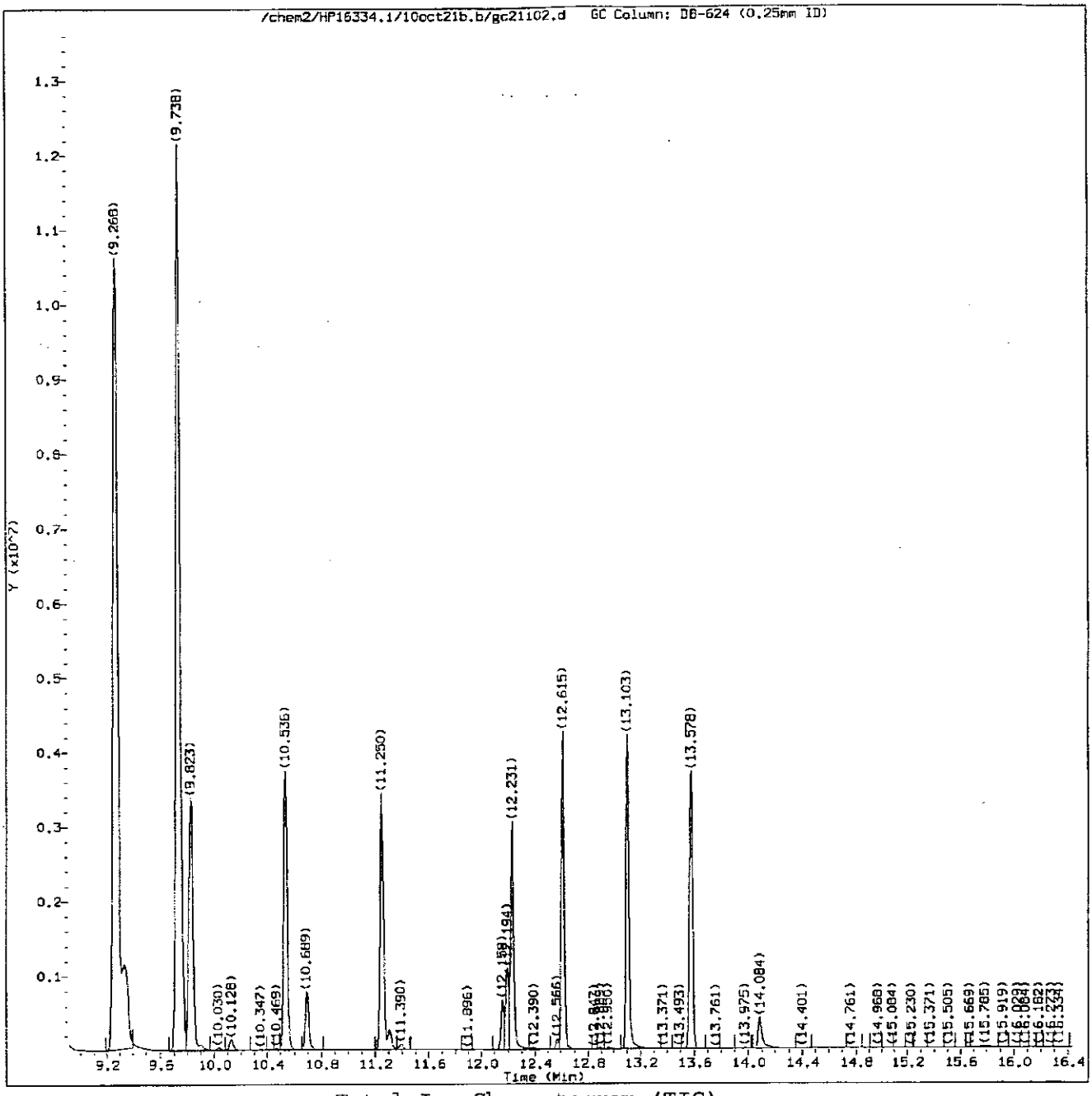
Data File: /chem2/HP16334.i/10oct21b.b/gc21i02.d Instrument ID: HP16334.i
Injection date and time: 21-OCT-2010 15:14 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: SMONLY
Calibration date and time: 21-OCT-2010 18:45
Date, time and analyst ID of latest file update: 21-Oct-2010 18:45 sej02002

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Sara E. Johnson
on 10/21/2010 at 18:56.
Target 3.5 esignature user ID: sej02002

RAD48 8267



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/10oct21b.b/gc21i02.d Instrument ID: HP16334.i
Injection date and time: 21-OCT-2010 15:14 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: SMONLY
Calibration date and time: 21-OCT-2010 18:45
Date, time and analyst ID of latest file update: 21-Oct-2010 18:45 sej02002

Sample Name: VSTD010 Lab Sample ID: VSTD010

RAD48 6268

Digitally signed by Sara E. Johnson
on 10/21/2010 at 18:56.
Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/10oct21b.b/gc21i02.d Instrument ID: HP16334.i
Injection date and time: 21-OCT-2010 15:14 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: SMONLY
Calibration date and time: 21-OCT-2010 18:45
Date, time and analyst ID of latest file update: 21-Oct-2010 18:45 sej02002

Sample Name: VSTD010 Lab Sample ID: VSTD010

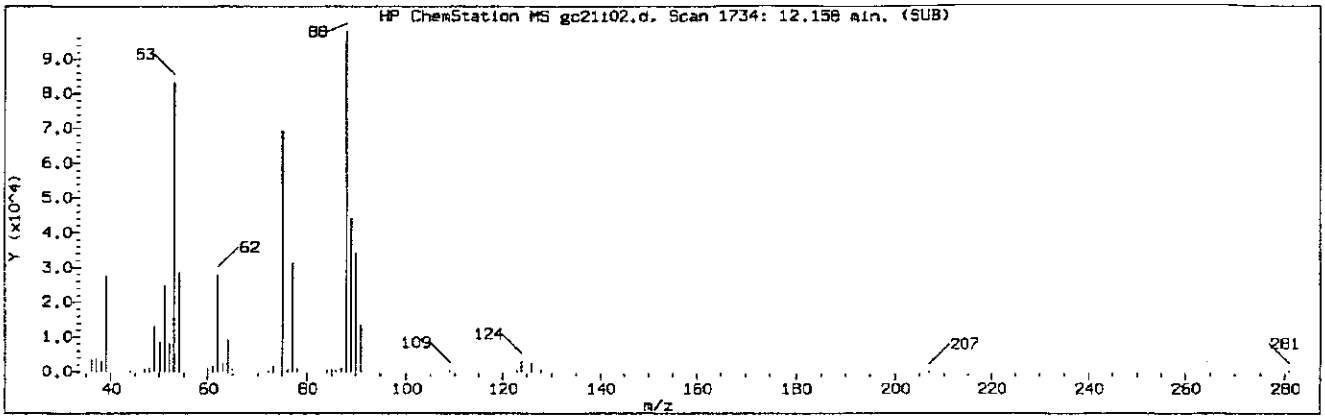
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(1)	2.075	45	965184	10.807
31) Acetonitrile	(4)	4.129	41	1522462	436.361
36)*t-Butyl Alcohol-d10	(4)	4.379	65	118735	50.000
46) Vinyl Acetate	(1)	5.476	43	711578	11.312
77)*Fluorobenzene	(1)	7.836	96	2750346	10.000
93) 2-Chloroethyl Vinyl Ether	(1)	9.347	63	288278	11.122
110)*Chlorobenzene-d5	(2)	11.250	117	2060410	10.000
122) cis-1,4-Dichloro-2-Butene	(4)	12.158	88	154534A	24.816
125) Cyclohexanone	(4)	12.194	55	512277	567.520
143)*1,4-Dichlorobenzene-d4	(3)	13.103	152	1170342	10.000
149) Hexachloroethane	(1)	13.578	117	633035	11.523

A = User selected an alternate hit.
* = Compound is an internal standard.

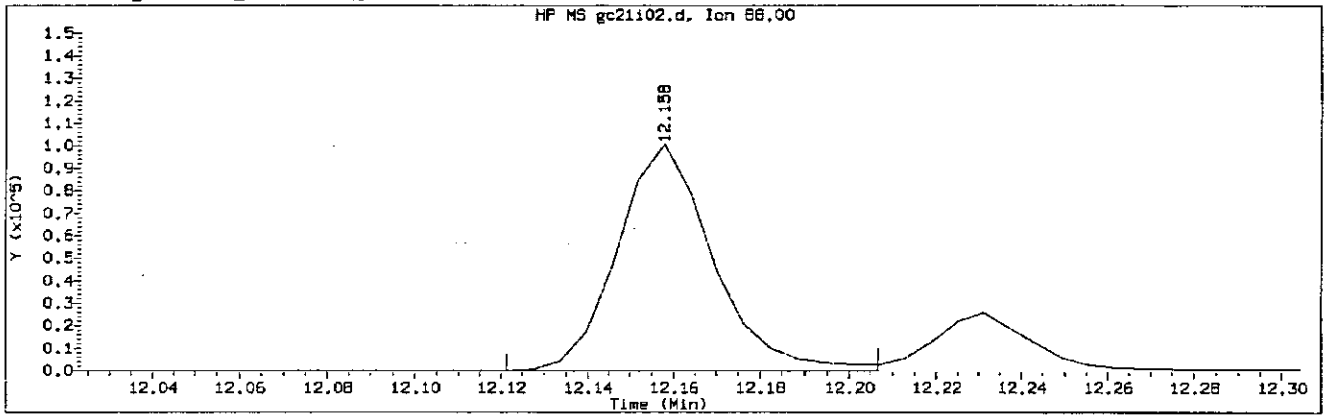
Digitally signed by Sara E. Johnson
on 10/21/2010 at 18:56.
Target 3.5 esignature user ID: sej02002

RAD48 8269

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10oct21b.b/gc21i02.d Instrument ID: HP16334.i
Injection date and time: 21-OCT-2010 15:14 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: SMONLY
Calibration date and time: 21-OCT-2010 18:45
Date, time and analyst ID of latest file update: 21-Oct-2010 18:45 sej02002

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number	: 122		
Compound Name	: cis-1,4-Dichloro-2-Butene		
Scan Number	: 1734		
Retention Time (minutes)	: 12.158		
Quant Ion	: 88.00		
Area (flag)	: 154534A		
On-Column Amount (ng)	: 24.8162		
Integration start scan	: 1727	Integration stop scan:	1741
Y at integration start	: 0	Y at integration end:	0

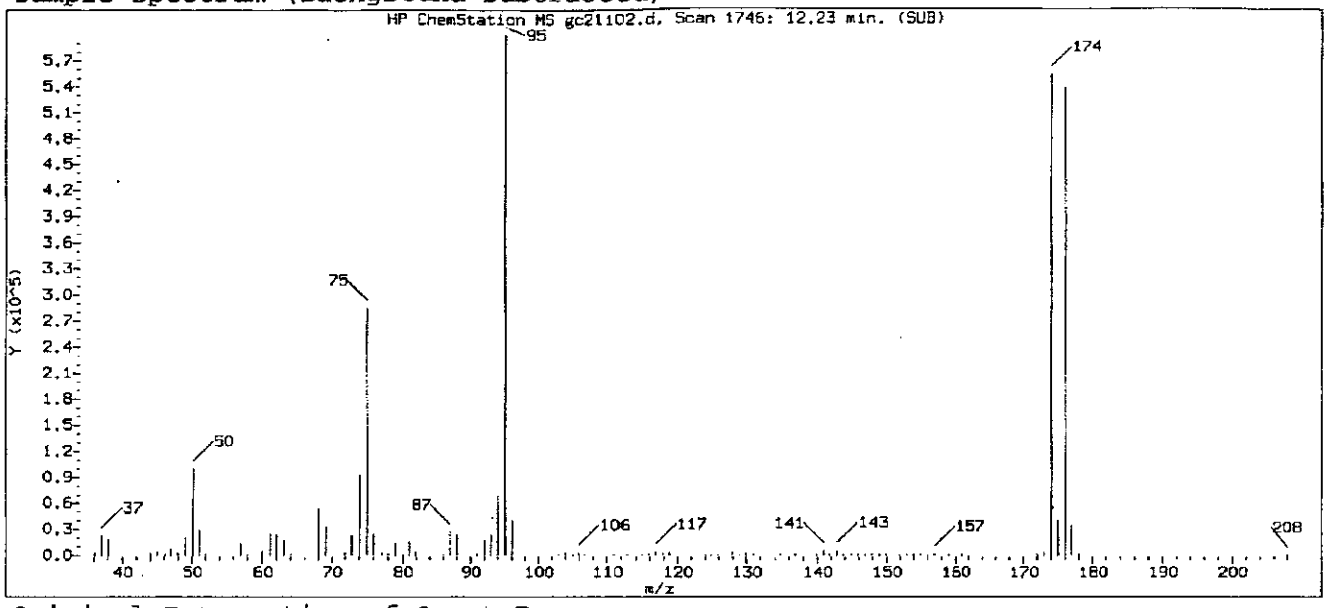
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Sara E. Johnson on 10/21/2010 at 18:56. Target 3.5 esignature user ID: sej02002

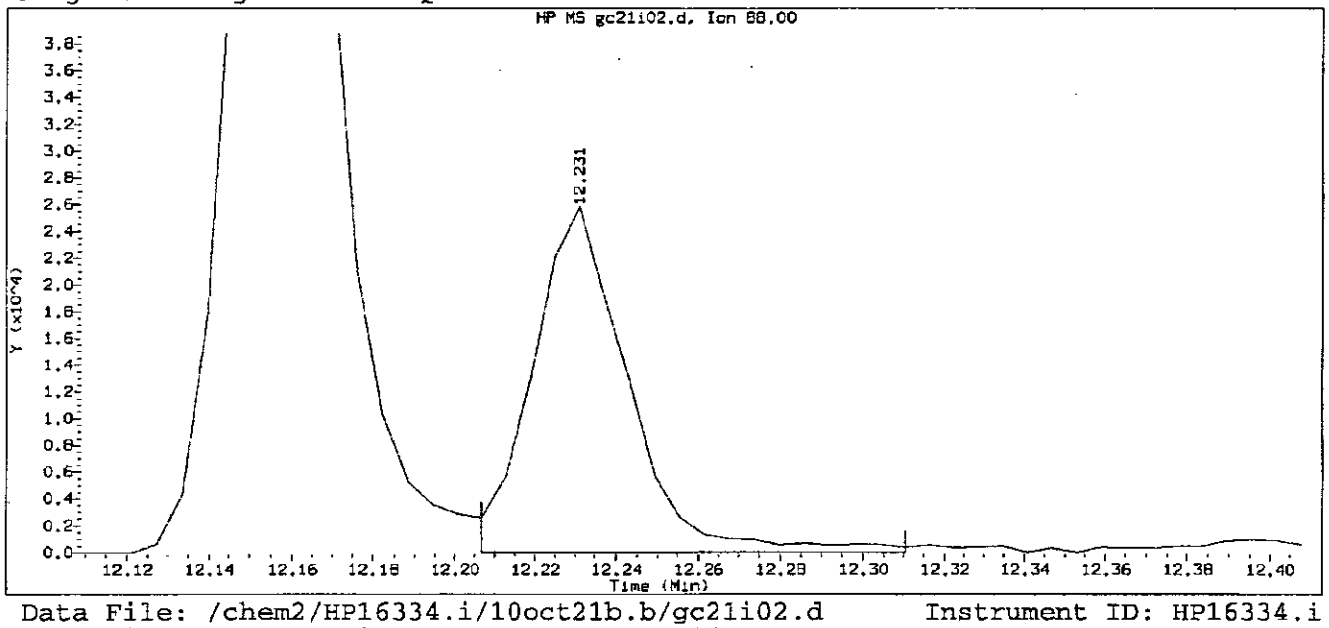
GC/MS audit/management approval: 10/22/10

RAD40 0270

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10oct21b.b/gc21i02.d Instrument ID: HP16334.i
Injection date and time: 21-OCT-2010 15:14 Analyst ID: JML01693

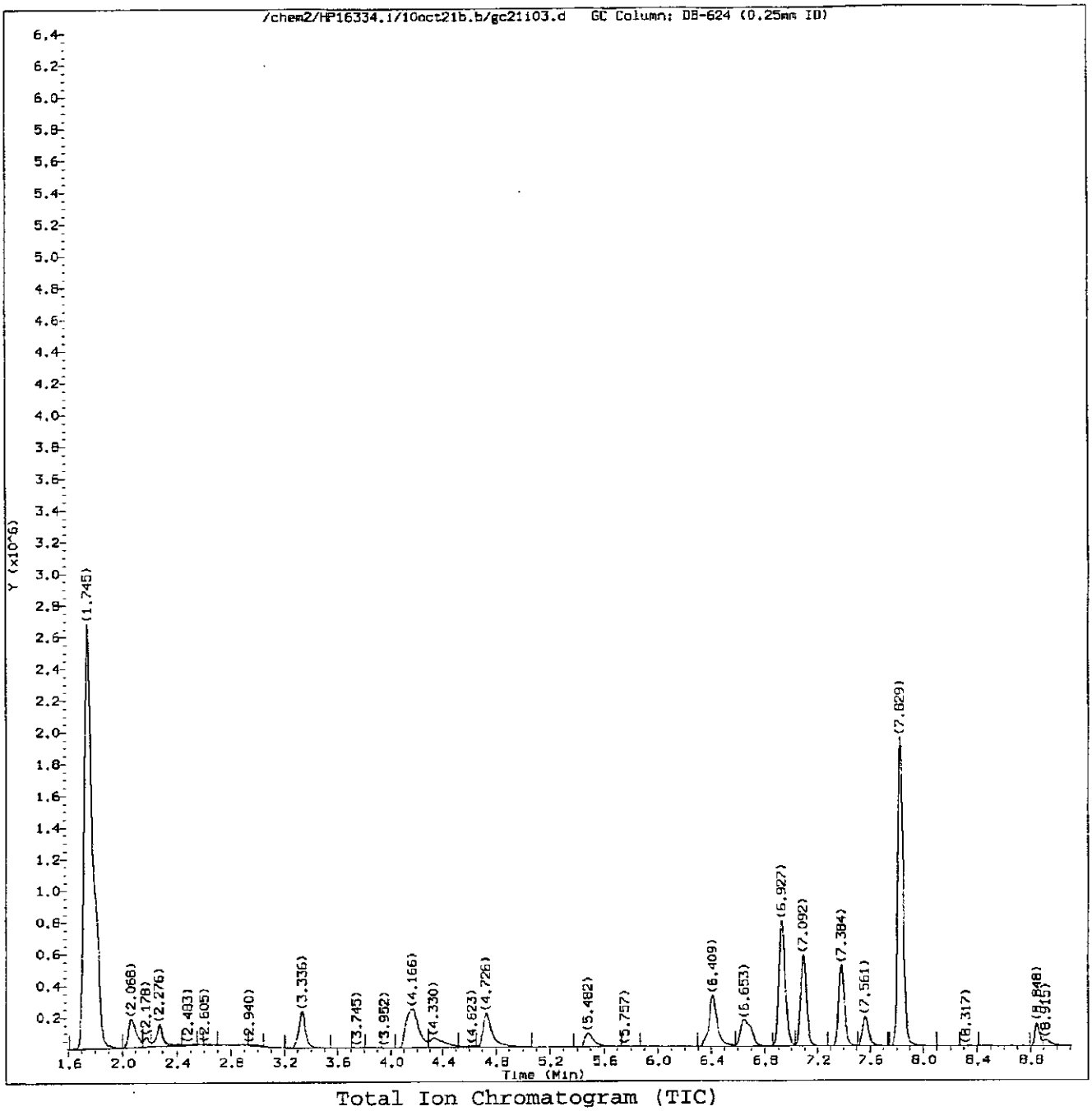
Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: SMONLY
Calibration date and time: 21-OCT-2010 15:32
Date, time and analyst ID of latest file update: 21-Oct-2010 15:32 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number	: 122		
Compound Name	: cis-1,4-Dichloro-2-Butene		
Scan Number	: 1746		
Retention Time (minutes)	: 12.231		
Quant Ion	: 88.00		
Area	: 41875		
On-column Amount (ng)	: 28.1647		
Integration start scan	: 1741	Integration stop scan:	1758
Y at integration start	: 0	Y at integration end:	0

RAD48 8271

Digitally signed by Sara E. Johnson on 10/21/2010 at 18:56.
Target 3.5 esignature user ID: sej02002



Total Ion Chromatogram (TIC)

Target Revision 3.5

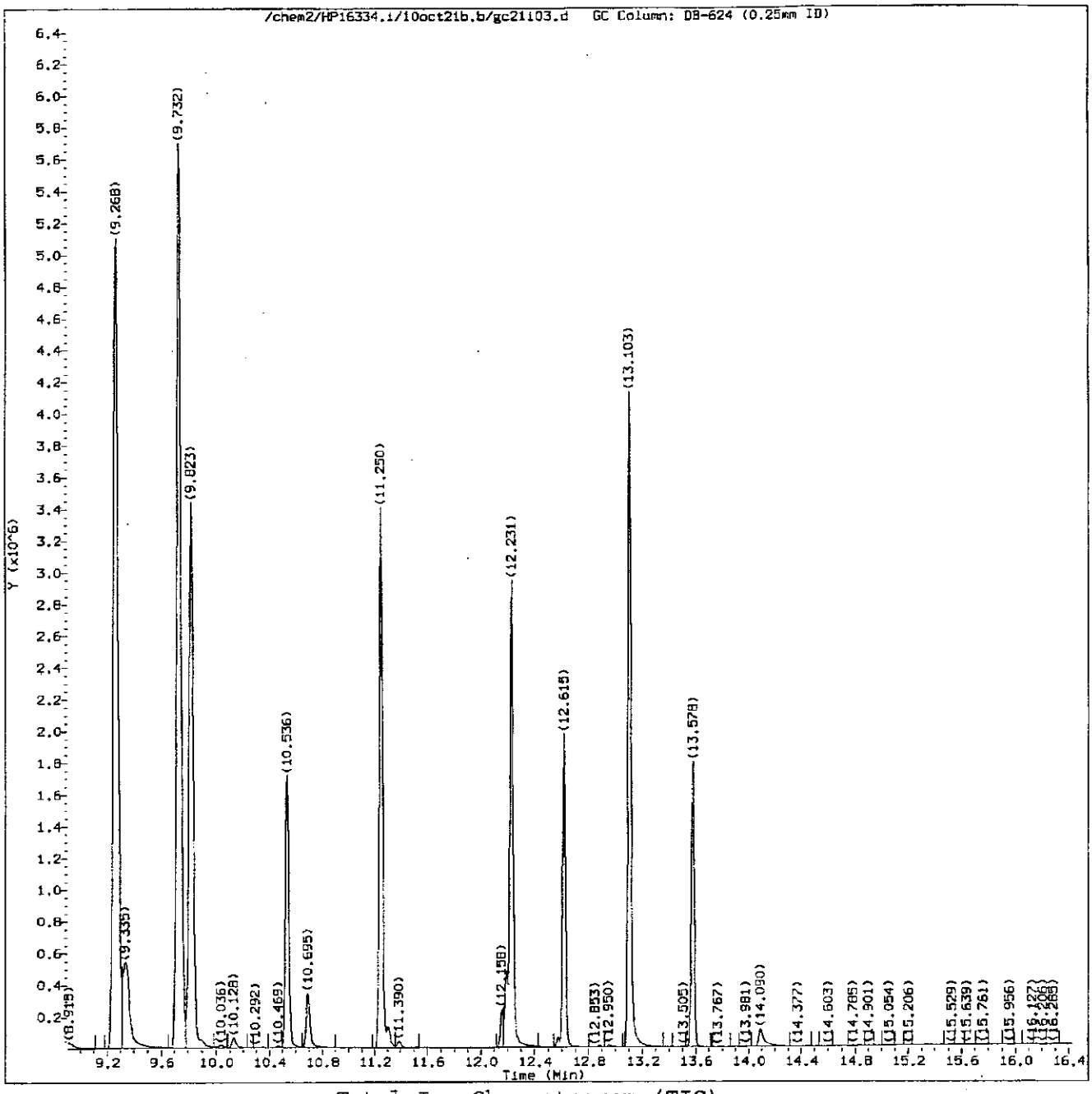
Data File: /chem2/HP16334.i/10oct21b.b/gc21i03.d Instrument ID: HP16334.i
Injection date and time: 21-OCT-2010 15:35 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: SMONLY
Calibration date and time: 21-OCT-2010 18:45
Date, time and analyst ID of latest file update: 21-Oct-2010 18:45 sej02002

Sample Name: VSTD005 Lab Sample ID: VSTD005

RAD48 0272

Digitally signed by Sara E. Johnson
on 10/21/2010 at 18:56.
Target 3.5 esignature user ID: sej02002



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/10oct21b.b/gc21i03.d Instrument ID: HP16334.i
Injection date and time: 21-OCT-2010 15:35 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: SMONLY
Calibration date and time: 21-OCT-2010 18:45
Date, time and analyst ID of latest file update: 21-Oct-2010 18:45 sej02002

Sample Name: VSTD005 Lab Sample ID: VSTD005

RAD48 #273

Digitally signed by Sara E. Johnson
on 10/21/2010 at 18:56.
Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/10oct21b.b/gc21i03.d Instrument ID: HP16334.i
Injection date and time: 21-OCT-2010 15:35 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: SMONLY
Calibration date and time: 21-OCT-2010 18:45
Date, time and analyst ID of latest file update: 21-Oct-2010 18:45 sej02002

Sample Name: VSTD005 Lab Sample ID: VSTD005

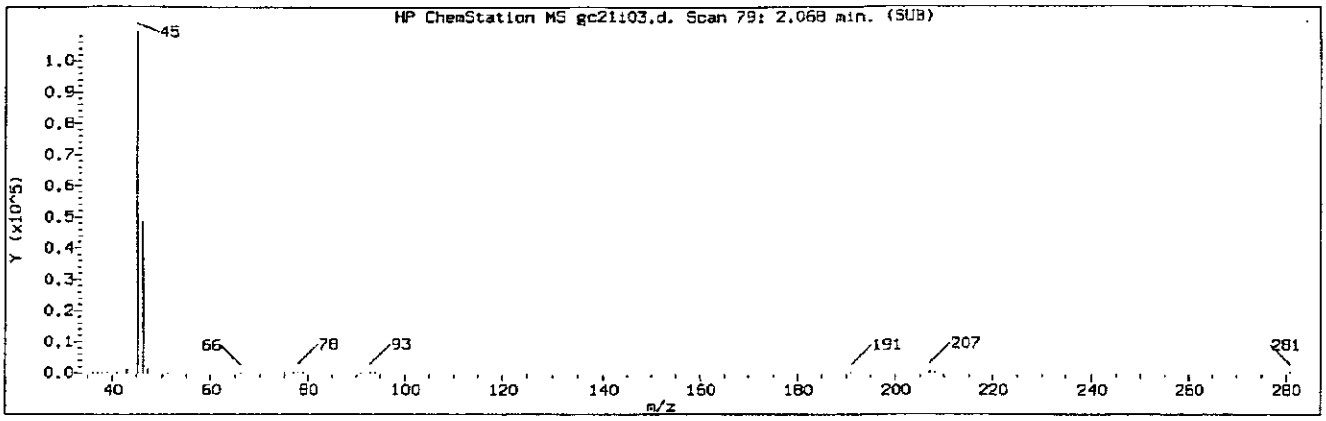
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(1)	2.068	45	447677M	5.016
31) Acetonitrile	(4)	4.129	41	723362	213.060
36)*t-Butyl Alcohol-d10	(4)	4.373	65	115540	50.000
46) Vinyl Acetate	(1)	5.482	43	325182	5.173
77)*Fluorobenzene	(1)	7.829	96	2748610	10.000
93) 2-Chloroethyl Vinyl Ether	(1)	9.354	63	136827	5.282
110)*Chlorobenzene-d5	(2)	11.250	117	2055269	10.000
122) cis-1,4-Dichloro-2-Butene	(4)	12.158	88	58130A	9.593
125) Cyclohexanone	(4)	12.194	55	227453	258.949
143)*1,4-Dichlorobenzene-d4	(3)	13.103	152	1165625	10.000
149) Hexachloroethane	(1)	13.578	117	295474	5.382

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.

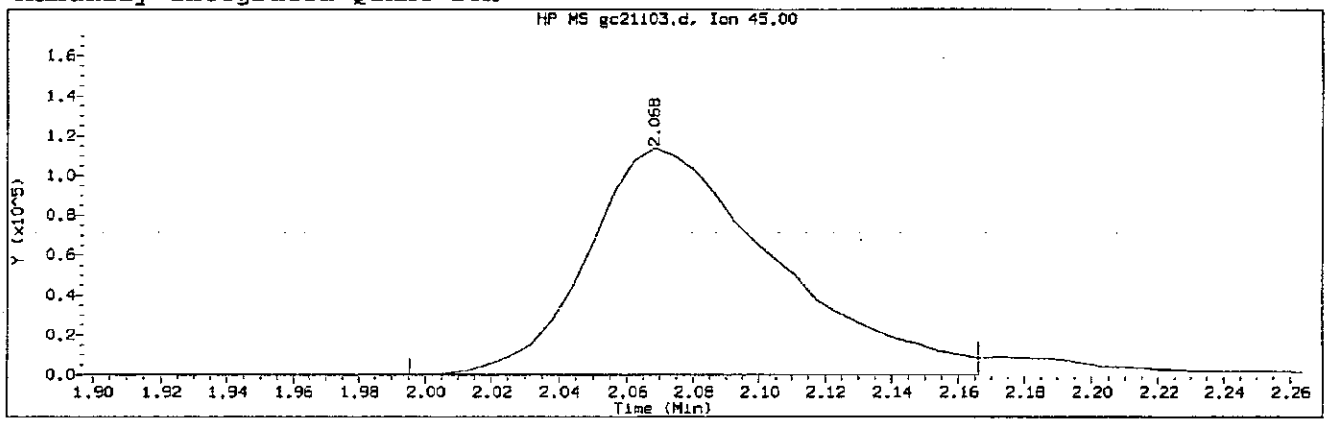
Digitally signed by Sara E. Johnson
on 10/21/2010 at 18:56.
Target 3.5 esignature user ID: sej02002

RAD40 0274

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10oct21b.b/gc21i03.d Instrument ID: HP16334.i
Injection date and time: 21-OCT-2010 15:35 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: SMONLY
Calibration date and time: 21-OCT-2010 18:45
Date, time and analyst ID of latest file update: 21-Oct-2010 18:45 sej02002

Sample Name: VSTD005 Lab Sample ID: VSTD005

Compound Number	: 4		
Compound Name	: Dimethyl ether		
Scan Number	: 79		
Retention Time (minutes)	: 2.068		
Quant Ion	: 45.00		
Area (flag)	: 447677M		
On-Column Amount (ng)	: 5.0156		
Integration start scan	: 66	Integration stop scan:	94
Y at integration start	: 0	Y at integration end:	0

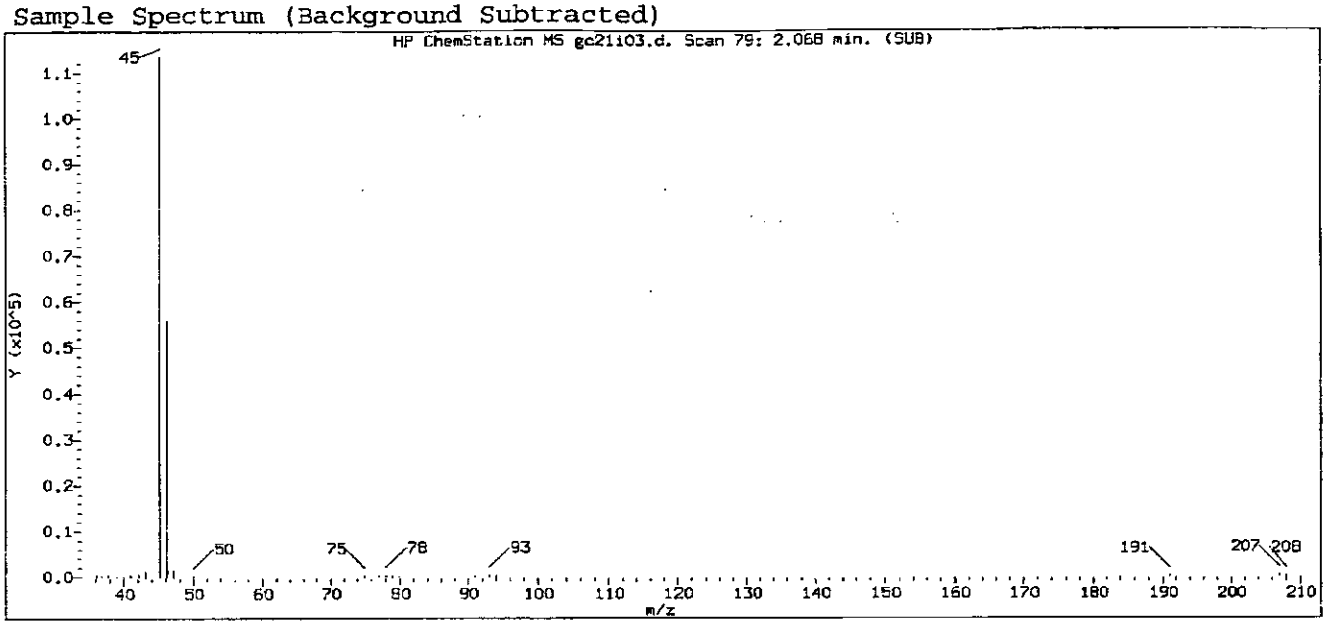
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Sara E. Johnson
on 10/21/2010 at 18:56.
Target 3.5 esignature user ID: sej02002

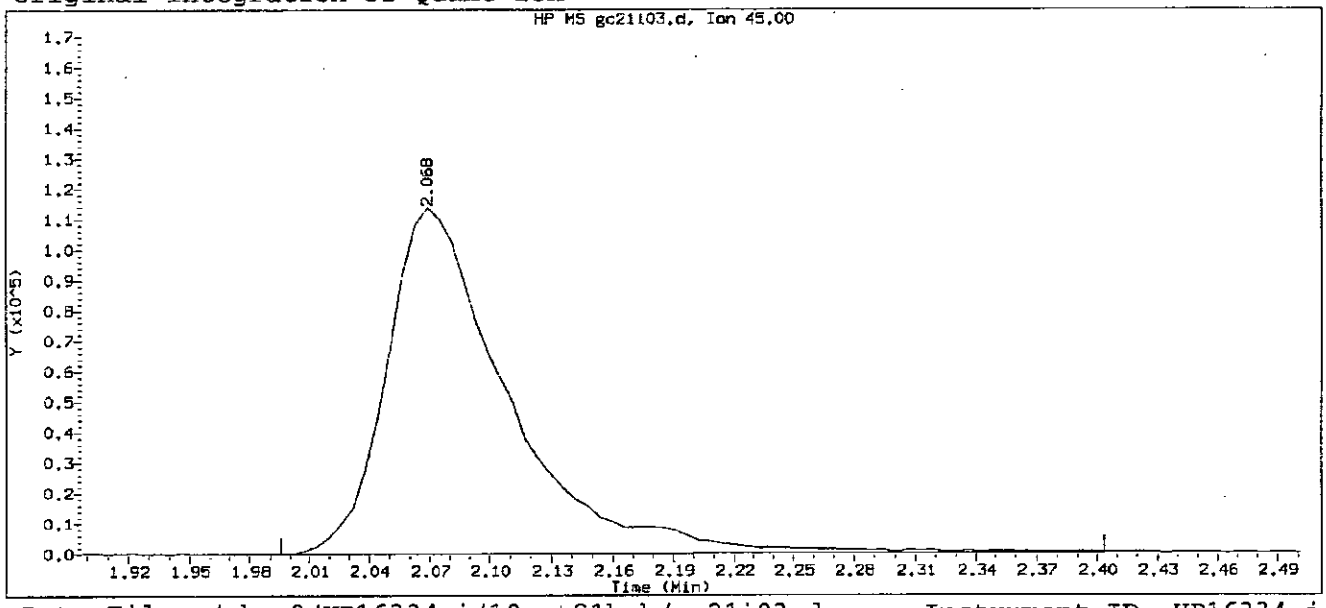
GC/MS audit/management approval: 10/22/10

RAD46 0275

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10oct21b.b/gc21i03.d Instrument ID: HP16334.i
Injection date and time: 21-OCT-2010 15:35 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: SMONLY
Calibration date and time: 21-OCT-2010 15:53
Date, time and analyst ID of latest file update: 21-Oct-2010 15:53 Automation

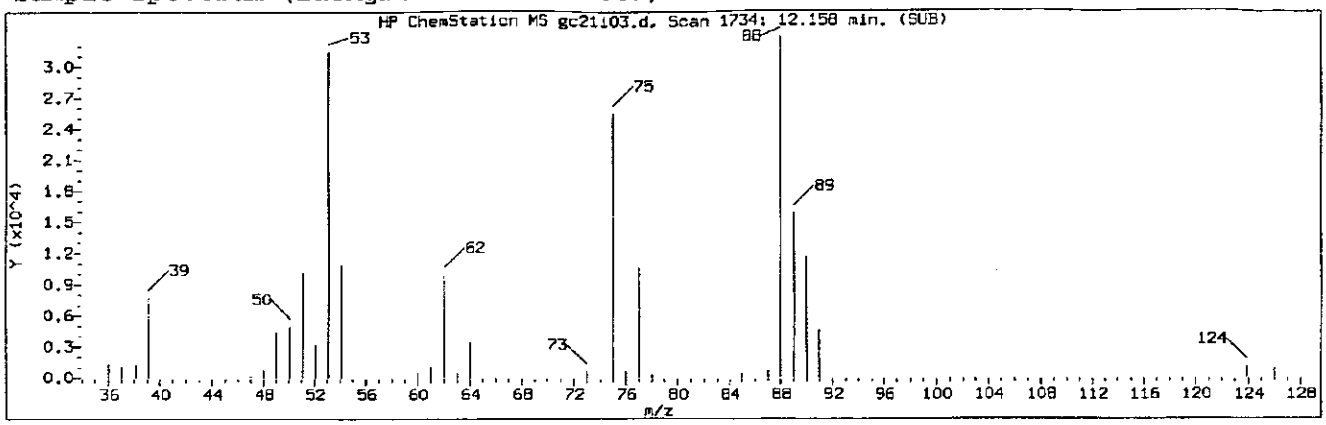
Sample Name: VSTD005 Lab Sample ID: VSTD005

Compound Number	: 4		
Compound Name	: Dimethyl ether		
Scan Number	: 79		
Retention Time (minutes)	: 2.068		
Quant Ion	: 45.00		
Area	: 478656		
On-column Amount (ng)	: 5.1188		
Integration start scan	: 66	Integration stop scan:	133
Y at integration start	: 0	Y at integration end:	158

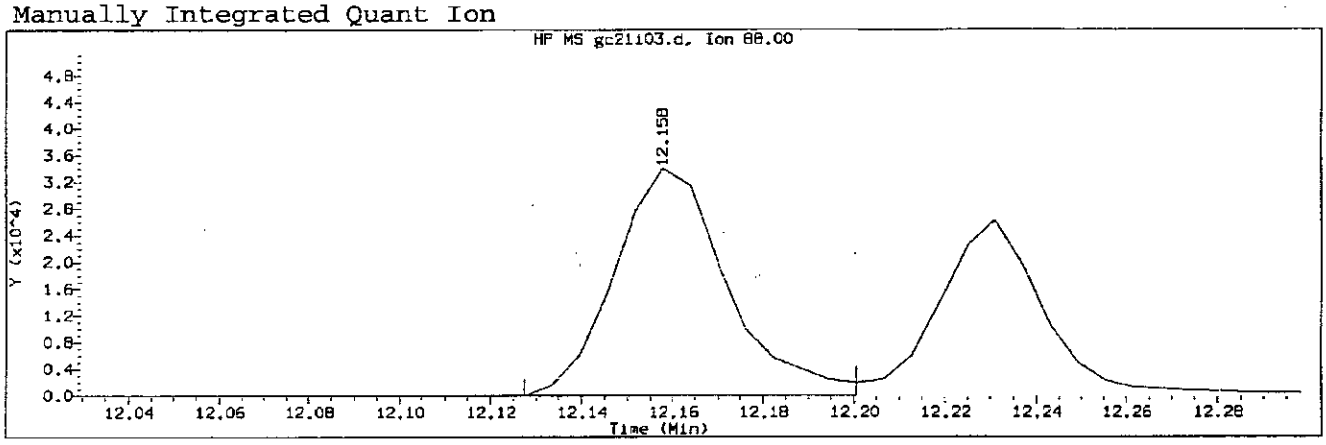
RAD40 0276

Digitally signed by Sara E. Johnson on 10/21/2010 at 18:56.
Target 3.5 esignature user ID: sej02002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10oct21b.b/gc21i03.d Instrument ID: HP16334.i
Injection date and time: 21-OCT-2010 15:35 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: SMONLY
Calibration date and time: 21-OCT-2010 18:45
Date, time and analyst ID of latest file update: 21-Oct-2010 18:45 sej02002

Sample Name: VSTD005 Lab Sample ID: VSTD005

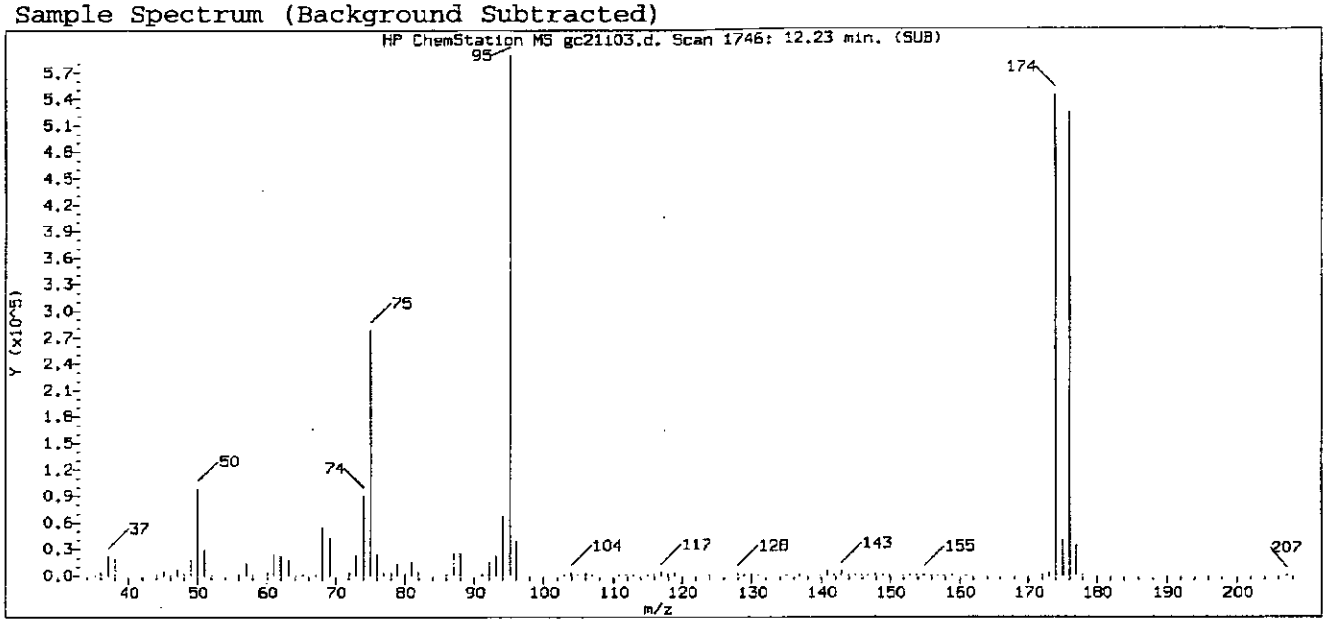
Compound Number	: 122		
Compound Name	: cis-1,4-Dichloro-2-Butene		
Scan Number	: 1734		
Retention Time (minutes)	: 12.158		
Quant Ion	: 88.00		
Area (flag)	: 58130A		
On-Column Amount (ng)	: 9.5931		
Integration start scan	: 1728	Integration stop scan:	1740
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

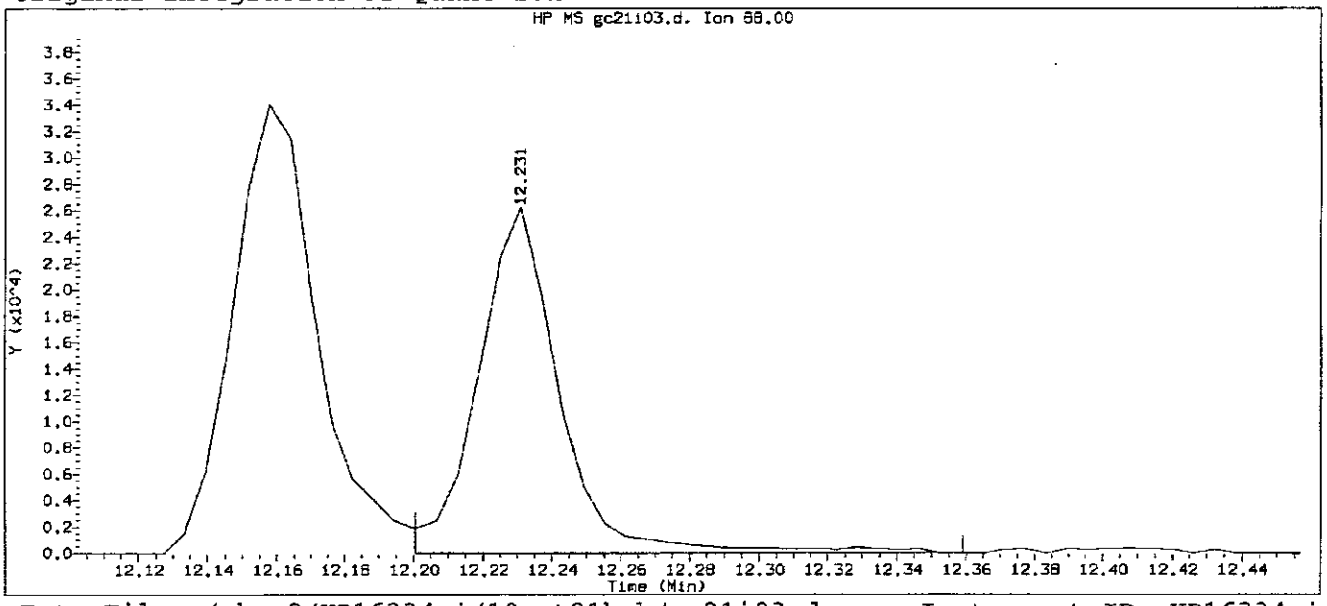
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 10/21/2010 at 18:56.
Target 3.5 esignature user ID: sej02002

GC/MS audit/management approval: 10/22/10 RAD48 0277

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10oct21b.b/gc21i03.d Instrument ID: HP16334.i
Injection date and time: 21-OCT-2010 15:35 Analyst ID: JML01693

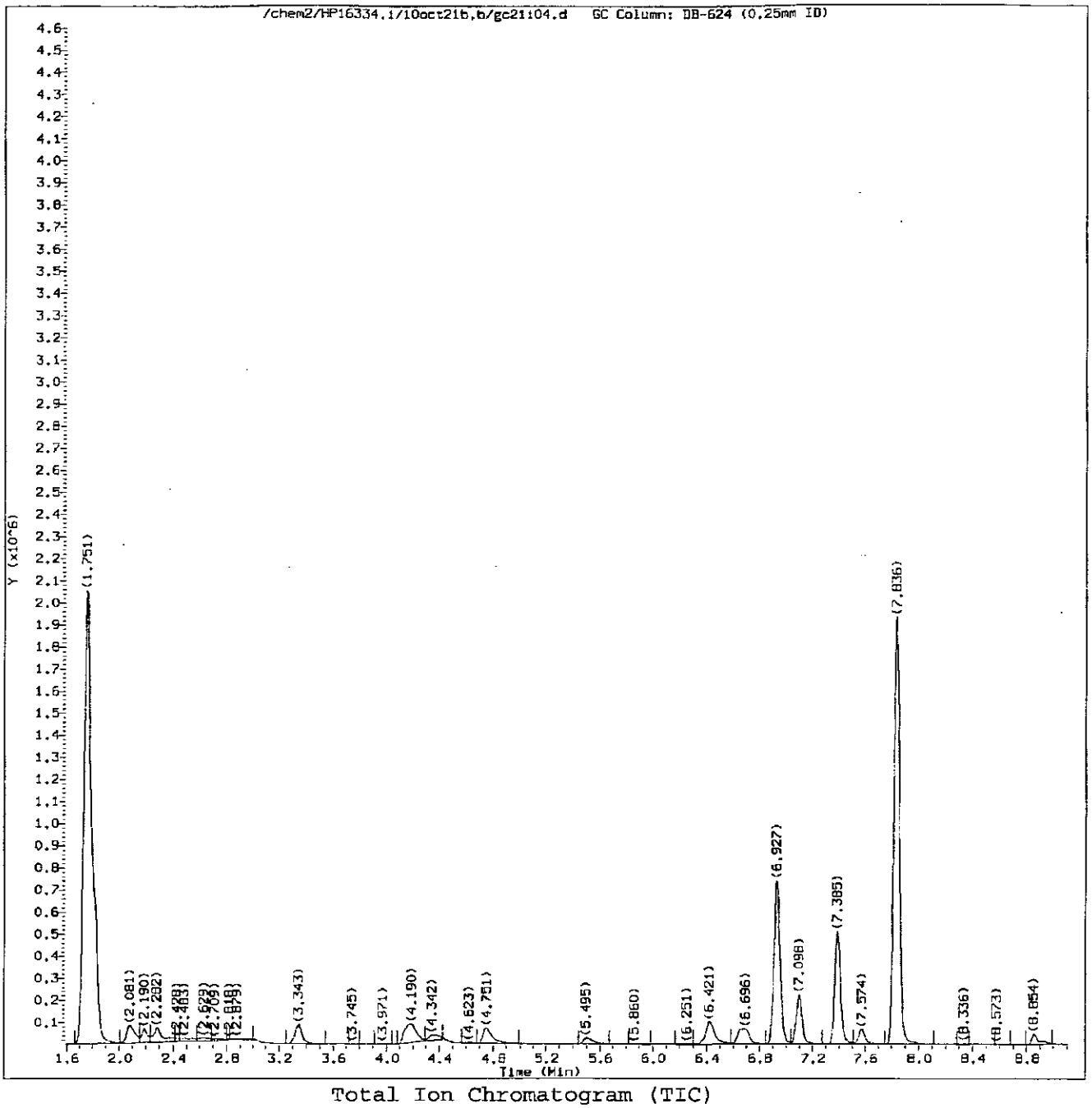
Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: SMONLY
Calibration date and time: 21-OCT-2010 15:53
Date, time and analyst ID of latest file update: 21-Oct-2010 15:53 Automation

Sample Name: VSTD005 Lab Sample ID: VSTD005

Compound Number	: 122		
Compound Name	: cis-1,4-Dichloro-2-Butene		
Scan Number	: 1746		
Retention Time (minutes)	: 12.231		
Quant Ion	: 88.00		
Area	: 42766		
On-column Amount (ng)	: 17.8933		
Integration start scan	: 1740	Integration stop scan:	1766
Y at integration start	: 0	Y at integration end:	0

RAD40 6278

Digitally signed by Sara E. Johnson on 10/21/2010 at 18:56.
Target 3.5 esignature user ID: sej02002



Total Ion Chromatogram (TIC)

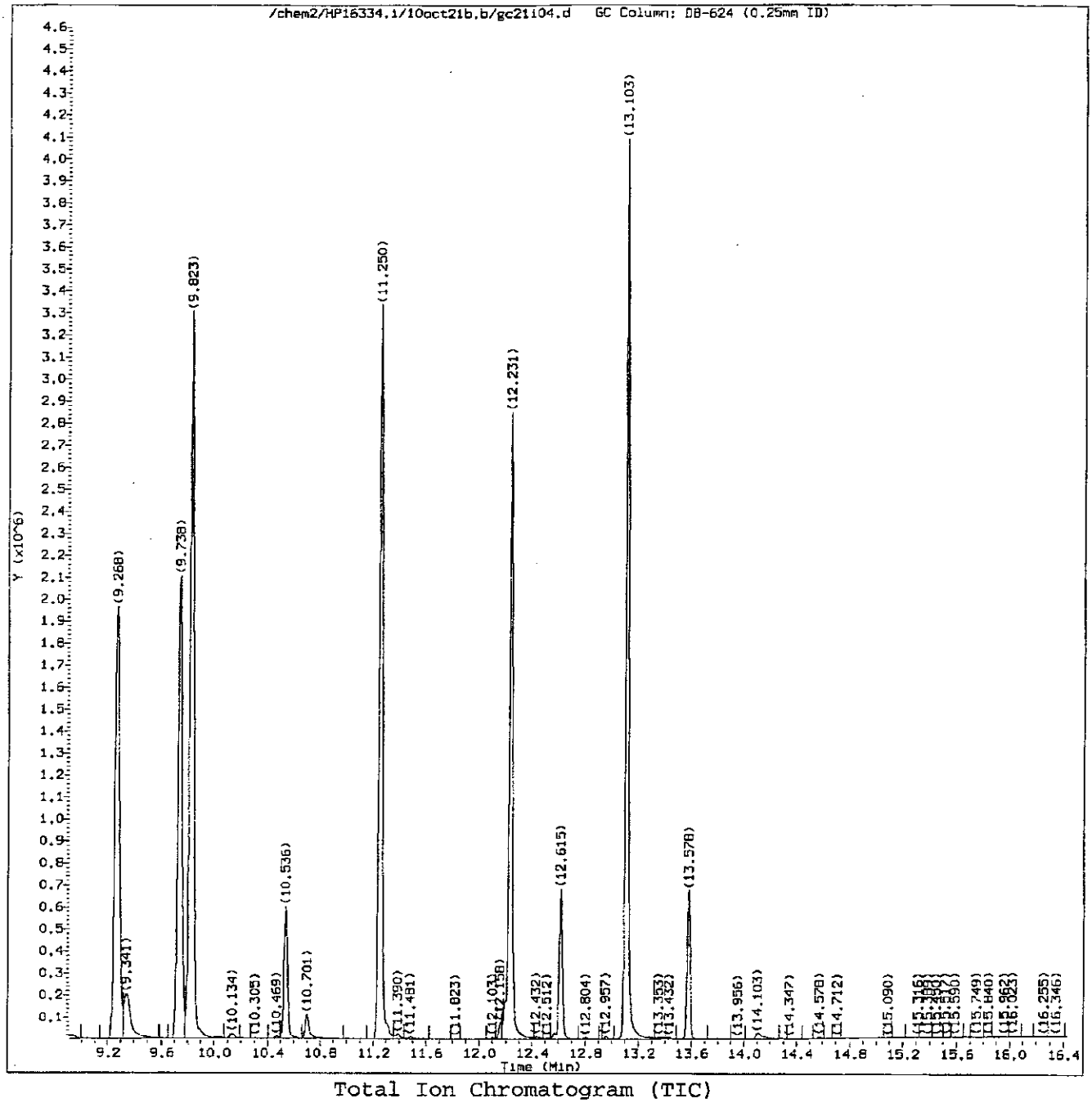
Target Revision 3.5

Data File: /chem2/HP16334.i/10oct21b.b/gc21i04.d Instrument ID: HP16334.i
Injection date and time: 21-OCT-2010 15:56 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: SMONLY
Calibration date and time: 21-OCT-2010 18:45
Date, time and analyst ID of latest file update: 21-Oct-2010 18:45 sej02002

Sample Name: VSTD002 Lab Sample ID: VSTD002

Digitally signed by Sara E. Johnson
on 10/21/2010 at 18:56.
Target 3.5 esignature user ID: sej02002



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/10oct21b.b/gc21i04.d Instrument ID: HP16334.i
Injection date and time: 21-OCT-2010 15:56 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: SMONLY
Calibration date and time: 21-OCT-2010 18:45
Date, time and analyst ID of latest file update: 21-Oct-2010 18:45 sej02002

Sample Name: VSTD002 Lab Sample ID: VSTD002

RAD40 0288

Digitally signed by Sara E. Johnson
on 10/21/2010 at 18:56.
Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/10oct21b.b/gc21i04.d Instrument ID: HP16334.i
Injection date and time: 21-OCT-2010 15:56 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: SMONLY
Calibration date and time: 21-OCT-2010 18:45
Date, time and analyst ID of latest file update: 21-Oct-2010 18:45 sej02002

Sample Name: VSTD002 Lab Sample ID: VSTD002

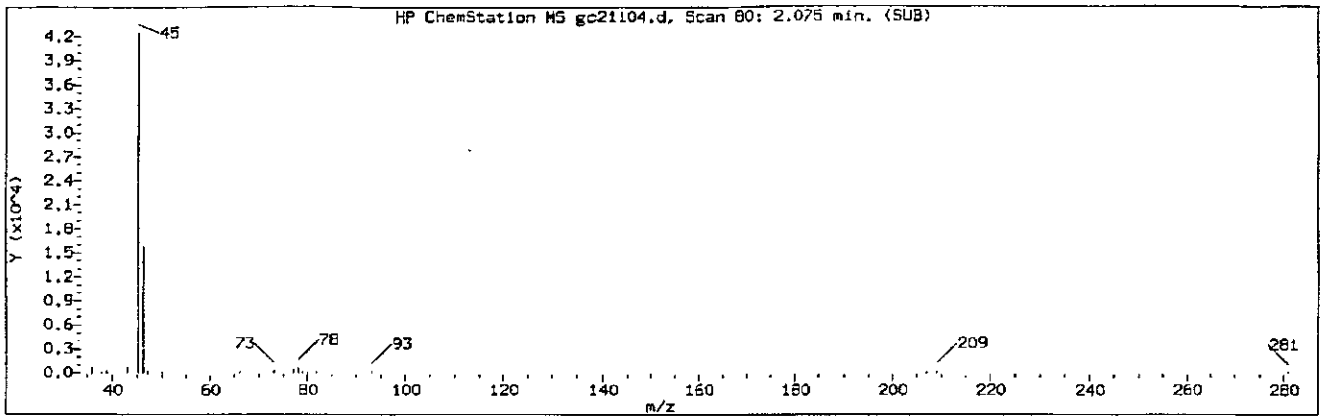
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(1)	2.075	45	185015M	2.079
31) Acetonitrile	(4)	4.153	41	276530	79.244
36)*t-Butyl Alcohol-d10	(4)	4.379	65	118755	50.000
46) Vinyl Acetate	(1)	5.495	43	114419	1.826
77)*Fluorobenzene	(1)	7.836	96	2740187	10.000
93) 2-Chloroethyl Vinyl Ether	(1)	9.354	63	49572	1.920
110)*Chlorobenzene-d5	(2)	11.250	117	2027648	10.000
122) cis-1,4-Dichloro-2-Butene	(4)	12.164	88	19573A	3.143
125) Cyclohexanone	(4)	12.195	55	85441	94.639
143)*1,4-Dichlorobenzene-d4	(3)	13.103	152	1159760	10.000
149) Hexachloroethane	(1)	13.578	117	104495	1.909

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.

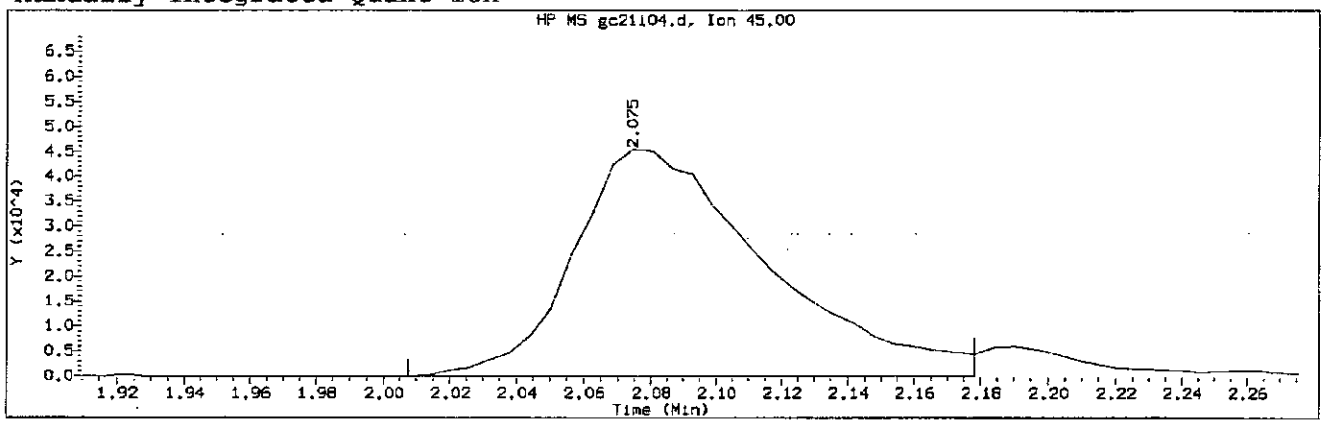
Digitally signed by Sara E. Johnson
on 10/21/2010 at 18:56.
Target 3.5 esignature user ID: sej02002

RAD40 0281

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10oct21b.b/gc21i04.d Instrument ID: HP16334.i
Injection date and time: 21-OCT-2010 15:56 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: SMONLY
Calibration date and time: 21-OCT-2010 18:45
Date, time and analyst ID of latest file update: 21-Oct-2010 18:45 sej02002

Sample Name: VSTD002 Lab Sample ID: VSTD002

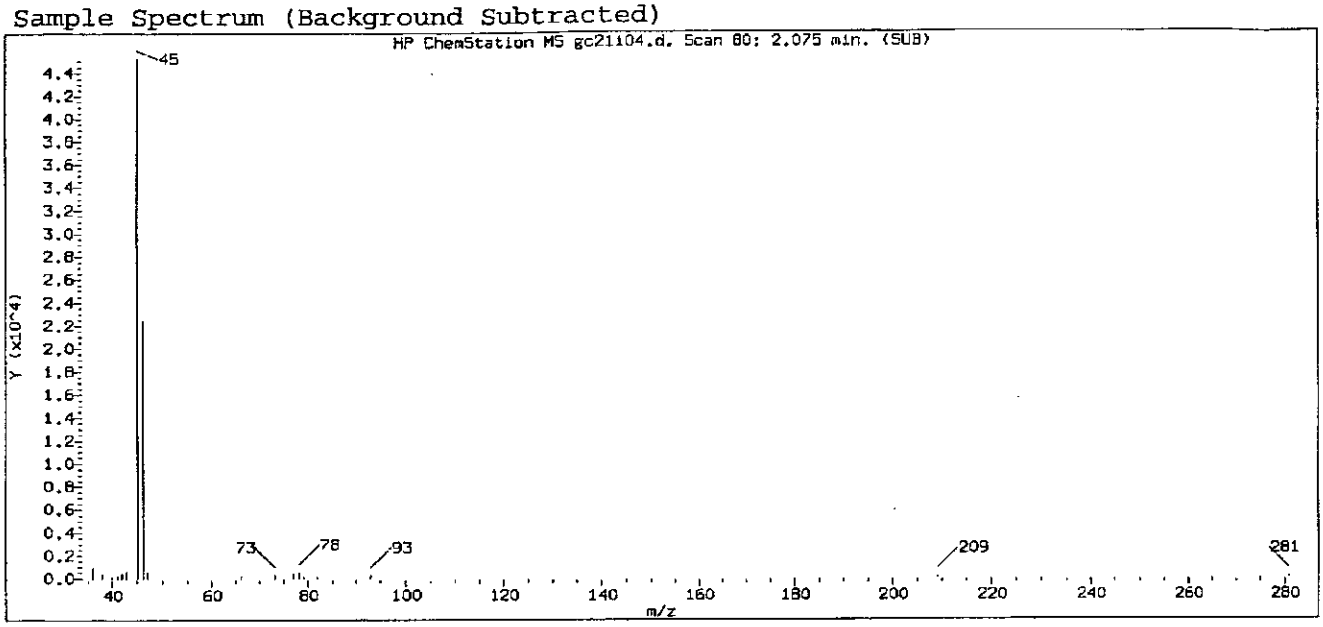
Compound Number	: 4		
Compound Name	: Dimethyl ether		
Scan Number	: 80		
Retention Time (minutes)	: 2.075		
Quant Ion	: 45.00		
Area (flag)	: 185015M		
On-Column Amount (ng)	: 2.0792		
Integration start scan	: 68	Integration stop scan:	96
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

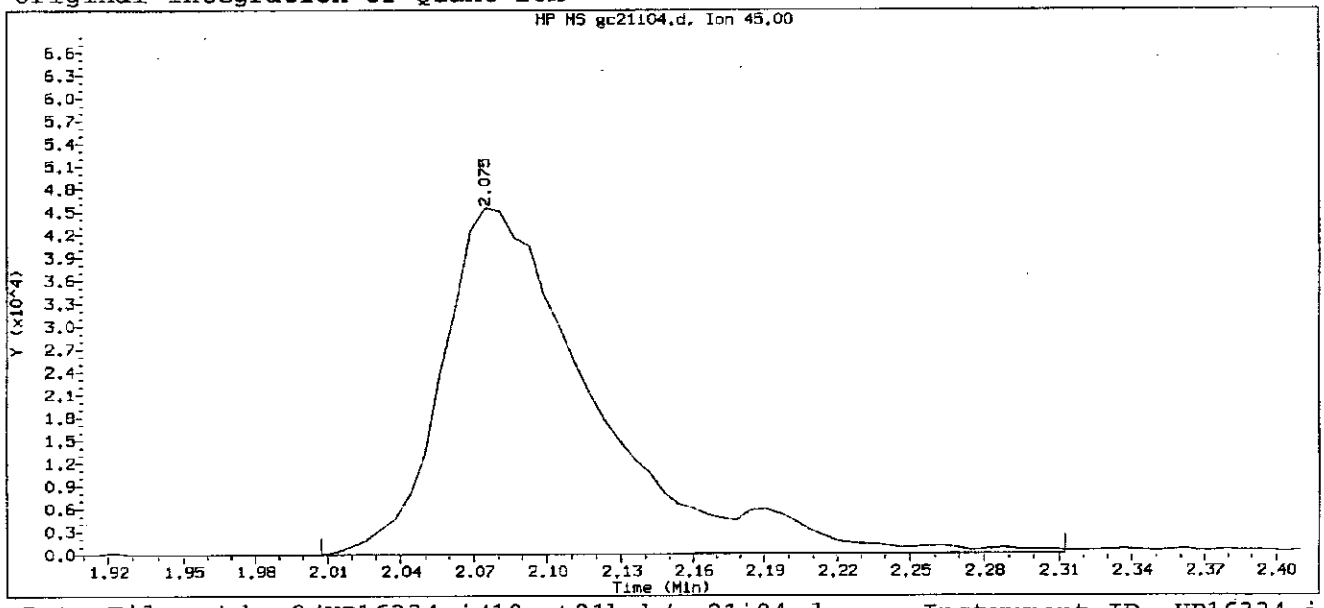
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 10/21/2010 at 18:56.
Target 3.5 esignature user ID: sej02002

GC/MS audit/management approval: 10/22/10 RAD40 0282

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10oct21b.b/gc21i04.d Instrument ID: HP16334.i
Injection date and time: 21-OCT-2010 15:56 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: SMONLY
Calibration date and time: 21-OCT-2010 16:14
Date, time and analyst ID of latest file update: 21-Oct-2010 16:14 Automation

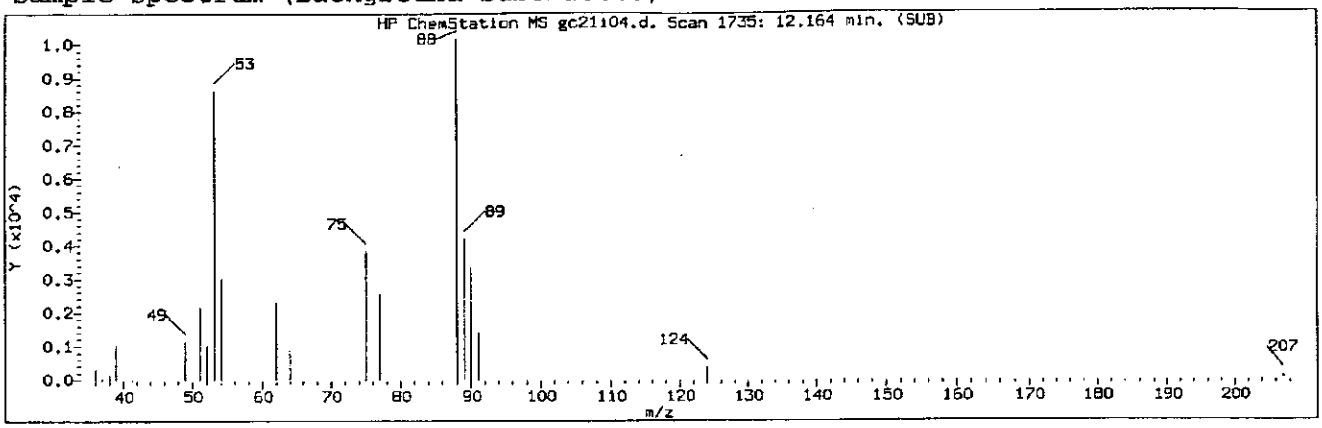
Sample Name: VSTD002 Lab Sample ID: VSTD002

Compound Number	: 4		
Compound Name	: Dimethyl ether		
Scan Number	: 80		
Retention Time (minutes)	: 2.075		
Quant Ion	: 45.00		
Area	: 199484		
On-column Amount (ng)	: 2.1031		
Integration start scan	: 68	Integration stop scan:	118
Y at integration start	: 0	Y at integration end:	95

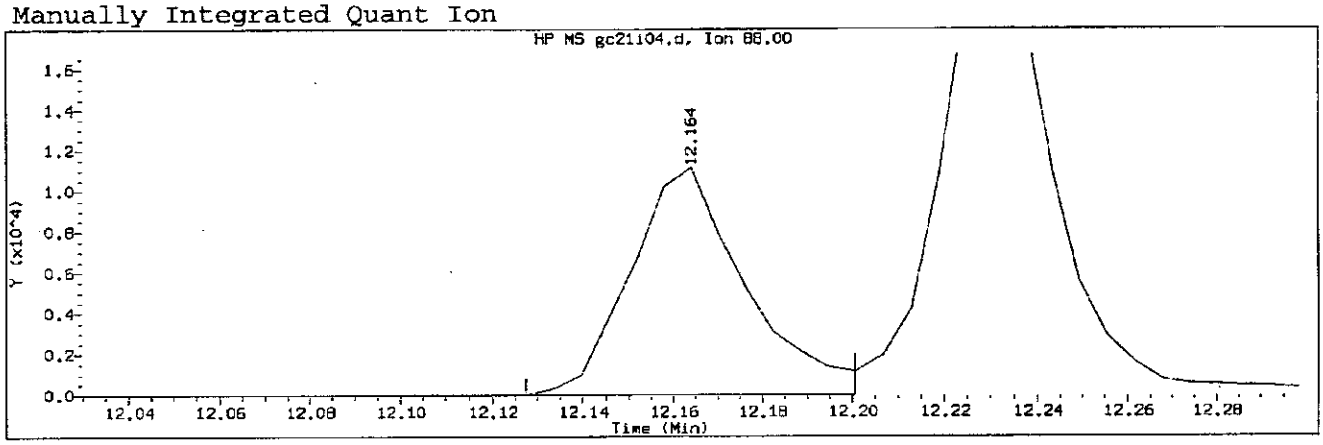
RAD40 0283

Digitally signed by Sara E. Johnson on 10/21/2010 at 18:56.
Target 3.5 esignature user ID: sej02002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10oct21b.b/gc21i04.d Instrument ID: HP16334.i
Injection date and time: 21-OCT-2010 15:56 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: SMONLY
Calibration date and time: 21-OCT-2010 18:45
Date, time and analyst ID of latest file update: 21-Oct-2010 18:45 sej02002

Sample Name: VSTD002 Lab Sample ID: VSTD002

Compound Number	: 122		
Compound Name	: cis-1,4-Dichloro-2-Butene		
Scan Number	: 1735		
Retention Time (minutes)	: 12.164		
Quant Ion	: 88.00		
Area (flag)	: 19573A		
On-Column Amount (ng)	: 3.1426		
Integration start scan	: 1728	Integration stop scan:	1740
Y at integration start	: 0	Y at integration end:	0

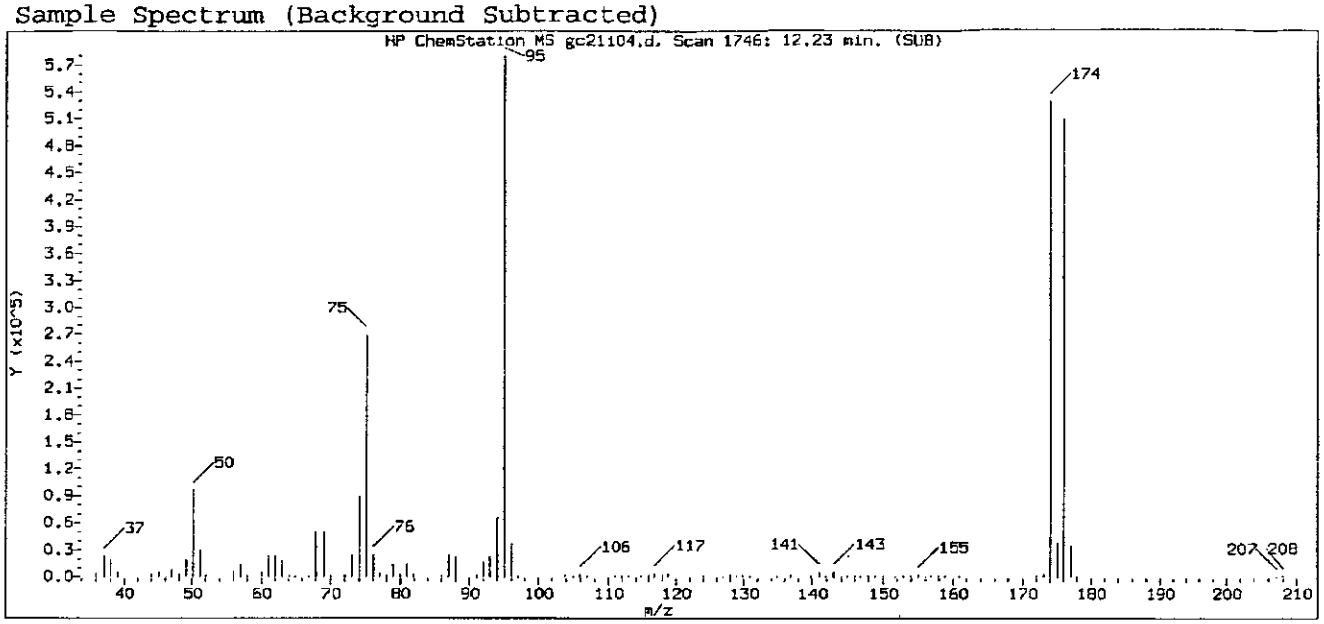
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Sara E. Johnson on 10/21/2010 at 18:56. Target 3.5 esignature user ID: sej02002

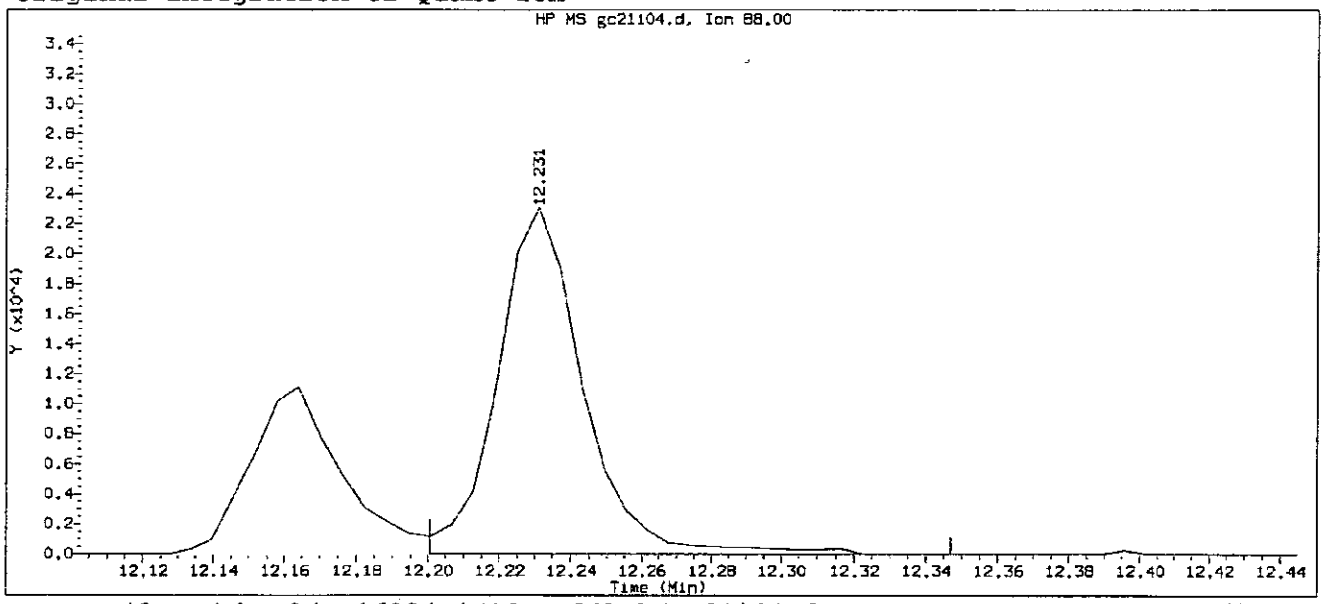
GC/MS audit/management approval: 10/22/10

RAD40 8284

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10oct21b.b/gc21i04.d Instrument ID: HP16334.i
Injection date and time: 21-OCT-2010 15:56 Analyst ID: JML01693

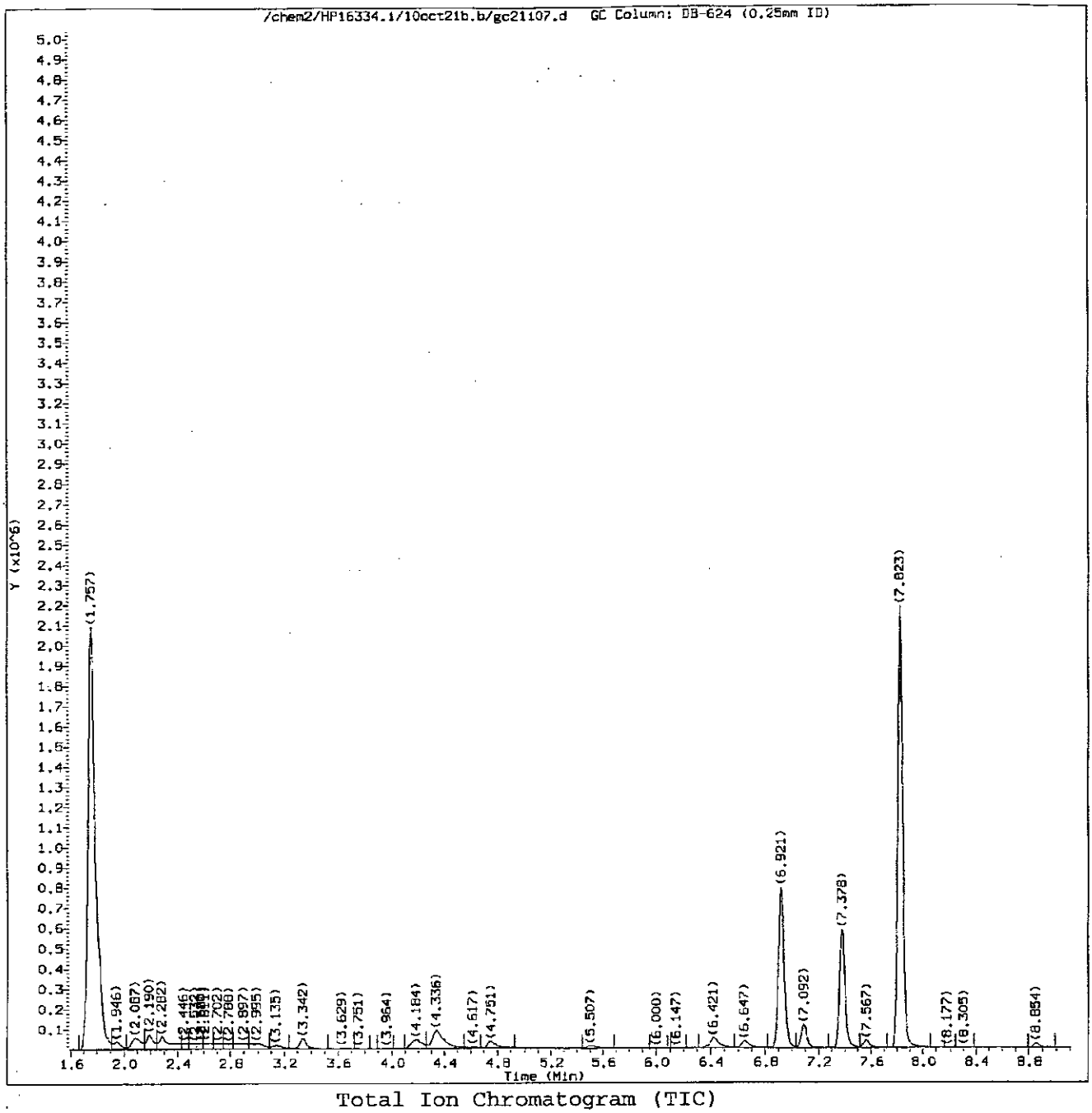
Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: SMONLY
Calibration date and time: 21-OCT-2010 16:14
Date, time and analyst ID of latest file update: 21-Oct-2010 16:14 Automation

Sample Name: VSTD002 Lab Sample ID: VSTD002

Compound Number	: 122		
Compound Name	: cis-1,4-Dichloro-2-Butene		
Scan Number	: 1746		
Retention Time (minutes)	: 12.231		
Quant Ion	: 88.00		
Area	: 38403		
On-column Amount (ng)	: 9.0518		
Integration start scan	: 1740	Integration stop scan:	1764
Y at integration start	: 0	Y at integration end:	0

RAD40 0285

Digitally signed by Sara E. Johnson on 10/21/2010 at 18:56.
Target 3.5 esignature user ID: sej02002



Total Ion Chromatogram (TIC)

Target Revision 3.5

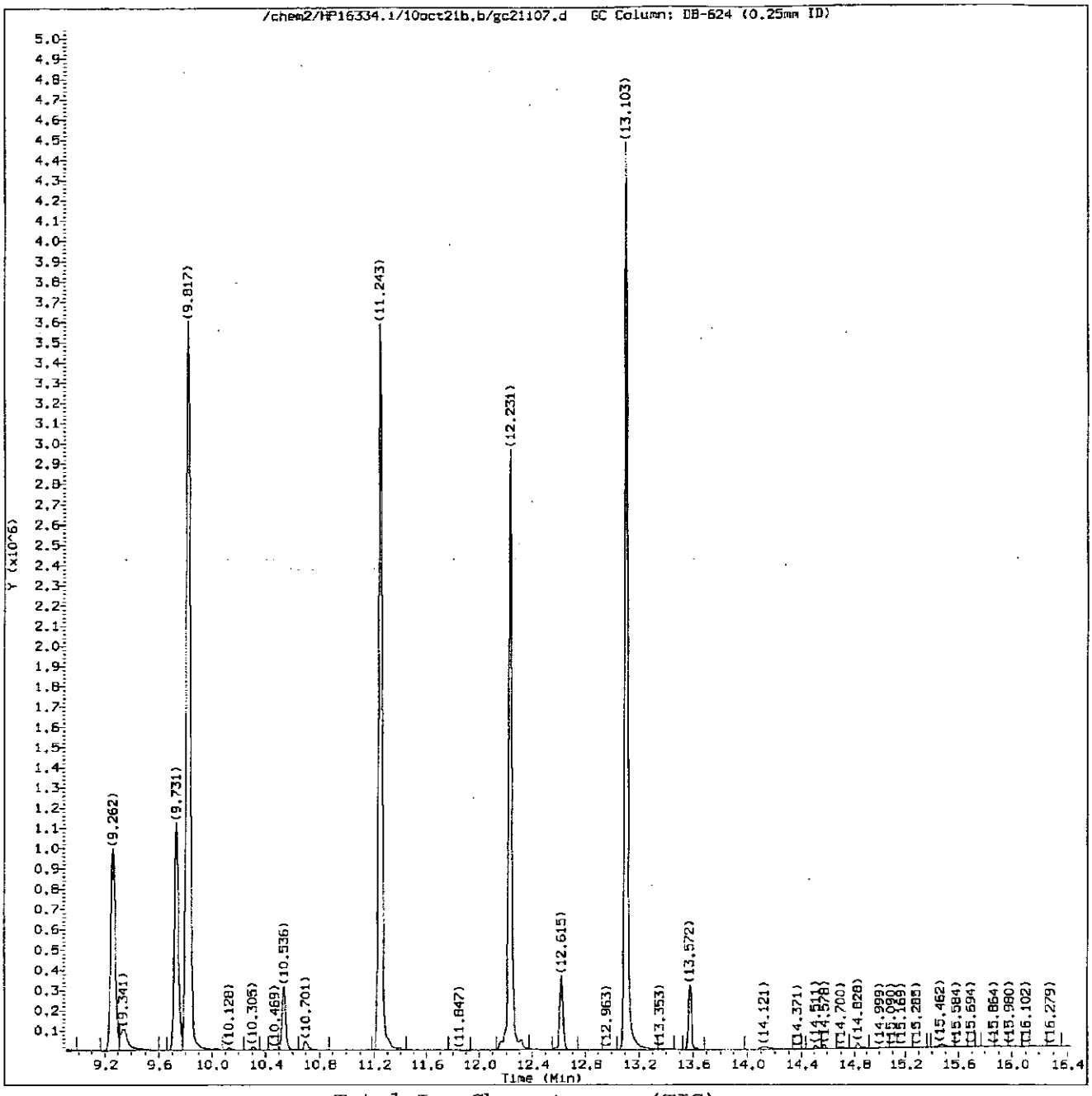
Data File: /chem2/HP16334.i/10oct21b.b/gc21i07.d Instrument ID: HP16334.i
Injection date and time: 21-OCT-2010 17:56 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: SMONLY
Calibration date and time: 21-OCT-2010 18:45
Date, time and analyst ID of latest file update: 21-Oct-2010 18:45 sej02002

Sample Name: VSTD001 Lab Sample ID: VSTD001

RAD40 8286

Digitally signed by Sara E. Johnson
on 10/21/2010 at 18:56.
Target 3.5 esignature user ID: sej02002



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/10oct21b.b/gc21i07.d Instrument ID: HP16334.i
Injection date and time: 21-OCT-2010 17:56 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: SMONLY
Calibration date and time: 21-OCT-2010 18:45
Date, time and analyst ID of latest file update: 21-Oct-2010 18:45 sej02002

Sample Name: VSTD001 Lab Sample ID: VSTD001

RAD48 8287

Digitally signed by Sara E. Johnson
on 10/21/2010 at 18:56.
Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/10oct21b.b/gc21i07.d Instrument ID: HP16334.i
Injection date and time: 21-OCT-2010 17:56 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: SMONLY
Calibration date and time: 21-OCT-2010 18:45
Date, time and analyst ID of latest file update: 21-Oct-2010 18:45 sej02002

Sample Name: VSTD001 Lab Sample ID: VSTD001

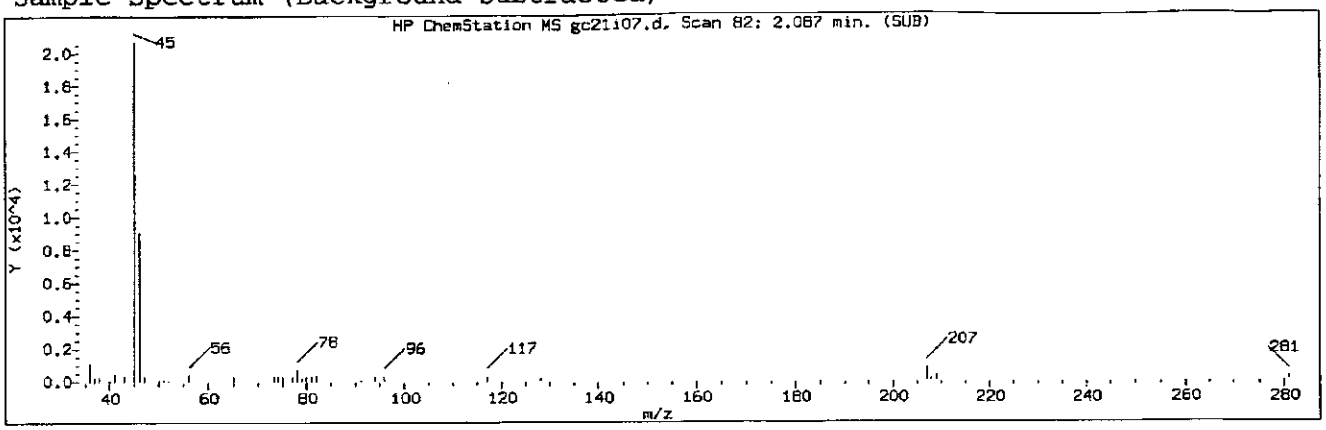
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(1)	2.087	45	88449M	0.914
31) Acetonitrile	(4)	4.147	41	143096M	34.002
36)*t-Butyl Alcohol-d10	(4)	4.373	65	143219	50.000
46) Vinyl Acetate	(1)	5.501	43	58800	0.863
77)*Fluorobenzene	(1)	7.823	96	2980019	10.000
93) 2-Chloroethyl Vinyl Ether	(1)	9.353	63	26054	0.928
110)*Chlorobenzene-d5	(2)	11.243	117	2197923	10.000
122) cis-1,4-Dichloro-2-Butene	(4)	12.158	88	13008	1.732
125) Cyclohexanone	(4)	12.194	55	48142	44.216
143)*1,4-Dichlorobenzene-d4	(3)	13.103	152	1246320	10.000
149) Hexachloroethane	(1)	13.572	117	48840	0.820

M = Compound was manually integrated.
* = Compound is an internal standard.

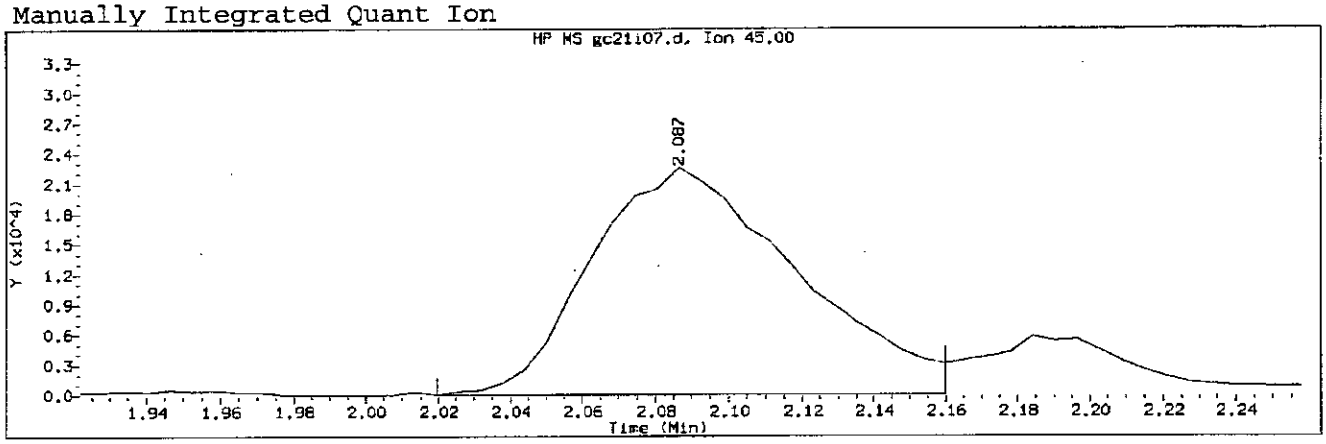
Digitally signed by Sara E. Johnson
on 10/21/2010 at 18:56.
Target 3.5 esignature user ID: sej02002

RAD40 0288

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10oct21b.b/gc21i07.d Instrument ID: HP16334.i
Injection date and time: 21-OCT-2010 17:56 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: SMONLY
Calibration date and time: 21-OCT-2010 18:45
Date, time and analyst ID of latest file update: 21-Oct-2010 18:45 sej02002

Sample Name: VSTD001 Lab Sample ID: VSTD001

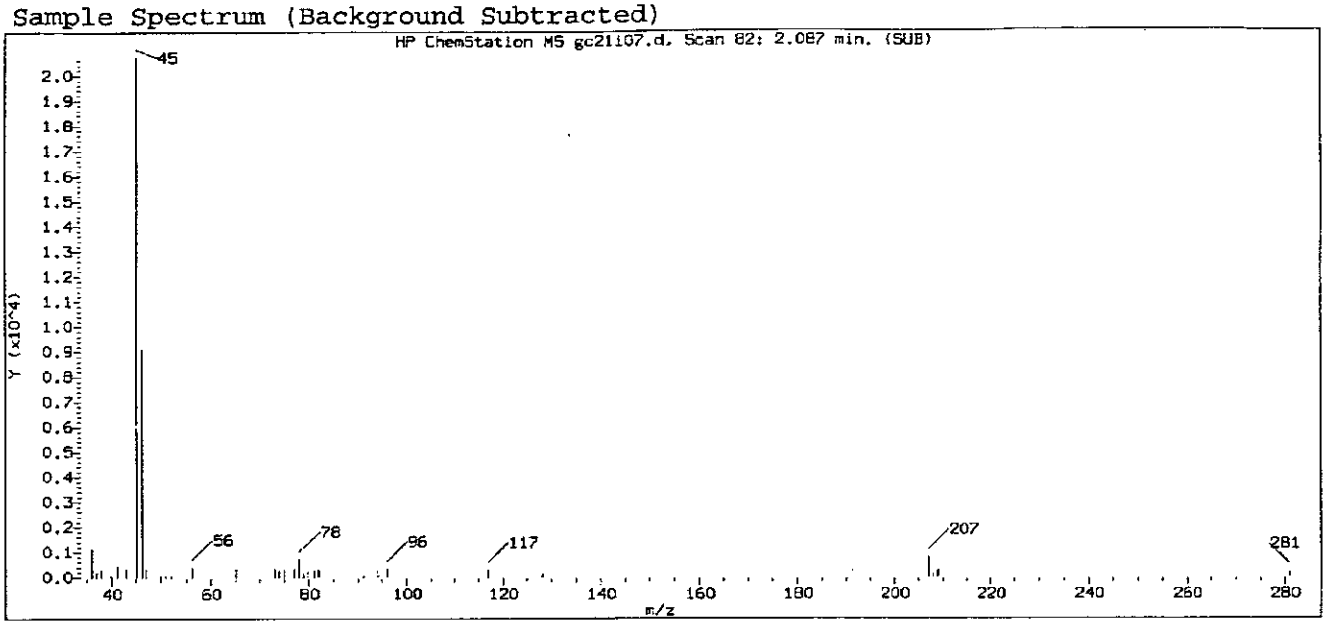
Compound Number	: 4		
Compound Name	: Dimethyl ether		
Scan Number	: 82		
Retention Time (minutes)	: 2.087		
Quant Ion	: 45.00		
Area (flag)	: 88449M		
On-Column Amount (ng)	: 0.9140		
Integration start scan	: 70	Integration stop scan:	93
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

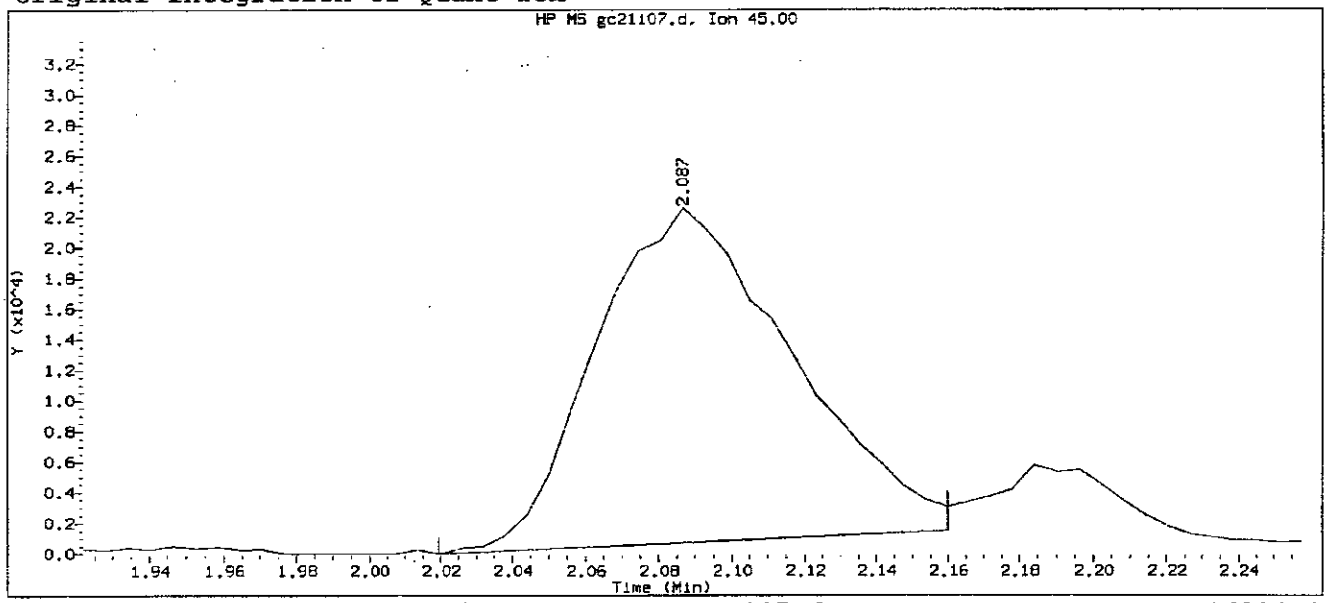
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 10/21/2010 at 18:56.
Target 3.5 esignature user ID: sej02002

GC/MS audit/management approval: [signature] 10/22/10 RAD48 8289

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10oct21b.b/gc21i07.d Instrument ID: HP16334.i
Injection date and time: 21-OCT-2010 17:56 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: SMONLY
Calibration date and time: 21-OCT-2010 18:14
Date, time and analyst ID of latest file update: 21-Oct-2010 18:14 Automation

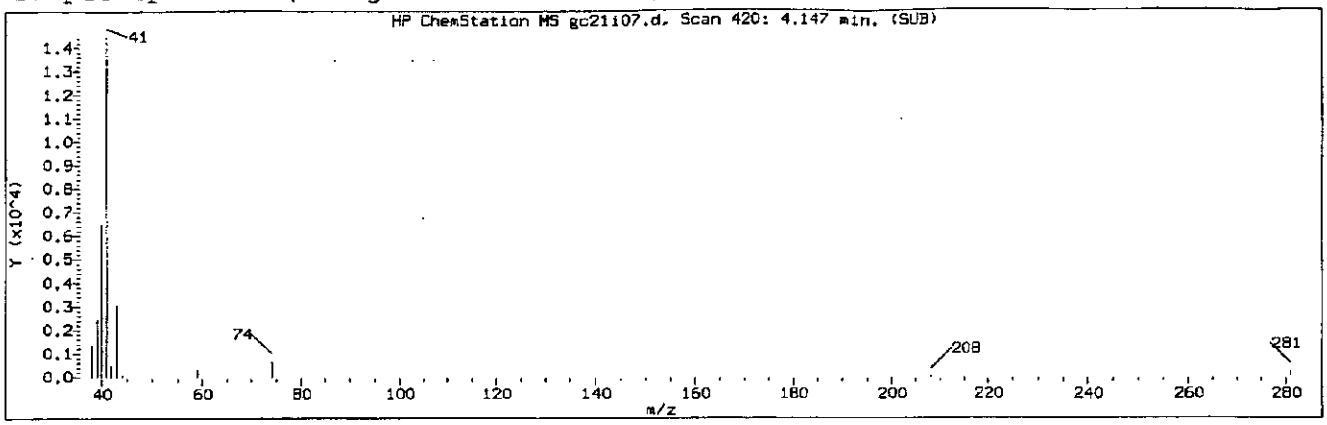
Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number	: 4		
Compound Name	: Dimethyl ether		
Scan Number	: 82		
Retention Time (minutes)	: 2.087		
Quant Ion	: 45.00		
Area	: 81411		
On-column Amount (ng)	: 0.7105		
Integration start scan	: 70	Integration stop scan:	93
Y at integration start	: 0	Y at integration end:	1539

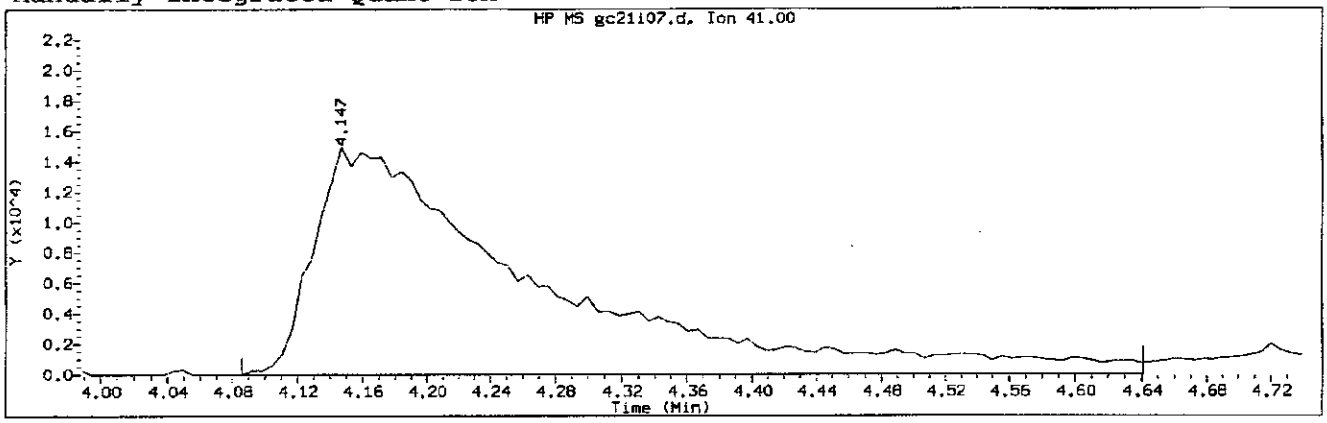
RAD40 0290

Digitally signed by Sara E. Johnson on 10/21/2010 at 18:56.
Target 3.5 esignature user ID: sej02002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10oct21b.b/gc21i07.d Instrument ID: HP16334.i
Injection date and time: 21-OCT-2010 17:56 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: SMONLY
Calibration date and time: 21-OCT-2010 18:45
Date, time and analyst ID of latest file update: 21-Oct-2010 18:45 sej02002

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number	: 31		
Compound Name	: Acetonitrile		
Scan Number	: 420		
Retention Time (minutes)	: 4.147		
Quant Ion	: 41.00		
Area (flag)	: 143096M		
On-Column Amount (ng)	: 34.0020		
Integration start scan	: 409	Integration stop scan:	500
Y at integration start	: 0	Y at integration end:	0

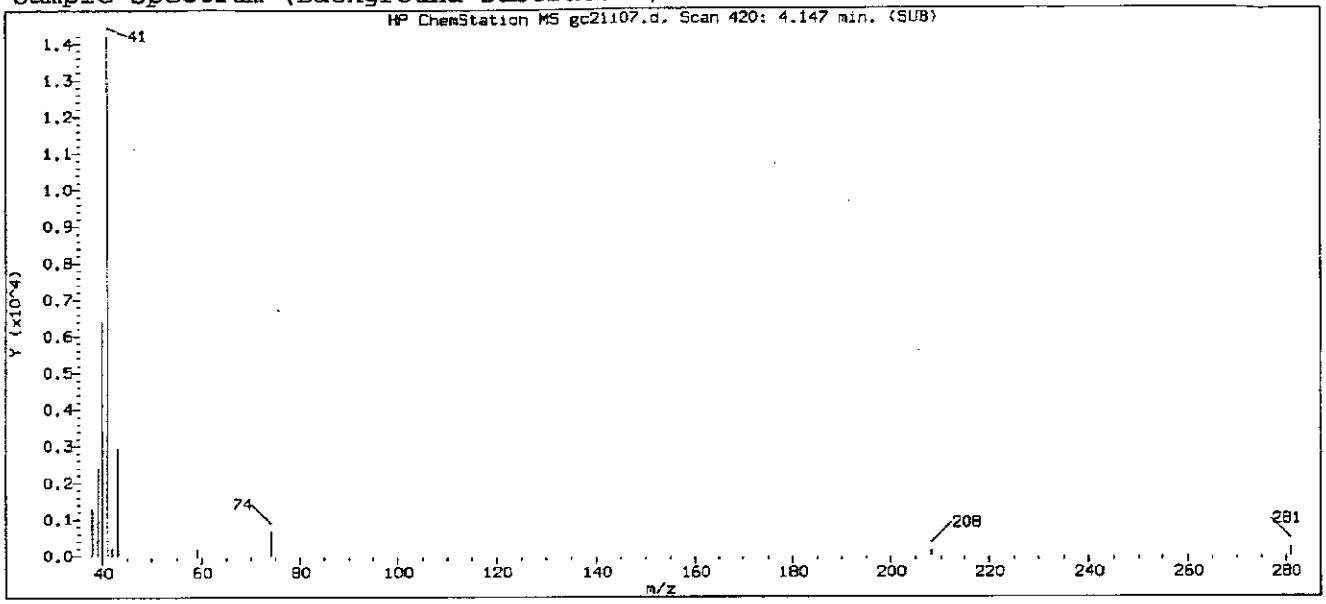
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Sara E. Johnson
on 10/21/2010 at 18:56.
Target 3.5 esignature user ID: sej02002

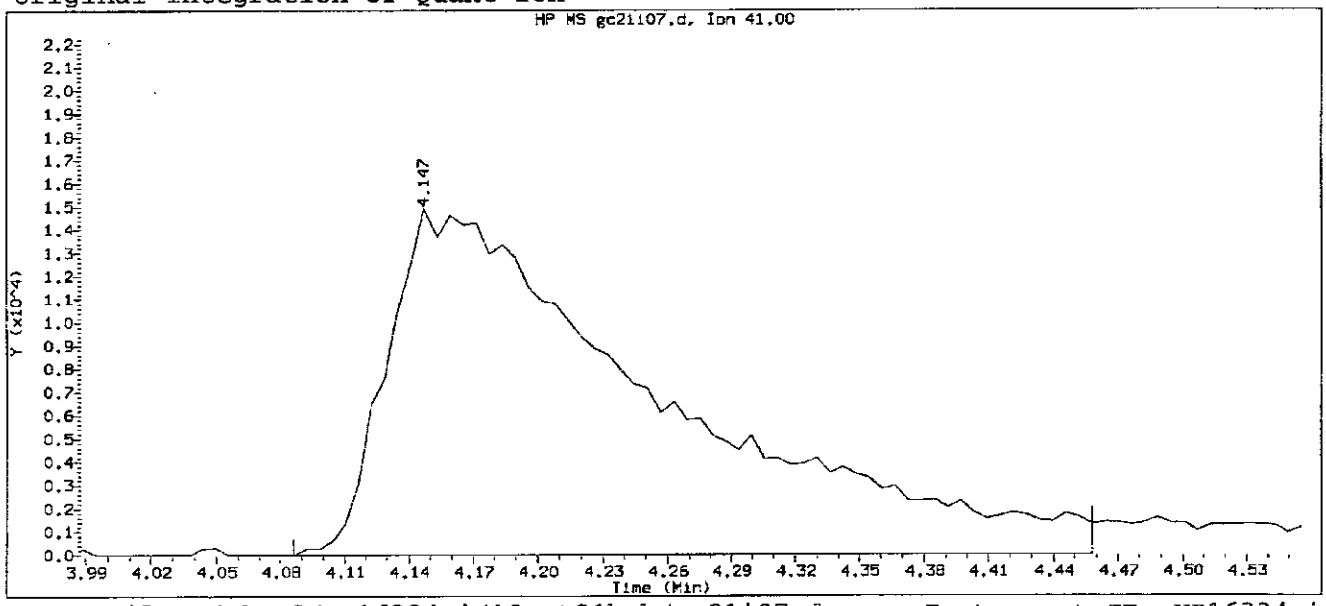
GC/MS audit/management approval: [redacted] 10/22/10

RAD48 0291

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10oct21b.b/gc21i07.d Instrument ID: HP16334.i
Injection date and time: 21-OCT-2010 17:56 Analyst ID: JML01693

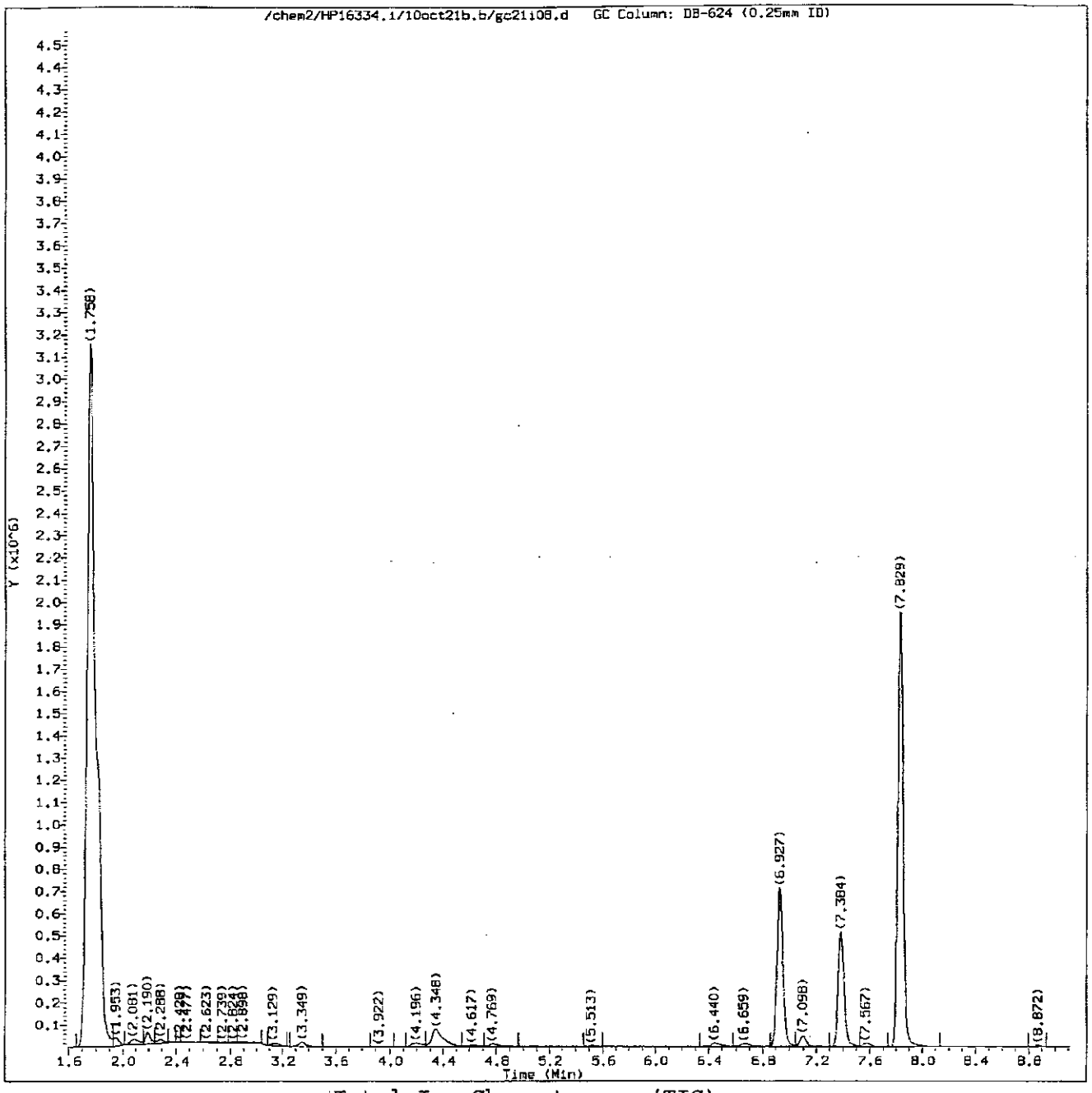
Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: SMONLY
Calibration date and time: 21-OCT-2010 18:14
Date, time and analyst ID of latest file update: 21-Oct-2010 18:14 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number	: 31		
Compound Name	: Acetonitrile		
Scan Number	: 420		
Retention Time (minutes)	: 4.147		
Quant Ion	: 41.00		
Area	: 130546		
On-column Amount (ng)	: 31.5826		
Integration start scan	: 409	Integration stop scan:	470
Y at integration start	: 0	Y at integration end:	0

RAD40 0292

Digitally signed by Sara E. Johnson on 10/21/2010 at 18:56.
Target 3.5 esignature user ID: sej02002



Total Ion Chromatogram (TIC)

Target Revision 3.5

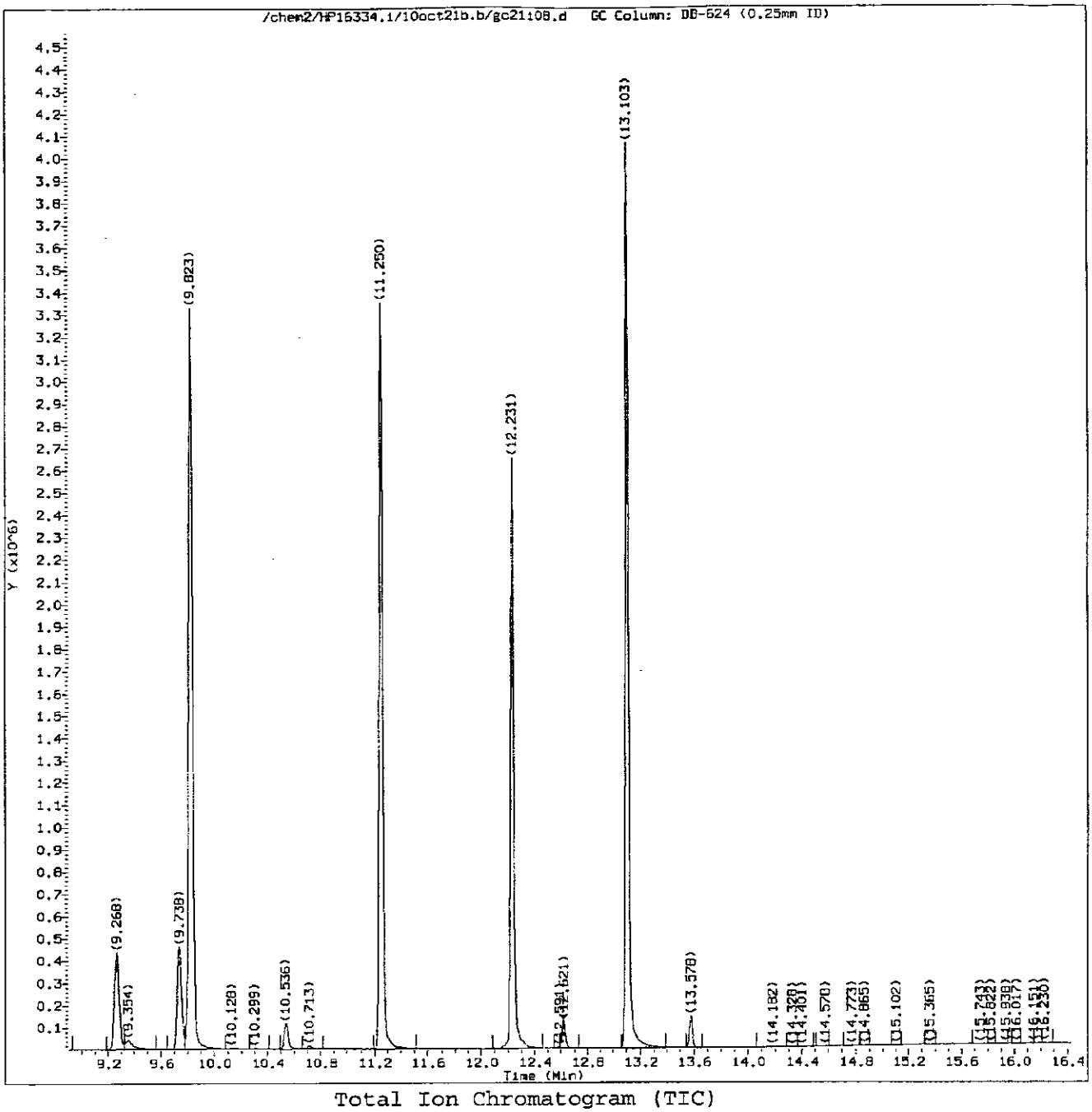
Data File: /chem2/HP16334.i/10oct21b.b/gc21i08.d Instrument ID: HP16334.i
Injection date and time: 21-OCT-2010 18:18 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: SMONLY
Calibration date and time: 21-OCT-2010 18:45
Date, time and analyst ID of latest file update: 21-Oct-2010 18:45 sej02002

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

RAD40 8293

Digitally signed by Sara E. Johnson
on 10/21/2010 at 18:57.
Target 3.5 esignature user ID: sej02002



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/10oct21b.b/gc21i08.d Instrument ID: HP16334.i
Injection date and time: 21-OCT-2010 18:18 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: SMONLY
Calibration date and time: 21-OCT-2010 18:45
Date, time and analyst ID of latest file update: 21-Oct-2010 18:45 sej02002

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Digitally signed by Sara E. Johnson
on 10/21/2010 at 18:57.
Target 3.5 esignature user ID: sej02002

RAD40 8894

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/10oct21b.b/gc21i08.d Instrument ID: HP16334.i
Injection date and time: 21-OCT-2010 18:18 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: SMONLY
Calibration date and time: 21-OCT-2010 18:45
Date, time and analyst ID of latest file update: 21-Oct-2010 18:45 sej02002

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

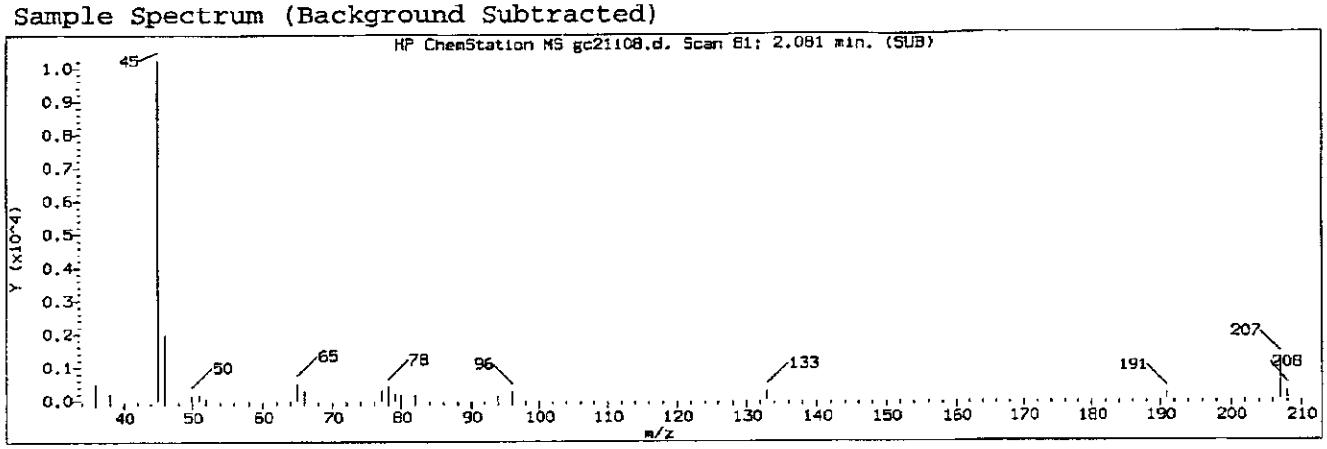
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(1)	2.081	45	43364M	0.486
31) Acetonitrile	(4)	4.178	41	63474M	17.648
36)*t-Butyl Alcohol-d10	(4)	4.385	65	122402	50.000
46) Vinyl Acetate	(1)	5.519	43	25032M	0.399
77)*Fluorobenzene	(1)	7.836	96	2745345	10.000
93) 2-Chloroethyl Vinyl Ether	(1)	9.360	63	9719	0.376
110)*Chlorobenzene-d5	(2)	11.250	117	2023664	10.000
122) cis-1,4-Dichloro-2-Butene	(4)	12.170	88	3528	0.550
125) Cyclohexanone	(4)	12.194	55	19715	21.187
143)*1,4-Dichlorobenzene-d4	(3)	13.103	152	1145849	10.000
149) Hexachloroethane	(1)	13.572	117	20549	0.375

M = Compound was manually integrated.
* = Compound is an internal standard.

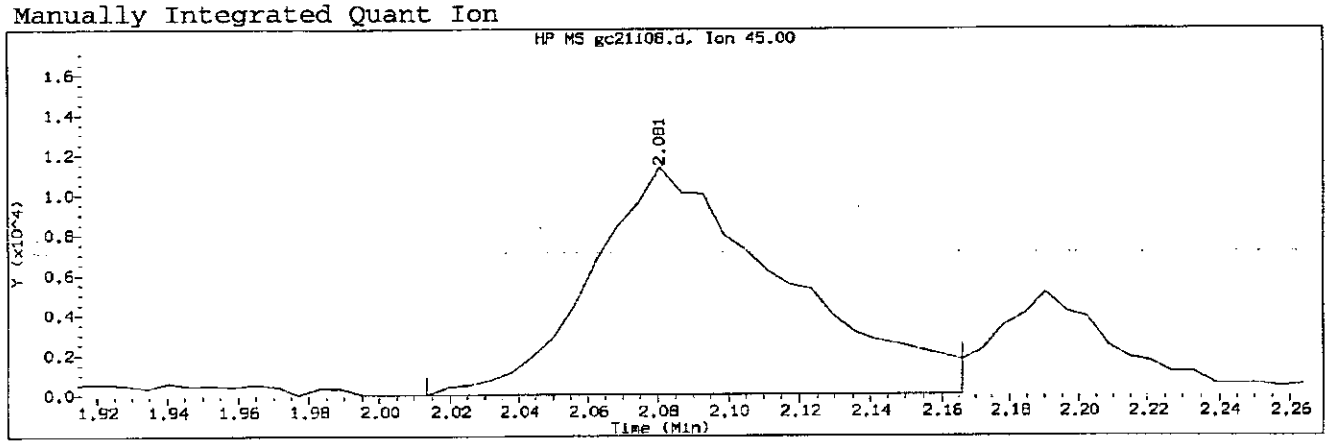
Digitally signed by Sara E. Johnson
on 10/21/2010 at 18:57.
Target 3.5 esignature user ID: sej02002

RAD40 0295

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10oct21b.b/gc21i08.d Instrument ID: HP16334.i
Injection date and time: 21-OCT-2010 18:18 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: SMONLY
Calibration date and time: 21-OCT-2010 18:45
Date, time and analyst ID of latest file update: 21-Oct-2010 18:45 sej02002

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compound Number	: 4		
Compound Name	: Dimethyl ether		
Scan Number	: 81		
Retention Time (minutes)	: 2.081		
Quant Ion	: 45.00		
Area (flag)	: 43364M		
On-Column Amount (ng)	: 0.4864		
Integration start scan	: 69	Integration stop scan:	94
Y at integration start	: 0	Y at integration end:	0

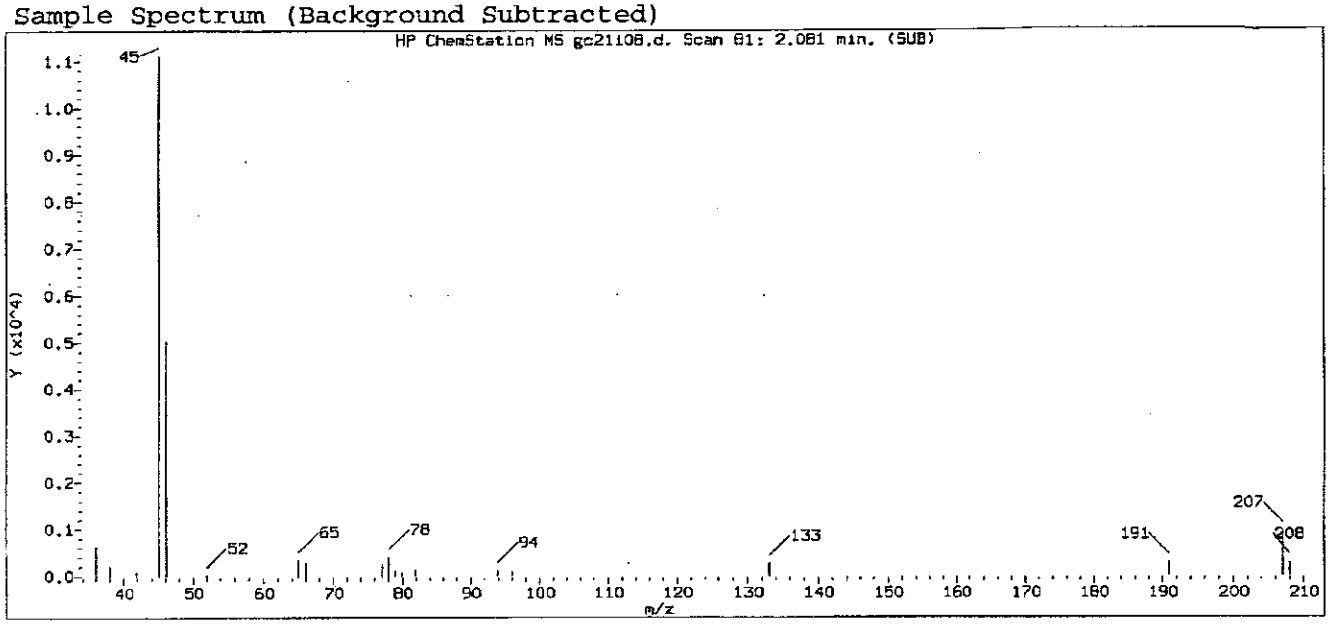
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Sara E. Johnson on 10/21/2010 at 18:57. Target 3.5 esignature user ID: sej02002

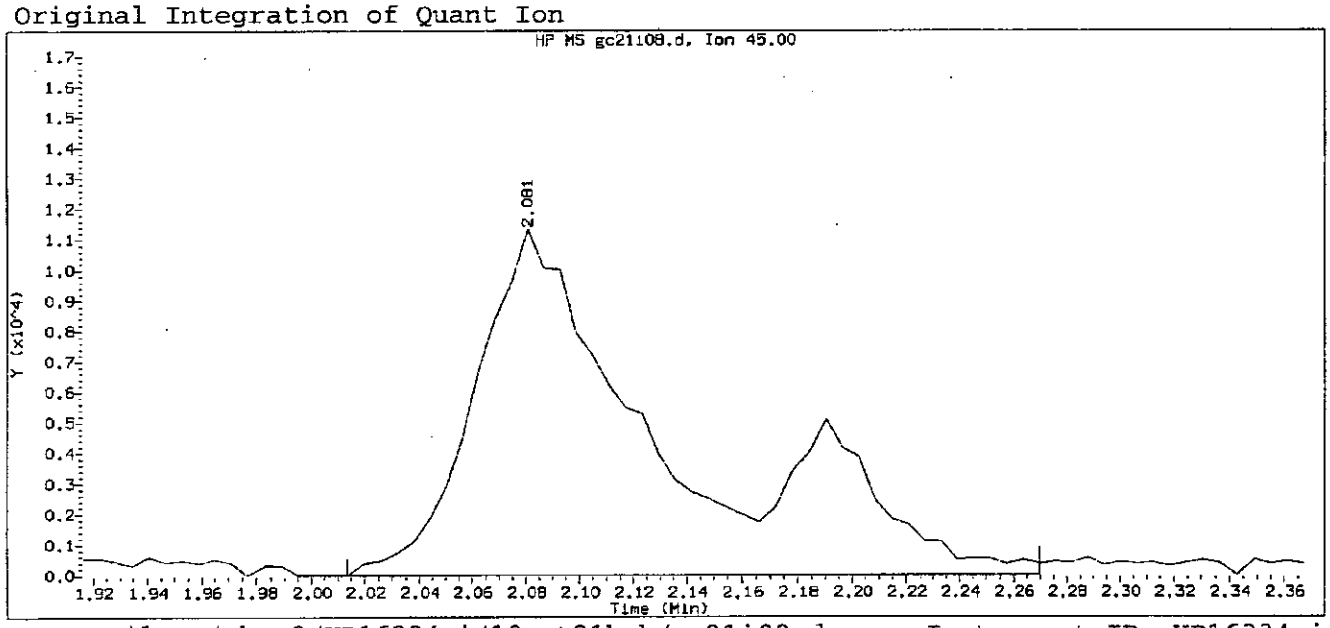
GC/MS audit/management approval: 10/22/10

RAD48 8296

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10oct21b.b/gc21i08.d Instrument ID: HP16334.i
Injection date and time: 21-OCT-2010 18:18 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: SMONLY
Calibration date and time: 21-OCT-2010 18:35
Date, time and analyst ID of latest file update: 21-Oct-2010 18:35 Automation

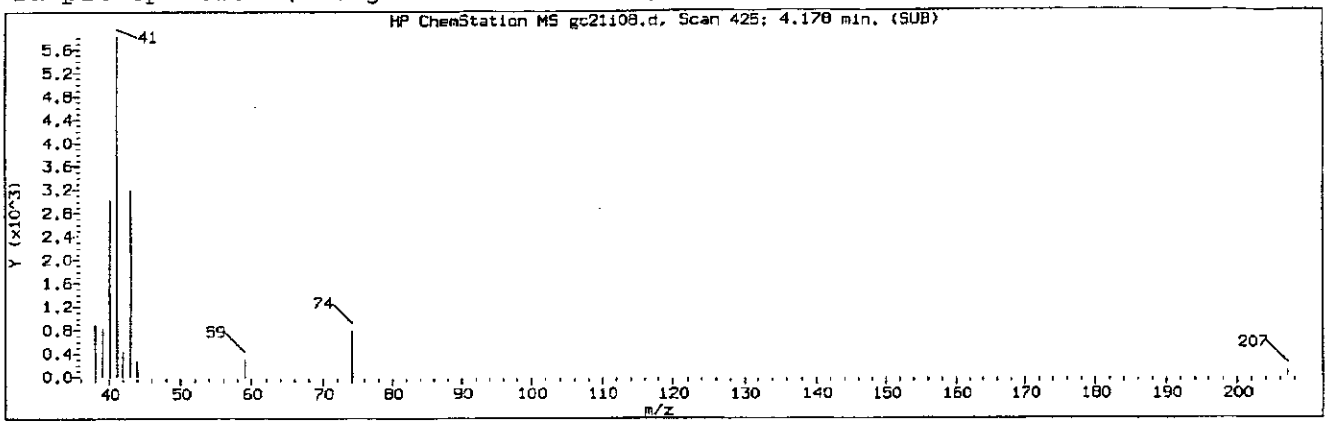
Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compound Number	: 4		
Compound Name	: Dimethyl ether		
Scan Number	: 81		
Retention Time (minutes)	: 2.081		
Quant Ion	: 45.00		
Area	: 55653		
On-column Amount (ng)	: 0.5968		
Integration start scan	: 69	Integration stop scan:	111
Y at integration start	: 0	Y at integration end:	0

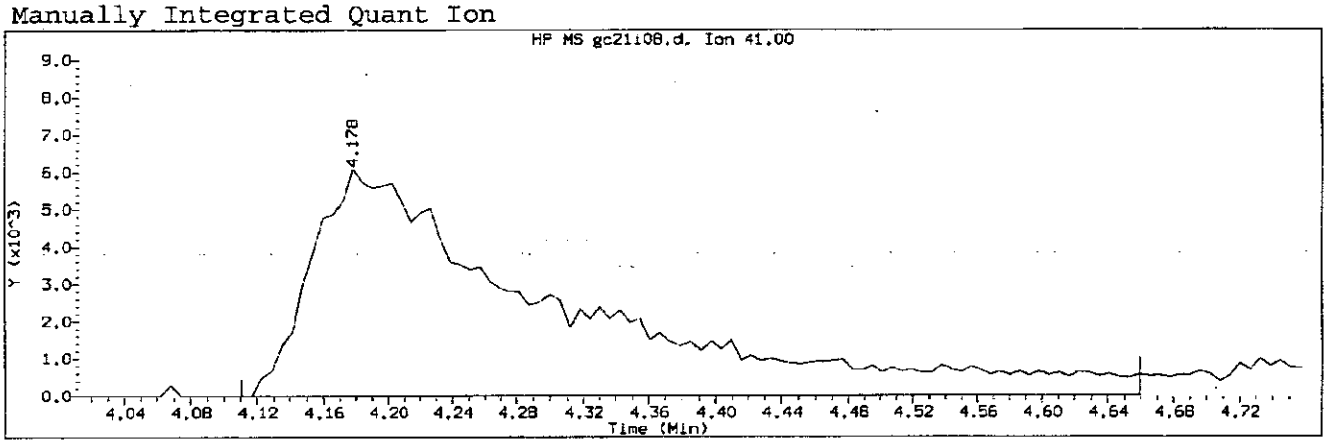
RAD48 8297

Digitally signed by Sara E. Johnson on 10/21/2010 at 18:57.
Target 3.5 esignature user ID: sej02002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10oct21b.b/gc21i08.d Instrument ID: HP16334.i
Injection date and time: 21-OCT-2010 18:18 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: SMONLY
Calibration date and time: 21-OCT-2010 18:45
Date, time and analyst ID of latest file update: 21-Oct-2010 18:45 sej02002

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

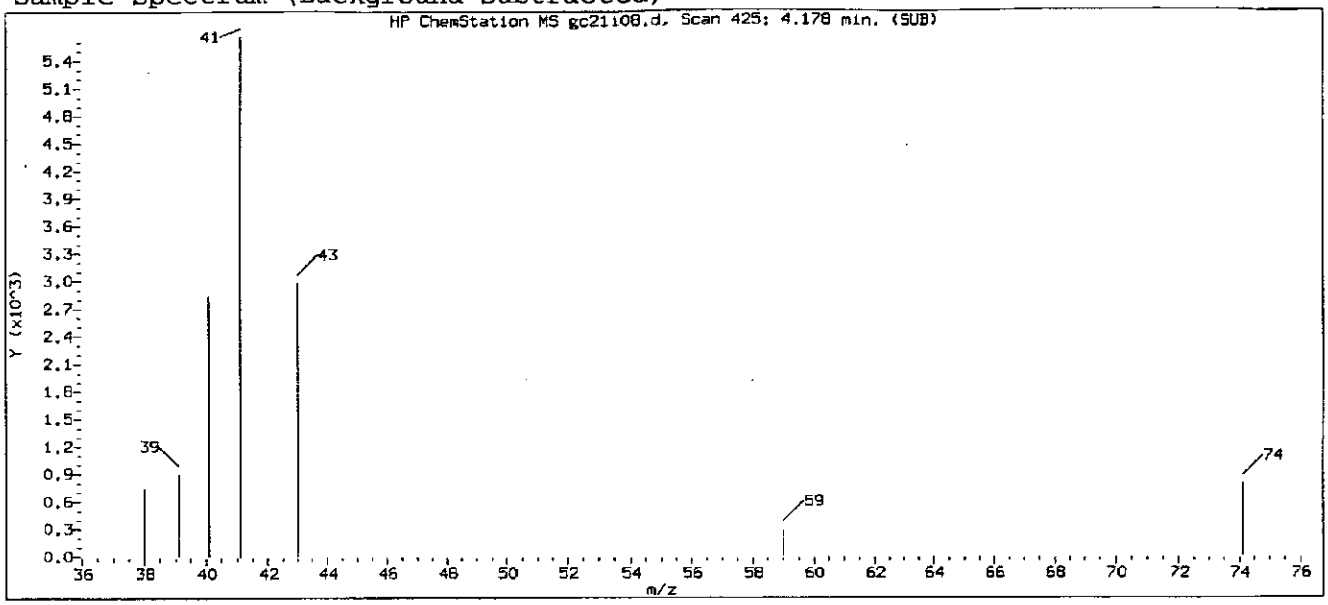
Compound Number	: 31		
Compound Name	: Acetonitrile		
Scan Number	: 425		
Retention Time (minutes)	: 4.178		
Quant Ion	: 41.00		
Area (flag)	: 63474M		
On-Column Amount (ng)	: 17.6476		
Integration start scan	: 413	Integration stop scan:	503
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

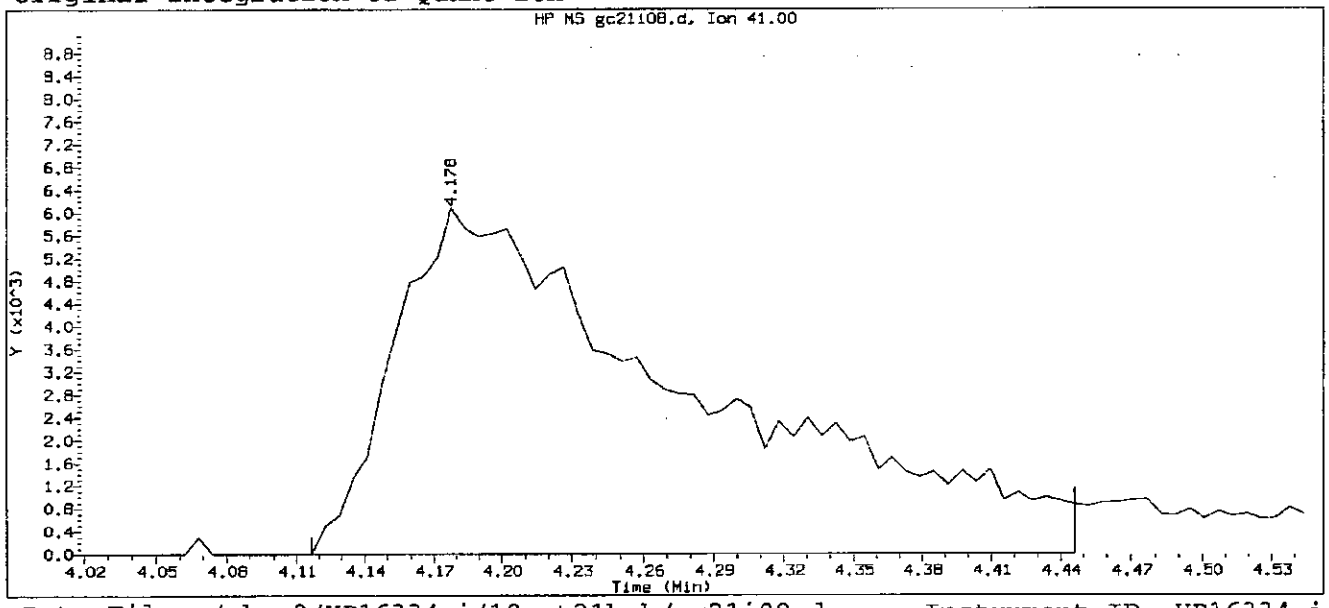
Analyst responsible for change: Digitally signed by Sara E. Johnson
on 10/21/2010 at 18:57.
Target 3.5 esignature user ID: sej02002

GC/MS audit/management approval: 10/22/10 RAD40 0298

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10oct21b.b/gc21i08.d Instrument ID: HP16334.i
Injection date and time: 21-OCT-2010 18:18 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: SMONLY
Calibration date and time: 21-OCT-2010 18:35
Date, time and analyst ID of latest file update: 21-Oct-2010 18:35 Automation

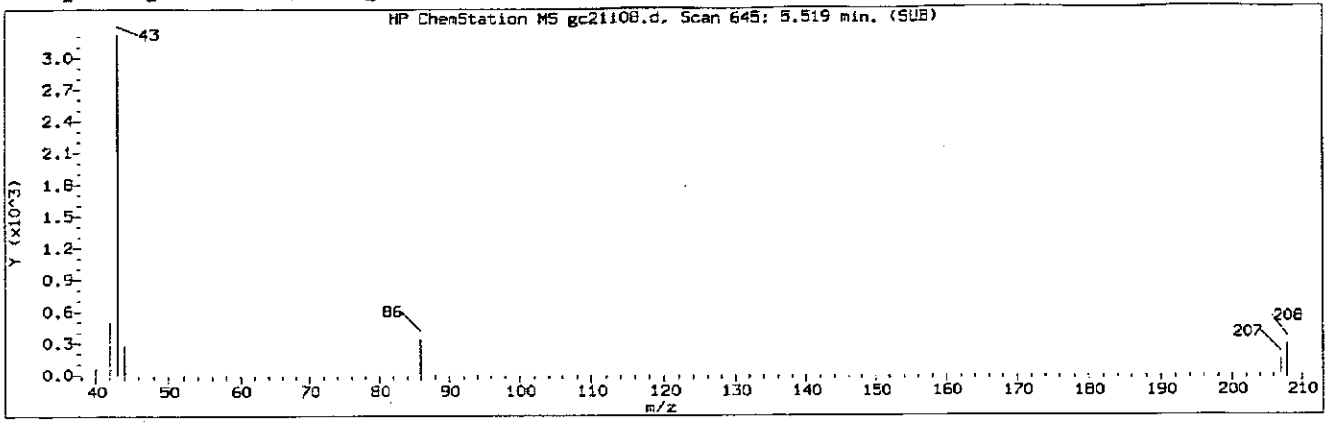
Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compound Number	: 31		
Compound Name	: Acetonitrile		
Scan Number	: 425		
Retention Time (minutes)	: 4.178		
Quant Ion	: 41.00		
Area	: 54737		
On-column Amount (ng)	: 15.7325		
Integration start scan	: 414	Integration stop scan:	468
Y at integration start	: 0	Y at integration end:	0

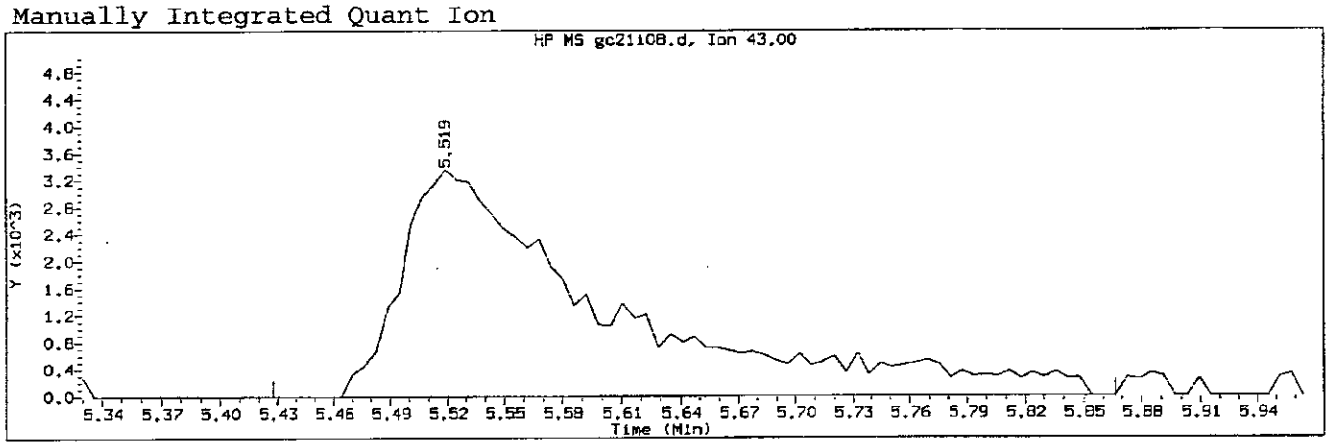
RAD40 0299

Digitally signed by Sara E. Johnson on 10/21/2010 at 18:57.
Target 3.5 esignature user ID: sej02002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10oct21b.b/gc21i08.d Instrument ID: HP16334.i
Injection date and time: 21-OCT-2010 18:18 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: SMONLY
Calibration date and time: 21-OCT-2010 18:45
Date, time and analyst ID of latest file update: 21-Oct-2010 18:45 sej02002

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compound Number	: 46		
Compound Name	: Vinyl Acetate		
Scan Number	: 645		
Retention Time (minutes)	: 5.519		
Quant Ion	: 43.00		
Area (flag)	: 25032M		
On-Column Amount (ng)	: 0.3987		
Integration start scan	: 629	Integration stop scan:	701
Y at integration start	: 0	Y at integration end:	0

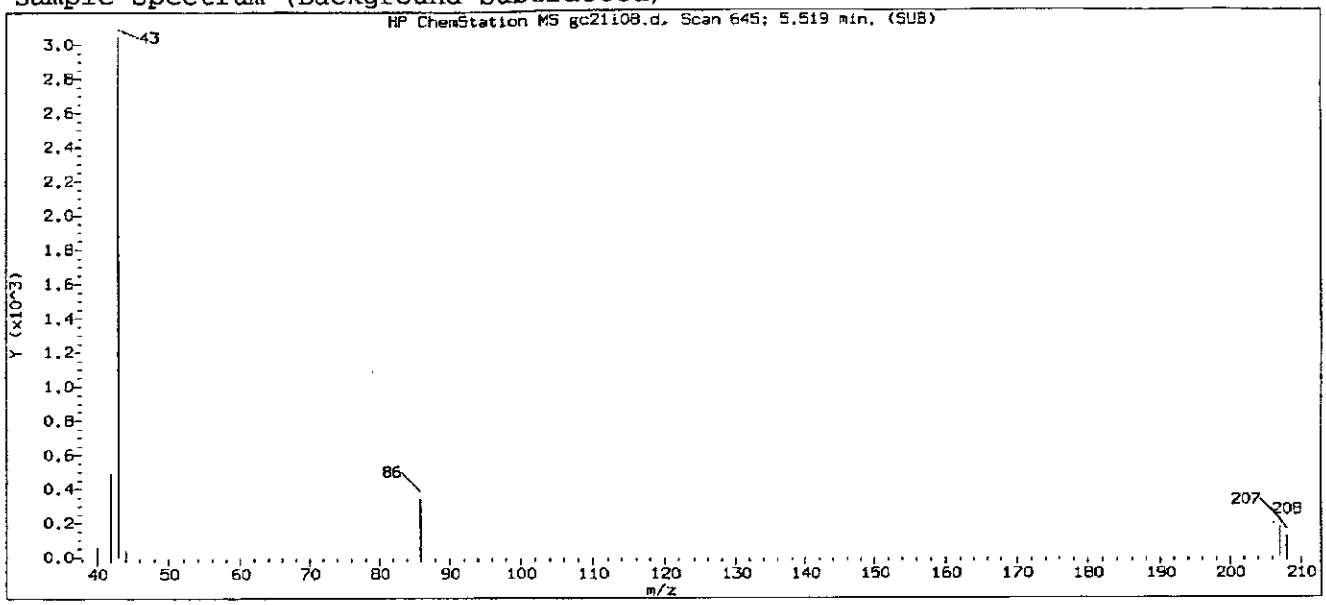
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Sara E. Johnson
on 10/21/2010 at 18:57.
Target 3.5 esignature user ID: sej02002

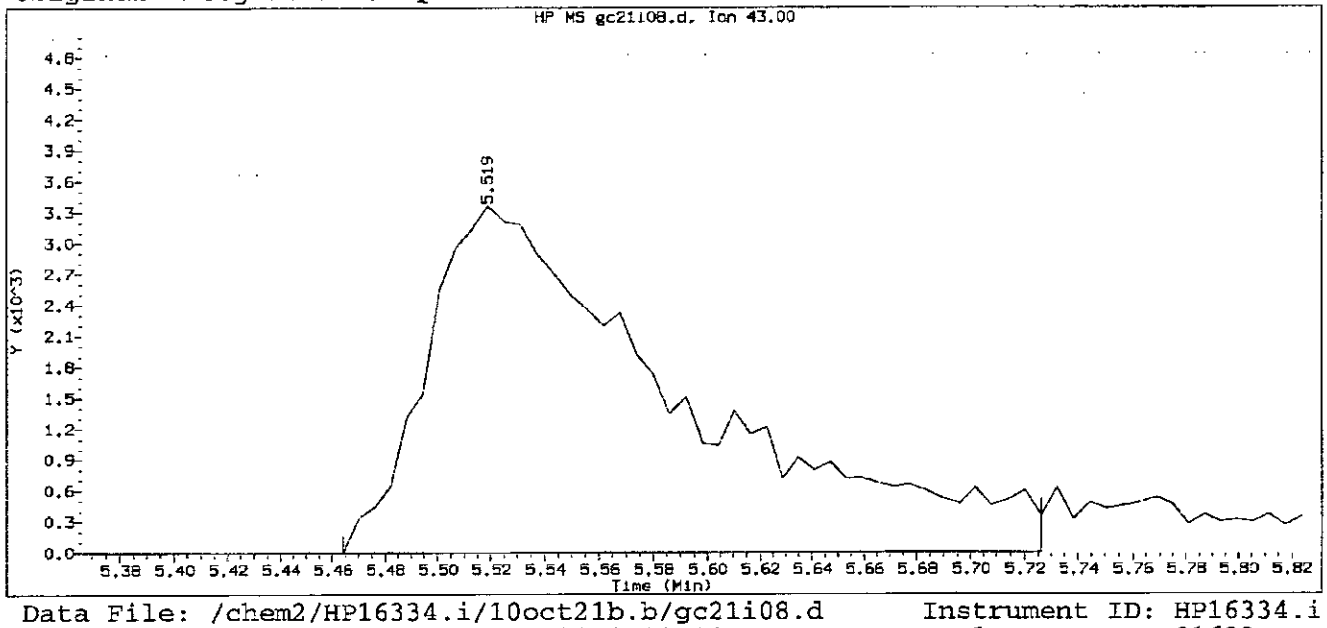
GC/MS audit/management approval: 10/22/10

RAD40 0300

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10oct21b.b/gc21i08.d Instrument ID: HP16334.i
Injection date and time: 21-OCT-2010 18:18 Analyst ID: JML01693

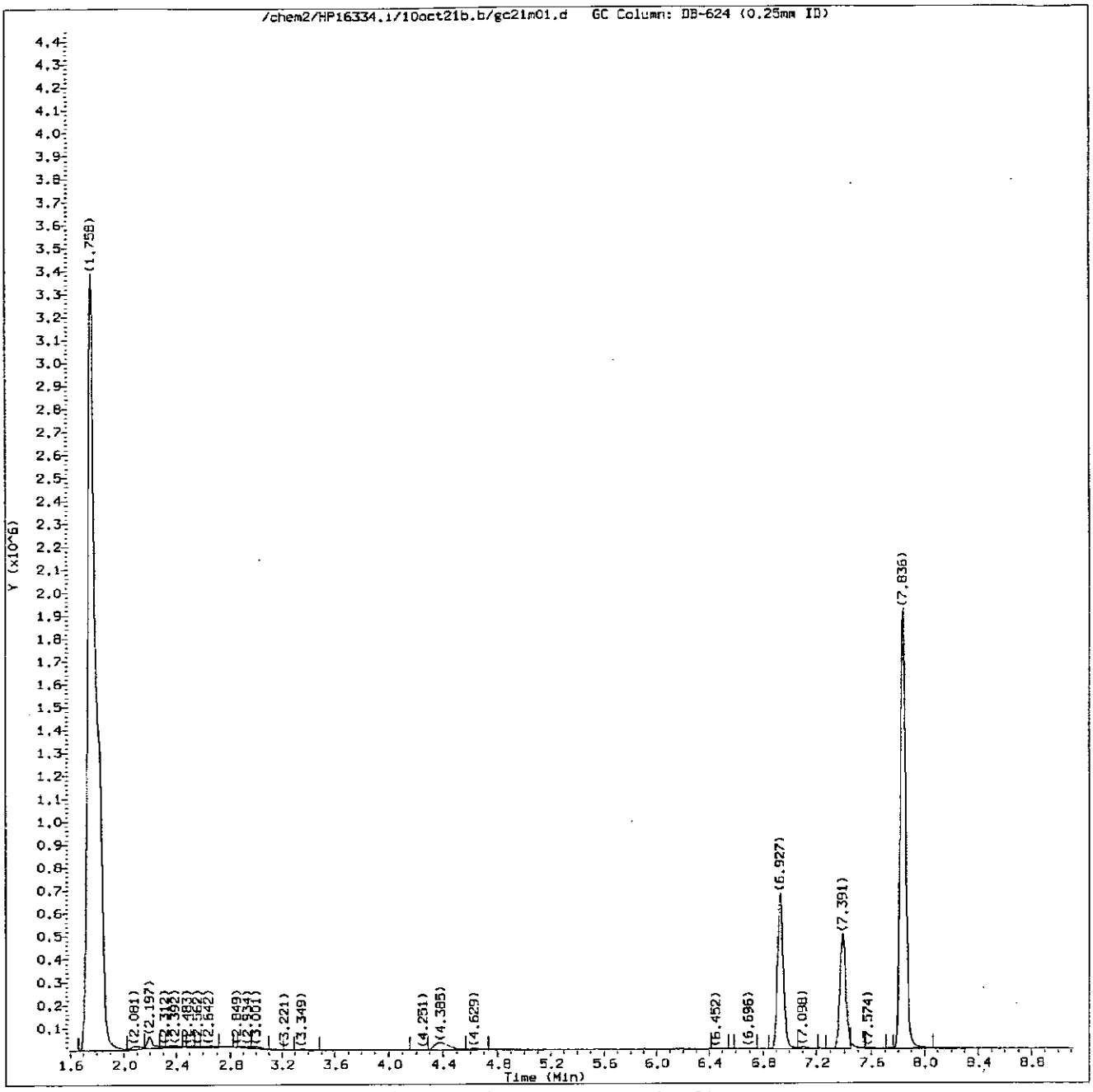
Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: SMONLY
Calibration date and time: 21-OCT-2010 18:35
Date, time and analyst ID of latest file update: 21-Oct-2010 18:35 Automation

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compound Number	: 46		
Compound Name	: Vinyl Acetate		
Scan Number	: 645		
Retention Time (minutes)	: 5.519		
Quant Ion	: 43.00		
Area	: 22213		
On-column Amount (ng)	: 0.3592		
Integration start scan	: 635	Integration stop scan:	678
Y at integration start	: 0	Y at integration end:	0

RAD40 0301

Digitally signed by Sara E. Johnson on 10/21/2010 at 18:57.
Target 3.5 esignature user ID: sej02002



Total Ion Chromatogram (TIC)

Target Revision 3.5

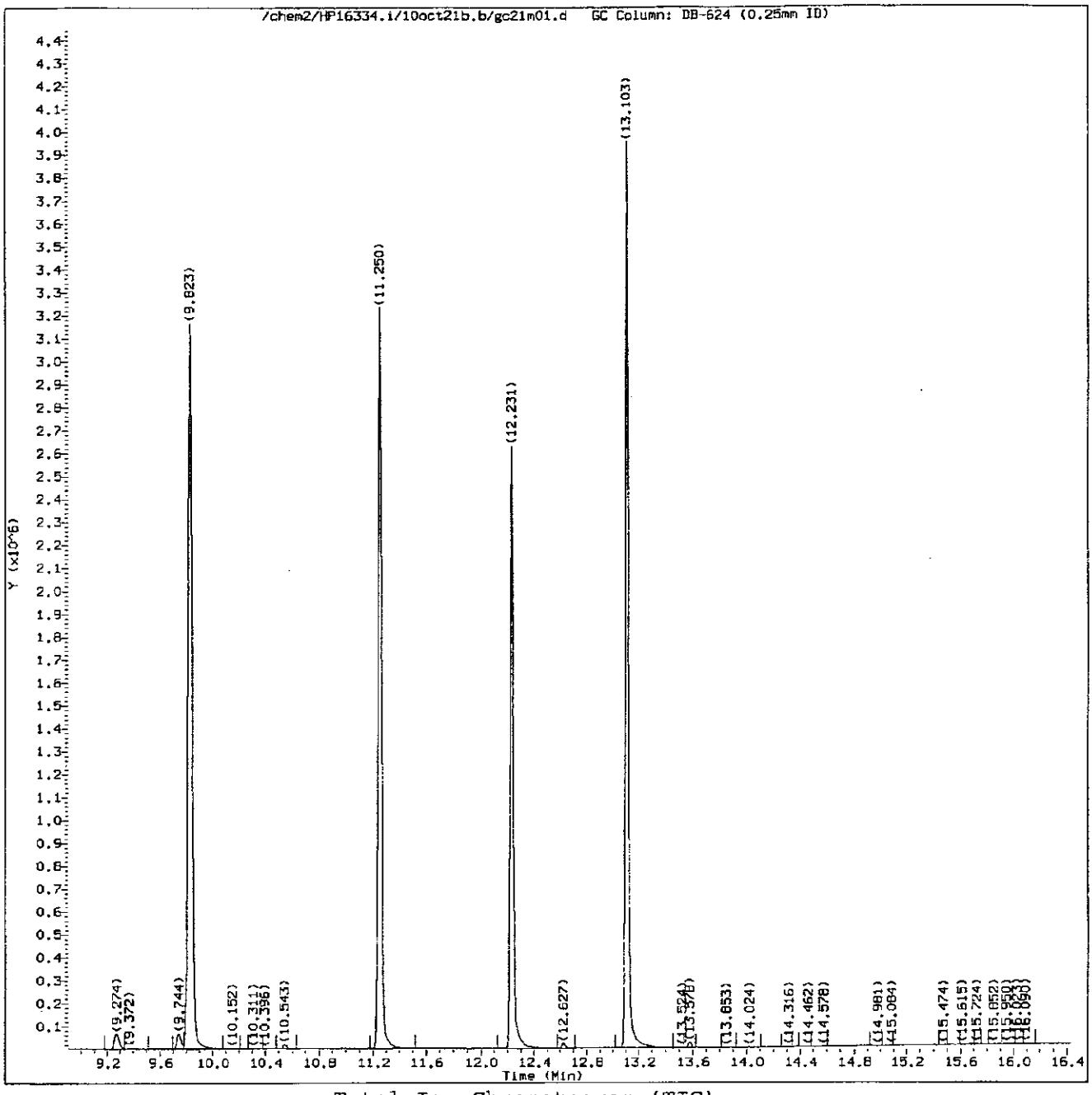
Data File: /chem2/HP16334.i/10oct21b.b/gc21m01.d Instrument ID: HP16334.i
Injection date and time: 21-OCT-2010 17:01 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: SMONLY
Calibration date and time: 21-OCT-2010 17:10
Date, time and analyst ID of latest file update: 21-Oct-2010 19:49 sej02002

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Digitally signed by Sara E. Johnson
on 10/21/2010 at 19:52.
Target 3.5 esignature user ID: sej02002

RAD40 0302



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/10oct21b.b/gc21m01.d Instrument ID: HP16334.i
Injection date and time: 21-OCT-2010 17:01 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: SMONLY
Calibration date and time: 21-OCT-2010 17:10
Date, time and analyst ID of latest file update: 21-Oct-2010 19:49 sej02002

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Digitally signed by Sara E. Johnson
on 10/21/2010 at 19:52.
Target 3.5 esignature user ID: sej02002

RAD40 0303

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/10oct21b.b/gc21m01.d Instrument ID: HP16334.i
Injection date and time: 21-OCT-2010 17:01 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: SMONLY
Calibration date and time: 21-OCT-2010 17:10
Date, time and analyst ID of latest file update: 21-Oct-2010 19:49 sej02002

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

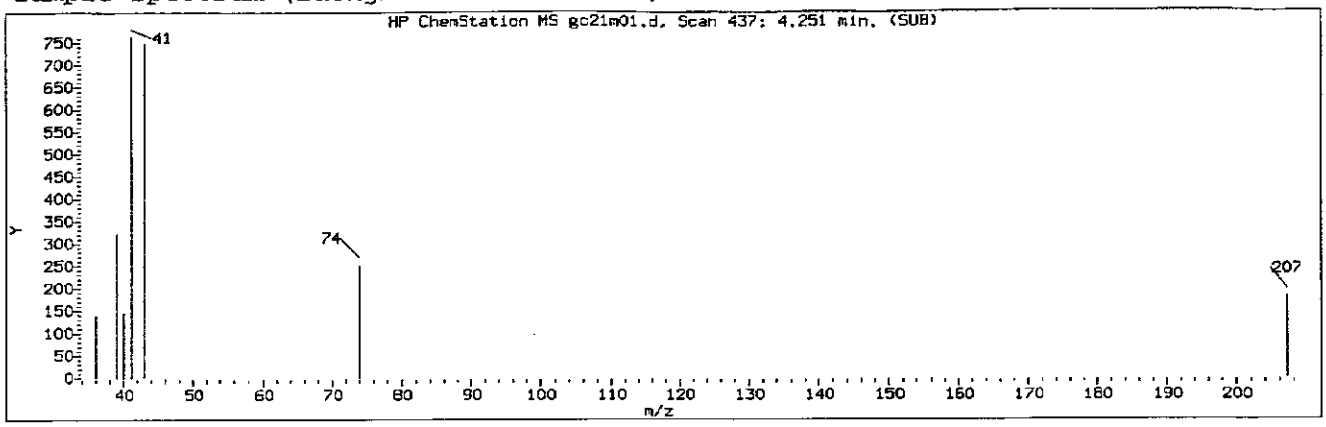
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(1)	2.081	45	17674	0.202
31) Acetonitrile	(4)	4.251	41	10102M	3.052
36)*t-Butyl Alcohol-d10	(4)	4.385	65	112649	50.000
46) Vinyl Acetate	(1)	5.574	43	3130	0.054
77)*Fluorobenzene	(1)	7.836	96	2690942	10.000
93) 2-Chloroethyl Vinyl Ether	(1)	9.396	63	970	0.040
110)*Chlorobenzene-d5	(2)	11.250	117	1981799	10.000
125) Cyclohexanone	(4)	12.225	55	4401	5.139
143)*1,4-Dichlorobenzene-d4	(3)	13.103	152	1123641	10.000
149) Hexachloroethane	(1)	13.578	117	3567	0.323

M = Compound was manually integrated.
* = Compound is an internal standard.

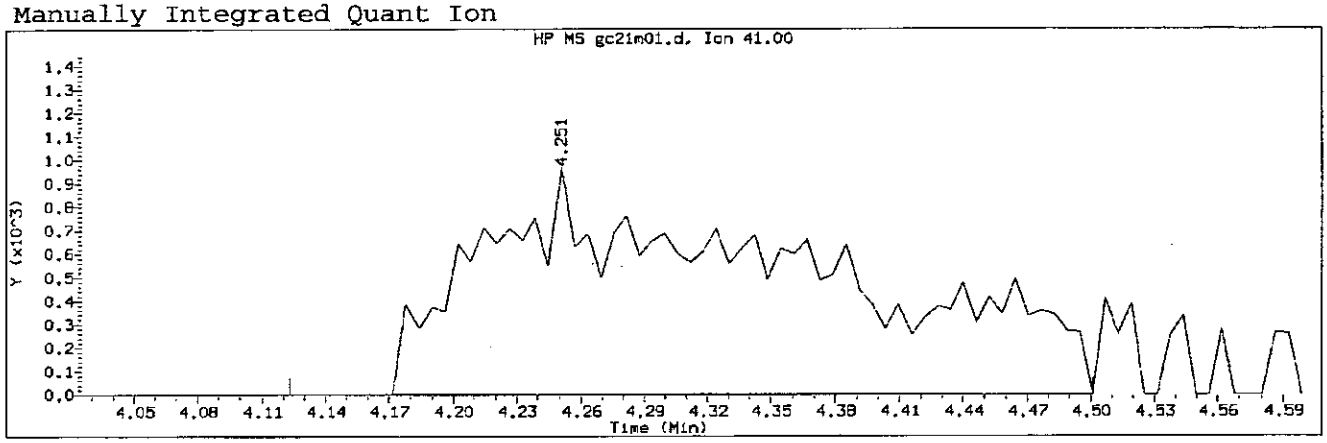
Digitally signed by Sara E. Johnson
on 10/21/2010 at 19:52.
Target 3.5 esignature user ID: sej02002

RAD48 8384

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10oct21b.b/gc21m01.d Instrument ID: HP16334.i
Injection date and time: 21-OCT-2010 17:01 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: SMONLY
Calibration date and time: 21-OCT-2010 17:10
Date, time and analyst ID of latest file update: 21-Oct-2010 19:49 sej02002

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compound Number	: 31		
Compound Name	: Acetonitrile		
Scan Number	: 437		
Retention Time (minutes)	: 4.251		
Quant Ion	: 41.00		
Area (flag)	: 10102M		
On-Column Amount (ng)	: 3.0518		
Integration start scan	: 415	Integration stop scan:	477
Y at integration start	: 0	Y at integration end:	0

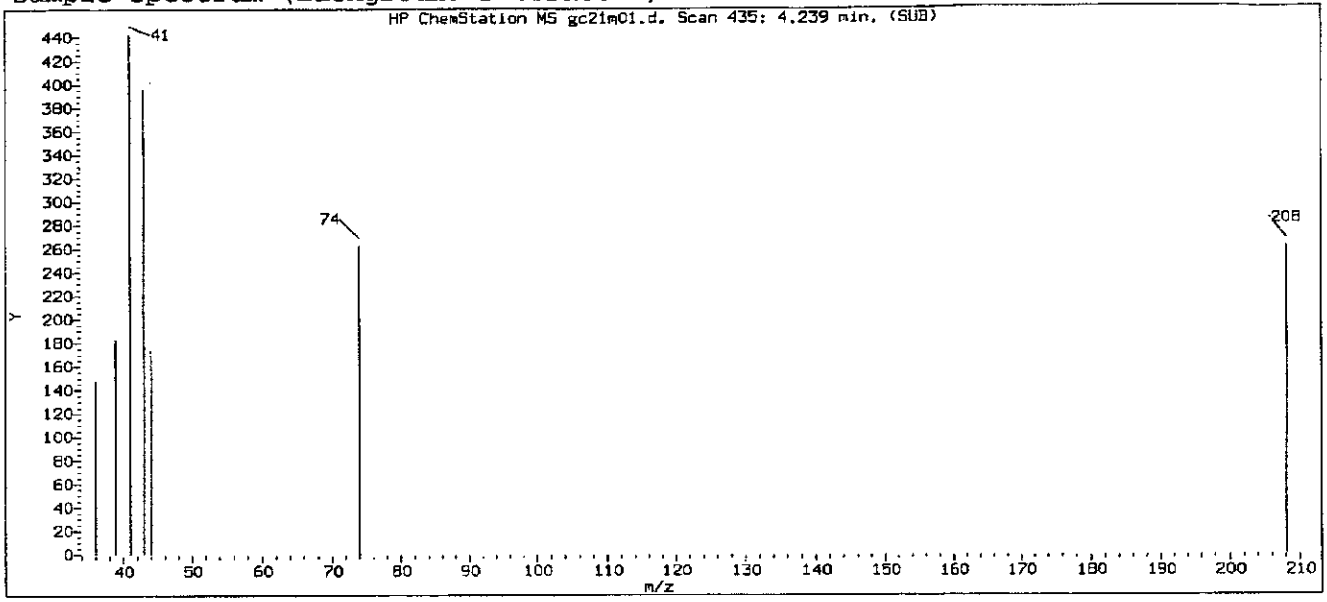
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Sara E. Johnson
on 10/21/2010 at 19:52.
Target 3.5 esignature user ID: sej02002

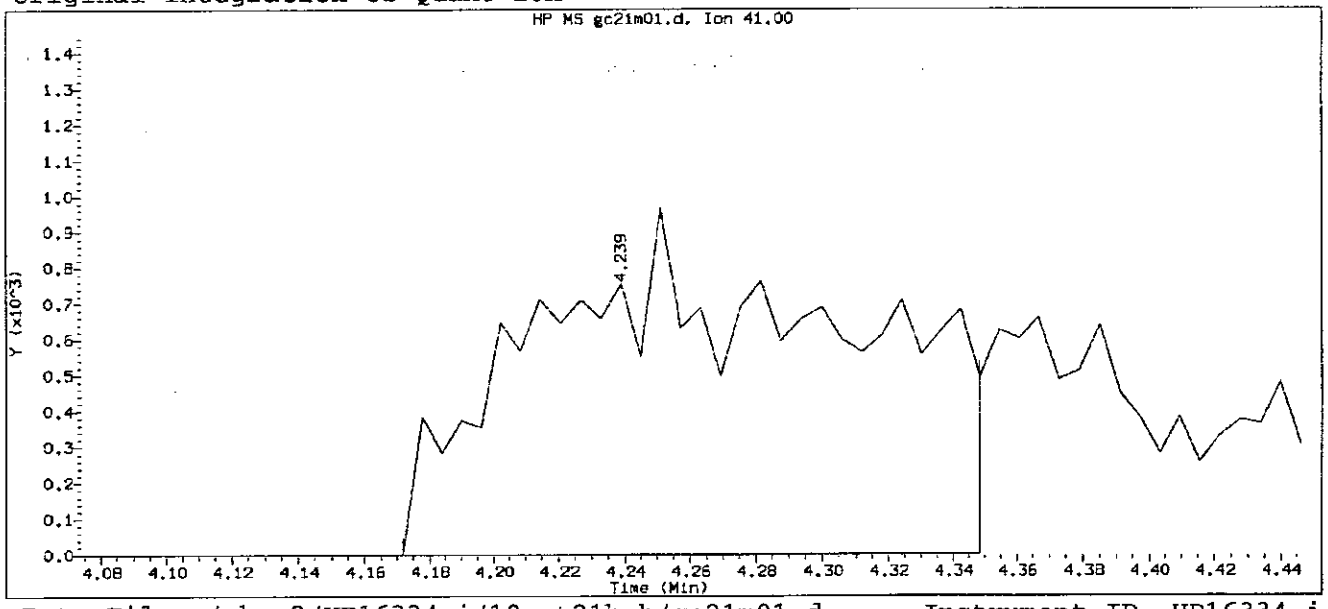
GC/MS audit/management approval: 10/22/10

RAD40 #305

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10oct21b.b/gc21m01.d Instrument ID: HP16334.i
Injection date and time: 21-OCT-2010 17:01 Analyst ID: JML01693

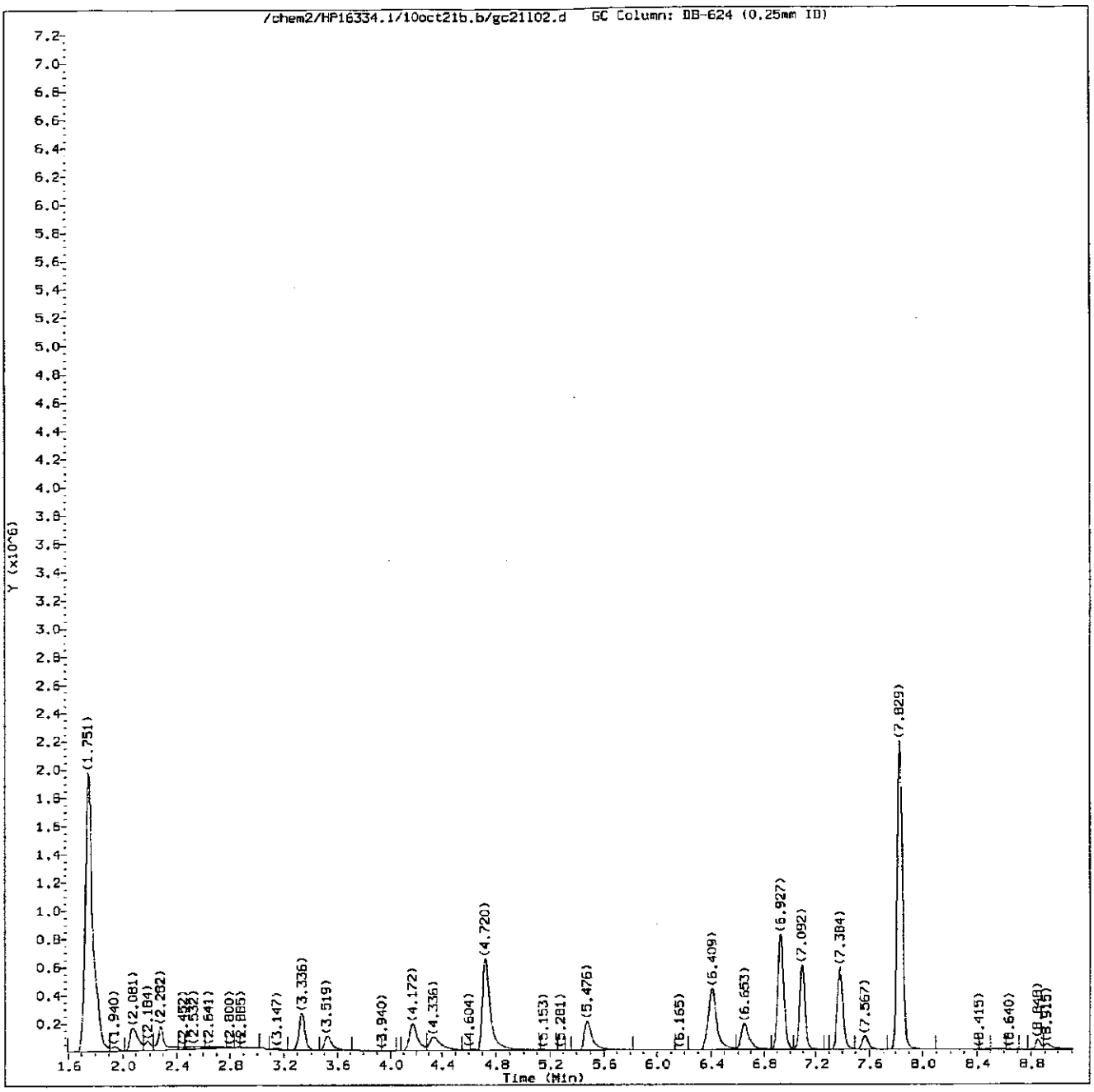
Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: SMONLY
Calibration date and time: 21-OCT-2010 17:10
Date, time and analyst ID of latest file update: 21-Oct-2010 17:18 Automation

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compound Number	: 31		
Compound Name	: Acetonitrile		
Scan Number	: 435		
Retention Time (minutes)	: 4.239		
Quant Ion	: 41.00		
Area	: 6370		
On-column Amount (ng)	: 1.9172		
Integration start scan	: 423	Integration stop scan:	452
Y at integration start	: 0	Y at integration end:	0

RAD40 0306

Digitally signed by Sara E. Johnson on 10/21/2010 at 19:52.
Target 3.5 esignature user ID: sej02002



Total Ion Chromatogram (TIC)

Target Revision 3.5

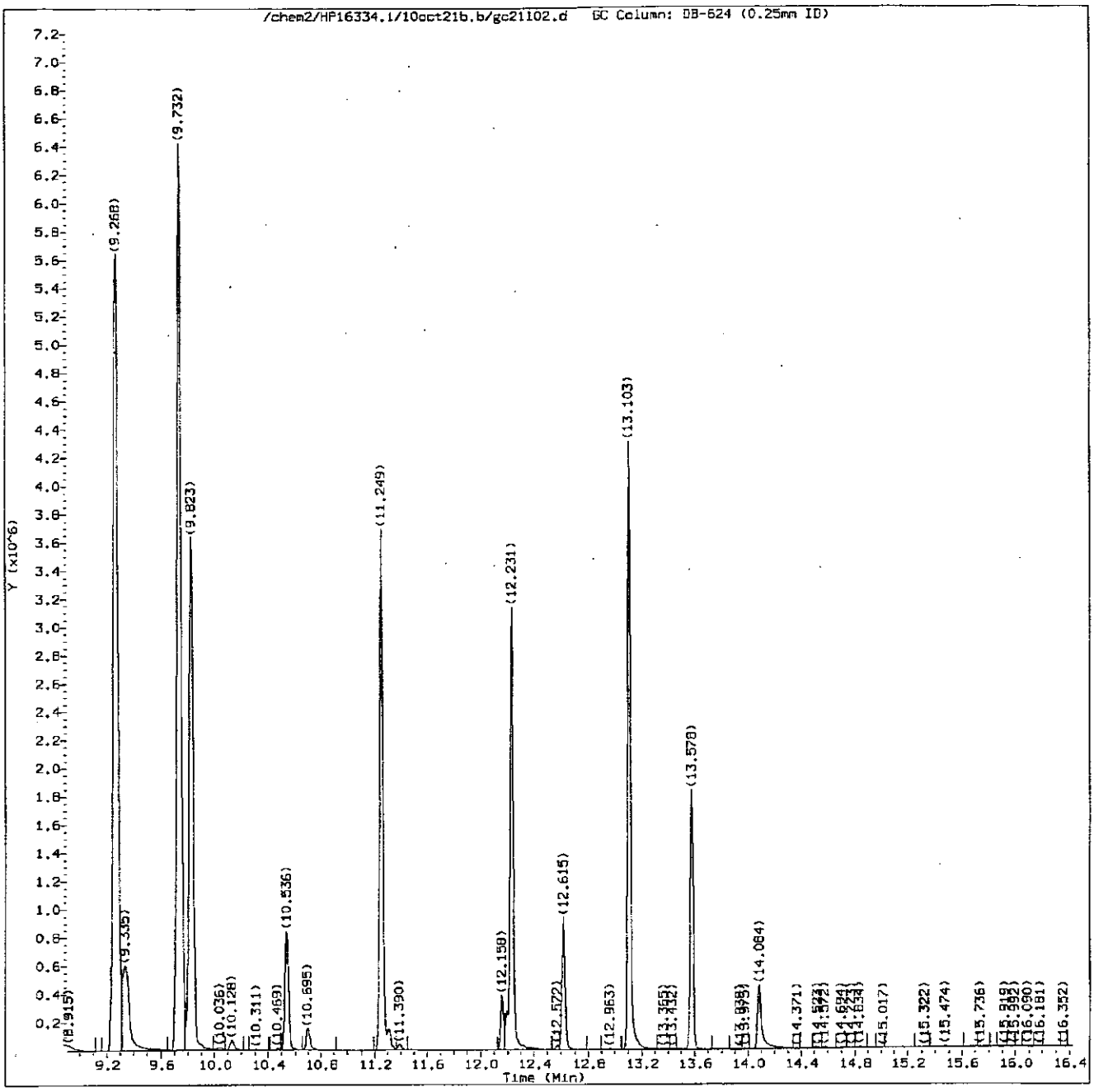
Data File: /chem2/HP16334.i/10oct21b.b/gc21102.d Instrument ID: HP16334.i
Injection date and time: 21-OCT-2010 19:53 Analyst ID: SEJ02002

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: SMQC
Calibration date and time: 21-OCT-2010 19:57
Date, time and analyst ID of latest file update: 21-Oct-2010 20:11 Automation

Sample Name: LCS1G71 Lab Sample ID: LCS1G71

Digitally signed by Sara E. Johnson
on 10/21/2010 at 20:11.
Target 3.5 esignature user ID: sej02002

RAD40 8307



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/10oct21b.b/gc21102.d Instrument ID: HP16334.i
Injection date and time: 21-OCT-2010 19:53 Analyst ID: SEJ02002

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: SMQC
Calibration date and time: 21-OCT-2010 19:57
Date, time and analyst ID of latest file update: 21-Oct-2010 20:11 Automation

Sample Name: LCS1G71 Lab Sample ID: LCS1G71

Digitally signed by Sara E. Johnson
on 10/21/2010 at 20:11.
Target 3.5 esignature user ID: sej02002

RAD48 0388

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/10oct21b.b/gc21102.d Instrument ID: HP16334.i
Injection date and time: 21-OCT-2010 19:53 Analyst ID: SEJ02002

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: SMQC
Calibration date and time: 21-OCT-2010 19:57
Date, time and analyst ID of latest file update: 21-Oct-2010 20:11 Automation

Sample Name: LCS1G71 Lab Sample ID: LCS1G71

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(1)	2.081	45	436826	4.578
31) Acetonitrile	(4)	4.166	41	157379	40.662
36)*t-Butyl Alcohol-d10	(4)	4.379	65	131714	50.000
46) Vinyl Acetate	(1)	5.476	43	669983	10.518
61)$Dibromofluoromethane	(1)	6.927	113	707845	10.732
70)$1,2-Dichloroethane-d4	(1)	7.384	102	134064	10.236
77)*Fluorobenzene	(1)	7.829	96	2938661	10.000
93) 2-Chloroethyl Vinyl Ether	(1)	9.354	63	149774	5.625
97)$Toluene-d8	(2)	9.823	98	2987231	10.219
110)*Chlorobenzene-d5	(2)	11.249	117	2187178	10.000
122) cis-1,4-Dichloro-2-Butene	(4)	12.158	88	91793	11.912
125) Cyclohexanone	(4)	12.194	55	130273	130.100
126)$4-Bromofluorobenzene	(2)	12.231	95	989427	9.850
143)*1,4-Dichlorobenzene-d4	(3)	13.103	152	1227745	10.000
149) Hexachloroethane	(1)	13.578	117	298617	4.680

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Sara E. Johnson
on 10/21/2010 at 20:11.
Target 3.5 esignature user ID: sej02002

RAD40 0309

Data File: /chem2/HP16334.i/10oct21b.b/gc21t02.d

Date : 21-OCT-2010 14:19

Client ID: 50ng BFB

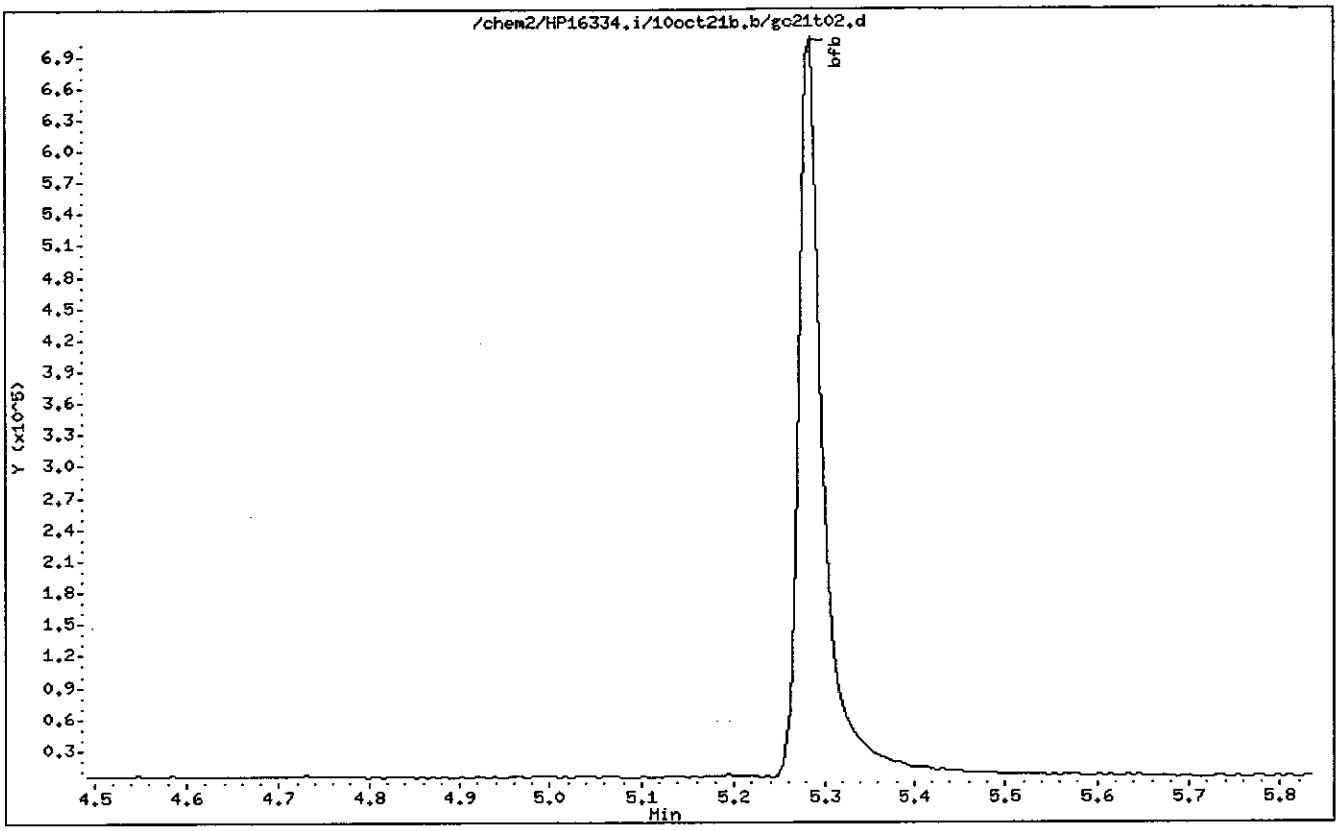
Instrument: HP16334.i

Sample Info: 50ng BFB;BFB MAY12-10;1;3;;

Operator: JML01693

Column phase: DB-624

Column diameter: 0.25



RAD40 0310

Digitally signed by Jason M. Long on 10/21/2010 at 15:14.
Target 3.5 esignature user ID: jml01693

Data File: /chem2/HP16334.i/10oct21b.b/gc21t02.d

Date : 21-OCT-2010 14:19

Client ID: 50ng BFB

Instrument: HP16334.i

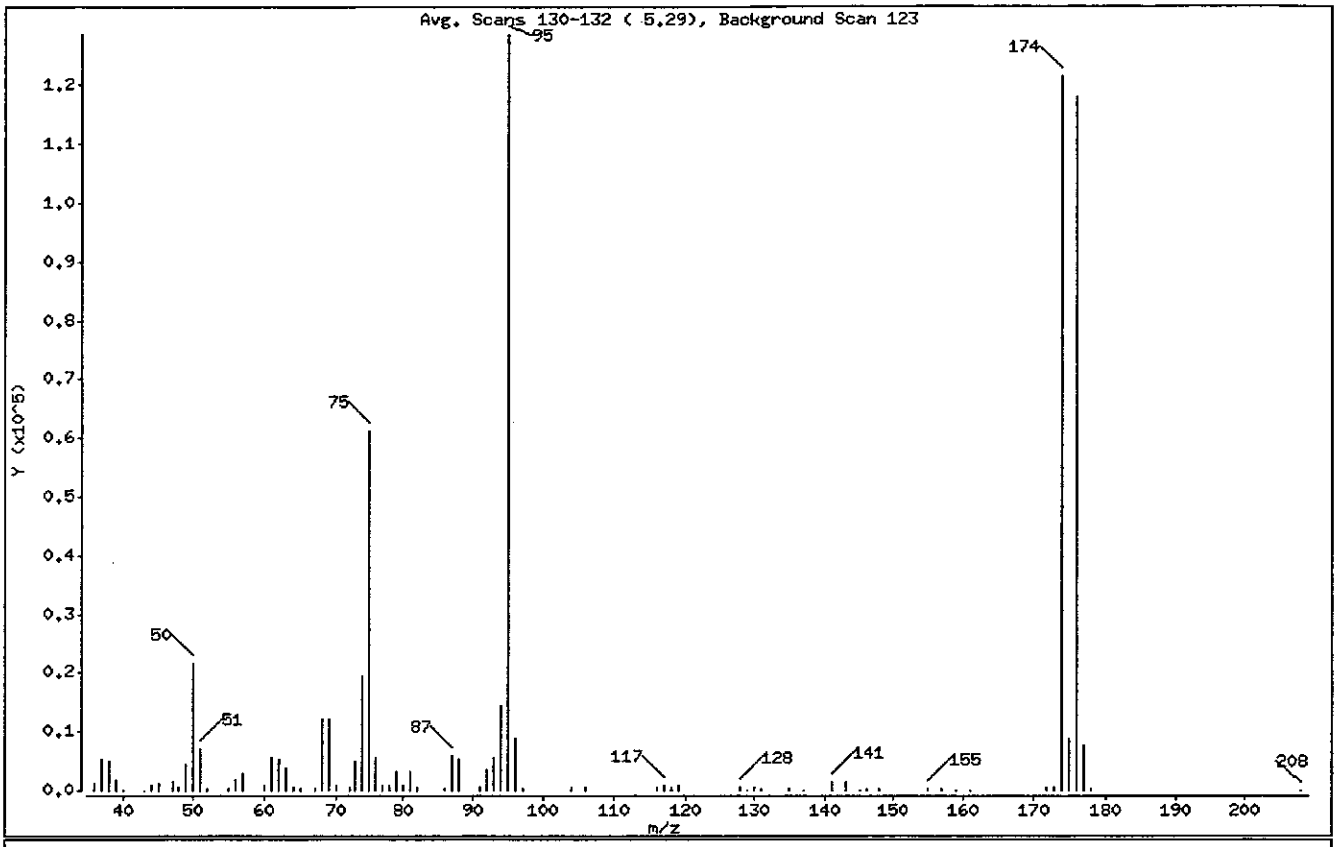
Sample Info: 50ng BFB;BFB MAY12-10;1;3;;

Operator: JML01693

Column phase: DB-624

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	16.74
75	30.00 - 60.00% of mass 95	47.63
96	5.00 - 9.00% of mass 95	6.82
173	Less than 2.00% of mass 174	0.40 (0.43)
174	50.00 - 100.00% of mass 95	94.50
175	5.00 - 9.00% of mass 174	6.86 (7.26)
176	95.00 - 101.00% of mass 174	91.69 (97.03)
177	5.00 - 9.00% of mass 176	5.95 (6.49)

RAD40 6311

Digitally signed by Jason M. Long on 10/21/2010 at 15:14.
Target 3.5 esignature user ID: jml01693

Data File: /chem2/HP16334.i/10oct21b.b/gc21t02.d

Date : 21-OCT-2010 14:19

Client ID: 50ng BFB

Instrument: HP16334.i

Sample Info: 50ng BFB;BFB MAY12-10;1;3;;

Operator: JML01693

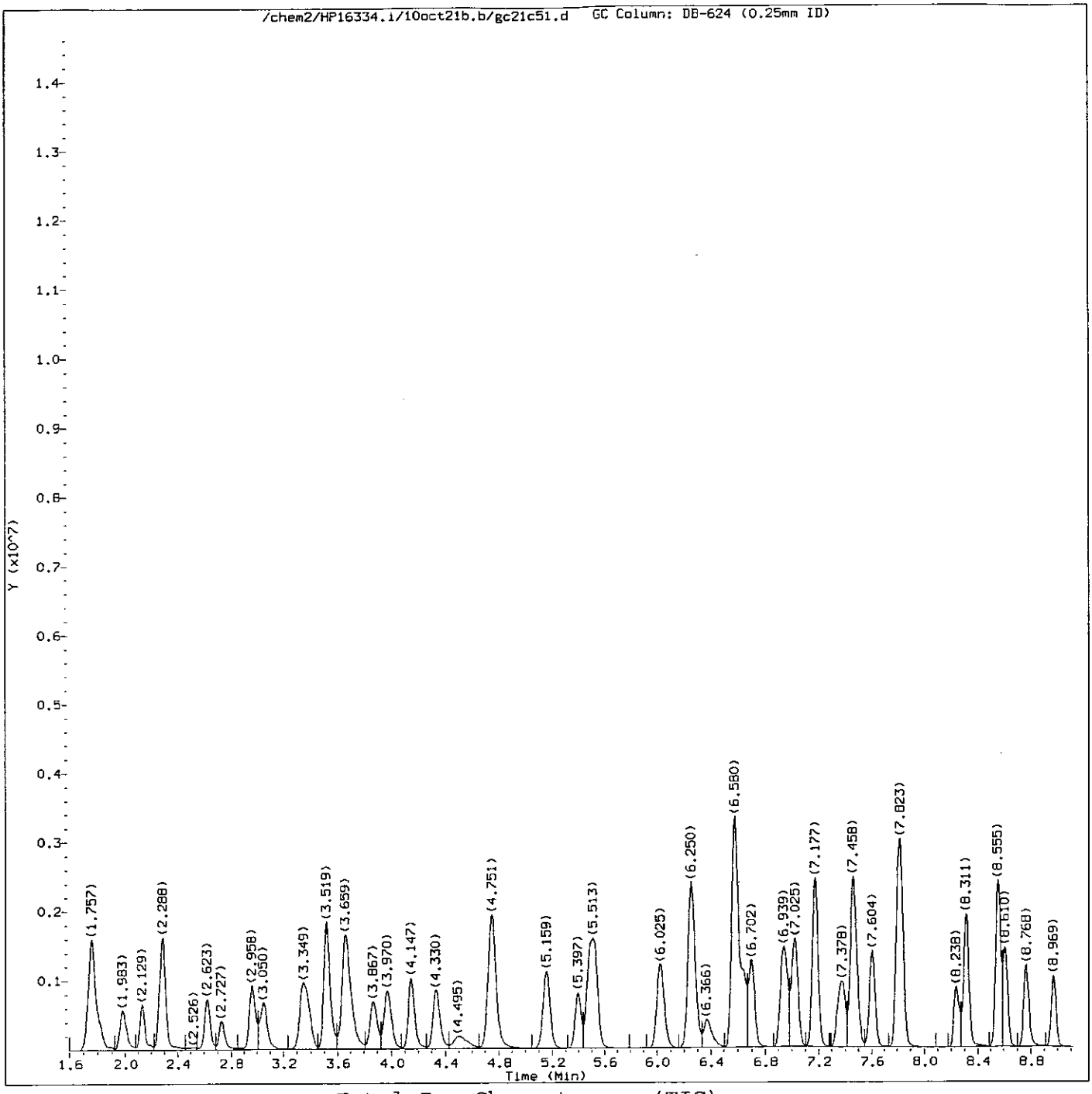
Column phase: DB-624

Column diameter: 0.25

Data File: gc21t02.d
Spectrum: Avg. Scans 130-132 (5.29), Background Scan 123
Location of Maximum: 95.00
Number of points: 77

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1106	63.00	3990	88.00	5340	141.00	1418
37.00	5190	64.00	544	91.00	518	143.00	1408
38.00	5062	65.00	387	92.00	3486	145.00	99
39.00	1807	67.00	205	93.00	5485	146.00	176
40.00	34	68.00	12090	94.00	14559	148.00	343
43.00	86	69.00	12112	95.00	128688	155.00	267
44.00	771	70.00	1007	96.00	8781	157.00	223
45.00	1103	72.00	528	97.00	308	159.00	97
47.00	1502	73.00	5120	104.00	485	161.00	85
48.00	701	74.00	19600	106.00	617	172.00	502
49.00	4521	75.00	61296	116.00	559	173.00	520
50.00	21544	76.00	5533	117.00	911	174.00	121608
51.00	7039	77.00	882	118.00	510	175.00	8823
52.00	323	78.00	818	119.00	763	176.00	118000
55.00	228	79.00	3330	128.00	574	177.00	7661
56.00	1652	80.00	1020	129.00	113	178.00	185
57.00	2869	81.00	3326	130.00	525	208.00	60
60.00	1032	82.00	666	131.00	369		
61.00	5496	86.00	187	135.00	204		
62.00	5408	87.00	6018	137.00	138		

Digitally signed by Jason M. Long on 10/21/2010 at 15:14.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

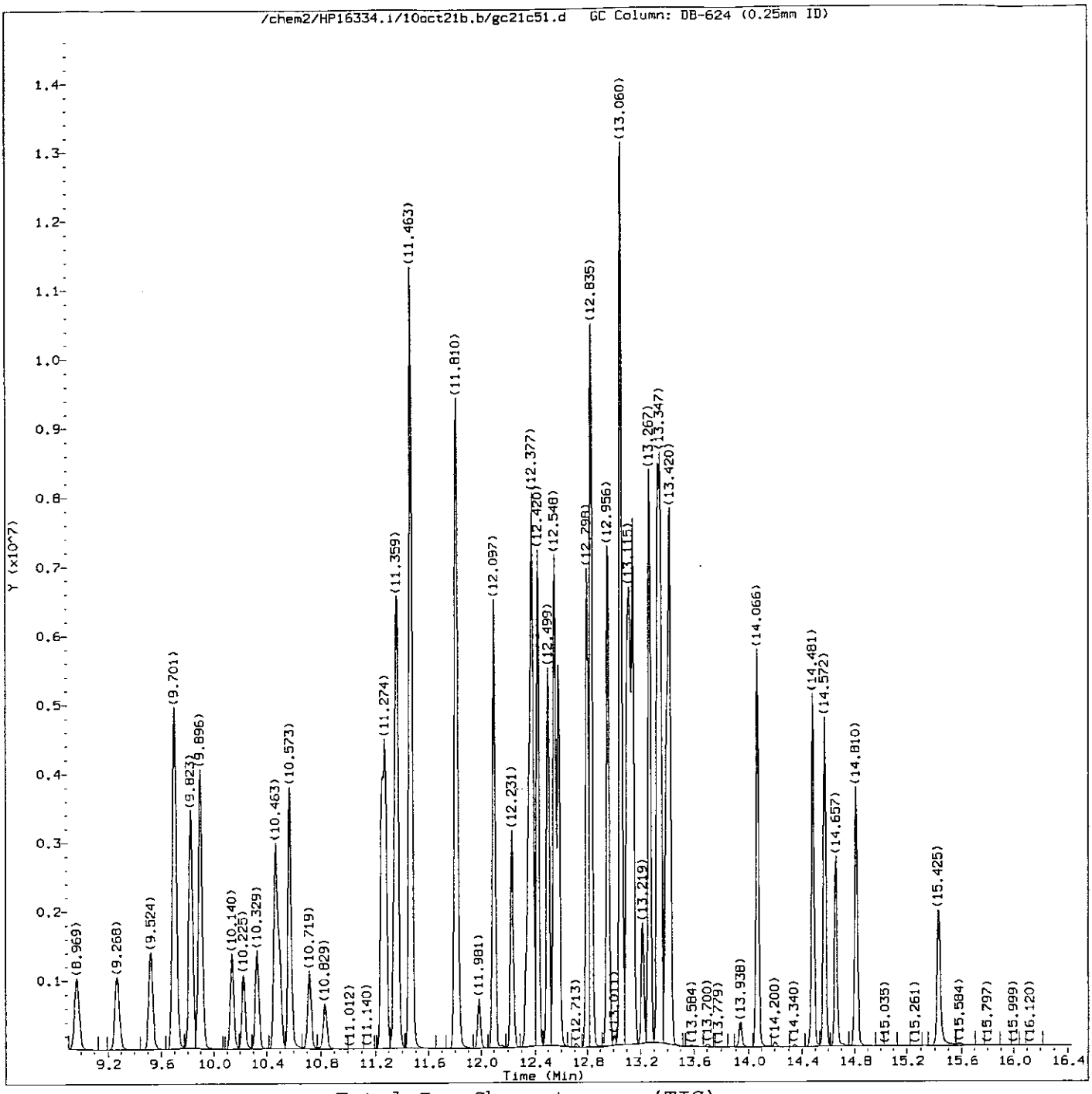
Data File: /chem2/HP16334.i/10oct21b.b/gc21c51.d Instrument ID: HP16334.i
Injection date and time: 21-OCT-2010 17:22 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 21-OCT-2010 17:40
Date, time and analyst ID of latest file update: 21-Oct-2010 19:57 sej02002

Sample Name: VSTD010 Lab Sample ID: VSTD010

RAD40 8313

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on 10/21/2010 at 19:57.
Target 3.5 esignature user ID: sej02002



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/10oct21b.b/gc21c51.d Instrument ID: HP16334.i
Injection date and time: 21-OCT-2010 17:22 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 21-OCT-2010 17:40
Date, time and analyst ID of latest file update: 21-Oct-2010 19:57 sej02002

Sample Name: VSTD010 Lab Sample ID: VSTD010

RAD40 0314

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on 10/21/2010 at 19:57.
Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/10oct21b.b/gc21c51.d Instrument ID: HP16334.i
Injection date and time: 21-OCT-2010 17:22 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 21-OCT-2010 17:40
Date, time and analyst ID of latest file update: 21-Oct-2010 19:57 sej02002

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
2) Dichlorodifluoromethane	(1)	1.983	85	1223174	9.525
5) Chloromethane	(1)	2.129	50	993671	8.868
6) Vinyl Chloride	(1)	2.263	62	979361	8.976
9) 1,3-Butadiene	(1)	2.288	39	906754	6.882
10) Bromomethane	(1)	2.623	94	737868	9.258
11) Chloroethane	(1)	2.727	64	539729	8.740
13) Dichlorofluoromethane	(1)	2.958	67	1355681	9.936
15) Trichlorofluoromethane	(1)	3.050	101	1400045	10.376
17) Ethyl Ether	(1)	3.336	59	523723	10.402
18) Freon 123a	(1)	3.367	67	877761	10.340
23) Acrolein	(4)	3.519	56	3079443	441.566
24) 1,1-Dichloroethene	(1)	3.653	96	686586	9.845
25) Freon 113	(1)	3.672	101	736031	10.197
26) Acetone	(4)	3.720	58	295583	98.582
27) Methyl Iodide	(1)	3.867	142	1333982	9.755
29) Carbon Disulfide	(1)	3.970	76	2222931	10.965
32) Allyl Chloride	(1)	4.147	41	1127049	10.921
33) Methyl Acetate	(1)	4.184	43	218954	11.205
34) Methylene Chloride	(1)	4.330	84	750286	9.690
36)*t-Butyl Alcohol-d10	(4)	4.379	65	124105	50.000
38) t-Butyl Alcohol	(4)	4.501	59	668840	231.077
39) Acrylonitrile	(4)	4.726	53	601187	51.795
41) trans-1,2-Dichloroethene	(1)	4.751	96	791217	9.893
40) Methyl Tertiary Butyl Ether	(1)	4.751	73	1520136	9.657
37) 1,2-Dichloroethene (Total)	(1)		96	1643786	19.785
44) n-Hexane	(1)	5.159	57	1060356	10.018
45) 1,1-Dichloroethane	(1)	5.397	63	1341215M	9.985
47) di-Isopropyl Ether	(1)	5.488	45	2343239	10.159
48) 2-Chloro-1,3-Butadiene	(1)	5.531	53	1043590	10.392
49) Ethyl t-Butyl Ether	(1)	6.025	59	1977831	9.579
51) 2,2-Dichloropropane	(1)	6.250	77	1064915	9.955
50) cis-1,2-Dichloroethene	(1)	6.250	96	852569	9.891
52) 2-Butanone	(4)	6.275	43	1540695	99.608
53) Propionitrile	(4)	6.372	54	916453	220.179
55) Methacrylonitrile	(4)	6.580	67	1623849	90.729
56) Bromochloromethane	(1)	6.586	128	370721	10.261
57) Tetrahydrofuran	(4)	6.641	71	459583	91.796
58) Chloroform	(1)	6.702	83	1389275	10.294

M = Compound was manually integrated.
* = Compound is an internal standard.

SND48 8315

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Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/10oct21b.b/gc21c51.d Instrument ID: HP16334.i
Injection date and time: 21-OCT-2010 17:22 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 21-OCT-2010 17:40
Date, time and analyst ID of latest file update: 21-Oct-2010 19:57 sej02002

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
62)$Dibromofluoromethane(mz111)	(1)	6.927	111	692778	10.653
61)$Dibromofluoromethane	(1)	6.927	113	684925	10.727
63) 1,1,1-Trichloroethane	(1)	6.952	97	1181815	10.123
64) Cyclohexane	(1)	7.025	56	1302867	10.119
65) 1,1-Dichloropropene	(1)	7.177	75	1063629	10.175
66) Carbon Tetrachloride	(1)	7.177	117	1088859	10.784
67) Isobutyl Alcohol	(4)	7.354	41	574183	614.428
70)$1,2-Dichloroethane-d4	(1)	7.384	102	125257	9.880
68)$1,2-Dichloroethane-d4(mz104)	(1)	7.384	104	81029	10.083
69)$1,2-Dichloroethane-d4(mz65)	(1)	7.384	65	578540	10.514
72) Benzene	(1)	7.458	78	3128348	10.167
74) 1,2-Dichloroethane	(1)	7.488	62	783191	10.714
73) 1,2-Dichloroethane(mz98)	(1)	7.488	98	74804	10.614
75) t-Amyl Methyl Ether	(1)	7.604	73	1721577	9.717
76) n-Heptane	(1)	7.805	43	1145959	10.290
77)*Fluorobenzene	(1)	7.829	96	2844645	10.000
81) n-Butanol	(4)	8.238	56	944621	1213.183
83) Trichloroethene	(1)	8.311	95	851701	10.159
84) Methylcyclohexane	(1)	8.561	83	1459331	10.211
85) 1,2-Dichloropropane	(1)	8.610	63	811691	10.513
87) Methyl Methacrylate	(4)	8.762	69	286485	9.312
88) Dibromomethane	(1)	8.768	93	367393	10.626
89) 1,4-Dioxane	(4)	8.787	88	129899	663.082
90) Bromodichloromethane	(1)	8.969	83	941923	10.890
91) 2-Nitropropane	(4)	9.268	41	879441	94.467
94) cis-1,3-Dichloropropene	(1)	9.524	75	1056773	10.613
96) 4-Methyl-2-Pentanone	(1)	9.701	43	4049658	114.728
97)$Toluene-d8	(2)	9.823	98	2823868	10.016
98)$Toluene-d8(mz100)	(2)	9.823	100	1827687	9.877
101) Toluene	(2)	9.896	92	2062838	10.190
102) trans-1,3-Dichloropropene	(2)	10.140	75	891772	10.979
103) Ethyl Methacrylate	(2)	10.225	69	617601	10.696
104) 1,1,2-Trichloroethane	(2)	10.329	97	513676	10.516
105) Tetrachloroethene	(2)	10.463	166	993968	10.188
106) 1,3-Dichloropropane	(2)	10.493	76	879778	10.544
107) 2-Hexanone	(2)	10.573	43	2732714	113.067
108) Dibromochloromethane	(2)	10.719	129	630796	11.064
109) 1,2-Dibromoethane	(2)	10.829	107	470212	10.547

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 10/21/2010 at 19:57.
Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/10oct21b.b/gc21c51.d Instrument ID: HP16334.i
Injection date and time: 21-OCT-2010 17:22 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 21-OCT-2010 17:40
Date, time and analyst ID of latest file update: 21-Oct-2010 19:57 sej02002

Sample Name: VSTD010 Lab Sample ID: VSTD010

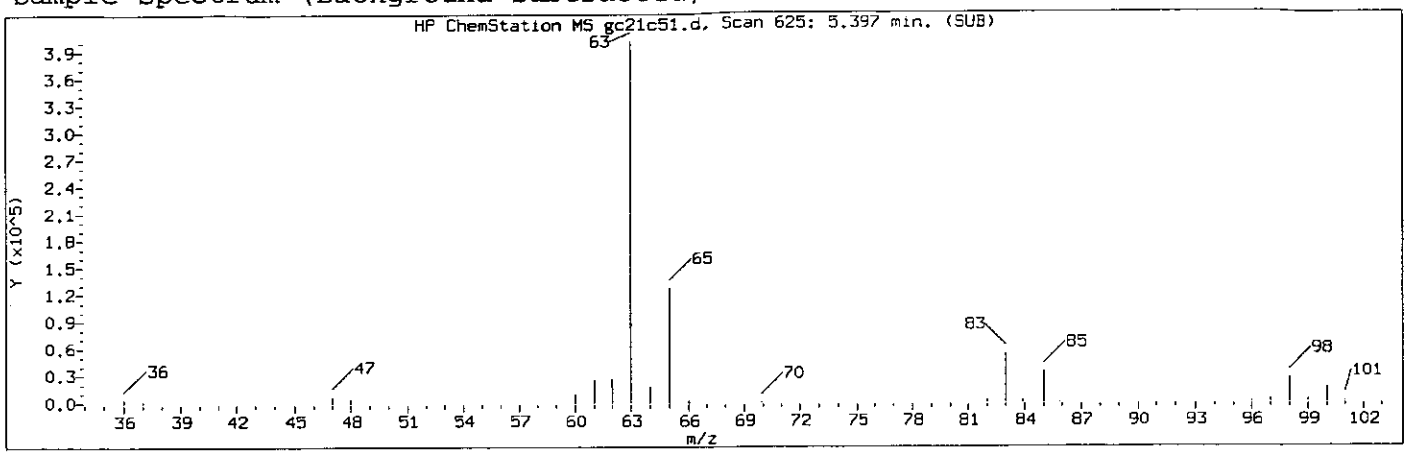
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
110) *Chlorobenzene-d5	(2)	11.249	117	2109605	10.000
112) Chlorobenzene	(2)	11.274	112	2396673	10.336
113) 1,1,1,2-Tetrachloroethane	(2)	11.347	131	831563	10.687
114) Ethylbenzene	(2)	11.365	91	4121963	10.571
117) m+p-Xylene	(2)	11.463	106	3291159	21.150
115) Xylene (Total)	(2)		106	4909026	31.653
118) o-Xylene	(2)	11.804	106	1617867	10.502
119) Styrene	(2)	11.816	104	2551959	11.160
120) Bromoform	(2)	11.981	173	340240	11.688
121) Isopropylbenzene	(2)	12.097	105	4151809	10.487
126) $4-Bromofluorobenzene	(2)	12.231	95	954402	9.850
127) $4-Bromofluorobenzene(mz174)	(2)	12.231	174	882942	9.921
128) 1,1,2,2-Tetrachloroethane	(3)	12.335	83	616640	10.938
129) Bromobenzene	(3)	12.359	156	1024168	10.239
130) trans-1,4-Dichloro-2-Butene	(4)	12.377	53	1158515	97.389
131) 1,2,3-Trichloropropane	(3)	12.377	110	170701	10.900
132) n-Propylbenzene	(3)	12.420	91	5168158	10.478
133) 2-Chlorotoluene	(3)	12.499	126	1035944	10.231
134) 1,3,5-Trimethylbenzene	(3)	12.548	105	3590072	10.554
135) 4-Chlorotoluene	(3)	12.578	126	1058962	10.235
137) tert-Butylbenzene	(3)	12.798	134	842479	10.908
138) Pentachloroethane	(3)	12.828	167	673355	11.300
139) 1,2,4-Trimethylbenzene	(3)	12.835	105	3883813	10.736
140) sec-Butylbenzene	(3)	12.956	105	4737482	10.501
141) p-Isopropyltoluene	(3)	13.054	119	4270688	10.664
142) 1,3-Dichlorobenzene	(3)	13.060	146	2212815	10.594
143) *1,4-Dichlorobenzene-d4	(3)	13.103	152	1263864	10.000
144) 1,4-Dichlorobenzene	(3)	13.121	146	2202433	10.198
145) 1,2,3-Trimethylbenzene	(3)	13.145	120	1675801	10.613
146) Benzyl Chloride	(3)	13.219	126	258596	10.826
147) n-Butylbenzene	(3)	13.347	92	2126526	10.711
148) 1,2-Dichlorobenzene	(3)	13.395	146	1918320	10.374
150) 1,2-Dibromo-3-Chloropropane	(4)	13.938	155	79575	8.980
153) 1,2,4-Trichlorobenzene	(3)	14.481	180	1505247	10.319
154) Hexachlorobutadiene	(3)	14.572	225	834112	10.214
155) Naphthalene	(3)	14.657	128	2030542	10.735
156) 1,2,3-Trichlorobenzene	(3)	14.810	180	1177631	10.506

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

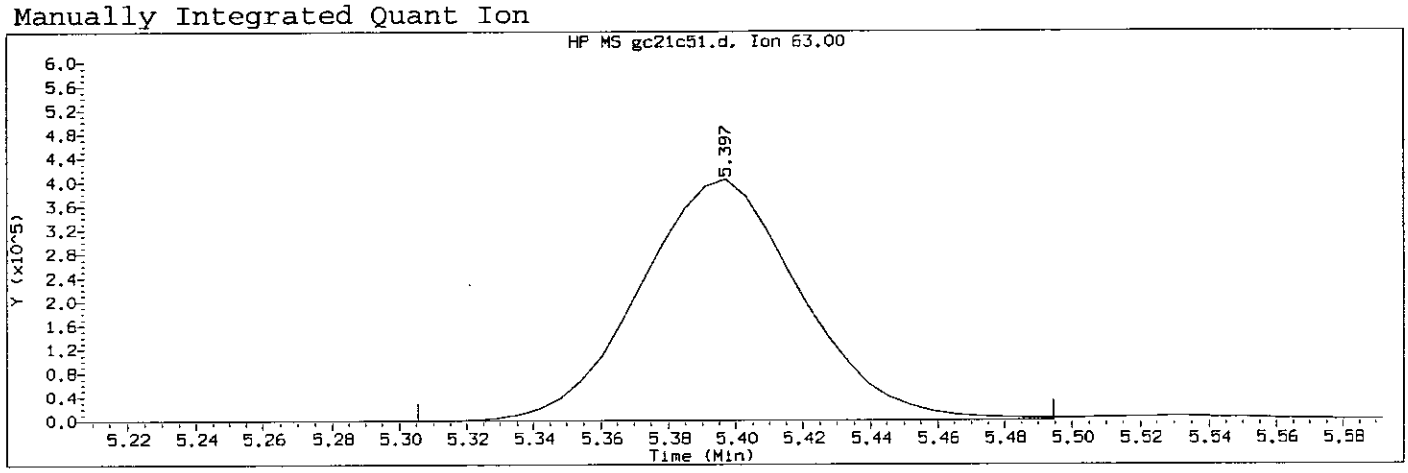
RAD48 0317

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on 10/21/2010 at 19:57.
Target 3.5 esignature user ID: sej02002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10oct21b.b/gc21c51.d Instrument ID: HP16334.i
Injection date and time: 21-OCT-2010 17:22 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 21-OCT-2010 17:40
Date, time and analyst ID of latest file update: 21-Oct-2010 19:57 sej02002

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number : 45
Compound Name : 1,1-Dichloroethane
Scan Number : 625
Retention Time (minutes): 5.397
Quant Ion : 63.00
Area (flag) : 1341215M
On-Column Amount (ng) : 9.9850
Integration start scan : 609 Integration stop scan: 640
Y at integration start : 0 Y at integration end: 0

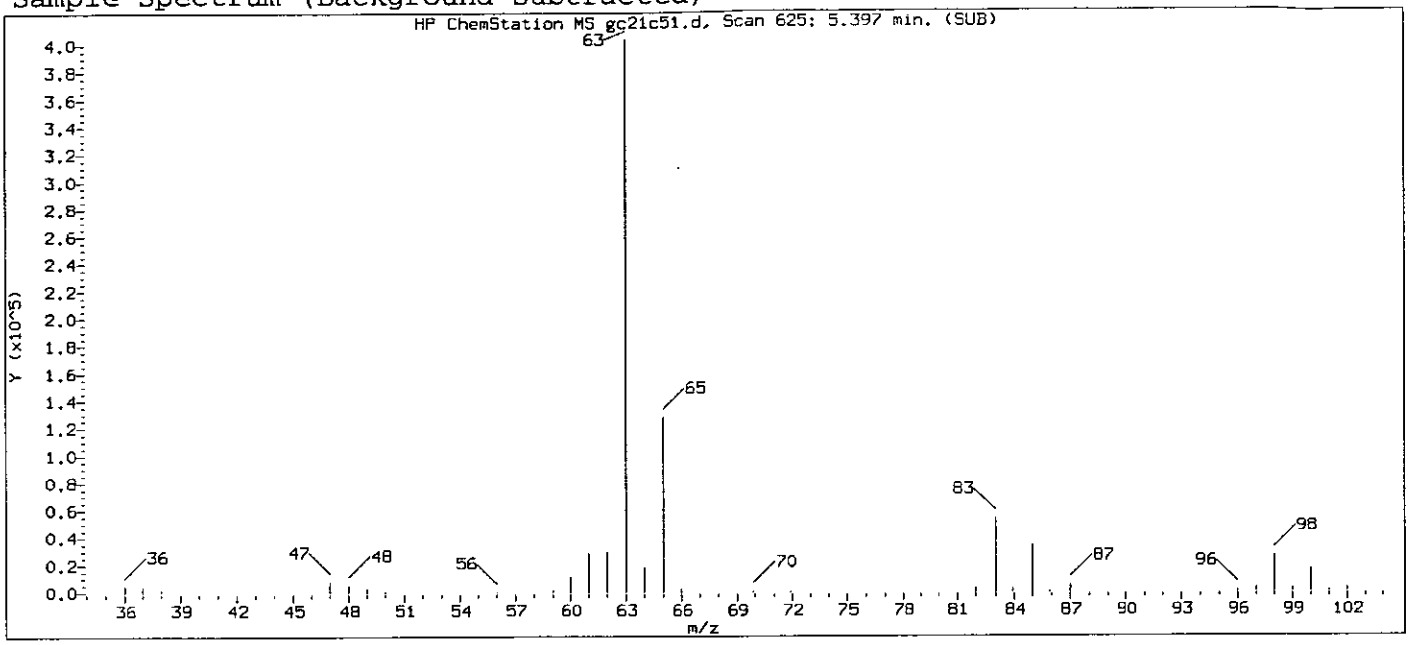
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Sara E. Johnson
on 10/21/2010 at 19:57.
Target 3.5 esignature user ID: sej02002

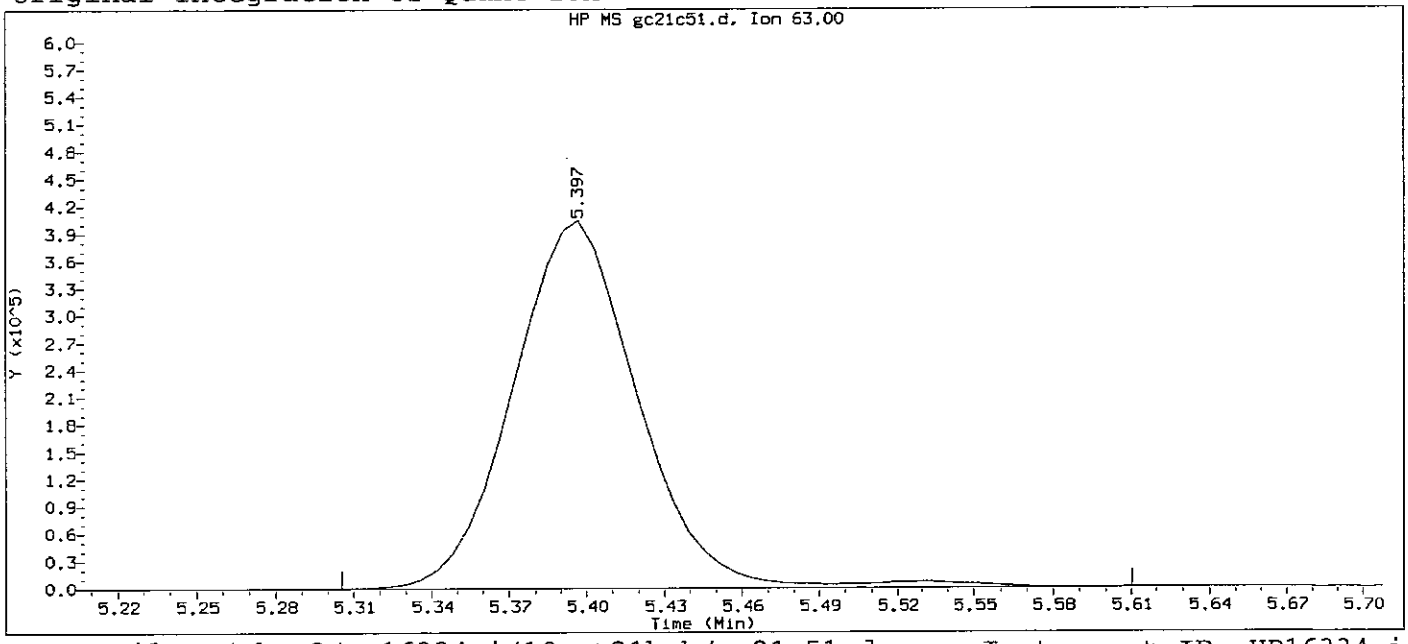
RAD48 0318

GC/MS audit/management approval: _____ 10/25/10

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10oct21b.b/gc21c51.d Instrument ID: HP16334.i
Injection date and time: 21-OCT-2010 17:22 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 21-OCT-2010 17:40
Date, time and analyst ID of latest file update: 21-Oct-2010 17:40 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number : 45
Compound Name : 1,1-Dichloroethane
Scan Number : 625
Retention Time (minutes): 5.397
Quant Ion : 63.00
Area : 1364346
On-column Amount (ng) : 10.1572
Integration start scan : 609 Integration stop scan: 659
Y at integration start : 0 Y at integration end: 0

RAD40 0319

Digitally signed by Sara E. Johnson on 10/21/2010 at 19:57.
Target 3.5 esignature user ID: sej02002

Raw QC Data

VBLKG71 Lancaster Laboratories Analysis Summary for GC/MS Volatiles VBLKG71

Data file: /chem2/HP16334.i/10oct21b.b/gc21b51.d Injection date and time: **21-OCT-2010 19:10**
Data file Sample Info. Line: VBLKG71;VBLKG71;1;3;; Instrument ID: **HP16334.i** Batch: **G102942AA**
Date, time and analyst ID of latest file update: 21-Oct-2010 20:02 sej02002

Blank Data file reference: **/chem2/HP16334.i/10oct21b.b/gc21b51.d**

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: **8260W25+SM**
Calibration date and time (Last Method Edit): 21-OCT-2010 19:57
Mid Level Daily Calibration Standard Reference: **/chem2/HP16334.i/10oct21b.b/gc21c51.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
36) t-Butyl Alcohol-d10	4.367(0.012)	456	65	123120 (-1)	50.00	
77) Fluorobenzene	7.823(0.006)	1023	96	2620881 (-8)	10.00	
110) Chlorobenzene-d5	11.250(0.000)	1585	117	1945189 (-8)	10.00	
143) 1,4-Dichlorobenzene-d4	13.103(0.000)	1889	152	1111685 (-12)	10.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
61) Dibromofluoromethane	(1)	6.915(0.001)	113	635072	10.796	108%		77 - 114
70) 1,2-Dichloroethane-d4	(1)	7.378(0.000)	102	120851	10.346	103%		74 - 113
97) Toluene-d8	(2)	9.817(0.001)	98	2565484	9.869	99%		77 - 110
126) 4-Bromofluorobenzene	(2)	12.231(0.000)	95	847915	9.491	95%		78 - 110

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
2) Dichlorodifluoromethane	(1)			Not Detected					0.1
4) Dimethyl ether	(1)			Not Detected					0.1
5) Chloromethane	(1)			Not Detected					0.2
6) Vinyl Chloride	(1)			Not Detected					0.1
9) 1,3-Butadiene	(1)			Not Detected					0.1
10) Bromomethane	(1)			Not Detected					0.1
11) Chloroethane	(1)			Not Detected					0.1
13) Dichlorofluoromethane	(1)			Not Detected					0.2
15) Trichlorofluoromethane	(1)			Not Detected					0.1
17) Ethyl Ether	(1)			Not Detected					0.1
18) Freon 123a	(1)			Not Detected					0.2
23) Acrolein	(4)			Not Detected					5
24) 1,1-Dichloroethene	(1)			Not Detected					0.1
25) Freon 113	(1)			Not Detected					0.2
26) Acetone	(4)			Not Detected					3
27) Methyl Iodide	(1)			Not Detected					0.1
29) Carbon Disulfide	(1)			Not Detected					0.4
32) Allyl Chloride	(1)			Not Detected					0.1
33) Methyl Acetate	(1)			Not Detected					0.3
31) Acetonitrile	(4)			Not Detected					7
34) Methylene Chloride	(1)			Not Detected					0.2
38) t-Butyl Alcohol	(4)			Not Detected					4
39) Acrylonitrile	(4)			Not Detected					1
41) trans-1,2-Dichloroethene	(1)			Not Detected					0.1
37) 1,2-Dichloroethene (Total)	(1)			Not Detected					0.1
40) Methyl Tertiary Butyl Ether	(1)			Not Detected					0.1
44) n-Hexane	(1)			Not Detected					0.1
45) 1,1-Dichloroethane	(1)			Not Detected					0.1
46) Vinyl Acetate	(1)			Not Detected					0.2
47) di-Isopropyl Ether	(1)			Not Detected					0.1
48) 2-Chloro-1,3-Butadiene	(1)			Not Detected					0.1
49) Ethyl t-Butyl Ether	(1)			Not Detected					0.1
51) 2,2-Dichloropropane	(1)			Not Detected					0.1
50) cis-1,2-Dichloroethene	(1)			Not Detected					0.1

RAD46 8321

Digitally signed by Sara E. Johnson on 10/21/2010 at 20:15. Target 3.5 esignature user ID: sej02002

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

VBLKG71

Data file: /chem2/HP16334.i/10oct21b.b/gc21b51.d
Data file Sample Info. Line: VBLKG71;VBLKG71;1;3;;
Date, time and analyst ID of latest file update: 21-Oct-2010 20:02 sej02002

Injection date and time: **21-OCT-2010 19:10**
Instrument ID: **HP16334.i** Batch: **G102942AA**

Blank Data file reference: **/chem2/HP16334.i/10oct21b.b/gc21b51.d**

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: **8260W25+SM**
Calibration date and time (Last Method Edit): 21-OCT-2010 19:57
Mid Level Daily Calibration Standard Reference: **/chem2/HP16334.i/10oct21b.b/gc21c51.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
52) 2-Butanone	(4)				Not Detected					1
53) Propionitrile	(4)				Not Detected					2
55) Methacrylonitrile	(4)				Not Detected					1
56) Bromochloromethane	(1)				Not Detected					0.1
57) Tetrahydrofuran	(4)				Not Detected					2
58) Chloroform	(1)				Not Detected					0.1
63) 1,1,1-Trichloroethane	(1)				Not Detected					0.1
64) Cyclohexane	(1)				Not Detected					0.1
65) 1,1-Dichloropropene	(1)				Not Detected					0.1
66) Carbon Tetrachloride	(1)				Not Detected					0.1
67) Isobutyl Alcohol	(4)				Not Detected					10
72) Benzene	(1)				Not Detected					0.1
74) 1,2-Dichloroethane	(1)				Not Detected					0.1
75) t-Amyl Methyl Ether	(1)				Not Detected					0.1
76) n-Heptane	(1)				Not Detected					0.2
81) n-Butanol	(4)				Not Detected					20
83) Trichloroethene	(1)				Not Detected					0.1
84) Methylcyclohexane	(1)				Not Detected					0.1
85) 1,2-Dichloropropane	(1)				Not Detected					0.1
88) Dibromomethane	(1)				Not Detected					0.1
89) 1,4-Dioxane	(4)				Not Detected					20
87) Methyl Methacrylate	(4)				Not Detected					0.1
90) Bromodichloromethane	(1)				Not Detected					0.1
91) 2-Nitropropane	(4)				Not Detected					1
93) 2-Chloroethyl Vinyl Ether	(1)				Not Detected					0.1
94) cis-1,3-Dichloropropene	(1)				Not Detected					0.1
96) 4-Methyl-2-Pentanone	(1)				Not Detected					1
101) Toluene	(2)				Not Detected					0.1
102) trans-1,3-Dichloropropene	(2)				Not Detected					0.1
103) Ethyl Methacrylate	(2)				Not Detected					0.1
104) 1,1,2-Trichloroethane	(2)				Not Detected					0.1
105) Tetrachloroethene	(2)				Not Detected					0.1
106) 1,3-Dichloropropane	(2)				Not Detected					0.1
107) 2-Hexanone	(2)				Not Detected					1
108) Dibromochloromethane	(2)				Not Detected					0.1
109) 1,2-Dibromoethane	(2)				Not Detected					0.1
112) Chlorobenzene	(2)				Not Detected					0.1
113) 1,1,1,2-Tetrachloroethane	(2)				Not Detected					0.1
114) Ethylbenzene	(2)				Not Detected					0.1
117) m+p-Xylene	(2)				Not Detected					0.1
115) Xylene (Total)	(2)				Not Detected					0.1
118) o-Xylene	(2)				Not Detected					0.1
119) Styrene	(2)				Not Detected					0.1
120) Bromoform	(2)				Not Detected					0.1
121) Isopropylbenzene	(2)				Not Detected					0.1
122) cis-1,4-Dichloro-2-Butene	(4)				Not Detected					0.4
125) Cyclohexanone	(4)				Not Detected					5
128) 1,1,2,2-Tetrachloroethane	(3)				Not Detected					0.1
129) Bromobenzene	(3)				Not Detected					0.1
130) trans-1,4-Dichloro-2-Butene	(4)				Not Detected					1
131) 1,2,3-Trichloropropane	(3)				Not Detected					0.3
132) n-Propylbenzene	(3)				Not Detected					0.1
133) 2-Chlorotoluene	(3)				Not Detected					0.1
135) 4-Chlorotoluene	(3)				Not Detected					0.1
134) 1,3,5-Trimethylbenzene	(3)				Not Detected					0.1

RAD40 0322

Digitally signed by Sara E. Johnson on 10/21/2010 at 20:15. Target 3.5 esignature user ID: sej02002

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

VBLKG71

Data file: /chem2/HP16334.i/10oct21b.b/gc21b51.d
Data file Sample Info. Line: VBLKG71;VBLKG71;1;3;;
Date, time and analyst ID of latest file update: 21-Oct-2010 20:02 sej02002

Injection date and time: **21-OCT-2010 19:10**
Instrument ID: **HP16334.i** Batch: **G102942AA**

Blank Data file reference: **/chem2/HP16334.i/10oct21b.b/gc21b51.d**

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: **8260W25+SM**
Calibration date and time (Last Method Edit): 21-OCT-2010 19:57
Mid Level Daily Calibration Standard Reference: **/chem2/HP16334.i/10oct21b.b/gc21c51.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

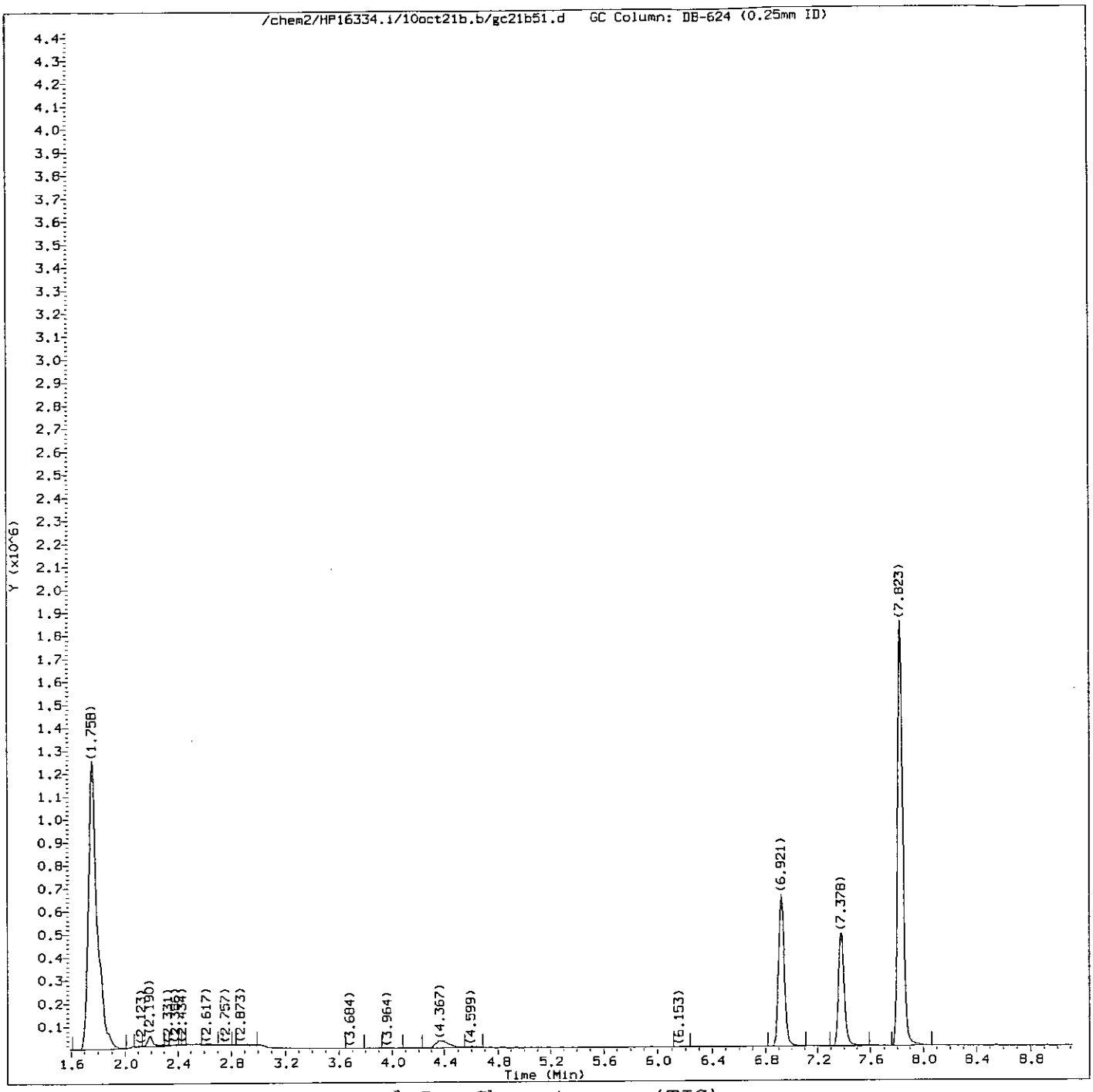
Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
138) Pentachloroethane	(3)				Not Detected					0.2
137) tert-Butylbenzene	(3)				Not Detected					0.1
139) 1,2,4-Trimethylbenzene	(3)				Not Detected					0.1
140) sec-Butylbenzene	(3)				Not Detected					0.1
142) 1,3-Dichlorobenzene	(3)				Not Detected					0.1
141) p-Isopropyltoluene	(3)				Not Detected					0.1
144) 1,4-Dichlorobenzene	(3)				Not Detected					0.1
145) 1,2,3-Trimethylbenzene	(3)				Not Detected					0.1
146) Benzyl Chloride	(3)				Not Detected					0.1
147) n-Butylbenzene	(3)				Not Detected					0.1
148) 1,2-Dichlorobenzene	(3)				Not Detected					0.1
149) Hexachloroethane	(1)				Not Detected					0.1
150) 1,2-Dibromo-3-Chloropropane	(4)				Not Detected					0.2
153) 1,2,4-Trichlorobenzene	(3)				Not Detected					0.1
154) Hexachlorobutadiene	(3)				Not Detected					0.1
155) Naphthalene	(3)				Not Detected					0.1
156) 1,2,3-Trichlorobenzene	(3)				Not Detected					0.1

Total number of targets = 106

Comments:_____

Digitally signed by Sara E. Johnson on 10/21/2010 at 20:15. Target 3.5 esignature user ID: sej02002AD48 8323

Auditor:_____ Date:_____



Total Ion Chromatogram (TIC)

Target Revision 3.5

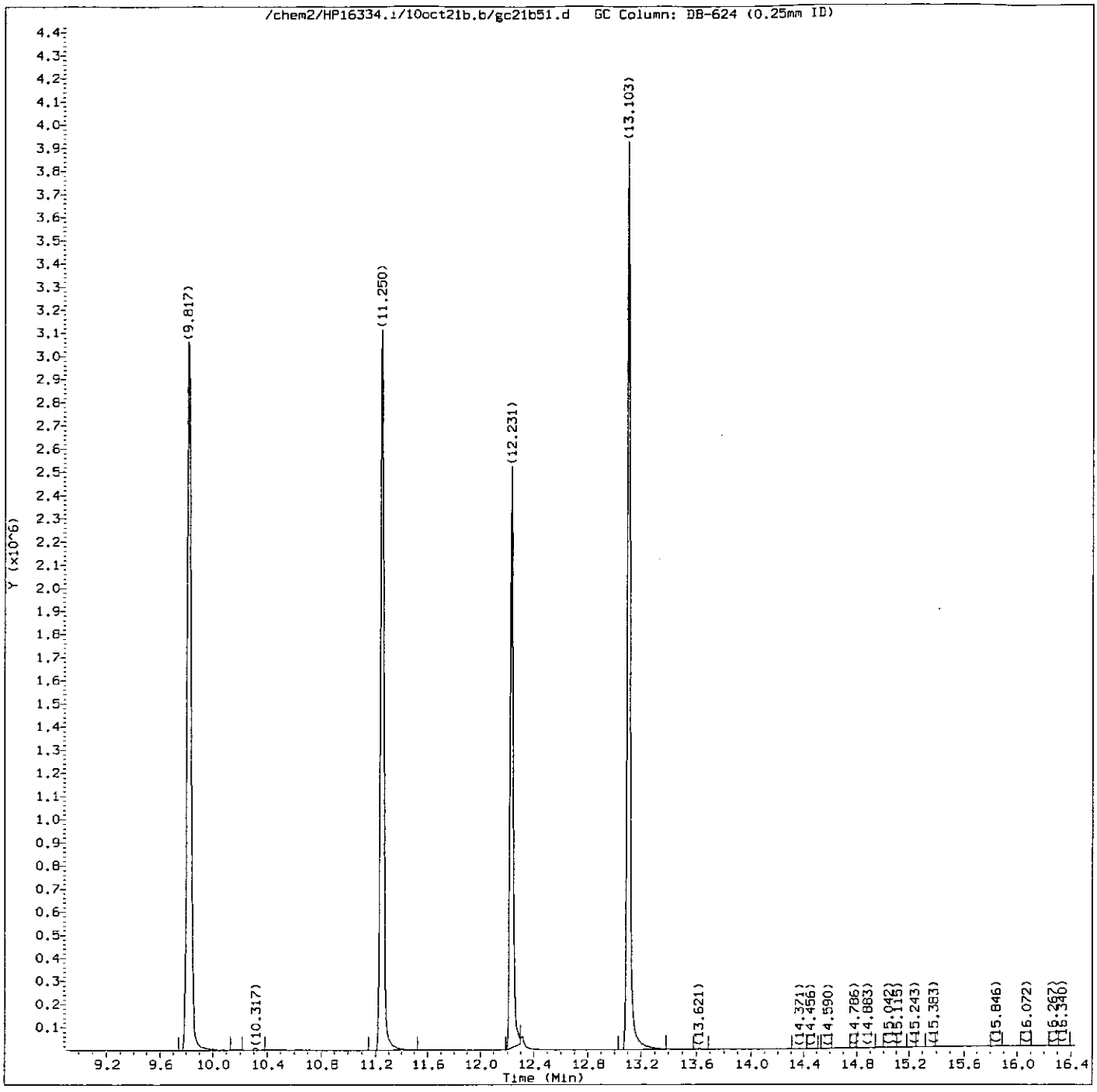
Data File: /chem2/HP16334.i/10oct21b.b/gc21b51.d Instrument ID: HP16334.i
Injection date and time: 21-OCT-2010 19:10 Analyst ID: SEJ02002

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: 8260W25+SM
Calibration date and time: 21-OCT-2010 19:57
Date, time and analyst ID of latest file update: 21-Oct-2010 20:02 sej02002

Sample Name: VBLKG71 Lab Sample ID: VBLKG71

RAD48 0324

Digitally signed by Sara E. Johnson
on 10/21/2010 at 20:15.
Target 3.5 esignature user ID: sej02002



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/10oct21b.b/gc21b51.d Instrument ID: HP16334.i
Injection date and time: 21-OCT-2010 19:10 Analyst ID: SEJ02002

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: 8260W25+SM
Calibration date and time: 21-OCT-2010 19:57
Date, time and analyst ID of latest file update: 21-Oct-2010 20:02 sej02002

Sample Name: VBLKG71 Lab Sample ID: VBLKG71

RAD48 0325

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on 10/21/2010 at 20:15.
Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/10oct21b.b/gc21b51.d Instrument ID: HP16334.i
Injection date and time: 21-OCT-2010 19:10 Analyst ID: SEJ02002

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: 8260W25+SM
Calibration date and time: 21-OCT-2010 19:57
Date, time and analyst ID of latest file update: 21-Oct-2010 20:02 sej02002

Sample Name: VBLKG71 Lab Sample ID: VBLKG71

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
36)*t-Butyl Alcohol-d10	(4)	4.367	65	123120	50.000
61)$Dibromofluoromethane	(1)	6.915	113	635072	10.796
70)$1,2-Dichloroethane-d4	(1)	7.378	102	120851	10.346
77)*Fluorobenzene	(1)	7.823	96	2620881	10.000
97)$Toluene-d8	(2)	9.817	98	2565484	9.869
110)*Chlorobenzene-d5	(2)	11.250	117	1945189	10.000
126)$4-Bromofluorobenzene	(2)	12.231	95	847915	9.491
143)*1,4-Dichlorobenzene-d4	(3)	13.103	152	1111685	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

RAD48 #326

Digitally signed by Sara E. Johnson
on 10/21/2010 at 20:15.
Target 3.5 esignature user ID: sej02002

XXXXXMS

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

6117038MS

Data file: /chem2/HP16334.i/10oct21b.b/gc21s57.d
Data file Sample Info. Line: XXXXXMS;6117038MS;1:3;MS;;DRAPER;
Date, time and analyst ID of latest file update: 25-Oct-2010 11:26 jml01693

Injection date and time: **21-OCT-2010 22:43**
Instrument ID: **HP16334.i** Batch: **G102942AA**

Blank Data file reference: **/chem2/HP16334.i/10oct21b.b/gc21b51.d**

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: **1415-SM**
Calibration date and time (Last Method Edit): 25-OCT-2010 11:22
Mid Level Daily Calibration Standard Reference: **/chem2/HP16334.i/10oct21b.b/gc21c51.d**

Bottle Code: **38A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
36) t-Butyl Alcohol-d10	4.379(0.000)	458	65	131096 (6)	50.00	
77) Fluorobenzene	7.830(0.000)	1024	96	2857889 (0)	10.00	
110) Chlorobenzene-d5	11.250(0.000)	1585	117	2084743 (-1)	10.00	
143) 1,4-Dichlorobenzene-d4	13.103(0.000)	1889	152	1261680 (0)	10.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
61) Dibromofluoromethane	(1)	6.927(0.000)	113	579423	10.592	106%		77 - 114
70) 1,2-Dichloroethane-d4	(1)	7.385(0.000)	102	128944	10.124	101%		74 - 113
97) Toluene-d8	(2)	9.823(0.000)	98	2807525	10.077	101%		77 - 110
126) 4-Bromofluorobenzene	(2)	12.231(0.000)	95	941640	9.834	98%		78 - 110

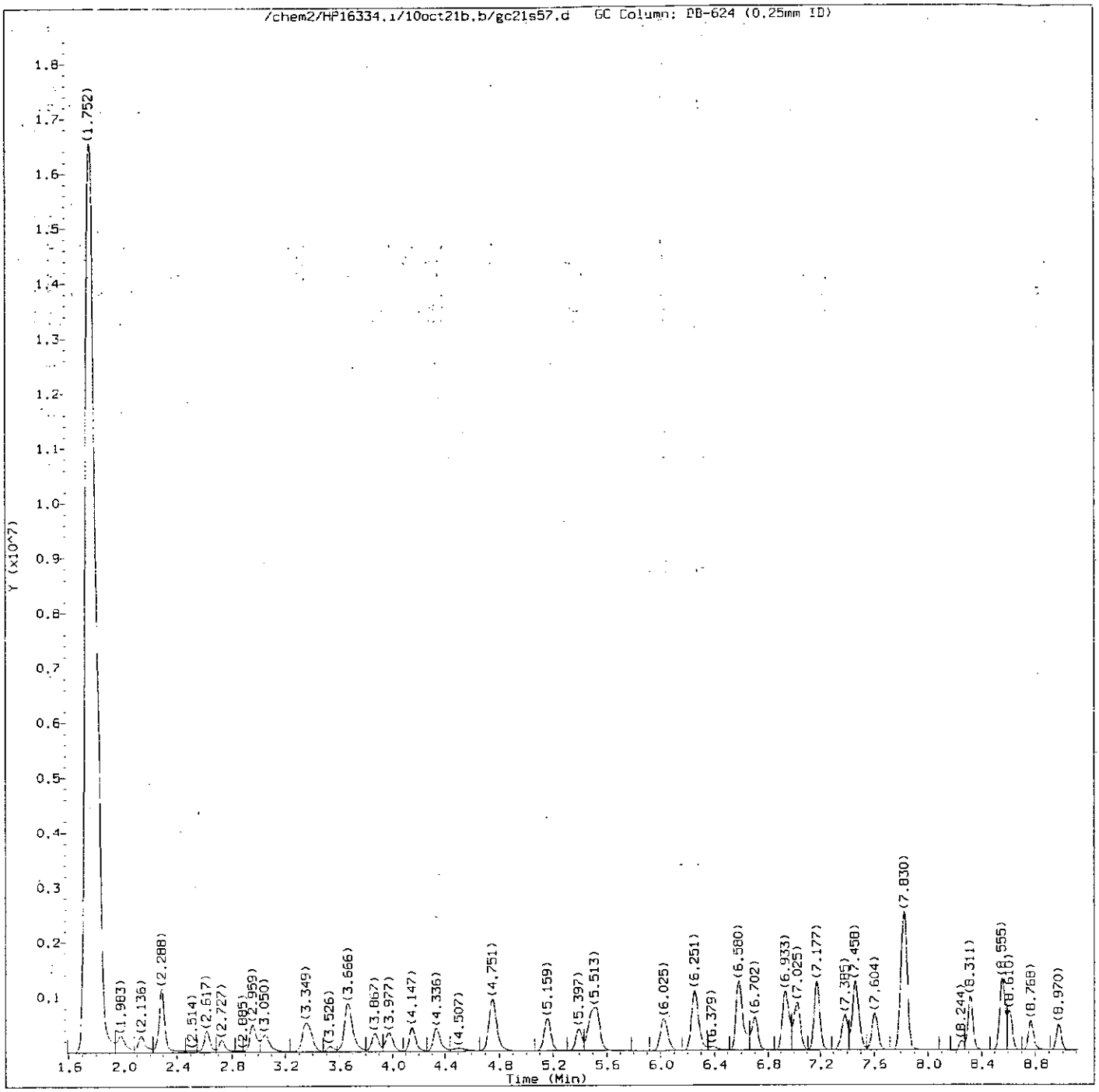
Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
5) Chloromethane	(1)	2.136(-0.000)	50	472570	4.198	4.20			0.2
6) Vinyl Chloride	(1)	2.276(-0.001)	62	512161	4.672	4.67			0.1
10) Bromomethane	(1)	2.617(0.000)	94	355612	4.441	4.44			0.1
15) Trichlorofluoromethane	(1)	3.050(-0.000)	101	750069	5.535	5.53			0.1
24) 1,1-Dichloroethene	(1)	3.660(-0.000)	96	355863	5.079	5.08			0.1
34) Methylene Chloride	(1)	4.336(-0.000)	84	374164	4.810	4.81			0.2
45) 1,1-Dichloroethane	(1)	5.397(-0.000)	63	698122	5.173	5.17			0.1
58) Chloroform	(1)	6.702(-0.000)	83	698297	5.150	5.15			0.1
63) 1,1,1-Trichloroethane	(1)	6.952(-0.000)	97	604158	5.151	5.15			0.1
66) Carbon Tetrachloride	(1)	7.177(-0.000)	117	555654	5.478	5.48			0.1
72) Benzene	(1)	7.458(0.000)	78	1584076	5.124	5.12			0.1
74) 1,2-Dichloroethane	(1)	7.488(0.000)	62	381943	5.201	5.20			0.1
83) Trichloroethene	(1)	8.311(0.000)	95	443248	5.262	5.26			0.1
101) Toluene	(2)	9.896(-0.000)	92	1031984	5.158	5.16			0.1
105) Tetrachloroethene	(2)	10.463(-0.000)	166	505498	5.243	5.24			0.1
112) Chlorobenzene	(2)	11.274(0.000)	112	1172486	5.117	5.12			0.1
146) Benzyl Chloride	(3)	13.219(0.000)	126	108639	4.556	4.56			0.1
155) Naphthalene	(3)	14.658(0.000)	128	936925	4.962	4.96			0.1

Total number of targets = 18

Comments: _____

Digitally signed by Jason M. Long on 10/25/2010 at 11:36. Target 3.5 esignature user ID: jml01693 RAD40 8327

Auditor: _____ Date: 10/27/10



Total Ion Chromatogram (TIC)

Target Revision 3.5

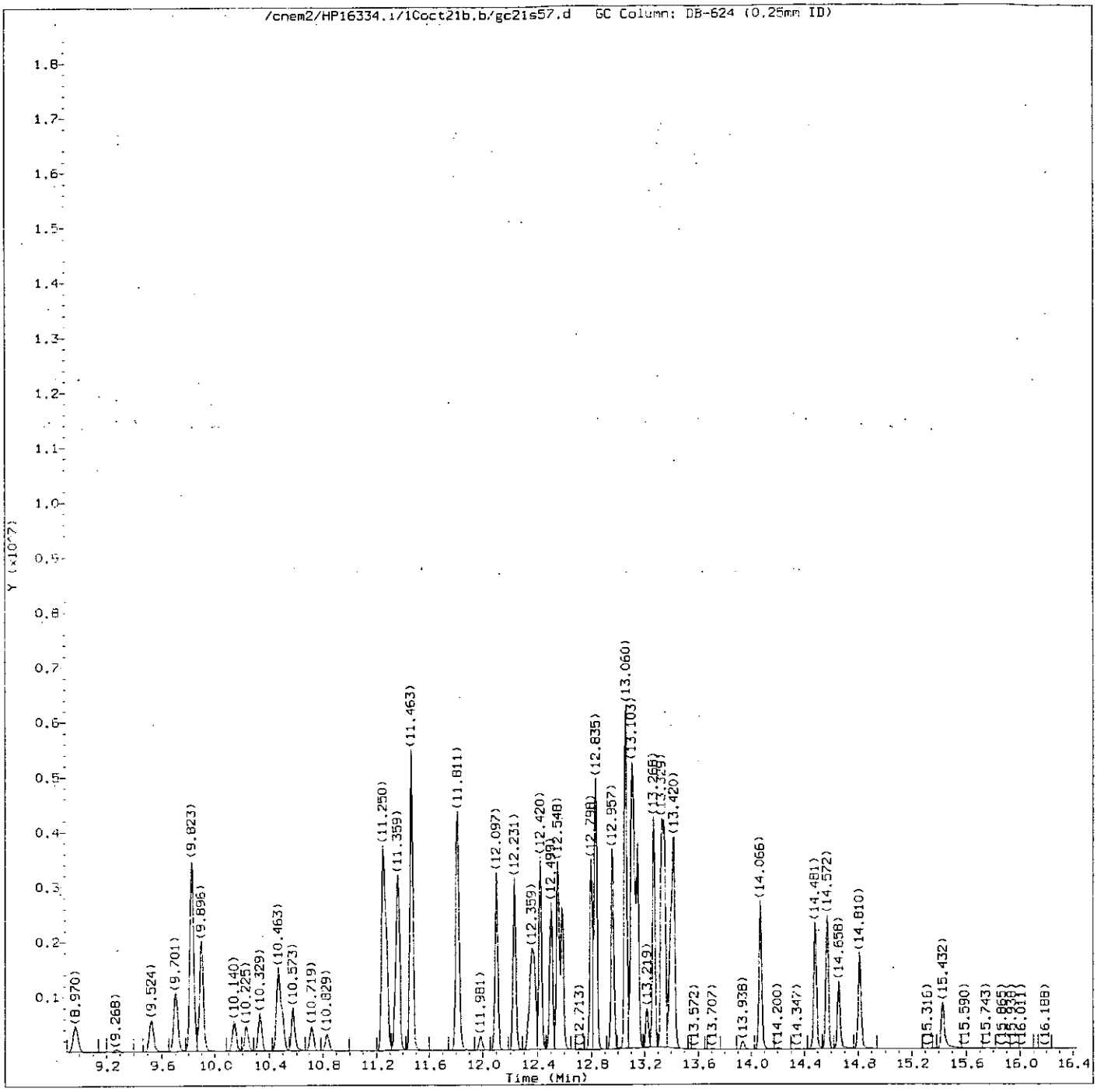
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Injection date and time: 21-OCT-2010 22:43 Analyst ID: SEJ02002

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: 1415-SM
Calibration date and time: 25-OCT-2010 11:22
Date, time and analyst ID of latest file update: 25-Oct-2010 11:26 jml01693

Sample Name: XXXXXMS Lab Sample ID: 6117038MS

RAD40 8328

Digitally signed by Jason M. Long
on 10/25/2010 at 11:36.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/10oct21b.b/gc21s57.d Instrument ID: HP16334.i
Injection date and time: 21-OCT-2010 22:43 Analyst ID: SEJ02002

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: 1415-SM
Calibration date and time: 25-OCT-2010 11:22
Date, time and analyst ID of latest file update: 25-Oct-2010 11:26 jml01693

Sample Name: XXXXXMS Lab Sample ID: 6117038MS

RAD48 8329

Digitally signed by Jason M. Long
on 10/25/2010 at 11:36.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/10oct21b.b/gc21s57.d Instrument ID: HP16334.i
Injection date and time: 21-OCT-2010 22:43 Analyst ID: SEJ02002

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: 1415-SM
Calibration date and time: 25-OCT-2010 11:22
Date, time and analyst ID of latest file update: 25-Oct-2010 11:26 jm101693

Sample Name: XXXXXMS Lab Sample ID: 6117038MS

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
5) Chloromethane	(1)	2.136	50	472570	4.198
6) Vinyl Chloride	(1)	2.276	62	512161	4.672
10) Bromomethane	(1)	2.617	94	355612	4.441
15) Trichlorofluoromethane	(1)	3.050	101	750069	5.533
24) 1,1-Dichloroethene	(1)	3.660	96	355863	5.079
34) Methylene Chloride	(1)	4.336	84	374164	4.810
36)*t-Butyl Alcohol-d10	(4)	4.379	65	131096	50.000
45) 1,1-Dichloroethane	(1)	5.397	63	698122	5.173
58) Chloroform	(1)	6.702	83	698297	5.150
61)$Dibromofluoromethane	(1)	6.927	113	679423	10.592
63) 1,1,1-Trichloroethane	(1)	6.952	97	604158	5.151
66) Carbon Tetrachloride	(1)	7.177	117	555654	5.478
70)$1,2-Dichloroethane-d4	(1)	7.385	102	128944	10.124
72) Benzene	(1)	7.458	78	1584076	5.124
74) 1,2-Dichloroethane	(1)	7.488	62	381943	5.201
77)*Fluorobenzene	(1)	7.830	96	2857889	10.000
83) Trichloroethene	(1)	8.311	95	443248	5.262
97)$Toluene-d8	(2)	9.823	98	2807625	10.077
101) Toluene	(2)	9.896	92	1031884	5.158
105) Tetrachloroethene	(2)	10.463	166	505498	5.243
110)*Chlorobenzene-d5	(2)	11.250	117	2084743	10.000
112) Chlorobenzene	(2)	11.274	112	1172486	5.117
126)$4-Bromofluorobenzene	(2)	12.231	95	941640	9.834
143)*1,4-Dichlorobenzene-d4	(3)	13.103	152	1261680	10.000
146) Benzyl Chloride	(3)	13.219	126	108639	4.556
155) Naphthalene	(3)	14.658	128	936925	4.962

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

RAD40 8330

Digitally signed by Jason M. Long
on 10/25/2010 at 11:36.
Target 3.5 esignature user ID: jm101693

XXXXXMSD

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

6117039MSD

Data file: /chem2/HP16334.i/10oct21b.b/gc21s58.d
Data file Sample Info. Line: XXXXXMSD;6117039MSD;1;3;MSD;;DRAPER;
Date, time and analyst ID of latest file update: 25-Oct-2010 11:26 jml01693

Injection date and time: **21-OCT-2010 23:05**
Instrument ID: **HP16334.i** Batch: **G102942AA**

Blank Data file reference: **/chem2/HP16334.i/10oct21b.b/gc21b51.d**

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: **1415-SM**
Calibration date and time (Last Method Edit): 25-OCT-2010 11:22
Mid Level Daily Calibration Standard Reference: **/chem2/HP16334.i/10oct21b.b/gc21c51.d**

Bottle Code: **38A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
36) t-Butyl Alcohol-d10	4.373(0.006)	457	65	132495 (7)	50.00	
77) Fluorobenzene	7.836(-0.006)	1025	96	2860949 (1)	10.00	
110) Chlorobenzene-d5	11.249(0.000)	1585	117	2094978 (-1)	10.00	
143) 1,4-Dichlorobenzene-d4	13.103(0.000)	1889	152	1256028 (-1)	10.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
61) Dibromofluoromethane	(1)	6.927(0.001)	113	685071	10.668	107%		77 - 114
70) 1,2-Dichlorcethane-d4	(1)	7.391(0.000)	102	126436	9.916	99%		74 - 113
97) Toluene-d8	(2)	9.823(0.000)	98	2821987	10.079	101%		77 - 110
126) 4-Bromofluorobenzene	(2)	12.231(0.000)	95	950712	9.881	99%		76 - 110

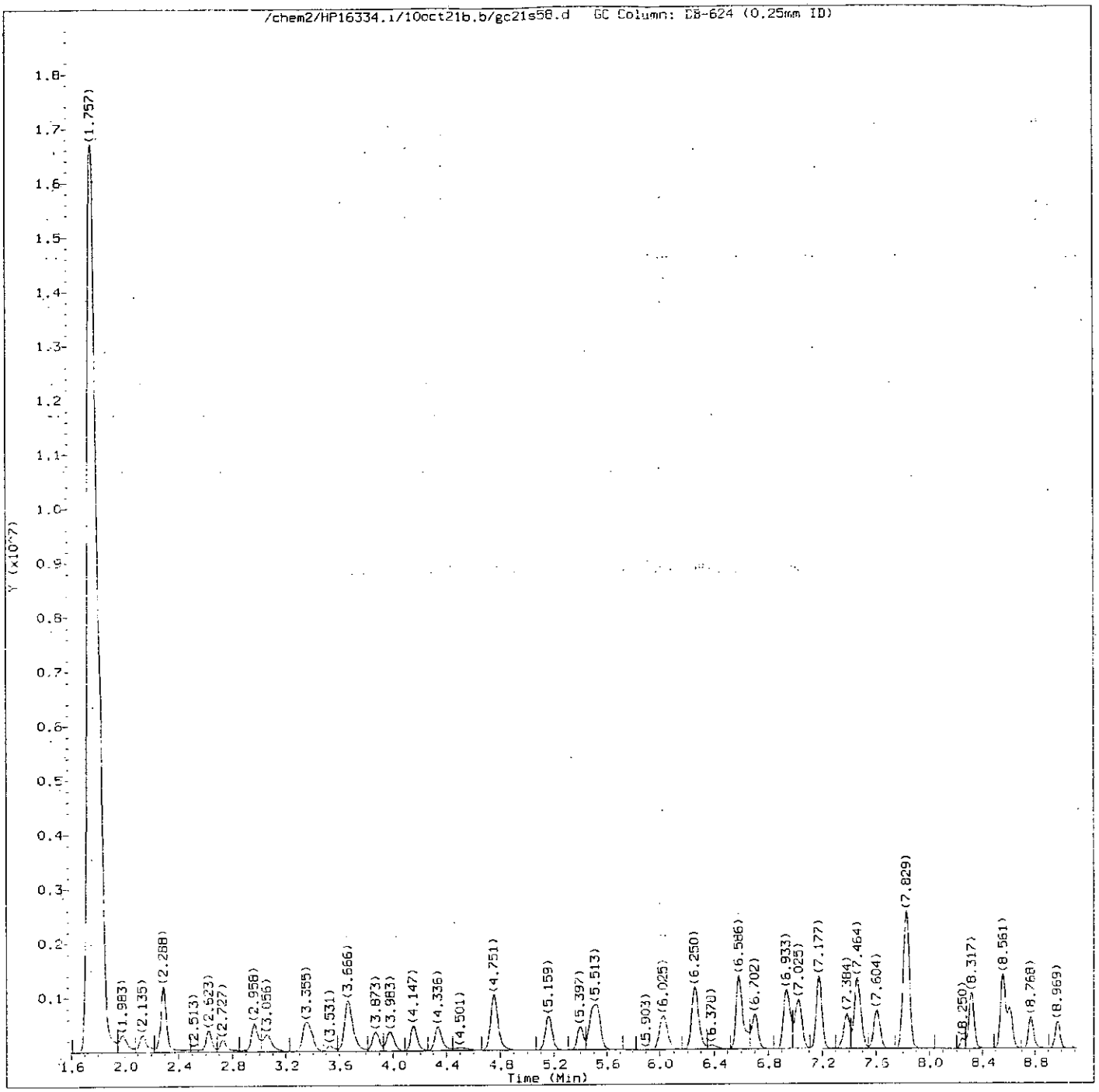
Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
5) Chloromethane	(1)	2.135(-0.000)	50	498625	4.425	4.42			0.2
6) Vinyl Chloride	(1)	2.276(-0.001)	62	536251	4.887	4.89			0.1
10) Bromomethane	(1)	2.623(0.000)	94	369724	4.612	4.61			0.1
15) Trichlorofluoromethane	(1)	3.056(-0.000)	101	769274	5.669	5.67			0.1
24) 1,1-Dichloroethene	(1)	3.660(-0.000)	96	380492	5.425	5.42			0.1
34) Methylene Chloride	(1)	4.336(-0.000)	84	394775	5.069	5.07			0.2
45) 1,1-Dichloroethane	(1)	5.397(0.000)	63	741206	5.487	5.49			0.1
58) Chloroform	(1)	6.708(-0.000)	83	744518	5.485	5.49			0.1
63) 1,1,1-Trichloroethane	(1)	6.952(0.000)	97	641267	5.462	5.46			0.1
66) Carbon Tetrachloride	(1)	7.177(0.000)	117	591423	5.824	5.82			0.1
72) Benzene	(1)	7.458(0.000)	78	1683866	5.441	5.44			0.1
74) 1,2-Dichloroethane	(1)	7.488(0.000)	62	405923	5.521	5.52			0.1
83) Trichloroethene	(1)	8.311(0.000)	95	468784	5.560	5.56			0.1
101) Toluene	(2)	9.696(0.000)	92	1103093	5.487	5.49			0.1
105) Tetrachloroethene	(2)	10.469(-0.000)	166	538281	5.556	5.56			0.1
112) Chlorobenzene	(2)	11.274(0.000)	112	1248738	5.423	5.42			0.1
146) Benzyl Chloride	(3)	13.219(0.000)	126	116959	4.927	4.93			0.1
155) Naphthalene	(3)	14.657(0.000)	128	994763	5.292	5.29			0.1

Total number of targets = 18

Comments:_____

Digitally signed by Jason M. Long on 10/25/2010 at 11:37. Target 3.5 esignature user ID: jml01693 RAD40 6331

Auditor:_____ Date: 10/27/10



Total Ion Chromatogram (TIC)

Target Revision 3.5

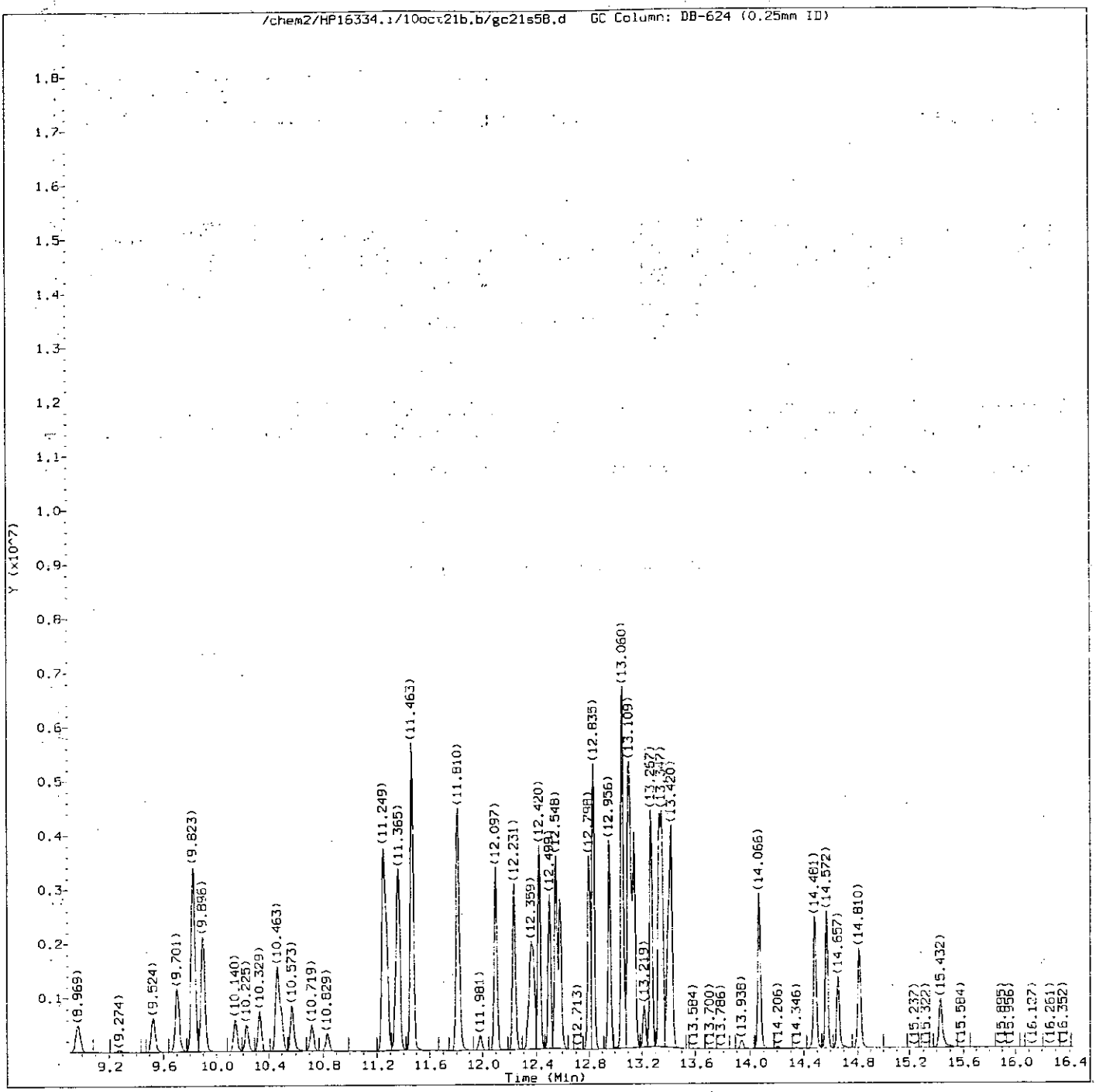
Data File: /chem2/HP16334.i/10oct21b.b/gc21s58.d Instrument ID: HP16334.i
Injection date and time: 21-OCT-2010 23:05 Analyst ID: SEJ02002

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: 1415-SM
Calibration date and time: 25-OCT-2010 11:22
Date, time and analyst ID of latest file update: 25-Oct-2010 11:26 jml01693

Sample Name: XXXXXMSD Lab Sample ID: 6117039MSD

RAD46 0332

Digitally signed by Jason M. Long
on 10/25/2010 at 11:37.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/10oct21b.b/gc21s58.d Instrument ID: HP16334.i
Injection date and time: 21-OCT-2010 23:05 Analyst ID: SEJ02002

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: 1415-SM
Calibration date and time: 25-OCT-2010 11:22
Date, time and analyst ID of latest file update: 25-Oct-2010 11:26 jml01693

Sample Name: XXXXXMSD Lab Sample ID: 6117039MSD

RAD48 8333

Digitally signed by Jason M. Long
on 10/25/2010 at 11:37.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/10oct21b.b/gc21s58.d Instrument ID: HP16334.i
Injection date and time: 21-OCT-2010 23:05 Analyst ID: SEJ02002

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: 1415-SM
Calibration date and time: 25-OCT-2010 11:22
Date, time and analyst ID of latest file update: 25-Oct-2010 11:26 jml01693

Sample Name: XXXXXMSD Lab Sample ID: 6117039MSD

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
5) Chloromethane	(1)	2.135	50	498625	4.425
6) Vinyl Chloride	(1)	2.276	62	536251	4.887
10) Bromomethane	(1)	2.623	94	369724	4.612
15) Trichlorofluoromethane	(1)	3.056	101	769274	5.669
24) 1,1-Dichloroethene	(1)	3.660	96	380492	5.425
34) Methylene Chloride	(1)	4.336	84	394775	5.069
36)*t-Butyl Alcohol-d10	(4)	4.373	65	132495	50.000
45) 1,1-Dichloroethane	(1)	5.397	63	741206	5.487
58) Chloroform	(1)	6.708	83	744518	5.485
61)$Dibromofluoromethane	(1)	6.927	113	685071	10.668
63) 1,1,1-Trichloroethane	(1)	6.952	97	641267	5.462
66) Carbon Tetrachloride	(1)	7.177	117	591423	5.824
70)$1,2-Dichloroethane-d4	(1)	7.391	102	126436	9.916
72) Benzene	(1)	7.458	78	1683866	5.441
74) 1,2-Dichloroethane	(1)	7.488	62	405923	5.521
77)*Fluorobenzene	(1)	7.836	96	2860949	10.000
83) Trichloroethene	(1)	8.311	95	468784	5.560
97)$Toluene-d8	(2)	9.823	98	2821987	10.079
101) Toluene	(2)	9.896	92	1103093	5.487
105) Tetrachloroethene	(2)	10.469	166	538281	5.556
110)*Chlorobenzene-d5	(2)	11.249	117	2094978	10.000
112) Chlorobenzene	(2)	11.274	112	1248738	5.423
126)$4-Bromofluorobenzene	(2)	12.231	95	950712	9.881
143)*1,4-Dichlorobenzene-d4	(3)	13.103	152	1256028	10.000
146) Benzyl Chloride	(3)	13.219	126	116959	4.927
155) Naphthalene	(3)	14.657	128	994763	5.292

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

RAD40 6334

Digitally signed by Jason M. Long
on 10/25/2010 at 11:37.
Target 3.5 esignature user ID: jml01693

XXXXXMS1 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 6117038

Data file: /chem2/HP16334.i/10oct21b.b/gc21s59.d
Data file Sample Info. Line: XXXXXMS1;6117038;1;3;MS;
Date, time and analyst ID of latest file update: 22-Oct-2010 00:32 hb01996

Injection date and time: **21-OCT-2010 23:26**
Instrument ID: **HP16334.i** Batch: **G102942AA**

Blank Data file reference: **/chem2/HP16334.i/10oct21b.b/gc21b51.d**

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: **1415SM**
Calibration date and time (Last Method Edit): 22-OCT-2010 00:30
Mid Level Daily Calibration Standard Reference: **/chem2/HP16334.i/10oct21b.b/gc21c51.d**

Bottle Code: **38B** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
77) Fluorobenzene	7.836(-0.006)	1025	96	2969072 (4)	10.00	
110) Chlorobenzene-d5	11.249(0.000)	1585	117	2190846 (4)	10.00	
143) 1,4-Dichlorobenzene-d4	13.103(0.000)	1889	152	1242744 (-2)	10.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
61) Dibromofluoromethane	(1)	6.927(0.001)	113	708554	10.632	106%		77 - 114
70) 1,2-Dichloroethane-d4	(1)	7.391(0.000)	102	134727	10.182	102%		74 - 113
97) Toluene-d8	(2)	9.823(0.000)	98	2997053	10.236	102%		77 - 110
126) 4-Bromofluorobenzene	(2)	12.231(0.000)	95	994716	9.886	99%		78 - 110

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
149) Hexachloroethane	(1)	13.578(0.000)	117	297398	4.618	4.62			0.1

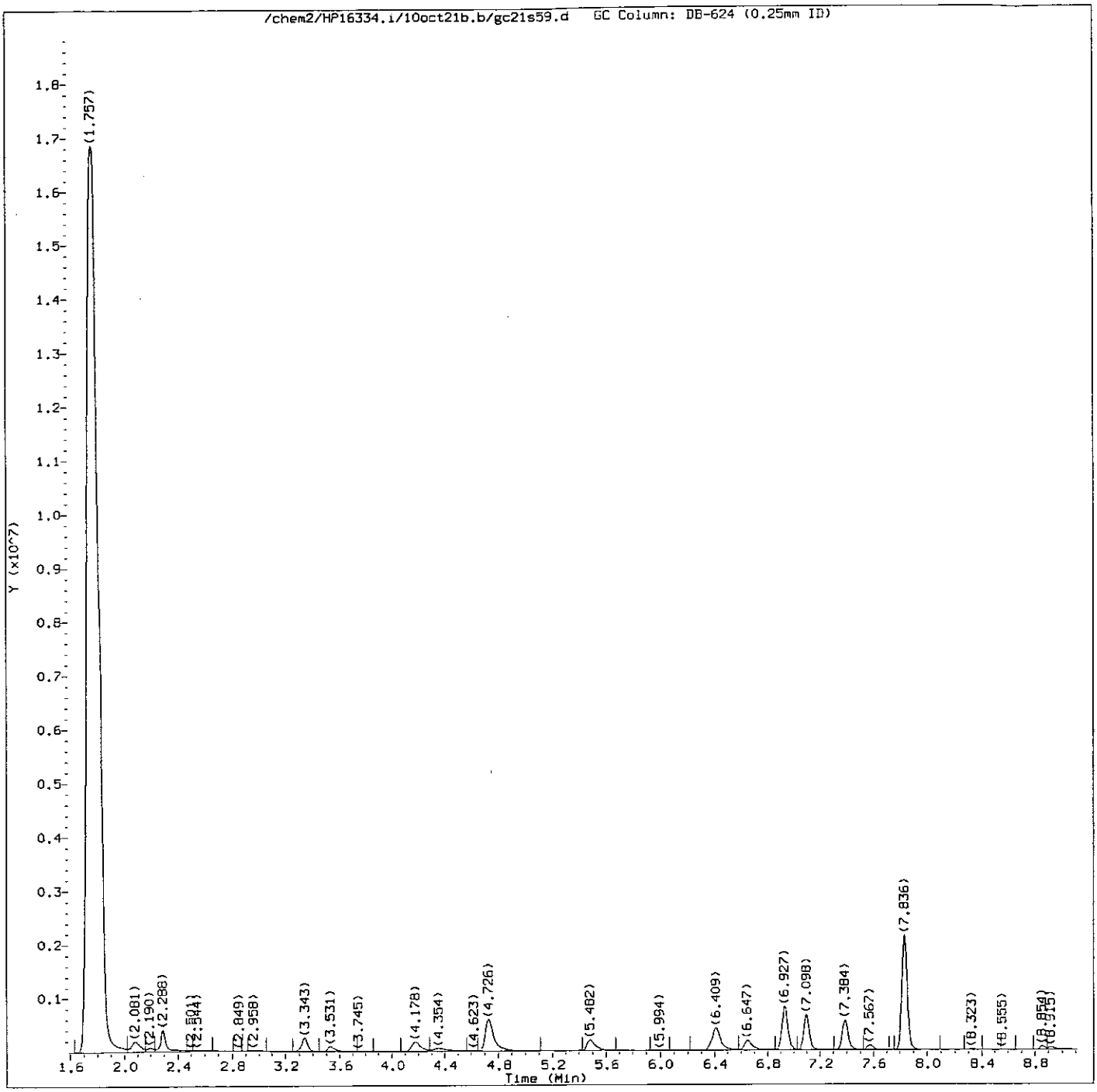
Total number of targets = 1

Comments:_____

Digitally signed by Holly Berry on 10/22/2010 at 00:34. Target 3.5 esignature user ID: hb01996

RAD40 0335

Auditor:_____ Date:_____



Total Ion Chromatogram (TIC)

Target Revision 3.5

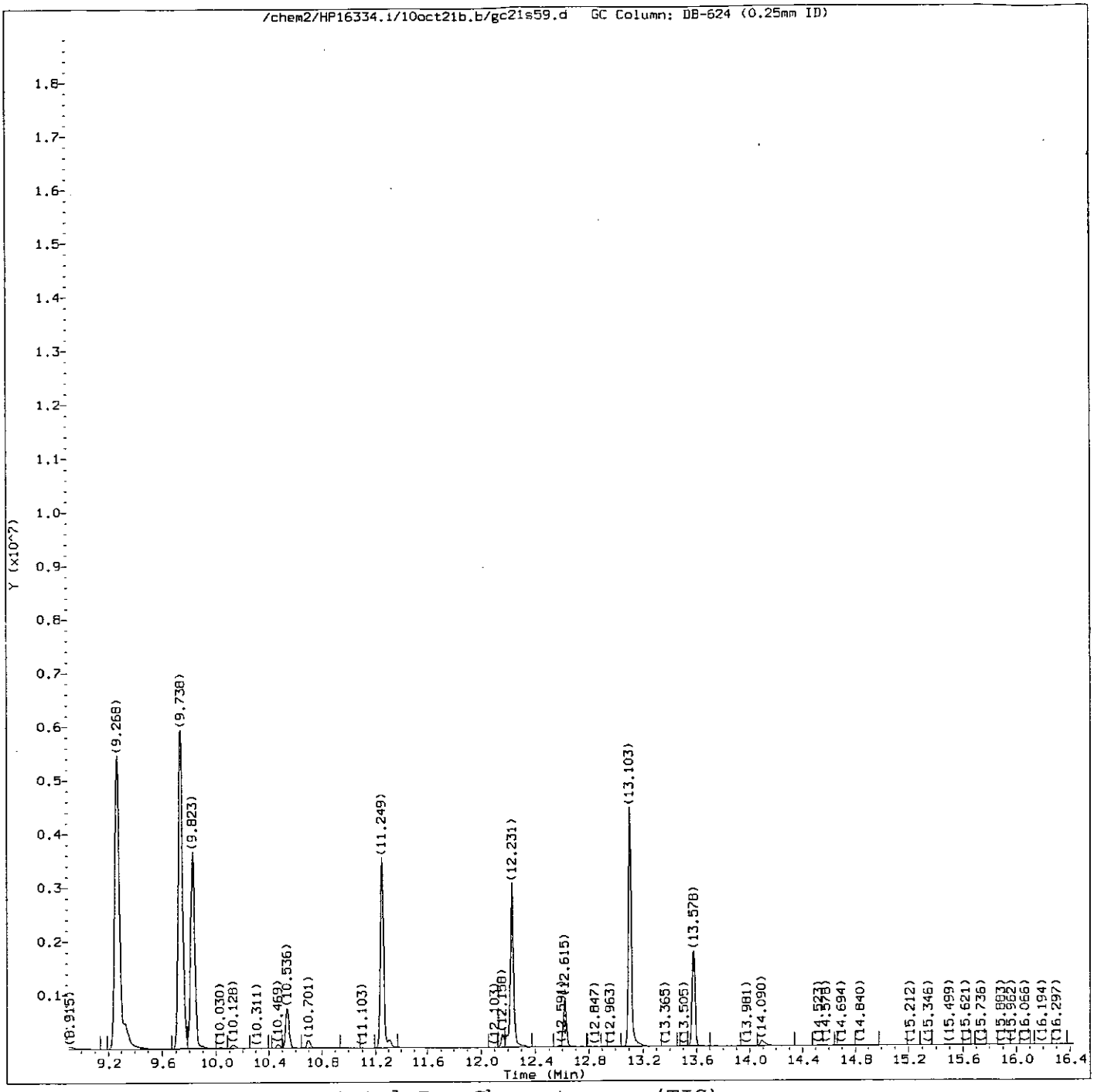
Data File: /chem2/HP16334.i/10oct21b.b/gc21s59.d Instrument ID: HP16334.i
Injection date and time: 21-OCT-2010 23:26 Analyst ID: SEJ02002

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: 1415SM
Calibration date and time: 22-OCT-2010 00:30
Date, time and analyst ID of latest file update: 22-Oct-2010 00:32 hb01996

Sample Name: XXXXXMS1 Lab Sample ID: 6117038

RAD40 0336

Digitally signed by Holly Berry
on 10/22/2010 at 00:34.
Target 3.5 esignature user ID: hb01996



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/10oct21b.b/gc21s59.d Instrument ID: HP16334.i
Injection date and time: 21-OCT-2010 23:26 Analyst ID: SEJ02002

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: 1415SM
Calibration date and time: 22-OCT-2010 00:30
Date, time and analyst ID of latest file update: 22-Oct-2010 00:32 hb01996

Sample Name: XXXXXMS1 Lab Sample ID: 6117038

RAD40 0337

Digitally signed by Holly Berry
on 10/22/2010 at 00:34.
Target 3.5 esignature user ID: hb01996

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/10oct21b.b/gc21s59.d Instrument ID: HP16334.i
Injection date and time: 21-OCT-2010 23:26 Analyst ID: SEJ02002

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: 1415SM
Calibration date and time: 22-OCT-2010 00:30
Date, time and analyst ID of latest file update: 22-Oct-2010 00:32 hb01996

Sample Name: XXXXXMS1 Lab Sample ID: 6117038

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
61)$Dibromofluoromethane	(1)	6.927	113	708554	10.632
70)$1,2-Dichloroethane-d4	(1)	7.391	102	134727	10.182
77)*Fluorobenzene	(1)	7.836	96	2969072	10.000
97)$Toluene-d8	(2)	9.823	98	2997053	10.236
110)*Chlorobenzene-d5	(2)	11.249	117	2190846	10.000
126)$4-Bromofluorobenzene	(2)	12.231	95	994716	9.886
143)*1,4-Dichlorobenzene-d4	(3)	13.103	152	1242744	10.000
149) Hexachloroethane	(1)	13.578	117	297398	4.618

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

RAD40 0338

Digitally signed by Holly Berry
on 10/22/2010 at 00:34.
Target 3.5 esignature user ID: hb01996

XXXXXMSD1 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 6117039

Data file: /chem2/HP16334.i/10oct21b.b/gc21s60.d
Data file Sample Info. Line: XXXXXMSD1;6117039;1;3;MSD;
Date, time and analyst ID of latest file update: 22-Oct-2010 00:32 hb01996

Injection date and time: **21-OCT-2010 23:47**
Instrument ID: **HP16334.i** Batch: **G102942AA**

Blank Data file reference: **/chem2/HP16334.i/10oct21b.b/gc21b51.d**

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: **1415SM**
Calibration date and time (Last Method Edit): 22-OCT-2010 00:30
Mid Level Daily Calibration Standard Reference: **/chem2/HP16334.i/10oct21b.b/gc21c51.d**

Bottle Code: **38B** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
77) Fluorobenzene	7.829(0.000)	1024	96	2867536 (1)	10.00	
110) Chlorobenzene-d5	11.249(0.000)	1585	117	2127730 (1)	10.00	
143) 1,4-Dichlorobenzene-d4	13.103(0.000)	1889	152	1192047 (-6)	10.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
61) Dibromofluoromethane	(1)	6.921(0.001)	113	684828	10.640	106%		77 - 114
70) 1,2-Dichloroethane-d4	(1)	7.384(0.000)	102	130751	10.231	102%		74 - 113
97) Toluene-d8	(2)	9.823(0.000)	98	2887518	10.154	102%		77 - 110
126) 4-Bromofluorobenzene	(2)	12.231(0.000)	95	952022	9.742	97%		78 - 110

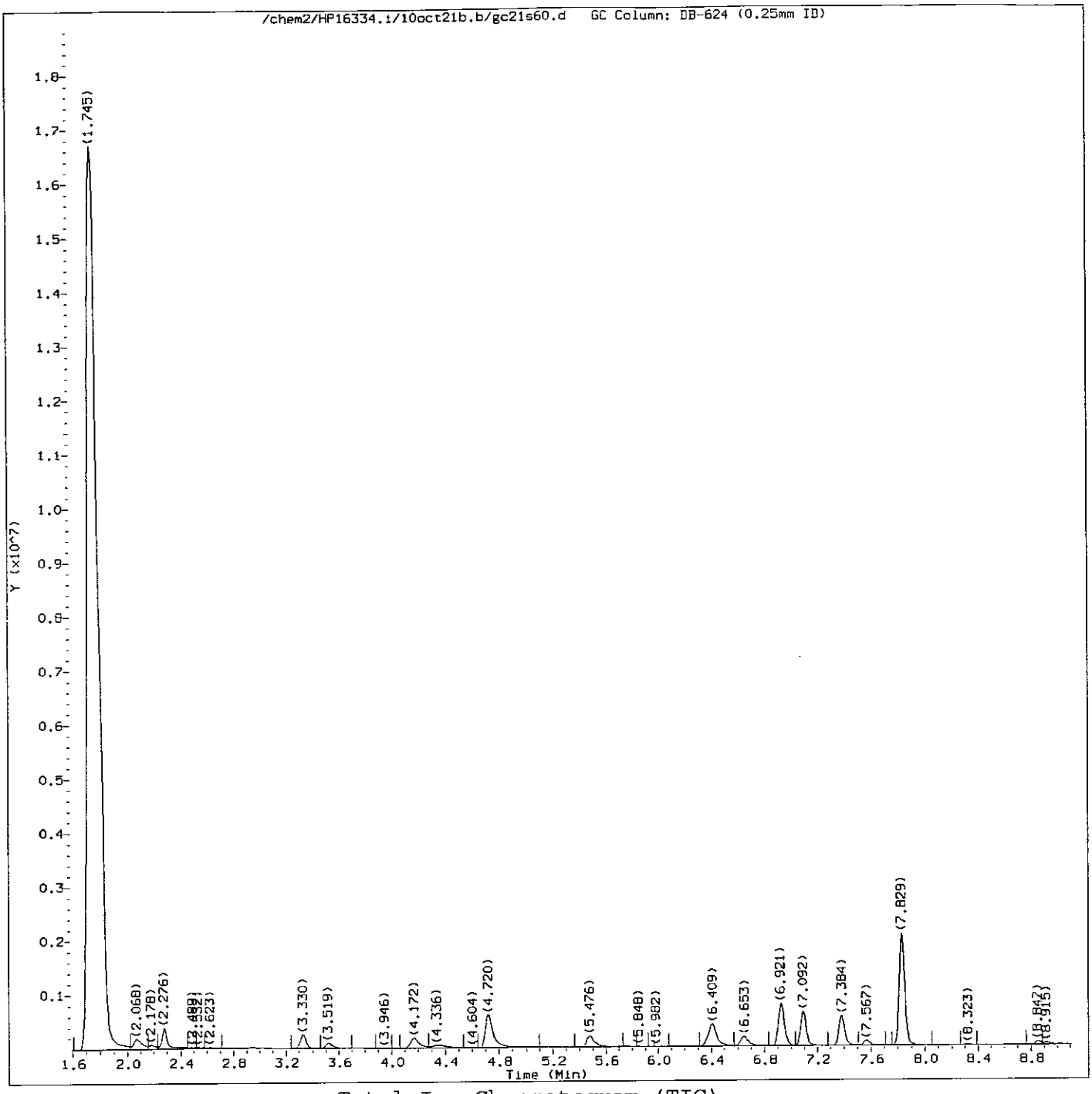
Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
149) Hexachloroethane	(1)	13.578(-0.000)	117	285019	4.585	4.59			0.1

Total number of targets = 1

Comments:_____

Digitally signed by Holly Berry on 10/22/2010 at 00:34. Target 3.5 esignature user ID: hb01996 RAD40 0339

Auditor:_____ Date:_____



Total Ion Chromatogram (TIC)

Target Revision 3.5

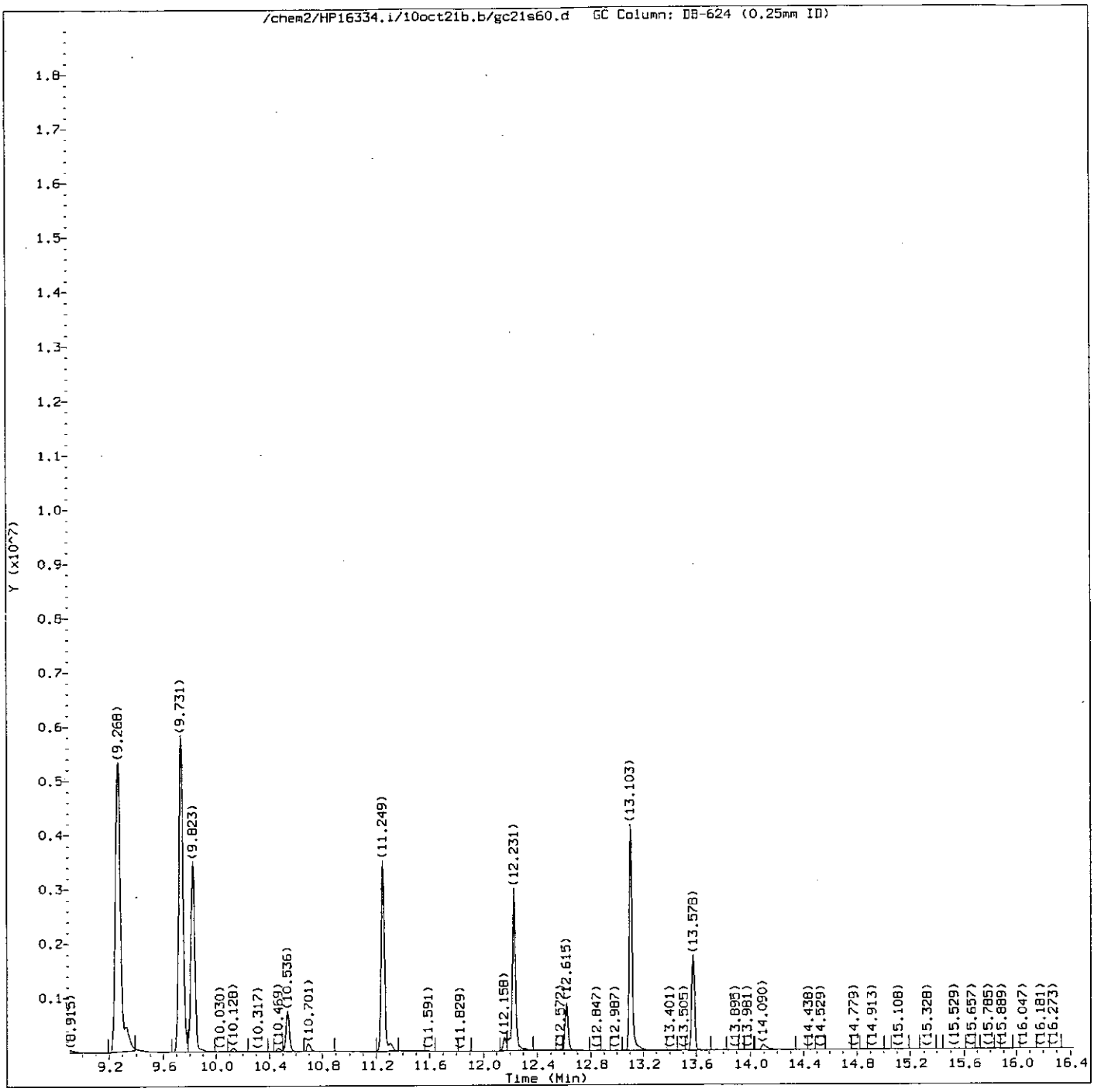
Data File: /chem2/HP16334.i/10oct21b.b/gc21s60.d Instrument ID: HP16334.i
Injection date and time: 21-OCT-2010 23:47 Analyst ID: SEJ02002

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: 1415SM
Calibration date and time: 22-OCT-2010 00:30
Date, time and analyst ID of latest file update: 22-Oct-2010 00:32 hb01996

Sample Name: XXXXXMSD1 Lab Sample ID: 6117039

RAD40 8348

Digitally signed by Holly Berry
on 10/22/2010 at 00:34.
Target 3.5 esignature user ID: hb01996



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/10oct21b.b/gc21s60.d Instrument ID: HP16334.i
Injection date and time: 21-OCT-2010 23:47 Analyst ID: SEJ02002

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: 1415SM
Calibration date and time: 22-OCT-2010 00:30
Date, time and analyst ID of latest file update: 22-Oct-2010 00:32 hb01996

Sample Name: XXXXXMSD1 Lab Sample ID: 6117039

RAD40 0341

Digitally signed by Holly Berry
on 10/22/2010 at 00:34.
Target 3.5 esignature user ID: hb01996

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/10oct21b.b/gc21s60.d Instrument ID: HP16334.i
Injection date and time: 21-OCT-2010 23:47 Analyst ID: SEJ02002

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: 1415SM
Calibration date and time: 22-OCT-2010 00:30
Date, time and analyst ID of latest file update: 22-Oct-2010 00:32 hb01996

Sample Name: XXXXXMSD1 Lab Sample ID: 6117039

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
61)$Dibromofluoromethane	(1)	6.921	113	684828	10.640
70)$1,2-Dichloroethane-d4	(1)	7.384	102	130751	10.231
77)*Fluorobenzene	(1)	7.829	96	2867536	10.000
97)$Toluene-d8	(2)	9.823	98	2887518	10.154
110)*Chlorobenzene-d5	(2)	11.249	117	2127730	10.000
126)$4-Bromofluorobenzene	(2)	12.231	95	952022	9.742
143)*1,4-Dichlorobenzene-d4	(3)	13.103	152	1192047	10.000
149) Hexachloroethane	(1)	13.578	117	285019	4.585

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

RAD40 8342

Digitally signed by Holly Berry
on 10/22/2010 at 00:34.
Target 3.5 esignature user ID: hb01996

LCSG71 Lancaster Laboratories
Analysis Summary for GC/MS Volatiles LCSG71

Data file: /chem2/HP16334.i/10oct21b.b/gc21101.d Injection date and time: **21-OCT-2010 19:31**
Data file Sample Info. Line: LCSG71;LCSG71;1;3;LCS; Instrument ID: **HP16334.i** Batch: **G102942AA**
Date, time and analyst ID of latest file update: 21-Oct-2010 20:05 sej02002

Blank Data file reference: **/chem2/HP16334.i/10oct21b.b/gc21b51.d**

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: **8260W25**
Calibration date and time (Last Method Edit): 21-OCT-2010 19:57
Mid Level Daily Calibration Standard Reference: **/chem2/HP16334.i/10oct21b.b/gc21c51.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
36) t-Butyl Alcohol-d10	4.379(0.000)	458	65	123352 (-1)	50.00	
77) Fluorobenzene	7.830(0.000)	1024	96	2865966 (1)	10.00	
110) Chlorobenzene-d5	11.250(0.000)	1585	117	2102584 (0)	10.00	
143) 1,4-Dichlorobenzene-d4	13.103(0.000)	1889	152	1267864 (0)	10.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
61) Dibromofluoromethane	(1)	6.927(0.000)	113	683155	10.620	106%		77 - 114
70) 1,2-Dichloroethane-d4	(1)	7.385(0.000)	102	127991	10.020	100%		74 - 113
97) Toluene-d8	(2)	9.823(0.000)	98	2817883	10.028	100%		77 - 110
126) 4-Bromofluorobenzene	(2)	12.231(0.000)	95	953989	9.879	99%		78 - 110

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
2) Dichlorodifluoromethane	(1)	1.983(-0.000)	85	428938	3.315	3.32			0.1
5) Chloromethane	(1)	2.123(0.000)	50	452147	4.005	4.01			0.2
6) Vinyl Chloride	(1)	2.258(0.000)	62	467504	4.253	4.25			0.1
9) 1,3-Butadiene	(1)	2.288(-0.000)	39	466396	3.513	3.51			0.1
10) Bromomethane	(1)	2.617(0.000)	94	338210	4.212	4.21			0.1
11) Chloroethane	(1)	2.727(-0.000)	64	261676	4.206	4.21			0.1
13) Dichlorofluoromethane	(1)	2.952(0.000)	67	680868	4.953	4.95			0.2
15) Trichlorofluoromethane	(1)	3.044(0.000)	101	675340	4.968	4.97			0.1
17) Ethyl Ether	(1)	3.336(-0.000)	59	257475	5.076	5.08			0.1
18) Freon 123a	(1)	3.367(-0.000)	67	441246	5.159	5.16			0.2
23) Acrolein	(4)	3.526(-0.001)	56	175127	25.265	25.27			5
24) 1,1-Dichloroethene	(1)	3.654(-0.000)	96	321321	4.573	4.57			0.1
25) Freon 113	(1)	3.666(0.000)	101	353658	4.863	4.86			0.2
26) Acetone	(4)	3.721(-0.000)	58	106119	35.608	35.61			3
27) Methyl Iodide	(1)	3.867(-0.000)	142	654231	4.749	4.75			0.1
29) Carbon Disulfide	(1)	3.964(0.000)	76	967372	4.736	4.74			0.4
32) Allyl Chloride	(1)	4.147(-0.000)	41	476134	4.579	4.58			0.1
33) Methyl Acetate	(1)	4.184(-0.000)	43	97840	4.970	4.97			0.3
34) Methylene Chloride	(1)	4.330(-0.000)	84	363911	4.665	4.66			0.2
38) t-Butyl Alcohol	(4)	4.507(-0.001)	59	158960	55.254	55.25			4
39) Acrylonitrile	(4)	4.739(-0.002)	53	277079	24.017	24.02			1
41) trans-1,2-Dichloroethene	(1)	4.751(-0.000)	96	385146	4.780	4.78			0.1
37) 1,2-Dichloroethene (Total)	(1)		96	799198	9.548	9.55			0.1
40) Methyl Tertiary Butyl Ether	(1)	4.745(0.000)	73	727151	4.585	4.59			0.1
44) n-Hexane	(1)	5.159(-0.000)	57	478700	4.489	4.49			0.1
45) 1,1-Dichloroethane	(1)	5.391(0.000)	63	643185	4.753	4.75			0.1
47) di-Isopropyl Ether	(1)	5.488(-0.000)	45	1115908	4.802	4.80			0.1
48) 2-Chloro-1,3-Butadiene	(1)	5.531(-0.000)	53	511576	5.056	5.06			0.1
49) Ethyl t-Butyl Ether	(1)	6.025(-0.000)	59	933604	4.488	4.49			0.1
51) 2,2-Dichloropropane	(1)	6.251(-0.000)	77	511478	4.746	4.75			0.1
50) cis-1,2-Dichloroethene	(1)	6.244(0.000)	96	414052	4.768	4.77			0.1
52) 2-Butanone	(4)	6.269(0.001)	43	538774	35.045	35.05			1
53) Propionitrile	(4)	6.385(-0.002)	54	140652	33.998	34.00			2
55) Methacrylonitrile	(4)	6.580(0.000)	67	574533	32.297	32.30			1

RAD48 6343

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Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP16334.i/10oct21b.b/gc21l01.d
Injection date and time: **21-OCT-2010 19:31**
Data file Sample Info. Line: LCSG71;LCSG71;1;3;LCS;
Instrument ID: **HP16334.i** Batch: **G102942AA**
Date, time and analyst ID of latest file update: 21-Oct-2010 20:05 sej02002

Blank Data file reference: **/chem2/HP16334.i/10oct21b.b/gc21b51.d**

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: **8260W25**
Calibration date and time (Last Method Edit): 21-OCT-2010 19:57
Mid Level Daily Calibration Standard Reference: **/chem2/HP16334.i/10oct21b.b/gc21c51.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
56) Bromochloromethane	(1)	6.586(-0.000)	128	176032	4.836	4.84			0.1
57) Tetrahydrofuran	(4)	6.647(-0.001)	71	107473	21.597	21.60			2
58) Chloroform	(1)	6.702(-0.000)	83	668955	4.920	4.92			0.1
63) 1,1,1-Trichloroethane	(1)	6.952(-0.000)	97	575746	4.895	4.90			0.1
64) Cyclohexane	(1)	7.019(0.000)	56	617694	4.762	4.76			0.1
65) 1,1-Dichloropropene	(1)	7.171(0.000)	75	504528	4.790	4.79			0.1
66) Carbon Tetrachloride	(1)	7.177(-0.000)	117	511308	5.026	5.03			0.1
67) Isobutyl Alcohol	(4)	7.360(-0.001)	41	136440	146.895	146.89			10
72) Benzene	(1)	7.458(0.000)	78	1511642	4.876	4.88			0.1
74) 1,2-Dichloroethane	(1)	7.488(0.000)	62	372351	5.056	5.06			0.1
75) t-Amyl Methyl Ether	(1)	7.604(-0.000)	73	807797	4.526	4.53			0.1
76) n-Heptane	(1)	7.805(-0.000)	43	526827	4.695	4.70			0.2
81) n-Butanol	(4)	8.244(-0.001)	56	196549	253.970	253.97			20
83) Trichloroethene	(1)	8.311(0.000)	95	409907	4.853	4.85			0.1
84) Methylcyclohexane	(1)	8.555(0.000)	83	671691	4.665	4.66			0.1
85) 1,2-Dichloropropane	(1)	8.610(0.000)	63	387980	4.988	4.99			0.1
88) Dibromomethane	(1)	8.762(0.000)	93	176080	5.055	5.05			0.1
89) 1,4-Dioxane	(4)	8.787(0.000)	88	31910	163.882	163.88			20
87) Methyl Methacrylate	(4)	8.768(-0.001)	69	126880	4.149	4.15			0.1
90) Bromodichloromethane	(1)	8.970(0.000)	83	434352	4.985	4.98			0.1
91) 2-Nitropropane	(4)	9.268(0.000)	41	34984	3.781	3.78			1
94) cis-1,3-Dichloropropene	(1)	9.524(0.000)	75	447566	4.461	4.46			0.1
96) 4-Methyl-2-Pentanone	(1)	9.701(0.000)	43	902142	25.368	25.37			1
101) Toluene	(2)	9.896(-0.000)	92	986974	4.892	4.89			0.1
102) trans-1,3-Dichloropropene	(2)	10.140(-0.000)	75	376190	4.647	4.65			0.1
103) Ethyl Methacrylate	(2)	10.225(-0.000)	69	276489	4.804	4.80			0.1
104) 1,1,2-Trichloroethane	(2)	10.323(0.000)	97	244107	5.014	5.01			0.1
105) Tetrachloroethene	(2)	10.463(-0.000)	166	471080	4.845	4.84			0.1
106) 1,3-Dichloropropane	(2)	10.494(-0.000)	76	416607	5.010	5.01			0.1
107) 2-Hexanone	(2)	10.573(-0.000)	43	609675	25.310	25.31			1
108) Dibromochloromethane	(2)	10.719(-0.000)	129	277539	4.884	4.88			0.1
109) 1,2-Dibromoethane	(2)	10.829(-0.000)	107	222424	5.006	5.01			0.1
112) Chlorobenzene	(2)	11.274(0.000)	112	1134807	4.910	4.91			0.1
113) 1,1,1,2-Tetrachloroethane	(2)	11.347(0.000)	131	390907	5.041	5.04			0.1
114) Ethylbenzene	(2)	11.366(0.000)	91	1927484	4.960	4.96			0.1
117) m+p-Xylene	(2)	11.463(0.000)	106	1538012	9.917	9.92			0.1
115) Xylene (Total)	(2)		106	2297197	14.862	14.86			0.1
118) o-Xylene	(2)	11.804(0.000)	106	759185	4.945	4.94			0.1
119) Styrene	(2)	11.817(0.000)	104	1169956	5.133	5.13			0.1
120) Bromoform	(2)	11.981(0.000)	173	144279	4.973	4.97			0.1
121) Isopropylbenzene	(2)	12.097(0.000)	105	1925807	4.881	4.88			0.1
128) 1,1,2,2-Tetrachloroethane	(3)	12.335(-0.000)	83	295590	5.227	5.23			0.1
129) Bromobenzene	(3)	12.359(-0.000)	156	481696	4.800	4.80			0.1
130) trans-1,4-Dichloro-2-Butene	(4)	12.377(0.000)	53	217811	21.851	21.85			1
131) 1,2,3-Trichloropropane	(3)	12.377(-0.000)	110	79786	5.079	5.08			0.3
132) n-Propylbenzene	(3)	12.420(-0.000)	91	2396088	4.843	4.84			0.1
133) 2-Chlorotoluene	(3)	12.499(-0.000)	126	486913	4.793	4.79			0.1
135) 4-Chlorotoluene	(3)	12.579(-0.000)	126	504611	4.862	4.86			0.1
134) 1,3,5-Trimethylbenzene	(3)	12.548(-0.000)	105	1664089	4.877	4.88			0.1
138) Pentachloroethane	(3)	12.829(-0.000)	167	310976	5.202	5.20			0.2
137) tert-Butylbenzene	(3)	12.798(-0.000)	134	395133	5.100	5.10			0.1
139) 1,2,4-Trimethylbenzene	(3)	12.835(-0.000)	105	1799314	4.958	4.96			0.1
140) sec-Butylbenzene	(3)	12.957(-0.000)	105	2181932	4.821	4.82			0.1
142) 1,3-Dichlorobenzene	(3)	13.060(-0.000)	146	1025422	4.894	4.89			0.1
141) p-Isopropyltoluene	(3)	13.054(-0.000)	119	1947359	4.847	4.85			0.1

RAD48 0344

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Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP16334.i/10oct21b.b/gc21101.d
Injection date and time: **21-OCT-2010 19:31**
Data file Sample Info. Line: LCSG71;LCSG71;1;3;LCS;
Instrument ID: **HP16334.i** Batch: **G102942AA**
Date, time and analyst ID of latest file update: 21-Oct-2010 20:10 sej02002

Blank Data file reference: **/chem2/HP16334.i/10oct21b.b/gc21b51.d**

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: **8260W25**
Calibration date and time (Last Method Edit): 21-OCT-2010 19:57
Mid Level Daily Calibration Standard Reference: **/chem2/HP16334.i/10oct21b.b/gc21c51.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
144) 1,4-Dichlorobenzene	(3)	13.121(-0.000)	146	1043170	4.815	4.82			0.1
145) 1,2,3-Trimethylbenzene	(3)	13.146(0.000)	120	797983	5.038	5.04			0.1
146) Benzyl Chloride	(3)	13.219(0.000)	126	115330	4.813	4.81			0.1
147) n-Butylbenzene	(3)	13.347(-0.000)	92	988591M	4.964	4.96			0.1
148) 1,2-Dichlorobenzene	(3)	13.396(0.000)	146	906696	4.888	4.89			0.1
150) 1,2-Dibromo-3-Chloropropane	(4)	13.938(0.000)	155	35810	4.291	4.29			0.2
153) 1,2,4-Trichlorobenzene	(3)	14.487(-0.000)	180	682388	4.663	4.66			0.1
154) Hexachlorobutadiene	(3)	14.572(0.000)	225	379352	4.631	4.63			0.1
155) Naphthalene	(3)	14.658(0.000)	128	910113	4.796	4.80			0.1
156) 1,2,3-Trichlorobenzene	(3)	14.810(0.000)	180	533191	4.742	4.74			0.1

M = Compound was manually integrated.

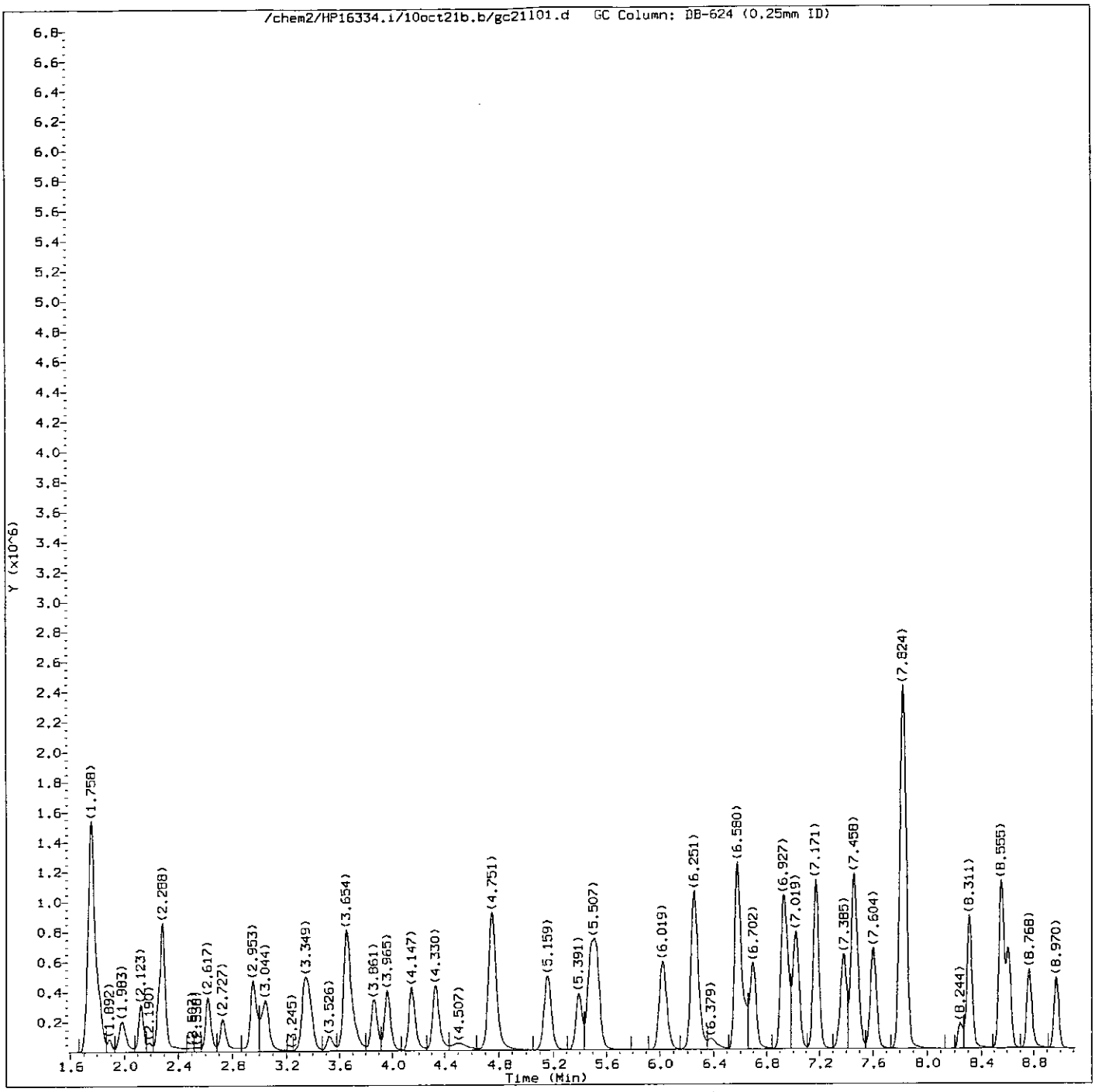
Total number of targets = 99

Comments:_____

RAD48 8345

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Auditor:_____ Date: 10/25/10



Total Ion Chromatogram (TIC)

Target Revision 3.5

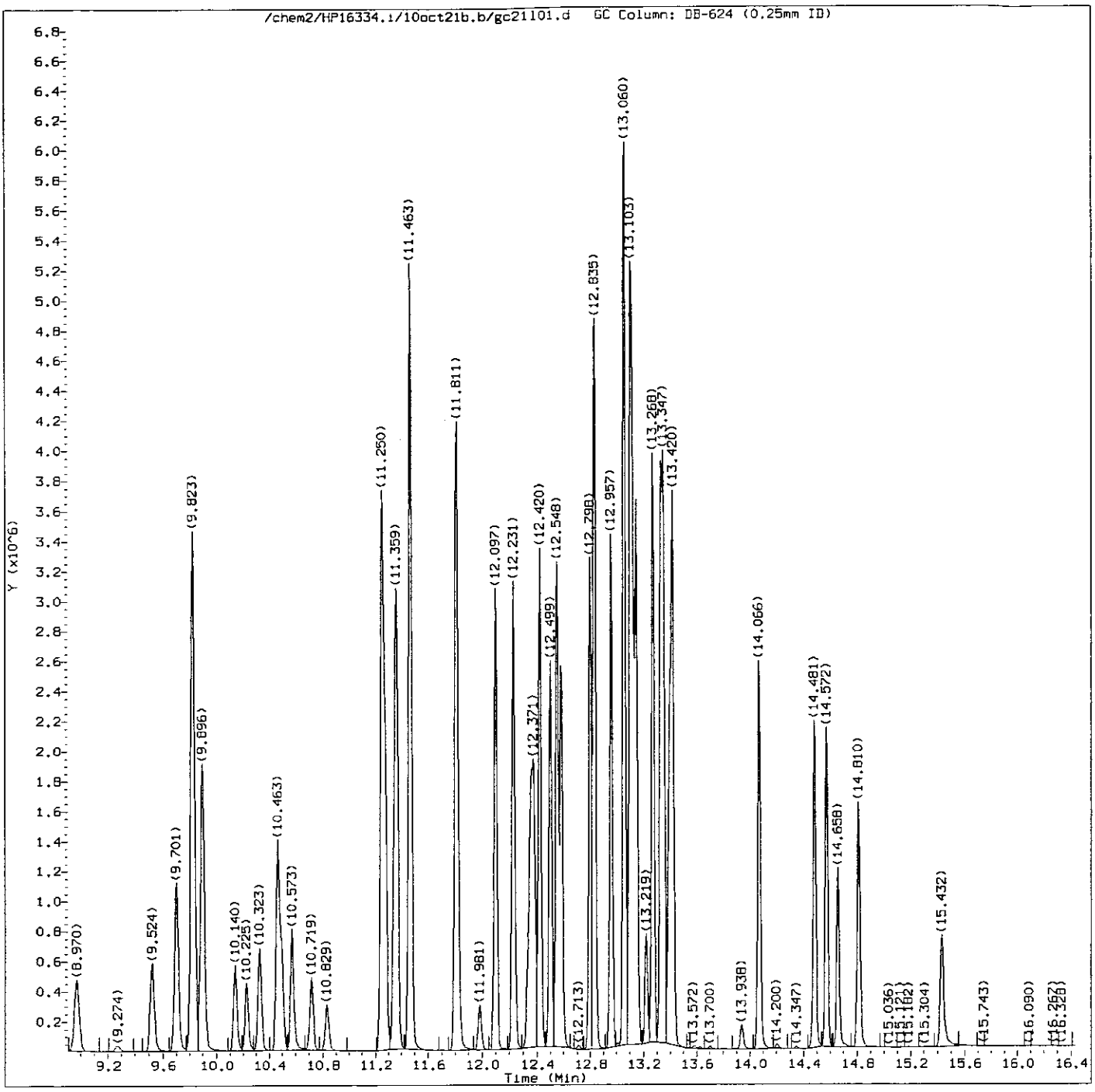
Data File: /chem2/HP16334.i/10oct21b.b/gc21101.d Instrument ID: HP16334.i
Injection date and time: 21-OCT-2010 19:31 Analyst ID: SEJ02002

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 21-OCT-2010 19:57
Date, time and analyst ID of latest file update: 21-Oct-2010 20:05 sej02002

Sample Name: LCSG71 Lab Sample ID: LCSG71

RAD40 8346

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on 10/21/2010 at 20:05.
Target 3.5 esignature user ID: sej02002



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/10oct21b.b/gc21101.d Instrument ID: HP16334.i
Injection date and time: 21-OCT-2010 19:31 Analyst ID: SEJ02002

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 21-OCT-2010 19:57
Date, time and analyst ID of latest file update: 21-Oct-2010 20:05 sej02002

Sample Name: LCSG71 Lab Sample ID: LCSG71

RAD48 0547

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on 10/21/2010 at 20:05.
Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/10oct21b.b/gc21101.d Instrument ID: HP16334.i
Injection date and time: 21-OCT-2010 19:31 Analyst ID: SEJ02002

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 21-OCT-2010 19:57
Date, time and analyst ID of latest file update: 21-Oct-2010 20:05 sej02002

Sample Name: LCSG71 Lab Sample ID: LCSG71

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
2) Dichlorodifluoromethane	(1)	1.983	85	428938	3.315
5) Chloromethane	(1)	2.123	50	452147	4.005
6) Vinyl Chloride	(1)	2.258	62	467504	4.253
9) 1,3-Butadiene	(1)	2.288	39	466396	3.513
10) Bromomethane	(1)	2.617	94	338210	4.212
11) Chloroethane	(1)	2.727	64	261676	4.206
13) Dichlorofluoromethane	(1)	2.953	67	680868	4.953
15) Trichlorofluoromethane	(1)	3.044	101	675340	4.968
17) Ethyl Ether	(1)	3.337	59	257475	5.076
18) Freon 123a	(1)	3.367	67	441246	5.159
23) Acrolein	(4)	3.526	56	175127	25.265
24) 1,1-Dichloroethene	(1)	3.654	96	321321	4.573
25) Freon 113	(1)	3.666	101	353658	4.863
26) Acetone	(4)	3.721	58	106119	35.608
27) Methyl Iodide	(1)	3.867	142	654231	4.749
29) Carbon Disulfide	(1)	3.965	76	967372	4.736
32) Allyl Chloride	(1)	4.147	41	476134	4.579
33) Methyl Acetate	(1)	4.184	43	97840	4.970
34) Methylene Chloride	(1)	4.330	84	363911	4.665
36)*t-Butyl Alcohol-d10	(4)	4.379	65	123352	50.000
38) t-Butyl Alcohol	(4)	4.507	59	158960	55.254
39) Acrylonitrile	(4)	4.739	53	277079	24.017
40) Methyl Tertiary Butyl Ether	(1)	4.745	73	727151	4.585
41) trans-1,2-Dichloroethene	(1)	4.751	96	385146	4.780
37) 1,2-Dichloroethene (Total)	(1)		96	799198	9.548
44) n-Hexane	(1)	5.159	57	478700	4.489
45) 1,1-Dichloroethane	(1)	5.391	63	643185	4.753
47) di-Isopropyl Ether	(1)	5.489	45	1115908	4.802
48) 2-Chloro-1,3-Butadiene	(1)	5.531	53	511576	5.056
49) Ethyl t-Butyl Ether	(1)	6.025	59	933604	4.488
50) cis-1,2-Dichloroethene	(1)	6.245	96	414052	4.768
51) 2,2-Dichloropropane	(1)	6.251	77	511478	4.746
52) 2-Butanone	(4)	6.269	43	538774	35.045
53) Propionitrile	(4)	6.385	54	140652	33.998
55) Methacrylonitrile	(4)	6.580	67	574533	32.297
56) Bromochloromethane	(1)	6.586	128	176032	4.836
57) Tetrahydrofuran	(4)	6.647	71	107473	21.597
58) Chloroform	(1)	6.702	83	668955	4.920

* = Compound is an internal standard.

RAD40 8348

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on 10/21/2010 at 20:05.
Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/10oct21b.b/gc21101.d Instrument ID: HP16334.i
Injection date and time: 21-OCT-2010 19:31 Analyst ID: SEJ02002

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 21-OCT-2010 19:57
Date, time and analyst ID of latest file update: 21-Oct-2010 20:05 sej02002

Sample Name: LCSG71 Lab Sample ID: LCSG71

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
61)$Dibromofluoromethane	(1)	6.927	113	683155	10.620
63) 1,1,1-Trichloroethane	(1)	6.952	97	575746	4.895
64) Cyclohexane	(1)	7.019	56	617694	4.762
65) 1,1-Dichloropropene	(1)	7.171	75	504528	4.790
66) Carbon Tetrachloride	(1)	7.177	117	511308	5.026
67) Isobutyl Alcohol	(4)	7.360	41	136440	146.895
70)$1,2-Dichloroethane-d4	(1)	7.385	102	127991	10.020
72) Benzene	(1)	7.458	78	1511642	4.876
74) 1,2-Dichloroethane	(1)	7.488	62	372351	5.056
75) t-Amyl Methyl Ether	(1)	7.604	73	807797	4.526
76) n-Heptane	(1)	7.805	43	526827	4.695
77)*Fluorobenzene	(1)	7.830	96	2865966	10.000
81) n-Butanol	(4)	8.244	56	196549	253.970
83) Trichloroethene	(1)	8.311	95	409907	4.853
84) Methylcyclohexane	(1)	8.555	83	671691	4.665
85) 1,2-Dichloropropane	(1)	8.610	63	387980	4.988
88) Dibromomethane	(1)	8.762	93	176080	5.055
87) Methyl Methacrylate	(4)	8.768	69	126880	4.149
89) 1,4-Dioxane	(4)	8.787	88	31910	163.882
90) Bromodichloromethane	(1)	8.970	83	434352	4.985
91) 2-Nitropropane	(4)	9.268	41	34984	3.781
94) cis-1,3-Dichloropropene	(1)	9.524	75	447566	4.461
96) 4-Methyl-2-Pentanone	(1)	9.701	43	902142	25.368
97)$Toluene-d8	(2)	9.823	98	2817883	10.028
101) Toluene	(2)	9.896	92	986974	4.892
102) trans-1,3-Dichloropropene	(2)	10.140	75	376190	4.647
103) Ethyl Methacrylate	(2)	10.225	69	276489	4.804
104) 1,1,2-Trichloroethane	(2)	10.323	97	244107	5.014
105) Tetrachloroethene	(2)	10.463	166	471080	4.845
106) 1,3-Dichloropropane	(2)	10.494	76	416607	5.010
107) 2-Hexanone	(2)	10.573	43	609675	25.310
108) Dibromochloromethane	(2)	10.719	129	277539	4.884
109) 1,2-Dibromoethane	(2)	10.829	107	222424	5.006
110)*Chlorobenzene-d5	(2)	11.250	117	2102584	10.000
112) Chlorobenzene	(2)	11.274	112	1134807	4.910
113) 1,1,1,2-Tetrachloroethane	(2)	11.347	131	390907	5.041
114) Ethylbenzene	(2)	11.366	91	1927484	4.960
117) m+p-Xylene	(2)	11.463	106	1538012	9.917

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 10/21/2010 at 20:05.
Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/10oct21b.b/gc21101.d Instrument ID: HP16334.i
Injection date and time: 21-OCT-2010 19:31 Analyst ID: SEJ02002

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 21-OCT-2010 19:57
Date, time and analyst ID of latest file update: 21-Oct-2010 20:10 sej02002

Sample Name: LCSG71 Lab Sample ID: LCSG71

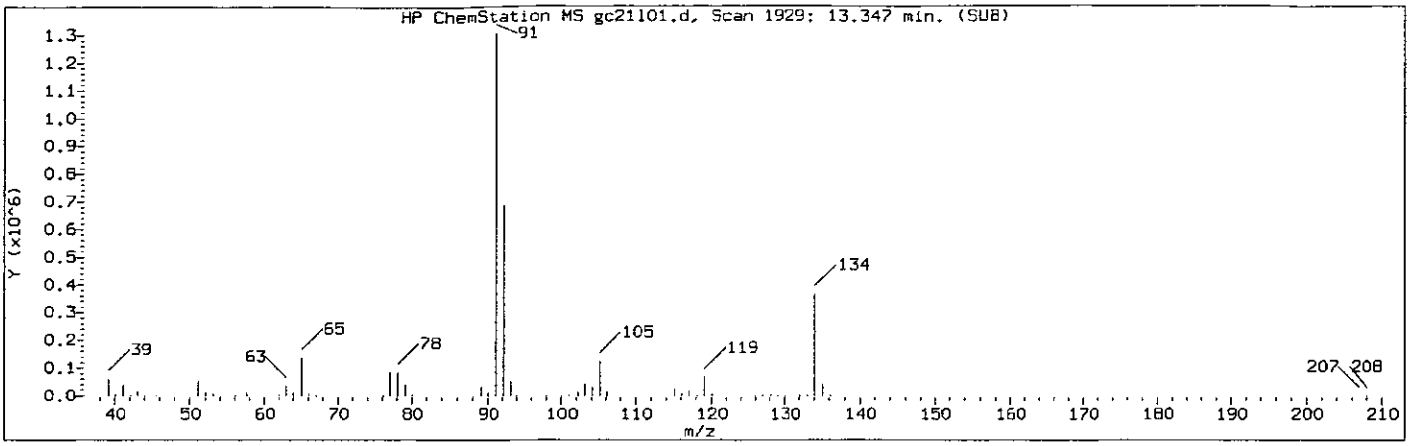
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
115) Xylene (Total)	(2)		106	2297197	14.862
118) o-Xylene	(2)	11.804	106	759185	4.945
119) Styrene	(2)	11.817	104	1169956	5.133
120) Bromoform	(2)	11.981	173	144279	4.973
121) Isopropylbenzene	(2)	12.097	105	1925807	4.881
126)$4-Bromofluorobenzene	(2)	12.231	95	953989	9.879
128) 1,1,2,2-Tetrachloroethane	(3)	12.335	83	295590	5.227
129) Bromobenzene	(3)	12.359	156	481696	4.800
131) 1,2,3-Trichloropropane	(3)	12.377	110	79786	5.079
130) trans-1,4-Dichloro-2-Butene	(4)	12.377	53	217811	21.851
132) n-Propylbenzene	(3)	12.420	91	2396088	4.843
133) 2-Chlorotoluene	(3)	12.499	126	486913	4.793
134) 1,3,5-Trimethylbenzene	(3)	12.548	105	1664089	4.877
135) 4-Chlorotoluene	(3)	12.579	126	504611	4.862
137) tert-Butylbenzene	(3)	12.798	134	395133	5.100
138) Pentachloroethane	(3)	12.829	167	310976	5.202
139) 1,2,4-Trimethylbenzene	(3)	12.835	105	1799314	4.958
140) sec-Butylbenzene	(3)	12.957	105	2181932	4.821
141) p-Isopropyltoluene	(3)	13.054	119	1947359	4.847
142) 1,3-Dichlorobenzene	(3)	13.060	146	1025422	4.894
143)*1,4-Dichlorobenzene-d4	(3)	13.103	152	1267864	10.000
144) 1,4-Dichlorobenzene	(3)	13.121	146	1043170	4.815
145) 1,2,3-Trimethylbenzene	(3)	13.146	120	797983	5.038
146) Benzyl Chloride	(3)	13.219	126	115330	4.813
147) n-Butylbenzene	(3)	13.347	92	988591M	4.964
148) 1,2-Dichlorobenzene	(3)	13.396	146	906696	4.888
150) 1,2-Dibromo-3-Chloropropane	(4)	13.938	155	35810	4.291
153) 1,2,4-Trichlorobenzene	(3)	14.487	180	682388	4.663
154) Hexachlorobutadiene	(3)	14.572	225	379352	4.631
155) Naphthalene	(3)	14.658	128	910113	4.796
156) 1,2,3-Trichlorobenzene	(3)	14.810	180	533191	4.742

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

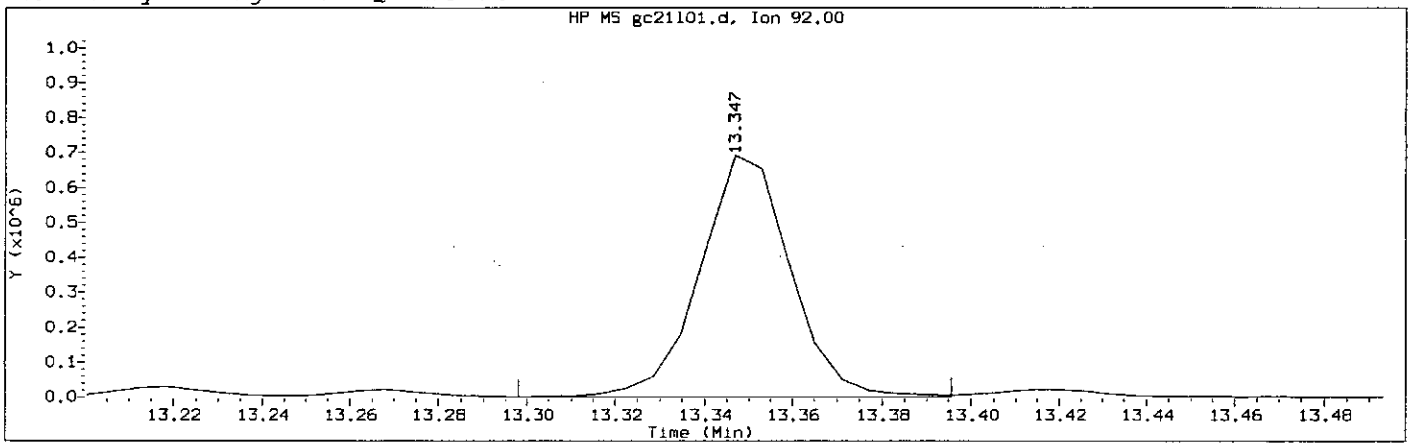
RAD40 0350

Digitally signed by Sara E. Johnson
on 10/21/2010 at 20:11.
Target 3.5 esignature user ID: sej02002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10oct21b.b/gc21101.d Instrument ID: HP16334.i
Injection date and time: 21-OCT-2010 19:31 Analyst ID: SEJ02002

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 21-OCT-2010 19:57
Date, time and analyst ID of latest file update: 21-Oct-2010 20:10 sej02002

Sample Name: LCSG71 Lab Sample ID: LCSG71

Compound Number : 147
Compound Name : n-Butylbenzene
Scan Number : 1929
Retention Time (minutes): 13.347
Quant Ion : 92.00
Area (flag) : 988591M
On-Column Amount (ng) : 4.9636
Integration start scan : 1920 Integration stop scan: 1936
Y at integration start : 191 Y at integration end: 191

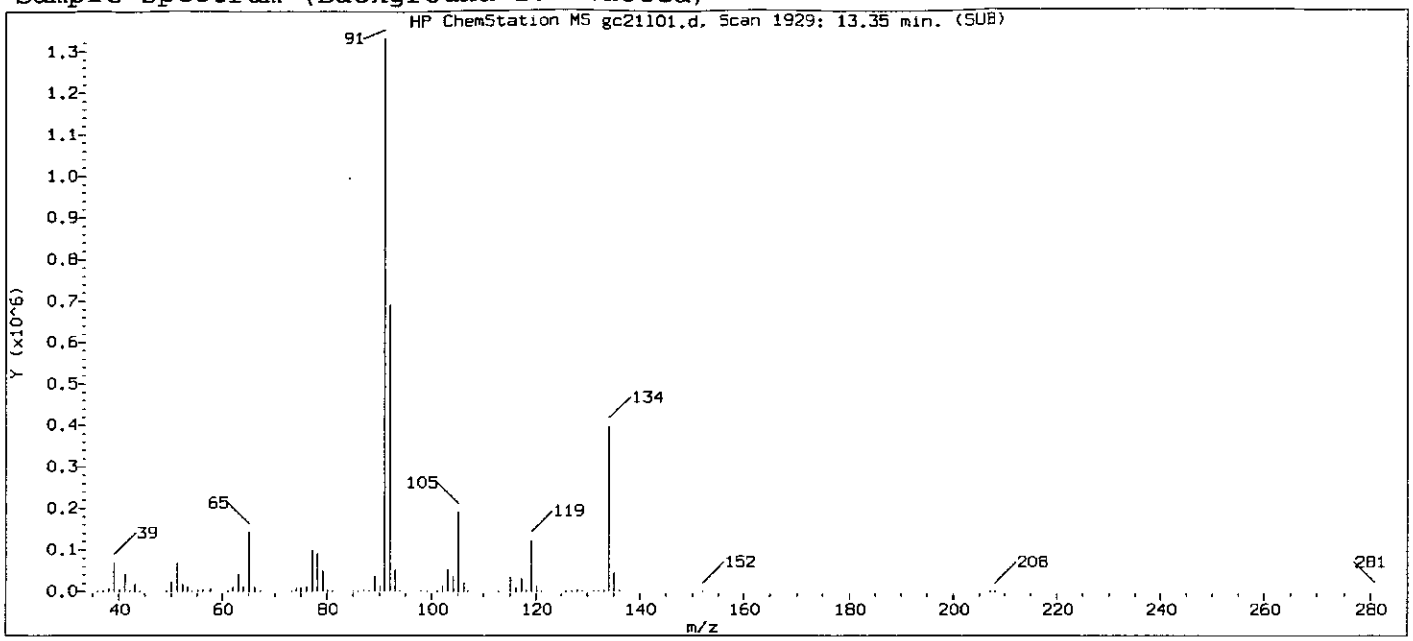
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Sara E. Johnson on 10/21/2010 at 20:11. Target 3.5 esignature user ID: sej02002

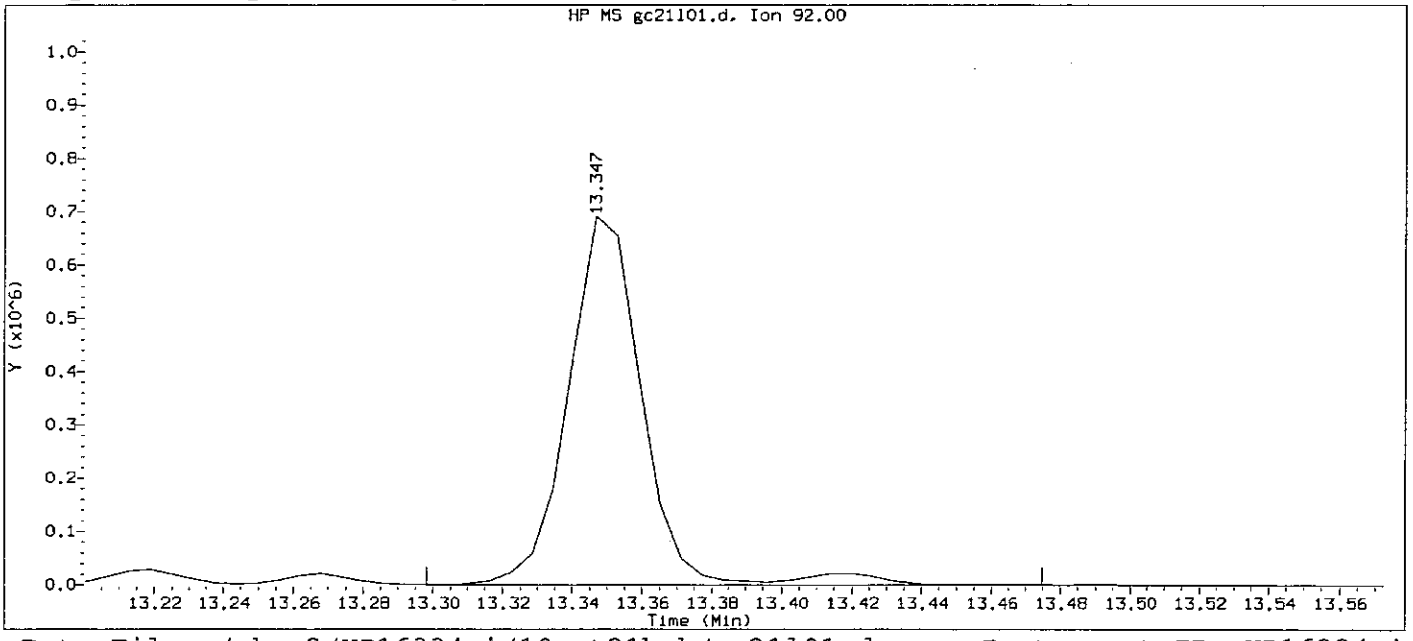
RAD40 0351

GC/MS audit/management approval: _____ 10/25/10

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10oct21b.b/gc21101.d Instrument ID: HP16334.i
Injection date and time: 21-OCT-2010 19:31 Analyst ID: SEJ02002

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 21-OCT-2010 18:53
Date, time and analyst ID of latest file update: 21-Oct-2010 19:49 Automation

Sample Name: LCSG71 Lab Sample ID: LCSG71

Compound Number : 147
Compound Name : n-Butylbenzene
Scan Number : 1929
Retention Time (minutes): 13.347
Quant Ion : 92.00
Area : 1024033
On-column Amount (ng) : 5.1415
Integration start scan : 1920 Integration stop scan: 1949
Y at integration start : 189 Y at integration end: 287

RAD48 0352

Digitally signed by Sara E. Johnson on 10/21/2010 at 20:05.
Target 3.5 esignature user ID: sej02002

LCS1G71 Lancaster Laboratories Analysis Summary for GC/MS Volatiles LCS1G71

Data file: /chem2/HP16334.i/10oct21b.b/gc21102.d Injection date and time: **21-OCT-2010 19:53**
Data file Sample Info. Line: LCS1G71;LCS1G71;1;3;LCS; Instrument ID: **HP16334.i** Batch: **G102942AA**
Date, time and analyst ID of latest file update: 21-Oct-2010 20:11 Automation

Blank Data file reference: **/chem2/HP16334.i/10oct21b.b/gc21b51.d**

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: **SMQC**
Calibration date and time (Last Method Edit): 21-OCT-2010 19:57
Mid Level Daily Calibration Standard Reference: **/chem2/HP16334.i/10oct21b.b/gc21c51.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
36) t-Butyl Alcohol-d10	4.379(0.000)	458	65	131714 (6)	50.00	
77) Fluorobenzene	7.829(0.000)	1024	96	2938661 (3)	10.00	
110) Chlorobenzene-d5	11.249(0.000)	1585	117	2187178 (4)	10.00	
143) 1,4-Dichlorobenzene-d4	13.103(0.000)	1889	152	1227745 (-3)	10.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
61) Dibromofluoromethane	(1)	6.927(0.000)	113	707845	10.732	107%		77 - 114
70) 1,2-Dichloroethane-d4	(1)	7.384(0.000)	102	134064	10.236	102%		74 - 113
97) Toluene-d8	(2)	9.823(0.000)	98	2987231	10.219	102%		77 - 110
126) 4-Bromofluorobenzene	(2)	12.231(0.000)	95	989427	9.850	98%		78 - 110

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
4) Dimethyl ether	(1)	2.080(0.000)	45	436826	4.578	4.58			0.1
31) Acetonitrile	(4)	4.166(0.002)	41	157379	40.662	40.66			7
46) Vinyl Acetate	(1)	5.476(0.005)	43	669983	10.518	10.52			0.2
93) 2-Chloroethyl Vinyl Ether	(1)	9.354(0.000)	63	149774	5.625	5.62			0.1
125) Cyclohexanone	(4)	12.194(0.000)	55	130273	130.100	130.10			5
122) cis-1,4-Dichloro-2-Butene	(4)	12.158(0.002)	88	91793	11.912	11.91			0.4
149) Hexachloroethane	(1)	13.578(-0.000)	117	298617	4.680	4.68			0.1

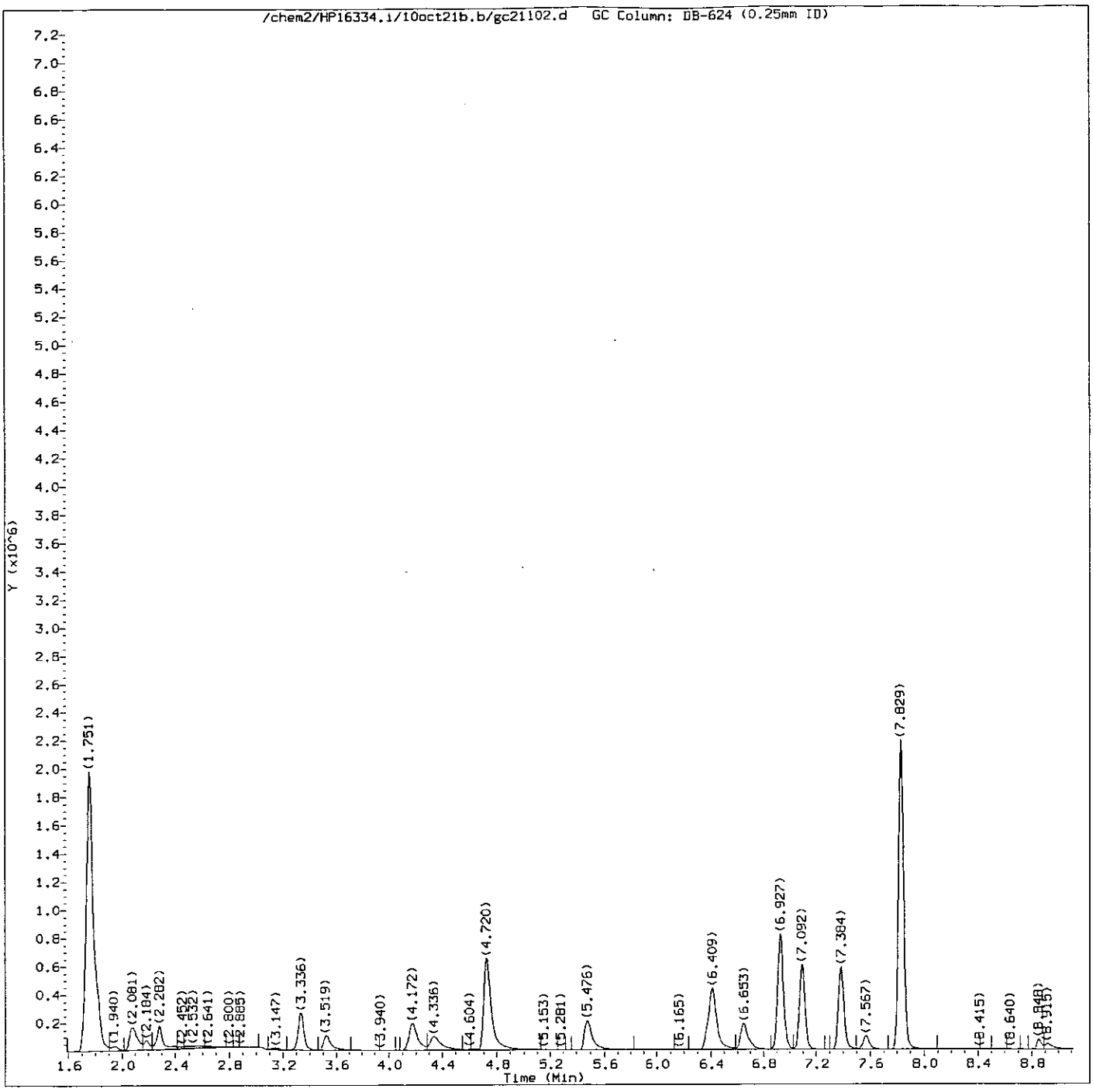
Total number of targets = 7

Comments:_____

Digitally signed by Sara E. Johnson on 10/21/2010 at 20:11. Target 3.5 esignature user ID: sej02002

BAD40 0353

Auditor:_____ Date: 10/20/10



Total Ion Chromatogram (TIC)

Target Revision 3.5

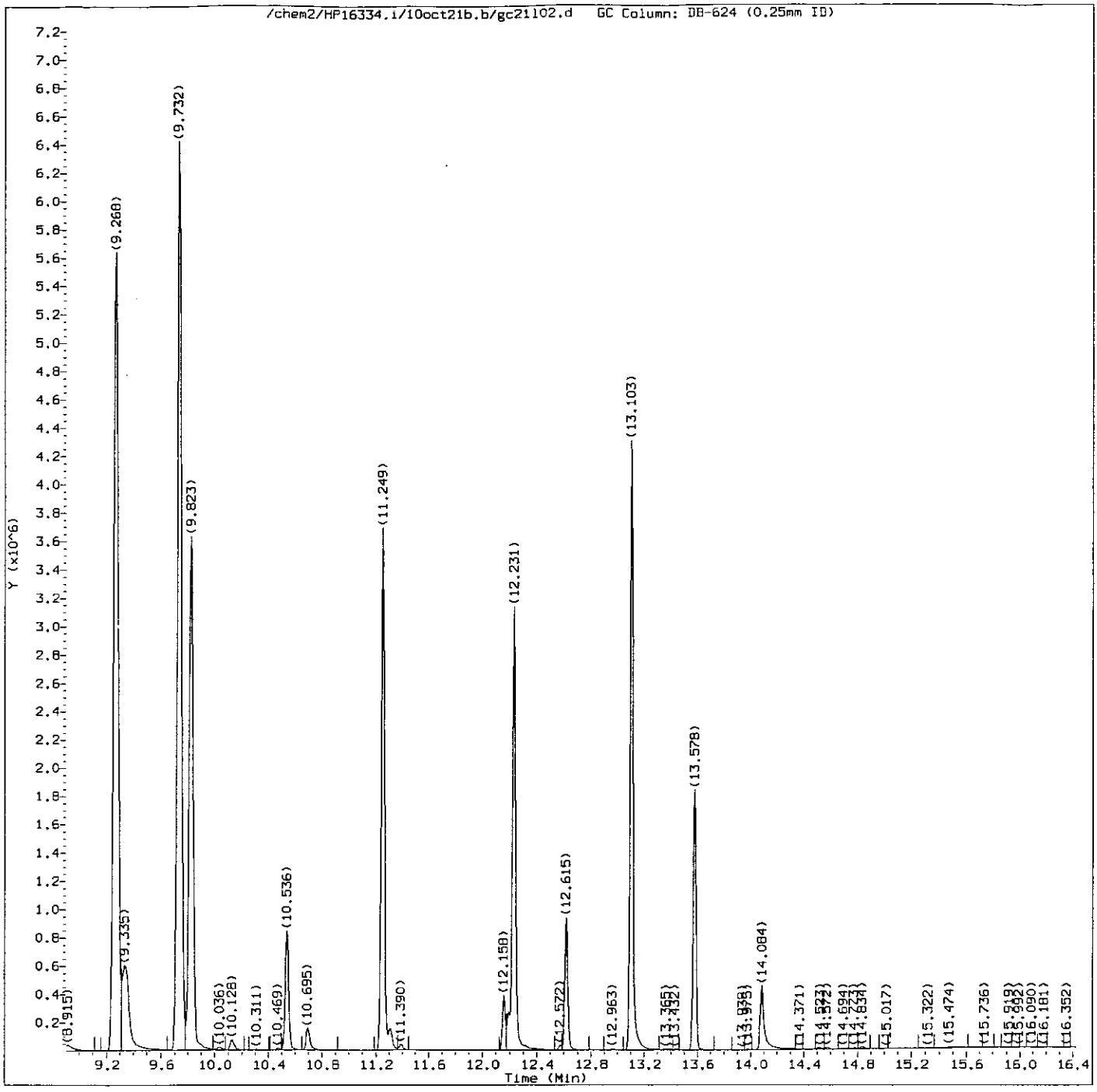
Data File: /chem2/HP16334.i/10oct21b.b/gc21102.d Instrument ID: HP16334.i
Injection date and time: 21-OCT-2010 19:53 Analyst ID: SEJ02002

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: SMQC
Calibration date and time: 21-OCT-2010 19:57
Date, time and analyst ID of latest file update: 21-Oct-2010 20:11 Automation

Sample Name: LCS1G71 Lab Sample ID: LCS1G71

RAD40 0354

Digitally signed by Sara E. Johnson
on 10/21/2010 at 20:11.
Target 3.5 esignature user ID: sej02002



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/10oct21b.b/gc21102.d Instrument ID: HP16334.i
Injection date and time: 21-OCT-2010 19:53 Analyst ID: SEJ02002

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: SMQC
Calibration date and time: 21-OCT-2010 19:57
Date, time and analyst ID of latest file update: 21-Oct-2010 20:11 Automation

Sample Name: LCS1G71 Lab Sample ID: LCS1G71

RAD40 0355

Digitally signed by Sara E. Johnson
on 10/21/2010 at 20:11.
Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/10oct21b.b/gc21102.d Instrument ID: HP16334.i
Injection date and time: 21-OCT-2010 19:53 Analyst ID: SEJ02002

Method used: /chem2/HP16334.i/10oct21b.b/g8260w25.m Sublist used: SMQC
Calibration date and time: 21-OCT-2010 19:57
Date, time and analyst ID of latest file update: 21-Oct-2010 20:11 Automation

Sample Name: LCS1G71 Lab Sample ID: LCS1G71

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(1)	2.081	45	436826	4.578
31) Acetonitrile	(4)	4.166	41	157379	40.662
36)*t-Butyl Alcohol-d10	(4)	4.379	65	131714	50.000
46) Vinyl Acetate	(1)	5.476	43	669983	10.518
61)$Dibromofluoromethane	(1)	6.927	113	707845	10.732
70)$1,2-Dichloroethane-d4	(1)	7.384	102	134064	10.236
77)*Fluorobenzene	(1)	7.829	96	2938661	10.000
93) 2-Chloroethyl Vinyl Ether	(1)	9.354	63	149774	5.625
97)$Toluene-d8	(2)	9.823	98	2987231	10.219
110)*Chlorobenzene-d5	(2)	11.249	117	2187178	10.000
122) cis-1,4-Dichloro-2-Butene	(4)	12.158	88	91793	11.912
125) Cyclohexanone	(4)	12.194	55	130273	130.100
126)$4-Bromofluorobenzene	(2)	12.231	95	989427	9.850
143)*1,4-Dichlorobenzene-d4	(3)	13.103	152	1227745	10.000
149) Hexachloroethane	(1)	13.578	117	298617	4.680

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

RAD48 0356

Digitally signed by Sara E. Johnson
on 10/21/2010 at 20:11.
Target 3.5 esignature user ID: sej02002

Lancaster Laboratories

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Type I Data Package

Prepared for:

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

Project: RAAP - Radford, VA - HWMU13/Open Burning Ground
Groundwater and Water Samples
Collected on 09/01/10

SDG# RAD36

GROUP	SAMPLE NUMBERS
1210258	6076061-6076063

PA Cert. # 36-00037
NY Cert. # 10670
NJ Cert. # PA011
NC Cert. # 521
TX Cert. # T104704194-08A-TX

Through our technical processes and second person review of data, we have established that our data/deliverables are in compliance with the methods and project requirements unless otherwise noted or previously resolved with the client.

Authorized by: Luz C Torres

Luz C Torres
Group Leader

Date 9/30/10

Any questions or concerns you might have regarding this data package should be directed to your client representative, Barbara Weyandt at Ext. 1576.

Total Number of Pages 388

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Sample Reference List for SDG Number RAD36 with a Data Package Type of I

11200 - Draper Aden Associates, Inc.

Project: RAAP - Radford, VA - HWMU13/Open Burning Ground

Lab Sample Number	Lab Sample Code	Client Sample Description
6076061	13MW1	13MW1 Groundwater Sample OBG-Background GW Monitoring Event
6076062	13MW2	13MW2 Groundwater Sample OBG-Background GW Monitoring Event
6076063	13MTB	Trip_Blank Water Sample OBG-Background GW Monitoring Event

acct#11200 Gp# 1210258

CHAIN OF CUSTODY RECORD

Sample# 607C0061-63

JLF 8-1-10

Laboratory: Lancaster Laboratories, 2425 New Holland Pike, Lancaster, PA, 17605-2425/ Barb Weyandt, Manager/ (717) 656-2300

JLF 8/31/10

Client:	Draper Aden Associates	**Consultant:**	Draper Aden Associates	**Sample Site:**	RAAP, Radford, Virginia
Attn:	0	**Attn:**	Janet C. Frazier	**Location:**	Open Burning Ground (OBG)/HWMU13
Address:	0	**Address:**	2206 South Main Street Blacksburg, Virginia 24060	**Event:**	OBG - Background GW monitoring event.
	0			**DAA JN:**	803204.08 305
Phone:	0	**Phone:**	(540) 552-0444	**Lab JN:**	
Fax:	0	**Fax:**	(540) 552-0291		
Fax:	0				

Project Specific (PS) QC Sample Collection for Project Complete? BATCH QC — YES / NO — yes

Carrier: UPS

Tracking Number: 1Z-237301-01-5632-9360

Box 1: Matrix
SW Surface Water; GW Groundwater; L Leachate; S Soil; T Trip Blank; E Equipment Blank; P Product; O Other

Box 2: Preservative
A HCl; B HNO_3; C H_2SO_4; D $Na_2S_2O_3$; E NaOH; F ZnAc; G Other (Specify); H None

Box 3: Filtered/Unfiltered
F Filtered; U Unfiltered

Box 5: Sample Container Type
P Plastic; V VOA; AG Amber Glass; CG Clear Glass

Box 4: Sample Type
G Grab; C Composite

Invoice
Copy to Consultant: YES / NO — YES
Bill: Client / Consultant — Client
Preserved and shipped on ice: YES / NO — YES

JLF 8/31/10

Box 4 - Sample Type				G									
Box 3 - Filtered/Unfiltered				U									
Required pH of Sample				<2									
Box 2 - Preservative				A									
Box 5 - Sample Container Type				3-40 ml V									
Sample ID	**Date: 2010**	**Time**	**Box 1: Matrix**	**Number of Bottles**	**8260B/5030B - 25 mL purge** 1,1-Dichloroethane; 1,1,1-Trichloroethane; Trichlorofluoromethane — 8/6/2010								
13MW1	9-1	0940	GW	4	X								
13MW2	9-1	0935	GW	4	X								
Trip Blank	9-1	0800	T	2	X								

9-1-10

GENERAL NOTES:
1. Level 1 deliverable with EDD and pdf.
2. REPORT DL/QL and estimated results.
3. STANDARD turnaround time.
4. 3 target analytes only.

JLF 8-30-10

Clients Special Instructions: Level 1 with edd.

Received by lab in Good Condition ____ Yes ____ No Custody Seal Intact ____ Yes ____ No Temperature upon arrival ____ Received on Ice ____ Yes ____ No
Describe problems, if any:

Sampler Name (Print): KEN CUDDINGTON	Date: 9-1-10	#1 Relinquished by (Signature):	Date: 9-01-10	#2 Relinquished by (Signature):	Date:	Sample Storage Time Requested:
Sampler Signature:	Time: 0700	Company Name: DAA	Time: 1700	Company Name:	Time:	
Sampler Name (Print): Chris Branscome	Date: 9/1/10	#1 Received by (Signature):	Date:	#2 Received by (Signature):	Date: 9/2/10	30 DYS ORG/E MTHS INORG
Sampler Signature:	Time: 0700	Company Name:	Time:	Company Name: LLI	Time: 920	

ADD: 8082

JLF 8/30/2010

JLF 8-6-10

1/1

Lancaster Laboratories

Environmental Sample Administration
Receipt Documentation Log

Client/Project: Draper Aden

Date of Receipt: 9/2/10

Time of Receipt: 920

Source Code: 60:1

Unpacker Emp. No.: 2316

Shipping Container Sealed: (YES) NO

Custody Seal Present * : (YES) NO

* Custody seal was intact unless otherwise noted in the discrepancy section

Package: (Chilled) Not Chilled

Temperature of Shipping Containers							
Cooler #	Thermometer ID	Temperature (°C)	Temp Bottle (TB) or Surface Temp (ST)	Wet Ice (WI) or Dry Ice (DI) or Ice Packs (IP)	Ice Present? Y/N	Loose (L) Bagged Ice (B) or NA	Comments
1	9193	1.6°C	TB	WI	Y	B	
2							
3							
4							
5							
6							

Number of Trip Blanks received NOT listed on chain of custody: 0

Paperwork Discrepancy/Unpacking Problems:

Sample Administration Internal Chain of Custody			
Name	Date	Time	Reason for Transfer
[signature]	9/2/10	1520	Unpacking to storage
[signature]	9/2/10		Place in Storage or (Entry)
			Entry
			Entry

Issued by Dept. 6042 Management
2174.05

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01163 GC/MS VOA Water Prep

An undiluted aliquot of the water sample or a dilution of the sample is purged with an inert gas and the volatiles are collected on an adsorbent trap that is subsequently desorbed onto a gas chromatographic column.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 5030B, December 1996.

02898 EPA SW846/8260 (water-25ml) #1

The water sample is purged and the volatile compounds are collected on a sorbent trap that is subsequently desorbed onto the GC/MS system for chromatographic and mass spectral analysis.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 8260B, December 1996.

Lancaster Laboratories

ANALYTICAL RESULTS

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

Prepared for:

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

September 10, 2010

Project: RAAP - Radford, VA - HWMU13/Open Burning Ground

Submittal Date: 09/02/2010
Group Number: 1210258
SDG: RAD36
State of Sample Origin: VA

Client Sample Description	Lancaster Labs (LLI) #
13MW1 Groundwater Sample	6076061
13MW2 Groundwater Sample	6076062
Trip_Blank Water Sample	6076063

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO	Draper Aden Associates, Inc.	Attn: Janet Frazier
1 COPY TO	Data Package Group	

Questions? Contact your Client Services Representative
Barbara A Weyandt at (717) 656-2300 Ext. 1576

Respectfully Submitted,

Lawrence M. Taylor
Senior Specialist

RAD36 0885

Lancaster Laboratories, Inc.
2425 New Holland Pike
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Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

Lancaster Laboratories
2425 New Holland Pike • Lancaster, PA 17601

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

RL	Reporting Limit	**BMQL**	Below Minimum Quantitation Level
N.D.	none detected	**MPN**	Most Probable Number
TNTC	Too Numerous To Count	**CP Units**	cobalt-chloroplatinate units
IU	International Units	**NTU**	nephelometric turbidity units
umhos/cm	micromhos/cm	**ng**	nanogram(s)
C	degrees Celsius	**F**	degrees Fahrenheit
meq	milliequivalents	**lb.**	pound(s)
g	gram(s)	**kg**	kilogram(s)
ug	microgram(s)	**mg**	milligram(s)
ml	milliliter(s)	**l**	liter(s)
m3	cubic meter(s)	**ul**	microliter(s)

< less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

> greater than

J estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

ppm parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.

ppb parts per billion

Dry weight basis Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers

A	TIC is a possible aldol-condensation product
B	Analyte was also detected in the blank
C	Pesticide result confirmed by GC/MS
D	Compound quantitated on a diluted sample
E	Concentration exceeds the calibration range of the instrument
N	Presumptive evidence of a compound (TICs only)
P	Concentration difference between primary and confirmation columns >25%
U	Compound was not detected
X,Y,Z	Defined in case narrative

Inorganic Qualifiers

B	Value is <CRDL, but ≥IDL
E	Estimated due to interference
M	Duplicate injection precision not met
N	Spike sample not within control limits
S	Method of standard additions (MSA) used for calculation
U	Compound was not detected
W	Post digestion spike out of control limits
*	Duplicate analysis not within control limits
+	Correlation coefficient for MSA <0.995

Analytical test results for methods listed on the laboratories' accreditation scope meet all requirements of NELAC unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

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Lancaster Laboratories

Sample Description: 13MW1 Groundwater Sample
OBG-Background GW Monitoring Event
RAAP - Radford, VA - HWMU13/Open Burning Ground

LLI Sample # WW 6076061
LLI Group # 1210258
Account # 11200

Project Name: RAAP - Radford, VA - HWMU13/Open Burning Ground

Collected: 09/01/2010 08:40 by KC

Submitted: 09/02/2010 09:20
Reported: 09/10/2010 12:35
Discard: 10/11/2010

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

13MW1 SDG#: RAD36-01

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B 25mL purge**		ug/l	ug/l	ug/l	
02898	1,1-Dichloroethane	75-34-3	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	G102461AA	09/03/2010 11:22	Stephanie A Selis	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G102461AA	09/03/2010 11:22	Stephanie A Selis	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories, Inc.
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

Lancaster Laboratories

Sample Description: 13MW2 Groundwater Sample
OBG-Background GW Monitoring Event
RAAP - Radford, VA - HWMU13/Open Burning Ground

LLI Sample # WW 6076062
LLI Group # 1210258
Account # 11200

Project Name: RAAP - Radford, VA - HWMU13/Open Burning Ground

Collected: 09/01/2010 09:35 by KC

Submitted: 09/02/2010 09:20
Reported: 09/10/2010 12:35
Discard: 10/11/2010

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

13MW2 SDG#: RAD36-02

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B 25mL purge**		ug/l	ug/l	ug/l	
02898	1,1-Dichloroethane	75-34-3	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	G102461AA	09/03/2010 11:44	Stephanie A Selis	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G102461AA	09/03/2010 11:44	Stephanie A Selis	1

RAD36 0009

*=This limit was used in the evaluation of the final result

Lancaster Laboratories, Inc.
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

Lancaster Laboratories

Sample Description: Trip_Blank Water Sample
OBG-Background GW Monitoring Event
RAAP - Radford, VA - HWMU13/Open Burning Ground

LLI Sample # WW 6076063
LLI Group # 1210258
Account # 11200

Project Name: RAAP - Radford, VA - HWMU13/Open Burning Ground

Collected: 09/01/2010 08:00

Submitted: 09/02/2010 09:20
Reported: 09/10/2010 12:35
Discard: 10/11/2010

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

13MTB SDG#: RAD36-03TB*

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B 25mL purge**		ug/l	ug/l	ug/l	
02898	1,1-Dichloroethane	75-34-3	N.D.	0.1	0.5	1
02898	1,1,1-Trichloroethane	71-55-6	N.D.	0.1	0.5	1
02898	Trichlorofluoromethane	75-69-4	N.D.	0.1	0.5	1

General Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02898	EPA SW846/8260 (water-25ml) #1	SW-846 8260B 25mL purge	1	G102461AA	09/03/2010 12:05	Stephanie A Selis	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	G102461AA	09/03/2010 12:05	Stephanie A Selis	1

RAD36 0089

*=This limit was used in the evaluation of the final result

Lancaster Laboratories, Inc.
2425 New Holland Pike
PO Box 12425
Lancaster, PA 17605-2425
717-656-2300 Fax: 717-656-2681

Volatiles by GC/MS Data

Case Narrative
Conformance/Nonconformance
Summary

CASE NARRATIVE
Client: Draper Aden Associates, Inc.
SDG#: RAD36

LANCASTER LABORATORIES
VOLATILES BY GC/MS

SAMPLE NUMBER(S):

LL #'s	Sample Code	Matrix Water	Comments
6076061	13MW1	X	
6076062	13MW2	X	
6076063	13MTB	X	Client Blank

LABORATORY SUBMITTED QC:

VBLKG23	VBLKG23	X	Method Blank
6075230	CSTEE	X	Unspiked
6075230	CSTEEMS	X	Matrix Spike
LCSG23	LCSG23	X	Lab Control Sample
LCDG23	LCDG23	X	Lab Control Sample Dup

SAMPLE PREPARATION:

No sample preparation was necessary for the VOA fraction.

ANALYSIS:

No problems were encountered during the analysis of these samples.

QUALITY CONTROL and NONCONFORMANCE SUMMARY:

Matrix QC may not be included if site-specific QC were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCD was performed, unless otherwise specified in the method or by the client.

All QC is within specifications.

RAD36 8812

DATA INTERPRETATION:

No further interpretation is necessary for the data submitted.

Case Narrative reviewed and approved by:

Date 9/29/10

Dana M. Kauffman
Manager, Data Deliverables

RAD36 8813

QC Summary

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKG23

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: VBLKG23

Sample wt/vol: 25.00(g/mL) mL Lab File ID: HP16334.i/10sep03a.b/gs03b01.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 09/03/10

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)	MDL ug/L	Q
75-71-8	Dichlorodifluoromethane		0.1	U
74-87-3	Chloromethane		0.2	U
75-01-4	Vinyl Chloride		0.1	U
106-99-0	1,3-Butadiene		0.1	U
74-83-9	Bromomethane		0.1	U
75-00-3	Chloroethane		0.1	U
75-43-4	Dichlorofluoromethane		0.2	U
75-69-4	Trichlorofluoromethane		0.1	U
60-29-7	Ethyl Ether		0.1	U
354-23-4	Freon 123a		0.2	U
107-02-8	Acrolein		5.0	U
75-35-4	1,1-Dichloroethene		0.1	U
76-13-1	Freon 113		0.2	U
67-64-1	Acetone		3.0	U
74-88-4	Methyl Iodide		0.1	U
75-15-0	Carbon Disulfide		0.4	U
107-05-1	Allyl Chloride		0.1	U
79-20-9	Methyl Acetate		0.3	U
75-09-2	Methylene Chloride		0.3	J
540-59-0	1,2-Dichloroethene (Total)		0.1	U
75-65-0	t-Butyl Alcohol		4.0	U
107-13-1	Acrylonitrile		1.0	U
1634-04-4	Methyl Tertiary Butyl Ether		0.1	U
156-60-5	trans-1,2-Dichloroethene		0.1	U
110-54-3	n-Hexane		0.1	U
75-34-3	1,1-Dichloroethane		0.1	U
108-20-3	di-Isopropyl Ether		0.1	U
126-99-8	2-Chloro-1,3-Butadiene		0.1	U
637-92-3	Ethyl t-Butyl Ether		0.1	U
156-59-2	cis-1,2-Dichloroethene		0.1	U

RAD36 0015

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKG23

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: VBLKG23

Sample wt/vol: 25.00(g/mL) mL Lab File ID: HP16334.i/10sep03a.b/gs03b01.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 09/03/10

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)	MDL ug/L	Q
594-20-7	2,2-Dichloropropane		0.1	U
78-93-3	2-Butanone		1.0	U
107-12-0	Propionitrile		2.0	U
126-98-7	Methacrylonitrile		1.0	U
74-97-5	Bromochloromethane		0.1	U
109-99-9	Tetrahydrofuran		2.0	U
67-66-3	Chloroform		0.1	U
71-55-6	1,1,1-Trichloroethane		0.1	U
110-82-7	Cyclohexane		0.1	U
563-58-6	1,1-Dichloropropene		0.1	U
56-23-5	Carbon Tetrachloride		0.1	U
78-83-1	Isobutyl Alcohol		10	U
71-43-2	Benzene		0.1	U
107-06-2	1,2-Dichloroethane		0.1	U
994-05-8	t-Amyl Methyl Ether		0.1	U
142-82-5	n-Heptane		0.2	U
71-36-3	n-Butanol		20	U
79-01-6	Trichloroethene		0.1	U
108-87-2	Methylcyclohexane		0.1	U
78-87-5	1,2-Dichloropropane		0.1	U
80-62-6	Methyl Methacrylate		0.1	U
74-95-3	Dibromomethane		0.1	U
123-91-1	1,4-Dioxane		20	U
75-27-4	Bromodichloromethane		0.1	U
79-46-9	2-Nitropropane		1.0	U
10061-01-5	cis-1,3-Dichloropropene		0.1	U
108-10-1	4-Methyl-2-Pentanone		1.0	U
108-88-3	Toluene		0.1	U
10061-02-6	trans-1,3-Dichloropropene		0.1	U
97-63-2	Ethyl Methacrylate		0.1	U

RAD36 0016

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKG23

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: VBLKG23

Sample wt/vol: 25.00(g/mL) mL Lab File ID: HP16334.i/10sep03a.b/gs03b01.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 09/03/10

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)	MDL ug/L	Q
79-00-5	1,1,2-Trichloroethane		0.1	U
127-18-4	Tetrachloroethene		0.1	U
142-28-9	1,3-Dichloropropane		0.1	U
591-78-6	2-Hexanone		1.0	U
124-48-1	Dibromochloromethane		0.1	U
106-93-4	1,2-Dibromoethane		0.1	U
108-90-7	Chlorobenzene		0.1	U
630-20-6	1,1,1,2-Tetrachloroethane		0.1	U
100-41-4	Ethylbenzene		0.1	U
1330-20-7	Xylene (Total)		0.1	U
179601-23-1	m+p-Xylene		0.1	U
95-47-6	o-Xylene		0.1	U
100-42-5	Styrene		0.1	U
75-25-2	Bromoform		0.1	U
98-82-8	Isopropylbenzene		0.1	U
79-34-5	1,1,2,2-Tetrachloroethane		0.1	U
108-86-1	Bromobenzene		0.1	U
110-57-6	trans-1,4-Dichloro-2-Butene		1.0	U
96-18-4	1,2,3-Trichloropropane		0.3	U
103-65-1	n-Propylbenzene		0.1	U
95-49-8	2-Chlorotoluene		0.1	U
108-67-8	1,3,5-Trimethylbenzene		0.1	U
106-43-4	4-Chlorotoluene		0.1	U
98-06-6	tert-Butylbenzene		0.1	U
76-01-7	Pentachloroethane		0.2	U
95-63-6	1,2,4-Trimethylbenzene		0.1	U
135-98-8	sec-Butylbenzene		0.1	U
99-87-6	p-Isopropyltoluene		0.1	U
541-73-1	1,3-Dichlorobenzene		0.1	U
106-46-7	1,4-Dichlorobenzene		0.1	U

RAD36 0017

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKG23

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Matrix: (soil/water) WATER Lab Sample ID: VBLKG23

Sample wt/vol: 25.00(g/mL) mL Lab File ID: HP16334.i/10sep03a.b/gs03b01.d

Level: (low/med) LOW Date Received:

Moisture: not dec. _____ Date Analyzed: 09/03/10

Column: (pack/cap) CAP Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg)	MDL ug/L	Q
526-73-8	1,2,3-Trimethylbenzene		0.1	U
100-44-7	Benzyl Chloride		0.1	U
104-51-8	n-Butylbenzene		0.1	U
95-50-1	1,2-Dichlorobenzene		0.1	U
96-12-8	1,2-Dibromo-3-Chloropropane		0.2	U
120-82-1	1,2,4-Trichlorobenzene		0.1	U
87-68-3	Hexachlorobutadiene		0.1	U
91-20-3	Naphthalene		0.1	U
87-61-6	1,2,3-Trichlorobenzene		0.1	U

RAD36 0018

WATER VOLATILE SURROGATE RECOVERY

Lab Name: Lancaster Laboratories Contract: _____

Lab Code: _____ Case No.: _____ SAS No.: _____ SDG No.: RAD36

	LAB SAMPLE ID	S1 (DBF) #	S2 (DCA) #	S3 (TOL) #	S4 (BFB) #	TOT OUT
01	6076061	97	101	96	93	0
02	6076062	98	105	96	92	0
03	6076063	98	103	96	92	0
04	VBLKG23	97	103	96	93	0
05	6075230	97	102	95	93	0
06	6075230MS	97	101	97	96	0
07	LCDG23	98	102	97	96	0
08	LCSG23	97	100	97	96	0

	QC LIMITS
S1 (DBF) = Dibromofluoromethane	(77-114)
S2 (DCA) = 1,2-Dichloroethane-d4	(74-113)
S3 (TOL) = Toluene-d8	(77-110)
S4 (BFB) = 4-Bromofluorobenzene	(78-110)

Column to be used to flag recovery values
* values outside of QC limits
D sample diluted, values outside of QC limits

Lancaster Laboratories, Inc.
GC/MS Volatiles Matrix Spike Recoveries

Unspiked: gs03s04.d
CSTEE 6075230
Method: SW-846 8260B (25ML)
Instrument: HP16334

Matrix Spike: gs03s05.d
CSTEEMS 6075230
Matrix/Level: WL
Dilution Factor: 1.00

Batch: G102461AA

COMPOUND NAME	MS SPIKE	US CONC UG/L	MS CONC UG/L	MS REC %	Range LOWER-UPPER	INSPEC
Dichlorodifluoromethane	5.00	ND	3.59	72	40-136	YES
Chloromethane	5.00	ND	4.18	84	55-152	YES
Vinyl Chloride	5.00	ND	4.32	86	57-150	YES
1,3-Butadiene	5.00	ND	3.37	67	88-137	NO
Bromomethane	5.00	ND	4.34	87	66-137	YES
Chloroethane	5.00	ND	4.32	86	70-139	YES
Dichlorofluoromethane	5.00	ND	4.66	93	76-148	YES
Trichlorofluoromethane	5.00	ND	4.52	90	81-149	YES
Ethyl Ether	5.00	ND	4.26	85	67-127	YES
Freon 123a	5.00	ND	5.60	112	81-151	YES
Acrolein	37.50	ND	40.40	108	29-149	YES
1,1-Dichloroethene	5.00	ND	6.16	123	88-137	YES
Freon 113	5.00	ND	6.50	130	87-158	YES
Acetone	37.50	ND	47.64	127	57-163	YES
Methyl Iodide	5.00	ND	5.90	118	79-129	YES
Carbon Disulfide	5.00	ND	7.04	141	82-147	YES
Allyl Chloride	5.00	ND	7.23	145	67-139	NO
Methyl Acetate	5.00	ND	6.44	129	69-130	YES
Methylene Chloride	5.00	ND	5.29	106	84-122	YES
t-Butyl Alcohol	50.00	ND	46.81	94	46-135	YES
Acrylonitrile	25.00	ND	31.24	125	56-161	YES
trans-1,2-Dichloroethene	5.00	ND	6.15	123	88-127	YES
1,2-Dichloroethene (Total	10.00	ND	12.06	121	89-124	YES
Methyl Tertiary Butyl Eth	5.00	ND	5.37	107	73-125	YES
n-Hexane	5.00	ND	6.12	122	82-149	YES
1,1-Dichloroethane	5.00	ND	5.99	120	89-128	YES
di-Isopropyl Ether	5.00	ND	5.60	112	75-123	YES
2-Chloro-1,3-Butadiene	5.00	ND	6.52	130	71-159	YES
Ethyl t-Butyl Ether	5.00	ND	5.33	107	72-124	YES
2,2-Dichloropropane	5.00	ND	6.03	121	80-134	YES
cis-1,2-Dichloroethene	5.00	ND	5.91	118	82-129	YES
2-Butanone	37.50	ND	45.86	122	58-168	YES
Propionitrile	37.50	ND	45.95	123	63-147	YES
Methacrylonitrile	37.50	ND	46.76	125	58-155	YES
Bromochloromethane	5.00	ND	6.16	123	82-125	YES
Tetrahydrofuran	25.00	ND	29.26	117	56-154	YES
Chloroform	5.00	ND	6.07	121	86-136	YES
1,1,1-Trichloroethane	5.00	ND	6.31	126	81-152	YES
Cyclohexane	5.00	ND	6.33	127	84-147	YES
1,1-Dichloropropene	5.00	ND	6.12	122	86-139	YES
Carbon Tetrachloride	5.00	ND	5.95	119	86-152	YES
Isobutyl Alcohol	125.00	ND	130.77	105	65-155	YES
Benzene	5.00	ND	6.01	120	87-126	YES
1,2-Dichloroethane	5.00	ND	5.74	115	83-143	YES
t-Amyl Methyl Ether	5.00	ND	5.44	109	74-127	YES
n-Heptane	5.00	ND	6.25	125	76-155	YES
n-Butanol	250.00	ND	254.16	102	60-127	YES
Trichloroethene	5.00	ND	6.54	131	85-131	YES
Methylcyclohexane	5.00	ND	6.96	139	91-146	YES
1,2-Dichloropropane	5.00	ND	6.04	121	83-126	YES
Dibromomethane	5.00	ND	5.90	118	83-126	YES
1,4-Dioxane	125.00	ND	161.03	129	57-162	YES
Methyl Methacrylate	5.00	ND	5.42	108	48-152	YES
Bromodichloromethane	5.00	ND	5.75	115	82-133	YES
2-Nitropropane	5.00	ND	5.39	108	43-176	YES
cis-1,3-Dichloropropene	5.00	ND	5.68	114	63-127	YES
4-Methyl-2-Pentanone	25.00	ND	26.64	107	69-133	YES
Toluene	5.00	ND	5.88	118	83-127	YES

N/C = Could not calculate

Lab Chronicle: _____ Ent. by _____

_____ Ver. by _____

_____

RAD36 0828

Lancaster Laboratories, Inc.
GC/MS Volatiles Matrix Spike Recoveries

Unspiked: gs03s04.d
CSTEE 6075230
Method: SW-846 8260B (25ML)
Instrument: HP16334

Matrix Spike: gs03s05.d
CSTEEMS 6075230
Matrix/Level: WL
Dilution Factor: 1.00

Batch: G102461AA

COMPOUND NAME	MS SPIKE	US CONC UG/L	MS CONC UG/L	MS REC %	Range LOWER-UPPER	INSPEC
trans-1,3-Dichloropropene	5.00	ND	5.57	111	71-128	YES
Ethyl Methacrylate	5.00	ND	6.09	122	58-133	YES
1,1,2-Trichloroethane	5.00	ND	5.89	118	85-129	YES
Tetrachloroethene	5.00	ND	6.29	126	86-129	YES
1,3-Dichloropropane	5.00	ND	5.71	114	80-127	YES
2-Hexanone	25.00	ND	26.19	105	63-145	YES
Dibromochloromethane	5.00	ND	5.27	105	79-125	YES
1,2-Dibromoethane	5.00	ND	5.69	114	80-120	YES
Chlorobenzene	5.00	ND	5.97	119	87-120	YES
1,1,1,2-Tetrachloroethane	5.00	ND	5.80	116	87-126	YES
Ethylbenzene	5.00	ND	5.94	119	80-140	YES
m+p-Xylene	10.00	ND	11.68	117	84-125	YES
Xylene (Total)	15.00	ND	17.40	116	84-125	YES
o-Xylene	5.00	ND	5.72	114	84-125	YES
Styrene	5.00	ND	5.24	105	39-162	YES
Bromoform	5.00	ND	4.29	86	65-126	YES
Isopropylbenzene	5.00	ND	5.92	118	81-133	YES
1,1,2,2-Tetrachloroethane	5.00	ND	5.69	114	70-125	YES
Bromobenzene	5.00	ND	5.75	115	80-123	YES
trans-1,4-Dichloro-2-Bute	25.00	ND	8.65	35	11-172	YES
1,2,3-Trichloropropane	5.00	ND	5.54	111	76-120	YES
n-Propylbenzene	5.00	ND	5.89	118	79-131	YES
2-Chlorotoluene	5.00	ND	5.85	117	81-120	YES
4-Chlorotoluene	5.00	ND	5.82	116	82-119	YES
1,3,5-Trimethylbenzene	5.00	ND	5.59	112	70-130	YES
Pentachloroethane	5.00	ND	5.03	101	78-127	YES
tert-Butylbenzene	5.00	ND	5.80	116	81-125	YES
1,2,4-Trimethylbenzene	5.00	ND	5.59	112	65-131	YES
sec-Butylbenzene	5.00	ND	5.97	119	84-128	YES
1,3-Dichlorobenzene	5.00	ND	5.99	120	81-118	NO
p-Isopropyltoluene	5.00	ND	5.87	117	84-124	YES
1,4-Dichlorobenzene	5.00	ND	5.79	116	79-120	YES
1,2,3-Trimethylbenzene	5.00	ND	5.58	112	70-130	YES
Benzyl Chloride	5.00	ND	4.43	89	62-125	YES
n-Butylbenzene	5.00	ND	6.11	122	83-131	YES
1,2-Dichlorobenzene	5.00	ND	5.78	116	83-117	YES
1,2-Dibromo-3-Chloropropa	5.00	ND	5.28	106	55-156	YES
1,2,4-Trichlorobenzene	5.00	ND	5.56	111	63-125	YES
Hexachlorobutadiene	5.00	ND	6.25	125	74-135	YES
Naphthalene	5.00	ND	5.15	103	55-132	YES
1,2,3-Trichlorobenzene	5.00	ND	5.35	107	69-119	YES

N/C = Could not calculate

RAD36 0021

Lab Chronicle: _____ Ent. by _____

_____ Ver. by _____

Lancaster Laboratories, Inc.
Volatiles Laboratory Control Sample Recoveries

LCS: gs03l01.d
Client ID: LCSG23
Method: SW-846 8260B (25ML)
Instrument: HP16334

LCS Duplicate: gs03l02.d
Client ID: LCDG23
Matrix/Level: WL
Dilution Factor: 1.0

Batch: G102461AA

COMPOUND NAME	SPIKE LEVEL	LCS CONC UG/L	LCSD CONC UG/L	LCS REC %	LCSD REC %	Range LOWER-UPPER	RPD %	RPD MAX	INSPEC
Dichlorodifluoromethane	5.00	2.93	2.90	59	58	39-120	1	30	YES
Chloromethane	5.00	3.69	3.64	74	73	55-135	1	30	YES
Vinyl Chloride	5.00	3.73	3.65	75	73	55-126	2	30	YES
1,3-Butadiene	5.00	3.53	3.45	71	69	44-188	2	30	YES
Bromomethane	5.00	3.90	3.76	78	75	66-124	3	30	YES
Chloroethane	5.00	3.73	3.66	75	73	67-124	2	30	YES
Dichlorofluoromethane	5.00	4.14	3.99	83	80	76-131	4	30	YES
Trichlorofluoromethane	5.00	3.63	3.66	73	73	71-126	1	30	YES
Ethyl Ether	5.00	4.08	3.99	82	80	63-121	2	30	YES
Freon 123a	5.00	4.76	4.67	95	93	78-120	2	30	YES
Acrolein	37.50	33.86	33.03	90	88	32-129	2	30	YES
1,1-Dichloroethene	5.00	4.85	4.70	97	94	80-123	3	30	YES
Freon 113	5.00	4.82	4.64	96	93	78-132	4	30	YES
Acetone	37.50	41.57	41.75	111	111	74-137	0	30	YES
Methyl Iodide	5.00	4.79	4.70	96	94	71-120	2	30	YES
Carbon Disulfide	5.00	5.36	5.08	107	102	73-133	5	30	YES
Allyl Chloride	5.00	4.76	4.72	95	94	74-121	1	30	YES
Methyl Acetate	5.00	5.93	5.74	119	115	76-120	3	30	YES
Methylene Chloride	5.00	4.67	4.61	93	92	80-120	1	30	YES
t-Butyl Alcohol	50.00	43.70	44.51	87	89	61-127	2	30	YES
Acrylonitrile	25.00	27.39	25.84	110	103	76-135	6	30	YES
trans-1,2-Dichloroethene	5.00	4.90	4.79	98	96	80-120	2	30	YES
1,2-Dichloroethene (Total)	10.00	9.77	9.53	98	95	80-120	3	30	YES
Methyl Tertiary Butyl Ether	5.00	4.68	4.64	94	93	73-120	1	30	YES
n-Hexane	5.00	4.43	4.36	89	87	70-120	2	30	YES
1,1-Dichloroethane	5.00	4.99	4.82	100	96	80-120	3	30	YES
di-Isopropyl Ether	5.00	4.75	4.66	95	93	80-120	2	30	YES
2-Chloro-1,3-Butadiene	5.00	5.15	5.13	103	103	80-127	0	30	YES
Ethyl t-Butyl Ether	5.00	4.61	4.54	92	91	72-120	2	30	YES
2,2-Dichloropropane	5.00	4.71	4.60	94	92	75-122	2	30	YES
cis-1,2-Dichloroethene	5.00	4.87	4.74	97	95	80-120	3	30	YES
2-Butanone	37.50	41.62	41.27	111	110	71-149	1	30	YES
Propionitrile	37.50	40.92	38.59	109	103	76-133	6	30	YES
Methacrylonitrile	37.50	41.18	39.51	110	105	75-134	4	30	YES
Bromochloromethane	5.00	5.03	4.96	101	99	80-120	1	30	YES
Tetrahydrofuran	25.00	26.69	25.87	107	103	77-128	3	30	YES
Chloroform	5.00	4.94	4.84	99	97	80-120	2	30	YES
1,1,1-Trichloroethane	5.00	4.92	4.82	98	96	80-121	2	30	YES
Cyclohexane	5.00	4.74	4.61	95	92	77-122	3	30	YES
1,1-Dichloropropene	5.00	4.71	4.64	94	93	80-120	1	30	YES
Carbon Tetrachloride	5.00	4.21	4.19	84	84	80-129	0	30	YES
Isobutyl Alcohol	125.00	125.04	124.41	100	100	78-142	1	30	YES
Benzene	5.00	4.89	4.79	98	96	80-120	2	30	YES
1,2-Dichloroethane	5.00	4.86	4.81	97	96	80-127	1	30	YES
t-Amyl Methyl Ether	5.00	4.70	4.69	94	94	74-120	0	30	YES
n-Heptane	5.00	4.54	4.42	91	88	71-126	3	30	YES
n-Butanol	250.00	255.03	251.72	102	101	71-121	1	30	YES
Trichloroethene	5.00	5.43	5.27	109	105	80-120	3	30	YES
Methylcyclohexane	5.00	5.00	4.93	100	99	78-128	1	30	YES
1,2-Dichloropropane	5.00	5.02	4.92	100	98	80-120	2	30	YES
Dibromomethane	5.00	5.10	5.02	102	100	80-120	2	30	YES
1,4-Dioxane	125.00	158.84	153.66	127	123	75-154	3	30	YES
Methyl Methacrylate	5.00	4.95	4.76	99	95	58-139	4	30	YES
Bromodichloromethane	5.00	4.63	4.53	93	91	80-120	2	30	YES
2-Nitropropane	5.00	3.90	4.46	78	89	65-146	13	30	YES
cis-1,3-Dichloropropene	5.00	4.11	4.15	82	83	74-120	1	30	YES
4-Methyl-2-Pentanone	25.00	24.58	25.22	98	101	70-123	3	30	YES
Toluene	5.00	4.74	4.62	95	92	80-120	3	30	YES

N/C = Could not calculate

Lab Chronicle: _____ Ent. by RAD36 0822

_____ Ver. by ____

Lancaster Laboratories, Inc.
Volatiles Laboratory Control Sample Recoveries

LCS: gs03l01.d
Client ID: LCSG23
Method: SW-846 8260B (25ML)
Instrument: HP16334

LCS Duplicate: gs03l02.d
Client ID: LCDG23
Matrix/Level: WL
Dilution Factor: 1.0

Batch: G102461AA

COMPOUND NAME	SPIKE LEVEL	LCS CONC UG/L	LCSD CONC UG/L	LCS REC %	LCSD REC %	Range LOWER-UPPER	RPD %	RPD MAX	INSPEC
trans-1,3-Dichloropropene	5.00	4.00	4.03	80	81	80-120	1	30	YES
Ethyl Methacrylate	5.00	5.44	5.43	109	109	72-120	0	30	YES
1,1,2-Trichloroethane	5.00	5.13	5.14	103	103	80-120	0	30	YES
Tetrachloroethene	5.00	4.94	4.85	99	97	80-120	2	30	YES
1,3-Dichloropropane	5.00	4.97	4.94	99	99	80-120	1	30	YES
2-Hexanone	25.00	25.80	25.89	103	104	75-124	0	30	YES
Dibromochloromethane	5.00	4.19	4.11	84	82	80-120	2	30	YES
1,2-Dibromoethane	5.00	5.02	4.97	100	99	80-120	1	30	YES
Chlorobenzene	5.00	4.94	4.85	99	97	80-120	2	30	YES
1,1,1,2-Tetrachloroethane	5.00	4.73	4.66	95	93	80-120	1	30	YES
Ethylbenzene	5.00	4.83	4.71	97	94	80-120	2	30	YES
m+p-Xylene	10.00	9.58	9.35	96	94	80-120	2	30	YES
Xylene (Total)	15.00	14.34	14.06	96	94	80-120	2	30	YES
o-Xylene	5.00	4.76	4.71	95	94	80-120	1	30	YES
Styrene	5.00	4.75	4.67	95	93	80-120	2	30	YES
Bromoform	5.00	3.29	3.34	66	67	70-128	2	30	NO
Isopropylbenzene	5.00	4.74	4.63	95	93	80-120	2	30	YES
1,1,2,2-Tetrachloroethane	5.00	5.30	5.27	106	105	80-125	1	30	YES
Bromobenzene	5.00	4.91	4.82	98	96	80-120	2	30	YES
trans-1,4-Dichloro-2-Butene	25.00	5.33	5.74	21	23	14-166	8	30	YES
1,2,3-Trichloropropane	5.00	5.07	5.08	101	102	80-120	0	30	YES
n-Propylbenzene	5.00	4.74	4.60	95	92	80-120	3	30	YES
2-Chlorotoluene	5.00	4.82	4.72	96	94	80-120	2	30	YES
4-Chlorotoluene	5.00	4.92	4.77	98	95	80-120	3	30	YES
1,3,5-Trimethylbenzene	5.00	4.73	4.61	95	92	80-120	3	30	YES
Pentachloroethane	5.00	3.60	3.60	72	72	80-120	0	30	NO
tert-Butylbenzene	5.00	4.70	4.50	94	90	80-120	5	30	YES
1,2,4-Trimethylbenzene	5.00	4.72	4.59	94	92	80-120	3	30	YES
sec-Butylbenzene	5.00	4.72	4.61	94	92	80-120	2	30	YES
1,3-Dichlorobenzene	5.00	5.05	4.94	101	99	80-120	2	30	YES
p-Isopropyltoluene	5.00	4.74	4.58	95	92	80-120	3	30	YES
1,4-Dichlorobenzene	5.00	4.98	4.84	100	97	80-120	3	30	YES
1,2,3-Trimethylbenzene	5.00	4.62	4.55	92	91	80-120	2	30	YES
Benzyl Chloride	5.00	3.55	3.69	71	74	70-128	4	30	YES
n-Butylbenzene	5.00	4.83	4.71	97	94	80-120	2	30	YES
1,2-Dichlorobenzene	5.00	5.05	4.97	101	99	80-120	2	30	YES
1,2-Dibromo-3-Chloropropane	5.00	4.82	4.74	96	95	70-133	2	30	YES
1,2,4-Trichlorobenzene	5.00	4.78	4.78	96	96	71-120	0	30	YES
Hexachlorobutadiene	5.00	4.89	4.86	98	97	79-120	1	30	YES
Naphthalene	5.00	4.70	4.83	94	97	77-120	3	30	YES
1,2,3-Trichlorobenzene	5.00	4.63	4.79	93	96	71-120	3	30	YES

N/C = Could not calculate

Lab Chronicle: _____ Ent. by _____

_____ Ver. by _____

RAD36 0023

VOLATILE METHOD BLANK SUMMARY

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_RAD36____

Lab File ID: gs03b01.d Lab Sample ID: VBLKG23

Date Analyzed: 09/03/10 Time Analyzed: 02:56

Matrix (soil/water) WATER Level: (low/med) LOW

Instrument ID: HP16334

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

	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	LCSG23	gs03l01.d	03:17
02	LCDG23	gs03l02.d	03:39
03	6074074	gs03s01.d	05:16
04	6074076	gs03s02.d	05:38
05	6075233	gs03s03.d	06:00
06	6075230	gs03s04.d	06:21
07	6075230MS	gs03s05.d	06:43
08	6075231	gs03s06.d	07:05
09	6075232	gs03s07.d	07:26
10	6074071	gs03s08.d	07:48
11	6074072	gs03s09.d	08:09
12	6074073	gs03s10.d	08:30
13	6074075	gs03s11.d	08:52
14	6072828	gs03s12.d	09:13
15	6074841	gs03s13.d	09:35
16	6076494	gs03s14.d	09:56
17	6076497	gs03s15.d	10:18
18	6076500	gs03s16.d	10:39
19	6076503	gs03s17.d	11:01
20	6076061	gs03s18.d	11:22
21	6076062	gs03s19.d	11:44
22	6076063	gs03s20.d	12:05
23	6076262	gs03s21.d	12:27

COMMENTS: G102461AA

RAD36 0024

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_RAD36___

Lab File ID: gg17t01.d BFB Injection Date: 08/17/10

Instrument ID: HP16334 BFB Injection Time: 11:30

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	17.82
75	30.0 - 60.0% of mass 95	49.36
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	7.34
173	Less than 2.0% of mass 174	0.00 (0.00)1
174	Greater than 50.0% of mass 95	85.04
175	5.0 - 9.0% of mass 174	6.25 (7.35)1
176	Greater than 95.0%, but less than 101.0% of mass 174	84.95 (99.90)1
177	5.0 - 9.0% of mass 176	5.89 (6.94)2

1-Value is % mass 174 2-Value is % mass 176

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

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD25	gg17i01.d	08/17/10	12:02
02	VSTD10	gg17i02.d	08/17/10	12:23
03	VSTD5	gg17i03.d	08/17/10	12:44
04	VSTD2	gg17i04.d	08/17/10	13:06
05	VSTD1	gg17i05.d	08/17/10	13:27
06	VSTD.5	gg17i06.d	08/17/10	13:49
07	MDL0.1 - MDL0.1	gg17m01.d	08/17/10	14:10
08	VBLKG01	gg17b01.d	08/17/10	14:31
09	LCSG01	gg17l01.d	08/17/10	14:53
10	LCDG01	gg17l02.d	08/17/10	15:14
11	MDL0.2 - MDL0.2	gg17m02.d	08/17/10	15:36
12	MDL0.3 - MDL0.3	gg17m03.d	08/17/10	16:20
13	6052416	gg17s01.d	08/17/10	16:56
14	6058485	gg17s02.d	08/17/10	17:18
15	6058485MS	gg17s03.d	08/17/10	17:39
16	6057671	gg17s04.d	08/17/10	18:00
17	6057671DUP	gg17s05.d	08/17/10	18:22
18	6057672	gg17s06.d	08/17/10	18:43
19	6051637	gg17s07.d	08/17/10	19:05
20	6051638	gg17s08.d	08/17/10	19:26
21	6052890	gg17s09.d	08/17/10	19:47
22	6052891	gg17s10.d	08/17/10	20:09

RAD36 0825

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_RAD36___

Lab File ID: gg17t01.d BFB Injection Date: 08/17/10

Instrument ID: HP16334 BFB Injection Time: 11:30

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	17.82
75	30.0 - 60.0% of mass 95	49.36
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	7.34
173	Less than 2.0% of mass 174	0.00 (0.00)1
174	Greater than 50.0% of mass 95	85.04
175	5.0 - 9.0% of mass 174	6.25 (7.35)1
176	Greater than 95.0%, but less than 101.0% of mass 174	84.95 (99.90)1
177	5.0 - 9.0% of mass 176	5.89 (6.94)2

1-Value is % mass 174 2-Value is % mass 176

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

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
23	6052892	gg17s11.d	08/17/10	20:30
24	6052892DL	gg17s12.d	08/17/10	20:52
25	6052893	gg17s13.d	08/17/10	21:13
26	6052893DL	gg17s14.d	08/17/10	21:35
27	6052894	gg17s15.d	08/17/10	21:56
28	6052894DL	gg17s16.d	08/17/10	22:17
29	6052895	gg17s18.d	08/17/10	23:00

RAD36 0626

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_RAD36___

Lab File ID: gs03t01.d BFB Injection Date: 09/03/10

Instrument ID: HP16334 BFB Injection Time: 01:53

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	15.90
75	30.0 - 60.0% of mass 95	46.29
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.79
173	Less than 2.0% of mass 174	0.49 (0.58)1
174	Greater than 50.0% of mass 95	85.07
175	5.0 - 9.0% of mass 174	6.03 (7.09)1
176	Greater than 95.0%, but less than 101.0% of mass 174	84.52 (99.36)1
177	5.0 - 9.0% of mass 176	5.73 (6.78)2

1-Value is % mass 174 2-Value is % mass 176

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

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD10	gs03c01.d	09/03/10	02:13
02	VBLKG23	gs03b01.d	09/03/10	02:56
03	LCSG23	gs03l01.d	09/03/10	03:17
04	LCDG23	gs03l02.d	09/03/10	03:39
05	6074074	gs03s01.d	09/03/10	05:16
06	6074076	gs03s02.d	09/03/10	05:38
07	6075233	gs03s03.d	09/03/10	06:00
08	6075230	gs03s04.d	09/03/10	06:21
09	6075230MS	gs03s05.d	09/03/10	06:43
10	6075231	gs03s06.d	09/03/10	07:05
11	6075232	gs03s07.d	09/03/10	07:26
12	6074071	gs03s08.d	09/03/10	07:48
13	6074072	gs03s09.d	09/03/10	08:09
14	6074073	gs03s10.d	09/03/10	08:30
15	6074075	gs03s11.d	09/03/10	08:52
16	6072828	gs03s12.d	09/03/10	09:13
17	6074841	gs03s13.d	09/03/10	09:35
18	6076494	gs03s14.d	09/03/10	09:56
19	6076497	gs03s15.d	09/03/10	10:18
20	6076500	gs03s16.d	09/03/10	10:39
21	6076503	gs03s17.d	09/03/10	11:01
22	6076061	gs03s18.d	09/03/10	11:22

RAD36 0827

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.: RAD36

Lab File ID: gs03t01.d BFB Injection Date: 09/03/10

Instrument ID: HP16334 BFB Injection Time: 01:53

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	15.90
75	30.0 - 60.0% of mass 95	46.29
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.79
173	Less than 2.0% of mass 174	0.49 (0.58)1
174	Greater than 50.0% of mass 95	85.07
175	5.0 - 9.0% of mass 174	6.03 (7.09)1
176	Greater than 95.0%, but less than 101.0% of mass 174	84.52 (99.36)1
177	5.0 - 9.0% of mass 176	5.73 (6.78)2

1-Value is % mass 174 2-Value is % mass 176

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

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
23	6076062	gs03s19.d	09/03/10	11:44
24	6076063	gs03s20.d	09/03/10	12:05
25	6076262	gs03s21.d	09/03/10	12:27

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_RAD36___

Lab File ID (Standard): gs03c01.d Date Analyzed: 09/03/10

Instrument ID: HP16334 Time Analyzed: 02:13

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

	IS1(FBZ) AREA	#	RT	#	IS2(CBZ) AREA	#	RT	#	IS3(DCB) AREA	#	RT	#	IS4(TBA) AREA	#	RT	#
12 HOUR STD	2521009		7.823		1879048		11.250		1081196		13.109		107003		4.367	
UPPER LIMIT	5042018		8.323		3758096		11.750		2162392		13.609		214006		4.867	
LOWER LIMIT	1260504		7.323		939524		10.750		540598		12.609		53502		3.867	
LAB SAMPLE ID																
01 VBLKG23	2434858		7.830		1813592		11.256		980702		13.109		102090		4.379	
02 LCSG23	2468049		7.830		1816074		11.256		1048718		13.109		103389		4.355	
03 LCDG23	2511034		7.829		1851546		11.256		1070906		13.109		109426		4.379	
04 6074074	2549935		7.830		1902833		11.256		1047790		13.109					
05 6074076	2423775		7.835		1807617		11.256		979549		13.109					
06 6075233	2394860		7.836		1772913		11.256		967382		13.109					
07 6075230	2341798		7.830		1738633		11.256		942803		13.109		95842		4.367	
08 6075230MS	2416440		7.836		1780330		11.256		1030770		13.109		99208		4.361	
09 6075231	2364531		7.829		1744907		11.256		954826		13.109					
10 6075232	2283912		7.829		1696577		11.256		925670		13.109					
11 6074071	2296438		7.829		1691389		11.256		926127		13.109					
12 6074072	2270134		7.830		1675224		11.256		917624		13.109					
13 6074073	2244427		7.836		1663528		11.256		908514		13.109					
14 6074075	2192708		7.830		1626683		11.256		891165		13.109					
15 6072828	2188359		7.830		1618158		11.256		881323		13.109					
16 6074841	2148263		7.836		1586718		11.256		864107		13.109					
17 6076494	2088126		7.836		1550936		11.256		846203		13.109		86868		4.379	
18 6076497	2058167		7.835		1579741		11.255		946537		13.109		67393		4.385	
19 6076500	2633759		7.836		1958434		11.256		1079172		13.109		113723		4.367	
20 6076503	2605397		7.836		1922985		11.256		1072646		13.109		116703		4.379	
21 6076061	2646691		7.830		1953751		11.256		1063136		13.109					
22 6076062	2633343		7.830		1963394		11.256		1075964		13.109					

IS1 (FBZ)=Fluorobenzene
IS2 (CBZ)=Chlorobenzene-d5
IS3 (DCB)=1,4-Dichlorobenzene-d4
IS4 (TBA)=t-Butyl Alcohol-d10

UPPER LIMIT = + 100%
of internal standard area.
LOWER LIMIT = - 50%
of internal standard area.

RAD36 8829

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

FORM VIII VOA

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_RAD36___

Lab File ID (Standard): gs03c01.d Date Analyzed: 09/03/10

Instrument ID: HP16334 Time Analyzed: 02:13

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

		IS1(FBZ)		IS2(CBZ)		IS3(DCB)		IS4(TBA)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	2521009	7.823	1879048	11.250	1081196	13.109	107003	4.367
	UPPER LIMIT	5042018	8.323	3758096	11.750	2162392	13.609	214006	4.867
	LOWER LIMIT	1260504	7.323	939524	10.750	540598	12.609	53502	3.867
	LAB SAMPLE ID								
23	6076063	2566455	7.836	1908372	11.256	1040360	13.109		
24	6076262	2484937	7.835	1836339	11.256	1004009	13.109		

IS1 (FBZ)=Fluorobenzene
IS2 (CBZ)=Chlorobenzene-d5
IS3 (DCB)=1,4-Dichlorobenzene-d4
IS4 (TBA)=t-Butyl Alcohol-d10

UPPER LIMIT = + 100%
of internal standard area.
LOWER LIMIT = - 50%
of internal standard area.

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

FORM VIII VOA

Sample Data

Lancaster Laboratories

LOQ and MDL by Analysis Number

COMPONENT_NAME	MDL	LOQ	DEFAULT_UNITS
02898: EPA SW846/8260 (water-25ml) #1			
1,2-Dichloroethene (Total)	0.1	0.5	ug/l
Ethanol	50	250	ug/l
Cyclohexanone	5.0	25	ug/l
Benzyl Chloride	0.1	0.5	ug/l
Dichlorodifluoromethane	0.1	0.5	ug/l
Chloromethane	0.2	0.5	ug/l
Vinyl Chloride	0.1	0.5	ug/l
Bromomethane	0.1	0.5	ug/l
Chloroethane	0.1	0.5	ug/l
Trichlorofluoromethane	0.1	0.5	ug/l
Acrolein	5.0	25	ug/l
1,1-Dichloroethene	0.1	0.5	ug/l
Freon 113	0.2	0.5	ug/l
Acetone	3.0	5.0	ug/l
Methyl Iodide	0.1	0.5	ug/l
Carbon Disulfide	0.4	0.5	ug/l
Acetonitrile	7.0	20	ug/l
Allyl Chloride	0.1	0.5	ug/l
Methylene Chloride	0.2	0.5	ug/l
t-Butyl Alcohol	4.0	10	ug/l
Acrylonitrile	1.0	5.0	ug/l
trans-1,2-Dichloroethene	0.1	0.5	ug/l
Methyl Tertiary Butyl Ether	0.1	0.5	ug/l
n-Hexane	0.1	0.5	ug/l
1,1-Dichloroethane	0.1	0.5	ug/l
2-Chloro-1,3-Butadiene	0.1	0.5	ug/l
Vinyl Acetate	0.2	0.5	ug/l
di-Isopropyl Ether	0.1	0.5	ug/l
Ethyl t-butyl ether	0.1	0.5	ug/l
2,2-Dichloropropane	0.1	0.5	ug/l
cis-1,2-Dichloroethene	0.1	0.5	ug/l
2-Butanone	1.0	5.0	ug/l
Propionitrile	2.0	10	ug/l
Bromochloromethane	0.1	0.5	ug/l
Methacrylonitrile	1.0	5.0	ug/l
Tetrahydrofuran	2.0	5.0	ug/l
Chloroform	0.1	0.5	ug/l
1,1,1-Trichloroethane	0.1	0.5	ug/l
Cyclohexane	0.1	0.5	ug/l
Carbon Tetrachloride	0.1	0.5	ug/l
1,1-Dichloropropene	0.1	0.5	ug/l
Benzene	0.1	0.5	ug/l
1,2-Dichloroethane	0.1	0.5	ug/l
Isobutyl Alcohol	10	25	ug/l
t-Amyl methyl ether	0.1	0.5	ug/l
Trichloroethene	0.1	0.5	ug/l
n-Heptane	0.2	0.5	ug/l
1,2-Dichloropropane	0.1	0.5	ug/l
Dibromomethane	0.1	0.5	ug/l
Methyl Methacrylate	0.1	0.5	ug/l
1,4-Dioxane	20	100	ug/l
Bromodichloromethane	0.1	0.5	ug/l
2-Nitropropane	1.0	5.0	ug/l
2-Chloroethyl vinyl ether	0.1	0.5	ug/l
cis-1,3-Dichloropropene	0.1	0.5	ug/l
4-Methyl-2-Pentanone	1.0	5.0	ug/l
Toluene	0.1	0.5	ug/l
1,1,2-Trichloroethane	0.1	0.5	ug/l
trans-1,3-Dichloropropene	0.1	0.5	ug/l

RAD36 0832

COMPONENT NAME	MDL	LOQ	DEFAULT UNITS
02898: EPA SW846/8260 (water-25ml) #1			
Ethyl Methacrylate	0.1	0.5	ug/l
Tetrachloroethene	0.1	0.5	ug/l
1,3-Dichloropropane	0.1	0.5	ug/l
2-Hexanone	1.0	5.0	ug/l
Dibromochloromethane	0.1	0.5	ug/l
1,2-Dibromoethane	0.1	0.5	ug/l
Chlorobenzene	0.1	0.5	ug/l
1,1,1,2-Tetrachloroethane	0.1	0.5	ug/l
Ethylbenzene	0.1	0.5	ug/l
m+p-Xylene	0.1	0.5	ug/l
o-Xylene	0.1	0.5	ug/l
Styrene	0.1	0.5	ug/l
Bromoform	0.1	0.5	ug/l
Isopropylbenzene	0.1	0.5	ug/l
1,1,2,2-Tetrachloroethane	0.1	0.5	ug/l
Bromobenzene	0.1	0.5	ug/l
1,2,3-Trichloropropane	0.3	1.0	ug/l
trans-1,4-Dichloro-2-butene	1.0	5.0	ug/l
n-Propylbenzene	0.1	0.5	ug/l
2-Chlorotoluene	0.1	0.5	ug/l
1,3,5-Trimethylbenzene	0.1	0.5	ug/l
4-Chlorotoluene	0.1	0.5	ug/l
tert-Butylbenzene	0.1	0.5	ug/l
Pentachloroethane	0.2	0.5	ug/l
1,2,4-Trimethylbenzene	0.1	0.5	ug/l
sec-Butylbenzene	0.1	0.5	ug/l
p-Isopropyltoluene	0.1	0.5	ug/l
1,3-Dichlorobenzene	0.1	0.5	ug/l
1,4-Dichlorobenzene	0.1	0.5	ug/l
n-Butylbenzene	0.1	0.5	ug/l
1,2-Dichlorobenzene	0.1	0.5	ug/l
1,2-Dibromo-3-chloropropane	0.2	0.5	ug/l
1,2,4-Trichlorobenzene	0.1	0.5	ug/l
Ethyl ether	0.1	0.5	ug/l
n-Butanol	20	50	ug/l
Hexachlorobutadiene	0.1	0.5	ug/l
Naphthalene	0.1	0.5	ug/l
Xylene (Total)	0.1	0.5	ug/l
1,2,3-Trichlorobenzene	0.1	0.5	ug/l
Dichlorofluoromethane	0.2	0.5	ug/l
Methyl Acetate	0.3	1.0	ug/l
Methylcyclohexane	0.1	0.5	ug/l
cis-1,4-Dichloro-2-butene	0.4	1.0	ug/l
Freon 123a	0.2	0.5	ug/l
1,2,3-Trimethylbenzene	0.1	0.5	ug/l
Hexachloroethane	0.1	0.5	ug/l
Dimethyl ether	0.1	0.5	ug/l
1,3-Butadiene	0.1	0.5	ug/l

RAD36 0033

XXXXX

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

6076061

Data file: /chem2/HP16334.i/10sep03a.b/gs03s18.d
Injection date and time: **03-SEP-2010 11:22**
Data file Sample Info. Line: XXXXX;6076061;1;0;;;;
Instrument ID: **HP16334.i** Batch: **G102461AA**
Date, time and analyst ID of latest file update: 03-Sep-2010 11:40 Automation

Blank Data file reference: **/chem2/HP16334.i/10sep03a.b/gs03b01.d**

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: **4607**
Calibration date and time (Last Method Edit): 03-SEP-2010 10:10
Mid Level Daily Calibration Standard Reference: **/chem2/HP16334.i/10sep03a.b/gs03c01.d**

Bottle Code: **38A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
77) Fluorobenzene	7.830 (-0.006)	1024	96	2646691 (5)	10.00	
110) Chlorobenzene-d5	11.256 (-0.006)	1586	117	1953751 (4)	10.00	
143) 1,4-Dichlorobenzene-d4	13.109 (0.000)	1890	152	1063136 (-2)	10.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
61) Dibromofluoromethane	(1)	6.921	(-0.001)	113	590763	9.703	97%		77 - 114
70) 1,2-Dichloroethane-d4	(1)	7.378	(0.000)	102	114716	10.103	101%		74 - 113
97) Toluene-d8	(2)	9.829	(0.000)	98	2524921	9.570	96%		77 - 110
126) 4-Bromofluorobenzene	(2)	12.237	(0.000)	95	825244	9.254	93%		78 - 110

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
15) Trichlorofluoromethane	(1)				Not Detected					0.1
45) 1,1-Dichloroethane	(1)				Not Detected					0.1
63) 1,1,1-Trichloroethane	(1)				Not Detected					0.1

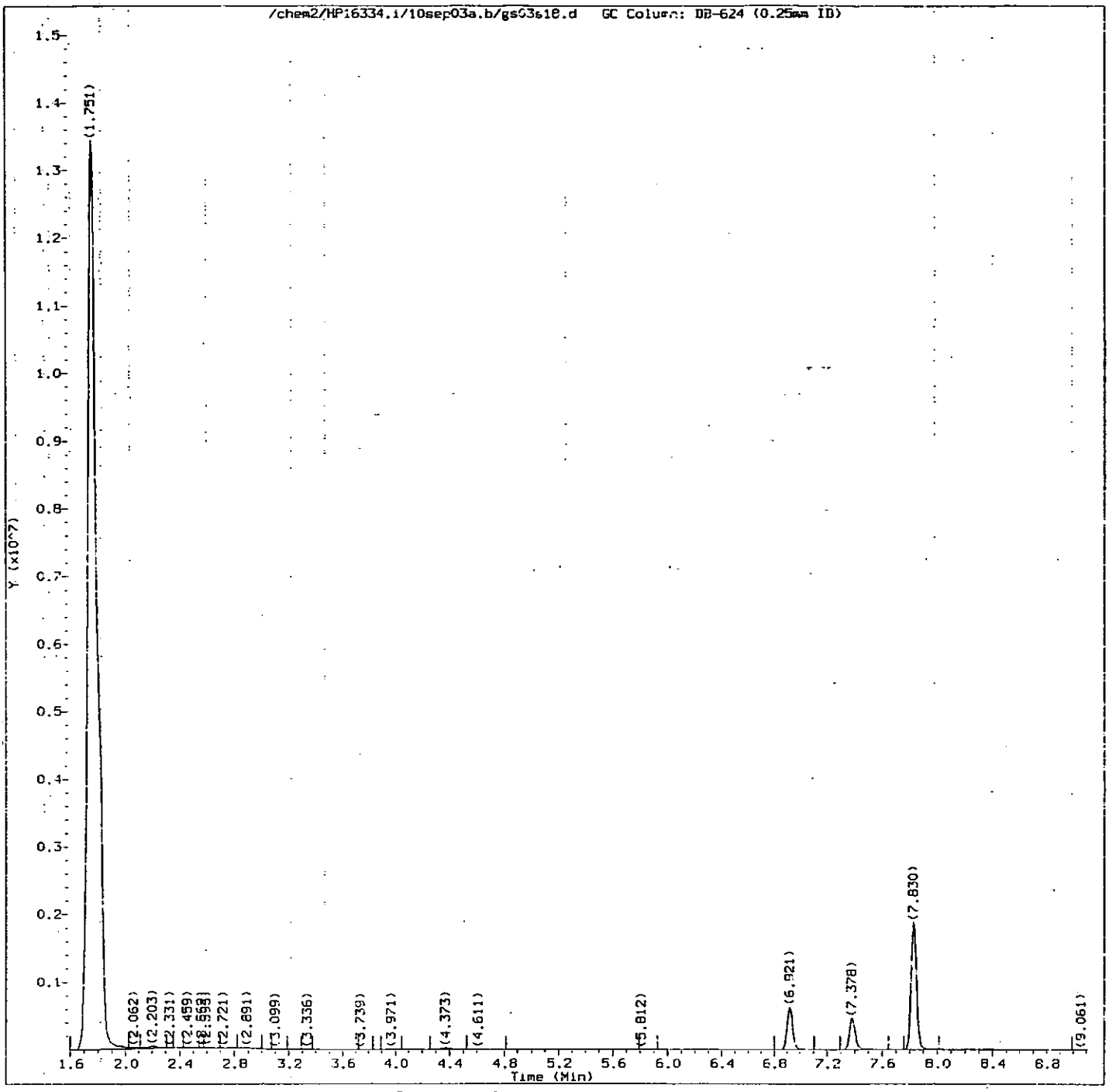
Total number of targets = 3

Comments: _____

Digitally signed by Jason M. Long on 09/03/2010 at 12:09. Target 3.5 esignature user ID: jml01693

RAD36 8834

Auditor: _____ Date: 9/10/10



Total Ion Chromatogram (TIC)

Target Revision 3.5

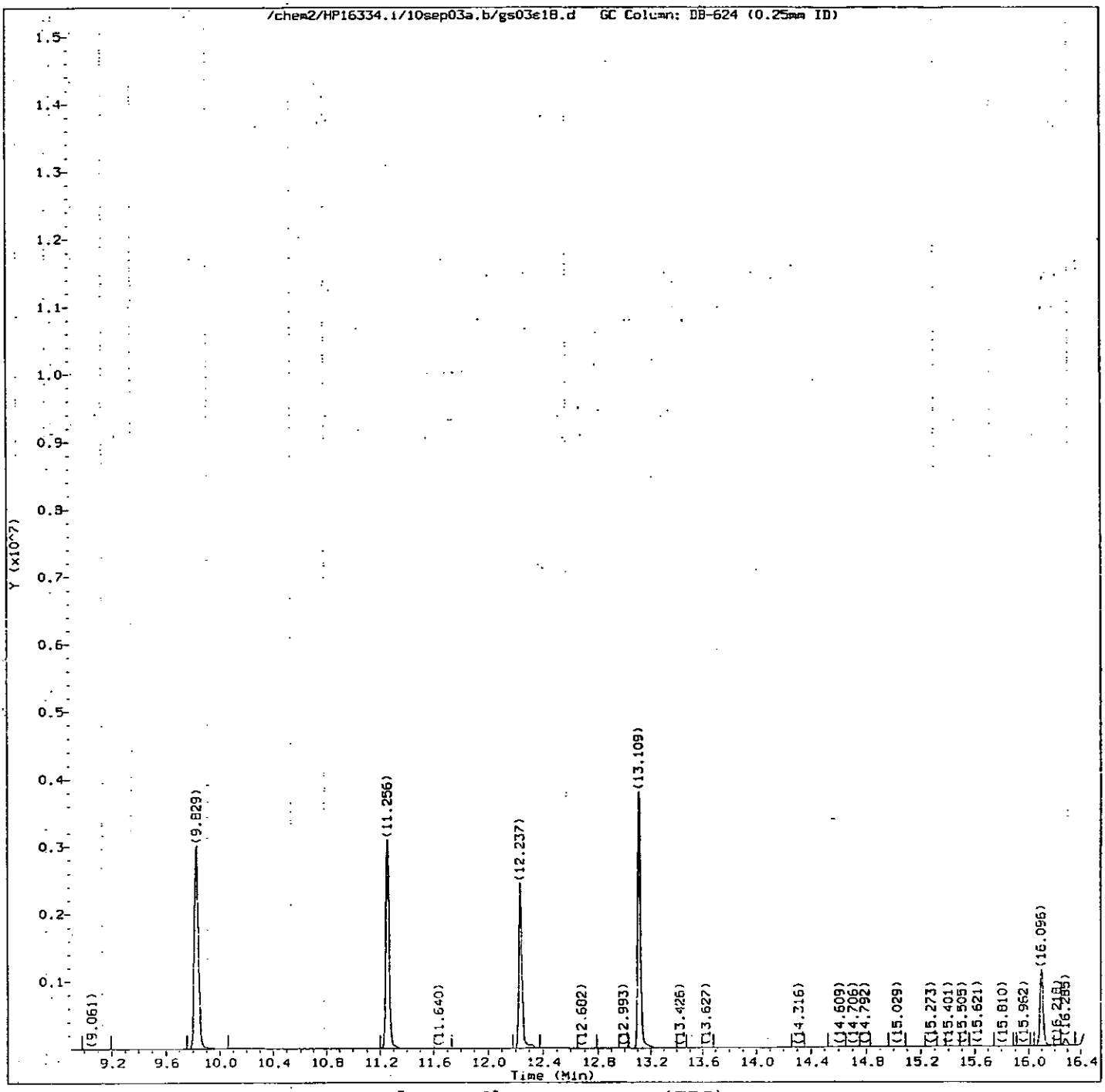
Data File: /chem2/HP16334.i/10sep03a.b/gs03s18.d Instrument ID: HP16334.i
Injection date and time: 03-SEP-2010 11:22 Analyst ID: SAS00403

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: 4607
Calibration date and time: 03-SEP-2010 10:10
Date, time and analyst ID of latest file update: 03-Sep-2010 11:40 Automation

Sample Name: XXXXX Lab Sample ID: 6076061

RAD36 0035

Digitally signed by Jason M. Long
on 09/03/2010 at 12:09:
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/10sep03a.b/gs03s18.d Instrument ID: HP16334.i
Injection date and time: 03-SEP-2010 11:22 Analyst ID: SAS00403

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: 4607
Calibration date and time: 03-SEP-2010 10:10
Date, time and analyst ID of latest file update: 03-Sep-2010 11:40 Automation

Sample Name: XXXXX Lab Sample ID: 6076061 RAD36 8=36

Digitally signed by Jason M. Long
on 09/03/2010 at 12:09:
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/10sep03a.b/gs03s18.d Instrument ID: HP16334.i
Injection date and time: 03-SEP-2010 11:22 Analyst ID: SAS00403

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: 4607
Calibration date and time: 03-SEP-2010 10:10
Date, time and analyst ID of latest file update: 03-Sep-2010 11:40 Automation

Sample Name: XXXXX Lab Sample ID: 6076061

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
61)$Dibromofluoromethane	(1)	6.921	113	590763	9.703
70)$1,2-Dichloroethane-d4	(1)	7.378	102	114716	10.103
77)*Fluorobenzene	(1)	7.830	96	2646691	10.000
97)$Toluene-d8	(2)	9.829	98	2524921	9.570
110)*Chlorobenzene-d5	(2)	11.256	117	1953751	10.000
126)$4-Bromofluorobenzene	(2)	12.237	95	825244	9.254
143)*1,4-Dichlorobenzene-d4	(3)	13.109	152	1063136	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jason M. Long
on 09/03/2010 at 12:09
Target 3.5 esignature user ID: jml01693

XXXXX

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

6076062

Data file: /chem2/HP16334.i/10sep03a.b/gs03s19.d
Injection date and time: **03-SEP-2010 11:44**
Data file Sample Info. Line: XXXXX;6076062;1;0;;;;
Instrument ID: **HP16334.i** Batch: **G102461AA**
Date, time and analyst ID of latest file update: 03-Sep-2010 12:01 Automation

Blank Data file reference: **/chem2/HP16334.i/10sep03a.b/gs03b01.d**

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: **4607**
Calibration date and time (Last Method Edit): 03-SEP-2010 10:10
Mid Level Daily Calibration Standard Reference: **/chem2/HP16334.i/10sep03a.b/gs03c01.d**

Bottle Code: **38A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
77) Fluorobenzene	7.830(-0.006)	1024	96	2633343 (4)	10.00	
110) Chlorobenzene-d5	11.256(-0.006)	1586	117	1963394 (4)	10.00	
143) 1,4-Dichlorobenzene-d4	13.109(0.000)	1890	152	1075904 (0)	10.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
61) Dibromofluoromethane	(1)	6.921(-0.001)	113	591774	9.769	98%		77 - 114
70) 1,2-Dichloroethane-d4	(1)	7.378(0.000)	102	118576	10.478	105%		74 - 113
97) Toluene-d8	(2)	9.829(0.000)	98	2533153	9.554	96%		77 - 110
126) 4-Bromofluorobenzene	(2)	12.257(0.000)	95	827210	9.231	92%		78 - 110

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
15) Trichlorofluoromethane	(1)			Not Detected					0.1
45) 1,1-Dichloroethane	(1)			Not Detected					0.1
63) 1,1,1-Trichloroethane	(1)			Not Detected					0.1

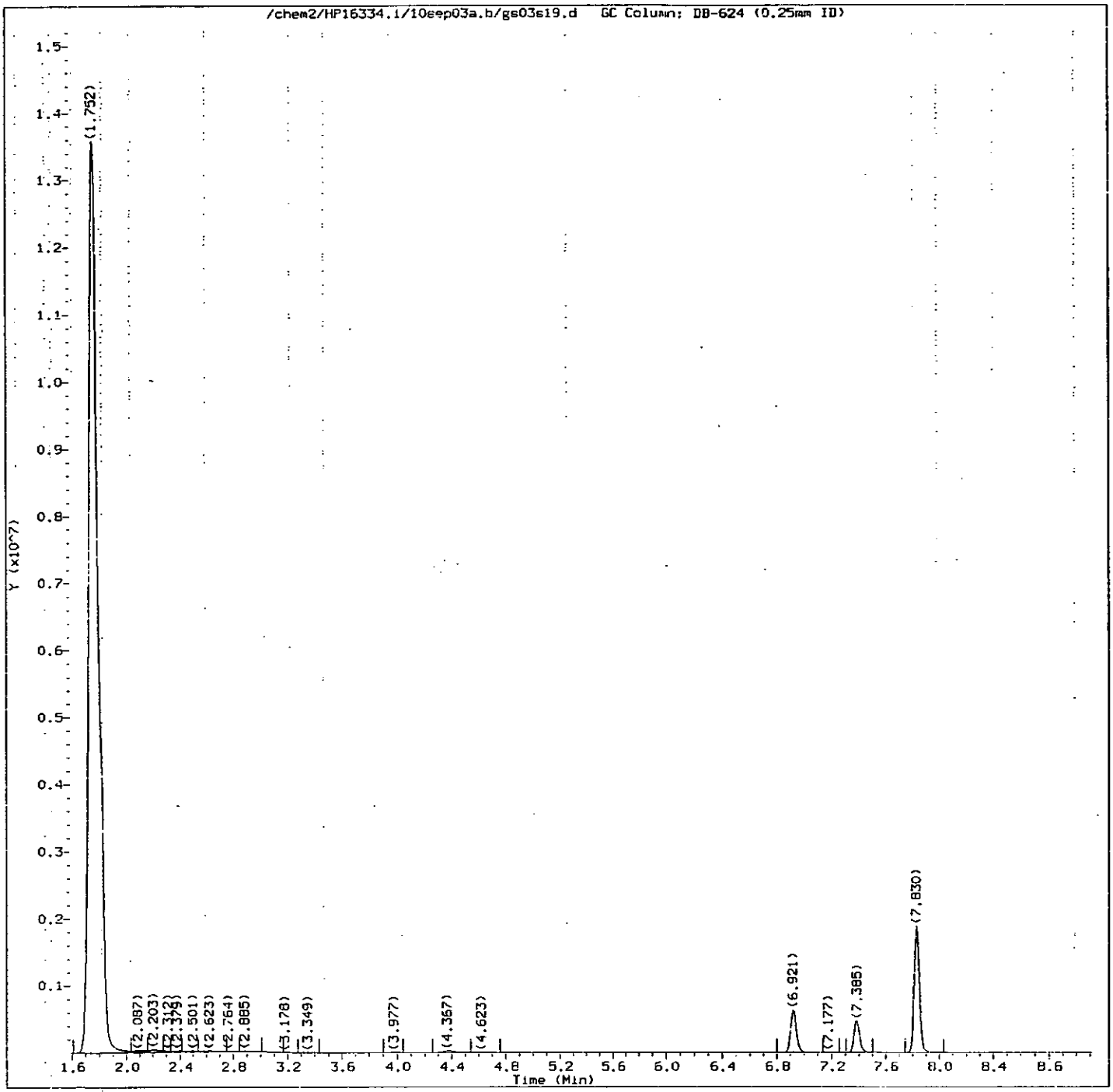
Total number of targets = 3

Comments: _____

Digitally signed by Jason M. Long on 09/03/2010 at 12:09. Target 3.5 esignature user ID: jml01693

RAD36 0038

Auditor: _____ Date: 9/10/10



Total Ion Chromatogram (TIC)

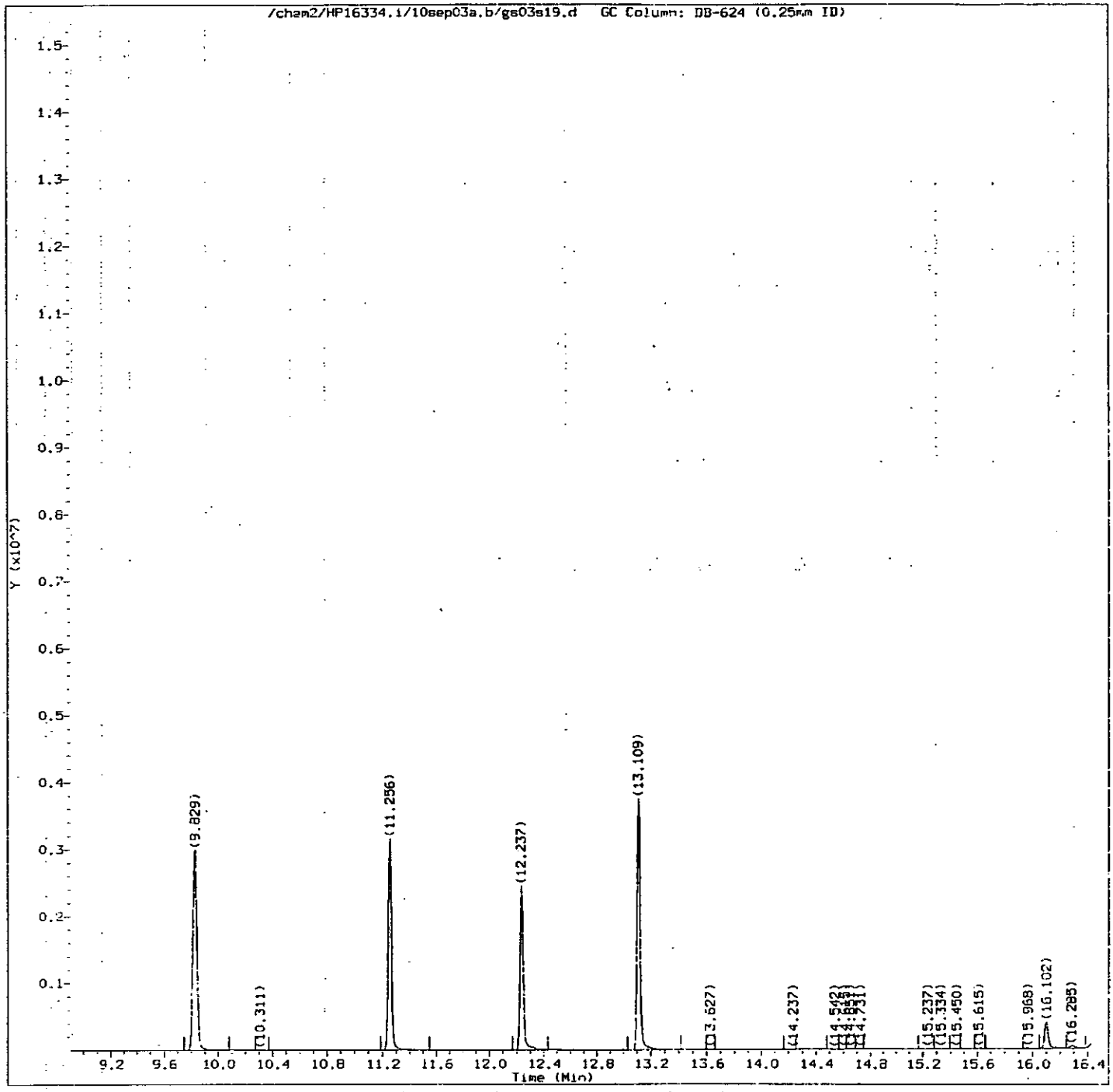
Target Revision 3.5

Data File: /chem2/HP16334.i/10sep03a.b/gs03s19.d Instrument ID: HP16334.i
Injection date and time: 03-SEP-2010 11:44 Analyst ID: SAS00403

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: 4607
Calibration date and time: 03-SEP-2010 10:10
Date, time and analyst ID of latest file update: 03-Sep-2010 12:01 Automation

Sample Name: XXXXX Lab Sample ID: 6076062 BAD36 0839

Digitally signed by Jason M. Long
on 09/03/2010 at 12:09.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/10sep03a.b/gs03s19.d Instrument ID: HP16334.i
Injection date and time: 03-SEP-2010 11:44 Analyst ID: SAS00403

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: 4607
Calibration date and time: 03-SEP-2010 10:10
Date, time and analyst ID of latest file update: 03-Sep-2010 12:01 Automation

Sample Name: XXXXX Lab Sample ID: 6076062

RAD36 0048

Digitally signed by Jason M. Long
on 09/03/2010 at 12:09.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/10sep03a.b/gs03s19.d Instrument ID: HP16334.i
Injection date and time: 03-SEP-2010 11:44 Analyst ID: SAS00403

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: 4607
Calibration date and time: 03-SEP-2010 10:10
Date, time and analyst ID of latest file update: 03-Sep-2010 12:01 Automation

Sample Name: XXXXX Lab Sample ID: 6076062

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
61)$Dibromofluoromethane	(1)	6.921	113	591774	9.769
70)$1,2-Dichloroethane-d4	(1)	7.378	102	118376	10.478
77)*Fluorobenzene	(1)	7.830	96	2633343	10.000
97)$Toluene-d8	(2)	9.829	98	2533153	9.554
110)*Chlorobenzene-d5	(2)	11.256	117	1963394	10.000
126)$4-Bromofluorobenzene	(2)	12.237	95	827210	9.231
143)*1,4-Dichlorobenzene-d4	(3)	13.109	152	1075964	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

RAD36 0041

Digitally signed by Jason M. Long
on 09/03/2010 at 12:09.
Target 3.5 esignature user ID: jml01693

XXXXX

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles 6076063

Data file: /chem2/HP16334.i/10sep03a.b/gs03s20.d
Injection date and time: **03-SEP-2010 12:05**
Data file Sample Info. Line: XXXXX;6076063;1;0;;;;
Instrument ID: **HP16334.i** Batch: **G102461AA**
Date, time and analyst ID of latest file update: 03-Sep-2010 12:23 Automation

Blank Data file reference: **/chem2/HP16334.i/10sep03a.b/gs03b01.d**

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: **4607**
Calibration date and time (Last Method Edit): 03-SEP-2010 10:10
Mid Level Daily Calibration Standard Reference: **/chem2/HP16334.i/10sep03a.b/gs03c01.d**

Bottle Code: **38A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC. Flag
77) Fluorobenzene	7.836(-0.012)	1025	96	2566455 (2)	10.00	
110) Chlorobenzene-d5	11.256(-0.006)	1586	117	1908372 (2)	10.00	
143) 1,4-Dichlorobenzene-d4	13.109(0.000)	1890	152	1040360 (-4)	10.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
61) Dibromofluoromethane	(1)	6.927(-0.001)	113	576842	9.770	98%		77 - 114
70) 1,2-Dichloroethane-d4	(1)	7.391(-0.001)	102	113344	10.294	103%		74 - 113
97) Toluene-d8	(2)	9.829(0.000)	98	2464318	9.563	96%		77 - 110
126) 4-Bromofluorobenzene	(2)	12.237(0.000)	95	801572	9.202	92%		78 - 110

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
15) Trichlorofluoromethane	(1)			Not Detected					0.1
45) 1,1-Dichloroethane	(1)			Not Detected					0.1
63) 1,1,1-Trichloroethane	(1)			Not Detected					0.1

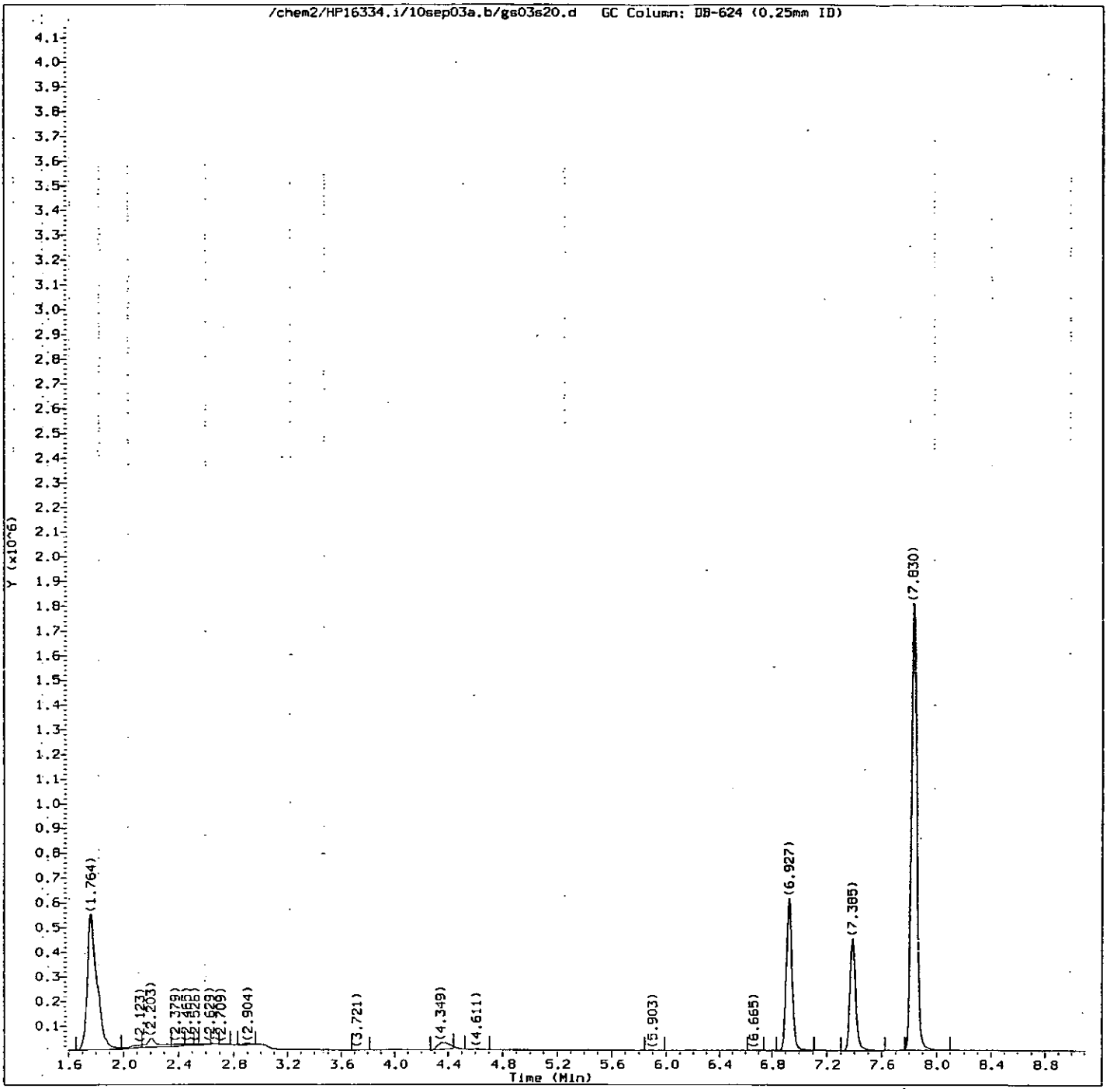
Total number of targets = 3

Comments:_____

Digitally signed by Jason M. Long on 09/03/2010 at 13:15. Target 3.5 esignature user ID: jml01693

RAD36 0042

Auditor:_____ Date: 9/10/10



Total Ion Chromatogram (TIC)

Target Revision 3.5

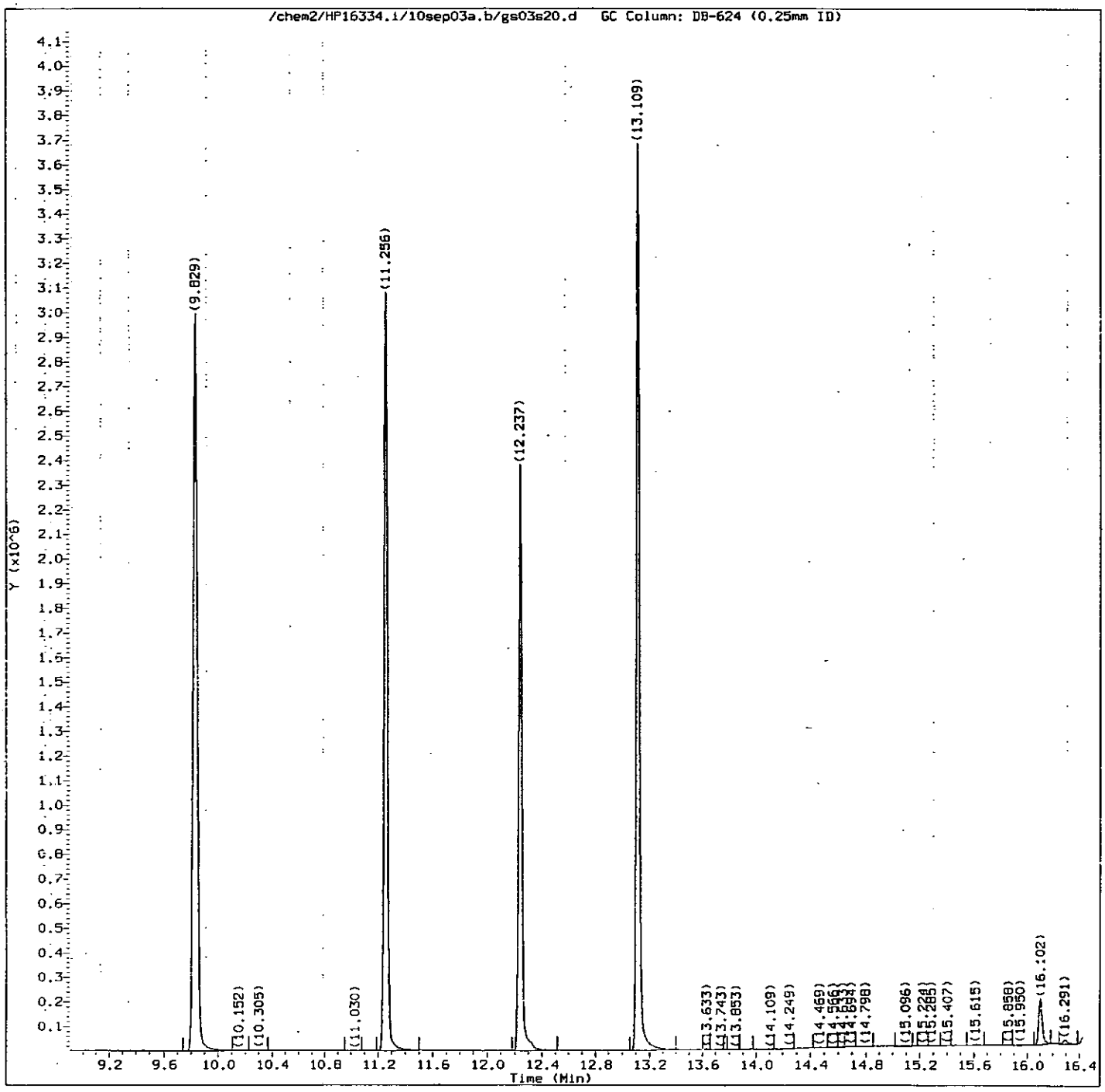
Data File: /chem2/HP16334.i/10sep03a.b/gs03s20.d Instrument ID: HP16334.i
Injection date and time: 03-SEP-2010 12:05 Analyst ID: SAS00403

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: 4607
Calibration date and time: 03-SEP-2010 10:10
Date, time and analyst ID of latest file update: 03-Sep-2010 12:23 Automation

Sample Name: XXXXX Lab Sample ID: 6076063

RAD36 0043

Digitally signed by Jason M. Long
on 09/03/2010 at 13:15.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/10sep03a.b/gs03s20.d Instrument ID: HP16334.i
Injection date and time: 03-SEP-2010 12:05 Analyst ID: SAS00403

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: 4607
Calibration date and time: 03-SEP-2010 10:10
Date, time and analyst ID of latest file update: 03-Sep-2010 12:23 Automation

Sample Name: XXXXX Lab Sample ID: 6076063

RAD36 8044

Digitally signed by Jason M. Long
on 09/03/2010 at 13:15.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/10sep03a.b/gs03s20.d Instrument ID: HP16334.i
Injection date and time: 03-SEP-2010 12:05 Analyst ID: SAS00403

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: 4607
Calibration date and time: 03-SEP-2010 10:10
Date, time and analyst ID of latest file update: 03-Sep-2010 12:23 Automation

Sample Name: XXXXX Lab Sample ID: 6076063

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
61)$Dibromofluoromethane	(1)	6.927	113	576842	9.770
70)$1,2-Dichloroethane-d4	(1)	7.391	102	113344	10.294
77)*Fluorobenzene	(1)	7.836	96	2566455	10.000
97)$Toluene-d8	(2)	9.829	98	2464318	9.563
110)*Chlorobenzene-d5	(2)	11.256	117	1908372	10.000
126)$4-Bromofluorobenzene	(2)	12.237	95	801572	9.202
143)*1,4-Dichlorobenzene-d4	(3)	13.109	152	1040360	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

RAD36 0845

Digitally signed by Jason M. Long
on 09/03/2010 at 13:15.
Target 3.5 esignature user ID: jml01693

Standards Data

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP16334 Calibration Date(s): 08/17/10 08/17/10

Heated Purge: (Y/N) Y Calibration Times: 12:02 13:49

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .25

LAB FILE ID: RRF 0.5 gg17i06.d RRF 1 = gg17i05.d RRF 2 = gg17i04.d
RRF 5 = gg17i03.d RRF 10= gg17i02.d RRF 25= gg17i01.d RRF =

COMPOUND	RRF 0.5	RRF 1	RRF 2	RRF 5	RRF 10	RRF 25	RRF	$\overline{RRF}$	% RSD	CAL. METHOD	
Dichlorodifluoromethane	0.4563	0.4547	0.4465	0.4440	0.4287	0.4284		0.4431	3	AVG	
Chloromethane	#0.4601	0.4433	0.4162	0.4052	0.4119	0.4147		0.4252	5	AVG	#
Vinyl Chloride	*0.4319	0.4233	0.4139	0.3995	0.3956	0.4059		0.4117	3	AVG	*
1,3-Butadiene	0.7355	0.6853	0.7069	0.6637	0.6330	0.5791		0.6673	8	AVG	
Bromomethane	0.3393	0.3305	0.3146	0.3001	0.2987	0.3019		0.3142	5	AVG	
Chloroethane	0.2774	0.2557	0.2392	0.2292	0.2260	0.2226		0.2417	9	AVG	
Dichlorofluoromethane	0.6436	0.5918	0.5631	0.5506	0.5425	0.5558		0.5746	7	AVG	
Trichlorofluoromethane	0.5568	0.4924	0.4868	0.5093	0.4693	0.4924		0.5012	6	AVG	
Ethyl Ether	0.1606	0.1624	0.1685	0.1706	0.1719	0.1798		0.1690	4	AVG	
Freon 123a	0.3120	0.3030	0.3004	0.2953	0.2914	0.2970		0.2998	2	AVG	
Acrolein	1.7941	1.9054	2.0471	2.1194	2.2776	2.4138		2.0929	11	AVG	
1,1-Dichloroethene	*0.2436	0.2424	0.2435	0.2468	0.2422	0.2523		0.2451	2	AVG	*
Freon 113	0.2461	0.2571	0.2534	0.2628	0.2468	0.2595		0.2543	3	AVG	
Acetone	0.8716	0.9834	1.0031	0.9843	1.0140	1.0729		0.9882	7	AVG	
Methyl Iodide	0.4443	0.4459	0.4495	0.4542	0.4427	0.4510		0.4479	1	AVG	
Carbon Disulfide	0.6577	0.6599	0.6365	0.6800	0.6661	0.7051		0.6676	3	AVG	
Allyl Chloride	0.2661	0.2430	0.2453	0.2552	0.2553	0.2803		0.2575	5	AVG	
Methyl Acetate	0.0356	0.0413	0.0469	0.0538	0.0594	0.0656		0.0504	22	2NDDEG	
Methylene Chloride	0.3624	0.3054	0.2882	0.2686	0.2558	0.2574		0.2896	14	AVG	
t-Butyl Alcohol	1.2988	1.2753	1.2539	1.2453	1.2315	1.2624		1.2612	2	AVG	
Acrylonitrile	2.6392	3.0413	3.4676	3.7554	4.1199	4.5002		3.5873	19	2NDDEG	
trans-1,2-Dichloroethene	0.2699	0.2772	0.2740	0.2771	0.2742	0.2839		0.2761	2	AVG	
1,2-Dichloroethene (Total)	0.2821	0.2835	0.2835	0.2859	0.2823	0.2946		0.2853	2	AVG	
Methyl Tertiary Butyl Ether	0.5290	0.5386	0.5438	0.5551	0.5474	0.5594		0.5455	2	AVG	
n-Hexane	0.3592	0.3713	0.3681	0.3786	0.3604	0.3792		0.3695	2	AVG	
1,1-Dichloroethane	#0.4514	0.4503	0.4560	0.4491	0.4537	0.4600		0.4534	1	AVG	#
di-Isopropyl Ether	0.7524	0.7590	0.7718	0.7781	0.7759	0.8129		0.7750	3	AVG	
2-Chloro-1,3-Butadiene	0.3037	0.3021	0.3234	0.3318	0.3266	0.3471		0.3225	5	AVG	
Ethyl t-Butyl Ether	0.6705	0.6872	0.7067	0.7062	0.7006	0.7236		0.6991	3	AVG	
2,2-Dichloropropane	0.3522	0.3631	0.3611	0.3759	0.3716	0.3865		0.3684	3	AVG	
cis-1,2-Dichloroethene	0.2943	0.2898	0.2930	0.2947	0.2904	0.3053		0.2946	2	AVG	
2-Butanone	4.6859	4.8424	4.8849	5.0096	5.3744	5.7592		5.0927	8	AVG	
Propionitrile	1.0194	1.1453	1.2841	1.3807	1.4761	1.6038		1.3182	16	2NDDEG	
Methacrylonitrile	5.1326	5.2555	5.5846	5.6278	6.0396	6.4525		5.6821	9	AVG	
Bromochloromethane	0.1110	0.1147	0.1183	0.1172	0.1191	0.1246		0.1175	4	AVG	
Tetrahydrofuran	1.5755	1.5878	1.6491	1.6384	1.7200	1.7865		1.6595	5	AVG	
Chloroform	*0.4446	0.4625	0.4627	0.4694	0.4590	0.4808		0.4632	3	AVG	*
1,1,1-Trichloroethane	0.3935	0.3992	0.3963	0.4101	0.3991	0.4165		0.4024	2	AVG	
Cyclohexane	0.4355	0.4436	0.4449	0.4544	0.4343	0.4538		0.4444	2	AVG	
1,1-Dichloropropene	0.3482	0.3627	0.3585	0.3642	0.3612	0.3765		0.3619	3	AVG	
Carbon Tetrachloride	0.3253	0.3423	0.3449	0.3614	0.3566	0.3799		0.3517	5	AVG	
Isobutyl Alcohol	0.4075	0.3642	0.3733	0.3781	0.3837	0.4041		0.3851	4	AVG	
Benzene	1.0454	1.0567	1.0571	1.0649	1.0553	1.1128		1.0653	2	AVG	
1,2-Dichloroethane	0.2469	0.2508	0.2534	0.2548	0.2527	0.2607		0.2532	2	AVG	
1,2-Dichloroethane(mz98)	0.0226	0.0241	0.0231	0.0250	0.0250	0.0257		0.0243	5	AVG	
t-Amyl Methyl Ether	0.5789	0.5971	0.5974	0.6174	0.6118	0.6322		0.6058	3	AVG	
n-Heptane	0.3997	0.3693	0.3728	0.3853	0.3667	0.3936		0.3812	4	AVG	
n-Butanol	0.2131	0.2540	0.2854	0.3193	0.3311	0.3566		0.2932	18	2NDDEG	
Trichloroethene	0.2859	0.2925	0.2912	0.2941	0.2893	0.3048		0.2930	2	AVG	
Methylcyclohexane	0.4430	0.4532	0.4645	0.4686	0.4504	0.4822		0.4603	3	AVG	
1,2-Dichloropropane	*0.2497	0.2649	0.2598	0.2660	0.2641	0.2770		0.2636	3	AVG	*
Dibromomethane	0.1097	0.1148	0.1152	0.1204	0.1186	0.1246		0.1172	4	AVG	

Minimum RRF for SPCC(#) = 0.10
(0.30 for Chlorobenzene, 1,1,2,2-Tetrachloroethane)
Maximum %RSD for CCC(*) = 30%

RAD36 0047

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP16334 Calibration Date(s): 08/17/10 08/17/10

Heated Purge: (Y/N) Y Calibration Times: 12:02 13:49

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .25

LAB FILE ID: RRF 0.5 gg17i06.d RRF 1 = gg17i05.d RRF 2 = gg17i04.d
RRF 5 = gg17i03.d RRF 10= gg17i02.d RRF 25= gg17i01.d RRF =

COMPOUND	RRF 0.5	RRF 1	RRF 2	RRF 5	RRF 10	RRF 25	RRF	$\overline{RRF}$	% RSD	CAL. METHOD	
1,4-Dioxane	0.0660	0.0924	0.0916	0.0975	0.0957	0.0903		0.0889	13	AVG	
Methyl Methacrylate	9.3730	10.190	11.070	11.612	12.604	13.340		11.364	13	AVG	
Bromodichloromethane	0.2710	0.2875	0.2901	0.3074	0.3131	0.3317		0.3001	7	AVG	
2-Nitropropane	3.0444	2.6088	2.8393	2.9116	3.1485	3.3542		2.9845	9	AVG	
cis-1,3-Dichloropropene	0.2758	0.2916	0.3037	0.3252	0.3273	0.3568		0.3134	9	AVG	
4-Methyl-2-Pentanone	0.1111	0.1168	0.1209	0.1284	0.1313	0.1398		0.1247	8	AVG	
Toluene	*0.9468	0.9629	0.9709	0.9723	0.9680	1.0257		0.9744	3	AVG	*
trans-1,3-Dichloropropene	0.2766	0.3168	0.3240	0.3637	0.3718	0.4069		0.3433	14	AVG	
Ethyl Methacrylate	0.1877	0.2177	0.2323	0.2541	0.2586	0.2706		0.2368	13	AVG	
1,1,2-Trichloroethane	0.2213	0.2241	0.2295	0.2315	0.2311	0.2348		0.2287	2	AVG	
Tetrachloroethene	0.4200	0.4404	0.4347	0.4481	0.4409	0.4656		0.4416	3	AVG	
1,3-Dichloropropane	0.3629	0.3846	0.3895	0.3910	0.3903	0.4027		0.3868	3	AVG	
2-Hexanone	0.1012	0.1017	0.1113	0.1186	0.1200	0.1261		0.1131	9	AVG	
Dibromochloromethane	0.2233	0.2355	0.2532	0.2776	0.2852	0.3053		0.2634	12	AVG	
1,2-Dibromoethane	0.1845	0.2005	0.2072	0.2141	0.2146	0.2178		0.2065	6	AVG	
Chlorobenzene	#1.0468	1.0773	1.0928	1.0960	1.0957	1.1580		1.0944	3	AVG	#
1,1,1,2-Tetrachloroethane	0.3018	0.3307	0.3451	0.3656	0.3692	0.4022		0.3524	10	AVG	
Ethylbenzene	*1.7239	1.7981	1.8076	1.8723	1.8951	2.0713		1.8614	6	AVG	*
m+p-Xylene	0.6683	0.7162	0.7231	0.7471	0.7584	0.8556		0.7448	8	AVG	
Xylene (Total)	0.6637	0.7094	0.7248	0.7458	0.7547	0.8489		0.7412	8	AVG	
o-Xylene	0.6543	0.6960	0.7281	0.7433	0.7473	0.8355		0.7341	8	AVG	
Styrene	0.8909	0.9930	1.0645	1.1468	1.1815	1.3404		1.1028	14	AVG	
Bromoform	#0.1026	0.1179	0.1252	0.1445	0.1537	0.1700		0.1357	18	2NDDEG	#
Isopropylbenzene	1.7179	1.8403	1.8607	1.9196	1.9297	2.0982		1.8944	7	AVG	
1,1,2,2-Tetrachloroethane	#0.4171	0.4298	0.4466	0.4630	0.4609	0.4754		0.4488	5	AVG	#
Bromobenzene	0.7351	0.7650	0.7658	0.7800	0.7812	0.8373		0.7774	4	AVG	
trans-1,4-Dichloro-2-Butene	1.4822	1.6971	2.1072	2.6503	3.1823	4.3184		2.5729	41	2NDDEG	
1,2,3-Trichloropropane	0.1174	0.1223	0.1273	0.1314	0.1310	0.1399		0.1282	6	AVG	
n-Propylbenzene	3.6911	3.9318	3.9671	4.0587	4.0686	4.3402		4.0096	5	AVG	
2-Chlorotoluene	0.7637	0.7889	0.7967	0.8192	0.8073	0.8586		0.8057	4	AVG	
4-Chlorotoluene	0.7959	0.7960	0.8134	0.8294	0.8209	0.8768		0.8220	4	AVG	
1,3,5-Trimethylbenzene	2.5248	2.6828	2.7124	2.8311	2.8538	3.1376		2.7904	7	AVG	
Pentachloroethane	0.3823	0.4139	0.4564	0.5010	0.5220	0.6035		0.4798	17	2NDDEG	
tert-Butylbenzene	0.5851	0.5783	0.6066	0.6454	0.6452	0.6981		0.6265	7	AVG	
1,2,4-Trimethylbenzene	2.6211	2.7743	2.8927	3.0618	3.1172	3.5274		2.9991	11	AVG	
sec-Butylbenzene	3.4499	3.5757	3.6230	3.7835	3.7791	4.0889		3.7167	6	AVG	
1,3-Dichlorobenzene	1.5299	1.5876	1.6115	1.6796	1.7093	1.9575		1.6792	9	AVG	
p-Isopropyltoluene	2.8992	3.0727	3.2285	3.3639	3.4447	3.9248		3.3223	11	AVG	
1,4-Dichlorobenzene	1.7256	1.7103	1.7073	1.7067	1.6896	1.8186		1.7263	3	AVG	
1,2,3-Trimethylbenzene	1.2233	1.2985	1.3299	1.3302	1.3397	1.4870		1.3348	6	AVG	
Benzyl Chloride	0.1020	0.1274	0.1515	0.1750	0.1824	0.1997		0.1563	23	2NDDEG	
n-Butylbenzene	1.4120	1.5519	1.6178	1.6684	1.7015	1.8904		1.6437	10	AVG	
1,2-Dichlorobenzene	1.4350	1.4383	1.4565	1.4870	1.4680	1.5863		1.4785	4	AVG	
1,2-Dibromo-3-Chloropropane	1.9225	2.2267	2.4499	2.6826	2.9363	3.2380		2.5760	19	2NDDEG	
1,2,4-Trichlorobenzene	1.1045	1.1179	1.1515	1.1755	1.1769	1.2765		1.1672	5	AVG	
Hexachlorobutadiene	0.5918	0.6124	0.6140	0.6293	0.6319	0.6952		0.6291	6	AVG	
Naphthalene	1.4382	1.4862	1.5789	1.6455	1.6599	1.7206		1.5882	7	AVG	
1,2,3-Trichlorobenzene	0.8646	0.8931	0.9153	0.9224	0.9221	0.9651		0.9137	4	AVG	
Dibromofluoromethane	0.2286	0.2315	0.2301	0.2294	0.2318	0.2289		0.2300	1	AVG	
Dibromofluoromethane(mz111)	0.2326	0.2334	0.2346	0.2352	0.2362	0.2337		0.2343	1	AVG	
1,2-Dichloroethane-d4	0.0438	0.0434	0.0429	0.0427	0.0427	0.0419		0.0429	2	AVG	

Minimum RRF for SPCC(#) = 0.10
(0.30 for Chlorobenzene, 1,1,2,2-Tetrachloroethane)
Maximum %RSD for CCC(*) = 30%.

RAD36 0048

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP16334 Calibration Date(s): 08/17/10 08/17/10

Heated Purge: (Y/N) Y Calibration Times: 12:02 13:49

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .25

LAB FILE ID: RRF 0.5 gg17i06.d RRF 1 = gg17i05.d RRF 2 = gg17i04.d
RRF 5 = gg17i03.d RRF 10= gg17i02.d RRF 25= gg17i01.d RRF =

COMPOUND	RRF 0.5	RRF 1	RRF 2	RRF 5	RRF 10	RRF 25	RRF	$\overline{RRF}$	% RSD	CAL. METHOD
1,2-Dichloroethane-d4(mz65)	0.1955	0.1939	0.1900	0.1887	0.1919	0.1864		0.1911	2	AVG
1,2-Dichloroethane-d4(mz104)	0.0277	0.0278	0.0276	0.0274	0.0276	0.0274		0.0276	1	AVG
Toluene-d8	1.3337	1.3562	1.3714	1.3492	1.3589	1.3328		1.3504	1	AVG
Toluene-d8(mz100)	0.8641	0.8801	0.8839	0.8725	0.8795	0.8617		0.8737	1	AVG
4-Bromofluorobenzene	0.4506	0.4567	0.4669	0.4571	0.4567	0.4505		0.4564	1	AVG
4-Bromofluorobenzene(mz174)	0.3974	0.4051	0.4101	0.4043	0.4100	0.3989		0.4043	1	AVG

Average %RSD 7

Minimum RRF for SPCC(#) = 0.10
(0.30 for Chlorobenzene, 1,1,2,2-Tetrachloroethane)
Maximum %RSD for CCC(*) = 30%

RAD36 8849

Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem2/HP16334.i/10aug17a.b/gg17i01.d VSTD025
/chem2/HP16334.i/10aug17a.b/gg17i02.d VSTD010
/chem2/HP16334.i/10aug17a.b/gg17i03.d VSTD005
/chem2/HP16334.i/10aug17a.b/gg17i04.d VSTD002
/chem2/HP16334.i/10aug17a.b/gg17i05.d VSTD001
/chem2/HP16334.i/10aug17a.b/gg17i06.d VSTD0.5

Area Summary

File ID:

Internal Standard Name	gg17i01.d	gg17i02.d	gg17i03.d	gg17i04.d	gg17i05.d	gg17i06.d	Avg. Area	%RSD	In Spec
t-Butyl Alcohol-d10	109744	114990	122410	116394	118245	112248	115672	4	Yes
Fluorobenzene	2462995	2557823	2558018	2563298	2529183	2468844	2523360	2	Yes
Chlorobenzene-d5	1816017	1855717	1859706	1846965	1839555	1822662	1840104	1	Yes
1,4-Dichlorobenzene-d4	1056610	1067585	1062935	1054367	1039639	1007695	1048138	2	Yes

%RSD of internal standard area is flagged out of spec if greater than 30.

RT Summary

File ID:

Internal Standard Name	gg17i01.d	gg17i02.d	gg17i03.d	gg17i04.d	gg17i05.d	gg17i06.d	Avg. RT
t-Butyl Alcohol-d10	4.373	4.367	4.391	4.379	4.367	4.385	4.377
Fluorobenzene	7.835	7.836	7.836	7.835	7.835	7.836	7.836
Chlorobenzene-d5	11.256	11.256	11.256	11.256	11.256	11.256	11.256
1,4-Dichlorobenzene-d4	13.109	13.109	13.109	13.109	13.109	13.109	13.109

* indicates the retention time is greater than 30 seconds from the average RT.

Report generated on 08/17/2010 at 14:41.

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP16334 ICV Date: 08/17/10 Time: 14:53

Lab File ID: gg17101.d Init. Calib. Date(s): 08/17/10 08/17/10

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .25

	COMPOUND	RRF	RRF	ACTUAL CONC.	TRUE CONC.	% DRIFT	
	Dichlorodifluoromethane	0.4431	0.4036	4.55	5	-9	
#	Chloromethane	0.4252	0.4160	4.89	5	-2	#
*	Vinyl Chloride	0.4117	0.4113	5.00	5	0	*
	1,3-Butadiene	0.6673	0.4677	3.50	5	-30	
	Bromomethane	0.3142	0.3084	4.91	5	-2	
	Chloroethane	0.2417	0.2391	4.95	5	-1	
	Dichlorofluoromethane	0.5746	0.5800	5.05	5	1	
	Trichlorofluoromethane	0.5012	0.4781	4.77	5	-5	
	Ethyl Ether	0.1690	0.1506	4.46	5	-11	
	Freon 123a	0.2998	0.3025	5.04	5	1	
	Acrolein	2.0929	1.6068	28.79	37.5	-23	
*	1,1-Dichloroethene	0.2451	0.2326	4.74	5	-5	*
	Freon 113	0.2543	0.2428	4.77	5	-5	
	Acetone	0.9882	0.9385	35.61	37.5	-5	
	Methyl Iodide	0.4479	0.4287	4.79	5	-4	
	Carbon Disulfide	0.6676	0.5681	4.26	5	-15	
	Allyl Chloride	0.2575	0.2809	5.45	5	9	
	Methyl Acetate	0.0504	0.0568	5.11	5	2	
	Methylene Chloride	0.2896	0.2593	4.46	5	-10	
	t-Butyl Alcohol	1.2612	1.2049	47.77	50	-4	
	Acrylonitrile	3.5873	3.6386	23.55	25	-6	
	trans-1,2-Dichloroethene	0.2761	0.2710	4.91	5	-2	
	1,2-Dichloroethene (Total)	0.2853	0.2779	9.74	10	-3	
	Methyl Tertiary Butyl Ether	0.5455	0.5227	4.79	5	-4	
	n-Hexane	0.3695	0.3466	4.69	5	-6	
#	1,1-Dichloroethane	0.4534	0.4409	4.86	5	-3	#
	di-Isopropyl Ether	0.7750	0.7421	4.79	5	-4	
	2-Chloro-1,3-Butadiene	0.3225	0.3630	5.63	5	13	
	Ethyl t-Butyl Ether	0.6991	0.6697	4.79	5	-4	
	2,2-Dichloropropane	0.3684	0.3610	4.90	5	-2	
	cis-1,2-Dichloroethene	0.2946	0.2849	4.84	5	-3	
	2-Butanone	5.0927	4.9333	36.33	37.5	-3	
	Propionitrile	1.3182	1.2746	37.12	37.5	-1	
	Methacrylonitrile	5.6821	5.6050	36.99	37.5	-1	
	Bromochloromethane	0.1175	0.1198	5.10	5	2	
	Tetrahydrofuran	1.6595	1.5972	24.06	25	-4	

Minimum RRF for SPCC(#)=0.10 (0.30 for Chlorobenzene, 1,1,2,2-Tetrachloroethane) RAD36 0051
Maximum %Drift for CCC(*)=20%

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP16334 ICV Date: 08/17/10 Time: 14:53

Lab File ID: gg17101.d Init. Calib. Date(s): 08/17/10 08/17/10

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .25

	COMPOUND	RRF	RRF	ACTUAL CONC.	TRUE CONC.	% DRIFT	
*	Chloroform	0.4632	0.4687	5.06	5	1	*
	1,1,1-Trichloroethane	0.4024	0.4016	4.99	5	0	
	Cyclohexane	0.4444	0.4333	4.87	5	-3	
	1,1-Dichloropropene	0.3619	0.3582	4.95	5	-1	
	Carbon Tetrachloride	0.3517	0.3506	4.98	5	0	
	Isobutyl Alcohol	0.3851	0.3641	118.17	125	-5	
	Benzene	1.0653	1.0468	4.91	5	-2	
	1,2-Dichloroethane	0.2532	0.2560	5.06	5	1	
	t-Amyl Methyl Ether	0.6058	0.5883	4.86	5	-3	
	n-Heptane	0.3812	0.3676	4.82	5	-4	
	n-Butanol	0.2932	0.2902	241.76	250	-3	
	Trichloroethene	0.2930	0.2908	4.96	5	-1	
	Methylcyclohexane	0.4603	0.4901	5.32	5	6	
*	1,2-Dichloropropane	0.2636	0.2641	5.01	5	0	*
	Dibromomethane	0.1172	0.1174	5.01	5	0	
	1,4-Dioxane	0.0889	0.0996	140.03	125	12	
	Methyl Methacrylate	11.364	10.2662	4.52	5	-10	
	Bromodichloromethane	0.3001	0.3006	5.01	5	0	
	2-Nitropropane	2.9845	2.5679	4.30	5	-14	
	cis-1,3-Dichloropropene	0.3134	0.3148	5.02	5	0	
	4-Methyl-2-Pentanone	0.1247	0.1211	24.28	25	-3	
*	Toluene	0.9744	0.9591	4.92	5	-2	*
	trans-1,3-Dichloropropene	0.3433	0.3547	5.17	5	3	
	Ethyl Methacrylate	0.2368	0.2800	5.91	5	18	
	1,1,2-Trichloroethane	0.2287	0.2316	5.06	5	1	
	Tetrachloroethene	0.4416	0.4493	5.09	5	2	
	1,3-Dichloropropane	0.3868	0.3868	5.00	5	0	
	2-Hexanone	0.1131	0.1118	24.70	25	-1	
	Dibromochloromethane	0.2624	0.2617	4.97	5	-1	
	1,2-Dibromoethane	0.2065	0.2094	5.07	5	1	
#	Chlorobenzene	1.0944	1.1009	5.03	5	1	#
	1,1,1,2-Tetrachloroethane	0.3524	0.3562	5.05	5	1	
*	Ethylbenzene	1.8614	1.8564	4.99	5	0	*
	m+p-Xylene	0.7448	0.7413	9.95	10	0	
	Xylene (Total)	0.7412	0.5373	14.96	15	0	
	o-Xylene	0.7341	0.7350	5.01	5	0	

RAD36 0852

Minimum RRF for SPCC(#)=0.10 (0.30 for Chlorobenzene, 1,1,2,2-Tetrachloroethane)
Maximum %Drift for CCC(*)=20%

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP16334 ICV Date: 08/17/10 Time: 14:53

Lab File ID: gg17l01.d Init. Calib. Date(s): 08/17/10 08/17/10

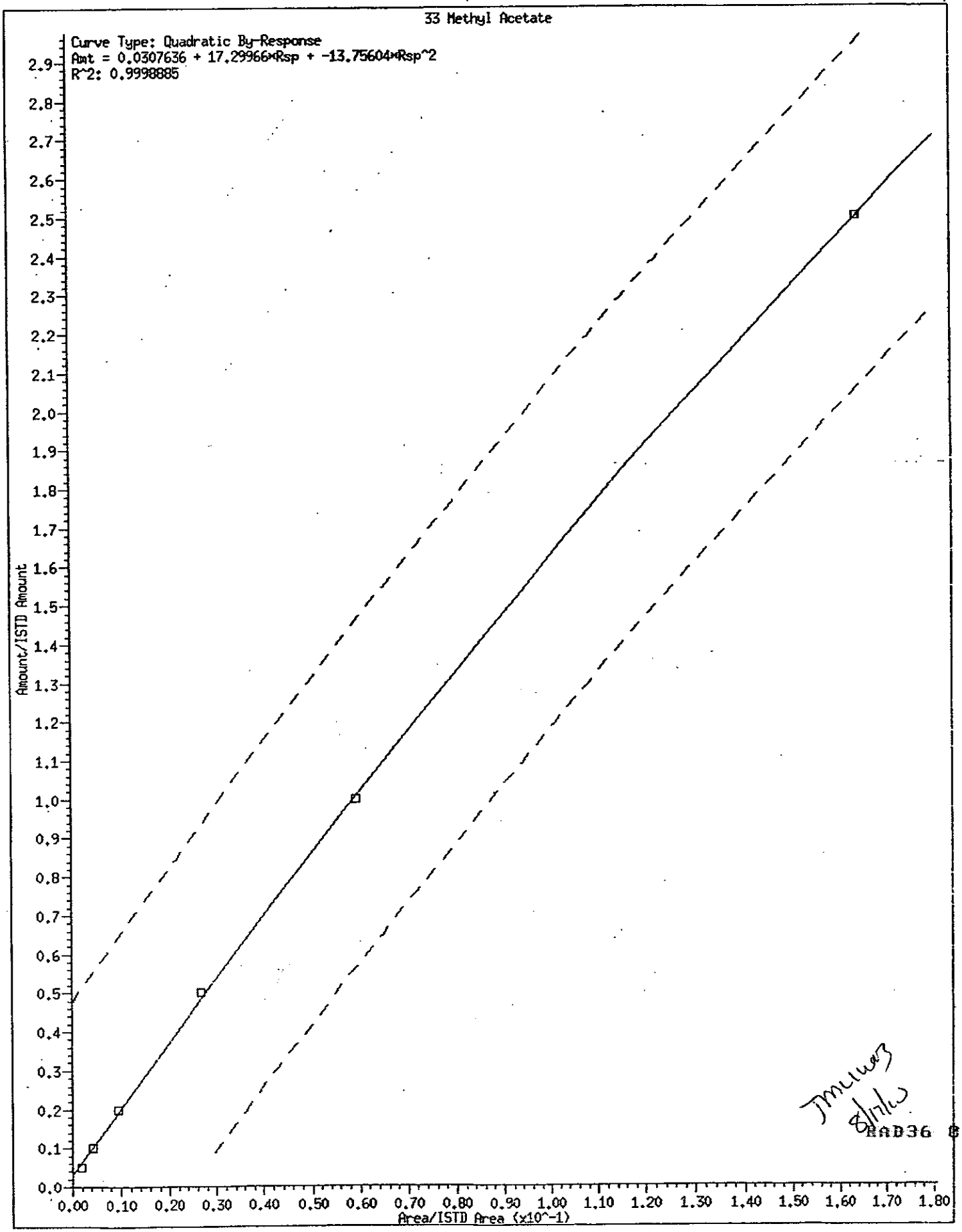
Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .25

	COMPOUND	RRF	RRF	ACTUAL CONC.	TRUE CONC.	% DRIFT	
	Styrene	1.1028	1.1559	5.24	5	5	
#	Bromoform	0.1357	0.1335	4.61	5	-8	#
	Isopropylbenzene	1.8944	1.9029	5.02	5	0	
#	1,1,2,2-Tetrachloroethane	0.4488	0.4547	5.07	5	1	#
	Bromobenzene	0.7774	0.7643	4.92	5	-2	
	trans-1,4-Dichloro-2-Butene	2.5729	2.5254	25.50	25	2	
	1,2,3-Trichloropropane	0.1282	0.1278	4.99	5	0	
	n-Propylbenzene	4.0096	3.9767	4.96	5	-1	
	2-Chlorotoluene	0.8057	0.8011	4.97	5	-1	
	4-Chlorotoluene	0.8220	0.8101	4.93	5	-1	
	1,3,5-Trimethylbenzene	2.7904	2.7780	4.98	5	0	
	Pentachloroethane	0.4798	0.4830	4.86	5	-3	
	tert-Butylbenzene	0.6265	0.6301	5.03	5	1	
	1,2,4-Trimethylbenzene	2.9991	3.0062	5.01	5	0	
	sec-Butylbenzene	3.7167	3.7108	4.99	5	0	
	1,3-Dichlorobenzene	1.6792	1.6770	4.99	5	0	
	p-Isopropyltoluene	3.3223	3.2895	4.95	5	-1	
	1,4-Dichlorobenzene	1.7263	1.7138	4.96	5	-1	
	1,2,3-Trimethylbenzene	1.3348	1.3229	4.96	5	-1	
	Benzyl Chloride	0.1563	0.1569	4.55	5	-9	
	n-Butylbenzene	1.6437	1.6503	5.02	5	0	
	1,2-Dichlorobenzene	1.4785	1.4784	5.00	5	0	
	1,2-Dibromo-3-Chloropropane	2.5760	2.6218	4.76	5	-5	
	1,2,4-Trichlorobenzene	1.1672	1.1366	4.87	5	-3	
	Hexachlorobutadiene	0.6291	0.5995	4.76	5	-5	
	Naphthalene	1.5882	1.5834	4.98	5	0	
	1,2,3-Trichlorobenzene	0.9137	0.8820	4.83	5	-3	

Average %Drift 4

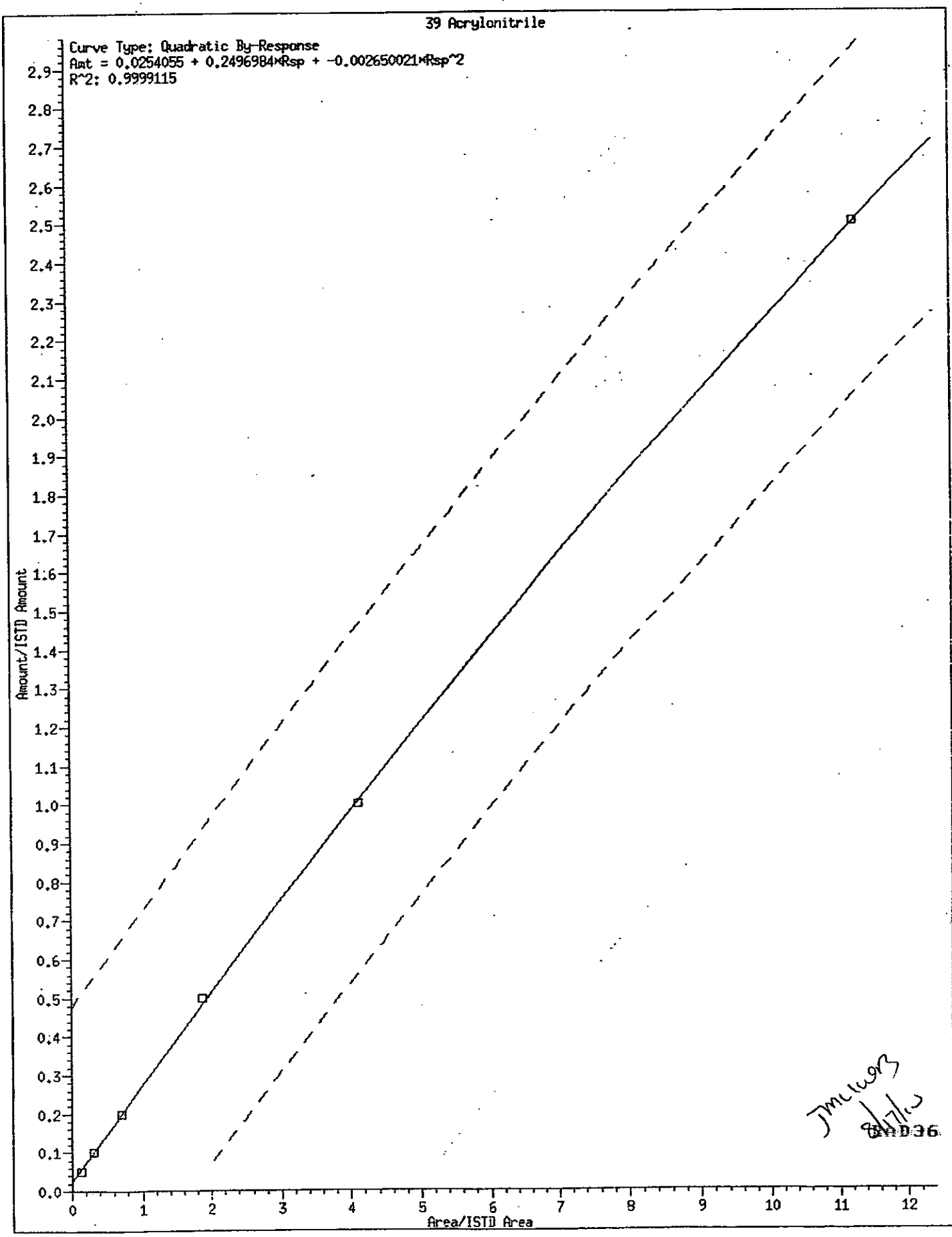
RAD36 0853

Minimum RRF for SPCC(#)=0.10 (0.30 for Chlorobenzene, 1,1,2,2-Tetrachloroethane)
Maximum %Drift for CCC(*)=20%



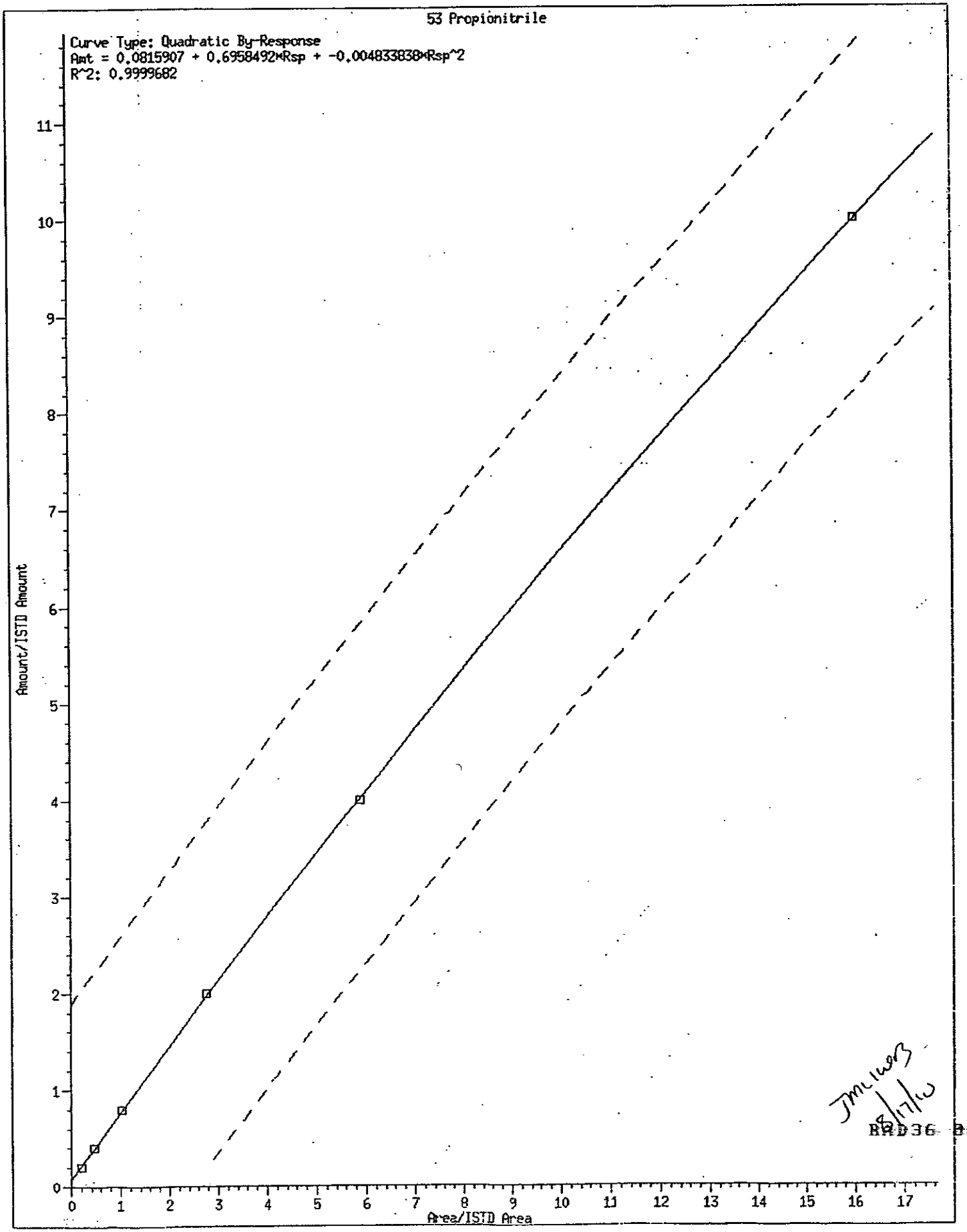
JMcIver 8/17/16

RnD36 0854



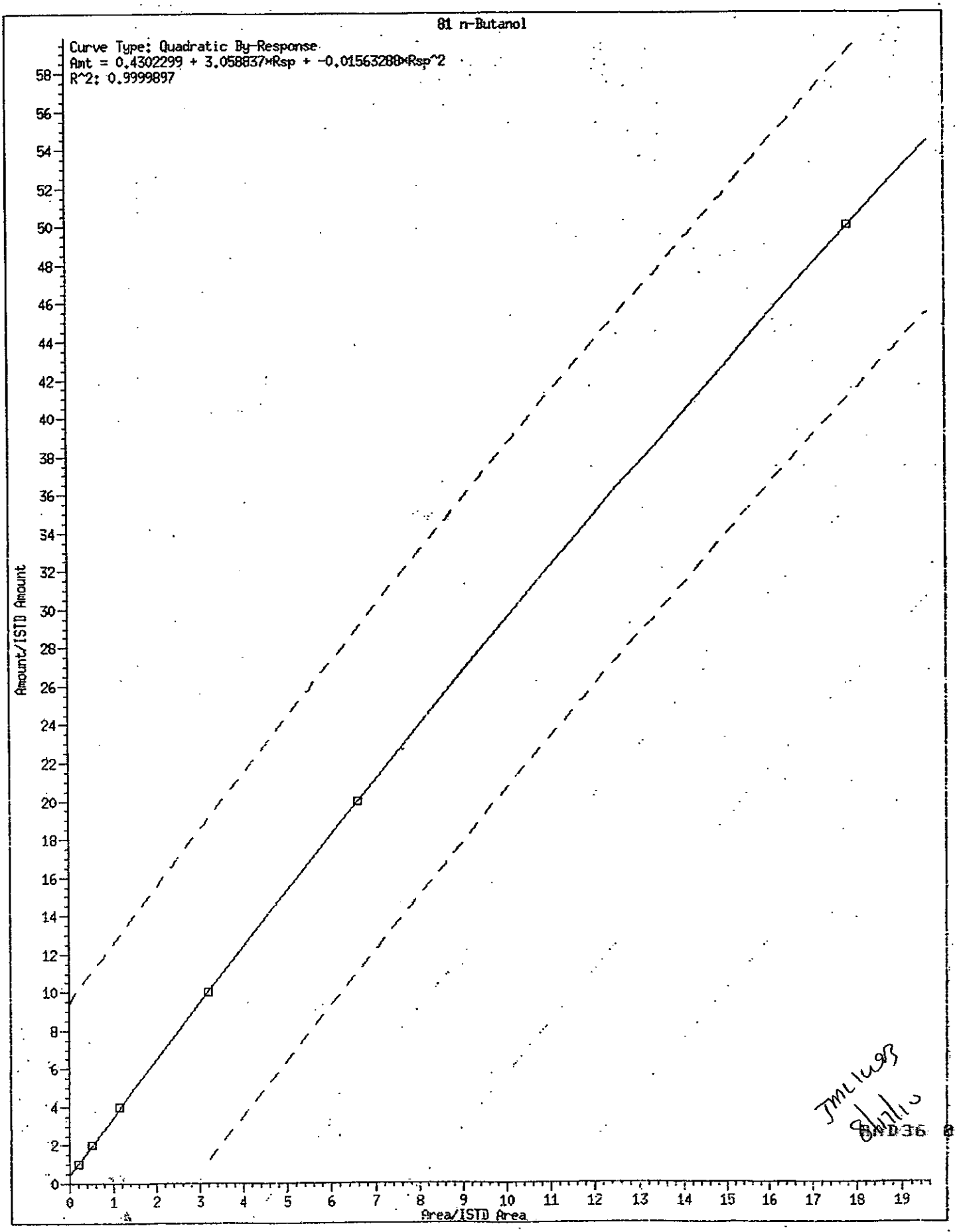
JMcWorth 8/7/15

SMD36 0055



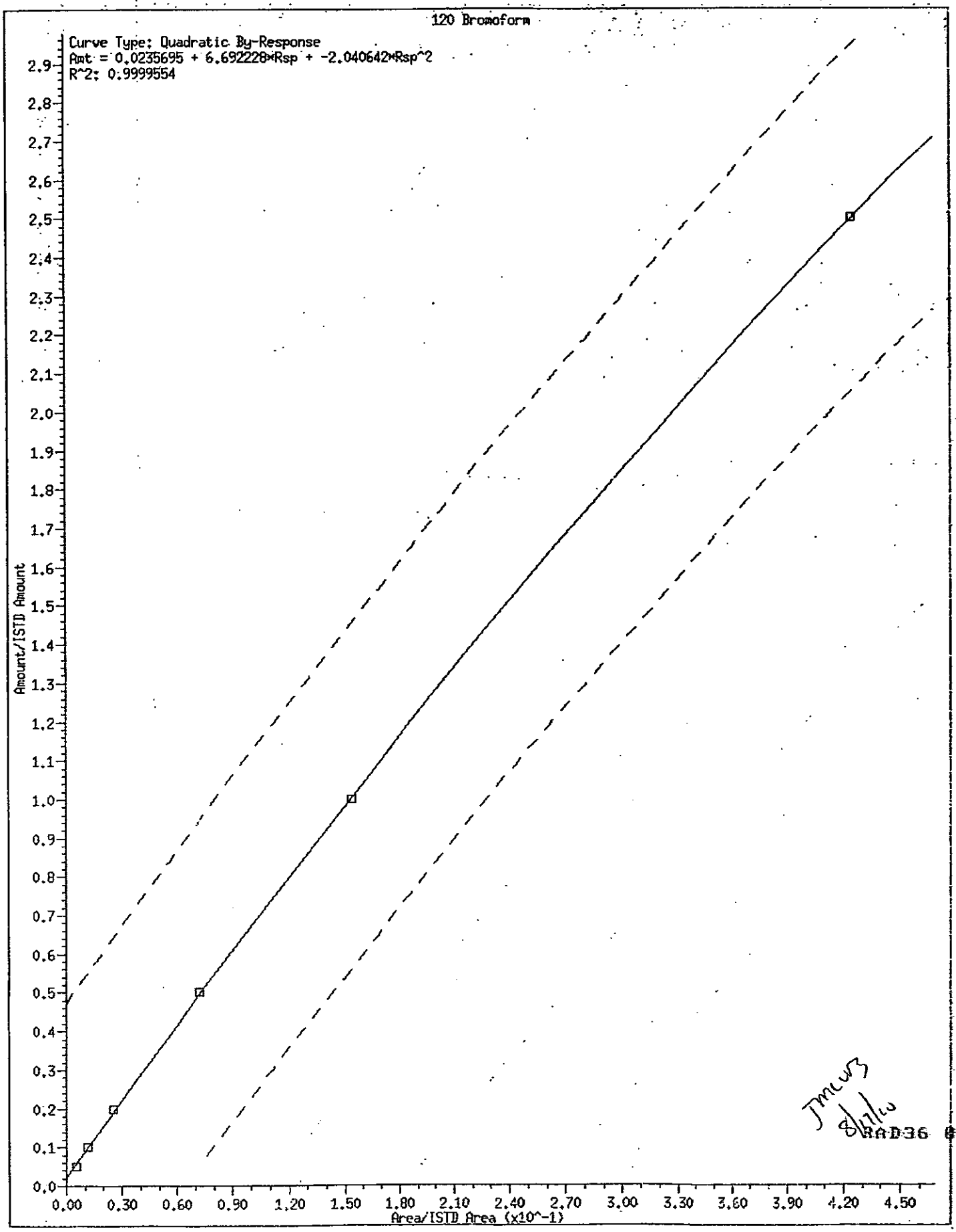
JML 10/03
8/17/10

RR036 0056



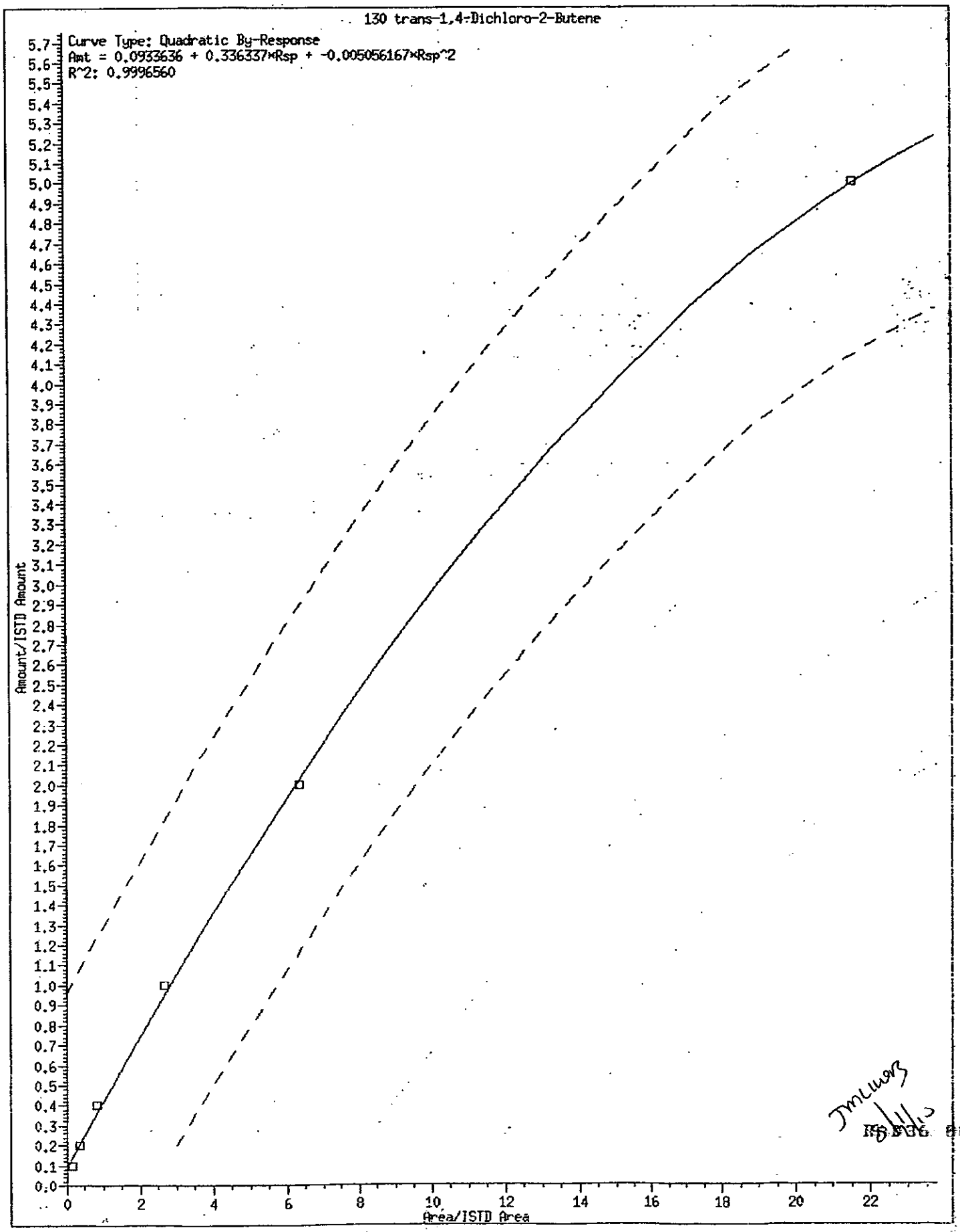
JMC 11/08
8/7/11

BND36 0857

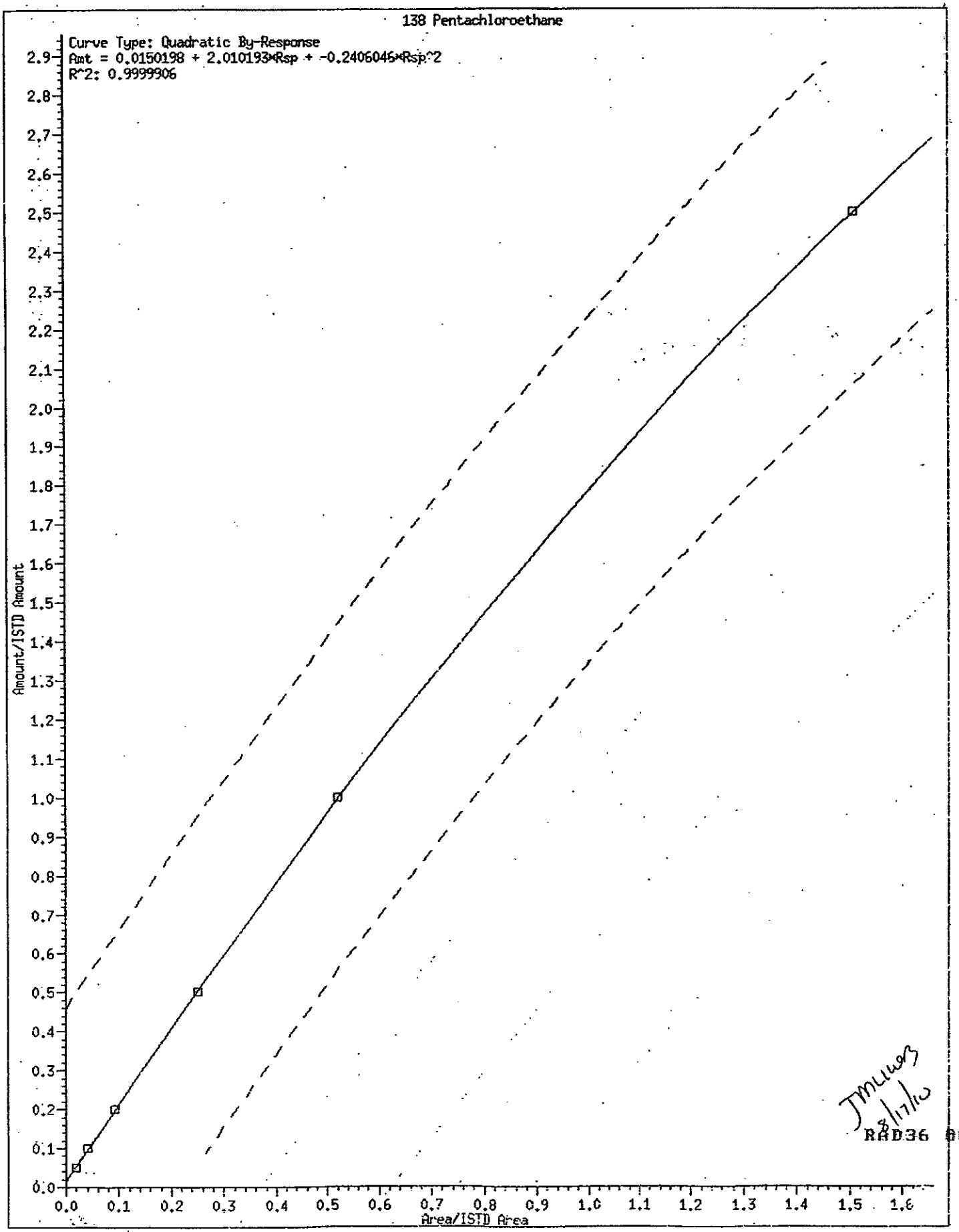


JMW 8/17/10

RAD36 0058

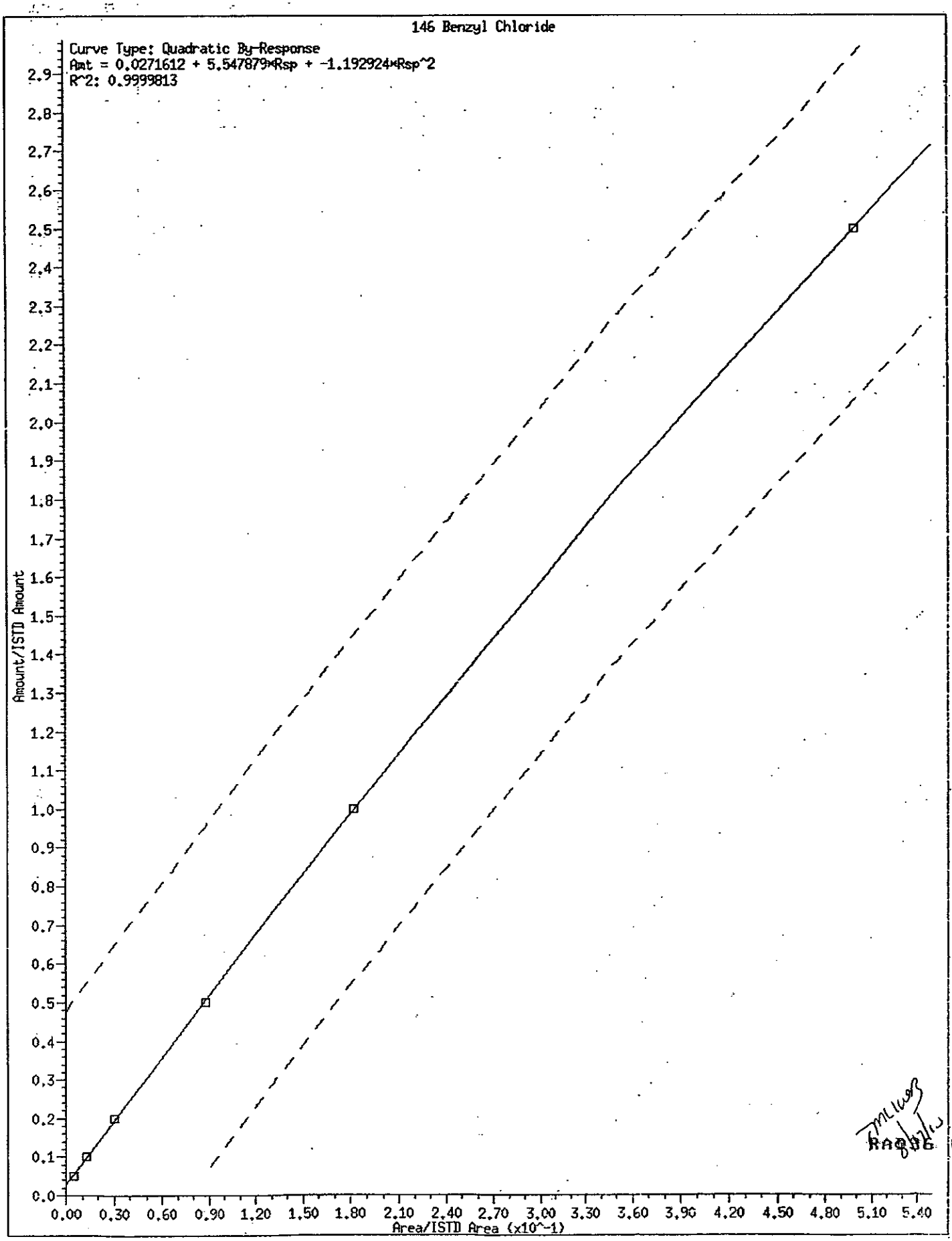

130 trans-1,4-Dichloro-2-Butene
Curve Type: Quadratic By-Response
Amt = 0.0933636 + 0.336337*Rsp + -0.005056167*Rsp^2
R^2: 0.9996560
Amount/ISTD Amount
Area/ISTD Area

0059

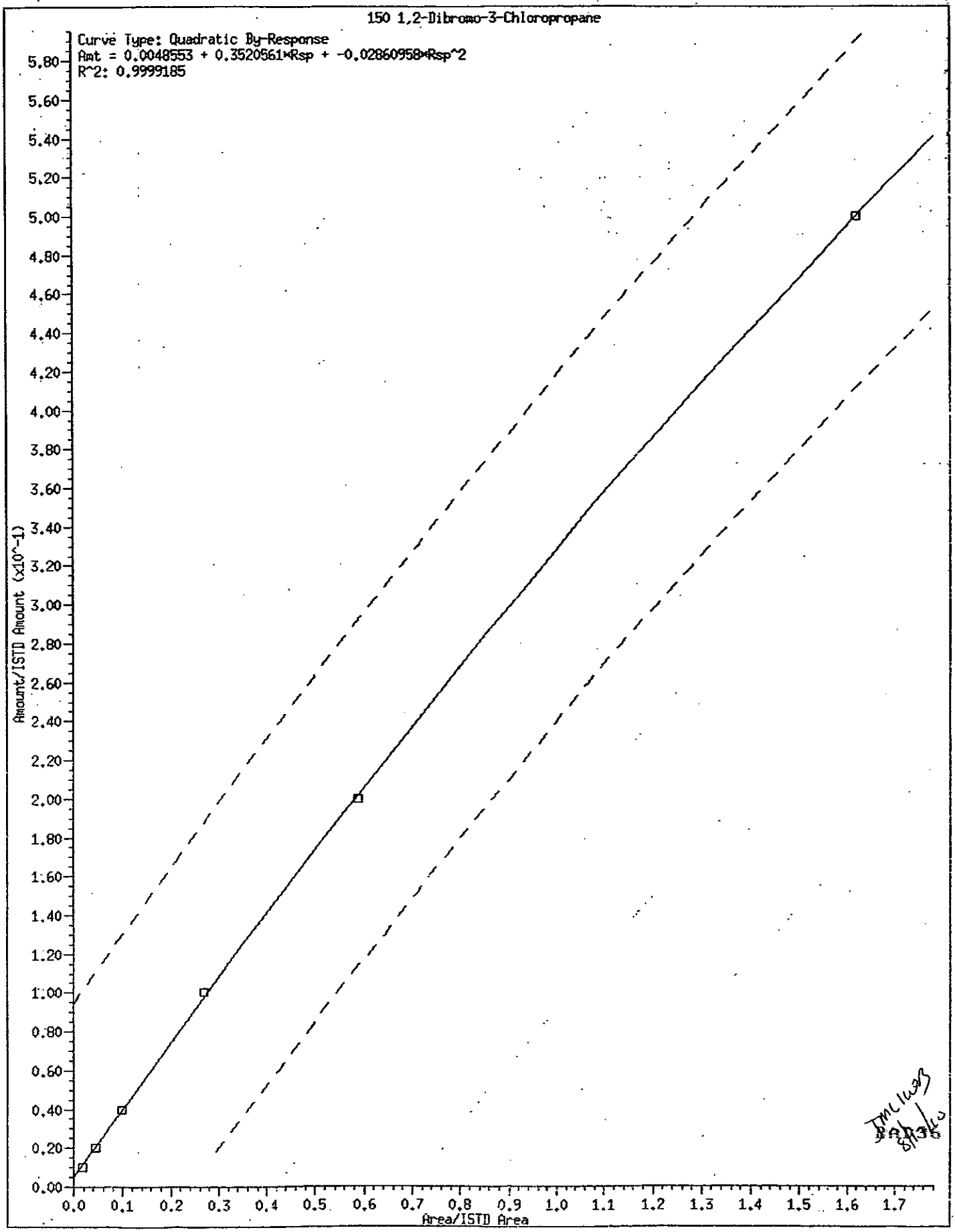


JM 8/17/10

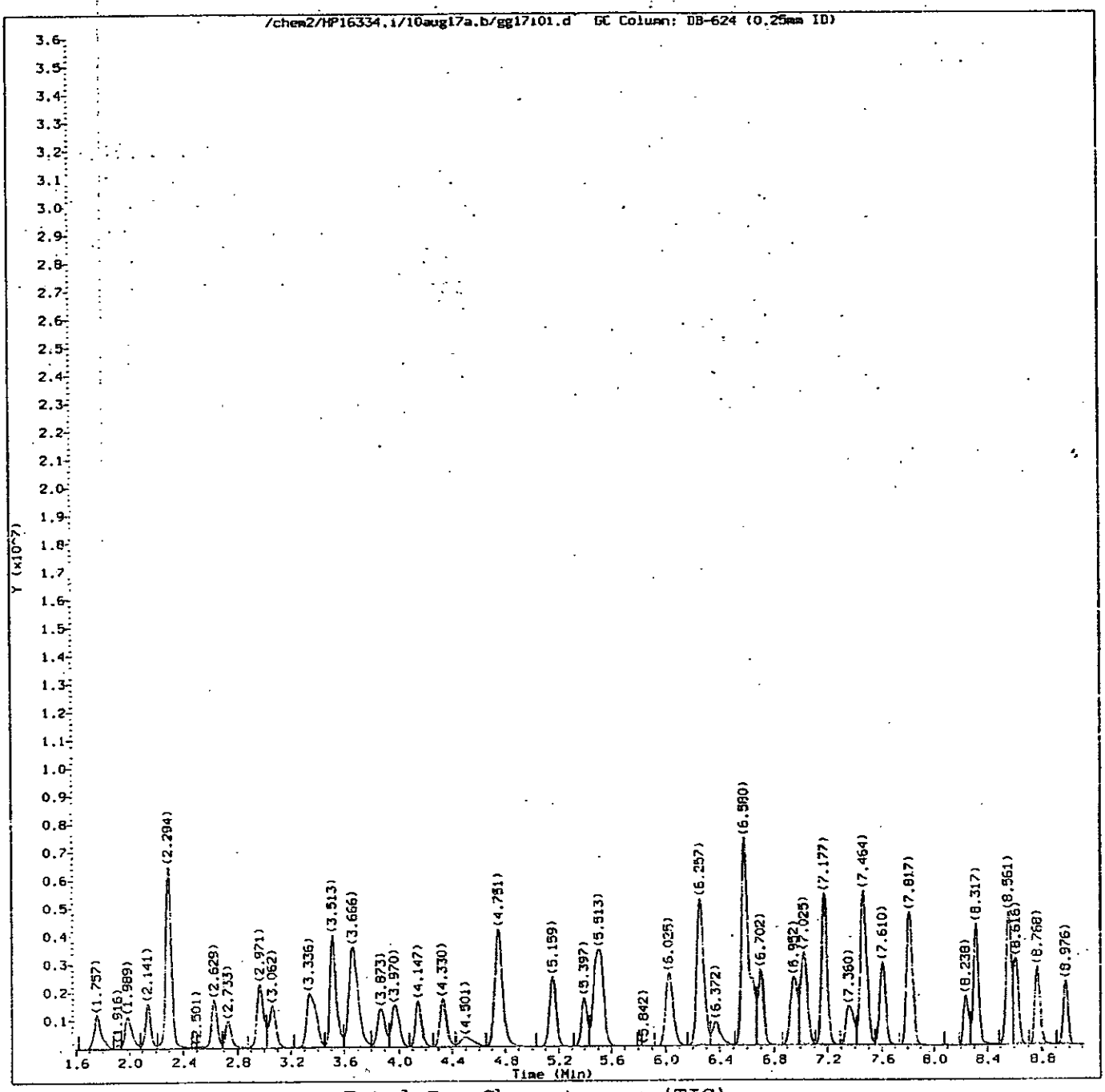
RAD36 0868


146 Benzyl Chloride
Curve Type: Quadratic By-Response
Amt = 0.0271612 + 5.547879*Rsp + -1.192924*Rsp^2
R^2: 0.9999813
Amount/ISTD Amount
Area/ISTD Area (x10^-1)
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
1.1
1.2
1.3
1.4
1.5
1.6
1.7
1.8
1.9
2.0
2.1
2.2
2.3
2.4
2.5
2.6
2.7
2.8
2.9
0.00
0.30
0.60
0.90
1.20
1.50
1.80
2.10
2.40
2.70
3.00
3.30
3.60
3.90
4.20
4.50
4.80
5.10
5.40

RA006 0061


150 1,2-Dibromo-3-Chloropropane
Curve Type: Quadratic By-Response
Amt = 0.0048553 + 0.3520561*Rsp + -0.02860958*Rsp^2
R^2: 0.9999185
Amount/ISTD Amount (x10^-1)
Area/ISTD Area

0062



Total Ion Chromatogram (TIC)

Target Revision 3.5

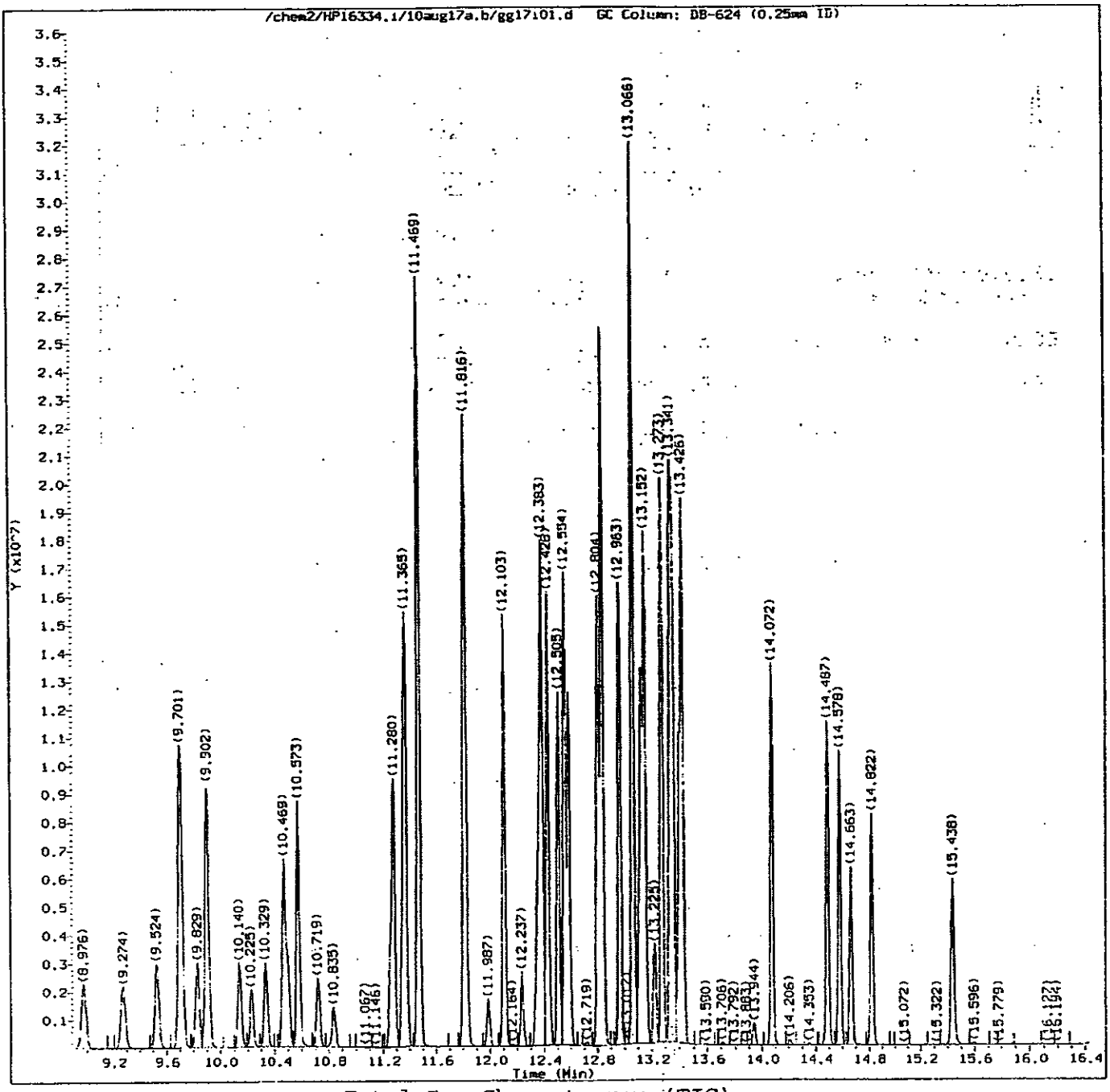
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Injection date and time: 17-AUG-2010 12:02 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 14:36
Date, time and analyst ID of latest file update: 17-Aug-2010 14:36 jml01693

Sample Name: VSTD025 Lab Sample ID: VSTD025

RAD36 8863

Digitally signed by Jason M. Long
on 08/17/2010 at 14:53.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/10aug17a.b/gg17i01.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 12:02 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 14:36
Date, time and analyst ID of latest file update: 17-Aug-2010 14:36 jml01693

Sample Name: VSTD025 Lab Sample ID: VSTD025

RAD36 0864

Digitally signed by Jason M. Long
on 08/17/2010 at 14:53.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/10aug17a.b/gg17i01.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 12:02 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 14:36
Date, time and analyst ID of latest file update: 17-Aug-2010 14:36 jml01693

Sample Name: VSTD025 Lab Sample ID: VSTD025

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
2) Dichlorodifluoromethane	(1)	1.989	85	2638019	24.171
5) Chloromethane	(1)	2.141	50	2553329	24.379
6) Vinyl Chloride	(1)	2.282	62	2499063	24.647
9) 1,3-Butadiene	(1)	2.300	39	3565853	21.697
10) Bromomethane	(1)	2.629	94	1858893	24.021
11) Chloroethane	(1)	2.733	64	1370635	23.026
13) Dichlorofluoromethane	(1)	2.965	67	3422195	24.182
15) Trichlorofluoromethane	(1)	3.062	101	3032079	24.563
17) Ethyl Ether	(1)	3.330	59	1106986	26.602
18) Freon 123a	(1)	3.373	67	1828770	24.763
23) Acrolein	(4)	3.513	56	6622556	1441.675
24) 1,1-Dichloroethene	(1)	3.659	96	1553576	25.731
25) Freon 113	(1)	3.672	101	1597687	25.510
26) Acetone	(4)	3.714	58	588742	271.433
27) Methyl Iodide	(1)	3.867	142	2777082	25.172
29) Carbon Disulfide	(1)	3.977	76	4341739	26.407
32) Allyl Chloride	(1)	4.141	41	1726121	27.214
33) Methyl Acetate	(1)	4.172	43	404169M	24.992
34) Methylene Chloride	(1)	4.330	84	1584768	22.216
36)*t-Butyl Alcohol-d10	(4)	4.373	65	109744	50.000
38) t-Butyl Alcohol	(4)	4.501	59	1385441	500.483
39) Acrylonitrile	(4)	4.720	53	1234666	124.960
41) trans-1,2-Dichloroethene	(1)	4.751	96	1748403	25.715
40) Methyl Tertiary Butyl Ether	(1)	4.751	73	3444345	25.634
37) 1,2-Dichloroethene (Total)	(1)		96	3628364	51.625
44) n-Hexane	(1)	5.159	57	2334942	25.658
45) 1,1-Dichloroethane	(1)	5.397	63	2832538	25.365
47) di-Isopropyl Ether	(1)	5.488	45	5005541	26.223
48) 2-Chloro-1,3-Butadiene	(1)	5.531	53	2137356	26.911
49) Ethyl t-Butyl Ether	(1)	6.025	59	4455440	25.874
50) cis-1,2-Dichloroethene	(1)	6.250	96	1879961	25.910
51) 2,2-Dichloropropane	(1)	6.257	77	2379815	26.228
52) 2-Butanone	(4)	6.269	43	3160207	282.718
53) Propionitrile	(4)	6.372	54	1760036MA	499.904
55) Methacrylonitrile	(4)	6.580	67	3540610	283.896
56) Bromochloromethane	(1)	6.586	128	767388	26.520
57) Tetrahydrofuran	(4)	6.647	71	980268	269.121
58) Chloroform	(1)	6.702	83	2960489	25.951
62)$Dibromofluoromethane(mz111)	(1)	6.927	111	575721	9.976

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

RAD36 0065

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/10aug17a.b/gg17i01.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 12:02 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 14:36
Date, time and analyst ID of latest file update: 17-Aug-2010 14:36 jml01693

Sample Name: VSTD025 Lab Sample ID: VSTD025

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
61)$Dibromofluoromethane	(1)	6.927	113	563701	9.949
63) 1,1,1-Trichloroethane	(1)	6.958	97	2564662	25.873
64) Cyclohexane	(1)	7.025	56	2793971	25.525
65) 1,1-Dichloropropene	(1)	7.177	75	2318295	26.010
66) Carbon Tetrachloride	(1)	7.177	117	2339136	27.001
67) Isobutyl Alcohol	(4)	7.354	41	1108641	1311.421
70)$1,2-Dichloroethane-d4	(1)	7.390	102	103233	9.769
68)$1,2-Dichloroethane-d4(mz104)	(1)	7.390	104	67399	9.916
69)$1,2-Dichloroethane-d4(mz65)	(1)	7.390	65	459222	9.758
72) Benzene	(1)	7.458	78	6852245	26.114
74) 1,2-Dichloroethane	(1)	7.488	62	1605081	25.738
73) 1,2-Dichloroethane(mz98)	(1)	7.494	98	157967	26.447
75) t-Amyl Methyl Ether	(1)	7.610	73	3892876	26.090
76) n-Heptane	(1)	7.811	43	2423858	25.812
77)*Fluorobenzene	(1)	7.835	96	2462995	10.000
81) n-Butanol	(4)	8.238	56	1956727	2499.963
83) Trichloroethene	(1)	8.317	95	1876939	26.012
84) Methylcyclohexane	(1)	8.561	83	2968886	26.186
85) 1,2-Dichloropropane	(1)	8.616	63	1705893	26.279
87) Methyl Methacrylate	(4)	8.768	69	731967A	29.344
88) Dibromomethane	(1)	8.768	93	767058	26.572
89) 1,4-Dioxane	(4)	8.793	88	247881	1270.099
90) Bromodichloromethane	(1)	8.976	83	2042691	27.632
91) 2-Nitropropane	(4)	9.274	41	1840533	280.972
94) cis-1,3-Dichloropropene	(1)	9.524	75	2197219	28.463
96) 4-Methyl-2-Pentanone	(1)	9.701	43	8610458	280.338
97)$Toluene-d8	(2)	9.829	98	2420388	9.870
98)$Toluene-d8(mz100)	(2)	9.829	100	1564874	9.863
101) Toluene	(2)	9.902	92	4656572	26.315
102) trans-1,3-Dichloropropene	(2)	10.140	75	1847161A	29.629
103) Ethyl Methacrylate	(2)	10.225	69	1228490	28.560
104) 1,1,2-Trichloroethane	(2)	10.329	97	1066223A	25.668
105) Tetrachloroethene	(2)	10.469	166	2113910	26.359
106) 1,3-Dichloropropane	(2)	10.500	76	1828463	26.027
107) 2-Hexanone	(2)	10.573	43	5725014	278.630
108) Dibromochloromethane	(2)	10.725	129	1385934	28.979
109) 1,2-Dibromoethane	(2)	10.835	107	988942A	26.377
110)*Chlorobenzene-d5	(2)	11.256	117	1816017	10.000
112) Chlorobenzene	(2)	11.280	112	5257220	26.451

A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

RAD36 B066

Digitally signed by Jason M. Long
on 08/17/2010 at 14:53.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/10aug17a.b/gg17i01.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 12:02 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 14:36
Date, time and analyst ID of latest file update: 17-Aug-2010 14:36 jml01693

Sample Name: VSTD025 Lab Sample ID: VSTD025

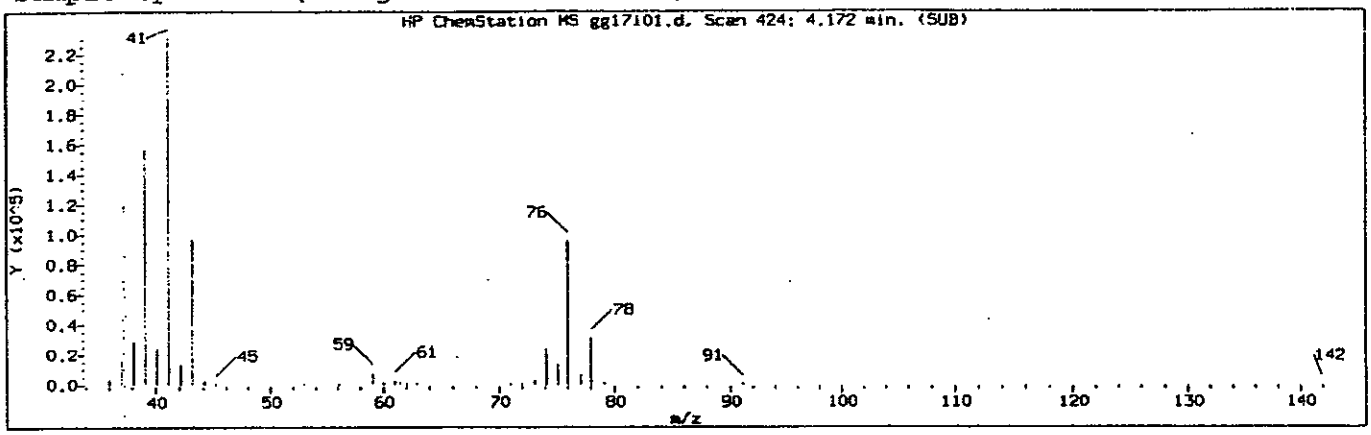
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
113) 1,1,1,2-Tetrachloroethane	(2)	11.353	131	1825913	28.529
114) Ethylbenzene	(2)	11.371	91	9403795A	27.820
117) m+p-Xylene	(2)	11.469	106	7769298	57.441
115) Xylene (Total)	(2)		106	11562370	85.894
118) o-Xylene	(2)	11.810	106	3793072	28.453
119) Styrene	(2)	11.816	104	6085543	30.385
120) Bromoform	(2)	11.987	173	771971M	24.996
121) Isopropylbenzene	(2)	12.103	105	9526111	27.690
126)$4-Bromofluorobenzene	(2)	12.237	95	818203M	9.871
127)$4-Bromofluorobenzene(mz174)	(2)	12.237	174	724357	9.865
128) 1,1,2,2-Tetrachloroethane	(3)	12.341	83	1255898M	26.484
129) Bromobenzene	(3)	12.365	156	2211725	26.927
130) trans-1,4-Dichloro-2-Butene	(4)	12.383	53	2369567A	249.913
131) 1,2,3-Trichloropropane	(3)	12.383	110	369557M	27.277
132) n-Propylbenzene	(3)	12.426	91	11464711	27.061
133) 2-Chlorotoluene	(3)	12.505	126	2268101	26.642
134) 1,3,5-Trimethylbenzene	(3)	12.554	105	8287926	28.110
135) 4-Chlorotoluene	(3)	12.585	126	2316033	26.664
137) tert-Butylbenzene	(3)	12.804	134	1844056M	27.859
138) Pentachloroethane	(3)	12.835	167	1594039	25.001
139) 1,2,4-Trimethylbenzene	(3)	12.841	105	9317598	29.404
140) sec-Butylbenzene	(3)	12.963	105	10800854	27.504
142) 1,3-Dichlorobenzene	(3)	13.066	146	5170745	29.142
141) p-Isopropyltoluene	(3)	13.066	119	10367384	29.534
143)*1,4-Dichlorobenzene-d4	(3)	13.109	152	1056610	10.000
144) 1,4-Dichlorobenzene	(3)	13.127	146	4803948	26.336
145) 1,2,3-Trimethylbenzene	(3)	13.152	120	3927915	27.851
146) Benzyl Chloride	(3)	13.225	126	527612	25.000
147) n-Butylbenzene	(3)	13.359	92	4993470	28.752
148) 1,2-Dichlorobenzene	(3)	13.401	146	4190353	26.823
150) 1,2-Dibromo-3-Chloropropane	(4)	13.944	155	177678	24.992
153) 1,2,4-Trichlorobenzene	(3)	14.493	180	3371841	27.342
154) Hexachlorobutadiene	(3)	14.584	225	1836511	27.628
155) Naphthalene	(3)	14.663	128	4545106	27.084
156) 1,2,3-Trichlorobenzene	(3)	14.822	180	2549275	26.405

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

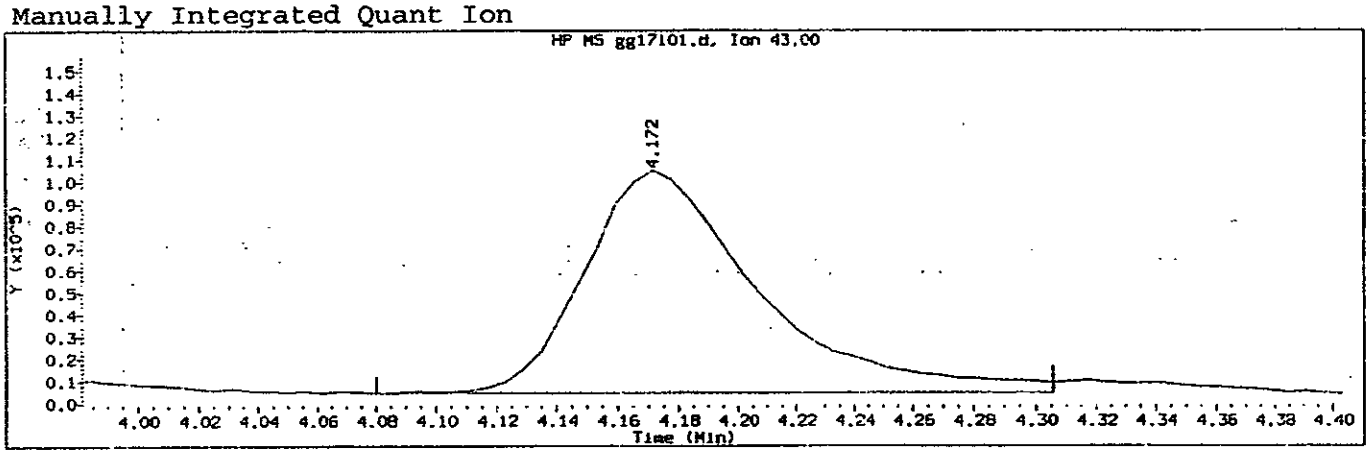
RAD36 0067

Digitally signed by Jason M. Long
on 08/17/2010 at 14:53.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i01.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 12:02 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 14:36
Date, time and analyst ID of latest file update: 17-Aug-2010 14:36 jml01693

Sample Name: VSTD025 Lab Sample ID: VSTD025

Compound Number	: 33		
Compound Name	: Methyl Acetate		
Scan Number	: 424		
Retention Time (minutes)	: 4.172		
Quant Ion	: 43.00		
Area (flag)	: 404169M		
On-Column Amount (ng)	: 24.9916		
Integration start scan	: 408	Integration stop scan:	445
Y at integration start	: 4671	Y at integration end:	4671

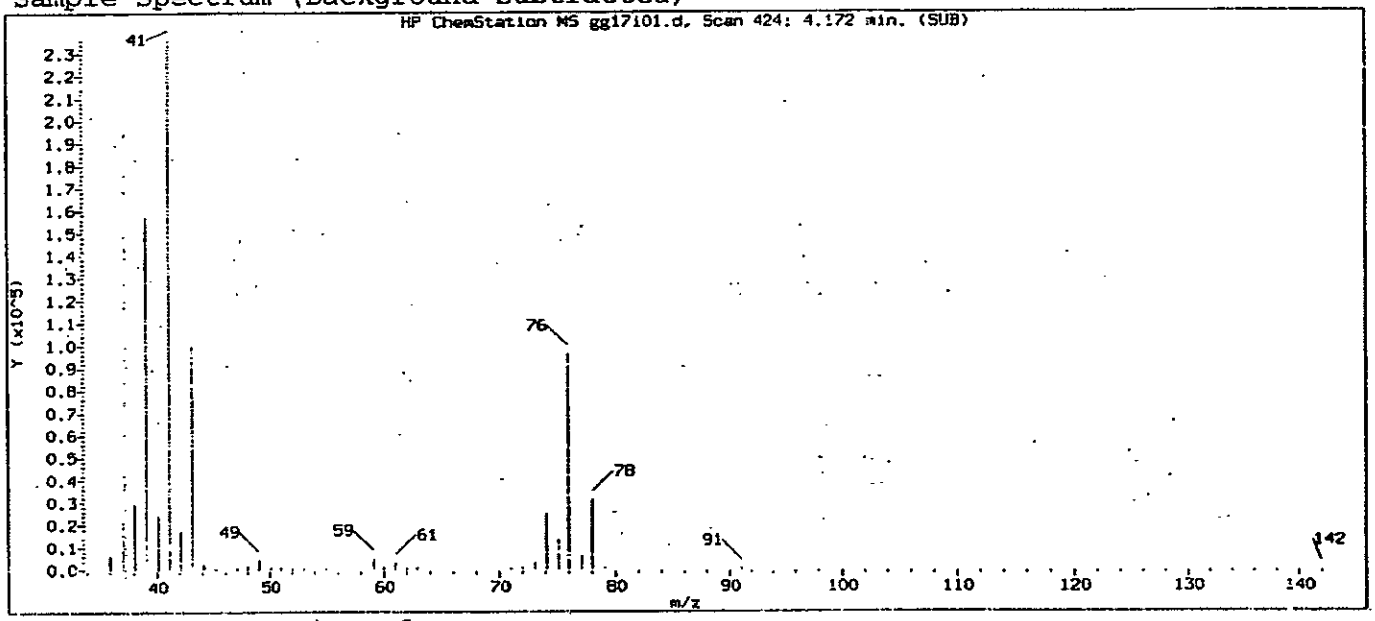
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long on 08/17/2010 at 14:53. Target 3.5 esignature user ID: jml01693.

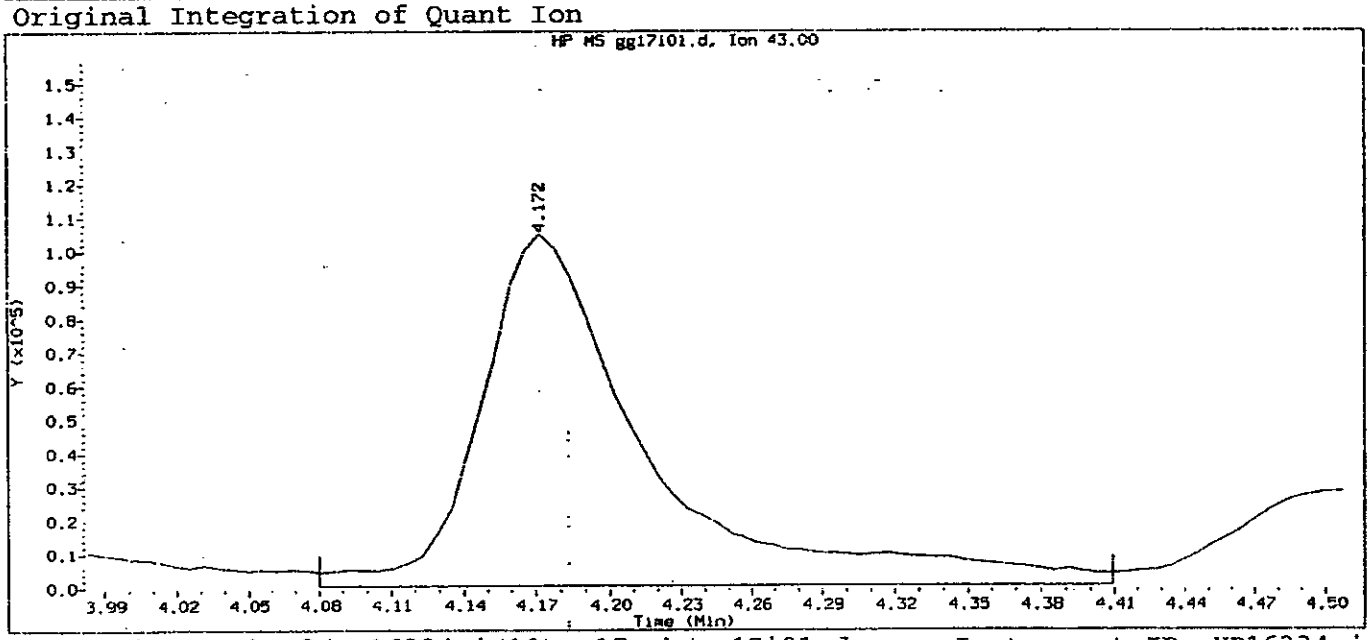
GC/MS audit/management approval: _____ 8/18/10

RA936 0068

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i01.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 12:02 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 12:25
Date, time and analyst ID of latest file update: 17-Aug-2010 12:25 jml01693

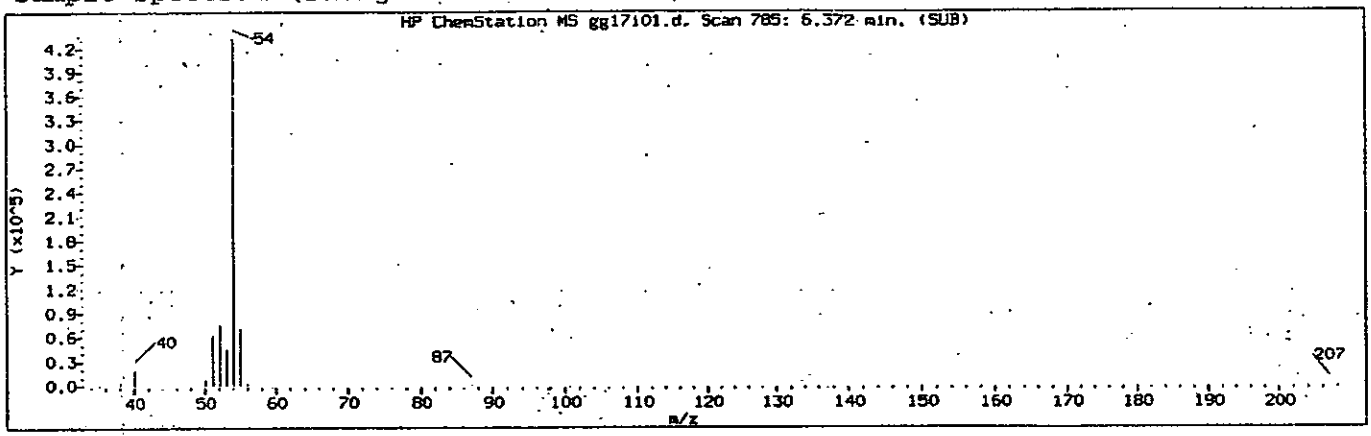
Sample Name: VSTD025 Lab Sample ID: VSTD025

Compound Number	: 33		
Compound Name	: Methyl Acetate		
Scan Number	: 424		
Retention Time (minutes)	: 4.172		
Quant Ion	: 43.00		
Area	: 498134		
On-column Amount (ng)	: 30.8814		
Integration start scan	: 408	Integration stop scan:	462
Y at integration start	: 730	Y at integration end:	730

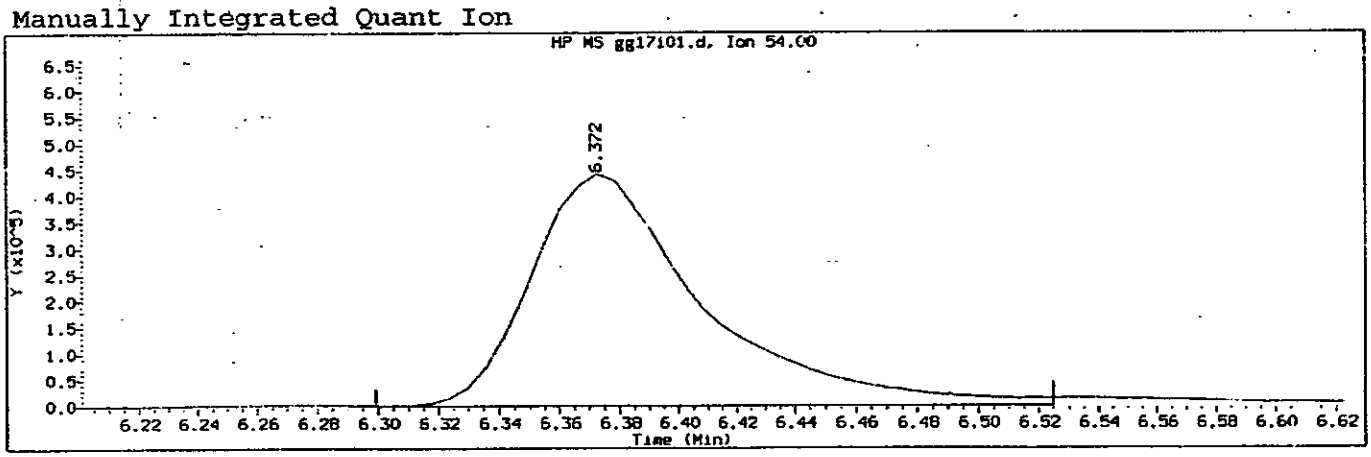
RAD36 0869

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Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i01.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 12:02 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 14:36
Date, time and analyst ID of latest file update: 17-Aug-2010 14:36 jml01693

Sample Name: VSTD025 Lab Sample ID: VSTD025

Compound Number	: 53		
Compound Name	: Propionitrile		
Scan Number	: 785		
Retention Time (minutes)	: 6.372		
Quant Ion	: 54.00		
Area (flag)	: 1760036MA		
On-Column Amount (ng)	: 499.9042		
Integration start scan	: 772	Integration stop scan:	809
Y at integration start	: 0	Y at integration end:	0

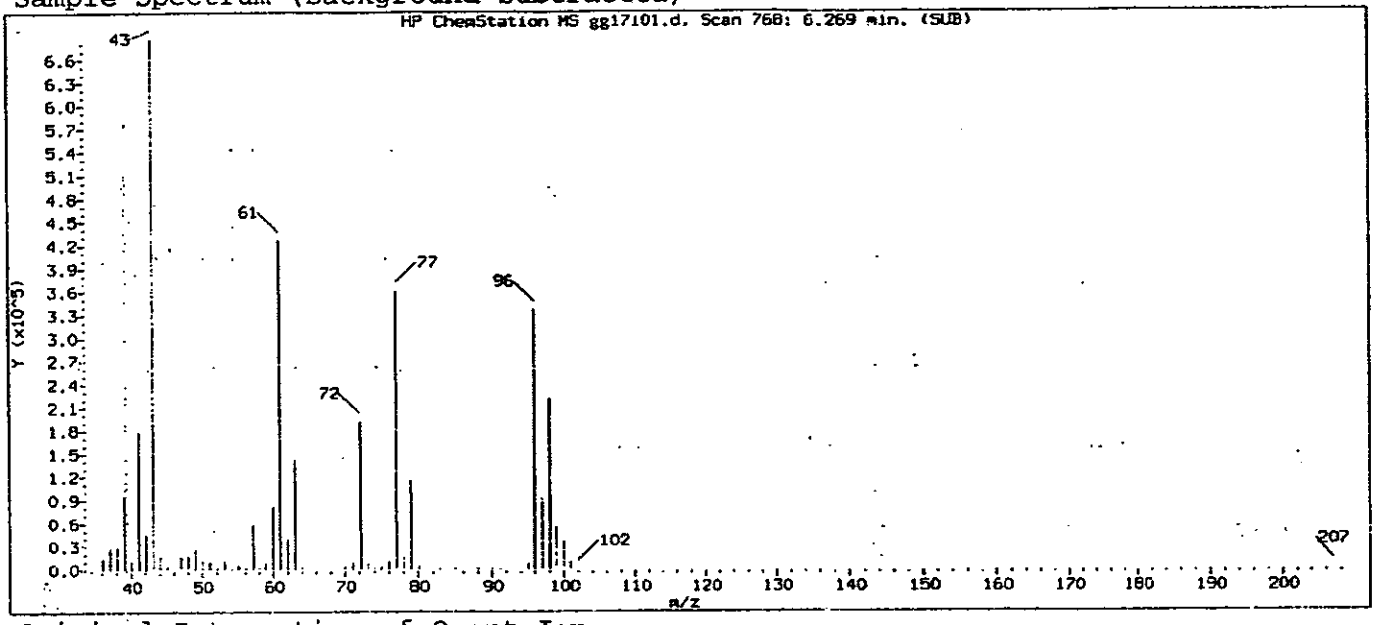
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long
on 08/17/2010 at 14:53.
Target 3.5 esignature user ID: jml01693

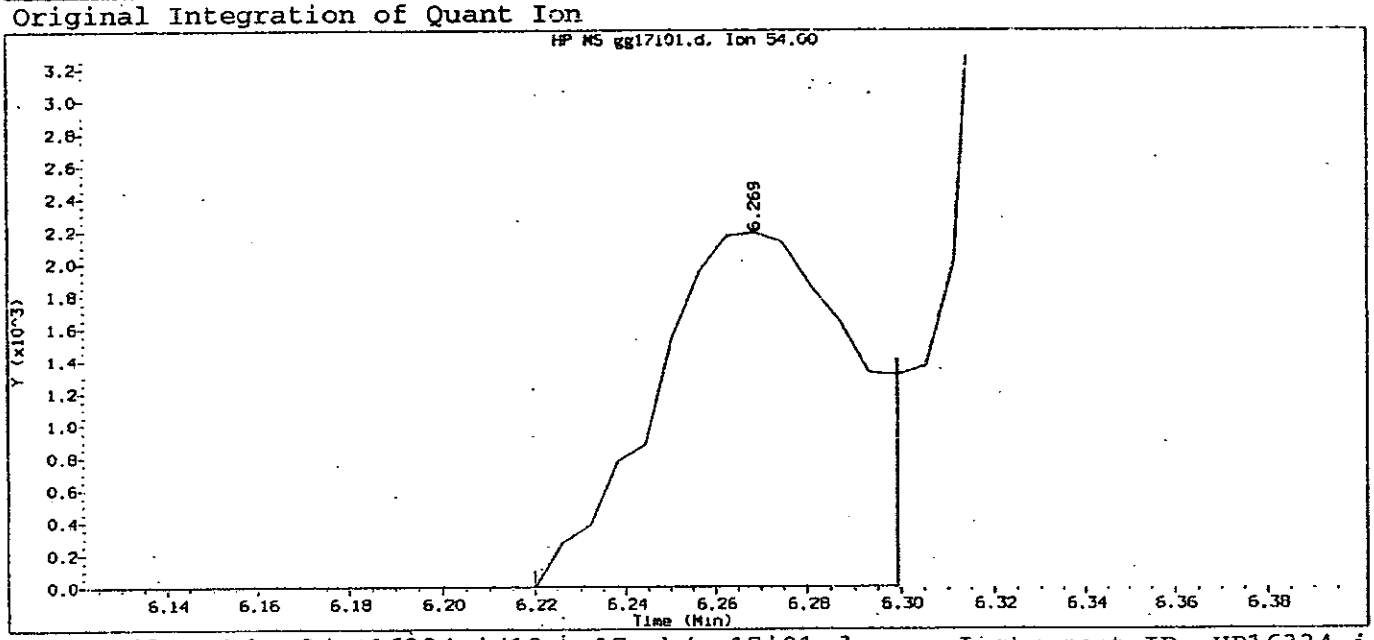
GC/MS audit/management approval: _____ 8/18/10

RAD36 0070

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i01.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 12:02 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 12:25
Date, time and analyst ID of latest file update: 17-Aug-2010 12:25 jml01693

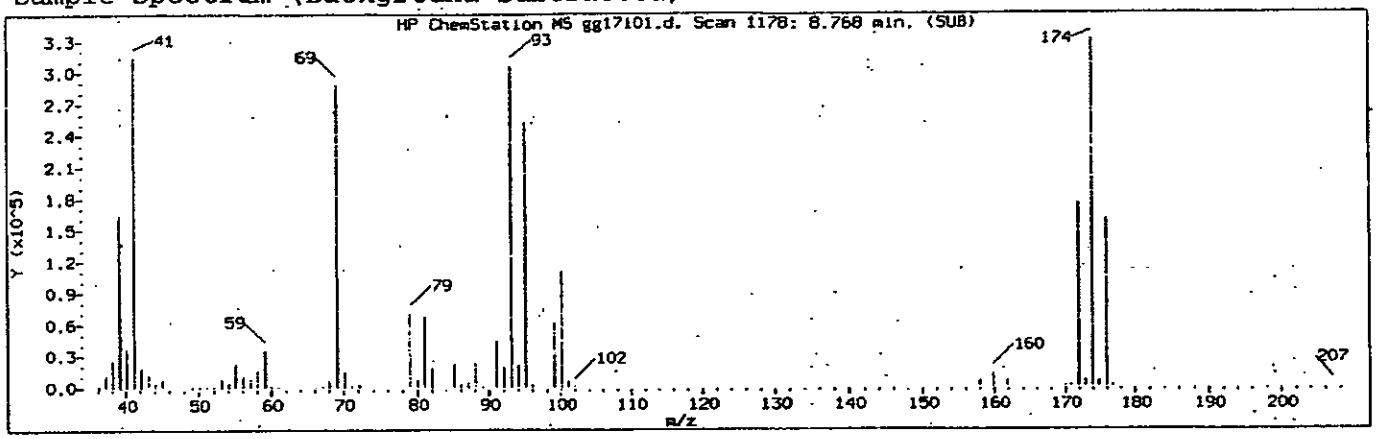
Sample Name: VSTD025 Lab Sample ID: VSTD025

Compound Number	: 53		
Compound Name	: Propionitrile		
Scan Number	: 768		
Retention Time (minutes)	: 6.269		
Quant Ion	: 54.00		
Area	: 6495		
On-column Amount (ng)	: 2.2602		
Integration start scan	: 759	Integration stop scan:	772
Y at integration start	: 0	Y at integration end:	0

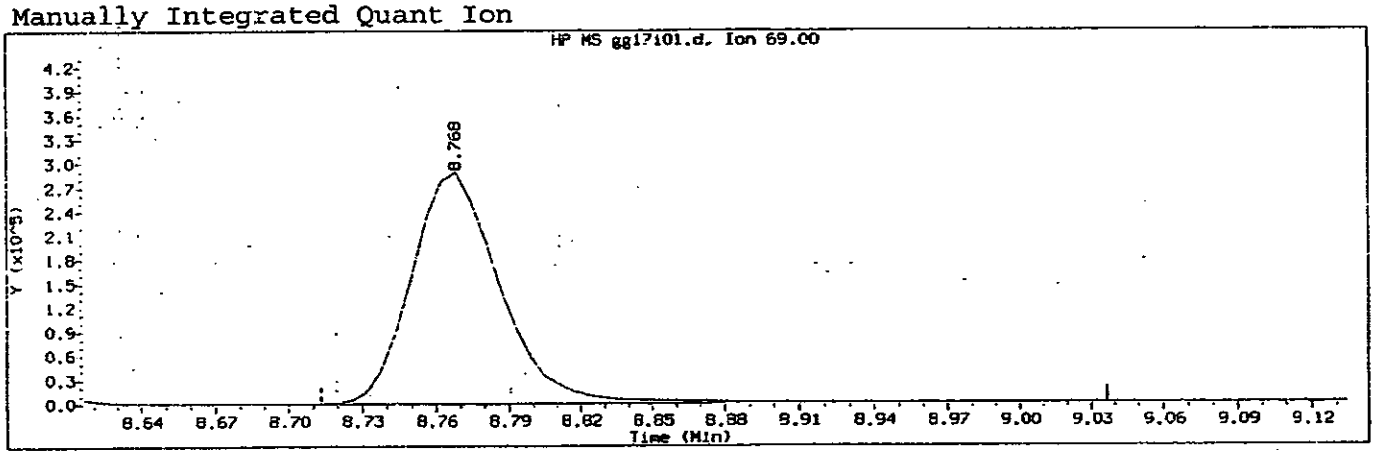
RAD36 8871

Digitally signed by Jason M. Long on 08/17/2010 at 14:53.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i01.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 12:02 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 14:36
Date, time and analyst ID of latest file update: 17-Aug-2010 14:36 jml01693

Sample Name: VSTD025 Lab Sample ID: VSTD025

Compound Number	: 87		
Compound Name	: Methyl Methacrylate		
Scan Number	: 1178		
Retention Time (minutes)	: 8.768		
Quant Ion	: 69.00		
Area (flag)	: 731967A		
On-Column Amount (ng)	: 29.3441		
Integration start scan	: 1168	Integration stop scan:	1221
Y at integration start	: 145	Y at integration end:	377

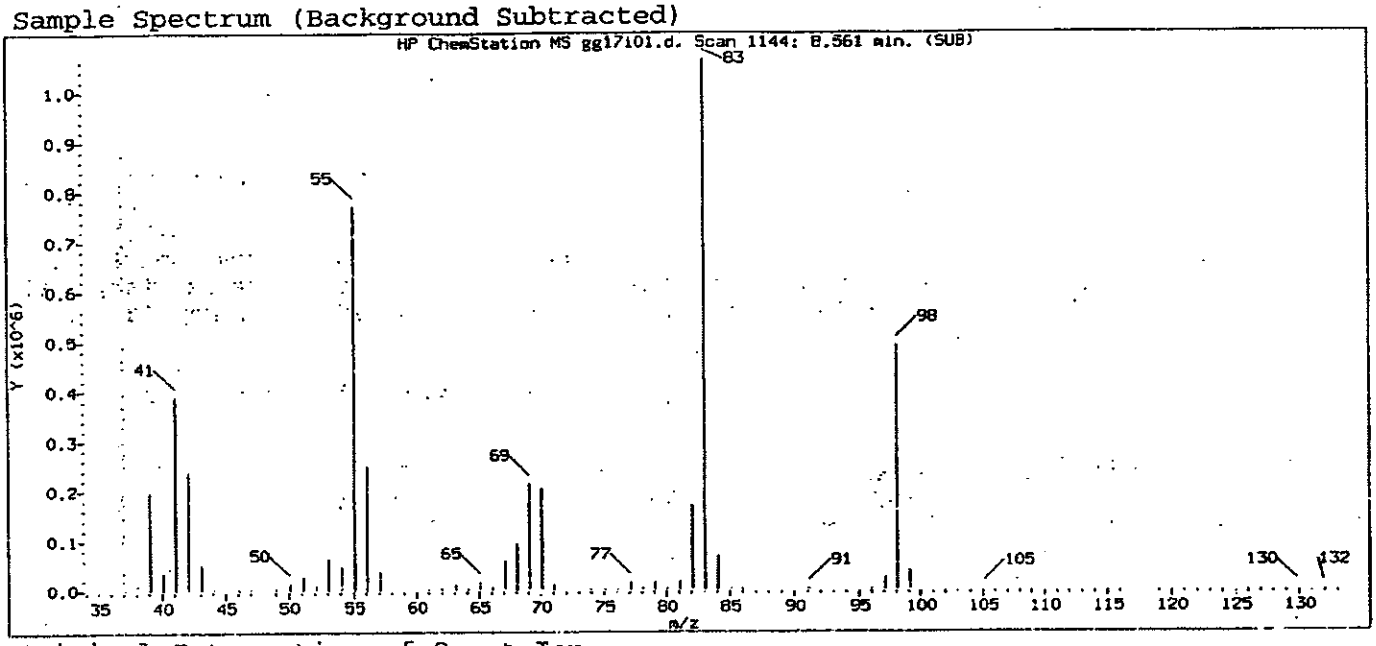
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long on 08/17/2010 at 14:53. Target 3.5 esignature user ID: jml01693

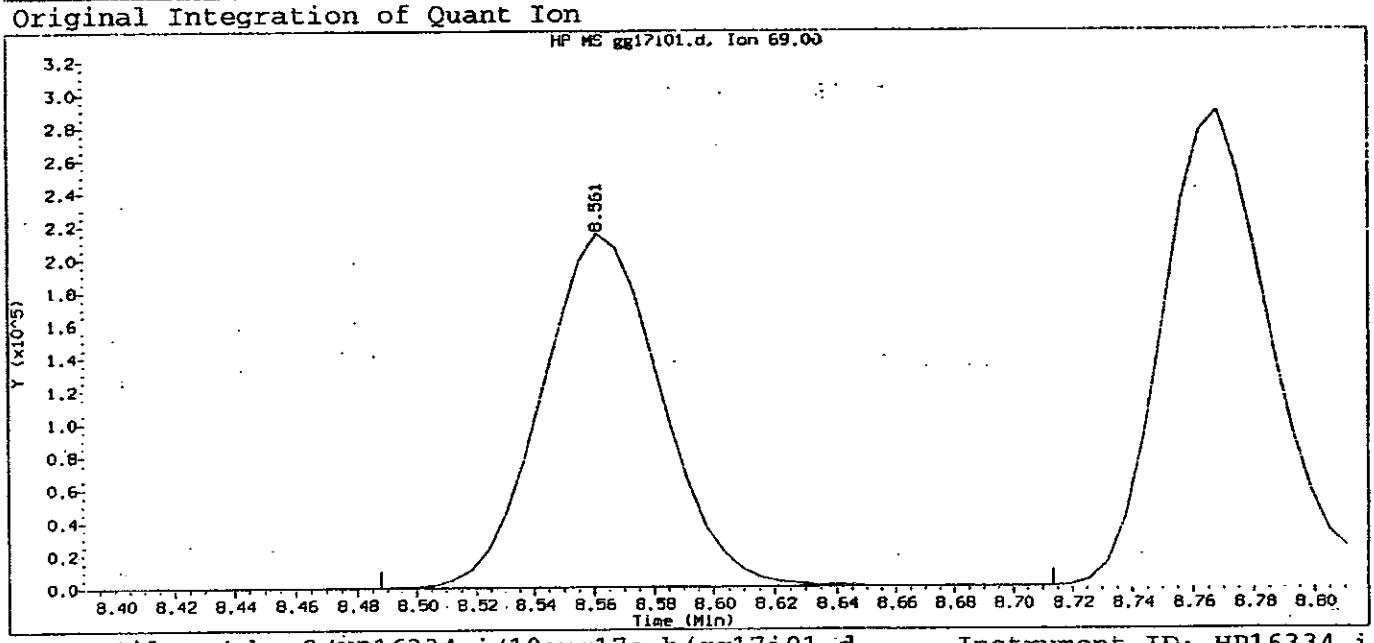
GC/MS audit/management approval: _____

RAD36 0872

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i01.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 12:02 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 12:25
Date, time and analyst ID of latest file update: 17-Aug-2010 12:25 jml01693

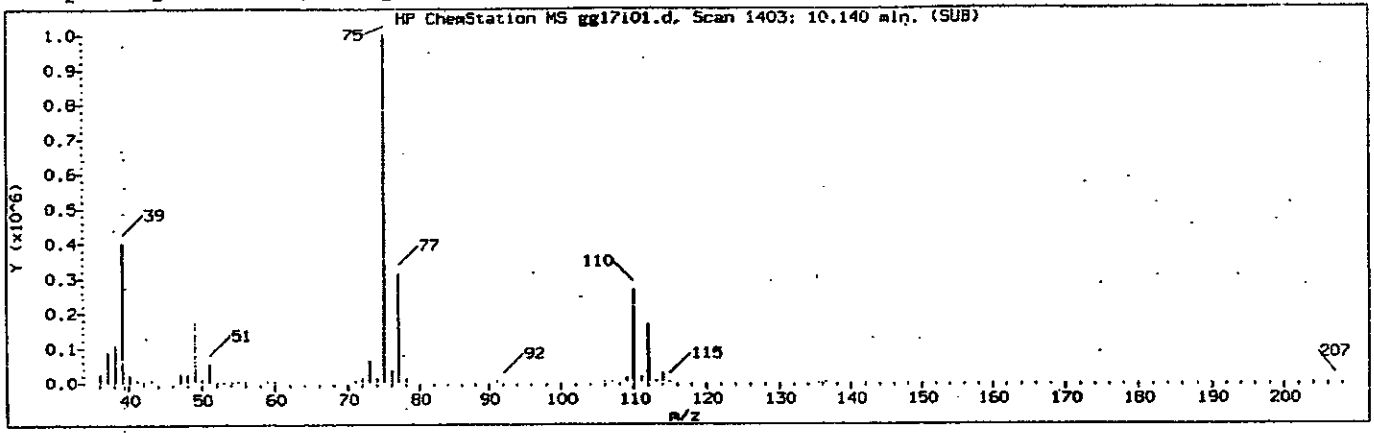
Sample Name: VSTD025 Lab Sample ID: VSTD025

Compound Number	: 87		
Compound Name	: Methyl Methacrylate		
Scan Number	: 1144		
Retention Time (minutes)	: 8.561		
Quant Ion	: 69.00		
Area	: 598172		
On-column Amount (ng)	: 19.7014		
Integration start scan	: 1131	Integration stop scan:	1168
Y at integration start	: 0	Y at integration end:	145

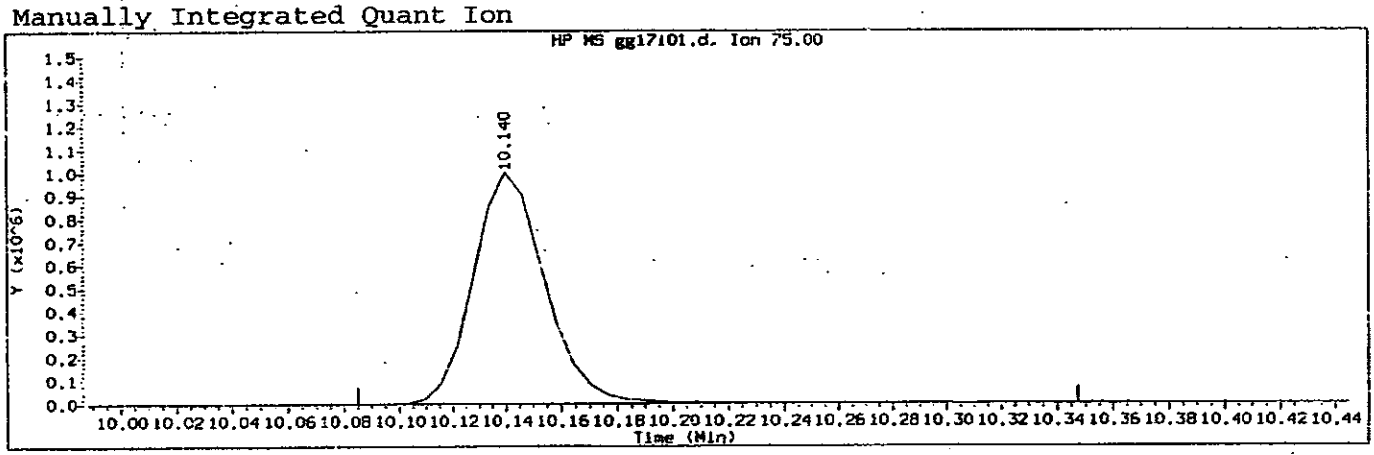
RAD36 0073

Digitally signed by Jason M. Long on 08/17/2010 at 14:53.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i01.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 12:02 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 14:36
Date, time and analyst ID of latest file update: 17-Aug-2010 14:36 jml01693

Sample Name: VSTD025 Lab Sample ID: VSTD025

Compound Number	: 102		
Compound Name	: trans-1,3-Dichloropropene		
Scan Number	: 1403		
Retention Time (minutes)	: 10.140		
Quant Ion	: 75.00		
Area (flag)	: 1847161A		
On-Column Amount (ng)	: 29.6285		
Integration start scan	: 1393	Integration stop scan:	1436
Y at integration start	: 52	Y at integration end:	173

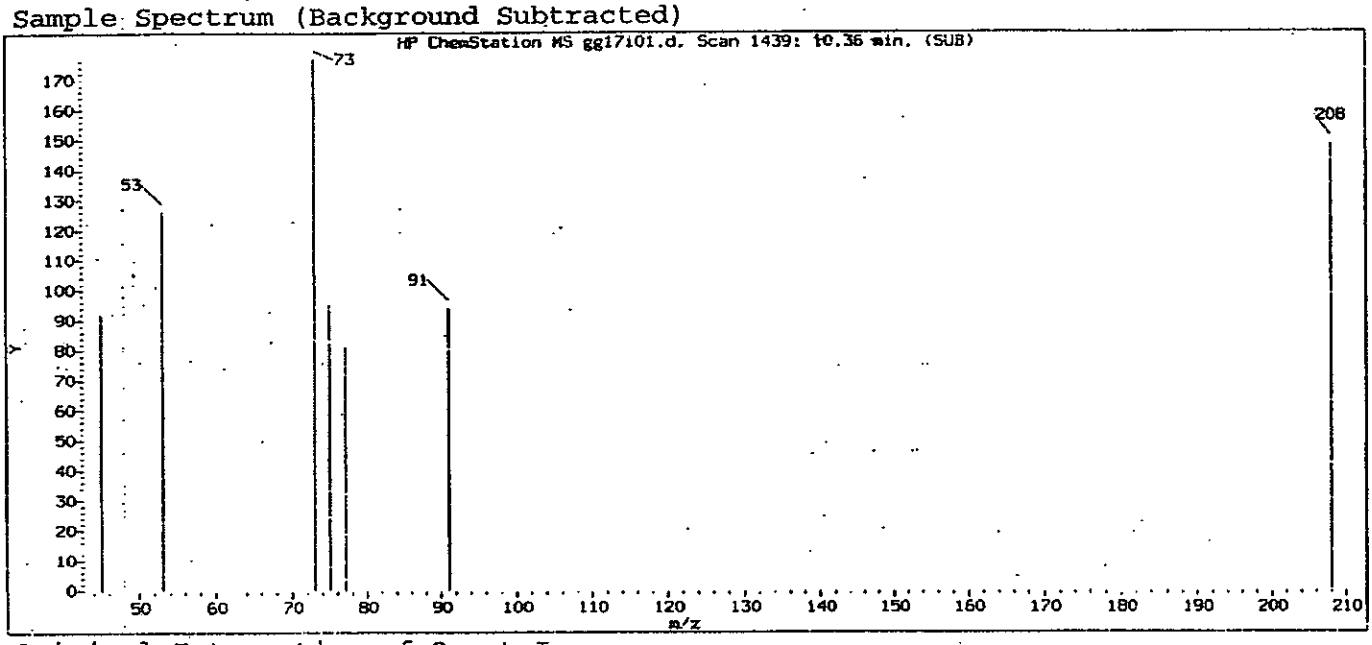
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long
on 08/17/2010 at 14:53.
Target 3.5 esignature user ID: jml01693

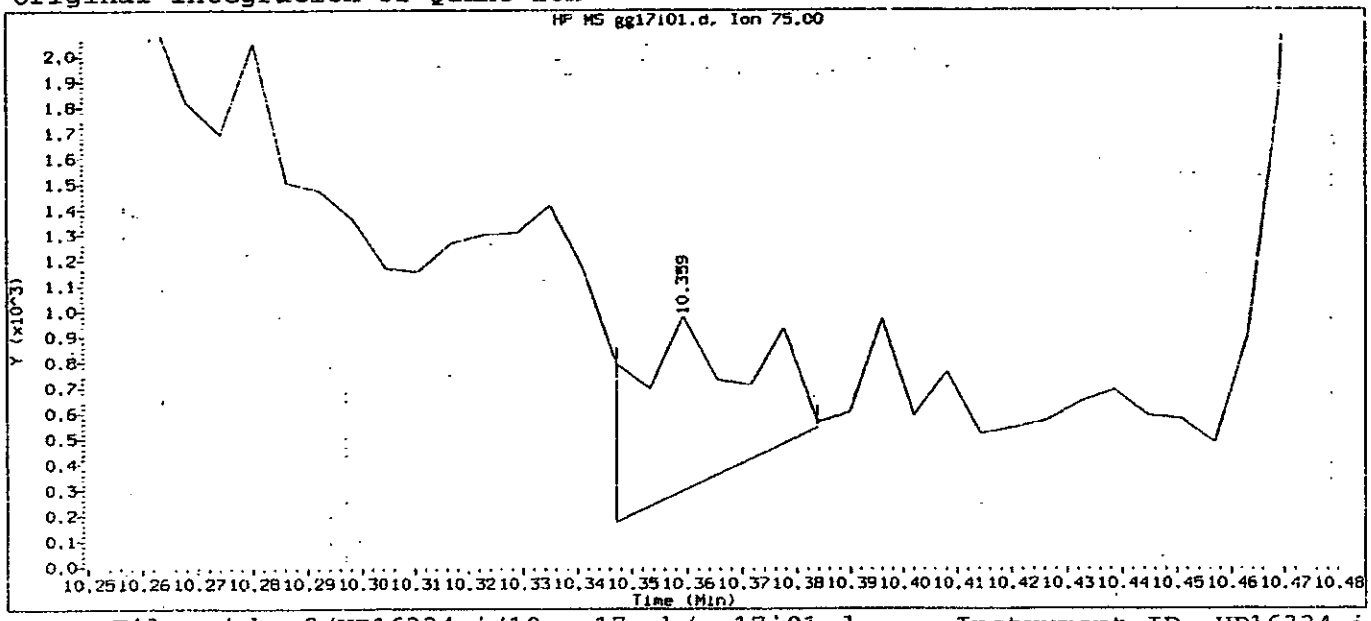
GC/MS audit/management approval: _____ 8/18

RAD36 0674

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i01.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 12:02 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 12:25
Date, time and analyst ID of latest file update: 17-Aug-2010 12:25 jml01693

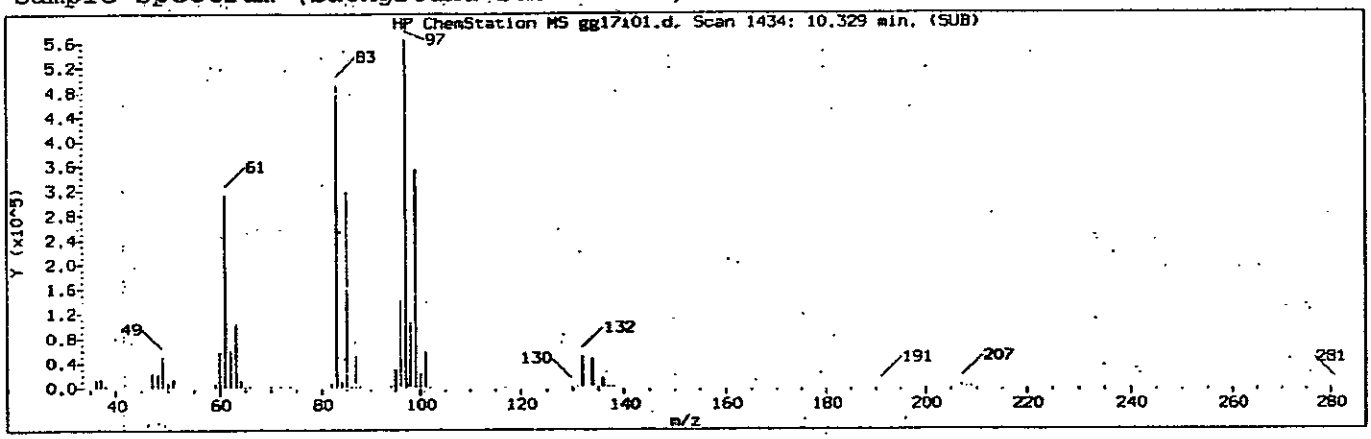
Sample Name: VSTD025 Lab Sample ID: VSTD025

Compound Number	: 102		
Compound Name	: trans-1,3-Dichloropropene		
Scan Number	: 1439		
Retention Time (minutes)	: 10.359		
Quant Ion	: 75.00		
Area	: 944		
On-column Amount (ng)	: 0.0188		
Integration start scan	: 1436	Integration stop scan:	1442
Y at integration start	: 173	Y at integration end:	542

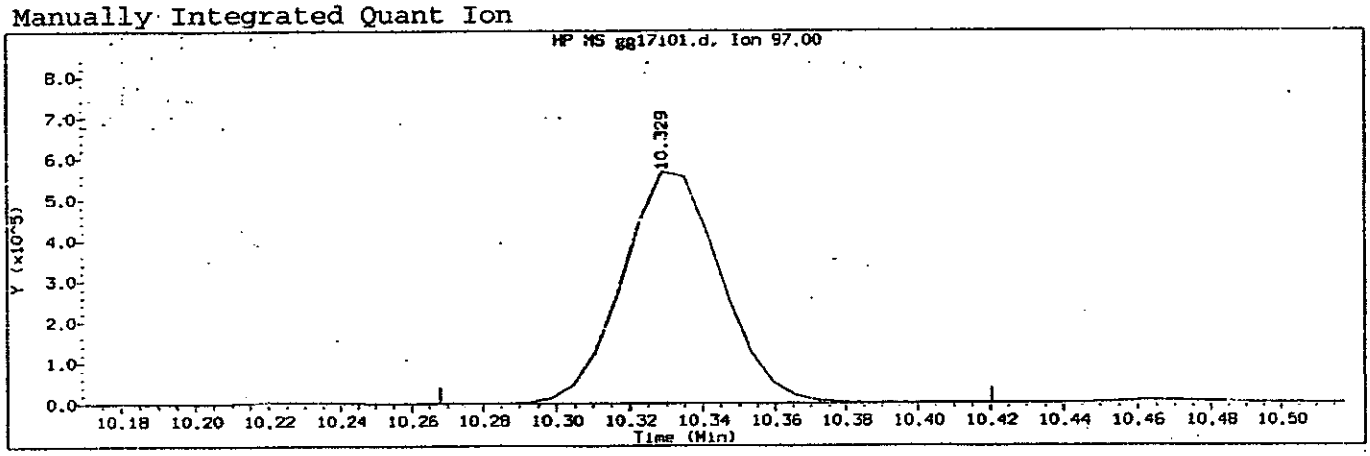
RAD36 0075

Digitally signed by Jason M. Long on 08/17/2010 at 14:53.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i01.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 12:02 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 14:36
Date, time and analyst ID of latest file update: 17-Aug-2010 14:36 jml01693

Sample Name: VSTD025 Lab Sample ID: VSTD025

Compound Number : 104
Compound Name : 1,1,2-Trichloroethane
Scan Number : 1434
Retention Time (minutes): 10.329
Quant Ion : 97.00
Area (flag) : 1066223A
On-Column Amount (ng) : 25.6675
Integration start scan : 1423 Integration stop scan: 1448
Y at integration start : 0 Y at integration end: 0

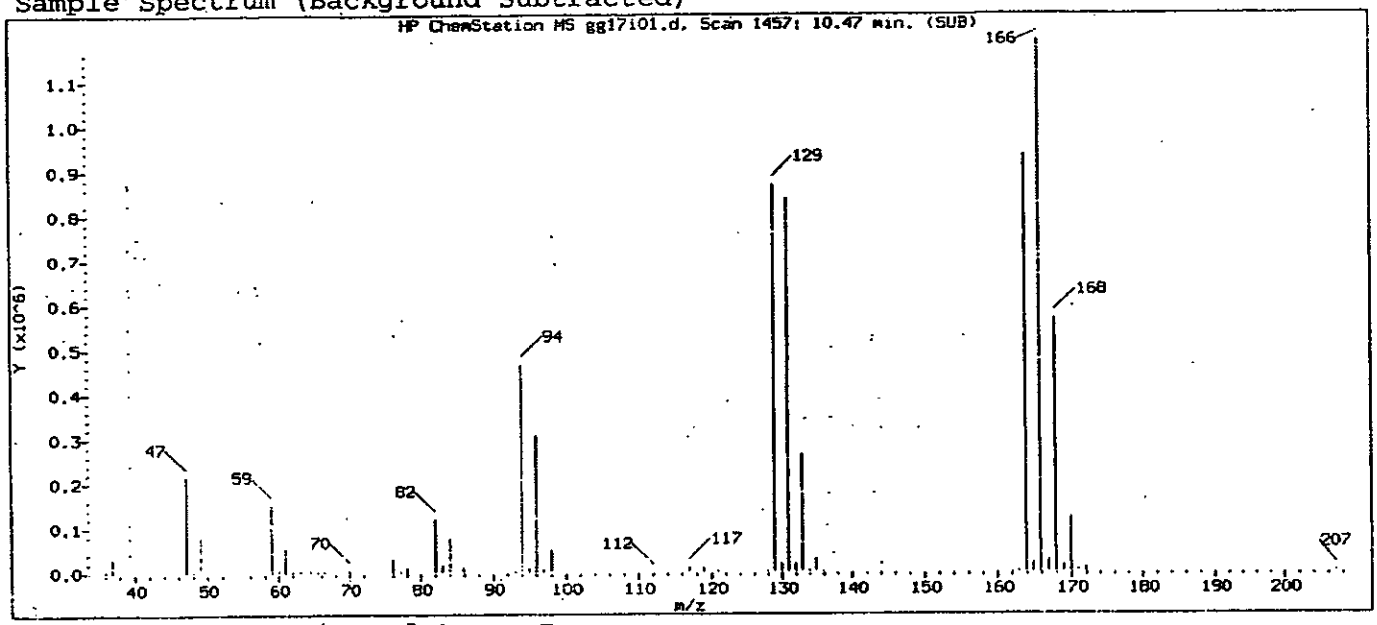
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long
on 08/17/2010 at 14:53.
Target 3.5 esignature user ID: jml01693

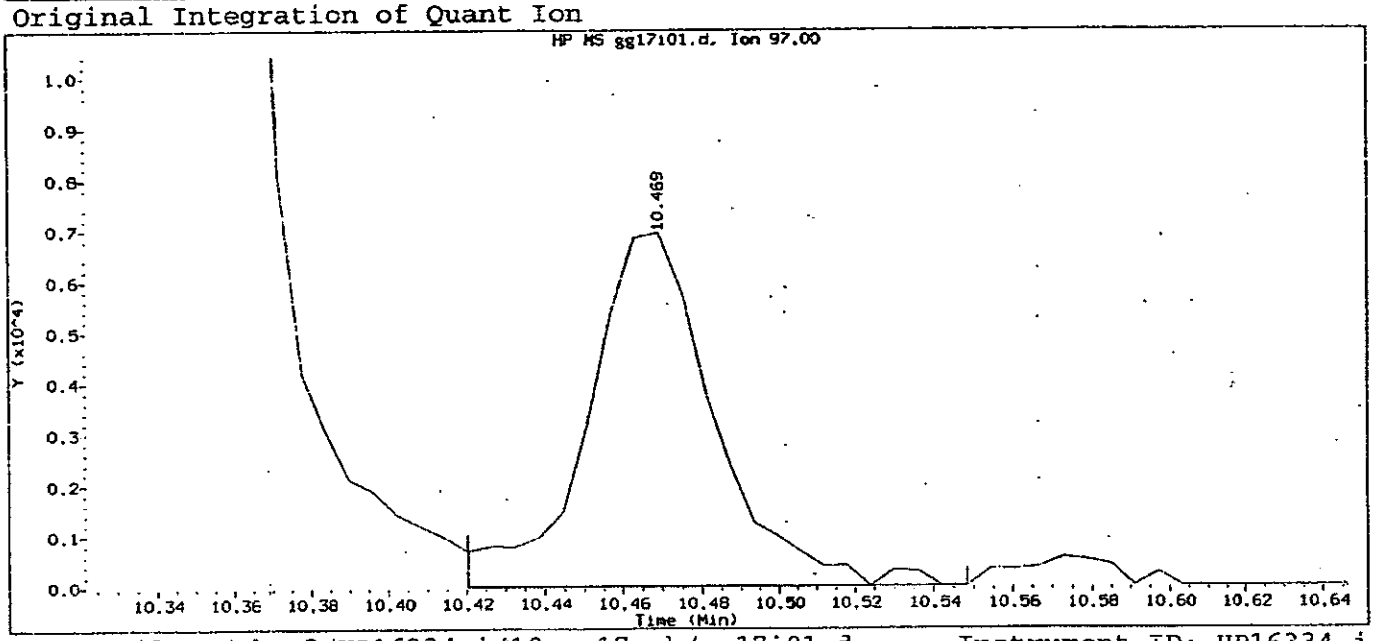
GC/MS audit/management approval: 8/18/10

RAD36 0076

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i01.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 12:02 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 12:25
Date, time and analyst ID of latest file update: 17-Aug-2010 12:25 jml01693

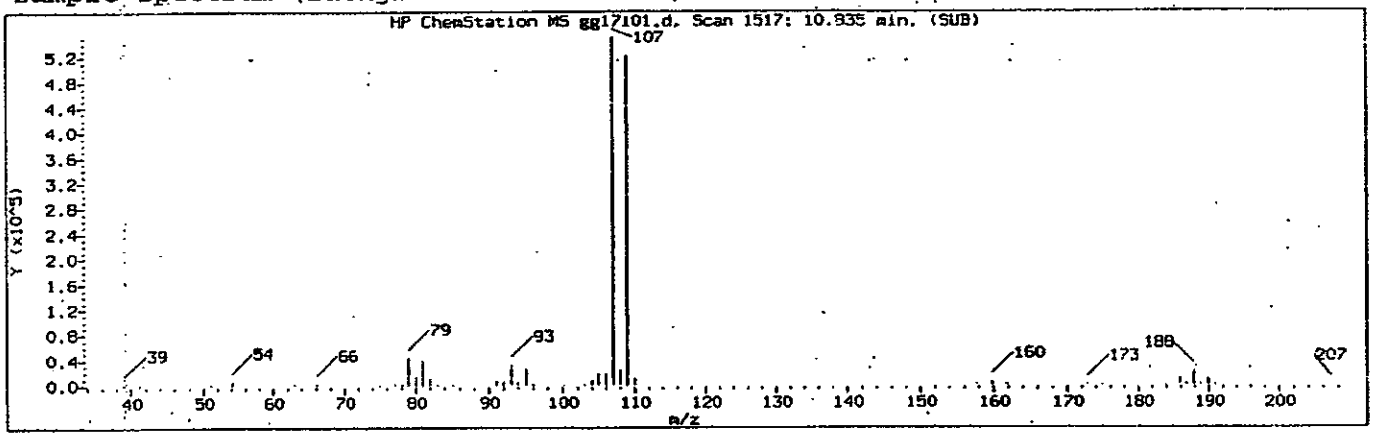
Sample Name: VSTD025 Lab Sample ID: VSTD025

Compound Number	: 104		
Compound Name	: 1,1,2-Trichloroethane		
Scan Number	: 1457		
Retention Time (minutes)	: 10.469		
Quant Ion	: 97.00		
Area	: 15655		
On-column Amount (ng)	: 0.4335		
Integration start scan	: 1448	Integration stop scan:	1469
Y at integration start	: 0	Y at integration end:	0

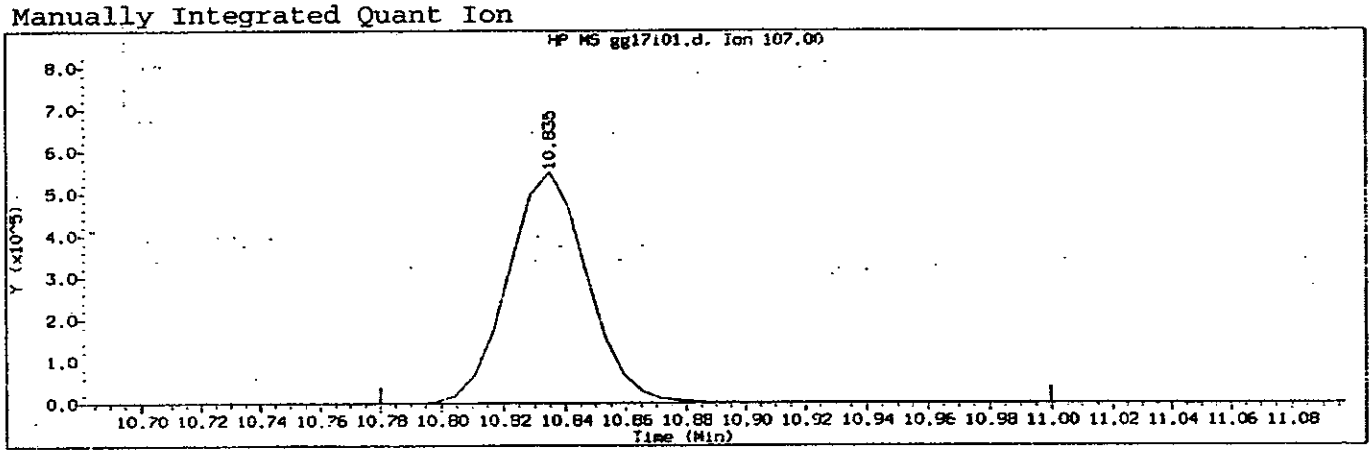
RAD36 0077

Digitally signed by Jason M. Long on 08/17/2010 at 14:53.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i01.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 12:02 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 14:36
Date, time and analyst ID of latest file update: 17-Aug-2010 14:36 jml01693

Sample Name: VSTD025 Lab Sample ID: VSTD025

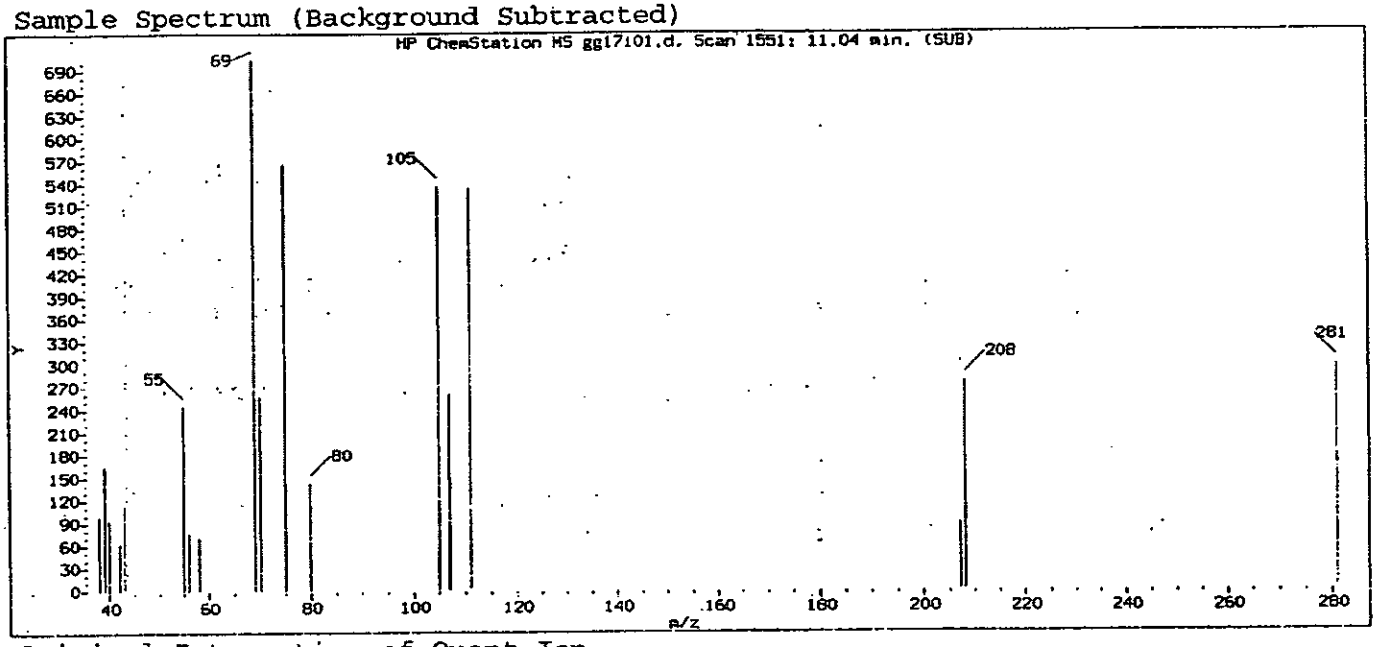
Compound Number	: 109		
Compound Name	: 1,2-Dibromoethane		
Scan Number	: 1517		
Retention Time (minutes)	: 10.835		
Quant Ion	: 107.00		
Area (flag)	: 988942A		
On-Column Amount (ng)	: 26.3768		
Integration start scan	: 1507	Integration stop scan:	1543
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

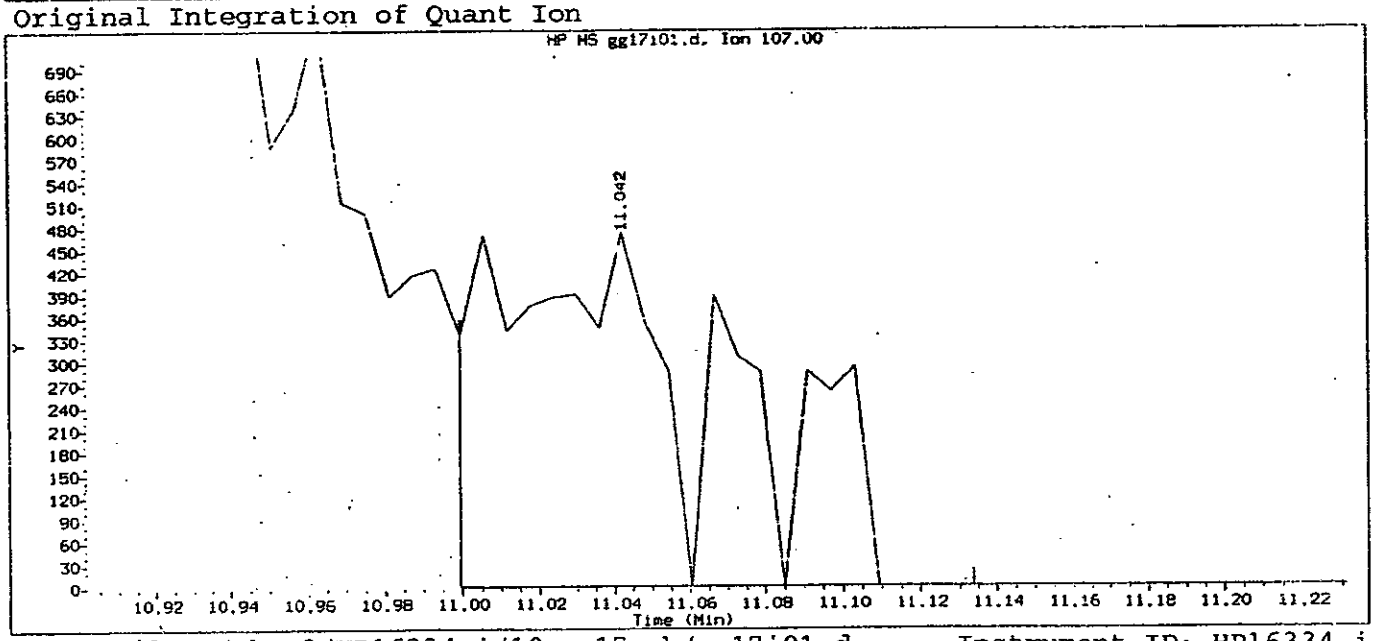
Analyst responsible for change: Digitally signed by Jason M. Long
on 08/17/2010 at 14:53.
Target 3.5 esignature user ID: jml01693

GC/MS audit/management approval: _____ RAD36 0878

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i01.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 12:02 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 12:25
Date, time and analyst ID of latest file update: 17-Aug-2010 12:25 jml01693

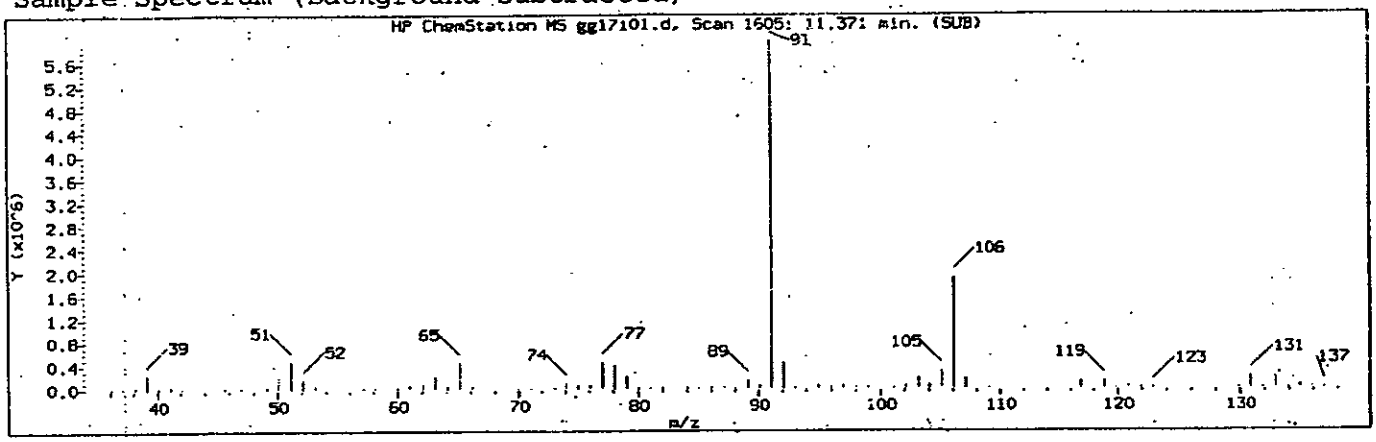
Sample Name: VSTD025 Lab Sample ID: VSTD025

Compound Number	: 109		
Compound Name	: 1,2-Dibromoethane		
Scan Number	: 1551		
Retention Time (minutes)	: 11.042		
Quant Ion	: 107.00		
Area	: 1978		
On-column Amount (ng)	: 0.0597		
Integration start scan	: 1543	Integration stop scan:	1565
Y at integration start	: 0	Y at integration end:	0

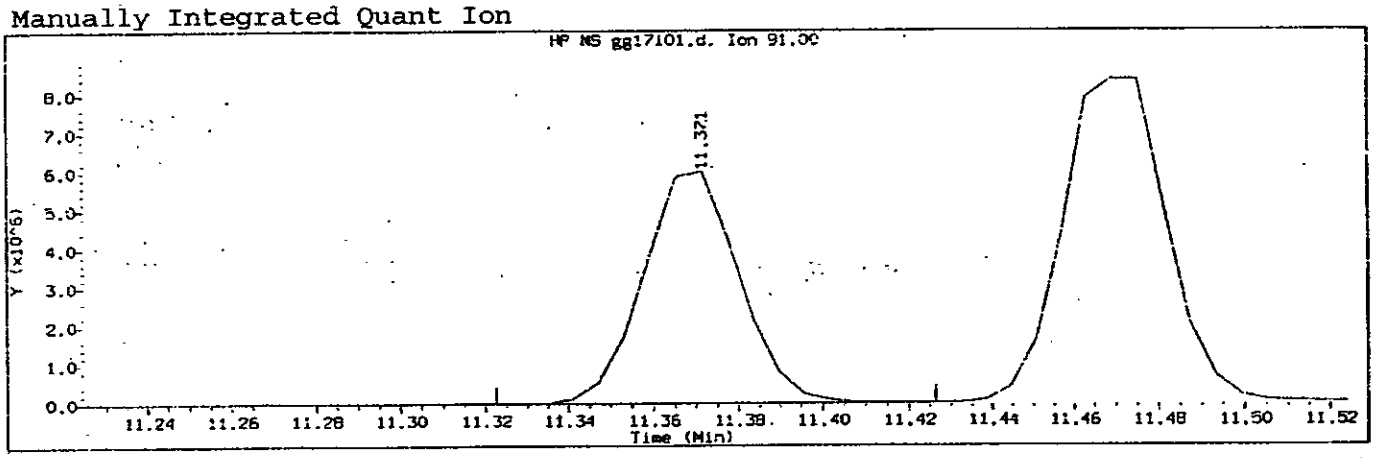
RAD36 0079

Digitally signed by Jason M. Long on 08/17/2010 at 14:53.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i01.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 12:02 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 14:36
Date, time and analyst ID of latest file update: 17-Aug-2010 14:36 jml01693

Sample Name: VSTD025 Lab Sample ID: VSTD025

Compound Number	: 114		
Compound Name	: Ethylbenzene		
Scan Number	: 1605		
Retention Time (minutes)	: 11.371		
Quant Ion	: 91.00		
Area (flag)	: 9403795A		
On-Column Amount (ng)	: 27.8195		
Integration start scan	: 1596	Integration stop scan:	1613
Y at integration start	: 0	Y at integration end:	6638

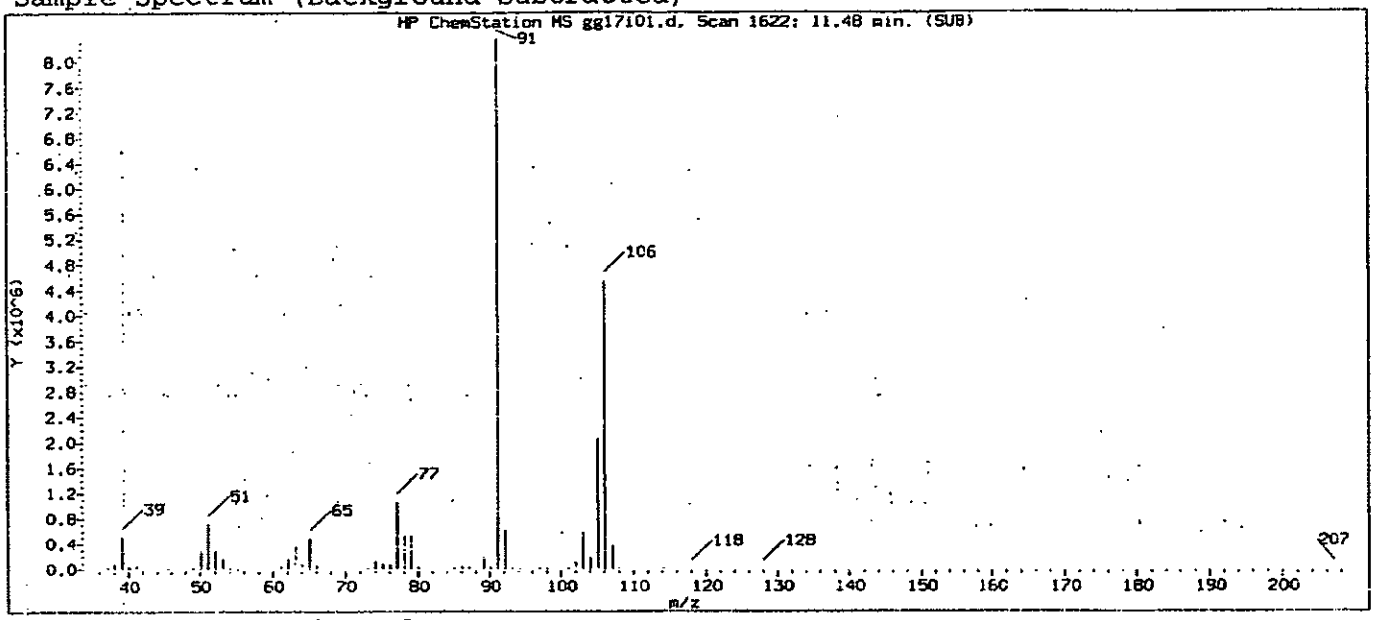
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long
on 08/17/2010 at 14:53.
Target 3.5 esignature user ID:: jml01693

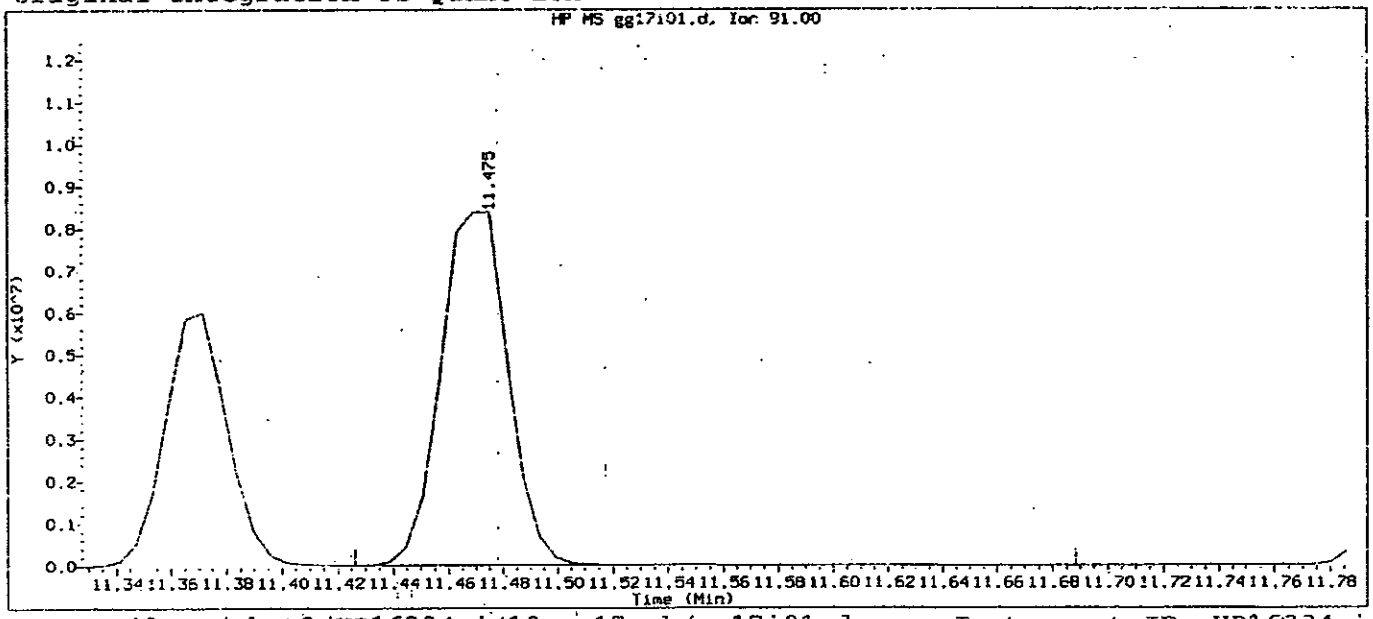
GC/MS audit/management approval: _____ 8/18/10

RAD36 0080

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i01.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 12:02 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 12:25
Date, time and analyst ID of latest file update: 17-Aug-2010 12:25 jml01693

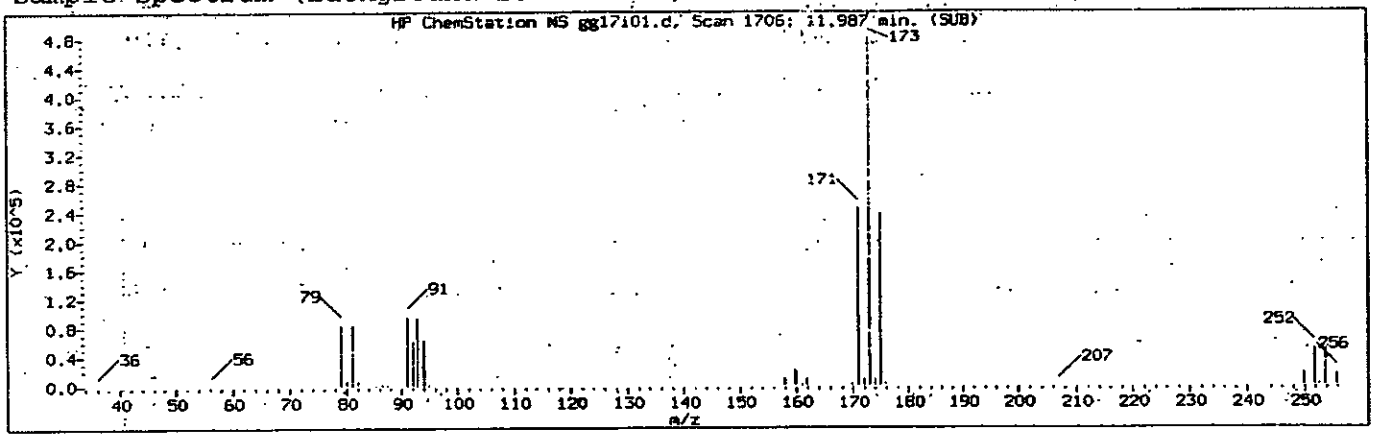
Sample Name: VSTD025 Lab Sample ID: VSTD025

Compound Number	: 114		
Compound Name	: Ethylbenzene		
Scan Number	: 1622		
Retention Time (minutes)	: 11.475		
Quant Ion	: 91.00		
Area	: 14432878		
On-column Amount (ng)	: 39.4642		
Integration start scan	: 1613	Integration stop scan:	1656
Y at integration start	: 6638	Y at integration end:	1411

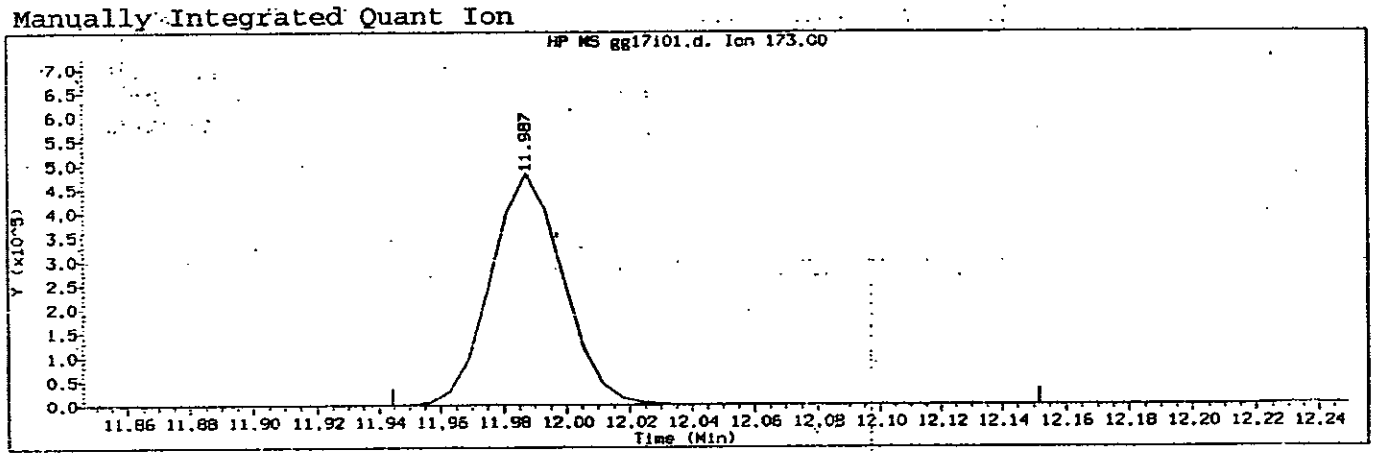
RAD36 8081

Digitally signed by Jason M. Long on 08/17/2010 at 14:53.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i01.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 12:02 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 14:36
Date, time and analyst ID of latest file update: 17-Aug-2010 14:36 jml01693

Sample Name: VSTD025 Lab Sample ID: VSTD025

Compound Number	: 120		
Compound Name	: Bromoform		
Scan Number	: 1706		
Retention Time (minutes)	: 11.987		
Quant Ion	: 173.00		
Area (flag)	: 771971M		
On-Column Amount (ng)	: 24.9952		
Integration start scan	: 1698	Integration stop scan:	1732
Y at integration start	: 0	Y at integration end:	0

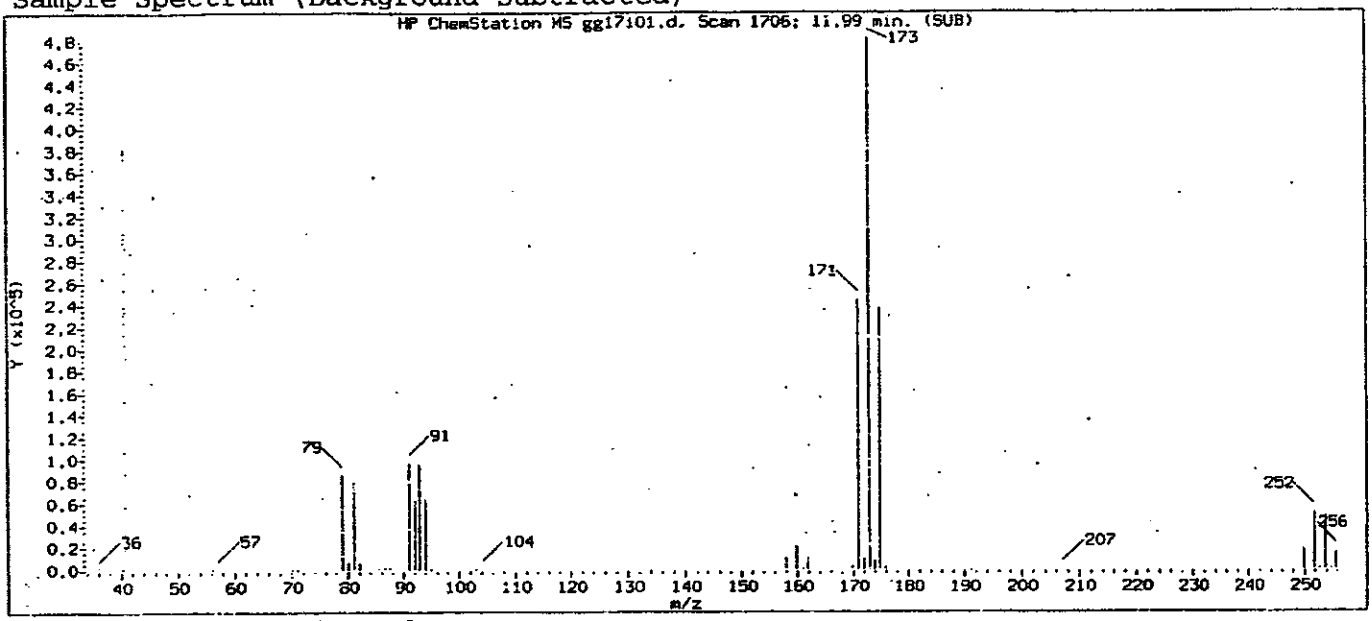
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long
on 08/17/2010 at 14:53.
Target 3.5 esignature user ID: jml01693

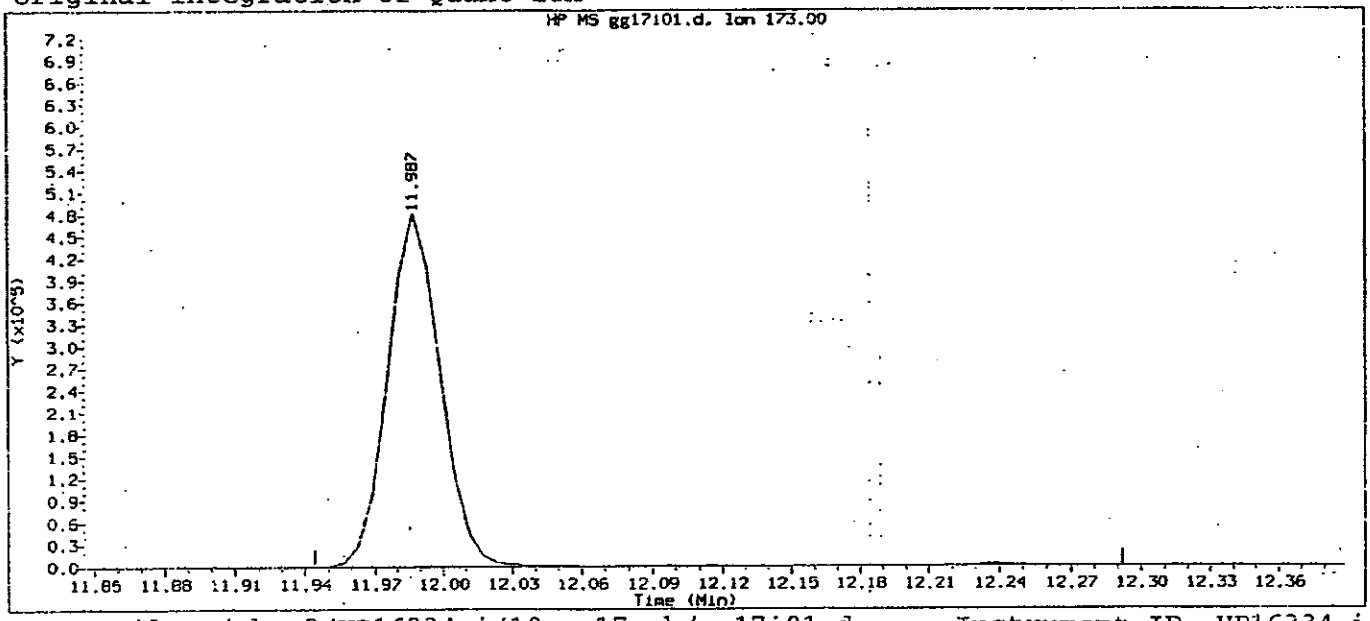
GC/MS audit/management approval: _____ 8/18/10

RAD36 0882

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i01.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 12:02 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 12:25
Date, time and analyst ID of latest file update: 17-Aug-2010 12:25 jml01693

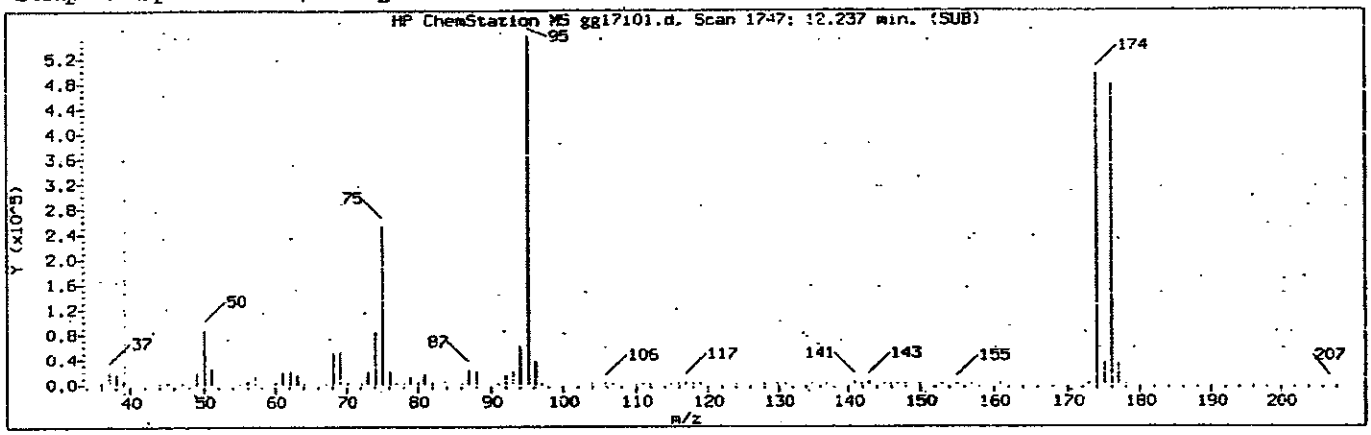
Sample Name: VSTD025 Lab Sample ID: VSTD025

Compound Number	: 120		
Compound Name	: Bromoform		
Scan Number	: 1706		
Retention Time (minutes)	: 11.987		
Quant Ion	: 173.00		
Area	: 776092		
On-column Amount (ng)	: 24.9917		
Integration start scan	: 1698	Integration stop scan:	1755
Y at integration start	: 0	Y at integration end:	0

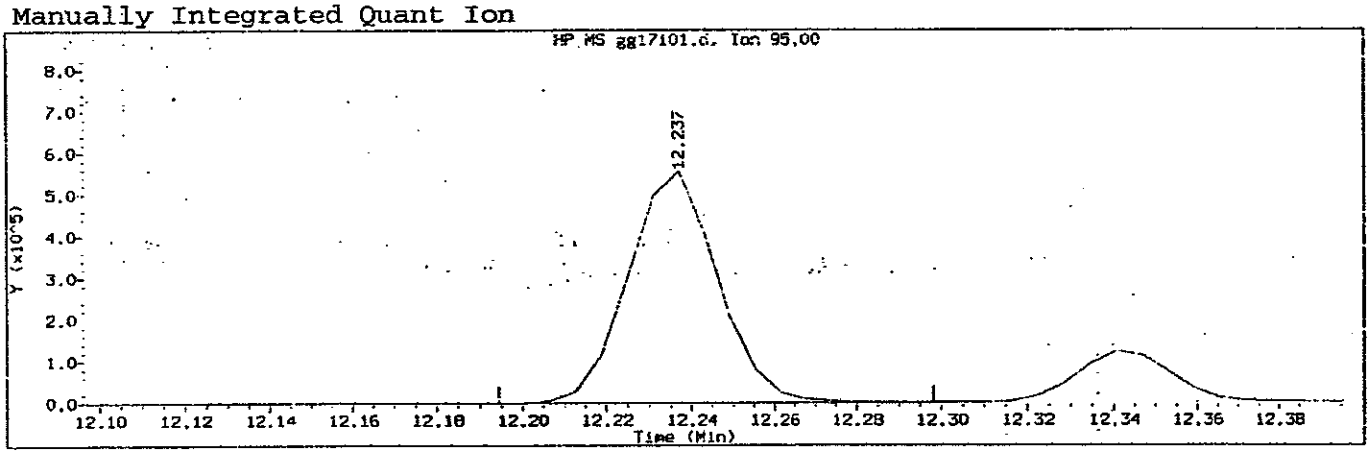
RA036 0083

Digitally signed by Jason M. Long on 08/17/2010 at 14:53.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i01.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 12:02 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 14:36
Date, time and analyst ID of latest file update: 17-Aug-2010 14:36 jml01693

Sample Name: VSTD025 Lab Sample ID: VSTD025

Compound Number : 126
Compound Name : 4-Bromofluorobenzene
Scan Number : 1747
Retention Time (minutes): 12.237
Quant Ion : 95.00
Area (flag) : 818203M
On-Column Amount (ng) : 9.8710
Integration start scan : 1739 Integration stop scan: 1756
Y at integration start : 0 Y at integration end: 0

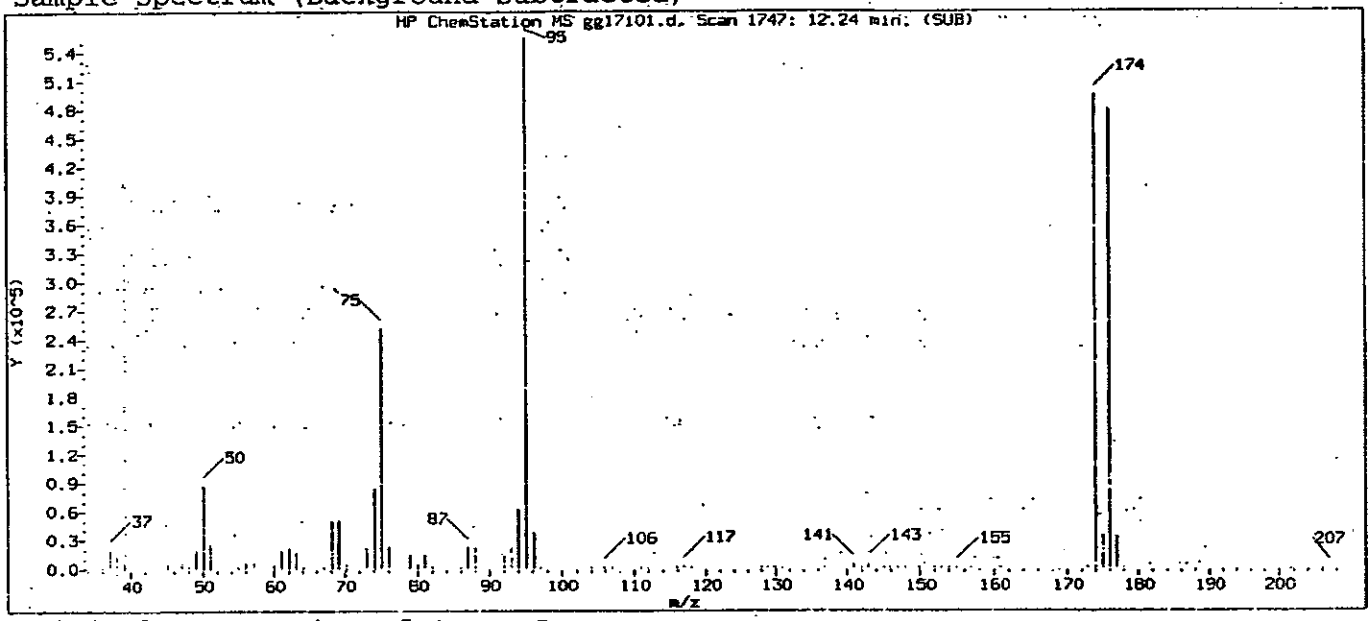
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long
on 08/17/2010 at 14:53.
Target 3.5 esignature user ID: jml01693

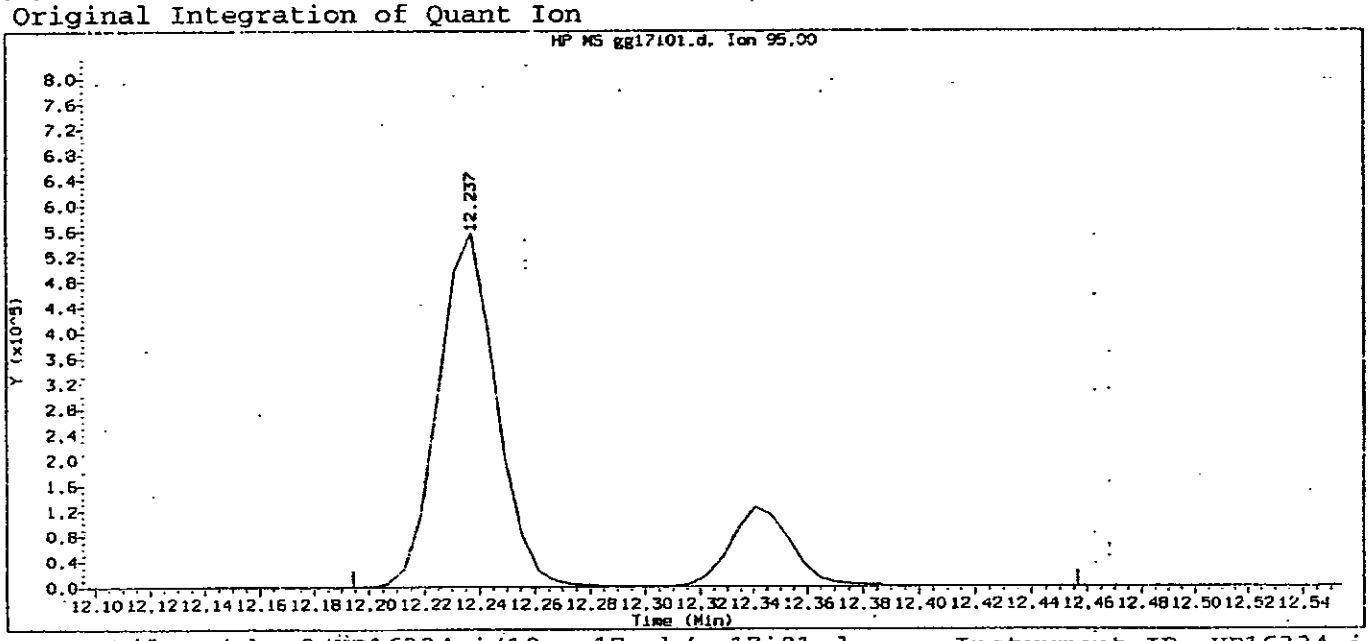
GC/MS audit/management approval: _____ 8/18/10

RnD36 8884

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i01.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 12:02 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 12:25
Date, time and analyst ID of latest file update: 17-Aug-2010 12:25 jml01693

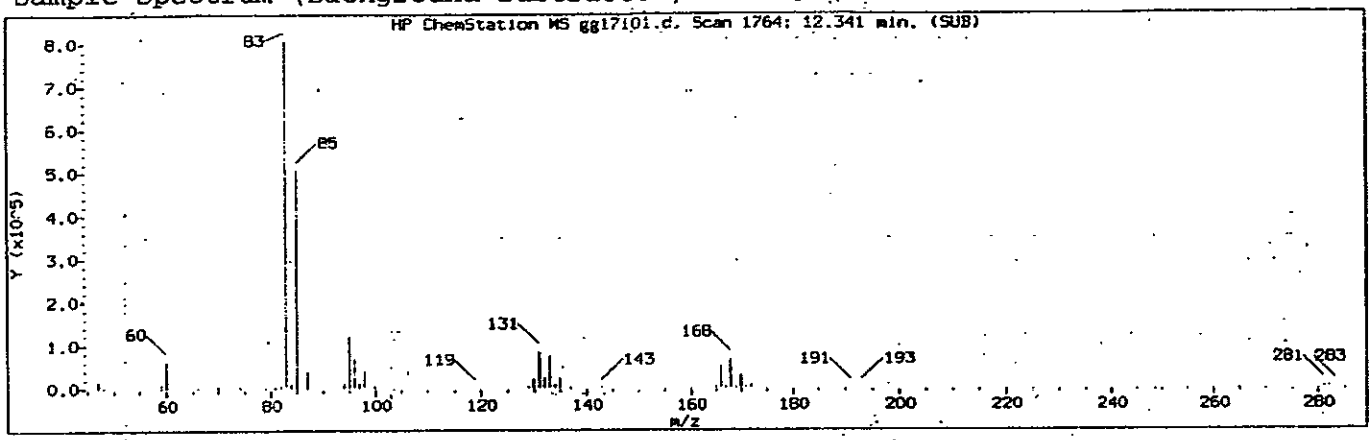
Sample Name: VSTD025 Lab Sample ID: VSTD025

Compound Number	: 126		
Compound Name	: 4-Bromofluorobenzene		
Scan Number	: 1747		
Retention Time (minutes)	: 12.237		
Quant Ion	: 95.00		
Area	: 1019761		
On-column Amount (ng)	: 11.4501		
Integration start scan	: 1739	Integration stop scan:	1782
Y at integration start	: 0	Y at integration end:	0

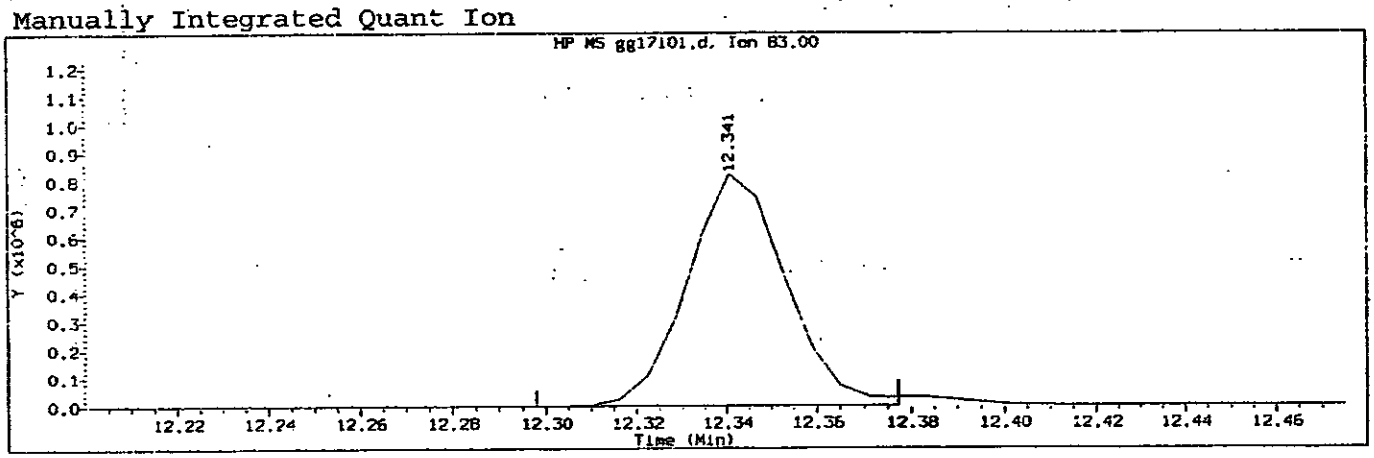
RAD36 0085

Digitally signed by Jason M. Long on 08/17/2010 at 14:53.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i01.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 12:02 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 14:36
Date, time and analyst ID of latest file update: 17-Aug-2010 14:36 jml01693

Sample Name: VSTD025 Lab Sample ID: VSTD025

Compound Number	: 128		
Compound Name	: 1,1,2,2-Tetrachloroethane		
Scan Number	: 1764		
Retention Time (minutes)	: 12.341		
Quant Ion	: 83.00		
Area (flag)	: 1255898M		
On-Column Amount (ng)	: 26.4845		
Integration start scan	: 1756	Integration stop scan:	1769
Y at integration start	: 0	Y at integration end:	0

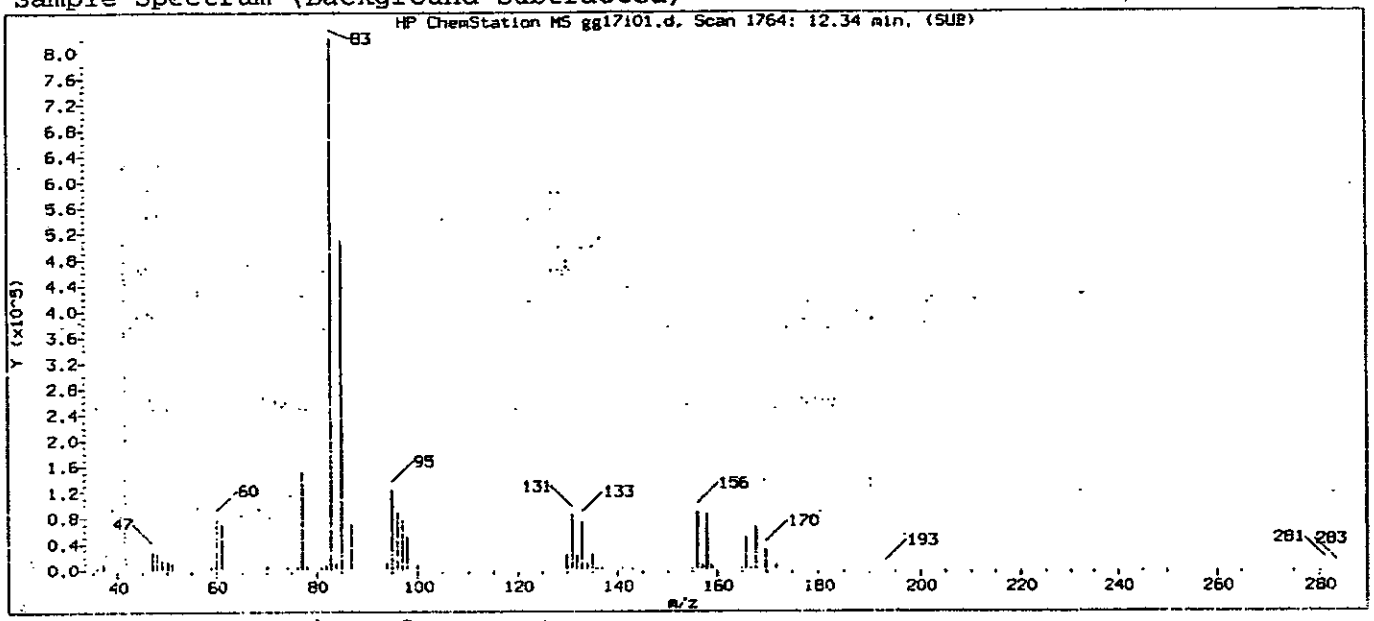
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long
on 08/17/2010 at 14:53.
Target 3.5 esignature user ID: jml01693

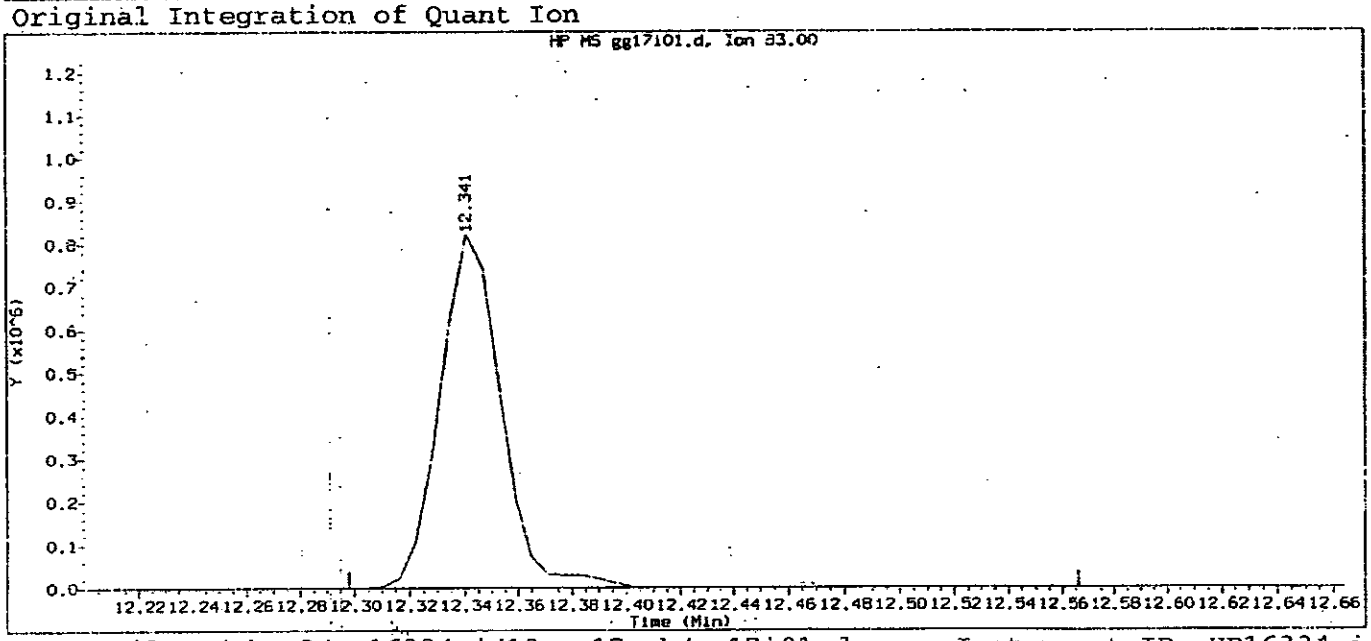
GC/MS audit/management approval: _____ 8/18/10

RAD36 0886

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i01.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 12:02 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 12:25
Date, time and analyst ID of latest file update: 17-Aug-2010 12:25 jml01693

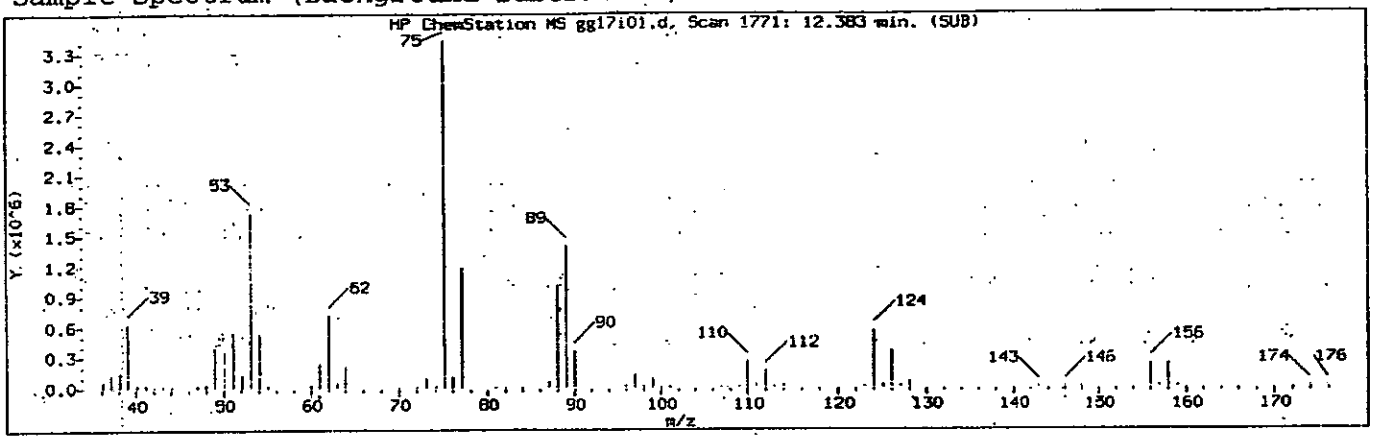
Sample Name: VSTD025 Lab Sample ID: VSTD025

Compound Number	: 128		
Compound Name	: 1,1,2,2-Tetrachloroethane		
Scan Number	: 1764		
Retention Time (minutes)	: 12.341		
Quant Ion	: 83.00		
Area	: 1284612		
On-column Amount (ng)	: 26.3293		
Integration start scan	: 1756	Integration stop scan:	1800
Y at integration start	: 0	Y at integration end:	0

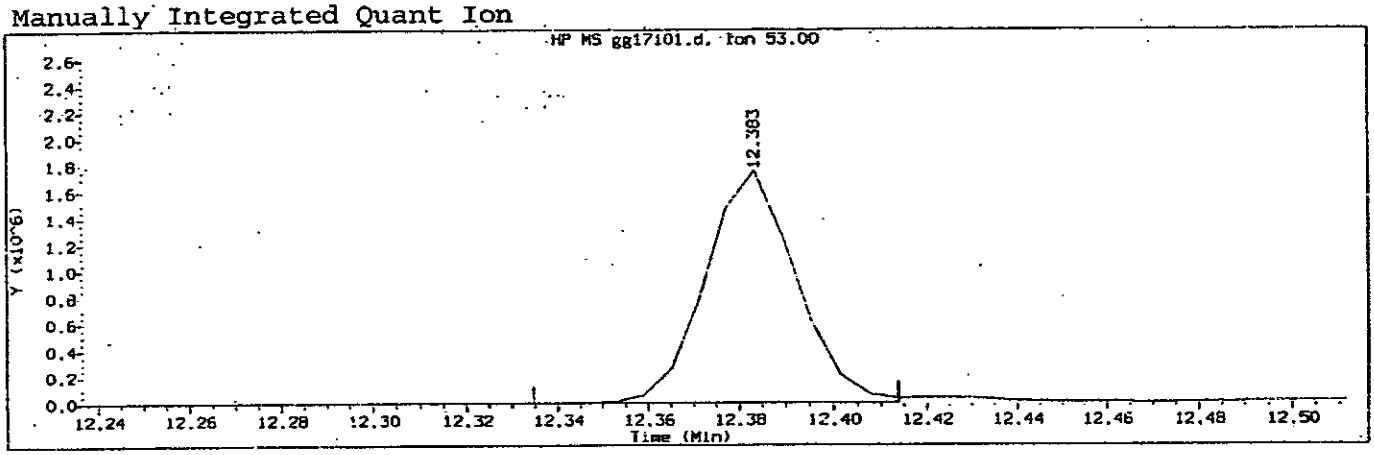
RAD36 0887

Digitally signed by Jason M. Long on 08/17/2010 at 14:53.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i01.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 12:02 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 14:36
Date, time and analyst ID of latest file update: 17-Aug-2010 14:36 jml01693

Sample Name: VSTD025 Lab Sample ID: VSTD025

Compound Number	: 130		
Compound Name	: trans-1,4-Dichloro-2-Butene		
Scan Number	: 1771		
Retention Time (minutes)	: 12.383		
Quant Ion	: 53.00		
Area (flag)	: 2369567A		
On-Column Amount (ng)	: 249.9133		
Integration start scan	: 1762	Integration stop scan:	1775
Y at integration start	: 0	Y at integration end:	0

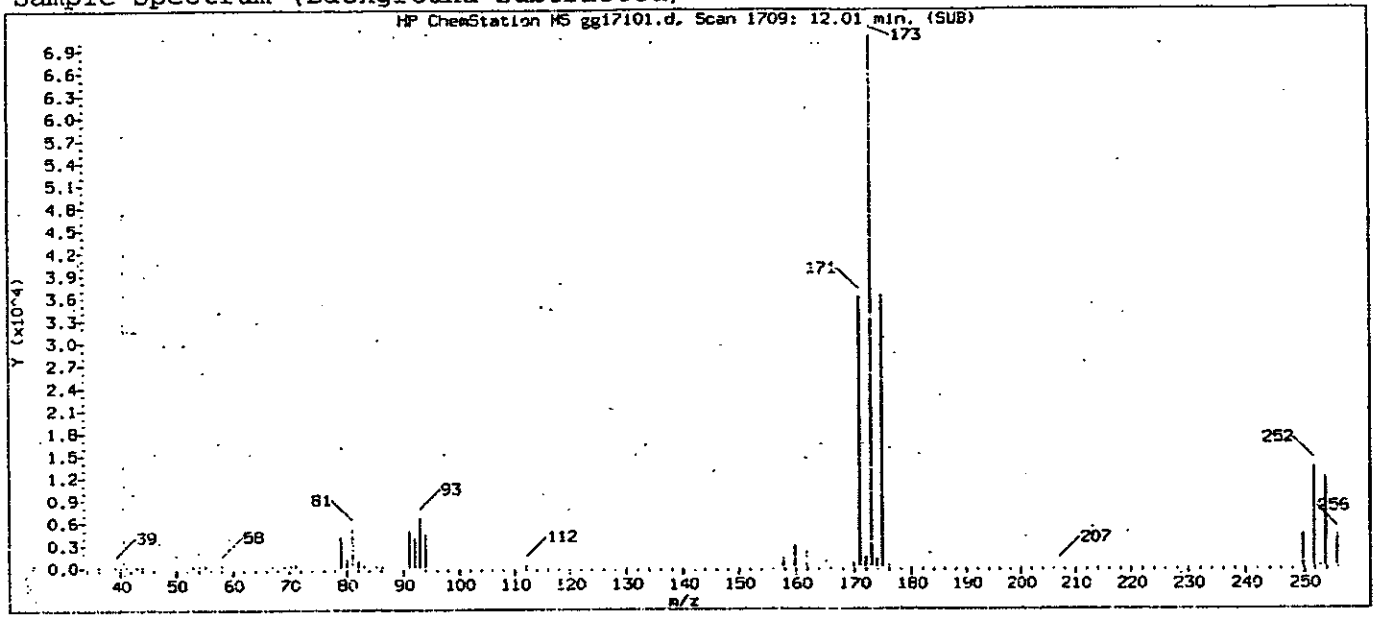
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long
on 08/17/2010 at 14:53.
Target 3.5 esignature user ID: jml01693

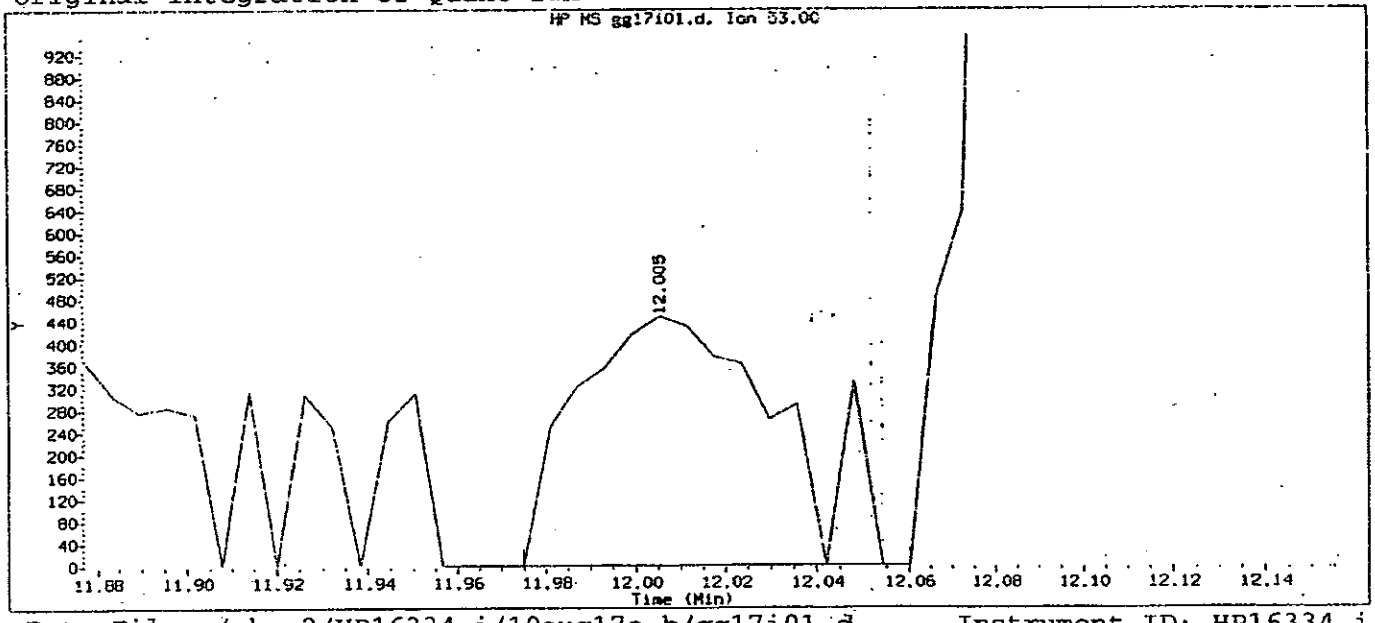
GC/MS audit/management approval: 8/18/10

RAD36 0088

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i01.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 12:02 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 12:25
Date, time and analyst ID of latest file update: 17-Aug-2010 12:25 jml01693

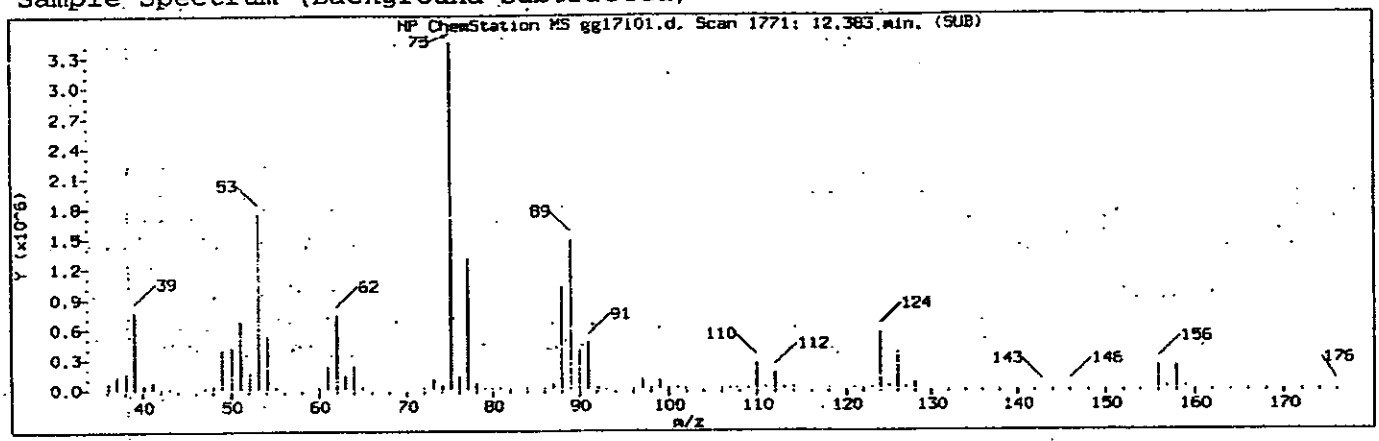
Sample Name: VSTD025 Lab Sample ID: VSTD025

Compound Number	: 130		
Compound Name	: trans-1,4-Dichloro-2-Butene		
Scan Number	: 1709		
Retention Time (minutes)	: 12.005		
Quant Ion	: 53.00		
Area	: 1405		
On-column Amount (ng)	: 71.4258		
Integration start scan	: 1703	Integration stop scan: 1717	
Y at integration start	: 0	Y at integration end: 0	

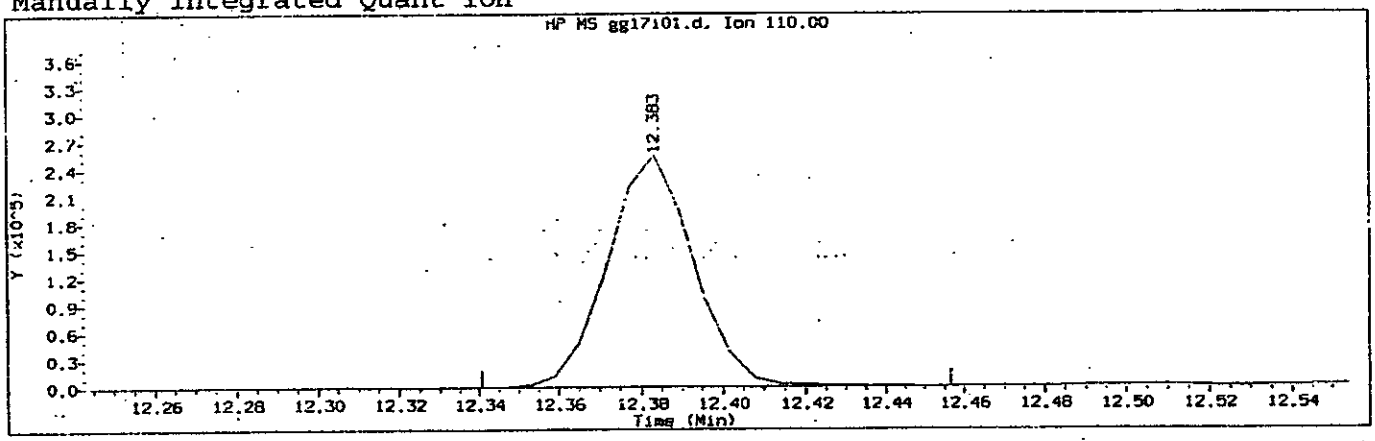
RAD36 8889

Digitally signed by Jason M. Long on 08/17/2010 at 14:53.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i01.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 12:02 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 14:36
Date, time and analyst ID of latest file update: 17-Aug-2010 14:36 jml01693

Sample Name: VSTD025 Lab Sample ID: VSTD025

Compound Number	: 131		
Compound Name	: 1,2,3-Trichloropropane		
Scan Number	: 1771		
Retention Time (minutes)	: 12.383		
Quant Ion	: 110.00		
Area (flag)	: 369557M		
On-Column Amount (ng)	: 27.2768		
Integration start scan	: 1763	Integration stop scan:	1782
Y at integration start	: 0	Y at integration end:	0

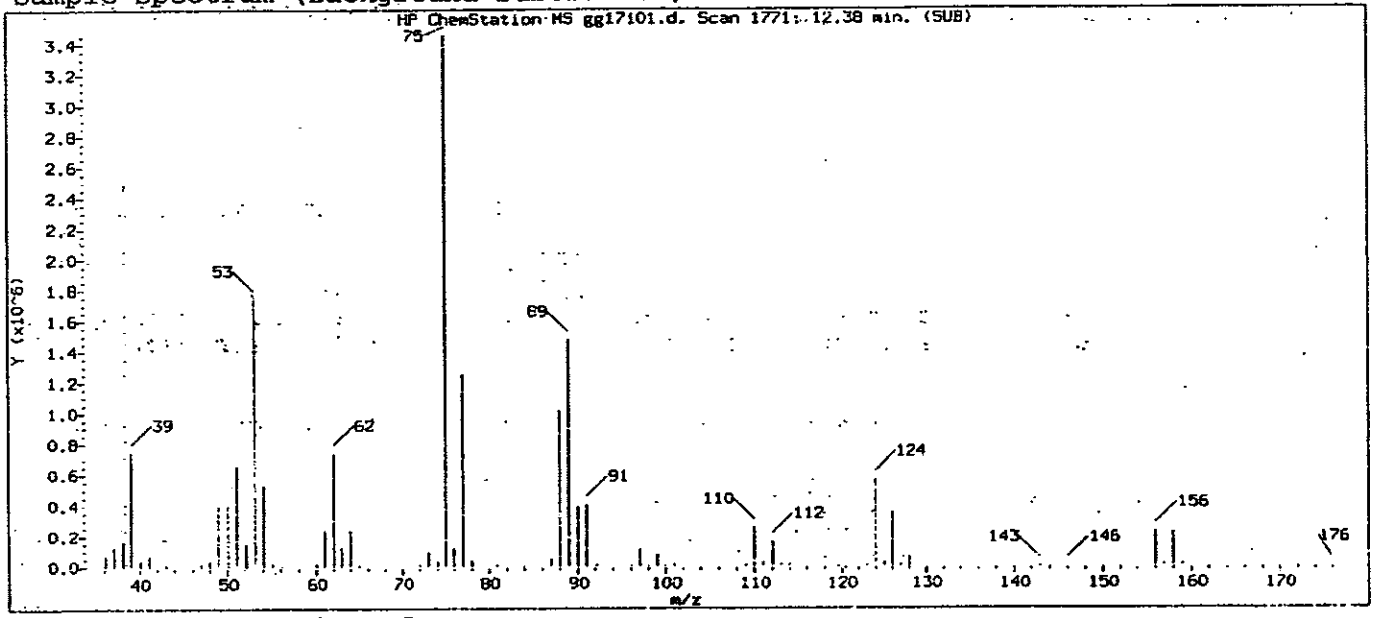
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long on 08/17/2010 at 14:53. Target 3.5 esignature user ID: jml01693

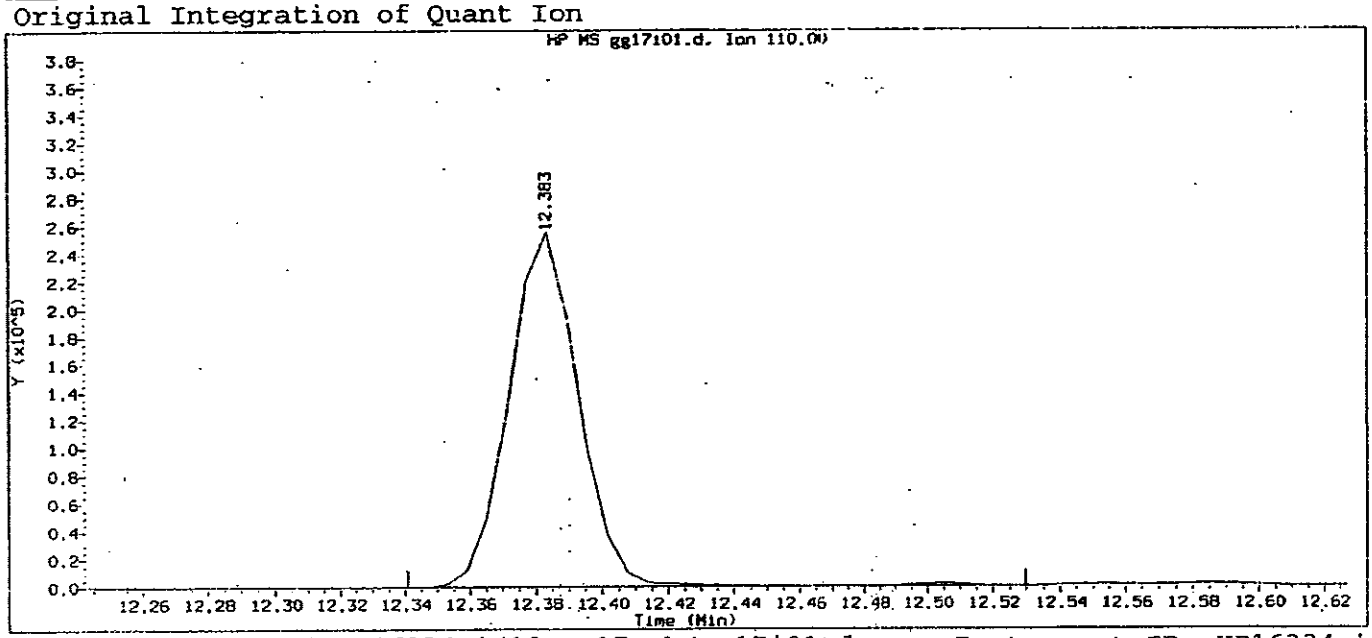
GC/MS audit/management approval: _____ 8/18/10

RAD36 0090

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i01.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 12:02 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 12:25
Date, time and analyst ID of latest file update: 17-Aug-2010 12:25 jml01693

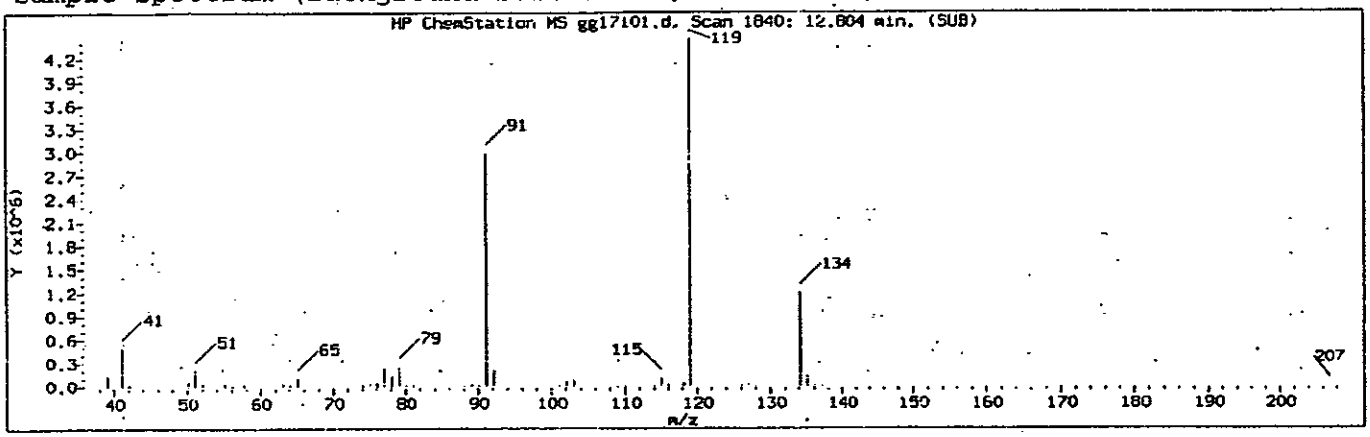
Sample Name: VSTD025 Lab Sample ID: VSTD025

Compound Number	: 131		
Compound Name	: 1,2,3-Trichloropropane		
Scan Number	: 1771		
Retention Time (minutes)	: 12.383		
Quant Ion	: 110.00		
Area	: 372416		
On-column Amount (ng)	: 26.3571		
Integration start scan	: 1763	Integration stop scan:	1794
Y at integration start	: 0	Y at integration end:	0

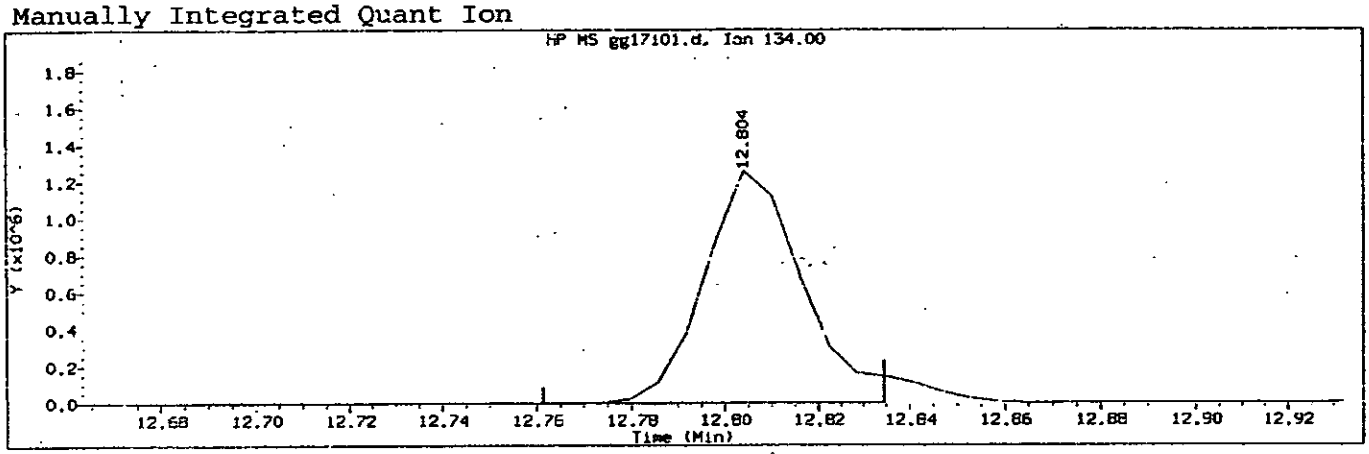
RAD36 8091

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Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i01.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 12:02 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 14:36
Date, time and analyst ID of latest file update: 17-Aug-2010 14:36 jml01693

Sample Name: VSTD025 Lab Sample ID: VSTD025

Compound Number	: 137		
Compound Name	: tert-Butylbenzene		
Scan Number	: 1840		
Retention Time (minutes)	: 12.804		
Quant Ion	: 134.00		
Area (flag)	: 1844056M		
On-Column Amount (ng)	: 27.8591		
Integration start scan	: 1832	Integration stop scan:	1844
Y at integration start	: 0	Y at integration end:	0

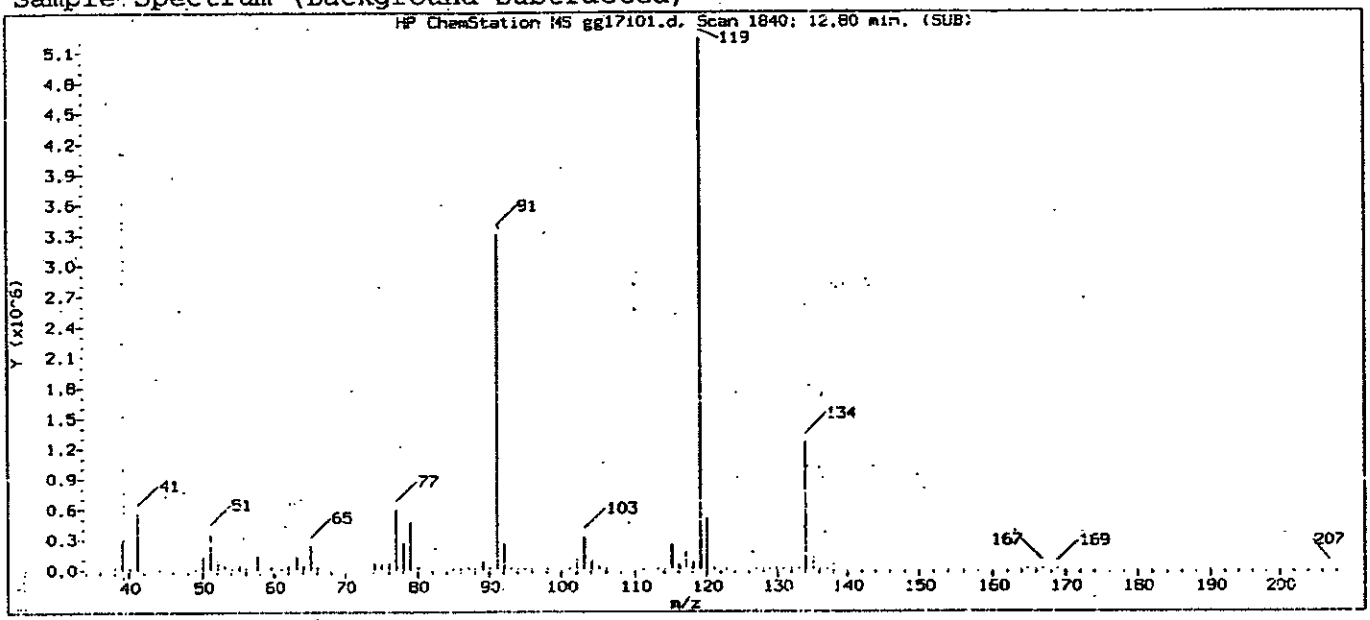
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long
on 08/17/2010 at 14:53.
Target 3.5 esignature user ID: jml01693

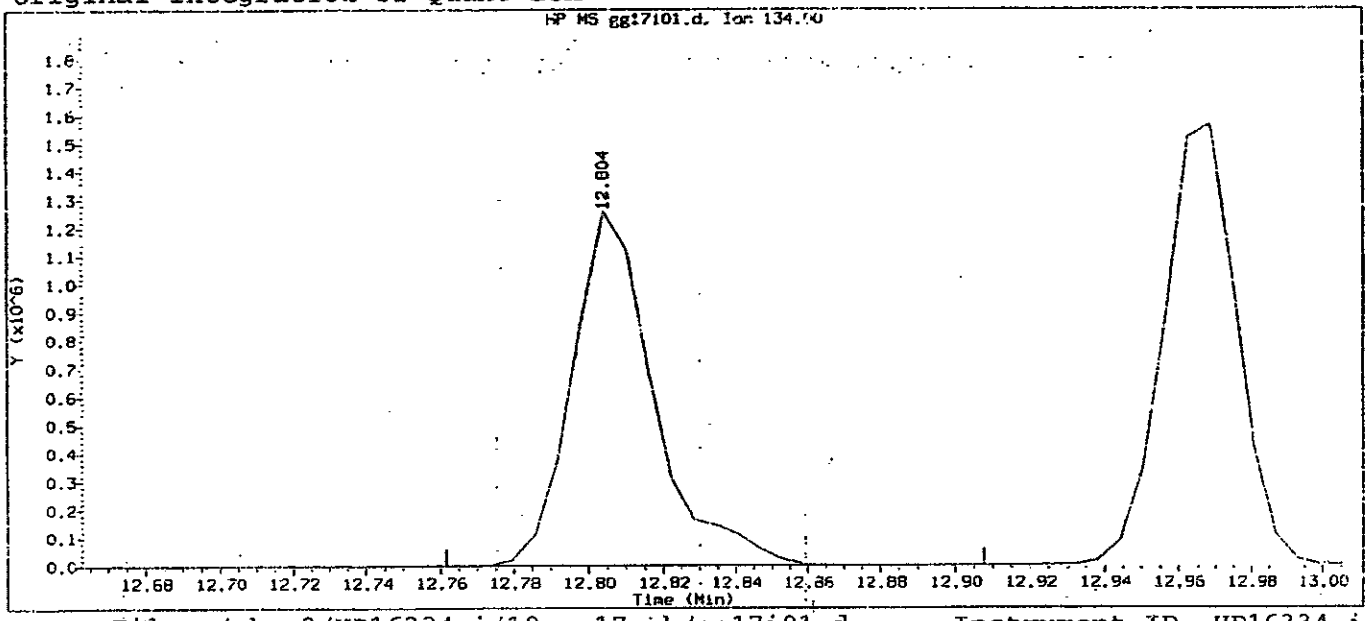
GC/MS audit/management approval: _____ 8/18/10

RAD36 0092

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i01.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 12:02 Analyst ID: JML01693

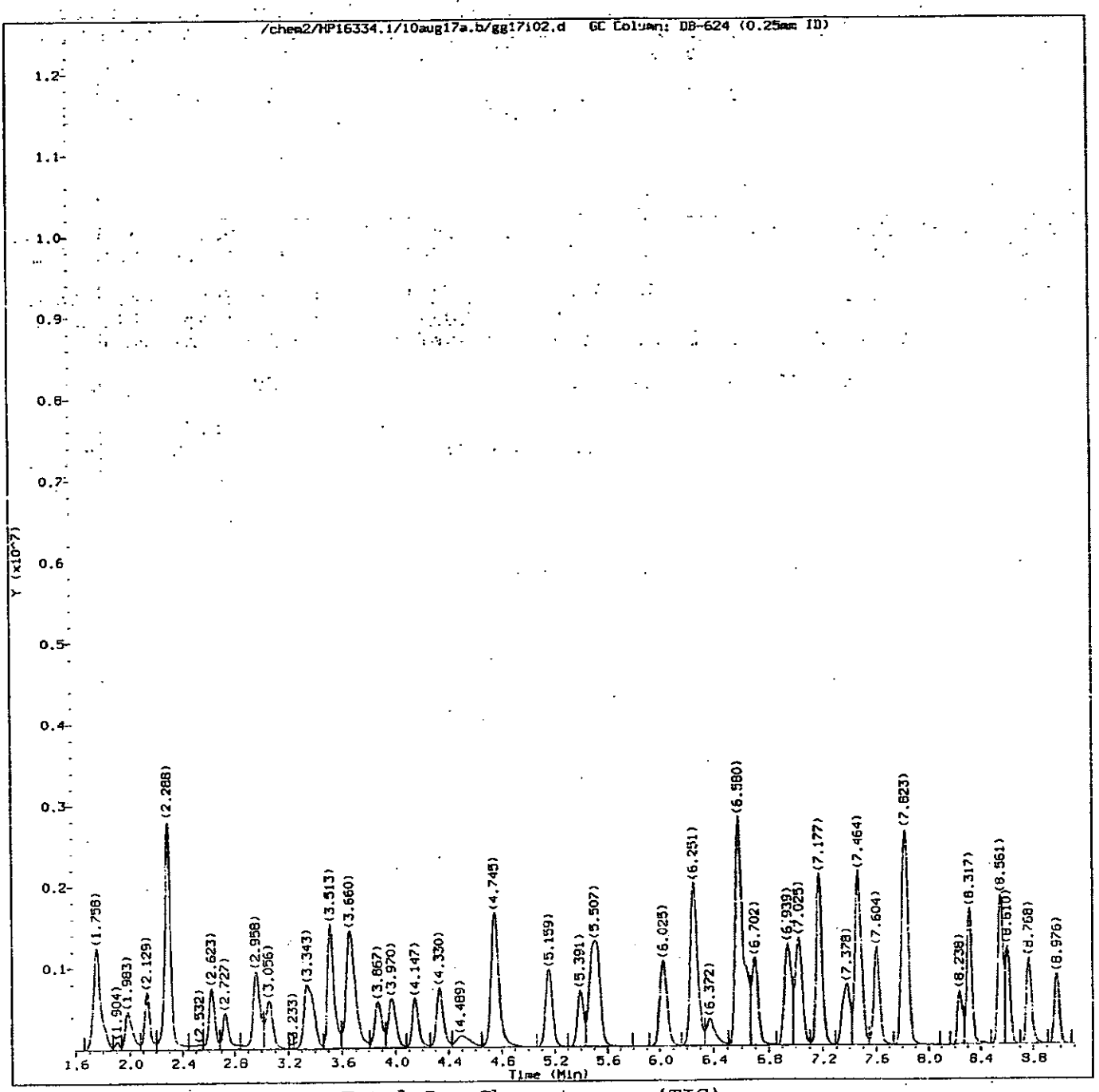
Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 12:25
Date, time and analyst ID of latest file update: 17-Aug-2010 12:25 jml01693

Sample Name: VSTD025 Lab Sample ID: VSTD025

Compound Number	: 137		
Compound Name	: tert-Butylbenzene		
Scan Number	: 1840		
Retention Time (minutes)	: 12.804		
Quant Ion	: 134.00		
Area	: 1919368		
On-column Amount (ng)	: 28.9285		
Integration start scan	: 1832	Integration stop scan: 1856	
Y at integration start	: 0	Y at integration end: 0	

RAD36 0093

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Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

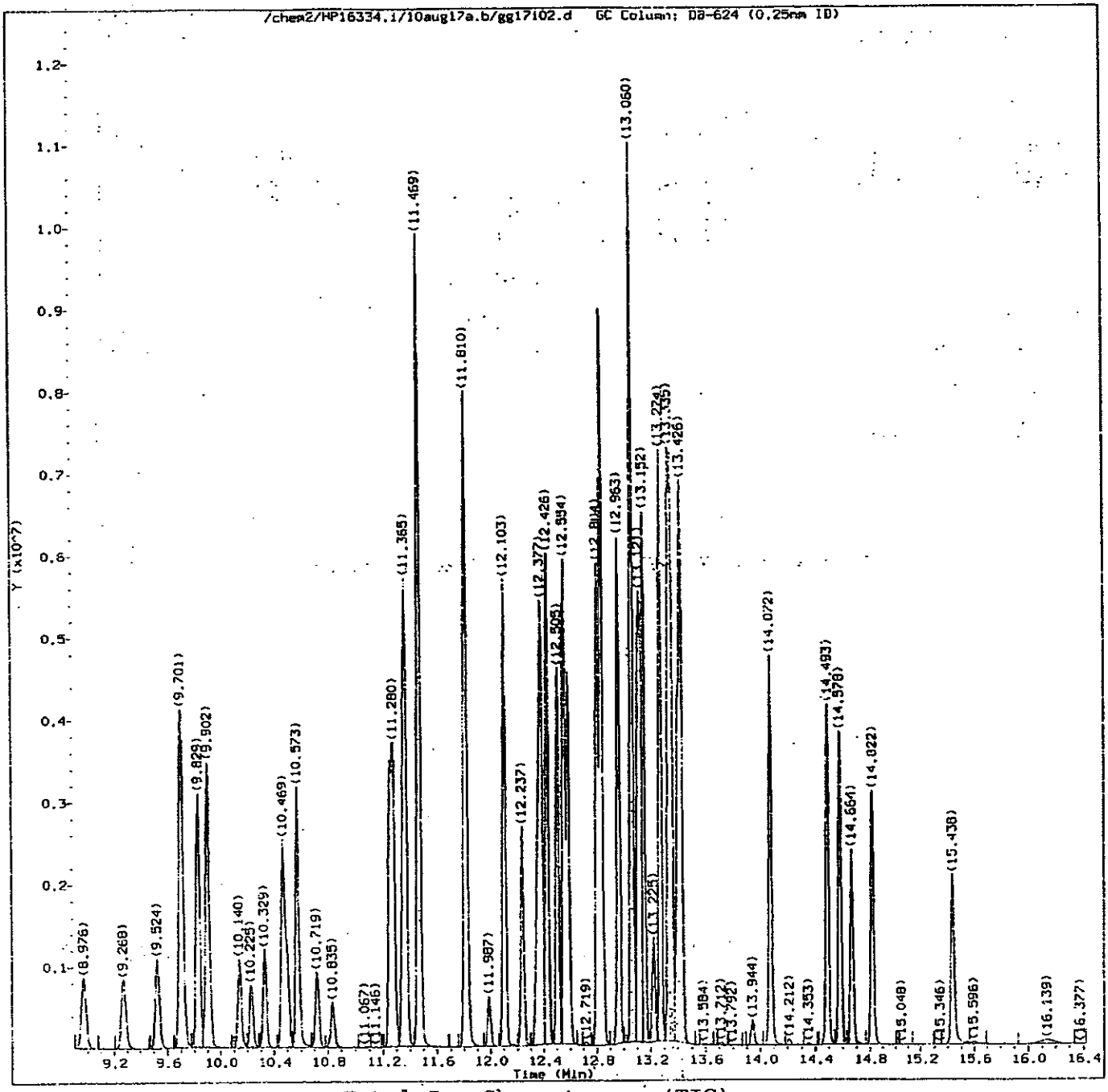
Data File: /chem2/HP16334.i/10aug17a.b/gg17i02.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 12:23 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 14:37
Date, time and analyst ID of latest file update: 17-Aug-2010 14:37 jml01693

Sample Name: VSTD010 Lab Sample ID: VSTD010

RAD36 0894

Digitally signed by Jason M. Long
on 08/17/2010 at 14:53.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/10aug17a.b/gg17i02.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 12:23 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 14:37
Date, time and analyst ID of latest file update: 17-Aug-2010 14:37 jml01693

Sample Name: VSTD010 Lab Sample ID: VSTD010

RAD36 0895

Digitally signed by Jason M. Long
on 08/17/2010 at 14:53.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/10aug17a.b/gg17i02.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 12:23 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 14:37
Date, time and analyst ID of latest file update: 17-Aug-2010 14:37 jml01693

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
2) Dichlorodifluoromethane	(1)	1.983	85	1096644	9.676
5) Chloromethane	(1)	2.129	50	1053690	9.688
6) Vinyl Chloride	(1)	2.270	62	1011850	9.609
9) 1,3-Butadiene	(1)	2.294	39	1619197	9.487
10) Bromomethane	(1)	2.623	94	764120	9.508
11) Chloroethane	(1)	2.727	64	578057	9.351
13) Dichlorofluoromethane	(1)	2.958	67	1387718	9.442
15) Trichlorofluoromethane	(1)	3.056	101	1200446M	9.364
17) Ethyl Ether	(1)	3.330	59	439718	10.175
18) Freon 123a	(1)	3.373	67	745311	9.718
23) Acrolein	(4)	3.513	56	2619007	544.126
24) 1,1-Dichloroethene	(1)	3.653	96	619625	9.882
25) Freon 113	(1)	3.666	101	631155	9.704
26) Acetone	(4)	3.714	58	233190	102.605
27) Methyl Iodide	(1)	3.867	142	1132273	9.882
29) Carbon Disulfide	(1)	3.970	76	1703863	9.979
32) Allyl Chloride	(1)	4.141	41	652929M	9.913
33) Methyl Acetate	(1)	4.172	43	151879M	10.095
34) Methylene Chloride	(1)	4.330	84	654359	8.833
36)*t-Butyl Alcohol-d10	(4)	4.367	65	114990	50.000
38) t-Butyl Alcohol	(4)	4.501	59	566449M	195.291
39) Acrylonitrile	(4)	4.726	53	473751	50.458
40) Methyl Tertiary Butyl Ether	(1)	4.745	73	1400159	10.034
41) trans-1,2-Dichloroethene	(1)	4.751	96	701410	9.934
37) 1,2-Dichloroethene (Total)	(1)		96	1444132	19.790
44) n-Hexane	(1)	5.159	57	921835	9.754
45) 1,1-Dichloroethane	(1)	5.391	63	1160379	10.006
47) di-Isopropyl Ether	(1)	5.482	45	1984553	10.011
48) 2-Chloro-1,3-Butadiene	(1)	5.531	53	835449	10.129
49) Ethyl t-Butyl Ether	(1)	6.025	59	1792097	10.021
51) 2,2-Dichloropropane	(1)	6.251	77	950501	10.087
50) cis-1,2-Dichloroethene	(1)	6.251	96	742722	9.857
52) 2-Butanone	(4)	6.275	43	1236005	105.531
53) Propionitrile	(4)	6.372	54	678967M	201.088
55) Methacrylonitrile	(4)	6.580	67	1388984	106.291
56) Bromochloromethane	(1)	6.586	128	304640	10.138
57) Tetrahydrofuran	(4)	6.647	71	395559	103.642
58) Chloroform	(1)	6.702	83	1173922	9.909
62)$Dibromofluoromethane(mz111)	(1)	6.927	111	604176	10.081

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

RAD36 8896

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on 08/17/2010 at 14:53.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/10aug17a.b/gg17i02.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 12:23 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 14:37
Date, time and analyst ID of latest file update: 17-Aug-2010 14:37 jml01693

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
61)$Dibromofluoromethane	(1)	6.927	113	592996	10.078
63) 1,1,1-Trichloroethane	(1)	6.952	97	1020761	9.916
64) Cyclohexane	(1)	7.025	56	1110915	9.773
65) 1,1-Dichloropropene	(1)	7.177	75	923891	9.981
66) Carbon Tetrachloride	(1)	7.177	117	912073	10.138
67) Isobutyl Alcohol	(4)	7.354	41	441202M	498.092
70)$1,2-Dichloroethane-d4	(1)	7.384	102	109198	9.951
68)$1,2-Dichloroethane-d4(mz104)	(1)	7.384	104	70609	10.004
69)$1,2-Dichloroethane-d4(mz65)	(1)	7.384	65	490867M	10.044
72) Benzene	(1)	7.458	78	2699160	9.905
74) 1,2-Dichloroethane	(1)	7.488	62	646300	9.980
73) 1,2-Dichloroethane(mz98)	(1)	7.488	98	64067	10.329
75) t-Amyl Methyl Ether	(1)	7.604	73	1564800	10.099
76) n-Heptane	(1)	7.805	43	938050	9.619
77)*Fluorobenzene	(1)	7.836	96	2557823	10.000
81) n-Butanol	(4)	8.238	56	761426	999.970
83) Trichloroethene	(1)	8.317	95	740008	9.875
84) Methylcyclohexane	(1)	8.561	83	1152163	9.785
85) 1,2-Dichloropropane	(1)	8.616	63	675477	10.020
87) Methyl Methacrylate	(4)	8.768	69	289859	11.090
88) Dibromomethane	(1)	8.768	93	303253	10.116
89) 1,4-Dioxane	(4)	8.793	88	110092	538.358
90) Bromodichloromethane	(1)	8.976	83	800975	10.433
91) 2-Nitropropane	(4)	9.268	41	724093	105.496
94) cis-1,3-Dichloropropene	(1)	9.524	75	837193	10.443
96) 4-Methyl-2-Pentanone	(1)	9.701	43	3357507	105.260
97)$Toluene-d8	(2)	9.829	98	2521697	10.063
98)$Toluene-d8(mz100)	(2)	9.829	100	1632161	10.067
101) Toluene	(2)	9.902	92	1796289	9.934
102) trans-1,3-Dichloropropene	(2)	10.140	75	689927	10.830
103) Ethyl Methacrylate	(2)	10.225	69	479971	10.920
104) 1,1,2-Trichloroethane	(2)	10.329	97	428831	10.103
105) Tetrachloroethene	(2)	10.469	166	818102	9.983
106) 1,3-Dichloropropane	(2)	10.500	76	724257	10.089
107) 2-Hexanone	(2)	10.573	43	2226468	106.041
108) Dibromochloromethane	(2)	10.719	129	529233	10.829
109) 1,2-Dibromoethane	(2)	10.835	107	398153	10.392
110)*Chlorobenzene-d5	(2)	11.256	117	1855717	10.000
112) Chlorobenzene	(2)	11.280	112	2033304	10.012

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

RAD36 0697

Digitally signed by Jason M. Long
on 08/17/2010 at 14:53.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/10aug17a.b/gg17i02.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 12:23 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 14:37
Date, time and analyst ID of latest file update: 17-Aug-2010 14:37 jml01693

Sample Name: VSTD010 Lab Sample ID: VSTD010

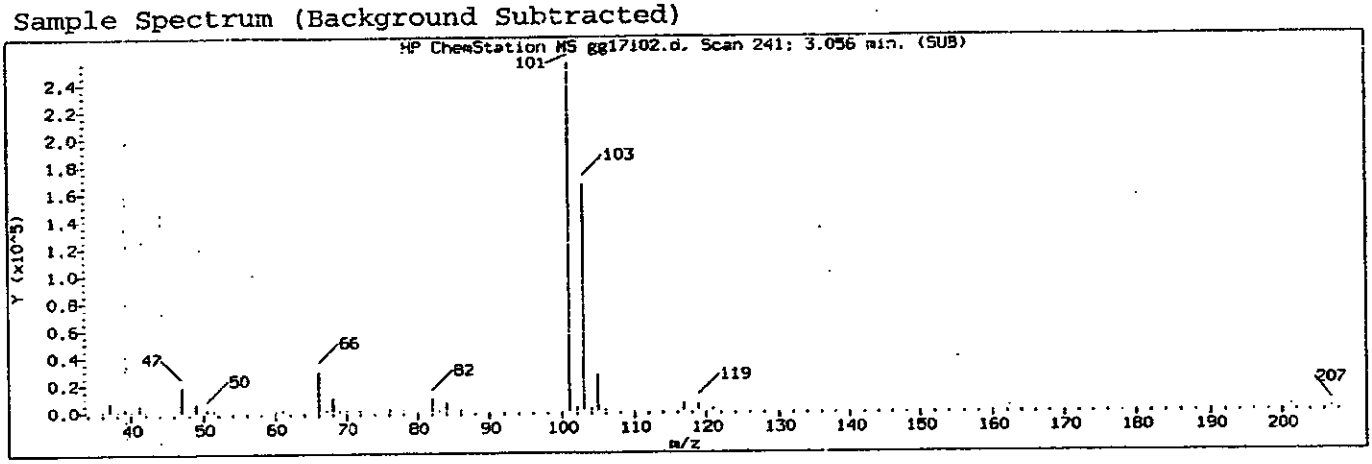
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
113) 1,1,1,2-Tetrachloroethane	(2)	11.353	131	685099	10.475
114) Ethylbenzene	(2)	11.365	91	3516716	10.181
117) m+p-Xylene	(2)	11.469	106	2814700	20.365
115) Xylene (Total)	(2)		106	4201517	30.545
118) o-Xylene	(2)	11.810	106	1386817	10.180
119) Styrene	(2)	11.816	104	2192450	10.713
120) Bromoform	(2)	11.987	173	285211M	10.039
121) Isopropylbenzene	(2)	12.103	105	3581014	10.186
126)$4-Bromofluorobenzene	(2)	12.237	95	847572	10.007
127)$4-Bromofluorobenzene(mz174)	(2)	12.237	174	760901	10.141
128) 1,1,2,2-Tetrachloroethane	(3)	12.341	83	492006M	10.269
129) Bromobenzene	(3)	12.365	156	833961	10.049
130) trans-1,4-Dichloro-2-Butene	(4)	12.383	53	731862M	101.459
131) 1,2,3-Trichloropropane	(3)	12.383	110	139890	10.219
132) n-Propylbenzene	(3)	12.426	91	4343525	10.147
133) 2-Chlorotoluene	(3)	12.505	126	861847	10.019
134) 1,3,5-Trimethylbenzene	(3)	12.554	105	3046682	10.227
135) 4-Chlorotoluene	(3)	12.585	126	876366	9.986
137) tert-Butylbenzene	(3)	12.804	134	688834M	10.300
138) Pentachloroethane	(3)	12.835	167	557323	9.989
139) 1,2,4-Trimethylbenzene	(3)	12.841	105	3327905	10.394
140) sec-Butylbenzene	(3)	12.963	105	4034464	10.168
141) p-Isopropyltoluene	(3)	13.060	119	3677523	10.368
142) 1,3-Dichlorobenzene	(3)	13.066	146	1824868	10.179
143)*1,4-Dichlorobenzene-d4	(3)	13.109	152	1067585	10.000
144) 1,4-Dichlorobenzene	(3)	13.127	146	1803794	9.787
145) 1,2,3-Trimethylbenzene	(3)	13.152	120	1430262	10.037
146) Benzyl Chloride	(3)	13.225	126	194698	9.993
147) n-Butylbenzene	(3)	13.353	92	1816492	10.352
148) 1,2-Dichlorobenzene	(3)	13.402	146	1567180	9.929
150) 1,2-Dibromo-3-Chloropropane	(4)	13.944	155	67530	10.087
153) 1,2,4-Trichlorobenzene	(3)	14.493	180	1256493	10.084
154) Hexachlorobutadiene	(3)	14.584	225	674580	10.044
155) Naphthalene	(3)	14.664	128	1772108	10.451
156) 1,2,3-Trichlorobenzene	(3)	14.822	180	984391	10.091

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

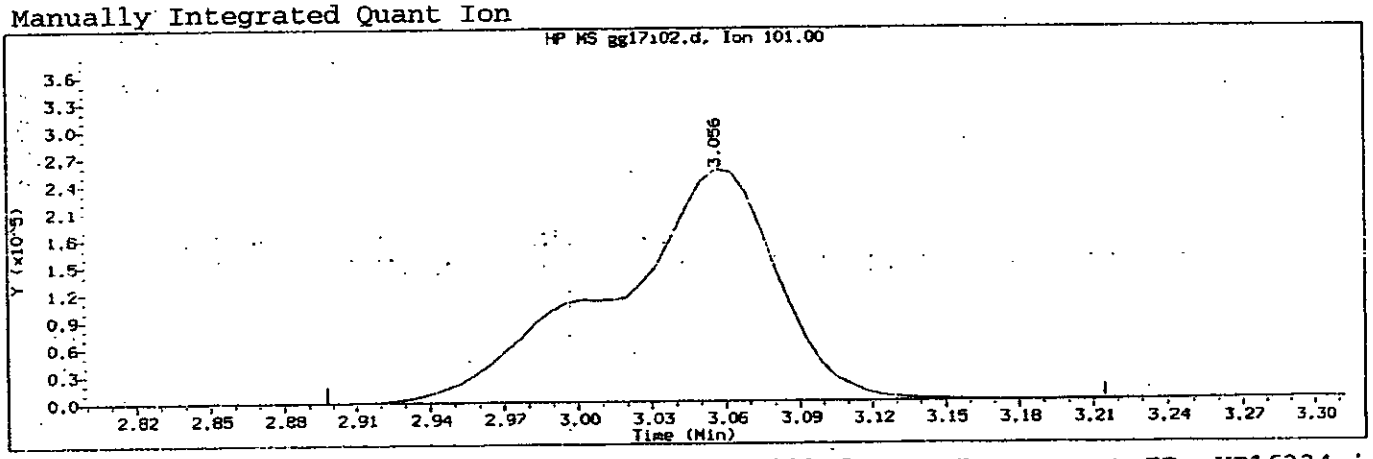
RAD36 8890

Digitally signed by Jason M. Long
on 08/17/2010 at 14:53.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i02.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 12:23 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 14:37
Date, time and analyst ID of latest file update: 17-Aug-2010 14:37 jml01693

Sample Name: VSTD010 Lab Sample ID: VSTD010

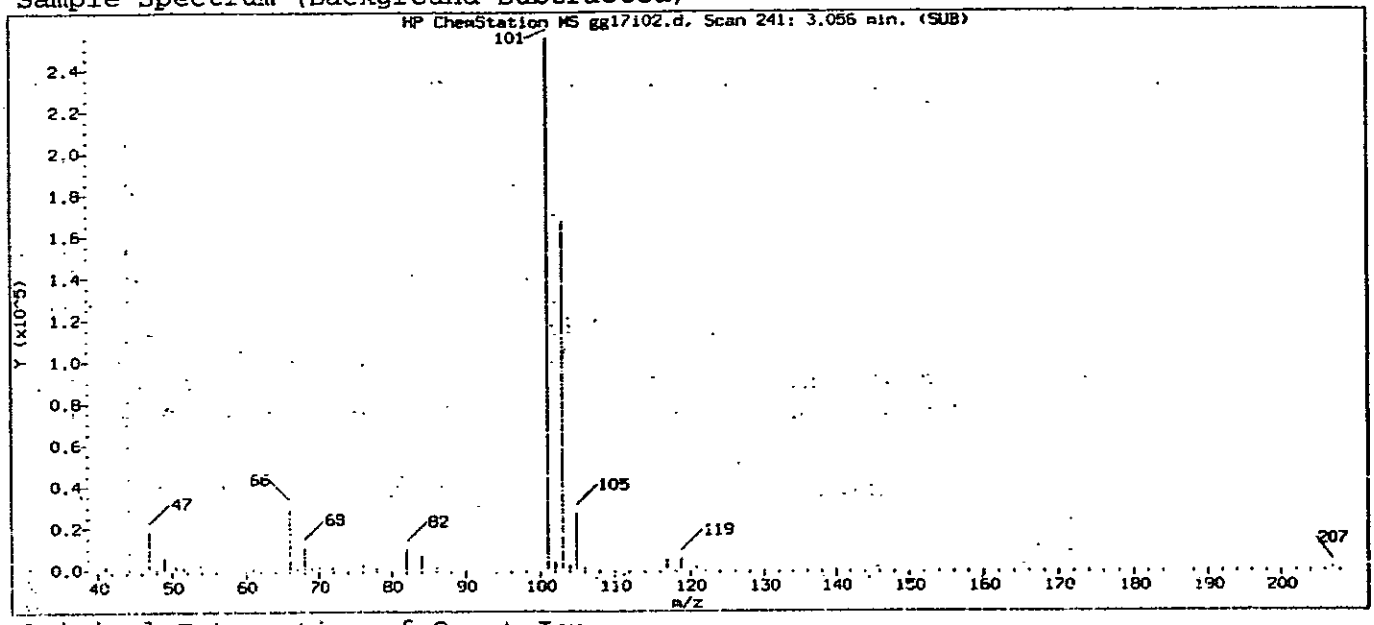
Compound Number	: 15		
Compound Name	: Trichlorofluoromethane		
Scan Number	: 241		
Retention Time (minutes)	: 3.056		
Quant Ion	: 101.00		
Area (flag)	: 1200446M		
On-Column Amount (ng)	: 9.3644		
Integration start scan	: 214	Integration stop scan:	266
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

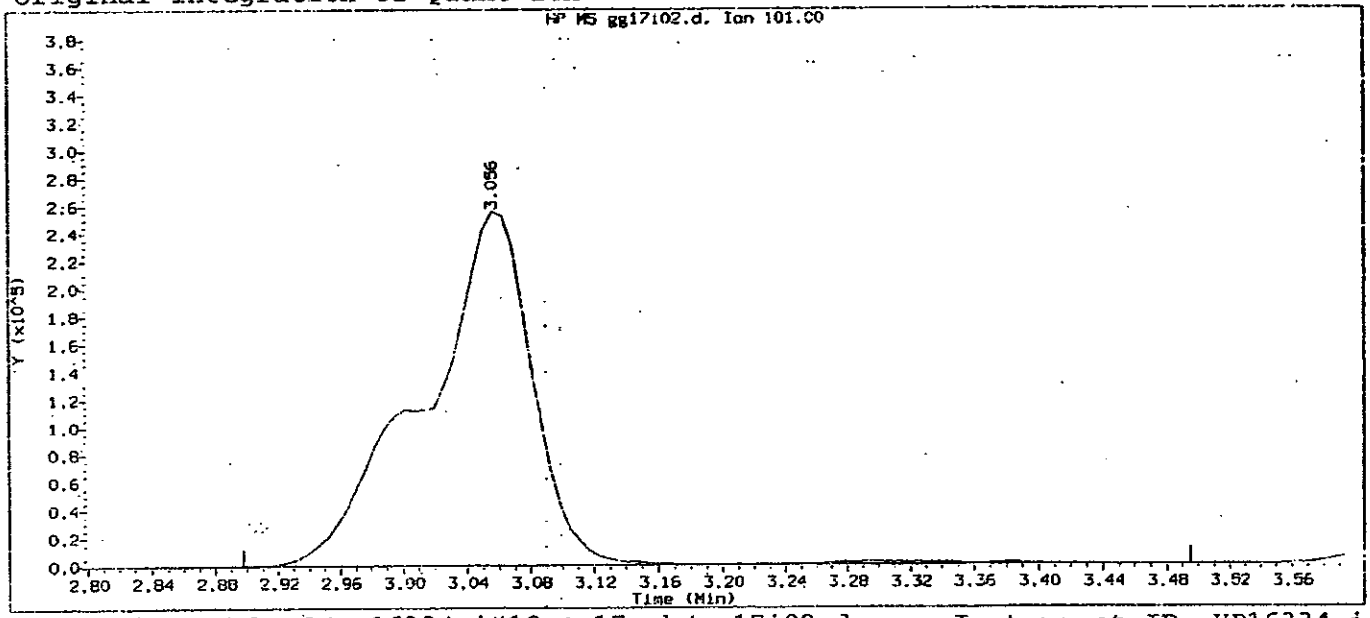
Analyst responsible for change: Digitally signed by Jason M. Long on 08/17/2010 at 14:53. Target 3.5 esignature user ID: jml01693

GC/MS audit/management approval: 8/18/10 RAD36 0099

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i02.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 12:23 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 12:41
Date, time and analyst ID of latest file update: 17-Aug-2010 12:41 jml01693

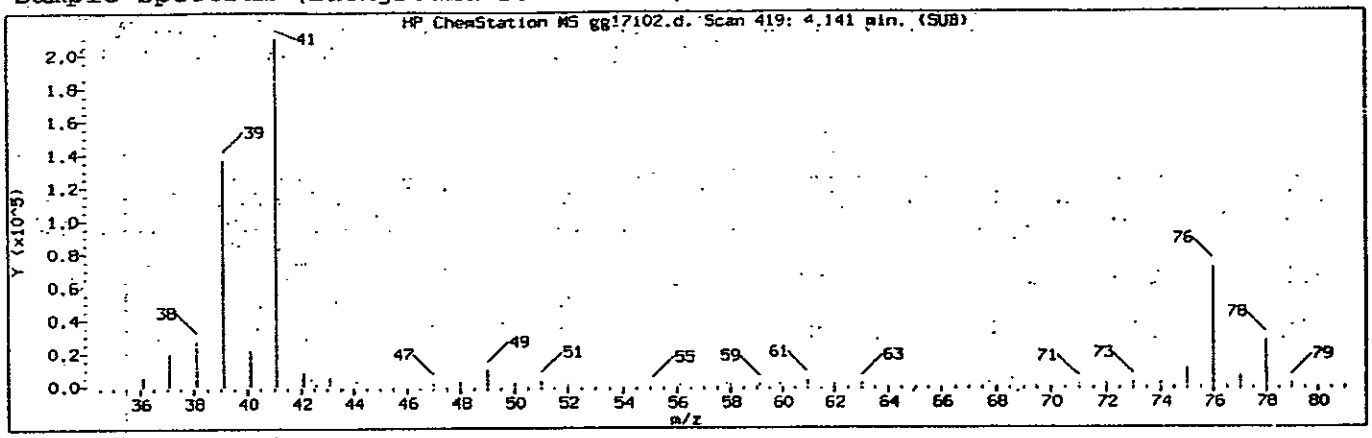
Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number	: 15		
Compound Name	: Trichlorofluoromethane		
Scan Number	: 241		
Retention Time (minutes)	: 3.056		
Quant Ion	: 101.00		
Area	: 1217038		
On-column Amount (ng)	: 9.8284		
Integration start scan	: 214	Integration stop scan:	312
Y at integration start	: 0	Y at integration end:	0

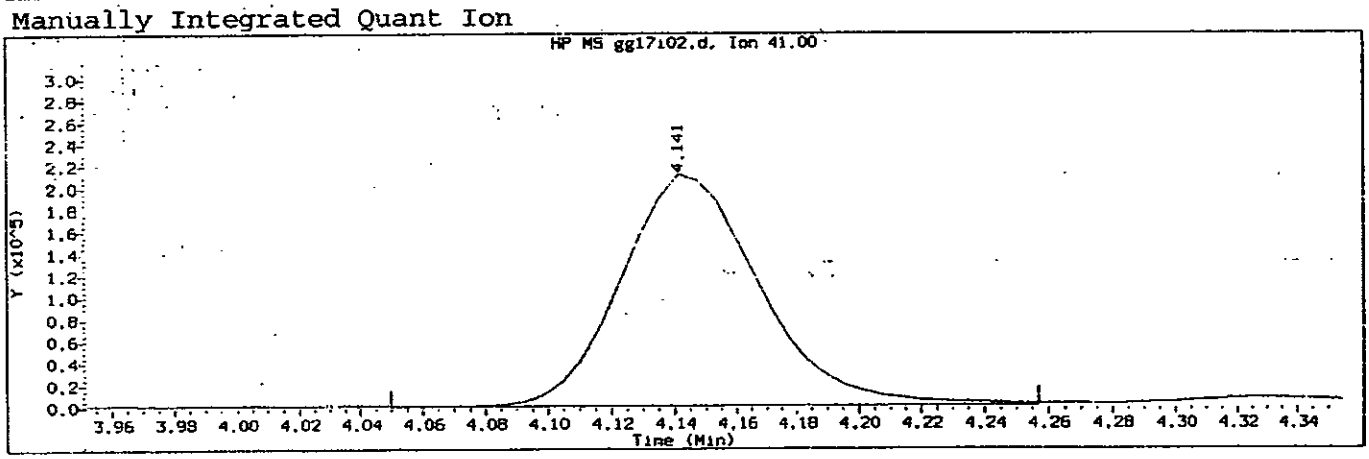
RAD36 0100

Digitally signed by Jason M. Long on 08/17/2010 at 14:53.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i02.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 12:23 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 14:37
Date, time and analyst ID of latest file update: 17-Aug-2010 14:37 jml01693

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number	: 32		
Compound Name	: Allyl Chloride		
Scan Number	: 419		
Retention Time (minutes)	: 4.141		
Quant Ion	: 41.00		
Area (flag)	: 652929M		
On-Column Amount (ng)	: 9.9125		
Integration start scan	: 403	Integration stop scan:	437
Y at integration start	: 563	Y at integration end:	563

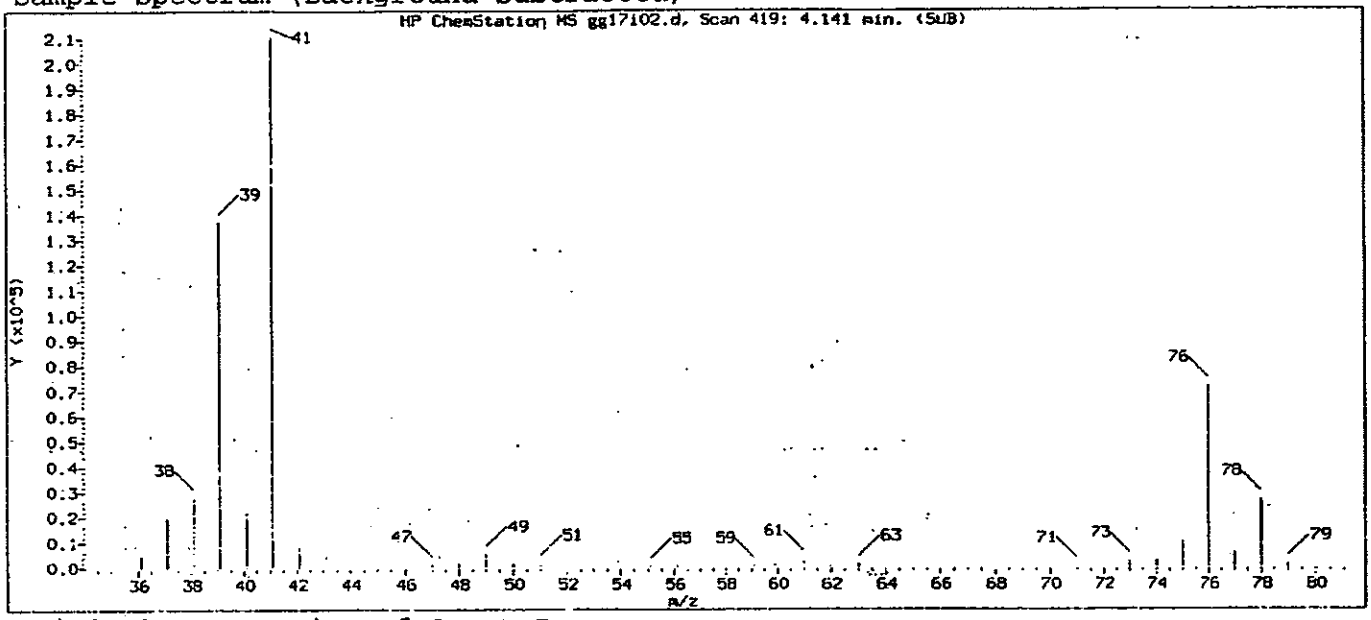
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long
on 08/17/2010 at 14:53.
Target 3.5 esignature user ID: jml01693

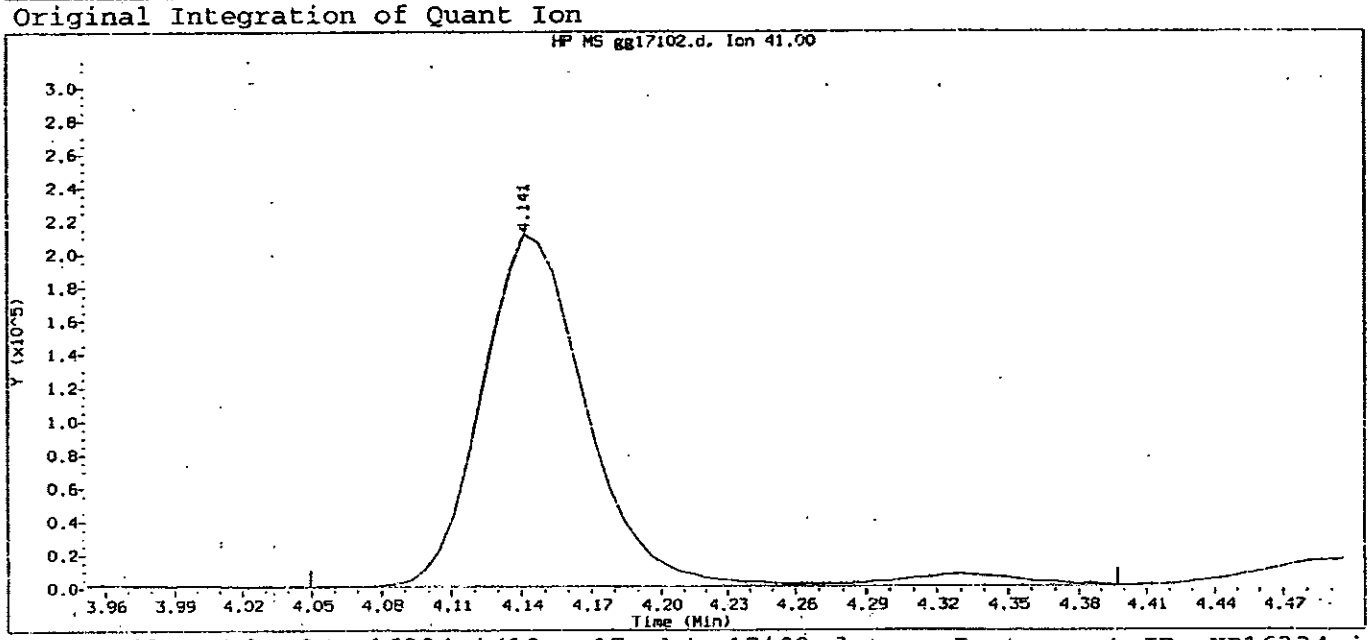
GC/MS audit/management approval: _____ 8/18/10

RAD36 0101

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i02.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 12:23 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 12:41
Date, time and analyst ID of latest file update: 17-Aug-2010 12:41 jml01693

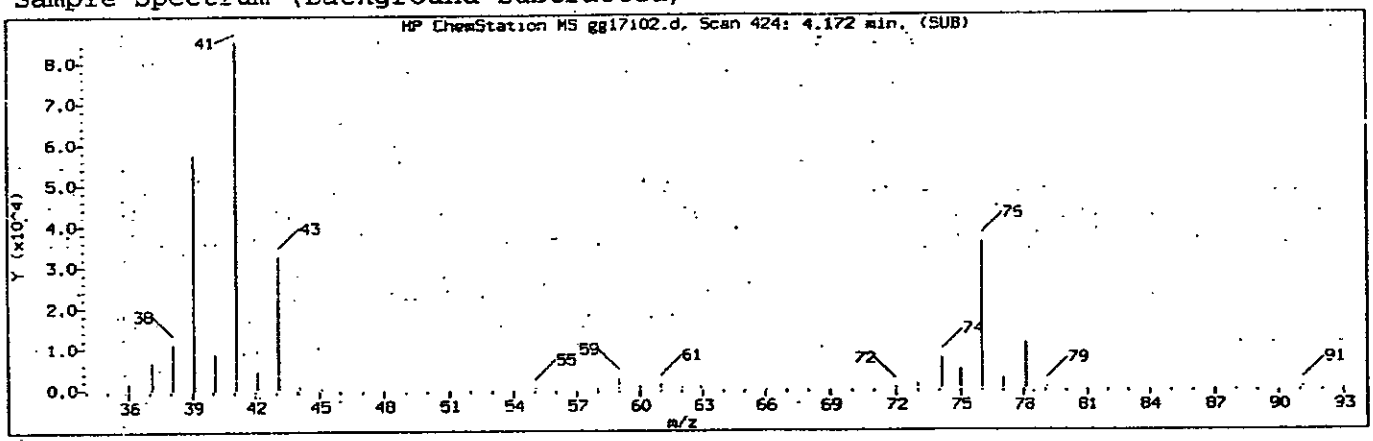
Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number	: 32		
Compound Name	: Allyl Chloride		
Scan Number	: 419		
Retention Time (minutes)	: 4.141		
Quant Ion	: 41.00		
Area	: 682548		
On-column Amount (ng)	: 9.7536		
Integration start scan	: 403	Integration stop scan:	460
Y at integration start	: 563	Y at integration end:	563

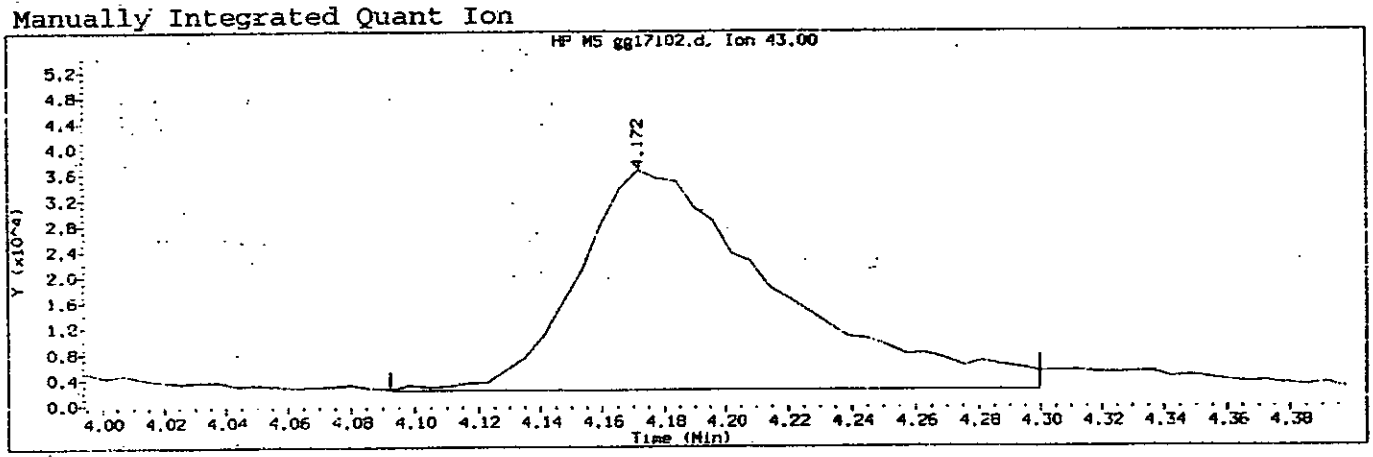
RAD36 0102

Digitally signed by Jason M. Long on 08/17/2010 at 14:53.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i02.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 12:23 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 14:37
Date, time and analyst ID of latest file update: 17-Aug-2010 14:37 jml01693

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number	: 33		
Compound Name	: Methyl Acetate		
Scan Number	: 424		
Retention Time (minutes)	: 4.172		
Quant Ion	: 43.00		
Area (flag)	: 151879M		
On-Column Amount (ng)	: 10.0949		
Integration start scan	: 410	Integration stop scan:	444
Y at integration start	: 2282	Y at integration end:	2282

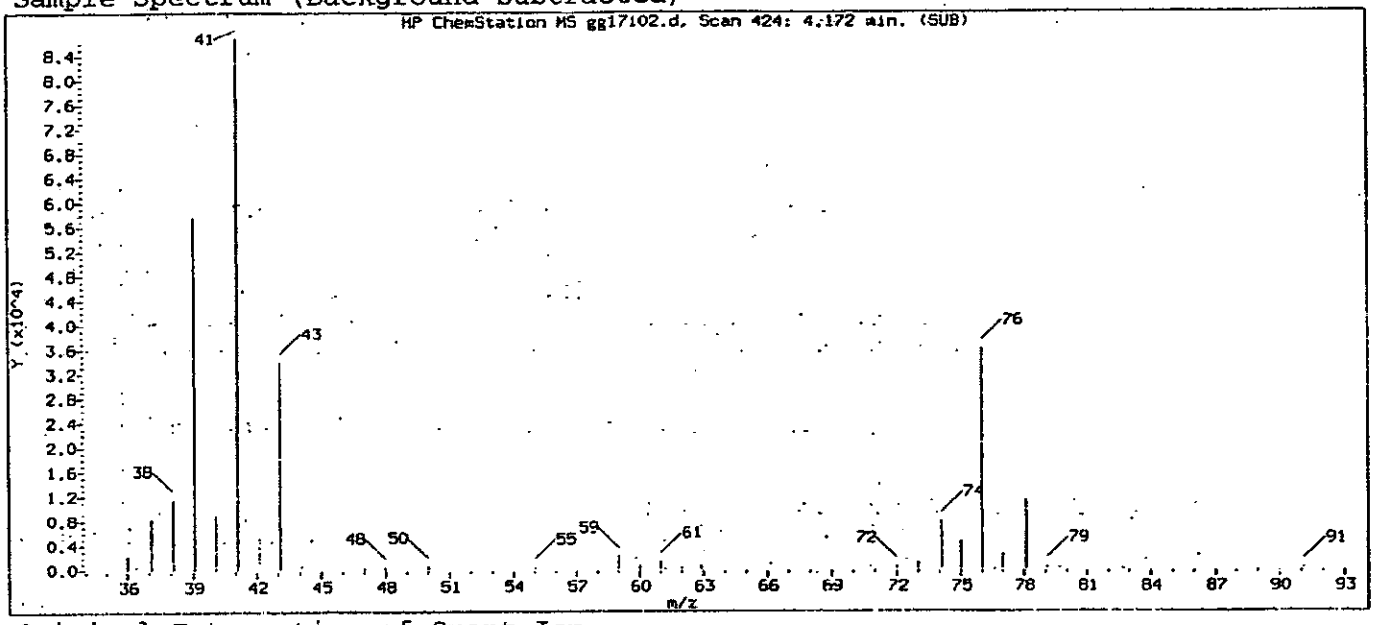
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long
on 08/17/2010 at 14:53.
Target 3.5 esignature user ID: jml01693

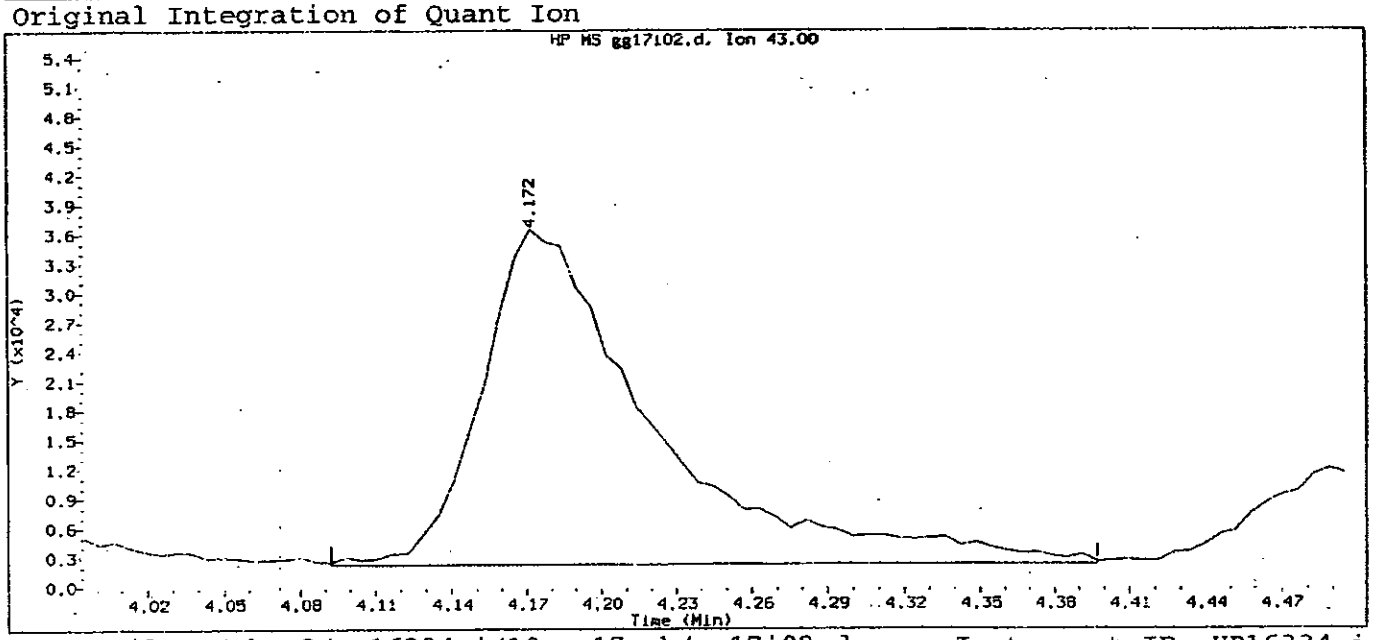
GC/MS audit/management approval: 8/18/10

RnD36 0103

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i02.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 12:23 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 12:41
Date, time and analyst ID of latest file update: 17-Aug-2010 12:41 jml01693

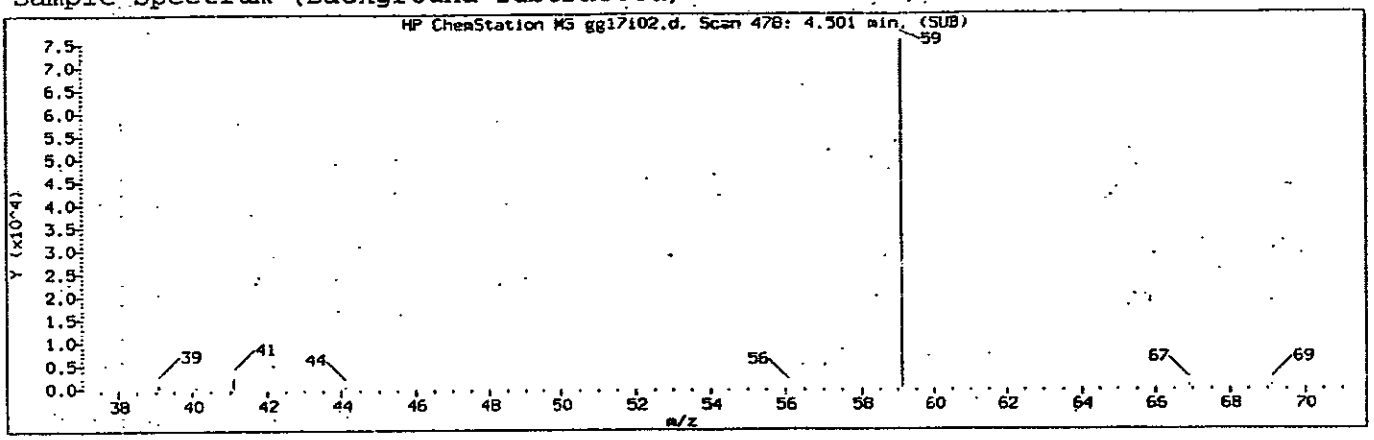
Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number	: 33		
Compound Name	: Methyl Acetate		
Scan Number	: 424		
Retention Time (minutes)	: 4.172		
Quant Ion	: 43.00		
Area	: 162220		
On-column Amount (ng)	: 9.1944		
Integration start scan	: 410	Integration stop scan:	460
Y at integration start	: 2282	Y at integration end:	2282

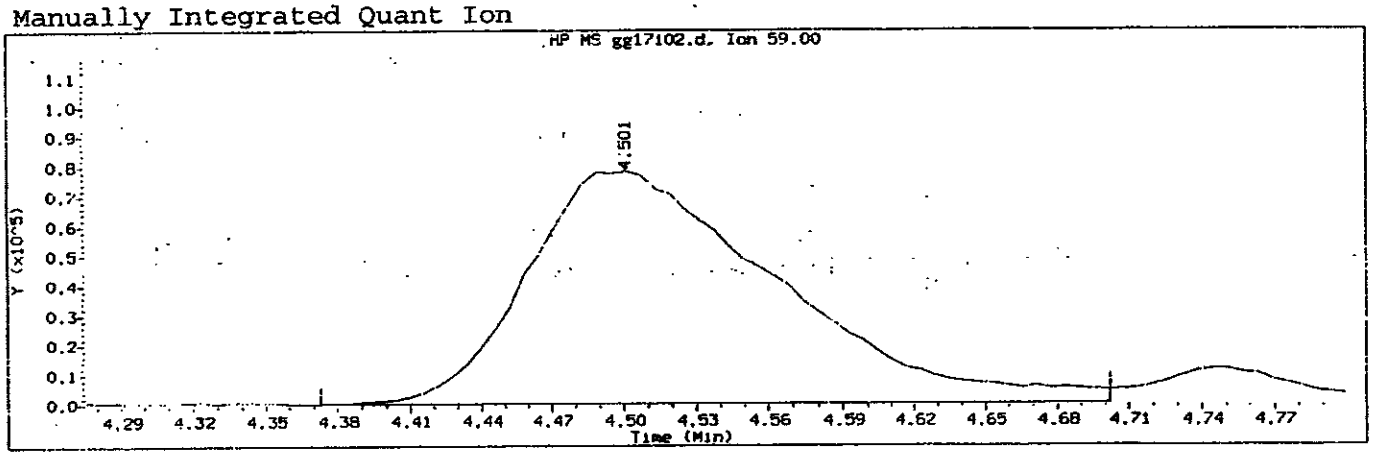
RAD36 0104

Digitally signed by Jason M. Long on 08/17/2010 at 14:53.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i02.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 12:23 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 14:37
Date, time and analyst ID of latest file update: 17-Aug-2010 14:37 jml01693

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number	: 38		
Compound Name	: t-Butyl Alcohol		
Scan Number	: 478		
Retention Time (minutes)	: 4.501		
Quant Ion	: 59.00		
Area (flag)	: 566449M		
On-Column Amount (ng)	: 195.2913		
Integration start scan	: 456	Integration stop scan:	510
Y at integration start	: 0	Y at integration end:	0

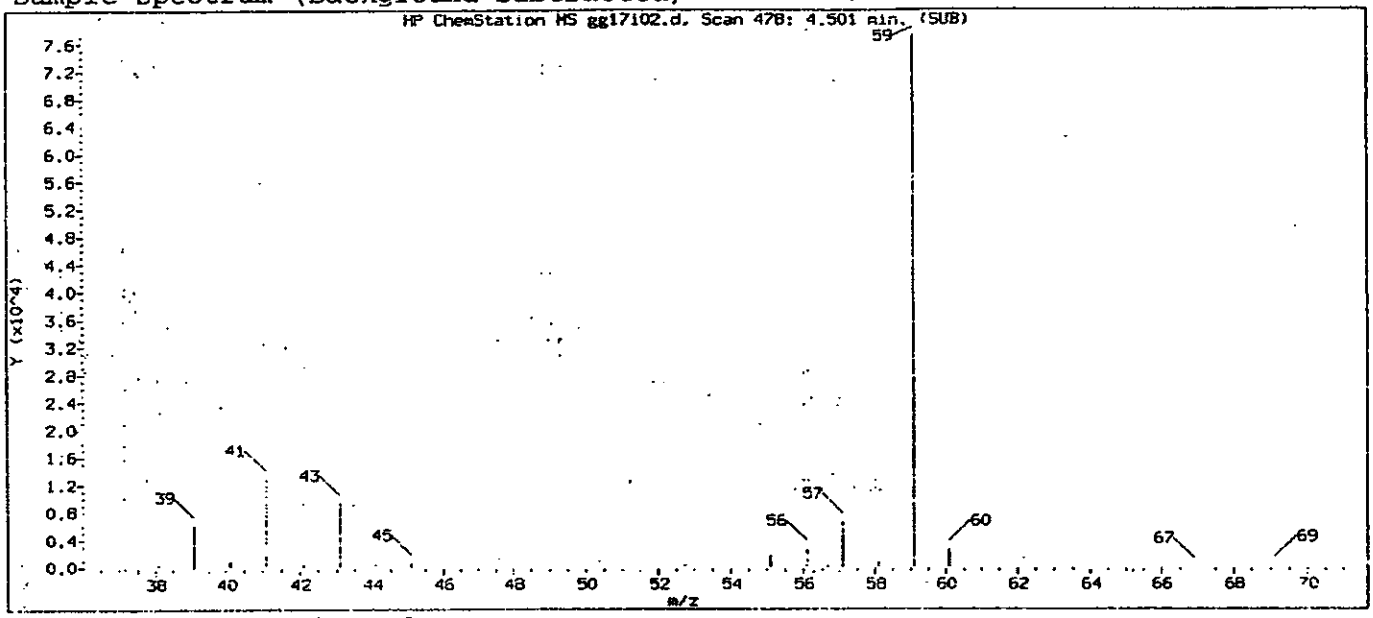
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long
on 08/17/2010 at 14:53.
Target 3.5 esignature user ID: jml01693

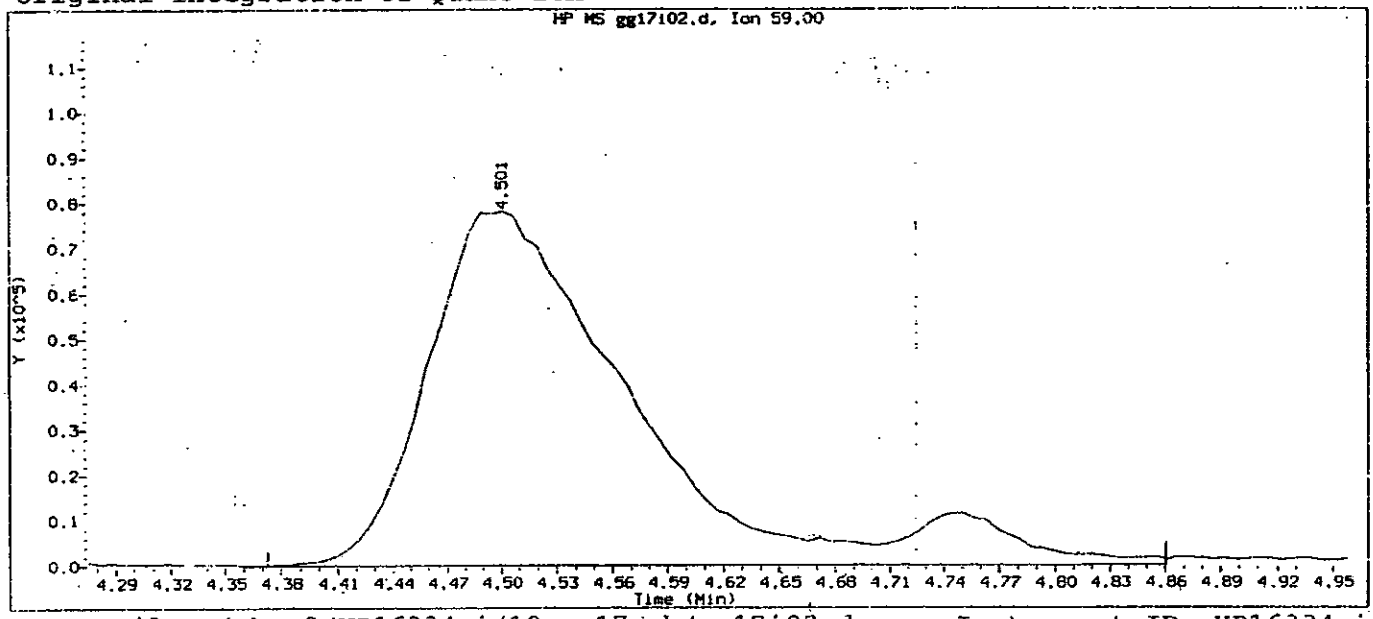
GC/MS audit/management approval: _____ 8/18/10

RAD36 0185

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i02.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 12:23 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 12:41
Date, time and analyst ID of latest file update: 17-Aug-2010 12:41 jml01693

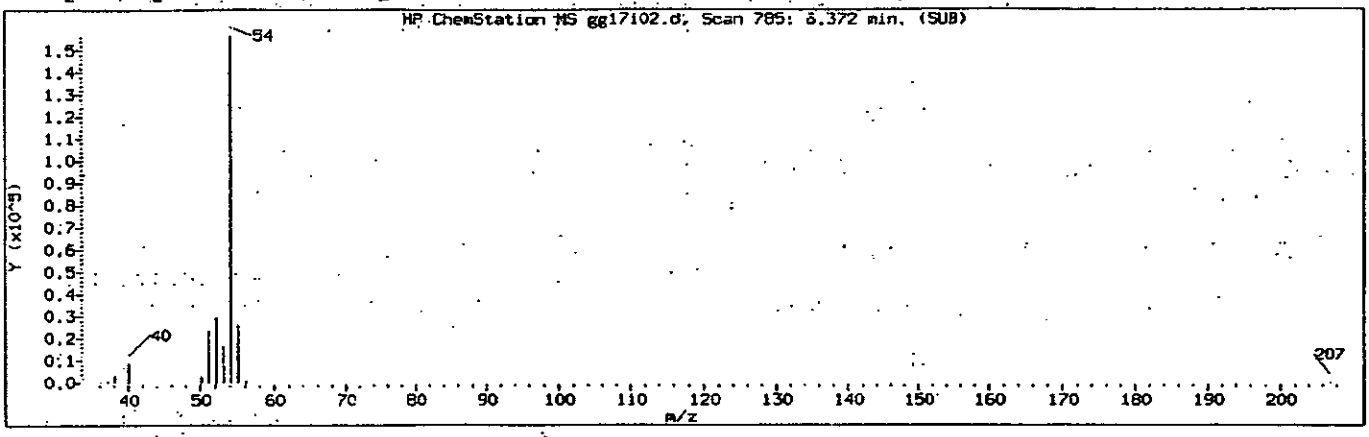
Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number	: 38		
Compound Name	: t-Butyl Alcohol		
Scan Number	: 478		
Retention Time (minutes)	: 4.501		
Quant Ion	: 59.00		
Area	: 616236		
On-column Amount (ng)	: 205.9434		
Integration start scan	: 456	Integration stop scan:	536
Y at integration start	: 0	Y at integration end:	0

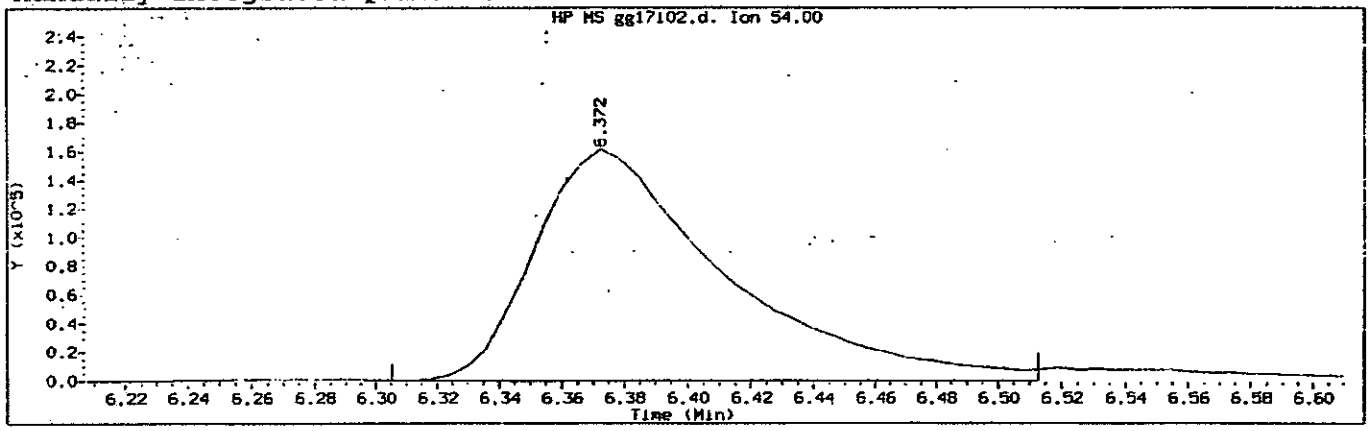
RAD36 0186

Digitally signed by Jason M. Long on 08/17/2010 at 14:53.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i02.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 12:23 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 14:37
Date, time and analyst ID of latest file update: 17-Aug-2010 14:37 jml01693

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number	: 53		
Compound Name	: Propionitrile		
Scan Number	: 785		
Retention Time (minutes)	: 6.372		
Quant Ion	: 54.00		
Area (flag)	: 678967M		
On-Column Amount (ng)	: 201.0879		
Integration start scan	: 773	Integration stop scan:	807
Y at integration start	: 0	Y at integration end:	0

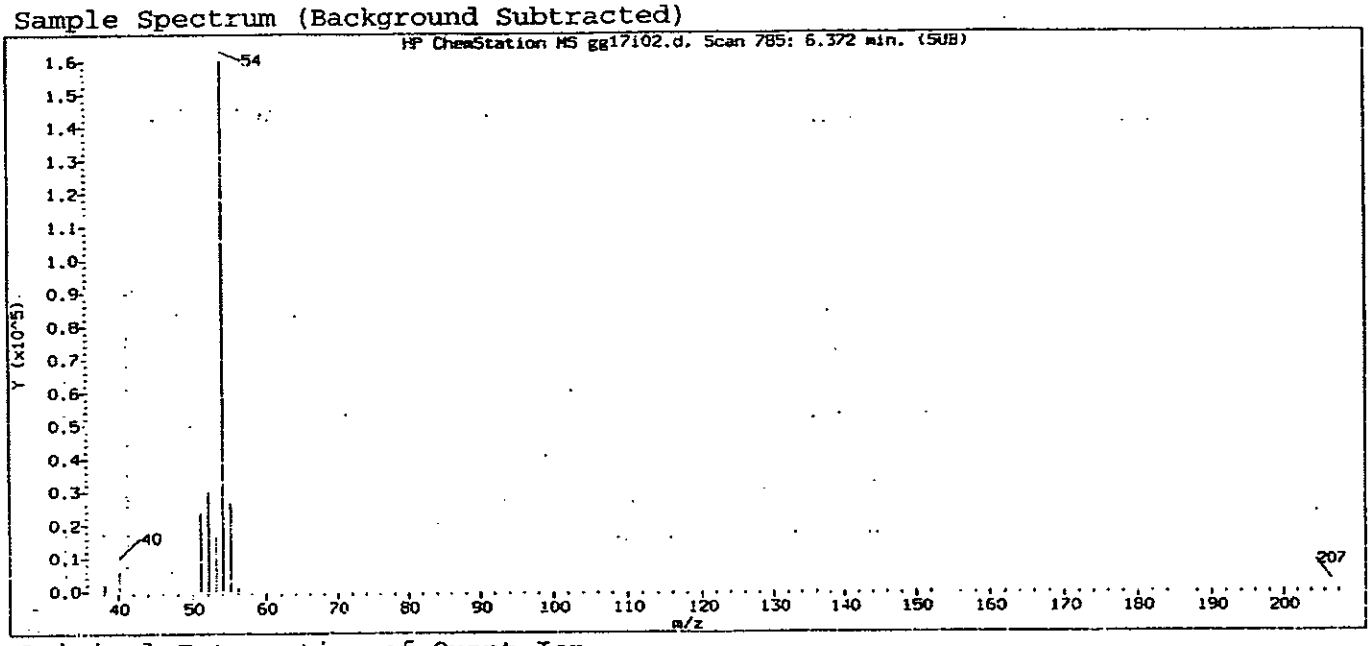
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long
on 08/17/2010 at 14:53.
Target 3.5 esignature user ID: jml01693

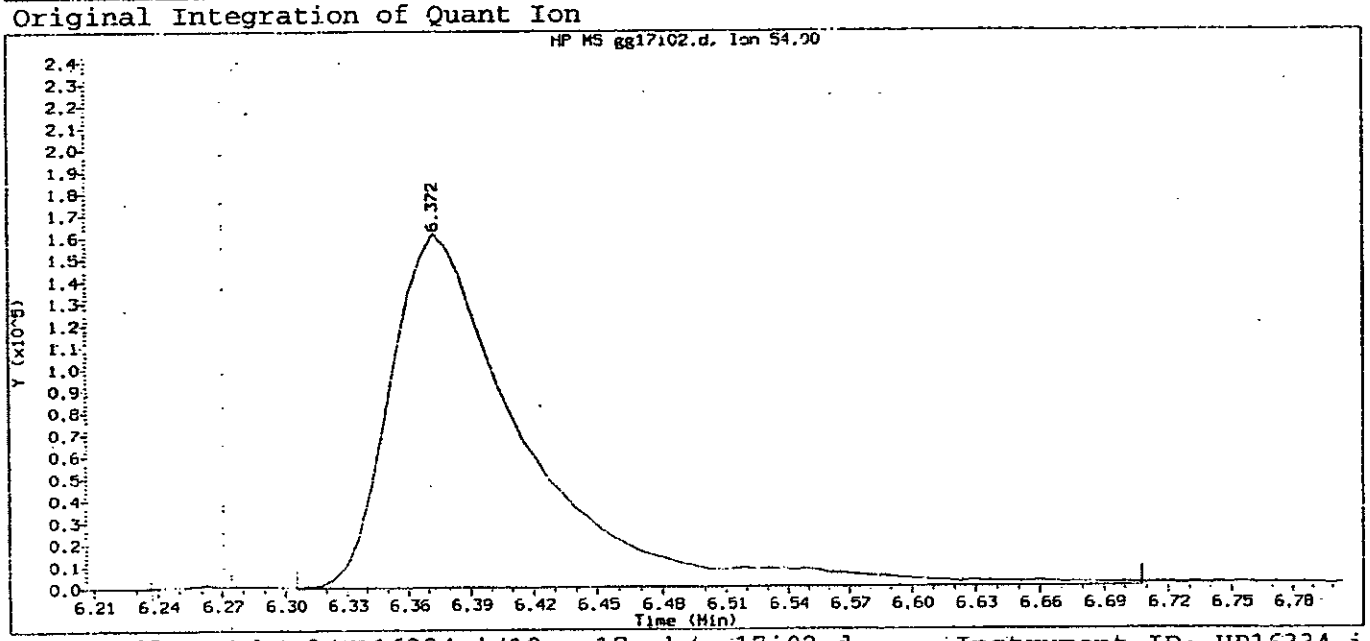
GC/MS audit/management approval: _____ 8/18/10

RAD36 0187

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i02.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 12:23 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 12:41
Date, time and analyst ID of latest file update: 17-Aug-2010 12:41 jml01693

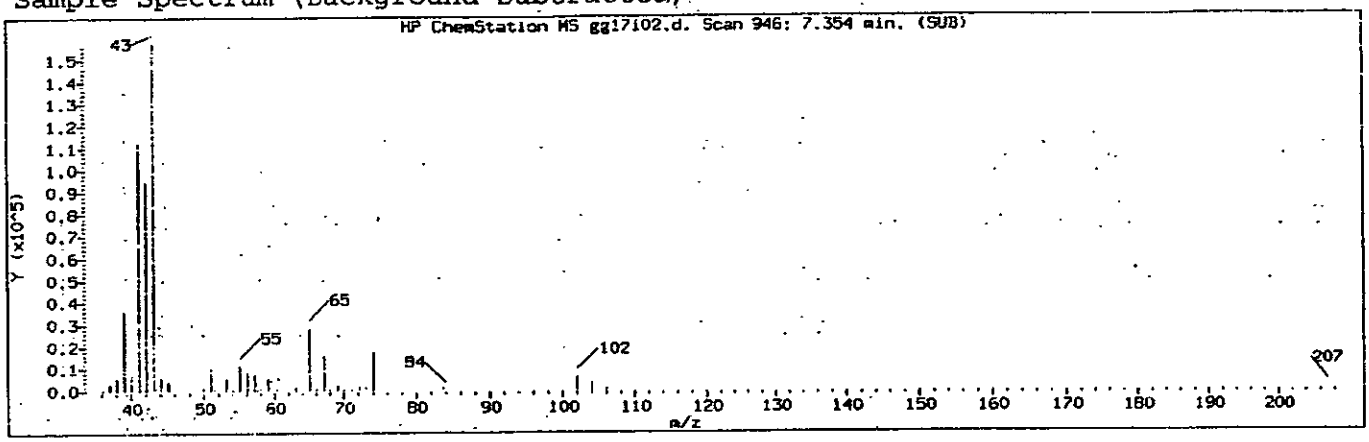
Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number	: 53		
Compound Name	: Propionitrile		
Scan Number	: 785		
Retention Time (minutes)	: 6.372		
Quant Ion	: 54.00		
Area	: 727061		
On-column Amount (ng)	: 195.1574		
Integration start scan	: 773	Integration stop scan:	839
Y at integration start	: 0	Y at integration end:	0

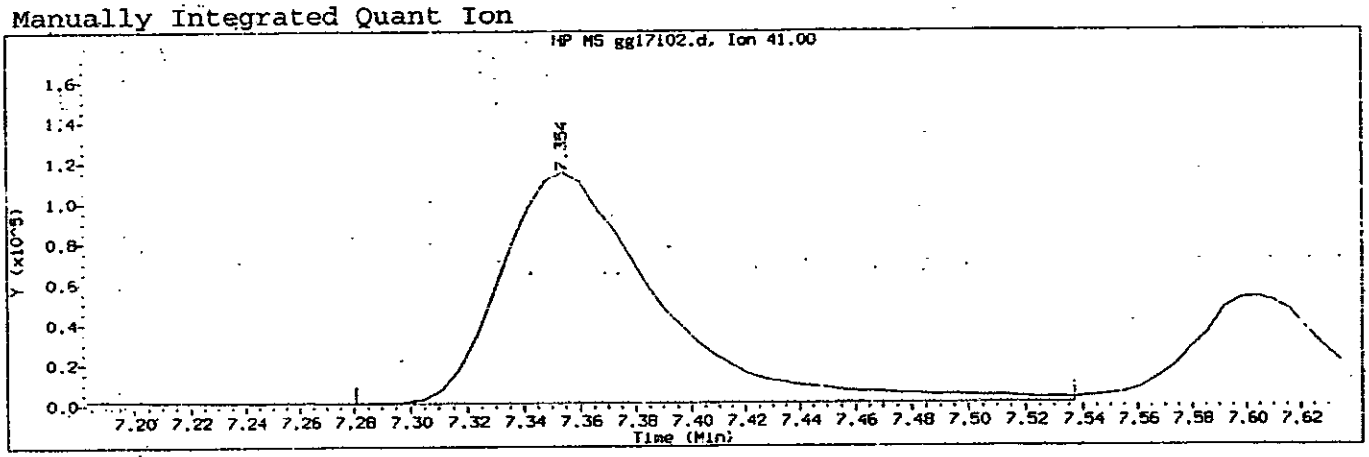
RAD36 6188

Digitally signed by Jason M. Long on 08/17/2010 at 14:53.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i02.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 12:23 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 14:37
Date, time and analyst ID of latest file update: 17-Aug-2010 14:37 jml01693

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number	: 67		
Compound Name	: Isobutyl Alcohol		
Scan Number	: 946		
Retention Time (minutes)	: 7.354		
Quant Ion	: 41.00		
Area (flag)	: 441202M		
On-Column Amount (ng)	: 498.0918		
Integration start scan	: 933	Integration stop scan:	975
Y at integration start	: 668	Y at integration end:	668

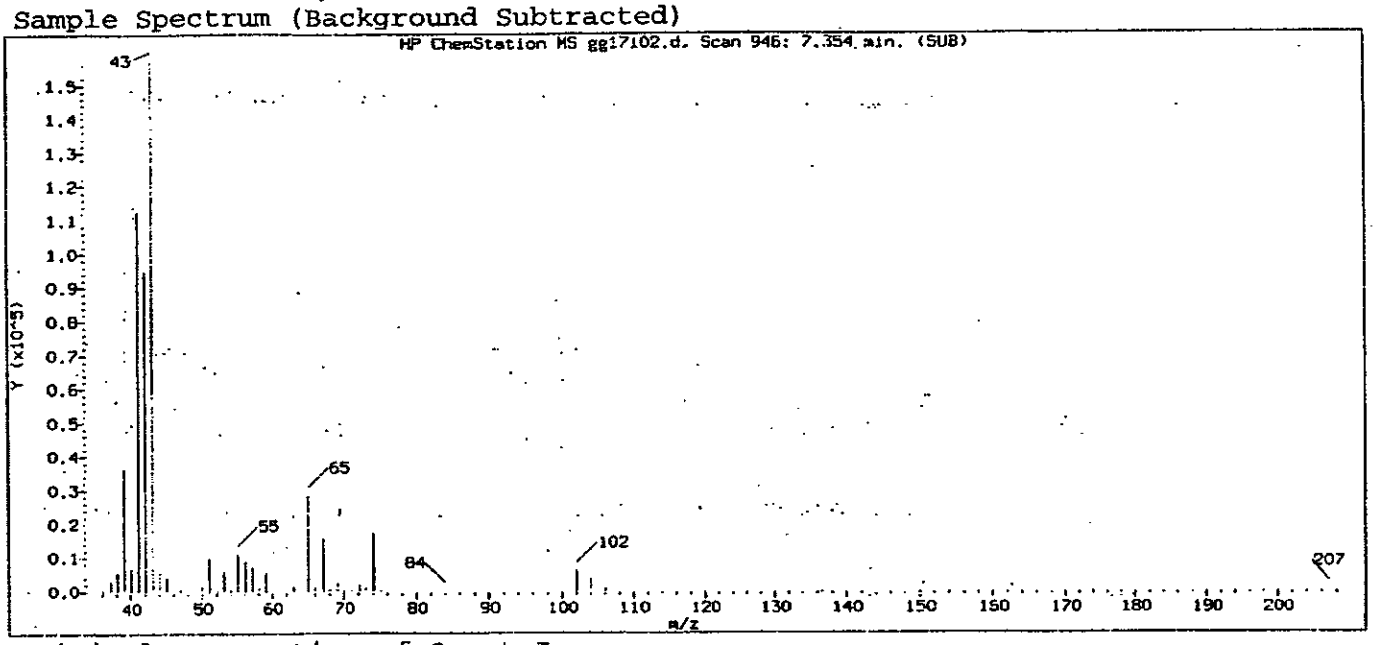
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long
on 08/17/2010 at 14:53.
Target 3.5 esignature user ID: jml01693

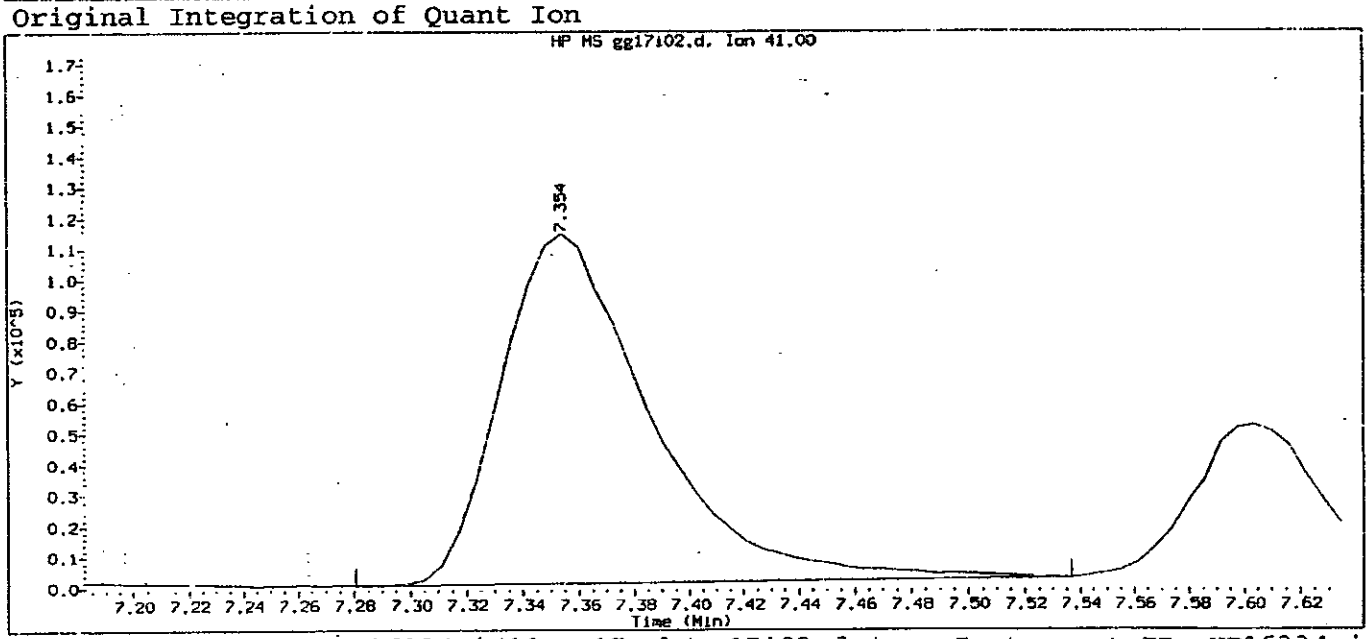
GC/MS audit/management approval: _____ 8/18/10

RAD36 0109

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i02.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 12:23 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 12:41
Date, time and analyst ID of latest file update: 17-Aug-2010 12:41 jml01693

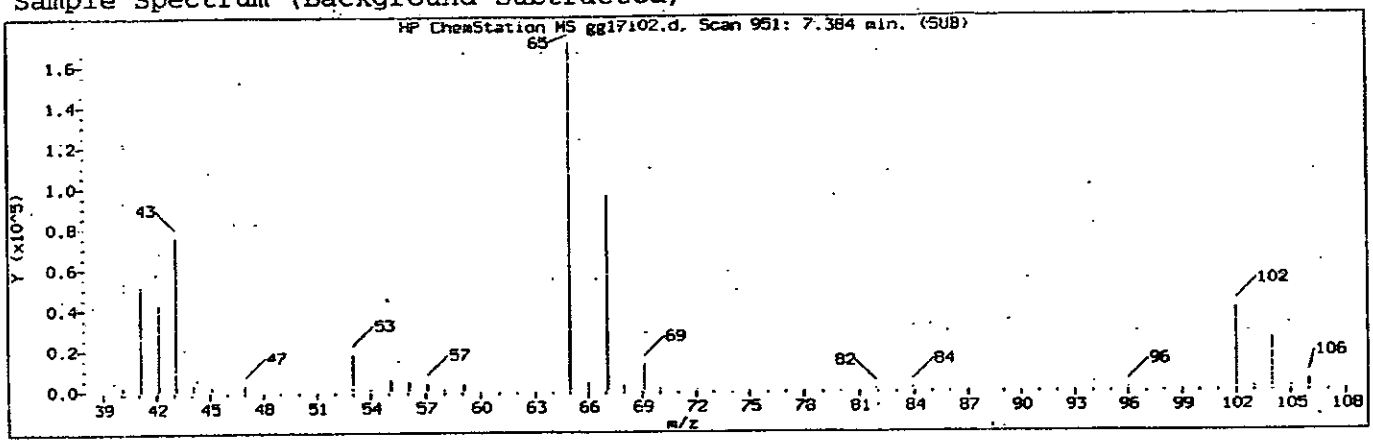
Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number	: 67		
Compound Name	: Isobutyl Alcohol		
Scan Number	: 946		
Retention Time (minutes)	: 7.354		
Quant Ion	: 41.00		
Area	: 422433		
On-column Amount (ng)	: 476.2019		
Integration start scan	: 933	Integration stop scan:	975
Y at integration start	: 704	Y at integration end:	3014

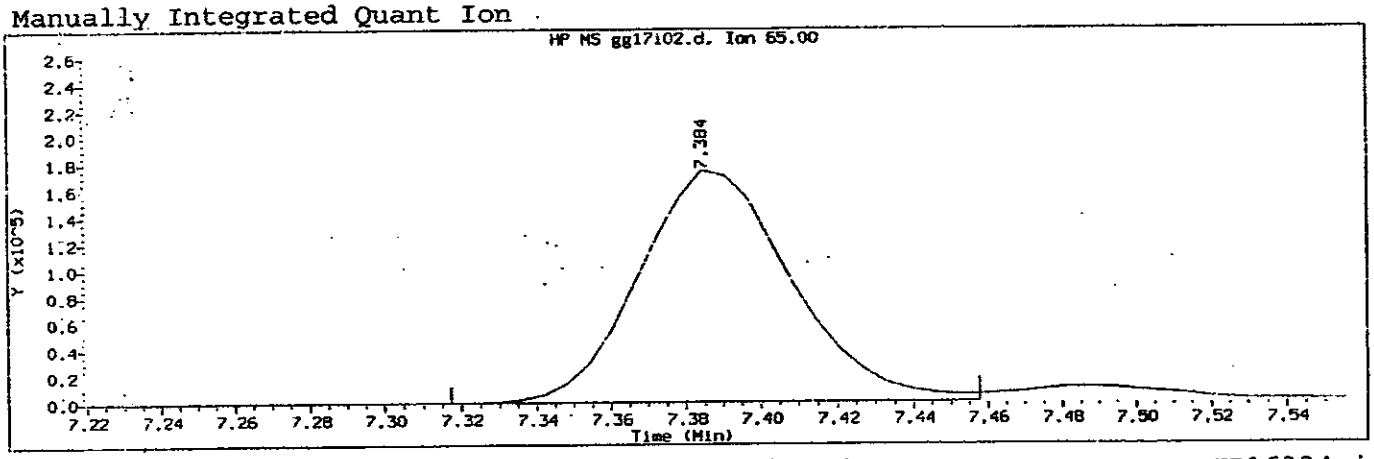
RAD36 8/18

Digitally signed by Jason M. Long on 08/17/2010 at 14:53.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i02.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 12:23 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 14:37
Date, time and analyst ID of latest file update: 17-Aug-2010 14:37 jml01693

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number	: 69		
Compound Name	: 1,2-Dichloroethane-d4(mz65)		
Scan Number	: 951		
Retention Time (minutes)	: 7.384		
Quant Ion	: 65.00		
Area (flag)	: 490867M		
On-Column Amount (ng)	: 10.0440		
Integration start scan	: 939	Integration stop scan:	962
Y at integration start	: 0	Y at integration end:	0

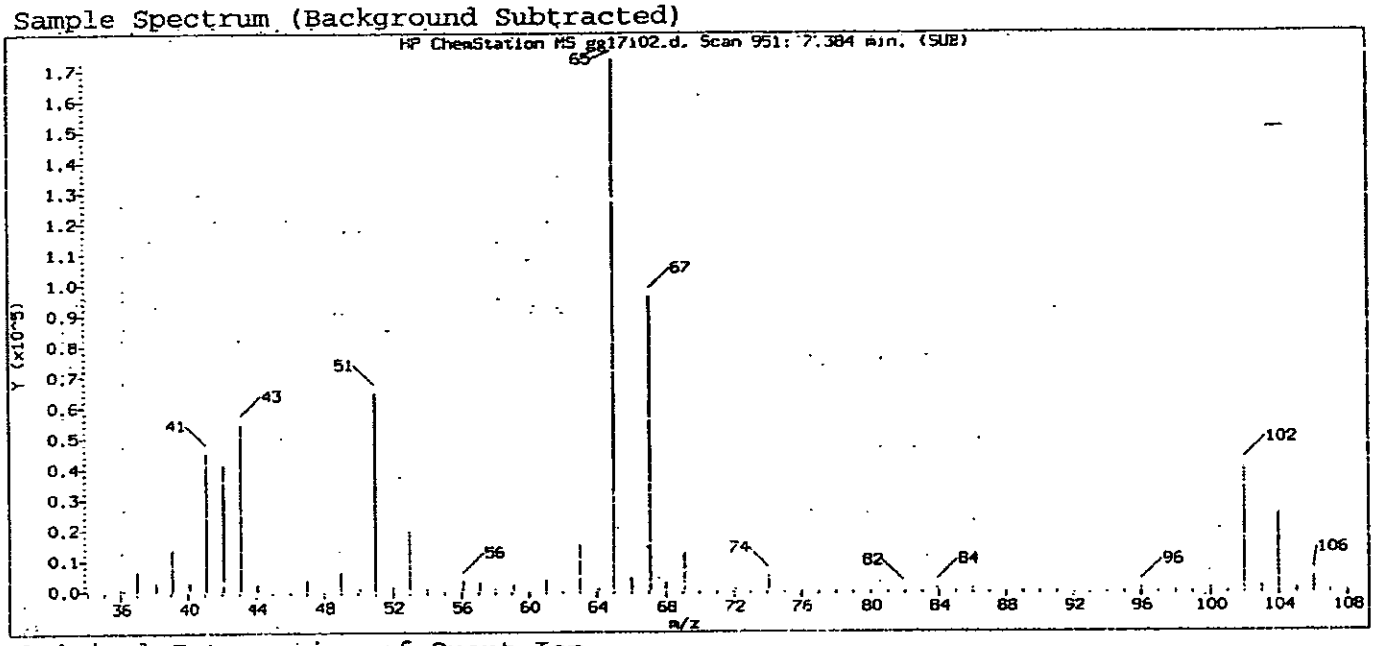
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long
on 08/17/2010 at 14:53.
Target 3.5 esignature user ID: jml01693

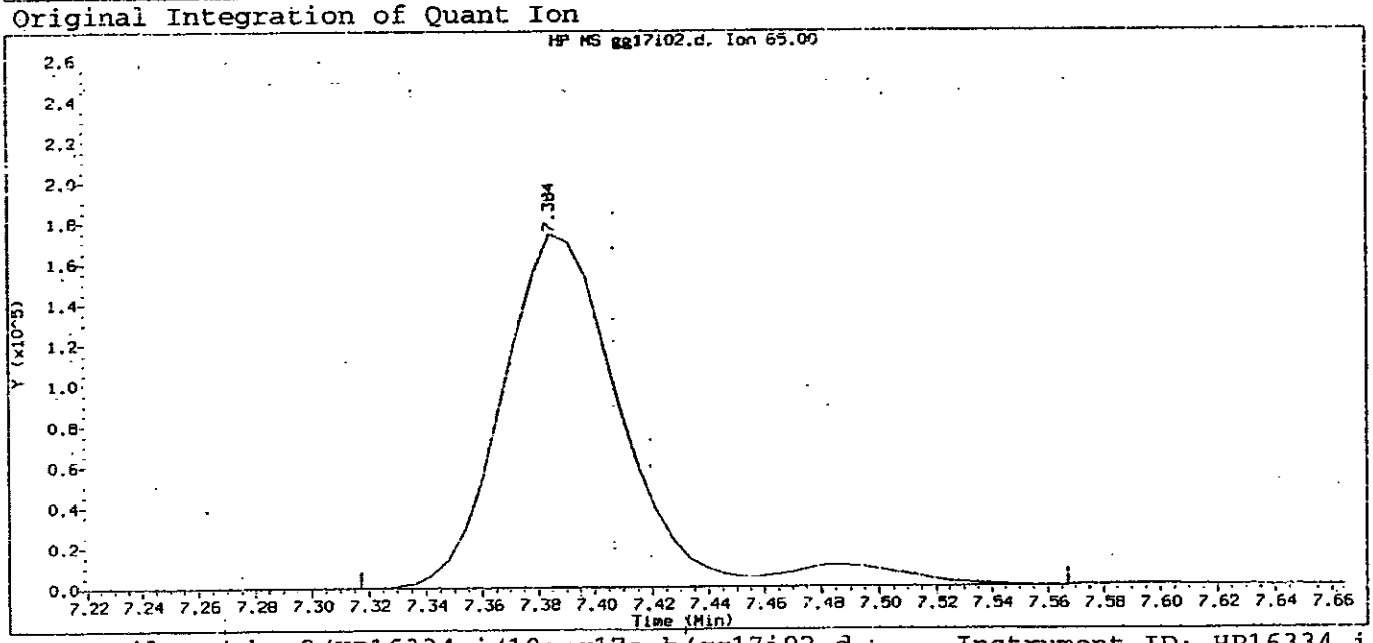
GC/MS audit/management approval: 8/18/10

RAD36 0111

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i02.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 12:23 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 12:41
Date, time and analyst ID of latest file update: 17-Aug-2010 12:41 jml01693

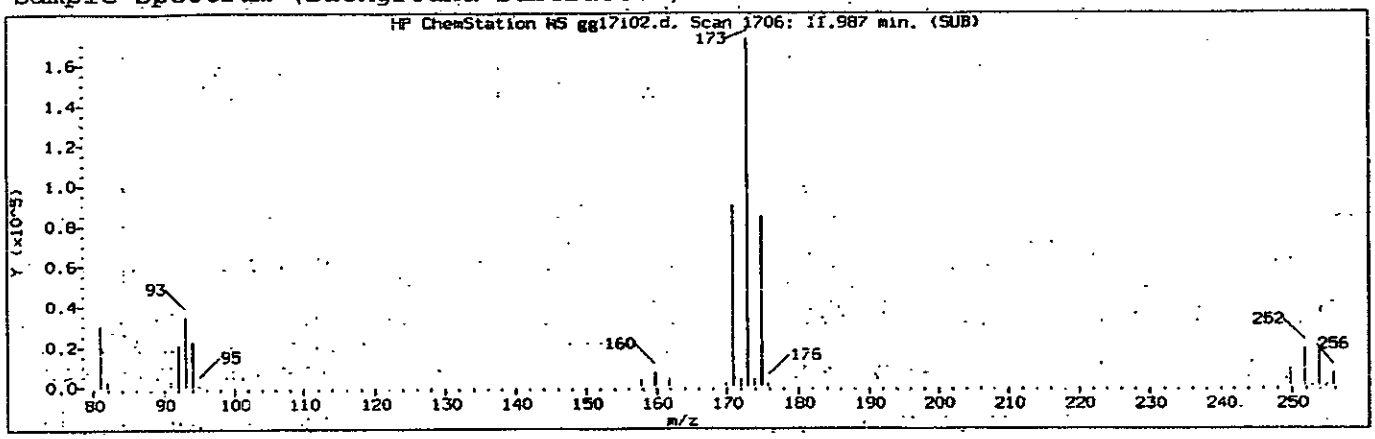
Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number	: 69		
Compound Name	: 1,2-Dichloroethane-d4(mz65)		
Scan Number	: 951		
Retention Time (minutes)	: 7.384		
Quant Ion	: 65.00		
Area	: 523032		
On-column Amount (ng)	: 10.4613		
Integration start scan	: 939	Integration stop scan:	980
Y at integration start	: 0	Y at integration end:	0

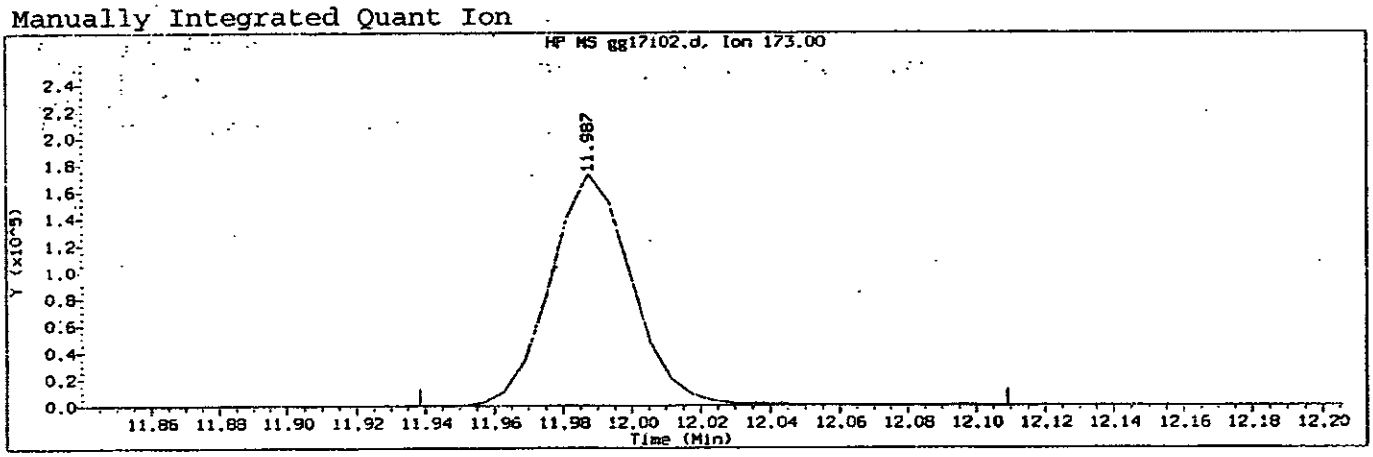
RAD36 0112

Digitally signed by Jason M. Long on 08/17/2010 at 14:53.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i02.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 12:23 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 14:37
Date, time and analyst ID of latest file update: 17-Aug-2010 14:37 jml01693

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number	: 120		
Compound Name	: Bromoform		
Scan Number	: 1706		
Retention Time (minutes)	: 11.987		
Quant Ion	: 173.00		
Area (flag)	: 285211M		
On-Column Amount (ng)	: 10.0392		
Integration start scan	: 1697	Integration stop scan:	1725
Y at integration start	: 0	Y at integration end:	0

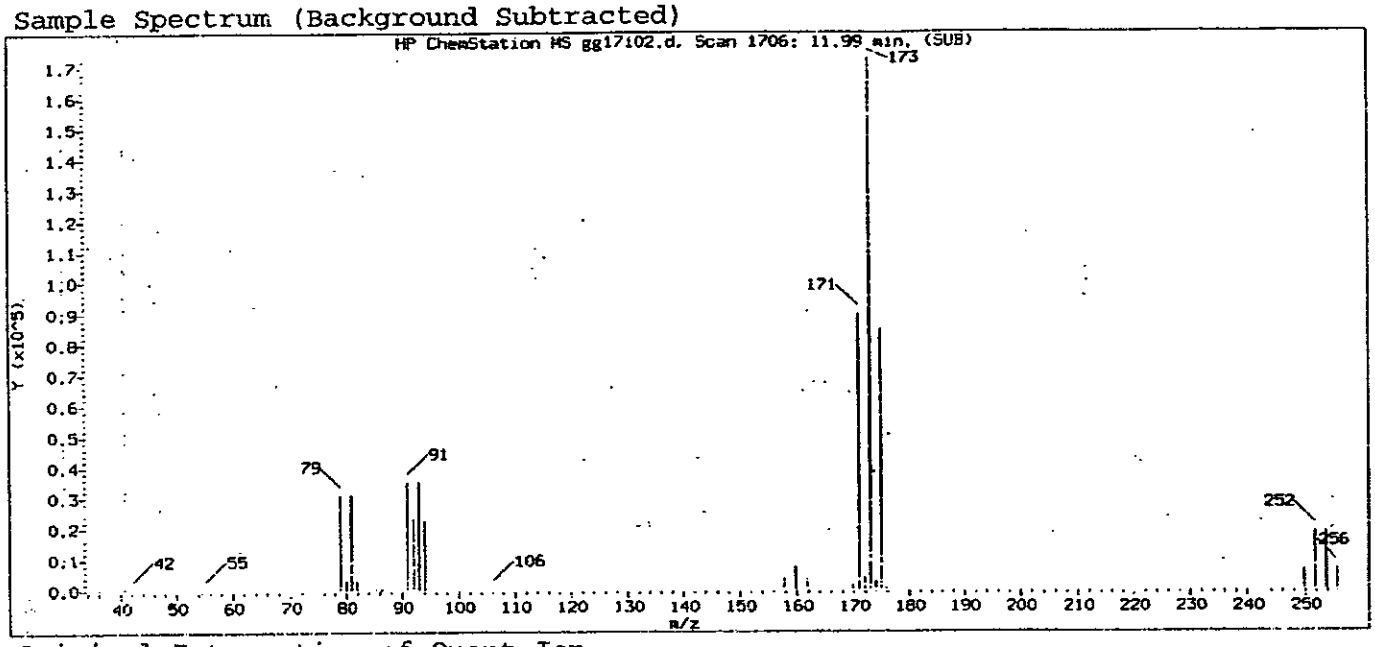
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long
on 08/17/2010 at 14:53.
Target 3.5 esignature user ID: jml01693

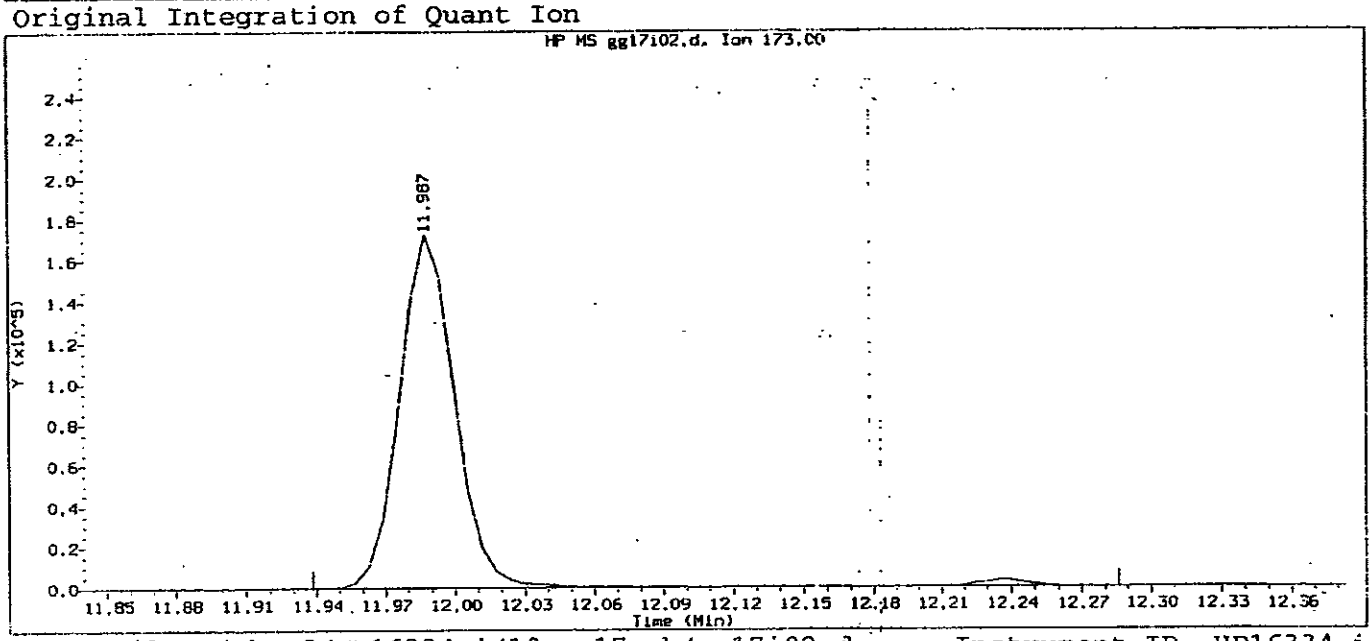
GC/MS audit/management approval: _____ 8/18/10

BAD36 0113

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i02.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 12:23 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 12:41
Date, time and analyst ID of latest file update: 17-Aug-2010 12:41 jml01693

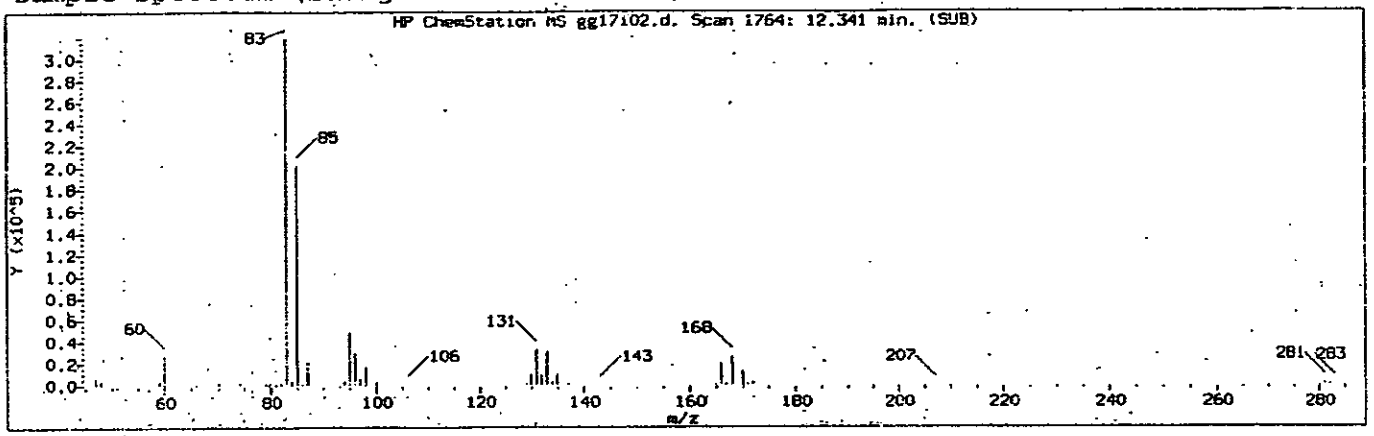
Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number	: 120
Compound Name	: Bromoform
Scan Number	: 1706
Retention Time (minutes)	: 11.987
Quant Ion	: 173.00
Area	: 289694
On-column Amount (ng)	: 9.5730
Integration start scan	: 1697
Integration stop scan	: 1754
Y at integration start	: 0
Y at integration end	: 0

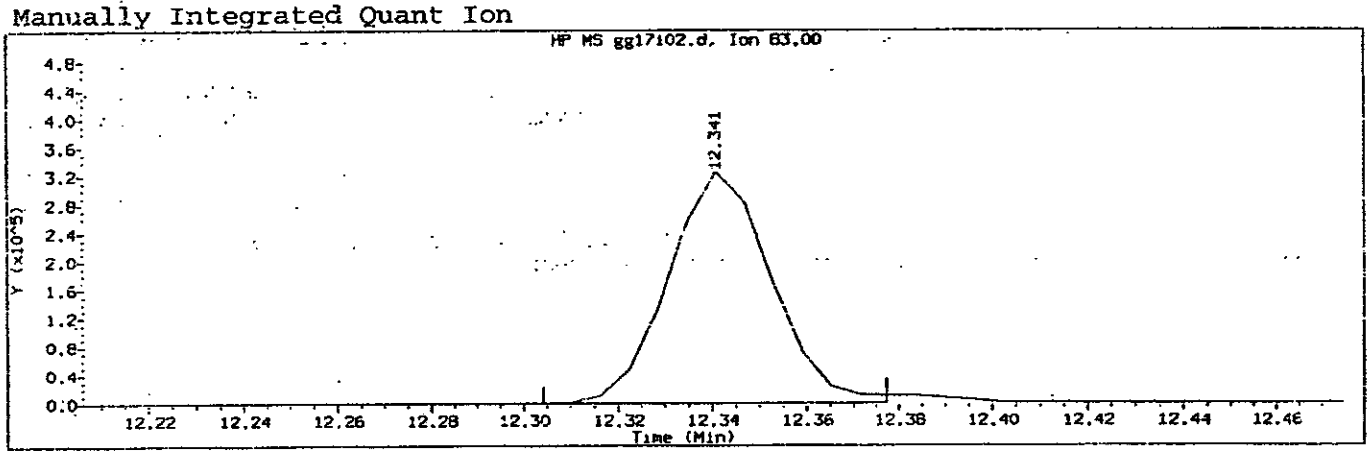
RAD36 8114

Digitally signed by Jason M. Long on 08/17/2010 at 14:53.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i02.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 12:23 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 14:37
Date, time and analyst ID of latest file update: 17-Aug-2010 14:37 jml01693

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number	: 128		
Compound Name	: 1,1,2,2-Tetrachloroethane		
Scan Number	: 1764		
Retention Time (minutes)	: 12.341		
Quant Ion	: 83.00		
Area (flag)	: 492006M		
On-Column Amount (ng)	: 10.2688		
Integration start scan	: 1757	Integration stop scan:	1769
Y at integration start	: 0	Y at integration end:	0

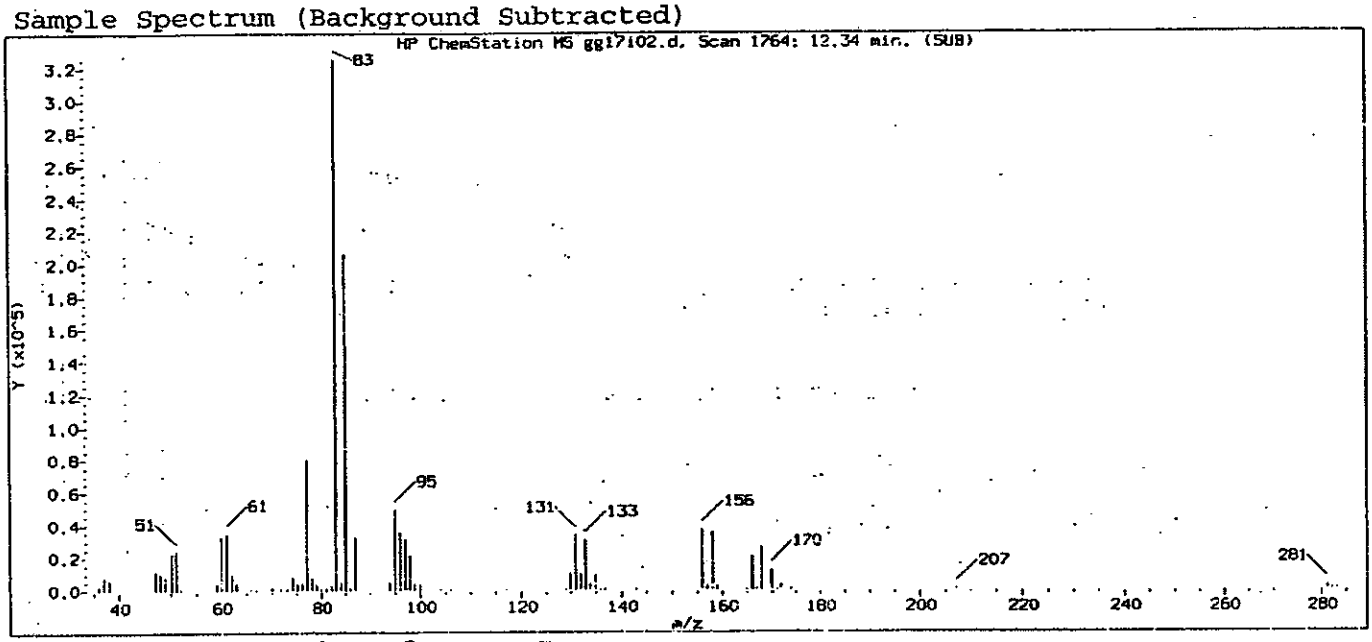
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long
on 08/17/2010 at 14:53.
Target 3.5 esignature user ID: jml01693

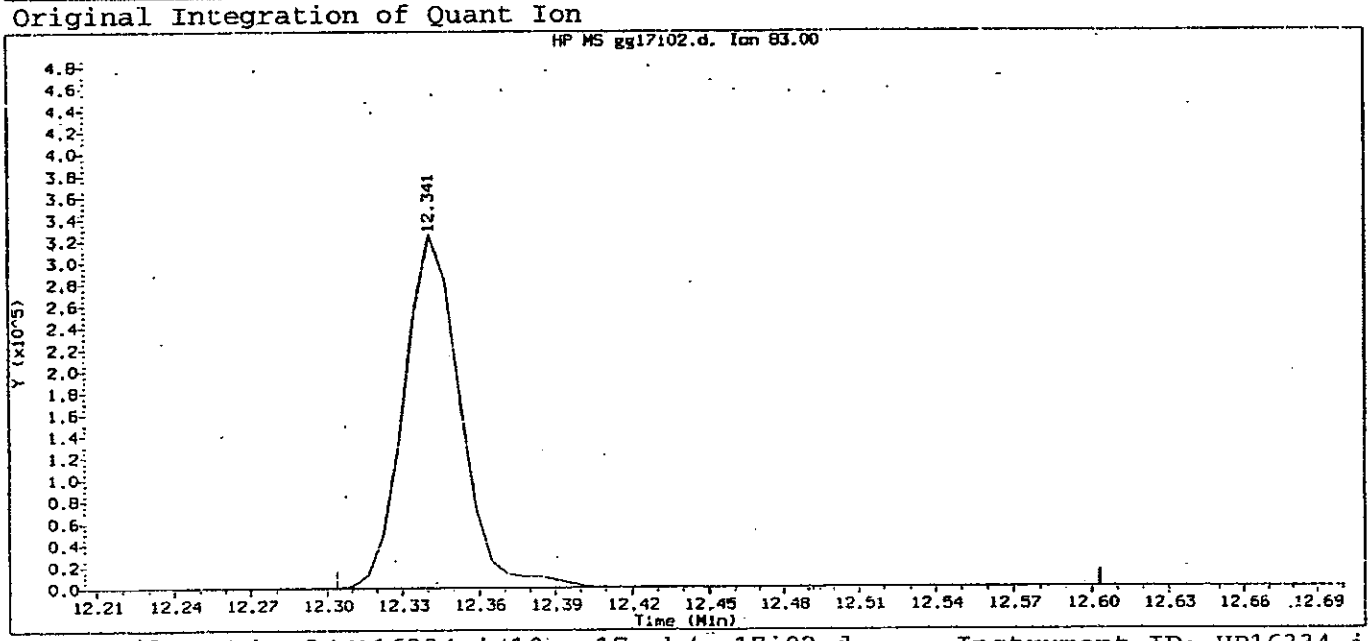
GC/MS audit/management approval: _____ 8/18/10

RAD36 B115

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i02.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 12:23 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 12:41
Date, time and analyst ID of latest file update: 17-Aug-2010 12:41 jml01693

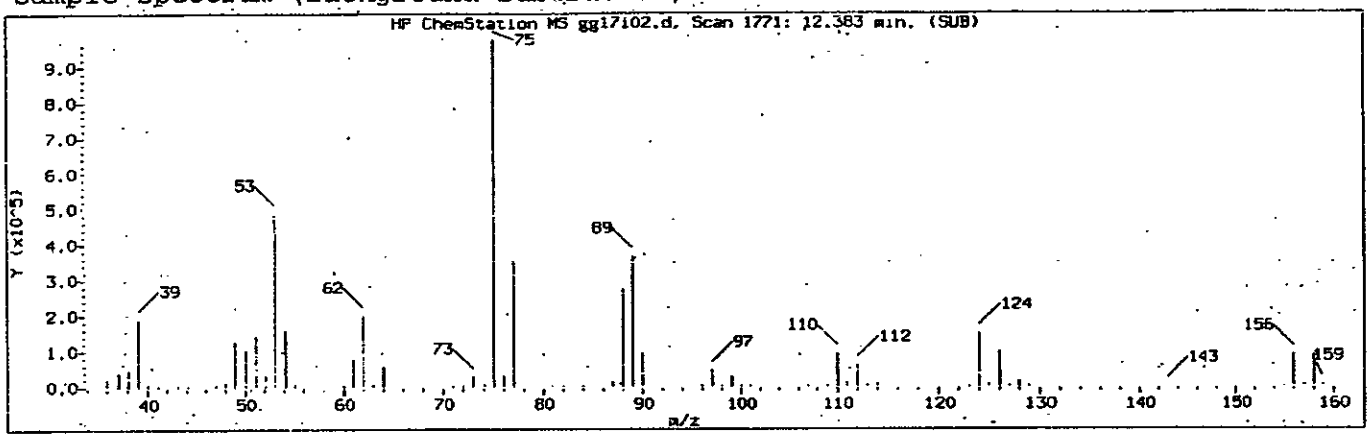
Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number	: 128		
Compound Name	: 1,1,2,2-Tetrachloroethane		
Scan Number	: 1764		
Retention Time (minutes)	: 12.341		
Quant Ion	: 83.00		
Area	: 502869		
On-column Amount (ng)	: 9.9534		
Integration start scan	: 1757	Integration stop scan:	1806
Y at integration start	: 0	Y at integration end:	0

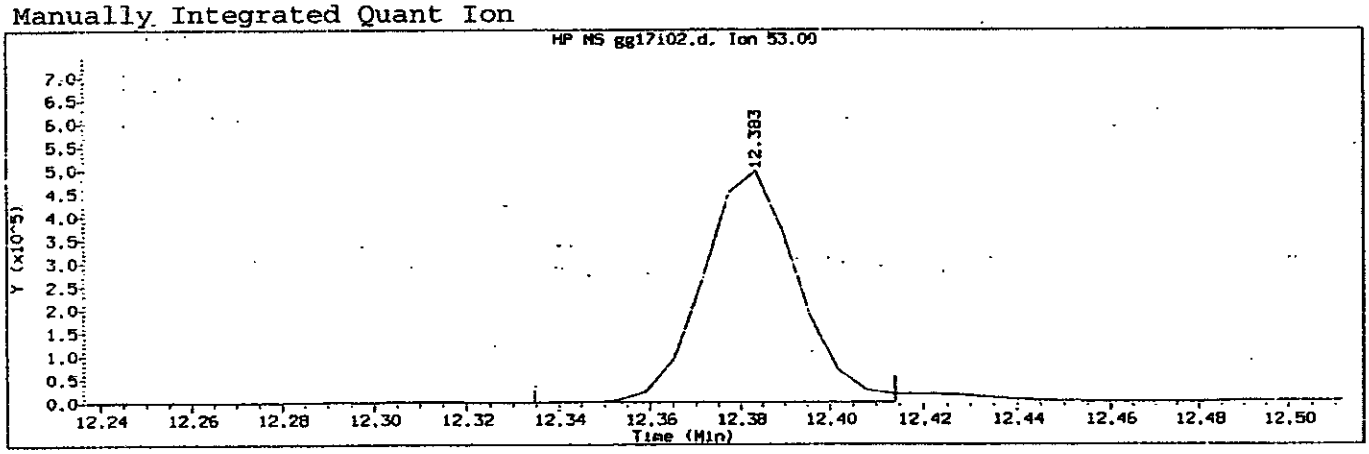
RAD36 0116

Digitally signed by Jason M. Long on 08/17/2010 at 14:53.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i02.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 12:23 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 14:37
Date, time and analyst ID of latest file update: 17-Aug-2010 14:37 jml01693

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number	: 130		
Compound Name	: trans-1,4-Dichloro-2-Butene		
Scan Number	: 1771		
Retention Time (minutes)	: 12.383		
Quant Ion	: 53.00		
Area (flag)	: 731862M		
On-Column Amount (ng)	: 101.4595		
Integration start scan	: 1762	Integration stop scan:	1775
Y at integration start	: 0	Y at integration end:	0

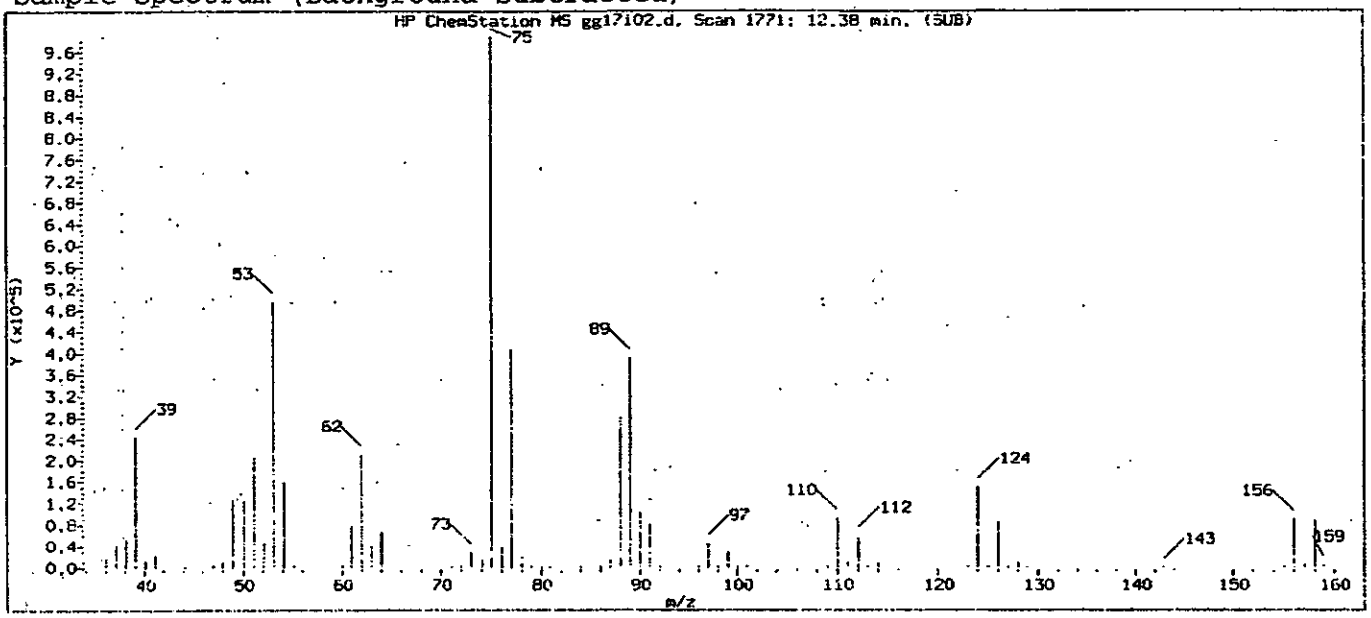
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long
on 08/17/2010 at 14:53.
Target 3.5 esignature user ID: jml01693

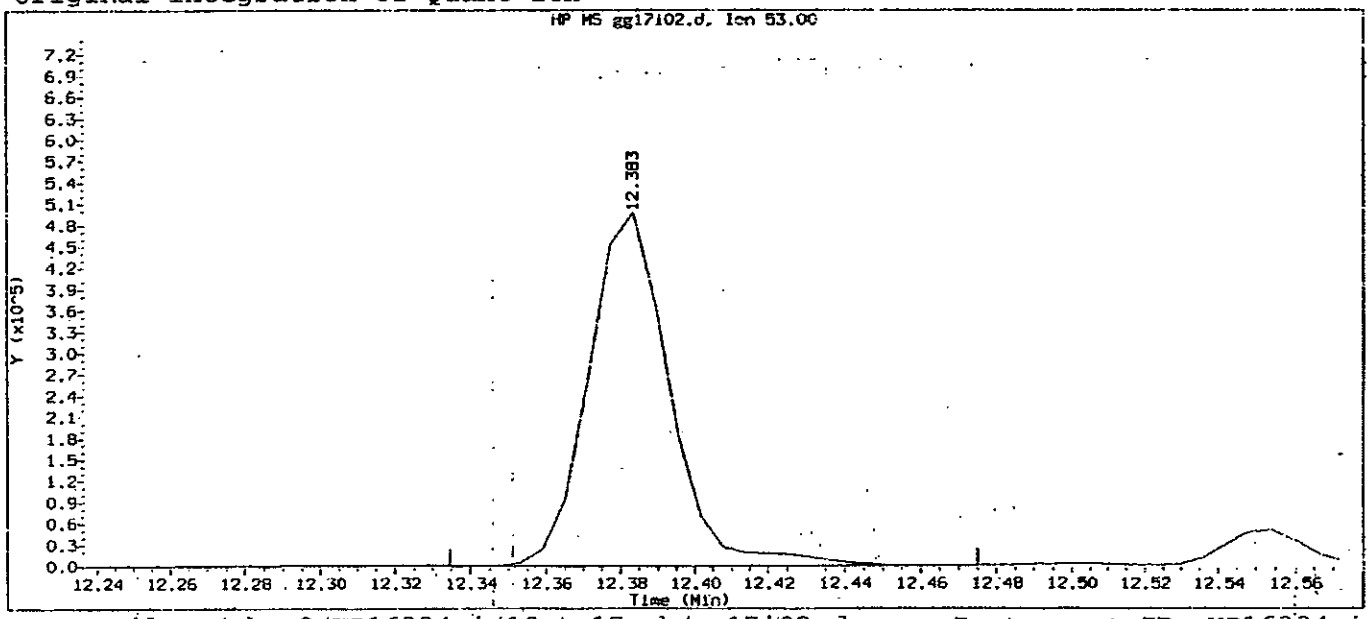
GC/MS audit/management approval: _____ 8/18/10

RAD36 0117

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i02.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 12:23 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 12:41
Date, time and analyst ID of latest file update: 17-Aug-2010 12:41 jml01693

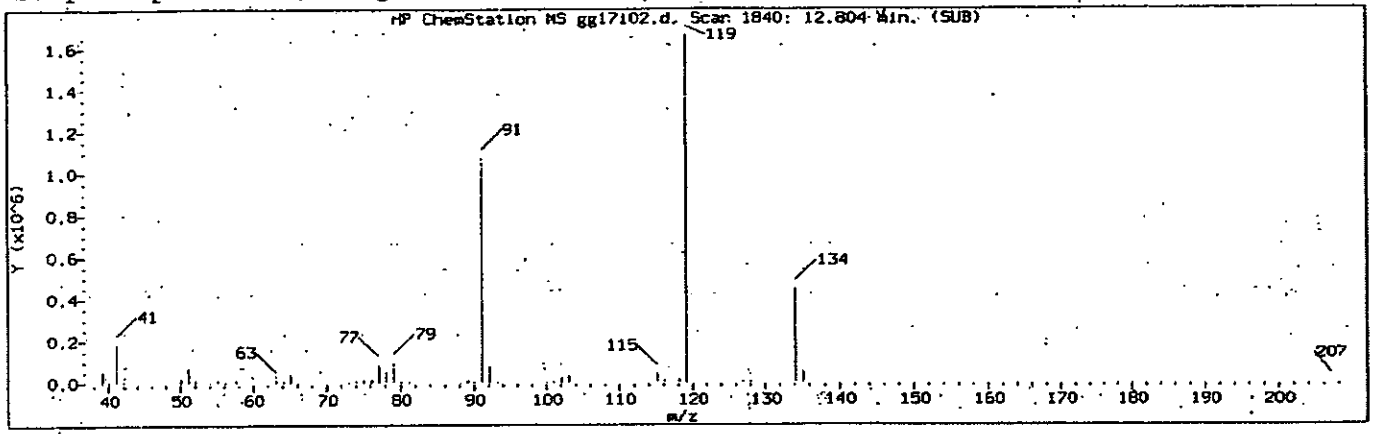
Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number	: 130		
Compound Name	: trans-1,4-Dichloro-2-Butene		
Scan Number	: 1771		
Retention Time (minutes)	: 12.383		
Quant Ion	: 53.00		
Area	: 755284		
On-column Amount (ng)	: 86.3961		
Integration start scan	: 1762	Integration stop scan:	1785
Y at integration start	: 0	Y at integration end:	0

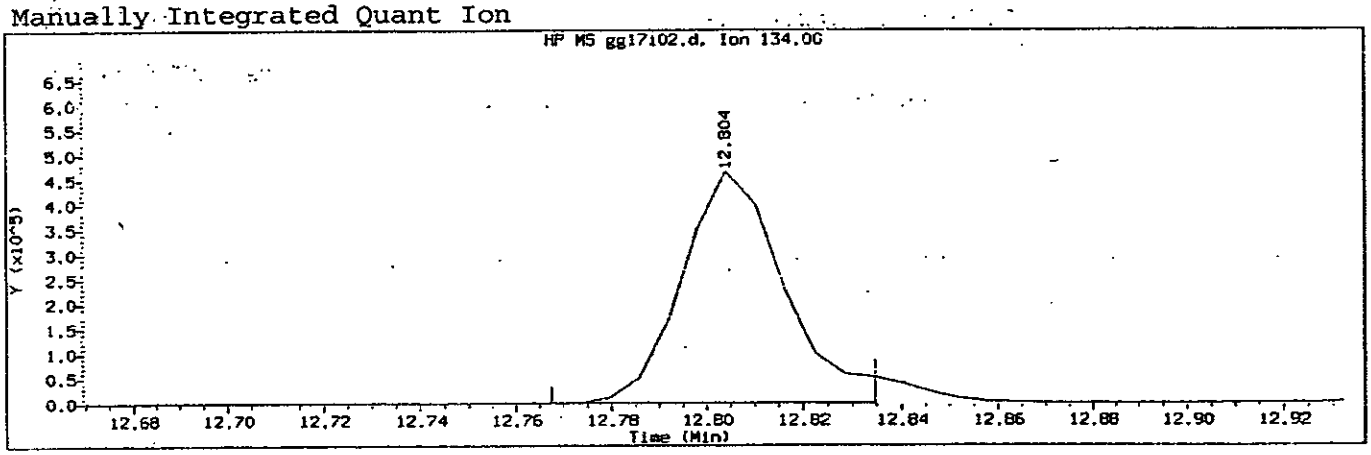
RAD36 0118

Digitally signed by Jason M. Long on 08/17/2010 at 14:53.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i02.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 12:23 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 14:37
Date, time and analyst ID of latest file update: 17-Aug-2010 14:37 jml01693

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number	: 137		
Compound Name	: tert-Butylbenzene		
Scan Number	: 1840		
Retention Time (minutes)	: 12.804		
Quant Ion	: 134.00		
Area (flag)	: 688834M		
On-Column Amount (ng)	: 10.2996		
Integration start scan	: 1833	Integration stop scan:	1844
Y at integration start	: 0	Y at integration end:	0

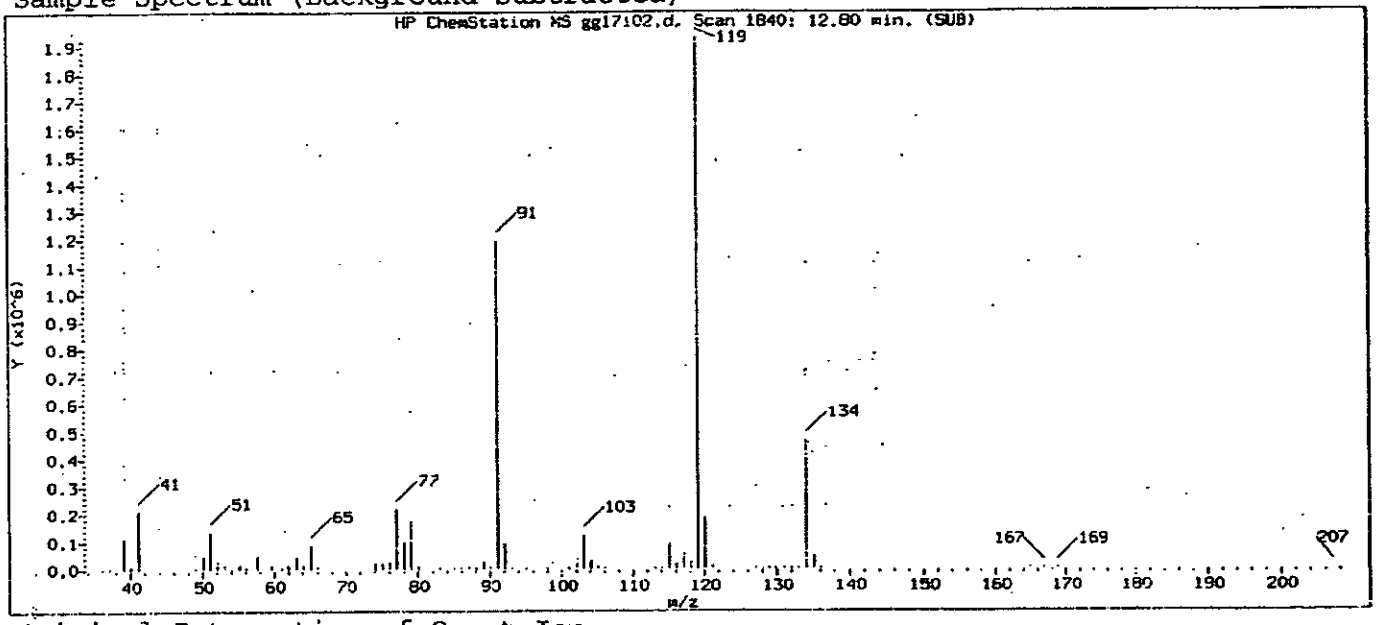
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long on 08/17/2010 at 14:53. Target 3.5 esignature user ID: jml01693

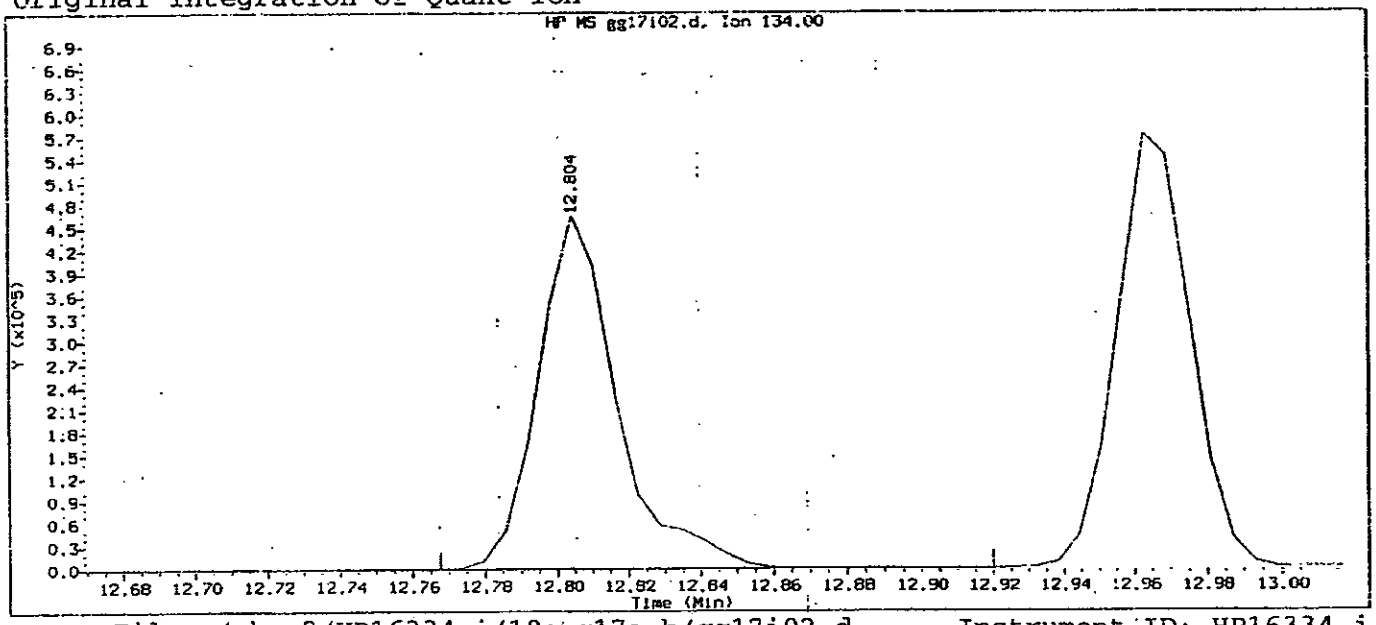
RAD36 0119

GC/MS audit/management approval: _____ 8/18/10

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i02.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 12:23 Analyst ID: JML01693

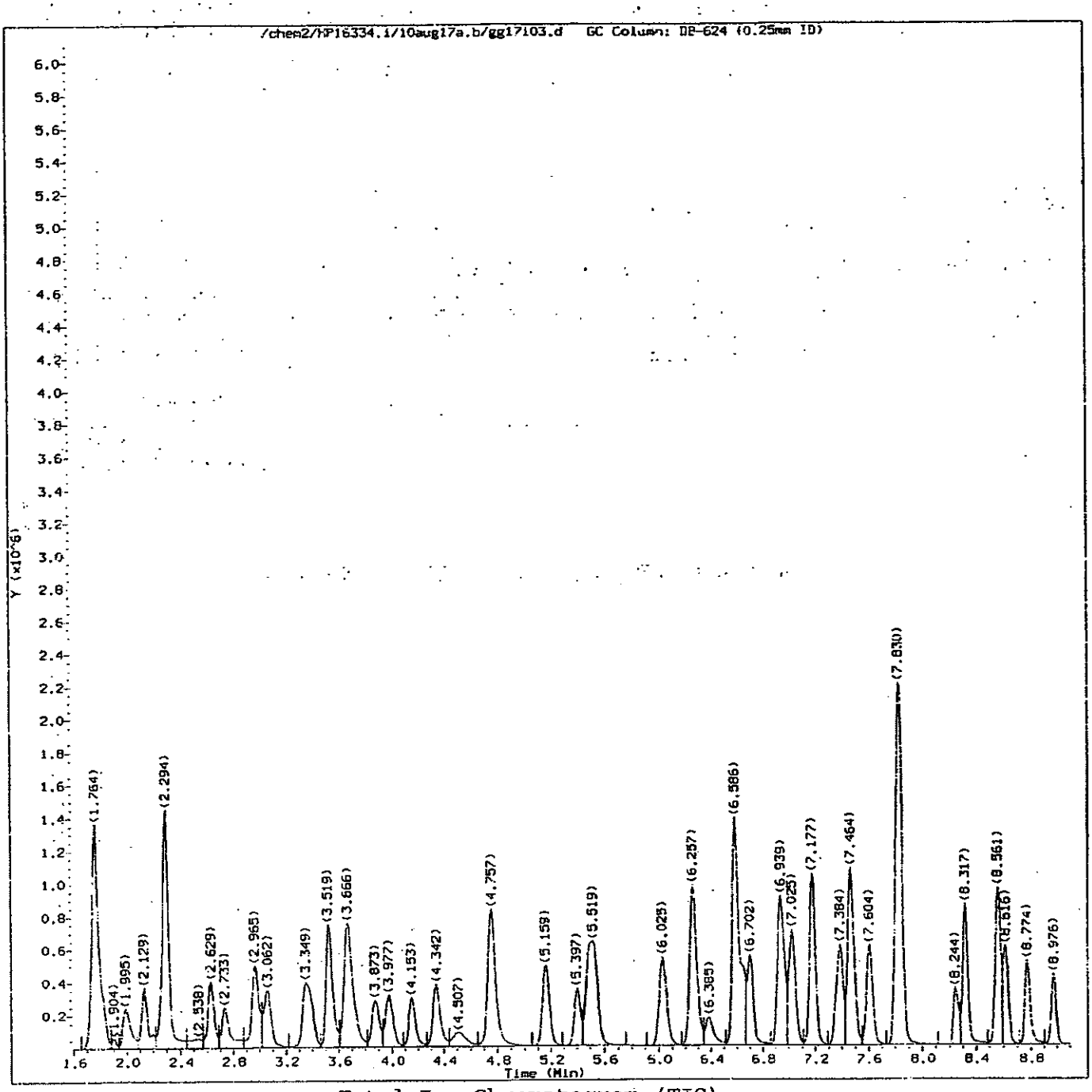
Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 12:41
Date, time and analyst ID of latest file update: 17-Aug-2010 12:41 jml01693

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number	: 137		
Compound Name	: tert-Butylbenzene		
Scan Number	: 1840		
Retention Time (minutes)	: 12.804		
Quant Ion	: 134.00		
Area	: 714322		
On-column Amount (ng)	: 9.7879		
Integration start scan	: 1833	Integration stop scan: 1858	
Y at integration start	: 0	Y at integration end: 0	

RAD36 0820

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Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/10aug17a.b/gg17i03.d
Injection date and time: 17-AUG-2010 12:44

Instrument ID: HP16334.i
Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m
Calibration date and time: 17-AUG-2010 14:37

Sublist used: 8260WI25

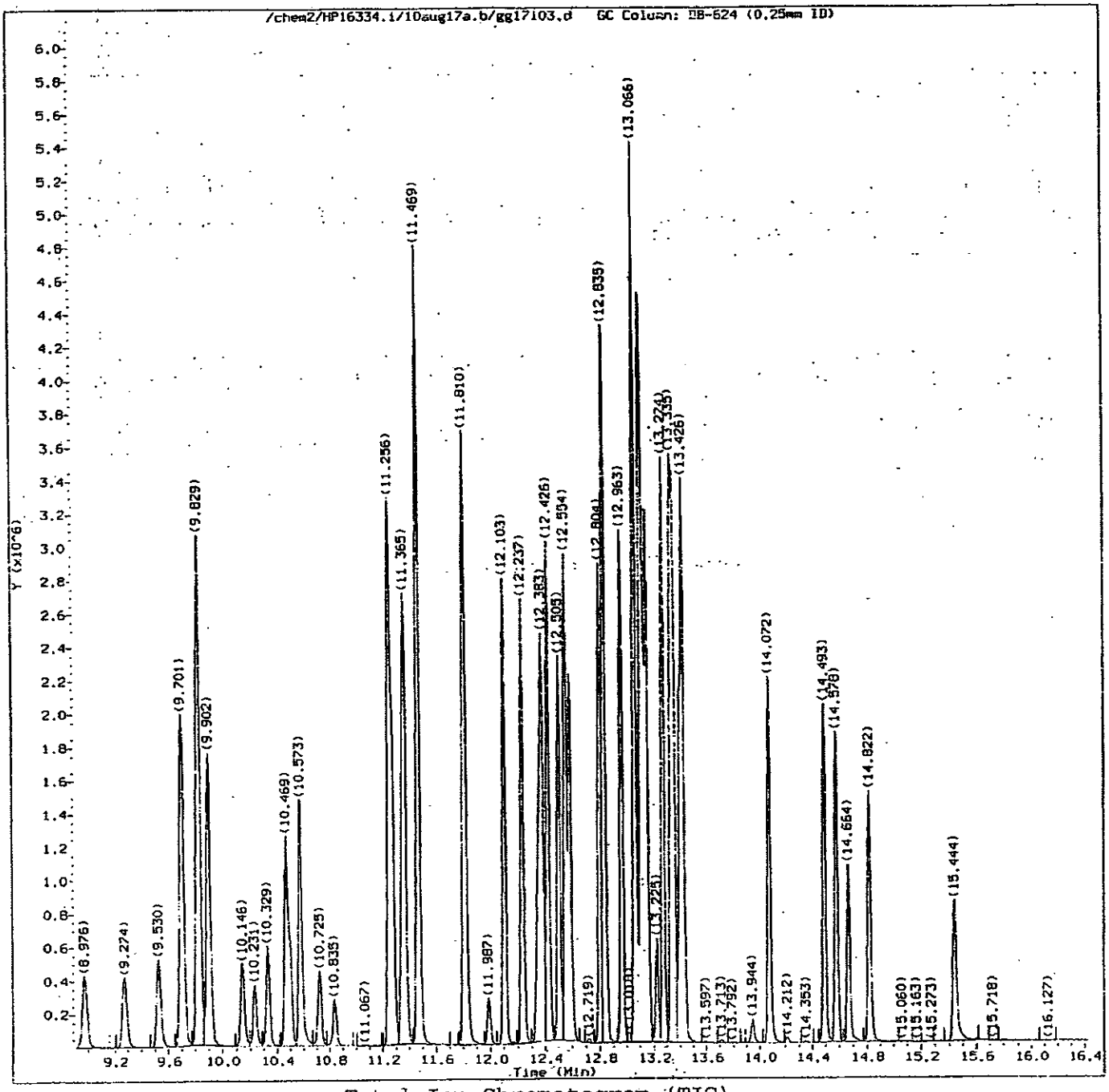
Date, time and analyst ID of latest file update: 17-Aug-2010 14:37 jml01693

Sample Name: VSTD005

Lab Sample ID: VSTD005

RAD36 0121

Digitally signed by Jason M. Long
on 08/17/2010 at 14:54.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/10aug17a.b/gg17i03.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 12:44 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 14:37
Date, time and analyst ID of latest file update: 17-Aug-2010 14:37 jml01693

Sample Name: VSTD005 Lab Sample ID: VSTD005

RAD36 8122

Digitally signed by Jason M. Long
on 08/17/2010 at 14:54.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/10aug17a.b/gg17i03.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 12:44 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 14:37
Date, time and analyst ID of latest file update: 17-Aug-2010 14:37 jml01693

Sample Name: VSTD005 Lab Sample ID: VSTD005

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
2) Dichlorodifluoromethane	(1)	1.995	85	567896	5.010
5) Chloromethane	(1)	2.129	50	518274	4.765
6) Vinyl Chloride	(1)	2.270	62	510975	4.852
9) 1,3-Butadiene	(1)	2.294	39	848820	4.973
10) Bromomethane	(1)	2.623	94	383800	4.775
11) Chloroethane	(1)	2.733	64	293188	4.743
13) Dichlorofluoromethane	(1)	2.965	67	704225	4.791
15) Trichlorofluoromethane	(1)	3.062	101	651445	5.081
17) Ethyl Ether	(1)	3.343	59	218236	5.050
18) Freon 123a	(1)	3.373	67	377675	4.924
23) Acrolein	(4)	3.525	56	1297163	253.163
24) 1,1-Dichloroethene	(1)	3.660	96	315637	5.033
25) Freon 113	(1)	3.678	101	336178	5.168
26) Acetone	(4)	3.727	58	120488M	49.802
27) Methyl Iodide	(1)	3.873	142	580882	5.070
29) Carbon Disulfide	(1)	3.977	76	869681	5.093
32) Allyl Chloride	(1)	4.147	41	326428	4.955
33) Methyl Acetate	(1)	4.190	43	68774M	4.859
34) Methylene Chloride	(1)	4.336	84	343520	4.637
36)*t-Butyl Alcohol-d10	(4)	4.391	65	122410	50.000
38) t-Butyl Alcohol	(4)	4.513	59	304870	98.737
39) Acrylonitrile	(4)	4.739	53	229850	24.246
41) trans-1,2-Dichloroethene	(1)	4.757	96	354468	5.020
40) Methyl Tertiary Butyl Ether	(1)	4.757	73	710030	5.088
37) 1,2-Dichloroethene (Total)	(1)		96	731432	10.022
44) n-Hexane	(1)	5.159	57	484295	5.124
45) 1,1-Dichloroethane	(1)	5.403	63	574350	4.952
47) di-Isopropyl Ether	(1)	5.495	45	995232	5.020
48) 2-Chloro-1,3-Butadiene	(1)	5.531	53	424390	5.145
49) Ethyl t-Butyl Ether	(1)	6.025	59	903278	5.051
50) cis-1,2-Dichloroethene	(1)	6.251	96	376964	5.002
51) 2,2-Dichloropropane	(1)	6.257	77	480785	5.102
52) 2-Butanone	(4)	6.281	43	613227	49.184
53) Propionitrile	(4)	6.385	54	338016M	98.311
55) Methacrylonitrile	(4)	6.586	67	688903	49.522
56) Bromochloromethane	(1)	6.592	128	149847	4.986
57) Tetrahydrofuran	(4)	6.647	71	200556	49.363
58) Chloroform	(1)	6.702	83	600390	5.067
62)$Dibromofluoromethane(mz111)	(1)	6.927	111	601705	10.039

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jason M. Long
on 08/17/2010 at 14:54.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/10aug17a.b/gg17i03.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 12:44 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 14:37
Date, time and analyst ID of latest file update: 17-Aug-2010 14:37 jml01693

Sample Name: VSTD005 Lab Sample ID: VSTD005

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
61)$Dibromofluoromethane	(1)	6.933	113	586732	9.971
63) 1,1,1-Trichloroethane	(1)	6.958	97	524533	5.095
64) Cyclohexane	(1)	7.025	56	581216	5.113
65) 1,1-Dichloropropene	(1)	7.177	75	465800	5.032
66) Carbon Tetrachloride	(1)	7.177	117	462277	5.138
67) Isobutyl Alcohol	(4)	7.360	41	231441	245.446
70)$1,2-Dichloroethane-d4	(1)	7.391	102	109234M	9.953
68)$1,2-Dichloroethane-d4(mz104)	(1)	7.391	104	70142	9.937
69)$1,2-Dichloroethane-d4(mz65)	(1)	7.391	65	482750M	9.877
72) Benzene	(1)	7.464	78	1362037	4.998
73) 1,2-Dichloroethane(mz98)	(1)	7.488	98	31990	5.157
74) 1,2-Dichloroethane	(1)	7.494	62	325838	5.031
75) t-Amyl Methyl Ether	(1)	7.610	73	789688	5.096
76) n-Heptane	(1)	7.811	43	492798	5.053
77)*Fluorobenzene	(1)	7.836	96	2558018	10.000
81) n-Butanol	(4)	8.244	56	390874	501.909
83) Trichloroethene	(1)	8.317	95	376204	5.020
84) Methylcyclohexane	(1)	8.561	83	599370	5.090
85) 1,2-Dichloropropane	(1)	8.616	63	340164	5.045
88) Dibromomethane	(1)	8.768	93	153949	5.135
87) Methyl Methacrylate	(4)	8.774	69	142141	5.109
89) 1,4-Dioxane	(4)	8.793	88	59671	274.108
90) Bromodichloromethane	(1)	8.976	83	393177	5.121
91) 2-Nitropropane	(4)	9.274	41	356408M	48.779
94) cis-1,3-Dichloropropene	(1)	9.524	75	415940	5.188
96) 4-Methyl-2-Pentanone	(1)	9.701	43	1642455	51.488
97)$Toluene-d8	(2)	9.829	98	2509200	9.992
98)$Toluene-d8(mz100)	(2)	9.829	100	1622561	9.987
101) Toluene	(2)	9.902	92	904058	4.989
102) trans-1,3-Dichloropropene	(2)	10.146	75	338223	5.298
103) Ethyl Methacrylate	(2)	10.231	69	236300	5.365
104) 1,1,2-Trichloroethane	(2)	10.329	97	215291	5.061
105) Tetrachloroethene	(2)	10.469	166	416640	5.073
106) 1,3-Dichloropropane	(2)	10.500	76	363596	5.054
107) 2-Hexanone	(2)	10.573	43	1102655	52.404
108) Dibromochloromethane	(2)	10.725	129	258174	5.271
109) 1,2-Dibromoethane	(2)	10.835	107	199114	5.186
110)*Chlorobenzene-d5	(2)	11.256	117	1859706	10.000
112) Chlorobenzene	(2)	11.280	112	1019126	5.007

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

RAD36 0124

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Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/10aug17a.b/gg17i03.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 12:44 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 14:37
Date, time and analyst ID of latest file update: 17-Aug-2010 14:37 jml01693

Sample Name: VSTD005 Lab Sample ID: VSTD005

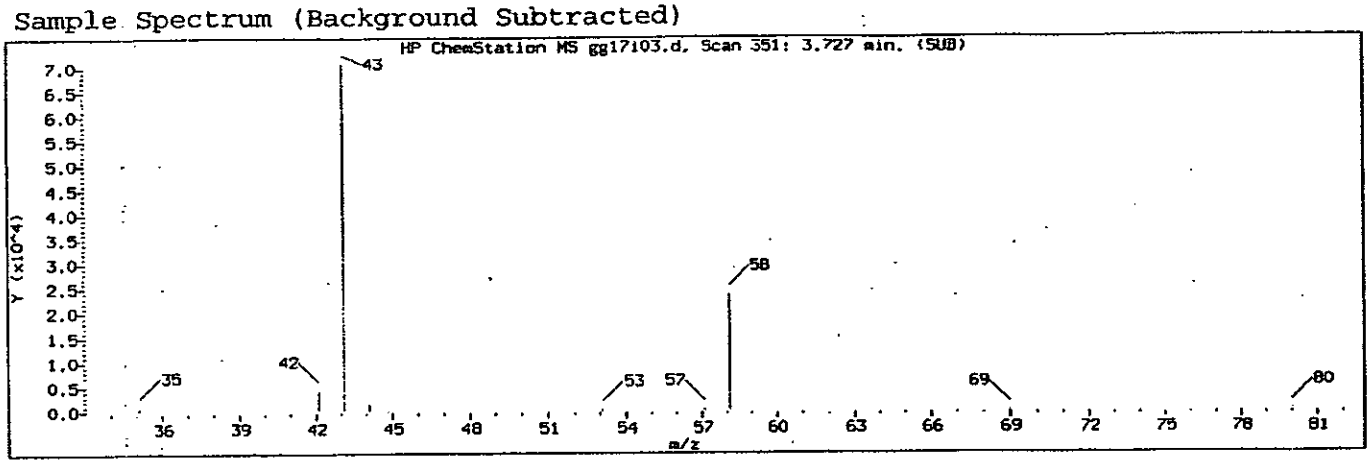
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
113) 1,1,1,2-Tetrachloroethane	(2)	11.353	131	339937	5.187
114) Ethylbenzene	(2)	11.371	91	1740971	5.029
117) m+p-Xylene	(2)	11.469	106	1389436	10.031
115) Xylene (Total)	(2)		106	2080591	15.094
118) o-Xylene	(2)	11.810	106	691155	5.063
119) Styrene	(2)	11.823	104	1066372	5.199
120) Bromoform	(2)	11.987	173	134374	4.965
121) Isopropylbenzene	(2)	12.103	105	1784940	5.066
126)$4-Bromofluorobenzene	(2)	12.237	95	850079	10.015
127)$4-Bromofluorobenzene(mz174)	(2)	12.237	174	751947	10.001
128) 1,1,2,2-Tetrachloroethane	(3)	12.341	83	246058M	5.158
129) Bromobenzene	(3)	12.365	156	414556	5.017
130) trans-1,4-Dichloro-2-Butene	(4)	12.383	53	324420MA	47.462
131) 1,2,3-Trichloropropane	(3)	12.383	110	69861	5.126
132) n-Propylbenzene	(3)	12.426	91	2157063	5.061
133) 2-Chlorotoluene	(3)	12.505	126	435353	5.083
134) 1,3,5-Trimethylbenzene	(3)	12.554	105	1504631	5.073
135) 4-Chlorotoluene	(3)	12.585	126	440795	5.045
137) tert-Butylbenzene	(3)	12.804	134	343022M	5.151
138) Pentachloroethane	(3)	12.835	167	266243	5.034
139) 1,2,4-Trimethylbenzene	(3)	12.841	105	1627223	5.105
140) sec-Butylbenzene	(3)	12.963	105	2010801	5.090
142) 1,3-Dichlorobenzene	(3)	13.066	146	892671	5.001
141) p-Isopropyltoluene	(3)	13.066	119	1787778	5.063
143)*1,4-Dichlorobenzene-d4	(3)	13.109	152	1062935	10.000
144) 1,4-Dichlorobenzene	(3)	13.127	146	907055	4.943
145) 1,2,3-Trimethylbenzene	(3)	13.152	120	706955	4.983
146) Benzyl Chloride	(3)	13.225	126	93017	5.035
147) n-Butylbenzene	(3)	13.359	92	897337	5.136
148) 1,2-Dichlorobenzene	(3)	13.402	146	790282	5.029
150) 1,2-Dibromo-3-Chloropropane	(4)	13.944	155	32838	4.862
153) 1,2,4-Trichlorobenzene	(3)	14.493	180	624753	5.036
154) Hexachlorobutadiene	(3)	14.584	225	334450	5.001
155) Naphthalene	(3)	14.670	128	874553	5.180
156) 1,2,3-Trichlorobenzene	(3)	14.822	180	490209	5.047

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

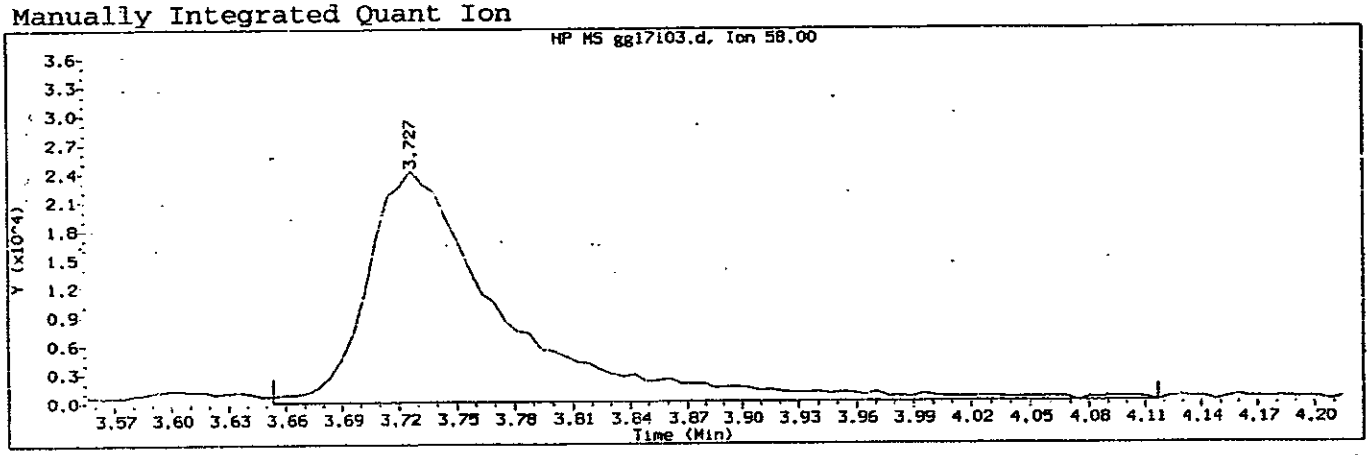
RAD36 0125

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on 08/17/2010 at 14:54.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i03.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 12:44 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 14:37
Date, time and analyst ID of latest file update: 17-Aug-2010 14:37 jml01693

Sample Name: VSTD005 Lab Sample ID: VSTD005

Compound Number	: 26		
Compound Name	: Acetone		
Scan Number	: 351		
Retention Time (minutes)	: 3.727		
Quant Ion	: 58.00		
Area (flag)	: 120488M		
On-Column Amount (ng)	: 49.8018		
Integration start scan	: 338	Integration stop scan:	414
Y at integration start	: 0	Y at integration end:	0

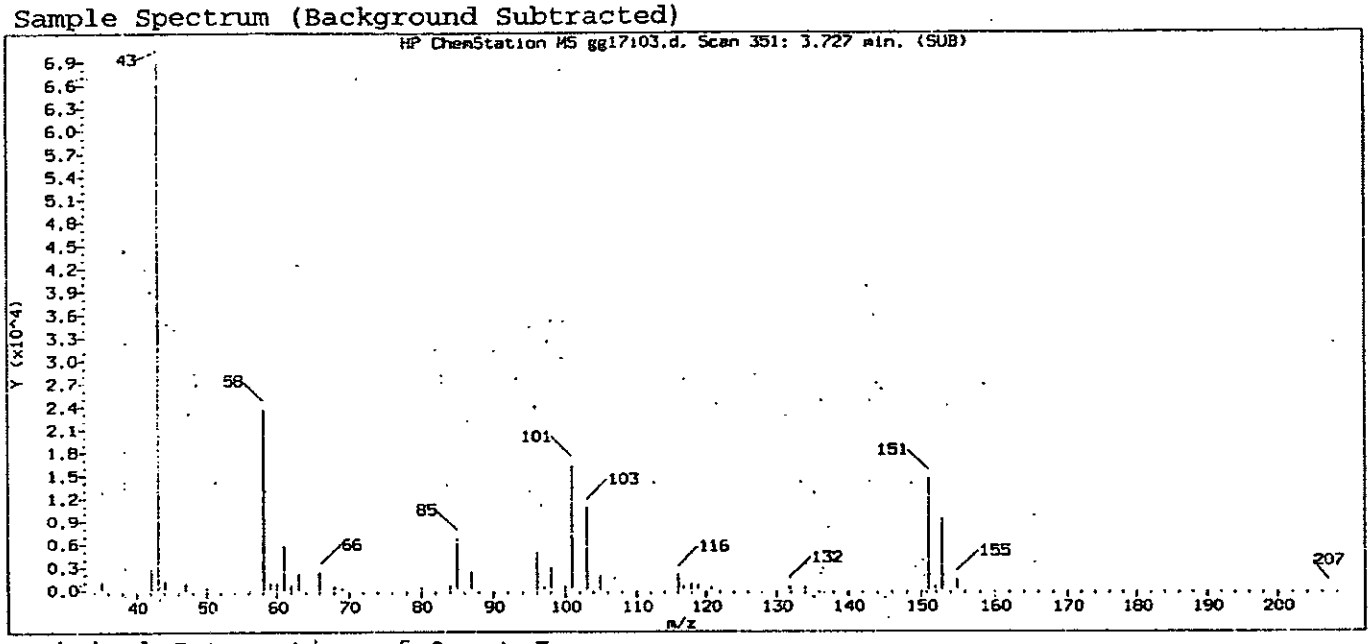
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long on 08/17/2010 at 14:54. Target 3.5 esignature user ID: jml01693

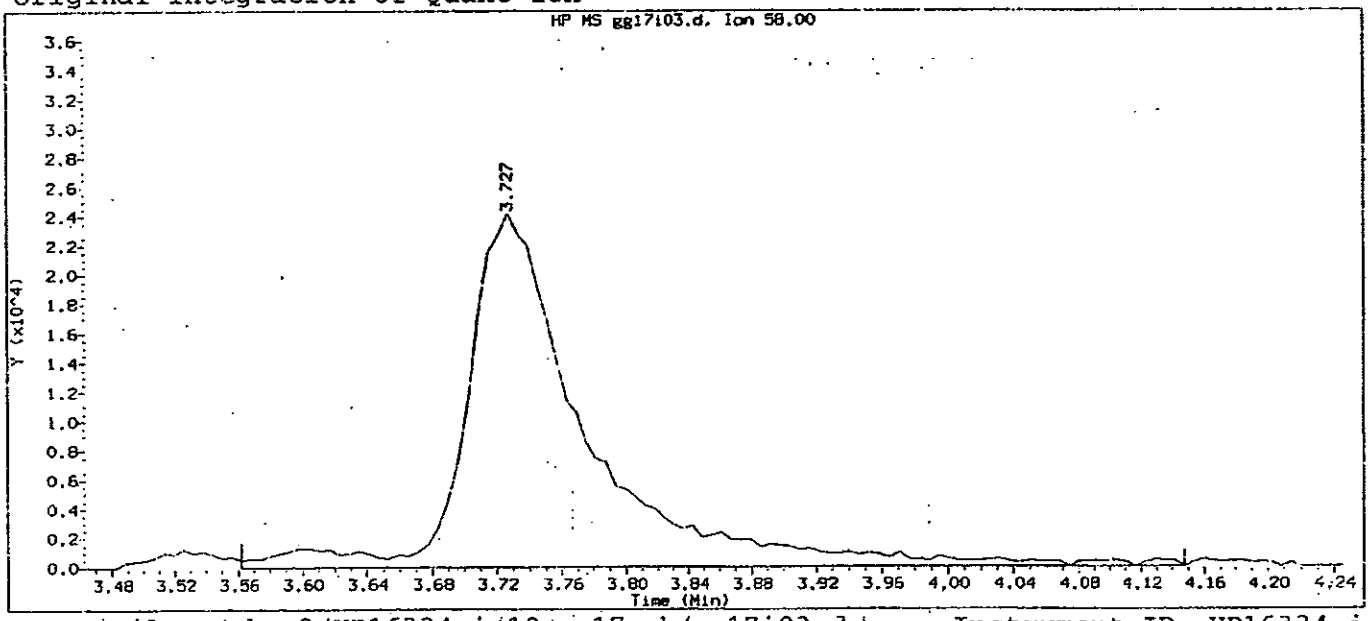
GC/MS audit/management approval: _____ 8/18/10

RAD36 0126

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i03.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 12:44 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 13:02
Date, time and analyst ID of latest file update: 17-Aug-2010 13:02 Automation

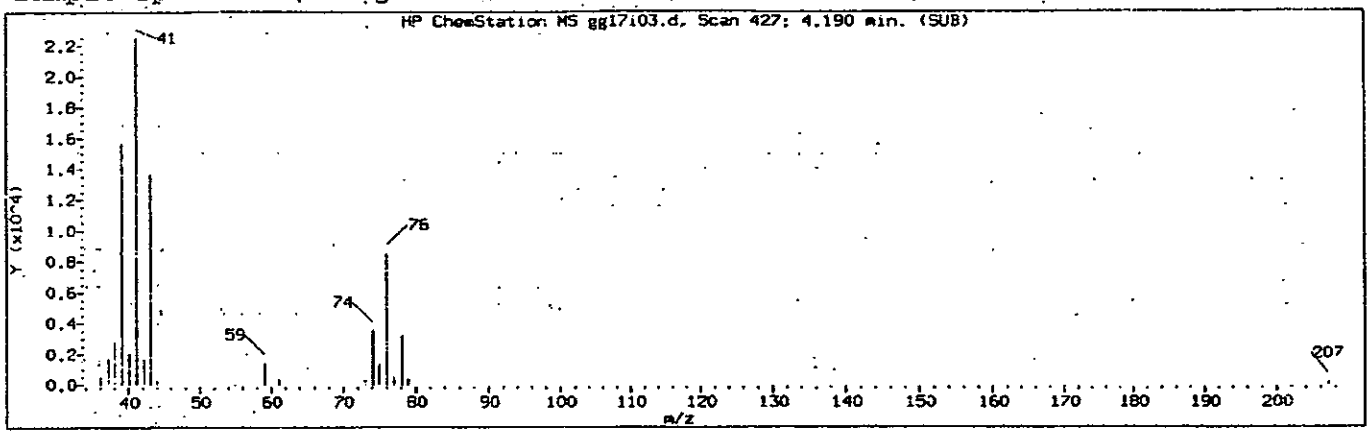
Sample Name: VSTD005 Lab Sample ID: VSTD005

Compound Number	: 26		
Compound Name	: Acetone		
Scan Number	: 351		
Retention Time (minutes)	: 3.727		
Quant Ion	: 58.00		
Area	: 126029		
On-column Amount (ng)	: 49.5545		
Integration start scan	: 323	Integration stop scan:	419
Y at integration start	: 0	Y at integration end:	0

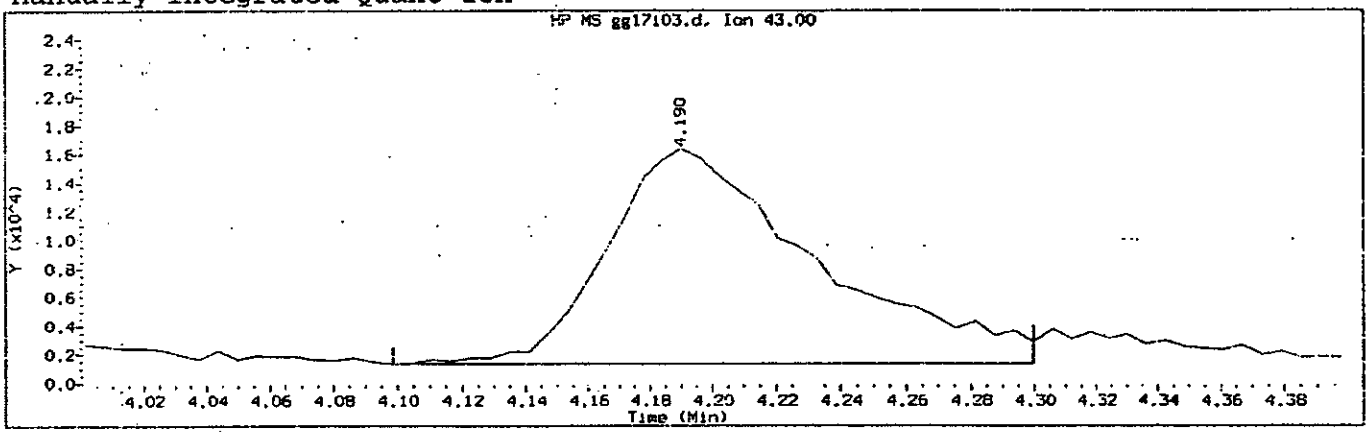
RAD36 0127

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Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i03.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 12:44 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 14:37
Date, time and analyst ID of latest file update: 17-Aug-2010 14:37 jml01693

Sample Name: VSTD005 Lab Sample ID: VSTD005

Compound Number	: 33		
Compound Name	: Methyl Acetate		
Scan Number	: 427		
Retention Time (minutes)	: 4.190		
Quant Ion	: 43.00		
Area (flag)	: 68774M		
On-Column Amount (ng)	: 4.8593		
Integration start scan	: 411	Integration stop scan:	444
Y at integration start	: 1370	Y at integration end:	1370

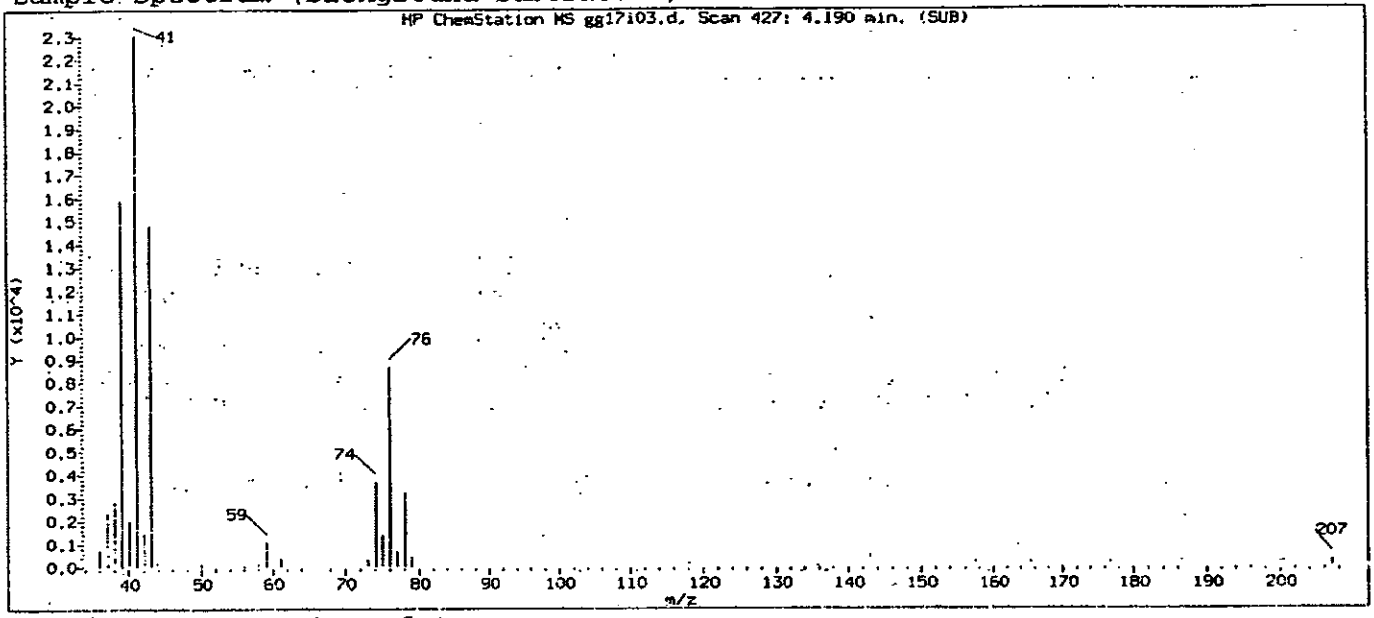
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long on 08/17/2010 at 14:54. Target 3.5 esignature user ID: jml01693

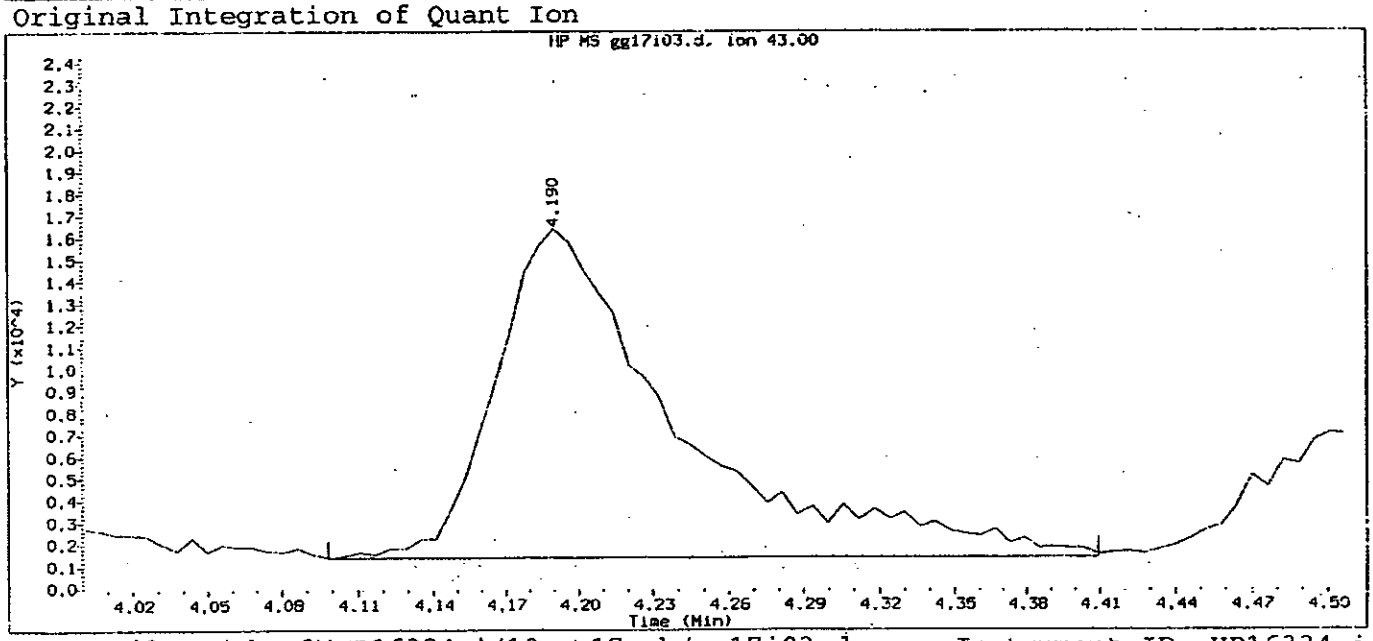
GC/MS audit/management approval: _____ 8/18/10

RAD36 8128

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i03.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 12:44 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 13:02
Date, time and analyst ID of latest file update: 17-Aug-2010 13:02 Automation

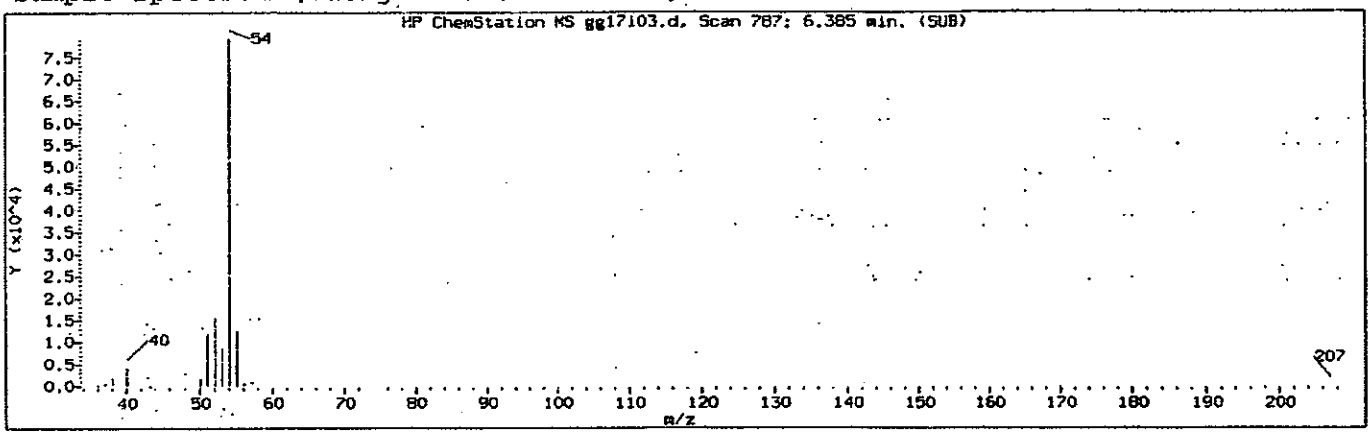
Sample Name: VSTD005 Lab Sample ID: VSTD005

Compound Number	: 33		
Compound Name	: Methyl Acetate		
Scan Number	: 427		
Retention Time (minutes)	: 4.190		
Quant Ion	: 43.00		
Area	: 76514		
On-column Amount (ng)	: 4.5371		
Integration start scan	: 411	Integration stop scan:	462
Y at integration start	: 1370	Y at integration end:	1370

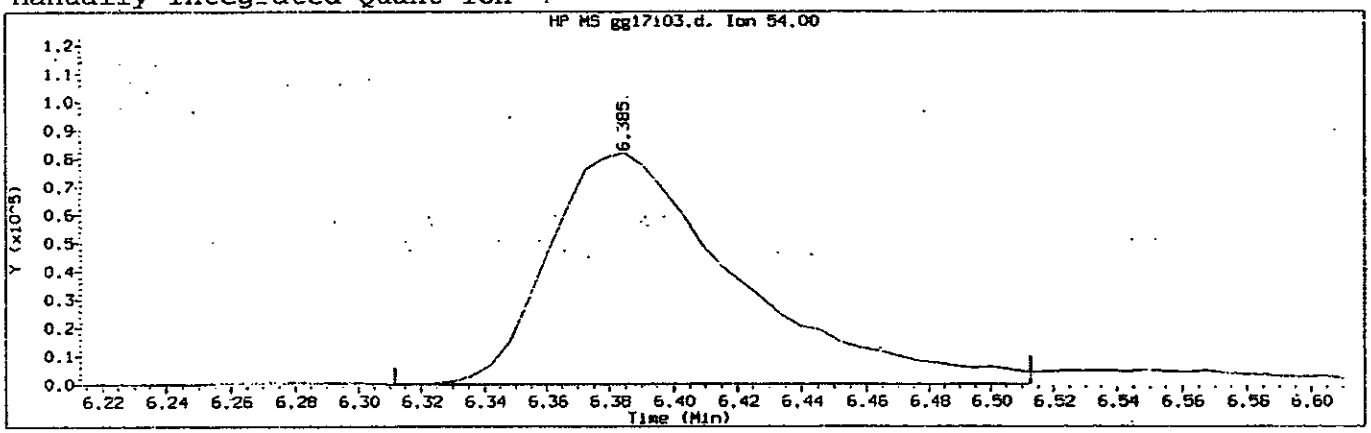
RAD36 0129

Digitally signed by Jason M. Long on 08/17/2010 at 14:54.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i03.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 12:44 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 14:37
Date, time and analyst ID of latest file update: 17-Aug-2010 14:37 jml01693

Sample Name: VSTD005 Lab Sample ID: VSTD005

Compound Number	: 53		
Compound Name	: Propionitrile		
Scan Number	: 787		
Retention Time (minutes)	: 6.385		
Quant Ion	: 54.00		
Area (flag)	: 338016M		
On-Column Amount (ng)	: 98.3106		
Integration start scan	: 774	Integration stop scan:	807
Y at integration start	: 0	Y at integration end:	0

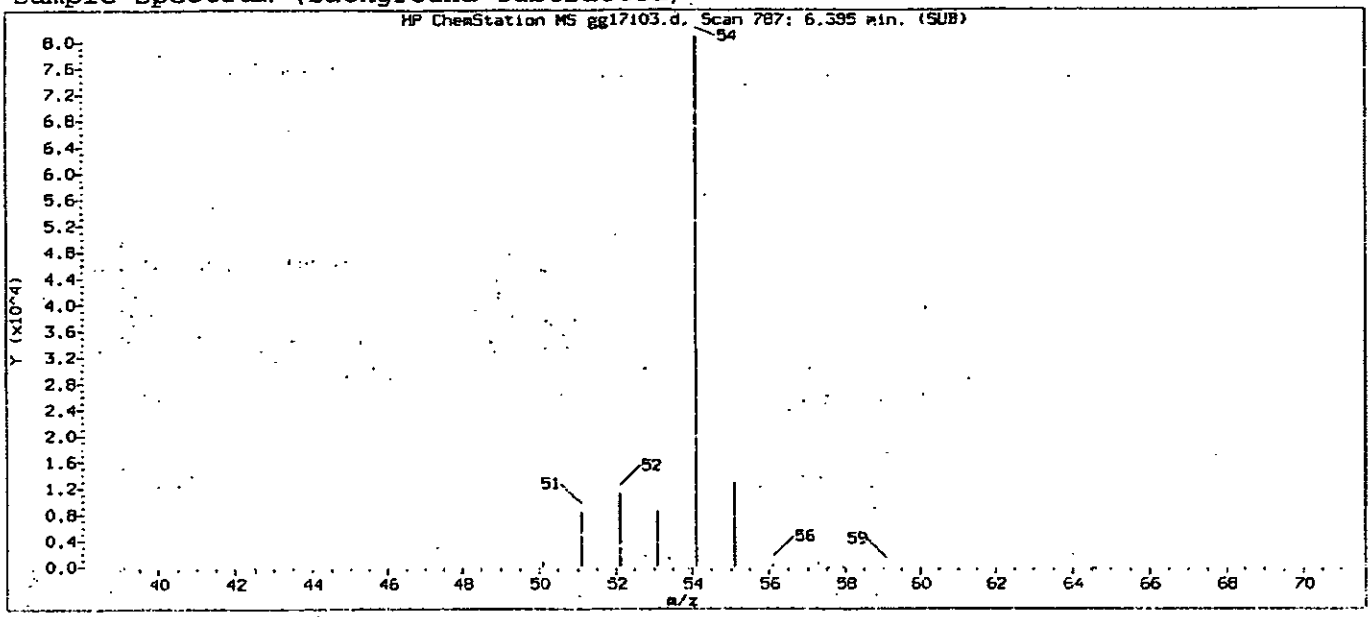
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long
on 08/17/2010 at 14:54.
Target 3.5 esignature user ID: jml01693

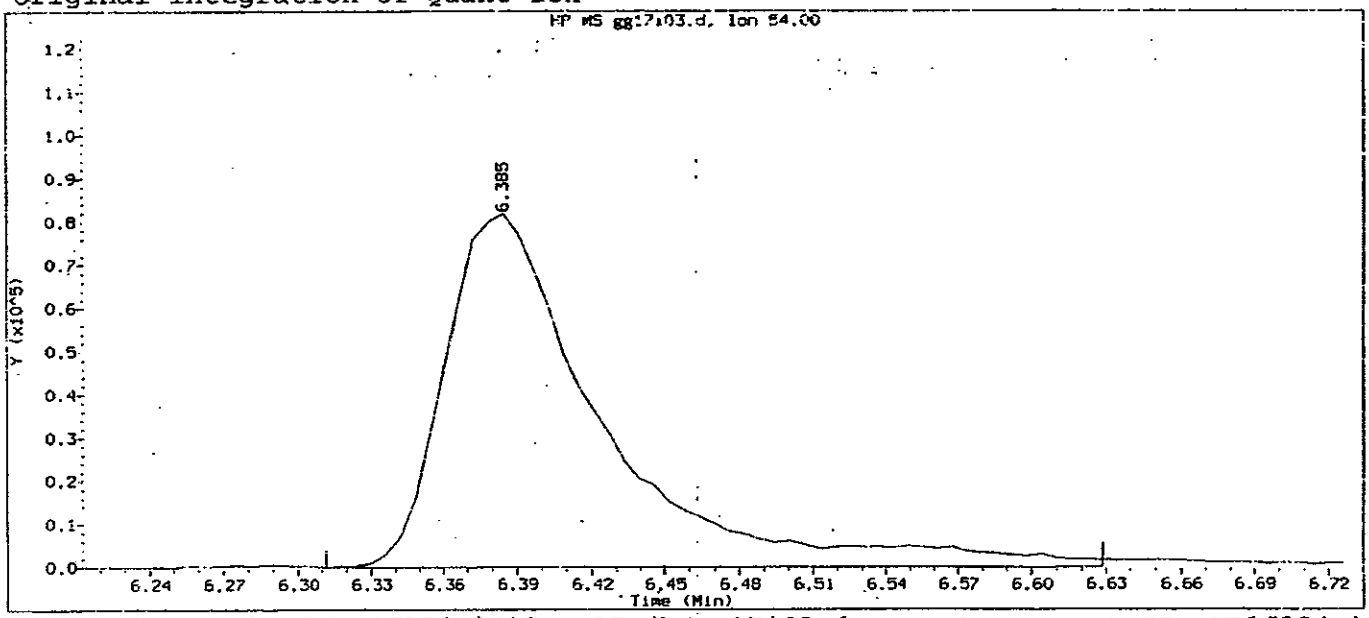
GC/MS audit/management approval: _____

RAD36 8138

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i03.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 12:44 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 13:02
Date, time and analyst ID of latest file update: 17-Aug-2010 13:02 Automation

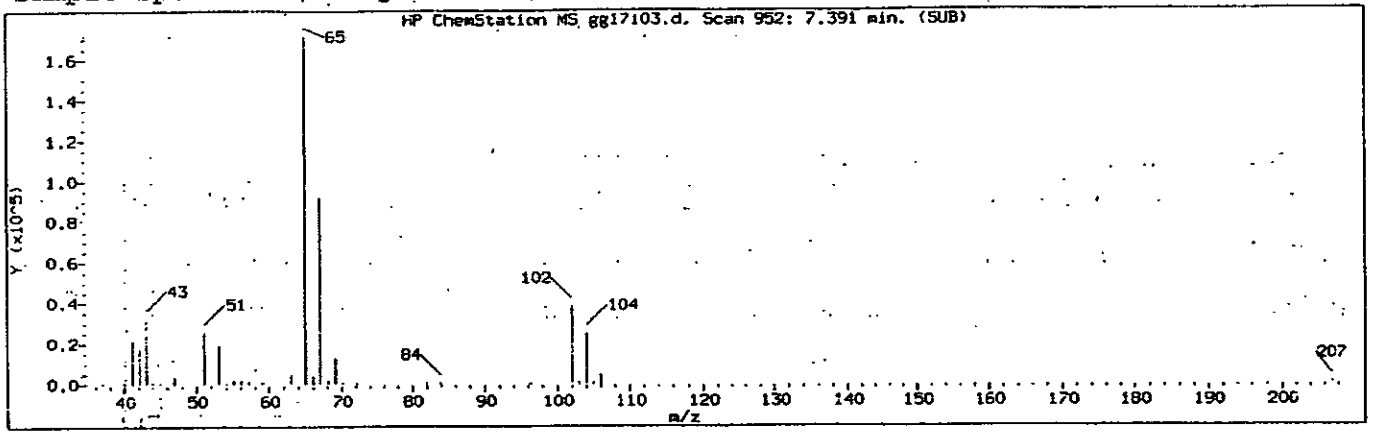
Sample Name: VSTD005 Lab Sample ID: VSTD005

Compound Number	: 53		
Compound Name	: Propionitrile		
Scan Number	: 787		
Retention Time (minutes)	: 6.385		
Quant Ion	: 54.00		
Area	: 362383		
On-column Amount (ng)	: 94.0794		
Integration start scan	: 774	Integration stop scan:	826
Y at integration start	: 0	Y at integration end:	0

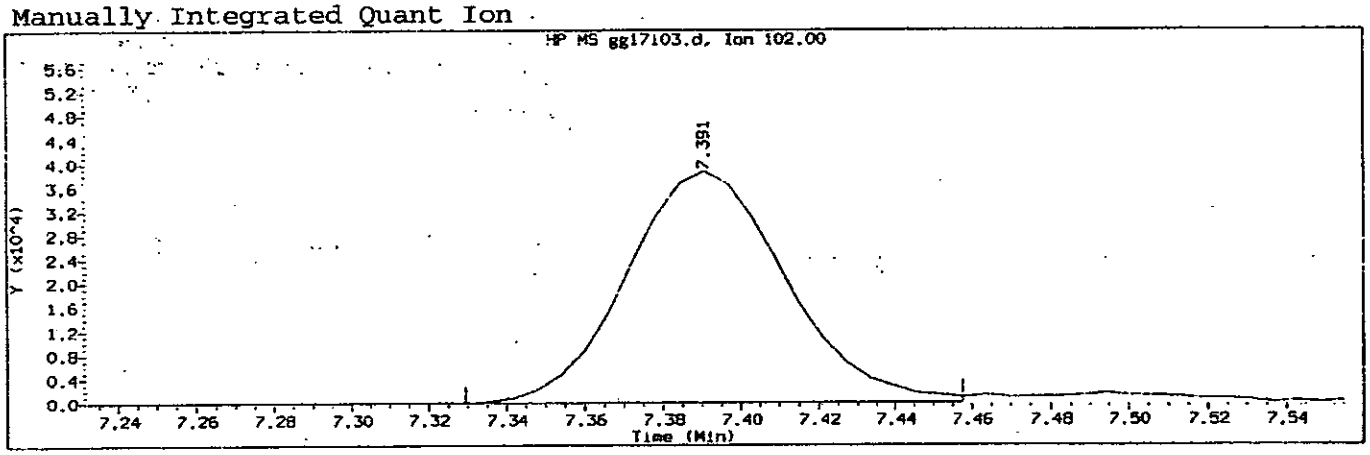
RAD36 B151

Digitally signed by Jason M. Long on 08/17/2010 at 14:54.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i03.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 12:44 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 14:37
Date, time and analyst ID of latest file update: 17-Aug-2010 14:37 jml01693

Sample Name: VSTD005 Lab Sample ID: VSTD005

Compound Number	: 70		
Compound Name	: 1,2-Dichloroethane-d4		
Scan Number	: 952		
Retention Time (minutes)	: 7.391		
Quant Ion	: 102.00		
Area (flag)	: 109234M		
On-Column Amount (ng)	: 9.9532		
Integration start scan	: 941	Integration stop scan:	962
Y at integration start	: 0	Y at integration end:	0

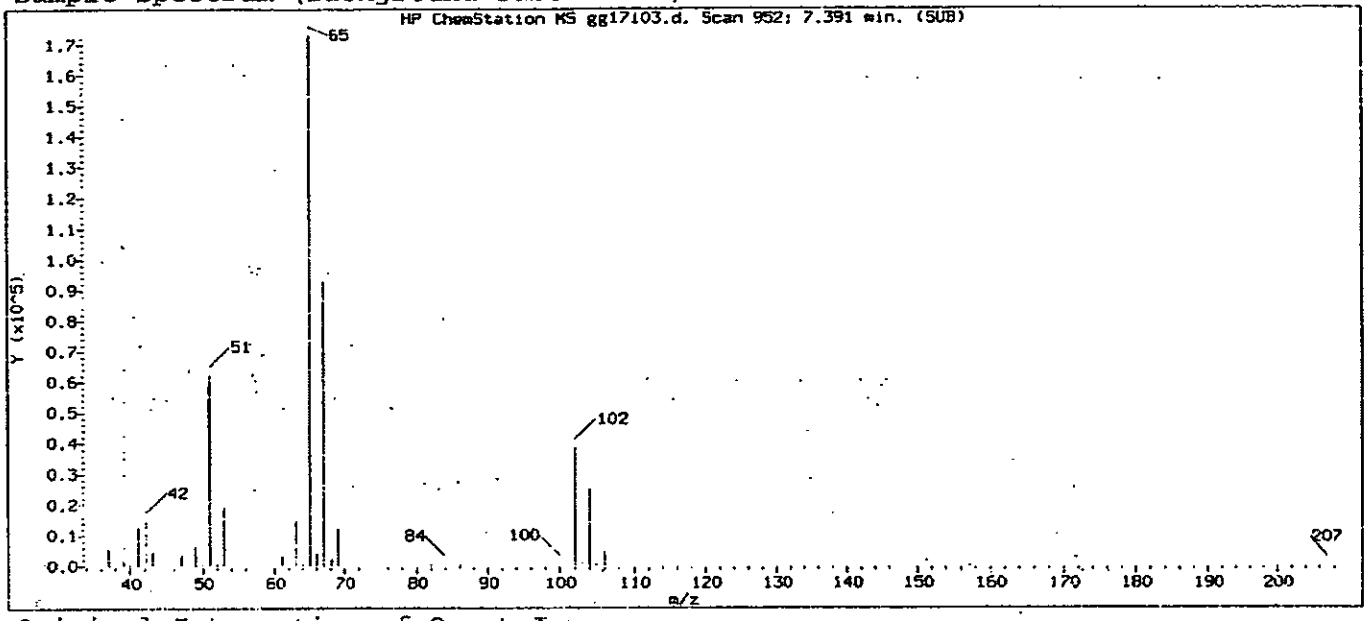
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long
on 08/17/2010 at 14:54.
Target 3.5 esignature user ID: jml01693

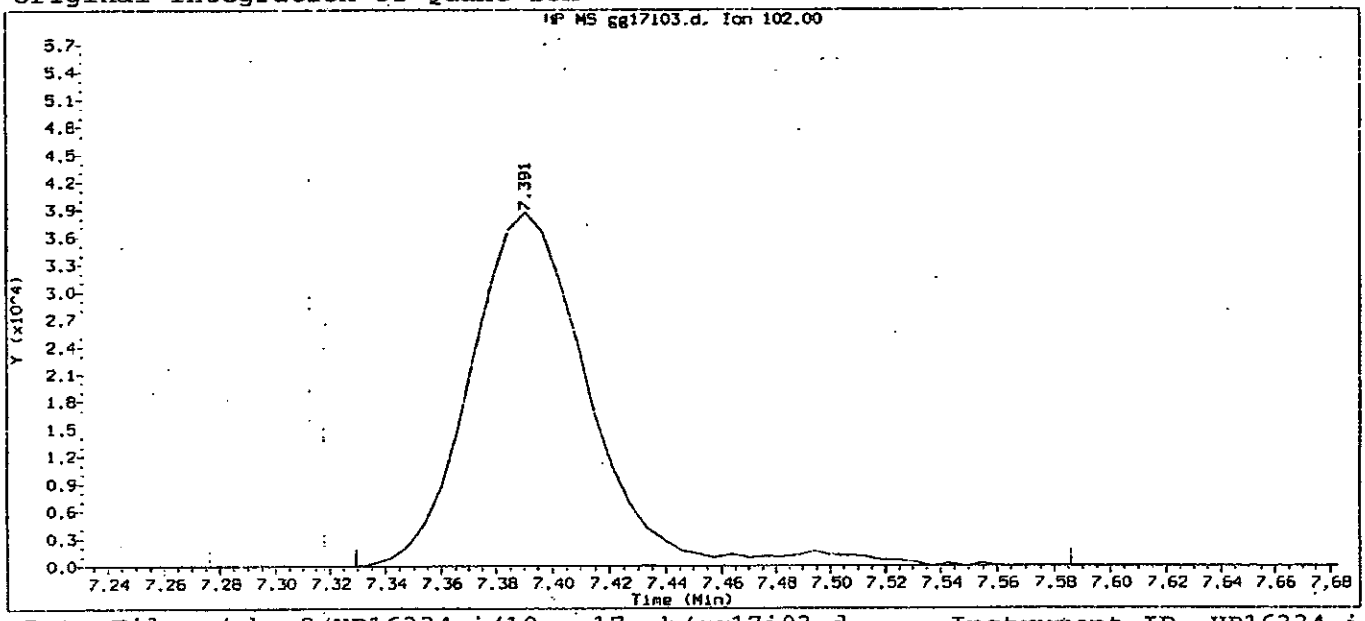
GC/MS audit/management approval: _____ 8/18/10

RAD36 0132

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i03.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 12:44 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 13:02
Date, time and analyst ID of latest file update: 17-Aug-2010 13:02 Automation

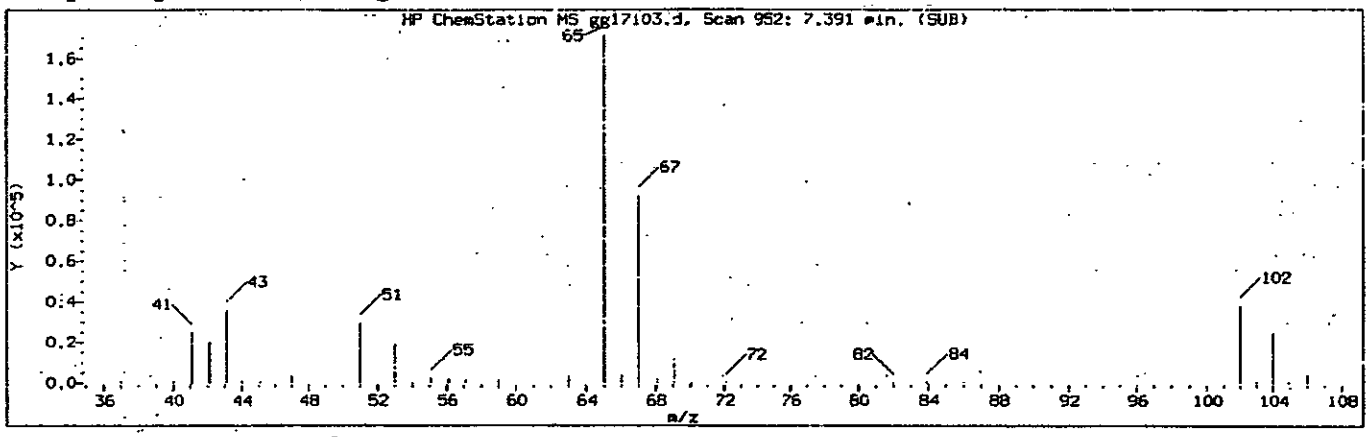
Sample Name: VSTD005 Lab Sample ID: VSTD005

Compound Number	: 70		
Compound Name	: 1,2-Dichloroethane-d4		
Scan Number	: 952		
Retention Time (minutes)	: 7.391		
Quant Ion	: 102.00		
Area	: 113823		
On-column Amount (ng)	: 10.3399		
Integration start scan	: 941	Integration stop scan:	983
Y at integration start	: 0	Y at integration end:	0

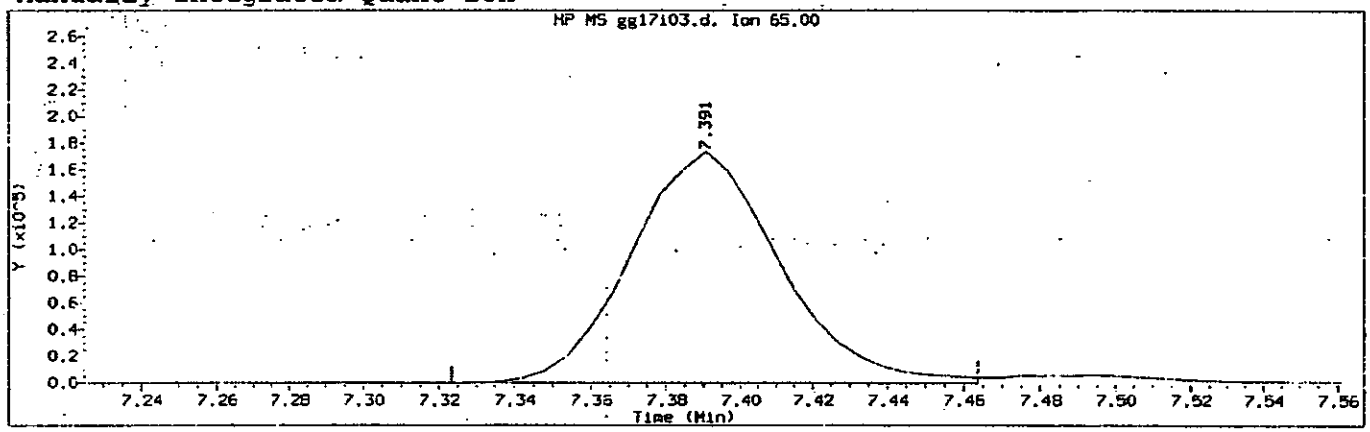
RAD36 0133

Digitally signed by Jason M. Long on 08/17/2010 at 14:54.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i03.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 12:44 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 14:37
Date, time and analyst ID of latest file update: 17-Aug-2010 14:37 jml01693

Sample Name: VSTD005 Lab Sample ID: VSTD005

Compound Number	: 69		
Compound Name	: 1,2-Dichloroethane-d4(mz65)		
Scan Number	: 952		
Retention Time (minutes)	: 7.391		
Quant Ion	: 65.00		
Area (flag)	: 482750M		
On-Column Amount (ng)	: 9.8772		
Integration start scan	: 940	Integration stop scan:	963
Y at integration start	: 0	Y at integration end:	0

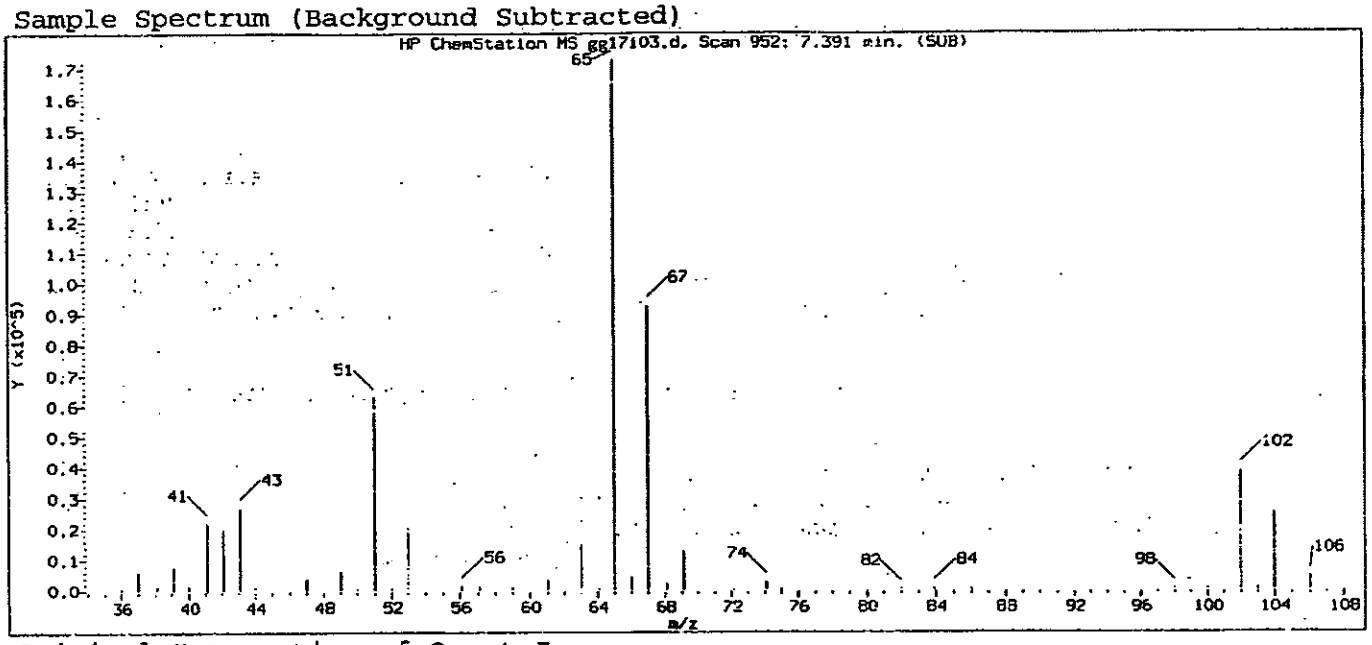
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long
on 08/17/2010 at 14:54.
Target 3.5 esignature user ID: jml01693

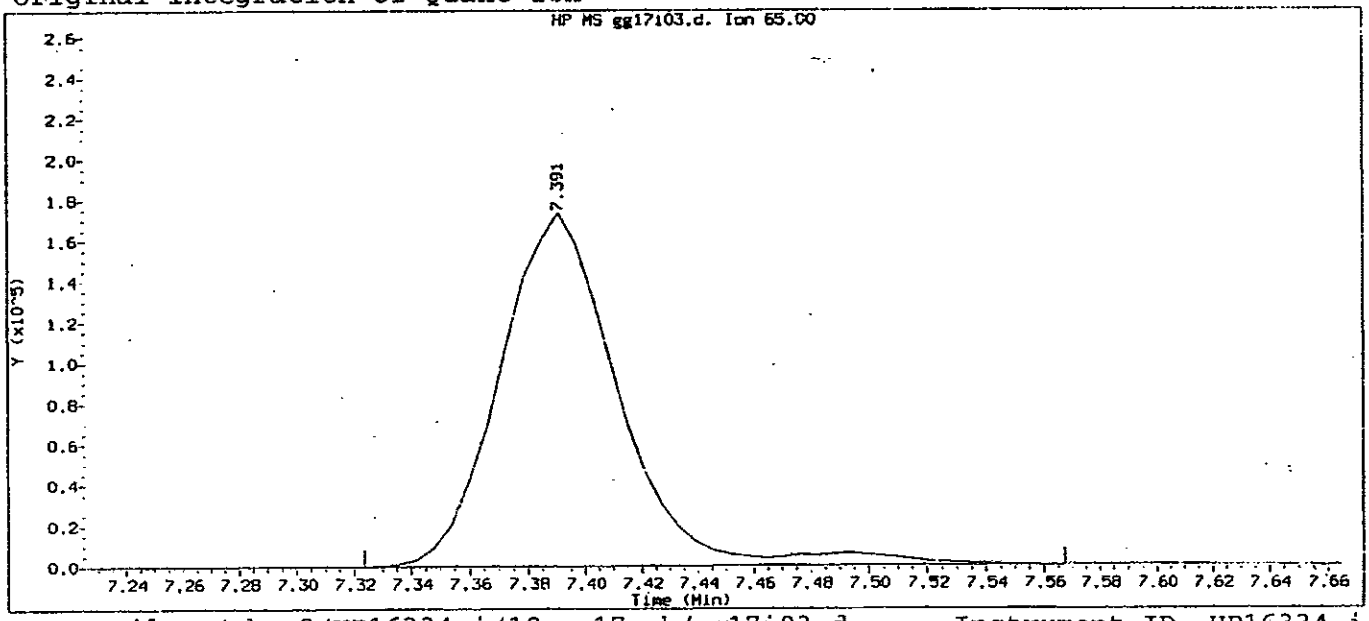
GC/MS audit/management approval: _____ 8/18/10

RAD36 0134

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i03.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 12:44 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 13:02
Date, time and analyst ID of latest file update: 17-Aug-2010 13:02 Automation

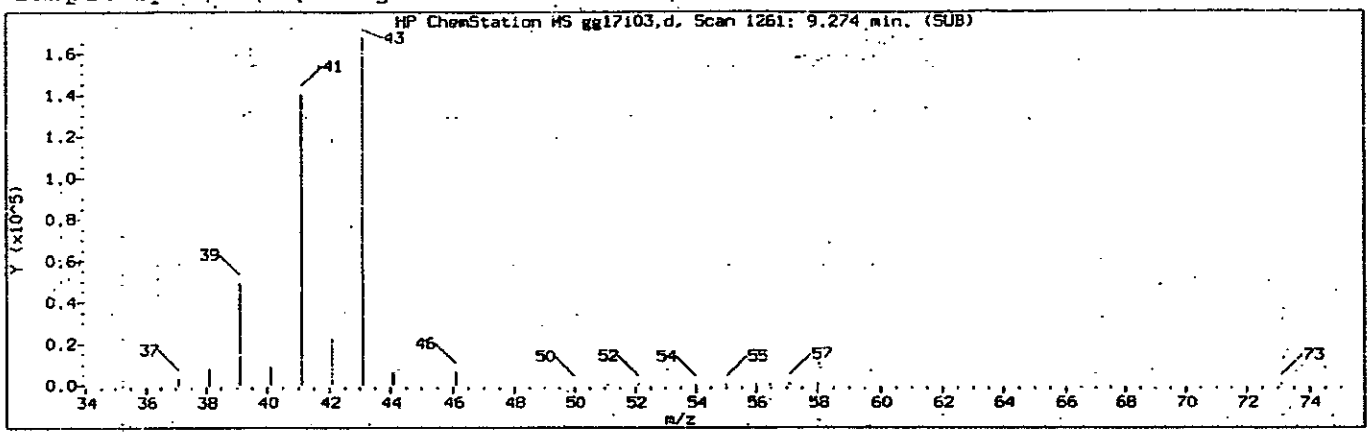
Sample Name: VSTD005 Lab Sample ID: VSTD005

Compound Number	: 69		
Compound Name	: 1,2-Dichloroethane-d4(mz65)		
Scan Number	: 952		
Retention Time (minutes)	: 7.391		
Quant Ion	: 65.00		
Area	: 499662		
On-column Amount (ng)	: 10.2145		
Integration start scan	: 940	Integration stop scan:	980
Y at integration start	: 0	Y at integration end:	337

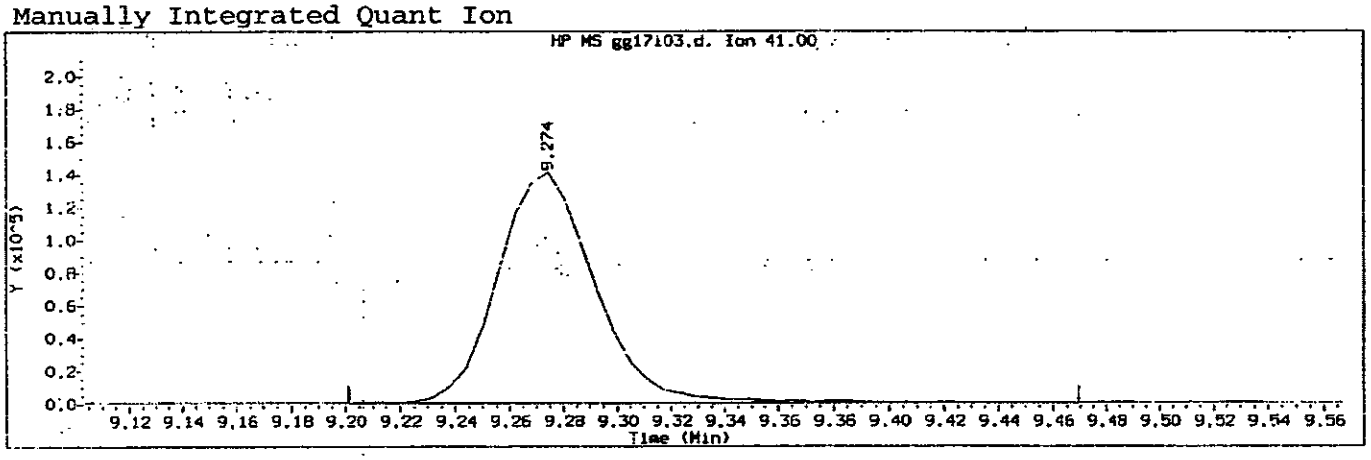
RAD36 8135

Digitally signed by Jason M. Long on 08/17/2010 at 14:54.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i03.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 12:44 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 14:37
Date, time and analyst ID of latest file update: 17-Aug-2010 14:37 jml01693

Sample Name: VSTD005 Lab Sample ID: VSTD005

Compound Number	: 91		
Compound Name	: 2-Nitropropane		
Scan Number	: 1261		
Retention Time (minutes)	: 9.274		
Quant Ion	: 41.00		
Area (flag)	: 356408M		
On-Column Amount (ng)	: 48.7788		
Integration start scan	: 1248	Integration stop scan:	1292
Y at integration start	: 490	Y at integration end:	490

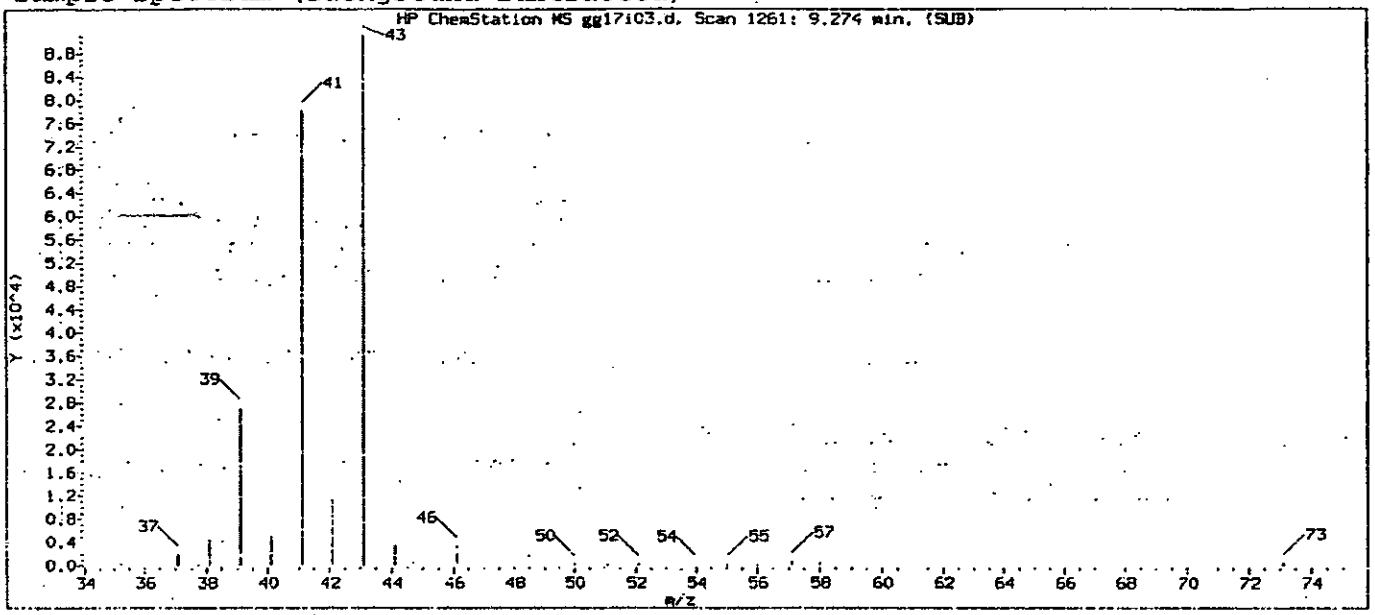
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long
on 08/17/2010 at 14:54.
Target 3.5 esignature user ID: jml01693

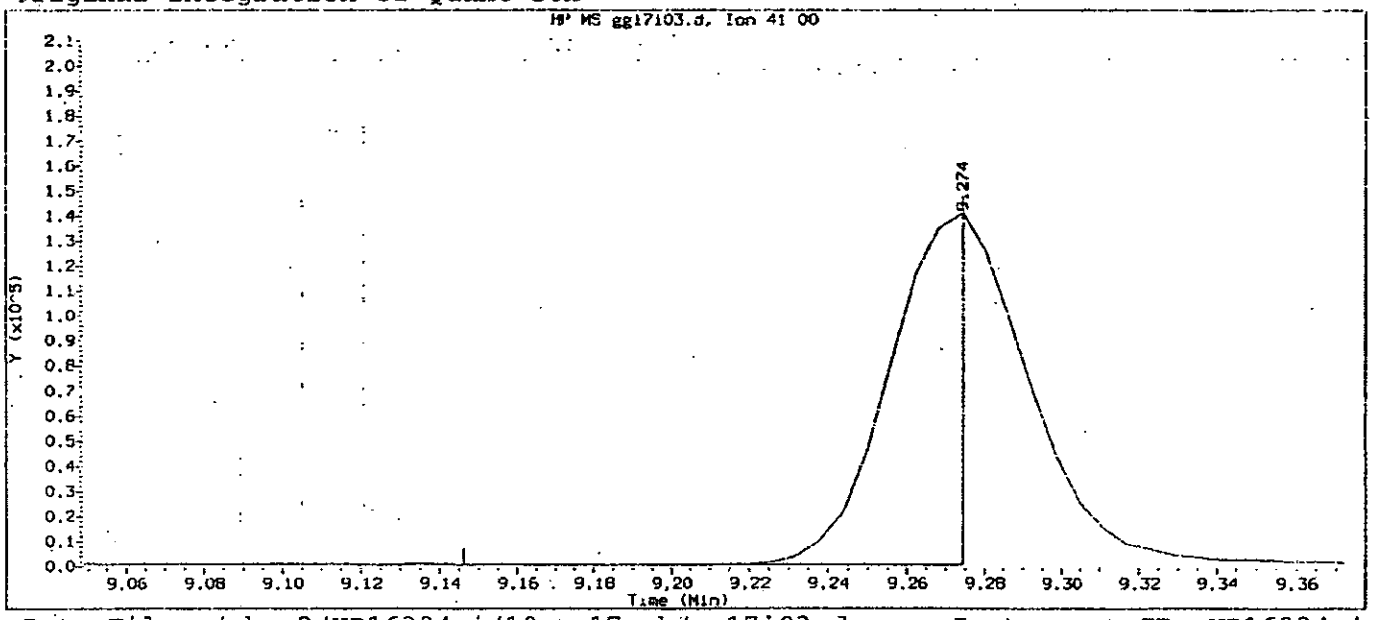
GC/MS audit/management approval: _____ 8/18/10

RAD36 0136

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i03.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 12:44 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 13:02
Date, time and analyst ID of latest file update: 17-Aug-2010 13:02 Automation

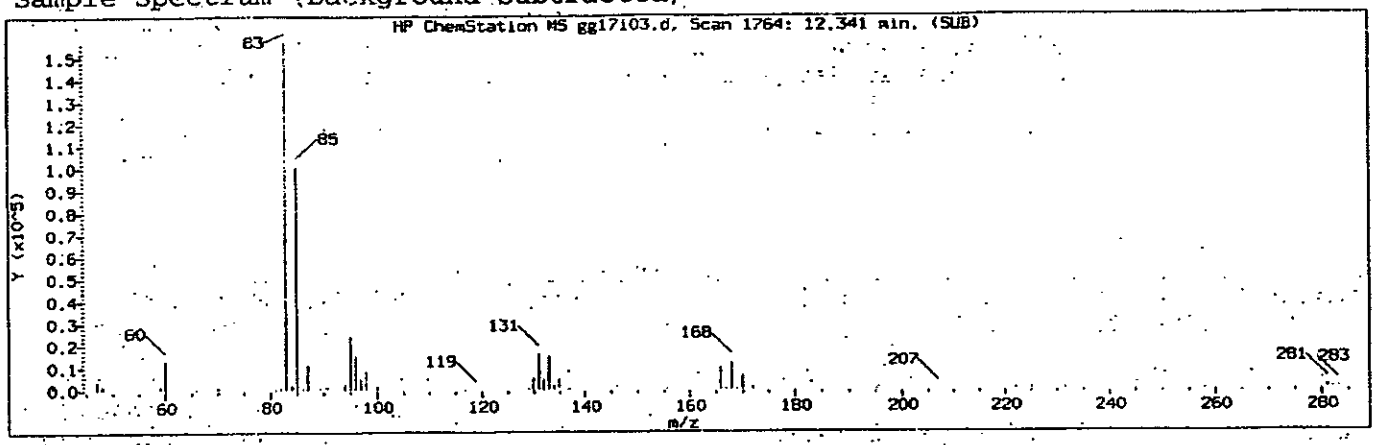
Sample Name: VSTD005 Lab Sample ID: VSTD005

Compound Number	: 91		
Compound Name	: 2-Nitropropane		
Scan Number	: 1261		
Retention Time (minutes)	: 9.274		
Quant Ion	: 41.00		
Area	: 177544		
On-column Amount (ng)	: 27.3553		
Integration start scan	: 1239	Integration stop scan:	1260
Y at integration start	: 582	Y at integration end:	582

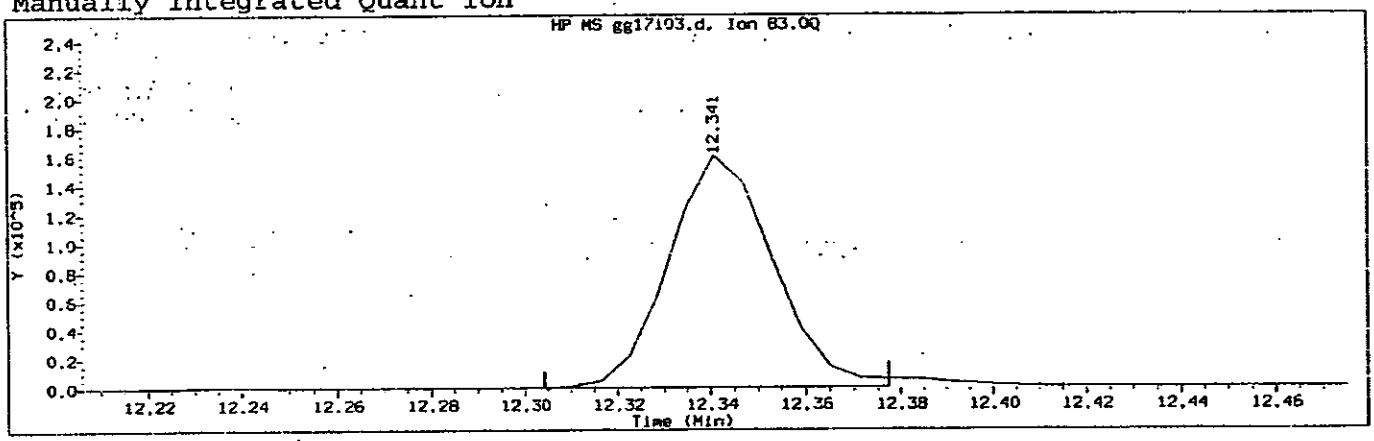
RAD36 0137

Digitally signed by Jason M. Long on 08/17/2010 at 14:54.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i03.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 12:44 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 14:37
Date, time and analyst ID of latest file update: 17-Aug-2010 14:37 jml01693

Sample Name: VSTD005 Lab Sample ID: VSTD005

Compound Number	: 128		
Compound Name	: 1,1,2,2-Tetrachloroethane		
Scan Number	: 1764		
Retention Time (minutes)	: 12.341		
Quant Ion	: 83.00		
Area (flag)	: 246058M		
On-Column Amount (ng)	: 5.1580		
Integration start scan	: 1757	Integration stop scan:	1769
Y at integration start	: 0	Y at integration end:	0

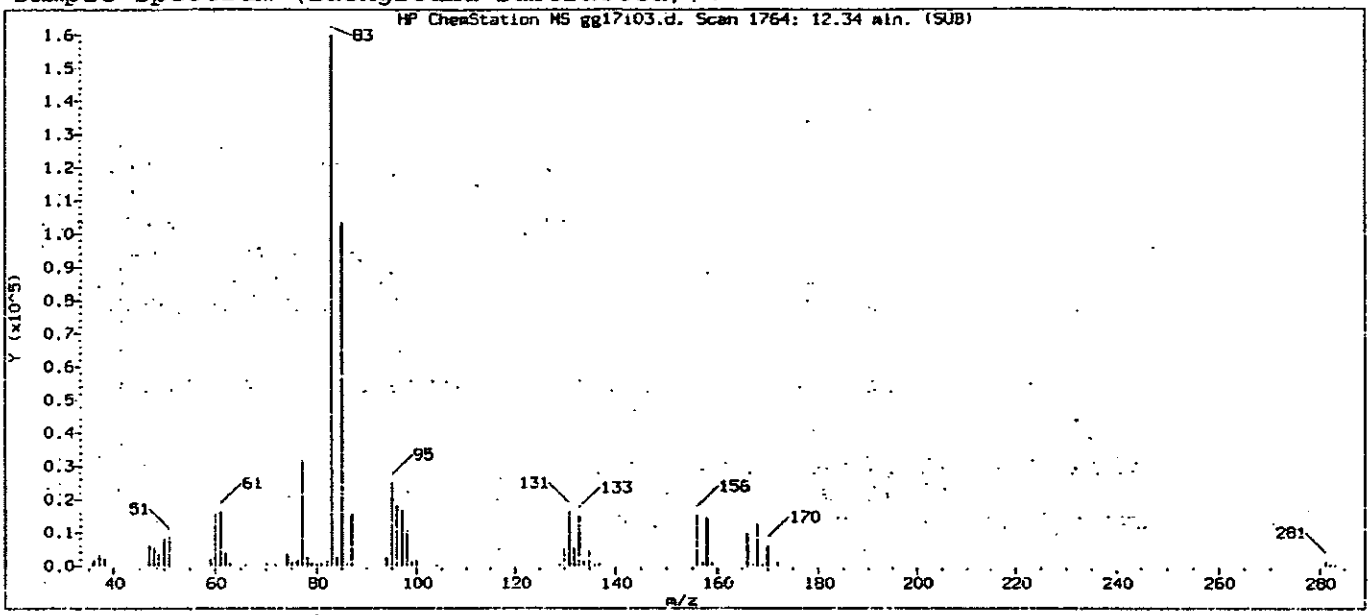
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long
on 08/17/2010 at 14:54.
Target 3.5 esignature user ID: jml01693

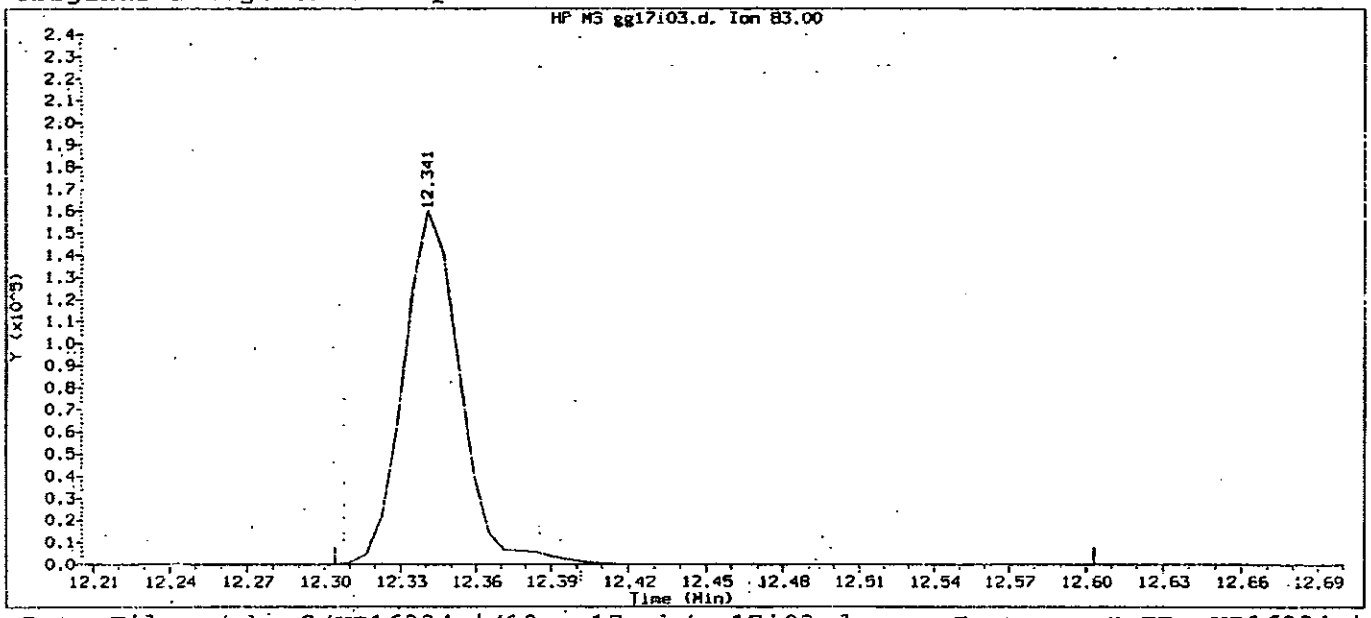
GC/MS audit/management approval: _____ 8/18/10

RAD36 0138

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i03.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 12:44 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 13:02
Date, time and analyst ID of latest file update: 17-Aug-2010 13:02 Automation

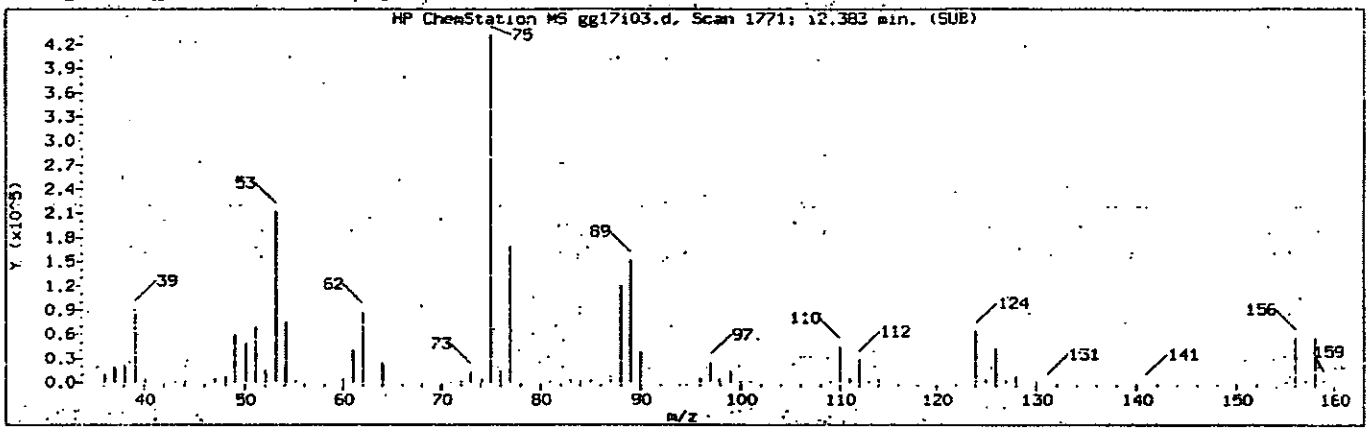
Sample Name: VSTD005 Lab Sample ID: VSTD005

Compound Number	: 128		
Compound Name	: 1,1,2,2-Tetrachloroethane		
Scan Number	: 1764		
Retention Time (minutes)	: 12.341		
Quant Ion	: 83.00		
Area	: 251569		
On-column Amount (ng)	: 5.0369		
Integration start scan	: 1757	Integration stop scan:	1806
Y at integration start	: 0	Y at integration end:	0

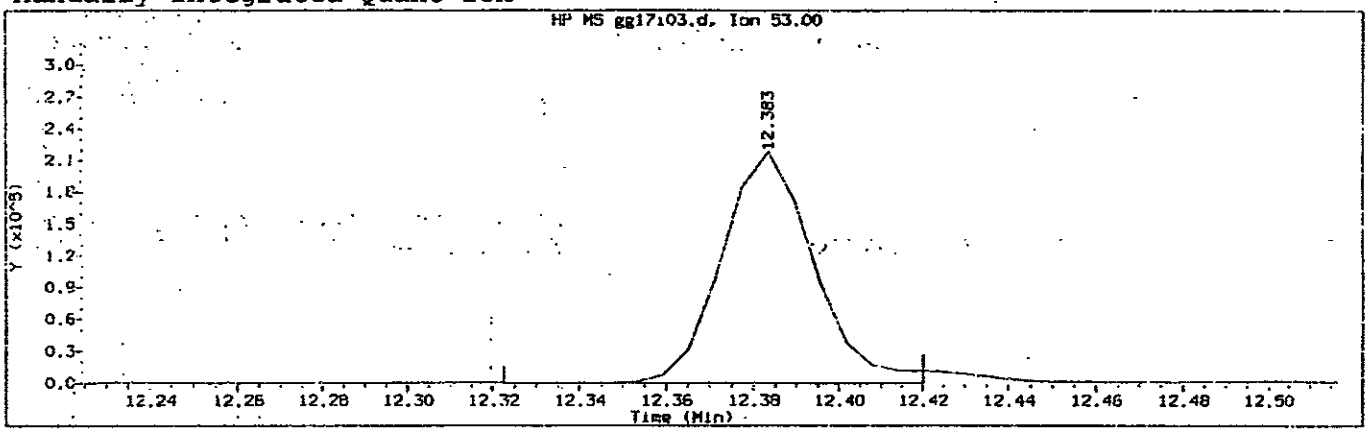
RAD36 0139

Digitally signed by Jason M. Long on 08/17/2010 at 14:54.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i03.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 12:44 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 14:37
Date, time and analyst ID of latest file update: 17-Aug-2010 14:37 jml01693

Sample Name: VSTD005 Lab Sample ID: VSTD005

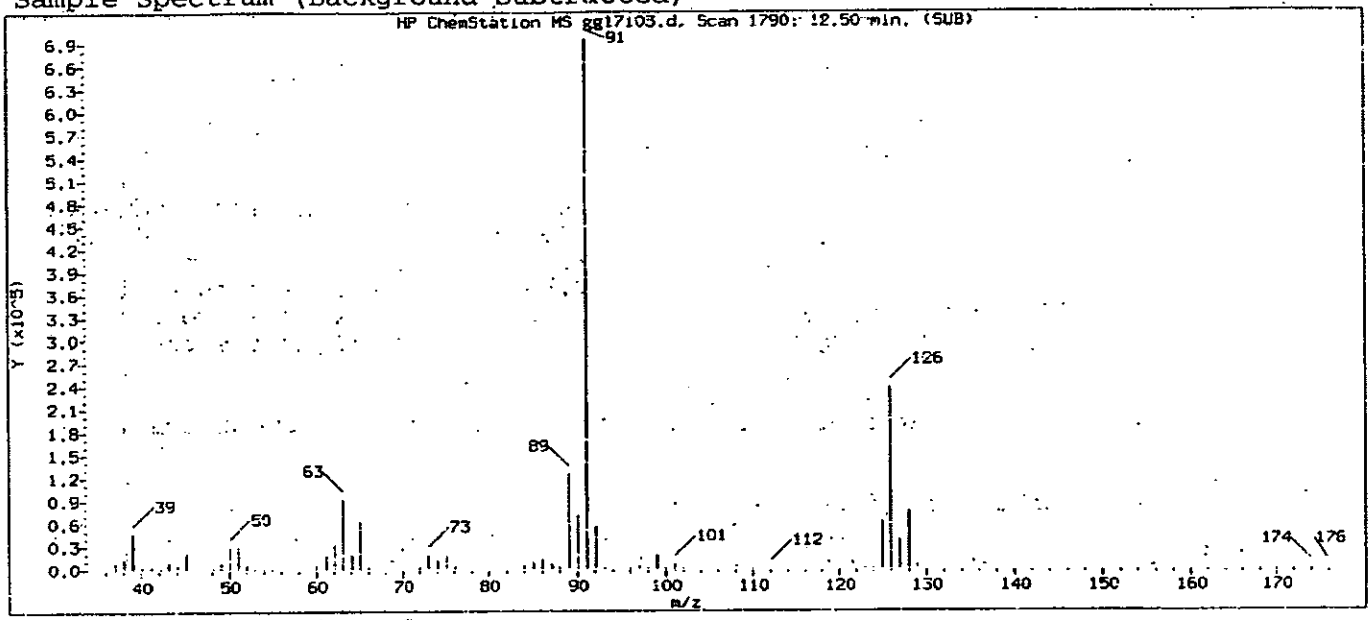
Compound Number	: 130		
Compound Name	: trans-1,4-Dichloro-2-Butene		
Scan Number	: 1771		
Retention Time (minutes)	: 12.383		
Quant Ion	: 53.00		
Area (flag)	: 324420MA		
On-Column Amount (ng)	: 47.4617		
Integration start scan	: 1760	Integration stop scan:	1776
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

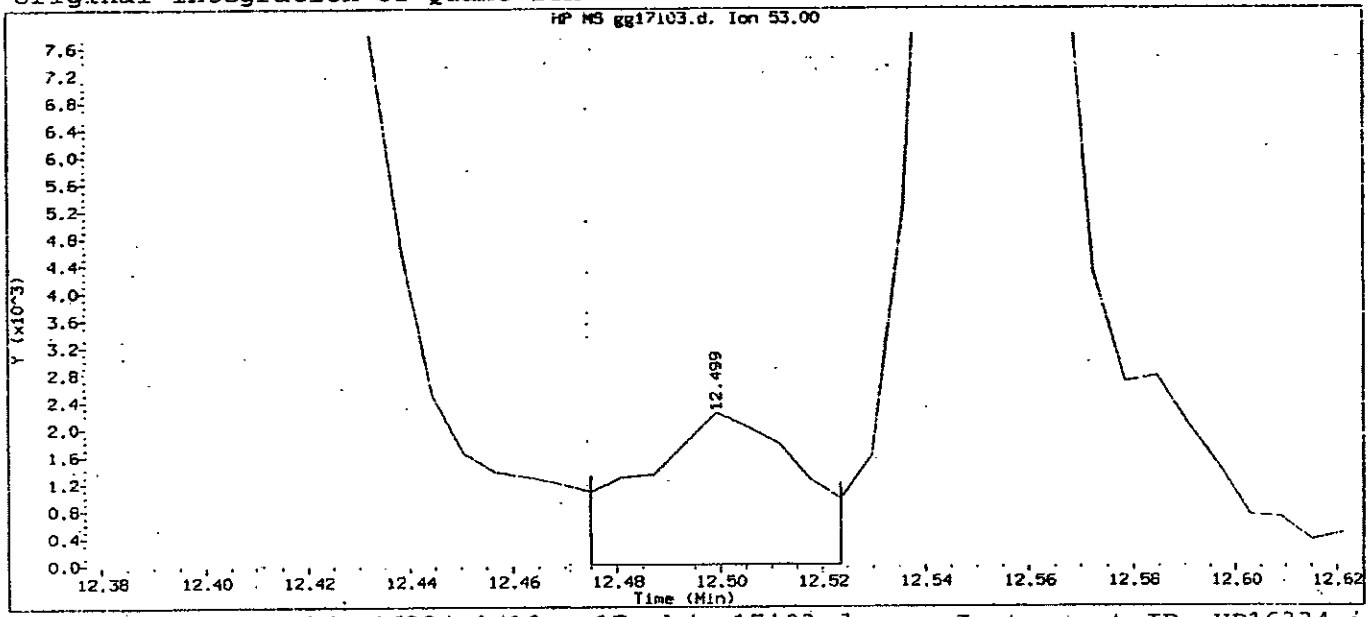
Analyst responsible for change: Digitally signed by Jason M. Long
on 08/17/2010 at 14:54.
Target 3.5 esignature user ID: jml01693

GC/MS audit/management approval: _____ RAD36 8148

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i03.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 12:44 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 13:02
Date, time and analyst ID of latest file update: 17-Aug-2010 13:02 Automation

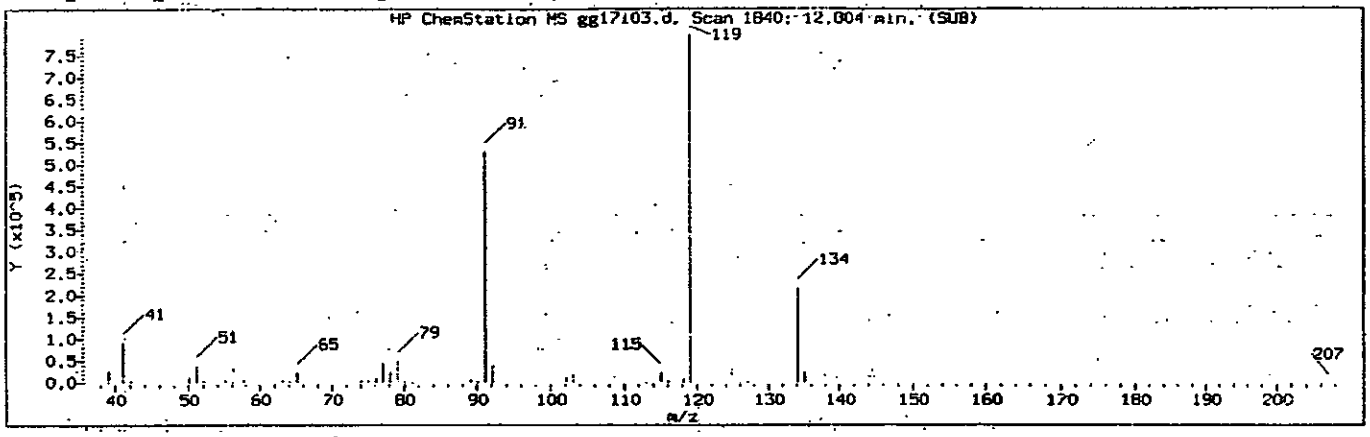
Sample Name: VSTD005 Lab Sample ID: VSTD005

Compound Number	: 130		
Compound Name	: trans-1,4-Dichloro-2-Butene		
Scan Number	: 1790		
Retention Time (minutes)	: 12.499		
Quant Ion	: 53.00		
Area	: 4629		
On-column Amount (ng)	: 0.7525		
Integration start scan	: 1785	Integration stop scan:	1793
Y at integration start	: 0	Y at integration end:	0

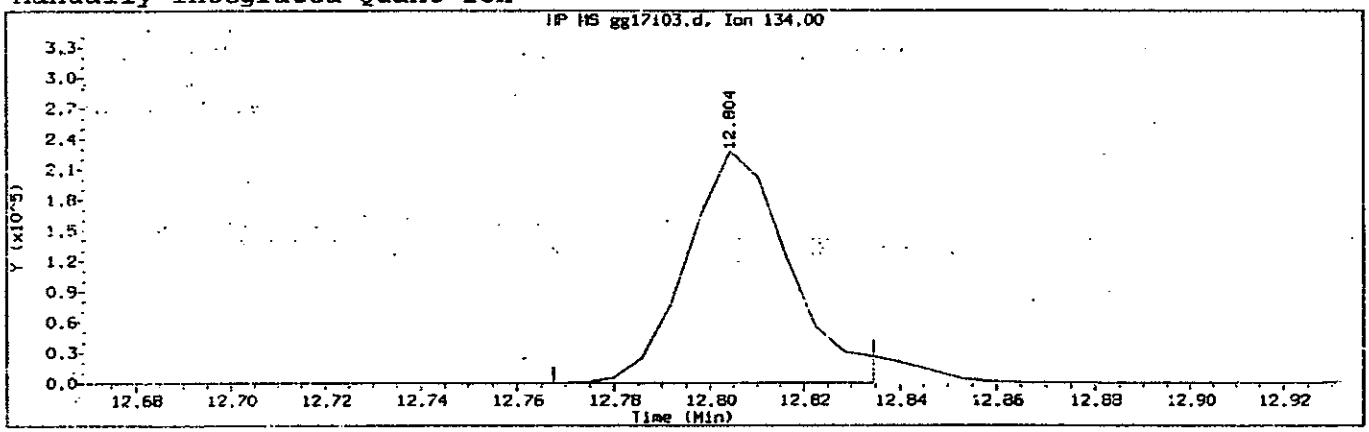
RAD36 P141

Digitally signed by Jason M. Long on 08/17/2010 at 14:54.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i03.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 12:44 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 14:37
Date, time and analyst ID of latest file update: 17-Aug-2010 14:37 jml01693

Sample Name: VSTD005 Lab Sample ID: VSTD005

Compound Number	: 137		
Compound Name	: tert-Butylbenzene		
Scan Number	: 1840		
Retention Time (minutes)	: 12.804		
Quant Ion	: 134.00		
Area (flag)	: 343022M		
On-Column Amount (ng)	: 5.1514		
Integration start scan	: 1833	Integration stop scan:	1844
Y at integration start	: 0	Y at integration end:	0

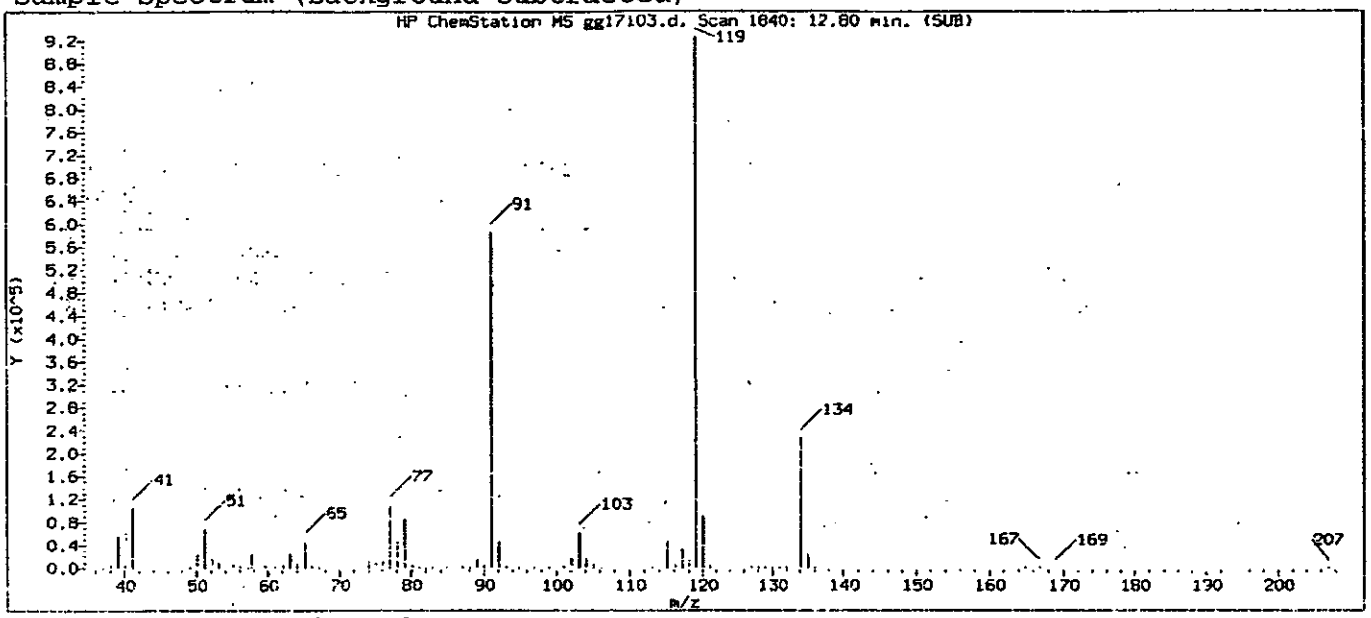
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long on 08/17/2010 at 14:54. Target 3.5 esignature user ID: jml01693

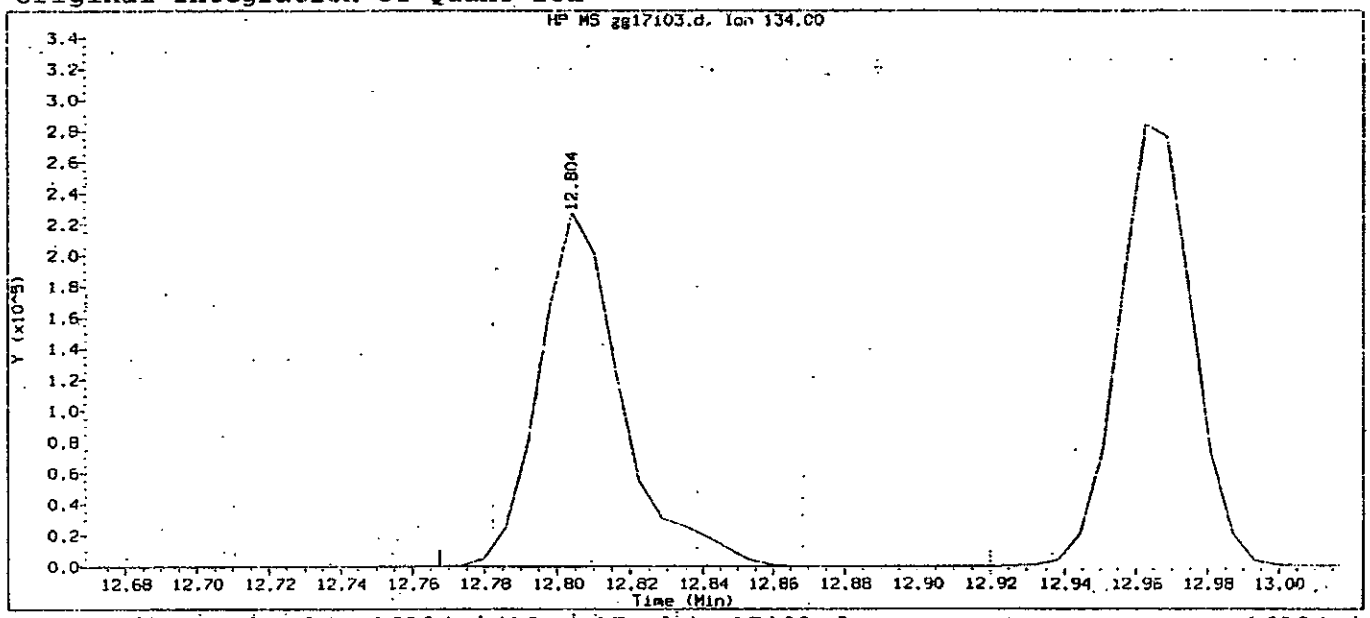
GC/MS audit/management approval: _____ 8/18/10

RAD36 8142

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i03.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 12:44 Analyst ID: JML01693

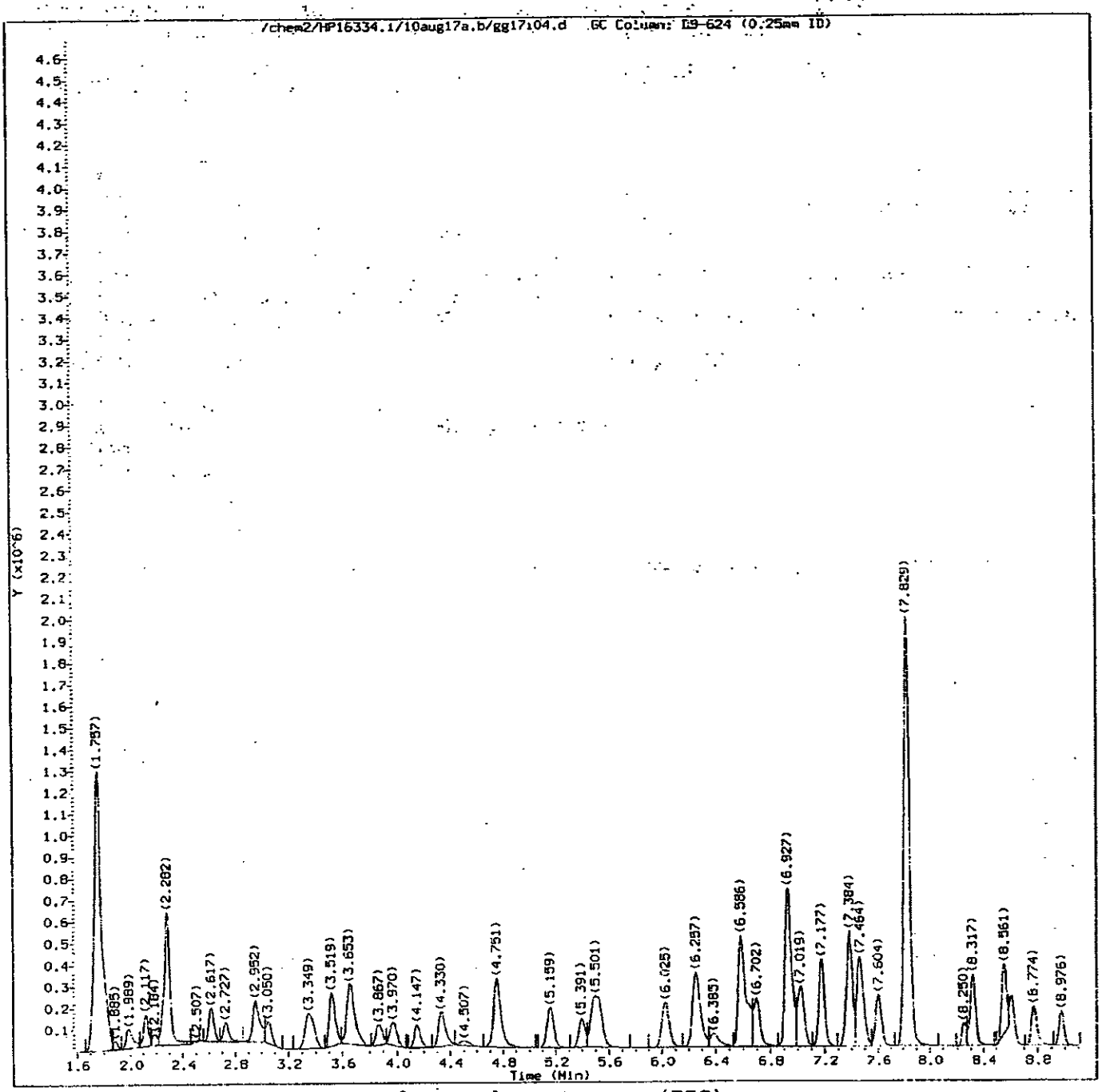
Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 13:02
Date, time and analyst ID of latest file update: 17-Aug-2010 13:02 Automation

Sample Name: VSTD005 Lab Sample ID: VSTD005

Compound Number	: 137		
Compound Name	: tert-Butylbenzene		
Scan Number	: 1840		
Retention Time (minutes)	: 12.804		
Quant Ion	: 134.00		
Area	: 357220		
On-column Amount (ng)	: 5.0024		
Integration start scan	: 1833	Integration stop scan:	1858
Y at integration start	: 0	Y at integration end:	0

RAD36 0143

Digitally signed by Jason M. Long on 08/17/2010 at 14:54.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

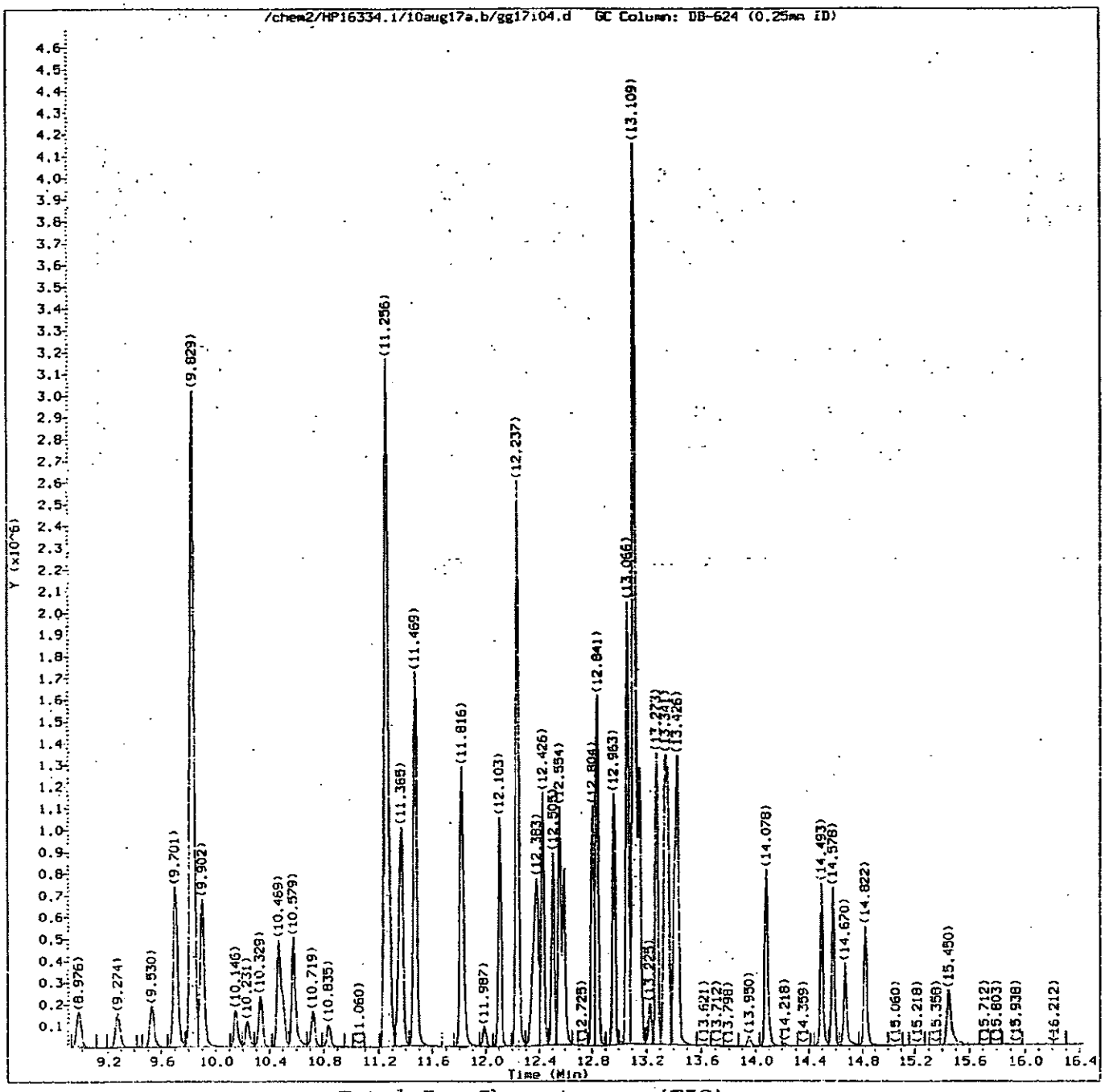
Data File: /chem2/HP16334.i/10aug17a.b/gg17i04.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 13:06 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 14:37
Date, time and analyst ID of latest file update: 17-Aug-2010 14:37 jml01693

Sample Name: VSTD002 Lab Sample ID: VSTD002

RAD36 0144

Digitally signed by Jason M. Long
on 08/17/2010 at 14:54.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/10aug17a.b/gg17i04.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 13:06 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 14:37
Date, time and analyst ID of latest file update: 17-Aug-2010 14:37 jml01693

Sample Name: VSTD002 Lab Sample ID: VSTD002

RAD36 0145

Digitally signed by Jason M. Long
on 08/17/2010 at 14:54.
Target 3,5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/10aug17a.b/gg17i04.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 13:06 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 14:37
Date, time and analyst ID of latest file update: 17-Aug-2010 14:37 jml01693

Sample Name: VSTD002 Lab Sample ID: VSTD002

	Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
2)	Dichlorodifluoromethane	(1)	1.989	85	228910	2.015
5)	Chloromethane	(1)	2.117	50	213377	1.958
6)	Vinyl Chloride	(1)	2.251	62	212215	2.011
9)	1,3-Butadiene	(1)	2.288	39	362405	2.119
10)	Bromomethane	(1)	2.617	94	161301	2.003
11)	Chloroethane	(1)	2.727	64	122619	1.979
13)	Dichlorofluoromethane	(1)	2.952	67	288685	1.960
15)	Trichlorofluoromethane	(1)	3.056	101	249571M	1.943
17)	Ethyl Ether	(1)	3.336	59	86361	1.994
18)	Freon 123a	(1)	3.367	67	154003	2.004
23)	Acrolein	(4)	3.519	56	476542	97.812
24)	1,1-Dichloroethene	(1)	3.653	96	124832	1.987
25)	Freon 113	(1)	3.672	101	129932	1.993
26)	Acetone	(4)	3.727	58	46701	20.301
27)	Methyl Iodide	(1)	3.867	142	230463	2.007
29)	Carbon Disulfide	(1)	3.970	76	326330	1.907
32)	Allyl Chloride	(1)	4.147	41	125746	1.905
33)	Methyl Acetate	(1)	4.196	43	24059M	1.919
34)	Methylene Chloride	(1)	4.330	84	147728	1.990
36)	*t-Butyl Alcohol-d10	(4)	4.379	65	116394	50.000
38)	t-Butyl Alcohol	(4)	4.507	59	116757	39.768
39)	Acrylonitrile	(4)	4.745	53	80722	9.865
41)	trans-1,2-Dichloroethene	(1)	4.751	96	140449	1.985
40)	Methyl Tertiary Butyl Ether	(1)	4.751	73	278763	1.993
37)	1,2-Dichloroethene (Total)	(1)		96	290665	3.974
44)	n-Hexane	(1)	5.159	57	188733	1.993
45)	1,1-Dichloroethane	(1)	5.397	63	233767	2.011
47)	di-Isopropyl Ether	(1)	5.488	45	395653	1.992
48)	2-Chloro-1,3-Butadiene	(1)	5.531	53	165771	2.006
49)	Ethyl t-Butyl Ether	(1)	6.019	59	362274	2.022
50)	cis-1,2-Dichloroethene	(1)	6.250	96	150216	1.989
51)	2,2-Dichloropropane	(1)	6.257	77	185130	1.961
52)	2-Butanone	(4)	6.287	43	227429	19.184
53)	Propionitrile	(4)	6.385	54	119573M	39.567
55)	Methacrylonitrile	(4)	6.586	67	260007	19.657
56)	Bromochloromethane	(1)	6.592	128	60672	2.015
57)	Tetrahydrofuran	(4)	6.647	71	76777	19.874
58)	Chloroform	(1)	6.702	83	237203	1.998
62)	$Dibromofluoromethane(mz111)	(1)	6.927	111	601312	10.012

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jason M. Long
on 08/17/2010 at 14:54.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/10aug17a.b/gg17i04.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 13:06 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 14:37
Date, time and analyst ID of latest file update: 17-Aug-2010 14:37 jml01693

Sample Name: VSTD002 Lab Sample ID: VSTD002

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
61)$Dibromofluoromethane	(1)	6.927	113	589799	10.002
63) 1,1,1-Trichloroethane	(1)	6.952	97	203173	1.969
64) Cyclohexane	(1)	7.025	56	228092	2.002
65) 1,1-Dichloropropene	(1)	7.177	75	183792	1.981
66) Carbon Tetrachloride	(1)	7.177	117	176817	1.961
67) Isobutyl Alcohol	(4)	7.360	41	86899M	96.921
69)$1,2-Dichloroethane-d4(mz65)	(1)	7.384	65	486910M	9.942
70)$1,2-Dichloroethane-d4	(1)	7.384	102	109933M	9.996
68)$1,2-Dichloroethane-d4(mz104)	(1)	7.390	104	70871	10.019
72) Benzene	(1)	7.457	78	541909	1.984
73) 1,2-Dichloroethane(mz98)	(1)	7.494	98	11841	1.905
74) 1,2-Dichloroethane	(1)	7.494	62	129912	2.002
75) t-Amyl Methyl Ether	(1)	7.604	73	306257	1.972
76) n-Heptane	(1)	7.805	43	191117	1.956
77)*Fluorobenzene	(1)	7.835	96	2563298	10.000
81) n-Butanol	(4)	8.250	56	132883	195.101
83) Trichloroethene	(1)	8.317	95	149281	1.988
84) Methylcyclohexane	(1)	8.561	83	238149	2.018
85) 1,2-Dichloropropane	(1)	8.616	63	133166	1.971
88) Dibromomethane	(1)	8.768	93	59063	1.966
87) Methyl Methacrylate	(4)	8.774	69	51540	1.948
89) 1,4-Dioxane	(4)	8.793	88	21324	103.018
90) Bromodichloromethane	(1)	8.976	83	148743	1.933
91) 2-Nitropropane	(4)	9.274	41	132193	19.027
94) cis-1,3-Dichloropropene	(1)	9.530	75	155709	1.938
96) 4-Methyl-2-Pentanone	(1)	9.701	43	619633	19.384
97)$Toluene-d8	(2)	9.829	98	2532889	10.156
98)$Toluene-d8(mz100)	(2)	9.829	100	1632617	10.118
101) Toluene	(2)	9.902	92	358639	1.993
102) trans-1,3-Dichloropropene	(2)	10.146	75	119693	1.888
103) Ethyl Methacrylate	(2)	10.231	69	85814	1.962
104) 1,1,2-Trichloroethane	(2)	10.329	97	84785	2.007
105) Tetrachloroethene	(2)	10.469	166	160577	1.969
106) 1,3-Dichloropropane	(2)	10.500	76	143887	2.014
107) 2-Hexanone	(2)	10.579	43	411118	19.673
108) Dibromochloromethane	(2)	10.725	129	93524	1.923
109) 1,2-Dibromoethane	(2)	10.835	107	76554	2.008
110)*Chlorobenzene-d5	(2)	11.256	117	1846965	10.000
112) Chlorobenzene	(2)	11.280	112	403673	1.997

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 08/17/2010 at 14:54.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/10aug17a.b/gg17i04.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 13:06 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 14:37
Date, time and analyst ID of latest file update: 17-Aug-2010 14:37 jml01693

Sample Name: VSTD002 Lab Sample ID: VSTD002

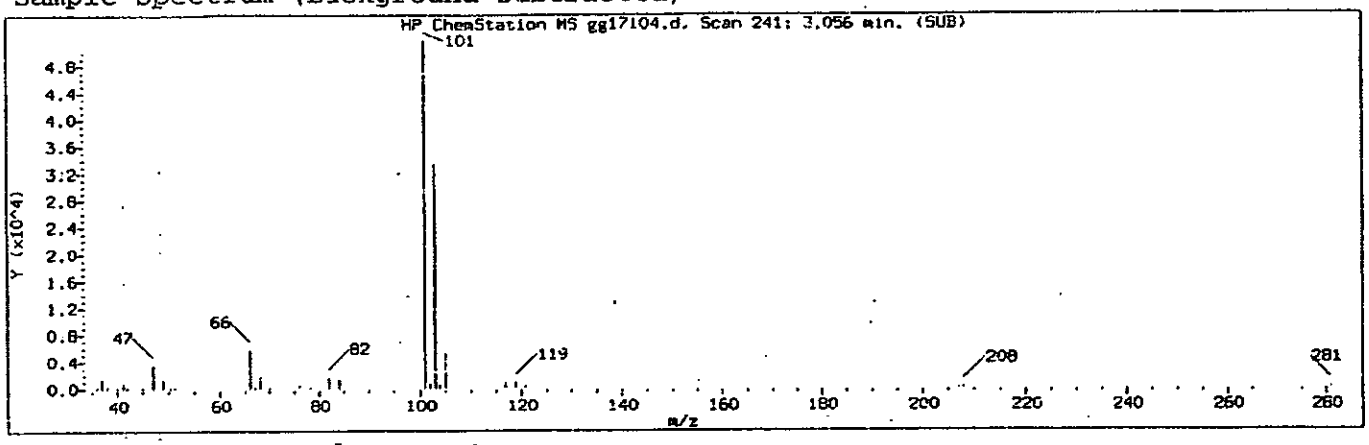
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
113) 1,1,1,2-Tetrachloroethane	(2)	11.353	131	127491	1.959
114) Ethylbenzene	(2)	11.371	91	667702	1.942
117) m+p-Xylene	(2)	11.469	106	534236	3.884
115) Xylene (Total)	(2)		106	803195	5.867
118) o-Xylene	(2)	11.810	106	268959	1.984
119) Styrene	(2)	11.822	104	393226	1.930
120) Bromoform	(2)	11.987	173	46265	1.899
121) Isopropylbenzene	(2)	12.103	105	687324	1.964
126)$4-Bromofluorobenzene	(2)	12.237	95	862354	10.229
127)$4-Bromofluorobenzene(mz174)	(2)	12.237	174	757500	10.144
128) 1,1,2,2-Tetrachloroethane	(3)	12.341	83	94180M	1.990
129) Bromobenzene	(3)	12.365	156	161481	1.970
130) trans-1,4-Dichloro-2-Butene	(4)	12.383	53	98107MA	18.663
131) 1,2,3-Trichloropropane	(3)	12.383	110	26843	1.985
132) n-Propylbenzene	(3)	12.426	91	836566M	1.979
133) 2-Chlorotoluene	(3)	12.505	126	168006	1.978
134) 1,3,5-Trimethylbenzene	(3)	12.554	105	571979	1.944
135) 4-Chlorotoluene	(3)	12.591	126	171528	1.979
137) tert-Butylbenzene	(3)	12.804	134	127911M	1.937
138) Pentachloroethane	(3)	12.835	167	96236	1.965
139) 1,2,4-Trimethylbenzene	(3)	12.841	105	609986	1.929
140) sec-Butylbenzene	(3)	12.963	105	763993	1.950
142) 1,3-Dichlorobenzene	(3)	13.066	146	339826	1.919
141) p-Isopropyltoluene	(3)	13.066	119	680797	1.944
143)*1,4-Dichlorobenzene-d4	(3)	13.109	152	1054367	10.000
144) 1,4-Dichlorobenzene	(3)	13.127	146	360031	1.978
145) 1,2,3-Trimethylbenzene	(3)	13.152	120	280445	1.993
146) Benzyl Chloride	(3)	13.225	126	31940	1.941
147) n-Butylbenzene	(3)	13.359	92	341153M	1.969
148) 1,2-Dichlorobenzene	(3)	13.401	146	307133	1.970
150) 1,2-Dibromo-3-Chloropropane	(4)	13.950	155	11406	1.954
153) 1,2,4-Trichlorobenzene	(3)	14.493	180	242831	1.973
154) Hexachlorobutadiene	(3)	14.584	225	129472	1.952
155) Naphthalene	(3)	14.670	128	332956	1.988
156) 1,2,3-Trichlorobenzene	(3)	14.822	180	193011	2.003

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

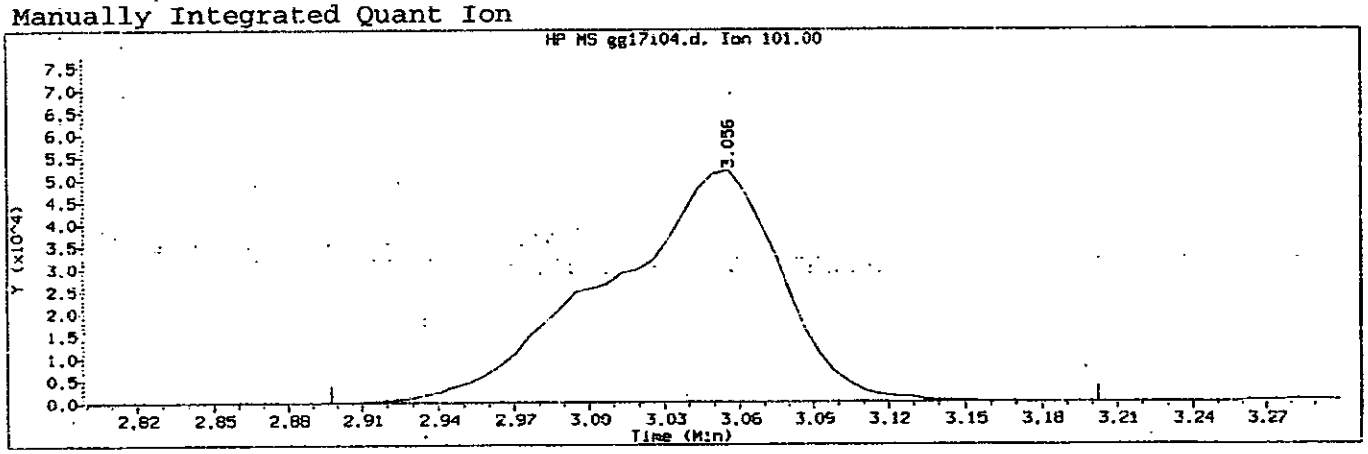
RAD36 0148

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on 08/17/2010 at 14:54.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i04.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 13:06 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 14:37
Date, time and analyst ID of latest file update: 17-Aug-2010 14:37 jml01693

Sample Name: VSTD002 Lab Sample ID: VSTD002

Compound Number	: 15		
Compound Name	: Trichlorofluoromethane		
Scan Number	: 241		
Retention Time (minutes)	: 3.056		
Quant Ion	: 101.00		
Area (flag)	: 249571M		
On-Column Amount (ng)	: 1.9427		
Integration start scan	: 214	Integration stop scan:	264
Y at integration start	: 0	Y at integration end:	0

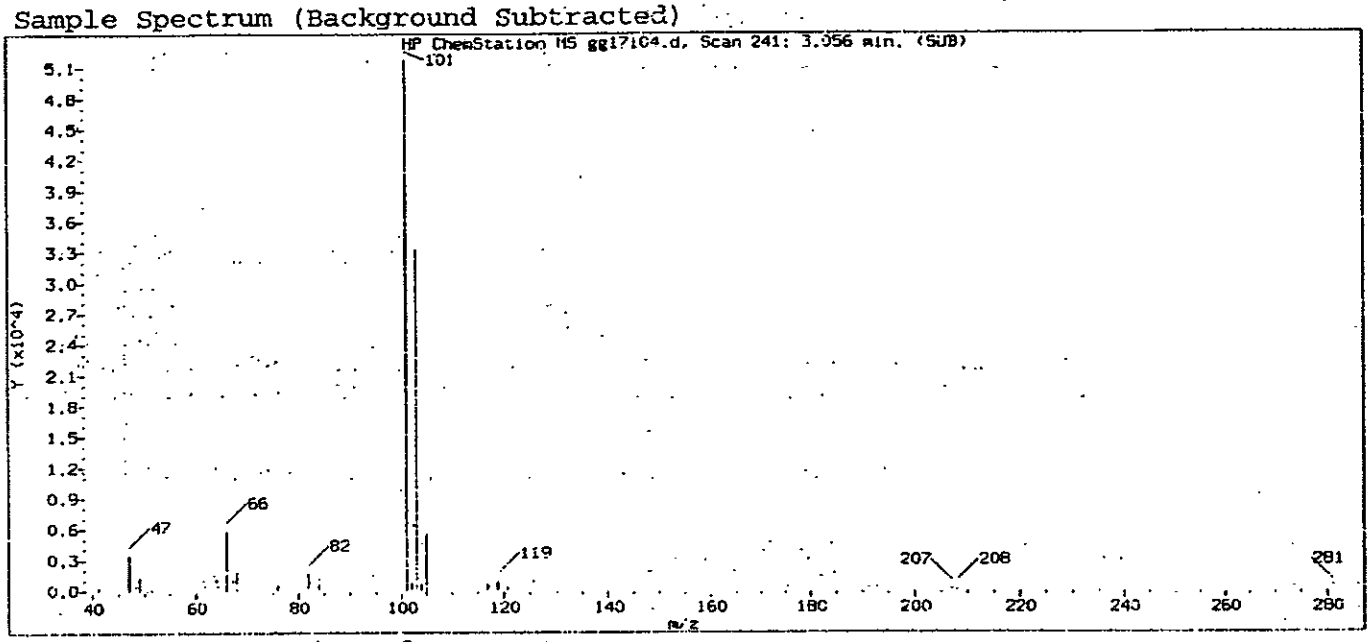
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long
on 08/17/2010 at 14:54.
Target 3.5 esignature user ID: jml01693

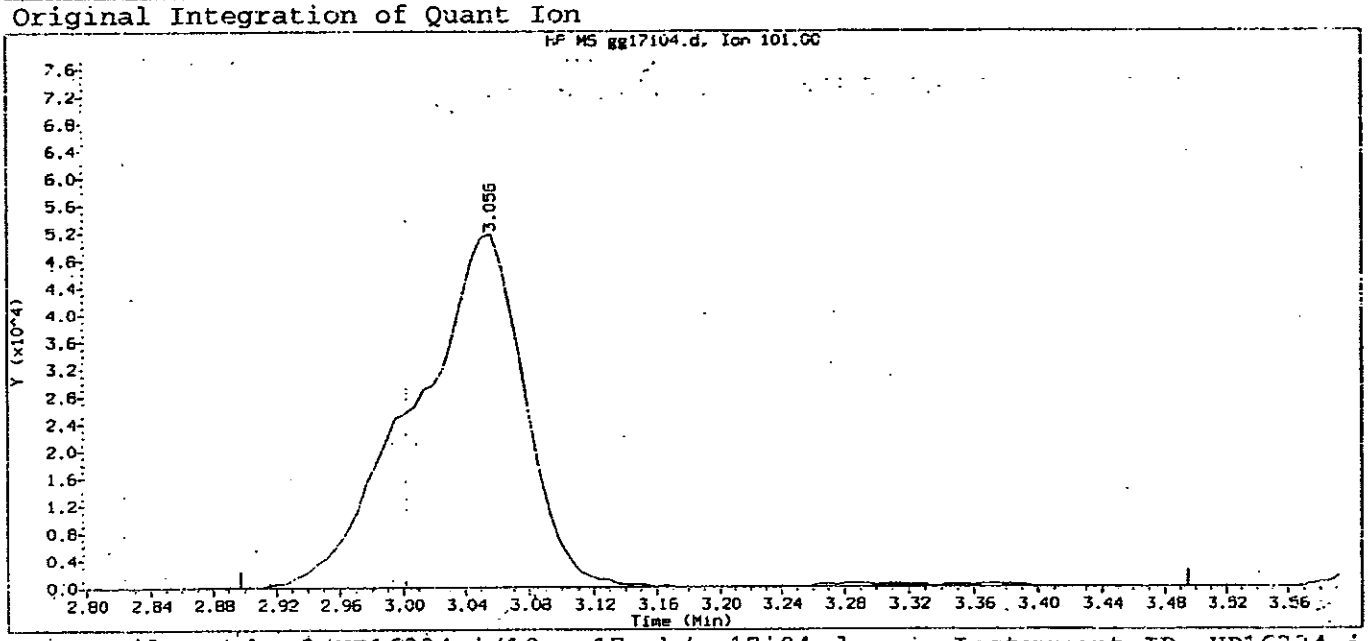
GC/MS audit/management approval: _____ 8/18/10

RAD36 0149

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i04.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 13:06 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 13:24
Date, time and analyst ID of latest file update: 17-Aug-2010 13:24 Automation

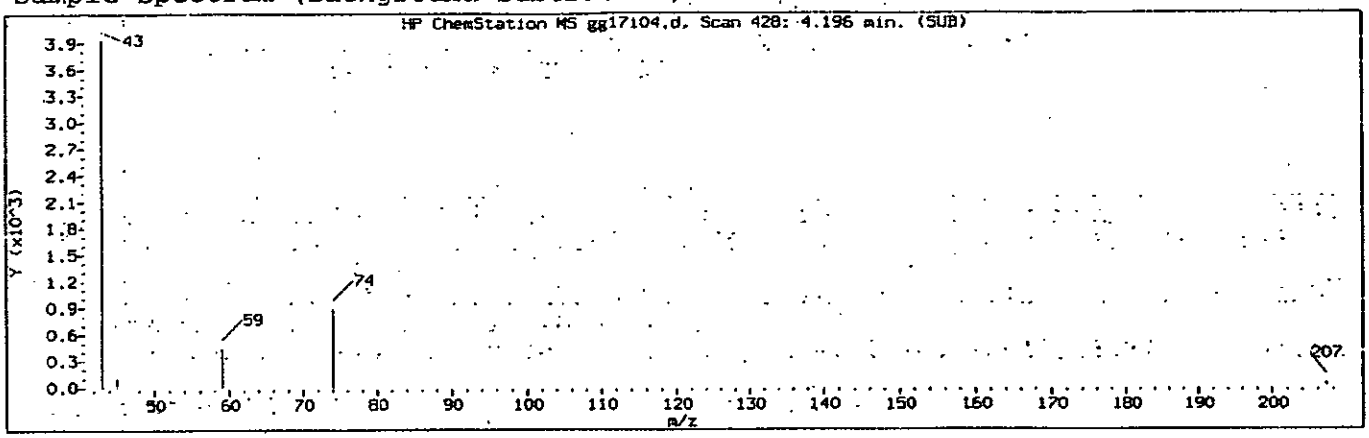
Sample Name: VSTD002 Lab Sample ID: VSTD002

Compound Number	: 15		
Compound Name	: Trichlorofluoromethane		
Scan Number	: 241		
Retention Time (minutes)	: 3.056		
Quant Ion	: 101.00		
Area	: 252411		
On-column Amount (ng)	: 2.0061		
Integration start scan	: 214	Integration stop scan:	312
Y at integration start	: 0	Y at integration end:	0

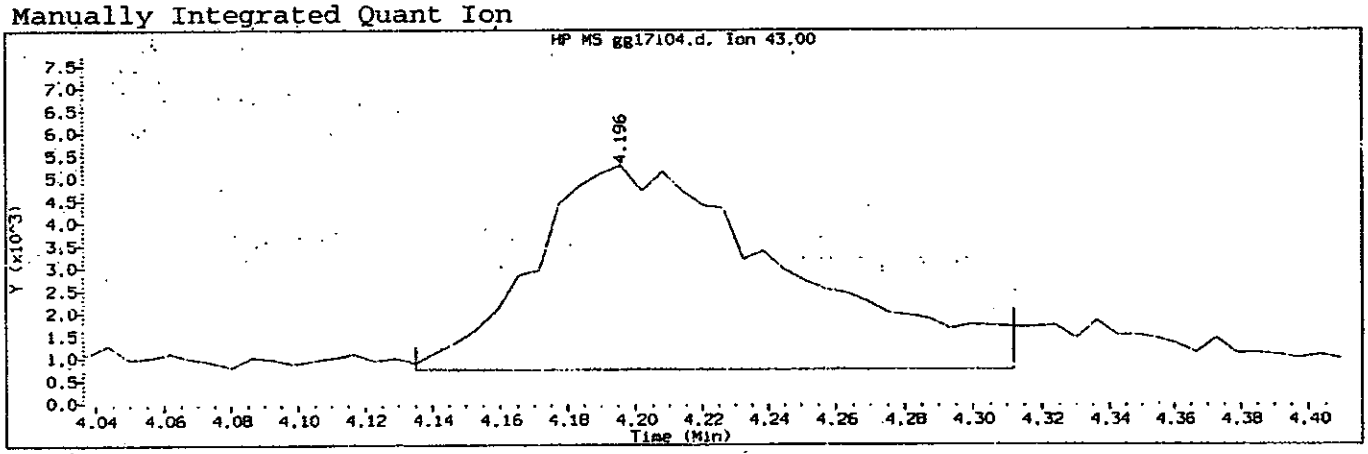
RAD36 8150

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Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i04.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 13:06 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 14:37
Date, time and analyst ID of latest file update: 17-Aug-2010 14:37 jml01693

Sample Name: VSTD002 Lab Sample ID: VSTD002

Compound Number	: 33		
Compound Name	: Methyl Acetate		
Scan Number	: 428		
Retention Time (minutes)	: 4.196		
Quant Ion	: 43.00		
Area (flag)	: 24059M		
On-Column Amount (ng)	: 1.9193		
Integration start scan	: 417	Integration stop scan:	446
Y at integration start	: 730	Y at integration end:	730

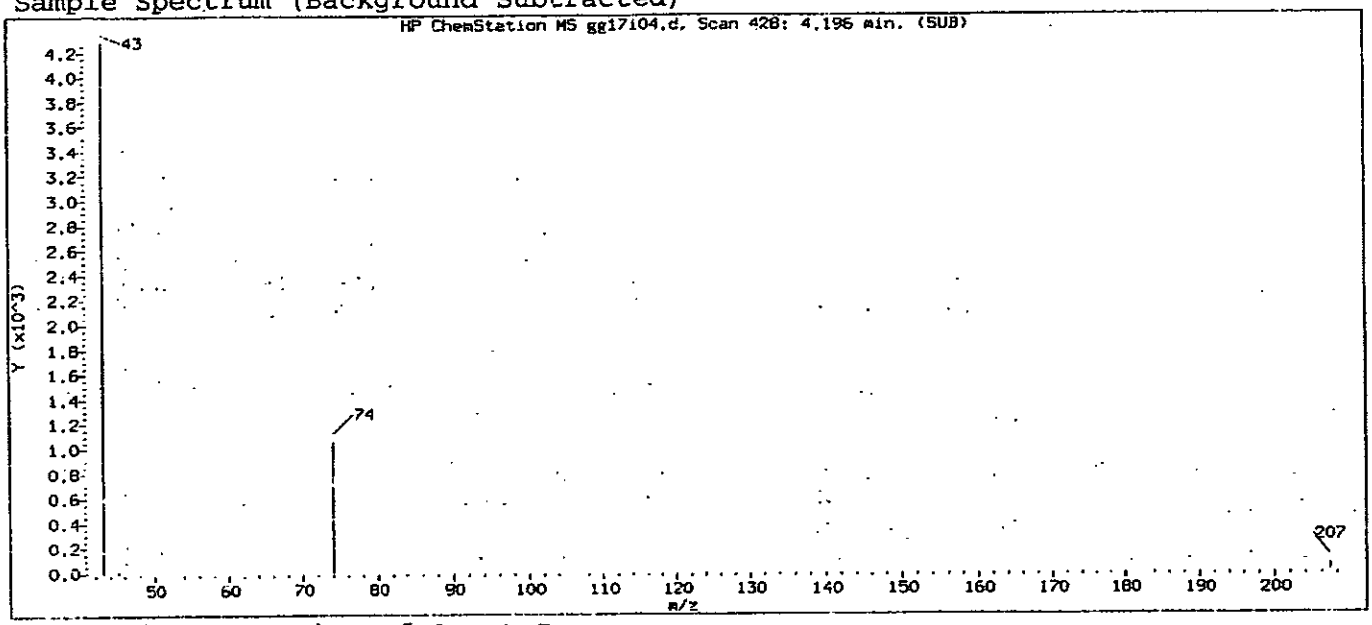
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long on 08/17/2010 at 14:54. Target 3.5 esignature user ID: jml01693

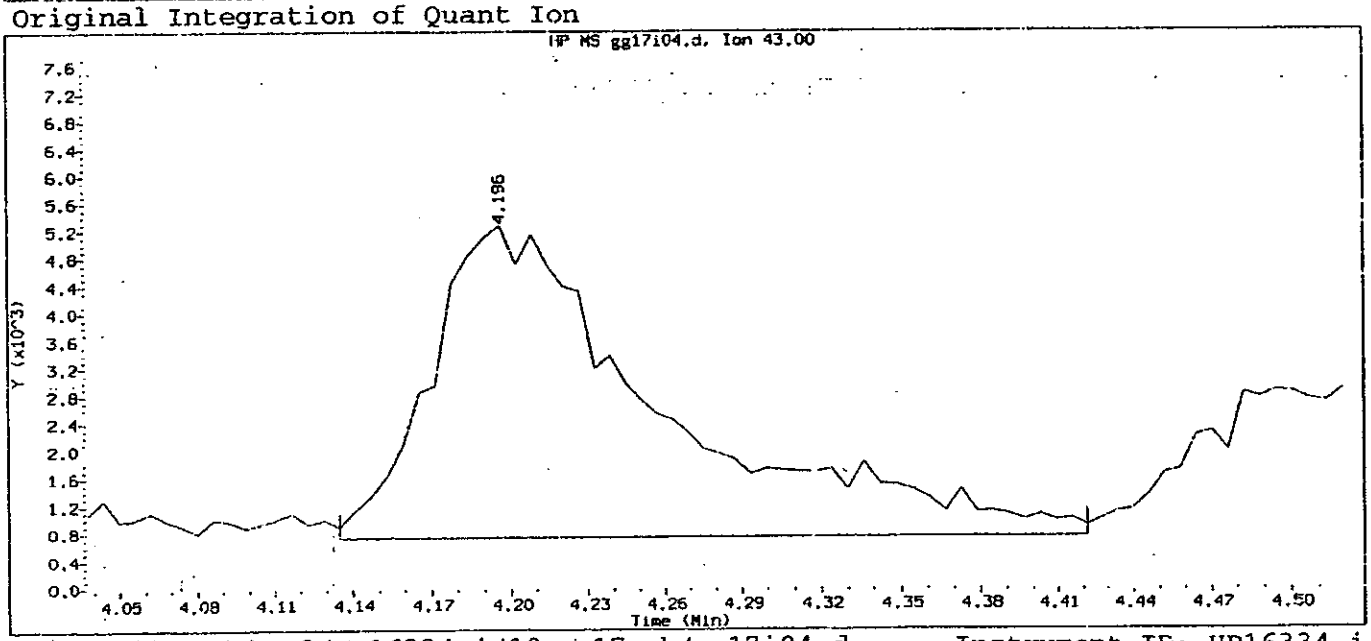
GC/MS audit/management approval: _____ 8/18/10

RAD36 0151

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i04.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 13:06 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 13:24
Date, time and analyst ID of latest file update: 17-Aug-2010 13:24 Automation

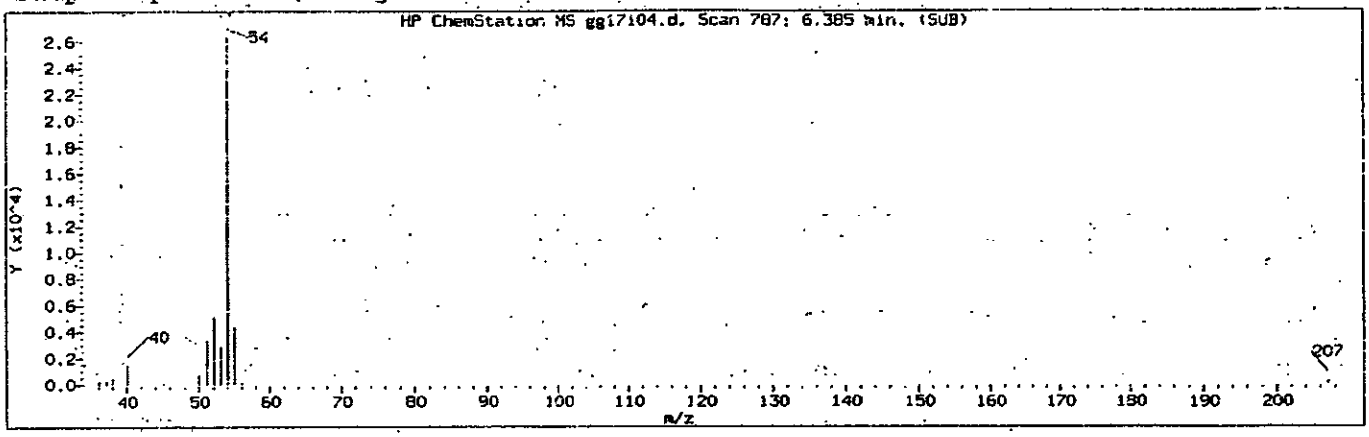
Sample Name: VSTD002 Lab Sample ID: VSTD002

Compound Number	: 33		
Compound Name	: Methyl Acetate		
Scan Number	: 428		
Retention Time (minutes)	: 4.196		
Quant Ion	: 43.00		
Area	: 27598		
On-column Amount (ng)	: 1.7116		
Integration start scan	: 417	Integration stop scan:	464
Y at integration start	: 730	Y at integration end:	730

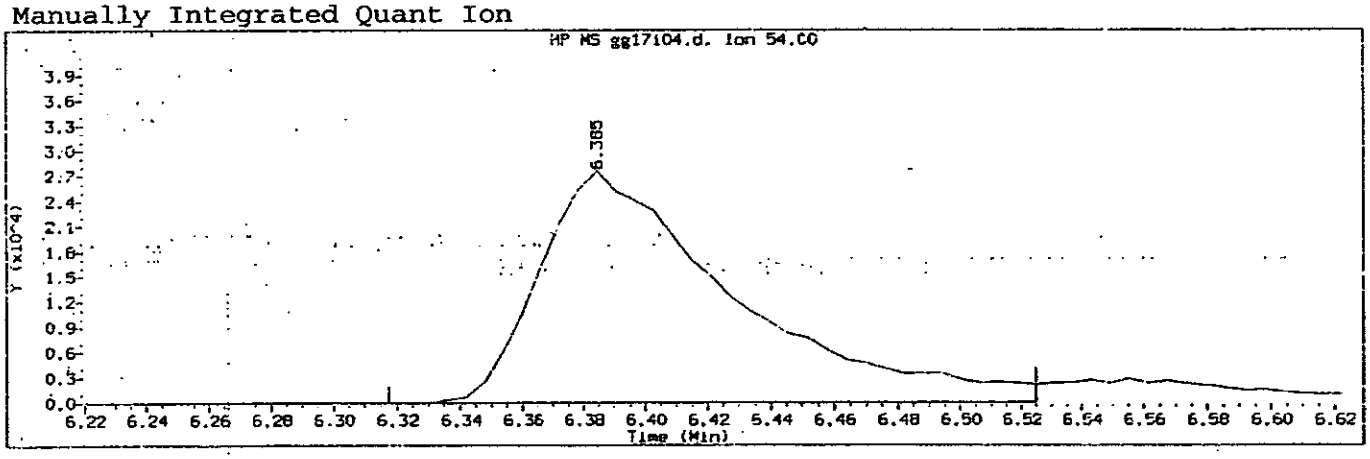
RAD36 5152

Digitally signed by Jason M. Long on 08/17/2010 at 14:54.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i04.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 13:06 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 14:37
Date, time and analyst ID of latest file update: 17-Aug-2010 14:37 jml01693

Sample Name: VSTD002 Lab Sample ID: VSTD002

Compound Number	: 53		
Compound Name	: Propionitrile		
Scan Number	: 787		
Retention Time (minutes)	: 6.385		
Quant Ion	: 54.00		
Area (flag)	: 119573M		
On-Column Amount (ng)	: 39.5672		
Integration start scan	: 775	Integration stop scan:	809
Y at integration start	: 0	Y at integration end:	0

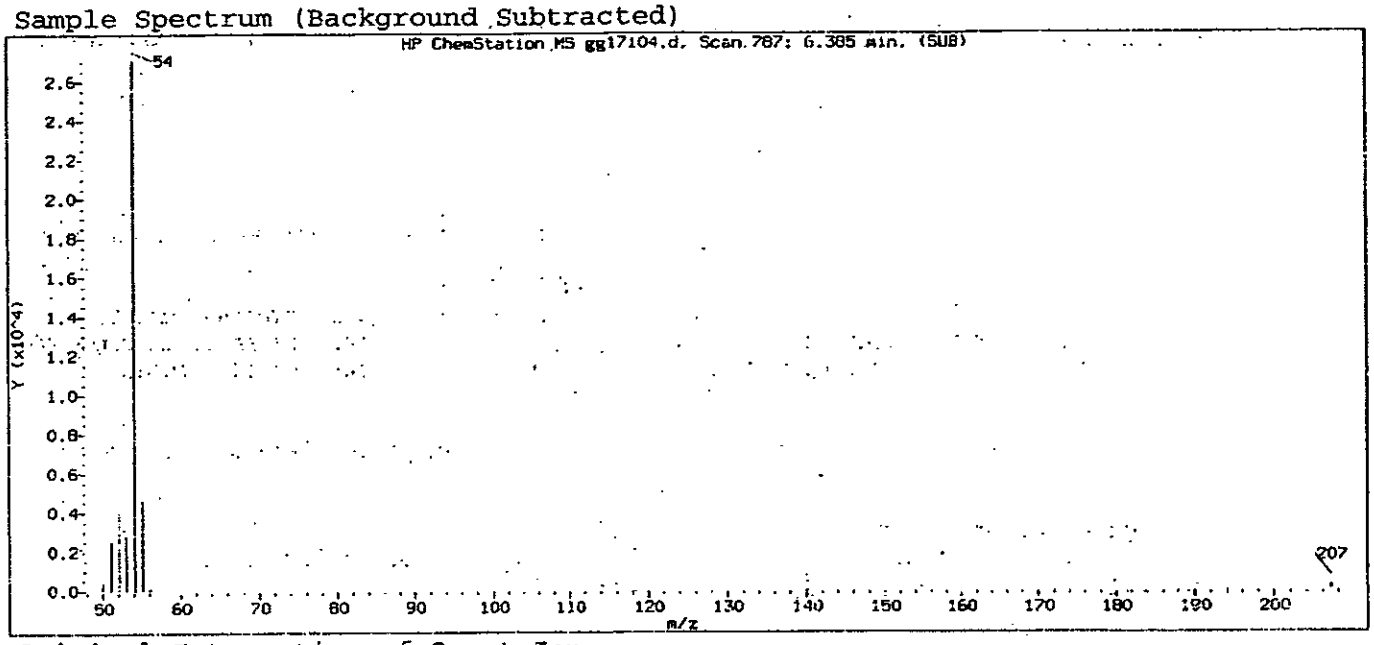
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long on 08/17/2010 at 14:54. Target 3.5 esignature user ID: jml01693

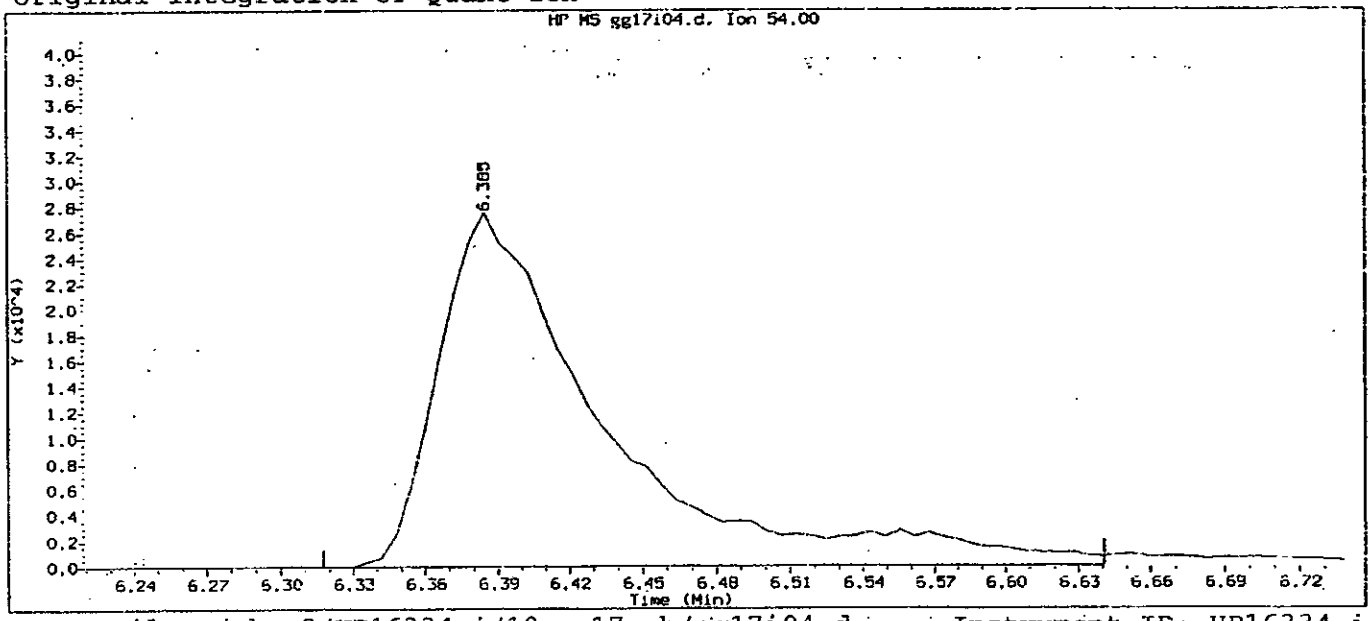
GC/MS audit/management approval: _____

RAD36 0153

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i04.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 13:06 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 13:24
Date, time and analyst ID of latest file update: 17-Aug-2010 13:24 Automation

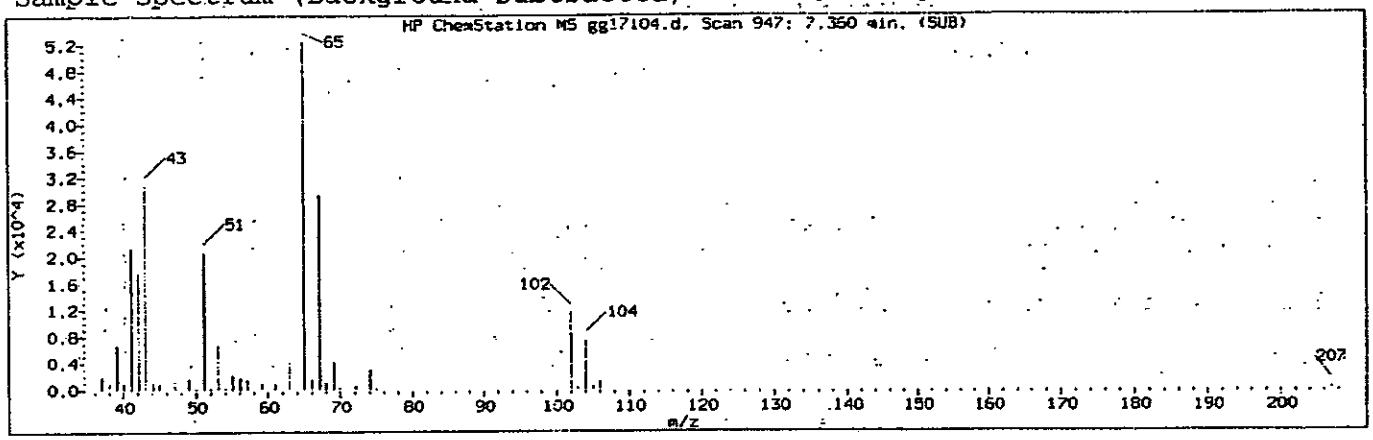
Sample Name: VSTD002 Lab Sample ID: VSTD002

Compound Number	: 53		
Compound Name	: Propionitrile		
Scan Number	: 787		
Retention Time (minutes)	: 6.385		
Quant Ion	: 54.00		
Area	: 131501		
On-column Amount (ng)	: 36.8472		
Integration start scan	: 775	Integration stop scan:	828
Y at integration start	: 0	Y at integration end:	0

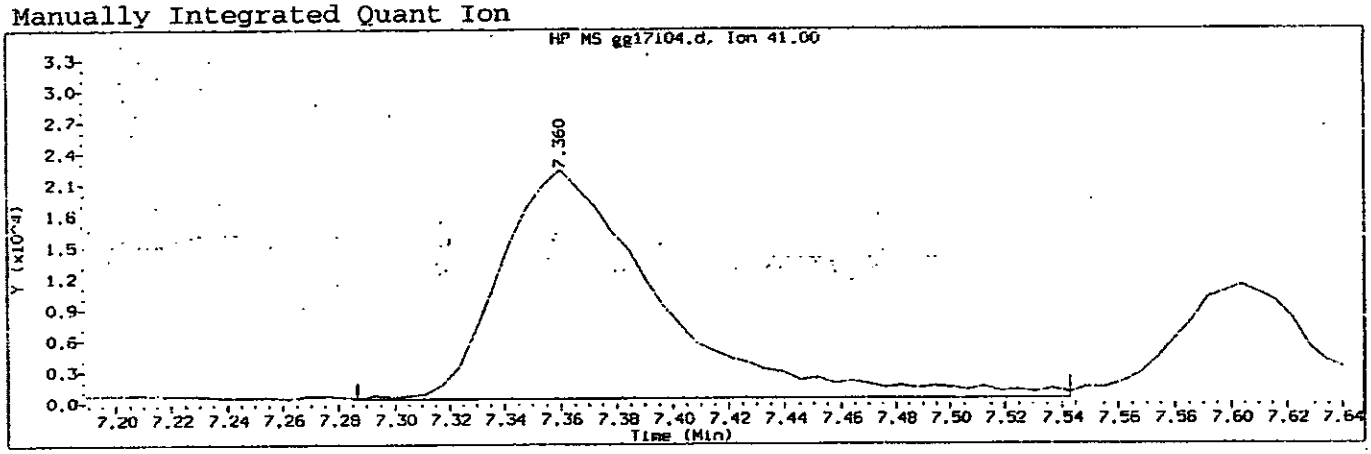
RAD36 8154

Digitally signed by Jason M. Long on 08/17/2010 at 14:54.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i04.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 13:06 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 14:37
Date, time and analyst ID of latest file update: 17-Aug-2010 14:37 jml01693

Sample Name: VSTD002 Lab Sample ID: VSTD002

Compound Number	: 67		
Compound Name	: Isobutyl Alcohol		
Scan Number	: 947		
Retention Time (minutes)	: 7.360		
Quant Ion	: 41.00		
Area (flag)	: 86899M		
On-Column Amount (ng)	: 96.9206		
Integration start scan	: 934	Integration stop scan:	976
Y at integration start	: 299	Y at integration end:	299

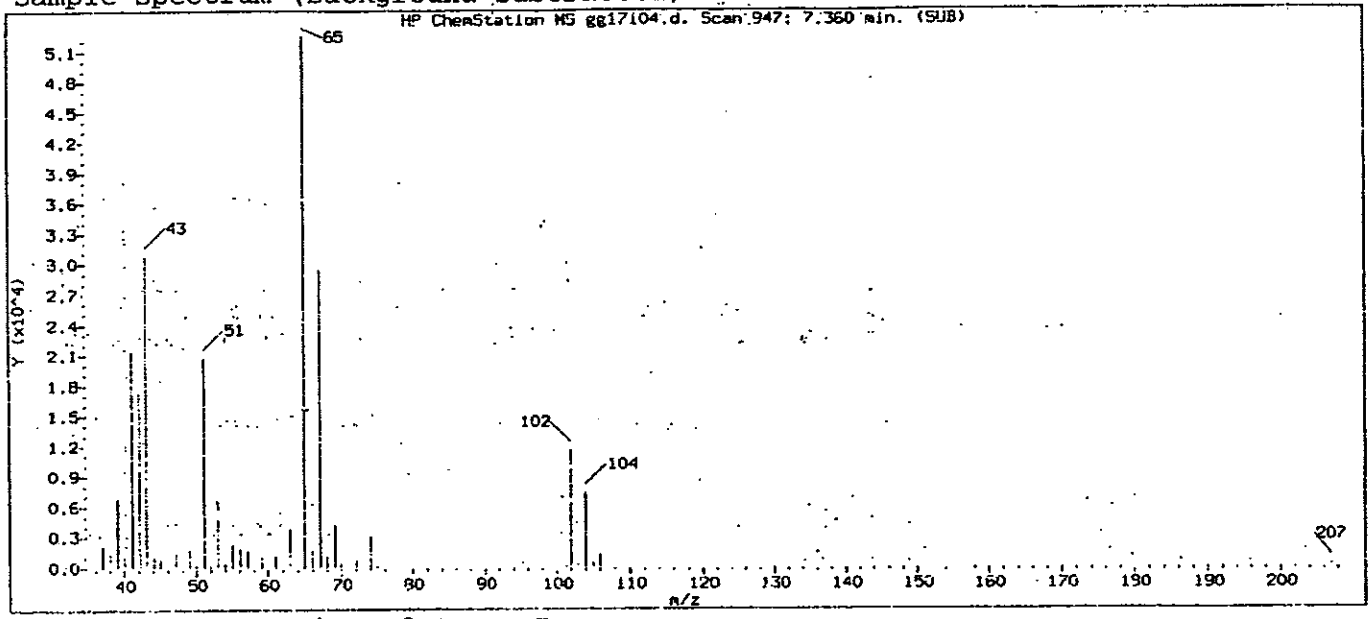
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long
on 08/17/2010 at 14:54.
Target 3.5 esignature user ID: jml01693

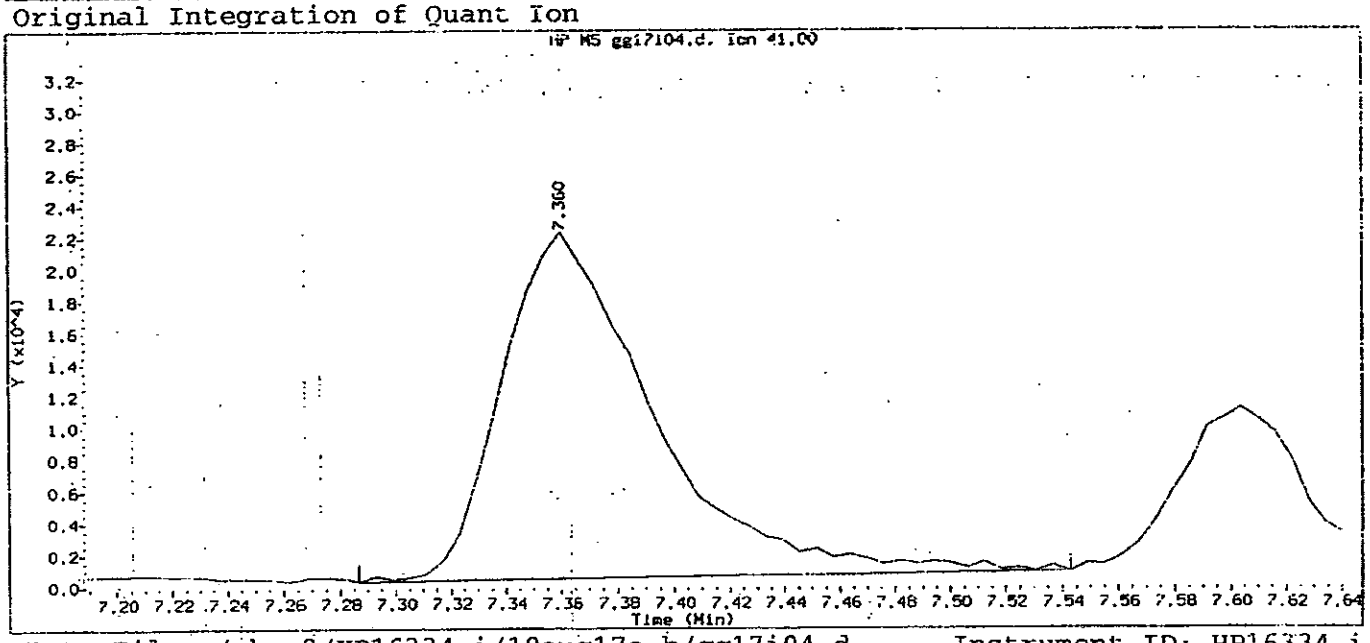
GC/MS audit/management approval: _____ 8/18/10

RAD36 0155

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i04.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 13:06 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 13:24
Date, time and analyst ID of latest file update: 17-Aug-2010 13:24 Automation

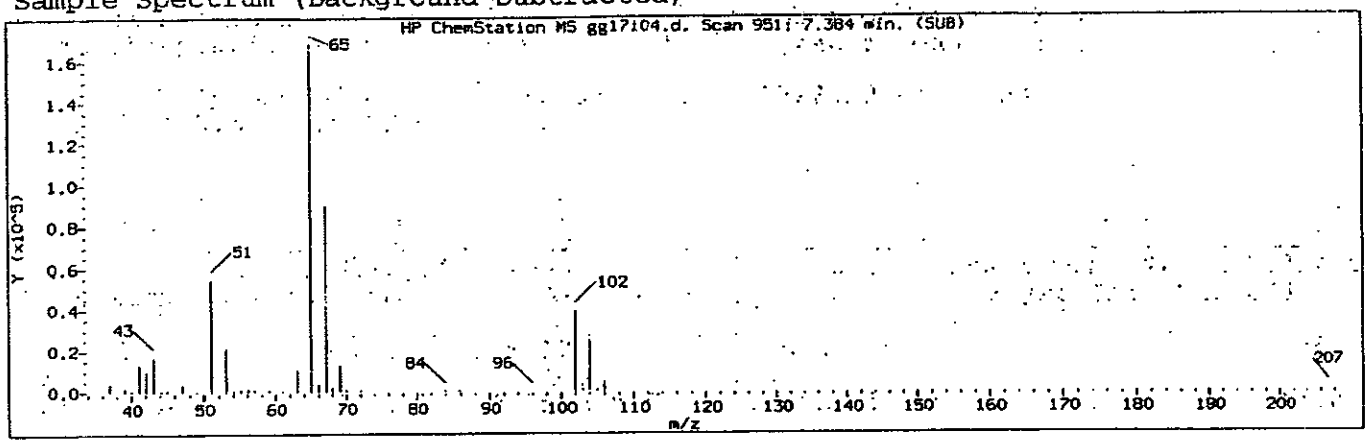
Sample Name: VSTD002 Lab Sample ID: VSTD002

Compound Number	: 67		
Compound Name	: Isobutyl Alcohol		
Scan Number	: 947		
Retention Time (minutes)	: 7.360		
Quant Ion	: 41.00		
Area	: 82281		
On-column Amount (ng)	: 93.0540		
Integration start scan	: 934	Integration stop scan:	976
Y at integration start	: 318	Y at integration end:	867

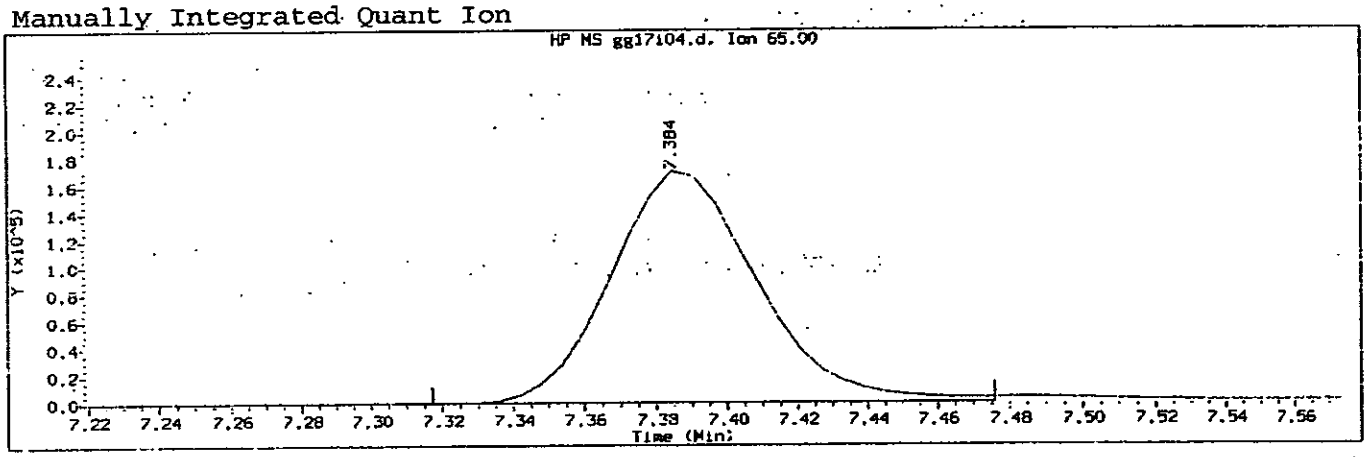
RAD36 0156

Digitally signed by Jason M. Long on 08/17/2010 at 14:54.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i04.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 13:06 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 14:37
Date, time and analyst ID of latest file update: 17-Aug-2010 14:37 jml01693

Sample Name: VSTD002 Lab Sample ID: VSTD002

Compound Number	: 69		
Compound Name	: 1,2-Dichloroethane-d4(mz65)		
Scan Number	: 951		
Retention Time (minutes)	: 7.384		
Quant Ion	: 65.00		
Area (flag)	: 486910M		
On-Column Amount (ng)	: 9.9418		
Integration start scan	: 939	Integration stop scan:	965
Y at integration start	: 0	Y at integration end:	0

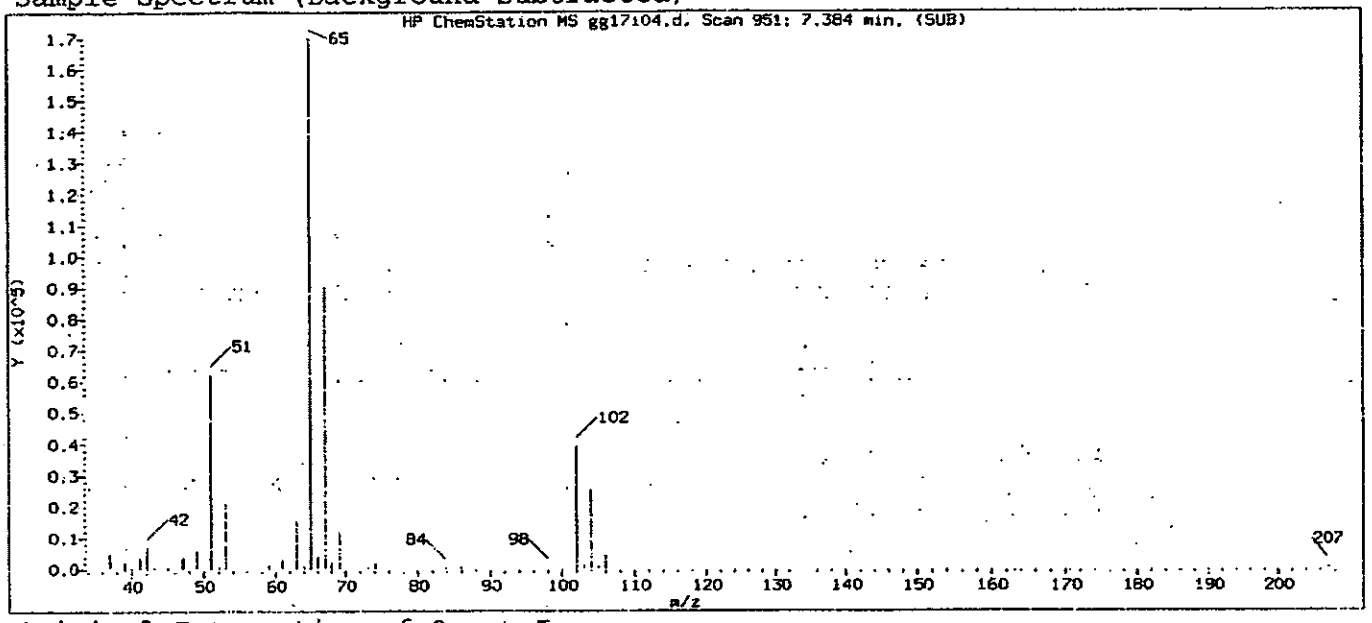
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long on 08/17/2010 at 14:54. Target 3.5 esignature user ID: jml01693

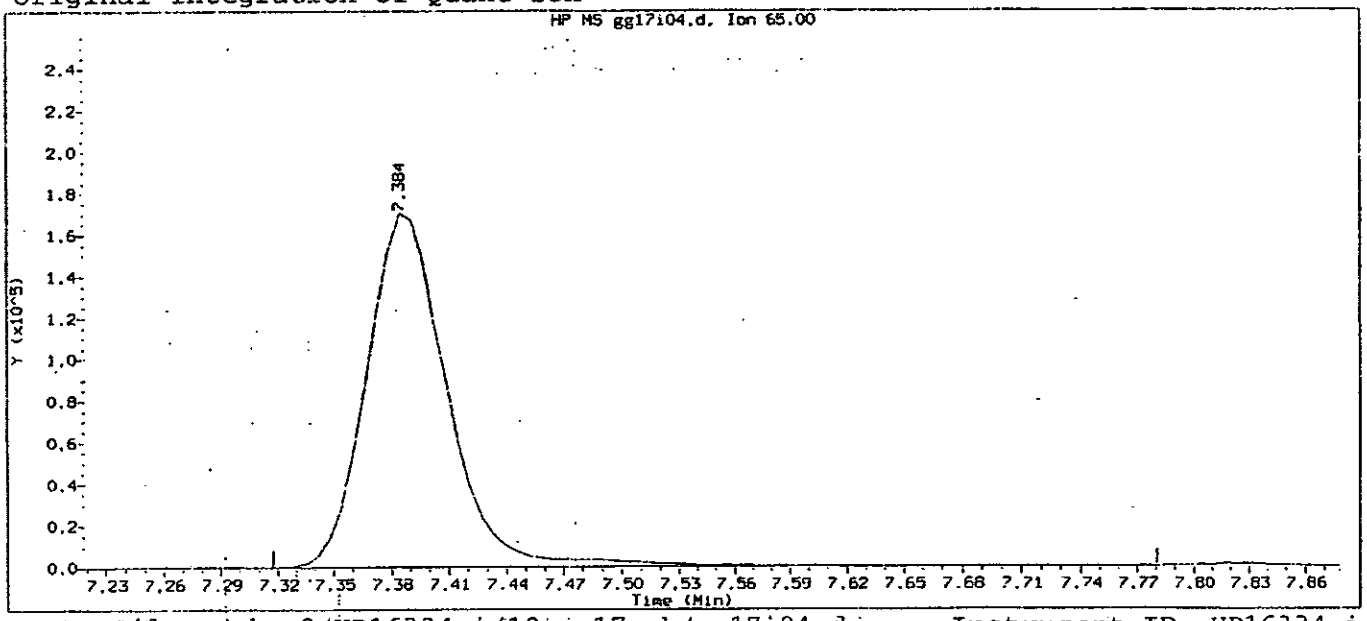
RAD36 0157

GC/MS audit/management approval: _____

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i04.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 13:06 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 13:24
Date, time and analyst ID of latest file update: 17-Aug-2010 13:24 Automation

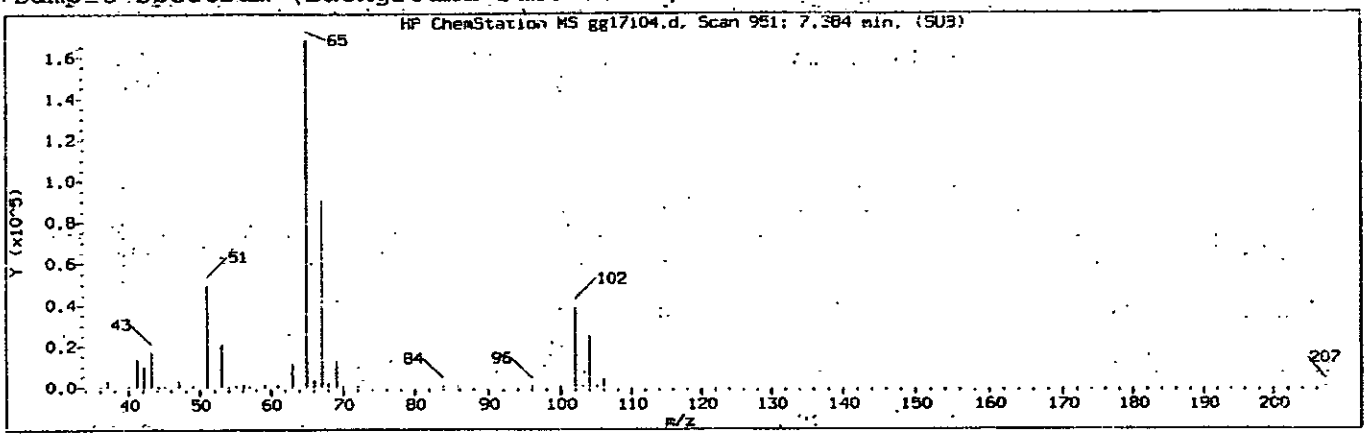
Sample Name: VSTD002 Lab Sample ID: VSTD002

Compound Number	: 69		
Compound Name	: 1,2-Dichloroethane-d4(mz65)		
Scan Number	: 951		
Retention Time (minutes)	: 7.384		
Quant Ion	: 65.00		
Area	: 501001		
On-column Amount (ng)	: 10.1647		
Integration start scan	: 939	Integration stop scan:	1015
Y at integration start	: 0	Y at integration end:	0

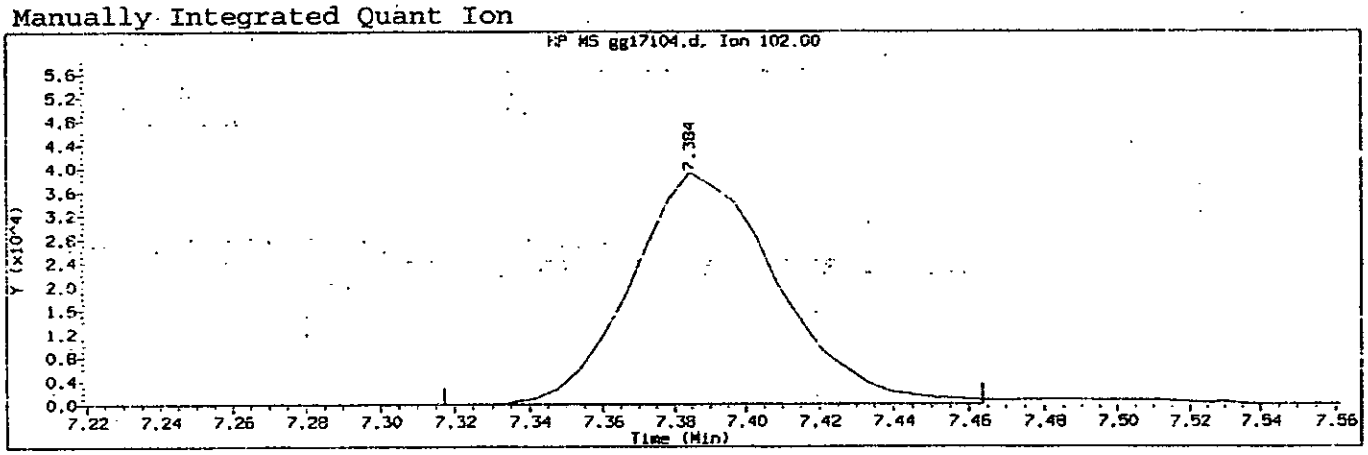
RAD36 0158

Digitally signed by Jason M. Long on 08/17/2010 at 14:54.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i04.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 13:06 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 14:37
Date, time and analyst ID of latest file update: 17-Aug-2010 14:37 jml01693

Sample Name: VSTD002 Lab Sample ID: VSTD002

Compound Number	: 70		
Compound Name	: 1,2-Dichloroethane-d4		
Scan Number	: 951		
Retention Time (minutes)	: 7.384		
Quant Ion	: 102.00		
Area (flag)	: 109933M		
On-Column Amount (ng)	: 9.9962		
Integration start scan	: 939	Integration stop scan:	963
Y at integration start	: 0	Y at integration end:	0

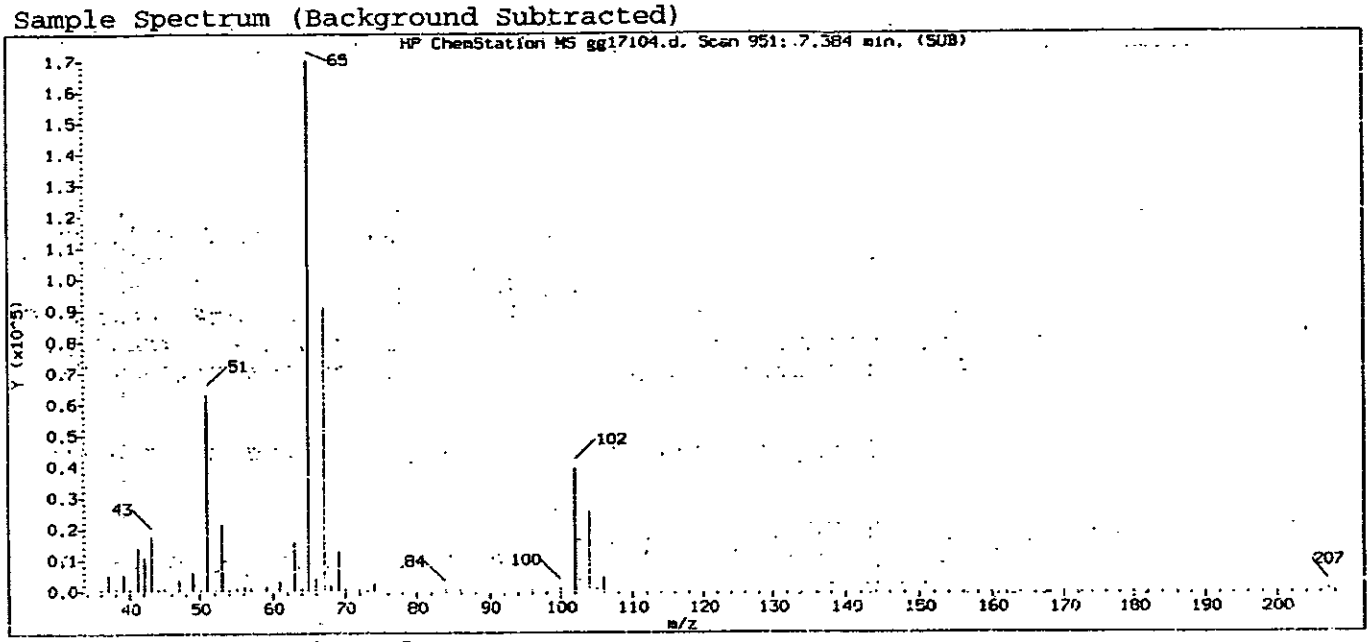
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long
on 08/17/2010 at 14:54.
Target 3.5 esignature user ID: jml01693

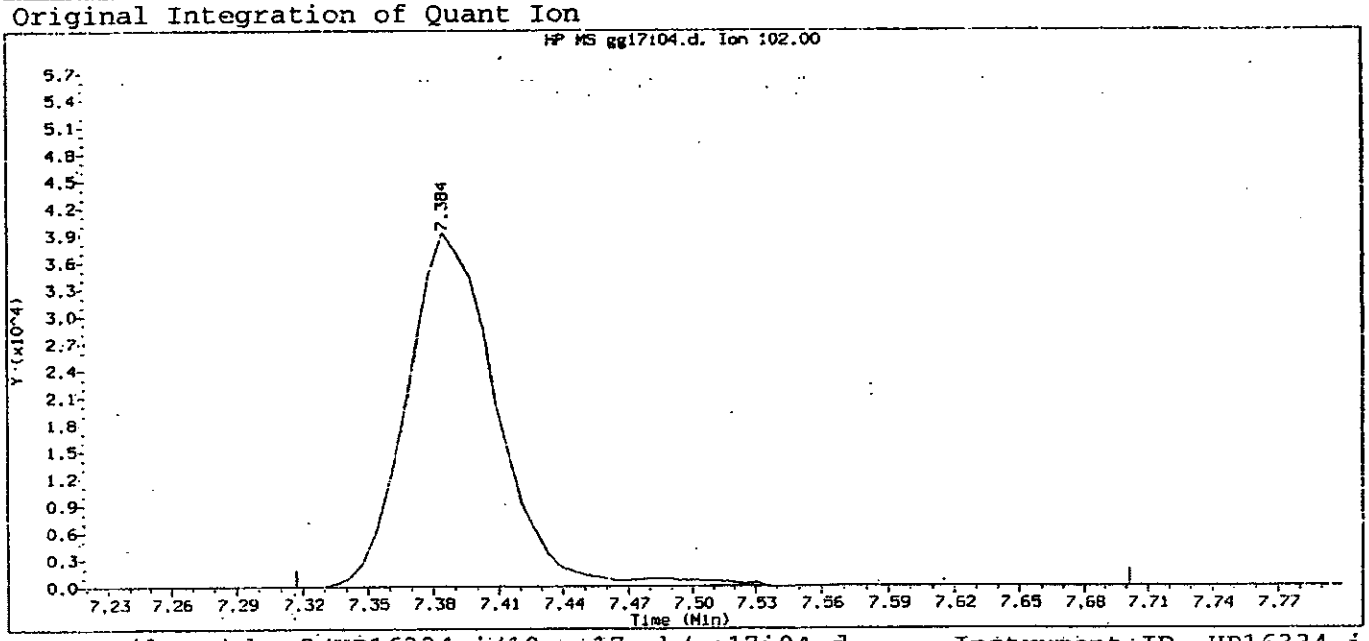
GC/MS audit/management approval: _____ 8/18/10

RAD36 0159

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i04.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 13:06 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 13:24
Date, time and analyst ID of latest file update: 17-Aug-2010 13:24 Automation

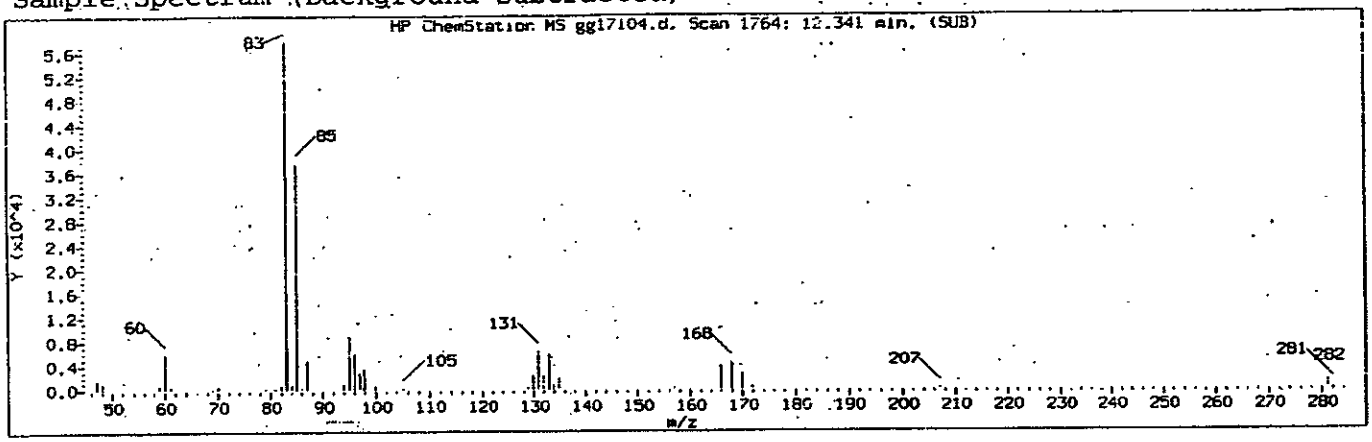
Sample Name: VSTD002 Lab Sample ID: VSTD002

Compound Number	: 70		
Compound Name	: 1,2-Dichloroethane-d4		
Scan Number	: 951		
Retention Time (minutes)	: 7.384		
Quant Ion	: 102.00		
Area	: 112428		
On-column Amount (ng)	: 10.1434		
Integration start scan	: 939	Integration stop scan:	1002
Y at integration start	: 0	Y at integration end:	0

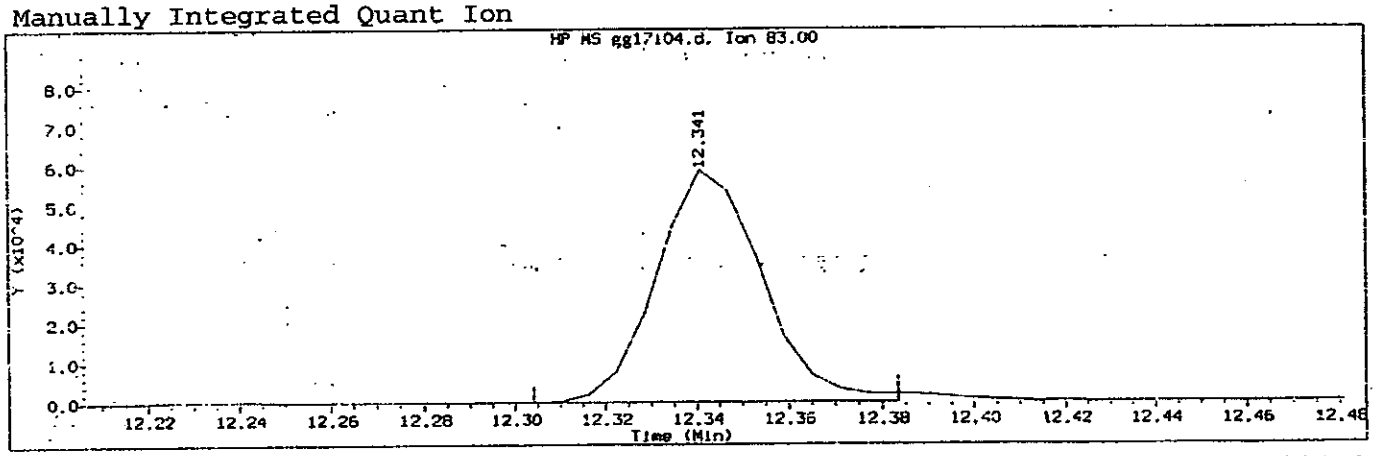
RAD36 0168

Digitally signed by Jason M. Long on 08/17/2010 at 14:54.
Target 3.5 esignature user ID: jm101693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i04.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 13:06 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 14:37
Date, time and analyst ID of latest file update: 17-Aug-2010 14:37 jml01693

Sample Name: VSTD002 Lab Sample ID: VSTD002

Compound Number	: 128		
Compound Name	: 1,1,2,2-Tetrachloroethane		
Scan Number	: 1764		
Retention Time (minutes)	: 12.341		
Quant Ion	: 83.00		
Area (flag)	: 94180M		
On-Column Amount (ng)	: 1.9903		
Integration start scan	: 1757	Integration stop scan:	1770
Y at integration start	: 0	Y at integration end:	0

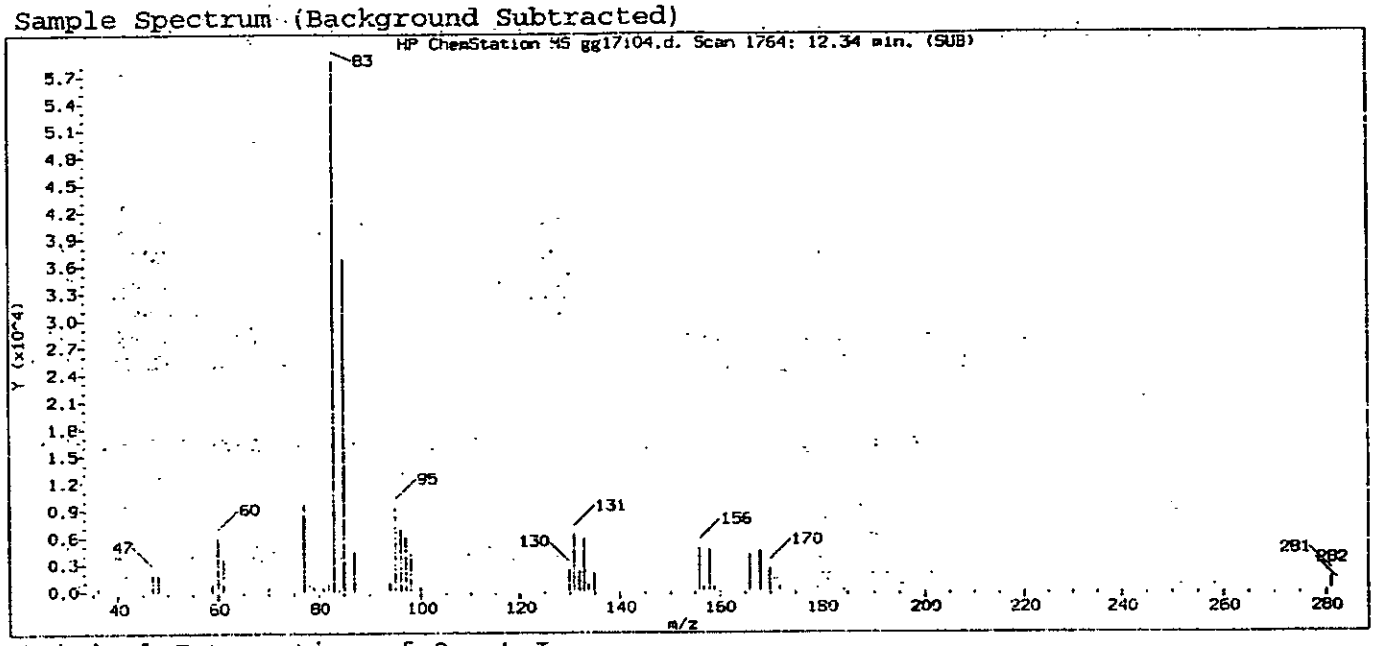
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long
on 08/17/2010 at 14:54.
Target 3.5 esignature user ID: jml01693

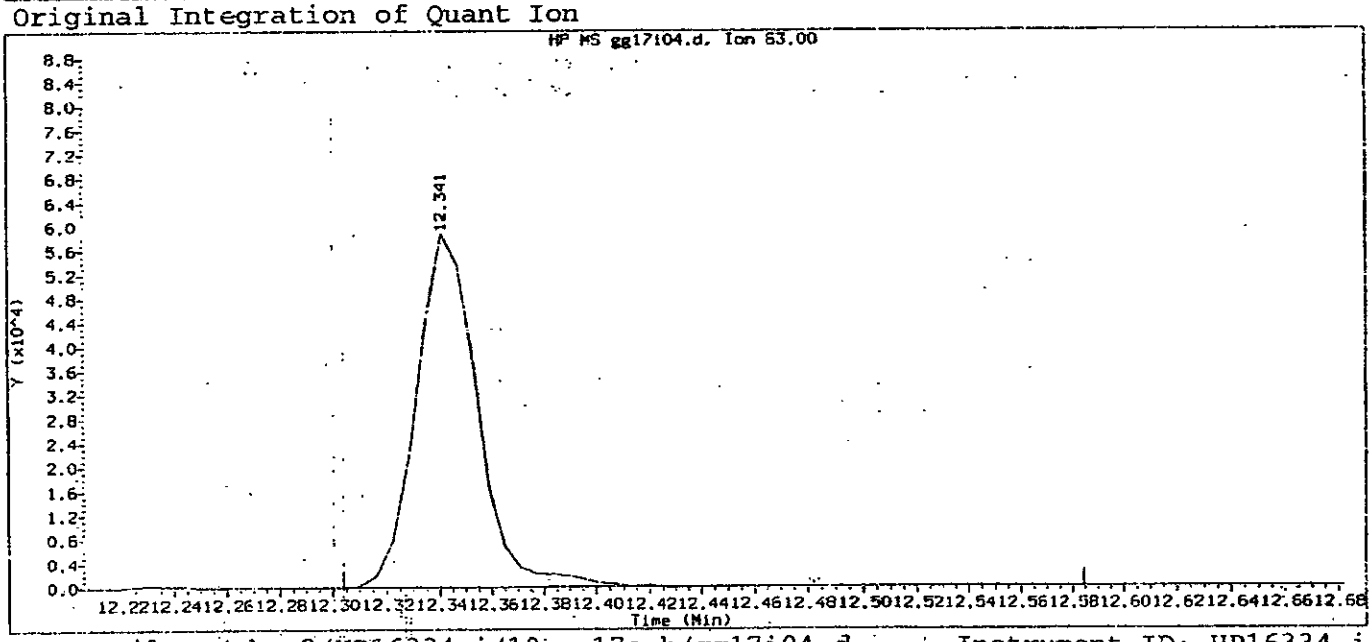
GC/MS audit/management approval: _____

RAD36 0161

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i04.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 13:06 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 13:24
Date, time and analyst ID of latest file update: 17-Aug-2010 13:24 Automation

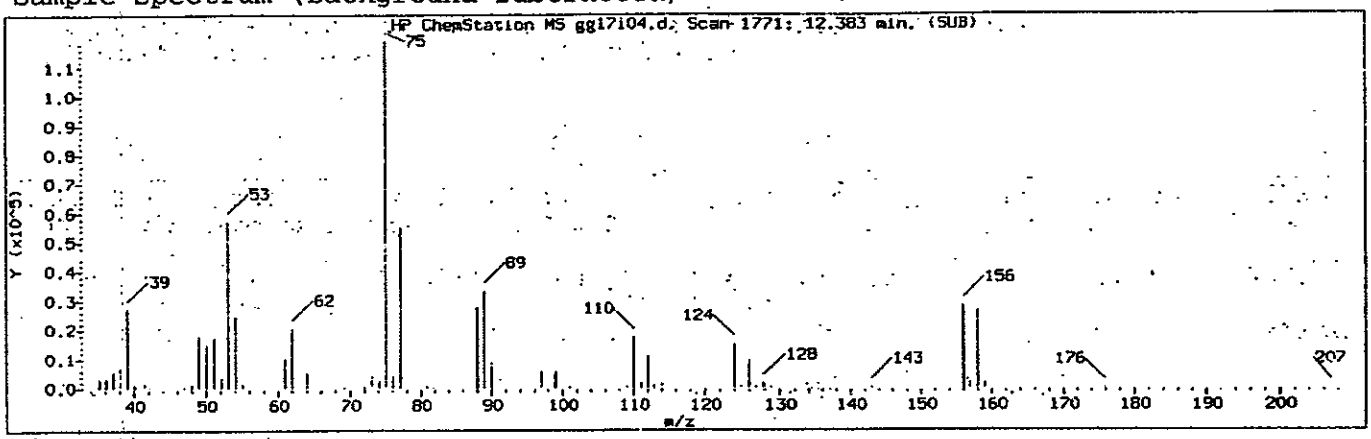
Sample Name: VSTD002 Lab Sample ID: VSTD002

Compound Number	: 128
Compound Name	: 1,1,2,2-Tetrachloroethane
Scan Number	: 1764
Retention Time (minutes)	: 12.341
Quant Ion	: 83.00
Area	: 95863
On-column Amount (ng)	: 1.9508
Integration start scan	: 1757 Integration stop scan: 1803
Y at integration start	: 0 Y at integration end: 0

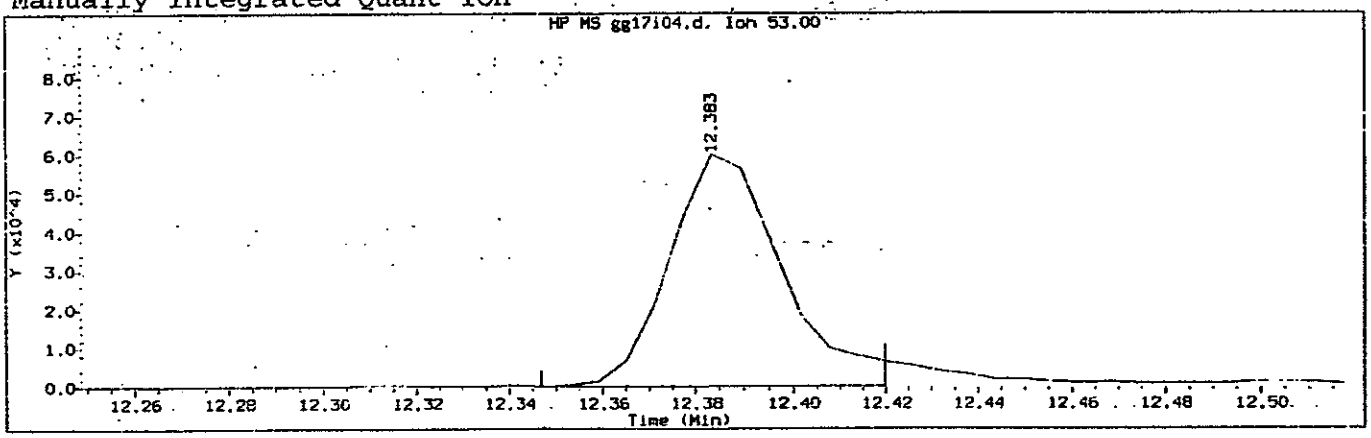
RAD36 8162

Digitally signed by Jason M. Long on 08/17/2010 at 14:54.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i04.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 13:06 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 14:37
Date, time and analyst ID of latest file update: 17-Aug-2010 14:37 jml01693

Sample Name: VSTD002 Lab Sample ID: VSTD002

Compound Number	: 130		
Compound Name	: trans-1,4-Dichloro-2-Butene		
Scan Number	: 1771		
Retention Time (minutes)	: 12.383		
Quant Ion	: 53.00		
Area (flag)	: 98107MA		
On-Column Amount (ng)	: 18.6633		
Integration start scan	: 1764	Integration stop scan:	1776
Y at integration start	: 0	Y at integration end:	0

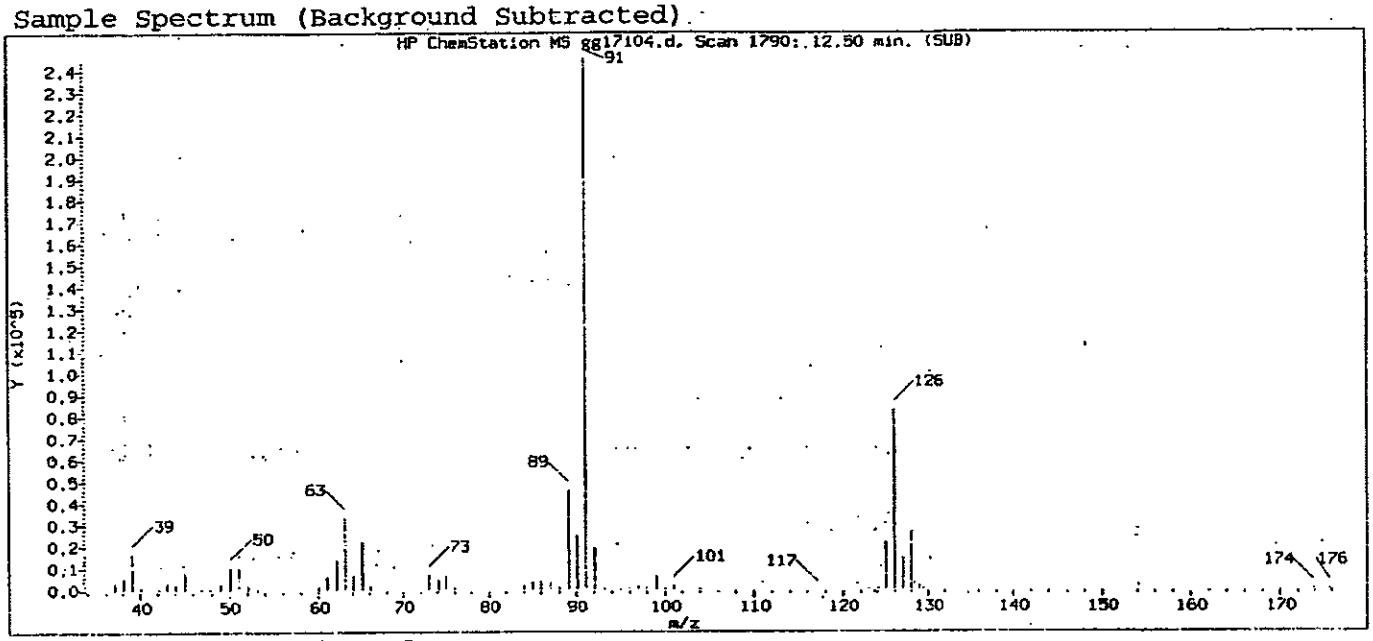
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long
on 08/17/2010 at 14:54.
Target 3.5 esignature user ID: jml01693

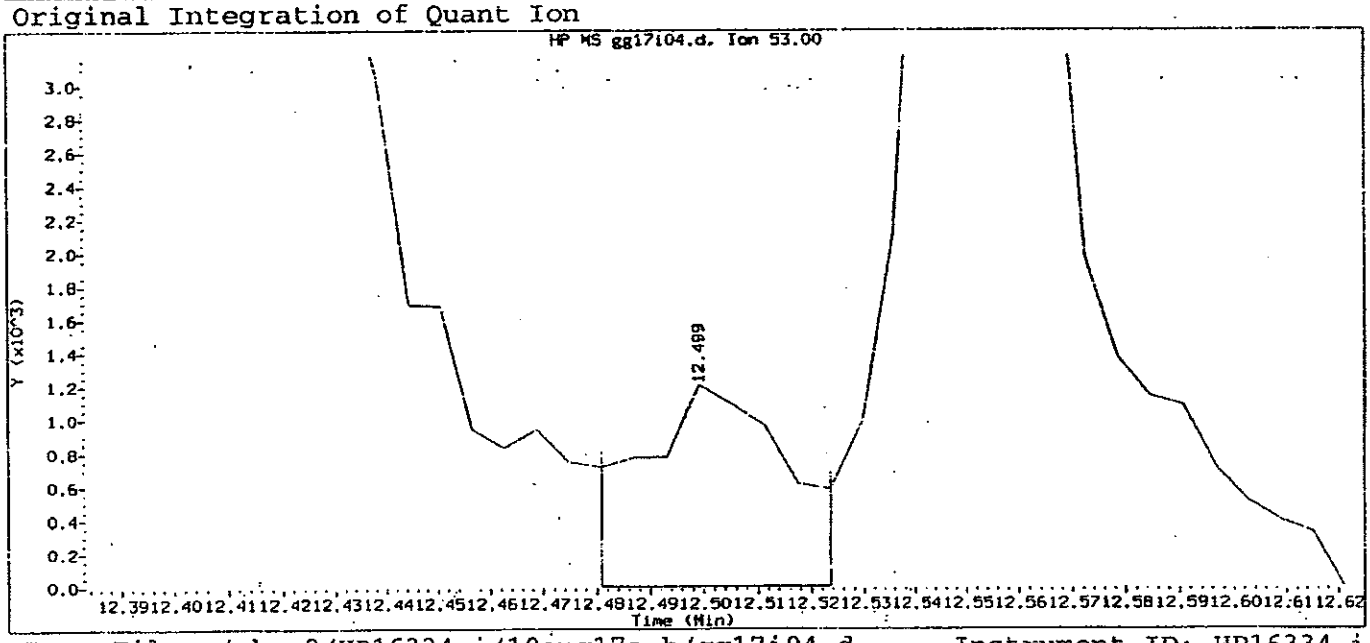
RAD36 0163

GC/MS audit/management approval: _____ 8/18/10

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i04.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 13:06 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 13:24
Date, time and analyst ID of latest file update: 17-Aug-2010 13:24 Automation

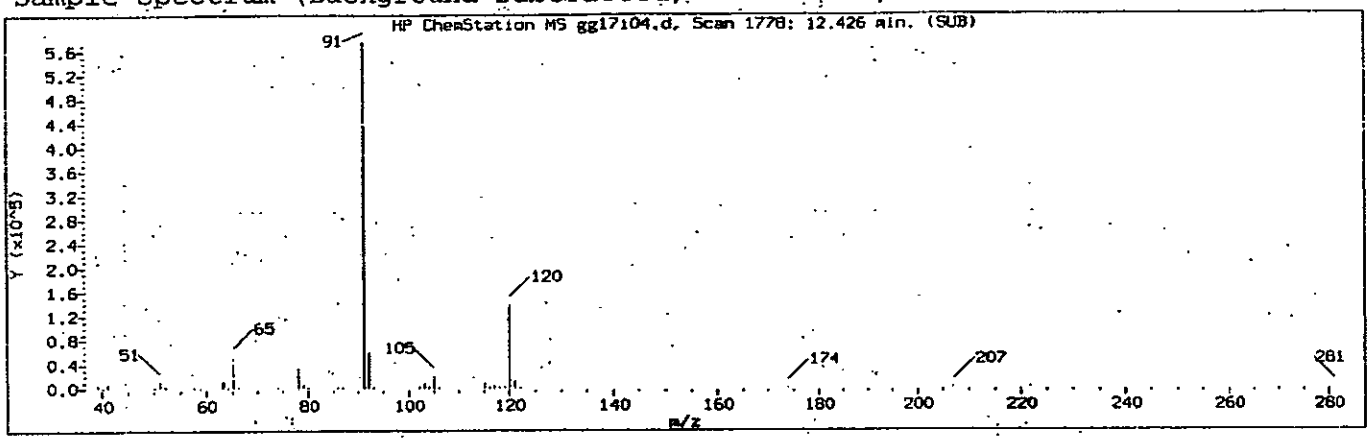
Sample Name: VSTD002 Lab Sample ID: VSTD002

Compound Number	: 130		
Compound Name	: trans-1,4-Dichloro-2-Butene		
Scan Number	: 1790		
Retention Time (minutes)	: 12.499		
Quant Ion	: 53.00		
Area	: 2222		
On-column Amount (ng)	: 0.5034		
Integration start scan	: 1786	Integration stop scan:	1793
Y at integration start	: 0	Y at integration end:	0

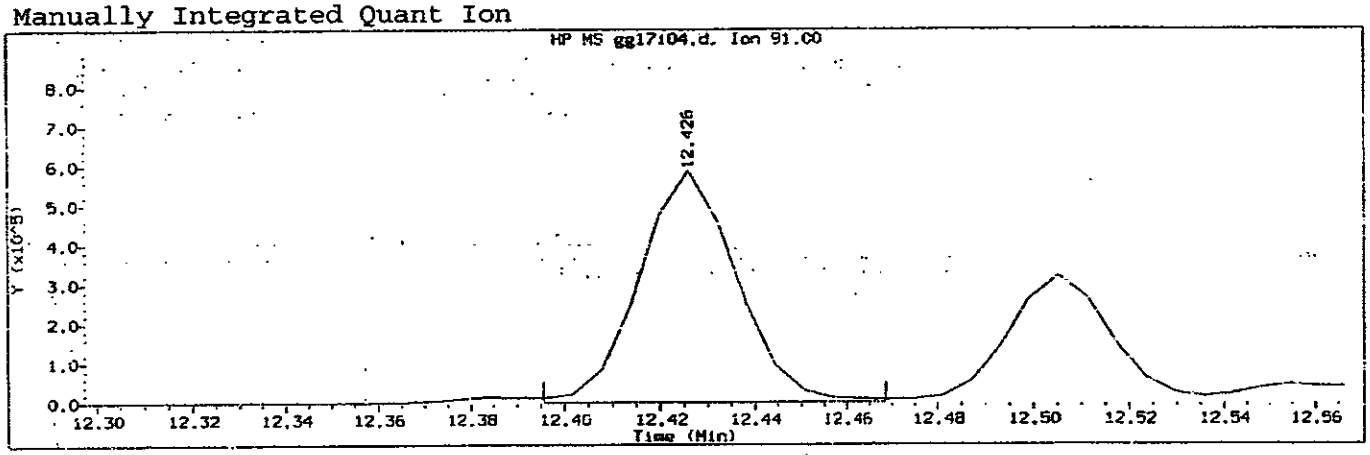
RAD36 8164

Digitally signed by Jason M. Long on 08/17/2010 at 14:54.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i04.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 13:06 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 14:37
Date, time and analyst ID of latest file update: 17-Aug-2010 14:37 jml01693

Sample Name: VSTD002 Lab Sample ID: VSTD002

Compound Number	: 132		
Compound Name	: n-Propylbenzene		
Scan Number	: 1778		
Retention Time (minutes)	: 12.426		
Quant Ion	: 91.00		
Area (flag)	: 836566M		
On-Column Amount (ng)	: 1.9788		
Integration start scan	: 1772	Integration stop scan:	1784
Y at integration start	: 0	Y at integration end:	0

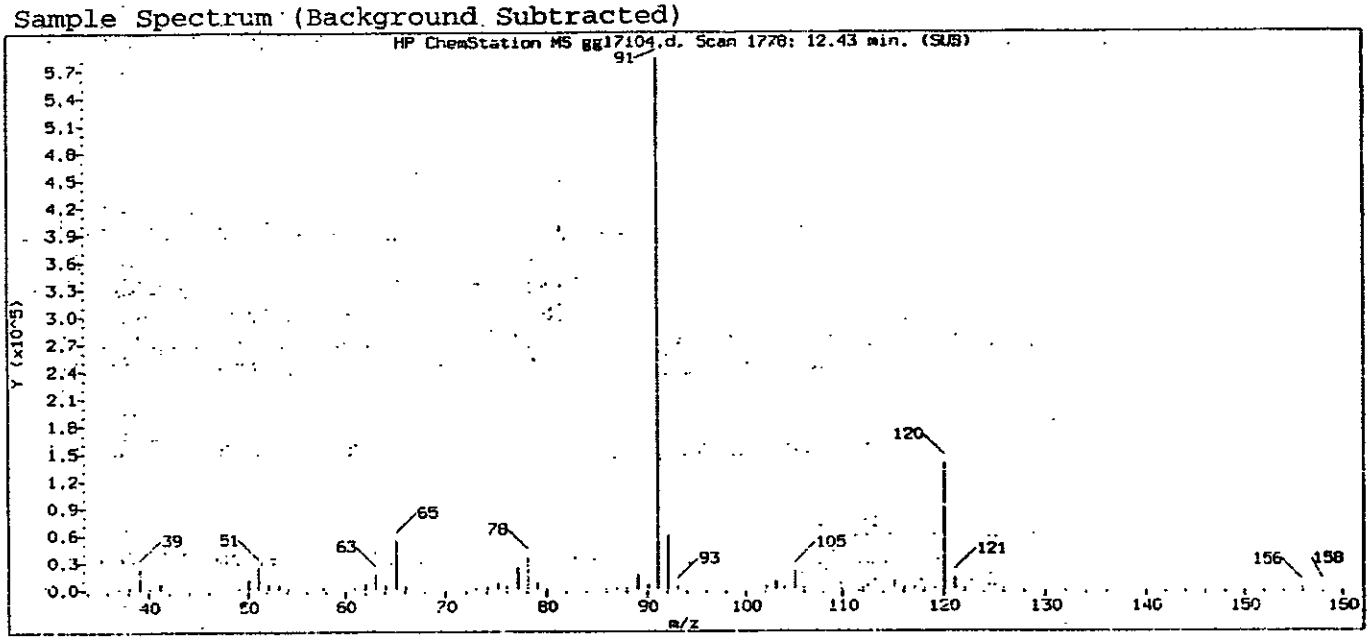
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long
on 08/17/2010 at 14:54.
Target 3.5 esignature user ID: jml01693

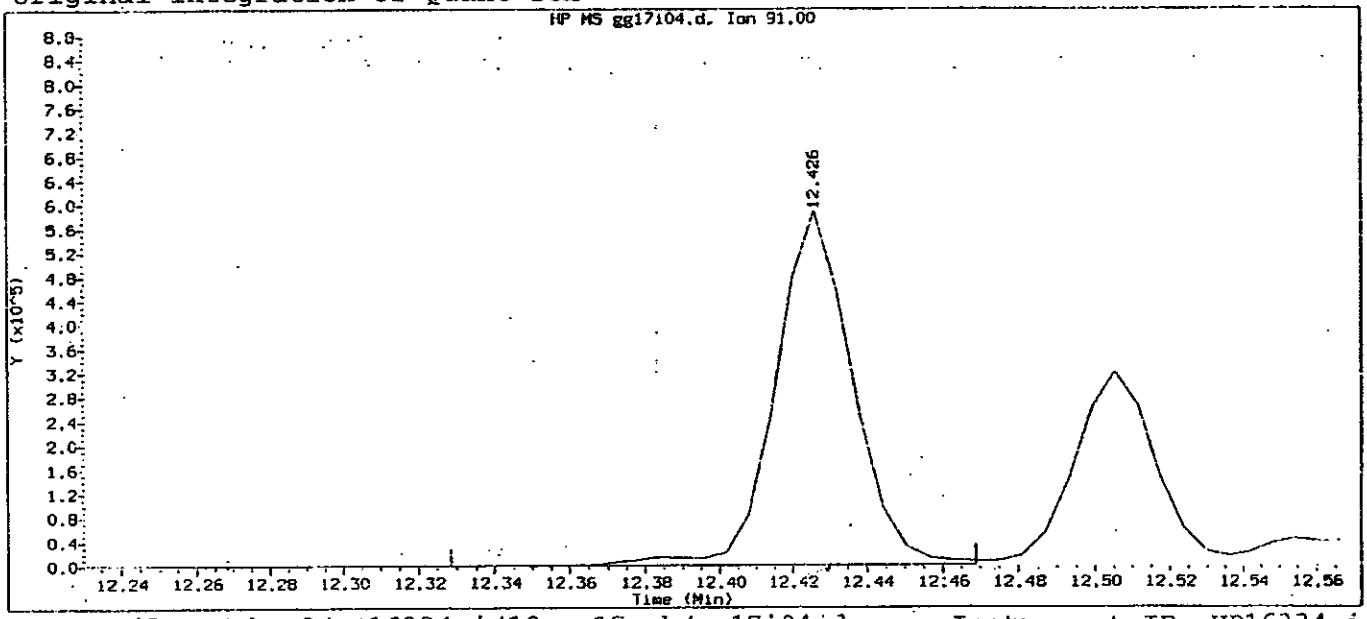
GC/MS audit/management approval: _____ 8/18/10

RAD36 0165

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i04.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 13:06 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 13:24
Date, time and analyst ID of latest file update: 17-Aug-2010 13:24 Automation

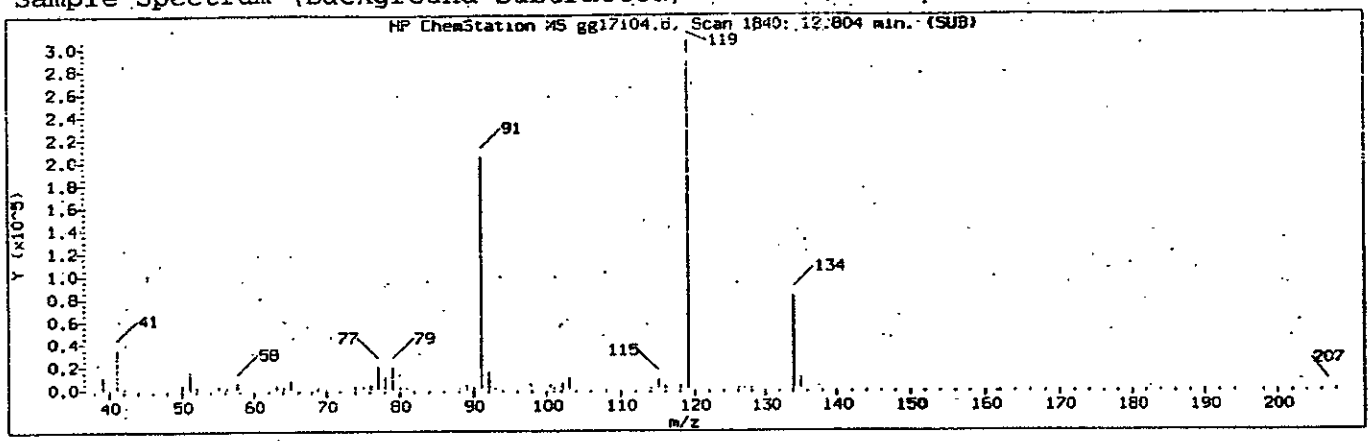
Sample Name: VSTD002 Lab Sample ID: VSTD002

Compound Number	: 132		
Compound Name	: n-Propylbenzene		
Scan Number	: 1778		
Retention Time (minutes)	: 12.426		
Quant Ion	: 91.00		
Area	: 850898		
On-column Amount (ng)	: 1.9561		
Integration start scan	: 1761	Integration stop scan:	1784
Y at integration start	: 0	Y at integration end:	0

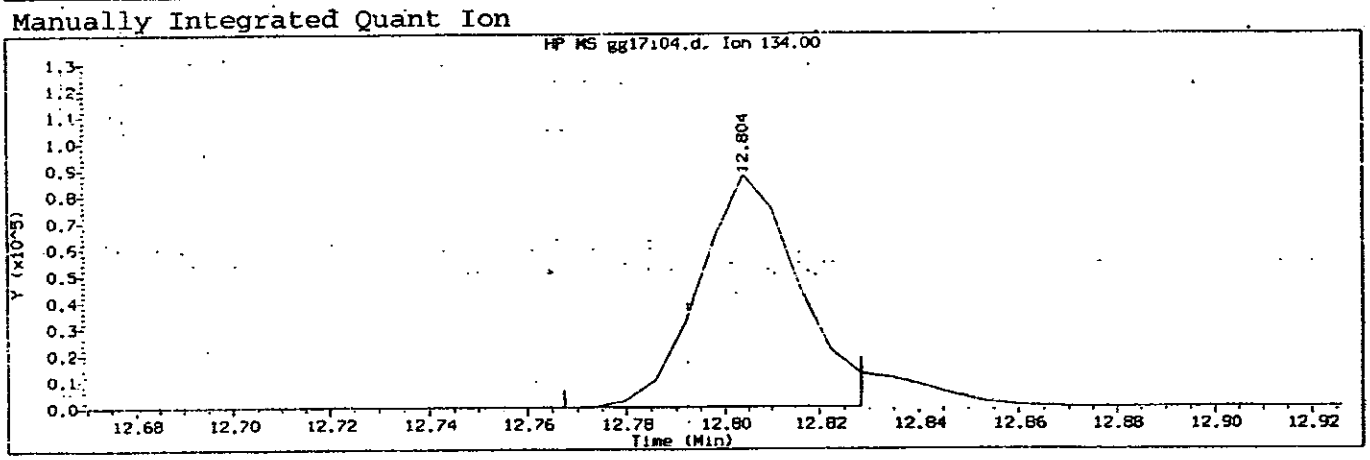
RAD36 8166

Digitally signed by Jason M. Long on 08/17/2010 at 14:54.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i04.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 13:06 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 14:37
Date, time and analyst ID of latest file update: 17-Aug-2010 14:37 jml01693

Sample Name: VSTD002 Lab Sample ID: VSTD002

Compound Number	: 137		
Compound Name	: tert-Butylbenzene		
Scan Number	: 1840		
Retention Time (minutes)	: 12.804		
Quant Ion	: 134.00		
Area (flag)	: 127911M		
On-Column Amount (ng)	: 1.9365		
Integration start scan	: 1833	Integration stop scan:	1843
Y at integration start	: 0	Y at integration end:	0

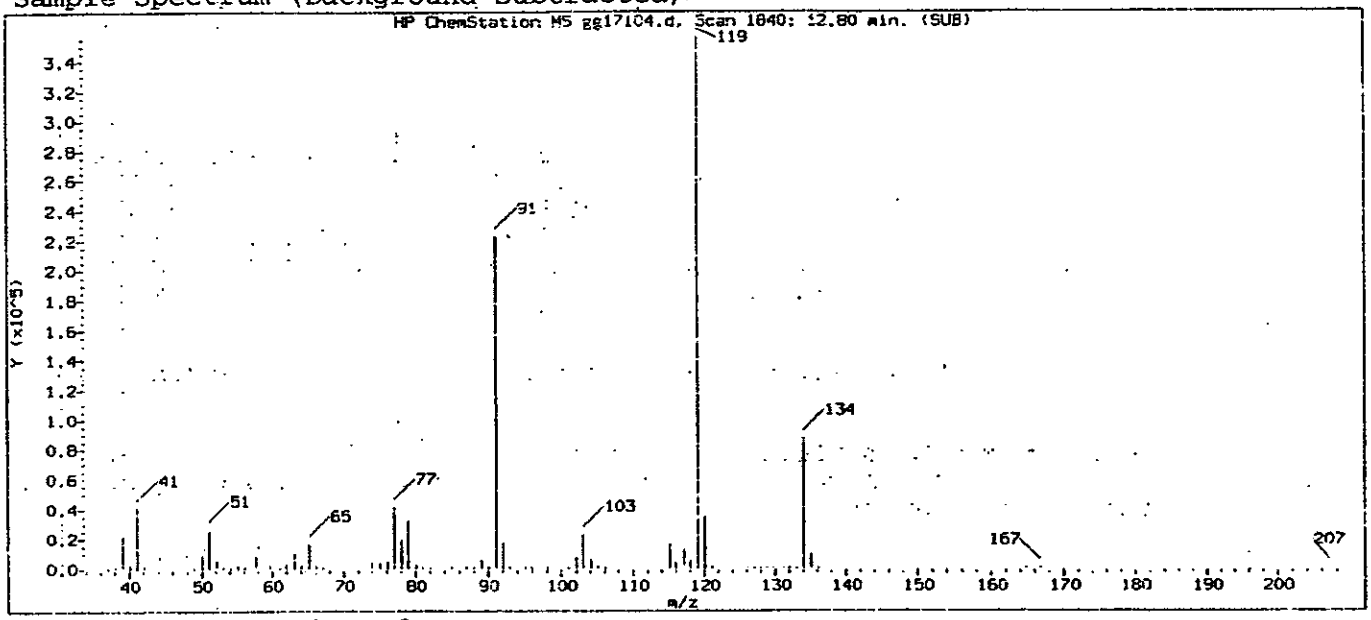
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long
on 08/17/2010 at 14:54.
Target 3.5 esignature user ID: jml01693

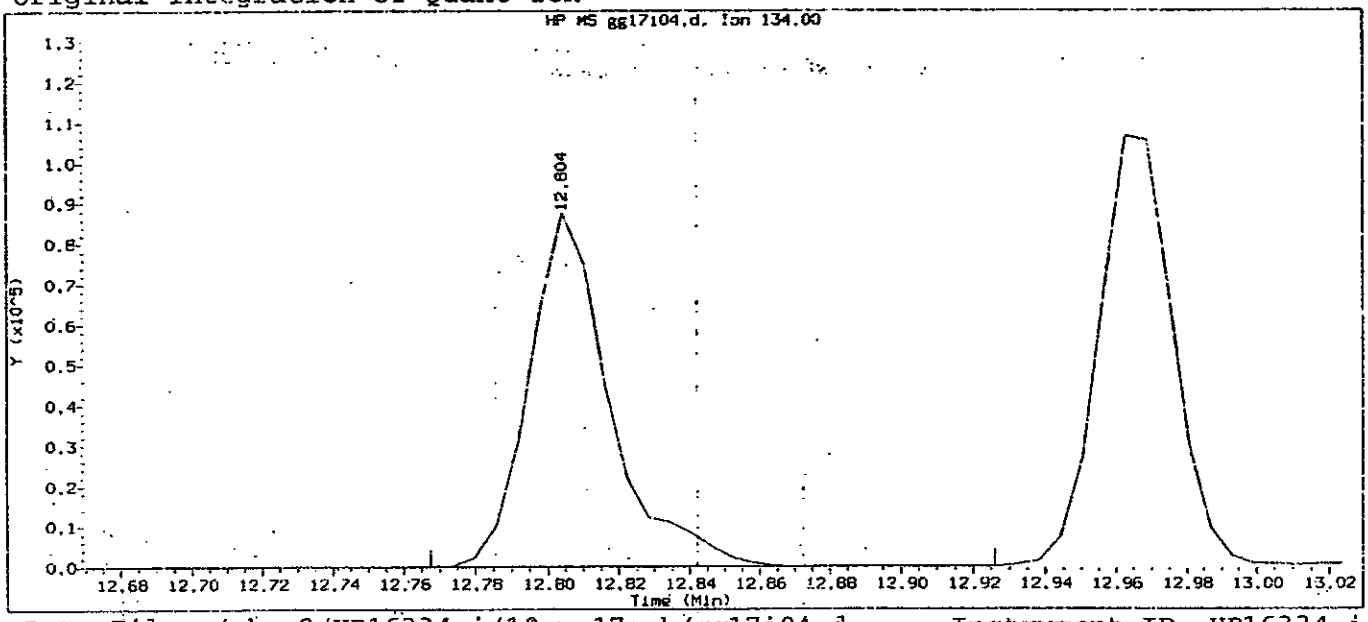
GC/MS audit/management approval: _____ 8/18/10

RAD36 B167

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i04.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 13:06 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 13:24
Date, time and analyst ID of latest file update: 17-Aug-2010 13:24 Automation

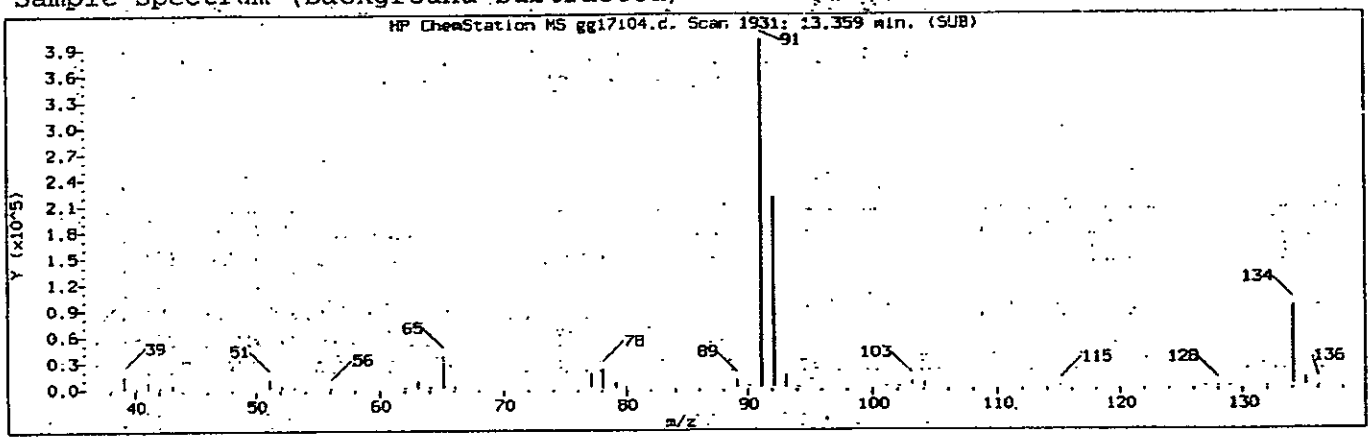
Sample Name: VSTD002 Lab Sample ID: VSTD002

Compound Number	: 137		
Compound Name	: tert-Butylbenzene		
Scan Number	: 1840		
Retention Time (minutes)	: 12.804		
Quant Ion	: 134.00		
Area	: 137864		
On-column Amount (ng)	: 1.9594		
Integration start scan	: 1833	Integration stop scan:	1859
Y at integration start	: 0	Y at integration end:	0

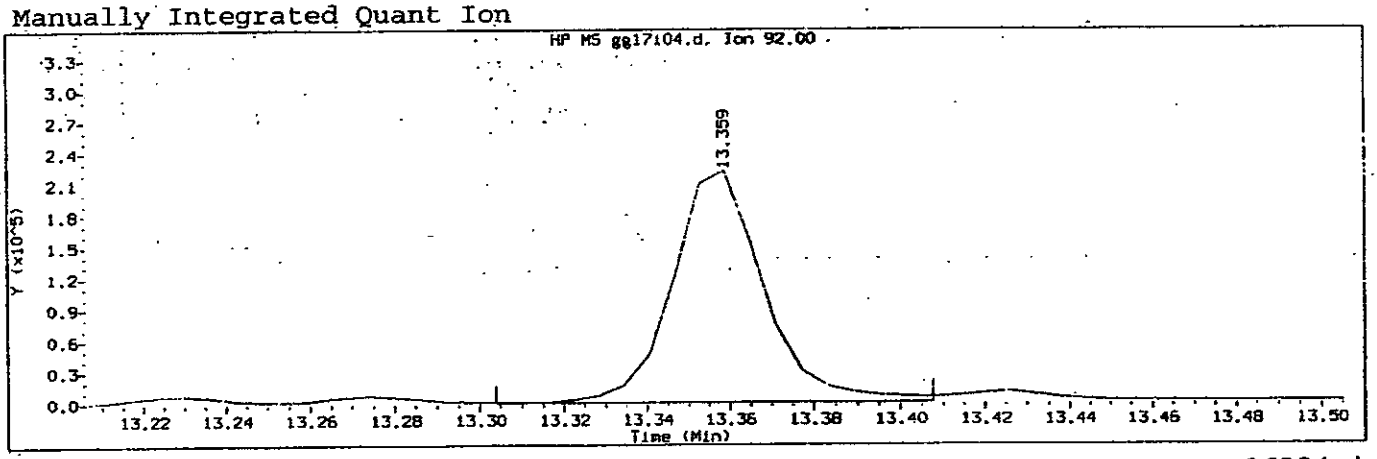
BAD36 0168

Digitally signed by Jason M. Long on 08/17/2010 at 14:54.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i04.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 13:06 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 14:37
Date, time and analyst ID of latest file update: 17-Aug-2010 14:37 jml01693

Sample Name: VSTD002 Lab Sample ID: VSTD002

Compound Number	: 147		
Compound Name	: n-Butylbenzene		
Scan Number	: 1931		
Retention Time (minutes)	: 13.359		
Quant Ion	: 92.00		
Area (flag)	: 341153M		
On-Column Amount (ng)	: 1.9685		
Integration start scan	: 1921	Integration stop scan:	1938
Y at integration start	: 0	Y at integration end:	0

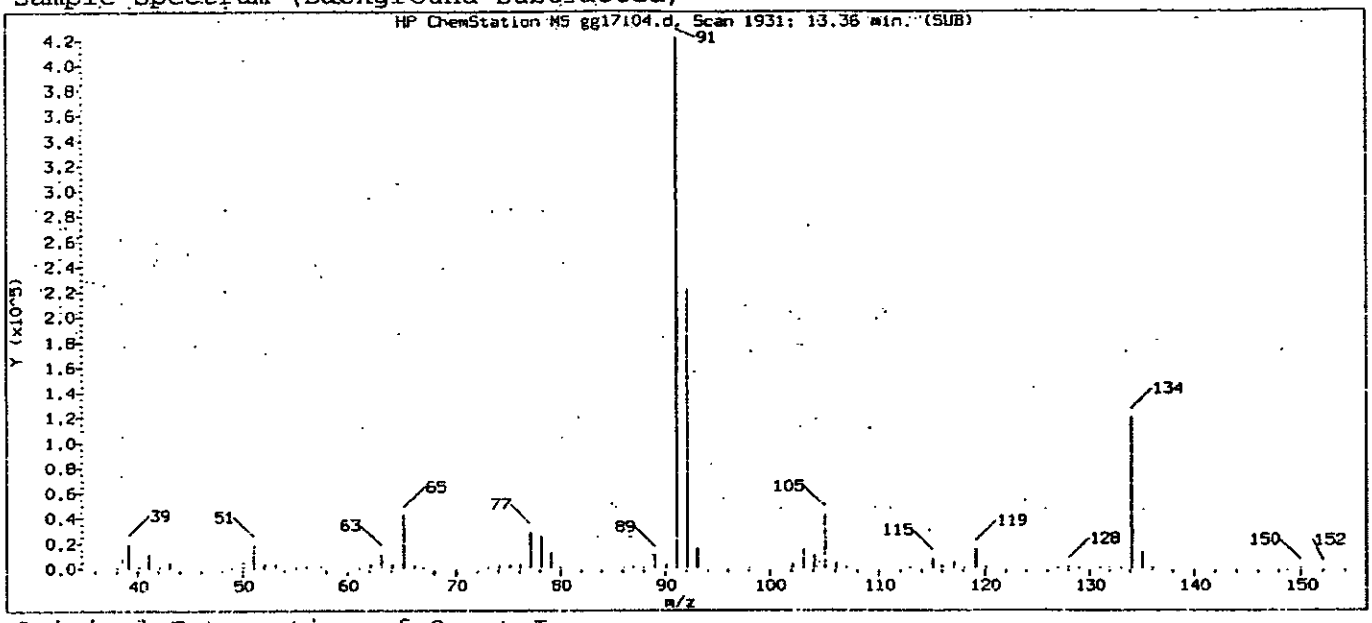
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long on 08/17/2010 at 14:54. Target 3.5 esignature user ID: jml01693

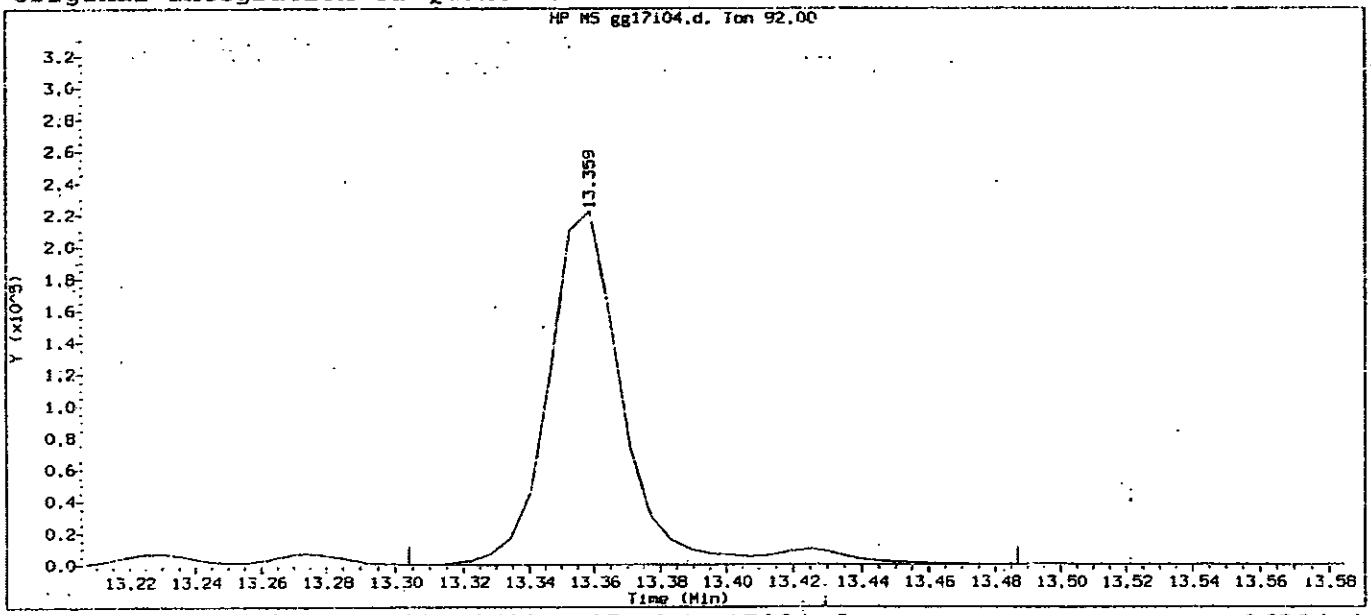
GC/MS audit/management approval: _____

RAD36 0169

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i04.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 13:06 Analyst ID: JML01693

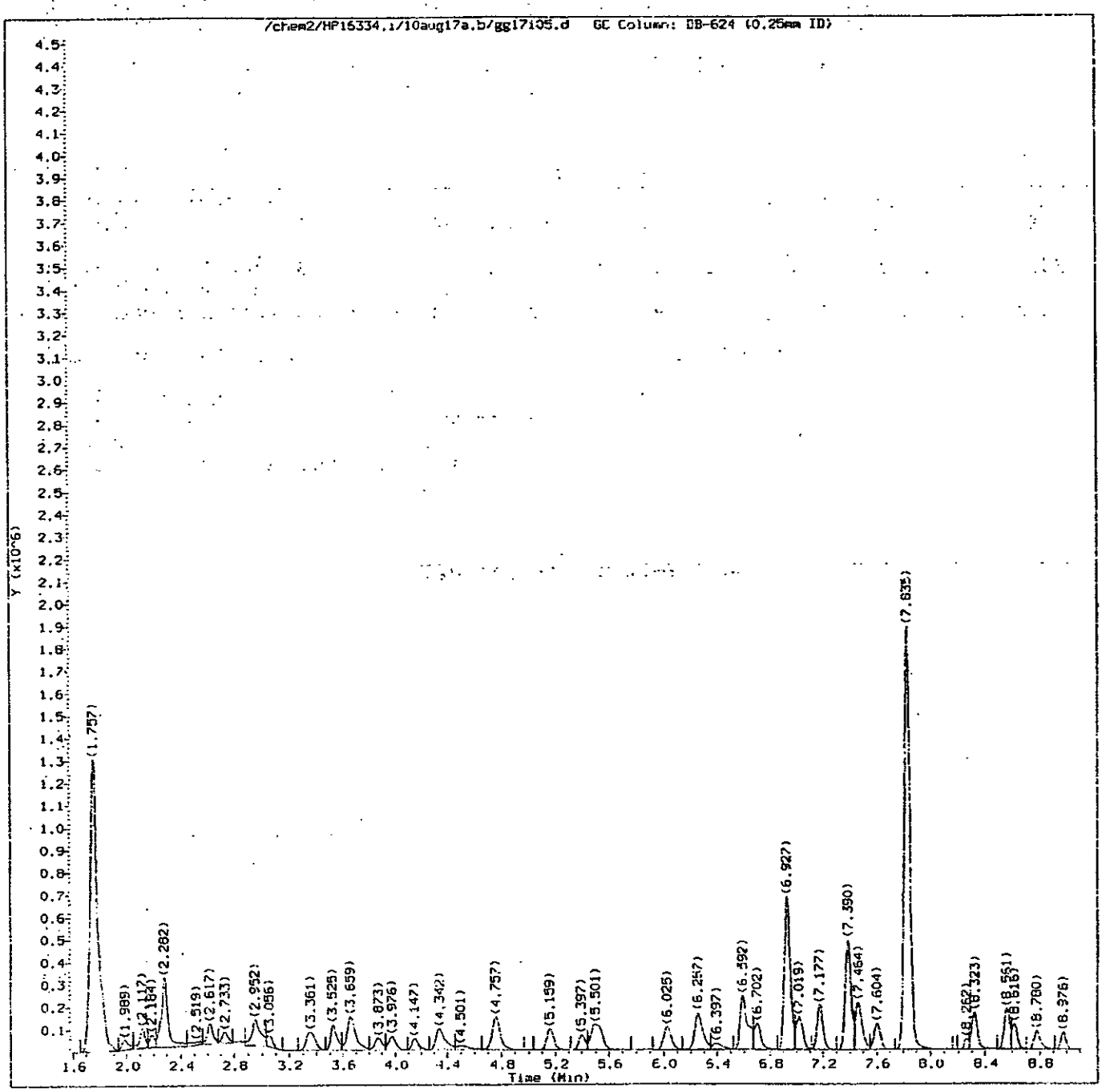
Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 13:24
Date, time and analyst ID of latest file update: 17-Aug-2010 13:24 Automation

Sample Name: VSTD002 Lab Sample ID: VSTD002

Compound Number	: 147		
Compound Name	: n-Butylbenzene		
Scan Number	: 1931		
Retention Time (minutes)	: 13.359		
Quant Ion	: 92.00		
Area	: 357838		
On-column Amount (ng)	: 1.9457		
Integration start scan	: 1921	Integration stop scan:	1951
Y at integration start	: 0	Y at integration end:	0

RAD36 8170

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Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

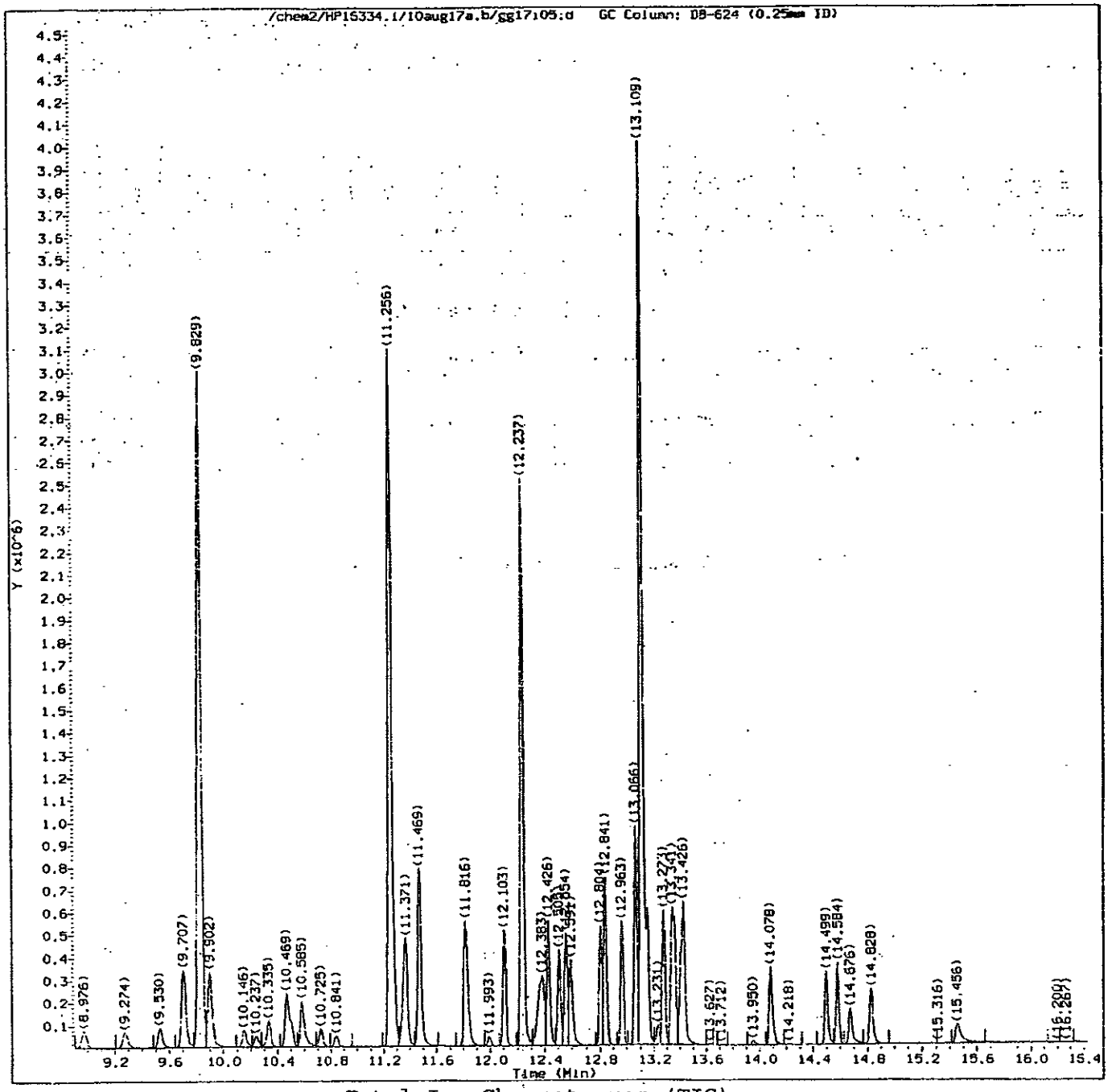
Data File: /chem2/HP16334.i/10aug17a.b/gg17i05.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 13:27 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 14:37
Date, time and analyst ID of latest file update: 17-Aug-2010 14:37 jml01693

Sample Name: VSTD001 Lab Sample ID: VSTD001

RAD36 0171

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on 08/17/2010 at 14:54.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/10aug17a.b/gg17i05.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 13:27 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 14:37
Date, time and analyst ID of latest file update: 17-Aug-2010 14:37 jml01693

Sample Name: VSTD001 Lab Sample ID: VSTD001

RAD36 8172

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on 08/17/2010 at 14:54.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/10aug17a.b/gg17i05.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 13:27 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 14:37
Date, time and analyst ID of latest file update: 17-Aug-2010 14:37 jml01693

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
2) Dichlorodifluoromethane	(1)	1.989	85	115008	1.026
5) Chloromethane	(1)	2.117	50	112109	1.042
6) Vinyl Chloride	(1)	2.251	62	107062M	1.028
9) 1,3-Butadiene	(1)	2.288	39	173336M	1.027
10) Bromomethane	(1)	2.617	94	83588	1.052
11) Chloroethane	(1)	2.727	64	64664	1.058
13) Dichlorofluoromethane	(1)	2.952	67	149685M	1.030
15) Trichlorofluoromethane	(1)	3.056	101	124530	0.982
17) Ethyl Ether	(1)	3.342	59	41067	0.961
18) Freon 123a	(1)	3.373	67	76641	1.011
23) Acrolein	(4)	3.525	56	225305	45.521
24) 1,1-Dichloroethene	(1)	3.659	96	61305	0.989
25) Freon 113	(1)	3.666	101	65017	1.011
26) Acetone	(4)	3.739	58	23256	9.951
27) Methyl Iodide	(1)	3.873	142	112773	0.995
29) Carbon Disulfide	(1)	3.976	76	166902	0.989
32) Allyl Chloride	(1)	4.153	41	61452	0.944
33) Methyl Acetate	(1)	4.202	43	10446	1.020
34) Methylene Chloride	(1)	4.330	84	77253	1.055
36)*t-Butyl Alcohol-d10	(4)	4.367	65	118245	50.000
38) t-Butyl Alcohol	(4)	4.513	59	60320M	20.224
40) Methyl Tertiary Butyl Ether	(1)	4.757	73	136224	0.987
41) trans-1,2-Dichloroethene	(1)	4.763	96	70110	1.004
39) Acrylonitrile	(4)	4.763	53	35962	5.055
37) 1,2-Dichloroethene (Total)	(1)		96	143417	1.988
44) n-Hexane	(1)	5.159	57	93909	1.005
45) 1,1-Dichloroethane	(1)	5.397	63	113882	0.993
47) di-Isopropyl Ether	(1)	5.488	45	191962	0.979
48) 2-Chloro-1,3-Butadiene	(1)	5.537	53	76411	0.937
49) Ethyl t-Butyl Ether	(1)	6.025	59	173794M	0.983
51) 2,2-Dichloropropane	(1)	6.244	77	91822	0.986
50) cis-1,2-Dichloroethene	(1)	6.257	96	73307	0.984
52) 2-Butanone	(4)	6.293	43	114518	9.508
53) Propionitrile	(4)	6.397	54	54169M	19.968
55) Methacrylonitrile	(4)	6.592	67	124287	9.249
56) Bromochloromethane	(1)	6.592	128	29008	0.976
57) Tetrahydrofuran	(4)	6.659	71	37549	9.568
58) Chloroform	(1)	6.702	83	116980	0.999
62)$Dibromofluoromethane(mz111)	(1)	6.927	111	590412	9.963

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 08/17/2010 at 14:54.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/10aug17a.b/gg17i05.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 13:27 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 14:37
Date, time and analyst ID of latest file update: 17-Aug-2010 14:37 jml01693

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
61)$Dibromofluoromethane	(1)	6.927	113	585413	10.062
63) 1,1,1-Trichloroethane	(1)	6.952	97	100962	0.992
64) Cyclohexane	(1)	7.025	56	112202	0.998
65) 1,1-Dichloropropene	(1)	7.177	75	91724	1.002
66) Carbon Tetrachloride	(1)	7.177	117	86562	0.973
67) Isobutyl Alcohol	(4)	7.366	41	43066	47.281
69)$1,2-Dichloroethane-d4(mz65)	(1)	7.384	65	490381	10.148
70)$1,2-Dichloroethane-d4	(1)	7.390	102	109740	10.113
68)$1,2-Dichloroethane-d4(mz104)	(1)	7.390	104	70282	10.070
72) Benzene	(1)	7.464	78	267250	0.992
74) 1,2-Dichloroethane	(1)	7.494	62	63420	0.990
73) 1,2-Dichloroethane(mz98)	(1)	7.494	98	6097	0.994
75) t-Amyl Methyl Ether	(1)	7.604	73	151005	0.986
76) n-Heptane	(1)	7.811	43	93414	0.969
77)*Fluorobenzene	(1)	7.835	96	2529183	10.000
81) n-Butanol	(4)	8.262	56	60057	98.989
83) Trichloroethene	(1)	8.317	95	73968	0.998
84) Methylcyclohexane	(1)	8.555	83	114627	0.985
85) 1,2-Dichloropropane	(1)	8.622	63	66991	1.005
88) Dibromomethane	(1)	8.774	93	29046	0.980
87) Methyl Methacrylate	(4)	8.787	69	24099	0.897
89) 1,4-Dioxane	(4)	8.811	88	10922	51.939
90) Bromodichloromethane	(1)	8.976	83	72706	0.958
91) 2-Nitropropane	(4)	9.274	41	61696	8.741
94) cis-1,3-Dichloropropene	(1)	9.530	75	73755	0.930
96) 4-Methyl-2-Pentanone	(1)	9.707	43	295312	9.363
97)$Toluene-d8	(2)	9.829	98	2494883	10.043
98)$Toluene-d8(mz100)	(2)	9.829	100	1619059	10.074
101) Toluene	(2)	9.902	92	177137	0.988
102) trans-1,3-Dichloropropene	(2)	10.152	75	58281	0.923
103) Ethyl Methacrylate	(2)	10.244	69	40054	0.919
104) 1,1,2-Trichloroethane	(2)	10.335	97	41228	0.980
105) Tetrachloroethene	(2)	10.469	166	81022	0.997
106) 1,3-Dichloropropane	(2)	10.506	76	70754	0.994
107) 2-Hexanone	(2)	10.585	43	187159M	8.992
108) Dibromochloromethane	(2)	10.725	129	43323	0.894
109) 1,2-Dibromoethane	(2)	10.841	107	36880	0.971
110)*Chlorobenzene-d5	(2)	11.256	117	1839555	10.000
112) Chlorobenzene	(2)	11.280	112	198174	0.984

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 08/17/2010 at 14:54.
Target 3.5 esignature user ID: jml01693

RAD36 8174

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/10aug17a.b/gg17i05.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 13:27 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 14:37
Date, time and analyst ID of latest file update: 17-Aug-2010 14:37 jml01693

Sample Name: VSTD001 Lab Sample ID: VSTD001

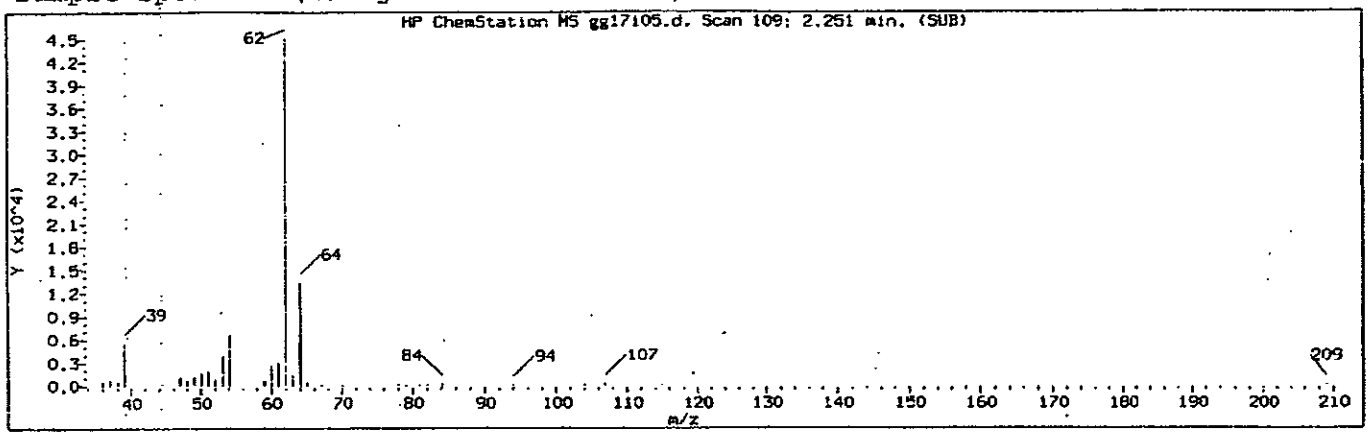
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
113) 1,1,1,2-Tetrachloroethane	(2)	11.353	131	60836	0.938
114) Ethylbenzene	(2)	11.371	91	330771	0.966
117) m+p-Xylene	(2)	11.475	106	263484	1.923
115) Xylene (Total)	(2)		106	391516	2.871
118) o-Xylene	(2)	11.810	106	128032	0.948
119) Styrene	(2)	11.829	104	182660	0.900
120) Bromoform	(2)	11.993	173	21696	1.022
121) Isopropylbenzene	(2)	12.103	105	338526	0.971
126)$4-Bromofluorobenzene	(2)	12.237	95	840187	10.007
127)$4-Bromofluorobenzene(mz174)	(2)	12.237	174	745186	10.019
128) 1,1,2,2-Tetrachloroethane	(3)	12.341	83	44684M	0.958
129) Bromobenzene	(3)	12.365	156	79529	0.984
131) 1,2,3-Trichloropropane	(3)	12.383	110	12714	0.954
130) trans-1,4-Dichloro-2-Butene	(4)	12.389	53	40135M	10.347
132) n-Propylbenzene	(3)	12.426	91	408770	0.981
133) 2-Chlorotoluene	(3)	12.505	126	82014	0.979
134) 1,3,5-Trimethylbenzene	(3)	12.554	105	278914	0.961
135) 4-Chlorotoluene	(3)	12.591	126	82751	0.968
137) tert-Butylbenzene	(3)	12.804	134	60127M	0.923
138) Pentachloroethane	(3)	12.835	167	43030	0.978
139) 1,2,4-Trimethylbenzene	(3)	12.841	105	288427	0.925
140) sec-Butylbenzene	(3)	12.963	105	371746	0.962
142) 1,3-Dichlorobenzene	(3)	13.066	146	165054	0.945
141) p-Isopropyltoluene	(3)	13.066	119	319452	0.925
143)*1,4-Dichlorobenzene-d4	(3)	13.109	152	1039639	10.000
144) 1,4-Dichlorobenzene	(3)	13.127	146	177806	0.991
145) 1,2,3-Trimethylbenzene	(3)	13.152	120	135002	0.973
146) Benzyl Chloride	(3)	13.231	126	13247	0.977
147) n-Butylbenzene	(3)	13.359	92	161344M	0.944
148) 1,2-Dichlorobenzene	(3)	13.408	146	149528	0.973
150) 1,2-Dibromo-3-Chloropropane	(4)	13.950	155	5266	1.024
153) 1,2,4-Trichlorobenzene	(3)	14.499	180	116225	0.958
154) Hexachlorobutadiene	(3)	14.584	225	63668	0.973
155) Naphthalene	(3)	14.676	128	154511	0.936
156) 1,2,3-Trichlorobenzene	(3)	14.828	180	92847	0.977

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

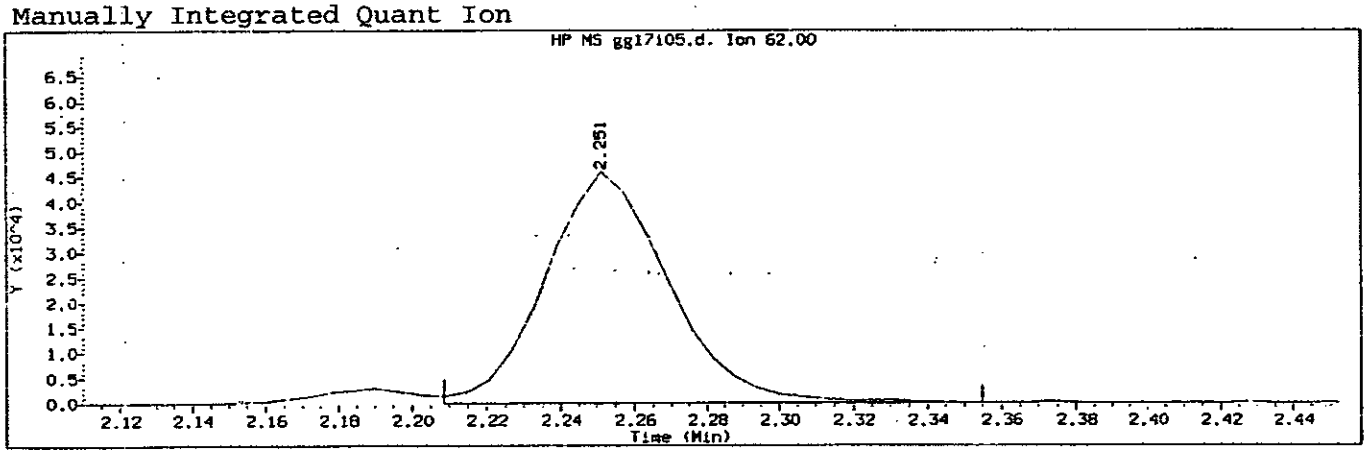
RAD36 0175

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on 08/17/2010 at 14:54.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i05.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 13:27 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 14:37
Date, time and analyst ID of latest file update: 17-Aug-2010 14:37 jml01693

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number	: 6		
Compound Name	: Vinyl Chloride		
Scan Number	: 109		
Retention Time (minutes)	: 2.251		
Quant Ion	: 62.00		
Area (flag)	: 107062M		
On-Column Amount (ng)	: 1.0282		
Integration start scan	: 101	Integration stop scan:	125
Y at integration start	: 0	Y at integration end:	0

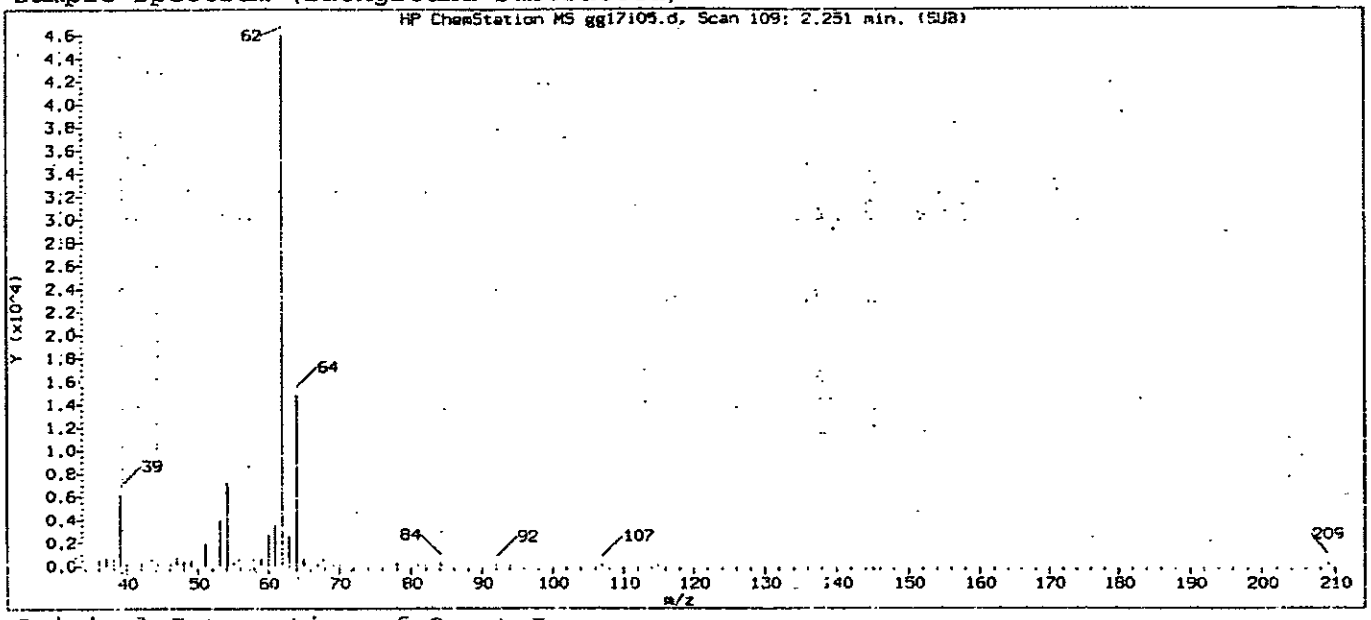
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long
on 08/17/2010 at 14:54.
Target 3.5 esignature user ID: jml01693

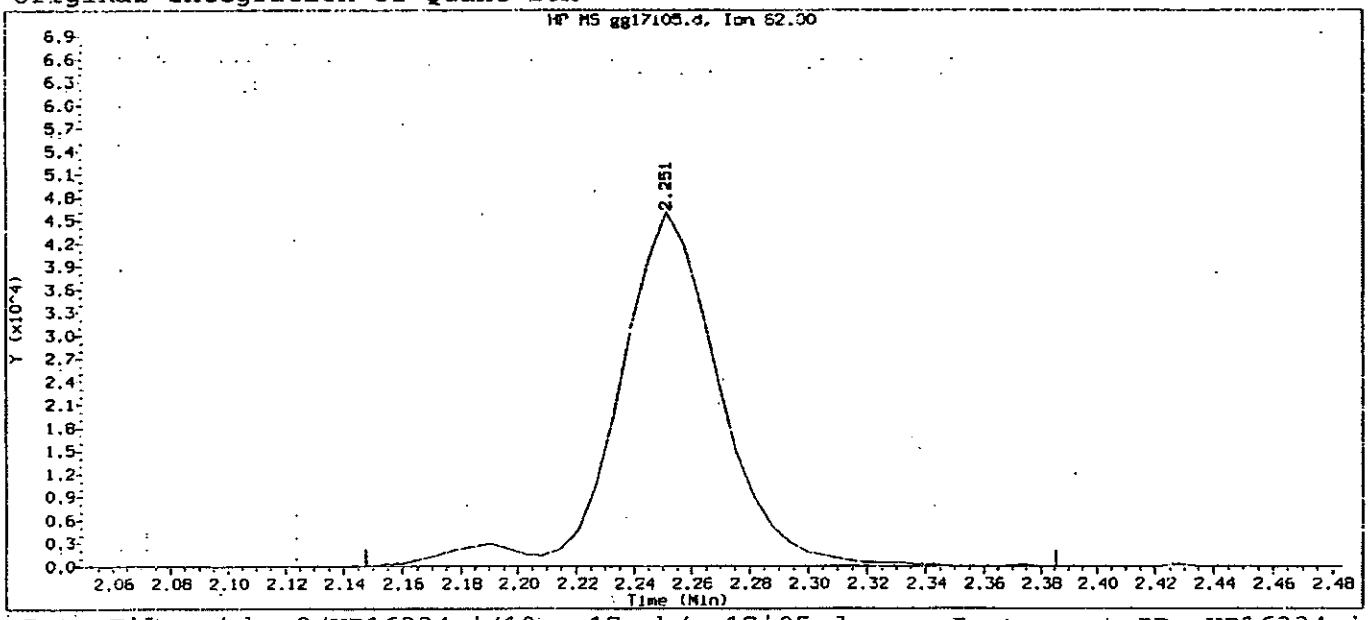
GC/MS audit/management approval: 8/18/10

RAD36 8176

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i05.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 13:27 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 13:45
Date, time and analyst ID of latest file update: 17-Aug-2010 13:45 Automation

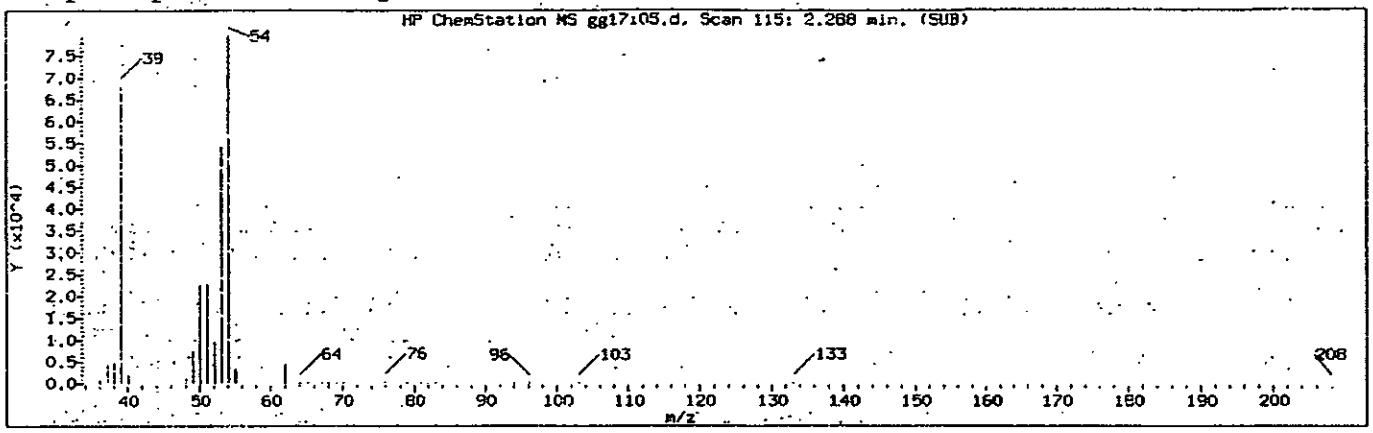
Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number	: 6		
Compound Name	: Vinyl Chloride		
Scan Number	: 109		
Retention Time (minutes)	: 2.251		
Quant Ion	: 62.00		
Area	: 112483		
On-column Amount (ng)	: 1.0797		
Integration start scan	: 91	Integration stop scan:	130
Y at integration start	: 0	Y at integration end:	0

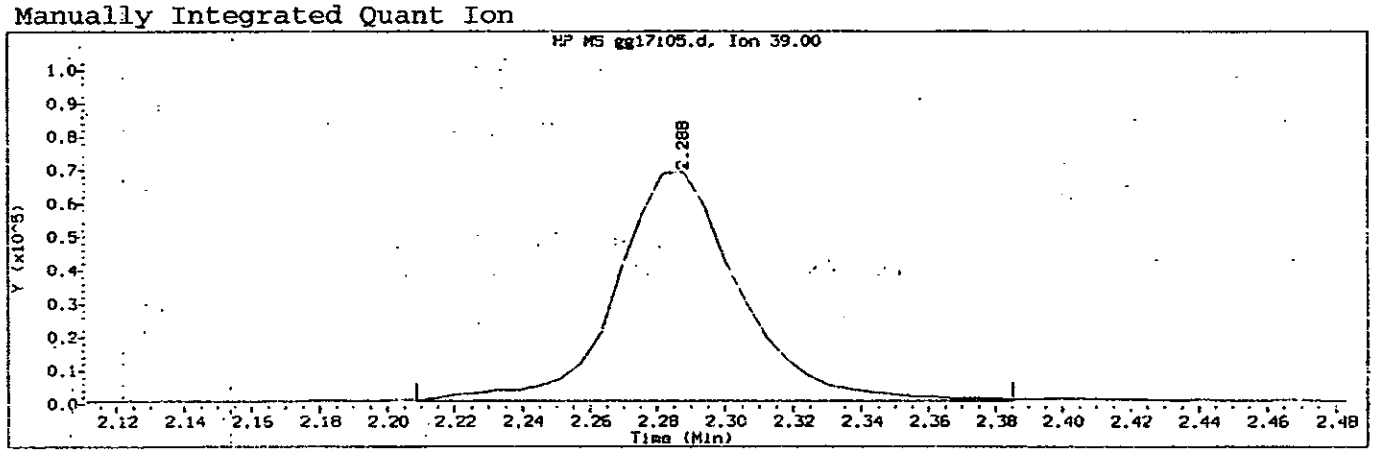
RAD36 8177

Digitally signed by Jason M. Long on 08/17/2010 at 14:54.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i05.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 13:27 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 14:37
Date, time and analyst ID of latest file update: 17-Aug-2010 14:37 jml01693

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number	: 9		
Compound Name	: 1,3-Butadiene		
Scan Number	: 115		
Retention Time (minutes)	: 2.288		
Quant Ion	: 39.00		
Area (flag)	: 173336M		
On-Column Amount (ng)	: 1.0271		
Integration start scan	: 101	Integration stop scan:	130
Y at integration start	: 1001	Y at integration end:	1001

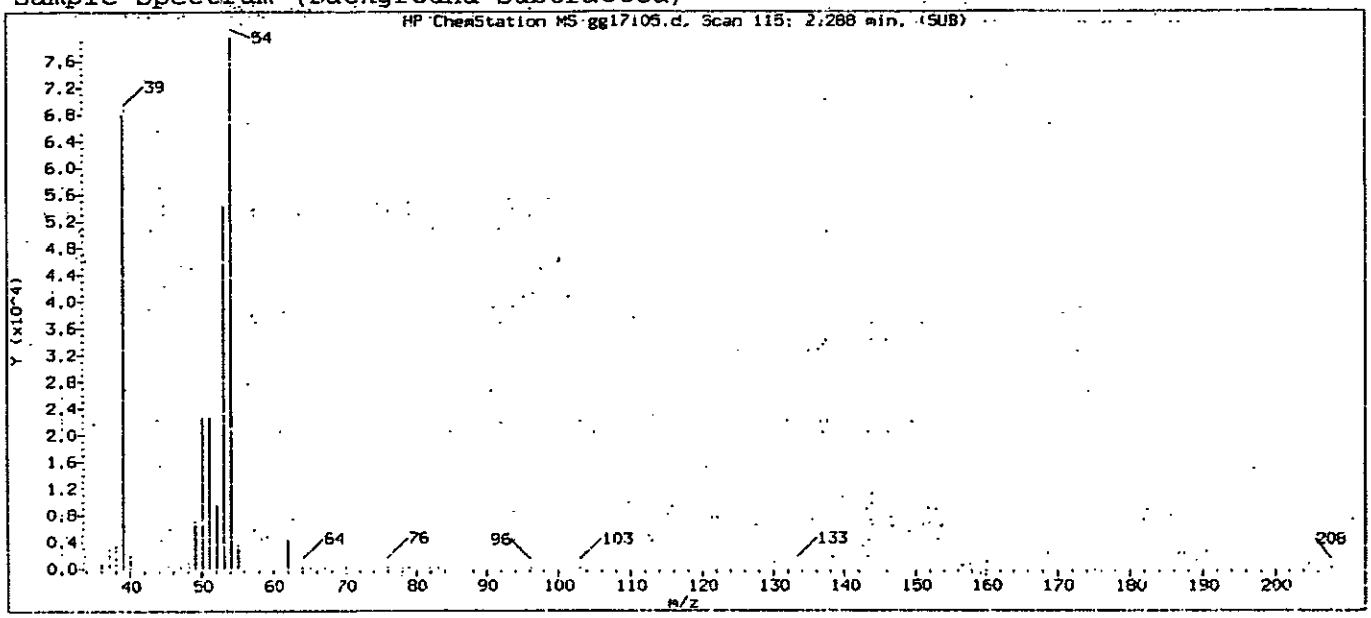
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long
on 08/17/2010 at 14:54.
Target 3.5 esignature user ID: jml01693

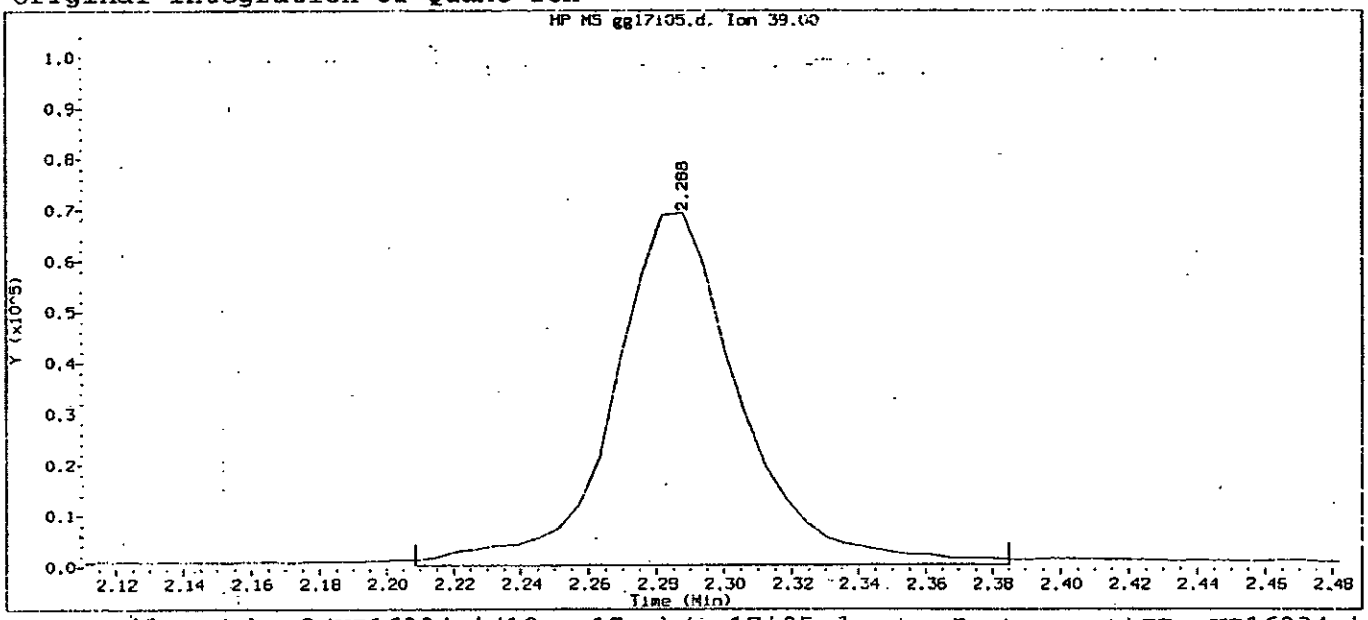
GC/MS audit/management approval: _____

RAD36 B178

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i05.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 13:27 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 13:45
Date, time and analyst ID of latest file update: 17-Aug-2010 13:45 Automation

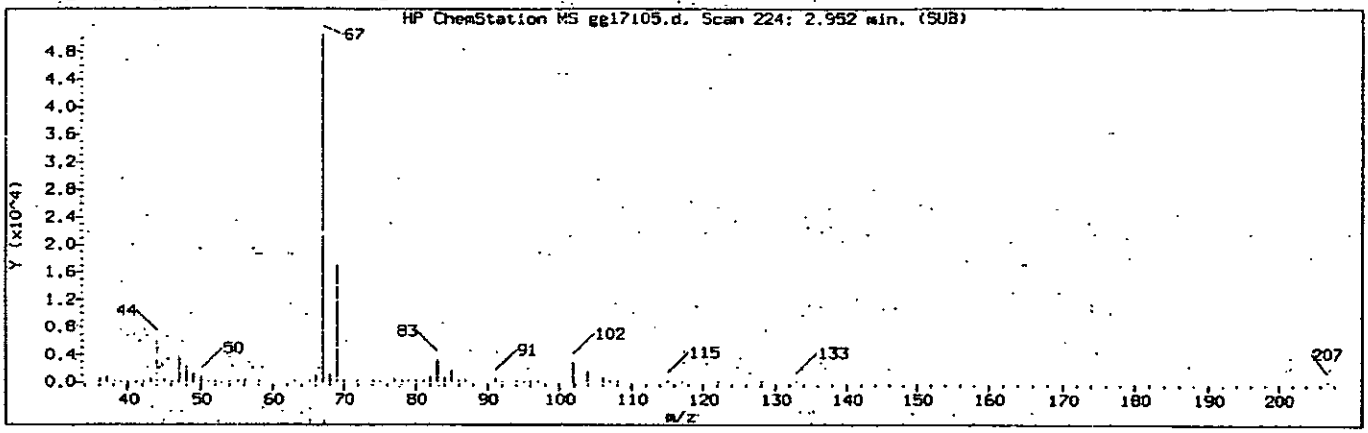
Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number	: 9		
Compound Name	: 1,3-Butadiene		
Scan Number	: 115		
Retention Time (minutes)	: 2.288		
Quant Ion	: 39.00		
Area	: 180458		
On-column Amount (ng)	: 1.0823		
Integration start scan	: 101	Integration stop scan:	130
Y at integration start	: 233	Y at integration end:	400

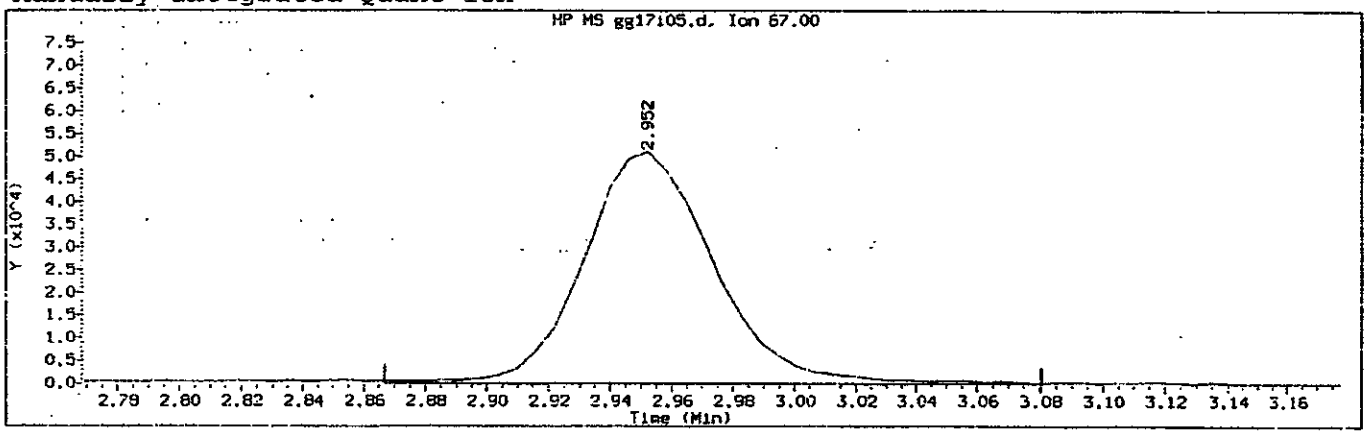
RAD36 0179

Digitally signed by Jason M. Long on 08/17/2010 at 14:54.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i05.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 13:27 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 14:37
Date, time and analyst ID of latest file update: 17-Aug-2010 14:37 jml01693

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number	: 13		
Compound Name	: Dichlorofluoromethane		
Scan Number	: 224		
Retention Time (minutes)	: 2.952		
Quant Ion	: 67.00		
Area (flag)	: 149685M		
On-Column Amount (ng)	: 1.0300		
Integration start scan	: 209	Integration stop scan:	244
Y at integration start	: 0	Y at integration end:	0

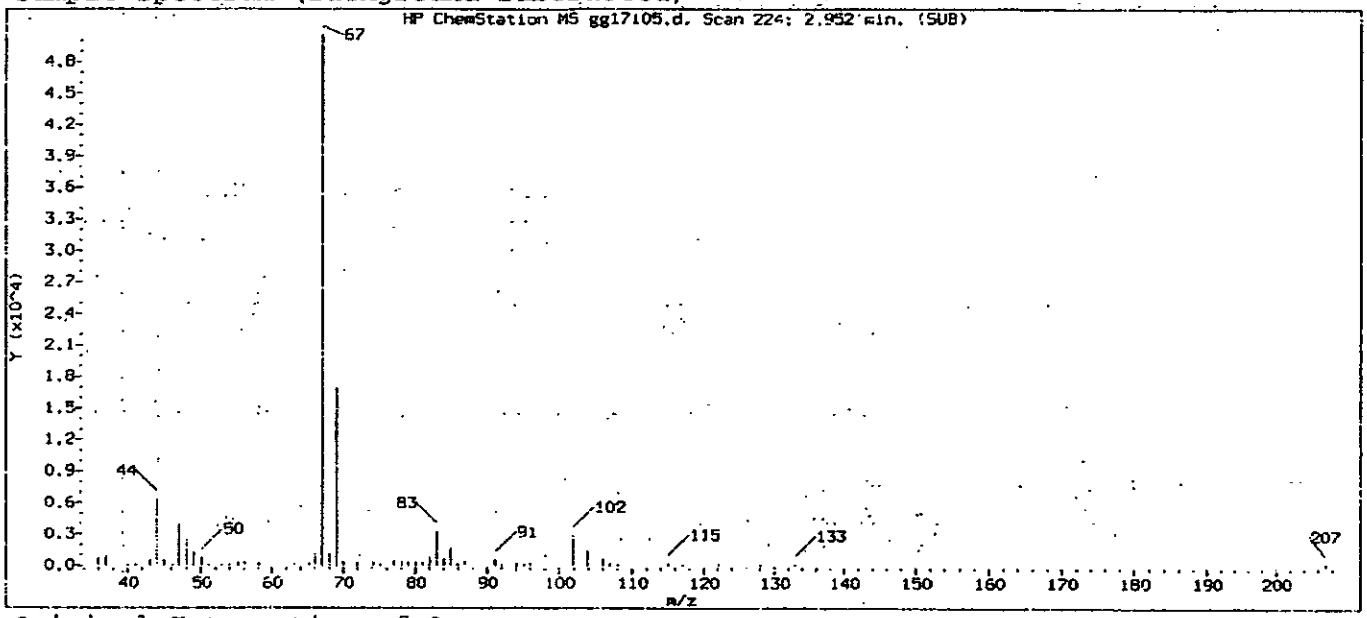
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long
on 08/17/2010 at 14:54.
Target 3.5 esignature user ID: jml01693

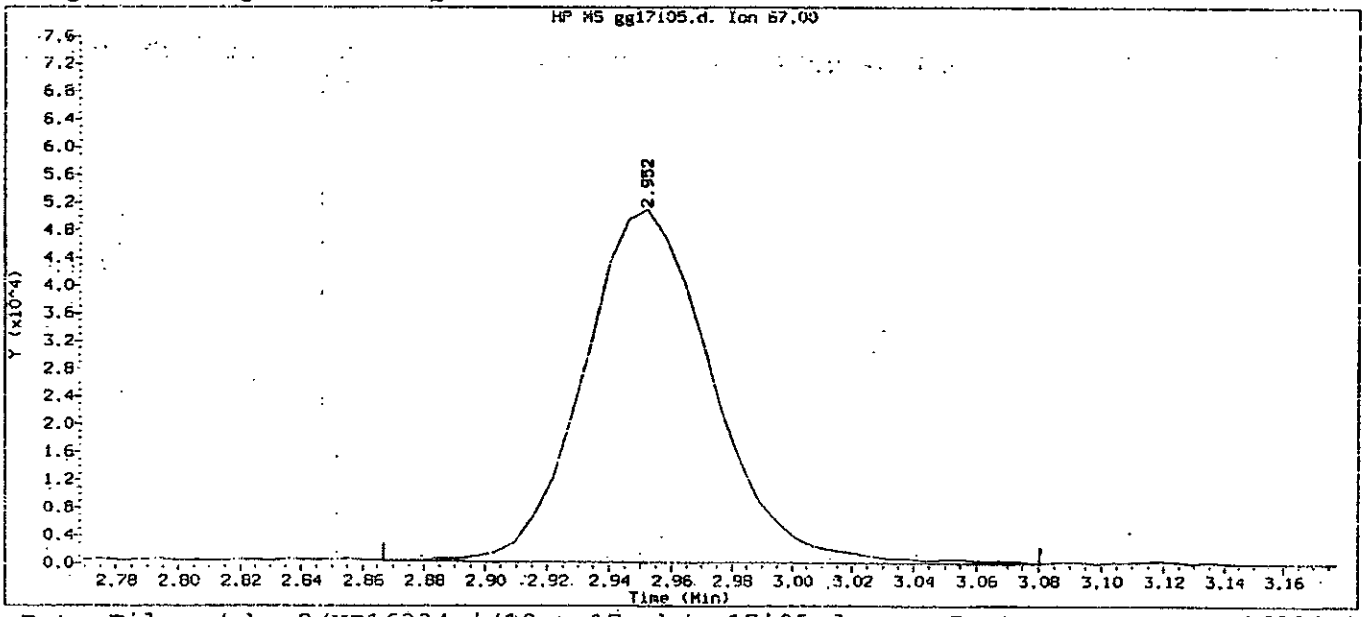
GC/MS audit/management approval: _____ 8/18/10

RAD36 0188

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i05.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 13:27 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 13:45
Date, time and analyst ID of latest file update: 17-Aug-2010 13:45 Automation

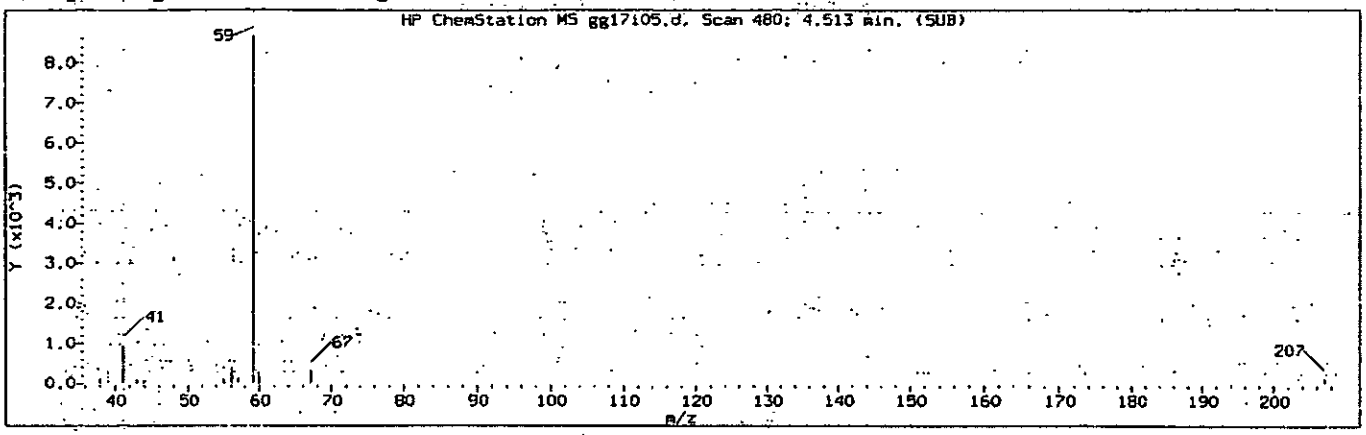
Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number	: 13		
Compound Name	: Dichlorofluoromethane		
Scan Number	: 224		
Retention Time (minutes)	: 2.952		
Quant Ion	: 67.00		
Area	: 147331		
On-column Amount (ng)	: 1.0423		
Integration start scan	: 209	Integration stop scan:	244
Y at integration start	: 354	Y at integration end:	0

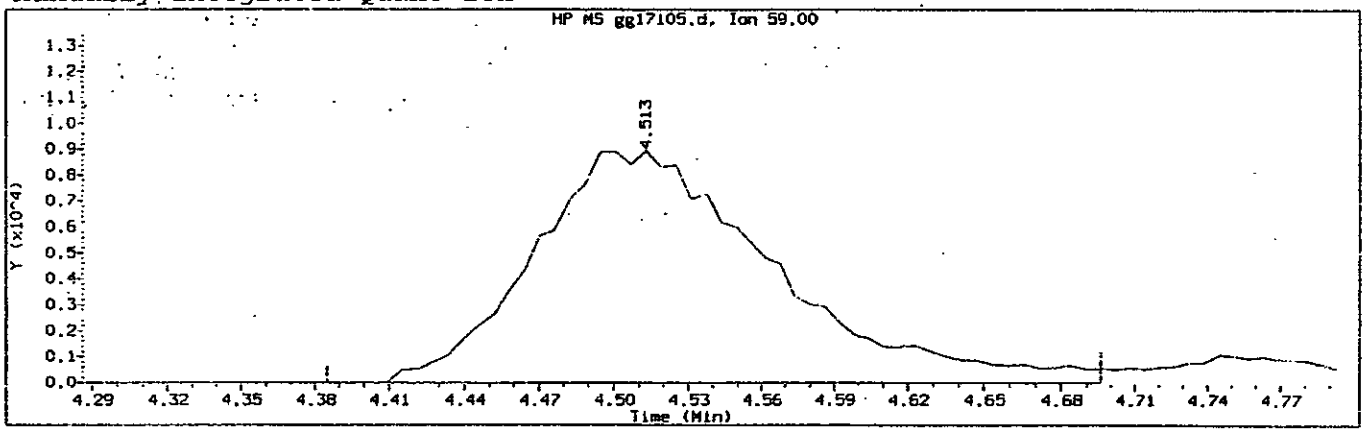
RAD36 8181

Digitally signed by Jason M. Long on 08/17/2010 at 14:54.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i05.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 13:27 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 14:37
Date, time and analyst ID of latest file update: 17-Aug-2010 14:37 jml01693

Sample Name: VSTD001 Lab Sample ID: VSTD001

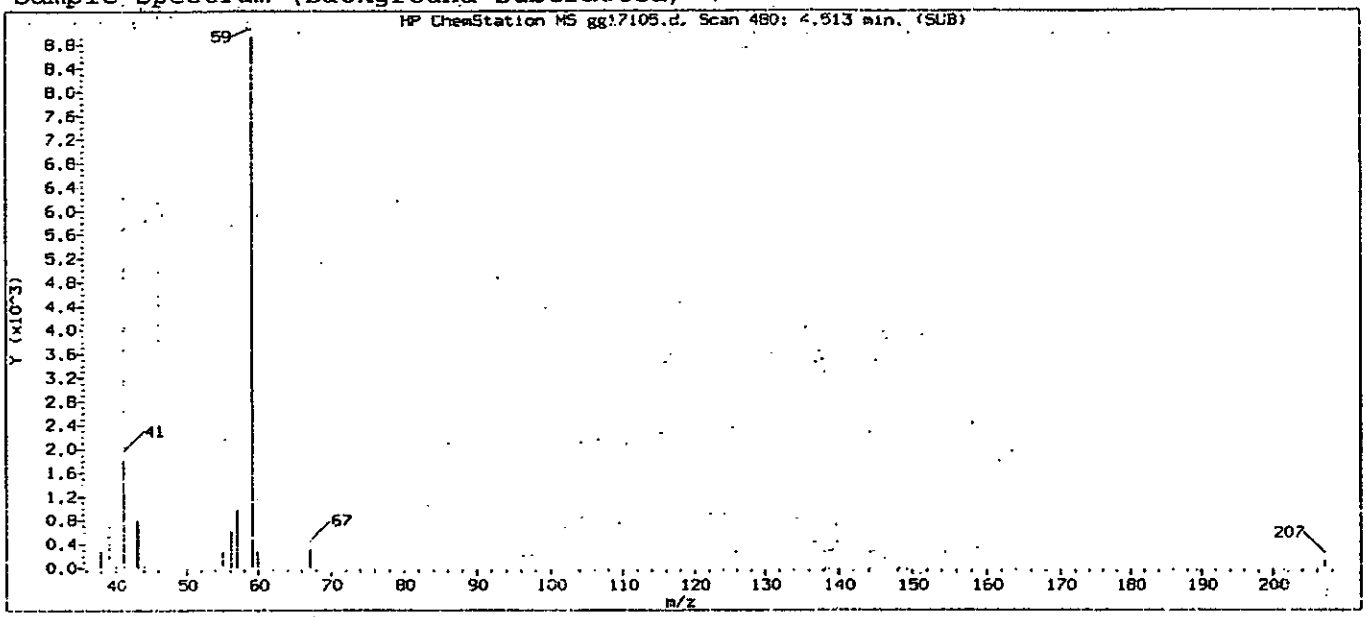
Compound Number	: 38		
Compound Name	: t-Butyl Alcohol		
Scan Number	: 480		
Retention Time (minutes)	: 4.513		
Quant Ion	: 59.00		
Area (flag)	: 60320M		
On-Column Amount (ng)	: 20.2237		
Integration start scan	: 458	Integration stop scan:	509
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

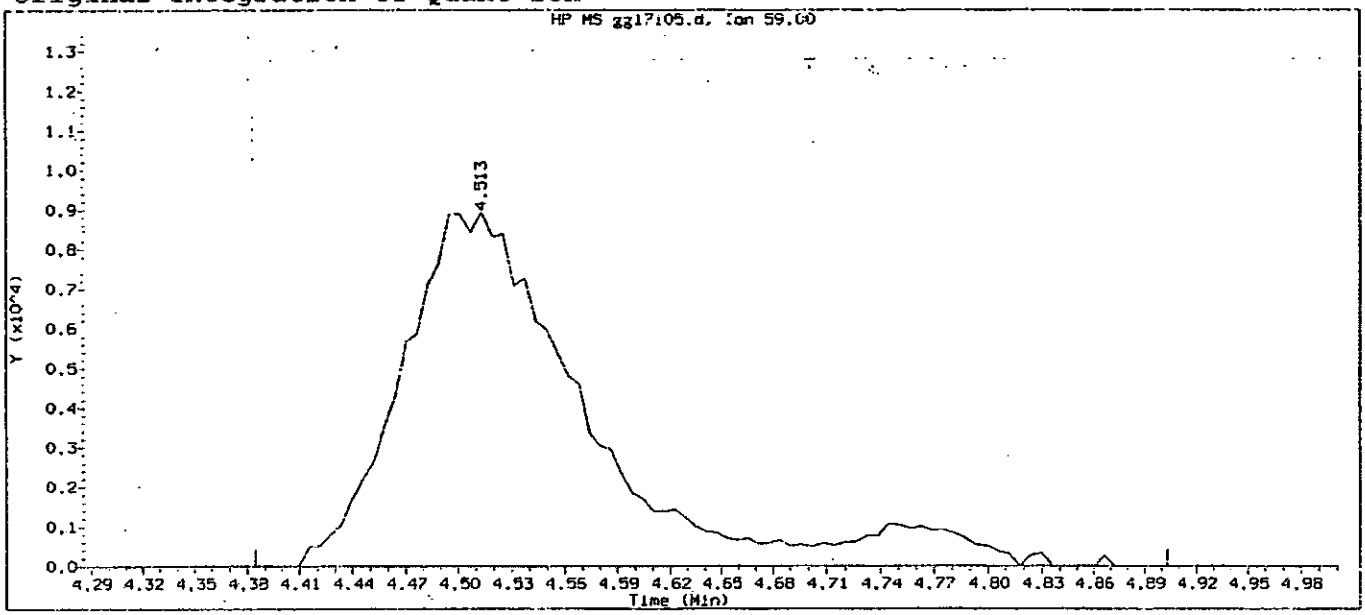
Analyst responsible for change: Digitally signed by Jason M. Long
on 08/17/2010 at 14:54.
Target 3.5 esignature user ID: jml01693

GC/MS audit/management approval: _____ RAD36 8182

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i05.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 13:27 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 13:45
Date, time and analyst ID of latest file update: 17-Aug-2010 13:45 Automation

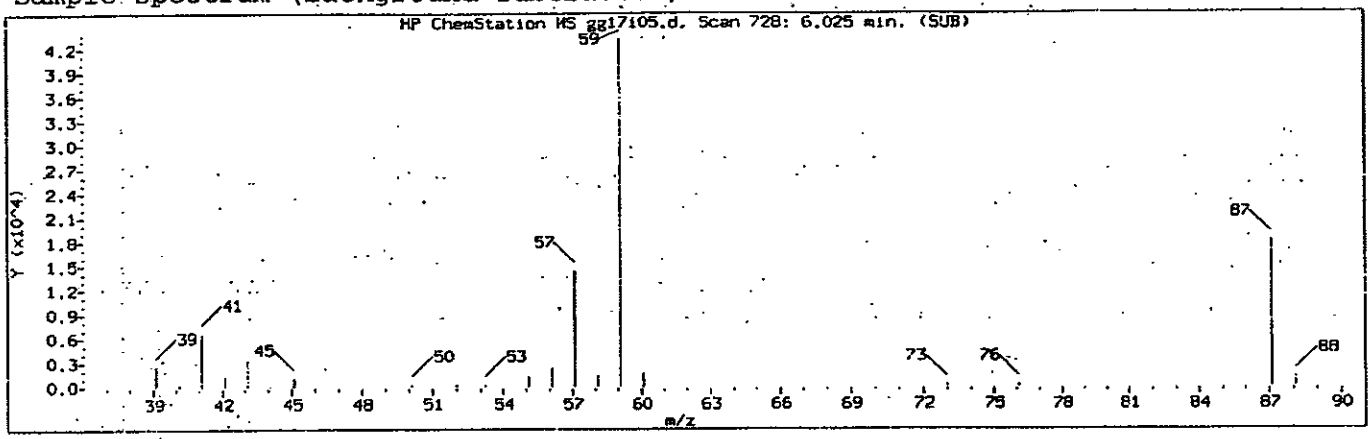
Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number	: 38		
Compound Name	: t-Butyl Alcohol		
Scan Number	: 480		
Retention Time (minutes)	: 4.513		
Quant Ion	: 59.00		
Area	: 65582		
On-column Amount (ng)	: 21.7342		
Integration start scan	: 458	Integration stop scan:	543
Y at integration start	: 0	Y at integration end:	0

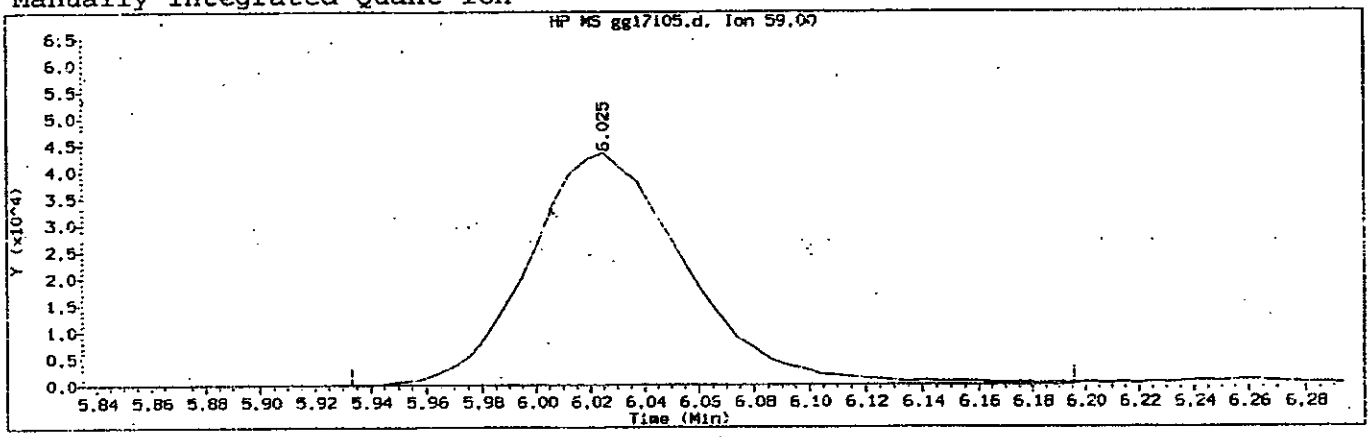
RAD36 0183

Digitally signed by Jason M. Long on 08/17/2010 at 14:54.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i05.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 13:27 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 14:37
Date, time and analyst ID of latest file update: 17-Aug-2010 14:37 jml01693

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number	: 49		
Compound Name	: Ethyl t-Butyl Ether		
Scan Number	: 728		
Retention Time (minutes)	: 6.025		
Quant Ion	: 59.00		
Area (flag)	: 173794M		
On-Column Amount (ng)	: 0.9829		
Integration start scan	: 712	Integration stop scan:	755
Y at integration start	: 0	Y at integration end:	0

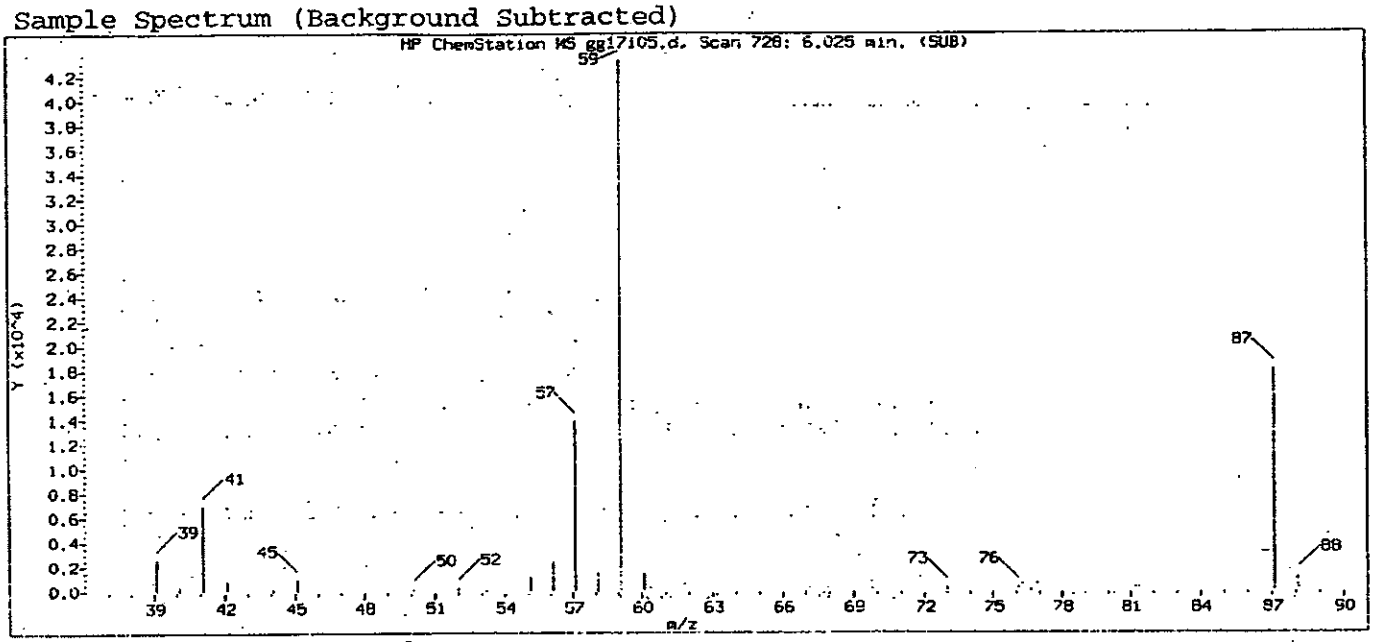
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long on 08/17/2010 at 14:54. Target 3.5 esignature user ID: jml01693

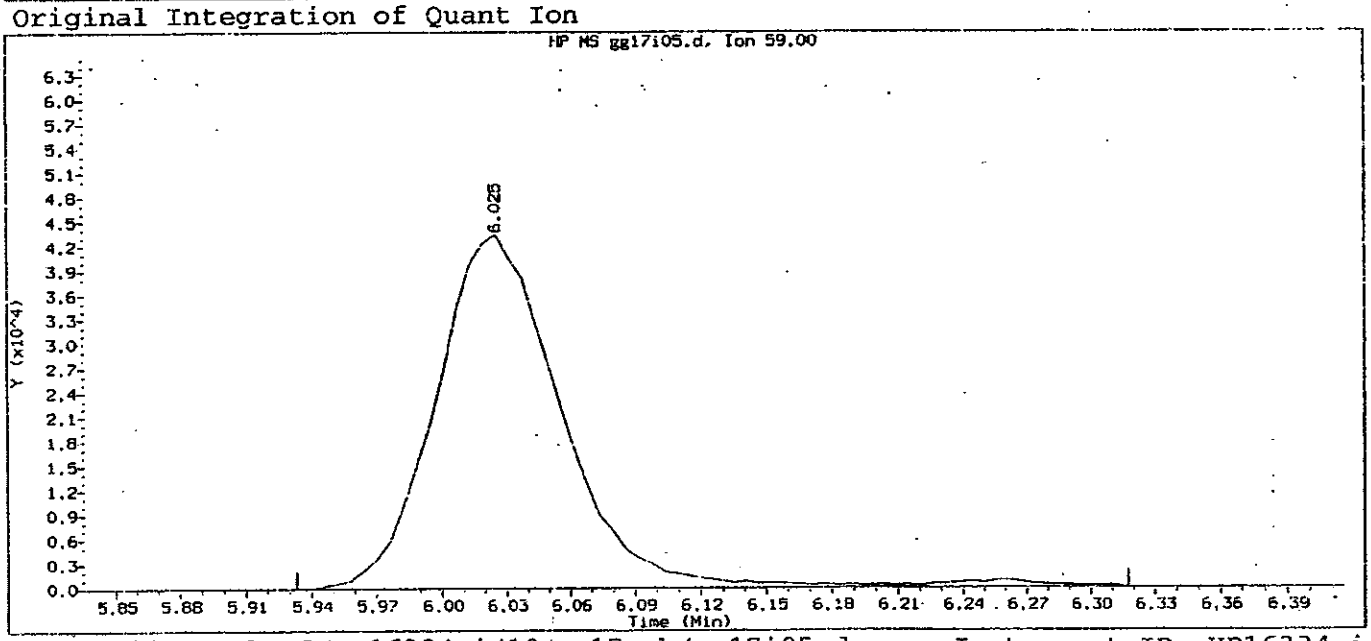
GC/MS audit/management approval: _____ 8/18/10

RAD36 5184

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i05.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 13:27 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 13:45
Date, time and analyst ID of latest file update: 17-Aug-2010 13:45 Automation

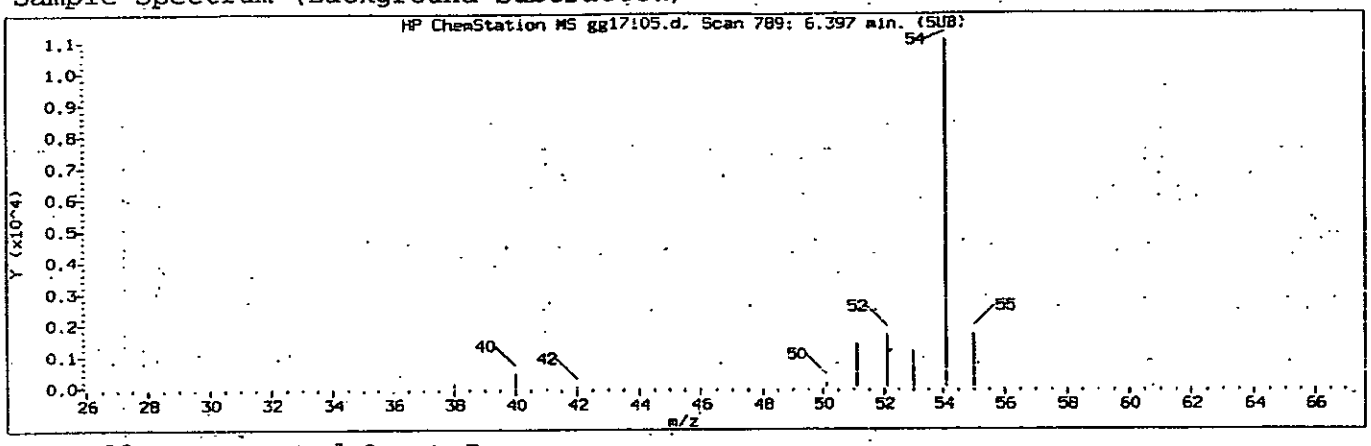
Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number	: 49
Compound Name	: Ethyl t-Butyl Ether
Scan Number	: 728
Retention Time (minutes)	: 6.025
Quant Ion	: 59.00
Area	: 177252
On-column Amount (ng)	: 0.9905
Integration start scan	: 712
Integration stop scan	: 775
Y at integration start	: 0
Y at integration end	: 0

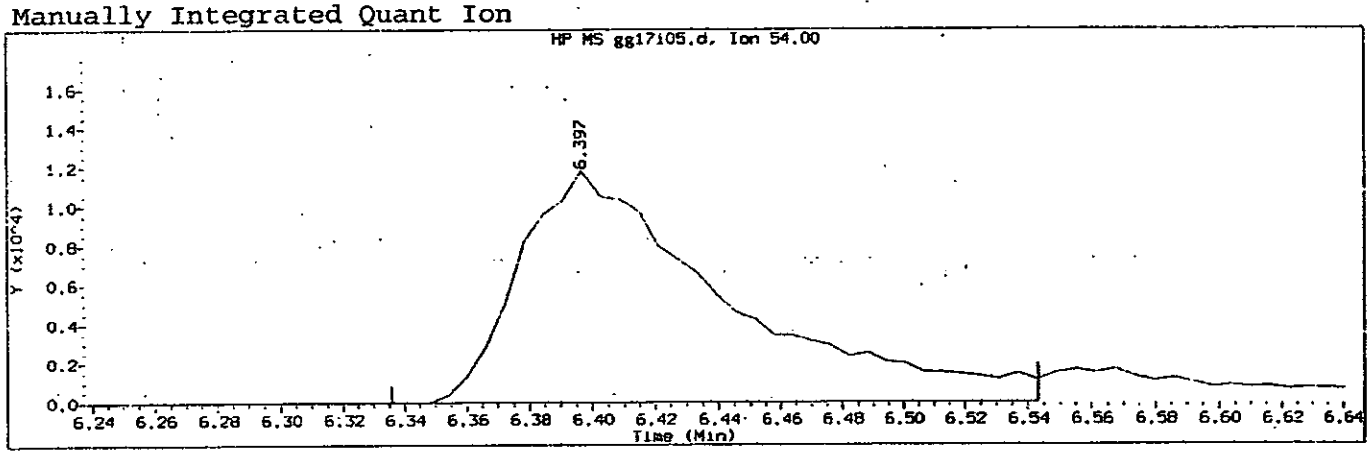
RAD36 8185

Digitally signed by Jason M. Long on 08/17/2010 at 14:54.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i05.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 13:27 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 14:37
Date, time and analyst ID of latest file update: 17-Aug-2010 14:37 jml01693

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number	: 53		
Compound Name	: Propionitrile		
Scan Number	: 789		
Retention Time (minutes)	: 6.397		
Quant Ion	: 54.00		
Area (flag)	: 54169M		
On-Column Amount (ng)	: 19.9675		
Integration start scan	: 778	Integration stop scan:	812
Y at integration start	: 0	Y at integration end:	0

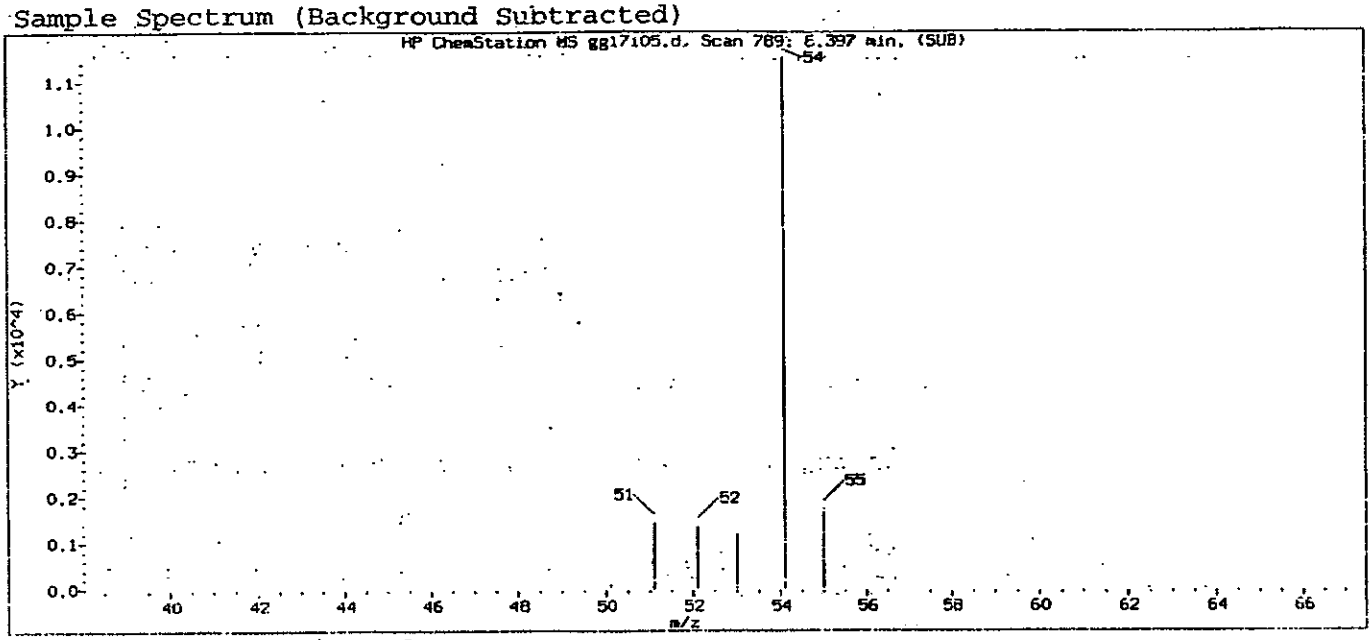
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long
on 08/17/2010 at 14:54.
Target 3.5 esignature user ID: jml01693

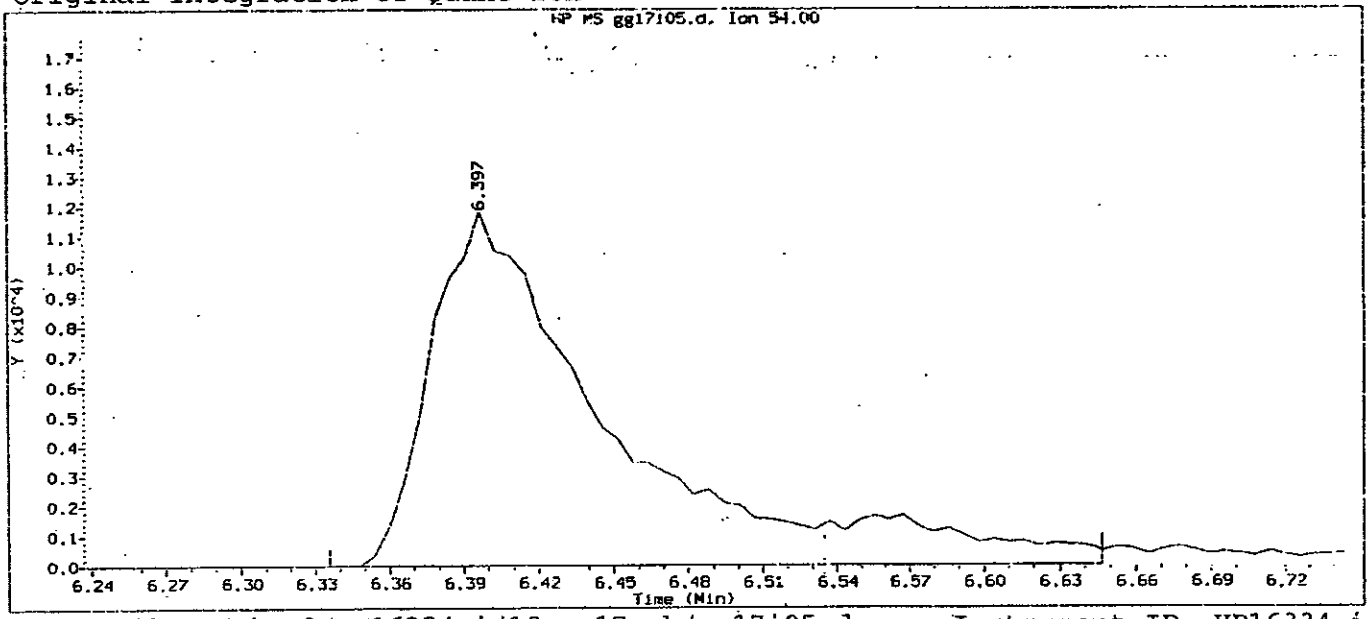
GC/MS audit/management approval: _____ 8/18/10

RAD36 0186

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i05.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 13:27 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 13:45
Date, time and analyst ID of latest file update: 17-Aug-2010 13:45 Automation

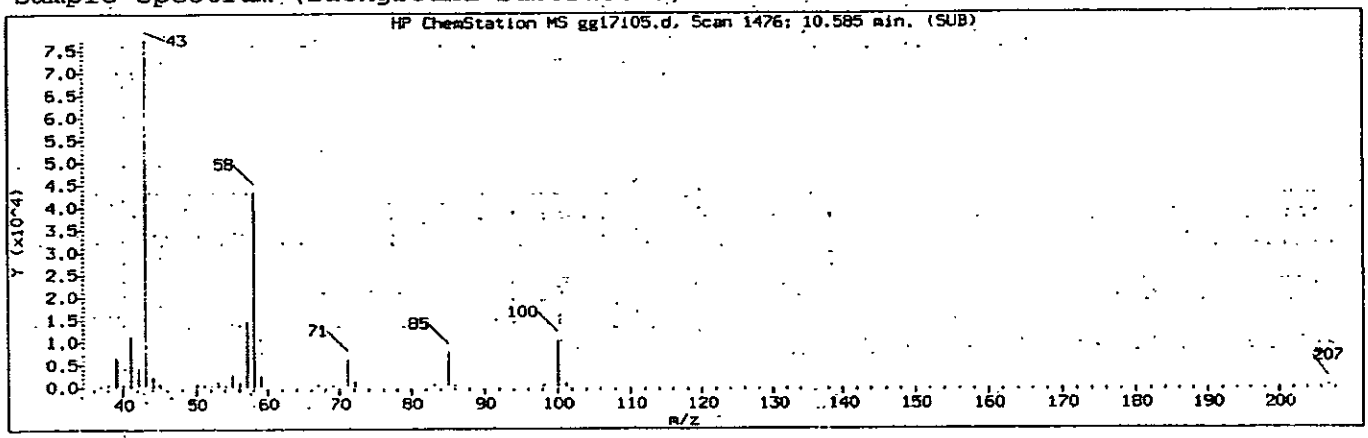
Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number	: 53		
Compound Name	: Propionitrile		
Scan Number	: 789		
Retention Time (minutes)	: 6.397		
Quant Ion	: 54.00		
Area	: 60428		
On-column Amount (ng)	: 17.2419		
Integration start scan	: 778	Integration stop scan:	829
Y at integration start	: 0	Y at integration end:	0

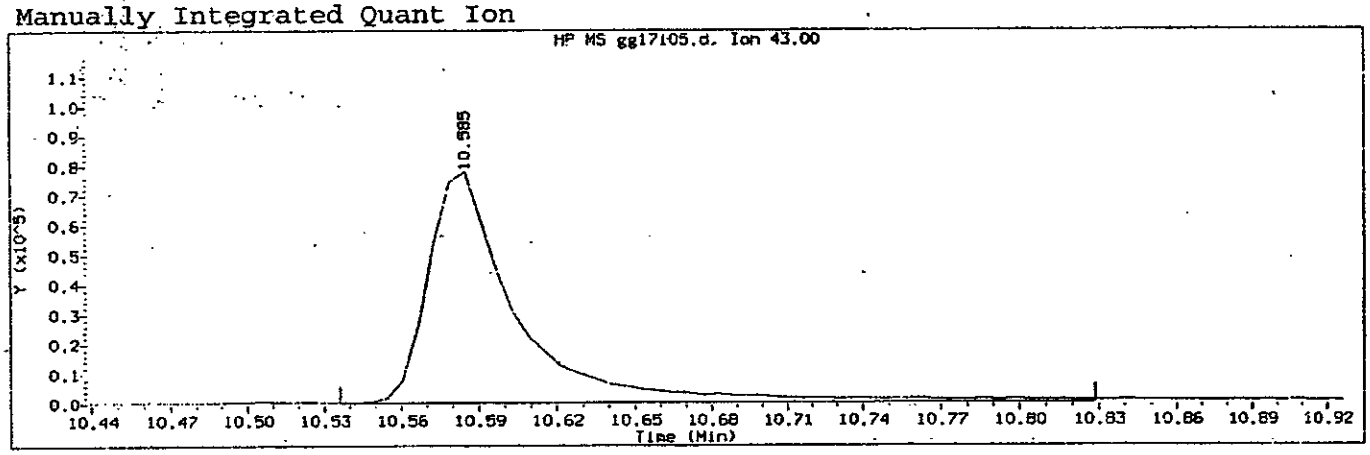
RAD36 8187

Digitally signed by Jason M. Long on 08/17/2010 at 14:54.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i05.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 13:27 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 14:37
Date, time and analyst ID of latest file update: 17-Aug-2010 14:37 jml01693

Sample Name: VSTD001 Lab Sample ID: VSTD001

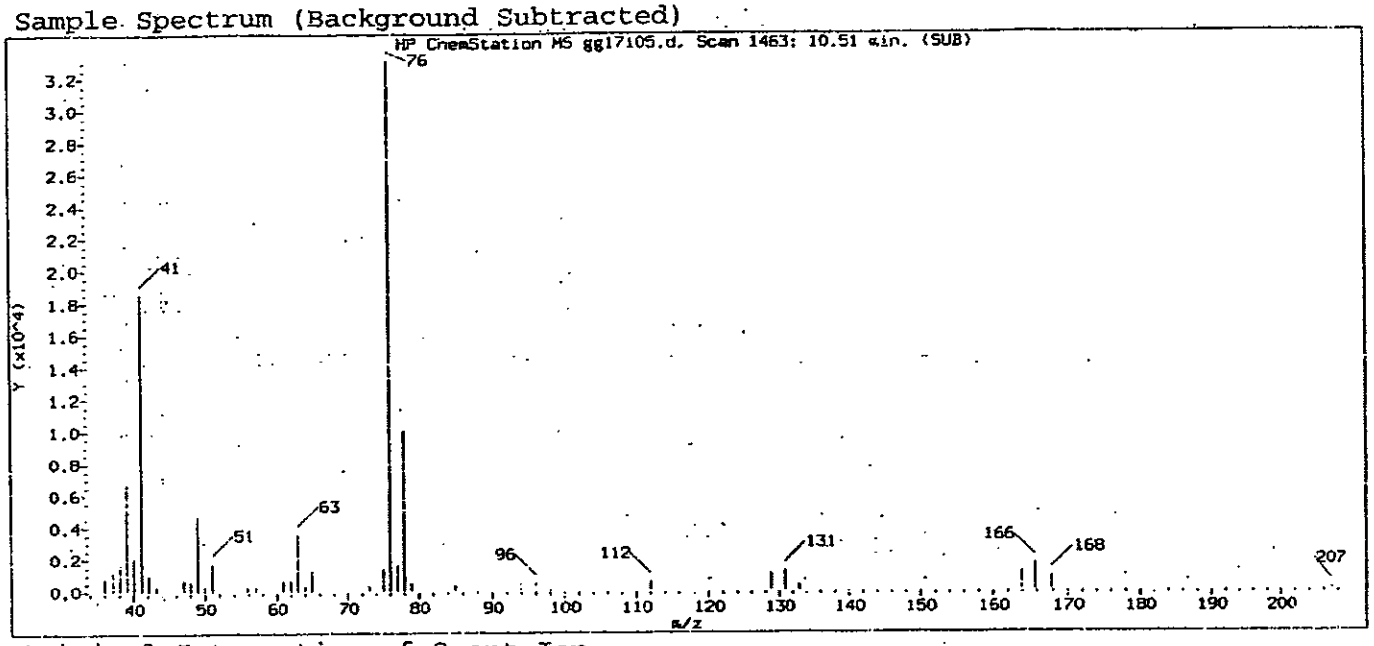
Compound Number	: 107		
Compound Name	: 2-Hexanone		
Scan Number	: 1476		
Retention Time (minutes)	: 10.585		
Quant Ion	: 43.00		
Area (flag)	: 187159M		
On-Column Amount (ng)	: 8.9923		
Integration start scan	: 1467	Integration stop scan:	1515
Y at integration start	: 234	Y at integration end:	234

Reason for manual integration: improper integration

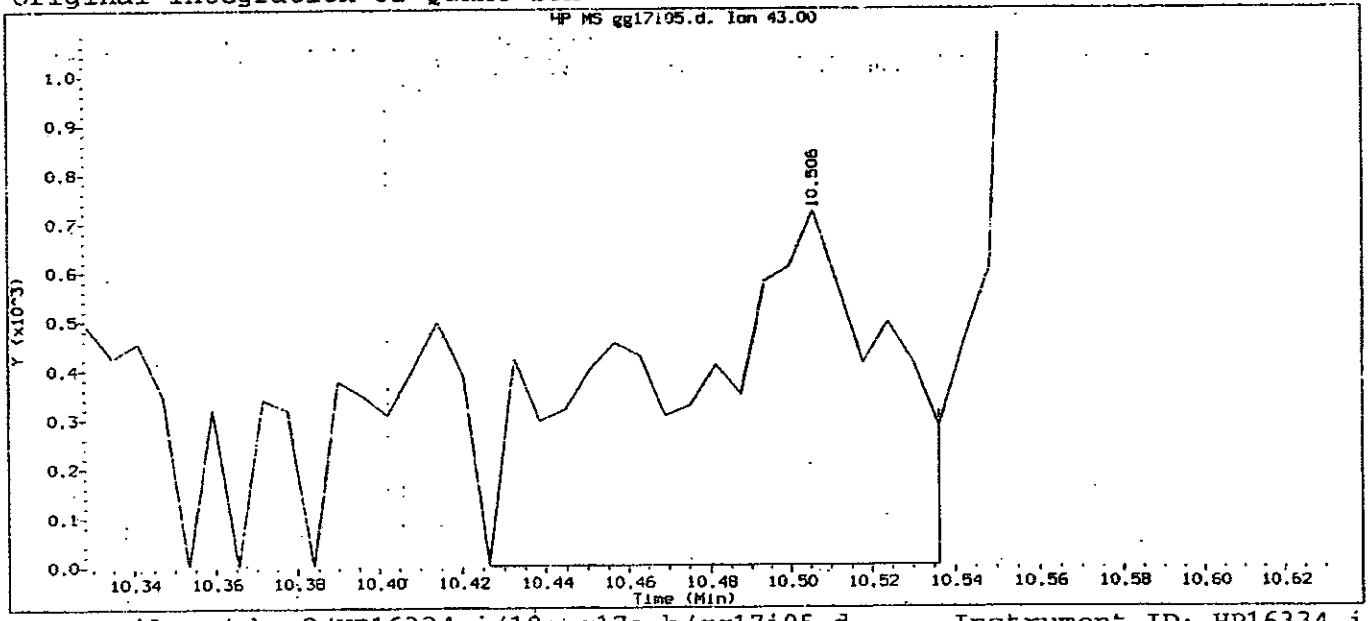
Analyst responsible for change: Digitally signed by Jason M. Long
on 08/17/2010 at 14:54.
Target 3.5 esignature user ID: jml01693

GC/MS audit/management approval: _____ RAD36 8188

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i05.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 13:27 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 13:45
Date, time and analyst ID of latest file update: 17-Aug-2010 13:45 Automation

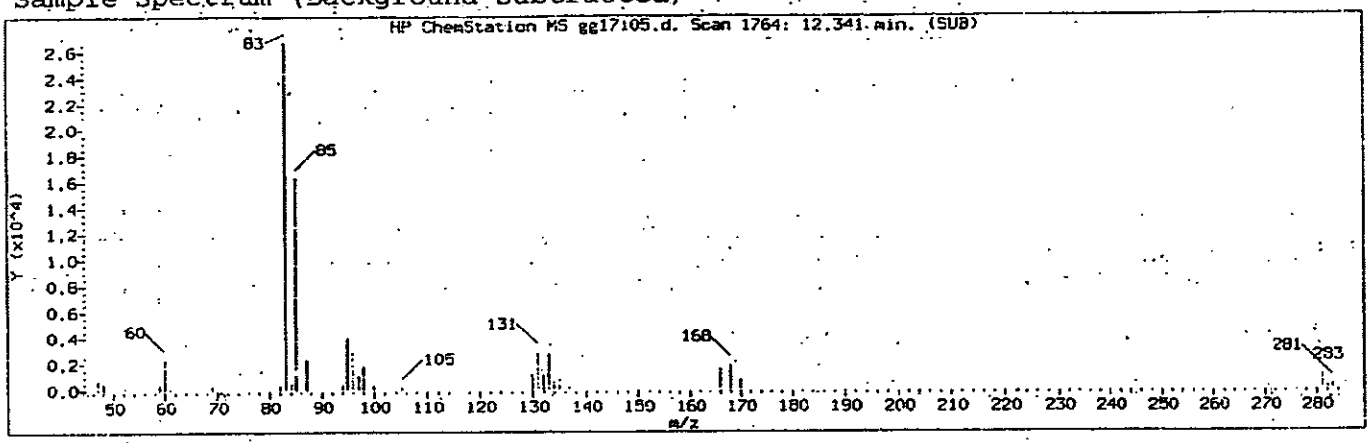
Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number	: 107		
Compound Name	: 2-Hexanone		
Scan Number	: 1463		
Retention Time (minutes)	: 10.506		
Quant Ion	: 43.00		
Area	: 2794		
On-column Amount (ng)	: 0.1591		
Integration start scan	: 1449	Integration stop scan:	1467
Y at integration start	: 0	Y at integration end:	0

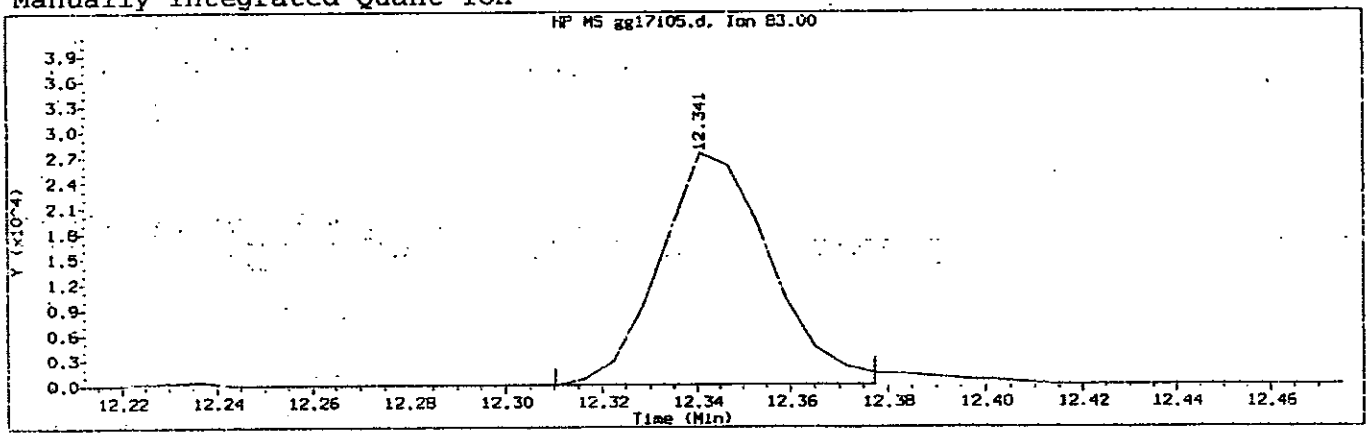
RAD36 0189

Digitally signed by Jason M. Long on 08/17/2010 at 14:54.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i05.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 13:27 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 14:37
Date, time and analyst ID of latest file update: 17-Aug-2010 14:37 jml01693

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number	: 128		
Compound Name	: 1,1,2,2-Tetrachloroethane		
Scan Number	: 1764		
Retention Time (minutes)	: 12.341		
Quant Ion	: 83.00		
Area (flag)	: 44684M		
On-Column Amount (ng)	: 0.9577		
Integration start scan	: 1758	Integration stop scan:	1769
Y at integration start	: 0	Y at integration end:	0

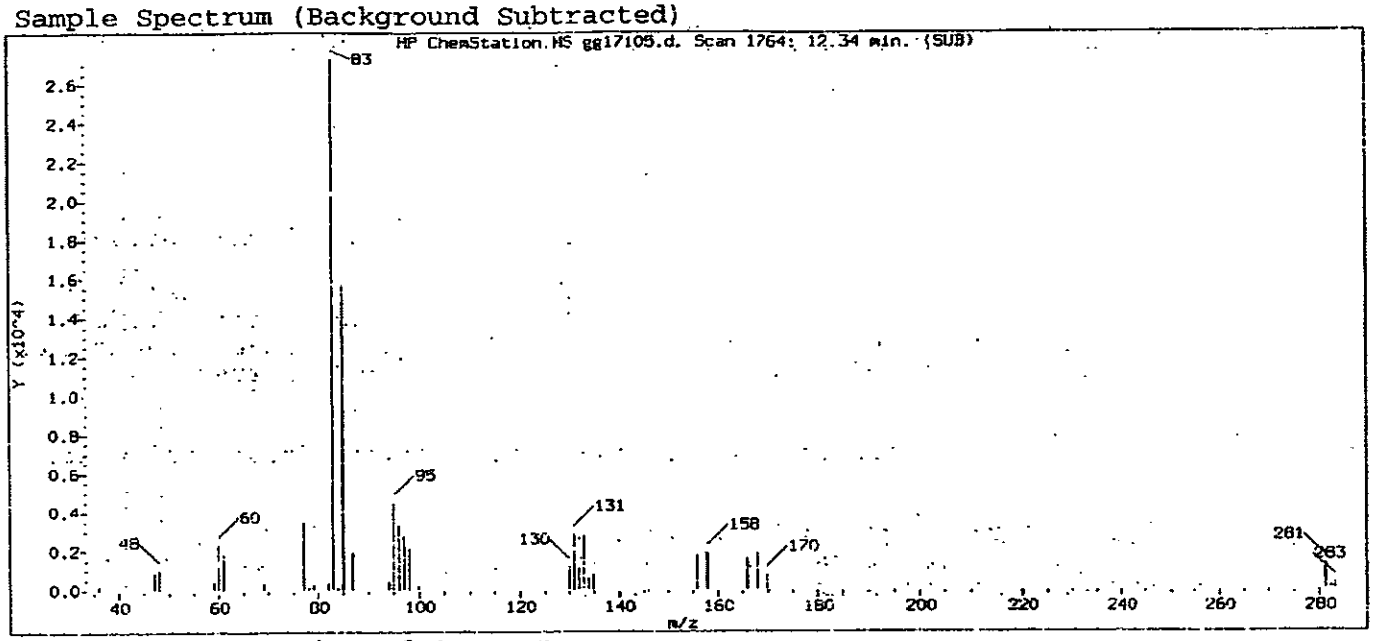
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long
on 08/17/2010 at 14:54.
Target 3.5 esignature user ID: jml01693

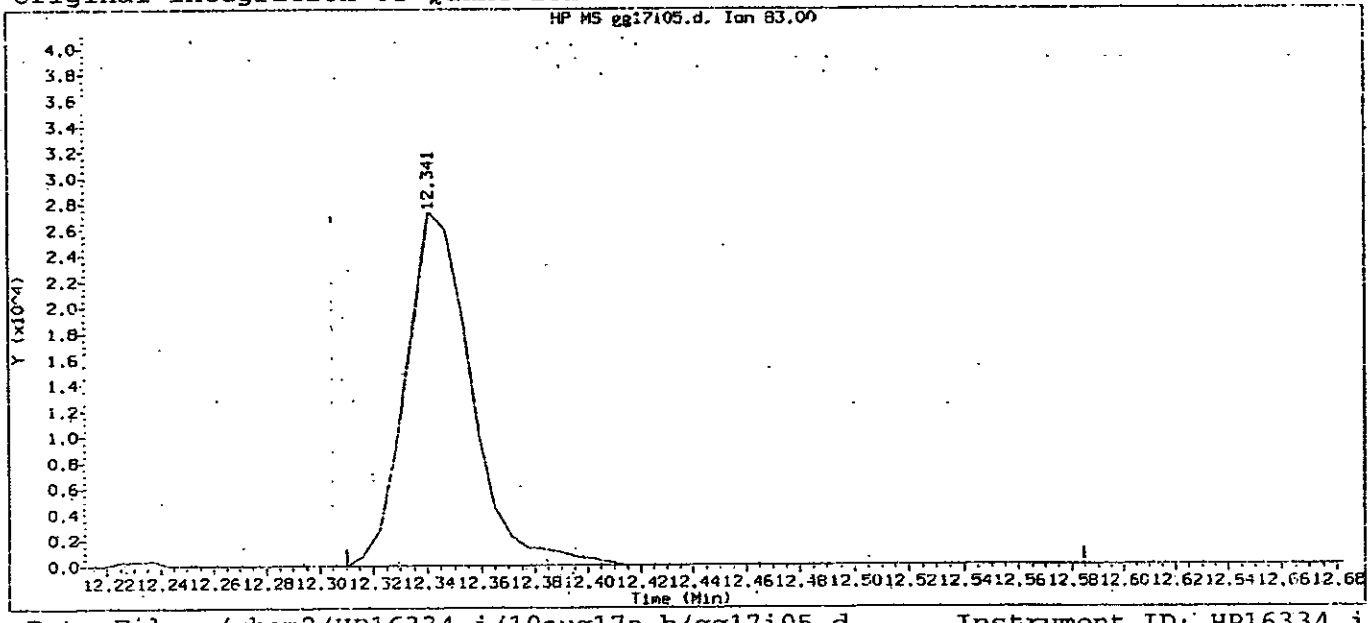
GC/MS audit/management approval: _____

RAD36 0190

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i05.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 13:27 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260W125
Calibration date and time: 17-AUG-2010 13:45
Date, time and analyst ID of latest file update: 17-Aug-2010 13:45 Automation

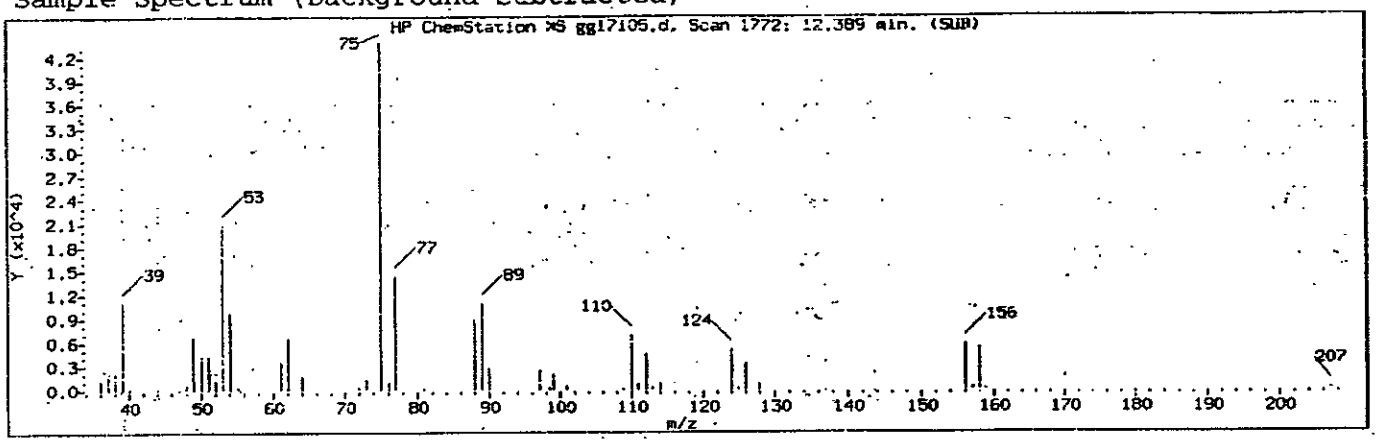
Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number	: 128		
Compound Name	: 1,1,2,2-Tetrachloroethane		
Scan Number	: 1764		
Retention Time (minutes)	: 12.341		
Quant Ion	: 83.00		
Area	: 46032		
On-column Amount (ng)	: 0.9673		
Integration start scan	: 1758	Integration stop scan: 1803	
Y at integration start	: 0	Y at integration end: 0	

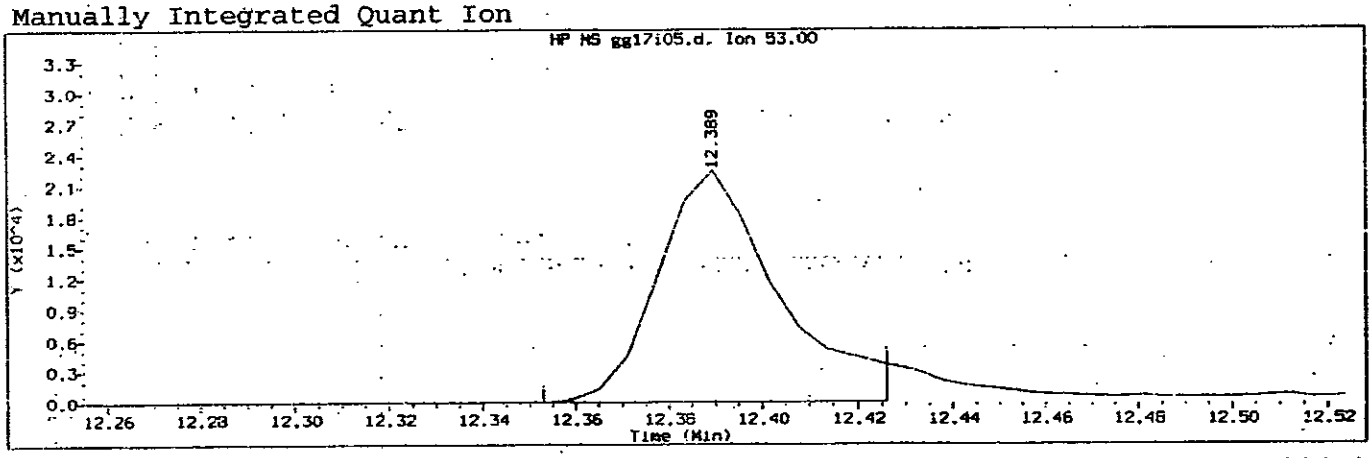
RAD36 0191

Digitally signed by Jason M. Long on 08/17/2010 at 14:54.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i05.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 13:27 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 14:37
Date, time and analyst ID of latest file update: 17-Aug-2010 14:37 jml01693

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number	: 130		
Compound Name	: trans-1,4-Dichloro-2-Butene		
Scan Number	: 1772		
Retention Time (minutes)	: 12.389		
Quant Ion	: 53.00		
Area (flag)	: 40135M		
On-Column Amount (ng)	: 10.3471		
Integration start scan	: 1765	Integration stop scan:	1777
Y at integration start	: 0	Y at integration end:	0

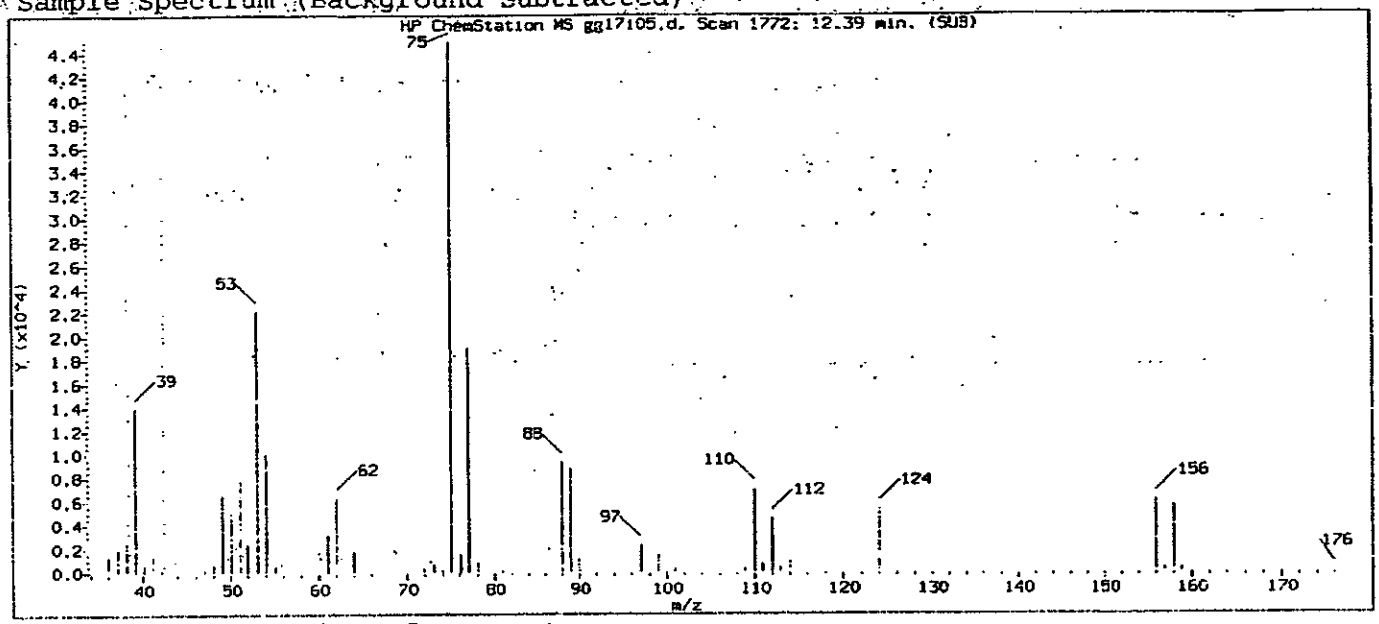
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long
on 08/17/2010 at 14:54.
Target 3.5 esignature user ID: jml01693

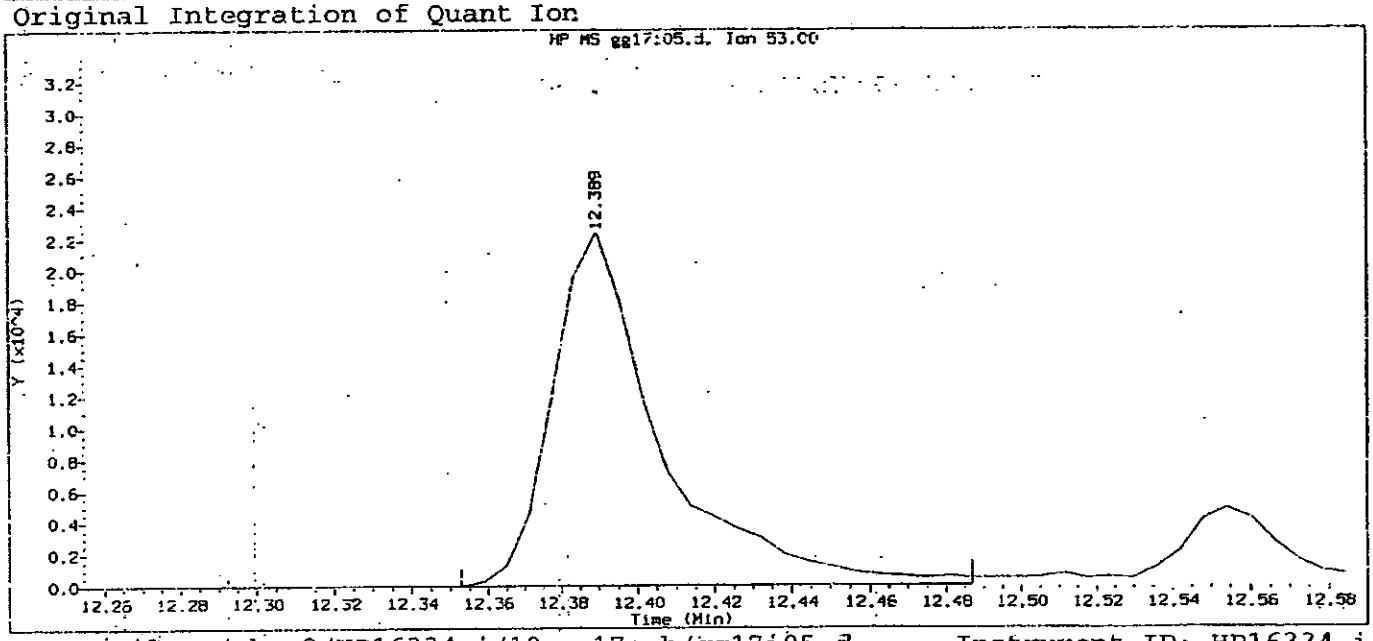
GC/MS audit/management approval: _____ 8/18/10

RAD36 0192

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i05.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 13:27 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 13:45
Date, time and analyst ID of latest file update: 17-Aug-2010 13:45 Automation

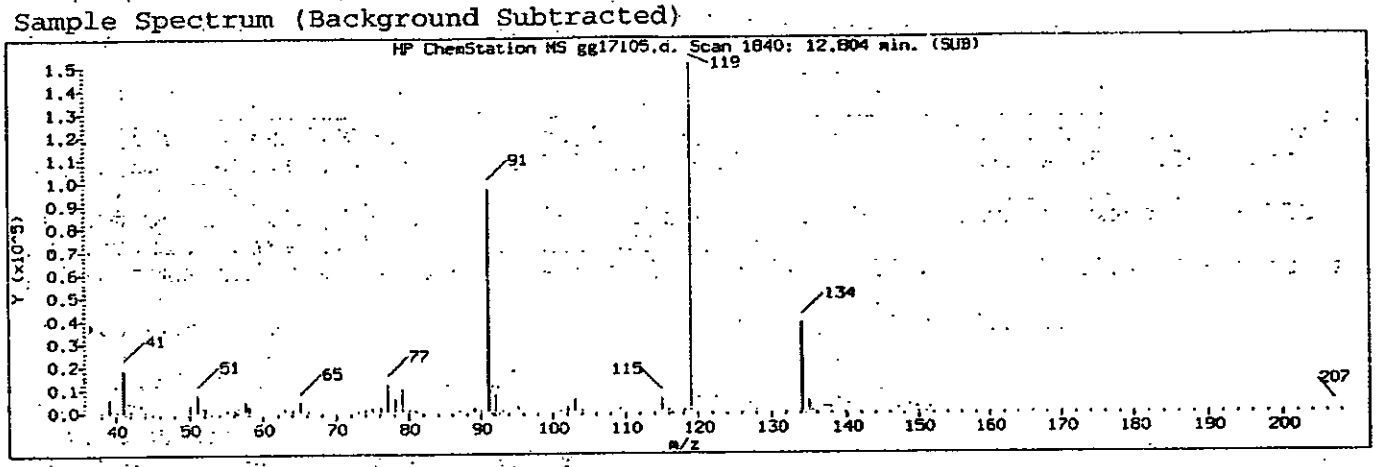
Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number	:	130
Compound Name	:	trans-1,4-Dichloro-2-Butene
Scan Number	:	1772
Retention Time (minutes)	:	12.389
Quant Ion	:	53.00
Area	:	44212
On-column Amount (ng)	:	6.6165
Integration start scan	:	1765
Integration stop scan	:	1787
Y at integration start	:	0
Y at integration end	:	0

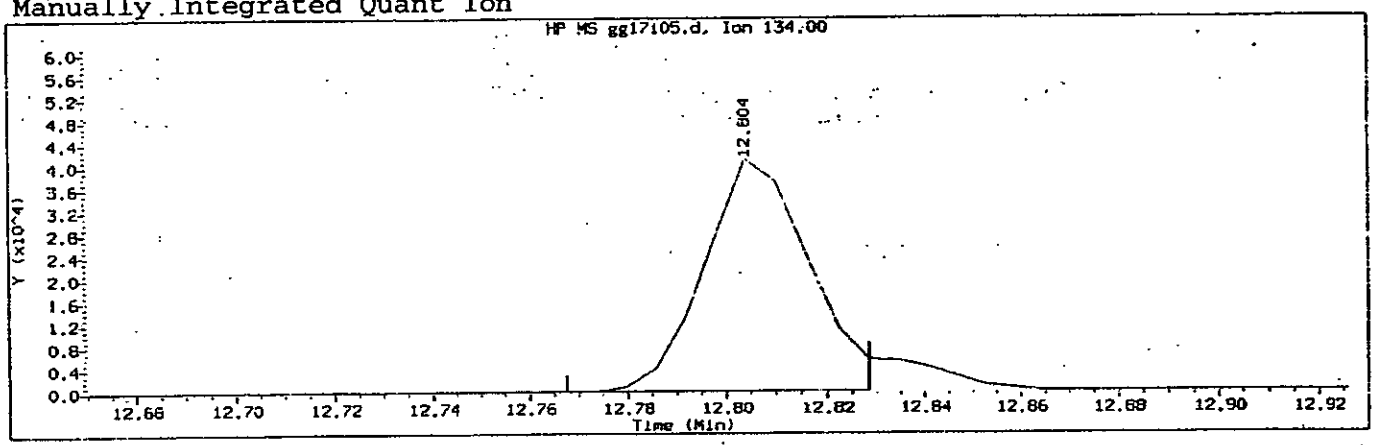
RAD36 8193

Digitally signed by Jason M. Long on 08/17/2010 at 14:54.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i05.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 13:27 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 14:37
Date, time and analyst ID of latest file update: 17-Aug-2010 14:37 jml01693

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number	: 137		
Compound Name	: tert-Butylbenzene		
Scan Number	: 1840		
Retention Time (minutes)	: 12.804		
Quant Ion	: 134.00		
Area (flag)	: 60127M		
On-Column Amount (ng)	: 0.9232		
Integration start scan	: 1833	Integration stop scan:	1843
Y at integration start	: 0	Y at integration end:	0

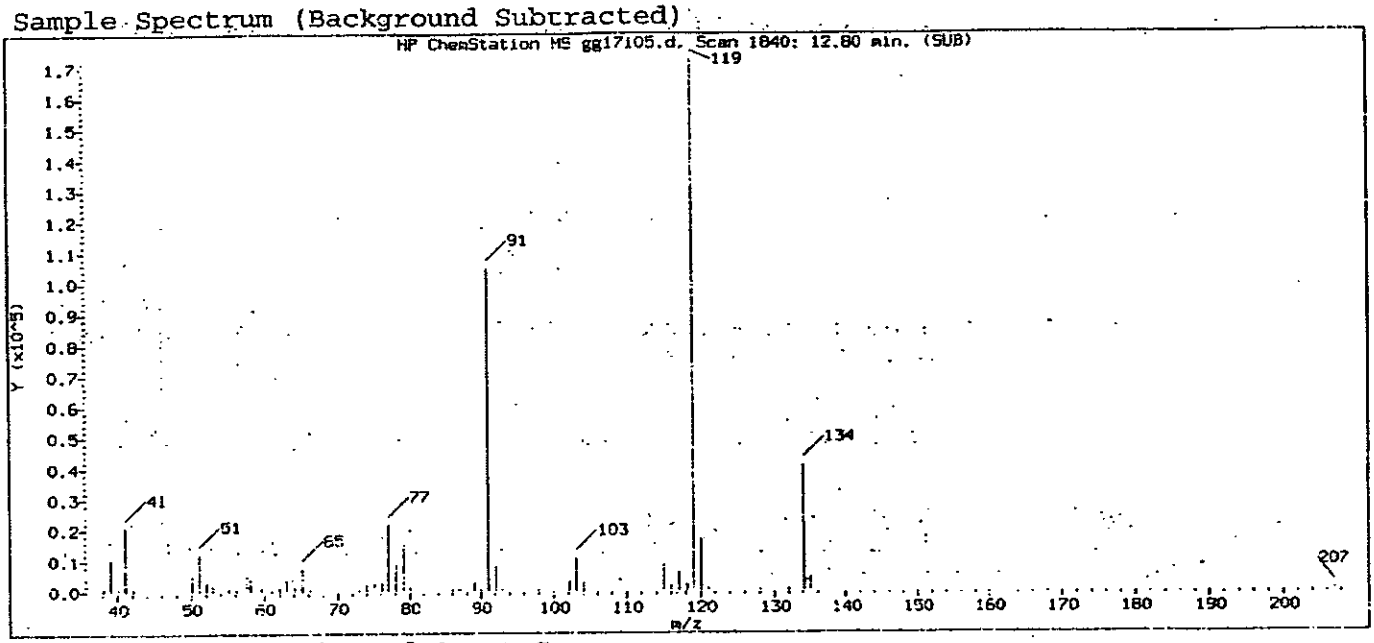
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long
on 08/17/2010 at 14:54.
Target 3.5 esignature user ID: jml01693

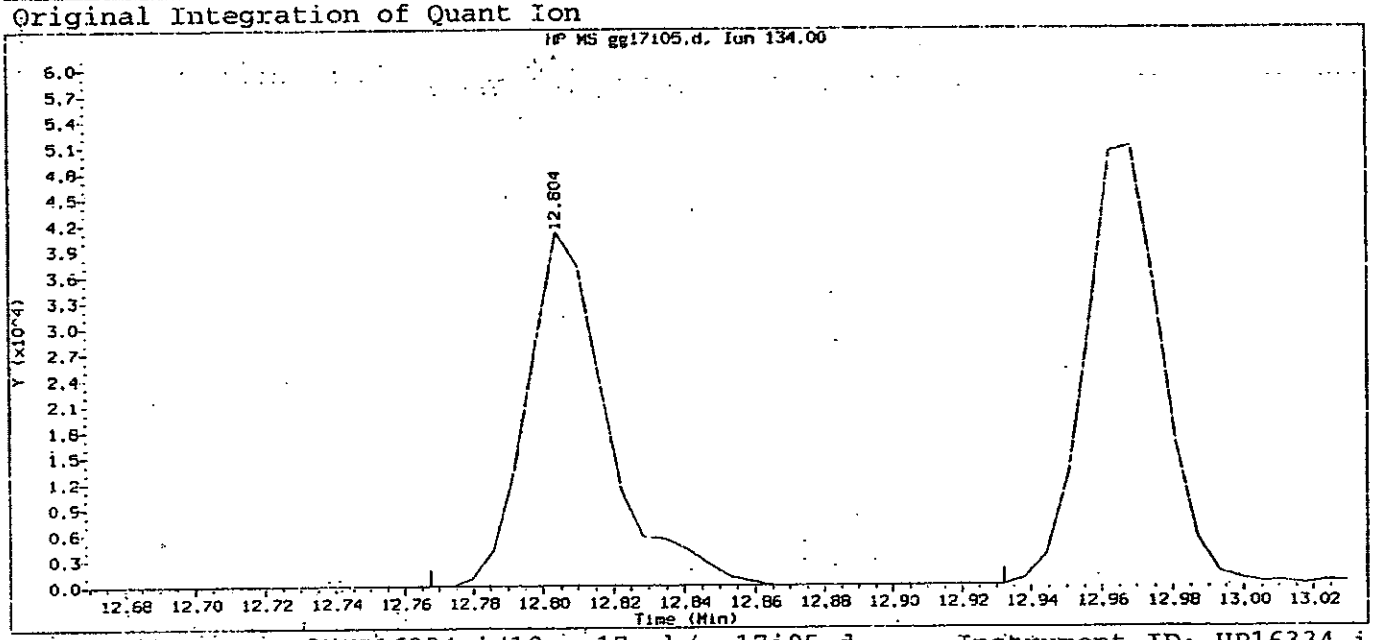
GC/MS audit/management approval: _____ 8/18/10

RAD36 0194

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i05.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 13:27 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 13:45
Date, time and analyst ID of latest file update: 17-Aug-2010 13:45 Automation

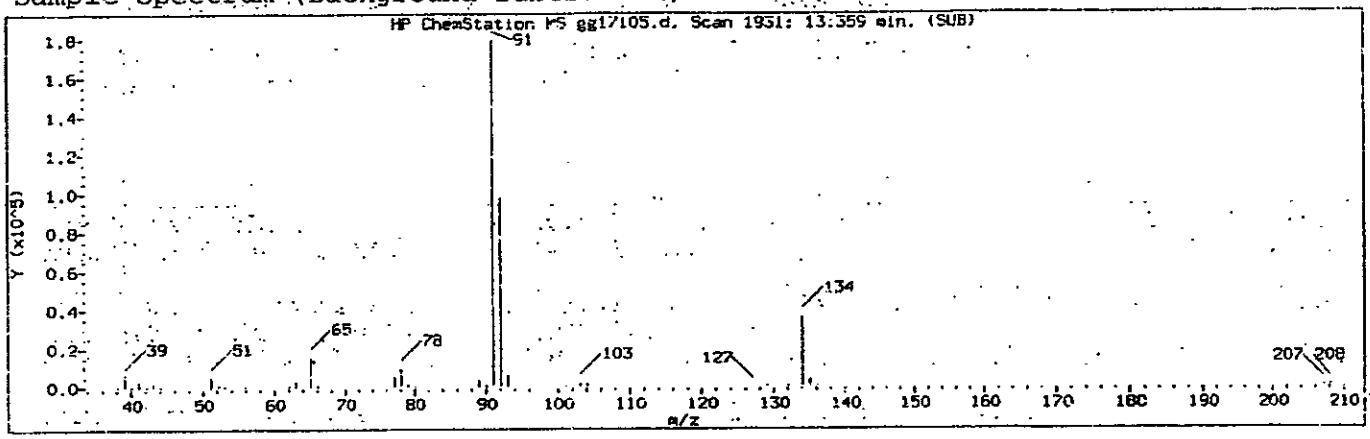
Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number	: 137		
Compound Name	: tert-Butylbenzene		
Scan Number	: 1840		
Retention Time (minutes)	: 12.804		
Quant Ion	: 134.00		
Area	: 65160		
On-column Amount (ng)	: 0.9726		
Integration start scan	: 1833	Integration stop scan:	1860
Y at integration start	: 0	Y at integration end:	0

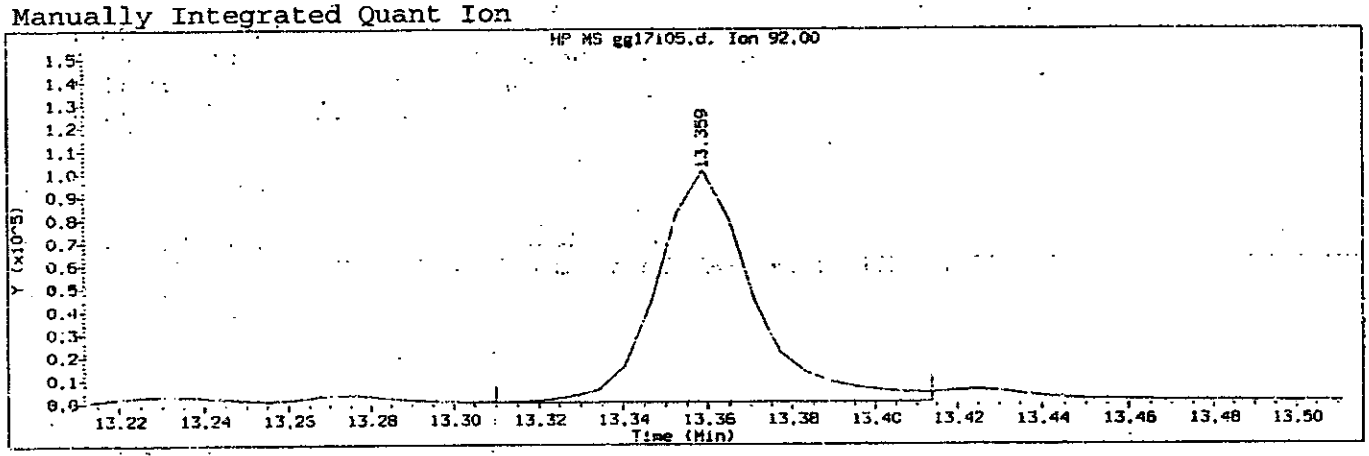
RAD36 0195

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Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i05.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 13:27 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 14:37
Date, time and analyst ID of latest file update: 17-Aug-2010 14:37 jml01693

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number	: 147		
Compound Name	: n-Butylbenzene		
Scan Number	: 1931		
Retention Time (minutes)	: 13.359		
Quant Ion	: 92.00		
Area (flag)	: 161344M		
On-Column Amount (ng)	: 0.9442		
Integration start scan	: 1922	Integration stop scan:	1939
Y at integration start	: 0	Y at integration end:	0

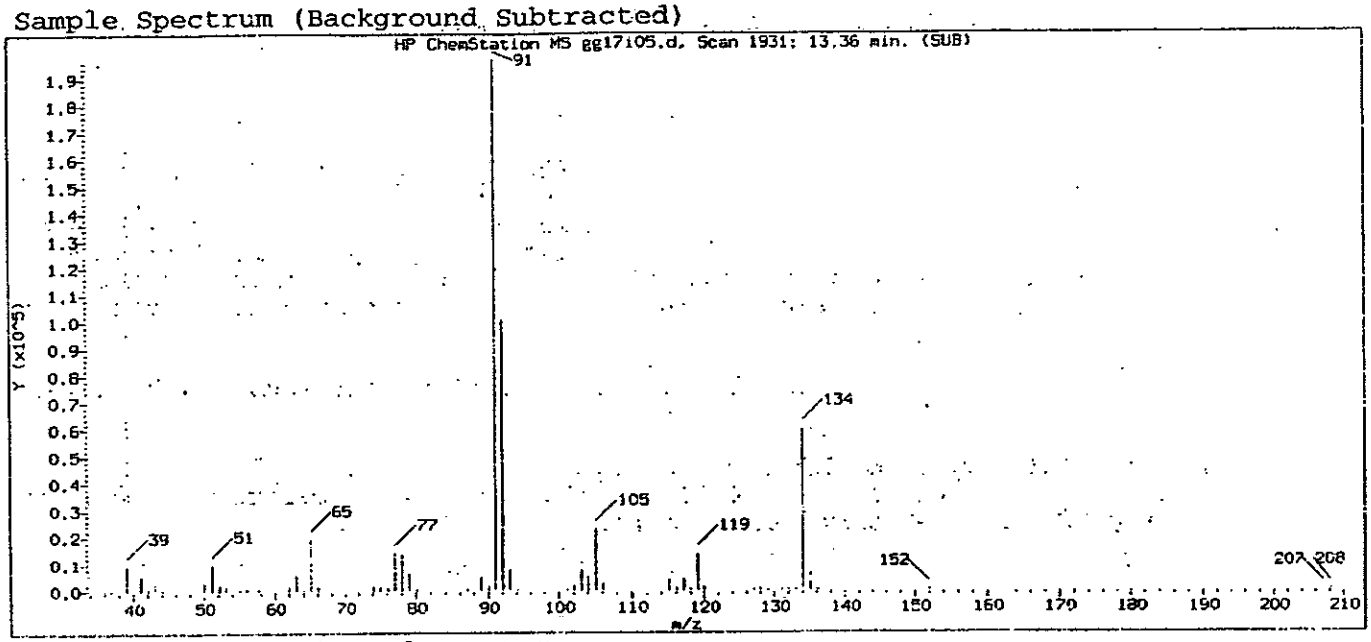
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long
on 08/17/2010 at 14:54.
Target 3.5 esignature user ID: jml01693

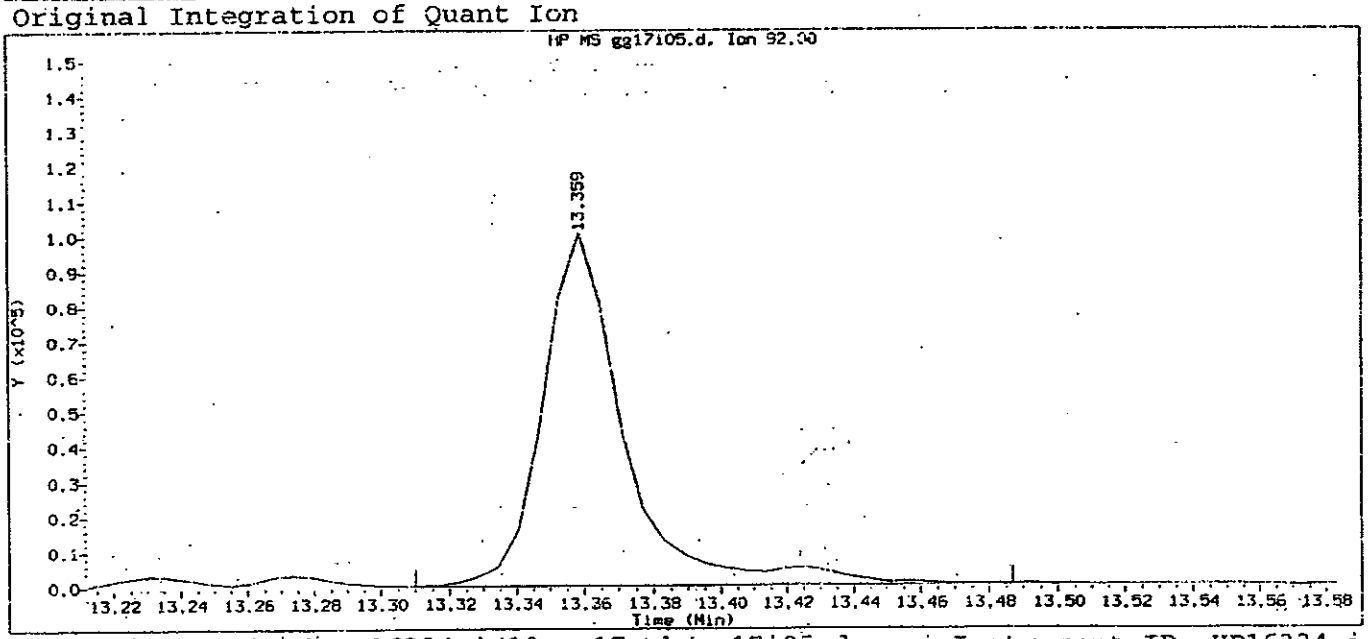
GC/MS audit/management approval: _____

RAD36 0196

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i05.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 13:27 Analyst ID: JML01693

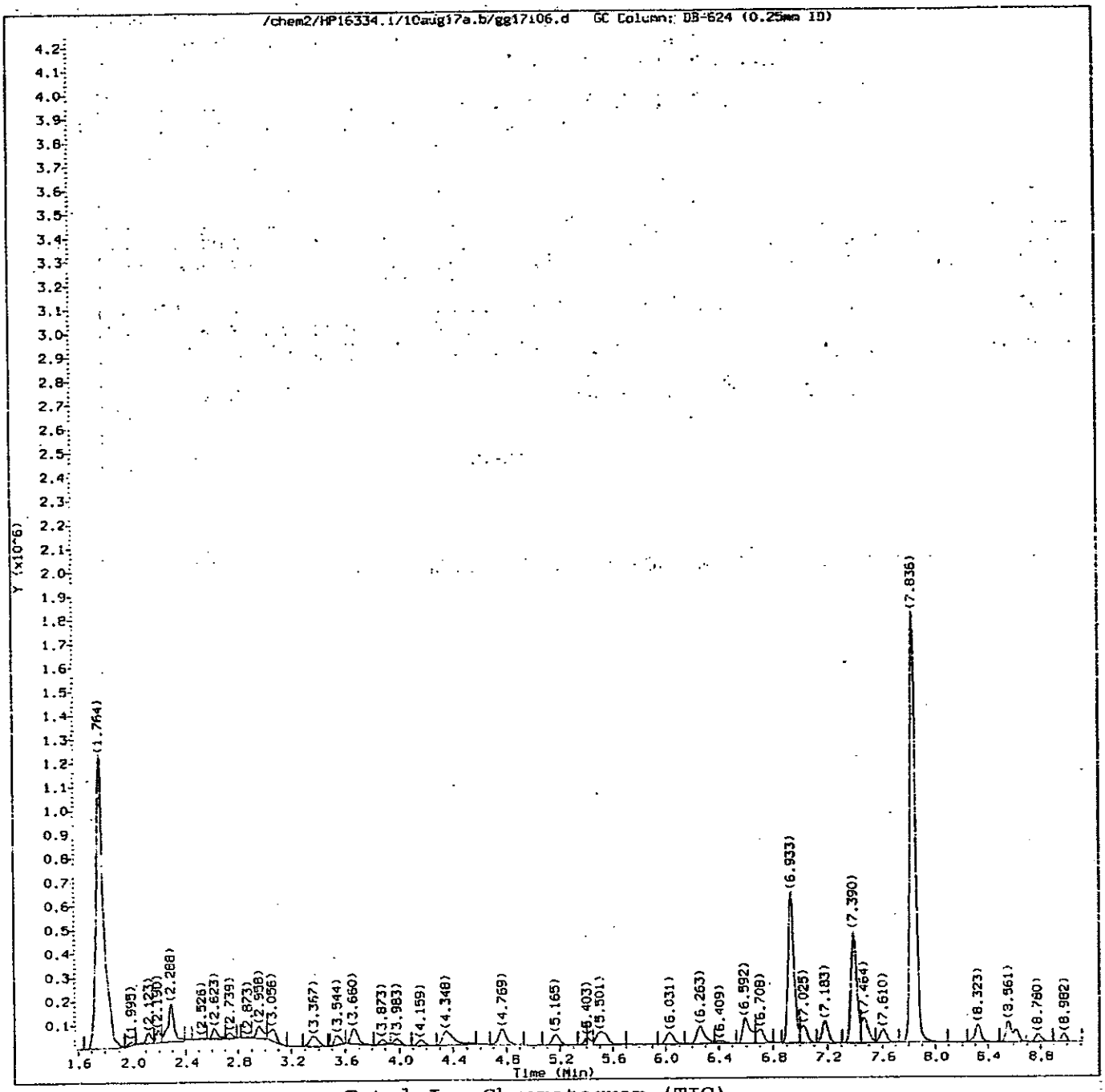
Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 13:45
Date, time and analyst ID of latest file update: 17-Aug-2010 13:45 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number	: 147		
Compound Name	: n-Butylbenzene		
Scan Number	: 1931		
Retention Time (minutes)	: 13.359		
Quant Ion	: 92.00		
Area	: 168584		
On-column Amount (ng)	: 0.9517		
Integration start scan	: 1922	Integration stop scan:	1951
Y at integration start	: 103	Y at integration end:	250

RAD36 0197

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Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

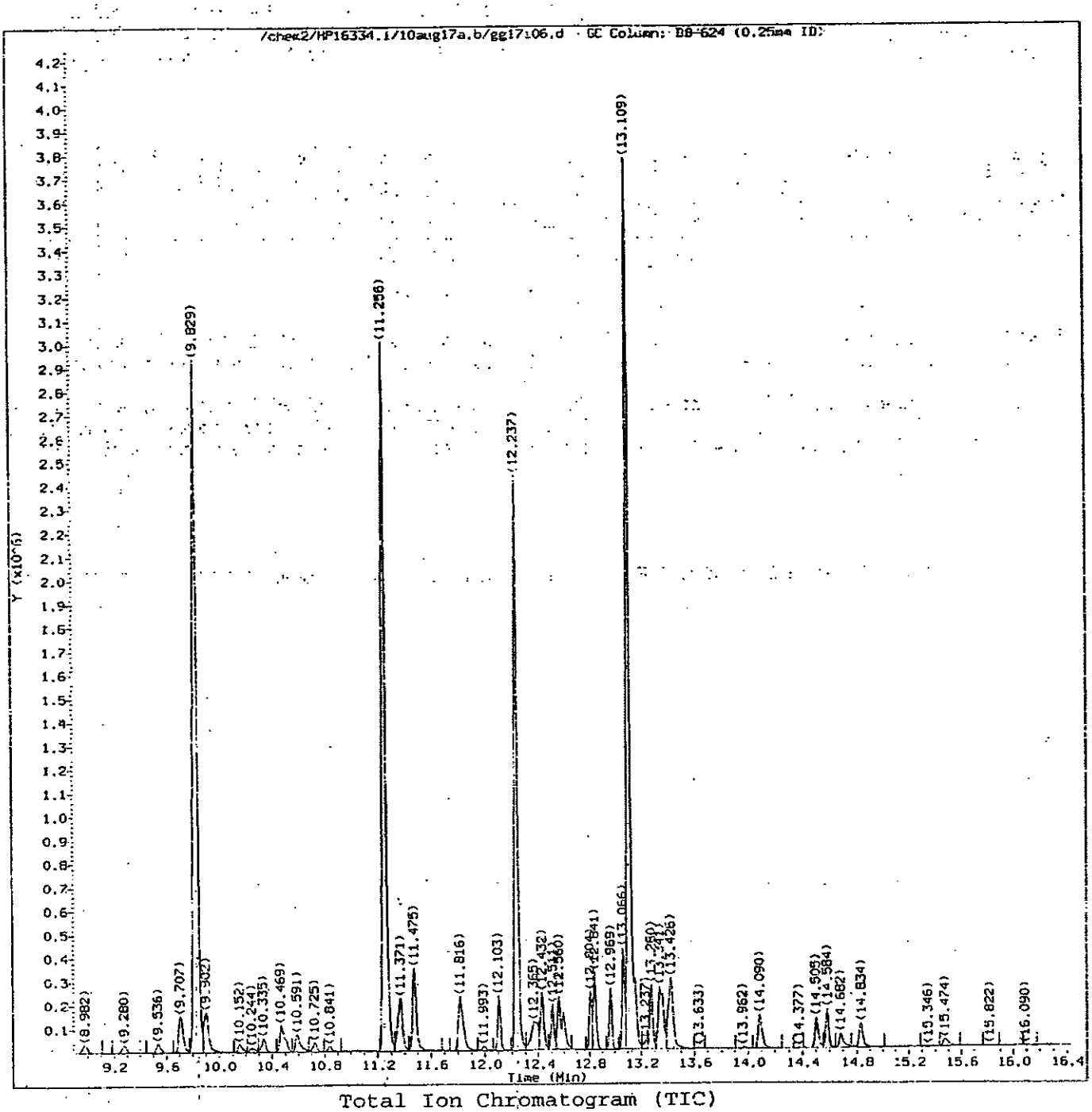
Data File: /chem2/HP16334.i/10aug17a.b/gg17i06.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 13:49 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 14:37
Date, time and analyst ID of latest file update: 17-Aug-2010 14:37 jml01693

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

RAD36 0198

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on 08/17/2010 at 14:54.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/10aug17a.b/gg17i06.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 13:49 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 14:37
Date, time and analyst ID of latest file update: 17-Aug-2010 14:37 jml01693

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

RAD36 0199

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on 08/17/2010 at 14:54.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/10aug17a.b/gg17i06.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 13:49 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 14:37
Date, time and analyst ID of latest file update: 17-Aug-2010 14:37 jml01693

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
2) Dichlorodifluoromethane	(1)	1.995	85	56326	0.515
5) Chloromethane	(1)	2.117	50	56790	0.541
6) Vinyl Chloride	(1)	2.251	62	53309	0.525
9) 1,3-Butadiene	(1)	2.288	39	90794	0.551
10) Bromomethane	(1)	2.623	94	41884	0.540
11) Chloroethane	(1)	2.739	64	34241	0.574
13) Dichlorofluoromethane	(1)	2.952	67	79447M	0.560
15) Trichlorofluoromethane	(1)	3.056	101	68731	0.555
17) Ethyl Ether	(1)	3.349	59	19820	0.475
18) Freon 123a	(1)	3.379	67	38511	0.520
23) Acrolein	(4)	3.544	56	100690	21.430
24) 1,1-Dichloroethene	(1)	3.666	96	30073	0.497
25) Freon 113	(1)	3.678	101	30379	0.484
26) Acetone	(4)	3.745	58	9784	4.410
27) Methyl Iodide	(1)	3.879	142	54850	0.496
29) Carbon Disulfide	(1)	3.983	76	81183	0.493
32) Allyl Chloride	(1)	4.153	41	32842	0.517
33) Methyl Acetate	(1)	4.239	43	4395M	0.615
34) Methylene Chloride	(1)	4.336	84	44734	0.626
36)*t-Butyl Alcohol-d10	(4)	4.385	65	112248	50.000
38) t-Butyl Alcohol	(4)	4.507	59	29158	10.298
40) Methyl Tertiary Butyl Ether	(1)	4.757	73	65295	0.485
41) trans-1,2-Dichloroethene	(1)	4.769	96	33312	0.489
37) 1,2-Dichloroethene (Total)	(1)		96	69636	0.988
39) Acrylonitrile	(4)	4.787	53	14812	2.915
44) n-Hexane	(1)	5.171	57	44342	0.486
45) 1,1-Dichloroethane	(1)	5.403	63	55716	0.498
47) di-Isopropyl Ether	(1)	5.501	45	92874	0.485
48) 2-Chloro-1,3-Butadiene	(1)	5.543	53	37495	0.471
49) Ethyl t-Butyl Ether	(1)	6.025	59	82773	0.480
51) 2,2-Dichloropropane	(1)	6.250	77	43474	0.478
50) cis-1,2-Dichloroethene	(1)	6.257	96	36324	0.499
52) 2-Butanone	(4)	6.318	43	52598	4.601
53) Propionitrile	(4)	6.409	54	22884M	11.163
56) Bromochloromethane	(1)	6.592	128	13699	0.472
55) Methacrylonitrile	(4)	6.598	67	57612	4.516
57) Tetrahydrofuran	(4)	6.659	71	17685	4.747
58) Chloroform	(1)	6.708	83	54888	0.480
62)$Dibromofluoromethane(mz111)	(1)	6.933	111	574284	9.928

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

RAD36 8260

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on 08/17/2010 at 14:54.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/10aug17a.b/gg17i06.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 13:49 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 14:37
Date, time and analyst ID of latest file update: 17-Aug-2010 14:37 jml01693

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
61)$Dibromofluoromethane	(1)	6.933	113	564432	9.938
63) 1,1,1-Trichloroethane	(1)	6.964	97	48578	0.489
64) Cyclohexane	(1)	7.031	56	53753	0.490
65) 1,1-Dichloropropene	(1)	7.183	75	42986	0.481
66) Carbon Tetrachloride	(1)	7.183	117	40158	0.462
67) Isobutyl Alcohol	(4)	7.372	41	22872M	26.452
70)$1,2-Dichloroethane-d4	(1)	7.390	102	108226	10.217
68)$1,2-Dichloroethane-d4(mz104)	(1)	7.390	104	68498	10.054
69)$1,2-Dichloroethane-d4(mz65)	(1)	7.390	65	482616	10.231
72) Benzene	(1)	7.464	78	129042	0.491
73) 1,2-Dichloroethane(mz98)	(1)	7.488	98	2788	0.466
74) 1,2-Dichloroethane	(1)	7.500	62	30477	0.488
75) t-Amyl Methyl Ether	(1)	7.610	73	71463	0.478
76) n-Heptane	(1)	7.811	43	49344M	0.524
77)*Fluorobenzene	(1)	7.836	96	2468844	10.000
81) n-Butanol	(4)	8.281	56	23920	54.068
83) Trichloroethene	(1)	8.323	95	35291	0.488
84) Methylcyclohexane	(1)	8.561	83	54681	0.481
85) 1,2-Dichloropropane	(1)	8.622	63	30819	0.474
88) Dibromomethane	(1)	8.774	93	13537	0.468
87) Methyl Methacrylate	(4)	8.799	69	10521	0.412
89) 1,4-Dioxane	(4)	8.811	88	3702	18.545
90) Bromodichloromethane	(1)	8.982	83	33447	0.451
91) 2-Nitropropane	(4)	9.280	41	34173	5.100
94) cis-1,3-Dichloropropene	(1)	9.536	75	34050	0.440
96) 4-Methyl-2-Pentanone	(1)	9.707	43	137119	4.454
97)$Toluene-d8	(2)	9.829	98	2430874	9.876
98)$Toluene-d8(mz100)	(2)	9.829	100	1574989	9.891
101) Toluene	(2)	9.902	92	86281	0.486
102) trans-1,3-Dichloropropene	(2)	10.152	75	25205	0.403
103) Ethyl Methacrylate	(2)	10.244	69	17109	0.396
104) 1,1,2-Trichloroethane	(2)	10.335	97	20171	0.484
105) Tetrachloroethene	(2)	10.469	166	38277	0.476
106) 1,3-Dichloropropane	(2)	10.506	76	33076	0.469
107) 2-Hexanone	(2)	10.591	43	92190	4.470
108) Dibromochloromethane	(2)	10.725	129	20354	0.424
109) 1,2-Dibromoethane	(2)	10.841	107	16814	0.447
110)*Chlorobenzene-d5	(2)	11.256	117	1822662	10.000
112) Chlorobenzene	(2)	11.280	112	95397	0.478

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

RAD36 0201

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on 08/17/2010 at 14:54.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/10aug17a.b/gg17i06.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 13:49 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 14:37
Date, time and analyst ID of latest file update: 17-Aug-2010 14:37 jml01693

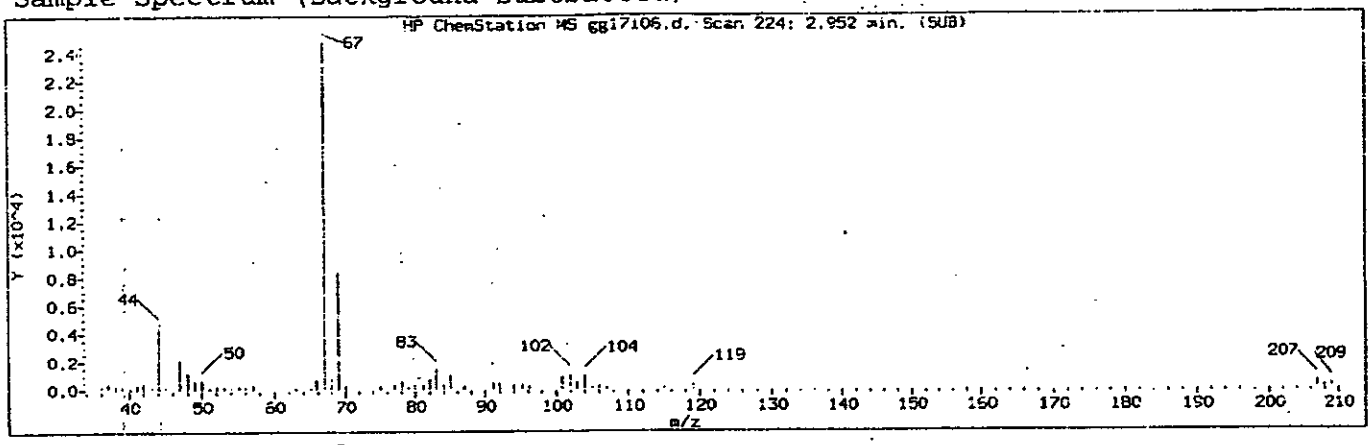
Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
113) 1,1,1,2-Tetrachloroethane	(2)	11.353	131	27506	0.428
114) Ethylbenzene	(2)	11.371	91	157104	0.463
117) m+p-Xylene	(2)	11.475	106	121817	0.897
115) Xylene (Total)	(2)		106	181443	1.343
118) o-Xylene	(2)	11.810	106	59626	0.446
119) Styrene	(2)	11.835	104	81193	0.404
120) Bromoform	(2)	11.993	173	9353	0.579
121) Isopropylbenzene	(2)	12.109	105	156559	0.453
126)$4-Bromofluorobenzene	(2)	12.237	95	821262	9.872
127)$4-Bromofluorobenzene(mz174)	(2)	12.237	174	724373	9.830
128) 1,1,2,2-Tetrachloroethane	(3)	12.347	83	21014M	0.465
129) Bromobenzene	(3)	12.365	156	37037	0.473
131) 1,2,3-Trichloropropane	(3)	12.389	110	5914	0.458
130) trans-1,4-Dichloro-2-Butene	(4)	12.396	53	16637A	7.155
132) n-Propylbenzene	(3)	12.432	91	185975	0.460
133) 2-Chlorotoluene	(3)	12.511	126	38477	0.474
134) 1,3,5-Trimethylbenzene	(3)	12.560	105	127210	0.452
135) 4-Chlorotoluene	(3)	12.597	126	40102	0.484
137) tert-Butylbenzene	(3)	12.804	134	29479M	0.467
138) Pentachloroethane	(3)	12.835	167	19261	0.534
139) 1,2,4-Trimethylbenzene	(3)	12.847	105	132065	0.437
140) sec-Butylbenzene	(3)	12.969	105	173823	0.464
141) p-Isopropyltoluene	(3)	13.066	119	146077	0.436
142) 1,3-Dichlorobenzene	(3)	13.072	146	77084	0.456
143)*1,4-Dichlorobenzene-d4	(3)	13.109	152	1007695	10.000
144) 1,4-Dichlorobenzene	(3)	13.127	146	86944	0.500
145) 1,2,3-Trimethylbenzene	(3)	13.158	120	61634	0.458
146) Benzyl Chloride	(3)	13.237	126	5138	0.554
147) n-Butylbenzene	(3)	13.359	92	71142M	0.430
148) 1,2-Dichlorobenzene	(3)	13.408	146	72302	0.485
150) 1,2-Dibromo-3-Chloropropane	(4)	13.962	155	2158	0.581
153) 1,2,4-Trichlorobenzene	(3)	14.505	180	55650	0.473
154) Hexachlorobutadiene	(3)	14.584	225	29820	0.470
155) Naphthalene	(3)	14.682	128	72462	0.453
156) 1,2,3-Trichlorobenzene	(3)	14.834	180	43561	0.473

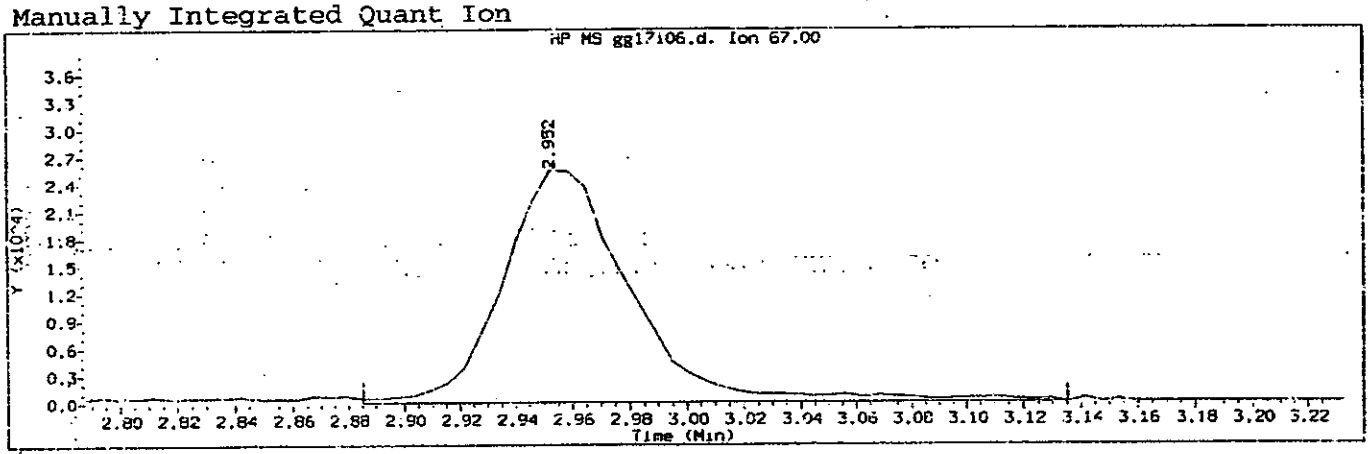
M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jason M. Long
on 08/17/2010 at 14:54.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i06.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 13:49 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 14:37
Date, time and analyst ID of latest file update: 17-Aug-2010 14:37 jml01693

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compound Number	: 13		
Compound Name	: Dichlorofluoromethane		
Scan Number	: 224		
Retention Time (minutes)	: 2.952		
Quant Ion	: 67.00		
Area (flag)	: 79447M		
On-Column Amount (ng)	: 0.5601		
Integration start scan	: 212	Integration stop scan:	253
Y at integration start	: 0	Y at integration end:	0

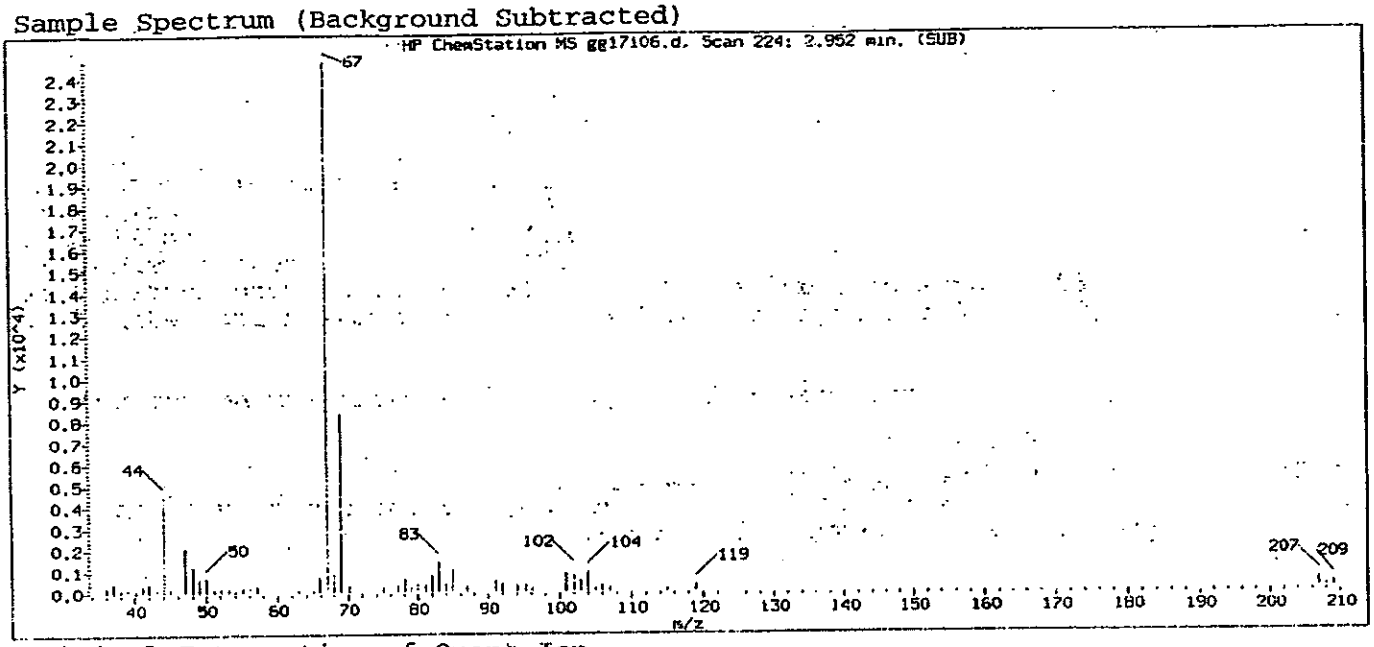
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long.
on 08/17/2010 at 14:54.
Target 3.5 esignature user ID: jml01693

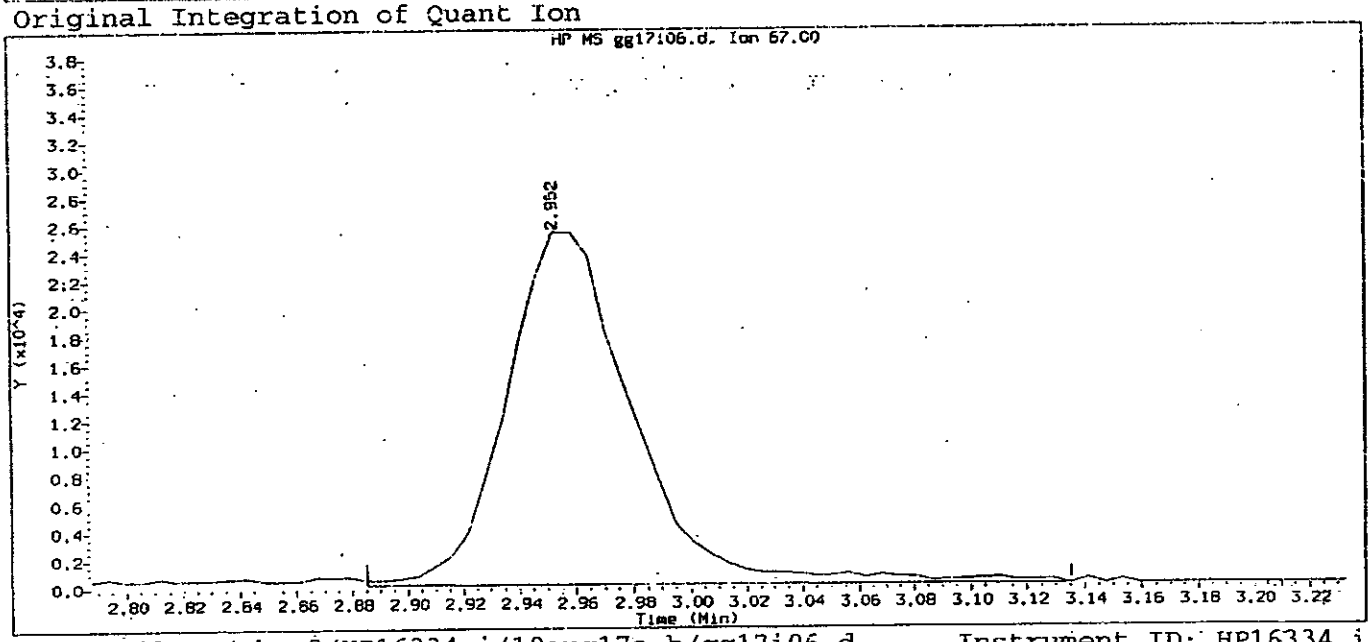
GC/MS audit/management approval: 8/18/10 8/18/10

RAB36 8283

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i06.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 13:49 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 14:06
Date, time and analyst ID of latest file update: 17-Aug-2010 14:06 Automation

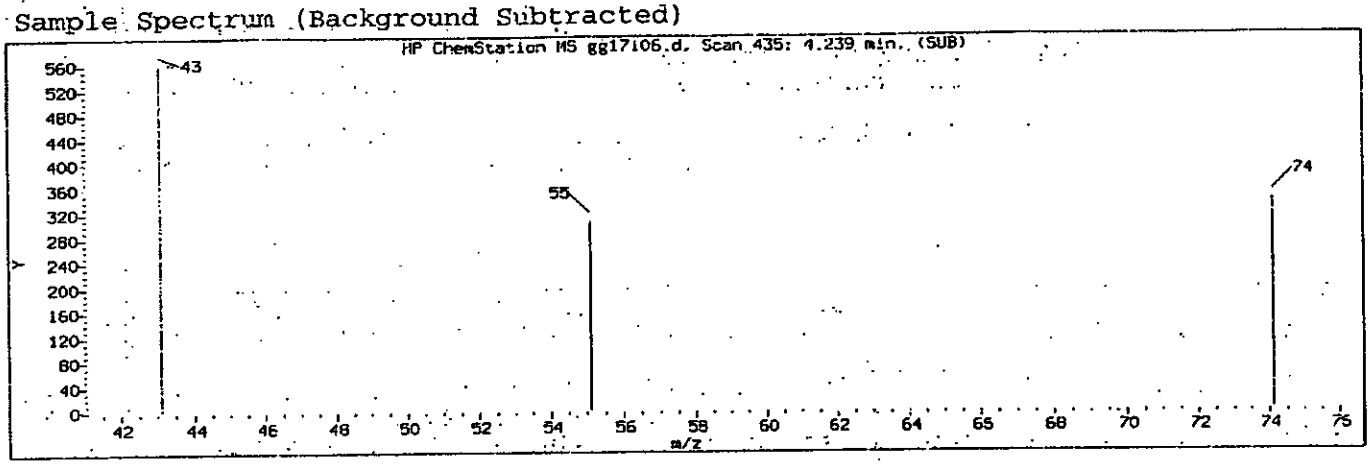
Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compound Number	: 13		
Compound Name	: Dichlorofluoromethane		
Scan Number	: 224		
Retention Time (minutes)	: 2.952		
Quant Ion	: 67.00		
Area	: 78145		
On-column Amount (ng)	: 0.5526		
Integration start scan	: 212	Integration stop scan:	253
Y at integration start	: 162	Y at integration end:	0

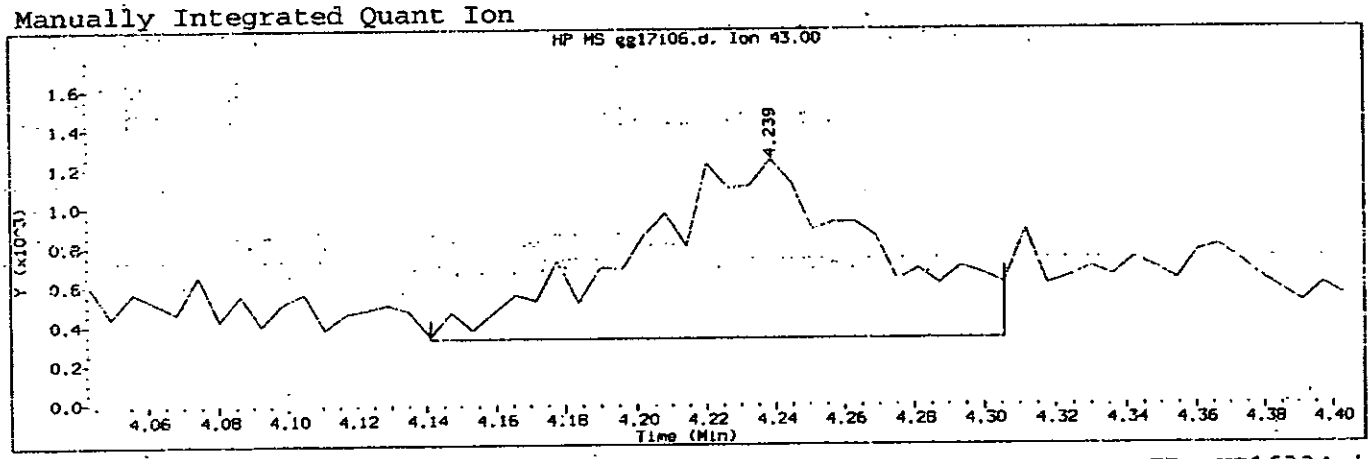
RAD36 0204

Digitally signed by Jason M. Long on 08/17/2010 at 14:54.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i06.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 13:49 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 14:37
Date, time and analyst ID of latest file update: 17-Aug-2010 14:37 jml01693

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

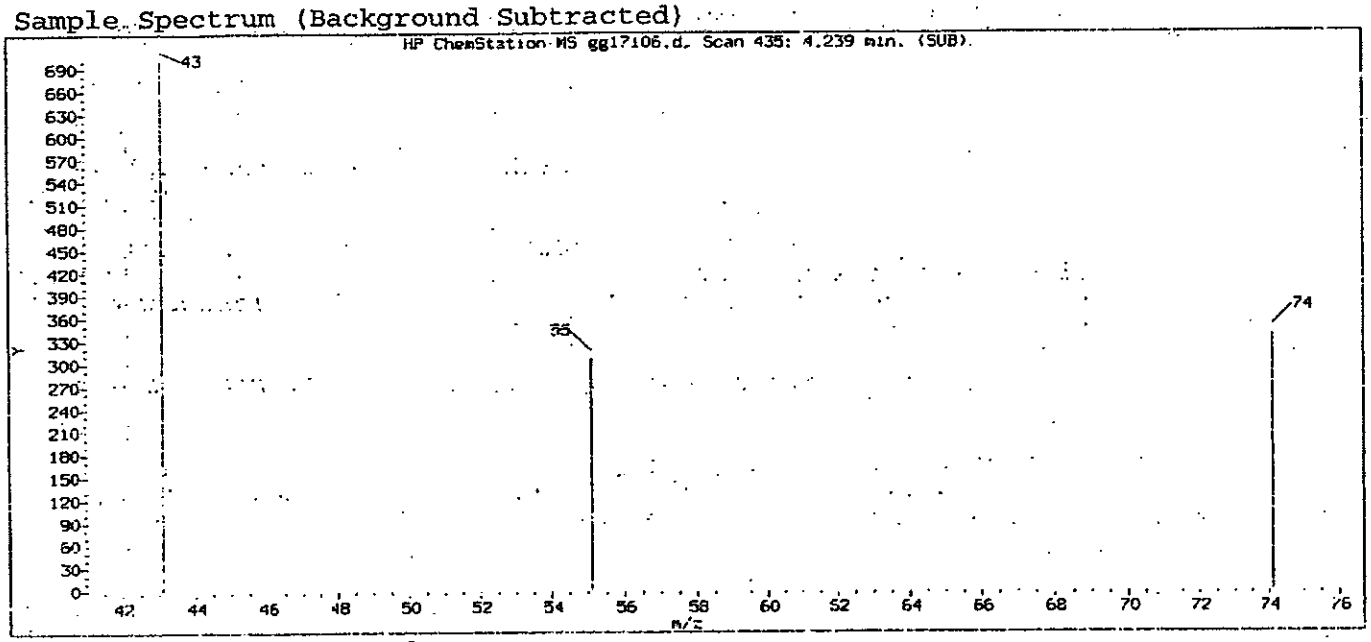
Compound Number	: 33		
Compound Name	: Methyl Acetate		
Scan Number	: 435		
Retention Time (minutes)	: 4.239		
Quant Ion	: 43.00		
Area (flag)	: 4395M		
On-Column Amount (ng)	: 0.6152		
Integration start scan	: 418	Integration stop scan:	445
Y at integration start	: 325	Y at integration end:	325

Reason for manual integration: improper integration

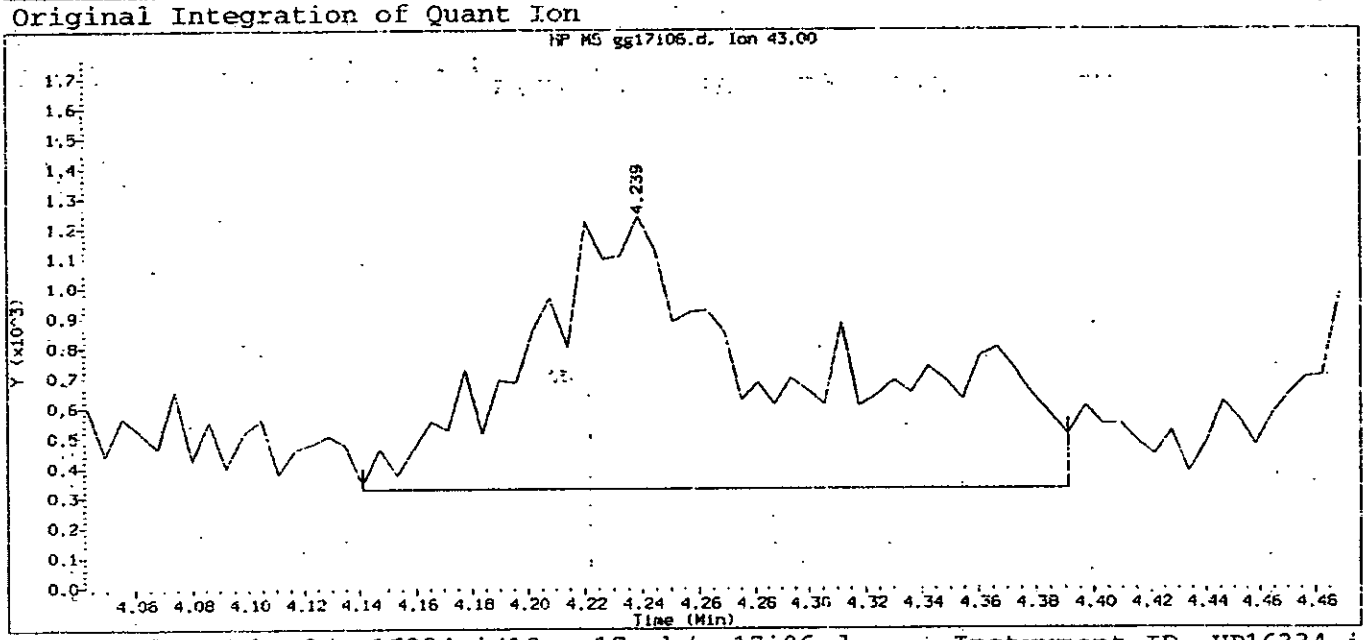
Analyst responsible for change: Digitally signed by Jason M. Long on 08/17/2010 at 14:54. Target 3.5 esignature user ID: jml01693

GC/MS audit/management approval: _____

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i06.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 13:49 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 14:06
Date, time and analyst ID of latest file update: 17-Aug-2010 14:06 Automation

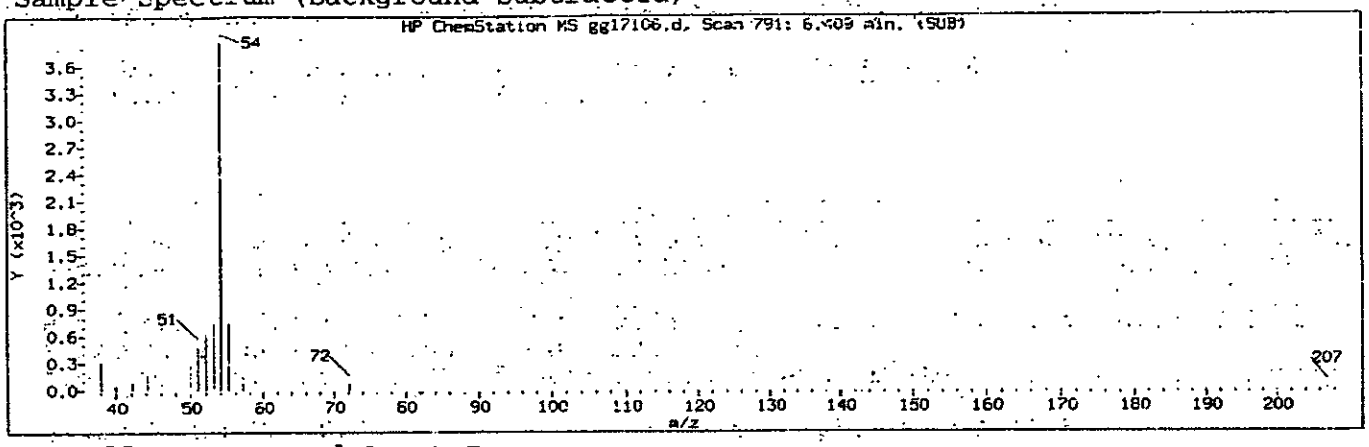
Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compound Number	: 33		
Compound Name	: Methyl Acetate		
Scan Number	: 435		
Retention Time (minutes)	: 4.239		
Quant Ion	: 43.00		
Area	: 6168		
On-column Amount (ng)	: 0.4372		
Integration start scan	: 418	Integration stop scan:	459
Y at integration start	: 325	Y at integration end:	325

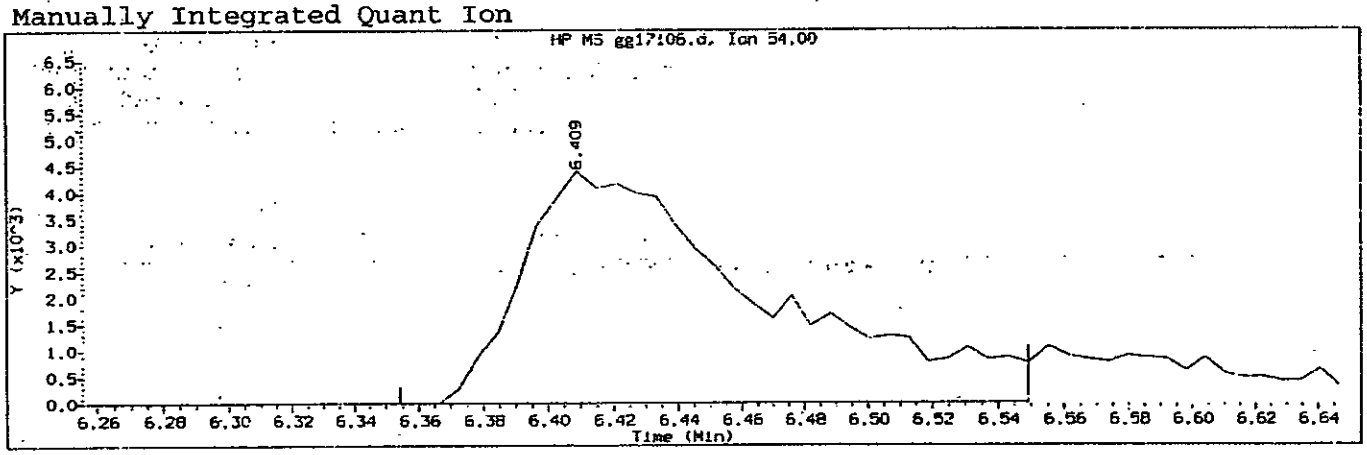
RAD36 0206

Digitally signed by Jason M. Long on 08/17/2010 at 14:54.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i06.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 13:49 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 14:37
Date, time and analyst ID of latest file update: 17-Aug-2010 14:37 jml01693

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compound Number	: 53		
Compound Name	: Propionitrile		
Scan Number	: 791		
Retention Time (minutes)	: 6.409		
Quant Ion	: 54.00		
Area (flag)	: 22884M		
On-Column Amount (ng)	: 11.1626		
Integration start scan	: 781	Integration stop scan:	813
Y at integration start	: 0	Y at integration end:	0

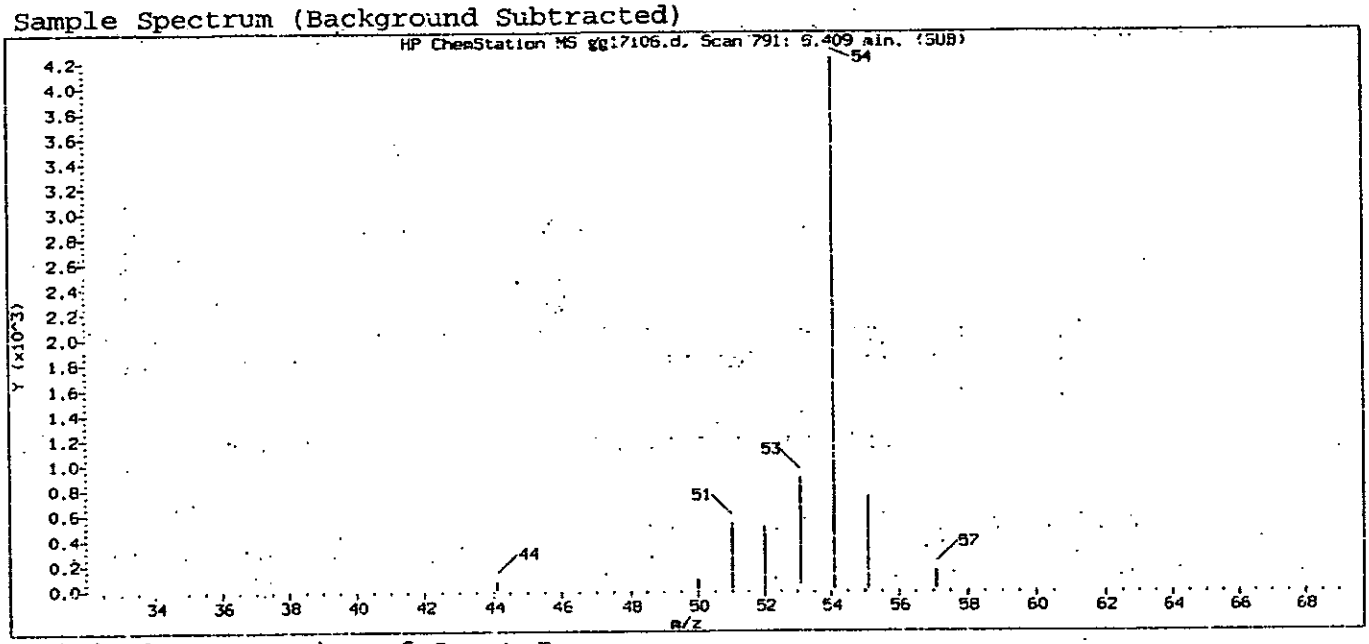
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long on 08/17/2010 at 14:54. Target 3.5 esignature user ID: jml01693

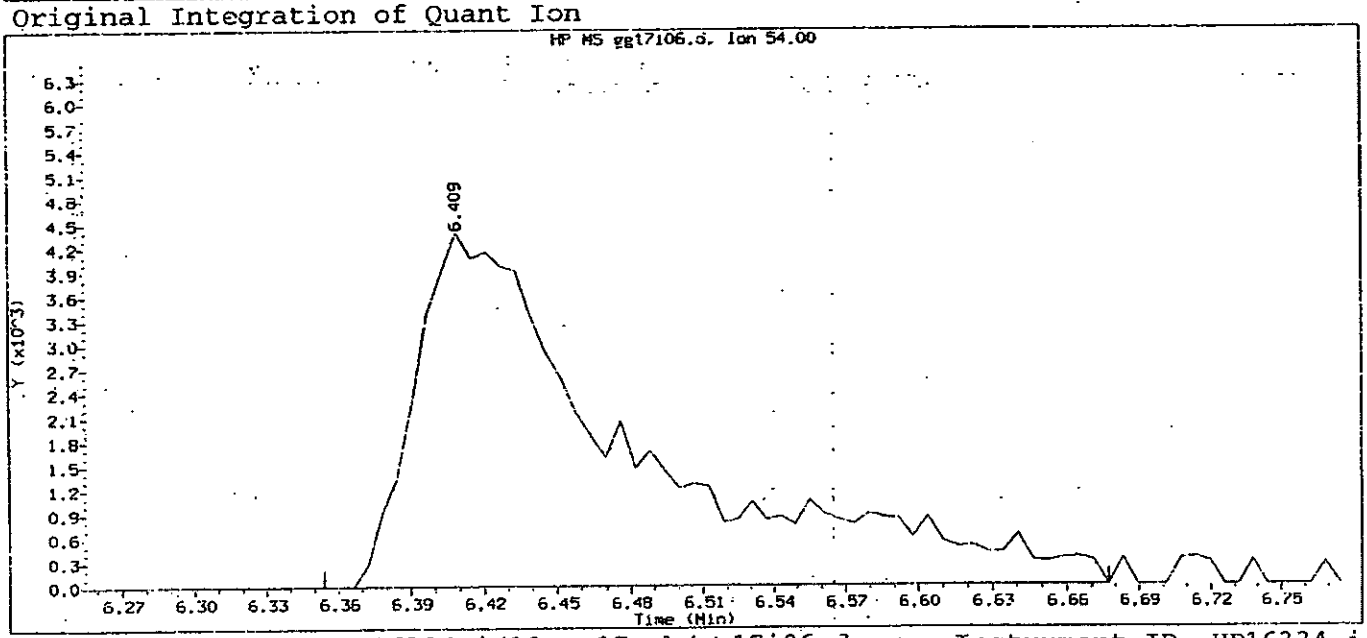
GC/MS audit/management approval: _____ 8/18/10

RAD36 8207

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i06.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 13:49 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 14:06
Date, time and analyst ID of latest file update: 17-Aug-2010 14:06 Automation

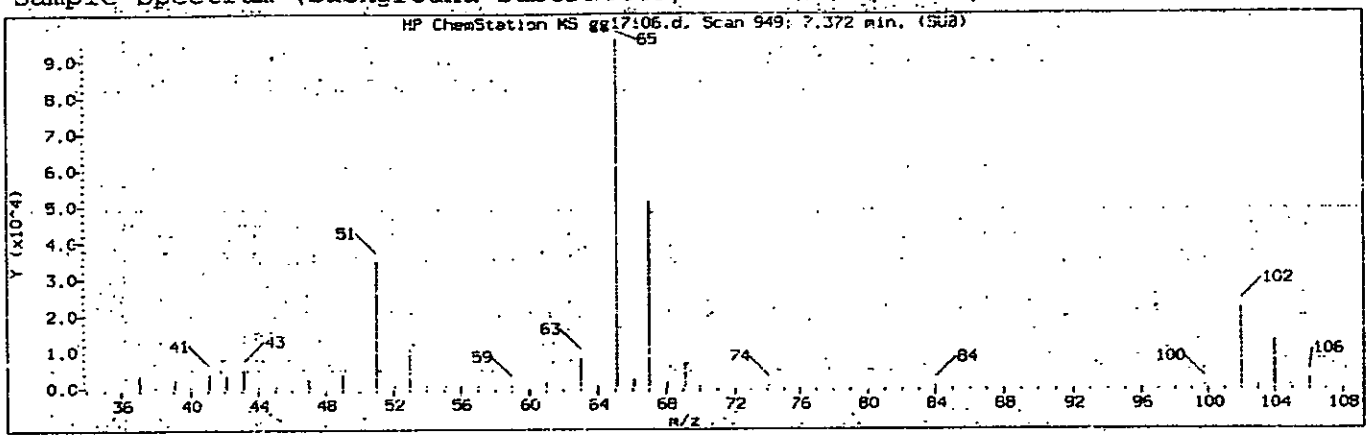
Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compound Number	: 53		
Compound Name	: Propionitrile		
Scan Number	: 791		
Retention Time (minutes)	: 6.409		
Quant Ion	: 54.00		
Area	: 27327		
On-column Amount (ng)	: 8.4659		
Integration start scan	: 781	Integration stop scan:	834
Y at integration start	: 0	Y at integration end:	0

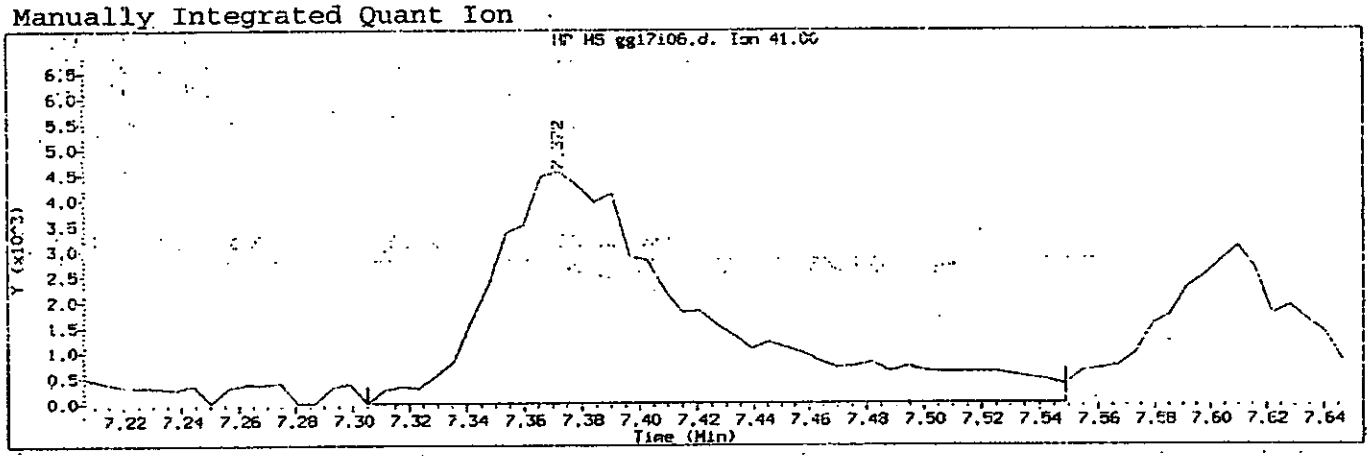
RAD36 0208

Digitally signed by Jason M. Long on 08/17/2010 at 14:54.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i06.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 13:49 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 14:37
Date, time and analyst ID of latest file update: 17-Aug-2010 14:37 jml01693

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compound Number	: 67		
Compound Name	: Isobutyl Alcohol		
Scan Number	: 949		
Retention Time (minutes)	: 7.372		
Quant Ion	: 41.00		
Area (flag)	: 22872M		
On-Column Amount (ng)	: 26.4519		
Integration start scan	: 937	Integration stop scan:	977
Y at integration start	: 0	Y at integration end:	0

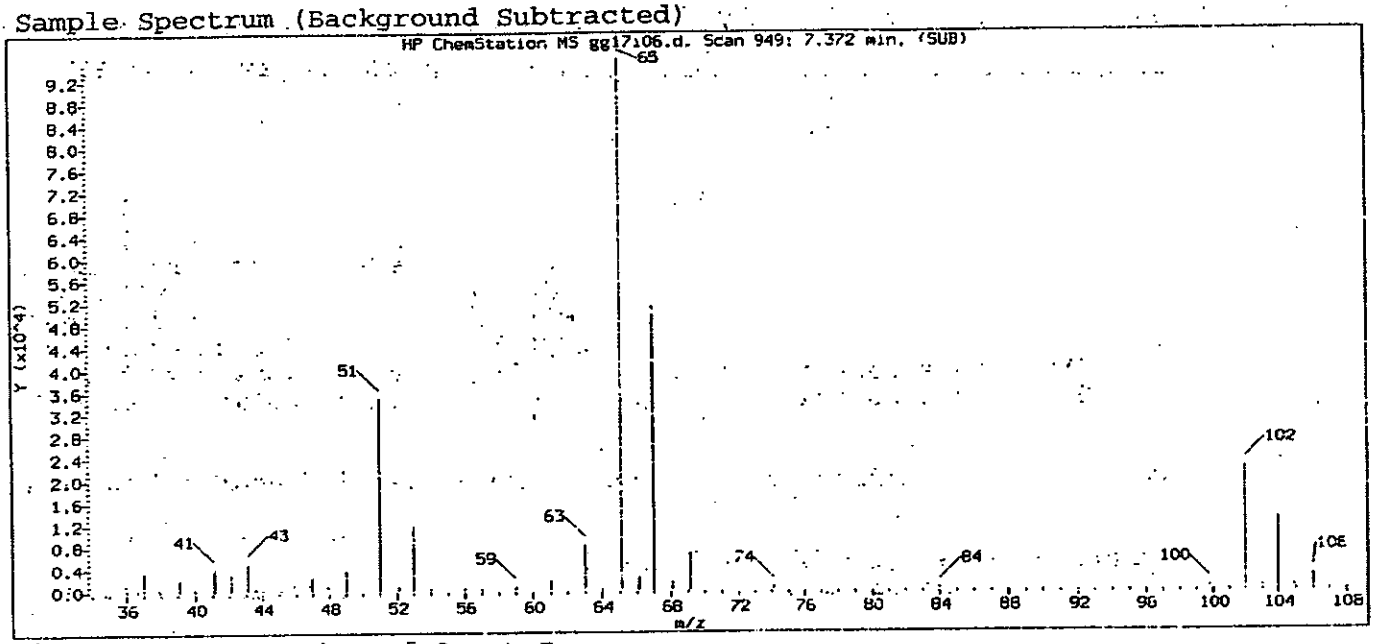
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long on 08/17/2010 at 14:54. Target 3.5 esignature user ID: jml01693

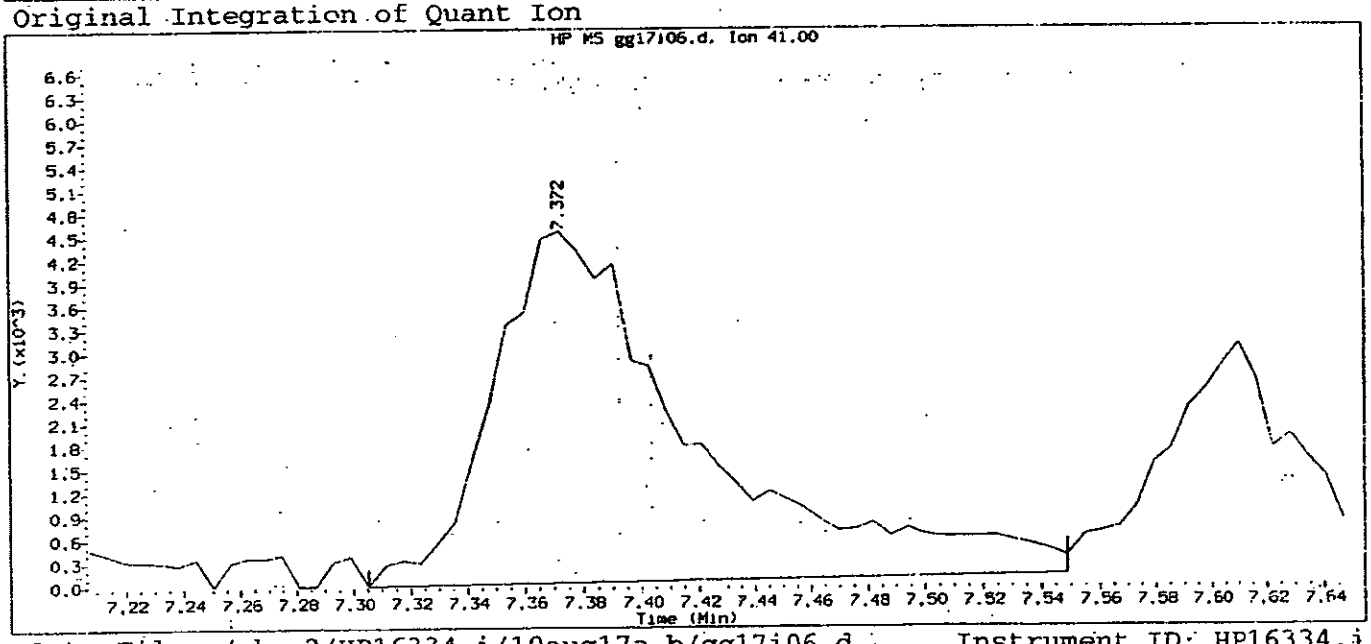
GC/MS audit/management approval: _____

RAD36 8289

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i06.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 13:49 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 14:06
Date, time and analyst ID of latest file update: 17-Aug-2010 14:06 Automation

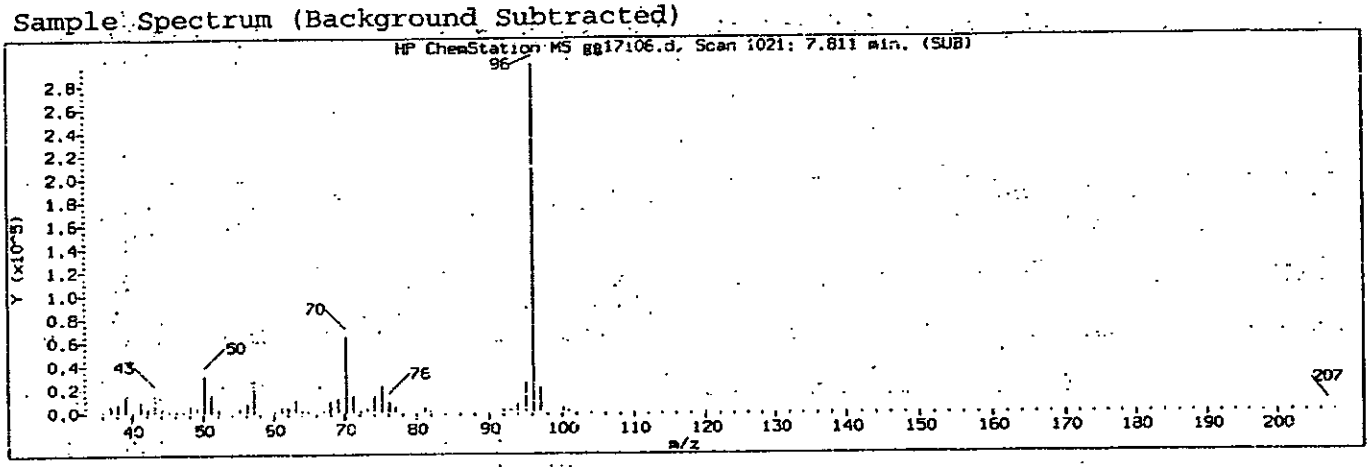
Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compound Number	: 67		
Compound Name	: Isobutyl Alcohol		
Scan Number	: 949		
Retention Time (minutes)	: 7.372		
Quant Ion	: 41.00		
Area	: 21944		
On-column Amount (ng)	: 25.5617		
Integration start scan	: 937	Integration stop scan:	977
Y at integration start	: 0	Y at integration end:	118

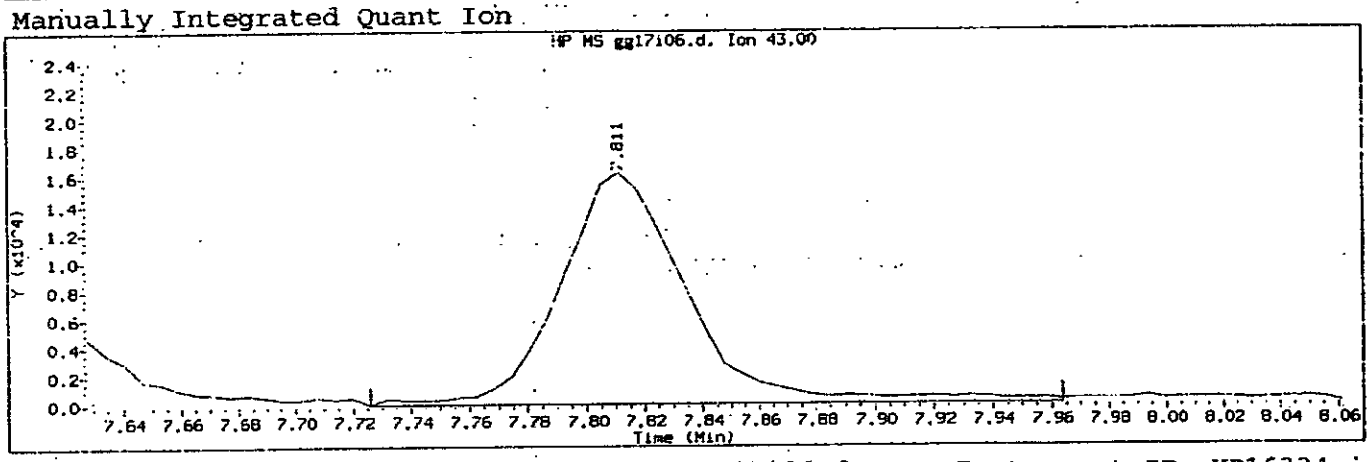
RAD36 0210

Digitally signed by Jason M. Long on 08/17/2010 at 14:54.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i06.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 13:49 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 14:37
Date, time and analyst ID of latest file update: 17-Aug-2010 14:37 jml01693

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compound Number	: 76		
Compound Name	: n-Heptane		
Scan Number	: 1021		
Retention Time (minutes)	: 7.811		
Quant Ion	: 43.00		
Area (flag)	: 49344M		
On-Column Amount (ng)	: 0.5242		
Integration start scan	: 1006	Integration stop scan:	1045
Y at integration start	: 0	Y at integration end:	0

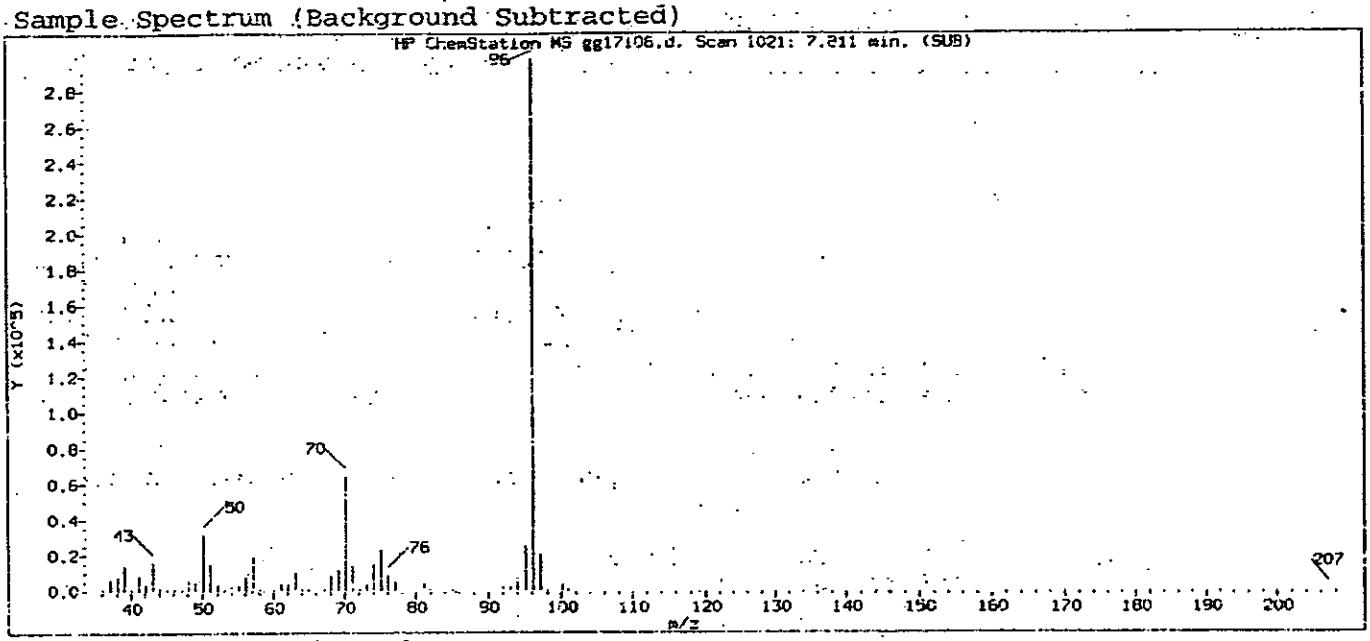
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long
on 08/17/2010 at 14:54.
Target 3.5 esignature user ID: jml01693

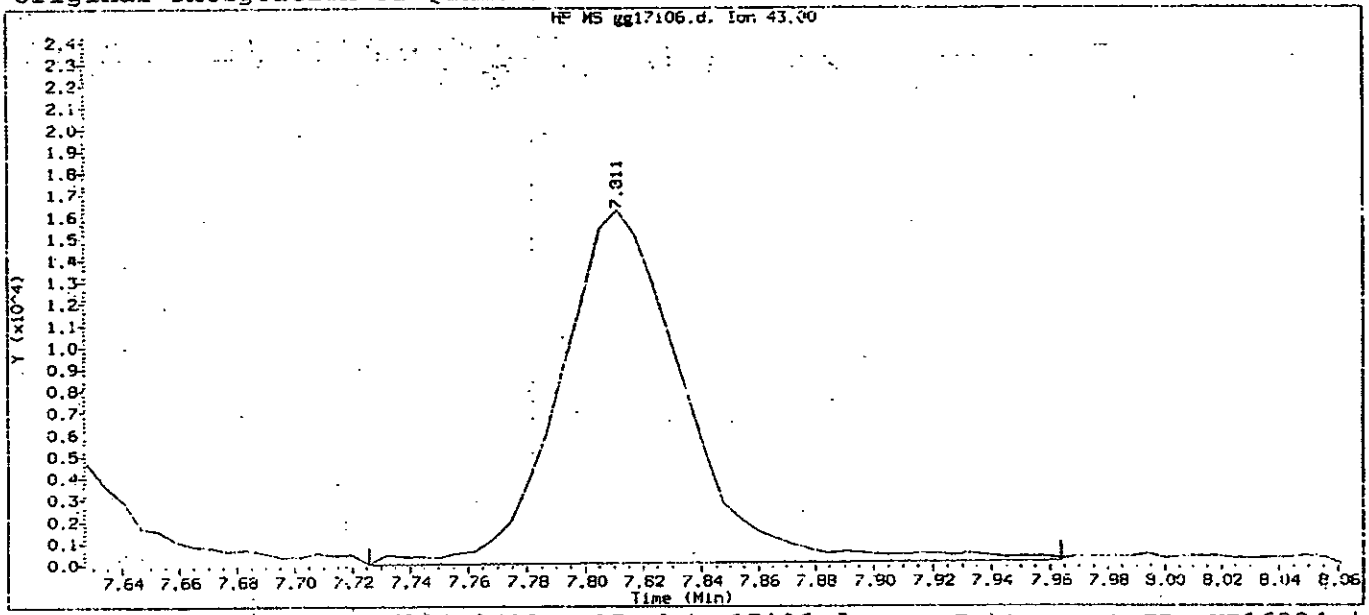
RAD36 0211

GC/MS audit/management approval: _____ 8/18/10

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i06.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 13:49 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 14:06
Date, time and analyst ID of latest file update: 17-Aug-2010 14:06 Automation

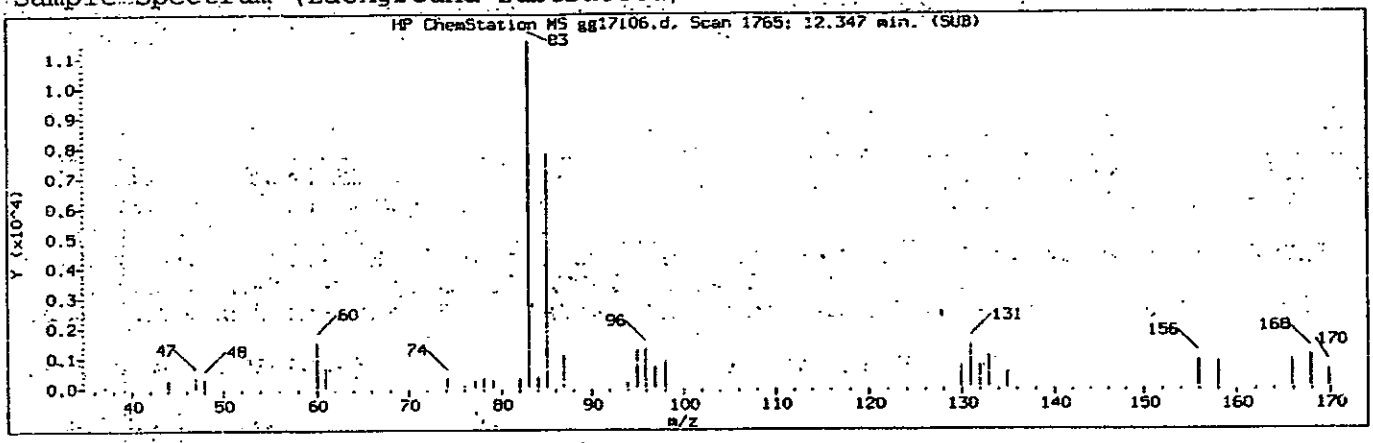
Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compound Number	: 76		
Compound Name	: n-Heptane		
Scan Number	: 1021		
Retention Time (minutes)	: 7.811		
Quant Ion	: 43.00		
Area	: 48407		
On-column Amount (ng)	: 0.5160		
Integration start scan	: 1006	Integration stop scan:	1045
Y at integration start	: 0	Y at integration end:	125

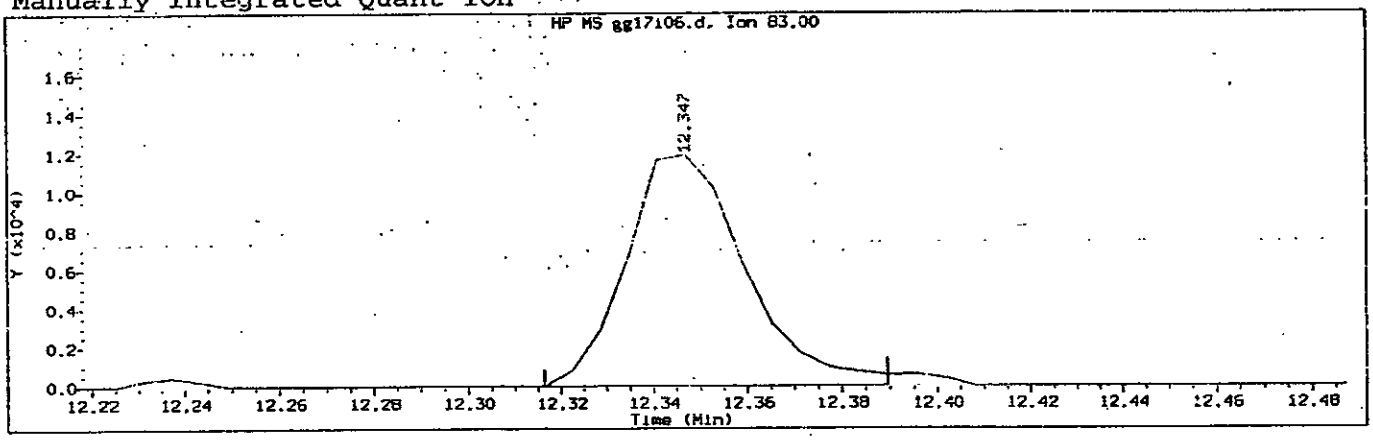
RAD36 0212

Digitally signed by Jason M. Long on 08/17/2010 at 14:54.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i06.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 13:49 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 14:37
Date, time and analyst ID of latest file update: 17-Aug-2010 14:37 jml01693

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compound Number	: 128		
Compound Name	: 1,1,2,2-Tetrachloroethane		
Scan Number	: 1765		
Retention Time (minutes)	: 12.347		
Quant Ion	: 83.00		
Area (flag)	: 21014M		
On-Column Amount (ng)	: 0.4647		
Integration start scan	: 1759	Integration stop scan:	1771
Y at integration start	: 0	Y at integration end:	0

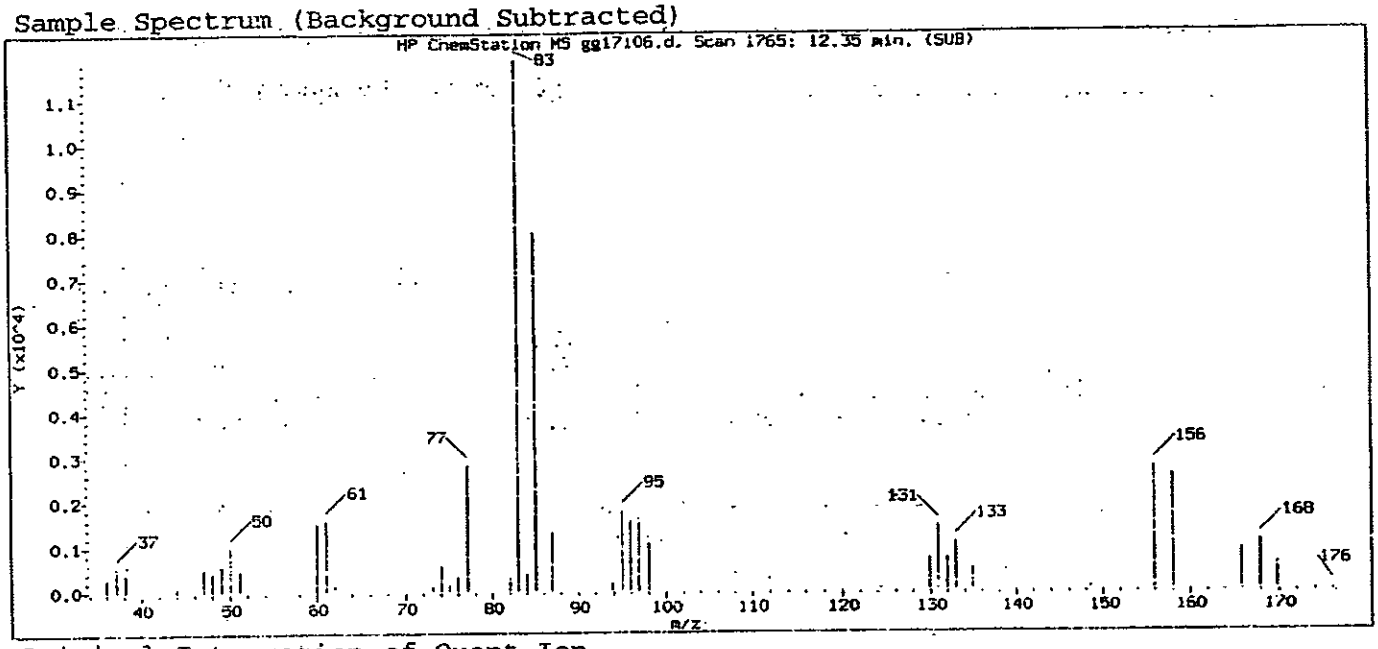
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long on 08/17/2010 at 14:54. Target 3.5 esignature user ID: jml01693

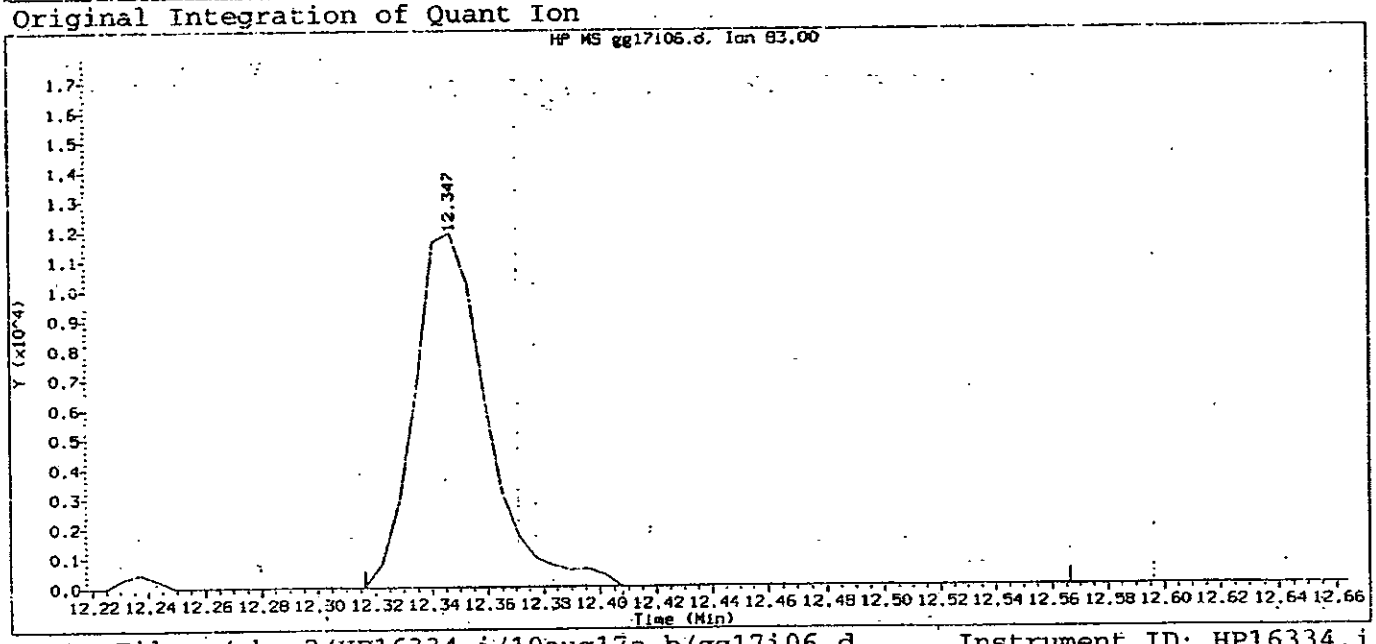
GC/MS audit/management approval: _____

RAD36 0213

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i06.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 13:49 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 14:06
Date, time and analyst ID of latest file update: 17-Aug-2010 14:06 Automation

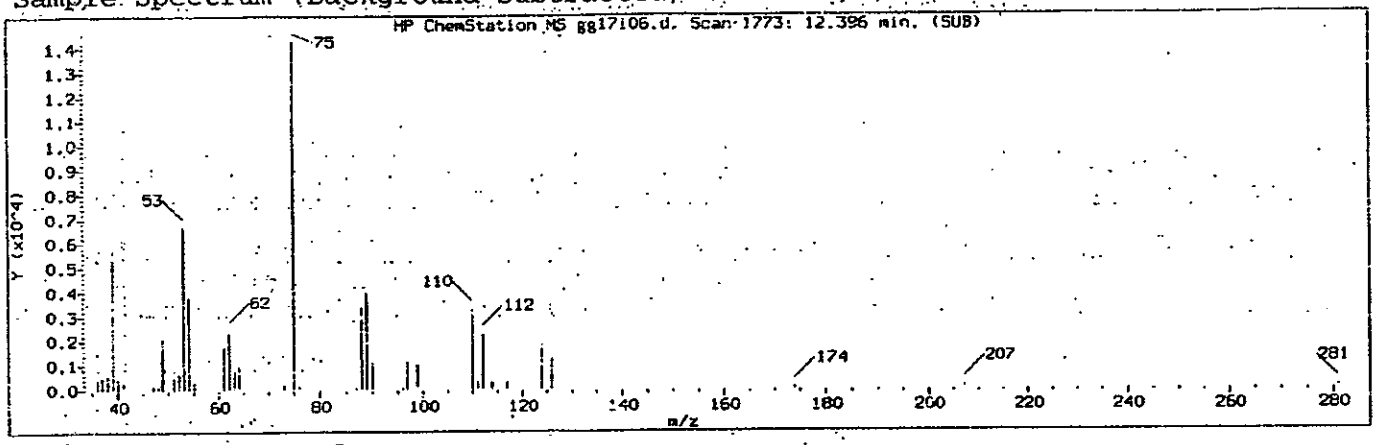
Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compound Number	: 128		
Compound Name	: 1,1,2,2-Tetrachloroethane		
Scan Number	: 1765		
Retention Time (minutes)	: 12.347		
Quant Ion	: 83.00		
Area	: 21381		
On-column Amount (ng)	: 0.4715		
Integration start scan	: 1759	Integration stop scan:	1800
Y at integration start	: 0	Y at integration end:	0

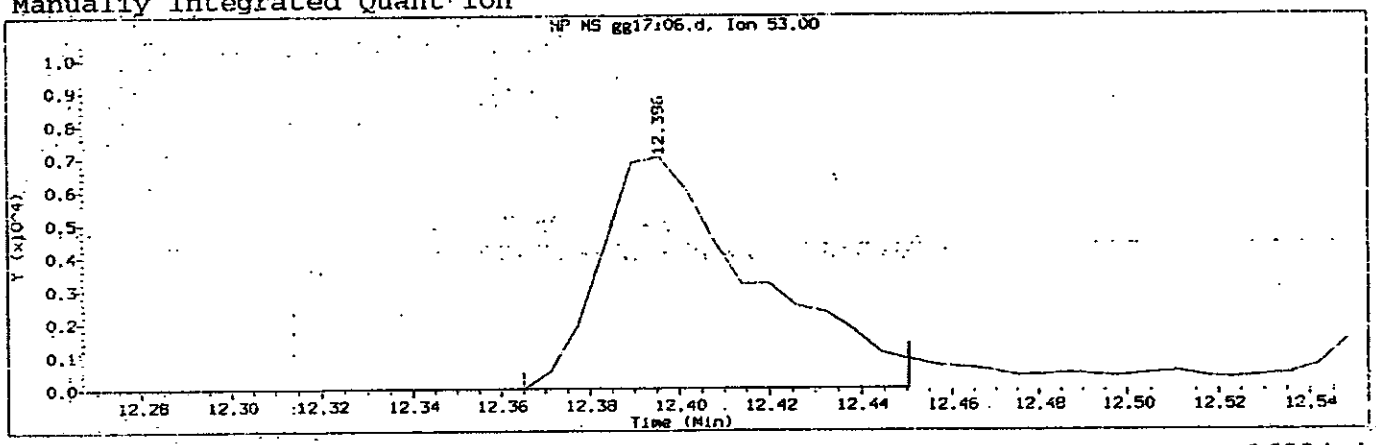
RAD36 0214

Digitally signed by Jason M. Long on 08/17/2010 at 14:54.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i05.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 13:49 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 14:37
Date, time and analyst ID of latest file update: 17-Aug-2010 14:37 jml01693

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compound Number	: 130		
Compound Name	: trans-1,4-Dichloro-2-Butene		
Scan Number	: 1773		
Retention Time (minutes)	: 12.396		
Quant Ion	: 53.00		
Area (flag)	: 16637A		
On-Column Amount (ng)	: 7.1552		
Integration start scan	: 1767	Integration stop scan:	1781
Y at integration start	: 0	Y at integration end:	0

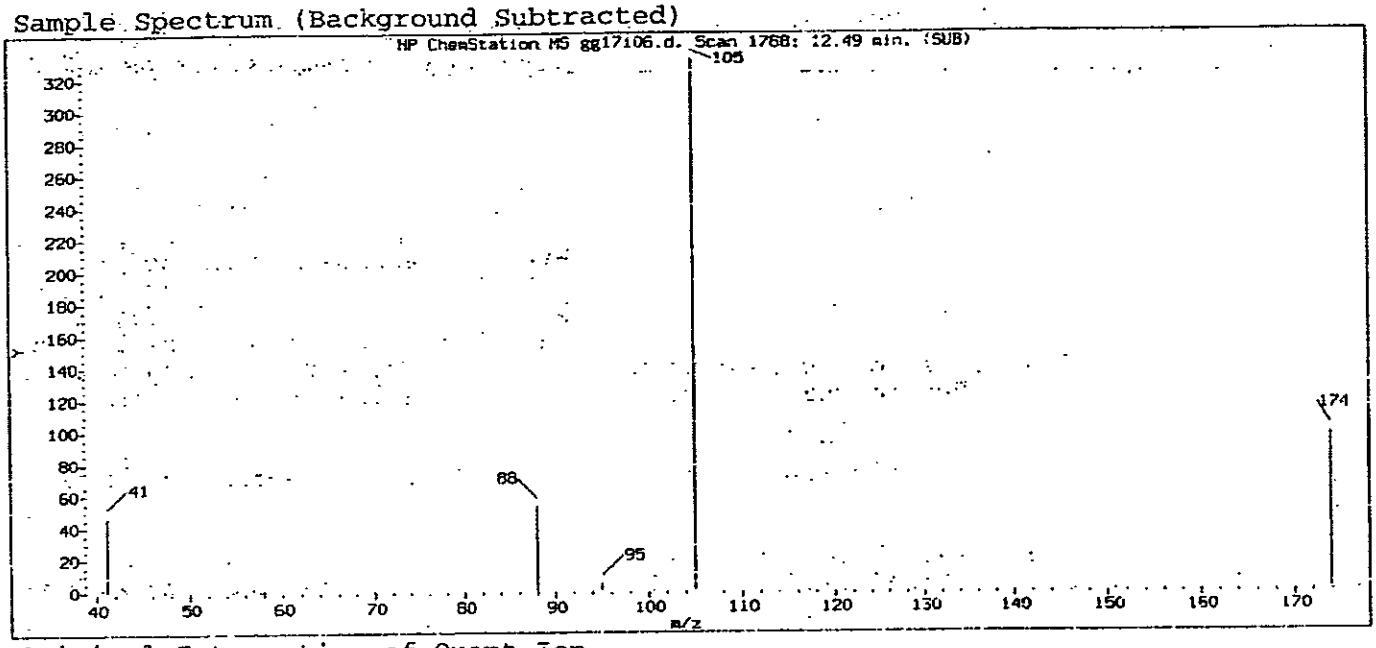
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long
on 08/17/2010 at 14:54.
Target 3.5 esignature user ID: jml01693

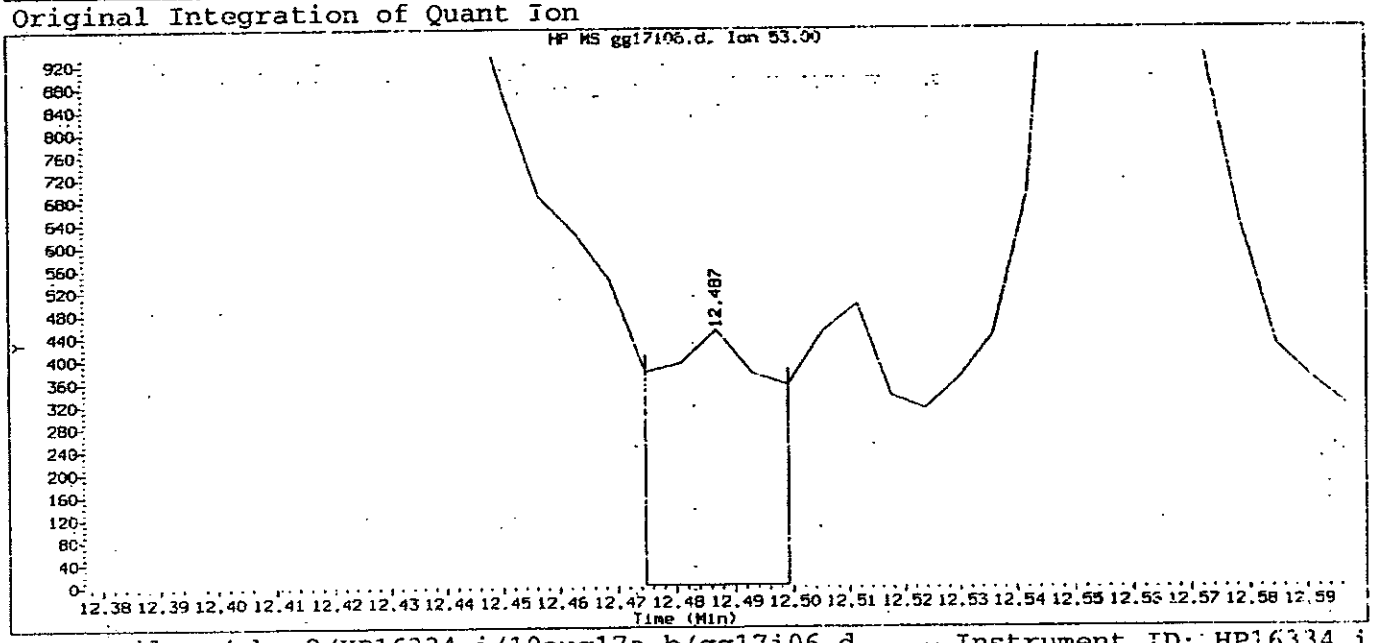
RAD36 0215

GC/MS audit/management approval: _____

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10aug17a,b/gg17i06.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 13:49 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 14:06
Date, time and analyst ID of latest file update: 17-Aug-2010 14:06 Automation

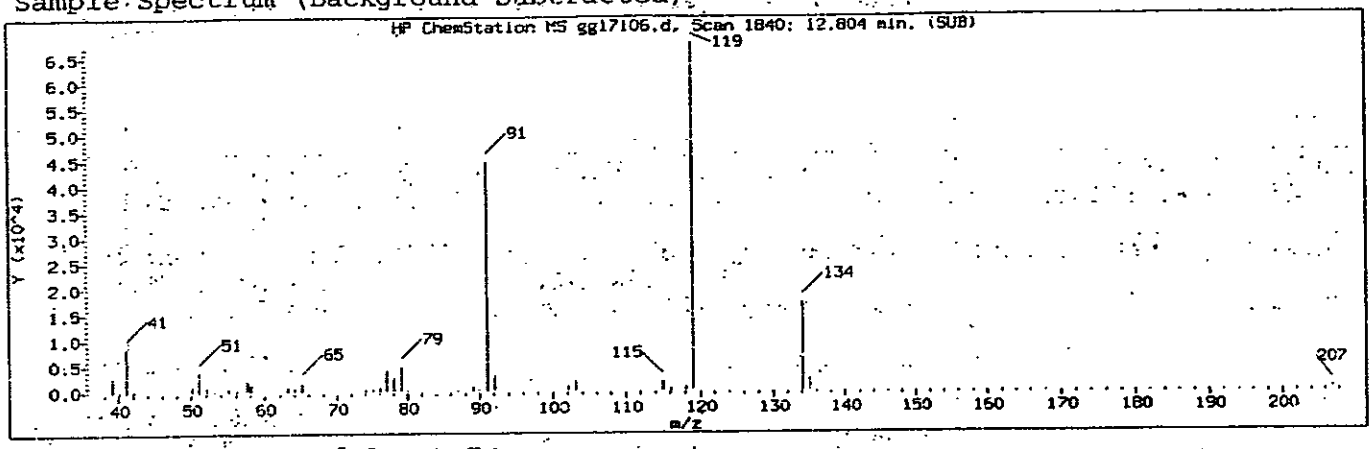
Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compound Number	: 130		
Compound Name	: trans-1,4-Dichloro-2-Butene		
Scan Number	: 1788		
Retention Time (minutes)	: 12.487		
Quant Ion	: 53.00		
Area	: 577		
On-column Amount (ng)	: 0.1102		
Integration start scan	: 1785	Integration stop scan:	1789
Y at integration start	: 0	Y at integration end:	0

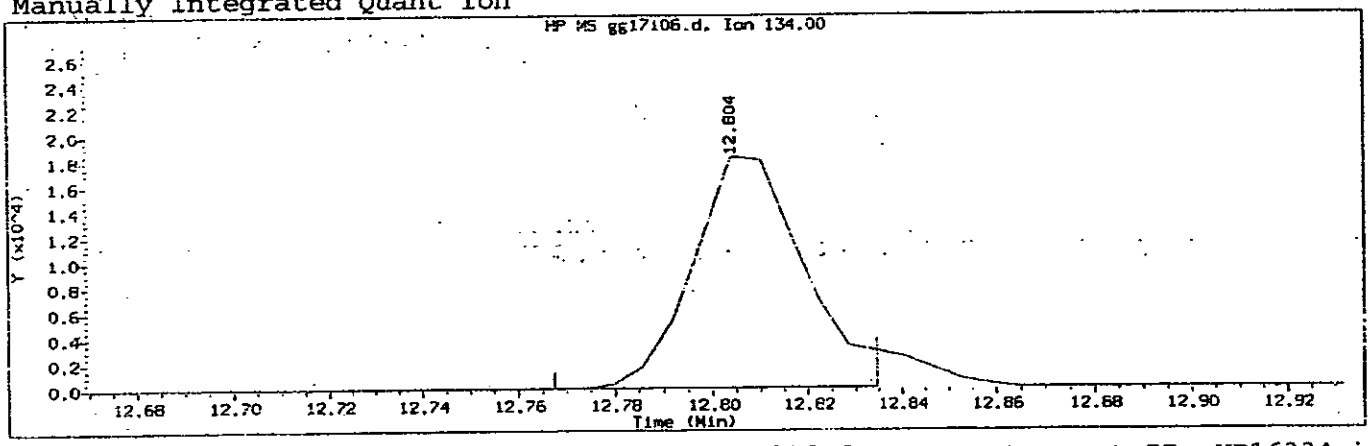
RAD36 0216

Digitally signed by Jason M. Long on 08/17/2010 at 14:54.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i06.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 13:49 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 14:37
Date, time and analyst ID of latest file update: 17-Aug-2010 14:37 jml01693

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compound Number	: 137		
Compound Name	: tert-Butylbenzene		
Scan Number	: 1840		
Retention Time (minutes)	: 12.804		
Quant Ion	: 134.00		
Area (flag)	: 29479M		
On-Column Amount (ng)	: 0.4670		
Integration start scan	: 1833	Integration stop scan:	1844
Y at integration start	: 0	Y at integration end:	0

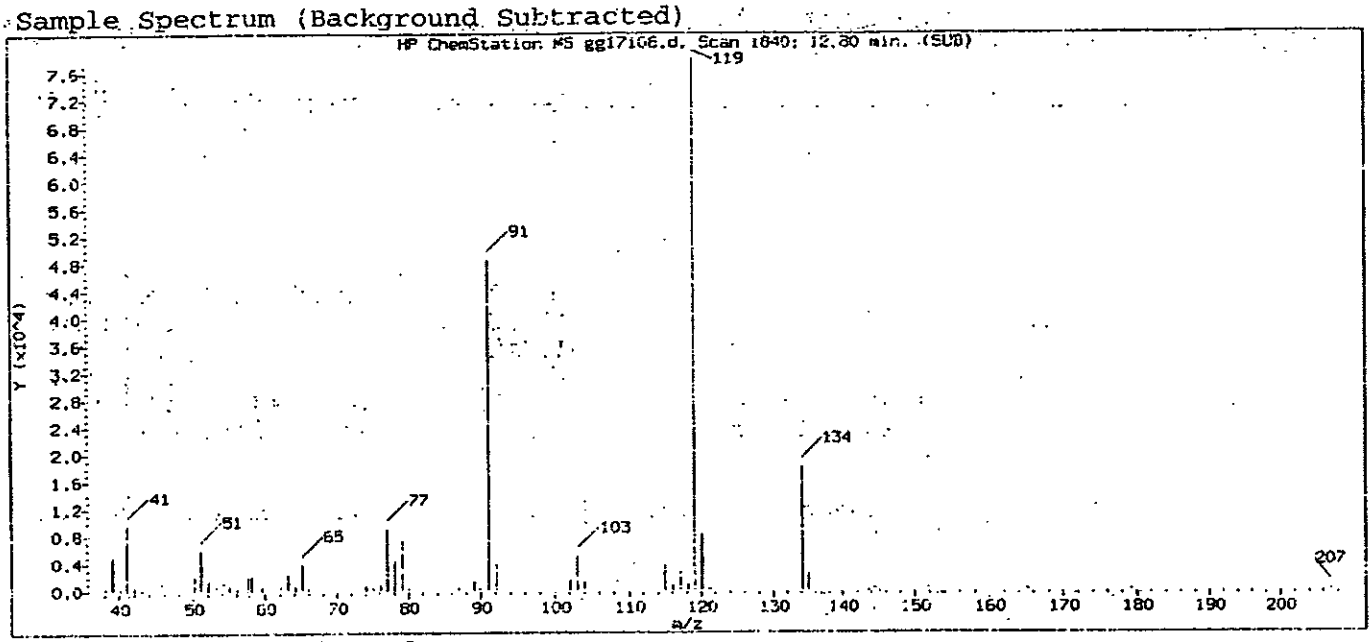
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long
on 08/17/2010 at 14:54.
Target 3.5 esignature user ID: jml01693

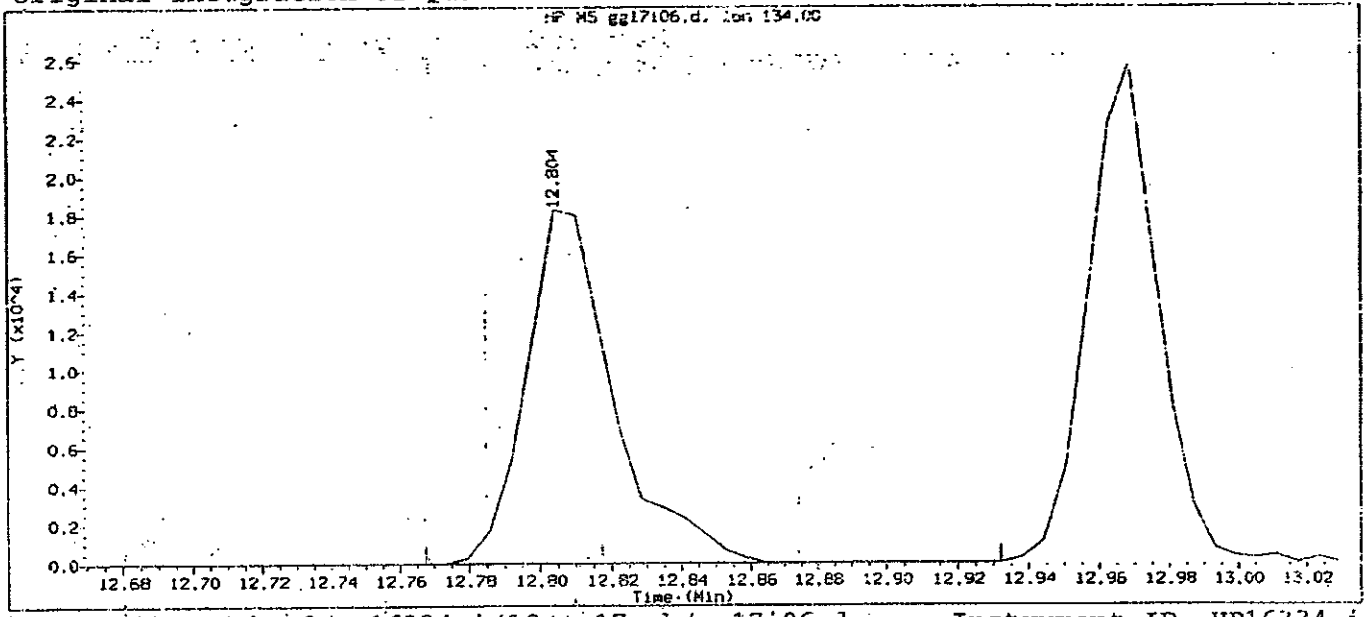
RAD36 0217

GC/MS audit/management approval: _____

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i06.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 13:49 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 14:06
Date, time and analyst ID of latest file update: 17-Aug-2010 14:06 Automation

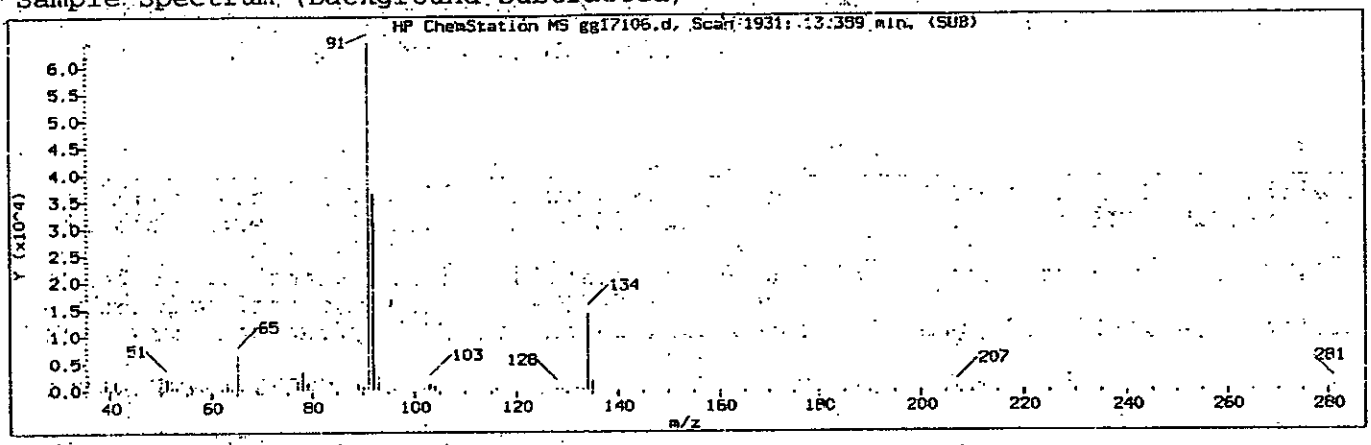
Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compound Number	: 137
Compound Name	: tert-Butylbenzene
Scan Number	: 1840
Retention Time (minutes)	: 12.804
Quant Ion	: 134.00
Area	: 31259
On-column Amount (ng)	: 0.4906
Integration start scan	: 1833
Integration stop scan	: 1860
Y at integration start	: 0
Y at integration end	: 0

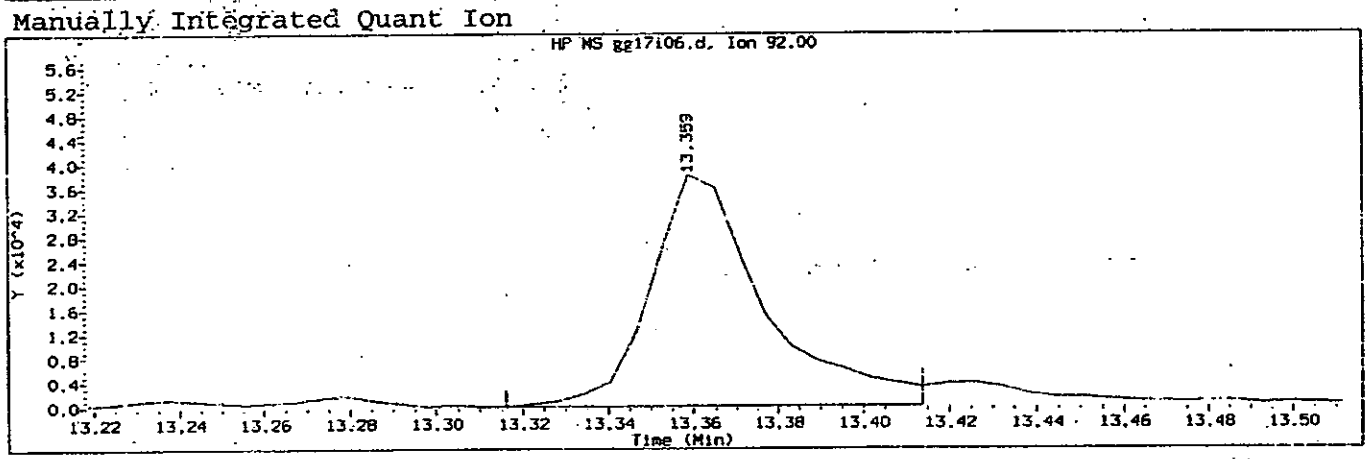
RAD36 8218

Digitally signed by Jason M. Long on 08/17/2010 at 14:54.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i06.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 13:49 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 14:37
Date, time and analyst ID of latest file update: 17-Aug-2010 14:37 jml01693

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compound Number	: 147		
Compound Name	: n-Butylbenzene		
Scan Number	: 1931		
Retention Time (minutes)	: 13.359		
Quant Ion	: 92.00		
Area (flag)	: 71142M		
On-Column Amount (ng)	: 0.4295		
Integration start scan	: 1923	Integration stop scan:	1939
Y at integration start	: 0	Y at integration end:	0

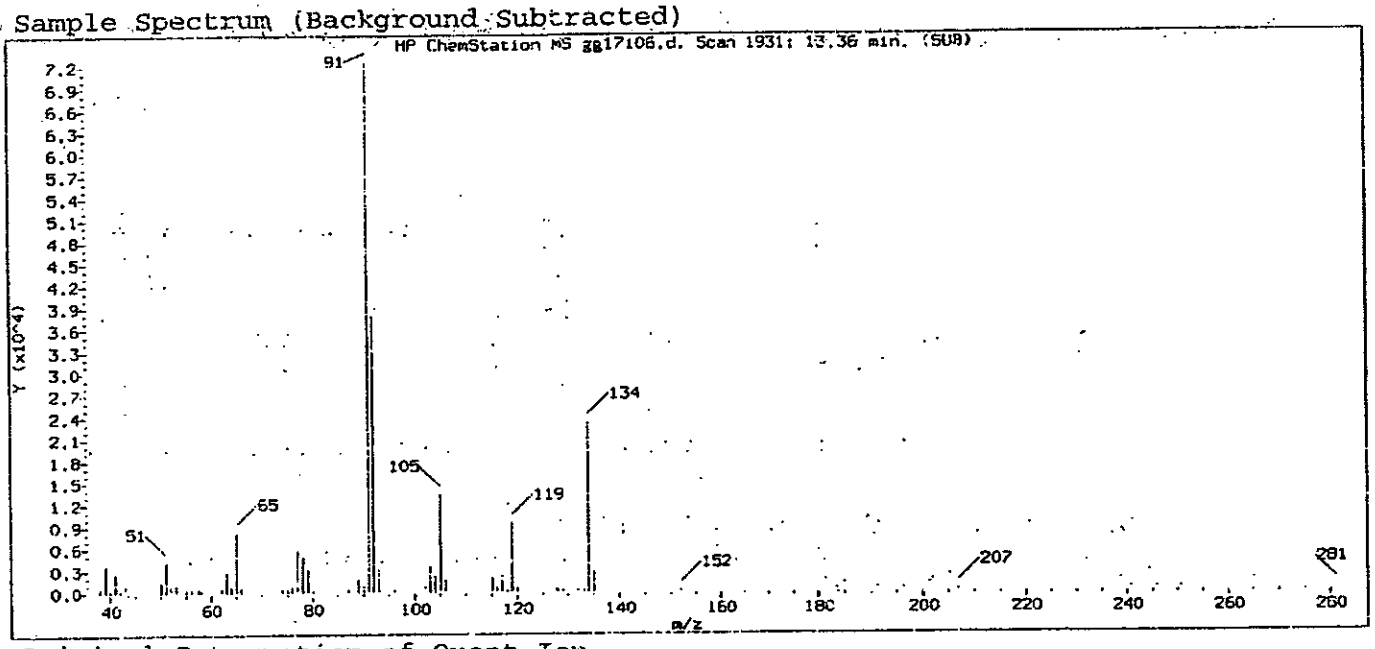
Reason for manual integration: improper integration

Digitally signed by Jason M. Long
Analyst responsible for change: on 08/17/2010 at 14:54.
Target 3.5 esignature user ID: jml01693

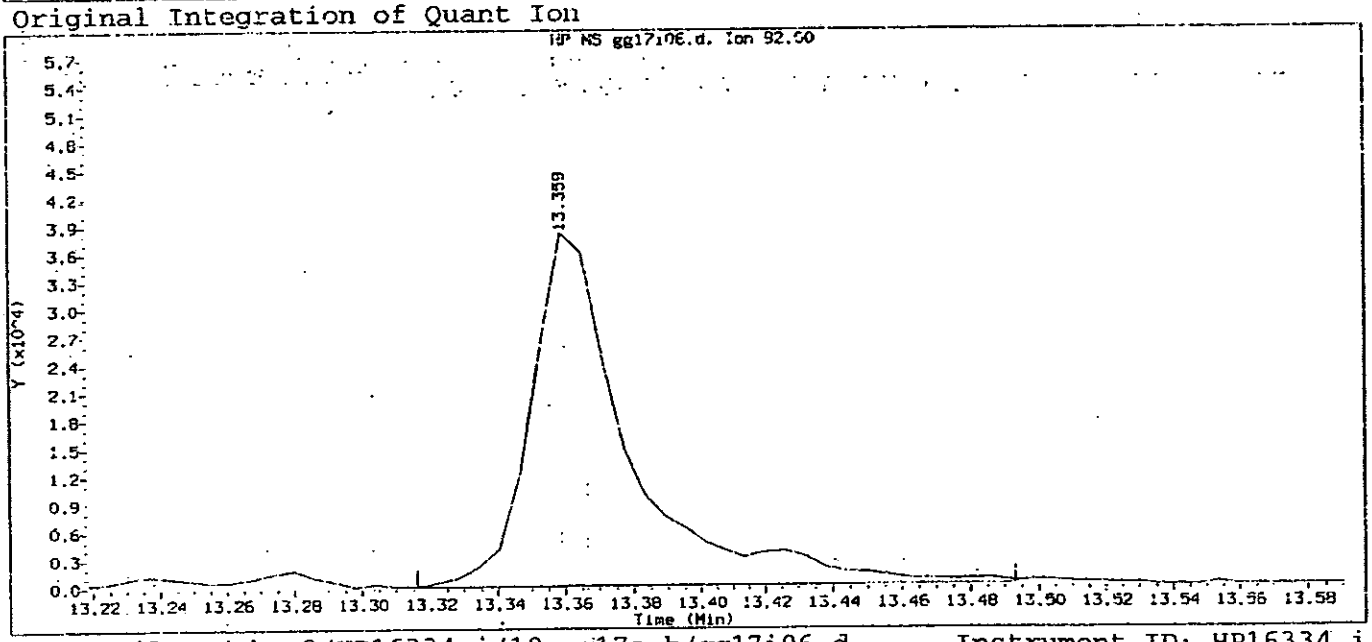
RAD36 0219

GC/MS audit/management approval: _____ 8/18/10

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17i06.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 13:49 Analyst ID: JML01693

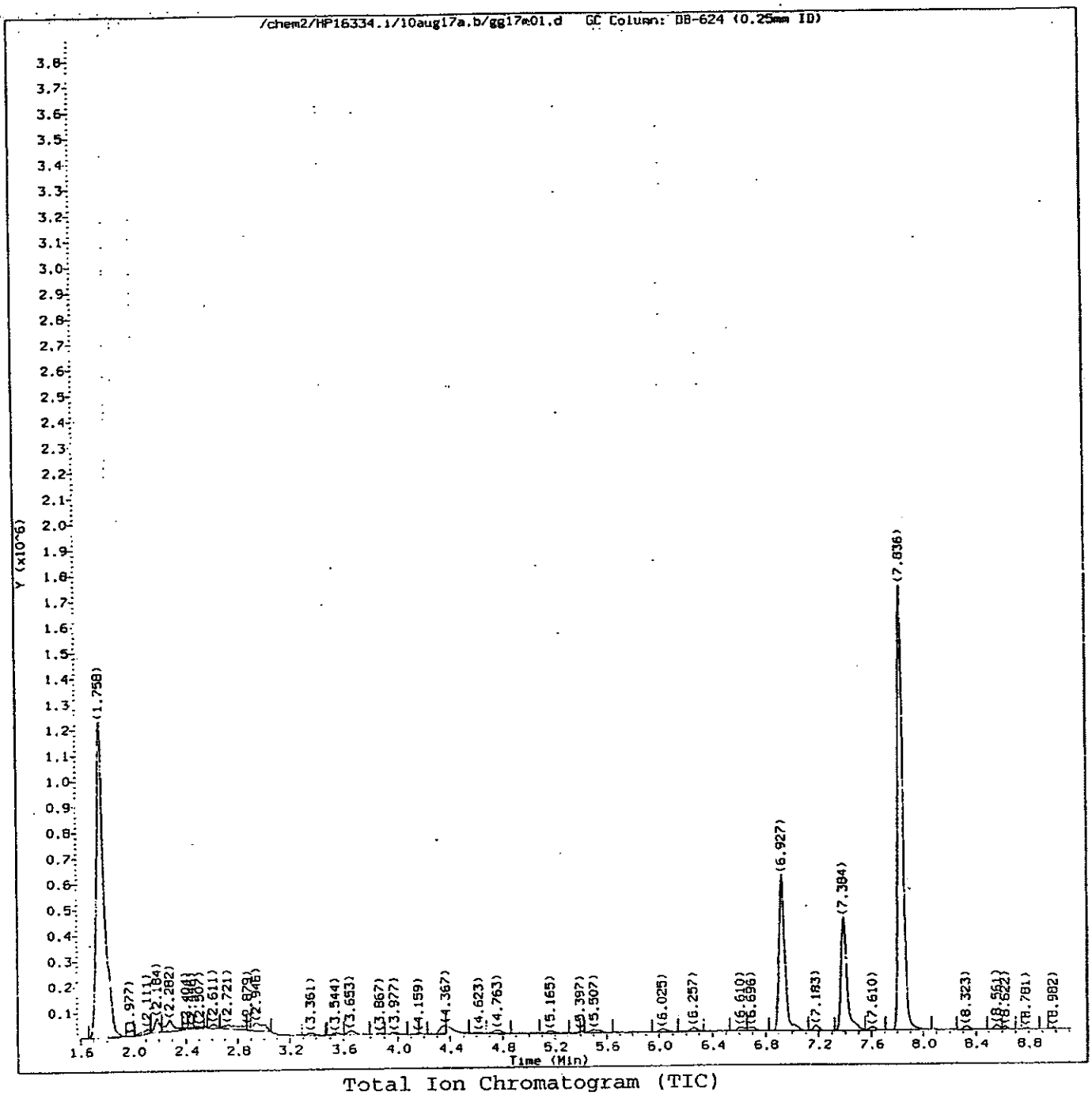
Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 17-AUG-2010 14:06
Date, time and analyst ID of latest file update: 17-Aug-2010 14:06 Automation

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compound Number	: 147		
Compound Name	: n-Butylbenzene		
Scan Number	: 1931		
Retention Time (minutes)	: 13.359		
Quant Ion	: 92.00		
Area	: 78118		
On-column Amount (ng)	: 0.4651		
Integration start scan	: 1923	Integration stop scan:	1952
Y at integration start	: 0	Y at integration end:	94

RAD36 0228

Digitally signed by Jason M. Long on 08/17/2010 at 14:54.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/10aug17a.b/gg17m01.d
Injection date and time: 17-AUG-2010 14:10

Instrument ID: HP16334.i
Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m
Calibration date and time: 18-AUG-2010 10:58
Date, time and analyst ID of latest file update: 18-Aug-2010 10:58 jml01693

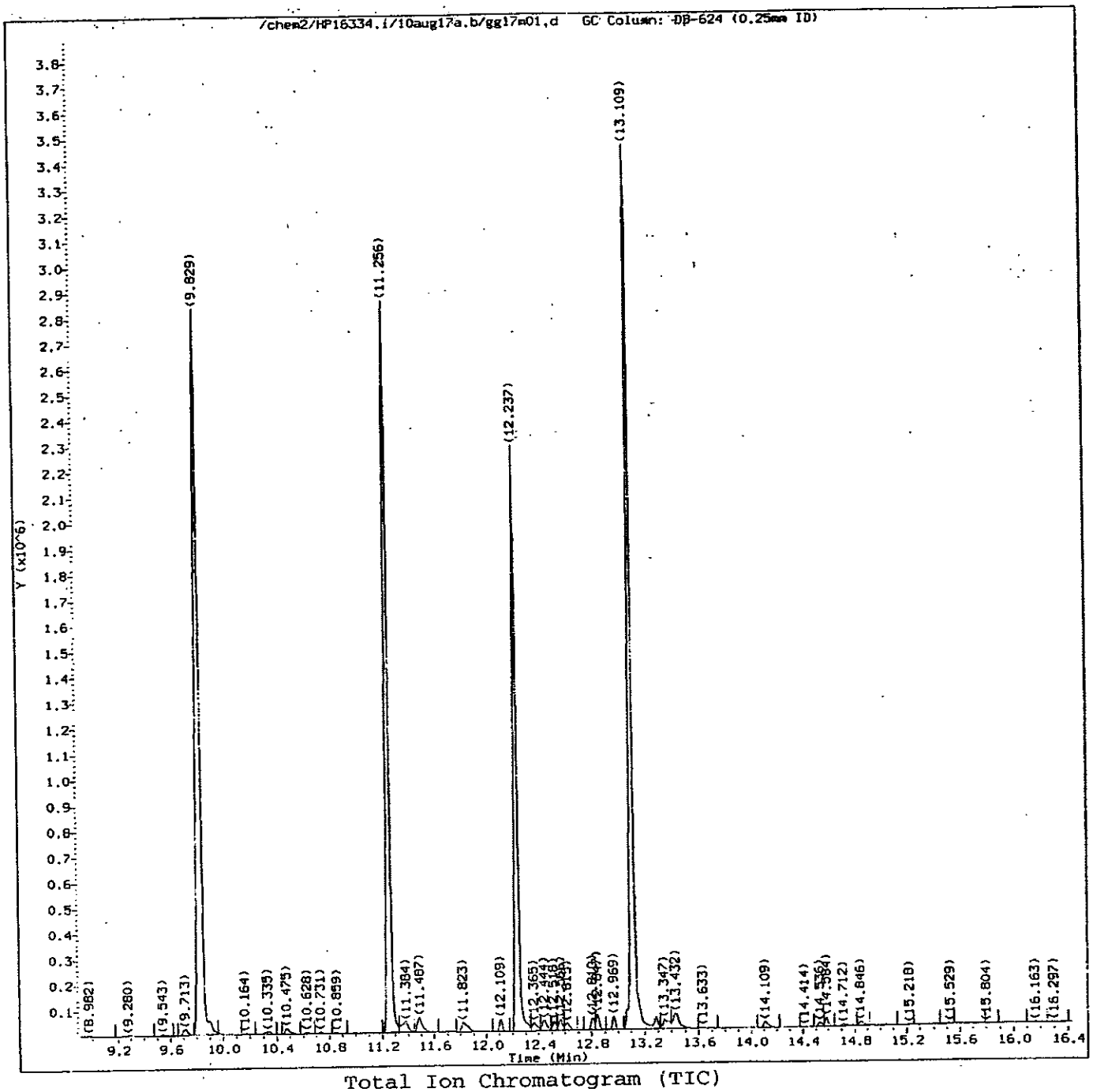
Sublist used: 8260W25-3

Sample Name: MDL0.1

Lab Sample ID: MDL0.1

BAD36 8221

Digitally signed by Jason M. Long
on 08/18/2010 at 10:59.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/10aug17a.b/gg17m01.d
Injection date and time: 17-AUG-2010 14:10

Instrument ID: HP16334.i
Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m
Calibration date and time: 18-AUG-2010 10:58
Date, time and analyst ID of latest file update: 18-Aug-2010 10:58 jml01693

Sublist used: 8260W25-3

Sample Name: MDL0.1

Lab Sample ID: MDL0.1

RAD36 0222

Digitally signed by Jason M. Long
on 08/18/2010 at 10:59.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/10aug17a.b/gg17m01.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 14:10 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260W25-3
Calibration date and time: 18-AUG-2010 10:58
Date, time and analyst ID of latest file update: 18-Aug-2010 10:58 jml01693

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
2) Dichlorodifluoromethane	(1)	1.977	85	11711	0.109
5) Chloromethane	(1)	2.111	50	15046	0.147
6) Vinyl Chloride	(1)	2.239	62	12708M	0.128
9) 1,3-Butadiene	(1)	2.282	39	18992M	0.118
10) Bromomethane	(1)	2.611	94	8755M	0.115
11) Chloroethane	(1)	2.727	64	9023	0.155
13) Dichlorofluoromethane	(1)	2.946	67	22833M	0.165
15) Trichlorofluoromethane	(1)	3.050	101	14106	0.117
17) Ethyl Ether	(1)	3.343	59	3800	0.093
18) Freon 123a	(1)	3.361	67	8857	0.122
23) Acrolein	(4)	3.544	56	16623	3.612
24) 1,1-Dichloroethene	(1)	3.653	96	7500	0.127
25) Freon 113	(1)	3.660	101	6595	0.107
26) Acetone	(4)	3.775	58	1647	0.758
27) Methyl Iodide	(1)	3.861	142	12048	0.111
29) Carbon Disulfide	(1)	3.977	76	24493	0.152
32) Allyl Chloride	(1)	4.159	41	9255	0.149
34) Methylene Chloride	(1)	4.330	84	15562	0.223
36)*t-Butyl Alcohol-d10	(4)	4.373	65	109934	50.000
38) t-Butyl Alcohol	(4)	4.489	59	5835	2.104
40) Methyl Tertiary Butyl Ether	(1)	4.757	73	14148	0.107
41) trans-1,2-Dichloroethene	(1)	4.763	96	7693	0.115
37) 1,2-Dichloroethene (Total)	(1)		96	15401	0.224
44) n-Hexane	(1)	5.165	57	9257	0.104
45) 1,1-Dichloroethane	(1)	5.397	63	11824	0.108
47) di-Isopropyl Ether	(1)	5.495	45	20001	0.107
48) 2-Chloro-1,3-Butadiene	(1)	5.549	53	7831	0.101
49) Ethyl t-Butyl Ether	(1)	6.025	59	18152	0.108
51) 2,2-Dichloropropane	(1)	6.244	77	10203	0.115
50) cis-1,2-Dichloroethene	(1)	6.257	96	7708	0.108
52) 2-Butanone	(4)	6.342	43	11703	1.045
53) Propionitrile	(4)	6.476	54	2952	5.014
56) Bromochloromethane	(1)	6.598	128	2566	0.090
55) Methacrylonitrile	(4)	6.616	67	10317	0.826
57) Tetrahydrofuran	(4)	6.665	71	3715	1.018
58) Chloroform	(1)	6.702	83	12314	0.110
61)$Dibromofluoromethane	(1)	6.927	113	554619	9.987
63) 1,1,1-Trichloroethane	(1)	6.946	97	10887	0.112
64) Cyclohexane	(1)	7.025	56	12403	0.116

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

RAD36 9223

Digitally signed by Jason M. Long
on 08/18/2010 at 10:59.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/10aug17a.b/gg17m01.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 14:10 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260W25-3
Calibration date and time: 18-AUG-2010 10:58
Date, time and analyst ID of latest file update: 18-Aug-2010 10:58 jml01693

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
65) 1,1-Dichloropropene	(1)	7.177	75	9206	0.105
66) Carbon Tetrachloride	(1)	7.177	117	8584	0.101
67) Isobutyl Alcohol	(4)	7.378	41	6538	7.720
70)$1,2-Dichloroethane-d4	(1)	7.391	102	105156	10.153
72) Benzene	(1)	7.464	78	31215	0.121
74) 1,2-Dichloroethane	(1)	7.506	62	6636	0.109
75) t-Amyl Methyl Ether	(1)	7.610	73	15247	0.104
76) n-Heptane	(1)	7.805	43	11932	0.130
77)*Fluorobenzene	(1)	7.836	96	2414097	10.000
83) Trichloroethene	(1)	8.323	95	8024	0.113
81) n-Butanol	(4)	8.384	56	2986	25.665
84) Methylcyclohexane	(1)	8.561	83	10948	0.099
85) 1,2-Dichloropropane	(1)	8.622	63	6883	0.108
88) Dibromomethane	(1)	8.781	93	2888	0.102
89) 1,4-Dioxane	(4)	8.817	88	103M	0.527
87) Methyl Methacrylate	(4)	8.817	69	988	0.040
90) Bromodichloromethane	(1)	8.988	83	6958	0.096
91) 2-Nitropropane	(4)	9.280	41	7523	1.146
94) cis-1,3-Dichloropropene	(1)	9.543	75	6822	0.090
96) 4-Methyl-2-Pentanone	(1)	9.713	43	26717M	0.887
97)$Toluene-d8	(2)	9.829	98	2370543	9.846
101) Toluene	(2)	9.902	92	20570	0.118
102) trans-1,3-Dichloropropene	(2)	10.171	75	4978	0.081
103) Ethyl Methacrylate	(2)	10.286	69	2799	0.066
104) 1,1,2-Trichloroethane	(2)	10.347	97	4101	0.101
105) Tetrachloroethene	(2)	10.475	166	8413	0.107
106) 1,3-Dichloropropane	(2)	10.512	76	6976	0.101
107) 2-Hexanone	(2)	10.628	43	16443MA	0.815
108) Dibromochloromethane	(2)	10.731	129	4089	0.087
109) 1,2-Dibromoethane	(2)	10.847	107	3313	0.090
110)*Chlorobenzene-d5	(2)	11.256	117	1783016	10.000
112) Chlorobenzene	(2)	11.280	112	21211	0.109
113) 1,1,1,2-Tetrachloroethane	(2)	11.353	131	5491	0.087
114) Ethylbenzene	(2)	11.384	91	33660	0.101
117) m+p-Xylene	(2)	11.481	106	27317	0.206
115) Xylene (Total)	(2)		106	40198	0.304
118) o-Xylene	(2)	11.823	106	12881	0.098
119) Styrene	(2)	11.853	104	16081M	0.082
120) Bromoform	(2)	11.999	173	1578	0.295

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

RA936 0224

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/10aug17a.b/gg17m01.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 14:10 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260W25-3
Calibration date and time: 18-AUG-2010 10:58
Date, time and analyst ID of latest file update: 18-Aug-2010 10:58 jml01693

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

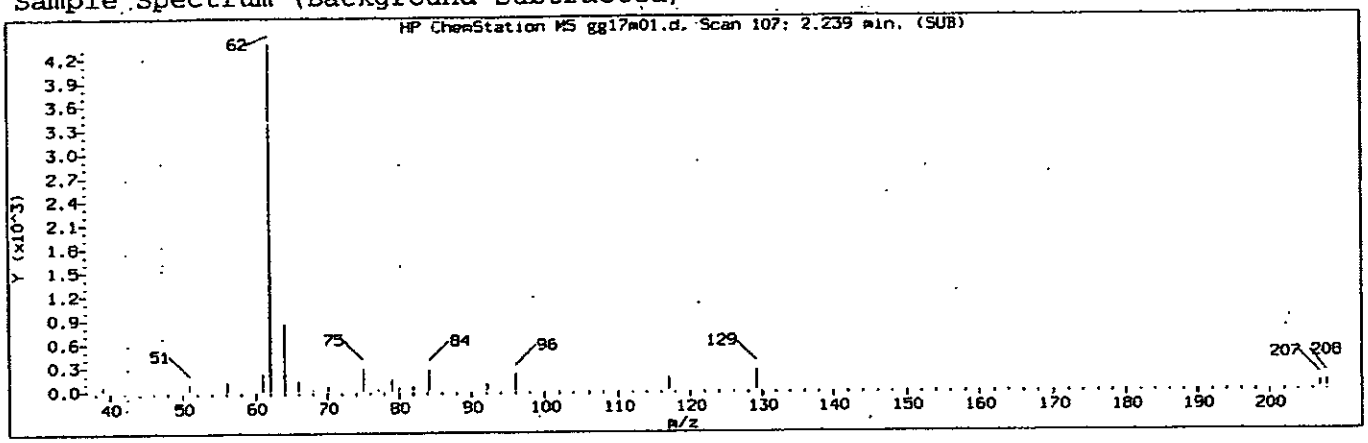
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
121) Isopropylbenzene	(2)	12.109	105	34177	0.101
126)$4-Bromofluorobenzene	(2)	12.237	95	801101	9.844
128) 1,1,2,2-Tetrachloroethane	(3)	12.353	83	4510M	0.102
129) Bromobenzene	(3)	12.371	156	8398	0.110
131) 1,2,3-Trichloropropane	(3)	12.402	110	1030	0.082
130) trans-1,4-Dichloro-2-Butene	(4)	12.432	53	2311	5.022
132) n-Propylbenzene	(3)	12.444	91	38394	0.097
133) 2-Chlorotoluene	(3)	12.518	126	8385	0.106
134) 1,3,5-Trimethylbenzene	(3)	12.566	105	26735	0.097
135) 4-Chlorotoluene	(3)	12.615	126	8286	0.102
137) tert-Butylbenzene	(3)	12.810	134	6889	0.112
138) Pentachloroethane	(3)	12.841	167	3263	0.217
139) 1,2,4-Trimethylbenzene	(3)	12.847	105	28552M	0.097
140) sec-Butylbenzene	(3)	12.969	105	37016	0.101
141) p-Isopropyltoluene	(3)	13.072	119	31108M	0.095
142) 1,3-Dichlorobenzene	(3)	13.072	146	16988	0.103
143)*1,4-Dichlorobenzene-d4	(3)	13.109	152	984812	10.000
144) 1,4-Dichlorobenzene	(3)	13.127	146	19633	0.115
145) 1,2,3-Trimethylbenzene	(3)	13.158	120	12024	0.091
146) Benzyl Chloride	(3)	13.261	126	371	0.293
147) n-Butylbenzene	(3)	13.383	92	15364	0.095
148) 1,2-Dichlorobenzene	(3)	13.420	146	14920	0.102
153) 1,2,4-Trichlorobenzene	(3)	14.536	180	11835	0.103
154) Hexachlorobutadiene	(3)	14.590	225	6401	0.103
155) Naphthalene	(3)	14.725	128	14608	0.093
156) 1,2,3-Trichlorobenzene	(3)	14.853	180	9501	0.106

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

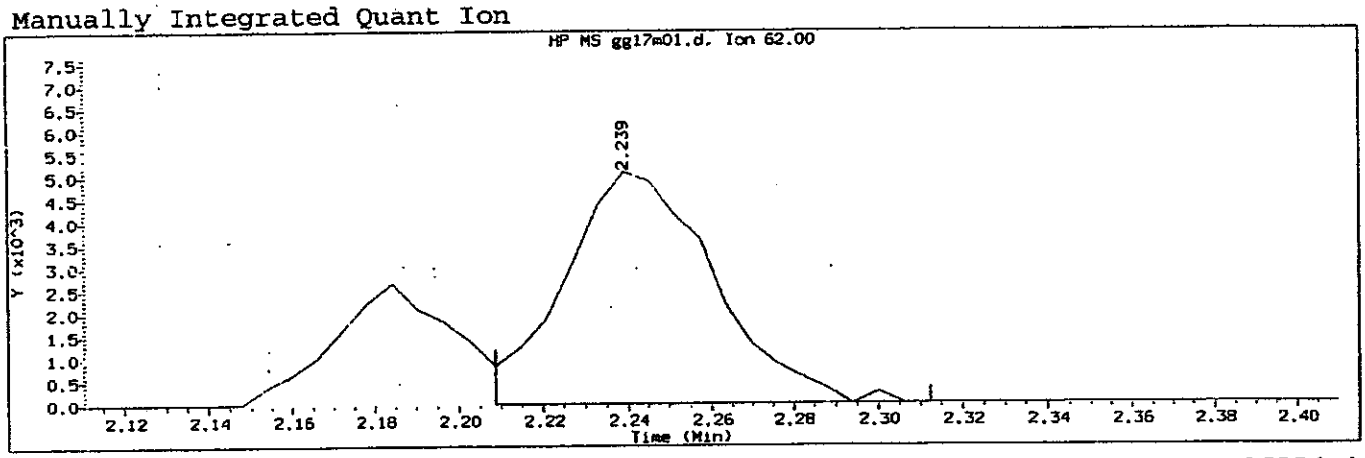
RAD36 8225

Digitally signed by Jason M. Long
on 08/18/2010 at 10:59.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17m01.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 14:10 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260W25-3
Calibration date and time: 18-AUG-2010 10:58
Date, time and analyst ID of latest file update: 18-Aug-2010 10:58 jml01693

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compound Number	: 6		
Compound Name	: Vinyl Chloride		
Scan Number	: 107		
Retention Time (minutes)	: 2.239		
Quant Ion	: 62.00		
Area (flag)	: 12708M		
On-Column Amount (ng)	: 0.1279		
Integration start scan	: 101	Integration stop scan:	118
Y at integration start	: 0	Y at integration end:	0

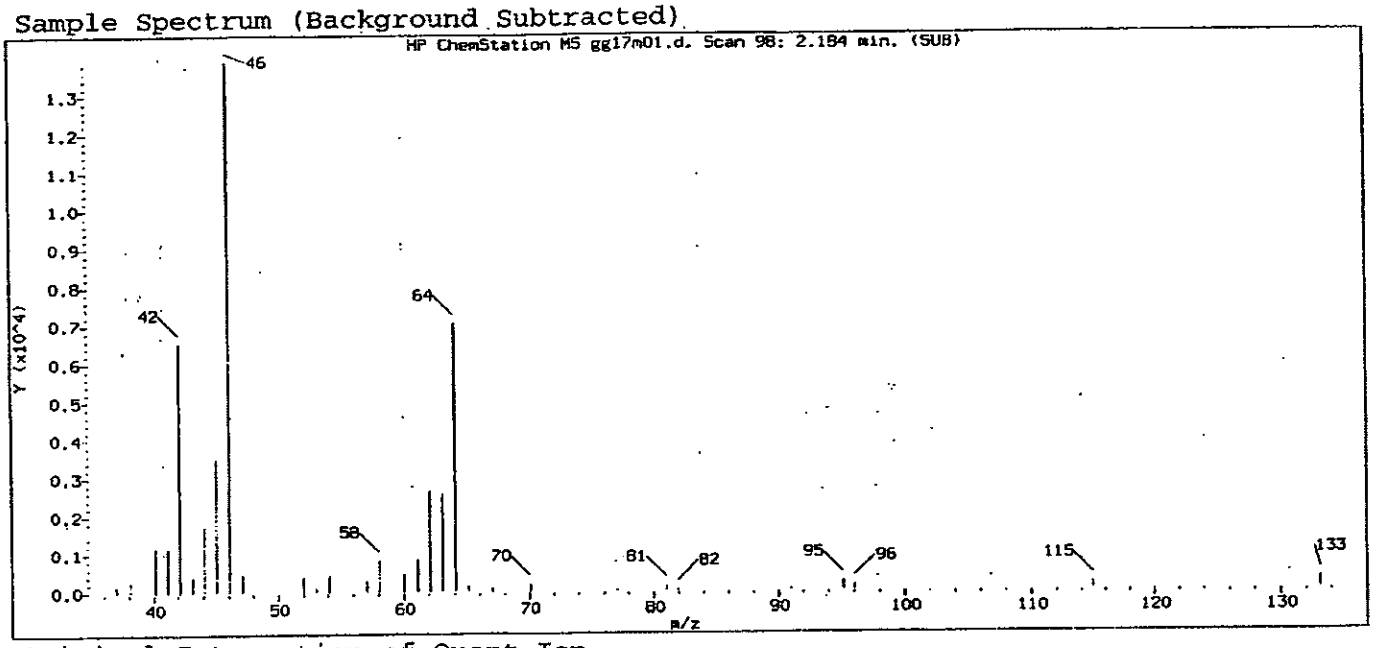
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long on 08/18/2010 at 10:59. Target 3.5 esignature user ID: jml01693

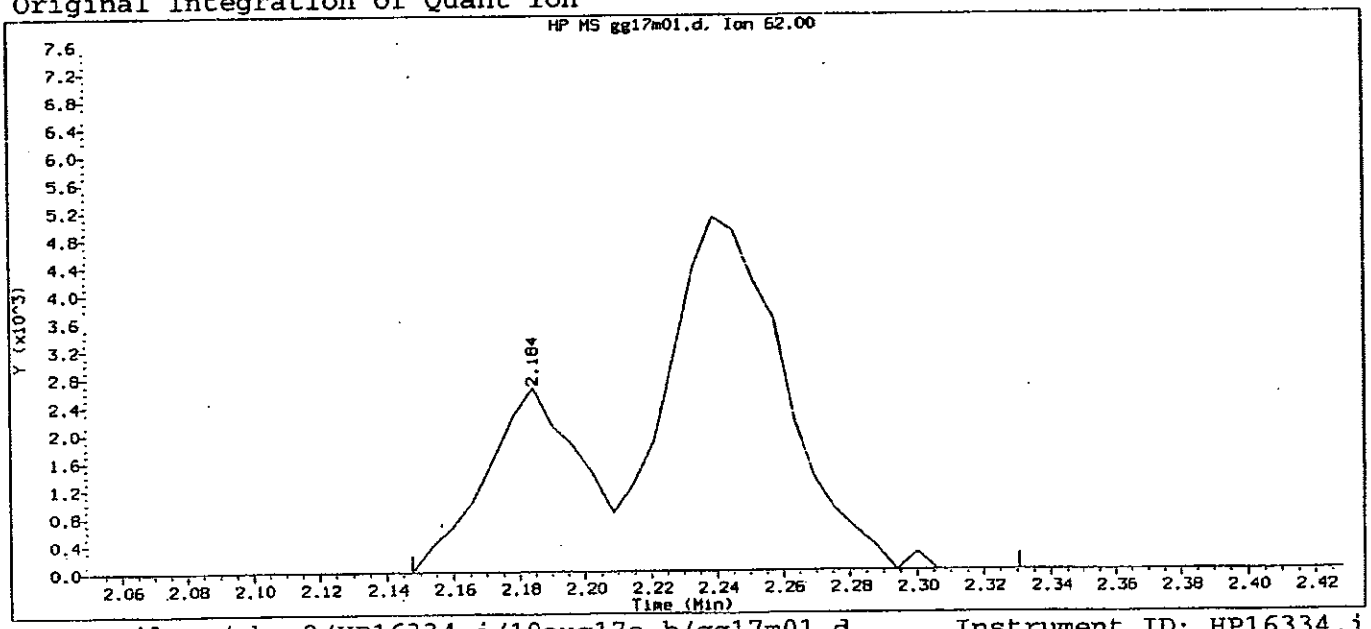
GC/MS audit/management approval: _____ 8/18/10

RAD36 0226

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17m01.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 14:10 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 17-AUG-2010 14:37
Date, time and analyst ID of latest file update: 17-Aug-2010 14:40 jml01693

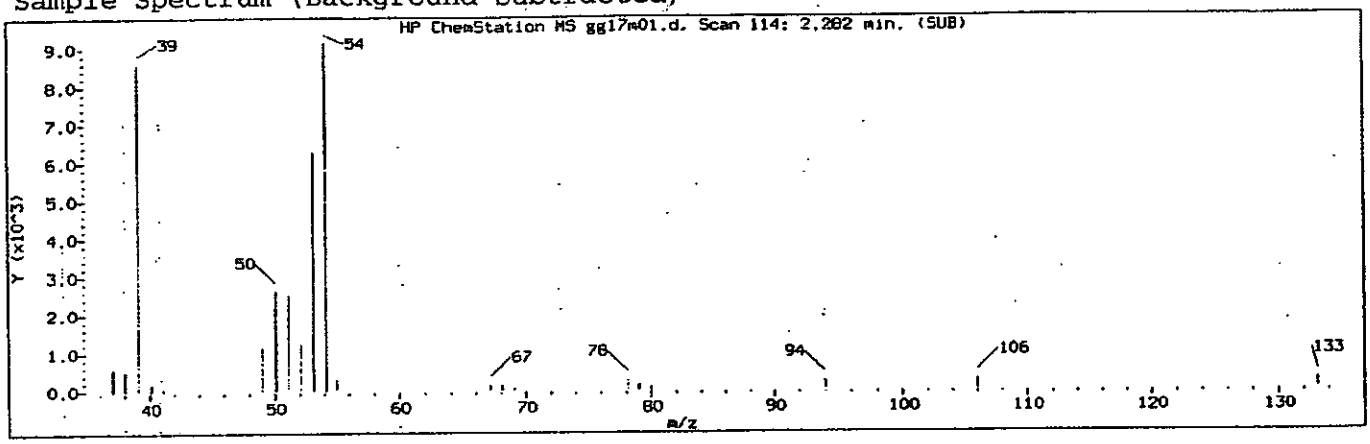
Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compound Number	: 6		
Compound Name	: Vinyl Chloride		
Scan Number	: 98		
Retention Time (minutes)	: 2.184		
Quant Ion	: 62.00		
Area	: 17781		
On-column Amount (ng)	: 0.1789		
Integration start scan	: 91	Integration stop scan:	121
Y at integration start	: 0	Y at integration end:	0

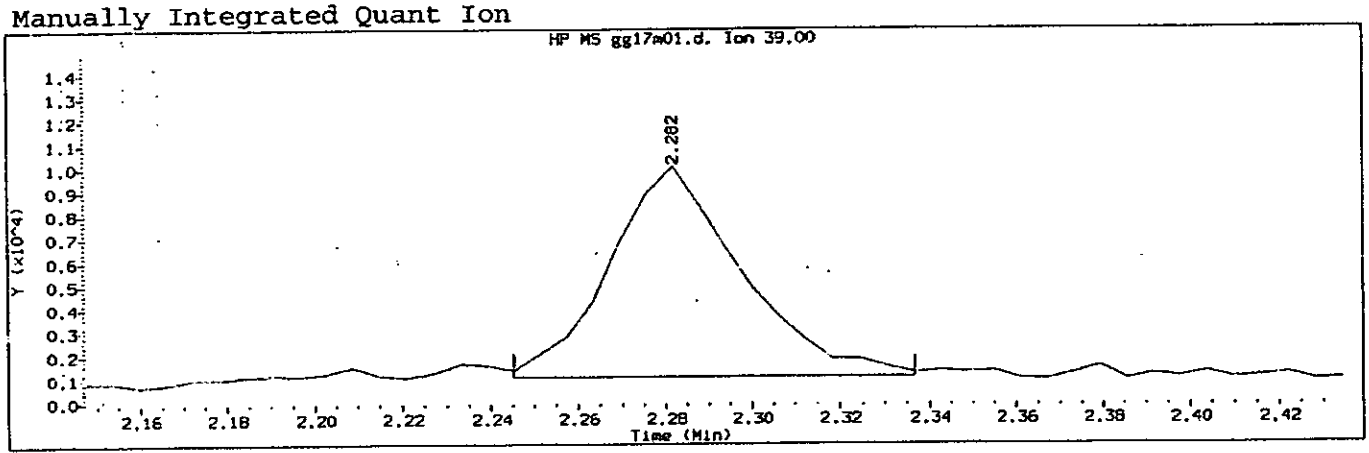
RAD36 8227

Digitally signed by Jason M. Long on 08/18/2010 at 10:59.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17m01.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 14:10 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260W25-3
Calibration date and time: 18-AUG-2010 10:58
Date, time and analyst ID of latest file update: 18-Aug-2010 10:58 jml01693

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compound Number	: 9		
Compound Name	: 1,3-Butadiene		
Scan Number	: 114		
Retention Time (minutes)	: 2.282		
Quant Ion	: 39.00		
Area (flag)	: 18992M		
On-Column Amount (ng)	: 0.1179		
Integration start scan	: 107	Integration stop scan:	122
Y at integration start	: 1056	Y at integration end:	1056

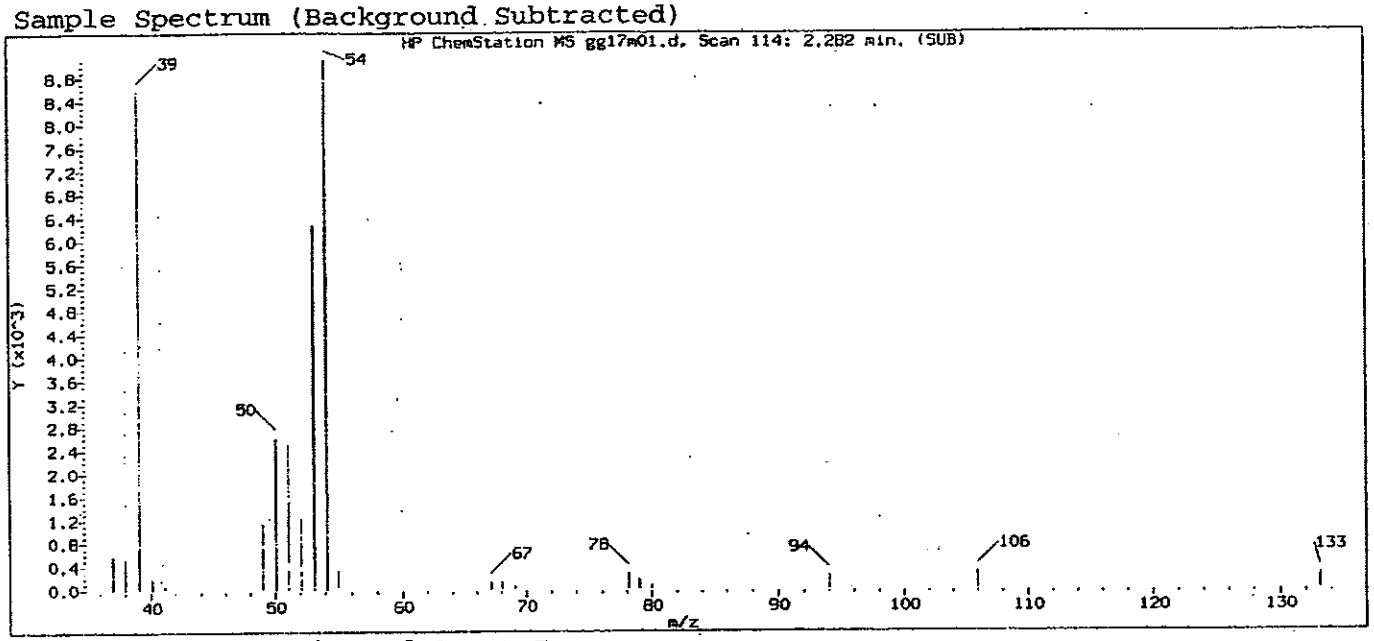
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long
on 08/18/2010 at 10:59.
Target 3.5 esignature user ID: jml01693

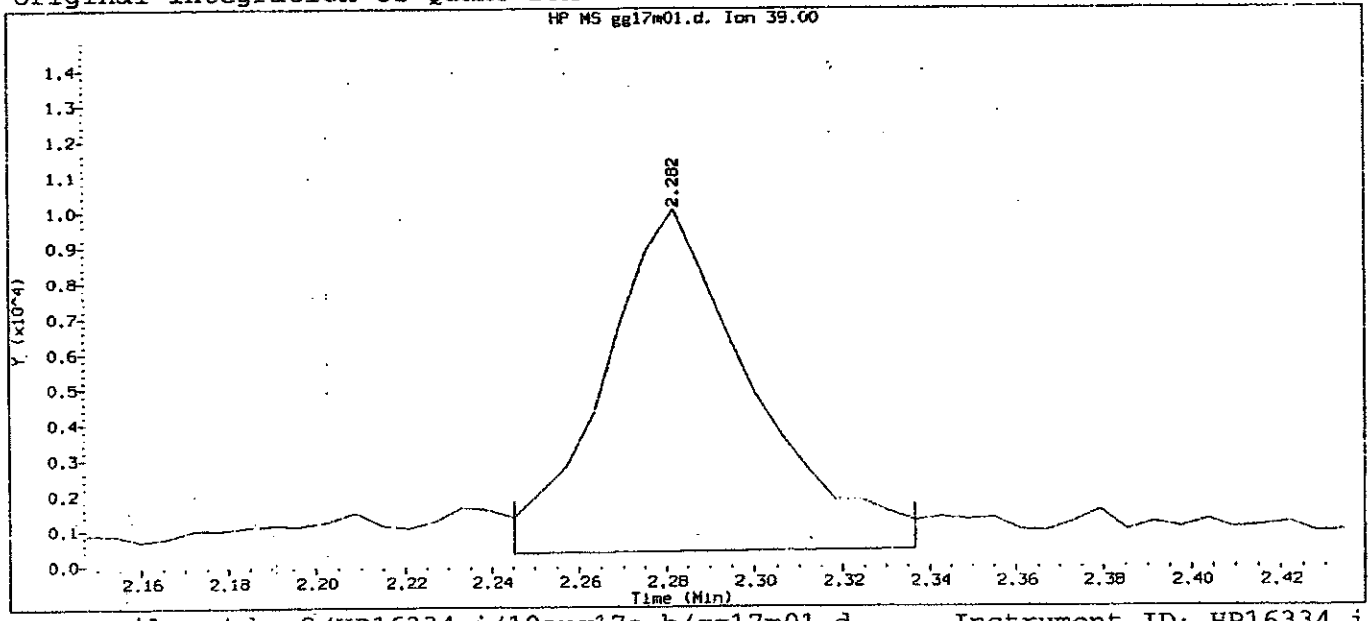
RAD36 0228

GC/MS audit/management approval: _____ 8/18/10

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17m01.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 14:10 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 17-AUG-2010 14:37
Date, time and analyst ID of latest file update: 17-Aug-2010 14:40 jml01693

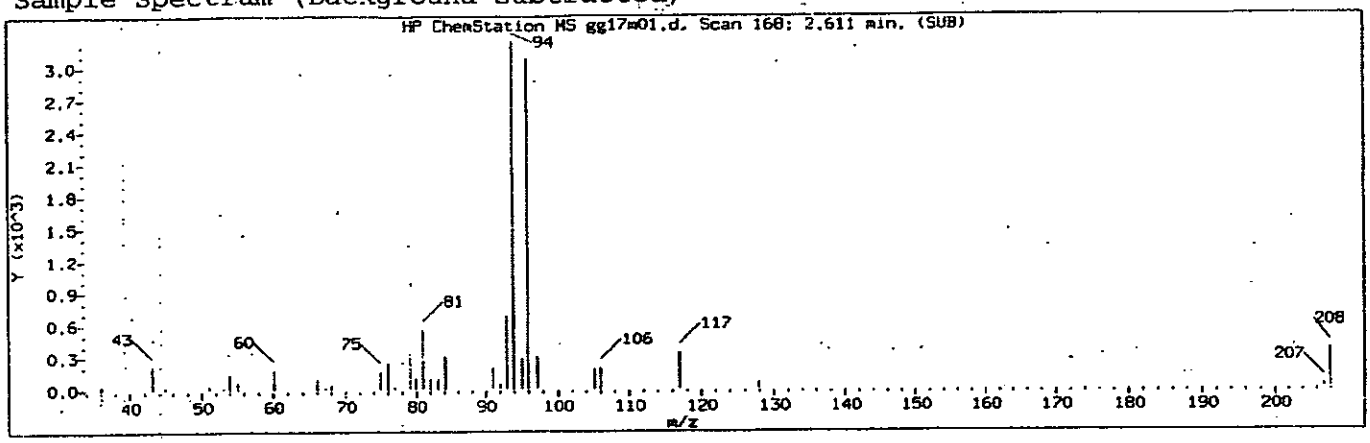
Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compound Number	: 9		
Compound Name	: 1,3-Butadiene		
Scan Number	: 114		
Retention Time (minutes)	: 2.282		
Quant Ion	: 39.00		
Area	: 22603		
On-column Amount (ng)	: 0.1403		
Integration start scan	: 107	Integration stop scan:	122
Y at integration start	: 335	Y at integration end:	429

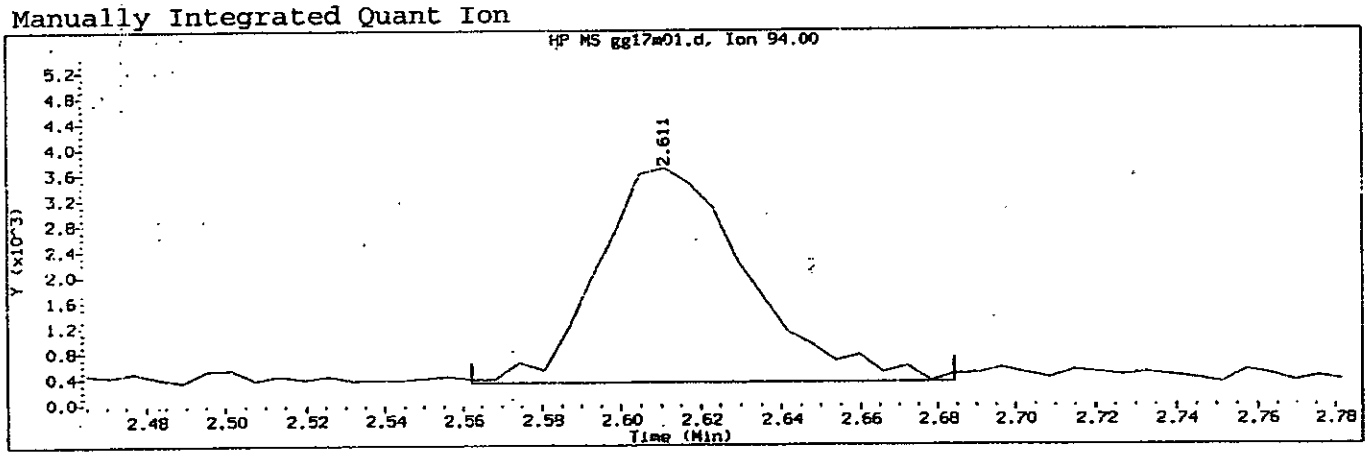
RAD36 0229

Digitally signed by Jason M. Long on 08/18/2010 at 10:59.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17m01.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 14:10 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260W25-3
Calibration date and time: 18-AUG-2010 10:58
Date, time and analyst ID of latest file update: 18-Aug-2010 10:58 jml01693

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compound Number	: 10		
Compound Name	: Bromomethane		
Scan Number	: 168		
Retention Time (minutes)	: 2.611		
Quant Ion	: 94.00		
Area (flag)	: 8755M		
On-Column Amount (ng)	: 0.1154		
Integration start scan	: 159	Integration stop scan:	179
Y at integration start	: 321	Y at integration end:	321

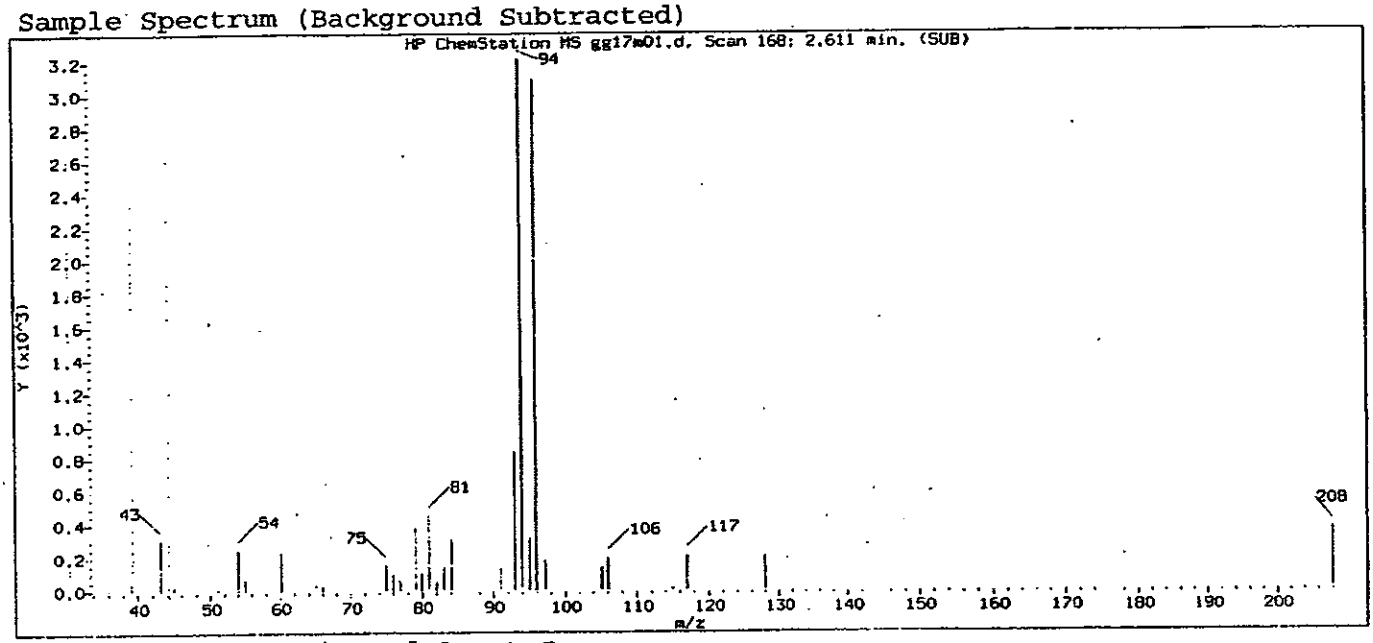
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long
on 08/18/2010 at 10:59.
Target 3.5 esignature user ID: jml01693

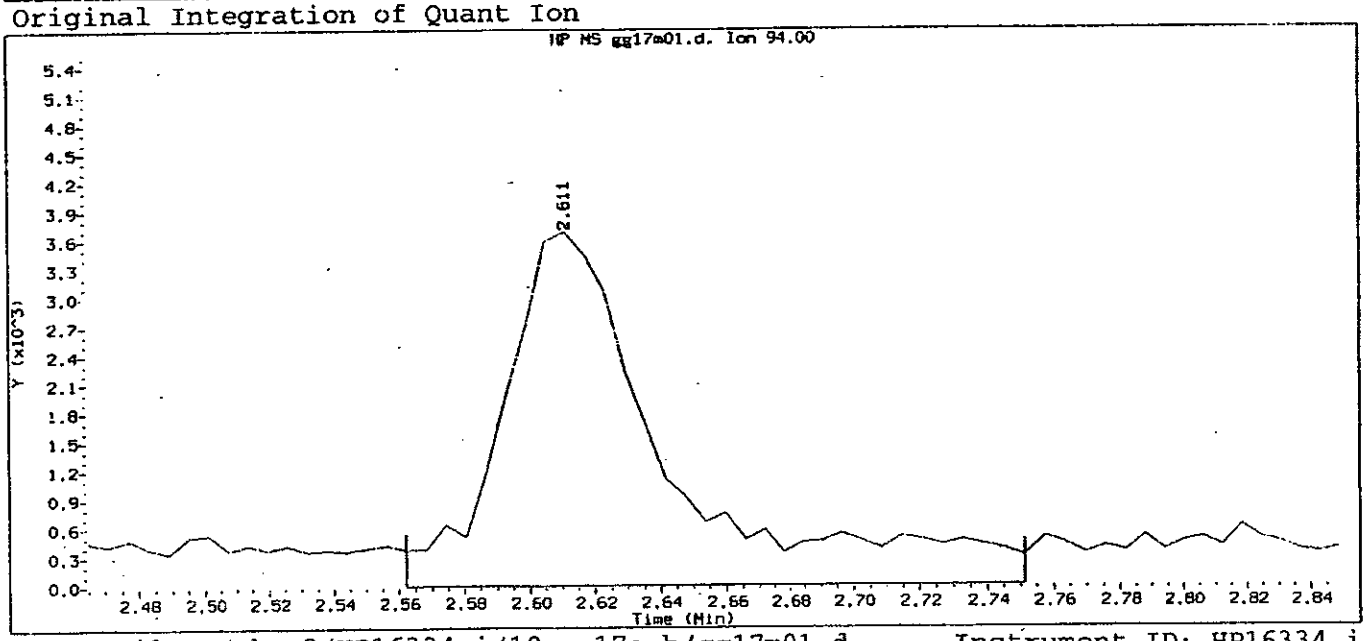
RAD36 0230

GC/MS audit/management approval: _____ 8/18/10

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17m01.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 14:10 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 17-AUG-2010 14:37
Date, time and analyst ID of latest file update: 17-Aug-2010 14:40 jml01693

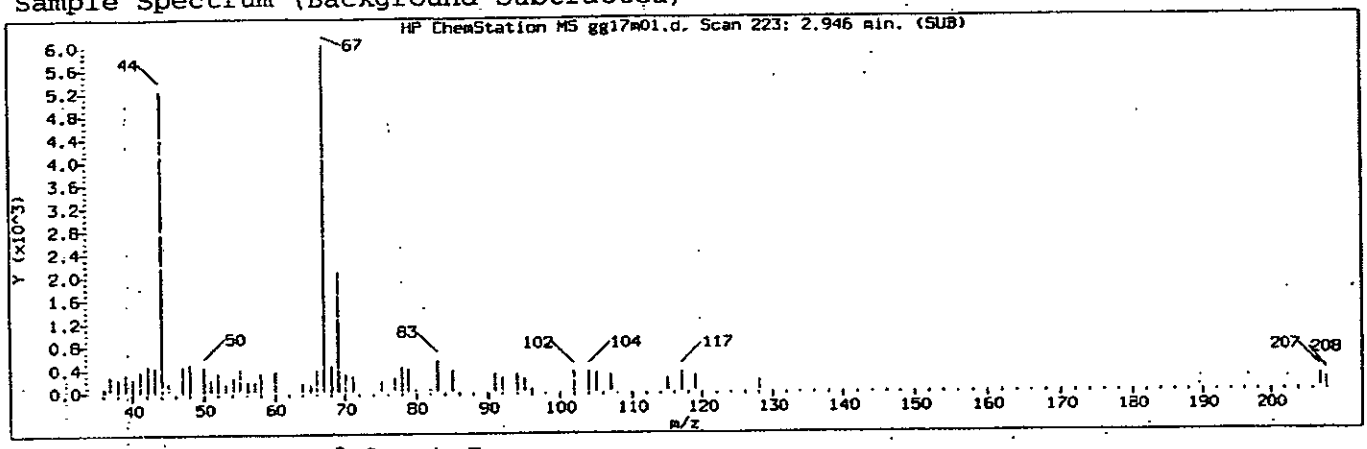
Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compound Number	: 10		
Compound Name	: Bromomethane		
Scan Number	: 168		
Retention Time (minutes)	: 2.611		
Quant Ion	: 94.00		
Area	: 12857		
On-column Amount (ng)	: 0.1695		
Integration start scan	: 159	Integration stop scan:	190
Y at integration start	: 0	Y at integration end:	0

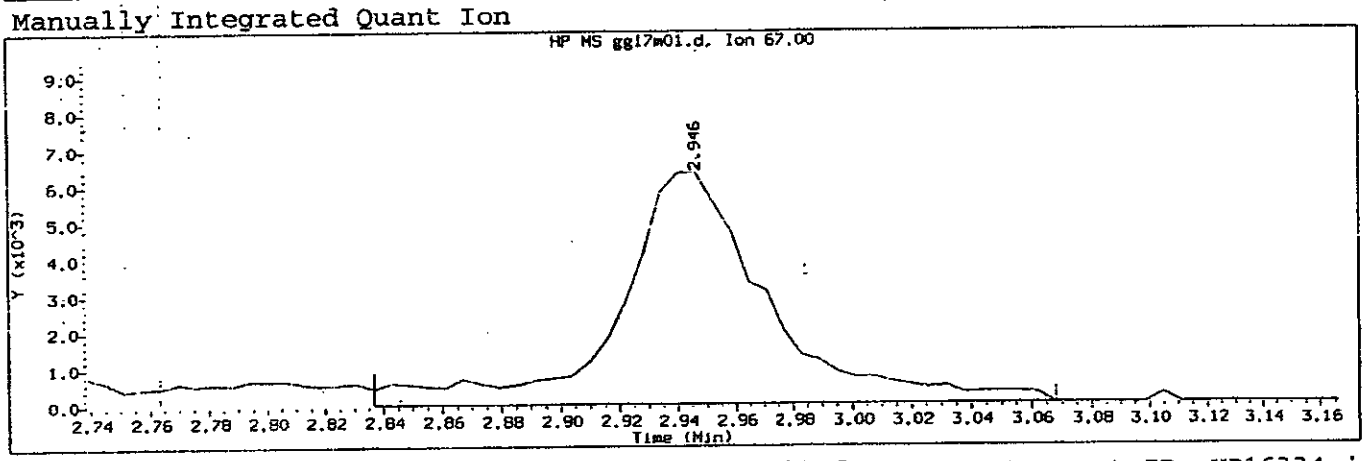
RAD36 0231

Digitally signed by Jason M. Long on 08/18/2010 at 10:59.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17m01.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 14:10 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260W25-3
Calibration date and time: 18-AUG-2010 10:58
Date, time and analyst ID of latest file update: 18-Aug-2010 10:58 jml01693

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compound Number	: 13		
Compound Name	: Dichlorofluoromethane		
Scan Number	: 223		
Retention Time (minutes)	: 2.946		
Quant Ion	: 67.00		
Area (flag)	: 22833M		
On-Column Amount (ng)	: 0.1646		
Integration start scan	: 204	Integration stop scan:	242
Y at integration start	: 0	Y at integration end:	0

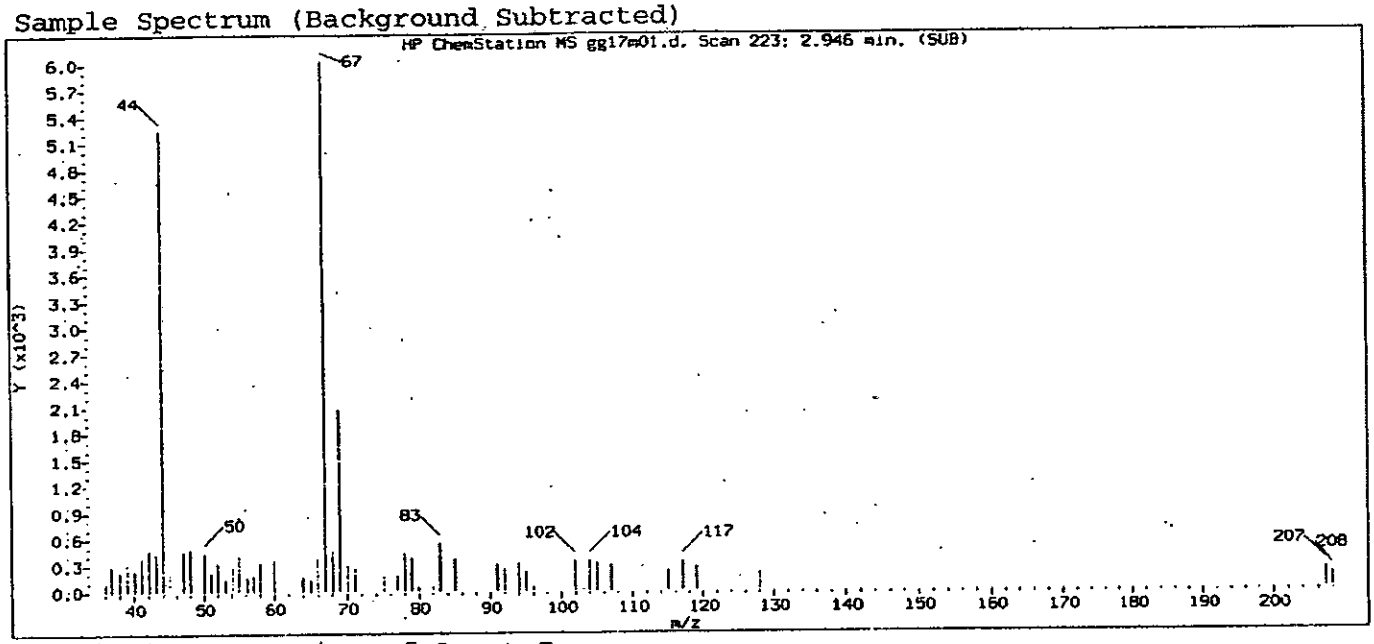
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long
on 08/18/2010 at 10:59.
Target 3.5 esignature user ID: jml01693

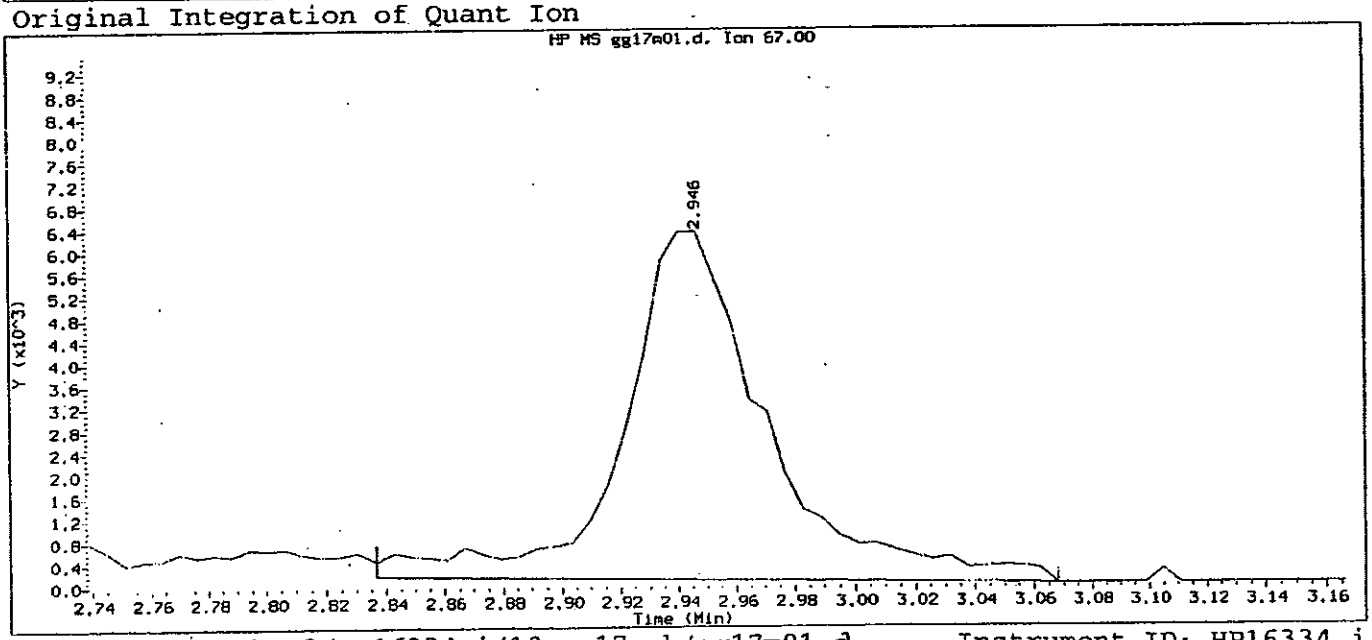
GC/MS audit/management approval: _____ 8/18/10

RAD36 8232

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17m01.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 14:10 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 17-AUG-2010 14:37
Date, time and analyst ID of latest file update: 17-Aug-2010 14:40 jml01693

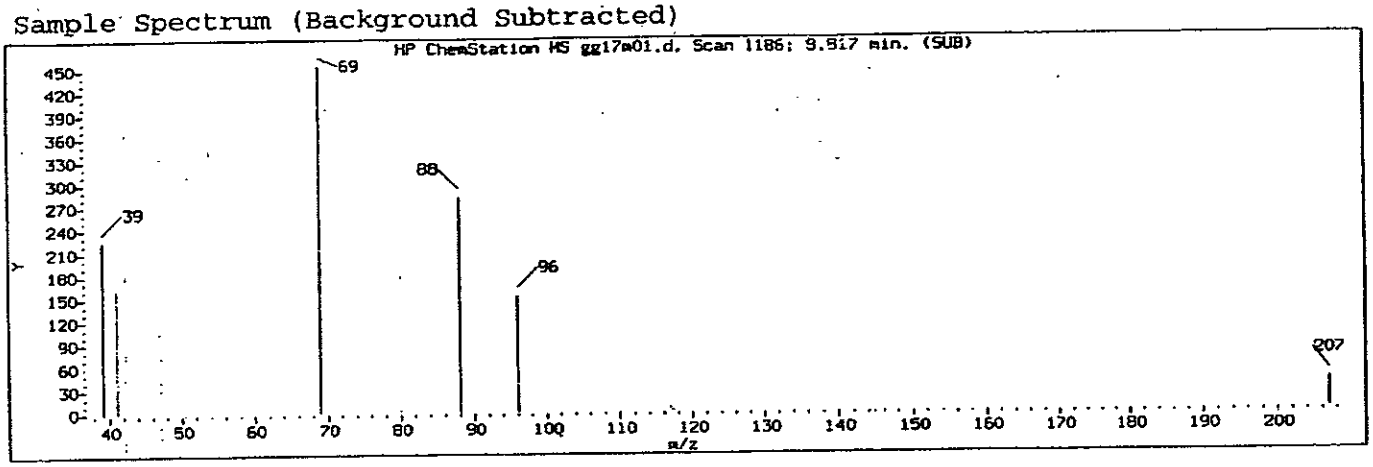
Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compound Number	: 13		
Compound Name	: Dichlorofluoromethane		
Scan Number	: 223		
Retention Time (minutes)	: 2.946		
Quant Ion	: 67.00		
Area	: 21516		
On-column Amount (ng)	: 0.1551		
Integration start scan	: 204	Integration stop scan:	242
Y at integration start	: 178	Y at integration end:	0

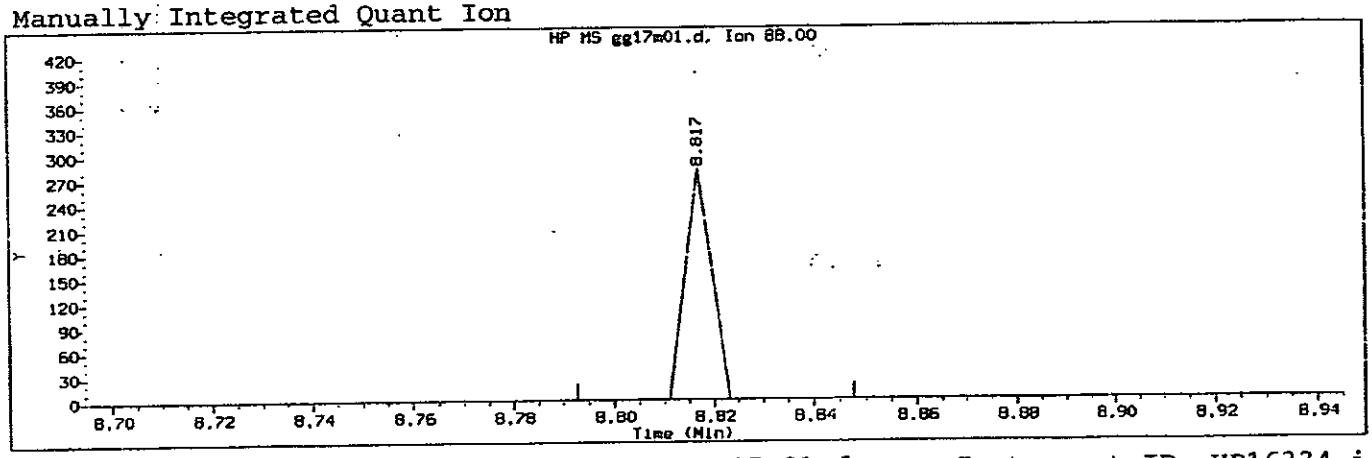
RAD36 0233

Digitally signed by Jason M. Long on 08/18/2010 at 10:59.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17m01.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 14:10 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260W25-3
Calibration date and time: 18-AUG-2010 10:58
Date, time and analyst ID of latest file update: 18-Aug-2010 10:58 jml01693

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compound Number	: 89		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1186		
Retention Time (minutes)	: 8.817		
Quant Ion	: 88.00		
Area (flag)	: 103M		
On-Column Amount (ng)	: 0.5268		
Integration start scan	: 1181	Integration stop scan:	1190
Y at integration start	: 0	Y at integration end:	0

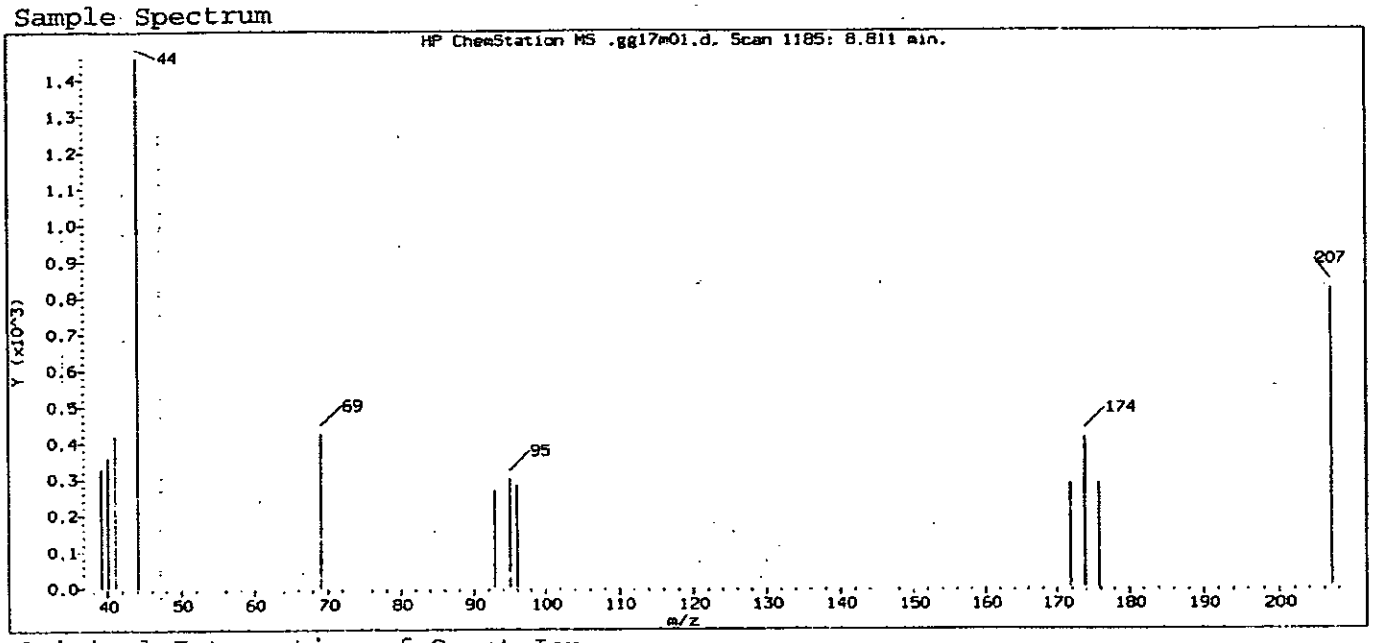
Reason for manual integration: missed peak

Analyst responsible for change: Digitally signed by Jason M. Long
on 08/18/2010 at 10:59.
Target 3.5 esignature user ID: jml01693

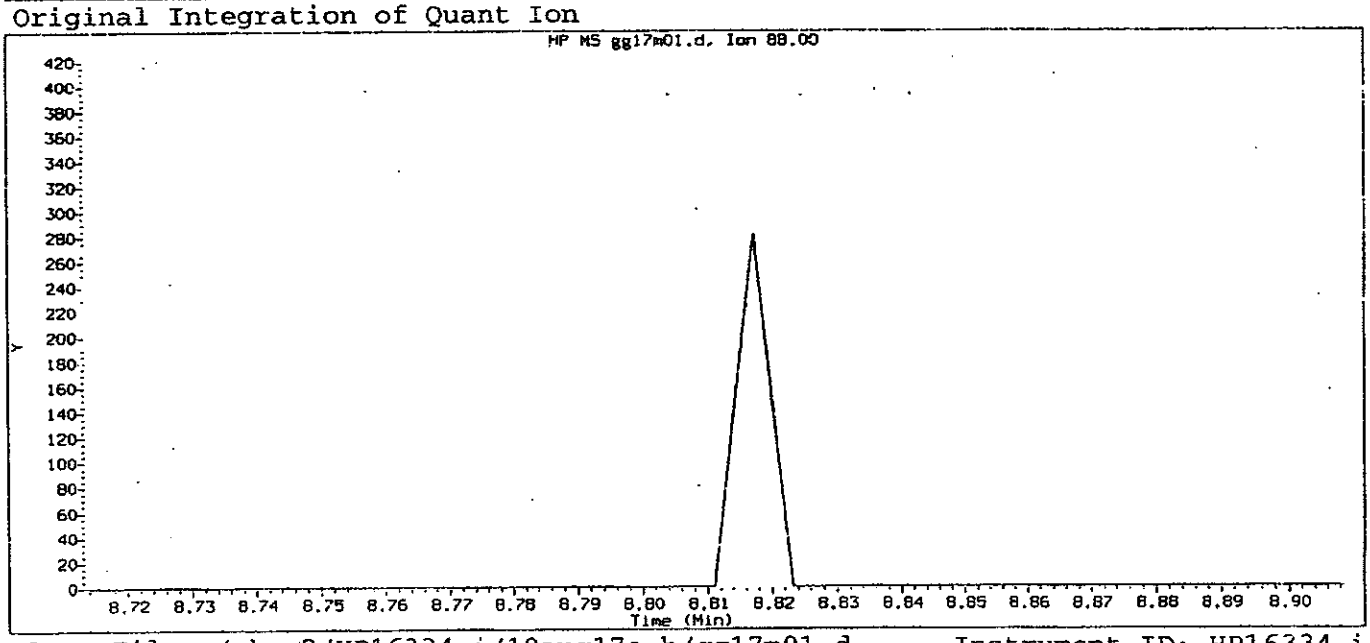
RAD36 0234

GC/MS audit/management approval: _____ 8/18/10

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17m01.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 14:10 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 17-AUG-2010 14:37
Date, time and analyst ID of latest file update: 17-Aug-2010 14:40 jml01693

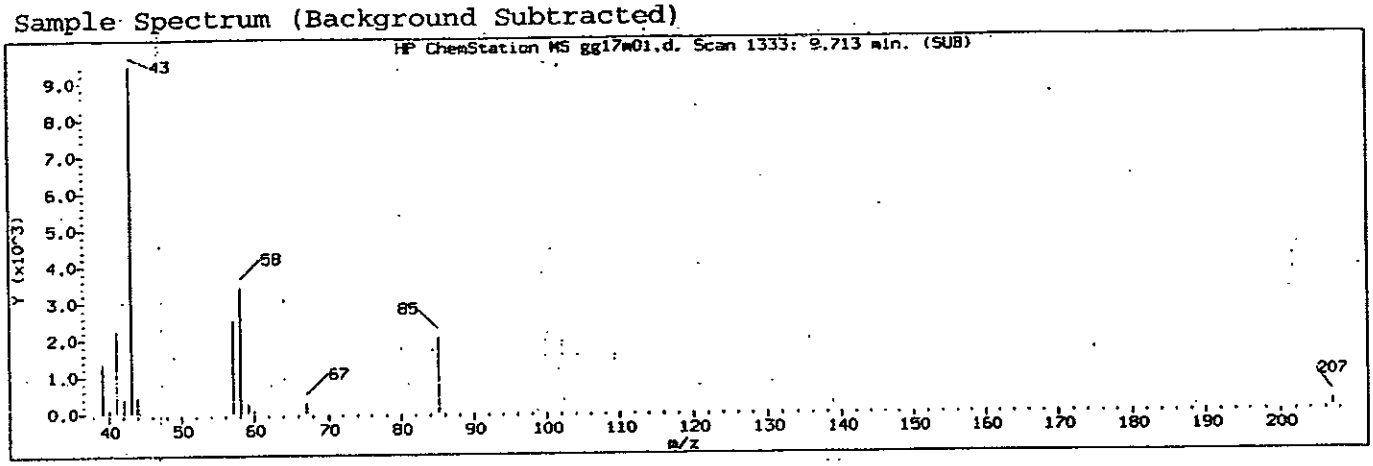
Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compound Number : 89
Compound Name : 1,4-Dioxane
Expected RT (minutes) : 8.811
Quant Ion : 88

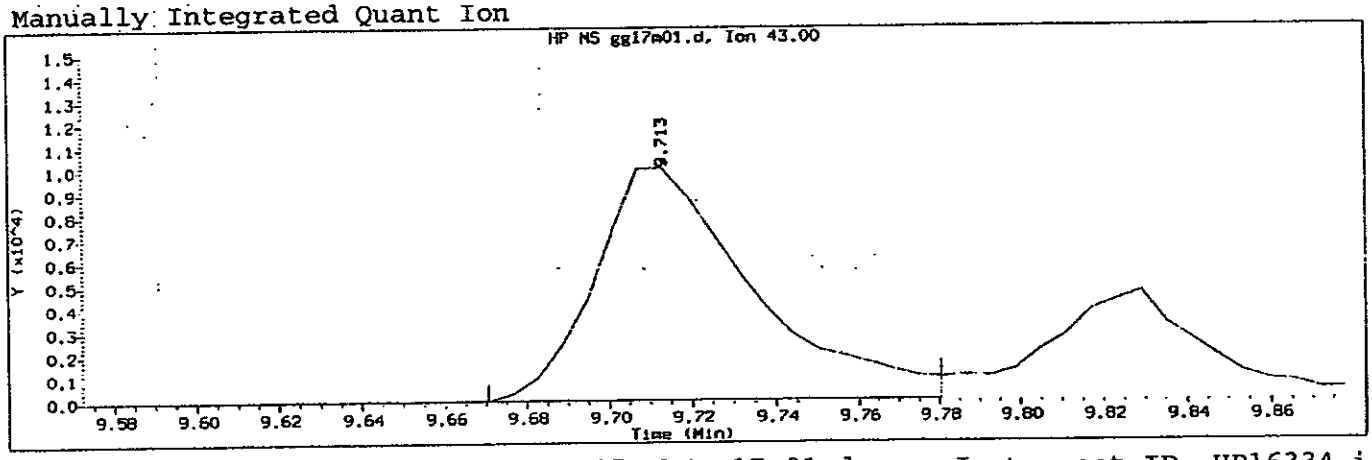
RAD36 0235

Digitally signed by Jason M. Long on 08/18/2010 at 10:59.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17m01.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 14:10 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260W25-3
Calibration date and time: 18-AUG-2010 10:58
Date, time and analyst ID of latest file update: 18-Aug-2010 10:58 jml01693

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compound Number	: 96		
Compound Name	: 4-Methyl-2-Pentanone		
Scan Number	: 1333		
Retention Time (minutes)	: 9.713		
Quant Ion	: 43.00		
Area (flag)	: 26717M		
On-Column Amount (ng)	: 0.8875		
Integration start scan	: 1325	Integration stop scan:	1343
Y at integration start	: 0	Y at integration end:	0

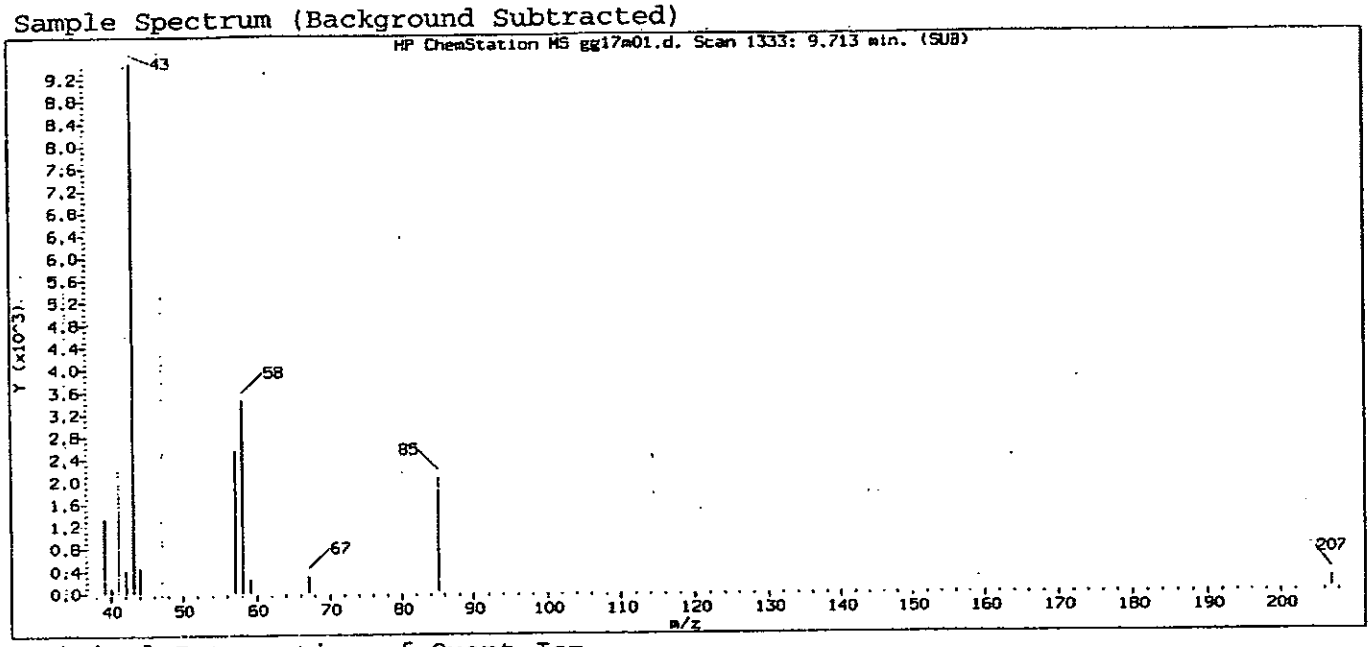
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long
on 08/18/2010 at 10:59.
Target 3.5 esignature user ID: jml01693

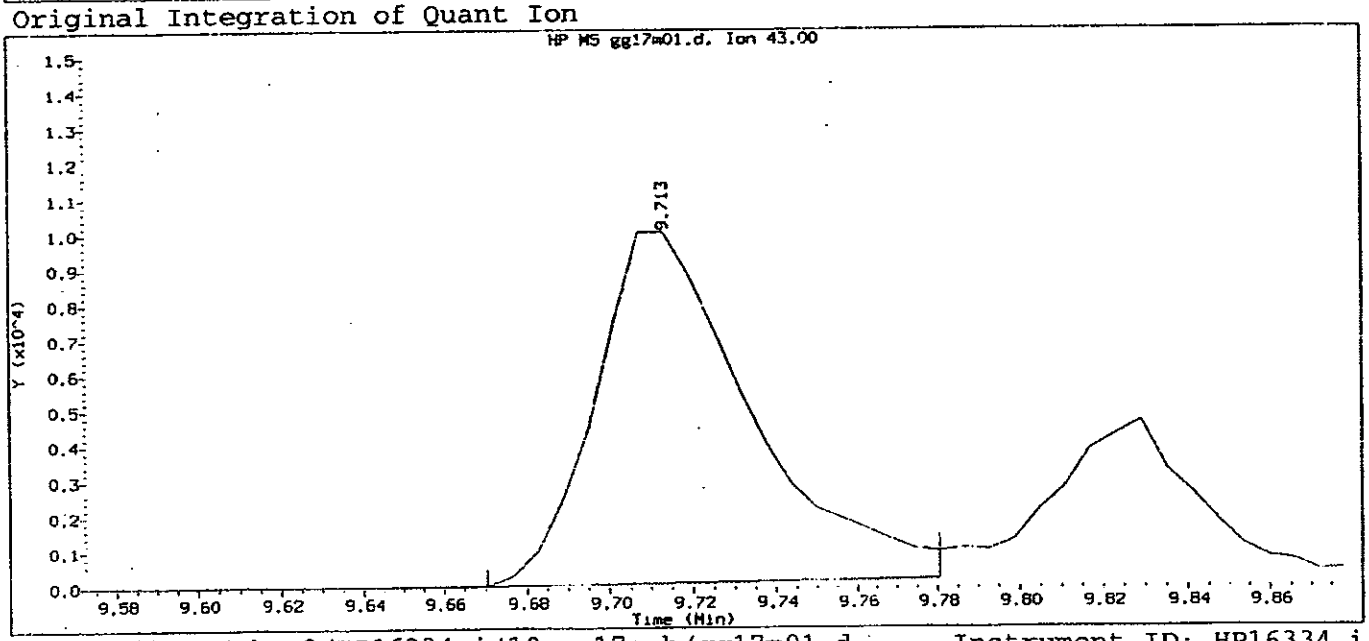
GC/MS audit/management approval: _____ 8/18/10

RAD36 8236

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17m01.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 14:10 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 17-AUG-2010 14:37
Date, time and analyst ID of latest file update: 17-Aug-2010 14:40 jml01693

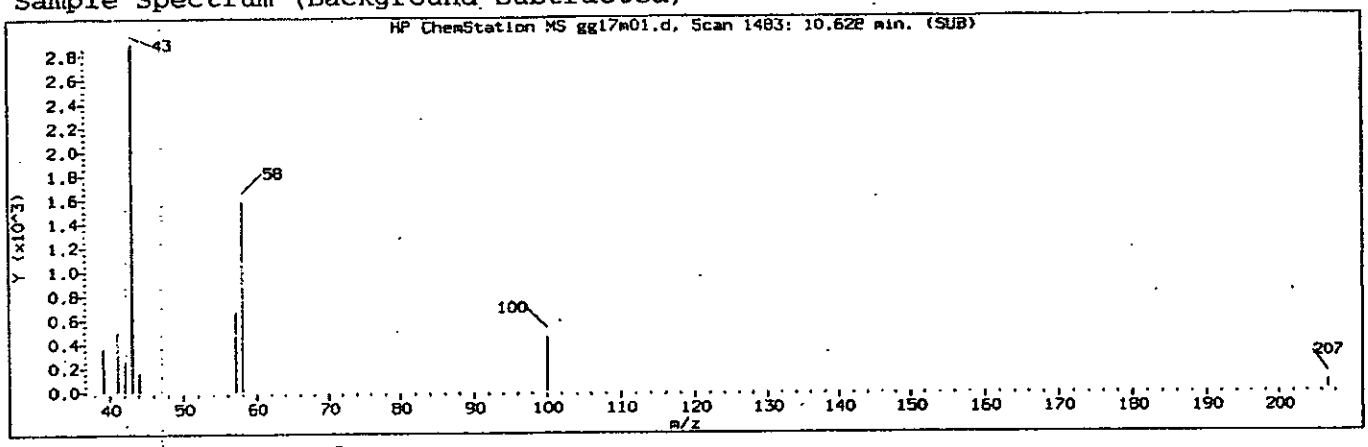
Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compound Number	: 96		
Compound Name	: 4-Methyl-2-Pentanone		
Scan Number	: 1333		
Retention Time (minutes)	: 9.713		
Quant Ion	: 43.00		
Area	: 25995		
On-column Amount (ng)	: 0.8635		
Integration start scan	: 1325	Integration stop scan:	1343
Y at integration start	: 0	Y at integration end:	166

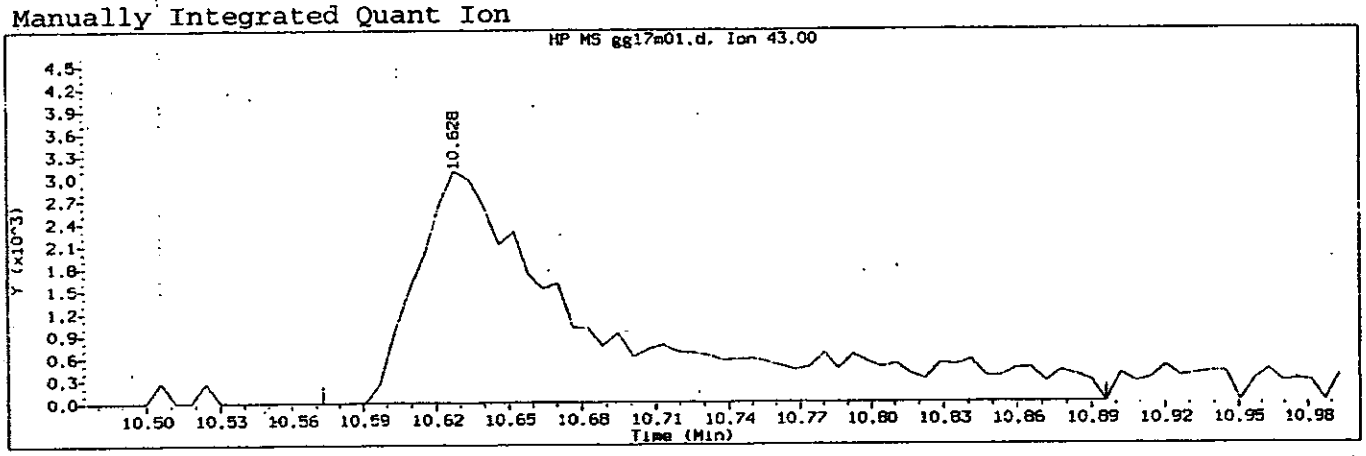
RAD36 0237

Digitally signed by Jason M. Long on 08/18/2010 at 10:59.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17m01.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 14:10 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260W25-3
Calibration date and time: 18-AUG-2010 10:58
Date, time and analyst ID of latest file update: 18-Aug-2010 10:58 jml01693

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compound Number	: 107		
Compound Name	: 2-Hexanone		
Scan Number	: 1483		
Retention Time (minutes)	: 10.628		
Quant Ion	: 43.00		
Area (flag)	: 16443MA		
On-Column Amount (ng)	: 0.8151		
Integration start scan	: 1473	Integration stop scan:	1526
Y at integration start	: 0	Y at integration end:	0

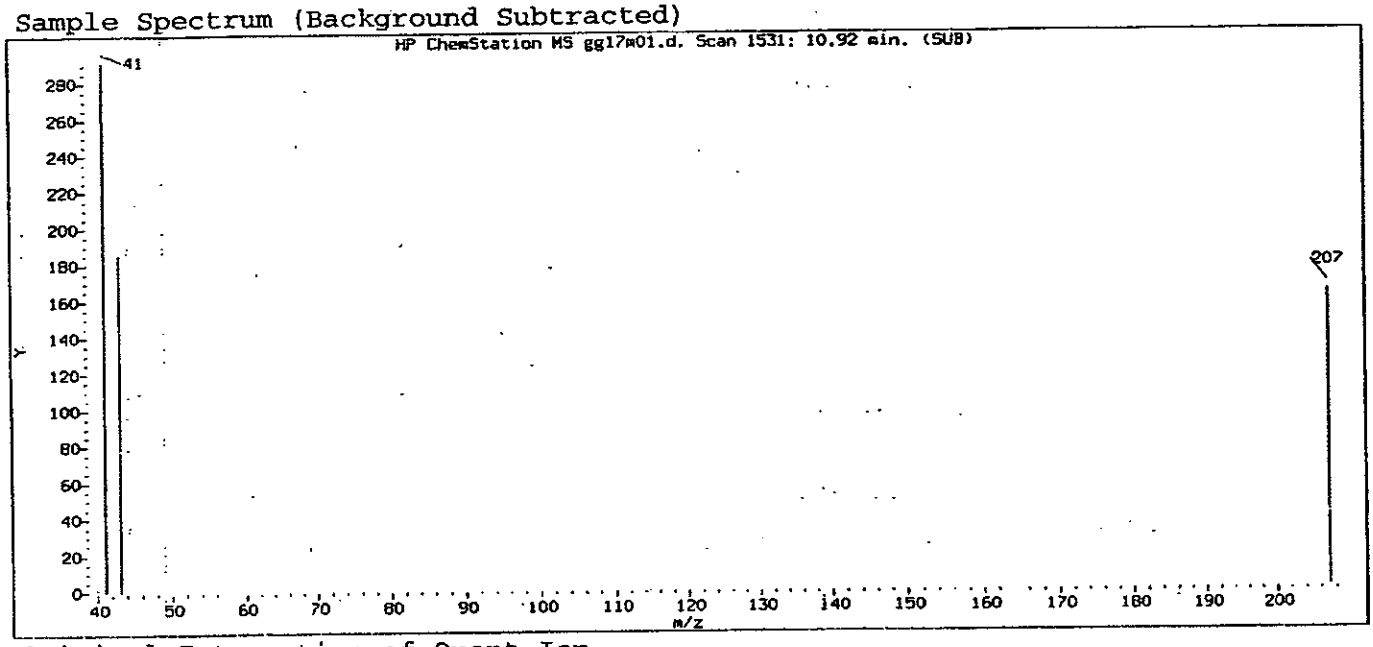
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long.
on 08/18/2010 at 10:59.
Target 3.5 esignature user ID: jml01693

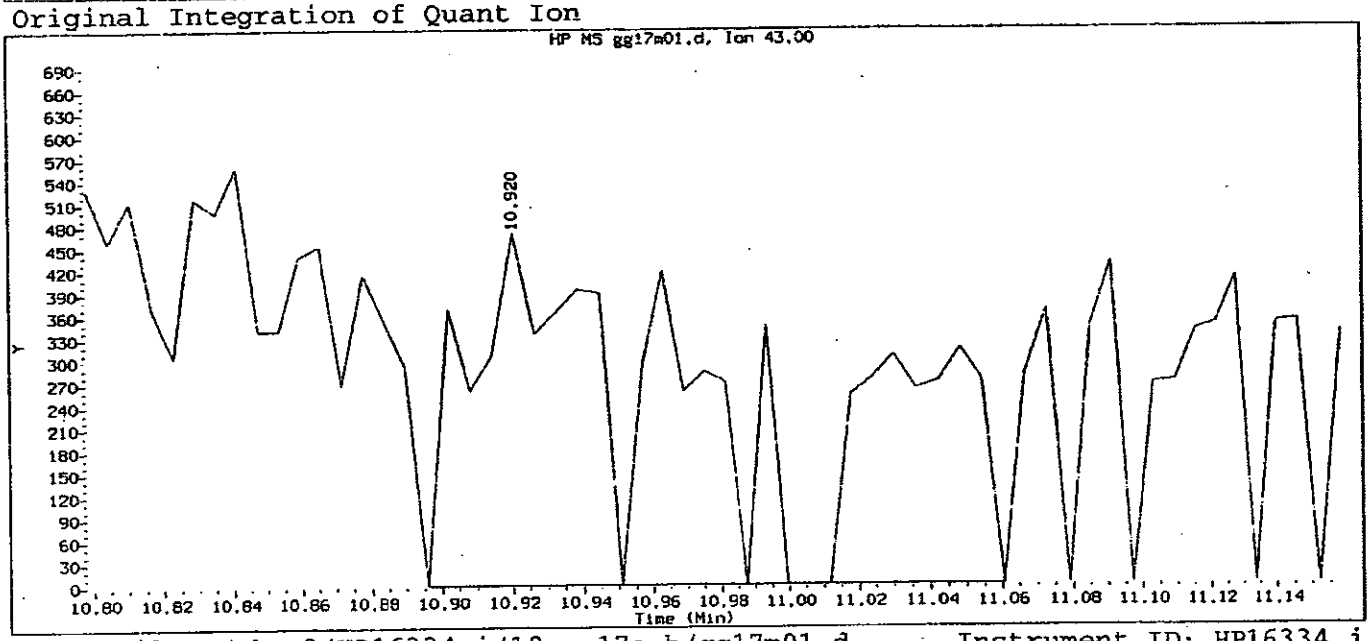
GC/MS audit/management approval: _____

RAD36 0238

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17m01.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 14:10 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 17-AUG-2010 14:37
Date, time and analyst ID of latest file update: 17-Aug-2010 14:40 jml01693

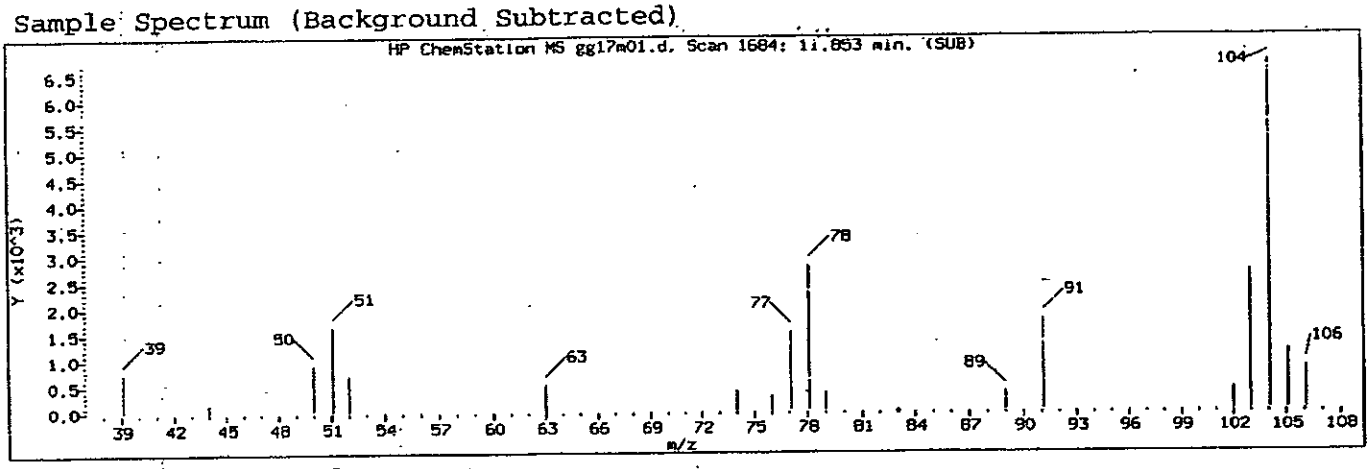
Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compound Number	: 107		
Compound Name	: 2-Hexanone		
Scan Number	: 1531		
Retention Time (minutes)	: 10.920		
Quant Ion	: 43.00		
Area	: 2455		
On-column Amount (ng)	: 0.1217		
Integration start scan	: 1526	Integration stop scan:	1553
Y at integration start	: 0	Y at integration end:	0

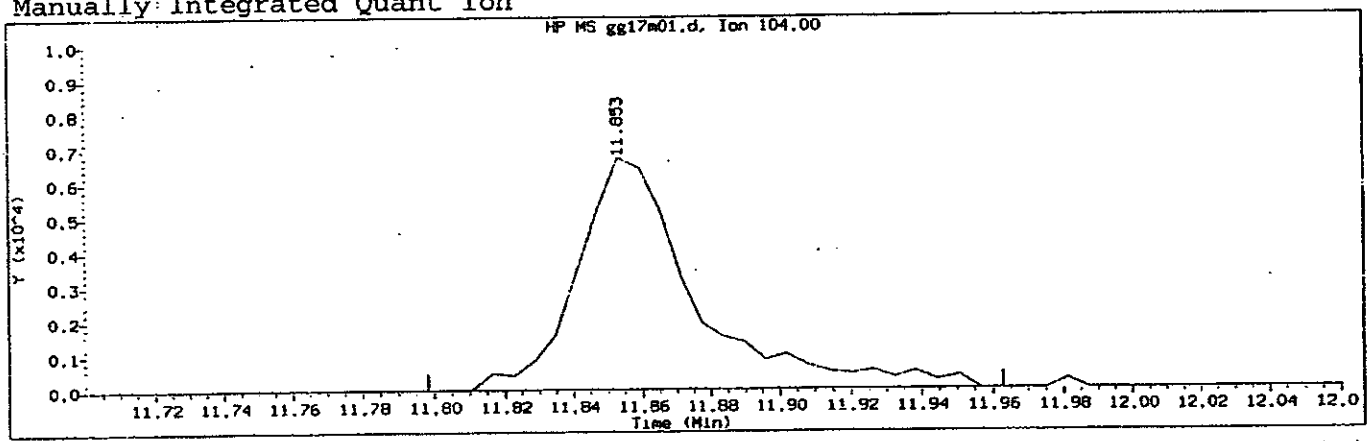
RAD36 0239

Digitally signed by Jason M. Long on 08/18/2010 at 10:59.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17m01.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 14:10 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260W25-3
Calibration date and time: 18-AUG-2010 10:58
Date, time and analyst ID of latest file update: 18-Aug-2010 10:58 jml01693

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compound Number	: 119		
Compound Name	: Styrene		
Scan Number	: 1684		
Retention Time (minutes)	: 11.853		
Quant Ion	: 104.00		
Area (flag)	: 16081M		
On-Column Amount (ng)	: 0.0818		
Integration start scan	: 1674	Integration stop scan:	1701
Y at integration start	: 0	Y at integration end:	0

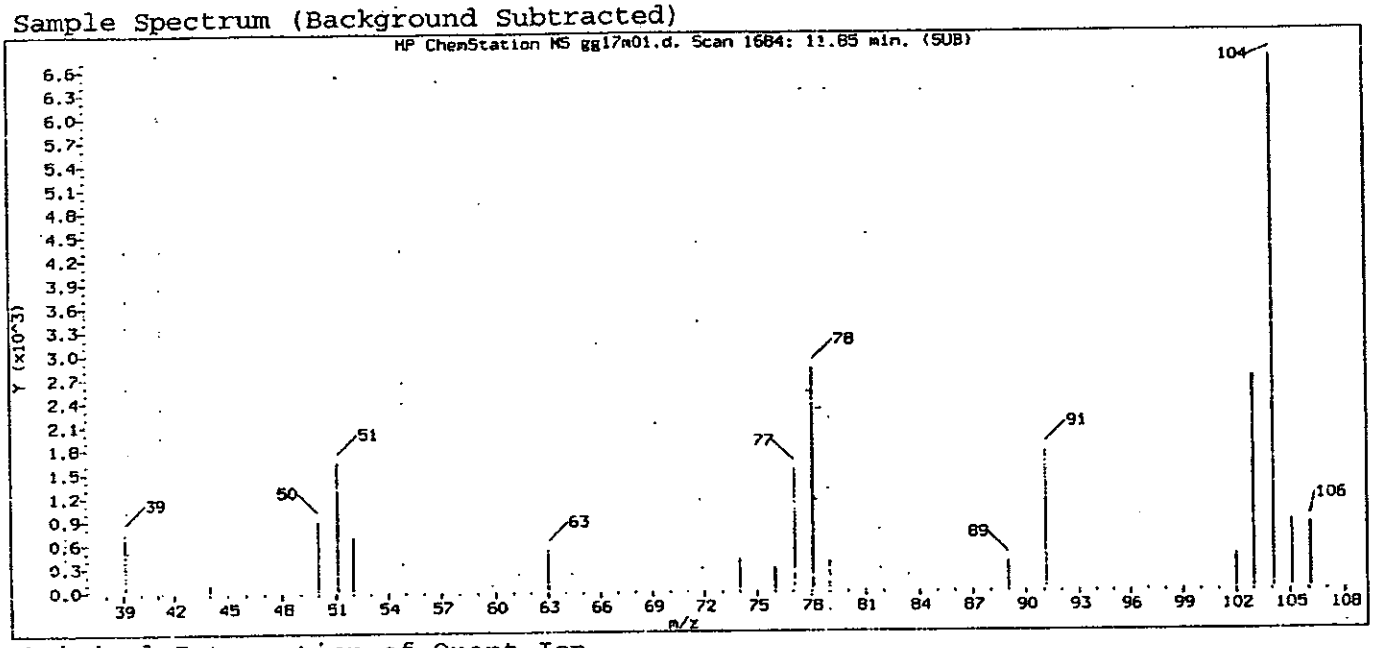
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long
on 08/18/2010 at 10:59.
Target 3.5 esignature user ID: jml01693

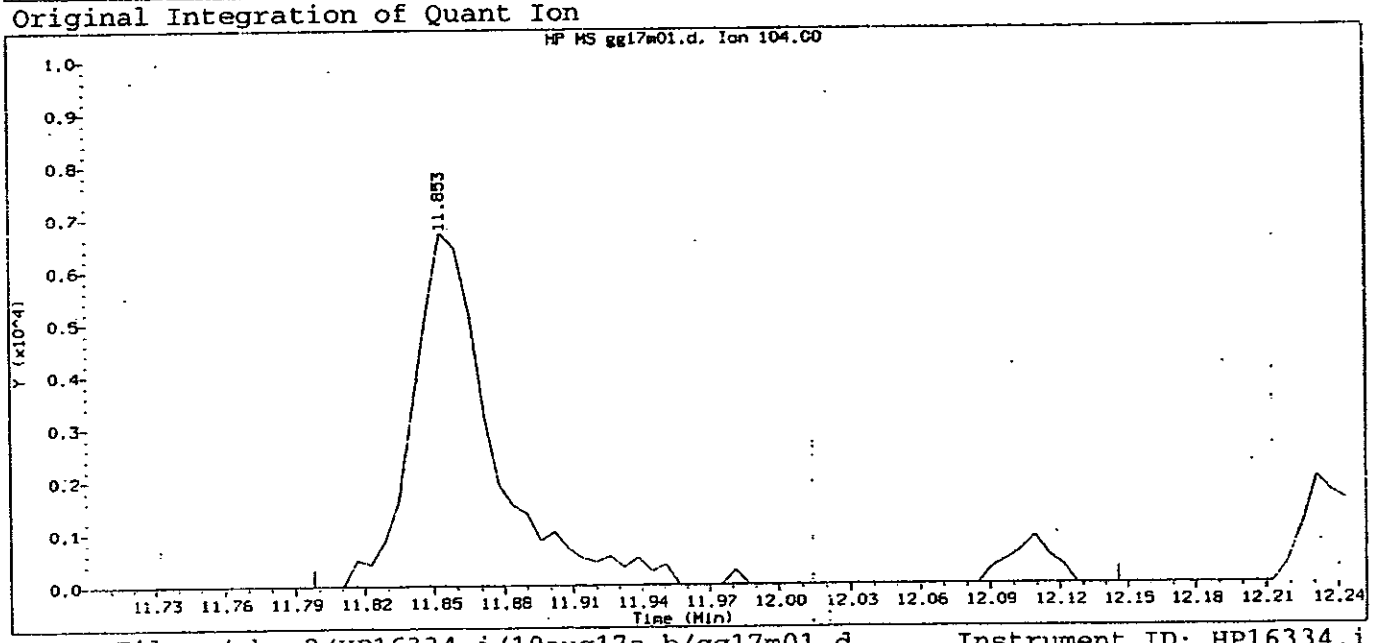
RAD36 0240

GC/MS audit/management approval: _____

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17m01.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 14:10 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 17-AUG-2010 14:37
Date, time and analyst ID of latest file update: 17-Aug-2010 14:40 jml01693

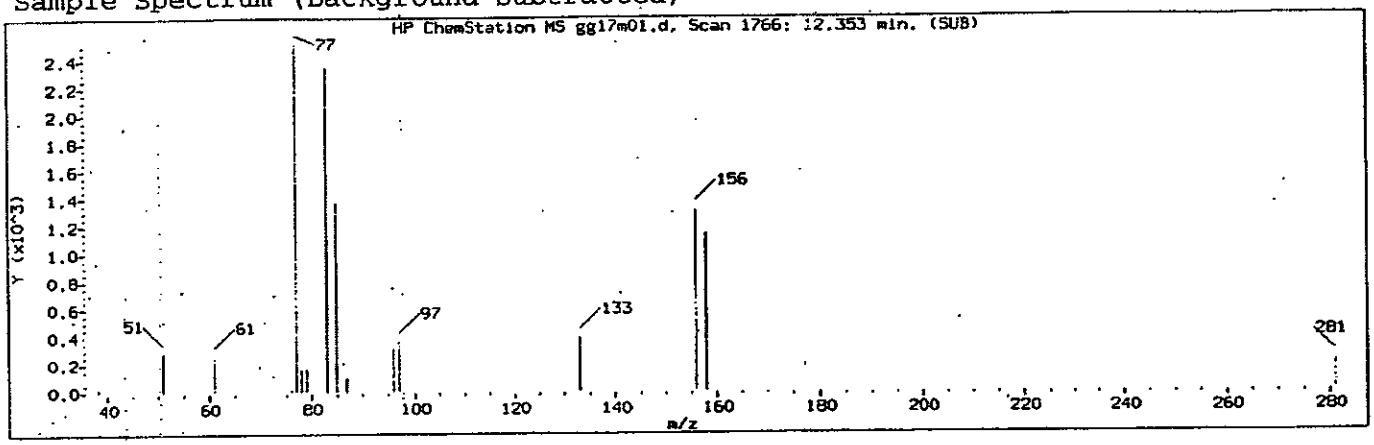
Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compound Number	: 119		
Compound Name	: Styrene		
Scan Number	: 1684		
Retention Time (minutes)	: 11.853		
Quant Ion	: 104.00		
Area	: 17348		
On-column Amount (ng)	: 0.0882		
Integration start scan	: 1674	Integration stop scan:	1731
Y at integration start	: 0	Y at integration end:	0

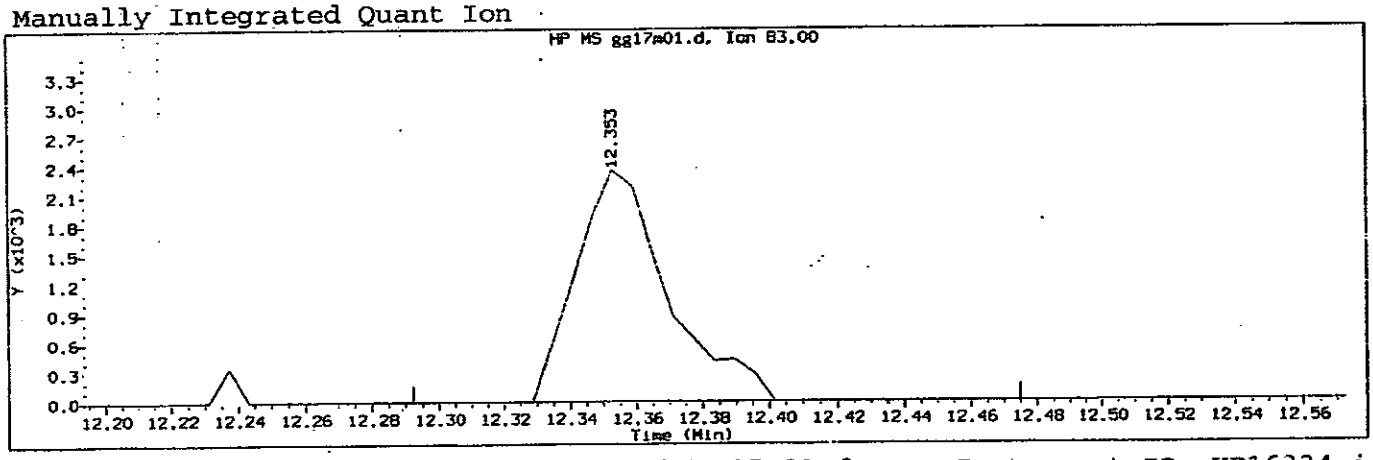
RAD36 8241

Digitally signed by Jason M. Long on 08/18/2010 at 10:59.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17m01.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 14:10 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260W25-3
Calibration date and time: 18-AUG-2010 10:58
Date, time and analyst ID of latest file update: 18-Aug-2010 10:58 jml01693

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compound Number	: 128		
Compound Name	: 1,1,2,2-Tetrachloroethane		
Scan Number	: 1766		
Retention Time (minutes)	: 12.353		
Quant Ion	: 83.00		
Area (flag)	: 4510M		
On-Column Amount (ng)	: 0.1020		
Integration start scan	: 1755	Integration stop scan:	1785
Y at integration start	: 0	Y at integration end:	0

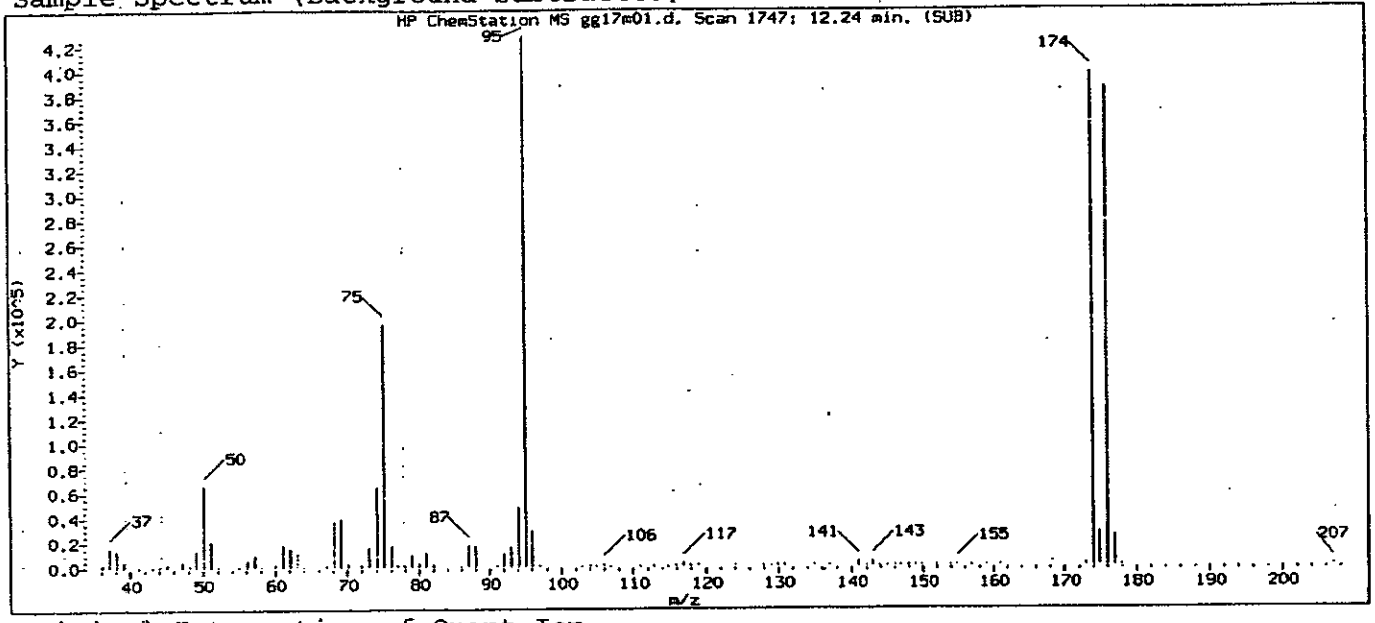
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long
on 08/18/2010 at 10:59.
Target 3.5 esignature user ID: jml01693

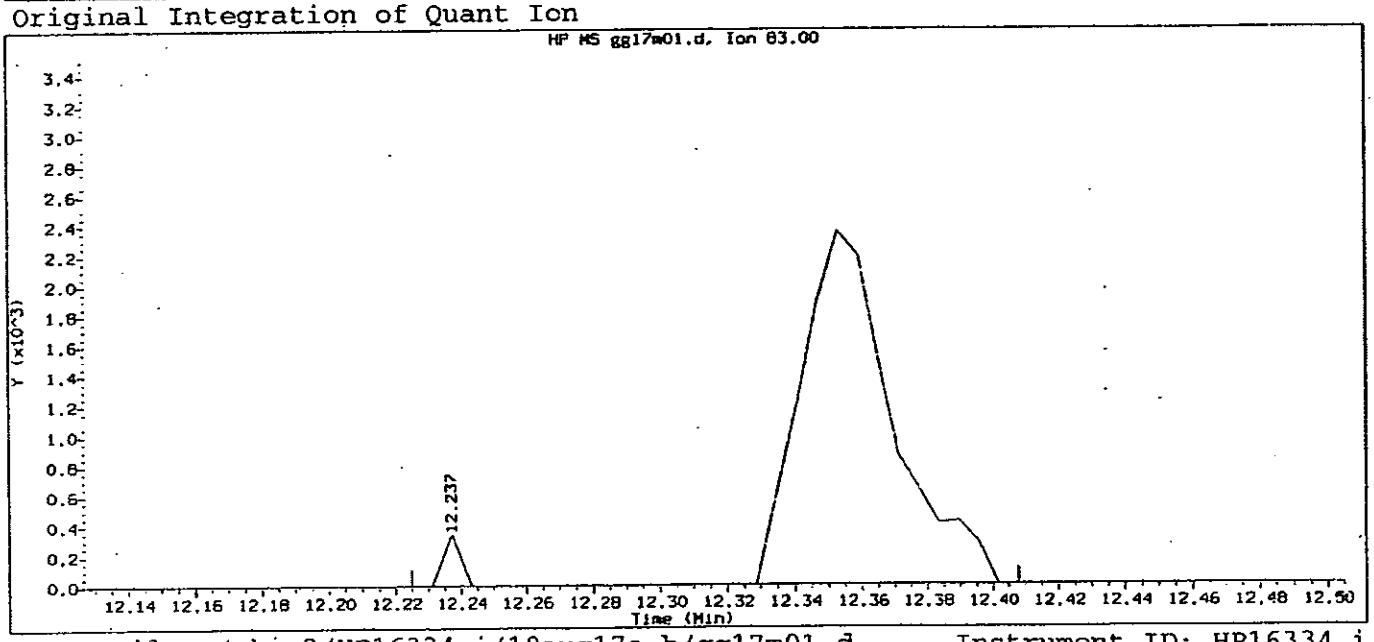
RAD36 8242

GC/MS audit/management approval: _____ 8/18/10

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17m01.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 14:10 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 17-AUG-2010 14:37
Date, time and analyst ID of latest file update: 17-Aug-2010 14:40 jml01693

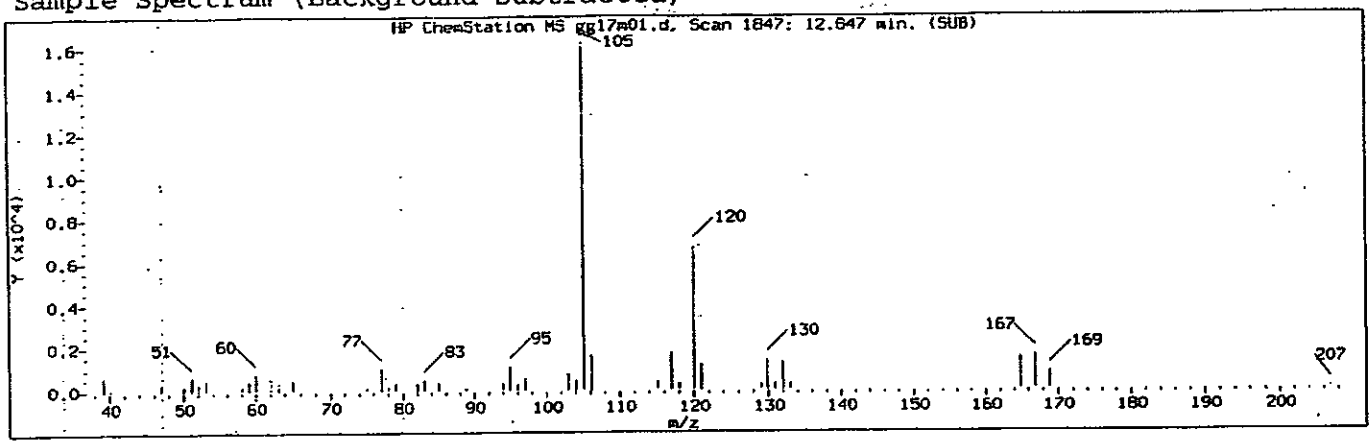
Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compound Number	: 128		
Compound Name	: 1,1,2,2-Tetrachloroethane		
Scan Number	: 1747		
Retention Time (minutes)	: 12.237		
Quant Ion	: 83.00		
Area	: 4636		
On-column Amount (ng)	: 0.1049		
Integration start scan	: 1744	Integration stop scan:	1774
Y at integration start	: 0	Y at integration end:	0

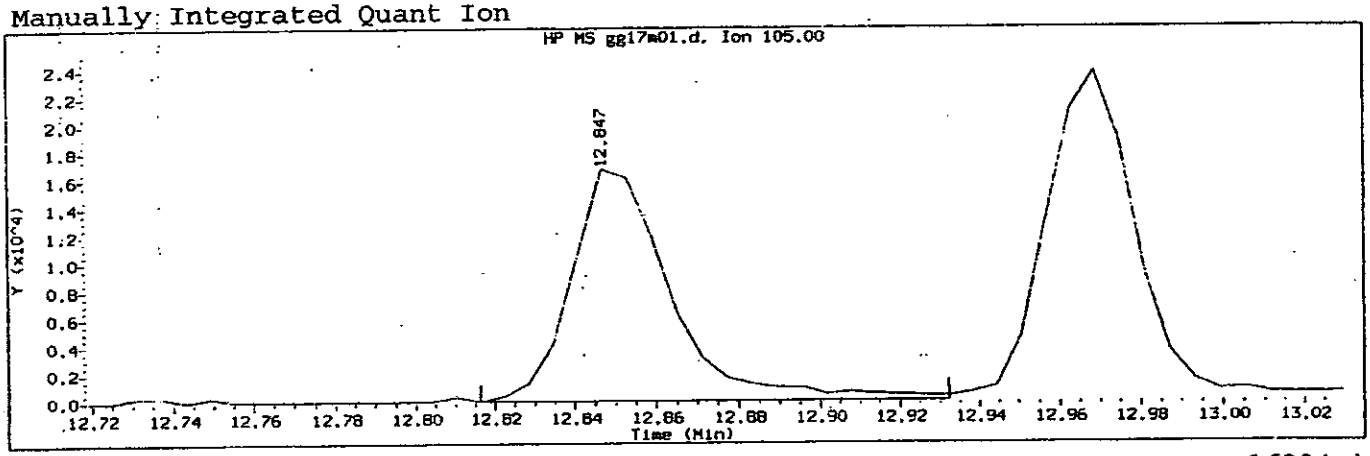
RAD36 0243

Digitally signed by Jason M. Long on 08/18/2010 at 10:59.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17m01.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 14:10 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260W25-3
Calibration date and time: 18-AUG-2010 10:58
Date, time and analyst ID of latest file update: 18-Aug-2010 10:58 jml01693

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compound Number	: 139		
Compound Name	: 1,2,4-Trimethylbenzene		
Scan Number	: 1847		
Retention Time (minutes)	: 12.847		
Quant Ion	: 105.00		
Area (flag)	: 28552M		
On-Column Amount (ng)	: 0.0967		
Integration start scan	: 1841	Integration stop scan:	1860
Y at integration start	: 0	Y at integration end:	0

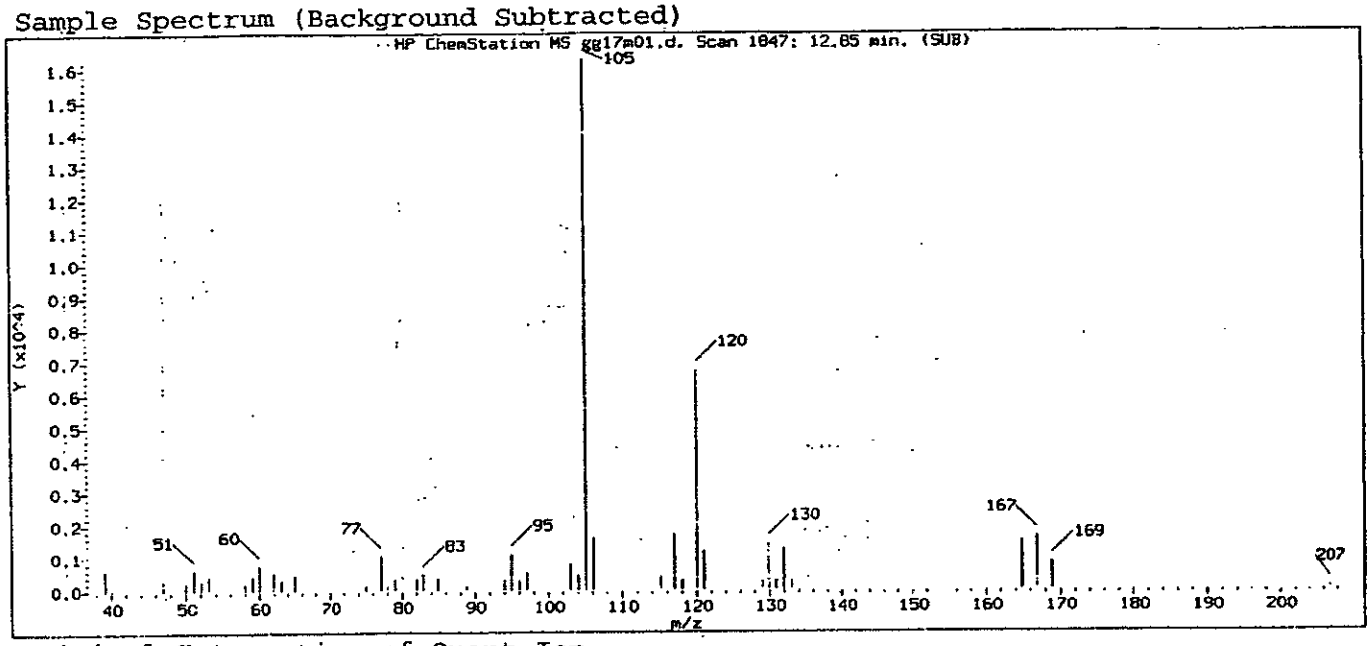
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long
on 08/18/2010 at 10:59.
Target 3.5 esignature user ID: jml01693

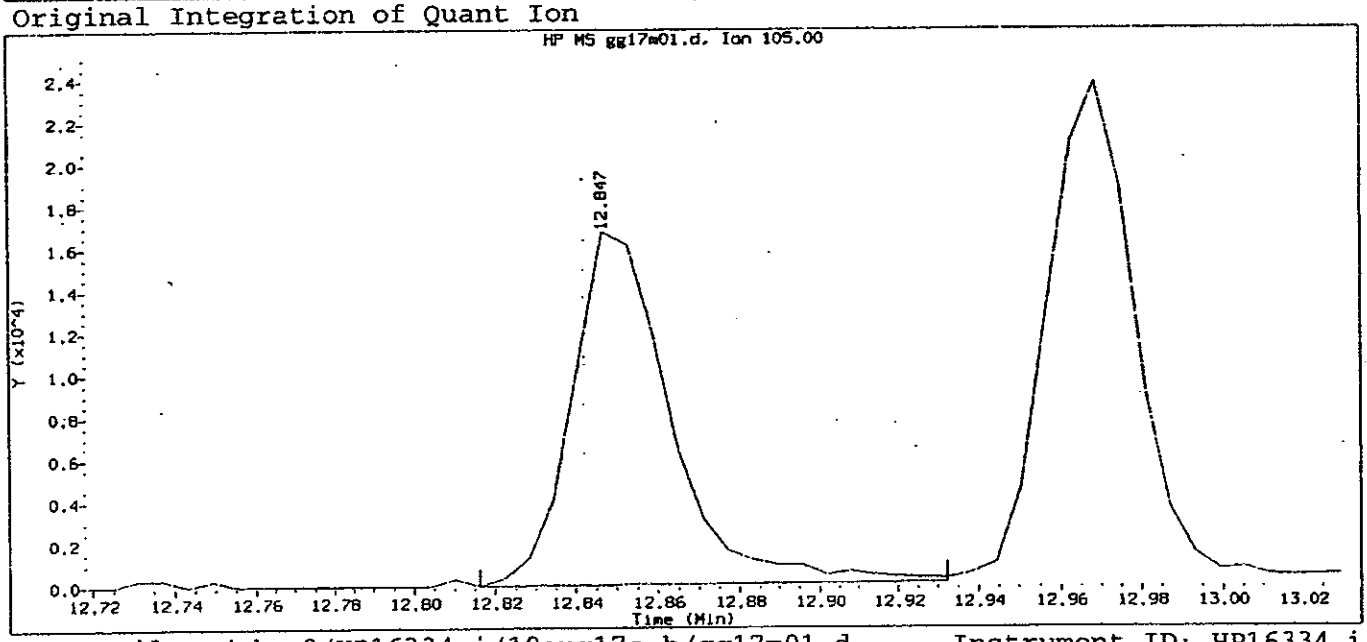
GC/MS audit/management approval: _____

RAD36 0244

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17m01.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 14:10 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 17-AUG-2010 14:37
Date, time and analyst ID of latest file update: 17-Aug-2010 14:40 jml01693

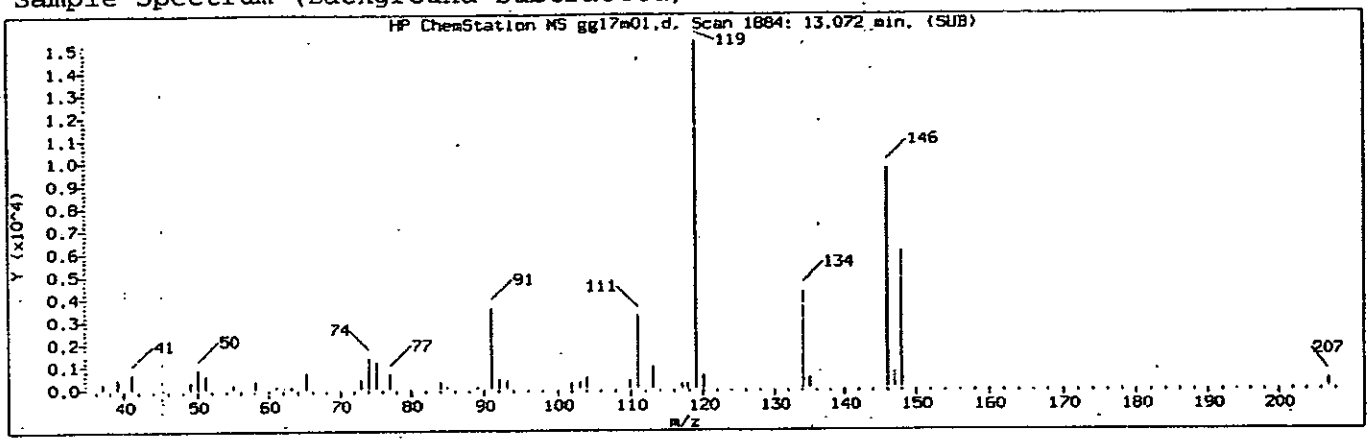
Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compound Number	: 139		
Compound Name	: 1,2,4-Trimethylbenzene		
Scan Number	: 1847		
Retention Time (minutes)	: 12.847		
Quant Ion	: 105.00		
Area	: 28067		
On-column Amount (ng)	: 0.0950		
Integration start scan	: 1841	Integration stop scan:	1860
Y at integration start	: 0	Y at integration end:	123

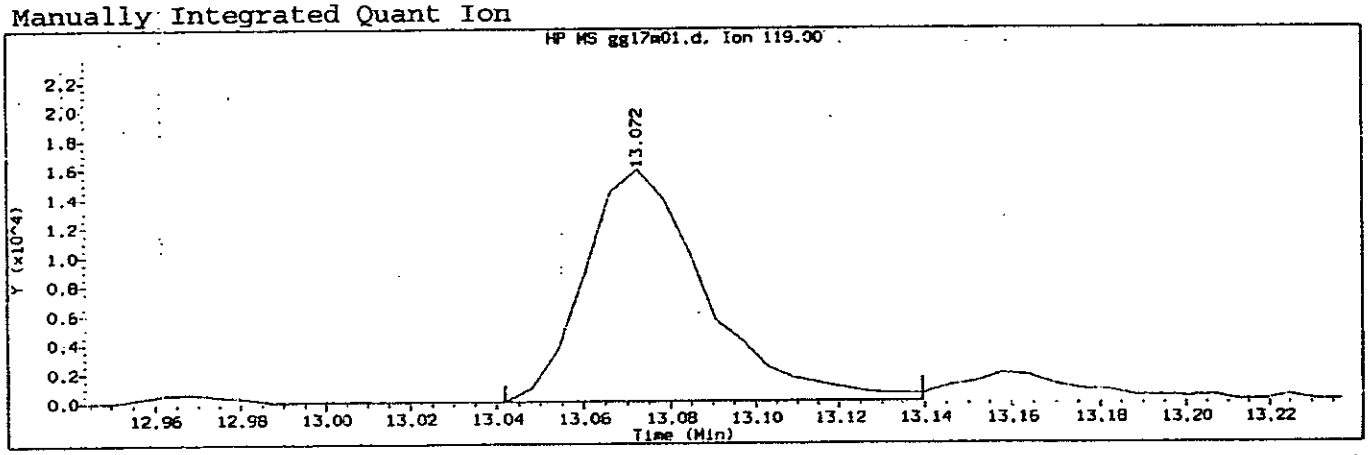
RAD36 0245

Digitally signed by Jason M. Long on 08/18/2010 at 10:59.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17m01.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 14:10 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260W25-3
Calibration date and time: 18-AUG-2010 10:58
Date, time and analyst ID of latest file update: 18-Aug-2010 10:58 jml01693

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compound Number	: 141		
Compound Name	: p-Isopropyltoluene		
Scan Number	: 1884		
Retention Time (minutes)	: 13.072		
Quant Ion	: 119.00		
Area (flag)	: 31108M		
On-Column Amount (ng)	: 0.0951		
Integration start scan	: 1878	Integration stop scan:	1894
Y at integration start	: 0	Y at integration end:	0

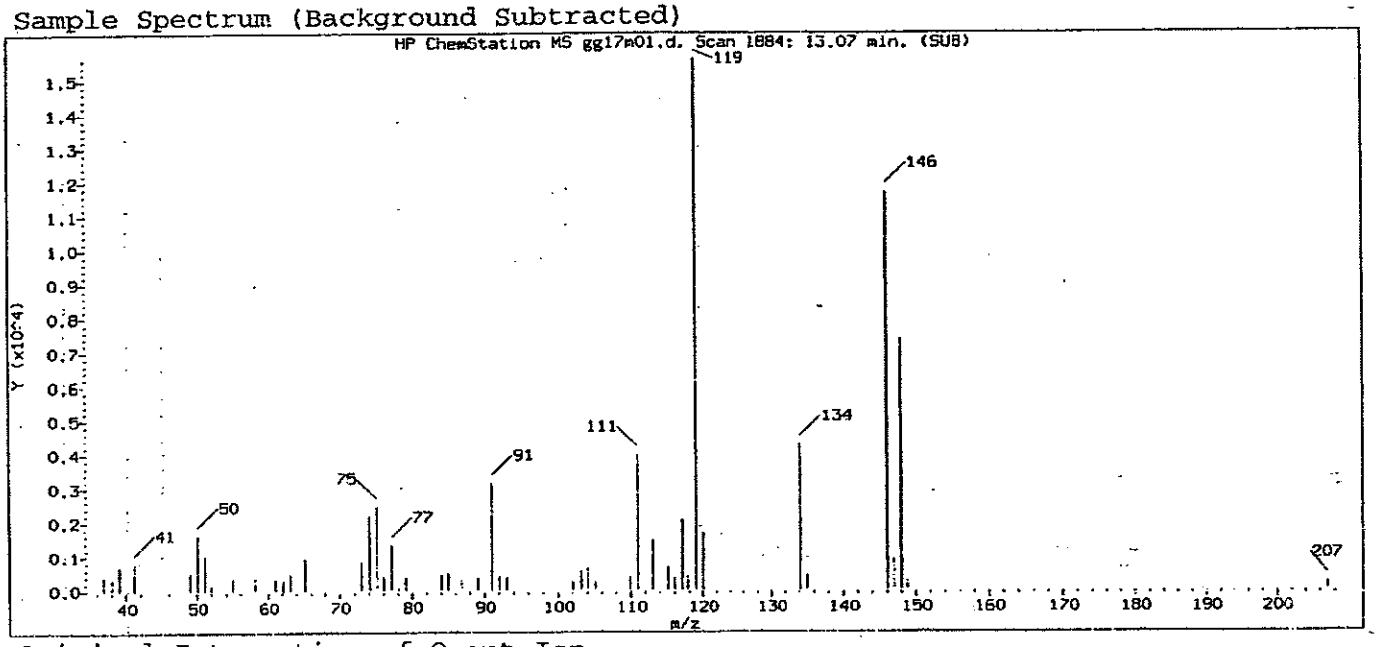
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long
on 08/18/2010 at 10:59.
Target 3.5 esignature user ID: jml01693

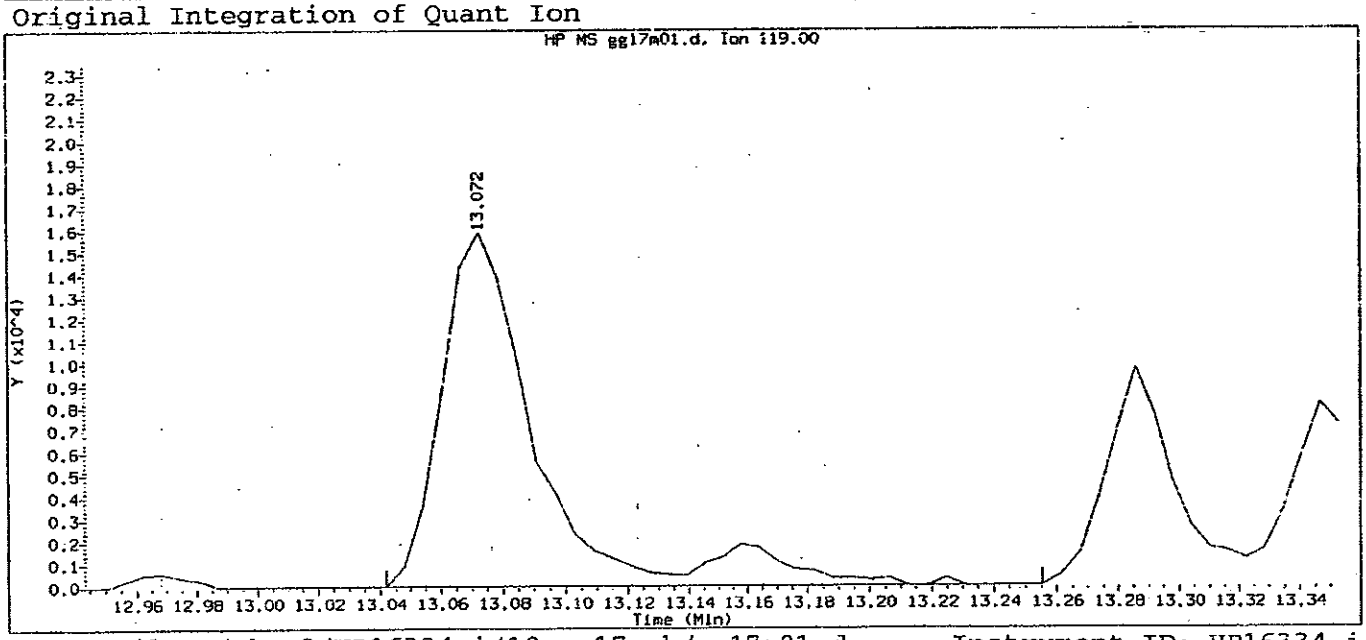
RAD36 8246

GC/MS audit/management approval: _____ 8/18/10

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17m01.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 14:10 Analyst ID: JML01693

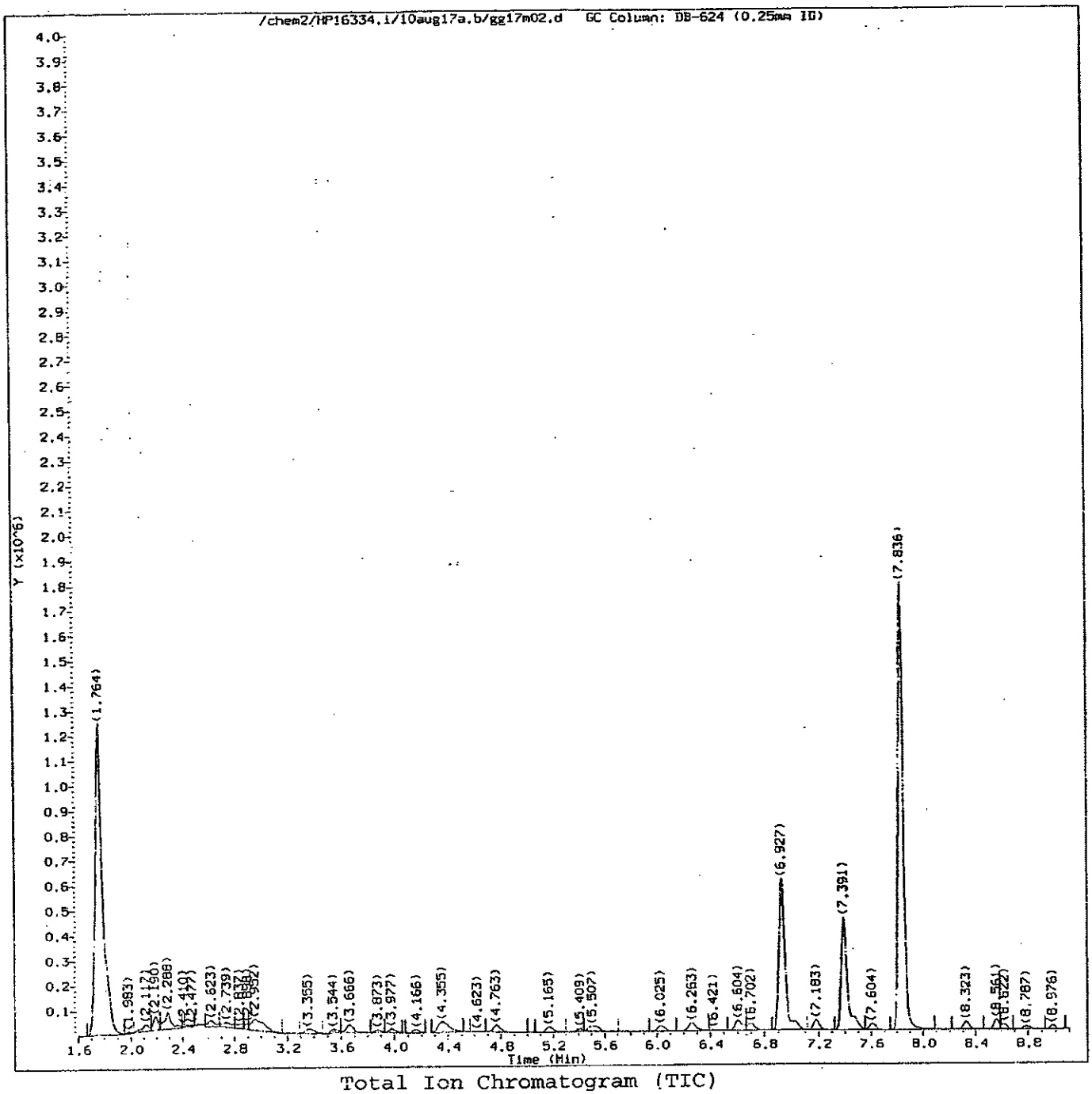
Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 17-AUG-2010 14:37
Date, time and analyst ID of latest file update: 17-Aug-2010 14:40 jml01693

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compound Number	: 141		
Compound Name	: p-Isopropyltoluene		
Scan Number	: 1884		
Retention Time (minutes)	: 13.072		
Quant Ion	: 119.00		
Area	: 34828		
On-column Amount (ng)	: 0.1065		
Integration start scan	: 1878	Integration stop scan:	1913
Y at integration start	: 0	Y at integration end:	0

RAD36 B242

Digitally signed by Jason M. Long on 08/18/2010 at 10:59.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/10aug17a.b/gg17m02.d
Injection date and time: 17-AUG-2010 15:36

Instrument ID: HP16334.i
Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m
Calibration date and time: 18-AUG-2010 10:58

Sublist used: MDL0.2

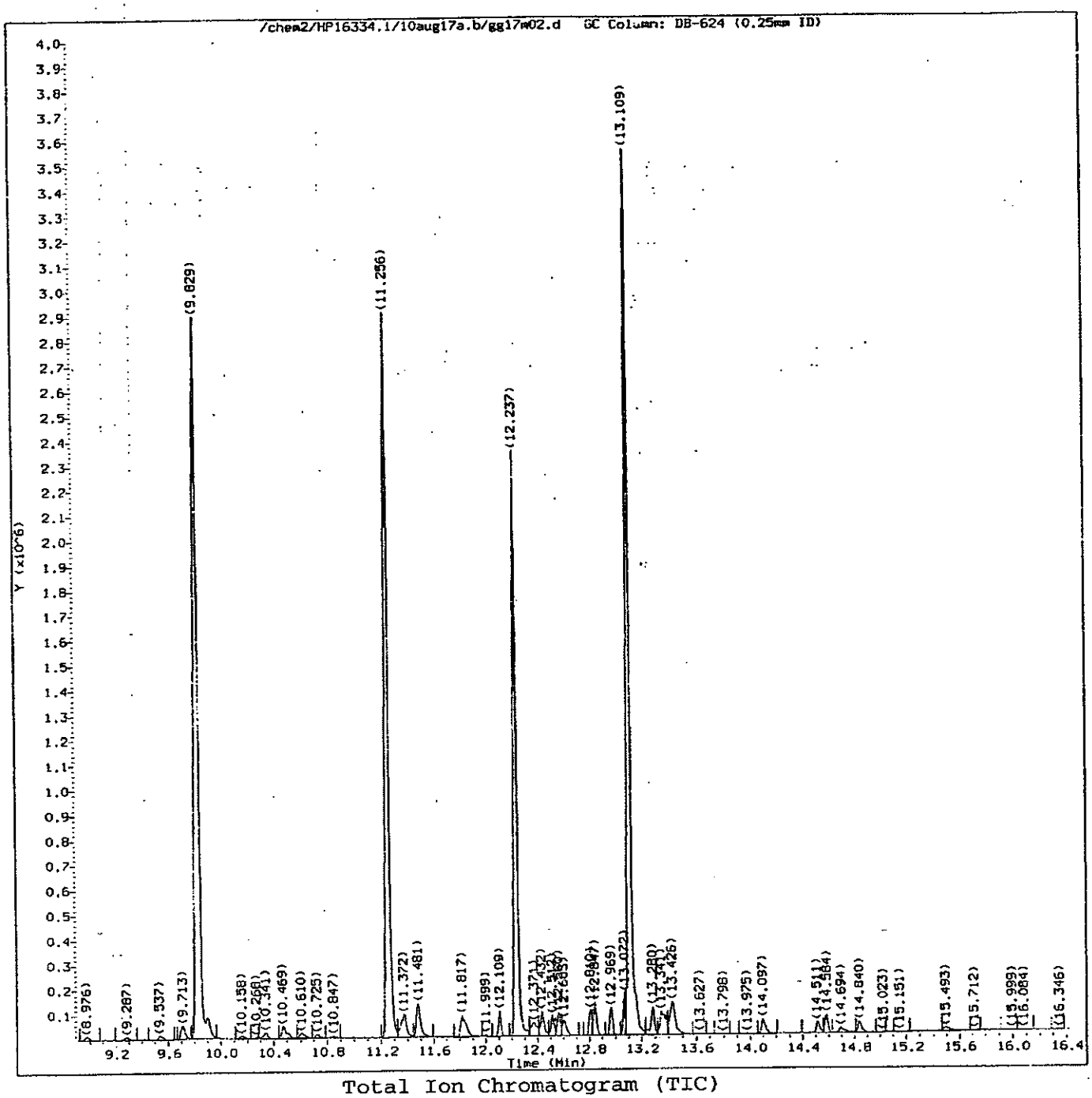
Date, time and analyst ID of latest file update: 18-Aug-2010 10:59 jml01693

Sample Name: MDL0.2

Lab Sample ID: MDL0.2

RAD36 8248

Digitally signed by Jason M. Long
on 08/18/2010 at 11:00.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/10aug17a.b/gg17m02.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 15:36 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: MDL0.2
Calibration date and time: 18-AUG-2010 10:58
Date, time and analyst ID of latest file update: 18-Aug-2010 10:59 jml01693

Sample Name: MDL0.2 Lab Sample ID: MDL0.2

RAD36 0249

Digitally signed by Jason M. Long
on 08/18/2010 at 11:00.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/10aug17a.b/gg17m02.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 15:36 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: MDL0.2
Calibration date and time: 18-AUG-2010 10:58
Date, time and analyst ID of latest file update: 18-Aug-2010 10:59 jml01693

Sample Name: MDL0.2 Lab Sample ID: MDL0.2

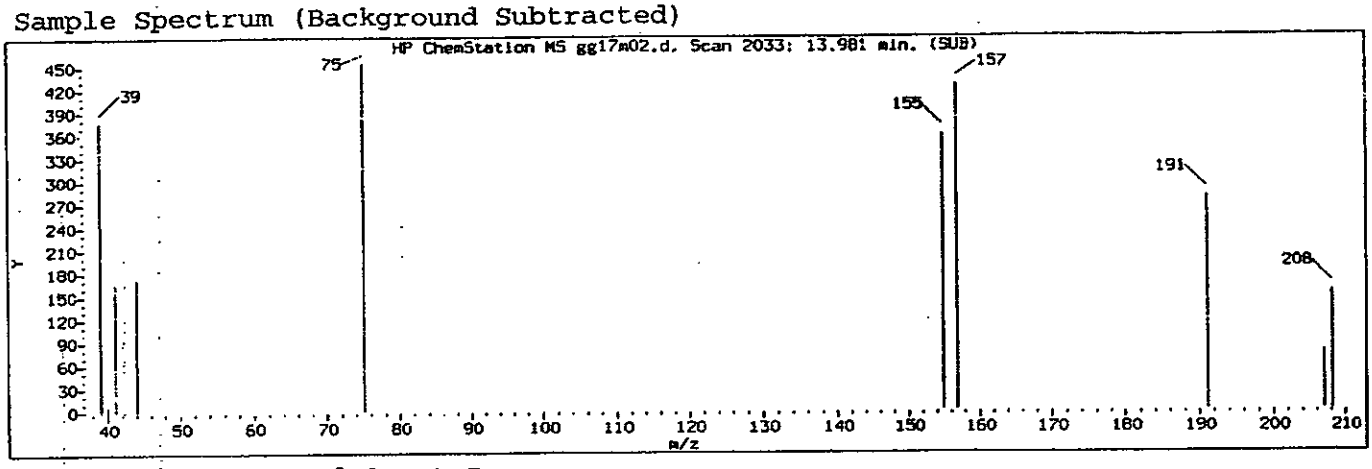
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
36) *t-Butyl Alcohol-d10	(4)	4.385	65	108214	50.000
39) Acrylonitrile	(4)	4.830	53	3922	1.723
61) $Dibromofluoromethane	(1)	6.927	113	555396	9.899
70) $1,2-Dichloroethane-d4	(1)	7.391	102	104558	9.992
77) *Fluorobenzene	(1)	7.836	96	2438923	10.000
89) 1,4-Dioxane	(4)	8.823	88	1676	8.709
97) $Toluene-d8	(2)	9.829	98	2396991	9.930
110) *Chlorobenzene-d5	(2)	11.256	117	1787542	10.000
126) $4-Bromofluorobenzene	(2)	12.237	95	797095	9.770
143) *1,4-Dichlorobenzene-d4	(3)	13.109	152	984930	10.000
150) 1,2-Dibromo-3-Chloropropane	(4)	13.981	155	565M	0.335

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

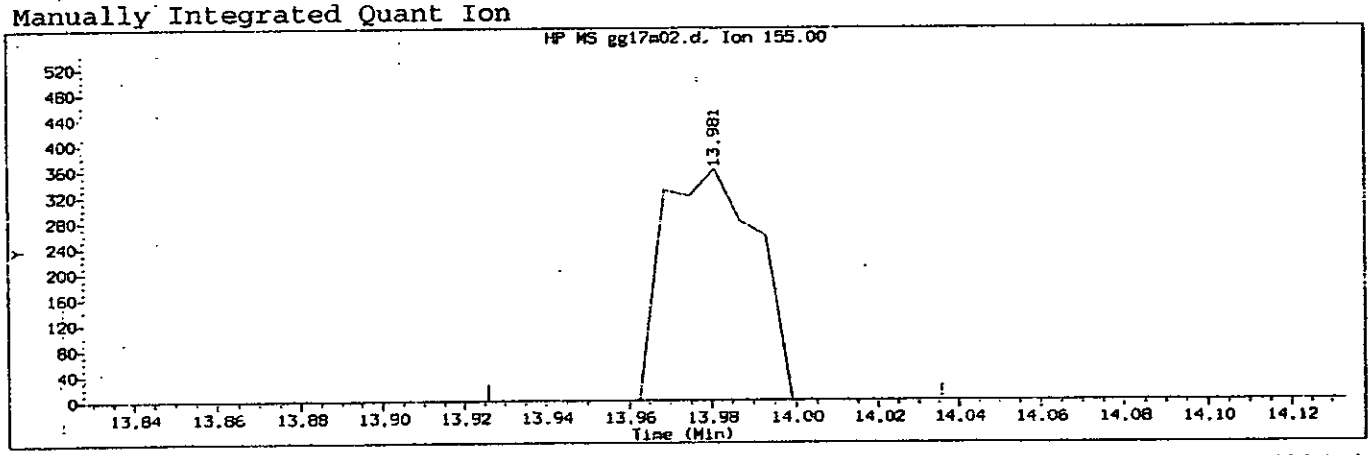
RAD36 0250

Digitally signed by Jason M. Long
on 08/18/2010 at 11:00.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17m02.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 15:36 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: MDL0.2
Calibration date and time: 18-AUG-2010 10:58
Date, time and analyst ID of latest file update: 18-Aug-2010 10:59 jml01693

Sample Name: MDL0.2 Lab Sample ID: MDL0.2

Compound Number	: 150		
Compound Name	: 1,2-Dibromo-3-Chloropropane		
Scan Number	: 2033		
Retention Time (minutes)	: 13.981		
Quant Ion	: 155.00		
Area (flag)	: 565M		
On-Column Amount (ng)	: 0.3347		
Integration start scan	: 2023	Integration stop scan:	2041
Y at integration start	: 0	Y at integration end:	0

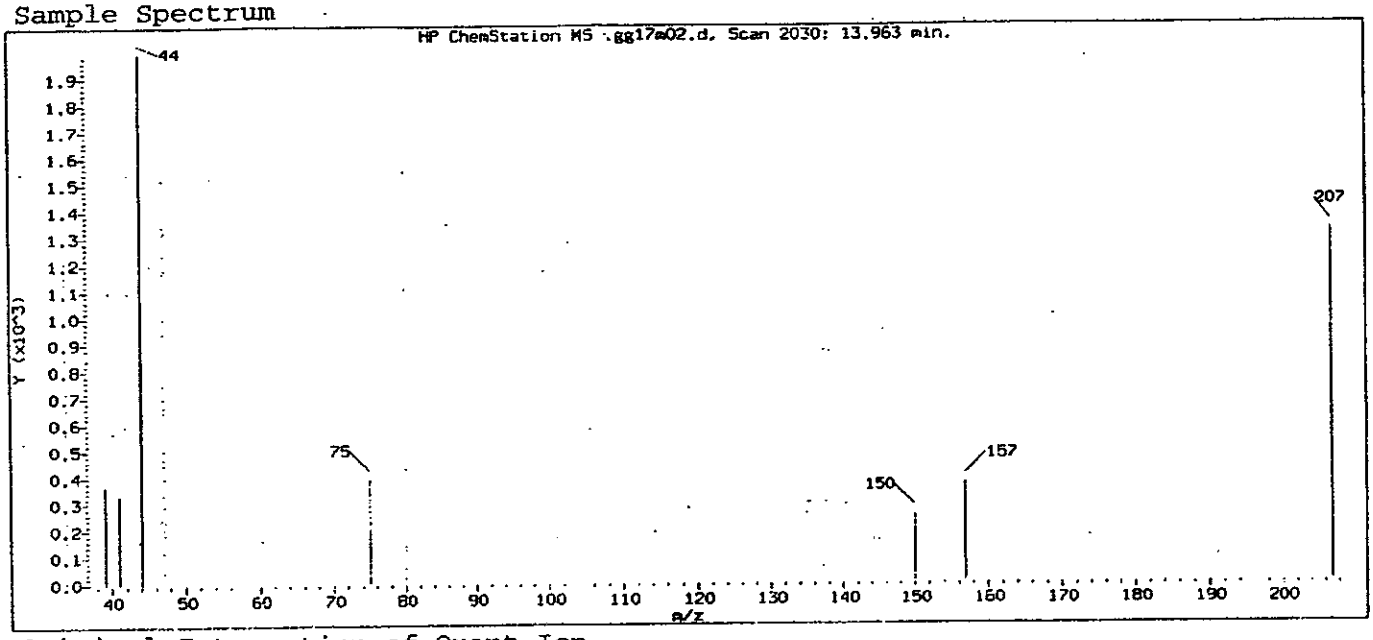
Reason for manual integration: missed peak

Analyst responsible for change: Digitally signed by Jason M. Long
on 08/18/2010 at 11:00.
Target 3.5 esignature user ID: jml01693

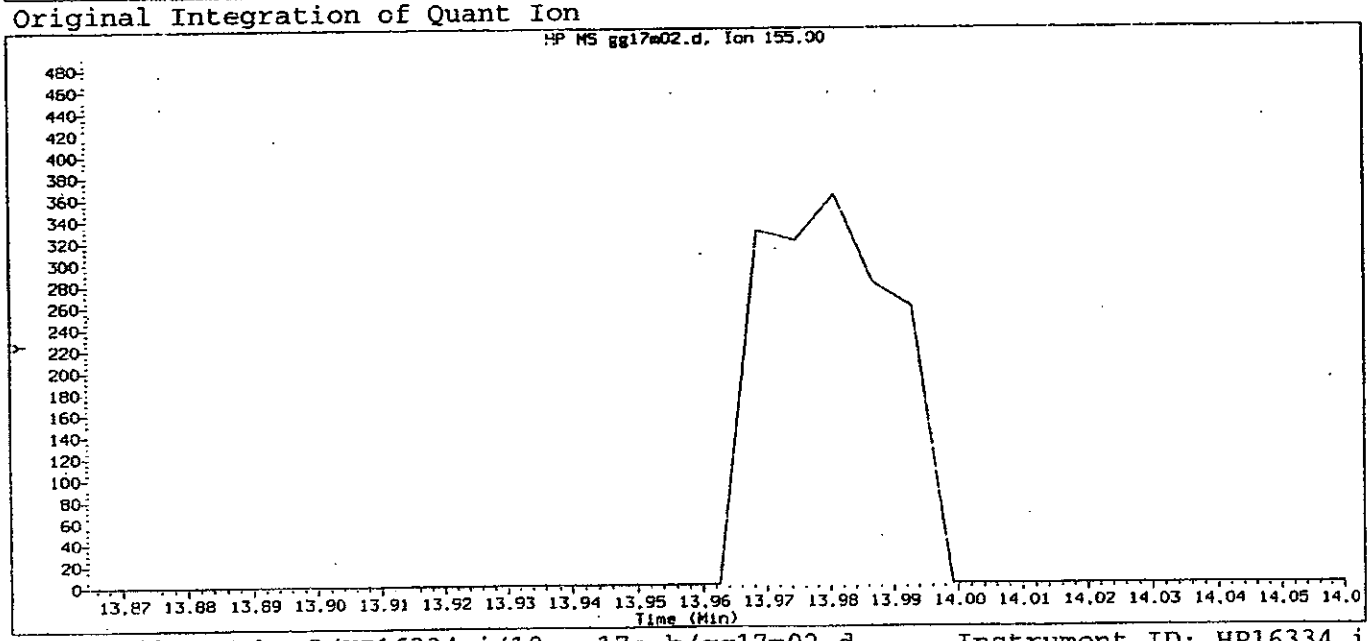
GC/MS audit/management approval: _____ 8/18/10

RAD36 0251

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17m02.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 15:36 Analyst ID: JML01693

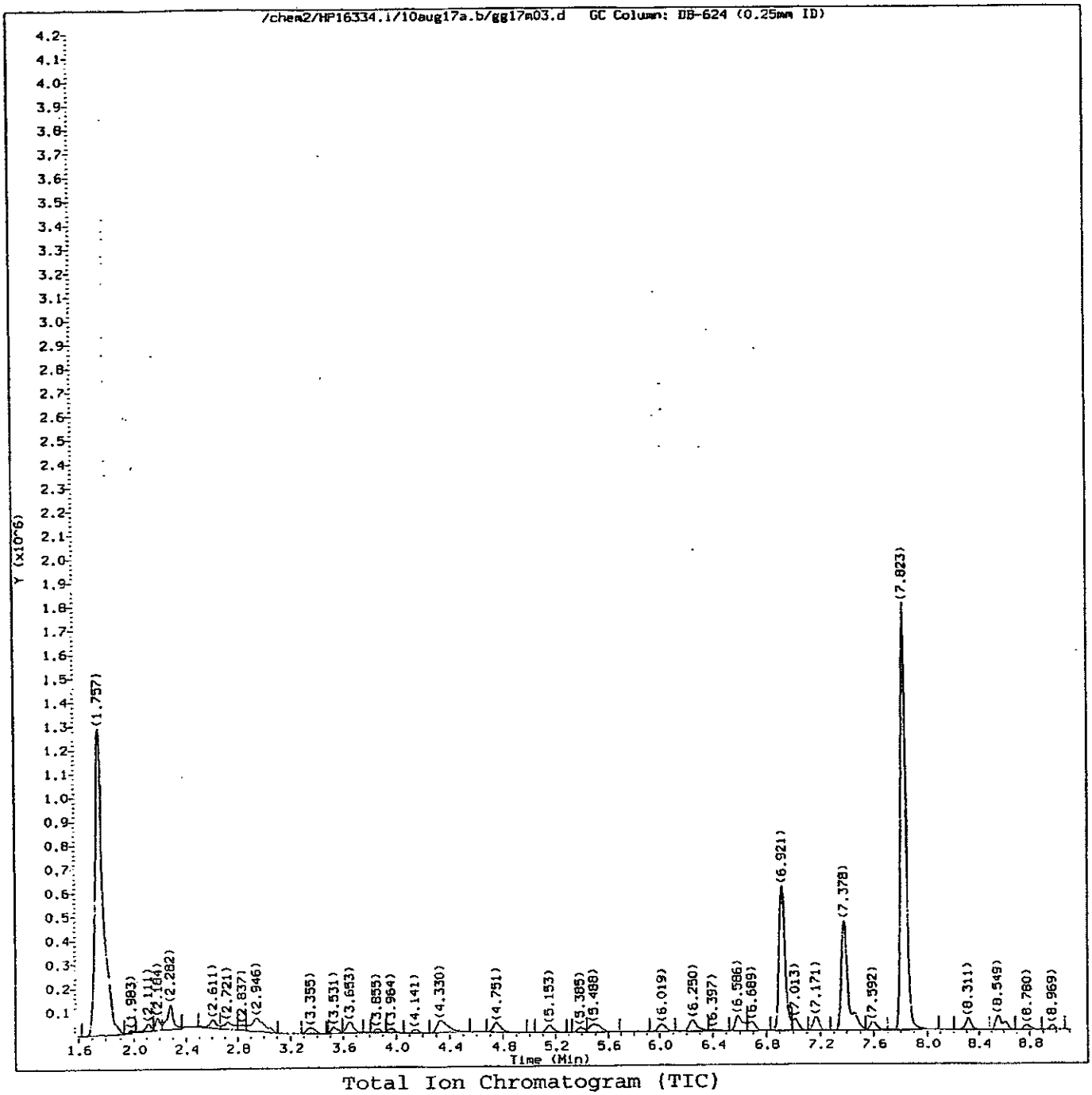
Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: MDL0.2
Calibration date and time: 17-AUG-2010 15:57
Date, time and analyst ID of latest file update: 17-Aug-2010 15:57 jml01693

Sample Name: MDL0.2 Lab Sample ID: MDL0.2

Compound Number : 150
Compound Name : 1,2-Dibromo-3-Chloropropane
Expected RT (minutes) : 13.962
Quant Ion : 155

RAD36 0252

Digitally signed by Jason M. Long on 08/18/2010 at 11:00.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/10aug17a.b/gg17m03.d
Injection date and time: 17-AUG-2010 16:20

Instrument ID: HP16334.i
Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m
Calibration date and time: 17-AUG-2010 17:24

Sublist used: MDL0.3

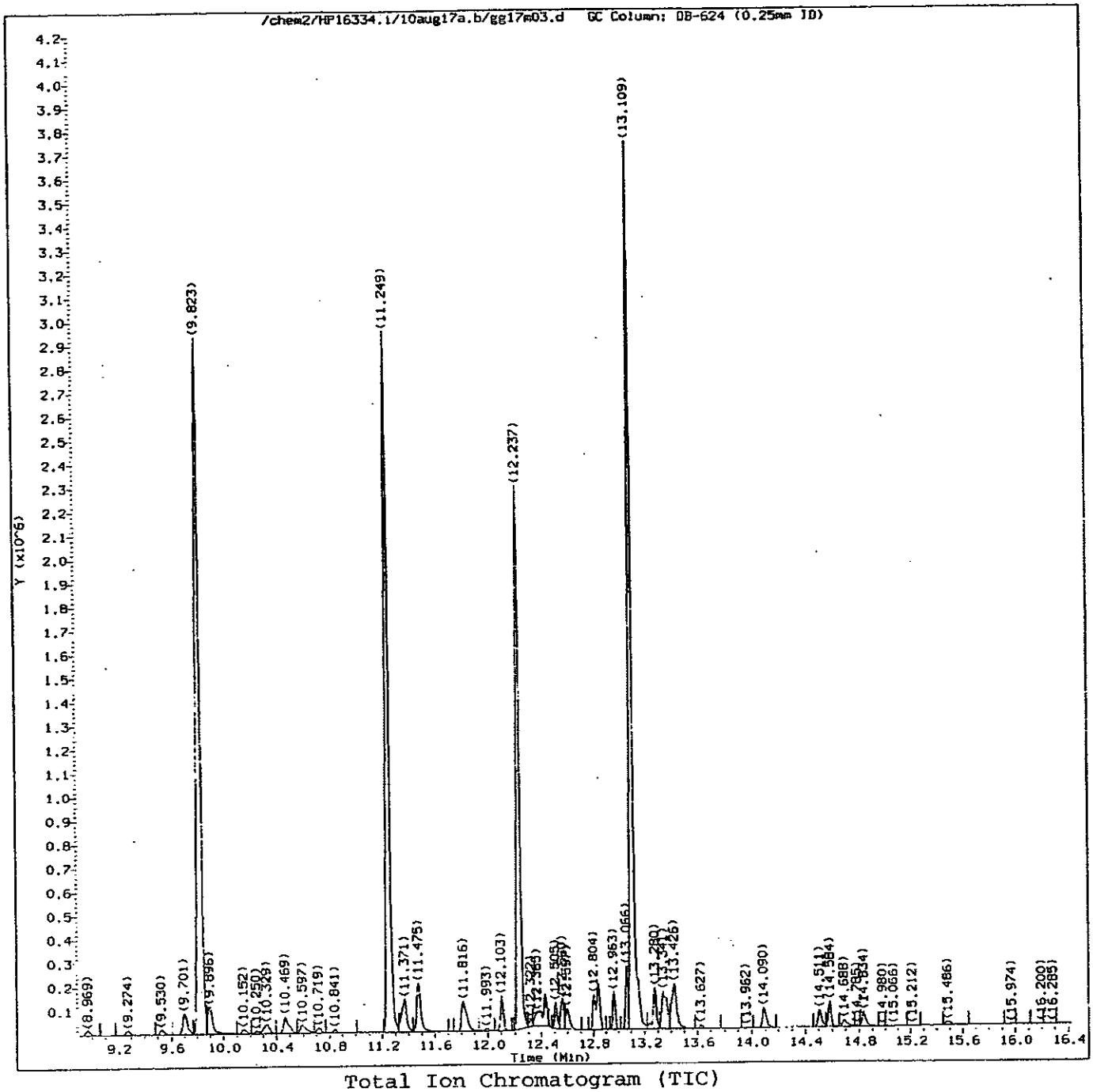
Date, time and analyst ID of latest file update: 17-Aug-2010 17:24 sej02002

Sample Name: MDL0.3

Lab Sample ID: MDL0.3

RAD36 0253

Digitally signed by Sara E. Johnson
on 08/17/2010 at 17:26.
Target 3.5 esignature user ID: sej02002



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/10aug17a.b/gg17m03.d
Injection date and time: 17-AUG-2010 16:20

Instrument ID: HP16334.i
Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m
Calibration date and time: 17-AUG-2010 17:24

Sublist used: MDL0.3

Date, time and analyst ID of latest file update: 17-Aug-2010 17:24 sej02002

Sample Name: MDL0.3

Lab Sample ID: MDL0.3

RAD36 10254

Digitally signed by Sara E. Johnson
on 08/17/2010 at 17:26.
Target 3.5 esignature user ID: sej02002

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/10aug17a.b/gg17m03.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 16:20 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: MDL0.3
Calibration date and time: 17-AUG-2010 17:24
Date, time and analyst ID of latest file update: 17-Aug-2010 17:24 sej02002

Sample Name: MDL0.3 Lab Sample ID: MDL0.3

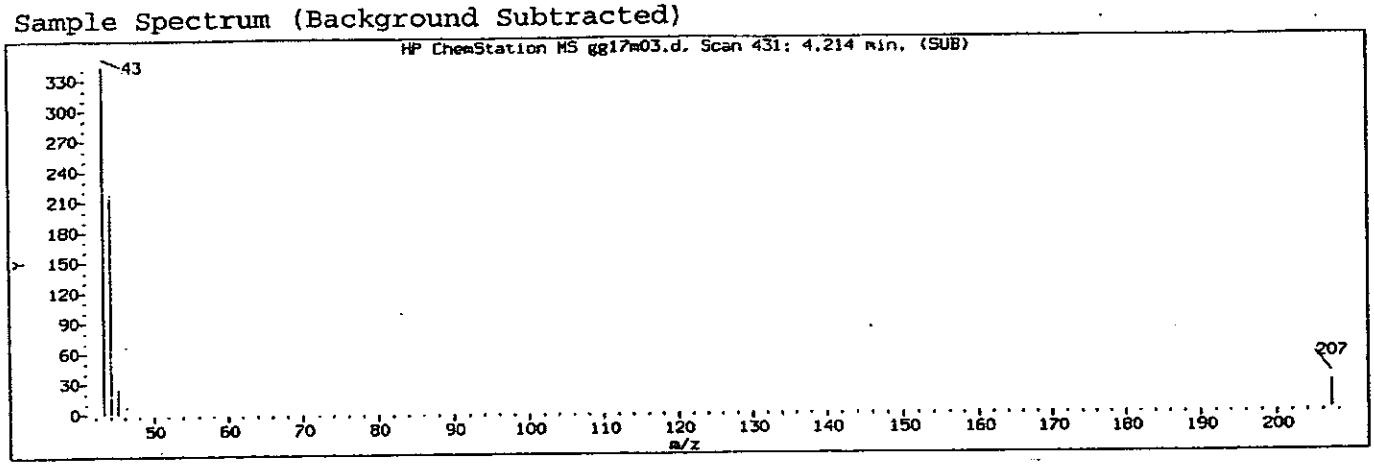
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
33) Methyl Acetate	(1)	4.214	43	1707M	0.429
36)*t-Butyl Alcohol-d10	(4)	4.361	65	113646	50.000
61)$Dibromofluoromethane	(1)	6.915	113	557754	9.956
70)$1,2-Dichloroethane-d4	(1)	7.378	102	105918	10.138
77)*Fluorobenzene	(1)	7.823	96	2435174	10.000
97)$Toluene-d8	(2)	9.823	98	2396214	9.893
110)*Chlorobenzene-d5	(2)	11.249	117	1793669	10.000
126)$4-Bromofluorobenzene	(2)	12.237	95	803385	9.813
143)*1,4-Dichlorobenzene-d4	(3)	13.109	152	998182	10.000

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

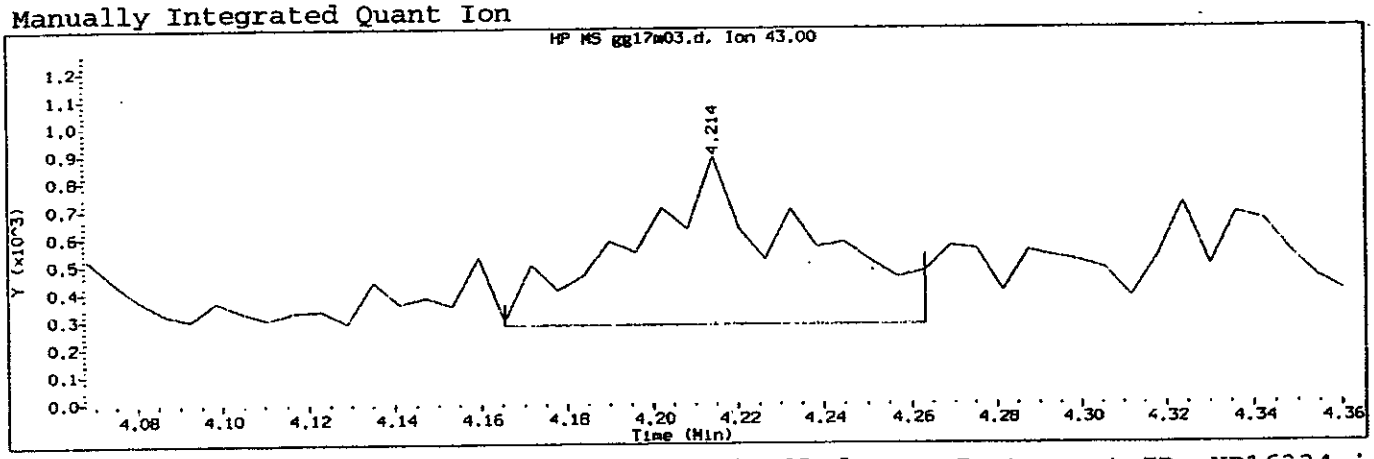
RAD36 0255

Digitally signed by Sara E. Johnson
on 08/17/2010 at 17:26.
Target 3.5 esignature user ID: sej02002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17m03.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 16:20 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: MDL0.3
Calibration date and time: 17-AUG-2010 17:24
Date, time and analyst ID of latest file update: 17-Aug-2010 17:24 sej02002

Sample Name: MDL0.3 Lab Sample ID: MDL0.3

Compound Number	: 33		
Compound Name	: Methyl Acetate		
Scan Number	: 431		
Retention Time (minutes)	: 4.214		
Quant Ion	: 43.00		
Area (flag)	: 1707M		
On-Column Amount (ng)	: 0.4288		
Integration start scan	: 422	Integration stop scan:	438
Y at integration start	: 278	Y at integration end:	278

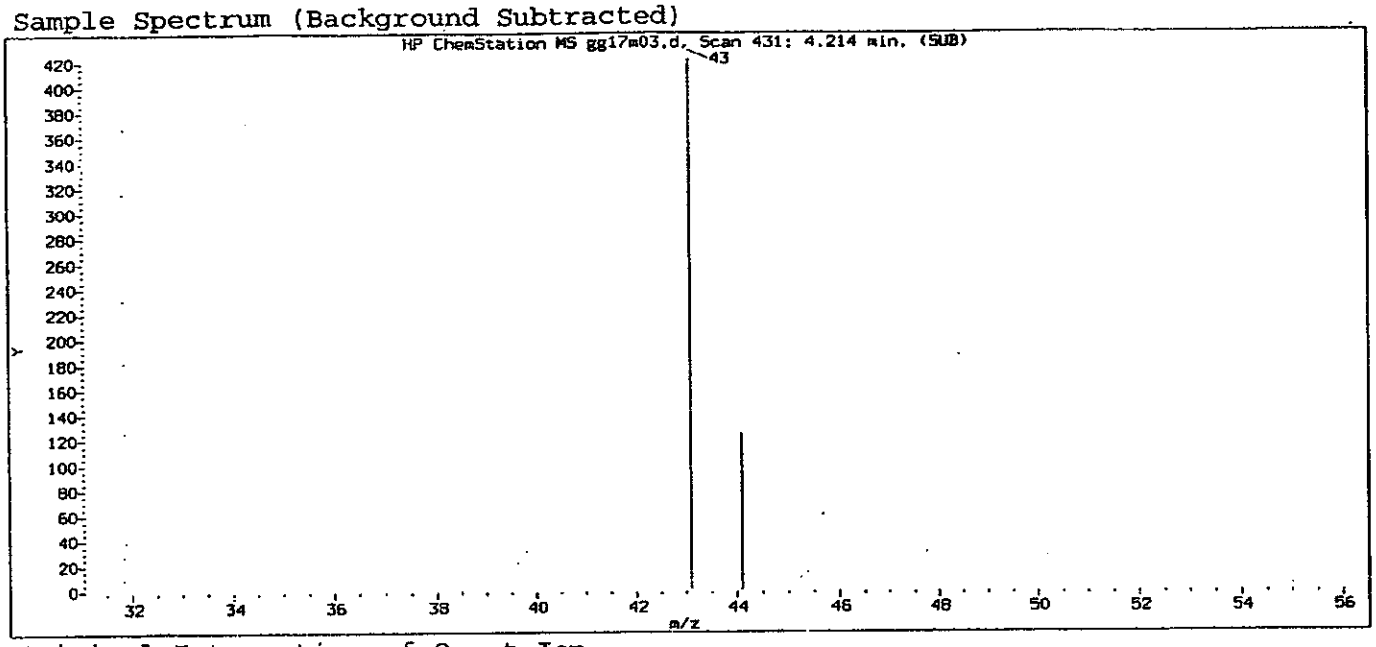
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Sara E. Johnson
on 08/17/2010 at 17:26.
Target 3.5 esignature user ID: sej02002

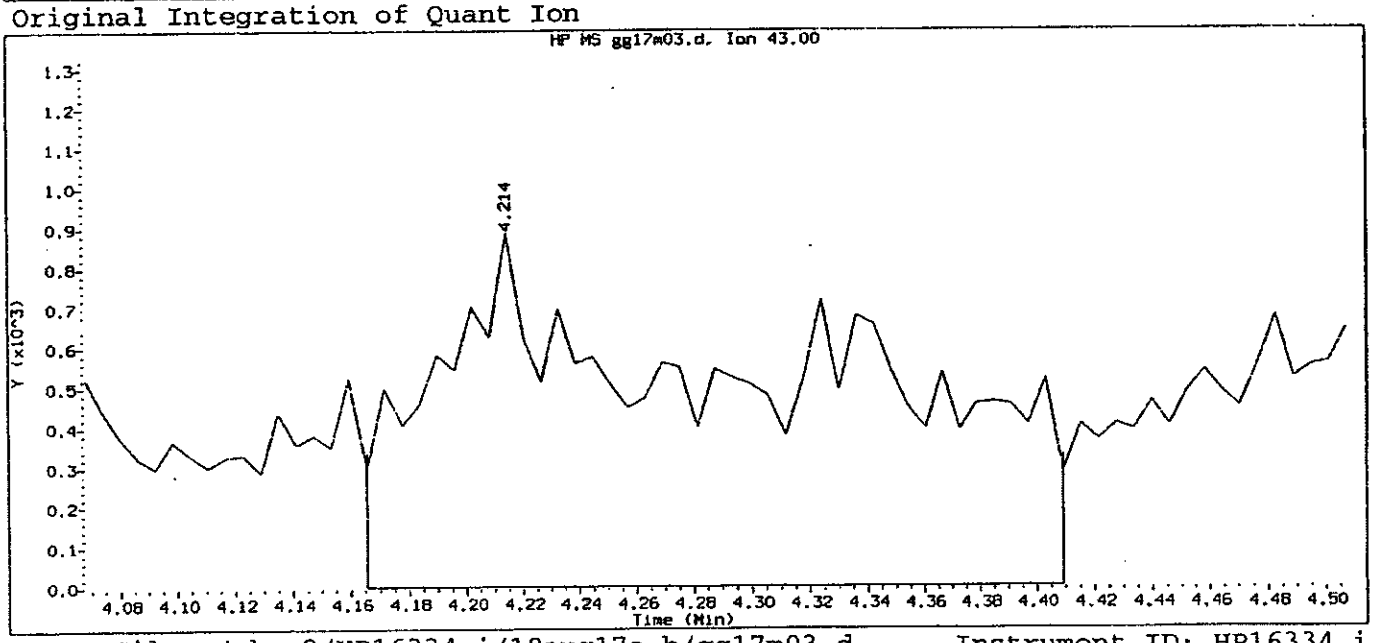
GC/MS audit/management approval: _____ 8/18/10

RAD36 8256

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17m03.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 16:20 Analyst ID: JML01693

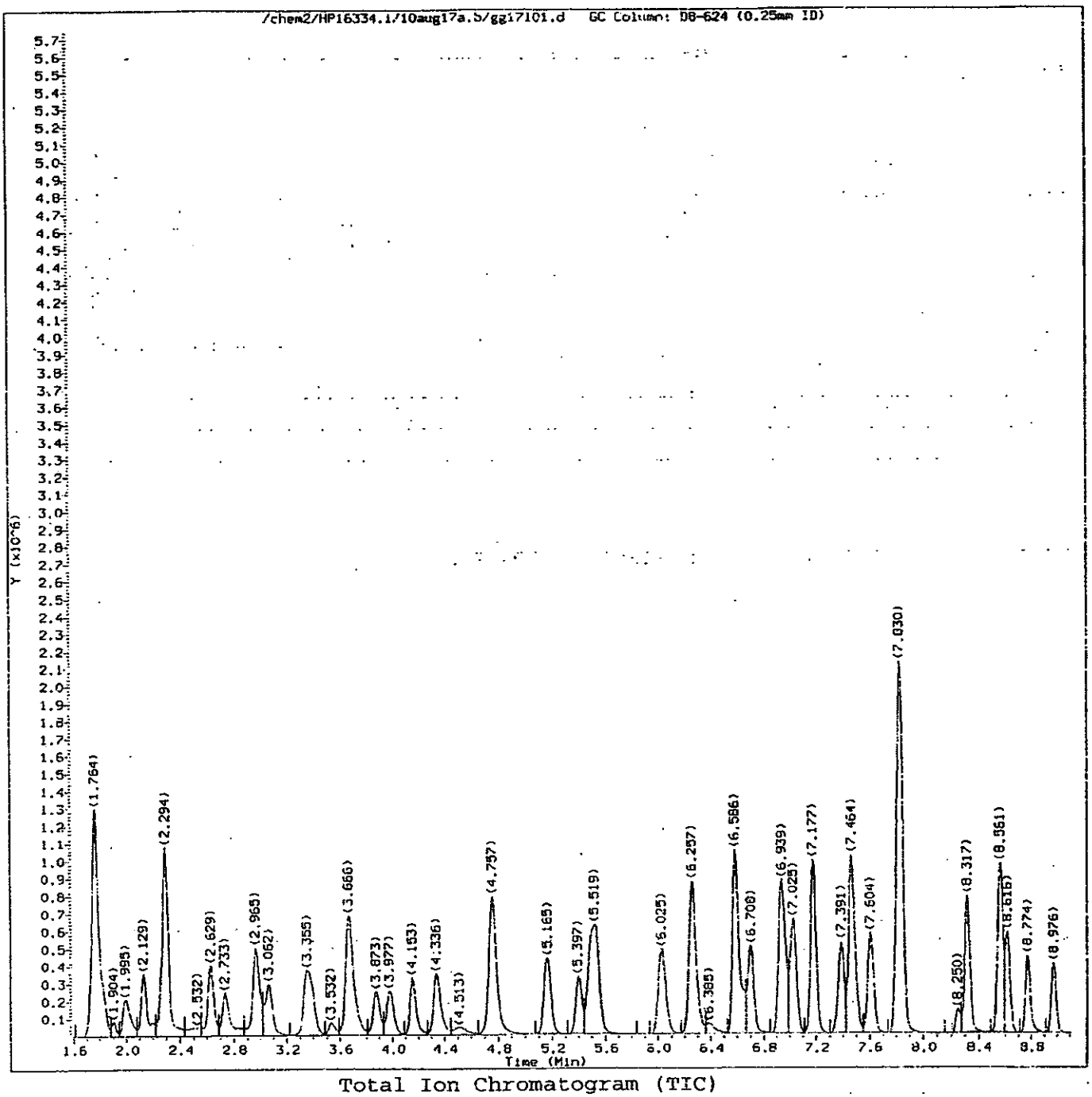
Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: MDL0.2
Calibration date and time: 17-AUG-2010 15:57
Date, time and analyst ID of latest file update: 17-Aug-2010 16:38 Automation

Sample Name: MDL0.3 Lab Sample ID: MDL0.3

Compound Number	: 33		
Compound Name	: Methyl Acetate		
Scan Number	: 431		
Retention Time (minutes)	: 4.214		
Quant Ion	: 43.00		
Area	: 7682		
On-column Amount (ng)	: 0.8520		
Integration start scan	: 422	Integration stop scan:	462
Y at integration start	: 0	Y at integration end:	0

RaD36 0257

Digitally signed by Sara E. Johnson on 08/17/2010 at 17:26.
Target 3.5 esignature user ID: sej02002



Total Ion Chromatogram (TIC)

Target Revision 3.5

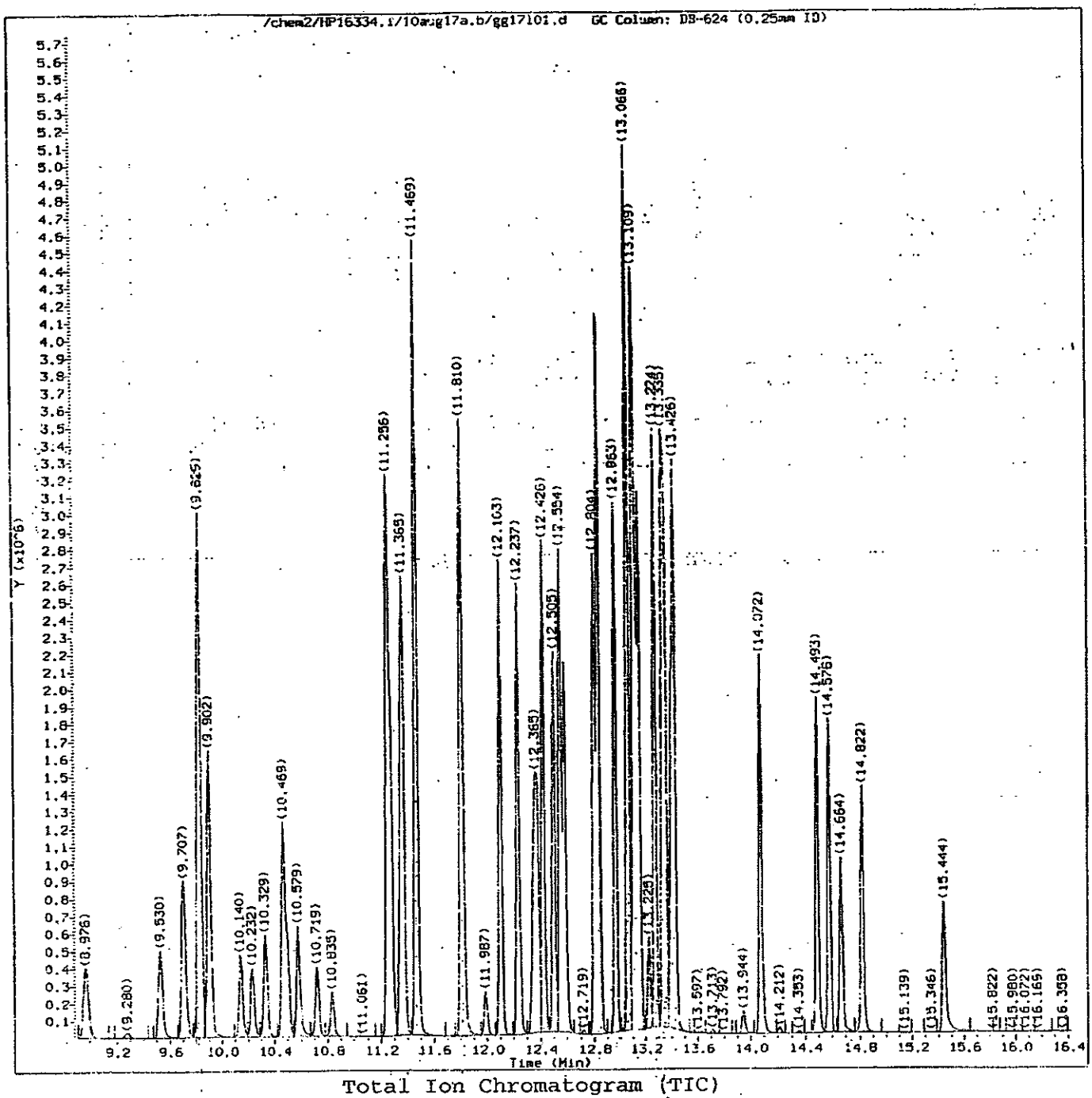
Data File: /chem2/HP16334.i/10aug17a.b/gg17101.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 14:53 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 17-AUG-2010 15:01
Date, time and analyst ID of latest file update: 17-Aug-2010 15:29 jml01693

Sample Name: LCSG01 Lab Sample ID: LCSG01

RAD36 0258

Digitally signed by Jason M. Long
on 08/17/2010 at 15:30.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/10aug17a.b/gg17101.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 14:53 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 17-AUG-2010 15:01
Date, time and analyst ID of latest file update: 17-Aug-2010 15:29 jml01693

Sample Name: LCSG01 Lab Sample ID: LCSG01

RAD36 8259

Digitally signed by Jason M. Long
on 08/17/2010 at 15:30.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/10aug17a.b/gg17101.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 14:53 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 17-AUG-2010 15:01
Date, time and analyst ID of latest file update: 17-Aug-2010 15:29 jml01693

Sample Name: LCSG01 Lab Sample ID: LCSG01

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
2) Dichlorodifluoromethane	(1)	1.995	85	498628	4.554
5) Chloromethane	(1)	2.129	50	513883	4.891
6) Vinyl Chloride	(1)	2.270	62	508126	4.995
9) 1,3-Butadiene	(1)	2.294	39	577850	3.505
10) Bromomethane	(1)	2.629	94	381029	4.908
11) Chloroethane	(1)	2.733	64	295410	4.947
13) Dichlorofluoromethane	(1)	2.965	67	716530	5.047
15) Trichlorofluoromethane	(1)	3.062	101	590701	4.770
17) Ethyl Ether	(1)	3.343	59	186106	4.458
18) Freon 123a	(1)	3.379	67	373670	5.044
23) Acrolein	(4)	3.538	56	138401	28.791
24) 1,1-Dichloroethene	(1)	3.666	96	287335	4.744
25) Freon 113	(1)	3.678	101	300009	4.775
26) Acetone	(4)	3.727	58	80840	35.615
27) Methyl Iodide	(1)	3.873	142	529632	4.785
29) Carbon Disulfide	(1)	3.983	76	701843	4.255
32) Allyl Chloride	(1)	4.153	41	346980	5.453
33) Methyl Acetate	(1)	4.190	43	70184M	5.111
34) Methylene Chloride	(1)	4.342	84	320387	4.477
36)*t-Butyl Alcohol-d10	(4)	4.385	65	114845	50.000
38) t-Butyl Alcohol	(4)	4.525	59	138375	47.767
39) Acrylonitrile	(4)	4.739	53	208935	23.545
41) trans-1,2-Dichloroethene	(1)	4.757	96	334752	4.908
40) Methyl Tertiary Butyl Ether	(1)	4.763	73	645705	4.790
37) 1,2-Dichloroethene (Total)	(1)		96	686714	9.743
44) n-Hexane	(1)	5.165	57	428191	4.690
45) 1,1-Dichloroethane	(1)	5.403	63	544706	4.862
47) di-Isopropyl Ether	(1)	5.489	45	916815	4.788
48) 2-Chloro-1,3-Butadiene	(1)	5.537	53	448448	5.628
49) Ethyl t-Butyl Ether	(1)	6.031	59	827405	4.790
50) cis-1,2-Dichloroethene	(1)	6.251	96	351962	4.835
51) 2,2-Dichloropropane	(1)	6.257	77	445947	4.899
52) 2-Butanone	(4)	6.287	43	424922	36.326
53) Propionitrile	(4)	6.391	54	109783M	37.118
55) Methacrylonitrile	(4)	6.586	67	482777	36.991
56) Bromochloromethane	(1)	6.592	128	148039	5.100
57) Tetrahydrofuran	(4)	6.653	71	91717	24.061
58) Chloroform	(1)	6.708	83	579037	5.060
61)$Dibromofluoromethane	(1)	6.927	113	572011	10.063

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

RAD36.0260

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on 08/17/2010 at 15:30.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/10aug17a.b/gg17101.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 14:53 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 17-AUG-2010 15:01
Date, time and analyst ID of latest file update: 17-Aug-2010 15:29 jml01693

Sample Name: LCSG01 Lab Sample ID: LCSG01

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
63) 1,1,1-Trichloroethane	(1)	6.958	97	496111	4.989
64) Cyclohexane	(1)	7.025	56	535272	4.875
65) 1,1-Dichloropropene	(1)	7.177	75	442504	4.949
66) Carbon Tetrachloride	(1)	7.177	117	433083	4.983
67) Isobutyl Alcohol	(4)	7.360	41	104542M	118.171
70)$1,2-Dichloroethane-d4	(1)	7.391	102	105170M	9.921
72) Benzene	(1)	7.464	78	1293278	4.913
74) 1,2-Dichloroethane	(1)	7.494	62	316332	5.056
75) t-Amyl Methyl Ether	(1)	7.604	73	726787	4.855
76) n-Heptane	(1)	7.811	43	454189	4.821
77)*Fluorobenzene	(1)	7.836	96	2470877	10.000
81) n-Butanol	(4)	8.250	56	166620	241.758
83) Trichloroethene	(1)	8.317	95	359270	4.963
84) Methylcyclohexane	(1)	8.561	83	605492	5.323
85) 1,2-Dichloropropane	(1)	8.616	63	326264	5.010
88) Dibromomethane	(1)	8.768	93	145076	5.010
87) Methyl Methacrylate	(4)	8.774	69	117902	4.517
89) 1,4-Dioxane	(4)	8.799	88	28600	140.033
90) Bromodichloromethane	(1)	8.976	83	371349	5.007
91) 2-Nitropropane	(4)	9.274	41	29491	4.302
94) cis-1,3-Dichloropropene	(1)	9.530	75	388975	5.023
96) 4-Methyl-2-Pentanone	(1)	9.701	43	748186	24.282
97)$Toluene-d8	(2)	9.829	98	2450371	10.104
101) Toluene	(2)	9.902	92	861242	4.922
102) trans-1,3-Dichloropropene	(2)	10.140	75	318537	5.167
103) Ethyl Methacrylate	(2)	10.232	69	251440	5.911
104) 1,1,2-Trichloroethane	(2)	10.329	97	207921	5.062
105) Tetrachloroethene	(2)	10.469	166	403406	5.087
106) 1,3-Dichloropropane	(2)	10.500	76	347323	4.999
107) 2-Hexanone	(2)	10.579	43	501869	24.700
108) Dibromochloromethane	(2)	10.719	129	234950	4.968
109) 1,2-Dibromoethane	(2)	10.835	107	188003	5.071
110)*Chlorobenzene-d5	(2)	11.256	117	1795857	10.000
112) Chlorobenzene	(2)	11.280	112	988520	5.030
113) 1,1,1,2-Tetrachloroethane	(2)	11.347	131	319875	5.054
114) Ethylbenzene	(2)	11.372	91	1666881	4.987
117) m+p-Xylene	(2)	11.469	106	1331357	9.954
115) Xylene (Total)	(2)		106	1991359	14.960
118) o-Xylene	(2)	11.810	106	660002	5.006

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

RAD36 0261

Digitally signed by Jason M. Long
on 08/17/2010 at 15:30.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/10aug17a.b/gg17101.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 14:53 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 17-AUG-2010 15:01
Date, time and analyst ID of latest file update: 17-Aug-2010 15:29 jml01693

Sample Name: LCSG01 Lab Sample ID: LCSG01

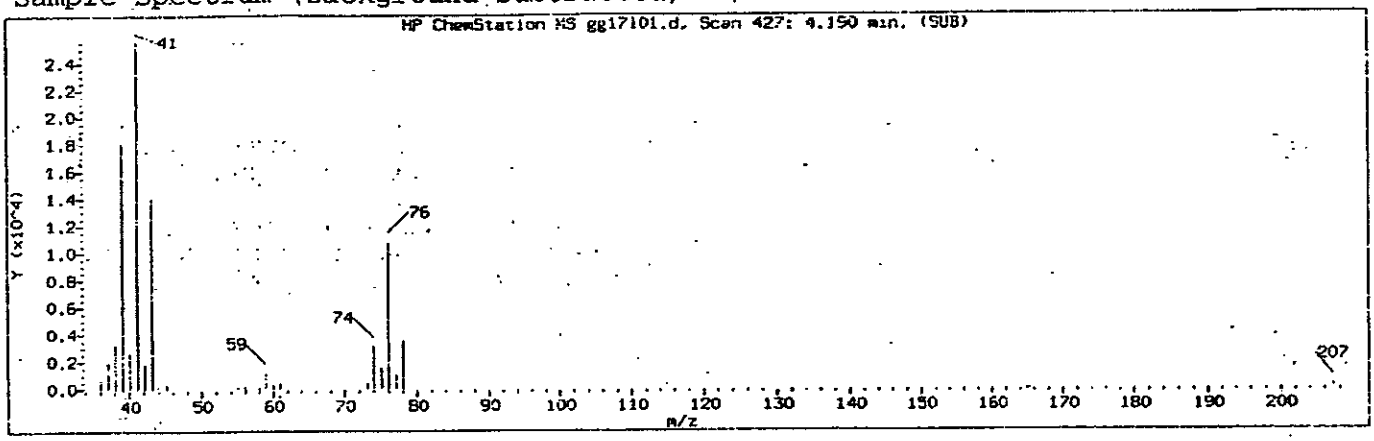
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
119) Styrene	(2)	11.823	104	1037909	5.240
120) Bromoform	(2)	11.987	173	119868	4.612
121) Isopropylbenzene	(2)	12.103	105	1708700	5.023
126)$4-Bromofluorobenzene	(2)	12.237	95	826806	10.087
128) 1,1,2,2-Tetrachloroethane	(3)	12.341	83	236631M	5.065
129) Bromobenzene	(3)	12.365	156	397786	4.916
131) 1,2,3-Trichloropropane	(3)	12.384	110	66539M	4.985
130) trans-1,4-Dichloro-2-Butene	(4)	12.384	53	145017M	25.500
132) n-Propylbenzene	(3)	12.426	91	2069658	4.959
133) 2-Chlorotoluene	(3)	12.505	126	416947	4.972
134) 1,3,5-Trimethylbenzene	(3)	12.554	105	1445796	4.978
135) 4-Chlorotoluene	(3)	12.585	126	421607	4.927
137) tert-Butylbenzene	(3)	12.804	134	327908M	5.029
138) Pentachloroethane	(3)	12.835	167	251361	4.864
139) 1,2,4-Trimethylbenzene	(3)	12.841	105	1564566	5.012
140) sec-Butylbenzene	(3)	12.963	105	1931288	4.992
141) p-Isopropyltoluene	(3)	13.060	119	1711995	4.951
142) 1,3-Dichlorobenzene	(3)	13.066	146	872806	4.993
143)*1,4-Dichlorobenzene-d4	(3)	13.109	152	1040892	10.000
144) 1,4-Dichlorobenzene	(3)	13.127	146	891923	4.964
145) 1,2,3-Trimethylbenzene	(3)	13.152	120	688485	4.955
146) Benzyl Chloride	(3)	13.225	126	81637	4.549
147) n-Butylbenzene	(3)	13.353	92	858913	5.020
148) 1,2-Dichlorobenzene	(3)	13.402	146	769409	5.000
150) 1,2-Dibromo-3-Chloropropane	(4)	13.944	155	30110	4.760
153) 1,2,4-Trichlorobenzene	(3)	14.493	180	591553	4.869
154) Hexachlorobutadiene	(3)	14.584	225	311997	4.765
155) Naphthalene	(3)	14.670	128	824089	4.985
156) 1,2,3-Trichlorobenzene	(3)	14.822	180	459019	4.826

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

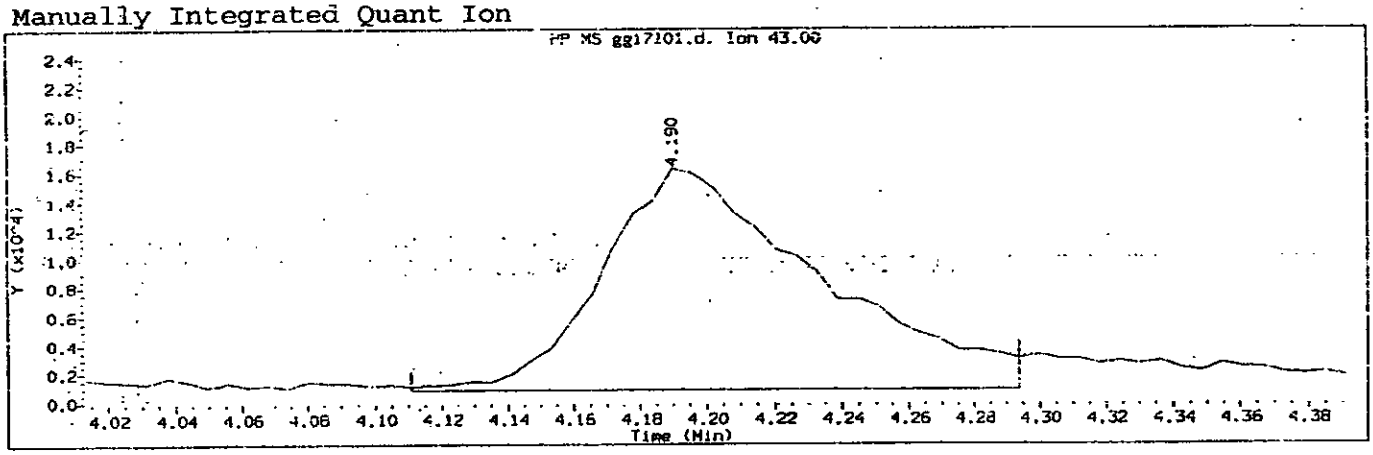
RAD36 0262

Digitally signed by Jason M. Long
on 08/17/2010 at 15:30.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17101.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 14:53 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 17-AUG-2010 15:01
Date, time and analyst ID of latest file update: 17-Aug-2010 15:29 jml01693

Sample Name: LCSG01 Lab Sample ID: LCSG01

Compound Number	: 33		
Compound Name	: Methyl Acetate		
Scan Number	: 427		
Retention Time (minutes)	: 4.190		
Quant Ion	: 43.00		
Area (flag)	: 70184M		
On-Column Amount (ng)	: 5.1106		
Integration start scan	: 413	Integration stop scan:	443
Y at integration start	: 834	Y at integration end:	834

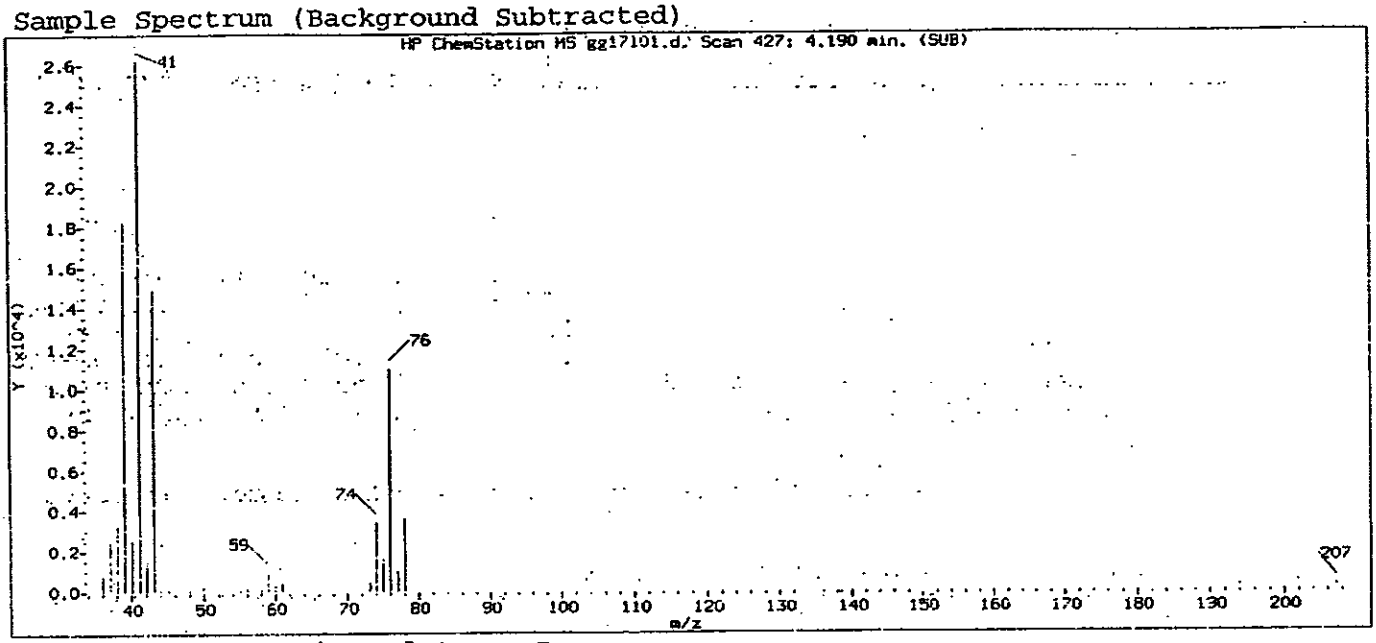
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long on 08/17/2010 at 15:30. Target 3.5 esignature user ID: jml01693

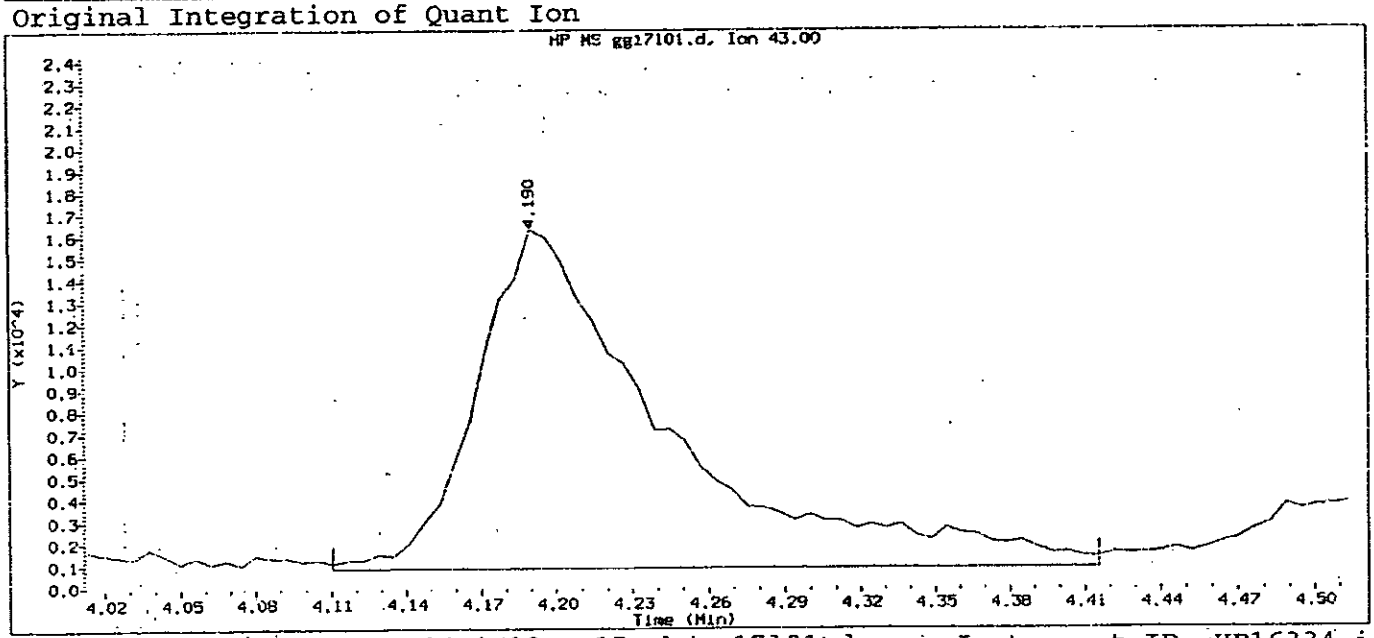
GC/MS audit/management approval: _____ 8/18/10

RAD36 0263

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17101.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 14:53 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 17-AUG-2010 15:01
Date, time and analyst ID of latest file update: 17-Aug-2010 15:11 Automation

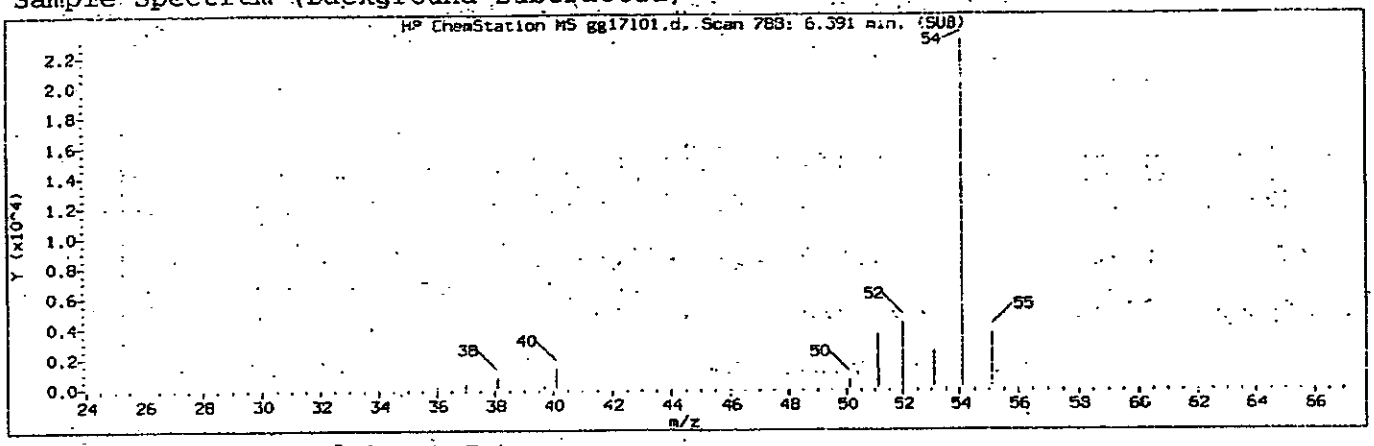
Sample Name: LCSG01 Lab Sample ID: LCSG01

Compound Number	: 33		
Compound Name	: Methyl Acetate		
Scan Number	: 427		
Retention Time (minutes)	: 4.190		
Quant Ion	: 43.00		
Area	: 80590		
On-column Amount (ng)	: 5.8038		
Integration start scan	: 413	Integration stop scan:	463
Y at integration start	: 834	Y at integration end:	834

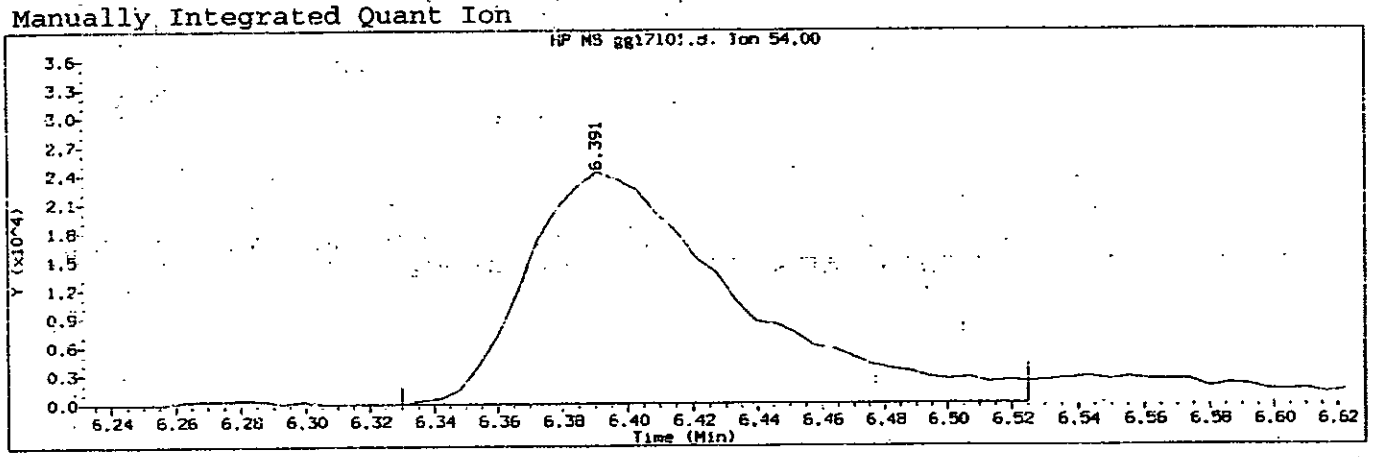
RAD36 0264

Digitally signed by Jason M. Long on 08/17/2010 at 15:30.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17101.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 14:53 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 17-AUG-2010 15:01
Date, time and analyst ID of latest file update: 17-Aug-2010 15:29 jml01693

Sample Name: LCSG01 Lab Sample ID: LCSG01

Compound Number	: 53		
Compound Name	: Propionitrile		
Scan Number	: 788		
Retention Time (minutes)	: 6.391		
Quant Ion	: 54.00		
Area (flag)	: 109783M		
On-Column Amount (ng)	: 37.1177		
Integration start scan	: 777	Integration stop scan:	809
Y at integration start	: 0	Y at integration end:	0

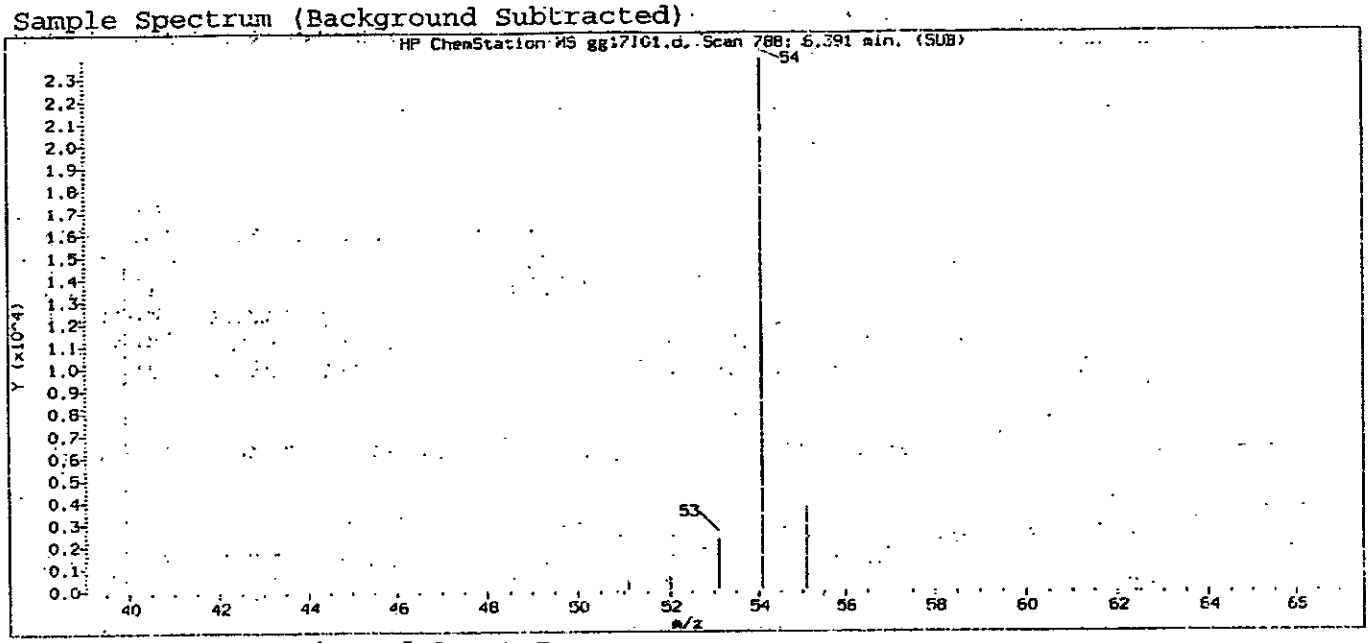
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long on 08/17/2010 at 15:30. Target 3.5 esignature user ID: jml01693

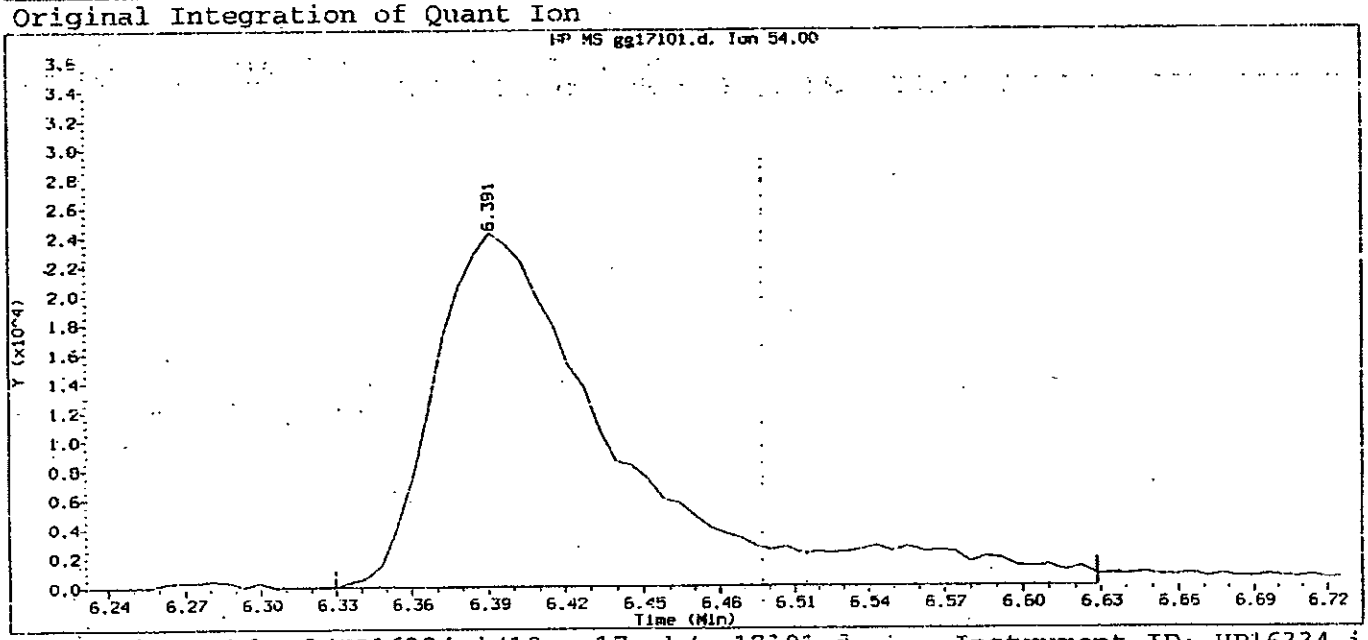
GC/MS audit/management approval: _____ 8/18/10

RAD36 0265

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17101.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 14:53 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 17-AUG-2010 15:01
Date, time and analyst ID of latest file update: 17-Aug-2010 15:11 Automation

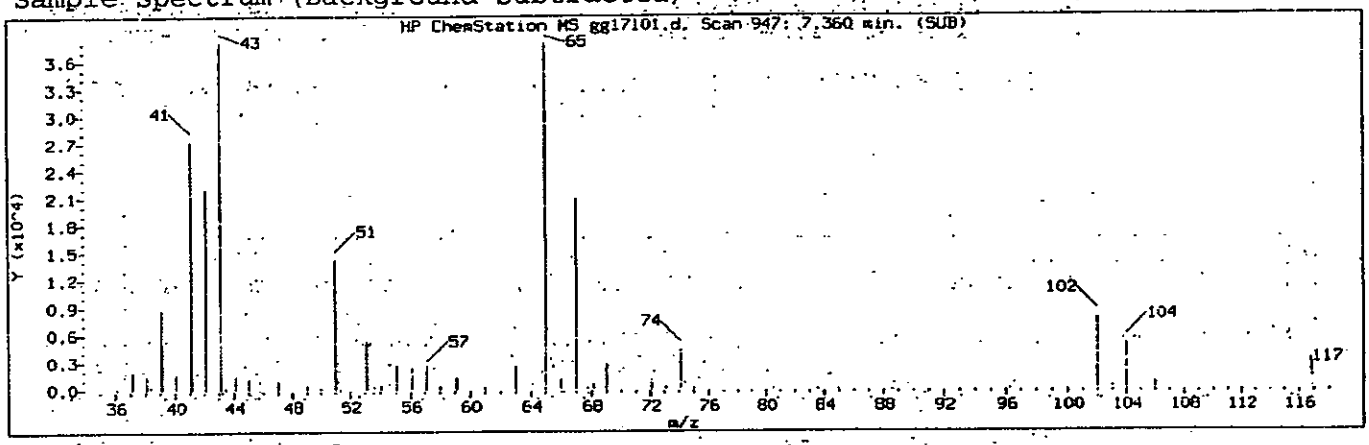
Sample Name: LCSG01 Lab Sample ID: LCSG01

Compound Number	: 53		
Compound Name	: Propionitrile		
Scan Number	: 788		
Retention Time (minutes)	: 6.391		
Quant Ion	: 54.00		
Area	: 121445		
On-column Amount (ng)	: 40.6012		
Integration start scan	: 777	Integration stop scan:	826
Y at integration start	: 0	Y at integration end:	0

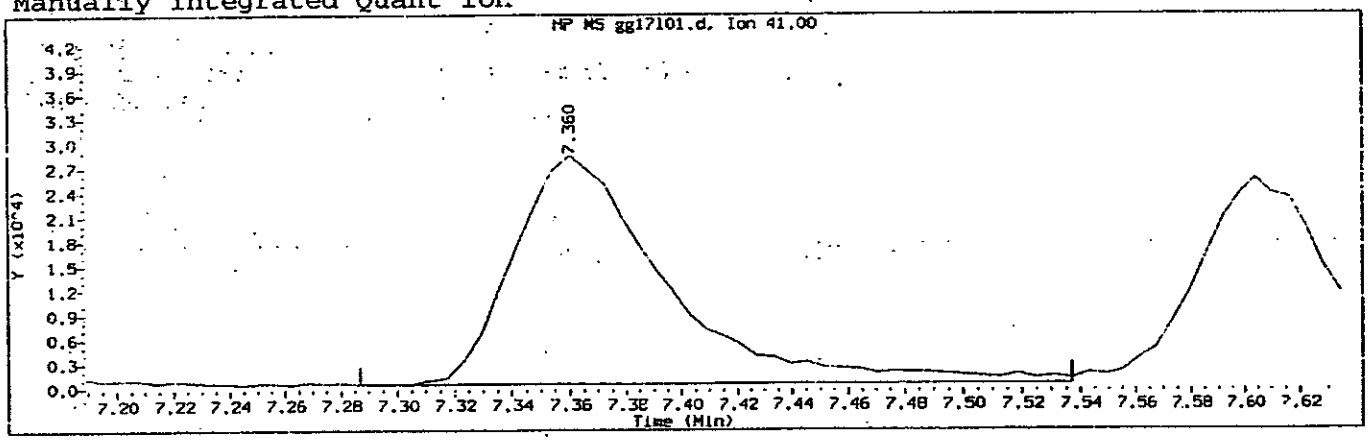
HAD36 8266

Digitally signed by Jason M. Long on 08/17/2010 at 15:30.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17101.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 14:53 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 17-AUG-2010 15:01
Date, time and analyst ID of latest file update: 17-Aug-2010 15:29 jml01693

Sample Name: LCSG01 Lab Sample ID: LCSG01

Compound Number	: 67		
Compound Name	: Isobutyl Alcohol		
Scan Number	: 947		
Retention Time (minutes)	: 7.360		
Quant Ion	: 41.00		
Area (flag)	: 104542M		
On-Column Amount (ng)	: 118.1710		
Integration start scan	: 934	Integration stop scan:	975
Y at integration start	: 489	Y at integration end:	489

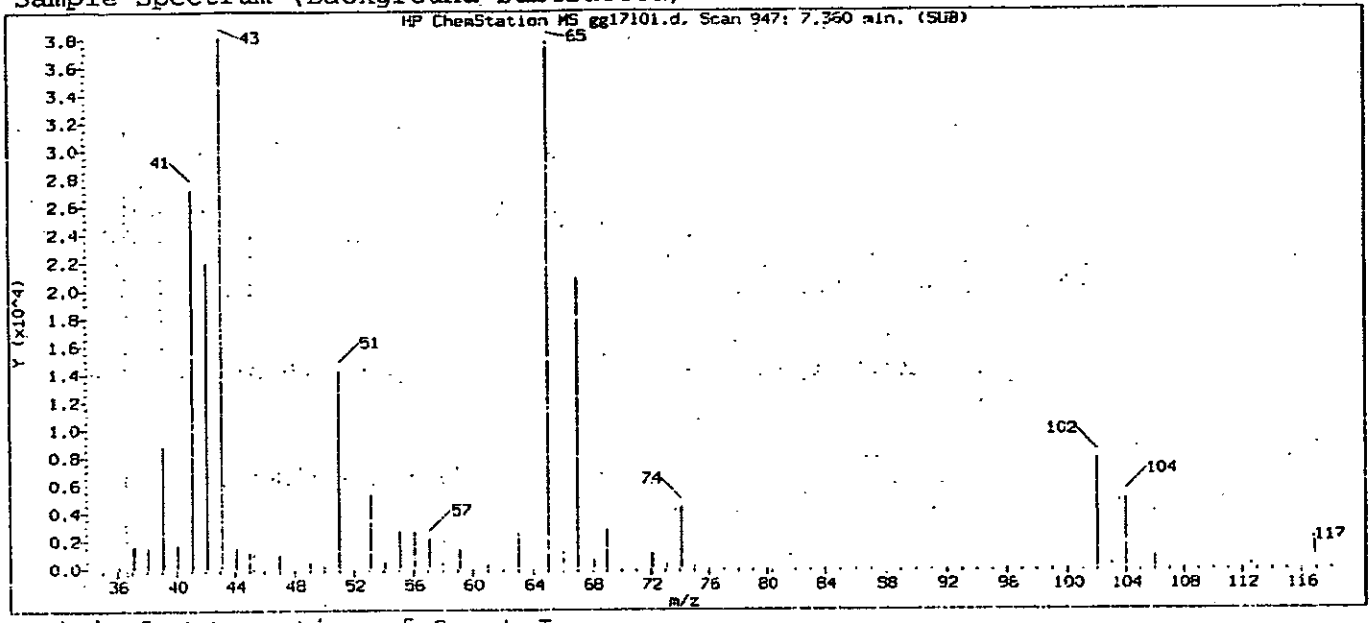
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long
on 08/17/2010 at 15:30.
Target 3.5 esignature user ID: jml01693

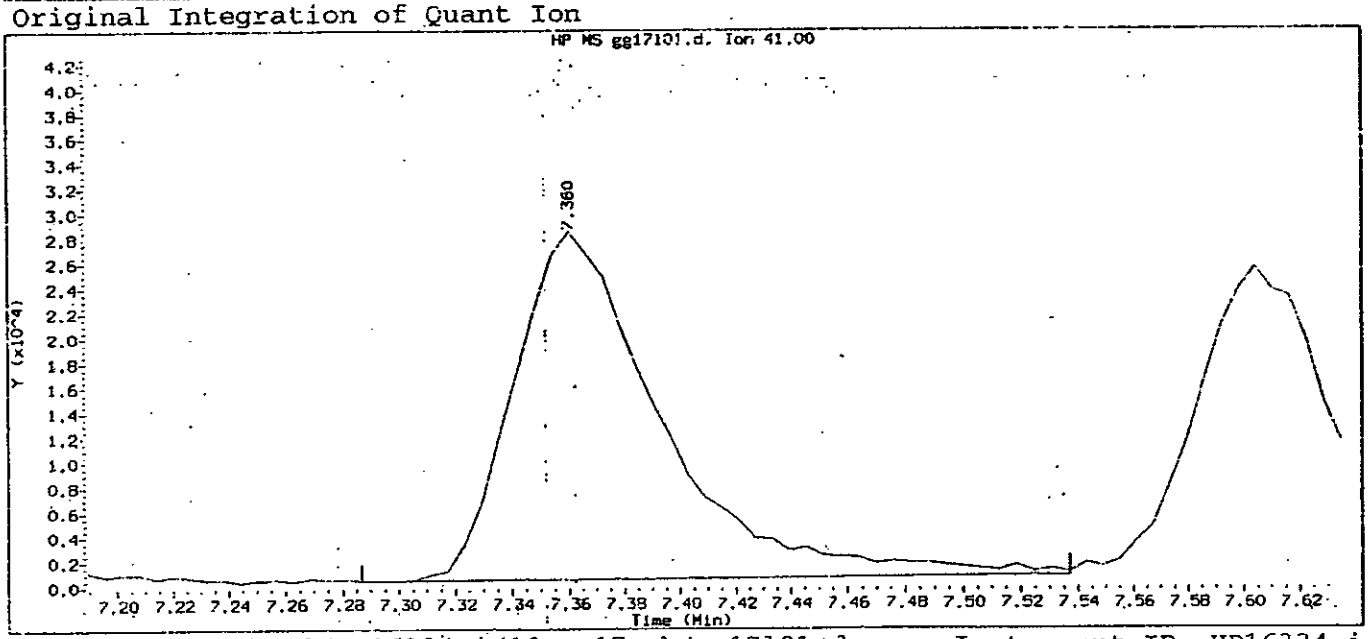
RAD36 0267

GC/MS audit/management approval: _____ 8/18/10

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17101.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 14:53 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 17-AUG-2010 15:01
Date, time and analyst ID of latest file update: 17-Aug-2010 15:11 Automation

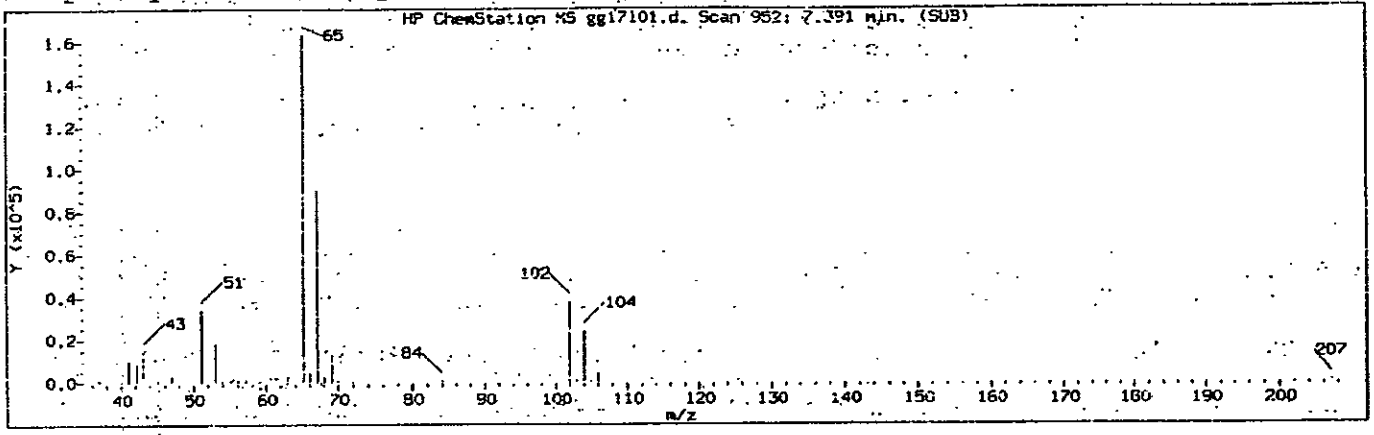
Sample Name: LCSG01 Lab Sample ID: LCSG01

Compound Number	: 67		
Compound Name	: Isobutyl Alcohol		
Scan Number	: 947		
Retention Time (minutes)	: 7.360		
Quant Ion	: 41.00		
Area	: 101518		
On-column Amount (ng)	: 114.7527		
Integration start scan	: 934	Integration stop scan:	975
Y at integration start	: 498	Y at integration end:	868

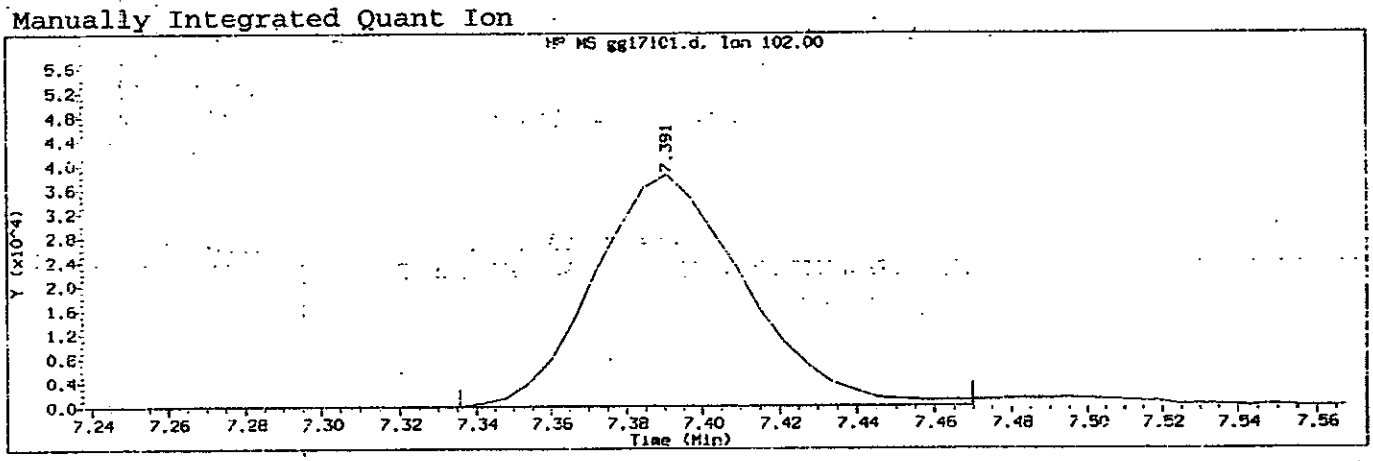
RAD36 8268

Digitally signed by Jason M. Long on 08/17/2010 at 15:30.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17101.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 14:53 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 17-AUG-2010 15:01
Date, time and analyst ID of latest file update: 17-Aug-2010 15:29 jml01693

Sample Name: LCSG01 Lab Sample ID: LCSG01

Compound Number	: 70		
Compound Name	: 1,2-Dichloroethane-d4		
Scan Number	: 952		
Retention Time (minutes)	: 7.391		
Quant Ion	: 102.00		
Area (flag)	: 105170M		
On-Column Amount (ng)	: 9.9209		
Integration start scan	: 942	Integration stop scan:	964
Y at integration start	: 0	Y at integration end:	0

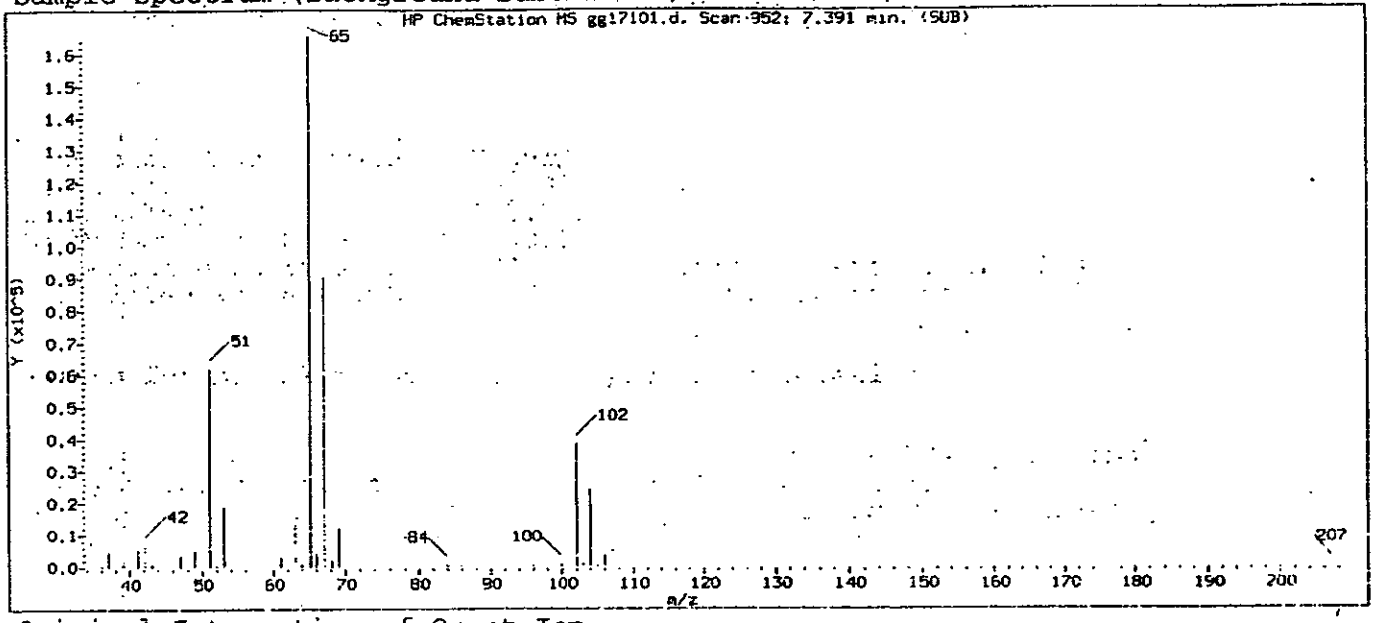
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long
on 08/17/2010 at 15:30.
Target 3.5 esignature user ID: jml01693

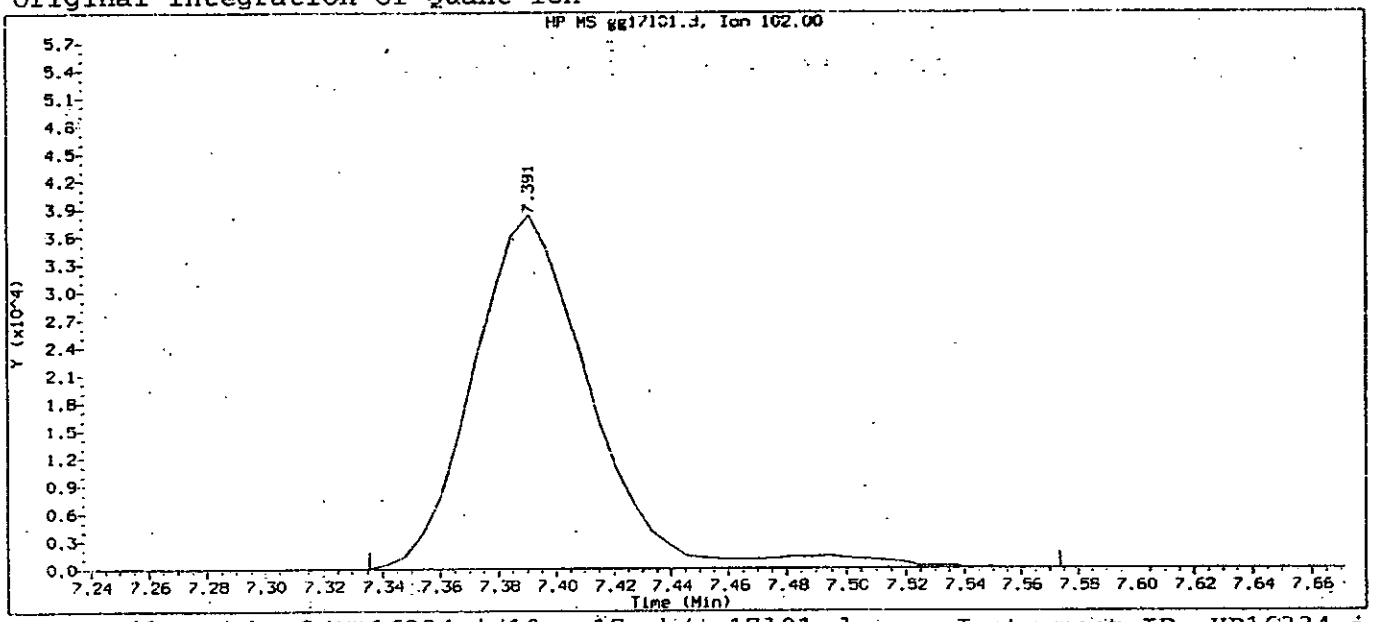
RAD36 0269

GC/MS audit/management approval: _____ 8/18/10

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17101.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 14:53 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 17-AUG-2010 15:01
Date, time and analyst ID of latest file update: 17-Aug-2010 15:11 Automation

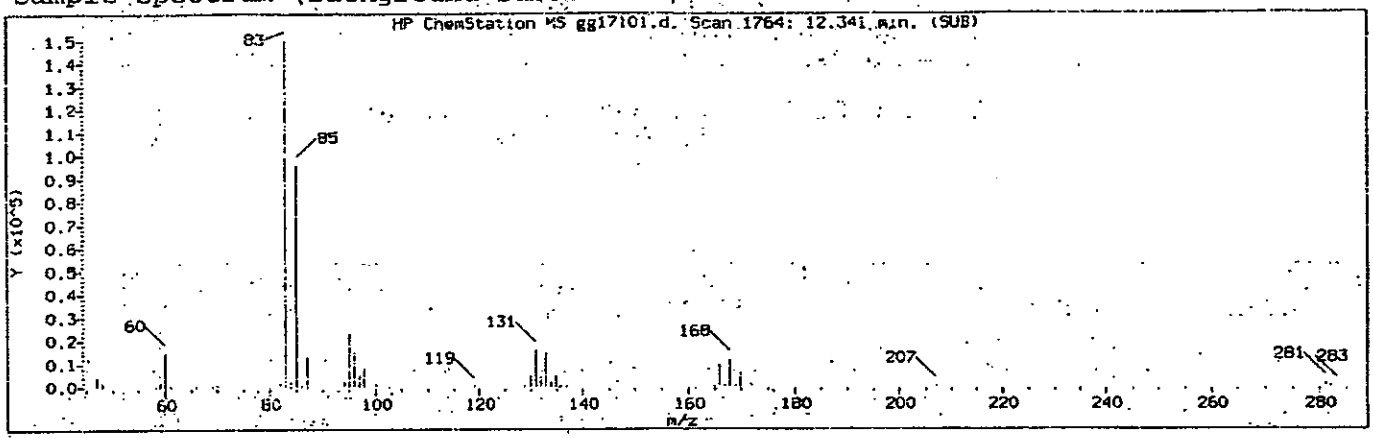
Sample Name: LCSG01 Lab Sample ID: LCSG01

Compound Number	: 70		
Compound Name	: 1,2-Dichloroethane-d4		
Scan Number	: 952		
Retention Time (minutes)	: 7.391		
Quant Ion	: 102.00		
Area	: 108870		
On-column Amount (ng)	: 10.2699		
Integration start scan	: 942	Integration stop scan:	981
Y at integration start	: 0	Y at integration end:	0

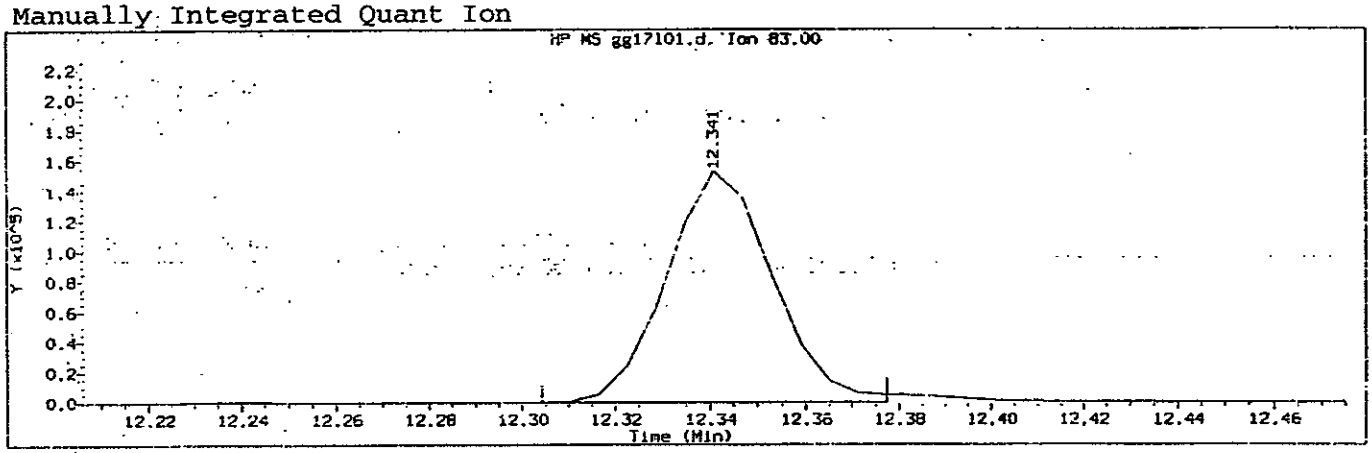
RAD36 8270

Digitally signed by Jason M. Long on 08/17/2010 at 15:30.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17101.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 14:53 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 17-AUG-2010 15:01
Date, time and analyst ID of latest file update: 17-Aug-2010 15:29 jml01693

Sample Name: LCSG01 Lab Sample ID: LCSG01

Compound Number	: 128		
Compound Name	: 1,1,2,2-Tetrachloroethane		
Scan Number	: 1764		
Retention Time (minutes)	: 12.341		
Quant Ion	: 83.00		
Area (flag)	: 236631M		
On-Column Amount (ng)	: 5.0655		
Integration start scan	: 1757	Integration stop scan:	1769
Y at integration start	: 0	Y at integration end:	0

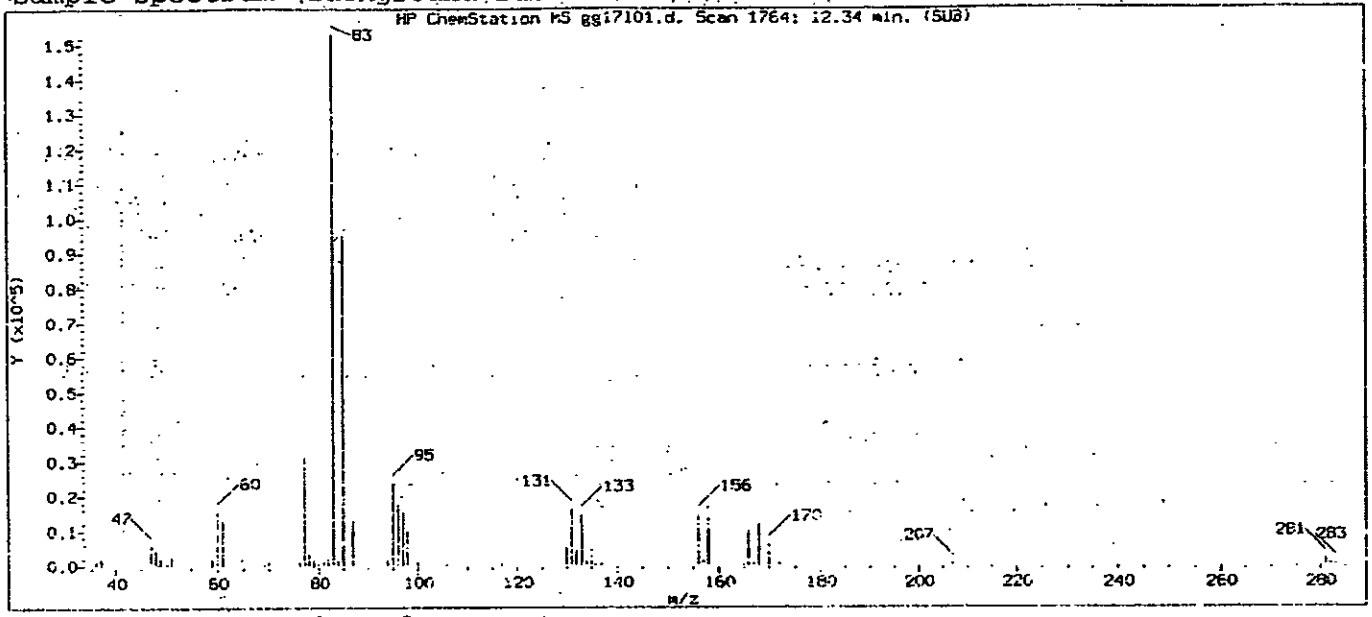
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long on 08/17/2010 at 15:30. Target 3.5 esignature user ID: jml01693

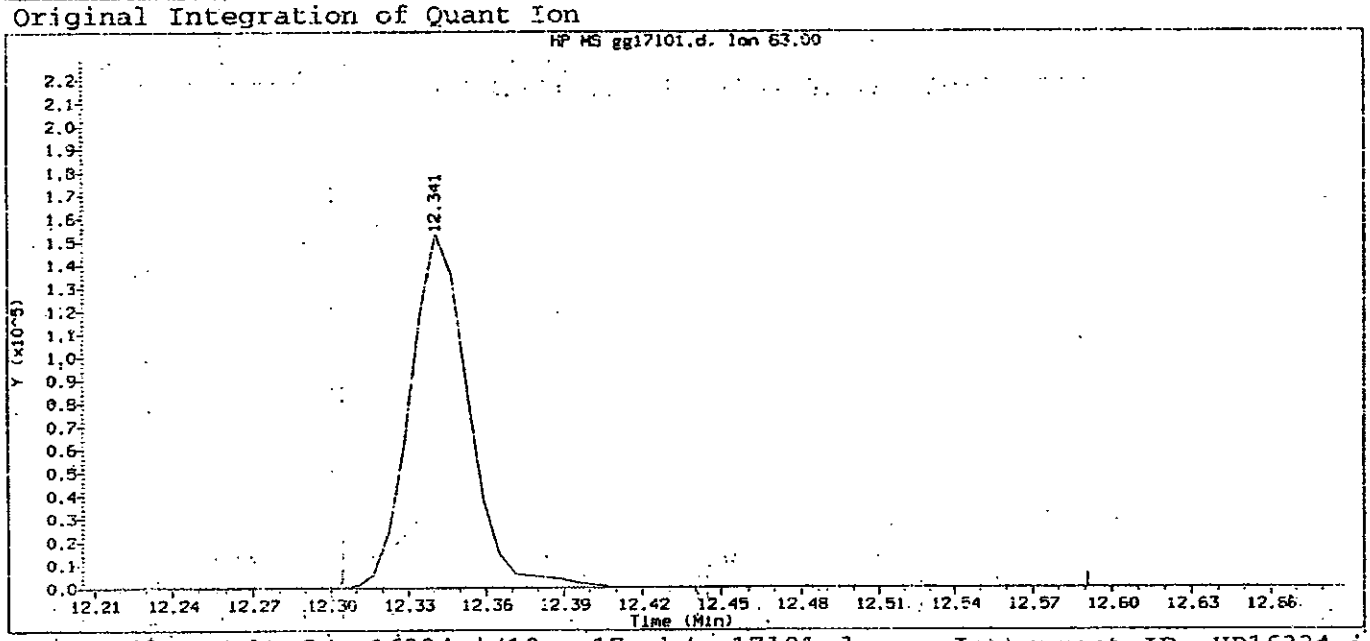
GC/MS audit/management approval: _____ 8/18/10

RAD36 8271

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17101.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 14:53 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 17-AUG-2010 15:01
Date, time and analyst ID of latest file update: 17-Aug-2010 15:11 Automation

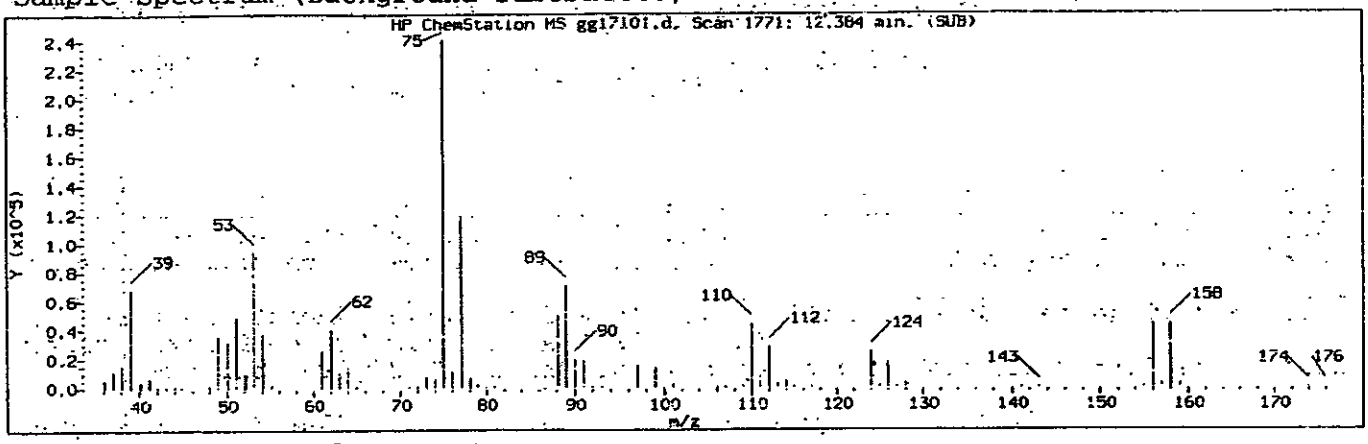
Sample Name: LCSG01 Lab Sample ID: LCSG01

Compound Number	128
Compound Name	1,1,2,2-Tetrachloroethane
Scan Number	1764
Retention Time (minutes)	12.341
Quant Ion	83.00
Area	241668
On-column Amount (ng)	5.1733
Integration start scan	1757
Integration stop scan	1804
Y at integration start	0
Y at integration end	0

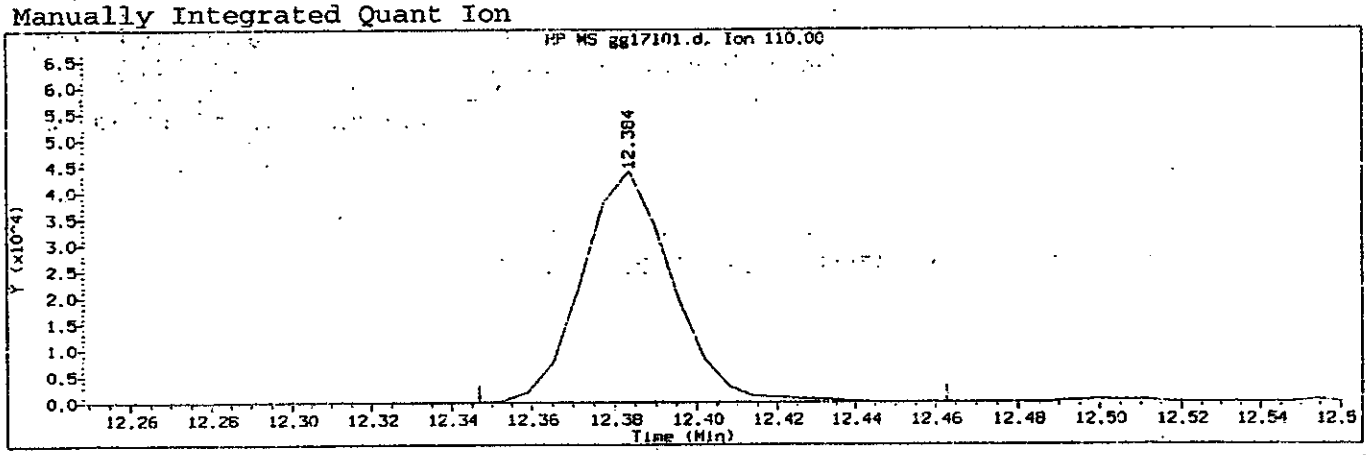
RAD36 0272

Digitally signed by Jason M. Long on 08/17/2010 at 15:30.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17101.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 14:53 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 17-AUG-2010 15:01
Date, time and analyst ID of latest file update: 17-Aug-2010 15:29 jml01693

Sample Name: LCSG01 Lab Sample ID: LCSG01

Compound Number	: 131		
Compound Name	: 1,2,3-Trichloropropane		
Scan Number	: 1771		
Retention Time (minutes)	: 12.384		
Quant Ion	: 110.00		
Area (flag)	: 66539M		
On-Column Amount (ng)	: 4.9854		
Integration start scan	: 1764	Integration stop scan:	1783
Y at integration start	: 0	Y at integration end:	0

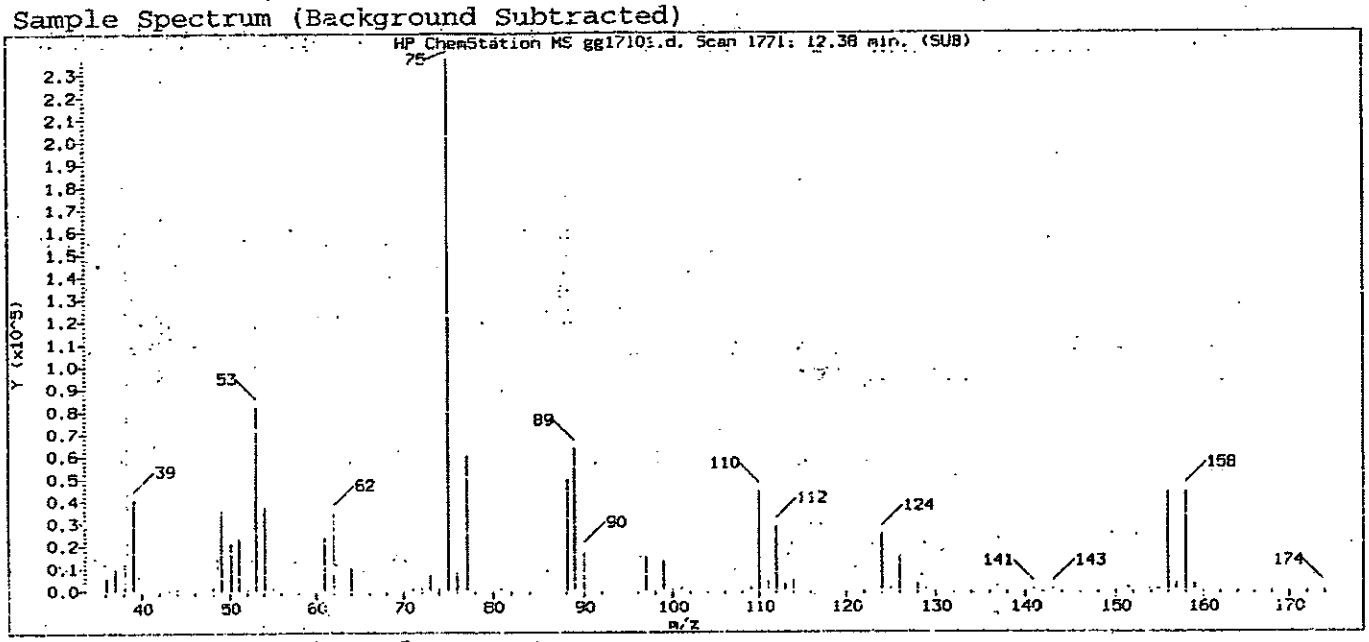
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long
on 08/17/2010 at 15:30.
Target 3.5 esignature user ID: jml01693

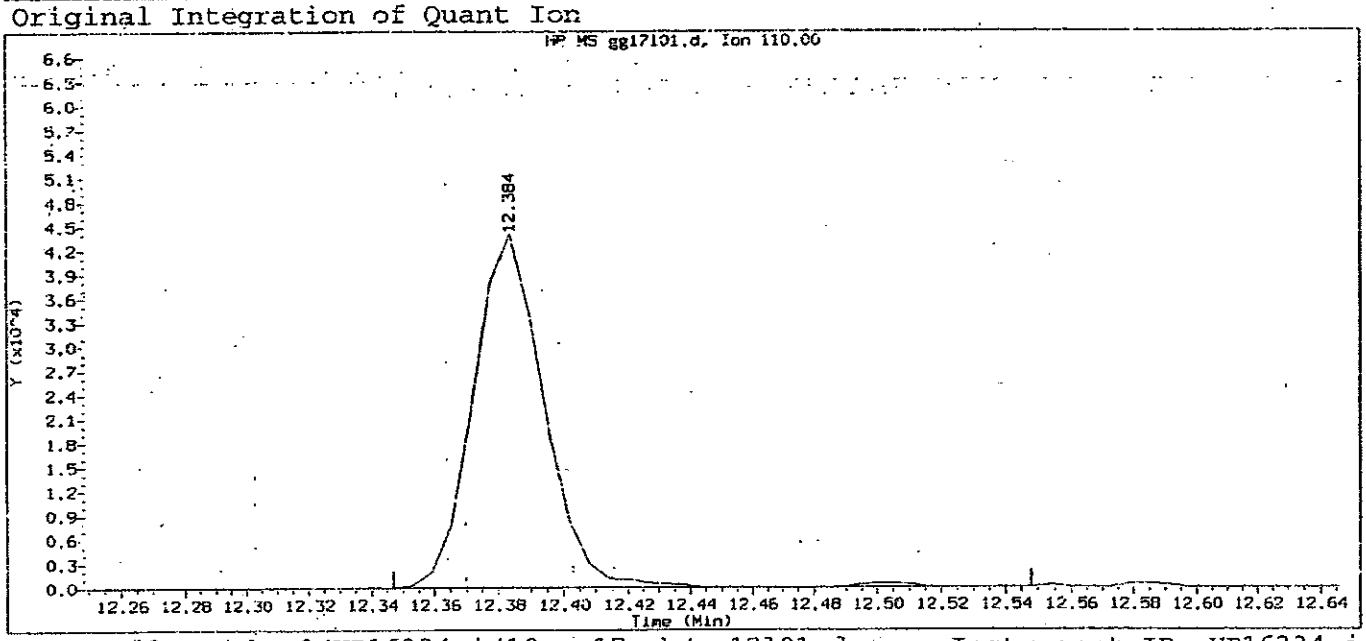
RAD36 0273

GC/MS audit/management approval: _____

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17101.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 14:53 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 17-AUG-2010 15:01
Date, time and analyst ID of latest file update: 17-Aug-2010 15:11 Automation

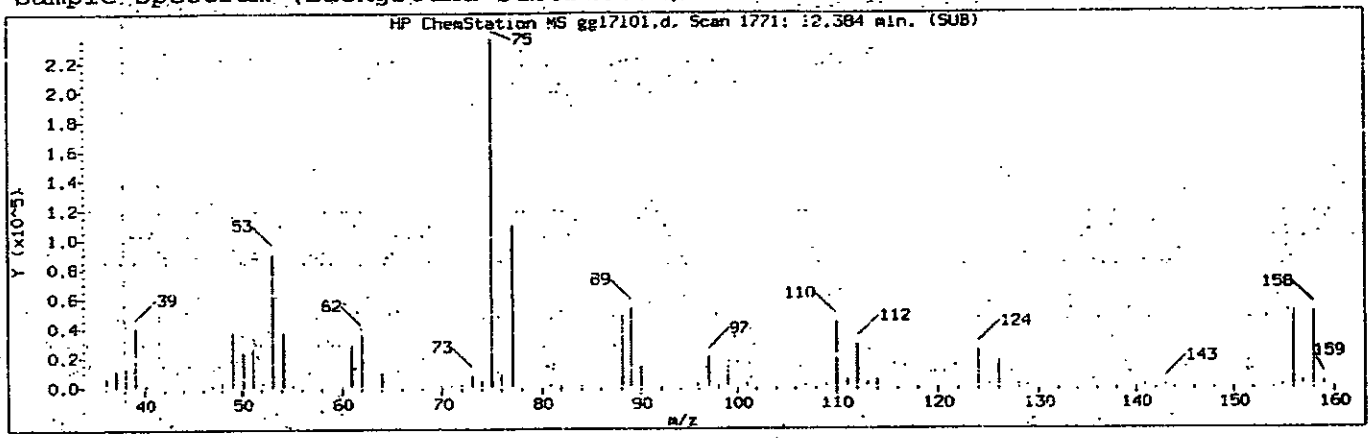
Sample Name: LCSG01 Lab Sample ID: LCSG01

Compound Number	: 131		
Compound Name	: 1,2,3-Trichloropropane		
Scan Number	: 1771		
Retention Time (minutes)	: 12.384		
Quant Ion	: 110.00		
Area	: 67132		
On-column Amount (ng)	: 5.0298		
Integration start scan	: 1764	Integration stop scan:	1797
Y at integration start	: 0	Y at integration end:	0

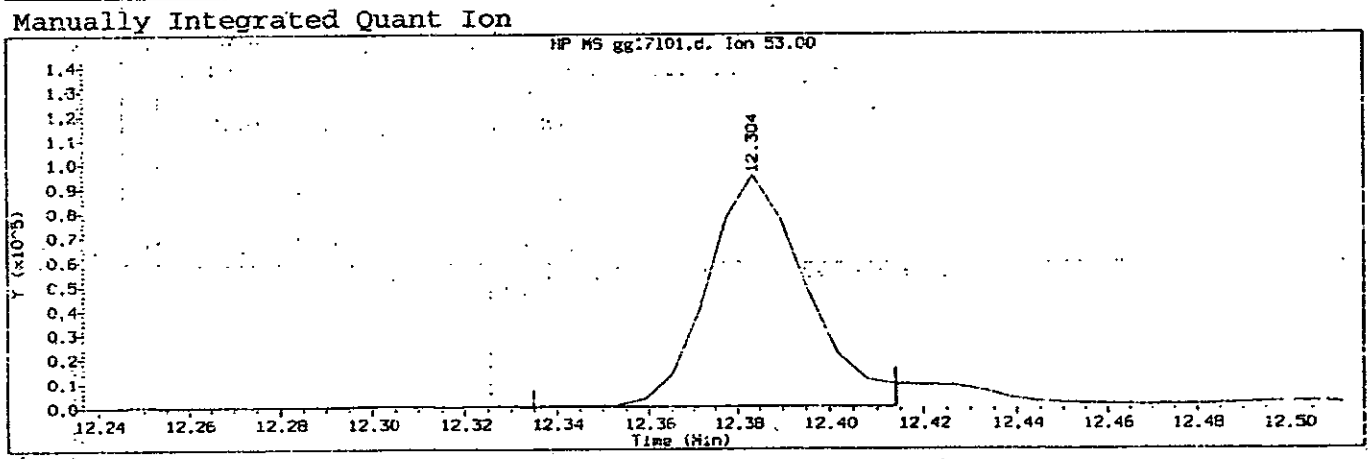
RAD36 8274

Digitally signed by Jason M. Long on 08/17/2010 at 15:30.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17101.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 14:53 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 17-AUG-2010 15:01
Date, time and analyst ID of latest file update: 17-Aug-2010 15:29 jml01693

Sample Name: LCSG01 Lab Sample ID: LCSG01

Compound Number	: 130		
Compound Name	: trans-1,4-Dichloro-2-Butene		
Scan Number	: 1771		
Retention Time (minutes)	: 12.384		
Quant Ion	: 53.00		
Area (flag)	: 145017M		
On-Column Amount (ng)	: 25.5001		
Integration start scan	: 1762	Integration stop scan:	1775
Y at integration start	: 0	Y at integration end:	0

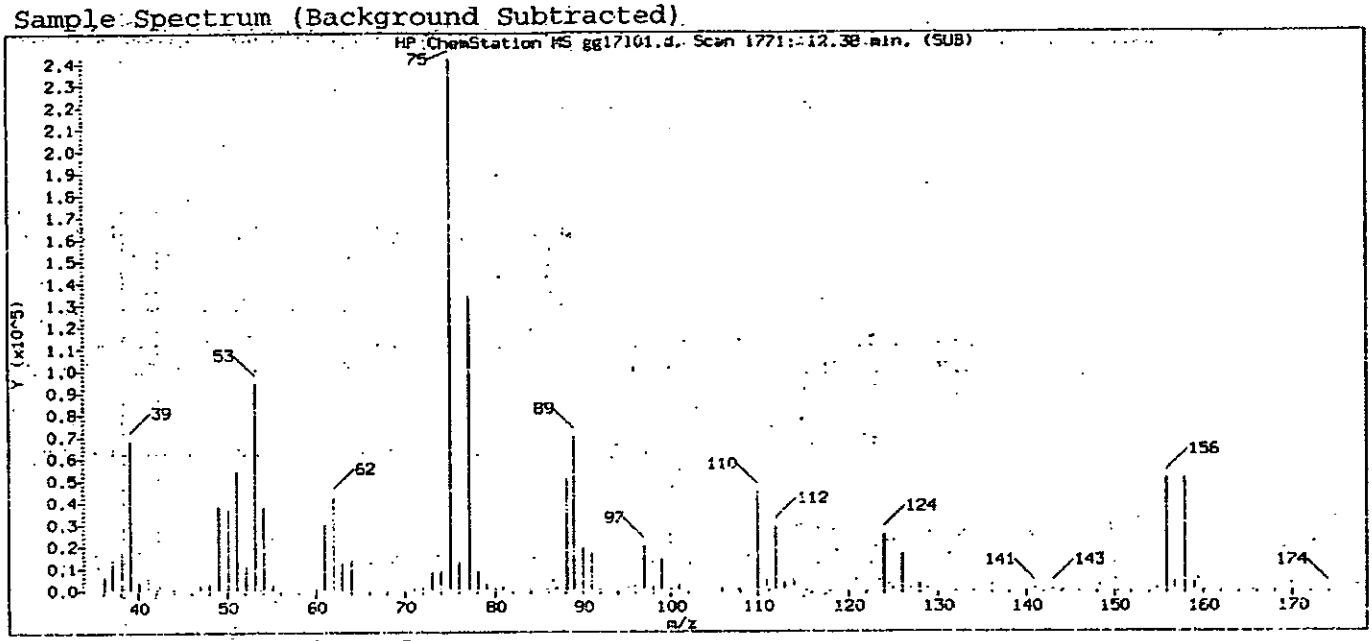
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long on 08/17/2010 at 15:30. Target 3.5 esignature user ID: jml01693

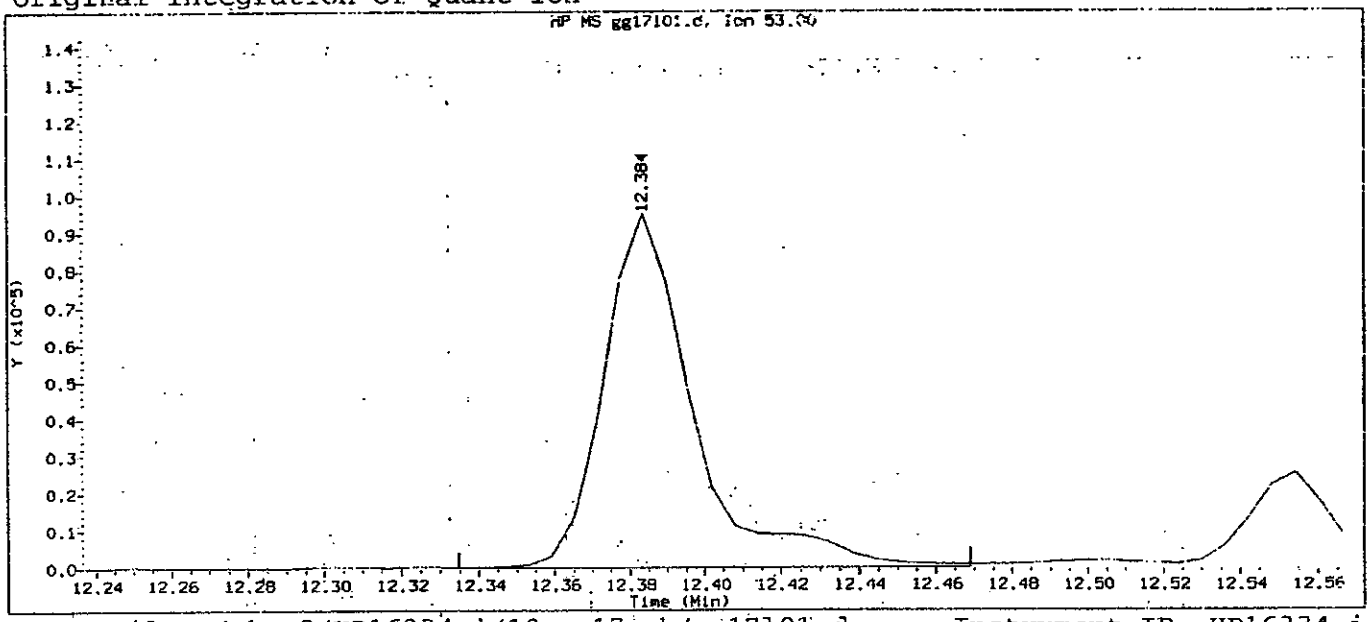
GC/MS audit/management approval: _____

RAD36 #275

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17101.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 14:53 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 17-AUG-2010 15:01
Date, time and analyst ID of latest file update: 17-Aug-2010 15:11 Automation

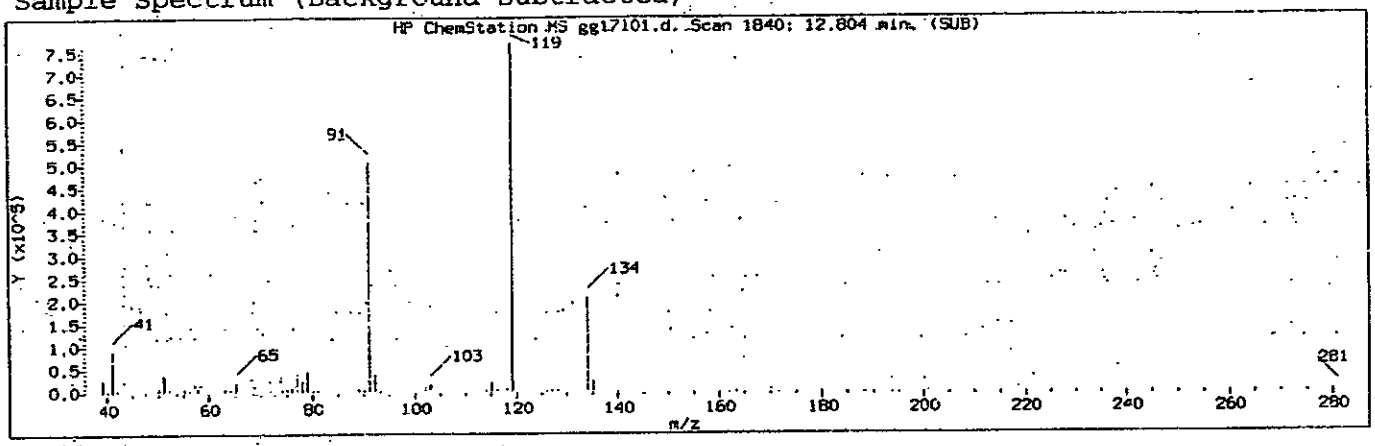
Sample Name: LCSG01 Lab Sample ID: LCSG01

Compound Number	: 130		
Compound Name	: trans-1,4-Dichloro-2-Butene		
Scan Number	: 1771		
Retention Time (minutes)	: 12.384		
Quant Ion	: 53.00		
Area	: 157436		
On-column Amount (ng)	: 27.2466		
Integration start scan	: 1762	Integration stop scan:	1784
Y at integration start	: 0	Y at integration end:	0

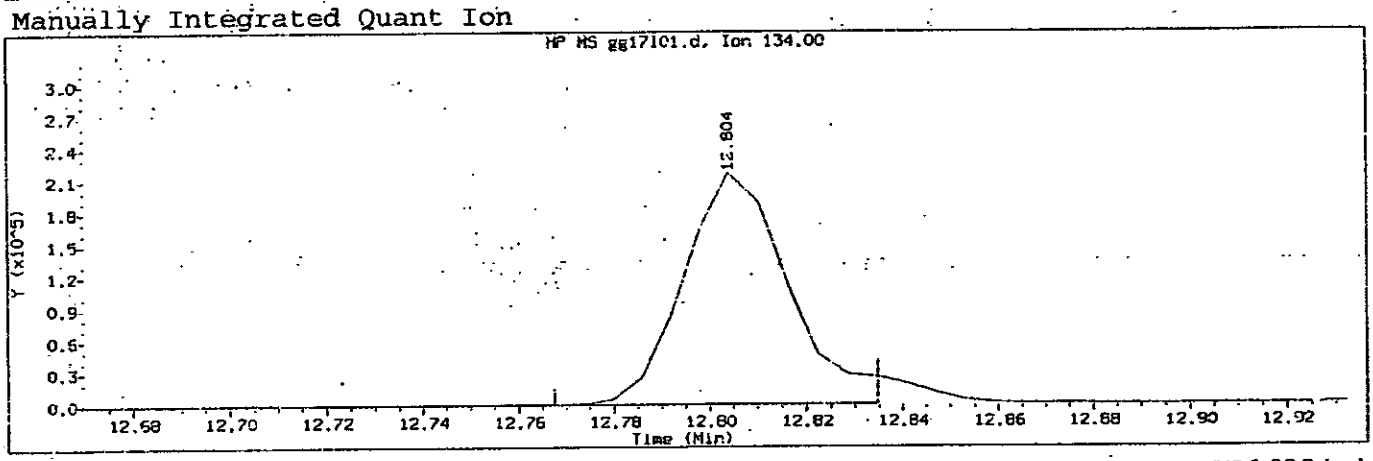
RAD36 0276

Digitally signed by Jason M. Long on 08/17/2010 at 15:30.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17101.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 14:53 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 17-AUG-2010 15:01
Date, time and analyst ID of latest file update: 17-Aug-2010 15:29 jml01693

Sample Name: LCSG01 Lab Sample ID: LCSG01

Compound Number	: 137		
Compound Name	: tert-Butylbenzene		
Scan Number	: 1840		
Retention Time (minutes)	: 12.804		
Quant Ion	: 134.00		
Area (flag)	: 327908M		
On-Column Amount (ng)	: 5.0287		
Integration start scan	: 1833	Integration stop scan:	1844
Y at integration start	: 0	Y at integration end:	0

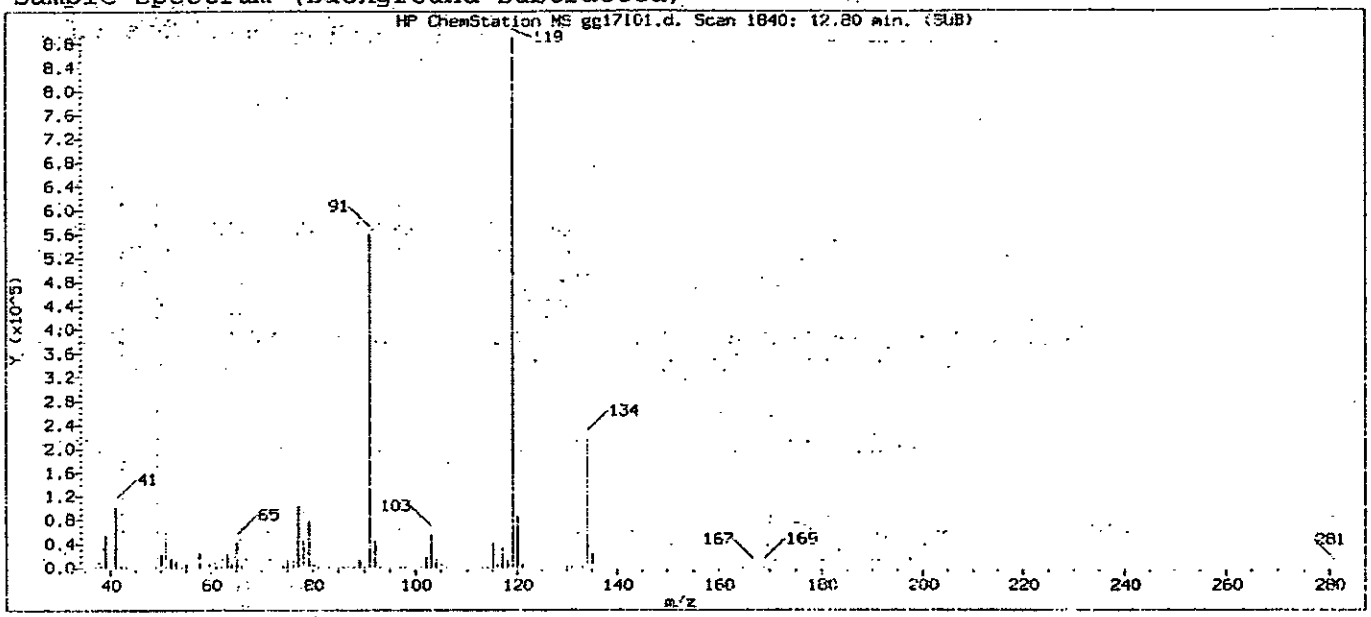
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long
on 08/17/2010 at 15:30.
Target 3.5 esignature user ID: jml01693

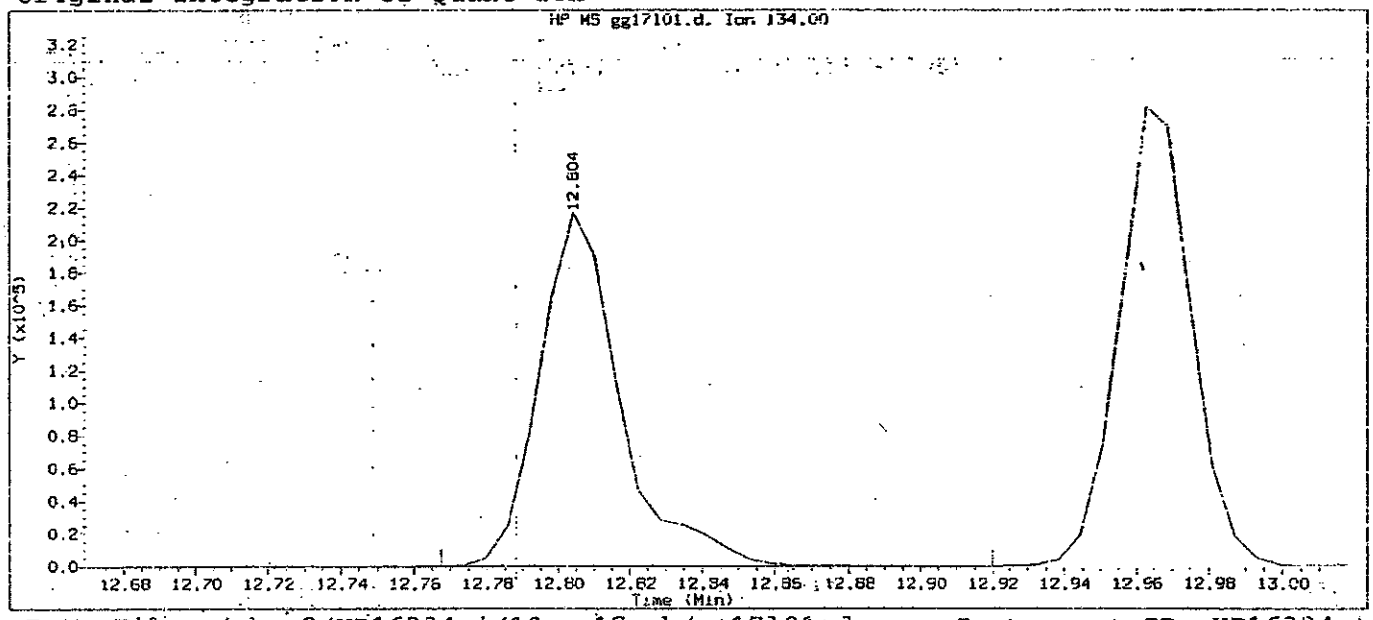
RAD36 0277

GC/MS audit/management approval: _____ 8/18/10

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10aug17a.b/gg17101.d Instrument ID: HP16334.i
Injection date and time: 17-AUG-2010 14:53 Analyst ID: JML01693

Method used: /chem2/HP16334.i/10aug17a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 17-AUG-2010 15:01
Date, time and analyst ID of latest file update: 17-Aug-2010 15:11 Automation

Sample Name: LCSG01 Lab Sample ID: LCSG01

Compound Number	: 137		
Compound Name	: tert-Butylbenzene		
Scan Number	: 1840		
Retention Time (minutes)	: 12.804		
Quant Ion	: 134.00		
Area	: 341602		
On-column Amount (ng)	: 5.2387		
Integration start scan	: 1833	Integration stop scan:	1858
Y at integration start	: 0	Y at integration end:	0

RAD36 0279

Digitally signed by Jason M. Long on 08/17/2010 at 15:30.
Target 3.5 esignature user ID: jm101693

Lancaster Laboratories

Continuing Calibration Internal Standard Check

Initial Calibration Standards:

/chem2/HP16334.i/10aug17a.b/gg17i06.d
/chem2/HP16334.i/10aug17a.b/gg17i05.d
/chem2/HP16334.i/10aug17a.b/gg17i04.d
/chem2/HP16334.i/10aug17a.b/gg17i03.d
/chem2/HP16334.i/10aug17a.b/gg17i02.d
/chem2/HP16334.i/10aug17a.b/gg17i01.d

File /chem2/HP16334.i/10aug17a.b/gg17i03.d is Mid Level Calibration Standard used for comparison.

Current Continuing Calibration Standard:

/chem2/HP16334.i/10sep03a.b/gs03c01.d

RT Summary

Internal Standard Name	File ID: gs03c01.d	ICAL RT	In Spec
t-Butyl Alcohol-d10	4.367	4.391	Yes
Fluorobenzene	7.823	7.836	Yes
Chlorobenzene-d5	11.250	11.256	Yes
1,4-Dichlorobenzene-d4	13.109	13.109	Yes

A "No" indicates the retention time is greater than 30 seconds from the referenced ICAL standard.

Area Summary

Internal Standard Name	File ID: gs03c01.d	ICAL Area	Low Limit	High Limit	In Spec
t-Butyl Alcohol-d10	107003	122410	61205	244820	Yes
Fluorobenzene	2521009	2558018	1279009	5116036	Yes
Chlorobenzene-d5	1879048	1859706	929853	3719412	Yes
1,4-Dichlorobenzene-d4	1081196	1062935	531468	2125870	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

RAD36 @279

Comments: _____

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract: _____

Lab Code: LANCAS Case No.: _____ SAS No.: _____ SDG No.: _____

Instrument ID: HP16334 Calibration Date: 09/03/10 Time: 02:13

Lab File ID: gs03c01.d Init. Calib. Date(s): 08/17/10 08/17/10

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .25

	COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT	
	Dichlorodifluoromethane	0.4431	0.3714	8.38	10	-16	
#	Chloromethane	0.4252	0.3487	8.20	10	-18	#
*	Vinyl Chloride	0.4117	0.3336	8.10	10	-19	*
	1,3-Butadiene	0.6673	0.6044	9.06	10	-9	
	Bromomethane	0.3142	0.2643	8.41	10	-16	
	Chloroethane	0.2417	0.1953	8.08	10	-19	
	Dichlorofluoromethane	0.5746	0.4561	7.94	10	-21	
	Trichlorofluoromethane	0.5012	0.4071	8.12	10	-19	
	Ethyl Ether	0.1690	0.1614	9.55	10	-4	
	Freon 123a	0.2998	0.2769	9.23	10	-8	
	Acrolein	2.0929	2.3885	570.63	500	14	
*	1,1-Dichloroethene	0.2451	0.2205	8.99	10	-10	*
	Freon 113	0.2543	0.2353	9.25	10	-7	
	Acetone	0.9882	1.1046	111.77	100	12	
	Methyl Iodide	0.4479	0.4009	8.95	10	-11	
	Carbon Disulfide	0.6676	0.6905	10.34	10	3	
	Allyl Chloride	0.2575	0.2253	8.75	10	-13	
	Methyl Acetate	0.0504	0.0680	11.43	10	14	
	Methylene Chloride	0.2896	0.2429	8.39	10	-16	
	t-Butyl Alcohol	1.2612	0.9308	147.61	200	-26	
	Acrylonitrile	3.5873	4.2161	51.55	50	3	
	trans-1,2-Dichloroethene	0.2761	0.2548	9.23	10	-8	
	1,2-Dichloroethene (Total)	0.2853	0.2650	18.57	20	-7	
	Methyl Tertiary Butyl Ether	0.5455	0.4909	9.00	10	-10	
	n-Hexane	0.3695	0.3312	8.96	10	-10	
#	1,1-Dichloroethane	0.4534	0.4157	9.17	10	-8	#
	di-Isopropyl Ether	0.7750	0.7105	9.17	10	-8	
	2-Chloro-1,3-Butadiene	0.3225	0.2901	9.00	10	-10	
	Ethyl t-Butyl Ether	0.6991	0.6284	8.99	10	-10	
	2,2-Dichloropropane	0.3684	0.3395	9.21	10	-8	
	cis-1,2-Dichloroethene	0.2946	0.2751	9.34	10	-7	
	2-Butanone	5.0927	5.4179	106.38	100	6	
	Propionitrile	1.3182	1.5401	209.24	200	5	
	Methacrylonitrile	5.6821	6.0247	106.03	100	6	
	Bromochloromethane	0.1175	0.1173	9.98	10	0	
	Tetrahydrofuran	1.6595	1.7059	102.79	100	3	

RAD36 8280

Minimum RRF for SPCC(#)=0.10 (0.30 for Chlorobenzene, 1,1,2,2-Tetrachloroethane)
Maximum %Drift for CCC(*)=20%

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP16334 Calibration Date: 09/03/10 Time: 02:13

Lab File ID: gs03c01.d Init. Calib. Date(s): 08/17/10 08/17/10

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .25

	COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT	
*	Chloroform	0.4632	0.4357	9.41	10	-6	*
	1,1,1-Trichloroethane	0.4024	0.3819	9.49	10	-5	
	Cyclohexane	0.4444	0.4057	9.13	10	-9	
	1,1-Dichloropropene	0.3619	0.3335	9.22	10	-8	
	Carbon Tetrachloride	0.3517	0.3041	8.65	10	-14	
	Isobutyl Alcohol	0.3851	0.3410	442.62	500	-11	
	Benzene	1.0653	1.0066	9.45	10	-6	
	1,2-Dichloroethane	0.2532	0.2319	9.16	10	-8	
	1,2-Dichloroethane(mz98)	0.0243	0.0234	9.65	10	-4	
	t-Amyl Methyl Ether	0.6058	0.5561	9.18	10	-8	
	n-Heptane	0.3812	0.3472	9.11	10	-9	
	n-Butanol	0.2932	0.3052	925.85	1000	-7	
	Trichloroethene	0.2930	0.2926	9.99	10	0	
	Methylcyclohexane	0.4603	0.4425	9.61	10	-4	
*	1,2-Dichloropropane	0.2636	0.2518	9.55	10	-4	*
	Dibromomethane	0.1172	0.1144	9.76	10	-2	
	1,4-Dioxane	0.0889	0.0877	493.42	500	-1	
	Methyl Methacrylate	11.364	012.1354	10.68	10	7	
	Bromodichloromethane	0.3001	0.2827	9.42	10	-6	
	2-Nitropropane	2.9845	2.7803	93.16	100	-7	
	cis-1,3-Dichloropropene	0.3134	0.2814	8.98	10	-10	
	4-Methyl-2-Pentanone	0.1247	0.1226	98.29	100	-2	
*	Toluene	0.9744	0.8889	9.12	10	-9	*
	trans-1,3-Dichloropropene	0.3433	0.3039	8.85	10	-11	
	Ethyl Methacrylate	0.2368	0.2267	9.57	10	-4	
	1,1,2-Trichloroethane	0.2287	0.2185	9.55	10	-4	
	Tetrachloroethene	0.4416	0.4204	9.52	10	-5	
	1,3-Dichloropropane	0.3868	0.3624	9.37	10	-6	
	2-Hexanone	0.1131	0.1102	97.40	100	-3	
	Dibromochloromethane	0.2634	0.2368	8.99	10	-10	
	1,2-Dibromoethane	0.2065	0.2008	9.72	10	-3	
#	Chlorobenzene	1.0944	1.0142	9.27	10	-7	#
	1,1,1,2-Tetrachloroethane	0.3524	0.3273	9.29	10	-7	
*	Ethylbenzene	1.8614	1.7504	9.40	10	-6	*
	m+p-Xylene	0.7448	0.6974	18.73	20	-6	
	Xylene (Total)	0.7412	0.6930	28.05	30	-7	

RAD36 0281

Minimum RRF for SPCC(#)=0.10 (0.30 for Chlorobenzene, 1,1,2,2-Tetrachloroethane)
Maximum %Drift for CCC(*)=20%

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP16334 Calibration Date: 09/03/10 Time: 02:13

Lab File ID: gs03c01.d Init. Calib. Date(s): 08/17/10 08/17/10

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .25

	COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT	
	o-Xylene	0.7341	0.6842	9.32	10	-7	
	Styrene	1.1028	1.0241	9.29	10	-7	
#	Bromoform	0.1357	0.1134	7.56	10	-24	#
	Isopropylbenzene	1.8944	1.7585	9.28	10	-7	
#	1,1,2,2-Tetrachloroethane	0.4488	0.4305	9.59	10	-4	#
	Bromobenzene	0.7774	0.7206	9.27	10	-7	
	trans-1,4-Dichloro-2-Butene	2.5729	1.1391	41.67	100	-58	
	1,2,3-Trichloropropane	0.1282	0.1187	9.25	10	-7	
	n-Propylbenzene	4.0096	3.7534	9.36	10	-6	
	2-Chlorotoluene	0.8057	0.7425	9.22	10	-8	
	4-Chlorotoluene	0.8220	0.7626	9.29	10	-7	
	1,3,5-Trimethylbenzene	2.7904	2.5607	9.18	10	-8	
	Pentachloroethane	0.4798	0.4093	7.97	10	-20	
	tert-Butylbenzene	0.6265	0.5971	9.53	10	-5	
	1,2,4-Trimethylbenzene	2.9991	2.7478	9.16	10	-8	
	sec-Butylbenzene	3.7167	3.4355	9.24	10	-8	
	1,3-Dichlorobenzene	1.6792	1.5945	9.50	10	-5	
	p-Isopropyltoluene	3.3223	3.0940	9.31	10	-7	
	1,4-Dichlorobenzene	1.7263	1.5567	9.02	10	-10	
	1,2,3-Trimethylbenzene	1.3348	1.2470	9.34	10	-7	
	Benzyl Chloride	0.1563	0.1391	7.76	10	-22	
	n-Butylbenzene	1.6437	1.5463	9.41	10	-6	
	1,2-Dichlorobenzene	1.4785	1.3464	9.11	10	-9	
	1,2-Dibromo-3-Chloropropane	2.5760	2.6388	9.13	10	-9	
	1,2,4-Trichlorobenzene	1.1672	1.0352	8.87	10	-11	
	Hexachlorobutadiene	0.6291	0.5934	9.43	10	-6	
	Naphthalene	1.5882	1.4086	8.87	10	-11	
	1,2,3-Trichlorobenzene	0.9137	0.7719	8.45	10	-16	
	Dibromofluoromethane	0.2300	0.2260	9.82	10	-2	
	Dibromofluoromethane(mz111)	0.2343	0.2297	9.81	10	-2	
	1,2-Dichloroethane-d4	0.0429	0.0433	10.10	10	1	
	1,2-Dichloroethane-d4(mz104)	0.0276	0.0277	10.03	10	0	
	1,2-Dichloroethane-d4(mz65)	0.1911	0.1863	9.75	10	-2	
	Toluene-d8	1.3504	1.3090	9.69	10	-3	
	Toluene-d8(mz100)	0.8737	0.8559	9.80	10	-2	

RAD36 0282

Minimum RRF for SPCC(#)=0.10 (0.30 for Chlorobenzene, 1,1,2,2-Tetrachloroethane)
Maximum %Drift for CCC(*)=20%

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP16334 Calibration Date: 09/03/10 Time: 02:13

Lab File ID: gs03c01.d Init. Calib. Date(s): 08/17/10 08/17/10

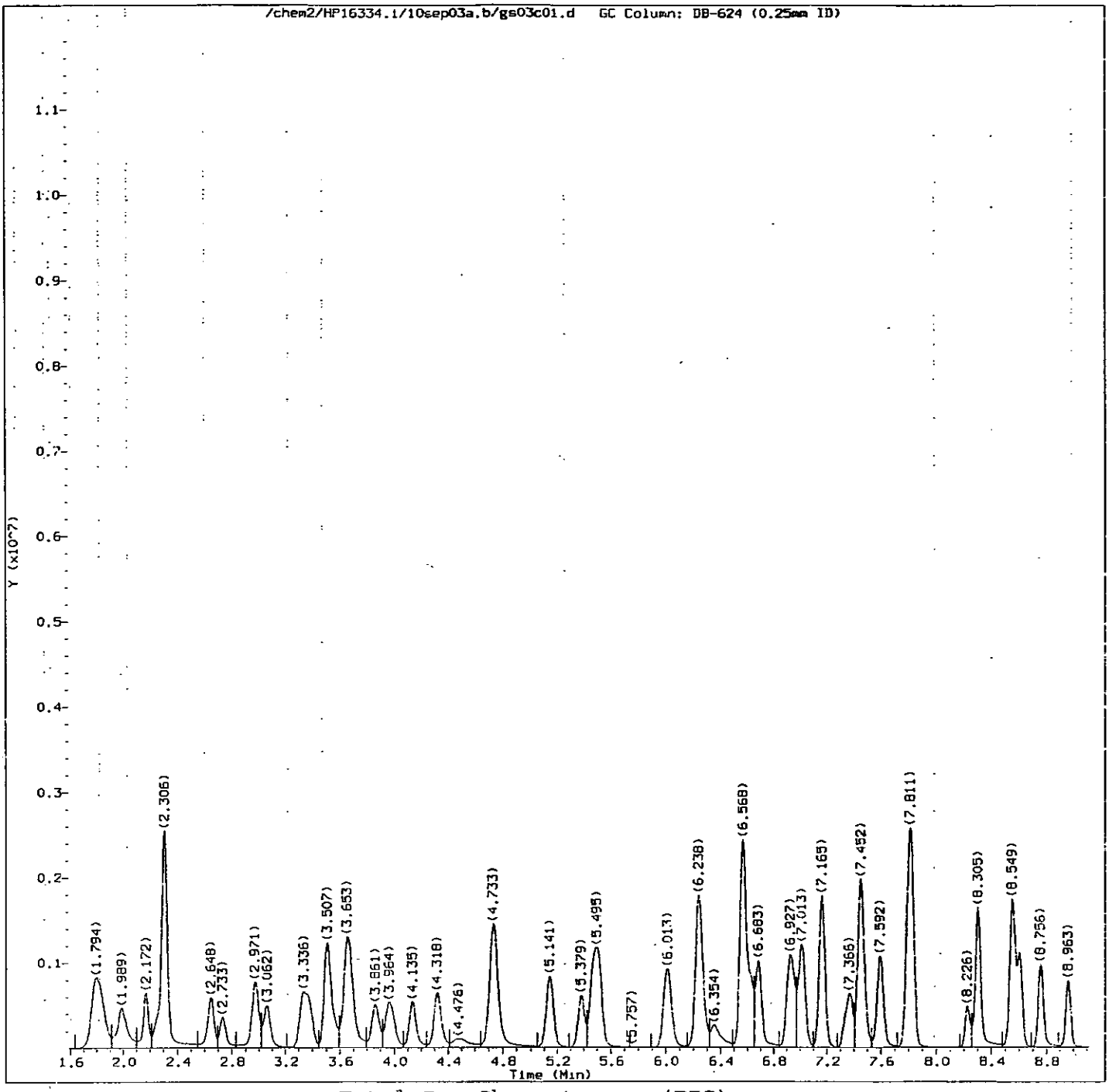
Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .25

COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT
4-Bromofluorobenzene	0.4564	0.4436	9.72	10	-3
4-Bromofluorobenzene(mz174)	0.4043	0.4056	10.03	10	0

Average %Drift 9

RAD36 0283

Minimum RRF for SPCC(#)=0.10 (0.30 for Chlorobenzene, 1,1,2,2-Tetrachloroethane)
Maximum %Drift for CCC(*)=20%



Total Ion Chromatogram (TIC)

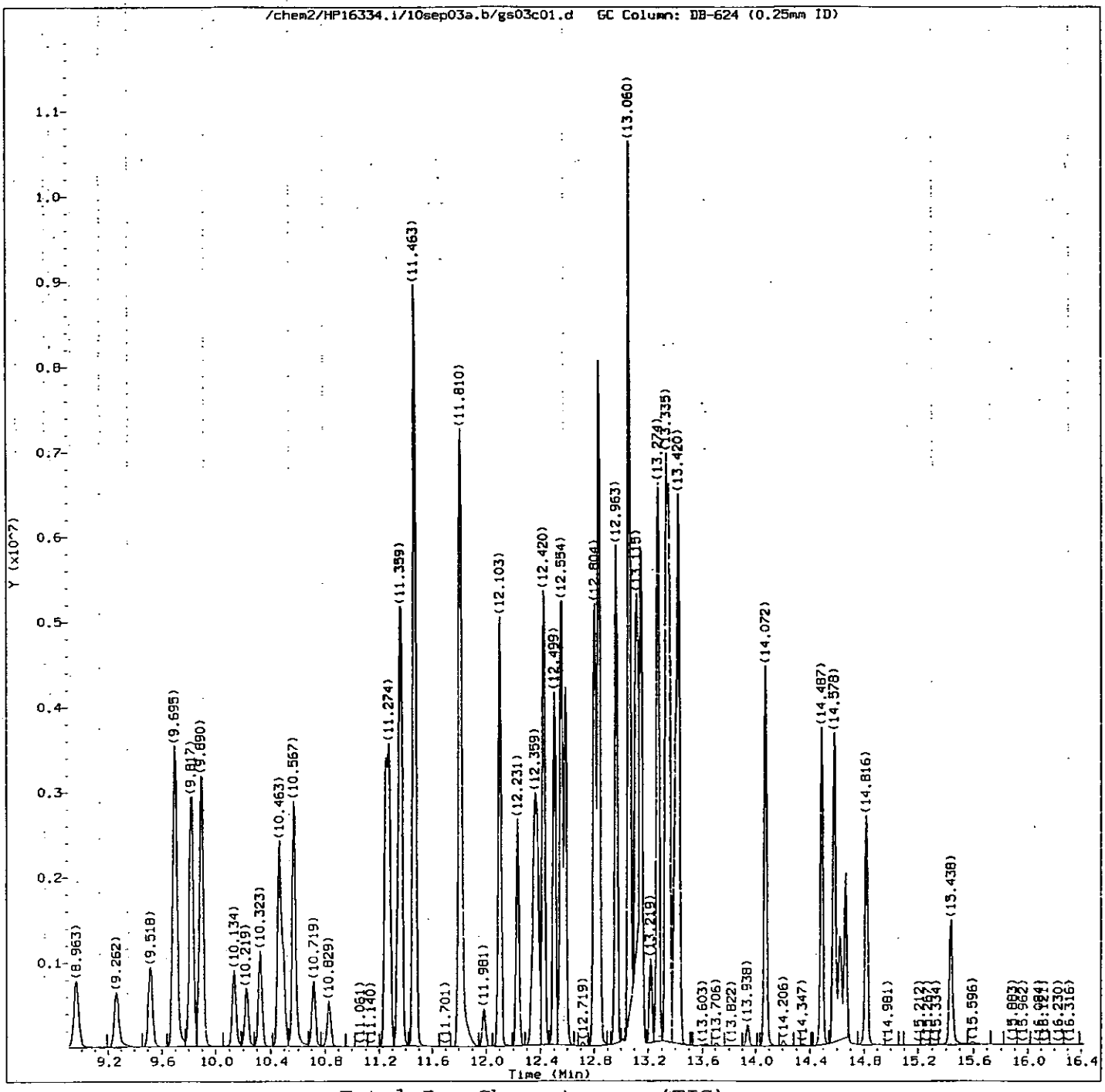
Target Revision 3.5

Data File: /chem2/HP16334.i/10sep03a.b/gs03c01.d Instrument ID: HP16334.i
Injection date and time: 03-SEP-2010 02:13 Analyst ID: SAS00403

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 03-SEP-2010 02:31
Date, time and analyst ID of latest file update: 03-Sep-2010 02:55 sas00403

Sample Name: VSTD010 Lab Sample ID: VSTD010 RAD36 8284

Digitally signed by Stephanie A. Selis
on 09/03/2010 at 02:55.
Target 3.5 esignature user ID: sas00403



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/10sep03a.b/gs03c01.d Instrument ID: HP16334.i
Injection date and time: 03-SEP-2010 02:13 Analyst ID: SAS00403

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 03-SEP-2010 02:31
Date, time and analyst ID of latest file update: 03-Sep-2010 02:55 sas00403

Sample Name: VSTD010 Lab Sample ID: VSTD010 RAD36 0285

Digitally signed by Stephanie A. Selis
on 09/03/2010 at 02:55.
Target 3.5 esignature user ID: sas00403

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/10sep03a.b/gs03c01.d Instrument ID: HP16334.i
Injection date and time: 03-SEP-2010 02:13 Analyst ID: SAS00403

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 03-SEP-2010 02:31
Date, time and analyst ID of latest file update: 03-Sep-2010 02:55 sas00403

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
2) Dichlorodifluoromethane	(1)	1.989	85	936204	8.381
5) Chloromethane	(1)	2.172	50	879060	8.200
6) Vinyl Chloride	(1)	2.306	62	840919	8.103
9) 1,3-Butadiene	(1)	2.306	39	1523586	9.057
10) Bromomethane	(1)	2.648	94	666368	8.413
11) Chloroethane	(1)	2.733	64	492325	8.081
13) Dichlorofluoromethane	(1)	2.971	67	1149728	7.937
15) Trichlorofluoromethane	(1)	3.056	101	1026213M	8.122
17) Ethyl Ether	(1)	3.324	59	406836	9.552
18) Freon 123a	(1)	3.367	67	698059	9.235
23) Acrolein	(4)	3.507	56	2555786	570.625
24) 1,1-Dichloroethene	(1)	3.647	96	555873	8.995
25) Freon 113	(1)	3.666	101	593109	9.252
26) Acetone	(4)	3.702	58	236384	111.774
27) Methyl Iodide	(1)	3.861	142	1010610	8.949
29) Carbon Disulfide	(1)	3.964	76	1740785	10.344
32) Allyl Chloride	(1)	4.135	41	568043	8.750
33) Methyl Acetate	(1)	4.159	43	171325	11.429
34) Methylene Chloride	(1)	4.318	84	612279	8.386
36)*t-Butyl Alcohol-d10	(4)	4.367	65	107003	50.000
38) t-Butyl Alcohol	(4)	4.476	59	398404	147.608
39) Acrylonitrile	(4)	4.714	53	451133	51.552
41) trans-1,2-Dichloroethene	(1)	4.739	96	642444	9.231
40) Methyl Tertiary Butyl Ether	(1)	4.739	73	1237584	8.999
37) 1,2-Dichloroethene (Total)	(1)		96	1335922	18.569
44) n-Hexane	(1)	5.147	57	835025	8.965
45) 1,1-Dichloroethane	(1)	5.379	63	1047944	9.168
47) di-Isopropyl Ether	(1)	5.470	45	1791153	9.168
48) 2-Chloro-1,3-Butadiene	(1)	5.513	53	731355	8.997
49) Ethyl t-Butyl Ether	(1)	6.013	59	1584086	8.988
50) cis-1,2-Dichloroethene	(1)	6.232	96	693478	9.338
51) 2,2-Dichloropropane	(1)	6.244	77	855795	9.215
52) 2-Butanone	(4)	6.257	43	1159455	106.384
53) Propionitrile	(4)	6.354	54	659185	209.244
55) Methacrylonitrile	(4)	6.561	67	1289318	106.029
56) Bromochloromethane	(1)	6.574	128	295661	9.983
57) Tetrahydrofuran	(4)	6.628	71	365067	102.792
58) Chloroform	(1)	6.683	83	1098323	9.406
61)$Dibromofluoromethane	(1)	6.909	113	569657	9.823

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

RAD36 0286

Digitally signed by Stephanie A. Selis
on 09/03/2010 at 02:55.
Target 3.5 esignature user ID: sas00403

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/10sep03a.b/gs03c01.d Instrument ID: HP16334.i
Injection date and time: 03-SEP-2010 02:13 Analyst ID: SAS00403

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 03-SEP-2010 02:31
Date, time and analyst ID of latest file update: 03-Sep-2010 02:55 sas00403

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
62)$Dibromofluoromethane(mz111)	(1)	6.915	111	579195	9.806
63) 1,1,1-Trichloroethane	(1)	6.939	97	962776	9.489
64) Cyclohexane	(1)	7.013	56	1022762	9.129
65) 1,1-Dichloropropene	(1)	7.159	75	840725	9.215
66) Carbon Tetrachloride	(1)	7.165	117	766605	8.645
67) Isobutyl Alcohol	(4)	7.336	41	364837	442.624
70)$1,2-Dichloroethane-d4	(1)	7.372	102	109208	10.097
68)$1,2-Dichloroethane-d4(mz104)	(1)	7.372	104	69789	10.032
69)$1,2-Dichloroethane-d4(mz65)	(1)	7.372	65	469676M	9.751
72) Benzene	(1)	7.445	78	2537645	9.449
74) 1,2-Dichloroethane	(1)	7.476	62	584512	9.157
73) 1,2-Dichloroethane(mz98)	(1)	7.476	98	58983	9.648
75) t-Amyl Methyl Ether	(1)	7.592	73	1401827	9.179
76) n-Heptane	(1)	7.793	43	875328	9.107
77)*Fluorobenzene	(1)	7.823	96	2521009	10.000
81) n-Butanol	(4)	8.226	56	653075	925.850
83) Trichloroethene	(1)	8.305	95	737550	9.986
84) Methylcyclohexane	(1)	8.549	83	1115435	9.612
85) 1,2-Dichloropropane	(1)	8.604	63	634862	9.555
87) Methyl Methacrylate	(4)	8.756	69	259705	10.678
88) Dibromomethane	(1)	8.756	93	288355	9.759
89) 1,4-Dioxane	(4)	8.774	88	93894	493.420
90) Bromodichloromethane	(1)	8.963	83	712640	9.418
91) 2-Nitropropane	(4)	9.262	41	595003	93.159
94) cis-1,3-Dichloropropene	(1)	9.518	75	709470	8.979
96) 4-Methyl-2-Pentanone	(1)	9.695	43	3090126	98.293
98)$Toluene-d8(mz100)	(2)	9.817	100	1608319	9.797
97)$Toluene-d8	(2)	9.823	98	2459681	9.694
101) Toluene	(2)	9.896	92	1670202	9.122
102) trans-1,3-Dichloropropene	(2)	10.134	75	571121	8.854
103) Ethyl Methacrylate	(2)	10.225	69	425951	9.570
104) 1,1,2-Trichloroethane	(2)	10.323	97	410566	9.552
105) Tetrachloroethene	(2)	10.463	166	789875	9.519
106) 1,3-Dichloropropane	(2)	10.494	76	681032	9.369
107) 2-Hexanone	(2)	10.567	43	2070797	97.403
108) Dibromochloromethane	(2)	10.719	129	444950	8.991
109) 1,2-Dibromoethane	(2)	10.829	107	377268	9.725
110)*Chlorobenzene-d5	(2)	11.250	117	1879048	10.000
112) Chlorobenzene	(2)	11.274	112	1905687	9.267

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

RAD36 0287

Digitally signed by Stephanie A. Selis
on 09/03/2010 at 02:55.
Target 3.5 esignature user ID: sas00403

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/10sep03a.b/gs03c01.d Instrument ID: HP16334.i
Injection date and time: 03-SEP-2010 02:13 Analyst ID: SAS00403

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 03-SEP-2010 02:31
Date, time and analyst ID of latest file update: 03-Sep-2010 02:55 sas00403

Sample Name: VSTD010 Lab Sample ID: VSTD010

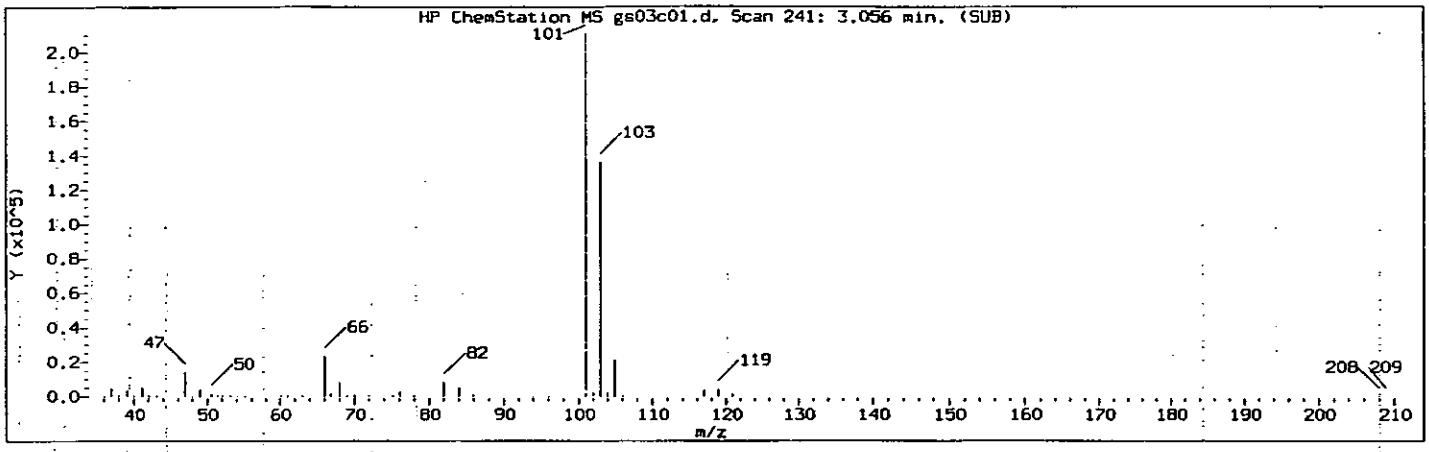
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
113) 1,1,1,2-Tetrachloroethane	(2)	11.347	131	614989	9.286
114) Ethylbenzene	(2)	11.365	91	3289048	9.404
117) m+p-Xylene	(2)	11.463	106	2620715	18.726
115) Xylene (Total)	(2)		106	3906415	28.047
118) o-Xylene	(2)	11.804	106	1285700	9.321
119) Styrene	(2)	11.817	104	1924410	9.286
120) Bromoform	(2)	11.981	173	213074	7.562
121) Isopropylbenzene	(2)	12.103	105	3304387	9.283
126)$4-Bromofluorobenzene	(2)	12.231	95	833567	9.719
127)$4-Bromofluorobenzene(mz174)	(2)	12.231	174	762059	10.031
128) 1,1,2,2-Tetrachloroethane	(3)	12.341	83	465506	9.593
129) Bromobenzene	(3)	12.359	156	779146	9.270
130) trans-1,4-Dichloro-2-Butene	(4)	12.377	53	243768A	41.667
131) 1,2,3-Trichloropropane	(3)	12.377	110	128294	9.254
132) n-Propylbenzene	(3)	12.420	91	4058206	9.361
133) 2-Chlorotoluene	(3)	12.499	126	802773	9.215
134) 1,3,5-Trimethylbenzene	(3)	12.554	105	2768584	9.177
135) 4-Chlorotoluene	(3)	12.585	126	824470	9.276
137) tert-Butylbenzene	(3)	12.804	134	645539	9.531
138) Pentachloroethane	(3)	12.835	167	442526	7.975
139) 1,2,4-Trimethylbenzene	(3)	12.835	105	2970933	9.162
140) sec-Butylbenzene	(3)	12.963	105	3714441	9.243
141) p-Isopropyltoluene	(3)	13.060	119	3345255	9.313
142) 1,3-Dichlorobenzene	(3)	13.060	146	1724019	9.496
143)*1,4-Dichlorobenzene-d4	(3)	13.109	152	1081196	10.000
144) 1,4-Dichlorobenzene	(3)	13.127	146	1683081	9.017
145) 1,2,3-Trimethylbenzene	(3)	13.152	120	1348267	9.343
146) Benzyl Chloride	(3)	13.219	126	150441	7.760
147) n-Butylbenzene	(3)	13.353	92	1671892	9.408
148) 1,2-Dichlorobenzene	(3)	13.402	146	1455771	9.107
150) 1,2-Dibromo-3-Chloropropane	(4)	13.944	155	56472	9.134
153) 1,2,4-Trichlorobenzene	(3)	14.487	180	1119290	8.870
154) Hexachlorobutadiene	(3)	14.578	225	641578	9.432
155) Naphthalene	(3)	14.664	128	1522933	8.869
156) 1,2,3-Trichlorobenzene	(3)	14.816	180	834556	8.447

A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

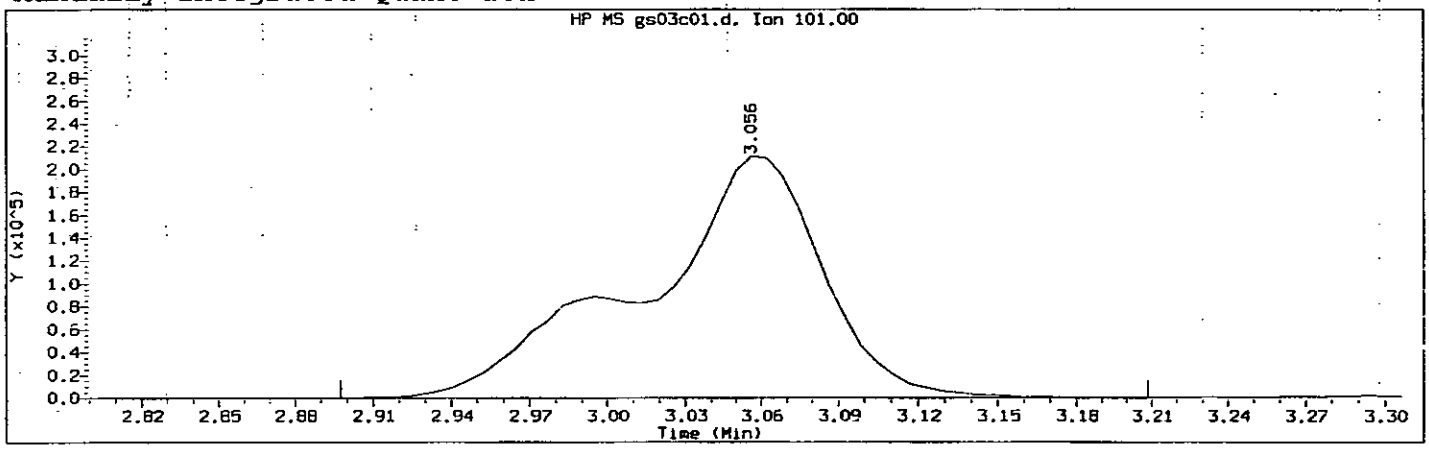
RAD36 0288

Digitally signed by Stephanie A. Selis
on 09/03/2010 at 02:55.
Target 3.5 esignature user ID: sas00403

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10sep03a.b/gs03c01.d Instrument ID: HP16334.i
Injection date and time: 03-SEP-2010 02:13 Analyst ID: SAS00403

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 03-SEP-2010 02:31
Date, time and analyst ID of latest file update: 03-Sep-2010 02:55 sas00403

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number	: 15		
Compound Name	: Trichlorofluoromethane		
Scan Number	: 241		
Retention Time (minutes)	: 3.056		
Quant Ion	: 101.00		
Area (flag)	: 1026213M		
On-Column Amount (ng)	: 8.1222		
Integration start scan	: 214	Integration stop scan:	265
Y at integration start	: 0	Y at integration end:	0

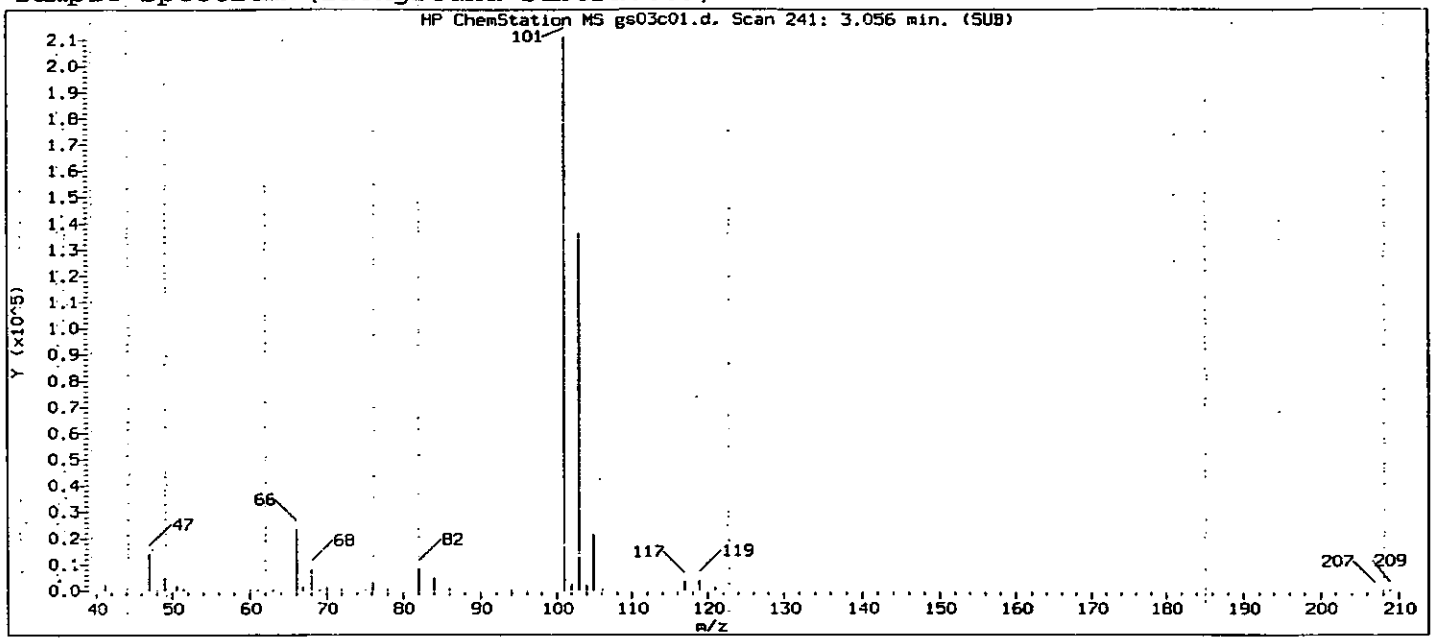
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Stephanie A. Selis on 09/03/2010 at 02:55. Target 3.5 esignature user ID: sas00403

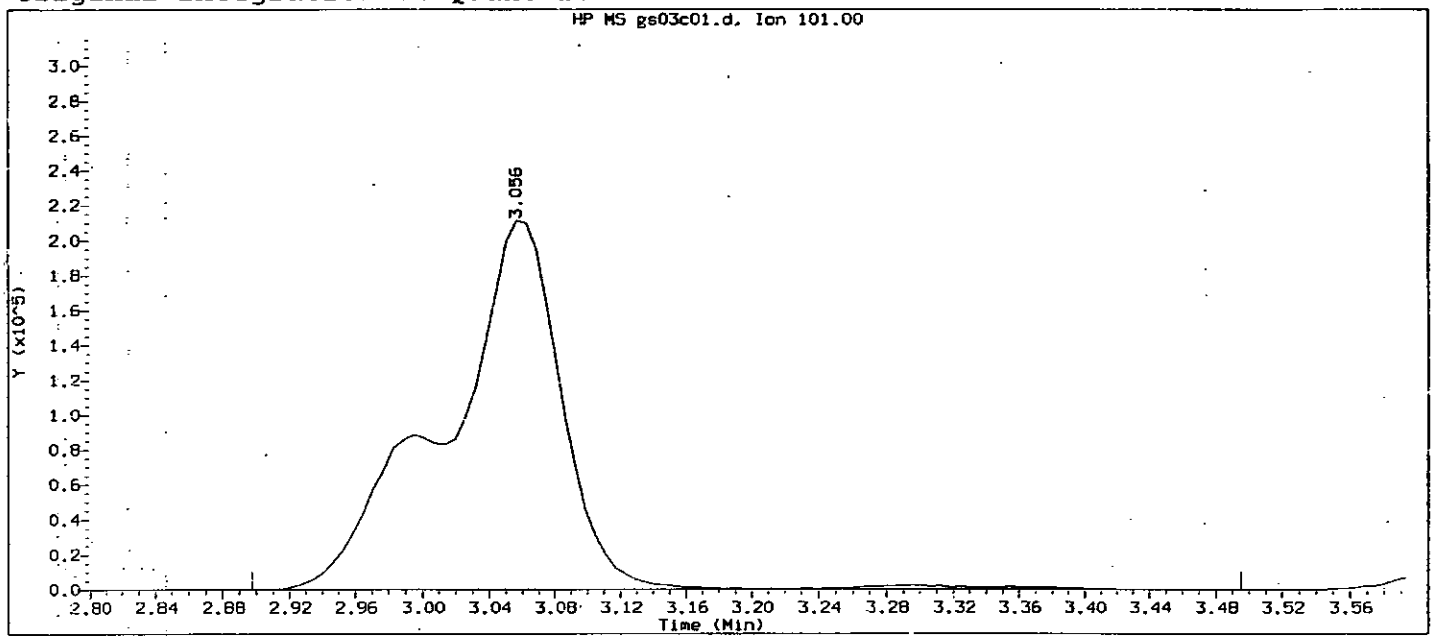
RAD36 0289

GC/MS audit/management approval: _____ 9/10/10

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10sep03a.b/gs03c01.d Instrument ID: HP16334.i
Injection date and time: 03-SEP-2010 02:13 Analyst ID: SAS00403

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 03-SEP-2010 02:31
Date, time and analyst ID of latest file update: 03-Sep-2010 02:31 Automation

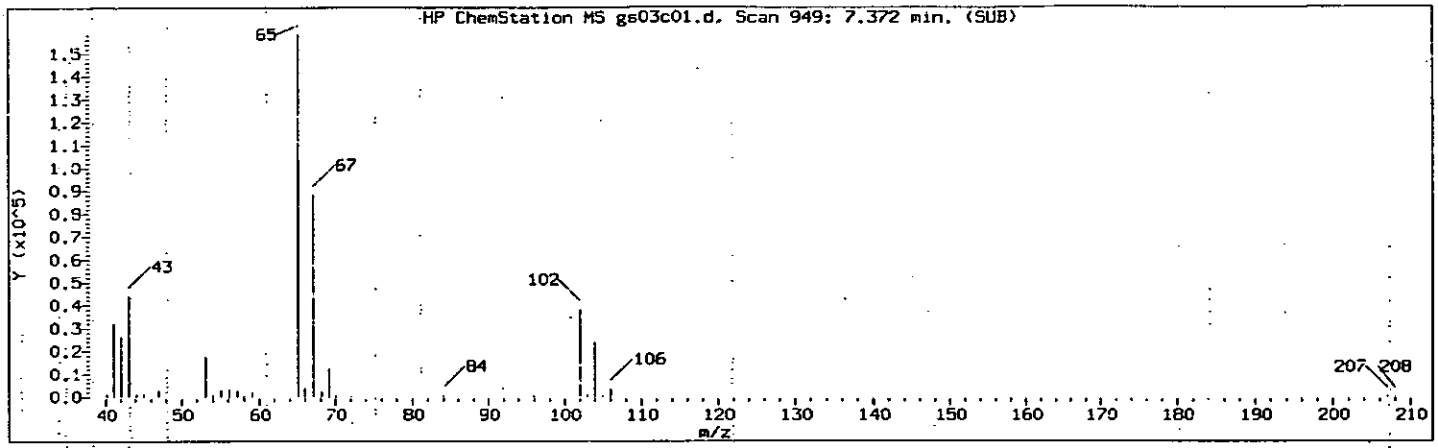
Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number : 15
Compound Name : Trichlorofluoromethane
Scan Number : 241
Retention Time (minutes): 3.056
Quant Ion : 101.00
Area : 1042012
On-column Amount (ng) : 8.2472
Integration start scan : 214 Integration stop scan: 312
Y at integration start : 0 Y at integration end: 0

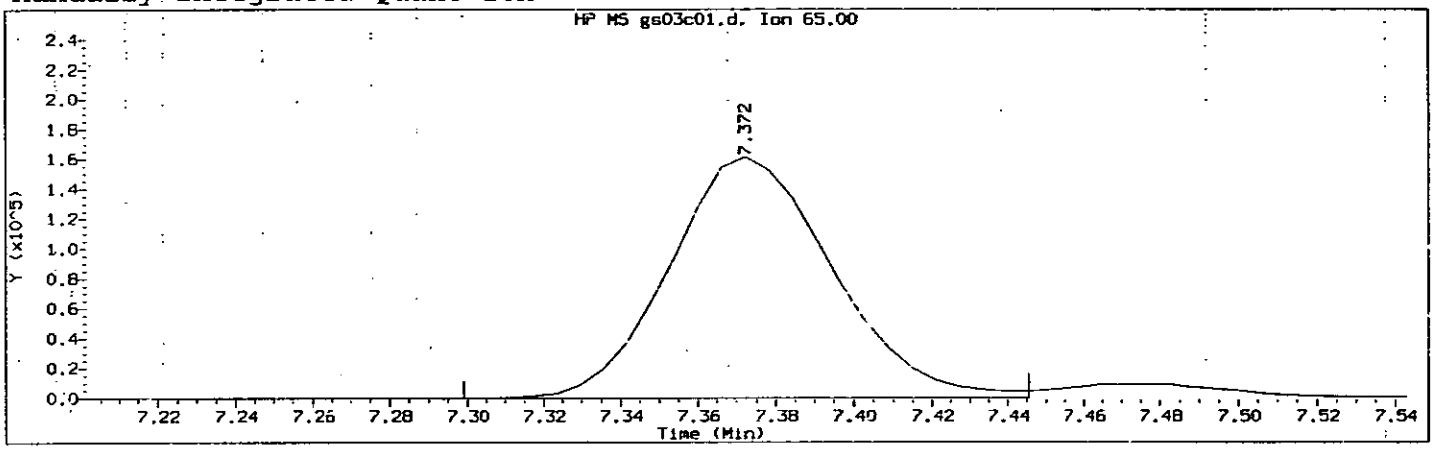
RAD36 0290

Digitally signed by Stephanie A. Selis on 09/03/2010 at 02:55.
Target 3.5 esignature user ID: sas00403

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10sep03a.b/gs03c01.d Instrument ID: HP16334.i
Injection date and time: 03-SEP-2010 02:13 Analyst ID: SAS00403

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 03-SEP-2010 02:31
Date, time and analyst ID of latest file update: 03-Sep-2010 02:55 sas00403

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number	: 69		
Compound Name	: 1,2-Dichloroethane-d4(mz65)		
Scan Number	: 949		
Retention Time (minutes)	: 7.372		
Quant Ion	: 65.00		
Area (flag)	: 469676M		
On-Column Amount (ng)	: 9.7508		
Integration start scan	: 936	Integration stop scan:	960
Y at integration start	: 0	Y at integration end:	0

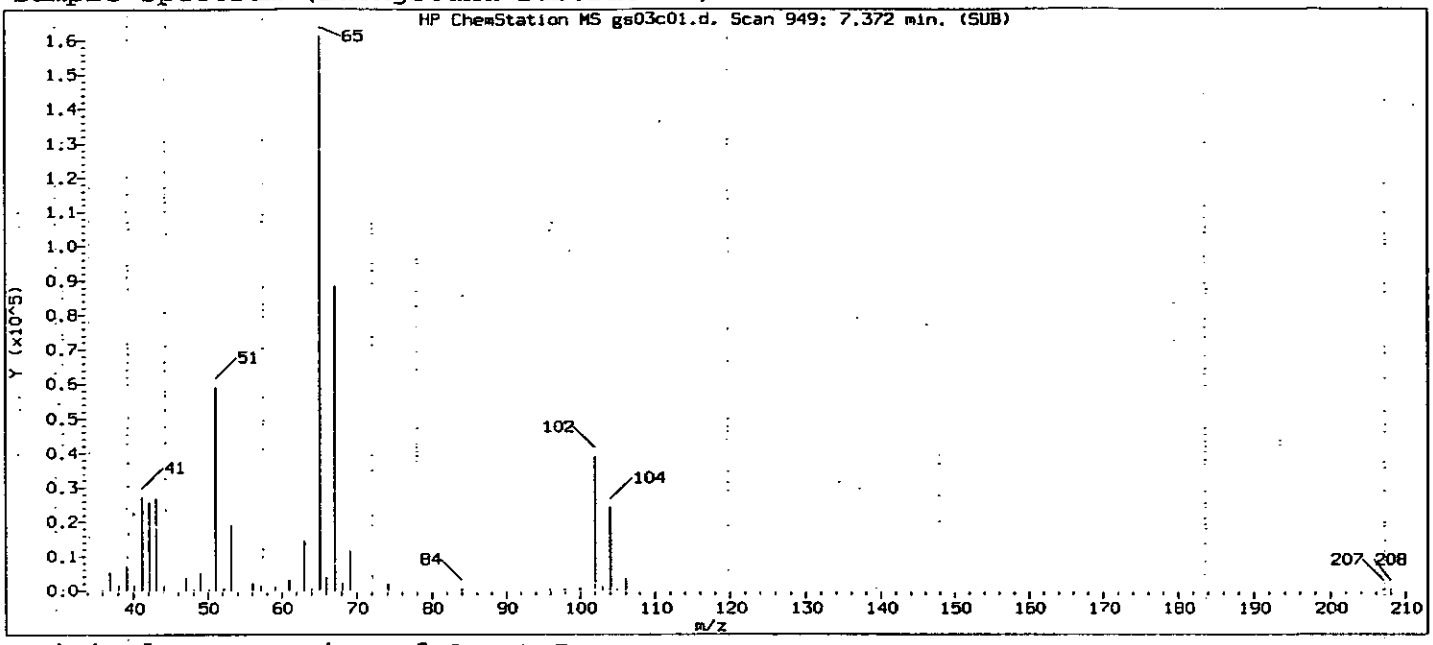
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Stephanie A. Selis on 09/03/2010 at 02:55. Target 3.5 esignature user ID: sas00403

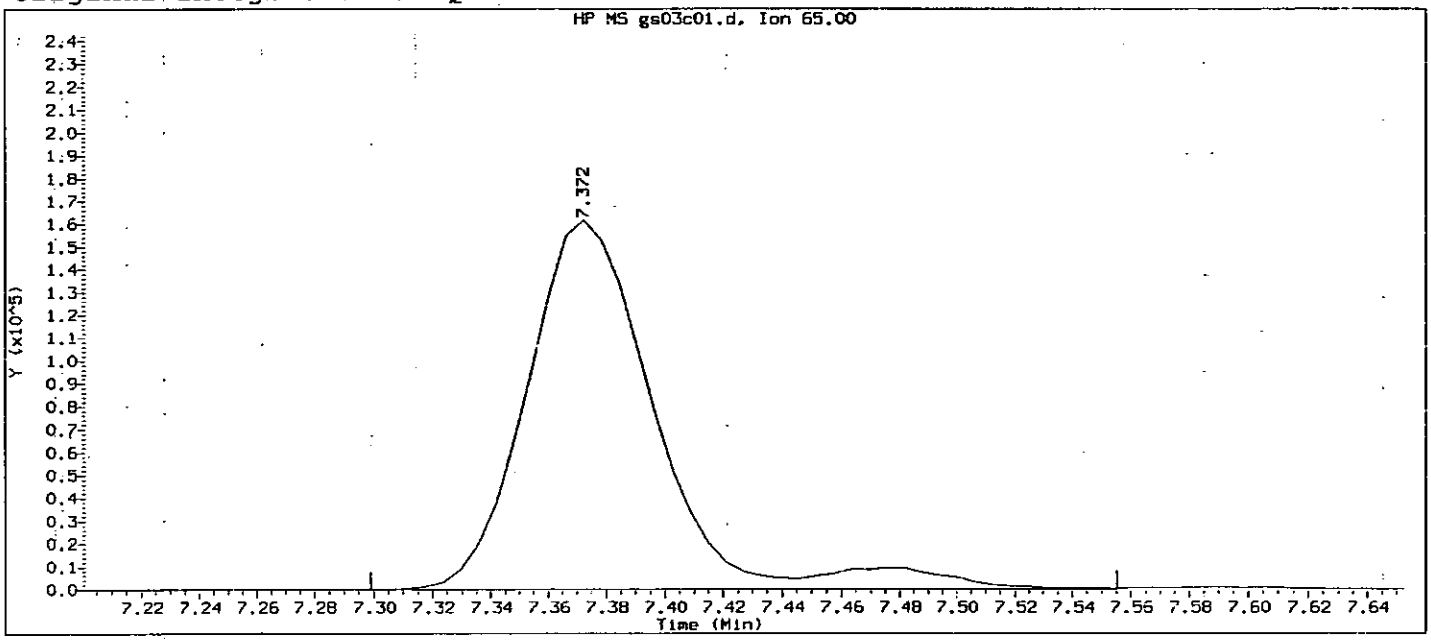
RAD36 0291

GC/MS audit/management approval: _____ 9/10/10

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10sep03a.b/gs03c01.d Instrument ID: HP16334.i
Injection date and time: 03-SEP-2010 02:13 Analyst ID: SAS00403

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 03-SEP-2010 02:31
Date, time and analyst ID of latest file update: 03-Sep-2010 02:31 Automation

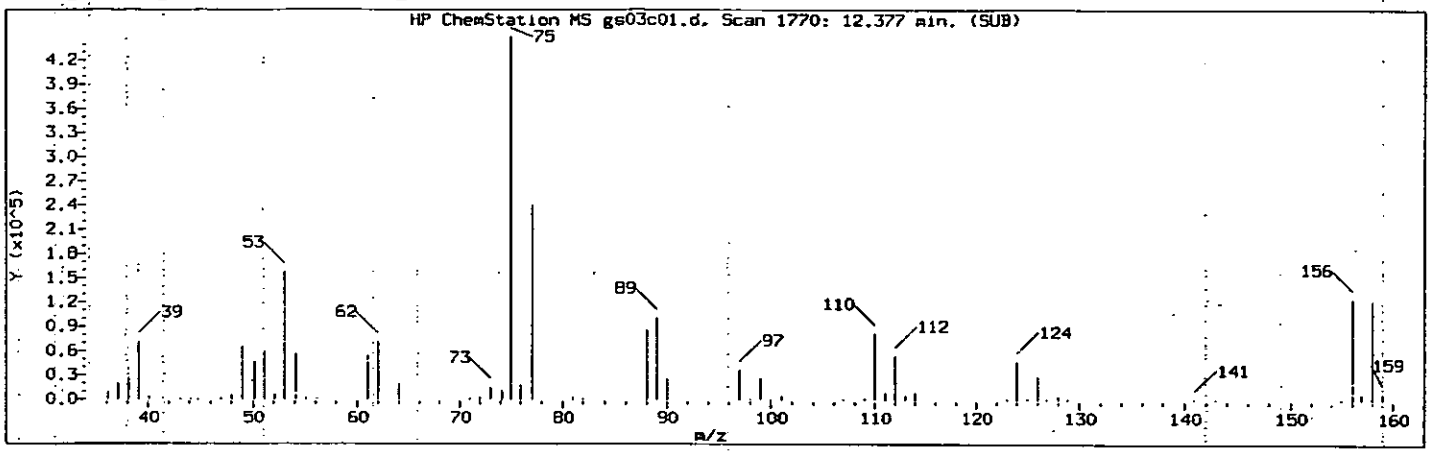
Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number	: 69		
Compound Name	: 1,2-Dichloroethane-d4(mz65)		
Scan Number	: 949		
Retention Time (minutes)	: 7.372		
Quant Ion	: 65.00		
Area	: 498593		
On-column Amount (ng)	: 10.3511		
Integration start scan	: 936	Integration stop scan:	978
Y at integration start	: 0	Y at integration end:	0

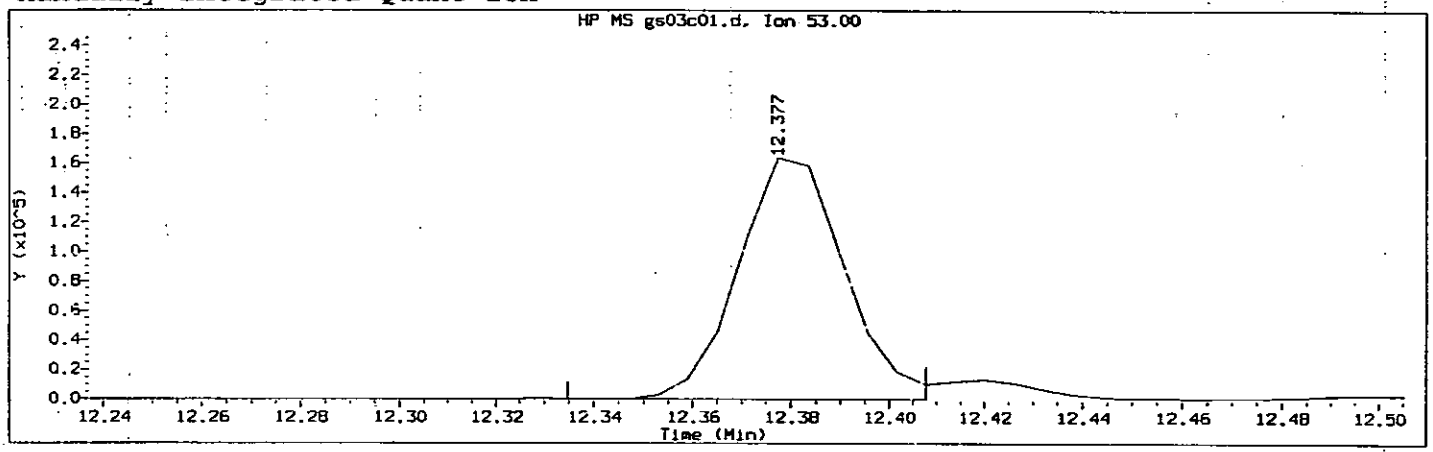
RAD36 0292

Digitally signed by Stephanie A. Selis on 09/03/2010 at 02:55.
Target 3.5 esignature user ID: sas00403

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10sep03a.b/gs03c01.d Instrument ID: HP16334.i
Injection date and time: 03-SEP-2010 02:13 Analyst ID: SAS00403

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 03-SEP-2010 02:31
Date, time and analyst ID of latest file update: 03-Sep-2010 02:55 sas00403

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number	: 130		
Compound Name	: trans-1,4-Dichloro-2-Butene		
Scan Number	: 1770		
Retention Time (minutes)	: 12.377		
Quant Ion	: 53.00		
Area (flag)	: 243768A		
On-Column Amount (ng)	: 41.6673		
Integration start scan	: 1762	Integration stop scan:	1774
Y at integration start	: 0	Y at integration end:	0

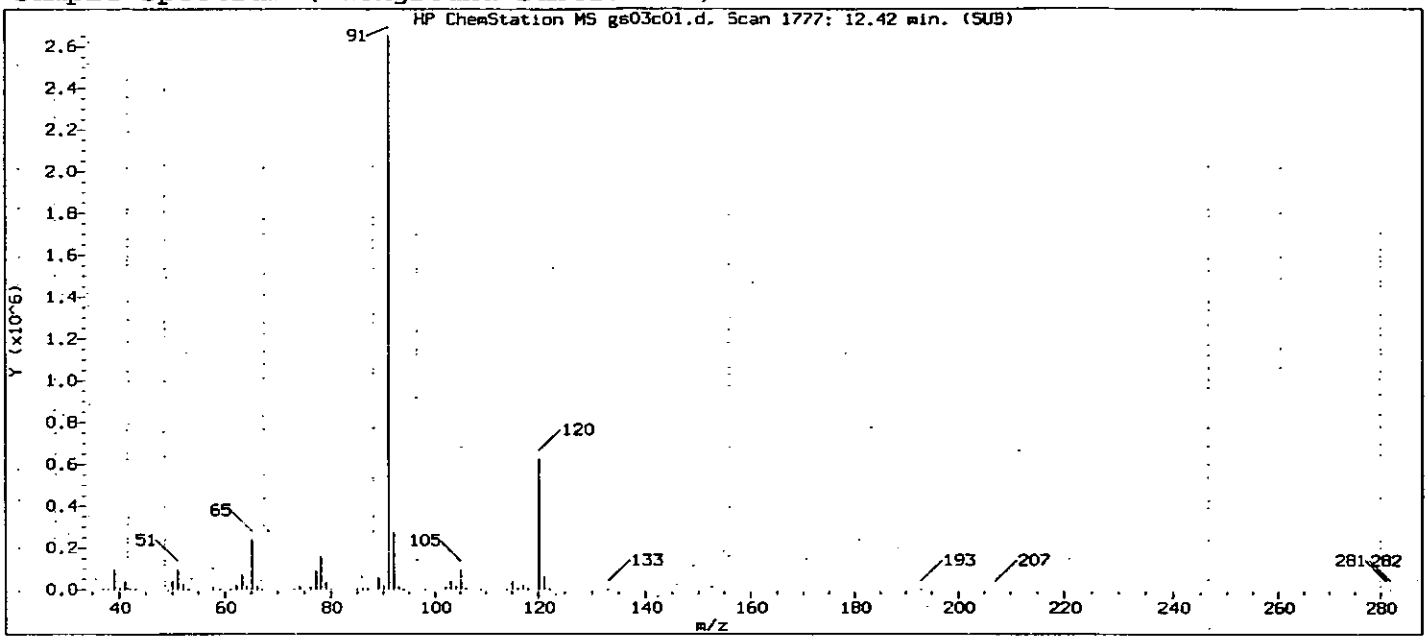
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Stephanie A. Selis on 09/03/2010 at 02:55. Target 3.5 esignature user ID: sas00403

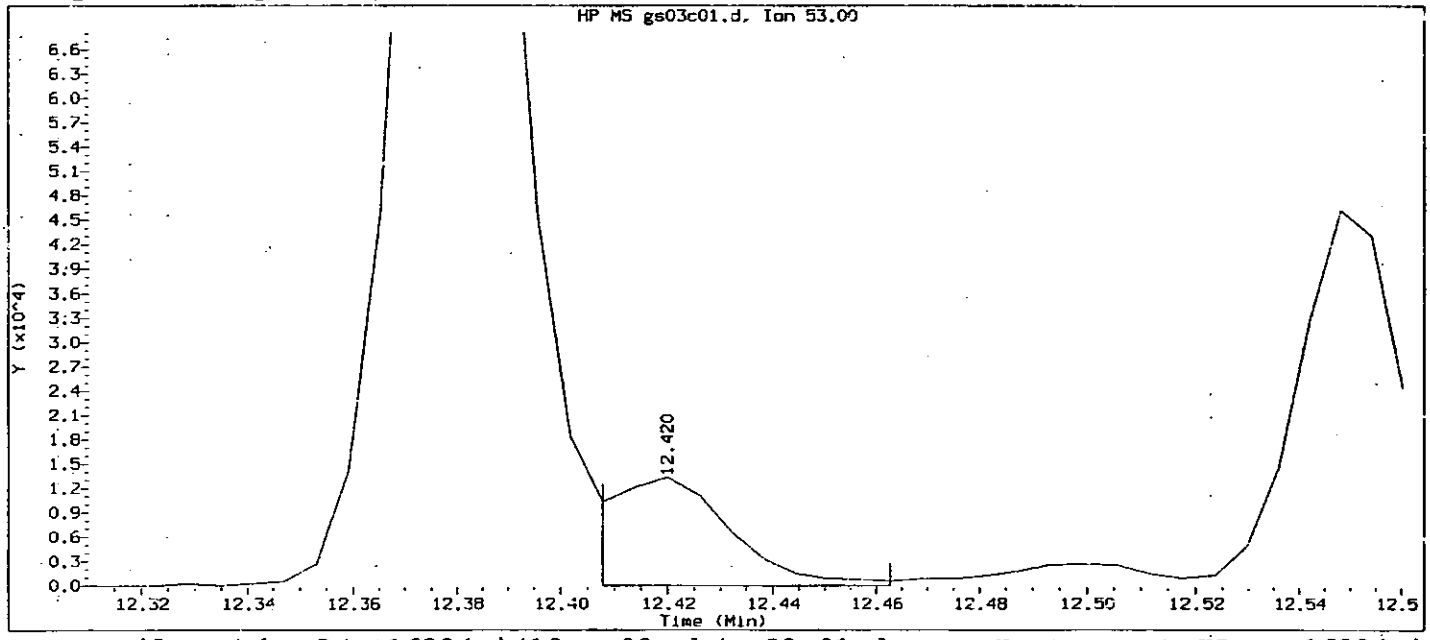
RAD36 8293

GC/MS audit/management approval: _____ 9/10/10

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10sep03a.b/gs03c01.d Instrument ID: HP16334.i
Injection date and time: 03-SEP-2010 02:13 Analyst ID: SAS00403

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: 8260WI25
Calibration date and time: 03-SEP-2010 02:31
Date, time and analyst ID of latest file update: 03-Sep-2010 02:31 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number	: 130
Compound Name	: trans-1,4-Dichloro-2-Butene
Scan Number	: 1777
Retention Time (minutes)	: 12.420
Quant Ion	: 53.00
Area	: 20120
On-column Amount (ng)	: 7.8215
Integration start scan	: 1774
Integration stop scan	: 1783
Y at integration start	: 0
Y at integration end	: 0

RAD36 8294

Digitally signed by Stephanie A. Selis on 09/03/2010 at 02:55:
Target 3.5 esignature user ID: sas00403

Raw QC Data

Data File: /chem2/HP16334.i/10aug17a.b/gg17t01.d

Page 1

Date : 17-AUG-2010 11:30

Client ID: 50ngBFB

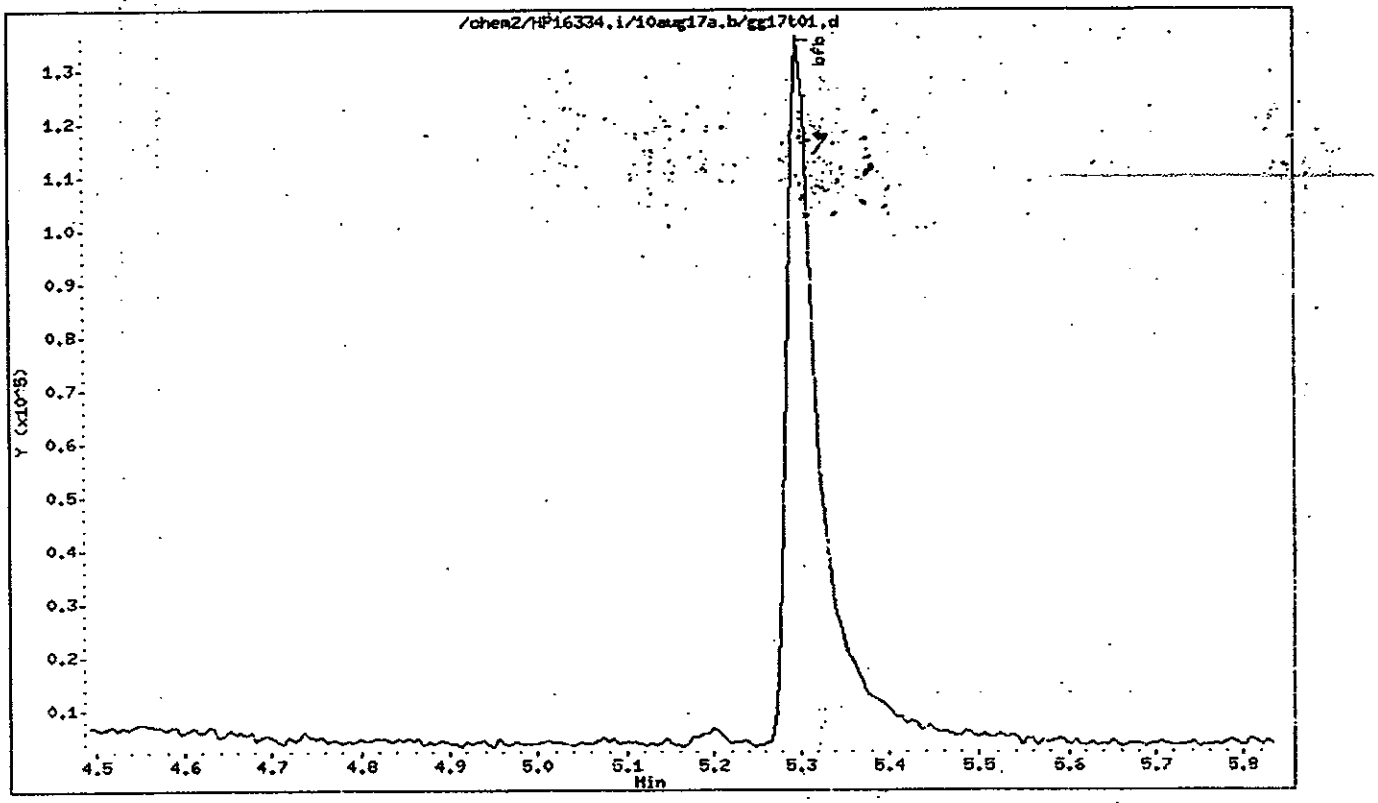
Instrument: HP16334.i

Sample Info: 50ngBFB;BFB MAY12-10;1;3;;

Operator: JML01693

Column phase: DB-624

Column diameter: 0.25



RAD36 296

Digitally signed by Jason M. Long on 08/17/2010 at 11:33.
Target 3.5 esignature user ID: jml01693

Data File: /chem2/HP16334.i/10aug17a.b/gg17t01.d

Date : 17-AUG-2010 11:30

Client ID: 50ngBFB

Instrument: HP16334.i

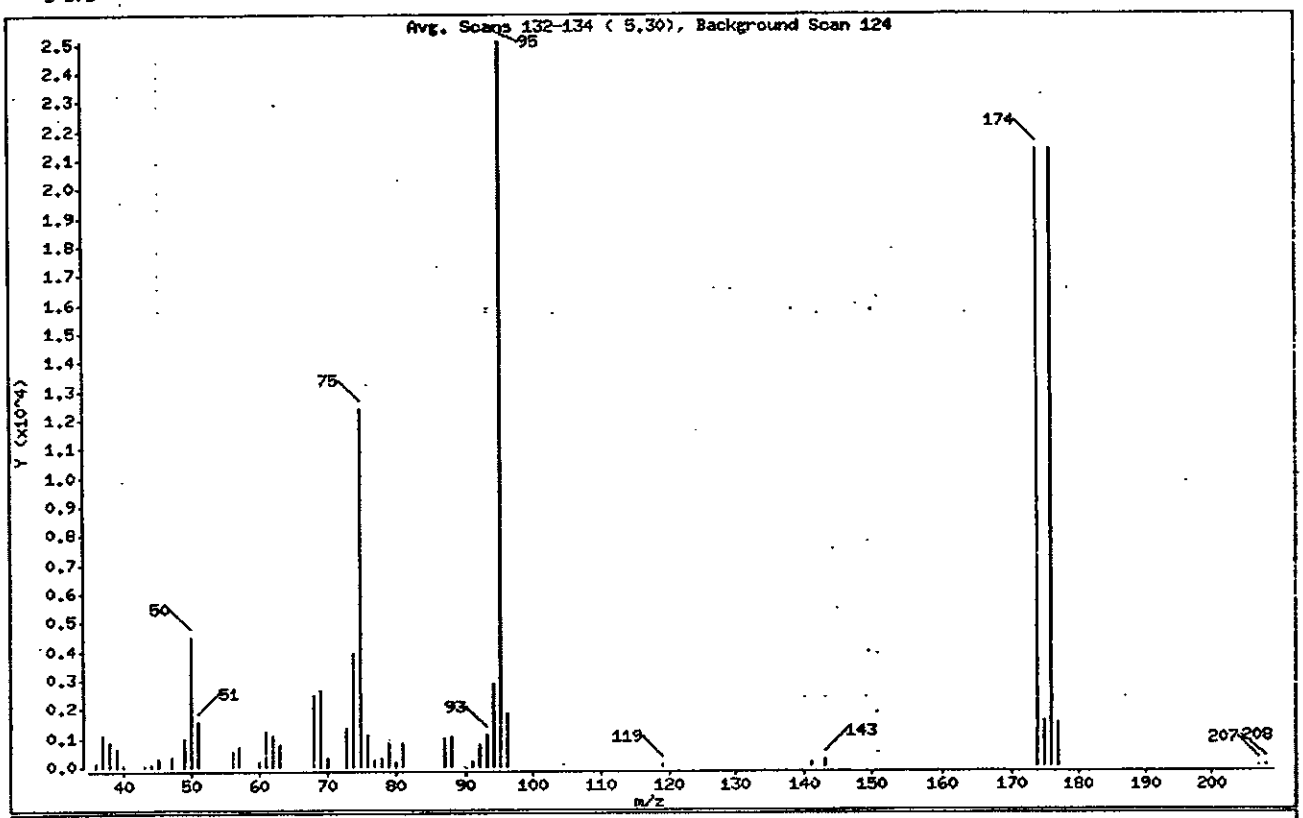
Sample Info: 50ngBFB;BFB MAY12-10:1;3;;

Operator: JML01693

Column phase: DB-624

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	17.82
75	30.00 - 60.00% of mass 95	49.36
96	5.00 - 9.00% of mass 95	7.34
173	Less than 2.00% of mass 174	0.00 (0.00)
174	50.00 - 100.00% of mass 95	85.04
175	5.00 - 9.00% of mass 174	6.25 (7.35)
176	95.00 - 101.00% of mass 174	84.95 (99.90)
177	5.00 - 9.00% of mass 176	5.89 (6.94)

RAD36 0297

Digitally signed by Jason M. Long on 08/17/2010 at 11:33.
Target 3.5 esignature user ID: jml01693

Data File: /chem2/HP16334.i/10aug17a.b/gg17t01.d

Date : 17-AUG-2010 11:30

Client ID: 50ngBFB

Instrument: HP16334.i

Sample Info: 50ngBFB;BFB MAY12-10;1;3;;

Operator: JML01693

Column phase: DB-624

Column diameter: 0.25

Data File: gg17t01.d

Spectrum: Avg. Scans 132-134 (5.30), Background Scan 124

Location of Maximum: 95.00

Number of points: 47

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	105	56.00	517	76.00	1073	95.00	25104
37.00	1115	57.00	718	77.00	238	96.00	1842
38.00	853	60.00	193	78.00	308	119.00	85
39.00	621	61.00	1212	79.00	830	141.00	142
40.00	65	62.00	1075	80.00	194	143.00	239
43.00	7	63.00	766	81.00	780	174.00	21352
44.00	30	68.00	2477	87.00	998	175.00	1569
45.00	314	69.00	2668	88.00	1053	176.00	21328
47.00	340	70.00	309	91.00	196	177.00	1480
49.00	984	73.00	1306	92.00	740	207.00	1
50.00	4475	74.00	3920	93.00	1092	208.00	86
51.00	1553	75.00	12393	94.00	2905		

RAD36 8298

Digitally signed by Jason M. Long on 08/17/2010 at 11:33.
Target 3.5 esignature user ID: jml01693

Data File: /chem2/HP16334.i/10sep03a.b/gs03t01.d

Date : 03-SEP-2010 01:53

Client ID: 50ngBFB

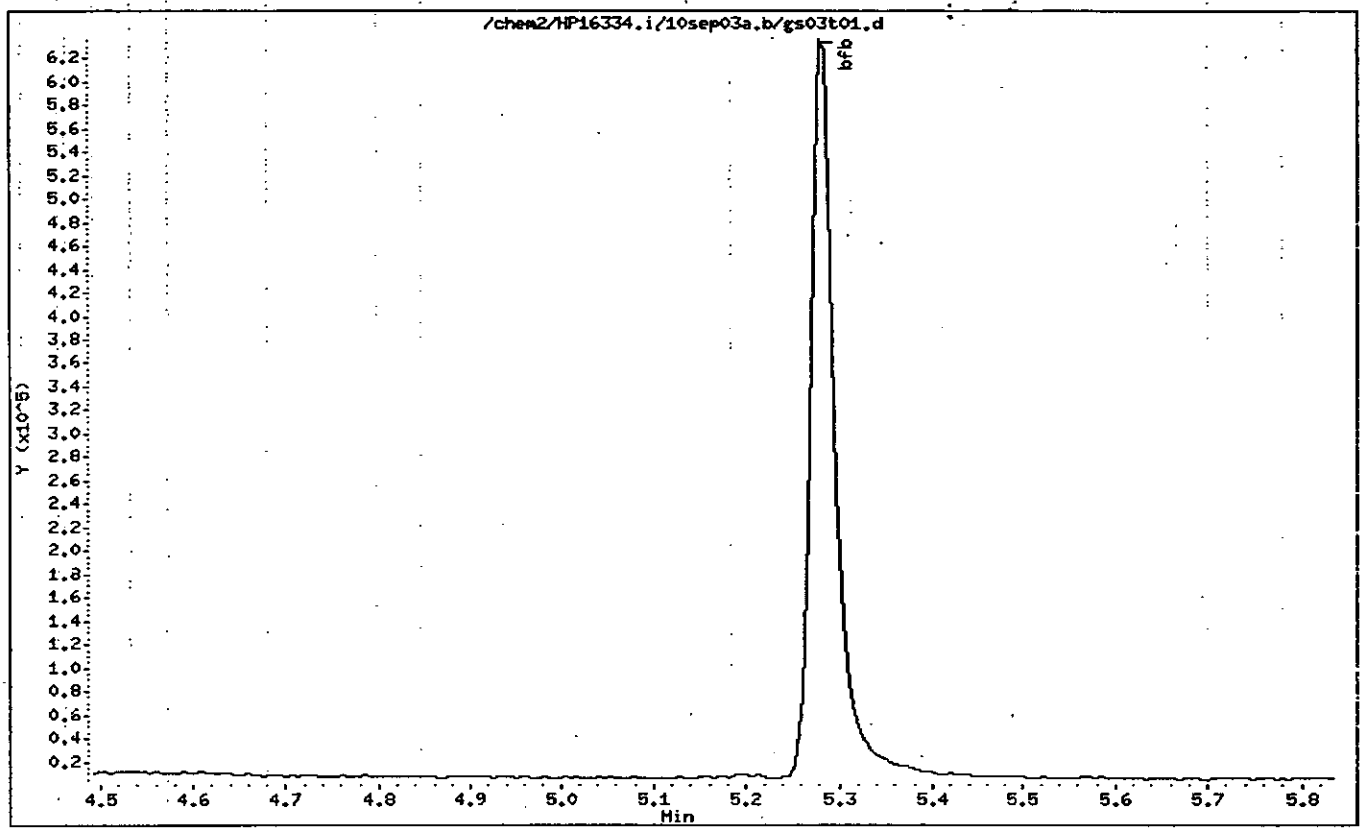
Instrument: HP16334.i

Sample Info: 50ngBFB;BFB MAY12-10;1;3;;

Operator: SAS00403

Column phase: DB-624

Column diameter: 0.25



RAD36 0299

Digitally signed by Stephanie A. Selis on 09/03/2010 at 02:55.
Target 3.5 esignature user ID: sas00403

Data File: /chem2/HP16334.i/10sep03a.b/gs03t01.d

Date : 03-SEP-2010 01:53

Client ID: 50ngBFB

Instrument: HP16334.i

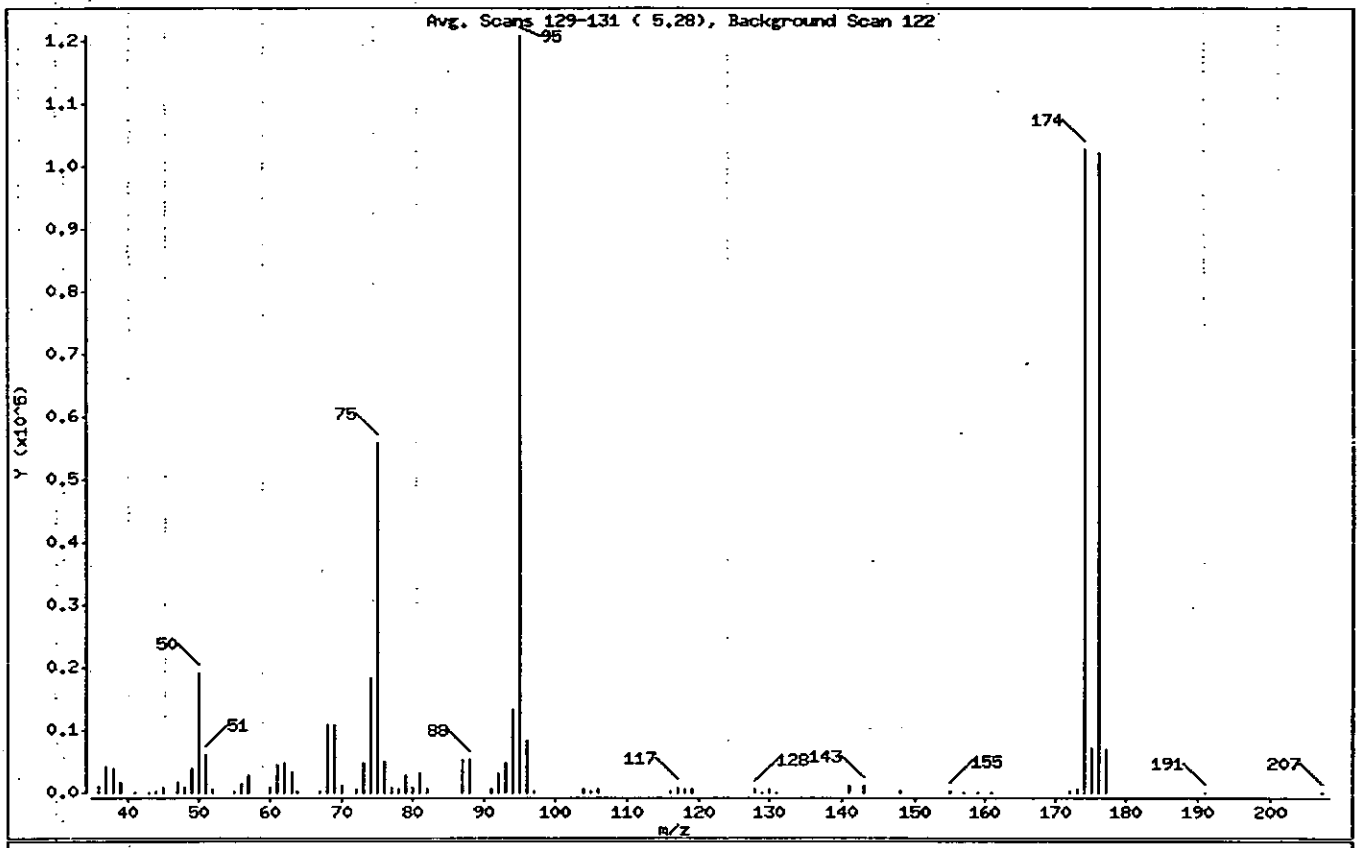
Sample Info: 50ngBFB;BFB MAY12-10;1;3;;

Operator: SAS00403

Column phase: DB-624

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	15.90
75	30.00 - 60.00% of mass 95	46.29
96	5.00 - 9.00% of mass 95	6.79
173	Less than 2.00% of mass 174	0.49 (0.58)
174	50.00 - 100.00% of mass 95	85.07
175	5.00 - 9.00% of mass 174	6.03 (7.09)
176	95.00 - 101.00% of mass 174	84.52 (99.36)
177	5.00 - 9.00% of mass 176	5.73 (6.78)

RAD36 0388

Digitally signed by Stephanie A. Selis on 09/03/2010 at 02:55.
Target 3.5 esignature user ID: sas00403

Data File: /chem2/HP16334.i/10sep03a.b/gs03t01.d

Date : 03-SEP-2010 01:53

Client ID: 50ngBFB

Instrument: HP16334.i

Sample Info: 50ngBFB;BFB MAY12-10;1;3;;

Operator: SAS00403

Column phase: DB-624

Column diameter: 0.25

Data File: gs03t01.d

Spectrum: Avg. Scans 129-131 (5.28), Background Scan 122

Location of Maximum: 95.00

Number of points: 72

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	980	62.00	4635	88.00	5244	141.00	1020
37.00	4056	63.00	3368	91.00	489	143.00	1185
38.00	3900	64.00	296	92.00	3125	148.00	221
39.00	1786	67.00	294	93.00	4662	155.00	333
41.00	113	68.00	10823	94.00	13276	157.00	103
43.00	83	69.00	10970	95.00	120816	159.00	84
44.00	410	70.00	1001	96.00	8205	161.00	85
45.00	920	72.00	549	97.00	272	172.00	273
47.00	1592	73.00	4709	104.00	489	173.00	591
48.00	733	74.00	18296	105.00	284	174.00	102776
49.00	3985	75.00	55928	106.00	502	175.00	7282
50.00	19208	76.00	5073	116.00	408	176.00	102120
51.00	6173	77.00	857	117.00	706	177.00	6924
52.00	509	78.00	417	118.00	428	191.00	89
55.00	317	79.00	2836	119.00	652	207.00	76
56.00	1508	80.00	830	128.00	485		
57.00	2814	81.00	2951	129.00	87		
60.00	826	82.00	635	130.00	423		
61.00	4397	87.00	5150	131.00	96		

Digitally signed by Stephanie A. Selis on 09/03/2010 at 02:55.
Target 3.5 esignature user ID: sas00403

VBLKG23

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

VBLKG23

Data file: /chem2/HP16334.i/10sep03a.b/gs03b01.d Injection date and time: **03-SEP-2010 02:56**
Data file Sample Info. Line: VBLKG23;VBLKG23;1;3;;;; Instrument ID: **HP16334.i** Batch: **G102461AA**
Date, time and analyst ID of latest file update: 03-Sep-2010 05:46 sas00403

Blank Data file reference: **/chem2/HP16334.i/10sep03a.b/gs03b01.d**

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: **1064**
Calibration date and time (Last Method Edit): 03-SEP-2010 02:31
Mid Level Daily Calibration Standard Reference: **/chem2/HP16334.i/10sep03a.b/gs03c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
36) t-Butyl Alcohol-d10	4.379(-0.012)	458	65	102090 (-5)	50.00	
77) Fluorobenzene	7.830(-0.006)	1024	96	2434858 (-3)	10.00	
110) Chlorobenzene-d5	11.256(-0.006)	1586	117	1813592 (-3)	10.00	
143) 1,4-Dichlorobenzene-d4	13.109(0.000)	1890	152	980702 (-9)	10.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
61) Dibromofluoromethane	(1)	6.927(-0.002)	113	542488	9.685	97%		77 - 114
70) 1,2-Dichloroethane-d4	(1)	7.385(-0.001)	102	107470	10.288	103%		74 - 113
97) Toluene-d8	(2)	9.829(0.000)	98	2354838	9.615	96%		77 - 110
126) 4-Bromofluorobenzene	(2)	12.237(0.000)	95	767012	9.266	93%		78 - 110

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
2) Dichlorodifluoromethane	(1)			Not Detected					0.1
5) Chloromethane	(1)			Not Detected					0.2
6) Vinyl Chloride	(1)			Not Detected					0.1
10) Bromomethane	(1)			Not Detected					0.1
11) Chloroethane	(1)			Not Detected					0.1
15) Trichlorofluoromethane	(1)			Not Detected					0.1
18) Freon 123a	(1)			Not Detected					0.2
24) 1,1-Dichloroethene	(1)			Not Detected					0.1
25) Freon 113	(1)			Not Detected					0.2
26) Acetone	(4)			Not Detected					3
29) Carbon Disulfide	(1)			Not Detected					0.4
33) Methyl Acetate	(1)			Not Detected					0.3
34) Methylene Chloride	(1)	4.336(-0.001)	84	20296	0.288	0.29			0.2
41) trans-1,2-Dichloroethene	(1)			Not Detected					0.1
40) Methyl Tertiary Butyl Ether	(1)			Not Detected					0.1
45) 1,1-Dichloroethane	(1)			Not Detected					0.1
50) cis-1,2-Dichloroethene	(1)			Not Detected					0.1
52) 2-Butanone	(4)			Not Detected					1
58) Chloroform	(1)			Not Detected					0.1
63) 1,1,1-Trichloroethane	(1)			Not Detected					0.1
64) Cyclohexane	(1)			Not Detected					0.1
66) Carbon Tetrachloride	(1)			Not Detected					0.1
72) Benzene	(1)			Not Detected					0.1
74) 1,2-Dichloroethane	(1)			Not Detected					0.1
83) Trichloroethene	(1)			Not Detected					0.1
84) Methylcyclohexane	(1)			Not Detected					0.1
85) 1,2-Dichloropropane	(1)			Not Detected					0.1
90) Bromodichloromethane	(1)			Not Detected					0.1
94) cis-1,3-Dichloropropene	(1)			Not Detected					0.1
96) 4-Methyl-2-Pentanone	(1)			Not Detected					1
101) Toluene	(2)			Not Detected					0.1
102) trans-1,3-Dichloropropene	(2)			Not Detected					0.1
104) 1,1,2-Trichloroethane	(2)			Not Detected					0.1
105) Tetrachloroethene	(2)			Not Detected					0.1

RAD36 0382

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VBLKG23 Lancaster Laboratories VBLKG23
Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP16334.i/10sep03a.b/gs03b01.d Injection date and time: **03-SEP-2010 02:56**
Data file Sample Info. Line: VBLKG23;VBLKG23;1;3;;;; Instrument ID: **HP16334.i** Batch: **G102461AA**
Date, time and analyst ID of latest file update: 03-Sep-2010 05:46 sas00403

Blank Data file reference: **/chem2/HP16334.i/10sep03a.b/gs03b01.d**

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: **1064**
Calibration date and time (Last Method Edit): 03-SEP-2010 02:31
Mid Level Daily Calibration Standard Reference: **/chem2/HP16334.i/10sep03a.b/gs03c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
107) 2-Hexanone	(2)			Not Detected					1
108) Dibromochloromethane	(2)			Not Detected					0.1
109) 1,2-Dibromoethane	(2)			Not Detected					0.1
112) Chlorobenzene	(2)			Not Detected					0.1
114) Ethylbenzene	(2)			Not Detected					0.1
117) m+p-Xylene	(2)			Not Detected					0.1
118) o-Xylene	(2)			Not Detected					0.1
119) Styrene	(2)			Not Detected					0.1
120) Bromoform	(2)			Not Detected					0.1
121) Isopropylbenzene	(2)			Not Detected					0.1
128) 1,1,2,2-Tetrachloroethane	(3)			Not Detected					0.1
142) 1,3-Dichlorobenzene	(3)			Not Detected					0.1
144) 1,4-Dichlorobenzene	(3)			Not Detected					0.1
148) 1,2-Dichlorobenzene	(3)			Not Detected					0.1
150) 1,2-Dibromo-3-Chloropropane	(4)			Not Detected					0.2
153) 1,2,4-Trichlorobenzene	(3)			Not Detected					0.1

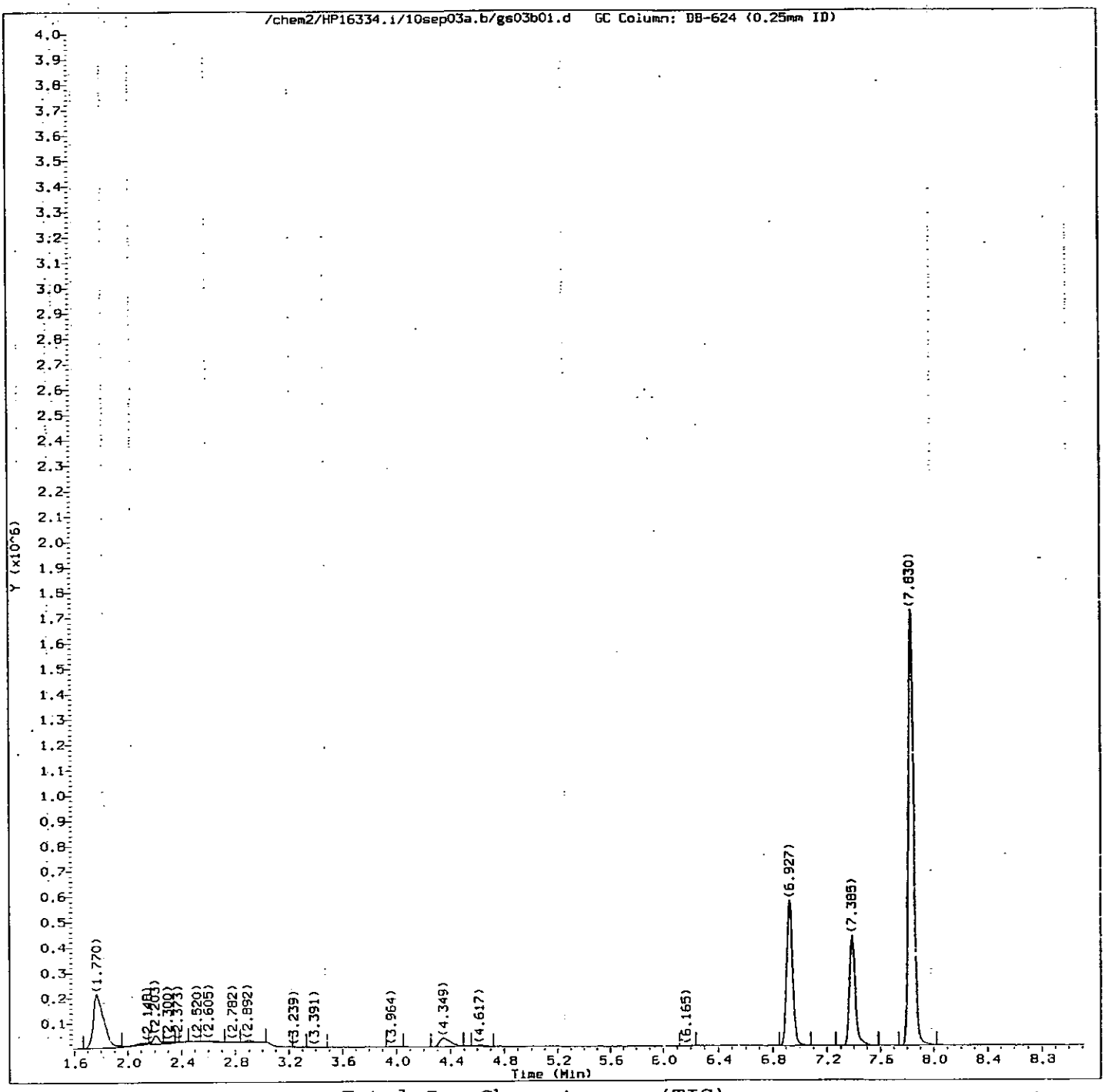
Total number of targets = 50

Comments:_____

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RAD36 0303

Auditor:_____ Date: 9/10/10



Total Ion Chromatogram (TIC)

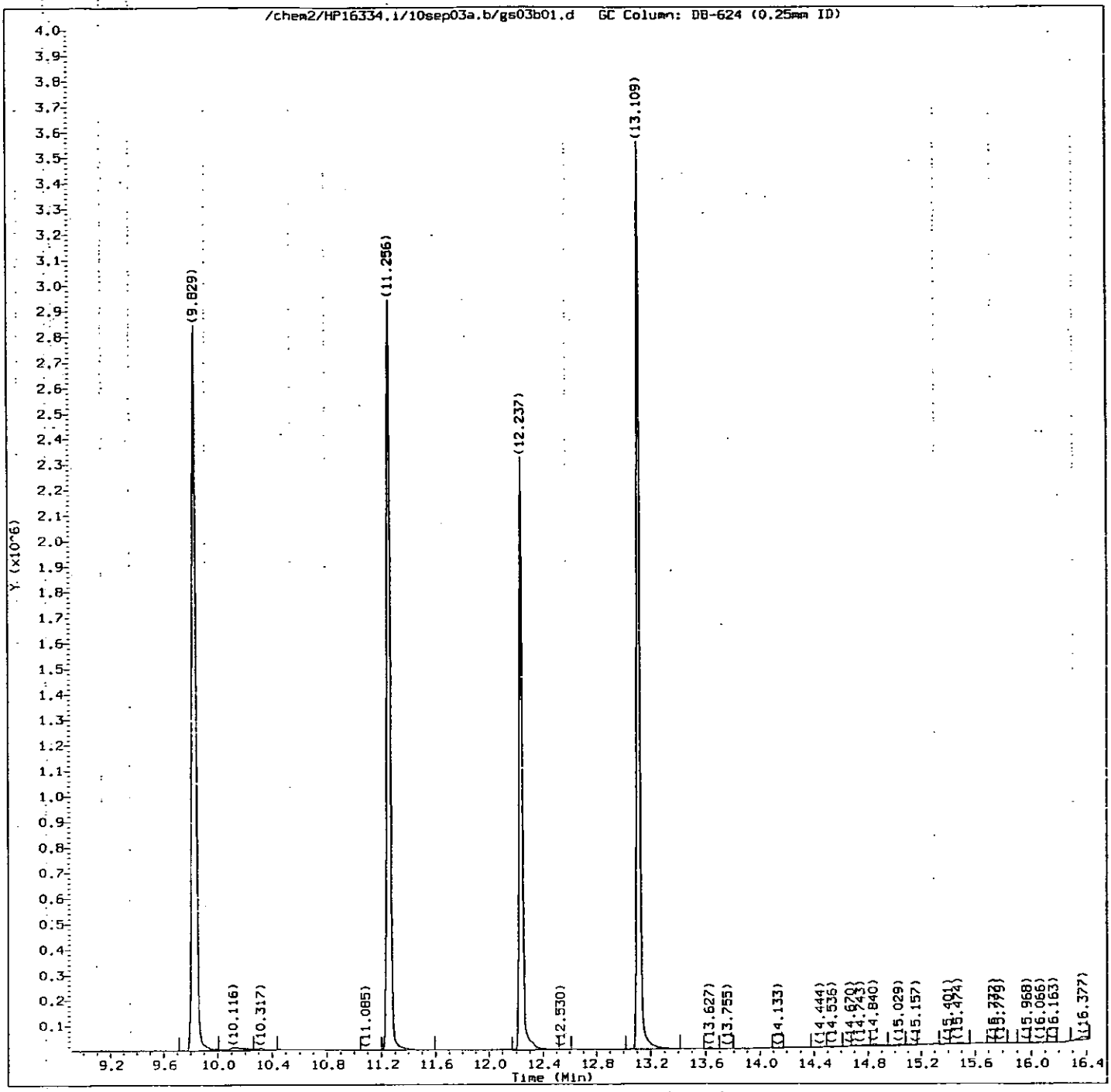
Target Revision 3.5

Data File: /chem2/HP16334.i/10sep03a.b/gs03b01.d Instrument ID: HP16334.i
Injection date and time: 03-SEP-2010 02:56 Analyst ID: SAS00403

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: 1064
Calibration date and time: 03-SEP-2010 02:31
Date, time and analyst ID of latest file update: 03-Sep-2010 05:46 sas00403

Sample Name: VBLKG23 Lab Sample ID: VBLKG23 RAD36 0304

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on 09/03/2010 at 05:46.
Target 3.5 esignature user ID: sas00403



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/10sep03a.b/gs03b01.d Instrument ID: HP16334.i
Injection date and time: 03-SEP-2010 02:56 Analyst ID: SAS00403

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: 1064
Calibration date and time: 03-SEP-2010 02:31
Date, time and analyst ID of latest file update: 03-Sep-2010 05:46 sas00403

Sample Name: VBLKG23 Lab Sample ID: VBLKG23 RAD36 0305

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on 09/03/2010 at 05:46.
Target 3.5 esignature user ID: sas00403

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/10sep03a.b/gs03b01.d Instrument ID: HP16334.i
Injection date and time: 03-SEP-2010 02:56 Analyst ID: SAS00403

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: 1064
Calibration date and time: 03-SEP-2010 02:31
Date, time and analyst ID of latest file update: 03-Sep-2010 05:46 sas00403

Sample Name: VBLKG23 Lab Sample ID: VBLKG23

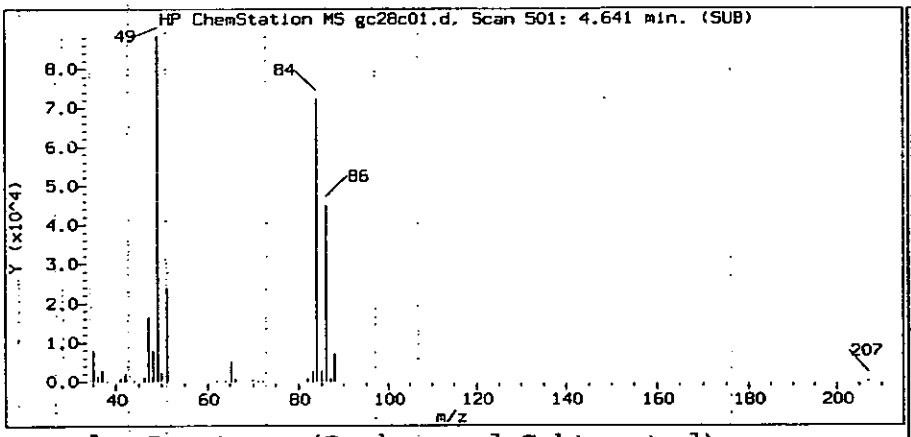
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
34) Methylene Chloride	(1)	4.336	84	20296	0.288
36)*t-Butyl Alcohol-d10	(4)	4.379	65	102090	50.000
61)$Dibromofluoromethane	(1)	6.927	113	542488	9.685
70)$1,2-Dichloroethane-d4	(1)	7.385	102	107470	10.288
77)*Fluorobenzene	(1)	7.830	96	2434858	10.000
97)$Toluene-d8	(2)	9.829	98	2354838	9.615
110)*Chlorobenzene-d5	(2)	11.256	117	1813592	10.000
126)$4-Bromofluorobenzene	(2)	12.237	95	767012	9.266
143)*1,4-Dichlorobenzene-d4	(3)	13.109	152	980702	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

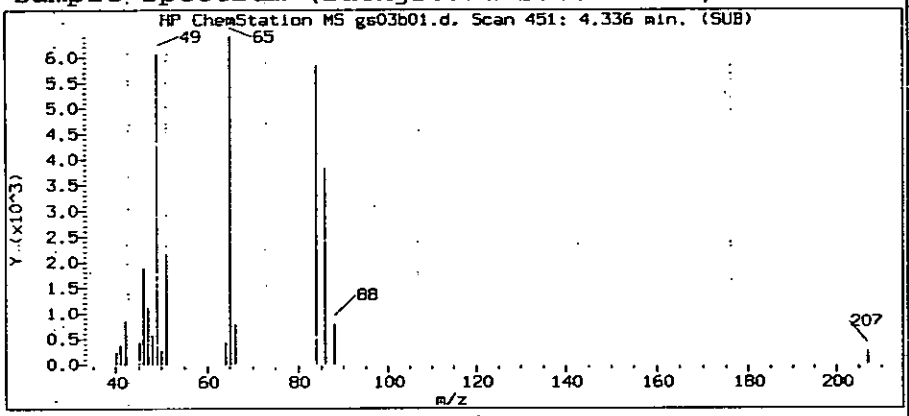
RAD36 0306

Digitally signed by Stephanie A. Selis
on 09/03/2010 at 05:46.
Target 3.5 esignature user ID: sas00403

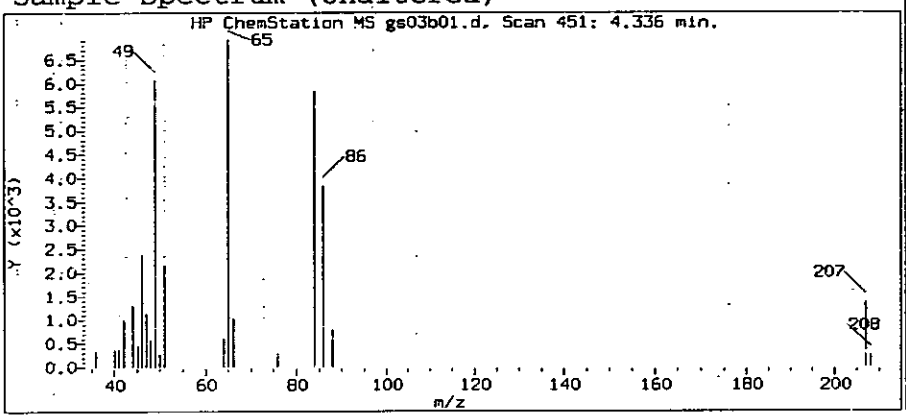
Reference Standard Spectrum for Methylene Chloride

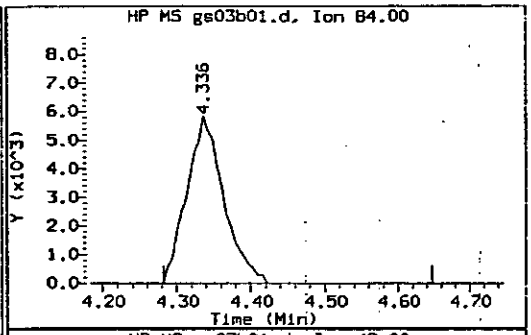


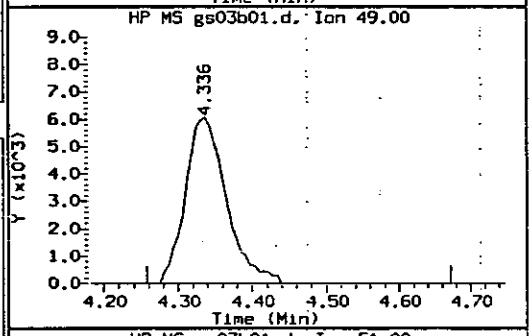
Sample Spectrum (Background Subtracted)

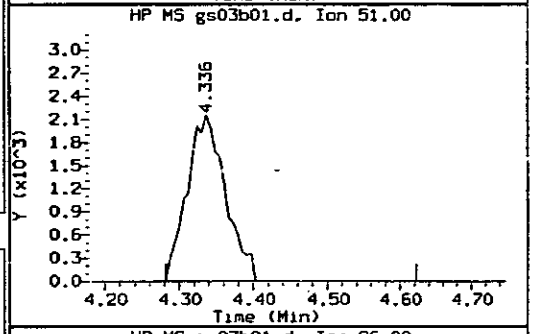


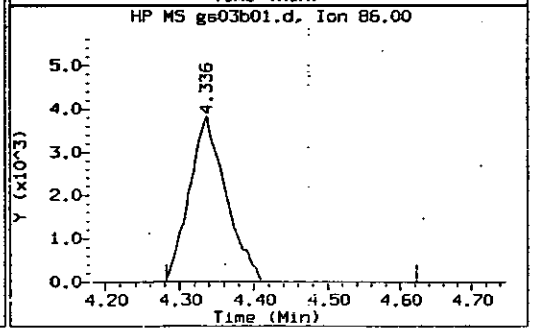
Sample Spectrum (Unaltered)











Data File: /chem2/HP16334.i/10sep03a.b/gs03b01.d Instrument ID: HP16334.i
Injection date and time: 03-SEP-2010 02:56 Analyst ID: SAS00403

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: 1064
Calibration date and time: 03-SEP-2010 02:31
Date, time and analyst ID of latest file update: 03-Sep-2010 05:46 sas00403

Sample Name: VBLKG23 Lab Sample ID: VBLKG23

Compound Number	: 34
Compound Name	: Methylene Chloride
Scan Number	: 451
Retention Time (minutes)	: 4.336
Relative Retention Time	: -0.001
Quant Ion	: 84.00
Area (flag)	: 20296
On-Column Amount (ng)	: 0.2878

RAD36 5387

Digitally signed by Stephanie A. Selis on 09/03/2010 at 05:46.
Target 3.5 esignature user ID: sas00403

XXXXX

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

6075230

Data file: /chem2/HP16334.i/10sep03a.b/gs03s04.d
Injection date and time: **03-SEP-2010 06:21**
Data file Sample Info. Line: XXXXX;6075230;1;0;;;;
Instrument ID: **HP16334.i** Batch: **G102461AA**
Date, time and analyst ID of latest file update: 03-Sep-2010 07:46 jml01693

Blank Data file reference: **/chem2/HP16334.i/10sep03a.b/gs03b01.d**

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: **8260W25**
Calibration date and time (Last Method Edit): 03-SEP-2010 02:31
Mid Level Daily Calibration Standard Reference: **/chem2/HP16334.i/10sep03a.b/gs03c01.d**

Bottle Code: **30A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
36) t-Butyl Alcohol-d10	4.367(0.000)	456	65	95842 (-10)	50.00	
77) Fluorobenzene	7.830(-0.006)	1024	96	2341798 (-7)	10.00	
110) Chlorobenzene-d5	11.256(-0.006)	1586	117	1738633 (-7)	10.00	
143) 1,4-Dichlorobenzene-d4	13.109(0.000)	1890	152	942803 (-13)	10.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
61) Dibromofluoromethane	(1)	6.921(-0.001)	113	524713	9.740	97%		77 - 114
70) 1,2-Dichloroethane-d4	(1)	7.385(-0.001)	102	102510	10.203	102%		74 - 113
97) Toluene-d8	(2)	9.829(0.000)	98	2239921	9.540	95%		77 - 110
126) 4-Bromofluorobenzene	(2)	12.237(0.000)	95	735543	9.269	93%		78 - 110

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
2) Dichlorodifluoromethane	(1)			Not Detected					0.1
5) Chloromethane	(1)			Not Detected					0.2
6) Vinyl Chloride	(1)			Not Detected					0.1
9) 1,3-Butadiene	(1)			Not Detected					0.1
10) Bromomethane	(1)			Not Detected					0.1
11) Chloroethane	(1)			Not Detected					0.1
13) Dichlorofluoromethane	(1)			Not Detected					0.2
15) Trichlorofluoromethane	(1)			Not Detected					0.1
17) Ethyl Ether	(1)			Not Detected					0.1
18) Freon 123a	(1)			Not Detected					0.2
23) Acrolein	(4)			Not Detected					5
24) 1,1-Dichloroethene	(1)			Not Detected					0.1
25) Freon 113	(1)			Not Detected					0.2
26) Acetone	(4)			Not Detected					3
27) Methyl Iodide	(1)			Not Detected					0.1
29) Carbon Disulfide	(1)			Not Detected					0.4
32) Allyl Chloride	(1)			Not Detected					0.1
33) Methyl Acetate	(1)			Not Detected					0.3
34) Methylene Chloride	(1)			Not Detected					0.2
38) t-Butyl Alcohol	(4)			Not Detected					4
39) Acrylonitrile	(4)			Not Detected					1
41) trans-1,2-Dichloroethene	(1)			Not Detected					0.1
37) 1,2-Dichloroethene (Total)	(1)			Not Detected					0.1
40) Methyl Tertiary Butyl Ether	(1)			Not Detected					0.1
44) n-Hexane	(1)			Not Detected					0.1
45) 1,1-Dichloroethane	(1)			Not Detected					0.1
47) di-Isopropyl Ether	(1)			Not Detected					0.1
48) 2-Chloro-1,3-Butadiene	(1)			Not Detected					0.1
49) Ethyl t-Butyl Ether	(1)			Not Detected					0.1
51) 2,2-Dichloropropane	(1)			Not Detected					0.1
50) cis-1,2-Dichloroethene	(1)			Not Detected					0.1
52) 2-Butanone	(4)			Not Detected					1
53) Propionitrile	(4)			Not Detected					2
55) Methacrylonitrile	(4)			Not Detected					1

RAD36 0308

Digitally signed by Jason M. Long on 09/03/2010 at 08:01. Target 3.5 esignature user ID: jml01693

XXXXX

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles 6075230

Data file: /chem2/HP16334.i/10sep03a.b/gs03s04.d
Data file Sample Info. Line: XXXXX;6075230;1;0;;;;
Date, time and analyst ID of latest file update: 03-Sep-2010 07:46 jml01693

Injection date and time: **03-SEP-2010 06:21**
Instrument ID: **HP16334.i** Batch: **G102461AA**

Blank Data file reference: **/chem2/HP16334.i/10sep03a.b/gs03b01.d**

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: **8260W25**
Calibration date and time (Last Method Edit): 03-SEP-2010 02:31
Mid Level Daily Calibration Standard Reference: **/chem2/HP16334.i/10sep03a.b/gs03c01.d**

Bottle Code: **38A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: 1.00

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
56) Bromochloromethane	(1)			Not Detected					0.1
57) Tetrahydrofuran	(4)			Not Detected					2
58) Chloroform	(1)			Not Detected					0.1
63) 1,1,1-Trichloroethane	(1)			Not Detected					0.1
64) Cyclohexane	(1)			Not Detected					0.1
65) 1,1-Dichloropropene	(1)			Not Detected					0.1
66) Carbon Tetrachloride	(1)			Not Detected					0.1
67) Isobutyl Alcohol	(4)			Not Detected					10
72) Benzene	(1)			Not Detected					0.1
74) 1,2-Dichloroethane	(1)			Not Detected					0.1
75) t-Amyl Methyl Ether	(1)			Not Detected					0.1
76) n-Heptane	(1)			Not Detected					0.2
81) n-Butanol	(4)			Not Detected					20
83) Trichloroethene	(1)			Not Detected					0.1
84) Methylcyclohexane	(1)			Not Detected					0.1
85) 1,2-Dichloropropane	(1)			Not Detected					0.1
88) Dibromomethane	(1)			Not Detected					0.1
89) 1,4-Dioxane	(4)			Not Detected					20
87) Methyl Methacrylate	(4)			Not Detected					0.1
90) Bromodichloromethane	(1)			Not Detected					0.1
91) 2-Nitropropane	(4)			Not Detected					1
94) cis-1,3-Dichloropropene	(1)			Not Detected					0.1
96) 4-Methyl-2-Pentanone	(1)			Not Detected					1
101) Toluene	(2)			Not Detected					0.1
102) trans-1,3-Dichloropropene	(2)			Not Detected					0.1
103) Ethyl Methacrylate	(2)			Not Detected					0.1
104) 1,1,2-Trichloroethane	(2)			Not Detected					0.1
105) Tetrachloroethene	(2)			Not Detected					0.1
106) 1,3-Dichloropropane	(2)			Not Detected					0.1
107) 2-Hexanone	(2)			Not Detected					1
108) Dibromochloromethane	(2)			Not Detected					0.1
109) 1,2-Dibromoethane	(2)			Not Detected					0.1
112) Chlorobenzene	(2)			Not Detected					0.1
113) 1,1,1,2-Tetrachloroethane	(2)			Not Detected					0.1
114) Ethylbenzene	(2)			Not Detected					0.1
117) m+p-Xylene	(2)			Not Detected					0.1
115) Xylene (Total)	(2)			Not Detected					0.1
118) o-Xylene	(2)			Not Detected					0.1
119) Styrene	(2)			Not Detected					0.1
120) Bromoform	(2)			Not Detected					0.1
121) Isopropylbenzene	(2)			Not Detected					0.1
128) 1,1,2,2-Tetrachloroethane	(3)			Not Detected					0.1
129) Bromobenzene	(3)			Not Detected					0.1
130) trans-1,4-Dichloro-2-Butene	(4)			Not Detected					1
131) 1,2,3-Trichloropropane	(3)			Not Detected					0.3
132) n-Propylbenzene	(3)			Not Detected					0.1
133) 2-Chlorotoluene	(3)			Not Detected					0.1
135) 4-Chlorotoluene	(3)			Not Detected					0.1
134) 1,3,5-Trimethylbenzene	(3)			Not Detected					0.1
138) Pentachloroethane	(3)			Not Detected					0.2
137) tert-Butylbenzene	(3)			Not Detected					0.1
139) 1,2,4-Trimethylbenzene	(3)			Not Detected					0.1
140) sec-Butylbenzene	(3)			Not Detected					0.1
142) 1,3-Dichlorobenzene	(3)			Not Detected					0.1
141) p-Isopropyltoluene	(3)			Not Detected					0.1

RAD36 00389

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XXXXX

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles 6075230

Data file: /chem2/HP16334.i/10sep03a.b/gs03s04.d
Injection date and time: 03-SEP-2010 06:21
Data file Sample Info. Line: XXXXX;6075230;1;0;;;;
Instrument ID: HP16334.i Batch: G102461AA
Date, time and analyst ID of latest file update: 03-Sep-2010 07:46 jml01693

Blank Data file reference: **/chem2/HP16334.i/10sep03a.b/gs03b01.d**

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: **8260W25**
Calibration date and time (Last Method Edit): 03-SEP-2010 02:31
Mid Level Daily Calibration Standard Reference: **/chem2/HP16334.i/10sep03a.b/gs03c01.d**

Bottle Code: **38A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: 1.00

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
144) 1,4-Dichlorobenzene	(3)			Not Detected					0.1
145) 1,2,3-Trimethylbenzene	(3)			Not Detected					0.1
146) Benzyl Chloride	(3)			Not Detected					0.1
147) n-Butylbenzene	(3)			Not Detected					0.1
148) 1,2-Dichlorobenzene	(3)			Not Detected					0.1
150) 1,2-Dibromo-3-Chloropropane	(4)			Not Detected					0.2
153) 1,2,4-Trichlorobenzene	(3)			Not Detected					0.1
154) Hexachlorobutadiene	(3)			Not Detected					0.1
155) Naphthalene	(3)			Not Detected					0.1
156) 1,2,3-Trichlorobenzene	(3)			Not Detected					0.1

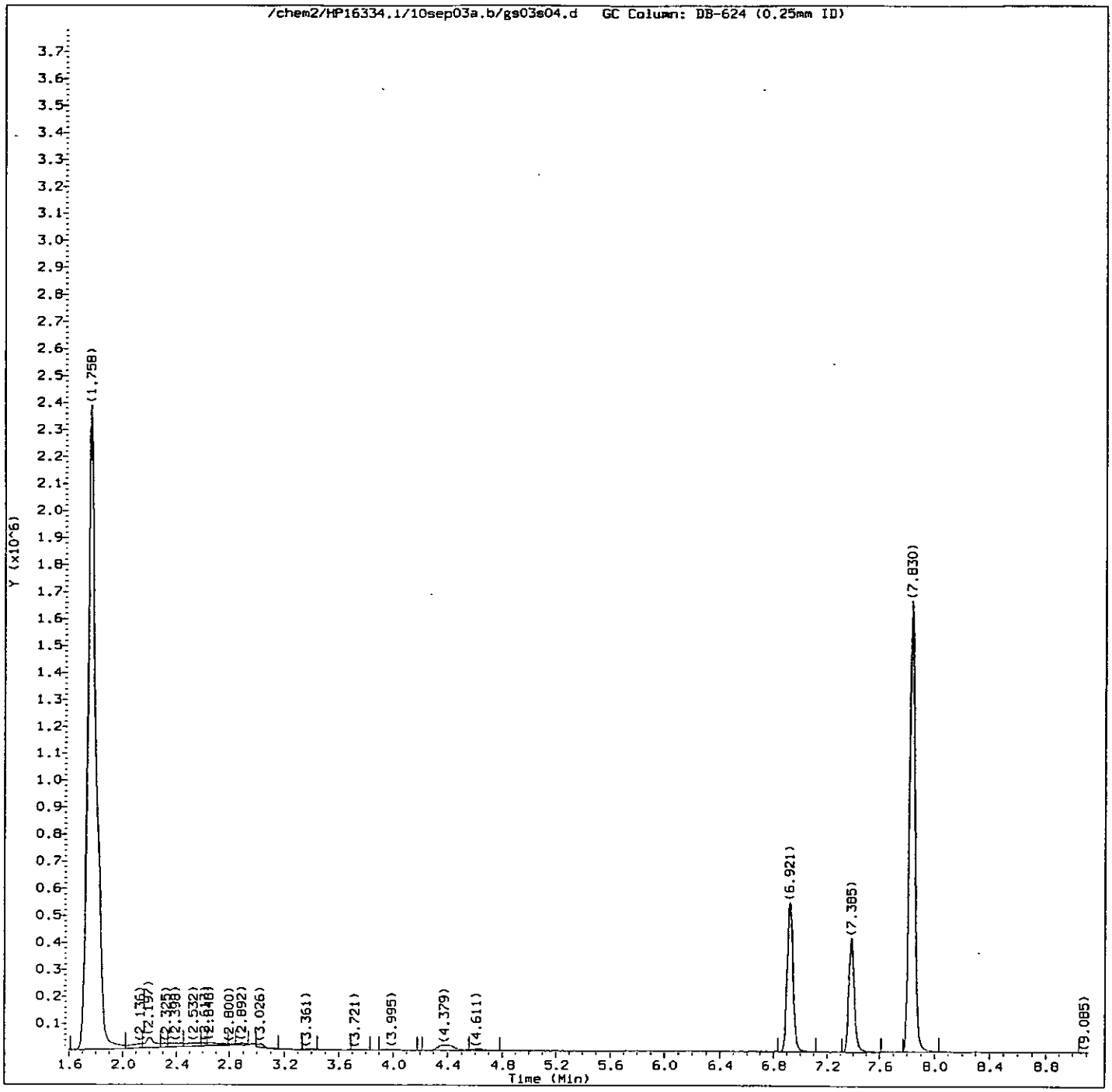
Total number of targets = 99

Comments: Bulk

RAD36 0310

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Auditor: _____ Date: 9/10/10



Total Ion Chromatogram (TIC)

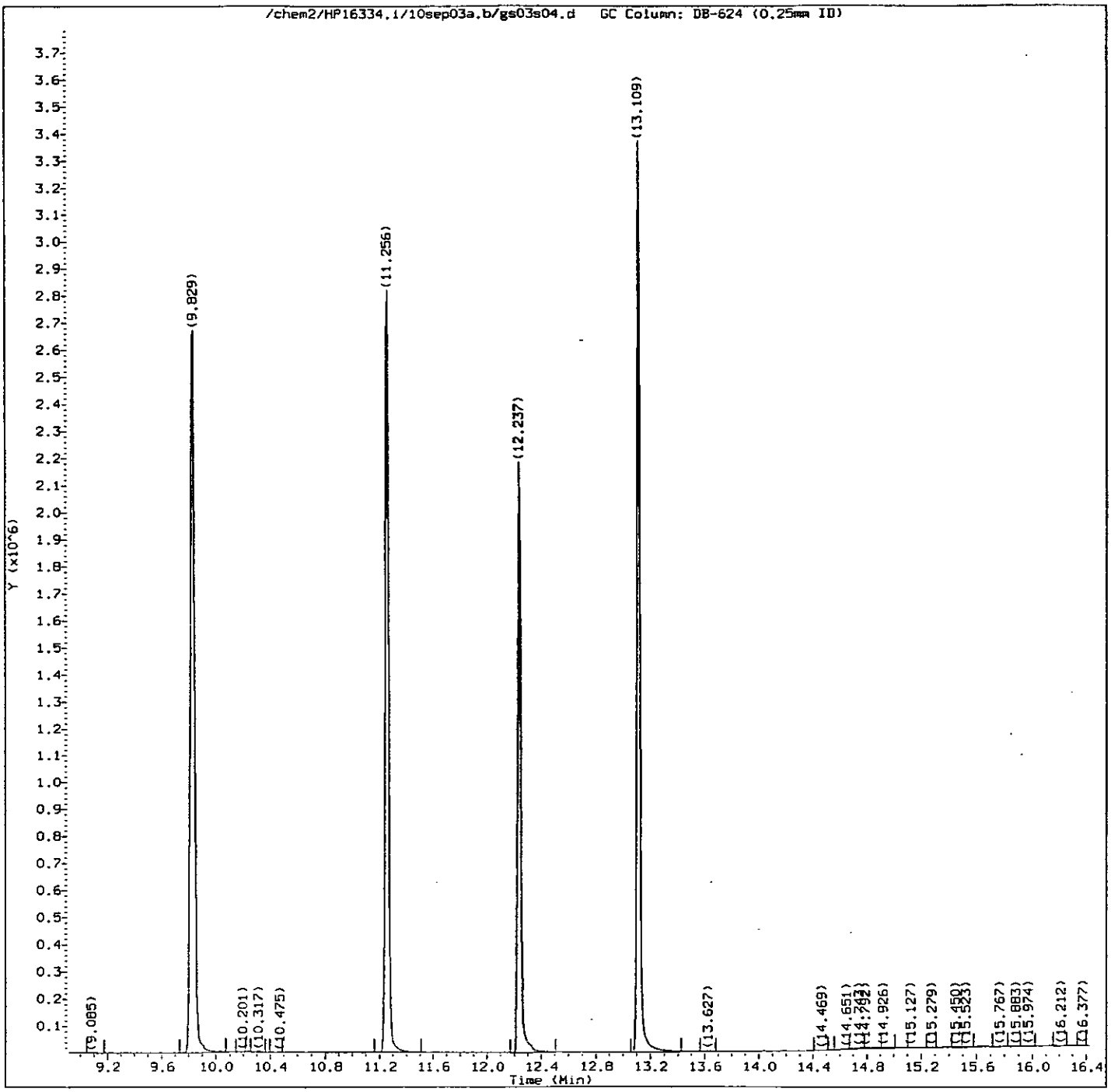
Target Revision 3.5

Data File: /chem2/HP16334.i/10sep03a.b/gs03s04.d Instrument ID: HP16334.i
Injection date and time: 03-SEP-2010 06:21 Analyst ID: SAS00403

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 03-SEP-2010 02:31
Date, time and analyst ID of latest file update: 03-Sep-2010 07:46 jml01693

Sample Name: XXXXX Lab Sample ID: 6075230 RAD36 0311

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on 09/03/2010 at 08:01.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/10sep03a.b/gs03s04.d Instrument ID: HP16334.i
Injection date and time: 03-SEP-2010 06:21 Analyst ID: SAS00403

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 03-SEP-2010 02:31
Date, time and analyst ID of latest file update: 03-Sep-2010 07:46 jml01693

Sample Name: XXXXX Lab Sample ID: 6075230 RAD36 8312

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on 09/03/2010 at 08:01.
Target 3.5 esignature user ID: jml01693 ...

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/10sep03a.b/gs03s04.d Instrument ID: HP16334.i
Injection date and time: 03-SEP-2010 06:21 Analyst ID: SAS00403

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 03-SEP-2010 02:31
Date, time and analyst ID of latest file update: 03-Sep-2010 07:46 jml01693

Sample Name: XXXXX Lab Sample ID: 6075230

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
36)*t-Butyl Alcohol-d10	(4)	4.367	65	95842	50.000
61)$Dibromofluoromethane	(1)	6.921	113	524713	9.740
70)$1,2-Dichloroethane-d4	(1)	7.385	102	102510	10.203
77)*Fluorobenzene	(1)	7.830	96	2341798	10.000
97)$Toluene-d8	(2)	9.829	98	2239921	9.540
110)*Chlorobenzene-d5	(2)	11.256	117	1738633	10.000
126)$4-Bromofluorobenzene	(2)	12.237	95	735543	9.269
143)*1,4-Dichlorobenzene-d4	(3)	13.109	152	942803	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

RAD36 8313

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on 09/03/2010 at 08:01.
Target 3.5 esignature user ID: jml01693

XXXXXMS

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

6075230MS

Data file: /chem2/HP16334.i/10sep03a.b/gs03s05.d
Injection date and time: **03-SEP-2010 06:43**
Data file Sample Info: Line: XXXXXMS;6075230MS;1;3;MS;;;
Instrument ID: **HP16334.i** Batch: **G102461AA**
Date, time and analyst ID of latest file update: 03-Sep-2010 07:41 jm101693

Blank Data file reference: **/chem2/HP16334.i/10sep03a.b/gs03b01.d**

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: **8260W25**
Calibration date and time (Last Method Edit): 03-SEP-2010 02:31
Mid Level Daily Calibration Standard Reference: **/chem2/HP16334.i/10sep03a.b/gs03c01.d**

Bottle Code: **38B** Matrix: WATER Level: **Low**

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
36) t-Butyl Alcohol-d10	4.361	(0.006)	455	65	99208	(-7)	50.00	
77) Fluorobenzene	7.836	(-0.012)	1025	96	2416440	(-4)	10.00	
110) Chlorobenzene-d5	11.256	(-0.006)	1586	117	1780330	(-5)	10.00	
143) 1,4-Dichlorobenzene-d4	13.109	(0.000)	1890	152	1030770	(-5)	10.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
61) Dibromofluoromethane	(1)	6.927	(-0.001)	113	538758	9.692	97%		77 - 114
70) 1,2-Dichloroethane-d4	(1)	7.391	(-0.001)	102	104263M	10.057	101%		74 - 113
97) Toluene-d8	(2)	9.829	(0.000)	98	2331247	9.697	97%		77 - 110
126) 4-Bromofluorobenzene	(2)	12.237	(0.000)	95	776802	9.559	96%		78 - 110

M = Surrogate Standard was manually integrated

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
2) Dichlorodifluoromethane	(1)	1.995	(-0.000)	85	384446	3.590	3.59			0.1
5) Chloromethane	(1)	2.178	(-0.000)	50	429464	4.180	4.18			0.2
6) Vinyl Chloride	(1)	2.312	(-0.000)	62	430144	4.324	4.32			0.1
9) 1,3-Butadiene	(1)	2.312	(-0.000)	39	543908	3.373	3.37			0.1
10) Bromomethane	(1)	2.654	(-0.000)	94	329877	4.345	4.34			0.1
11) Chloroethane	(1)	2.745	(-0.001)	64	252064	4.316	4.32			0.1
13) Dichlorofluoromethane	(1)	2.983	(-0.000)	67	647702	4.665	4.66			0.2
15) Trichlorofluoromethane	(1)	3.068	(-0.000)	101	547180	4.518	4.52			0.1
17) Ethyl Ether	(1)	3.336	(-0.000)	59	173934	4.260	4.26			0.1
18) Freon 123a	(1)	3.379	(-0.000)	67	405619	5.598	5.60			0.2
23) Acrolein	(4)	3.532	(-0.006)	56	167755	40.397	40.40			5
24) 1,1-Dichloroethene	(1)	3.666	(-0.001)	96	364770	6.158	6.16			0.1
25) Freon 113	(1)	3.678	(-0.000)	101	399266	6.498	6.50			0.2
26) Acetone	(4)	3.720	(-0.005)	58	93411	47.640	47.64			3
27) Methyl Iodide	(1)	3.879	(-0.001)	142	638589	5.900	5.90			0.1
29) Carbon Disulfide	(1)	3.983	(-0.001)	76	1135236	7.038	7.04			0.4
32) Allyl Chloride	(1)	4.147	(-0.000)	41	449997	7.231	7.23			0.1
33) Methyl Acetate	(1)	4.178	(-0.001)	43	88196M	6.438	6.44			0.3
34) Methylene Chloride	(1)	4.336	(-0.001)	84	370083	5.288	5.29	0.288	B	0.2
38) t-Butyl Alcohol	(4)	4.507	(-0.008)	59	117144	46.812	46.81			4
39) Acrylonitrile	(4)	4.732	(-0.005)	53	244539	31.239	31.24			1
41) trans-1,2-Dichloroethene	(1)	4.751	(-0.000)	96	410343	6.151	6.15			0.1
37) 1,2-Dichloroethene (Total)	(1)			96	831303	12.065	12.06			0.1
40) Methyl Tertiary Butyl Ether	(1)	4.745	(0.000)	73	708552	5.375	5.37			0.1
44) n-Hexane	(1)	5.159	(-0.000)	57	546600	6.122	6.12			0.1
45) 1,1-Dichloroethane	(1)	5.397	(-0.001)	63	656541	5.993	5.99			0.1
47) di-Isopropyl Ether	(1)	5.488	(-0.001)	45	1049294	5.603	5.60			0.1
48) 2-Chloro-1,3-Butadiene	(1)	5.531	(-0.001)	53	508188	6.522	6.52			0.1
49) Ethyl t-Butyl Ether	(1)	6.025	(-0.000)	59	900703	5.331	5.33			0.1
51) 2,2-Dichloropropane	(1)	6.257	(-0.000)	77	536825	6.030	6.03			0.1
50) cis-1,2-Dichloroethene	(1)	6.250	(-0.001)	96	420960	5.914	5.91			0.1
52) 2-Butanone	(4)	6.275	(-0.006)	43	463445	45.864	45.86			5
53) Propionitrile	(4)	6.385	(-0.009)	54	120396M	45.947	45.95	N.I.B.		

M = Compound was manually integrated. B = Compound detected in referenced method blank. NIB = Compound not in referenced method blank sublist.

RAD36 $\frac{1}{2}$ 0314

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XXXXXMS

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

6075230MS

Data file: /chem2/HP16334.i/10sep03a.b/gs03s05.d
Injection date and time: **03-SEP-2010 06:43**
Data file Sample Info. Line: XXXXXMS;6075230MS;1;3;MS;;;
Instrument ID: **HP16334.i** Batch: **G102462AA**
Date, time and analyst ID of latest file update: 03-Sep-2010 07:41 jm101693

Blank Data file reference: **/chem2/HP16334.i/10sep03a.b/gs03b01.d**

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: **8260W25**
Calibration date and time (Last Method Edit): 03-SEP-2010 02:31
Mid Level Daily Calibration Standard Reference: **/chem2/HP16334.i/10sep03a.b/gs03c01.d**

Bottle Code: **38B** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
55) Methacrylonitrile	(4)	6.580(-0.006)	67	527232	46.765	46.76			1
56) Bromochloromethane	(1)	6.586(-0.000)	128	174818	6.158	6.16			0.1
57) Tetrahydrofuran	(4)	6.647(-0.006)	71	96339	29.258	29.26			2
58) Chloroform	(1)	6.702(-0.001)	83	679283	6.069	6.07			0.1
63) 1,1,1-Trichloroethane	(1)	6.958(-0.000)	97	613442	6.308	6.31			0.1
64) Cyclohexane	(1)	7.025(-0.000)	56	679987	6.332	6.33			0.1
65) 1,1-Dichloropropene	(1)	7.177(-0.000)	75	535100	6.119	6.12			0.1
66) Carbon Tetrachloride	(1)	7.177(-0.000)	117	505712	5.950	5.95			0.1
67) Isobutyl Alcohol	(4)	7.354(-0.006)	41	99939	130.774	130.77			10
72) Benzene	(1)	7.458(-0.000)	78	1546006	6.005	6.01			0.1
74) 1,2-Dichloroethane	(1)	7.488(-0.000)	62	351098	5.739	5.74			0.1
75) t-Amyl Methyl Ether	(1)	7.604(-0.000)	73	796757	5.443	5.44			0.1
76) n-Heptane	(1)	7.805(-0.000)	43	575800	6.250	6.25			0.2
81) n-Butanol	(4)	8.244(-0.006)	56	152103	254.160	254.16			20
83) Trichloroethene	(1)	8.317(0.000)	95	462690	6.536	6.54			0.1
84) Methylcyclohexane	(1)	8.561(0.000)	83	773931	6.958	6.96			0.1
85) 1,2-Dichloropropane	(1)	8.616(0.000)	63	384915	6.044	6.04			0.1
88) Dibromomethane	(1)	8.768(0.000)	93	166974	5.896	5.90			0.1
89) 1,4-Dioxane	(4)	8.793(-0.007)	88	28410M	161.029	161.03			20
87) Methyl Methacrylate	(4)	8.768(-0.005)	69	122142	5.417	5.42			0.1
90) Bromodichloromethane	(1)	8.969(0.001)	83	417034	5.750	5.75			0.1
91) 2-Nitropropane	(4)	9.274(-0.005)	41	31914	5.389	5.39			1
94) cis-1,3-Dichloropropene	(1)	9.530(0.000)	75	429842	5.675	5.68			0.1
96) 4-Methyl-2-Pentanone	(1)	9.707(0.000)	43	802661	26.636	26.64			1
101) Toluene	(2)	9.902(-0.000)	92	1019233	5.875	5.88			0.1
102) trans-1,3-Dichloropropene	(2)	10.140(-0.000)	75	340367	5.569	5.57			0.1
103) Ethyl Methacrylate	(2)	10.231(-0.000)	69	256658	6.086	6.09			0.1
104) 1,1,2-Trichloroethane	(2)	10.329(-0.000)	97	239869	5.890	5.89			0.1
105) Tetrachloroethene	(2)	10.469(-0.000)	166	494643	6.291	6.29			0.1
106) 1,3-Dichloropropane	(2)	10.500(-0.000)	76	392993	5.706	5.71			0.1
107) 2-Hexanone	(2)	10.579(-0.000)	43	527499	26.187	26.19			1
108) Dibromochloromethane	(2)	10.725(-0.000)	129	247049	5.269	5.27			0.1
109) 1,2-Dibromoethane	(2)	10.835(-0.000)	107	209300	5.694	5.69			0.1
112) Chlorobenzene	(2)	11.280(0.000)	112	1163673	5.972	5.97			0.1
113) 1,1,1,2-Tetrachloroethane	(2)	11.353(0.000)	131	363834	5.799	5.80			0.1
114) Ethylbenzene	(2)	11.371(0.000)	91	1968276	5.940	5.94			0.1
117) m+p-Xylene	(2)	11.469(0.000)	106	1548697	11.680	11.68			0.1
115) Xylene (Total)	(2)		106	2296228	17.399	17.40			0.1
118) o-Xylene	(2)	11.810(0.000)	106	747531	5.720	5.72			0.1
119) Styrene	(2)	11.822(0.000)	104	1028138	5.236	5.24			0.1
120) Bromoform	(2)	11.987(0.000)	173	109834	4.287	4.29			0.1
121) Isopropylbenzene	(2)	12.103(0.000)	105	1995610	5.917	5.92			0.1
128) 1,1,2,2-Tetrachloroethane	(3)	12.341(0.000)	83	263101M	5.687	5.69			0.1
129) Bromobenzene	(3)	12.365(-0.000)	156	460847	5.751	5.75			0.1
130) trans-1,4-Dichloro-2-Butene	(4)	12.383(-0.005)	53	23600	8.654	8.65			1
131) 1,2,3-Trichloropropane	(3)	12.383(-0.000)	110	73212	5.539	5.54			0.3
132) n-Propylbenzene	(3)	12.426(-0.000)	91	2433775	5.889	5.89			0.1
133) 2-Chlorotoluene	(3)	12.505(-0.000)	126	485543	5.846	5.85			0.1
135) 4-Chlorotoluene	(3)	12.585(-0.000)	126	493167	5.820	5.82			0.1
134) 1,3,5-Trimethylbenzene	(3)	12.554(-0.000)	105	1607607	5.589	5.59			0.1
138) Pentachloroethane	(3)	12.834(-0.000)	167	257889	5.029	5.03			0.2
137) tert-Butylbenzene	(3)	12.804(0.000)	134	374551M	5.800	5.80			0.1
139) 1,2,4-Trimethylbenzene	(3)	12.841(-0.000)	105	1726857	5.586	5.59			0.1
140) sec-Butylbenzene	(3)	12.963(0.000)	105	2286490	5.968	5.97			0.1
142) 1,3-Dichlorobenzene	(3)	13.066(-0.000)	146	1036646	5.989	5.99			0.1

RAD36 9315

M = Compound was manually integrated.

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XXXXXMS

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

6075230MS

Data file: /chem2/HP16334.i/10sep03a.b/gs03s05.d
Injection date and time: **03-SEP-2010 06:43**
Data file Sample Info. Line: XXXXXMS;6075230MS;1;3;MS;;;
Instrument ID: **HP16334.i** Batch: **G102461AA**
Date, time and analyst ID of latest file update: 03-Sep-2010 07:41 jml01693

Blank Data file reference: **/chem2/HP16334.i/10sep03a.b/gs03b01.d**

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: **8260W25**
Calibration date and time (Last Method Edit): 03-SEP-2010 02:31
Mid Level Daily Calibration Standard Reference: **/chem2/HP16334.i/10sep03a.b/gs03c01.d**

Bottle Code: **38B** Matrix: **WATER** Level: **Low**

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
141) p-Isopropyltoluene	(3)	13.060(-0.000)	119	2011608	5.874	5.87			0.1
144) 1,4-Dichlorobenzene	(3)	13.127(-0.000)	146	1031053	5.794	5.79			0.1
145) 1,2,3-Trimethylbenzene	(3)	13.152(-0.000)	120	767162	5.576	5.58			0.1
146) Benzyl Chloride	(3)	13.225(-0.000)	126	78553M	4.430	4.43			0.1
147) n-Butylbenzene	(3)	13.353(-0.000)	92	1035865	6.114	6.11			0.1
148) 1,2-Dichlorobenzene	(3)	13.402(-0.000)	146	881160	5.782	5.78			0.1
150) 1,2-Dibromo-3-Chloropropane	(4)	13.944(-0.004)	155	29067	5.277	5.28			0.2
153) 1,2,4-Trichlorobenzene	(3)	14.493(-0.000)	180	669477	5.565	5.56			0.1
154) Hexachlorobutadiene	(3)	14.578(-0.000)	225	405410	6.252	6.25			0.1
155) Naphthalene	(3)	14.663(-0.000)	128	843545	5.153	5.15			0.1
156) 1,2,3-Trichlorobenzene	(3)	14.822(-0.000)	180	503601	5.347	5.35			0.1

M = Compound was manually integrated.

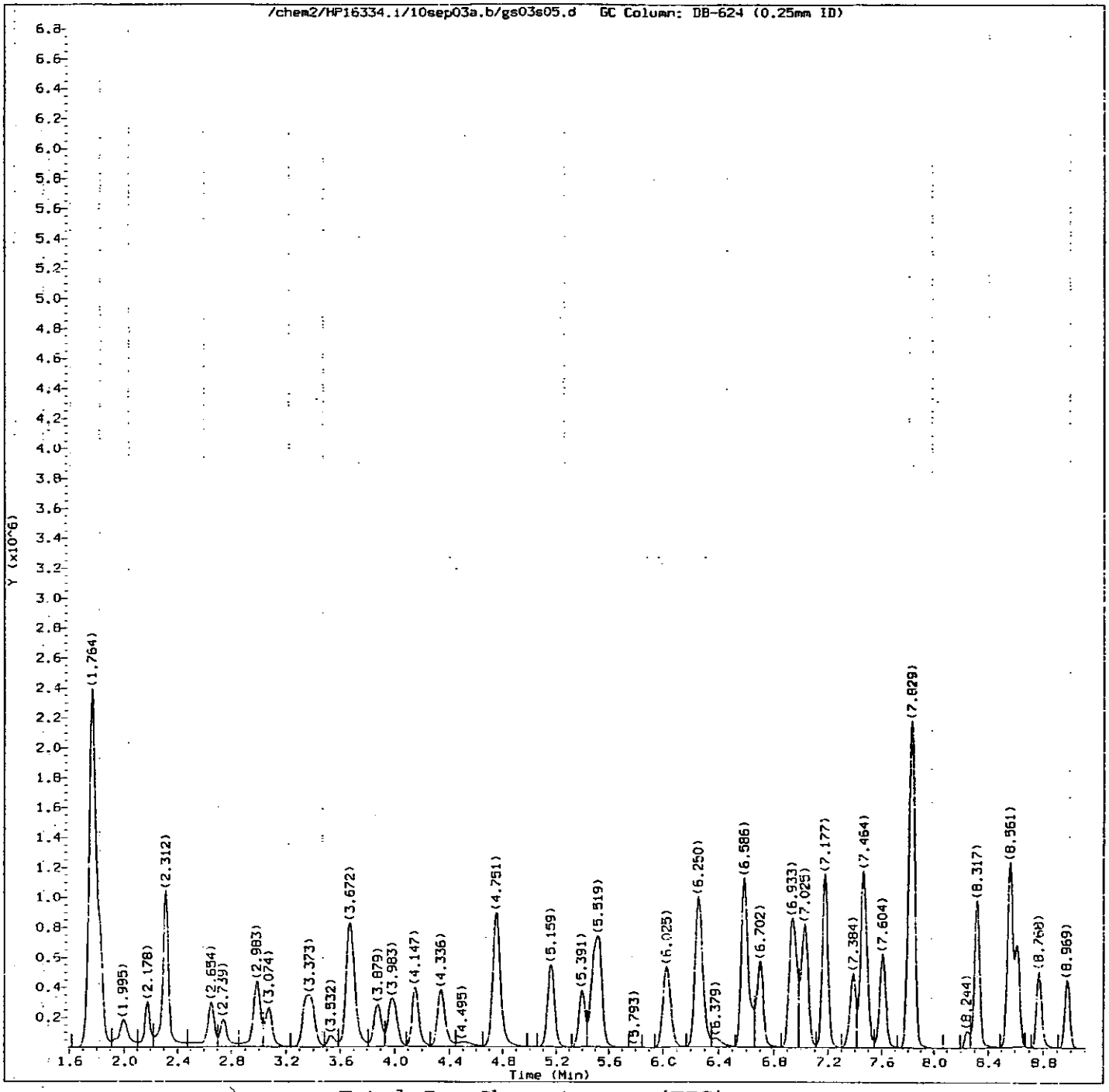
Total number of targets = 99

Comments: _____

RA036 0316

Digitally signed by Jason M. Long on 09/03/2010 at 07:46. Target 3.5 esignature user ID: jml01693

Auditor: _____ Date: 9/10/10



Total Ion Chromatogram (TIC)

Target Revision 3.5

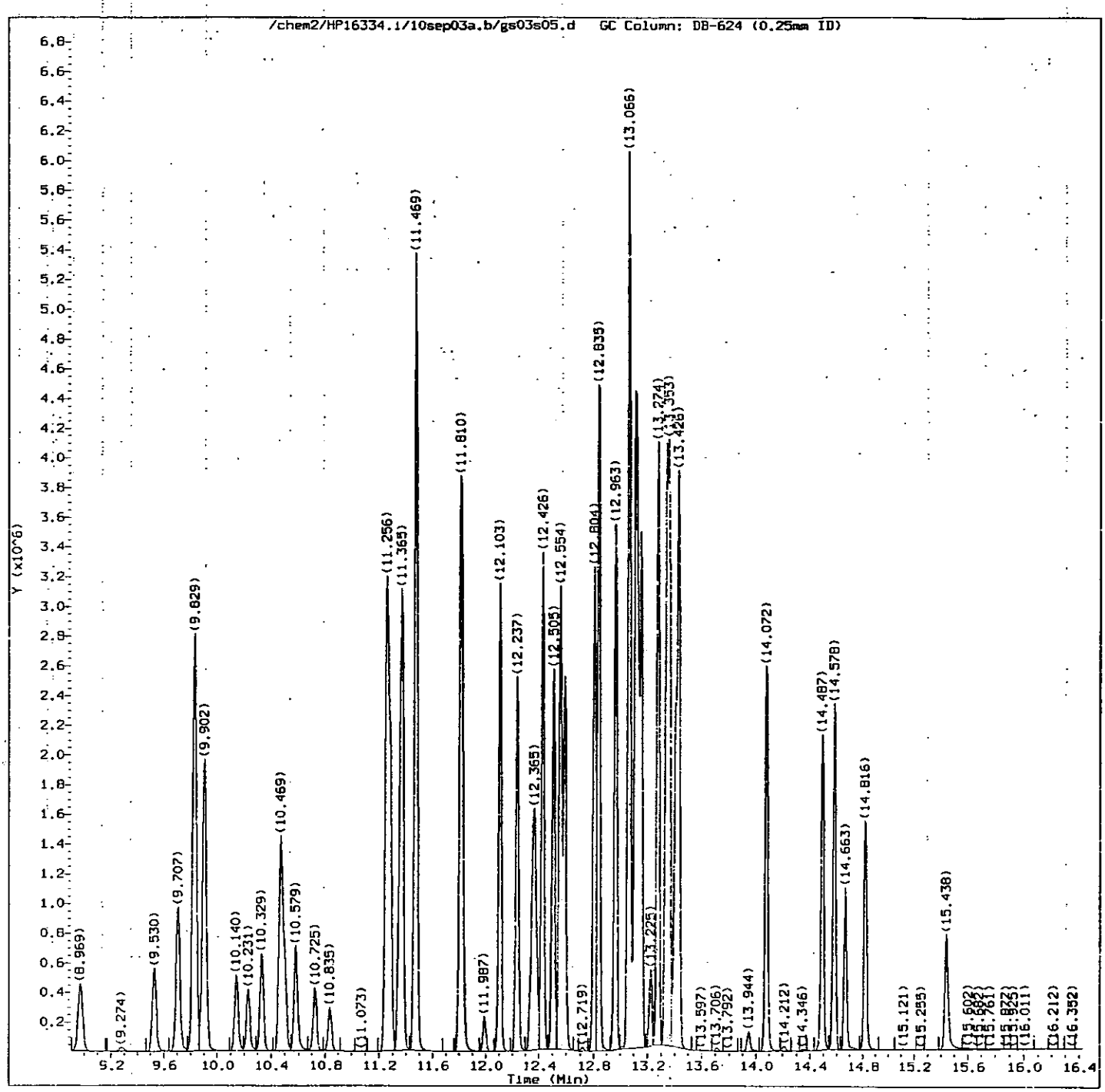
Data File: /chem2/HP16334.i/10sep03a.b/gs03s05.d Instrument ID: HP16334.i
Injection date and time: 03-SEP-2010 06:43 Analyst ID: SAS00403

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 03-SEP-2010 02:31
Date, time and analyst ID of latest file update: 03-Sep-2010 07:41 jm101693

Sample Name: XXXXXMS Lab Sample ID: 6075230MS

RAD36 0217

Digitally signed by Jason M. Long
on 09/03/2010 at 07:46.
Target 3.5 esignature user ID: jm101693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/10sep03a.b/gs03s05.d Instrument ID: HP16334.i
Injection date and time: 03-SEP-2010 06:43 Analyst ID: SAS00403

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 03-SEP-2010 02:31
Date, time and analyst ID of latest file update: 03-Sep-2010 07:41 jm101693

Sample Name: XXXXXMS Lab Sample ID: 6075230MS

RAD36 0318

Digitally signed by Jason M. Long
on 09/03/2010 at 07:46.
Target 3.5 esignature user ID: jm101693

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/10sep03a.b/gs03s05.d Instrument ID: HP16334.i
Injection date and time: 03-SEP-2010 06:43 Analyst ID: SAS00403

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 03-SEP-2010 02:31
Date, time and analyst ID of latest file update: 03-Sep-2010 07:41 jml01693

Sample Name: XXXXXMS Lab Sample ID: 6075230MS

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
2) Dichlorodifluoromethane	(1)	1.995	85	384446	3.590
5) Chloromethane	(1)	2.178	50	429464	4.180
6) Vinyl Chloride	(1)	2.312	62	430144	4.324
9) 1,3-Butadiene	(1)	2.312	39	543908	3.373
10) Bromomethane	(1)	2.654	94	329877	4.345
11) Chloroethane	(1)	2.745	64	252064	4.316
13) Dichlorofluoromethane	(1)	2.983	67	647702	4.665
15) Trichlorofluoromethane	(1)	3.068	101	547180	4.518
17) Ethyl Ether	(1)	3.336	59	173934	4.260
18) Freon 123a	(1)	3.379	67	405619	5.598
23) Acrolein	(4)	3.532	56	167755	40.397
24) 1,1-Dichloroethene	(1)	3.666	96	364770	6.158
25) Freon 113	(1)	3.678	101	399266	6.498
26) Acetone	(4)	3.720	58	93411	47.640
27) Methyl Iodide	(1)	3.879	142	638589	5.900
29) Carbon Disulfide	(1)	3.983	76	1135236	7.038
32) Allyl Chloride	(1)	4.147	41	449997	7.231
33) Methyl Acetate	(1)	4.178	43	88196M	6.438
34) Methylene Chloride	(1)	4.336	84	370083	5.288
36)*t-Butyl Alcohol-d10	(4)	4.361	65	99208	50.000
38) t-Butyl Alcohol	(4)	4.507	59	117144	46.812
39) Acrylonitrile	(4)	4.732	53	244539	31.239
40) Methyl Tertiary Butyl Ether	(1)	4.745	73	708552	5.375
41) trans-1,2-Dichloroethene	(1)	4.751	96	410343	6.151
37) 1,2-Dichloroethene (Total)	(1)		96	831303	12.065
44) n-Hexane	(1)	5.159	57	546600	6.122
45) 1,1-Dichloroethane	(1)	5.397	63	656541	5.993
47) di-Isopropyl Ether	(1)	5.488	45	1049294	5.603
48) 2-Chloro-1,3-Butadiene	(1)	5.531	53	508188	6.522
49) Ethyl t-Butyl Ether	(1)	6.025	59	900703	5.331
50) cis-1,2-Dichloroethene	(1)	6.250	96	420960	5.914
51) 2,2-Dichloropropane	(1)	6.257	77	536825	6.030
52) 2-Butanone	(4)	6.275	43	463445	45.864
53) Propionitrile	(4)	6.385	54	120396M	45.947
55) Methacrylonitrile	(4)	6.580	67	527232	46.765
56) Bromochloromethane	(1)	6.586	128	174818	6.158
57) Tetrahydrofuran	(4)	6.647	71	96339	29.258
58) Chloroform	(1)	6.702	83	679283	6.069
61)$Dibromofluoromethane	(1)	6.927	113	538758	9.692

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

RAD36 0319

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on 09/03/2010 at 07:46.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/10sep03a.b/gs03s05.d Instrument ID: HP16334.i
Injection date and time: 03-SEP-2010 06:43 Analyst ID: SAS00403

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 03-SEP-2010 02:31
Date, time and analyst ID of latest file update: 03-Sep-2010 07:41 jml01693

Sample Name: XXXXXMS Lab Sample ID: 6075230MS

	Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
63)	1,1,1-Trichloroethane	(1)	6.958	97	613442	6.308
64)	Cyclohexane	(1)	7.025	56	679987	6.332
65)	1,1-Dichloropropene	(1)	7.177	75	535100	6.119
66)	Carbon Tetrachloride	(1)	7.177	117	505712	5.950
67)	Isobutyl Alcohol	(4)	7.354	41	99939	130.774
70)	$1,2-Dichloroethane-d4	(1)	7.391	102	104263M	10.057
72)	Benzene	(1)	7.458	78	1546006	6.005
74)	1,2-Dichloroethane	(1)	7.488	62	351098	5.739
75)	t-Amyl Methyl Ether	(1)	7.604	73	796757	5.443
76)	n-Heptane	(1)	7.805	43	575800	6.250
77)	*Fluorobenzene	(1)	7.836	96	2416440	10.000
81)	n-Butanol	(4)	8.244	56	152103	254.160
83)	Trichloroethene	(1)	8.317	95	462690	6.536
84)	Methylcyclohexane	(1)	8.561	83	773931	6.958
85)	1,2-Dichloropropane	(1)	8.616	63	384915	6.044
87)	Methyl Methacrylate	(4)	8.768	69	122142	5.417
88)	Dibromomethane	(1)	8.768	93	166974	5.896
89)	1,4-Dioxane	(4)	8.793	88	28410M	161.029
90)	Bromodichloromethane	(1)	8.969	83	417034	5.750
91)	2-Nitropropane	(4)	9.274	41	31914	5.389
94)	cis-1,3-Dichloropropene	(1)	9.530	75	429842	5.675
96)	4-Methyl-2-Pentanone	(1)	9.707	43	802661	26.636
97)	$Toluene-d8	(2)	9.829	98	2331247	9.697
101)	Toluene	(2)	9.902	92	1019233	5.875
102)	trans-1,3-Dichloropropene	(2)	10.140	75	340367	5.569
103)	Ethyl Methacrylate	(2)	10.231	69	256658	6.086
104)	1,1,2-Trichloroethane	(2)	10.329	97	239869	5.890
105)	Tetrachloroethene	(2)	10.469	166	494643	6.291
106)	1,3-Dichloropropane	(2)	10.500	76	392993	5.706
107)	2-Hexanone	(2)	10.579	43	527499	26.187
108)	Dibromochloromethane	(2)	10.725	129	247049	5.269
109)	1,2-Dibromcethane	(2)	10.835	107	209300	5.694
110)	*Chlorobenzene-d5	(2)	11.256	117	1780330	10.000
112)	Chlorobenzene	(2)	11.280	112	1163673	5.972
113)	1,1,1,2-Tetrachloroethane	(2)	11.353	131	363834	5.799
114)	Ethylbenzene	(2)	11.371	91	1968276	5.940
117)	m+p-Xylene	(2)	11.469	106	1548697	11.680
115)	Xylene (Total)	(2)		106	2296228	17.399
118)	o-Xylene	(2)	11.810	106	747531	5.720

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

RAD36 0328

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on 09/03/2010 at 07:46.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/10sep03a.b/gs03s05.d Instrument ID: HP16334.i
Injection date and time: 03-SEP-2010 06:43 Analyst ID: SAS00403

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 03-SEP-2010 02:31
Date, time and analyst ID of latest file update: 03-Sep-2010 07:41 jml01693

Sample Name: XXXXXMS Lab Sample ID: 6075230MS

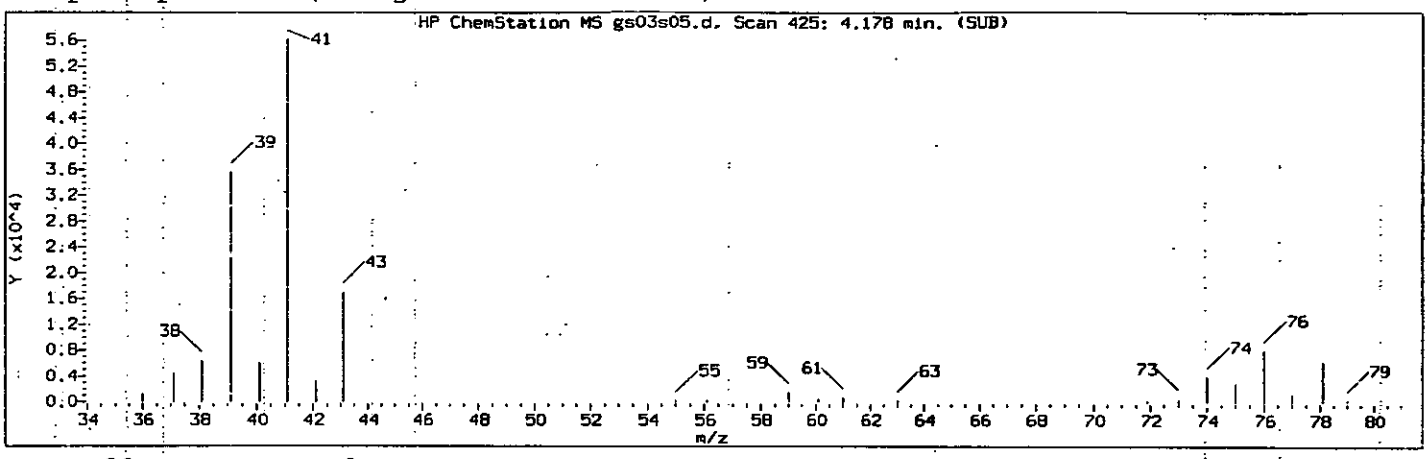
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
119) Styrene	(2)	11.823	104	1028138	5.236
120) Bromoform	(2)	11.987	173	109834	4.287
121) Isopropylbenzene	(2)	12.103	105	1995610	5.917
126)$4-Bromofluorobenzene	(2)	12.237	95	776802	9.559
128) 1,1,2,2-Tetrachloroethane	(3)	12.341	83	263101M	5.687
129) Bromobenzene	(3)	12.365	156	460847	5.751
131) 1,2,3-Trichloropropane	(3)	12.383	110	73212	5.539
130) trans-1,4-Dichloro-2-Butene	(4)	12.383	53	23600	8.654
132) n-Propylbenzene	(3)	12.426	91	2433775	5.889
133) 2-Chlorotoluene	(3)	12.505	126	485543	5.846
134) 1,3,5-Trimethylbenzene	(3)	12.554	105	1607607	5.589
135) 4-Chlorotoluene	(3)	12.585	126	493167	5.820
137) tert-Butylbenzene	(3)	12.804	134	374551M	5.800
138) Pentachloroethane	(3)	12.835	167	257889	5.029
139) 1,2,4-Trimethylbenzene	(3)	12.841	105	1726857	5.586
140) sec-Butylbenzene	(3)	12.963	105	2286490	5.968
141) p-Isopropyltoluene	(3)	13.060	119	2011608	5.874
142) 1,3-Dichlorobenzene	(3)	13.066	146	1036646	5.989
143)*1,4-Dichlorobenzene-d4	(3)	13.109	152	1030770	10.000
144) 1,4-Dichlorobenzene	(3)	13.127	146	1031053	5.794
145) 1,2,3-Trimethylbenzene	(3)	13.152	120	767162	5.576
146) Benzyl Chloride	(3)	13.225	126	78553M	4.430
147) n-Butylbenzene	(3)	13.353	92	1035865	6.114
148) 1,2-Dichlorobenzene	(3)	13.402	146	881160	5.782
150) 1,2-Dibromo-3-Chloropropane	(4)	13.944	155	29067	5.277
153) 1,2,4-Trichlorobenzene	(3)	14.493	180	669477	5.565
154) Hexachlorobutadiene	(3)	14.578	225	405410	6.252
155) Naphthalene	(3)	14.663	128	843545	5.153
156) 1,2,3-Trichlorobenzene	(3)	14.822	180	503601	5.347

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

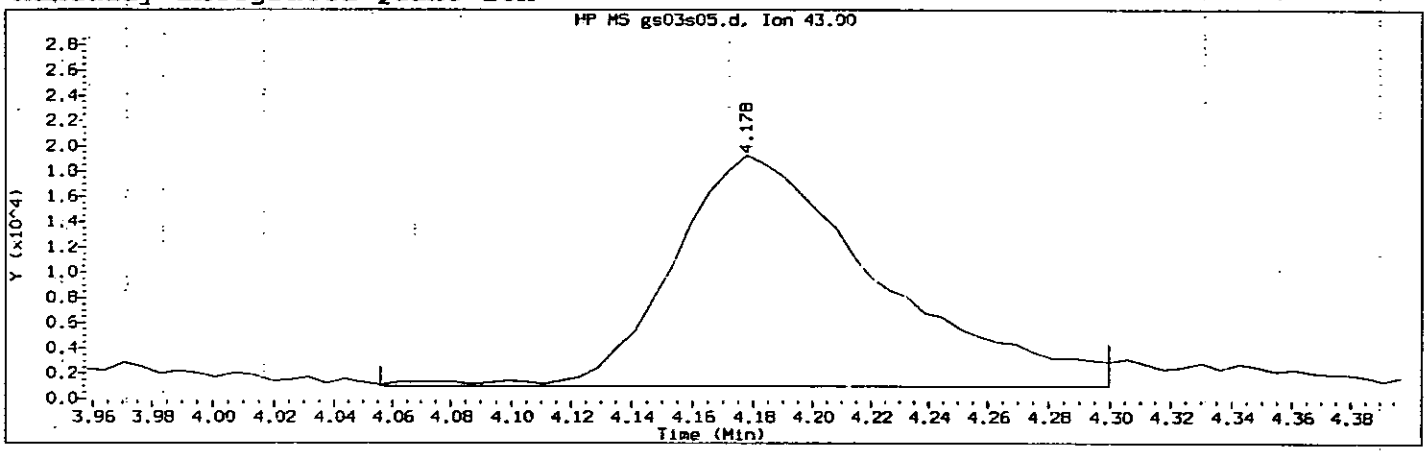
RAD36 8321

Digitally signed by Jason M. Long
on 09/03/2010 at 07:46.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10sep03a.b/gs03s05.d Instrument ID: HP16334.i
Injection date and time: 03-SEP-2010 06:43 Analyst ID: SAS00403

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 03-SEP-2010 02:31
Date, time and analyst ID of latest file update: 03-Sep-2010 07:41 jml01693

Sample Name: XXXXXMS Lab Sample ID: 6075230MS

Compound Number	: 33		
Compound Name	: Methyl Acetate		
Scan Number	: 425		
Retention Time (minutes)	: 4.178		
Quant Ion	: 43.00		
Area (flag)	: 88196M		
On-Column Amount (ng)	: 6.4385		
Integration start scan	: 404	Integration stop scan:	444
Y at integration start	: 988	Y at integration end:	988

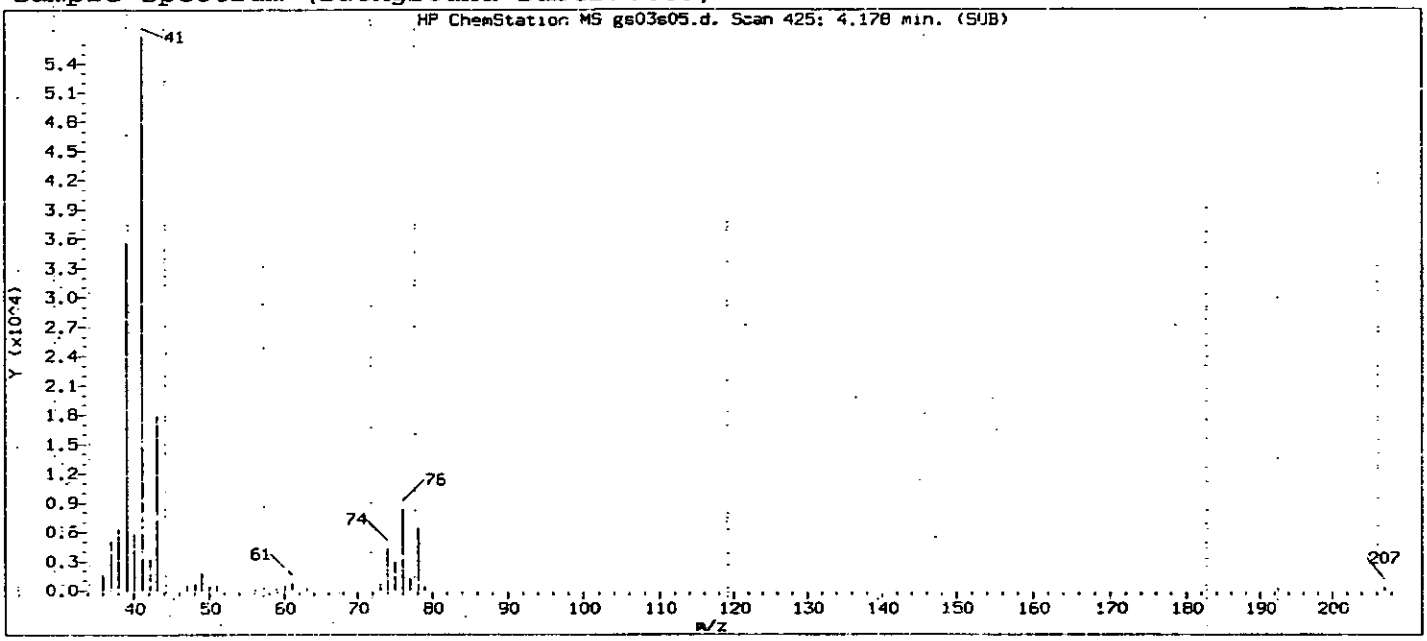
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long
on 09/03/2010 at 07:46.
Target 3.5 esignature user ID: jml01693

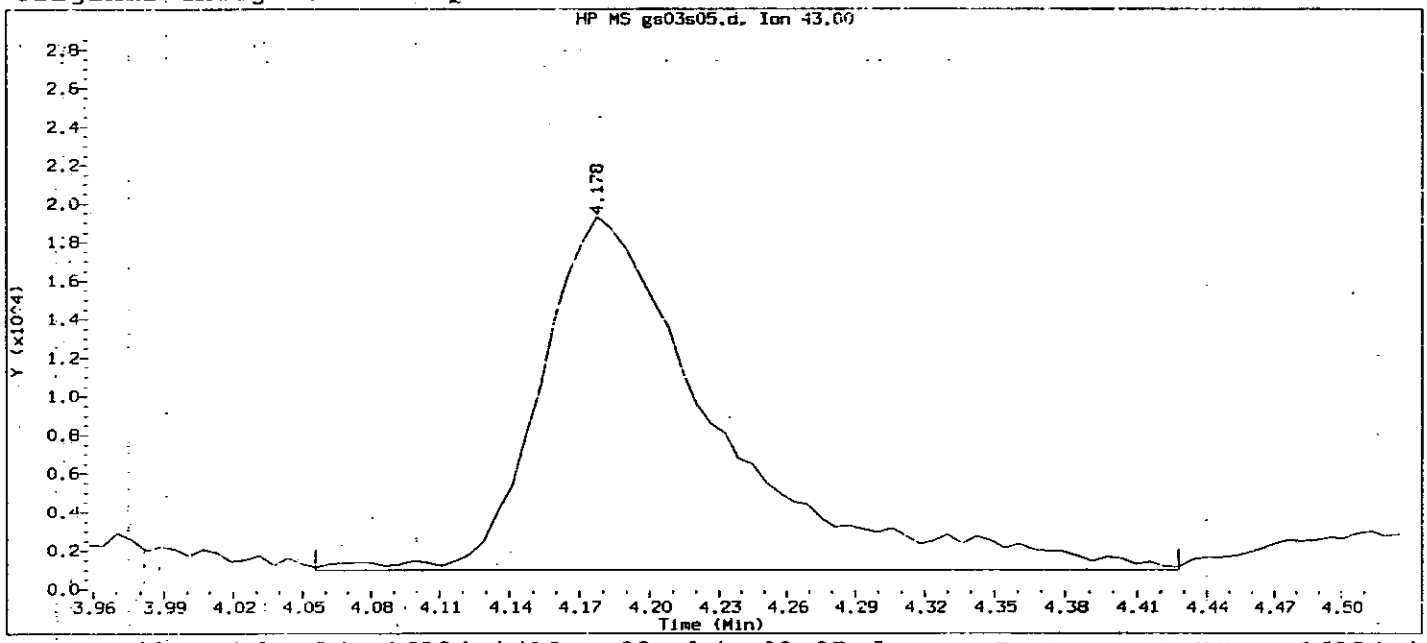
RAD36 0322

GC/MS audit/management approval: _____ 9/10/10

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10sep03a.b/gs03s05.d Instrument ID: HP16334.i
Injection date and time: 03-SEP-2010 06:43 Analyst ID: SAS00403

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 03-SEP-2010 02:31
Date, time and analyst ID of latest file update: 03-Sep-2010 07:39 jml01693

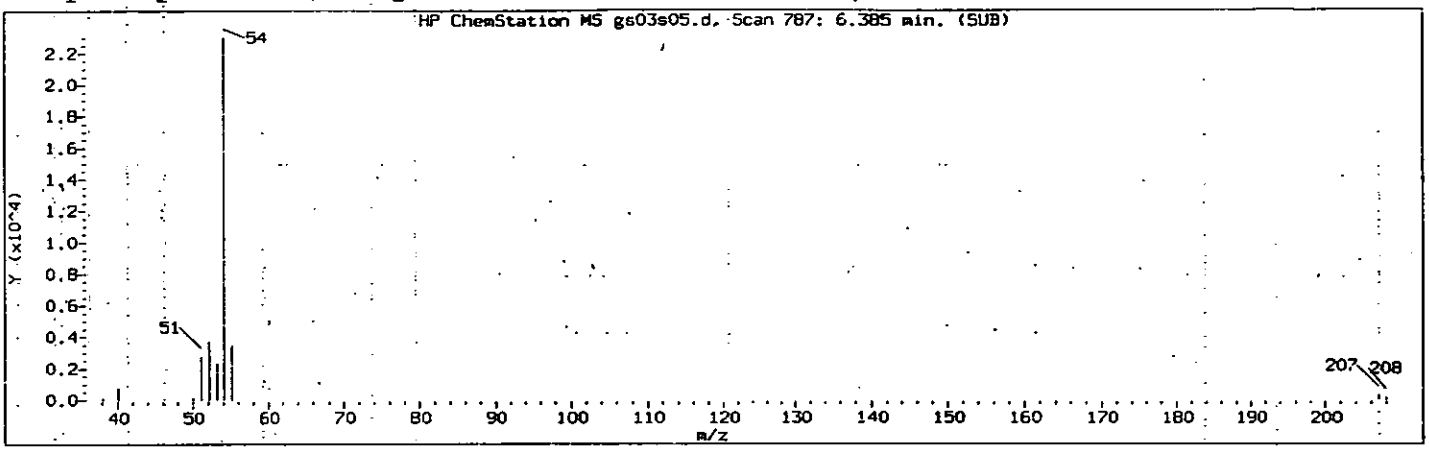
Sample Name: XXXXXMS Lab Sample ID: 6075230MS

Compound Number	: 33		
Compound Name	: Methyl Acetate		
Scan Number	: 425		
Retention Time (minutes)	: 4.178		
Quant Ion	: 43.00		
Area	: 96313		
On-column Amount (ng)	: 6.9844		
Integration start scan	: 404	Integration stop scan:	465
Y at integration start	: 988	Y at integration end:	988

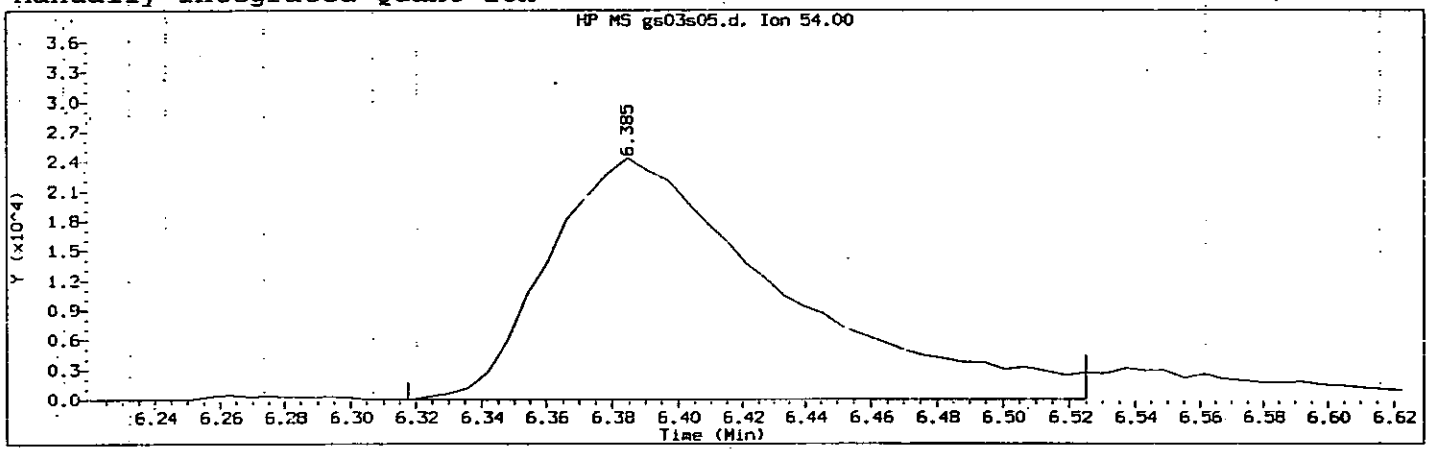
RAD36 8323

Digitally signed by Jason M. Long on 09/03/2010 at 07:46.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10sep03a.b/gs03s05.d Instrument ID: HP16334.i
Injection date and time: 03-SEP-2010 06:43 Analyst ID: SAS00403

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 03-SEP-2010 02:31
Date, time and analyst ID of latest file update: 03-Sep-2010 07:41 jml01693

Sample Name: XXXXXMS Lab Sample ID: 6075230MS

Compound Number	: 53		
Compound Name	: Propionitrile		
Scan Number	: 787		
Retention Time (minutes)	: 6.385		
Quant Ion	: 54.00		
Area (flag)	: 120396M		
On-Column Amount (ng)	: 45.9469		
Integration start scan	: 775	Integration stop scan:	809
Y at integration start	: 0	Y at integration end:	0

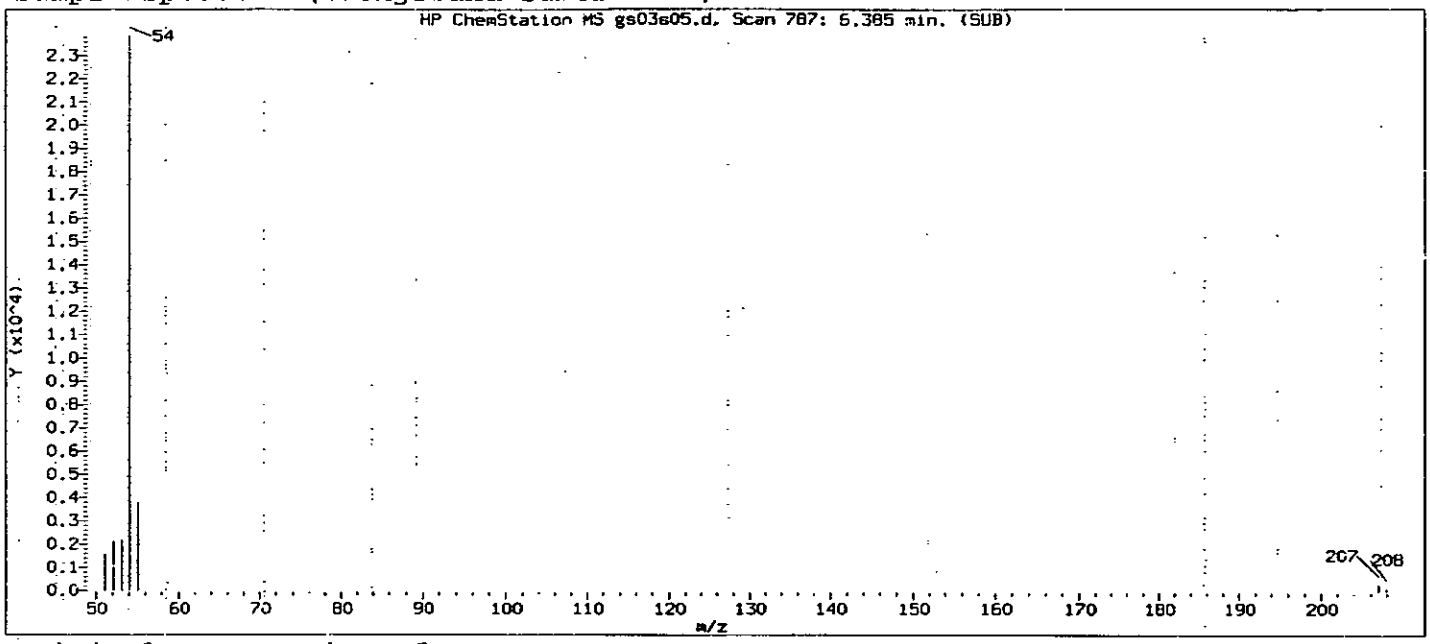
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long
on 09/03/2010 at 07:46.
Target 3.5 esignature user ID: jml01693

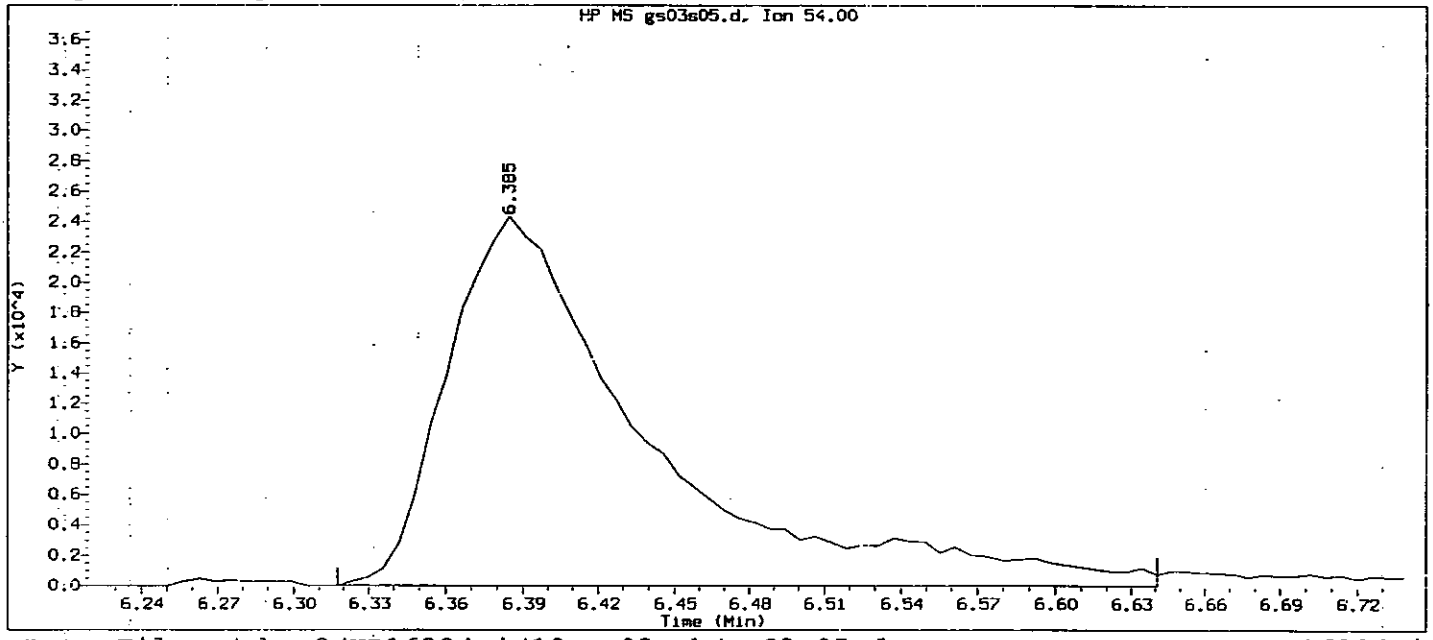
RAD36 0324

GC/MS audit/management approval: _____ 9/10/10

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10sep03a.b/gs03s05.d Instrument ID: HP16334.i
Injection date and time: 03-SEP-2010 06:43 Analyst ID: SAS00403

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 03-SEP-2010 02:31
Date, time and analyst ID of latest file update: 03-Sep-2010 07:39 jml01693

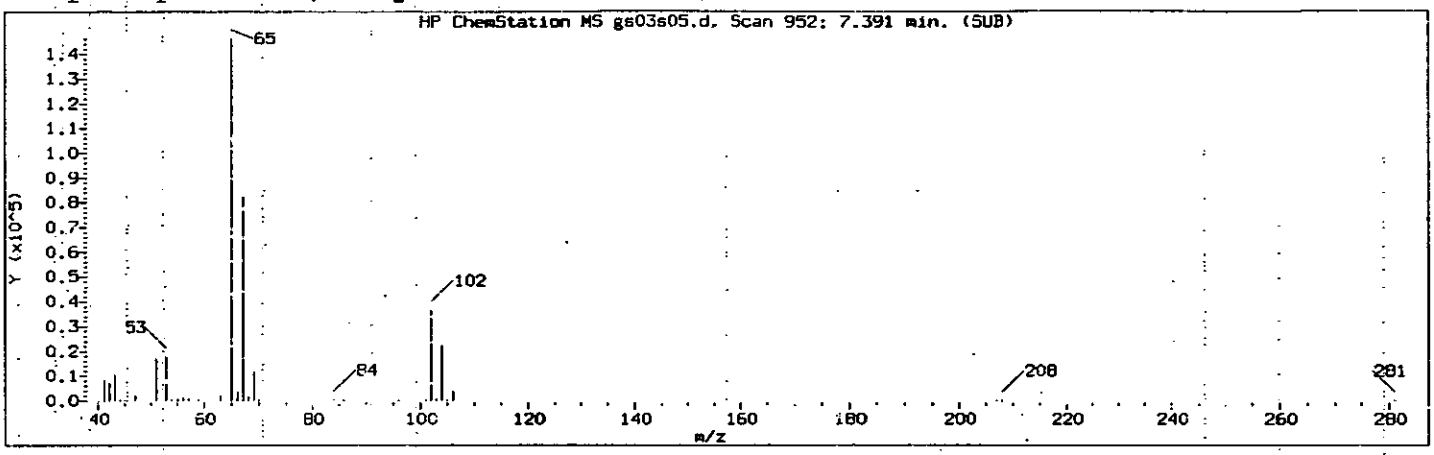
Sample Name: XXXXXMS Lab Sample ID: 6075230MS

Compound Number	: 53		
Compound Name	: Propionitrile		
Scan Number	: 787		
Retention Time (minutes)	: 6.385		
Quant Ion	: 54.00		
Area	: 132924		
On-column Amount (ng)	: 50.2626		
Integration start scan	: 775	Integration stop scan:	828
Y at integration start	: 0	Y at integration end:	0

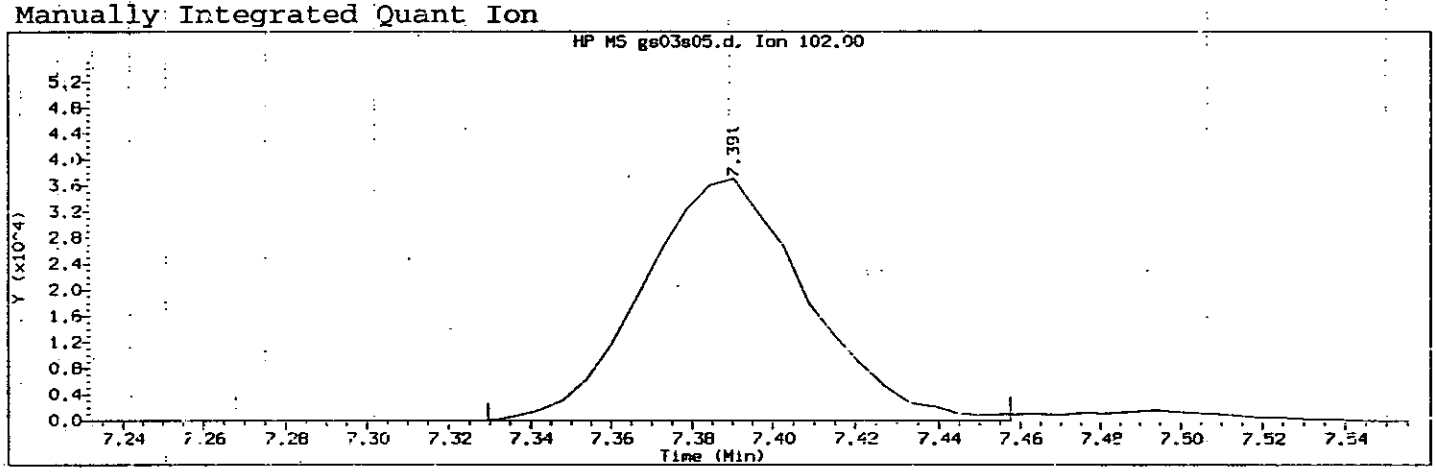
RAD36 0325

Digitally signed by Jason M. Long on 09/03/2010 at 07:46.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10sep03a.b/gs03s05.d Instrument ID: HP16334.i
Injection date and time: 03-SEP-2010 06:43 Analyst ID: SAS00403

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 03-SEP-2010 02:31
Date, time and analyst ID of latest file update: 03-Sep-2010 07:41 jm101693

Sample Name: XXXXXMS Lab Sample ID: 6075230MS

Compound Number	: 70		
Compound Name	: 1,2-Dichloroethane-d4		
Scan Number	: 952		
Retention Time (minutes)	: 7.391		
Quant Ion	: 102.00		
Area (flag)	: 104263M		
On-Column Amount (ng)	: 10.0569		
Integration start scan	: 941	Integration stop scan:	962
Y at integration start	: 0	Y at integration end:	0

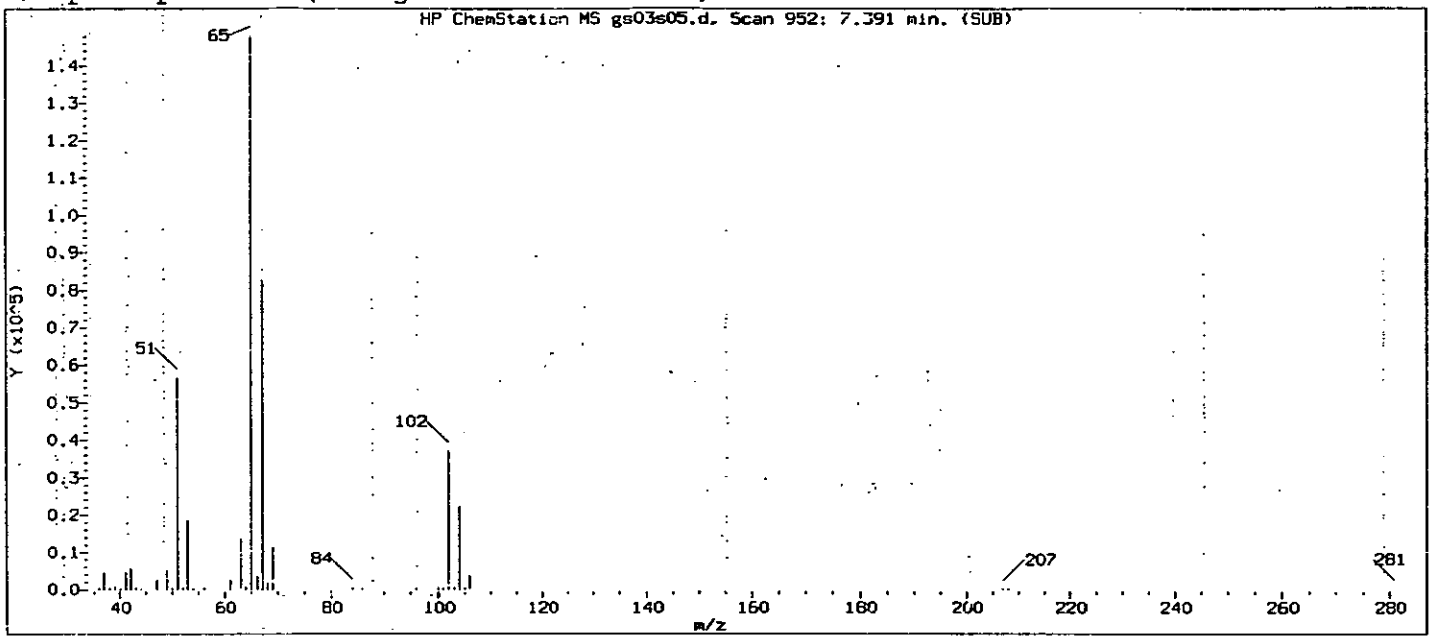
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long on 09/03/2010 at 07:46. Target 3.5 esignature user ID: jm101693

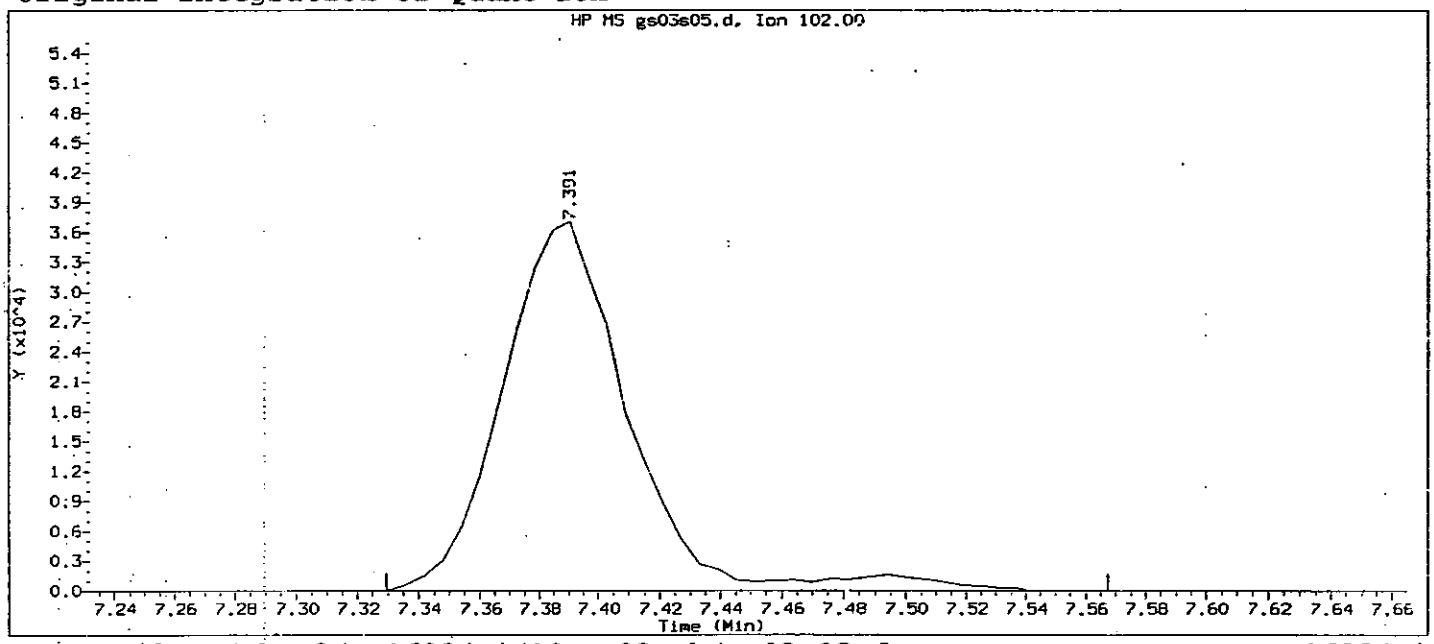
RAD36 8326

GC/MS audit/management approval: 9/10/10

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10sep03a.b/gs03s05.d Instrument ID: HP16334.i
Injection date and time: 03-SEP-2010 06:43 Analyst ID: SAS00403

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 03-SEP-2010 02:31
Date, time and analyst ID of latest file update: 03-Sep-2010 07:39 jml01693

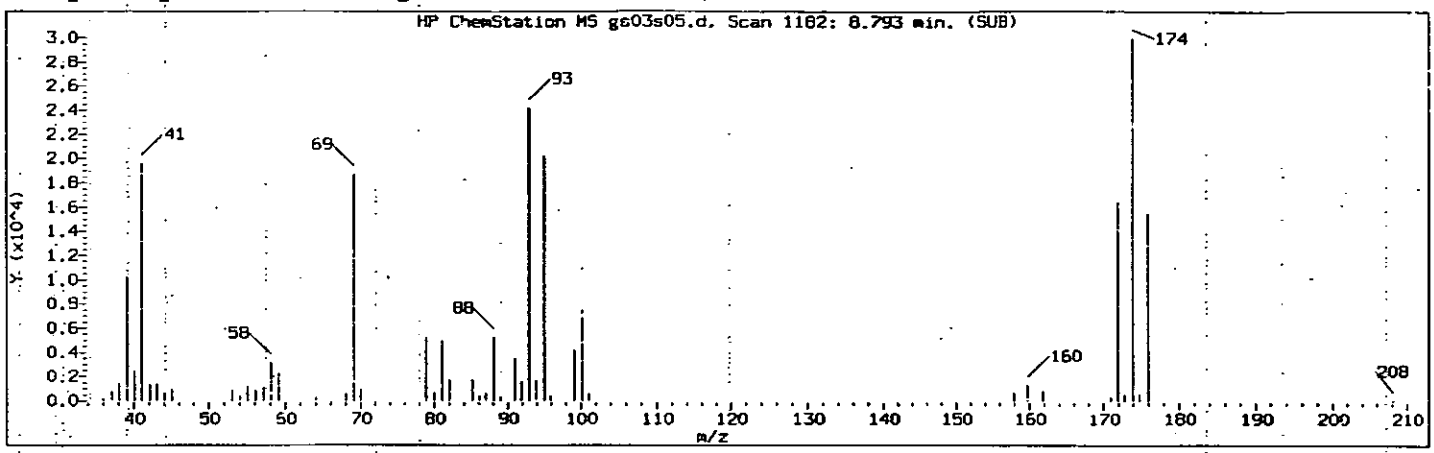
Sample Name: XXXXXMS Lab Sample ID: 6075230MS

Compound Number	: 70		
Compound Name	: 1,2-Dichloroethane-d4		
Scan Number	: 952		
Retention Time (minutes)	: 7.391		
Quant Ion	: 102.00		
Area	: 108835		
On-column Amount (ng)	: 10.4978		
Integration start scan	: 941	Integration stop scan:	980
Y at integration start	: 0	Y at integration end:	0

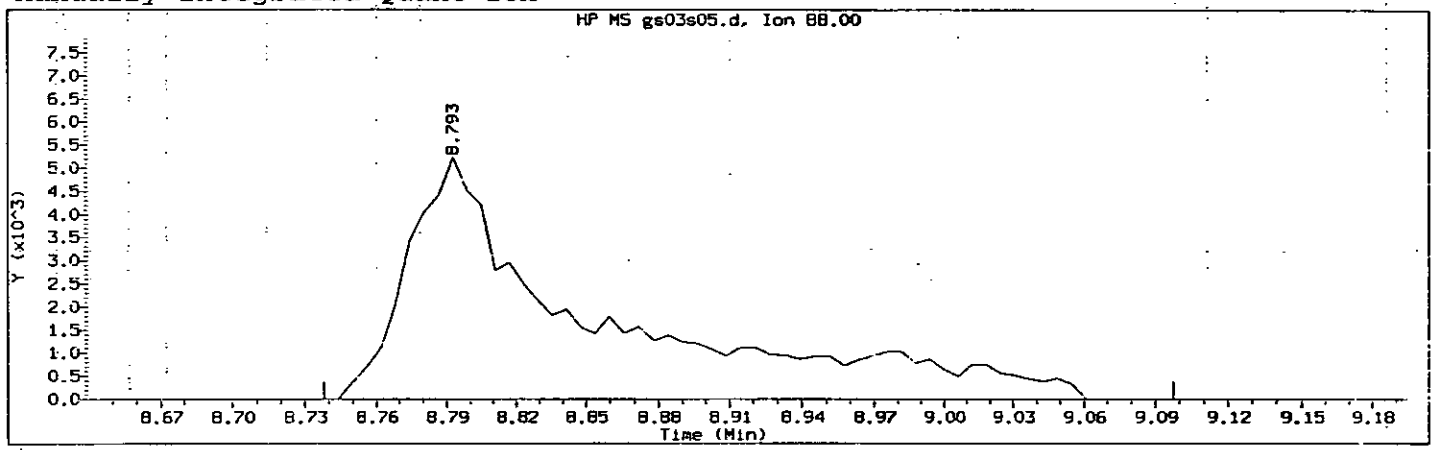
RAD36 0327

Digitally signed by Jason M. Long on 09/03/2010 at 07:46.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10sep03a.b/gs03s05.d Instrument ID: HP16334.i
Injection date and time: 03-SEP-2010 06:43 Analyst ID: SAS00403

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 03-SEP-2010 02:31
Date, time and analyst ID of latest file update: 03-Sep-2010 07:41 jml01693

Sample Name: XXXXXMS Lab Sample ID: 6075230MS

Compound Number : 89
Compound Name : 1,4-Dioxane
Scan Number : 1182
Retention Time (minutes): 8.793
Quant Ion : 88.00
Area (flag) : 28410M
On-Column Amount (ng) : 161.0294
Integration start scan : 1172 Integration stop scan: 1231
Y at integration start : 0 Y at integration end: 0

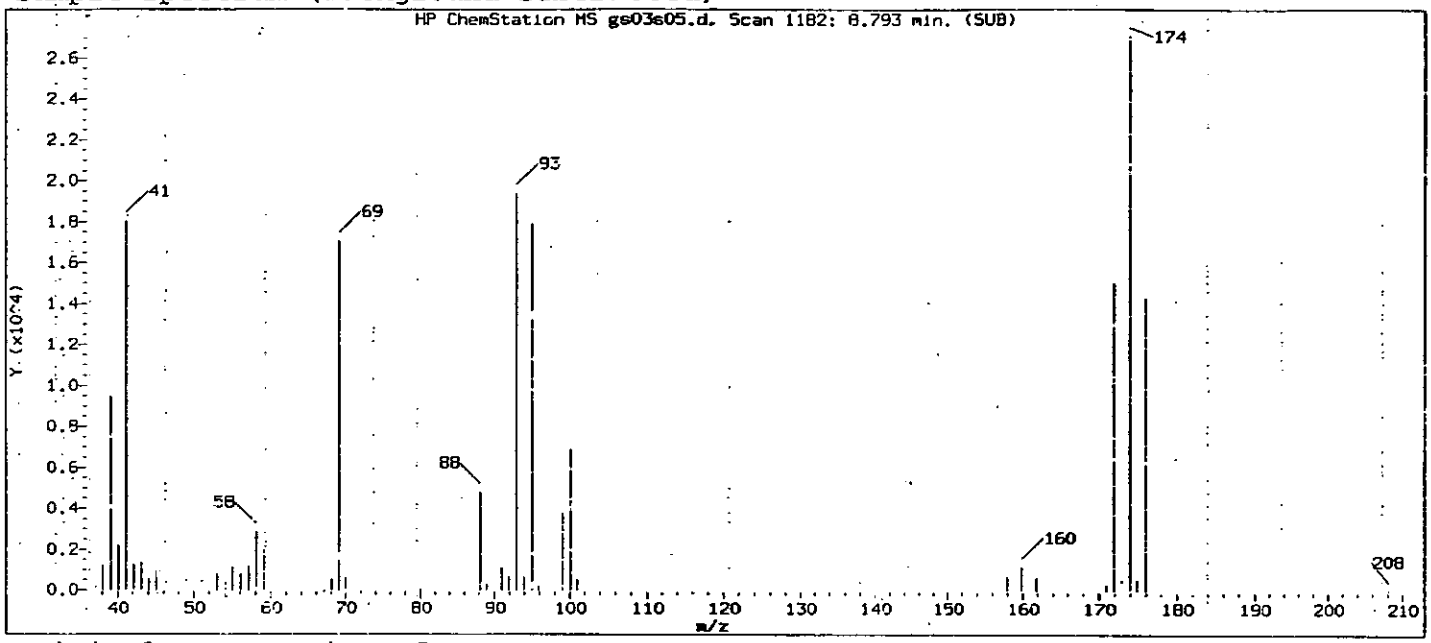
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long on 09/03/2010 at 07:46. Target 3.5 esignature user ID: jml01693

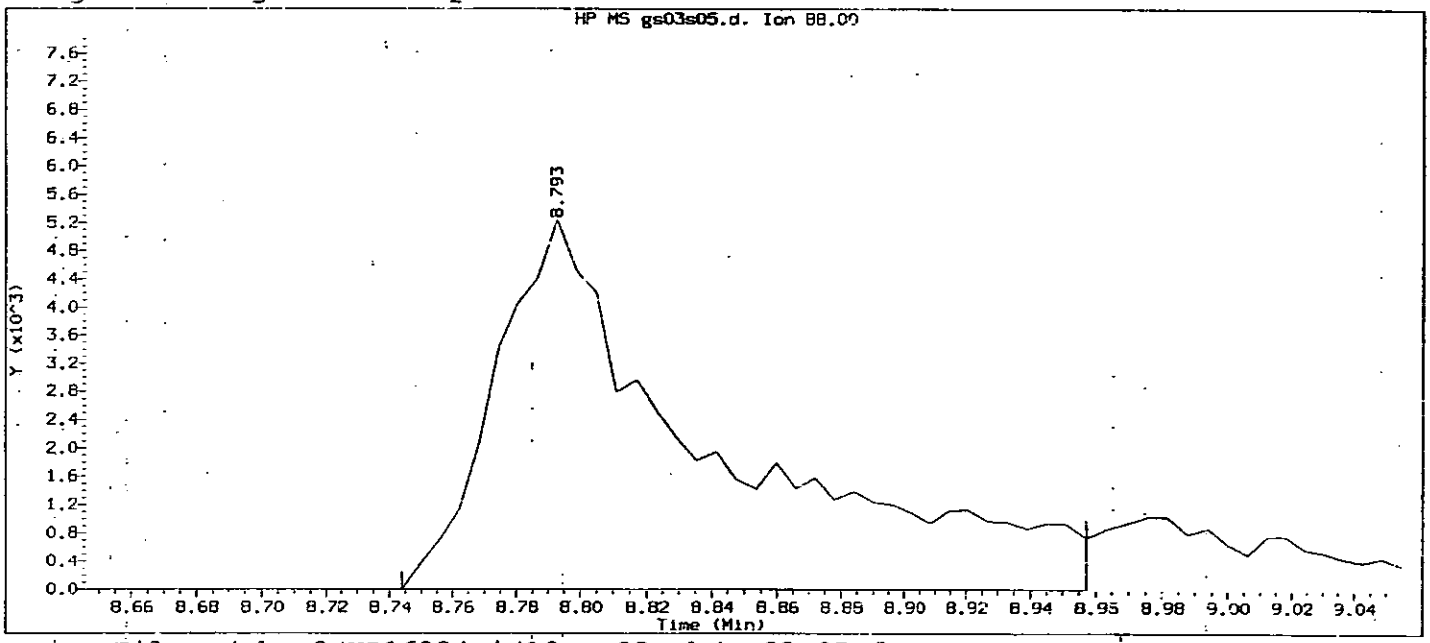
RAD36 8328

GC/MS audit/management approval: 9/10/10

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10sep03a.b/gs03s05.d Instrument ID: HP16334.i
Injection date and time: 03-SEP-2010 06:43 Analyst ID: SAS00403

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 03-SEP-2010 02:31
Date, time and analyst ID of latest file update: 03-Sep-2010 07:39 jml01693

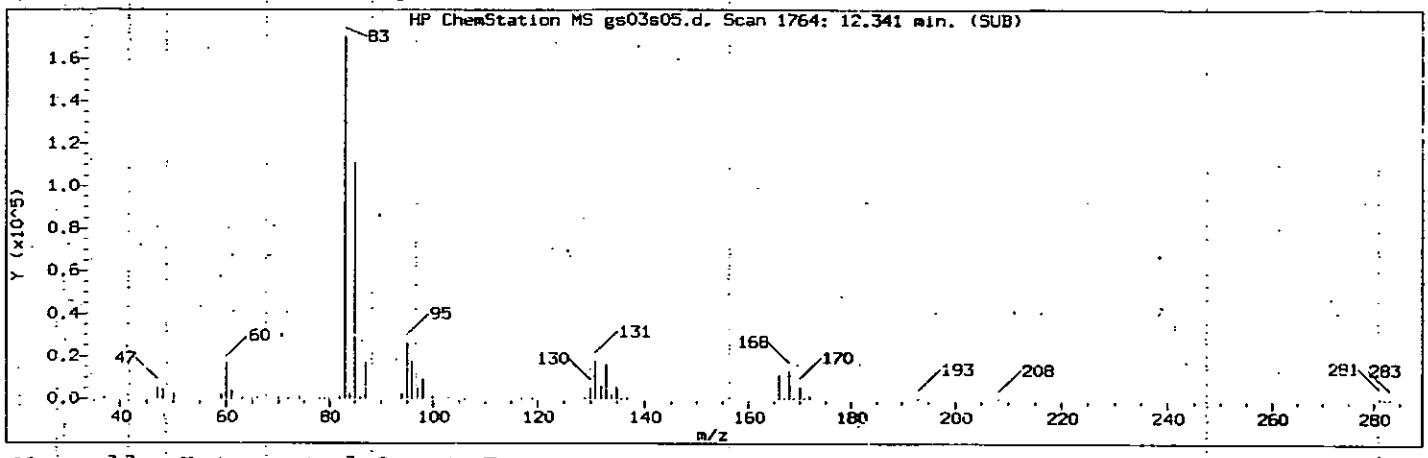
Sample Name: XXXXXMS Lab Sample ID: 6075230MS

Compound Number	: 89		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1182		
Retention Time (minutes)	: 8.793		
Quant Ion	: 88.00		
Area	: 24317		
On-column Amount (ng)	: 137.8318		
Integration start scan	: 1173	Integration stop scan:	1208
Y at integration start	: 0	Y at integration end:	0

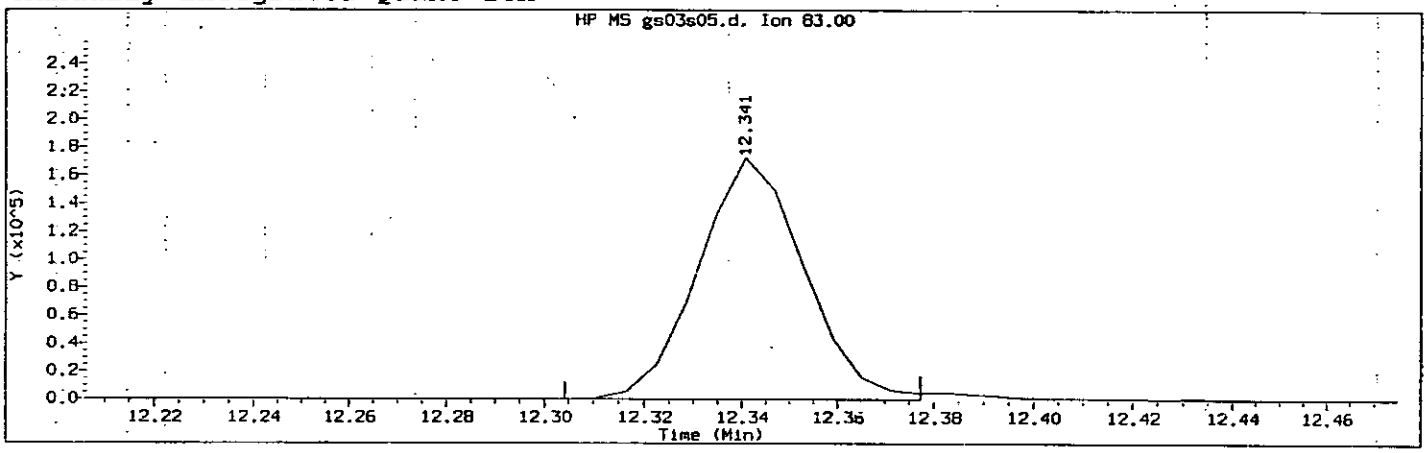
RAD36 0329

Digitally signed by Jason M. Long on 09/03/2010 at 07:46.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10sep03a.b/gs03s05.d Instrument ID: HP16334.i
Injection date and time: 03-SEP-2010 06:43 Analyst ID: SAS00403

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 03-SEP-2010 02:31
Date, time and analyst ID of latest file update: 03-Sep-2010 07:41 jml01693

Sample Name: XXXXXMS Lab Sample ID: 6075230MS

Compound Number : 128
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1764
Retention Time (minutes): 12.341
Quant Ion : 83.00
Area (flag) : 263101M
On-Column Amount (ng) : 5.6874
Integration start scan : 1757 Integration stop scan: 1769
Y at integration start : 0 Y at integration end: 0

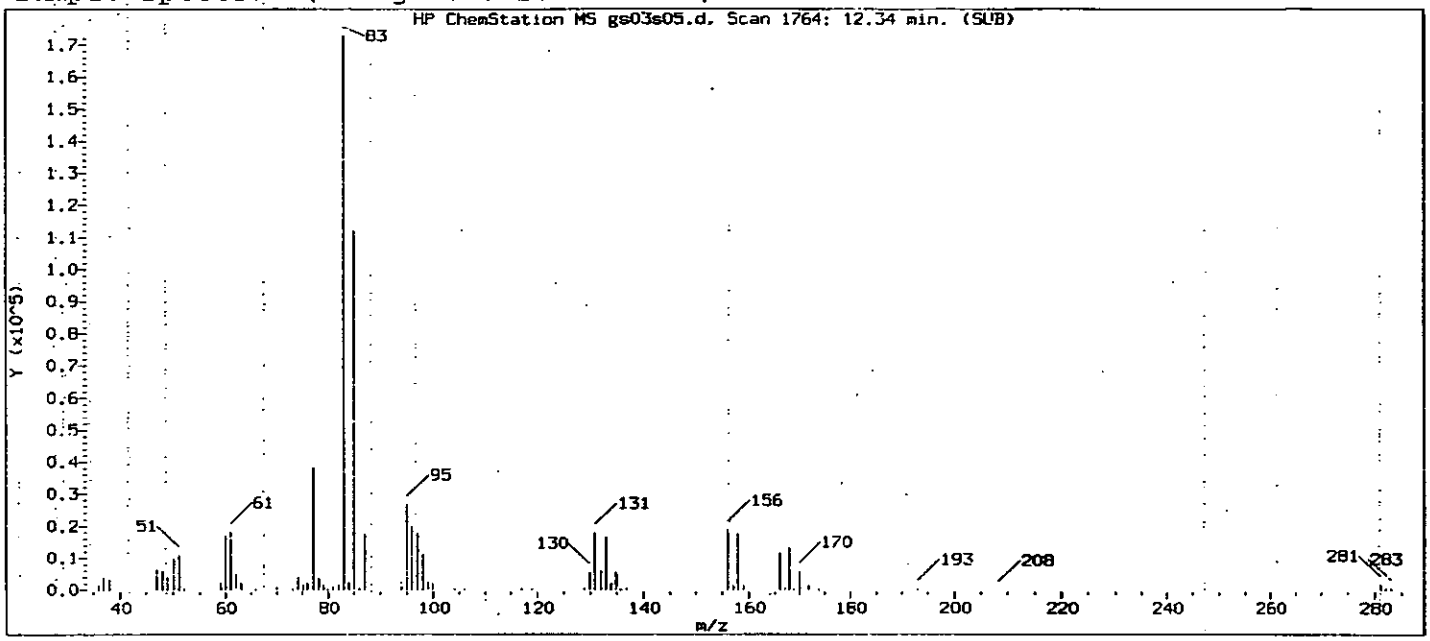
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long
on 09/03/2010 at 07:46.
Target 3.5 esignature user ID: jml01693

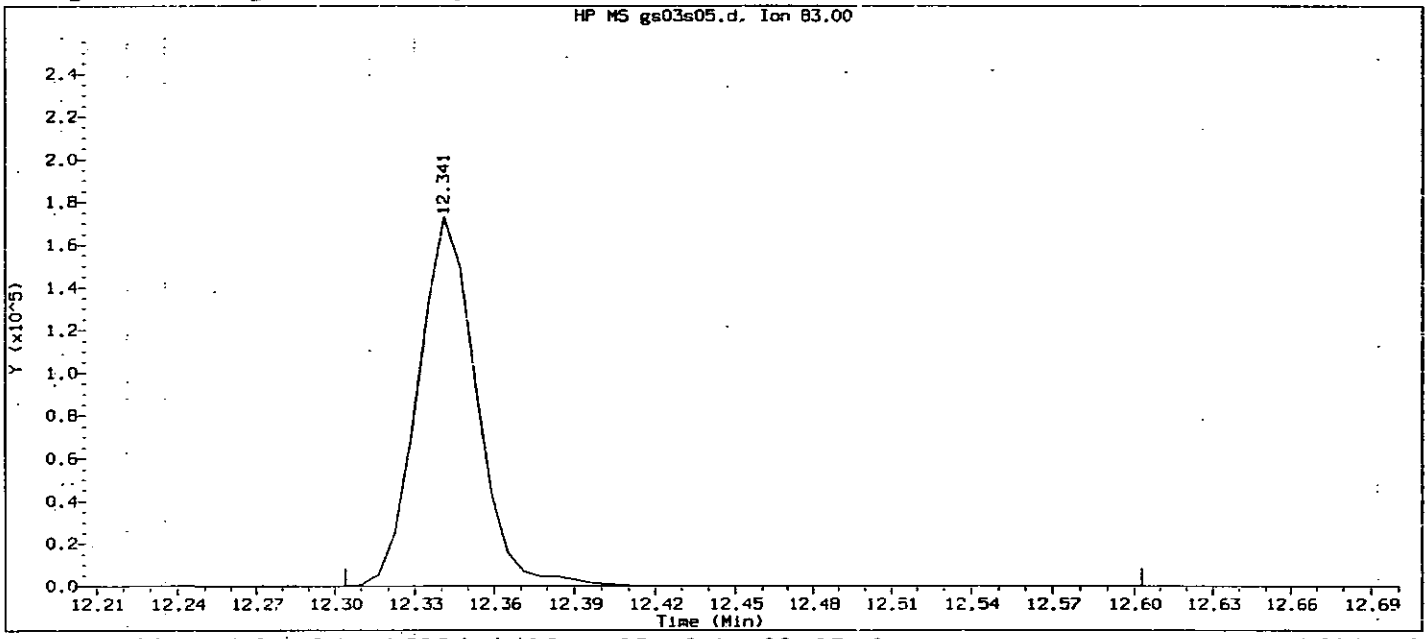
RAD36 B330

GC/MS audit/management approval: _____ 9/10/10

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10sep03a.b/gs03s05.d Instrument ID: HP16334.i
Injection date and time: 03-SEP-2010 06:43 Analyst ID: SAS00403

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 03-SEP-2010 02:31
Date, time and analyst ID of latest file update: 03-Sep-2010 07:39 jml01693

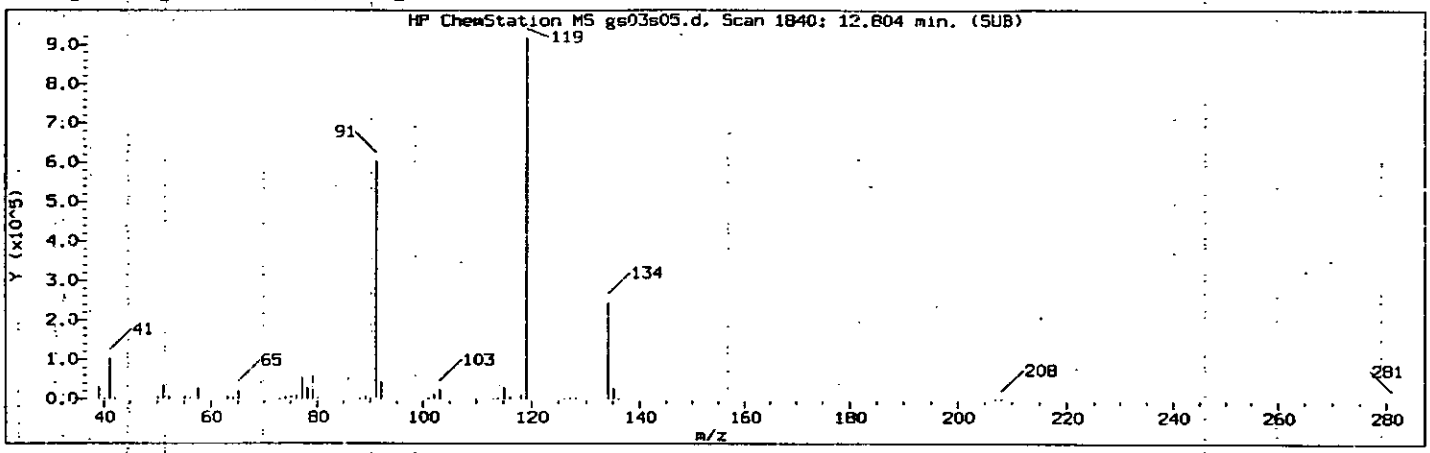
Sample Name: XXXXXMS Lab Sample ID: 6075230MS

Compound Number : 128
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1764
Retention Time (minutes): 12.341
Quant Ion : 83.00
Area : 267589
On-column Amount (ng) : 5.7844
Integration start scan : 1757 Integration stop scan: 1806
Y at integration start : 0 Y at integration end: 0

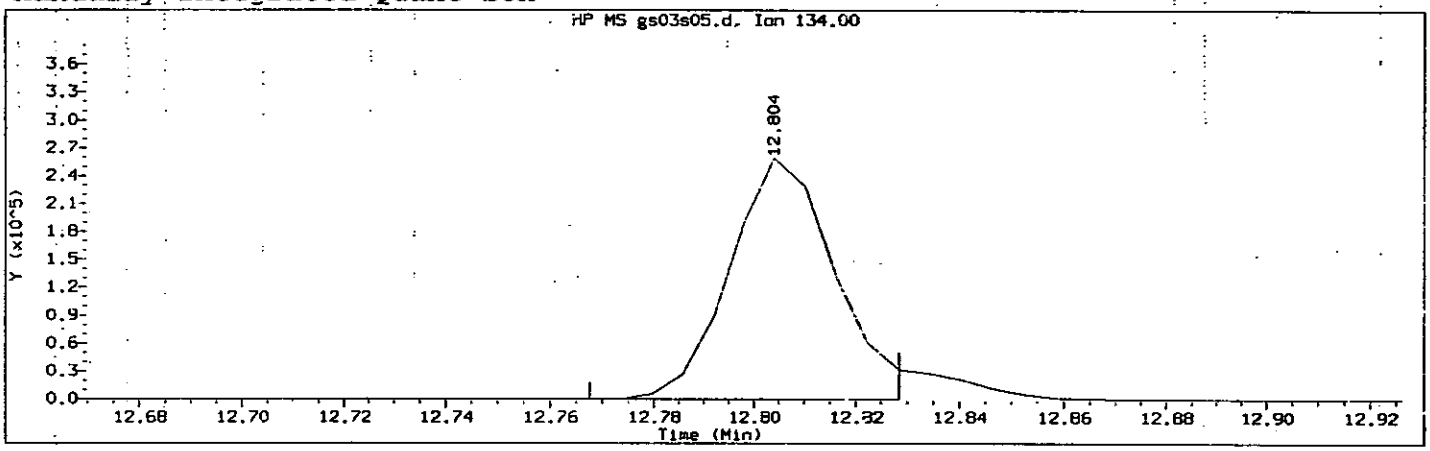
RAD36 0331

Digitally signed by Jason M. Long on 09/03/2010 at 07:46.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10sep03a.b/gs03s05.d Instrument ID: HP16334.i
Injection date and time: 03-SEP-2010 06:43 Analyst ID: SAS00403

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 03-SEP-2010 02:31
Date, time and analyst ID of latest file update: 03-Sep-2010 07:41 jml01693

Sample Name: XXXXXMS Lab Sample ID: 6075230MS

Compound Number	: 137		
Compound Name	: tert-Butylbenzene		
Scan Number	: 1840		
Retention Time (minutes)	: 12.804		
Quant Ion	: 134.00		
Area (flag)	: 374551M		
On-Column Amount (ng)	: 5.8004		
Integration start scan	: 1833	Integration stop scan:	1843
Y at integration start	: 0	Y at integration end:	0

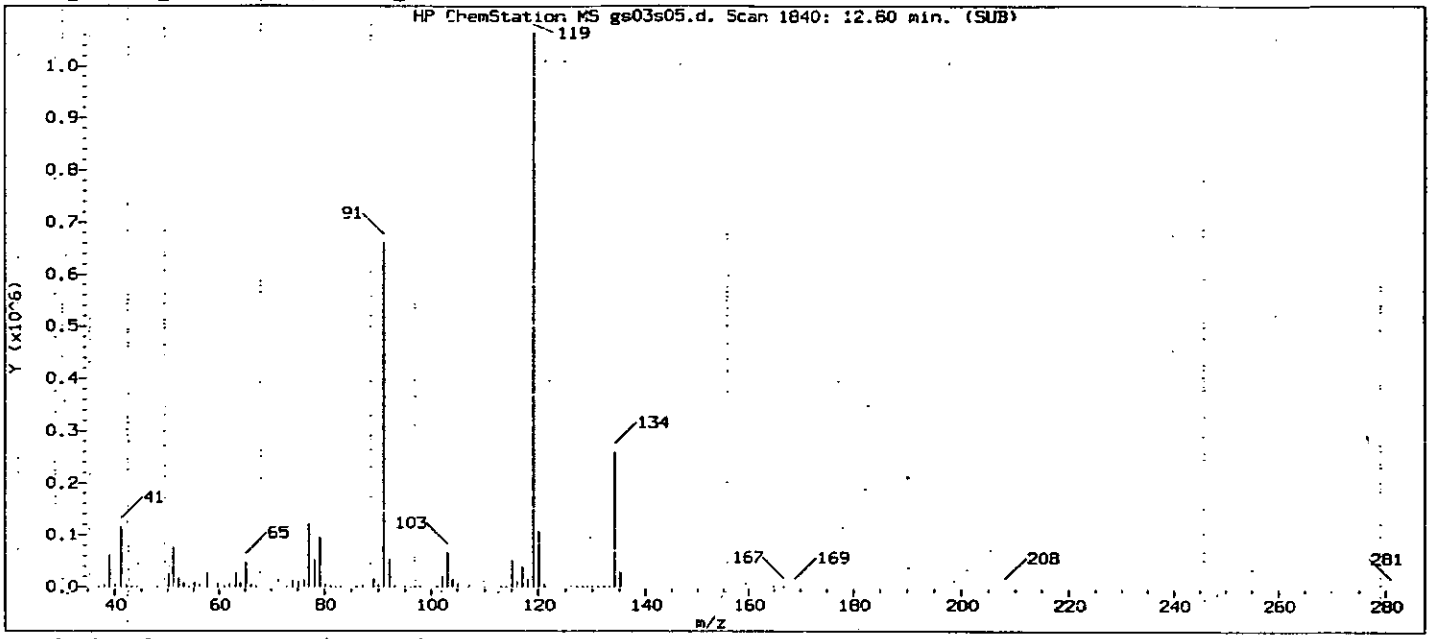
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long on 09/03/2010 at 07:46. Target 3.5 esignature user ID: jml01693

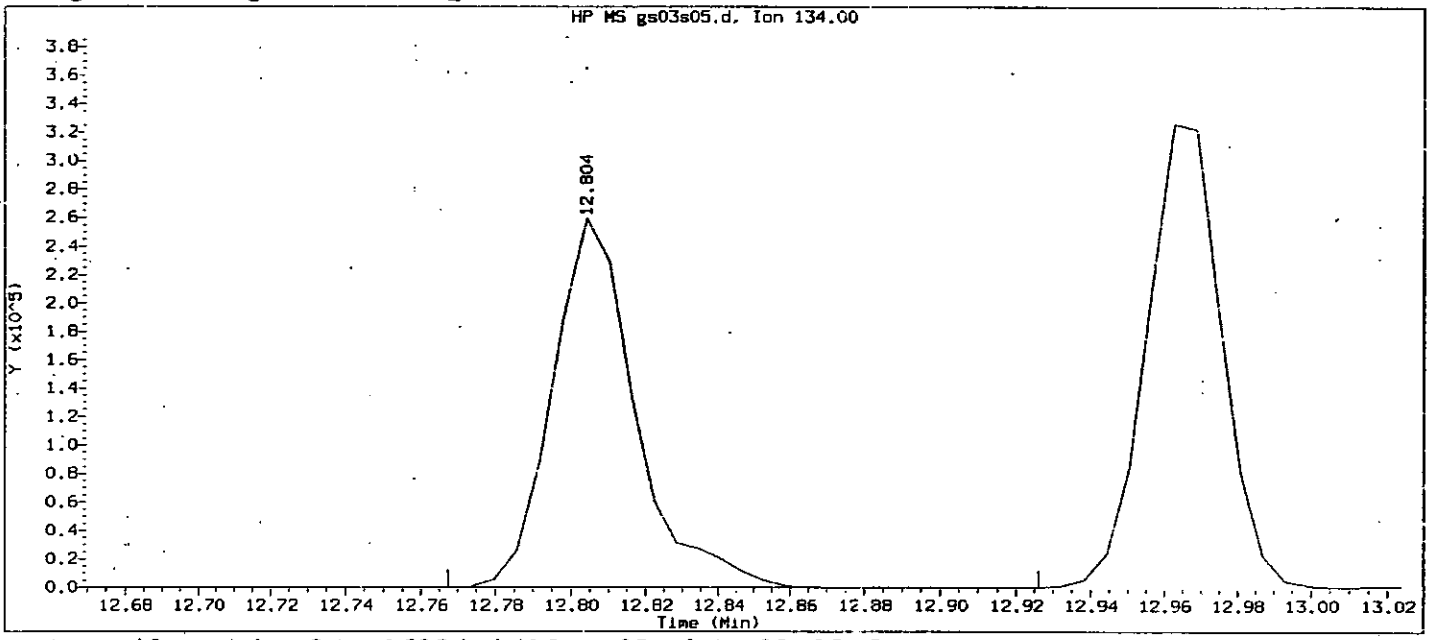
RAD36 0332

GC/MS audit/management approval: _____ 9/10/10

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10sep03a.b/gs03s05.d Instrument ID: HP16334.i
Injection date and time: 03-SEP-2010 06:43 Analyst ID: SAS00403

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 03-SEP-2010 02:31
Date, time and analyst ID of latest file update: 03-Sep-2010 07:39 jml01693

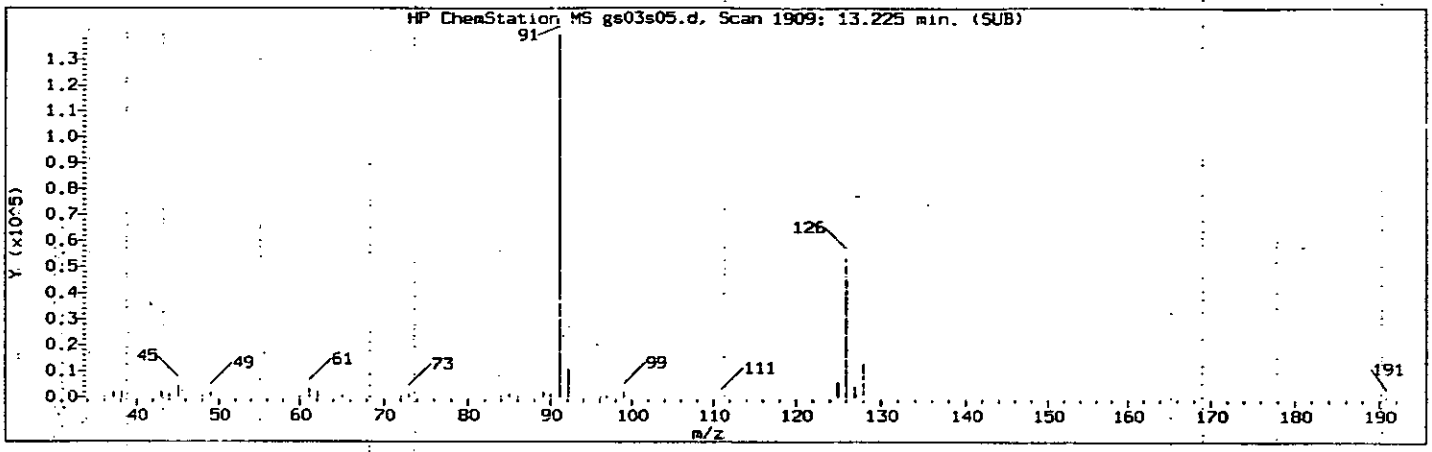
Sample Name: XXXXXMS Lab Sample ID: 6075230MS

Compound Number : 137
Compound Name : tert-Butylbenzene
Scan Number : 1840
Retention Time (minutes): 12.804
Quant Ion : 134.00
Area : 398608
On-column Amount (ng) : 6.1729
Integration start scan : 1833 Integration stop scan: 1859
Y at integration start : 0 Y at integration end: 0

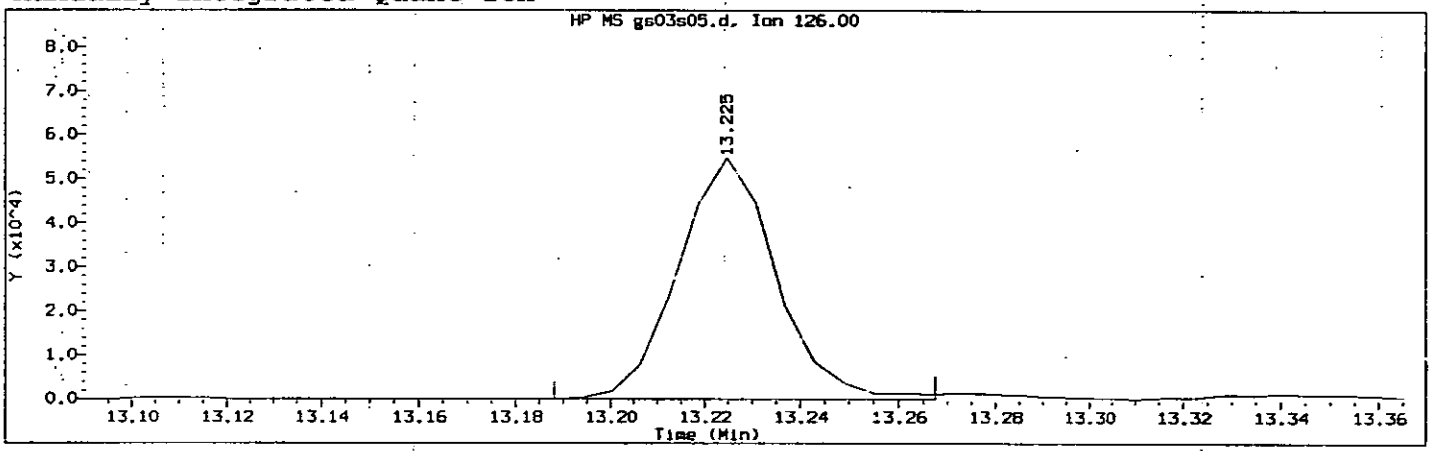
RAD36 0333

Digitally signed by Jason M. Long on 09/03/2010 at 07:46.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10sep03a.b/gs03s05.d Instrument ID: HP16334.i
Injection date and time: 03-SEP-2010 06:43 Analyst ID: SAS00403

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 03-SEP-2010 02:31
Date, time and analyst ID of latest file update: 03-Sep-2010 07:41 jm101693

Sample Name: XXXXXMS Lab Sample ID: 6075230MS

Compound Number	: 146		
Compound Name	: Benzyl Chloride		
Scan Number	: 1909		
Retention Time (minutes)	: 13.225		
Quant Ion	: 126.00		
Area (flag)	: 78553M		
On-Column Amount (ng)	: 4.4303		
Integration start scan	: 1902	Integration stop scan:	1915
Y at integration start	: 0	Y at integration end:	0

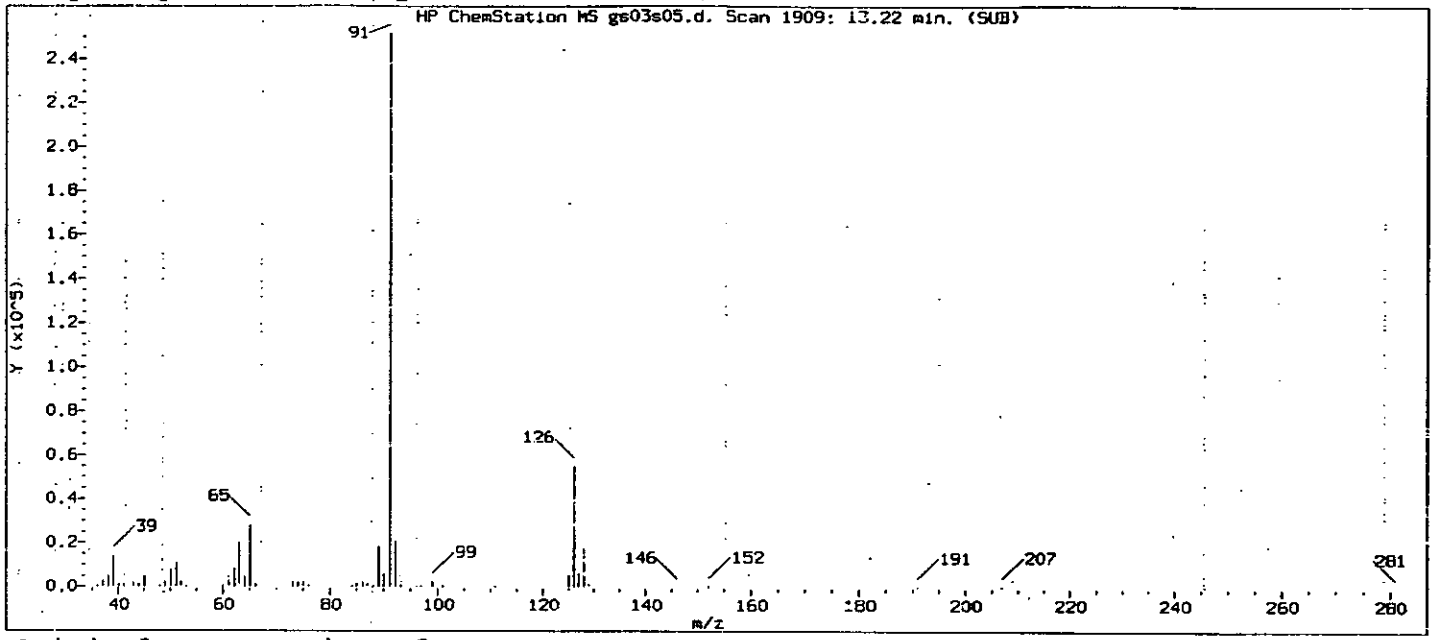
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long
on 09/03/2010 at 07:46.
Target 3.5 esignature user ID: jm101693

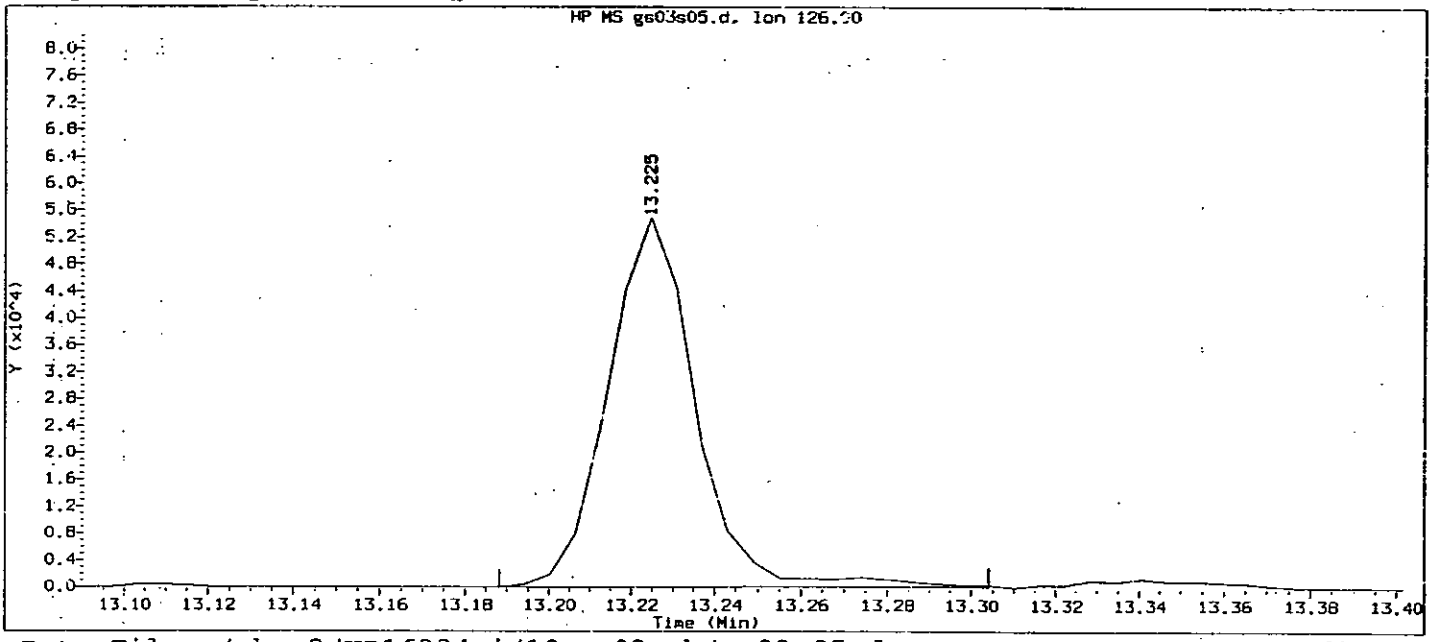
RAD36 8334

GC/MS audit/management approval: _____ 9/10/10

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10sep03a.b/gs03s05.d Instrument ID: HP16334.i
Injection date and time: 03-SEP-2010 06:43 Analyst ID: SAS00403

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 03-SEP-2010 02:31
Date, time and analyst ID of latest file update: 03-Sep-2010 07:39 jml01693

Sample Name: XXXXXMS Lab Sample ID: 6075230MS

Compound Number	: 146		
Compound Name	: Benzyl Chloride		
Scan Number	: 1909		
Retention Time (minutes)	: 13.225		
Quant Ion	: 126.00		
Area	: 79871		
On-column Amount (ng)	: 4.4989		
Integration start scan	: 1902	Integration stop scan:	1921
Y at integration start	: 0	Y at integration end:	107

RAD36 0335

Digitally signed by Jason M. Long on 09/03/2010 at 07:46.
Target 3.5 esignature user ID: jml01693

LCSG23

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

LCSG23

Data file: /chem2/HP16334.i/10sep03a.b/gs03101.d
Injection date and time: **03-SEP-2010 03:17**
Data file Sample Info. Line: LCSG23;LCSG23;1;3;LCS;;;
Instrument ID: **HP16334.i** Batch: **G102461AA**
Date, time and analyst ID of latest file update: 03-Sep-2010 06:55 jm101693

Blank Data file reference: **/chem2/HP16334.i/10sep03a.b/gs03b01.d**

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: **8260W25**
Calibration date and time (Last Method Edit): 03-SEP-2010 02:31
Mid Level Daily Calibration Standard Reference: **/chem2/HP16334.i/10sep03a.b/gs03c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
36) t-Butyl Alcohol-d10	4.355	(0.012)	454	65	103389	(-3)	50.00	
77) Fluorobenzene	7.830	(-0.006)	1024	96	2468049	(-2)	10.00	
110) Chlorobenzene-d5	11.256	(-0.006)	1586	117	1816074	(-3)	10.00	
143) 1,4-Dichlorobenzene-d4	13.109	(0.000)	1890	152	1048718	(-3)	10.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
61) Dibromofluoromethane	(1)	6.915	(0.000)	113	551692	9.717	97%		77 - 114
70) 1,2-Dichloroethane-d4	(1)	7.378	(0.000)	102	105997	10.010	100%		74 - 113
97) Toluene-d8	(2)	9.823	(0.000)	98	2388076	9.738	97%		77 - 110
126) 4-Bromofluorobenzene	(2)	12.237	(0.000)	95	797118	9.616	96%		78 - 110

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
2) Dichlorodifluoromethane	(1)	1.983	(0.000)	85	319928	2.925	2.93			0.1
5) Chloromethane	(1)	2.160	(0.001)	50	387686	3.694	3.69			0.2
6) Vinyl Chloride	(1)	2.294	(0.001)	62	379230	3.732	3.73			0.1
9) 1,3-Butadiene	(1)	2.300	(0.000)	39	581138	3.529	3.53			0.1
10) Bromomethane	(1)	2.636	(0.001)	94	302042	3.895	3.90			0.1
11) Chloroethane	(1)	2.727	(0.001)	64	222327	3.727	3.73			0.1
13) Dichlorofluoromethane	(1)	2.965	(0.001)	67	587454	4.143	4.14			0.2
15) Trichlorofluoromethane	(1)	3.056	(0.000)	101	448983	3.630	3.63			0.1
17) Ethyl Ether	(1)	3.324	(0.000)	59	170183	4.081	4.08			0.1
18) Freon 123a	(1)	3.361	(0.001)	67	352144	4.758	4.76			0.2
23) Acrolein	(4)	3.520	(-0.005)	56	146533	33.860	33.86			5
24) 1,1-Dichloroethene	(1)	3.648	(0.000)	96	293697	4.854	4.85			0.1
25) Freon 113	(1)	3.660	(0.001)	101	302787	4.825	4.82			0.2
26) Acetone	(4)	3.708	(-0.003)	58	84950	41.573	41.57			3
27) Methyl Iodide	(1)	3.861	(0.000)	142	530028	4.794	4.79			0.1
29) Carbon Disulfide	(1)	3.964	(0.000)	76	882306	5.355	5.36			0.4
32) Allyl Chloride	(1)	4.135	(0.000)	41	302775	4.764	4.76			0.1
33) Methyl Acetate	(1)	4.166	(-0.000)	43	82332M	5.926	5.93			0.3
34) Methylene Chloride	(1)	4.318	(0.000)	84	333788	4.670	4.67	0.288	B	0.2
38) t-Butyl Alcohol	(4)	4.495	(-0.007)	59	113973	43.703	43.70			4
39) Acrylonitrile	(4)	4.720	(-0.004)	53	221347	27.392	27.39			1
41) trans-1,2-Dichloroethene	(1)	4.739	(0.000)	96	333789	4.899	4.90			0.1
37) 1,2-Dichloroethene (Total)	(1)			96	687992	9.771	9.77			0.1
40) Methyl Tertiary Butyl Ether	(1)	4.739	(0.000)	73	630130	4.680	4.68			0.1
44) n-Hexane	(1)	5.147	(0.000)	57	403921	4.429	4.43			0.1
45) 1,1-Dichloroethane	(1)	5.385	(-0.000)	63	558140	4.988	4.99			0.1
47) di-Isopropyl Ether	(1)	5.476	(-0.000)	45	908109	4.748	4.75			0.1
48) 2-Chloro-1,3-Butadiene	(1)	5.519	(-0.000)	53	409620	5.147	5.15			0.1
49) Ethyl t-Butyl Ether	(1)	6.013	(0.000)	59	794790	4.606	4.61			0.1
51) 2,2-Dichloropropane	(1)	6.244	(0.000)	77	428317	4.711	4.71			0.1
50) cis-1,2-Dichloroethene	(1)	6.238	(-0.000)	96	354203	4.872	4.87			0.1
52) 2-Butanone	(4)	6.269	(-0.006)	43	438335	41.625	41.62			1
53) Propionitrile	(4)	6.379	(-0.009)	54	110305M	40.924	40.92			1
55) Methacrylonitrile	(4)	6.574	(-0.006)	67	483825	41.179	41.18			1

RAD336 0336

M = Compound was manually integrated. B = Compound detected in referenced method blank.

Digitally signed by Jason M. Long on 09/03/2010 at 06:57. Target 3.5 esignature,user ID: jm101693

LCSG23 Lancaster Laboratories Analysis Summary for GC/MS Volatiles LCSG23

Data file: /chem2/HP16334.i/10sep03a.b/gs03101.d Injection date and time: **03-SEP-2010 03:17**
Data file Sample Info. Line: LCSG23;LCSG23;1;3;LCS;;; Instrument ID: **HP16334.i** Batch: **G102461AA**
Date, time and analyst ID of latest file update: 03-Sep-2010 06:55 jm101693

Blank Data file reference: **/chem2/HP16334.i/10sep03a.b/gs03b01.d**

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: **8260W25**
Calibration date and time (Last Method Edit): 03-SEP-2010 02:31
Mid Level Daily Calibration Standard Reference: **/chem2/HP16334.i/10sep03a.b/gs03c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
56) Bromochloromethane	(1)	6.580(-0.000)	128	145852	5.030	5.03			0.1
57) Tetrahydrofuran	(4)	6.635(-0.005)	71	91583	26.689	26.69			2
58) Chloroform	(1)	6.696(-0.000)	83	564569	4.939	4.94			0.1
63) 1,1,1-Trichloroethane	(1)	6.946(-0.000)	97	499165	4.925	4.92			0.1
64) Cyclohexane	(1)	7.019(-0.000)	56	519870	4.740	4.74			0.1
65) 1,1-Dichloropropene	(1)	7.171(-0.000)	75	420262	4.705	4.71			0.1
66) Carbon Tetrachloride	(1)	7.171(-0.000)	117	365098	4.206	4.21			0.1
67) Isobutyl Alcohol	(4)	7.348(-0.007)	41	99585	125.041	125.04			10
72) Benzene	(1)	7.452(-0.000)	78	1286586	4.893	4.89			0.1
74) 1,2-Dichloroethane	(1)	7.482(-0.000)	62	303893	4.863	4.86			0.1
75) t-Amyl Methyl Ether	(1)	7.598(-0.000)	73	702800	4.701	4.70			0.1
76) n-Heptane	(1)	7.805(-0.000)	43	427177M	4.540	4.54			0.2
81) n-Butanol	(4)	8.238(-0.008)	56	159111	255.031	255.03			20
83) Trichloroethene	(1)	8.311(0.000)	95	392920	5.434	5.43			0.1
84) Methylcyclohexane	(1)	8.555(0.000)	83	568127	5.001	5.00			0.1
85) 1,2-Dichloropropane	(1)	8.610(0.000)	63	326783	5.024	5.02			0.1
88) Dibromomethane	(1)	8.762(0.000)	93	147535	5.100	5.10			0.1
89) 1,4-Dioxane	(4)	8.781(-0.005)	88	29205	158.839	158.84			20
87) Methyl Methacrylate	(4)	8.768(-0.008)	69	116292	4.949	4.95			0.1
90) Bromodichloromethane	(1)	8.970(0.000)	83	343282	4.634	4.63			0.1
91) 2-Nitropropane	(4)	9.274(-0.008)	41	24093M	3.904	3.90			1
94) cis-1,3-Dichloropropene	(1)	9.524(0.000)	75	317973	4.111	4.11			0.1
96) 4-Methyl-2-Pentanone	(1)	9.701(0.000)	43	756397	24.575	24.58			1
101) Toluene	(2)	9.896(0.000)	92	838513	4.738	4.74			0.1
102) trans-1,3-Dichloropropene	(2)	10.140(-0.000)	75	249553	4.003	4.00			0.1
103) Ethyl Methacrylate	(2)	10.226(0.000)	69	233923	5.438	5.44			0.1
104) 1,1,2-Trichloroethane	(2)	10.329(-0.000)	97	212928	5.126	5.13			0.1
105) Tetrachloroethene	(2)	10.469(-0.000)	166	396001	4.938	4.94			0.1
106) 1,3-Dichloropropane	(2)	10.500(-0.000)	76	349515	4.975	4.97			0.1
107) 2-Hexanone	(2)	10.573(-0.000)	43	530087	25.798	25.80			1
108) Dibromochloromethane	(2)	10.719(0.000)	129	200472	4.192	4.19			0.1
109) 1,2-Dibromoethane	(2)	10.835(-0.000)	107	188215	5.020	5.02			0.1
112) Chlorobenzene	(2)	11.280(0.000)	112	981660	4.939	4.94			0.1
113) 1,1,1,2-Tetrachloroethane	(2)	11.347(0.000)	131	302443	4.725	4.73			0.1
114) Ethylbenzene	(2)	11.366(0.000)	91	1631386	4.826	4.83			0.1
117) m+p-Xylene	(2)	11.469(0.000)	106	1295845	9.580	9.58			0.1
115) Xylene (Total)	(2)		106	1930288	14.339	14.34			0.1
118) o-Xylene	(2)	11.810(0.000)	106	634443	4.759	4.76			0.1
119) Styrene	(2)	11.823(0.000)	104	950915	4.748	4.75			0.1
120) Bromoform	(2)	11.987(0.000)	173	84100	3.291	3.29			0.1
121) Isopropylbenzene	(2)	12.103(0.000)	105	1629898	4.738	4.74			0.1
128) 1,1,2,2-Tetrachloroethane	(3)	12.341(-0.000)	83	249330M	5.297	5.30			0.1
129) Bromobenzene	(3)	12.365(-0.000)	156	400079	4.907	4.91			0.1
130) trans-1,4-Dichloro-2-Butene	(4)	12.390(-0.010)	53	4042	5.325	5.33			1
131) 1,2,3-Trichloropropane	(3)	12.384(-0.000)	110	68190	5.071	5.07			0.3
132) n-Propylbenzene	(3)	12.426(-0.000)	91	1994266	4.743	4.74			0.1
133) 2-Chlorotoluene	(3)	12.506(-0.000)	126	407426	4.822	4.82			0.1
135) 4-Chlorotoluene	(3)	12.585(-0.000)	126	424030	4.919	4.92			0.1
134) 1,3,5-Trimethylbenzene	(3)	12.554(-0.000)	105	1385031	4.733	4.73			0.1
138) Pentachloroethane	(3)	12.835(-0.000)	167	183824	3.600	3.60			0.2
137) tert-Butylbenzene	(3)	12.804(-0.000)	134	309048M	4.704	4.70			0.1
139) 1,2,4-Trimethylbenzene	(3)	12.841(-0.000)	105	1485097	4.722	4.72			0.1
140) sec-Butylbenzene	(3)	12.963(-0.000)	105	1841243	4.724	4.72			0.1
142) 1,3-Dichlorobenzene	(3)	13.066(-0.000)	146	889571	5.051	5.05			0.1
141) p-Isopropyltoluene	(3)	13.060(-0.000)	119	1650935	4.738	4.74			0.1

M = Compound was manually integrated.

RAD36 0337

Digitally signed by Jason M. Long cn 09/03/2010 at 06:57. Target 3.5 esignature user ID: jm101693

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP16334.i/10sep03a.b/gs03101.d
Injection date and time: **03-SEP-2010 03:17**
Data file Sample Info. Line: LCSG23;LCSG23;1;3;LCS;;;
Instrument ID: **HP16334.i** Batch: **G102461AA**
Date, time and analyst ID of latest file update: 03-Sep-2010 06:55 jml01693

Blank Data file reference: **/chem2/HP16334.i/10sep03a.b/gs03b01.d**

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: **8260W25**
Calibration date and time (Last Method Edit): 03-SEP-2010 02:31
Mid Level Daily Calibration Standard Reference: **/chem2/HP16334.i/10sep03a.b/gs03c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
144) 1,4-Dichlorobenzene	(3)	13.127(-0.000)	146	900923	4.976	4.98			0.1
145) 1,2,3-Trimethylbenzene	(3)	13.152(-0.000)	120	647207	4.624	4.62			0.1
146) Benzyl Chloride	(3)	13.225(-0.000)	126	62810	3.552	3.55			0.1
147) n-Butylbenzene	(3)	13.353(0.000)	92	832285	4.828	4.83			0.1
148) 1,2-Dichlorobenzene	(3)	13.402(-0.000)	146	783616	5.054	5.05			0.1
150) 1,2-Dibromo-3-Chloropropane	(4)	13.944(-0.008)	155	27491	4.822	4.82			0.2
153) 1,2,4-Trichlorobenzene	(3)	14.493(-0.000)	180	585384	4.782	4.78			0.1
154) Hexachlorobutadiene	(3)	14.578(-0.000)	225	322331	4.886	4.89			0.1
155) Naphthalene	(3)	14.664(-0.000)	128	782538	4.698	4.70			0.1
156) 1,2,3-Trichlorobenzene	(3)	14.822(-0.000)	180	443567	4.629	4.63			0.1

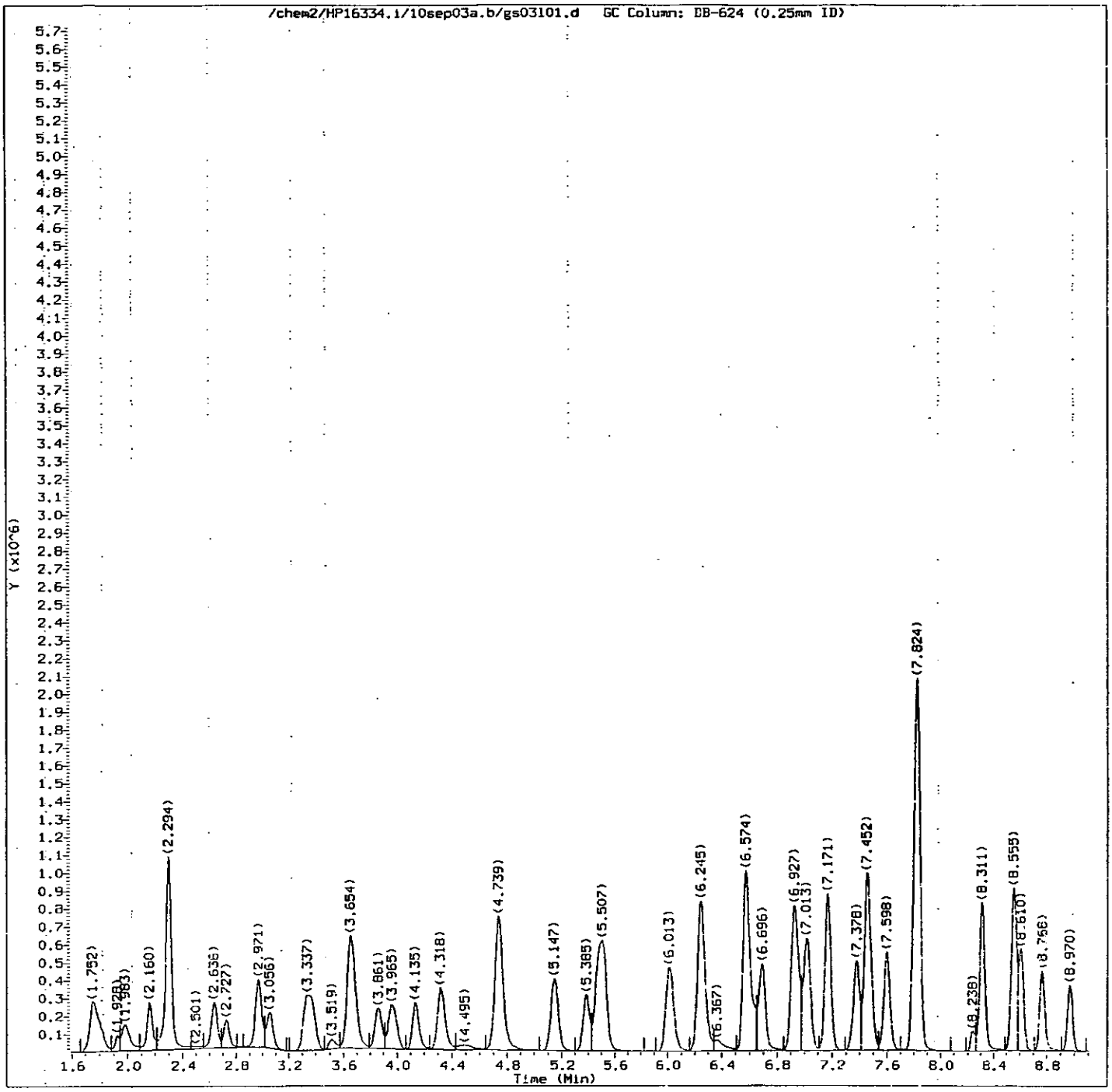
Total number of targets = 99

Comments:_____

Digitally signed by Jason M. Long on 09/03/2010 at 06:57. Target 3.5 esignature user ID: jml01693

RAD36 8358

Auditor:_____ Date: 9/10/10



Total Ion Chromatogram (TIC)

Target Revision 3.5

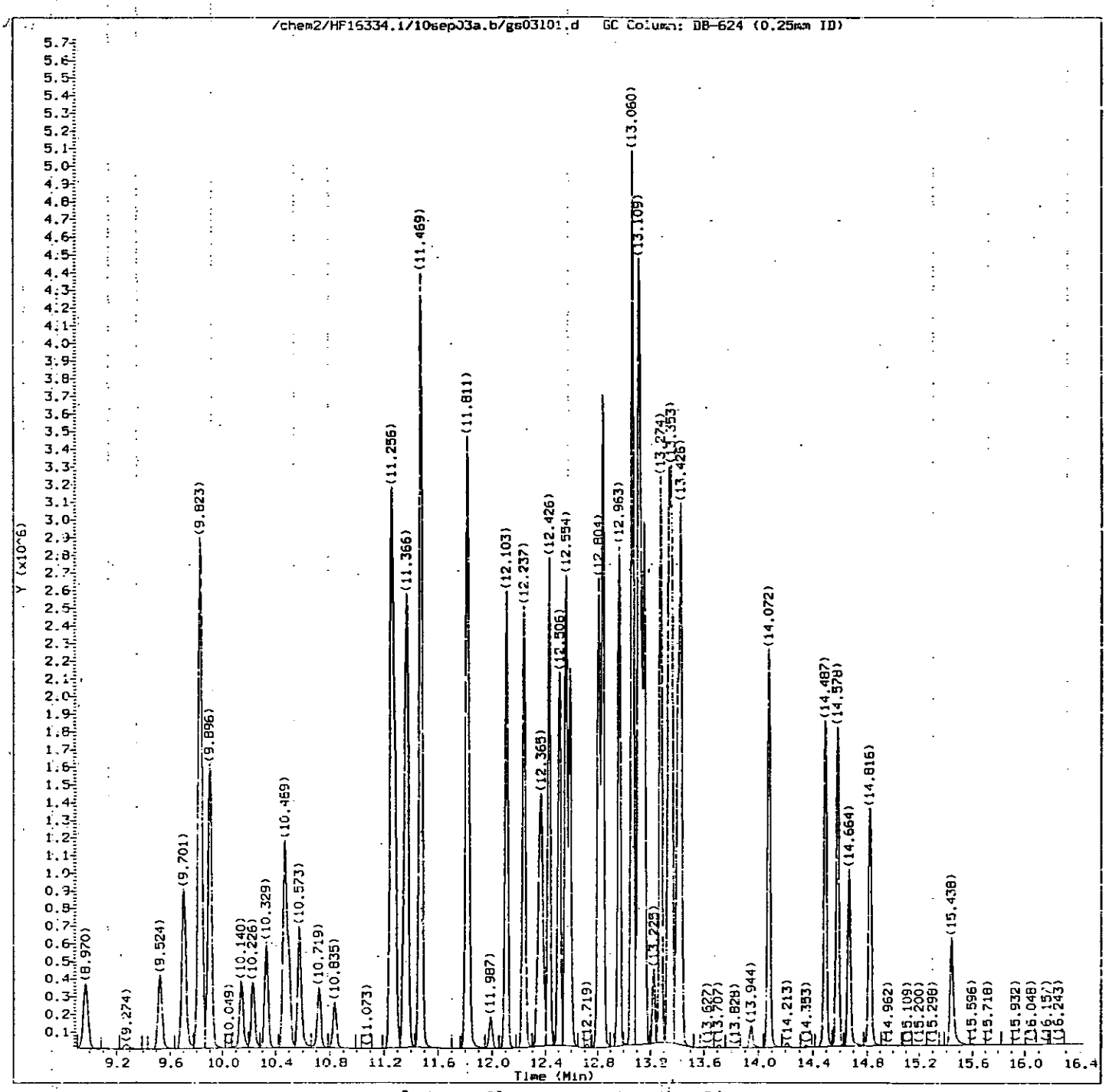
Data File: /chem2/HP16334.i/10sep03a.b/gs03101.d Instrument ID: HP16334.i
Injection date and time: 03-SEP-2010 03:17 Analyst ID: SAS00403

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 03-SEP-2010 02:31
Date, time and analyst ID of latest file update: 03-Sep-2010 06:55 jml01693

Sample Name: LCSG23 Lab Sample ID: LCSG23

RAD36 0339

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on 09/03/2010 at 06:57.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/10sep03a.b/gs03101.d Instrument ID: HP16334.i
Injection date and time: 03-SEP-2010 03:17 Analyst ID: SAS00403

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 03-SEP-2010 02:31
Date, time and analyst ID of latest file update: 03-Sep-2010 06:55 jml01693

Sample Name: LCSG23 Lab Sample ID: LCSG23

RAD36 8340

Digitally signed by Jason M. Long
on 09/03/2010 at 06:57.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/10sep03a.b/gs03101.d Instrument ID: HP16334.i
Injection date and time: 03-SEP-2010 03:17 Analyst ID: SAS00403

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 03-SEP-2010 02:31
Date, time and analyst ID of latest file update: 03-Sep-2010 06:55 jml01693

Sample Name: LCSG23 Lab Sample ID: LCSG23

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
2) Dichlorodifluoromethane	(1)	1.983	85	319928	2.925
5) Chloromethane	(1)	2.160	50	387686	3.694
6) Vinyl Chloride	(1)	2.294	62	379230	3.732
9) 1,3-Butadiene	(1)	2.300	39	581138	3.529
10) Bromomethane	(1)	2.636	94	302042	3.895
11) Chloroethane	(1)	2.727	64	222327	3.727
13) Dichlorofluoromethane	(1)	2.965	67	587454	4.143
15) Trichlorofluoromethane	(1)	3.056	101	448983	3.630
17) Ethyl Ether	(1)	3.324	59	170183	4.081
18) Freon 123a	(1)	3.361	67	352144	4.758
23) Acrolein	(4)	3.519	56	146533	33.860
24) 1,1-Dichloroethene	(1)	3.648	96	293697	4.854
25) Freon 113	(1)	3.660	101	302787	4.825
26) Acetone	(4)	3.708	58	84950	41.573
27) Methyl Iodide	(1)	3.861	142	530028	4.794
29) Carbon Disulfide	(1)	3.965	76	882306	5.355
32) Allyl Chloride	(1)	4.135	41	302775	4.764
33) Methyl Acetate	(1)	4.166	43	82332M	5.926
34) Methylene Chloride	(1)	4.318	84	333788	4.670
36)*t-Butyl Alcohol-d10	(4)	4.355	65	103389	50.000
38) t-Butyl Alcohol	(4)	4.495	59	113973	43.703
39) Acrylonitrile	(4)	4.720	53	221347	27.392
41) trans-1,2-Dichloroethene	(1)	4.739	96	333789	4.899
40) Methyl Tertiary Butyl Ether	(1)	4.739	73	630130	4.680
37) 1,2-Dichloroethene (Total)	(1)		96	687992	9.771
44) n-Hexane	(1)	5.147	57	403921	4.429
45) 1,1-Dichloroethane	(1)	5.385	63	558140	4.988
47) di-Isopropyl Ether	(1)	5.476	45	908109	4.748
48) 2-Chloro-1,3-Butadiene	(1)	5.519	53	409620	5.147
49) Ethyl t-Butyl Ether	(1)	6.013	59	794790	4.606
50) cis-1,2-Dichloroethene	(1)	6.238	96	354203	4.872
51) 2,2-Dichloropropane	(1)	6.245	77	428317	4.711
52) 2-Butanone	(4)	6.269	43	438335	41.625
53) Propionitrile	(4)	6.379	54	110305M	40.924
55) Methacrylonitrile	(4)	6.574	67	483825	41.179
56) Bromochloromethane	(1)	6.580	128	145852	5.039
57) Tetrahydrofuran	(4)	6.635	71	91583	26.689
58) Chloroform	(1)	6.696	83	564569	4.939
61)$Dibromofluoromethane	(1)	6.915	113	551692	9.717

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

RAD36 0341

Digitally signed by Jason M. Long
on 09/03/2010 at 06:57:
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/10sep03a.b/gs03101.d Instrument ID: HP16334.i
Injection date and time: 03-SEP-2010 03:17 Analyst ID: SAS00403

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 03-SEP-2010 02:31
Date, time and analyst ID of latest file update: 03-Sep-2010 06:55 jml01693

Sample Name: LCSG23 Lab Sample ID: LCSG23

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
63) 1,1,1-Trichloroethane	(1)	6.946	97	489165	4.925
64) Cyclohexane	(1)	7.019	56	519870	4.740
65) 1,1-Dichloropropene	(1)	7.171	75	420262	4.705
66) Carbon Tetrachloride	(1)	7.171	117	365098	4.206
67) Isobutyl Alcohol	(4)	7.348	41	99585	125.041
70)$1,2-Dichloroethane-d4	(1)	7.378	102	105997	10.010
72) Benzene	(1)	7.452	78	1286586	4.893
74) 1,2-Dichloroethane	(1)	7.482	62	303893	4.863
75) t-Amyl Methyl Ether	(1)	7.598	73	702800	4.701
76) n-Heptane	(1)	7.805	43	427177M	4.540
77)*Fluorobenzene	(1)	7.830	96	2468049	10.000
81) n-Butanol	(4)	8.238	56	159111	255.031
83) Trichloroethene	(1)	8.311	95	392920	5.434
84) Methylcyclohexane	(1)	8.555	83	568127	5.001
85) 1,2-Dichloropropane	(1)	8.610	63	326783	5.024
88) Dibromomethane	(1)	8.762	93	147535	5.100
87) Methyl Methacrylate	(4)	8.768	69	116292	4.949
89) 1,4-Dioxane	(4)	8.781	88	29205	158.839
90) Bromodichloromethane	(1)	8.970	83	343282	4.634
91) 2-Nitropropane	(4)	9.274	41	24093M	3.904
94) cis-1,3-Dichloropropene	(1)	9.524	75	317973	4.111
96) 4-Methyl-2-Pentanone	(1)	9.701	43	756397	24.576
97)$Toluene-d8	(2)	9.823	98	2388076	9.738
101) Toluene	(2)	9.896	92	838513	4.738
102) trans-1,3-Dichloropropene	(2)	10.140	75	249553	4.003
103) Ethyl Methacrylate	(2)	10.226	69	233923	5.438
104) 1,1,2-Trichloroethane	(2)	10.329	97	212928	5.126
105) Tetrachloroethene	(2)	10.469	166	396001	4.938
106) 1,3-Dichloropropane	(2)	10.500	76	349515	4.975
107) 2-Hexanone	(2)	10.573	43	530087	25.798
108) Dibromochloromethane	(2)	10.719	129	200472	4.192
109) 1,2-Dibromoethane	(2)	10.835	107	188215	5.020
110)*Chlorobenzene-d5	(2)	11.256	117	1816074	10.000
112) Chlorobenzene	(2)	11.280	112	981660	4.939
113) 1,1,1,2-Tetrachloroethane	(2)	11.347	131	302443	4.725
114) Ethylbenzene	(2)	11.366	91	1631386	4.826
117) m+p-Xylene	(2)	11.469	106	1295845	9.580
115) Xylene (Total)	(2)		106	1930288	14.339
118) o-Xylene	(2)	11.811	106	634443	4.759

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

RAD36 0342

Digitally signed by Jason M. Long
on 09/03/2010 at 06:57.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/10sep03a.b/gs03101.d Instrument ID: HP16334.i
Injection date and time: 03-SEP-2010 03:17 Analyst ID: SAS00403

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 03-SEP-2010 02:31
Date, time and analyst ID of latest file update: 03-Sep-2010 06:55 jml01693

Sample Name: LCSG23 Lab Sample ID: LCSG23

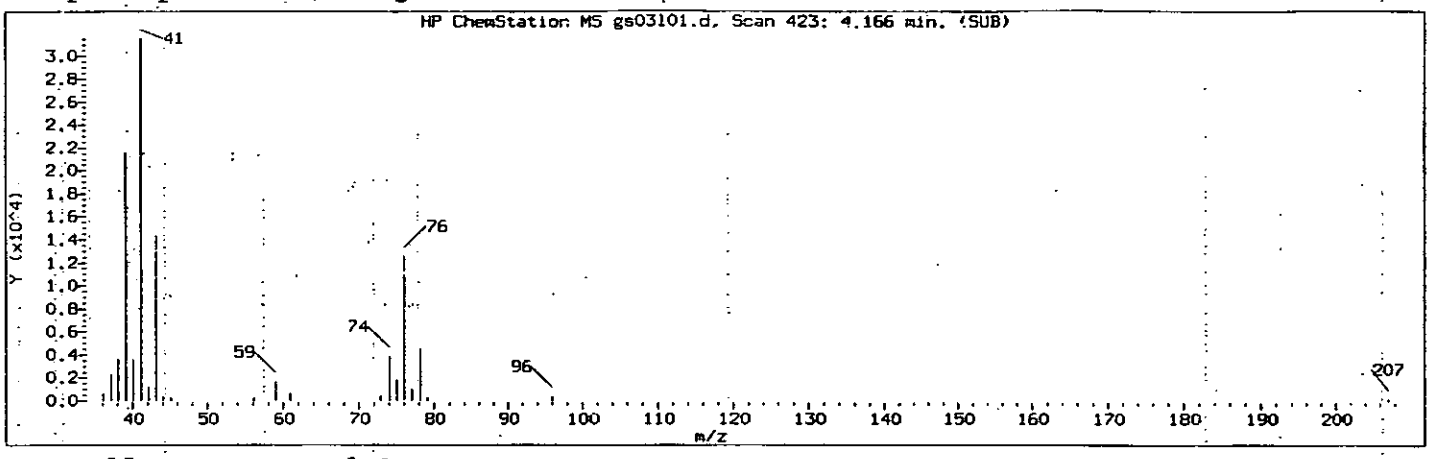
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
119) Styrene	(2)	11.823	104	950915	4.748
120) Bromoform	(2)	11.987	173	84100	3.291
121) Isopropylbenzene	(2)	12.103	105	1629898	4.738
126)$4-Bromofluorobenzene	(2)	12.237	95	797118	9.616
128) 1,1,2,2-Tetrachloroethane	(3)	12.341	83	249330M	5.297
129) Bromobenzene	(3)	12.365	156	400079	4.907
131) 1,2,3-Trichloropropane	(3)	12.384	110	68190	5.071
130) trans-1,4-Dichloro-2-Butene	(4)	12.390	53	4042	5.325
132) n-Propylbenzene	(3)	12.426	91	1994266	4.743
133) 2-Chlorotoluene	(3)	12.506	126	407426	4.822
134) 1,3,5-Trimethylbenzene	(3)	12.554	105	1385031	4.733
135) 4-Chlorotoluene	(3)	12.585	126	424030	4.919
137) tert-Butylbenzene	(3)	12.804	134	309048M	4.704
138) Pentachloroethane	(3)	12.835	167	183824	3.600
139) 1,2,4-Trimethylbenzene	(3)	12.841	105	1485097	4.722
140) sec-Butylbenzene	(3)	12.963	105	1841243	4.724
141) p-Isopropyltoluene	(3)	13.060	119	1650935	4.738
142) 1,3-Dichlorobenzene	(3)	13.066	146	889571	5.051
143)*1,4-Dichlorobenzene-d4	(3)	13.109	152	1048718	10.000
144) 1,4-Dichlorobenzene	(3)	13.127	146	900923	4.976
145) 1,2,3-Trimethylbenzene	(3)	13.152	120	647207	4.624
146) Benzyl Chloride	(3)	13.225	126	62810	3.552
147) n-Butylbenzene	(3)	13.353	92	832285	4.828
148) 1,2-Dichlorobenzene	(3)	13.402	146	783616	5.054
150) 1,2-Dibromo-3-Chloropropane	(4)	13.944	155	27491	4.822
153) 1,2,4-Trichlorobenzene	(3)	14.493	180	585384	4.782
154) Hexachlorobutadiene	(3)	14.578	225	322331	4.886
155) Naphthalene	(3)	14.664	128	782538	4.698
156) 1,2,3-Trichlorobenzene	(3)	14.822	180	443567	4.629

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

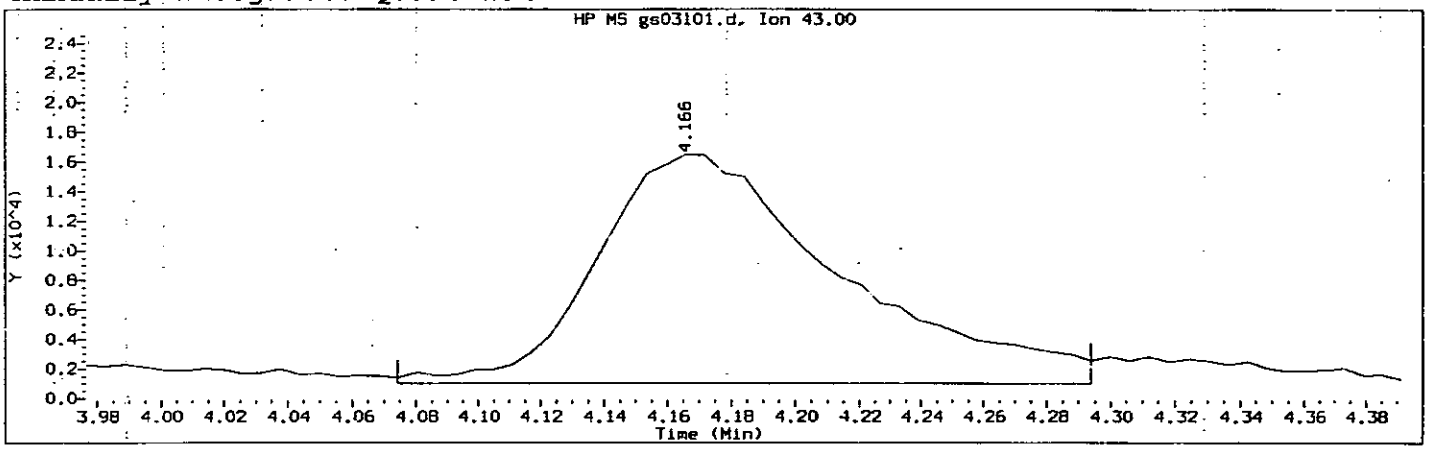
RAD36 0343

Digitally signed by Jason M. Long
on 09/03/2010 at 06:57.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10sep03a.b/gs03101.d Instrument ID: HP16334.i
Injection date and time: 03-SEP-2010 03:17 Analyst ID: SAS00403

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 03-SEP-2010 02:31
Date, time and analyst ID of latest file update: 03-Sep-2010 06:55 jml01693

Sample Name: LCSG23 Lab Sample ID: LCSG23

Compound Number	: 33		
Compound Name	: Methyl Acetate		
Scan Number	: 423		
Retention Time (minutes)	: 4.166		
Quant Ion	: 43.00		
Area (flag)	: 82332M		
On-Column Amount (ng)	: 5.9256		
Integration start scan	: 407	Integration stop scan:	443
Y at integration start	: 1036	Y at integration end:	1036

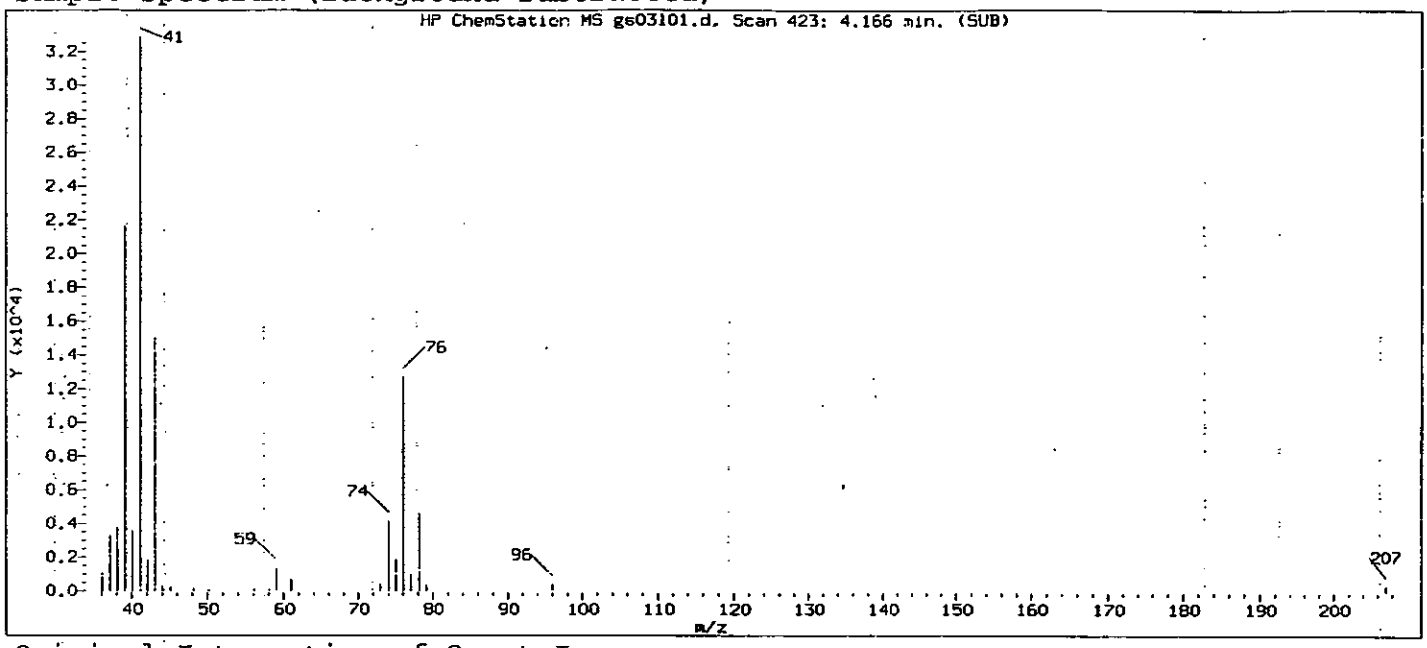
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long on 09/03/2010 at 06:57. Target 3.5 esignature user ID: jml01693

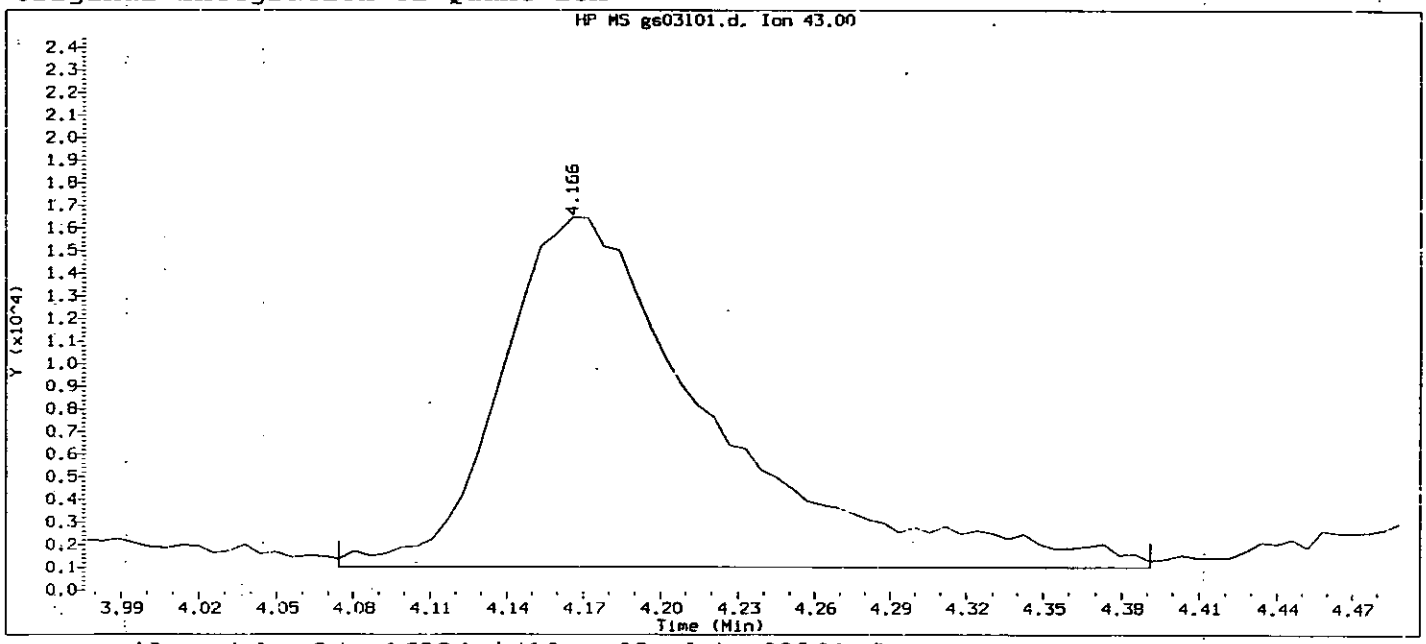
RAD36 0344

GC/MS audit/management approval: _____ 9/10/10

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10sep03a.b/gs03101.d Instrument ID: HP16334.i
Injection date and time: 03-SEP-2010 03:17 Analyst ID: SAS00403

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 03-SEP-2010 02:31
Date, time and analyst ID of latest file update: 03-Sep-2010 06:53 jml01693

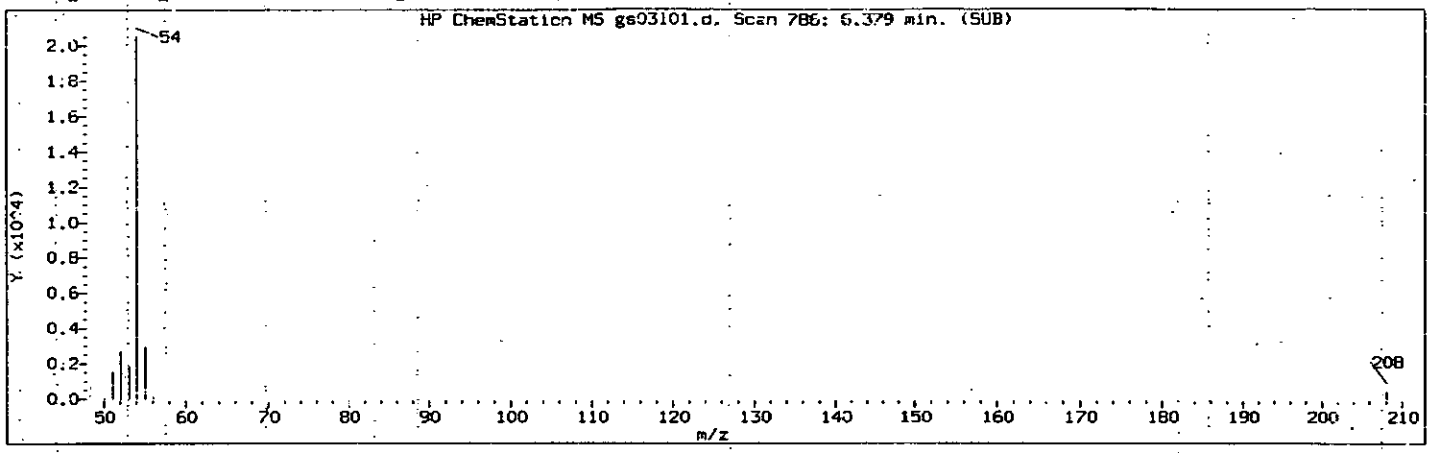
Sample Name: LCSG23 Lab Sample ID: LCSG23

Compound Number	: 33
Compound Name	: Methyl Acetate
Scan Number	: 423
Retention Time (minutes)	: 4.166
Quant Ion	: 43.00
Area	: 88911
On-column Amount (ng)	: 6.3613
Integration start scan	: 407 Integration stop scan: 459
Y at integration start	: 1036 Y at integration end: 1036

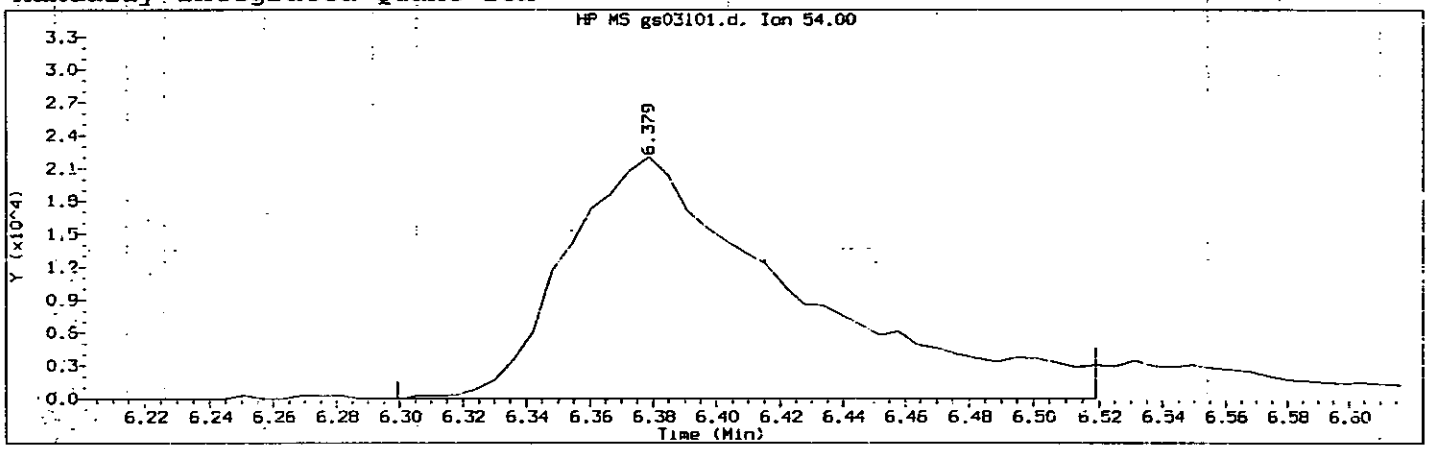
RAD36 0345

Digitally signed by Jason M. Long on 09/03/2010 at 06:57.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10sep03a.b/gs03101.d Instrument ID: HP16334.i
Injection date and time: 03-SEP-2010 03:17 Analyst ID: SAS00403

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 03-SEP-2010 02:31
Date, time and analyst ID of latest file update: 03-Sep-2010 06:55 jml01693

Sample Name: LCSG23 Lab Sample ID: LCSG23

Compound Number	: 53		
Compound Name	: Propionitrile		
Scan Number	: 786		
Retention Time (minutes)	: 6.379		
Quant Ion	: 54.00		
Area (flag)	: 110305M		
On-Column Amount (ng)	: 40.9244		
Integration start scan	: 772	Integration stop scan:	808
Y at integration start	: 0	Y at integration end:	0

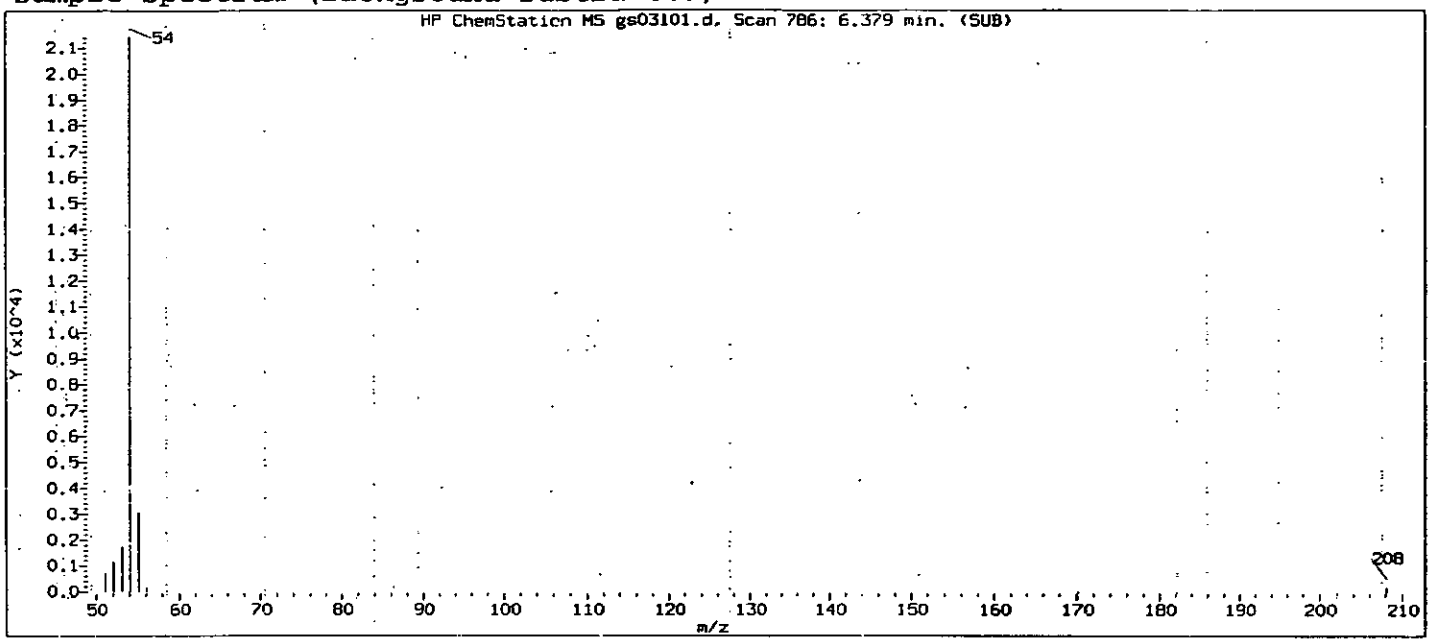
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long on 09/03/2010 at 06:57. Target 3.5 esignature user ID: jml01693

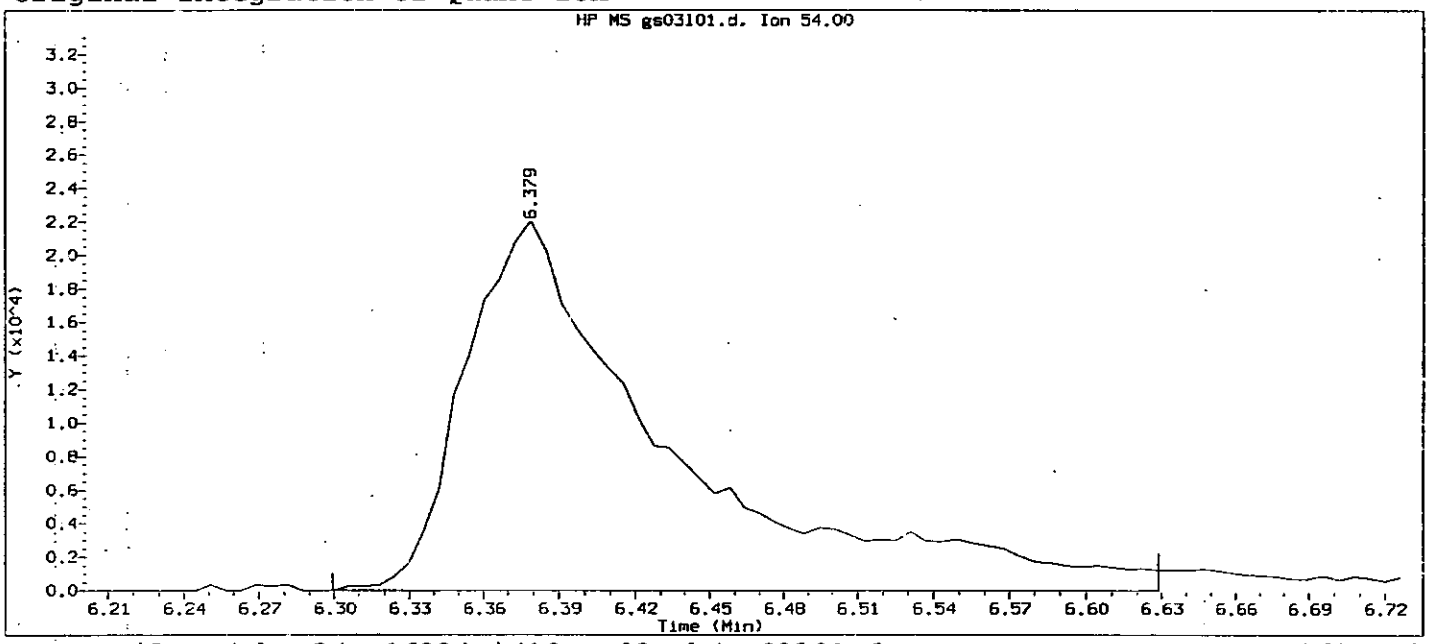
RAB36 0346

GC/MS audit/management approval: _____ 9/10/10

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10sep03a.b/gs03101.d Instrument ID: HP16334.i
Injection date and time: 03-SEP-2010 03:17 Analyst ID: SAS00403

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 03-SEP-2010 02:31
Date, time and analyst ID of latest file update: 03-Sep-2010 06:53 jml01693

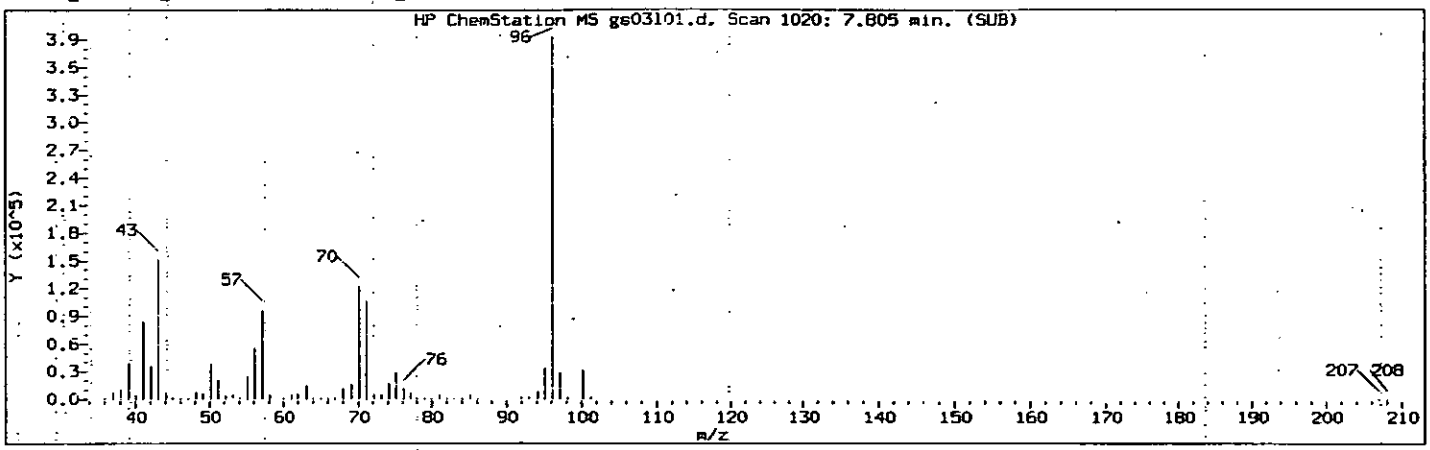
Sample Name: LCSG23 Lab Sample ID: LCSG23

Compound Number	: 53		
Compound Name	: Propionitrile		
Scan Number	: 786		
Retention Time (minutes)	: 6.379		
Quant Ion	: 54.00		
Area	: 124106		
On-column Amount (ng)	: 45.4955		
Integration start scan	: 772	Integration stop scan:	826
Y at integration start	: 0	Y at integration end:	0

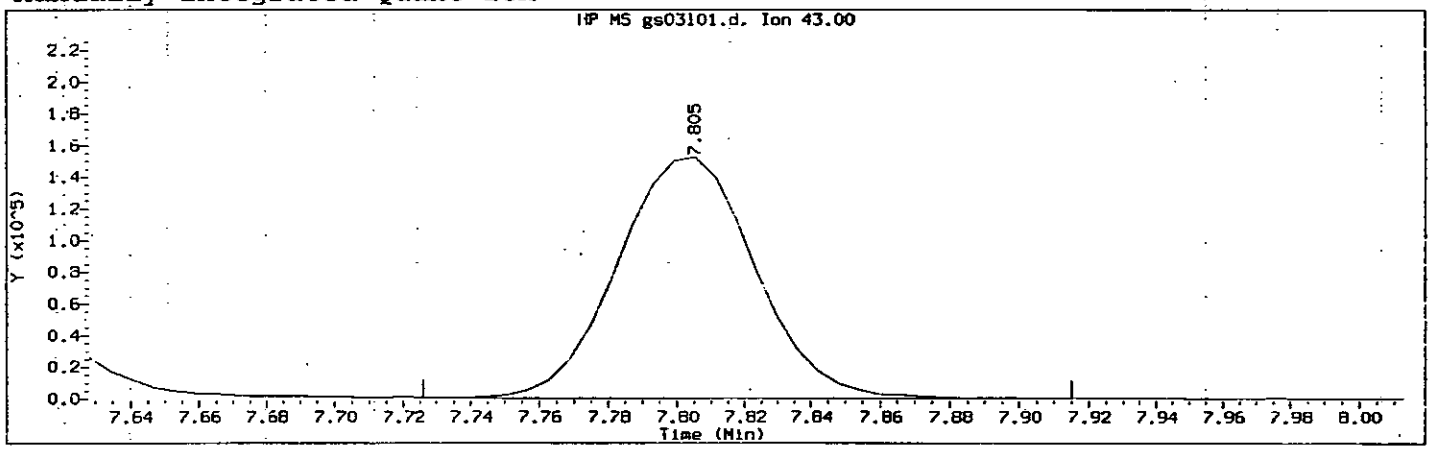
RAD36 0347

Digitally signed by Jason M. Long on 09/03/2010 at 06:57.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10sep03a.b/gs03101.d Instrument ID: HP16334.i
Injection date and time: 03-SEP-2010 03:17 Analyst ID: SAS00403

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 03-SEP-2010 02:31
Date, time and analyst ID of latest file update: 03-Sep-2010 06:55 jml01693

Sample Name: LCSG23 Lab Sample ID: LCSG23

Compound Number	: 76		
Compound Name	: n-Heptane		
Scan Number	: 1020		
Retention Time (minutes)	: 7.805		
Quant Ion	: 43.00		
Area (flag)	: 427177M		
On-Column Amount (ng)	: 4.5393		
Integration start scan	: 1006	Integration stop scan:	1037
Y at integration start	: 531	Y at integration end:	531

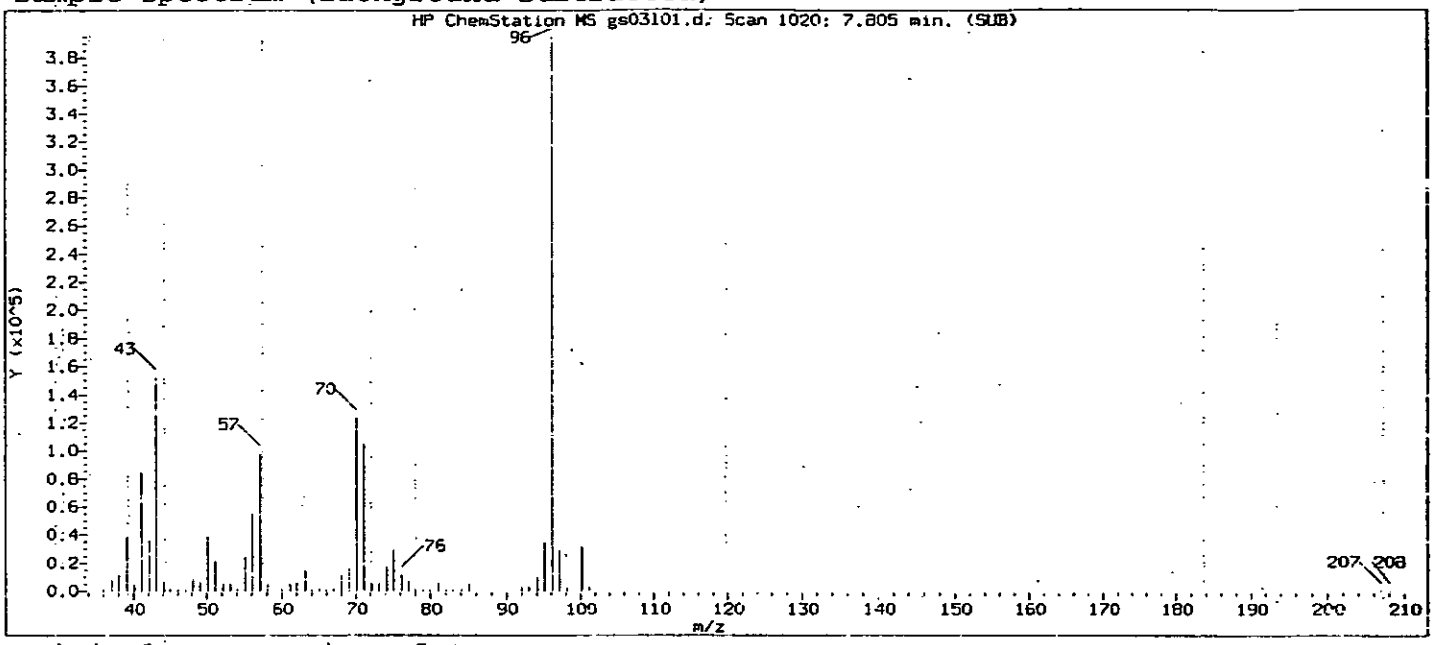
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long
on 09/03/2010 at 06:57.
Target 3.5 esignature user ID: jml01693

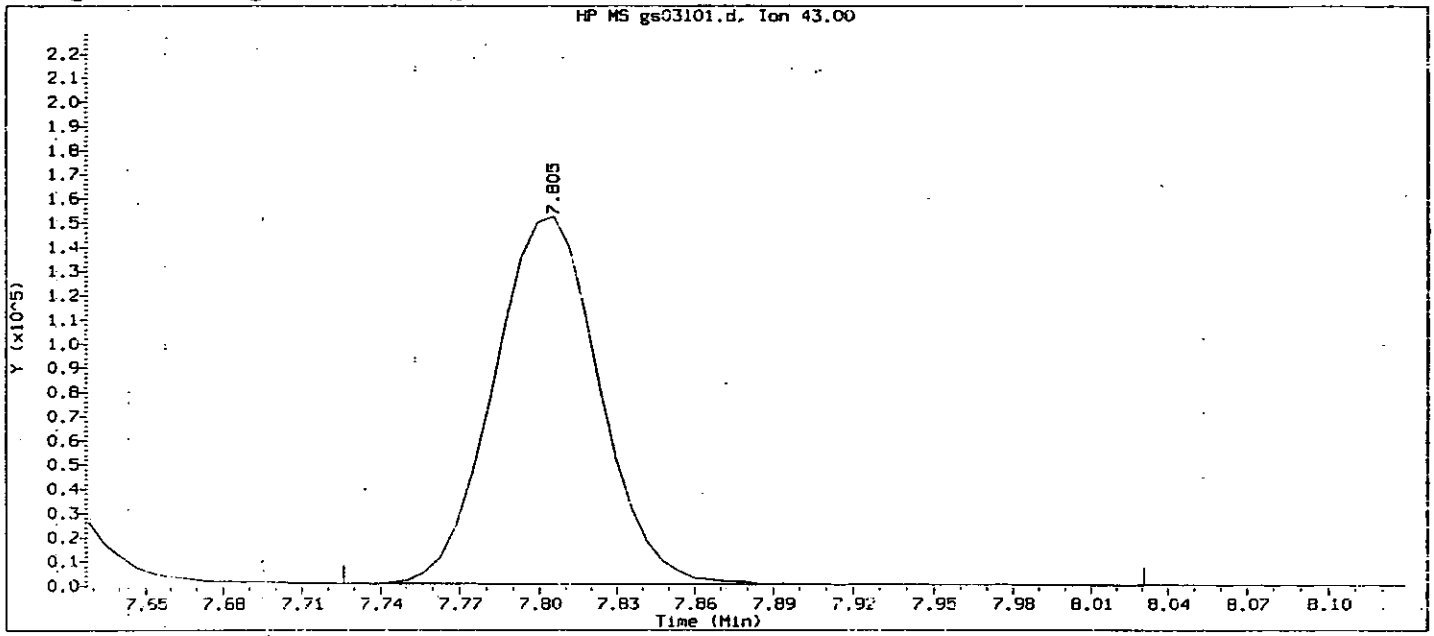
RAD36 0348

GC/MS audit/management approval: _____ 9/10/10

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10sep03a.b/gs03101.d Instrument ID: HP16334.i
Injection date and time: 03-SEP-2010 03:17 Analyst ID: SAS00403

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 03-SEP-2010 02:31
Date, time and analyst ID of latest file update: 03-Sep-2010 06:53 jm101693

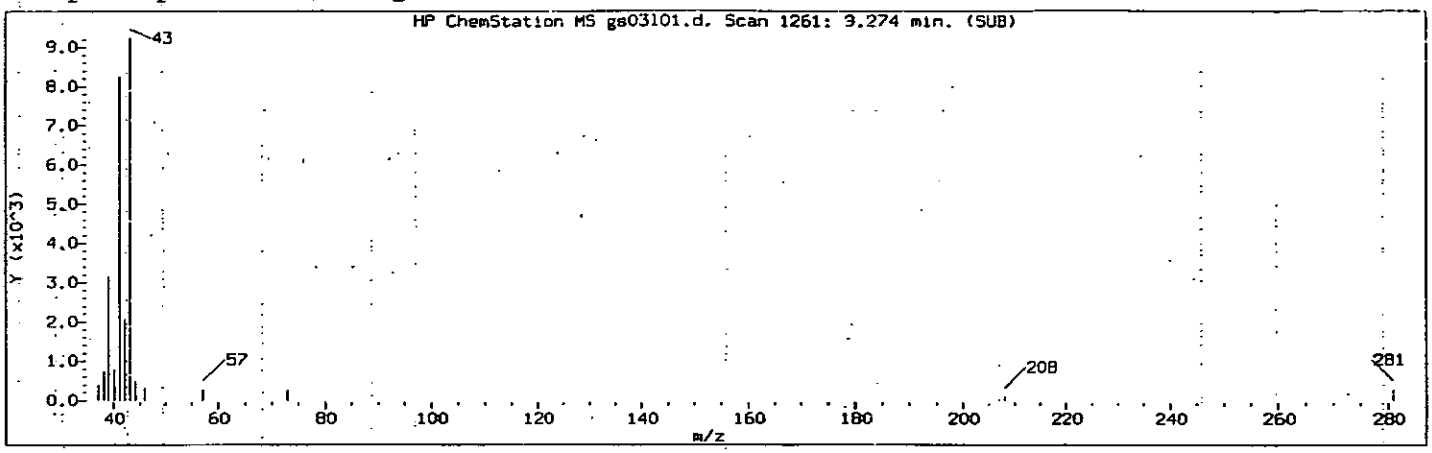
Sample Name: LCSG23 Lab Sample ID: LCSG23

Compound Number	: 76		
Compound Name	: n-Heptane		
Scan Number	: 1020		
Retention Time (minutes)	: 7.805		
Quant Ion	: 43.00		
Area	: 425843		
On-column Amount (ng)	: 4.5256		
Integration start scan	: 1006	Integration stop scan:	1056
Y at integration start	: 888	Y at integration end:	296

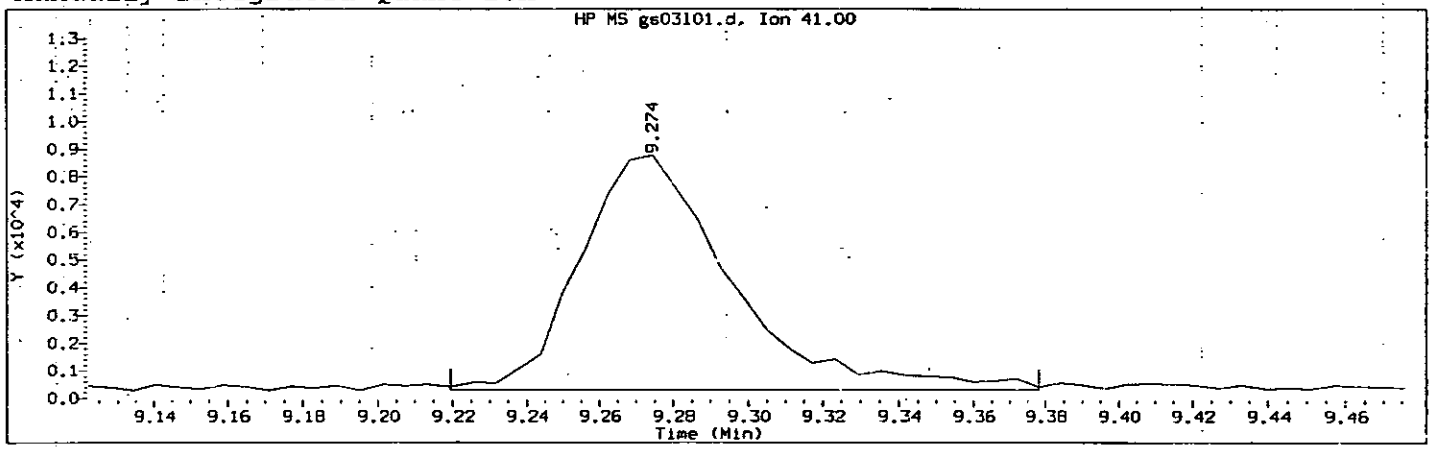
RAD36 8249

Digitally signed by Jason M. Long on 09/03/2010 at 06:57.
Target 3.5 esignature user ID: jm101693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10sep03a.b/gs03101.d Instrument ID: HP16334.i
Injection date and time: 03-SEP-2010 03:17 Analyst ID: SAS00403

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 03-SEP-2010 02:31
Date, time and analyst ID of latest file update: 03-Sep-2010 06:55 jml01693

Sample Name: LCSG23 Lab Sample ID: LCSG23

Compound Number : 91
Compound Name : 2-Nitropropane
Scan Number : 1261
Retention Time (minutes): 9.274
Quant Ion : 41.00
Area (flag) : 24093M
On-Column Amount (ng) : 3.9042
Integration start scan : 1251 Integration stop scan: 1277
Y at integration start : 315 Y at integration end: 315

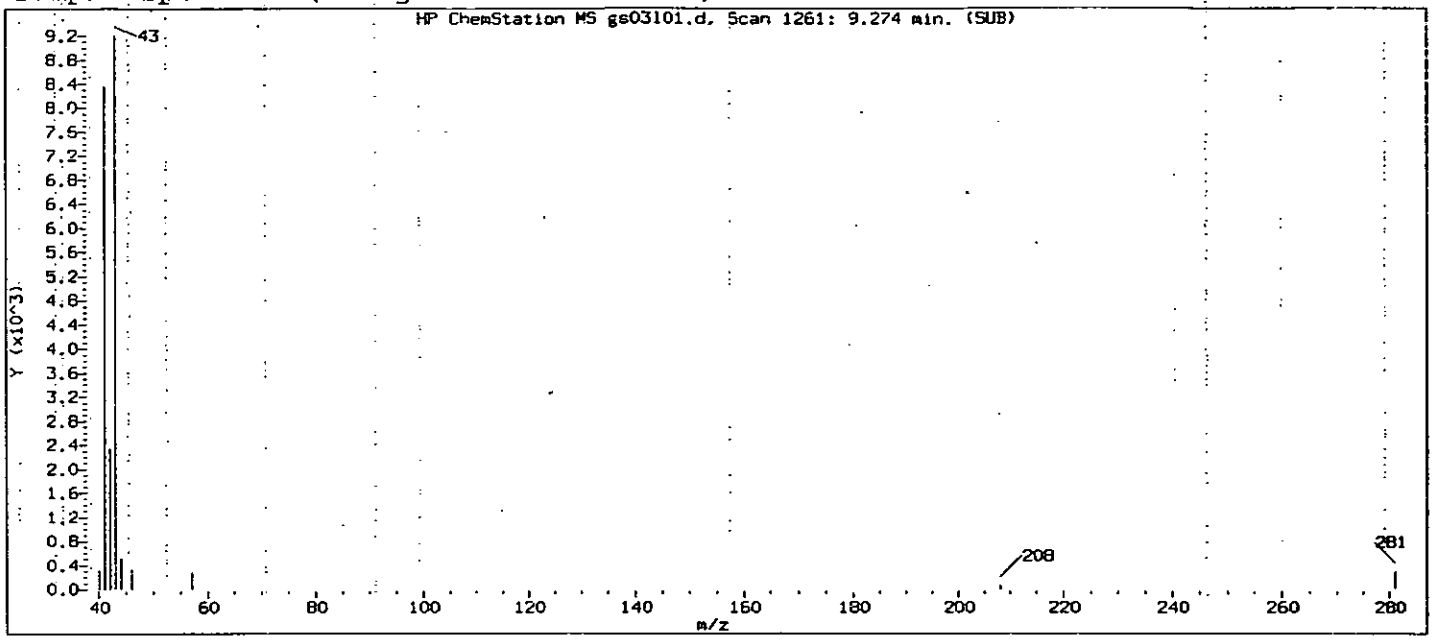
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long on 09/03/2010 at 06:57. Target 3.5 esignature user ID: jml01693

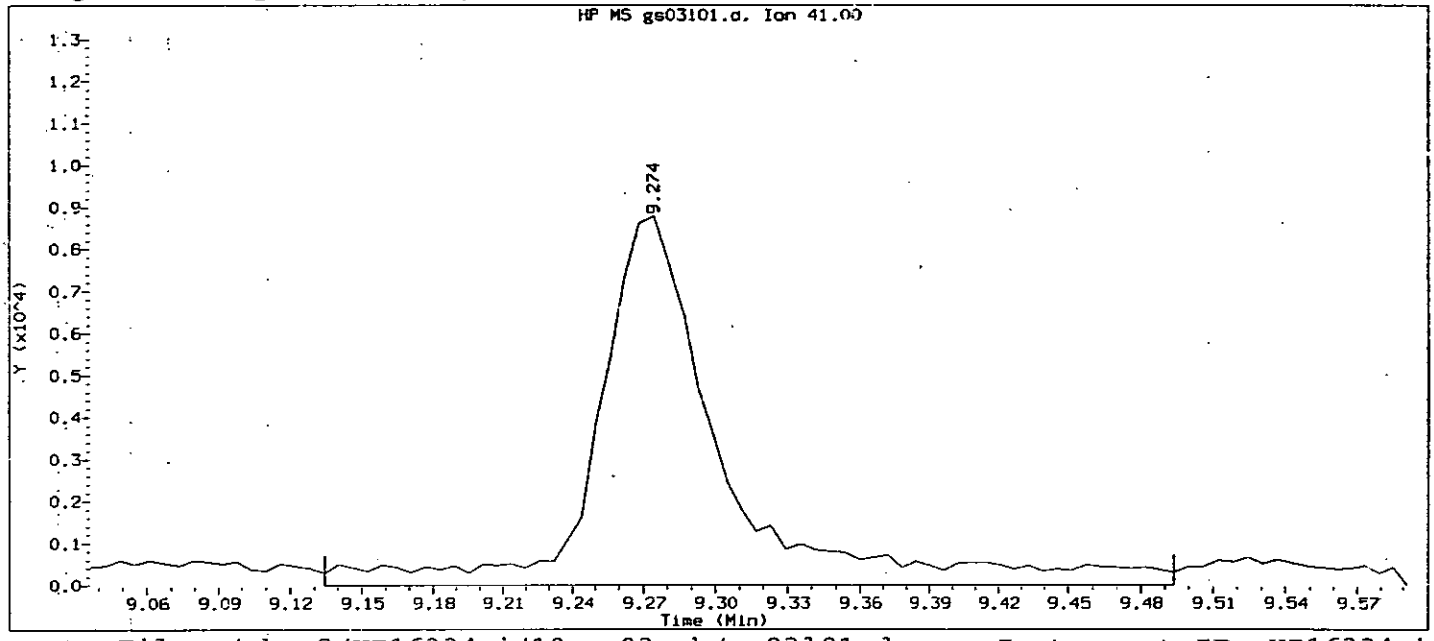
RAD36 0358

GC/MS audit/management approval: 9/13/10

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10sep03a.b/gs03101.d Instrument ID: HP16334.i
Injection date and time: 03-SEP-2010 03:17 Analyst ID: SAS00403

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 03-SEP-2010 02:31
Date, time and analyst ID of latest file update: 03-Sep-2010 06:53 jml01693

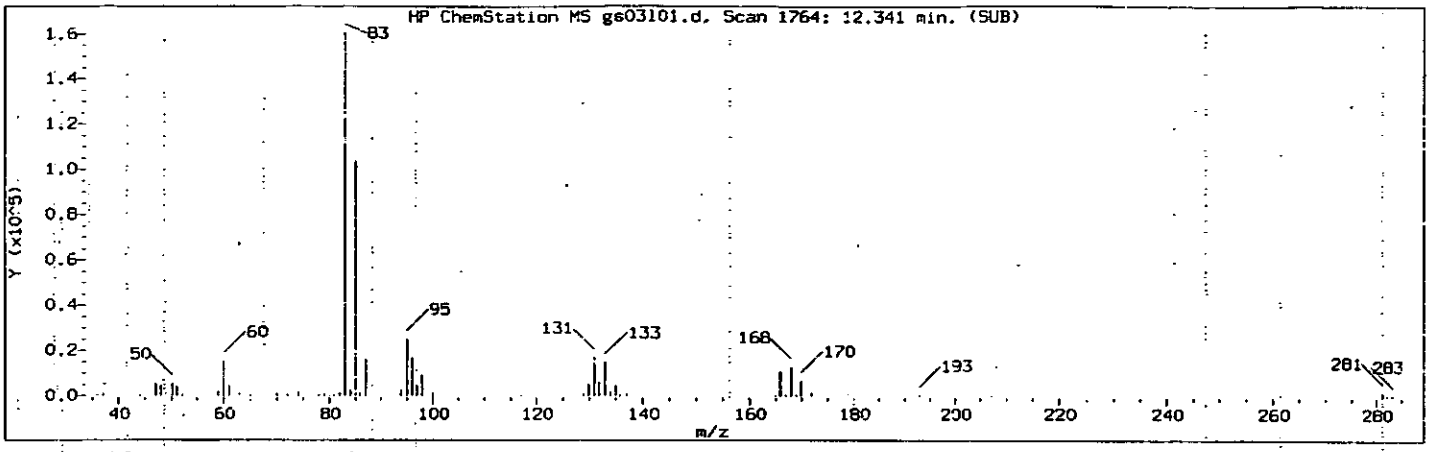
Sample Name: LCSG23 Lab Sample ID: LCSG23

Compound Number : 91
Compound Name : 2-Nitropropane
Scan Number : 1261
Retention Time (minutes): 9.274
Quant Ion : 41.00
Area : 32248
On-column Amount (ng) : 5.2256
Integration start scan : 1237 Integration stop scan: 1296
Y at integration start : 0 Y at integration end: 0

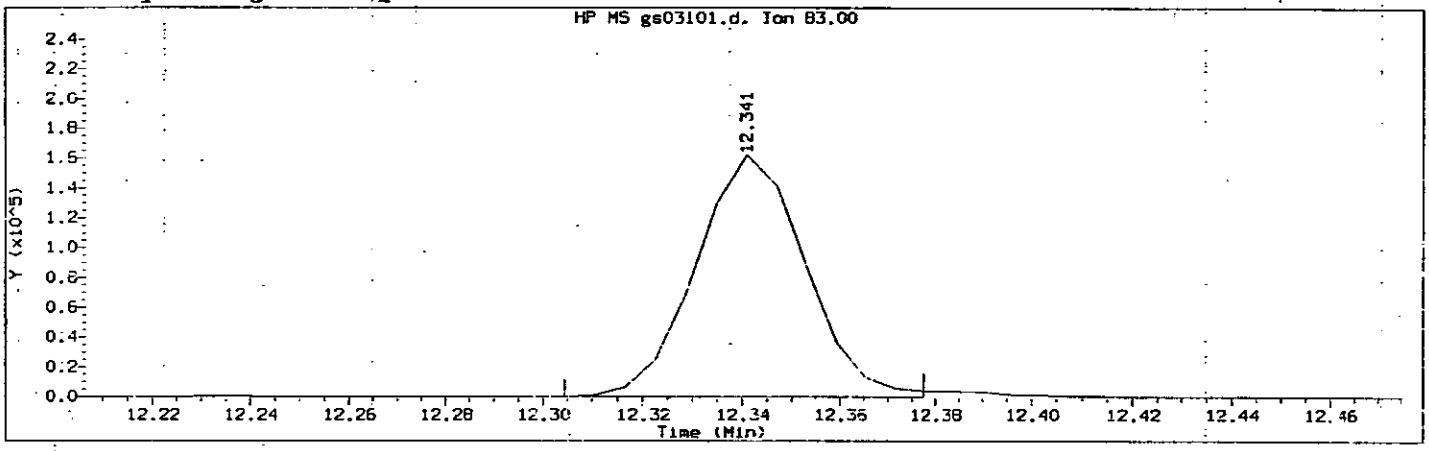
RAD36 8351

Digitally signed by Jason M. Long on 09/03/2010 at 06:57.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10sep03a.b/gs03101.d Instrument ID: HP16334.i
Injection date and time: 03-SEP-2010 03:17 Analyst ID: SAS00403

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 03-SEP-2010 02:31
Date, time and analyst ID of latest file update: 03-Sep-2010 06:55 jml01693

Sample Name: LCSG23 Lab Sample ID: LCSG23

Compound Number : 128
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1764
Retention Time (minutes): 12.341
Quant Ion : 83.00
Area (flag) : 249330M
On-Column Amount (ng) : 5.2975
Integration start scan : 1757 Integration stop scan: 1769
Y at integration start : 0 Y at integration end: 0

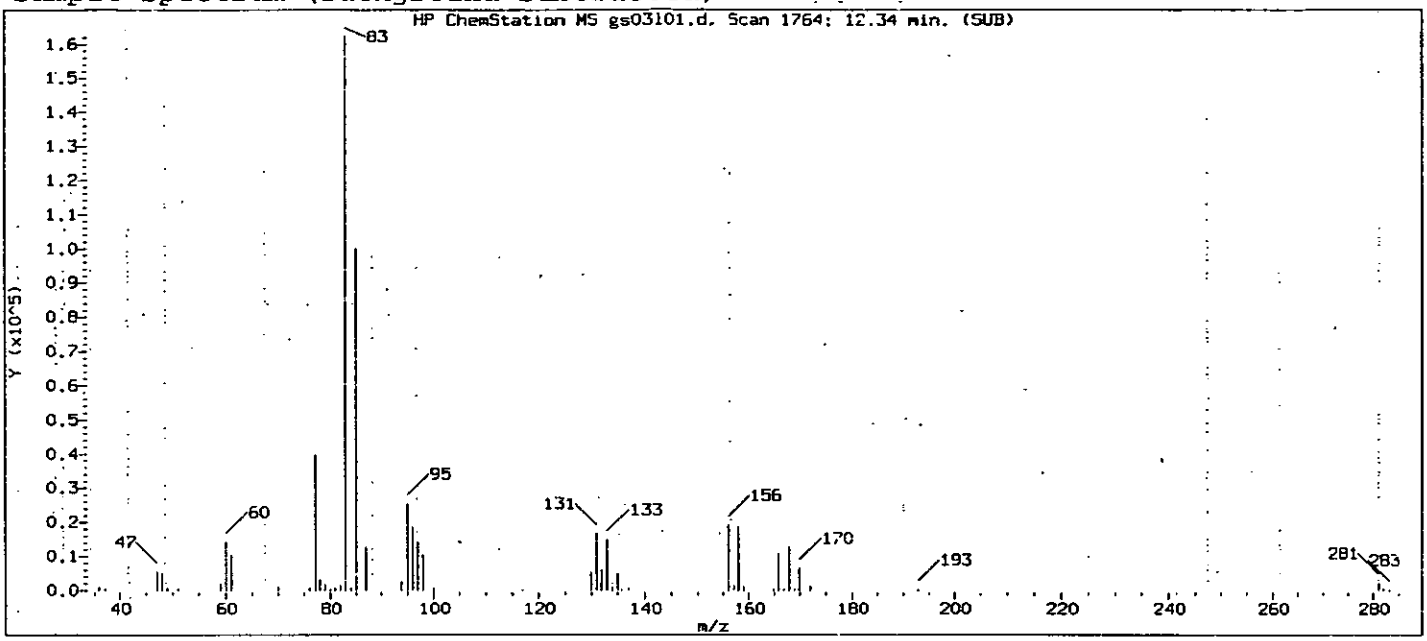
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long
on 09/03/2010 at 06:57.
Target 3.5 esignature user ID: jml01693

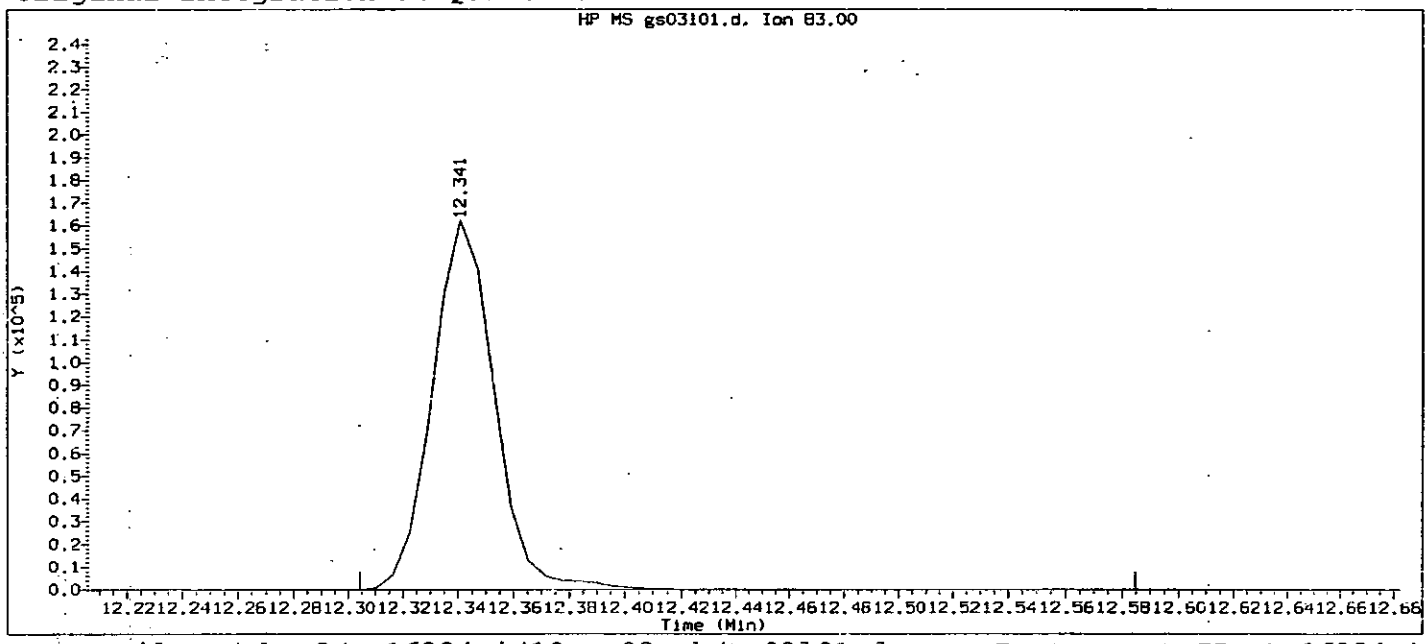
RAD36 8352

GC/MS audit/management approval: _____ 9/10/10

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10sep03a.b/gs03101.d Instrument ID: HP16334.i
Injection date and time: 03-SEP-2010 03:17 Analyst ID: SAS00403

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 03-SEP-2010 02:31
Date, time and analyst ID of latest file update: 03-Sep-2010 06:53 jml01693

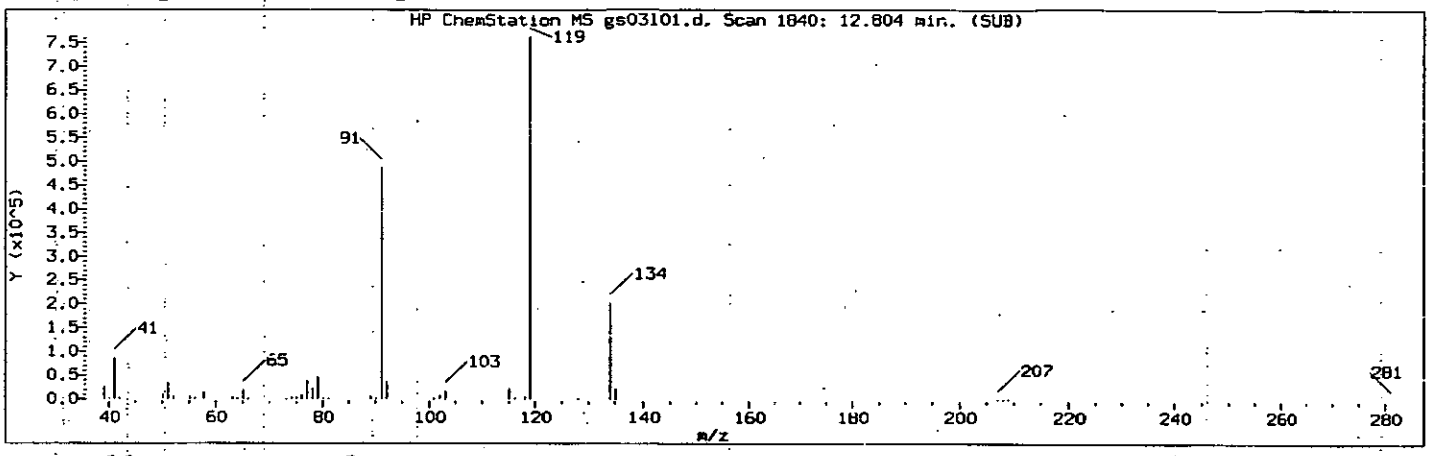
Sample Name: LCSG23 Lab Sample ID: LCSG23

Compound Number : 128
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1764
Retention Time (minutes): 12.341
Quant Ion : 83.00
Area : 253072
On-column Amount (ng) : 5.3770
Integration start scan : 1757 Integration stop scan: 1803
Y at integration start : 0 Y at integration end: 0

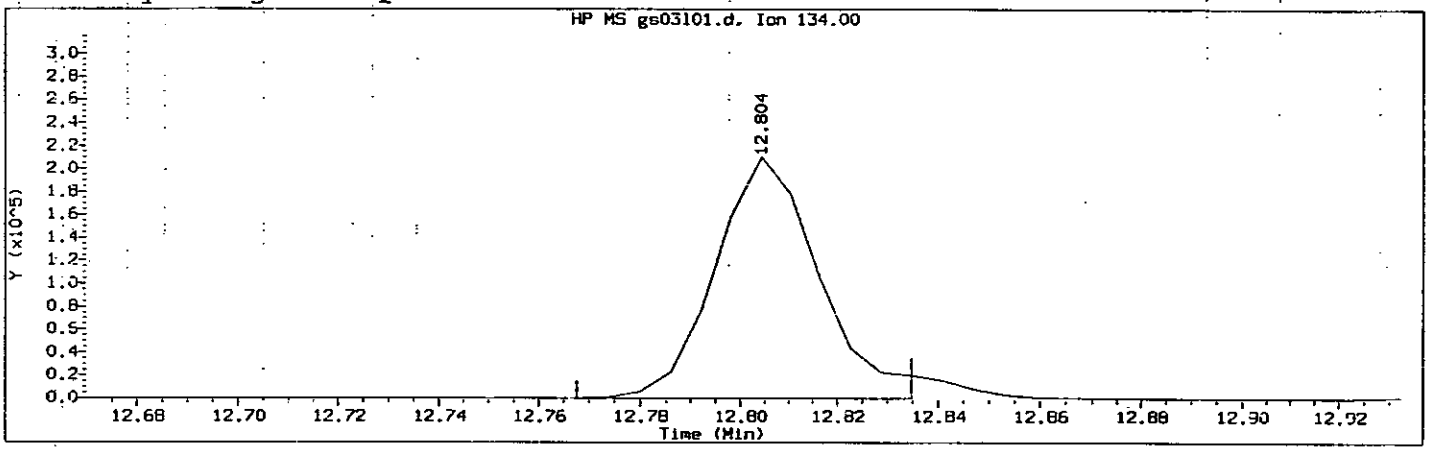
RAD36 8353

Digitally signed by Jason M. Long on 09/03/2010 at 06:57.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10sep03a.b/gs03101.d Instrument ID: HP16334.i
Injection date and time: 03-SEP-2010 03:17 Analyst ID: SAS00403

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 03-SEP-2010 02:31
Date, time and analyst ID of latest file update: 03-Sep-2010 06:55 jml01693

Sample Name: LCSG23 Lab Sample ID: LCSG23

Compound Number	: 137		
Compound Name	: tert-Butylbenzene		
Scan Number	: 1840		
Retention Time (minutes)	: 12.804		
Quant Ion	: 134.00		
Area (flag)	: 309048M		
On-Column Amount (ng)	: 4.7041		
Integration start scan	: 1833	Integration stop scan:	1844
Y at integration start	: 0	Y at integration end:	0

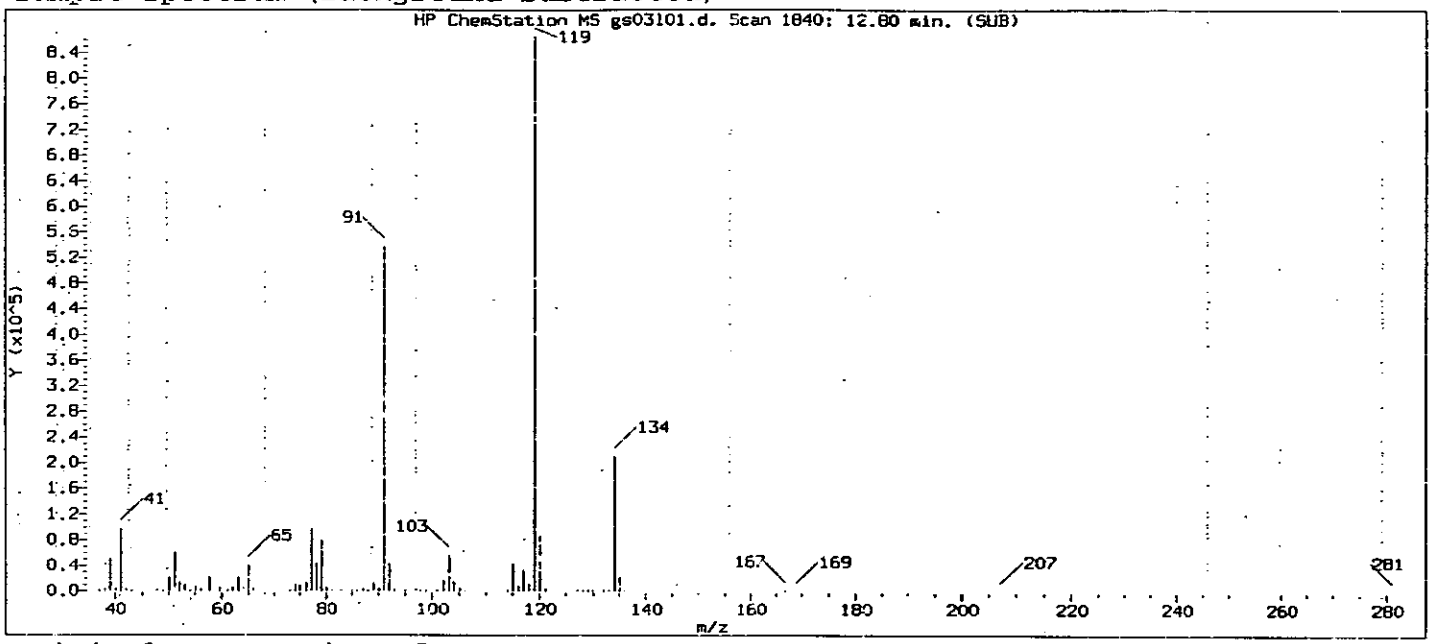
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long on 09/03/2010 at 06:57. Target 3.5 esignature user ID: jml01693

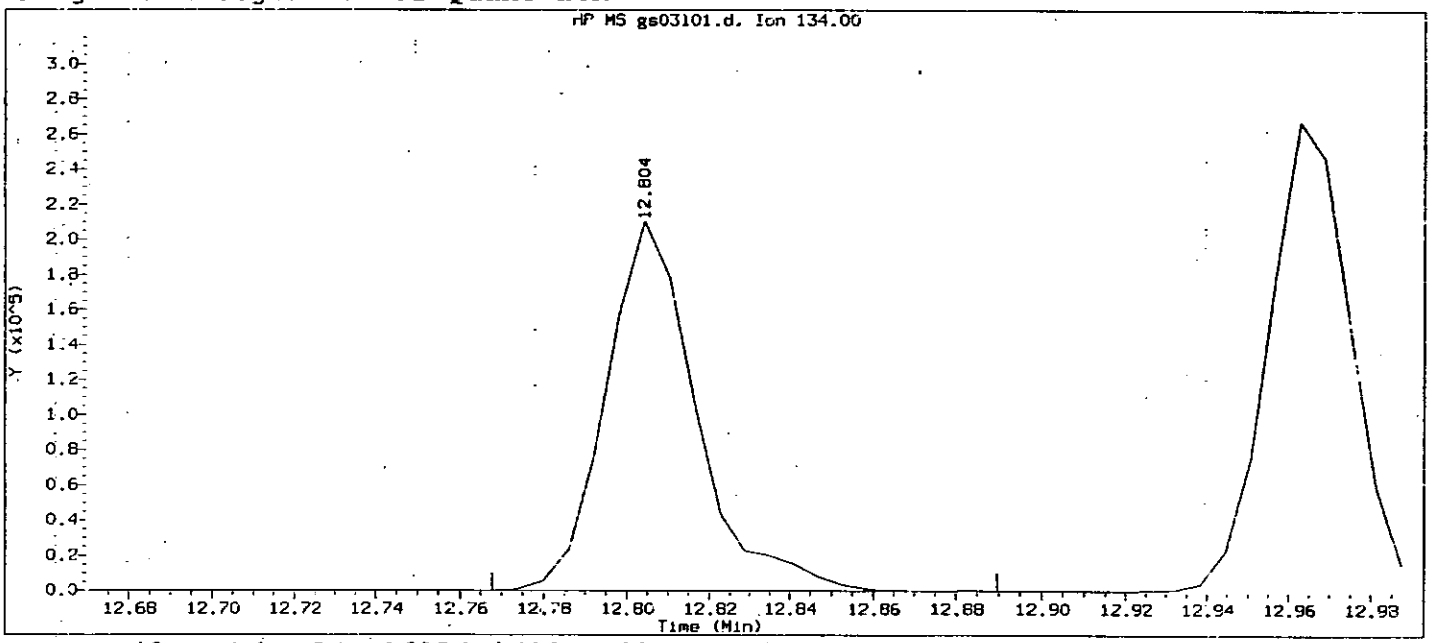
RAD36 8354

GC/MS audit/management approval: _____ 9/10/10

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10sep03a.b/gs03101.d Instrument ID: HP16334.i
Injection date and time: 03-SEP-2010 03:17 Analyst ID: SAS00403

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 03-SEP-2010 02:31
Date, time and analyst ID of latest file update: 03-Sep-2010 06:53 jm101693

Sample Name: LCSG23 Lab Sample ID: LCSG23

Compound Number : 137
Compound Name : tert-Butylbenzene
Scan Number : 1840
Retention Time (minutes): 12.804
Quant Ion : 134.00
Area : 319425
On-column Amount (ng) : 4.8620
Integration start scan : 1833 Integration stop scan: 1853
Y at integration start : 0 Y at integration end: 0

RAD36 0355

Digitally signed by Jason M. Long on 09/03/2010 at 06:57.
Target 3.5 esignature user ID: jm101693

LCDG23

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

LCDG23

Data file: /chem2/HP16334.i/10sep03a.b/gs03102.d
Injection date and time: **03-SEP-2010 03:39**
Data file Sample Info: Line: LCDG23;LCDG23;1;3;LCSD;;;
Instrument ID: **HP16334.i** Batch: **G102461AA**
Date, time and analyst ID of latest file update: 03-Sep-2010 06:56 jml01693

Blank Data file reference: **/chem2/HP16334.i/10sep03a.b/gs03b01.d**

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: **8260W25**
Calibration date and time (Last Method Edit): 03-SEP-2010 02:31
Mid Level Daily Calibration Standard Reference: **/chem2/HP16334.i/10sep03a.b/gs03c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
36) t-Butyl Alcohol-d10	4.379	(-0.012)	458	65	109426	(2)	50.00	
77) Fluorobenzene	7.829	(-0.006)	1024	96	2511034	(0)	10.00	
110) Chlorobenzene-d5	11.256	(-0.006)	1586	117	1851546	(-1)	10.00	
143) 1,4-Dichlorobenzene-d4	13.109	(0.000)	1890	152	1070906	(-1)	10.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
61) Dibromofluoromethane	(1)	6.921	(-0.001)	113	565066	9.782	98%		77 - 114
70) 1,2-Dichloroethane-d4	(1)	7.364	(-0.001)	102	110011M	10.212	102%		74 - 113
97) Toluene-d8	(2)	9.823	(0.000)	98	2437541	9.749	97%		77 - 110
126) 4-Bromofluorobenzene	(2)	12.237	(0.000)	95	808883	9.571	96%		78 - 110

M = Surrogate Standard was manually integrated

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
2) Dichlorodifluoromethane	(1)	1.989	(0.000)	85	322760	2.901	2.90			0.1
5) Chloromethane	(1)	2.166	(0.000)	50	388996	3.643	3.64			0.2
6) Vinyl Chloride	(1)	2.300	(0.001)	62	377621	3.653	3.65			0.1
9) 1,3-Butadiene	(1)	2.300	(0.001)	39	577503	3.447	3.45			0.1
10) Bromomethane	(1)	2.641	(0.001)	94	296864	3.763	3.76			0.1
11) Chloroethane	(1)	2.727	(0.001)	64	222235	3.662	3.66			0.1
13) Dichlorofluoromethane	(1)	2.971	(0.000)	67	575498	3.989	3.99			0.2
15) Trichlorofluoromethane	(1)	3.062	(-0.000)	101	460563M	3.660	3.66			0.1
17) Ethyl Ether	(1)	3.324	(0.000)	59	169343	3.992	3.99			0.1
18) Freon 123a	(1)	3.373	(-0.000)	67	351982	4.675	4.67			0.2
23) Acrolein	(4)	3.519	(-0.000)	56	151308	33.034	33.03			5
24) 1,1-Dichloroethene	(1)	3.647	(0.000)	96	289199	4.698	4.70			0.1
25) Freon 113	(1)	3.672	(-0.000)	101	296122	4.638	4.64			0.2
26) Acetone	(4)	3.714	(-0.000)	58	90298	41.752	41.75			3
27) Methyl Iodide	(1)	3.861	(0.000)	142	528917	4.702	4.70			0.1
29) Carbon Disulfide	(1)	3.970	(-0.000)	76	851749	5.081	5.08			0.4
32) Allyl Chloride	(1)	4.141	(-0.000)	41	305327	4.722	4.72			0.1
33) Methyl Acetate	(1)	4.166	(-0.000)	43	80865M	5.736	5.74			0.3
34) Methylene Chloride	(1)	4.324	(-0.000)	84	335307	4.610	4.61	0.288	B	0.2
38) t-Butyl Alcohol	(4)	4.501	(-0.002)	59	122856	44.510	44.51			4
39) Acrylonitrile	(4)	4.732	(-0.001)	53	220059M	25.842	25.84			1
41) trans-1,2-Dichloroethene	(1)	4.745	(-0.000)	96	332148	4.792	4.79			0.1
37) 1,2-Dichloroethene (Total)	(1)			96	682515	9.528	9.53			0.1
40) Methyl Tertiary Butyl Ether	(1)	4.738	(0.000)	73	635213	4.637	4.64			0.1
44) n-Hexane	(1)	5.153	(-0.000)	57	404827	4.363	4.36			0.1
45) 1,1-Dichloroethane	(1)	5.385	(-0.000)	63	548980	4.822	4.82			0.1
47) di-Isopropyl Ether	(1)	5.482	(-0.001)	45	907383	4.663	4.66			0.1
48) 2-Chloro-1,3-Butadiene	(1)	5.525	(-0.001)	53	415432	5.131	5.13			0.1
49) Ethyl t-Butyl Ether	(1)	6.013	(0.000)	59	796384	4.536	4.54			0.1
51) 2,2-Dichloropropane	(1)	6.244	(0.000)	77	425606	4.601	4.60			0.1
50) cis-1,2-Dichloroethene	(1)	6.244	(-0.000)	96	350367	4.736	4.74			0.1
52) 2-Butanone	(4)	6.269	(0.001)	43	460022	41.274	41.27			2
53) Propionitrile	(4)	6.372	(-0.000)	54	109301M	38.591	38.59			2

RAD36 8356

M = Compound was manually integrated. B = Compound detected in referenced method blank.

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Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP16334.i/10sep03a.b/gs03102.d Injection date and time: **03-SEP-2010 03:39**
Data file Sample Info. Line: LCDG23;LCDG23;1;3;LCSD;;; Instrument ID: **HP16334.i** Batch: **G102461AA**
Date, time and analyst ID of latest file update: 03-Sep-2010 06:56 jm101693

Blank Data file reference: **/chem2/HP16334.i/10sep03a.b/gs03b01.d**

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: **8260W25**
Calibration date and time (Last Method Edit): 03-SEP-2010 02:31
Mid Level Daily Calibration Standard Reference: **/chem2/HP16334.i/10sep03a.b/gs03c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
55) Methacrylonitrile	(4)	6.574(0.001)	67	491281	39.507	39.51			1
56) Bromochloromethane	(1)	6.580(-0.000)	128	146197	4.956	4.96			0.1
57) Tetrahydrofuran	(4)	6.647(0.000)	71	93943	25.866	25.87			2
58) Chloroform	(1)	6.696(-0.000)	83	562774	4.839	4.84			0.1
63) 1,1,1-Trichloroethane	(1)	6.945(-0.000)	97	487136	4.820	4.82			0.1
64) Cyclohexane	(1)	7.019(-0.000)	56	514166	4.607	4.61			0.1
65) 1,1-Dichloropropene	(1)	7.171(-0.000)	75	421745	4.641	4.64			0.1
66) Carbon Tetrachloride	(1)	7.171(-0.000)	117	370060	4.190	4.19			0.1
67) Isobutyl Alcohol	(4)	7.348(0.001)	41	104865M	124.406	124.41			10
72) Benzene	(1)	7.458(-0.000)	78	1280342	4.786	4.79			0.1
74) 1,2-Dichloroethane	(1)	7.488(-0.000)	62	305537	4.806	4.81			0.1
75) t-Amyl Methyl Ether	(1)	7.598(-0.000)	73	712877	4.686	4.69			0.1
76) n-Heptane	(1)	7.805(-0.000)	43	423481M	4.423	4.42			0.2
81) n-Butanol	(4)	8.244(0.001)	56	165997	251.722	251.72			20
83) Trichloroethene	(1)	8.311(0.000)	95	387945	5.273	5.27			0.1
84) Methylcyclohexane	(1)	8.555(0.000)	83	570053	4.932	4.93			0.1
85) 1,2-Dichloropropane	(1)	8.610(0.000)	63	325645	4.920	4.92			0.1
88) Dibromomethane	(1)	8.768(-0.000)	93	147851	5.024	5.02			0.1
89) 1,4-Dioxane	(4)	8.786(0.002)	88	29903	153.663	153.66			20
87) Methyl Methacrylate	(4)	8.768(0.002)	69	118296	4.756	4.76			0.1
90) Bromodichloromethane	(1)	8.969(0.000)	83	341474	4.531	4.53			0.1
91) 2-Nitropropane	(4)	9.268(0.004)	41	29158	4.464	4.46			1
94) cis-1,3-Dichloropropene	(1)	9.524(0.000)	75	326953	4.154	4.15			0.1
96) 4-Methyl-2-Pentanone	(1)	9.701(0.000)	43	789870	25.224	25.22			1
101) Toluene	(2)	9.902(-0.000)	92	833771	4.621	4.62			0.1
102) trans-1,3-Dichloropropene	(2)	10.140(-0.000)	75	256475	4.035	4.03			0.1
103) Ethyl Methacrylate	(2)	10.231(-0.000)	69	238098	5.429	5.43			0.1
104) 1,1,2-Trichloroethane	(2)	10.329(-0.000)	97	217795	5.142	5.14			0.1
105) Tetrachloroethene	(2)	10.469(-0.000)	166	396355	4.847	4.85			0.1
106) 1,3-Dichloropropane	(2)	10.500(-0.000)	76	353706	4.938	4.94			0.1
107) 2-Hexanone	(2)	10.579(-0.000)	43	542435	25.893	25.89			1
108) Dibromochloromethane	(2)	10.719(0.000)	129	200383	4.109	4.11			0.1
109) 1,2-Dibromoethane	(2)	10.835(-0.000)	107	189906	4.968	4.97			0.1
112) Chlorobenzene	(2)	11.280(-0.000)	112	983176	4.852	4.85			0.1
113) 1,1,1,2-Tetrachloroethane	(2)	11.353(0.000)	131	303939	4.658	4.66			0.1
114) Ethylbenzene	(2)	11.371(0.000)	91	1622366	4.707	4.71			0.1
117) m+p-Xylene	(2)	11.469(0.000)	106	1269895	9.354	9.35			0.1
115) Xylene (Total)	(2)		106	1930035	14.062	14.06			0.1
118) o-Xylene	(2)	11.810(0.000)	106	640140	4.710	4.71			0.1
119) Styrene	(2)	11.822(0.000)	104	953905	4.671	4.67			0.1
120) Bromoform	(2)	11.987(0.000)	173	87263	3.344	3.34			0.1
121) Isopropylbenzene	(2)	12.103(0.000)	105	1623751	4.629	4.63			0.1
128) 1,1,2,2-Tetrachloroethane	(3)	12.341(-0.000)	83	253178M	5.268	5.27			0.1
129) Bromobenzene	(3)	12.365(-0.000)	156	401651	4.825	4.82			0.1
130) trans-1,4-Dichloro-2-Butene	(4)	12.390(0.005)	53	6999A	5.743	5.74			1
131) 1,2,3-Trichloropropane	(3)	12.383(-0.000)	110	69820	5.085	5.08			0.3
132) n-Propylbenzene	(3)	12.426(-0.000)	91	1973458	4.596	4.60			0.1
133) 2-Chlorotoluene	(3)	12.505(-0.000)	126	407262	4.720	4.72			0.1
135) 4-Chlorotoluene	(3)	12.585(-0.000)	126	419783	4.768	4.77			0.1
134) 1,3,5-Trimethylbenzene	(3)	12.554(-0.000)	105	1376884	4.608	4.61			0.1
138) Pentachloroethane	(3)	12.834(-0.000)	167	187884	3.603	3.60			0.2
137) tert-Butylbenzene	(3)	12.804(0.000)	134	301681M	4.497	4.50			0.1
139) 1,2,4-Trimethylbenzene	(3)	12.841(-0.000)	105	1473207	4.587	4.59			0.1
140) sec-Butylbenzene	(3)	12.962(0.000)	105	1834828	4.610	4.61			0.1
142) 1,3-Dichlorobenzene	(3)	13.066(-0.000)	146	888534	4.941	4.94			0.1

RAD36 8357

M = Compound was manually integrated. A = User selected an alternate peak.

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Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

LCDG23

Data file: /chem2/HP16334.i/10sep03a.b/gs03102.d
Injection date and time: **03-SEP-2010 03:39**
Data file Sample Info. Line: LCDG23;LCDG23;1;3;LCSD;;;
Instrument ID: **HP16334.i** Batch: **G102461AA**
Date, time and analyst ID of latest file update: 03-Sep-2010 06:56 jml01693

Blank Data file reference: **/chem2/HP16334.i/10sep03a.b/gs03b01.d**

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: **8260W25**
Calibration date and time (Last Method Edit): 03-SEP-2010 02:31
Mid Level Daily Calibration Standard Reference: **/chem2/HP16334.i/10sep03a.b/gs03c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
141) p-Isopropyltoluene	(3)	13.060(-0.000)	119	1629352	4.580	4.58			0.1
144) 1,4-Dichlorobenzene	(3)	13.127(-0.000)	146	894614	4.839	4.84			0.1
145) 1,2,3-Trimethylbenzene	(3)	13.152(-0.000)	120	650829	4.55[illegible]	4.55			0.1
146) Benzyl Chloride	(3)	13.225(-0.000)	126	66915M	3.692	3.69			0.1
147) n-Butylbenzene	(3)	13.359(-0.000)	92	829158	4.711	4.71			0.1
148) 1,2-Dichlorobenzene	(3)	13.402(-0.000)	146	786798	4.969	4.97			0.1
150) 1,2-Dibromo-3-Chloropropane	(4)	13.944(0.008)	155	28578	4.742	4.74			0.2
153) 1,2,4-Trichlorobenzene	(3)	14.493(-0.000)	180	597185	4.778	4.78			0.1
154) Hexachlorobutadiene	(3)	14.584(-0.000)	225	327321	4.858	4.86			0.1
155) Naphthalene	(3)	14.663(-0.000)	128	822244	4.834	4.83			0.1
156) 1,2,3-Trichlorobenzene	(3)	14.822(-0.000)	180	468358	4.786	4.79			0.1

M = Compound was manually integrated.

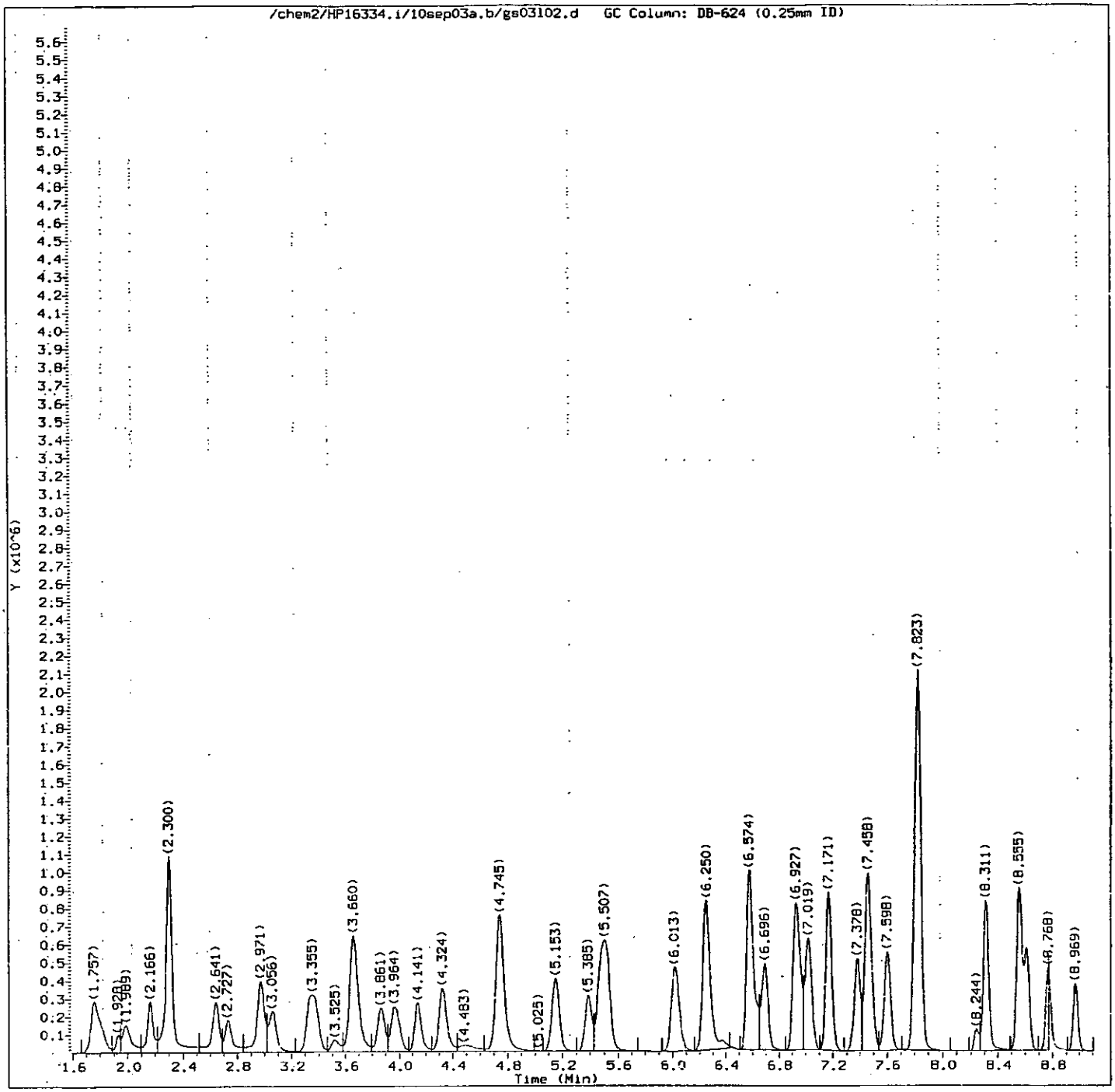
Total number of targets = 99

Comments: _____

RAD36 0358

Digitally signed by Jason M. Long on 09/03/2010 at 06:58. Target 3.5 esignature user ID: jml01693

Auditor: _____ Date: 9/10/10



Total Ion Chromatogram (TIC)

Target Revision 3.5

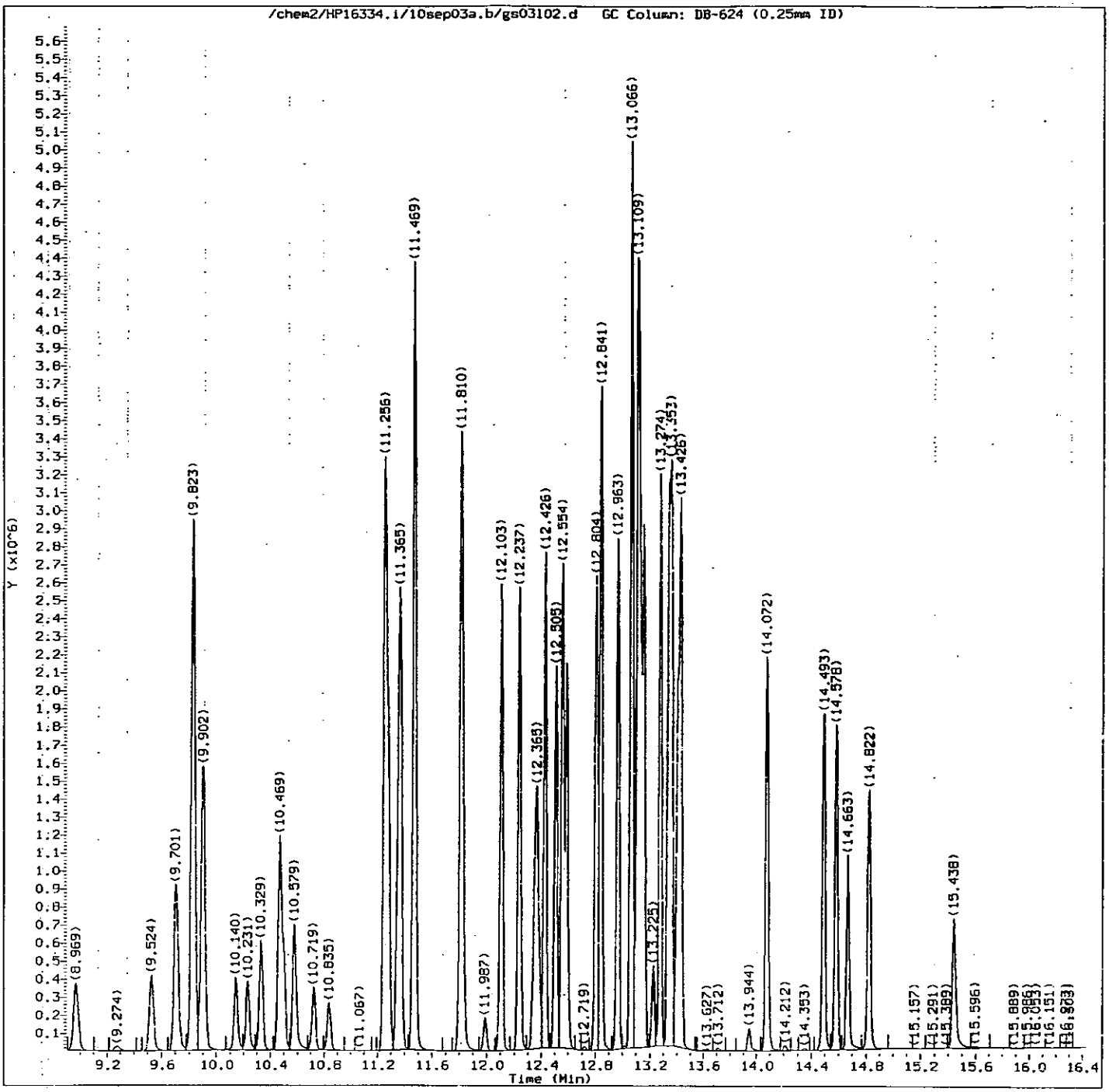
Data File: /chem2/HP16334.i/10sep03a.b/gs03102.d Instrument ID: HP16334.i
Injection date and time: 03-SEP-2010 03:39 Analyst ID: SAS00403

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 03-SEP-2010 02:31
Date, time and analyst ID of latest file update: 03-Sep-2010 06:56 jml01693

Sample Name: LCDG23 Lab Sample ID: LCDG23

RAD36 0359

Digitally signed by Jason M. Long
on 09/03/2010 at 06:57.
Target 3.5 esignature user ID: jml01693



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP16334.i/10sep03a.b/gs03102.d Instrument ID: HP16334.i
Injection date and time: 03-SEP-2010 03:39 Analyst ID: SAS00403

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 03-SEP-2010 02:31
Date, time and analyst ID of latest file update: 03-Sep-2010 06:56 jml01693

Sample Name: LCDG23 Lab Sample ID: LCDG23

RAD36 0368

Digitally signed by Jason M. Long
on 09/03/2010 at 06:58.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/10sep03a.b/gs03102.d Instrument ID: HP16334.i
Injection date and time: 03-SEP-2010 03:39 Analyst ID: SAS00403

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 03-SEP-2010 02:31
Date, time and analyst ID of latest file update: 03-Sep-2010 06:56 jml01693

Sample Name: LCDG23 Lab Sample ID: LCDG23

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
2) Dichlorodifluoromethane	(1)	1.989	85	322760	2.901
5) Chloromethane	(1)	2.166	50	388996	3.643
6) Vinyl Chloride	(1)	2.300	62	377621	3.653
9) 1,3-Butadiene	(1)	2.300	39	577503	3.447
10) Bromomethane	(1)	2.641	94	296864	3.763
11) Chloroethane	(1)	2.727	64	222235	3.662
13) Dichlorofluoromethane	(1)	2.971	67	575498	3.989
15) Trichlorofluoromethane	(1)	3.062	101	460563M	3.660
17) Ethyl Ether	(1)	3.324	59	169343	3.992
18) Freon 123a	(1)	3.373	67	351982	4.675
23) Acrolein	(4)	3.519	56	151308	33.034
24) 1,1-Dichloroethene	(1)	3.647	96	289199	4.698
25) Freon 113	(1)	3.672	101	296122	4.638
26) Acetone	(4)	3.714	58	90298	41.752
27) Methyl Iodide	(1)	3.861	142	528917	4.702
29) Carbon Disulfide	(1)	3.970	76	851749	5.081
32) Allyl Chloride	(1)	4.141	41	305327	4.722
33) Methyl Acetate	(1)	4.166	43	80865M	5.736
34) Methylene Chloride	(1)	4.324	84	335307	4.610
36)*t-Butyl Alcohol-d10	(4)	4.379	65	109426	50.000
38) t-Butyl Alcohol	(4)	4.501	59	122856	44.510
39) Acrylonitrile	(4)	4.732	53	220059M	25.842
40) Methyl Tertiary Butyl Ether	(1)	4.739	73	635213	4.637
41) trans-1,2-Dichloroethene	(1)	4.745	96	332148	4.792
37) 1,2-Dichloroethene (Total)	(1)		96	682515	9.528
44) n-Hexane	(1)	5.153	57	404827	4.363
45) 1,1-Dichloroethane	(1)	5.385	63	548980	4.822
47) di-Isopropyl Ether	(1)	5.482	45	907383	4.663
48) 2-Chloro-1,3-Butadiene	(1)	5.525	53	415432	5.131
49) Ethyl t-Butyl Ether	(1)	6.013	59	796384	4.536
51) 2,2-Dichloropropane	(1)	6.244	77	425606	4.601
50) cis-1,2-Dichloroethene	(1)	6.244	96	350367	4.736
52) 2-Butanone	(4)	6.269	43	460022	41.274
53) Propionitrile	(4)	6.372	54	109301M	38.591
55) Methacrylonitrile	(4)	6.574	67	491281	39.507
56) Bromochloromethane	(1)	6.580	128	146197	4.956
57) Tetrahydrofuran	(4)	6.647	71	93943	25.866
58) Chloroform	(1)	6.696	83	562774	4.839
61)$Dibromofluoromethane	(1)	6.921	113	565066	9.782

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

RAD36 0361

Digitally signed by Jason M. Long
on 09/03/2010 at 06:58.
Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/10sep03a.b/gs03102.d Instrument ID: HP16334.i
Injection date and time: 03-SEP-2010 03:39 Analyst ID: SAS00403

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 03-SEP-2010 02:31
Date, time and analyst ID of latest file update: 03-Sep-2010 06:56 jml01693

Sample Name: LCDG23 Lab Sample ID: LCDG23

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
63) 1,1,1-Trichloroethane	(1)	6.945	97	487136	4.820
64) Cyclohexane	(1)	7.019	56	514166	4.607
65) 1,1-Dichloropropene	(1)	7.171	75	421745	4.641
66) Carbon Tetrachloride	(1)	7.171	117	370060	4.190
67) Isobutyl Alcohol	(4)	7.348	41	104865M	124.406
70)$1,2-Dichloroethane-d4	(1)	7.384	102	110011M	10.212
72) Benzene	(1)	7.458	78	1280342	4.786
74) 1,2-Dichloroethane	(1)	7.488	62	305537	4.806
75) t-Amyl Methyl Ether	(1)	7.598	73	712877	4.686
76) n-Heptane	(1)	7.805	43	423481M	4.423
77)*Fluorobenzene	(1)	7.829	96	2511034	10.000
81) n-Butanol	(4)	8.244	56	165997	251.722
83) Trichloroethene	(1)	8.311	95	387945	5.273
84) Methylcyclohexane	(1)	8.555	83	570053	4.932
85) 1,2-Dichloropropane	(1)	8.610	63	325645	4.920
87) Methyl Methacrylate	(4)	8.768	69	118296	4.756
88) Dibromomethane	(1)	8.768	93	147851	5.024
89) 1,4-Dioxane	(4)	8.787	88	29903	153.663
90) Bromodichloromethane	(1)	8.969	83	341474	4.531
91) 2-Nitropropane	(4)	9.268	41	29158	4.464
94) cis-1,3-Dichloropropene	(1)	9.524	75	326953	4.154
96) 4-Methyl-2-Pentanone	(1)	9.701	43	789870	25.224
97)$Toluene-d8	(2)	9.823	98	2437541	9.749
101) Toluene	(2)	9.902	92	833771	4.621
102) trans-1,3-Dichloropropene	(2)	10.140	75	256475	4.035
103) Ethyl Methacrylate	(2)	10.231	69	238098	5.429
104) 1,1,2-Trichloroethane	(2)	10.329	97	217795	5.142
105) Tetrachloroethene	(2)	10.469	166	396355	4.847
106) 1,3-Dichloropropane	(2)	10.500	76	353706	4.938
107) 2-Hexanone	(2)	10.579	43	542435	25.893
108) Dibromochloromethane	(2)	10.719	129	200383	4.109
109) 1,2-Dibromoethane	(2)	10.835	107	189906	4.968
110)*Chlorobenzene-d5	(2)	11.256	117	1851546	10.000
112) Chlorobenzene	(2)	11.280	112	983176	4.852
113) 1,1,1,2-Tetrachloroethane	(2)	11.353	131	303939	4.658
114) Ethylbenzene	(2)	11.371	91	1622366	4.707
117) m+p-Xylene	(2)	11.469	106	1289895	9.354
115) Xylene (Total)	(2)		106	1930035	14.063
118) o-Xylene	(2)	11.810	106	640140	4.710

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

RAD36 0362

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Target 3.5 esignature user ID: jml01693

Quant Report

Target Revision 3.5

Data File: /chem2/HP16334.i/10sep03a.b/gs03102.d Instrument ID: HP16334.i
Injection date and time: 03-SEP-2010 03:39 Analyst ID: SAS00403

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 03-SEP-2010 02:31
Date, time and analyst ID of latest file update: 03-Sep-2010 06:56 jml01693

Sample Name: LCDG23 Lab Sample ID: LCDG23

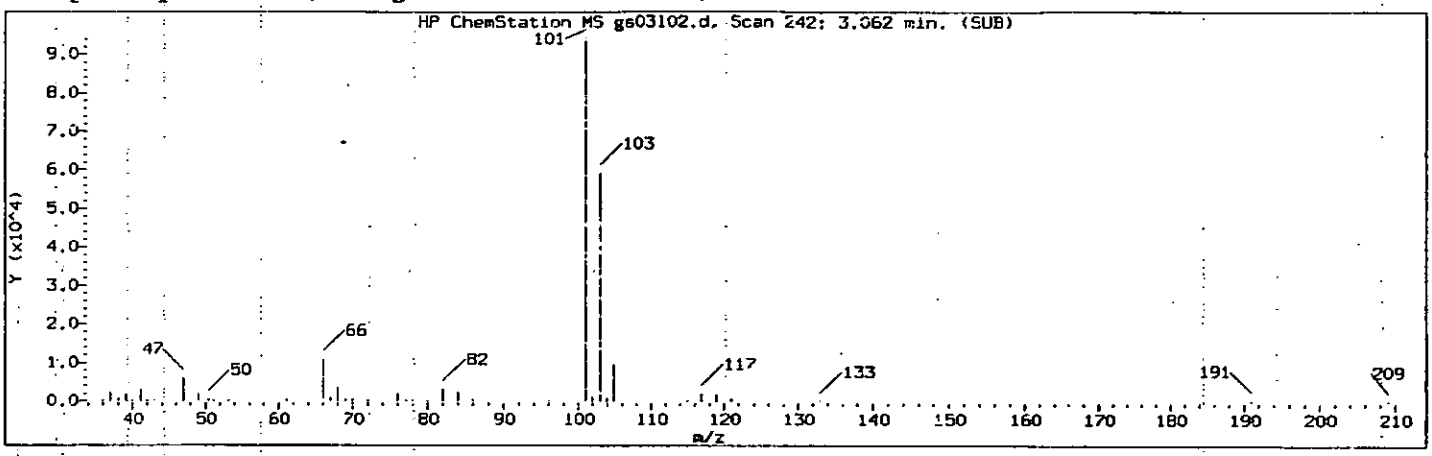
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
119) Styrene	(2)	11.823	104	953905	4.671
120) Bromoform	(2)	11.987	173	87263	3.344
121) Isopropylbenzene	(2)	12.103	105	1623751	4.629
126)$4-Bromofluorobenzene	(2)	12.237	95	808883	9.571
128) 1,1,2,2-Tetrachloroethane	(3)	12.341	83	253178M	5.268
129) Bromobenzene	(3)	12.365	156	401651	4.825
131) 1,2,3-Trichloropropane	(3)	12.383	110	69820	5.085
130) trans-1,4-Dichloro-2-Butene	(4)	12.390	53	6999A	5.743
132) n-Propylbenzene	(3)	12.426	91	1973458	4.596
133) 2-Chlorotoluene	(3)	12.505	126	407262	4.720
134) 1,3,5-Trimethylbenzene	(3)	12.554	105	1376884	4.608
135) 4-Chlorotoluene	(3)	12.585	126	419783	4.768
137) tert-Butylbenzene	(3)	12.804	134	301681M	4.497
138) Pentachloroethane	(3)	12.835	167	187884	3.603
139) 1,2,4-Trimethylbenzene	(3)	12.841	105	1473207	4.587
140) sec-Butylbenzene	(3)	12.963	105	1834828	4.610
141) p-Isopropyltoluene	(3)	13.060	119	1629352	4.580
142) 1,3-Dichlorobenzene	(3)	13.066	146	888534	4.941
143)*1,4-Dichlorobenzene-d4	(3)	13.109	152	1070906	10.000
144) 1,4-Dichlorobenzene	(3)	13.127	146	894614	4.839
145) 1,2,3-Trimethylbenzene	(3)	13.152	120	650829	4.553
146) Benzyl Chloride	(3)	13.225	126	66915M	3.692
147) n-Butylbenzene	(3)	13.359	92	829158	4.711
148) 1,2-Dichlorobenzene	(3)	13.402	146	786798	4.969
150) 1,2-Dibromo-3-Chloropropane	(4)	13.944	155	28578	4.742
153) 1,2,4-Trichlorobenzene	(3)	14.493	180	597185	4.778
154) Hexachlorobutadiene	(3)	14.584	225	327321	4.858
155) Naphthalene	(3)	14.663	128	822244	4.834
156) 1,2,3-Trichlorobenzene	(3)	14.822	180	468358	4.786

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

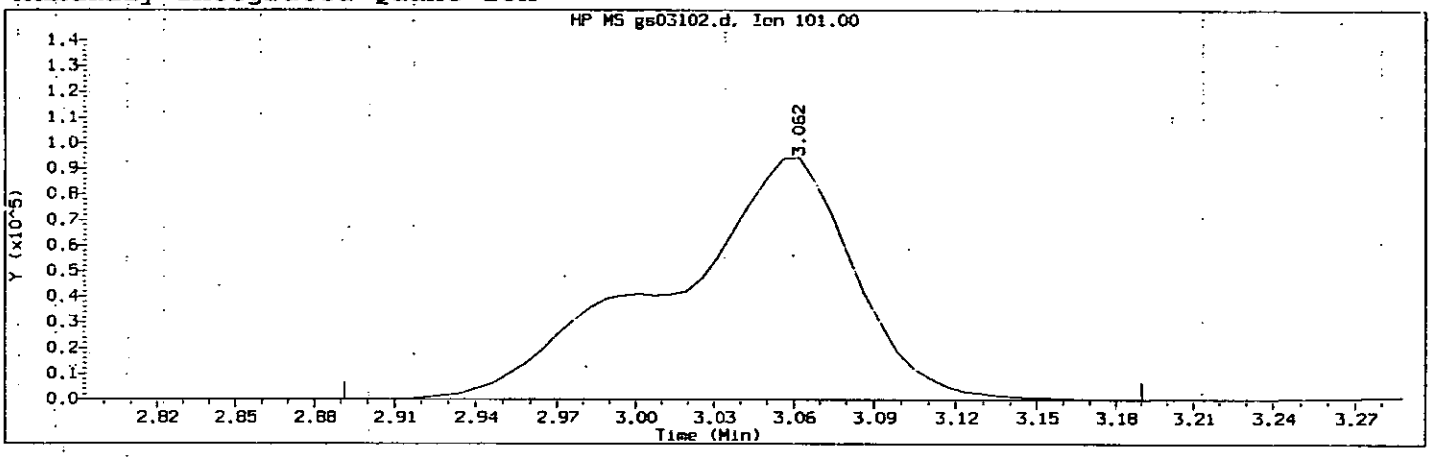
RAD36 8363

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on 09/03/2010 at 06:58.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10sep03a.b/gs03102.d Instrument ID: HP16334.i
Injection date and time: 03-SEP-2010 03:39 Analyst ID: SAS00403

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 03-SEP-2010 02:31
Date, time and analyst ID of latest file update: 03-Sep-2010 06:56 jm101693

Sample Name: LCDG23 Lab Sample ID: LCDG23

Compound Number	: 15		
Compound Name	: Trichlorofluoromethane		
Scan Number	: 242		
Retention Time (minutes)	: 3.062		
Quant Ion	: 101.00		
Area (flag)	: 460563M		
On-Column Amount (ng)	: 3.6597		
Integration start scan	: 213	Integration stop scan:	262
Y at integration start	: 0	Y at integration end:	0

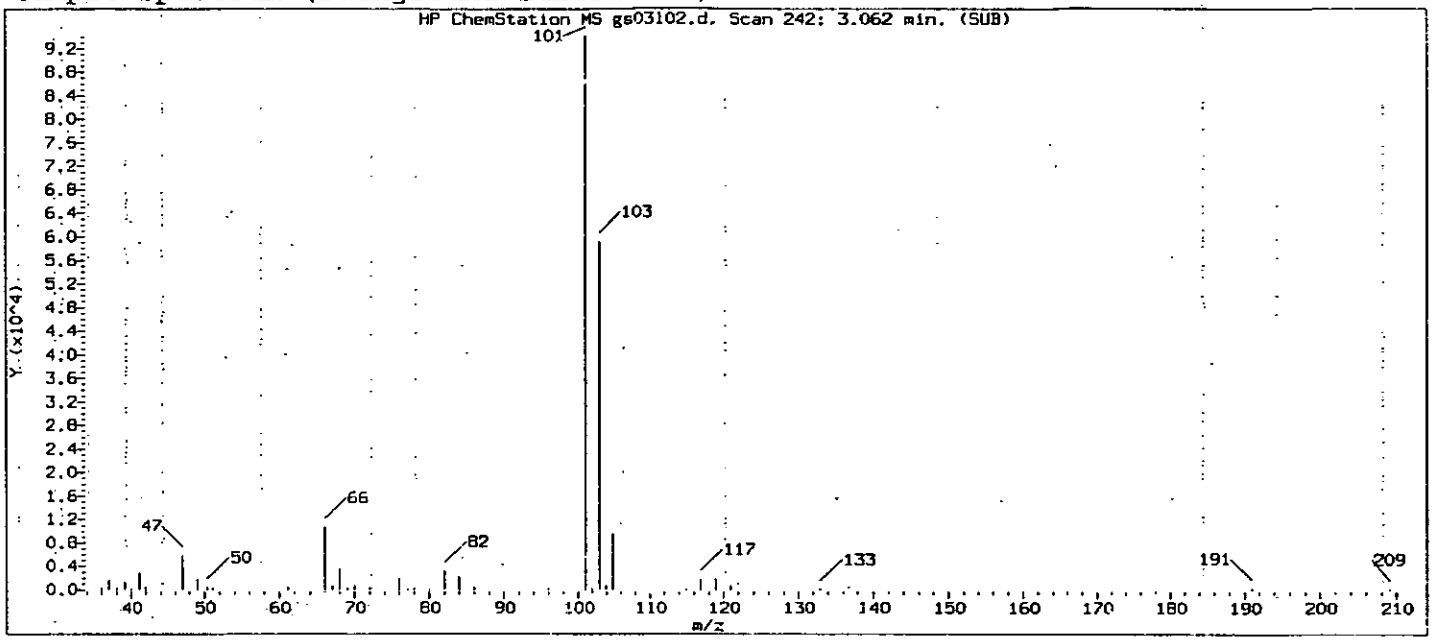
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long on 09/03/2010 at 06:58. Target 3.5 esignature user ID: jm101693

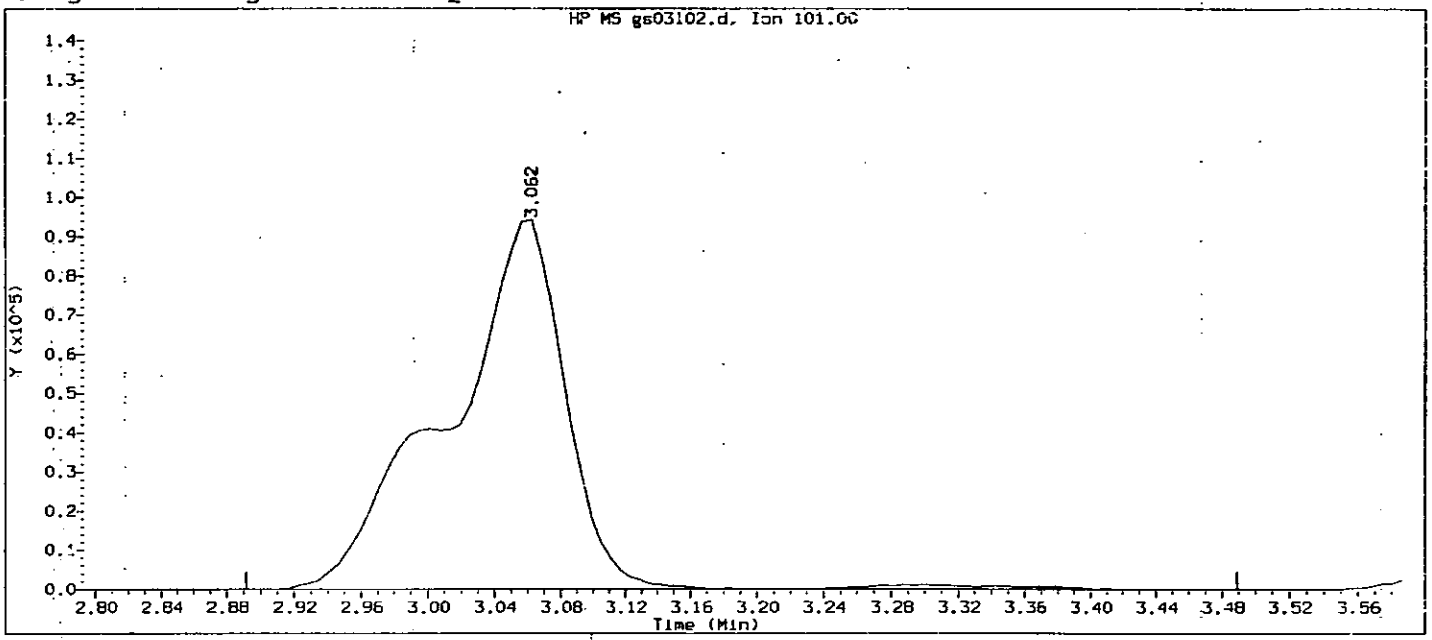
RAD36 0364

GC/MS audit/management approval: _____ 9/10/10

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10sep03a.b/gs03102.d Instrument ID: HP16334.i
Injection date and time: 03-SEP-2010 03:39 Analyst ID: SAS00403

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 03-SEP-2010 02:31
Date, time and analyst ID of latest file update: 03-Sep-2010 06:53 jm101693

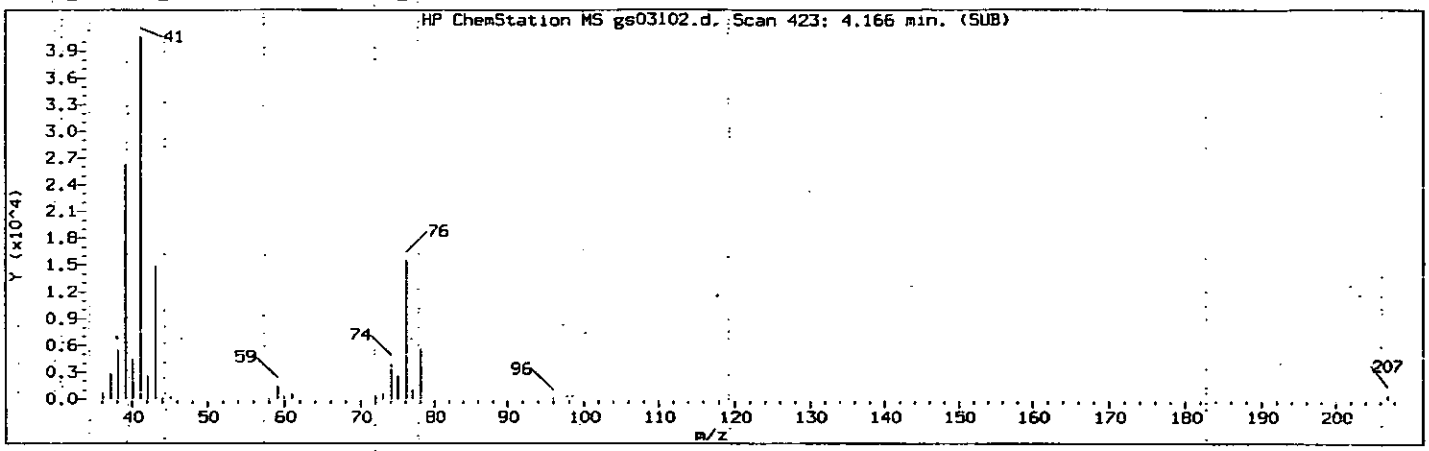
Sample Name: LCDG23 Lab Sample ID: LCDG23

Compound Number : 15
Compound Name : Trichlorofluoromethane
Scan Number : 242
Retention Time (minutes): 3.062
Quant Ion : 101.00
Area : 468716
On-column Amount (ng) : 3.7245
Integration start scan : 213 Integration stop scan: 311
Y at integration start : 0 Y at integration end: 0

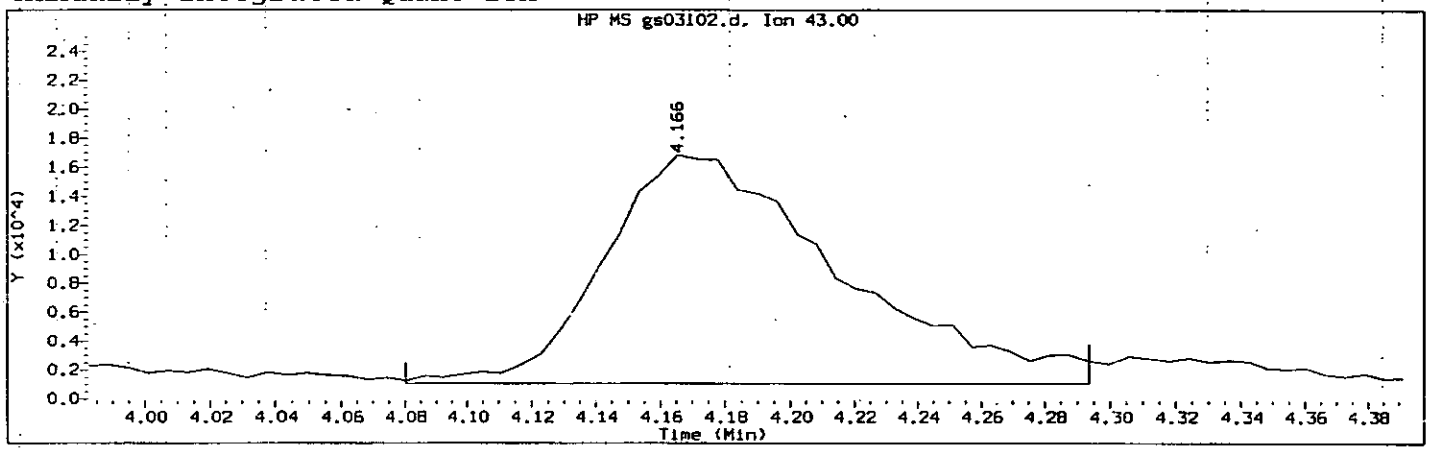
RAD36 8365

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Target 3.5 esignature user ID: jm101693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10sep03a.b/gs03102.d Instrument ID: HP16334.i
Injection date and time: 03-SEP-2010 03:39 Analyst ID: SAS00403

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 03-SEP-2010 02:31
Date, time and analyst ID of latest file update: 03-Sep-2010 06:56 jml01693

Sample Name: LCDG23 Lab Sample ID: LCDG23

Compound Number	: 33		
Compound Name	: Methyl Acetate		
Scan Number	: 423		
Retention Time (minutes)	: 4.166		
Quant Ion	: 43.00		
Area (flag)	: 80865M		
On-Column Amount (ng)	: 5.7361		
Integration start scan	: 408	Integration stop scan:	443
Y at integration start	: 1075	Y at integration end:	1075

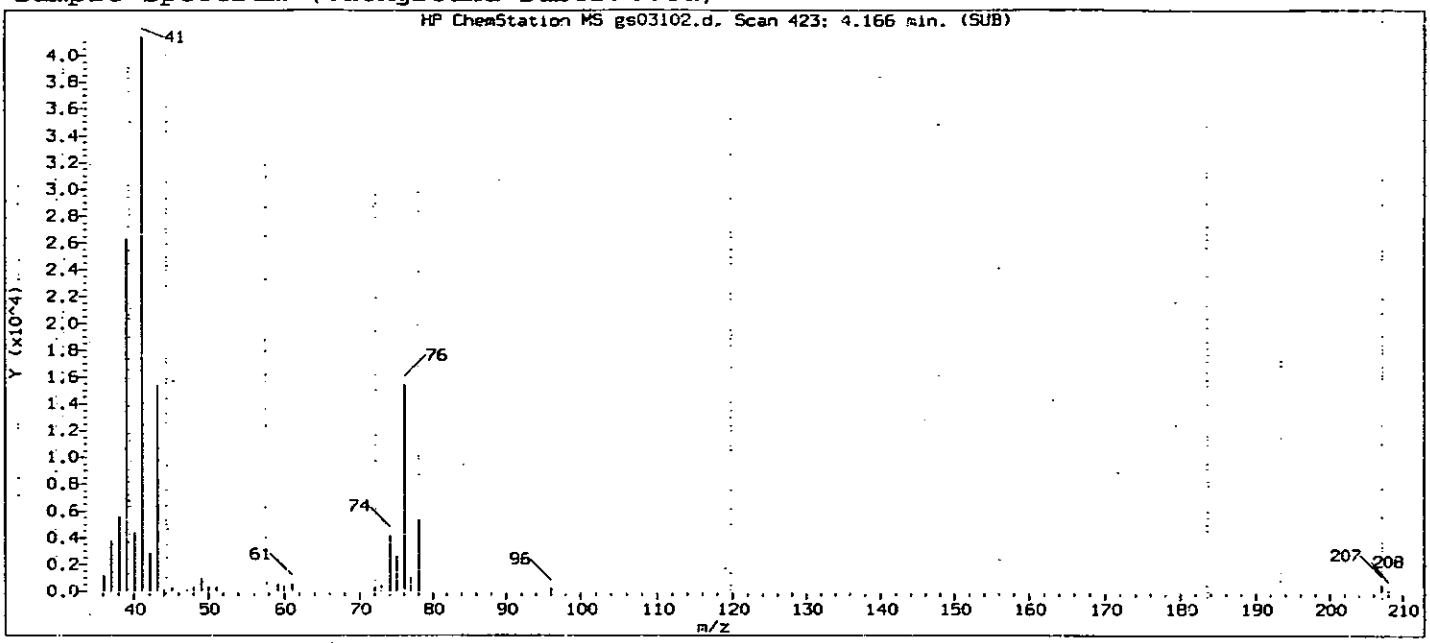
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long
on 09/03/2010 at 06:58.
Target 3.5 esignature user ID: jml01693

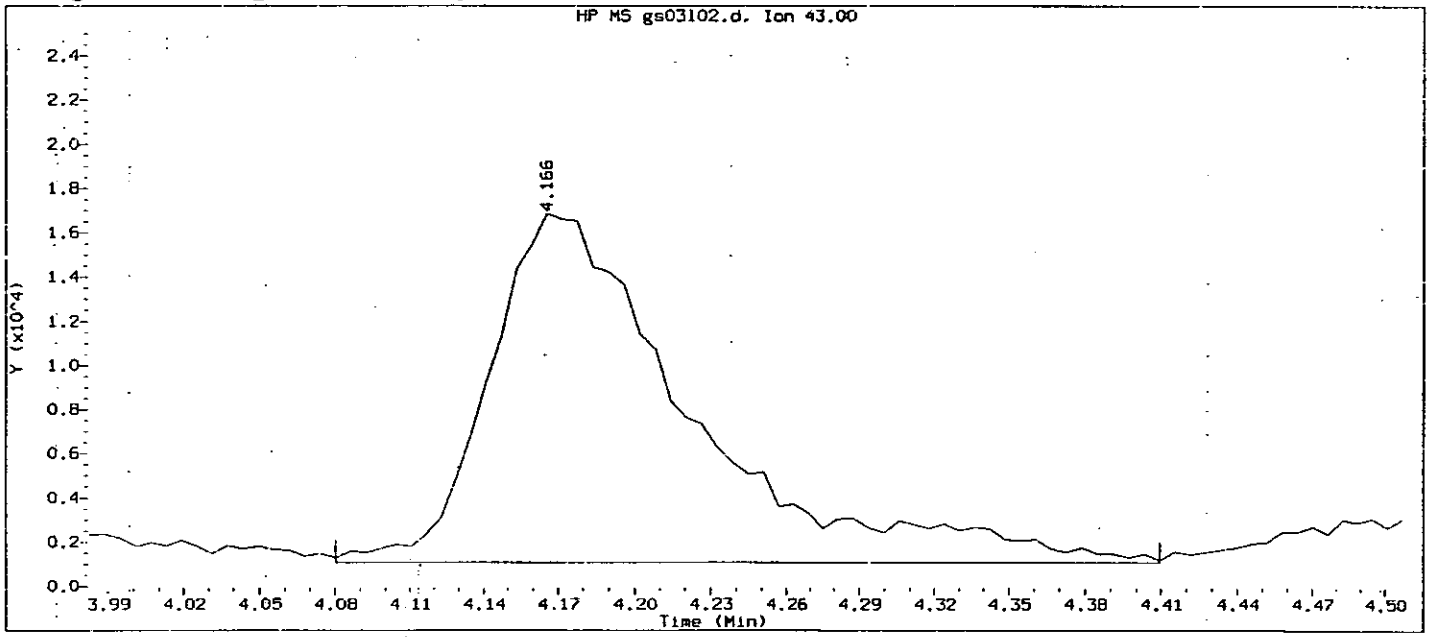
RAD36 8366

GC/MS audit/management approval: _____ 9/10/10

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10sep03a.b/gs03102.d Instrument ID: HP16334.i
Injection date and time: 03-SEP-2010 03:39 Analyst ID: SAS00403

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 03-SEP-2010 02:31
Date, time and analyst ID of latest file update: 03-Sep-2010 06:53 jml01693

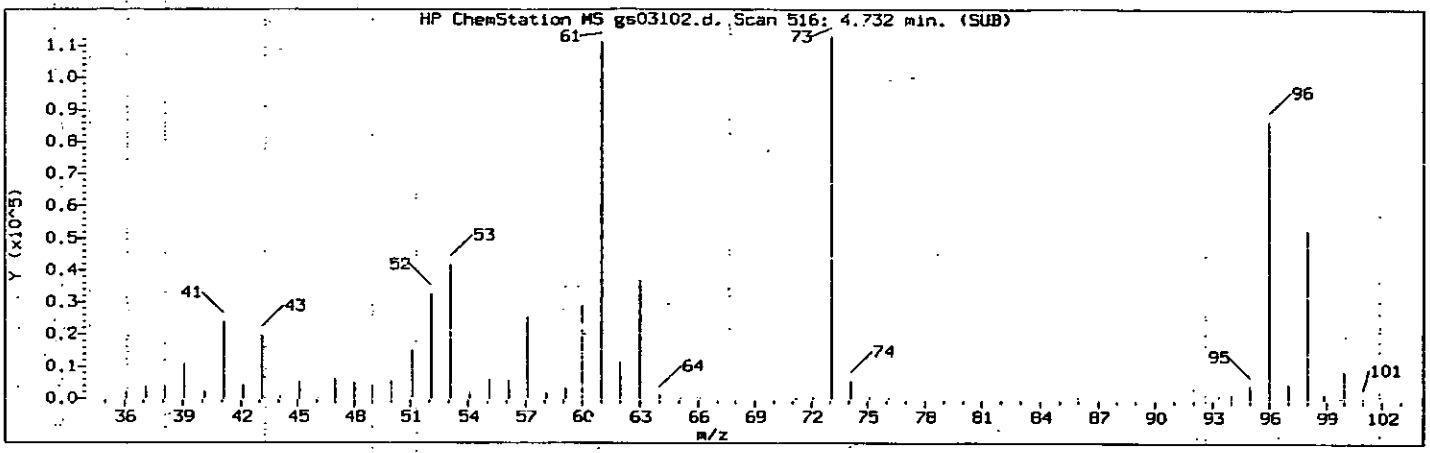
Sample Name: LCDG23 Lab Sample ID: LCDG23

Compound Number : 33
Compound Name : Methyl Acetate
Scan Number : 423
Retention Time (minutes): 4.166
Quant Ion : 43.00
Area : 87855
On-column Amount (ng) : 6.1920
Integration start scan : 408 Integration stop scan: 462
Y at integration start : 1075 Y at integration end: 1075

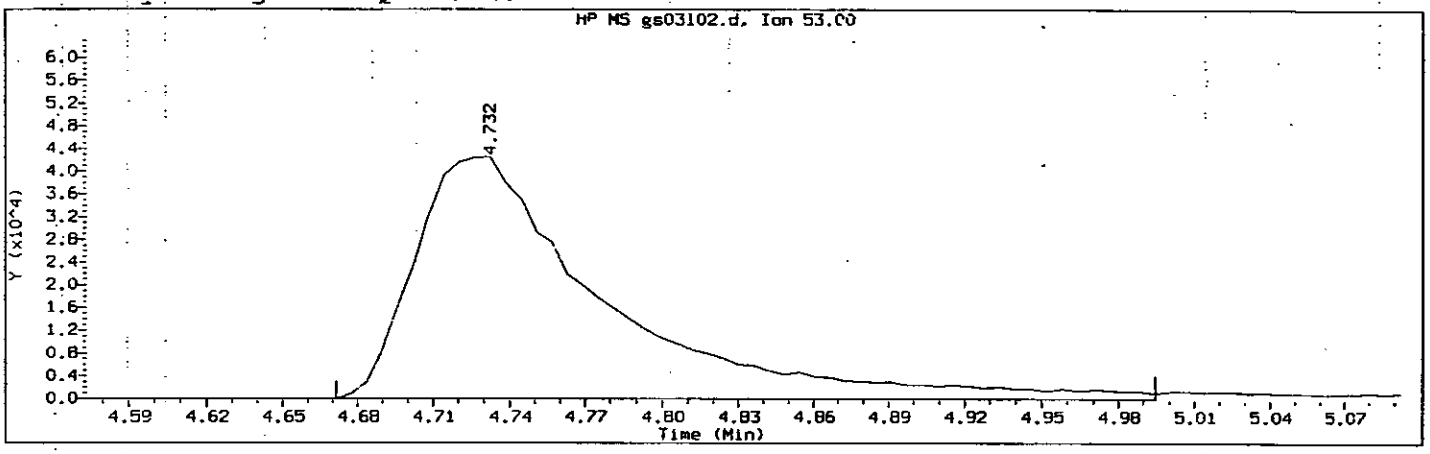
RAD36 8367

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Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10sep03a.b/gs03102.d Instrument ID: HP16334.i
Injection date and time: 03-SEP-2010 03:39 Analyst ID: SAS00403

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 03-SEP-2010 02:31
Date, time and analyst ID of latest file update: 03-Sep-2010 06:56 jml01693

Sample Name: LCDG23 Lab Sample ID: LCDG23

Compound Number	: 39		
Compound Name	: Acrylonitrile		
Scan Number	: 516		
Retention Time (minutes)	: 4.732		
Quant Ion	: 53.00		
Area (flag)	: 220059M		
On-Column Amount (ng)	: 25.8420		
Integration start scan	: 505	Integration stop scan:	558
Y at integration start	: 0	Y at integration end:	0

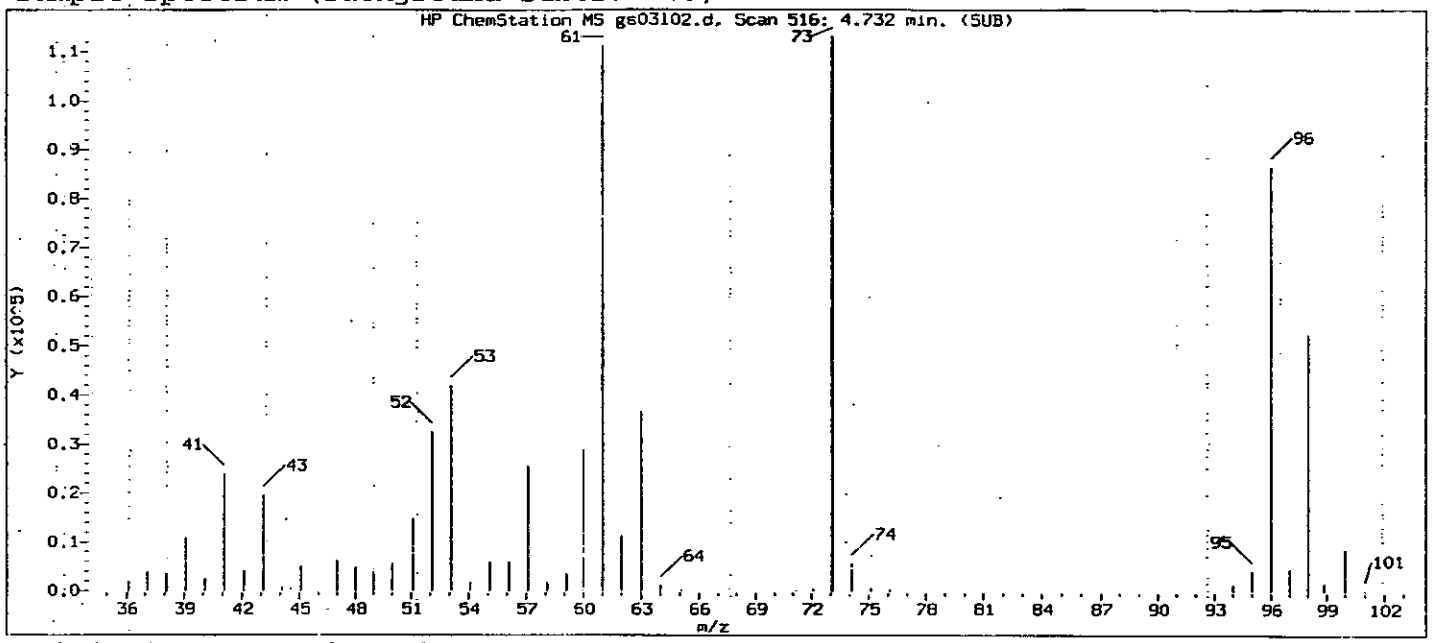
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long on 09/03/2010 at 06:58. Target 3.5 esignature user ID: jml01693

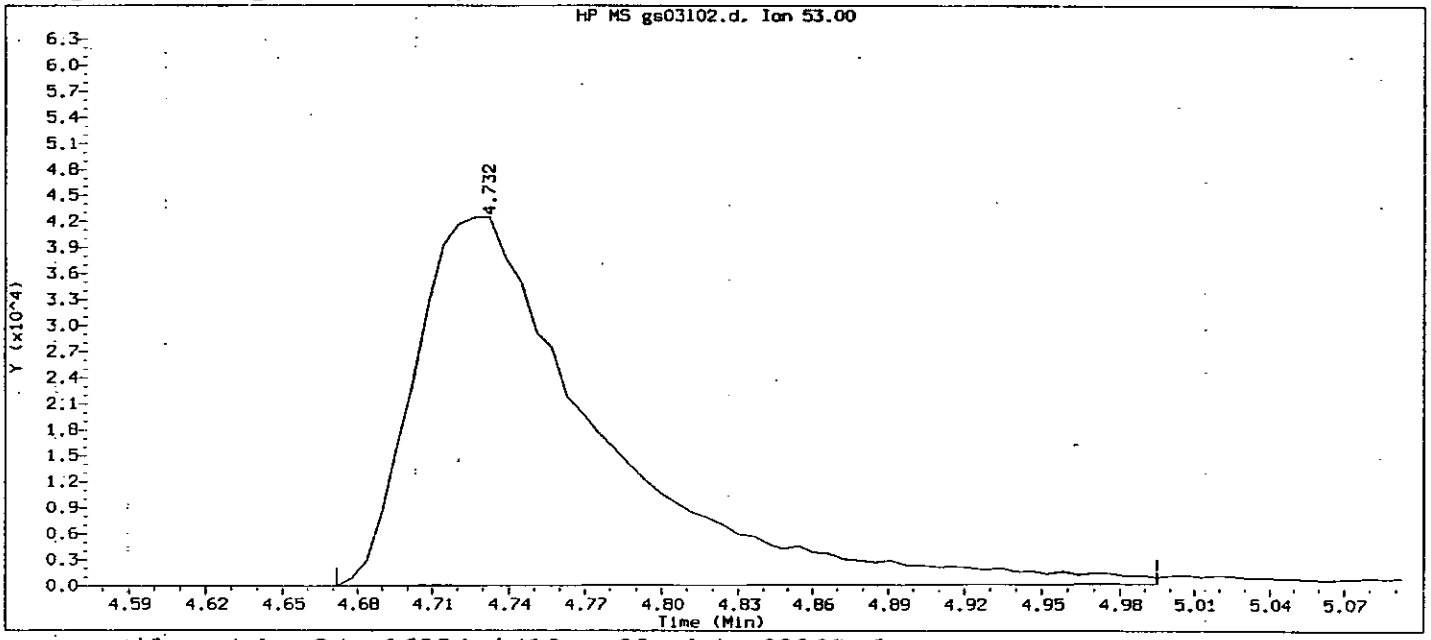
RAD36 0368

GC/MS audit/management approval: _____ 9/10/10

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10sep03a.b/gs03102.d Instrument ID: HP16334.i
Injection date and time: 03-SEP-2010 03:39 Analyst ID: SAS00403

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 03-SEP-2010 02:31
Date, time and analyst ID of latest file update: 03-Sep-2010 06:53 jml01693

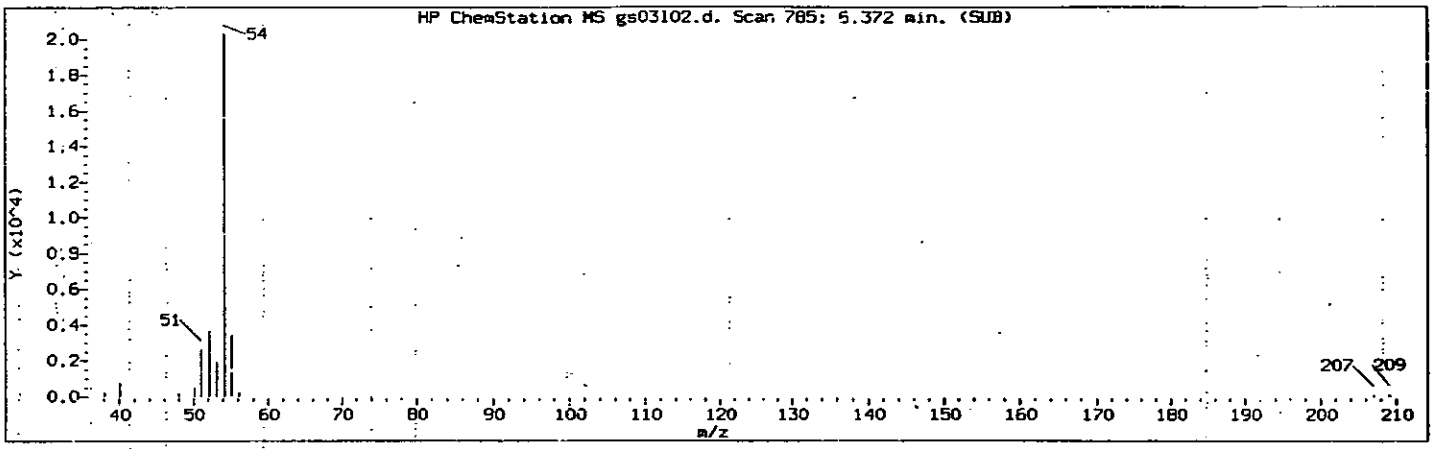
Sample Name: LCDG23 Lab Sample ID: LCDG23

Compound Number : 39
Compound Name : Acrylonitrile
Scan Number : 516
Retention Time (minutes): 4.732
Quant Ion : 53.00
Area : 216770
On-column Amount (ng) : 25.4826
Integration start scan : 505 Integration stop scan: 558
Y at integration start : 0 Y at integration end: 319

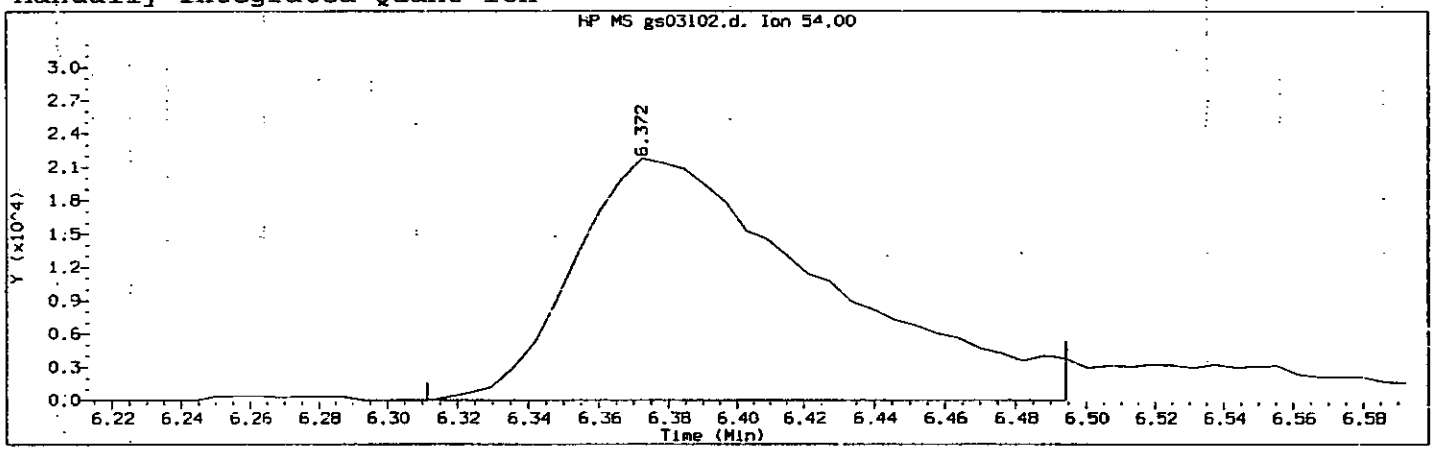
RAD36 8369

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Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10sep03a.b/gs03102.d Instrument ID: HP16334.i
Injection date and time: 03-SEP-2010 03:39 Analyst ID: SAS00403

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 03-SEP-2010 02:31
Date, time and analyst ID of latest file update: 03-Sep-2010 06:56 jm101693

Sample Name: LCDG23 Lab Sample ID: LCDG23

Compound Number	: 53		
Compound Name	: Propionitrile		
Scan Number	: 785		
Retention Time (minutes)	: 6.372		
Quant Ion	: 54.00		
Area (flag)	: 109301M		
On-Column Amount (ng)	: 38.5912		
Integration start scan	: 774	Integration stop scan:	804
Y at integration start	: 0	Y at integration end:	0

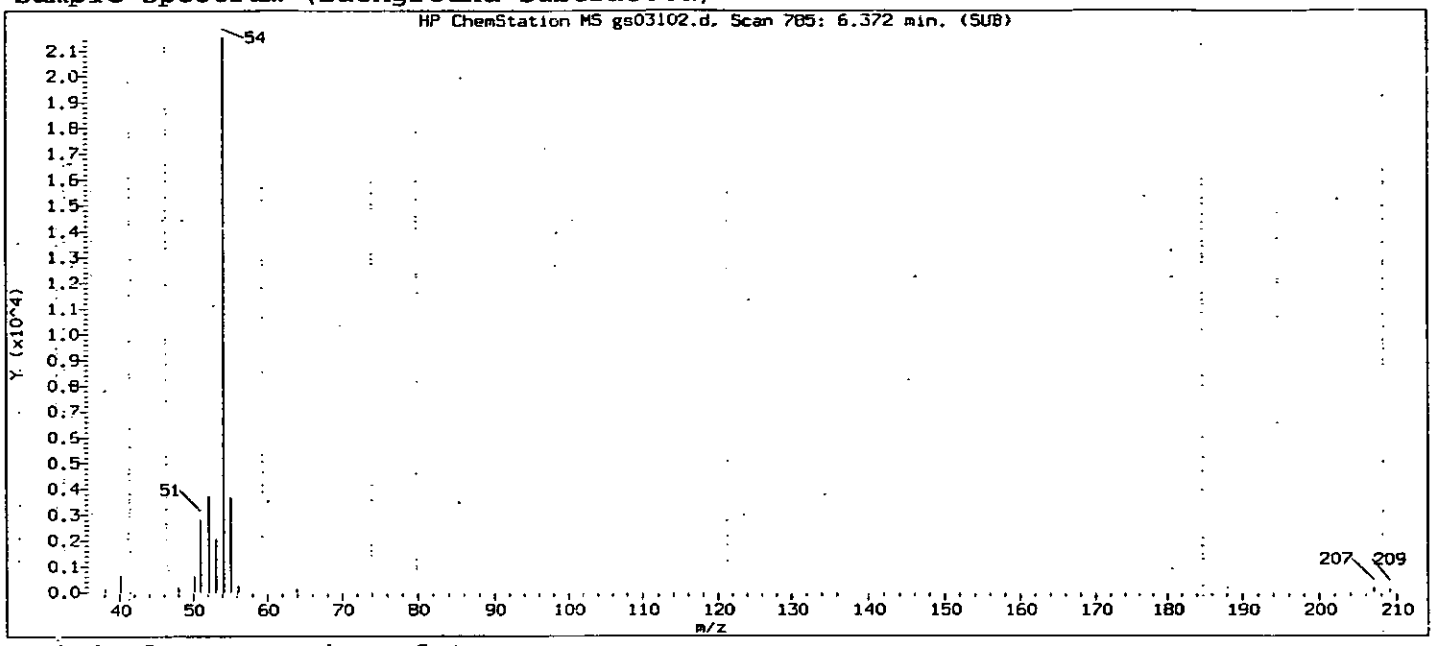
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long
on 09/03/2010 at 06:58.
Target 3.5 esignature user ID: jm101693

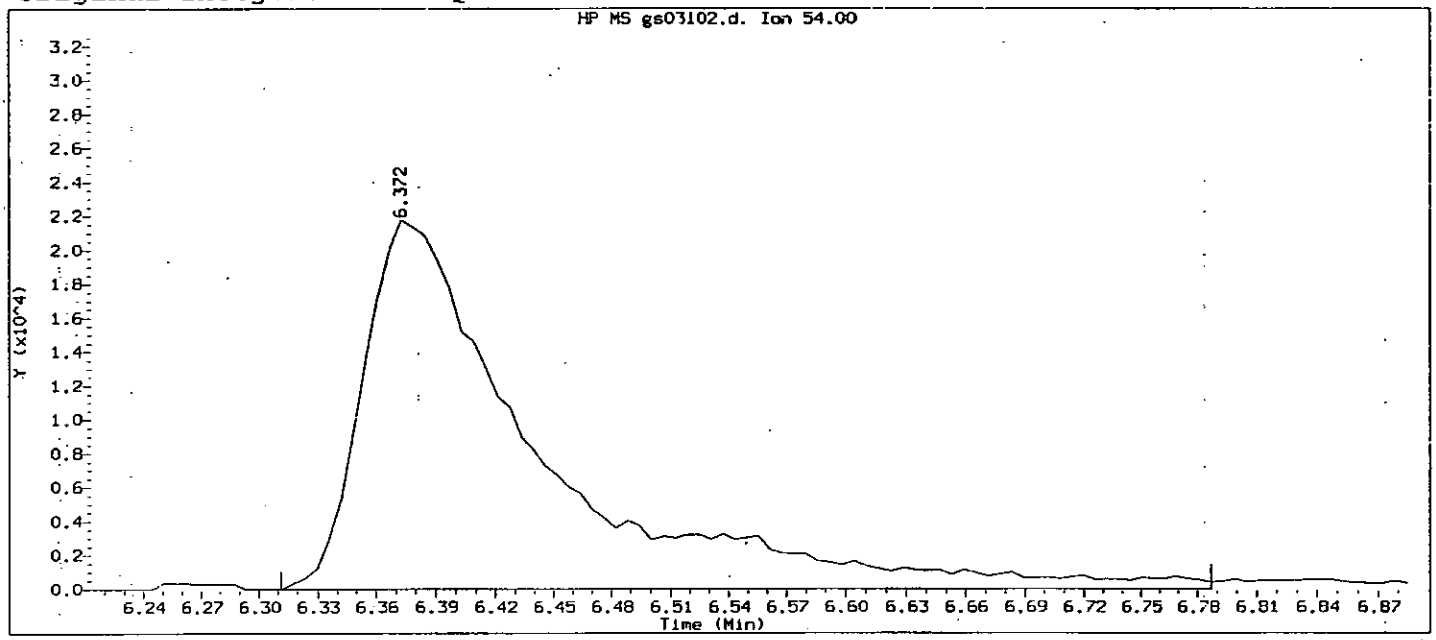
RAD36 0370

GC/MS audit/management approval: _____ 9/10/10

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10sep03a.b/gs03102.d Instrument ID: HP16334.i
Injection date and time: 03-SEP-2010 03:39 Analyst ID: SAS00403

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 03-SEP-2010 02:31
Date, time and analyst ID of latest file update: 03-Sep-2010 06:53 jml01693

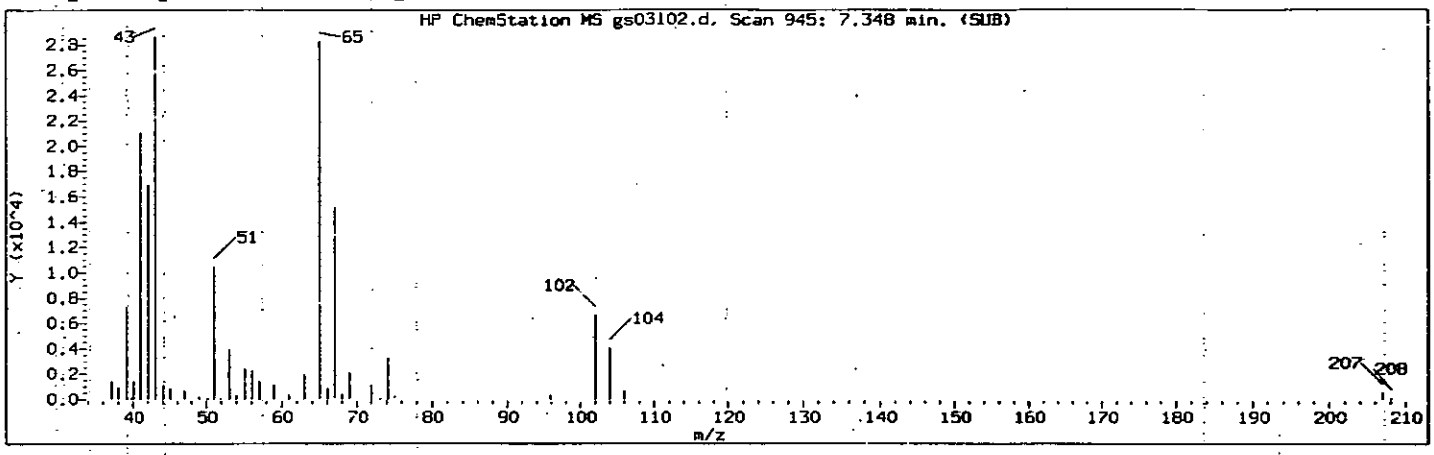
Sample Name: LCDG23 Lab Sample ID: LCDG23

Compound Number	: 53		
Compound Name	: Propionitrile		
Scan Number	: 785		
Retention Time (minutes)	: 6.372		
Quant Ion	: 54.00		
Area	: 134868		
On-column Amount (ng)	: 46.5944		
Integration start scan	: 774	Integration stop scan:	852
Y at integration start	: 0	Y at integration end:	0

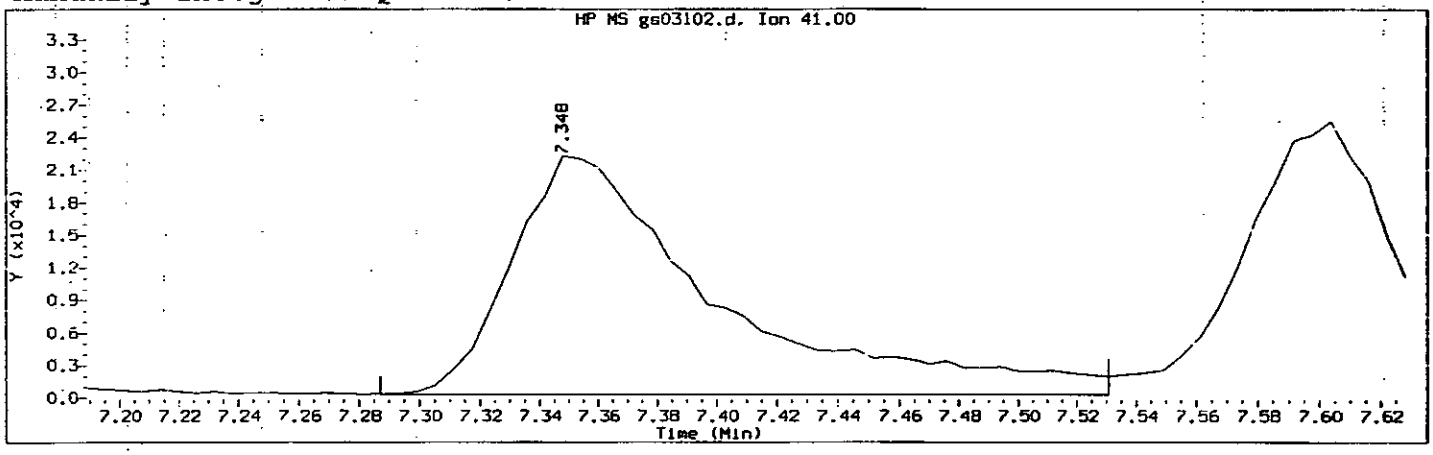
RAD36 0371

Digitally signed by Jason M. Long on 09/03/2010 at 06:58.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10sep03a.b/gs03102.d Instrument ID: HP16334.i
Injection date and time: 03-SEP-2010 03:39 Analyst ID: SAS00403

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 03-SEP-2010 02:31
Date, time and analyst ID of latest file update: 03-Sep-2010 06:56 jml01693

Sample Name: LCDG23 Lab Sample ID: LCDG23

Compound Number	: 67		
Compound Name	: Isobutyl Alcohol		
Scan Number	: 945		
Retention Time (minutes)	: 7.348		
Quant Ion	: 41.00		
Area (flag)	: 104865M		
On-Column Amount (ng)	: 124.4063		
Integration start scan	: 934	Integration stop scan:	974
Y at integration start	: 330	Y at integration end:	330

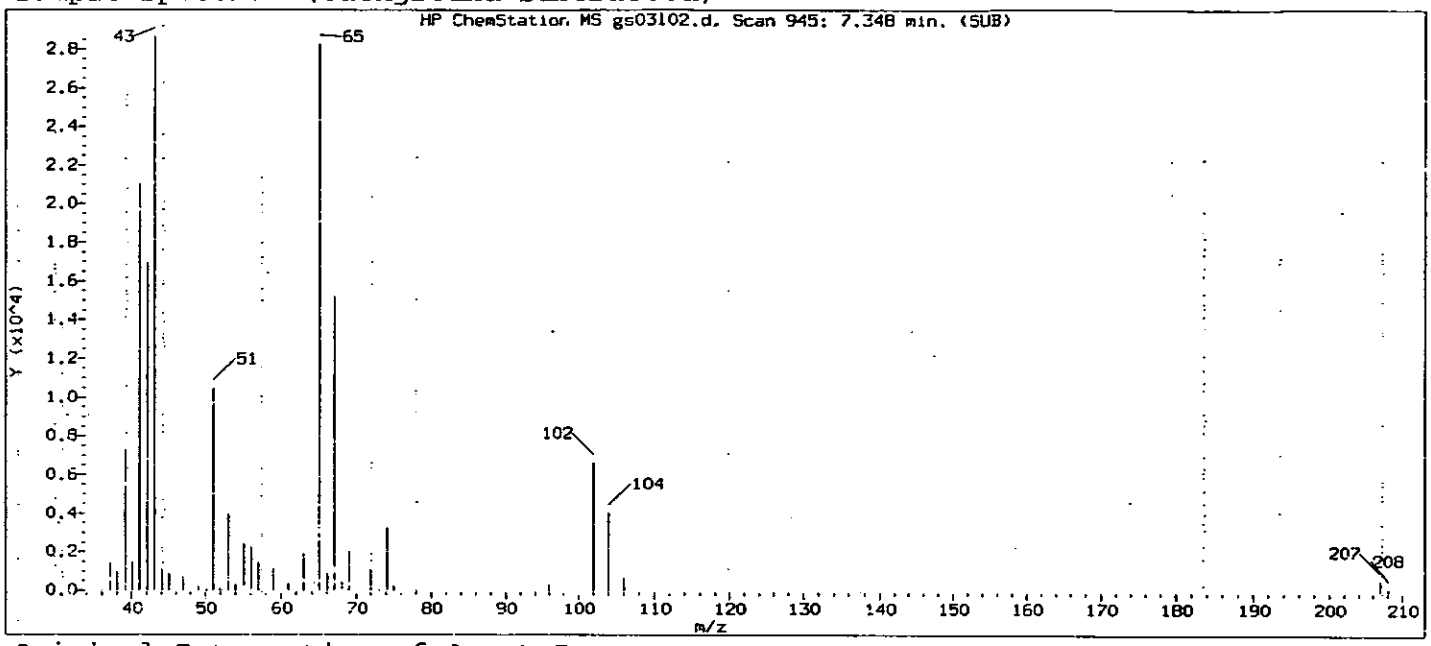
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long on 09/03/2010 at 06:58. Target 3.5 esignature user ID: jml01693

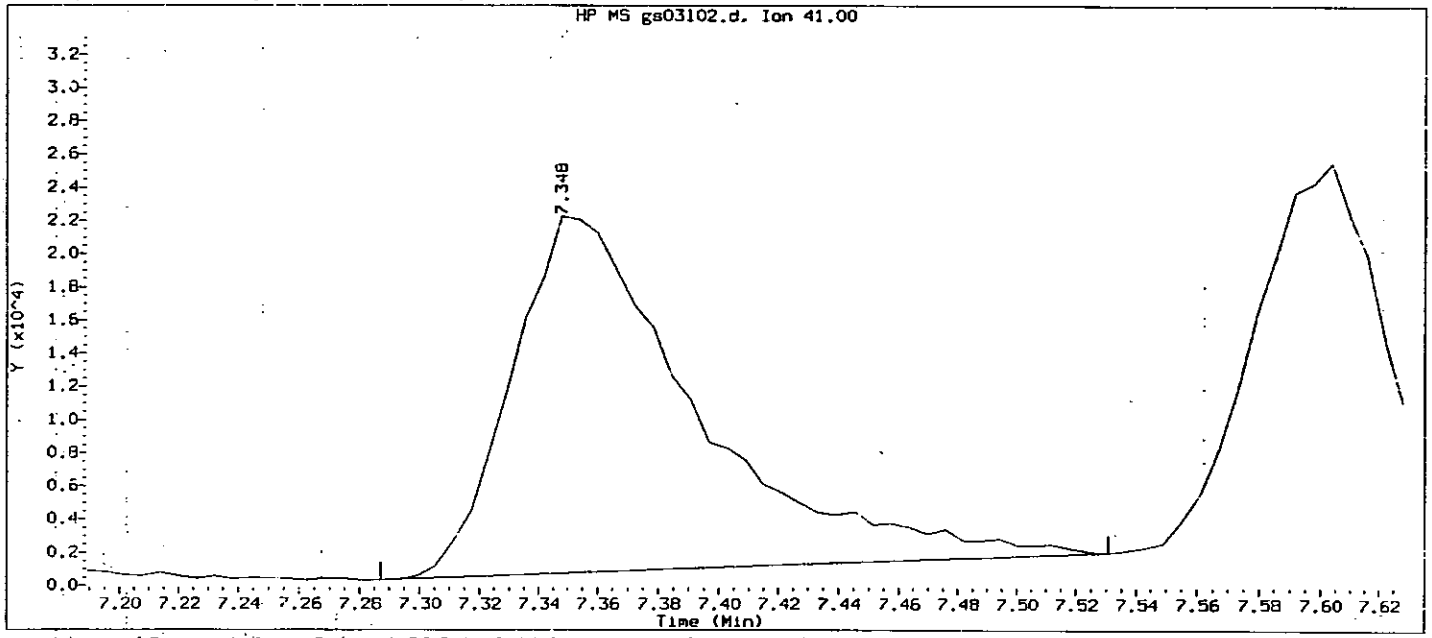
RAD36 0372

GC/MS audit/management approval: _____ 9/10/10

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10sep03a.b/gs03102.d Instrument ID: HP16334.i
Injection date and time: 03-SEP-2010 03:39 Analyst ID: SAS00403

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 03-SEP-2010 02:31
Date, time and analyst ID of latest file update: 03-Sep-2010 06:53 jml01693

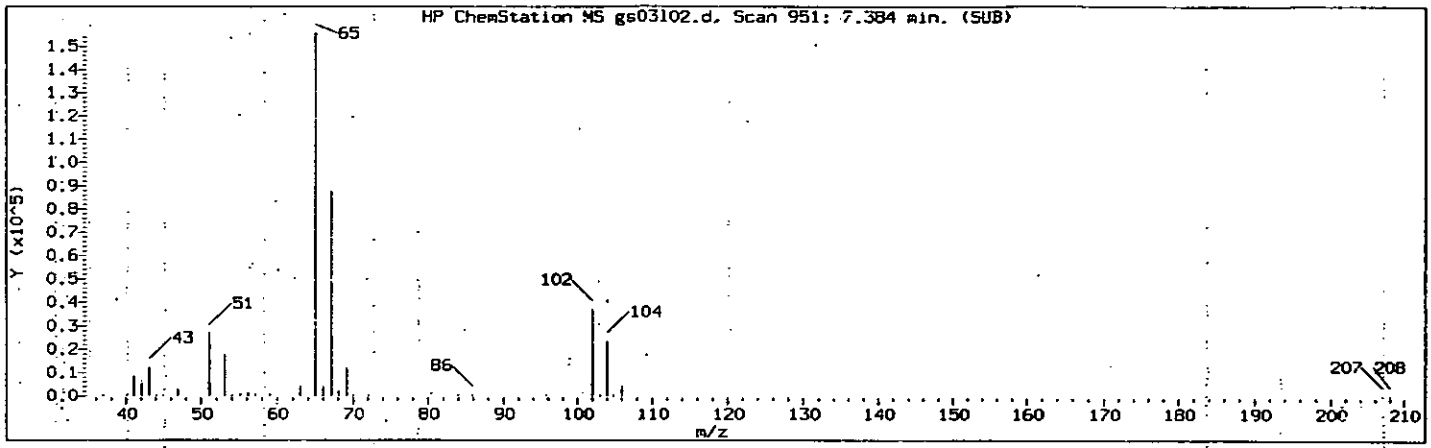
Sample Name: LCDG23 Lab Sample ID: LCDG23

Compound Number : 67
Compound Name : Isobutyl Alcohol
Scan Number : 945
Retention Time (minutes): 7.348
Quant Ion : 41.00
Area : 92059
On-column Amount (ng) : 109.2141
Integration start scan : 934 Integration stop scan: 974
Y at integration start : 332 Y at integration end: 2035

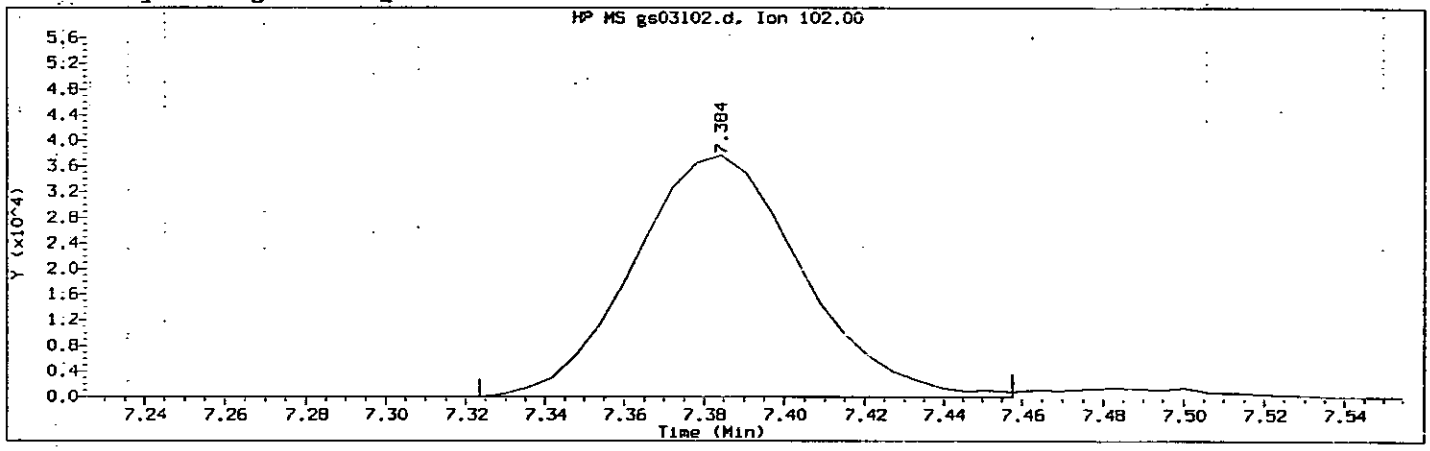
RAD36 0373

Digitally signed by Jason M. Long on 09/03/2010 at 06:58.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10sep03a.b/gs03102.d Instrument ID: HP16334.i
Injection date and time: 03-SEP-2010 03:39 Analyst ID: SAS00403

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 03-SEP-2010 02:31
Date, time and analyst ID of latest file update: 03-Sep-2010 06:56 jml01693

Sample Name: LCDG23 Lab Sample ID: LCDG23

Compound Number : 70
Compound Name : 1,2-Dichloroethane-d4
Scan Number : 951
Retention Time (minutes): 7.384
Quant Ion : 102.00
Area (flag) : 110011M
On-Column Amount (ng) : 10.2115
Integration start scan : 940 Integration stop scan: 962
Y at integration start : 0 Y at integration end: 0

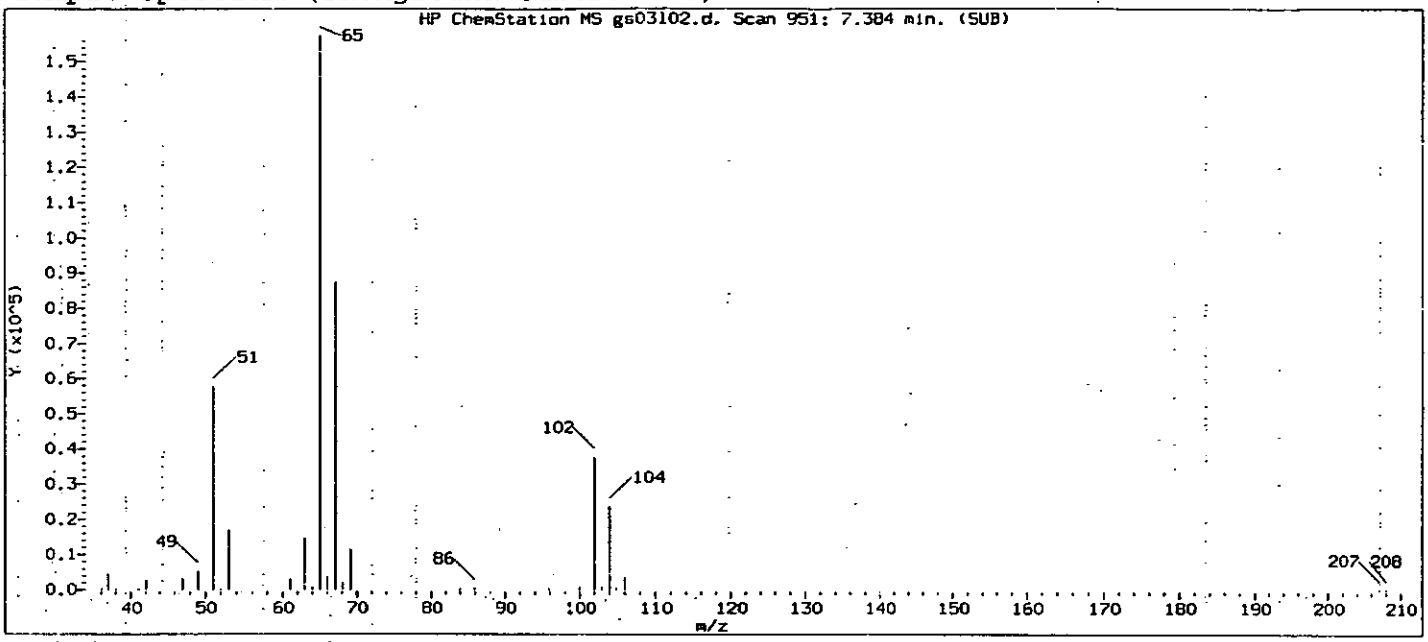
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long on 09/03/2010 at 06:58. Target 3.5 esignature user ID: jml01693

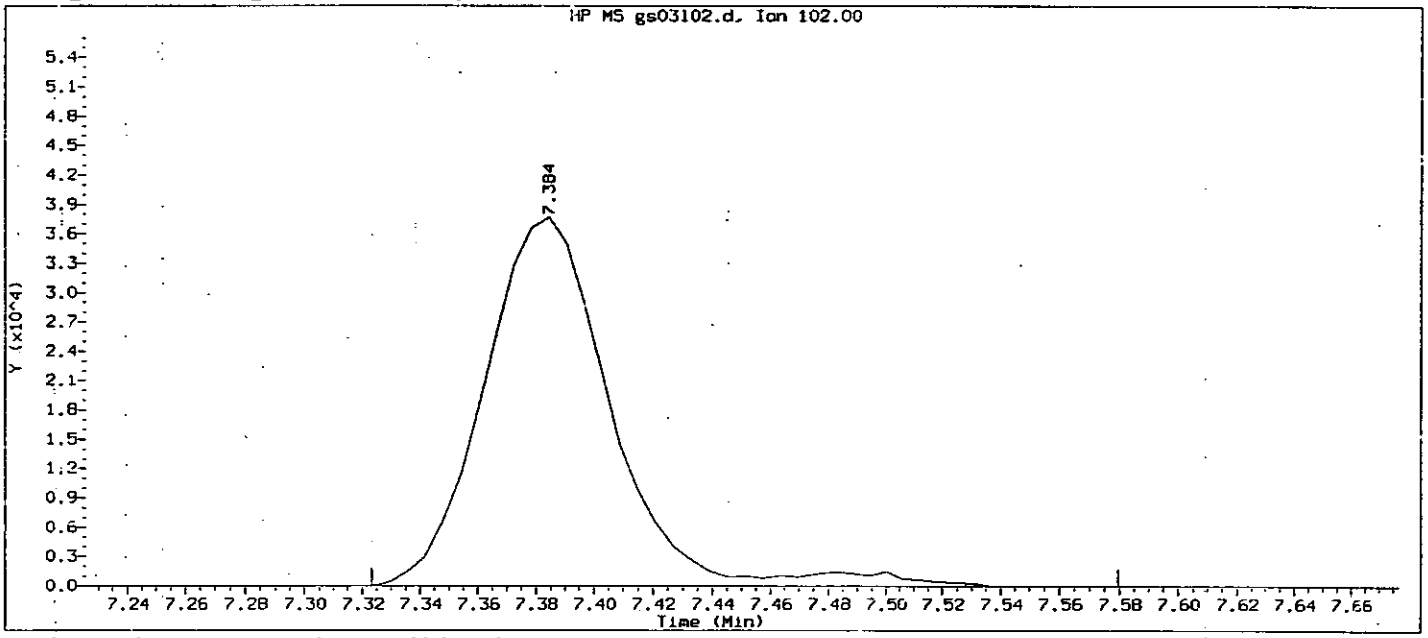
RAD36 8374

GC/MS audit/management approval: 9/10/10

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10sep03a.b/gs03102.d Instrument ID: HP16334.i
Injection date and time: 03-SEP-2010 03:39 Analyst ID: SAS00403

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 03-SEP-2010 02:31
Date, time and analyst ID of latest file update: 03-Sep-2010 06:53 jml01693

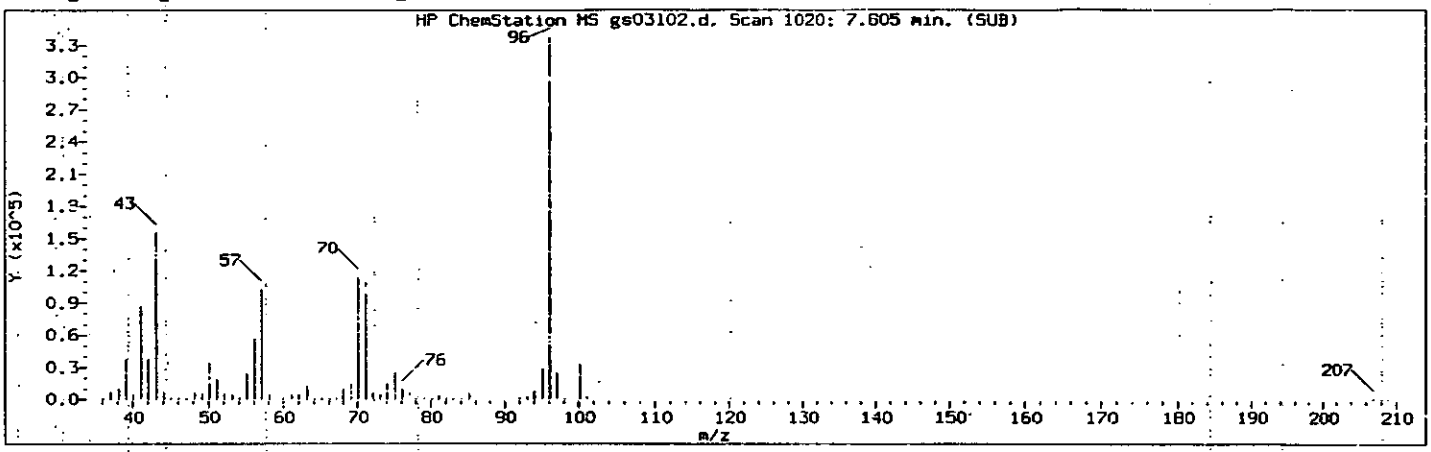
Sample Name: LCDG23 Lab Sample ID: LCDG23

Compound Number : 70
Compound Name : 1,2-Dichloroethane-d4
Scan Number : 951
Retention Time (minutes): 7.384
Quant Ion : 102.00
Area : 114027
On-column Amount (ng) : 10.5843
Integration start scan : 940 Integration stop scan: 982
Y at integration start : 0 Y at integration end: 0

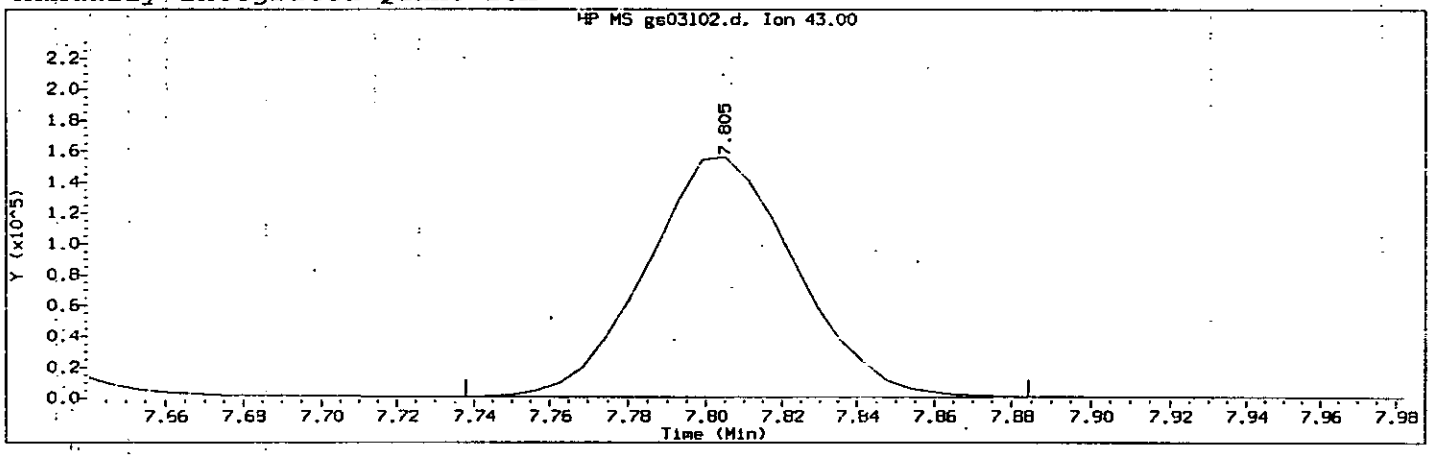
RAD36 0375

Digitally signed by Jason M. Long on 09/03/2010 at 06:58.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10sep03a.b/gs03102.d Instrument ID: HP16334.i
Injection date and time: 03-SEP-2010 03:39 Analyst ID: SAS00403

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 03-SEP-2010 02:31
Date, time and analyst ID of latest file update: 03-Sep-2010 06:56 jml01693

Sample Name: LCDG23 Lab Sample ID: LCDG23

Compound Number	: 76		
Compound Name	: n-Heptane		
Scan Number	: 1020		
Retention Time (minutes)	: 7.805		
Quant Ion	: 43.00		
Area (flag)	: 423481M		
On-Column Amount (ng)	: 4.4235		
Integration start scan	: 1008	Integration stop scan:	1032
Y at integration start	: 609	Y at integration end:	609

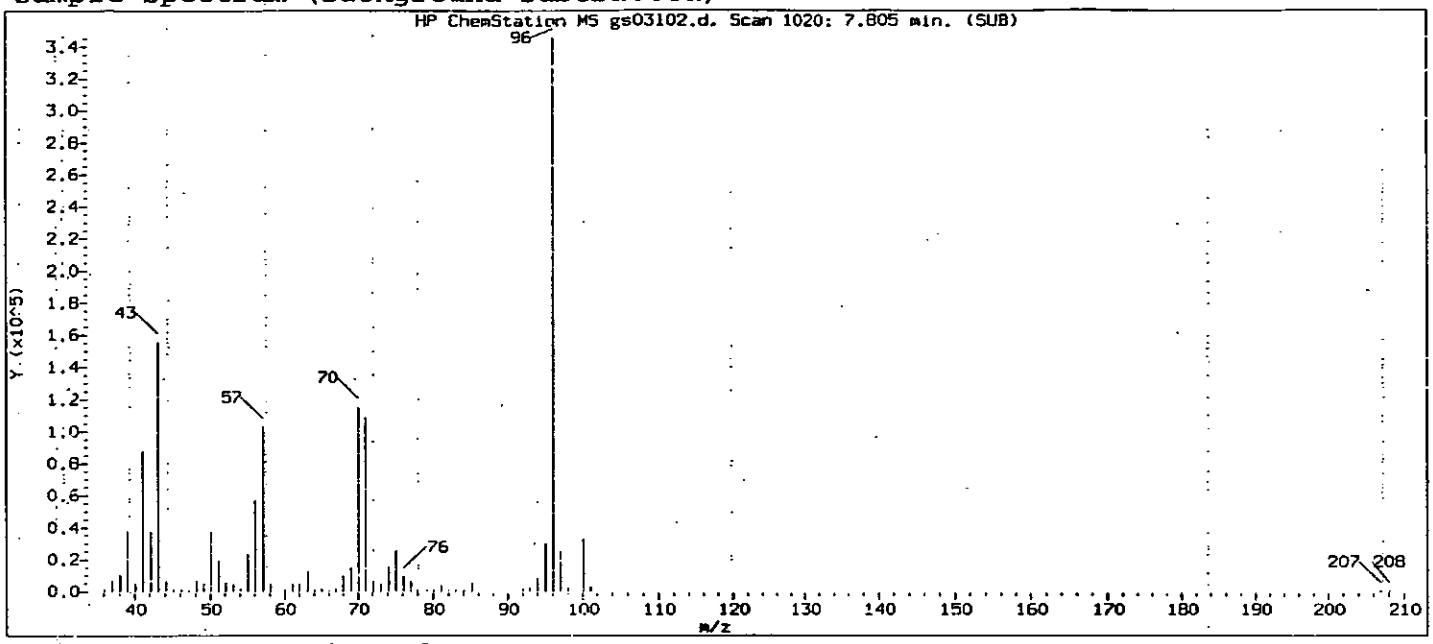
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long on 09/03/2010 at 06:58. Target 3.5 esignature user ID: jml01693

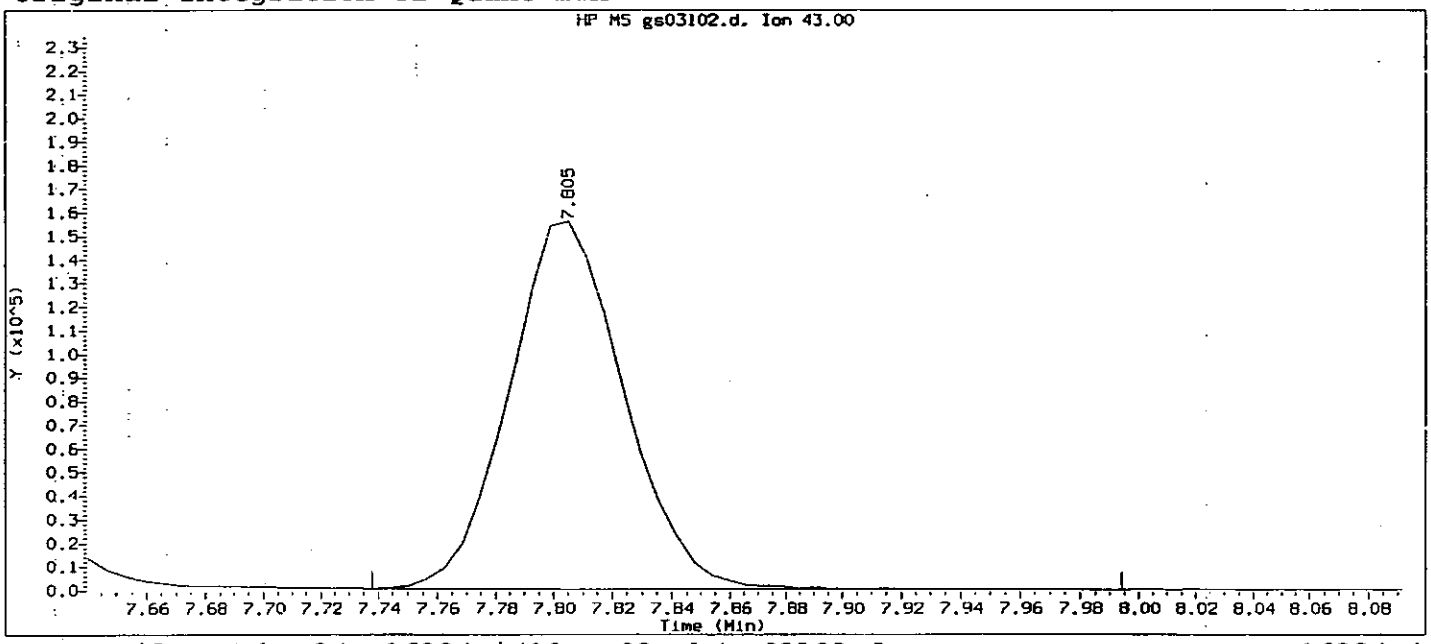
RAD36 0376

GC/MS audit/management approval: _____ 9/10/10

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10sep03a.b/gs03102.d Instrument ID: HP16334.i
Injection date and time: 03-SEP-2010 03:39 Analyst ID: SAS00403

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 03-SEP-2010 02:31
Date, time and analyst ID of latest file update: 03-Sep-2010 06:53 jml01693

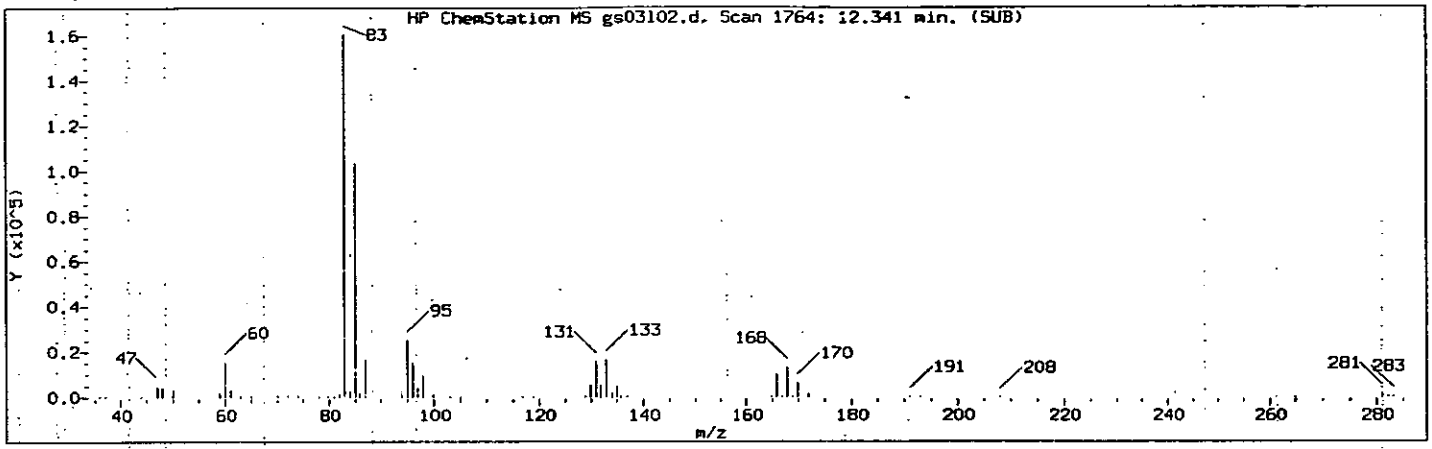
Sample Name: LCDG23 Lab Sample ID: LCDG23

Compound Number	: 76		
Compound Name	: n-Heptane		
Scan Number	: 1020		
Retention Time (minutes)	: 7.805		
Quant Ion	: 43.00		
Area	: 425360		
On-column Amount (ng)	: 4.4431		
Integration start scan	: 1008	Integration stop scan:	1050
Y at integration start	: 768	Y at integration end:	261

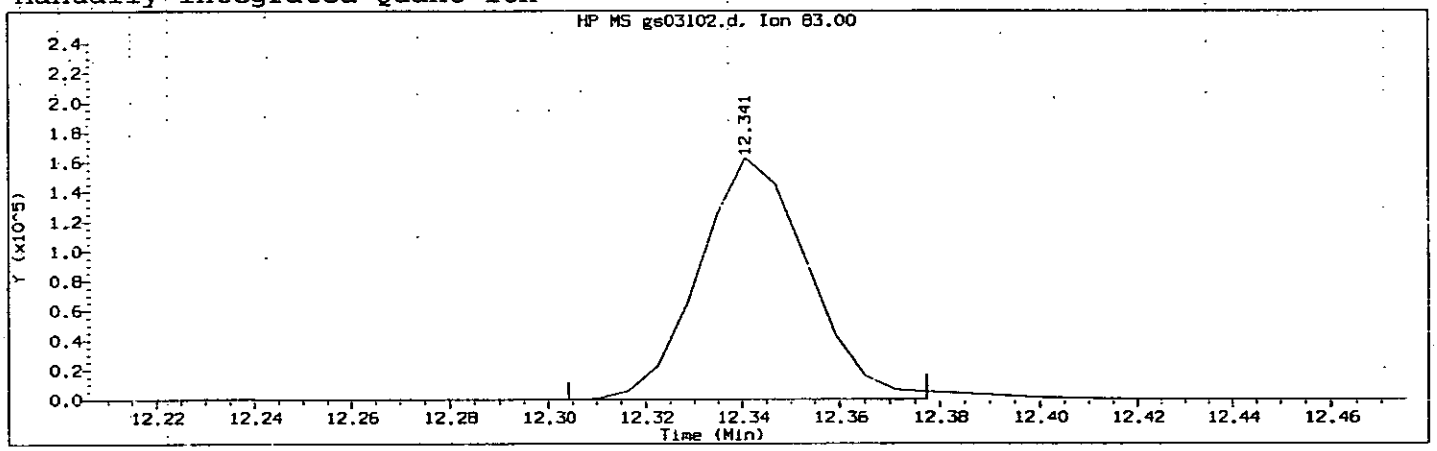
RAD36 0377

Digitally signed by Jason M. Long on 09/03/2010 at 06:58.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10sep03a.b/gs03102.d Instrument ID: HP16334.i
Injection date and time: 03-SEP-2010 03:39 Analyst ID: SAS00403

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 03-SEP-2010 02:31
Date, time and analyst ID of latest file update: 03-Sep-2010 06:56 jml01693

Sample Name: LCDG23 Lab Sample ID: LCDG23

Compound Number	: 128		
Compound Name	: 1,1,2,2-Tetrachloroethane		
Scan Number	: 1764		
Retention Time (minutes)	: 12.341		
Quant Ion	: 83.00		
Area (flag)	: 253178M		
On-Column Amount (ng)	: 5.2678		
Integration start scan	: 1757	Integration stop scan:	1769
Y at integration start	: 0	Y at integration end:	0

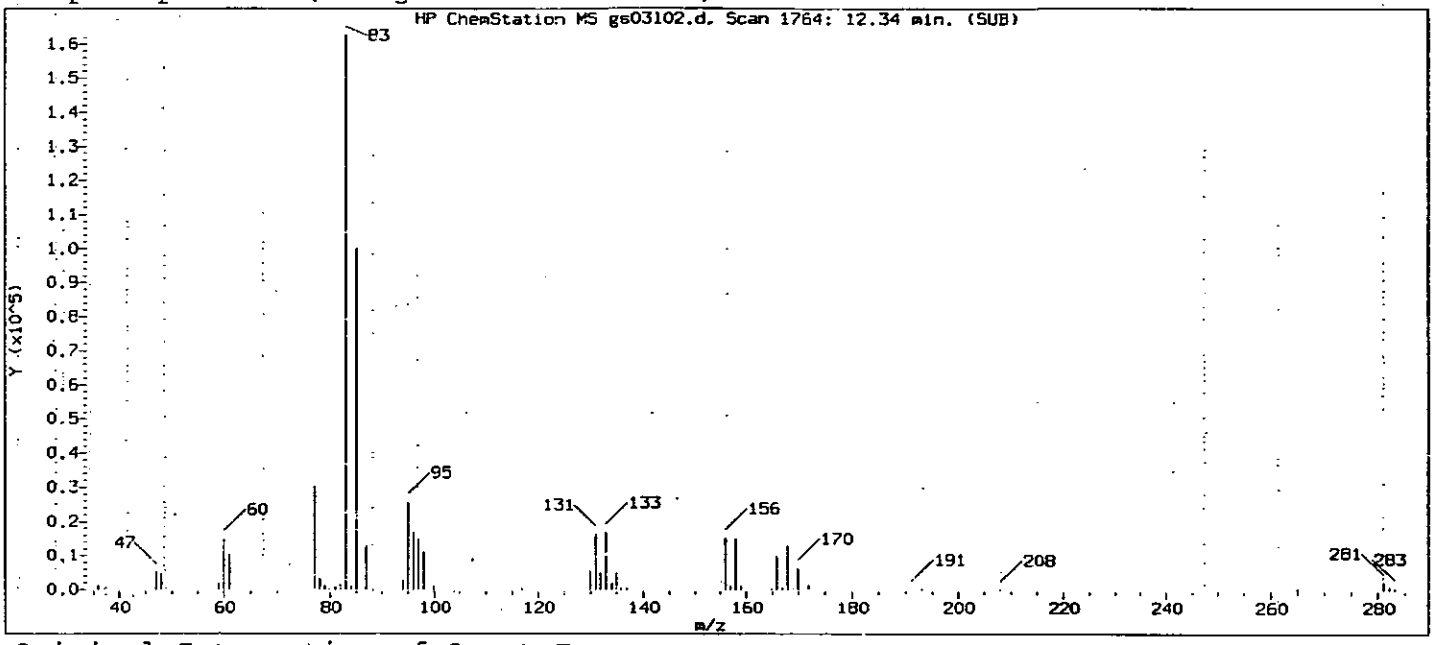
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long
on 09/03/2010 at 06:58:
Target 3.5 esignature user ID: jml01693

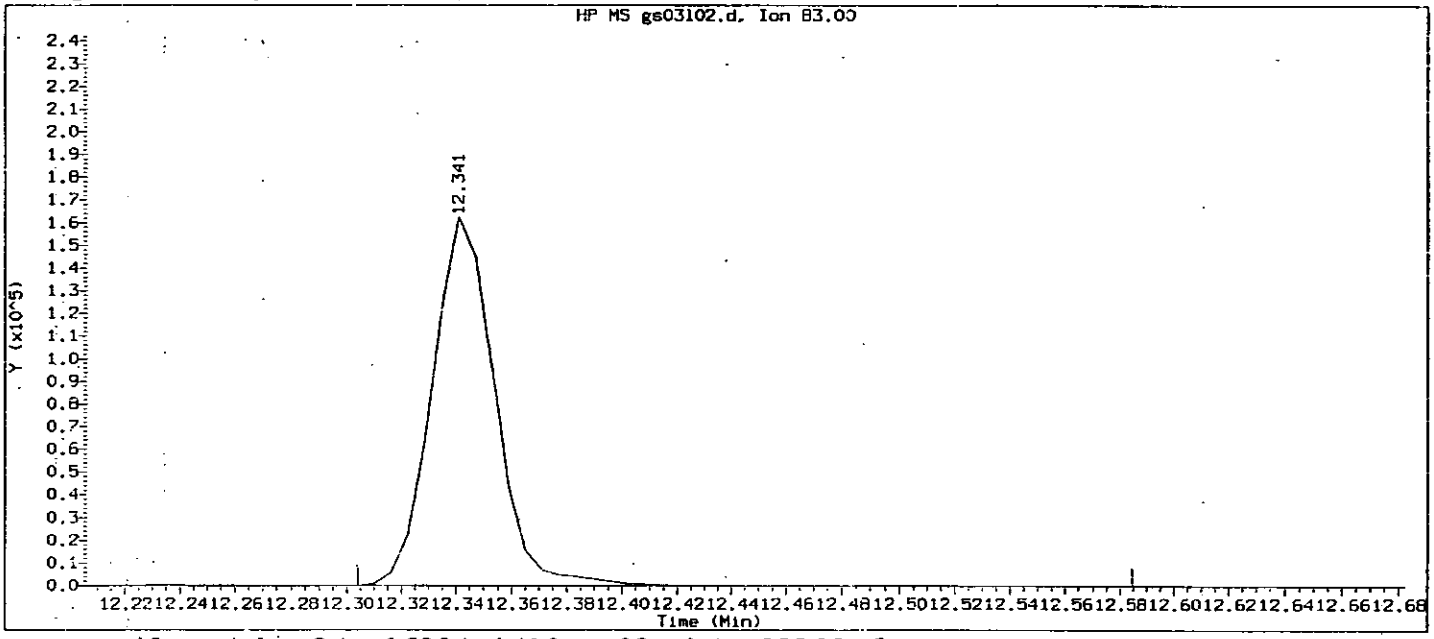
RAD36 6378

GC/MS audit/management approval: 9/10/10 9/10/10

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10sep03a.b/gs03102.d Instrument ID: HP16334.i
Injection date and time: 03-SEP-2010 03:39 Analyst ID: SAS00403

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 03-SEP-2010 02:31
Date, time and analyst ID of latest file update: 03-Sep-2010 06:53 jml01693

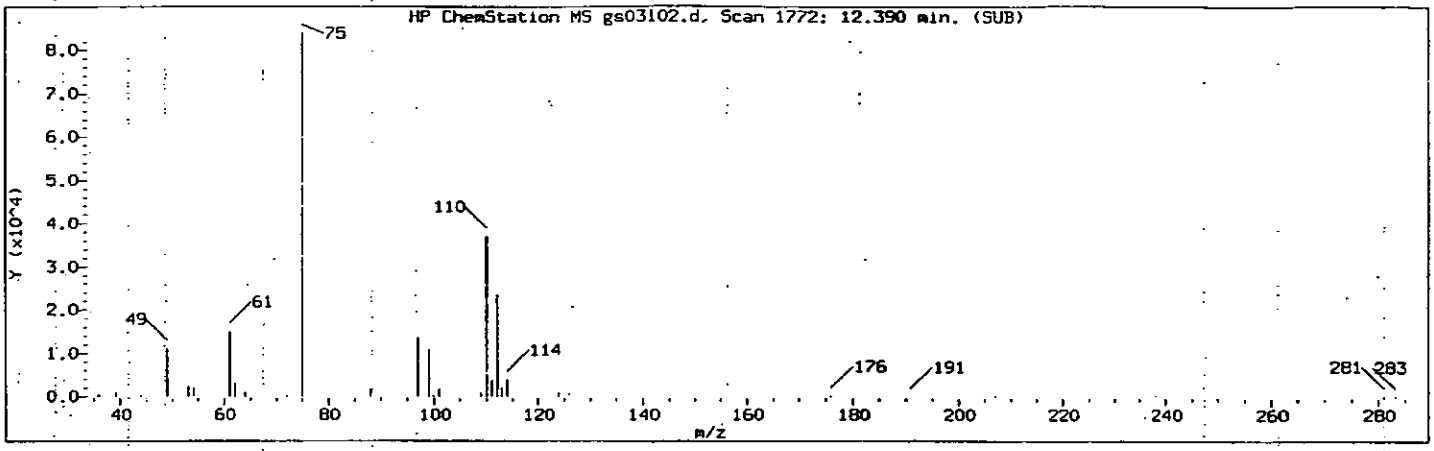
Sample Name: LCDG23 Lab Sample ID: LCDG23

Compound Number : 128
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1764
Retention Time (minutes): 12.341
Quant Ion : 83.00
Area : 257261
On-column Amount (ng) : 5.3527
Integration start scan : 1757 Integration stop scan: 1803
Y at integration start : 0 Y at integration end: 0

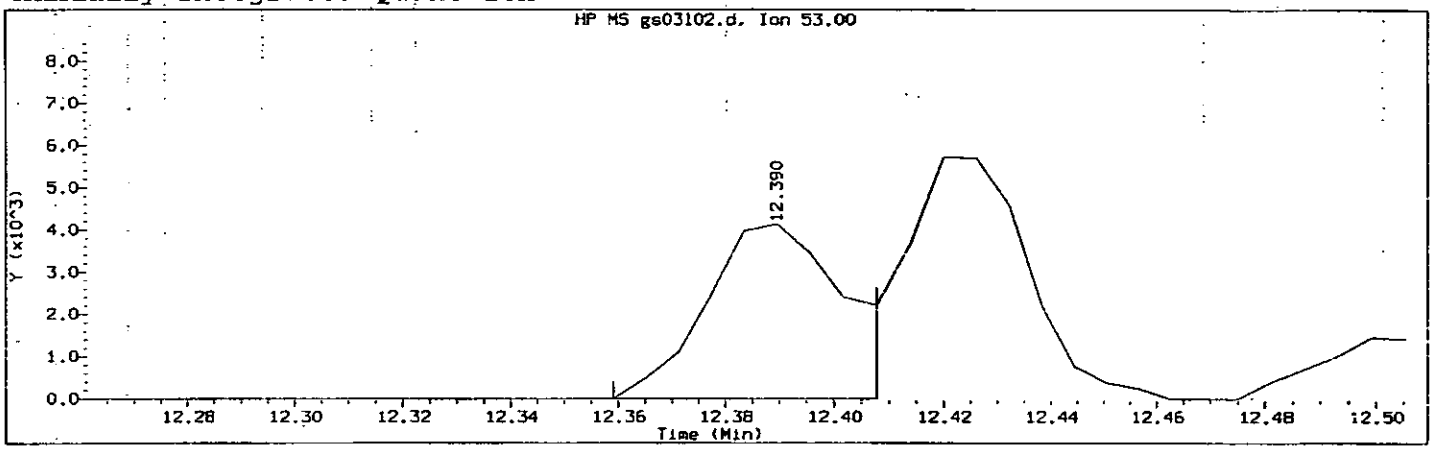
RnD36 8379

Digitally signed by Jason M. Long on 09/03/2010 at 06:58.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10sep03a.b/gs03102.d Instrument ID: HP16334.i
Injection date and time: 03-SEP-2010 03:39 Analyst ID: SAS00403

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 03-SEP-2010 02:31
Date, time and analyst ID of latest file update: 03-Sep-2010 06:56 jm101693

Sample Name: LCDG23 Lab Sample ID: LCDG23

Compound Number	: 130		
Compound Name	: trans-1,4-Dichloro-2-Butene		
Scan Number	: 1772		
Retention Time (minutes)	: 12.390		
Quant Ion	: 53.00		
Area (flag)	: 6999A		
On-Column Amount (ng)	: 5.7428		
Integration start scan	: 1766	Integration stop scan:	1774
Y at integration start	: 0	Y at integration end:	0

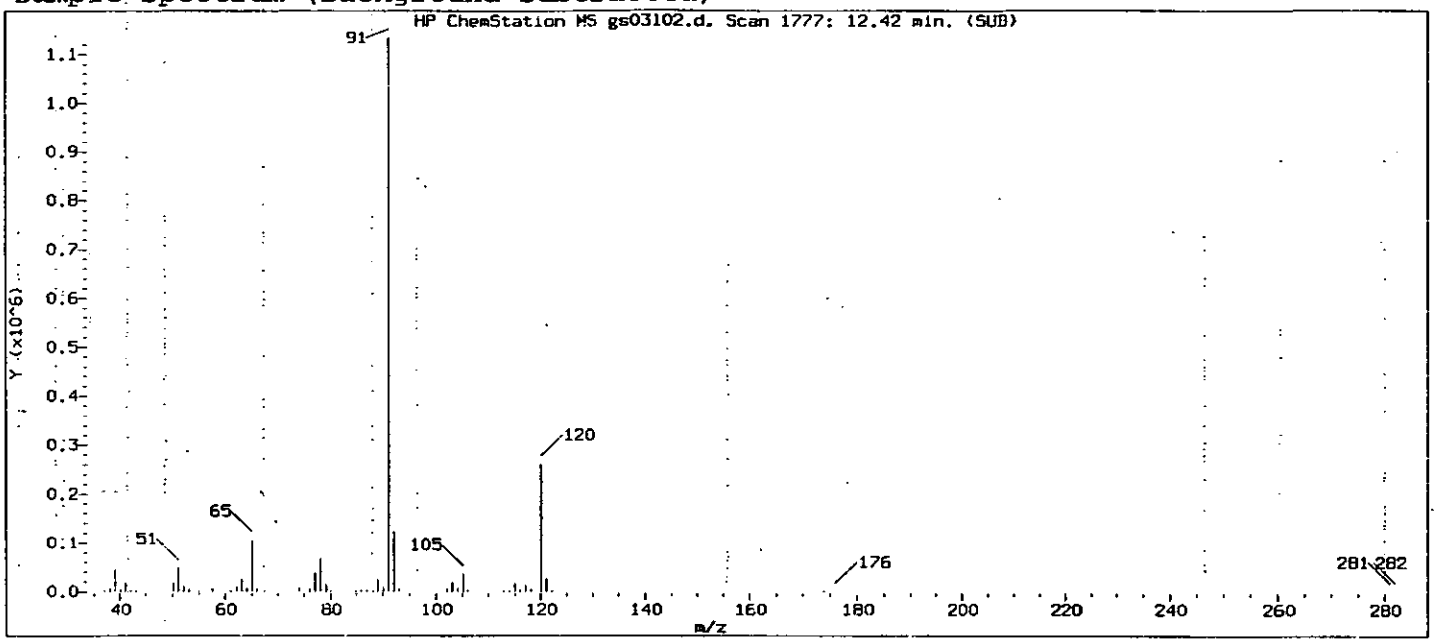
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long on 09/03/2010 at 06:58. Target 3.5 esignature user ID: jm101693

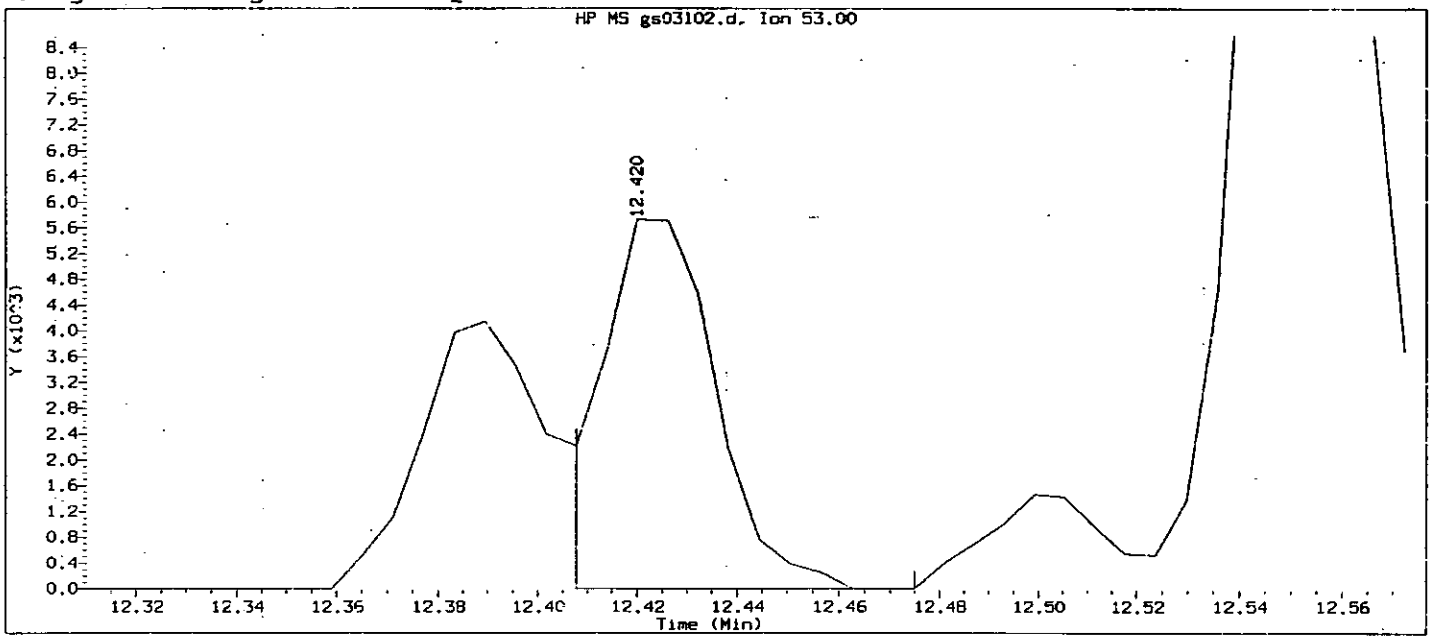
RAD36 0388

GC/MS audit/management approval: _____ 9/10/10

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10sep03a.b/gs03102.d Instrument ID: HP16334.i
Injection date and time: 03-SEP-2010 03:39 Analyst ID: SAS00403

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 03-SEP-2010 02:31
Date, time and analyst ID of latest file update: 03-Sep-2010 06:53 jml01693

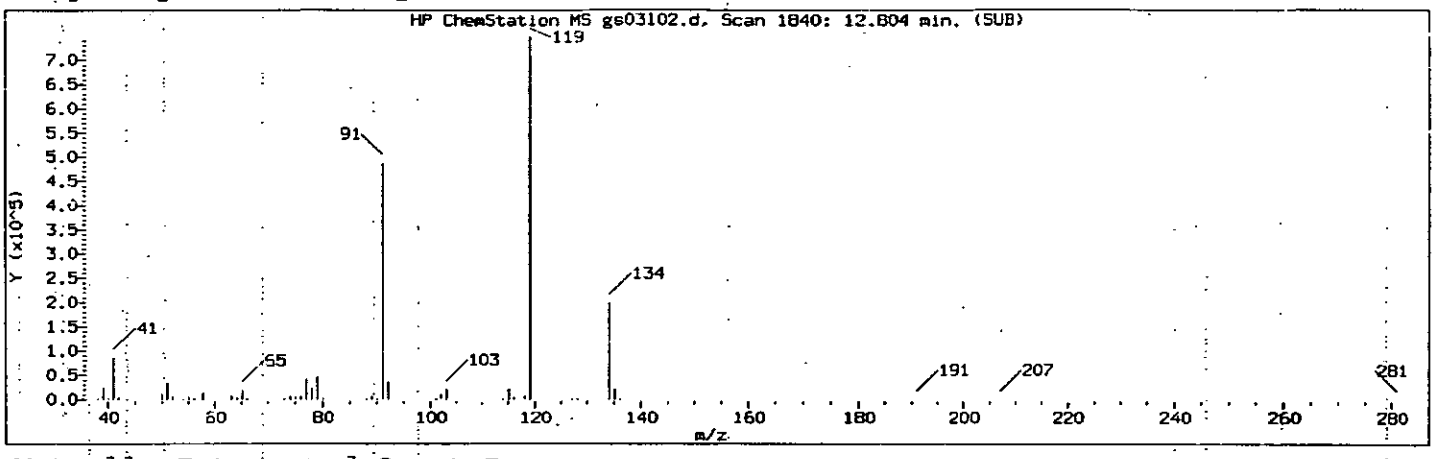
Sample Name: LCDG23 Lab Sample ID: LCDG23

Compound Number : 130
Compound Name : trans-1,4-Dichloro-2-Butene
Scan Number : 1777
Retention Time (minutes): 12.420
Quant Ion : 53.00
Area : 8915
On-column Amount (ng) : 6.0366
Integration start scan : 1774 Integration stop scan: 1785
Y at integration start : 0 Y at integration end: 0

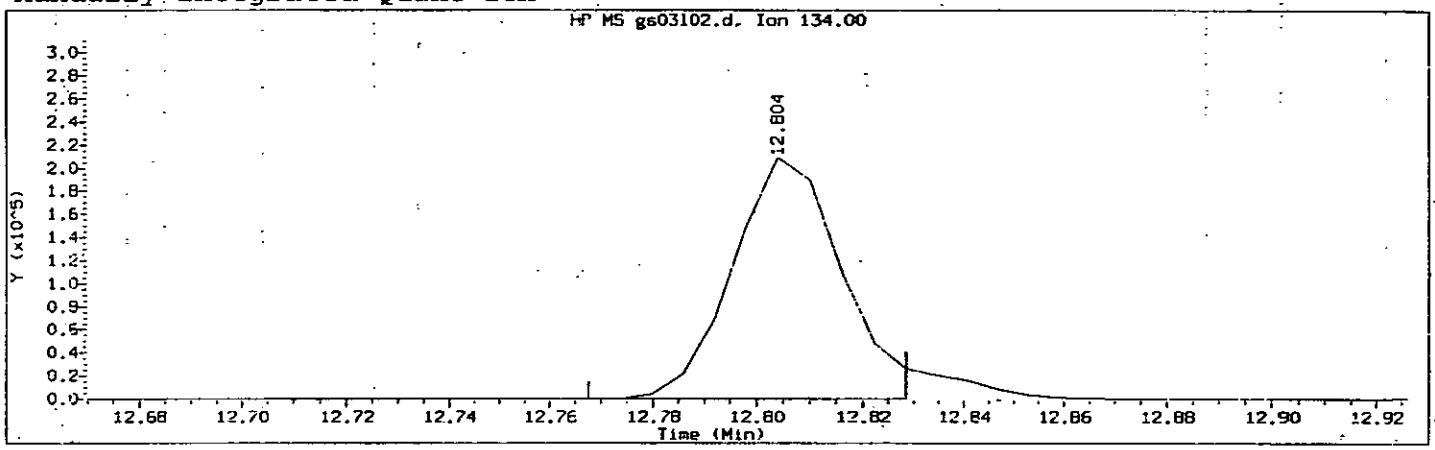
RAD36 0581

Digitally signed by Jason M. Long on 09/03/2010 at 06:58.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10sep03a.b/gs03102.d Instrument ID: HP16334.i
Injection date and time: 03-SEP-2010 03:39 Analyst ID: SAS00403

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 03-SEP-2010 02:31
Date, time and analyst ID of latest file update: 03-Sep-2010 06:56 jml01693

Sample Name: LCDG23 Lab Sample ID: LCDG23

Compound Number : 137
Compound Name : tert-Butylbenzene
Scan Number : 1840
Retention Time (minutes): 12.804
Quant Ion : 134.00
Area (flag) : 301681M
On-Column Amount (ng) : 4.4968
Integration start scan : 1833 Integration stop scan: 1843
Y at integration start : 0 Y at integration end: 0

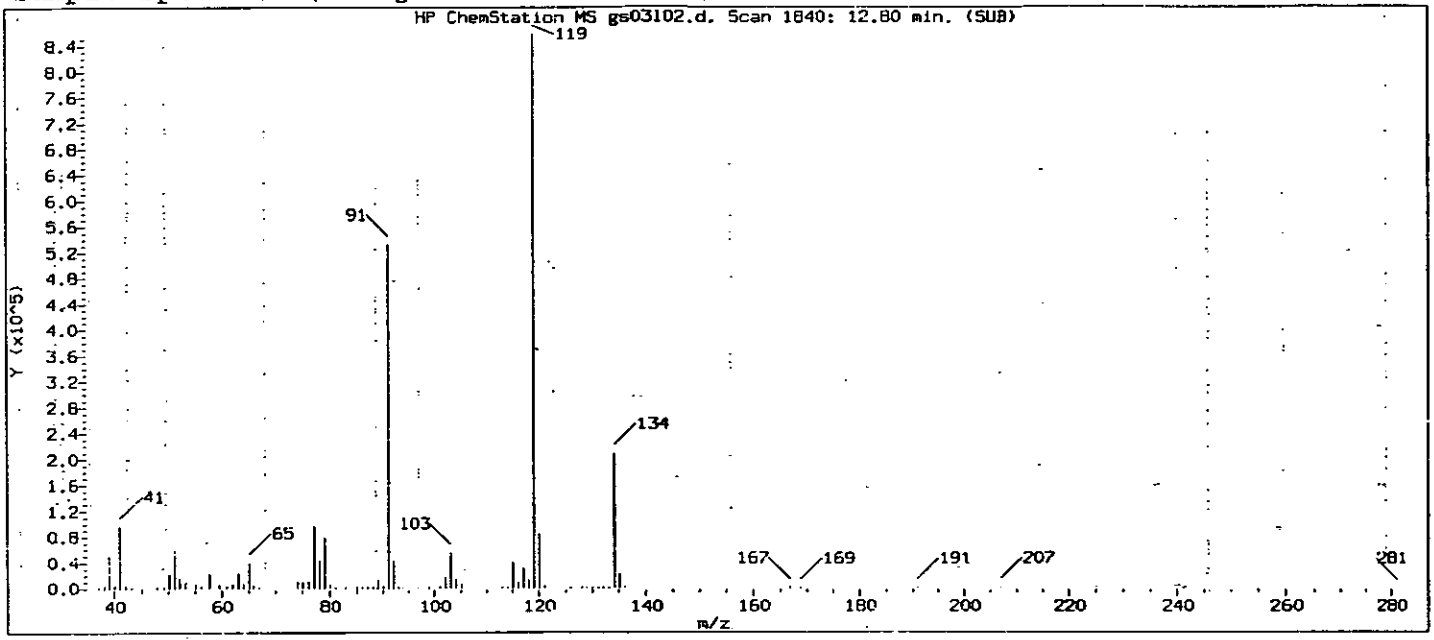
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long on 09/03/2010 at 06:58. Target 3.5 esignature user ID: jml01693

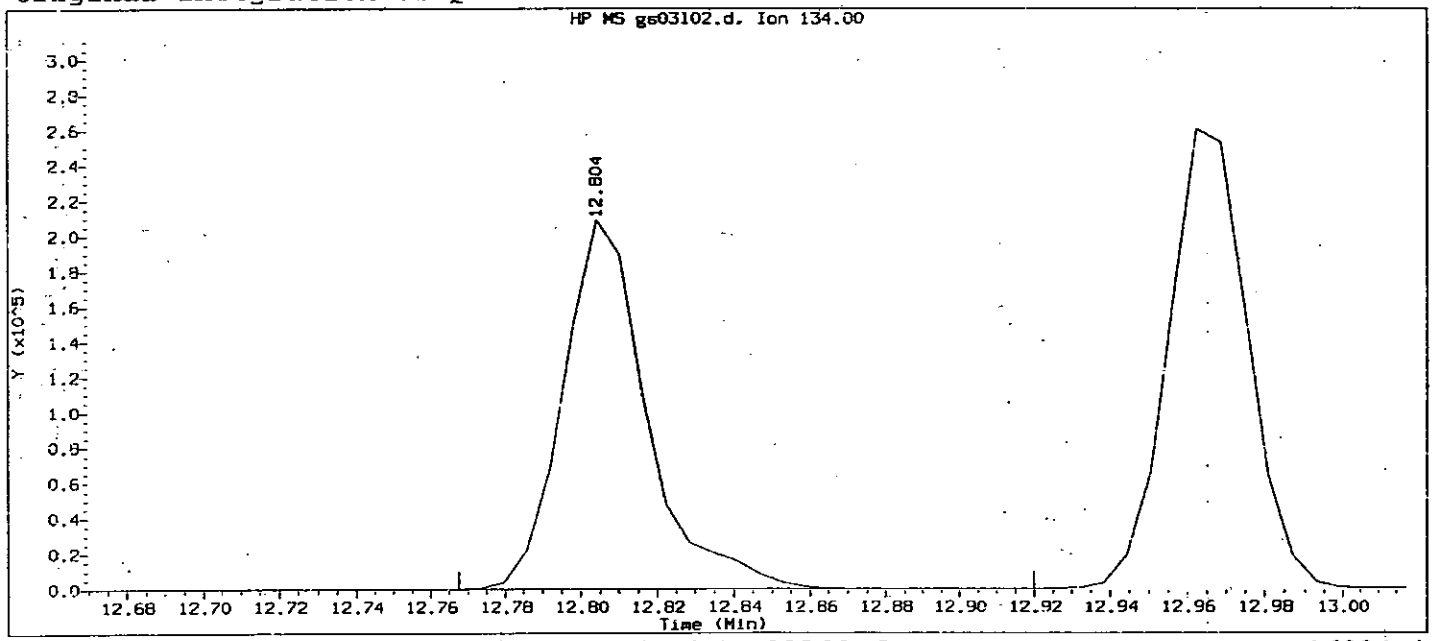
RAD36 0382

GC/MS audit/management approval: _____ 9/10/10

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10sep03a.b/gs03102.d Instrument ID: HP16334.i
Injection date and time: 03-SEP-2010 03:39 Analyst ID: SAS00403

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 03-SEP-2010 02:31
Date, time and analyst ID of latest file update: 03-Sep-2010 06:53 jml01693

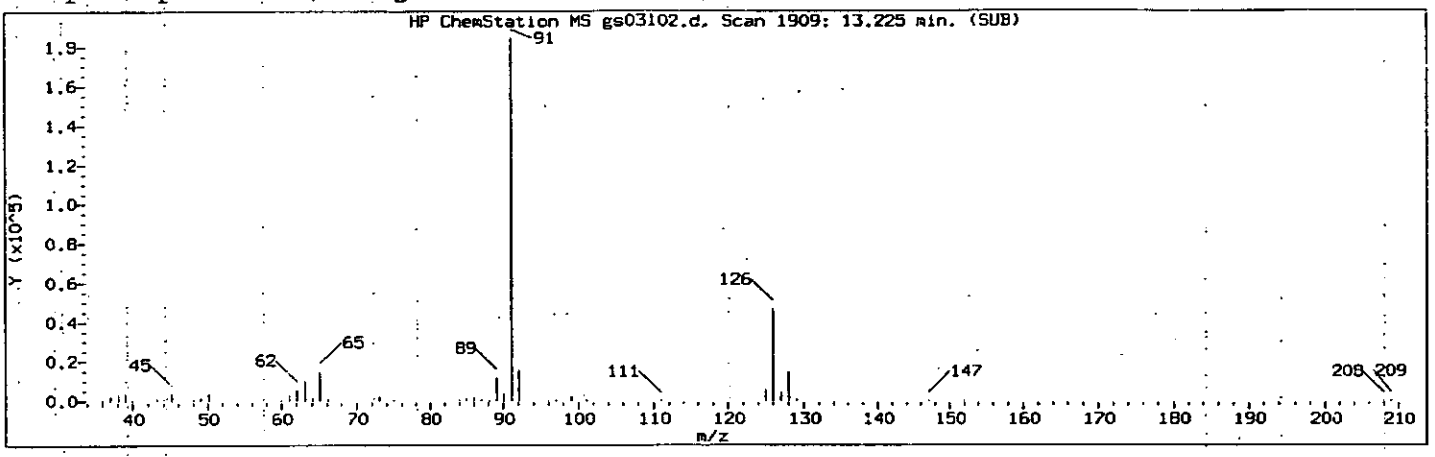
Sample Name: LCDG23 Lab Sample ID: LCDG23

Compound Number : 137
Compound Name : tert-Butylbenzene
Scan Number : 1840
Retention Time (minutes): 12.804
Quant Ion : 134.00
Area : 320189
On-column Amount (ng) : 4.7727
Integration start scan : 1833 Integration stop scan: 1858
Y at integration start : 0 Y at integration end: 0

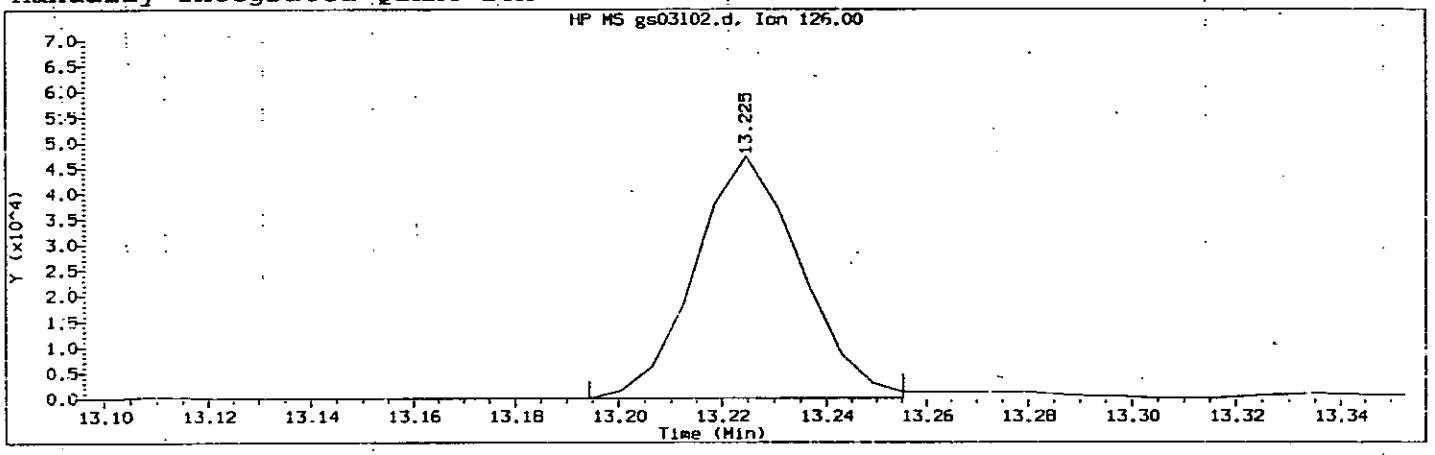
RAD36 0383

Digitally signed by Jason M. Long on 09/03/2010 at 06:58.
Target 3.5 esignature user ID: jml01693

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP16334.i/10sep03a.b/gs03102.d Instrument ID: HP16334.i
Injection date and time: 03-SEP-2010 03:39 Analyst ID: SAS00403

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 03-SEP-2010 02:31
Date, time and analyst ID of latest file update: 03-Sep-2010 06:56 jml01693

Sample Name: LCDG23 Lab Sample ID: LCDG23

Compound Number : 146
Compound Name : Benzyl Chloride
Scan Number : 1909
Retention Time (minutes): 13.225
Quant Ion : 126.00
Area (flag) : 66915M
On-Column Amount (ng) : 3.6916
Integration start scan : 1903 Integration stop scan: 1913
Y at integration start : 0 Y at integration end: 0

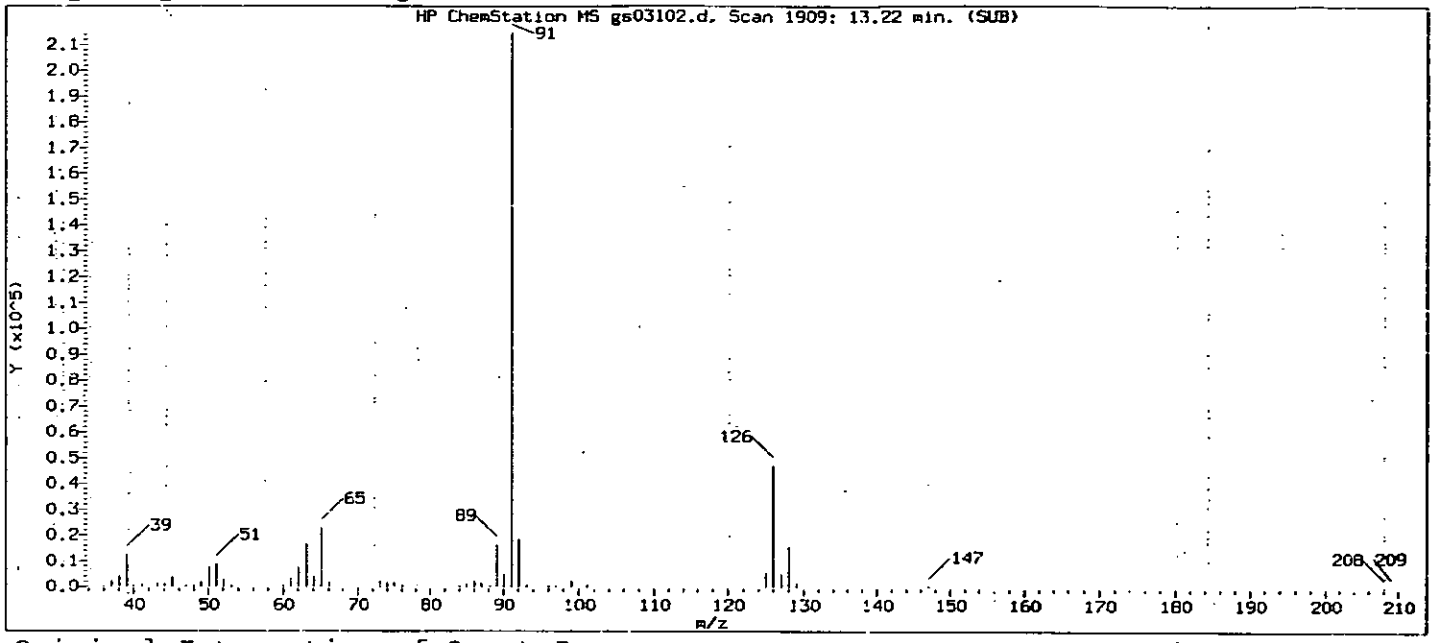
Reason for manual integration: improper integration

Analyst responsible for change: Digitally signed by Jason M. Long on 09/03/2010 at 06:58; Target 3.5 esignature user ID: jml01693

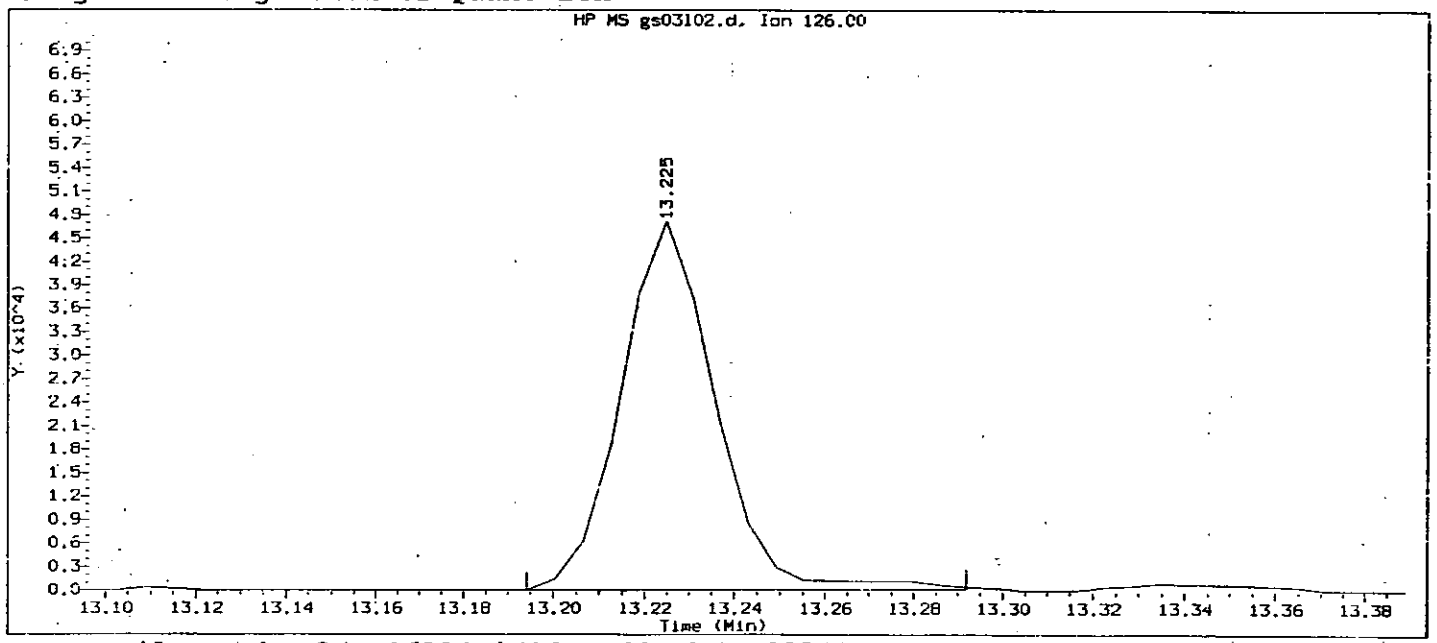
RAD36 0384

GC/MS audit/management approval: _____ 9/10/10

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP16334.i/10sep03a.b/gs03102.d Instrument ID: HP16334.i
Injection date and time: 03-SEP-2010 03:39 Analyst ID: SAS00403

Method used: /chem2/HP16334.i/10sep03a.b/g8260w25.m Sublist used: 8260W25
Calibration date and time: 03-SEP-2010 02:31
Date, time and analyst ID of latest file update: 03-Sep-2010 06:53 jml01693

Sample Name: LCDG23 Lab Sample ID: LCDG23

Compound Number : 146
Compound Name : Benzyl Chloride
Scan Number : 1909
Retention Time (minutes): 13.225
Quant Ion : 126.00
Area : 68658
On-column Amount (ng) : 3.7794
Integration start scan : 1903 Integration stop scan: 1919
Y at integration start : 0 Y at integration end: 136

RAD36 0385

Digitally signed by Jason M. Long on 09/03/2010 at 06:58.
Target 3.5 esignature user ID: jml01693

Lancaster Laboratories
2425 New Holland Pike • Lancaster, PA 17601

GC/MS Volatiles pH Log

Batch: G102461AA

LLI#	pH	Date Checked	Initials/ Employee #	Comments
6076061	≤2	9/3/2010	JML 1693	38A
6076062	≤2	9/3/2010	JML 1693	38A
6076063	≤2	9/3/2010	JML 1693	38A

Lancaster Laboratories
Runlog for Hewelet Packard GC/MS System HP16334 **HP #29**

** Shift #1 Analyst: JML ** Shift #2 Analyst: SEJ ** Shift #3 Analyst: _____ *

Comment Code:

R =	Reinjection necessary	X =	Sample sent to be reextracted
S =	Surrogate problem	I =	Internal Standard problem
NU =	Not used	F =	Further dilution required
MR =	Meets requirements	IUO =	Internal use only
Cz =	Confirms z, (z = S, I or X)	T =	Injected outside valid tune period

Other problems or comments are as follows:

* 8260 25ML WATERS *

* *

* *

* *

Data Directory Path is - c:\msdchem\1\data\10AUG17A\

FILE	SAMPLE	LLI#	DATE	TIME	BATCH	D.F.	NOTES
GG17T01.D	50ngBFB	BFB MAY12-10	17 Aug 2010	11:30			MR
GG17X01.D	BLK	BLK	17 Aug 2010	11:40			NU
GG17I01.D	VSTD025	VSTD025	17 Aug 2010	12:02			MR
GG17I02.D	VSTD010	VSTD010	17 Aug 2010	12:23			MR
GG17I03.D	VSTD005	VSTD005	17 Aug 2010	12:44			MR
GG17I04.D	VSTD002	VSTD002	17 Aug 2010	13:06			MR
GG17I05.D	VSTD001	VSTD001	17 Aug 2010	13:27			MR
GG17I06.D	VSTD0.5	VSTD0.5	17 Aug 2010	13:49			MR
GG17M01.D	MDL0.1	MDL0.1	17 Aug 2010	14:10			MR
GG17B01.D	VBLKG01	VBLKG01	17 Aug 2010	14:31	G102291AA		MR
GG17L01.D	LCSG01	LCSG01	17 Aug 2010	14:53	G102291AA		MR
GG17L02.D	LCDG01	LCDG01	17 Aug 2010	15:14	G102291AA		MR
GG17M02.D	MDL0.2	MDL0.2	17 Aug 2010	15:36			MR
GG17M03.D	MDL0.3	MDL0.3	17 Aug 2010	16:20			MR

Lancaster Laboratories
Runlog for Hewelet Packard GC/MS System HP16334 **HP #29**

** Shift #1 Analyst: JML ** Shift #2 Analyst: ** Shift #3 Analyst: SAS *

Comment Code:
R = Reinjection necessary
S = Surrogate problem
NU = Not used
MR = Meets requirements
Cz = Confirms z, (z = S, I or X)
X = Sample sent to be reextracted
I = Internal Standard problem
F = Further dilution required
IUO = Internal use only
T = Injected outside valid tune period

Other problems or comments are as follows:

8260_25ML_WATERS

Data Directory Path is - c:\msdchem\1\data\10SEP03A\

FILE	SAMPLE	LLI#	DATE	TIME	BATCH	D.F.	NOTES
GS03T01.D	50ngBFB	BFB MAY12-10	03 Sep 2010	01:53			MR
GS03C01.D	VSTD010	VSTD010	03 Sep 2010	02:13			MR
GS03BA1.D	VBLKG23	VBLKG23	03 Sep 2010	02:35	G102461AA		NU
GS03B01.D	VBLKG23	VBLKG23	03 Sep 2010	02:56	G102461AA		MR
GS03L01.D	LCSG23	LCSG23	03 Sep 2010	03:17	G102461AA		MR
GS03L02.D	LCDG23	LCDG23	03 Sep 2010	03:39	G102461AA		MR
GS03S01.D	XXXXX	6074074	03 Sep 2010	05:16	G102461AA		MR
GS03S02.D	XXXXX	6074076	03 Sep 2010	05:38	G102461AA		MR
GS03S03.D	XXXXX	6075233	03 Sep 2010	06:00	G102461AA		MR
GS03S04.D	XXXXX	6075230	03 Sep 2010	06:21	G102461AA		MR
GS03S05.D	XXXXXMS	6075230MS	03 Sep 2010	06:43	G102461AA		MR
GS03S06.D	XXXXX	6075231	03 Sep 2010	07:05	G102461AA		MR
GS03S07.D	XXXXX	6075232	03 Sep 2010	07:26	G102461AA		MR
GS03S08.D	XXXXX	6074071	03 Sep 2010	07:48	G102461AA		MR
GS03S09.D	XXXXX	6074072	03 Sep 2010	08:09	G102461AA		MR
GS03S10.D	XXXXX	6074073	03 Sep 2010	08:30	G102461AA		MR
GS03S11.D	XXXXX	6074075	03 Sep 2010	08:52	G102461AA		MR
GS03S12.D	XXXXX	6072828	03 Sep 2010	09:13	G102461AA		MR
GS03S13.D	XXXXX	6074841	03 Sep 2010	09:35	G102461AA	10	MR
GS03S14.D	XXXXX	6076494	03 Sep 2010	09:56	G102461AA		MR
GS03S15.D	XXXXX	6076497	03 Sep 2010	10:18	G102461AA		MR
GS03S16.D	XXXXX	6076500	03 Sep 2010	10:39	G102461AA		MR
GS03S17.D	XXXXX	6076503	03 Sep 2010	11:01	G102461AA		MR
GS03S18.D	XXXXX	6076061	03 Sep 2010	11:22	G102461AA		MR
GS03S19.D	XXXXX	6076062	03 Sep 2010	11:44	G102461AA		MR
GS03S20.D	XXXXX	6076063	03 Sep 2010	12:05	G102461AA		MR
GS03S21.D	XXXXX	6076262	03 Sep 2010	12:27	G102461AA		MR

CompuChem

A Division Of

Liberty Analytical Corp.

11/30/2010

JANET FRAZIER

DRAPER

2206 SOUTH MAIN STREET

BLACKSBURG, VA 24060

Subject:

Report of Data - Project: RAAP HWMU13 (OBG)/B03204-08 WorkOrder: 1010107

Attn.: JANET FRAZIER

Enclosed are the results of analytical work performed in accordance with the referenced account number. This report covers sample(s) appearing on the listing.

Thank you for selecting CompuChem for your sample analysis. If you should have questions or require additional analytical services, please contact your representative at 1-800-833-5097

Sincerely,

Compuchem

a division of Liberty Analytical Corporation

Attachment

TOTAL NUMBER

OF PAGES _____

501 Madison Avenue, Cary, NC 27513 Tel: 919-379-4100 Fax: 919-379-4050

CompuChem, a division of Liberty Analytical

Client: DRAPER **Work:** 1010107

Project: RAAP HWMU13 (OBG)/B03204-08 **Sdg:** 1010107

Lab ID	Client ID	Matrix	Date Sampled	Date Received
1010107-01	13MW5	Water	10/19/2010 08:30	10/20/2010 09:36
1010107-02	13MW1	Water	10/18/2010 11:05	10/20/2010 09:36
1010107-03	13MW2	Water	10/18/2010 12:00	10/20/2010 09:36
1010107-04	13MW3	Water	10/18/2010 08:00	10/20/2010 09:36
1010107-05	13MW4	Water	10/18/2010 09:10	10/20/2010 09:36
1010107-06	13MWDUP	Water	10/19/2010 07:30	10/20/2010 09:36
1010107-07	13MW6	Water	10/18/2010 10:10	10/20/2010 09:36
1010107-08	13MW7	Water	10/19/2010 09:45	10/20/2010 09:36

CompuChem, a Division of Liberty Analytical Corporation

I. SAMPLE DATA PACKAGE

DOCUMENT 6020

The sample data package shall include data for all analyses of all samples in one Sample Delivery Group (SDG), including field and analytical samples, reanalyses, blanks, spikes, duplicates, and laboratory control samples. The sample data package consists of the following:

A. Cover Documentation

B. Sample Data

LAB CODE : LIBRTY CONTRACT # : SW846

SDG # : 1010107

A. Cover Documentation

1. Cover Page

2. SDG Narrative

3. Sample Traffic Reports/
   Chain-Of-Custody Records

1. Cover Page

Inorganic Analyses Data Package

The Cover Page includes laboratory information, the Case and SDG numbers, Non-Routine Analytical Service (NRAS) number (if appropriate), the EPA sample numbers in alphanumeric order showing the EPA sample numbers cross-referenced with Lab ID numbers, and completion of the questions on the use of background and interelement correction for the samples.

SW846 - METALS

COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

SOW No.: SW846

EPA Sample No.	Lab Sample ID.
13MW1	1010107-02
13MW2	1010107-03
13MW3	1010107-04
13MW4	1010107-05
13MW5	1010107-01
13MW5D	0102522-DUP1
13MW5D	0102523-DUP1
13MW5S	0102522-MS1
13MW5S	0102523-MS1
13MW5SD	0102522-MSD1
13MW5SD	0102523-MSD1
13MW6	1010107-07
13MW7	1010107-08
13MWDUP	1010107-06

Were ICP interelement corrections applied? Yes/No NO

Were ICP background corrections applied? Yes/No NO

If yes-were raw data generated before application of background corrections? Yes/No NO

Comments:

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 above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Name: Susan W Bass

Date: 11-10-10 Title: Senior Chemist

2. SDG Narrative

The SDG Narrative contains laboratory information, the Case and SDG numbers, contract number, and detailed documentation of any QC, sample, shipment, and/or analytical problems encountered in processing the samples. This will include any technical and administrative problems encountered and the resolution or corrective actions taken. The SDG Narrative will also document the alternative means of determining the cooler temperature when a cooler's temperature indicator bottle is absent. The SDG Narrative also provides equations or curves and utilizes raw data from the SDG being reported to demonstrate how sample results are obtained from raw instrument output. The SDG Narrative also includes a discussion of any flexibility Statement of Work (SOW) modification, including attaching a copy of the USEPA approved modification form to the SDG Narrative. Finally, the SDG Narrative will identify and explain any differences between results being provided in the data package and those provided previously as Preliminary Results.

CompuChem
a Division of Liberty Analytical Corp.
501 Madison Avenue
Cary, NC 27513

SDG NARRATIVE
SDG # 1010107

The indicated Sample Delivery Group (SDG) consisting of eight (8) water samples was received into the laboratory information management system (LIMS) on October 20, 2010 intact and in good condition with Chain of Custody (COC) Records in order, unless otherwise noted in any attachments or Quality Assurance Notices. The temperature of the samples upon receipt was 0.1 to 1.0°C. Sample ID's reported in this data package are noted by the receiving department on the COC if they differ from those listed by the samplers on the COC.

The samples were prepared and analyzed in accordance with SW846-6020 methodology for the requested metals and mercury.

INSTRUMENTAL QUALITY CONTROL:

All calibration verification solutions (ICV & CCV), blanks (ICB & CCB), and interference check samples (ICSA & ICSAB) associated with this data were confirmed to be within allowable limits.

SAMPLE PREPARATION QUALITY CONTROL:

The sample preparation procedure verification (PBW & LCSW) was found to be within acceptable ranges and the field samples were prepared and analyzed within the specified holding times.

MATRIX RELATED QUALITY CONTROL:

The sample matrix spikes, CCN = 1010107-01 ID 13MW5S and 13MW5SD were inside control limits for the requested analytes.

Control limits for matrix spikes recoveries are set at 75% to 125% of the analyte quantity added unless original sample concentrations exceed the true values of these "spikes" by a factor of four or more. In this case, affected analytes are not flagged even if recoveries are outside percentage recovery control limits.

The sample matrix duplicate, CCN = 1010107-01 ID 13MW5D was inside control limits for the requested analytes.

CLP control limits for duplicate determinations are +/- 20% Relative Percent Difference (RPD) for concentrations greater than or equal to five times the CRDL in both the original and duplicate samples, and +/- the CRDL for concentrations less than five times the CRDL. The RPD is not calculated if both the original and duplicate values fall below the IDL.

A five-fold serial dilution of sample, CCN = 1010107-01 ID 13MW5L was performed in accordance with requirements for ICP/MS and mercury analysis.

The adjusted sample concentration was inside control limits for the requested analytes.

I certify that the tests used in this report meet all requirements of the NELAC standards unless otherwise stated in the SDG narrative or QA notice.

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 above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on CD has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Susan W. Bass
Senior Chemist
November 9, 2010

CompuChem

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Liberty Analytical Corp.

DATA REPORTING QUALIFIERS FOR INORGANICS

On Form I, under the column labeled "C" for concentration qualifier and "Q" for qualifier, each result is flagged with the specific data reporting qualifiers listed below, as appropriate. Up to five qualifiers may be reported on Form I for each analyte.

The C (concentration) qualifiers used are:

U: This flag indicates the analyte was analyzed for but not detected. This reported value was obtained from a reading that was less than the Instrument Detection Limit (IDL). The IDL will be adjusted to reflect any dilution and, for soils, the percent moisture.

B: This flag indicates the analyte was analyzed for and the reported value was obtained from a reading that was less than the Contract Required Detection Limit (CRDL) but greater than or equal to the Method Detection Limit (MDL).

The Q qualifiers used are:

E: This flag indicates an estimated value. This flag is used:

1. When the serial dilution (a five fold dilution for CLP and a five fold dilution for SW-846 method 6010B) results are not within 10%. The analyte concentration must be sufficiently high (minimally a factor of 50X above the IDL in the original sample).

N: This flag indicates the sample spike recovery is outside of control limits:

***:** This flag is used for duplicate analysis when the sample and the sample duplicate results are not within control limits.

The extensions: D, S, SD, L. A, added to the end of the client ID represent as follows:

D:	matrix duplicate
S:	matrix spike
SD:	matrix spike duplicate
L:	serial dilution
A:	post digestion spike

Method Codes:

P:	ICP PLASMA
CV:	MERCURY COLD VAPOR AA
CA:	MIDI-DISTILLATION SPECTROPHOTOMETRIC
MS:	MASS SPECTROMETRY
AS:	SEMI-AUTOMATED SPECTROPHOTOMETRIC

3. Sample Traffic Reports/ Chain-Of-Custody Records

CHAIN OF CUSTODY RECORD

10-19-10

Laboratory: CompuChem Environmental, 501 Madison Avenue, Cary, NC 27513/Cathy Dover, Manager/1-800-833-5097

Client: Draper Aden Associates **Attn:** 0 **Address:** 0 0 **Phone:** 0 **Fax:** 0 **Fax:** 0	**Consultant:** Draper Aden Associates **Attn:** Janet C. Frazier **Address:** 2206 South Main Street Blacksburg, Virginia 24060 **Phone:** (540) 552-0444 **Fax:** (540) 552-0291	**Sample Site:** RAAP, Radford, Virginia **Location:** Open Burning Ground (OBG)/HWMU13 **Event:** 2nd Semiannual 2010 Monitoring Event **DAA JN:** B03204-08 **Lab JN:**	**Project Specific (PS) or Batch (B) QC:** **Sample Collection for Project Complete?** YES UPS 12-237-301-01- 5634-5155 5818-5969 **Carrier:** K 5754-0978 **Tracking Number:** M 5605-4184 S 5644-9598 5713-1204		

Box 1: Matrix
SW Surface Water; GW Groundwater; L Leachate; S Soil; T Trip Blank; E Equipment Blank; P Product; O Other

Box 2: Preservative
A HCl; B HNO_3; C H_2SO_4; D $Na_2S_2O_3$; E NaOH; F ZnAc; G Other (Specify); H None

Box 3: Filtered/Unfiltered
F Filtered; U Unfiltered

Box 5: Sample Container Type
P Plastic; AG Amber Glass; V VOA; CG Clear Glass

Box 4: Sample Type
G Grab; C Composite

Invoice
Copy to Consultant: YES
Bill: CLIENT OTHER
Preserved and shipped on ice: YES

Box 4 - Sample Type	G	G	G	G	G	G						
Box 3 - Filtered/Unfiltered	U	U	U	U	U	U						
Required pH of Sample					<2	<2						
Box 2 - Preservative	H	H	H	H	B	B						
Box 5 - Sample Container Type	2-1L A		1-250ml P	2-1L A	1-500ml P							

Sample ID	Date: 2010	Time	Box 1: Matrix	Number of Bottles	8332/3535 - Nitroglycerine (2 AL)	8330 - Explosives	Perchlorate 314.0 (250 mL)	SVOCs 8270C (35 2oz. 2 AL)	ICP 6010B/3005A/ thallium 7000 (Metals-Total) (500mL)	7470A (Mercury-Total)	Metals pH					
13MW1	10/18	1105	GW	6	X	X	X	X	X	X	<2					1010107-02
13MW2	10/18	1200	GW	6	X	X	X	X	X	X	<2					-03
13MW3	10/18	0806	GW	6	X	X	X	X*	X	X	<2	*rec'd 1-SVOC broken for 13MW3 JD 10/20/10				-04
13MW4	10/18	0910	GW	6	X	X	X	X	X	X	<2					-05
13MWDUP	10/19	0730	GW	6	X	X	X	X	X	X	<2					-06
13MW5	10/19	0930	GW	6	X	X	X	X	X	X	<2	USE FOR QC				1010107-01
13MW6	10/18	1010	GW	6	X	X	X	X	X	X	<2					-07
13MW7	10/19	0945	GW	6	X	X	X	X	X	X	<2					-08

GENERAL NOTES:
1. Level 4 deliverable with EDD and pdf.
2. REPORT DL/QL and estimated results.
(See 4th Q. 2009, if needed).
or call.
JCR 10.2.10

Residual Chlorine Present?
Yes ____ No ✓

Clients Special Instructions: Level 4 with add and PDF. 0.6, 0.1, 0.2, 1.0, 0.9°C SN0015

Received by lab in Good Condition ✓ Yes ____ No Custody Seal Intact ✓ Yes ____ No Temperature upon arrival ^ Received on Ice ✓ Yes ____ No
Describe problems, if any:

Sampler Name (Print): KEN CODDINGTON	Date: 10-18-10	#1 Relinquished by (Signature):	Date: 10-19-10	#2 Relinquished by (Signature):	Date:	Sample Storage Time Requested:
Sampler Signature:	Time: 0600	Company Name: DAA	Time: 1700	Company Name:	Time:	
Sampler Name (Print): Chris Branscome	Date: 10/18/10	#1 Received by (Signature): Jennifer Dover	Date: 10/20/10	#2 Received by (Signature):	Date:	30 DYS ORG/6 MTHS INORG
Sampler Signature: Chris Branscome	Time: 0600	Company Name: Compuchem	Time: 0936	Company Name:	Time:	

JCR 10.2.10 1/5

5/5

ANALYTICAL METHOD: SEE BELOW
TYPE METHOD: SEE BELOW
CLASS: TOTAL

Method SW 846-6010B 6020 ps 2x10

No.	PARAMETER	CAS RN	Permit QL (ug/l)
1.	Antimony	7440-36-0	5
2.	Arsenic	7440-38-2	5
3.	Barium	7440-39-3	1
4.	Cadmium	7440-43-9	1
5.	Chromium	7440-47-3	5
6.	Lead	7440-92-1	5
7.	Nickel	7440-02-0	5
8.	Selenium	7782-49-2	5
9.	Silver	7440-22-4	2
10.	Zinc	7440-66-6	5

Method SW 7470A/CVAA

11.	Mercury	7439-97-6	0.5

.p:\admin\divisions\envr\templates\bburg eteam temp\field events\raap\sample event set up\semi-annual events\hwmu-13\hwmu13-target analyte list gw (new) 2007 10.doc
Revised July 18, 2005 – JCF
Revised November, 2005 – new permit – JCF
Revised Oct 10, 2009
Revised September, 2010, new 8260B analytes - KPO

1010107

COMPUCHEM

Client:	**DRAPER**	**Project Manager:**	**Cathy Dover**
Project:	**RAAP HWMU13 (OBG)/B03204-08**	**Project Number:**	**RAAP HWMU13 (OBG)/B03204-08**
SDG:	**1010107** **CASE:**	**Status:**	**Prepared**

Report To:
DRAPER
JANET FRAZIER
2206 SOUTH MAIN STREET
BLACKSBURG, VA 24060
Phone: (540)552-0444
Fax: -

Invoice To:
DRAPER
JANET FRAZIER
2206 SOUTH MAIN STREET
BLACKSBURG, VA 24060
Phone :(540)552-0444
Fax: -

Date Due: 11/09/2010 00:00 (20 day TAT)

Received By: Cathy Dover — Date Received: 10/20/2010 09:36

Logged In By: Cathy Dover — Date Logged In: 10/20/2010 16:12

J & B Flags?: **YES** Metals ND to? **MDL**	TICS?:**NO** Spike Level: **FULL Spike**	Deliverable: **Style 9**	EDD : **DRAPER ACCESS + ERIS**

USE 1010107-01*NOTE SAMPLING DATES*SVOC FULL SCAN 8270C=HWMU13A.SUB*8330A=DAU13*8332=NITROGLYCERIN ONLY*6020 MS MTL=Sb,As,Ba,Cd,Cr,Pb,Ni,Se,Ag & Zn + Hg 7470*PERCHLORATE 314.0--4 ug/L STD.

Analysis	Due	TAT	Expires	Received	Comments
1010107-01 13MW5 [Water] Sampled 10/19/2010 08:30 Eastern					**USE FOR QC**
6020 ICP MS	11/09/2010 16:00	20	04/17/2011 08:30	10/20/2010 09:36	
GC-8330B EXPLOSIVES	11/09/2010 16:00	20	11/02/2010 08:30	10/20/2010 09:36	SubList = GC- 8330 DAU13 (10-20-10)
GC-8332 EXPLOSIVES	11/09/2010 16:00	20	10/26/2010 08:30	10/20/2010 09:36	SubList = GC- 8332 NITRO (10-20-10)
IC 314.0 Perchlorate Water	11/09/2010 16:00	20	11/16/2010 08:30	10/20/2010 09:36	
SVOC 8270C	11/09/2010 16:00	20	10/26/2010 08:30	10/20/2010 09:36	SubList = SVapix- HWMU13A (10-21-10
7470A/7471A Mercury	11/09/2010 16:00	20	11/16/2010 08:30	10/20/2010 09:36	
1010107-02 13MW1 [Water] Sampled 10/18/2010 11:05 Eastern					
GC-8332 EXPLOSIVES	11/09/2010 16:00	20	10/25/2010 11:05	10/20/2010 09:36	SubList = GC- 8332 NITRO (10-20-10)
SVOC 8270C	11/09/2010 16:00	20	10/25/2010 11:05	10/20/2010 09:36	SubList = SVapix- HWMU13A (10-21-10
6020 ICP MS	11/09/2010 16:00	20	04/16/2011 11:05	10/20/2010 09:36	
GC-8330B EXPLOSIVES	11/09/2010 16:00	20	11/01/2010 11:05	10/20/2010 09:36	SubList = GC- 8330 DAU13 (10-20-10)
IC 314.0 Perchlorate Water	11/09/2010 16:00	20	11/15/2010 11:05	10/20/2010 09:36	
7470A/7471A Mercury	11/09/2010 16:00	20	11/15/2010 11:05	10/20/2010 09:36	

1010107

COMPUCHEM

Client:	**DRAPER**	**Project Manager:**	**Cathy Dover**
Project:	**RAAP HWMU13 (OBG)/B03204-08**	**Project Number:**	**RAAP HWMU13 (OBG)/B03204-08**
SDG:	**1010107** **CASE:**	**Status:**	**Prepared**

Analysis	Due	TAT	Expires	Comments	
1010107-03 13MW2 [Water] Sampled 10/18/2010 12:00 Eastern					
7470A/7471A Mercury	11/09/2010 16:00	20	11/15/2010 12:00	10/20/2010 09:36	
6020 ICP MS	11/09/2010 16:00	20	04/16/2011 12:00	10/20/2010 09:36	
GC-8330B EXPLOSIVES	11/09/2010 16:00	20	11/01/2010 12:00	10/20/2010 09:36	SubList = GC- 8330 DAU13 (10-20-10)
GC-8332 EXPLOSIVES	11/09/2010 16:00	20	10/25/2010 12:00	10/20/2010 09:36	SubList = GC- 8332 NITRO (10-20-10)
IC 314.0 Perchlorate Water	11/09/2010 16:00	20	11/15/2010 12:00	10/20/2010 09:36	
SVOC 8270C	11/09/2010 16:00	20	10/25/2010 12:00	10/20/2010 09:36	SubList = SVapix- HWMU13A (10-21-10
1010107-04 13MW3 [Water] Sampled 10/18/2010 08:00 Eastern					
GC-8332 EXPLOSIVES	11/09/2010 16:00	20	10/25/2010 08:00	10/20/2010 09:36	SubList = GC- 8332 NITRO (10-20-10)
GC-8330B EXPLOSIVES	11/09/2010 16:00	20	11/01/2010 08:00	10/20/2010 09:36	SubList = GC- 8330 DAU13 (10-20-10)
7470A/7471A Mercury	11/09/2010 16:00	20	11/15/2010 08:00	10/20/2010 09:36	
6020 ICP MS	11/09/2010 16:00	20	04/16/2011 08:00	10/20/2010 09:36	
IC 314.0 Perchlorate Water	11/09/2010 16:00	20	11/15/2010 08:00	10/20/2010 09:36	
SVOC 8270C	11/09/2010 16:00	20	10/25/2010 08:00	10/20/2010 09:36	SubList = SVapix- HWMU13A (10-21-10
1010107-05 13MW4 [Water] Sampled 10/18/2010 09:10 Eastern					
7470A/7471A Mercury	11/09/2010 16:00	20	11/15/2010 09:10	10/20/2010 09:36	
GC-8330B EXPLOSIVES	11/09/2010 16:00	20	11/01/2010 09:10	10/20/2010 09:36	SubList = GC- 8330 DAU13 (10-20-10)
GC-8332 EXPLOSIVES	11/09/2010 16:00	20	10/25/2010 09:10	10/20/2010 09:36	SubList = GC- 8332 NITRO (10-20-10)
IC 314.0 Perchlorate Water	11/09/2010 16:00	20	11/15/2010 09:10	10/20/2010 09:36	
SVOC 8270C	11/09/2010 16:00	20	10/25/2010 09:10	10/20/2010 09:36	SubList = SVapix- HWMU13A (10-21-10
6020 ICP MS	11/09/2010 16:00	20	04/16/2011 09:10	10/20/2010 09:36	
1010107-06 13MWDUP [Water] Sampled 10/19/2010 07:30 Eastern					
GC-8332 EXPLOSIVES	11/09/2010 16:00	20	10/26/2010 07:30	10/20/2010 09:36	SubList = GC- 8332 NITRO (10-20-10)
6020 ICP MS	11/09/2010 16:00	20	04/17/2011 07:30	10/20/2010 09:36	
SVOC 8270C	11/09/2010 16:00	20	10/26/2010 07:30	10/20/2010 09:36	SubList = SVapix- HWMU13A (10-21-10
GC-8330B EXPLOSIVES	11/09/2010 16:00	20	11/02/2010 07:30	10/20/2010 09:36	SubList = GC- 8330 DAU13 (10-20-10)
IC 314.0 Perchlorate Water	11/09/2010 16:00	20	11/16/2010 07:30	10/20/2010 09:36	
7470A/7471A Mercury	11/09/2010 16:00	20	11/16/2010 07:30	10/20/2010 09:36	

1010107

COMPUCHEM

Client:	**DRAPER**	**Project Manager:**	**Cathy Dover**
Project:	**RAAP HWMU13 (OBG)/B03204-08**	**Project Number:**	**RAAP HWMU13 (OBG)/B03204-08**
SDG:	**1010107** **CASE:**	**Status:**	**Reported**

Analysis	Due	TAT	Expires		Comments
1010107-07 13MW6 [Water] Sampled 10/18/2010 10:10 Eastern					
GC-8330B EXPLOSIVES	11/09/2010 16:00	20	11/01/2010 10:10	10/20/2010 09:36	SubList = GC- 8330 DAU13 (10-20-10)
IC 314.0 Perchlorate Water	11/09/2010 16:00	20	11/15/2010 10:10	10/20/2010 09:36	
6020 ICP MS	11/09/2010 16:00	20	04/16/2011 10:10	10/20/2010 09:36	
7470A/7471A Mercury	11/09/2010 16:00	20	11/15/2010 10:10	10/20/2010 09:36	
SVOC 8270C	11/09/2010 16:00	20	10/25/2010 10:10	10/20/2010 09:36	SubList = SVapix- HWMU13A (10-21-10
GC-8332 EXPLOSIVES	11/09/2010 16:00	20	10/25/2010 10:10	10/20/2010 09:36	SubList = GC- 8332 NITRO (10-20-10)
1010107-08 13MW7 [Water] Sampled 10/19/2010 09:45 Eastern					
SVOC 8270C	11/09/2010 16:00	20	10/26/2010 09:45	10/20/2010 09:36	SubList = SVapix- HWMU13A (10-21-10
6020 ICP MS	11/09/2010 16:00	20	04/17/2011 09:45	10/20/2010 09:36	
7470A/7471A Mercury	11/09/2010 16:00	20	11/16/2010 09:45	10/20/2010 09:36	
IC 314.0 Perchlorate Water	11/09/2010 16:00	20	11/16/2010 09:45	10/20/2010 09:36	
GC-8332 EXPLOSIVES	11/09/2010 16:00	20	10/26/2010 09:45	10/20/2010 09:36	SubList = GC- 8332 NITRO (10-20-10)
GC-8330B EXPLOSIVES	11/09/2010 16:00	20	11/02/2010 09:45	10/20/2010 09:36	SubList = GC- 8330 DAU13 (10-20-10)

B. Sample Data

1. Results
2. Quality Control Data
3. Raw Data
4. Digestion and Distillation Logs

LAB CODE : LIBRTY CONTRACT # : SW846

SDG # : 1010107

1. Results

Sample results shall be arranged in packets with the Inorganic Analysis Data Sheet [Form IA – IN and Form IB – IN]. These sample packets shall be placed in increasing alphanumeric EPA sample number order, considering both letters and numbers, and shall include all the samples in the SDG.

SW846 - METALS

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.: 13MW1

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix (soil/water): WATER Lab Sample ID: 1010107-02

Level (low/med): LOW Date Received: 10/20/2010

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony	0.20	U		MS
7440-38-2	Arsenic	0.088	U		MS
7440-39-3	Barium	116			MS
7440-43-9	Cadmium	0.045	U		MS
7440-47-3	Chromium	3.2	B		MS
7439-92-1	Lead	0.11	B		MS
7439-97-6	Mercury	0.091	U		CV
7440-02-0	Nickel	2.4	B		MS
7782-49-2	Selenium	3.0	B		MS
7440-22-4	Silver	0.043	U		MS
7440-66-6	Zinc	3.1	B		MS

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

SW846 - METALS

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

13MW2

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix (soil/water): WATER Lab Sample ID: 1010107-03

Level (low/med): LOW Date Received: 10/20/2010

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony	0.20	U		MS
7440-38-2	Arsenic	0.088	U		MS
7440-39-3	Barium	148			MS
7440-43-9	Cadmium	0.045	U		MS
7440-47-3	Chromium	4.1	B		MS
7439-92-1	Lead	0.054	U		MS
7439-97-6	Mercury	0.091	U		CV
7440-02-0	Nickel	1.8	B		MS
7782-49-2	Selenium	0.80	B		MS
7440-22-4	Silver	0.043	U		MS
7440-66-6	Zinc	1.5	B		MS

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

SW846 - METALS

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.: 13MW3

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix (soil/water): WATER Lab Sample ID: 1010107-04

Level (low/med): LOW Date Received: 10/20/2010

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony	0.20	U		MS
7440-38-2	Arsenic	0.088	U		MS
7440-39-3	Barium	96.7			MS
7440-43-9	Cadmium	0.045	U		MS
7440-47-3	Chromium	5.9			MS
7439-92-1	Lead	2.8	B		MS
7439-97-6	Mercury	0.091	U		CV
7440-02-0	Nickel	1.4	B		MS
7782-49-2	Selenium	0.73	B		MS
7440-22-4	Silver	0.043	U		MS
7440-66-6	Zinc	4.7	B		MS

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

SW846 - METALS

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

13MW4

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix (soil/water): WATER Lab Sample ID: 1010107-05

Level (low/med): LOW Date Received: 10/20/2010

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony	0.21	B		MS
7440-38-2	Arsenic	0.21	B		MS
7440-39-3	Barium	57.7			MS
7440-43-9	Cadmium	0.045	U		MS
7440-47-3	Chromium	5.1			MS
7439-92-1	Lead	0.87	B		MS
7439-97-6	Mercury	0.091	U		CV
7440-02-0	Nickel	3.3	B		MS
7782-49-2	Selenium	0.66	B		MS
7440-22-4	Silver	0.043	U		MS
7440-66-6	Zinc	7.0			MS

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

SW846 - METALS

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

13MW5

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix (soil/water): WATER Lab Sample ID: 1010107-01

Level (low/med): LOW Date Received: 10/20/2010

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony	0.83	B		MS
7440-38-2	Arsenic	0.088	U		MS
7440-39-3	Barium	96.2			MS
7440-43-9	Cadmium	0.045	U		MS
7440-47-3	Chromium	5.4			MS
7439-92-1	Lead	0.24	B		MS
7439-97-6	Mercury	0.091	U		CV
7440-02-0	Nickel	1.4	B		MS
7782-49-2	Selenium	1.6	B		MS
7440-22-4	Silver	0.043	U		MS
7440-66-6	Zinc	3.1	B		MS

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

SW846 - METALS

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.: 13MW6

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix (soil/water): WATER Lab Sample ID: 1010107-07

Level (low/med): LOW Date Received: 10/20/2010

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony	0.20	U		MS
7440-38-2	Arsenic	0.088	U		MS
7440-39-3	Barium	89.2			MS
7440-43-9	Cadmium	0.045	U		MS
7440-47-3	Chromium	2.9	B		MS
7439-92-1	Lead	0.30	B		MS
7439-97-6	Mercury	0.091	U		CV
7440-02-0	Nickel	2.0	B		MS
7782-49-2	Selenium	2.7	B		MS
7440-22-4	Silver	0.043	U		MS
7440-66-6	Zinc	3.7	B		MS

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

SW846 - METALS

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.: 13MW7

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix (soil/water): WATER Lab Sample ID: 1010107-08

Level (low/med): LOW Date Received: 10/20/2010

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony	0.20	U		MS
7440-38-2	Arsenic	0.088	U		MS
7440-39-3	Barium	146			MS
7440-43-9	Cadmium	0.045	U		MS
7440-47-3	Chromium	3.0	B		MS
7439-92-1	Lead	0.12	B		MS
7439-97-6	Mercury	0.091	U		CV
7440-02-0	Nickel	36.0			MS
7782-49-2	Selenium	2.5	B		MS
7440-22-4	Silver	0.043	U		MS
7440-66-6	Zinc	39.1			MS

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

SW846 - METALS

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

13MWDUP

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix (soil/water): WATER Lab Sample ID: 1010107-06

Level (low/med): LOW Date Received: 10/20/2010

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7440-36-0	Antimony	0.21	B		MS
7440-38-2	Arsenic	0.088	U		MS
7440-39-3	Barium	52.1			MS
7440-43-9	Cadmium	0.045	U		MS
7440-47-3	Chromium	5.2			MS
7439-92-1	Lead	0.41	B		MS
7439-97-6	Mercury	0.091	U		CV
7440-02-0	Nickel	3.6	B		MS
7782-49-2	Selenium	0.56	B		MS
7440-22-4	Silver	0.043	U		MS
7440-66-6	Zinc	4.4	B		MS

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

2. Quality Control (QC) Data

a. Initial and Continuing Calibration Verification
[Form IIA - IN]

b. CRQL Check Standard
[Form IIB - IN]

c. Blanks
[Form III - IN]

d. ICP-MS Interference Check Sample
[Form IVB - IN]

e. Matrix Spike Sample Recovery
[Form VA - IN]

f. Post Digest Spike Sample Recovery
[Form VB - IN]

g. Duplicates
[Form VI - IN]

h. Laboratory Control Sample
[Form VII - IN]

i. ICP-MS Serial Dilutions
[Form VIII - IN]

j. Method Detection Limits (Annually)
[Form IX - IN]

k. ICP-MS Linear Ranges (Quarterly)
[Form XI – IN]

l. Preparation Log
[Form XII - IN]

m. Analysis Run Log
[Form XIII - IN]

n. ICP-MS Tune
[Form XIV – IN]

o. ICP-MS Internal Standards Relative Intensity Summary
[Form XV – IN]

SW846 - METALS

2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Initial Calibration Source: EPA-0307

Continuing Calibration Source: HP615001

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					M
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	
Antimony	199.0	202.33	102	300.0	319.00	106	307.27	102	MS
Arsenic	200.0	197.69	99	300.0	302.15	101	303.49	101	MS
Barium	99.0	100.62	102	300.0	309.93	103	301.57	101	MS
Cadmium	99.0	99.53	101	300.0	308.49	103	310.52	104	MS
Chromium	98.0	102.73	105	300.0	300.49	100	305.97	102	MS
Lead	200.0	200.11	100	300.0	303.51	101	307.82	103	MS
Mercury	4.0	3.96	99	5.0	5.06	101	5.05	101	CV
Nickel	101.0	94.03	93	300.0	304.39	101	303.45	101	MS
Selenium	206.0	207.23	101	300.0	301.01	100	300.15	100	MS
Silver	100.0	108.19	108	300.0	312.70	104	315.38	105	MS
Zinc	205.0	202.20	99	300.0	303.06	101	306.16	102	MS

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

2A

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Initial Calibration Source: EPA-0307

Continuing Calibration Source: HP615001

Concentration Units: ug/L

Analyte	Initial Calibration			Continuing Calibration					
	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	M
Antimony				300.0	306.43	102			MS
Arsenic				300.0	300.52	100			MS
Barium				300.0	302.05	101			MS
Cadmium				300.0	309.71	103			MS
Chromium				300.0	307.54	103			MS
Lead				300.0	302.90	101			MS
Mercury				5.0	5.04	101	5.15	103	CV
Nickel				300.0	304.47	101			MS
Selenium				300.0	302.51	101			MS
Silver				300.0	309.62	103			MS
Zinc				300.0	306.62	102			MS

(1) Control Limits: Mercury 80-120; Other Metals 90-110; Cyanide 85-115

2B-IN

CRDL STANDARD FOR AA AND ICP

Lab Name: COMPUCHEM Contract: _____

Lab Code: LIBRTY Case No.: _____ SAS No.: _____ SDG No.: 1010107

AA CRDL Standard Source: HP1015809

ICP CRDL Standard Source: HP527008

Concentration Units: ug/L

Analyte	CRDL Standard for AA			CRDL Standard for ICP				
				Initial			Final	
	True	Found	%R	True	Found	%R	Found	%R
Antimony				2.0	2.29	114		
Arsenic				1.0	0.98	98		
Barium				10.0	10.34	103		
Cadmium				1.0	1.12	112		
Chromium				2.0	2.17	108		
Lead				1.0	1.20	120		
Mercury	0.2	0.20	100.0					
Nickel				1.0	0.98	98		
Selenium				5.0	5.09	102		
Silver				1.0	1.28	128		
Zinc				2.0	2.09	104		

Control Limits: no limits have been established by EPA at this time

SW846 - METALS

3

BLANKS

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C	M
Antimony	0.372	B	0.200	U	0.200	U	0.200	U	0.200	U	MS
Arsenic	0.088	U	0.088	U	0.088	U	0.088	U	0.088	U	MS
Barium	0.690	U	0.690	U	0.690	U	0.690	U	0.690	U	MS
Cadmium	0.045	U	0.045	U	0.065	B	0.045	U	0.045	U	MS
Chromium	0.240	U	0.240	U	0.240	U	0.240	U	0.277	B	MS
Lead	0.092	B	0.079	B	0.129	B	0.054	U	0.054	U	MS
Mercury	0.091	U	0.091	U	0.091	U	0.091	U	0.091	U	CV
Nickel	0.093	U	0.093	U	0.093	U	0.093	U	0.093	U	MS
Selenium	0.290	U	0.290	U	0.290	U	0.290	U	0.290	U	MS
Silver	0.043	U	0.043	U	0.043	U	0.043	U	0.043	U	MS
Zinc	0.340	U	0.340	U	0.340	U	0.340	U	0.480	B	MS

3

BLANKS

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Preparation Blank	C	M
Mercury			0.091	U							CV

4

ICP INTERFERENCE CHECK SAMPLE

Lab Name: COMPUCHEM Contract: _____

Lab Code: LIBRTY Case No.: _____ SAS No.: _____ SDG No.: 1010107

ICP ID Number: PEMS ICS Source: EPA-803

Concentration Units: ug/L

Analyte	True		Initial Found			Final Found		
	Sol.A	Sol.AB	Sol.A	Sol.AB	%R	Sol.A	Sol.AB	%R
Antimony	2	22	1.2	20.5	93			
Arsenic	0	19	0.011	18.7	98			
Barium	1	22	1.4	21.4	97			
Cadmium	1	20	0.57	18.9	94			
Chromium	21	40	20.9	40.1	100			
Lead	4	25	4.2	24.3	97			
Nickel	6	24	5.3	22.4	93			
Selenium	0	19	0.13	19.7	104			
Silver	0	18	0.011	18.4	102			
Zinc	11	29	12.1	28.3	98			

SW846 - METALS

5A

SPIKE SAMPLE RECOVERY

SAMPLE NO.

13MW5S

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix (soil/water): WATER Level (low/med): LOW

% Solids for Sample: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Antimony	75 - 125	105.0926		0.8322	B	100.00	104		MS
Arsenic	75 - 125	41.5489		0.0880	U	40.00	104		MS
Barium	75 - 125	2017.9920		96.2438		2000.00	96		MS
Cadmium	75 - 125	52.2113		0.0450	U	50.00	104		MS
Chromium	75 - 125	208.2629		5.3884		200.00	101		MS
Lead	75 - 125	21.0725		0.2446	B	20.00	104		MS
Mercury	75 - 125	0.9830		0.0910	U	1.00	98		CV
Nickel	75 - 125	451.7217		1.4484	B	500.00	90		MS
Selenium	75 - 125	13.0029		1.6204	B	10.00	114		MS
Silver	75 - 125	52.1945		0.0430	U	50.00	104		MS
Zinc	75 - 125	522.4205		3.0741	B	500.00	104		MS

Comments:

SW846 - METALS

5A

SPIKE SAMPLE RECOVERY

SAMPLE NO.

13MW5SD

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix (soil/water): WATER Level (low/med): LOW

% Solids for Sample: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Antimony	75 - 125	101.8420		0.8322	B	100.00	101		MS
Arsenic	75 - 125	40.5024		0.0880	U	40.00	101		MS
Barium	75 - 125	1964.2730		96.2438		2000.00	93		MS
Cadmium	75 - 125	50.0339		0.0450	U	50.00	100		MS
Chromium	75 - 125	202.8996		5.3884		200.00	99		MS
Lead	75 - 125	20.4042		0.2446	B	20.00	101		MS
Mercury	75 - 125	0.9850		0.0910	U	1.00	98		CV
Nickel	75 - 125	437.1988		1.4484	B	500.00	87		MS
Selenium	75 - 125	12.5575		1.6204	B	10.00	109		MS
Silver	75 - 125	50.0454		0.0430	U	50.00	100		MS
Zinc	75 - 125	505.6068		3.0741	B	500.00	101		MS

Comments:

6

DUPLICATES

SAMPLE NO.

13MW5D

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix (soil/water): WATER Level (low/med): LOW

% Solids for Sample: 0.0 % Solids for Duplicate: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Antimony		0.8322	B	0.3877	B	73		MS
Arsenic		0.0880	U	0.0880	U			MS
Barium		96.2438		99.7667		4		MS
Cadmium		0.0450	U	0.0450	U			MS
Chromium	5.0	5.3884		5.7460		6		MS
Lead		0.2446	B	0.1420	B	53		MS
Mercury		0.0910	U	0.0910	U			CV
Nickel		1.4484	B	1.4455	B	0		MS
Selenium		1.6204	B	1.7859	B	10		MS
Silver		0.0430	U	0.0430	U			MS
Zinc	5.0	3.0741	B	6.0918		66		MS

7

LABORATORY CONTROL SAMPLE

Lab Name: COMPUCHEM Contract: _____

Lab Code: LIBRTY Case No.: _____ SAS No.: _____ SDG No.: 1010107

Solid LCS Source: _____

Aqueous LCS Source: EPA-0307

Analyte	Aqueous (ug/L) True	Found	%R	Solid (mg/kg) True	Found	C	Limits		%R
Antimony	198.0	208.33	105						
Arsenic	199.0	213.20	107						
Barium	100.0	102.67	103						
Cadmium	99.0	105.79	107						
Chromium	98.0	105.87	108						
Lead	199.0	208.03	105						
Mercury	3.0	2.87	96						
Nickel	98.0	96.92	99						
Selenium	201.0	230.53	115						
Silver	99.0	112.24	113						
Zinc	200.0	226.94	113						

9
ICP SERIAL DILUTIONS

SAMPLE NO.

13MW5L

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Matrix (soil/water): WATER Level (low/med): LOW

Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Antimony	0.83	B	1.00	U	100.0		MS
Arsenic	0.09	U	0.44	U			MS
Barium	96.24		108.04		12		MS
Cadmium	0.05	U	0.47	B	100.0		MS
Chromium	5.39		7.58	B	41		MS
Lead	0.24	B	0.68	B	183		MS
Mercury	0.09	U	0.46	U			CV
Nickel	1.45	B	2.24	B	54		MS
Selenium	1.62	B	1.75	B	8		MS
Silver	0.04	U	0.22	U			MS
Zinc	3.07	B	3.75	B	22		MS

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INSTRUMENT DETECTION LIMITS (QUARTERLY)

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

ICP ID Number: Date: 4/10/2010

Flame AA ID Number: V4

Furnace AA ID Number:

Analyte	Wave-length (nm)	Back-ground	CRQL ug/L	MDL ug/L	M
Mercury	253.70		0.50	0.091	CV

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

ICP ID Number: PEMS Date: 4/15/2010

Flame AA ID Number:

Furnace AA ID Number:

Analyte	Isotope	Back-ground	CRQL ug/L	MDL ug/L	M
Antimony	121		5	0.200	MS
Arsenic	75		5	0.088	MS
Barium	137		1	0.690	MS
Cadmium	111		1	0.045	MS
Chromium	52		5	0.240	MS
Lead	208		5	0.054	MS
Nickel	60		5	0.093	MS
Selenium	82		5	0.290	MS
Silver	107		2	0.043	MS
Zinc	66		5	0.340	MS

Comments:

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ICP LINEAR RANGES (QUARTERLY)

Lab Name: COMPUCHEM Contract: _____

Lab Code: LIBRTY Case No.: _____ SAS No.: _____ SDG No.: 1010107

ICP ID Number: PEMS Date: 10/19/2010

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	M
Antimony	0.200	5000.0	MS
Arsenic	1.500	5000.0	MS
Barium	0.500	5000.0	MS
Cadmium	0.200	5000.0	MS
Chromium	0.200	5000.0	MS
Lead	0.200	5000.0	MS
Nickel	0.300	5000.0	MS
Selenium	1.500	5000.0	MS
Silver	0.300	5000.0	MS
Zinc	0.300	4000.0	MS

Comments: _____

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PREPARATION LOG

Lab Name: COMPUCHEM Contract: _____

Lab Code: LIBRTY Case No.: _____ SAS No.: _____ SDG No.: 1010107

Method: MS

EPA Sample No.	Preparation Date		Volume (mL)
13MW1	10/26/2010		100.0
13MW2	10/26/2010		100.0
13MW3	10/26/2010		100.0
13MW4	10/26/2010		100.0
13MW5	10/26/2010		100.0
13MW5D	10/26/2010		100.0
13MW5S	10/26/2010		100.0
13MW5SD	10/26/2010		100.0
13MW6	10/26/2010		100.0
13MW7	10/26/2010		100.0
13MWDUP	10/26/2010		100.0
LCSW	10/26/2010		100.0
PBW	10/26/2010		100.0

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PREPARATION LOG

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Method: CV

EPA Sample No.	Preparation Date		Volume (mL)
13MW1	10/26/2010		100.0
13MW2	10/26/2010		100.0
13MW3	10/26/2010		100.0
13MW4	10/26/2010		100.0
13MW5	10/26/2010		100.0
13MW5D	10/26/2010		100.0
13MW5S	10/26/2010		100.0
13MW5SD	10/26/2010		100.0
13MW6	10/26/2010		100.0
13MW7	10/26/2010		100.0
13MWDUP	10/26/2010		100.0
LCSW	10/26/2010		100.0
PBW	10/26/2010		100.0

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ANALYSIS RUN LOG

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Instrument ID Number: V4 Method: CV

Start Date: 10/27/2010 End Date: 10/27/2010

EPA Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
S0	1.00	1045																X									
S0.2	1.00	1047																X									
S0.5	1.00	1049																X									
S1	1.00	1051																X									
S5	1.00	1053																X									
S10	1.00	1055																X									
ICV	1.00	1058																X									
ICB	1.00	1100																X									
CRA	1.00	1102																X									
CCV	1.00	1104																X									
CCB	1.00	1106																X									
ZZZZZZ	1.00	1108																									
ZZZZZZ	1.00	1110																									
ZZZZZZ	1.00	1112																									
ZZZZZZ	1.00	1114																									
ZZZZZZ	1.00	1116																									
ZZZZZZ	1.00	1118																									
ZZZZZZ	1.00	1120																									
ZZZZZZ	1.00	1122																									
ZZZZZZ	1.00	1124																									
ZZZZZZ	1.00	1126																									
CCV	1.00	1128																X									
CCB	1.00	1130																X									
ZZZZZZ	1.00	1132																									
ZZZZZZ	1.00	1134																									
PBW	1.00	1136																X									
LCSW	1.00	1139																X									
13MW5	1.00	1141																X									
13MW5D	1.00	1143																X									
13MW5S	1.00	1145																X									
13MW5SD	1.00	1147																X									
13MW5L	5.00	1149																X									
13MW1	1.00	1151																X									
CCV	1.00	1153																X									
CCB	1.00	1155																X									
13MW2	1.00	1157																X									
13MW3	1.00	1159																X									
13MW4	1.00	1202																X									

SW846 - METALS

14

ANALYSIS RUN LOG

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Instrument ID Number: V4 Method: CV

Start Date: 10/27/2010 End Date: 10/27/2010

EPA Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
13MWDUP	1.00	1204																X									
13MW6	1.00	1206																X									
13MW7	1.00	1208																X									
ZZZZZZ	1.00	1210																									
ZZZZZZ	1.00	1212																									
ZZZZZZ	1.00	1214																									
ZZZZZZ	1.00	1216																									
CCV	1.00	1218																X									
CCB	1.00	1220																X									

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ANALYSIS RUN LOG

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: SAS No.: SDG No.: 1010107

Instrument ID Number: PEMS Method: MS

Start Date: 11/9/2010 End Date: 11/9/2010

EPA Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
TUNE	1.00	1059																										
S0	1.00	1131			X	X	X		X		X				X				X		X	X				X	
S	1.00	1133			X	X	X		X		X				X				X		X	X				X	
S	1.00	1134			X	X	X		X		X				X				X		X	X				X	
S	1.00	1136			X	X	X		X		X				X				X		X	X				X	
S	1.00	1137			X	X	X		X		X				X				X		X	X				X	
S	1.00	1139			X	X	X		X		X				X				X		X	X				X	
LRS	1.00	1142			X	X	X		X		X				X				X		X	X				X	
ICV	1.00	1144			X	X	X		X		X				X				X		X	X				X	
ICB	1.00	1145			X	X	X		X		X				X				X		X	X				X	
ICSA	1.00	1147			X	X	X		X		X				X				X		X	X				X	
ICSAB	1.00	1148			X	X	X		X		X				X				X		X	X				X	
ZZZZZZ	1.00	1150																										
CCV	1.00	1151			X	X	X		X		X				X				X		X	X				X	
CCB	1.00	1153			X	X	X		X		X				X				X		X	X				X	
PBW	1.00	1156			X	X	X		X		X				X				X		X	X				X	
LCSW	1.00	1158			X	X	X		X		X				X				X		X	X				X	
13MW5	1.00	1200			X	X	X		X		X				X				X		X	X				X	
13MW5D	1.00	1201			X	X	X		X		X				X				X		X	X				X	
13MW5S	1.00	1203			X	X	X		X		X				X				X		X	X				X	
13MW5SD	1.00	1204			X	X	X		X		X				X				X		X	X				X	
13MW5L	5.00	1206			X	X	X		X		X				X				X		X	X				X	
ZZZZZZ	1.00	1207																										
13MW1	1.00	1209			X	X	X		X		X				X				X		X	X				X	
13MW2	1.00	1210			X	X	X		X		X				X				X		X	X				X	
CCV	1.00	1212			X	X	X		X		X				X				X		X	X				X	
CCB	1.00	1213			X	X	X		X		X				X				X		X	X				X	
13MW3	1.00	1215			X	X	X		X		X				X				X		X	X				X	
13MW4	1.00	1216			X	X	X		X		X				X				X		X	X				X	
13MWDUP	1.00	1218			X	X	X		X		X				X				X		X	X				X	
13MW6	1.00	1219			X	X	X		X		X				X				X		X	X				X	
13MW7	1.00	1221			X	X	X		X		X				X				X		X	X				X	
ZZZZZZ	1.00	1222																										
CCV	1.00	1224			X	X	X		X		X				X				X		X	X				X	
CCB	1.00	1225			X	X	X		X		X				X				X		X	X				X	

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14 - IN

ICP-MS Tune

Lab Name: COMPUCHEM Contract: _____

Lab Code: LIBRTY Case No.: _____ NRAS No.: _____ SDG NO.: 1010107

ICP-MS Instrument ID: PEMS Date: 11/09/2010

Element - Mass	Avg. Measured Mass (amu)	Avg. Peak Width at Peak Height (amu)	%RSD
Be_9	9.03	0.70	0.65
Mg_24	23.98	0.69	0.27
Mg_25	25.03	0.68	0.89
Mg_26	26.03	0.69	0.69
Co_59	58.93	0.70	0.61
In_113	112.88	0.73	0.54
In_115	114.88	0.71	0.69
Pb_206	205.93	0.70	0.49
Pb_207	206.93	0.70	0.72
Pb_208	207.98	0.70	0.77

Comments: _____

SW846 - METALS

15-IN

ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: COMPUCHEM Contract:

Lab Code: LIBRTY Case No.: NRAS No.: SDG NO.: 1010107

ICP-MS Instrument ID: PEMS 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 In_115	Q	Element Tb_159	Q	Element Bi_209	Q	Element	Q
S0	S0	1131	100		100		100		100		100			
S 6020-MS1	S	1133	102		100		101		104		103			
S 6020-MS2	S	1134	102		100		103		104		102			
S 6020-MS3	S	1136	104		104		103		106		103			
S 6020-MS4	S	1137	102		103		102		103		102			
S 6020-MS5	S	1139	103		105		103		106		103			
LLICV	LRS	1142	102		102		101		101		101			
ICV1	ICV	1144	102		101		99		102		101			
ICB1	ICB	1145	100		101		99		101		100			
ICS-A1	ICSA	1147	94		104		100		105		91			
LLCCV	ZZZZZZ	1150	0											
CCV1	CCV	1151	105		108		103		103		101			
CCB1	CCB	1153	105		108		104		103		101			
0102522-BLK	PBW	1156	101		102		101		100		100			
0102522-BS1	LCSW	1158	97		99		97		99		97			
1010107-01	13MW5	1200	98		100		97		101		96			
0102522-DUP	13MW5D	1201	94		94		91		95		91			
0102522-MS1	13MW5S	1203	94		94		91		97		92			
0102522-MSD	13MW5SD	1204	95		95		92		98		93			
0102522-PS1	ZZZZZZ	1207	0											
1010107-02	13MW1	1209	95		92		91		95		91			
1010107-03	13MW2	1210	95		92		90		94		91			
CCV2	CCV	1212	107		103		97		102		100			
CCB2	CCB	1213	107		103		100		101		101			
1010107-04	13MW3	1215	95		93		90		95		91			
1010107-05	13MW4	1216	98		95		94		98		96			
1010107-06	13MWDUP	1218	96		93		91		95		91			
1010107-07	13MW6	1219	93		89		87		92		89			
LLCCV	ZZZZZZ	1222	0											
CCV3	CCV	1224	107		103		100		102		102			
CCB3	CCB	1225	107		104		101		101		102			

3. Raw Data

For each reported value, the laboratory shall include in the data package all raw data used to obtain that value. This applies to all required QA/QC measurements, instrument standardization, as well as all sample analysis results. This does not apply to the quarterly verification of method and instrument parameters submitted as a part of each data package.

Daily Instrument Profile

Detector Cross Cal: D01310
Analog Voltage: -1606
Pulse Voltage: 1000
Nebulizer Pressure: 0.89

Maintenance: none

Printed: 11/10/2010 8:57:00 AM

Method(s) (circle one): **ILM05.4** **SW-846** (6020) **Other** _____

Operator(s): JCF **Date/Time** 110910/1131 **to** 110910/1331

Tune Date/Time 110910/1055

↑	Specified element(s) fail(s) high
↓	Specified element(s) fail(s) low
RR	Re-run sample(s) neat
RR #X	Re-run at a #-fold dilution
#X	Sample run at a #-fold dilution (aliquot of sample diluted with acidified water)
L	Matrix = leachate
W	Matrix = water
S	Matrix = solid
B	Matrix = biological tissue

SDG	Matrix	Comments
1010107	Water	Cal tune complete
1010116	Water	
1010141	Water	

ICP-MS Run Log: PEM

File Name: PEMSJCF110910

Seq	Sample ID	Client ID	Sample Type	DF	Date	Time	SDG	Action Needed
1	TUN1	Tune	CALIB STD					
2	CAL1	S0	CALIB STD	1	11/09/10	11:31:46		
3	CAL2	S 6020-MS1	CALIB STD	1	11/09/10	11:33:18		
4	CAL3	S 6020-MS2	CALIB STD	1	11/09/10	11:34:48		
5	CAL4	S 6020-MS3	CALIB STD	1	11/09/10	11:36:19		
6	CAL5	S 6020-MS4	CALIB STD	1	11/09/10	11:37:50		
7	CAL6	S 6020-MS5	CALIB STD	1	11/09/10	11:39:21		
8	CRL1	LLICV	ICV	1	11/09/10	11:42:43		
9	ICV1	ICV	ICV	1	11/09/10	11:44:15		
10	ICB1	ICB	ICB	1	11/09/10	11:45:47		
11	IFA1	ICSA	ICS	1	11/09/10	11:47:18		
12	IFB1	ICSAB	ICS	1	11/09/10	11:48:49		
13	CRL2	LLCCV	CCV	1	11/09/10	11:50:21		
14	CCV1	CCV	CCV	1	11/09/10	11:51:53		
15	CCB1	CCB	CCB	1	11/09/10	11:53:24		

The presence of the Chemist's/Analyst's employee ID number, or signature, on this run log attests that strict compliance with the method's SOP has occurred. Any SOP deviations require documentation by the responsible chemist/analyst together with the chemist's/analyst's initials and the initials of the lab supervisor and a QA department representative, signifying approval of the deviation.

Reviewed By: _____ Date: 11-10-10

ICP-MS Run Log: PEM

File Name: PEMSJCF110910

Seq	Sample ID	Client ID	Sample Type	DF	Date	Time	SDG	Action Needed
16	0102522-BLK1	PBW	BLANK	1	11/09/10	11:56:59		
17	0102522-BS1	LCSW	LCS	1	11/09/10	11:58:30		
18	1010107-01	13MW5	SAMPLE	1	11/09/10	12:00:01	1010107	
19	0102522-DUP1	13MW5D	DUPLICATE	1	11/09/10	12:01:32	1010107	
20	0102522-MS1	13MW5S	MATRIX SPIK	1	11/09/10	12:03:03	1010107	
21	0102522-MSD1	13MW5SD	MATRIX SPIK	1	11/09/10	12:04:33	1010107	
22	SRD1	13MW5L	CALIB STD	5	11/09/10	12:06:04	1010107	
23	0102522-PS1	0102522-PS1	SAMPLE	1	11/09/10	12:07:35	1010107	
24	1010107-02	13MW1	SAMPLE	1	11/09/10	12:09:06	1010107	
25	1010107-03	13MW2	SAMPLE	1	11/09/10	12:10:37	1010107	
26	CCV2	CCV	CCV	1	11/09/10	12:12:09		
27	CCB2	CCB	CCB	1	11/09/10	12:13:40		
28	1010107-04	13MW3	SAMPLE	1	11/09/10	12:15:13	1010107	
29	1010107-05	13MW4	SAMPLE	1	11/09/10	12:16:44	1010107	
30	1010107-06	13MWDUP	SAMPLE	1	11/09/10	12:18:15	1010107	
31	1010107-07	13MW6	SAMPLE	1	11/09/10	12:19:46	1010107	
32	1010107-08	13MW7	SAMPLE	1	11/09/10	12:21:16	1010107	
33	CRL3	LLCCV	CCV	1	11/09/10	12:22:48		
34	CCV3	CCV	CCV	1	11/09/10	12:24:20		
35	CCB3	CCB	CCB	1	11/09/10	12:25:51		
36	0102524-BLK1	PBW	BLANK	1	11/09/10	12:30:50	1010107	
37	0102524-BS1	LCSW	LCS	1	11/09/10	12:32:20	1010107	
38	1010116-01	10DDH2R	SAMPLE	1	11/09/10	12:33:51	1010116	
39	0102524-DUP1	10DDH2RD	DUPLICATE	1	11/09/10	12:35:22	1010116	
40	0102524-MS1	10DDH2RS	MATRIX SPIK	1	11/09/10	12:36:53	1010116	
41	0102524-MSD1	10DDH2RSD	MATRIX SPIK	1	11/09/10	12:38:24	1010116	
42	SRD2	10DDH2RL	CALIB STD	5	11/09/10	12:39:55	1010116	
43	0102524-PS1	0102524-PS1	SAMPLE	1	11/09/10	12:41:26	1010116	
44	1010116-02	10D4	SAMPLE	1	11/09/10	12:42:57	1010116	
45	1010116-03	10MW1	SAMPLE	1	11/09/10	12:44:27	1010116	
46	CCV4	CCV	CCV	1	11/09/10	12:46:00		
47	CCB4	CCB	CCB	1	11/09/10	12:47:31		

The presence of the Chemist's/Analyst's employee ID number, or signature, on this run log attests that strict compliance with the method's SOP has occurred. Any SOP deviations require documentation by the responsible chemist/analyst together with the chemist's/analyst's initials and the initials of the lab supervisor and a QA department representative, signifying approval of the deviation.

Reviewed By: _____ Date: 11-10-10

ICP-MS Run Log: PEM

File Name: PEMSJCF110910

Seq	Sample ID	Client ID	Sample Type	DF	Date	Time	SDG	Action Needed
48	1010116-04	10D3	SAMPLE	1	11/09/10	12:49:04	1010116	
49	1010116-05	10DUP	SAMPLE	1	11/09/10	12:50:35	1010116	
50	1010116-06	10D3D	SAMPLE	1	11/09/10	12:52:05	1010116	
51	CRL4	LLCCV	CCV	1	11/09/10	12:53:37		
52	CCV5	CCV	CCV	1	11/09/10	12:55:09		
53	CCB5	CCB	CCB	1	11/09/10	12:56:40		
54	0102820-BLK1	PBW	BLANK	1	11/09/10	13:00:46	1010116	
55	0102820-BS1	LCSW	LCS	1	11/09/10	13:02:17	1010116	
56	1010141-01	7W11B	SAMPLE	1	11/09/10	13:03:47	1010141	
57	0102820-DUP1	7W11BD	DUPLICATE	1	11/09/10	13:05:18	1010141	
58	0102820-MS1	7W11BS	MATRIX SPIK	1	11/09/10	13:06:49	1010141	
59	0102820-MSD1	7W11BSD	MATRIX SPIK	1	11/09/10	13:08:20	1010141	
60	SRD3	7W11BL	CALIB STD	5	11/09/10	13:09:51	1010141	
61	0102820-PS1	0102820-PS1	SAMPLE	1	11/09/10	13:11:22	1010141	
62	1010141-02	7W12B	SAMPLE	1	11/09/10	13:12:53	1010141	
63	1010141-03	7WCA	SAMPLE	1	11/09/10	13:14:24	1010141	
64	CCV6	CCV	CCV	1	11/09/10	13:15:56		
65	CCB6	CCB	CCB	1	11/09/10	13:17:27		
66	1010141-04	7WDUP	SAMPLE	1	11/09/10	13:19:00	1010141	
67	1010141-05	7MW6	SAMPLE	1	11/09/10	13:20:31	1010141	
68	1010141-06	7W9C	SAMPLE	1	11/09/10	13:22:02	1010141	
69	1010141-07	7W10B	SAMPLE	1	11/09/10	13:23:32	1010141	
70	1010141-08	7W10C	SAMPLE	1	11/09/10	13:25:03	1010141	
71	1010141-09	7W13	SAMPLE	1	11/09/10	13:26:34	1010141	
72	CRL5	LLCCV	CCV	1	11/09/10	13:28:06		
73	CCV7	CCV	CCV	1	11/09/10	13:29:38		
74	CCB7	CCB	CCB	1	11/09/10	13:31:09		

The presence of the Chemist's/Analyst's employee ID number, or signature, on this run log attests that strict compliance with the method's SOP has occurred. Any SOP deviations require documentation by the responsible chemist/analyst together with the chemist's/analyst's initials and the initials of the lab supervisor and a QA department representative, signifying approval of the deviation.

Reviewed By: _____ Date: 11-10-10

Standards/QC Preparation for ICP-MS (PEMS) 1 of 3 CompuChem a division of Liberty Analytical Corp. WORKSHEET 1 AA(1)

STANDARDS and REAGENTS TRACEABILITY Seq. File Name: PEMS1f 111010

STANDARD / REAGENT	Reference # *	Manufacturer	Lot #	Expiration Date
Nitric Acid (HNO3)	NHO3-D-051810-DDD	JT Baker	H12022	04/11
Hydrochloric Acid (HCl)	HCL-D-061010-DDD	Caledon	71129	05/11
ICP-MS-TS-3 (Pre Tune Soln)	0I15015	High Purity	1006907	09/13/11
Q-6042-M (CAL Standard)	0B18009	NSI	020310	02/28/12
ICV-1 (0307) multi-element solution	0C27004	EPA	0307	03/27/13
SM-770-032 (CP-MS-CRQL-Rev multi-element solution)	0J19006	High Purity	1028534	10/13/11
ICSA (0803) multi-element solution	0E20022	EPA	0803	05/17/15
ICSAB (0803) multi-element solution	0E20021	EPA	0803	05/17/15
LITHIUM^{6} (Li^{6}) 1000 mg/L single element standard	0B16007	High Purity	0911701	07/20/11
SCANDIUM (Sc) 1,000 mg/L single element standard	0F14006	High Purity	0922308	12/09/11
INDIUM (In) 1,000 mg/L single element standard	0F14004	High Purity	1008216	12/09/11
TERBIUM (Tb) 1,000 mg/L single element standard	0F14005	High Purity	1011601	12/09/11
BISMUTH (Bi) 1,000 mg/L single element standard	0B16008	High Purity	1000418	07/20/11
Water Spike Sample D ICP-MS Matrix Spike multi-element solution	9I15001	High Purity	0934201	12/10/10

*Ref# = Logbook ID, Page number, and item number from Materials Receipt Log

Multi-Element Stock Standard Concentrations:

Stock Standard	Analyte Concentrations (µg/mL)
Pre Tune Solution	Be: 10 Mg: 10 Co: 10 In: 10 Pb: 10
CAL standard	Al: 1000 Sb: 100 As: 100 Ba: 100 Be: 100 B: 100 Cd: 100 Ca: 1000 Cr: 100 Co: 100 Cu: 100 Fe: 1000 Pb: 100 Mg: 1000 Mn: 100 Mo: 100 Ni: 100 K: 1000 Se: 100 Si: 100 Ag: 100 Na: 1000 Tl: 100 Ti: 100 V: 100 Zn: 100 Sn: 100 Sr: 100
CP-MS-CRQL-Rev multi-element solution	Be: 1 V: 5 Cr: 2 Mn: 1 Co: 1 Ni: 1 Cu: 2 Zn: 2 As: 1 Se: 5 Ag: 1 Cd: 1 Sb: 2 Ba: 10 Tl: 1 Pb: 1 Al: 30 Sn: 1 Mo: 1

Entered By: _____

Reviewed By: _____ Date: 11-10-10

Standards/QC Preparation for ICP-MS (PEMS) 2 of 3

CompuChem a division of Liberty Analytical Corp. **WORKSHEET 1 AA(1)**

Standard Lot Number *	Preparation Instructions	Resultant Analyte Conc. (µg/L)
Instrument Tune Solution– 09 14 10- JCF	Place in a 500-mLvolumetric flask: 0.5 mL of PRE-Tuning solution and 5 mL distilled nitric acid. Dilute to volume with deionized water	Li^7: 10 Be: 10 Mg: 10 Co: 10 In: 10 Ce: 10 Pb: 10 U: 10
Internal Standard– 09 18 10 – JCF	Place in a 100-mLvolumetric flask: 50 mL of deionized water , 1.0 mL of distilled nitric acid. Pipet: 2.0 mL of $Lithium^6$, 1.0 mL of Scandium, 1.0 mL of Indium, 1.0 mL of Terbium, and 1.0 mL of Bismuth. Dilute to volume with deionized water	Li^6: 20000 Sc: 10000 In: 10000 Tb: 10000 Bi: 10000
S0/ICB/CCB– 11 09 10 – JCF	Place in a 100-mL volumetric flask: 1 mL distilled nitric acid and 1mL Internal Standard. Dilute to volume with deionized water. Prepare Daily.	Li^6: 200 Sc: 100 In: 100 Tb: 100 Bi: 100
S 6020-MS1/LLICV/LLCCV– 11 09 10 – JCF	Place in a 200-mL volumetric flask: 2 mL distilled nitric acid and 2 mL Internal Standard. Pipet 0.200 mL of CP-MS-CRQL, into flask. Dilute to volume with deionized water	Li^6: 200 Be: 1 Al: 30 Sc: 100 V: 5 Cr: 2 Mn: 1 Co: 1 Ni: 1 Cu: 2 Zn: 2 As: 1 Se: 5 Mo: 1 Ag: 1 Cd: 1 In: 100 Sn: 1 Sb: 2 Ba: 10 Tb: 100 Tl: 1 Pb: 1 Bi: 100
S 6020-MS2 –11 09 10 – JCF	Place in a 100-mL volumetric flask: Pipet 1.0 mL distilled nitric acid and 1 mL Internal Standard. Pipet 0.200 mL of CP-MS-CRQL, into flask. Dilute to volume with deionized water.	Li^6: 200 Be: 2 Al: 60 Sc: 100 V: 10 Cr: 4 Mn: 2 Co: 2 Ni: 2 Cu: 4 Zn: 4 As: 2 Se: 10 Mo: 2 Ag: 2 Cd: 2 In: 100 Sn: 2 Sb: 4 Ba: 20 Tb: 100 Tl: 2 Pb: 2 Bi: 100
S 6020-MS3–11 09 10 – JCF	Place in a 100-mL volumetric flask: 1 mL distilled nitric acid and 1 mL Internal Standard. Pipet 0.125 mL of CAL Standard into flask. Dilute to volume with deionized water	Li^6: 200 Be: 125 Al: 1250 Sc: 100 V: 125 Cr: 125 Mn: 125 Co: 125 Ni: 125 Cu: 125 Zn: 125 As: 125 Se: 125 Mo: 125 Ag: 125 Cd: 125 In: 100 Sn: 125 Sb: 125 Ba: 125 Tb: 100 Tl: 125 Pb: 125 Bi: 100 Al: 1250 Ca: 1250 Na: 1250 Mg: 1250 Fe: 1250 K: 1250
S 6020-MS4–11 09 10 – JCF	Place in a 100-mL volumetric flask: 1 mL distilled nitric acid and 1 mL Internal Standard. Pipet 0.250 mL of CAL Standard into flask. Dilute to volume with deionized water	Li^6: 200 Be: 250 Al: 2500 Sc: 100 V: 250 Cr: 250 Mn: 250 Co: 250 Ni: 250 Cu: 250 Zn: 250 As: 250 Se: 250 Mo: 250 Ag: 250 Cd: 250 In: 100 Sn: 250 Sb: 250 Ba: 250 Tb: 100 Tl: 250 Pb: 250 Bi: 100 Al: 2500 Ca: 2500 Na: 2500 Mg: 2500 Fe: 2500 K: 2500

*Standard Lot Number consists of standard ID, date prepared, and initials of preparer.

Standard Solutions Prepared By: _____

Entered By: _____ Date: 11/09/10

Reviewed By: _____ Date: 11-10-10

Standards/QC Preparation for ICP-MS (PEMS) 3 of 3 CompuChem a division of Liberty Analytical Corp. WORKSHEET 1 AA(1)

Standard Lot Number *	Preparation Instructions	Resultant Analyte Conc. (µg/L)
S 6020-MS5–11 09 10 – JCF	Place in a 100-mL volumetric flask: 1 mL distilled nitric acid and 1 mL Internal Standard. Pipet 0.50 mL of CAL Standard into flask. Dilute to volume with deionized water	Li^6: 200 Be: 500 Al: 5000 Sc: 100 V: 500 Cr: 500 Mn: 500 Co: 500 Ni: 500 Cu: 500 Zn: 500 As: 500 Se: 500 Mo: 500 Ag: 500 Cd: 500 In: 100 Sn: 500 Sb: 500 Ba: 500 Tb: 100 Tl: 500 Pb: 500 Bi: 100 Al: 5000 Ca: 5000 Na: 5000 Mg: 5000 Fe: 5000 K: 5000
ICV– 11 09 10 – JCF	Place in a 200-mL volumetric flask: 2 mL distilled nitric acid, and 2 mL Internal Standard. Pipet 4.0 ml of ICV (0307) multi-element solution, 2.2 mL of 10 µg/mL Molybdenum and 2.2 mL of 10 µg/mL Tin into flask. Dilute to volume with deionized water. (Note: Tin must be from a source different than that used for the calibration standards)	Al: 504 Sb: 199 As: 200 Ba: 99 Be: 99 Ca: 2005 Cr: 98 Co: 100 Cu: 98 Fe: 1016 Pb: 200 Mg: 1215 Mn: 100 Ni: 101 K: 2004 Se: 206 Ag: 100 Na: 2019 Tl: 206 V: 100 Zn: 205 Cd: 99 Li^6: 200 Sc: 100 In: 100 Tb: 100 Bi: 100 Mo: 110 Sn: 110
ICSA– 11 09 10 – JCF	Place in a 200-mL volumetric flask: 2 mL distilled nitric acid and 2 mL Internal Standard. Pipet 20.0 mL of ICS Part A (0803) into flask. Dilute to volume with deionized water.	Al: 100000 Sb: 1.5 As 0.1 Ba: 1.2 Be: 0 Cd: 0.7 Ca: 100000 C: 200000 Cl: 1000000 Cr: 21 Co: 1 Cu: 8 Fe: 10000 Pb: 4 Mg: 100000 Mn: 7 Mo: 2000 Ni: 6 P: 100000 K: 10000 Se: 0.3 Ag: 0 Na: 100000 S: 100000 Tl: 0 Ti: 2000 V: 0.5 Zn: 11, Li^6: 200 Sc: 100 In: 100 Tb: 100 Bi: 100
ICSAB– 11 09 10 – JCF	Place in a 200-mL volumetric flask: 2 mL distilled nitric acid and 2 mL Internal Standard. Pipet 20.0 mL of ICS Part A (0803) and 20.0 mL of ICS Part B (0803) and 0.400 mL of 10 µg/mL Tin into flask. Dilute to volume with deionized water.	Al: 100000 Sb: 22 As 19 Ba: 22 Be: 19 Cd: 20 Ca: 100000 C: 200000 Cl: 1000000 Cr: 40 Co: 20 Cu: 25 Fe: 10000 Pb: 25 Mg: 100000 Mn: 27 Mo: 2000 Ni: 24 P: 100000 K: 10000 Se: 19 Ag: 18 Na: 100000 S: 100000 Tl: 21 Ti: 2000 V: 19 Zn: 29, Li^6: 200 Sc: 100 In: 100 Tb: 100 Bi: 100
CCV– 11 09 10 – JCF	Place in a 200-mL volumetric flask: 2 mL distilled nitric acid, and 2 mL Internal Standard. Pipet 0.600 mL of CAL Standard. Dilute to volume with deionized water.	Li^6: 200 Be: 300 Sc: 100 V: 300 Cr: 300 Mn: 300 Co: 300 Ni: 300 Cu: 300 Zn: 300 As: 300 Se: 300 Mo: 300 Ag: 300 Cd: 300 In: 100 Sn: 300 Sb: 300 Ba: 300 Tb: 100 Tl: 300 Pb: 300 Bi: 100 Al: 3000 Na: 3000 Ca: 3000 K:3000 Mg: 3000 Fe: 3000

*Standard Lot Number consists of standard ID, date prepared, and initials of preparer.

Standard Solutions Prepared By: _____

Entered By: _____ Date: 11/09/10

Reviewed By: _____ Date: 11/10/10

The presence of the Chemist's/Analyst's employee ID number, or signature, on this run log attests that strict compliance with the method's SOP has occurred. Any SOP deviations require documentation by the responsible chemist/analyst together with the chemist's/analyst's initials and the initials of the lab supervisor and a QA department representative, signifying approval of the deviation.

ILM05.4 TUNING REPORT SUMMARY

Sample ID: TUNE

Sample Date/Time: Tuesday, November 09, 2010 10:59:40
Sample Description: 100 PPB TUNING SOLN @ 10 % PEAK HEIGHT
Number of Replicates: 5
Sample File:
Method File: C:\Elandata1\Method\ILM05.4\ILM05.4TUNE.mth
Dataset File: C:\Elandata\Dataset\Default\TUNE.1246

Tuning File

Analyte	Exact Mass	Measured Mass	Measured Peak Width
Be	9.012	9.025	0.697
Mg	23.985	23.975	0.690
Mg	24.986	25.025	0.675
Mg	25.983	26.025	0.691
Co	58.933	58.925	0.702
In	112.904	112.875	0.728
In	114.904	114.875	0.705
Pb	205.975	205.925	0.699
Pb	206.976	206.925	0.699
Pb	207.977	207.975	0.698

Concentration Results

Analyte	Mass	Meas. Intens. Mean	Meas. Intens. RSD
Be	9	6163.139	0.652
Mg	24	50667.677	0.269
Mg	25	7659.973	0.885
Mg	26	8996.445	0.688
Co	59	141408.954	0.609
In	113	14010.772	0.540
In	115	318402.079	0.694
Pb	206	93473.198	0.487
Pb	207	79866.356	0.716
Pb	208	192602.010	0.766

RAW DATA

Replicate 1

Analyte	Mass	Meas. Intensity
Be	9	6115.069
Mg	24	50648.138
Mg	25	7615.098
Mg	26	8937.993
Co	59	140372.353
In	113	14065.108
In	115	319265.149
Pb	206	93375.524

Pb	207	79034.090
Pb	208	191429.491

Replicate 2

Analyte	Mass	Meas. Intensity
Be	9	6142.686
Mg	24	50892.574
Mg	25	7680.348
Mg	26	8950.604
Co	59	140761.364
In	113	14021.754
In	115	316148.208
Pb	206	93343.628
Pb	207	80200.320
Pb	208	192689.548

Replicate 3

Analyte	Mass	Meas. Intensity
Be	9	6151.291
Mg	24	50644.117
Mg	25	7756.607
Mg	26	8972.624
Co	59	141688.318
In	113	14096.878
In	115	321244.387
Pb	206	94257.137
Pb	207	80432.776
Pb	208	193191.086

Replicate 4

Analyte	Mass	Meas. Intensity
Be	9	6216.732
Mg	24	50519.891
Mg	25	7668.739
Mg	26	9083.123
Co	59	141659.311
In	113	13957.232
In	115	316160.624
Pb	206	93069.490
Pb	207	79532.821
Pb	208	190997.345

Replicate 5

Analyte	Mass	Meas. Intensity
Be	9	6189.915
Mg	24	50633.665
Mg	25	7579.071
Mg	26	9037.882
Co	59	142563.424
In	113	13912.886
In	115	319192.026
Pb	206	93320.211
Pb	207	80131.774
Pb	208	194702.580

EPA 6020 & EPA 6020A - Summary Report

Sample ID: S0

Sample Date/Time: Tuesday, November 09, 2010 11:31:46
Sample Type: Sample
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: C:\Elandata1\Method\6020\6020AAAMETHOD.mth
Dataset File: C:\Elandata\Dataset\PEMSJCF110910\S0.001

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Meas. Intens. RSD	Net Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li	6	203114.845	1.005				ppb
⌊	Be	9	2.667	43.301				ppb
⌈>	Sc	45	551723.823	2.099				ppb
|	V	51	978.297	8.250				ppb
|	Cr	52	3240.526	4.004				ppb
|	Mn	55	486.679	3.608				ppb
|	Co	59	138.001	12.383				ppb
|	Ni	60	24.444	7.873				ppb
|	Cu	63	160.001	25.345				ppb
|	Cu	65	75.556	28.364				ppb
|	Zn	66	271.115	12.130				ppb
|	As	75	28.281	118.562				ppb
⌊	Se	82	37.111	26.906				ppb
⌈	Ag	107	10.000	57.735				ppb
|	Ag	109	11.111	17.321				ppb
|	Cd	111	11.245	31.023				ppb
|	In	113	48582.730	0.548				ppb
⌊>	In	115	1113296.985	2.281				ppb
⌈	Sb	121	425.009	20.614				ppb
|	Ba	135	94.000	6.383				ppb
|	Ba	137	157.335	11.535				ppb
⌊>	Tb	159	1547293.124	2.889				ppb
⌈	Tl	205	80.000	45.070				ppb
|	Pb	206	180.002	22.048				ppb
|	Pb	207	331.670	31.055				ppb
|	Pb	208	523.342	37.106				ppb
⌊>	Bi	209	1059321.561	1.344				ppb

Raw Data

Replicate 1

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
⌈>	Li	6	205442.882		ppb
⌊	Be	9	2.000		ppb
⌈>	Sc	45	563861.071		ppb
|	V	51	1071.424		ppb
|	Cr	52	3388.574		ppb
|	Mn	55	470.011		ppb
|	Co	59	156.001		ppb
|	Ni	60	26.667		ppb
|	Cu	63	180.002		ppb
|	Cu	65	100.001		ppb
|	Zn	66	293.338		ppb
|	As	75	46.294		ppb
⌊	Se	82	45.333		ppb
⌈	Ag	107	13.333		ppb
|	Ag	109	10.000		ppb

	Cd	111	13.820		ppb
	In	113	48813.850		ppb
>	In	115	1130300.651		ppb
	Sb	121	335.006		ppb
	Ba	135	88.000		ppb
	Ba	137	178.002		ppb
>	Tb	159	1584222.581		ppb
	Tl	205	40.000		ppb
	Pb	206	225.003		ppb
	Pb	207	440.005		ppb
	Pb	208	740.016		ppb
>	Bi	209	1071940.130		ppb

Replicate 2

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	202265.078		ppb
	Be	9	2.000		ppb
>	Sc	45	540792.859		ppb
	V	51	928.523		ppb
	Cr	52	3146.495		ppb
	Mn	55	485.012		ppb
	Co	59	136.001		ppb
	Ni	60	23.333		ppb
	Cu	63	186.668		ppb
	Cu	65	66.667		ppb
	Zn	66	233.336		ppb
	As	75	-10.406		ppb
	Se	82	26.000		ppb
	Ag	107	3.333		ppb
	Ag	109	10.000		ppb
	Cd	111	7.275		ppb
	In	113	48643.020		ppb
>	In	115	1084099.856		ppb
	Sb	121	430.009		ppb
	Ba	135	100.001		ppb
	Ba	137	150.001		ppb
>	Tb	159	1560053.102		ppb
	Tl	205	90.000		ppb
	Pb	206	165.001		ppb
	Pb	207	320.003		ppb
	Pb	208	465.006		ppb
>	Bi	209	1062142.799		ppb

Replicate 3

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	201636.575		ppb
	Be	9	4.000		ppb
>	Sc	45	550517.539		ppb
	V	51	934.944		ppb
	Cr	52	3186.508		ppb
	Mn	55	505.013		ppb
	Co	59	122.001		ppb
	Ni	60	23.333		ppb
	Cu	63	113.334		ppb
	Cu	65	60.000		ppb
	Zn	66	286.671		ppb
	As	75	48.956		ppb
	Se	82	40.000		ppb
	Ag	107	13.333		ppb
	Ag	109	13.333		ppb
	Cd	111	12.640		ppb
	In	113	48291.322		ppb
>	In	115	1125490.448		ppb
	Sb	121	510.013		ppb

	Ba	135	94.000	ppb
	Ba	137	144.001	ppb
>	Tb	159	1497603.689	ppb
	Tl	205	110.001	ppb
	Pb	206	150.001	ppb
	Pb	207	235.001	ppb
	Pb	208	365.004	ppb
>	Bi	209	1043881.754	ppb

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
⌈>	Li	6					
⌊	Be	9					
⌈>	Sc	45					
|	V	51					
|	Cr	52					
|	Mn	55					
|	Co	59					
|	Ni	60					
|	Cu	63					
|	Cu	65					
|	Zn	66					
|	As	75					
⌊	Se	82					
⌈	Ag	107					
|	Ag	109					
|	Cd	111					
|	In	113					
⌊>	In	115					
⌈	Sb	121					
|	Ba	135					
|	Ba	137					
⌊>	Tb	159					
⌈	Tl	205					
|	Pb	206					
|	Pb	207					
|	Pb	208					
⌊>	Bi	209					

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

EPA 6020 & EPA 6020A - Summary Report

Sample ID: S 6020-MS1

Sample Date/Time: Tuesday, November 09, 2010 11:33:18
Sample Type: Sample
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: C:\Elandata1\Method\6020\6020AAAMETHOD.mth
Dataset File: C:\Elandata\Dataset\PEMSJCF110910\S 6020-MS1.002

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Meas. Intens. RSD	Net Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li	6	206512.598	0.365	206512.598			ppb
⌊	Be	9	218.669	14.644	0.001	1.00000	14.86	ppb
⌈>	Sc	45	552216.897	2.166	552216.897			ppb
|	V	51	24411.823	2.229	0.042	5.00000	2.09	ppb
|	Cr	52	11283.029	0.567	0.015	2.00000	2.34	ppb
|	Mn	55	6383.704	0.432	0.011	1.00000	1.90	ppb
|	Co	59	5194.016	3.390	0.009	1.00000	2.26	ppb
|	Ni	60	1147.844	2.436	0.002	1.00000	2.63	ppb
|	Cu	63	5388.118	2.524	0.009	2.00000	0.75	ppb
|	Cu	65	2576.999	4.631	0.005	2.00000	3.13	ppb
|	Zn	66	1567.901	0.747	0.002	2.00000	3.54	ppb
|	As	75	725.077	19.066	0.001	1.00000	17.80	ppb
⌊	Se	82	369.562	5.104	0.001	5.00000	3.31	ppb
⌈	Ag	107	4149.750	1.944	0.004	1.00000	0.90	ppb
|	Ag	109	4242.011	2.818	0.004	1.00000	3.79	ppb
|	Cd	111	873.438	9.946	0.001	1.00000	7.22	ppb
|	In	113	50185.636	1.597	0.001			ppb
⌊>	In	115	1119712.597	2.776	1119712.597			ppb
⌈	Sb	121	6625.530	4.165	0.004	2.00000	4.64	ppb
|	Ba	135	8031.891	1.560	0.005	10.00000	0.74	ppb
|	Ba	137	13996.458	2.133	0.009	10.00000	1.37	ppb
⌊>	Tb	159	1603401.516	1.515	1603401.516			ppb
⌈	Tl	205	9878.210	0.792	0.009	1.00000	1.79	ppb
|	Pb	206	3498.947	5.382	0.003	1.00000	7.00	ppb
|	Pb	207	6347.687	3.981	0.006	1.00000	3.98	ppb
|	Pb	208	10054.670	3.112	0.009	1.00000	1.36	ppb
⌊>	Bi	209	1087062.445	1.846	1087062.445			ppb

Raw Data

Replicate 1

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
⌈>	Li	6	206853.518		ppb
⌊	Be	9	250.003	1.143111	ppb
⌈>	Sc	45	538704.547		ppb
|	V	51	23953.014	5.029629	ppb
|	Cr	52	11210.280	2.051164	ppb
|	Mn	55	6352.017	1.021366	ppb
|	Co	59	5069.285	1.000540	ppb
|	Ni	60	1130.064	1.009215	ppb
|	Cu	63	5231.368	1.990314	ppb
|	Cu	65	2480.308	1.972931	ppb
|	Zn	66	1580.125	2.078934	ppb
|	As	75	579.648	0.814181	ppb
⌊	Se	82	348.673	4.819623	ppb
⌈	Ag	107	4087.502	1.009804	ppb
|	Ag	109	4317.599	1.043224	ppb

	Cd	111	798.576	0.937869	ppb
	In	113	50788.648		ppb
>	In	115	1092061.726		ppb
	Sb	121	6792.306	2.084896	ppb
	Ba	135	7889.111	9.961306	ppb
	Ba	137	13911.670	10.081845	ppb
>	Tb	159	1580921.171		ppb
	Tl	205	9794.795	1.004929	ppb
	Pb	206	3715.690	1.080012	ppb
	Pb	207	6491.075	1.038558	ppb
	Pb	208	9797.850	0.987223	ppb
>	Bi	209	1072428.571		ppb

Replicate 2

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	205649.055		ppb
	Be	9	220.002	1.010386	ppb
>	Sc	45	561461.550		ppb
	V	51	24269.480	4.883708	ppb
	Cr	52	11308.390	1.959332	ppb
	Mn	55	6402.049	0.984964	ppb
	Co	59	5395.455	1.022334	ppb
	Ni	60	1133.398	0.970346	ppb
	Cu	63	5458.156	1.992494	ppb
	Cu	65	2710.367	2.071477	ppb
	Zn	66	1556.788	1.942326	ppb
	As	75	854.797	1.168891	ppb
	Se	82	385.341	5.144330	ppb
	Ag	107	4120.849	0.998221	ppb
	Ag	109	4104.175	0.972196	ppb
	Cd	111	853.042	0.982981	ppb
	In	113	50492.152		ppb
>	In	115	1113715.857		ppb
	Sb	121	6306.988	1.900953	ppb
	Ba	135	8083.266	10.085580	ppb
	Ba	137	13749.446	9.842021	ppb
>	Tb	159	1600109.081		ppb
	Tl	205	9889.888	0.980184	ppb
	Pb	206	3405.580	0.950042	ppb
	Pb	207	6496.057	1.002352	ppb
	Pb	208	10403.150	1.014243	ppb
>	Bi	209	1109945.080		ppb

Replicate 3

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	207035.221		ppb
	Be	9	186.002	0.846503	ppb
>	Sc	45	556484.594		ppb
	V	51	25012.976	5.086662	ppb
	Cr	52	11330.415	1.989504	ppb
	Mn	55	6397.045	0.993670	ppb
	Co	59	5117.309	0.977126	ppb
	Ni	60	1180.070	1.020439	ppb
	Cu	63	5474.832	2.017193	ppb
	Cu	65	2540.323	1.955592	ppb
	Zn	66	1566.789	1.978741	ppb
	As	75	740.785	1.016928	ppb
	Se	82	374.674	5.036046	ppb
	Ag	107	4240.899	0.991975	ppb
	Ag	109	4304.259	0.984579	ppb
	Cd	111	968.696	1.079150	ppb
	In	113	49276.108		ppb
>	In	115	1153360.210		ppb
	Sb	121	6777.296	2.014151	ppb

|	Ba	135	8123.298	9.953113	ppb
|	Ba	137	14328.258	10.076134	ppb
\>	Tb	159	1629174.295		ppb
⌈	Tl	205	9949.948	1.014887	ppb
|	Pb	206	3375.570	0.969946	ppb
|	Pb	207	6055.929	0.959090	ppb
|	Pb	208	9963.010	0.998534	ppb
\>	Bi	209	1078813.684		ppb

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Li	6					
	Be	9					
>	Sc	45					
	V	51					
	Cr	52					
	Mn	55					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	As	75					
	Se	82					
	Ag	107					
	Ag	109					
	Cd	111					
	In	113					
>	In	115					
	Sb	121					
	Ba	135					
	Ba	137					
>	Tb	159					
	Tl	205					
	Pb	206					
	Pb	207					
	Pb	208					
>	Bi	209					

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

EPA 6020 & EPA 6020A - Summary Report

Sample ID: S 6020-MS2

Sample Date/Time: Tuesday, November 09, 2010 11:34:48
Sample Type: Sample
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: C:\Elandata1\Method\6020\6020AAAMETHOD.mth
Dataset File: C:\Elandata\Dataset\PEMSJCF110910\S 6020-MS2.003

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Meas. Intens. RSD	Net Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li	6	207433.471	0.943	207433.471			ppb
⌊	Be	9	456.677	5.546	0.002	2.01784	5.42	ppb
⌈>	Sc	45	553490.415	0.587	553490.415			ppb
|	V	51	48299.966	2.394	0.085	10.01424	1.99	ppb
|	Cr	52	19483.634	2.106	0.029	4.00543	1.88	ppb
|	Mn	55	12606.275	1.436	0.022	2.00975	0.95	ppb
|	Co	59	10582.264	1.458	0.019	2.01190	0.89	ppb
|	Ni	60	2254.699	4.248	0.004	1.99609	4.82	ppb
|	Cu	63	10745.772	1.857	0.019	4.00796	1.29	ppb
|	Cu	65	5101.301	1.585	0.009	4.00200	1.65	ppb
|	Zn	66	2837.070	4.688	0.005	3.98891	4.69	ppb
|	As	75	1586.123	6.726	0.003	2.04313	6.71	ppb
⌊	Se	82	716.692	2.176	0.001	10.03966	2.32	ppb
⌈	Ag	107	8344.592	1.080	0.007	1.99318	0.67	ppb
|	Ag	109	8035.450	1.728	0.007	1.96849	1.32	ppb
|	Cd	111	1930.332	4.735	0.002	2.03310	5.04	ppb
|	In	113	52115.513	2.677	0.002			ppb
⌊>	In	115	1146227.274	0.745	1146227.274			ppb
⌈	Sb	121	12871.615	2.245	0.008	4.00004	2.00	ppb
|	Ba	135	15823.844	1.066	0.010	19.94534	0.83	ppb
|	Ba	137	27652.862	2.327	0.017	19.95605	2.41	ppb
⌊>	Tb	159	1610686.634	0.316	1610686.634			ppb
⌈	Tl	205	19592.515	2.308	0.018	1.99926	4.09	ppb
|	Pb	206	6818.991	1.338	0.006	2.00110	3.33	ppb
|	Pb	207	12510.612	2.245	0.011	2.00610	3.80	ppb
|	Pb	208	19481.122	1.179	0.017	1.99909	2.59	ppb
⌊>	Bi	209	1084909.840	2.222	1084909.840			ppb

Raw Data

Replicate 1

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
⌈>	Li	6	206394.172		ppb
⌊	Be	9	428.009	1.900060	ppb
⌈>	Sc	45	550052.993		ppb
|	V	51	47629.986	9.935973	ppb
|	Cr	52	19012.056	3.918642	ppb
|	Mn	55	12397.680	1.988070	ppb
|	Co	59	10415.421	1.992372	ppb
|	Ni	60	2363.613	2.106453	ppb
|	Cu	63	10535.547	3.953489	ppb
|	Cu	65	5054.610	3.989909	ppb
|	Zn	66	2687.028	3.782219	ppb
|	As	75	1507.052	1.951874	ppb
⌊	Se	82	708.025	9.976807	ppb
⌈	Ag	107	8276.757	1.993829	ppb
|	Ag	109	7903.122	1.952585	ppb

	Cd	111	1980.777	2.104202	ppb
	In	113	50592.658		ppb
>	In	115	1136546.971		ppb
	Sb	121	12678.032	3.947390	ppb
	Ba	135	15636.215	19.753693	ppb
	Ba	137	27150.808	19.637116	ppb
>	Tb	159	1606952.253		ppb
	Tl	205	20075.130	2.093539	ppb
	Pb	206	6917.392	2.076415	ppb
	Pb	207	12764.100	2.093912	ppb
	Pb	208	19616.182	2.058886	ppb
>	Bi	209	1061205.707		ppb

Replicate 2

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	206216.564		ppb
	Be	9	476.011	2.116345	ppb
>	Sc	45	556516.287		ppb
	V	51	49635.423	10.240300	ppb
	Cr	52	19759.503	4.047257	ppb
	Mn	55	12723.089	2.017717	ppb
	Co	59	10719.743	2.027231	ppb
	Ni	60	2216.912	1.951167	ppb
	Cu	63	10932.640	4.056411	ppb
	Cu	65	5054.610	3.942870	ppb
	Zn	66	2883.749	4.037676	ppb
	As	75	1543.848	1.976773	ppb
	Se	82	707.358	9.844752	ppb
	Ag	107	8310.118	1.979438	ppb
	Ag	109	8180.011	1.998436	ppb
	Cd	111	1824.825	1.915739	ppb
	In	113	53331.836		ppb
>	In	115	1149414.488		ppb
	Sb	121	12733.101	3.960878	ppb
	Ba	135	15872.587	20.033174	ppb
	Ba	137	28378.209	20.508721	ppb
>	Tb	159	1608627.244		ppb
	Tl	205	19178.373	1.957205	ppb
	Pb	206	6737.269	1.977013	ppb
	Pb	207	12208.765	1.956915	ppb
	Pb	208	19215.935	1.971925	ppb
>	Bi	209	1084119.046		ppb

Replicate 3

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	209689.677		ppb
	Be	9	466.011	2.037116	ppb
>	Sc	45	553901.966		ppb
	V	51	47634.489	9.866438	ppb
	Cr	52	19679.345	4.050380	ppb
	Mn	55	12698.057	2.023474	ppb
	Co	59	10611.627	2.016112	ppb
	Ni	60	2183.572	1.930665	ppb
	Cu	63	10769.129	4.013975	ppb
	Cu	65	5194.682	4.073224	ppb
	Zn	66	2940.432	4.146823	ppb
	As	75	1707.469	2.200735	ppb
	Se	82	734.694	10.297410	ppb
	Ag	107	8446.899	2.006281	ppb
	Ag	109	8023.217	1.954447	ppb
	Cd	111	1985.396	2.079373	ppb
	In	113	52422.044		ppb
>	In	115	1152720.363		ppb
	Sb	121	13203.711	4.091862	ppb

	Ba	135	15962.730	20.049167	ppb
	Ba	137	27429.568	19.722307	ppb
>	Tb	159	1616480.405		ppb
	Tl	205	19524.041	1.947025	ppb
	Pb	206	6802.313	1.949862	ppb
	Pb	207	12558.969	1.967460	ppb
	Pb	208	19611.247	1.966470	ppb
>	Bi	209	1109404.768		ppb

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
⌈>	Li	6					
⌊	Be	9					
⌈>	Sc	45					
|	V	51					
|	Cr	52					
|	Mn	55					
|	Co	59					
|	Ni	60					
|	Cu	63					
|	Cu	65					
|	Zn	66					
|	As	75					
⌊	Se	82					
⌈	Ag	107					
|	Ag	109					
|	Cd	111					
|	In	113					
⌊>	In	115					
⌈	Sb	121					
|	Ba	135					
|	Ba	137					
⌊>	Tb	159					
⌈	Tl	205					
|	Pb	206					
|	Pb	207					
|	Pb	208					
⌊>	Bi	209					

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

EPA 6020 & EPA 6020A - Summary Report

Sample ID: S 6020-MS3

Sample Date/Time: Tuesday, November 09, 2010 11:36:19
Sample Type: Sample
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: C:\Elandata1\Method\6020\6020AAAMETHOD.mth
Dataset File: C:\Elandata\Dataset\PEMSJCF110910\S 6020-MS3.004

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Meas. Intens. RSD	Net Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li	6	210728.156	1.498	210728.156			ppb
⌊	Be	9	26371.394	0.510	0.125	124.99667	1.03	ppb
⌈>	Sc	45	572596.189	1.571	572596.189			ppb
|	V	51	617835.093	0.936	1.077	125.00949	1.42	ppb
|	Cr	52	502226.551	1.565	0.871	124.99194	1.16	ppb
|	Mn	55	789829.418	1.250	1.379	125.00049	2.01	ppb
|	Co	59	626770.607	1.078	1.094	124.99716	1.12	ppb
|	Ni	60	153529.800	1.645	0.268	125.00235	2.14	ppb
|	Cu	63	324392.015	1.855	0.566	124.99152	2.68	ppb
|	Cu	65	157504.164	1.338	0.275	124.99497	0.93	ppb
|	Zn	66	83445.614	0.761	0.145	125.00007	2.13	ppb
|	As	75	97478.773	0.994	0.170	124.99954	0.73	ppb
⌊	Se	82	8664.419	1.291	0.015	124.98556	0.71	ppb
⌈	Ag	107	506876.758	1.334	0.441	124.99867	2.94	ppb
|	Ag	109	487037.775	0.865	0.424	124.99806	1.60	ppb
|	Cd	111	116558.781	1.273	0.101	124.99942	1.45	ppb
|	In	113	164400.732	2.050	0.099			ppb
⌊>	In	115	1148963.799	2.448	1148963.799			ppb
⌈	Sb	121	388550.047	0.852	0.237	124.99741	2.53	ppb
|	Ba	135	99047.000	2.700	0.060	124.95432	1.29	ppb
|	Ba	137	174037.525	1.181	0.106	124.97802	2.22	ppb
⌊>	Tb	159	1636393.270	3.161	1636393.270			ppb
⌈	Tl	205	1243876.515	2.232	1.142	125.00059	2.53	ppb
|	Pb	206	422737.150	1.779	0.388	125.00059	2.10	ppb
|	Pb	207	785147.806	1.195	0.721	125.00117	1.50	ppb
|	Pb	208	1219947.493	1.358	1.119	125.00097	1.58	ppb
⌊>	Bi	209	1089275.505	0.321	1089275.505			ppb

Raw Data

Replicate 1

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
⌈>	Li	6	208523.672		ppb
⌊	Be	9	26238.378	125.668286	ppb
⌈>	Sc	45	563713.066		ppb
|	V	51	612210.672	125.809640	ppb
|	Cr	52	493363.378	124.713573	ppb
|	Mn	55	795533.119	127.868194	ppb
|	Co	59	624918.532	126.581255	ppb
|	Ni	60	154710.920	127.931034	ppb
|	Cu	63	329083.821	128.773101	ppb
|	Cu	65	156559.356	126.197121	ppb
|	Zn	66	84125.708	127.987515	ppb
|	As	75	96378.927	125.528494	ppb
⌊	Se	82	8535.641	125.063168	ppb
⌈	Ag	107	499634.167	124.040558	ppb
|	Ag	109	487010.382	125.851847	ppb

|	Cd	111	116982.482	126.323653	ppb
|	In	113	162235.427		ppb
|>	In	115	1140808.665		ppb
⌈	Sb	121	390222.990	126.603143	ppb
|	Ba	135	97169.816	123.672007	ppb
|	Ba	137	172376.996	124.845444	ppb
|>	Tb	159	1621773.558		ppb
⌈	Tl	205	1225817.492	123.112751	ppb
|	Pb	206	421332.941	124.512037	ppb
|	Pb	207	779364.554	124.008994	ppb
|	Pb	208	1203475.932	123.242502	ppb
|>	Bi	209	1089866.293		ppb

Replicate 2

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
⌈>	Li	6	214344.827		ppb
⌊	Be	9	26507.085	123.507192	ppb
⌈>	Sc	45	581695.309		ppb
|	V	51	617531.338	122.975394	ppb
|	Cr	52	504976.045	123.696142	ppb
|	Mn	55	795527.714	123.912025	ppb
|	Co	59	634257.882	124.500980	ppb
|	Ni	60	155249.166	124.406986	ppb
|	Cu	63	326483.986	123.803918	ppb
|	Cu	65	159918.554	124.919323	ppb
|	Zn	66	83342.524	122.859397	ppb
|	As	75	98204.206	123.951334	ppb
⌊	Se	82	8737.816	124.063247	ppb
⌈	Ag	107	507972.218	121.894349	ppb
|	Ag	109	491264.403	122.706791	ppb
|	Cd	111	117785.191	122.937831	ppb
|	In	113	168284.163		ppb
|>	In	115	1180267.975		ppb
⌈	Sb	121	390690.732	121.355221	ppb
|	Ba	135	102108.661	124.428667	ppb
|	Ba	137	176335.116	122.275269	ppb
|>	Tb	159	1693850.417		ppb
⌈	Tl	205	1275848.827	128.650384	ppb
|	Pb	206	430861.327	127.838538	ppb
|	Pb	207	795977.309	127.160236	ppb
|	Pb	208	1236615.897	127.144412	ppb
|>	Bi	209	1085524.998		ppb

Replicate 3

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
⌈>	Li	6	209315.969		ppb
⌊	Be	9	26368.720	125.814534	ppb
⌈>	Sc	45	572380.191		ppb
|	V	51	623763.269	126.243423	ppb
|	Cr	52	508340.229	126.566118	ppb
|	Mn	55	778427.421	123.221264	ppb
|	Co	59	621135.406	123.909234	ppb
|	Ni	60	150629.313	122.669031	ppb
|	Cu	63	317608.238	122.397529	ppb
|	Cu	65	156034.582	123.868467	ppb
|	Zn	66	82868.610	124.153302	ppb
|	As	75	97853.187	125.518778	ppb
⌊	Se	82	8719.800	125.830251	ppb
⌈	Ag	107	513023.890	129.061109	ppb
|	Ag	109	482838.539	126.435556	ppb
|	Cd	111	114908.670	125.736775	ppb
|	In	113	162682.605		ppb
|>	In	115	1125814.755		ppb
⌈	Sb	121	384736.419	127.033874	ppb

|	Ba	135	97862.522	126.762296	ppb
|	Ba	137	173400.464	127.813352	ppb
|>	Tb	159	1593555.835		ppb
⌈	Tl	205	1229963.227	123.238642	ppb
|	Pb	206	416017.182	122.651205	ppb
|	Pb	207	780101.556	123.834295	ppb
|	Pb	208	1219750.649	124.616004	ppb
|>	Bi	209	1092435.224		ppb

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
⌈>	Li	6					
⌊	Be	9					
⌈>	Sc	45					
|	V	51					
|	Cr	52					
|	Mn	55					
|	Co	59					
|	Ni	60					
|	Cu	63					
|	Cu	65					
|	Zn	66					
|	As	75					
⌊	Se	82					
⌈	Ag	107					
|	Ag	109					
|	Cd	111					
|	In	113					
⌊>	In	115					
⌈	Sb	121					
|	Ba	135					
|	Ba	137					
⌊>	Tb	159					
⌈	Tl	205					
|	Pb	206					
|	Pb	207					
|	Pb	208					
⌊>	Bi	209					

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

EPA 6020 & EPA 6020A - Summary Report

Sample ID: S 6020-MS4

Sample Date/Time: Tuesday, November 09, 2010 11:37:50
Sample Type: Sample
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: C:\Elandata1\Method\6020\6020AAAMETHOD.mth
Dataset File: C:\Elandata\Dataset\PEMSJCF110910\S 6020-MS4.005

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Meas. Intens. RSD	Net Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li	6	207801.705	1.081	207801.705			ppb
⌊	Be	9	51878.280	2.606	0.250	249.86377	1.60	ppb
⌈>	Sc	45	567775.917	2.027	567775.917			ppb
|	V	51	1203541.360	0.944	2.118	249.14399	1.68	ppb
|	Cr	52	979922.097	0.905	1.720	249.35148	1.26	ppb
|	Mn	55	1526741.904	1.589	2.688	248.72081	0.93	ppb
|	Co	59	1210736.903	1.646	2.132	248.67772	0.46	ppb
|	Ni	60	295397.989	1.604	0.520	248.47414	0.82	ppb
|	Cu	63	627351.059	1.663	1.105	248.73419	0.68	ppb
|	Cu	65	304316.933	1.070	0.536	248.69992	1.22	ppb
|	Zn	66	161372.806	0.821	0.284	248.81203	1.26	ppb
|	As	75	191103.874	0.283	0.337	249.43852	1.81	ppb
⌊	Se	82	17101.059	2.166	0.030	249.86278	0.60	ppb
⌈	Ag	107	992342.074	0.930	0.877	249.70158	1.65	ppb
|	Ag	109	956880.824	1.141	0.846	249.89082	2.31	ppb
|	Cd	111	229661.054	1.211	0.203	250.04990	3.46	ppb
|	In	113	277208.409	1.240	0.202			ppb
⌊>	In	115	1131200.904	2.284	1131200.904			ppb
⌈	Sb	121	751151.015	0.698	0.469	249.40768	0.57	ppb
|	Ba	135	194088.889	1.048	0.121	250.08716	0.86	ppb
|	Ba	137	338330.310	0.641	0.211	249.67141	0.68	ppb
⌊>	Tb	159	1600634.407	1.236	1600634.407			ppb
⌈	Tl	205	2291039.100	0.981	2.129	246.41197	2.79	ppb
|	Pb	206	819592.056	0.715	0.761	249.04882	1.91	ppb
|	Pb	207	1524534.348	0.234	1.416	249.12973	2.28	ppb
|	Pb	208	2422677.970	0.389	2.251	250.25643	1.89	ppb
⌊>	Bi	209	1076549.318	2.103	1076549.318			ppb

Raw Data

Replicate 1

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
⌈>	Li	6	205508.203		ppb
⌊	Be	9	50354.460	245.256308	ppb
⌈>	Sc	45	554519.836		ppb
|	V	51	1195183.701	253.280713	ppb
|	Cr	52	970231.812	252.757960	ppb
|	Mn	55	1502561.358	250.613145	ppb
|	Co	59	1187769.402	249.778954	ppb
|	Ni	60	290210.886	249.928089	ppb
|	Cu	63	616176.277	250.128915	ppb
|	Cu	65	300913.676	251.760624	ppb
|	Zn	66	159864.364	252.342317	ppb
|	As	75	190578.200	254.637782	ppb
⌊	Se	82	16682.570	249.576458	ppb
⌈	Ag	107	982094.929	253.250500	ppb
|	Ag	109	949804.791	254.174099	ppb

	Cd	111	232100.219	258.897149	ppb
	In	113	280283.660		ppb
>	In	115	1103570.611		ppb
	Sb	121	745892.637	251.032465	ppb
	Ba	135	191944.626	250.691389	ppb
	Ba	137	336400.673	251.624353	ppb
>	Tb	159	1579075.849		ppb
	Tl	205	2267765.847	238.603988	ppb
	Pb	206	819312.827	243.578430	ppb
	Pb	207	1520524.987	243.083369	ppb
	Pb	208	2432541.756	245.838293	ppb
>	Bi	209	1100067.863		ppb

Replicate 2

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	207898.864		ppb
	Be	9	52346.651	252.028013	ppb
>	Sc	45	575232.050		ppb
	V	51	1198960.076	244.925500	ppb
	Cr	52	981885.080	246.562697	ppb
	Mn	55	1551079.696	249.390015	ppb
	Co	59	1220951.700	247.511704	ppb
	Ni	60	296487.710	246.139610	ppb
	Cu	63	636828.450	249.203979	ppb
	Cu	65	304633.805	245.694412	ppb
	Zn	66	161906.833	246.353998	ppb
	As	75	191659.360	246.860512	ppb
	Se	82	17233.504	248.533056	ppb
	Ag	107	994943.368	245.190807	ppb
	Ag	109	951384.930	243.311202	ppb
	Cd	111	226631.350	241.590212	ppb
	In	113	277841.921		ppb
>	In	115	1154758.062		ppb
	Sb	121	756372.596	248.436913	ppb
	Ba	135	194332.077	247.704983	ppb
	Ba	137	340677.877	248.694806	ppb
>	Tb	159	1617981.621		ppb
	Tl	205	2292728.288	251.558922	ppb
	Pb	206	813879.944	252.324652	ppb
	Pb	207	1525752.170	254.364720	ppb
	Pb	208	2421717.967	255.224987	ppb
>	Bi	209	1054903.292		ppb

Replicate 3

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	209998.048		ppb
	Be	9	52933.729	252.306994	ppb
>	Sc	45	573575.865		ppb
	V	51	1216480.302	249.225769	ppb
	Cr	52	987649.398	248.733778	ppb
	Mn	55	1526584.659	246.159264	ppb
	Co	59	1223489.606	248.742503	ppb
	Ni	60	299495.371	249.354733	ppb
	Cu	63	629048.451	246.869674	ppb
	Cu	65	307403.318	248.644739	ppb
	Zn	66	162347.220	247.739777	ppb
	As	75	191074.062	246.817257	ppb
	Se	82	17387.102	251.478826	ppb
	Ag	107	999987.925	250.663427	ppb
	Ag	109	969452.750	252.187156	ppb
	Cd	111	230251.593	249.662325	ppb
	In	113	273499.647		ppb
>	In	115	1135274.038		ppb
	Sb	121	751187.811	248.753662	ppb

	Ba	135	195989.965	251.865105	ppb
	Ba	137	337912.380	248.695068	ppb
>	Tb	159	1604845.751		ppb
	Tl	205	2312623.166	249.072989	ppb
	Pb	206	825583.396	251.243393	ppb
	Pb	207	1527325.888	249.941114	ppb
	Pb	208	2413774.187	249.705997	ppb
>	Bi	209	1074676.800		ppb

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
⌈>	Li	6					
⌊	Be	9					
⌈>	Sc	45					
|	V	51					
|	Cr	52					
|	Mn	55					
|	Co	59					
|	Ni	60					
|	Cu	63					
|	Cu	65					
|	Zn	66					
|	As	75					
⌊	Se	82					
⌈	Ag	107					
|	Ag	109					
|	Cd	111					
|	In	113					
⌊>	In	115					
⌈	Sb	121					
|	Ba	135					
|	Ba	137					
⌊>	Tb	159					
⌈	Tl	205					
|	Pb	206					
|	Pb	207					
|	Pb	208					
⌊>	Bi	209					

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

EPA 6020 & EPA 6020A - Summary Report

Sample ID: S 6020-MS5

Sample Date/Time: Tuesday, November 09, 2010 11:39:21
Sample Type: Sample
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: C:\Elandata1\Method\6020\6020AAAMETHOD.mth
Dataset File: C:\Elandata\Dataset\PEMSJCF110910\S 6020-MS5.006

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Meas. Intens. RSD	Net Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li	6	209713.816	1.470	209713.816			ppb
⌊	Be	9	105507.681	0.466	0.503	500.86758	1.49	ppb
⌈>	Sc	45	580884.979	2.807	580884.979			ppb
|	V	51	2511230.319	2.033	4.322	501.95483	0.82	ppb
|	Cr	52	2016309.002	0.818	3.467	500.59418	2.61	ppb
|	Mn	55	3218571.152	1.412	5.542	502.96762	1.84	ppb
|	Co	59	2519301.993	0.405	4.339	501.41577	2.39	ppb
|	Ni	60	624395.009	0.710	1.075	503.16851	2.60	ppb
|	Cu	63	1281131.231	1.215	2.206	499.22572	2.93	ppb
|	Cu	65	627739.846	1.334	1.081	500.37253	1.55	ppb
|	Zn	66	334633.678	0.682	0.576	501.15163	2.18	ppb
|	As	75	390491.955	0.768	0.672	499.59499	2.17	ppb
⌊	Se	82	34830.783	1.311	0.060	499.55658	1.90	ppb
⌈	Ag	107	1987024.931	0.198	1.737	498.62093	2.27	ppb
|	Ag	109	1947934.139	1.489	1.703	500.67881	2.99	ppb
|	Cd	111	471681.382	0.585	0.412	501.77291	2.33	ppb
|	In	113	512397.864	1.380	0.404			ppb
⌊>	In	115	1144456.608	2.315	1144456.608			ppb
⌈	Sb	121	1544812.275	1.076	0.943	500.34011	1.59	ppb
|	Ba	135	405616.842	0.462	0.248	502.57985	2.14	ppb
|	Ba	137	703156.285	0.568	0.429	501.71938	1.90	ppb
⌊>	Tb	159	1638020.588	1.909	1638020.588			ppb
⌈	Tl	205	4720549.888	1.510	4.328	500.24044	1.12	ppb
|	Pb	206	1658314.767	0.315	1.521	499.37745	1.02	ppb
|	Pb	207	3079572.454	0.643	2.824	499.21071	1.10	ppb
|	Pb	208	4756480.669	1.668	4.361	496.32410	0.44	ppb
⌊>	Bi	209	1090591.787	1.305	1090591.787			ppb

Raw Data

Replicate 1

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
⌈>	Li	6	210892.580		ppb
⌊	Be	9	106061.485	500.612559	ppb
⌈>	Sc	45	566816.316		ppb
|	V	51	2462701.778	504.400233	ppb
|	Cr	52	2022501.892	514.379463	ppb
|	Mn	55	3206053.302	513.290869	ppb
|	Co	59	2508997.209	511.531057	ppb
|	Ni	60	625956.529	516.705220	ppb
|	Cu	63	1291265.578	515.410832	ppb
|	Cu	65	618978.292	505.492575	ppb
|	Zn	66	332121.821	509.536291	ppb
|	As	75	387070.489	507.306943	ppb
⌊	Se	82	34708.128	509.999931	ppb
⌈	Ag	107	1986950.781	485.623666	ppb
|	Ag	109	1934983.612	484.377178	ppb

	Cd	111	471302.663	488.319068	ppb
	In	113	520455.174		ppb
>	In	115	1174633.432		ppb
	Sb	121	1562952.906	497.284570	ppb
	Ba	135	406160.130	494.324000	ppb
	Ba	137	706572.442	495.230275	ppb
>	Tb	159	1667157.789		ppb
	Tl	205	4794665.608	500.996145	ppb
	Pb	206	1662675.319	493.662747	ppb
	Pb	207	3084311.493	492.963440	ppb
	Pb	208	4835946.167	497.592474	ppb
>	Bi	209	1106018.698		ppb

Replicate 2

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	206216.564		ppb
	Be	9	105337.897	508.471492	ppb
>	Sc	45	598754.290		ppb
	V	51	2564488.557	497.227761	ppb
	Cr	52	2028815.595	488.419471	ppb
	Mn	55	3268967.090	495.444046	ppb
	Co	59	2529379.227	488.178116	ppb
	Ni	60	627839.229	490.613960	ppb
	Cu	63	1288912.362	487.025655	ppb
	Cu	65	635660.898	491.424728	ppb
	Zn	66	336577.130	488.810556	ppb
	As	75	392673.368	487.196940	ppb
	Se	82	35336.323	491.514163	ppb
	Ag	107	1990991.937	504.171484	ppb
	Ag	109	1981166.170	513.834659	ppb
	Cd	111	474610.131	509.491810	ppb
	In	113	507220.464		ppb
>	In	115	1133721.541		ppb
	Sb	121	1541191.470	509.355573	ppb
	Ba	135	407159.566	514.737375	ppb
	Ba	137	704128.786	512.635276	ppb
>	Tb	159	1604997.452		ppb
	Tl	205	4652461.024	494.282268	ppb
	Pb	206	1659742.769	501.049628	ppb
	Pb	207	3096573.119	503.216812	ppb
	Pb	208	4756223.367	497.589167	ppb
>	Bi	209	1087792.699		ppb

Replicate 3

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	212032.304		ppb
	Be	9	105123.660	493.518702	ppb
>	Sc	45	577084.330		ppb
	V	51	2506500.623	504.236495	ppb
	Cr	52	1997609.520	498.983618	ppb
	Mn	55	3180693.064	500.167935	ppb
	Co	59	2519529.544	504.538144	ppb
	Ni	60	619389.271	502.186359	ppb
	Cu	63	1263215.753	495.240679	ppb
	Cu	65	628580.348	504.200281	ppb
	Zn	66	335202.082	505.108046	ppb
	As	75	391732.008	504.281075	ppb
	Se	82	34447.898	497.155650	ppb
	Ag	107	1983132.075	506.067640	ppb
	Ag	109	1927652.634	503.824592	ppb
	Cd	111	469131.350	507.507847	ppb
	In	113	509517.955		ppb
>	In	115	1125014.850		ppb
	Sb	121	1530292.449	494.380186	ppb

|	Ba	135	403530.831	498.678164	ppb
|	Ba	137	698767.626	497.292579	ppb
\>	Tb	159	1641906.522		ppb
⌈	Tl	205	4714523.033	505.442917	ppb
|	Pb	206	1652526.214	503.419972	ppb
|	Pb	207	3057832.750	501.451874	ppb
|	Pb	208	4677272.473	493.790653	ppb
\>	Bi	209	1077963.964		ppb

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Li	6					
	Be	9					
>	Sc	45					
	V	51					
	Cr	52					
	Mn	55					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	As	75					
	Se	82					
	Ag	107					
	Ag	109					
	Cd	111					
	In	113					
>	In	115					
	Sb	121					
	Ba	135					
	Ba	137					
>	Tb	159					
	Tl	205					
	Pb	206					
	Pb	207					
	Pb	208					
>	Bi	209					

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

EPA 6020 & EPA 6020A - Summary Report

Sample ID: LLICV

Sample Date/Time: Tuesday, November 09, 2010 11:42:43
Sample Type: Sample
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: C:\Elandata1\Method\6020\6020AAAMETHOD.mth
Dataset File: C:\Elandata\Dataset\PEMSJCF110910\LLICV.007

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Meas. Intens. RSD	Net Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li	6	206098.315	1.053	206098.315			ppb
⌊	Be	9	219.336	9.179	0.001	1.04695	10.20	ppb
⌈>	Sc	45	560338.202	1.479	560338.202			ppb
⌈	V	51	24746.373	1.986	0.042	4.92296	0.62	ppb
⌈	Cr	52	11698.840	1.059	0.015	2.16733	3.43	ppb
⌈	Mn	55	7052.490	4.707	0.012	1.06258	5.71	ppb
⌈	Co	59	5538.867	1.926	0.010	1.11349	1.48	ppb
⌈	Ni	60	1200.072	6.742	0.002	0.98133	6.65	ppb
⌈	Cu	63	5629.362	1.120	0.010	2.20818	2.63	ppb
⌈	Cu	65	2745.933	3.486	0.005	2.20541	3.52	ppb
⌈	Zn	66	1617.909	7.645	0.002	2.08523	9.05	ppb
⌈	As	75	764.908	6.479	0.001	0.97573	5.59	ppb
⌊	Se	82	379.785	6.359	0.001	5.08810	5.62	ppb
⌈	Ag	107	5027.931	3.228	0.004	1.28075	5.41	ppb
⌈	Ag	109	4832.280	4.153	0.004	1.25957	4.16	ppb
⌈	Cd	111	1042.911	11.259	0.001	1.11599	11.88	ppb
⌈	In	113	50686.512	2.355	0.001			ppb
⌊>	In	115	1125645.849	2.147	1125645.849			ppb
⌈	Sb	121	7154.233	6.758	0.004	2.29270	6.85	ppb
⌈	Ba	135	8008.539	1.336	0.005	10.32065	2.64	ppb
⌈	Ba	137	13933.701	1.073	0.009	10.34400	1.42	ppb
⌊>	Tb	159	1556624.181	1.278	1556624.181			ppb
⌈	Tl	205	9771.439	1.776	0.009	1.04382	1.76	ppb
⌈	Pb	206	4117.518	7.901	0.004	1.20566	9.79	ppb
⌈	Pb	207	7584.789	8.450	0.007	1.19573	10.57	ppb
⌈	Pb	208	11874.146	7.184	0.011	1.20452	9.28	ppb
⌊>	Bi	209	1073002.878	1.655	1073002.878			ppb

Raw Data

Replicate 1

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
⌈>	Li	6	203593.633		ppb
⌊	Be	9	238.003	1.150614	ppb
⌈>	Sc	45	555982.806		ppb
⌈	V	51	24582.515	4.929154	ppb
⌈	Cr	52	11808.968	2.218826	ppb
⌈	Mn	55	7427.758	1.132487	ppb
⌈	Co	59	5581.557	1.131293	ppb
⌈	Ni	60	1266.747	1.045342	ppb
⌈	Cu	63	5678.278	2.245332	ppb
⌈	Cu	65	2827.066	2.290624	ppb
⌈	Zn	66	1726.816	2.275466	ppb
⌈	As	75	713.297	0.915075	ppb
⌊	Se	82	357.340	4.798092	ppb
⌈	Ag	107	5214.693	1.360678	ppb
⌈	Ag	109	4814.492	1.286185	ppb

	Cd	111	1088.152	1.193682	ppb
	In	113	49858.987		ppb
>	In	115	1098167.219		ppb
	Sb	121	6657.215	2.118254	ppb
	Ba	135	7959.166	10.230202	ppb
	Ba	137	13779.487	10.203649	ppb
>	Tb	159	1560198.365		ppb
	Tl	205	9719.721	1.057940	ppb
	Pb	206	4385.962	1.312013	ppb
	Pb	207	8241.705	1.328258	ppb
	Pb	208	12784.728	1.325506	ppb
>	Bi	209	1053102.504		ppb

Replicate 2

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	207323.093		ppb
	Be	9	222.002	1.052856	ppb
>	Sc	45	569894.057		ppb
	V	51	25298.891	4.949797	ppb
	Cr	52	11564.683	2.082067	ppb
	Mn	55	6932.402	1.023998	ppb
	Co	59	5617.577	1.110277	ppb
	Ni	60	1223.408	0.983736	ppb
	Cu	63	5558.211	2.141249	ppb
	Cu	65	2770.384	2.187116	ppb
	Zn	66	1643.468	2.082195	ppb
	As	75	812.116	1.020633	ppb
	Se	82	405.342	5.369578	ppb
	Ag	107	4921.211	1.242040	ppb
	Ag	109	4641.077	1.199266	ppb
	Cd	111	909.593	0.962946	ppb
	In	113	50145.414		ppb
>	In	115	1135149.520		ppb
	Sb	121	7182.579	2.336730	ppb
	Ba	135	8131.305	10.626513	ppb
	Ba	137	13943.715	10.496914	ppb
>	Tb	159	1535178.252		ppb
	Tl	205	9629.634	1.023011	ppb
	Pb	206	4210.886	1.226294	ppb
	Pb	207	7551.444	1.182336	ppb
	Pb	208	11744.087	1.182958	ppb
>	Bi	209	1078663.729		ppb

Replicate 3

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	207378.219		ppb
	Be	9	198.002	0.937367	ppb
>	Sc	45	555137.744		ppb
	V	51	24357.713	4.889940	ppb
	Cr	52	11722.867	2.201099	ppb
	Mn	55	6797.309	1.031259	ppb
	Co	59	5417.467	1.098899	ppb
	Ni	60	1110.062	0.914900	ppb
	Cu	63	5651.597	2.237974	ppb
	Cu	65	2640.349	2.138496	ppb
	Zn	66	1483.443	1.898028	ppb
	As	75	769.312	0.991491	ppb
	Se	82	376.674	5.096639	ppb
	Ag	107	4947.890	1.239518	ppb
	Ag	109	5041.270	1.293257	ppb
	Cd	111	1130.987	1.191336	ppb
	In	113	52055.135		ppb
>	In	115	1143620.809		ppb
	Sb	121	7622.904	2.423126	ppb

|	Ba	135	7935.147	10.105223	ppb
|	Ba	137	14077.902	10.331432	ppb
\>	Tb	159	1574495.925		ppb
⌈	Tl	205	9964.963	1.050515	ppb
|	Pb	206	3755.705	1.078681	ppb
|	Pb	207	6961.219	1.076595	ppb
|	Pb	208	11093.624	1.105088	ppb
\>	Bi	209	1087242.403		ppb

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Li	6		101.469			
	Be	9	104.695				
>	Sc	45		101.561			
	V	51	98.459				
	Cr	52	108.367				
	Mn	55	106.258				
	Co	59	111.349				
	Ni	60	98.133				
	Cu	63	110.409				
	Cu	65	110.271				
	Zn	66	104.261				
	As	75	97.573				
	Se	82	101.762				
	Ag	107	128.075				
	Ag	109	125.957				
	Cd	111	111.599				
	In	113					
>	In	115		101.109			
	Sb	121	114.635				
	Ba	135	103.206				
	Ba	137	103.440				
>	Tb	159		100.603			
	Tl	205	104.382				
	Pb	206	120.566				
	Pb	207	119.573				
	Pb	208	120.452				
>	Bi	209		101.292			

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

EPA 6020 & EPA 6020A - Summary Report

Sample ID: ICV

Sample Date/Time: Tuesday, November 09, 2010 11:44:15
Sample Type: Sample
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: C:\Elandata1\Method\6020\6020AAAMETHOD.mth
Dataset File: C:\Elandata\Dataset\PEMSJCF110910\ICV.008

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Meas. Intens. RSD	Net Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li	6	206996.493	0.669	206996.493			ppb
⌊	Be	9	20689.383	1.313	0.100	99.47916	0.66	ppb
⌈>	Sc	45	557405.848	1.964	557405.848			ppb
|	V	51	467928.435	1.697	0.838	97.29687	0.93	ppb
|	Cr	52	399801.734	1.800	0.711	102.72647	1.16	ppb
|	Mn	55	593367.577	3.805	1.064	96.52623	2.66	ppb
|	Co	59	510248.153	1.444	0.915	105.76960	0.61	ppb
|	Ni	60	112021.815	1.460	0.201	94.03196	1.99	ppb
|	Cu	63	255308.902	2.016	0.458	103.57523	0.51	ppb
|	Cu	65	121346.346	1.401	0.218	100.72905	0.80	ppb
|	Zn	66	129762.137	1.331	0.232	202.19900	0.63	ppb
|	As	75	148330.355	1.682	0.266	197.68548	1.43	ppb
⌊	Se	82	13886.302	0.770	0.025	207.22978	2.69	ppb
⌈	Ag	107	414946.786	0.969	0.377	108.18988	0.59	ppb
|	Ag	109	395381.226	2.013	0.359	105.58197	1.61	ppb
|	Cd	111	90051.498	1.313	0.082	99.52877	1.27	ppb
|	In	113	138688.484	0.879	0.082			ppb
⌊>	In	115	1101051.866	0.496	1101051.866			ppb
⌈	Sb	121	600860.417	0.489	0.381	202.32830	1.65	ppb
|	Ba	135	77685.287	1.370	0.049	100.00338	1.71	ppb
|	Ba	137	135733.905	2.091	0.086	100.61527	1.26	ppb
⌊>	Tb	159	1574820.970	1.387	1574820.970			ppb
⌈	Tl	205	1922051.967	0.557	1.794	207.36394	0.71	ppb
|	Pb	206	648343.673	1.482	0.605	198.73275	1.78	ppb
|	Pb	207	1196439.133	1.137	1.117	197.41772	1.46	ppb
|	Pb	208	1883877.935	0.433	1.758	200.11405	0.75	ppb
⌊>	Bi	209	1071183.853	0.328	1071183.853			ppb

Raw Data

Replicate 1

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
⌈>	Li	6	208448.122		ppb
⌊	Be	9	20992.010	100.234238	ppb
⌈>	Sc	45	548258.355		ppb
|	V	51	459089.945	97.045405	ppb
|	Cr	52	391577.422	102.281868	ppb
|	Mn	55	590987.068	97.755242	ppb
|	Co	59	505282.981	106.480539	ppb
|	Ni	60	112741.975	96.197823	ppb
|	Cu	63	252169.893	104.008698	ppb
|	Cu	65	120464.575	101.657518	ppb
|	Zn	66	128331.532	203.291797	ppb
|	As	75	148259.028	200.867302	ppb
⌊	Se	82	13946.385	211.536380	ppb
⌈	Ag	107	411419.373	107.876699	ppb
|	Ag	109	386701.754	103.851108	ppb

|	Cd	111	89430.577	99.399752	ppb
|	In	113	137291.016		ppb
\>	In	115	1094873.905		ppb
⌈	Sb	121	603937.464	203.348679	ppb
|	Ba	135	76491.432	98.461442	ppb
|	Ba	137	133803.216	99.191716	ppb
\>	Tb	159	1574717.021		ppb
⌈	Tl	205	1913491.562	205.768360	ppb
|	Pb	206	642428.499	196.272824	ppb
|	Pb	207	1185394.498	194.953796	ppb
|	Pb	208	1878011.825	198.840014	ppb
\>	Bi	209	1074671.248		ppb

Replicate 2

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
⌈>	Li	6	205689.882		ppb
⌊	Be	9	20466.923	99.037348	ppb
⌈>	Sc	45	554424.777		ppb
|	V	51	470242.534	98.299989	ppb
|	Cr	52	402879.336	104.078322	ppb
|	Mn	55	572073.359	93.570842	ppb
|	Co	59	506748.412	105.601385	ppb
|	Ni	60	110149.995	92.940164	ppb
|	Cu	63	252508.273	102.989265	ppb
|	Cu	65	120268.907	100.362773	ppb
|	Zn	66	129273.550	202.504758	ppb
|	As	75	145871.327	195.433213	ppb
⌊	Se	82	13949.723	209.227593	ppb
⌈	Ag	107	419324.440	108.919792	ppb
|	Ag	109	397104.427	105.646119	ppb
|	Cd	111	89308.904	98.334761	ppb
|	In	113	139531.711		ppb
\>	In	115	1105224.459		ppb
⌈	Sb	121	600563.065	205.036633	ppb
|	Ba	135	78029.245	101.847356	ppb
|	Ba	137	134405.209	101.031153	ppb
\>	Tb	159	1553036.365		ppb
⌈	Tl	205	1918612.903	207.676958	ppb
|	Pb	206	659433.627	202.795901	ppb
|	Pb	207	1211640.600	200.583316	ppb
|	Pb	208	1893188.914	201.766907	ppb
\>	Bi	209	1067645.048		ppb

Replicate 3

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
⌈>	Li	6	206851.477		ppb
⌊	Be	9	20609.215	99.165880	ppb
⌈>	Sc	45	569534.411		ppb
|	V	51	474452.828	96.545216	ppb
|	Cr	52	404948.445	101.819230	ppb
|	Mn	55	617042.305	98.252613	ppb
|	Co	59	518713.066	105.226868	ppb
|	Ni	60	113173.475	92.957895	ppb
|	Cu	63	261248.539	103.727723	ppb
|	Cu	65	123305.555	100.166858	ppb
|	Zn	66	131681.328	200.800434	ppb
|	As	75	150860.709	196.755922	ppb
⌊	Se	82	13762.798	200.925375	ppb
⌈	Ag	107	414096.546	107.773147	ppb
|	Ag	109	402337.496	107.248678	ppb
|	Cd	111	91415.012	100.851791	ppb
|	In	113	139242.724		ppb
\>	In	115	1103057.234		ppb
⌈	Sb	121	598080.722	198.599594	ppb

|	Ba	135	78535.183	99.701345	ppb
|	Ba	137	138993.290	101.622933	ppb
|>	Tb	159	1596709.525		ppb
⌈	Tl	205	1934051.436	208.646493	ppb
|	Pb	206	643168.892	197.129540	ppb
|	Pb	207	1192282.300	196.716034	ppb
|	Pb	208	1880433.065	199.735225	ppb
|>	Bi	209	1071235.262		ppb

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Li	6		101.911			
	Be	9	100.484				
>	Sc	45		101.030			
	V	51	97.297				
	Cr	52	104.823				
	Mn	55	96.526				
	Co	59	105.770				
	Ni	60	93.101				
	Cu	63	105.689				
	Cu	65	102.785				
	Zn	66	98.634				
	As	75	98.843				
	Se	82	100.597				
	Ag	107	108.190				
	Ag	109	105.582				
	Cd	111	100.534				
	In	113					
>	In	115		98.900			
	Sb	121	101.673				
	Ba	135	101.014				
	Ba	137	101.632				
>	Tb	159		101.779			
	Tl	205	100.662				
	Pb	206	99.366				
	Pb	207	98.709				
	Pb	208	100.057				
>	Bi	209		101.120			

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

EPA 6020 & EPA 6020A - Summary Report

Sample ID: ICB

Sample Date/Time: Tuesday, November 09, 2010 11:45:47
Sample Type: Sample
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: C:\Elandata1\Method\6020\6020AAAMETHOD.mth
Dataset File: C:\Elandata\Dataset\PEMSJCF110910\ICB.009

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Meas. Intens. RSD	Net Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li	6	202400.046	1.449	202400.046			ppb
⌊	Be	9	8.667	74.182	0.000	0.02941	106.47	ppb
⌈>	Sc	45	555298.396	0.669	555298.396			ppb
|	V	51	1130.201	4.661	0.000	0.03043	34.37	ppb
|	Cr	52	3391.242	2.609	0.000	0.03366	51.04	ppb
|	Mn	55	673.356	12.740	0.000	0.03000	46.81	ppb
|	Co	59	244.003	20.785	0.000	0.02187	47.91	ppb
|	Ni	60	57.778	54.833	0.000	0.02798	95.28	ppb
|	Cu	63	196.669	22.422	0.000	0.01456	124.91	ppb
|	Cu	65	107.778	21.052	0.000	0.02642	70.50	ppb
|	Zn	66	266.670	8.750	-0.000	-0.00958	404.86	ppb
|	As	75	7.092	223.272	-0.000	-0.02865	73.58	ppb
⌊	Se	82	34.667	11.538	-0.000	-0.04035	146.74	ppb
⌈	Ag	107	18.889	20.377	0.000	0.00232	39.08	ppb
|	Ag	109	24.444	43.835	0.000	0.00354	76.79	ppb
|	Cd	111	36.638	78.493	0.000	0.02848	115.50	ppb
|	In	113	48174.128	2.175	-0.000			ppb
⌊>	In	115	1105248.137	2.315	1105248.137			ppb
⌈	Sb	121	1535.127	33.382	0.001	0.37235	44.79	ppb
|	Ba	135	140.001	12.372	0.000	0.05848	47.34	ppb
|	Ba	137	220.669	15.444	0.000	0.04624	65.38	ppb
⌊>	Tb	159	1567403.374	2.754	1567403.374			ppb
⌈	Tl	205	130.001	13.324	0.000	0.00552	35.55	ppb
|	Pb	206	446.678	38.083	0.000	0.08335	64.30	ppb
|	Pb	207	798.351	35.176	0.000	0.07851	60.65	ppb
|	Pb	208	1370.060	24.735	0.001	0.09159	40.28	ppb
⌊>	Bi	209	1055168.375	0.517	1055168.375			ppb

Raw Data

Replicate 1

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
⌈>	Li	6	203540.569		ppb
⌊	Be	9	16.000	0.065181	ppb
⌈>	Sc	45	556621.930		ppb
|	V	51	1084.318	0.020309	ppb
|	Cr	52	3426.587	0.040804	ppb
|	Mn	55	765.029	0.044683	ppb
|	Co	59	302.005	0.033797	ppb
|	Ni	60	90.000	0.054925	ppb
|	Cu	63	230.003	0.027879	ppb
|	Cu	65	133.334	0.047497	ppb
|	Zn	66	243.336	-0.047198	ppb
|	As	75	-4.101	-0.043556	ppb
⌊	Se	82	30.667	-0.101470	ppb
⌈	Ag	107	16.667	0.001862	ppb
|	Ag	109	20.000	0.002523	ppb

	Cd	111	68.820	0.065444	ppb
	In	113	48743.508		ppb
>	In	115	1077462.130		ppb
	Sb	121	1080.058	0.231395	ppb
	Ba	135	160.001	0.090406	ppb
	Ba	137	260.003	0.081141	ppb
>	Tb	159	1519531.800		ppb
	Tl	205	150.001	0.007780	ppb
	Pb	206	640.020	0.144356	ppb
	Pb	207	1110.032	0.131524	ppb
	Pb	208	1690.085	0.126946	ppb
>	Bi	209	1050138.799		ppb

Replicate 2

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	204591.696		ppb
	Be	9	6.000	0.016124	ppb
>	Sc	45	551103.530		ppb
	V	51	1118.565	0.029792	ppb
	Cr	52	3290.541	0.014059	ppb
	Mn	55	660.022	0.028638	ppb
	Co	59	222.002	0.017648	ppb
	Ni	60	56.667	0.027381	ppb
	Cu	63	213.336	0.021972	ppb
	Cu	65	90.000	0.012205	ppb
	Zn	66	290.004	0.030312	ppb
	As	75	0.167	-0.037857	ppb
	Se	82	34.667	-0.036352	ppb
	Ag	107	23.333	0.003361	ppb
	Ag	109	36.667	0.006625	ppb
	Cd	111	27.640	0.017534	ppb
	In	113	48813.850		ppb
>	In	115	1127822.224		ppb
	Sb	121	1435.103	0.329175	ppb
	Ba	135	130.001	0.041260	ppb
	Ba	137	202.002	0.028406	ppb
>	Tb	159	1603346.358		ppb
	Tl	205	120.001	0.004344	ppb
	Pb	206	380.007	0.061826	ppb
	Pb	207	720.013	0.064626	ppb
	Pb	208	1405.062	0.094501	ppb
>	Bi	209	1060961.744		ppb

Replicate 3

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	199067.874		ppb
	Be	9	4.000	0.006933	ppb
>	Sc	45	558169.727		ppb
	V	51	1187.720	0.041197	ppb
	Cr	52	3456.597	0.046102	ppb
	Mn	55	595.018	0.016692	ppb
	Co	59	208.002	0.014160	ppb
	Ni	60	26.667	0.001623	ppb
	Cu	63	146.668	-0.006163	ppb
	Cu	65	100.001	0.019543	ppb
	Zn	66	266.670	-0.011869	ppb
	As	75	25.208	-0.004530	ppb
	Se	82	38.667	0.016760	ppb
	Ag	107	16.667	0.001730	ppb
	Ag	109	16.667	0.001479	ppb
	Cd	111	13.455	0.002454	ppb
	In	113	46965.027		ppb
>	In	115	1110460.057		ppb
	Sb	121	2090.218	0.556490	ppb

┆	Ba	135	130.001	0.043762	ppb
┆	Ba	137	200.002	0.029165	ppb
┗>	Tb	159	1579331.963		ppb
┌	Tl	205	120.001	0.004425	ppb
┆	Pb	206	320.005	0.043868	ppb
┆	Pb	207	565.008	0.039382	ppb
┆	Pb	208	1015.033	0.053337	ppb
┗>	Bi	209	1054404.581		ppb

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Li	6		99.648			
	Be	9					
>	Sc	45		100.648			
	V	51					
	Cr	52					
	Mn	55					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	As	75					
	Se	82					
	Ag	107					
	Ag	109					
	Cd	111					
	In	113					
>	In	115		99.277			
	Sb	121					
	Ba	135					
	Ba	137					
>	Tb	159		101.300			
	Tl	205					
	Pb	206					
	Pb	207					
	Pb	208					
>	Bi	209		99.608			

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

EPA 6020 & EPA 6020A - Summary Report

Sample ID: ICSA

Sample Date/Time: Tuesday, November 09, 2010 11:47:18
Sample Type: Sample
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: C:\Elandata1\Method\6020\6020AAAMETHOD.mth
Dataset File: C:\Elandata\Dataset\PEMSJCF110910\ICSA.010

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Meas. Intens. RSD	Net Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li	6	189984.429	0.584	189984.429			ppb
⌊	Be	9	46.000	34.783	0.000	0.22778	36.57	ppb
⌈>	Sc	45	571311.708	2.257	571311.708			ppb
|	V	51	645.661	155.242	-0.001	-0.07159	289.37	ppb
|	Cr	52	86161.087	2.553	0.145	20.92890	1.48	ppb
|	Mn	55	49383.352	2.482	0.086	7.76606	2.08	ppb
|	Co	59	5868.389	2.443	0.010	1.15858	3.35	ppb
|	Ni	60	6434.292	0.823	0.011	5.25075	2.39	ppb
|	Cu	63	20361.822	1.215	0.035	8.00022	1.13	ppb
|	Cu	65	10256.371	2.963	0.018	8.24856	2.66	ppb
|	Zn	66	8207.813	2.249	0.014	12.08319	4.31	ppb
|	As	75	37.011	250.866	0.000	0.01146	1048.05	ppb
⌊	Se	82	47.333	10.634	0.000	0.13065	61.55	ppb
⌈	Ag	107	52.222	14.741	0.000	0.01095	18.32	ppb
|	Ag	109	48.889	30.745	0.000	0.01003	39.57	ppb
|	Cd	111	533.910	51.351	0.000	0.57352	52.35	ppb
|	In	113	50917.635	0.309	0.002			ppb
⌊>	In	115	1108529.996	0.189	1108529.996			ppb
⌈	Sb	121	4040.821	9.082	0.002	1.17915	9.85	ppb
|	Ba	135	1234.077	8.410	0.001	1.42505	9.55	ppb
|	Ba	137	2124.226	3.021	0.001	1.41578	3.66	ppb
⌊>	Tb	159	1617953.954	0.437	1617953.954			ppb
⌈	Tl	205	118.334	35.183	0.000	0.00538	90.49	ppb
|	Pb	206	13198.706	1.688	0.013	4.42419	1.82	ppb
|	Pb	207	23517.370	2.965	0.024	4.24120	2.44	ppb
|	Pb	208	35829.525	4.016	0.037	4.15746	3.22	ppb
⌊>	Bi	209	967619.330	0.868	967619.330			ppb

Raw Data

Replicate 1

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
⌈>	Li	6	191049.732		ppb
⌊	Be	9	46.000	0.226609	ppb
⌈>	Sc	45	558671.622		ppb
|	V	51	1690.162	0.145426	ppb
|	Cr	52	83622.178	20.765016	ppb
|	Mn	55	48050.164	7.726165	ppb
|	Co	59	5779.670	1.166691	ppb
|	Ni	60	6402.049	5.341195	ppb
|	Cu	63	20160.301	8.099752	ppb
|	Cu	65	9944.943	8.177638	ppb
|	Zn	66	8413.538	12.679419	ppb
|	As	75	71.707	0.057276	ppb
⌊	Se	82	46.667	0.135638	ppb
⌈	Ag	107	56.667	0.012082	ppb
|	Ag	109	63.334	0.013847	ppb

	Cd	111	675.952	0.729071	ppb
	In	113	50773.571		ppb
>	In	115	1109688.974		ppb
	Sb	121	3635.661	1.052181	ppb
	Ba	135	1350.091	1.578255	ppb
	Ba	137	2164.234	1.451947	ppb
>	Tb	159	1610337.521		ppb
	Tl	205	165.001	0.010858	ppb
	Pb	206	13418.997	4.470635	ppb
	Pb	207	24314.930	4.359773	ppb
	Pb	208	37095.208	4.280118	ppb
>	Bi	209	973638.234		ppb

Replicate 2

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	188834.242		ppb
	Be	9	30.000	0.145077	ppb
>	Sc	45	570814.386		ppb
	V	51	555.202	-0.092972	ppb
	Cr	52	87501.155	21.286486	ppb
	Mn	55	50462.000	7.943597	ppb
	Co	59	6033.820	1.192713	ppb
	Ni	60	6495.442	5.303689	ppb
	Cu	63	20287.224	7.976366	ppb
	Cu	65	10552.231	8.494863	ppb
	Zn	66	8056.577	11.856331	ppb
	As	75	107.514	0.101852	ppb
	Se	82	52.667	0.208465	ppb
	Ag	107	56.667	0.012129	ppb
	Ag	109	33.333	0.005927	ppb
	Cd	111	217.864	0.227427	ppb
	In	113	50894.182		ppb
>	In	115	1106109.104		ppb
	Sb	121	4135.855	1.205274	ppb
	Ba	135	1202.072	1.378677	ppb
	Ba	137	2050.210	1.356394	ppb
>	Tb	159	1624304.204		ppb
	Tl	205	105.001	0.003767	ppb
	Pb	206	12973.410	4.331356	ppb
	Pb	207	23213.650	4.170420	ppb
	Pb	208	36128.708	4.177776	ppb
>	Bi	209	971191.612		ppb

Replicate 3

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	190069.313		ppb
	Be	9	62.000	0.311642	ppb
>	Sc	45	584449.118		ppb
	V	51	-308.382	-0.267217	ppb
	Cr	52	87359.928	20.735212	ppb
	Mn	55	49637.891	7.628432	ppb
	Co	59	5791.677	1.116333	ppb
	Ni	60	6405.384	5.107374	ppb
	Cu	63	20637.941	7.924536	ppb
	Cu	65	10271.940	8.073181	ppb
	Zn	66	8153.322	11.713823	ppb
	As	75	-68.189	-0.124763	ppb
	Se	82	42.667	0.047854	ppb
	Ag	107	43.333	0.008631	ppb
	Ag	109	50.000	0.010313	ppb
	Cd	111	707.913	0.764053	ppb
	In	113	51085.152		ppb
>	In	115	1109791.908		ppb
	Sb	121	4350.946	1.279998	ppb

|	Ba	135	1150.066	1.318207	ppb
|	Ba	137	2158.233	1.438998	ppb
_>	Tb	159	1619220.135		ppb
⌈	Tl	205	85.000	0.001526	ppb
|	Pb	206	13203.711	4.470586	ppb
|	Pb	207	23023.530	4.193398	ppb
|	Pb	208	34264.660	4.014498	ppb
_>	Bi	209	958028.143		ppb

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Li	6		93.535			
	Be	9					
>	Sc	45		103.550			
	V	51	-14.318				
	Cr	52	99.661				
	Mn	55	110.944				
	Co	59	115.858				
	Ni	60	87.513				
	Cu	63	100.003				
	Cu	65	103.107				
	Zn	66	109.847				
	As	75	11.455				
	Se	82	43.551				
	Ag	107					
	Ag	109					
	Cd	111	81.931				
	In	113					
>	In	115		99.572			
	Sb	121	78.610				
	Ba	135	118.754				
	Ba	137	117.982				
>	Tb	159		104.567			
	Tl	205	53835.397				
	Pb	206	110.605				
	Pb	207	106.030				
	Pb	208	103.937				
>	Bi	209		91.343			

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

EPA 6020 & EPA 6020A - Summary Report

Sample ID: ICSAB

Sample Date/Time: Tuesday, November 09, 2010 11:48:49
Sample Type: Sample
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: C:\Elandata1\Method\6020\6020AAAMETHOD.mth
Dataset File: C:\Elandata\Dataset\PEMSJCF110910\ICSAB.011

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Meas. Intens. RSD	Net Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li	6	193888.289	0.545	193888.289			ppb
⌊	Be	9	3884.088	2.355	0.020	19.92943	2.66	ppb
⌈>	Sc	45	569681.173	2.333	569681.173			ppb
|	V	51	94920.789	2.916	0.165	19.15002	3.25	ppb
|	Cr	52	161667.913	1.655	0.278	40.13374	0.77	ppb
|	Mn	55	167754.146	2.203	0.294	26.65118	2.17	ppb
|	Co	59	106263.777	2.088	0.186	21.53037	1.38	ppb
|	Ni	60	27250.420	1.786	0.048	22.37507	4.02	ppb
|	Cu	63	66998.143	0.847	0.117	26.55181	1.48	ppb
|	Cu	65	32676.643	1.522	0.057	26.49539	1.23	ppb
|	Zn	66	18792.087	1.340	0.033	28.28637	1.01	ppb
|	As	75	14364.256	3.543	0.025	18.69204	1.62	ppb
⌊	Se	82	1385.207	3.794	0.002	19.71086	2.44	ppb
⌈	Ag	107	71482.369	0.930	0.064	18.39419	1.49	ppb
|	Ag	109	69389.940	1.241	0.062	18.28803	1.77	ppb
|	Cd	111	17294.363	2.956	0.015	18.85236	1.84	ppb
|	In	113	67955.129	1.011	0.017			ppb
⌊>	In	115	1115611.627	1.130	1115611.627			ppb
⌈	Sb	121	63363.470	1.352	0.039	20.45455	0.49	ppb
|	Ba	135	16884.247	2.271	0.010	20.87327	1.81	ppb
|	Ba	137	30014.316	1.550	0.018	21.37582	0.88	ppb
⌊>	Tb	159	1632010.988	1.098	1632010.988			ppb
⌈	Tl	205	185542.249	0.983	0.192	22.19009	2.15	ppb
|	Pb	206	73109.641	1.310	0.076	24.79869	1.50	ppb
|	Pb	207	133139.394	2.000	0.137	24.30641	0.52	ppb
|	Pb	208	206980.727	3.231	0.214	24.32189	1.40	ppb
⌊>	Bi	209	966278.454	2.508	966278.454			ppb

Raw Data

Replicate 1

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
⌈>	Li	6	194038.457		ppb
⌊	Be	9	3784.716	19.403038	ppb
⌈>	Sc	45	558946.354		ppb
|	V	51	96470.204	19.839068	ppb
|	Cr	52	159894.169	40.458078	ppb
|	Mn	55	163571.936	26.480763	ppb
|	Co	59	103739.316	21.420336	ppb
|	Ni	60	27768.501	23.224869	ppb
|	Cu	63	66567.493	26.882450	ppb
|	Cu	65	32512.768	26.865586	ppb
|	Zn	66	18603.956	28.540395	ppb
|	As	75	13830.905	18.345754	ppb
⌊	Se	82	1325.421	19.210782	ppb
⌈	Ag	107	71602.095	18.664943	ppb
|	Ag	109	69379.846	18.523346	ppb

	Cd	111	16717.423	18.464642	ppb
	In	113	67441.655		ppb
>	In	115	1101175.319		ppb
	Sb	121	62484.608	20.427877	ppb
	Ba	135	16655.859	20.853591	ppb
	Ba	137	29533.547	21.301261	ppb
>	Tb	159	1611481.748		ppb
	Tl	205	183462.629	22.178694	ppb
	Pb	206	73252.316	25.119164	ppb
	Pb	207	132150.255	24.392957	ppb
	Pb	208	201401.113	23.930934	ppb
>	Bi	209	955623.586		ppb

Replicate 2

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	192764.165		ppb
	Be	9	3964.786	20.461280	ppb
>	Sc	45	565547.412		ppb
	V	51	91724.696	18.630570	ppb
	Cr	52	160363.596	40.095807	ppb
	Mn	55	170577.532	27.295037	ppb
	Co	59	107148.986	21.866739	ppb
	Ni	60	27180.221	22.466833	ppb
	Cu	63	66785.607	26.655180	ppb
	Cu	65	32282.022	26.362385	ppb
	Zn	66	18694.124	28.341042	ppb
	As	75	14417.279	18.901481	ppb
	Se	82	1406.099	20.169449	ppb
	Ag	107	70766.176	18.116955	ppb
	Ag	109	70255.931	18.421673	ppb
	Cd	111	17474.567	18.955962	ppb
	In	113	67688.313		ppb
>	In	115	1121233.633		ppb
	Sb	121	63410.409	20.369524	ppb
	Ba	135	16669.883	20.506051	ppb
	Ba	137	30462.327	21.590566	ppb
>	Tb	159	1640009.781		ppb
	Tl	205	186289.170	22.673178	ppb
	Pb	206	72088.907	24.887198	ppb
	Pb	207	131112.584	24.365337	ppb
	Pb	208	205148.557	24.542813	ppb
>	Bi	209	949192.186		ppb

Replicate 3

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	194862.245		ppb
	Be	9	3902.761	19.923985	ppb
>	Sc	45	584549.752		ppb
	V	51	96567.468	18.980417	ppb
	Cr	52	164745.975	39.847349	ppb
	Mn	55	169112.970	26.177737	ppb
	Co	59	107903.029	21.304041	ppb
	Ni	60	26802.537	21.433496	ppb
	Cu	63	67641.330	26.117793	ppb
	Cu	65	33235.137	26.258194	ppb
	Zn	66	19078.182	27.977658	ppb
	As	75	14844.583	18.828889	ppb
	Se	82	1424.101	19.752342	ppb
	Ag	107	72078.835	18.400662	ppb
	Ag	109	68534.044	17.919082	ppb
	Cd	111	17691.098	19.136483	ppb
	In	113	68735.419		ppb
>	In	115	1124425.928		ppb
	Sb	121	64195.393	20.566260	ppb

	Ba	135	17326.998	21.260160	ppb
	Ba	137	30047.074	21.235623	ppb
>	Tb	159	1644541.436		ppb
	Tl	205	186874.948	21.718396	ppb
	Pb	206	73987.700	24.389701	ppb
	Pb	207	136155.342	24.160928	ppb
	Pb	208	214392.511	24.491909	ppb
>	Bi	209	994019.591		ppb

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
⌈>	Li	6		95.457			
⌊	Be	9	104.892				
⌈>	Sc	45		103.255			
|	V	51	100.790				
|	Cr	52	100.334				
|	Mn	55	98.708				
|	Co	59	107.652				
|	Ni	60	93.229				
|	Cu	63	106.207				
|	Cu	65	105.982				
|	Zn	66	97.539				
|	As	75	98.379				
⌊	Se	82	103.741				
⌈	Ag	107	102.190				
|	Ag	109	101.600				
|	Cd	111	94.262				
|	In	113					
⌊>	In	115		100.208			
⌈	Sb	121	92.975				
|	Ba	135	94.878				
|	Ba	137	97.163				
⌊>	Tb	159		105.475			
⌈	Tl	205	105.667				
|	Pb	206	99.195				
|	Pb	207	97.226				
|	Pb	208	97.288				
⌊>	Bi	209		91.217			

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

EPA 6020 & EPA 6020A - Summary Report

Sample ID: LLCCV

Sample Date/Time: Tuesday, November 09, 2010 11:50:21
Sample Type: Sample
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: C:\Elandata1\Method\6020\6020AAAMETHOD.mth
Dataset File: C:\Elandata\Dataset\PEMSJCF110910\LLCCV.012

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Meas. Intens. RSD	Net Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li	6	217266.899	0.346	217266.899			ppb
⌊	Be	9	236.669	10.499	0.001	1.07132	10.68	ppb
⌈>	Sc	45	606221.465	0.381	606221.465			ppb
|	V	51	27659.420	1.873	0.044	5.09312	1.99	ppb
|	Cr	52	12686.042	1.177	0.015	2.17356	1.44	ppb
|	Mn	55	7322.683	4.243	0.011	1.01617	4.20	ppb
|	Co	59	5705.627	0.598	0.009	1.05881	0.82	ppb
|	Ni	60	1227.853	5.295	0.002	0.92711	5.78	ppb
|	Cu	63	5880.618	1.235	0.009	2.12941	1.56	ppb
|	Cu	65	3010.453	2.661	0.005	2.23576	3.11	ppb
|	Zn	66	1594.572	3.003	0.002	1.86179	4.15	ppb
|	As	75	860.428	11.929	0.001	1.01670	12.72	ppb
⌊	Se	82	403.786	5.133	0.001	4.99357	6.11	ppb
⌈	Ag	107	4427.647	0.786	0.004	1.07928	1.02	ppb
|	Ag	109	4269.801	2.903	0.004	1.06560	2.89	ppb
|	Cd	111	1002.125	7.513	0.001	1.02611	8.32	ppb
|	In	113	53083.883	1.738	0.002			ppb
⌊>	In	115	1175014.604	1.042	1175014.604			ppb
⌈	Sb	121	6854.015	1.615	0.004	2.07531	0.64	ppb
|	Ba	135	8426.216	1.472	0.005	10.32351	2.66	ppb
|	Ba	137	14267.504	0.631	0.009	10.06682	1.52	ppb
⌊>	Tb	159	1637383.153	1.512	1637383.153			ppb
⌈	Tl	205	9741.409	0.520	0.009	1.01531	2.12	ppb
|	Pb	206	3482.273	1.222	0.003	0.98431	1.26	ppb
|	Pb	207	6337.681	2.963	0.005	0.96344	1.49	ppb
|	Pb	208	9862.864	1.429	0.008	0.96475	1.96	ppb
⌊>	Bi	209	1099633.858	1.563	1099633.858			ppb

Raw Data

Replicate 1

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
⌈>	Li	6	216443.307		ppb
⌊	Be	9	250.003	1.136719	ppb
⌈>	Sc	45	604802.464		ppb
|	V	51	28163.091	5.202228	ppb
|	Cr	52	12764.141	2.199309	ppb
|	Mn	55	7022.465	0.973789	ppb
|	Co	59	5743.649	1.068615	ppb
|	Ni	60	1256.746	0.951551	ppb
|	Cu	63	5858.382	2.126174	ppb
|	Cu	65	3037.128	2.261401	ppb
|	Zn	66	1630.133	1.918139	ppb
|	As	75	959.651	1.140759	ppb
⌊	Se	82	413.342	5.137576	ppb
⌈	Ag	107	4387.629	1.073594	ppb
|	Ag	109	4127.518	1.033961	ppb

	Cd	111	954.060	0.979743	ppb
	In	113	52482.359		ppb
>	In	115	1170483.563		ppb
	Sb	121	6737.269	2.076233	ppb
	Ba	135	8507.617	10.609179	ppb
	Ba	137	14246.140	10.230698	ppb
>	Tb	159	1608819.856		ppb
	Tl	205	9709.712	1.002338	ppb
	Pb	206	3530.623	0.988944	ppb
	Pb	207	6451.050	0.972248	ppb
	Pb	208	10017.944	0.971099	ppb
>	Bi	209	1109872.665		ppb

Replicate 2

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	217444.683		ppb
	Be	9	208.002	0.939148	ppb
>	Sc	45	604977.596		ppb
	V	51	27128.206	5.001991	ppb
	Cr	52	12513.825	2.138682	ppb
	Mn	55	7302.665	1.015521	ppb
	Co	59	5677.611	1.055682	ppb
	Ni	60	1273.414	0.964162	ppb
	Cu	63	5961.777	2.164211	ppb
	Cu	65	3073.806	2.288796	ppb
	Zn	66	1613.463	1.893479	ppb
	As	75	866.949	1.026575	ppb
	Se	82	418.009	5.200247	ppb
	Ag	107	4450.990	1.072241	ppb
	Ag	109	4327.603	1.067402	ppb
	Cd	111	963.417	0.973971	ppb
	In	113	54146.195		ppb
>	In	115	1188880.833		ppb
	Sb	121	6867.357	2.061497	ppb
	Ba	135	8283.429	10.060424	ppb
	Ba	137	14190.061	9.927604	ppb
>	Tb	159	1650832.691		ppb
	Tl	205	9799.799	1.040152	ppb
	Pb	206	3450.595	0.993714	ppb
	Pb	207	6120.952	0.946834	ppb
	Pb	208	9827.917	0.979695	ppb
>	Bi	209	1079785.671		ppb

Replicate 3

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	217912.707		ppb
	Be	9	252.003	1.138103	ppb
>	Sc	45	608884.335		ppb
	V	51	27686.963	5.075154	ppb
	Cr	52	12780.161	2.182679	ppb
	Mn	55	7642.920	1.059210	ppb
	Co	59	5695.622	1.052141	ppb
	Ni	60	1153.400	0.865616	ppb
	Cu	63	5821.694	2.097846	ppb
	Cu	65	2920.426	2.157085	ppb
	Zn	66	1540.119	1.773747	ppb
	As	75	754.683	0.882759	ppb
	Se	82	380.007	4.642897	ppb
	Ag	107	4444.321	1.091992	ppb
	Ag	109	4354.281	1.095435	ppb
	Cd	111	1088.899	1.124616	ppb
	In	113	52623.096		ppb
>	In	115	1165679.414		ppb
	Sb	121	6957.419	2.088192	ppb

|	Ba	135	8487.600	10.300925	ppb
|	Ba	137	14366.312	10.042145	ppb
|>	Tb	159	1652496.912		ppb
⌈	Tl	205	9714.716	1.003433	ppb
|	Pb	206	3465.600	0.970285	ppb
|	Pb	207	6441.043	0.971237	ppb
|	Pb	208	9742.732	0.943444	ppb
|>	Bi	209	1109243.236		ppb

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Li	6		106.968			
	Be	9	107.132				
>	Sc	45		109.878			
	V	51	101.862				
	Cr	52	108.678				
	Mn	55	101.617				
	Co	59	105.881				
	Ni	60	92.711				
	Cu	63	106.471				
	Cu	65	111.788				
	Zn	66	93.089				
	As	75	101.670				
	Se	82	99.871				
	Ag	107	107.928				
	Ag	109	106.560				
	Cd	111	102.611				
	In	113					
>	In	115		105.544			
	Sb	121	103.765				
	Ba	135	103.235				
	Ba	137	100.668				
>	Tb	159		105.822			
	Tl	205	101.531				
	Pb	206	98.431				
	Pb	207	96.344				
	Pb	208	96.475				
>	Bi	209		103.805			

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

EPA 6020 & EPA 6020A - Summary Report

Sample ID: CCV

Sample Date/Time: Tuesday, November 09, 2010 11:51:53
Sample Type: Sample
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: C:\Elandata1\Method\6020\6020AAAMETHOD.mth
Dataset File: C:\Elandata\Dataset\PEMSJCF110910\CCV.013

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Meas. Intens. RSD	Net Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li	6	212223.010	0.631	212223.010			ppb
⌊	Be	9	64803.303	0.750	0.305	303.95982	1.05	ppb
⌈>	Sc	45	596405.593	1.905	596405.593			ppb
|	V	51	1534846.646	0.552	2.573	298.77237	2.43	ppb
|	Cr	52	1244482.466	1.093	2.081	300.49346	1.29	ppb
|	Mn	55	2003942.139	1.254	3.360	304.96350	2.44	ppb
|	Co	59	1586615.671	2.003	2.661	307.48357	2.62	ppb
|	Ni	60	387894.243	2.586	0.651	304.39046	3.48	ppb
|	Cu	63	805959.616	2.050	1.351	305.72442	1.28	ppb
|	Cu	65	394821.296	0.658	0.662	306.50806	2.51	ppb
|	Zn	66	207915.016	1.381	0.348	303.06439	2.55	ppb
|	As	75	242523.803	1.199	0.407	302.15301	2.38	ppb
⌊	Se	82	21564.337	0.494	0.036	301.00740	2.41	ppb
⌈	Ag	107	1245927.601	1.458	1.089	312.70234	1.25	ppb
|	Ag	109	1207233.571	0.065	1.055	310.33837	0.54	ppb
|	Cd	111	289935.465	0.283	0.253	308.48620	0.46	ppb
|	In	113	335791.495	0.592	0.250			ppb
⌊>	In	115	1143859.190	0.605	1143859.190			ppb
⌈	Sb	121	957393.950	0.541	0.601	319.00326	1.05	ppb
|	Ba	135	245667.111	0.756	0.154	313.11933	1.01	ppb
|	Ba	137	422253.026	0.918	0.265	309.92695	0.64	ppb
⌊>	Tb	159	1591866.974	1.548	1591866.974			ppb
⌈	Tl	205	2828138.245	0.988	2.657	307.06995	1.42	ppb
|	Pb	206	998292.278	1.110	0.938	307.97525	1.49	ppb
|	Pb	207	1846908.331	1.208	1.735	306.71513	1.53	ppb
|	Pb	208	2838899.196	0.591	2.667	303.50877	1.02	ppb
⌊>	Bi	209	1064424.662	0.442	1064424.662			ppb

Raw Data

Replicate 1

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
⌈>	Li	6	213727.830		ppb
⌊	Be	9	64849.594	302.025816	ppb
⌈>	Sc	45	605641.000		ppb
|	V	51	1525591.534	292.348088	ppb
|	Cr	52	1260121.412	299.586273	ppb
|	Mn	55	2021725.566	302.897044	ppb
|	Co	59	1615475.816	308.235872	ppb
|	Ni	60	394674.339	304.896569	ppb
|	Cu	63	824869.615	308.115222	ppb
|	Cu	65	394220.278	301.278738	ppb
|	Zn	66	209865.985	301.158346	ppb
|	As	75	244652.380	300.078412	ppb
⌊	Se	82	21459.668	294.877134	ppb
⌈	Ag	107	1242566.208	310.225890	ppb
|	Ag	109	1208004.396	308.901824	ppb

	Cd	111	289972.210	306.902748	ppb
	In	113	334316.498		ppb
>	In	115	1149887.323		ppb
	Sb	121	957215.582	317.424744	ppb
	Ba	135	245027.593	310.820382	ppb
	Ba	137	423539.273	309.403786	ppb
>	Tb	159	1599310.118		ppb
	Tl	205	2810620.742	304.705124	ppb
	Pb	206	1002397.161	308.773247	ppb
	Pb	207	1861320.700	308.641905	ppb
	Pb	208	2827053.106	301.787189	ppb
>	Bi	209	1065997.400		ppb

Replicate 2

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	211166.265		ppb
	Be	9	65264.279	307.644552	ppb
>	Sc	45	599857.552		ppb
	V	51	1536732.207	297.325691	ppb
	Cr	52	1237976.518	297.152248	ppb
	Mn	55	1975190.559	298.777156	ppb
	Co	59	1552546.293	299.083991	ppb
	Ni	60	376371.967	293.560022	ppb
	Cu	63	798701.329	301.215472	ppb
	Cu	65	392577.510	302.916249	ppb
	Zn	66	204618.911	296.453089	ppb
	As	75	239210.081	296.231479	ppb
	Se	82	21560.551	299.127825	ppb
	Ag	107	1265544.448	317.204931	ppb
	Ag	109	1207269.781	309.927597	ppb
	Cd	111	290737.367	308.922336	ppb
	In	113	338054.050		ppb
>	In	115	1145384.600		ppb
	Sb	121	952303.130	322.853650	ppb
	Ba	135	244214.052	316.711962	ppb
	Ba	137	417897.185	312.103720	ppb
>	Tb	159	1564359.505		ppb
	Tl	205	2813436.055	304.397253	ppb
	Pb	206	985742.287	303.031601	ppb
	Pb	207	1821202.573	301.381261	ppb
	Pb	208	2831543.563	301.658959	ppb
>	Bi	209	1068144.386		ppb

Replicate 3

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	211774.935		ppb
	Be	9	64296.037	302.209101	ppb
>	Sc	45	583718.227		ppb
	V	51	1542216.197	306.643323	ppb
	Cr	52	1235349.467	304.741854	ppb
	Mn	55	2014910.292	313.216290	ppb
	Co	59	1591824.903	315.130847	ppb
	Ni	60	392636.423	314.714799	ppb
	Cu	63	794307.905	307.842562	ppb
	Cu	65	397666.099	315.329191	ppb
	Zn	66	209260.152	311.581743	ppb
	As	75	243708.947	310.149142	ppb
	Se	82	21672.793	309.017256	ppb
	Ag	107	1229672.147	310.676185	ppb
	Ag	109	1206426.537	312.185699	ppb
	Cd	111	289096.817	309.633529	ppb
	In	113	335003.939		ppb
>	In	115	1136305.647		ppb
	Sb	121	962663.139	316.731372	ppb

|	Ba	135	247759.687	311.825660	ppb
|	Ba	137	425322.621	308.273337	ppb
|>	Tb	159	1611931.299		ppb
⌈	Tl	205	2860357.937	312.107469	ppb
|	Pb	206	1006737.386	312.120898	ppb
|	Pb	207	1858201.719	310.122222	ppb
|	Pb	208	2858100.920	307.080161	ppb
|>	Bi	209	1059132.201		ppb

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Li	6		104.484			
	Be	9	101.320				
>	Sc	45		108.099			
	V	51	99.591				
	Cr	52	100.164				
	Mn	55	101.654				
	Co	59	102.495				
	Ni	60	101.463				
	Cu	63	101.908				
	Cu	65	102.169				
	Zn	66	101.021				
	As	75	100.718				
	Se	82	100.336				
	Ag	107	104.234				
	Ag	109	103.446				
	Cd	111	102.829				
	In	113					
>	In	115		102.745			
	Sb	121	106.334				
	Ba	135	104.373				
	Ba	137	103.309				
>	Tb	159		102.881			
	Tl	205	102.357				
	Pb	206	102.658				
	Pb	207	102.238				
	Pb	208	101.170				
>	Bi	209		100.482			

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

EPA 6020 & EPA 6020A - Summary Report

Sample ID: CCB

Sample Date/Time: Tuesday, November 09, 2010 11:53:24
Sample Type: Sample
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: C:\Elandata1\Method\6020\6020AAAMETHOD.mth
Dataset File: C:\Elandata\Dataset\PEMSJCF110910\CCB.014

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Meas. Intens. RSD	Net Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li	6	213308.353	0.193	213308.353			ppb
⌊	Be	9	10.000	91.652	0.000	0.03363	127.48	ppb
⌈>	Sc	45	594748.581	1.679	594748.581			ppb
|	V	51	1228.039	24.886	0.000	0.03325	167.66	ppb
|	Cr	52	3527.289	1.112	0.000	0.00850	255.87	ppb
|	Mn	55	900.041	18.668	0.001	0.05749	47.54	ppb
|	Co	59	304.005	50.744	0.000	0.03044	101.99	ppb
|	Ni	60	93.334	44.750	0.000	0.05293	64.06	ppb
|	Cu	63	291.116	36.396	0.000	0.04550	92.60	ppb
|	Cu	65	161.113	46.279	0.000	0.06264	96.50	ppb
|	Zn	66	217.780	7.550	-0.000	-0.10870	26.60	ppb
|	As	75	24.870	41.676	-0.000	-0.00710	179.34	ppb
⌊	Se	82	37.556	5.423	-0.000	-0.03456	57.80	ppb
⌈	Ag	107	51.111	26.357	0.000	0.01007	33.32	ppb
|	Ag	109	45.556	11.177	0.000	0.00862	15.68	ppb
|	Cd	111	28.183	43.960	0.000	0.01733	75.82	ppb
|	In	113	51140.510	2.954	0.000			ppb
⌊>	In	115	1160289.760	0.698	1160289.760			ppb
⌈	Sb	121	843.371	26.385	0.000	0.13513	52.13	ppb
|	Ba	135	143.334	11.867	0.000	0.05986	39.06	ppb
|	Ba	137	218.669	15.745	0.000	0.04219	64.78	ppb
⌊>	Tb	159	1589485.977	1.394	1589485.977			ppb
⌈	Tl	205	188.335	19.570	0.000	0.01162	31.61	ppb
|	Pb	206	411.676	35.397	0.000	0.07126	65.17	ppb
|	Pb	207	801.684	33.993	0.000	0.07783	60.30	ppb
|	Pb	208	1261.716	33.894	0.001	0.07869	60.40	ppb
⌊>	Bi	209	1068170.066	1.582	1068170.066			ppb

Raw Data

Replicate 1

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
⌈>	Li	6	212904.545		ppb
⌊	Be	9	20.000	0.080442	ppb
⌈>	Sc	45	584565.641		ppb
|	V	51	914.564	-0.024232	ppb
|	Cr	52	3568.637	0.033400	ppb
|	Mn	55	1075.058	0.086856	ppb
|	Co	59	478.011	0.065596	ppb
|	Ni	60	136.668	0.088662	ppb
|	Cu	63	410.008	0.093086	ppb
|	Cu	65	246.670	0.131953	ppb
|	Zn	66	236.669	-0.075312	ppb
|	As	75	13.814	-0.020527	ppb
⌊	Se	82	35.333	-0.056866	ppb
⌈	Ag	107	43.333	0.008207	ppb
|	Ag	109	46.667	0.008962	ppb

	Cd	111	34.550	0.024164	ppb
	In	113	49406.751		ppb
>	In	115	1153400.388		ppb
	Sb	121	620.019	0.064294	ppb
	Ba	135	160.001	0.084026	ppb
	Ba	137	246.003	0.064724	ppb
>	Tb	159	1566289.517		ppb
	Tl	205	175.002	0.010455	ppb
	Pb	206	515.013	0.104625	ppb
	Pb	207	1030.027	0.117370	ppb
	Pb	208	1695.083	0.126762	ppb
>	Bi	209	1054299.301		ppb

Replicate 2

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	213292.686		ppb
	Be	9	2.000	-0.003735	ppb
>	Sc	45	604521.199		ppb
	V	51	1525.127	0.087071	ppb
	Cr	52	3522.620	-0.006690	ppb
	Mn	55	885.039	0.052817	ppb
	Co	59	250.003	0.018887	ppb
	Ni	60	90.000	0.048930	ppb
	Cu	63	256.670	0.030452	ppb
	Cu	65	110.001	0.020841	ppb
	Zn	66	210.002	-0.125336	ppb
	As	75	26.431	-0.005600	ppb
	Se	82	39.333	-0.018332	ppb
	Ag	107	43.333	0.008061	ppb
	Ag	109	40.000	0.007125	ppb
	Cd	111	13.905	0.002181	ppb
	In	113	52175.761		ppb
>	In	115	1169207.831		ppb
	Sb	121	845.036	0.135944	ppb
	Ba	135	126.001	0.037359	ppb
	Ba	137	230.003	0.050040	ppb
>	Tb	159	1591737.490		ppb
	Tl	205	160.001	0.008664	ppb
	Pb	206	475.011	0.090923	ppb
	Pb	207	875.019	0.090146	ppb
	Pb	208	1250.044	0.077586	ppb
>	Bi	209	1063218.618		ppb

Replicate 3

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	213727.830		ppb
	Be	9	8.000	0.024191	ppb
>	Sc	45	595158.902		ppb
	V	51	1244.425	0.036903	ppb
	Cr	52	3490.609	-0.001220	ppb
	Mn	55	740.027	0.032793	ppb
	Co	59	184.002	0.006823	ppb
	Ni	60	53.333	0.021199	ppb
	Cu	63	206.669	0.012954	ppb
	Cu	65	126.667	0.035131	ppb
	Zn	66	206.669	-0.125455	ppb
	As	75	34.367	0.004817	ppb
	Se	82	38.000	-0.028478	ppb
	Ag	107	66.667	0.013945	ppb
	Ag	109	50.000	0.009759	ppb
	Cd	111	36.095	0.025634	ppb
	In	113	51839.017		ppb
>	In	115	1158261.061		ppb
	Sb	121	1065.057	0.205165	ppb

|	Ba	135	144.001	0.058179	ppb
|	Ba	137	180.002	0.011791	ppb
\>	Tb	159	1610430.923		ppb
⌈	Tl	205	230.003	0.015726	ppb
|	Pb	206	245.003	0.018219	ppb
|	Pb	207	500.006	0.025970	ppb
|	Pb	208	840.020	0.031727	ppb
\>	Bi	209	1086992.278		ppb

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Li	6		105.019			
	Be	9					
>	Sc	45		107.798			
	V	51					
	Cr	52					
	Mn	55					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	As	75					
	Se	82					
	Ag	107					
	Ag	109					
	Cd	111					
	In	113					
>	In	115		104.221			
	Sb	121					
	Ba	135					
	Ba	137					
>	Tb	159		102.727			
	Tl	205					
	Pb	206					
	Pb	207					
	Pb	208					
>	Bi	209		100.835			

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

EPA 6020 & EPA 6020A - Summary Report

Sample ID: 0102522-BLK1

Sample Date/Time: Tuesday, November 09, 2010 11:56:59
Sample Type: Sample
Sample Description: PBW
Number of Replicates: 3
Batch ID: 1010107
Method File: C:\Elandata1\Method\6020\6020AAAMETHOD.mth
Dataset File: C:\Elandata\Dataset\PEMSJCF110910\0102522-BLK1.015

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Meas. Intens. RSD	Net Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li	6	205366.716	0.556	205366.716			ppb
⌊	Be	9	0.667	173.205	-0.000	-0.00985	56.60	ppb
⌈>	Sc	45	560976.703	2.546	560976.703			ppb
|	V	51	786.168	37.784	-0.000	-0.04246	151.28	ppb
|	Cr	52	4368.954	0.754	0.002	0.27705	12.57	ppb
|	Mn	55	613.352	8.327	0.000	0.01926	48.15	ppb
|	Co	59	121.334	11.578	-0.000	-0.00394	59.93	ppb
|	Ni	60	85.556	17.569	0.000	0.05083	27.80	ppb
|	Cu	63	724.471	11.516	0.001	0.22622	12.08	ppb
|	Cu	65	351.117	7.189	0.000	0.22630	7.86	ppb
|	Zn	66	585.573	10.594	0.001	0.47964	15.68	ppb
|	As	75	-33.815	108.922	-0.000	-0.08336	59.26	ppb
⌊	Se	82	34.889	5.838	-0.000	-0.04253	45.04	ppb
⌈	Ag	107	17.778	10.825	0.000	0.00198	22.52	ppb
|	Ag	109	22.222	34.641	0.000	0.00292	70.92	ppb
|	Cd	111	9.578	107.987	-0.000	-0.00188	601.58	ppb
|	In	113	48576.056	1.846	-0.000			ppb
⌊>	In	115	1119247.504	1.005	1119247.504			ppb
⌈	Sb	121	313.338	24.944	-0.000	-0.03823	70.60	ppb
|	Ba	135	71.334	11.331	-0.000	-0.02970	36.18	ppb
|	Ba	137	125.334	2.438	-0.000	-0.02415	9.63	ppb
⌊>	Tb	159	1546889.283	0.240	1546889.283			ppb
⌈	Tl	205	63.334	43.481	-0.000	-0.00184	162.36	ppb
|	Pb	206	186.668	19.004	0.000	0.00187	510.01	ppb
|	Pb	207	320.003	18.422	-0.000	-0.00211	412.00	ppb
|	Pb	208	511.675	8.813	-0.000	-0.00135	264.43	ppb
⌊>	Bi	209	1060171.710	2.447	1060171.710			ppb

Raw Data

Replicate 1

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
⌈>	Li	6	206169.610		ppb
⌊	Be	9	2.000	-0.003412	ppb
⌈>	Sc	45	570481.154		ppb
|	V	51	889.145	-0.024921	ppb
|	Cr	52	4330.938	0.248110	ppb
|	Mn	55	650.021	0.023355	ppb
|	Co	59	136.001	-0.001356	ppb
|	Ni	60	86.667	0.050353	ppb
|	Cu	63	810.033	0.255670	ppb
|	Cu	65	340.006	0.212520	ppb
|	Zn	66	643.354	0.553829	ppb
|	As	75	-48.908	-0.101776	ppb
⌊	Se	82	35.333	-0.044424	ppb
⌈	Ag	107	16.667	0.001717	ppb
|	Ag	109	26.667	0.004105	ppb

	Cd	111	20.280	0.009865	ppb
	In	113	48728.434		ppb
>	In	115	1113882.038		ppb
	Sb	121	230.003	-0.067064	ppb
	Ba	135	64.000	-0.039556	ppb
	Ba	137	126.001	-0.023901	ppb
>	Tb	159	1551079.696		ppb
	Tl	205	65.000	-0.001828	ppb
	Pb	206	225.003	0.012072	ppb
	Pb	207	370.004	0.004734	ppb
	Pb	208	555.009	0.001796	ppb
>	Bi	209	1088654.330		ppb

Replicate 2

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	205871.564		ppb
	Be	9	0.000	-0.013069	ppb
>	Sc	45	567895.007		ppb
	V	51	451.341	-0.113632	ppb
	Cr	52	4386.962	0.267347	ppb
	Mn	55	555.015	0.008642	ppb
	Co	59	120.001	-0.004486	ppb
	Ni	60	70.000	0.036944	ppb
	Cu	63	720.026	0.221270	ppb
	Cu	65	380.007	0.246386	ppb
	Zn	66	593.351	0.481667	ppb
	As	75	8.166	-0.027399	ppb
	Se	82	36.667	-0.022496	ppb
	Ag	107	20.000	0.002493	ppb
	Ag	109	13.333	0.000528	ppb
	Cd	111	8.820	-0.002812	ppb
	In	113	49386.652		ppb
>	In	115	1132169.022		ppb
	Sb	121	325.005	-0.034058	ppb
	Ba	135	70.000	-0.031287	ppb
	Ba	137	128.001	-0.021954	ppb
>	Tb	159	1544039.788		ppb
	Tl	205	35.000	-0.004831	ppb
	Pb	206	155.001	-0.006760	ppb
	Pb	207	255.002	-0.011917	ppb
	Pb	208	465.007	-0.005237	ppb
>	Bi	209	1037910.578		ppb

Replicate 3

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	204058.975		ppb
	Be	9	0.000	-0.013069	ppb
>	Sc	45	544553.947		ppb
	V	51	1018.018	0.011183	ppb
	Cr	52	4388.963	0.315689	ppb
	Mn	55	635.020	0.025778	ppb
	Co	59	108.001	-0.005986	ppb
	Ni	60	100.001	0.065194	ppb
	Cu	63	643.354	0.201708	ppb
	Cu	65	333.339	0.219989	ppb
	Zn	66	520.014	0.403432	ppb
	As	75	-60.704	-0.120902	ppb
	Se	82	32.667	-0.060667	ppb
	Ag	107	16.667	0.001725	ppb
	Ag	109	26.667	0.004119	ppb
	Cd	111	-0.365	-0.012693	ppb
	In	113	47613.081		ppb
>	In	115	1111691.452		ppb
	Sb	121	385.007	-0.013568	ppb

|	Ba	135	80.000	-0.018245	ppb
|	Ba	137	122.001	-0.026586	ppb
\>	Tb	159	1545548.367		ppb
⌈	Tl	205	90.000	0.001141	ppb
|	Pb	206	180.002	0.000284	ppb
|	Pb	207	335.003	0.000841	ppb
|	Pb	208	515.008	-0.000613	ppb
\>	Bi	209	1053950.221		ppb

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
⌈>	Li	6		101.109			
⌊	Be	9					
⌈>	Sc	45		101.677			
|	V	51					
|	Cr	52					
|	Mn	55					
|	Co	59					
|	Ni	60					
|	Cu	63					
|	Cu	65					
|	Zn	66					
|	As	75					
⌊	Se	82					
⌈	Ag	107					
|	Ag	109					
|	Cd	111					
|	In	113					
⌊>	In	115		100.534			
⌈	Sb	121					
|	Ba	135					
|	Ba	137					
⌊>	Tb	159		99.974			
⌈	Tl	205					
|	Pb	206					
|	Pb	207					
|	Pb	208					
⌊>	Bi	209		100.080			

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

EPA 6020 & EPA 6020A - Summary Report

Sample ID: 0102522-BS1

Sample Date/Time: Tuesday, November 09, 2010 11:58:30
Sample Type: Sample
Sample Description: LCSW
Number of Replicates: 3
Batch ID: 1010107
Method File: C:\Elandata1\Method\6020\6020AAAMETHOD.mth
Dataset File: C:\Elandata\Dataset\PEMSJCF110910\0102522-BS1.016

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Meas. Intens. RSD	Net Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li	6	196866.669	1.785	196866.669			ppb
⌊	Be	9	21700.869	3.068	0.110	109.73392	3.31	ppb
⌈>	Sc	45	546254.614	2.313	546254.614			ppb
|	V	51	469542.576	0.359	0.858	99.65691	2.13	ppb
|	Cr	52	403556.415	1.067	0.733	105.86592	2.63	ppb
|	Mn	55	602793.931	1.491	1.103	100.09837	1.92	ppb
|	Co	59	514704.444	1.595	0.942	108.88695	1.86	ppb
|	Ni	60	113149.974	1.513	0.207	96.91613	1.37	ppb
|	Cu	63	264572.305	1.149	0.484	109.54742	1.16	ppb
|	Cu	65	127745.213	0.303	0.234	108.24187	2.47	ppb
|	Zn	66	142679.823	2.009	0.261	226.94475	2.17	ppb
|	As	75	156742.592	1.021	0.287	213.19664	1.83	ppb
⌊	Se	82	15134.778	0.445	0.028	230.53223	2.25	ppb
⌈	Ag	107	423968.005	0.904	0.391	112.24437	1.50	ppb
|	Ag	109	402816.499	0.749	0.371	109.22033	0.28	ppb
|	Cd	111	94258.789	1.570	0.087	105.78814	2.36	ppb
|	In	113	141306.419	0.862	0.087			ppb
⌊>	In	115	1084442.274	0.828	1084442.274			ppb
⌈	Sb	121	603519.400	0.985	0.393	208.32648	2.15	ppb
|	Ba	135	77129.645	0.529	0.050	101.80041	2.84	ppb
|	Ba	137	135097.842	1.007	0.088	102.66988	1.63	ppb
⌊>	Tb	159	1536510.045	2.309	1536510.045			ppb
⌈	Tl	205	1912638.287	0.307	1.858	214.77485	1.07	ppb
|	Pb	206	638817.579	1.958	0.621	203.79342	1.78	ppb
|	Pb	207	1186181.320	1.653	1.152	203.69787	1.12	ppb
|	Pb	208	1881811.507	1.795	1.828	208.03012	0.50	ppb
⌊>	Bi	209	1029243.236	1.310	1029243.236			ppb

Raw Data

Replicate 1

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
⌈>	Li	6	197825.583		ppb
⌊	Be	9	22465.206	113.030178	ppb
⌈>	Sc	45	542686.418		ppb
|	V	51	470908.278	100.573157	ppb
|	Cr	52	408475.640	107.836925	ppb
|	Mn	55	593096.628	99.112563	ppb
|	Co	59	506016.722	107.730360	ppb
|	Ni	60	111670.048	96.261511	ppb
|	Cu	63	263937.790	109.983918	ppb
|	Cu	65	127426.739	108.641167	ppb
|	Zn	66	139513.121	223.315873	ppb
|	As	75	155081.504	212.270104	ppb
⌊	Se	82	15204.884	233.049868	ppb
⌈	Ag	107	427607.708	114.179128	ppb
|	Ag	109	400395.156	109.502026	ppb

|	Cd	111	95414.007	107.997424	ppb
|	In	113	142655.321		ppb
|>	In	115	1075143.391		ppb
⌈	Sb	121	597301.136	205.953560	ppb
|	Ba	135	77065.817	101.590843	ppb
|	Ba	137	136105.981	103.330737	ppb
|>	Tb	159	1537729.256		ppb
⌈	Tl	205	1918895.156	213.625224	ppb
|	Pb	206	631972.801	199.887002	ppb
|	Pb	207	1182880.997	201.401339	ppb
|	Pb	208	1905852.733	208.905215	ppb
|>	Bi	209	1038071.019		ppb

Replicate 2

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
⌈>	Li	6	192972.119		ppb
⌊	Be	9	21390.854	110.331314	ppb
⌈>	Sc	45	535789.003		ppb
|	V	51	467661.417	101.166719	ppb
|	Cr	52	400463.131	107.076698	ppb
|	Mn	55	604446.903	102.312225	ppb
|	Co	59	515768.471	111.221013	ppb
|	Ni	60	112755.459	98.448881	ppb
|	Cu	63	261898.547	110.539414	ppb
|	Cu	65	128176.226	110.688162	ppb
|	Zn	66	143431.303	232.560869	ppb
|	As	75	156871.607	217.485445	ppb
⌊	Se	82	15070.681	233.968764	ppb
⌈	Ag	107	424329.052	111.445251	ppb
|	Ag	109	406198.995	109.267247	ppb
|	Cd	111	92591.236	103.082899	ppb
|	In	113	140287.170		ppb
|>	In	115	1093071.446		ppb
⌈	Sb	121	604112.581	213.485043	ppb
|	Ba	135	77565.659	104.795138	ppb
|	Ba	137	133549.863	103.910952	ppb
|>	Tb	159	1500434.712		ppb
⌈	Tl	205	1907238.727	217.426287	ppb
|	Pb	206	631222.570	204.445137	ppb
|	Pb	207	1168429.700	203.718580	ppb
|	Pb	208	1843200.612	206.888717	ppb
|>	Bi	209	1013728.532		ppb

Replicate 3

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
⌈>	Li	6	199802.305		ppb
⌊	Be	9	21246.547	105.840264	ppb
⌈>	Sc	45	560288.420		ppb
|	V	51	470058.032	97.230840	ppb
|	Cr	52	401730.475	102.684145	ppb
|	Mn	55	610838.261	98.870318	ppb
|	Co	59	522328.139	107.709485	ppb
|	Ni	60	115024.415	96.037996	ppb
|	Cu	63	267880.578	108.118914	ppb
|	Cu	65	127632.673	105.396267	ppb
|	Zn	66	145095.047	224.957508	ppb
|	As	75	158274.666	209.834375	ppb
⌊	Se	82	15128.769	224.578051	ppb
⌈	Ag	107	419967.257	111.108731	ppb
|	Ag	109	401855.345	108.891719	ppb
|	Cd	111	94771.124	106.284106	ppb
|	In	113	140976.767		ppb
|>	In	115	1085111.986		ppb
⌈	Sb	121	609144.483	205.540846	ppb

|	Ba	135	76757.459	99.015264	ppb
|	Ba	137	135637.683	100.767960	ppb
_>	Tb	159	1571366.169		ppb
⌈	Tl	205	1911780.979	213.273051	ppb
|	Pb	206	653257.367	207.048108	ppb
|	Pb	207	1207233.264	205.973681	ppb
|	Pb	208	1896381.175	208.296430	ppb
_>	Bi	209	1035930.158		ppb

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Li	6		96.924			
	Be	9					
>	Sc	45		99.009			
	V	51					
	Cr	52					
	Mn	55					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	As	75					
	Se	82					
	Ag	107					
	Ag	109					
	Cd	111					
	In	113					
>	In	115		97.408			
	Sb	121					
	Ba	135					
	Ba	137					
>	Tb	159		99.303			
	Tl	205					
	Pb	206					
	Pb	207					
	Pb	208					
>	Bi	209		97.161			

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

EPA 6020 & EPA 6020A - Summary Report

Sample ID: 1010107-01

Sample Date/Time: Tuesday, November 09, 2010 12:00:01
Sample Type: Sample
Sample Description: 13MW5
Number of Replicates: 3
Batch ID: 1010107
Method File: C:\Elandata1\Method\6020\6020AAAMETHOD.mth
Dataset File: C:\Elandata\Dataset\PEMSJCF110910\1010107-01.017

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Meas. Intens. RSD	Net Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li	6	197943.327	0.954	197943.327			ppb
⌊	Be	9	5.333	78.062	0.000	0.01380	153.09	ppb
⌈>	Sc	45	553865.883	0.942	553865.883			ppb
|	V	51	2466.704	72.782	0.003	0.31253	120.77	ppb
|	Cr	52	23919.270	4.056	0.037	5.38839	4.97	ppb
|	Mn	55	2318.603	6.920	0.003	0.29988	8.59	ppb
|	Co	59	886.039	5.680	0.001	0.15595	6.17	ppb
|	Ni	60	1739.041	10.061	0.003	1.44842	10.12	ppb
|	Cu	63	4297.590	0.864	0.007	1.69023	1.49	ppb
|	Cu	65	2282.483	6.115	0.004	1.84412	5.79	ppb
|	Zn	66	2228.026	2.386	0.004	3.07411	3.80	ppb
|	As	75	-240.653	73.647	-0.000	-0.36230	66.73	ppb
⌊	Se	82	144.890	8.388	0.000	1.62041	11.24	ppb
⌈	Ag	107	15.556	12.372	0.000	0.00156	35.05	ppb
|	Ag	109	14.444	48.038	0.000	0.00100	188.10	ppb
|	Cd	111	35.458	62.458	0.000	0.02783	90.40	ppb
|	In	113	47234.650	1.801	0.000			ppb
⌊>	In	115	1079374.981	1.169	1079374.981			ppb
⌈	Sb	121	2868.745	5.090	0.002	0.83223	5.92	ppb
|	Ba	135	73621.356	0.799	0.047	95.88045	0.95	ppb
|	Ba	137	128322.153	1.167	0.082	96.24377	0.99	ppb
⌊>	Tb	159	1556393.379	0.178	1556393.379			ppb
⌈	Tl	205	325.005	8.566	0.000	0.02821	11.07	ppb
|	Pb	206	903.375	15.243	0.001	0.23643	20.71	ppb
|	Pb	207	1680.072	14.196	0.001	0.23716	19.22	ppb
|	Pb	208	2685.214	12.447	0.002	0.24460	16.48	ppb
⌊>	Bi	209	1016887.058	1.575	1016887.058			ppb

Raw Data

Replicate 1

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
⌈>	Li	6	196764.963		ppb
⌊	Be	9	10.000	0.037521	ppb
⌈>	Sc	45	557424.854		ppb
|	V	51	404.721	-0.121612	ppb
|	Cr	52	22916.228	5.088112	ppb
|	Mn	55	2485.309	0.324605	ppb
|	Co	59	944.045	0.166818	ppb
|	Ni	60	1586.793	1.311232	ppb
|	Cu	63	4257.573	1.662649	ppb
|	Cu	65	2443.632	1.966085	ppb
|	Zn	66	2183.572	2.981626	ppb
|	As	75	-189.756	-0.290992	ppb
⌊	Se	82	134.001	1.443536	ppb
⌈	Ag	107	16.667	0.001844	ppb
|	Ag	109	6.667	-0.001123	ppb

	Cd	111	50.280	0.044273	ppb
	In	113	48215.959		ppb
>	In	115	1081823.683		ppb
	Sb	121	2960.438	0.861505	ppb
	Ba	135	72979.331	94.853351	ppb
	Ba	137	129971.172	97.289459	ppb
>	Tb	159	1559489.504		ppb
	Tl	205	320.005	0.028314	ppb
	Pb	206	1045.055	0.287960	ppb
	Pb	207	1905.092	0.281991	ppb
	Pb	208	2900.245	0.274391	ppb
>	Bi	209	998411.470		ppb

Replicate 2

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	196944.445		ppb
	Be	9	2.000	-0.002960	ppb
>	Sc	45	547878.355		ppb
	V	51	3312.383	0.496230	ppb
	Cr	52	23988.739	5.474211	ppb
	Mn	55	2305.266	0.301830	ppb
	Co	59	860.037	0.152508	ppb
	Ni	60	1700.145	1.431247	ppb
	Cu	63	4304.259	1.712045	ppb
	Cu	65	2203.576	1.798603	ppb
	Zn	66	2286.928	3.205218	ppb
	As	75	-437.765	-0.631709	ppb
	Se	82	142.668	1.610358	ppb
	Ag	107	16.667	0.001911	ppb
	Ag	109	16.667	0.001664	ppb
	Cd	111	46.095	0.040348	ppb
	In	113	46779.159		ppb
>	In	115	1065714.040		ppb
	Sb	121	2945.434	0.859857	ppb
	Ba	135	73750.961	96.188680	ppb
	Ba	137	127045.939	95.425588	ppb
>	Tb	159	1554128.074		ppb
	Tl	205	355.006	0.031283	ppb
	Pb	206	895.040	0.230854	ppb
	Pb	207	1705.073	0.238616	ppb
	Pb	208	2855.242	0.260682	ppb
>	Bi	209	1025436.836		ppb

Replicate 3

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	200120.575		ppb
	Be	9	4.000	0.006828	ppb
>	Sc	45	556294.440		ppb
	V	51	3683.008	0.562984	ppb
	Cr	52	24852.845	5.602855	ppb
	Mn	55	2165.234	0.273206	ppb
	Co	59	854.036	0.148516	ppb
	Ni	60	1930.186	1.602772	ppb
	Cu	63	4330.938	1.696002	ppb
	Cu	65	2200.242	1.767658	ppb
	Zn	66	2213.578	3.035499	ppb
	As	75	-94.436	-0.164205	ppb
	Se	82	158.001	1.807335	ppb
	Ag	107	13.333	0.000931	ppb
	Ag	109	20.000	0.002458	ppb
	Cd	111	10.000	-0.001133	ppb
	In	113	46708.832		ppb
>	In	115	1090587.218		ppb
	Sb	121	2700.365	0.775338	ppb

|	Ba	135	74133.776	96.599324	ppb
|	Ba	137	127949.348	96.016259	ppb
_>	Tb	159	1555562.561		ppb
⌈	Tl	205	300.005	0.025038	ppb
|	Pb	206	770.030	0.190486	ppb
|	Pb	207	1430.051	0.190869	ppb
|	Pb	208	2300.156	0.198730	ppb
_>	Bi	209	1026812.866		ppb

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
⌈>	Li	6		97.454			
⌊	Be	9					
⌈>	Sc	45		100.388			
|	V	51					
|	Cr	52					
|	Mn	55					
|	Co	59					
|	Ni	60					
|	Cu	63					
|	Cu	65					
|	Zn	66					
|	As	75					
⌊	Se	82					
⌈	Ag	107					
|	Ag	109					
|	Cd	111					
|	In	113					
⌊>	In	115		96.953			
⌈	Sb	121					
|	Ba	135					
|	Ba	137					
⌊>	Tb	159		100.588			
⌈	Tl	205					
|	Pb	206					
|	Pb	207					
|	Pb	208					
⌊>	Bi	209		95.994			

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

EPA 6020 & EPA 6020A - Summary Report

Sample ID: 0102522-DUP1

Sample Date/Time: Tuesday, November 09, 2010 12:01:32
Sample Type: Sample
Sample Description: 13MW5D
Number of Replicates: 3
Batch ID: 1010107
Method File: C:\Elandata1\Method\6020\6020AAAMETHOD.mth
Dataset File: C:\Elandata\Dataset\PEMSJCF110910\0102522-DUP1.018

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Meas. Intens. RSD	Net Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li	6	190873.151	0.806	190873.151			ppb
⌊	Be	9	3.333	124.900	0.000	0.00443	494.59	ppb
⌈>	Sc	45	520375.220	0.926	520375.220			ppb
|	V	51	2780.651	95.032	0.004	0.41484	142.49	ppb
|	Cr	52	23764.880	2.090	0.040	5.74597	1.72	ppb
|	Mn	55	2151.899	4.615	0.003	0.29534	6.60	ppb
|	Co	59	776.697	4.107	0.001	0.14359	5.02	ppb
|	Ni	60	1630.133	3.981	0.003	1.44547	4.95	ppb
|	Cu	63	5066.839	2.035	0.009	2.13768	2.19	ppb
|	Cu	65	2697.031	5.350	0.005	2.33642	5.87	ppb
|	Zn	66	3897.426	1.683	0.007	6.09184	2.79	ppb
|	As	75	-128.377	61.059	-0.000	-0.22083	49.81	ppb
⌊	Se	82	146.446	2.151	0.000	1.78589	3.44	ppb
⌈	Ag	107	13.333	66.144	0.000	0.00121	209.00	ppb
|	Ag	109	24.444	47.889	0.000	0.00416	81.23	ppb
|	Cd	111	20.823	75.526	0.000	0.01266	148.65	ppb
|	In	113	45081.400	1.337	0.001			ppb
⌊>	In	115	1012845.755	0.564	1012845.755			ppb
⌈	Sb	121	1483.444	12.351	0.001	0.38767	15.41	ppb
|	Ba	135	72124.518	1.142	0.049	99.17985	2.26	ppb
|	Ba	137	125985.333	0.604	0.085	99.76665	1.45	ppb
⌊>	Tb	159	1474335.575	1.242	1474335.575			ppb
⌈	Tl	205	240.003	18.517	0.000	0.02004	26.11	ppb
|	Pb	206	538.348	7.450	0.000	0.12756	9.83	ppb
|	Pb	207	1051.694	5.712	0.001	0.13756	8.55	ppb
|	Pb	208	1678.415	10.760	0.001	0.14202	15.81	ppb
⌊>	Bi	209	963962.023	0.915	963962.023			ppb

Raw Data

Replicate 1

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
⌈>	Li	6	191039.540		ppb
⌊	Be	9	2.000	-0.002648	ppb
⌈>	Sc	45	516024.169		ppb
|	V	51	987.276	0.016268	ppb
|	Cr	52	23647.928	5.769121	ppb
|	Mn	55	2260.255	0.317487	ppb
|	Co	59	798.032	0.149820	ppb
|	Ni	60	1680.141	1.502740	ppb
|	Cu	63	4981.240	2.118633	ppb
|	Cu	65	2643.683	2.308387	ppb
|	Zn	66	3957.450	6.246993	ppb
|	As	75	-106.390	-0.191258	ppb
⌊	Se	82	145.334	1.787475	ppb
⌈	Ag	107	6.667	-0.000694	ppb
|	Ag	109	13.333	0.000927	ppb

	Cd	111	34.099	0.028585	ppb
	In	113	44790.083		ppb
>	In	115	1015250.392		ppb
	Sb	121	1310.086	0.332349	ppb
	Ba	135	72683.186	101.333721	ppb
	Ba	137	126310.713	101.417216	ppb
>	Tb	159	1453956.056		ppb
	Tl	205	255.003	0.022099	ppb
	Pb	206	535.014	0.127992	ppb
	Pb	207	1110.031	0.149925	ppb
	Pb	208	1875.101	0.167010	ppb
>	Bi	209	956002.349		ppb

Replicate 2

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	189258.144		ppb
	Be	9	8.000	0.029009	ppb
>	Sc	45	519549.873		ppb
	V	51	5815.273	1.094012	ppb
	Cr	52	23337.200	5.637858	ppb
	Mn	55	2065.213	0.280717	ppb
	Co	59	740.027	0.135704	ppb
	Ni	60	1653.470	1.468382	ppb
	Cu	63	5181.342	2.190959	ppb
	Cu	65	2860.409	2.485409	ppb
	Zn	66	3907.430	6.117907	ppb
	As	75	-63.333	-0.128648	ppb
	Se	82	150.001	1.846432	ppb
	Ag	107	23.333	0.004078	ppb
	Ag	109	23.333	0.003883	ppb
	Cd	111	3.455	-0.008115	ppb
	In	113	44679.591		ppb
>	In	115	1006325.833		ppb
	Sb	121	1465.107	0.379638	ppb
	Ba	135	72511.949	99.337261	ppb
	Ba	137	125115.833	98.710421	ppb
>	Tb	159	1479646.961		ppb
	Tl	205	190.002	0.014088	ppb
	Pb	206	500.013	0.114820	ppb
	Pb	207	990.025	0.126509	ppb
	Pb	208	1520.065	0.123532	ppb
>	Bi	209	962432.439		ppb

Replicate 3

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	192321.769		ppb
	Be	9	0.000	-0.013069	ppb
>	Sc	45	525551.618		ppb
	V	51	1539.403	0.134253	ppb
	Cr	52	24309.512	5.830931	ppb
	Mn	55	2130.227	0.287825	ppb
	Co	59	792.031	0.145260	ppb
	Ni	60	1556.788	1.365299	ppb
	Cu	63	5037.935	2.103446	ppb
	Cu	65	2587.001	2.215460	ppb
	Zn	66	3827.399	5.910623	ppb
	As	75	-215.409	-0.342594	ppb
	Se	82	144.001	1.723750	ppb
	Ag	107	10.000	0.000244	ppb
	Ag	109	36.667	0.007667	ppb
	Cd	111	24.915	0.017524	ppb
	In	113	45774.526		ppb
>	In	115	1016961.042		ppb
	Sb	121	1675.140	0.451020	ppb

	Ba	135	71178.420	96.868573	ppb
	Ba	137	126529.453	99.172319	ppb
>	Tb	159	1489403.709		ppb
	Tl	205	275.004	0.023921	ppb
	Pb	206	580.017	0.139880	ppb
	Pb	207	1055.028	0.136256	ppb
	Pb	208	1640.079	0.135529	ppb
>	Bi	209	973451.281		ppb

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Li	6		93.973			
	Be	9					
>	Sc	45		94.318			
	V	51					
	Cr	52					
	Mn	55					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	As	75					
	Se	82					
	Ag	107					
	Ag	109					
	Cd	111					
	In	113					
>	In	115		90.977			
	Sb	121					
	Ba	135					
	Ba	137					
>	Tb	159		95.285			
	Tl	205					
	Pb	206					
	Pb	207					
	Pb	208					
>	Bi	209		90.998			

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

EPA 6020 & EPA 6020A - Summary Report

Sample ID: 0102522-MS1

Sample Date/Time: Tuesday, November 09, 2010 12:03:03
Sample Type: Spike - 2 of 3
Sample Description: 13MW5S
Number of Replicates: 3
Batch ID: 1010107
Method File: C:\Elandata1\Method\6020\6020AAAMETHOD.mth
Dataset File: C:\Elandata\Dataset\PEMSJCF110910\0102522-MS1.019

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Meas. Intens. RSD	Net Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li	6	190428.804	0.834	190428.804			ppb
⌊	Be	9	10210.546	2.631	0.054	53.35721	1.99	ppb
⌈>	Sc	45	516546.889	0.305	516546.889			ppb
|	V	51	2244687.313	1.347	4.344	504.48510	1.21	ppb
|	Cr	52	748068.449	1.940	1.442	208.26286	1.78	ppb
|	Mn	55	2744932.782	0.334	5.313	482.23033	0.38	ppb
|	Co	59	2308356.229	0.505	4.469	516.43337	0.80	ppb
|	Ni	60	498697.286	1.407	0.965	451.72168	1.50	ppb
|	Cu	63	570678.722	1.523	1.105	249.92113	1.48	ppb
|	Cu	65	277172.523	1.376	0.536	248.35805	1.64	ppb
|	Zn	66	310313.533	0.697	0.600	522.42056	0.64	ppb
|	As	75	28913.937	0.251	0.056	41.54888	0.50	ppb
⌊	Se	82	840.258	2.085	0.002	13.00285	2.42	ppb
⌈	Ag	107	183784.667	0.925	0.182	52.19448	3.12	ppb
|	Ag	109	177363.597	0.921	0.175	51.59292	3.35	ppb
|	Cd	111	43385.900	1.757	0.043	52.21129	1.95	ppb
|	In	113	87497.819	1.027	0.043			ppb
⌊>	In	115	1011393.979	2.762	1011393.979			ppb
⌈	Sb	121	297634.723	1.114	0.198	105.09257	0.65	ppb
|	Ba	135	1515221.250	0.768	1.010	2049.26815	1.14	ppb
|	Ba	137	2590903.889	1.129	1.727	2017.99237	1.70	ppb
⌊>	Tb	159	1500604.986	0.622	1500604.986			ppb
⌈	Tl	205	456895.157	0.975	0.469	54.16186	1.48	ppb
|	Pb	206	63070.075	3.290	0.065	21.19595	3.82	ppb
|	Pb	207	115849.014	2.350	0.119	20.95826	3.08	ppb
|	Pb	208	180941.719	1.121	0.185	21.07251	2.14	ppb
⌊>	Bi	209	974838.409	1.034	974838.409			ppb

Raw Data

Replicate 1

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
⌈>	Li	6	188634.526		ppb
⌊	Be	9	9920.919	52.340632	ppb
⌈>	Sc	45	516892.327		ppb
|	V	51	2219104.454	498.403777	ppb
|	Cr	52	736562.707	204.912462	ppb
|	Mn	55	2755457.049	483.753999	ppb
|	Co	59	2310969.809	516.664476	ppb
|	Ni	60	490596.097	444.080980	ppb
|	Cu	63	561574.290	245.768824	ppb
|	Cu	65	273941.498	245.291036	ppb
|	Zn	66	308252.191	518.599992	ppb
|	As	75	28839.931	41.414330	ppb
⌊	Se	82	850.036	13.151001	ppb
⌈	Ag	107	183552.591	53.699644	ppb
|	Ag	109	178804.386	53.577210	ppb

	Cd	111	42583.546	52.804647	ppb
	In	113	86961.478		ppb
>	In	115	981263.532		ppb
	Sb	121	294096.980	104.590372	ppb
	Ba	135	1521063.580	2071.876114	ppb
	Ba	137	2621698.593	2056.515123	ppb
>	Tb	159	1489900.150		ppb
	Tl	205	461996.063	54.907452	ppb
	Pb	206	65423.313	22.043719	ppb
	Pb	207	118704.882	21.529656	ppb
	Pb	208	181007.083	21.133012	ppb
>	Bi	209	972263.657		ppb

Replicate 2

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	191651.075		ppb
	Be	9	10259.260	53.273953	ppb
>	Sc	45	517918.426		ppb
	V	51	2278051.877	510.634565	ppb
	Cr	52	764376.138	212.259165	ppb
	Mn	55	2740760.166	480.219897	ppb
	Co	59	2295619.906	512.215627	ppb
	Ni	60	502688.330	454.125677	ppb
	Cu	63	578891.065	252.847340	ppb
	Cu	65	276195.577	246.819796	ppb
	Zn	66	312562.948	524.815664	ppb
	As	75	28916.753	41.442405	ppb
	Se	82	820.034	12.640827	ppb
	Ag	107	185589.676	52.413740	ppb
	Ag	109	175588.144	50.789832	ppb
	Cd	111	44100.650	52.790559	ppb
	In	113	86996.783		ppb
>	In	115	1016493.701		ppb
	Sb	121	298133.916	104.822419	ppb
	Ba	135	1522784.342	2050.665673	ppb
	Ba	137	2587516.248	2006.651337	ppb
>	Tb	159	1507012.496		ppb
	Tl	205	453782.505	54.264331	ppb
	Pb	206	62283.359	21.113028	ppb
	Pb	207	115559.901	21.087584	ppb
	Pb	208	182936.716	21.491188	ppb
>	Bi	209	966294.585		ppb

Replicate 3

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	191000.810		ppb
	Be	9	10451.459	54.457057	ppb
>	Sc	45	514829.914		ppb
	V	51	2236905.607	504.416969	ppb
	Cr	52	743266.502	207.616964	ppb
	Mn	55	2738581.132	482.717109	ppb
	Co	59	2318478.974	520.420001	ppb
	Ni	60	502807.432	456.958390	ppb
	Cu	63	571570.809	251.147240	ppb
	Cu	65	281380.493	252.963320	ppb
	Zn	66	310125.461	523.846024	ppb
	As	75	28985.127	41.789920	ppb
	Se	82	850.703	13.216729	ppb
	Ag	107	182211.735	50.470057	ppb
	Ag	109	177698.263	50.411720	ppb
	Cd	111	43473.505	51.038675	ppb
	In	113	88535.197		ppb
>	In	115	1036424.705		ppb
	Sb	121	300673.272	105.864926	ppb

|	Ba	135	1501815.828	2025.262648	ppb
|	Ba	137	2563496.826	1990.810657	ppb
|>	Tb	159	1504902.311		ppb
⌈	Tl	205	454906.902	53.313791	ppb
|	Pb	206	61503.555	20.431116	ppb
¦	Pb	207	113282.260	20.257533	ppb
|	Pb	208	178881.359	20.593340	ppb
|>	Bi	209	985956.985		ppb

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
⌈>	Li	6		93.754			
⌊	Be	9			106.687		
⌈>	Sc	45		93.624			
|	V	51			100.835		
|	Cr	52			101.437		
|	Mn	55			96.386		
|	Co	59					
|	Ni	60			90.055		
|	Cu	63			99.292		
|	Cu	65					
|	Zn	66			103.869		
|	As	75			104.778		
⌊	Se	82			113.824		
⌈	Ag	107			104.386		
|	Ag	109					
|	Cd	111			104.367		
|	In	113					
⌊>	In	115		90.847			
⌈	Sb	121			104.260		
|	Ba	135					
|	Ba	137			96.087		
⌊>	Tb	159		96.983			
⌈	Tl	205			108.267		
|	Pb	206					
|	Pb	207					
|	Pb	208			104.140		
⌊>	Bi	209		92.025			

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

EPA 6020 & EPA 6020A - Summary Report

Sample ID: 0102522-MSD1

Sample Date/Time: Tuesday, November 09, 2010 12:04:33
Sample Type: Spike - 2 of 3
Sample Description: 13MW5SD
Number of Replicates: 3
Batch ID: 1010107
Method File: C:\Elandata1\Method\6020\6020AAAMETHOD.mth
Dataset File: C:\Elandata\Dataset\PEMSJCF110910\0102522-MSD1.020

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Meas. Intens. RSD	Net Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li	6	192485.941	1.808	192485.941			ppb
⌊	Be	9	10021.687	1.524	0.052	51.81672	0.71	ppb
⌈>	Sc	45	521157.275	0.544	521157.275			ppb
|	V	51	2209066.998	1.976	4.237	492.06635	1.55	ppb
|	Cr	52	735409.507	1.905	1.405	202.89956	1.40	ppb
|	Mn	55	2723976.974	2.099	5.226	474.28699	1.59	ppb
|	Co	59	2237464.514	1.037	4.293	496.13531	0.86	ppb
|	Ni	60	486999.927	2.140	0.934	437.19879	1.73	ppb
|	Cu	63	560450.347	1.018	1.075	243.26544	0.55	ppb
|	Cu	65	270168.920	0.976	0.518	239.93562	1.06	ppb
|	Zn	66	303016.222	1.261	0.581	505.60680	1.10	ppb
|	As	75	28438.602	1.533	0.055	40.50239	1.28	ppb
⌊	Se	82	819.811	4.444	0.002	12.55748	5.18	ppb
⌈	Ag	107	178811.327	1.211	0.174	50.04541	1.18	ppb
|	Ag	109	173238.978	1.304	0.169	49.65899	1.05	ppb
|	Cd	111	42175.026	0.815	0.041	50.03387	1.50	ppb
|	In	113	87383.484	0.846	0.042			ppb
⌊>	In	115	1025726.474	0.691	1025726.474			ppb
⌈	Sb	121	290501.066	0.997	0.192	101.84201	2.42	ppb
|	Ba	135	1489492.642	1.208	0.985	1999.78131	1.33	ppb
|	Ba	137	2540313.122	1.621	1.681	1964.27272	2.34	ppb
⌊>	Tb	159	1511687.988	1.420	1511687.988			ppb
⌈	Tl	205	449725.496	1.739	0.458	52.93605	2.27	ppb
|	Pb	206	61015.667	2.674	0.062	20.35105	0.67	ppb
|	Pb	207	112057.328	2.667	0.114	20.11952	0.75	ppb
|	Pb	208	176502.286	2.109	0.179	20.40417	1.35	ppb
⌊>	Bi	209	982117.856	3.326	982117.856			ppb

Raw Data

Replicate 1

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
⌈>	Li	6	188610.071		ppb
⌊	Be	9	9846.846	51.956477	ppb
⌈>	Sc	45	518176.283		ppb
|	V	51	2159143.561	483.729097	ppb
|	Cr	52	719398.226	199.619563	ppb
|	Mn	55	2674786.458	468.425189	ppb
|	Co	59	2214598.945	493.890705	ppb
|	Ni	60	475181.180	429.061118	ppb
|	Cu	63	553872.041	241.796309	ppb
|	Cu	65	268585.786	239.898155	ppb
|	Zn	66	299426.693	502.490586	ppb
|	As	75	27992.622	40.096776	ppb
⌊	Se	82	850.036	13.117026	ppb
⌈	Ag	107	179282.838	50.523762	ppb
|	Ag	109	170830.122	49.307355	ppb

	Cd	111	42544.880	50.818410	ppb
	In	113	86583.217		ppb
>	In	115	1018681.150		ppb
	Sb	121	293607.919	104.444976	ppb
	Ba	135	1472302.072	2006.004839	ppb
	Ba	137	2528329.528	1983.816003	ppb
>	Tb	159	1489490.296		ppb
	Tl	205	441923.728	54.044766	ppb
	Pb	206	59149.417	20.503824	ppb
	Pb	207	108727.010	20.288607	ppb
	Pb	208	172463.024	20.718255	ppb
>	Bi	209	944864.738		ppb

Replicate 2

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	193508.332		ppb
	Be	9	10129.127	52.093087	ppb
>	Sc	45	521471.102		ppb
	V	51	2240072.395	498.695647	ppb
	Cr	52	741394.940	204.443825	ppb
	Mn	55	2710439.150	471.670356	ppb
	Co	59	2260980.227	501.048973	ppb
	Ni	60	494879.611	444.025060	ppb
	Cu	63	563424.112	244.412942	ppb
	Cu	65	273211.941	242.489015	ppb
	Zn	66	307032.173	512.006472	ppb
	As	75	28863.765	41.084314	ppb
	Se	82	830.034	12.710793	ppb
	Ag	107	180701.363	50.224464	ppb
	Ag	109	173576.817	49.412415	ppb
	Cd	111	41865.125	49.319654	ppb
	In	113	88040.861		ppb
>	In	115	1032859.430		ppb
	Sb	121	290020.480	101.545101	ppb
	Ba	135	1508193.224	2022.646844	ppb
	Ba	137	2586150.745	1997.328633	ppb
>	Tb	159	1513247.185		ppb
	Tl	205	457564.108	53.104850	ppb
	Pb	206	61724.912	20.305351	ppb
	Pb	207	112940.730	19.999792	ppb
	Pb	208	177250.076	20.206495	ppb
>	Bi	209	995617.427		ppb

Replicate 3

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	195339.421		ppb
	Be	9	10089.087	51.400605	ppb
>	Sc	45	523824.440		ppb
	V	51	2227985.038	493.774315	ppb
	Cr	52	745435.356	204.635292	ppb
	Mn	55	2786705.313	482.765414	ppb
	Co	59	2236814.370	493.466255	ppb
	Ni	60	490938.992	438.510181	ppb
	Cu	63	564054.889	243.587070	ppb
	Cu	65	268709.032	237.419684	ppb
	Zn	66	302589.798	502.323329	ppb
	As	75	28459.418	40.326079	ppb
	Se	82	779.364	11.844621	ppb
	Ag	107	176449.779	49.387993	ppb
	Ag	109	175309.994	50.257193	ppb
	Cd	111	42115.074	49.963557	ppb
	In	113	87526.374		ppb
>	In	115	1025638.841		ppb
	Sb	121	287874.799	99.535949	ppb

|	Ba	135	1487982.631	1970.692245	ppb
|	Ba	137	2506459.094	1911.673514	ppb
\>	Tb	159	1532326.482		ppb
⌈	Tl	205	449688.653	51.658548	ppb
|	Pb	206	62172.673	20.243984	ppb
|	Pb	207	114504.245	20.070154	ppb
|	Pb	208	179793.758	20.287756	ppb
\>	Bi	209	1005871.404		ppb

QC Calculated Values

Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
Li	6		94.767			
Be	9			103.606		
Sc	45		94.460			
V	51			98.351		
Cr	52			98.756		
Mn	55			94.797		
Co	59					
Ni	60			87.150		
Cu	63			96.630		
Cu	65					
Zn	66			100.507		
As	75			102.162		
Se	82			109.371		
Ag	107			100.088		
Ag	109					
Cd	111			100.012		
In	113					
In	115		92.134			
Sb	121			101.010		
Ba	135					
Ba	137			93.401		
Tb	159		97.699			
Tl	205			105.816		
Pb	206					
Pb	207					
Pb	208			100.798		
Bi	209		92.712			

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

EPA 6020 & EPA 6020A - Summary Report

Sample ID: SDI1010107-01

Sample Date/Time: Tuesday, November 09, 2010 12:06:04
Sample Type: Sample
Sample Description: 13MW5I 5X
Number of Replicates: 3
Batch ID: 1010107
Method File: C:\Elandata1\Method\6020\6020AAAMETHOD.mth
Dataset File: C:\Elandata\Dataset\PEMSJCF110910\SDI1010107-01.021

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Meas. Intens. RSD	Net Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li	6	209386.114	0.479	209386.114			ppb
⌊	Be	9	14.000	136.277	0.000	0.05329	169.42	ppb
⌈>	Sc	45	547536.551	1.129	547536.551			ppb
|	V	51	3693.142	35.517	0.005	0.57602	46.99	ppb
|	Cr	52	8966.020	3.174	0.010	1.51608	3.38	ppb
|	Mn	55	1761.843	45.718	0.002	0.21115	61.75	ppb
|	Co	59	1058.738	63.500	0.002	0.19365	72.00	ppb
|	Ni	60	548.904	21.933	0.001	0.44768	21.89	ppb
|	Cu	63	1201.184	13.163	0.002	0.43036	13.97	ppb
|	Cu	65	621.131	12.772	0.001	0.46136	13.35	ppb
|	Zn	66	742.250	15.146	0.001	0.75093	22.18	ppb
|	As	75	-22.930	203.605	-0.000	-0.06903	91.58	ppb
⌊	Se	82	59.778	5.501	0.000	0.34978	16.31	ppb
⌈	Ag	107	157.781	158.568	0.000	0.03946	169.01	ppb
|	Ag	109	340.016	165.565	0.000	0.08988	171.01	ppb
|	Cd	111	94.093	179.019	0.000	0.09401	202.50	ppb
|	In	113	48514.065	0.560	0.001			ppb
⌊>	In	115	1081177.146	0.735	1081177.146			ppb
⌈	Sb	121	795.061	118.876	0.000	0.12505	257.06	ppb
|	Ba	135	16460.901	5.822	0.011	21.34969	5.70	ppb
|	Ba	137	28921.156	4.717	0.018	21.60713	4.50	ppb
⌊>	Tb	159	1555746.173	0.466	1555746.173			ppb
⌈	Tl	205	1395.227	141.625	0.001	0.14399	150.16	ppb
|	Pb	206	685.043	111.412	0.000	0.15735	150.76	ppb
|	Pb	207	1218.401	108.379	0.001	0.14873	148.55	ppb
|	Pb	208	1790.152	98.522	0.001	0.13687	138.76	ppb
⌊>	Bi	209	1053495.244	0.933	1053495.244			ppb

Raw Data

Replicate 1

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
⌈>	Li	6	209652.918		ppb
⌊	Be	9	2.000	-0.003573	ppb
⌈>	Sc	45	549229.532		ppb
|	V	51	2902.647	0.407859	ppb
|	Cr	52	8915.973	1.495954	ppb
|	Mn	55	1480.110	0.164531	ppb
|	Co	59	844.036	0.148694	ppb
|	Ni	60	523.347	0.425125	ppb
|	Cu	63	1176.736	0.419178	ppb
|	Cu	65	606.685	0.447983	ppb
|	Zn	66	793.365	0.829520	ppb
|	As	75	-76.511	-0.141579	ppb
⌊	Se	82	62.000	0.380391	ppb
⌈	Ag	107	13.333	0.000978	ppb
|	Ag	109	16.667	0.001619	ppb

	Cd	111	-11.095	-0.024841	ppb
	In	113	48718.386		ppb
>	In	115	1076140.751		ppb
	Sb	121	205.002	-0.076045	ppb
	Ba	135	15850.552	20.489927	ppb
	Ba	137	28360.158	21.120551	ppb
>	Tb	159	1560622.541		ppb
	Tl	205	320.005	0.026103	ppb
	Pb	206	285.004	0.032348	ppb
	Pb	207	540.007	0.034560	ppb
	Pb	208	835.020	0.033278	ppb
>	Bi	209	1061799.004		ppb

Replicate 2

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	208276.603		ppb
	Be	9	4.000	0.006049	ppb
>	Sc	45	540682.105		ppb
	V	51	2969.522	0.431927	ppb
	Cr	52	8709.791	1.477947	ppb
	Mn	55	1135.064	0.110476	ppb
	Co	59	520.014	0.082244	ppb
	Ni	60	443.343	0.362938	ppb
	Cu	63	1056.722	0.376616	ppb
	Cu	65	550.015	0.407544	ppb
	Zn	66	613.352	0.559630	ppb
	As	75	8.997	-0.025720	ppb
	Se	82	61.334	0.384990	ppb
	Ag	107	13.333	0.000932	ppb
	Ag	109	13.333	0.000661	ppb
	Cd	111	5.000	-0.006712	ppb
	In	113	48205.911		ppb
>	In	115	1090337.205		ppb
	Sb	121	295.004	-0.044589	ppb
	Ba	135	15966.737	20.818223	ppb
	Ba	137	27926.941	20.974595	ppb
>	Tb	159	1547416.976		ppb
	Tl	205	190.002	0.012332	ppb
	Pb	206	205.002	0.008767	ppb
	Pb	207	375.004	0.008233	ppb
	Pb	208	710.016	0.021277	ppb
>	Bi	209	1042647.397		ppb

Replicate 3

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	210228.821		ppb
	Be	9	36.000	0.157393	ppb
>	Sc	45	552698.017		ppb
	V	51	5207.259	0.888283	ppb
	Cr	52	9272.297	1.574335	ppb
	Mn	55	2670.356	0.358453	ppb
	Co	59	1812.164	0.350014	ppb
	Ni	60	680.023	0.554966	ppb
	Cu	63	1370.094	0.495296	ppb
	Cu	65	706.692	0.528542	ppb
	Zn	66	820.034	0.863626	ppb
	As	75	-1.275	-0.039797	ppb
	Se	82	56.000	0.283968	ppb
	Ag	107	446.677	0.116483	ppb
	Ag	109	990.049	0.267356	ppb
	Cd	111	288.373	0.313570	ppb
	In	113	48617.898		ppb
>	In	115	1077053.483		ppb
	Sb	121	1885.178	0.495782	ppb

	Ba	135	17565.414	22.740915	ppb
	Ba	137	30476.370	22.726256	ppb
>|	Tb	159	1559199.000		ppb
	Tl	205	3675.675	0.393529	ppb
	Pb	206	1565.122	0.430940	ppb
	Pb	207	2740.192	0.403388	ppb
	Pb	208	3825.420	0.356061	ppb
>|	Bi	209	1056039.333		ppb

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Li	6		103.088			
	Be	9					
>	Sc	45		99.241			
	V	51					
	Cr	52					
	Mn	55					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	As	75					
	Se	82					
	Ag	107					
	Ag	109					
	Cd	111					
	In	113					
>	In	115		97.115			
	Sb	121					
	Ba	135					
	Ba	137					
>	Tb	159		100.546			
	Tl	205					
	Pb	206					
	Pb	207					
	Pb	208					
>	Bi	209		99.450			

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

EPA 6020 & EPA 6020A - Summary Report

Sample ID: 0102522-PS1

Sample Date/Time: Tuesday, November 09, 2010 12:07:35
Sample Type: Sample
Sample Description: 13MW5A
Number of Replicates: 3
Batch ID: 1010107
Method File: C:\Elandata1\Method\6020\6020AAAMETHOD.mth
Dataset File: C:\Elandata\Dataset\PEMSJCF110910\0102522-PS1.022

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Meas. Intens. RSD	Net Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li	6	190726.737	1.882	190726.737			ppb
⌊	Be	9	433.343	3.702	0.002	2.25006	5.45	ppb
⌈>	Sc	45	513928.891	1.537	513928.891			ppb
|	V	51	46170.217	1.580	0.088	10.22955	2.29	ppb
|	Cr	52	39108.326	0.597	0.070	10.14109	1.20	ppb
|	Mn	55	13515.795	1.074	0.025	2.30742	2.45	ppb
|	Co	59	10522.868	1.661	0.020	2.33777	2.29	ppb
|	Ni	60	3839.626	1.232	0.007	3.47572	2.22	ppb
|	Cu	63	12866.051	1.772	0.025	5.60095	3.31	ppb
|	Cu	65	6752.279	1.448	0.013	6.01924	0.58	ppb
|	Zn	66	4646.636	3.087	0.009	7.44038	1.96	ppb
|	As	75	1540.279	7.531	0.003	2.18984	8.66	ppb
⌊	Se	82	894.262	2.815	0.002	13.94889	2.99	ppb
⌈	Ag	107	7719.646	1.340	0.008	2.22259	4.03	ppb
|	Ag	109	7201.481	1.163	0.007	2.12299	3.69	ppb
|	Cd	111	1820.676	2.538	0.002	2.21178	3.33	ppb
|	In	113	45921.912	2.560	0.002			ppb
⌊>	In	115	996728.479	2.807	996728.479			ppb
⌈	Sb	121	12849.920	2.351	0.008	4.50609	2.51	ppb
|	Ba	135	86803.801	0.848	0.059	120.07896	1.43	ppb
|	Ba	137	151409.006	0.827	0.103	120.62340	1.46	ppb
⌊>	Tb	159	1465719.493	0.647	1465719.493			ppb
⌈	Tl	205	19286.916	1.150	0.020	2.30300	1.45	ppb
|	Pb	206	7147.556	3.854	0.007	2.37843	3.46	ppb
|	Pb	207	13085.986	3.090	0.013	2.34379	2.71	ppb
|	Pb	208	20225.295	1.042	0.020	2.33106	0.48	ppb
⌊>	Bi	209	964262.576	0.957	964262.576			ppb

Raw Data

Replicate 1

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
⌈>	Li	6	192293.228		ppb
⌊	Be	9	418.009	2.150835	ppb
⌈>	Sc	45	521450.046		ppb
|	V	51	46631.751	10.180154	ppb
|	Cr	52	39198.677	10.006436	ppb
|	Mn	55	13353.910	2.244273	ppb
|	Co	59	10405.411	2.277231	ppb
|	Ni	60	3797.388	3.386728	ppb
|	Cu	63	12718.082	5.453178	ppb
|	Cu	65	6862.354	6.029115	ppb
|	Zn	66	4811.157	7.602428	ppb
|	As	75	1546.659	2.165542	ppb
⌊	Se	82	916.042	14.086580	ppb
⌈	Ag	107	7616.233	2.122873	ppb
|	Ag	109	7122.536	2.032887	ppb

	Cd	111	1825.816	2.147777	ppb
	In	113	47276.490		ppb
>	In	115	1028741.697		ppb
	Sb	121	12673.025	4.471738	ppb
	Ba	135	87180.372	121.377719	ppb
	Ba	137	152412.697	122.205903	ppb
>	Tb	159	1456257.664		ppb
	Tl	205	19443.885	2.300293	ppb
	Pb	206	7442.769	2.455893	ppb
	Pb	207	13519.615	2.400659	ppb
	Pb	208	20467.193	2.337422	ppb
>	Bi	209	973198.350		ppb

Replicate 2

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	193265.707		ppb
	Be	9	432.009	2.212059	ppb
>	Sc	45	514640.530		ppb
	V	51	45328.998	10.023583	ppb
	Cr	52	39283.006	10.173719	ppb
	Mn	55	13634.288	2.324475	ppb
	Co	59	10723.747	2.379231	ppb
	Ni	60	3890.757	3.516705	ppb
	Cu	63	12751.458	5.540875	ppb
	Cu	65	6718.923	5.980704	ppb
	Zn	66	4581.049	7.319534	ppb
	As	75	1421.223	2.013618	ppb
	Se	82	866.704	13.481045	ppb
	Ag	107	7823.059	2.296222	ppb
	Ag	109	7192.586	2.161796	ppb
	Cd	111	1772.107	2.195277	ppb
	In	113	45322.474		ppb
>	In	115	976995.643		ppb
	Sb	121	12678.032	4.414190	ppb
	Ba	135	85955.839	118.131401	ppb
	Ba	137	150006.725	118.727474	ppb
>	Tb	159	1475218.671		ppb
	Tl	205	19383.768	2.337590	ppb
	Pb	206	7102.521	2.387340	ppb
	Pb	207	13019.271	2.355422	ppb
	Pb	208	20081.775	2.337684	ppb
>	Bi	209	954767.301		ppb

Replicate 3

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	186621.276		ppb
	Be	9	450.010	2.387299	ppb
>	Sc	45	505696.098		ppb
	V	51	46549.901	10.484914	ppb
	Cr	52	38843.294	10.243112	ppb
	Mn	55	13559.186	2.353526	ppb
	Co	59	10439.446	2.356852	ppb
	Ni	60	3830.734	3.523735	ppb
	Cu	63	13128.612	5.808798	ppb
	Cu	65	6675.561	6.047911	ppb
	Zn	66	4547.701	7.399167	ppb
	As	75	1652.954	2.390354	ppb
	Se	82	900.041	14.279059	ppb
	Ag	107	7719.645	2.248662	ppb
	Ag	109	7289.322	2.174302	ppb
	Cd	111	1864.104	2.292301	ppb
	In	113	45166.772		ppb
>	In	115	984448.097		ppb
	Sb	121	13198.705	4.632349	ppb

|	Ba	135	87275.193	120.727757	ppb
|	Ba	137	151807.597	120.936819	ppb
|>	Tb	159	1465682.143		ppb
⌈	Tl	205	19033.096	2.271133	ppb
|	Pb	206	6897.378	2.292049	ppb
|	Pb	207	12719.072	2.275290	ppb
|	Pb	208	20126.919	2.318062	ppb
|>	Bi	209	964822.077		ppb

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
⌈>	Li	6		93.901			
⌊	Be	9					
⌈>	Sc	45		93.150			
|	V	51					
|	Cr	52					
|	Mn	55					
|	Co	59					
|	Ni	60					
|	Cu	63					
|	Cu	65					
|	Zn	66					
|	As	75					
⌊	Se	82					
⌈	Ag	107					
|	Ag	109					
|	Cd	111					
|	In	113					
⌊>	In	115		89.529			
⌈	Sb	121					
|	Ba	135					
|	Ba	137					
⌊>	Tb	159		94.728			
⌈	Tl	205					
|	Pb	206					
|	Pb	207					
|	Pb	208					
⌊>	Bi	209		91.026			

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

EPA 6020 & EPA 6020A - Summary Report

Sample ID: 1010107-02

Sample Date/Time: Tuesday, November 09, 2010 12:09:06
Sample Type: Sample
Sample Description: 13MW1
Number of Replicates: 3
Batch ID: 1010107
Method File: C:\Elandata1\Method\6020\6020AAAMETHOD.mth
Dataset File: C:\Elandata\Dataset\PEMSJCF110910\1010107-02.023

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Meas. Intens. RSD	Net Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li	6	191959.969	1.799	191959.969			ppb
⌊	Be	9	16.667	110.851	0.000	0.07440	131.85	ppb
⌈>	Sc	45	507914.375	1.440	507914.375			ppb
|	V	51	1282.034	116.280	0.001	0.08548	393.15	ppb
|	Cr	52	14182.726	3.730	0.022	3.18572	6.40	ppb
|	Mn	55	12384.557	21.065	0.024	2.13769	23.45	ppb
|	Co	59	2353.137	102.319	0.004	0.51174	109.42	ppb
|	Ni	60	2672.590	21.246	0.005	2.44652	22.96	ppb
|	Cu	63	3968.575	13.754	0.008	1.70482	15.80	ppb
|	Cu	65	2169.128	15.756	0.004	1.91693	17.85	ppb
|	Zn	66	2037.990	17.669	0.004	3.07071	21.74	ppb
|	As	75	-396.021	72.475	-0.001	-0.61339	67.58	ppb
⌊	Se	82	217.558	2.300	0.000	3.01055	1.97	ppb
⌈	Ag	107	75.556	131.196	0.000	0.01886	148.91	ppb
|	Ag	109	60.000	139.554	0.000	0.01451	167.54	ppb
|	Cd	111	42.940	56.834	0.000	0.03949	74.05	ppb
|	In	113	44868.786	1.616	0.001			ppb
⌊>	In	115	1008462.199	0.823	1008462.199			ppb
⌈	Sb	121	901.707	6.616	0.000	0.17929	11.83	ppb
|	Ba	135	83348.583	0.597	0.057	114.80107	0.61	ppb
|	Ba	137	146095.506	0.849	0.099	115.89257	1.40	ppb
⌊>	Tb	159	1471985.759	1.114	1471985.759			ppb
⌈	Tl	205	350.008	68.677	0.000	0.03324	88.37	ppb
|	Pb	206	506.680	14.312	0.000	0.11610	22.39	ppb
|	Pb	207	921.689	17.971	0.001	0.11303	28.13	ppb
|	Pb	208	1391.723	7.725	0.001	0.10739	13.36	ppb
⌊>	Bi	209	968728.839	1.542	968728.839			ppb

Raw Data

Replicate 1

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
⌈>	Li	6	188438.889		ppb
⌊	Be	9	38.000	0.187669	ppb
⌈>	Sc	45	499711.210		ppb
|	V	51	712.722	-0.040289	ppb
|	Cr	52	14764.892	3.418322	ppb
|	Mn	55	15396.844	2.716443	ppb
|	Co	59	5133.317	1.158276	ppb
|	Ni	60	3327.220	3.094720	ppb
|	Cu	63	4594.389	2.014767	ppb
|	Cu	65	2563.662	2.311679	ppb
|	Zn	66	2400.288	3.752827	ppb
|	As	75	-68.439	-0.139834	ppb
⌊	Se	82	214.669	3.021018	ppb
⌈	Ag	107	190.002	0.051293	ppb
|	Ag	109	156.668	0.042562	ppb

	Cd	111	70.730	0.072725	ppb
	In	113	44925.690		ppb
>	In	115	1012537.311		ppb
	Sb	121	950.045	0.193165	ppb
	Ba	135	83906.545	114.367505	ppb
	Ba	137	145251.291	114.018232	ppb
>	Tb	159	1487389.320		ppb
	Tl	205	625.020	0.066906	ppb
	Pb	206	580.017	0.143651	ppb
	Pb	207	1095.030	0.147354	ppb
	Pb	208	1510.063	0.123730	ppb
>	Bi	209	955047.233		ppb

Replicate 2

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	195339.421		ppb
	Be	9	6.000	0.017507	ppb
>	Sc	45	510285.652		ppb
	V	51	159.836	-0.169557	ppb
	Cr	52	13731.421	3.037471	ppb
	Mn	55	10890.927	1.857049	ppb
	Co	59	968.047	0.190334	ppb
	Ni	60	2313.601	2.100723	ppb
	Cu	63	3590.645	1.526569	ppb
	Cu	65	1980.196	1.733117	ppb
	Zn	66	2033.540	3.040680	ppb
	As	75	-516.283	-0.789759	ppb
	Se	82	214.669	2.946792	ppb
	Ag	107	16.667	0.002211	ppb
	Ag	109	13.333	0.000990	ppb
	Cd	111	33.090	0.028024	ppb
	In	113	44117.102		ppb
>	In	115	998909.684		ppb
	Sb	121	835.035	0.154882	ppb
	Ba	135	83188.584	114.433541	ppb
	Ba	137	147520.142	116.868961	ppb
>	Tb	159	1473812.149		ppb
	Tl	205	180.002	0.012797	ppb
	Pb	206	435.009	0.092018	ppb
	Pb	207	765.015	0.084589	ppb
	Pb	208	1300.052	0.096871	ppb
>	Bi	209	966470.421		ppb

Replicate 3

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	192101.597		ppb
	Be	9	6.000	0.018022	ppb
>	Sc	45	513746.261		ppb
	V	51	2973.544	0.466280	ppb
	Cr	52	14051.866	3.101363	ppb
	Mn	55	10865.900	1.839579	ppb
	Co	59	958.046	0.186608	ppb
	Ni	60	2376.949	2.144128	ppb
	Cu	63	3720.692	1.573122	ppb
	Cu	65	1963.526	1.705993	ppb
	Zn	66	1680.141	2.418628	ppb
	As	75	-603.341	-0.910592	ppb
	Se	82	223.336	3.063825	ppb
	Ag	107	20.000	0.003084	ppb
	Ag	109	10.000	-0.000035	ppb
	Cd	111	25.000	0.017716	ppb
	In	113	45563.566		ppb
>	In	115	1013939.602		ppb
	Sb	121	920.042	0.189825	ppb

	Ba	135	82950.619	115.602173	ppb
	Ba	137	145515.085	116.790525	ppb
>	Tb	159	1454755.809		ppb
	Tl	205	245.003	0.020028	ppb
	Pb	206	505.013	0.112634	ppb
	Pb	207	905.021	0.107140	ppb
	Pb	208	1365.055	0.101555	ppb
>	Bi	209	984668.863		ppb

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Li	6		94.508			
	Be	9					
>	Sc	45		92.060			
	V	51					
	Cr	52					
	Mn	55					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	As	75					
	Se	82					
	Ag	107					
	Ag	109					
	Cd	111					
	In	113					
>	In	115		90.583			
	Sb	121					
	Ba	135					
	Ba	137					
>	Tb	159		95.133			
	Tl	205					
	Pb	206					
	Pb	207					
	Pb	208					
>	Bi	209		91.448			

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

EPA 6020 & EPA 6020A - Summary Report

Sample ID: 1010107-03

Sample Date/Time: Tuesday, November 09, 2010 12:10:37
Sample Type: Sample
Sample Description: 13MW2
Number of Replicates: 3
Batch ID: 1010107
Method File: C:\Elandata1\Method\6020\6020AAAMETHOD.mth
Dataset File: C:\Elandata\Dataset\PEMSJCF110910\1010107-03.024

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Meas. Intens. RSD	Net Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li	6	192758.880	1.111	192758.880			ppb
⌊	Be	9	2.000	100.000	-0.000	-0.00270	383.25	ppb
⌈>	Sc	45	507858.881	0.824	507858.881			ppb
|	V	51	386.218	355.836	-0.001	-0.11610	272.16	ppb
|	Cr	52	17363.734	2.295	0.028	4.08841	1.85	ppb
|	Mn	55	2486.977	7.645	0.004	0.36425	8.46	ppb
|	Co	59	634.687	2.842	0.001	0.11555	4.49	ppb
|	Ni	60	1924.630	5.479	0.004	1.75206	4.78	ppb
|	Cu	63	2382.506	3.183	0.004	0.99612	4.25	ppb
|	Cu	65	1395.653	3.497	0.003	1.20892	3.82	ppb
|	Zn	66	1120.063	1.859	0.002	1.49170	1.36	ppb
|	As	75	-478.522	49.298	-0.001	-0.73815	46.55	ppb
⌊	Se	82	82.667	3.696	0.000	0.79650	6.78	ppb
⌈	Ag	107	5.556	69.282	-0.000	-0.00098	112.48	ppb
|	Ag	109	5.556	124.900	-0.000	-0.00130	156.17	ppb
|	Cd	111	13.427	59.427	0.000	0.00409	237.07	ppb
|	In	113	44324.690	0.989	0.001			ppb
⌊>	In	115	996707.338	0.732	996707.338			ppb
⌈	Sb	121	780.031	16.766	0.000	0.13834	34.38	ppb
|	Ba	135	105992.140	1.174	0.073	147.53279	1.21	ppb
|	Ba	137	184579.918	0.270	0.127	147.96027	0.37	ppb
⌊>	Tb	159	1456897.224	0.639	1456897.224			ppb
⌈	Tl	205	195.002	16.814	0.000	0.01468	24.78	ppb
|	Pb	206	285.004	4.642	0.000	0.04155	9.04	ppb
|	Pb	207	515.007	6.367	0.000	0.03936	14.78	ppb
|	Pb	208	803.353	6.856	0.000	0.03891	17.97	ppb
⌊>	Bi	209	961337.410	1.343	961337.410			ppb

Raw Data

Replicate 1

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
⌈>	Li	6	190709.326		ppb
⌊	Be	9	2.000	-0.002630	ppb
⌈>	Sc	45	509959.636		ppb
|	V	51	-917.711	-0.414939	ppb
|	Cr	52	17435.186	4.088676	ppb
|	Mn	55	2480.308	0.361380	ppb
|	Co	59	636.020	0.115230	ppb
|	Ni	60	2010.202	1.823700	ppb
|	Cu	63	2320.269	0.963908	ppb
|	Cu	65	1343.424	1.156190	ppb
|	Zn	66	1126.730	1.495275	ppb
|	As	75	-722.787	-1.091087	ppb
⌊	Se	82	85.334	0.834379	ppb
⌈	Ag	107	10.000	0.000293	ppb
|	Ag	109	3.333	-0.001954	ppb

	Cd	111	22.640	0.015269	ppb
	In	113	44800.128		ppb
>	In	115	999730.293		ppb
	Sb	121	630.020	0.083576	ppb
	Ba	135	107415.826	149.428637	ppb
	Ba	137	184689.913	147.962013	ppb
>	Tb	159	1457725.197		ppb
	Tl	205	225.003	0.017994	ppb
	Pb	206	300.005	0.045443	ppb
	Pb	207	545.008	0.043661	ppb
	Pb	208	750.016	0.031492	ppb
>	Bi	209	973132.369		ppb

Replicate 2

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	194982.557		ppb
	Be	9	0.000	-0.013069	ppb
>	Sc	45	510574.868		ppb
	V	51	254.895	-0.147955	ppb
	Cr	52	17721.689	4.163753	ppb
	Mn	55	2680.359	0.396410	ppb
	Co	59	616.019	0.110529	ppb
	Ni	60	1956.858	1.772591	ppb
	Cu	63	2360.279	0.980398	ppb
	Cu	65	1440.104	1.242382	ppb
	Zn	66	1136.731	1.510006	ppb
	As	75	-251.982	-0.404744	ppb
	Se	82	79.334	0.734714	ppb
	Ag	107	3.333	-0.001624	ppb
	Ag	109	13.333	0.000978	ppb
	Cd	111	8.820	-0.001580	ppb
	In	113	44237.632		ppb
>	In	115	1002001.281		ppb
	Sb	121	870.038	0.169202	ppb
	Ba	135	105447.038	145.881932	ppb
	Ba	137	185013.818	147.407701	ppb
>	Tb	159	1465768.539		ppb
	Tl	205	160.001	0.010787	ppb
	Pb	206	280.004	0.041245	ppb
	Pb	207	520.007	0.041670	ppb
	Pb	208	800.019	0.039867	ppb
>	Bi	209	947541.073		ppb

Replicate 3

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	192584.758		ppb
	Be	9	4.000	0.007606	ppb
>	Sc	45	503042.139		ppb
	V	51	1821.471	0.214598	ppb
	Cr	52	16934.326	4.012795	ppb
	Mn	55	2300.265	0.334966	ppb
	Co	59	652.021	0.120888	ppb
	Ni	60	1806.830	1.659896	ppb
	Cu	63	2466.971	1.044053	ppb
	Cu	65	1403.432	1.228186	ppb
	Zn	66	1096.727	1.469809	ppb
	As	75	-460.796	-0.718633	ppb
	Se	82	83.334	0.820414	ppb
	Ag	107	3.333	-0.001611	ppb
	Ag	109	0.000	-0.002935	ppb
	Cd	111	8.820	-0.001432	ppb
	In	113	43936.308		ppb
>	In	115	988390.440		ppb
	Sb	121	840.035	0.162244	ppb

	Ba	135	105113.555	147.287810	ppb
	Ba	137	184036.022	148.511097	ppb
>	Tb	159	1447197.937		ppb
	Tl	205	200.002	0.015266	ppb
	Pb	206	275.004	0.037949	ppb
	Pb	207	480.006	0.032738	ppb
	Pb	208	860.024	0.045381	ppb
>	Bi	209	963338.789		ppb

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Li	6		94.901			
	Be	9					
>	Sc	45		92.049			
	V	51					
	Cr	52					
	Mn	55					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	As	75					
	Se	82					
	Ag	107					
	Ag	109					
	Cd	111					
	In	113					
>	In	115		89.528			
	Sb	121					
	Ba	135					
	Ba	137					
>	Tb	159		94.158			
	Tl	205					
	Pb	206					
	Pb	207					
	Pb	208					
>	Bi	209		90.750			

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

EPA 6020 & EPA 6020A - Summary Report

Sample ID: CCV

Sample Date/Time: Tuesday, November 09, 2010 12:12:09
Sample Type: Sample
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: C:\Elandata1\Method\6020\6020AAAMETHOD.mth
Dataset File: C:\Elandata\Dataset\PEMSJCF110910\CCV.025

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Meas. Intens. RSD	Net Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li	6	216235.604	0.587	216235.604			ppb
⌊	Be	9	64940.254	2.309	0.300	298.92816	1.94	ppb
⌈>	Sc	45	566752.394	2.150	566752.394			ppb
|	V	51	1466761.823	2.372	2.586	300.37934	1.49	ppb
|	Cr	52	1204060.508	1.067	2.119	305.96890	1.22	ppb
|	Mn	55	1900358.456	0.218	3.353	304.35289	2.36	ppb
|	Co	59	1500816.141	1.542	2.648	306.03888	0.93	ppb
|	Ni	60	367496.244	1.505	0.649	303.45098	2.13	ppb
|	Cu	63	767631.757	1.793	1.354	306.44633	1.49	ppb
|	Cu	65	370776.093	2.095	0.654	302.83406	1.62	ppb
|	Zn	66	199616.262	1.486	0.352	306.15590	1.37	ppb
|	As	75	231491.585	0.539	0.409	303.49281	1.71	ppb
⌊	Se	82	20433.968	0.830	0.036	300.14933	2.24	ppb
⌈	Ag	107	1189375.443	1.233	1.099	315.38472	0.64	ppb
|	Ag	109	1160100.648	1.259	1.072	315.09928	1.74	ppb
|	Cd	111	276220.240	1.314	0.255	310.52142	1.61	ppb
|	In	113	315235.966	1.820	0.248			ppb
⌊>	In	115	1082724.785	1.707	1082724.785			ppb
⌈	Sb	121	912169.888	2.051	0.579	307.27077	1.05	ppb
|	Ba	135	232605.360	1.747	0.148	299.73259	0.58	ppb
|	Ba	137	406352.235	1.013	0.258	301.57004	0.72	ppb
⌊>	Tb	159	1574305.799	1.229	1574305.799			ppb
⌈	Tl	205	2839065.830	2.571	2.690	310.89894	3.07	ppb
|	Pb	206	1006396.994	1.669	0.953	313.10607	1.64	ppb
|	Pb	207	1868632.116	1.345	1.770	312.97644	1.97	ppb
|	Pb	208	2854716.871	1.149	2.705	307.82193	2.11	ppb
⌊>	Bi	209	1055711.761	2.771	1055711.761			ppb

Raw Data

Replicate 1

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
⌈>	Li	6	217195.351		ppb
⌊	Be	9	64801.282	296.982348	ppb
⌈>	Sc	45	554699.395		ppb
|	V	51	1452324.477	303.874892	ppb
|	Cr	52	1194873.723	310.192309	ppb
|	Mn	55	1905055.276	311.631397	ppb
|	Co	59	1474383.959	307.150161	ppb
|	Ni	60	362506.923	305.764887	ppb
|	Cu	63	752122.640	306.742302	ppb
|	Cu	65	362085.390	302.133136	ppb
|	Zn	66	196229.936	307.459778	ppb
|	As	75	230051.772	308.084535	ppb
⌊	Se	82	20323.298	304.927804	ppb
⌈	Ag	107	1188049.234	317.338881	ppb
|	Ag	109	1143235.909	312.764989	ppb

|	Cd	111	272049.907	308.051488	ppb
|	In	113	314952.872		ppb
\>	In	115	1074793.474		ppb
⌈	Sb	121	901033.086	304.038269	ppb
|	Ba	135	232900.923	300.625027	ppb
|	Ba	137	408669.317	303.784880	ppb
\>	Tb	159	1571691.900		ppb
⌈	Tl	205	2806866.992	300.029537	ppb
|	Pb	206	1011620.214	307.242865	ppb
|	Pb	207	1872197.244	306.090252	ppb
|	Pb	208	2857539.749	300.762509	ppb
\>	Bi	209	1081163.269		ppb

Replicate 2

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
⌈>	Li	6	216715.099		ppb
⌊	Be	9	66504.409	305.463526	ppb
⌈>	Sc	45	579069.286		ppb
|	V	51	1506452.395	301.933877	ppb
|	Cr	52	1218745.319	303.054857	ppb
|	Mn	55	1897224.828	297.285826	ppb
|	Co	59	1517437.678	302.815144	ppb
|	Ni	60	366540.015	296.154889	ppb
|	Cu	63	772368.595	301.741636	ppb
|	Cu	65	373203.126	298.303688	ppb
|	Zn	66	200867.324	301.472375	ppb
|	As	75	232177.321	297.844392	ppb
⌊	Se	82	20349.350	292.446573	ppb
⌈	Ag	107	1204654.068	313.304276	ppb
|	Ag	109	1168139.058	311.165879	ppb
|	Cd	111	278658.280	307.228714	ppb
|	In	113	321109.085		ppb
\>	In	115	1103849.465		ppb
⌈	Sb	121	933766.348	310.514903	ppb
|	Ba	135	236514.260	300.859529	ppb
|	Ba	137	408790.107	299.463865	ppb
\>	Tb	159	1594832.357		ppb
⌈	Tl	205	2922607.634	317.972849	ppb
|	Pb	206	1019956.610	315.300495	ppb
|	Pb	207	1891794.135	314.811493	ppb
|	Pb	208	2886012.191	309.177885	ppb
\>	Bi	209	1062220.432		ppb

Replicate 3

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
⌈>	Li	6	214796.362		ppb
⌊	Be	9	63515.070	294.338620	ppb
⌈>	Sc	45	566488.501		ppb
|	V	51	1441508.596	295.329262	ppb
|	Cr	52	1198562.483	304.659541	ppb
|	Mn	55	1898795.265	304.141450	ppb
|	Co	59	1510626.787	308.151338	ppb
|	Ni	60	373441.792	308.433168	ppb
|	Cu	63	778404.035	310.855039	ppb
|	Cu	65	377039.763	308.065354	ppb
|	Zn	66	201751.526	309.535535	ppb
|	As	75	232245.662	304.549505	ppb
⌊	Se	82	20629.256	303.073623	ppb
⌈	Ag	107	1175423.028	315.510993	ppb
|	Ag	109	1168926.979	321.366971	ppb
|	Cd	111	277952.532	316.284048	ppb
|	In	113	309645.939		ppb
\>	In	115	1069531.417		ppb
⌈	Sb	121	901710.230	307.259131	ppb

	Ba	135	228400.897	297.713203	ppb
	Ba	137	401597.282	301.461382	ppb
>	Tb	159	1556393.141		ppb
	Tl	205	2787722.864	314.694433	ppb
	Pb	206	987614.160	316.774844	ppb
	Pb	207	1841904.969	318.027563	ppb
	Pb	208	2820598.675	313.525391	ppb
>	Bi	209	1023751.583		ppb

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
⎡>	Li	6		106.460			
⎣	Be	9	99.643				
⎡>	Sc	45		102.724			
⎢	V	51	100.126				
⎢	Cr	52	101.990				
⎢	Mn	55	101.451				
⎢	Co	59	102.013				
⎢	Ni	60	101.150				
⎢	Cu	63	102.149				
⎢	Cu	65	100.945				
⎢	Zn	66	102.052				
⎢	As	75	101.164				
⎣	Se	82	100.050				
⎡	Ag	107	105.128				
⎢	Ag	109	105.033				
⎢	Cd	111	103.507				
⎢	In	113					
⎣>	In	115		97.254			
⎡	Sb	121	102.424				
⎢	Ba	135	99.911				
⎢	Ba	137	100.523				
⎣>	Tb	159		101.746			
⎡	Tl	205	103.633				
⎢	Pb	206	104.369				
⎢	Pb	207	104.325				
⎢	Pb	208	102.607				
⎣>	Bi	209		99.659			

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

EPA 6020 & EPA 6020A - Summary Report

Sample ID: CCB

Sample Date/Time: Tuesday, November 09, 2010 12:13:40
Sample Type: Sample
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: C:\Elandata1\Method\6020\6020AAAMETHOD.mth
Dataset File: C:\Elandata\Dataset\PEMSJCF110910\CCB.026

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Meas. Intens. RSD	Net Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li	6	216656.727	1.165	216656.727			ppb
⌊	Be	9	8.667	35.251	0.000	0.02665	50.75	ppb
⌈>	Sc	45	570488.151	1.272	570488.151			ppb
⌈	V	51	2121.956	54.822	0.002	0.22761	106.57	ppb
⌈	Cr	52	3896.759	2.522	0.001	0.13836	22.27	ppb
⌈	Mn	55	916.710	21.353	0.001	0.06586	47.98	ppb
⌈	Co	59	419.343	38.460	0.000	0.05617	58.76	ppb
⌈	Ni	60	101.112	57.323	0.000	0.06233	76.62	ppb
⌈	Cu	63	357.785	43.604	0.000	0.07642	81.43	ppb
⌈	Cu	65	175.557	56.465	0.000	0.07914	101.96	ppb
⌈	Zn	66	212.225	33.590	-0.000	-0.10349	106.40	ppb
⌈	As	75	-0.109	38659.310	-0.000	-0.03852	143.75	ppb
⌊	Se	82	32.667	17.437	-0.000	-0.08265	107.85	ppb
⌈	Ag	107	60.000	48.432	0.000	0.01289	58.19	ppb
⌈	Ag	109	48.889	15.746	0.000	0.00998	20.90	ppb
⌈	Cd	111	70.880	60.642	0.000	0.06524	72.14	ppb
⌈	In	113	49597.710	1.459	0.001			ppb
⌊>	In	115	1113577.688	0.497	1113577.688			ppb
⌈	Sb	121	793.365	13.316	0.000	0.12354	29.80	ppb
⌈	Ba	135	184.002	22.303	0.000	0.11558	46.69	ppb
⌈	Ba	137	345.339	19.779	0.000	0.13942	37.58	ppb
⌊>	Tb	159	1563740.118	1.053	1563740.118			ppb
⌈	Tl	205	208.336	26.545	0.000	0.01376	43.81	ppb
⌈	Pb	206	568.350	30.341	0.000	0.11840	44.38	ppb
⌈	Pb	207	1108.366	33.610	0.001	0.12764	48.21	ppb
⌈	Pb	208	1740.093	33.884	0.001	0.12862	48.41	ppb
⌊>	Bi	209	1071796.848	1.681	1071796.848			ppb

Raw Data

Replicate 1

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
⌈>	Li	6	215959.004		ppb
⌊	Be	9	8.000	0.023806	ppb
⌈>	Sc	45	569592.588		ppb
⌈	V	51	1345.151	0.068341	ppb
⌈	Cr	52	3790.718	0.112871	ppb
⌈	Mn	55	1140.065	0.101602	ppb
⌈	Co	59	596.018	0.092023	ppb
⌈	Ni	60	166.668	0.116183	ppb
⌈	Cu	63	536.681	0.147580	ppb
⌈	Cu	65	290.004	0.172310	ppb
⌈	Zn	66	290.004	0.015446	ppb
⌈	As	75	34.073	0.006360	ppb
⌊	Se	82	33.333	-0.072895	ppb
⌈	Ag	107	93.334	0.021495	ppb
⌈	Ag	109	53.333	0.011155	ppb

	Cd	111	117.640	0.116344	ppb
	In	113	50266.017		ppb
>	In	115	1113030.299		ppb
	Sb	121	725.026	0.102192	ppb
	Ba	135	224.003	0.169706	ppb
	Ba	137	420.009	0.197536	ppb
>	Tb	159	1551596.408		ppb
	Tl	205	260.003	0.019134	ppb
	Pb	206	755.029	0.174117	ppb
	Pb	207	1480.055	0.187269	ppb
	Pb	208	2375.162	0.194429	ppb
>	Bi	209	1078486.006		ppb

Replicate 2

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	219455.909		ppb
	Be	9	12.000	0.041363	ppb
>	Sc	45	563718.352		ppb
	V	51	3459.401	0.506789	ppb
	Cr	52	3984.794	0.172597	ppb
	Mn	55	835.035	0.054384	ppb
	Co	59	382.007	0.049409	ppb
	Ni	60	80.000	0.045672	ppb
	Cu	63	286.671	0.049448	ppb
	Cu	65	116.667	0.032414	ppb
	Zn	66	196.669	-0.124038	ppb
	As	75	-47.289	-0.100406	ppb
	Se	82	38.000	0.001214	ppb
	Ag	107	46.667	0.009509	ppb
	Ag	109	53.333	0.011215	ppb
	Cd	111	61.910	0.055691	ppb
	In	113	48828.923		ppb
>	In	115	1108335.264		ppb
	Sb	121	740.027	0.102383	ppb
	Ba	135	186.002	0.115252	ppb
	Ba	137	330.005	0.124888	ppb
>	Tb	159	1582475.677		ppb
	Tl	205	215.002	0.014905	ppb
	Pb	206	535.014	0.111317	ppb
	Pb	207	1110.031	0.131301	ppb
	Pb	208	1635.073	0.120772	ppb
>	Bi	209	1051390.655		ppb

Replicate 3

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	214555.268		ppb
	Be	9	6.000	0.014768	ppb
>	Sc	45	578153.512		ppb
	V	51	1561.315	0.107703	ppb
	Cr	52	3914.766	0.129623	ppb
	Mn	55	775.030	0.041607	ppb
	Co	59	280.004	0.027064	ppb
	Ni	60	56.667	0.025130	ppb
	Cu	63	250.003	0.032225	ppb
	Cu	65	120.001	0.032691	ppb
	Zn	66	150.001	-0.201871	ppb
	As	75	12.889	-0.021521	ppb
	Se	82	26.667	-0.176265	ppb
	Ag	107	40.000	0.007680	ppb
	Ag	109	40.000	0.007573	ppb
	Cd	111	33.090	0.023685	ppb
	In	113	49698.189		ppb
>	In	115	1119367.499		ppb
	Sb	121	915.042	0.166055	ppb

|	Ba	135	142.001	0.061782	ppb
|	Ba	137	286.004	0.095826	ppb
\>	Tb	159	1557148.270		ppb
⌈	Tl	205	150.001	0.007242	ppb
|	Pb	206	415.009	0.069755	ppb
|	Pb	207	735.014	0.064356	ppb
|	Pb	208	1210.045	0.070644	ppb
\>	Bi	209	1085513.883		ppb

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Li	6		106.667			
	Be	9					
>	Sc	45		103.401			
	V	51					
	Cr	52					
	Mn	55					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	As	75					
	Se	82					
	Ag	107					
	Ag	109					
	Cd	111					
	In	113					
>	In	115		100.025			
	Sb	121					
	Ba	135					
	Ba	137					
>	Tb	159		101.063			
	Tl	205					
	Pb	206					
	Pb	207					
	Pb	208					
>	Bi	209		101.178			

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

EPA 6020 & EPA 6020A - Summary Report

Sample ID: 1010107-04

Sample Date/Time: Tuesday, November 09, 2010 12:15:13
Sample Type: Sample
Sample Description: 13MW3
Number of Replicates: 3
Batch ID: 1010107
Method File: C:\Elandata1\Method\6020\6020AAAMETHOD.mth
Dataset File: C:\Elandata\Dataset\PEMSJCF110910\1010107-04.027

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Meas. Intens. RSD	Net Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li	6	193074.832	0.874	193074.832			ppb
⌊	Be	9	7.333	31.492	0.000	0.02473	47.94	ppb
⌈>	Sc	45	510586.414	1.102	510586.414			ppb
|	V	51	2888.233	23.696	0.004	0.45216	35.81	ppb
|	Cr	52	23942.631	1.257	0.041	5.92411	2.70	ppb
|	Mn	55	65436.779	1.786	0.127	11.55139	0.70	ppb
|	Co	59	1622.798	1.771	0.003	0.33839	0.90	ppb
|	Ni	60	1544.564	8.094	0.003	1.39399	7.10	ppb
|	Cu	63	5631.587	3.786	0.011	2.42966	2.88	ppb
|	Cu	65	3090.478	3.793	0.006	2.73972	4.97	ppb
|	Zn	66	3001.562	5.734	0.005	4.68769	5.50	ppb
|	As	75	-222.519	22.901	-0.000	-0.36135	19.57	ppb
⌊	Se	82	79.334	2.223	0.000	0.73495	5.57	ppb
⌈	Ag	107	31.111	72.931	0.000	0.00636	104.16	ppb
|	Ag	109	22.222	45.826	0.000	0.00352	80.11	ppb
|	Cd	111	21.488	58.418	0.000	0.01349	107.55	ppb
|	In	113	44592.617	3.477	0.001			ppb
⌊>	In	115	1006844.152	2.169	1006844.152			ppb
⌈	Sb	121	773.365	26.378	0.000	0.13456	58.99	ppb
|	Ba	135	70187.478	1.239	0.048	96.85003	1.81	ppb
|	Ba	137	121678.516	0.943	0.083	96.70653	2.49	ppb
⌊>	Tb	159	1469212.943	1.911	1469212.943			ppb
⌈	Tl	205	141.668	5.391	0.000	0.00830	8.12	ppb
|	Pb	206	8668.757	2.470	0.009	2.90669	4.04	ppb
|	Pb	207	15431.047	3.466	0.016	2.78384	5.22	ppb
|	Pb	208	24083.948	0.842	0.025	2.79553	2.16	ppb
⌊>	Bi	209	961430.979	1.765	961430.979			ppb

Raw Data

Replicate 1

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
⌈>	Li	6	193335.028		ppb
⌊	Be	9	10.000	0.038419	ppb
⌈>	Sc	45	516192.533		ppb
|	V	51	2111.072	0.269043	ppb
|	Cr	52	23633.895	5.763037	ppb
|	Mn	55	66530.582	11.617962	ppb
|	Co	59	1644.135	0.339192	ppb
|	Ni	60	1670.139	1.493177	ppb
|	Cu	63	5785.006	2.470254	ppb
|	Cu	65	3003.784	2.630574	ppb
|	Zn	66	3190.509	4.951708	ppb
|	As	75	-269.755	-0.426335	ppb
⌊	Se	82	78.667	0.709846	ppb
⌈	Ag	107	13.333	0.001131	ppb
|	Ag	109	33.333	0.006563	ppb

	Cd	111	35.280	0.029316	ppb
	In	113	45905.123		ppb
>	In	115	1031939.848		ppb
	Sb	121	585.017	0.061962	ppb
	Ba	135	71087.779	96.417592	ppb
	Ba	137	122005.758	95.298793	ppb
>	Tb	159	1494455.774		ppb
	Tl	205	140.001	0.007987	ppb
	Pb	206	8763.839	2.917600	ppb
	Pb	207	15511.114	2.777579	ppb
	Pb	208	24282.636	2.798896	ppb
>	Bi	209	967998.117		ppb

Replicate 2

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	191271.919		ppb
	Be	9	6.000	0.018157	ppb
>	Sc	45	510627.453		ppb
	V	51	3152.682	0.511130	ppb
	Cr	52	23958.667	5.926928	ppb
	Mn	55	65574.297	11.575478	ppb
	Co	59	1634.134	0.340940	ppb
	Ni	60	1543.452	1.393589	ppb
	Cu	63	5721.636	2.469810	ppb
	Cu	65	3043.796	2.696210	ppb
	Zn	66	2853.740	4.436336	ppb
	As	75	-229.288	-0.371688	ppb
	Se	82	78.000	0.712808	ppb
	Ag	107	23.333	0.004144	ppb
	Ag	109	13.333	0.001000	ppb
	Cd	111	10.730	0.000812	ppb
	In	113	44990.982		ppb
>	In	115	996453.451		ppb
	Sb	121	745.028	0.122405	ppb
	Ba	135	69351.652	95.352922	ppb
	Ba	137	120402.501	95.337741	ppb
>	Tb	159	1474215.641		ppb
	Tl	205	135.001	0.007832	ppb
	Pb	206	8818.887	3.018346	ppb
	Pb	207	15921.408	2.932273	ppb
	Pb	208	24091.941	2.854171	ppb
>	Bi	209	942156.194		ppb

Replicate 3

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	194617.549		ppb
	Be	9	6.000	0.017620	ppb
>	Sc	45	504939.255		ppb
	V	51	3400.946	0.576311	ppb
	Cr	52	24235.332	6.082366	ppb
	Mn	55	64205.457	11.460733	ppb
	Co	59	1590.126	0.335034	ppb
	Ni	60	1420.101	1.295216	ppb
	Cu	63	5388.118	2.348915	ppb
	Cu	65	3223.853	2.892382	ppb
	Zn	66	2960.438	4.675038	ppb
	As	75	-168.514	-0.286027	ppb
	Se	82	81.334	0.782199	ppb
	Ag	107	56.667	0.013819	ppb
	Ag	109	20.000	0.002993	ppb
	Cd	111	18.455	0.010346	ppb
	In	113	42881.745		ppb
>	In	115	992139.155		ppb
	Sb	121	990.049	0.219320	ppb

|	Ba	135	70123.003	98.779589	ppb
|	Ba	137	122627.291	99.483045	ppb
|>	Tb	159	1438967.414		ppb
⌈	Tl	205	150.001	0.009068	ppb
|	Pb	206	8423.546	2.784130	ppb
|	Pb	207	14860.617	2.641664	ppb
|	Pb	208	23877.266	2.733536	ppb
|>	Bi	209	974138.625		ppb

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
⌈>	Li	6		95.057			
⌊	Be	9					
⌈>	Sc	45		92.544			
|	V	51					
|	Cr	52					
|	Mn	55					
|	Co	59					
|	Ni	60					
|	Cu	63					
|	Cu	65					
|	Zn	66					
|	As	75					
⌊	Se	82					
⌈	Ag	107					
|	Ag	109					
|	Cd	111					
|	In	113					
⌊>	In	115		90.438			
⌈	Sb	121					
|	Ba	135					
|	Ba	137					
⌊>	Tb	159		94.954			
⌈	Tl	205					
|	Pb	206					
|	Pb	207					
|	Pb	208					
⌊>	Bi	209		90.759			

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

EPA 6020 & EPA 6020A - Summary Report

Sample ID: 1010107-05

Sample Date/Time: Tuesday, November 09, 2010 12:16:44
Sample Type: Sample
Sample Description: 13MW4
Number of Replicates: 3
Batch ID: 1010107
Method File: C:\Elandata1\Method\6020\6020AAAMETHOD.mth
Dataset File: C:\Elandata\Dataset\PEMSJCF110910\1010107-05.028

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Meas. Intens. RSD	Net Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li	6	199186.924	0.613	199186.924			ppb
⌊	Be	9	14.667	47.889	0.000	0.06023	58.47	ppb
⌈>	Sc	45	523969.141	2.193	523969.141			ppb
|	V	51	3981.461	55.805	0.006	0.67046	71.86	ppb
|	Cr	52	21724.909	1.250	0.036	5.13967	1.11	ppb
|	Mn	55	113694.372	0.951	0.216	19.62120	2.67	ppb
|	Co	59	4552.369	1.434	0.008	0.97561	3.28	ppb
|	Ni	60	3679.567	6.161	0.007	3.26321	4.03	ppb
|	Cu	63	13154.202	1.276	0.025	5.61646	2.16	ppb
|	Cu	65	6529.911	3.405	0.012	5.70990	5.18	ppb
|	Zn	66	4493.232	1.503	0.008	7.03650	0.76	ppb
|	As	75	172.514	152.597	0.000	0.20993	181.00	ppb
⌊	Se	82	76.889	6.272	0.000	0.66200	7.88	ppb
⌈	Ag	107	88.889	43.946	0.000	0.02185	49.71	ppb
|	Ag	109	54.445	3.535	0.000	0.01235	1.91	ppb
|	Cd	111	31.402	101.804	0.000	0.02369	151.39	ppb
|	In	113	45993.909	2.561	0.000			ppb
⌊>	In	115	1047450.135	2.502	1047450.135			ppb
⌈	Sb	121	1015.053	17.919	0.000	0.20799	28.43	ppb
|	Ba	135	42785.339	0.889	0.028	56.99283	0.73	ppb
|	Ba	137	75251.450	1.440	0.049	57.72873	0.24	ppb
⌊>	Tb	159	1520392.615	1.283	1520392.615			ppb
⌈	Tl	205	308.338	29.960	0.000	0.02624	39.85	ppb
|	Pb	206	2925.428	2.466	0.003	0.88708	3.06	ppb
|	Pb	207	5302.377	2.152	0.005	0.86465	2.99	ppb
|	Pb	208	8265.350	2.030	0.008	0.86703	2.96	ppb
⌊>	Bi	209	1019077.156	0.844	1019077.156			ppb

Raw Data

Replicate 1

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
⌈>	Li	6	198360.014		ppb
⌊	Be	9	8.000	0.027078	ppb
⌈>	Sc	45	511510.932		ppb
|	V	51	1444.173	0.121969	ppb
|	Cr	52	21432.944	5.202236	ppb
|	Mn	55	114436.055	20.225305	ppb
|	Co	59	4609.062	1.012442	ppb
|	Ni	60	3430.588	3.117408	ppb
|	Cu	63	13031.819	5.699199	ppb
|	Cu	65	6628.863	5.936173	ppb
|	Zn	66	4417.642	7.088899	ppb
|	As	75	426.711	0.581692	ppb
⌊	Se	82	71.334	0.601937	ppb
⌈	Ag	107	73.334	0.017992	ppb
|	Ag	109	53.333	0.012388	ppb

	Cd	111	18.820	0.010087	ppb
	In	113	45247.134		ppb
>	In	115	1023458.058		ppb
	Sb	121	820.034	0.144477	ppb
	Ba	135	42520.207	57.437574	ppb
	Ba	137	74143.850	57.682656	ppb
>	Tb	159	1499227.103		ppb
	Tl	205	255.003	0.020446	ppb
	Pb	206	2985.446	0.914809	ppb
	Pb	207	5425.743	0.894224	ppb
	Pb	208	8372.056	0.887049	ppb
>	Bi	209	1010174.440		ppb

Replicate 2

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	200589.837		ppb
	Be	9	14.000	0.056407	ppb
>	Sc	45	534154.973		ppb
	V	51	4921.077	0.864045	ppb
	Cr	52	21970.108	5.090957	ppb
	Mn	55	114193.304	19.323267	ppb
	Co	59	4567.043	0.959206	ppb
	Ni	60	3874.084	3.372865	ppb
	Cu	63	13085.222	5.477438	ppb
	Cu	65	6275.302	5.375406	ppb
	Zn	66	4547.701	6.982166	ppb
	As	75	189.774	0.225870	ppb
	Se	82	80.000	0.687928	ppb
	Ag	107	133.334	0.034105	ppb
	Ag	109	53.333	0.012094	ppb
	Cd	111	7.639	-0.003383	ppb
	In	113	45382.747		ppb
>	In	115	1043477.111		ppb
	Sb	121	1045.055	0.218026	ppb
	Ba	135	42614.607	56.615711	ppb
	Ba	137	75300.444	57.617964	ppb
>	Tb	159	1524320.060		ppb
	Tl	205	255.003	0.019959	ppb
	Pb	206	2945.434	0.885802	ppb
	Pb	207	5280.706	0.853401	ppb
	Pb	208	8071.918	0.838038	ppb
>	Bi	209	1027337.905		ppb

Replicate 3

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	198610.921		ppb
	Be	9	22.000	0.097196	ppb
>	Sc	45	526241.517		ppb
	V	51	5579.134	1.025367	ppb
	Cr	52	21771.675	5.125819	ppb
	Mn	55	112453.757	19.315026	ppb
	Co	59	4481.004	0.955170	ppb
	Ni	60	3734.030	3.299369	ppb
	Cu	63	13345.566	5.672736	ppb
	Cu	65	6685.567	5.818118	ppb
	Zn	66	4514.352	7.038439	ppb
	As	75	-98.942	-0.177769	ppb
	Se	82	79.334	0.696144	ppb
	Ag	107	60.000	0.013439	ppb
	Ag	109	56.667	0.012559	ppb
	Cd	111	67.749	0.064380	ppb
	In	113	47351.845		ppb
>	In	115	1075415.234		ppb
	Sb	121	1180.070	0.261467	ppb

|	Ba	135	43221.202	56.925202	ppb
|	Ba	137	76310.055	57.885581	ppb
|>	Tb	159	1537630.683		ppb
⌈	Tl	205	415.009	0.038307	ppb
|	Pb	206	2845.405	0.860621	ppb
|	Pb	207	5200.682	0.846316	ppb
|	Pb	208	8352.075	0.875989	ppb
|>	Bi	209	1019719.124		ppb

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Li	6		98.066			
	Be	9					
>	Sc	45		94.969			
	V	51					
	Cr	52					
	Mn	55					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	As	75					
	Se	82					
	Ag	107					
	Ag	109					
	Cd	111					
	In	113					
>	In	115		94.085			
	Sb	121					
	Ba	135					
	Ba	137					
>	Tb	159		98.261			
	Tl	205					
	Pb	206					
	Pb	207					
	Pb	208					
>	Bi	209		96.201			

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

EPA 6020 & EPA 6020A - Summary Report

Sample ID: 1010107-06

Sample Date/Time: Tuesday, November 09, 2010 12:18:15
Sample Type: Sample
Sample Description: 13MWDUP
Number of Replicates: 3
Batch ID: 1010107
Method File: C:\Elandata1\Method\6020\6020AAAMETHOD.mth
Dataset File: C:\Elandata\Dataset\PEMSJCF110910\1010107-06.029

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Meas. Intens. RSD	Net Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li	6	195679.389	0.825	195679.389			ppb
⌊	Be	9	5.333	57.282	0.000	0.01399	109.75	ppb
⌈>	Sc	45	512377.465	0.774	512377.465			ppb
|	V	51	2718.406	59.114	0.004	0.41124	89.57	ppb
|	Cr	52	21508.443	1.513	0.036	5.21392	2.55	ppb
|	Mn	55	57481.420	1.399	0.111	10.10178	0.63	ppb
|	Co	59	3857.411	1.907	0.007	0.84124	2.61	ppb
|	Ni	60	3940.777	3.537	0.008	3.57772	3.11	ppb
|	Cu	63	4310.929	2.431	0.008	1.83800	1.76	ppb
|	Cu	65	2303.599	1.814	0.004	2.01797	1.60	ppb
|	Zn	66	2831.513	5.417	0.005	4.38314	6.62	ppb
|	As	75	-145.632	101.314	-0.000	-0.24821	85.71	ppb
⌊	Se	82	68.667	13.134	0.000	0.55698	27.23	ppb
⌈	Ag	107	16.667	52.915	0.000	0.00214	113.84	ppb
|	Ag	109	24.444	51.626	0.000	0.00422	88.68	ppb
|	Cd	111	25.945	73.449	0.000	0.01897	121.66	ppb
|	In	113	44267.772	1.018	0.000			ppb
⌊>	In	115	1009484.453	1.193	1009484.453			ppb
⌈	Sb	121	976.715	10.571	0.000	0.20678	18.94	ppb
|	Ba	135	38046.924	1.851	0.026	52.38169	1.66	ppb
|	Ba	137	65737.371	0.770	0.045	52.12406	0.28	ppb
⌊>	Tb	159	1470661.441	0.513	1470661.441			ppb
⌈	Tl	205	316.672	23.702	0.000	0.02912	30.89	ppb
|	Pb	206	1425.102	5.240	0.001	0.42826	6.50	ppb
|	Pb	207	2531.830	4.561	0.002	0.40759	5.81	ppb
|	Pb	208	3957.135	5.627	0.004	0.40961	7.07	ppb
⌊>	Bi	209	967068.573	0.586	967068.573			ppb

Raw Data

Replicate 1

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
⌈>	Li	6	195139.575		ppb
⌊	Be	9	6.000	0.017538	ppb
⌈>	Sc	45	516545.055		ppb
|	V	51	2510.892	0.358615	ppb
|	Cr	52	21136.314	5.060351	ppb
|	Mn	55	58339.681	10.170761	ppb
|	Co	59	3776.713	0.816069	ppb
|	Ni	60	3987.462	3.591261	ppb
|	Cu	63	4404.303	1.863701	ppb
|	Cu	65	2343.608	2.037054	ppb
|	Zn	66	2763.715	4.228929	ppb
|	As	75	-269.719	-0.426017	ppb
⌊	Se	82	68.000	0.536799	ppb
⌈	Ag	107	26.667	0.004905	ppb
|	Ag	109	10.000	-0.000060	ppb

	Cd	111	23.734	0.015943	ppb
	In	113	44759.949		ppb
>	In	115	1023050.839		ppb
	Sb	121	905.041	0.179712	ppb
	Ba	135	38857.348	53.324895	ppb
	Ba	137	66133.964	52.267296	ppb
>	Tb	159	1475501.151		ppb
	Tl	205	360.006	0.034060	ppb
	Pb	206	1395.097	0.415397	ppb
	Pb	207	2465.155	0.392856	ppb
	Pb	208	3775.423	0.385686	ppb
>	Bi	209	972368.119		ppb

Replicate 2

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	197495.147		ppb
	Be	9	8.000	0.027254	ppb
>	Sc	45	511931.662		ppb
	V	51	1225.295	0.072043	ppb
	Cr	52	21739.605	5.283761	ppb
	Mn	55	57359.032	10.089277	ppb
	Co	59	3920.768	0.856205	ppb
	Ni	60	4050.820	3.681721	ppb
	Cu	63	4330.938	1.848660	ppb
	Cu	65	2260.255	1.980605	ppb
	Zn	66	2723.704	4.202871	ppb
	As	75	-184.693	-0.306120	ppb
	Se	82	60.000	0.416392	ppb
	Ag	107	10.000	0.000277	ppb
	Ag	109	30.000	0.005840	ppb
	Cd	111	46.009	0.043407	ppb
	In	113	43876.045		ppb
>	In	115	1005331.716		ppb
	Sb	121	930.043	0.188927	ppb
	Ba	135	37584.497	51.608653	ppb
	Ba	137	65910.496	52.125186	ppb
>	Tb	159	1474515.387		ppb
	Tl	205	360.006	0.034562	ppb
	Pb	206	1510.114	0.460229	ppb
	Pb	207	2665.181	0.434910	ppb
	Pb	208	4205.532	0.441806	ppb
>	Bi	209	961092.283		ppb

Replicate 3

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	194403.444		ppb
	Be	9	2.000	-0.002828	ppb
>	Sc	45	508655.678		ppb
	V	51	4419.031	0.803053	ppb
	Cr	52	21649.410	5.297648	ppb
	Mn	55	56745.547	10.045305	ppb
	Co	59	3874.751	0.851450	ppb
	Ni	60	3784.049	3.460167	ppb
	Cu	63	4197.547	1.801651	ppb
	Cu	65	2306.933	2.036252	ppb
	Zn	66	3007.119	4.717628	ppb
	As	75	17.514	-0.012501	ppb
	Se	82	78.000	0.717746	ppb
	Ag	107	13.333	0.001249	ppb
	Ag	109	33.333	0.006866	ppb
	Cd	111	8.090	-0.002448	ppb
	In	113	44167.323		ppb
>	In	115	1000070.805		ppb
	Sb	121	1095.060	0.251689	ppb

	Ba	135	37698.927	52.211507	ppb
	Ba	137	65167.651	51.979709	ppb
>	Tb	159	1461967.783		ppb
	Tl	205	230.003	0.018740	ppb
	Pb	206	1370.094	0.409162	ppb
	Pb	207	2465.154	0.394997	ppb
	Pb	208	3890.451	0.401325	ppb
>	Bi	209	967745.317		ppb

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Li	6		96.339			
	Be	9					
>	Sc	45		92.868			
	V	51					
	Cr	52					
	Mn	55					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	As	75					
	Se	82					
	Ag	107					
	Ag	109					
	Cd	111					
	In	113					
>	In	115		90.675			
	Sb	121					
	Ba	135					
	Ba	137					
>	Tb	159		95.047			
	Tl	205					
	Pb	206					
	Pb	207					
	Pb	208					
>	Bi	209		91.291			

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

EPA 6020 & EPA 6020A - Summary Report

Sample ID: 1010107-07

Sample Date/Time: Tuesday, November 09, 2010 12:19:46
Sample Type: Sample
Sample Description: 13MW6
Number of Replicates: 3
Batch ID: 1010107
Method File: C:\Elandata1\Method\6020\6020AAAMETHOD.mth
Dataset File: C:\Elandata\Dataset\PEMSJCF110910\1010107-07.030

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Meas. Intens. RSD	Net Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li	6	188573.399	0.297	188573.399			ppb
⌊	Be	9	2.667	114.564	0.000	0.00098	1641.82	ppb
⌈>	Sc	45	488907.377	2.431	488907.377			ppb
|	V	51	456.705	410.469	-0.001	-0.09150	491.83	ppb
|	Cr	52	12688.051	3.486	0.020	2.90123	6.09	ppb
|	Mn	55	23840.051	0.433	0.048	4.34713	2.10	ppb
|	Co	59	1011.385	3.659	0.002	0.21036	6.37	ppb
|	Ni	60	2144.675	4.442	0.004	2.03320	5.87	ppb
|	Cu	63	3173.837	0.934	0.006	1.40396	3.09	ppb
|	Cu	65	1907.960	0.994	0.004	1.74397	2.71	ppb
|	Zn	66	2294.708	4.650	0.004	3.66003	6.68	ppb
|	As	75	-110.875	430.739	-0.000	-0.19574	363.83	ppb
⌊	Se	82	190.891	6.847	0.000	2.69925	11.00	ppb
⌈	Ag	107	24.444	34.317	0.000	0.00466	51.80	ppb
|	Ag	109	13.333	66.144	0.000	0.00114	241.25	ppb
|	Cd	111	17.246	36.954	0.000	0.00931	82.62	ppb
|	In	113	42849.944	0.328	0.001			ppb
⌊>	In	115	968194.013	1.472	968194.013			ppb
⌈	Sb	121	618.353	15.371	0.000	0.08388	44.25	ppb
|	Ba	135	62000.333	2.134	0.043	87.85156	1.13	ppb
|	Ba	137	109348.793	2.179	0.076	89.23230	0.84	ppb
⌊>	Tb	159	1430253.247	1.339	1430253.247			ppb
⌈	Tl	205	250.003	7.211	0.000	0.02212	11.62	ppb
|	Pb	206	1050.055	3.334	0.001	0.31232	5.39	ppb
|	Pb	207	1911.759	3.312	0.002	0.30539	5.00	ppb
|	Pb	208	2908.581	5.312	0.003	0.29693	5.40	ppb
⌊>	Bi	209	937184.634	1.347	937184.634			ppb

Raw Data

Replicate 1

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
⌈>	Li	6	189005.431		ppb
⌊	Be	9	6.000	0.018531	ppb
⌈>	Sc	45	502222.441		ppb
|	V	51	-969.668	-0.430174	ppb
|	Cr	52	12435.728	2.727326	ppb
|	Mn	55	23918.571	4.242508	ppb
|	Co	59	974.047	0.195235	ppb
|	Ni	60	2076.882	1.914239	ppb
|	Cu	63	3150.496	1.353824	ppb
|	Cu	65	1913.516	1.700494	ppb
|	Zn	66	2220.246	3.419919	ppb
|	As	75	-659.233	-1.013293	ppb
⌊	Se	82	178.668	2.405421	ppb
⌈	Ag	107	16.667	0.002357	ppb
|	Ag	109	10.000	0.000099	ppb

|	Cd	111	16.824	0.008829	ppb
|	In	113	43007.283		ppb
|>	In	115	969420.589		ppb
⌈	Sb	121	525.014	0.046196	ppb
|	Ba	135	63090.394	88.101811	ppb
|	Ba	137	111926.896	90.016558	ppb
|>	Tb	159	1451344.329		ppb
⌈	Tl	205	230.003	0.019213	ppb
|	Pb	206	1010.051	0.292889	ppb
|	Pb	207	1855.087	0.289393	ppb
|	Pb	208	2995.267	0.302121	ppb
|>	Bi	209	951331.889		ppb

Replicate 2

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
⌈>	Li	6	187941.662		ppb
⌊	Be	9	0.000	-0.013069	ppb
⌈>	Sc	45	479376.116		ppb
|	V	51	2579.979	0.419126	ppb
|	Cr	52	12429.720	2.895916	ppb
|	Mn	55	23723.106	4.411507	ppb
|	Co	59	1012.051	0.215079	ppb
|	Ni	60	2103.555	2.032491	ppb
|	Cu	63	3163.834	1.427769	ppb
|	Cu	65	1923.518	1.794218	ppb
|	Zn	66	2246.919	3.651715	ppb
|	As	75	112.667	0.136530	ppb
⌊	Se	82	204.669	2.999023	ppb
⌈	Ag	107	23.333	0.004448	ppb
|	Ag	109	23.333	0.004262	ppb
|	Cd	111	11.095	0.001870	ppb
|	In	113	42806.424		ppb
|>	In	115	953367.434		ppb
⌈	Sb	121	615.019	0.085047	ppb
|	Ba	135	60528.633	86.758181	ppb
|	Ba	137	107227.825	88.516271	ppb
|>	Tb	159	1413946.850		ppb
⌈	Tl	205	265.004	0.024093	ppb
|	Pb	206	1075.058	0.322565	ppb
|	Pb	207	1980.099	0.319798	ppb
|	Pb	208	3000.260	0.309715	ppb
|>	Bi	209	933141.900		ppb

Replicate 3

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
⌈>	Li	6	188773.104		ppb
⌊	Be	9	2.000	-0.002523	ppb
⌈>	Sc	45	485123.575		ppb
|	V	51	-240.196	-0.263440	ppb
|	Cr	52	13198.705	3.080444	ppb
|	Mn	55	23878.475	4.387362	ppb
|	Co	59	1048.055	0.220766	ppb
|	Ni	60	2253.587	2.152873	ppb
|	Cu	63	3207.181	1.430294	ppb
|	Cu	65	1886.845	1.737212	ppb
|	Zn	66	2416.959	3.908443	ppb
|	As	75	213.940	0.289556	ppb
⌊	Se	82	189.335	2.693305	ppb
⌈	Ag	107	33.333	0.007168	ppb
|	Ag	109	6.667	-0.000938	ppb
|	Cd	111	23.820	0.017235	ppb
|	In	113	42736.124		ppb
|>	In	115	981794.014		ppb
⌈	Sb	121	715.026	0.120407	ppb

|	Ba	135	62381.970	88.694677	ppb
|	Ba	137	108891.659	89.164073	ppb
\>	Tb	159	1425468.562		ppb
⌈	Tl	205	255.003	0.023061	ppb
|	Pb	206	1065.057	0.321496	ppb
|	Pb	207	1900.092	0.306994	ppb
|	Pb	208	2730.214	0.278955	ppb
\>	Bi	209	927080.113		ppb

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
⌈>	Li	6		92.841			
⌊	Be	9					
⌈>	Sc	45		88.615			
|	V	51					
|	Cr	52					
|	Mn	55					
|	Co	59					
|	Ni	60					
|	Cu	63					
|	Cu	65					
|	Zn	66					
|	As	75					
⌊	Se	82					
⌈	Ag	107					
|	Ag	109					
|	Cd	111					
|	In	113					
⌊>	In	115		86.966			
⌈	Sb	121					
|	Ba	135					
|	Ba	137					
⌊>	Tb	159		92.436			
⌈	Tl	205					
|	Pb	206					
|	Pb	207					
|	Pb	208					
⌊>	Bi	209		88.470			

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

EPA 6020 & EPA 6020A - Summary Report

Sample ID: 1010107-08

Sample Date/Time: Tuesday, November 09, 2010 12:21:16
Sample Type: Sample
Sample Description: 13MW7
Number of Replicates: 3
Batch ID: 1010107
Method File: C:\Elandata1\Method\6020\6020AAAMETHOD.mth
Dataset File: C:\Elandata\Dataset\PEMSJCF110910\1010107-08.031

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Meas. Intens. RSD	Net Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li	6	192932.768	0.728	192932.768			ppb
⌊	Be	9	1.333	173.205	-0.000	-0.00613	195.94	ppb
⌈>	Sc	45	463302.551	1.454	463302.551			ppb
|	V	51	-1294.954	97.377	-0.005	-0.53259	59.93	ppb
|	Cr	52	12413.035	1.947	0.021	3.02064	1.78	ppb
|	Mn	55	21807.092	2.126	0.046	4.19339	3.55	ppb
|	Co	59	1180.737	6.405	0.002	0.26571	7.70	ppb
|	Ni	60	35663.493	1.670	0.077	36.00515	2.71	ppb
|	Cu	63	4895.643	2.253	0.010	2.32566	2.61	ppb
|	Cu	65	2872.635	3.887	0.006	2.80688	3.43	ppb
|	Zn	66	21057.707	1.520	0.045	39.13992	2.80	ppb
|	As	75	-241.090	42.907	-0.001	-0.42413	38.90	ppb
⌊	Se	82	167.557	3.697	0.000	2.45610	6.25	ppb
⌈	Ag	107	20.000	44.096	0.000	0.00328	76.46	ppb
|	Ag	109	14.444	13.323	0.000	0.00142	45.30	ppb
|	Cd	111	42.575	28.002	0.000	0.04070	36.30	ppb
|	In	113	43196.438	1.216	0.001			ppb
⌊>	In	115	977712.813	1.487	977712.813			ppb
⌈	Sb	121	671.690	22.828	0.000	0.09560	62.92	ppb
|	Ba	135	107196.893	1.306	0.072	146.78059	3.06	ppb
|	Ba	137	185435.018	1.242	0.125	146.19249	1.60	ppb
⌊>	Tb	159	1481703.555	2.639	1481703.555			ppb
⌈	Tl	205	126.667	14.945	0.000	0.00734	36.32	ppb
|	Pb	206	533.348	10.025	0.000	0.13634	16.95	ppb
|	Pb	207	953.357	4.272	0.001	0.12921	3.86	ppb
|	Pb	208	1436.728	9.584	0.001	0.12269	11.10	ppb
⌊>	Bi	209	913038.626	2.005	913038.626			ppb

Raw Data

Replicate 1

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
⌈>	Li	6	193952.820		ppb
⌊	Be	9	0.000	-0.013069	ppb
⌈>	Sc	45	459761.531		ppb
|	V	51	-2708.588	-0.890152	ppb
|	Cr	52	12147.373	2.966969	ppb
|	Mn	55	22214.647	4.305343	ppb
|	Co	59	1266.080	0.289342	ppb
|	Ni	60	36349.277	36.972443	ppb
|	Cu	63	5001.250	2.395776	ppb
|	Cu	65	2937.098	2.894082	ppb
|	Zn	66	21399.539	40.081761	ppb
|	As	75	-318.388	-0.552576	ppb
⌊	Se	82	169.335	2.510102	ppb
⌈	Ag	107	13.333	0.001334	ppb
|	Ag	109	13.333	0.001073	ppb

	Cd	111	28.905	0.023669	ppb
	In	113	43062.520		ppb
>	In	115	978221.557		ppb
	Sb	121	510.013	0.034889	ppb
	Ba	135	108642.976	147.058271	ppb
	Ba	137	187314.050	146.016109	ppb
>	Tb	159	1498123.617		ppb
	Tl	205	105.001	0.004323	ppb
	Pb	206	500.013	0.120799	ppb
	Pb	207	1000.025	0.134784	ppb
	Pb	208	1570.070	0.135953	ppb
>	Bi	209	929844.991		ppb

Replicate 2

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	193514.449		ppb
	Be	9	0.000	-0.013069	ppb
>	Sc	45	471070.028		ppb
	V	51	-285.960	-0.276438	ppb
	Cr	52	12619.958	3.020244	ppb
	Mn	55	21302.666	4.024354	ppb
	Co	59	1154.067	0.254222	ppb
	Ni	60	35275.442	35.017763	ppb
	Cu	63	4904.536	2.290232	ppb
	Cu	65	2937.098	2.823085	ppb
	Zn	66	20764.870	37.936701	ppb
	As	75	-281.306	-0.481742	ppb
	Se	82	160.668	2.282978	ppb
	Ag	107	30.000	0.006103	ppb
	Ag	109	13.333	0.001018	ppb
	Cd	111	50.815	0.050052	ppb
	In	113	42751.188		ppb
>	In	115	991993.650		ppb
	Sb	121	690.024	0.096735	ppb
	Ba	135	105849.254	142.153128	ppb
	Ba	137	186124.139	143.953236	ppb
>	Tb	159	1509921.182		ppb
	Tl	205	135.001	0.008310	ppb
	Pb	206	505.013	0.125314	ppb
	Pb	207	935.022	0.125165	ppb
	Pb	208	1445.061	0.123377	ppb
>	Bi	209	915732.605		ppb

Replicate 3

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	191331.034		ppb
	Be	9	4.000	0.007742	ppb
>	Sc	45	459076.094		ppb
	V	51	-890.313	-0.431174	ppb
	Cr	52	12471.772	3.074700	ppb
	Mn	55	21903.963	4.250467	ppb
	Co	59	1122.063	0.253563	ppb
	Ni	60	35365.760	36.025243	ppb
	Cu	63	4781.143	2.290962	ppb
	Cu	65	2743.710	2.703477	ppb
	Zn	66	21008.712	39.401302	ppb
	As	75	-123.576	-0.238072	ppb
	Se	82	172.668	2.575230	ppb
	Ag	107	16.667	0.002390	ppb
	Ag	109	16.667	0.002155	ppb
	Cd	111	48.005	0.048382	ppb
	In	113	43775.606		ppb
>	In	115	962923.232		ppb
	Sb	121	815.033	0.155184	ppb

|	Ba	135	107098.449	151.130376	ppb
|	Ba	137	182866.865	148.608132	ppb
_>	Tb	159	1437065.866		ppb
⌈	Tl	205	140.001	0.009380	ppb
|	Pb	206	595.018	0.162895	ppb
|	Pb	207	925.023	0.127670	ppb
|	Pb	208	1295.052	0.108731	ppb
_>	Bi	209	893538.282		ppb

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Li	6		94.987			
	Be	9					
>	Sc	45		83.974			
	V	51					
	Cr	52					
	Mn	55					
	Co	59					
	Ni	60					
	Cu	63					
	Cu	65					
	Zn	66					
	As	75					
	Se	82					
	Ag	107					
	Ag	109					
	Cd	111					
	In	113					
>	In	115		87.821			
	Sb	121					
	Ba	135					
	Ba	137					
>	Tb	159		95.761			
	Tl	205					
	Pb	206					
	Pb	207					
	Pb	208					
>	Bi	209		86.191			

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

EPA 6020 & EPA 6020A - Summary Report

Sample ID: LLCCV

Sample Date/Time: Tuesday, November 09, 2010 12:22:48
Sample Type: Sample
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: C:\Elandata1\Method\6020\6020AAAMETHOD.mth
Dataset File: C:\Elandata\Dataset\PEMSJCF110910\LLCCV.032

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Meas. Intens. RSD	Net Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li	6	218887.221	2.424	218887.221			ppb
⌊	Be	9	198.669	6.703	0.001	0.89041	6.24	ppb
⌈>	Sc	45	546381.213	3.544	546381.213			ppb
|	V	51	25319.107	3.875	0.045	5.17752	3.40	ppb
|	Cr	52	11654.121	0.659	0.015	2.23419	4.58	ppb
|	Mn	55	6548.811	1.434	0.011	1.00908	5.43	ppb
|	Co	59	5203.353	0.961	0.009	1.07238	2.75	ppb
|	Ni	60	1105.617	2.600	0.002	0.92693	4.63	ppb
|	Cu	63	5385.895	1.795	0.010	2.16757	5.38	ppb
|	Cu	65	2692.586	6.864	0.005	2.22019	8.00	ppb
|	Zn	66	1530.117	3.403	0.002	2.01216	6.66	ppb
|	As	75	732.667	26.749	0.001	0.96449	30.81	ppb
⌊	Se	82	385.119	3.259	0.001	5.32460	7.06	ppb
⌈	Ag	107	4074.164	3.527	0.004	1.07137	2.54	ppb
|	Ag	109	3929.662	4.142	0.004	1.05811	3.68	ppb
|	Cd	111	973.245	6.764	0.001	1.07485	5.33	ppb
|	In	113	49279.487	1.887	0.002			ppb
⌊>	In	115	1089039.095	2.068	1089039.095			ppb
⌈	Sb	121	6118.538	1.359	0.004	1.92681	1.68	ppb
|	Ba	135	7644.922	1.727	0.005	9.78239	2.20	ppb
|	Ba	137	13472.407	2.702	0.008	9.93109	0.69	ppb
⌊>	Tb	159	1566787.142	2.564	1566787.142			ppb
⌈	Tl	205	9627.969	3.275	0.009	1.02152	1.10	ppb
|	Pb	206	3418.920	6.841	0.003	0.98320	4.53	ppb
|	Pb	207	6200.974	3.451	0.005	0.95977	2.28	ppb
|	Pb	208	9530.998	2.077	0.008	0.94876	3.71	ppb
⌊>	Bi	209	1079932.726	2.597	1079932.726			ppb

Raw Data

Replicate 1

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
⌈>	Li	6	220737.661		ppb
⌊	Be	9	214.002	0.952001	ppb
⌈>	Sc	45	562000.600		ppb
|	V	51	26444.890	5.259038	ppb
|	Cr	52	11626.755	2.139170	ppb
|	Mn	55	6492.107	0.968398	ppb
|	Co	59	5253.380	1.051384	ppb
|	Ni	60	1080.058	0.878495	ppb
|	Cu	63	5278.059	2.059449	ppb
|	Cu	65	2530.320	2.020971	ppb
|	Zn	66	1563.456	1.993537	ppb
|	As	75	514.504	0.642072	ppb
⌊	Se	82	370.674	4.938532	ppb
⌈	Ag	107	4130.853	1.063400	ppb
|	Ag	109	4080.832	1.075644	ppb

	Cd	111	1010.714	1.093406	ppb
	In	113	49808.737		ppb
>	In	115	1112521.643		ppb
	Sb	121	6106.864	1.898956	ppb
	Ba	135	7795.037	9.859809	ppb
	Ba	137	13531.148	9.860779	ppb
>	Tb	159	1584717.588		ppb
	Tl	205	9939.938	1.024998	ppb
	Pb	206	3665.672	1.027531	ppb
	Pb	207	6351.032	0.955033	ppb
	Pb	208	9442.643	0.910875	ppb
>	Bi	209	1111282.054		ppb

Replicate 2

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	223019.459		ppb
	Be	9	192.002	0.843928	ppb
>	Sc	45	552423.452		ppb
	V	51	24646.560	4.975705	ppb
	Cr	52	11740.888	2.220792	ppb
	Mn	55	6497.110	0.987397	ppb
	Co	59	5203.353	1.059647	ppb
	Ni	60	1136.731	0.942087	ppb
	Cu	63	5414.799	2.152300	ppb
	Cu	65	2893.752	2.361677	ppb
	Zn	66	1470.108	1.888446	ppb
	As	75	789.653	1.023906	ppb
	Se	82	391.341	5.345815	ppb
	Ag	107	4180.874	1.101654	ppb
	Ag	109	3757.372	1.013482	ppb
	Cd	111	1011.790	1.120587	ppb
	In	113	49823.812		ppb
>	In	115	1086985.582		ppb
	Sb	121	6206.926	1.919218	ppb
	Ba	135	7592.881	9.538953	ppb
	Ba	137	13803.520	9.996798	ppb
>	Tb	159	1594878.990		ppb
	Tl	205	9634.639	1.030662	ppb
	Pb	206	3390.575	0.983647	ppb
	Pb	207	6295.997	0.983679	ppb
	Pb	208	9757.769	0.980467	ppb
>	Bi	209	1071279.661		ppb

Replicate 3

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	212904.545		ppb
	Be	9	190.002	0.875292	ppb
>	Sc	45	524719.587		ppb
	V	51	24865.869	5.297824	ppb
	Cr	52	11594.718	2.342598	ppb
	Mn	55	6657.215	1.071450	ppb
	Co	59	5153.327	1.106102	ppb
	Ni	60	1100.061	0.960221	ppb
	Cu	63	5464.826	2.290973	ppb
	Cu	65	2653.685	2.277908	ppb
	Zn	66	1556.788	2.154503	ppb
	As	75	893.843	1.227497	ppb
	Se	82	393.341	5.689453	ppb
	Ag	107	3910.765	1.049060	ppb
	Ag	109	3950.780	1.085197	ppb
	Cd	111	897.230	1.010549	ppb
	In	113	48205.911		ppb
>	In	115	1067610.060		ppb
	Sb	121	6041.825	1.962249	ppb

	Ba	135	7546.847	9.948404	ppb
	Ba	137	13082.552	9.935685	ppb
>	Tb	159	1520764.848		ppb
	Tl	205	9309.331	1.008908	ppb
	Pb	206	3200.512	0.938412	ppb
	Pb	207	5955.892	0.940608	ppb
	Pb	208	9392.581	0.954923	ppb
>	Bi	209	1057236.464		ppb

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Li	6		107.765			
	Be	9	89.041				
>	Sc	45		99.032			
	V	51	103.550				
	Cr	52	111.709				
	Mn	55	100.908				
	Co	59	107.238				
	Ni	60	92.693				
	Cu	63	108.379				
	Cu	65	111.009				
	Zn	66	100.608				
	As	75	96.449				
	Se	82	106.492				
	Ag	107	107.137				
	Ag	109	105.811				
	Cd	111	107.485				
	In	113					
>	In	115		97.821			
	Sb	121	96.340				
	Ba	135	97.824				
	Ba	137	99.311				
>	Tb	159		101.260			
	Tl	205	102.152				
	Pb	206	98.320				
	Pb	207	95.977				
	Pb	208	94.876				
>	Bi	209		101.946			

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

EPA 6020 & EPA 6020A - Summary Report

Sample ID: CCV

Sample Date/Time: Tuesday, November 09, 2010 12:24:20
Sample Type: Sample
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: C:\Elandata1\Method\6020\6020AAAMETHOD.mth
Dataset File: C:\Elandata\Dataset\PEMSJCF110910\CCV.033

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Meas. Intens. RSD	Net Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li	6	216413.599	1.306	216413.599			ppb
⌊	Be	9	65673.624	0.914	0.303	302.09809	1.47	ppb
⌈>	Sc	45	565944.236	2.322	565944.236			ppb
|	V	51	1477519.489	1.698	2.609	303.04412	1.25	ppb
|	Cr	52	1208379.671	0.867	2.130	307.54153	1.87	ppb
|	Mn	55	1937603.162	0.514	3.424	310.75354	2.04	ppb
|	Co	59	1509158.157	1.167	2.667	308.25434	2.53	ppb
|	Ni	60	368148.695	0.386	0.651	304.47385	2.57	ppb
|	Cu	63	770940.424	0.928	1.363	308.31577	3.11	ppb
|	Cu	65	374835.321	1.160	0.663	306.71030	3.29	ppb
|	Zn	66	199575.229	0.673	0.352	306.62028	2.85	ppb
|	As	75	228860.933	0.750	0.405	300.52181	2.73	ppb
⌊	Se	82	20562.677	1.273	0.036	302.51233	2.99	ppb
⌈	Ag	107	1196775.252	0.649	1.078	309.61612	1.87	ppb
|	Ag	109	1150652.012	1.235	1.037	304.86606	1.38	ppb
|	Cd	111	282371.441	1.681	0.254	309.70971	2.91	ppb
|	In	113	323867.644	0.338	0.248			ppb
⌊>	In	115	1109868.593	1.288	1109868.593			ppb
⌈	Sb	121	907458.892	0.320	0.578	306.43308	1.55	ppb
|	Ba	135	234015.959	0.828	0.149	302.26972	1.12	ppb
|	Ba	137	406042.344	0.604	0.258	302.04583	1.38	ppb
⌊>	Tb	159	1570770.013	1.471	1570770.013			ppb
⌈	Tl	205	2838919.851	1.314	2.635	304.56657	1.88	ppb
|	Pb	206	999316.373	1.618	0.927	304.61018	1.95	ppb
|	Pb	207	1864203.494	1.790	1.730	305.87983	1.76	ppb
|	Pb	208	2867649.973	2.346	2.661	302.90283	2.09	ppb
⌊>	Bi	209	1077379.315	1.613	1077379.315			ppb

Raw Data

Replicate 1

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
⌈>	Li	6	219674.633		ppb
⌊	Be	9	65749.441	297.926943	ppb
⌈>	Sc	45	555491.605		ppb
|	V	51	1449446.923	302.839600	ppb
|	Cr	52	1196313.580	310.122999	ppb
|	Mn	55	1939374.925	316.794338	ppb
|	Co	59	1522941.842	316.814396	ppb
|	Ni	60	369789.768	311.463334	ppb
|	Cu	63	779044.472	317.271116	ppb
|	Cu	65	379811.758	316.475493	ppb
|	Zn	66	201118.974	314.680714	ppb
|	As	75	230758.466	308.590277	ppb
⌊	Se	82	20837.688	312.213140	ppb
⌈	Ag	107	1203518.795	312.894410	ppb
|	Ag	109	1162602.859	309.577757	ppb

	Cd	111	282210.604	311.031485	ppb
	In	113	322688.732		ppb
>	In	115	1104253.768		ppb
	Sb	121	905708.460	309.719342	ppb
	Ba	135	234041.083	306.152501	ppb
	Ba	137	407067.947	306.655807	ppb
>	Tb	159	1550882.307		ppb
	Tl	205	2837835.434	310.096185	ppb
	Pb	206	997287.151	309.636228	ppb
	Pb	207	1852377.122	309.595631	ppb
	Pb	208	2842001.919	305.790331	ppb
>	Bi	209	1057607.824		ppb

Replicate 2

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	214916.911		ppb
	Be	9	66232.614	306.760529	ppb
>	Sc	45	580694.588		ppb
	V	51	1497779.537	299.353627	ppb
	Cr	52	1213658.881	300.939475	ppb
	Mn	55	1946567.241	304.165681	ppb
	Co	59	1515215.507	301.525265	ppb
	Ni	60	367397.296	296.016696	ppb
	Cu	63	765481.402	298.213233	ppb
	Cu	65	371771.244	296.327039	ppb
	Zn	66	198667.359	297.330135	ppb
	As	75	228411.769	292.192987	ppb
	Se	82	20533.727	294.273855	ppb
	Ag	107	1188288.668	302.935776	ppb
	Ag	109	1154406.542	301.426084	ppb
	Cd	111	277706.464	300.123629	ppb
	In	113	324062.089		ppb
>	In	115	1126121.086		ppb
	Sb	121	905855.965	300.984861	ppb
	Ba	135	235940.954	299.886502	ppb
	Ba	137	407813.417	298.505770	ppb
>	Tb	159	1596126.519		ppb
	Tl	205	2876749.315	304.935090	ppb
	Pb	206	1016405.932	306.121768	ppb
	Pb	207	1901871.345	308.349047	ppb
	Pb	208	2943989.109	307.278619	ppb
>	Bi	209	1090255.485		ppb

Replicate 3

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	214649.253		ppb
	Be	9	65038.817	301.606784	ppb
>	Sc	45	561646.515		ppb
	V	51	1485332.007	306.939132	ppb
	Cr	52	1215166.553	311.562121	ppb
	Mn	55	1926867.319	311.300588	ppb
	Co	59	1489317.123	306.423353	ppb
	Ni	60	367259.020	305.941519	ppb
	Cu	63	768295.397	309.462965	ppb
	Cu	65	372922.959	307.328364	ppb
	Zn	66	198939.354	307.849986	ppb
	As	75	227412.563	300.782170	ppb
	Se	82	20316.617	301.049982	ppb
	Ag	107	1198518.294	313.018171	ppb
	Ag	109	1134946.634	303.594343	ppb
	Cd	111	287197.256	317.974020	ppb
	In	113	324852.111		ppb
>	In	115	1099230.924		ppb
	Sb	121	910812.249	308.595040	ppb

|	Ba	135	232065.842	300.770144	ppb
|	Ba	137	403245.667	300.975912	ppb
\>	Tb	159	1565301.215		ppb
⌈	Tl	205	2802174.803	298.668437	ppb
|	Pb	206	984256.037	298.072529	ppb
|	Pb	207	1838362.015	299.694825	ppb
|	Pb	208	2816958.890	295.639532	ppb
\>	Bi	209	1084274.636		ppb

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
>	Li	6		106.547			
	Be	9	100.699				
>	Sc	45		102.577			
	V	51	101.015				
	Cr	52	102.514				
	Mn	55	103.585				
	Co	59	102.751				
	Ni	60	101.491				
	Cu	63	102.772				
	Cu	65	102.237				
	Zn	66	102.207				
	As	75	100.174				
	Se	82	100.837				
	Ag	107	103.205				
	Ag	109	101.622				
	Cd	111	103.237				
	In	113					
>	In	115		99.692			
	Sb	121	102.144				
	Ba	135	100.757				
	Ba	137	100.682				
>	Tb	159		101.517			
	Tl	205	101.522				
	Pb	206	101.537				
	Pb	207	101.960				
	Pb	208	100.968				
>	Bi	209		101.705			

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

EPA 6020 & EPA 6020A - Summary Report

Sample ID: CCB

Sample Date/Time: Tuesday, November 09, 2010 12:25:51
Sample Type: Sample
Sample Description:
Number of Replicates: 3
Batch ID:
Method File: C:\Elandata1\Method\6020\6020AAAMETHOD.mth
Dataset File: C:\Elandata\Dataset\PEMSJCF110910\CCB.034

Concentration Results

	Analyte	Mass	Meas. Intens. Mean	Meas. Intens. RSD	Net Intens. Mean	Conc. Mean	Conc. RSD	Sample Unit
⌈>	Li	6	218104.179	0.453	218104.179			ppb
⌊	Be	9	8.000	132.288	0.000	0.02341	205.78	ppb
⌈>	Sc	45	570979.496	2.101	570979.496			ppb
|	V	51	1753.990	17.263	0.001	0.15064	39.78	ppb
|	Cr	52	3633.994	3.193	0.000	0.07120	51.09	ppb
|	Mn	55	741.695	23.686	0.000	0.03824	78.55	ppb
|	Co	59	297.338	39.780	0.000	0.03156	78.67	ppb
|	Ni	60	62.222	34.856	0.000	0.03049	60.88	ppb
|	Cu	63	230.003	18.160	0.000	0.02575	70.25	ppb
|	Cu	65	177.779	8.660	0.000	0.08096	18.93	ppb
|	Zn	66	174.446	31.649	-0.000	-0.16061	55.24	ppb
|	As	75	42.229	57.831	0.000	0.01645	184.19	ppb
⌊	Se	82	36.667	9.091	-0.000	-0.02585	150.45	ppb
⌈	Ag	107	71.111	9.758	0.000	0.01554	12.13	ppb
|	Ag	109	91.112	20.150	0.000	0.02082	22.29	ppb
|	Cd	111	25.000	28.398	0.000	0.01473	52.80	ppb
|	In	113	48978.010	1.846	-0.000			ppb
⌊>	In	115	1127221.563	0.831	1127221.563			ppb
⌈	Sb	121	956.715	26.219	0.000	0.17940	49.41	ppb
|	Ba	135	118.001	16.169	0.000	0.02962	77.91	ppb
|	Ba	137	222.669	23.116	0.000	0.04730	77.74	ppb
⌊>	Tb	159	1564359.320	1.121	1564359.320			ppb
⌈	Tl	205	288.338	10.161	0.000	0.02223	12.91	ppb
|	Pb	206	333.339	29.022	0.000	0.04578	62.21	ppb
|	Pb	207	613.343	25.655	0.000	0.04529	54.85	ppb
|	Pb	208	960.029	27.129	0.000	0.04514	58.55	ppb
⌊>	Bi	209	1075888.179	1.136	1075888.179			ppb

Raw Data

Replicate 1

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
⌈>	Li	6	218597.410		ppb
⌊	Be	9	20.000	0.078007	ppb
⌈>	Sc	45	564722.709		ppb
|	V	51	1406.303	0.083283	ppb
|	Cr	52	3518.619	0.051585	ppb
|	Mn	55	780.030	0.045304	ppb
|	Co	59	420.009	0.057046	ppb
|	Ni	60	83.334	0.048316	ppb
|	Cu	63	270.004	0.042566	ppb
|	Cu	65	186.668	0.089629	ppb
|	Zn	66	180.002	-0.150265	ppb
|	As	75	24.762	-0.005507	ppb
⌊	Se	82	36.667	-0.019472	ppb
⌈	Ag	107	76.667	0.016980	ppb
|	Ag	109	73.334	0.016226	ppb

	Cd	111	32.275	0.022612	ppb
	In	113	48748.532		ppb
>	In	115	1125371.430		ppb
	Sb	121	695.024	0.087622	ppb
	Ba	135	138.001	0.053939	ppb
	Ba	137	282.004	0.089729	ppb
>	Tb	159	1580251.696		ppb
	Tl	205	300.005	0.023173	ppb
	Pb	206	445.010	0.078667	ppb
	Pb	207	795.016	0.073970	ppb
	Pb	208	1240.046	0.073631	ppb
>	Bi	209	1086842.206		ppb

Replicate 2

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	216966.462		ppb
	Be	9	4.000	0.005283	ppb
>	Sc	45	563406.493		ppb
	V	51	1959.709	0.198038	ppb
	Cr	52	3750.703	0.113167	ppb
	Mn	55	895.040	0.064125	ppb
	Co	59	288.004	0.030170	ppb
	Ni	60	63.334	0.031867	ppb
	Cu	63	233.336	0.028092	ppb
	Cu	65	186.668	0.089987	ppb
	Zn	66	226.669	-0.077526	ppb
	As	75	31.790	0.003838	ppb
	Se	82	33.333	-0.067538	ppb
	Ag	107	63.334	0.013408	ppb
	Ag	109	110.001	0.025504	ppb
	Cd	111	18.090	0.007065	ppb
	In	113	49974.562		ppb
>	In	115	1137370.728		ppb
	Sb	121	980.048	0.186049	ppb
	Ba	135	116.001	0.026918	ppb
	Ba	137	196.002	0.027321	ppb
>	Tb	159	1567272.096		ppb
	Tl	205	310.005	0.024504	ppb
	Pb	206	280.004	0.029491	ppb
	Pb	207	525.007	0.030739	ppb
	Pb	208	915.025	0.040370	ppb
>	Bi	209	1078113.909		ppb

Replicate 3

Internal Standard Symbol	Analyte	Mass	Meas. Intensity	Concentration	Report Unit
>	Li	6	218748.664		ppb
	Be	9	0.000	-0.013069	ppb
>	Sc	45	584809.286		ppb
	V	51	1895.958	0.170592	ppb
	Cr	52	3632.660	0.048841	ppb
	Mn	55	550.015	0.005300	ppb
	Co	59	184.002	0.007455	ppb
	Ni	60	40.000	0.011273	ppb
	Cu	63	186.668	0.006606	ppb
	Cu	65	160.001	0.063263	ppb
	Zn	66	116.667	-0.254049	ppb
	As	75	70.135	0.051017	ppb
	Se	82	40.000	0.009459	ppb
	Ag	107	73.334	0.016237	ppb
	Ag	109	90.000	0.020717	ppb
	Cd	111	24.635	0.014503	ppb
	In	113	48210.935		ppb
>	In	115	1118922.531		ppb
	Sb	121	1195.071	0.264529	ppb

⎢	Ba	135	100.001	0.008018	ppb
⎢	Ba	137	190.002	0.024837	ppb
⎣>	Tb	159	1545554.169		ppb
⎡	Tl	205	255.003	0.019004	ppb
⎢	Pb	206	275.004	0.029182	ppb
⎢	Pb	207	520.007	0.031156	ppb
⎢	Pb	208	725.015	0.021420	ppb
⎣>	Bi	209	1062708.422		ppb

QC Calculated Values

	Analyte	Mass	QC Std % Recovery	Int Std % Recovery	Spike % Recovery	Dilution % Diff	Dup. Rel. % Diff
⎡>	Li	6		107.380			
⎣	Be	9					
⎡>	Sc	45		103.490			
⎢	V	51					
⎢	Cr	52					
⎢	Mn	55					
⎢	Co	59					
⎢	Ni	60					
⎢	Cu	63					
⎢	Cu	65					
⎢	Zn	66					
⎢	As	75					
⎣	Se	82					
⎡	Ag	107					
⎢	Ag	109					
⎢	Cd	111					
⎢	In	113					
⎣>	In	115		101.251			
⎡	Sb	121					
⎢	Ba	135					
⎢	Ba	137					
⎣>	Tb	159		101.103			
⎡	Tl	205					
⎢	Pb	206					
⎢	Pb	207					
⎢	Pb	208					
⎣>	Bi	209		101.564			

QC Out of Limits

Measurement Type	Analyte	Mass	Out of Limits Message

Maintenance: None

Method(s) (circle one): ILM04.1 ILM05.4 (Others) 7470A/7471A

Operator(s): JRR 2725 Date/Time 10-27-10 1045 to 10-27-10 1325

Printed: 10/27/2010 1:32:05 PM

↑	Specified element(s) fail(s) high
↓	Specified element(s) fail(s) low
RR	Re-run sample(s) neat
RR #X	Re-run at a #-fold dilution
#X	Sample run at a #-fold dilution (aliquot of sample diluted with acidified water)
L	Matrix = leachate
W	Matrix = water
S	Matrix = solid
B	Matrix = biological tissue

ORIGINAL

SDG	Matrix	Comments
1010107	Water	Complete.
1010116	Water	Complete.
1010119	Soil	Complete.
1010121	Soil	Complete.

Batch
0102502
0102521
0102523
0102525

HG Run Log (V4)

File Name: V410270B

Seq	Cup	Sample ID	Client ID	Sample Type	DF	Date	Time	Results	Comments
1		CAL1	S0	CALIB STD	1.0	27 OCT 1	10:45:40	602	
2		CAL2	S0.2	CALIB STD	1.0	27 OCT 1	10:47:41	1993	
3		CAL3	S0.5	CALIB STD	1.0	27 OCT 1	10:49:54	4387	
4		CAL4	S1.0	CALIB STD	1.0	27 OCT 1	10:51:53	8267	
5		CAL5	S5.0	CALIB STD	1.0	27 OCT 1	10:53:55	41065	
6		CAL6	S10.0	CALIB STD	1.0	27 OCT 1	10:55:59	81004	
7		ICV1	ICV	ICV	1.0	27 OCT 1	10:58:11	3.96	
8		ICB1	ICB	ICB	1.0	27 OCT 1	11:00:11	-.075	
9		CRL1	CRI	CRI	1.0	27 OCT 1	11:02:12	.197	
10		CCV1	CCV1	CCV	1.0	27 OCT 1	11:04:13	5.06	
11		CCB1	CCB1	CCB	1.0	27 OCT 1	11:06:23	-.022	
12		0102525-BLK1	PBW	BLANK	1.0	27 OCT 1	11:08:21	.004	
13		0102525-BS1	LCSW	LCS	1.0	27 OCT 1	11:10:29	2.76	
14		1010116-01	10DDH2R	SAMPLE	1.0	27 OCT 1	11:12:38	-.013	
15		0102525-DUP1	10DDH2RD	DUPLICATE	1.0	27 OCT 1	11:14:37	-.012	
16		0102525-MS1	10DDH2RS	MATRIX SPIKE	1.0	27 OCT 1	11:16:46	.981	
17		0102525-MSD1	10DDH2RSD	MATRIX SPIKE	1.0	27 OCT 1	11:18:44	.967	

The presence of the Chemist's/Analyst's employee ID number, or signature, on this run log attests that strict compliance with the method's SOP has occurred. Any SOP deviations require documentation by the responsible chemist/analyst together with the chemist's/analyst's initials and the initials of the lab supervisor and a QA department representative, signifying approval of the deviation.

Reviewed By: [signature] Date: 10/28/10

HG Run Log (V4)

File Name: V410270B

Seq	Cup	Sample ID	Client ID	Sample Type	DF	Date	Time	Results	Comments
18		SRD1	SRD1	SDI	5	27 OCT 1	11:20:46	-.044	
19		1010116-02	10D4	SAMPLE	1.0	27 OCT 1	11:22:46	.002	
20		1010116-03	10MW1	SAMPLE	1.0	27 OCT 1	11:24:47	-.004	
21		1010116-04	10D3	SAMPLE	1.0	27 OCT 1	11:26:47	.007	
22		CCV2	CCV2	CCV	1.0	27 OCT 1	11:28:47	5.05	
23		CCB2	CCB2	CCB	1.0	27 OCT 1	11:30:52	-.047	
24		1010116-05	10DUP	SAMPLE	1.0	27 OCT 1	11:32:51	.009	
25		1010116-06	10D3D	SAMPLE	1.0	27 OCT 1	11:34:51	.019	
26		0102523-BLK1	PBW	BLANK	1.0	27 OCT 1	11:36:52	-.012	
27		0102523-BS1	LCSW	LCS	1.0	27 OCT 1	11:39:00	2.87	
28		1010107-01	13MW5	SAMPLE	1.0	27 OCT 1	11:41:15	-.030	
29		0102523-DUP1	13MW5D	DUPLICATE	1.0	27 OCT 1	11:43:18	-.003	
30		0102523-MS1	13MW5S	MATRIX SPIKE	1.0	27 OCT 1	11:45:19	.983	
31		0102523-MSD1	13MW5SD	MATRIX SPIKE	1.0	27 OCT 1	11:47:19	.985	
32		SRD2	SRD2	SDI	5	27 OCT 1	11:49:20	-.066	
33		1010107-02	13MW1	SAMPLE	1.0	27 OCT 1	11:51:24	-.008	
34		CCV3	CCV3	CCV	1.0	27 OCT 1	11:53:33	5.04	
35		CCB3	CCB3	CCB	1.0	27 OCT 1	11:55:37	-.051	
36		1010107-03	13MW2	SAMPLE	1.0	27 OCT 1	11:57:49	.013	
37		1010107-04	13MW3	SAMPLE	1.0	27 OCT 1	11:59:54	.009	
38		1010107-05	13MW4	SAMPLE	1.0	27 OCT 1	12:02:01	-.002	
39		1010107-06	13MWDUP	SAMPLE	1.0	27 OCT 1	12:04:00	-.002	
40		1010107-07	13MW6	SAMPLE	1.0	27 OCT 1	12:06:13	-.002	
41		1010107-08	13MW7	SAMPLE	1.0	27 OCT 1	12:08:14	.019	
42		0102521-BLK1	PBW	BLANK	1.0	27 OCT 1	12:10:24	.021	
43		0102521-BS1	LCSW	LCS	25	27 OCT 1	12:12:29	7.62	
44		0102502-BLK1	TCLPBLKEX	BLANK	1.0	27 OCT 1	12:14:29	-.107	
45		0102502-BLK2	TCLPBLKFA	BLANK	1.0	27 OCT 1	12:16:29	-.011	
46		CCV4	CCV4	CCV	1.0	27 OCT 1	12:18:32	5.15	
47		CCB4	CCB4	CCB	1.0	27 OCT 1	12:20:34	-.040	
48		1010121-02	CONC04-09	SAMPLE	1.0	27 OCT 1	12:22:38	.242	

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Reviewed By: 2 Date: 10/28/10

HG Run Log (V4)

File Name: V410270B

Seq	Cup	Sample ID	Client ID	Sample Type	DF	Date	Time	Results	Comments
49		0102521-DUP1	CONC04-09D	DUPLICATE	1.0	27 OCT 1	12:24:40	.234	
50		0102521-MS1	CONC04-09S	MATRIX SPIKE	1.0	27 OCT 1	12:26:44	130	RR
51		0102521-MSD1	CONC04-09SD	MATRIX SPIKE	1.0	27 OCT 1	12:29:21	133	RR
52		SRD3	SRD3	SDI	5	27 OCT 1	12:31:53	-.506	
53		1010119-01	CU-1 102110	SAMPLE	1.0	27 OCT 1	12:33:58	-.047	
54		0102521-DUP2	CU-1 102110D	DUPLICATE	1.0	27 OCT 1	12:35:56	-.040	
55		0102521-MS2	CU-1 102110S	MATRIX SPIKE	1.0	27 OCT 1	12:37:58	135	RR
56		0102521-MSD2	CU-1 102110SD	MATRIX SPIKE	1.0	27 OCT 1	12:40:33	135	RR
57		SRD4	SRD4	SDI	5	27 OCT 1	12:43:13	-.441	
58		CCV5	CCV5	CCV	1.0	27 OCT 1	12:45:17	5.17	
59		CCB5	CCB5	CCB	1.0	27 OCT 1	12:47:15	-.107	
60		1010119-02	CU-2 102110	SAMPLE	1.0	27 OCT 1	12:49:19	-.011	
61		1010119-03	CU-2FD 102110	SAMPLE	1.0	27 OCT 1	12:51:18	-.012	
62		1010119-04	CU-3 102110	SAMPLE	1.0	27 OCT 1	12:53:18	-.009	
63		1010119-05	CU-4 102110	SAMPLE	1.0	27 OCT 1	12:55:38	.022	
64		0102521-MS1	CONC04-09S	MATRIX SPIKE	25	27 OCT 1	13:10:59	7.66	
65		0102521-MSD1	CONC04-09SD	MATRIX SPIKE	25	27 OCT 1	13:13:01	7.76	
66		SRD5	SRD5	SDI	5	27 OCT 1	13:15:03	-.090	
67		0102521-MS2	CU-1 102110S	MATRIX SPIKE	25	27 OCT 1	13:17:04	7.69	
68		0102521-MSD2	CU-1 102110SD	MATRIX SPIKE	25	27 OCT 1	13:19:03	7.67	
69		SRD6	SRD6	SDI	5	27 OCT 1	13:21:19	-.077	
70		CCV6	CCV6	CCV	1.0	27 OCT 1	13:23:24	5.24	
71		CCB6	CCB6	CCB	1.0	27 OCT 1	13:25:25	-.072	

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Reviewed By: _____ Date: 10/29/10

Standards/QC Preparation Log for Analysis of Cold Vapor Mercury

COMPUCHEM a division of Liberty Analytical Corp. WORKSHEET 1 NNN

Seq. File Name: V410270B

194

REAGENTS	REF # [1]	MANUFACTURER	LOT #	EXPIRATION DATE
Sodium Chloride (NaCL)	1m2-188-15	JTBAKER	H14614	08/12
Hydrochloric Acid (HCL)	0I15015	Caledon	73819	9/15
Hydroxylamine Hydrochloride (NH_2OH-HCL)	0H19005	JT BAKER	J30597	08/15
Stannous Chloride ($SnCL_2$-$2H_2O$)	0H19004	JT BAKER	J24586	08/15

STANDARD LOT NUMBER [2]	PREPARATION INSTRUCTIONS
$SnCL_2$– 10-19-10-JR Stannous chloride	Place in a 1000 mL volumetric flask containing 500 mL of reagent water: 100 g of $SnCl_2$-$2H_2O$ Baker Instra-analyzed or equivalent 250 mL of HCL Baker Instra-analyzed or equivalent Dilute to 1000 mL with reagent water. Prepare as needed
HCL– 10-26-10 – JR Hydrochloric Acid	Place in a 2 L volumetric flask: 1000 mL of deionized water 200 mL of concentrated HCL Baker Instra-analyzed or equivalent Dilute to 2000 mL with reagent water. Prepare as needed
NH_2OH-HCL– 10-21-10 –JR Hydroxylamine hydrochloride	Place in a 2000 ml volumetric flask: 240.0 g of NH_2OH-HCl Baker Instra-analyzed or equivalent 240.0 g NaCl Baker Instra-analyzed or equivalent Dilute to 2000 mL with reagent water. Place solution in a repipetor bottle. Prepare as needed

Standard Solutions Prepared By: John Rensch

Entered By: John Rensch Date: 10-27-10

Reviewed By: _____ Date: _____

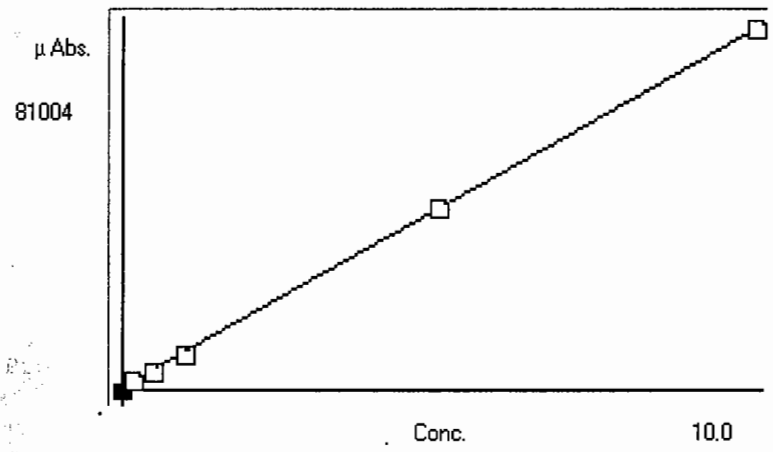
[1]Ref# = Logbook ID, Page number, and item number from Materials Receipt Log

[2]Standard Lot Number consists of standard ID, date prepared, and initials of preparer.

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V410270B JRR 102710

Protocol: INSTIDV4



A
B 1.23917e-4
C -5.26763e-2
Rhc .999982

Accepted Date: 27-Oct-10 10:56

S	Conc.	Calc.	Dev.	Mean	SD or %RSD	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
01	.00000	.022	.022	602	0	602				
02	.20000	.194	-.006	1994	0%	1993				
03	.50000	.491	-.009	4388	0%	4387				
04	1.0000	.972	-.028	8267	0%	8267				
05	5.0000	5.04	.036	41065	0%	41065				
06	10.000	9.99	-.015	81004	0%	81004				
07										
08										
09										
10										

S0.5 = .491/.500 x 100 = 98.2%

S1.0 = .972/1.00 x 100 = 97.2%

S5.0 = 5.04/5.00 x 100 = 100.8%

S10.0 = 9.99/10.00 x 100 = 99.9%

All standards are within ± 5% of the true values. JRR 102710

POST-RUN REPORT

Line	Conc.	Units	SD/RSD	1	2	3	4	5	
*** Standard: 1 Rep: 1	S0.0 JRR 102710			Seq: 1		10:45:40 27 Oct 10			HG
Hg	.000	ppb	602						
*** Standard: 2 Rep: 1	S0.2 JRR 102710			Seq: 2		10:47:41 27 Oct 10			HG
Hg	.200	ppb	1993						
*** Standard: 3 Rep: 1	S0.5 JRR 102710			Seq: 3		10:49:54 27 Oct 10			HG
Hg	.500	ppb	4387						
*** Standard: 4 Rep: 1	S1.0 JRR 102710			Seq: 4		10:51:53 27 Oct 10			HG
Hg	1.00	ppb	8267						
*** Standard: 5 Rep: 1	S5.0 JRR 102710			Seq: 5		10:53:55 27 Oct 10			HG
Hg	5.00	ppb	41065						
*** Standard: 6 Rep: 1	S1.0 JRR 102710			Seq: 6		10:55:59 27 Oct 10			HG
Hg	10.0	ppb	81004						

*** Check Standard: 3 Ck3 ICV Seq: 7 10:58:11 27 Oct 10 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		98.9	3.96	4.00	ppb	.000

*** Check Standard: 1 Ck1 ~~CCB~~ I JRR 102710 Seq: 8 11:00:11 27 Oct 10 HG

Line	Flag	Found	Range(+/-)	Units	SD/RSD
Hg		-.075	.200	ppb	.000

*** Check Standard: 4 Ck4 CRI Seq: 9 11:02:12 27 Oct 10 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		98.4	.197	.200	ppb	.000

*** Check Standard: 2 Ck2 CCV Seq: 10 11:04:13 27 Oct 10 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		101.	5.06	5.00	ppb	.000

*** Check Standard: 1 Ck1 CCB Seq: 11 11:06:23 27 Oct 10 HG

Line	Flag	Found	Range(+/-)	Units	SD/RSD
Hg		-.022	.200	ppb	.000

*** Sample ID: PBW Seq: 12 11:08:21 27 Oct 10 HG
0102525-BLK1

Hg	.004	ppb	.000	.004

==========

*** Sample ID: LCSW Seq: 13 11:10:29 27 Oct 10 HG
0102525-BS1

Hg	2.76	ppb	.000	2.76

=

==========

*** Sample ID: 10DDH2R Seq: 14 11:12:38 27 Oct 10 HG
1010116-01

Hg	-.013	ppb	.000	-.013

=

==========

*** Sample ID: 10DDH2RD Seq: 15 11:14:37 27 Oct 10 HG
0102525-DUP1

Hg	-.012	ppb	.000	-.012

==========

Line	Conc.	Units	SD/RSD	1	2	3	4	5

*** Sample ID: 10DDH2RS Seq: 16 11:16:46 27 Oct 10 HG
0102525-MS1
Hg .981 ppb .000 .981

*** Sample ID: 10DDH2RSD Seq: 17 11:18:44 27 Oct 10 HG
0102525-MSD1
Hg .967 ppb .000 .967

*** Sample ID: 10DDH2R Seq: 18 11:20:46 27 Oct 10 HG
SDI1010116-01 5X
Hg -.044 ppb .000 -.044

*** Sample ID: 10D4 Seq: 19 11:22:46 27 Oct 10 HG
1010116-02
Hg .002 ppb .000 .002

*** Sample ID: 10MW1 Seq: 20 11:24:47 27 Oct 10 HG
1010116-03
Hg -.004 ppb .000 -.004

*** Sample ID: 10D3 Seq: 21 11:26:47 27 Oct 10 HG
1010116-04
Hg .007 ppb .000 .007

*** Check Standard: 2 Ck2 CCV Seq: 22 11:28:47 27 Oct 10 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		101.	5.05	5.00	ppb	.000

*** Check Standard: 1 Ck1 CCB Seq: 23 11:30:52 27 Oct 10 HG

Line	Flag	Found	Range(+/-)	Units	SD/RSD
Hg		-.047	.200	ppb	.000

*** Sample ID: 10DUP Seq: 24 11:32:51 27 Oct 10 HG
1010116-05
Hg .009 ppb .000 .009

*** Sample ID: 10D3D Seq: 25 11:34:51 27 Oct 10 HG
1010116-06
Hg .019 ppb .000 .019

*** Sample ID: PBW Seq: 26 11:36:52 27 Oct 10 HG
0102523-BLK1
Hg -.012 ppb .000 -.012

*** Sample ID: LCSW Seq: 27 11:39:00 27 Oct 10 HG
0102523-BS1
Hg 2.87 ppb .000 2.87

*** Sample ID: 13MW5 Seq: 28 11:41:15 27 Oct 10 HG
1010107-01
Hg -.030 ppb .000 -.030

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: 13MW5D				Seq: 29	11:43:18 27 Oct 10	HG		
				0102523-DUP1				
Hg	-.003	ppb	.000	-.003				
*** Sample ID: 13MW5S				Seq: 30	11:45:19 27 Oct 10	HG		
				0102523-MS1				
Hg	.983	ppb	.000	.983				
*** Sample ID: 13MW5SD				Seq: 31	11:47:19 27 Oct 10	HG		
				0102523-MSD1				
Hg	.985	ppb	.000	.985				
*** Sample ID: 13MW5				Seq: 32	11:49:20 27 Oct 10	HG		
				SDI1010107-01 5X				
Hg	-.066	ppb	.000	-.066				
*** Sample ID: 13MW1				Seq: 33	11:51:24 27 Oct 10	HG		
				1010107-02				
Hg	-.008	ppb	.000	-.008				
*** Check Standard: 2 Ck2 CCV				Seq: 34	11:53:33 27 Oct 10	HG		
Line	Flag	%Rcv.	Found	True	Units	SD/RSD		
Hg		101.	5.04	5.00	ppb	.000		
*** Check Standard: 1 Ck1 CCB				Seq: 35	11:55:37 27 Oct 10	HG		
Line	Flag	Found	Range(+/-)	Units	SD/RSD			
Hg		-.051	.200	ppb	.000			
*** Sample ID: 13MW2				Seq: 36	11:57:49 27 Oct 10	HG		
				1010107-03				
Hg	.013	ppb	.000	.013				
*** Sample ID: 13MW3				Seq: 37	11:59:54 27 Oct 10	HG		
				1010107-04				
Hg	.009	ppb	.000	.009				
*** Sample ID: 13MW4				Seq: 38	12:02:01 27 Oct 10	HG		
				1010107-05				
Hg	-.002	ppb	.000	-.002				
*** Sample ID: 13MWDUP				Seq: 39	12:04:00 27 Oct 10	HG		
				1010107-06				
Hg	-.002	ppb	.000	-.002				
*** Sample ID: 13MW6				Seq: 40	12:06:13 27 Oct 10	HG		
				1010107-07				
Hg	-.002	ppb	.000	-.002				
*** Sample ID: 13MW7				Seq: 41	12:08:14 27 Oct 10	HG		
				1010107-08				
Hg	.019	ppb	.000	.019				

Line	Conc.	Units	SD/RSD	1	2	3	4	5
*** Sample ID: PBW				Seq: 42	12:10:24 27 Oct 10		HG	
				0102521-BLK1				
Hg	.021	ppb	.000	.021				
*** Sample ID: LCSW				Seq: 43	12:12:29 27 Oct 10		HG	
				0102521-BS1 25X				
Hg	7.62	ppb	.000	7.62				
*** Sample ID: TCLPBLKEX				Seq: 44	12:14:29 27 Oct 10		HG	
				0102502-BLK1				
Hg	-.107	ppb	.000	-.107				
*** Sample ID: TCLPBLKFA				Seq: 45	12:16:29 27 Oct 10		HG	
				0102502-BLK2				
Hg	-.011	ppb	.000	-.011				
*** Check Standard: 2 Ck2 CCV				Seq: 46	12:18:32 27 Oct 10		HG	
Line	Flag	%Rcv.	Found	True	Units	SD/RSD		
Hg		103.	5.15	5.00	ppb	.000		
*** Check Standard: 1 Ck1 CCB				Seq: 47	12:20:34 27 Oct 10		HG	
Line	Flag	Found	Range(+/-)	Units	SD/RSD			
Hg		-.040	.200	ppb	.000			
*** Sample ID: CONC04-09				Seq: 48	12:22:38 27 Oct 10		HG	
				1010121-02				
Hg	.242	ppb	.000	.242				
*** Sample ID: CONC04-09D				Seq: 49	12:24:40 27 Oct 10		HG	
				0102521-DUP1				
Hg	.234	ppb	.000	.234				
*** Sample ID: CONC04-09S				Seq: 50	12:26:44 27 Oct 10		HG	
				0102521-MS1				
Hg	130.	H ppb	.000	130.				
*** Sample ID: CONC04-09S				Seq: 51	12:29:21 27 Oct 10		HG	
				0102521-MSD1				
Hg	133.	H ppb	.000	133.				
*** Sample ID: CONC04-09				Seq: 52	12:31:53 27 Oct 10		HG	
				SDI1010121-02 5X				
Hg	-.506	ppb	.000	-.506				
*** Sample ID: CU-1 10211				Seq: 53	12:33:58 27 Oct 10		HG	
				1010119-01				
Hg	-.047	ppb	.000	-.047				
*** Sample ID: CU-1 10211				Seq: 54	12:35:56 27 Oct 10		HG	
				0102521-DUP2				
Hg	-.040	ppb	.000	-.040				
*** Sample ID: CU-1 10211				Seq: 55	12:37:58 27 Oct 10		HG	
				0102521-MS2				
Hg	135.	H ppb	.000	135.				

```
Line   Conc.  Units     SD/RSD      1       2       3       4       5
-------------------------------------------------------------------------------

*** Sample ID: CU-1 10211            Seq:  56     12:40:33 27 Oct 10   HG
                           0102521-MSD2
Hg    135.  H ppb       .000      135.
                                                                        =
*** Sample ID: CU-1 10211            Seq:  57     12:43:13 27 Oct 10   HG
                           SDI1010119-01  5X
Hg   -.441    ppb       .000     -.441
                                                                        =
*** Check Standard: 2  Ck2 CCV       Seq:  58     12:45:17 27 Oct 10   HG
Line  Flag  %Rcv.   Found    True  Units      SD/RSD
Hg          103.     5.17    5.00  ppb         .000
                                                                        =
*** Check Standard: 1  Ck1 CCB       Seq:  59     12:47:15 27 Oct 10   HG
Line  Flag  Found Range(+/-) Units      SD/RSD
Hg         -.107     .200     ppb         .000
                                                                        =
*** Sample ID: CU-2 10211            Seq:  60     12:49:19 27 Oct 10   HG
                           1010119-02
Hg   -.011    ppb       .000     -.011
                                                                        =
===============================================================================
*** Sample ID: CU-2FD 102            Seq:  61     12:51:18 27 Oct 10   HG
                           1010119-03
Hg   -.012    ppb       .000     -.012
                                                                        =
===============================================================================
*** Sample ID: CU-3 10211            Seq:  62     12:53:18 27 Oct 10   HG
                           1010119-04
Hg   -.009    ppb       .000     -.009
                                                                        =
===============================================================================
*** Sample ID: CU-4 10211            Seq:  63     12:55:38 27 Oct 10   HG
                           1010119-05
Hg    .022    ppb       .000      .022
                                                                        =
===============================================================================
*** Sample ID: CONC04-09S            Seq:  64     13:10:59 27 Oct 10   HG
                           0102521-MS1  25X
Hg    7.66    ppb       .000      7.66
                                                                        =
*** Sample ID: CONC04-09S            Seq:  65     13:13:01 27 Oct 10   HG
                           0102521-MSD1  25X
Hg    7.76    ppb       .000      7.76
                                                                        =
===============================================================================
*** Sample ID: CONC04-09             Seq:  66     13:15:03 27 Oct 10   HG
                           SDI1010121-02  5X
Hg   -.090    ppb       .000     -.090
                                                                        =
===============================================================================
*** Sample ID: CU-1 10211            Seq:  67     13:17:04 27 Oct 10   HG
                           0102521-MS2  25X
Hg    7.69    ppb       .000      7.69
                                                                        =
*** Sample ID: CU-1 10211            Seq:  68     13:19:03 27 Oct 10   HG
                           0102521-MSD2  25X
Hg    7.67    ppb       .000      7.67
                                                                        =
*** Sample ID: CU-1 10211            Seq:  69     13:21:19 27 Oct 10   HG
                           SDI1010119-01  5X
Hg   -.077    ppb       .000     -.077
                                                                        =
```

POST-RUN REPORT

Line	Conc.	Units	SD/RSD	1	2	3	4	5

*** Check Standard: 2 Ck2 CCV Seq: 70 13:23:24 27 Oct 10 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		105.	5.24	5.00	ppb	.000

=

*** Check Standard: 1 Ck1 CCB Seq: 71 13:25:25 27 Oct 10 HG

Line	Flag	Found	Range(+/-)	Units	SD/RSD
Hg		-.072	.200	ppb	.000

=

4. Digestion and Distillation Logs

The following logs shall be submitted, as appropriate, for each preparation procedure: digestion logs for ICP-AES, ICP-MS, mercury preparations, and cyanide. The logs shall include: (1) date; (2) sample weights and volumes, with initial sample weight/volume and final volume clearly indicated; (3) sufficient information to unequivocally identify which QC samples (i.e., LCS, PB) correspond to each batch digested; (4) comments describing any significant sample changes or reactions which occur during preparation shall be entered in the log and noted in the SDG Narrative; (5) indication of pH less than 2 or greater than 12, as applicable; (6) identification of the sample preparer(s) [signature (s)].

METALS/MERCURY PREPARATION LOG

Metals Method: 3005A
Mercury Method: 7470A/7471B
Prepared By: DDD
Case/SDG: 1010107

CompuChem
A Division Of
Liberty Analytical Corp.

Preparation Date: 10-26-10
Preparation Time: 1200
Batch Number: 102522/23
Purple Water

COMPUCHEM SAMPLE ID	CLIENT SAMPLE ID	SAMPLE TYPE	ICP Initial (mL)	ICP Final (mL)	HG Initial (mL)	HG Final (mL)	*Description Before	*Description After ICP	pH
0102522/23-BLK1	PBW	MB	100	100	100	100	CS / CL	CS / CL	N/A
0102522/23-BS1	LCSW	LCS	100		100		CS / CL	CS / CL	N/A
0102522/23-DUP1	13MW5D	DUP	100		100		CS / CL	CS / CL	<2
0102522/23-MS1	13MW5S	MS	100		100		CS / CL	CS / CL	<2
0102522/23-MSD1	13MW5SD	MSD	100		100		CS / CL	CS / CL	<2
1010107-01	13MW5	SAMPLE	100		100		CS / CL	CS / CL	<2
1010107-02	13MW1	SAMPLE	100		100		CS / CL	CS / CL	<2
1010107-03	13MW2	SAMPLE	100		100		CS / CL	CS / CL	<2
1010107-04	13MW3	SAMPLE	100		100		CS / CL	CS / CL	<2
1010107-05	13MW4	SAMPLE	100		100		CS / CL	CS / CL	<2
1010107-06	13MWDUP	SAMPLE	100		100		CS / CL	CS / CL	<2
1010107-07	13MW6	SAMPLE	100		100		CS / CL	CS / CL	<2
1010107-08	13MW7	SAMPLE	100		100		CS / CL	CS / CL	<2

Mercury Standards and QC S0 S0.2 S0.5S1 S5 S10 ICV ICB CRI CCV CCB

NOTE: All standards and QC for mercury were prepared at the same day as the associated samples. Refer to the attached. Standard/QC Preparation Log, with date matching the above preparation date, for preparation method and instruction.

Record of Tempature/Time		
Hot Block Temp In:	95°	C
Hot Block Temp Out:	95°	C
Time Hg in water bath:	1230	
Time Hg out water bath:	1430	
Water Bath Temp In:	95°	C
Water Bath Temp Out:	95°	C

MS Reference

ICAP: 1.0mL Water Spike D
0.5 ml for 50 ml prep
Ref #: 9L15001

HG: 1.0mL 100ppb Hg
Ref# Hg 100ppb 102610 DD

LCS Reference

ICAP: 2.0 mL of ICV 0307
1.0 ml for 50 ml prep
Ref #: 0E20013

HG: 3.0mL 100ppb Hg
Ref# Hg 100 ppb 102610 DD

* R=red, BL=blue, Y=yellow, G=green, O=orange, V=violet, W=white, CS=colorless, BR=brown, BK=black
GY= grey, F=fine, M=medium, C=coarse, CL=clear, CY=cloudy, OP=opaque

"The presence of the Chemist's/analyst's employee ID number, or signature, on this log attests that strict compliance with the method's SOP has occurred. Any SOP deviations requires documentation by the chemist/analyst together with the chemist's/analyst's initials and the initials of the lab supervisor and a QA department representative, signifying approval of the deviation."

Sample Verification Signature: [signature]
This signature corroborates that the sample identification numbers appearing on the digestion cups are the same as those appearing on the field sample containers.

Reviewed By: [signature]
Date: 11/9/10

Shading has been applied to unused portions of this worksheet as a substitute for 'Z-out.

JCF 120209

Standards/QC Preparation Log for ICP Metals/Mercury Page 1 of 3 **Case/SDG:** 1010107
COMPUCHEM a division of Liberty Analytical Corp. Worksheet 1Q (1) 2

REAGENTS	REF#[1]	MANUFACTURER	LOT#	EXPIRATION DATE
SULFURIC ACID (H_2SO_4)	0H13010	CALEDON	72949	08/15
NITRIC ACID (HNO_3)	0I15016	JT BAKER	J29049	09/15
POTASSIUM PERMANGANATE ($KMnO_4$)	0F30018	JT BAKER	J04613	04/15
HYDROCHLORIC ACID (HCL)	0I15015	CALEDON	73819	09/15
POTASSIUM PERSULFATE ($K_2S_2O_8$)	0A07004	JT BAKER	H44465	11/12
HYDROGEN PEROXIDE (H_2O_2)	0I02006	CALEDON	72923	05/11
STANDARDS				
XCL 20R	0I15003	HIGH PURITY	1025219	09/13/11
XCL LCS 10XR	0H03016	HIGH PURITY	1021106	08/02/11
ERA PPT (540)	0G07001	ERA	540	07/07/15
EPA LCS (0405)	0E20016	EPA	0405	05/17/15
ICV-1 (0307)	0E20013	EPA	0307	05/17/15
ILM05.3 MATRIX SPIKE	0B23010	HIGH PURITY	1004722	02/18/11
SILVER (Ag) 100ppm	9L15009	HIGH PURITY	0934323	12/10/10
TCLP 500	9L21002	HIGH PURITY	0934202	12/10/10
ARSENIC (As) 1000ppm	9F17001	HIGH PURITY	0911221	12/05/10
MERCURY (Hg) 20ppm	0F16001	HIGH PURITY	1015809	06/07/11
ICV-5 (0508) Hg	0E20020	EPA	0508	05/17/15

[1]Ref#=Logbook ID, Page number, and item number from Materials Receipt Log
[2]Standard Lot Number consist of standard ID, date prepared, and initials of preparer

Pb 1000ppm	9F17005	HIGH PURITY	0831553	12/05/10

STANDARD SOLUTIONS PREPARED BY: D.Dickens DATE: 10-26-10

ENTERED BY: D.Dickens DATE: 10-26-10

REVIEWED BY: [signature] DATE: 10/26/10

The presence of the Chemist's/Analyst's employee ID number, or signature, on this worksheet attests that strict compliance with the method's SOP has occurred. Any SOP deviations require documentation by the responsible chemist/analyst together with the chemist's/analyst's initials and the initials of the lab supervisor and a QA department representative, signifying approval of the deviation.

Standards/QC Preparation Log for ICP Metals/Mercury Page 2 of 3 **Case/SDG:** 1010107
COMPUCHEM a division of Liberty Analytical Corp. Worksheet 1Q (1) 2

STANDARD LOT NUMBER[2]	PREPARATION INSTRUCTIONS
Hg 100ppb-10-26-10-DD	Place in a 100mL volumetric flask: 0.5mL of 20ppm Hg stock solution 2.5mL of concentrated HNO_3 Baker instra-analyzed Trace Metals grade or equivalent Dilute to 100mL volume with reagent water **(PREPARE DAILY)**
$K_2S_2O_8$- 10-21-10-DD Potassium Persulfate	Place in a 1000mL Erlenmeyer to a re-pipettor bottle **(PREPARE AS NEEDED)**
$KmnO_4$- 10-21-10 –DD Potassium Permanganate	Place in a 2000mL volumetric flask: 100.0g of $KmnO_4$ Baker instra-analyzed Trace Metals grade or equivalent Dilute to 2000mL with reagent water **(PREARE AS NEEDED)**
HNO_3- 10-14-10 - DD Nitric Acid	Place in a 2000mL volumetric flask: 500mL of Deionized water 1000mL of concentrated HNO_3 Baker instra-analyzed Trace Metals grade or equivalent Dilute to 2000mL with reagent water **(PREPARE AS NEEDED)**
HCl- 10-14-10 - DD Hydrochloric Acid	Place in a 2000mL volumetric flask: 500mL of Deionized water 1000mL of concentrated HCl Baker instra-analyzed Trace Metals grade or equivalent Dilute to 2000mL with reagent water **(PREPARE AS NEEDED)**
Aqua Regia- 10-12-10 - DD	Place in a 1000mL container: 600mL of Concentrated HCL 200mL of Concentrated HNO3 **(PREPARE AS NEEDED)**

[1]Ref#=Logbook ID, Page number, and item number from Materials Receipt Log
[2]Standard Lot Number consist of standard ID, date prepared, and initials of preparer

STANDARD SOLUTIONS PREPARED BY: D. Dickens DATE: 10-26-10

ENTERED BY: D. Dickens DATE: 10-26-10

REVIEWED BY: [signature] DATE: 10/28/10

The presence of the Chemist's/Analyst's employee ID number, or signature, on this worksheet attests that strict compliance with the method's SOP has occurred. Any SOP deviations require documentation by the responsible chemist/analyst together with the chemist's/analyst's initials and the initials of the lab supervisor and a QA department representative, signifying approval of the deviation.

Standards/QC Preparation Log for ICP Metals/Mercury Page 3 of 3 **Case/SDG:** 1010107
COMPUCHEM a division of Liberty Analytical Corp. Worksheet 1Q (1) 2

STANDARD LOT NUMBER[2]	PREPARATION INSTRUCTIONS	Resultant Analyte Concentration
ICV-5- 10-26-10-DD	Pipet into a 300mL BOD Bottle 1.0mL of ICV-5 and 99mL of reagent water. Digest according to sample preparation instructions	4.0µg/L
S0/ICB/CCB- 10-26-10-DD	Pipet into a 300mL BOD Bottle 100mL of reagent water Digest according to sample preparation instructions	0.0µg/L
S0.2/CRA/CRI- 10-26-10-DD	Pipet into a 300mL BOD Bottle 0.2mL of Hg 100ppb and 99.8mL of reagent water Digest according to sample preparation instructions	0.2µg/L
S0.5- 10-26-10-DD	Pipet into a 300mL BOD Bottle 0.5mL of Hg 100ppb and 99.5mL of reagent water Digest according to sample preparation instructions	0.5µg/L
S1.0- 10-26-10-DD	Pipet into a 300mL BOD Bottle 1.0mL of Hg 100ppb and 99mL of reagent water Digest according to sample preparation instructions	1.0µg/L
S5.0/CCV 10-26-10-DD	Pipet into a 300mL BOD Bottle 5.0mL of Hg 100ppb and 95mL of reagent water Digest according to sample preparation instructions	5.0µg/L
S10.0- 10-26-10-DD	Pipet into a 300mL BOD Bottle 10mL of Hg 100ppb and 90mL of reagent water Digest according to sample preparation instructions	10.0µg/L

[1]Ref#=Logbook ID, Page number, and item number from Materials Receipt Log
[2]Standard Lot Number consist of standard ID, date prepared, and initials of preparer

STANDARD SOLUTIONS PREPARED BY: D. Dickens DATE: 10-26-10

ENTERED BY: D. Dickens DATE: 10-26-10

REVIEWED BY: [signature] DATE: 10/26/10

The presence of the Chemist's/Analyst's employee ID number, or signature, on this worksheet attests that strict compliance with the method's SOP has occurred. Any SOP deviations require documentation by the responsible chemist/analyst together with the chemist's/analyst's initials and the initials of the lab supervisor and a QA department representative, signifying approval of the deviation.

Standards/QC Preparation Log for ICP/MS Metals

COMPUCHEM a division of Liberty Analytical Corp. WORKSHEET 1 YYY

Case/SDG: 1010107

Reagents	Ref#[1]	Manufacturer	Lot #	Expiration
Hydrochloric Acid - Distilled (HCl)	HCL-D-100410-DDD	Caledon	73819	10/11
Nitric Acid – Distilled (HNO_3)	NHO3-D-100810-DDD	JT Baker	J29049	10/11
Standards				
ICV-1 (0307)	0E20013	EPA	0307	05/17/15
EPA LCS (0405)	OE20016	EPA	0405	05/17/15
ERA PPT (540)	0G07001	ERA	540	07/07/15
Water Spike Sample D	9L15001	High Purity	0934201	12/10/10
Tin 10 ppm	7m1-42-12	NSI	102008-Sn	10/10
Molybdenum 10 ppm	7m1-42-13	NSI	102008-Mo	10/10

Standard Lot Number[2]	Preparation Instructions
HNO_3– 10 20 10 – DDD Nitric Acid	Place in a 100 mL volumetric flask: 25 mL of Deionized water 50 mL of **Distilled** concentrated HNO_3, Baker Instra-analyzed or equivalent Dilute to 100 mL with DI water. Prepare as needed.
HCl– 10 08 10 – DDD Hydrochloric Acid	Place in a 100 mL volumetric flask: 25 mL of Deionized water 50 mL of **Distilled** concentrated HCl, Baker Instra-analyzed or equivalent Dilute to 100 mL with DI water. Prepare as needed.

Standard Solutions Prepared By: D. Dickens Date: 10-26-10

Entered By: D. Dickens Date: 10-26-10

Reviewed By: [signature] Date: 10/26/10

[1]Ref# = Logbook ID, Page number, and item number from Materials Receipt Log

[2]Standard Lot Number consists of standard ID, date prepared, and initials of preparer.

[3]Raw Material sub-boiled from specified lot # in accordance with SOP SPP.9.10

The presence of the Chemist's/Analyst's employee ID number, or signature, on this log attests that strict compliance with the method's SOP has occurred. Any SOP deviations require documentation by the responsible chemist/analyst together with the chemist's/analyst's initials and the initials of the lab supervisor and a QA department representative, signifying approval of the deviation.

INTERNAL DIGESTION COC

0102522

COMPUCHEM

Printed: 10/25/2010 11:27:50AM

Matrix: Water **Prepared using: METALS - EPA 3005A**

Lab Number	Client ID	Sample Type	
0102522-BLK1	PBW	Blank	
0102522-BS1	LCSW	LCS	
0102522-DUP1	13MW5D	Duplicate	
0102522-MS1	13MW5S	Matrix Spike	
0102522-MSD1	13MW5SD	Matrix Spike Dup	
1010107-01	13MW5	Sample	
1010107-02	13MW1	Sample	
1010107-03	13MW2	Sample	
1010107-04	13MW3	Sample	
1010107-05	13MW4	Sample	
1010107-06	13MWDUP	Sample	
1010107-07	13MW6	Sample	
1010107-08	13MW7	Sample	

D. Dickens	10-26-10 1650	ICP Stg	10-26-10 1650
Relinquished By	Date	Received By	Date
ICP Stg.	11-08-10 1036	John Rausch	11-09-10 1036
Relinquished By	Date	Received By	Date
John Rausch	11-09-10 1800	ICP Stg.	11-09-10 1800
Relinquished By	Date	Received By	Date
		11-10-10	
Relinquished By	Date	Received By	Date

INTERNAL DIGESTION COC

0102523

COMPUCHEM

Printed: 10/25/2010 11:27:45AM

Matrix: Water **Prepared using: METALS - EPA 7470A Prep**

Lab Number	Client ID	Sample Type	
0102523-BLK1	PBW	Blank	
0102523-BS1	LCSW	LCS	
0102523-DUP1	13MW5D	Duplicate	
0102523-MS1	13MW5S	Matrix Spike	
0102523-MSD1	13MW5SD	Matrix Spike Dup	
1010107-01	13MW5	Sample	
1010107-02	13MW1	Sample	
1010107-03	13MW2	Sample	
1010107-04	13MW3	Sample	
1010107-05	13MW4	Sample	
1010107-06	13MWDUP	Sample	
1010107-07	13MW6	Sample	
1010107-08	13MW7	Sample	

D. Dickens	10-26-10 1450	Hg Stg	10-26-10 1450
Relinquished By	Date	Received By	Date
Hg Stg.	10-27-10 0900	John Rensch	10-27-10 0900
Relinquished By	Date	Received By	Date
John Rensch	10-28-10 0930	Waste.	10-28-10 0930
Relinquished By	Date	Received By	Date
		11-10.	
Relinquished By	Date	Received By	Date

Metals Internal Chain of Custody Sheet

Batch: 0102522 **Status:** Batched **Analysis**: 6020 ICP MS

Lab Id	Client_Id	Received	Container	Extraction	Preservative	Matrix	Due Date	Cust Date
1010107-01 K	13MW5	10/20/10	3n_500mL Plastic, HNO3	EPA 3005A	Add HNO3 to pH<2	Water	11/9/2010	10/20/2010
1010107-02 E	13MW1	10/20/10	3n_500mL Plastic, HNO3	EPA 3005A	Add HNO3 to pH<2	Water	11/9/2010	10/21/2010
1010107-03 E	13MW2	10/20/10	3n_500mL Plastic, HNO3	EPA 3005A	Add HNO3 to pH<2	Water	11/9/2010	10/21/2010
1010107-04 E	13MW3	10/20/10	3n_500mL Plastic, HNO3	EPA 3005A	Add HNO3 to pH<2	Water	11/9/2010	10/21/2010
1010107-05 E	13MW4	10/20/10	3n_500mL Plastic, HNO3	EPA 3005A	Add HNO3 to pH<2	Water	11/9/2010	10/21/2010
1010107-06 E	13MWDUP	10/20/10	3n_500mL Plastic, HNO3	EPA 3005A	Add HNO3 to pH<2	Water	11/9/2010	10/21/2010
1010107-07 E	13MW6	10/20/10	3n_500mL Plastic, HNO3	EPA 3005A	Add HNO3 to pH<2	Water	11/9/2010	10/20/2010
1010107-08 E	13MW7	10/20/10	3n_500mL Plastic, HNO3	EPA 3005A	Add HNO3 to pH<2	Water	11/9/2010	10/21/2010

ambient	10/26/10 0922	Diane Boyd	10/26/10 0922
Relinquished By	Date/Time	Received By	Date/Time
Diane Boyd	10/26/10 0922	D. Dickens	10-26-10 0922
Relinquished By	Date/Time	Received By	Date/Time
D. Dickens	10-26-10 1630	Ambient	10-26-10 1630
Relinquished By	Date/Time	Received By	Date/Time
		11-12-10	
Relinquished By	Date/Time	Received By	Date/Time

CompuChem

A Division Of

Liberty Analytical Corp.

11/2/2010

JANET FRAZIER

DRAPER

2206 SOUTH MAIN STREET

BLACKSBURG, VA 24060

Subject:

Report of Data - Project: RAAP HWMU13 (OBG)/B03204-08

WorkOrder: 1010107

Attn. JANET FRAZIER

Enclosed are the results of analytical work performed in accordance with the referenced account number. This report covers sample(s) appearing on the listing.

Thank you for selecting CompuChem for your sample analysis. If you should have questions or require additional analytical services, please contact your representative at 1-800-833-5097

Sincerely,

Compuchem

a division of Liberty Analytical Corporation

Attachment

TOTAL NUMBER

OF PAGES ____

501 Madison Avenue, Cary, NC 27513 Tel: 919-379-4100 Fax: 919-379-4050

CompuChem
A Division Of
Liberty Analytical Corp.

SDG NARRATIVE
SDG # 1010107

The 8 water samples were received intact refrigerated between 0.1°C and 1.0°C, with proper documentations, in sealed shipping containers, on October 20th, 2010. The samples were scheduled for the requested analysis of the Wet Chemistry fraction. The samples were analyzed, in accordance with current EPA methods, for the analytes requested as per the COC, with the exceptions and/or additions requested by the client.

SAMPLE IDs:

The cover page contained in this package lists the client ID's and the associated CompuChem numbers which are part of this SDG.

INSTRUMENTAL QUALITY CONTROL:

All calibration verification solutions (ICV & CCV), blanks (ICB, & CCB), associated with this data were confirmed to be within allowable limits.

SAMPLE PREPARATION QUALITY CONTROL:

The sample preparation procedure verifications (LCS & Blank) were found to be within acceptable ranges and all field samples were prepared and analyzed within the contract specified holding times.

MATRIX RELATED QUALITY CONTROL:

13MW5 *(1010107-01)* was requested for matrix spike and matrix spike duplicate. The associated matrix spike and matrix spike duplicate were found to be inside control limits.

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 above. Furthermore, I certify that the tests used in this report meet all requirements of the NELAC standards unless otherwise stated in the SDG narrative or QA notice. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Preeti Khare
Data Reviewer I
November 2nd, 2010

CompuChem
A Division Of
Liberty Analytical Corp.

DRAPER	Project: RAAP HWMU13 (OBG)/B03204-08	
2206 SOUTH MAIN STREET	Project Number: RAAP HWMU13 (OBG)/B03204-08	**Reported:**
BLACKSBURG VA, 24060	Project Manager: JANET FRAZIER	11/02/2010 16:26

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
13MW5	1010107-01	Water	10/19/2010 08:30	10/20/2010 09:36
13MW1	1010107-02	Water	10/18/2010 11:05	10/20/2010 09:36
13MW2	1010107-03	Water	10/18/2010 12:00	10/20/2010 09:36
13MW3	1010107-04	Water	10/18/2010 08:00	10/20/2010 09:36
13MW4	1010107-05	Water	10/18/2010 09:10	10/20/2010 09:36
13MWDUP	1010107-06	Water	10/19/2010 07:30	10/20/2010 09:36
13MW6	1010107-07	Water	10/18/2010 10:10	10/20/2010 09:36
13MW7	1010107-08	Water	10/19/2010 09:45	10/20/2010 09:36

CompuChem
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DRAPER	Project: RAAP HWMU13 (OBG)/B03204-08	
2206 SOUTH MAIN STREET	Project Number: RAAP HWMU13 (OBG)/B03204-08	**Reported:**
BLACKSBURG VA, 24060	Project Manager: JANET FRAZIER	11/02/2010 16:26

13MW5

1010107-01 (Water)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
COMPUCHEM								
INORGANIC ANIONS BY IC								
Perchlorate	**6.36**	4.00	ug/L	1	0102135	10/21/2010 16:52	11/02/2010 15:39	EPA 314.0

CompuChem
A Division Of
Liberty Analytical Corp.

DRAPER	Project: RAAP HWMU13 (OBG)/B03204-08	
2206 SOUTH MAIN STREET	Project Number: RAAP HWMU13 (OBG)/B03204-08	**Reported:**
BLACKSBURG VA, 24060	Project Manager: JANET FRAZIER	11/02/2010 16:26

13MW1

1010107-02 (Water)

Analyte	Result		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
COMPUCHEM									
INORGANIC ANIONS BY IC									
Perchlorate	ND	U	4.00	ug/L	1	0102135	10/21/2010 16:52	11/02/2010 15:39	EPA 314.0

CompuChem
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Liberty Analytical Corp.

DRAPER	Project: RAAP HWMU13 (OBG)/B03204-08	
2206 SOUTH MAIN STREET	Project Number: RAAP HWMU13 (OBG)/B03204-08	**Reported:**
BLACKSBURG VA, 24060	Project Manager: JANET FRAZIER	11/02/2010 16:26

13MW2

1010107-03 (Water)

Analyte	Result		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
COMPUCHEM									
INORGANIC ANIONS BY IC									
Perchlorate	ND	U	4.00	ug/L	1	0102135	10/21/2010 16:52	11/02/2010 15:39	EPA 314.0

CompuChem
A Division Of
Liberty Analytical Corp.

DRAPER	Project: RAAP HWMU13 (OBG)/B03204-08	
2206 SOUTH MAIN STREET	Project Number: RAAP HWMU13 (OBG)/B03204-08	**Reported:**
BLACKSBURG VA, 24060	Project Manager: JANET FRAZIER	11/02/2010 16:26

13MW3

1010107-04 (Water)

Analyte	Result		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
COMPUCHEM									
INORGANIC ANIONS BY IC									
Perchlorate	**1.59**	J	4.00	ug/L	1	0102135	10/21/2010 16:52	11/02/2010 15:39	EPA 314.0

CompuChem
A Division Of
Liberty Analytical Corp.

DRAPER	Project: RAAP HWMU13 (OBG)/B03204-08	
2206 SOUTH MAIN STREET	Project Number: RAAP HWMU13 (OBG)/B03204-08	**Reported:**
BLACKSBURG VA, 24060	Project Manager: JANET FRAZIER	11/02/2010 16:26

13MW4

1010107-05 (Water)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
COMPUCHEM								
INORGANIC ANIONS BY IC								
Perchlorate	**34.1**	4.00	ug/L	1	0102135	10/21/2010 16:52	11/02/2010 15:39	EPA 314.0

CompuChem
A Division Of
Liberty Analytical Corp.

DRAPER	Project: RAAP HWMU13 (OBG)/B03204-08	
2206 SOUTH MAIN STREET	Project Number: RAAP HWMU13 (OBG)/B03204-08	**Reported:**
BLACKSBURG VA, 24060	Project Manager: JANET FRAZIER	11/02/2010 16:26

13MWDUP

1010107-06 (Water)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
COMPUCHEM								
INORGANIC ANIONS BY IC								
Perchlorate	**40.1**	4.00	ug/L	1	0102135	10/21/2010 16:52	11/02/2010 15:39	EPA 314.0

DRAPER	Project: RAAP HWMU13 (OBG)/B03204-08	
2206 SOUTH MAIN STREET	Project Number: RAAP HWMU13 (OBG)/B03204-08	**Reported:**
BLACKSBURG VA, 24060	Project Manager: JANET FRAZIER	11/02/2010 16:26

13MW6

1010107-07 (Water)

Analyte	Result		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
COMPUCHEM									
INORGANIC ANIONS BY IC									
Perchlorate	ND	U	4.00	ug/L	1	0102135	10/21/2010 16:52	11/02/2010 15:39	EPA 314.0

CompuChem
A Division Of
Liberty Analytical Corp.

DRAPER	Project: RAAP HWMU13 (OBG)/B03204-08	
2206 SOUTH MAIN STREET	Project Number: RAAP HWMU13 (OBG)/B03204-08	**Reported:**
BLACKSBURG VA, 24060	Project Manager: JANET FRAZIER	11/02/2010 16:26

13MW7

1010107-08 (Water)

Analyte	Result		Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method
COMPUCHEM									
INORGANIC ANIONS BY IC									
Perchlorate	ND	U	4.00	ug/L	1	0102135	10/21/2010 16:52	11/02/2010 15:39	EPA 314.0

CompuChem
A Division Of
Liberty Analytical Corp.

DRAPER	Project: RAAP HWMU13 (OBG)/B03204-08	
2206 SOUTH MAIN STREET	Project Number: RAAP HWMU13 (OBG)/B03204-08	**Reported:**
BLACKSBURG VA, 24060	Project Manager: JANET FRAZIER	11/02/2010 16:26

INORGANIC ANIONS BY IC - Quality Control

COMPUCHEM

Analyte	Result		Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 0102135 - NO PREP											
Blank (0102135-BLK1)					Prepared: 10/21/2010 16:52 Analyzed: 11/02/2010 15:39						
Perchlorate	ND	U	4.00	ug/L							
LCS (0102135-BS1)					Prepared: 10/21/2010 16:52 Analyzed: 11/02/2010 15:39						
Perchlorate	182		4.00	ug/L	150.0		121	75-125			
Matrix Spike (0102135-MS1)		**Source: 1010107-01**			Prepared: 10/21/2010 16:52 Analyzed: 11/02/2010 15:39						
Perchlorate	124		4.00	ug/L	100.0	6.36	118	75-125			
Matrix Spike Dup (0102135-MSD1)		**Source: 1010107-01**			Prepared: 10/21/2010 16:52 Analyzed: 11/02/2010 15:39						
Perchlorate	128		4.00	ug/L	100.0	6.36	122	75-125	3	20	

DRAPER	Project: RAAP HWMU13 (OBG)/B03204-08	
2206 SOUTH MAIN STREET	Project Number: RAAP HWMU13 (OBG)/B03204-08	**Reported:**
BLACKSBURG VA, 24060	Project Manager: JANET FRAZIER	11/02/2010 16:26

Notes and Definitions

U	The compound was analyzed for but not detected (CLP U-flag).
J	Compound detected below the Reporting Limit; therefore, result is an estimated concentration (CLP J-flag).
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

Items for Project Manager Review

LabNumber	Analysis	Analyte	Exception
			Default Report (not modified)
			VERSION 6.04:2001
	IC 314.0 Perehlorate Water	(WATER)	B-Flags used
	IC 314.0 Perchlorate Water	(WATER)	D-Flags used
	IC 314.0 Perchlorate Water	(WATER)	J-Flags used
	IC 314.0 Perchlorate Water	(WATER)	Result calculations based on MDL
	IC 314.0 Perchlorate Water	(WATER)	RPD calculations based on %Recovery
	IC 314.0 Perchlorate Water	(WATER)	Special Units: (ug/L)
	IC 314.0 Perchlorate Water	(WATER)	U-Flags used

Page 1 of 1
Page 1 of 1
Page 1 of 1

COMPUCHEM
A DIVISION OF LIBERTY CORP

1st 11-2-10

CASE(S): ~~100~~ 1010073, 1010107

ANALYST: JM

DATE: 10/29/10

METHOD 314.0 CL04 in Water

Sequence File: 10-25-2010

Batch #(s): 0101816, 0102135

DIONEX IC 2000 CL04 RUN

Reviewed by: [signature]

Date: 11-2-10

Sequence File: 10-25-2010

Batch #s: 0101816, 0102135

Sample	Sample Name	Ret.Time	Area	Height	Amount	Comments
No.		min	µS*min	µS	PPB	
		ics 2000 perchlorate-1	ics 2000 perchlorate-1	ics 2000 perchlorate-1	ics 2000 perchlorate-1	
		ECD_1	ECD_1	ECD_1	ECD_1	
1	500 PPB	10.327	0.303	1.1384	503.7572	
2	200 PPB	10.37	0.1173	0.4362	195.0513	
3	100 PPB	10.383	0.0546	0.211	90.8678	
4	50 PPB	10.364	0.029	0.1109	48.1718	
5	20 PPB	10.41	0.0122	0.0478	20.3313	
6	10 PPB	10.384	0.0067	0.0238	11.1282	
7	4 PPB	10.43	0.0029	0.0089	4.8691	
8	0 PPB	10.394	0.0014	0.0066	2.3313	
9	ICV 150	10.387	0.1054	0.3935	175.1874	tv=150 +/- 25%
10	ICB	10.337	0.0003	0.0046	0.5258	
11	CCV 100	10.257	0.0678	0.2498	112.7322	tv=100 +/- 25%
12	CCB	10.36	0	0.0003	0.0177	
13	0101816-BLK1	10.443	0.0006	0.0055	1.0274	
14	0101816-BS1	10.412	0.105	0.4038	174.6313	tv=150 +/- 25%
15	1010073-01	10.41	0.0081	0.0252	13.4505	
16	0101816-MS1	10.374	0.0761	0.282	126.5603	
17	0101816-MSD1	10.387	0.0759	0.2808	126.2312	
18	1010073-02	10.383	0.0067	0.0251	11.1576	
19	1010073-03	10.397	0.0008	0.0059	1.267	
20	0102135-BLK1	10.447	0.0001	0.0031	0.2034	
21	0102135-BS1	10.403	0.1094	0.4114	181.9645	tv=150 +/- 25%
22	CCV 100	10.393	0.0694	0.2611	115.3681	tv=100 +/- 25%
23	CCB	10.437	0.0002	0.0027	0.3338	
24	1010107-01	10.39	0.0038	0.0163	6.3627	
25	0102135-MS1	10.413	0.0748	0.2808	124.439	
26	0102135-MSD1	10.387	0.077	0.2812	128.0898	
27	1010107-02	10.34	0.0001	0.0027	0.2151	
28	1010107-03	10.36	0.0003	0.0048	0.4302	
29	1010107-04	10.35	0.001	0.0058	1.5897	
30	1010107-05	10.383	0.0205	0.0809	34.1167	
31	1010107-06	10.404	0.0241	0.091	40.053	
32	1010107-07	10.414	0.0001	0.0024	0.1439	
33	1010107-08	10.287	0.0001	0.0021	0.1923	
34	CCV	10.397	0.0673	0.2546	111.9303	tv=100 +/- 25%
35	CCB	10.43	0.0001	0.0024	0.1869	
36	SHUTDOWN	n.a.	n.a.	n.a.	n.a.	
Average:		10.384	0.0406	0.1532	67.569	
Rel.Std.Dev:		0.39%	148.64%	147.61%	148.64%	

Reagent /Standards/QC Preparation for Perchlorate by IC

Sequence File Number: 10-25-2010

CompuChem a division of Liberty Analytical Corporation WORKSHEET 1 Y(7)

Batch #(s) 0101816, 0102135

STANDARDS AND REAGENTS TRACEABILITY*	Ref #:	Manufacturer	Lot #	Expiration Date
1000 mg/L Perchlorate ICAL Stock Standard	1U(6)1-19-25	HIGH PURITY STDS	0932419	07/16/2011
1000 mg/L Perchlorate Second Source Stock Standard	1U(6)1-18-12	NSI	0409609	04 / 2011
Eluent Solution (Elugen Cartridge)	1U(6)1-13-27	DIONEX	058900	N/A

STANDARD LOT NUMBER* *	PREPARATION INSTRUCTIONS	RESULTANT ANALYTE CONC (UG/L)
Intermediate stock Standard – 10 29 10 jm (10ppm)	Place in a 100- mL volumetric flask: 1 mL of 1000 mg/L Perchlorate Stock Standard.Dilute to the mark with deionzed water.	10,000
Intermediate 2nd source Standard – 10 29 10 jm (10ppm)	Place in a 100mL volumetric flask: 1 mL of 1000 mg/L Perchlorate Stock Standard.Dilute to the mark with deionized water.	10,000
S500 – 10 29 10 jm	Place in a 100- mL volumetric flask: 5.0 ml of the intermediate standard Dilute to the mark with deionized water.	500
S200 – 10 29 10 jm	Place in a 100-mL volumetric flask: 2.0 ml of the intermediate standard Dilute to the mark with deionized water.	200
S100 – 10 29 10 jm **Use for CCV**	Place in a 100-mL volumetric flask: 1.0 ml of the intermediate standard Dilute to the mark with deionized water.	100
S50 – 10 29 10 jm	Place in a 100-mL volumetric flask: 0.5 ml of the intermediate standard Dilute to the mark with deionized water.	50
S20 – 10 29 10 jm	Place in a 100-mL volumetric flask: 0.2 ml of the intermediate standard Dilute to the mark with deionized water.	20
S4 – 10 29 10 jm	Place in a 100-mL volumetric flask: .04 ml of the intermediate standard . Dilute to the mark with deionized water	4
ICV/LCS 10 29 10 jm	Place in a 100-mL volumetric flask: 0.030 ml of the 1000 mg/L Perchlorate Second Source Stock Standard.Dilute to the mark with deionized water	150
For Matrix Spike and Matrix Spike Duplicates 10 29 10 jm	In a 15-mL plastic beaker: Add 0.100 mL of the intermediate standard to 9.9 mL of sample	100
2 ug/L 04 17 10 jm	Place in a 100-mL volumetric flask: .02 ml of the intermediate standard . Dilute to the mark with deionized water	2

* Ref# = Logbook ID, Page number, and item number from a Material Receipt Log

**Standard Lot Number consists of standard ID, date prepared, and initials of preparer.The presence of the Chemist's employee ID number, or signature, on this run log attests thatstrict compliance with the method's SOP has occurred. Any SOP deviations require documentation by the responsible chemist together with the chemist's initials and the initials of the lab supervisor and a QA department representative, signifying approval of the deviation.

Standard Solutions Prepared and Entered By: _____ Date: 10.29.10

Reviewed By: _____ Date: 11-2-10

2/18/10:jm

Title:
Datasource: D143S571_local
Location:
Timebase: ICS_2000 Created: 10/25/2010 7:35:51 PM by chromeleon
#Samples: 36 Last Update: 11/1/2010 5:43:56 PM by chromeleon

No.	Name	Inj. Date/Time	Weight	Dil. Factor	ISTD Amount	Sample ID	Replicate ID	Comment
1	500 PPB	10/29/2010 11:17:22 AM	1.0000	1.0000	1.0000		04	
2	200 PPB	10/29/2010 11:33:17 AM	1.0000	1.0000	1.0000		05	
3	100 PPB	10/29/2010 11:49:11 AM	1.0000	1.0000	1.0000		06	
4	50 PPB	10/29/2010 12:05:06 PM	1.0000	1.0000	1.0000		07	
5	20 PPB	10/29/2010 12:21:00 PM	1.0000	1.0000	1.0000		08	
6	10 PPB	10/29/2010 12:36:55 PM	1.0000	1.0000	1.0000		09	
7	4 PPB	10/29/2010 12:52:50 PM	1.0000	1.0000	1.0000		10	
8	0 PPB	10/29/2010 1:08:44 PM	1.0000	1.0000	1.0000		11	
9	ICV 150	10/29/2010 1:24:39 PM	1.0000	1.0000	1.0000		12	
10	ICB	10/29/2010 1:40:34 PM	1.0000	1.0000	1.0000		13	
11	CCV 100	10/29/2010 1:56:28 PM	1.0000	1.0000	1.0000		14	
12	CCB	10/29/2010 2:13:20 PM	1.0000	1.0000	1.0000		15	
13	0101816-BLK1	10/29/2010 2:29:45 PM	1.0000	1.0000	1.0000		16	
14	0101816-BS1	10/29/2010 2:45:47 PM	1.0000	1.0000	1.0000		17	
15	1010073-01	10/29/2010 3:01:41 PM	1.0000	1.0000	1.0000		18	
16	0101816-MS1	10/29/2010 3:17:36 PM	1.0000	1.0000	1.0000		19	
17	0101816-MSD1	10/29/2010 3:33:30 PM	1.0000	1.0000	1.0000		20	
18	1010073-02	10/29/2010 3:49:25 PM	1.0000	1.0000	1.0000		20	
19	1010073-03	10/29/2010 4:05:20 PM	1.0000	1.0000	1.0000		20	
20	0102135-BLK1	10/29/2010 4:21:14 PM	1.0000	1.0000	1.0000		20	
21	0102135-BS1	10/29/2010 4:37:09 PM	1.0000	1.0000	1.0000		20	
22	CCV 100	10/29/2010 4:53:03 PM	1.0000	1.0000	1.0000		20	
23	CCB	10/29/2010 5:08:58 PM	1.0000	1.0000	1.0000		20	
24	1010107-01	10/29/2010 5:24:53 PM	1.0000	1.0000	1.0000		20	
25	0102135-MS1	10/29/2010 5:40:47 PM	1.0000	1.0000	1.0000		20	
26	0102135-MSD1	10/29/2010 5:56:42 PM	1.0000	1.0000	1.0000		20	
27	1010107-02	10/29/2010 6:12:36 PM	1.0000	1.0000	1.0000		20	
28	1010107-03	10/29/2010 6:28:31 PM	1.0000	1.0000	1.0000		20	
29	1010107-04	10/29/2010 6:44:25 PM	1.0000	1.0000	1.0000		20	
30	1010107-05	10/29/2010 7:00:20 PM	1.0000	1.0000	1.0000		20	
31	1010107-06	10/29/2010 7:16:14 PM	1.0000	1.0000	1.0000		20	
32	1010107-07	10/29/2010 7:32:08 PM	1.0000	1.0000	1.0000		20	
33	1010107-08	10/29/2010 7:48:02 PM	1.0000	1.0000	1.0000		20	
34	CCV	10/29/2010 8:03:56 PM	1.0000	1.0000	1.0000		20	
35	CCB	10/29/2010 8:19:51 PM	1.0000	1.0000	1.0000		20	
36	SHUTDOWN	10/29/2010 8:35:46 PM	1.0000	1.0000	1.0000		20	

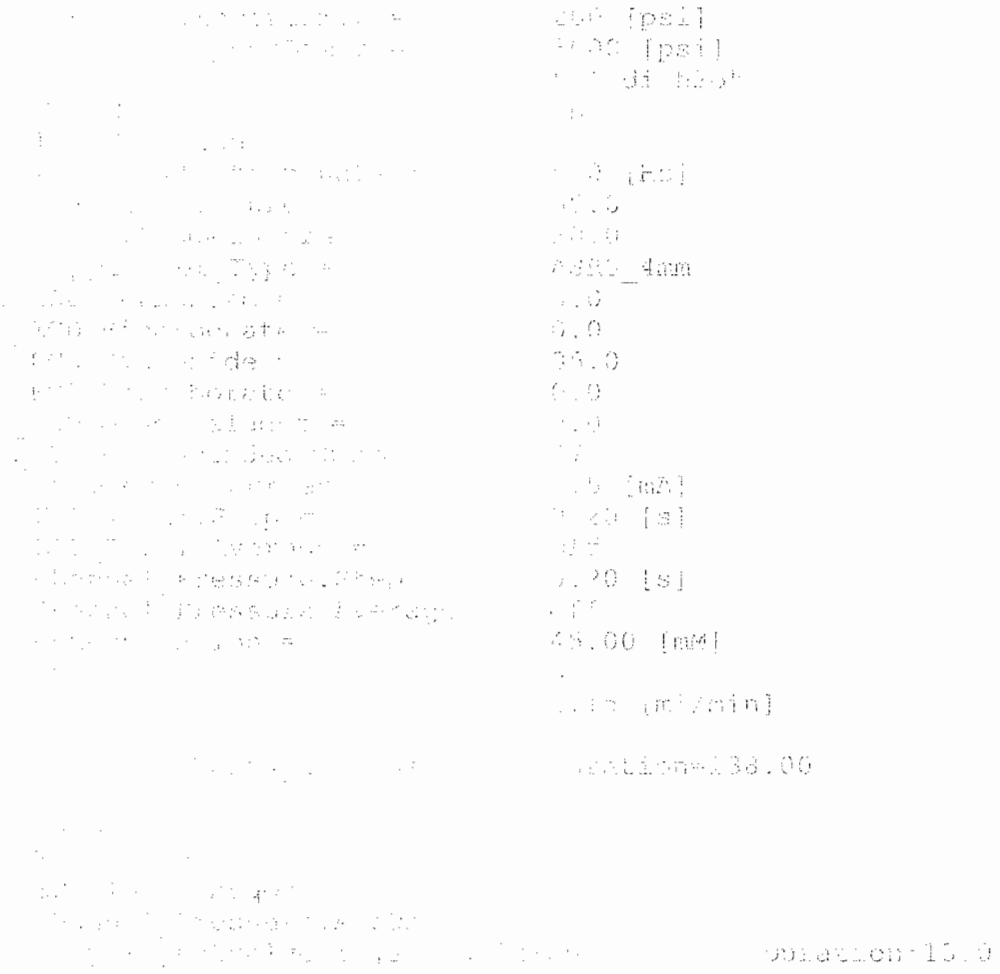
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Operator: chromeleon
Printed: 11/2/2010 2:20:03 PM

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Location:
Timebase: ICS_2000
#Samples: 36

Created: 10/25/2010 7:35:51 PM by chromeleon
Last Update: 11/1/2010 5:43:56 PM by chromeleon

No.	Name	Type	Pos.	Inj. Vol.	Program	Method	Status
1	500 PPB	Standard	4	20.000	ICS_2000 perchlorate	ics 2000 perchlorate	Finished
2	200 PPB	Standard	5	20.000	ICS_2000 perchlorate	ics 2000 perchlorate	Finished
3	100 PPB	Standard	6	20.000	ICS_2000 perchlorate	ics 2000 perchlorate	Finished
4	50 PPB	Standard	7	20.000	ICS_2000 perchlorate	ics 2000 perchlorate	Finished
5	20 PPB	Standard	8	20.000	ICS_2000 perchlorate	ics 2000 perchlorate	Finished
6	10 PPB	Standard	9	20.000	ICS_2000 perchlorate	ics 2000 perchlorate	Finished
7	4 PPB	Standard	10	20.000	ICS_2000 perchlorate	ics 2000 perchlorate	Finished
8	0 PPB	Standard	11	20.000	ICS_2000 perchlorate	ics 2000 perchlorate	Finished
9	ICV 150	Unknown	12	20.000	ICS_2000 perchlorate	ics 2000 perchlorate	Finished
10	ICB	Unknown	13	20.000	ICS_2000 perchlorate	ics 2000 perchlorate	Finished
11	CCV 100	Unknown	14	20.000	ICS_2000 perchlorate	ics 2000 perchlorate	Finished
12	CCB	Unknown	15	20.000	ICS_2000 perchlorate	ics 2000 perchlorate	Finished
13	0101816-BLK1	Unknown	16	20.000	ICS_2000 perchlorate	ics 2000 perchlorate	Finished
14	0101816-BS1	Unknown	17	20.000	ICS_2000 perchlorate	ics 2000 perchlorate	Finished
15	1010073-01	Unknown	18	20.000	ICS_2000 perchlorate	ics 2000 perchlorate	Finished
16	0101816-MS1	Unknown	19	20.000	ICS_2000 perchlorate	ics 2000 perchlorate	Finished
17	0101816-MSD1	Unknown	20	20.000	ICS_2000 perchlorate	ics 2000 perchlorate	Finished
18	1010073-02	Unknown	21	20.000	ICS_2000 perchlorate	ics 2000 perchlorate	Finished
19	1010073-03	Unknown	22	20.000	ICS_2000 perchlorate	ics 2000 perchlorate	Finished
20	0102135-BLK1	Unknown	23	20.000	ICS_2000 perchlorate	ics 2000 perchlorate	Finished
21	0102135-BS1	Unknown	24	20.000	ICS_2000 perchlorate	ics 2000 perchlorate	Finished
22	CCV 100	Unknown	25	20.000	ICS_2000 perchlorate	ics 2000 perchlorate	Finished
23	CCB	Unknown	26	20.000	ICS_2000 perchlorate	ics 2000 perchlorate	Finished
24	1010107-01	Unknown	27	20.000	ICS_2000 perchlorate	ics 2000 perchlorate	Finished
25	0102135-MS1	Unknown	28	20.000	ICS_2000 perchlorate	ics 2000 perchlorate	Finished
26	0102135-MSD1	Unknown	29	20.000	ICS_2000 perchlorate	ics 2000 perchlorate	Finished
27	1010107-02	Unknown	30	20.000	ICS_2000 perchlorate	ics 2000 perchlorate	Finished
28	1010107-03	Unknown	31	20.000	ICS_2000 perchlorate	ics 2000 perchlorate	Finished
29	1010107-04	Unknown	32	20.000	ICS_2000 perchlorate	ics 2000 perchlorate	Finished
30	1010107-05	Unknown	33	20.000	ICS_2000 perchlorate	ics 2000 perchlorate	Finished
31	1010107-06	Unknown	34	20.000	ICS_2000 perchlorate	ics 2000 perchlorate	Finished
32	1010107-07	Unknown	35	20.000	ICS_2000 perchlorate	ics 2000 perchlorate	Finished
33	1010107-08	Unknown	36	20.000	ICS_2000 perchlorate	ics 2000 perchlorate	Finished
34	CCV	Unknown	37	20.000	ICS_2000 perchlorate	ics 2000 perchlorate	Finished
35	CCB	Unknown	38	20.000	ICS_2000 perchlorate	ics 2000 perchlorate	Finished
36	SHUTDOWN	Unknown	39	20.000	Shutdown	ics 2000 perchlorate	Finished

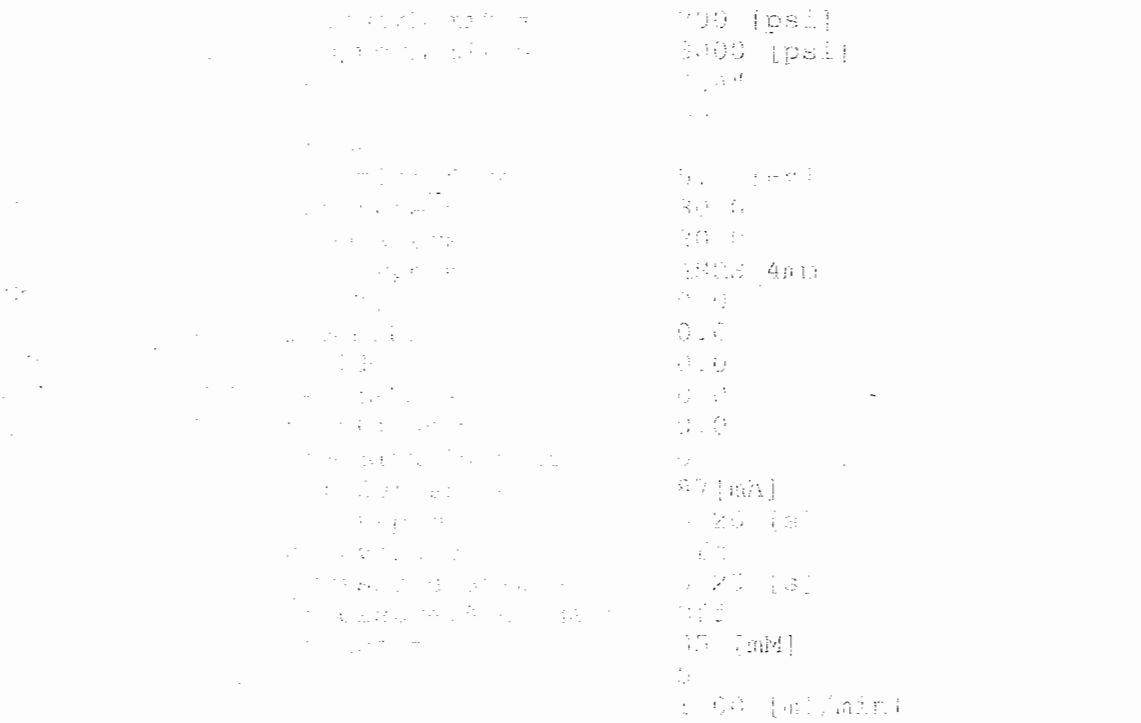
Title:
Datasource: D143S571_local
Location: 10_25_2010_.SEQ
Created: 4/28/2005 11:43:29 AM by COMPUCHEM A DIVISION
Timebase: ICS_2000
Changed: 1/23/2010 12:08:47 PM by chromeleon



Title:
Datasource: D143S571_local
Location: 10_25_2010_.SEQ
Timebase: ICS_2000
Created: 4/28/2005 11:43:29 AM by COMPUCHEM A DIVISION
Changed: 1/23/2010 12:08:47 PM by chromeleon

No.	Channel	Operation	Parameters

Title:
Datasource: D143S571_local
Location: 10_25_2010_.SEQ
Timebase: ICS_2000
Created: 4/28/2005 12:32:11 PM by COMPUCHEM A DIVISION
Changed: 4/28/2005 3:56:49 PM by COMPUCHEM A DIVISION

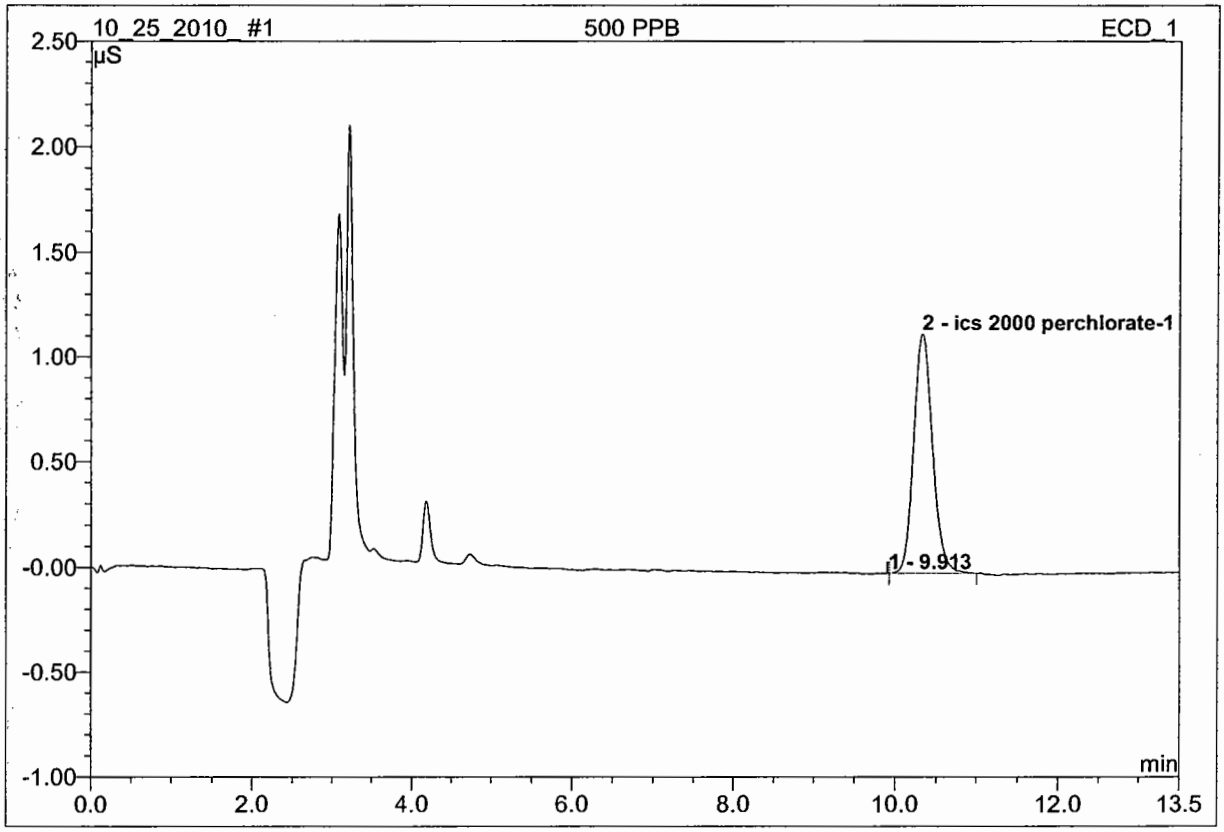


Title:
Datasource: D143S571_local
Location: 10_25_2010_.SEQ
Timebase: ICS_2000
Created: 4/28/2005 12:32:11 PM by COMPUCHEM A DIVISION
Changed: 4/28/2005 3:56:49 PM by COMPUCHEM A DIVISION

No.	Channel	Operation	Parameters

1 500 PPB

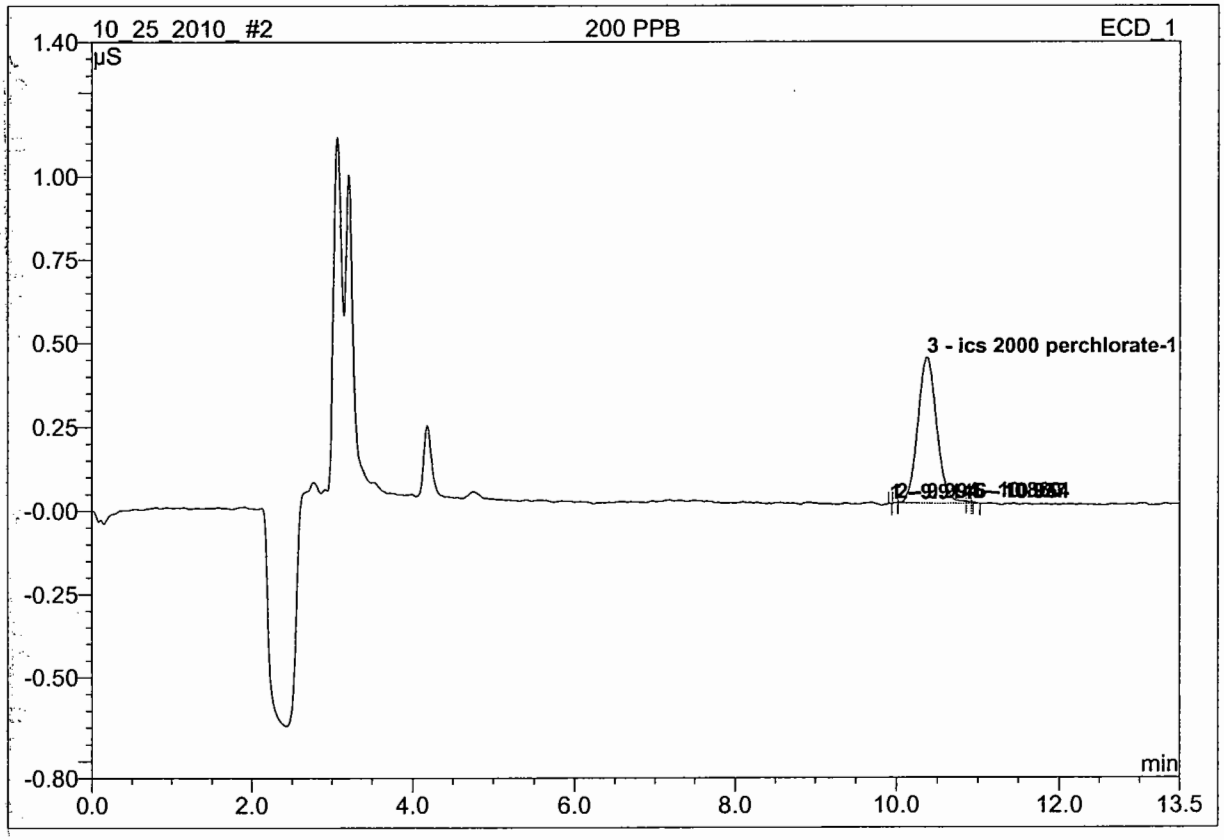
Sample Name:	**500 PPB**	*Injection Volume:*	**20.0**
Vial Number:	**4**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**ICS_2000 perchlorate**	*Bandwidth:*	**n.a.**
Quantif. Method:	**ics 2000 perchlorate**	*Dilution Factor:*	**1.0000**
Recording Time:	**10/29/2010 11:17**	*Sample Weight:*	**1.0000**
Run Time (min):	**13.50**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount PPB	Type
1	9.91	n.a.	0.000	0.000	0.00	n.a.	BM
2	10.33	ics 2000 perchlorate-1	1.138	0.303	100.00	503.757	MB
Total:			1.139	0.303	100.00	503.757	

2 200 PPB

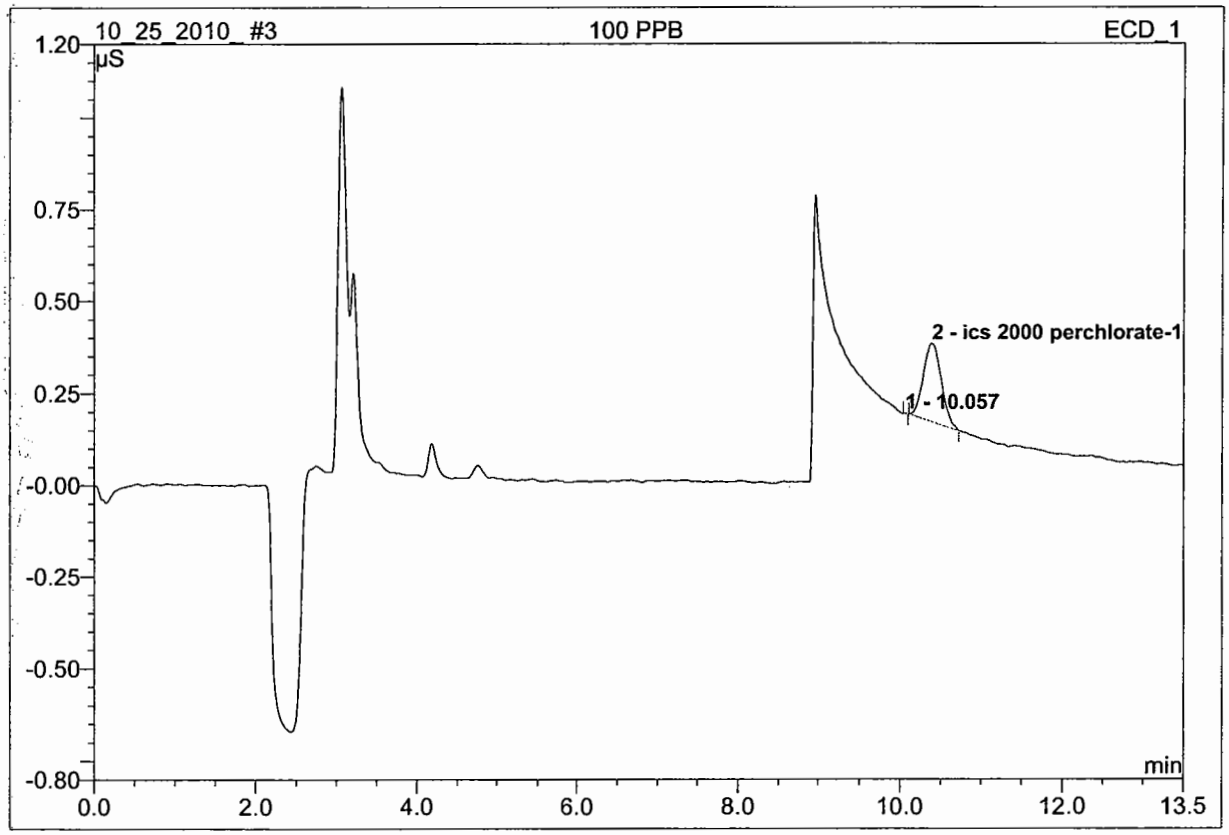
Sample Name:	**200 PPB**	*Injection Volume:*	**20.0**
Vial Number:	**5**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**ICS_2000 perchlorate**	*Bandwidth:*	**n.a.**
Quantif. Method:	**ics 2000 perchlorate**	*Dilution Factor:*	**1.0000**
Recording Time:	**10/29/2010 11:33**	*Sample Weight:*	**1.0000**
Run Time (min):	**13.50**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount PPB	Type
1	9.91	n.a.	0.001	0.000	0.02	n.a.	BMB
2	9.99	n.a.	0.001	0.000	0.04	n.a.	BMb
3	10.37	ics 2000 perchlorate-1	0.436	0.117	99.50	195.051	bM
4	10.86	n.a.	0.005	0.000	0.24	n.a.	M
5	10.93	n.a.	0.000	0.000	0.00	n.a.	Ru
6	10.95	n.a.	0.004	0.000	0.20	n.a.	MB
Total:			0.447	0.118	100.00	195.051	

3 100 PPB

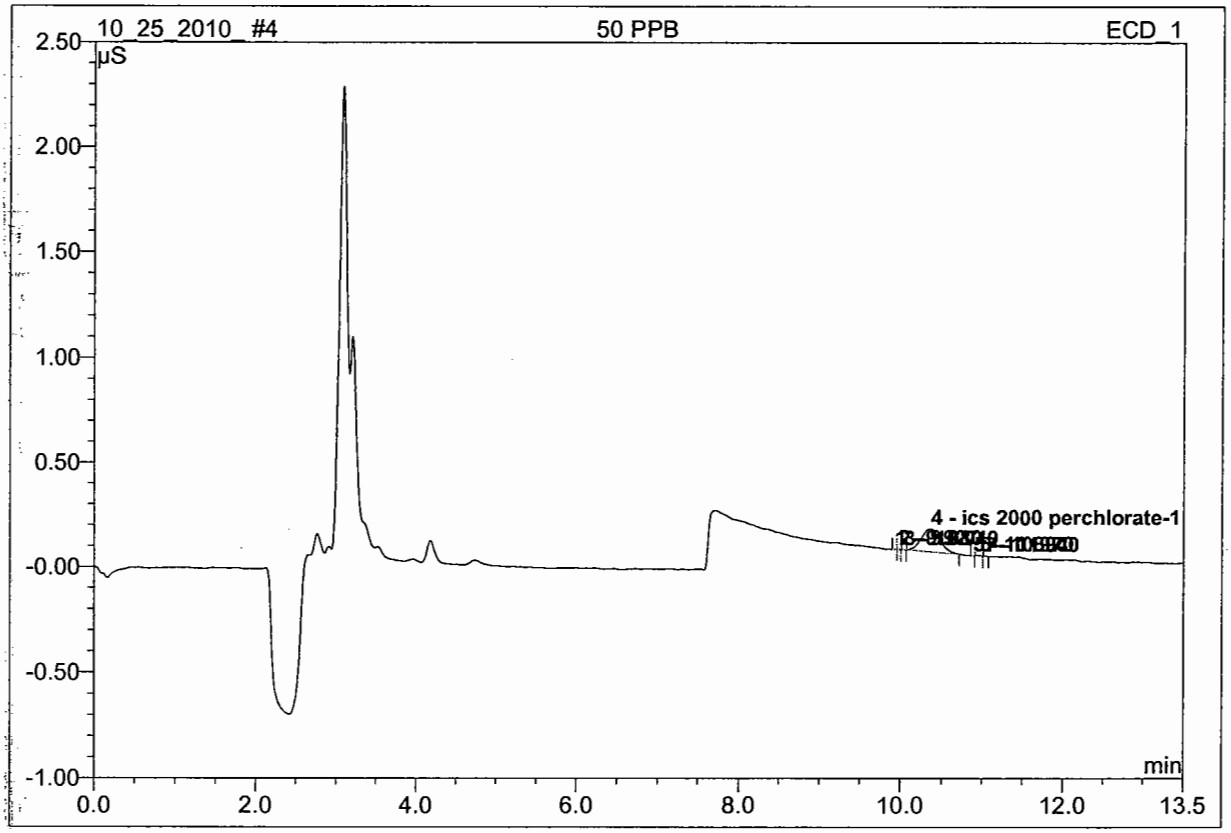
Sample Name:	**100 PPB**	*Injection Volume:*	**20.0**
Vial Number:	**6**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**ICS_2000 perchlorate**	*Bandwidth:*	**n.a.**
Quantif. Method:	**ics 2000 perchlorate**	*Dilution Factor:*	**1.0000**
Recording Time:	**10/29/2010 11:49**	*Sample Weight:*	**1.0000**
Run Time (min):	**13.50**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount PPB	Type
1	10.06	n.a.	0.001	0.000	0.06	n.a.	BMB
2	10.38	ics 2000 perchlorate-1	0.211	0.055	99.94	90.868	BMB
Total:			0.212	0.055	100.00	90.868	

4 50 PPB

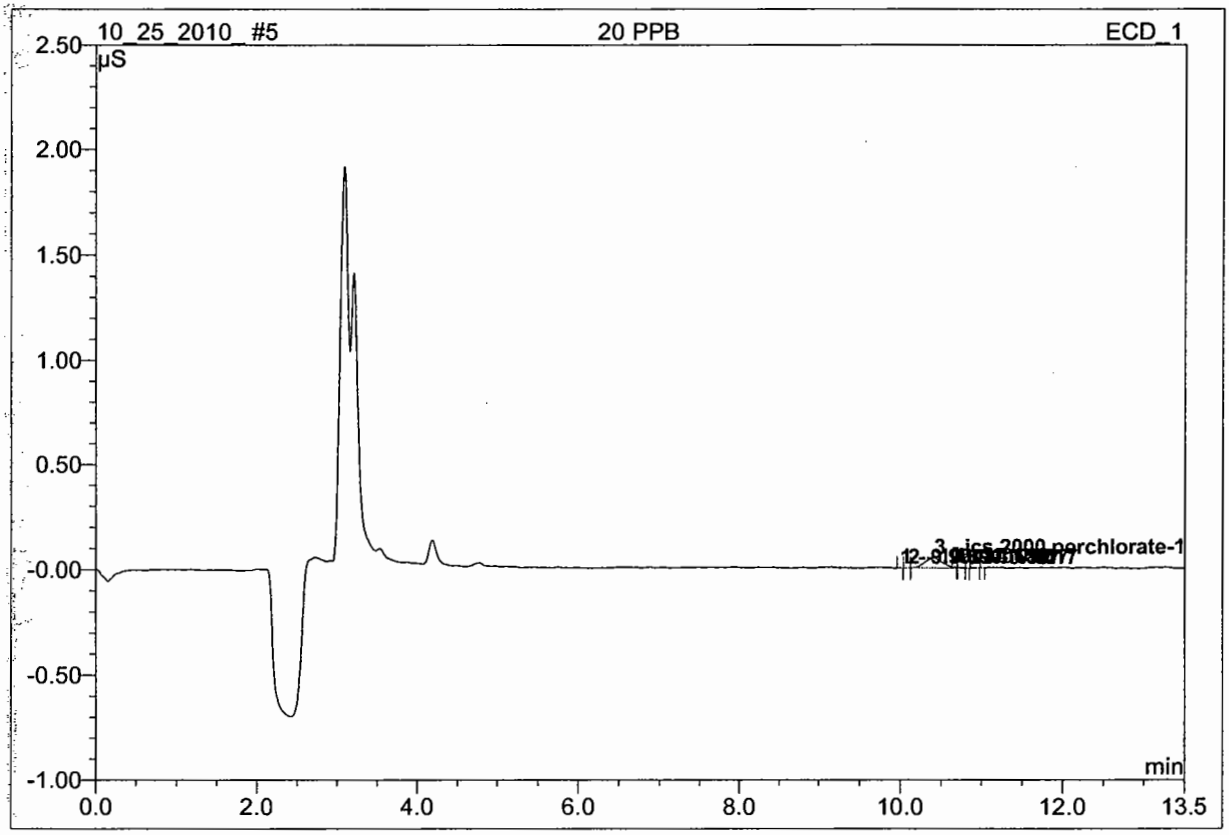
Sample Name:	**50 PPB**	*Injection Volume:*	**20.0**
Vial Number:	**7**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**ICS_2000 perchlorate**	*Bandwidth:*	**n.a.**
Quantif. Method:	**ics 2000 perchlorate**	*Dilution Factor:*	**1.0000**
Recording Time:	**10/29/2010 12:05**	*Sample Weight:*	**1.0000**
Run Time (min):	**13.50**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount PPB	Type
1	9.93	n.a.	0.001	0.000	0.12	n.a.	BM
2	9.98	n.a.	0.001	0.000	0.10	n.a.	MB
3	10.04	n.a.	0.002	0.000	0.19	n.a.	BMB
4	10.36	ics 2000 perchlorate-1	0.111	0.029	98.99	48.172	BMB
5	10.89	n.a.	0.001	0.000	0.05	n.a.	BMB
6	10.97	n.a.	0.002	0.000	0.39	n.a.	BMB
7	11.04	n.a.	0.001	0.000	0.16	n.a.	BMB
Total:			0.119	0.029	100.00	48.172	

5 20 PPB

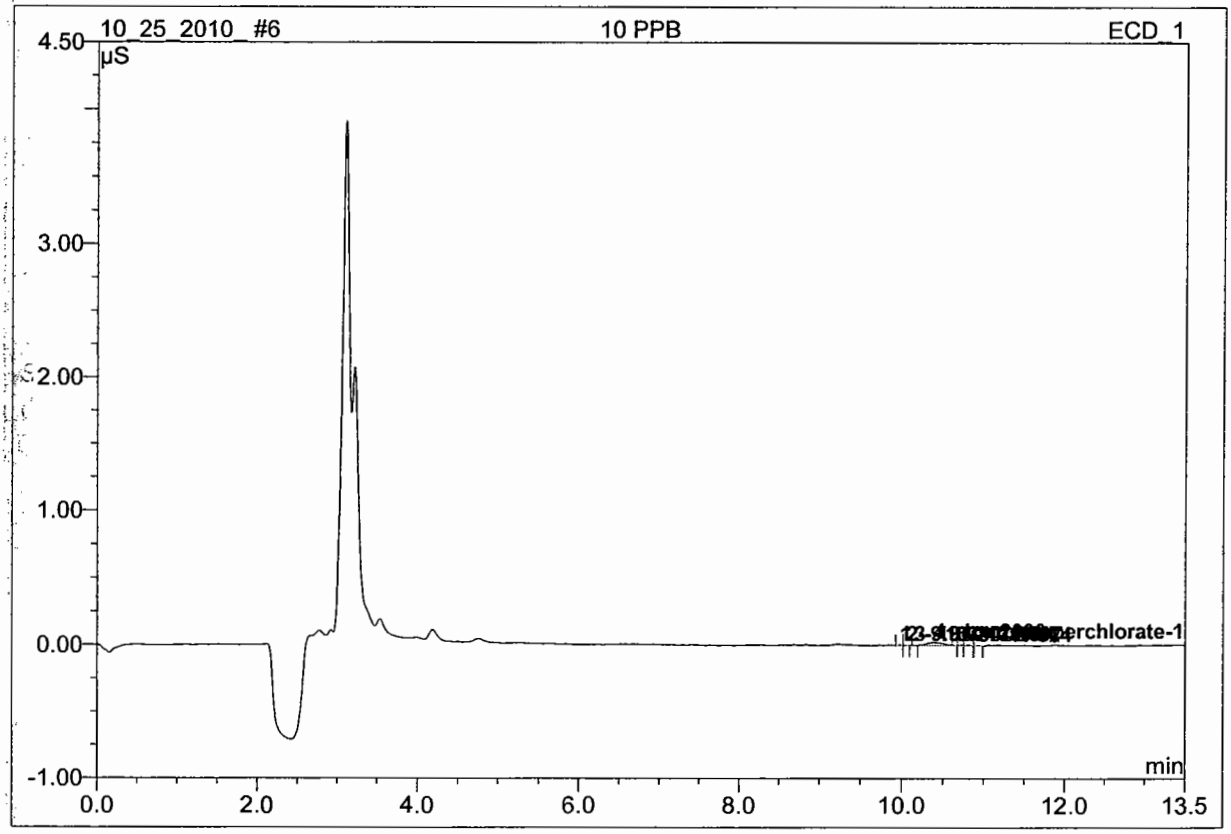
Sample Name:	**20 PPB**	*Injection Volume:*	**20.0**
Vial Number:	**8**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**ICS_2000 perchlorate**	*Bandwidth:*	**n.a.**
Quantif. Method:	**ics 2000 perchlorate**	*Dilution Factor:*	**1.0000**
Recording Time:	**10/29/2010 12:21**	*Sample Weight:*	**1.0000**
Run Time (min):	**13.50**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount PPB	Type
1	9.99	n.a.	0.001	0.000	0.38	n.a.	BMB
2	10.09	n.a.	0.002	0.000	0.45	n.a.	BMB
3	10.41	ics 2000 perchlorate-1	0.048	0.012	96.07	20.331	BM
4	10.65	n.a.	0.001	0.000	0.25	n.a.	Rd
5	10.73	n.a.	0.003	0.000	1.58	n.a.	MB
6	10.81	n.a.	0.000	0.000	0.06	n.a.	BMB
7	10.91	n.a.	0.002	0.000	1.04	n.a.	BMB
8	11.02	n.a.	0.001	0.000	0.17	n.a.	BMB
Total:			0.058	0.013	100.00	20.331	

6 10 PPB

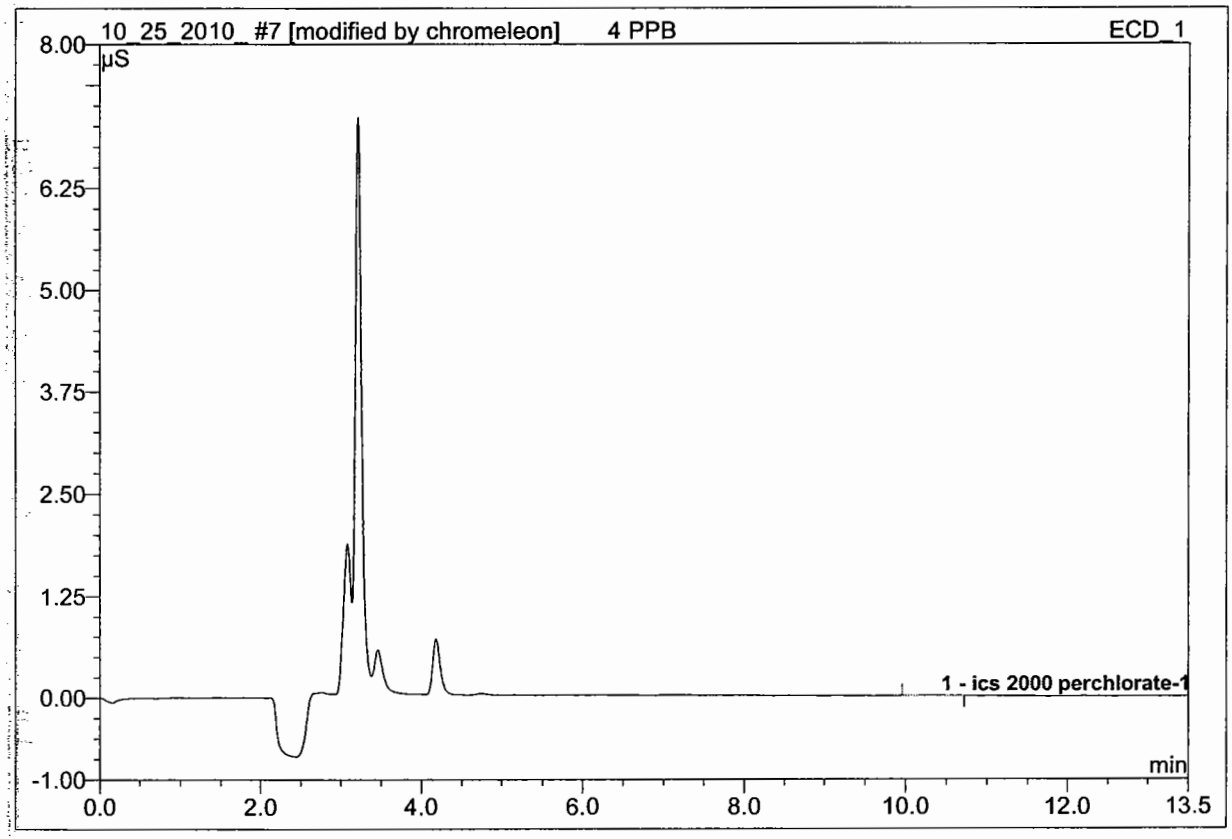
Sample Name:	**10 PPB**	*Injection Volume:*	**20.0**
Vial Number:	**9**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**ICS_2000 perchlorate**	*Bandwidth:*	**n.a.**
Quantif. Method:	**ics 2000 perchlorate**	*Dilution Factor:*	**1.0000**
Recording Time:	**10/29/2010 12:36**	*Sample Weight:*	**1.0000**
Run Time (min):	**13.50**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount PPB	Type
1	9.97	n.a.	0.002	0.000	1.31	n.a.	Ru
2	10.05	n.a.	0.002	0.000	1.32	n.a.	Ru
3	10.15	n.a.	0.001	0.000	0.59	n.a.	Ru
4	10.38	ics 2000 perchlorate-1	0.024	0.007	90.43	11.128	BMB
5	10.64	n.a.	0.001	0.000	0.48	n.a.	Rd
6	10.71	n.a.	0.003	0.000	1.45	n.a.	Rd
7	10.81	n.a.	0.003	0.000	2.86	n.a.	Rd
8	10.92	n.a.	0.002	0.000	1.56	n.a.	BMB
Total:			0.039	0.007	100.00	11.128	

7 4 PPB

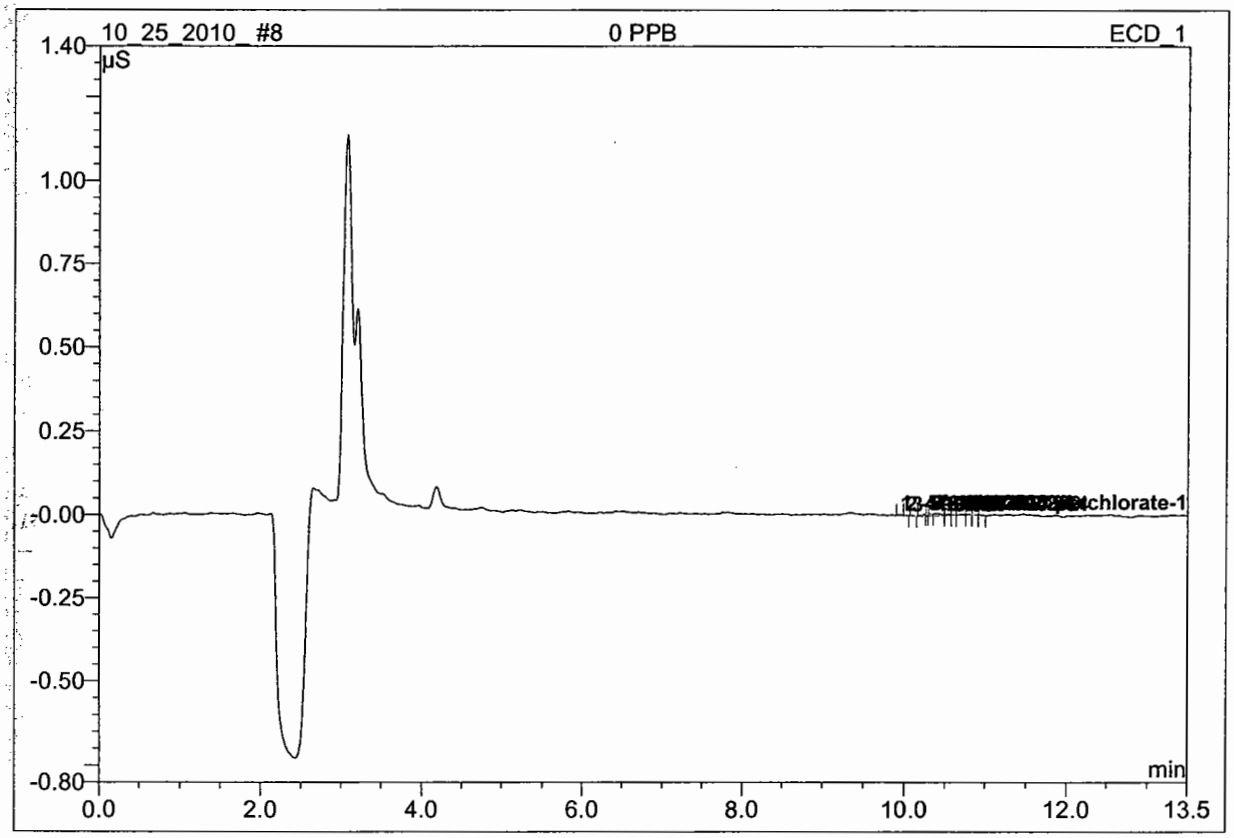
Sample Name:	**4 PPB**	*Injection Volume:*	**20.0**
Vial Number:	**10**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**ICS_2000 perchlorate**	*Bandwidth:*	**n.a.**
Quantif. Method:	**ics 2000 perchlorate**	*Dilution Factor:*	**1.0000**
Recording Time:	**10/29/2010 12:52**	*Sample Weight:*	**1.0000**
Run Time (min):	**13.50**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount PPB	Type
1	10.43	ics 2000 perchlorate-1	0.009	0.003	100.00	4.869	BMB*
Total:			0.009	0.003	100.00	4.869	

8 0 PPB

Sample Name:	**0 PPB**	*Injection Volume:*	**20.0**
Vial Number:	**11**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**ICS_2000 perchlorate**	*Bandwidth:*	**n.a.**
Quantif. Method:	**ics 2000 perchlorate**	*Dilution Factor:*	**1.0000**
Recording Time:	**10/29/2010 13:08**	*Sample Weight:*	**1.0000**
Run Time (min):	**13.50**	*Sample Amount:*	**1.0000**

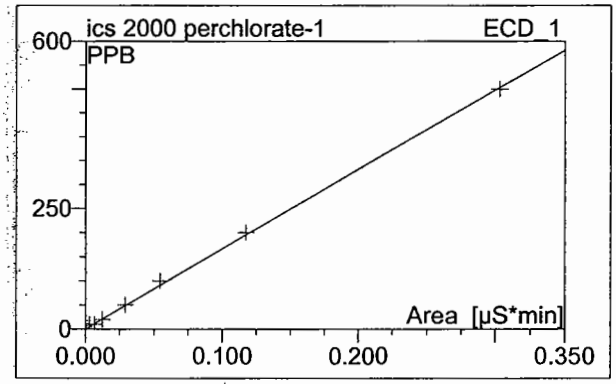


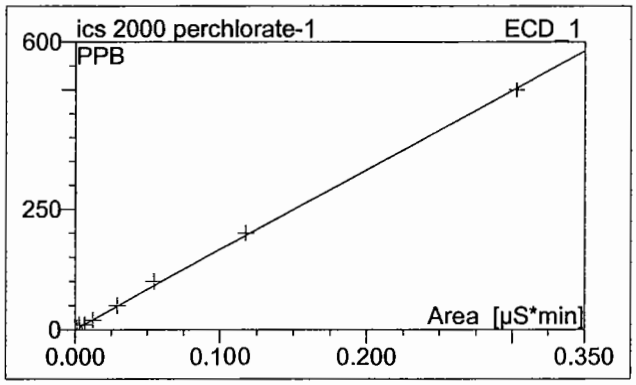
No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount PPB	Type
1	9.94	n.a.	0.003	0.000	13.53	n.a.	BMB
2	10.01	n.a.	0.001	0.000	0.75	n.a.	Rd
3	10.08	n.a.	0.001	0.000	1.15	n.a.	Rd
4	10.24	n.a.	0.001	0.000	2.42	n.a.	Ru
5	10.27	n.a.	0.000	0.000	0.13	n.a.	Ru
6	10.33	n.a.	0.001	0.000	0.53	n.a.	Ru
7	10.39	ics 2000 perchlorate-1	0.007	0.001	50.99	2.331	BM
8	10.54	n.a.	0.004	0.000	8.19	n.a.	M
9	10.59	n.a.	0.002	0.000	3.56	n.a.	M
10	10.72	n.a.	0.003	0.000	9.10	n.a.	M
11	10.79	n.a.	0.003	0.000	4.68	n.a.	MB

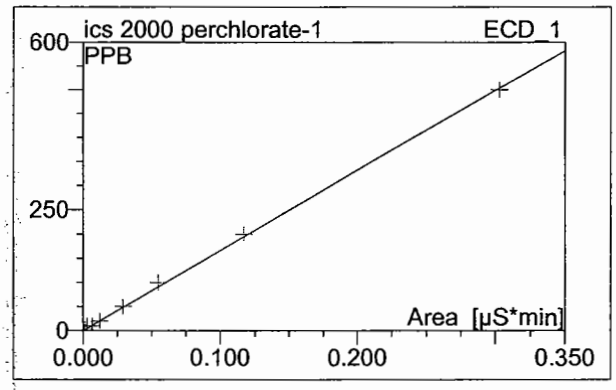
12	10.87	n.a.	0.001	0.000	1.47	n.a.	BMB
13	10.95	n.a.	0.002	0.000	3.50	n.a.	BMB
Total:			0.028	0.003	100.00	2.331	

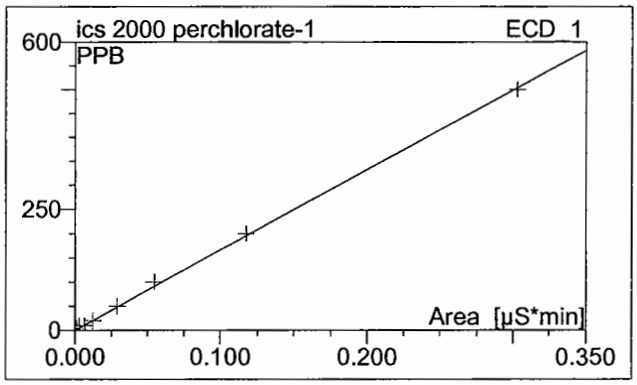
8 0 PPB

Sample Name:	**0 PPB**	*Injection Volume:*	**20.0**
Vial Number:	**11**	*Channel:*	**ECD_1**
Sample Type:	**standard**	*Wavelength:*	**n.a.**
Control Program:	**ICS_2000 perchlorate**	*Bandwidth:*	**n.a.**
Quantif. Method:	**ics 2000 perchlorate**	*Dilution Factor:*	**1.0000**
Recording Time:	**###############**	*Sample Weight:*	**1.0000**
Run Time (min):	**13.50**	*Sample Amount:*	**1.0000**







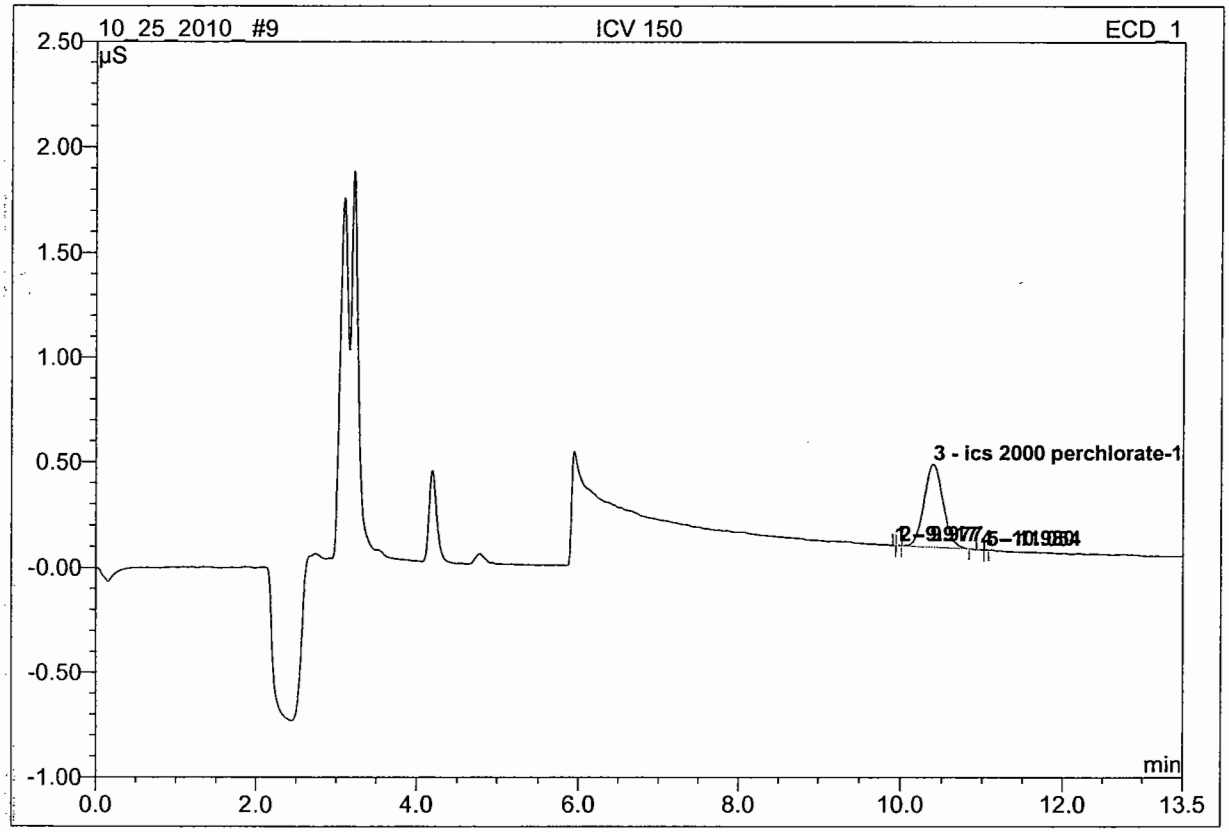


No.	Ret.Time min	Peak Name	Cal.Type	Points	Corr.Coeff. %	Offset	Slope	Curve
1	9.94	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2	10.01	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
3	10.08	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
4	10.24	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
5	10.27	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
6	10.33	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
7	10.39	ics 2000 perchlor	Lin	8	99.9754	0.0000	##########	0.0000
8	10.54	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
9	10.59	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
10	10.72	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
11	10.79	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
12	10.87	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

13	10.95	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Average:					99.9754	0.0000	##########	0.0000

9 ICV 150

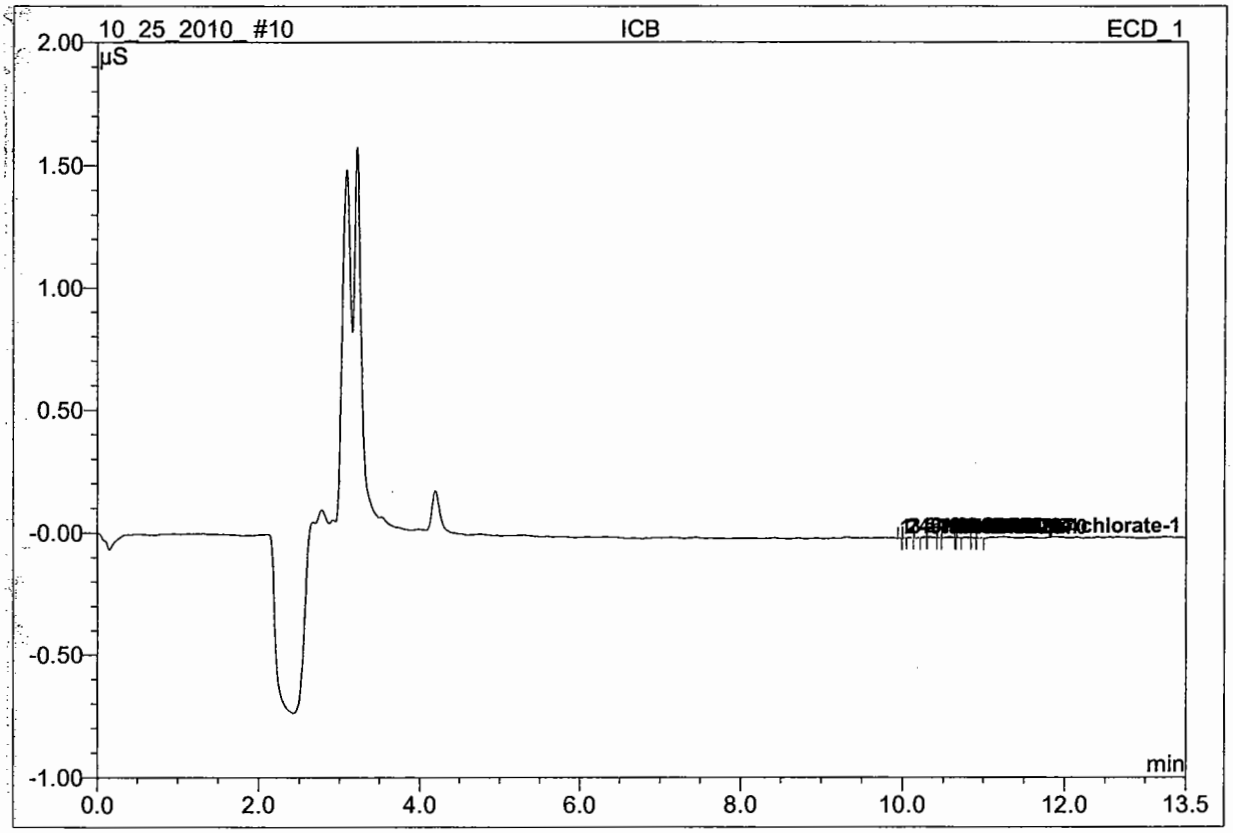
Sample Name:	**ICV 150**	*Injection Volume:*	**20.0**
Vial Number:	**12**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ICS_2000 perchlorate**	*Bandwidth:*	**n.a.**
Quantif. Method:	**ics 2000 perchlorate**	*Dilution Factor:*	**1.0000**
Recording Time:	**10/29/2010 13:24**	*Sample Weight:*	**1.0000**
Run Time (min):	**13.50**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount PPB	Type
1	9.92	n.a.	0.001	0.000	0.01	n.a.	BMB
2	9.98	n.a.	0.002	0.000	0.05	n.a.	BMB
3	10.39	ics 2000 perchlorate-1	0.393	0.105	99.82	175.187	BMB
4	10.98	n.a.	0.002	0.000	0.08	n.a.	BMB
5	11.05	n.a.	0.001	0.000	0.03	n.a.	BMB
Total:			0.399	0.106	100.00	175.187	

10 ICB

Sample Name:	**ICB**	*Injection Volume:*	**20.0**
Vial Number:	**13**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ICS_2000 perchlorate**	*Bandwidth:*	**n.a.**
Quantif. Method:	**ics 2000 perchlorate**	*Dilution Factor:*	**1.0000**
Recording Time:	**10/29/2010 13:40**	*Sample Weight:*	**1.0000**
Run Time (min):	**13.50**	*Sample Amount:*	**1.0000**

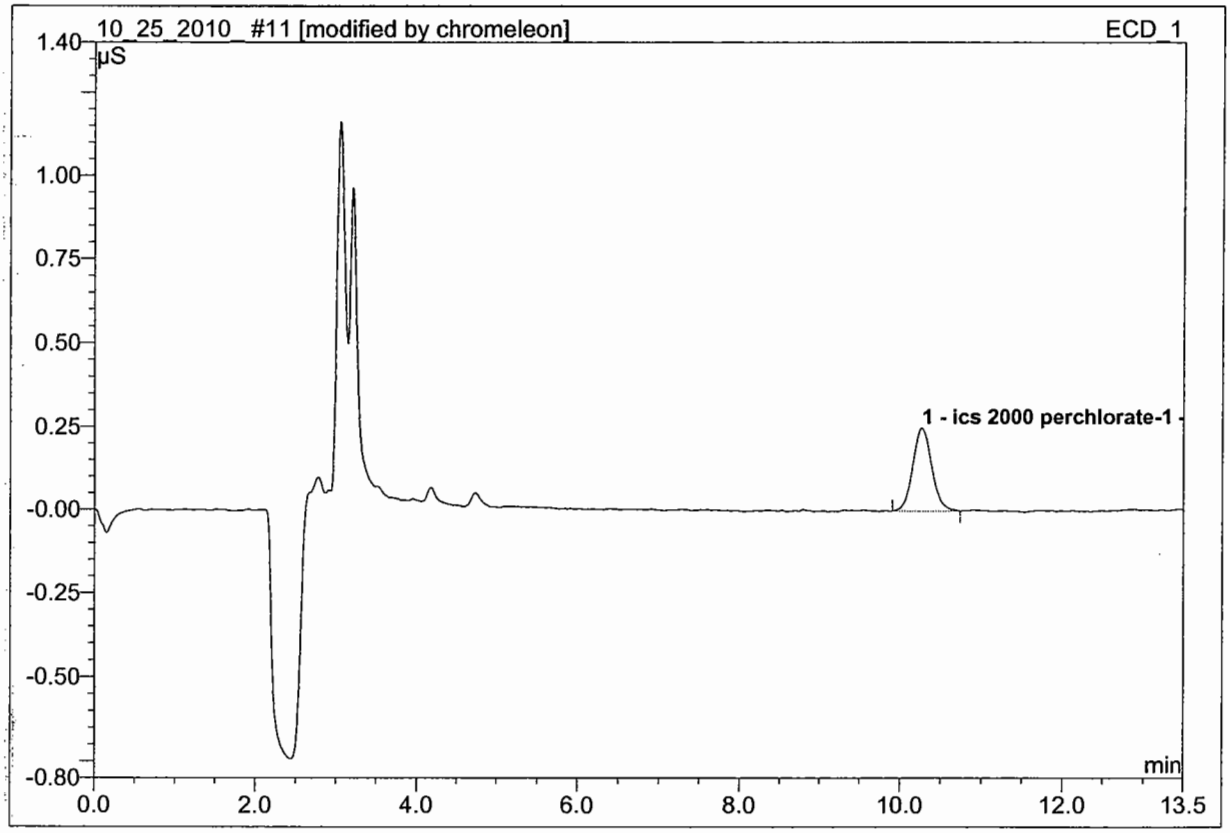


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount PPB	Type
1	9.96	n.a.	0.001	0.000	0.84	n.a.	BMB
2	10.04	n.a.	0.001	0.000	1.02	n.a.	Ru
3	10.08	n.a.	0.003	0.000	14.45	n.a.	BM
4	10.19	n.a.	0.001	0.000	1.81	n.a.	Ru
5	10.26	n.a.	0.005	0.000	15.65	n.a.	M
6	10.34	ics 2000 perchlorate-1	0.005	0.000	17.84	0.526	MB
7	10.44	n.a.	0.000	0.000	0.71	n.a.	BMB
8	10.57	n.a.	0.005	0.000	19.67	n.a.	BMB
9	10.65	n.a.	0.000	0.000	0.06	n.a.	bMB
10	10.68	n.a.	0.001	0.000	0.81	n.a.	Ru
11	10.80	n.a.	0.004	0.000	18.83	n.a.	BM

12	10.86	n.a.	0.002	0.000	5.27	n.a.	MB
13	10.97	n.a.	0.001	0.000	3.03	n.a.	BMB
Total:			0.029	0.002	100.00	0.526	

11 CCV 100

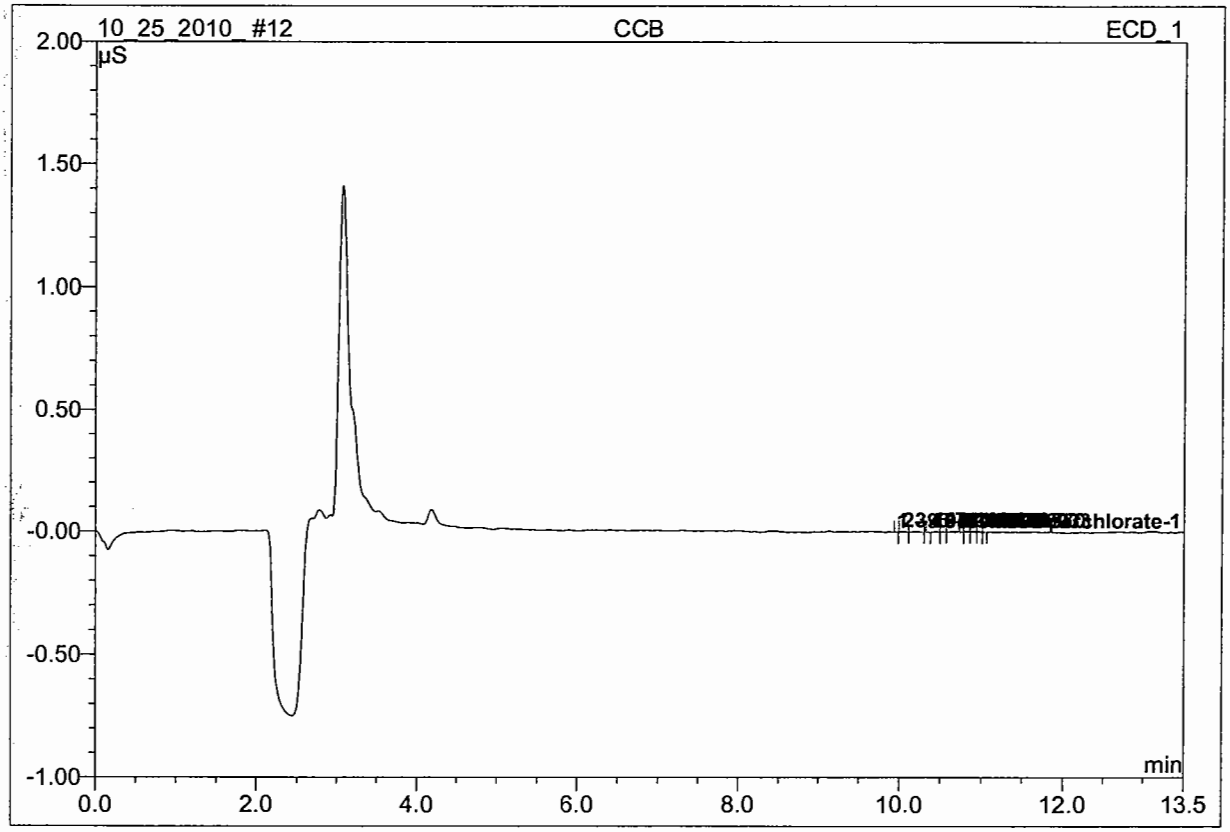
Sample Name:	**CCV 100**	*Injection Volume:*	**20.0**
Vial Number:	**14**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ICS_2000 perchlorate**	*Bandwidth:*	**n.a.**
Quantif. Method:	**ics 2000 perchlorate**	*Dilution Factor:*	**1.0000**
Recording Time:	**10/29/2010 13:56**	*Sample Weight:*	**1.0000**
Run Time (min):	**13.50**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount PPB	Type
1	10.26	ics 2000 perchlorate-1	0.250	0.068	100.00	112.732	BMB
Total:			0.250	0.068	100.00	112.732	

12 CCB

Sample Name:	**CCB**	*Injection Volume:*	**20.0**
Vial Number:	**15**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ICS_2000 perchlorate**	*Bandwidth:*	**n.a.**
Quantif. Method:	**ics 2000 perchlorate**	*Dilution Factor:*	**1.0000**
Recording Time:	**10/29/2010 14:13**	*Sample Weight:*	**1.0000**
Run Time (min):	**13.50**	*Sample Amount:*	**1.0000**

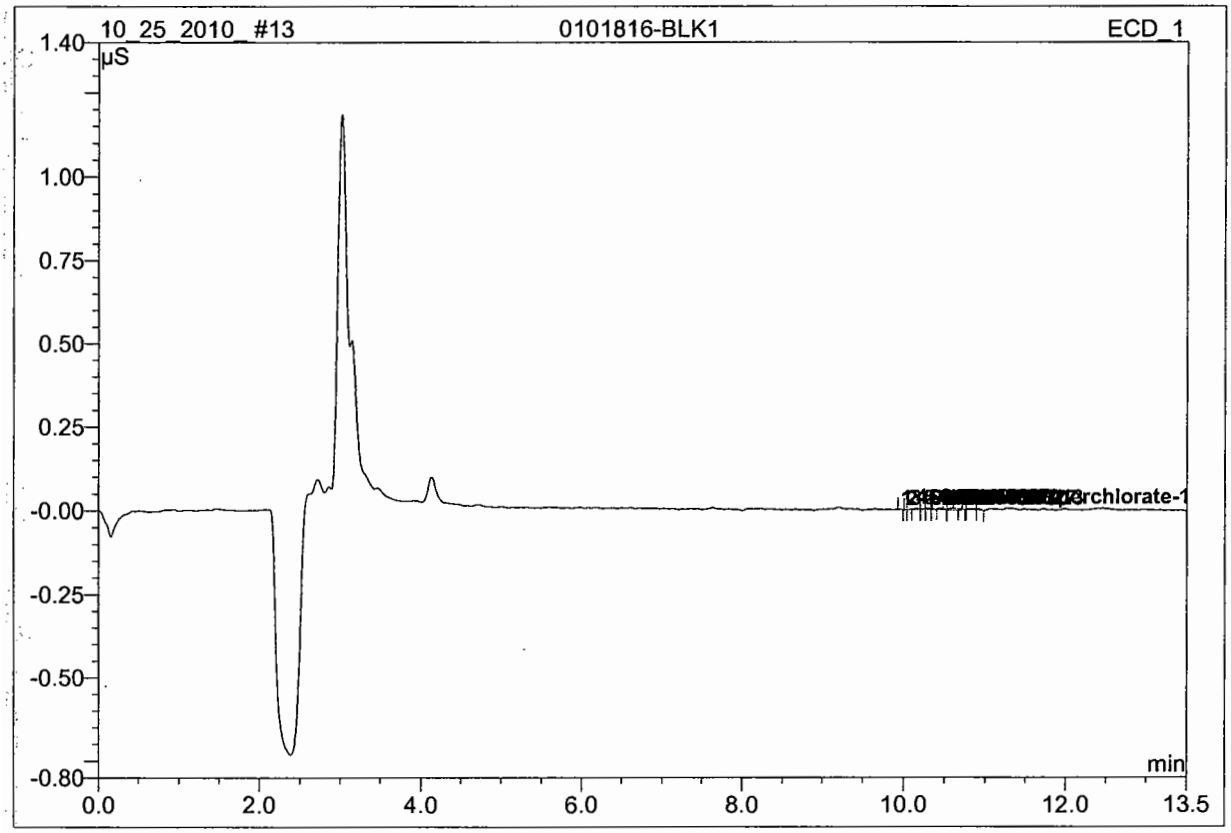


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount PPB	Type
1	9.96	n.a.	0.001	0.000	1.46	n.a.	BMB
2	10.03	n.a.	0.004	0.000	12.57	n.a.	BM
3	10.19	n.a.	0.004	0.000	17.02	n.a.	MB
4	10.36	ics 2000 perchlorate-1	0.000	0.000	0.46	0.018	Ru
5	10.46	n.a.	0.003	0.000	12.58	n.a.	BM
6	10.54	n.a.	0.002	0.000	5.35	n.a.	M
7	10.67	n.a.	0.005	0.001	28.52	n.a.	M
8	10.76	n.a.	0.001	0.000	0.61	n.a.	Rd
9	10.82	n.a.	0.003	0.000	7.59	n.a.	M
10	10.91	n.a.	0.002	0.000	6.59	n.a.	M
11	10.97	n.a.	0.003	0.000	5.38	n.a.	M

12	11.03	n.a.	0.001	0.000	1.86	n.a.	MB
Total:			0.031	0.002	100.00	0.018	

13 0101816-BLK1

Sample Name:	**0101816-BLK1**	*Injection Volume:*	**20.0**
Vial Number:	**16**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ICS_2000 perchlorate**	*Bandwidth:*	**n.a.**
Quantif. Method:	**ics 2000 perchlorate**	*Dilution Factor:*	**1.0000**
Recording Time:	**10/29/2010 14:29**	*Sample Weight:*	**1.0000**
Run Time (min):	**13.50**	*Sample Amount:*	**1.0000**

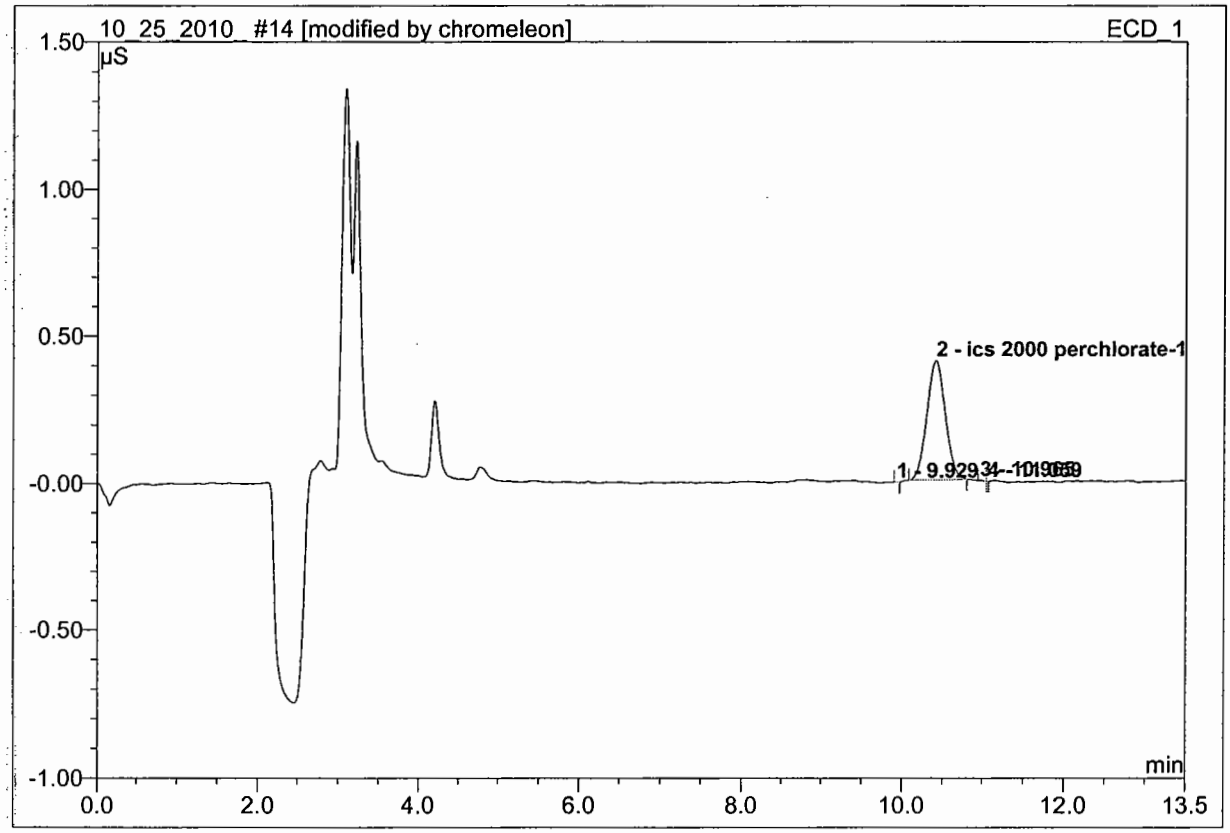


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount PPB	Type
1	9.96	n.a.	0.001	0.000	1.24	n.a.	BMB
2	10.03	n.a.	0.000	0.000	0.30	n.a.	Ru
3	10.08	n.a.	0.001	0.000	0.40	n.a.	Ru
4	10.14	n.a.	0.004	0.000	15.42	n.a.	BM
5	10.24	n.a.	0.004	0.000	6.78	n.a.	M
6	10.30	n.a.	0.005	0.000	8.23	n.a.	M
7	10.38	n.a.	0.001	0.000	0.71	n.a.	Ru
8	10.44	ics 2000 perchlorate-1	0.005	0.001	19.82	1.027	M
9	10.49	n.a.	0.000	0.000	0.40	n.a.	Rd
10	10.59	n.a.	0.006	0.001	26.87	n.a.	M
11	10.62	n.a.	0.000	0.000	0.54	n.a.	Rd

12	10.73	n.a.	0.000	0.000	0.23	n.a.	Rd
13	10.83	n.a.	0.004	0.000	12.89	n.a.	M
14	10.91	n.a.	0.004	0.000	6.18	n.a.	MB
Total:			0.035	0.003	100.00	1.027	

14 0101816-BS1

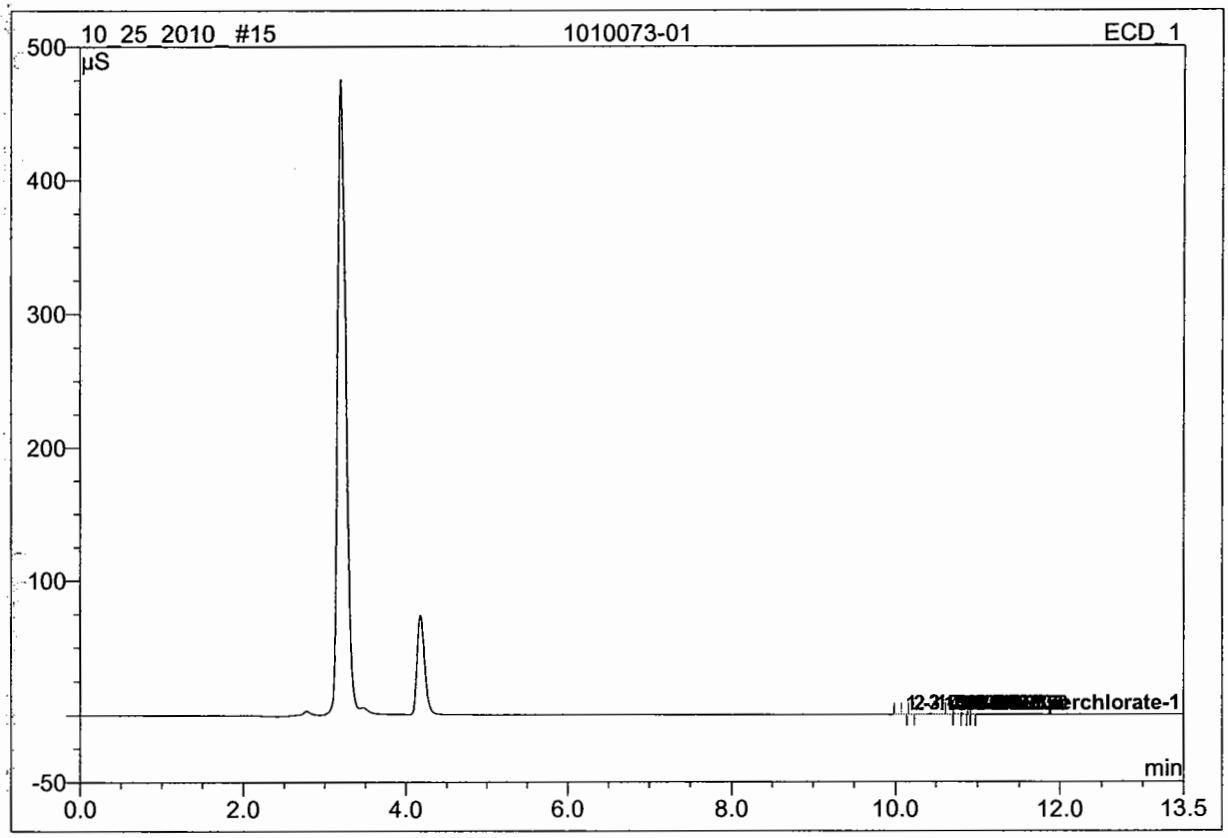
Sample Name:	**0101816-BS1**	*Injection Volume:*	**20.0**
Vial Number:	**17**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ICS_2000 perchlorate**	*Bandwidth:*	**n.a.**
Quantif. Method:	**ics 2000 perchlorate**	*Dilution Factor:*	**1.0000**
Recording Time:	**10/29/2010 14:45**	*Sample Weight:*	**1.0000**
Run Time (min):	**13.49**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount PPB	Type
1	9.93	n.a.	0.001	0.000	0.02	n.a.	BMB
2	10.41	ics 2000 perchlorate-1	0.404	0.105	99.92	174.631	BMB*
3	10.97	n.a.	0.002	0.000	0.06	n.a.	BM *
4	11.06	n.a.	0.000	0.000	0.00	n.a.	MB*
Total:			0.406	0.105	100.00	174.631	

15 1010073-01

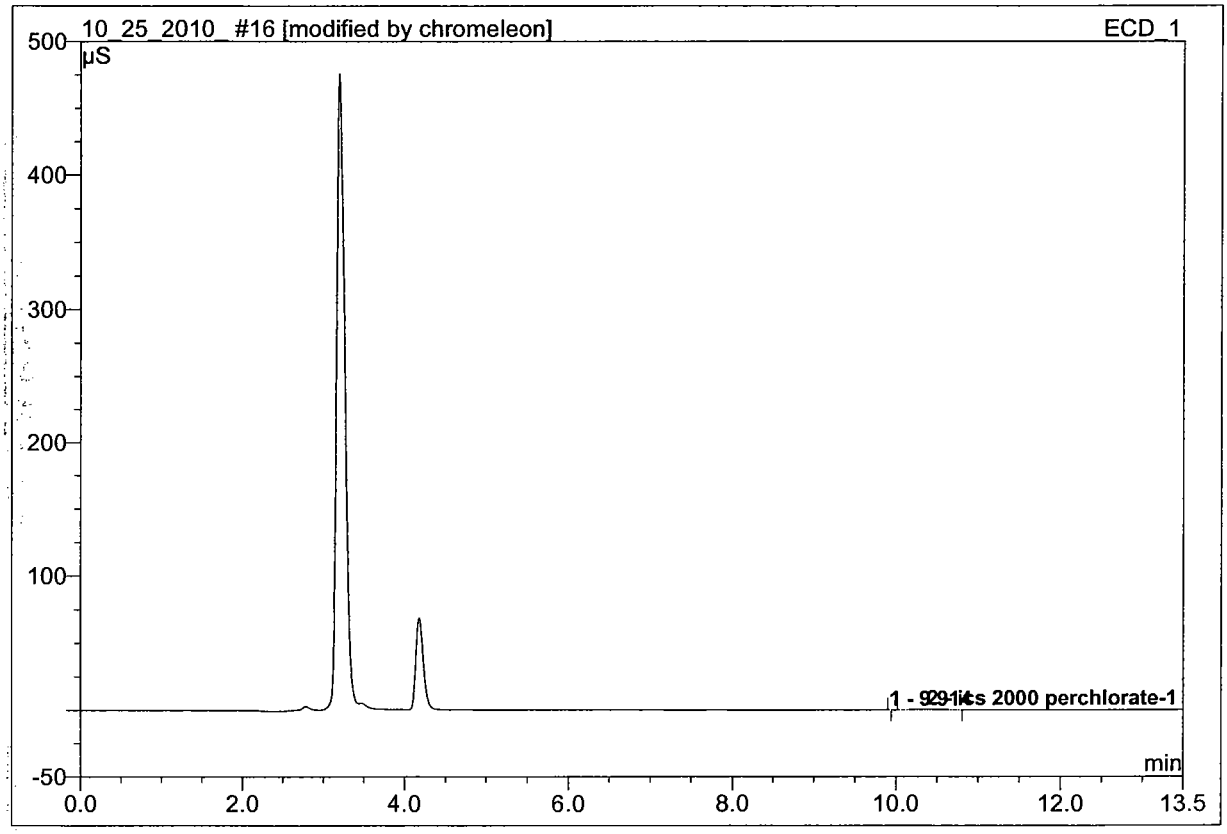
Sample Name:	**1010073-01**	*Injection Volume:*	**20.0**
Vial Number:	**18**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ICS_2000 perchlorate**	*Bandwidth:*	**n.a.**
Quantif. Method:	**ics 2000 perchlorate**	*Dilution Factor:*	**1.0000**
Recording Time:	**10/29/2010 15:01**	*Sample Weight:*	**1.0000**
Run Time (min):	**13.50**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount PPB	Type
1	10.12	n.a.	0.001	0.000	0.39	n.a.	Ru
2	10.22	n.a.	0.001	0.000	0.46	n.a.	Ru
3	10.41	ics 2000 perchlorate-1	0.025	0.008	94.98	13.450	BMB
4	10.66	n.a.	0.003	0.000	1.52	n.a.	Rd
5	10.76	n.a.	0.003	0.000	1.79	n.a.	Rd
6	10.84	n.a.	0.001	0.000	0.49	n.a.	BMB
7	10.90	n.a.	0.000	0.000	0.06	n.a.	BMB
8	10.95	n.a.	0.001	0.000	0.30	n.a.	BMB
Total:			0.035	0.009	100.00	13.450	

16 0101816-MS1

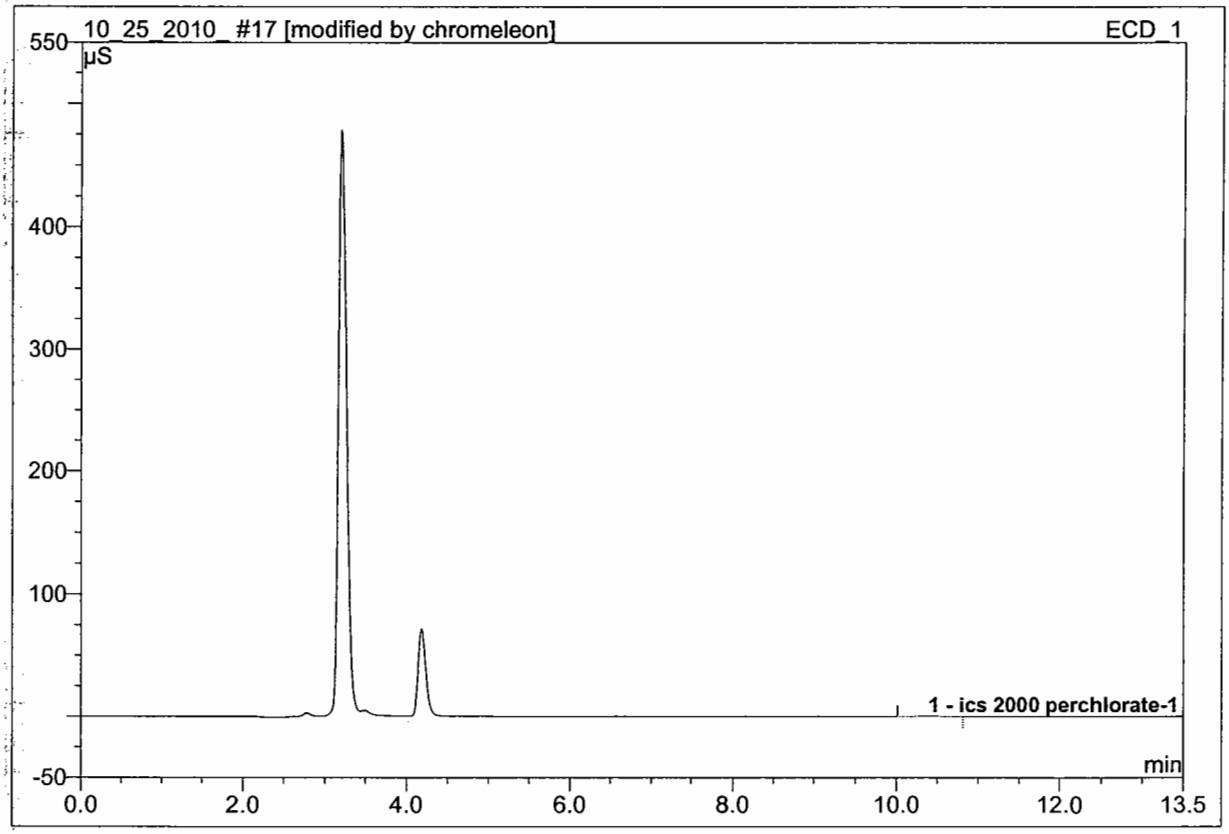
Sample Name:	**0101816-MS1**	*Injection Volume:*	**20.0**
Vial Number:	**19**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ICS_2000 perchlorate**	*Bandwidth:*	**n.a.**
Quantif. Method:	**ics 2000 perchlorate**	*Dilution Factor:*	**1.0000**
Recording Time:	**10/29/2010 15:17**	*Sample Weight:*	**1.0000**
Run Time (min):	**13.50**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount PPB	Type
1	9.91	n.a.	0.001	0.000	0.02	n.a.	BMB
2	10.37	ics 2000 perchlorate-1	0.282	0.076	99.98	126.560	BMB
Total:			0.283	0.076	100.00	126.560	

17 0101816-MSD1

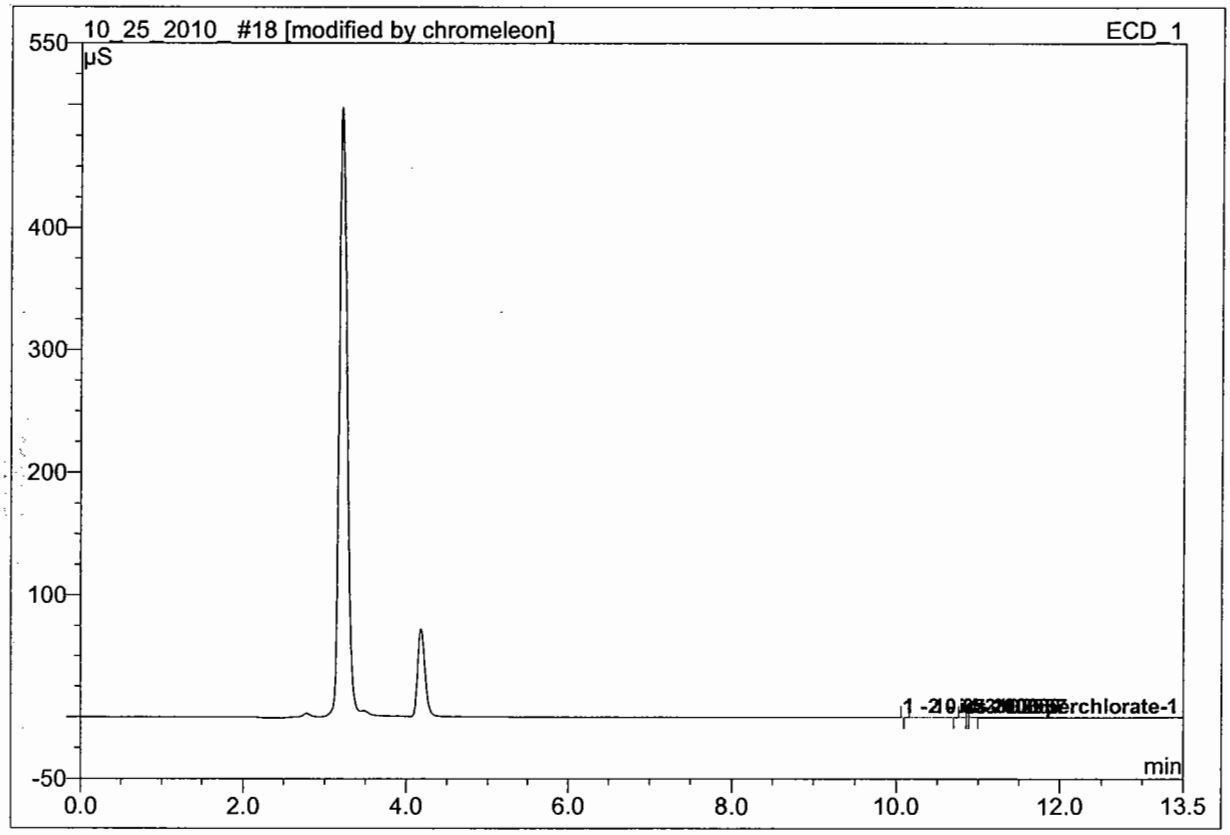
Sample Name:	**0101816-MSD1**	*Injection Volume:*	**20.0**
Vial Number:	**20**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ICS_2000 perchlorate**	*Bandwidth:*	**n.a.**
Quantif. Method:	**ics 2000 perchlorate**	*Dilution Factor:*	**1.0000**
Recording Time:	**10/29/2010 15:33**	*Sample Weight:*	**1.0000**
Run Time (min):	**13.50**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount PPB	Type
1	10.39	ics 2000 perchlorate-1	0.281	0.076	100.00	126.231	BMB
Total:			0.281	0.076	100.00	126.231	

18 1010073-02

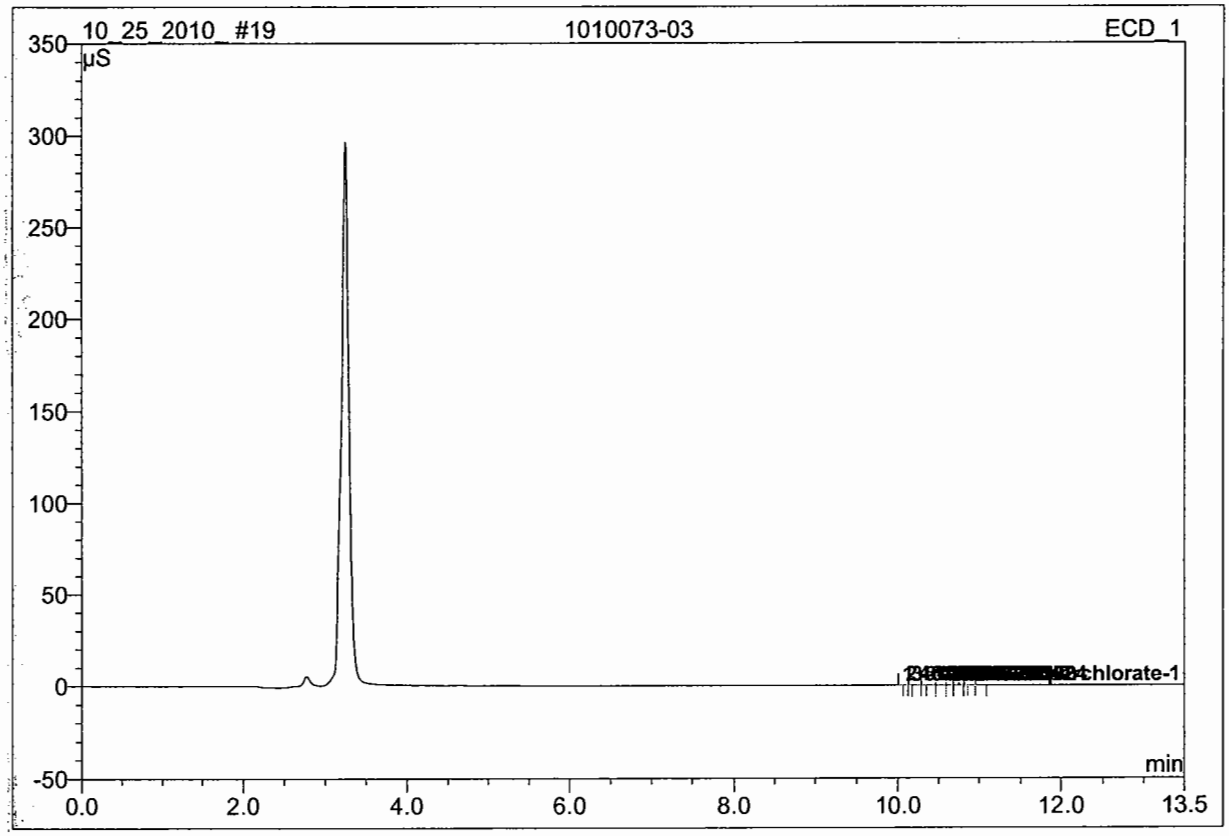
Sample Name:	**1010073-02**	*Injection Volume:*	**20.0**
Vial Number:	**21**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ICS_2000 perchlorate**	*Bandwidth:*	**n.a.**
Quantif. Method:	**ics 2000 perchlorate**	*Dilution Factor:*	**1.0000**
Recording Time:	**10/29/2010 15:49**	*Sample Weight:*	**1.0000**
Run Time (min):	**13.50**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount PPB	Type
1	10.07	n.a.	0.000	0.000	0.11	n.a.	BMB*
2	10.38	ics 2000 perchlorate-1	0.025	0.007	97.46	11.158	BMB*
3	10.80	n.a.	0.001	0.000	0.88	n.a.	BMB*
4	10.86	n.a.	0.000	0.000	0.03	n.a.	BMB
5	10.94	n.a.	0.002	0.000	1.51	n.a.	BMB
Total:			0.029	0.007	100.00	11.158	

19 1010073-03

Sample Name:	**1010073-03**	*Injection Volume:*	**20.0**
Vial Number:	**22**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ICS_2000 perchlorate**	*Bandwidth:*	**n.a.**
Quantif. Method:	**ics 2000 perchlorate**	*Dilution Factor:*	**1.0000**
Recording Time:	**10/29/2010 16:05**	*Sample Weight:*	**1.0000**
Run Time (min):	**13.50**	*Sample Amount:*	**1.0000**

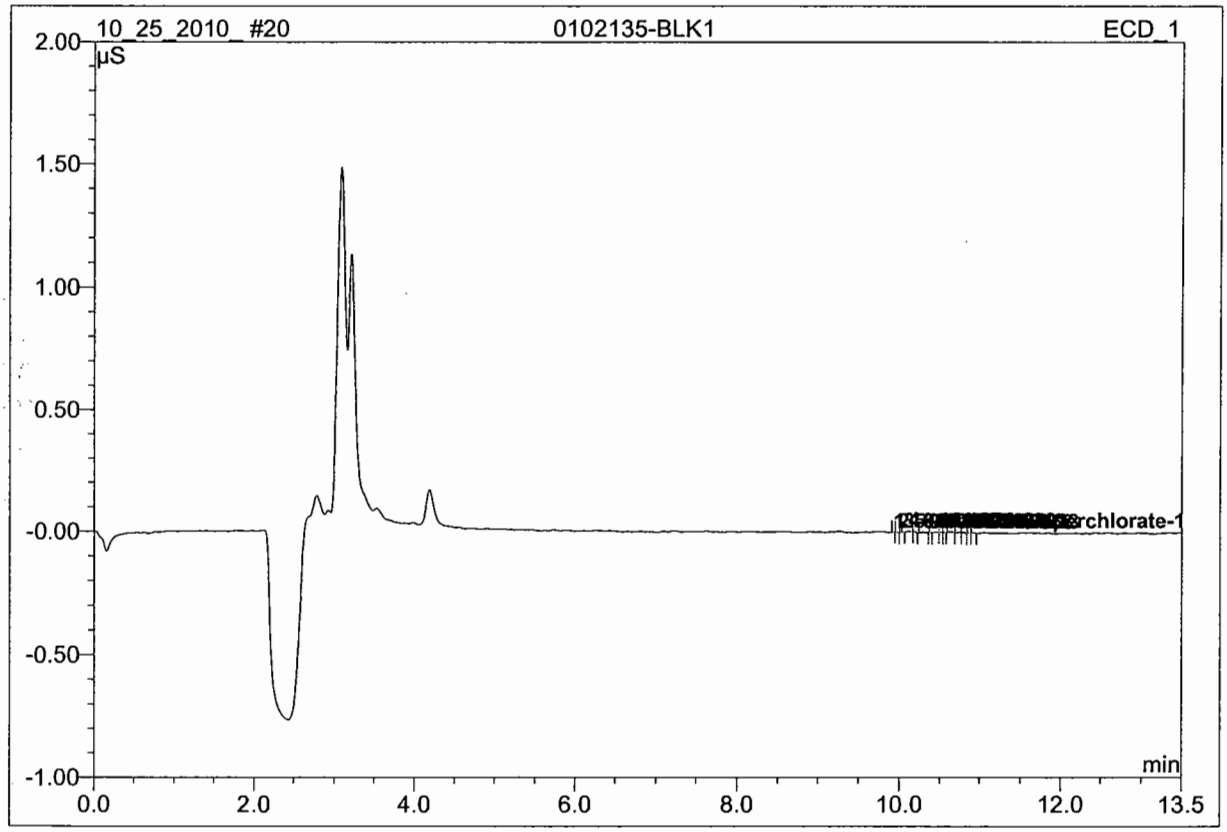


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount PPB	Type
1	10.06	n.a.	0.001	0.000	0.81	n.a.	Ru
2	10.09	n.a.	0.003	0.000	7.02	n.a.	BM
3	10.16	n.a.	0.000	0.000	0.31	n.a.	Ru
4	10.25	n.a.	0.005	0.001	16.44	n.a.	M
5	10.32	n.a.	0.001	0.000	0.51	n.a.	Ru
6	10.40	ics 2000 perchlorate-1	0.006	0.001	23.13	1.267	M
7	10.53	n.a.	0.006	0.001	16.91	n.a.	M
8	10.63	n.a.	0.004	0.000	7.99	n.a.	M
9	10.73	n.a.	0.004	0.000	10.26	n.a.	M
10	10.76	n.a.	0.000	0.000	0.65	n.a.	Rd
11	10.85	n.a.	0.000	0.000	0.35	n.a.	Ru

12	10.90	n.a.	0.003	0.000	8.74	n.a.	MB
13	11.02	n.a.	0.003	0.000	6.89	n.a.	BMB
Total:			0.035	0.003	100.00	1.267	

20 0102135-BLK1

Sample Name:	**0102135-BLK1**	*Injection Volume:*	**20.0**
Vial Number:	**23**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ICS_2000 perchlorate**	*Bandwidth:*	**n.a.**
Quantif. Method:	**ics 2000 perchlorate**	*Dilution Factor:*	**1.0000**
Recording Time:	**10/29/2010 16:21**	*Sample Weight:*	**1.0000**
Run Time (min):	**13.50**	*Sample Amount:*	**1.0000**

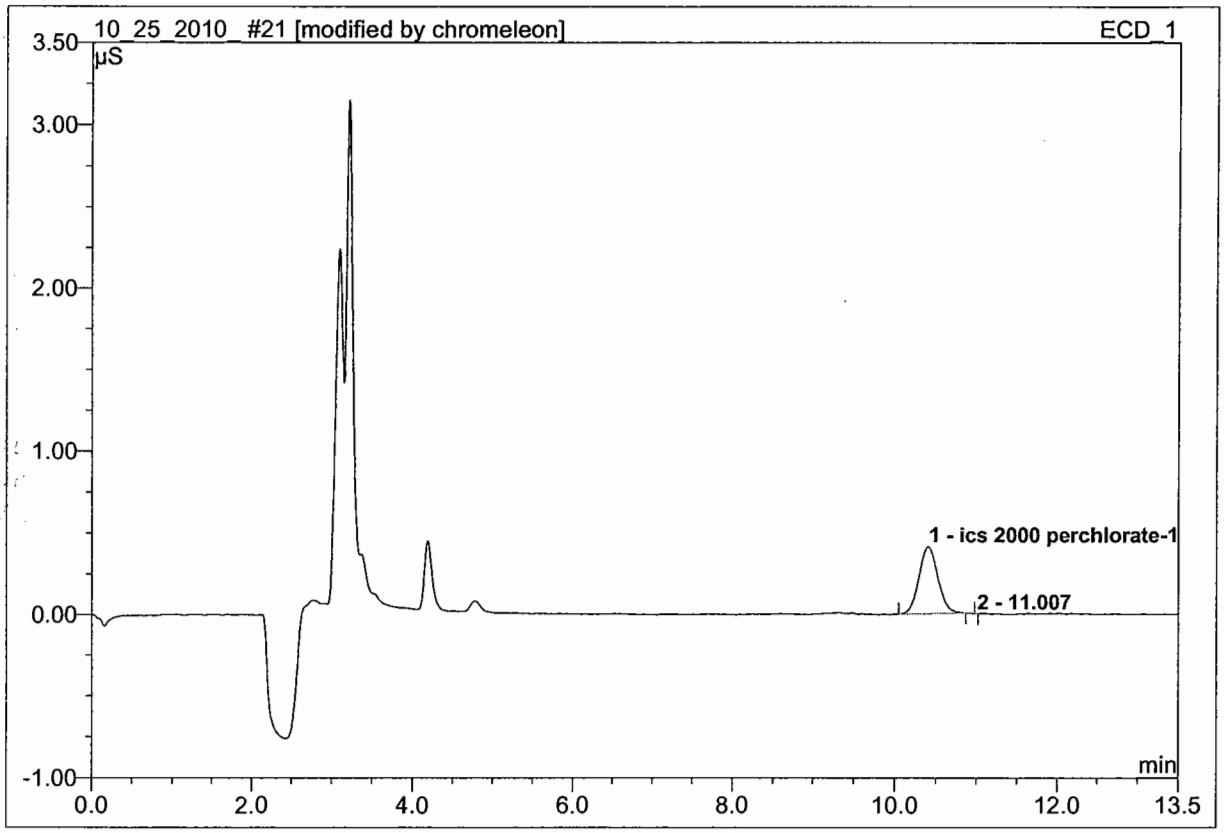


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount PPB	Type
1	9.92	n.a.	0.000	0.000	0.94	n.a.	BMB
2	9.98	n.a.	0.001	0.000	0.94	n.a.	BMB
3	10.05	n.a.	0.000	0.000	0.90	n.a.	Ru
4	10.11	n.a.	0.003	0.000	16.60	n.a.	BMb
5	10.17	n.a.	0.000	0.000	3.45	n.a.	bMB
6	10.27	n.a.	0.003	0.000	15.69	n.a.	BMB
7	10.38	n.a.	0.000	0.000	0.58	n.a.	Ru
8	10.45	ics 2000 perchlorate-1	0.003	0.000	9.84	0.203	BM
9	10.51	n.a.	0.002	0.000	4.44	n.a.	M
10	10.55	n.a.	0.001	0.000	1.39	n.a.	MB
11	10.63	n.a.	0.004	0.000	17.57	n.a.	BMB

12	10.74	n.a.	0.002	0.000	9.23	n.a.	BM
13	10.78	n.a.	0.002	0.000	8.28	n.a.	MB
14	10.85	n.a.	0.000	0.000	0.95	n.a.	BMB
15	10.92	n.a.	0.003	0.000	9.19	n.a.	BMB
Total:			0.026	0.001	100.00	0.203	

21 0102135-BS1

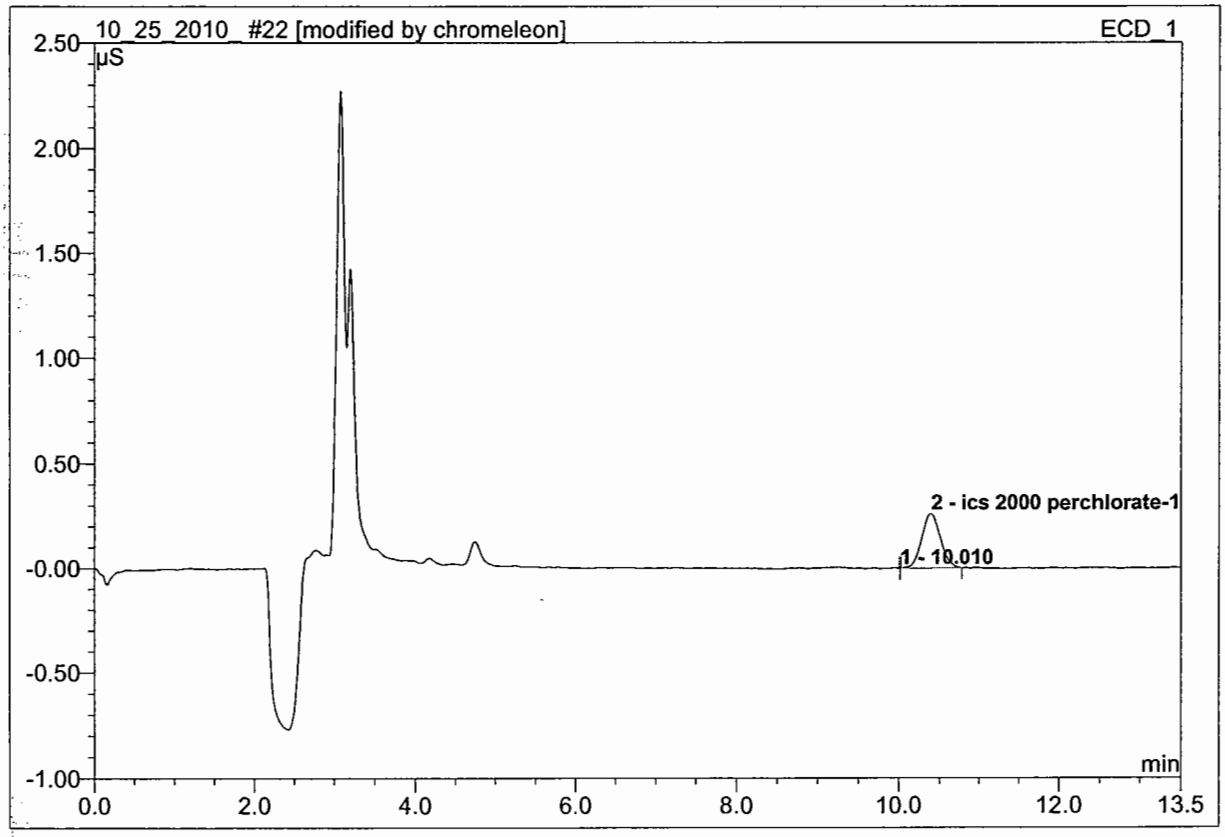
Sample Name:	**0102135-BS1**	*Injection Volume:*	**20.0**
Vial Number:	**24**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ICS_2000 perchlorate**	*Bandwidth:*	**n.a.**
Quantif. Method:	**ics 2000 perchlorate**	*Dilution Factor:*	**1.0000**
Recording Time:	**10/29/2010 16:37**	*Sample Weight:*	**1.0000**
Run Time (min):	**13.50**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount PPB	Type
1	10.40	ics 2000 perchlorate-1	0.411	0.109	100.00	181.964	BMB*
2	11.01	n.a.	0.000	0.000	0.00	n.a.	BMB
Total:			0.412	0.109	100.00	181.964	

22 CCV 100

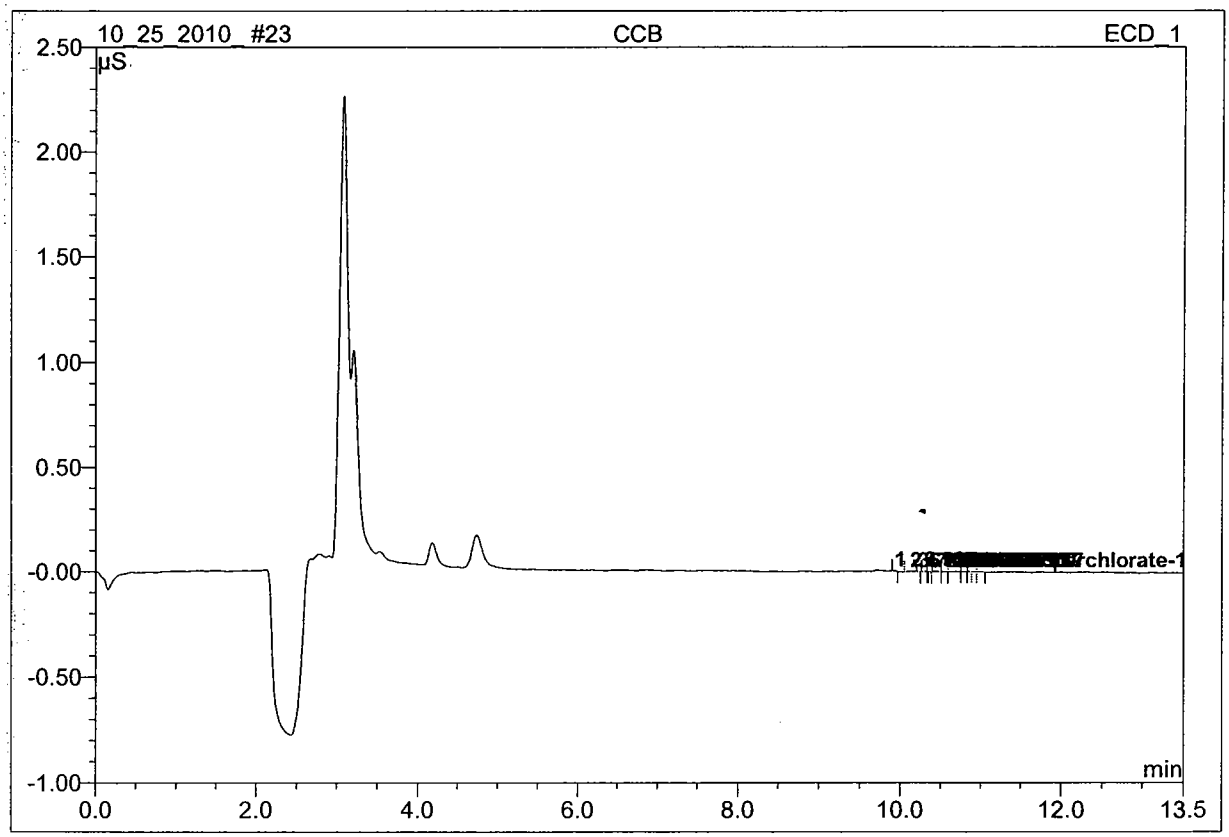
Sample Name:	**CCV 100**	*Injection Volume:*	**20.0**
Vial Number:	**25**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ICS_2000 perchlorate**	*Bandwidth:*	**n.a.**
Quantif. Method:	**ics 2000 perchlorate**	*Dilution Factor:*	**1.0000**
Recording Time:	**10/29/2010 16:53**	*Sample Weight:*	**1.0000**
Run Time (min):	**13.50**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount PPB	Type
1	10.01	n.a.	0.000	0.000	0.00	n.a.	BMB
2	10.39	ics 2000 perchlorate-1	0.261	0.069	100.00	115.368	BMB
Total:			0.261	0.069	100.00	115.368	

23 CCB

Sample Name:	**CCB**	*Injection Volume:*	**20.0**
Vial Number:	**26**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ICS_2000 perchlorate**	*Bandwidth:*	**n.a.**
Quantif. Method:	**ics 2000 perchlorate**	*Dilution Factor:*	**1.0000**
Recording Time:	**10/29/2010 17:08**	*Sample Weight:*	**1.0000**
Run Time (min):	**13.50**	*Sample Amount:*	**1.0000**

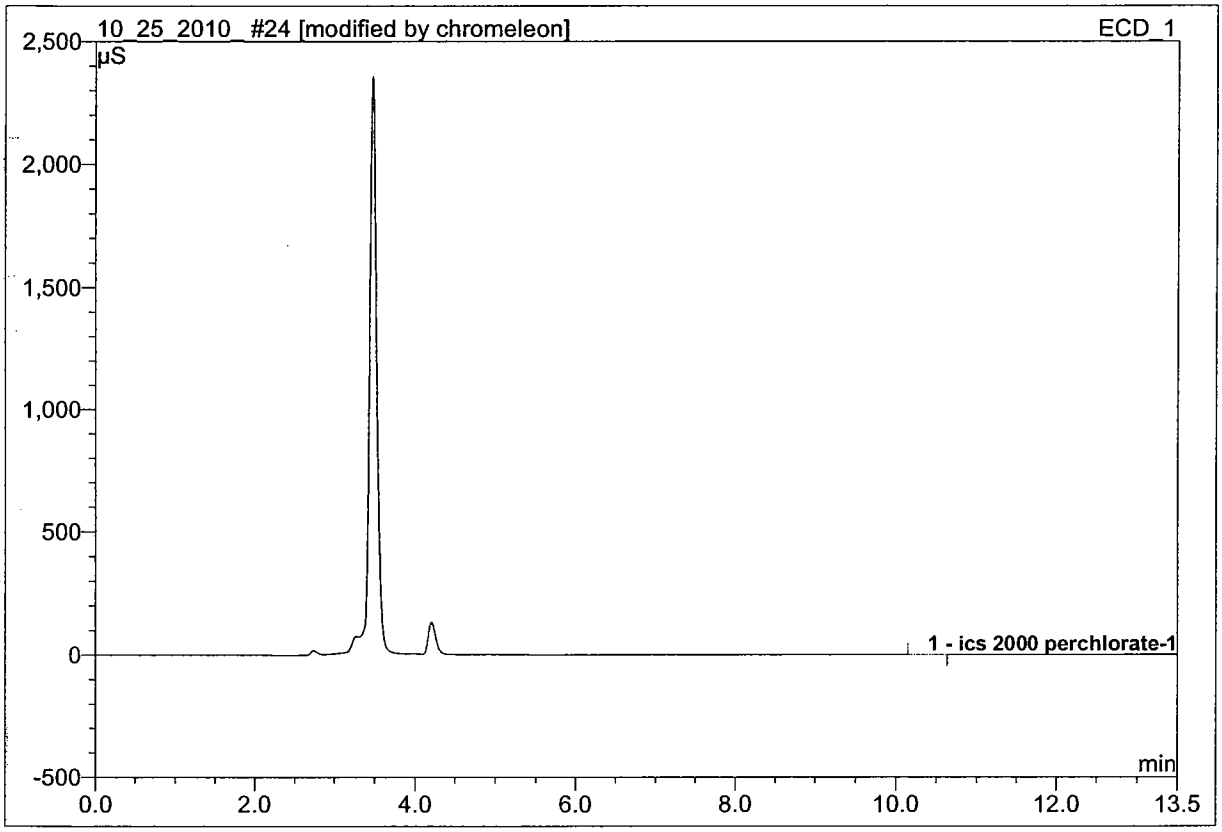


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount PPB	Type
1	9.93	n.a.	0.002	0.000	4.04	n.a.	BMB
2	10.12	n.a.	0.003	0.000	14.62	n.a.	BMB
3	10.22	n.a.	0.001	0.000	0.90	n.a.	Rd
4	10.31	n.a.	0.002	0.000	4.37	n.a.	BM
5	10.34	n.a.	0.000	0.000	0.02	n.a.	Ru
6	10.36	n.a.	0.002	0.000	3.35	n.a.	MB
7	10.44	ics 2000 perchlorate-1	0.003	0.000	10.43	0.334	BM
8	10.55	n.a.	0.003	0.000	6.90	n.a.	MB
9	10.69	n.a.	0.003	0.000	17.56	n.a.	BM
10	10.80	n.a.	0.003	0.000	9.80	n.a.	M
11	10.87	n.a.	0.000	0.000	0.69	n.a.	Ru

12	10.91	n.a.	0.003	0.000	16.14	n.a.	M
13	10.97	n.a.	0.003	0.000	11.18	n.a.	MB
Total:			0.027	0.002	100.00	0.334	

24 1010107-01

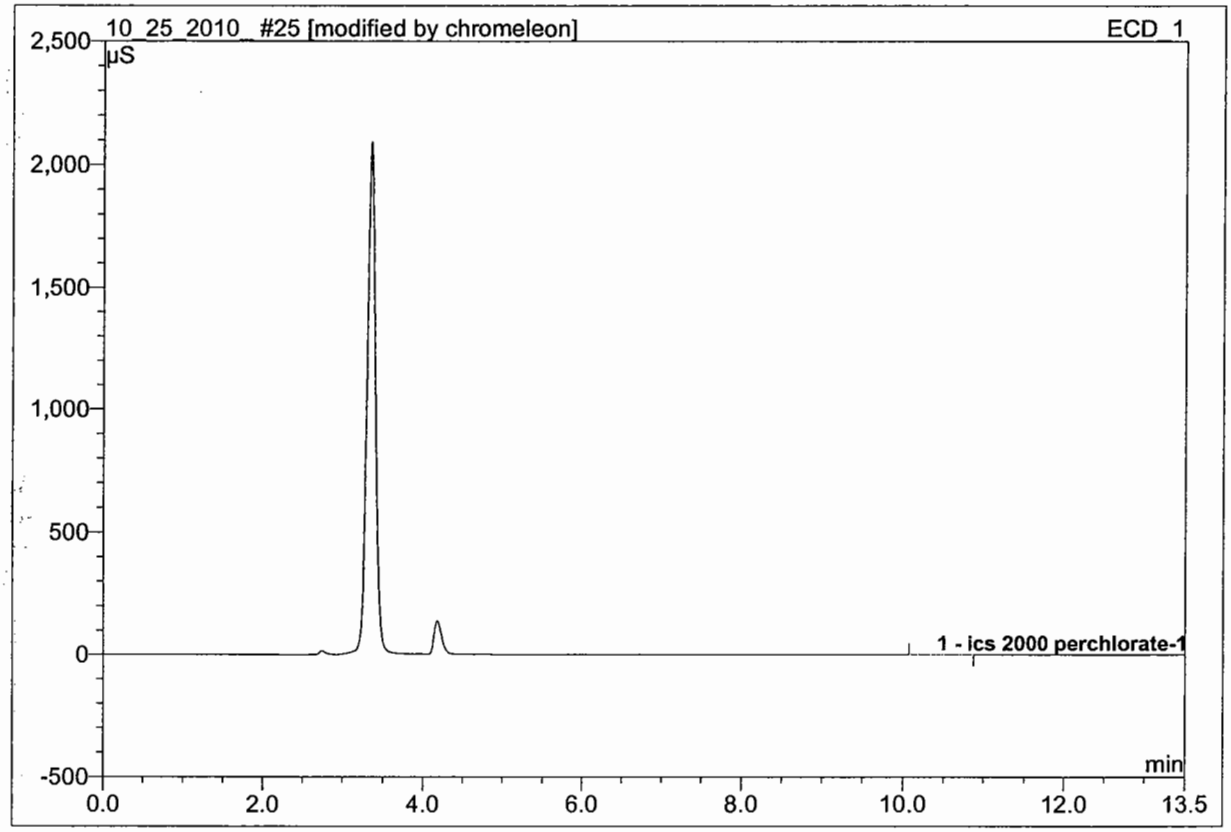
Sample Name:	**1010107-01**	*Injection Volume:*	**20.0**
Vial Number:	**27**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ICS_2000 perchlorate**	*Bandwidth:*	**n.a.**
Quantif. Method:	**ics 2000 perchlorate**	*Dilution Factor:*	**1.0000**
Recording Time:	**10/29/2010 17:24**	*Sample Weight:*	**1.0000**
Run Time (min):	**13.50**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount PPB	Type
1	10.39	ics 2000 perchlorate-1	0.016	0.004	100.00	6.363	BMB*
Total:			0.016	0.004	100.00	6.363	

25 0102135-MS1

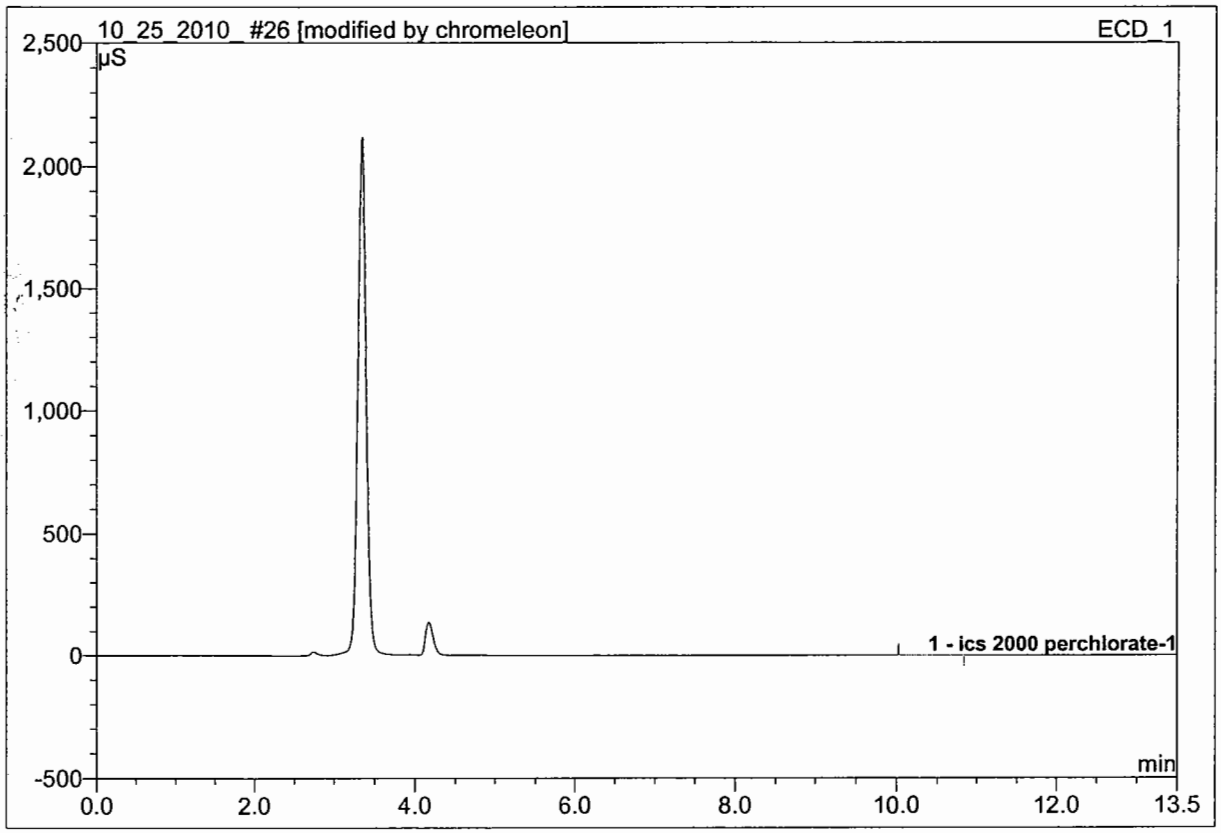
Sample Name:	**0102135-MS1**	*Injection Volume:*	**20.0**
Vial Number:	**28**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ICS_2000 perchlorate**	*Bandwidth:*	**n.a.**
Quantif. Method:	**ics 2000 perchlorate**	*Dilution Factor:*	**1.0000**
Recording Time:	**10/29/2010 17:40**	*Sample Weight:*	**1.0000**
Run Time (min):	**13.50**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount PPB	Type
1	10.41	ics 2000 perchlorate-1	0.281	0.075	100.00	124.439	BMB
Total:			0.281	0.075	100.00	124.439	

26 0102135-MSD1

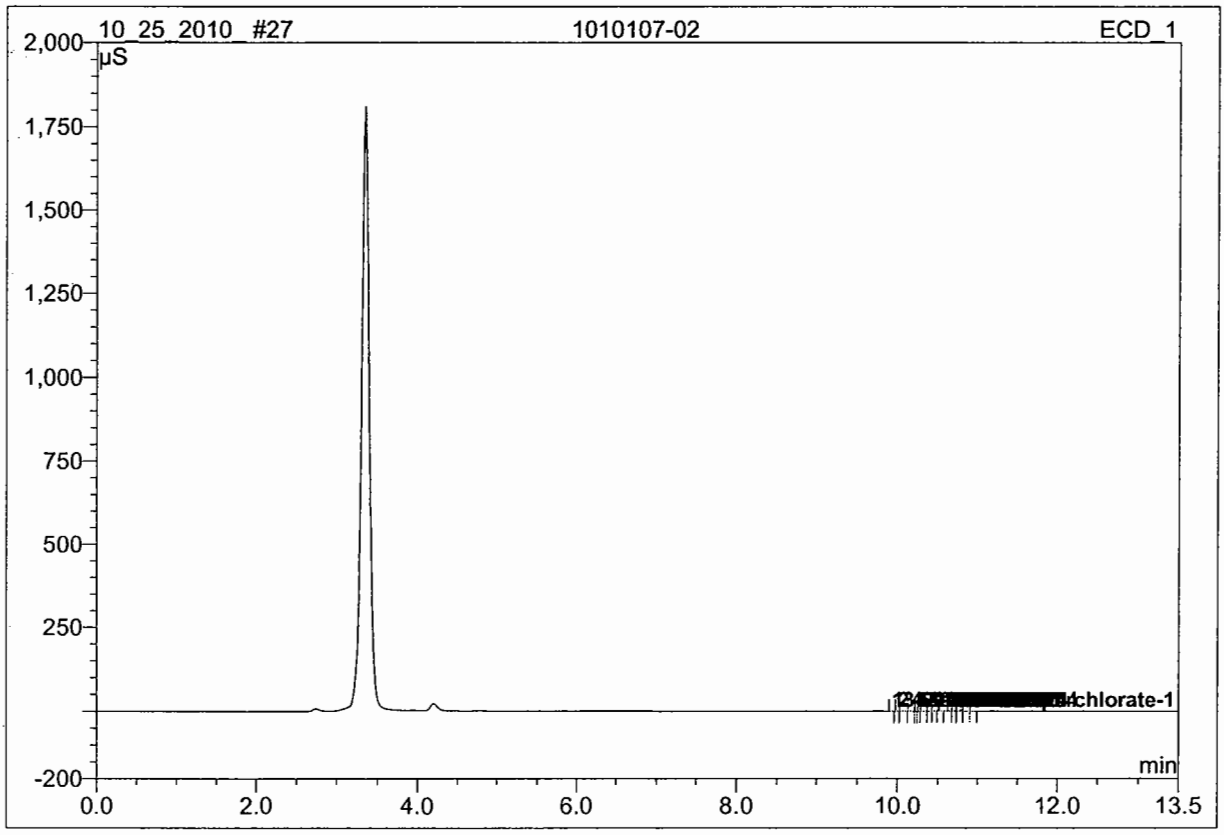
Sample Name:	**0102135-MSD1**	*Injection Volume:*	**20.0**
Vial Number:	**29**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ICS_2000 perchlorate**	*Bandwidth:*	**n.a.**
Quantif. Method:	**ics 2000 perchlorate**	*Dilution Factor:*	**1.0000**
Recording Time:	**10/29/2010 17:56**	*Sample Weight:*	**1.0000**
Run Time (min):	**13.50**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount PPB	Type
1	10.39	ics 2000 perchlorate-1	0.281	0.077	100.00	128.090	BMB
Total:			0.281	0.077	100.00	128.090	

27 1010107-02

Sample Name:	**1010107-02**	*Injection Volume:*	**20.0**
Vial Number:	**30**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ICS_2000 perchlorate**	*Bandwidth:*	**n.a.**
Quantif. Method:	**ics 2000 perchlorate**	*Dilution Factor:*	**1.0000**
Recording Time:	**10/29/2010 18:12**	*Sample Weight:*	**1.0000**
Run Time (min):	**13.50**	*Sample Amount:*	**1.0000**

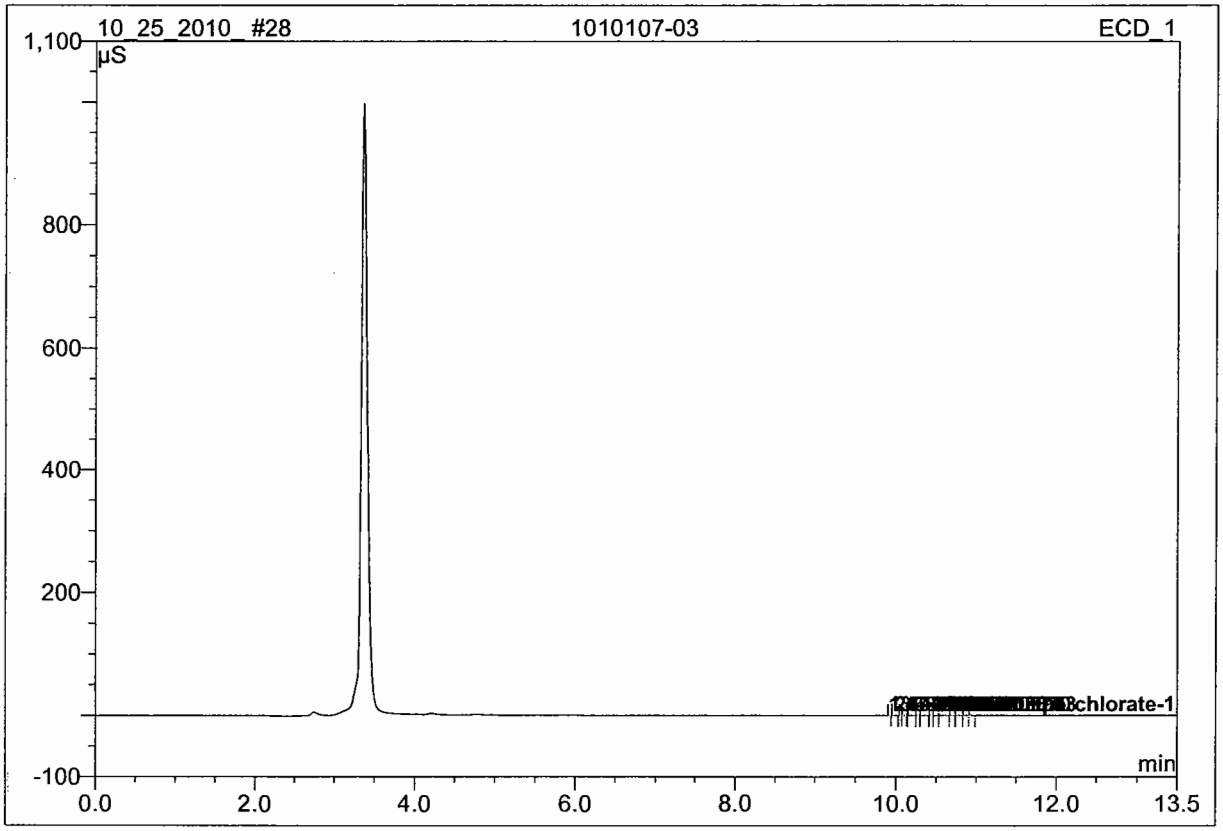


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount PPB	Type
1	9.93	n.a.	0.001	0.000	1.48	n.a.	BMB
2	10.00	n.a.	0.001	0.000	1.17	n.a.	BMB
3	10.07	n.a.	0.002	0.000	7.09	n.a.	BMB
4	10.17	n.a.	0.002	0.000	4.59	n.a.	BMB
5	10.22	n.a.	0.000	0.000	0.34	n.a.	BMB
6	10.27	n.a.	0.000	0.000	0.06	n.a.	BMB
7	10.34	ics 2000 perchlorate-1	0.003	0.000	8.59	0.215	BM
8	10.38	n.a.	0.002	0.000	5.48	n.a.	MB
9	10.45	n.a.	0.002	0.000	3.61	n.a.	BMB
10	10.56	n.a.	0.001	0.000	1.18	n.a.	Ru
11	10.61	n.a.	0.003	0.000	31.95	n.a.	BM

12	10.64	n.a.	0.000	0.000	0.84	n.a.	Rd
13	10.71	n.a.	0.000	0.000	0.77	n.a.	Rd
14	10.77	n.a.	0.003	0.000	16.90	n.a.	M
15	10.80	n.a.	0.000	0.000	0.08	n.a.	Rd
16	10.82	n.a.	0.003	0.000	9.27	n.a.	MB
17	10.94	n.a.	0.002	0.000	6.57	n.a.	BMB
Total:			0.026	0.002	100.00	0.215	

28 1010107-03

Sample Name:	**1010107-03**	*Injection Volume:*	**20.0**
Vial Number:	**31**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ICS_2000 perchlorate**	*Bandwidth:*	**n.a.**
Quantif. Method:	**ics 2000 perchlorate**	*Dilution Factor:*	**1.0000**
Recording Time:	**10/29/2010 18:28**	*Sample Weight:*	**1.0000**
Run Time (min):	**13.50**	*Sample Amount:*	**1.0000**

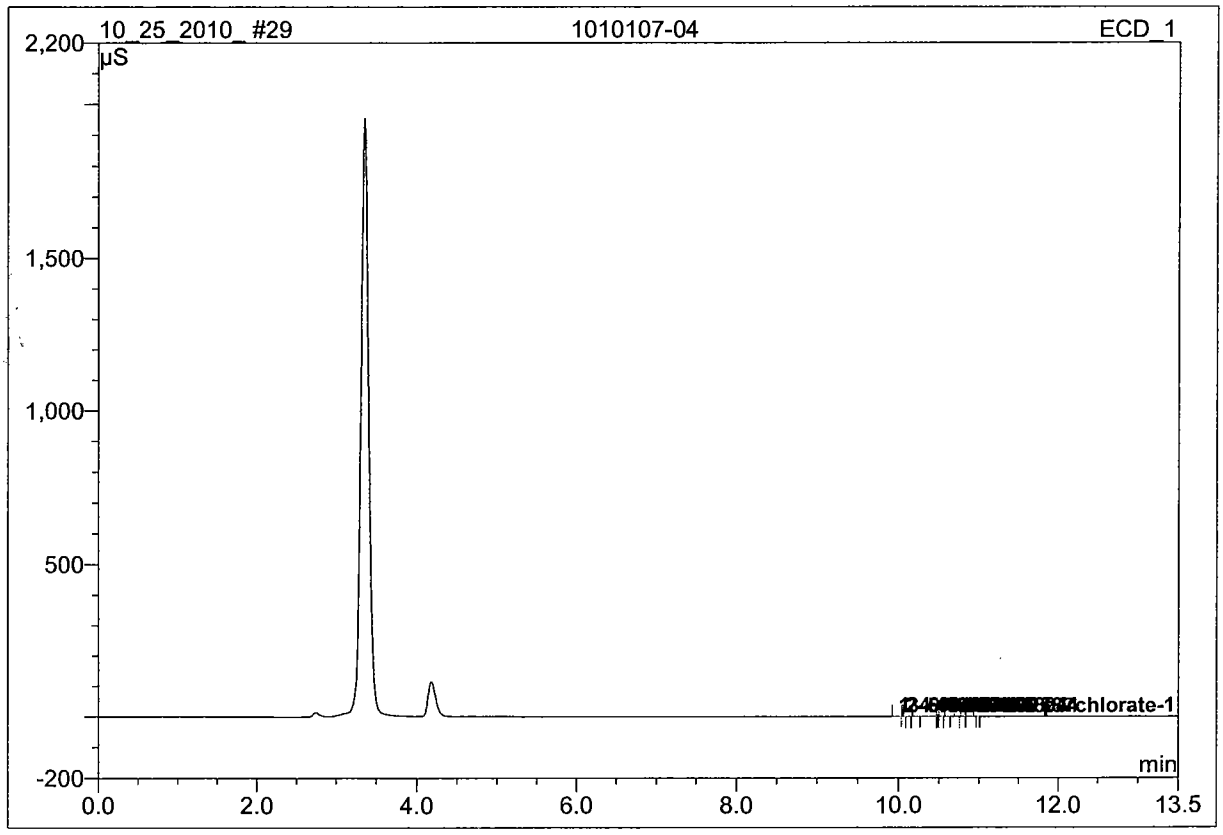


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount PPB	Type
1	9.91	n.a.	0.001	0.000	1.43	n.a.	BMB
2	9.98	n.a.	0.002	0.000	6.06	n.a.	BMB
3	10.05	n.a.	0.000	0.000	0.43	n.a.	BMB
4	10.12	n.a.	0.001	0.000	1.13	n.a.	BMB
5	10.14	n.a.	0.000	0.000	0.01	n.a.	BMB
6	10.22	n.a.	0.002	0.000	9.87	n.a.	BM
7	10.26	n.a.	0.002	0.000	4.82	n.a.	MB
8	10.36	ics 2000 perchlorate-1	0.005	0.000	19.20	0.430	BMB
9	10.44	n.a.	0.001	0.000	3.55	n.a.	BM
10	10.50	n.a.	0.003	0.000	9.99	n.a.	M
11	10.57	n.a.	0.003	0.000	19.15	n.a.	MB

12	10.71	n.a.	0.002	0.000	7.33	n.a.	BM
13	10.77	n.a.	0.002	0.000	8.99	n.a.	MB
14	10.87	n.a.	0.002	0.000	4.53	n.a.	BMB
15	10.94	n.a.	0.001	0.000	3.52	n.a.	BMB
Total:			0.027	0.001	100.00	0.430	

29 1010107-04

Sample Name:	**1010107-04**	*Injection Volume:*	**20.0**
Vial Number:	**32**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ICS_2000 perchlorate**	*Bandwidth:*	**n.a.**
Quantif. Method:	**ics 2000 perchlorate**	*Dilution Factor:*	**1.0000**
Recording Time:	**10/29/2010 18:44**	*Sample Weight:*	**1.0000**
Run Time (min):	**13.50**	*Sample Amount:*	**1.0000**

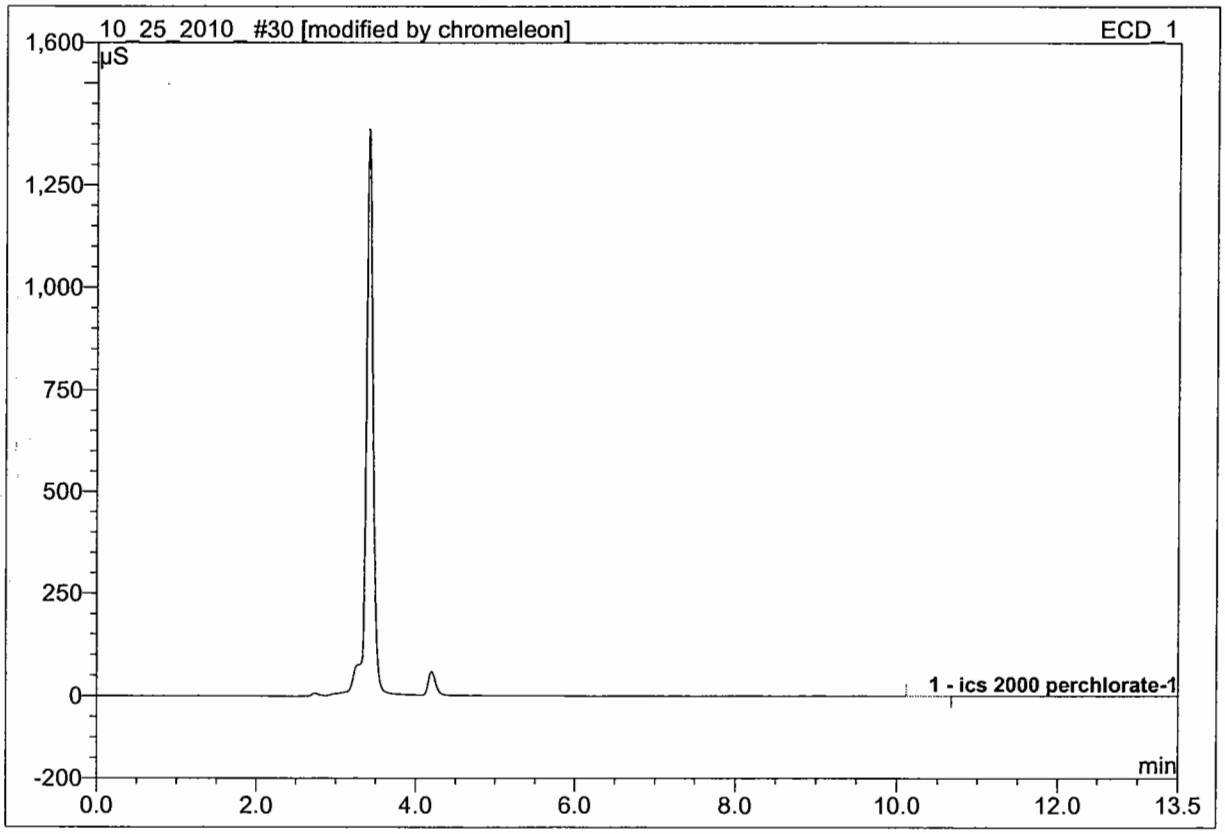


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount PPB	Type
1	10.00	n.a.	0.004	0.000	11.15	n.a.	BMB
2	10.08	n.a.	0.000	0.000	0.19	n.a.	Ru
3	10.11	n.a.	0.003	0.000	9.15	n.a.	BMB
4	10.25	n.a.	0.001	0.000	3.53	n.a.	Ru
5	10.35	ics 2000 perchlorate-1	0.006	0.001	46.78	1.590	BMB
6	10.48	n.a.	0.000	0.000	0.13	n.a.	bMB
7	10.51	n.a.	0.001	0.000	2.79	n.a.	BMB
8	10.60	n.a.	0.001	0.000	2.30	n.a.	BMB
9	10.73	n.a.	0.002	0.000	3.09	n.a.	BMB
10	10.81	n.a.	0.002	0.000	3.58	n.a.	BM
11	10.89	n.a.	0.004	0.000	16.91	n.a.	MB

12	10.94	n.a.	0.000	0.000	0.40	n.a.	Rd
Total:			0.024	0.002	100.00	1.590	

30 1010107-05

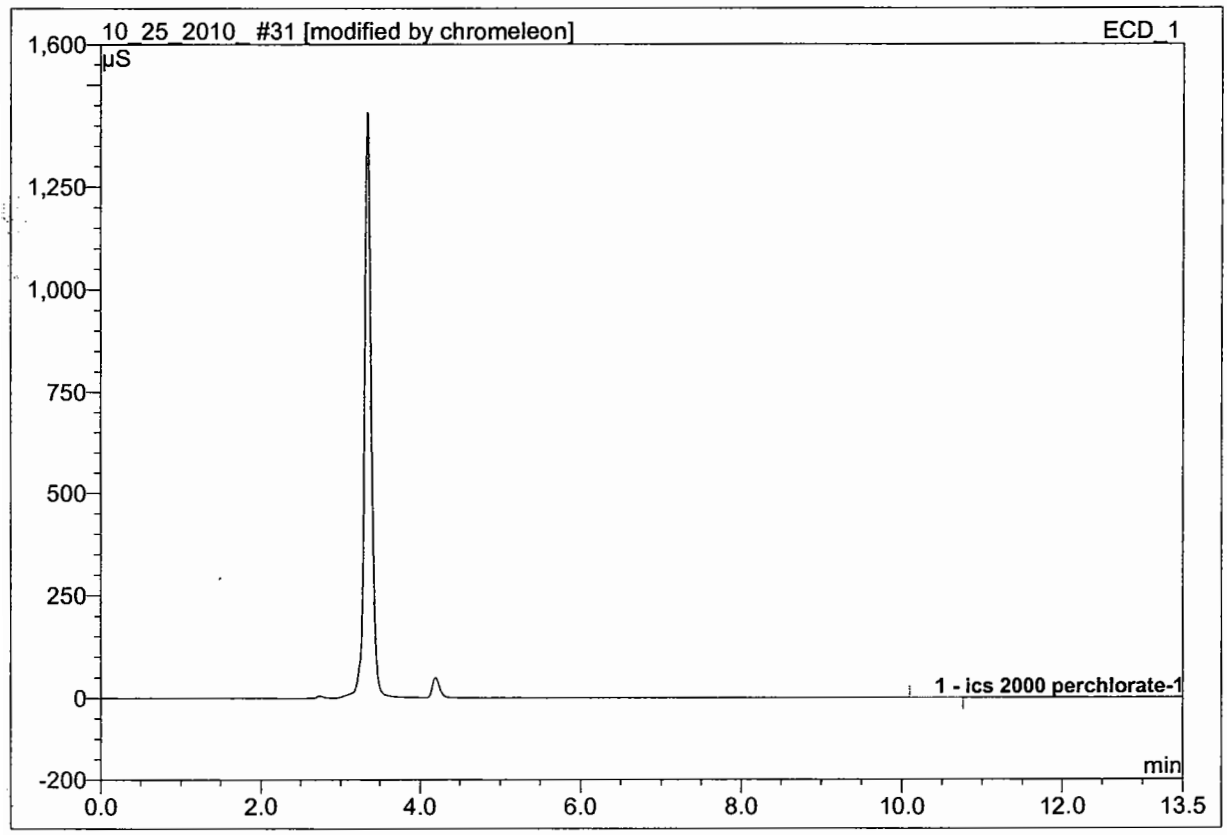
Sample Name:	**1010107-05**	*Injection Volume:*	**20.0**
Vial Number:	**33**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ICS_2000 perchlorate**	*Bandwidth:*	**n.a.**
Quantif. Method:	**ics 2000 perchlorate**	*Dilution Factor:*	**1.0000**
Recording Time:	**10/29/2010 19:00**	*Sample Weight:*	**1.0000**
Run Time (min):	**13.50**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount PPB	Type
1	10.38	ics 2000 perchlorate-1	0.081	0.021	100.00	34.117	BMB
Total:			0.081	0.021	100.00	34.117	

31 1010107-06

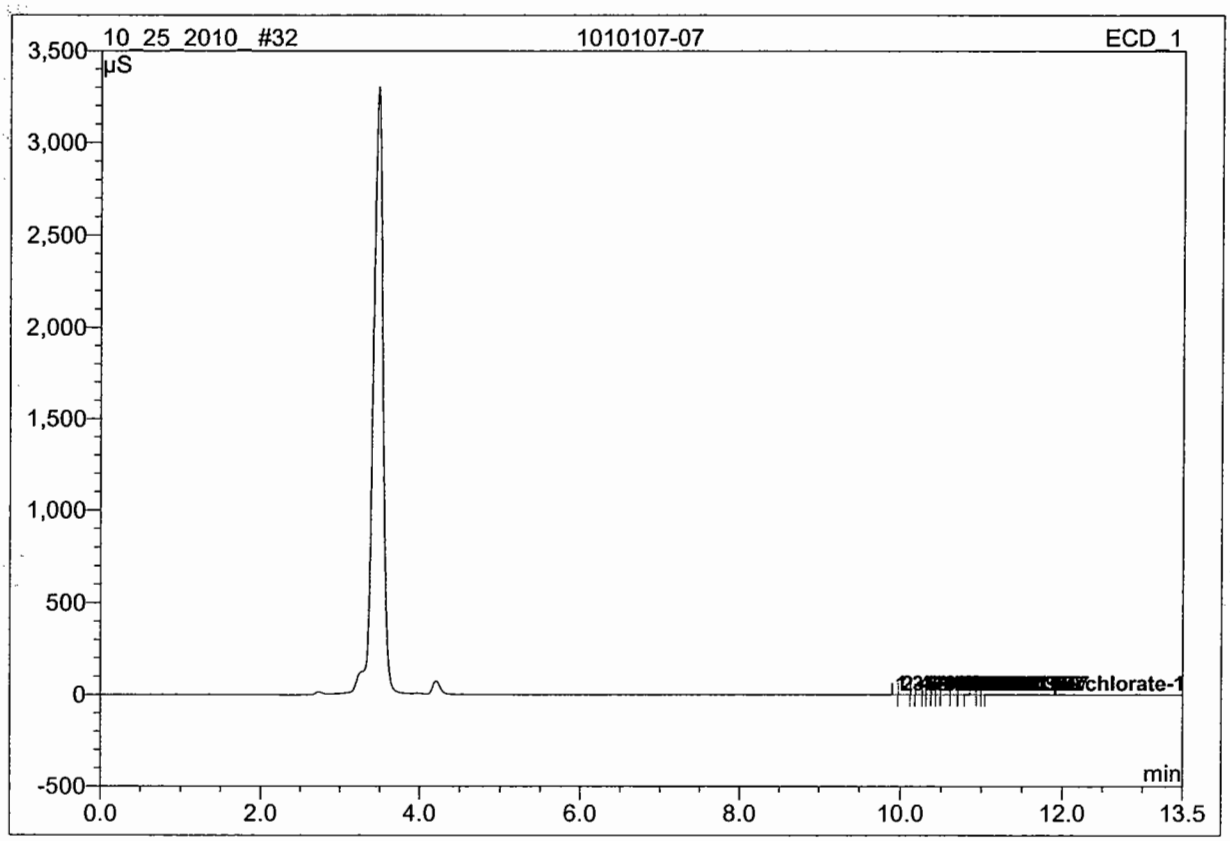
Sample Name:	**1010107-06**	*Injection Volume:*	**20.0**
Vial Number:	**34**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ICS_2000 perchlorate**	*Bandwidth:*	**n.a.**
Quantif. Method:	**ics 2000 perchlorate**	*Dilution Factor:*	**1.0000**
Recording Time:	**10/29/2010 19:16**	*Sample Weight:*	**1.0000**
Run Time (min):	**13.50**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount PPB	Type
1	10.40	ics 2000 perchlorate-1	0.091	0.024	100.00	40.053	BMB*
Total:			0.091	0.024	100.00	40.053	

32 1010107-07

Sample Name:	**1010107-07**	*Injection Volume:*	**20.0**
Vial Number:	**35**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ICS_2000 perchlorate**	*Bandwidth:*	**n.a.**
Quantif. Method:	**ics 2000 perchlorate**	*Dilution Factor:*	**1.0000**
Recording Time:	**10/29/2010 19:32**	*Sample Weight:*	**1.0000**
Run Time (min):	**13.50**	*Sample Amount:*	**1.0000**

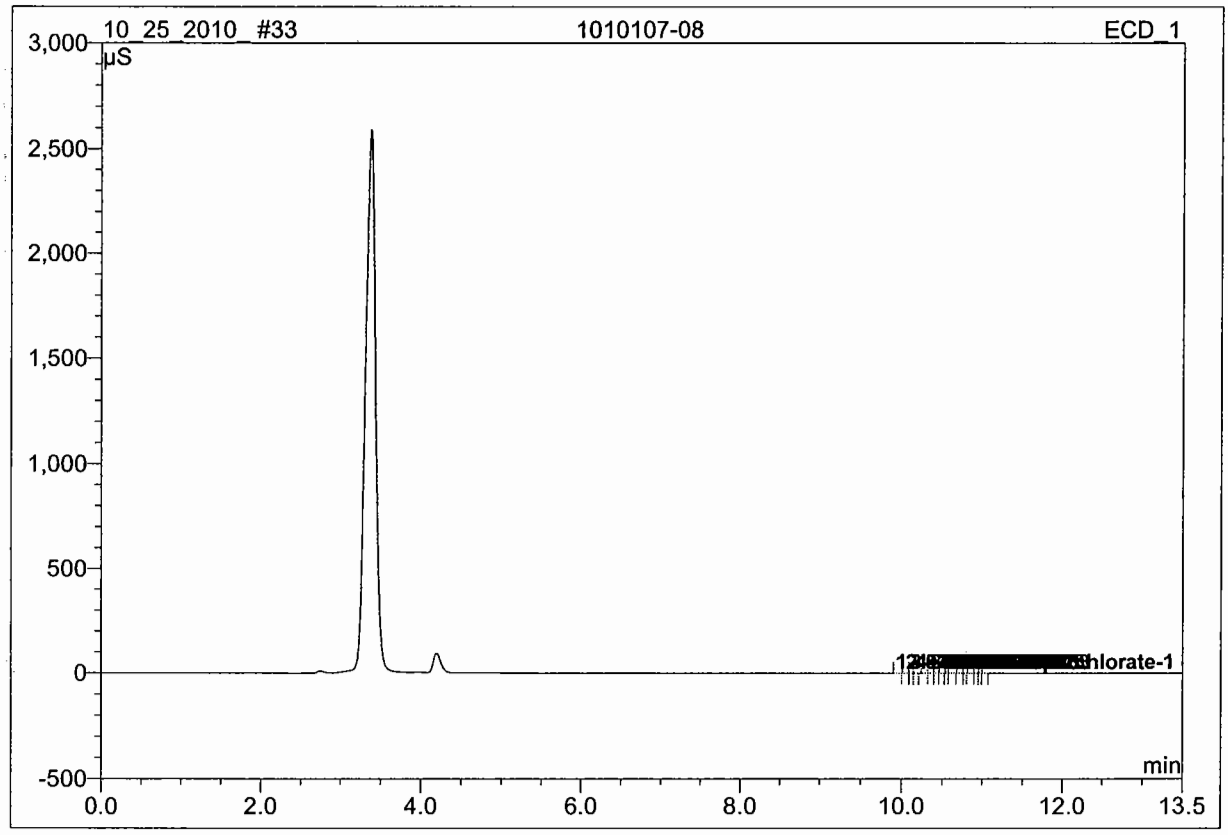


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount PPB	Type
1	9.93	n.a.	0.002	0.000	5.54	n.a.	BMB
2	10.01	n.a.	0.004	0.000	21.36	n.a.	BMB
3	10.14	n.a.	0.001	0.000	1.46	n.a.	BMB
4	10.22	n.a.	0.001	0.000	3.83	n.a.	BMB
5	10.30	n.a.	0.001	0.000	1.86	n.a.	BM
6	10.34	n.a.	0.001	0.000	3.34	n.a.	MB
7	10.41	ics 2000 perchlorate-1	0.002	0.000	5.41	0.144	BM
8	10.44	n.a.	0.003	0.000	6.81	n.a.	MB
9	10.54	n.a.	0.004	0.000	18.14	n.a.	BM
10	10.64	n.a.	0.003	0.000	11.44	n.a.	MB
11	10.74	n.a.	0.001	0.000	2.50	n.a.	BMB

12	10.90	n.a.	0.003	0.000	9.97	n.a.	BM
13	10.96	n.a.	0.003	0.000	6.37	n.a.	M
14	11.02	n.a.	0.001	0.000	1.97	n.a.	MB
Total:			0.031	0.002	100.00	0.144	

33 1010107-08

Sample Name:	**1010107-08**	*Injection Volume:*	**20.0**
Vial Number:	**36**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ICS_2000 perchlorate**	*Bandwidth:*	**n.a.**
Quantif. Method:	**ics 2000 perchlorate**	*Dilution Factor:*	**1.0000**
Recording Time:	**10/29/2010 19:48**	*Sample Weight:*	**1.0000**
Run Time (min):	**13.50**	*Sample Amount:*	**1.0000**

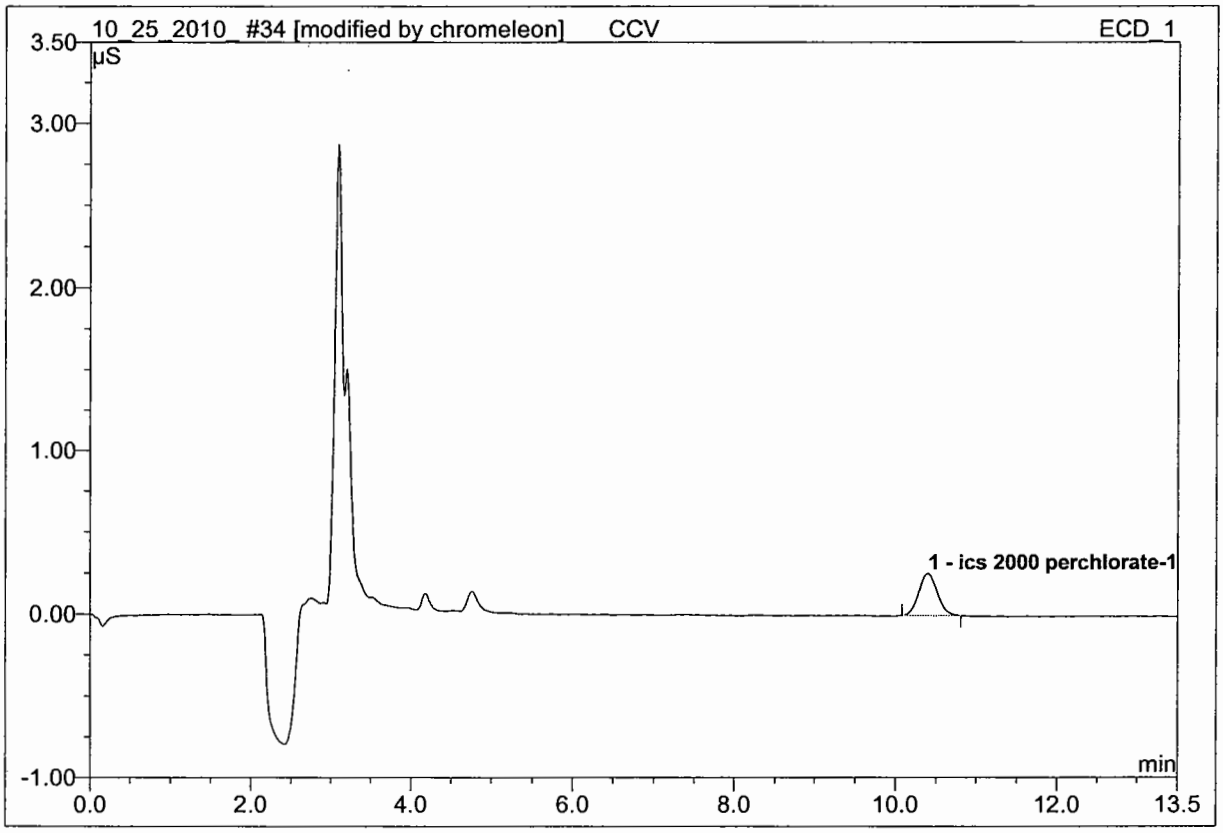


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount PPB	Type
1	9.92	n.a.	0.003	0.000	15.14	n.a.	BMB
2	10.05	n.a.	0.002	0.000	10.76	n.a.	BM
3	10.11	n.a.	0.002	0.000	6.31	n.a.	MB
4	10.17	n.a.	0.001	0.000	2.67	n.a.	BMB
5	10.29	ics 2000 perchlorate-1	0.002	0.000	11.42	0.192	BM
6	10.35	n.a.	0.002	0.000	9.70	n.a.	MB
7	10.42	n.a.	0.001	0.000	3.34	n.a.	BMB
8	10.49	n.a.	0.002	0.000	7.37	n.a.	BMB
9	10.56	n.a.	0.000	0.000	0.44	n.a.	BMB
10	10.59	n.a.	0.001	0.000	5.24	n.a.	BMB
11	10.72	n.a.	0.001	0.000	6.13	n.a.	BM

12	10.79	n.a.	0.000	0.000	1.31	n.a.	MB
13	10.87	n.a.	0.001	0.000	7.88	n.a.	BM
14	10.91	n.a.	0.001	0.000	3.26	n.a.	MB
15	10.97	n.a.	0.000	0.000	0.85	n.a.	BMB
16	11.03	n.a.	0.002	0.000	8.17	n.a.	BMB
Total:			0.022	0.001	100.00	0.192	

34 CCV

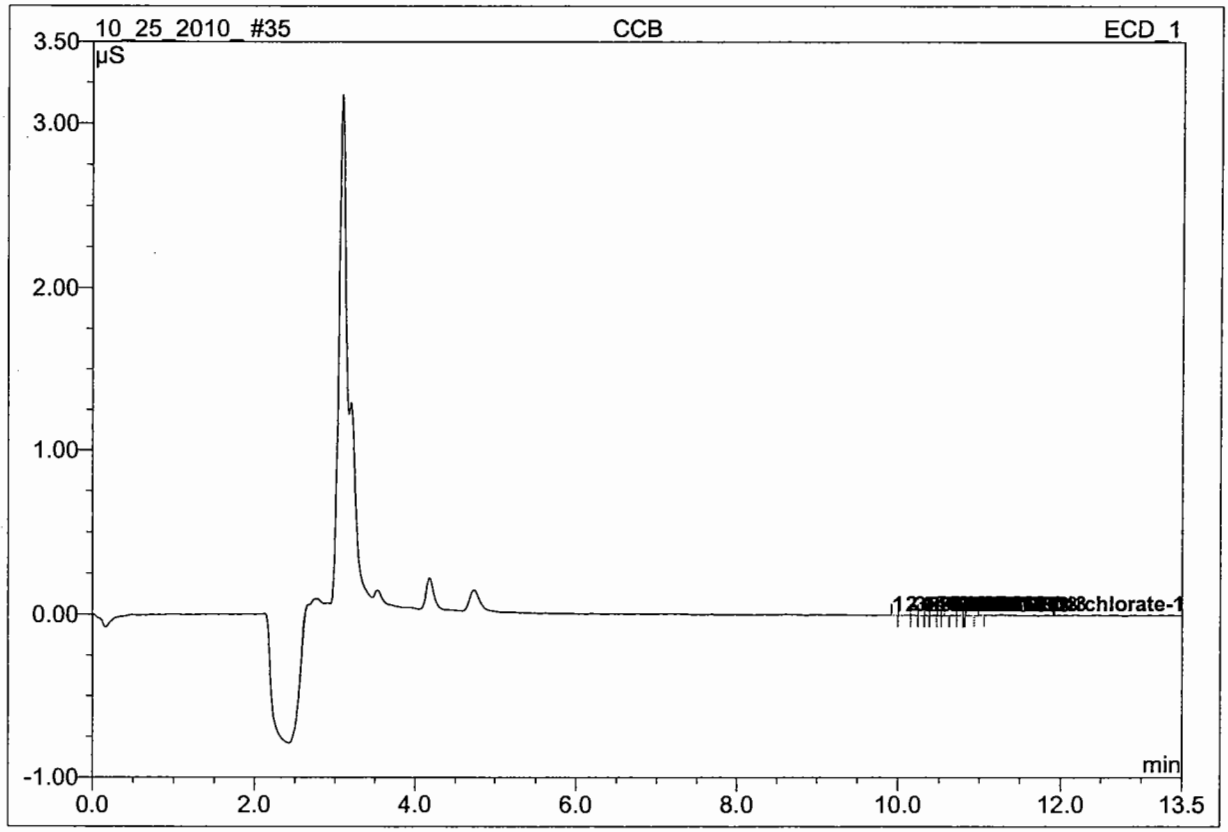
Sample Name:	**CCV**	*Injection Volume:*	**20.0**
Vial Number:	**37**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ICS_2000 perchlorate**	*Bandwidth:*	**n.a.**
Quantif. Method:	**ics 2000 perchlorate**	*Dilution Factor:*	**1.0000**
Recording Time:	**10/29/2010 20:03**	*Sample Weight:*	**1.0000**
Run Time (min):	**13.50**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount PPB	Type
1	10.40	ics 2000 perchlorate-1	0.255	0.067	100.00	111.930	BMB*
Total:			0.255	0.067	100.00	111.930	

35 CCB

Sample Name:	**CCB**	*Injection Volume:*	**20.0**
Vial Number:	**38**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**ICS_2000 perchlorate**	*Bandwidth:*	**n.a.**
Quantif. Method:	**ics 2000 perchlorate**	*Dilution Factor:*	**1.0000**
Recording Time:	**10/29/2010 20:19**	*Sample Weight:*	**1.0000**
Run Time (min):	**13.50**	*Sample Amount:*	**1.0000**

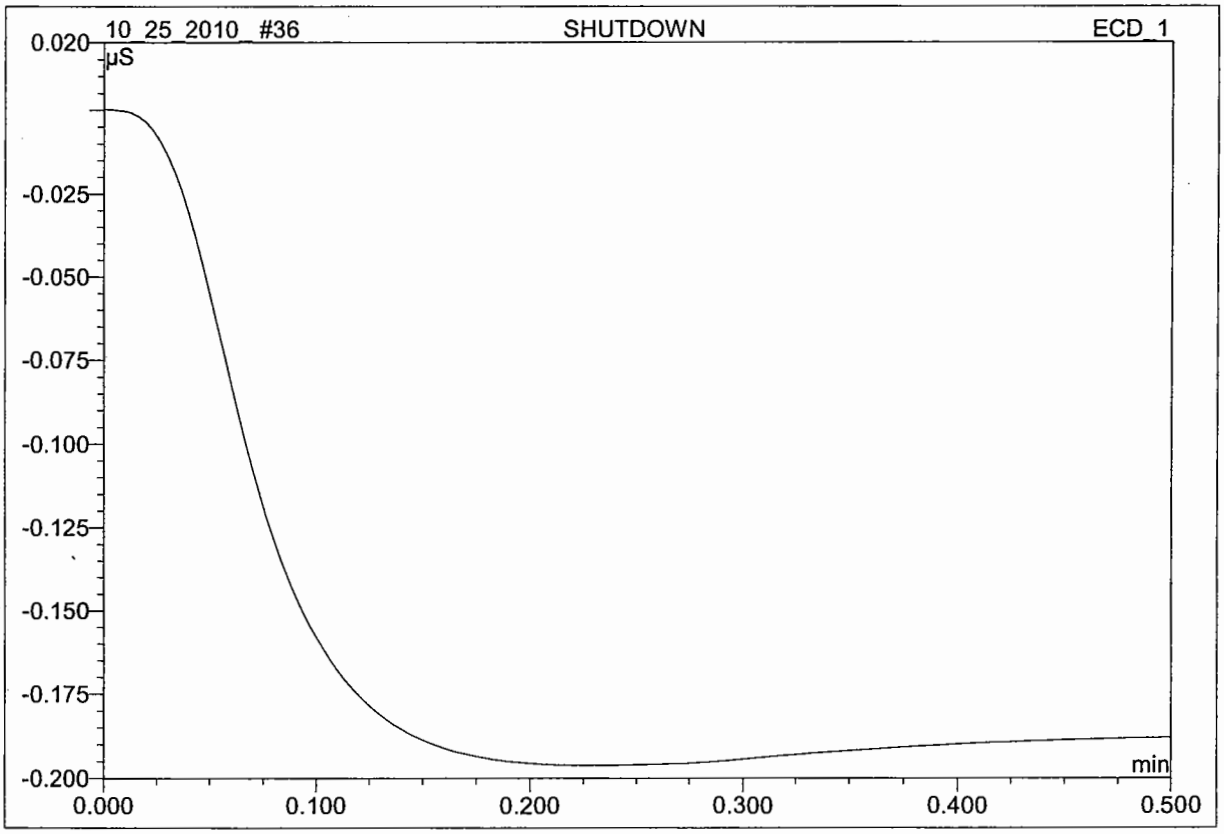


No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount PPB	Type
1	9.92	n.a.	0.000	0.000	2.85	n.a.	BMB
2	10.09	n.a.	0.002	0.000	19.82	n.a.	BM
3	10.19	n.a.	0.002	0.000	12.71	n.a.	MB
4	10.27	n.a.	0.001	0.000	2.87	n.a.	BMB
5	10.35	n.a.	0.001	0.000	2.76	n.a.	BMB
6	10.43	ics 2000 perchlorate-1	0.002	0.000	10.39	0.187	BMB
7	10.50	n.a.	0.001	0.000	2.06	n.a.	BM
8	10.61	n.a.	0.000	0.000	1.17	n.a.	Ru
9	10.66	n.a.	0.003	0.000	28.18	n.a.	M
10	10.73	n.a.	0.002	0.000	9.16	n.a.	MB
11	10.80	n.a.	0.000	0.000	0.12	n.a.	BMB

12	10.90	n.a.	0.001	0.000	5.35	n.a.	BMB
13	11.01	n.a.	0.001	0.000	2.55	n.a.	BMB
Total:			0.016	0.001	100.00	0.187	

36 SHUTDOWN

Sample Name:	**SHUTDOWN**	*Injection Volume:*	**20.0**
Vial Number:	**39**	*Channel:*	**ECD_1**
Sample Type:	**unknown**	*Wavelength:*	**n.a.**
Control Program:	**Shutdown**	*Bandwidth:*	**n.a.**
Quantif. Method:	**ics 2000 perchlorate**	*Dilution Factor:*	**1.0000**
Recording Time:	**10/29/2010 20:35**	*Sample Weight:*	**1.0000**
Run Time (min):	**0.50**	*Sample Amount:*	**1.0000**



No.	Ret.Time min	Peak Name	Height µS	Area µS*min	Rel.Area %	Amount PPB	Type
Total:			0.000	0.000	0.00	0.000	

CHAIN OF CUSTODY RECORD

14

Laboratory: CompuChem Environmental, 501 Madison Avenue, Cary, NC 27513/Cathy Dover, Manager/1-800-833-5097

10-19-10

Client: Draper Aden Associates Attn: 0 Address: 0 0 Phone: 0 Fax: 0 Fax: 0	**Consultant:** Draper Aden Associates Attn: Janet C. Frazier Address: 2206 South Main Street Blacksburg, Virginia 24060 Phone: (540) 552-0444 Fax: (540) 552-0291	**Sample Site:** RAAP, Radford, Virginia **Location:** Open Burning Ground (OBG)/HWMU13 **Event:** 2nd Semiannual 2010 Monitoring Event **DAA JN:** B03204-08 **Lab JN:**	**Project Specific (PS) or Batch (B) QC:** **Sample Collection for Project Complete?** YES UPS 12-237-301-01- 5634-5155 5818-5969 Carrier: K 5754-0978 Tracking Number: 5605-4184 5644-9598 5713-1204	**Box 1: Matrix** SW Surface Water — T Trip Blank GW Groundwater — E Equipment Blank L Leachate — P Product S Soil — O Other **Box 2: Preservative** A HCl — E NaOH B HNO_3 — F ZnAc C H_2SO_4 — G Other (Specify) D $Na_2S_2O_3$ — H None **Box 3: Filtered/Unfiltered** F Filtered U Unfiltered **Box 5: Sample Container Type** P Plastic — V VOA AG Amber Glass — CG Clear Glass **Box 4: Sample Type** G Grab C Composite	**Invoice** **Copy to Consultant:** YES **Bill:** CLIENT OTHER **Preserved and shipped on ice:** YES

Box 4 - Sample Type	G	G	G	G	G	G						
Box 3 - Filtered/Unfiltered	U	U	U	U	U	U						
Required pH of Sample					<2	<2						
Box 2 - Preservative	H	H	H	H	B	B						
Box 5 - Sample Container Type	2-1L A		1-250ml P	2-1L A	1-500ml P							

Sample ID	Date: 2010	Time	Box 1: Matrix	Number of Bottles	8332/3535 - Nitroglycerine (24hr)	8330 - Explosives	Perchlorate 314.0 (250mL)	SVOCs 8270C (35 mL 24hr 10/20 lkr22)	ICP 6010B/3005A/ thallium 7000 (Metals-Total) (500mL)	7470A (Mercury-Total)	Metals pH						
13MW1	10/18	1105	GW	6	X	X	X	X	X	X	<2						1010107-02
13MW2	10/18	1200	GW	6	X	X	X	X	X	X	<2						-03
13MW3	10/18	0800	GW	6	X	X	X	X*	X	X	<2	*recd 1-SVOC broken for 13MW3 SD 10/20/10					-04
13MW4	10/18	0910	GW	6	X	X	X	X	X	X	<2						-05
13MWDUP	10/19	0730	GW	6	X	X	X	X	X	X	<2						-06
13MW5	10/19	0830	GW	18	X	X	X	X	X	X	<2					USE FOR QC	1010107-01
13MW6	10/18	1010	GW	6	X	X	X	X	X	X	<2						-07
13MW7	10/19	0945	GW	6	X	X	X	X	X	X	<2						-08

GENERAL NOTES:

1. Level 4 deliverable with EDD and pdf.
2. REPORT DL/QL and estimated results.

(See 4th Q. 2009, if needed). or call. JCF 10.2.20

Residual Chlorine Present?

Yes ____ No ✓

Clients Special Instructions: Level 4 with edd and PDF. 0.6, 0.1, 0.2, 1.0, 0.9°C SN0015

Received by lab in Good Condition ✓ Yes ____ No Custody Seal Intact ✓ Yes ____ No Temperature upon arrival ^ Received on Ice ✓ Yes ____ No

Describe problems, if any:

Sampler Name (Print): KEN CODDINGTON	Date: 10-18-10	#1 Relinquished by (Signature):	Date: 10-19-10	#2 Relinquished by (Signature):	Date:	Sample Storage Time Requested:
Sampler Signature:	Time: 0600	Company Name: DAA	Time: 1700	Company Name:	Time:	
Sampler Name (Print): Chris Branscome	Date: 10/18/10	#1 Received by (Signature): Jennifer Does	Date: 10/20/10	#2 Received by (Signature):	Date:	30 DYS ORG/6 MTHS INORG
Sampler Signature: Chris Branscome	Time: 0600	Company Name: CompuChem	Time: 0936	Company Name:	Time:	

JCF 11/5 10.2.20

3/5

ANALYTICAL METHOD: 314.0
TYPE METHOD: GC

No.	PARAMETER	CAS RN
1.	Perchlorate	14797-73-0

.p:\admin\divisions\envr\templates\bburg eteam temp\field events\raap\sample event set up\semi-annual events\hwmu-13\hwmu13-target analyte list gw (new) 2007 10.doc
Revised July 18, 2005 – JCF
Revised November, 2005 – new permit – JCF
Revised Oct 10, 2009
Revised September, 2010, new 8260B analytes - KPO

WORK ORDER

1010107

Printed: 11/2/2010 3:43:57PM

COMPUCHEM

Client:	**DRAPER**	**Project Manager:**	**Cathy Dover**
Project:	**RAAP HWMU13 (OBG)/B03204-08**	**Project Number:**	**RAAP HWMU13 (OBG)/B03204-08**
SDG:	**1010107** **CASE:**	**Status:**	**Prepared**

Report To:
DRAPER
JANET FRAZIER
2206 SOUTH MAIN STREET
BLACKSBURG, VA 24060
Phone: (540)552-0444
Fax: -

Invoice To:
DRAPER
JANET FRAZIER
2206 SOUTH MAIN STREET
BLACKSBURG, VA 24060
Phone :(540)552-0444
Fax: -

Date Due: 11/09/2010 00:00 (20 day TAT)

Received By: Cathy Dover — Date Received: 10/20/2010 09:36

Logged In By: Cathy Dover — Date Logged In: 10/20/2010 16:12

J & B Flags?: **YES** Metals ND to? **MDL**	TICS?:**NO** Spike Level: **FULL Spike**	Deliverable: **Style 9**	EDD : **DRAPER ACCESS + ERIS**

USE 1010107-01*NOTE SAMPLING DATES*SVOC FULL SCAN 8270C=HWMU13A.SUB*8330A=DAU13*8332=NITROGLYCERIN ONLY*6020 MS MTL=Sb,As,Ba,Cd,Cr,Pb,Ni,Se,Ag & Zn + Hg 7470*PERCHLORATE 314.0--4 ug/L STD.

Analysis	Due	TAT	Expires	Received	Comments
1010107-01 13MW5 [Water] Sampled 10/19/2010 08:30 Eastern					**USE FOR QC**
6020 ICP MS	11/09/2010 16:00	20	04/17/2011 08:30	10/20/2010 09:36	
GC-8330B EXPLOSIVES	11/09/2010 16:00	20	11/02/2010 08:30	10/20/2010 09:36	SubList = GC- 8330 DAU13 (10-20-10)
GC-8332 EXPLOSIVES	11/09/2010 16:00	20	10/26/2010 08:30	10/20/2010 09:36	SubList = GC- 8332 NITRO (10-20-10)
IC 314.0 Perchlorate Water	11/09/2010 16:00	20	11/16/2010 08:30	10/20/2010 09:36	
SVOC 8270C	11/09/2010 16:00	20	10/26/2010 08:30	10/20/2010 09:36	SubList = SVapix- HWMU13A (10-21-10
7470A/7471A Mercury	11/09/2010 16:00	20	11/16/2010 08:30	10/20/2010 09:36	
1010107-02 13MW1 [Water] Sampled 10/18/2010 11:05 Eastern					
GC-8332 EXPLOSIVES	11/09/2010 16:00	20	10/25/2010 11:05	10/20/2010 09:36	SubList = GC- 8332 NITRO (10-20-10)
SVOC 8270C	11/09/2010 16:00	20	10/25/2010 11:05	10/20/2010 09:36	SubList = SVapix- HWMU13A (10-21-10
6020 ICP MS	11/09/2010 16:00	20	04/16/2011 11:05	10/20/2010 09:36	
GC-8330B EXPLOSIVES	11/09/2010 16:00	20	11/01/2010 11:05	10/20/2010 09:36	SubList = GC- 8330 DAU13 (10-20-10)
IC 314.0 Perchlorate Water	11/09/2010 16:00	20	11/15/2010 11:05	10/20/2010 09:36	
7470A/7471A Mercury	11/09/2010 16:00	20	11/15/2010 11:05	10/20/2010 09:36	

1010107

COMPUCHEM

Client:	**DRAPER**	**Project Manager:**	**Cathy Dover**
Project:	**RAAP HWMU13 (OBG)/B03204-08**	**Project Number:**	**RAAP HWMU13 (OBG)/B03204-08**
SDG:	**1010107** **CASE:**	**Status:**	**Prepared**

Analysis	Due	TAT	Expires		Comments
1010107-03 13MW2 [Water] Sampled 10/18/2010 12:00 Eastern					
7470A/7471A Mercury	11/09/2010 16:00	20	11/15/2010 12:00	10/20/2010 09:36	
6020 ICP MS	11/09/2010 16:00	20	04/16/2011 12:00	10/20/2010 09:36	
GC-8330B EXPLOSIVES	11/09/2010 16:00	20	11/01/2010 12:00	10/20/2010 09:36	SubList = GC- 8330 DAU13 (10-20-10)
GC-8332 EXPLOSIVES	11/09/2010 16:00	20	10/25/2010 12:00	10/20/2010 09:36	SubList = GC- 8332 NITRO (10-20-10)
IC 314.0 Perchlorate Water	11/09/2010 16:00	20	11/15/2010 12:00	10/20/2010 09:36	
SVOC 8270C	11/09/2010 16:00	20	10/25/2010 12:00	10/20/2010 09:36	SubList = SVapix- HWMU13A (10-21-10
1010107-04 13MW3 [Water] Sampled 10/18/2010 08:00 Eastern					
GC-8332 EXPLOSIVES	11/09/2010 16:00	20	10/25/2010 08:00	10/20/2010 09:36	SubList = GC- 8332 NITRO (10-20-10)
GC-8330B EXPLOSIVES	11/09/2010 16:00	20	11/01/2010 08:00	10/20/2010 09:36	SubList = GC- 8330 DAU13 (10-20-10)
7470A/7471A Mercury	11/09/2010 16:00	20	11/15/2010 08:00	10/20/2010 09:36	
6020 ICP MS	11/09/2010 16:00	20	04/16/2011 08:00	10/20/2010 09:36	
IC 314.0 Perchlorate Water	11/09/2010 16:00	20	11/15/2010 08:00	10/20/2010 09:36	
SVOC 8270C	11/09/2010 16:00	20	10/25/2010 08:00	10/20/2010 09:36	SubList = SVapix- HWMU13A (10-21-10
1010107-05 13MW4 [Water] Sampled 10/18/2010 09:10 Eastern					
7470A/7471A Mercury	11/09/2010 16:00	20	11/15/2010 09:10	10/20/2010 09:36	
GC-8330B EXPLOSIVES	11/09/2010 16:00	20	11/01/2010 09:10	10/20/2010 09:36	SubList = GC- 8330 DAU13 (10-20-10)
GC-8332 EXPLOSIVES	11/09/2010 16:00	20	10/25/2010 09:10	10/20/2010 09:36	SubList = GC- 8332 NITRO (10-20-10)
IC 314.0 Perchlorate Water	11/09/2010 16:00	20	11/15/2010 09:10	10/20/2010 09:36	
SVOC 8270C	11/09/2010 16:00	20	10/25/2010 09:10	10/20/2010 09:36	SubList = SVapix- HWMU13A (10-21-10
6020 ICP MS	11/09/2010 16:00	20	04/16/2011 09:10	10/20/2010 09:36	
1010107-06 13MWDUP [Water] Sampled 10/19/2010 07:30 Eastern					
GC-8332 EXPLOSIVES	11/09/2010 16:00	20	10/26/2010 07:30	10/20/2010 09:36	SubList = GC- 8332 NITRO (10-20-10)
6020 ICP MS	11/09/2010 16:00	20	04/17/2011 07:30	10/20/2010 09:36	
SVOC 8270C	11/09/2010 16:00	20	10/26/2010 07:30	10/20/2010 09:36	SubList = SVapix- HWMU13A (10-21-10
GC-8330B EXPLOSIVES	11/09/2010 16:00	20	11/02/2010 07:30	10/20/2010 09:36	SubList = GC- 8330 DAU13 (10-20-10)
IC 314.0 Perchlorate Water	11/09/2010 16:00	20	11/16/2010 07:30	10/20/2010 09:36	
7470A/7471A Mercury	11/09/2010 16:00	20	11/16/2010 07:30	10/20/2010 09:36	

1010107

COMPUCHEM

Client:	**DRAPER**	**Project Manager:**	**Cathy Dover**
Project:	**RAAP HWMU13 (OBG)/B03204-08**	**Project Number:**	**RAAP HWMU13 (OBG)/B03204-08**
SDG:	**1010107** **CASE:**	**Status:**	**Reviewed**

Analysis	Due	TAT	Expires	Comments	
1010107-07 13MW6 [Water] Sampled 10/18/2010 10:10 Eastern					
GC-8330B EXPLOSIVES	11/09/2010 16:00	20	11/01/2010 10:10	10/20/2010 09:36	SubList = GC- 8330 DAU13 (10-20-10)
IC 314.0 Perchlorate Water	11/09/2010 16:00	20	11/15/2010 10:10	10/20/2010 09:36	
6020 ICP MS	11/09/2010 16:00	20	04/16/2011 10:10	10/20/2010 09:36	
7470A/7471A Mercury	11/09/2010 16:00	20	11/15/2010 10:10	10/20/2010 09:36	
SVOC 8270C	11/09/2010 16:00	20	10/25/2010 10:10	10/20/2010 09:36	SubList = SVapix- HWMU13A (10-21-10
GC-8332 EXPLOSIVES	11/09/2010 16:00	20	10/25/2010 10:10	10/20/2010 09:36	SubList = GC- 8332 NITRO (10-20-10)
1010107-08 13MW7 [Water] Sampled 10/19/2010 09:45 Eastern					
SVOC 8270C	11/09/2010 16:00	20	10/26/2010 09:45	10/20/2010 09:36	SubList = SVapix- HWMU13A (10-21-10
6020 ICP MS	11/09/2010 16:00	20	04/17/2011 09:45	10/20/2010 09:36	
7470A/7471A Mercury	11/09/2010 16:00	20	11/16/2010 09:45	10/20/2010 09:36	
IC 314.0 Perchlorate Water	11/09/2010 16:00	20	11/16/2010 09:45	10/20/2010 09:36	
GC-8332 EXPLOSIVES	11/09/2010 16:00	20	10/26/2010 09:45	10/20/2010 09:36	SubList = GC- 8332 NITRO (10-20-10)
GC-8330B EXPLOSIVES	11/09/2010 16:00	20	11/02/2010 09:45	10/20/2010 09:36	SubList = GC- 8330 DAU13 (10-20-10)

Data Validation Report

Draper Aden Associates
Engineering • Surveying • Environmental Services
www.daa.com

Data Validation Summary
Fourth Quarter 2010 Semiannual Groundwater Monitoring Event

Open Burning Ground (OBG) - HWMU 13
Radford Facility Army Ammunition Plant, Radford, Virginia
EPA ID# VA1210020730

Draper Aden Associates performed data validation of the analytical results for the Fourth Quarter 2010 semiannual groundwater monitoring event at the Open Burning Ground (OBG) located at the Radford Facility Army Ammunition Plant (RFAAP) in Radford, Virginia.

As well, this event served as the second background monitoring event at 13MW1 and 13MW2 for the additional Appendix IX constituents 1,1-dichloroethane, 1,1,1-trichloroethane, and trichlorofluoromethane that were added to the proposed Compliance Monitoring List for the Unit. In accordance with the pending Compliance Monitoring Plan, background monitoring for the confirmed additional Appendix IX constituents began in Third Quarter 2010 (September 1, 2010). Results for the background monitoring events will be submitted under separate cover after completion of all background monitoring. The third and fourth background monitoring events are scheduled for First and Second Quarter 2011.

The following information and attached table summarize the data validation results for the Fourth Quarter 2010 Semiannual Groundwater Monitoring Event.

Sample Collection/Analytical Services

Draper Aden Associates, of Blacksburg, Virginia, collected the semiannual groundwater samples monitoring samples during October 18-19, 2010.

Samples were submitted for laboratory analysis via courier to CompuChem, a Division of Liberty Analytical, of Cary, North Carolina, and Lancaster Laboratories, Lancaster, Pennsylvania.

The chain of custody and permit required target analytes submitted to each laboratory is provided as an attachment.

Receipt of Monitoring Event Data

On behalf of Alliant Techsystems Inc., each laboratory submitted results to Draper Aden Associates in a final certificate of analysis which included analytical results as well as relevant documentation to verify and validate the results. The final certificate of analysis for the event was received on December 2, 2010.

2206 South Main Street ◆ Blacksburg, VA ◆ 24060 ◆ (540) 552-0444 ◆ Fax: (540) 552-0291
Charlottesville ◆ Hampton Roads ◆ Richmond

Verification Events

No verification sampling was required.

Data Presentation

Sample results provided by the laboratory were reported and presented on the attached data validation summary table to at or above the method detection limit (MDL). Validated sample results are reported to at or above the quantitation limit (QL).

A reported value for a target analyte detected between the MDL and the QL should be considered an estimated concentration. Target analytes reported by the laboratory as detected less than the corresponding QLs are validated and qualified as "U" to note the analyte was analyzed for, but not detected above the QL.

No results were rejected based on the data validation criteria.

A summary of the data validation is provided below.

Data Validation Summary

The samples were analyzed by *SW-846 Method requirements (Test Methods for Evaluating Solid Wastes - Physical and Chemical Methods, USEPA SW-846, 3rd edition - Final Update I, II/IIA and III)* and *USEPA Methods for the "Determination of Organic and Inorganic Compounds in Drinking Water, Volume 1, EPA 815-R-00-014.* All data, except where noted below, were evaluated in general accordance with:

- *USEPA Region III Modifications to the Laboratory Data Validation Functional Guidelines for Evaluating Inorganic Analyses, April 1993.*
- *USEPA Region III Modifications to National Functional Guidelines for Organic Data Review, September 1994.*
- *USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review, June 2008.*
- *USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, October 2004.*
- *USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review, January 2010.*
- *USEPA Region III Innovative Approaches for Validation of Organic and Inorganic Data Standard Operating Procedures M-1, June 1995, modified, and the analytical method.*

The evaluation of the data was based on the following:

- Data package completeness
- Chain of custody
- Holding time/preservation
- Initial and continuing calibrations
- Blanks

- Interference check sample (inorganics)
- Surrogates
- Matrix spike/matrix spike duplicate (MS/MSD) samples
- Laboratory control samples (LCS)
- Internal standards
- Field duplicate
- Serial dilution (inorganics)
- Target analyte identification and quantitation
- Other criteria as noted below

Data validation results are summarized on the attached reports and table. A summary of the required methods of analysis and the laboratory that performed the analysis is provided below.

Summary of Required Analytical Methods and Laboratory

Analytical Method	Laboratory/ SDG	Monitoring Well							
		13MW1	13MW2	13MW3	13MW4	13MWDUP (13MW4)	13MW5	13MW6	13MW7
8260B Volatiles	Lancaster Laboratories, Inc./ RAD40	X	X	X	X	X	X	X	X
8270C Semivolatiles	CompuChem/ 1010107	X	X	X	X	X	X	X	X
6020 Inorganics		X	X	X	X	X	X	X	X
7470A Mercury		X	X	X	X	X	X	X	X
8330A Explosives		X	X	X	X	X	X	X	X
8332 Nitroglycerin		X	X	X	X	X	X	X	X
314.0 Perchlorate		X	X	X	X	X	X	X	X

Note: ***13MW1 and 13MW2 background monitoring wells. Remaining monitoring locations are compliance wells.***

Each final certificate of analysis was complete in its presentation and the data were of acceptable quality.

The chain of custody documentation was complete. The chain of custody was appropriately signed and dated by field and laboratory personnel.

Each laboratory received the samples on ice and in good condition, with custody seals intact. Applicable holding time and preservation criteria were met for all samples and methods, except where noted below. The data set demonstrated the laboratory's ability to achieve the reported permit QL, except where discussed below.

The laboratory submitted to Draper Aden Associates, for each method of analysis, results from an acceptable single blind performance evaluation sample that was analyzed within the past 12 months and evaluated from an independent source.

SW-846 Method 8260B/5030B - 25 ml purge volume - Volatile Organic Analytes

The instrument performance check, instrument calibration, blank, surrogate, MS/MSD, LCS, internal standards, sample/field sample duplicate results, and target analyte identification and quantitation were met, unless noted below. The laboratory analyzed a passing method detection limit check sample. Although not required by Method 8260B, the laboratory also analyzed a passing initial calibration verification standard. The MS/MSD analysis was performed on project sample 13MW5. MS/MSD criteria were met for all target analytes. A trip blank was analyzed for each day of sample collection and no target analytes were detected. Sample 13MW4 was selected as the field duplicate and was submitted blind to the laboratory (13MWDUP). Trichloroethene was detected at a concentration of 2.7 µg/l in 13MW4 and at 2.5 µg/l in 13MWDUP. Sample/Field Sample Duplicate RPD criteria were met (RPD <10). Sample results were reviewed for transcription errors from the instrument data to the laboratory report and no errors were noted.

No deviations from specific QA/QC criteria were identified during the data review process.

- The laboratory provided the analyst initial demonstration of capability data for analyst S. Johnson.

- Hexachloroethane was reported by both Method 8260B and Method 8270C.

SW-846 Method 8270C/3510C - Semivolatile Organic Analytes

The instrument performance check, instrument calibration, blank, surrogate, MS/MSD, LCS, internal standards, sample/field sample duplicate results, and target analyte identification and quantitation were met, except where noted below. The MS/MSD analysis was performed on sample 13MW5. Associated blanks were interference free, except where noted below. A field duplicate of sample 13MW4 was submitted blind to the laboratory (13MWDUP). No target analytes were detected in sample 13MW4 or the field duplicate. Sample results were reviewed for transcription errors from the instrument data to the laboratory report and no errors were noted, except noted below.

Deviations from specific QA/QC criteria that were identified during the data review process are summarized below.

- The laboratory revised the certificate of analysis to include the initial demonstration of capability data for analyst MEW and the method detection limit study data.

- The initial calibration RSD exceeded 15% (20%) for 2-chlorophenol; however, the average response factor was used to process data for 2-chlorophenol. 2-Chlorophenol was not detected at or above the MDL or QL and the QL for this target analyte was qualified as estimated.

- Hexachloroethane was reported by Method 8260B and 8270C.

- Bis(2-ethylhexyl)phthalate was reported below the QL in sample 13MW5. No other target analytes were detected in sample 13MW5 or in any other project sample.

- Although listed on the certificate of analysis separately, 3-methylphenol and 4-methylphenol cannot be analyzed separately due to analytical limitations. 3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total for both compounds.

- N-nitrosodiphenylamine converts to diphenylamine during analysis and cannot be resolved under the chromatographic conditions used for sample analysis. The result reported as n-nitrosodiphenylamine represents the combined total for both n-nitrosodiphenylamine and diphenylamine.

SW-846 Method 6020/3005A – Inorganics-total

Instrument tune, calibration, QL check standard, blank, interference check sample, MS/MSD, LCS, internal standards, serial dilution, sample/field sample duplicate results were met, except where noted below. The MS/MSD/serial dilution was analyzed on project sample 13MW5, as noted on the chain of custody. A field duplicate of sample 13MW4 was submitted blind to the laboratory (13MWDUP). Barium was detected at 57.7 µg/l in 13MW4 and 52.1 µg/l in 13MWDUP. Chromium was detected at 5.1 µg/l in 13MW4 and 5.2 µg/l in 13MWDUP Sample/Field Sample Duplicate RPD criteria were met.

Sample results were reviewed for transcription errors from the instrument data to the laboratory report and no errors were noted.

Deviations from specific QA/QC criteria that were identified during the data review process are summarized below.

- Lead was reported below the QL in the continuing calibration blanks (0.08-0.13 B µg/l) and reported detections for lead approximately five times the blank concentration or less were attributed to laboratory contamination and validated as "U." This applied to all reported detections for lead except for lead reported below the QL in sample 13MW3. Zinc was reported below the QL in the laboratory preparation blank (0.48 µg/l) and reported detections for zinc approximately five times the blank concentration or less were attributed to laboratory contamination and validated as "U." This applied to zinc reported below the QL in sample 13MW2.

- The serial dilution percent difference for barium exceeded ten percent (12%). Barium was reported above the QL in all project samples and the results for barium are qualified as estimated ("J") due to this QC deficiency.

- The laboratory provided the method detection limit (MDL) study and the analyst initial demonstration of capability data for J. Feldhaus as a revision.

SW-846 Method 7470A – Mercury-total

QL standard, calibration, blank, MS/MSD, LCS, and sample/field sample duplicate results were met, except where noted below. The MS/MSD was analyzed on project sample 13MW5, as noted on the chain of custody. Mercury was not detected in the sample/field duplicate sample

SW-846 Method 7470A – Mercury-total

QL standard, calibration, blank, MS/MSD, LCS, and sample/field sample duplicate results were met, except where noted below. The MS/MSD was analyzed on project sample 13MW5, as noted on the chain of custody. Mercury was not detected in the sample/field duplicate sample (13MW4/13MWDUP). Sample results were reviewed for transcription errors from the instrument data to the laboratory report and no errors were noted.

No deviations from specific QA/QC criteria were identified during the data review process. The laboratory provided the method detection limit study (MDL) and the analyst initial demonstration of capability data (JRR 2725) as a revision.

SW-846 Methods 8330B/8332 - Explosives/Nitroglycerin

The instrument performance check, instrument calibration, blank, surrogate, MS/MSD, LCS, internal standards, sample/field sample duplicate results, and target analyte identification and quantitation were met, except where noted below. The MS/MSD analysis was performed on project sample 13MW5. A field duplicate of sample 13MW4 was submitted blind to the laboratory (13MWDUP). No target analytes were detected in the sample/field duplicate sample (13MW4/13MWDUP). No target analytes were detected in any project sample. Sample results were reviewed for transcription errors from the instrument data to the laboratory report and no errors were noted.

No deviations from specific QA/QC criteria were identified during the data review process. The laboratory provided the method detection limit study (MDL) and the analyst initial demonstration of capability data (BWL) as a revision.

US EPA Method 314.0 – Perchlorate

The instrument performance check, instrument calibration, blank, surrogate, MS/MSD, LCS, and sample/field sample duplicate results were met, except where noted below. The laboratory analyzed an initial calibration standard at 4 µg/l, the QL. The MS/MSD analysis was performed on project sample 13MW5. Sample 13MW4 was selected as the blind field duplicate (13MWDUP). Sample results were reviewed for transcription errors from the instrument data to the laboratory report and no errors were noted. Deviations from specific QA/QC criteria that were identified during the data review process are summarized below.

- Perchlorate was detected at 34.1 µg/l in 13MW4 and 40.1 µg/l in 13MWDUP. The sample/field sample duplicate RPD was greater than the RPD criteria (10 RPD). Perchlorate results for this event were qualified as estimated ("J") due to the inconsistency between field sample and field duplicate results.

- The laboratory provided the method detection limit study and analyst initial demonstration of capability data (J. Mohn) as a revision.

LIMITATIONS:

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Conclusions presented are based upon a review of available information, the results of our field studies, and/or professional judgment. To the best of our knowledge, information provided by others is true and accurate, unless otherwise noted. Draper Aden Associates' liability, hereunder, shall be limited to amounts due Draper Aden Associates for services actually rendered, or reimbursable expenses actually incurred.

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Draper Aden Associates
Engineering ♦ Surveying ♦ Environmental Services

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Date:

Radford Facility Army Ammunition Plant: HWMU-13

Analyte	Sample ID	Result (ug/L)	Q	Result (ug/L)	Q	QL (ug/L)	DL (ug/L)	Validation Notes
Method: 314.0								
Laboratory: CompuChem, a Division of Liberty Analytical, Cary, NC								
Perchlorate	13MW1	4	U	U	J	4	0.95	Analyte not detected at or above the MDL or QL. Field duplicate precision criteria not met. Result is estimated.
	13MW2	4	U	U	J	4	0.95	Analyte not detected at or above the MDL or QL. Field duplicate precision criteria not met. Result is estimated.
	13MW3	1.59	J	U	J	4	0.95	Result < QL. Field duplicate precision criteria not met. Result is estimated.
	13MW4	34.1		34.1	J	4	0.95	Field duplicate precision criteria not met. Result is estimated. Field duplicate result was 40.1 ug/l. RPD >10 (16).
	13MW5	6.36		6.36	J	4	0.95	Field duplicate precision criteria not met. Result is estimated.
	13MW6	4	U	U	J	4	0.95	Analyte not detected at or above the MDL or QL. Field duplicate precision criteria not met. Result is estimated.
	13MW7	4	U	U	J	4	0.95	Analyte not detected at or above the MDL or QL. Field duplicate precision criteria not met. Result is estimated.
	13MWDUP	40.1		40.1	J	4	0.95	Field duplicate precision criteria not met. Result is estimated. Field duplicate of 13MW4. RPD >10 (16).

Radford Facility Army Ammunition Plant: HWMU-13

Analyte	Sample ID	Result (ug/L)	Q	Result (ug/L)	Q	QL (ug/L)	DL (ug/L)	Validation Notes
Method: 6020								
Laboratory: CompuChem, a Division of Liberty Analytical, Cary, NC								
Antimony	13MW1	0.2	U	U		5	0.2	Analyte not detected at or above the MDL or QL.
	13MW2	0.2	U	U		5	0.2	Analyte not detected at or above the MDL or QL.
	13MW3	0.2	U	U		5	0.2	Analyte not detected at or above the MDL or QL.
	13MW4	0.21	B	U		5	0.2	Result < QL.
	13MW5	0.83	B	U		5	0.2	Result < QL.
	13MW6	0.2	U	U		5	0.2	Analyte not detected at or above the MDL or QL.
	13MW7	0.2	U	U		5	0.2	Analyte not detected at or above the MDL or QL.
	13MWDUP	0.21	B	U		5	0.2	Result < QL. Field duplicate of 13MW4. RPD not calculable.
Arsenic	13MW1	0.088	U	U		5	0.088	Analyte not detected at or above the MDL or QL.
	13MW2	0.088	U	U		5	0.088	Analyte not detected at or above the MDL or QL.
	13MW3	0.088	U	U		5	0.088	Analyte not detected at or above the MDL or QL.
	13MW4	0.21	B	U		5	0.088	Result < QL.
	13MW5	0.088	U	U		5	0.088	Analyte not detected at or above the MDL or QL.
	13MW6	0.088	U	U		5	0.088	Analyte not detected at or above the MDL or QL.
	13MW7	0.088	U	U		5	0.088	Analyte not detected at or above the MDL or QL.
	13MWDUP	0.088	U	U		5	0.088	Analyte not detected at or above the MDL or QL. Field duplicate of 13MW4.
Barium	13MW1	116		116	J	1	0.69	Serial dilution percent difference >10% (12%). Reported result is estimated.
	13MW2	148		148	J	1	0.69	Serial dilution percent difference >10% (12%). Reported result is estimated.
	13MW3	96.7		96.7	J	1	0.69	Serial dilution percent difference >10% (12%). Reported result is estimated.
	13MW4	57.7		57.7	J	1	0.69	Serial dilution percent difference >10% (12%). Reported result is estimated. Field duplicate result was 52.1 ug/l. RPD = 10.
	13MW5	96.2		96.2	J	1	0.69	Serial dilution percent difference >10% (12%). Reported result is estimated.
	13MW6	89.2		89.2	J	1	0.69	Serial dilution percent difference >10% (12%). Reported result is estimated.
	13MW7	146		146	J	1	0.69	Serial dilution percent difference >10% (12%). Reported result is estimated.
	13MWDUP	52.1		52.1	J	1	0.69	Serial dilution percent difference >10% (12%). Reported result is estimated. Field duplicate of 13MW4. RPD = 10.
Cadmium	13MW1	0.045	U	U		1	0.045	Analyte not detected at or above the MDL or QL.
	13MW2	0.045	U	U		1	0.045	Analyte not detected at or above the MDL or QL.
	13MW3	0.045	U	U		1	0.045	Analyte not detected at or above the MDL or QL.
	13MW4	0.045	U	U		1	0.045	Analyte not detected at or above the MDL or QL.
	13MW5	0.045	U	U		1	0.045	Analyte not detected at or above the MDL or QL.
	13MW6	0.045	U	U		1	0.045	Analyte not detected at or above the MDL or QL.
	13MW7	0.045	U	U		1	0.045	Analyte not detected at or above the MDL or QL.

Radford Facility Army Ammunition Plant: HWMU-13

Analyte	Sample ID	Result (ug/L)	Q	Result (ug/L)	Q	QL (ug/L)	DL (ug/L)	Validation Notes
Method: 6020								
Laboratory: CompuChem, a Division of Liberty Analytical, Cary, NC								
Cadmium	13MWDUP	0.045	U	U		1	0.045	Analyte not detected at or above the MDL or QL. Field duplicate of 13MW4.
Chromium	13MW1	3.2	B	U		5	0.24	Result < QL.
	13MW2	4.1	B	U		5	0.24	Result < QL.
	13MW3	5.9		5.9		5	0.24	No action taken.
	13MW4	5.1		5.1		5	0.24	No action taken. Field duplicate result was 5.2 ug/l. RPD <10.
	13MW5	5.4		5.4		5	0.24	No action taken.
	13MW6	2.9	B	U		5	0.24	Result < QL.
	13MW7	3	B	U		5	0.24	Result < QL.
	13MWDUP	5.2		5.2		5	0.24	No action taken. Field duplicate of 13MW4. RPD <10.
Lead	13MW1	0.11	B	U		5	0.054	Result < QL. Blank contamination. Continuing calibration blank contamination (0.079-0.129 ug/l).
	13MW2	0.054	U	U		5	0.054	Analyte not detected at or above the MDL or QL.
	13MW3	2.8	B	U		5	0.054	Result < QL.
	13MW4	0.87	B	U		5	0.054	Result < QL. Blank contamination. Continuing calibration blank contamination (0.079-0.129 ug/l).
	13MW5	0.24	B	U		5	0.054	Result < QL. Blank contamination. Continuing calibration blank contamination (0.079-0.129 ug/l).
	13MW6	0.3	B	U		5	0.054	Result < QL. Blank contamination. Continuing calibration blank contamination (0.079-0.129 ug/l).
	13MW7	0.12	B	U		5	0.054	Result < QL. Blank contamination. Continuing calibration blank contamination (0.079-0.129 ug/l).
	13MWDUP	0.41	B	U		5	0.054	Result < QL. Blank contamination. Continuing calibration blank contamination (0.079-0.129 ug/l).
Nickel	13MW1	2.4	B	U		5	0.093	Result < QL.
	13MW2	1.8	B	U		5	0.093	Result < QL.
	13MW3	1.4	B	U		5	0.093	Result < QL.
	13MW4	3.3	B	U		5	0.093	Result < QL.
	13MW5	1.4	B	U		5	0.093	Result < QL.
	13MW6	2	B	U		5	0.093	Result < QL.
	13MW7	36		36		5	0.093	No action taken.
	13MWDUP	3.6	B	U		5	0.093	Result < QL. Field duplicate of 13MW4. RPD not calculable.
Selenium	13MW1	3	B	U		5	0.29	Result < QL.
	13MW2	0.8	B	U		5	0.29	Result < QL.
	13MW3	0.73	B	U		5	0.29	Result < QL.
	13MW4	0.66	B	U		5	0.29	Result < QL.
	13MW5	1.6	B	U		5	0.29	Result < QL.
	13MW6	2.7	B	U		5	0.29	Result < QL.
	13MW7	2.5	B	U		5	0.29	Result < QL.

Radford Facility Army Ammunition Plant: HWMU-13

Analyte	Sample ID	Result (ug/L)	Q	Result (ug/L)	Q	QL (ug/L)	DL (ug/L)	Validation Notes
Method: 6020								
Laboratory: CompuChem, a Division of Liberty Analytical, Cary, NC								
Selenium	13MWDUP	0.56	B	U		5	0.29	Result < QL. Field duplicate of 13MW4. RPD not calculable.
Silver	13MW1	0.043	U	U		2	0.043	Analyte not detected at or above the MDL or QL.
	13MW2	0.043	U	U		2	0.043	Analyte not detected at or above the MDL or QL.
	13MW3	0.043	U	U		2	0.043	Analyte not detected at or above the MDL or QL.
	13MW4	0.043	U	U		2	0.043	Analyte not detected at or above the MDL or QL.
	13MW5	0.043	U	U		2	0.043	Analyte not detected at or above the MDL or QL.
	13MW6	0.043	U	U		2	0.043	Analyte not detected at or above the MDL or QL.
	13MW7	0.043	U	U		2	0.043	Analyte not detected at or above the MDL or QL.
	13MWDUP	0.043	U	U		2	0.043	Analyte not detected at or above the MDL or QL. Field duplicate of 13MW4.
Zinc	13MW1	3.1	B	U		5	0.34	Result < QL.
	13MW2	1.5	B	U		5	0.34	Result < QL. Blank contamination. Laboratory preparation blank contamination (0.480 ug/l).
	13MW3	4.7	B	U		5	0.34	Result < QL.
	13MW4	7		7		5	0.34	No action taken.
	13MW5	3.1	B	U		5	0.34	Result < QL.
	13MW6	3.7	B	U		5	0.34	Result < QL.
	13MW7	39.1		39.1		5	0.34	No action taken.
	13MWDUP	4.4	B	U		5	0.34	Result < QL. Field duplicate of 13MW4. RPD not calculable.
Method: 7470A								
Laboratory: CompuChem, a Division of Liberty Analytical, Cary, NC								
Mercury	13MW2	0.091	U	U		0.5	0.091	Analyte not detected at or above the MDL or QL.
	13MW3	0.091	U	U		0.5	0.091	Analyte not detected at or above the MDL or QL.
	13MW4	0.091	U	U		0.5	0.091	Analyte not detected at or above the MDL or QL.
	13MW5	0.091	U	U		0.5	0.091	Analyte not detected at or above the MDL or QL.
	13MW6	0.091	U	U		0.5	0.091	Analyte not detected at or above the MDL or QL.
	13MW7	0.091	U	U		0.5	0.091	Analyte not detected at or above the MDL or QL.
	13MWDUP	0.091	U	U		0.5	0.091	Analyte not detected at or above the MDL or QL. Field duplicate of 13MW4.

Analyte	Sample ID	Result (ug/L)	Q	Result (ug/L)	Q	QL (ug/L)	DL (ug/L)	Validation Notes
Method: 8260B								
Laboratory: Lancaster Laboratories, Lancaster, PA								
Benzene	13MW1	0.1	U	U		0.5	0.1	Analyte not detected at or above the MDL or QL.
	13MW2	0.1	U	U		0.5	0.1	Analyte not detected at or above the MDL or QL.
	13MW3	0.1	U	U		0.5	0.1	Analyte not detected at or above the MDL or QL.
	13MW4	0.1	U	U		0.5	0.1	Analyte not detected at or above the MDL or QL.
	13MW5	0.1	U	U		0.5	0.1	Analyte not detected at or above the MDL or QL.
	13MW6	0.1	U	U		0.5	0.1	Analyte not detected at or above the MDL or QL.
	13MW7	0.1	U	U		0.5	0.1	Analyte not detected at or above the MDL or QL.
	13MWDUP	0.1	U	U		0.5	0.1	Analyte not detected at or above the MDL or QL. Field duplicate of 13MW4.
	TRIP BLANK 1	0.1	U	U		0.5	0.1	Analyte not detected at or above the MDL or QL.
	TRIP BLANK 2	0.1	U	U		0.5	0.1	Analyte not detected at or above the MDL or QL.
Benzyl chloride	13MW1	0.1	U	U		0.5	0.1	Analyte not detected at or above the MDL or QL.
	13MW2	0.1	U	U		0.5	0.1	Analyte not detected at or above the MDL or QL.
	13MW3	0.1	U	U		0.5	0.1	Analyte not detected at or above the MDL or QL.
	13MW4	0.1	U	U		0.5	0.1	Analyte not detected at or above the MDL or QL.
	13MW5	0.1	U	U		0.5	0.1	Analyte not detected at or above the MDL or QL.
	13MW6	0.1	U	U		0.5	0.1	Analyte not detected at or above the MDL or QL.
	13MW7	0.1	U	U		0.5	0.1	Analyte not detected at or above the MDL or QL.
	13MWDUP	0.1	U	U		0.5	0.1	Analyte not detected at or above the MDL or QL. Field duplicate of 13MW4.
	TRIP BLANK 1	0.1	U	U		0.5	0.1	Analyte not detected at or above the MDL or QL.
	TRIP BLANK 2	0.1	U	U		0.5	0.1	Analyte not detected at or above the MDL or QL.
Bromomethane	13MW1	0.1	U	U		0.5	0.1	Analyte not detected at or above the MDL or QL.
	13MW2	0.1	U	U		0.5	0.1	Analyte not detected at or above the MDL or QL.
	13MW3	0.1	U	U		0.5	0.1	Analyte not detected at or above the MDL or QL.
	13MW4	0.1	U	U		0.5	0.1	Analyte not detected at or above the MDL or QL.
	13MW5	0.1	U	U		0.5	0.1	Analyte not detected at or above the MDL or QL.
	13MW6	0.1	U	U		0.5	0.1	Analyte not detected at or above the MDL or QL.
	13MW7	0.1	U	U		0.5	0.1	Analyte not detected at or above the MDL or QL.
	13MWDUP	0.1	U	U		0.5	0.1	Analyte not detected at or above the MDL or QL. Field duplicate of 13MW4.
	TRIP BLANK 1	0.1	U	U		0.5	0.1	Analyte not detected at or above the MDL or QL.
	TRIP BLANK 2	0.1	U	U		0.5	0.1	Analyte not detected at or above the MDL or QL.
Carbon tetrachloride	13MW1	0.1	U	U		1	0.1	Analyte not detected at or above the MDL or QL.
	13MW2	0.1	U	U		1	0.1	Analyte not detected at or above the MDL or QL.

Analyte	Sample ID	Result (ug/L)	Q	Result (ug/L)	Q	QL (ug/L)	DL (ug/L)	Validation Notes
Method: 8260B								
Laboratory: Lancaster Laboratories, Lancaster, PA								
Carbon tetrachloride	13MW3	4.2		4.2		1	0.1	No action taken.
	13MW4	0.1	U	U		1	0.1	Analyte not detected at or above the MDL or QL.
	13MW5	0.1	U	U		1	0.1	Analyte not detected at or above the MDL or QL.
	13MW6	0.1	U	U		1	0.1	Analyte not detected at or above the MDL or QL.
	13MW7	0.1	U	U		1	0.1	Analyte not detected at or above the MDL or QL.
	13MWDUP	0.1	U	U		1	0.1	Analyte not detected at or above the MDL or QL. Field duplicate of 13MW4.
	TRIP BLANK 1	0.1	U	U		1	0.1	Analyte not detected at or above the MDL or QL.
	TRIP BLANK 2	0.1	U	U		1	0.1	Analyte not detected at or above the MDL or QL.
Chlorobenzene	13MW1	0.1	U	U		0.5	0.1	Analyte not detected at or above the MDL or QL.
	13MW2	0.1	U	U		0.5	0.1	Analyte not detected at or above the MDL or QL.
	13MW3	0.1	U	U		0.5	0.1	Analyte not detected at or above the MDL or QL.
	13MW4	0.1	U	U		0.5	0.1	Analyte not detected at or above the MDL or QL.
	13MW5	0.1	U	U		0.5	0.1	Analyte not detected at or above the MDL or QL.
	13MW6	0.1	U	U		0.5	0.1	Analyte not detected at or above the MDL or QL.
	13MW7	0.1	U	U		0.5	0.1	Analyte not detected at or above the MDL or QL.
	13MWDUP	0.1	U	U		0.5	0.1	Analyte not detected at or above the MDL or QL. Field duplicate of 13MW4.
	TRIP BLANK 1	0.1	U	U		0.5	0.1	Analyte not detected at or above the MDL or QL.
	TRIP BLANK 2	0.1	U	U		0.5	0.1	Analyte not detected at or above the MDL or QL.
Chloromethane	13MW1	0.2	U	U		0.5	0.2	Analyte not detected at or above the MDL or QL.
	13MW2	0.2	U	U		0.5	0.2	Analyte not detected at or above the MDL or QL.
	13MW3	0.2	U	U		0.5	0.2	Analyte not detected at or above the MDL or QL.
	13MW4	0.2	U	U		0.5	0.2	Analyte not detected at or above the MDL or QL.
	13MW5	0.2	U	U		0.5	0.2	Analyte not detected at or above the MDL or QL.
	13MW6	0.2	U	U		0.5	0.2	Analyte not detected at or above the MDL or QL.
	13MW7	0.2	U	U		0.5	0.2	Analyte not detected at or above the MDL or QL.
	13MWDUP	0.2	U	U		0.5	0.2	Analyte not detected at or above the MDL or QL. Field duplicate of 13MW4.
	TRIP BLANK 1	0.2	U	U		0.5	0.2	Analyte not detected at or above the MDL or QL.
	TRIP BLANK 2	0.2	U	U		0.5	0.2	Analyte not detected at or above the MDL or QL.
Chloroform	13MW1	0.1	U	U		0.5	0.1	Analyte not detected at or above the MDL or QL.
	13MW2	0.1	U	U		0.5	0.1	Analyte not detected at or above the MDL or QL.
	13MW3	0.6		0.6		0.5	0.1	No action taken.
	13MW4	0.1	U	U		0.5	0.1	Analyte not detected at or above the MDL or QL.

Analyte	Sample ID	Result (ug/L)	Q	Result (ug/L)	Q	QL (ug/L)	DL (ug/L)	Validation Notes
Method: 8260B								
Laboratory: Lancaster Laboratories, Lancaster, PA								
Chloroform	13MW5	0.1	U	U		0.5	0.1	Analyte not detected at or above the MDL or QL.
	13MW6	0.1	U	U		0.5	0.1	Analyte not detected at or above the MDL or QL.
	13MW7	0.1	U	U		0.5	0.1	Analyte not detected at or above the MDL or QL.
	13MWDUP	0.1	U	U		0.5	0.1	Analyte not detected at or above the MDL or QL. Field duplicate of 13MW4.
	TRIP BLANK 1	0.1	U	U		0.5	0.1	Analyte not detected at or above the MDL or QL.
	TRIP BLANK 2	0.1	U	U		0.5	0.1	Analyte not detected at or above the MDL or QL.
1,1-Dichloroethane	13MW1	0.1	U	U		1	0.1	Analyte not detected at or above the MDL or QL.
	13MW2	0.1	U	U		1	0.1	Analyte not detected at or above the MDL or QL.
	13MW3	0.1	U	U		1	0.1	Analyte not detected at or above the MDL or QL.
	13MW4	0.1	U	U		1	0.1	Analyte not detected at or above the MDL or QL.
	13MW5	0.1	U	U		1	0.1	Analyte not detected at or above the MDL or QL.
	13MW6	0.1	U	U		1	0.1	Analyte not detected at or above the MDL or QL.
	13MW7	0.1	U	U		1	0.1	Analyte not detected at or above the MDL or QL.
	13MWDUP	0.1	U	U		1	0.1	Analyte not detected at or above the MDL or QL. Field duplicate of 13MW4.
	TRIP BLANK 1	0.1	U	U		1	0.1	Analyte not detected at or above the MDL or QL.
	TRIP BLANK 2	0.1	U	U		1	0.1	Analyte not detected at or above the MDL or QL.
1,2-Dichloroethane	13MW1	0.1	U	U		0.5	0.1	Analyte not detected at or above the MDL or QL.
	13MW2	0.1	U	U		0.5	0.1	Analyte not detected at or above the MDL or QL.
	13MW3	0.1	U	U		0.5	0.1	Analyte not detected at or above the MDL or QL.
	13MW4	0.1	U	U		0.5	0.1	Analyte not detected at or above the MDL or QL.
	13MW5	0.1	U	U		0.5	0.1	Analyte not detected at or above the MDL or QL.
	13MW6	0.1	U	U		0.5	0.1	Analyte not detected at or above the MDL or QL.
	13MW7	0.1	U	U		0.5	0.1	Analyte not detected at or above the MDL or QL.
	13MWDUP	0.1	U	U		0.5	0.1	Analyte not detected at or above the MDL or QL. Field duplicate of 13MW4.
	TRIP BLANK 1	0.1	U	U		0.5	0.1	Analyte not detected at or above the MDL or QL.
	TRIP BLANK 2	0.1	U	U		0.5	0.1	Analyte not detected at or above the MDL or QL.
1,1-Dichloroethene	13MW1	0.1	U	U		0.5	0.1	Analyte not detected at or above the MDL or QL.
	13MW2	0.1	U	U		0.5	0.1	Analyte not detected at or above the MDL or QL.
	13MW3	0.1	U	U		0.5	0.1	Analyte not detected at or above the MDL or QL.
	13MW4	0.1	U	U		0.5	0.1	Analyte not detected at or above the MDL or QL.
	13MW5	0.1	U	U		0.5	0.1	Analyte not detected at or above the MDL or QL.
	13MW6	0.1	U	U		0.5	0.1	Analyte not detected at or above the MDL or QL.

Analyte	Sample ID	Result (ug/L)	Q	Result (ug/L)	Q	QL (ug/L)	DL (ug/L)	Validation Notes
Method: 8260B								
Laboratory: Lancaster Laboratories, Lancaster, PA								
1,1-Dichloroethene	13MW7	0.1	U	U		0.5	0.1	Analyte not detected at or above the MDL or QL.
	13MWDUP	0.1	U	U		0.5	0.1	Analyte not detected at or above the MDL or QL. Field duplicate of 13MW4.
	TRIP BLANK 1	0.1	U	U		0.5	0.1	Analyte not detected at or above the MDL or QL.
	TRIP BLANK 2	0.1	U	U		0.5	0.1	Analyte not detected at or above the MDL or QL.
Hexachloroethane	13MW1	0.1	U	U		0.5	0.1	Analyte not detected at or above the MDL or QL.
	13MW2	0.1	U	U		0.5	0.1	Analyte not detected at or above the MDL or QL.
	13MW3	0.1	U	U		0.5	0.1	Analyte not detected at or above the MDL or QL.
	13MW4	0.1	U	U		0.5	0.1	Analyte not detected at or above the MDL or QL.
	13MW5	0.1	U	U		0.5	0.1	Analyte not detected at or above the MDL or QL.
	13MW6	0.1	U	U		0.5	0.1	Analyte not detected at or above the MDL or QL.
	13MW7	0.1	U	U		0.5	0.1	Analyte not detected at or above the MDL or QL.
	13MWDUP	0.1	U	U		0.5	0.1	Analyte not detected at or above the MDL or QL. Field duplicate of 13MW4.
	TRIP BLANK 1	0.1	U	U		0.5	0.1	Analyte not detected at or above the MDL or QL.
	TRIP BLANK 2	0.1	U	U		0.5	0.1	Analyte not detected at or above the MDL or QL.
Methylene chloride	13MW1	0.2	U	U		1	0.2	Analyte not detected at or above the MDL or QL.
	13MW2	0.2	U	U		1	0.2	Analyte not detected at or above the MDL or QL.
	13MW3	0.2	U	U		1	0.2	Analyte not detected at or above the MDL or QL.
	13MW4	0.2	U	U		1	0.2	Analyte not detected at or above the MDL or QL.
	13MW5	0.2	U	U		1	0.2	Analyte not detected at or above the MDL or QL.
	13MW6	0.2	U	U		1	0.2	Analyte not detected at or above the MDL or QL.
	13MW7	0.2	U	U		1	0.2	Analyte not detected at or above the MDL or QL.
	13MWDUP	0.2	U	U		1	0.2	Analyte not detected at or above the MDL or QL. Field duplicate of 13MW4.
	TRIP BLANK 1	0.2	U	U		1	0.2	Analyte not detected at or above the MDL or QL.
	TRIP BLANK 2	0.2	U	U		1	0.2	Analyte not detected at or above the MDL or QL.
Naphthalene	13MW1	0.1	U	U		0.5	0.1	Analyte not detected at or above the MDL or QL.
	13MW2	0.1	U	U		0.5	0.1	Analyte not detected at or above the MDL or QL.
	13MW3	0.1	U	U		0.5	0.1	Analyte not detected at or above the MDL or QL.
	13MW4	0.1	U	U		0.5	0.1	Analyte not detected at or above the MDL or QL.
	13MW5	0.1	U	U		0.5	0.1	Analyte not detected at or above the MDL or QL.
	13MW6	0.1	U	U		0.5	0.1	Analyte not detected at or above the MDL or QL.
	13MW7	0.1	U	U		0.5	0.1	Analyte not detected at or above the MDL or QL.
	13MWDUP	0.1	U	U		0.5	0.1	Analyte not detected at or above the MDL or QL. Field duplicate of 13MW4.

Analyte	Sample ID	Result (ug/L)	Q	Result (ug/L)	Q	QL (ug/L)	DL (ug/L)	Validation Notes
Method: 8260B								
Laboratory: Lancaster Laboratories, Lancaster, PA								
Naphthalene	TRIP BLANK 1	0.1	U	U		0.5	0.1	Analyte not detected at or above the MDL or QL.
	TRIP BLANK 2	0.1	U	U		0.5	0.1	Analyte not detected at or above the MDL or QL.
Tetrachloroethene	13MW1	0.1	U	U		1	0.1	Analyte not detected at or above the MDL or QL.
	13MW2	0.1	U	U		1	0.1	Analyte not detected at or above the MDL or QL.
	13MW3	0.1	U	U		1	0.1	Analyte not detected at or above the MDL or QL.
	13MW4	0.1	U	U		1	0.1	Analyte not detected at or above the MDL or QL.
	13MW5	0.1	U	U		1	0.1	Analyte not detected at or above the MDL or QL.
	13MW6	0.1	U	U		1	0.1	Analyte not detected at or above the MDL or QL.
	13MW7	0.1	J	U		1	0.1	Result < QL.
	13MWDUP	0.1	U	U		1	0.1	Analyte not detected at or above the MDL or QL. Field duplicate of 13MW4.
	TRIP BLANK 1	0.1	U	U		1	0.1	Analyte not detected at or above the MDL or QL.
	TRIP BLANK 2	0.1	U	U		1	0.1	Analyte not detected at or above the MDL or QL.
Toluene	13MW1	0.1	U	U		1	0.1	Analyte not detected at or above the MDL or QL.
	13MW2	0.1	U	U		1	0.1	Analyte not detected at or above the MDL or QL.
	13MW3	0.1	U	U		1	0.1	Analyte not detected at or above the MDL or QL.
	13MW4	0.1	U	U		1	0.1	Analyte not detected at or above the MDL or QL.
	13MW5	0.1	U	U		1	0.1	Analyte not detected at or above the MDL or QL.
	13MW6	0.1	U	U		1	0.1	Analyte not detected at or above the MDL or QL.
	13MW7	0.1	U	U		1	0.1	Analyte not detected at or above the MDL or QL.
	13MWDUP	0.1	U	U		1	0.1	Analyte not detected at or above the MDL or QL. Field duplicate of 13MW4.
	TRIP BLANK 1	0.1	U	U		1	0.1	Analyte not detected at or above the MDL or QL.
	TRIP BLANK 2	0.1	U	U		1	0.1	Analyte not detected at or above the MDL or QL.
1,1,1-Trichloroethane	13MW1	0.1	U	U		1	0.1	Analyte not detected at or above the MDL or QL.
	13MW2	0.1	U	U		1	0.1	Analyte not detected at or above the MDL or QL.
	13MW3	0.1	U	U		1	0.1	Analyte not detected at or above the MDL or QL.
	13MW4	0.1	U	U		1	0.1	Analyte not detected at or above the MDL or QL.
	13MW5	0.1	U	U		1	0.1	Analyte not detected at or above the MDL or QL.
	13MW6	0.1	U	U		1	0.1	Analyte not detected at or above the MDL or QL.
	13MW7	0.1	U	U		1	0.1	Analyte not detected at or above the MDL or QL.
	13MWDUP	0.1	U	U		1	0.1	Analyte not detected at or above the MDL or QL. Field duplicate of 13MW4.
	TRIP BLANK 1	0.1	U	U		1	0.1	Analyte not detected at or above the MDL or QL.
	TRIP BLANK 2	0.1	U	U		1	0.1	Analyte not detected at or above the MDL or QL.

Analyte	Sample ID	Result (ug/L)	Q	Result (ug/L)	Q	QL (ug/L)	DL (ug/L)	Validation Notes
Method: 8260B								
Laboratory: Lancaster Laboratories, Lancaster, PA								
Trichloroethene	13MW1	0.1	U	U		1	0.1	Analyte not detected at or above the MDL or QL.
	13MW2	0.1	U	U		1	0.1	Analyte not detected at or above the MDL or QL.
	13MW3	0.6	J	U		1	0.1	Result < QL.
	13MW4	2.7		2.7		1	0.1	No action taken. Field duplicate result was 2.5 ug/l (RPD <10).
	13MW5	0.1	U	U		1	0.1	Analyte not detected at or above the MDL or QL.
	13MW6	0.1	U	U		1	0.1	Analyte not detected at or above the MDL or QL.
	13MW7	1.4		1.4		1	0.1	No action taken.
	13MWDUP	2.5		2.5		1	0.1	No action taken. Field duplicate of 13MW4. RPD <10.
	TRIP BLANK 1	0.1	U	U		1	0.1	Analyte not detected at or above the MDL or QL.
	TRIP BLANK 2	0.1	U	U		1	0.1	Analyte not detected at or above the MDL or QL.
Trichlorofluoromethane	13MW1	0.1	U	U		1	0.1	Analyte not detected at or above the MDL or QL.
	13MW2	0.1	U	U		1	0.1	Analyte not detected at or above the MDL or QL.
	13MW3	0.2	J	U		1	0.1	Result < QL.
	13MW4	0.1	U	U		1	0.1	Analyte not detected at or above the MDL or QL.
	13MW5	0.1	U	U		1	0.1	Analyte not detected at or above the MDL or QL.
	13MW6	0.1	U	U		1	0.1	Analyte not detected at or above the MDL or QL.
	13MW7	0.1	U	U		1	0.1	Analyte not detected at or above the MDL or QL.
	13MWDUP	0.1	U	U		1	0.1	Analyte not detected at or above the MDL or QL. Field duplicate of 13MW4.
	TRIP BLANK 1	0.1	U	U		1	0.1	Analyte not detected at or above the MDL or QL.
	TRIP BLANK 2	0.1	U	U		1	0.1	Analyte not detected at or above the MDL or QL.
Vinyl chloride	13MW1	0.1	U	U		0.5	0.1	Analyte not detected at or above the MDL or QL.
	13MW2	0.1	U	U		0.5	0.1	Analyte not detected at or above the MDL or QL.
	13MW3	0.1	U	U		0.5	0.1	Analyte not detected at or above the MDL or QL.
	13MW4	0.1	U	U		0.5	0.1	Analyte not detected at or above the MDL or QL.
	13MW5	0.1	U	U		0.5	0.1	Analyte not detected at or above the MDL or QL.
	13MW6	0.1	U	U		0.5	0.1	Analyte not detected at or above the MDL or QL.
	13MW7	0.1	U	U		0.5	0.1	Analyte not detected at or above the MDL or QL.
	13MWDUP	0.1	U	U		0.5	0.1	Analyte not detected at or above the MDL or QL. Field duplicate of 13MW4.
	TRIP BLANK 1	0.1	U	U		0.5	0.1	Analyte not detected at or above the MDL or QL.
	TRIP BLANK 2	0.1	U	U		0.5	0.1	Analyte not detected at or above the MDL or QL.

Analyte	Sample ID	Result (ug/L)	Q	Result (ug/L)	Q	QL (ug/L)	DL (ug/L)	Validation Notes
Method: 8270C								
Laboratory: CompuChem, a Division of Liberty Analytical, Cary, NC								
Acetophenone	13MW1	5.3	U	U		5	0.88	Analyte not detected at or above the MDL or QL.
	13MW2	5	U	U		5	0.83	Analyte not detected at or above the MDL or QL.
	13MW3	5.3	U	U		5	0.88	Analyte not detected at or above the MDL or QL.
	13MW4	5	U	U		5	0.83	Analyte not detected at or above the MDL or QL.
	13MW5	5	U	U		5	0.83	Analyte not detected at or above the MDL or QL.
	13MW6	5	U	U		5	0.83	Analyte not detected at or above the MDL or QL.
	13MW7	5	U	U		5	0.83	Analyte not detected at or above the MDL or QL.
	13MWDUP	5	U	U		5	0.83	Analyte not detected at or above the MDL or QL. Field duplicate of 13MW4.
Benzo[a]anthracene	13MW1	5.3	U	U		5	1.4	Analyte not detected at or above the MDL or QL.
	13MW2	5	U	U		5	1.3	Analyte not detected at or above the MDL or QL.
	13MW3	5.3	U	U		5	1.4	Analyte not detected at or above the MDL or QL.
	13MW4	5	U	U		5	1.3	Analyte not detected at or above the MDL or QL.
	13MW5	5	U	U		5	1.3	Analyte not detected at or above the MDL or QL.
	13MW6	5	U	U		5	1.3	Analyte not detected at or above the MDL or QL.
	13MW7	5	U	U		5	1.3	Analyte not detected at or above the MDL or QL.
	13MWDUP	5	U	U		5	1.3	Analyte not detected at or above the MDL or QL. Field duplicate of 13MW4.
Benzo[b]fluoranthene	13MW1	5.3	U	U		5	1.4	Analyte not detected at or above the MDL or QL.
	13MW2	5	U	U		5	1.4	Analyte not detected at or above the MDL or QL.
	13MW3	5.3	U	U		5	1.4	Analyte not detected at or above the MDL or QL.
	13MW4	5	U	U		5	1.4	Analyte not detected at or above the MDL or QL.
	13MW5	5	U	U		5	1.4	Analyte not detected at or above the MDL or QL.
	13MW6	5	U	U		5	1.4	Analyte not detected at or above the MDL or QL.
	13MW7	5	U	U		5	1.4	Analyte not detected at or above the MDL or QL.
	13MWDUP	5	U	U		5	1.4	Analyte not detected at or above the MDL or QL. Field duplicate of 13MW4.
Benzo[k]fluoranthene	13MW1	5.3	U	U		5	0.81	Analyte not detected at or above the MDL or QL.
	13MW2	5	U	U		5	0.76	Analyte not detected at or above the MDL or QL.
	13MW3	5.3	U	U		5	0.81	Analyte not detected at or above the MDL or QL.
	13MW4	5	U	U		5	0.76	Analyte not detected at or above the MDL or QL.
	13MW5	5	U	U		5	0.76	Analyte not detected at or above the MDL or QL.
	13MW6	5	U	U		5	0.76	Analyte not detected at or above the MDL or QL.
	13MW7	5	U	U		5	0.76	Analyte not detected at or above the MDL or QL.
	13MWDUP	5	U	U		5	0.76	Analyte not detected at or above the MDL or QL. Field duplicate of 13MW4.

Analyte	Sample ID	Result (ug/L)	Q	Result (ug/L)	Q	QL (ug/L)	DL (ug/L)	Validation Notes
Method: 8270C								
Laboratory: CompuChem, a Division of Liberty Analytical, Cary, NC								
Benzo[a]pyrene	13MW1	5.3	U	U		5	1.4	Analyte not detected at or above the MDL or QL.
	13MW2	5	U	U		5	1.3	Analyte not detected at or above the MDL or QL.
	13MW3	5.3	U	U		5	1.4	Analyte not detected at or above the MDL or QL.
	13MW4	5	U	U		5	1.3	Analyte not detected at or above the MDL or QL.
	13MW5	5	U	U		5	1.3	Analyte not detected at or above the MDL or QL.
	13MW6	5	U	U		5	1.3	Analyte not detected at or above the MDL or QL.
	13MW7	5	U	U		5	1.3	Analyte not detected at or above the MDL or QL.
	13MWDUP	5	U	U		5	1.3	Analyte not detected at or above the MDL or QL. Field duplicate of 13MW4.
bis(2-Ethylhexyl)phthalate	13MW1	5.3	U	U		5	1.5	Analyte not detected at or above the MDL or QL.
	13MW2	5	U	U		5	1.5	Analyte not detected at or above the MDL or QL.
	13MW3	5.3	U	U		5	1.5	Analyte not detected at or above the MDL or QL.
	13MW4	5	U	U		5	1.5	Analyte not detected at or above the MDL or QL.
	13MW5	1.7	J	U		5	1.5	Result < QL.
	13MW6	5	U	U		5	1.5	Analyte not detected at or above the MDL or QL.
	13MW7	5	U	U		5	1.5	Analyte not detected at or above the MDL or QL.
	13MWDUP	5	U	U		5	1.5	Analyte not detected at or above the MDL or QL. Field duplicate of 13MW4.
Butyl benzyl phthalate	13MW1	5.3	U	U		5	1.5	Analyte not detected at or above the MDL or QL.
	13MW2	5	U	U		5	1.5	Analyte not detected at or above the MDL or QL.
	13MW3	5.3	U	U		5	1.5	Analyte not detected at or above the MDL or QL.
	13MW4	5	U	U		5	1.5	Analyte not detected at or above the MDL or QL.
	13MW5	5	U	U		5	1.5	Analyte not detected at or above the MDL or QL.
	13MW6	5	U	U		5	1.5	Analyte not detected at or above the MDL or QL.
	13MW7	5	U	U		5	1.5	Analyte not detected at or above the MDL or QL.
	13MWDUP	5	U	U		5	1.5	Analyte not detected at or above the MDL or QL. Field duplicate of 13MW4.
2-Chlorophenol	13MW1	10	U	U	J	10	0.97	Analyte not detected at or above the MDL or QL. ICAL %RSD was >15% (20%). QL is estimated.
	13MW2	10	U	U	J	10	0.93	Analyte not detected at or above the MDL or QL. ICAL %RSD was >15% (20%). QL is estimated.
	13MW3	10	U	U	J	10	0.97	Analyte not detected at or above the MDL or QL. ICAL %RSD was >15% (20%). QL is estimated.
	13MW4	10	U	U	J	10	0.93	Analyte not detected at or above the MDL or QL. ICAL %RSD was >15% (20%). QL is estimated.
	13MW5	10	U	U	J	10	0.93	Analyte not detected at or above the MDL or QL. ICAL %RSD was >15% (20%). QL is estimated.
	13MW6	10	U	U	J	10	0.93	Analyte not detected at or above the MDL or QL. ICAL %RSD was >15% (20%). QL is estimated.
	13MW7	10	U	U	J	10	0.93	Analyte not detected at or above the MDL or QL. ICAL %RSD was >15% (20%). QL is estimated.

Analyte	Sample ID	Result (ug/L)	Q	Result (ug/L)	Q	QL (ug/L)	DL (ug/L)	Validation Notes
Method: 8270C								
Laboratory: CompuChem, a Division of Liberty Analytical, Cary, NC								
2-Chlorophenol	13MWDUP	10	U	U	J	10	0.93	Analyte not detected at or above the MDL or QL. ICAL %RSD was >15% (20%). QL is estimated. Field duplicate of 13MW4.
Diethyl phthalate	13MW1	5.3	U	U		5	0.58	Analyte not detected at or above the MDL or QL.
	13MW2	5	U	U		5	0.56	Analyte not detected at or above the MDL or QL.
	13MW3	5.3	U	U		5	0.58	Analyte not detected at or above the MDL or QL.
	13MW4	5	U	U		5	0.56	Analyte not detected at or above the MDL or QL.
	13MW5	5	U	U		5	0.56	Analyte not detected at or above the MDL or QL.
	13MW6	5	U	U		5	0.56	Analyte not detected at or above the MDL or QL.
	13MW7	5	U	U		5	0.56	Analyte not detected at or above the MDL or QL.
	13MWDUP	5	U	U		5	0.56	Analyte not detected at or above the MDL or QL. Field duplicate of 13MW4.
Dibenz(a,h)anthracene	13MW1	5.3	U	U		5	1.3	Analyte not detected at or above the MDL or QL.
	13MW2	5	U	U		5	1.2	Analyte not detected at or above the MDL or QL.
	13MW3	5.3	U	U		5	1.3	Analyte not detected at or above the MDL or QL.
	13MW4	5	U	U		5	1.2	Analyte not detected at or above the MDL or QL.
	13MW5	5	U	U		5	1.2	Analyte not detected at or above the MDL or QL.
	13MW6	5	U	U		5	1.2	Analyte not detected at or above the MDL or QL.
	13MW7	5	U	U		5	1.2	Analyte not detected at or above the MDL or QL.
	13MWDUP	5	U	U		5	1.2	Analyte not detected at or above the MDL or QL. Field duplicate of 13MW4.
Dibenzofuran	13MW1	5.3	U	U		5	0.59	Analyte not detected at or above the MDL or QL.
	13MW2	5	U	U		5	0.57	Analyte not detected at or above the MDL or QL.
	13MW3	5.3	U	U		5	0.59	Analyte not detected at or above the MDL or QL.
	13MW4	5	U	U		5	0.57	Analyte not detected at or above the MDL or QL.
	13MW5	5	U	U		5	0.57	Analyte not detected at or above the MDL or QL.
	13MW6	5	U	U		5	0.57	Analyte not detected at or above the MDL or QL.
	13MW7	5	U	U		5	0.57	Analyte not detected at or above the MDL or QL.
	13MWDUP	5	U	U		5	0.57	Analyte not detected at or above the MDL or QL. Field duplicate of 13MW4.
2,4-Dichlorophenol	13MW1	10	U	U		10	0.76	Analyte not detected at or above the MDL or QL.
	13MW2	10	U	U		10	0.72	Analyte not detected at or above the MDL or QL.
	13MW3	10	U	U		10	0.72	Analyte not detected at or above the MDL or QL.
	13MW4	10	U	U		10	0.72	Analyte not detected at or above the MDL or QL.
	13MW5	10	U	U		10	0.72	Analyte not detected at or above the MDL or QL.
	13MW6	10	U	U		10	0.72	Analyte not detected at or above the MDL or QL.

Analyte	Sample ID	Result (ug/L)	Q	Result (ug/L)	Q	QL (ug/L)	DL (ug/L)	Validation Notes
Method: 8270C								
Laboratory: CompuChem, a Division of Liberty Analytical, Cary, NC								
2,4-Dichlorophenol	13MW7	10	U	U		10	0.72	Analyte not detected at or above the MDL or QL.
	13MWDUP	10	U	U		10	0.72	Analyte not detected at or above the MDL or QL. Field duplicate of 13MW4.
3,3'-Dimethylbenzidine	13MW1	5.3	U	U		5	4.2	Analyte not detected at or above the MDL or QL.
	13MW2	5	U	U		5	4	Analyte not detected at or above the MDL or QL.
	13MW3	5.3	U	U		5	4.2	Analyte not detected at or above the MDL or QL.
	13MW4	5	U	U		5	4	Analyte not detected at or above the MDL or QL.
	13MW5	5	U	U		5	4	Analyte not detected at or above the MDL or QL.
	13MW6	5	U	U		5	4	Analyte not detected at or above the MDL or QL.
	13MW7	5	U	U		5	4	Analyte not detected at or above the MDL or QL.
	13MWDUP	5	U	U		5	4	Analyte not detected at or above the MDL or QL. Field duplicate of 13MW4.
Dimethyl phthalate	13MW1	5.3	U	U		5	0.57	Analyte not detected at or above the MDL or QL.
	13MW2	5	U	U		5	0.55	Analyte not detected at or above the MDL or QL.
	13MW3	5.3	U	U		5	0.57	Analyte not detected at or above the MDL or QL.
	13MW4	5	U	U		5	0.55	Analyte not detected at or above the MDL or QL.
	13MW5	5	U	U		5	0.55	Analyte not detected at or above the MDL or QL.
	13MW6	5	U	U		5	0.55	Analyte not detected at or above the MDL or QL.
	13MW7	5	U	U		5	0.55	Analyte not detected at or above the MDL or QL.
	13MWDUP	5	U	U		5	0.55	Analyte not detected at or above the MDL or QL. Field duplicate of 13MW4.
Di-n-butyl phthalate	13MW1	5.3	U	U		5	1.5	Analyte not detected at or above the MDL or QL.
	13MW2	5	U	U		5	1.4	Analyte not detected at or above the MDL or QL.
	13MW3	5.3	U	U		5	1.5	Analyte not detected at or above the MDL or QL.
	13MW4	5	U	U		5	1.4	Analyte not detected at or above the MDL or QL.
	13MW5	5	U	U		5	1.4	Analyte not detected at or above the MDL or QL.
	13MW6	5	U	U		5	1.4	Analyte not detected at or above the MDL or QL.
	13MW7	5	U	U		5	1.4	Analyte not detected at or above the MDL or QL.
	13MWDUP	5	U	U		5	1.4	Analyte not detected at or above the MDL or QL. Field duplicate of 13MW4.
Di-n-octyl phthalate	13MW1	5.3	U	U		5	1.4	Analyte not detected at or above the MDL or QL.
	13MW2	5	U	U		5	1.3	Analyte not detected at or above the MDL or QL.
	13MW3	5.3	U	U		5	1.4	Analyte not detected at or above the MDL or QL.
	13MW4	5	U	U		5	1.3	Analyte not detected at or above the MDL or QL.
	13MW5	5	U	U		5	1.3	Analyte not detected at or above the MDL or QL.
	13MW6	5	U	U		5	1.3	Analyte not detected at or above the MDL or QL.

Analyte	Sample ID	Result (ug/L)	Q	Result (ug/L)	Q	QL (ug/L)	DL (ug/L)	Validation Notes
Method: 8270C								
Laboratory: CompuChem, a Division of Liberty Analytical, Cary, NC								
Di-n-octyl phthalate	13MW7	5	U	U		5	1.3	Analyte not detected at or above the MDL or QL.
	13MWDUP	5	U	U		5	1.3	Analyte not detected at or above the MDL or QL. Field duplicate of 13MW4.
Fluoranthene	13MW1	5.3	U	U		5	0.63	Analyte not detected at or above the MDL or QL.
	13MW2	5	U	U		5	0.6	Analyte not detected at or above the MDL or QL.
	13MW3	5.3	U	U		5	0.63	Analyte not detected at or above the MDL or QL.
	13MW4	5	U	U		5	0.6	Analyte not detected at or above the MDL or QL.
	13MW5	5	U	U		5	0.6	Analyte not detected at or above the MDL or QL.
	13MW6	5	U	U		5	0.6	Analyte not detected at or above the MDL or QL.
	13MW7	5	U	U		5	0.6	Analyte not detected at or above the MDL or QL.
	13MWDUP	5	U	U		5	0.6	Analyte not detected at or above the MDL or QL. Field duplicate of 13MW4.
Hexachloroethane	13MW1	5.3	U	U		5	0.91	Analyte not detected at or above the MDL or QL.
	13MW2	5	U	U		5	0.86	Analyte not detected at or above the MDL or QL.
	13MW3	5.3	U	U		5	0.91	Analyte not detected at or above the MDL or QL.
	13MW4	5	U	U		5	0.86	Analyte not detected at or above the MDL or QL.
	13MW5	5	U	U		5	0.86	Analyte not detected at or above the MDL or QL.
	13MW6	5	U	U		5	0.86	Analyte not detected at or above the MDL or QL.
	13MW7	5	U	U		5	0.86	Analyte not detected at or above the MDL or QL.
	13MWDUP	5	U	U		5	0.86	Analyte not detected at or above the MDL or QL. Field duplicate of 13MW4.
Indeno[1,2,3-cd]pyrene	13MW1	5.3	U	U		5	0.53	Analyte not detected at or above the MDL or QL.
	13MW2	5	U	U		5	0.5	Analyte not detected at or above the MDL or QL.
	13MW3	5.3	U	U		5	0.53	Analyte not detected at or above the MDL or QL.
	13MW4	5	U	U		5	0.5	Analyte not detected at or above the MDL or QL.
	13MW5	5	U	U		5	0.5	Analyte not detected at or above the MDL or QL.
	13MW6	5	U	U		5	0.5	Analyte not detected at or above the MDL or QL.
	13MW7	5	U	U		5	0.5	Analyte not detected at or above the MDL or QL.
	13MWDUP	5	U	U		5	0.5	Analyte not detected at or above the MDL or QL. Field duplicate of 13MW4.
3 & 4-Methylphenol	13MW1	8.4	U	U		8	0.66	Analyte not detected at or above the MDL or QL.
	13MW2	8	U	U		8	0.63	Analyte not detected at or above the MDL or QL.
	13MW3	8.4	U	U		8	0.66	Analyte not detected at or above the MDL or QL.
	13MW4	8	U	U		8	0.63	Analyte not detected at or above the MDL or QL.
	13MW5	8	U	U		8	0.63	Analyte not detected at or above the MDL or QL.
	13MW6	8	U	U		8	0.63	Analyte not detected at or above the MDL or QL.

Analyte	Sample ID	Result (ug/L)	Q	Result (ug/L)	Q	QL (ug/L)	DL (ug/L)	Validation Notes
Method: 8270C								
Laboratory: CompuChem, a Division of Liberty Analytical, Cary, NC								
3 & 4-Methylphenol	13MW7	8	U	U		8	0.63	Analyte not detected at or above the MDL or QL.
	13MWDUP	8	U	U		8	0.63	Analyte not detected at or above the MDL or QL. Field duplicate of 13MW4.
Nitrobenzene	13MW1	5.3	U	U		5	0.84	Analyte not detected at or above the MDL or QL.
	13MW2	5	U	U		5	0.8	Analyte not detected at or above the MDL or QL.
	13MW3	5.3	U	U		5	0.84	Analyte not detected at or above the MDL or QL.
	13MW4	5	U	U		5	0.8	Analyte not detected at or above the MDL or QL.
	13MW5	5	U	U		5	0.8	Analyte not detected at or above the MDL or QL.
	13MW6	5	U	U		5	0.8	Analyte not detected at or above the MDL or QL.
	13MW7	5	U	U		5	0.8	Analyte not detected at or above the MDL or QL.
	13MWDUP	5	U	U		5	0.8	Analyte not detected at or above the MDL or QL. Field duplicate of 13MW4.
p-Nitrophenol	13MW1	10	U	U		10	0.53	Analyte not detected at or above the MDL or QL.
	13MW2	10	U	U		10	0.5	Analyte not detected at or above the MDL or QL.
	13MW3	10	U	U		10	0.53	Analyte not detected at or above the MDL or QL.
	13MW4	10	U	U		10	0.5	Analyte not detected at or above the MDL or QL.
	13MW5	10	U	U		10	0.5	Analyte not detected at or above the MDL or QL.
	13MW6	10	U	U		10	0.5	Analyte not detected at or above the MDL or QL.
	13MW7	10	U	U		10	0.5	Analyte not detected at or above the MDL or QL.
	13MWDUP	10	U	U		10	0.5	Analyte not detected at or above the MDL or QL. Field duplicate of 13MW4.
N-Nitrosodiphenylamine	13MW1	5.3	U	U		5	0.65	Analyte not detected at or above the MDL or QL.
	13MW2	5	U	U		5	0.62	Analyte not detected at or above the MDL or QL.
	13MW3	5.3	U	U		5	0.65	Analyte not detected at or above the MDL or QL.
	13MW4	5	U	U		5	0.62	Analyte not detected at or above the MDL or QL.
	13MW5	5	U	U		5	0.62	Analyte not detected at or above the MDL or QL.
	13MW6	5	U	U		5	0.62	Analyte not detected at or above the MDL or QL.
	13MW7	5	U	U		5	0.62	Analyte not detected at or above the MDL or QL.
	13MWDUP	5	U	U		5	0.62	Analyte not detected at or above the MDL or QL. Field duplicate of 13MW4.
Phenol	13MW1	10	U	U		10	0.59	Analyte not detected at or above the MDL or QL.
	13MW2	10	U	U		10	0.56	Analyte not detected at or above the MDL or QL.
	13MW3	10	U	U		10	0.59	Analyte not detected at or above the MDL or QL.
	13MW4	10	U	U		10	0.56	Analyte not detected at or above the MDL or QL.
	13MW5	10	U	U		10	0.56	Analyte not detected at or above the MDL or QL.
	13MW6	10	U	U		10	0.56	Analyte not detected at or above the MDL or QL.

Radford Facility Army Ammunition Plant: HWMU-13

Analyte	Sample ID	Result (ug/L)	Q	Result (ug/L)	Q	QL (ug/L)	DL (ug/L)	Validation Notes
Method: 8270C								
Laboratory: CompuChem, a Division of Liberty Analytical, Cary, NC								
Phenol	13MW7	10	U	U		10	0.56	Analyte not detected at or above the MDL or QL.
	13MWDUP	10	U	U		10	0.56	Analyte not detected at or above the MDL or QL. Field duplicate of 13MW4.
Pyrene	13MW1	5.3	U	U		5	1.5	Analyte not detected at or above the MDL or QL.
	13MW2	5	U	U		5	1.4	Analyte not detected at or above the MDL or QL.
	13MW3	5.3	U	U		5	1.5	Analyte not detected at or above the MDL or QL.
	13MW4	5	U	U		5	1.4	Analyte not detected at or above the MDL or QL.
	13MW5	5	U	U		5	1.4	Analyte not detected at or above the MDL or QL.
	13MW6	5	U	U		5	1.4	Analyte not detected at or above the MDL or QL.
	13MW7	5	U	U		5	1.4	Analyte not detected at or above the MDL or QL.
	13MWDUP	5	U	U		5	1.4	Analyte not detected at or above the MDL or QL. Field duplicate of 13MW4.

Analyte	Sample ID	Result (ug/L)	Q	Result (ug/L)	Q	QL (ug/L)	DL (ug/L)	Validation Notes
Method: 8330B								
Laboratory: CompuChem, a Division of Liberty Analytical, Cary, NC								
2,4-Dinitrotoluene	13MW1	5	U	U		5	0.28	Analyte not detected at or above the MDL or QL.
	13MW2	5	U	U		5	0.28	Analyte not detected at or above the MDL or QL.
	13MW3	5	U	U		5	0.28	Analyte not detected at or above the MDL or QL.
	13MW4	5	U	U		5	0.28	Analyte not detected at or above the MDL or QL.
	13MW5	5	U	U		5	0.28	Analyte not detected at or above the MDL or QL.
	13MW6	5	U	U		5	0.28	Analyte not detected at or above the MDL or QL.
	13MW7	5	U	U		5	0.28	Analyte not detected at or above the MDL or QL.
	13MWDUP	5	U	U		5	0.28	Analyte not detected at or above the MDL or QL. Field duplicate of 13MW4.
m-Dinitrobenzene	13MW1	2.5	U	U		2.5	0.45	Analyte not detected at or above the MDL or QL.
	13MW2	2.5	U	U		2.5	0.45	Analyte not detected at or above the MDL or QL.
	13MW3	2.5	U	U		2.5	0.45	Analyte not detected at or above the MDL or QL.
	13MW4	2.5	U	U		2.5	0.45	Analyte not detected at or above the MDL or QL.
	13MW5	2.5	U	U		2.5	0.45	Analyte not detected at or above the MDL or QL.
	13MW6	2.5	U	U		2.5	0.45	Analyte not detected at or above the MDL or QL.
	13MW7	2.5	U	U		2.5	0.45	Analyte not detected at or above the MDL or QL.
	13MWDUP	2.5	U	U		2.5	0.45	Analyte not detected at or above the MDL or QL. Field duplicate of 13MW4.
2,6-Dinitrotoluene	13MW1	5	U	U		5	0.37	Analyte not detected at or above the MDL or QL.
	13MW2	5	U	U		5	0.37	Analyte not detected at or above the MDL or QL.
	13MW3	5	U	U		5	0.37	Analyte not detected at or above the MDL or QL.
	13MW4	5	U	U		5	0.37	Analyte not detected at or above the MDL or QL.
	13MW5	5	U	U		5	0.37	Analyte not detected at or above the MDL or QL.
	13MW6	5	U	U		5	0.37	Analyte not detected at or above the MDL or QL.
	13MW7	5	U	U		5	0.37	Analyte not detected at or above the MDL or QL.
	13MWDUP	5	U	U		5	0.37	Analyte not detected at or above the MDL or QL. Field duplicate of 13MW4.
sym-Trinitrobenzene	13MW1	2.5	U	U		2.5	0.31	Analyte not detected at or above the MDL or QL.
	13MW2	2.5	U	U		2.5	0.31	Analyte not detected at or above the MDL or QL.
	13MW3	2.5	U	U		2.5	0.31	Analyte not detected at or above the MDL or QL.
	13MW4	2.5	U	U		2.5	0.31	Analyte not detected at or above the MDL or QL.
	13MW5	2.5	U	U		2.5	0.31	Analyte not detected at or above the MDL or QL.
	13MW6	2.5	U	U		2.5	0.31	Analyte not detected at or above the MDL or QL.
	13MW7	2.5	U	U		2.5	0.31	Analyte not detected at or above the MDL or QL.
	13MWDUP	2.5	U	U		2.5	0.31	Analyte not detected at or above the MDL or QL. Field duplicate of 13MW4.

Radford Facility Army Ammunition Plant: HWMU-13

Analyte	Sample ID	Result (ug/L)	Q	Result (ug/L)	Q	QL (ug/L)	DL (ug/L)	Validation Notes
Method: 8332								
Laboratory: CompuChem, a Division of Liberty Analytical, Cary, NC								
Nitroglycerin	13MW1	16	U	U		16	0.032	Analyte not detected at or above the MDL or QL.
	13MW2	16	U	U		16	0.032	Analyte not detected at or above the MDL or QL.
	13MW3	16	U	U		16	0.032	Analyte not detected at or above the MDL or QL.
	13MW4	16	U	U		16	0.032	Analyte not detected at or above the MDL or QL.
	13MW5	16	U	U		16	0.032	Analyte not detected at or above the MDL or QL.
	13MW6	16	U	U		16	0.032	Analyte not detected at or above the MDL or QL.
	13MW7	16	U	U		16	0.032	Analyte not detected at or above the MDL or QL.
	13MWDUP	16	U	U		16	0.032	Analyte not detected at or above the MDL or QL. Field duplicate of 13MW4.

Definitions: **QL** Denotes quantitation limit. **DL** Denotes detection limit. **Q** Denotes data qualifier. **U** Denotes analyte not detected at or above QL.
UA Denotes analyte not detected at or above adjusted sample QL. **J** Denotes analyte reported at or above QL and associated result is estimated due to quality control reasons. When used with a "U" (i.e., "UJ"), denotes analyte not detected at or above QL and QL is estimated due to quality control reasons. When used with "UA" (i.e., "UAJ"), denotes analyte not detected at or above adjusted QL and adjusted QL is estimated due to quality control reasons. **R** Denotes result rejected.

B or J denotes result between detection limit and QL. Estimated result. B and J are laboratory result data qualifiers.
Appendix IX Monitoring Events:
For Appendix IX Monitoring Events, results are reported to the detection limit.
Appendix IX Monitoring Events: First Quarter 2006 (First Appendix IX Monitoring Event for unit). Second Quarter 2007. Second Quarter 2008. Second Quarter 2009. Second Quarter 2010

SW-846 METHOD 8260B (GC/MS) VOLATILE ORGANIC DATA VALIDATION

Sample ID: 13MW1, 13MW2, 13MW3, 13MW4, 13MW5, 13MW6, 13MW7
QC Samples: Blanks, LCS, 13MW5 MS/MSD, field dup (13MWDUP/13MW4)
Laboratory: Lancaster Laboratories, Lancaster, PA; **SDG:** RAD40

"☑" denotes items reviewed. See Data Validation Report for additional comments.

A. QC DELIVERABLES PACKAGE:

- ☑ Case narrative and Chain of custody present and signed by a laboratory representative
- ☑ Sample results included for all sample locations
- ☑ All project specific target analytes reported at or above required permit QL
- ☑ MDL study performed for all target analytes and supports required QL
- ☑ Analyst initial demonstration of proficiency performed for all target analytes
- ☑ Passed single blind performance evaluation sample within 12 months (5 ml purge volume)
- ☑ Electronic data file reviewed

B. TECHNICAL HOLDING TIME AND PRESERVATION REVIEW CRITERIA:

- ☑ 14-day sample holding time, zero head space, pH <2
- ☑ Samples received at ≤6°C
- ☑ Preparation Method 5030B (25 ml purge volume)

C. GC/MS INSTRUMENT PERFORMANCE CHECK REVIEW CRITERIA:

- ☑ Instrument performance check solution was analyzed at the beginning of each 12-hour period of standard and/or sample analysis

D. INITIAL GC/MS CALIBRATION REVIEW CRITERIA:

- ☑ Target analytes included in the ICAL
- ☑ ICAL consisted of 5 calibration standards (or more, as needed)
- ☑ Lowest concentration calibration standard at or below the associated MCL, regulatory compliance, action limit, or required QL
- ☑ MDL check standard analyzed with ICAL for all target analytes
- ☑ No calibration standards were removed from curve that would negatively impact the data integrity
- ☑ Each target analyte %RSD ≤ 15% or
- ☑ Correlation coefficient or coefficient of determination >0.99 for target analytes with ≥15 % RSD
- ☑ ICAL verification standard after ICAL, all analytes, 70-130%

E. CALIBRATION VERIFICATION REVIEW CRITERIA:

- ☑ Calibration verification standard analyzed at the beginning of each 12-hour period following the instrument performance check analysis and prior to the method blank and sample analysis
- ☑ % Difference/Drift of target analytes within ± 25.0%

F. BLANK REVIEW CRITERIA:

- ☑ Method/extraction blank analyzed on each GC/MS system used for sample analysis
- ☑ Trip Blank-one per day of collection.

G. SURROGATE REVIEW CRITERIA:

- ☑ The following surrogates (or others as allowed) were used and within the specified range
  - dibromofluoromethane (80-120%), 4-bromofluorobenzene (80-120%)
  - toluene-d_8 (80-120%), 1,2-dichloroethane-d_4 (80-120%)

H. MATRIX SPIKE / MATRIX SPIKE DUPLICATE (MS/MSD) / LABORATORY CONTROL SAMPLE (LCS) REVIEW CRITERIA:

- ☑ MS/MSD and LCS analyzed; MS/MSD and LCS within range
- ☑ Project specific analytes -%R 75-130%; Independent source

☑ All target analytes

I. INTERNAL STANDARDS REVIEW CRITERIA:

☑ The following internal standards (or others as allowed) were used -fluorobenzene or 1,4-difluorobenzene, chlorobenzene-d_5, 1,4-dichlorobenzene-d_4
☑ Internal standard areas within ± 50% of last calibration verification
☑ Internal standard retention times within ± 30 seconds of last calibration verification

J. TARGET ANALYTE IDENTIFICATION REVIEW CRITERIA:

☑ Results were consistent with historical data. New detections evaluated as follows:
☑ RRTs of the reported analytes within ± 0.06 RRT units of the standard RRT
☑ Sample spectra versus laboratory standard spectra criteria were evaluated:
* Characteristic ions maximized in the same scan or within one scan of each other
* Characteristic ions present in the standard spectra were present in the sample spectra for analytes detected above the QL
* Relative intensities of the ions between the standard and sample spectra were within ±30%.

K. TARGET ANALYTE QUANTITATION REVIEW CRITERIA:

☑ Results are consistent with historical data. New detections evaluated as follows:
* If analyte %RSD was 15% or less, use average relative response factor for quantitation.
* If analyte %RSD was greater than 15%, use first or higher order regression fit of five calibration points (6 calibration points for 2nd order).

☑ Results that exceed the initial calibration range were reanalyzed at a higher dilution.
☑ Analyte concentrations recorded on the sample quantitation reports were accurately transferred to the sample summary sheets (laboratory report).

L. REPORTING:

☑ Detected analytes or results requiring validation are presented on the attached data validation report
☑ Validated results reported to at or above required QL
☑ Sample/field duplicate RPD<20, where applicable

LIMITATIONS AND REFERENCES:

Draper Aden Associates conducted data validation of the above noted data set using summary tables and raw data provided by the analyzing laboratory. Data validation was conducted in general accordance with SW-846 Method requirements (Test Methods for Evaluating Solid Wastes - Physical and Chemical Methods, USEPA SW-846, 3rd edition - Final Update I, II/IIA and III) and CLP data validation guidelines (USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review, October 1999 and USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review, June 2008, where applicable). Validation of this data set is limited to the items detailed in this report.

Validated by: Date:

Draper Aden Associates
Engineering ♦ Surveying ♦ Environmental Services

12-21-2010

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SW-846 METHOD 8270C (GC/MS) SEMIVOLATILE ORGANIC DATA VALIDATION

Sample ID: 13MW1, 13MW2, 13MW3, 13MW4, 13MW5, 13MW6, 13MW7
QC Samples: Blanks, LCS, 13MW5 MS/MSD, field dup (13MWDUP/13MW4)
Laboratory: CompuChem, a Division of Liberty Analytical, Cary, NC; SDG 1010107

"☑" denotes items reviewed. See Data Validation Report for additional comments.

A. QC DELIVERABLES PACKAGE:

- ☑ Case narrative and Chain of custody present and signed by a laboratory representative
- ☑ Sample results included for all sample locations
- ☑ All project specific target analytes reported at or above permit QL
- ☑ MDL study performed for all target analytes and supports permit QL
- ☑ Initial demonstration of proficiency performed for all target analytes
- ☑ Passed single blind performance evaluation sample within 12 months
- ☑ Electronic data file reviewed

B. TECHNICAL HOLDING TIME AND PRESERVATION REVIEW CRITERIA:

- ☑ Holding time: 7-day sample collection to extraction / 40-day extraction to analysis
- ☑ Samples received at $\leq 6^{\circ}C$
- ☑ Extraction Method 3510C

C. GC/MS INSTRUMENT PERFORMANCE CHECK REVIEW CRITERIA:

- ☑ Instrument performance check solution analyzed at the beginning of each 12-hour period of standard and/or sample analysis

D. INITIAL GC/MS CALIBRATION REVIEW CRITERIA:

- ☑ All target analytes included in the ICAL
- ☑ ICAL consisted of a minimum of 5 calibration standards (or more, as needed)
- ☑ Lowest concentration calibration standard at or below the associated MCL, regulatory compliance, action limit, or permit QL
- ☑ No calibration standards were removed that would negatively impact the data integrity
- ☑ Each target analyte %RSD ≤ 15%
- ☑ Correlation coefficient or coefficient of determination >0.99 for target analytes with ≥15 % RSD

E. CALIBRATION VERIFICATION REVIEW CRITERIA:

- ☑ Calibration verification standard analyzed at the beginning of each 12-hour period following the instrument performance check analysis and prior to he method blank and sample analysis
- ☑ All analytes have % Difference/Drift within ± 25.0%

F. BLANK REVIEW CRITERIA:

- ☑ Method/extraction blank analyzed on each GC/MS system used for sample analysis

G. SURROGATE REVIEW CRITERIA:

- ☑ The following surrogates (or others, as allowed) were used and within the specified range
  - phenol - d_6 Or - d_6 (10%-94%), - 2-fluorophenol (21%-100%), - 2,4,6-tribromophenol (10%-123%),
  - nitrobenzene – $d_{8\ or\ d5}$ (35%-114%), - 2-fluorobiphenyl (43%-116%), -p-terphenyl - d_{14} (33%-141%)

H. MATRIX SPIKE / MATRIX SPIKE DUPLICATE (MS/MSD) / LABORATORY CONTROL SAMPLE (LCS) REVIEW CRITERIA:

- ☑ MS/MSD and LCS analyzed with all target analytes
- ☑ MS/MSD and LCS recovered at or above 45%, RPD <20

I. INTERNAL STANDARDS REVIEW CRITERIA:

- ☑ The following internal standards were used (or others as allowed)
  - 1,4-Dichlorobenzene-d_4, Naphthalene-d_8, Acenapththene-d_{10}, Phenanthrene-d_{10}, Chrysene-d_{12}, Perylene-d_{12}
- ☑ Internal standard areas within ± 50% of last calibration verification
- ☑ Internal standard retention times within ± 30 seconds of last calibration verification

J. TARGET ANALYTE IDENTIFICATION REVIEW CRITERIA:

- ☑ Results were consistent with historical data. New detections evaluated as follows:
- ☑ RRTs of the reported analytes within ± 0.06 RRT units of the standard RRT
- ☑ Sample spectra versus laboratory standard spectra criteria were evaluated:
  - * Characteristic ions maximized in the same scan or within one scan of each other
  - * Characteristic ions present in the standard spectra were present in the sample spectra for analytes detected above the permit QL
  - * Relative intensities of the ions between the standard and sample spectra were within ±30%.

K. TARGET ANALYTE QUANTITATION REVIEW CRITERIA:

- ☑ Results were consistent with historical data. New detections evaluated as follows:
  - * If analyte %RSD was 15% or less, use average relative response factor for quantitation.
  - * If analyte %RSD was greater than 15%, use first or higher order regression fit of five calibration points (6 calibration points for 2nd order).
- ☑ Results that exceed the initial calibration range were reanalyzed at a higher dilution.
- ☑ Analyte concentrations recorded on the sample quantitation reports were accurately transferred to the sample summary sheets (laboratory report).

L. REPORTING:

- ☑ Detected analytes or results requiring validation are presented on the attached data validation report
- ☑ Validated results reported to at or above the permit QL

LIMITATIONS AND REFERENCES:

Draper Aden Associates conducted data validation of the above noted data set using summary tables and raw data provided by the analyzing laboratory. Data validation was conducted in general accordance with SW-846 Method requirements (Test Methods for Evaluating Solid Wastes - Physical and Chemical Methods, USEPA SW-846, 3rd edition - Final Update I, II/IIA and III) and CLP data validation guidelines (USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review, October 1999 and USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review, June 2008, where applicable). Validation of this data set is limited to the items detailed in this report.

Validated by:

Draper Aden Associates
Engineering ♦ Surveying ♦ Environmental Services

Date: 12.21.2010

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SW-846 METHOD 6020 DATA EVALUATION FOR INORGANICS BY ICP/MS

Sample ID: 13MW1, 13MW2, 13MW3, 13MW4, 13MW5, 13MW6, 13MW7
QC Samples: Blanks, LCS, 13MW5 MS/MSD, field dup (13MWDUP/13MW4)
Laboratory: CompuChem, a Division of Liberty Analytical, Cary, NC; SDG 1010107

Does Laboratory analyte list correspond to project analyte list? (total) _X_ yes ___ no
Corresponds to: antimony, arsenic, barium, cadmium, chromium, lead, nickel, selenium, silver, zinc
Preparation Method: 3005A
"☑" denotes items reviewed. See Data Validation Report for additional comments.

A. QC DOCUMENTATION CRITERIA:

☑ Specific detection limits for target analytes, where applicable
☑ Specific quantitation limits for target analytes
☑ Electronic data file reviewed
☑ Performance evaluation sample analyzed within 12 months
☑ Analyst IDOC previously provided

B. TECHNICAL HOLDING TIME/ PRESERVATION REQUIREMENTS:

☑ 6 month holding time, pH<2 with Nitric Acid (HNO_3)

C. INSTRUMENT CALIBRATION/TUNE CRITERIA:

☑ 1 calibration blank and at least 1 standard, correlation coefficient
☑ Instrument tuned prior to analysis (RSD <5%)

D. INSTRUMENT CONTINUING CALIBRATION CRITERIA:

☑ 10 sample frequency
☑ Use of calibration blank and check standard
☑ %R within 90-110% range

E. BLANK SAMPLE CRITERIA:

N/A Trip Blank (check only if analyzed)
N/A Equipment Blank
☑ Method/Other Lab Blanks (check only if analyzed)
☑ Interference free
☑ CCB 10 sample frequency

F. INTERFERENCE CHECK SAMPLE (ICS) CRITERIA:

☑ At beginning of batch or every 12 hours (80-120%)

G. MATRIX SPIKE DUPLICATE (MSD) SAMPLE CRITERIA:

☑ One MS/MSD per batch of samples
☑ %RPD ± 20% for spike/sample sample values greater than 5 times QL (100X DL)
☑ {spike/sample ± QL} when spike/sample values are less than 5 times QL (100X DL)

H. MATRIX SPIKE (MS) SAMPLE CRITERIA:

☑ %R within 75-125% range

I. SAMPLE RESULTS CRITERIA:

☑ Sample results reported within instrument calibration range

J. LABORATORY CONTROL SAMPLE (LCS) CRITERIA:

☑ Each element, 1 LCS per 20 samples, (80-120% R)

K. INTERNAL STANDARDS CRITERIA:

☑ IS (Li, Sc, In, Tb, Bi) intensities (see section 9.3, 6020A)

L. SERIAL DILUTION CRITERIA:

☑ Similar matrix
☑ If concentration 50 times IDL, %D must be within 10%

M. QUANTIATION LIMIT STANDARD (CDRL STANDARD) CRITERIA:

☑ All elements
☑ 85-115% recovery
☑ Standard analyzed at the quantitation limit

N. FIELD DUPLICATE CRITERIA:

☑ All elements
☑ RPD <20

Draper Aden Associates conducted a limited data validation of the above noted data set using the data package provided by the analyzing laboratory. Data evaluation was conducted in general accordance with SW-846 (Test Methods for Evaluating Solid Waste-Physical/Chemical Methods, USEPA, SW-846, 3rd Edition-Final Update I, II/IIA and III) method requirements and CLP data validation guidelines (USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, October 2004 and USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, January 2010). Validation of this data set is limited to review of items detailed in this data review report.

SW-846 METHOD 7470A DATA EVALUATION FOR MERCURY BY COLD VAPOR AA

Sample ID: 13MW1, 13MW2, 13MW3, 13MW4, 13MW5, 13MW6, 13MW7
QC Samples: Blanks, LCS, 13MW5 MS/MSD, field dup (13MWDUP/13MW4)
Laboratory: CompuChem, a Division of Liberty Analytical, Cary, NC; SDG 1010107

Does Laboratory analyte list correspond to analyte list requested? ☑ yes ___no
Corresponds to: mercury - total
"☑" denotes items were reviewed. See Data Validation Summary for additional comments.

A. QC DOCUMENTATION CRITERIA:

☑ Specific quantitation limit for mercury
☑ Specific detection limit for mercury
☑ Electronic data file reviewed
☑ QC standard analyzed at or less than the QL (70-130%R)
☑ Analyst IDOC and MDL study provided

B. TECHNICAL HOLDING TIME / PRESERVATION REQUIREMENTS:

☑ 28 days holding time
☑ Adjust pH <2 w/ HNO_3

C. INSTRUMENT CALIBRATION CRITERIA:

☑ 1 calibration blank and at least 5 standards , correlation coeffici>0.995
☑ Instrument calibrated for every analytical sequence for every method

D. INITIAL / CONTINUING CALIBRATION VERIFICATION CRITERIA:

☑ 15 sample frequency for CCV
☑ %R within 80-120% range

E. BLANK SAMPLE CRITERIA:

N/A Trip Blank (check only if analyzed)
N/A Equipment Blank (check only if analyzed)
☑ Method/other laboratory blanks (check only if analyzed)
☑ Interference free

F. MATRIX SPIKE DUPLICATE (MS/MSD) SAMPLE CRITERIA:

☑ Mercury
☑ One MS/MSD per batch of samples
☑ %RPD $\pm$ 20% for spike/sample values greater than 5 times QL
☑ {spike/sample $\pm$ QL} when spike/sample values are < than 5 times QL

G. MATRIX SPIKE (MS) SAMPLE CRITERIA:

☑ Mercury, spiked prior to digestion
☑ %R within 75-125% range
☑

H. LABORATORY CONTROL SAMPLE (LCS) CRITERIA:

☑ %R within 80-120% range
☑ Mercury

I. SAMPLE RESULTS CRITERIA:

☑ Results reported within instrument calibration range

Draper Aden Associates conducted a limited data validation of the above noted data set using the data package provided by the analyzing laboratory. Data evaluation was conducted in general accordance with SW-846 (Test Methods for Evaluating Solid Waste-Physical/Chemical Methods, USEPA, SW-846, 3rd Edition-Final Update I, II/IIA and III) method requirements and CLP data validation guidelines (USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, October 2004 and USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, January 2010). Validation of this data set is limited to review of items detailed in this data review report.

Validated by:

Draper Aden Associates
Engineering • Surveying • Environmental Services

Date: 12.21.2010

Cheryl Daniel
Environmental Scientist
2206 South Main Street
Blacksburg, Virginia 24060
540-552-0444
cdaniel@daa.com
www.daa.com

SW-846 METHOD 8330B/8332 (GC) ORGANIC DATA VALIDATION

Sample ID: 13MW1, 13MW2, 13MW3, 13MW4, 13MW5, 13MW6, 13MW7
QC Samples: Blanks, LCS, 13MW5 MS/MSD, field dup (13MWDUP/13MW4)
Laboratory: CompuChem, a Division of Liberty Analytical, Cary, NC; SDG 1010107

"☑" denotes items reviewed. See Data Validation Report for additional comments.

A. QC DELIVERABLES PACKAGE:

- ☑ Case narrative present and signed by a laboratory representative
- ☑ Chain of Custody present and signed by a laboratory representative
- ☑ Sample results included for all sample locations
- ☑ Results provided for project specific analytes
- ☑ Quantitation limits (QLs) at permit or project required QL
- ☑ MDL study supports QL
- ☑ Analyst initial demonstration of capability provided for all analytes

B. TECHNICAL HOLDING TIME AND PRESERVATION CRITERIA:

- ☑ 7-day sample collection to extraction holding time
- ☑ 40-day extraction to analysis holding time
- ☑ Extraction Method 3535, Samples received at $\leq 6^{\circ}C$

C. INITIAL CALIBRATION CRITERIA:

- ☑ Analytes included in the ICAL
- ☑ ICAL consist of a minimum of 5 calibration levels
- ☑ A calibration standard at or below the associated MCL, regulatory compliance, or action limit
- ☑ Calibration levels removed from the curve should not negatively impact the data integrity
- ☑ Each analyte %RSD $\leq$ 20%
- ☑ If not, correlation coefficient/coefficient of determination >0.99 for analytes with ≥20% RSD

D. CALIBRATION VERIFICATION (CV) CRITERIA:

- ☑ CV analyzed at the beginning of each 12-hour period following the analysis of the instrument performance check and prior to analysis of the method blank and samples
- ☑ Analytes have % Difference/Drift within ± 15%.

E. BLANK CRITERIA:

- ☑ Method blank analyzed
- ☑ Sample results evaluated for blank influence, where applicable.
- ☑ Blank analyzed after result exceeding calibration range, if required

F. SURROGATE CRITERIA:

- ☑ 1,4-dinitrobenzene (80-120%R);Surrogate added to all samples

G. MATRIX SPIKE/ MATRIX SPIKE DUPLICATE (MS/MSD) / LABORATORY CONTROL SAMPLE (LCS) CRITERIA:

- ☑ MS/MSD and LCS analyzed-all target analytes, where applicable
- ☑ MS/MSD and LCS within range, project specific analytes (50-150%,RPD<20), except as noted:

H. REPORTING:

- ☑ Detected analytes or results requiring validation are presented on the attached table(s).
- ☑ Laboratory reported results to at or above QL.
- ☑ Results validated to the MDL.
- ☑ Secondary/confirmation column provides adequate separation from primary column.

I. COMMENTS REGARDING ANALYTE DETECTIONS:

2,4-DNT and 2,6-DNT elute at similar retention times on C-18 columns using the separation conditions described in SW-846 Method 8330B (retention time difference of 0.2 minutes). A large concentration of one isomer (generally 2,4-DNT) may mask the response or the other isomer. If it is not apparent that both isomers are present or are not detected, an isomeric mixture should be reported. No detections were reported for this event.

J. ADDITIONAL COMMENTS:

Calculation checks performed to verify low calibration standard at or below QL.

LIMITATIONS AND REFERENCES:

Draper Aden Associates conducted data validation of the above noted data set using summary tables and raw data provided by the analyzing laboratory. Data validation was conducted in general accordance with SW-846 Method requirements (Test Methods for Evaluating Solid Wastes - Physical and Chemical Methods, USEPA SW-846, 3rd edition - Final Update I, II/IIA and III) and CLP data validation guidelines (USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review, October 1999 and USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review, June 2008, where applicable). Validation of this data set is limited to the items detailed in this report.

Validated by: *Date:*

Draper Aden Associates
Engineering ♦ Surveying ♦ Environmental Services

12.21

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USEPA METHOD 314.0 (PERCHLORATE) DATA VALIDATION

Sample ID: 13MW1, 13MW2, 13MW3, 13MW4, 13MW5, 13MW6, 13MW7
QC Samples: Blanks, LCS, 13MW5 MS/MSD, field dup (13MWDUP/13MW4)
Laboratory: CompuChem, a Division of Liberty Analytical, Cary, NC; SDG 1010107

A. INSTRUMENT PERFORMANCE CHECK (IPC):

- ☑ % Recovery within 80-120%
- ☑ Conductance of IPC within 10% of Matrix Conductivity Threshold (MCT)
  (Comment: The laboratory did not analyze a conductance standard as required by the method. The laboratory stated that the analysis was established for perchlorate only and the conductance standard was not applicable. No additional data qualification was required.

B. INITIAL/CONTINUING CALIBRATION VERIFICATION CRITERIA:

- ☑ Calibration has at least five calibration standards and correlation coefficient ≥ 0.995
- ☑ Lowest calibration standard at or below QL for all target analytes
- ☑ Continuing calibration verification standard recovered within 85-115%

C SAMPLE AND QC RESULTS:

- ☑ Perchlorate results were reported within calibration range
- ☑ Laboratory control standard recovered within criteria for target analytes- %R 85-115
- ☑ MS/MSD (or batch QC) per sample batch. %RSD 80-120/ RPD <20
- ☑ Sample/Field Duplicate RPD <20

D. METHOD/QC INFORMATION DOCUMENTATION:

- ☑ Requested target analytes analyzed
- ☑ Sample documentation provided (chain of custody)

E. TECHNICAL HOLDING TIMES/PRESERVATION REQUIREMENTS:

- ☑ Samples analyzed 28 days from collection

F. BLANK SAMPLES ANALYSES CRITERIA:

- ☑ Method blank @ 1 per batch/other laboratory blanks as needed

G. LIMITATIONS AND REFERENCES:

Draper Aden Associates conducted a limited data validation of the above noted data set using the data package provided by the analyzing laboratory. Data evaluation was conducted in general accordance with SW-846 (Test Methods for Evaluating Solid Waste-Physical/Chemical Methods, USEPA, SW-846, 3rd Edition-Final Update I, II/IIA and III) method requirements and CLP data validation guidelines USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, October 2004). Validation of this data set is limited to review of items detailed in this data review report.

Validated by: Date:

Draper Aden Associates
Engineering ♦ Surveying ♦ Environmental Services

12.21.2010

Cheryl Daniel, Environmental Scientist
2206 South Main Street
Blacksburg, Virginia 24060
cdaniel@daa.com; www.daa.com

Revisions to Data Set

CHAIN OF CUSTODY RECORD

Laboratory: CompuChem Environmental, 501 Madison Avenue, Cary, NC 27513/Cathy Dover, Manager/1-800-833-5097

Client: Draper Aden Associates Attn: 0 Address: 0 0 Phone: 0 Fax: 0 Fax: 0	**Consultant:** Draper Aden Associates Attn: Janet C. Frazier Address: 2206 South Main Street Blacksburg, Virginia 24060 Phone: (540) 552-0444 Fax: (540) 552-0291	**Sample Site:** RAAP, Redford, Virginia **Location:** Open Burning Ground (OBG)/HWMU13 **Event:** 2nd Semiannual 2010 Monitoring Event **DAA JN:** B03204-08 **Lab JN:**	**Project Specific (PS) or Batch (B) QC:** **Sample Collection for Project Complete?** YES WPS 12-237-301-01- 5634-5155 5818-5969 **Carrier:** K 5754-0978 **Tracking Number:** N 5605-9184 S 5644-9598 5713-1204	**Box 1: Matrix** SW Surface Water — T Trip Blank GW Groundwater — E Equipment Blank L Leachate — P Product S Soil — O Other	**Box 2: Preservative** A HCl — E NaOH B HNO_3 — F ZnAc C H_2SO_4 — G Other (Specify) D $Na_2S_2O_3$ — H None
Box 3: Filtered/Unfiltered F Filtered U Unfiltered **Box 5: Sample Container Type** P Plastic — V VOA AG Amber Glass — CG Clear Glass	**Box 4: Sample Type** G Grab C Composite	**Invoice** **Copy to Consultant:** YES **Bill:** CLIENT OTHER ____ **Preserved and shipped on ice:** YES			

Box 4 - Sample Type					G	G	G	G	G	G						
Box 3 - Filtered/Unfiltered					U	U	U	U	U	U						
Required pH of Sample									<2	<2						
Box 2 - Preservative					H	H	H	H	B	B						
Box 5 - Sample Container Type					2-1L A		1-250ml P	2-1L A	1-500ml P							
Sample ID	Date: 2010	Time	Box 1: Matrix	Number of Bottles	8332/3535 - Nitroglycerine (2 AL)	8330 - Explosives	Perchlorate 314.0 (250 mL)	SVOCs 8270C (35 mL 2 AL ice only 1 bottle)	ICP 6010B/3005A/ thallium 7000 (Metals-Total) (500mL)	7470A (Mercury-Total)	Metals pH					
13MW1	10/18	1105	GW	6	X	X	X	X	X	X	<2					
13MW2	10/18	1200	GW	6	X	X	X	X	X	X	<2					
13MW3	10/18	0806	GW	6	X	X	X	X*	X	X	<2					
13MW4	10/18	0910	GW	6	X	X	X	X	X	X	<2					
13MWDUP	10/19	0730	GW	6	X	X	X	X	X	X	<2					
13MW5	10/19	0830	GW	6	X	X	X	X	X	X	<2					
13MW6	10/18	1010	GW	6	X	X	X	X	X	X	<2					
13MW7	10/19	0945	GW	6	X	X	X	X	X	X	<2					

GENERAL NOTES:

1. Level 4 deliverable with EDD and pdf.
2. REPORT DL/QL and estimated results.

(See 4th Q. 2009, if needed). or call. JCF 10.2.20

Residual Chlorine Present? Yes ____ No ✓

*recd 1-SVOC broken for 13MW3 JD 10/20/10

10/07-02
-03
-04
-05
-06
USE FOR QC 10/07-01
-07
-08

Clients Special Instructions: Level 4 with add and PDF. 0.6, 0.1, 0.2, 1.0, 0.9°C SN0015

Received by lab in Good Condition ✓ Yes ____ No Custody Seal Intact ✓ Yes ____ No Temperature upon arrival ^ Received on ice ✓ Yes ____ No

Describe problems, if any:

Sampler Name (Print): Ken Coddington	Date: 10-18-10	#1 Relinquished by (Signature):	Date: 10-19-10	#2 Relinquished by (Signature):	Date:	Sample Storage Time Requested:
Sampler Signature:	Time: 0600	Company Name: DAA	Time: 1700	Company Name:	Time:	
Sampler Name (Print): Chris Branscome	Date: 10/18/10	#1 Received by (Signature): Jennifer Dover	Date: 10/20/10	#2 Received by (Signature):	Date:	30 DYS ORG/8 MTHS INORG
Sampler Signature: Chris Branscome	Time: 0600	Company Name: CompuChem	Time: 0936	Company Name:	Time:	

JCF 11.5 12-2-20

2/5

ANALYTICAL METHOD: SEE BELOW
TYPE METHOD: GC/ HPLC

Method 8330:

No.	PARAMETER	CAS RN
1.	1,3,5-trinitrobenzene (1,3,5-TNB)	99-35-4
2.	1,3-dinitrobenzene (1,3-DNB)	99-65-0
3.	2,4-dinitrotoluene (2,4-DNT)	121-14-2
4.	2,6-dinitrotoluene (2,6-DNT)	606-20-2

Method 8332:

No.	PARAMETER	CAS RN
1.	Nitroglycerin	55-63-0

acct#11200
Ap# 1217221
Sample# 6117032-43

HWMU13
Radford Army Ammunition Plant
2nd Semiannual 2010 Monitoring Event
DAA JN: B03204-08

ANALYTICAL METHOD: 8260B/5030B 25 ml purge volume
TYPE METHOD: GCMS
CLASS: VOLATILE

NO.	PARAMETER	CAS RN	Permit QL (ug/l)
1.	1,1-Dichloroethene	75-35-4	
2.	1,2-Dichloroethane	107-06-2	
3.	Benzene	71-43-2	
4.	Benzyl Chloride	100-44-7	
5.	Bromomethane	74-83-9	
6.	Carbon tetrachloride	56-23-5	
7.	Chlorobenzene	108-90-7	
8.	Chloroform	67-66-3	
9.	Hexachloroethane	67-72-1	
10.	Methyl chloride	74-87-3	
11.	Methylene chloride	75-09-2	
12.	Naphthalene	91-20-3	
13.	Tetrachloroethene	127-18-4	
14.	Toluene (methyl benzene)	108-88-3	
15.	Trichloroethene	79-01-6	
16.	Vinyl chloride	75-01-4	
17.	1,1-Dichloroethane	75-34-3	
18.	1,1,1-Trichloroethane	71-55-6	
19.	Trichlorofluoromethane	75-69-4	

New! JCF 10.2.2010

5 ml purge 8260 list

ANALYTICAL METHOD: SEE BELOW
TYPE METHOD: SEE BELOW
CLASS: TOTAL

Method SW 846-6010B

No.	PARAMETER	CAS RN	Permit QL (ug/l)
1.	Antimony	7440-36-0	5
2.	Arsenic	7440-38-2	5
3.	Barium	7440-39-3	1
4.	Cadmium	7440-43-9	1
5.	Chromium	7440-47-3	5
6.	Lead	7440-92-1	5
7.	Nickel	7440-02-0	5
8.	Selenium	7782-49-2	5
9.	Silver	7440-22-4	2
10.	Zinc	7440-66-6	5

Method SW 7470A/CVAA

11.	Mercury	7439-97-6	0.5

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Revised July 18, 2005 – JCF
Revised November, 2005 – new permit – JCF
Revised Oct 10, 2009
Revised September, 2010, new 8260B analytes - KPO

4/5

ANALYTICAL METHOD: 8270C
TYPE METHOD: GCMS
CLASS: SEMIVOLATILE

No.	PARAMETER	CAS RN	Permit QL (ug/l)
1.	2,4-dichlorophenol	120-83-2	
2.	3,3'-dimethylbenzidine	119-93-7	
3.	2-chlorophenol	95-57-8	
4.	3-methylphenol	108-39-4	
5.	4-methylphenol	106-44-5	
6.	4-nitrophenol	100-02-7	
7.	acetophenone	98-86-2	
8.	benzo(a)anthracene	56-55-3	
9.	benzo(a)pyrene	50-32-8	
10.	benzo[b]fluoranthene	205-99-2	
11.	benzo[k]fluoranthene	207-08-9	
12.	bis(2-Ethylhexyl)phthalate	117-81-7	
13.	butyl benzyl phthalate	85-68-7	
14.	dibenz(a,h)anthracene	53-70-3	
15.	dibenzofuran	132-64-9	
16.	di-n-butyl phthalate	84-74-2	
17.	diethyl phthalate	84-66-2	
18.	dimethyl phthalate	131-11-3	
19.	di-n-octyl phthalate	117-84-0	
20.	diphenylamine	122-39-4	
21.	fluoranthene	206-44-0	
22.	indeno[1,2,3-cd]pyrene	193-39-5	
23.	nitrobenzene	98-95-3	
24.	phenol	108-95-2	
25.	pyrene	129-00-0	
26.	Hexachloroethane	67-72-1	

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Revised July 18, 2005 – JCF
Revised November, 2005 – new permit – JCF
Revised Oct 10, 2009
Revised September, 2010, new 8260B analytes - KPO

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Analyst Demonstration of Capabilit
Certification Statement

Musselman, Natalie 6020 - *Inductively Coupled Plasma Mass Spectrometry(6020)*

Date 04-Jun-10 *SOP: NC-MT-0002*

Matrix: Water

STL - North Canton laboratory
4101 Shuffel Drive NW
North Canton, OH 44720
(330) 497-9396

We, the undersigned, CERTIFY that:

1. The analyst identified above, using the cited test method with the specifications in the cited SOP, which is in use at this facility for the analysis of samples under the TestAmerica Quality Assurance Plan, has met the Initial or Ongoing Demonstration of Capability.
2. The test method was performed by the analyst identified on this certification following the TestAmerica SOP.
3. A copy of the laboratory-specific SOP is available for all personnel on-site.
4. The data associated with the initial/ongoing demonstration of capability are true, accurate, complete and self-explanatory (*). These data are attached to this certification statement.
5. All raw data (including a copy of this certification form) necessary to reconstruct and validate these analyses have been retained at the facility, and that the associated information is well organized and available for review by authorized inspectors.

Comments/Observations:

Highlight = less than 4 count

Musselman, Natalie	Natalie J Musselman	6-4-10
Analyst's Name	Signature	Date
Mark Bruce	Mark Bruce	6/4/10
Technical Director's Name	Signature	Date
Dorothy Leeson	Dorothy J. Leeson	6/8/10
QA Manager's Name	Signature	Date

* *True: Consistent with supporting data.*
Accurate: Based on good laboratory practices consistent with sound scientific principles/practices..
Complete: Includes the results of all supporting performance testing.
Self-explanatory: Data properly labeled and stored so that the results are traceable and require no additional explanation.

Analyst Demonstration of Capabilities Data

Musselman, Natalie

start date for data: 03/06/10
end date for data: 06/04/10

Method: **6020** Inductively Coupled Plasma Mass Spectrometry(6020)

Matrix: *Water*

Work Order	*Batch*	*Batch date*	*Type*	*Compound Name*	*Result*	*Result units*	*Spike amount*	*Spike units*	*Recovery*	*LCL*	*UCL*	*SD*	*RSD*	*Eval*
L01MQ1DG	0125018	5/14/2010	LCS	Aluminum	9701	ug/L	10000	ug/L	97.01	80	120	1.51057226621	1.5724597908300	ok
L051V1A2	0127019	5/12/2010	LCS	Aluminum	9335	ug/L	10000	ug/L	93.35	80	120	1.51057226621	1.5724597908300	ok
L05151AR	0127023	5/8/2010	LCS	Aluminum	9.757	mg/L	10	mg/L	97.57	80	120	1.51057226621	1.5724597908300	ok
L01ML1DM	0125016	5/6/2010	LCS	Aluminum	9465	ug/L	10000	ug/L	94.65	80	120	1.51057226621	1.5724597908300	ok
L01MQ1CW	0125018	5/14/2010	LCS	Antimony	93.82	ug/L	100	ug/L	93.82	80	120	3.59920277368	3.8703879564977	ok
L01MQ1DM	0125018	5/14/2010	LCS	Antimony	93.82	ug/L	100	ug/L	93.82	80	120	3.59920277368	3.8703879564977	ok
L0RDJ1D5	0120014	5/5/2010	LCS	Antimony	0.09691	mg/L	0.1	mg/L	96.91	80	120	3.59920277368	3.8703879564977	ok
L0RDG1CN	0120013	5/5/2010	LCS	Antimony	101.2	ug/L	100	ug/L	101.2	80	120	3.59920277368	3.8703879564977	ok
L01MQ1DN	0125018	5/14/2010	LCS	Arsenic	88.99	ug/L	100	ug/L	88.99	80	120	1.99563883480	2.1881820204315	ok
L03VE1CG	0126025	5/12/2010	LCS	Arsenic	0.09177	mg/L	0.1	mg/L	91.77	80	120	1.99563883480	2.1881820204315	ok
L05151CP	0127023	5/8/2010	LCS	Arsenic	0.08962	mg/L	0.1	mg/L	89.62	80	120	1.99563883480	2.1881820204315	ok
L0WGW1C	0123019	5/6/2010	LCS	Arsenic	0.09301	mg/L	0.1	mg/L	93.01	80	120	1.99563883480	2.1881820204315	ok
L03VN1E0	0126030	5/10/2010	LCS	Barium	92.81	ug/L	100	ug/L	92.81	80	120	2.56815664854	2.8665661887908	ok

L03VN1AP	0126030	5/10/2010	LCS	Barium	92.81	ug/L	100	ug/L	92.81	80	120	2.56815664854	2.8665661887908	ok
L05151CQ	0127023	5/8/2010	LCS	Barium	0.08803	mg/L	0.1	mg/L	88.03	80	120	2.56815664854	2.8665661887908	ok
L01ML1AP	0125016	5/6/2010	LCS	Barium	86.65	ug/L	100	ug/L	86.65	80	120	2.56815664854	2.8665661887908	ok
L03VN1E1	0126030	5/10/2010	LCS	Beryllium	101.2	ug/L	100	ug/L	101.2	80	120	5.50634785195	5.6074692134318	ok
L03VN1EQ	0126030	5/10/2010	LCS	Beryllium	101.2	ug/L	100	ug/L	101.2	80	120	5.50634785195	5.6074692134318	ok
L05151AV	0127023	5/8/2010	LCS	Beryllium	0.08705	mg/L	0.1	mg/L	87.05	80	120	5.50634785195	5.6074692134318	ok
L01ML1C6	0125016	5/6/2010	LCS	Beryllium	99.33	ug/L	100	ug/L	99.33	80	120	5.50634785195	5.6074692134318	ok
L01MQ1DR	0125018	5/14/2010	LCS	Cadmium	98.5	ug/L	100	ug/L	98.5	80	120	2.40761004133	2.5239354204877	ok
L01MQ1C2	0125018	5/14/2010	LCS	Cadmium	98.5	ug/L	100	ug/L	98.5	80	120	2.40761004133	2.5239354204877	ok
L01ML1C7	0125016	5/6/2010	LCS	Cadmium	92.4	ug/L	100	ug/L	92.4	80	120	2.40761004133	2.5239354204877	ok
L01ML1AQ	0125016	5/6/2010	LCS	Cadmium	92.4	ug/L	100	ug/L	92.4	80	120	2.40761004133	2.5239354204877	ok
L01MQ1CR	0125018	5/14/2010	LCS	Calcium	10030	ug/L	10000	ug/L	100.3	80	120	1.80569931052	1.7854346274952	ok
L051V1A5	0127019	5/12/2010	LCS	Calcium	10120	ug/L	10000	ug/L	101.2	80	120	1.80569931052	1.7854346274952	ok
L03VN1E7	0126030	5/10/2010	LCS	Calcium	10320	ug/L	10000	ug/L	103.2	80	120	1.80569931052	1.7854346274952	ok
L01ML1CX	0125016	5/6/2010	LCS	Calcium	9861	ug/L	10000	ug/L	98.61	80	120	1.80569931052	1.7854346274952	ok
L03VN1E3	0126030	5/10/2010	LCS	Chromium, Total	95.13	ug/L	100	ug/L	95.13	80	120	2.44186111691	2.6634610786562	ok
L03VN1AT	0126030	5/10/2010	LCS	Chromium, Total	95.13	ug/L	100	ug/L	95.13	80	120	2.44186111691	2.6634610786562	ok
L05151AX	0127023	5/8/2010	LCS	Chromium, Total	0.09089	mg/L	0.1	mg/L	90.89	80	120	2.44186111691	2.6634610786562	ok
L01ML1AT	0125016	5/6/2010	LCS	Chromium, Total	88.8	ug/L	100	ug/L	88.8	80	120	2.44186111691	2.6634610786562	ok
L01MQ1C4	0125018	5/14/2010	LCS	Cobalt	93.74	ug/L	100	ug/L	93.74	80	120	2.99642048356	3.2237773835314	ok
L051X1C8	0127020	5/12/2010	LCS	Cobalt	88.73	ug/L	100	ug/L	88.73	80	120	2.99642048356	3.2237773835314	ok

L03VN1AR	0126030	5/10/2010	LCS	Cobalt	96.55	ug/L	100	ug/L	96.55	80	120	2.99642048356	3.2237773835314	ok
L03VN1E4	0126030	5/10/2010	LCS	Cobalt	96.55	ug/L	100	ug/L	96.55	80	120	2.99642048356	3.2237773835314	ok
L03VN1E5	0126030	5/10/2010	LCS	Copper	101.5	ug/L	100	ug/L	101.5	80	120	2.36677862747	2.4188133496504	ok
L03VN1ER	0126030	5/10/2010	LCS	Copper	101.5	ug/L	100	ug/L	101.5	80	120	2.36677862747	2.4188133496504	ok
L05151A0	0127023	5/8/2010	LCS	Copper	0.09654	mg/L	0.1	mg/L	96.54	80	120	2.36677862747	2.4188133496504	ok
L01ML1DN	0125016	5/6/2010	LCS	Copper	97.43	ug/L	100	ug/L	97.43	80	120	2.36677862747	2.4188133496504	ok
L051V1EA	0127019	5/12/2010	LCS	Iron	9874	ug/L	10000	ug/L	98.74	80	120	4.96616570587	5.0068578047584	ok
L03VN1FJ	0126030	5/10/2010	LCS	Iron	9524	ug/L	10000	ug/L	95.24	80	120	4.96616570587	5.0068578047584	ok
L0WGW1C	0123019	5/6/2010	LCS	Iron	9.689	mg/L	10	mg/L	96.89	80	120	4.96616570587	5.0068578047584	ok
L0RDJ1D7	0120014	5/5/2010	LCS	Iron	10.47	mg/L	10	mg/L	104.7	80	120	4.96616570587	5.0068578047584	ok
L01MQ1DW	0125018	5/14/2010	LCS	Lead	94.51	ug/L	100	ug/L	94.51	80	120	3.74149702659	4.2272026060243	ok
L051V1D7	0127019	5/12/2010	LCS	Lead	85.37	ug/L	100	ug/L	85.37	80	120	3.74149702659	4.2272026060243	ok
L03VE1CH	0126025	5/12/2010	LCS	Lead	0.087	mg/L	0.1	mg/L	87	80	120	3.74149702659	4.2272026060243	ok
L05151CU	0127023	5/8/2010	LCS	Lead	0.08539	mg/L	0.1	mg/L	85.39	80	120	3.74149702659	4.2272026060243	ok
L01MQ1DK	0125018	5/14/2010	LCS	Magnesium	10240	ug/L	10000	ug/L	102.4	80	120	2.01746127596	2.0110259927831	ok
L03VN1EN	0126030	5/10/2010	LCS	Magnesium	9949	ug/L	10000	ug/L	99.49	80	120	2.01746127596	2.0110259927831	ok
L03VN1E9	0126030	5/10/2010	LCS	Magnesium	9949	ug/L	10000	ug/L	99.49	80	120	2.01746127596	2.0110259927831	ok
L01ML1C1	0125016	5/6/2010	LCS	Magnesium	9782	ug/L	10000	ug/L	97.82	80	120	2.01746127596	2.0110259927831	ok
L03VN1EU	0126030	5/10/2010	LCS	Manganese	98.93	ug/L	100	ug/L	98.93	80	120	1.89722353529	1.9626353683512	ok
L01ML1DD	0125016	5/6/2010	LCS	Manganese	93.45	ug/L	100	ug/L	93.45	80	120	1.89722353529	1.9626353683512	ok
L0WG21AQ	0123021	5/5/2010	LCS	Manganese	95.96	ug/L	100	ug/L	95.96	80	120	1.89722353529	1.9626353683512	ok

L0WG21AP	0123021	5/5/2010	LCS	Manganese	95.96	ug/L	100	ug/L	95.96	80	120	1.89722353529	1.9626353683512	ok
L03VN1FM	0126030	5/10/2010	LCS	Molybdenum	93.39	ug/L	100	ug/L	93.39	80	120	0	0	ok
L03VN1FL	0126030	5/10/2010	LCS	Molybdenum	93.39	ug/L	100	ug/L	93.39	80	120	0	0	ok
L01MQ1C8	0125018	5/14/2010	LCS	Nickel	94.33	ug/L	100	ug/L	94.33	80	120	2.95917057234	3.05911627108	ok
L03VN1FC	0126030	5/10/2010	LCS	Nickel	100.9	ug/L	100	ug/L	100.9	80	120	2.95917057234	3.05911627108	ok
L01ML1AU	0125016	5/6/2010	LCS	Nickel	96.15	ug/L	100	ug/L	96.15	80	120	2.95917057234	3.05911627108	ok
L01ML1DE	0125016	5/6/2010	LCS	Nickel	96.15	ug/L	100	ug/L	96.15	80	120	2.95917057234	3.05911627108	ok
L01MQ1DJ	0125018	5/14/2010	LCS	Potassium	9345	ug/L	10000	ug/L	93.45	80	120	3.82008227286	4.0499456146772	ok
L03VN1E8	0126030	5/10/2010	LCS	Potassium	9228	ug/L	10000	ug/L	92.28	80	120	3.82008227286	4.0499456146772	ok
L03VN1EM	0126030	5/10/2010	LCS	Potassium	9228	ug/L	10000	ug/L	92.28	80	120	3.82008227286	4.0499456146772	ok
L01ML1C0	0125016	5/6/2010	LCS	Potassium	8979	ug/L	10000	ug/L	89.79	80	120	3.82008227286	4.0499456146772	ok
L05151CL	0127023	5/8/2010	LCS	Selenium	0.09404	mg/L	0.1	mg/L	94.04	80	120	1.90230153002	2.0178860425356	ok
L05151CV	0127023	5/8/2010	LCS	Selenium	0.09404	mg/L	0.1	mg/L	94.04	80	120	1.90230153002	2.0178860425356	ok
L01ML1DF	0125016	5/6/2010	LCS	Selenium	91.74	ug/L	100	ug/L	91.74	80	120	1.90230153002	2.0178860425356	ok
L01ML1AW	0125016	5/6/2010	LCS	Selenium	91.74	ug/L	100	ug/L	91.74	80	120	1.90230153002	2.0178860425356	ok
L01MQ1D2	0125018	5/14/2010	LCS	Silver	98.99	ug/L	100	ug/L	98.99	80	120	2.02967019762	2.0815232546989	ok
L051V1A3	0127019	5/12/2010	LCS	Silver	95.38	ug/L	100	ug/L	95.38	80	120	2.02967019762	2.0815232546989	ok
L03VN1FE	0126030	5/10/2010	LCS	Silver	100.1	ug/L	100	ug/L	100.1	80	120	2.02967019762	2.0815232546989	ok
L03VN1EG	0126030	5/10/2010	LCS	Silver	100.1	ug/L	100	ug/L	100.1	80	120	2.02967019762	2.0815232546989	ok
L01MQ1DL	0125018	5/14/2010	LCS	Sodium	10770	ug/L	10000	ug/L	107.7	80	120	5.04915127238	4.9752335172711	ok
L01MQ1CV	0125018	5/14/2010	LCS	Sodium	10770	ug/L	10000	ug/L	107.7	80	120	5.04915127238	4.9752335172711	ok

L01ML1C2	0125016	5/6/2010	LCS	Sodium	9630	ug/L	10000	ug/L	96.3	80	120	5.04915127238	4.9752335172711	ok
L01ML1DT	0125016	5/6/2010	LCS	Sodium	9630	ug/L	10000	ug/L	96.3	80	120	5.04915127238	4.9752335172711	ok
L01MQ1DC	0125018	5/14/2010	LCS	Thallium	87.8	ug/L	100	ug/L	87.8	80	120	2.81359150249	3.2646332294687	ok
L03VE1CL	0126025	5/12/2010	LCS	Thallium	0.09004	mg/L	0.1	mg/L	90.04	80	120	2.81359150249	3.2646332294687	ok
L03VN1AX	0126030	5/10/2010	LCS	Thallium	85.52	ug/L	100	ug/L	85.52	80	120	2.81359150249	3.2646332294687	ok
L05151A5	0127023	5/8/2010	LCS	Thallium	0.0817	mg/L	0.1	mg/L	81.7	80	120	2.81359150249	3.2646332294687	ok
L01MQ1D4	0125018	5/14/2010	LCS	Vanadium	91.48	ug/L	100	ug/L	91.48	80	120	4.07125533466	4.4181700467295	ok
L03VN1FG	0126030	5/10/2010	LCS	Vanadium	95.88	ug/L	100	ug/L	95.88	80	120	4.07125533466	4.4181700467295	ok
L03VN1EH	0126030	5/10/2010	LCS	Vanadium	95.88	ug/L	100	ug/L	95.88	80	120	4.07125533466	4.4181700467295	ok
L01ML1DJ	0125016	5/6/2010	LCS	Vanadium	86.02	ug/L	100	ug/L	86.02	80	120	4.07125533466	4.4181700467295	ok
L01MQ1DE	0125018	5/14/2010	LCS	Zinc	111.1	ug/L	100	ug/L	111.1	80	120	3.49972942677	3.1948842237548	ok
L01MQ1D5	0125018	5/14/2010	LCS	Zinc	111.1	ug/L	100	ug/L	111.1	80	120	3.49972942677	3.1948842237548	ok
L03VN1FH	0126030	5/10/2010	LCS	Zinc	111.3	ug/L	100	ug/L	111.3	80	120	3.49972942677	3.1948842237548	ok
L0WGW1C	0123019	5/6/2010	LCS	Zinc	0.1134	mg/L	0.1	mg/L	113.4	80	120	3.49972942677	3.1948842237548	ok

APPENDIX C

CONSTITUENT BACKGROUND VALUES FOR THE COMPLIANCE GROUNDWATER MONITORING PROGRAM

RADFORD ARMY AMMUNITION PLANT – OPEN BURNING GROUND
CALCULATION OF CONSTITUENT BACKGROUND VALUES FOR THE COMPLIANCE GROUNDWATER MONITORING PROGRAM CONSTITUENTS

Draper Aden Associates calculated background values for the Compliance Groundwater Monitoring Program (CGMP) constituents for the Open Burning Ground located at the Radford Army Ammunition Plant (Radford AAP) in Radford, Virginia. Background values were calculated for the additional CGMP constituents that are not on the Detection Groundwater Monitoring Program (DGMP) list.

Previously the background values for the DGMP constituents were calculated in May 2005. With the exceptions of carbon tetrachloride, chlorobenzene, hexachloroethane, methyl chloride, methlyene chloride, and perchlorate, the background values for each constituent listed in the DGMP were calculated using the analytical data for upgradient wells 13MW1 and 13MW2 from First Quarter 1996 through First Quarter 2005. Groundwater monitoring for carbon tetrachloride, chlorobenzene, hexachloroethane, methyl chloride, methlyene chloride, and perchlorate began in Fourth Quarter 2003; therefore, the background values for those six constituents were calculated using the analytical data for upgradient wells 13MW1 and 13MW2 from Fourth Quarter 2003 through First Quarter 2005. The background value calculations were based on site-wide 95% confidence, 95% coverage upper prediction intervals.

The background values for CGMP constituents not on the DGMP list were calculated using the analytical data for upgradient wells 13MW1 and 13MW2 from Fourth Quarter 2005 through Fourth Quarter 2006. The calculated background values for all target constituents are listed on **Table 1**.

Background Data and Background Value Calculations

Statistical calculations of background values were performed using the analytical data from upgradient wells 13MW1 and 13MW2 as background data. The methods of statistical analysis were dependent on the percentage of non-detects and the distribution of the background data. All CGMP constituents not on the DGMP list were 100% non-detected (<LOQ) in the background wells. The background values for these constituents were established as equal to their quantitation limits (QL). The one exception was bis(2-ethylhexyl)phthalate for which the background value was established as 6 µg/l (USEPA Maximum Contaminant Level (MCL)) whereas its LOQ is 10 µg/l. When GPS is less than the LOQ, constituent concentrations will be compared to the LOQ.

Background Value = Quantitation Limit (QL)				
Constituent	**Sample Size**	**% Non-Detects**	**QL (µg/l)**	**Background Value (µg/l)**
Cadmium	10	100	1	1
Nickel	10	100	5	5
Selenium	10	100	5	5
Zinc	10	100	5	5
Acetophenone	10	100	10	10
Benzyl chloride	8	100	5	5
Benzo[a]anthracene	10	100	10	10

Background Value = Quantitation Limit (QL)				
Constituent	**Sample Size**	**% Non-Detects**	**QL (µg/l)**	**Background Value (µg/l)**
Benzo[b]fluoranthene	10	100	10	10
Benzo[k]fluoranthene	10	100	10	10
Benzo[a]pyrene	10	100	10	10
Chloromethane	10	100	5	5
Bis(2-ethylhexyl)phthalate	10	100	10	6
Butyl benzyl phthalate	10	100	10	10
Chloroform	10	100	1	1
2-Chlorophenol	10	100	10	10
Dibenz(a, h)anthracene	10	100	10	10
Dibenzofuran	10	100	10	10
1,2-Dichloroethane	10	100	1	1
1,1-Dichloroethene	10	100	1	1
2,4-Dichlorophenol	10	100	10	10
3,3'-Dimethylbenzidine	10	100	10	10
Dimethyl phthalate	10	100	10	10
m-Dinitrobenzene	10	100	2.5	2.5
2,6-Dinitrotoluene	10	100	5	5
Di-n-octyl phthalate	10	100	10	10
Fluoranthene	10	100	10	10
Indeno[1,2,3-cd]pyrene	10	100	10	10
Bromomethane	10	100	1	1
3&4-Methylphenol	10	100	20	20
Naphthalene	10	100	1	1
Nitrobenzene	10	100	10	10
p-Nitrophenol	10	100	20	20
Phenol	10	100	10	10
Pyrene	10	100	10	10
Tetrachloroethene	10	100	1	1
Toluene	10	100	5	5
Trichloroethene	10	100	1	1
sym-Trinitrobenzene	10	100	2.5	2.5
Vinyl chloride	10	100	1	1

TABLE 1

OPEN BURNING GROUND
CALCULATED BACKGROUND VALUES

Constituent	Background Value (µg/l unless otherwise noted)
DGMP Parameters	
Antimony	6
Arsenic	5
Barium	228
Chromium	112
Lead	14.0
Mercury	2.52
Silver	2.4
Acetone	25
Benzene	5
Carbon Tetrachloride	5
Chlorobenzene	5
Methyl chloride	5
Methylene chloride	5
Toluene	5
2,4-Dinitrotoluene	10
Di-n-butylphthalate	10
Diethyl phthalate	10
Diphenylamine	10
Hexachloroethane	10
Nitroglycerine	10 mg/l
Perchlorate	4
Total Phenols	20.0
Nitrate	1,311
Nitrite	100
Sulfate	88,000
Total Organic Carbon	10,600
Total Organic Halides	54.5
Specific Conductivity	6,870 µS/cm
pH	5.72 – 7.80 pH units
CGMP Parameters not on DGMP List	
Cadmium	1
Nickel	5
Selenium	5
Zinc	5
Acetophenone	10
Benzyl chloride	5
Benzo[a]anthracene	10
Benzo[b]fluoranthene	10
Benzo[k]fluoranthene	10
Benzo[a]pyrene	10
Chloromethane	5
Bis(2-ethylhexyl)phthalate	6

Constituent	Background Value (µg/l unless otherwise noted)
Butyl benzyl phthalate	10
Chloroform	1
2-Chlorophenol	10
Dibenz(a, h)anthracene	10
Dibenzofuran	10
1,2-Dichloroethane	1
1,1-Dichloroethene	1
2,4-Dichlorophenol	10
3,3'-Dimethylbenzidine	10
Dimethyl phthalate	10
m-Dinitrobenzene	2.5
2,6-Dinitrotoluene	5
Di-n-octyl phthalate	10
Fluoranthene	10
Indeno[1,2,3-cd]pyrene	10
Bromomethane	1
3&4-Methylphenol	20
Naphthalene	1
Nitrobenzene	10
p-Nitrophenol	20
Phenol	10
Pyrene	10
Tetrachloroethene	1
Toluene	5
Trichloroethene	1
sym-Trinitrobenzene	2.5
Vinyl chloride	1

APPENDIX A

OPEN BURNING GROUND
BACKGROUND VALUE CALCULATIONS FOR DGMP PARAMETERS

RADFORD ARMY AMMUNITION PLANT – OPEN BURNING GROUND CALCULATION OF CONSTITUENT BACKGROUND VALUES FOR THE DETECTION GROUNDWATER MONITORING PROGRAM

Draper Aden Associates calculated background values for each constituent listed in the Detection Groundwater Monitoring Program (DGMP) dated September 2003 for the Open Burning Ground located at the Radford Army Ammunition Plant (Radford AAP) in Radford, Virginia. With the exceptions of carbon tetrachloride, chlorobenzene, hexachloroethane, methyl chloride, methlyene chloride, and perchlorate, the background values for each constituent listed in the DGMP were calculated using the analytical data for upgradient wells 13MW1 and 13MW2 from First Quarter 1996 through First Quarter 2005. Groundwater monitoring for carbon tetrachloride, chlorobenzene, hexachloroethane, methyl chloride, methlyene chloride, and perchlorate began in Fourth Quarter 2003; therefore, the background values for those six constituents were calculated using the analytical data for upgradient wells 13MW1 and 13MW2 from Fourth Quarter 2003 through First Quarter 2005. The background value calculations were based on site-wide 95% confidence, 95% coverage upper prediction intervals. The calculated background values are listed in **Table 1**.

Background Data and Statistical Calculations

Statistical calculations of background values were performed using the analytical data from upgradient wells 13MW1 and 13MW2 as background data. Based on the percentage of non-detects and the distribution of the background data, methods of statistical calculations varied. Background average, standard deviation and other descriptive statistical data were computed for all constituents and are presented in **Appendix A**.

The constituents listed below were 100% non-detected (<LOQ) in the background wells. The background values for these constituents were established as equal to their quantitation limits (QL).

Background Value = Quantitation Limit (QL)				
Parameter	**Sample Size**	**% Non-Detects**	**QL (µg/l)**	**Background Value (µg/l)**
Acetone	74	100	25	25
Benzene	74	100	5	5
Carbon tetrachloride	12	100	5	5
Chlorobenzene	12	100	5	5
Methyl chloride	12	100	5	5
Methylene chloride	12	100	5	5
Toluene	74	100	5	5
2,4-Dinitrotoluene	74	100	10	10
Di-n-butylphthalate	74	100	10	10
Diethyl phthalate	74	100	10	10
Diphenylamine	74	100	10	10
Hexachloroethane	12	100	10	10
Nitroglycerine	74	100	10 mg/l	10 mg/l
Perchlorate	12	100	4	4
Nitrite	61	100	100	100

Non-parametric prediction intervals were computed for all of the constituents for which the data from upgradient wells 13MW1 and 13MW2 satisfied one of the following two criteria, per VDEQ regulations and guidance as well as USEPA guidance:

- Percentage of non-detects was greater than or equal to 50 and less than 100; or
- Percentage of non-detects was less than 50, but data was not normally distributed in original or log-transformed mode.

The background values for these constituents were set as equal to their upper prediction limits (UPLs), with one exception. For pH, a two-sided parametric prediction interval was computed; therefore, the background value for pH consists of a range between the lower prediction limit (LPL) and the UPL. The background and relevant statistical data for these constituents are summarized below. Associated statistical computations are presented in **Appendix A**.

Background Value = UPL of Non-parametric Prediction Interval Background Value for pH = LPL – UPL of two-sided Prediction Interval				
Parameter	**Sample Size**	**% Non-Detects**	**QL (µg/l)**	**Background Value (µg/l)**
Antimony	74	99	5	6
Arsenic	74	93	5	5
Chromium	74	31	5	112
Lead	74	69	5	14.0
Mercury	74	99	2	2.52
Silver	74	92	2	2.4
Total Phenols	74	97	5	20.0
Total Organic Carbon	74	73	1,000	10,600
Total Organic Halides	74	85	20	54.5
Sulfate	61	0	1,000	88,000
pH	62	0	0.1 pH units	5.72 – 7.80 pH units
Specific Conductivity	62	0	1 µS/cm	6,870 µS/cm

The following constituents exhibited normally or ln-normally distributed background data with less than 25% non-detects. One sided parametric prediction intervals were computed on the background data for each of these constituents. The background values for these constituents were set as equal to their UPLs. The background concentration calculations were based on a site wide 95% confidence, 95% coverage upper prediction intervals. When adjusted for multiple comparisons of the background data, the false positive rate was 5% (0.05). The background and relevant statistical data for these constituents are summarized below. The prediction interval computations for these constituents are presented in **Appendix A**.

Background Value = UPL of one-sided Prediction Interval				
Parameter	**Sample Size**	**% Non-Detects**	**QL (µg/l)**	**Background Value (µg/l)**
Barium	74	0	10	228
Nitrate	61	3	100	1,311

TABLE 1

OPEN BURNING GROUND
CALCULATED BACKGROUND VALUES

Constituent	Background Value (µg/l unless otherwise noted)
Antimony	6
Arsenic	5
Barium	228
Chromium	112
Lead	14.0
Mercury	2.52
Silver	2.4
Acetone	25
Benzene	5
Carbon Tetrachloride	5
Chlorobenzene	5
Methyl chloride	5
Methylene chloride	5
Toluene	5
2,4-Dinitrotoluene	10
Di-n-butylphthalate	10
Diethyl phthalate	10
Diphenylamine	10
Hexachloroethane	10
Nitroglycerine	10 mg/l
Perchlorate	4
Total Phenols	20.0
Nitrate	1,311
Nitrite	100
Sulfate	88,000
Total Organic Carbon	10,600
Total Organic Halides	54.5
Specific Conductivity	6,870 µS/cm
pH	5.72 – 7.80 pH units

APPENDIX A

OPEN BURNING GROUND
BACKGROUND VALUE STATISTICAL CALCULATIONS

RAAP - Open Burning Ground (HWMU-13) - Statistical Analysis - Background Calculation

May 10, 2005

1) Y2K Correction dates on GRITS/STAT software are as shown in the table below.

Actual Event Date	Date Used in Stat Software	Notes
1st Quarter 2000	12/10/1999	
2nd Quarter 2000	12/11/1999	
3rd Quarter 2000	12/12/1999	
4th Quarter 2000	12/13/1999	
1st Quarter 2001	12/14/1999	
2nd Quarter 2001	12/15/1999	
3rd Quarter 2001	12/16/1999	
4th Quarter 2001	12/17/1999	
1st Quarter 2002	12/18/1999	
2nd Quarter 2002	12/19/1999	
3rd Quarter 2002	12/20/1999	
4th Quarter 2002	12/21/1999	
1st Quarter 2003	12/22/1999	
2nd Quarter 2003	12/23/1999	
3rd Quarter 2003	12/24/1999	
4th Quarter 2003	12/25/1999	
1st Quarter 2004	12/26/1999	
2nd Quarter 2004	12/27/1999	
3rd Quarter 2004	12/28/1999	
4th Quarter 2004	12/29/1999	
1st Quarter 2005	12/30/1999	

2) No adjustments for multiple comparisons could be made for non-parametric UPLs and where UPL=QL.
Any Statistically significant increase (SSI) must be confirmed by verification sampling.

3) No data available for pH and Specific conductivity from 2nd Qtr 1996 - 2nd Qtr 1997.

4) Background for chlorobenzene, Carbon tetrachloride, Methyl Chloride (Chloromethane), Methylene Chloride (Dichloromethane), Hexachloroethane and Perchlorate based on 4th Quarter 2003 to 1st Quarter 2005 data.

5) Background for all other target constituents based on 1st Quarter 1996 through 1st Quarter 2005 data.

P:\B03\200\B03204\B03204-03\WORK\[StatDate correction.xls]Statcorrection dates

Data Set Summary

Report Printed: 05-10-2005 20:01

Facility:RAAPHWMU13 Haz. Waste Unit 13 - RAAP

Address:

City:Radford ST:VA Zip:
County:PULASKI

Contact:
Phone:( ) -

Permit Type:Detection

Constituent:CCl4 Carbon tetrachloride

CAS Number: 56-23-5
MCL: 5.000 ppb
ACL: 0.000 ppb
Detect Limit: 10.000 ppb

Start Date:Mar 31 1996
End Date:Dec 30 1999

Well ID:13MW1

Sample Date	Observation	Ln
Dec 25 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 26 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 27 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 28 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 29 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 30 1999	5.000 ppb	1.609 (* Nondetect *)

Well ID:13MW1 Summary Statistics

Observations (N): 6
Nondetects (%ND):100

Minimum:	5.000 ppb	Ln Minimum:	1.609
Maximum:	5.000 ppb	Ln Maximum:	1.609
Mean:	5.000 ppb	Ln Mean:	1.609
Std. Dev.:	0.000 ppb	Ln Std. Dev.:	0.000

Well ID:13MW2

Sample Date	Observation	Ln

Dec 25 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 26 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 27 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 28 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 29 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 30 1999	5.000 ppb	1.609 (* Nondetect *)

Well ID:13MW2 Summary Statistics

Observations (N): 6
Nondetects (%ND):100

Minimum:	5.000 ppb	Ln Minimum:	1.609
Maximum:	5.000 ppb	Ln Maximum:	1.609
Mean:	5.000 ppb	Ln Mean:	1.609
Std. Dev.:	0.000 ppb	Ln Std. Dev.:	0.000

Data Set Summary

Report Printed: 05-10-2005 20:01

Facility:RAAPHWMU13 Haz. Waste Unit 13 - RAAP

Address:

City:Radford ST:VA Zip:
County:PULASKI

Contact:
Phone:( ) -

Permit Type:Detection

Constituent:ChlBenz Chlorobenzene

CAS Number: 108-90-7
MCL: 100.000 ppb
ACL: 0.000 ppb
Detect Limit: 10.000 ppb

Start Date:Mar 31 1996
End Date:Dec 30 1999

Well ID:13MW1

Sample Date	Observation	Ln
Dec 25 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 26 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 27 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 28 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 29 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 30 1999	5.000 ppb	1.609 (* Nondetect *)

Well ID:13MW1 Summary Statistics

Observations (N): 6
Nondetects (%ND):100

Minimum:	5.000 ppb	Ln Minimum:	1.609
Maximum:	5.000 ppb	Ln Maximum:	1.609
Mean:	5.000 ppb	Ln Mean:	1.609
Std. Dev.:	0.000 ppb	Ln Std. Dev.:	0.000

Well ID:13MW2

Sample Date	Observation	Ln

Dec 25 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 26 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 27 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 28 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 29 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 30 1999	5.000 ppb	1.609 (* Nondetect *)

Well ID: 13MW2 Summary Statistics

Observations (N): 6
Nondetects (%ND): 100

Minimum:	5.000 ppb	Ln Minimum:	1.609
Maximum:	5.000 ppb	Ln Maximum:	1.609
Mean:	5.000 ppb	Ln Mean:	1.609
Std. Dev.:	0.000 ppb	Ln Std. Dev.:	0.000

Data Set Summary

Report Printed: 05-10-2005 20:01

Facility:RAAPHWMU13 Haz. Waste Unit 13 - RAAP

Address:

City:Radford ST:VA Zip:
County:PULASKI

Contact:
Phone:( ) -

Permit Type:Detection

Constituent:ChlMeth Chloromethane

CAS Number: 74-87-3
MCL: 0.000 ppb
ACL: 0.000 ppb
Detect Limit: 10.000 ppb

Start Date:Mar 31 1996
End Date:Dec 30 1999

Well ID:13MW1

Sample Date	Observation	Ln
Dec 25 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 26 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 27 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 28 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 29 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 30 1999	5.000 ppb	1.609 (* Nondetect *)

Well ID:13MW1 Summary Statistics

Observations (N): 6
Nondetects (%ND):100

Minimum:	5.000 ppb	Ln Minimum:	1.609
Maximum:	5.000 ppb	Ln Maximum:	1.609
Mean:	5.000 ppb	Ln Mean:	1.609
Std. Dev.:	0.000 ppb	Ln Std. Dev.:	0.000

Well ID:13MW2

Sample Date	Observation	Ln

Dec 25 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 26 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 27 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 28 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 29 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 30 1999	5.000 ppb	1.609 (* Nondetect *)

Well ID:13MW2 Summary Statistics

Observations (N): 6
Nondetects (%ND):100

Minimum:	5.000 ppb	Ln Minimum:	1.609
Maximum:	5.000 ppb	Ln Maximum:	1.609
Mean:	5.000 ppb	Ln Mean:	1.609
Std. Dev.:	0.000 ppb	Ln Std. Dev.:	0.000

Data Set Summary

Report Printed: 05-10-2005 20:02

Facility:RAAPHWMU13 Haz. Waste Unit 13 - RAAP

Address:

City:Radford ST:VA Zip:
County:PULASKI

Contact:
Phone:( ) -

Permit Type:Detection

Constituent:DiClMe Dichloromethane

CAS Number: 75-09-2
MCL: 5.000 ppb
ACL: 0.000 ppb
Detect Limit: 10.000 ppb

Start Date:Mar 31 1996
End Date:Dec 30 1999

Well ID:13MW1

Sample Date	Observation	Ln
Dec 25 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 26 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 27 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 28 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 29 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 30 1999	5.000 ppb	1.609 (* Nondetect *)

Well ID:13MW1 Summary Statistics

Observations (N): 6
Nondetects (%ND):100

Minimum:	5.000 ppb	Ln Minimum:	1.609
Maximum:	5.000 ppb	Ln Maximum:	1.609
Mean:	5.000 ppb	Ln Mean:	1.609
Std. Dev.:	0.000 ppb	Ln Std. Dev.:	0.000

Well ID:13MW2

Sample Date	Observation	Ln

Dec 25 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 26 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 27 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 28 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 29 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 30 1999	5.000 ppb	1.609 (* Nondetect *)

Well ID:13MW2 Summary Statistics

Observations (N): 6
Nondetects (%ND):100

Minimum:	5.000 ppb	Ln Minimum:	1.609
Maximum:	5.000 ppb	Ln Maximum:	1.609
Mean:	5.000 ppb	Ln Mean:	1.609
Std. Dev.:	0.000 ppb	Ln Std. Dev.:	0.000

Data Set Summary

Report Printed: 05-10-2005 20:02

Facility:RAAPHWMU13 Haz. Waste Unit 13 - RAAP

Address:

City:Radford ST:VA Zip:
County:PULASKI

Contact:
Phone:( ) -

Permit Type:Detection

Constituent:HClEth Hexachloroethane

CAS Number: 67-72-1
MCL: 0.000 ppb
ACL: 0.000 ppb
Detect Limit: 20.000 ppb

Start Date:Mar 31 1996
End Date:Dec 30 1999

Well ID:13MW1

Sample Date	Observation	Ln
Dec 25 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 26 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 27 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 28 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 29 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 30 1999	10.000 ppb	2.303 (* Nondetect *)

Well ID:13MW1 Summary Statistics

Observations (N): 6
Nondetects (%ND):100

Minimum:	10.000 ppb	Ln Minimum:	2.303
Maximum:	10.000 ppb	Ln Maximum:	2.303
Mean:	10.000 ppb	Ln Mean:	2.303
Std. Dev.:	0.000 ppb	Ln Std. Dev.:	0.000

Well ID:13MW2

Sample Date	Observation	Ln

Dec 25 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 26 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 27 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 28 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 29 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 30 1999	10.000 ppb	2.303 (* Nondetect *)

Well ID:13MW2 Summary Statistics

Observations (N): 6
Nondetects (%ND):100

Minimum:	10.000 ppb	Ln Minimum:	2.303
Maximum:	10.000 ppb	Ln Maximum:	2.303
Mean:	10.000 ppb	Ln Mean:	2.303
Std. Dev.:	0.000 ppb	Ln Std. Dev.:	0.000

Data Set Summary

Report Printed: 05-10-2005 20:02

Facility:RAAPHWMU13 Haz. Waste Unit 13 - RAAP

Address:

City:Radford ST:VA Zip:
County:PULASKI

Contact:
Phone:( ) -

Permit Type:Detection

Constituent:Perchlor Perchlorate

CAS Number: - -
MCL: 0.000 ug/l
ACL: 0.000 ug/l
Detect Limit: 8.000 ug/l

Start Date:Mar 31 1996
End Date:Dec 30 1999

Well ID:13MW1

Sample Date	Observation	Ln
Dec 25 1999	4.000 ug/l	1.386 (* Nondetect *)
Dec 26 1999	4.000 ug/l	1.386 (* Nondetect *)
Dec 27 1999	4.000 ug/l	1.386 (* Nondetect *)
Dec 28 1999	4.000 ug/l	1.386 (* Nondetect *)
Dec 29 1999	4.000 ug/l	1.386 (* Nondetect *)
Dec 30 1999	4.000 ug/l	1.386 (* Nondetect *)

Well ID:13MW1 Summary Statistics

Observations (N): 6
Nondetects (%ND):100

Minimum:	4.000 ug/l	Ln Minimum:	1.386
Maximum:	4.000 ug/l	Ln Maximum:	1.386
Mean:	4.000 ug/l	Ln Mean:	1.386
Std. Dev.:	0.000 ug/l	Ln Std. Dev.:	0.000

Well ID:13MW2

Sample Date	Observation	Ln

Dec 25 1999	4.000 ug/l	1.386 (* Nondetect *)
Dec 26 1999	4.000 ug/l	1.386 (* Nondetect *)
Dec 27 1999	4.000 ug/l	1.386 (* Nondetect *)
Dec 28 1999	4.000 ug/l	1.386 (* Nondetect *)
Dec 29 1999	4.000 ug/l	1.386 (* Nondetect *)
Dec 30 1999	4.000 ug/l	1.386 (* Nondetect *)

Well ID:13MW2 Summary Statistics

Observations (N): 6
Nondetects (%ND):100

Minimum:	4.000 ug/l	Ln Minimum:	1.386
Maximum:	4.000 ug/l	Ln Maximum:	1.386
Mean:	4.000 ug/l	Ln Mean:	1.386
Std. Dev.:	0.000 ug/l	Ln Std. Dev.:	0.000

Data Set Summary

Report Printed: 05-10-2005 17:22

Facility:RAAPHWMU13 Haz. Waste Unit 13 - RAAP

Address:

City:Radford ST:VA Zip:
County:PULASKI

Contact:
Phone:( ) -

Permit Type:Detection

Constituent:Sb Antimony, total

CAS Number: 7440-36-0
MCL: 0.000 ppb
ACL: 0.000 ppb
Detect Limit: 10.000 ppb

Start Date:Mar 31 1996
End Date:Dec 30 1999

Well ID:13MW1

Sample Date	Observation	Ln
Mar 31 1996	1.500 ppb	0.405 (* Nondetect *)
Jun 30 1996	1.500 ppb	0.405 (* Nondetect *)
Sep 30 1996	1.500 ppb	0.405 (* Nondetect *)
Dec 31 1996	1.500 ppb	0.405 (* Nondetect *)
Mar 31 1997	1.500 ppb	0.405 (* Nondetect *)
Jun 30 1997	1.500 ppb	0.405 (* Nondetect *)
Sep 30 1997	1.500 ppb	0.405 (* Nondetect *)
Dec 31 1997	1.500 ppb	0.405 (* Nondetect *)
Mar 09 1998	1.500 ppb	0.405 (* Nondetect *)
May 14 1998	1.500 ppb	0.405 (* Nondetect *)
Aug 14 1998	1.500 ppb	0.405 (* Nondetect *)
Nov 23 1998	1.500 ppb	0.405 (* Nondetect *)
Mar 13 1999	1.500 ppb	0.405 (* Nondetect *)
May 27 1999	1.500 ppb	0.405 (* Nondetect *)
Jul 27 1999	1.500 ppb	0.405 (* Nondetect *)
Nov 08 1999	1.500 ppb	0.405 (* Nondetect *)
Dec 10 1999	1.500 ppb	0.405 (* Nondetect *)
Dec 11 1999	1.500 ppb	0.405 (* Nondetect *)
Dec 12 1999	1.500 ppb	0.405 (* Nondetect *)
Dec 13 1999	1.500 ppb	0.405 (* Nondetect *)
Dec 14 1999	1.500 ppb	0.405 (* Nondetect *)
Dec 15 1999	1.500 ppb	0.405 (* Nondetect *)
Dec 16 1999	1.500 ppb	0.405 (* Nondetect *)
Dec 17 1999	1.500 ppb	0.405 (* Nondetect *)

Dec 18 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 19 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 20 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 21 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 22 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 23 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 24 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 25 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 26 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 27 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 28 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 29 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 30 1999	5.000 ppb	1.609 (* Nondetect *)

Well ID:13MW1 Summary Statistics

Observations (N): 37
Nondetects (%ND):100

Minimum:	1.500 ppb	Ln Minimum:	0.405
Maximum:	5.000 ppb	Ln Maximum:	1.609
Mean:	2.730 ppb	Ln Mean:	0.828
Std. Dev.:	1.694 ppb	Ln Std. Dev.:	0.583

Well ID:13MW2

Sample Date	Observation	Ln
Mar 31 1996	1.500 ppb	0.405 (* Nondetect *)
Jun 30 1996	1.500 ppb	0.405 (* Nondetect *)
Sep 30 1996	1.500 ppb	0.405 (* Nondetect *)
Dec 31 1996	6.000 ppb	1.792
Mar 31 1997	1.500 ppb	0.405 (* Nondetect *)
Jun 30 1997	1.500 ppb	0.405 (* Nondetect *)
Sep 30 1997	1.500 ppb	0.405 (* Nondetect *)
Dec 31 1997	1.500 ppb	0.405 (* Nondetect *)
Mar 09 1998	1.500 ppb	0.405 (* Nondetect *)
May 14 1998	1.500 ppb	0.405 (* Nondetect *)
Aug 14 1998	1.500 ppb	0.405 (* Nondetect *)
Nov 23 1998	1.500 ppb	0.405 (* Nondetect *)
Mar 13 1999	1.500 ppb	0.405 (* Nondetect *)
May 27 1999	1.500 ppb	0.405 (* Nondetect *)
Jul 27 1999	1.500 ppb	0.405 (* Nondetect *)
Nov 08 1999	1.500 ppb	0.405 (* Nondetect *)
Dec 10 1999	1.500 ppb	0.405 (* Nondetect *)
Dec 11 1999	1.500 ppb	0.405 (* Nondetect *)
Dec 12 1999	1.500 ppb	0.405 (* Nondetect *)
Dec 13 1999	1.500 ppb	0.405 (* Nondetect *)
Dec 14 1999	1.500 ppb	0.405 (* Nondetect *)
Dec 15 1999	1.500 ppb	0.405 (* Nondetect *)
Dec 16 1999	1.500 ppb	0.405 (* Nondetect *)
Dec 17 1999	1.500 ppb	0.405 (* Nondetect *)
Dec 18 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 19 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 20 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 21 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 22 1999	5.000 ppb	1.609 (* Nondetect *)

Dec 23 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 24 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 25 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 26 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 27 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 28 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 29 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 30 1999	5.000 ppb	1.609 (* Nondetect *)

Well ID:13MW2 Summary Statistics

Observations (N): 37
Nondetects (%ND): 97

Minimum:	1.500 ppb	Ln Minimum:	0.405
Maximum:	6.000 ppb	Ln Maximum:	1.792
Mean:	2.851 ppb	Ln Mean:	0.866
Std. Dev.:	1.763 ppb	Ln Std. Dev.:	0.599

Normality Tests

Report Printed: 05-10-2005 15:34

Facility:RAAPHWMU13 Haz. Waste Unit 13 - RAAP

Address:

City:Radford ST:VA Zip:
County:PULASKI

Contact:
Phone:( ) -

Permit Type:Detection

Constituent:Sb Antimony, total

CAS Number: 7440-36-0
MCL: 0.000 ppb
ACL: 0.000 ppb
Detect Limit: 10.000 ppb

Start Date:Mar 31 1996
End Date:Dec 30 1999

Normality Test on Observations for wells listed below:

Well:13MW1 Position:Upgradient Observations:37

Scale	Minimum	Maximum	Mean	Std Dev
Original:	1.500	5.000	2.730	1.694
Log:	0.405	1.609	0.828	0.583

Well:13MW2 Position:Upgradient Observations:37

Scale	Minimum	Maximum	Mean	Std Dev
Original:	1.500	6.000	2.851	1.763
Log:	0.405	1.792	0.866	0.599

Pooled Statistics
Observations: 74

Statistic	Original Scale	Log Scale
Mean:	2.791	0.847
Std Dev:	1.718	0.587
Skewness:	0.578	0.566
Kurtosis:	-1.636	-1.673
Minimum:	1.500	0.405
Maximum:	6.000	1.792

CV: 0.616 0.693

Shapiro-Francia Statistics

Scale	Test Statistic	5% Critical Value	1% Critical Value
Original:	0.6407*	0.9690	0.9560
Log:	0.6351*	0.9690	0.9560

* Indicates statistically significant evidence of non-normality.
GRIT/STAT Version 5.0

%ND = 99%. ~~100~~

Nonparametric Prediction Interval
Report Printed May 10,2005

Facility:Haz. Waste Unit 13 - RAAP
Parameter:Antimony, total(CAS Number:7440-36-0)

ONE-TAILED UPPER PARAMETRIC PREDICTION INTERVAL

Observations (n):	74
Conf. Level (1-α):	***.***%

UL: ~~[illegible]~~ 6.0 ppb
LL: 0.000

%ND : 99%

Report Produced by GRITS/STAT 5.01

Data Set Summary

Report Printed: 05-10-2005 17:22

Facility:RAAPHWMU13 Haz. Waste Unit 13 - RAAP

Address:

City:Radford ST:VA Zip:
County:PULASKI

Contact:
Phone:( ) -

Permit Type:Detection

Constituent:As Arsenic, total

CAS Number: 7440-38-2
MCL: 0.000 ppb
ACL: 0.000 ppb
Detect Limit: 10.000 ppb

Start Date:Mar 31 1996
End Date:Dec 30 1999

Well ID:13MW1

Sample Date	Observation	Ln
Mar 31 1996	0.500 ppb	-0.693 (* Nondetect *)
Jun 30 1996	0.500 ppb	-0.693 (* Nondetect *)
Sep 30 1996	0.500 ppb	-0.693 (* Nondetect *)
Dec 31 1996	0.500 ppb	-0.693 (* Nondetect *)
Mar 31 1997	0.500 ppb	-0.693 (* Nondetect *)
Jun 30 1997	0.500 ppb	-0.693 (* Nondetect *)
Sep 30 1997	0.500 ppb	-0.693 (* Nondetect *)
Dec 31 1997	0.500 ppb	-0.693 (* Nondetect *)
Mar 09 1998	0.500 ppb	-0.693 (* Nondetect *)
May 14 1998	0.500 ppb	-0.693 (* Nondetect *)
Aug 14 1998	0.500 ppb	-0.693 (* Nondetect *)
Nov 23 1998	3.000 ppb	1.099
Mar 13 1999	1.000 ppb	0.000
May 27 1999	0.500 ppb	-0.693 (* Nondetect *)
Jul 27 1999	0.500 ppb	-0.693 (* Nondetect *)
Nov 08 1999	0.500 ppb	-0.693 (* Nondetect *)
Dec 10 1999	0.500 ppb	-0.693 (* Nondetect *)
Dec 11 1999	0.500 ppb	-0.693 (* Nondetect *)
Dec 12 1999	0.500 ppb	-0.693 (* Nondetect *)
Dec 13 1999	2.000 ppb	0.693
Dec 14 1999	0.500 ppb	-0.693 (* Nondetect *)
Dec 15 1999	0.500 ppb	-0.693 (* Nondetect *)
Dec 16 1999	0.500 ppb	-0.693 (* Nondetect *)
Dec 17 1999	0.500 ppb	-0.693 (* Nondetect *)

Dec 18 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 19 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 20 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 21 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 22 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 23 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 24 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 25 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 26 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 27 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 28 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 29 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 30 1999	5.000 ppb	1.609 (* Nondetect *)

Well ID:13MW1 Summary Statistics

Observations (N): 37
Nondetects (%ND): 92

Minimum:	0.500 ppb	Ln Minimum:	-0.693
Maximum:	5.000 ppb	Ln Maximum:	1.609
Mean:	2.203 ppb	Ln Mean:	0.220
Std. Dev.:	2.139 ppb	Ln Std. Dev.:	1.101

Well ID:13MW2

Sample Date	Observation	Ln
Mar 31 1996	0.500 ppb	-0.693 (* Nondetect *)
Jun 30 1996	0.500 ppb	-0.693 (* Nondetect *)
Sep 30 1996	0.500 ppb	-0.693 (* Nondetect *)
Dec 31 1996	0.500 ppb	-0.693 (* Nondetect *)
Mar 31 1997	0.500 ppb	-0.693 (* Nondetect *)
Jun 30 1997	0.500 ppb	-0.693 (* Nondetect *)
Sep 30 1997	0.500 ppb	-0.693 (* Nondetect *)
Dec 31 1997	0.500 ppb	-0.693 (* Nondetect *)
Mar 09 1998	0.500 ppb	-0.693 (* Nondetect *)
May 14 1998	0.500 ppb	-0.693 (* Nondetect *)
Aug 14 1998	0.500 ppb	-0.693 (* Nondetect *)
Nov 23 1998	0.500 ppb	-0.693 (* Nondetect *)
Mar 13 1999	0.500 ppb	-0.693 (* Nondetect *)
May 27 1999	0.500 ppb	-0.693 (* Nondetect *)
Jul 27 1999	1.000 ppb	0.000
Nov 08 1999	0.500 ppb	-0.693 (* Nondetect *)
Dec 10 1999	0.500 ppb	-0.693 (* Nondetect *)
Dec 11 1999	0.500 ppb	-0.693 (* Nondetect *)
Dec 12 1999	0.500 ppb	-0.693 (* Nondetect *)
Dec 13 1999	2.000 ppb	0.693
Dec 14 1999	0.500 ppb	-0.693 (* Nondetect *)
Dec 15 1999	0.500 ppb	-0.693 (* Nondetect *)
Dec 16 1999	0.500 ppb	-0.693 (* Nondetect *)
Dec 17 1999	0.500 ppb	-0.693 (* Nondetect *)
Dec 18 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 19 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 20 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 21 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 22 1999	5.000 ppb	1.609 (* Nondetect *)

Dec 23 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 24 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 25 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 26 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 27 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 28 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 29 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 30 1999	5.000 ppb	1.609 (* Nondetect *)

Well ID:13MW2 Summary Statistics

Observations (N): 37
Nondetects (%ND): 95

Minimum:	0.500 ppb	Ln Minimum:	-0.693
Maximum:	5.000 ppb	Ln Maximum:	1.609
Mean:	2.135 ppb	Ln Mean:	0.172
Std. Dev.:	2.153 ppb	Ln Std. Dev.:	1.101

Normality Tests

Report Printed: 05-10-2005 15:45

Facility:RAAPHWMU13 Haz. Waste Unit 13 - RAAP

Address:

City:Radford ST:VA Zip:
County:PULASKI

Contact:
Phone:( ) -

Permit Type:Detection

Constituent:As Arsenic, total

CAS Number: 7440-38-2
MCL: 0.000 ppb
ACL: 0.000 ppb
Detect Limit: 10.000 ppb

Start Date:Mar 31 1996
End Date:Dec 30 1999

Normality Test on Observations for wells listed below:

Well:13MW1 Position:Upgradient Observations:37

Scale	Minimum	Maximum	Mean	Std Dev
Original:	0.500	5.000	2.203	2.139
Log:	-0.693	1.609	0.220	1.101

Well:13MW2 Position:Upgradient Observations:37

Scale	Minimum	Maximum	Mean	Std Dev
Original:	0.500	5.000	2.135	2.153
Log:	-0.693	1.609	0.172	1.101

Pooled Statistics
Observations: 74

Statistic	Original Scale	Log Scale
Mean:	2.169	0.196
Std Dev:	2.131	1.094
Skewness:	0.552	0.465
Kurtosis:	-1.649	-1.725
Minimum:	0.500	-0.693
Maximum:	5.000	1.609

CV: 0.983 5.572

Shapiro-Francia Statistics

Scale	Test Statistic	5% Critical Value	1% Critical Value
Original:	0.6615*	0.9690	0.9560
Log:	0.6742*	0.9690	0.9560

* Indicates statistically significant evidence of non-normality.
GRIT/STAT Version 5.0

Nonparametric Prediction Interval
Report Printed May 10,2005

Facility:Haz. Waste Unit 13 - RAAP
Parameter:Arsenic, total(CAS Number:7440-38-2)

ONE-TAILED UPPER PARAMETRIC PREDICTION INTERVAL

Observations (n): 74
Conf. Level (1-α): ***.***%

UL: ~~0.500~~ 5.0 ppb
LL: 0.000

% ND: 100%.

BACKGROUND TO COMPLIANCE WELL COMPARISON

Well:13MW3

Sample Date	Observation
12/17/99	ND < 1.000 ppb

Report Produced by GRITS/STAT 5.01

Data Set Summary

Report Printed: 05-10-2005 17:23

Facility:RAAPHWMU13 Haz. Waste Unit 13 - RAAP

Address:

City:Radford ST:VA Zip:
County:PULASKI

Contact:
Phone:( ) -

Permit Type:Detection

Constituent:Ba Barium, total

CAS Number: 7440-39-3
MCL: 0.000 ppb
ACL: 0.000 ppb
Detect Limit: 20.000 ppb

Start Date:Mar 31 1996
End Date:Dec 30 1999

Well ID:13MW1

Sample Date	Observation	Ln
Mar 31 1996	87.000 ppb	4.466
Jun 30 1996	105.000 ppb	4.654
Sep 30 1996	90.000 ppb	4.500
Dec 31 1996	88.000 ppb	4.477
Mar 31 1997	127.000 ppb	4.844
Jun 30 1997	129.000 ppb	4.860
Sep 30 1997	154.000 ppb	5.037
Dec 31 1997	126.000 ppb	4.836
Mar 09 1998	117.000 ppb	4.762
May 14 1998	98.000 ppb	4.585
Aug 14 1998	107.000 ppb	4.673
Nov 23 1998	255.000 ppb	5.541
Mar 13 1999	178.000 ppb	5.182
May 27 1999	85.000 ppb	4.443
Jul 27 1999	103.000 ppb	4.635
Nov 08 1999	128.000 ppb	4.852
Dec 10 1999	96.000 ppb	4.564
Dec 11 1999	91.000 ppb	4.511
Dec 12 1999	81.000 ppb	4.394
Dec 13 1999	111.000 ppb	4.710
Dec 14 1999	115.000 ppb	4.745
Dec 15 1999	81.800 ppb	4.404
Dec 16 1999	112.000 ppb	4.718
Dec 17 1999	132.000 ppb	4.883

Dec 18 1999	127.000 ppb	4.844
Dec 19 1999	107.000 ppb	4.673
Dec 20 1999	132.000 ppb	4.883
Dec 21 1999	143.000 ppb	4.963
Dec 22 1999	110.000 ppb	4.700
Dec 23 1999	78.000 ppb	4.357
Dec 24 1999	89.500 ppb	4.494
Dec 25 1999	120.000 ppb	4.787
Dec 26 1999	98.800 ppb	4.593
Dec 27 1999	96.300 ppb	4.567
Dec 28 1999	97.100 ppb	4.576
Dec 29 1999	106.000 ppb	4.663
Dec 30 1999	101.000 ppb	4.615

Well ID:13MW1 Summary Statistics

Observations (N): 37
Nondetects (%ND): 0

Minimum:	78.000 ppb	Ln Minimum:	4.357
Maximum:	255.000 ppb	Ln Maximum:	5.541
Mean:	113.581 ppb	Ln Mean:	4.703
Std. Dev.:	32.212 ppb	Ln Std. Dev.:	0.235

Well ID:13MW2

Sample Date	Observation	Ln
Mar 31 1996	134.000 ppb	4.898
Jun 30 1996	139.000 ppb	4.934
Sep 30 1996	128.000 ppb	4.852
Dec 31 1996	110.000 ppb	4.700
Mar 31 1997	137.000 ppb	4.920
Jun 30 1997	125.000 ppb	4.828
Sep 30 1997	140.000 ppb	4.942
Dec 31 1997	141.000 ppb	4.949
Mar 09 1998	220.000 ppb	5.394
May 14 1998	159.000 ppb	5.069
Aug 14 1998	151.000 ppb	5.017
Nov 23 1998	172.000 ppb	5.147
Mar 13 1999	168.000 ppb	5.124
May 27 1999	153.000 ppb	5.030
Jul 27 1999	124.000 ppb	4.820
Nov 08 1999	146.000 ppb	4.984
Dec 10 1999	138.000 ppb	4.927
Dec 11 1999	145.000 ppb	4.977
Dec 12 1999	130.000 ppb	4.868
Dec 13 1999	135.000 ppb	4.905
Dec 14 1999	131.000 ppb	4.875
Dec 15 1999	147.000 ppb	4.990
Dec 16 1999	148.000 ppb	4.997
Dec 17 1999	155.000 ppb	5.043
Dec 18 1999	128.000 ppb	4.852
Dec 19 1999	148.000 ppb	4.997
Dec 20 1999	148.000 ppb	4.997
Dec 21 1999	142.000 ppb	4.956
Dec 22 1999	153.000 ppb	5.030

Dec 23 1999	172.000 ppb	5.147
Dec 24 1999	168.000 ppb	5.124
Dec 25 1999	152.000 ppb	5.024
Dec 26 1999	174.000 ppb	5.159
Dec 27 1999	168.000 ppb	5.124
Dec 28 1999	154.000 ppb	5.037
Dec 29 1999	171.000 ppb	5.142
Dec 30 1999	180.000 ppb	5.193

Well ID:13MW2 Summary Statistics

Observations (N): 37
Nondetects (%ND): 0

Minimum:	110.000 ppb	Ln Minimum:	4.700
Maximum:	220.000 ppb	Ln Maximum:	5.394
Mean:	149.568 ppb	Ln Mean:	4.999
Std. Dev.:	20.240 ppb	Ln Std. Dev.:	0.130

Normality Tests

Report Printed: 05-10-2005 15:54

Facility:RAAPHWMU13 Haz. Waste Unit 13 - RAAP

Address:

City:Radford ST:VA Zip:
County:PULASKI

Contact:
Phone:( ) -

Permit Type:Detection

Constituent:Ba Barium, total

CAS Number: 7440-39-3
MCL: 0.000 ppb
ACL: 0.000 ppb
Detect Limit: 20.000 ppb

Start Date:Mar 31 1996
End Date:Dec 30 1999

Normality Test on Observations for wells listed below:

Well:13MW1 Position:Upgradient Observations:37

Scale	Minimum	Maximum	Mean	Std Dev
Original:	78.000	255.000	113.581	32.212
Log:	4.357	5.541	4.703	0.235

Well:13MW2 Position:Upgradient Observations:37

Scale	Minimum	Maximum	Mean	Std Dev
Original:	110.000	220.000	149.568	20.240
Log:	4.700	5.394	4.999	0.130

Pooled Statistics
Observations: 74

Statistic	Original Scale	Log Scale
Mean:	131.574	4.851
Std Dev:	32.278	0.241
Skewness:	0.845	0.030
Kurtosis:	1.800	-0.118
Minimum:	78.000	4.357
Maximum:	255.000	5.541

CV:	0.245	0.050

Shapiro-Francia Statistics

Scale	Test Statistic	5% Critical Value	1% Critical Value
Original:	0.9407*	0.9690	0.9560
Log:	0.9794	0.9690	0.9560

* Indicates statistically significant evidence of non-normality.
GRIT/STAT Version 5.0

Parametric Prediction Interval
Report Printed May 10,2005

Facility:Haz. Waste Unit 13 - RAAP
Parameter:Barium, total(CAS Number:7440-39-3)

ONE-TAILED UPPER PARAMETRIC PREDICTION INTERVAL

Observations (n):	74
Shapiro-Francia (W):	0.9794
Critical W,α=0.01:	0.9560
Mean:	4.851 ln(ppb)
Std Dev:	0.241 ln(ppb)
DF:	73
Conf. Level (1-α):	0.9500
Future Samples (k):	5
$t_{\left[1-\frac{\alpha}{k}\right]}$:	2.3785
Kappa:	2.3945
UL:	227.572 ppb
LL:	0.000

%ND: 0 %

Report Produced by GRITS/STAT 5.01

Data Set Summary

Report Printed: 05-10-2005 17:23

Facility:RAAPHWMU13 Haz. Waste Unit 13 - RAAP

Address:

City:Radford ST:VA Zip:
County:PULASKI

Contact:
Phone:( ) -

Permit Type:Detection

Constituent:Cr Chromium, total

CAS Number: 7440-47-3
MCL: 0.000 ppb
ACL: 0.000 ppb
Detect Limit: 10.000 ppb

Start Date:Mar 31 1996
End Date:Dec 30 1999

Well ID:13MW1

Sample Date	Observation	Ln
Mar 31 1996	11.000 ppb	2.398
Jun 30 1996	13.000 ppb	2.565
Sep 30 1996	56.000 ppb	4.025
Dec 31 1996	20.000 ppb	2.996
Mar 31 1997	22.000 ppb	3.091
Jun 30 1997	19.000 ppb	2.944
Sep 30 1997	40.000 ppb	3.689
Dec 31 1997	23.000 ppb	3.135
Mar 09 1998	55.000 ppb	4.007
May 14 1998	6.000 ppb	1.792
Aug 14 1998	9.000 ppb	2.197
Nov 23 1998	112.000 ppb	4.718
Mar 13 1999	108.000 ppb	4.682
May 27 1999	3.000 ppb	1.099
Jul 27 1999	2.000 ppb	0.693
Nov 08 1999	15.000 ppb	2.708
Dec 10 1999	2.000 ppb	0.693
Dec 11 1999	2.000 ppb	0.693
Dec 12 1999	2.000 ppb	0.693
Dec 13 1999	4.000 ppb	1.386
Dec 14 1999	0.500 ppb	-0.693 (* Nondetect *)
Dec 15 1999	0.500 ppb	-0.693 (* Nondetect *)
Dec 16 1999	0.500 ppb	-0.693 (* Nondetect *)
Dec 17 1999	0.500 ppb	-0.693 (* Nondetect *)

Dec 18 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 19 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 20 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 21 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 22 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 23 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 24 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 25 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 26 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 27 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 28 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 29 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 30 1999	5.000 ppb	1.609 (* Nondetect *)

Well ID:13MW1 Summary Statistics

Observations (N): 37
Nondetects (%ND): 46

Minimum:	0.500 ppb	Ln Minimum:	-0.693
Maximum:	112.000 ppb	Ln Maximum:	4.718
Mean:	15.973 ppb	Ln Mean:	1.847
Std. Dev.:	26.511 ppb	Ln Std. Dev.:	1.386

Well ID:13MW2

Sample Date	Observation	Ln
Mar 31 1996	13.000 ppb	2.565
Jun 30 1996	10.000 ppb	2.303
Sep 30 1996	11.000 ppb	2.398
Dec 31 1996	14.000 ppb	2.639
Mar 31 1997	10.000 ppb	2.303
Jun 30 1997	10.000 ppb	2.303
Sep 30 1997	19.000 ppb	2.944
Dec 31 1997	12.000 ppb	2.485
Mar 09 1998	12.000 ppb	2.485
May 14 1998	7.000 ppb	1.946
Aug 14 1998	17.000 ppb	2.833
Nov 23 1998	20.000 ppb	2.996
Mar 13 1999	9.000 ppb	2.197
May 27 1999	6.000 ppb	1.792
Jul 27 1999	6.000 ppb	1.792
Nov 08 1999	6.000 ppb	1.792
Dec 10 1999	4.000 ppb	1.386
Dec 11 1999	6.000 ppb	1.792
Dec 12 1999	2.000 ppb	0.693
Dec 13 1999	5.000 ppb	1.609
Dec 14 1999	0.500 ppb	-0.693 (* Nondetect *)
Dec 15 1999	10.700 ppb	2.370
Dec 16 1999	9.210 ppb	2.220
Dec 17 1999	7.020 ppb	1.949
Dec 18 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 19 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 20 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 21 1999	57.600 ppb	4.054
Dec 22 1999	10.300 ppb	2.332

Dec 23 1999	6.300 ppb	1.841
Dec 24 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 25 1999	6.000 ppb	1.792
Dec 26 1999	7.600 ppb	2.028
Dec 27 1999	5.500 ppb	1.705
Dec 28 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 29 1999	7.400 ppb	2.001
Dec 30 1999	7.600 ppb	2.028

Well ID:13MW2 Summary Statistics

Observations (N): 37
Nondetects (%ND): 16

Minimum:	0.500 ppb	Ln Minimum:	-0.693
Maximum:	57.600 ppb	Ln Maximum:	4.054
Mean:	9.722 ppb	Ln Mean:	2.025
Std. Dev.:	9.158 ppb	Ln Std. Dev.:	0.733

Normality Tests

Report Printed: 05-10-2005 15:57

Facility:RAAPHWMU13 Haz. Waste Unit 13 - RAAP

Address:

City:Radford ST:VA Zip:
County:PULASKI

Contact:
Phone:( ) -

Permit Type:Detection

Constituent:Cr Chromium, total

CAS Number: 7440-47-3
MCL: 0.000 ppb
ACL: 0.000 ppb
Detect Limit: 10.000 ppb

Start Date:Mar 31 1996
End Date:Dec 30 1999

Normality Test on Observations for wells listed below:

Well:13MW1 Position:Upgradient Observations:37

Scale	Minimum	Maximum	Mean	Std Dev
Original:	0.500	112.000	15.973	26.511
Log:	-0.693	4.718	1.847	1.386

Well:13MW2 Position:Upgradient Observations:37

Scale	Minimum	Maximum	Mean	Std Dev
Original:	0.500	57.600	9.722	9.158
Log:	-0.693	4.054	2.025	0.733

Pooled Statistics
Observations: 74

Statistic	Original Scale	Log Scale
Mean:	12.848	1.936
Std Dev:	19.947	1.105
Skewness:	3.603*	-0.168
Kurtosis:	13.679	1.161
Minimum:	0.500	-0.693
Maximum:	112.000	4.718

CV:	1.553	0.570

Shapiro-Francia Statistics

Scale	Test Statistic	5% Critical Value	1% Critical Value
Original:	0.4961*	0.9690	0.9560
Log:	0.9189*	0.9690	0.9560

* Indicates statistically significant evidence of non-normality.
GRIT/STAT Version 5.0

Nonparametric Prediction Interval
Report Printed May 10,2005

Facility:Haz. Waste Unit 13 - RAAP
Parameter:Chromium, total(CAS Number:7440-47-3)

ONE-TAILED UPPER PARAMETRIC PREDICTION INTERVAL

Observations (n):	74
Conf. Level (1-α):	***.***%
UL:	~~0.500~~ 112.0 ppb
LL:	0.000

%ND: 31%.

Report Produced by GRITS/STAT 5.01

Data Set Summary

Report Printed: 05-10-2005 17:23

Facility:RAAPHWMU13 Haz. Waste Unit 13 - RAAP

Address:

City:Radford ST:VA Zip:
County:PULASKI

Contact:
Phone:( ) -

Permit Type:Detection

Constituent:Pb Lead, total

CAS Number: 7439-92-1
MCL: 0.000 ppb
ACL: 0.000 ppb
Detect Limit: 10.000 ppb

Start Date:Mar 31 1996
End Date:Dec 30 1999

Well ID:13MW1

Sample Date	Observation	Ln
Mar 31 1996	1.000 ppb	0.000
Jun 30 1996	1.000 ppb	0.000
Sep 30 1996	2.000 ppb	0.693
Dec 31 1996	4.000 ppb	1.386
Mar 31 1997	14.000 ppb	2.639
Jun 30 1997	9.000 ppb	2.197
Sep 30 1997	8.000 ppb	2.079
Dec 31 1997	5.000 ppb	1.609
Mar 09 1998	2.000 ppb	0.693
May 14 1998	0.500 ppb	-0.693 (* Nondetect *)
Aug 14 1998	0.500 ppb	-0.693 (* Nondetect *)
Nov 23 1998	6.000 ppb	1.792
Mar 13 1999	6.000 ppb	1.792
May 27 1999	0.500 ppb	-0.693 (* Nondetect *)
Jul 27 1999	0.500 ppb	-0.693 (* Nondetect *)
Nov 08 1999	0.500 ppb	-0.693 (* Nondetect *)
Dec 10 1999	0.500 ppb	-0.693 (* Nondetect *)
Dec 11 1999	0.500 ppb	-0.693 (* Nondetect *)
Dec 12 1999	0.500 ppb	-0.693 (* Nondetect *)
Dec 13 1999	0.500 ppb	-0.693 (* Nondetect *)
Dec 14 1999	0.500 ppb	-0.693 (* Nondetect *)
Dec 15 1999	0.500 ppb	-0.693 (* Nondetect *)
Dec 16 1999	3.200 ppb	1.163
Dec 17 1999	0.500 ppb	-0.693 (* Nondetect *)

Dec 18 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 19 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 20 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 21 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 22 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 23 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 24 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 25 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 26 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 27 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 28 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 29 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 30 1999	5.000 ppb	1.609 (* Nondetect *)

Well ID:13MW1 Summary Statistics

Observations (N): 37
Nondetects (%ND): 68

Minimum:	0.500 ppb	Ln Minimum:	-0.693
Maximum:	14.000 ppb	Ln Maximum:	2.639
Mean:	3.573 ppb	Ln Mean:	0.774
Std. Dev.:	3.027 ppb	Ln Std. Dev.:	1.138

Well ID:13MW2

Sample Date	Observation	Ln
Mar 31 1996	2.000 ppb	0.693
Jun 30 1996	4.000 ppb	1.386
Sep 30 1996	2.000 ppb	0.693
Dec 31 1996	6.000 ppb	1.792
Mar 31 1997	0.500 ppb	-0.693 (* Nondetect *)
Jun 30 1997	7.000 ppb	1.946
Sep 30 1997	6.000 ppb	1.792
Dec 31 1997	5.000 ppb	1.609
Mar 09 1998	3.000 ppb	1.099
May 14 1998	0.500 ppb	-0.693 (* Nondetect *)
Aug 14 1998	0.500 ppb	-0.693 (* Nondetect *)
Nov 23 1998	1.000 ppb	0.000
Mar 13 1999	2.000 ppb	0.693
May 27 1999	0.500 ppb	-0.693 (* Nondetect *)
Jul 27 1999	2.000 ppb	0.693
Nov 08 1999	0.500 ppb	-0.693 (* Nondetect *)
Dec 10 1999	0.500 ppb	-0.693 (* Nondetect *)
Dec 11 1999	0.500 ppb	-0.693 (* Nondetect *)
Dec 12 1999	0.500 ppb	-0.693 (* Nondetect *)
Dec 13 1999	0.500 ppb	-0.693 (* Nondetect *)
Dec 14 1999	0.500 ppb	-0.693 (* Nondetect *)
Dec 15 1999	0.500 ppb	-0.693 (* Nondetect *)
Dec 16 1999	0.500 ppb	-0.693 (* Nondetect *)
Dec 17 1999	0.500 ppb	-0.693 (* Nondetect *)
Dec 18 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 19 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 20 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 21 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 22 1999	5.000 ppb	1.609 (* Nondetect *)

Dec 23 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 24 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 25 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 26 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 27 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 28 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 29 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 30 1999	5.000 ppb	1.609 (* Nondetect *)

Well ID:13MW2 Summary Statistics

Observations (N): 37
Nondetects (%ND): 70

Minimum:	0.500 ppb	Ln Minimum:	-0.693
Maximum:	7.000 ppb	Ln Maximum:	1.946
Mean:	3.014 ppb	Ln Mean:	0.657
Std. Dev.:	2.238 ppb	Ln Std. Dev.:	1.078

Normality Tests

Report Printed: 05-10-2005 16:25

Facility:RAAPHWMU13 Haz. Waste Unit 13 - RAAP

Address:

City:Radford ST:VA Zip:
County:PULASKI

Contact:
Phone:( ) -

Permit Type:Detection

Constituent:Pb Lead, total

CAS Number: 7439-92-1
MCL: 0.000 ppb
ACL: 0.000 ppb
Detect Limit: 10.000 ppb

Start Date:Mar 31 1996
End Date:Dec 30 1999

Normality Test on Observations for wells listed below:

Well:13MW1 Position:Upgradient Observations:37

Scale	Minimum	Maximum	Mean	Std Dev
Original:	0.500	14.000	3.573	3.027
Log:	-0.693	2.639	0.774	1.138

Well:13MW2 Position:Upgradient Observations:37

Scale	Minimum	Maximum	Mean	Std Dev
Original:	0.500	7.000	3.014	2.238
Log:	-0.693	1.946	0.657	1.078

Pooled Statistics
Observations: 74

Statistic	Original Scale	Log Scale
Mean:	3.293	0.716
Std Dev:	2.658	1.102
Skewness:	0.876	-0.314
Kurtosis:	1.714	-1.614
Minimum:	0.500	-0.693
Maximum:	14.000	2.639

CV: 0.807 1.540

Shapiro-Francia Statistics

Scale	Test Statistic	5% Critical Value	1% Critical Value
Original:	0.8098*	0.9690	0.9560
Log:	0.7963*	0.9690	0.9560

* Indicates statistically significant evidence of non-normality.
GRIT/STAT Version 5.0

Nonparametric Prediction Interval
Report Printed May 10,2005

Facility:Haz. Waste Unit 13 - RAAP
Parameter:Lead, total(CAS Number:7439-92-1)

ONE-TAILED UPPER PARAMETRIC PREDICTION INTERVAL

Observations (n):	74
Conf. Level (1-α):	100.000%
UL:	14.0 ~~0.500~~ ppb
LL:	0.000

%ND: 69%.

Report Produced by GRITS/STAT 5.01

Data Set Summary

Report Printed: 05-10-2005 17:23

Facility:RAAPHWMU13 Haz. Waste Unit 13 - RAAP

Address:

City:Radford ST:VA Zip:
County:PULASKI

Contact:
Phone:( ) -

Permit Type:Detection

Constituent:Hg Mercury

CAS Number: 7439-97-6
MCL: 0.000 ppb
ACL: 0.000 ppb
Detect Limit: 4.000 ppb

Start Date:Mar 31 1996
End Date:Dec 30 1999

Well ID:13MW1

Sample Date	Observation	Ln
Mar 31 1996	0.100 ppb	-2.303 (* Nondetect *)
Jun 30 1996	0.100 ppb	-2.303 (* Nondetect *)
Sep 30 1996	0.100 ppb	-2.303 (* Nondetect *)
Dec 31 1996	0.100 ppb	-2.303 (* Nondetect *)
Mar 31 1997	0.100 ppb	-2.303 (* Nondetect *)
Jun 30 1997	0.100 ppb	-2.303 (* Nondetect *)
Sep 30 1997	0.100 ppb	-2.303 (* Nondetect *)
Dec 31 1997	0.100 ppb	-2.303 (* Nondetect *)
Mar 09 1998	0.100 ppb	-2.303 (* Nondetect *)
May 14 1998	0.100 ppb	-2.303 (* Nondetect *)
Aug 14 1998	0.100 ppb	-2.303 (* Nondetect *)
Nov 23 1998	0.100 ppb	-2.303 (* Nondetect *)
Mar 13 1999	0.100 ppb	-2.303 (* Nondetect *)
May 27 1999	0.100 ppb	-2.303 (* Nondetect *)
Jul 27 1999	0.100 ppb	-2.303 (* Nondetect *)
Nov 08 1999	0.100 ppb	-2.303 (* Nondetect *)
Dec 10 1999	0.100 ppb	-2.303 (* Nondetect *)
Dec 11 1999	0.100 ppb	-2.303 (* Nondetect *)
Dec 12 1999	0.100 ppb	-2.303 (* Nondetect *)
Dec 13 1999	0.100 ppb	-2.303 (* Nondetect *)
Dec 14 1999	0.100 ppb	-2.303 (* Nondetect *)
Dec 15 1999	0.100 ppb	-2.303 (* Nondetect *)
Dec 16 1999	0.100 ppb	-2.303 (* Nondetect *)
Dec 17 1999	0.100 ppb	-2.303 (* Nondetect *)

Dec 18 1999	2.000 ppb	0.693 (* Nondetect *)
Dec 19 1999	2.000 ppb	0.693 (* Nondetect *)
Dec 20 1999	2.000 ppb	0.693 (* Nondetect *)
Dec 21 1999	2.000 ppb	0.693 (* Nondetect *)
Dec 22 1999	2.000 ppb	0.693 (* Nondetect *)
Dec 23 1999	2.000 ppb	0.693 (* Nondetect *)
Dec 24 1999	2.000 ppb	0.693 (* Nondetect *)
Dec 25 1999	2.000 ppb	0.693 (* Nondetect *)
Dec 26 1999	2.000 ppb	0.693 (* Nondetect *)
Dec 27 1999	2.000 ppb	0.693 (* Nondetect *)
Dec 28 1999	2.000 ppb	0.693 (* Nondetect *)
Dec 29 1999	2.000 ppb	0.693 (* Nondetect *)
Dec 30 1999	2.000 ppb	0.693 (* Nondetect *)

Well ID:13MW1 Summary Statistics

Observations (N): 37
Nondetects (%ND):100

Minimum:	0.100 ppb	Ln Minimum:	-2.303
Maximum:	2.000 ppb	Ln Maximum:	0.693
Mean:	0.768 ppb	Ln Mean:	-1.250
Std. Dev.:	0.920 ppb	Ln Std. Dev.:	1.450

Well ID:13MW2

Sample Date	Observation	Ln
Mar 31 1996	0.100 ppb	-2.303 (* Nondetect *)
Jun 30 1996	0.100 ppb	-2.303 (* Nondetect *)
Sep 30 1996	0.100 ppb	-2.303 (* Nondetect *)
Dec 31 1996	0.100 ppb	-2.303 (* Nondetect *)
Mar 31 1997	0.100 ppb	-2.303 (* Nondetect *)
Jun 30 1997	0.100 ppb	-2.303 (* Nondetect *)
Sep 30 1997	0.100 ppb	-2.303 (* Nondetect *)
Dec 31 1997	0.100 ppb	-2.303 (* Nondetect *)
Mar 09 1998	0.100 ppb	-2.303 (* Nondetect *)
May 14 1998	0.100 ppb	-2.303 (* Nondetect *)
Aug 14 1998	0.100 ppb	-2.303 (* Nondetect *)
Nov 23 1998	0.100 ppb	-2.303 (* Nondetect *)
Mar 13 1999	0.100 ppb	-2.303 (* Nondetect *)
May 27 1999	0.100 ppb	-2.303 (* Nondetect *)
Jul 27 1999	0.100 ppb	-2.303 (* Nondetect *)
Nov 08 1999	0.100 ppb	-2.303 (* Nondetect *)
Dec 10 1999	0.100 ppb	-2.303 (* Nondetect *)
Dec 11 1999	0.100 ppb	-2.303 (* Nondetect *)
Dec 12 1999	0.100 ppb	-2.303 (* Nondetect *)
Dec 13 1999	0.100 ppb	-2.303 (* Nondetect *)
Dec 14 1999	0.100 ppb	-2.303 (* Nondetect *)
Dec 15 1999	0.100 ppb	-2.303 (* Nondetect *)
Dec 16 1999	0.100 ppb	-2.303 (* Nondetect *)
Dec 17 1999	0.100 ppb	-2.303 (* Nondetect *)
Dec 18 1999	2.000 ppb	0.693 (* Nondetect *)
Dec 19 1999	2.000 ppb	0.693 (* Nondetect *)
Dec 20 1999	2.520 ppb	0.924
Dec 21 1999	2.000 ppb	0.693 (* Nondetect *)
Dec 22 1999	2.000 ppb	0.693 (* Nondetect *)

Dec 23 1999	2.000 ppb	0.693 (* Nondetect *)
Dec 24 1999	2.000 ppb	0.693 (* Nondetect *)
Dec 25 1999	2.000 ppb	0.693 (* Nondetect *)
Dec 26 1999	2.000 ppb	0.693 (* Nondetect *)
Dec 27 1999	2.000 ppb	0.693 (* Nondetect *)
Dec 28 1999	2.000 ppb	0.693 (* Nondetect *)
Dec 29 1999	2.000 ppb	0.693 (* Nondetect *)
Dec 30 1999	2.000 ppb	0.693 (* Nondetect *)

Well ID: 13MW2 Summary Statistics

Observations (N): 37
Nondetects (%ND): 97

Minimum:	0.100 ppb	Ln Minimum:	-2.303
Maximum:	2.520 ppb	Ln Maximum:	0.924
Mean:	0.782 ppb	Ln Mean:	-1.244
Std. Dev.:	0.943 ppb	Ln Std. Dev.:	1.459

Normality Tests

Report Printed: 05-10-2005 16:28

Facility:RAAPHWMU13 Haz. Waste Unit 13 - RAAP

Address:

City:Radford ST:VA Zip:
County:PULASKI

Contact:
Phone:( ) -

Permit Type:Detection

Constituent:Hg Mercury

CAS Number: 7439-97-6
MCL: 0.000 ppb
ACL: 0.000 ppb
Detect Limit: 4.000 ppb

Start Date:Mar 31 1996
End Date:Dec 30 1999

Normality Test on Observations for wells listed below:

Well:13MW1 Position:Upgradient Observations:37

Scale	Minimum	Maximum	Mean	Std Dev
Original:	0.100	2.000	0.768	0.920
Log:	-2.303	0.693	-1.250	1.450

Well:13MW2 Position:Upgradient Observations:37

Scale	Minimum	Maximum	Mean	Std Dev
Original:	0.100	2.520	0.782	0.943
Log:	-2.303	0.924	-1.244	1.459

Pooled Statistics
Observations: 74

Statistic	Original Scale	Log Scale
Mean:	0.775	-1.247
Std Dev:	0.925	1.444
Skewness:	0.638	0.624
Kurtosis:	-1.565	-1.609
Minimum:	0.100	-2.303
Maximum:	2.520	0.924

CV: 1.194 -1.158

Shapiro-Francia Statistics

Scale	Test Statistic	5% Critical Value	1% Critical Value
Original:	0.6336*	0.9690	0.9560
Log:	0.6250*	0.9690	0.9560

* Indicates statistically significant evidence of non-normality.
GRIT/STAT Version 5.0

Nonparametric Prediction Interval
Report Printed May 10,2005

Facility:Haz. Waste Unit 13 - RAAP
Parameter:Mercury(CAS Number:7439-97-6)

ONE-TAILED UPPER PARAMETRIC PREDICTION INTERVAL

Observations (n):	74
Conf. Level (1-α):	100.000%
UL:	2.52 ~~0.100~~ ppb
LL:	0.000

%ND: ~99%.

Data Set Summary

Report Printed: 05-10-2005 17:24

Facility:RAAPHWMU13 Haz. Waste Unit 13 - RAAP

Address:

City:Radford ST:VA Zip:
County:PULASKI

Contact:
Phone:( ) -

Permit Type:Detection

Constituent:Ag Silver, total

CAS Number: 7440-22-4
MCL: 0.000 ppb
ACL: 0.000 ppb
Detect Limit: 4.000 ppb

Start Date:Mar 31 1996
End Date:Dec 30 1999

Well ID:13MW1

Sample Date	Observation	Ln
Mar 31 1996	0.300 ppb	-1.204
Jun 30 1996	0.100 ppb	-2.303 (* Nondetect *)
Sep 30 1996	2.400 ppb	0.875
Dec 31 1996	0.900 ppb	-0.105
Mar 31 1997	1.000 ppb	0.000
Jun 30 1997	0.100 ppb	-2.303 (* Nondetect *)
Sep 30 1997	0.100 ppb	-2.303 (* Nondetect *)
Dec 31 1997	0.100 ppb	-2.303 (* Nondetect *)
Mar 09 1998	0.100 ppb	-2.303 (* Nondetect *)
May 14 1998	0.100 ppb	-2.303 (* Nondetect *)
Aug 14 1998	0.100 ppb	-2.303 (* Nondetect *)
Nov 23 1998	0.100 ppb	-2.303 (* Nondetect *)
Mar 13 1999	0.100 ppb	-2.303 (* Nondetect *)
May 27 1999	0.100 ppb	-2.303 (* Nondetect *)
Jul 27 1999	0.100 ppb	-2.303 (* Nondetect *)
Nov 08 1999	0.100 ppb	-2.303 (* Nondetect *)
Dec 10 1999	0.100 ppb	-2.303 (* Nondetect *)
Dec 11 1999	0.100 ppb	-2.303 (* Nondetect *)
Dec 12 1999	0.100 ppb	-2.303 (* Nondetect *)
Dec 13 1999	0.100 ppb	-2.303 (* Nondetect *)
Dec 14 1999	0.100 ppb	-2.303 (* Nondetect *)
Dec 15 1999	0.100 ppb	-2.303 (* Nondetect *)
Dec 16 1999	0.100 ppb	-2.303 (* Nondetect *)
Dec 17 1999	0.100 ppb	-2.303 (* Nondetect *)

Dec 18 1999	2.000 ppb	0.693 (* Nondetect *)
Dec 19 1999	2.000 ppb	0.693 (* Nondetect *)
Dec 20 1999	2.000 ppb	0.693 (* Nondetect *)
Dec 21 1999	2.000 ppb	0.693 (* Nondetect *)
Dec 22 1999	2.000 ppb	0.693 (* Nondetect *)
Dec 23 1999	2.000 ppb	0.693 (* Nondetect *)
Dec 24 1999	2.000 ppb	0.693 (* Nondetect *)
Dec 25 1999	2.000 ppb	0.693 (* Nondetect *)
Dec 26 1999	2.000 ppb	0.693 (* Nondetect *)
Dec 27 1999	2.000 ppb	0.693 (* Nondetect *)
Dec 28 1999	2.000 ppb	0.693 (* Nondetect *)
Dec 29 1999	2.000 ppb	0.693 (* Nondetect *)
Dec 30 1999	2.000 ppb	0.693 (* Nondetect *)

Well ID:13MW1 Summary Statistics

Observations (N): 37
Nondetects (%ND): 89

Minimum:	0.100 ppb	Ln Minimum:	-2.303
Maximum:	2.400 ppb	Ln Maximum:	0.875
Mean:	0.881 ppb	Ln Mean:	-1.013
Std. Dev.:	0.930 ppb	Ln Std. Dev.:	1.458

Well ID:13MW2

Sample Date	Observation	Ln
Mar 31 1996	0.100 ppb	-2.303 (* Nondetect *)
Jun 30 1996	0.100 ppb	-2.303 (* Nondetect *)
Sep 30 1996	0.400 ppb	-0.916
Dec 31 1996	0.700 ppb	-0.357
Mar 31 1997	0.100 ppb	-2.303 (* Nondetect *)
Jun 30 1997	0.100 ppb	-2.303 (* Nondetect *)
Sep 30 1997	0.100 ppb	-2.303 (* Nondetect *)
Dec 31 1997	0.100 ppb	-2.303 (* Nondetect *)
Mar 09 1998	0.100 ppb	-2.303 (* Nondetect *)
May 14 1998	0.100 ppb	-2.303 (* Nondetect *)
Aug 14 1998	0.100 ppb	-2.303 (* Nondetect *)
Nov 23 1998	0.100 ppb	-2.303 (* Nondetect *)
Mar 13 1999	0.100 ppb	-2.303 (* Nondetect *)
May 27 1999	0.100 ppb	-2.303 (* Nondetect *)
Jul 27 1999	0.100 ppb	-2.303 (* Nondetect *)
Nov 08 1999	0.100 ppb	-2.303 (* Nondetect *)
Dec 10 1999	0.100 ppb	-2.303 (* Nondetect *)
Dec 11 1999	0.100 ppb	-2.303 (* Nondetect *)
Dec 12 1999	0.100 ppb	-2.303 (* Nondetect *)
Dec 13 1999	0.100 ppb	-2.303 (* Nondetect *)
Dec 14 1999	0.100 ppb	-2.303 (* Nondetect *)
Dec 15 1999	0.100 ppb	-2.303 (* Nondetect *)
Dec 16 1999	0.100 ppb	-2.303 (* Nondetect *)
Dec 17 1999	0.100 ppb	-2.303 (* Nondetect *)
Dec 18 1999	2.000 ppb	0.693 (* Nondetect *)
Dec 19 1999	2.000 ppb	0.693 (* Nondetect *)
Dec 20 1999	2.000 ppb	0.693 (* Nondetect *)
Dec 21 1999	2.000 ppb	0.693 (* Nondetect *)
Dec 22 1999	2.000 ppb	0.693 (* Nondetect *)

Dec 23 1999	2.000 ppb	0.693 (* Nondetect *)
Dec 24 1999	2.000 ppb	0.693 (* Nondetect *)
Dec 25 1999	2.000 ppb	0.693 (* Nondetect *)
Dec 26 1999	2.000 ppb	0.693 (* Nondetect *)
Dec 27 1999	2.000 ppb	0.693 (* Nondetect *)
Dec 28 1999	2.000 ppb	0.693 (* Nondetect *)
Dec 29 1999	2.000 ppb	0.693 (* Nondetect *)
Dec 30 1999	2.000 ppb	0.693 (* Nondetect *)

Well ID:13MW2 Summary Statistics

Observations (N): 37
Nondetects (%ND): 95

Minimum:	0.100 ppb	Ln Minimum:	-2.303
Maximum:	2.000 ppb	Ln Maximum:	0.693
Mean:	0.792 ppb	Ln Mean:	-1.160
Std. Dev.:	0.908 ppb	Ln Std. Dev.:	1.434

Normality Tests

Report Printed: 05-10-2005 16:37

Facility:RAAPHWMU13 Haz. Waste Unit 13 - RAAP

Address:

City:Radford ST:VA Zip:
County:PULASKI

Contact:
Phone:( ) -

Permit Type:Detection

Constituent:Ag Silver, total

CAS Number: 7440-22-4
MCL: 0.000 ppb
ACL: 0.000 ppb
Detect Limit: 4.000 ppb

Start Date:Mar 31 1996
End Date:Dec 30 1999

Normality Test on Observations for wells listed below:

Well:13MW1 Position:Upgradient Observations:37

Scale	Minimum	Maximum	Mean	Std Dev
Original:	0.100	2.400	0.881	0.930
Log:	-2.303	0.875	-1.013	1.458

Well:13MW2 Position:Upgradient Observations:37

Scale	Minimum	Maximum	Mean	Std Dev
Original:	0.100	2.000	0.792	0.908
Log:	-2.303	0.693	-1.160	1.434

Pooled Statistics
Observations: 74

Statistic	Original Scale	Log Scale
Mean:	0.836	-1.086
Std Dev:	0.914	1.438
Skewness:	0.502	0.376
Kurtosis:	-1.683	-1.799
Minimum:	0.100	-2.303
Maximum:	2.400	0.875

CV: 1.092 -1.324

Shapiro-Francia Statistics

Scale	Test Statistic	5% Critical Value	1% Critical Value
Original:	0.6793*	0.9690	0.9560
Log:	0.6842*	0.9690	0.9560

* Indicates statistically significant evidence of non-normality.
GRIT/STAT Version 5.0

Nonparametric Prediction Interval
Report Printed May 10,2005

Facility:Haz. Waste Unit 13 - RAAP
Parameter:Silver, total(CAS Number:7440-22-4)

ONE-TAILED UPPER PARAMETRIC PREDICTION INTERVAL

Observations (n):	74
Conf. Level (1-α):	***.***%
UL:	~~0.100~~ 2.4 ppb
LL:	0.000

%ND: 92%.

Report Produced by GRITS/STAT 5.01

Data Set Summary

Report Printed: 05-10-2005 16:44

Facility:RAAPHWMU13 Haz. Waste Unit 13 - RAAP

Address:

City:Radford ST:VA Zip:
County:PULASKI

Contact:
Phone:( ) -

Permit Type:Detection

Constituent:Acetone Acetone

CAS Number: 67-64-1
MCL: 0.000 ppb
ACL: 0.000 ppb
Detect Limit: 50.000 ppb

Start Date:Mar 31 1996
End Date:Dec 30 1999

Well ID:13MW1

Sample Date	Observation	Ln
Mar 31 1996	5.000 ppb	1.609 (* Nondetect *)
Jun 30 1996	5.000 ppb	1.609 (* Nondetect *)
Sep 30 1996	5.000 ppb	1.609 (* Nondetect *)
Dec 31 1996	5.000 ppb	1.609 (* Nondetect *)
Mar 31 1997	5.000 ppb	1.609 (* Nondetect *)
Jun 30 1997	5.000 ppb	1.609 (* Nondetect *)
Sep 30 1997	5.000 ppb	1.609 (* Nondetect *)
Dec 31 1997	5.000 ppb	1.609 (* Nondetect *)
Mar 09 1998	5.000 ppb	1.609 (* Nondetect *)
May 14 1998	5.000 ppb	1.609 (* Nondetect *)
Aug 14 1998	5.000 ppb	1.609 (* Nondetect *)
Nov 23 1998	5.000 ppb	1.609 (* Nondetect *)
Mar 13 1999	5.000 ppb	1.609 (* Nondetect *)
May 27 1999	5.000 ppb	1.609 (* Nondetect *)
Jul 27 1999	5.000 ppb	1.609 (* Nondetect *)
Nov 08 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 10 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 11 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 12 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 13 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 14 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 15 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 16 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 17 1999	5.000 ppb	1.609 (* Nondetect *)

Dec 18 1999	25.000 ppb	3.219 (* Nondetect *)
Dec 19 1999	25.000 ppb	3.219 (* Nondetect *)
Dec 20 1999	25.000 ppb	3.219 (* Nondetect *)
Dec 21 1999	25.000 ppb	3.219 (* Nondetect *)
Dec 22 1999	25.000 ppb	3.219 (* Nondetect *)
Dec 23 1999	25.000 ppb	3.219 (* Nondetect *)
Dec 24 1999	25.000 ppb	3.219 (* Nondetect *)
Dec 25 1999	25.000 ppb	3.219 (* Nondetect *)
Dec 26 1999	25.000 ppb	3.219 (* Nondetect *)
Dec 27 1999	25.000 ppb	3.219 (* Nondetect *)
Dec 28 1999	25.000 ppb	3.219 (* Nondetect *)
Dec 29 1999	25.000 ppb	3.219 (* Nondetect *)
Dec 30 1999	25.000 ppb	3.219 (* Nondetect *)

Well ID:13MW1 Summary Statistics

Observations (N): 37
Nondetects (%ND):100

Minimum:	5.000 ppb	Ln Minimum:	1.609
Maximum:	25.000 ppb	Ln Maximum:	3.219
Mean:	12.027 ppb	Ln Mean:	2.175
Std. Dev.:	9.680 ppb	Ln Std. Dev.:	0.779

Well ID:13MW2

Sample Date	Observation	Ln
Mar 31 1996	5.000 ppb	1.609 (* Nondetect *)
Jun 30 1996	5.000 ppb	1.609 (* Nondetect *)
Sep 30 1996	5.000 ppb	1.609 (* Nondetect *)
Dec 31 1996	5.000 ppb	1.609 (* Nondetect *)
Mar 31 1997	5.000 ppb	1.609 (* Nondetect *)
Jun 30 1997	5.000 ppb	1.609 (* Nondetect *)
Sep 30 1997	5.000 ppb	1.609 (* Nondetect *)
Dec 31 1997	5.000 ppb	1.609 (* Nondetect *)
Mar 09 1998	5.000 ppb	1.609 (* Nondetect *)
May 14 1998	5.000 ppb	1.609 (* Nondetect *)
Aug 14 1998	5.000 ppb	1.609 (* Nondetect *)
Nov 23 1998	5.000 ppb	1.609 (* Nondetect *)
Mar 13 1999	5.000 ppb	1.609 (* Nondetect *)
May 27 1999	5.000 ppb	1.609 (* Nondetect *)
Jul 27 1999	5.000 ppb	1.609 (* Nondetect *)
Nov 08 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 10 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 11 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 12 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 13 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 14 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 15 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 16 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 17 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 18 1999	25.000 ppb	3.219 (* Nondetect *)
Dec 19 1999	25.000 ppb	3.219 (* Nondetect *)
Dec 20 1999	25.000 ppb	3.219 (* Nondetect *)
Dec 21 1999	25.000 ppb	3.219 (* Nondetect *)
Dec 22 1999	25.000 ppb	3.219 (* Nondetect *)

Dec 23 1999	25.000 ppb	3.219 (* Nondetect *)
Dec 24 1999	25.000 ppb	3.219 (* Nondetect *)
Dec 25 1999	25.000 ppb	3.219 (* Nondetect *)
Dec 26 1999	25.000 ppb	3.219 (* Nondetect *)
Dec 27 1999	25.000 ppb	3.219 (* Nondetect *)
Dec 28 1999	25.000 ppb	3.219 (* Nondetect *)
Dec 29 1999	25.000 ppb	3.219 (* Nondetect *)
Dec 30 1999	25.000 ppb	3.219 (* Nondetect *)

Well ID: 13MW2 Summary Statistics

Observations (N): 37
Nondetects (%ND): 100

Minimum:	5.000 ppb	Ln Minimum:	1.609
Maximum:	25.000 ppb	Ln Maximum:	3.219
Mean:	12.027 ppb	Ln Mean:	2.175
Std. Dev.:	9.680 ppb	Ln Std. Dev.:	0.779

Data Set Summary

Report Printed: 05-10-2005 16:43

Facility:RAAPHWMU13 Haz. Waste Unit 13 - RAAP

Address:

City:Radford ST:VA Zip:
County:PULASKI

Contact:
Phone:( ) -

Permit Type:Detection

Constituent:Benzene Benzene

CAS Number: 71-43-2
MCL: 0.000 ppb
ACL: 0.000 ppb
Detect Limit: 10.000 ppb

Start Date:Mar 31 1996
End Date:Dec 30 1999

Well ID:13MW1

Sample Date	Observation	Ln
Mar 31 1996	0.050 ppb	-2.996 (* Nondetect *)
Jun 30 1996	0.050 ppb	-2.996 (* Nondetect *)
Sep 30 1996	0.050 ppb	-2.996 (* Nondetect *)
Dec 31 1996	0.050 ppb	-2.996 (* Nondetect *)
Mar 31 1997	0.050 ppb	-2.996 (* Nondetect *)
Jun 30 1997	0.050 ppb	-2.996 (* Nondetect *)
Sep 30 1997	0.050 ppb	-2.996 (* Nondetect *)
Dec 31 1997	0.050 ppb	-2.996 (* Nondetect *)
Mar 09 1998	0.050 ppb	-2.996 (* Nondetect *)
May 14 1998	0.050 ppb	-2.996 (* Nondetect *)
Aug 14 1998	0.050 ppb	-2.996 (* Nondetect *)
Nov 23 1998	0.050 ppb	-2.996 (* Nondetect *)
Mar 13 1999	0.050 ppb	-2.996 (* Nondetect *)
May 27 1999	0.050 ppb	-2.996 (* Nondetect *)
Jul 27 1999	0.050 ppb	-2.996 (* Nondetect *)
Nov 08 1999	0.050 ppb	-2.996 (* Nondetect *)
Dec 10 1999	0.050 ppb	-2.996 (* Nondetect *)
Dec 11 1999	0.050 ppb	-2.996 (* Nondetect *)
Dec 12 1999	0.050 ppb	-2.996 (* Nondetect *)
Dec 13 1999	0.050 ppb	-2.996 (* Nondetect *)
Dec 14 1999	0.050 ppb	-2.996 (* Nondetect *)
Dec 15 1999	0.050 ppb	-2.996 (* Nondetect *)
Dec 16 1999	0.050 ppb	-2.996 (* Nondetect *)
Dec 17 1999	0.050 ppb	-2.996 (* Nondetect *)

Dec 18 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 19 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 20 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 21 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 22 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 23 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 24 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 25 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 26 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 27 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 28 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 29 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 30 1999	5.000 ppb	1.609 (* Nondetect *)

Well ID:13MW1 Summary Statistics

Observations (N): 37
Nondetects (%ND):100

Minimum:	0.050 ppb	Ln Minimum:	-2.996
Maximum:	5.000 ppb	Ln Maximum:	1.609
Mean:	1.789 ppb	Ln Mean:	-1.378
Std. Dev.:	2.396 ppb	Ln Std. Dev.:	2.229

Well ID:13MW2

Sample Date	Observation	Ln
Mar 31 1996	0.050 ppb	-2.996 (* Nondetect *)
Jun 30 1996	0.050 ppb	-2.996 (* Nondetect *)
Sep 30 1996	0.050 ppb	-2.996 (* Nondetect *)
Dec 31 1996	0.050 ppb	-2.996 (* Nondetect *)
Mar 31 1997	0.050 ppb	-2.996 (* Nondetect *)
Jun 30 1997	0.050 ppb	-2.996 (* Nondetect *)
Sep 30 1997	0.050 ppb	-2.996 (* Nondetect *)
Dec 31 1997	0.050 ppb	-2.996 (* Nondetect *)
Mar 09 1998	0.050 ppb	-2.996 (* Nondetect *)
May 14 1998	0.050 ppb	-2.996 (* Nondetect *)
Aug 14 1998	0.050 ppb	-2.996 (* Nondetect *)
Nov 23 1998	0.050 ppb	-2.996 (* Nondetect *)
Mar 13 1999	0.050 ppb	-2.996 (* Nondetect *)
May 27 1999	0.050 ppb	-2.996 (* Nondetect *)
Jul 27 1999	0.050 ppb	-2.996 (* Nondetect *)
Nov 08 1999	0.050 ppb	-2.996 (* Nondetect *)
Dec 10 1999	0.050 ppb	-2.996 (* Nondetect *)
Dec 11 1999	0.050 ppb	-2.996 (* Nondetect *)
Dec 12 1999	0.050 ppb	-2.996 (* Nondetect *)
Dec 13 1999	0.050 ppb	-2.996 (* Nondetect *)
Dec 14 1999	0.050 ppb	-2.996 (* Nondetect *)
Dec 15 1999	0.050 ppb	-2.996 (* Nondetect *)
Dec 16 1999	0.050 ppb	-2.996 (* Nondetect *)
Dec 17 1999	0.050 ppb	-2.996 (* Nondetect *)
Dec 18 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 19 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 20 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 21 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 22 1999	5.000 ppb	1.609 (* Nondetect *)

Dec 23 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 24 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 25 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 26 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 27 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 28 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 29 1999	5.000 ppb	

Data Set Summary

Report Printed: 05-10-2005 16:46

Facility:RAAPHWMU13 Haz. Waste Unit 13 - RAAP

Address:

City:Radford ST:VA Zip:
County:PULASKI

Contact:
Phone:( ) -

Permit Type:Detection

Constituent:Toluen Toluene

CAS Number: 108-88-3
MCL: 0.000 ppb
ACL: 0.000 ppb
Detect Limit: 10.000 ppb

Start Date:Mar 31 1996
End Date:Dec 30 1999

Well ID:13MW1

Sample Date	Observation	Ln
Mar 31 1996	0.050 ppb	-2.996 (* Nondetect *)
Jun 30 1996	0.200 ppb	-1.609
Sep 30 1996	0.050 ppb	-2.996 (* Nondetect *)
Dec 31 1996	0.050 ppb	-2.996 (* Nondetect *)
Mar 31 1997	0.050 ppb	-2.996 (* Nondetect *)
Jun 30 1997	0.050 ppb	-2.996 (* Nondetect *)
Sep 30 1997	0.050 ppb	-2.996 (* Nondetect *)
Dec 31 1997	0.050 ppb	-2.996 (* Nondetect *)
Mar 09 1998	0.050 ppb	-2.996 (* Nondetect *)
May 14 1998	0.050 ppb	-2.996 (* Nondetect *)
Aug 14 1998	0.050 ppb	-2.996 (* Nondetect *)
Nov 23 1998	0.050 ppb	-2.996 (* Nondetect *)
Mar 13 1999	0.050 ppb	-2.996 (* Nondetect *)
May 27 1999	0.050 ppb	-2.996 (* Nondetect *)
Jul 27 1999	0.050 ppb	-2.996 (* Nondetect *)
Nov 08 1999	0.050 ppb	-2.996 (* Nondetect *)
Dec 10 1999	0.050 ppb	-2.996 (* Nondetect *)
Dec 11 1999	0.050 ppb	-2.996 (* Nondetect *)
Dec 12 1999	0.050 ppb	-2.996 (* Nondetect *)
Dec 13 1999	0.050 ppb	-2.996 (* Nondetect *)
Dec 14 1999	0.050 ppb	-2.996 (* Nondetect *)
Dec 15 1999	0.050 ppb	-2.996 (* Nondetect *)
Dec 16 1999	0.050 ppb	-2.996 (* Nondetect *)
Dec 17 1999	0.050 ppb	-2.996 (* Nondetect *)

Dec 18 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 19 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 20 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 21 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 22 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 23 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 24 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 25 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 26 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 27 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 28 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 29 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 30 1999	5.000 ppb	1.609 (* Nondetect *)

Well ID:13MW1 Summary Statistics

Observations (N): 37
Nondetects (%ND): 97

Minimum:	0.050 ppb	Ln Minimum:	-2.996
Maximum:	5.000 ppb	Ln Maximum:	1.609
Mean:	1.793 ppb	Ln Mean:	-1.340
Std. Dev.:	2.393 ppb	Ln Std. Dev.:	2.212

Well ID:13MW2

Sample Date	Observation	Ln
Mar 31 1996	0.050 ppb	-2.996 (* Nondetect *)
Jun 30 1996	0.200 ppb	-1.609
Sep 30 1996	0.050 ppb	-2.996 (* Nondetect *)
Dec 31 1996	0.050 ppb	-2.996 (* Nondetect *)
Mar 31 1997	0.050 ppb	-2.996 (* Nondetect *)
Jun 30 1997	0.050 ppb	-2.996 (* Nondetect *)
Sep 30 1997	0.050 ppb	-2.996 (* Nondetect *)
Dec 31 1997	0.050 ppb	-2.996 (* Nondetect *)
Mar 09 1998	0.050 ppb	-2.996 (* Nondetect *)
May 14 1998	0.050 ppb	-2.996 (* Nondetect *)
Aug 14 1998	0.050 ppb	-2.996 (* Nondetect *)
Nov 23 1998	0.050 ppb	-2.996 (* Nondetect *)
Mar 13 1999	0.050 ppb	-2.996 (* Nondetect *)
May 27 1999	0.050 ppb	-2.996 (* Nondetect *)
Jul 27 1999	0.050 ppb	-2.996 (* Nondetect *)
Nov 08 1999	0.050 ppb	-2.996 (* Nondetect *)
Dec 10 1999	0.050 ppb	-2.996 (* Nondetect *)
Dec 11 1999	0.050 ppb	-2.996 (* Nondetect *)
Dec 12 1999	0.050 ppb	-2.996 (* Nondetect *)
Dec 13 1999	0.050 ppb	-2.996 (* Nondetect *)
Dec 14 1999	0.050 ppb	-2.996 (* Nondetect *)
Dec 15 1999	0.050 ppb	-2.996 (* Nondetect *)
Dec 16 1999	0.050 ppb	-2.996 (* Nondetect *)
Dec 17 1999	0.050 ppb	-2.996 (* Nondetect *)
Dec 18 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 19 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 20 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 21 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 22 1999	5.000 ppb	1.609 (* Nondetect *)

Dec 23 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 24 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 25 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 26 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 27 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 28 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 29 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 30 1999	5.000 ppb	1.609 (* Nondetect *)

Well ID: 13MW2 Summary Statistics

Observations (N): 37
Nondetects (%ND): 97

Minimum:	0.050 ppb	Ln Minimum:	-2.996
Maximum:	5.000 ppb	Ln Maximum:	1.609
Mean:	1.793 ppb	Ln Mean:	-1.340
Std. Dev.:	2.393 ppb	Ln Std. Dev.:	2.212

Data Set Summary

Report Printed: 05-10-2005 16:46

Facility:RAAPHWMU13 Haz. Waste Unit 13 - RAAP

Address:

City:Radford ST:VA Zip:
County:PULASKI

Contact:
Phone:( ) -

Permit Type:Detection

Constituent:2,4-DNT 2,4-Dinitrotoluene

CAS Number: 121-14-2
MCL: 0.000 ppb
ACL: 0.000 ppb
Detect Limit: 20.000 ppb

Start Date:Mar 31 1996
End Date:Dec 30 1999

Well ID:13MW1

Sample Date	Observation	Ln
Mar 31 1996	0.040 ppb	-3.219 (* Nondetect *)
Jun 30 1996	0.040 ppb	-3.219 (* Nondetect *)
Sep 30 1996	0.040 ppb	-3.219 (* Nondetect *)
Dec 31 1996	0.040 ppb	-3.219 (* Nondetect *)
Mar 31 1997	0.040 ppb	-3.219 (* Nondetect *)
Jun 30 1997	0.040 ppb	-3.219 (* Nondetect *)
Sep 30 1997	0.040 ppb	-3.219 (* Nondetect *)
Dec 31 1997	0.040 ppb	-3.219 (* Nondetect *)
Mar 09 1998	0.040 ppb	-3.219 (* Nondetect *)
May 14 1998	0.040 ppb	-3.219 (* Nondetect *)
Aug 14 1998	0.040 ppb	-3.219 (* Nondetect *)
Nov 23 1998	0.040 ppb	-3.219 (* Nondetect *)
Mar 13 1999	0.040 ppb	-3.219 (* Nondetect *)
May 27 1999	0.040 ppb	-3.219 (* Nondetect *)
Jul 27 1999	0.040 ppb	-3.219 (* Nondetect *)
Nov 08 1999	0.040 ppb	-3.219 (* Nondetect *)
Dec 10 1999	0.040 ppb	-3.219 (* Nondetect *)
Dec 11 1999	0.040 ppb	-3.219 (* Nondetect *)
Dec 12 1999	0.040 ppb	-3.219 (* Nondetect *)
Dec 13 1999	0.040 ppb	-3.219 (* Nondetect *)
Dec 14 1999	0.040 ppb	-3.219 (* Nondetect *)
Dec 15 1999	0.040 ppb	-3.219 (* Nondetect *)
Dec 16 1999	0.040 ppb	-3.219 (* Nondetect *)
Dec 17 1999	0.040 ppb	-3.219 (* Nondetect *)

Dec 18 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 19 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 20 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 21 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 22 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 23 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 24 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 25 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 26 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 27 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 28 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 29 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 30 1999	10.000 ppb	2.303 (* Nondetect *)

Well ID:13MW1 Summary Statistics

Observations (N): 37
Nondetects (%ND):100

Minimum:	0.040 ppb	Ln Minimum:	-3.219
Maximum:	10.000 ppb	Ln Maximum:	2.303
Mean:	3.539 ppb	Ln Mean:	-1.279
Std. Dev.:	4.820 ppb	Ln Std. Dev.:	2.672

Well ID:13MW2

Sample Date	Observation	Ln
Mar 31 1996	0.040 ppb	-3.219 (* Nondetect *)
Jun 30 1996	0.040 ppb	-3.219 (* Nondetect *)
Sep 30 1996	0.040 ppb	-3.219 (* Nondetect *)
Dec 31 1996	0.040 ppb	-3.219 (* Nondetect *)
Mar 31 1997	0.040 ppb	-3.219 (* Nondetect *)
Jun 30 1997	0.040 ppb	-3.219 (* Nondetect *)
Sep 30 1997	0.040 ppb	-3.219 (* Nondetect *)
Dec 31 1997	0.040 ppb	-3.219 (* Nondetect *)
Mar 09 1998	0.040 ppb	-3.219 (* Nondetect *)
May 14 1998	0.040 ppb	-3.219 (* Nondetect *)
Aug 14 1998	0.040 ppb	-3.219 (* Nondetect *)
Nov 23 1998	0.040 ppb	-3.219 (* Nondetect *)
Mar 13 1999	0.040 ppb	-3.219 (* Nondetect *)
May 27 1999	0.040 ppb	-3.219 (* Nondetect *)
Jul 27 1999	0.040 ppb	-3.219 (* Nondetect *)
Nov 08 1999	0.040 ppb	-3.219 (* Nondetect *)
Dec 10 1999	0.040 ppb	-3.219 (* Nondetect *)
Dec 11 1999	0.040 ppb	-3.219 (* Nondetect *)
Dec 12 1999	0.040 ppb	-3.219 (* Nondetect *)
Dec 13 1999	0.040 ppb	-3.219 (* Nondetect *)
Dec 14 1999	0.040 ppb	-3.219 (* Nondetect *)
Dec 15 1999	0.040 ppb	-3.219 (* Nondetect *)
Dec 16 1999	0.040 ppb	-3.219 (* Nondetect *)
Dec 17 1999	0.040 ppb	-3.219 (* Nondetect *)
Dec 18 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 19 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 20 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 21 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 22 1999	10.000 ppb	2.303 (* Nondetect *)

Dec 23 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 24 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 25 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 26 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 27 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 28 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 29 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 30 1999	10.000 ppb	2.303 (* Nondetect *)

Well ID: 13MW2 Summary Statistics

Observations (N): 37
Nondetects (%ND): 100

Minimum:	0.040 ppb	Ln Minimum:	-3.219
Maximum:	10.000 ppb	Ln Maximum:	2.303
Mean:	3.539 ppb	Ln Mean:	-1.279
Std. Dev.:	4.820 ppb	Ln Std. Dev.:	2.672

Data Set Summary

Report Printed: 05-10-2005 16:47

Facility:RAAPHWMU13 Haz. Waste Unit 13 - RAAP

Address:

City:Radford ST:VA Zip:
County:PULASKI

Contact:
Phone:( ) -

Permit Type:Detection

Constituent:Di-N-Bu Di-n-Butylphthalate

CAS Number: 84-74-2
MCL: 0.000 ppb
ACL: 0.000 ppb
Detect Limit: 20.000 ppb

Start Date:Mar 31 1996
End Date:Dec 30 1999

Well ID:13MW1

Sample Date	Observation	Ln
Mar 31 1996	2.500 ppb	0.916 (* Nondetect *)
Jun 30 1996	2.500 ppb	0.916 (* Nondetect *)
Sep 30 1996	2.500 ppb	0.916 (* Nondetect *)
Dec 31 1996	2.500 ppb	0.916 (* Nondetect *)
Mar 31 1997	2.500 ppb	0.916 (* Nondetect *)
Jun 30 1997	2.500 ppb	0.916 (* Nondetect *)
Sep 30 1997	2.500 ppb	0.916 (* Nondetect *)
Dec 31 1997	2.500 ppb	0.916 (* Nondetect *)
Mar 09 1998	2.500 ppb	0.916 (* Nondetect *)
May 14 1998	2.500 ppb	0.916 (* Nondetect *)
Aug 14 1998	2.500 ppb	0.916 (* Nondetect *)
Nov 23 1998	2.500 ppb	0.916 (* Nondetect *)
Mar 13 1999	2.500 ppb	0.916 (* Nondetect *)
May 27 1999	2.500 ppb	0.916 (* Nondetect *)
Jul 27 1999	2.500 ppb	0.916 (* Nondetect *)
Nov 08 1999	2.500 ppb	0.916 (* Nondetect *)
Dec 10 1999	2.500 ppb	0.916 (* Nondetect *)
Dec 11 1999	2.500 ppb	0.916 (* Nondetect *)
Dec 12 1999	2.500 ppb	0.916 (* Nondetect *)
Dec 13 1999	2.500 ppb	0.916 (* Nondetect *)
Dec 14 1999	2.500 ppb	0.916 (* Nondetect *)
Dec 15 1999	2.500 ppb	0.916 (* Nondetect *)
Dec 16 1999	2.500 ppb	0.916 (* Nondetect *)
Dec 17 1999	2.500 ppb	0.916 (* Nondetect *)

Dec 18 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 19 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 20 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 21 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 22 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 23 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 24 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 25 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 26 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 27 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 28 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 29 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 30 1999	10.000 ppb	2.303 (* Nondetect *)

Well ID:13MW1 Summary Statistics

Observations (N): 37
Nondetects (%ND):100

Minimum:	2.500 ppb	Ln Minimum:	0.916
Maximum:	10.000 ppb	Ln Maximum:	2.303
Mean:	5.135 ppb	Ln Mean:	1.403
Std. Dev.:	3.630 ppb	Ln Std. Dev.:	0.671

Well ID:13MW2

Sample Date	Observation	Ln
Mar 31 1996	2.500 ppb	0.916 (* Nondetect *)
Jun 30 1996	2.500 ppb	0.916 (* Nondetect *)
Sep 30 1996	2.500 ppb	0.916 (* Nondetect *)
Dec 31 1996	2.500 ppb	0.916 (* Nondetect *)
Mar 31 1997	2.500 ppb	0.916 (* Nondetect *)
Jun 30 1997	2.500 ppb	0.916 (* Nondetect *)
Sep 30 1997	2.500 ppb	0.916 (* Nondetect *)
Dec 31 1997	2.500 ppb	0.916 (* Nondetect *)
Mar 09 1998	2.500 ppb	0.916 (* Nondetect *)
May 14 1998	2.500 ppb	0.916 (* Nondetect *)
Aug 14 1998	2.500 ppb	0.916 (* Nondetect *)
Nov 23 1998	2.500 ppb	0.916 (* Nondetect *)
Mar 13 1999	2.500 ppb	0.916 (* Nondetect *)
May 27 1999	2.500 ppb	0.916 (* Nondetect *)
Jul 27 1999	2.500 ppb	0.916 (* Nondetect *)
Nov 08 1999	2.500 ppb	0.916 (* Nondetect *)
Dec 10 1999	2.500 ppb	0.916 (* Nondetect *)
Dec 11 1999	2.500 ppb	0.916 (* Nondetect *)
Dec 12 1999	2.500 ppb	0.916 (* Nondetect *)
Dec 13 1999	2.500 ppb	0.916 (* Nondetect *)
Dec 14 1999	2.500 ppb	0.916 (* Nondetect *)
Dec 15 1999	2.500 ppb	0.916 (* Nondetect *)
Dec 16 1999	2.500 ppb	0.916 (* Nondetect *)
Dec 17 1999	2.500 ppb	0.916 (* Nondetect *)
Dec 18 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 19 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 20 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 21 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 22 1999	10.000 ppb	2.303 (* Nondetect *)

Dec 23 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 24 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 25 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 26 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 27 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 28 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 29 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 30 1999	10.000 ppb	2.303 (* Nondetect *)

Well ID: 13MW2 Summary Statistics

Observations (N): 37
Nondetects (%ND): 100

Minimum:	2.500 ppb	Ln Minimum:	0.916
Maximum:	10.000 ppb	Ln Maximum:	2.303
Mean:	5.135 ppb	Ln Mean:	1.403
Std. Dev.:	3.630 ppb	Ln Std. Dev.:	0.671

Data Set Summary

Report Printed: 05-10-2005 16:47

Facility:RAAPHWMU13 Haz. Waste Unit 13 - RAAP

Address:

City:Radford ST:VA Zip:
County:PULASKI

Contact:
Phone:( ) -

Permit Type:Detection

Constituent:DEthPhth Diethylphthalate

CAS Number: 84-66-2
MCL: 0.000 ppb
ACL: 0.000 ppb
Detect Limit: 20.000 ppb

Start Date:Mar 31 1996
End Date:Dec 30 1999

Well ID:13MW1

Sample Date	Observation	Ln
Mar 31 1996	2.500 ppb	0.916 (* Nondetect *)
Jun 30 1996	2.500 ppb	0.916 (* Nondetect *)
Sep 30 1996	2.500 ppb	0.916 (* Nondetect *)
Dec 31 1996	2.500 ppb	0.916 (* Nondetect *)
Mar 31 1997	2.500 ppb	0.916 (* Nondetect *)
Jun 30 1997	2.500 ppb	0.916 (* Nondetect *)
Sep 30 1997	2.500 ppb	0.916 (* Nondetect *)
Dec 31 1997	2.500 ppb	0.916 (* Nondetect *)
Mar 09 1998	2.500 ppb	0.916 (* Nondetect *)
May 14 1998	2.500 ppb	0.916 (* Nondetect *)
Aug 14 1998	2.500 ppb	0.916 (* Nondetect *)
Nov 23 1998	2.500 ppb	0.916 (* Nondetect *)
Mar 13 1999	2.500 ppb	0.916 (* Nondetect *)
May 27 1999	2.500 ppb	0.916 (* Nondetect *)
Jul 27 1999	2.500 ppb	0.916 (* Nondetect *)
Nov 08 1999	2.500 ppb	0.916 (* Nondetect *)
Dec 10 1999	2.500 ppb	0.916 (* Nondetect *)
Dec 11 1999	2.500 ppb	0.916 (* Nondetect *)
Dec 12 1999	2.500 ppb	0.916 (* Nondetect *)
Dec 13 1999	2.500 ppb	0.916 (* Nondetect *)
Dec 14 1999	2.500 ppb	0.916 (* Nondetect *)
Dec 15 1999	2.500 ppb	0.916 (* Nondetect *)
Dec 16 1999	2.500 ppb	0.916 (* Nondetect *)
Dec 17 1999	2.500 ppb	0.916 (* Nondetect *)

Dec 18 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 19 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 20 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 21 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 22 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 23 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 24 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 25 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 26 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 27 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 28 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 29 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 30 1999	10.000 ppb	2.303 (* Nondetect *)

Well ID:13MW1 Summary Statistics

Observations (N): 37
Nondetects (%ND):100

Minimum:	2.500 ppb	Ln Minimum:	0.916
Maximum:	10.000 ppb	Ln Maximum:	2.303
Mean:	5.135 ppb	Ln Mean:	1.403
Std. Dev.:	3.630 ppb	Ln Std. Dev.:	0.671

Well ID:13MW2

Sample Date	Observation	Ln
Mar 31 1996	2.500 ppb	0.916 (* Nondetect *)
Jun 30 1996	2.500 ppb	0.916 (* Nondetect *)
Sep 30 1996	2.500 ppb	0.916 (* Nondetect *)
Dec 31 1996	2.500 ppb	0.916 (* Nondetect *)
Mar 31 1997	2.500 ppb	0.916 (* Nondetect *)
Jun 30 1997	2.500 ppb	0.916 (* Nondetect *)
Sep 30 1997	2.500 ppb	0.916 (* Nondetect *)
Dec 31 1997	2.500 ppb	0.916 (* Nondetect *)
Mar 09 1998	2.500 ppb	0.916 (* Nondetect *)
May 14 1998	2.500 ppb	0.916 (* Nondetect *)
Aug 14 1998	2.500 ppb	0.916 (* Nondetect *)
Nov 23 1998	2.500 ppb	0.916 (* Nondetect *)
Mar 13 1999	2.500 ppb	0.916 (* Nondetect *)
May 27 1999	2.500 ppb	0.916 (* Nondetect *)
Jul 27 1999	2.500 ppb	0.916 (* Nondetect *)
Nov 08 1999	2.500 ppb	0.916 (* Nondetect *)
Dec 10 1999	2.500 ppb	0.916 (* Nondetect *)
Dec 11 1999	2.500 ppb	0.916 (* Nondetect *)
Dec 12 1999	2.500 ppb	0.916 (* Nondetect *)
Dec 13 1999	2.500 ppb	0.916 (* Nondetect *)
Dec 14 1999	2.500 ppb	0.916 (* Nondetect *)
Dec 15 1999	2.500 ppb	0.916 (* Nondetect *)
Dec 16 1999	2.500 ppb	0.916 (* Nondetect *)
Dec 17 1999	2.500 ppb	0.916 (* Nondetect *)
Dec 18 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 19 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 20 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 21 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 22 1999	10.000 ppb	2.303 (* Nondetect *)

Dec 23 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 24 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 25 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 26 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 27 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 28 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 29 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 30 1999	10.000 ppb	2.303 (* Nondetect *)

Well ID:13MW2 Summary Statistics

Observations (N): 37
Nondetects (%ND):100

Minimum:	2.500 ppb	Ln Minimum:	0.916
Maximum:	10.000 ppb	Ln Maximum:	2.303
Mean:	5.135 ppb	Ln Mean:	1.403
Std. Dev.:	3.630 ppb	Ln Std. Dev.:	0.671

Data Set Summary

Report Printed: 05-10-2005 16:47

Facility:RAAPHWMU13 Haz. Waste Unit 13 - RAAP

Address:

City:Radford ST:VA Zip:
County:PULASKI

Contact:
Phone:( ) -

Permit Type:Detection

Constituent:DPA Diphenylamine

CAS Number: 122-39-4
MCL: 0.000 ppb
ACL: 0.000 ppb
Detect Limit: 20.000 ppb

Start Date:Mar 31 1996
End Date:Dec 30 1999

Well ID:13MW1

Sample Date	Observation	Ln
Mar 31 1996	5.000 ppb	1.609 (* Nondetect *)
Jun 30 1996	5.000 ppb	1.609 (* Nondetect *)
Sep 30 1996	5.000 ppb	1.609 (* Nondetect *)
Dec 31 1996	5.000 ppb	1.609 (* Nondetect *)
Mar 31 1997	5.000 ppb	1.609 (* Nondetect *)
Jun 30 1997	5.000 ppb	1.609 (* Nondetect *)
Sep 30 1997	5.000 ppb	1.609 (* Nondetect *)
Dec 31 1997	5.000 ppb	1.609 (* Nondetect *)
Mar 09 1998	5.000 ppb	1.609 (* Nondetect *)
May 14 1998	5.000 ppb	1.609 (* Nondetect *)
Aug 14 1998	5.000 ppb	1.609 (* Nondetect *)
Nov 23 1998	5.000 ppb	1.609 (* Nondetect *)
Mar 13 1999	5.000 ppb	1.609 (* Nondetect *)
May 27 1999	5.000 ppb	1.609 (* Nondetect *)
Jul 27 1999	5.000 ppb	1.609 (* Nondetect *)
Nov 08 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 10 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 11 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 12 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 13 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 14 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 15 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 16 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 17 1999	5.000 ppb	1.609 (* Nondetect *)

Dec 18 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 19 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 20 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 21 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 22 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 23 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 24 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 25 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 26 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 27 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 28 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 29 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 30 1999	10.000 ppb	2.303 (* Nondetect *)

Well ID:13MW1 Summary Statistics

Observations (N): 37
Nondetects (%ND):100

Minimum:	5.000 ppb	Ln Minimum:	1.609
Maximum:	10.000 ppb	Ln Maximum:	2.303
Mean:	6.757 ppb	Ln Mean:	1.853
Std. Dev.:	2.420 ppb	Ln Std. Dev.:	0.335

Well ID:13MW2

Sample Date	Observation	Ln
Mar 31 1996	5.000 ppb	1.609 (* Nondetect *)
Jun 30 1996	5.000 ppb	1.609 (* Nondetect *)
Sep 30 1996	5.000 ppb	1.609 (* Nondetect *)
Dec 31 1996	5.000 ppb	1.609 (* Nondetect *)
Mar 31 1997	5.000 ppb	1.609 (* Nondetect *)
Jun 30 1997	5.000 ppb	1.609 (* Nondetect *)
Sep 30 1997	5.000 ppb	1.609 (* Nondetect *)
Dec 31 1997	5.000 ppb	1.609 (* Nondetect *)
Mar 09 1998	5.000 ppb	1.609 (* Nondetect *)
May 14 1998	5.000 ppb	1.609 (* Nondetect *)
Aug 14 1998	5.000 ppb	1.609 (* Nondetect *)
Nov 23 1998	5.000 ppb	1.609 (* Nondetect *)
Mar 13 1999	5.000 ppb	1.609 (* Nondetect *)
May 27 1999	5.000 ppb	1.609 (* Nondetect *)
Jul 27 1999	5.000 ppb	1.609 (* Nondetect *)
Nov 08 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 10 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 11 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 12 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 13 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 14 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 15 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 16 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 17 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 18 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 19 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 20 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 21 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 22 1999	10.000 ppb	2.303 (* Nondetect *)

Dec 23 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 24 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 25 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 26 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 27 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 28 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 29 1999	10.000 ppb	2.303 (* Nondetect *)
Dec 30 1999	10.000 ppb	2.303 (* Nondetect *)

Well ID: 13MW2 Summary Statistics

Observations (N): 37
Nondetects (%ND): 100

Minimum:	5.000 ppb	Ln Minimum:	1.609
Maximum:	10.000 ppb	Ln Maximum:	2.303
Mean:	6.757 ppb	Ln Mean:	1.853
Std. Dev.:	2.420 ppb	Ln Std. Dev.:	0.335

Data Set Summary

Report Printed: 05-10-2005 16:48

Facility:RAAPHWMU13 Haz. Waste Unit 13 - RAAP

Address:

City:Radford ST:VA Zip:
County:PULASKI

Contact:
Phone:( ) -

Permit Type:Detection

Constituent:NGlycern Nitroglycerin or1,2,3-Propanetriol,trinitrate

CAS Number: 55-63-0
MCL: 0.000 mg/l
ACL: 0.000 mg/l
Detect Limit: 20.000 mg/l

Start Date:Mar 31 1996
End Date:Dec 30 1999

Well ID:13MW1

Sample Date	Observation	Ln
Mar 31 1996	0.005 mg/l	-5.298 (* Nondetect *)
Jun 30 1996	0.005 mg/l	-5.298 (* Nondetect *)
Sep 30 1996	0.005 mg/l	-5.298 (* Nondetect *)
Dec 31 1996	0.005 mg/l	-5.298 (* Nondetect *)
Mar 31 1997	0.005 mg/l	-5.298 (* Nondetect *)
Jun 30 1997	0.005 mg/l	-5.298 (* Nondetect *)
Sep 30 1997	0.005 mg/l	-5.298 (* Nondetect *)
Dec 31 1997	0.005 mg/l	-5.298 (* Nondetect *)
Mar 09 1998	0.005 mg/l	-5.298 (* Nondetect *)
May 14 1998	0.005 mg/l	-5.298 (* Nondetect *)
Aug 14 1998	0.005 mg/l	-5.298 (* Nondetect *)
Nov 23 1998	0.005 mg/l	-5.298 (* Nondetect *)
Mar 13 1999	0.005 mg/l	-5.298 (* Nondetect *)
May 27 1999	0.005 mg/l	-5.298 (* Nondetect *)
Jul 27 1999	0.005 mg/l	-5.298 (* Nondetect *)
Nov 08 1999	0.005 mg/l	-5.298 (* Nondetect *)
Dec 10 1999	0.005 mg/l	-5.298 (* Nondetect *)
Dec 11 1999	0.005 mg/l	-5.298 (* Nondetect *)
Dec 12 1999	0.005 mg/l	-5.298 (* Nondetect *)
Dec 13 1999	0.005 mg/l	-5.298 (* Nondetect *)
Dec 14 1999	0.005 mg/l	-5.298 (* Nondetect *)
Dec 15 1999	0.005 mg/l	-5.298 (* Nondetect *)
Dec 16 1999	0.005 mg/l	-5.298 (* Nondetect *)
Dec 17 1999	0.005 mg/l	-5.298 (* Nondetect *)

Dec 18 1999	10.000 mg/l	2.303 (* Nondetect *)
Dec 19 1999	10.000 mg/l	2.303 (* Nondetect *)
Dec 20 1999	10.000 mg/l	2.303 (* Nondetect *)
Dec 21 1999	10.000 mg/l	2.303 (* Nondetect *)
Dec 22 1999	10.000 mg/l	2.303 (* Nondetect *)
Dec 23 1999	10.000 mg/l	2.303 (* Nondetect *)
Dec 24 1999	10.000 mg/l	2.303 (* Nondetect *)
Dec 25 1999	10.000 mg/l	2.303 (* Nondetect *)
Dec 26 1999	10.000 mg/l	2.303 (* Nondetect *)
Dec 27 1999	10.000 mg/l	2.303 (* Nondetect *)
Dec 28 1999	10.000 mg/l	2.303 (* Nondetect *)
Dec 29 1999	10.000 mg/l	2.303 (* Nondetect *)
Dec 30 1999	10.000 mg/l	2.303 (* Nondetect *)

Well ID:13MW1 Summary Statistics

Observations (N): 37
Nondetects (%ND):100

Minimum:	0.005 mg/l	Ln Minimum:	-5.298
Maximum:	10.000 mg/l	Ln Maximum:	2.303
Mean:	3.517 mg/l	Ln Mean:	-2.628
Std. Dev.:	4.837 mg/l	Ln Std. Dev.:	3.679

Well ID:13MW2

Sample Date	Observation	Ln
Mar 31 1996	0.005 mg/l	-5.298 (* Nondetect *)
Jun 30 1996	0.005 mg/l	-5.298 (* Nondetect *)
Sep 30 1996	0.005 mg/l	-5.298 (* Nondetect *)
Dec 31 1996	0.005 mg/l	-5.298 (* Nondetect *)
Mar 31 1997	0.005 mg/l	-5.298 (* Nondetect *)
Jun 30 1997	0.005 mg/l	-5.298 (* Nondetect *)
Sep 30 1997	0.005 mg/l	-5.298 (* Nondetect *)
Dec 31 1997	0.005 mg/l	-5.298 (* Nondetect *)
Mar 09 1998	0.005 mg/l	-5.298 (* Nondetect *)
May 14 1998	0.005 mg/l	-5.298 (* Nondetect *)
Aug 14 1998	0.005 mg/l	-5.298 (* Nondetect *)
Nov 23 1998	0.005 mg/l	-5.298 (* Nondetect *)
Mar 13 1999	0.005 mg/l	-5.298 (* Nondetect *)
May 27 1999	0.005 mg/l	-5.298 (* Nondetect *)
Jul 27 1999	0.005 mg/l	-5.298 (* Nondetect *)
Nov 08 1999	0.005 mg/l	-5.298 (* Nondetect *)
Dec 10 1999	0.005 mg/l	-5.298 (* Nondetect *)
Dec 11 1999	0.005 mg/l	-5.298 (* Nondetect *)
Dec 12 1999	0.005 mg/l	-5.298 (* Nondetect *)
Dec 13 1999	0.005 mg/l	-5.298 (* Nondetect *)
Dec 14 1999	0.005 mg/l	-5.298 (* Nondetect *)
Dec 15 1999	0.005 mg/l	-5.298 (* Nondetect *)
Dec 16 1999	0.005 mg/l	-5.298 (* Nondetect *)
Dec 17 1999	0.005 mg/l	-5.298 (* Nondetect *)
Dec 18 1999	10.000 mg/l	2.303 (* Nondetect *)
Dec 19 1999	10.000 mg/l	2.303 (* Nondetect *)
Dec 20 1999	10.000 mg/l	2.303 (* Nondetect *)
Dec 21 1999	10.000 mg/l	2.303 (* Nondetect *)
Dec 22 1999	10.000 mg/l	2.303 (* Nondetect *)

Dec 23 1999	10.000 mg/l	2.303 (* Nondetect *)
Dec 24 1999	10.000 mg/l	2.303 (* Nondetect *)
Dec 25 1999	10.000 mg/l	2.303 (* Nondetect *)
Dec 26 1999	10.000 mg/l	2.303 (* Nondetect *)
Dec 27 1999	10.000 mg/l	2.303 (* Nondetect *)
Dec 28 1999	10.000 mg/l	2.303 (* Nondetect *)
Dec 29 1999	10.000 mg/l	2.303 (* Nondetect *)
Dec 30 1999	10.000 mg/l	2.303 (* Nondetect *)

Well ID: 13MW2 Summary Statistics

Observations (N): 37
Nondetects (%ND): 100

Minimum:	0.005 mg/l	Ln Minimum:	-5.298
Maximum:	10.000 mg/l	Ln Maximum:	2.303
Mean:			

3.517 mg/l	Ln Mean:	-2.628	
Std. Dev.:	4.837 mg/l	Ln Std. Dev.:	3.679

Data Set Summary

Report Printed: 05-10-2005 16:59

Facility:RAAPHWMU13 Haz. Waste Unit 13 - RAAP

Address:

City:Radford ST:VA Zip:
County:PULASKI

Contact:
Phone:( ) -

Permit Type:Detection

Constituent:Phenols Phenols, total

CAS Number: 108-95-2
MCL: 0.000 ppb
ACL: 0.000 ppb
Detect Limit: 10.000 ppb

Start Date:Mar 31 1996
End Date:Dec 30 1999

Well ID:13MW1

Sample Date	Observation	Ln
Mar 31 1996	20.000 ppb	2.996
Jun 30 1996	5.000 ppb	1.609 (* Nondetect *)
Sep 30 1996	5.000 ppb	1.609 (* Nondetect *)
Dec 31 1996	5.000 ppb	1.609 (* Nondetect *)
Mar 31 1997	14.000 ppb	2.639
Jun 30 1997	5.000 ppb	1.609 (* Nondetect *)
Sep 30 1997	5.000 ppb	1.609 (* Nondetect *)
Dec 31 1997	5.000 ppb	1.609 (* Nondetect *)
Mar 09 1998	5.000 ppb	1.609 (* Nondetect *)
May 14 1998	5.000 ppb	1.609 (* Nondetect *)
Aug 14 1998	5.000 ppb	1.609 (* Nondetect *)
Nov 23 1998	5.000 ppb	1.609 (* Nondetect *)
Mar 13 1999	5.000 ppb	1.609 (* Nondetect *)
May 27 1999	5.000 ppb	1.609 (* Nondetect *)
Jul 27 1999	5.000 ppb	1.609 (* Nondetect *)
Nov 08 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 10 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 11 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 12 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 13 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 14 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 15 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 16 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 17 1999	5.000 ppb	1.609 (* Nondetect *)

Dec 18 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 19 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 20 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 21 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 22 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 23 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 24 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 25 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 26 1999	13.000 ppb	2.565
Dec 27 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 28 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 29 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 30 1999	5.000 ppb	1.609 (* Nondetect *)

Well ID:13MW1 Summary Statistics

Observations (N): 37
Nondetects (%ND): 92

Minimum:	5.000 ppb	Ln Minimum:	1.609
Maximum:	20.000 ppb	Ln Maximum:	2.996
Mean:	5.865 ppb	Ln Mean:	1.701
Std. Dev.:	3.084 ppb	Ln Std. Dev.:	0.316

Well ID:13MW2

Sample Date	Observation	Ln
Mar 31 1996	5.000 ppb	1.609 (* Nondetect *)
Jun 30 1996	5.000 ppb	1.609 (* Nondetect *)
Sep 30 1996	5.000 ppb	1.609 (* Nondetect *)
Dec 31 1996	5.000 ppb	1.609 (* Nondetect *)
Mar 31 1997	5.000 ppb	1.609 (* Nondetect *)
Jun 30 1997	5.000 ppb	1.609 (* Nondetect *)
Sep 30 1997	5.000 ppb	1.609 (* Nondetect *)
Dec 31 1997	5.000 ppb	1.609 (* Nondetect *)
Mar 09 1998	5.000 ppb	1.609 (* Nondetect *)
May 14 1998	5.000 ppb	1.609 (* Nondetect *)
Aug 14 1998	5.000 ppb	1.609 (* Nondetect *)
Nov 23 1998	5.000 ppb	1.609 (* Nondetect *)
Mar 13 1999	5.000 ppb	1.609 (* Nondetect *)
May 27 1999	5.000 ppb	1.609 (* Nondetect *)
Jul 27 1999	5.000 ppb	1.609 (* Nondetect *)
Nov 08 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 10 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 11 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 12 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 13 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 14 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 15 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 16 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 17 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 18 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 19 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 20 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 21 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 22 1999	5.000 ppb	1.609 (* Nondetect *)

Dec 23 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 24 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 25 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 26 1999	12.000 ppb	2.485
Dec 27 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 28 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 29 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 30 1999	5.000 ppb	1.609 (* Nondetect *)

Well ID:13MW2 Summary Statistics

Observations (N): 37
Nondetects (%ND): 97

Minimum:	5.000 ppb	Ln Minimum:	1.609
Maximum:	12.000 ppb	Ln Maximum:	2.485
Mean:	5.189 ppb	Ln Mean:	1.633
Std. Dev.:	1.151 ppb	Ln Std. Dev.:	0.144

Normality Tests

Report Printed: 05-10-2005 16:59

Facility:RAAPHWMU13 Haz. Waste Unit 13 - RAAP

Address:

City:Radford ST:VA Zip:
County:PULASKI

Contact:
Phone:( ) -

Permit Type:Detection

Constituent:Phenols Phenols, total

CAS Number: 108-95-2
MCL: 0.000 ppb
ACL: 0.000 ppb
Detect Limit: 10.000 ppb

Start Date:Mar 31 1996
End Date:Dec 30 1999

Normality Test on Observations for wells listed below:

Well:13MW1 Position:Upgradient Observations:37

Scale	Minimum	Maximum	Mean	Std Dev
Original:	5.000	20.000	5.865	3.084
Log:	1.609	2.996	1.701	0.316

Well:13MW2 Position:Upgradient Observations:37

Scale	Minimum	Maximum	Mean	Std Dev
Original:	5.000	12.000	5.189	1.151
Log:	1.609	2.485	1.633	0.144

Pooled Statistics
Observations: 74

Statistic	Original Scale	Log Scale
Mean:	5.527	1.667
Std Dev:	2.336	0.246
Skewness:	4.671*	4.192*
Kurtosis:	22.128	16.382
Minimum:	5.000	1.609
Maximum:	20.000	2.996

CV:	0.423	0.148

Shapiro-Francia Statistics

Scale	Test Statistic	5% Critical Value	1% Critical Value
Original:	0.2166*	0.9690	0.9560
Log:	0.2249*	0.9690	0.9560

* Indicates statistically significant evidence of non-normality.
GRIT/STAT Version 5.0

Nonparametric Prediction Interval
Report Printed May 10,2005

Facility:Haz. Waste Unit 13 - RAAP
Parameter:Phenols, total(CAS Number:108-95-2)

ONE-TAILED UPPER PARAMETRIC PREDICTION INTERVAL

Observations (n):	74
Conf. Level (1-α):	100.000%
UL:	~~5.000~~ 20.0 ppb
LL:	0.000

%ND: 97%

Report Produced by GRITS/STAT 5.01

Data Set Summary

Report Printed: 05-10-2005 17:05

Facility:RAAPHWMU13 Haz. Waste Unit 13 - RAAP

Address:

City:Radford ST:VA Zip:
County:PULASKI

Contact:
Phone:( ) -

Permit Type:Detection

Constituent:TOC Total Organic Carbon

CAS Number: - -
MCL: 0.000 ppb
ACL: 0.000 ppb
Detect Limit: 2000.000 ppb

Start Date:Mar 31 1996
End Date:Dec 30 1999

Well ID:13MW1

Sample Date	Observation	Ln
Mar 31 1996	500.000 ppb	6.215 (* Nondetect *)
Jun 30 1996	3000.000 ppb	8.006
Sep 30 1996	500.000 ppb	6.215 (* Nondetect *)
Dec 31 1996	500.000 ppb	6.215 (* Nondetect *)
Mar 31 1997	500.000 ppb	6.215 (* Nondetect *)
Jun 30 1997	2000.000 ppb	7.601
Sep 30 1997	500.000 ppb	6.215 (* Nondetect *)
Dec 31 1997	500.000 ppb	6.215 (* Nondetect *)
Mar 09 1998	500.000 ppb	6.215 (* Nondetect *)
May 14 1998	500.000 ppb	6.215 (* Nondetect *)
Aug 14 1998	500.000 ppb	6.215 (* Nondetect *)
Nov 23 1998	500.000 ppb	6.215 (* Nondetect *)
Mar 13 1999	1725.000 ppb	7.453
May 27 1999	500.000 ppb	6.215 (* Nondetect *)
Jul 27 1999	500.000 ppb	6.215 (* Nondetect *)
Nov 08 1999	500.000 ppb	6.215 (* Nondetect *)
Dec 10 1999	500.000 ppb	6.215 (* Nondetect *)
Dec 11 1999	500.000 ppb	6.215 (* Nondetect *)
Dec 12 1999	1550.000 ppb	7.346
Dec 13 1999	500.000 ppb	6.215 (* Nondetect *)
Dec 14 1999	500.000 ppb	6.215 (* Nondetect *)
Dec 15 1999	500.000 ppb	6.215 (* Nondetect *)
Dec 16 1999	500.000 ppb	6.215 (* Nondetect *)
Dec 17 1999	500.000 ppb	6.215 (* Nondetect *)

Dec 18 1999	1000.000 ppb	6.908 (* Nondetect *)
Dec 19 1999	1000.000 ppb	6.908 (* Nondetect *)
Dec 20 1999	1000.000 ppb	6.908 (* Nondetect *)
Dec 21 1999	1000.000 ppb	6.908 (* Nondetect *)
Dec 22 1999	1000.000 ppb	6.908 (* Nondetect *)
Dec 23 1999	2177.000 ppb	7.686
Dec 24 1999	10600.000 ppb	9.269
Dec 25 1999	10600.000 ppb	9.269
Dec 26 1999	5682.000 ppb	8.645
Dec 27 1999	8370.000 ppb	9.032
Dec 28 1999	1000.000 ppb	6.908 (* Nondetect *)
Dec 29 1999	1000.000 ppb	6.908 (* Nondetect *)
Dec 30 1999	1000.000 ppb	6.908 (* Nondetect *)

Well ID:13MW1 Summary Statistics

Observations (N): 37
Nondetects (%ND): 76

Minimum:	500.000 ppb	Ln Minimum:	6.215
Maximum:	10600.000 ppb	Ln Maximum:	9.269
Mean:	1721.730 ppb	Ln Mean:	6.861
Std. Dev.:	2653.605 ppb	Ln Std. Dev.:	0.928

Well ID:13MW2

Sample Date	Observation	Ln
Mar 31 1996	500.000 ppb	6.215 (* Nondetect *)
Jun 30 1996	3000.000 ppb	8.006
Sep 30 1996	500.000 ppb	6.215 (* Nondetect *)
Dec 31 1996	500.000 ppb	6.215 (* Nondetect *)
Mar 31 1997	500.000 ppb	6.215 (* Nondetect *)
Jun 30 1997	2000.000 ppb	7.601
Sep 30 1997	500.000 ppb	6.215 (* Nondetect *)
Dec 31 1997	500.000 ppb	6.215 (* Nondetect *)
Mar 09 1998	500.000 ppb	6.215 (* Nondetect *)
May 14 1998	1400.000 ppb	7.244
Aug 14 1998	500.000 ppb	6.215 (* Nondetect *)
Nov 23 1998	500.000 ppb	6.215 (* Nondetect *)
Mar 13 1999	8625.000 ppb	9.062
May 27 1999	500.000 ppb	6.215 (* Nondetect *)
Jul 27 1999	500.000 ppb	6.215 (* Nondetect *)
Nov 08 1999	500.000 ppb	6.215 (* Nondetect *)
Dec 10 1999	500.000 ppb	6.215 (* Nondetect *)
Dec 11 1999	500.000 ppb	6.215 (* Nondetect *)
Dec 12 1999	1625.000 ppb	7.393
Dec 13 1999	500.000 ppb	6.215 (* Nondetect *)
Dec 14 1999	500.000 ppb	6.215 (* Nondetect *)
Dec 15 1999	500.000 ppb	6.215 (* Nondetect *)
Dec 16 1999	500.000 ppb	6.215 (* Nondetect *)
Dec 17 1999	500.000 ppb	6.215 (* Nondetect *)
Dec 18 1999	1000.000 ppb	6.908 (* Nondetect *)
Dec 19 1999	1000.000 ppb	6.908 (* Nondetect *)
Dec 20 1999	1000.000 ppb	6.908 (* Nondetect *)
Dec 21 1999	1000.000 ppb	6.908 (* Nondetect *)
Dec 22 1999	1000.000 ppb	6.908 (* Nondetect *)

Dec 23 1999	3550.000 ppb	8.175
Dec 24 1999	1505.000 ppb	7.317
Dec 25 1999	8417.000 ppb	9.038
Dec 26 1999	5972.000 ppb	8.695
Dec 27 1999	8255.000 ppb	9.019
Dec 28 1999	1000.000 ppb	6.908 (* Nondetect *)
Dec 29 1999	1000.000 ppb	6.908 (* Nondetect *)
Dec 30 1999	1042.000 ppb	6.949

Well ID:13MW2 Summary Statistics

Observations (N): 37
Nondetects (%ND): 70

Minimum:	500.000 ppb	Ln Minimum:	6.215
Maximum:	8625.000 ppb	Ln Maximum:	9.062
Mean:	1672.730 ppb	Ln Mean:	6.890
Std. Dev.:	2302.313 ppb	Ln Std. Dev.:	0.909

Normality Tests

Report Printed: 05-10-2005 17:02

Facility:RAAPHWMU13 Haz. Waste Unit 13 - RAAP

Address:

City:Radford ST:VA Zip:
County:PULASKI

Contact:
Phone:( ) -

Permit Type:Detection

Constituent:TOC Total Organic Carbon

CAS Number: - -
MCL: 0.000 ppb
ACL: 0.000 ppb
Detect Limit: 2000.000 ppb

Start Date:Mar 31 1996
End Date:Dec 30 1999

Normality Test on Observations for wells listed below:

Well:13MW1 Position:Upgradient Observations:37

Scale	Minimum	Maximum	Mean	Std Dev
Original:	500.000	10600.000	1721.730	2653.605
Log:	6.215	9.269	6.861	0.928

Well:13MW2 Position:Upgradient Observations:37

Scale	Minimum	Maximum	Mean	Std Dev
Original:	500.000	8625.000	1672.730	2302.313
Log:	6.215	9.062	6.890	0.909

Pooled Statistics
Observations: 74

Statistic	Original Scale	Log Scale
Mean:	1697.230	6.876
Std Dev:	2467.227	0.912
Skewness:	2.485*	1.364*
Kurtosis:	5.030	0.781
Minimum:	500.000	6.215
Maximum:	10600.000	9.269

CV:	1.454	0.133

Shapiro-Francia Statistics

Scale	Test Statistic	5% Critical Value	1% Critical Value
Original:	0.5304*	0.9690	0.9560
Log:	0.7452*	0.9690	0.9560

* Indicates statistically significant evidence of non-normality.
GRIT/STAT Version 5.0

Nonparametric Prediction Interval
Report Printed May 10,2005

Facility:Haz. Waste Unit 13 - RAAP
Parameter:Total Organic Carbon(CAS Number:- -)

ONE-TAILED UPPER PARAMETRIC PREDICTION INTERVAL

Observations (n):	74
Conf. Level (1-α):	***.***%
UL:	~~16,000.0~~ ~~500.000 ppb~~ 10,600.00 ppb
LL:	0.000

%ND: 73%.

Report Produced by GRITS/STAT 5.01

Normality Tests

Report Printed: 05-10-2005 17:10

Facility:RAAPHWMU13 Haz. Waste Unit 13 - RAAP

Address:

City:Radford ST:VA Zip:
County:PULASKI

Contact:
Phone:( ) -

Permit Type:Detection

Constituent:TOX Total Organic Halogens, Halides

CAS Number: - -
MCL: 0.000 ppb
ACL: 0.000 ppb
Detect Limit: 40.000 ppb

Start Date:Mar 31 1996
End Date:Dec 30 1999

Normality Test on Observations for wells listed below:

Well:13MW1 Position:Upgradient Observations:37

Scale	Minimum	Maximum	Mean	Std Dev
Original:	2.500	38.000	10.932	10.539
Log:	0.916	3.638	1.874	1.056

Well:13MW2 Position:Upgradient Observations:37

Scale	Minimum	Maximum	Mean	Std Dev
Original:	2.500	54.500	10.405	11.289
Log:	0.916	3.998	1.789	1.059

Pooled Statistics
Observations: 74

Statistic	Original Scale	Log Scale
Mean:	10.669	1.831
Std Dev:	10.849	1.051
Skewness:	1.378*	0.399
Kurtosis:	2.259	-1.616
Minimum:	2.500	0.916
Maximum:	54.500	3.998

CV:	1.017	0.574

Shapiro-Francia Statistics

Scale	Test Statistic	5% Critical Value	1% Critical Value
Original:	0.7158*	0.9690	0.9560
Log:	0.7407*	0.9690	0.9560

* Indicates statistically significant evidence of non-normality.
GRIT/STAT Version 5.0

Data Set Summary

Report Printed: 05-10-2005 17:10

Facility:RAAPHWMU13 Haz. Waste Unit 13 - RAAP

Address:

City:Radford ST:VA Zip:
County:PULASKI

Contact:
Phone:( ) -

Permit Type:Detection

Constituent:TOX Total Organic Halogens, Halides

CAS Number: - -
MCL: 0.000 ppb
ACL: 0.000 ppb
Detect Limit: 40.000 ppb

Start Date:Mar 31 1996
End Date:Dec 30 1999

Well ID:13MW1

Sample Date	Observation	Ln
Mar 31 1996	2.500 ppb	0.916 (* Nondetect *)
Jun 30 1996	2.500 ppb	0.916 (* Nondetect *)
Sep 30 1996	2.500 ppb	0.916 (* Nondetect *)
Dec 31 1996	2.500 ppb	0.916 (* Nondetect *)
Mar 31 1997	2.500 ppb	0.916 (* Nondetect *)
Jun 30 1997	2.500 ppb	0.916 (* Nondetect *)
Sep 30 1997	2.500 ppb	0.916 (* Nondetect *)
Dec 31 1997	9.000 ppb	2.197
Mar 09 1998	2.500 ppb	0.916 (* Nondetect *)
May 14 1998	5.500 ppb	1.705
Aug 14 1998	2.500 ppb	0.916 (* Nondetect *)
Nov 23 1998	25.500 ppb	3.239
Mar 13 1999	2.500 ppb	0.916 (* Nondetect *)
May 27 1999	2.500 ppb	0.916 (* Nondetect *)
Jul 27 1999	6.500 ppb	1.872
Nov 08 1999	14.500 ppb	2.674
Dec 10 1999	2.500 ppb	0.916 (* Nondetect *)
Dec 11 1999	2.500 ppb	0.916 (* Nondetect *)
Dec 12 1999	2.500 ppb	0.916 (* Nondetect *)
Dec 13 1999	2.500 ppb	0.916 (* Nondetect *)
Dec 14 1999	2.500 ppb	0.916 (* Nondetect *)
Dec 15 1999	2.500 ppb	0.916 (* Nondetect *)
Dec 16 1999	2.500 ppb	0.916 (* Nondetect *)
Dec 17 1999	2.500 ppb	0.916 (* Nondetect *)

Dec 18 1999	20.000 ppb	2.996 (* Nondetect *)
Dec 19 1999	20.000 ppb	2.996 (* Nondetect *)
Dec 20 1999	20.000 ppb	2.996 (* Nondetect *)
Dec 21 1999	20.000 ppb	2.996 (* Nondetect *)
Dec 22 1999	20.000 ppb	2.996 (* Nondetect *)
Dec 23 1999	20.000 ppb	2.996 (* Nondetect *)
Dec 24 1999	20.000 ppb	2.996 (* Nondetect *)
Dec 25 1999	20.000 ppb	2.996 (* Nondetect *)
Dec 26 1999	20.000 ppb	2.996 (* Nondetect *)
Dec 27 1999	20.000 ppb	2.996 (* Nondetect *)
Dec 28 1999	38.000 ppb	3.638
Dec 29 1999	20.000 ppb	2.996 (* Nondetect *)
Dec 30 1999	38.000 ppb	3.638

Well ID:13MW1 Summary Statistics

Observations (N): 37
Nondetects (%ND): 81

Minimum:	2.500 ppb	Ln Minimum:	0.916
Maximum:	38.000 ppb	Ln Maximum:	3.638
Mean:	10.932 ppb	Ln Mean:	1.874
Std. Dev.:	10.539 ppb	Ln Std. Dev.:	1.056

Well ID:13MW2

Sample Date	Observation	Ln
Mar 31 1996	2.500 ppb	0.916 (* Nondetect *)
Jun 30 1996	2.500 ppb	0.916 (* Nondetect *)
Sep 30 1996	2.500 ppb	0.916 (* Nondetect *)
Dec 31 1996	2.500 ppb	0.916 (* Nondetect *)
Mar 31 1997	2.500 ppb	0.916 (* Nondetect *)
Jun 30 1997	2.500 ppb	0.916 (* Nondetect *)
Sep 30 1997	2.500 ppb	0.916 (* Nondetect *)
Dec 31 1997	2.500 ppb	0.916 (* Nondetect *)
Mar 09 1998	2.500 ppb	0.916 (* Nondetect *)
May 14 1998	6.000 ppb	1.792
Aug 14 1998	2.500 ppb	0.916 (* Nondetect *)
Nov 23 1998	7.500 ppb	2.015
Mar 13 1999	2.500 ppb	0.916 (* Nondetect *)
May 27 1999	2.500 ppb	0.916 (* Nondetect *)
Jul 27 1999	2.500 ppb	0.916 (* Nondetect *)
Nov 08 1999	24.500 ppb	3.199
Dec 10 1999	2.500 ppb	0.916 (* Nondetect *)
Dec 11 1999	2.500 ppb	0.916 (* Nondetect *)
Dec 12 1999	2.500 ppb	0.916 (* Nondetect *)
Dec 13 1999	2.500 ppb	0.916 (* Nondetect *)
Dec 14 1999	2.500 ppb	0.916 (* Nondetect *)
Dec 15 1999	2.500 ppb	0.916 (* Nondetect *)
Dec 16 1999	2.500 ppb	0.916 (* Nondetect *)
Dec 17 1999	2.500 ppb	0.916 (* Nondetect *)
Dec 18 1999	20.000 ppb	2.996 (* Nondetect *)
Dec 19 1999	20.000 ppb	2.996 (* Nondetect *)
Dec 20 1999	20.000 ppb	2.996 (* Nondetect *)
Dec 21 1999	20.000 ppb	2.996 (* Nondetect *)
Dec 22 1999	20.000 ppb	2.996 (* Nondetect *)

Dec 23 1999	20.000 ppb	2.996 (* Nondetect *)
Dec 24 1999	20.000 ppb	2.996 (* Nondetect *)
Dec 25 1999	20.000 ppb	2.996 (* Nondetect *)
Dec 26 1999	20.000 ppb	2.996 (* Nondetect *)
Dec 27 1999	20.000 ppb	2.996 (* Nondetect *)
Dec 28 1999	20.000 ppb	2.996 (* Nondetect *)
Dec 29 1999	20.000 ppb	2.996 (* Nondetect *)
Dec 30 1999	54.500 ppb	3.998

Well ID: 13MW2 Summary Statistics

Observations (N): 37
Nondetects (%ND): 89

Minimum:	2.500 ppb	Ln Minimum:	0.916
Maximum:	54.500 ppb	Ln Maximum:	3.998
Mean:	10.405 ppb	Ln Mean:	1.789
Std. Dev.:	11.289 ppb	Ln Std. Dev.:	1.059

Nonparametric Prediction Interval
Report Printed May 10,2005

Facility:Haz. Waste Unit 13 - RAAP
Parameter:Total Organic Halogens, Halides(CAS Number:- -)

ONE-TAILED UPPER PARAMETRIC PREDICTION INTERVAL

Observations (n):	74
Conf. Level (1-α):	100.000%
UL:	54.5 ~~2500~~ ppb
LL:	0.000

%ND : 85%.

Report Produced by GRITS/STAT 5.01

Data Set Summary

Report Printed: 05-10-2005 17:13

Facility:RAAPHWMU13 Haz. Waste Unit 13 - RAAP

Address:

City:Radford ST:VA Zip:
County:PULASKI

Contact:
Phone:( ) -

Permit Type:Detection

Constituent:Cond F Specific Conductivity, Field

CAS Number: - -
MCL: 0.000 umhos/cm
ACL: 0.000 umhos/cm
Detect Limit: 2.000 umhos/cm

Start Date:Mar 31 1996
End Date:Dec 30 1999

Well ID:13MW1

Sample Date	Observation	Ln
Mar 31 1996	707.500 umhos/cm	6.562
Sep 30 1997	717.500 umhos/cm	6.576
Dec 31 1997	692.500 umhos/cm	6.540
Mar 09 1998	660.000 umhos/cm	6.492
May 14 1998	590.000 umhos/cm	6.380
Aug 14 1998	613.000 umhos/cm	6.418
Nov 23 1998	660.000 umhos/cm	6.492
Mar 13 1999	1940.000 umhos/cm	7.570
May 27 1999	6870.000 umhos/cm	8.835
Jul 27 1999	759.000 umhos/cm	6.632
Nov 08 1999	896.000 umhos/cm	6.798
Dec 10 1999	634.000 umhos/cm	6.452
Dec 11 1999	599.000 umhos/cm	6.395
Dec 12 1999	506.000 umhos/cm	6.227
Dec 13 1999	871.000 umhos/cm	6.770
Dec 14 1999	754.000 umhos/cm	6.625
Dec 15 1999	457.000 umhos/cm	6.125
Dec 16 1999	762.000 umhos/cm	6.636
Dec 17 1999	730.000 umhos/cm	6.593
Dec 18 1999	732.000 umhos/cm	6.596
Dec 19 1999	665.000 umhos/cm	6.500
Dec 20 1999	733.000 umhos/cm	6.597
Dec 21 1999	729.000 umhos/cm	6.592
Dec 23 1999	430.000 umhos/cm	6.064

Dec 24 1999	490.000 umhos/cm	6.194
Dec 25 1999	640.000 umhos/cm	6.461
Dec 26 1999	690.000 umhos/cm	6.537
Dec 27 1999	440.000 umhos/cm	6.087
Dec 28 1999	610.000 umhos/cm	6.413
Dec 29 1999	620.000 umhos/cm	6.430
Dec 30 1999	720.000 umhos/cm	6.579

Well ID:13MW1 Summary Statistics

Observations (N): 31
Nondetects (%ND): 0

Minimum:	430.000 umhos/cm	Ln Minimum:	6.064
Maximum:	6870.000 umhos/cm	Ln Maximum:	8.835
Mean:	900.564 umhos/cm	Ln Mean:	6.586
Std. Dev.:	1136.958 umhos/cm	Ln Std. Dev.:	0.495

Well ID:13MW2

Sample Date	Observation	Ln
Mar 31 1996	582.500 umhos/cm	6.367
Sep 30 1997	567.500 umhos/cm	6.341
Dec 31 1997	570.000 umhos/cm	6.346
Mar 09 1998	568.000 umhos/cm	6.342
May 14 1998	573.000 umhos/cm	6.351
Aug 14 1998	553.000 umhos/cm	6.315
Nov 23 1998	560.000 umhos/cm	6.328
Mar 13 1999	500.000 umhos/cm	6.215
May 27 1999	5810.000 umhos/cm	8.667
Jul 27 1999	589.000 umhos/cm	6.378
Nov 08 1999	687.000 umhos/cm	6.532
Dec 10 1999	495.000 umhos/cm	6.205
Dec 11 1999	568.000 umhos/cm	6.342
Dec 12 1999	601.000 umhos/cm	6.399
Dec 13 1999	689.000 umhos/cm	6.535
Dec 14 1999	618.000 umhos/cm	6.426
Dec 15 1999	574.000 umhos/cm	6.353
Dec 16 1999	613.000 umhos/cm	6.418
Dec 17 1999	617.000 umhos/cm	6.425
Dec 18 1999	612.000 umhos/cm	6.417
Dec 19 1999	648.000 umhos/cm	6.474
Dec 20 1999	610.000 umhos/cm	6.413
Dec 21 1999	621.000 umhos/cm	6.431
Dec 23 1999	630.000 umhos/cm	6.446
Dec 24 1999	670.000 umhos/cm	6.507
Dec 25 1999	600.000 umhos/cm	6.397
Dec 26 1999	750.000 umhos/cm	6.620
Dec 27 1999	450.000 umhos/cm	6.109
Dec 28 1999	550.000 umhos/cm	6.310
Dec 29 1999	670.000 umhos/cm	6.507
Dec 30 1999	710.000 umhos/cm	6.565

Well ID:13MW2 Summary Statistics

Observations (N): 31
Nondetects (%ND): 0

Minimum:	450.000 umhos/cm	Ln Minimum:	6.109
Maximum:	5810.000 umhos/cm	Ln Maximum:	8.667
Mean:	769.548 umhos/cm	Ln Mean:	6.467
Std. Dev.:	937.607 umhos/cm	Ln Std. Dev.:	0.422

Normality Tests

Report Printed: 05-10-2005 17:12

Facility:RAAPHWMU13 Haz. Waste Unit 13 - RAAP

Address:

City:Radford ST:VA Zip:
County:PULASKI

Contact:
Phone:( ) -

Permit Type:Detection

Constituent:Cond F Specific Conductivity, Field

CAS Number: - -
MCL: 0.000 umhos/cm
ACL: 0.000 umhos/cm
Detect Limit: 2.000 umhos/cm

Start Date:Mar 31 1996
End Date:Dec 30 1999

Normality Test on Observations for wells listed below:

Well:13MW1 Position:Upgradient Observations:31

Scale	Minimum	Maximum	Mean	Std Dev
Original:	430.000	6870.000	900.564	1136.958
Log:	6.064	8.835	6.586	0.495

Well:13MW2 Position:Upgradient Observations:31

Scale	Minimum	Maximum	Mean	Std Dev
Original:	450.000	5810.000	769.548	937.607
Log:	6.109	8.667	6.467	0.422

Pooled Statistics
Observations: 62

Statistic	Original Scale	Log Scale
Mean:	835.056	6.527
Std Dev:	1035.592	0.460
Skewness:	5.111*	3.858*
Kurtosis:	25.116	15.873
Minimum:	430.000	6.064
Maximum:	6870.000	8.835

CV:	1.240	0.071

Shapiro-Francia Statistics

Scale	Test Statistic	5% Critical Value	1% Critical Value
Original:	0.2489*	0.9640	0.9470
Log:	0.5030*	0.9640	0.9470

* Indicates statistically significant evidence of non-normality.
GRIT/STAT Version 5.0

Nonparametric Prediction Interval
Report Printed May 10,2005

Facility:Haz. Waste Unit 13 - RAAP
Parameter:Specific Conductivity, Field(CAS Number:- -)

ONE-TAILED UPPER PARAMETRIC PREDICTION INTERVAL

Observations (n):	62
Conf. Level (1-α):	100.000%
UL:	6870.0 umhos/cm
LL:	0.000

%ND: 0

Report Produced by GRITS/STAT 5.01

Data Set Summary

Report Printed: 05-10-2005 17:13

Facility:RAAPHWMU13 Haz. Waste Unit 13 - RAAP

Address:

City:Radford ST:VA Zip:
County:PULASKI

Contact:
Phone:( ) -

Permit Type:Detection

Constituent:pH F pH, Field

CAS Number: - -
MCL: 0.000 SU
ACL: 0.000 SU
Detect Limit: 0.100 SU

Start Date:Mar 31 1996
End Date:Dec 30 1999

Well ID:13MW1

Sample Date	Observation	Ln
Mar 31 1996	7.100 SU	1.960
Sep 30 1997	7.200 SU	1.974
Dec 31 1997	7.200 SU	1.974
Mar 09 1998	6.700 SU	1.902
May 14 1998	6.300 SU	1.841
Aug 14 1998	6.500 SU	1.872
Nov 23 1998	7.000 SU	1.946
Mar 13 1999	6.700 SU	1.902
May 27 1999	6.990 SU	1.944
Jul 27 1999	7.030 SU	1.950
Nov 08 1999	6.950 SU	1.939
Dec 10 1999	6.820 SU	1.920
Dec 11 1999	6.600 SU	1.887
Dec 12 1999	6.390 SU	1.855
Dec 13 1999	5.720 SU	1.744
Dec 14 1999	7.010 SU	1.947
Dec 15 1999	6.480 SU	1.869
Dec 16 1999	6.520 SU	1.875
Dec 17 1999	6.690 SU	1.901
Dec 18 1999	6.940 SU	1.937
Dec 19 1999	6.570 SU	1.883
Dec 20 1999	6.550 SU	1.879
Dec 21 1999	6.650 SU	1.895
Dec 23 1999	6.670 SU	1.898

Dec 24 1999	6.400 SU	1.856
Dec 25 1999	6.930 SU	1.936
Dec 26 1999	6.640 SU	1.893
Dec 27 1999	6.720 SU	1.905
Dec 28 1999	6.470 SU	1.867
Dec 29 1999	7.020 SU	1.949
Dec 30 1999	7.250 SU	1.981

Well ID:13MW1 Summary Statistics

Observations (N): 31
Nondetects (%ND): 0

Minimum:	5.720 SU	Ln Minimum:	1.744
Maximum:	7.250 SU	Ln Maximum:	1.981
Mean:	6.733 SU	Ln Mean:	1.906
Std. Dev.:	0.323 SU	Ln Std. Dev.:	0.049

Well ID:13MW2

Sample Date	Observation	Ln
Mar 31 1996	7.400 SU	2.001
Sep 30 1997	7.800 SU	2.054
Dec 31 1997	7.200 SU	1.974
Mar 09 1998	6.800 SU	1.917
May 14 1998	6.700 SU	1.902
Aug 14 1998	6.700 SU	1.902
Nov 23 1998	7.100 SU	1.960
Mar 13 1999	7.700 SU	2.041
May 27 1999	7.180 SU	1.971
Jul 27 1999	7.170 SU	1.970
Nov 08 1999	7.090 SU	1.959
Dec 10 1999	6.910 SU	1.933
Dec 11 1999	6.960 SU	1.940
Dec 12 1999	6.710 SU	1.904
Dec 13 1999	6.200 SU	1.825
Dec 14 1999	7.090 SU	1.959
Dec 15 1999	6.830 SU	1.921
Dec 16 1999	6.670 SU	1.898
Dec 17 1999	6.790 SU	1.915
Dec 18 1999	7.060 SU	1.954
Dec 19 1999	6.840 SU	1.923
Dec 20 1999	6.670 SU	1.898
Dec 21 1999	6.710 SU	1.904
Dec 23 1999	7.130 SU	1.964
Dec 24 1999	7.030 SU	1.950
Dec 25 1999	7.070 SU	1.956
Dec 26 1999	7.020 SU	1.949
Dec 27 1999	7.090 SU	1.959
Dec 28 1999	7.220 SU	1.977
Dec 29 1999	6.970 SU	1.942
Dec 30 1999	7.500 SU	2.015

Well ID:13MW2 Summary Statistics

Observations (N): 31
Nondetects (%ND): 0

Minimum:	6.200 SU	Ln Minimum:	1.825
Maximum:	7.800 SU	Ln Maximum:	2.054
Mean:	7.010 SU	Ln Mean:	1.946
Std. Dev.:	0.322 SU	Ln Std. Dev.:	0.046

Normality Tests

Report Printed: 05-10-2005 17:14

Facility:RAAPHWMU13 Haz. Waste Unit 13 - RAAP

Address:

City:Radford ST:VA Zip:
County:PULASKI

Contact:
Phone:( ) -

Permit Type:Detection

Constituent:pH F pH, Field

CAS Number: - -
MCL: 0.000 SU
ACL: 0.000 SU
Detect Limit: 0.100 SU

Start Date:Mar 31 1996
End Date:Dec 30 1999

Normality Test on Observations for wells listed below:

Well:13MW1 Position:Upgradient Observations:31

Scale	Minimum	Maximum	Mean	Std Dev
Original:	5.720	7.250	6.733	0.323
Log:	1.744	1.981	1.906	0.049

Well:13MW2 Position:Upgradient Observations:31

Scale	Minimum	Maximum	Mean	Std Dev
Original:	6.200	7.800	7.010	0.322
Log:	1.825	2.054	1.946	0.046

Pooled Statistics
Observations: 62

Statistic	Original Scale	Log Scale
Mean:	6.871	1.926
Std Dev:	0.349	0.051
Skewness:	-0.187	-0.447
Kurtosis:	1.327	1.708
Minimum:	5.720	1.744
Maximum:	7.800	2.054

CV: 0.051 0.027

Shapiro-Francia Statistics

Scale	Test Statistic	5% Critical Value	1% Critical Value
Original:	0.9566*	0.9640	0.9470
Log:	0.9489*	0.9640	0.9470

* Indicates statistically significant evidence of non-normality.
GRIT/STAT Version 5.0

Nonparametric Prediction Interval
Report Printed May 10,2005

Facility:Haz. Waste Unit 13 - RAAP
Parameter:pH, Field(CAS Number:- -)

TWO-TAILED PARAMETRIC PREDICTION INTERVAL

Observations (n):	62
Conf. Level (1-α):	100.000%

UL: ~~6.990 SU~~ 7.80 SU
LL: 6.910 SU 5.72 SU

Report Produced by GRITS/STAT 5.01

Data Set Summary

Report Printed: 05-10-2005 17:17

Facility:RAAPHWMU13 Haz. Waste Unit 13 - RAAP

Address:

City:Radford ST:VA Zip:
County:PULASKI

Contact:
Phone:( ) -

Permit Type:Detection

Constituent:Nitrate Nitrate

CAS Number:14797-55-8
MCL: 0.000 ppb
ACL: 0.000 ppb
Detect Limit: 100.000 ppb

Start Date:Mar 31 1996
End Date:Dec 30 1999

Well ID:13MW1

Sample Date	Observation	Ln
Mar 31 1996	700.000 ppb	6.551
Jun 30 1996	700.000 ppb	6.551
Sep 30 1996	500.000 ppb	6.215
Dec 31 1996	600.000 ppb	6.397
Mar 31 1997	700.000 ppb	6.551
Jun 30 1997	700.000 ppb	6.551
Sep 30 1997	900.000 ppb	6.802
Dec 31 1997	700.000 ppb	6.551
Mar 09 1998	480.000 ppb	6.174
May 14 1998	360.000 ppb	5.886
Aug 14 1998	440.000 ppb	6.087
Nov 23 1998	560.000 ppb	6.328
Mar 13 1999	410.000 ppb	6.016
May 27 1999	230.000 ppb	5.438
Jul 27 1999	380.000 ppb	5.940
Nov 08 1999	430.000 ppb	6.064
Dec 10 1999	430.000 ppb	6.064
Dec 11 1999	130.000 ppb	4.868
Dec 12 1999	900.000 ppb	6.802
Dec 13 1999	310.000 ppb	5.737
Dec 14 1999	320.000 ppb	5.768
Dec 15 1999	150.000 ppb	5.011
Dec 16 1999	380.000 ppb	5.940
Dec 17 1999	400.000 ppb	5.991

Dec 18 1999	340.000 ppb	5.829
Dec 19 1999	250.000 ppb	5.521
Dec 20 1999	260.000 ppb	5.561
Dec 21 1999	380.000 ppb	5.940
Dec 22 1999	300.000 ppb	5.704
Dec 23 1999	300.000 ppb	5.704
Dec 24 1999	50.000 ppb	3.912 (* Nondetect *)

Well ID:13MW1 Summary Statistics

Observations (N): 31
Nondetects (%ND): 3

Minimum:	50.000 ppb	Ln Minimum:	3.912
Maximum:	900.000 ppb	Ln Maximum:	6.802
Mean:	441.613 ppb	Ln Mean:	5.950
Std. Dev.:	212.259 ppb	Ln Std. Dev.:	0.600

Well ID:13MW2

Sample Date	Observation	Ln
Mar 31 1996	600.000 ppb	6.397
Jun 30 1996	800.000 ppb	6.685
Sep 30 1996	700.000 ppb	6.551
Dec 31 1996	800.000 ppb	6.685
Mar 31 1997	700.000 ppb	6.551
Jun 30 1997	900.000 ppb	6.802
Sep 30 1997	700.000 ppb	6.551
Dec 31 1997	600.000 ppb	6.397
Mar 09 1998	790.000 ppb	6.672
May 14 1998	380.000 ppb	5.940
Aug 14 1998	640.000 ppb	6.461
Nov 23 1998	600.000 ppb	6.397
Mar 13 1999	710.000 ppb	6.565
May 27 1999	860.000 ppb	6.757
Jul 27 1999	890.000 ppb	6.791
Nov 08 1999	920.000 ppb	6.824
Dec 10 1999	50.000 ppb	3.912 (* Nondetect *)
Dec 11 1999	920.000 ppb	6.824
Dec 12 1999	1050.000 ppb	6.957
Dec 13 1999	1360.000 ppb	7.215
Dec 14 1999	1200.000 ppb	7.090
Dec 15 1999	1160.000 ppb	7.056
Dec 16 1999	1190.000 ppb	7.082
Dec 17 1999	710.000 ppb	6.565
Dec 18 1999	920.000 ppb	6.824
Dec 19 1999	750.000 ppb	6.620
Dec 20 1999	580.000 ppb	6.363
Dec 22 1999	800.000 ppb	6.685
Dec 23 1999	700.000 ppb	6.551
Dec 24 1999	441.000 ppb	6.089

Well ID:13MW2 Summary Statistics

Observations (N): 30

Nondetects (%ND): 3

Minimum:	50.000 ppb	Ln Minimum:	3.912
Maximum:	1360.000 ppb	Ln Maximum:	7.215
Mean:	780.700 ppb	Ln Mean:	6.562
Std. Dev.:	262.094 ppb	Ln Std. Dev.:	0.574

Normality Tests

Report Printed: 05-10-2005 17:17

Facility:RAAPHWMU13 Haz. Waste Unit 13 - RAAP

Address:

City:Radford ST:VA Zip:
County:PULASKI

Contact:
Phone:( ) -

Permit Type:Detection

Constituent:Nitrate Nitrate

CAS Number:14797-55-8
MCL: 0.000 ppb
ACL: 0.000 ppb
Detect Limit: 100.000 ppb

Start Date:Mar 31 1996
End Date:Dec 30 1999

Normality Test on Observations for wells listed below:

Well:13MW1 Position:Upgradient Observations:31

Scale	Minimum	Maximum	Mean	Std Dev
Original:	50.000	900.000	441.613	212.259
Log:	3.912	6.802	5.950	0.600

Well:13MW2 Position:Upgradient Observations:30

Scale	Minimum	Maximum	Mean	Std Dev
Original:	50.000	1360.000	780.700	262.094
Log:	3.912	7.215	6.562	0.574

Pooled Statistics
Observations: 61

Statistic	Original Scale	Log Scale
Mean:	608.377	6.251
Std Dev:	291.453	0.659
Skewness:	0.269	-1.602*
Kurtosis:	-0.285	3.355
Minimum:	50.000	3.912
Maximum:	1360.000	7.215

CV:	0.479	0.105

Shapiro-Francia Statistics

Scale	Test Statistic	5% Critical Value	1% Critical Value
Original:	0.9813	0.9630	0.9470
Log:	0.8553*	0.9630	0.9470

* Indicates statistically significant evidence of non-normality.
GRIT/STAT Version 5.0

Parametric Prediction Interval
Report Printed May 10,2005

Facility:Haz. Waste Unit 13 - RAAP
Parameter:Nitrate(CAS Number:14797-55-8)

ONE-TAILED UPPER PARAMETRIC PREDICTION INTERVAL

Observations (n):	61
Shapiro-Francia (W):	0.9813
Critical W,α=0.01:	0.9470
Mean:	608.377 ppb
Std Dev:	291.453 ppb
DF:	60
Conf. Level (1-α):	0.9500
Future Samples (k):	5
$t_{\left[1-\frac{\alpha}{k}\right]}$:	2.3901
Kappa:	2.4096
UL:	1310.672 ppb
LL:	-∞

X.ND: 3y.

Report Produced by GRITS/STAT 5.01

Data Set Summary

Report Printed: 05-10-2005 17:19

Facility:RAAPHWMU13 Haz. Waste Unit 13 - RAAP

Address:

City:Radford ST:VA Zip:
County:PULASKI

Contact:
Phone:( ) -

Permit Type:Detection

Constituent:Nitrite Nitrite

CAS Number:14797-65-0
MCL: 0.000 ppb
ACL: 0.000 ppb
Detect Limit: 10.000 ppb

Start Date:Mar 31 1996
End Date:Dec 30 1999

Well ID:13MW1

Sample Date	Observation	Ln
Mar 31 1996	5.000 ppb	1.609 (* Nondetect *)
Jun 30 1996	5.000 ppb	1.609 (* Nondetect *)
Sep 30 1996	5.000 ppb	1.609 (* Nondetect *)
Dec 31 1996	5.000 ppb	1.609 (* Nondetect *)
Mar 31 1997	5.000 ppb	1.609 (* Nondetect *)
Jun 30 1997	5.000 ppb	1.609 (* Nondetect *)
Sep 30 1997	5.000 ppb	1.609 (* Nondetect *)
Dec 31 1997	5.000 ppb	1.609 (* Nondetect *)
Mar 09 1998	5.000 ppb	1.609 (* Nondetect *)
May 14 1998	5.000 ppb	1.609 (* Nondetect *)
Aug 14 1998	5.000 ppb	1.609 (* Nondetect *)
Nov 23 1998	5.000 ppb	1.609 (* Nondetect *)
Mar 13 1999	5.000 ppb	1.609 (* Nondetect *)
May 27 1999	5.000 ppb	1.609 (* Nondetect *)
Jul 27 1999	5.000 ppb	1.609 (* Nondetect *)
Nov 08 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 10 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 11 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 12 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 13 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 14 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 15 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 16 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 17 1999	5.000 ppb	1.609 (* Nondetect *)

Dec 18 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 19 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 20 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 21 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 22 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 23 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 24 1999	5.000 ppb	1.609 (* Nondetect *)

Well ID:13MW1 Summary Statistics

Observations (N): 31
Nondetects (%ND):100

Minimum:	5.000 ppb	Ln Minimum:	1.609
Maximum:	5.000 ppb	Ln Maximum:	1.609
Mean:	5.000 ppb	Ln Mean:	1.609
Std. Dev.:	0.000 ppb	Ln Std. Dev.:	0.000

Well ID:13MW2

Sample Date	Observation	Ln
Mar 31 1996	5.000 ppb	1.609 (* Nondetect *)
Jun 30 1996	5.000 ppb	1.609 (* Nondetect *)
Sep 30 1996	5.000 ppb	1.609 (* Nondetect *)
Dec 31 1996	5.000 ppb	1.609 (* Nondetect *)
Mar 31 1997	5.000 ppb	1.609 (* Nondetect *)
Jun 30 1997	5.000 ppb	1.609 (* Nondetect *)
Sep 30 1997	5.000 ppb	1.609 (* Nondetect *)
Dec 31 1997	5.000 ppb	1.609 (* Nondetect *)
Mar 09 1998	5.000 ppb	1.609 (* Nondetect *)
May 14 1998	5.000 ppb	1.609 (* Nondetect *)
Aug 14 1998	5.000 ppb	1.609 (* Nondetect *)
Nov 23 1998	5.000 ppb	1.609 (* Nondetect *)
Mar 13 1999	5.000 ppb	1.609 (* Nondetect *)
May 27 1999	5.000 ppb	1.609 (* Nondetect *)
Jul 27 1999	5.000 ppb	1.609 (* Nondetect *)
Nov 08 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 10 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 11 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 12 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 13 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 14 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 15 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 16 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 17 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 18 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 19 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 20 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 22 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 23 1999	5.000 ppb	1.609 (* Nondetect *)
Dec 24 1999	5.000 ppb	1.609 (* Nondetect *)

Well ID:13MW2 Summary Statistics

Observations (N): 30

Nondetects (%ND):100

Minimum:	5.000 ppb	Ln Minimum:	1.609
Maximum:	5.000 ppb	Ln Maximum:	1.609
Mean:	5.000 ppb	Ln Mean:	1.609
Std. Dev.:	0.000 ppb	Ln Std. Dev.:	0.000

Data Set Summary

Report Printed: 05-10-2005 17:19

Facility:RAAPHWMU13 Haz. Waste Unit 13 - RAAP

Address:

City:Radford ST:VA Zip:
County:PULASKI

Contact:
Phone:( ) -

Permit Type:Detection

Constituent:Sulfate Sulfate, total

CAS Number:14808-79-8
MCL: 0.000 ppb
ACL: 0.000 ppb
Detect Limit: 1000.000 ppb

Start Date:Mar 31 1996
End Date:Dec 30 1999

Well ID:13MW1

Sample Date	Observation	Ln
Mar 31 1996	88000.000 ppb	11.385
Jun 30 1996	84000.000 ppb	11.339
Sep 30 1996	80000.000 ppb	11.290
Dec 31 1996	82000.000 ppb	11.314
Mar 31 1997	70000.000 ppb	11.156
Jun 30 1997	64000.000 ppb	11.067
Sep 30 1997	73000.000 ppb	11.198
Dec 31 1997	79000.000 ppb	11.277
Mar 09 1998	73900.000 ppb	11.210
May 14 1998	61500.000 ppb	11.027
Aug 14 1998	64100.000 ppb	11.068
Nov 23 1998	73300.000 ppb	11.202
Mar 13 1999	65000.000 ppb	11.082
May 27 1999	53900.000 ppb	10.895
Jul 27 1999	68500.000 ppb	11.135
Nov 08 1999	61700.000 ppb	11.030
Dec 10 1999	65000.000 ppb	11.082
Dec 11 1999	47500.000 ppb	10.768
Dec 12 1999	39800.000 ppb	10.592
Dec 13 1999	59600.000 ppb	10.995
Dec 14 1999	59100.000 ppb	10.987
Dec 15 1999	34700.000 ppb	10.454
Dec 16 1999	58300.000 ppb	10.973
Dec 17 1999	64900.000 ppb	11.081

Dec 18 1999	65000.000 ppb	11.082
Dec 19 1999	49200.000 ppb	10.804
Dec 20 1999	62900.000 ppb	11.049
Dec 21 1999	65000.000 ppb	11.082
Dec 22 1999	50100.000 ppb	10.822
Dec 23 1999	40900.000 ppb	10.619
Dec 24 1999	38900.000 ppb	10.569

Well ID:13MW1 Summary Statistics

Observations (N): 31
Nondetects (%ND): 0

Minimum:	34700.000 ppb	Ln Minimum:	10.454
Maximum:	88000.000 ppb	Ln Maximum:	11.385
Mean:	62670.957 ppb	Ln Mean:	11.020
Std. Dev.:	13583.912 ppb	Ln Std. Dev.:	0.235

Well ID:13MW2

Sample Date	Observation	Ln
Mar 31 1996	32000.000 ppb	10.373
Jun 30 1996	31000.000 ppb	10.342
Sep 30 1996	28000.000 ppb	10.240
Dec 31 1996	27000.000 ppb	10.204
Mar 31 1997	24000.000 ppb	10.086
Jun 30 1997	24000.000 ppb	10.086
Sep 30 1997	26000.000 ppb	10.166
Dec 31 1997	29000.000 ppb	10.275
Mar 09 1998	30300.000 ppb	10.319
May 14 1998	30700.000 ppb	10.332
Aug 14 1998	26900.000 ppb	10.200
Nov 23 1998	27500.000 ppb	10.222
Mar 13 1999	26200.000 ppb	10.174
May 27 1999	22400.000 ppb	10.017
Jul 27 1999	23100.000 ppb	10.048
Nov 08 1999	24400.000 ppb	10.102
Dec 10 1999	25700.000 ppb	10.154
Dec 11 1999	22200.000 ppb	10.008
Dec 12 1999	27300.000 ppb	10.215
Dec 13 1999	23400.000 ppb	10.060
Dec 14 1999	26300.000 ppb	10.177
Dec 15 1999	31800.000 ppb	10.367
Dec 16 1999	22700.000 ppb	10.030
Dec 17 1999	24100.000 ppb	10.090
Dec 18 1999	29900.000 ppb	10.306
Dec 19 1999	28300.000 ppb	10.251
Dec 20 1999	28500.000 ppb	10.258
Dec 22 1999	34100.000 ppb	10.437
Dec 23 1999	48800.000 ppb	10.795
Dec 24 1999	32800.000 ppb	10.398

Well ID:13MW2 Summary Statistics

Observations (N): 30

Nondetects (%ND): 0

Minimum:	22200.000 ppb	Ln Minimum:	10.008
Maximum:	48800.000 ppb	Ln Maximum:	10.795
Mean:	27946.664 ppb	Ln Mean:	10.224
Std. Dev.:	5141.363 ppb	Ln Std. Dev.:	0.162

Normality Tests

Report Printed: 05-10-2005 17:19

Facility:RAAPHWMU13 Haz. Waste Unit 13 - RAAP

Address:

City:Radford ST:VA Zip:
County:PULASKI

Contact:
Phone:( ) -

Permit Type:Detection

Constituent:Sulfate Sulfate, total

CAS Number:14808-79-8
MCL: 0.000 ppb
ACL: 0.000 ppb
Detect Limit: 1000.000 ppb

Start Date:Mar 31 1996
End Date:Dec 30 1999

Normality Test on Observations for wells listed below:

Well:13MW1 Position:Upgradient Observations:31

Scale	Minimum	Maximum	Mean	Std Dev
Original:	34700.000	88000.000	62670.957	13583.912
Log:	10.454	11.385	11.020	0.235

Well:13MW2 Position:Upgradient Observations:30

Scale	Minimum	Maximum	Mean	Std Dev
Original:	22200.000	48800.000	27946.664	5141.363
Log:	10.008	10.795	10.224	0.162

Pooled Statistics
Observations: 61

Statistic	Original Scale	Log Scale
Mean:	45593.438	10.629
Std Dev:	20283.574	0.449
Skewness:	0.447	0.144
Kurtosis:	-1.253	-1.551
Minimum:	22200.000	10.008
Maximum:	88000.000	11.385

CV:	0.445	0.042

Shapiro-Francia Statistics

Scale	Test Statistic	5% Critical Value	1% Critical Value
Original:	0.8955*	0.9630	0.9470
Log:	0.9128*	0.9630	0.9470

* Indicates statistically significant evidence of non-normality.
GRIT/STAT Version 5.0

Nonparametric Prediction Interval
Report Printed May 10,2005

Facility:Haz. Waste Unit 13 - RAAP
Parameter:Sulfate, total(CAS Number:14808-79-8)

ONE-TAILED UPPER PARAMETRIC PREDICTION INTERVAL

Observations (n):	61
Conf. Level (1-α):	100.000%
UL:	88,000.0 ~~22200.000~~ ppb
LL:	0.000

% ND: 0

Report Produced by GRITS/STAT 5.01