Shaw Environmental & Infrastructure, Inc.

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Shaw The Shaw Group Inc.™

July 28, 2004

U. S. Army Engineer District, Nashville
ATTN: CELRN-EP-R-M (Linda Ingram)
110 Ninth Avenue South
U.S. Court House Annex
Nashville, TN 37203

Submittal of Analytical Data for the Groundwater Investigation, Plum Brook Ordnance Works, Sandusky, Ohio, Contract Number DACA62-00-D-0002

Dear Mrs. Ingram:

As required by the Scope of Work (SOW) for contract number DACA62-00-D-0002, enclosed are three copies of analytical data for the Plum Brook Ordnance Works (PBOW). The data sets contain analytical results from the following sampling events: Groundwater Sampling - December 2003. The data sets are separated into the following laboratory lot numbers: PB045 from Severn Trent Laboratories and F21096 from Accutest.

The reports include project sample data summaries, laboratory quality control summaries, case narratives, and chain-of-custody documentation.

If you have any questions or require additional information regarding this submittal, please call me at (865) 560-5271.

Sincerely,

Maureen F. McMyler

Maureen F. McMyler
Project Chemist

Enclosure

cc: Project file w/o enclosure

200-1e

G05OH001826_03.02_1021_a

Sample Cross-reference
Groundwater Wells
Former Plum Brook Ordnance Works
Sandusky, Ohio

Sample Type	Sample Location	Sample Number	Sample Date	Sample Purpose	Lot Number
GW	IT-BG8-BEDGW-001	DD3001	10-Dec-03	REG	PB045
GW	PB-BED-MW20	DD3002	9-Dec-03	REG	PB045
GW	PB-BED-MW24	DD3003	11-Dec-03	REG	PB045
GW	PB-BED-MW25	DD3004	11-Dec-03	REG	PB045
GW	PB-BED-MW25	DD3004-MS	11-Dec-03	MS	PB045
GW	PB-BED-MW25	DD3004-MSD	11-Dec-03	MSD	PB045
GW	PB-BED-MW25	DD3005	11-Dec-03	FD	PB045
GW	PB-BED-MW25	DD3006	11-Dec-03	FS	F21096
GW	PB-BED-MW28	DD3007	9-Dec-03	REG	PB045
GW	PB-BED-MW29	DD3008	9-Dec-03	REG	PB045

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SEVERN TRENT STL

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ANALYTICAL REPORT

PROJECT NO. 843656

PBOW
SDG #: PB045

Maureen McMyler

Shaw E & I Inc
312 Directors Dr
Knoxville, TN 37923

SEVERN TRENT LABORATORIES, INC.

Jamie A. McKinney
Project Manager

January 12, 2004

ANALYTICAL METHODS SUMMARY

PB045

PARAMETER	ANALYTICAL METHOD
Alkalinity	MCAWW 310.1
Chloride (Colorimetric, Automated Ferricyanide)	MCAWW 325.2
Cyanide, Total	SW846 9012A
Filterable Residue (TDS)	MCAWW 160.1
Mercury in Liquid Waste (Manual Cold-Vapor)	SW846 7470A
Nitrate	MCAWW 353.2
Nitroaromatics and Nitramines by HPLC	SW846 8330
Non-Filterable Residue (TSS)	MCAWW 160.2
Semivolatile Organic Compounds by GC/MS	SW846 8270C
Sulfate	MCAWW 375.4
Total Hardness (Titrimetric, EDTA)	MCAWW 130.2
Total Organic Carbon	SW846 9060
Trace Inductively Coupled Plasma (ICP) Metals	SW846 6010B
Turbidity (Nephelometric)	MCAWW 180.1
Volatile Organics by GC/MS	SW846 8260B

References:

MCAWW "Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-020, March 1983 and subsequent revisions.

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

SAMPLE SUMMARY

PB045 : H3L100268

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
F6DQ4	001	DD3007	12/09/03	13:20
F6DRG	002	DD3008	12/09/03	15:35
F6DRK	003	DD5001	12/09/03	

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.

(Continued on next page)

SAMPLE SUMMARY

PB045 : H3L110180

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
F6F1C	001	DD3002	12/10/03	12:00
F6F2H	002	DD3001	12/10/03	16:20
F6F3C	003	DD5002	12/10/03	

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.
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- This report must not be reproduced, except in full, without the written approval of the laboratory.
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(Continued on next page)

SAMPLE SUMMARY

PB045 : H3L120208

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
F6JXA	001	DD3003	12/11/03	10:35
F6JX2	002	DD3004	12/11/03	13:55
F6J0A	003	DD3005	12/11/03	13:55
F6J0Q	004	DD5003	12/11/03	

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.

PROJECT NARRATIVE
PB045

The results reported herein are applicable to the samples submitted for analysis only.

This report shall not be reproduced except in full, without the written approval of the laboratory.

The original chain of custody documentation is included with this report.

Sample Receipt

The collection date was not listed on the chain of custody for sample DD5001.

One of the explosive containers for samples DD3001 and DD3002 was received broken.

Sample DD3005 was listed on the STL North Canton chain of custody but was not received.

Subcontract

The following analyses were performed by STL North Canton Laboratory, 4101 Shuffel Drive, NW, North Canton, OH 44720, Hardness (MCAAW 130.2), Total Dissolved Solids (MCAAW 160.1), Total Suspended Solids (MCAAW 160.2), Turbidity (MCAAW 180.1), Alkalinity (MCAAW 310.1), Chloride (MCAAW 325.2), Nitrate (MCAAW 353.2), Sulfate (MCAAW 375.4), and Total Organic Carbon (SW846 9060).

Quality Control

Unless otherwise noted, all holding times and QC criteria were met and the test results shown in this report meet all applicable NELAC requirements.

Volatiles

Sample DD3003 was reported with elevated reporting limits for all analytes due to the presence of non-target compounds. A dilution was necessary prior to analysis, and the reporting limits were adjusted accordingly.

STL Knoxville maintains the following certifications, approvals and accreditations: Arkansas DEQ Cert. # 03-049-0, California DHS ELAP Cert. #2423, Colorado DPHE, Connecticut DPH Cert. #PH-0223, Florida DOH Cert. #E87177, Georgia DNR Cert. #906, Hawaii DOH, Illinois EPA Cert. # 000687, Indiana DOH Cert. #C-TN-02, Kansas DHE Cert. # E-10349, Kentucky DEP Lab ID #90101, Louisiana DEQ Cert. #03079, Louisiana DOHH Cert. #LA030024, Maryland DHMH Cert. #277, Massachusetts DEP Cert. #M-TN009, Michigan DEQ Lab ID #9933, New Jersey DEP Cert. #TN001, New York DOH Lab #10781, North Carolina DPH Lab ID #21705, North Carolina DEHNR Cert. #64, Oklahoma DEQ ID #9415, Pennsylvania DEP Cert. # 68-576, South Carolina DHEC Lab ID #84001001, Tennessee DOH Lab ID #02014, Utah DOH Cert. #QUAN3, Virginia DGS Lab ID #00165, Washington DOE Lab #C120, Wisconsin DNR Lab ID #998044300, US Army Corps of Engineers, Naval Facilities Engineering Service Center, US EPA Perchlorate Approval and USDA Soil Permit #S-46424. This list of approvals is subject to change and does not imply that laboratory certification is available for all parameters reported in this environmental sample data report.

PROJECT NARRATIVE
PB045

Semivolatiles

The recoveries for laboratory control sample F6H4R1AD were acceptable for all analytes except 4-chloro-3-methyl phenol. However, since the recovery was high, and no target analytes were detected in the associated samples, the data should not be affected.

The recoveries for laboratory control sample F6N421AC were acceptable for all analytes except phenol and 4-chloro-3-methyl phenol. However, since the recoveries were high, and no target analytes were detected in the associated samples, the data should not be affected.

The matrix spike/matrix spike duplicate recoveries for sample DD3004 were acceptable for all analytes except phenol and 4-chloro-3-methyl phenol. However, since the recoveries were high, and no target analytes were detected in the associated samples, the data should not be affected.

Explosives

The matrix spike/matrix spike duplicate recoveries and/or RPDs for sample DD3004 were acceptable for all analytes except tetryl. The laboratory control sample showed acceptable results indicating that the analysis was in control. The matrix spike/matrix spike duplicate results are, therefore, attributed to matrix effects.

Metals

The matrix spike/matrix spike duplicate recoveries for total metals for sample DD3004 were outside control limits for antimony. The laboratory control sample showed acceptable results indicating that the analysis was in control. The matrix spike results are, therefore, attributed to matrix effects.

The matrix spike/matrix spike duplicate recoveries for dissolved metals for sample DD3004 were outside control limits for calcium, potassium, and sodium. The laboratory control sample showed acceptable results indicating that the analysis was in control. The matrix spike results are, therefore, attributed to matrix effects.

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PROJECT NARRATIVE
PB045

Cyanide

A batch matrix spike/matrix spike duplicate was analyzed using a sample from this SDG. The matrix spike/matrix spike duplicate recoveries for the batch QC sample were outside control limits for cyanide. The laboratory control sample showed acceptable results indicating that the analysis was in control. The matrix spike results are, therefore, attributed to matrix effects.

The matrix spike/matrix spike duplicate recoveries for sample DD3004 were outside control limits for cyanide. The laboratory control samples showed acceptable results indicating that the analysis was in control. The matrix spike results are, therefore, attributed to matrix effects.

Turbidity

Samples DD3007, DD3008, DD3002, and DD3001 had not been homogenized when the samples were analyzed for turbidity. The samples will be analyzed again outside of holding time. Both sets of data were reported.

STL Knoxville maintains the following certifications, approvals and accreditations: Arkansas DEQ Cert. # 03-049-0, California DHS ELAP Cert. #2423, Colorado DPHE, Connecticut DPH Cert. #PH-0223, Florida DOH Cert. #E87177, Georgia DNR Cert. #906, Hawaii DOH, Illinois EPA Cert. # 000687, Indiana DOH Cert. #C-TN-02, Kansas DHE Cert. # E-10349, Kentucky DEP Lab ID #90101, Louisiana DEQ Cert. #03079, Louisiana DOHH Cert. #LA030024, Maryland DHMH Cert. #277, Massachusetts DEP Cert. #M-TN009, Michigan DEQ Lab ID #9933, New Jersey DEP Cert. #TN001, New York DOH Lab #10781, North Carolina DPH Lab ID #21705, North Carolina DEHNR Cert. #64, Oklahoma DEQ ID #9415, Pennsylvania DEP Cert. # 68-576, South Carolina DHEC Lab ID #84001001, Tennessee DOH Lab ID #02014, Utah DOH Cert. #QUAN3, Virginia DGS Lab ID #00165, Washington DOE Lab #C120, Wisconsin DNR Lab ID #998044300, US Army Corps of Engineers, Naval Facilities Engineering Service Center, US EPA Perchlorate Approval and USDA Soil Permit #S-46424. This list of approvals is subject to change and does not imply that laboratory certification is available for all parameters reported in this environmental sample data report.

Sample Data Summary

SHAW E & I INC

Client Sample ID: DD3007

GC/MS Volatiles

Lot-Sample #...: H3L100268-001 **Work Order #...:** F6DQ41AC **Matrix.....:** WATER
Date Sampled...: 12/09/03 **Date Received..:** 12/10/03
Prep Date.....: 12/11/03 **Analysis Date..:** 12/11/03
Prep Batch #...: 3345349
Dilution Factor: 1 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Chloromethane	**0.97 J**	**2.0**	**ug/L**	**0.12**
Bromomethane	ND	2.0	ug/L	0.38
Vinyl chloride	ND	1.0	ug/L	0.24
Chloroethane	ND	2.0	ug/L	0.24
Methylene chloride	ND	2.0	ug/L	0.23
Acetone	ND	10	ug/L	1.4
Carbon disulfide	ND	1.0	ug/L	0.10
1,1-Dichloroethene	ND	1.0	ug/L	0.10
1,1-Dichloroethane	ND	1.0	ug/L	0.10
1,2-Dichloroethene (total)	ND	1.0	ug/L	0.20
Chloroform	ND	1.0	ug/L	0.10
1,2-Dichloroethane	ND	1.0	ug/L	0.10
2-Butanone	ND	5.0	ug/L	0.75
1,1,1-Trichloroethane	ND	1.0	ug/L	0.10
Carbon tetrachloride	ND	1.0	ug/L	0.12
Bromodichloromethane	ND	1.0	ug/L	0.10
1,2-Dichloropropane	ND	1.0	ug/L	0.10
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.10
Trichloroethene	ND	1.0	ug/L	0.10
Dibromochloromethane	ND	1.0	ug/L	0.20
1,1,2-Trichloroethane	ND	1.0	ug/L	0.25
Benzene	**2.2**	**1.0**	**ug/L**	**0.10**
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.11
Bromoform	ND	1.0	ug/L	0.14
4-Methyl-2-pentanone	ND	5.0	ug/L	0.40
2-Hexanone	ND	5.0	ug/L	0.76
Tetrachloroethene	ND	1.0	ug/L	0.10
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.15
Toluene	**0.62 J**	**1.0**	**ug/L**	**0.10**
Chlorobenzene	ND	1.0	ug/L	0.10
Ethylbenzene	**0.13 J**	**1.0**	**ug/L**	**0.10**
Styrene	ND	1.0	ug/L	0.10
Xylenes (total)	**0.41 J**	**1.0**	**ug/L**	**0.30**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	97	(79 - 120)
1,2-Dichloroethane-d4	96	(71 - 127)
Toluene-d8	103	(80 - 120)
Bromofluorobenzene	93	(69 - 126)

(Continued on next page)

SHAW E & I INC

Client Sample ID: DD3007

GC/MS Volatiles

Lot-Sample #...: H3L100268-001 **Work Order #...:** F6DQ41AC **Matrix.....:** WATER

NOTE(S):

J Estimated result. Result is less than RL.

SHAW E & I INC

Client Sample ID: DD3008

GC/MS Volatiles

Lot-Sample #...: H3L100268-002 **Work Order #...:** F6DRG1AN **Matrix.....:** WATER
Date Sampled...: 12/09/03 **Date Received..:** 12/10/03
Prep Date.....: 12/11/03 **Analysis Date..:** 12/11/03
Prep Batch #...: 3345349
Dilution Factor: 1 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Chloromethane	**0.30 J**	**2.0**	**ug/L**	**0.12**
Bromomethane	ND	2.0	ug/L	0.38
Vinyl chloride	ND	1.0	ug/L	0.24
Chloroethane	ND	2.0	ug/L	0.24
Methylene chloride	ND	2.0	ug/L	0.23
Acetone	ND	10	ug/L	1.4
Carbon disulfide	**13**	**1.0**	**ug/L**	**0.10**
1,1-Dichloroethene	ND	1.0	ug/L	0.10
1,1-Dichloroethane	ND	1.0	ug/L	0.10
1,2-Dichloroethene (total)	ND	1.0	ug/L	0.20
Chloroform	ND	1.0	ug/L	0.10
1,2-Dichloroethane	ND	1.0	ug/L	0.10
2-Butanone	ND	5.0	ug/L	0.75
1,1,1-Trichloroethane	ND	1.0	ug/L	0.10
Carbon tetrachloride	ND	1.0	ug/L	0.12
Bromodichloromethane	ND	1.0	ug/L	0.10
1,2-Dichloropropane	ND	1.0	ug/L	0.10
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.10
Trichloroethene	ND	1.0	ug/L	0.10
Dibromochloromethane	ND	1.0	ug/L	0.20
1,1,2-Trichloroethane	ND	1.0	ug/L	0.25
Benzene	**0.96 J**	**1.0**	**ug/L**	**0.10**
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.11
Bromoform	ND	1.0	ug/L	0.14
4-Methyl-2-pentanone	ND	5.0	ug/L	0.40
2-Hexanone	ND	5.0	ug/L	0.76
Tetrachloroethene	ND	1.0	ug/L	0.10
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.15
Toluene	ND	1.0	ug/L	0.10
Chlorobenzene	ND	1.0	ug/L	0.10
Ethylbenzene	**0.87 J**	**1.0**	**ug/L**	**0.10**
Styrene	ND	1.0	ug/L	0.10
Xylenes (total)	**5.1**	**1.0**	**ug/L**	**0.30**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	101	(79 - 120)
1,2-Dichloroethane-d4	102	(71 - 127)
Toluene-d8	101	(80 - 120)
Bromofluorobenzene	93	(69 - 126)

(Continued on next page)

SHAW E & I INC

Client Sample ID: DD3008

GC/MS Volatiles

Lot-Sample #...: H3L100268-002 Work Order #...: F6DRG1AN Matrix.....: WATER

NOTE(S):

J Estimated result. Result is less than RL.

SHAW E & I INC

Client Sample ID: DD5001

GC/MS Volatiles

Lot-Sample #...: H3L100268-003 **Work Order #...:** F6DRK1AA **Matrix.....:** WATER
Date Sampled...: 12/09/03 **Date Received..:** 12/10/03
Prep Date.....: 12/11/03 **Analysis Date..:** 12/11/03
Prep Batch #...: 3345349
Dilution Factor: 1 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Chloromethane	ND	2.0	ug/L	0.12
Bromomethane	ND	2.0	ug/L	0.38
Vinyl chloride	ND	1.0	ug/L	0.24
Chloroethane	ND	2.0	ug/L	0.24
Methylene chloride	ND	2.0	ug/L	0.23
Acetone	ND	10	ug/L	1.4
Carbon disulfide	**0.13 J**	**1.0**	**ug/L**	**0.10**
1,1-Dichloroethene	ND	1.0	ug/L	0.10
1,1-Dichloroethane	ND	1.0	ug/L	0.10
1,2-Dichloroethene (total)	ND	1.0	ug/L	0.20
Chloroform	ND	1.0	ug/L	0.10
1,2-Dichloroethane	ND	1.0	ug/L	0.10
2-Butanone	ND	5.0	ug/L	0.75
1,1,1-Trichloroethane	ND	1.0	ug/L	0.10
Carbon tetrachloride	ND	1.0	ug/L	0.12
Bromodichloromethane	ND	1.0	ug/L	0.10
1,2-Dichloropropane	ND	1.0	ug/L	0.10
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.10
Trichloroethene	ND	1.0	ug/L	0.10
Dibromochloromethane	ND	1.0	ug/L	0.20
1,1,2-Trichloroethane	ND	1.0	ug/L	0.25
Benzene	ND	1.0	ug/L	0.10
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.11
Bromoform	ND	1.0	ug/L	0.14
4-Methyl-2-pentanone	ND	5.0	ug/L	0.40
2-Hexanone	ND	5.0	ug/L	0.76
Tetrachloroethene	ND	1.0	ug/L	0.10
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.15
Toluene	ND	1.0	ug/L	0.10
Chlorobenzene	ND	1.0	ug/L	0.10
Ethylbenzene	ND	1.0	ug/L	0.10
Styrene	ND	1.0	ug/L	0.10
Xylenes (total)	ND	1.0	ug/L	0.30

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	104	(79 - 120)
1,2-Dichloroethane-d4	100	(71 - 127)
Toluene-d8	102	(80 - 120)
Bromofluorobenzene	91	(69 - 126)

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SHAW E & I INC

Client Sample ID: DD5001

GC/MS Volatiles

Lot-Sample #...: H3L100268-003 Work Order #...: F6DRK1AA Matrix.....: WATER

NOTE(S):

J Estimated result. Result is less than RL.

SHAW E & I INC

Client Sample ID: DD3002

GC/MS Volatiles

Lot-Sample #...: H3L110180-001 **Work Order #...:** F6F1C1AC **Matrix.....:** WATER
Date Sampled...: 12/10/03 **Date Received..:** 12/11/03
Prep Date.....: 12/11/03 **Analysis Date..:** 12/11/03
Prep Batch #...: 3345349
Dilution Factor: 1 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Chloromethane	ND	2.0	ug/L	0.12
Bromomethane	ND	2.0	ug/L	0.38
Vinyl chloride	ND	1.0	ug/L	0.24
Chloroethane	ND	2.0	ug/L	0.24
Methylene chloride	ND	2.0	ug/L	0.23
Acetone	ND	10	ug/L	1.4
Carbon disulfide	**0.16 J**	**1.0**	**ug/L**	**0.10**
1,1-Dichloroethene	ND	1.0	ug/L	0.10
1,1-Dichloroethane	ND	1.0	ug/L	0.10
1,2-Dichloroethene (total)	ND	1.0	ug/L	0.20
Chloroform	ND	1.0	ug/L	0.10
1,2-Dichloroethane	ND	1.0	ug/L	0.10
2-Butanone	ND	5.0	ug/L	0.75
1,1,1-Trichloroethane	ND	1.0	ug/L	0.10
Carbon tetrachloride	ND	1.0	ug/L	0.12
Bromodichloromethane	ND	1.0	ug/L	0.10
1,2-Dichloropropane	ND	1.0	ug/L	0.10
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.10
Trichloroethene	ND	1.0	ug/L	0.10
Dibromochloromethane	ND	1.0	ug/L	0.20
1,1,2-Trichloroethane	ND	1.0	ug/L	0.25
Benzene	**1.2**	**1.0**	**ug/L**	**0.10**
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.11
Bromoform	ND	1.0	ug/L	0.14
4-Methyl-2-pentanone	ND	5.0	ug/L	0.40
2-Hexanone	ND	5.0	ug/L	0.76
Tetrachloroethene	ND	1.0	ug/L	0.10
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.15
Toluene	**0.26 J**	**1.0**	**ug/L**	**0.10**
Chlorobenzene	ND	1.0	ug/L	0.10
Ethylbenzene	ND	1.0	ug/L	0.10
Styrene	ND	1.0	ug/L	0.10
Xylenes (total)	ND	1.0	ug/L	0.30

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	105	(79 - 120)
1,2-Dichloroethane-d4	110	(71 - 127)
Toluene-d8	95	(80 - 120)
Bromofluorobenzene	90	(69 - 126)

(Continued on next page)

SHAW E & I INC

Client Sample ID: DD3002

GC/MS Volatiles

Lot-Sample #...: H3L110180-001 Work Order #...: F6F1C1AC Matrix.....: WATER

NOTE(S):

J Estimated result. Result is less than RL.

SHAW E & I INC

Client Sample ID: DD3001

GC/MS Volatiles

Lot-Sample #...: H3L110180-002 **Work Order #...:** F6F2H1AN **Matrix.....:** WATER
Date Sampled...: 12/10/03 **Date Received..:** 12/11/03
Prep Date.....: 12/11/03 **Analysis Date..:** 12/11/03
Prep Batch #...: 3345349
Dilution Factor: 1 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Chloromethane	**0.26 J**	**2.0**	**ug/L**	**0.12**
Bromomethane	ND	2.0	ug/L	0.38
Vinyl chloride	ND	1.0	ug/L	0.24
Chloroethane	ND	2.0	ug/L	0.24
Methylene chloride	ND	2.0	ug/L	0.23
Acetone	ND	10	ug/L	1.4
Carbon disulfide	**0.30 J**	**1.0**	**ug/L**	**0.10**
1,1-Dichloroethene	ND	1.0	ug/L	0.10
1,1-Dichloroethane	ND	1.0	ug/L	0.10
1,2-Dichloroethene (total)	ND	1.0	ug/L	0.20
Chloroform	ND	1.0	ug/L	0.10
1,2-Dichloroethane	ND	1.0	ug/L	0.10
2-Butanone	ND	5.0	ug/L	0.75
1,1,1-Trichloroethane	ND	1.0	ug/L	0.10
Carbon tetrachloride	ND	1.0	ug/L	0.12
Bromodichloromethane	ND	1.0	ug/L	0.10
1,2-Dichloropropane	ND	1.0	ug/L	0.10
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.10
Trichloroethene	ND	1.0	ug/L	0.10
Dibromochloromethane	ND	1.0	ug/L	0.20
1,1,2-Trichloroethane	ND	1.0	ug/L	0.25
Benzene	ND	1.0	ug/L	0.10
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.11
Bromoform	ND	1.0	ug/L	0.14
4-Methyl-2-pentanone	ND	5.0	ug/L	0.40
2-Hexanone	ND	5.0	ug/L	0.76
Tetrachloroethene	ND	1.0	ug/L	0.10
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.15
Toluene	ND	1.0	ug/L	0.10
Chlorobenzene	ND	1.0	ug/L	0.10
Ethylbenzene	ND	1.0	ug/L	0.10
Styrene	ND	1.0	ug/L	0.10
Xylenes (total)	ND	1.0	ug/L	0.30

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	98	(79 - 120)
1,2-Dichloroethane-d4	102	(71 - 127)
Toluene-d8	101	(80 - 120)
Bromofluorobenzene	90	(69 - 126)

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SHAW E & I INC

Client Sample ID: DD3001

GC/MS Volatiles

Lot-Sample #...: H3L110180-002 Work Order #...: F6F2H1AN Matrix.....: WATER

NOTE(S):

J Estimated result. Result is less than RL.

SHAW E & I INC

Client Sample ID: DD5002

GC/MS Volatiles

Lot-Sample #...: H3L110180-003 **Work Order #...:** F6F3C1AA **Matrix.....:** WATER
Date Sampled...: 12/10/03 **Date Received..:** 12/11/03
Prep Date.....: 12/11/03 **Analysis Date..:** 12/11/03
Prep Batch #...: 3345349
Dilution Factor: 1 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Chloromethane	ND	2.0	ug/L	0.12
Bromomethane	ND	2.0	ug/L	0.38
Vinyl chloride	ND	1.0	ug/L	0.24
Chloroethane	ND	2.0	ug/L	0.24
Methylene chloride	ND	2.0	ug/L	0.23
Acetone	ND	10	ug/L	1.4
Carbon disulfide	ND	1.0	ug/L	0.10
1,1-Dichloroethene	ND	1.0	ug/L	0.10
1,1-Dichloroethane	ND	1.0	ug/L	0.10
1,2-Dichloroethene (total)	ND	1.0	ug/L	0.20
Chloroform	**0.29 J**	**1.0**	**ug/L**	**0.10**
1,2-Dichloroethane	ND	1.0	ug/L	0.10
2-Butanone	ND	5.0	ug/L	0.75
1,1,1-Trichloroethane	ND	1.0	ug/L	0.10
Carbon tetrachloride	ND	1.0	ug/L	0.12
Bromodichloromethane	ND	1.0	ug/L	0.10
1,2-Dichloropropane	ND	1.0	ug/L	0.10
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.10
Trichloroethene	ND	1.0	ug/L	0.10
Dibromochloromethane	ND	1.0	ug/L	0.20
1,1,2-Trichloroethane	ND	1.0	ug/L	0.25
Benzene	ND	1.0	ug/L	0.10
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.11
Bromoform	ND	1.0	ug/L	0.14
4-Methyl-2-pentanone	ND	5.0	ug/L	0.40
2-Hexanone	ND	5.0	ug/L	0.76
Tetrachloroethene	ND	1.0	ug/L	0.10
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.15
Toluene	**0.13 J**	**1.0**	**ug/L**	**0.10**
Chlorobenzene	ND	1.0	ug/L	0.10
Ethylbenzene	ND	1.0	ug/L	0.10
Styrene	ND	1.0	ug/L	0.10
Xylenes (total)	ND	1.0	ug/L	0.30

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	100	(79 - 120)
1,2-Dichloroethane-d4	101	(71 - 127)
Toluene-d8	102	(80 - 120)
Bromofluorobenzene	92	(69 - 126)

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SHAW E & I INC

Client Sample ID: DD5002

GC/MS Volatiles

Lot-Sample #...: H3L110180-003 Work Order #...: F6F3C1AA Matrix.....: WATER

NOTE(S):

J Estimated result. Result is less than RL.

SHAW E & I INC

Client Sample ID: DD3003

GC/MS Volatiles

Lot-Sample #...: H3L120208-001 **Work Order #...:** F6JXA1AC **Matrix.....:** WATER
Date Sampled...: 12/11/03 **Date Received..:** 12/12/03
Prep Date.....: 12/15/03 **Analysis Date..:** 12/15/03
Prep Batch #...: 3349684
Dilution Factor: 10 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Chloromethane	ND	20	ug/L	1.2
Bromomethane	ND	20	ug/L	3.8
Vinyl chloride	ND	10	ug/L	2.4
Chloroethane	ND	20	ug/L	2.4
Methylene chloride	ND	20	ug/L	2.3
Acetone	ND	100	ug/L	14
Carbon disulfide	**3.4 J**	**10**	**ug/L**	**1.0**
1,1-Dichloroethene	ND	10	ug/L	1.0
1,1-Dichloroethane	ND	10	ug/L	1.0
1,2-Dichloroethene (total)	ND	10	ug/L	2.0
Chloroform	ND	10	ug/L	1.0
1,2-Dichloroethane	ND	10	ug/L	1.0
2-Butanone	ND	50	ug/L	7.5
1,1,1-Trichloroethane	ND	10	ug/L	1.0
Carbon tetrachloride	ND	10	ug/L	1.2
Bromodichloromethane	ND	10	ug/L	1.0
1,2-Dichloropropane	ND	10	ug/L	1.0
cis-1,3-Dichloropropene	ND	10	ug/L	1.0
Trichloroethene	ND	10	ug/L	1.0
Dibromochloromethane	ND	10	ug/L	2.0
1,1,2-Trichloroethane	ND	10	ug/L	2.5
Benzene	**36**	**10**	**ug/L**	**1.0**
trans-1,3-Dichloropropene	ND	10	ug/L	1.1
Bromoform	ND	10	ug/L	1.4
4-Methyl-2-pentanone	ND	50	ug/L	4.0
2-Hexanone	ND	50	ug/L	7.6
Tetrachloroethene	ND	10	ug/L	1.0
1,1,2,2-Tetrachloroethane	ND	10	ug/L	1.5
Toluene	**31**	**10**	**ug/L**	**1.0**
Chlorobenzene	ND	10	ug/L	1.0
Ethylbenzene	**10**	**10**	**ug/L**	**1.0**
Styrene	ND	10	ug/L	1.0
Xylenes (total)	**50**	**10**	**ug/L**	**3.0**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	98	(79 - 120)
1,2-Dichloroethane-d4	98	(71 - 127)
Toluene-d8	98	(80 - 120)
Bromofluorobenzene	87	(69 - 126)

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SHAW E & I INC

Client Sample ID: DD3003

GC/MS Volatiles

Lot-Sample #...: H3L120208-001 Work Order #...: F6JXA1AC Matrix.....: WATER

NOTE(S):

J Estimated result. Result is less than RL.

SHAW E & I INC

Client Sample ID: DD3004

GC/MS Volatiles

Lot-Sample #...: H3L120208-002 **Work Order #...:** F6JX21CE **Matrix.....:** WATER
Date Sampled...: 12/11/03 **Date Received..:** 12/12/03
Prep Date.....: 12/15/03 **Analysis Date..:** 12/15/03
Prep Batch #...: 3349684
Dilution Factor: 1 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Chloromethane	ND	2.0	ug/L	0.12
Bromomethane	ND	2.0	ug/L	0.38
Vinyl chloride	ND	1.0	ug/L	0.24
Chloroethane	ND	2.0	ug/L	0.24
Methylene chloride	ND	2.0	ug/L	0.23
Acetone	ND	10	ug/L	1.4
Carbon disulfide	**0.77 J**	**1.0**	**ug/L**	**0.10**
1,1-Dichloroethene	ND	1.0	ug/L	0.10
1,1-Dichloroethane	ND	1.0	ug/L	0.10
1,2-Dichloroethene (total)	ND	1.0	ug/L	0.20
Chloroform	ND	1.0	ug/L	0.10
1,2-Dichloroethane	ND	1.0	ug/L	0.10
2-Butanone	ND	5.0	ug/L	0.75
1,1,1-Trichloroethane	ND	1.0	ug/L	0.10
Carbon tetrachloride	ND	1.0	ug/L	0.12
Bromodichloromethane	ND	1.0	ug/L	0.10
1,2-Dichloropropane	ND	1.0	ug/L	0.10
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.10
Trichloroethene	ND	1.0	ug/L	0.10
Dibromochloromethane	ND	1.0	ug/L	0.20
1,1,2-Trichloroethane	ND	1.0	ug/L	0.25
Benzene	ND	1.0	ug/L	0.10
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.11
Bromoform	ND	1.0	ug/L	0.14
4-Methyl-2-pentanone	ND	5.0	ug/L	0.40
2-Hexanone	ND	5.0	ug/L	0.76
Tetrachloroethene	ND	1.0	ug/L	0.10
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.15
Toluene	ND	1.0	ug/L	0.10
Chlorobenzene	ND	1.0	ug/L	0.10
Ethylbenzene	ND	1.0	ug/L	0.10
Styrene	ND	1.0	ug/L	0.10
Xylenes (total)	ND	1.0	ug/L	0.30

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	91	(79 - 120)
1,2-Dichloroethane-d4	92	(71 - 127)
Toluene-d8	98	(80 - 120)
Bromofluorobenzene	88	(69 - 126)

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SHAW E & I INC

Client Sample ID: DD3004

GC/MS Volatiles

Lot-Sample #...: H3L120208-002 Work Order #...: F6JX21CE Matrix.....: WATER

NOTE(S):

J Estimated result. Result is less than RL.

SHAW E & I INC

Client Sample ID: DD3005

GC/MS Volatiles

Lot-Sample #...: H3L120208-003 **Work Order #...:** F6J0A1AN **Matrix.....:** WATER
Date Sampled...: 12/11/03 **Date Received..:** 12/12/03
Prep Date.....: 12/15/03 **Analysis Date..:** 12/16/03
Prep Batch #...: 3349684
Dilution Factor: 1 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Chloromethane	ND	2.0	ug/L	0.12
Bromomethane	ND	2.0	ug/L	0.38
Vinyl chloride	ND	1.0	ug/L	0.24
Chloroethane	ND	2.0	ug/L	0.24
Methylene chloride	ND	2.0	ug/L	0.23
Acetone	ND	10	ug/L	1.4
Carbon disulfide	**1.4**	**1.0**	**ug/L**	**0.10**
1,1-Dichloroethene	ND	1.0	ug/L	0.10
1,1-Dichloroethane	ND	1.0	ug/L	0.10
1,2-Dichloroethene (total)	ND	1.0	ug/L	0.20
Chloroform	ND	1.0	ug/L	0.10
1,2-Dichloroethane	ND	1.0	ug/L	0.10
2-Butanone	ND	5.0	ug/L	0.75
1,1,1-Trichloroethane	ND	1.0	ug/L	0.10
Carbon tetrachloride	ND	1.0	ug/L	0.12
Bromodichloromethane	ND	1.0	ug/L	0.10
1,2-Dichloropropane	ND	1.0	ug/L	0.10
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.10
Trichloroethene	ND	1.0	ug/L	0.10
Dibromochloromethane	ND	1.0	ug/L	0.20
1,1,2-Trichloroethane	ND	1.0	ug/L	0.25
Benzene	ND	1.0	ug/L	0.10
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.11
Bromoform	ND	1.0	ug/L	0.14
4-Methyl-2-pentanone	ND	5.0	ug/L	0.40
2-Hexanone	ND	5.0	ug/L	0.76
Tetrachloroethene	ND	1.0	ug/L	0.10
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.15
Toluene	ND	1.0	ug/L	0.10
Chlorobenzene	ND	1.0	ug/L	0.10
Ethylbenzene	ND	1.0	ug/L	0.10
Styrene	ND	1.0	ug/L	0.10
Xylenes (total)	ND	1.0	ug/L	0.30

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	91	(79 - 120)
1,2-Dichloroethane-d4	90	(71 - 127)
Toluene-d8	98	(80 - 120)
Bromofluorobenzene	86	(69 - 126)

SHAW E & I INC

Client Sample ID: DD5003

GC/MS Volatiles

Lot-Sample #...: H3L120208-004 **Work Order #...:** F6J0Q1AA **Matrix.....:** WATER
Date Sampled...: 12/11/03 **Date Received..:** 12/12/03
Prep Date.....: 12/15/03 **Analysis Date..:** 12/16/03
Prep Batch #...: 3349684
Dilution Factor: 1 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Chloromethane	ND	2.0	ug/L	0.12
Bromomethane	ND	2.0	ug/L	0.38
Vinyl chloride	ND	1.0	ug/L	0.24
Chloroethane	ND	2.0	ug/L	0.24
Methylene chloride	ND	2.0	ug/L	0.23
Acetone	ND	10	ug/L	1.4
Carbon disulfide	ND	1.0	ug/L	0.10
1,1-Dichloroethene	ND	1.0	ug/L	0.10
1,1-Dichloroethane	ND	1.0	ug/L	0.10
1,2-Dichloroethene (total)	ND	1.0	ug/L	0.20
Chloroform	**0.25 J**	**1.0**	**ug/L**	**0.10**
1,2-Dichloroethane	ND	1.0	ug/L	0.10
2-Butanone	ND	5.0	ug/L	0.75
1,1,1-Trichloroethane	ND	1.0	ug/L	0.10
Carbon tetrachloride	ND	1.0	ug/L	0.12
Bromodichloromethane	ND	1.0	ug/L	0.10
1,2-Dichloropropane	ND	1.0	ug/L	0.10
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.10
Trichloroethene	ND	1.0	ug/L	0.10
Dibromochloromethane	ND	1.0	ug/L	0.20
1,1,2-Trichloroethane	ND	1.0	ug/L	0.25
Benzene	ND	1.0	ug/L	0.10
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.11
Bromoform	ND	1.0	ug/L	0.14
4-Methyl-2-pentanone	ND	5.0	ug/L	0.40
2-Hexanone	ND	5.0	ug/L	0.76
Tetrachloroethene	ND	1.0	ug/L	0.10
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.15
Toluene	**0.12 J**	**1.0**	**ug/L**	**0.10**
Chlorobenzene	ND	1.0	ug/L	0.10
Ethylbenzene	ND	1.0	ug/L	0.10
Styrene	ND	1.0	ug/L	0.10
Xylenes (total)	ND	1.0	ug/L	0.30

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	94	(79 - 120)
1,2-Dichloroethane-d4	95	(71 - 127)
Toluene-d8	100	(80 - 120)
Bromofluorobenzene	89	(69 - 126)

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SHAW E & I INC

Client Sample ID: DD5003

GC/MS Volatiles

Lot-Sample #...: H3L120208-004 Work Order #...: F6J0Q1AA Matrix.....: WATER

NOTE(S):

J Estimated result. Result is less than RL.

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: PB045 **Work Order #...:** F6FW31AA **Matrix.....:** WATER
MB Lot-Sample #: H3L110000-349

Prep Date.....: 12/11/03
Analysis Date..: 12/11/03 **Prep Batch #...:** 3345349
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Chloromethane	ND	2.0	ug/L	SW846 8260B
Bromomethane	ND	2.0	ug/L	SW846 8260B
Vinyl chloride	ND	1.0	ug/L	SW846 8260B
Chloroethane	ND	2.0	ug/L	SW846 8260B
Methylene chloride	ND	2.0	ug/L	SW846 8260B
Acetone	ND	10	ug/L	SW846 8260B
Carbon disulfide	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethene (total)	ND	1.0	ug/L	SW846 8260B
Chloroform	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B
2-Butanone	ND	5.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
Trichloroethene	ND	1.0	ug/L	SW846 8260B
Dibromochloromethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Benzene	ND	1.0	ug/L	SW846 8260B
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
Bromoform	ND	1.0	ug/L	SW846 8260B
4-Methyl-2-pentanone	ND	5.0	ug/L	SW846 8260B
2-Hexanone	ND	5.0	ug/L	SW846 8260B
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
Toluene	ND	1.0	ug/L	SW846 8260B
Chlorobenzene	ND	1.0	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B
Styrene	ND	1.0	ug/L	SW846 8260B
Xylenes (total)	ND	1.0	ug/L	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	103	(79 - 120)
1,2-Dichloroethane-d4	104	(71 - 127)
Toluene-d8	101	(80 - 120)
Bromofluorobenzene	94	(69 - 126)

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METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: PB045 **Work Order #...:** F6FW31AA **Matrix.....:** WATER

NOTE(S):

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

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: PB045 **Work Order #...:** F6FW31AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: H3L110000-349 F6FW31AD-LCSD
Prep Date.....: 12/11/03 **Analysis Date..:** 12/11/03
Prep Batch #...: 3345349
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,1-Dichloroethene	**95**	**(70 - 128)**			**SW846 8260B**
	111	**(70 - 128)**	**16**	**(0-26)**	**SW846 8260B**
Trichloroethene	**94**	**(80 - 121)**			**SW846 8260B**
	115	**(80 - 121)**	**19**	**(0-20)**	**SW846 8260B**
Benzene	**85**	**(80 - 121)**			**SW846 8260B**
	101	**(80 - 121)**	**17**	**(0-20)**	**SW846 8260B**
Toluene	**84**	**(77 - 124)**			**SW846 8260B**
	97	**(77 - 124)**	**14**	**(0-20)**	**SW846 8260B**
Chlorobenzene	**83**	**(80 - 121)**			**SW846 8260B**
	94	**(80 - 121)**	**12**	**(0-20)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	96	(79 - 120)
	96	(79 - 120)
1,2-Dichloroethane-d4	93	(71 - 127)
	95	(71 - 127)
Toluene-d8	104	(80 - 120)
	102	(80 - 120)
Bromofluorobenzene	95	(69 - 126)
	96	(69 - 126)

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

GC/MS Volatiles

Client Lot #...: PB045 **Work Order #...:** F6FW31AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: H3L110000-349 F6FW31AD-LCSD
Prep Date.....: 12/11/03 **Analysis Date..:** 12/11/03
Prep Batch #...: 3345349
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
1,1-Dichloroethene	**10.0**	**9.46**	**ug/L**	**95**		**SW846 8260B**
	10.0	**11.1**	**ug/L**	**111**	**16**	**SW846 8260B**
Trichloroethene	**10.0**	**9.44**	**ug/L**	**94**		**SW846 8260B**
	10.0	**11.5**	**ug/L**	**115**	**19**	**SW846 8260B**
Benzene	**10.0**	**8.53**	**ug/L**	**85**		**SW846 8260B**
	10.0	**10.1**	**ug/L**	**101**	**17**	**SW846 8260B**
Toluene	**10.0**	**8.40**	**ug/L**	**84**		**SW846 8260B**
	10.0	**9.70**	**ug/L**	**97**	**14**	**SW846 8260B**
Chlorobenzene	**10.0**	**8.31**	**ug/L**	**83**		**SW846 8260B**
	10.0	**9.39**	**ug/L**	**94**	**12**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	96	(79 - 120)
	96	(79 - 120)
1,2-Dichloroethane-d4	93	(71 - 127)
	95	(71 - 127)
Toluene-d8	104	(80 - 120)
	102	(80 - 120)
Bromofluorobenzene	95	(69 - 126)
	96	(69 - 126)

NOTE(S):

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

Bold print denotes control parameters

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: PB045 **Work Order #...:** F6P8J1AA **Matrix.....:** WATER
MB Lot-Sample #: H3L150000-684

Prep Date.....: 12/15/03
Analysis Date..: 12/15/03 **Prep Batch #...:** 3349684
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Chloromethane	ND	2.0	ug/L	SW846 8260B
Bromomethane	ND	2.0	ug/L	SW846 8260B
Vinyl chloride	ND	1.0	ug/L	SW846 8260B
Chloroethane	ND	2.0	ug/L	SW846 8260B
Methylene chloride	ND	2.0	ug/L	SW846 8260B
Acetone	ND	10	ug/L	SW846 8260B
Carbon disulfide	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethene (total)	ND	1.0	ug/L	SW846 8260B
Chloroform	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B
2-Butanone	ND	5.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
Trichloroethene	ND	1.0	ug/L	SW846 8260B
Dibromochloromethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Benzene	ND	1.0	ug/L	SW846 8260B
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
Bromoform	ND	1.0	ug/L	SW846 8260B
4-Methyl-2-pentanone	ND	5.0	ug/L	SW846 8260B
2-Hexanone	ND	5.0	ug/L	SW846 8260B
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
Toluene	ND	1.0	ug/L	SW846 8260B
Chlorobenzene	ND	1.0	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B
Styrene	ND	1.0	ug/L	SW846 8260B
Xylenes (total)	ND	1.0	ug/L	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	98	(79 - 120)
1,2-Dichloroethane-d4	99	(71 - 127)
Toluene-d8	98	(80 - 120)
Bromofluorobenzene	87	(69 - 126)

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METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: PB045 **Work Order #...:** F6P8J1AA **Matrix.....:** WATER

NOTE(S):

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

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: PB045 **Work Order #...:** F6P8J1AC **Matrix.....:** WATER
LCS Lot-Sample#: H3L150000-684
Prep Date.....: 12/15/03 **Analysis Date..:** 12/15/03
Prep Batch #...: 3349684
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
1,1-Dichloroethene	**115**	**(70 - 128)**	**SW846 8260B**
Trichloroethene	**118**	**(80 - 121)**	**SW846 8260B**
Benzene	**107**	**(80 - 121)**	**SW846 8260B**
Toluene	**96**	**(77 - 124)**	**SW846 8260B**
Chlorobenzene	**96**	**(80 - 121)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	95	(79 - 120)
1,2-Dichloroethane-d4	92	(71 - 127)
Toluene-d8	96	(80 - 120)
Bromofluorobenzene	90	(69 - 126)

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

GC/MS Volatiles

Client Lot #...: PB045 **Work Order #...:** F6P8J1AC **Matrix.....:** WATER
LCS Lot-Sample#: H3L150000-684
Prep Date.....: 12/15/03 **Analysis Date..:** 12/15/03
Prep Batch #...: 3349684
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
1,1-Dichloroethene	**10.0**	**11.5**	**ug/L**	**115**	**SW846 8260B**
Trichloroethene	**10.0**	**11.8**	**ug/L**	**118**	**SW846 8260B**
Benzene	**10.0**	**10.7**	**ug/L**	**107**	**SW846 8260B**
Toluene	**10.0**	**9.64**	**ug/L**	**96**	**SW846 8260B**
Chlorobenzene	**10.0**	**9.58**	**ug/L**	**96**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	95	(79 - 120)
1,2-Dichloroethane-d4	92	(71 - 127)
Toluene-d8	96	(80 - 120)
Bromofluorobenzene	90	(69 - 126)

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

GC/MS Volatiles

Client Lot #...: PB045 **Work Order #...:** F6JX21CF-MS **Matrix.....:** WATER
MS Lot-Sample #: H3L120208-002 F6JX21CG-MSD
Date Sampled...: 12/11/03 **Date Received..:** 12/12/03
Prep Date.....: 12/15/03 **Analysis Date..:** 12/16/03
Prep Batch #...: 3349684
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,1-Dichloroethene	**98**	**(62 - 128)**			**SW846 8260B**
	112	**(62 - 128)**	**14**	**(0-26)**	**SW846 8260B**
Trichloroethene	**97**	**(56 - 137)**			**SW846 8260B**
	108	**(56 - 137)**	**11**	**(0-20)**	**SW846 8260B**
Benzene	**89**	**(73 - 125)**			**SW846 8260B**
	99	**(73 - 125)**	**11**	**(0-20)**	**SW846 8260B**
Toluene	**86**	**(69 - 129)**			**SW846 8260B**
	93	**(69 - 129)**	**8.4**	**(0-20)**	**SW846 8260B**
Chlorobenzene	**84**	**(71 - 125)**			**SW846 8260B**
	91	**(71 - 125)**	**8.3**	**(0-20)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	93	(79 - 120)
	97	(79 - 120)
1,2-Dichloroethane-d4	93	(71 - 127)
	94	(71 - 127)
Toluene-d8	99	(80 - 120)
	100	(80 - 120)
Bromofluorobenzene	87	(69 - 126)
	89	(69 - 126)

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

GC/MS Volatiles

Client Lot #...: PB045 **Work Order #...:** F6JX21CF-MS **Matrix.....:** WATER
MS Lot-Sample #: H3L120208-002 F6JX21CG-MSD
Date Sampled...: 12/11/03 **Date Received..:** 12/12/03
Prep Date.....: 12/15/03 **Analysis Date..:** 12/16/03
Prep Batch #...: 3349684
Dilution Factor: 1

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
1,1-Dichloroethene	**ND**	**10.0**	**9.76**	**ug/L**	**98**		**SW846 8260B**
	ND	**10.0**	**11.2**	**ug/L**	**112**	**14**	**SW846 8260B**
Trichloroethene	**ND**	**10.0**	**9.74**	**ug/L**	**97**		**SW846 8260B**
	ND	**10.0**	**10.8**	**ug/L**	**108**	**11**	**SW846 8260B**
Benzene	**ND**	**10.0**	**8.89**	**ug/L**	**89**		**SW846 8260B**
	ND	**10.0**	**9.89**	**ug/L**	**99**	**11**	**SW846 8260B**
Toluene	**ND**	**10.0**	**8.59**	**ug/L**	**86**		**SW846 8260B**
	ND	**10.0**	**9.34**	**ug/L**	**93**	**8.4**	**SW846 8260B**
Chlorobenzene	**ND**	**10.0**	**8.41**	**ug/L**	**84**		**SW846 8260B**
	ND	**10.0**	**9.13**	**ug/L**	**91**	**8.3**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	93	(79 - 120)
	97	(79 - 120)
1,2-Dichloroethane-d4	93	(71 - 127)
	94	(71 - 127)
Toluene-d8	99	(80 - 120)
	100	(80 - 120)
Bromofluorobenzene	87	(69 - 126)
	89	(69 - 126)

NOTE(S):

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

Bold print denotes control parameters

Sample Data Summary

SHAW E & I INC

Client Sample ID: DD3007

GC/MS Semivolatiles

Lot-Sample #...: H3L100268-001 **Work Order #...:** F6DQ41AD **Matrix.....:** WATER
Date Sampled...: 12/09/03 **Date Received..:** 12/10/03
Prep Date.....: 12/12/03 **Analysis Date..:** 12/15/03
Prep Batch #...: 3346158
Dilution Factor: 1 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Phenol	ND	10	ug/L	1.8
bis(2-Chloroethyl)-ether	ND	10	ug/L	1.6
2-Chlorophenol	ND	10	ug/L	1.2
1,3-Dichlorobenzene	ND	10	ug/L	1.6
1,4-Dichlorobenzene	ND	10	ug/L	1.4
1,2-Dichlorobenzene	ND	10	ug/L	1.7
2-Methylphenol	ND	10	ug/L	2.0
2,2'-oxybis(1-Chloro-propane)	ND	10	ug/L	1.4
4-Methylphenol	ND	10	ug/L	3.6
N-Nitrosodi-n-propyl-amine	ND	10	ug/L	2.1
Hexachloroethane	ND	10	ug/L	1.9
Nitrobenzene	ND	10	ug/L	1.8
Isophorone	ND	10	ug/L	1.6
2-Nitrophenol	ND	10	ug/L	2.4
2,4-Dimethylphenol	ND	10	ug/L	3.7
bis(2-Chloroethoxy) methane	ND	10	ug/L	1.5
2,4-Dichlorophenol	ND	10	ug/L	2.0
1,2,4-Trichloro-benzene	ND	10	ug/L	1.5
Naphthalene	ND	10	ug/L	1.7
4-Chloroaniline	ND	10	ug/L	1.8
Hexachlorobutadiene	ND	10	ug/L	1.4
4-Chloro-3-methylphenol	ND	10	ug/L	2.2
2-Methylnaphthalene	ND	10	ug/L	1.6
Hexachlorocyclopenta-diene	ND	50	ug/L	7.9
2,4,6-Trichloro-phenol	ND	10	ug/L	2.0
2,4,5-Trichloro-phenol	ND	10	ug/L	1.6
2-Chloronaphthalene	ND	10	ug/L	1.6
2-Nitroaniline	ND	50	ug/L	1.4
Dimethyl phthalate	ND	10	ug/L	1.1
Acenaphthylene	ND	10	ug/L	1.7
2,6-Dinitrotoluene	ND	10	ug/L	1.7

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SHAW E & I INC

Client Sample ID: DD3007

GC/MS Semivolatiles

Lot-Sample #...: H3L100268-001 **Work Order #...:** F6DQ41AD **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
3-Nitroaniline	ND	50	ug/L	1.3
Acenaphthene	ND	10	ug/L	1.5
2,4-Dinitrophenol	ND	50	ug/L	15
4-Nitrophenol	ND	50	ug/L	15
Dibenzofuran	ND	10	ug/L	1.6
2,4-Dinitrotoluene	ND	10	ug/L	1.6
Diethyl phthalate	ND	10	ug/L	1.3
4-Chlorophenyl phenyl ether	ND	10	ug/L	1.6
Fluorene	ND	10	ug/L	1.3
4-Nitroaniline	ND	50	ug/L	1.3
4,6-Dinitro-2-methylphenol	ND	50	ug/L	11
N-Nitrosodiphenylamine	ND	10	ug/L	1.6
4-Bromophenyl phenyl ether	ND	10	ug/L	1.4
Hexachlorobenzene	ND	10	ug/L	0.90
Pentachlorophenol	ND	50	ug/L	8.6
Phenanthrene	ND	10	ug/L	0.84
Anthracene	ND	10	ug/L	0.83
Carbazole	ND	10	ug/L	1.2
Di-n-butyl phthalate	ND	10	ug/L	1.4
Fluoranthene	ND	10	ug/L	1.3
Pyrene	ND	10	ug/L	0.96
Butyl benzyl phthalate	ND	10	ug/L	1.3
3,3'-Dichlorobenzidine	ND	50	ug/L	1.2
Benzo(a)anthracene	ND	10	ug/L	1.2
Chrysene	ND	10	ug/L	0.98
bis(2-Ethylhexyl) phthalate	ND	10	ug/L	2.2
Di-n-octyl phthalate	ND	10	ug/L	2.4
Benzo(b)fluoranthene	ND	10	ug/L	2.1
Benzo(k)fluoranthene	ND	10	ug/L	1.7
Benzo(a)pyrene	ND	10	ug/L	1.6
Indeno(1,2,3-cd)pyrene	ND	10	ug/L	2.1
Dibenz(a,h)anthracene	ND	10	ug/L	2.5
Benzo(ghi)perylene	ND	10	ug/L	2.1

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	74	(29 - 110)
Phenol-d5	89	(41 - 115)
Nitrobenzene-d5	96	(46 - 117)
2-Fluorobiphenyl	91	(44 - 116)
2,4,6-Tribromophenol	110	(31 - 138)
Terphenyl-d14	94	(36 - 134)

SHAW E & I INC

Client Sample ID: DD3008

GC/MS Semivolatiles

Lot-Sample #...: H3L100268-002 **Work Order #...:** F6DRG1AP **Matrix.....:** WATER
Date Sampled...: 12/09/03 **Date Received..:** 12/10/03
Prep Date.....: 12/12/03 **Analysis Date..:** 12/15/03
Prep Batch #...: 3346158
Dilution Factor: 1 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Phenol	ND	10	ug/L	1.8
bis(2-Chloroethyl)-ether	ND	10	ug/L	1.6
2-Chlorophenol	ND	10	ug/L	1.2
1,3-Dichlorobenzene	ND	10	ug/L	1.6
1,4-Dichlorobenzene	ND	10	ug/L	1.4
1,2-Dichlorobenzene	ND	10	ug/L	1.7
2-Methylphenol	ND	10	ug/L	2.0
2,2'-oxybis(1-Chloro-propane)	ND	10	ug/L	1.4
4-Methylphenol	ND	10	ug/L	3.6
N-Nitrosodi-n-propyl-amine	ND	10	ug/L	2.1
Hexachloroethane	ND	10	ug/L	1.9
Nitrobenzene	ND	10	ug/L	1.8
Isophorone	ND	10	ug/L	1.6
2-Nitrophenol	ND	10	ug/L	2.4
2,4-Dimethylphenol	ND	10	ug/L	3.7
bis(2-Chloroethoxy) methane	ND	10	ug/L	1.5
2,4-Dichlorophenol	ND	10	ug/L	2.0
1,2,4-Trichloro-benzene	ND	10	ug/L	1.5
Naphthalene	ND	10	ug/L	1.7
4-Chloroaniline	ND	10	ug/L	1.8
Hexachlorobutadiene	ND	10	ug/L	1.4
4-Chloro-3-methylphenol	ND	10	ug/L	2.2
2-Methylnaphthalene	ND	10	ug/L	1.6
Hexachlorocyclopenta-diene	ND	50	ug/L	7.9
2,4,6-Trichloro-phenol	ND	10	ug/L	2.0
2,4,5-Trichloro-phenol	ND	10	ug/L	1.6
2-Chloronaphthalene	ND	10	ug/L	1.6
2-Nitroaniline	ND	50	ug/L	1.4
Dimethyl phthalate	ND	10	ug/L	1.1
Acenaphthylene	ND	10	ug/L	1.7
2,6-Dinitrotoluene	ND	10	ug/L	1.7

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SHAW E & I INC

Client Sample ID: DD3008

GC/MS Semivolatiles

Lot-Sample #...: H3L100268-002 **Work Order #...:** F6DRG1AP **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
3-Nitroaniline	ND	50	ug/L	1.3
Acenaphthene	ND	10	ug/L	1.5
2,4-Dinitrophenol	ND	50	ug/L	15
4-Nitrophenol	ND	50	ug/L	15
Dibenzofuran	ND	10	ug/L	1.6
2,4-Dinitrotoluene	ND	10	ug/L	1.6
Diethyl phthalate	ND	10	ug/L	1.3
4-Chlorophenyl phenyl ether	ND	10	ug/L	1.6
Fluorene	ND	10	ug/L	1.3
4-Nitroaniline	ND	50	ug/L	1.3
4,6-Dinitro-2-methylphenol	ND	50	ug/L	11
N-Nitrosodiphenylamine	ND	10	ug/L	1.6
4-Bromophenyl phenyl ether	ND	10	ug/L	1.4
Hexachlorobenzene	ND	10	ug/L	0.90
Pentachlorophenol	ND	50	ug/L	8.6
Phenanthrene	ND	10	ug/L	0.84
Anthracene	ND	10	ug/L	0.83
Carbazole	ND	10	ug/L	1.2
Di-n-butyl phthalate	ND	10	ug/L	1.4
Fluoranthene	ND	10	ug/L	1.3
Pyrene	ND	10	ug/L	0.96
Butyl benzyl phthalate	ND	10	ug/L	1.3
3,3'-Dichlorobenzidine	ND	50	ug/L	1.2
Benzo(a)anthracene	ND	10	ug/L	1.2
Chrysene	ND	10	ug/L	0.98
bis(2-Ethylhexyl) phthalate	ND	10	ug/L	2.2
Di-n-octyl phthalate	ND	10	ug/L	2.4
Benzo(b)fluoranthene	ND	10	ug/L	2.1
Benzo(k)fluoranthene	ND	10	ug/L	1.7
Benzo(a)pyrene	ND	10	ug/L	1.6
Indeno(1,2,3-cd)pyrene	ND	10	ug/L	2.1
Dibenz(a,h)anthracene	ND	10	ug/L	2.5
Benzo(ghi)perylene	ND	10	ug/L	2.1

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	56	(29 - 110)
Phenol-d5	72	(41 - 115)
Nitrobenzene-d5	75	(46 - 117)
2-Fluorobiphenyl	76	(44 - 116)
2,4,6-Tribromophenol	98	(31 - 138)
Terphenyl-d14	89	(36 - 134)

SHAW E & I INC

Client Sample ID: DD3002

GC/MS Semivolatiles

Lot-Sample #...: H3L110180-001 **Work Order #...:** F6F1C1AD **Matrix.....:** WATER
Date Sampled...: 12/10/03 **Date Received..:** 12/11/03
Prep Date.....: 12/12/03 **Analysis Date..:** 12/15/03
Prep Batch #...: 3346158
Dilution Factor: 1 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Phenol	ND	10	ug/L	1.8
bis(2-Chloroethyl)-ether	ND	10	ug/L	1.6
2-Chlorophenol	ND	10	ug/L	1.2
1,3-Dichlorobenzene	ND	10	ug/L	1.6
1,4-Dichlorobenzene	ND	10	ug/L	1.4
1,2-Dichlorobenzene	ND	10	ug/L	1.7
2-Methylphenol	ND	10	ug/L	2.0
2,2'-oxybis(1-Chloro-propane)	ND	10	ug/L	1.4
4-Methylphenol	ND	10	ug/L	3.6
N-Nitrosodi-n-propyl-amine	ND	10	ug/L	2.1
Hexachloroethane	ND	10	ug/L	1.9
Nitrobenzene	ND	10	ug/L	1.8
Isophorone	ND	10	ug/L	1.6
2-Nitrophenol	ND	10	ug/L	2.4
2,4-Dimethylphenol	ND	10	ug/L	3.7
bis(2-Chloroethoxy) methane	ND	10	ug/L	1.5
2,4-Dichlorophenol	ND	10	ug/L	2.0
1,2,4-Trichloro-benzene	ND	10	ug/L	1.5
Naphthalene	ND	10	ug/L	1.7
4-Chloroaniline	ND	10	ug/L	1.8
Hexachlorobutadiene	ND	10	ug/L	1.4
4-Chloro-3-methylphenol	ND	10	ug/L	2.2
2-Methylnaphthalene	ND	10	ug/L	1.6
Hexachlorocyclopenta-diene	ND	50	ug/L	7.9
2,4,6-Trichloro-phenol	ND	10	ug/L	2.0
2,4,5-Trichloro-phenol	ND	10	ug/L	1.6
2-Chloronaphthalene	ND	10	ug/L	1.6
2-Nitroaniline	ND	50	ug/L	1.4
Dimethyl phthalate	ND	10	ug/L	1.1
Acenaphthylene	ND	10	ug/L	1.7
2,6-Dinitrotoluene	ND	10	ug/L	1.7

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SHAW E & I INC

Client Sample ID: DD3002

GC/MS Semivolatiles

Lot-Sample #...: H3L110180-001 **Work Order #...:** F6F1C1AD **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
3-Nitroaniline	ND	50	ug/L	1.3
Acenaphthene	ND	10	ug/L	1.5
2,4-Dinitrophenol	ND	50	ug/L	15
4-Nitrophenol	ND	50	ug/L	15
Dibenzofuran	ND	10	ug/L	1.6
2,4-Dinitrotoluene	ND	10	ug/L	1.6
Diethyl phthalate	ND	10	ug/L	1.3
4-Chlorophenyl phenyl ether	ND	10	ug/L	1.6
Fluorene	ND	10	ug/L	1.3
4-Nitroaniline	ND	50	ug/L	1.3
4,6-Dinitro-2-methylphenol	ND	50	ug/L	11
N-Nitrosodiphenylamine	ND	10	ug/L	1.6
4-Bromophenyl phenyl ether	ND	10	ug/L	1.4
Hexachlorobenzene	ND	10	ug/L	0.90
Pentachlorophenol	ND	50	ug/L	8.6
Phenanthrene	ND	10	ug/L	0.84
Anthracene	ND	10	ug/L	0.83
Carbazole	ND	10	ug/L	1.2
Di-n-butyl phthalate	ND	10	ug/L	1.4
Fluoranthene	ND	10	ug/L	1.3
Pyrene	ND	10	ug/L	0.96
Butyl benzyl phthalate	ND	10	ug/L	1.3
3,3'-Dichlorobenzidine	ND	50	ug/L	1.2
Benzo(a)anthracene	ND	10	ug/L	1.2
Chrysene	ND	10	ug/L	0.98
bis(2-Ethylhexyl) phthalate	ND	10	ug/L	2.2
Di-n-octyl phthalate	ND	10	ug/L	2.4
Benzo(b)fluoranthene	ND	10	ug/L	2.1
Benzo(k)fluoranthene	ND	10	ug/L	1.7
Benzo(a)pyrene	ND	10	ug/L	1.6
Indeno(1,2,3-cd)pyrene	ND	10	ug/L	2.1
Dibenz(a,h)anthracene	ND	10	ug/L	2.5
Benzo(ghi)perylene	ND	10	ug/L	2.1

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	69	(29 - 110)
Phenol-d5	81	(41 - 115)
Nitrobenzene-d5	86	(46 - 117)
2-Fluorobiphenyl	80	(44 - 116)
2,4,6-Tribromophenol	97	(31 - 138)
Terphenyl-d14	89	(36 - 134)

SHAW E & I INC

Client Sample ID: DD3001

GC/MS Semivolatiles

Lot-Sample #...: H3L110180-002 **Work Order #...:** F6F2H1AP **Matrix.....:** WATER
Date Sampled...: 12/10/03 **Date Received..:** 12/11/03
Prep Date.....: 12/12/03 **Analysis Date..:** 12/15/03
Prep Batch #...: 3346158
Dilution Factor: 1 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Phenol	ND	10	ug/L	1.8
bis(2-Chloroethyl)-ether	ND	10	ug/L	1.6
2-Chlorophenol	ND	10	ug/L	1.2
1,3-Dichlorobenzene	ND	10	ug/L	1.6
1,4-Dichlorobenzene	ND	10	ug/L	1.4
1,2-Dichlorobenzene	ND	10	ug/L	1.7
2-Methylphenol	ND	10	ug/L	2.0
2,2'-oxybis(1-Chloro-propane)	ND	10	ug/L	1.4
4-Methylphenol	ND	10	ug/L	3.6
N-Nitrosodi-n-propyl-amine	ND	10	ug/L	2.1
Hexachloroethane	ND	10	ug/L	1.9
Nitrobenzene	ND	10	ug/L	1.8
Isophorone	ND	10	ug/L	1.6
2-Nitrophenol	ND	10	ug/L	2.4
2,4-Dimethylphenol	ND	10	ug/L	3.7
bis(2-Chloroethoxy) methane	ND	10	ug/L	1.5
2,4-Dichlorophenol	ND	10	ug/L	2.0
1,2,4-Trichloro-benzene	ND	10	ug/L	1.5
Naphthalene	ND	10	ug/L	1.7
4-Chloroaniline	ND	10	ug/L	1.8
Hexachlorobutadiene	ND	10	ug/L	1.4
4-Chloro-3-methylphenol	ND	10	ug/L	2.2
2-Methylnaphthalene	ND	10	ug/L	1.6
Hexachlorocyclopenta-diene	ND	50	ug/L	7.9
2,4,6-Trichloro-phenol	ND	10	ug/L	2.0
2,4,5-Trichloro-phenol	ND	10	ug/L	1.6
2-Chloronaphthalene	ND	10	ug/L	1.6
2-Nitroaniline	ND	50	ug/L	1.4
Dimethyl phthalate	ND	10	ug/L	1.1
Acenaphthylene	ND	10	ug/L	1.7
2,6-Dinitrotoluene	ND	10	ug/L	1.7

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SHAW E & I INC

Client Sample ID: DD3001

GC/MS Semivolatiles

Lot-Sample #...: H3L110180-002 **Work Order #...:** F6F2H1AP **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
3-Nitroaniline	ND	50	ug/L	1.3
Acenaphthene	ND	10	ug/L	1.5
2,4-Dinitrophenol	ND	50	ug/L	15
4-Nitrophenol	ND	50	ug/L	15
Dibenzofuran	ND	10	ug/L	1.6
2,4-Dinitrotoluene	ND	10	ug/L	1.6
Diethyl phthalate	ND	10	ug/L	1.3
4-Chlorophenyl phenyl ether	ND	10	ug/L	1.6
Fluorene	ND	10	ug/L	1.3
4-Nitroaniline	ND	50	ug/L	1.3
4,6-Dinitro-2-methylphenol	ND	50	ug/L	11
N-Nitrosodiphenylamine	ND	10	ug/L	1.6
4-Bromophenyl phenyl ether	ND	10	ug/L	1.4
Hexachlorobenzene	ND	10	ug/L	0.90
Pentachlorophenol	ND	50	ug/L	8.6
Phenanthrene	ND	10	ug/L	0.84
Anthracene	ND	10	ug/L	0.83
Carbazole	ND	10	ug/L	1.2
Di-n-butyl phthalate	ND	10	ug/L	1.4
Fluoranthene	ND	10	ug/L	1.3
Pyrene	ND	10	ug/L	0.96
Butyl benzyl phthalate	ND	10	ug/L	1.3
3,3'-Dichlorobenzidine	ND	50	ug/L	1.2
Benzo(a)anthracene	ND	10	ug/L	1.2
Chrysene	ND	10	ug/L	0.98
bis(2-Ethylhexyl) phthalate	ND	10	ug/L	2.2
Di-n-octyl phthalate	ND	10	ug/L	2.4
Benzo(b)fluoranthene	ND	10	ug/L	2.1
Benzo(k)fluoranthene	ND	10	ug/L	1.7
Benzo(a)pyrene	ND	10	ug/L	1.6
Indeno(1,2,3-cd)pyrene	ND	10	ug/L	2.1
Dibenz(a,h)anthracene	ND	10	ug/L	2.5
Benzo(ghi)perylene	ND	10	ug/L	2.1

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	65	(29 - 110)
Phenol-d5	78	(41 - 115)
Nitrobenzene-d5	85	(46 - 117)
2-Fluorobiphenyl	85	(44 - 116)
2,4,6-Tribromophenol	98	(31 - 138)
Terphenyl-d14	95	(36 - 134)

SHAW E & I INC

Client Sample ID: DD3003

GC/MS Semivolatiles

Lot-Sample #...: H3L120208-001 **Work Order #...:** F6JXA1AD **Matrix.....:** WATER
Date Sampled...: 12/11/03 **Date Received..:** 12/12/03
Prep Date.....: 12/15/03 **Analysis Date..:** 12/18/03
Prep Batch #...: 3349288
Dilution Factor: 1 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Phenol	ND	10	ug/L	1.8
bis(2-Chloroethyl)-ether	ND	10	ug/L	1.6
2-Chlorophenol	ND	10	ug/L	1.2
1,3-Dichlorobenzene	ND	10	ug/L	1.6
1,4-Dichlorobenzene	ND	10	ug/L	1.4
1,2-Dichlorobenzene	ND	10	ug/L	1.7
2-Methylphenol	ND	10	ug/L	2.0
2,2'-oxybis(1-Chloro-propane)	ND	10	ug/L	1.4
4-Methylphenol	ND	10	ug/L	3.6
N-Nitrosodi-n-propyl-amine	ND	10	ug/L	2.1
Hexachloroethane	ND	10	ug/L	1.9
Nitrobenzene	ND	10	ug/L	1.8
Isophorone	ND	10	ug/L	1.6
2-Nitrophenol	ND	10	ug/L	2.4
2,4-Dimethylphenol	ND	10	ug/L	3.7
bis(2-Chloroethoxy) methane	ND	10	ug/L	1.5
2,4-Dichlorophenol	ND	10	ug/L	2.0
1,2,4-Trichloro-benzene	ND	10	ug/L	1.5
Naphthalene	**2.3 J**	**10**	**ug/L**	**1.7**
4-Chloroaniline	ND	10	ug/L	1.8
Hexachlorobutadiene	ND	10	ug/L	1.4
4-Chloro-3-methylphenol	ND	10	ug/L	2.2
2-Methylnaphthalene	**2.9 J**	**10**	**ug/L**	**1.6**
Hexachlorocyclopenta-diene	ND	50	ug/L	7.9
2,4,6-Trichloro-phenol	ND	10	ug/L	2.0
2,4,5-Trichloro-phenol	ND	10	ug/L	1.6
2-Chloronaphthalene	ND	10	ug/L	1.6
2-Nitroaniline	ND	50	ug/L	1.4
Dimethyl phthalate	ND	10	ug/L	1.1
Acenaphthylene	ND	10	ug/L	1.7
2,6-Dinitrotoluene	ND	10	ug/L	1.7

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SHAW E & I INC

Client Sample ID: DD3003

GC/MS Semivolatiles

Lot-Sample #...: H3L120208-001 **Work Order #...:** F6JXA1AD **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
3-Nitroaniline	ND	50	ug/L	1.3
Acenaphthene	ND	10	ug/L	1.5
2,4-Dinitrophenol	ND	50	ug/L	15
4-Nitrophenol	ND	50	ug/L	15
Dibenzofuran	ND	10	ug/L	1.6
2,4-Dinitrotoluene	ND	10	ug/L	1.6
Diethyl phthalate	ND	10	ug/L	1.3
4-Chlorophenyl phenyl ether	ND	10	ug/L	1.6
Fluorene	ND	10	ug/L	1.3
4-Nitroaniline	ND	50	ug/L	1.3
4,6-Dinitro-2-methylphenol	ND	50	ug/L	11
N-Nitrosodiphenylamine	ND	10	ug/L	1.6
4-Bromophenyl phenyl ether	ND	10	ug/L	1.4
Hexachlorobenzene	ND	10	ug/L	0.90
Pentachlorophenol	ND	50	ug/L	8.6
Phenanthrene	ND	10	ug/L	0.84
Anthracene	ND	10	ug/L	0.83
Carbazole	ND	10	ug/L	1.2
Di-n-butyl phthalate	ND	10	ug/L	1.4
Fluoranthene	ND	10	ug/L	1.3
Pyrene	ND	10	ug/L	0.96
Butyl benzyl phthalate	ND	10	ug/L	1.3
3,3'-Dichlorobenzidine	ND	50	ug/L	1.2
Benzo(a)anthracene	ND	10	ug/L	1.2
Chrysene	ND	10	ug/L	0.98
bis(2-Ethylhexyl) phthalate	ND	10	ug/L	2.2
Di-n-octyl phthalate	ND	10	ug/L	2.4
Benzo(b)fluoranthene	ND	10	ug/L	2.1
Benzo(k)fluoranthene	ND	10	ug/L	1.7
Benzo(a)pyrene	ND	10	ug/L	1.6
Indeno(1,2,3-cd)pyrene	ND	10	ug/L	2.1
Dibenz(a,h)anthracene	ND	10	ug/L	2.5
Benzo(ghi)perylene	ND	10	ug/L	2.1

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	75	(29 - 110)
Phenol-d5	88	(41 - 115)
Nitrobenzene-d5	89	(46 - 117)
2-Fluorobiphenyl	85	(44 - 116)
2,4,6-Tribromophenol	110	(31 - 138)
Terphenyl-d14	89	(36 - 134)

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SHAW E & I INC

Client Sample ID: DD3003

GC/MS Semivolatiles

Lot-Sample #...: H3L120208-001 Work Order #...: F6JXA1AD Matrix.....: WATER

NOTE(S):

J Estimated result. Result is less than RL.

SHAW E & I INC

Client Sample ID: DD3004

GC/MS Semivolatiles

Lot-Sample #...: H3L120208-002 **Work Order #...:** F6JX21CH **Matrix.....:** WATER
Date Sampled...: 12/11/03 **Date Received..:** 12/12/03
Prep Date.....: 12/15/03 **Analysis Date..:** 12/18/03
Prep Batch #...: 3349288
Dilution Factor: 1 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Phenol	ND	10	ug/L	1.8
bis(2-Chloroethyl)-ether	ND	10	ug/L	1.6
2-Chlorophenol	ND	10	ug/L	1.2
1,3-Dichlorobenzene	ND	10	ug/L	1.6
1,4-Dichlorobenzene	ND	10	ug/L	1.4
1,2-Dichlorobenzene	ND	10	ug/L	1.7
2-Methylphenol	ND	10	ug/L	2.0
2,2'-oxybis(1-Chloro-propane)	ND	10	ug/L	1.4
4-Methylphenol	ND	10	ug/L	3.6
N-Nitrosodi-n-propyl-amine	ND	10	ug/L	2.1
Hexachloroethane	ND	10	ug/L	1.9
Nitrobenzene	ND	10	ug/L	1.8
Isophorone	ND	10	ug/L	1.6
2-Nitrophenol	ND	10	ug/L	2.4
2,4-Dimethylphenol	ND	10	ug/L	3.7
bis(2-Chloroethoxy) methane	ND	10	ug/L	1.5
2,4-Dichlorophenol	ND	10	ug/L	2.0
1,2,4-Trichloro-benzene	ND	10	ug/L	1.5
Naphthalene	ND	10	ug/L	1.7
4-Chloroaniline	ND	10	ug/L	1.8
Hexachlorobutadiene	ND	10	ug/L	1.4
4-Chloro-3-methylphenol	ND	10	ug/L	2.2
2-Methylnaphthalene	ND	10	ug/L	1.6
Hexachlorocyclopenta-diene	ND	50	ug/L	7.9
2,4,6-Trichloro-phenol	ND	10	ug/L	2.0
2,4,5-Trichloro-phenol	ND	10	ug/L	1.6
2-Chloronaphthalene	ND	10	ug/L	1.6
2-Nitroaniline	ND	50	ug/L	1.4
Dimethyl phthalate	ND	10	ug/L	1.1
Acenaphthylene	ND	10	ug/L	1.7
2,6-Dinitrotoluene	ND	10	ug/L	1.7

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SHAW E & I INC

Client Sample ID: DD3004

GC/MS Semivolatiles

Lot-Sample #...: H3L120208-002 **Work Order #...:** F6JX21CH **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
3-Nitroaniline	ND	50	ug/L	1.3
Acenaphthene	ND	10	ug/L	1.5
2,4-Dinitrophenol	ND	50	ug/L	15
4-Nitrophenol	ND	50	ug/L	15
Dibenzofuran	ND	10	ug/L	1.6
2,4-Dinitrotoluene	ND	10	ug/L	1.6
Diethyl phthalate	ND	10	ug/L	1.3
4-Chlorophenyl phenyl ether	ND	10	ug/L	1.6
Fluorene	ND	10	ug/L	1.3
4-Nitroaniline	ND	50	ug/L	1.3
4,6-Dinitro-2-methylphenol	ND	50	ug/L	11
N-Nitrosodiphenylamine	ND	10	ug/L	1.6
4-Bromophenyl phenyl ether	ND	10	ug/L	1.4
Hexachlorobenzene	ND	10	ug/L	0.90
Pentachlorophenol	ND	50	ug/L	8.6
Phenanthrene	ND	10	ug/L	0.84
Anthracene	ND	10	ug/L	0.83
Carbazole	ND	10	ug/L	1.2
Di-n-butyl phthalate	ND	10	ug/L	1.4
Fluoranthene	ND	10	ug/L	1.3
Pyrene	ND	10	ug/L	0.96
Butyl benzyl phthalate	ND	10	ug/L	1.3
3,3'-Dichlorobenzidine	ND	50	ug/L	1.2
Benzo(a)anthracene	ND	10	ug/L	1.2
Chrysene	ND	10	ug/L	0.98
bis(2-Ethylhexyl) phthalate	ND	10	ug/L	2.2
Di-n-octyl phthalate	ND	10	ug/L	2.4
Benzo(b)fluoranthene	ND	10	ug/L	2.1
Benzo(k)fluoranthene	ND	10	ug/L	1.7
Benzo(a)pyrene	ND	10	ug/L	1.6
Indeno(1,2,3-cd)pyrene	ND	10	ug/L	2.1
Dibenz(a,h)anthracene	ND	10	ug/L	2.5
Benzo(ghi)perylene	ND	10	ug/L	2.1

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	62	(29 - 110)
Phenol-d5	80	(41 - 115)
Nitrobenzene-d5	80	(46 - 117)
2-Fluorobiphenyl	78	(44 - 116)
2,4,6-Tribromophenol	104	(31 - 138)
Terphenyl-d14	88	(36 - 134)

SHAW E & I INC

Client Sample ID: DD3005

GC/MS Semivolatiles

Lot-Sample #...: H3L120208-003 **Work Order #...:** F6J0A1AP **Matrix.....:** WATER
Date Sampled...: 12/11/03 **Date Received..:** 12/12/03
Prep Date.....: 12/15/03 **Analysis Date..:** 12/18/03
Prep Batch #...: 3349288
Dilution Factor: 1 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Phenol	ND	10	ug/L	1.8
bis(2-Chloroethyl)-ether	ND	10	ug/L	1.6
2-Chlorophenol	ND	10	ug/L	1.2
1,3-Dichlorobenzene	ND	10	ug/L	1.6
1,4-Dichlorobenzene	ND	10	ug/L	1.4
1,2-Dichlorobenzene	ND	10	ug/L	1.7
2-Methylphenol	ND	10	ug/L	2.0
2,2'-oxybis(1-Chloro-propane)	ND	10	ug/L	1.4
4-Methylphenol	ND	10	ug/L	3.6
N-Nitrosodi-n-propyl-amine	ND	10	ug/L	2.1
Hexachloroethane	ND	10	ug/L	1.9
Nitrobenzene	ND	10	ug/L	1.8
Isophorone	ND	10	ug/L	1.6
2-Nitrophenol	ND	10	ug/L	2.4
2,4-Dimethylphenol	ND	10	ug/L	3.7
bis(2-Chloroethoxy) methane	ND	10	ug/L	1.5
2,4-Dichlorophenol	ND	10	ug/L	2.0
1,2,4-Trichloro-benzene	ND	10	ug/L	1.5
Naphthalene	ND	10	ug/L	1.7
4-Chloroaniline	ND	10	ug/L	1.8
Hexachlorobutadiene	ND	10	ug/L	1.4
4-Chloro-3-methylphenol	ND	10	ug/L	2.2
2-Methylnaphthalene	ND	10	ug/L	1.6
Hexachlorocyclopenta-diene	ND	50	ug/L	7.9
2,4,6-Trichloro-phenol	ND	10	ug/L	2.0
2,4,5-Trichloro-phenol	ND	10	ug/L	1.6
2-Chloronaphthalene	ND	10	ug/L	1.6
2-Nitroaniline	ND	50	ug/L	1.4
Dimethyl phthalate	ND	10	ug/L	1.1
Acenaphthylene	ND	10	ug/L	1.7
2,6-Dinitrotoluene	ND	10	ug/L	1.7

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SHAW E & I INC

Client Sample ID: DD3005

GC/MS Semivolatiles

Lot-Sample #...: H3L120208-003 **Work Order #...:** F6J0A1AP **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
3-Nitroaniline	ND	50	ug/L	1.3
Acenaphthene	ND	10	ug/L	1.5
2,4-Dinitrophenol	ND	50	ug/L	15
4-Nitrophenol	ND	50	ug/L	15
Dibenzofuran	ND	10	ug/L	1.6
2,4-Dinitrotoluene	ND	10	ug/L	1.6
Diethyl phthalate	ND	10	ug/L	1.3
4-Chlorophenyl phenyl ether	ND	10	ug/L	1.6
Fluorene	ND	10	ug/L	1.3
4-Nitroaniline	ND	50	ug/L	1.3
4,6-Dinitro-2-methylphenol	ND	50	ug/L	11
N-Nitrosodiphenylamine	ND	10	ug/L	1.6
4-Bromophenyl phenyl ether	ND	10	ug/L	1.4
Hexachlorobenzene	ND	10	ug/L	0.90
Pentachlorophenol	ND	50	ug/L	8.6
Phenanthrene	ND	10	ug/L	0.84
Anthracene	ND	10	ug/L	0.83
Carbazole	ND	10	ug/L	1.2
Di-n-butyl phthalate	ND	10	ug/L	1.4
Fluoranthene	ND	10	ug/L	1.3
Pyrene	ND	10	ug/L	0.96
Butyl benzyl phthalate	ND	10	ug/L	1.3
3,3'-Dichlorobenzidine	ND	50	ug/L	1.2
Benzo(a)anthracene	ND	10	ug/L	1.2
Chrysene	ND	10	ug/L	0.98
bis(2-Ethylhexyl) phthalate	ND	10	ug/L	2.2
Di-n-octyl phthalate	ND	10	ug/L	2.4
Benzo(b)fluoranthene	ND	10	ug/L	2.1
Benzo(k)fluoranthene	ND	10	ug/L	1.7
Benzo(a)pyrene	ND	10	ug/L	1.6
Indeno(1,2,3-cd)pyrene	ND	10	ug/L	2.1
Dibenz(a,h)anthracene	ND	10	ug/L	2.5
Benzo(ghi)perylene	ND	10	ug/L	2.1

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	44	(29 - 110)
Phenol-d5	50	(41 - 115)
Nitrobenzene-d5	55	(46 - 117)
2-Fluorobiphenyl	49	(44 - 116)
2,4,6-Tribromophenol	61	(31 - 138)
Terphenyl-d14	53	(36 - 134)

METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: PB045 **Work Order #...:** F6H4R1AA **Matrix.....:** WATER
MB Lot-Sample #: H3L120000-158

Prep Date.....: 12/12/03
Analysis Date..: 12/15/03 **Prep Batch #...:** 3346158
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Phenol	ND	10	ug/L	SW846 8270C
bis(2-Chloroethyl)-ether	ND	10	ug/L	SW846 8270C
2-Chlorophenol	ND	10	ug/L	SW846 8270C
1,3-Dichlorobenzene	ND	10	ug/L	SW846 8270C
1,4-Dichlorobenzene	ND	10	ug/L	SW846 8270C
1,2-Dichlorobenzene	ND	10	ug/L	SW846 8270C
2-Methylphenol	ND	10	ug/L	SW846 8270C
2,2'-oxybis(1-Chloro-propane)	ND	10	ug/L	SW846 8270C
4-Methylphenol	ND	10	ug/L	SW846 8270C
N-Nitrosodi-n-propyl-amine	ND	10	ug/L	SW846 8270C
Hexachloroethane	ND	10	ug/L	SW846 8270C
Nitrobenzene	ND	10	ug/L	SW846 8270C
Isophorone	ND	10	ug/L	SW846 8270C
2-Nitrophenol	ND	10	ug/L	SW846 8270C
2,4-Dimethylphenol	ND	10	ug/L	SW846 8270C
bis(2-Chloroethoxy) methane	ND	10	ug/L	SW846 8270C
2,4-Dichlorophenol	ND	10	ug/L	SW846 8270C
1,2,4-Trichloro-benzene	ND	10	ug/L	SW846 8270C
Naphthalene	ND	10	ug/L	SW846 8270C
4-Chloroaniline	ND	10	ug/L	SW846 8270C
Hexachlorobutadiene	ND	10	ug/L	SW846 8270C
4-Chloro-3-methylphenol	ND	10	ug/L	SW846 8270C
2-Methylnaphthalene	ND	10	ug/L	SW846 8270C
Hexachlorocyclopenta-diene	ND	50	ug/L	SW846 8270C
2,4,6-Trichloro-phenol	ND	10	ug/L	SW846 8270C
2,4,5-Trichloro-phenol	ND	10	ug/L	SW846 8270C
2-Chloronaphthalene	ND	10	ug/L	SW846 8270C
2-Nitroaniline	ND	50	ug/L	SW846 8270C
Dimethyl phthalate	ND	10	ug/L	SW846 8270C
Acenaphthylene	ND	10	ug/L	SW846 8270C
2,6-Dinitrotoluene	ND	10	ug/L	SW846 8270C
3-Nitroaniline	ND	50	ug/L	SW846 8270C
Acenaphthene	ND	10	ug/L	SW846 8270C

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METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: PB045 **Work Order #...:** F6H4R1AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
2,4-Dinitrophenol	ND	50	ug/L	SW846 8270C
4-Nitrophenol	ND	50	ug/L	SW846 8270C
Dibenzofuran	ND	10	ug/L	SW846 8270C
2,4-Dinitrotoluene	ND	10	ug/L	SW846 8270C
Diethyl phthalate	ND	10	ug/L	SW846 8270C
4-Chlorophenyl phenyl ether	ND	10	ug/L	SW846 8270C
Fluorene	ND	10	ug/L	SW846 8270C
4-Nitroaniline	ND	50	ug/L	SW846 8270C
4,6-Dinitro-2-methylphenol	ND	50	ug/L	SW846 8270C
N-Nitrosodiphenylamine	ND	10	ug/L	SW846 8270C
4-Bromophenyl phenyl ether	ND	10	ug/L	SW846 8270C
Hexachlorobenzene	ND	10	ug/L	SW846 8270C
Pentachlorophenol	ND	50	ug/L	SW846 8270C
Phenanthrene	ND	10	ug/L	SW846 8270C
Anthracene	ND	10	ug/L	SW846 8270C
Carbazole	ND	10	ug/L	SW846 8270C
Di-n-butyl phthalate	ND	10	ug/L	SW846 8270C
Fluoranthene	ND	10	ug/L	SW846 8270C
Pyrene	ND	10	ug/L	SW846 8270C
Butyl benzyl phthalate	ND	10	ug/L	SW846 8270C
3,3'-Dichlorobenzidine	ND	50	ug/L	SW846 8270C
Benzo(a)anthracene	ND	10	ug/L	SW846 8270C
Chrysene	ND	10	ug/L	SW846 8270C
bis(2-Ethylhexyl) phthalate	ND	10	ug/L	SW846 8270C
Di-n-octyl phthalate	ND	10	ug/L	SW846 8270C
Benzo(b)fluoranthene	ND	10	ug/L	SW846 8270C
Benzo(k)fluoranthene	ND	10	ug/L	SW846 8270C
Benzo(a)pyrene	ND	10	ug/L	SW846 8270C
Indeno(1,2,3-cd)pyrene	ND	10	ug/L	SW846 8270C
Dibenz(a,h)anthracene	ND	10	ug/L	SW846 8270C
Benzo(ghi)perylene	ND	10	ug/L	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	73	(29 - 110)
Phenol-d5	85	(41 - 115)
Nitrobenzene-d5	89	(46 - 117)
2-Fluorobiphenyl	88	(44 - 116)
2,4,6-Tribromophenol	91	(31 - 138)
Terphenyl-d14	94	(36 - 134)

(Continued on next page)

METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: PB045 **Work Order #...:** F6H4R1AA **Matrix.....:** WATER

NOTE(S):

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

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: PB045 **Work Order #...:** F6H4R1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: H3L120000-158 F6H4R1AD-LCSD
Prep Date.....: 12/12/03 **Analysis Date..:** 12/15/03
Prep Batch #...: 3346158
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Phenol	96	(62 - 103)			SW846 8270C
	96	(62 - 103)	0.93	(0-41)	SW846 8270C
2-Chlorophenol	90	(63 - 103)			SW846 8270C
	89	(63 - 103)	0.22	(0-43)	SW846 8270C
1,4-Dichlorobenzene	86	(65 - 102)			SW846 8270C
	85	(65 - 102)	1.8	(0-37)	SW846 8270C
N-Nitrosodi-n-propyl-amine	92	(65 - 108)			SW846 8270C
	93	(65 - 108)	1.6	(0-36)	SW846 8270C
1,2,4-Trichloro-benzene	88	(67 - 104)			SW846 8270C
	89	(67 - 104)	1.0	(0-36)	SW846 8270C
4-Chloro-3-methylphenol	104	(65 - 108)			SW846 8270C
	111 a	(65 - 108)	6.5	(0-29)	SW846 8270C
Acenaphthene	83	(59 - 100)			SW846 8270C
	88	(59 - 100)	6.0	(0-26)	SW846 8270C
4-Nitrophenol	101	(50 - 122)			SW846 8270C
	109	(50 - 122)	7.6	(0-50)	SW846 8270C
2,4-Dinitrotoluene	105	(69 - 128)			SW846 8270C
	113	(69 - 128)	7.3	(0-25)	SW846 8270C
Pentachlorophenol	93	(64 - 114)			SW846 8270C
	103	(64 - 114)	10	(0-37)	SW846 8270C
Pyrene	87	(52 - 119)			SW846 8270C
	93	(52 - 119)	6.6	(0-27)	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	70	(29 - 110)
	71	(29 - 110)
Phenol-d5	84	(41 - 115)
	86	(41 - 115)
Nitrobenzene-d5	91	(46 - 117)
	93	(46 - 117)
2-Fluorobiphenyl	92	(44 - 116)
	98	(44 - 116)
2,4,6-Tribromophenol	101	(31 - 138)
	111	(31 - 138)
Terphenyl-d14	92	(36 - 134)

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: PB045 **Work Order #...:** F6H4R1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: H3L120000-158 F6H4R1AD-LCSD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
	99	(36 - 134)

NOTE(S):

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

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: PB045
LCS Lot-Sample#: H3L120000-158
Prep Date.....: 12/12/03
Prep Batch #...: 3346158
Dilution Factor: 1

Work Order #...: F6H4R1AC-LCS
F6H4R1AD-LCSD
Analysis Date..: 12/15/03

Matrix.....: WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Phenol	100	95.6	ug/L	96		SW846 8270C
	100	96.5	ug/L	96	0.93	SW846 8270C
2-Chlorophenol	100	89.5	ug/L	90		SW846 8270C
	100	89.3	ug/L	89	0.22	SW846 8270C
1,4-Dichlorobenzene	100	86.1	ug/L	86		SW846 8270C
	100	84.6	ug/L	85	1.8	SW846 8270C
N-Nitrosodi-n-propyl-amine	100	91.9	ug/L	92		SW846 8270C
	100	93.4	ug/L	93	1.6	SW846 8270C
1,2,4-Trichloro-benzene	100	87.9	ug/L	88		SW846 8270C
	100	88.8	ug/L	89	1.0	SW846 8270C
4-Chloro-3-methylphenol	100	104	ug/L	104		SW846 8270C
	100	111 a	ug/L	111	6.5	SW846 8270C
Acenaphthene	100	82.9	ug/L	83		SW846 8270C
	100	88.0	ug/L	88	6.0	SW846 8270C
4-Nitrophenol	100	101	ug/L	101		SW846 8270C
	100	109	ug/L	109	7.6	SW846 8270C
2,4-Dinitrotoluene	100	105	ug/L	105		SW846 8270C
	100	113	ug/L	113	7.3	SW846 8270C
Pentachlorophenol	100	92.9	ug/L	93		SW846 8270C
	100	103	ug/L	103	10	SW846 8270C
Pyrene	100	87.1	ug/L	87		SW846 8270C
	100	93.0	ug/L	93	6.6	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	70	(29 - 110)
	71	(29 - 110)
Phenol-d5	84	(41 - 115)
	86	(41 - 115)
Nitrobenzene-d5	91	(46 - 117)
	93	(46 - 117)
2-Fluorobiphenyl	92	(44 - 116)
	98	(44 - 116)
2,4,6-Tribromophenol	101	(31 - 138)
	111	(31 - 138)
Terphenyl-d14	92	(36 - 134)

(Continued on next page)

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: PB045 **Work Order #...:** F6H4R1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: H3L120000-158 F6H4R1AD-LCSD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
	99	(36 - 134)

NOTE(S):

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

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: PB045 **Work Order #...:** F6N421AA **Matrix.....:** WATER
MB Lot-Sample #: H3L150000-288

Prep Date.....: 12/15/03
Analysis Date..: 12/18/03 **Prep Batch #...:** 3349288
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Phenol	ND	10	ug/L	SW846 8270C
bis(2-Chloroethyl)-ether	ND	10	ug/L	SW846 8270C
2-Chlorophenol	ND	10	ug/L	SW846 8270C
1,3-Dichlorobenzene	ND	10	ug/L	SW846 8270C
1,4-Dichlorobenzene	ND	10	ug/L	SW846 8270C
1,2-Dichlorobenzene	ND	10	ug/L	SW846 8270C
2-Methylphenol	ND	10	ug/L	SW846 8270C
2,2'-oxybis(1-Chloro-propane)	ND	10	ug/L	SW846 8270C
4-Methylphenol	ND	10	ug/L	SW846 8270C
N-Nitrosodi-n-propyl-amine	ND	10	ug/L	SW846 8270C
Hexachloroethane	ND	10	ug/L	SW846 8270C
Nitrobenzene	ND	10	ug/L	SW846 8270C
Isophorone	ND	10	ug/L	SW846 8270C
2-Nitrophenol	ND	10	ug/L	SW846 8270C
2,4-Dimethylphenol	ND	10	ug/L	SW846 8270C
bis(2-Chloroethoxy) methane	ND	10	ug/L	SW846 8270C
2,4-Dichlorophenol	ND	10	ug/L	SW846 8270C
1,2,4-Trichloro-benzene	ND	10	ug/L	SW846 8270C
Naphthalene	ND	10	ug/L	SW846 8270C
4-Chloroaniline	ND	10	ug/L	SW846 8270C
Hexachlorobutadiene	ND	10	ug/L	SW846 8270C
4-Chloro-3-methylphenol	ND	10	ug/L	SW846 8270C
2-Methylnaphthalene	ND	10	ug/L	SW846 8270C
Hexachlorocyclopenta-diene	ND	50	ug/L	SW846 8270C
2,4,6-Trichloro-phenol	ND	10	ug/L	SW846 8270C
2,4,5-Trichloro-phenol	ND	10	ug/L	SW846 8270C
2-Chloronaphthalene	ND	10	ug/L	SW846 8270C
2-Nitroaniline	ND	50	ug/L	SW846 8270C
Dimethyl phthalate	ND	10	ug/L	SW846 8270C
Acenaphthylene	ND	10	ug/L	SW846 8270C
2,6-Dinitrotoluene	ND	10	ug/L	SW846 8270C
3-Nitroaniline	ND	50	ug/L	SW846 8270C
Acenaphthene	ND	10	ug/L	SW846 8270C

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METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: PB045 **Work Order #...:** F6N421AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
2,4-Dinitrophenol	ND	50	ug/L	SW846 8270C
4-Nitrophenol	ND	50	ug/L	SW846 8270C
Dibenzofuran	ND	10	ug/L	SW846 8270C
2,4-Dinitrotoluene	ND	10	ug/L	SW846 8270C
Diethyl phthalate	ND	10	ug/L	SW846 8270C
4-Chlorophenyl phenyl ether	ND	10	ug/L	SW846 8270C
Fluorene	ND	10	ug/L	SW846 8270C
4-Nitroaniline	ND	50	ug/L	SW846 8270C
4,6-Dinitro-2-methylphenol	ND	50	ug/L	SW846 8270C
N-Nitrosodiphenylamine	ND	10	ug/L	SW846 8270C
4-Bromophenyl phenyl ether	ND	10	ug/L	SW846 8270C
Hexachlorobenzene	ND	10	ug/L	SW846 8270C
Pentachlorophenol	ND	50	ug/L	SW846 8270C
Phenanthrene	ND	10	ug/L	SW846 8270C
Anthracene	ND	10	ug/L	SW846 8270C
Carbazole	ND	10	ug/L	SW846 8270C
Di-n-butyl phthalate	ND	10	ug/L	SW846 8270C
Fluoranthene	ND	10	ug/L	SW846 8270C
Pyrene	ND	10	ug/L	SW846 8270C
Butyl benzyl phthalate	ND	10	ug/L	SW846 8270C
3,3'-Dichlorobenzidine	ND	50	ug/L	SW846 8270C
Benzo(a)anthracene	ND	10	ug/L	SW846 8270C
Chrysene	ND	10	ug/L	SW846 8270C
bis(2-Ethylhexyl) phthalate	ND	10	ug/L	SW846 8270C
Di-n-octyl phthalate	ND	10	ug/L	SW846 8270C
Benzo(b)fluoranthene	ND	10	ug/L	SW846 8270C
Benzo(k)fluoranthene	ND	10	ug/L	SW846 8270C
Benzo(a)pyrene	ND	10	ug/L	SW846 8270C
Indeno(1,2,3-cd)pyrene	ND	10	ug/L	SW846 8270C
Dibenz(a,h)anthracene	ND	10	ug/L	SW846 8270C
Benzo(ghi)perylene	ND	10	ug/L	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	70	(29 - 110)
Phenol-d5	84	(41 - 115)
Nitrobenzene-d5	85	(46 - 117)
2-Fluorobiphenyl	81	(44 - 116)
2,4,6-Tribromophenol	89	(31 - 138)
Terphenyl-d14	91	(36 - 134)

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METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: PB045 **Work Order #...:** F6N421AA **Matrix.....:** WATER

NOTE(S):

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

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: PB045 **Work Order #...:** F6N421AC **Matrix.....:** WATER
LCS Lot-Sample#: H3L150000-288
Prep Date.....: 12/15/03 **Analysis Date..:** 12/18/03
Prep Batch #...: 3349288
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Phenol	**105 a**	**(62 - 103)**	**SW846 8270C**
2-Chlorophenol	**98**	**(63 - 103)**	**SW846 8270C**
1,4-Dichlorobenzene	**92**	**(65 - 102)**	**SW846 8270C**
N-Nitrosodi-n-propyl-amine	**99**	**(65 - 108)**	**SW846 8270C**
1,2,4-Trichloro-benzene	**90**	**(67 - 104)**	**SW846 8270C**
4-Chloro-3-methylphenol	**109 a**	**(65 - 108)**	**SW846 8270C**
Acenaphthene	**87**	**(59 - 100)**	**SW846 8270C**
4-Nitrophenol	**106**	**(50 - 122)**	**SW846 8270C**
2,4-Dinitrotoluene	**112**	**(69 - 128)**	**SW846 8270C**
Pentachlorophenol	**94**	**(64 - 114)**	**SW846 8270C**
Pyrene	**79**	**(52 - 119)**	**SW846 8270C**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	74	(29 - 110)
Phenol-d5	93	(41 - 115)
Nitrobenzene-d5	88	(46 - 117)
2-Fluorobiphenyl	91	(44 - 116)
2,4,6-Tribromophenol	98	(31 - 138)
Terphenyl-d14	83	(36 - 134)

NOTE(S):

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

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: PB045 **Work Order #...:** F6N421AC **Matrix.....:** WATER
LCS Lot-Sample#: H3L150000-288
Prep Date.....: 12/15/03 **Analysis Date..:** 12/18/03
Prep Batch #...: 3349288
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Phenol	**100**	**105 a**	**ug/L**	**105**	**SW846 8270C**
2-Chlorophenol	**100**	**97.6**	**ug/L**	**98**	**SW846 8270C**
1,4-Dichlorobenzene	**100**	**92.1**	**ug/L**	**92**	**SW846 8270C**
N-Nitrosodi-n-propyl-amine	**100**	**98.8**	**ug/L**	**99**	**SW846 8270C**
1,2,4-Trichloro-benzene	**100**	**90.5**	**ug/L**	**90**	**SW846 8270C**
4-Chloro-3-methylphenol	**100**	**109 a**	**ug/L**	**109**	**SW846 8270C**
Acenaphthene	**100**	**86.9**	**ug/L**	**87**	**SW846 8270C**
4-Nitrophenol	**100**	**106**	**ug/L**	**106**	**SW846 8270C**
2,4-Dinitrotoluene	**100**	**112**	**ug/L**	**112**	**SW846 8270C**
Pentachlorophenol	**100**	**94.2**	**ug/L**	**94**	**SW846 8270C**
Pyrene	**100**	**78.8**	**ug/L**	**79**	**SW846 8270C**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	74	(29 - 110)
Phenol-d5	93	(41 - 115)
Nitrobenzene-d5	88	(46 - 117)
2-Fluorobiphenyl	91	(44 - 116)
2,4,6-Tribromophenol	98	(31 - 138)
Terphenyl-d14	83	(36 - 134)

NOTE(S):

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

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: PB045 **Work Order #...:** F6JX21CJ-MS **Matrix.....:** WATER
MS Lot-Sample #: H3L120208-002 F6JX21CK-MSD
Date Sampled...: 12/11/03 **Date Received..:** 12/12/03
Prep Date.....: 12/15/03 **Analysis Date..:** 12/18/03
Prep Batch #...: 3349288
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Phenol	113 a	(58 - 103)			SW846 8270C
	112 a	(58 - 103)	0.88	(0-41)	SW846 8270C
2-Chlorophenol	98	(54 - 103)			SW846 8270C
	101	(54 - 103)	3.4	(0-43)	SW846 8270C
1,4-Dichlorobenzene	91	(56 - 102)			SW846 8270C
	93	(56 - 102)	2.1	(0-37)	SW846 8270C
N-Nitrosodi-n-propyl-amine	102	(61 - 108)			SW846 8270C
	101	(61 - 108)	0.98	(0-36)	SW846 8270C
1,2,4-Trichloro-benzene	91	(58 - 104)			SW846 8270C
	91	(58 - 104)	0.11	(0-36)	SW846 8270C
4-Chloro-3-methylphenol	115 a	(65 - 108)			SW846 8270C
	115 a	(65 - 108)	0.0	(0-29)	SW846 8270C
Acenaphthene	88	(59 - 100)			SW846 8270C
	86	(59 - 100)	2.2	(0-26)	SW846 8270C
4-Nitrophenol	115	(50 - 122)			SW846 8270C
	110	(50 - 122)	4.4	(0-50)	SW846 8270C
2,4-Dinitrotoluene	114	(67 - 128)			SW846 8270C
	113	(67 - 128)	0.88	(0-25)	SW846 8270C
Pentachlorophenol	102	(64 - 118)			SW846 8270C
	95	(64 - 118)	7.0	(0-37)	SW846 8270C
Pyrene	85	(51 - 119)			SW846 8270C
	79	(51 - 119)	7.9	(0-27)	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	73	(29 - 110)
	84	(29 - 110)
Phenol-d5	96	(41 - 115)
	97	(41 - 115)
Nitrobenzene-d5	92	(46 - 117)
	93	(46 - 117)
2-Fluorobiphenyl	90	(44 - 116)
	87	(44 - 116)
2,4,6-Tribromophenol	107	(31 - 138)
	101	(31 - 138)

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MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: PB045 **Work Order #...:** F6JX21CJ-MS **Matrix.....:** WATER
MS Lot-Sample #: H3L120208-002 F6JX21CK-MSD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Terphenyl-d14	91	(36 - 134)
	82	(36 - 134)

NOTE(S):

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

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: PB045 **Work Order #...:** F6JX21CJ-MS **Matrix.....:** WATER
MS Lot-Sample #: H3L120208-002 F6JX21CK-MSD
Date Sampled...: 12/11/03 **Date Received..:** 12/12/03
Prep Date.....: 12/15/03 **Analysis Date..:** 12/18/03
Prep Batch #...: 3349288
Dilution Factor: 1

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Phenol	ND	100	113	ug/L	113 a		SW846 8270C
	ND	100	112	ug/L	112 a	0.88	SW846 8270C
2-Chlorophenol	ND	100	97.6	ug/L	98		SW846 8270C
	ND	100	101	ug/L	101	3.4	SW846 8270C
1,4-Dichlorobenzene	ND	100	91.3	ug/L	91		SW846 8270C
	ND	100	93.2	ug/L	93	2.1	SW846 8270C
N-Nitrosodi-n-propyl-amine	ND	100	102	ug/L	102		SW846 8270C
	ND	100	101	ug/L	101	0.98	SW846 8270C
1,2,4-Trichloro-benzene	ND	100	90.8	ug/L	91		SW846 8270C
	ND	100	90.9	ug/L	91	0.11	SW846 8270C
4-Chloro-3-methylphenol	ND	100	115	ug/L	115 a		SW846 8270C
	ND	100	115	ug/L	115 a	0.0	SW846 8270C
Acenaphthene	ND	100	88.3	ug/L	88		SW846 8270C
	ND	100	86.4	ug/L	86	2.2	SW846 8270C
4-Nitrophenol	ND	100	115	ug/L	115		SW846 8270C
	ND	100	110	ug/L	110	4.4	SW846 8270C
2,4-Dinitrotoluene	ND	100	114	ug/L	114		SW846 8270C
	ND	100	113	ug/L	113	0.88	SW846 8270C
Pentachlorophenol	ND	100	102	ug/L	102		SW846 8270C
	ND	100	95.1	ug/L	95	7.0	SW846 8270C
Pyrene	ND	100	85.4	ug/L	85		SW846 8270C
	ND	100	78.9	ug/L	79	7.9	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	73	(29 - 110)
	84	(29 - 110)
Phenol-d5	96	(41 - 115)
	97	(41 - 115)
Nitrobenzene-d5	92	(46 - 117)
	93	(46 - 117)
2-Fluorobiphenyl	90	(44 - 116)
	87	(44 - 116)
2,4,6-Tribromophenol	107	(31 - 138)
	101	(31 - 138)

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MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: PB045 **Work Order #...:** F6JX21CJ-MS **Matrix.....:** WATER
MS Lot-Sample #: H3L120208-002 F6JX21CK-MSD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Terphenyl-d14	91	(36 - 134)
	82	(36 - 134)

NOTE(S):

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

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

Sample Data Summary

SHAW E & I INC

Client Sample ID: DD3007

HPLC

Lot-Sample #...: H3L100268-001 **Work Order #...:** F6DQ41AA **Matrix.....:** WATER
Date Sampled...: 12/09/03 **Date Received..:** 12/10/03
Prep Date.....: 12/16/03 **Analysis Date..:** 12/17/03
Prep Batch #...: 3350322
Dilution Factor: 1 **Method.....:** SW846 8330

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
HMX	ND	0.50	ug/L	0.10
RDX	ND	0.50	ug/L	0.13
1,3,5-Trinitrobenzene	ND	0.20	ug/L	0.11
1,3-Dinitrobenzene	ND	0.20	ug/L	0.080
Tetryl	ND	0.20	ug/L	0.17
Nitrobenzene	ND	0.20	ug/L	0.070
2,4,6-Trinitrotoluene	ND	0.20	ug/L	0.080
4-Amino-2,6-dinitrotoluene	ND	0.20	ug/L	0.11
2-Amino-4,6-dinitrotoluene	ND	0.20	ug/L	0.090
2,6-Dinitrotoluene	ND	0.20	ug/L	0.11
2,4-Dinitrotoluene	ND	0.20	ug/L	0.070
2-Nitrotoluene	ND	0.20	ug/L	0.14
4-Nitrotoluene	ND	0.20	ug/L	0.17
3-Nitrotoluene	ND	0.20	ug/L	0.13

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1-Chloro-3-nitrobenzene	88	(52 - 139)

SHAW E & I INC

Client Sample ID: DD3008

HPLC

Lot-Sample #...: H3L100268-002 **Work Order #...:** F6DRG1AM **Matrix.....:** WATER
Date Sampled...: 12/09/03 **Date Received..:** 12/10/03
Prep Date.....: 12/16/03 **Analysis Date..:** 12/17/03
Prep Batch #...: 3350322
Dilution Factor: 1 **Method.....:** SW846 8330

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
HMX	ND	0.50	ug/L	0.10
RDX	ND	0.50	ug/L	0.13
1,3,5-Trinitrobenzene	ND	0.20	ug/L	0.11
1,3-Dinitrobenzene	ND	0.20	ug/L	0.080
Tetryl	ND	0.20	ug/L	0.17
Nitrobenzene	ND	0.20	ug/L	0.070
2,4,6-Trinitrotoluene	ND	0.20	ug/L	0.080
4-Amino-2,6-dinitrotoluene	ND	0.20	ug/L	0.11
2-Amino-4,6-dinitrotoluene	ND	0.20	ug/L	0.090
2,6-Dinitrotoluene	ND	0.20	ug/L	0.11
2,4-Dinitrotoluene	ND	0.20	ug/L	0.070
2-Nitrotoluene	ND	0.20	ug/L	0.14
4-Nitrotoluene	ND	0.20	ug/L	0.17
3-Nitrotoluene	ND	0.20	ug/L	0.13

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1-Chloro-3-nitrobenzene	84	(52 - 139)

SHAW E & I INC

Client Sample ID: DD3002

HPLC

Lot-Sample #...: H3L110180-001 **Work Order #...:** F6F1C1AA **Matrix.....:** WATER
Date Sampled...: 12/10/03 **Date Received..:** 12/11/03
Prep Date.....: 12/16/03 **Analysis Date..:** 12/17/03
Prep Batch #...: 3350322
Dilution Factor: 1 **Method.....:** SW846 8330

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
HMX	ND	0.50	ug/L	0.10
RDX	ND	0.50	ug/L	0.13
1,3,5-Trinitrobenzene	ND	0.20	ug/L	0.11
1,3-Dinitrobenzene	ND	0.20	ug/L	0.080
Tetryl	ND	0.20	ug/L	0.17
Nitrobenzene	ND	0.20	ug/L	0.070
2,4,6-Trinitrotoluene	ND	0.20	ug/L	0.080
4-Amino-2,6-dinitrotoluene	ND	0.20	ug/L	0.11
2-Amino-4,6-dinitrotoluene	ND	0.20	ug/L	0.090
2,6-Dinitrotoluene	ND	0.20	ug/L	0.11
2,4-Dinitrotoluene	ND	0.20	ug/L	0.070
2-Nitrotoluene	ND	0.20	ug/L	0.14
4-Nitrotoluene	ND	0.20	ug/L	0.17
3-Nitrotoluene	ND	0.20	ug/L	0.13

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1-Chloro-3-nitrobenzene	98	(52 - 139)

SHAW E & I INC

Client Sample ID: DD3001

HPLC

Lot-Sample #...: H3L110180-002 **Work Order #...:** F6F2H1AM **Matrix.....:** WATER
Date Sampled...: 12/10/03 **Date Received..:** 12/11/03
Prep Date.....: 12/16/03 **Analysis Date..:** 12/17/03
Prep Batch #...: 3350322
Dilution Factor: 1 **Method.....:** SW846 8330

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
HMX	ND	0.50	ug/L	0.10
RDX	ND	0.50	ug/L	0.13
1,3,5-Trinitrobenzene	ND	0.20	ug/L	0.11
1,3-Dinitrobenzene	ND	0.20	ug/L	0.080
Tetryl	ND	0.20	ug/L	0.17
Nitrobenzene	ND	0.20	ug/L	0.070
2,4,6-Trinitrotoluene	ND	0.20	ug/L	0.080
4-Amino-2,6-dinitrotoluene	ND	0.20	ug/L	0.11
2-Amino-4,6-dinitrotoluene	ND	0.20	ug/L	0.090
2,6-Dinitrotoluene	ND	0.20	ug/L	0.11
2,4-Dinitrotoluene	ND	0.20	ug/L	0.070
2-Nitrotoluene	ND	0.20	ug/L	0.14
4-Nitrotoluene	ND	0.20	ug/L	0.17
3-Nitrotoluene	ND	0.20	ug/L	0.13

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1-Chloro-3-nitrobenzene	92	(52 - 139)

SHAW E & I INC

Client Sample ID: DD3003

HPLC

Lot-Sample #...: H3L120208-001 **Work Order #...:** F6JXA1AA **Matrix.....:** WATER
Date Sampled...: 12/11/03 **Date Received..:** 12/12/03
Prep Date.....: 12/16/03 **Analysis Date..:** 12/17/03
Prep Batch #...: 3350322
Dilution Factor: 1 **Method.....:** SW846 8330

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
HMX	ND	0.50	ug/L	0.10
RDX	ND	0.50	ug/L	0.13
1,3,5-Trinitrobenzene	ND	0.20	ug/L	0.11
1,3-Dinitrobenzene	ND	0.20	ug/L	0.080
Tetryl	ND	0.20	ug/L	0.17
Nitrobenzene	ND	0.20	ug/L	0.070
2,4,6-Trinitrotoluene	ND	0.20	ug/L	0.080
4-Amino-2,6-dinitrotoluene	ND	0.20	ug/L	0.11
2-Amino-4,6-dinitrotoluene	ND	0.20	ug/L	0.090
2,6-Dinitrotoluene	ND	0.20	ug/L	0.11
2,4-Dinitrotoluene	ND	0.20	ug/L	0.070
2-Nitrotoluene	ND	0.20	ug/L	0.14
4-Nitrotoluene	ND	0.20	ug/L	0.17
3-Nitrotoluene	ND	0.20	ug/L	0.13

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1-Chloro-3-nitrobenzene	97	(52 - 139)

SHAW E & I INC

Client Sample ID: DD3004

HPLC

Lot-Sample #...: H3L120208-002 **Work Order #...:** F6JX21CA **Matrix.....:** WATER
Date Sampled...: 12/11/03 **Date Received..:** 12/12/03
Prep Date.....: 12/16/03 **Analysis Date..:** 12/17/03
Prep Batch #...: 3350322
Dilution Factor: 1 **Method.....:** SW846 8330

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
HMX	ND	0.50	ug/L	0.10
RDX	ND	0.50	ug/L	0.13
1,3,5-Trinitrobenzene	ND	0.20	ug/L	0.11
1,3-Dinitrobenzene	ND	0.20	ug/L	0.080
Tetryl	ND	0.20	ug/L	0.17
Nitrobenzene	ND	0.20	ug/L	0.070
2,4,6-Trinitrotoluene	ND	0.20	ug/L	0.080
4-Amino-2,6-dinitrotoluene	ND	0.20	ug/L	0.11
2-Amino-4,6-dinitrotoluene	ND	0.20	ug/L	0.090
2,6-Dinitrotoluene	ND	0.20	ug/L	0.11
2,4-Dinitrotoluene	ND	0.20	ug/L	0.070
2-Nitrotoluene	ND	0.20	ug/L	0.14
4-Nitrotoluene	ND	0.20	ug/L	0.17
3-Nitrotoluene	ND	0.20	ug/L	0.13

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1-Chloro-3-nitrobenzene	91	(52 - 139)

SHAW E & I INC

Client Sample ID: DD3005

HPLC

Lot-Sample #...: H3L120208-003
Date Sampled...: 12/11/03
Prep Date.....: 12/16/03
Prep Batch #...: 3350322
Dilution Factor: 1

Work Order #...: F6J0A1AM
Date Received..: 12/12/03
Analysis Date..: 12/17/03

Method.....: SW846 8330

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
HMX	ND	0.50	ug/L	0.10
RDX	ND	0.50	ug/L	0.13
1,3,5-Trinitrobenzene	ND	0.20	ug/L	0.11
1,3-Dinitrobenzene	ND	0.20	ug/L	0.080
Tetryl	ND	0.20	ug/L	0.17
Nitrobenzene	ND	0.20	ug/L	0.070
2,4,6-Trinitrotoluene	ND	0.20	ug/L	0.080
4-Amino-2,6-dinitrotoluene	ND	0.20	ug/L	0.11
2-Amino-4,6-dinitrotoluene	ND	0.20	ug/L	0.090
2,6-Dinitrotoluene	ND	0.20	ug/L	0.11
2,4-Dinitrotoluene	ND	0.20	ug/L	0.070
2-Nitrotoluene	ND	0.20	ug/L	0.14
4-Nitrotoluene	ND	0.20	ug/L	0.17
3-Nitrotoluene	ND	0.20	ug/L	0.13

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1-Chloro-3-nitrobenzene	99	(52 - 139)

METHOD BLANK REPORT

HPLC

Client Lot #...: PB045
MB Lot-Sample #: H3L160000-322
Work Order #...: F6Q8D1AA
Matrix.....: WATER
Prep Date.....: 12/16/03
Analysis Date..: 12/17/03
Prep Batch #...: 3350322
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
HMX	ND	0.50	ug/L	SW846 8330
RDX	ND	0.50	ug/L	SW846 8330
1,3,5-Trinitrobenzene	ND	0.20	ug/L	SW846 8330
1,3-Dinitrobenzene	ND	0.20	ug/L	SW846 8330
Tetryl	ND	0.20	ug/L	SW846 8330
Nitrobenzene	ND	0.20	ug/L	SW846 8330
2,4,6-Trinitrotoluene	ND	0.20	ug/L	SW846 8330
4-Amino-2,6-dinitrotoluene	ND	0.20	ug/L	SW846 8330
2-Amino-4,6-dinitrotoluene	ND	0.20	ug/L	SW846 8330
2,6-Dinitrotoluene	ND	0.20	ug/L	SW846 8330
2,4-Dinitrotoluene	ND	0.20	ug/L	SW846 8330
2-Nitrotoluene	ND	0.20	ug/L	SW846 8330
4-Nitrotoluene	ND	0.20	ug/L	SW846 8330
3-Nitrotoluene	ND	0.20	ug/L	SW846 8330

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1-Chloro-3-nitrobenzene	94	(52 - 139)

NOTE(S):

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

LABORATORY CONTROL SAMPLE EVALUATION REPORT

HPLC

Client Lot #...: PB045 **Work Order #...:** F6Q8D1AC **Matrix.....:** WATER
LCS Lot-Sample#: H3L160000-322
Prep Date.....: 12/16/03 **Analysis Date..:** 12/17/03
Prep Batch #...: 3350322
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
HMX	**103**	**(71 - 122)**	**SW846 8330**
RDX	**110**	**(77 - 127)**	**SW846 8330**
1,3,5-Trinitrobenzene	**108**	**(75 - 121)**	**SW846 8330**
1,3-Dinitrobenzene	**108**	**(75 - 121)**	**SW846 8330**
Tetryl	**106**	**(73 - 119)**	**SW846 8330**
Nitrobenzene	**99**	**(61 - 114)**	**SW846 8330**
2,4,6-Trinitrotoluene	**108**	**(76 - 120)**	**SW846 8330**
4-Amino-2,6-dinitrotoluene	**101**	**(69 - 113)**	**SW846 8330**
2-Amino-4,6-dinitrotoluene	**103**	**(69 - 113)**	**SW846 8330**
2,6-Dinitrotoluene	**102**	**(74 - 120)**	**SW846 8330**
2,4-Dinitrotoluene	**106**	**(73 - 118)**	**SW846 8330**
2-Nitrotoluene	**92**	**(50 - 109)**	**SW846 8330**
4-Nitrotoluene	**96**	**(56 - 111)**	**SW846 8330**
3-Nitrotoluene	**95**	**(56 - 110)**	**SW846 8330**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1-Chloro-3-nitrobenzene	95	(52 - 139)

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

HPLC

Client Lot #...: PB045 **Work Order #...:** F6Q8D1AC **Matrix.....:** WATER
LCS Lot-Sample#: H3L160000-322
Prep Date.....: 12/16/03 **Analysis Date..:** 12/17/03
Prep Batch #...: 3350322
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
HMX	**3.00**	**3.09**	**ug/L**	**103**	**SW846 8330**
RDX	**3.00**	**3.30**	**ug/L**	**110**	**SW846 8330**
1,3,5-Trinitrobenzene	**3.00**	**3.24**	**ug/L**	**108**	**SW846 8330**
1,3-Dinitrobenzene	**3.00**	**3.25**	**ug/L**	**108**	**SW846 8330**
Tetryl	**3.00**	**3.18**	**ug/L**	**106**	**SW846 8330**
Nitrobenzene	**3.00**	**2.96**	**ug/L**	**99**	**SW846 8330**
2,4,6-Trinitrotoluene	**3.00**	**3.23**	**ug/L**	**108**	**SW846 8330**
4-Amino-2,6-dinitrotoluene	**3.00**	**3.03**	**ug/L**	**101**	**SW846 8330**
2-Amino-4,6-dinitrotoluene	**3.00**	**3.10**	**ug/L**	**103**	**SW846 8330**
2,6-Dinitrotoluene	**3.00**	**3.07**	**ug/L**	**102**	**SW846 8330**
2,4-Dinitrotoluene	**3.00**	**3.18**	**ug/L**	**106**	**SW846 8330**
2-Nitrotoluene	**3.00**	**2.75**	**ug/L**	**92**	**SW846 8330**
4-Nitrotoluene	**3.00**	**2.89**	**ug/L**	**96**	**SW846 8330**
3-Nitrotoluene	**3.00**	**2.86**	**ug/L**	**95**	**SW846 8330**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1-Chloro-3-nitrobenzene	95	(52 - 139)

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

HPLC

Client Lot #...: PB045 **Work Order #...:** F6JX21CC-MS **Matrix.....:** WATER
MS Lot-Sample #: H3L120208-002 F6JX21CD-MSD
Date Sampled...: 12/11/03 **Date Received..:** 12/12/03
Prep Date.....: 12/16/03 **Analysis Date..:** 12/17/03
Prep Batch #...: 3350322
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
HMX	96	(67 - 122)			SW846 8330
	93	(67 - 122)	3.3	(0-40)	SW846 8330
RDX	103	(70 - 133)			SW846 8330
	101	(70 - 133)	2.4	(0-35)	SW846 8330
1,3,5-Trinitrobenzene	100	(62 - 127)			SW846 8330
	97	(62 - 127)	3.4	(0-33)	SW846 8330
1,3-Dinitrobenzene	98	(70 - 121)			SW846 8330
	93	(70 - 121)	4.7	(0-42)	SW846 8330
Tetryl	21 a	(38 - 132)			SW846 8330
	11 a,p	(38 - 132)	59	(0-37)	SW846 8330
Nitrobenzene	96	(61 - 114)			SW846 8330
	87	(61 - 114)	9.7	(0-36)	SW846 8330
2,4,6-Trinitrotoluene	99	(67 - 120)			SW846 8330
	95	(67 - 120)	4.8	(0-34)	SW846 8330
4-Amino-2,6-dinitrotoluene	96	(68 - 113)			SW846 8330
	90	(68 - 113)	5.5	(0-43)	SW846 8330
2-Amino-4,6-dinitrotoluene	98	(59 - 125)			SW846 8330
	94	(59 - 125)	4.8	(0-34)	SW846 8330
2,6-Dinitrotoluene	99	(74 - 120)			SW846 8330
	93	(74 - 120)	6.0	(0-32)	SW846 8330
2,4-Dinitrotoluene	101	(72 - 118)			SW846 8330
	97	(72 - 118)	4.3	(0-36)	SW846 8330
2-Nitrotoluene	91	(46 - 118)			SW846 8330
	82	(46 - 118)	11	(0-38)	SW846 8330
4-Nitrotoluene	92	(56 - 111)			SW846 8330
	86	(56 - 111)	7.2	(0-33)	SW846 8330
3-Nitrotoluene	94	(56 - 121)			SW846 8330
	87	(56 - 121)	8.3	(0-36)	SW846 8330

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1-Chloro-3-nitrobenzene	102	(52 - 139)
	91	(52 - 139)

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

HPLC

Client Lot #...: PB045 **Work Order #...:** F6JX21CC-MS **Matrix.....:** WATER
MS Lot-Sample #: H3L120208-002 F6JX21CD-MSD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS

NOTE(S):

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

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

p Relative percent difference (RPD) is outside stated control limits.

MATRIX SPIKE SAMPLE DATA REPORT

HPLC

Client Lot #...: PB045 **Work Order #...:** F6JX21CC-MS **Matrix.....:** WATER
MS Lot-Sample #: H3L120208-002 F6JX21CD-MSD
Date Sampled...: 12/11/03 **Date Received..:** 12/12/03
Prep Date.....: 12/16/03 **Analysis Date..:** 12/17/03
Prep Batch #...: 3350322
Dilution Factor: 1

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
HMX	ND	3.00	2.88	ug/L	96		SW846 8330
	ND	3.00	2.79	ug/L	93	3.3	SW846 8330
RDX	ND	3.00	3.10	ug/L	103		SW846 8330
	ND	3.00	3.02	ug/L	101	2.4	SW846 8330
1,3,5-Trinitrobenzene	ND	3.00	3.00	ug/L	100		SW846 8330
	ND	3.00	2.90	ug/L	97	3.4	SW846 8330
1,3-Dinitrobenzene	ND	3.00	2.93	ug/L	98		SW846 8330
	ND	3.00	2.80	ug/L	93	4.7	SW846 8330
Tetryl	ND	3.00	0.627	ug/L	21 a		SW846 8330
	ND	3.00	0.342	ug/L	11 a,p	59	SW846 8330
Nitrobenzene	ND	3.00	2.88	ug/L	96		SW846 8330
	ND	3.00	2.61	ug/L	87	9.7	SW846 8330
2,4,6-Trinitrotoluene	ND	3.00	2.98	ug/L	99		SW846 8330
	ND	3.00	2.84	ug/L	95	4.8	SW846 8330
4-Amino-2,6-dinitrotoluene	ND	3.00	2.87	ug/L	96		SW846 8330
	ND	3.00	2.72	ug/L	90	5.5	SW846 8330
2-Amino-4,6-dinitrotoluene	ND	3.00	2.95	ug/L	98		SW846 8330
	ND	3.00	2.81	ug/L	94	4.8	SW846 8330
2,6-Dinitrotoluene	ND	3.00	2.96	ug/L	99		SW846 8330
	ND	3.00	2.79	ug/L	93	6.0	SW846 8330
2,4-Dinitrotoluene	ND	3.00	3.03	ug/L	101		SW846 8330
	ND	3.00	2.90	ug/L	97	4.3	SW846 8330
2-Nitrotoluene	ND	3.00	2.73	ug/L	91		SW846 8330
	ND	3.00	2.45	ug/L	82	11	SW846 8330
4-Nitrotoluene	ND	3.00	2.77	ug/L	92		SW846 8330
	ND	3.00	2.58	ug/L	86	7.2	SW846 8330
3-Nitrotoluene	ND	3.00	2.82	ug/L	94		SW846 8330
	ND	3.00	2.60	ug/L	87	8.3	SW846 8330

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1-Chloro-3-nitrobenzene	102	(52 - 139)
	91	(52 - 139)

(Continued on next page)

MATRIX SPIKE SAMPLE DATA REPORT

HPLC

Client Lot #...: PB045 **Work Order #...:** F6JX21CC-MS **Matrix.....:** WATER
MS Lot-Sample #: H3L120208-002 F6JX21CD-MSD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS

NOTE(S):

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

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

p Relative percent difference (RPD) is outside stated control limits.

Sample Data Summary

SHAW E & I INC

Client Sample ID: DD3007

TOTAL Metals

Lot-Sample #...: H3L100268-001 **Matrix.....:** WATER
Date Sampled...: 12/09/03 **Date Received..:** 12/10/03

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 3352155						
Mercury	ND	0.20	ug/L	SW846 7470A	12/18/03	F6DQ41A5
		Dilution Factor: 1		Analysis Time..: 14:28	MDL.....: 0.030	
Prep Batch #...: 3352178						
Aluminum	**42.6 B**	**200**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6DQ41AE**
		Dilution Factor: 1		Analysis Time..: 11:35	MDL.....: 41.3	
Antimony	ND	60.0	ug/L	SW846 6010B	12/18-12/19/03	F6DQ41AF
		Dilution Factor: 1		Analysis Time..: 11:35	MDL.....: 4.0	
Arsenic	**5.4 B**	**10.0**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6DQ41AG**
		Dilution Factor: 1		Analysis Time..: 11:35	MDL.....: 2.6	
Barium	**395**	**200**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6DQ41AH**
		Dilution Factor: 1		Analysis Time..: 11:35	MDL.....: 0.96	
Beryllium	ND	5.0	ug/L	SW846 6010B	12/18-12/19/03	F6DQ41AJ
		Dilution Factor: 1		Analysis Time..: 11:35	MDL.....: 0.56	
Cadmium	ND	5.0	ug/L	SW846 6010B	12/18-12/19/03	F6DQ41AK
		Dilution Factor: 1		Analysis Time..: 11:35	MDL.....: 0.84	
Calcium	**20000**	**5000**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6DQ41AL**
		Dilution Factor: 1		Analysis Time..: 11:35	MDL.....: 58.2	
Chromium	ND	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6DQ41AM
		Dilution Factor: 1		Analysis Time..: 11:35	MDL.....: 2.8	
Cobalt	ND	50.0	ug/L	SW846 6010B	12/18-12/19/03	F6DQ41AN
		Dilution Factor: 1		Analysis Time..: 11:35	MDL.....: 2.0	
Copper	ND	25.0	ug/L	SW846 6010B	12/18-12/19/03	F6DQ41AP
		Dilution Factor: 1		Analysis Time..: 11:35	MDL.....: 3.0	
Iron	**398**	**100**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6DQ41AQ**
		Dilution Factor: 1		Analysis Time..: 11:35	MDL.....: 45.8	
Lead	ND	3.0	ug/L	SW846 6010B	12/18-12/19/03	F6DQ41AR
		Dilution Factor: 1		Analysis Time..: 11:35	MDL.....: 1.6	

(Continued on next page)

SHAW E & I INC

Client Sample ID: DD3007

TOTAL Metals

Lot-Sample #...: H3L100268-001 Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Magnesium	**7780**	**5000**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6DQ41AT**
		Dilution Factor: 1		Analysis Time..: 11:35	MDL.....: 37.0	
Manganese	**16.6**	**15.0**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6DQ41AU**
		Dilution Factor: 1		Analysis Time..: 11:35	MDL.....: 1.6	
Nickel	ND	40.0	ug/L	SW846 6010B	12/18-12/19/03	F6DQ41AV
		Dilution Factor: 1		Analysis Time..: 11:35	MDL.....: 2.8	
Potassium	**6050**	**5000**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6DQ41AW**
		Dilution Factor: 1		Analysis Time..: 11:35	MDL.....: 66.8	
Selenium	ND	5.0	ug/L	SW846 6010B	12/18-12/19/03	F6DQ41AX
		Dilution Factor: 1		Analysis Time..: 11:35	MDL.....: 1.5	
Silver	ND	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6DQ41A0
		Dilution Factor: 1		Analysis Time..: 11:35	MDL.....: 1.9	
Sodium	**285000**	**5000**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6DQ41A1**
		Dilution Factor: 1		Analysis Time..: 11:35	MDL.....: 464	
Thallium	ND	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6DQ41A2
		Dilution Factor: 1		Analysis Time..: 11:35	MDL.....: 2.4	
Vanadium	ND	50.0	ug/L	SW846 6010B	12/18-12/19/03	F6DQ41A3
		Dilution Factor: 1		Analysis Time..: 11:35	MDL.....: 3.6	
Zinc	**247**	**20.0**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6DQ41A4**
		Dilution Factor: 1		Analysis Time..: 11:35	MDL.....: 2.4	

NOTE(S):

B Estimated result. Result is less than RL.

SHAW E & I INC

Client Sample ID: DD3007

DISSOLVED Metals

Lot-Sample #...: H3L100268-001 **Matrix.....:** WATER
Date Sampled...: 12/09/03 **Date Received..:** 12/10/03

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 3352158						
Mercury	ND	0.20	ug/L	SW846 7470A	12/18/03	F6DQ41C8
		Dilution Factor: 1		Analysis Time..: 14:56	MDL.....: 0.030	
Prep Batch #...: 3352178						
Aluminum	ND	200	ug/L	SW846 6010B	12/18-12/19/03	F6DQ41CH
		Dilution Factor: 1		Analysis Time..: 11:30	MDL.....: 41.3	
Antimony	ND	60.0	ug/L	SW846 6010B	12/18-12/19/03	F6DQ41CJ
		Dilution Factor: 1		Analysis Time..: 11:30	MDL.....: 4.0	
Arsenic	**5.6 B**	**10.0**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6DQ41CK**
		Dilution Factor: 1		Analysis Time..: 11:30	MDL.....: 2.6	
Barium	**374**	**200**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6DQ41CL**
		Dilution Factor: 1		Analysis Time..: 11:30	MDL.....: 0.96	
Beryllium	ND	5.0	ug/L	SW846 6010B	12/18-12/19/03	F6DQ41CM
		Dilution Factor: 1		Analysis Time..: 11:30	MDL.....: 0.56	
Cadmium	ND	5.0	ug/L	SW846 6010B	12/18-12/19/03	F6DQ41CN
		Dilution Factor: 1		Analysis Time..: 11:30	MDL.....: 0.84	
Calcium	**19700**	**5000**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6DQ41CP**
		Dilution Factor: 1		Analysis Time..: 11:30	MDL.....: 58.2	
Chromium	ND	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6DQ41CQ
		Dilution Factor: 1		Analysis Time..: 11:30	MDL.....: 2.8	
Cobalt	ND	50.0	ug/L	SW846 6010B	12/18-12/19/03	F6DQ41CR
		Dilution Factor: 1		Analysis Time..: 11:30	MDL.....: 2.0	
Copper	ND	25.0	ug/L	SW846 6010B	12/18-12/19/03	F6DQ41CT
		Dilution Factor: 1		Analysis Time..: 11:30	MDL.....: 3.0	
Iron	**354**	**100**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6DQ41CU**
		Dilution Factor: 1		Analysis Time..: 11:30	MDL.....: 45.8	
Lead	ND	3.0	ug/L	SW846 6010B	12/18-12/19/03	F6DQ41CV
		Dilution Factor: 1		Analysis Time..: 11:30	MDL.....: 1.6	

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SHAW E & I INC

Client Sample ID: DD3007

DISSOLVED Metals

Lot-Sample #...: H3L100268-001 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Magnesium	**7670**	**5000**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6DQ41CW**
		Dilution Factor: 1		Analysis Time..: 11:30	MDL.....: 37.0	
Manganese	**16.4**	**15.0**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6DQ41CX**
		Dilution Factor: 1		Analysis Time..: 11:30	MDL.....: 1.6	
Nickel	ND	40.0	ug/L	SW846 6010B	12/18-12/19/03	F6DQ41C0
		Dilution Factor: 1		Analysis Time..: 11:30	MDL.....: 2.8	
Potassium	**5920**	**5000**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6DQ41C1**
		Dilution Factor: 1		Analysis Time..: 11:30	MDL.....: 66.8	
Selenium	ND	5.0	ug/L	SW846 6010B	12/18-12/19/03	F6DQ41C2
		Dilution Factor: 1		Analysis Time..: 11:30	MDL.....: 1.5	
Silver	ND	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6DQ41C3
		Dilution Factor: 1		Analysis Time..: 11:30	MDL.....: 1.9	
Sodium	**280000**	**5000**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6DQ41C4**
		Dilution Factor: 1		Analysis Time..: 11:30	MDL.....: 464	
Thallium	**3.8 B**	**10.0**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6DQ41C5**
		Dilution Factor: 1		Analysis Time..: 11:30	MDL.....: 2.4	
Vanadium	ND	50.0	ug/L	SW846 6010B	12/18-12/19/03	F6DQ41C6
		Dilution Factor: 1		Analysis Time..: 11:30	MDL.....: 3.6	
Zinc	**247**	**20.0**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6DQ41C7**
		Dilution Factor: 1		Analysis Time..: 11:30	MDL.....: 2.4	

NOTE(S):

B Estimated result. Result is less than RL.

SHAW E & I INC

Client Sample ID: DD3008

TOTAL Metals

Lot-Sample #...: H3L100268-002 **Matrix.....:** WATER
Date Sampled...: 12/09/03 **Date Received..:** 12/10/03

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 3352155						
Mercury	ND	0.20	ug/L	SW846 7470A	12/18/03	F6DRG1AG
		Dilution Factor: 1		Analysis Time..: 14:30	MDL.....: 0.030	
Prep Batch #...: 3352178						
Aluminum	**49.9 B**	**200**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6DRG1AQ**
		Dilution Factor: 1		Analysis Time..: 11:44	MDL.....: 41.3	
Antimony	ND	60.0	ug/L	SW846 6010B	12/18-12/19/03	F6DRG1AR
		Dilution Factor: 1		Analysis Time..: 11:44	MDL.....: 4.0	
Arsenic	**3.3 B**	**10.0**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6DRG1AT**
		Dilution Factor: 1		Analysis Time..: 11:44	MDL.....: 2.6	
Barium	**11800**	**2000**	**ug/L**	**SW846 6010B**	**12/18-12/22/03**	**F6DRG1AU**
		Dilution Factor: 10		Analysis Time..: 15:25	MDL.....: 9.6	
Beryllium	ND	5.0	ug/L	SW846 6010B	12/18-12/19/03	F6DRG1AV
		Dilution Factor: 1		Analysis Time..: 11:44	MDL.....: 0.56	
Cadmium	ND	5.0	ug/L	SW846 6010B	12/18-12/19/03	F6DRG1AW
		Dilution Factor: 1		Analysis Time..: 11:44	MDL.....: 0.84	
Calcium	**295000**	**5000**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6DRG1AX**
		Dilution Factor: 1		Analysis Time..: 11:44	MDL.....: 58.2	
Chromium	ND	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6DRG1A0
		Dilution Factor: 1		Analysis Time..: 11:44	MDL.....: 2.8	
Cobalt	**3.6 B**	**50.0**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6DRG1A1**
		Dilution Factor: 1		Analysis Time..: 11:44	MDL.....: 2.0	
Copper	ND	25.0	ug/L	SW846 6010B	12/18-12/19/03	F6DRG1A2
		Dilution Factor: 1		Analysis Time..: 11:44	MDL.....: 3.0	
Iron	**1550**	**100**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6DRG1A3**
		Dilution Factor: 1		Analysis Time..: 11:44	MDL.....: 45.8	
Lead	ND G	20.0	ug/L	SW846 6010B	12/18-12/19/03	F6DRG1A4
		Dilution Factor: 1		Analysis Time..: 11:44	MDL.....: 1.6	

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SHAW E & I INC

Client Sample ID: DD3008

TOTAL Metals

Lot-Sample #...: H3L100268-002 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Magnesium	**198000**	**5000**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6DRG1A5**
		Dilution Factor: 1		Analysis Time..: 11:44	MDL.....: 37.0	
Manganese	**50.7**	**15.0**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6DRG1A6**
		Dilution Factor: 1		Analysis Time..: 11:44	MDL.....: 1.6	
Nickel	ND	40.0	ug/L	SW846 6010B	12/18-12/19/03	F6DRG1A7
		Dilution Factor: 1		Analysis Time..: 11:44	MDL.....: 2.8	
Potassium	**67800**	**50000**	**ug/L**	**SW846 6010B**	**12/18-12/22/03**	**F6DRG1A8**
		Dilution Factor: 10		Analysis Time..: 15:25	MDL.....: 668	
Selenium	ND	5.0	ug/L	SW846 6010B	12/18-12/19/03	F6DRG1A9
		Dilution Factor: 1		Analysis Time..: 11:44	MDL.....: 1.5	
Silver	ND	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6DRG1AA
		Dilution Factor: 1		Analysis Time..: 11:44	MDL.....: 1.9	
Sodium	**1350000**	**50000**	**ug/L**	**SW846 6010B**	**12/18-12/22/03**	**F6DRG1AC**
		Dilution Factor: 10		Analysis Time..: 15:25	MDL.....: 4640	
Thallium	**2.4 B**	**10.0**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6DRG1AD**
		Dilution Factor: 1		Analysis Time..: 11:44	MDL.....: 2.4	
Vanadium	ND	50.0	ug/L	SW846 6010B	12/18-12/19/03	F6DRG1AE
		Dilution Factor: 1		Analysis Time..: 11:44	MDL.....: 3.6	
Zinc	**507**	**20.0**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6DRG1AF**
		Dilution Factor: 1		Analysis Time..: 11:44	MDL.....: 2.4	

NOTE(S):

B Estimated result. Result is less than RL.

G Elevated reporting limit. The reporting limit is elevated due to matrix interference.

SHAW E & I INC

Client Sample ID: DD3008

DISSOLVED Metals

Lot-Sample #...: H3L100268-002 **Matrix.....:** WATER
Date Sampled...: 12/09/03 **Date Received..:** 12/10/03

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 3352158						
Mercury	ND	0.20	ug/L	SW846 7470A	12/18/03	F6DRG1CK
		Dilution Factor: 1		Analysis Time..: 14:58	MDL.....: 0.030	
Prep Batch #...: 3352178						
Aluminum	**66.9 B**	**200**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6DRG1CT**
		Dilution Factor: 1		Analysis Time..: 11:39	MDL.....: 41.3	
Antimony	ND	60.0	ug/L	SW846 6010B	12/18-12/19/03	F6DRG1CU
		Dilution Factor: 1		Analysis Time..: 11:39	MDL.....: 4.0	
Arsenic	**3.1 B**	**10.0**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6DRG1CV**
		Dilution Factor: 1		Analysis Time..: 11:39	MDL.....: 2.6	
Barium	**10800**	**2000**	**ug/L**	**SW846 6010B**	**12/18-12/22/03**	**F6DRG1CW**
		Dilution Factor: 10		Analysis Time..: 15:21	MDL.....: 9.6	
Beryllium	ND	5.0	ug/L	SW846 6010B	12/18-12/19/03	F6DRG1CX
		Dilution Factor: 1		Analysis Time..: 11:39	MDL.....: 0.56	
Cadmium	ND	5.0	ug/L	SW846 6010B	12/18-12/19/03	F6DRG1C0
		Dilution Factor: 1		Analysis Time..: 11:39	MDL.....: 0.84	
Calcium	**283000**	**5000**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6DRG1C1**
		Dilution Factor: 1		Analysis Time..: 11:39	MDL.....: 58.2	
Chromium	ND	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6DRG1C2
		Dilution Factor: 1		Analysis Time..: 11:39	MDL.....: 2.8	
Cobalt	**3.4 B**	**50.0**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6DRG1C3**
		Dilution Factor: 1		Analysis Time..: 11:39	MDL.....: 2.0	
Copper	ND	25.0	ug/L	SW846 6010B	12/18-12/19/03	F6DRG1C4
		Dilution Factor: 1		Analysis Time..: 11:39	MDL.....: 3.0	
Iron	**1490**	**100**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6DRG1C5**
		Dilution Factor: 1		Analysis Time..: 11:39	MDL.....: 45.8	
Lead	ND G	19.0	ug/L	SW846 6010B	12/18-12/19/03	F6DRG1C6
		Dilution Factor: 1		Analysis Time..: 11:39	MDL.....: 1.6	

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SHAW E & I INC

Client Sample ID: DD3008

DISSOLVED Metals

Lot-Sample #...: H3L100268-002 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Magnesium	**189000**	**5000**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6DRG1C7**
		Dilution Factor: 1		Analysis Time..: 11:39	MDL.....: 37.0	
Manganese	**49.3**	**15.0**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6DRG1C8**
		Dilution Factor: 1		Analysis Time..: 11:39	MDL.....: 1.6	
Nickel	ND	40.0	ug/L	SW846 6010B	12/18-12/19/03	F6DRG1CA
		Dilution Factor: 1		Analysis Time..: 11:39	MDL.....: 2.8	
Potassium	**60700**	**50000**	**ug/L**	**SW846 6010B**	**12/18-12/22/03**	**F6DRG1CC**
		Dilution Factor: 10		Analysis Time..: 15:21	MDL.....: 668	
Selenium	ND	5.0	ug/L	SW846 6010B	12/18-12/19/03	F6DRG1CD
		Dilution Factor: 1		Analysis Time..: 11:39	MDL.....: 1.5	
Silver	ND	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6DRG1CE
		Dilution Factor: 1		Analysis Time..: 11:39	MDL.....: 1.9	
Sodium	**1250000**	**50000**	**ug/L**	**SW846 6010B**	**12/18-12/22/03**	**F6DRG1CF**
		Dilution Factor: 10		Analysis Time..: 15:21	MDL.....: 4640	
Thallium	**3.8 B**	**10.0**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6DRG1CG**
		Dilution Factor: 1		Analysis Time..: 11:39	MDL.....: 2.4	
Vanadium	ND	50.0	ug/L	SW846 6010B	12/18-12/19/03	F6DRG1CH
		Dilution Factor: 1		Analysis Time..: 11:39	MDL.....: 3.6	
Zinc	**528**	**20.0**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6DRG1CJ**
		Dilution Factor: 1		Analysis Time..: 11:39	MDL.....: 2.4	

NOTE(S):

B Estimated result. Result is less than RL.

G Elevated reporting limit. The reporting limit is elevated due to matrix interference.

SHAW E & I INC

Client Sample ID: DD3002

TOTAL Metals

Lot-Sample #...: H3L110180-001 **Matrix.....:** WATER
Date Sampled...: 12/10/03 **Date Received..:** 12/11/03

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 3352155						
Mercury	ND	0.20	ug/L	SW846 7470A	12/18/03	F6F1C1A5
		Dilution Factor: 1		Analysis Time..: 14:32	MDL.....: 0.030	
Prep Batch #...: 3352178						
Aluminum	**57.9 B**	**200**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6F1C1AE**
		Dilution Factor: 1		Analysis Time..: 12:01	MDL.....: 41.3	
Antimony	ND	60.0	ug/L	SW846 6010B	12/18-12/19/03	F6F1C1AF
		Dilution Factor: 1		Analysis Time..: 12:01	MDL.....: 4.0	
Arsenic	ND	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6F1C1AG
		Dilution Factor: 1		Analysis Time..: 12:01	MDL.....: 2.6	
Barium	**26100**	**4000**	**ug/L**	**SW846 6010B**	**12/18-12/22/03**	**F6F1C1AH**
		Dilution Factor: 20		Analysis Time..: 15:34	MDL.....: 19.2	
Beryllium	ND	5.0	ug/L	SW846 6010B	12/18-12/19/03	F6F1C1AJ
		Dilution Factor: 1		Analysis Time..: 12:01	MDL.....: 0.56	
Cadmium	ND	5.0	ug/L	SW846 6010B	12/18-12/19/03	F6F1C1AK
		Dilution Factor: 1		Analysis Time..: 12:01	MDL.....: 0.84	
Calcium	**2290000**	**100000**	**ug/L**	**SW846 6010B**	**12/18-12/22/03**	**F6F1C1AL**
		Dilution Factor: 20		Analysis Time..: 15:34	MDL.....: 1160	
Chromium	ND	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6F1C1AM
		Dilution Factor: 1		Analysis Time..: 12:01	MDL.....: 2.8	
Cobalt	**6.8 B**	**50.0**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6F1C1AN**
		Dilution Factor: 1		Analysis Time..: 12:01	MDL.....: 2.0	
Copper	ND	25.0	ug/L	SW846 6010B	12/18-12/19/03	F6F1C1AP
		Dilution Factor: 1		Analysis Time..: 12:01	MDL.....: 3.0	
Iron	**2030**	**100**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6F1C1AQ**
		Dilution Factor: 1		Analysis Time..: 12:01	MDL.....: 45.8	
Lead	ND G	118	ug/L	SW846 6010B	12/18-12/19/03	F6F1C1AR
		Dilution Factor: 1		Analysis Time..: 12:01	MDL.....: 1.6	

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SHAW E & I INC

Client Sample ID: DD3002

TOTAL Metals

Lot-Sample #...: H3L110180-001 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Magnesium	**1040000**	**100000**	**ug/L**	**SW846 6010B**	**12/18-12/22/03**	**F6F1C1AT**
		Dilution Factor: 20		Analysis Time..: 15:34	MDL.....: 740	
Manganese	**202**	**15.0**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6F1C1AU**
		Dilution Factor: 1		Analysis Time..: 12:01	MDL.....: 1.6	
Nickel	ND	40.0	ug/L	SW846 6010B	12/18-12/19/03	F6F1C1AV
		Dilution Factor: 1		Analysis Time..: 12:01	MDL.....: 2.8	
Potassium	**72600 B**	**100000**	**ug/L**	**SW846 6010B**	**12/18-12/22/03**	**F6F1C1AW**
		Dilution Factor: 20		Analysis Time..: 15:34	MDL.....: 1340	
Selenium	ND	5.0	ug/L	SW846 6010B	12/18-12/19/03	F6F1C1AX
		Dilution Factor: 1		Analysis Time..: 12:01	MDL.....: 1.5	
Silver	ND	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6F1C1A0
		Dilution Factor: 1		Analysis Time..: 12:01	MDL.....: 1.9	
Sodium	**9130000**	**100000**	**ug/L**	**SW846 6010B**	**12/18-12/22/03**	**F6F1C1A1**
		Dilution Factor: 20		Analysis Time..: 15:34	MDL.....: 9280	
Thallium	ND	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6F1C1A2
		Dilution Factor: 1		Analysis Time..: 12:01	MDL.....: 2.4	
Vanadium	ND	50.0	ug/L	SW846 6010B	12/18-12/19/03	F6F1C1A3
		Dilution Factor: 1		Analysis Time..: 12:01	MDL.....: 3.6	
Zinc	**612**	**20.0**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6F1C1A4**
		Dilution Factor: 1		Analysis Time..: 12:01	MDL.....: 2.4	

NOTE(S):

B Estimated result. Result is less than RL.

G Elevated reporting limit. The reporting limit is elevated due to matrix interference.

SHAW E & I INC

Client Sample ID: DD3002

DISSOLVED Metals

Lot-Sample #...: H3L110180-001 **Matrix.....:** WATER
Date Sampled...: 12/10/03 **Date Received..:** 12/11/03

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 3352158						
Mercury	ND	0.20	ug/L	SW846 7470A	12/18/03	F6F1C1C8
		Dilution Factor: 1		Analysis Time..: 15:00	MDL.....: 0.030	
Prep Batch #...: 3352178						
Aluminum	ND	200	ug/L	SW846 6010B	12/18-12/19/03	F6F1C1CH
		Dilution Factor: 1		Analysis Time..: 11:48	MDL.....: 41.3	
Antimony	ND	60.0	ug/L	SW846 6010B	12/18-12/19/03	F6F1C1CJ
		Dilution Factor: 1		Analysis Time..: 11:48	MDL.....: 4.0	
Arsenic	**4.1 B**	**10.0**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6F1C1CK**
		Dilution Factor: 1		Analysis Time..: 11:48	MDL.....: 2.6	
Barium	**25700**	**4000**	**ug/L**	**SW846 6010B**	**12/18-12/22/03**	**F6F1C1CL**
		Dilution Factor: 20		Analysis Time..: 15:29	MDL.....: 19.2	
Beryllium	ND	5.0	ug/L	SW846 6010B	12/18-12/19/03	F6F1C1CM
		Dilution Factor: 1		Analysis Time..: 11:48	MDL.....: 0.56	
Cadmium	ND	5.0	ug/L	SW846 6010B	12/18-12/19/03	F6F1C1CN
		Dilution Factor: 1		Analysis Time..: 11:48	MDL.....: 0.84	
Calcium	**2240000**	**100000**	**ug/L**	**SW846 6010B**	**12/18-12/22/03**	**F6F1C1CP**
		Dilution Factor: 20		Analysis Time..: 15:29	MDL.....: 1160	
Chromium	ND	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6F1C1CQ
		Dilution Factor: 1		Analysis Time..: 11:48	MDL.....: 2.8	
Cobalt	**6.2 B**	**50.0**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6F1C1CR**
		Dilution Factor: 1		Analysis Time..: 11:48	MDL.....: 2.0	
Copper	ND	25.0	ug/L	SW846 6010B	12/18-12/19/03	F6F1C1CT
		Dilution Factor: 1		Analysis Time..: 11:48	MDL.....: 3.0	
Iron	**1830**	**100**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6F1C1CU**
		Dilution Factor: 1		Analysis Time..: 11:48	MDL.....: 45.8	
Lead	ND G	118	ug/L	SW846 6010B	12/18-12/19/03	F6F1C1CV
		Dilution Factor: 1		Analysis Time..: 11:48	MDL.....: 1.6	

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SHAW E & I INC

Client Sample ID: DD3002

DISSOLVED Metals

Lot-Sample #...: H3L110180-001 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Magnesium	**1020000**	**100000**	**ug/L**	**SW846 6010B**	**12/18-12/22/03**	**F6F1C1CW**
		Dilution Factor: 20		Analysis Time..: 15:29	MDL.....: 740	
Manganese	**200**	**15.0**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6F1C1CX**
		Dilution Factor: 1		Analysis Time..: 11:48	MDL.....: 1.6	
Nickel	ND	40.0	ug/L	SW846 6010B	12/18-12/19/03	F6F1C1C0
		Dilution Factor: 1		Analysis Time..: 11:48	MDL.....: 2.8	
Potassium	**70500 B**	**100000**	**ug/L**	**SW846 6010B**	**12/18-12/22/03**	**F6F1C1C1**
		Dilution Factor: 20		Analysis Time..: 15:29	MDL.....: 1340	
Selenium	ND	5.0	ug/L	SW846 6010B	12/18-12/19/03	F6F1C1C2
		Dilution Factor: 1		Analysis Time..: 11:48	MDL.....: 1.5	
Silver	ND	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6F1C1C3
		Dilution Factor: 1		Analysis Time..: 11:48	MDL.....: 1.9	
Sodium	**9000000**	**100000**	**ug/L**	**SW846 6010B**	**12/18-12/22/03**	**F6F1C1C4**
		Dilution Factor: 20		Analysis Time..: 15:29	MDL.....: 9280	
Thallium	ND	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6F1C1C5
		Dilution Factor: 1		Analysis Time..: 11:48	MDL.....: 2.4	
Vanadium	ND	50.0	ug/L	SW846 6010B	12/18-12/19/03	F6F1C1C6
		Dilution Factor: 1		Analysis Time..: 11:48	MDL.....: 3.6	
Zinc	**673**	**20.0**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6F1C1C7**
		Dilution Factor: 1		Analysis Time..: 11:48	MDL.....: 2.4	

NOTE(S):

B Estimated result. Result is less than RL.

G Elevated reporting limit. The reporting limit is elevated due to matrix interference.

SHAW E & I INC

Client Sample ID: DD3001

TOTAL Metals

Lot-Sample #...: H3L110180-002 **Matrix.....:** WATER
Date Sampled...: 12/10/03 **Date Received..:** 12/11/03

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 3352155						
Mercury	ND	0.20	ug/L	SW846 7470A	12/18/03	F6F2H1AG
		Dilution Factor: 1		Analysis Time..: 14:34	MDL.....: 0.030	
Prep Batch #...: 3352178						
Aluminum	ND	200	ug/L	SW846 6010B	12/18-12/19/03	F6F2H1AQ
		Dilution Factor: 1		Analysis Time..: 12:10	MDL.....: 41.3	
Antimony	ND	60.0	ug/L	SW846 6010B	12/18-12/19/03	F6F2H1AR
		Dilution Factor: 1		Analysis Time..: 12:10	MDL.....: 4.0	
Arsenic	ND	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6F2H1AT
		Dilution Factor: 1		Analysis Time..: 12:10	MDL.....: 2.6	
Barium	**73.2 B**	**200**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6F2H1AU**
		Dilution Factor: 1		Analysis Time..: 12:10	MDL.....: 0.96	
Beryllium	ND	5.0	ug/L	SW846 6010B	12/18-12/19/03	F6F2H1AV
		Dilution Factor: 1		Analysis Time..: 12:10	MDL.....: 0.56	
Cadmium	ND	5.0	ug/L	SW846 6010B	12/18-12/19/03	F6F2H1AW
		Dilution Factor: 1		Analysis Time..: 12:10	MDL.....: 0.84	
Calcium	**86200**	**5000**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6F2H1AX**
		Dilution Factor: 1		Analysis Time..: 12:10	MDL.....: 58.2	
Chromium	ND	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6F2H1A0
		Dilution Factor: 1		Analysis Time..: 12:10	MDL.....: 2.8	
Cobalt	ND	50.0	ug/L	SW846 6010B	12/18-12/19/03	F6F2H1A1
		Dilution Factor: 1		Analysis Time..: 12:10	MDL.....: 2.0	
Copper	ND	25.0	ug/L	SW846 6010B	12/18-12/19/03	F6F2H1A2
		Dilution Factor: 1		Analysis Time..: 12:10	MDL.....: 3.0	
Iron	**908**	**100**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6F2H1A3**
		Dilution Factor: 1		Analysis Time..: 12:10	MDL.....: 45.8	
Lead	ND G	5.0	ug/L	SW846 6010B	12/18-12/19/03	F6F2H1A4
		Dilution Factor: 1		Analysis Time..: 12:10	MDL.....: 1.6	

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SHAW E & I INC

Client Sample ID: DD3001

TOTAL Metals

Lot-Sample #...: H3L110180-002 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Magnesium	**37100**	**5000**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6F2H1A5**
		Dilution Factor: 1		Analysis Time..: 12:10	MDL.....: 37.0	
Manganese	**166**	**15.0**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6F2H1A6**
		Dilution Factor: 1		Analysis Time..: 12:10	MDL.....: 1.6	
Nickel	**4.8 B**	**40.0**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6F2H1A7**
		Dilution Factor: 1		Analysis Time..: 12:10	MDL.....: 2.8	
Potassium	**7630**	**5000**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6F2H1A8**
		Dilution Factor: 1		Analysis Time..: 12:10	MDL.....: 66.8	
Selenium	ND	5.0	ug/L	SW846 6010B	12/18-12/19/03	F6F2H1A9
		Dilution Factor: 1		Analysis Time..: 12:10	MDL.....: 1.5	
Silver	ND	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6F2H1AA
		Dilution Factor: 1		Analysis Time..: 12:10	MDL.....: 1.9	
Sodium	**86300**	**5000**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6F2H1AC**
		Dilution Factor: 1		Analysis Time..: 12:10	MDL.....: 464	
Thallium	**2.5 B**	**10.0**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6F2H1AD**
		Dilution Factor: 1		Analysis Time..: 12:10	MDL.....: 2.4	
Vanadium	ND	50.0	ug/L	SW846 6010B	12/18-12/19/03	F6F2H1AE
		Dilution Factor: 1		Analysis Time..: 12:10	MDL.....: 3.6	
Zinc	**30.1**	**20.0**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6F2H1AF**
		Dilution Factor: 1		Analysis Time..: 12:10	MDL.....: 2.4	

NOTE(S):

B Estimated result. Result is less than RL.

G Elevated reporting limit. The reporting limit is elevated due to matrix interference.

SHAW E & I INC

Client Sample ID: DD3001

DISSOLVED Metals

Lot-Sample #...: H3L110180-002 **Matrix.....:** WATER
Date Sampled...: 12/10/03 **Date Received..:** 12/11/03

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 3352158						
Mercury	ND	0.20	ug/L	SW846 7470A	12/18/03	F6F2H1CK
		Dilution Factor: 1		Analysis Time..: 15:02	MDL.....: 0.030	
Prep Batch #...: 3352178						
Aluminum	ND	200	ug/L	SW846 6010B	12/18-12/19/03	F6F2H1CT
		Dilution Factor: 1		Analysis Time..: 12:06	MDL.....: 41.3	
Antimony	ND	60.0	ug/L	SW846 6010B	12/18-12/19/03	F6F2H1CU
		Dilution Factor: 1		Analysis Time..: 12:06	MDL.....: 4.0	
Arsenic	ND	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6F2H1CV
		Dilution Factor: 1		Analysis Time..: 12:06	MDL.....: 2.6	
Barium	**81.8 B**	**200**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6F2H1CW**
		Dilution Factor: 1		Analysis Time..: 12:06	MDL.....: 0.96	
Beryllium	ND	5.0	ug/L	SW846 6010B	12/18-12/19/03	F6F2H1CX
		Dilution Factor: 1		Analysis Time..: 12:06	MDL.....: 0.56	
Cadmium	**1.2 B**	**5.0**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6F2H1C0**
		Dilution Factor: 1		Analysis Time..: 12:06	MDL.....: 0.84	
Calcium	**89900**	**5000**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6F2H1C1**
		Dilution Factor: 1		Analysis Time..: 12:06	MDL.....: 58.2	
Chromium	ND	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6F2H1C2
		Dilution Factor: 1		Analysis Time..: 12:06	MDL.....: 2.8	
Cobalt	ND	50.0	ug/L	SW846 6010B	12/18-12/19/03	F6F2H1C3
		Dilution Factor: 1		Analysis Time..: 12:06	MDL.....: 2.0	
Copper	ND	25.0	ug/L	SW846 6010B	12/18-12/19/03	F6F2H1C4
		Dilution Factor: 1		Analysis Time..: 12:06	MDL.....: 3.0	
Iron	**856**	**100**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6F2H1C5**
		Dilution Factor: 1		Analysis Time..: 12:06	MDL.....: 45.8	
Lead	ND G	6.0	ug/L	SW846 6010B	12/18-12/19/03	F6F2H1C6
		Dilution Factor: 1		Analysis Time..: 12:06	MDL.....: 1.6	

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SHAW E & I INC

Client Sample ID: DD3001

DISSOLVED Metals

Lot-Sample #...: H3L110180-002 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Magnesium	**40000**	**5000**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6F2H1C7**
		Dilution Factor: 1		Analysis Time..: 12:06	MDL.....: 37.0	
Manganese	**164**	**15.0**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6F2H1C8**
		Dilution Factor: 1		Analysis Time..: 12:06	MDL.....: 1.6	
Nickel	**4.8 B**	**40.0**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6F2H1CA**
		Dilution Factor: 1		Analysis Time..: 12:06	MDL.....: 2.8	
Potassium	**9690**	**5000**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6F2H1CC**
		Dilution Factor: 1		Analysis Time..: 12:06	MDL.....: 66.8	
Selenium	ND	5.0	ug/L	SW846 6010B	12/18-12/19/03	F6F2H1CD
		Dilution Factor: 1		Analysis Time..: 12:06	MDL.....: 1.5	
Silver	ND	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6F2H1CE
		Dilution Factor: 1		Analysis Time..: 12:06	MDL.....: 1.9	
Sodium	**112000**	**5000**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6F2H1CF**
		Dilution Factor: 1		Analysis Time..: 12:06	MDL.....: 464	
Thallium	**2.7 B**	**10.0**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6F2H1CG**
		Dilution Factor: 1		Analysis Time..: 12:06	MDL.....: 2.4	
Vanadium	ND	50.0	ug/L	SW846 6010B	12/18-12/19/03	F6F2H1CH
		Dilution Factor: 1		Analysis Time..: 12:06	MDL.....: 3.6	
Zinc	**35.9**	**20.0**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6F2H1CJ**
		Dilution Factor: 1		Analysis Time..: 12:06	MDL.....: 2.4	

NOTE(S):

B Estimated result. Result is less than RL.

G Elevated reporting limit. The reporting limit is elevated due to matrix interference.

SHAW E & I INC

Client Sample ID: DD3003

TOTAL Metals

Lot-Sample #...: H3L120208-001 **Matrix.....:** WATER
Date Sampled...: 12/11/03 **Date Received..:** 12/12/03

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 3352155						
Mercury	ND	0.20	ug/L	SW846 7470A	12/18/03	F6JXA1A5
		Dilution Factor: 1		Analysis Time..: 14:36	MDL.....: 0.030	
Prep Batch #...: 3352178						
Aluminum	**194 B**	**200**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6JXA1AE**
		Dilution Factor: 1		Analysis Time..: 12:19	MDL.....: 41.3	
Antimony	ND	60.0	ug/L	SW846 6010B	12/18-12/19/03	F6JXA1AF
		Dilution Factor: 1		Analysis Time..: 12:19	MDL.....: 4.0	
Arsenic	ND	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6JXA1AG
		Dilution Factor: 1		Analysis Time..: 12:19	MDL.....: 2.6	
Barium	**642**	**200**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6JXA1AH**
		Dilution Factor: 1		Analysis Time..: 12:19	MDL.....: 0.96	
Beryllium	ND	5.0	ug/L	SW846 6010B	12/18-12/19/03	F6JXA1AJ
		Dilution Factor: 1		Analysis Time..: 12:19	MDL.....: 0.56	
Cadmium	ND	5.0	ug/L	SW846 6010B	12/18-12/19/03	F6JXA1AK
		Dilution Factor: 1		Analysis Time..: 12:19	MDL.....: 0.84	
Calcium	**151000**	**5000**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6JXA1AL**
		Dilution Factor: 1		Analysis Time..: 12:19	MDL.....: 58.2	
Chromium	ND	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6JXA1AM
		Dilution Factor: 1		Analysis Time..: 12:19	MDL.....: 2.8	
Cobalt	**7.7 B**	**50.0**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6JXA1AN**
		Dilution Factor: 1		Analysis Time..: 12:19	MDL.....: 2.0	
Copper	ND	25.0	ug/L	SW846 6010B	12/18-12/19/03	F6JXA1AP
		Dilution Factor: 1		Analysis Time..: 12:19	MDL.....: 3.0	
Iron	ND	100	ug/L	SW846 6010B	12/18-12/19/03	F6JXA1AQ
		Dilution Factor: 1		Analysis Time..: 12:19	MDL.....: 45.8	
Lead	ND G	11.0	ug/L	SW846 6010B	12/18-12/19/03	F6JXA1AR
		Dilution Factor: 1		Analysis Time..: 12:19	MDL.....: 1.6	

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SHAW E & I INC

Client Sample ID: DD3003

TOTAL Metals

Lot-Sample #...: H3L120208-001 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Magnesium	**70800**	**5000**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6JXA1AT**
		Dilution Factor: 1		Analysis Time..: 12:19	MDL.....: 37.0	
Manganese	**25.8**	**15.0**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6JXA1AU**
		Dilution Factor: 1		Analysis Time..: 12:19	MDL.....: 1.6	
Nickel	ND	40.0	ug/L	SW846 6010B	12/18-12/19/03	F6JXA1AV
		Dilution Factor: 1		Analysis Time..: 12:19	MDL.....: 2.8	
Potassium	**24300**	**5000**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6JXA1AW**
		Dilution Factor: 1		Analysis Time..: 12:19	MDL.....: 66.8	
Selenium	ND	5.0	ug/L	SW846 6010B	12/18-12/19/03	F6JXA1AX
		Dilution Factor: 1		Analysis Time..: 12:19	MDL.....: 1.5	
Silver	ND	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6JXA1A0
		Dilution Factor: 1		Analysis Time..: 12:19	MDL.....: 1.9	
Sodium	**67000**	**5000**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6JXA1A1**
		Dilution Factor: 1		Analysis Time..: 12:19	MDL.....: 464	
Thallium	**2.5 B**	**10.0**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6JXA1A2**
		Dilution Factor: 1		Analysis Time..: 12:19	MDL.....: 2.4	
Vanadium	ND	50.0	ug/L	SW846 6010B	12/18-12/19/03	F6JXA1A3
		Dilution Factor: 1		Analysis Time..: 12:19	MDL.....: 3.6	
Zinc	**9.3 B**	**20.0**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6JXA1A4**
		Dilution Factor: 1		Analysis Time..: 12:19	MDL.....: 2.4	

NOTE(S):

B Estimated result. Result is less than RL.

G Elevated reporting limit. The reporting limit is elevated due to matrix interference.

SHAW E & I INC

Client Sample ID: DD3003

DISSOLVED Metals

Lot-Sample #...: H3L120208-001 **Matrix.....:** WATER
Date Sampled...: 12/11/03 **Date Received..:** 12/12/03

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 3352158						
Mercury	ND	0.20	ug/L	SW846 7470A	12/18/03	F6JXA1C8
		Dilution Factor: 1		Analysis Time..: 15:04	MDL.....: 0.030	
Prep Batch #...: 3352178						
Aluminum	**50.8 B**	**200**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6JXA1CH**
		Dilution Factor: 1		Analysis Time..: 12:15	MDL.....: 41.3	
Antimony	ND	60.0	ug/L	SW846 6010B	12/18-12/19/03	F6JXA1CJ
		Dilution Factor: 1		Analysis Time..: 12:15	MDL.....: 4.0	
Arsenic	ND	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6JXA1CK
		Dilution Factor: 1		Analysis Time..: 12:15	MDL.....: 2.6	
Barium	**669**	**200**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6JXA1CL**
		Dilution Factor: 1		Analysis Time..: 12:15	MDL.....: 0.96	
Beryllium	ND	5.0	ug/L	SW846 6010B	12/18-12/19/03	F6JXA1CM
		Dilution Factor: 1		Analysis Time..: 12:15	MDL.....: 0.56	
Cadmium	ND	5.0	ug/L	SW846 6010B	12/18-12/19/03	F6JXA1CN
		Dilution Factor: 1		Analysis Time..: 12:15	MDL.....: 0.84	
Calcium	**152000**	**5000**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6JXA1CP**
		Dilution Factor: 1		Analysis Time..: 12:15	MDL.....: 58.2	
Chromium	ND	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6JXA1CQ
		Dilution Factor: 1		Analysis Time..: 12:15	MDL.....: 2.8	
Cobalt	ND	50.0	ug/L	SW846 6010B	12/18-12/19/03	F6JXA1CR
		Dilution Factor: 1		Analysis Time..: 12:15	MDL.....: 2.0	
Copper	ND	25.0	ug/L	SW846 6010B	12/18-12/19/03	F6JXA1CT
		Dilution Factor: 1		Analysis Time..: 12:15	MDL.....: 3.0	
Iron	ND	100	ug/L	SW846 6010B	12/18-12/19/03	F6JXA1CU
		Dilution Factor: 1		Analysis Time..: 12:15	MDL.....: 45.8	
Lead	ND G	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6JXA1CV
		Dilution Factor: 1		Analysis Time..: 12:15	MDL.....: 1.6	

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SHAW E & I INC

Client Sample ID: DD3003

DISSOLVED Metals

Lot-Sample #...: H3L120208-001 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Magnesium	**71100**	**5000**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6JXA1CW**
		Dilution Factor: 1		Analysis Time..: 12:15	MDL.....: 37.0	
Manganese	**25.5**	**15.0**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6JXA1CX**
		Dilution Factor: 1		Analysis Time..: 12:15	MDL.....: 1.6	
Nickel	ND	40.0	ug/L	SW846 6010B	12/18-12/19/03	F6JXA1C0
		Dilution Factor: 1		Analysis Time..: 12:15	MDL.....: 2.8	
Potassium	**24500**	**5000**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6JXA1C1**
		Dilution Factor: 1		Analysis Time..: 12:15	MDL.....: 66.8	
Selenium	ND	5.0	ug/L	SW846 6010B	12/18-12/19/03	F6JXA1C2
		Dilution Factor: 1		Analysis Time..: 12:15	MDL.....: 1.5	
Silver	ND	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6JXA1C3
		Dilution Factor: 1		Analysis Time..: 12:15	MDL.....: 1.9	
Sodium	**67900**	**5000**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6JXA1C4**
		Dilution Factor: 1		Analysis Time..: 12:15	MDL.....: 464	
Thallium	ND	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6JXA1C5
		Dilution Factor: 1		Analysis Time..: 12:15	MDL.....: 2.4	
Vanadium	ND	50.0	ug/L	SW846 6010B	12/18-12/19/03	F6JXA1C6
		Dilution Factor: 1		Analysis Time..: 12:15	MDL.....: 3.6	
Zinc	ND	20.0	ug/L	SW846 6010B	12/18-12/19/03	F6JXA1C7
		Dilution Factor: 1		Analysis Time..: 12:15	MDL.....: 2.4	

NOTE(S):

B Estimated result. Result is less than RL.

G Elevated reporting limit. The reporting limit is elevated due to matrix interference.

SHAW E & I INC

Client Sample ID: DD3004

TOTAL Metals

Lot-Sample #...: H3L120208-002 **Matrix.....:** WATER
Date Sampled...: 12/11/03 **Date Received..:** 12/12/03

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 3352155						
Mercury	ND	0.20	ug/L	SW846 7470A	12/18/03	F6JX21AT
		Dilution Factor: 1		Analysis Time..: 14:38	MDL.....: 0.030	
Prep Batch #...: 3352178						
Aluminum	**61.2 B**	**200**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6JX21CL**
		Dilution Factor: 1		Analysis Time..: 12:41	MDL.....: 41.3	
Antimony	ND	60.0	ug/L	SW846 6010B	12/18-12/19/03	F6JX21CP
		Dilution Factor: 1		Analysis Time..: 12:41	MDL.....: 4.0	
Arsenic	ND	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6JX21CT
		Dilution Factor: 1		Analysis Time..: 12:41	MDL.....: 2.6	
Barium	**187 B**	**200**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6JX21CW**
		Dilution Factor: 1		Analysis Time..: 12:41	MDL.....: 0.96	
Beryllium	ND	5.0	ug/L	SW846 6010B	12/18-12/19/03	F6JX21C1
		Dilution Factor: 1		Analysis Time..: 12:41	MDL.....: 0.56	
Cadmium	ND	5.0	ug/L	SW846 6010B	12/18-12/19/03	F6JX21C4
		Dilution Factor: 1		Analysis Time..: 12:41	MDL.....: 0.84	
Calcium	**141000**	**5000**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6JX21C7**
		Dilution Factor: 1		Analysis Time..: 12:41	MDL.....: 58.2	
Chromium	ND	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6JX21DA
		Dilution Factor: 1		Analysis Time..: 12:41	MDL.....: 2.8	
Cobalt	ND	50.0	ug/L	SW846 6010B	12/18-12/19/03	F6JX21DE
		Dilution Factor: 1		Analysis Time..: 12:41	MDL.....: 2.0	
Copper	ND	25.0	ug/L	SW846 6010B	12/18-12/19/03	F6JX21DH
		Dilution Factor: 1		Analysis Time..: 12:41	MDL.....: 3.0	
Iron	**140**	**100**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6JX21DL**
		Dilution Factor: 1		Analysis Time..: 12:41	MDL.....: 45.8	
Lead	ND G	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6JX21DP
		Dilution Factor: 1		Analysis Time..: 12:41	MDL.....: 1.6	

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SHAW E & I INC

Client Sample ID: DD3004

TOTAL Metals

Lot-Sample #...: H3L120208-002 Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Magnesium	**54000**	**5000**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6JX21DT**
		Dilution Factor: 1		Analysis Time..: 12:41	MDL.....: 37.0	
Manganese	**58.5**	**15.0**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6JX21DW**
		Dilution Factor: 1		Analysis Time..: 12:41	MDL.....: 1.6	
Nickel	ND	40.0	ug/L	SW846 6010B	12/18-12/19/03	F6JX21D1
		Dilution Factor: 1		Analysis Time..: 12:41	MDL.....: 2.8	
Potassium	**11900**	**5000**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6JX21D4**
		Dilution Factor: 1		Analysis Time..: 12:41	MDL.....: 66.8	
Selenium	ND	5.0	ug/L	SW846 6010B	12/18-12/19/03	F6JX21D7
		Dilution Factor: 1		Analysis Time..: 12:41	MDL.....: 1.5	
Silver	ND	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6JX21AA
		Dilution Factor: 1		Analysis Time..: 12:41	MDL.....: 1.9	
Sodium	**122000**	**5000**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6JX21AE**
		Dilution Factor: 1		Analysis Time..: 12:41	MDL.....: 464	
Thallium	**3.0 B**	**10.0**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6JX21AH**
		Dilution Factor: 1		Analysis Time..: 12:41	MDL.....: 2.4	
Vanadium	ND	50.0	ug/L	SW846 6010B	12/18-12/19/03	F6JX21AL
		Dilution Factor: 1		Analysis Time..: 12:41	MDL.....: 3.6	
Zinc	**74.4**	**20.0**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6JX21AP**
		Dilution Factor: 1		Analysis Time..: 12:41	MDL.....: 2.4	

NOTE(S):

B Estimated result. Result is less than RL.

G Elevated reporting limit. The reporting limit is elevated due to matrix interference.

SHAW E & I INC

Client Sample ID: DD3004

DISSOLVED Metals

Lot-Sample #...: H3L120208-002 **Matrix.....:** WATER
Date Sampled...: 12/11/03 **Date Received..:** 12/12/03

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 3352158						
Mercury	ND	0.20	ug/L	SW846 7470A	12/18/03	F6JX21E4
		Dilution Factor: 1		Analysis Time..: 15:06	MDL.....: 0.030	
Prep Batch #...: 3352178						
Aluminum	ND	200	ug/L	SW846 6010B	12/18-12/19/03	F6JX21FT
		Dilution Factor: 1		Analysis Time..: 12:23	MDL.....: 41.3	
Antimony	ND	60.0	ug/L	SW846 6010B	12/18-12/19/03	F6JX21FW
		Dilution Factor: 1		Analysis Time..: 12:23	MDL.....: 4.0	
Arsenic	ND	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6JX21F1
		Dilution Factor: 1		Analysis Time..: 12:23	MDL.....: 2.6	
Barium	**175 B**	**200**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6JX21F4**
		Dilution Factor: 1		Analysis Time..: 12:23	MDL.....: 0.96	
Beryllium	ND	5.0	ug/L	SW846 6010B	12/18-12/19/03	F6JX21F7
		Dilution Factor: 1		Analysis Time..: 12:23	MDL.....: 0.56	
Cadmium	ND	5.0	ug/L	SW846 6010B	12/18-12/19/03	F6JX21GA
		Dilution Factor: 1		Analysis Time..: 12:23	MDL.....: 0.84	
Calcium	**135000**	**5000**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6JX21GE**
		Dilution Factor: 1		Analysis Time..: 12:23	MDL.....: 58.2	
Chromium	ND	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6JX21GH
		Dilution Factor: 1		Analysis Time..: 12:23	MDL.....: 2.8	
Cobalt	ND	50.0	ug/L	SW846 6010B	12/18-12/19/03	F6JX21GL
		Dilution Factor: 1		Analysis Time..: 12:23	MDL.....: 2.0	
Copper	ND	25.0	ug/L	SW846 6010B	12/18-12/19/03	F6JX21GP
		Dilution Factor: 1		Analysis Time..: 12:23	MDL.....: 3.0	
Iron	**74.5 B**	**100**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6JX21GT**
		Dilution Factor: 1		Analysis Time..: 12:23	MDL.....: 45.8	
Lead	ND G	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6JX21GW
		Dilution Factor: 1		Analysis Time..: 12:23	MDL.....: 1.6	

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SHAW E & I INC

Client Sample ID: DD3004

DISSOLVED Metals

Lot-Sample #...: H3L120208-002 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Magnesium	**51400**	**5000**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6JX21G1**
		Dilution Factor: 1		Analysis Time..: 12:23	MDL.....: 37.0	
Manganese	**55.2**	**15.0**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6JX21G4**
		Dilution Factor: 1		Analysis Time..: 12:23	MDL.....: 1.6	
Nickel	ND	40.0	ug/L	SW846 6010B	12/18-12/19/03	F6JX21EA
		Dilution Factor: 1		Analysis Time..: 12:23	MDL.....: 2.8	
Potassium	**11100**	**5000**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6JX21EE**
		Dilution Factor: 1		Analysis Time..: 12:23	MDL.....: 66.8	
Selenium	ND	5.0	ug/L	SW846 6010B	12/18-12/19/03	F6JX21EH
		Dilution Factor: 1		Analysis Time..: 12:23	MDL.....: 1.5	
Silver	ND	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6JX21EL
		Dilution Factor: 1		Analysis Time..: 12:23	MDL.....: 1.9	
Sodium	**115000**	**5000**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6JX21EP**
		Dilution Factor: 1		Analysis Time..: 12:23	MDL.....: 464	
Thallium	ND	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6JX21ET
		Dilution Factor: 1		Analysis Time..: 12:23	MDL.....: 2.4	
Vanadium	ND	50.0	ug/L	SW846 6010B	12/18-12/19/03	F6JX21EW
		Dilution Factor: 1		Analysis Time..: 12:23	MDL.....: 3.6	
Zinc	**21.7**	**20.0**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6JX21E1**
		Dilution Factor: 1		Analysis Time..: 12:23	MDL.....: 2.4	

NOTE(S):

B Estimated result. Result is less than RL.

G Elevated reporting limit. The reporting limit is elevated due to matrix interference.

SHAW E & I INC

Client Sample ID: DD3005

TOTAL Metals

Lot-Sample #...: H3L120208-003 **Matrix.....:** WATER
Date Sampled...: 12/11/03 **Date Received..:** 12/12/03

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 3352155						
Mercury	ND	0.20	ug/L	SW846 7470A	12/18/03	F6J0A1AG
		Dilution Factor: 1		Analysis Time..: 14:44	MDL.....: 0.030	
Prep Batch #...: 3352178						
Aluminum	**47.9 B**	**200**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6J0A1AQ**
		Dilution Factor: 1		Analysis Time..: 13:08	MDL.....: 41.3	
Antimony	ND	60.0	ug/L	SW846 6010B	12/18-12/19/03	F6J0A1AR
		Dilution Factor: 1		Analysis Time..: 13:08	MDL.....: 4.0	
Arsenic	ND	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6J0A1AT
		Dilution Factor: 1		Analysis Time..: 13:08	MDL.....: 2.6	
Barium	**179 B**	**200**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6J0A1AU**
		Dilution Factor: 1		Analysis Time..: 13:08	MDL.....: 0.96	
Beryllium	ND	5.0	ug/L	SW846 6010B	12/18-12/22/03	F6J0A1AV
		Dilution Factor: 1		Analysis Time..: 15:53	MDL.....: 0.56	
Cadmium	ND	5.0	ug/L	SW846 6010B	12/18-12/19/03	F6J0A1AW
		Dilution Factor: 1		Analysis Time..: 13:08	MDL.....: 0.84	
Calcium	**138000**	**5000**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6J0A1AX**
		Dilution Factor: 1		Analysis Time..: 13:08	MDL.....: 58.2	
Chromium	ND	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6J0A1A0
		Dilution Factor: 1		Analysis Time..: 13:08	MDL.....: 2.8	
Cobalt	ND	50.0	ug/L	SW846 6010B	12/18-12/19/03	F6J0A1A1
		Dilution Factor: 1		Analysis Time..: 13:08	MDL.....: 2.0	
Copper	ND	25.0	ug/L	SW846 6010B	12/18-12/19/03	F6J0A1A2
		Dilution Factor: 1		Analysis Time..: 13:08	MDL.....: 3.0	
Iron	**133**	**100**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6J0A1A3**
		Dilution Factor: 1		Analysis Time..: 13:08	MDL.....: 45.8	
Lead	ND G	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6J0A1A4
		Dilution Factor: 1		Analysis Time..: 13:08	MDL.....: 1.6	

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SHAW E & I INC

Client Sample ID: DD3005

TOTAL Metals

Lot-Sample #...: H3L120208-003 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Magnesium	**52700**	**5000**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6J0A1A5**
		Dilution Factor: 1		Analysis Time..: 13:08	MDL.....: 37.0	
Manganese	**56.2**	**15.0**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6J0A1A6**
		Dilution Factor: 1		Analysis Time..: 13:08	MDL.....: 1.6	
Nickel	ND	40.0	ug/L	SW846 6010B	12/18-12/19/03	F6J0A1A7
		Dilution Factor: 1		Analysis Time..: 13:08	MDL.....: 2.8	
Potassium	**10800**	**5000**	**ug/L**	**SW846 6010B**	**12/18-12/22/03**	**F6J0A1A8**
		Dilution Factor: 1		Analysis Time..: 15:53	MDL.....: 66.8	
Selenium	ND	5.0	ug/L	SW846 6010B	12/18-12/19/03	F6J0A1A9
		Dilution Factor: 1		Analysis Time..: 13:08	MDL.....: 1.5	
Silver	ND	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6J0A1AA
		Dilution Factor: 1		Analysis Time..: 13:08	MDL.....: 1.9	
Sodium	**118000**	**5000**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6J0A1AC**
		Dilution Factor: 1		Analysis Time..: 13:08	MDL.....: 464	
Thallium	**3.2 B**	**10.0**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6J0A1AD**
		Dilution Factor: 1		Analysis Time..: 13:08	MDL.....: 2.4	
Vanadium	ND	50.0	ug/L	SW846 6010B	12/18-12/19/03	F6J0A1AE
		Dilution Factor: 1		Analysis Time..: 13:08	MDL.....: 3.6	
Zinc	**69.4**	**20.0**	**ug/L**	**SW846 6010B**	**12/18-12/22/03**	**F6J0A1AF**
		Dilution Factor: 1		Analysis Time..: 15:53	MDL.....: 2.4	

NOTE(S):

B Estimated result. Result is less than RL.

G Elevated reporting limit. The reporting limit is elevated due to matrix interference.

SHAW E & I INC

Client Sample ID: DD3005

DISSOLVED Metals

Lot-Sample #...: H3L120208-003 **Matrix.....:** WATER
Date Sampled...: 12/11/03 **Date Received..:** 12/12/03

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 3352158						
Mercury	ND	0.20	ug/L	SW846 7470A	12/18/03	F6J0A1CK
		Dilution Factor: 1		Analysis Time..: 15:17	MDL.....: 0.030	
Prep Batch #...: 3352178						
Aluminum	**44.1 B**	**200**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6J0A1CT**
		Dilution Factor: 1		Analysis Time..: 13:03	MDL.....: 41.3	
Antimony	ND	60.0	ug/L	SW846 6010B	12/18-12/19/03	F6J0A1CU
		Dilution Factor: 1		Analysis Time..: 13:03	MDL.....: 4.0	
Arsenic	ND	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6J0A1CV
		Dilution Factor: 1		Analysis Time..: 13:03	MDL.....: 2.6	
Barium	**180 B**	**200**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6J0A1CW**
		Dilution Factor: 1		Analysis Time..: 13:03	MDL.....: 0.96	
Beryllium	ND	5.0	ug/L	SW846 6010B	12/18-12/22/03	F6J0A1CX
		Dilution Factor: 1		Analysis Time..: 15:49	MDL.....: 0.56	
Cadmium	ND	5.0	ug/L	SW846 6010B	12/18-12/19/03	F6J0A1C0
		Dilution Factor: 1		Analysis Time..: 13:03	MDL.....: 0.84	
Calcium	**139000**	**5000**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6J0A1C1**
		Dilution Factor: 1		Analysis Time..: 13:03	MDL.....: 58.2	
Chromium	ND	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6J0A1C2
		Dilution Factor: 1		Analysis Time..: 13:03	MDL.....: 2.8	
Cobalt	ND	50.0	ug/L	SW846 6010B	12/18-12/19/03	F6J0A1C3
		Dilution Factor: 1		Analysis Time..: 13:03	MDL.....: 2.0	
Copper	ND	25.0	ug/L	SW846 6010B	12/18-12/19/03	F6J0A1C4
		Dilution Factor: 1		Analysis Time..: 13:03	MDL.....: 3.0	
Iron	**54.3 B**	**100**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6J0A1C5**
		Dilution Factor: 1		Analysis Time..: 13:03	MDL.....: 45.8	
Lead	ND G	9.0	ug/L	SW846 6010B	12/18-12/19/03	F6J0A1C6
		Dilution Factor: 1		Analysis Time..: 13:03	MDL.....: 1.6	

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SHAW E & I INC

Client Sample ID: DD3005

DISSOLVED Metals

Lot-Sample #...: H3L120208-003 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Magnesium	**53400**	**5000**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6J0A1C7**
		Dilution Factor: 1		Analysis Time..: 13:03	MDL.....: 37.0	
Manganese	**56.8**	**15.0**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6J0A1C8**
		Dilution Factor: 1		Analysis Time..: 13:03	MDL.....: 1.6	
Nickel	ND	40.0	ug/L	SW846 6010B	12/18-12/19/03	F6J0A1CA
		Dilution Factor: 1		Analysis Time..: 13:03	MDL.....: 2.8	
Potassium	**11000**	**5000**	**ug/L**	**SW846 6010B**	**12/18-12/22/03**	**F6J0A1CC**
		Dilution Factor: 1		Analysis Time..: 15:49	MDL.....: 66.8	
Selenium	ND	5.0	ug/L	SW846 6010B	12/18-12/19/03	F6J0A1CD
		Dilution Factor: 1		Analysis Time..: 13:03	MDL.....: 1.5	
Silver	ND	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6J0A1CE
		Dilution Factor: 1		Analysis Time..: 13:03	MDL.....: 1.9	
Sodium	**120000**	**5000**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6J0A1CF**
		Dilution Factor: 1		Analysis Time..: 13:03	MDL.....: 464	
Thallium	**6.2 B**	**10.0**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6J0A1CG**
		Dilution Factor: 1		Analysis Time..: 13:03	MDL.....: 2.4	
Vanadium	ND	50.0	ug/L	SW846 6010B	12/18-12/19/03	F6J0A1CH
		Dilution Factor: 1		Analysis Time..: 13:03	MDL.....: 3.6	
Zinc	**20.8**	**20.0**	**ug/L**	**SW846 6010B**	**12/18-12/22/03**	**F6J0A1CJ**
		Dilution Factor: 1		Analysis Time..: 15:49	MDL.....: 2.4	

NOTE(S):

B Estimated result. Result is less than RL.

G Elevated reporting limit. The reporting limit is elevated due to matrix interference.

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: PB045 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MB Lot-Sample #: H3L180000-155 **Prep Batch #...:** 3352155						
Mercury	ND	0.20	ug/L	SW846 7470A	12/18/03	F6X6X1AA
		Dilution Factor: 1				
		Analysis Time..: 14:17				
MB Lot-Sample #: H3L180000-178 **Prep Batch #...:** 3352178						
Aluminum	ND	200	ug/L	SW846 6010B	12/18-12/19/03	F6X9W1AG
		Dilution Factor: 1				
		Analysis Time..: 11:08				
Antimony	ND	60.0	ug/L	SW846 6010B	12/18-12/19/03	F6X9W1AH
		Dilution Factor: 1				
		Analysis Time..: 11:08				
Arsenic	ND	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6X9W1AJ
		Dilution Factor: 1				
		Analysis Time..: 11:08				
Barium	ND	200	ug/L	SW846 6010B	12/18-12/19/03	F6X9W1AK
		Dilution Factor: 1				
		Analysis Time..: 11:08				
Beryllium	ND	5.0	ug/L	SW846 6010B	12/18-12/19/03	F6X9W1AL
		Dilution Factor: 1				
		Analysis Time..: 11:08				
Cadmium	ND	5.0	ug/L	SW846 6010B	12/18-12/19/03	F6X9W1AM
		Dilution Factor: 1				
		Analysis Time..: 11:08				
Calcium	ND	5000	ug/L	SW846 6010B	12/18-12/19/03	F6X9W1AN
		Dilution Factor: 1				
		Analysis Time..: 11:08				
Chromium	ND	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6X9W1AP
		Dilution Factor: 1				
		Analysis Time..: 11:08				
Cobalt	ND	50.0	ug/L	SW846 6010B	12/18-12/19/03	F6X9W1AQ
		Dilution Factor: 1				
		Analysis Time..: 11:08				

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METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: PB045 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Copper	ND	25.0	ug/L	SW846 6010B	12/18-12/19/03	F6X9W1AR
		Dilution Factor: 1				
		Analysis Time..: 11:08				
Iron	ND	100	ug/L	SW846 6010B	12/18-12/19/03	F6X9W1AT
		Dilution Factor: 1				
		Analysis Time..: 11:08				
Lead	ND	3.0	ug/L	SW846 6010B	12/18-12/19/03	F6X9W1AU
		Dilution Factor: 1				
		Analysis Time..: 11:08				
Magnesium	ND	5000	ug/L	SW846 6010B	12/18-12/19/03	F6X9W1AV
		Dilution Factor: 1				
		Analysis Time..: 11:08				
Manganese	ND	15.0	ug/L	SW846 6010B	12/18-12/19/03	F6X9W1AW
		Dilution Factor: 1				
		Analysis Time..: 11:08				
Nickel	ND	40.0	ug/L	SW846 6010B	12/18-12/19/03	F6X9W1AX
		Dilution Factor: 1				
		Analysis Time..: 11:08				
Potassium	ND	5000	ug/L	SW846 6010B	12/18-12/19/03	F6X9W1A0
		Dilution Factor: 1				
		Analysis Time..: 11:08				
Selenium	ND	5.0	ug/L	SW846 6010B	12/18-12/19/03	F6X9W1A1
		Dilution Factor: 1				
		Analysis Time..: 11:08				
Silver	ND	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6X9W1AA
		Dilution Factor: 1				
		Analysis Time..: 11:08				
Sodium	ND	5000	ug/L	SW846 6010B	12/18-12/19/03	F6X9W1AC
		Dilution Factor: 1				
		Analysis Time..: 11:08				
Thallium	ND	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6X9W1AD
		Dilution Factor: 1				
		Analysis Time..: 11:08				
Vanadium	ND	50.0	ug/L	SW846 6010B	12/18-12/19/03	F6X9W1AE
		Dilution Factor: 1				
		Analysis Time..: 11:08				

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METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: PB045 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Zinc	ND	20.0	ug/L	SW846 6010B	12/18-12/19/03	F6X9W1AF

Dilution Factor: 1
Analysis Time..: 11:08

NOTE(S):

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

METHOD BLANK REPORT

DISSOLVED Metals

Client Lot #...: PB045 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MB Lot-Sample #: H3L180000-158 **Prep Batch #...:** 3352158						
Mercury	ND	0.20	ug/L	SW846 7470A	12/18/03	F6X621AA
		Dilution Factor: 1				
		Analysis Time..: 14:52				
MB Lot-Sample #: H3L180000-178 **Prep Batch #...:** 3352178						
Aluminum	ND	200	ug/L	SW846 6010B	12/18-12/19/03	F6X9W1CR
		Dilution Factor: 1				
		Analysis Time..: 11:08				
Antimony	ND	60.0	ug/L	SW846 6010B	12/18-12/19/03	F6X9W1CT
		Dilution Factor: 1				
		Analysis Time..: 11:08				
Arsenic	ND	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6X9W1CU
		Dilution Factor: 1				
		Analysis Time..: 11:08				
Barium	ND	200	ug/L	SW846 6010B	12/18-12/19/03	F6X9W1CV
		Dilution Factor: 1				
		Analysis Time..: 11:08				
Beryllium	ND	5.0	ug/L	SW846 6010B	12/18-12/19/03	F6X9W1CW
		Dilution Factor: 1				
		Analysis Time..: 11:08				
Cadmium	ND	5.0	ug/L	SW846 6010B	12/18-12/19/03	F6X9W1CX
		Dilution Factor: 1				
		Analysis Time..: 11:08				
Calcium	ND	5000	ug/L	SW846 6010B	12/18-12/19/03	F6X9W1C0
		Dilution Factor: 1				
		Analysis Time..: 11:08				
Chromium	ND	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6X9W1C1
		Dilution Factor: 1				
		Analysis Time..: 11:08				
Cobalt	ND	50.0	ug/L	SW846 6010B	12/18-12/19/03	F6X9W1C2
		Dilution Factor: 1				
		Analysis Time..: 11:08				

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METHOD BLANK REPORT

DISSOLVED Metals

Client Lot #...: PB045 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Copper	ND	25.0	ug/L	SW846 6010B	12/18-12/19/03	F6X9W1C3
		Dilution Factor: 1				
		Analysis Time..: 11:08				
Iron	ND	100	ug/L	SW846 6010B	12/18-12/19/03	F6X9W1C4
		Dilution Factor: 1				
		Analysis Time..: 11:08				
Lead	ND	3.0	ug/L	SW846 6010B	12/18-12/19/03	F6X9W1C5
		Dilution Factor: 1				
		Analysis Time..: 11:08				
Magnesium	ND	5000	ug/L	SW846 6010B	12/18-12/19/03	F6X9W1C6
		Dilution Factor: 1				
		Analysis Time..: 11:08				
Manganese	ND	15.0	ug/L	SW846 6010B	12/18-12/19/03	F6X9W1C7
		Dilution Factor: 1				
		Analysis Time..: 11:08				
Nickel	ND	40.0	ug/L	SW846 6010B	12/18-12/19/03	F6X9W1C8
		Dilution Factor: 1				
		Analysis Time..: 11:08				
Potassium	ND	5000	ug/L	SW846 6010B	12/18-12/19/03	F6X9W1C9
		Dilution Factor: 1				
		Analysis Time..: 11:08				
Selenium	ND	5.0	ug/L	SW846 6010B	12/18-12/19/03	F6X9W1DA
		Dilution Factor: 1				
		Analysis Time..: 11:08				
Silver	ND	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6X9W1DC
		Dilution Factor: 1				
		Analysis Time..: 11:08				
Sodium	ND	5000	ug/L	SW846 6010B	12/18-12/19/03	F6X9W1DD
		Dilution Factor: 1				
		Analysis Time..: 11:08				
Thallium	ND	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6X9W1DE
		Dilution Factor: 1				
		Analysis Time..: 11:08				
Vanadium	ND	50.0	ug/L	SW846 6010B	12/18-12/19/03	F6X9W1DF
		Dilution Factor: 1				
		Analysis Time..: 11:08				

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METHOD BLANK REPORT

DISSOLVED Metals

Client Lot #...: PB045 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Zinc	ND	20.0	ug/L	SW846 6010B	12/18-12/19/03	F6X9W1DG

Dilution Factor: 1
Analysis Time..: 11:08

NOTE(S):

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

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: PB045 **Matrix.....:** WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: H3L180000-155 **Prep Batch #...:** 3352155					
Mercury	95	(90 - 110)	SW846 7470A	12/18/03	F6X6X1AC
		Dilution Factor: 1	Analysis Time..: 14:19		
LCS Lot-Sample#: H3L180000-178 **Prep Batch #...:** 3352178					
Aluminum	104	(90 - 110)	SW846 6010B	12/18-12/19/03	F6X9W1A7
		Dilution Factor: 1	Analysis Time..: 11:12		
Antimony	103	(90 - 110)	SW846 6010B	12/18-12/19/03	F6X9W1A8
		Dilution Factor: 1	Analysis Time..: 11:12		
Arsenic	102	(90 - 110)	SW846 6010B	12/18-12/19/03	F6X9W1A9
		Dilution Factor: 1	Analysis Time..: 11:12		
Barium	102	(90 - 110)	SW846 6010B	12/18-12/19/03	F6X9W1CA
		Dilution Factor: 1	Analysis Time..: 11:12		
Beryllium	107	(90 - 115)	SW846 6010B	12/18-12/19/03	F6X9W1CC
		Dilution Factor: 1	Analysis Time..: 11:12		
Cadmium	105	(90 - 110)	SW846 6010B	12/18-12/19/03	F6X9W1CD
		Dilution Factor: 1	Analysis Time..: 11:12		
Calcium	104	(90 - 110)	SW846 6010B	12/18-12/19/03	F6X9W1CE
		Dilution Factor: 1	Analysis Time..: 11:12		
Chromium	104	(89 - 110)	SW846 6010B	12/18-12/19/03	F6X9W1CF
		Dilution Factor: 1	Analysis Time..: 11:12		
Cobalt	105	(90 - 110)	SW846 6010B	12/18-12/19/03	F6X9W1CG
		Dilution Factor: 1	Analysis Time..: 11:12		
Copper	102	(88 - 110)	SW846 6010B	12/18-12/19/03	F6X9W1CH
		Dilution Factor: 1	Analysis Time..: 11:12		
Iron	102	(90 - 110)	SW846 6010B	12/18-12/19/03	F6X9W1CJ
		Dilution Factor: 1	Analysis Time..: 11:12		
Lead	104	(90 - 110)	SW846 6010B	12/18-12/19/03	F6X9W1CK
		Dilution Factor: 1	Analysis Time..: 11:12		

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: PB045 **Matrix.....:** WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Magnesium	102	(90 - 110)	SW846 6010B	12/18-12/19/03	F6X9W1CL
		Dilution Factor: 1	Analysis Time..: 11:12		
Manganese	105	(90 - 111)	SW846 6010B	12/18-12/19/03	F6X9W1CM
		Dilution Factor: 1	Analysis Time..: 11:12		
Nickel	104	(90 - 110)	SW846 6010B	12/18-12/19/03	F6X9W1CN
		Dilution Factor: 1	Analysis Time..: 11:12		
Potassium	108	(89 - 110)	SW846 6010B	12/18-12/19/03	F6X9W1CP
		Dilution Factor: 1	Analysis Time..: 11:12		
Selenium	106	(90 - 114)	SW846 6010B	12/18-12/19/03	F6X9W1CQ
		Dilution Factor: 1	Analysis Time..: 11:12		
Silver	102	(90 - 110)	SW846 6010B	12/18-12/19/03	F6X9W1A2
		Dilution Factor: 1	Analysis Time..: 11:12		
Sodium	103	(90 - 110)	SW846 6010B	12/18-12/19/03	F6X9W1A3
		Dilution Factor: 1	Analysis Time..: 11:12		
Thallium	103	(90 - 110)	SW846 6010B	12/18-12/19/03	F6X9W1A4
		Dilution Factor: 1	Analysis Time..: 11:12		
Vanadium	105	(90 - 110)	SW846 6010B	12/18-12/19/03	F6X9W1A5
		Dilution Factor: 1	Analysis Time..: 11:12		
Zinc	109	(90 - 115)	SW846 6010B	12/18-12/19/03	F6X9W1A6
		Dilution Factor: 1	Analysis Time..: 11:12		

NOTE(S):

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

LABORATORY CONTROL SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: PB045 **Matrix.....:** WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: H3L180000-155 **Prep Batch #...:** 3352155							
Mercury	5.00	4.74	ug/L	95	SW846 7470A	12/18/03	F6X6X1AC
			Dilution Factor: 1		Analysis Time..: 14:19		
LCS Lot-Sample#: H3L180000-178 **Prep Batch #...:** 3352178							
Aluminum	2000	2080	ug/L	104	SW846 6010B	12/18-12/19/03	F6X9W1A7
			Dilution Factor: 1		Analysis Time..: 11:12		
Antimony	500	514	ug/L	103	SW846 6010B	12/18-12/19/03	F6X9W1A8
			Dilution Factor: 1		Analysis Time..: 11:12		
Arsenic	2000	2050	ug/L	102	SW846 6010B	12/18-12/19/03	F6X9W1A9
			Dilution Factor: 1		Analysis Time..: 11:12		
Barium	2000	2040	ug/L	102	SW846 6010B	12/18-12/19/03	F6X9W1CA
			Dilution Factor: 1		Analysis Time..: 11:12		
Beryllium	50.0	53.7	ug/L	107	SW846 6010B	12/18-12/19/03	F6X9W1CC
			Dilution Factor: 1		Analysis Time..: 11:12		
Cadmium	50.0	52.4	ug/L	105	SW846 6010B	12/18-12/19/03	F6X9W1CD
			Dilution Factor: 1		Analysis Time..: 11:12		
Calcium	50000	51900	ug/L	104	SW846 6010B	12/18-12/19/03	F6X9W1CE
			Dilution Factor: 1		Analysis Time..: 11:12		
Chromium	200	208	ug/L	104	SW846 6010B	12/18-12/19/03	F6X9W1CF
			Dilution Factor: 1		Analysis Time..: 11:12		
Cobalt	500	524	ug/L	105	SW846 6010B	12/18-12/19/03	F6X9W1CG
			Dilution Factor: 1		Analysis Time..: 11:12		
Copper	250	254	ug/L	102	SW846 6010B	12/18-12/19/03	F6X9W1CH
			Dilution Factor: 1		Analysis Time..: 11:12		
Iron	1000	1020	ug/L	102	SW846 6010B	12/18-12/19/03	F6X9W1CJ
			Dilution Factor: 1		Analysis Time..: 11:12		
Lead	500	521	ug/L	104	SW846 6010B	12/18-12/19/03	F6X9W1CK
			Dilution Factor: 1		Analysis Time..: 11:12		

(Continued on next page)

LABORATORY CONTROL SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: PB045 **Matrix.....:** WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Magnesium	50000	51000	ug/L	102	SW846 6010B	12/18-12/19/03	F6X9W1CL
			Dilution Factor: 1		Analysis Time..: 11:12		
Manganese	500	525	ug/L	105	SW846 6010B	12/18-12/19/03	F6X9W1CM
			Dilution Factor: 1		Analysis Time..: 11:12		
Nickel	500	520	ug/L	104	SW846 6010B	12/18-12/19/03	F6X9W1CN
			Dilution Factor: 1		Analysis Time..: 11:12		
Potassium	50000	53900	ug/L	108	SW846 6010B	12/18-12/19/03	F6X9W1CP
			Dilution Factor: 1		Analysis Time..: 11:12		
Selenium	2000	2130	ug/L	106	SW846 6010B	12/18-12/19/03	F6X9W1CQ
			Dilution Factor: 1		Analysis Time..: 11:12		
Silver	50.0	50.8	ug/L	102	SW846 6010B	12/18-12/19/03	F6X9W1A2
			Dilution Factor: 1		Analysis Time..: 11:12		
Sodium	50000	51300	ug/L	103	SW846 6010B	12/18-12/19/03	F6X9W1A3
			Dilution Factor: 1		Analysis Time..: 11:12		
Thallium	2000	2070	ug/L	103	SW846 6010B	12/18-12/19/03	F6X9W1A4
			Dilution Factor: 1		Analysis Time..: 11:12		
Vanadium	500	524	ug/L	105	SW846 6010B	12/18-12/19/03	F6X9W1A5
			Dilution Factor: 1		Analysis Time..: 11:12		
Zinc	500	544	ug/L	109	SW846 6010B	12/18-12/19/03	F6X9W1A6
			Dilution Factor: 1		Analysis Time..: 11:12		

NOTE(S):

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

LABORATORY CONTROL SAMPLE EVALUATION REPORT

DISSOLVED Metals

Client Lot #...: PB045 **Matrix.....:** WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: H3L180000-158 **Prep Batch #...:** 3352158					
Mercury	97	(90 - 110)	SW846 7470A	12/18/03	F6X621AC
		Dilution Factor: 1	Analysis Time..: 14:54		
LCS Lot-Sample#: H3L180000-178 **Prep Batch #...:** 3352178					
Aluminum	104	(90 - 110)	SW846 6010B	12/18-12/19/03	F6X9W1DH
		Dilution Factor: 1	Analysis Time..: 11:12		
Antimony	103	(90 - 110)	SW846 6010B	12/18-12/19/03	F6X9W1DJ
		Dilution Factor: 1	Analysis Time..: 11:12		
Arsenic	102	(90 - 110)	SW846 6010B	12/18-12/19/03	F6X9W1DK
		Dilution Factor: 1	Analysis Time..: 11:12		
Barium	102	(90 - 110)	SW846 6010B	12/18-12/19/03	F6X9W1DL
		Dilution Factor: 1	Analysis Time..: 11:12		
Beryllium	107	(90 - 115)	SW846 6010B	12/18-12/19/03	F6X9W1DM
		Dilution Factor: 1	Analysis Time..: 11:12		
Cadmium	105	(90 - 110)	SW846 6010B	12/18-12/19/03	F6X9W1DN
		Dilution Factor: 1	Analysis Time..: 11:12		
Calcium	104	(90 - 110)	SW846 6010B	12/18-12/19/03	F6X9W1DP
		Dilution Factor: 1	Analysis Time..: 11:12		
Chromium	104	(89 - 110)	SW846 6010B	12/18-12/19/03	F6X9W1DQ
		Dilution Factor: 1	Analysis Time..: 11:12		
Cobalt	105	(90 - 110)	SW846 6010B	12/18-12/19/03	F6X9W1DR
		Dilution Factor: 1	Analysis Time..: 11:12		
Copper	102	(88 - 110)	SW846 6010B	12/18-12/19/03	F6X9W1DT
		Dilution Factor: 1	Analysis Time..: 11:12		
Iron	102	(90 - 110)	SW846 6010B	12/18-12/19/03	F6X9W1DU
		Dilution Factor: 1	Analysis Time..: 11:12		
Lead	104	(90 - 110)	SW846 6010B	12/18-12/19/03	F6X9W1DV
		Dilution Factor: 1	Analysis Time..: 11:12		

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

DISSOLVED Metals

Client Lot #...: PB045 **Matrix.....:** WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Magnesium	102	(90 - 110)	SW846 6010B	12/18-12/19/03	F6X9W1DW
		Dilution Factor: 1	Analysis Time..: 11:12		
Manganese	105	(90 - 111)	SW846 6010B	12/18-12/19/03	F6X9W1DX
		Dilution Factor: 1	Analysis Time..: 11:12		
Nickel	104	(90 - 110)	SW846 6010B	12/18-12/19/03	F6X9W1D0
		Dilution Factor: 1	Analysis Time..: 11:12		
Potassium	108	(89 - 110)	SW846 6010B	12/18-12/19/03	F6X9W1D1
		Dilution Factor: 1	Analysis Time..: 11:12		
Selenium	106	(90 - 114)	SW846 6010B	12/18-12/19/03	F6X9W1D2
		Dilution Factor: 1	Analysis Time..: 11:12		
Silver	102	(90 - 110)	SW846 6010B	12/18-12/19/03	F6X9W1D3
		Dilution Factor: 1	Analysis Time..: 11:12		
Sodium	103	(90 - 110)	SW846 6010B	12/18-12/19/03	F6X9W1D4
		Dilution Factor: 1	Analysis Time..: 11:12		
Thallium	103	(90 - 110)	SW846 6010B	12/18-12/19/03	F6X9W1D5
		Dilution Factor: 1	Analysis Time..: 11:12		
Vanadium	105	(90 - 110)	SW846 6010B	12/18-12/19/03	F6X9W1D6
		Dilution Factor: 1	Analysis Time..: 11:12		
Zinc	109	(90 - 115)	SW846 6010B	12/18-12/19/03	F6X9W1D7
		Dilution Factor: 1	Analysis Time..: 11:12		

NOTE(S):

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

LABORATORY CONTROL SAMPLE DATA REPORT

DISSOLVED Metals

Client Lot #...: PB045 **Matrix.....:** WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: H3L180000-158 **Prep Batch #...:** 3352158							
Mercury	5.00	4.85	ug/L	97	SW846 7470A	12/18/03	F6X621AC
			Dilution Factor: 1		Analysis Time..: 14:54		
LCS Lot-Sample#: H3L180000-178 **Prep Batch #...:** 3352178							
Aluminum	2000	2080	ug/L	104	SW846 6010B	12/18-12/19/03	F6X9W1DH
			Dilution Factor: 1		Analysis Time..: 11:12		
Antimony	500	514	ug/L	103	SW846 6010B	12/18-12/19/03	F6X9W1DJ
			Dilution Factor: 1		Analysis Time..: 11:12		
Arsenic	2000	2050	ug/L	102	SW846 6010B	12/18-12/19/03	F6X9W1DK
			Dilution Factor: 1		Analysis Time..: 11:12		
Barium	2000	2040	ug/L	102	SW846 6010B	12/18-12/19/03	F6X9W1DL
			Dilution Factor: 1		Analysis Time..: 11:12		
Beryllium	50.0	53.7	ug/L	107	SW846 6010B	12/18-12/19/03	F6X9W1DM
			Dilution Factor: 1		Analysis Time..: 11:12		
Cadmium	50.0	52.4	ug/L	105	SW846 6010B	12/18-12/19/03	F6X9W1DN
			Dilution Factor: 1		Analysis Time..: 11:12		
Calcium	50000	51900	ug/L	104	SW846 6010B	12/18-12/19/03	F6X9W1DP
			Dilution Factor: 1		Analysis Time..: 11:12		
Chromium	200	208	ug/L	104	SW846 6010B	12/18-12/19/03	F6X9W1DQ
			Dilution Factor: 1		Analysis Time..: 11:12		
Cobalt	500	524	ug/L	105	SW846 6010B	12/18-12/19/03	F6X9W1DR
			Dilution Factor: 1		Analysis Time..: 11:12		
Copper	250	254	ug/L	102	SW846 6010B	12/18-12/19/03	F6X9W1DT
			Dilution Factor: 1		Analysis Time..: 11:12		
Iron	1000	1020	ug/L	102	SW846 6010B	12/18-12/19/03	F6X9W1DU
			Dilution Factor: 1		Analysis Time..: 11:12		
Lead	500	521	ug/L	104	SW846 6010B	12/18-12/19/03	F6X9W1DV
			Dilution Factor: 1		Analysis Time..: 11:12		

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LABORATORY CONTROL SAMPLE DATA REPORT

DISSOLVED Metals

Client Lot #...: PB045 **Matrix.....:** WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Magnesium	50000	51000	ug/L	102	SW846 6010B	12/18-12/19/03	F6X9W1DW
			Dilution Factor: 1		Analysis Time..: 11:12		
Manganese	500	525	ug/L	105	SW846 6010B	12/18-12/19/03	F6X9W1DX
			Dilution Factor: 1		Analysis Time..: 11:12		
Nickel	500	520	ug/L	104	SW846 6010B	12/18-12/19/03	F6X9W1D0
			Dilution Factor: 1		Analysis Time..: 11:12		
Potassium	50000	53900	ug/L	108	SW846 6010B	12/18-12/19/03	F6X9W1D1
			Dilution Factor: 1		Analysis Time..: 11:12		
Selenium	2000	2130	ug/L	106	SW846 6010B	12/18-12/19/03	F6X9W1D2
			Dilution Factor: 1		Analysis Time..: 11:12		
Silver	50.0	50.8	ug/L	102	SW846 6010B	12/18-12/19/03	F6X9W1D3
			Dilution Factor: 1		Analysis Time..: 11:12		
Sodium	50000	51300	ug/L	103	SW846 6010B	12/18-12/19/03	F6X9W1D4
			Dilution Factor: 1		Analysis Time..: 11:12		
Thallium	2000	2070	ug/L	103	SW846 6010B	12/18-12/19/03	F6X9W1D5
			Dilution Factor: 1		Analysis Time..: 11:12		
Vanadium	500	524	ug/L	105	SW846 6010B	12/18-12/19/03	F6X9W1D6
			Dilution Factor: 1		Analysis Time..: 11:12		
Zinc	500	544	ug/L	109	SW846 6010B	12/18-12/19/03	F6X9W1D7
			Dilution Factor: 1		Analysis Time..: 11:12		

NOTE(S):

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

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: PB045 **Matrix.....:** WATER
Date Sampled...: 12/11/03 **Date Received..:** 12/12/03

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: H3L120208-002 **Prep Batch #...:** 3352155							
Mercury	96	(73 - 125)			SW846 7470A	12/18/03	F6JX21AU
	97	(73 - 125)	0.92	(0-20)	SW846 7470A	12/18/03	F6JX21AV
		Dilution Factor: 1					
		Analysis Time..: 14:40					
MS Lot-Sample #: H3L120208-002 **Prep Batch #...:** 3352178							
Aluminum	105	(75 - 125)			SW846 6010B	12/18-12/19/03	F6JX21CM
	107	(75 - 125)	1.9	(0-20)	SW846 6010B	12/18-12/19/03	F6JX21CN
		Dilution Factor: 1					
		Analysis Time..: 12:55					
Antimony	104	(75 - 125)			SW846 6010B	12/18-12/19/03	F6JX21CQ
	127 N	(75 - 125)	20	(0-20)	SW846 6010B	12/18-12/19/03	F6JX21CR
		Dilution Factor: 1					
		Analysis Time..: 12:55					
Arsenic	104	(75 - 125)			SW846 6010B	12/18-12/19/03	F6JX21CU
	107	(75 - 125)	2.0	(0-20)	SW846 6010B	12/18-12/19/03	F6JX21CV
		Dilution Factor: 1					
		Analysis Time..: 12:55					
Barium	103	(75 - 125)			SW846 6010B	12/18-12/19/03	F6JX21CX
	105	(75 - 125)	1.6	(0-20)	SW846 6010B	12/18-12/19/03	F6JX21C0
		Dilution Factor: 1					
		Analysis Time..: 12:55					
Beryllium	105	(75 - 125)			SW846 6010B	12/18-12/22/03	F6JX21C2
	106	(75 - 125)	0.83	(0-20)	SW846 6010B	12/18-12/22/03	F6JX21C3
		Dilution Factor: 1					
		Analysis Time..: 15:40					
Cadmium	104	(75 - 125)			SW846 6010B	12/18-12/19/03	F6JX21C5
	107	(75 - 125)	2.5	(0-20)	SW846 6010B	12/18-12/19/03	F6JX21C6
		Dilution Factor: 1					
		Analysis Time..: 12:55					
Calcium	98	(75 - 125)			SW846 6010B	12/18-12/19/03	F6JX21C8
	103	(75 - 125)	1.3	(0-20)	SW846 6010B	12/18-12/19/03	F6JX21C9
		Dilution Factor: 1					
		Analysis Time..: 12:55					

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MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: PB045 **Matrix.....:** WATER
Date Sampled...: 12/11/03 **Date Received..:** 12/12/03

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Chromium	104	(75 - 125)			SW846 6010B	12/18-12/19/03	F6JX21DC
	107	(75 - 125)	2.5	(0-20)	SW846 6010B	12/18-12/19/03	F6JX21DD
		Dilution Factor: 1					
		Analysis Time..: 12:55					
Cobalt	106	(75 - 125)			SW846 6010B	12/18-12/19/03	F6JX21DF
	108	(75 - 125)	2.1	(0-20)	SW846 6010B	12/18-12/19/03	F6JX21DG
		Dilution Factor: 1					
		Analysis Time..: 12:55					
Copper	103	(75 - 125)			SW846 6010B	12/18-12/19/03	F6JX21DJ
	105	(75 - 125)	1.7	(0-20)	SW846 6010B	12/18-12/19/03	F6JX21DK
		Dilution Factor: 1					
		Analysis Time..: 12:55					
Iron	105	(75 - 125)			SW846 6010B	12/18-12/19/03	F6JX21DM
	109	(75 - 125)	3.2	(0-20)	SW846 6010B	12/18-12/19/03	F6JX21DN
		Dilution Factor: 1					
		Analysis Time..: 12:55					
Lead	102	(75 - 125)			SW846 6010B	12/18-12/19/03	F6JX21DQ
	104	(75 - 125)	2.1	(0-20)	SW846 6010B	12/18-12/19/03	F6JX21DR
		Dilution Factor: 1					
		Analysis Time..: 12:55					
Magnesium	105	(75 - 125)			SW846 6010B	12/18-12/19/03	F6JX21DU
	108	(75 - 125)	1.5	(0-20)	SW846 6010B	12/18-12/19/03	F6JX21DV
		Dilution Factor: 1					
		Analysis Time..: 12:55					
Manganese	106	(75 - 125)			SW846 6010B	12/18-12/19/03	F6JX21DX
	108	(75 - 125)	1.9	(0-20)	SW846 6010B	12/18-12/19/03	F6JX21D0
		Dilution Factor: 1					
		Analysis Time..: 12:55					
Nickel	103	(75 - 125)			SW846 6010B	12/18-12/19/03	F6JX21D2
	106	(75 - 125)	2.3	(0-20)	SW846 6010B	12/18-12/19/03	F6JX21D3
		Dilution Factor: 1					
		Analysis Time..: 12:55					
Potassium	115	(75 - 125)			SW846 6010B	12/18-12/22/03	F6JX21D5
	116	(75 - 125)	0.36	(0-20)	SW846 6010B	12/18-12/22/03	F6JX21D6
		Dilution Factor: 1					
		Analysis Time..: 15:40					

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: PB045 **Matrix.....:** WATER
Date Sampled...: 12/11/03 **Date Received..:** 12/12/03

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Selenium	95	(75 - 125)			SW846 6010B	12/18-12/19/03	F6JX21D8
	95	(75 - 125)	0.73	(0-20)	SW846 6010B	12/18-12/19/03	F6JX21D9
		Dilution Factor: 1					
		Analysis Time..: 12:55					
Silver	104	(75 - 125)			SW846 6010B	12/18-12/19/03	F6JX21AC
	107	(75 - 125)	2.7	(0-20)	SW846 6010B	12/18-12/19/03	F6JX21AD
		Dilution Factor: 1					
		Analysis Time..: 12:55					
Sodium	103	(75 - 125)			SW846 6010B	12/18-12/19/03	F6JX21AF
	106	(75 - 125)	0.81	(0-20)	SW846 6010B	12/18-12/19/03	F6JX21AG
		Dilution Factor: 1					
		Analysis Time..: 12:55					
Thallium	104	(75 - 125)			SW846 6010B	12/18-12/19/03	F6JX21AJ
	106	(75 - 125)	2.4	(0-20)	SW846 6010B	12/18-12/19/03	F6JX21AK
		Dilution Factor: 1					
		Analysis Time..: 12:55					
Vanadium	106	(75 - 125)			SW846 6010B	12/18-12/19/03	F6JX21AM
	108	(75 - 125)	2.2	(0-20)	SW846 6010B	12/18-12/19/03	F6JX21AN
		Dilution Factor: 1					
		Analysis Time..: 12:55					
Zinc	107	(75 - 125)			SW846 6010B	12/18-12/22/03	F6JX21AQ
	108	(75 - 125)	0.64	(0-20)	SW846 6010B	12/18-12/22/03	F6JX21AR
		Dilution Factor: 1					
		Analysis Time..: 15:40					

NOTE(S):

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

N Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: PB045 **Matrix.....:** WATER
Date Sampled...: 12/11/03 **Date Received..:** 12/12/03

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: H3L120208-002 **Prep Batch #...:** 3352155									
Mercury									
	ND	1.00	0.965	ug/L	96		SW846 7470A	12/18/03	F6JX21AU
	ND	1.00	0.974	ug/L	97	0.92	SW846 7470A	12/18/03	F6JX21AV
			Dilution Factor: 1						
			Analysis Time..: 14:40						
MS Lot-Sample #: H3L120208-002 **Prep Batch #...:** 3352178									
Aluminum									
	61.2	2000	2150	ug/L	105		SW846 6010B	12/18-12/19/03	F6JX21CM
	61.2	2000	2200	ug/L	107	1.9	SW846 6010B	12/18-12/19/03	F6JX21CN
			Dilution Factor: 1						
			Analysis Time..: 12:55						
Antimony									
	ND	500	520	ug/L	104		SW846 6010B	12/18-12/19/03	F6JX21CQ
	ND	500	634 N	ug/L	127	20	SW846 6010B	12/18-12/19/03	F6JX21CR
			Dilution Factor: 1						
			Analysis Time..: 12:55						
Arsenic									
	ND	2000	2090	ug/L	104		SW846 6010B	12/18-12/19/03	F6JX21CU
	ND	2000	2130	ug/L	107	2.0	SW846 6010B	12/18-12/19/03	F6JX21CV
			Dilution Factor: 1						
			Analysis Time..: 12:55						
Barium									
	187	2000	2240	ug/L	103		SW846 6010B	12/18-12/19/03	F6JX21CX
	187	2000	2280	ug/L	105	1.6	SW846 6010B	12/18-12/19/03	F6JX21C0
			Dilution Factor: 1						
			Analysis Time..: 12:55						
Beryllium									
	ND	50.0	52.6	ug/L	105		SW846 6010B	12/18-12/22/03	F6JX21C2
	ND	50.0	53.1	ug/L	106	0.83	SW846 6010B	12/18-12/22/03	F6JX21C3
			Dilution Factor: 1						
			Analysis Time..: 15:40						
Cadmium									
	ND	50.0	52.0	ug/L	104		SW846 6010B	12/18-12/19/03	F6JX21C5
	ND	50.0	53.3	ug/L	107	2.5	SW846 6010B	12/18-12/19/03	F6JX21C6
			Dilution Factor: 1						
			Analysis Time..: 12:55						

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MATRIX SPIKE SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: PB045 **Matrix.....:** WATER
Date Sampled...: 12/11/03 **Date Received..:** 12/12/03

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Calcium									
	141000	50000	190000	ug/L	98		SW846 6010B	12/18-12/19/03	F6JX21C8
	141000	50000	192000	ug/L	103	1.3	SW846 6010B	12/18-12/19/03	F6JX21C9
			Dilution Factor: 1						
			Analysis Time..: 12:55						
Chromium									
	ND	200	208	ug/L	104		SW846 6010B	12/18-12/19/03	F6JX21DC
	ND	200	214	ug/L	107	2.5	SW846 6010B	12/18-12/19/03	F6JX21DD
			Dilution Factor: 1						
			Analysis Time..: 12:55						
Cobalt									
	ND	500	528	ug/L	106		SW846 6010B	12/18-12/19/03	F6JX21DF
	ND	500	539	ug/L	108	2.1	SW846 6010B	12/18-12/19/03	F6JX21DG
			Dilution Factor: 1						
			Analysis Time..: 12:55						
Copper									
	ND	250	258	ug/L	103		SW846 6010B	12/18-12/19/03	F6JX21DJ
	ND	250	262	ug/L	105	1.7	SW846 6010B	12/18-12/19/03	F6JX21DK
			Dilution Factor: 1						
			Analysis Time..: 12:55						
Iron									
	140	1000	1190	ug/L	105		SW846 6010B	12/18-12/19/03	F6JX21DM
	140	1000	1230	ug/L	109	3.2	SW846 6010B	12/18-12/19/03	F6JX21DN
			Dilution Factor: 1						
			Analysis Time..: 12:55						
Lead									
	ND	500	510	ug/L	102		SW846 6010B	12/18-12/19/03	F6JX21DQ
	ND	500	521	ug/L	104	2.1	SW846 6010B	12/18-12/19/03	F6JX21DR
			Dilution Factor: 1						
			Analysis Time..: 12:55						
Magnesium									
	54000	50000	106000	ug/L	105		SW846 6010B	12/18-12/19/03	F6JX21DU
	54000	50000	108000	ug/L	108	1.5	SW846 6010B	12/18-12/19/03	F6JX21DV
			Dilution Factor: 1						
			Analysis Time..: 12:55						

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MATRIX SPIKE SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: PB045 **Matrix.....:** WATER
Date Sampled...: 12/11/03 **Date Received..:** 12/12/03

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Manganese									
	58.5	500	587	ug/L	106		SW846 6010B	12/18-12/19/03	F6JX21DX
	58.5	500	598	ug/L	108	1.9	SW846 6010B	12/18-12/19/03	F6JX21D0
			Dilution Factor: 1						
			Analysis Time..: 12:55						
Nickel									
	ND	500	516	ug/L	103		SW846 6010B	12/18-12/19/03	F6JX21D2
	ND	500	528	ug/L	106	2.3	SW846 6010B	12/18-12/19/03	F6JX21D3
			Dilution Factor: 1						
			Analysis Time..: 12:55						
Potassium									
	11900	50000	69600	ug/L	115		SW846 6010B	12/18-12/22/03	F6JX21D5
	11900	50000	69800	ug/L	116	0.36	SW846 6010B	12/18-12/22/03	F6JX21D6
			Dilution Factor: 1						
			Analysis Time..: 15:40						
Selenium									
	ND	2000	1890	ug/L	95		SW846 6010B	12/18-12/19/03	F6JX21D8
	ND	2000	1910	ug/L	95	0.73	SW846 6010B	12/18-12/19/03	F6JX21D9
			Dilution Factor: 1						
			Analysis Time..: 12:55						
Silver									
	ND	50.0	51.8	ug/L	104		SW846 6010B	12/18-12/19/03	F6JX21AC
	ND	50.0	53.3	ug/L	107	2.7	SW846 6010B	12/18-12/19/03	F6JX21AD
			Dilution Factor: 1						
			Analysis Time..: 12:55						
Sodium									
	122000	50000	174000	ug/L	103		SW846 6010B	12/18-12/19/03	F6JX21AF
	122000	50000	175000	ug/L	106	0.81	SW846 6010B	12/18-12/19/03	F6JX21AG
			Dilution Factor: 1						
			Analysis Time..: 12:55						
Thallium									
	3.0	2000	2080	ug/L	104		SW846 6010B	12/18-12/19/03	F6JX21AJ
	3.0	2000	2130	ug/L	106	2.4	SW846 6010B	12/18-12/19/03	F6JX21AK
			Dilution Factor: 1						
			Analysis Time..: 12:55						

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MATRIX SPIKE SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: PB045 **Matrix.....:** WATER
Date Sampled...: 12/11/03 **Date Received..:** 12/12/03

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Vanadium									
	ND	500	528	ug/L	106		SW846 6010B	12/18-12/19/03	F6JX21AM
	ND	500	540	ug/L	108	2.2	SW846 6010B	12/18-12/19/03	F6JX21AN
			Dilution Factor: 1						
			Analysis Time..: 12:55						
Zinc									
	74.4	500	609	ug/L	107		SW846 6010B	12/18-12/22/03	F6JX21AQ
	74.4	500	613	ug/L	108	0.64	SW846 6010B	12/18-12/22/03	F6JX21AR
			Dilution Factor: 1						
			Analysis Time..: 15:40						

NOTE(S):

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

N Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE EVALUATION REPORT

DISSOLVED Metals

Client Lot #...: PB045 **Matrix.....:** WATER
Date Sampled...: 12/11/03 **Date Received..:** 12/12/03

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: H3L120208-002 **Prep Batch #...:** 3352158							
Mercury	98	(73 - 125)			SW846 7470A	12/18/03	F6JX21E5
	98	(73 - 125)	0.0	(0-20)	SW846 7470A	12/18/03	F6JX21E6
		Dilution Factor: 1					
		Analysis Time..: 15:09					
MS Lot-Sample #: H3L120208-002 **Prep Batch #...:** 3352178							
Aluminum	117	(75 - 125)			SW846 6010B	12/18-12/19/03	F6JX21FU
	107	(75 - 125)	9.2	(0-20)	SW846 6010B	12/18-12/19/03	F6JX21FV
		Dilution Factor: 1					
		Analysis Time..: 12:28					
Antimony	112	(75 - 125)			SW846 6010B	12/18-12/19/03	F6JX21FX
	103	(75 - 125)	7.8	(0-20)	SW846 6010B	12/18-12/19/03	F6JX21F0
		Dilution Factor: 1					
		Analysis Time..: 12:28					
Arsenic	113	(75 - 125)			SW846 6010B	12/18-12/19/03	F6JX21F2
	105	(75 - 125)	7.3	(0-20)	SW846 6010B	12/18-12/19/03	F6JX21F3
		Dilution Factor: 1					
		Analysis Time..: 12:28					
Barium	112	(75 - 125)			SW846 6010B	12/18-12/19/03	F6JX21F5
	103	(75 - 125)	7.8	(0-20)	SW846 6010B	12/18-12/19/03	F6JX21F6
		Dilution Factor: 1					
		Analysis Time..: 12:28					
Beryllium	115	(75 - 125)			SW846 6010B	12/18-12/19/03	F6JX21F8
	108	(75 - 125)	5.7	(0-20)	SW846 6010B	12/18-12/19/03	F6JX21F9
		Dilution Factor: 1					
		Analysis Time..: 12:28					
Cadmium	112	(75 - 125)			SW846 6010B	12/18-12/19/03	F6JX21GC
	105	(75 - 125)	6.3	(0-20)	SW846 6010B	12/18-12/19/03	F6JX21GD
		Dilution Factor: 1					
		Analysis Time..: 12:28					
Calcium	133 N	(75 - 125)			SW846 6010B	12/18-12/19/03	F6JX21GF
	112	(75 - 125)	5.4	(0-20)	SW846 6010B	12/18-12/19/03	F6JX21GG
		Dilution Factor: 1					
		Analysis Time..: 12:28					

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MATRIX SPIKE SAMPLE EVALUATION REPORT

DISSOLVED Metals

Client Lot #...: PB045 **Matrix.....:** WATER
Date Sampled...: 12/11/03 **Date Received..:** 12/12/03

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Chromium	112	(75 - 125)			SW846 6010B	12/18-12/19/03	F6JX21GJ
	105	(75 - 125)	6.2	(0-20)	SW846 6010B	12/18-12/19/03	F6JX21GK
		Dilution Factor: 1					
		Analysis Time..: 12:28					
Cobalt	113	(75 - 125)			SW846 6010B	12/18-12/19/03	F6JX21GM
	106	(75 - 125)	6.4	(0-20)	SW846 6010B	12/18-12/19/03	F6JX21GN
		Dilution Factor: 1					
		Analysis Time..: 12:28					
Copper	112	(75 - 125)			SW846 6010B	12/18-12/19/03	F6JX21GQ
	103	(75 - 125)	8.6	(0-20)	SW846 6010B	12/18-12/19/03	F6JX21GR
		Dilution Factor: 1					
		Analysis Time..: 12:28					
Iron	112	(75 - 125)			SW846 6010B	12/18-12/19/03	F6JX21GU
	104	(75 - 125)	6.9	(0-20)	SW846 6010B	12/18-12/19/03	F6JX21GV
		Dilution Factor: 1					
		Analysis Time..: 12:28					
Lead	109	(75 - 125)			SW846 6010B	12/18-12/19/03	F6JX21GX
	103	(75 - 125)	6.1	(0-20)	SW846 6010B	12/18-12/19/03	F6JX21G0
		Dilution Factor: 1					
		Analysis Time..: 12:28					
Magnesium	124	(75 - 125)			SW846 6010B	12/18-12/19/03	F6JX21G2
	111	(75 - 125)	6.0	(0-20)	SW846 6010B	12/18-12/19/03	F6JX21G3
		Dilution Factor: 1					
		Analysis Time..: 12:28					
Manganese	115	(75 - 125)			SW846 6010B	12/18-12/19/03	F6JX21G5
	107	(75 - 125)	6.7	(0-20)	SW846 6010B	12/18-12/19/03	F6JX21G6
		Dilution Factor: 1					
		Analysis Time..: 12:28					
Nickel	111	(75 - 125)			SW846 6010B	12/18-12/19/03	F6JX21EC
	104	(75 - 125)	6.5	(0-20)	SW846 6010B	12/18-12/19/03	F6JX21ED
		Dilution Factor: 1					
		Analysis Time..: 12:28					
Potassium	129 N	(75 - 125)			SW846 6010B	12/18-12/19/03	F6JX21EF
	119	(75 - 125)	7.0	(0-20)	SW846 6010B	12/18-12/19/03	F6JX21EG
		Dilution Factor: 1					
		Analysis Time..: 12:28					

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MATRIX SPIKE SAMPLE EVALUATION REPORT

DISSOLVED Metals

Client Lot #...: PB045 **Matrix.....:** WATER
Date Sampled...: 12/11/03 **Date Received..:** 12/12/03

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Selenium	102	(75 - 125)			SW846 6010B	12/18-12/19/03	F6JX21EJ
	96	(75 - 125)	5.8	(0-20)	SW846 6010B	12/18-12/19/03	F6JX21EK
		Dilution Factor: 1					
		Analysis Time..: 12:28					
Silver	112	(75 - 125)			SW846 6010B	12/18-12/19/03	F6JX21EM
	104	(75 - 125)	7.4	(0-20)	SW846 6010B	12/18-12/19/03	F6JX21EN
		Dilution Factor: 1					
		Analysis Time..: 12:28					
Sodium	139 N	(75 - 125)			SW846 6010B	12/18-12/19/03	F6JX21EQ
	115	(75 - 125)	6.8	(0-20)	SW846 6010B	12/18-12/19/03	F6JX21ER
		Dilution Factor: 1					
		Analysis Time..: 12:28					
Thallium	112	(75 - 125)			SW846 6010B	12/18-12/19/03	F6JX21EU
	104	(75 - 125)	7.0	(0-20)	SW846 6010B	12/18-12/19/03	F6JX21EV
		Dilution Factor: 1					
		Analysis Time..: 12:28					
Vanadium	114	(75 - 125)			SW846 6010B	12/18-12/19/03	F6JX21EX
	106	(75 - 125)	6.9	(0-20)	SW846 6010B	12/18-12/19/03	F6JX21E0
		Dilution Factor: 1					
		Analysis Time..: 12:28					
Zinc	118	(75 - 125)			SW846 6010B	12/18-12/19/03	F6JX21E2
	110	(75 - 125)	7.0	(0-20)	SW846 6010B	12/18-12/19/03	F6JX21E3
		Dilution Factor: 1					
		Analysis Time..: 12:28					

NOTE(S):

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

N Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE DATA REPORT

DISSOLVED Metals

Client Lot #...: PB045 **Matrix.....:** WATER
Date Sampled...: 12/11/03 **Date Received..:** 12/12/03

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: H3L120208-002 **Prep Batch #...:** 3352158									
Mercury									
	ND	1.00	0.983	ug/L	98		SW846 7470A	12/18/03	F6JX21E5
	ND	1.00	0.983	ug/L	98	0.0	SW846 7470A	12/18/03	F6JX21E6
			Dilution Factor: 1						
			Analysis Time..: 15:09						
MS Lot-Sample #: H3L120208-002 **Prep Batch #...:** 3352178									
Aluminum									
	ND	2000	2350	ug/L	117		SW846 6010B	12/18-12/19/03	F6JX21FU
	ND	2000	2140	ug/L	107	9.2	SW846 6010B	12/18-12/19/03	F6JX21FV
			Dilution Factor: 1						
			Analysis Time..: 12:28						
Antimony									
	ND	500	559	ug/L	112		SW846 6010B	12/18-12/19/03	F6JX21FX
	ND	500	517	ug/L	103	7.8	SW846 6010B	12/18-12/19/03	F6JX21F0
			Dilution Factor: 1						
			Analysis Time..: 12:28						
Arsenic									
	ND	2000	2250	ug/L	113		SW846 6010B	12/18-12/19/03	F6JX21F2
	ND	2000	2090	ug/L	105	7.3	SW846 6010B	12/18-12/19/03	F6JX21F3
			Dilution Factor: 1						
			Analysis Time..: 12:28						
Barium									
	175	2000	2410	ug/L	112		SW846 6010B	12/18-12/19/03	F6JX21F5
	175	2000	2230	ug/L	103	7.8	SW846 6010B	12/18-12/19/03	F6JX21F6
			Dilution Factor: 1						
			Analysis Time..: 12:28						
Beryllium									
	ND	50.0	57.4	ug/L	115		SW846 6010B	12/18-12/19/03	F6JX21F8
	ND	50.0	54.2	ug/L	108	5.7	SW846 6010B	12/18-12/19/03	F6JX21F9
			Dilution Factor: 1						
			Analysis Time..: 12:28						
Cadmium									
	ND	50.0	55.9	ug/L	112		SW846 6010B	12/18-12/19/03	F6JX21GC
	ND	50.0	52.4	ug/L	105	6.3	SW846 6010B	12/18-12/19/03	F6JX21GD
			Dilution Factor: 1						
			Analysis Time..: 12:28						

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MATRIX SPIKE SAMPLE DATA REPORT

DISSOLVED Metals

Client Lot #...: PB045 **Matrix.....:** WATER
Date Sampled...: 12/11/03 **Date Received..:** 12/12/03

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Calcium									
	135000	50000	201000	ug/L	133		SW846 6010B	12/18-12/19/03	F6JX21GF
			Qualifiers: N						
	135000	50000	191000	ug/L	112	5.4	SW846 6010B	12/18-12/19/03	F6JX21GG
			Dilution Factor: 1						
			Analysis Time..: 12:28						
Chromium									
	ND	200	224	ug/L	112		SW846 6010B	12/18-12/19/03	F6JX21GJ
	ND	200	211	ug/L	105	6.2	SW846 6010B	12/18-12/19/03	F6JX21GK
			Dilution Factor: 1						
			Analysis Time..: 12:28						
Cobalt									
	ND	500	566	ug/L	113		SW846 6010B	12/18-12/19/03	F6JX21GM
	ND	500	531	ug/L	106	6.4	SW846 6010B	12/18-12/19/03	F6JX21GN
			Dilution Factor: 1						
			Analysis Time..: 12:28						
Copper									
	ND	250	279	ug/L	112		SW846 6010B	12/18-12/19/03	F6JX21GQ
	ND	250	256	ug/L	103	8.6	SW846 6010B	12/18-12/19/03	F6JX21GR
			Dilution Factor: 1						
			Analysis Time..: 12:28						
Iron									
	74.5	1000	1200	ug/L	112		SW846 6010B	12/18-12/19/03	F6JX21GU
	74.5	1000	1120	ug/L	104	6.9	SW846 6010B	12/18-12/19/03	F6JX21GV
			Dilution Factor: 1						
			Analysis Time..: 12:28						
Lead									
	ND	500	546	ug/L	109		SW846 6010B	12/18-12/19/03	F6JX21GX
	ND	500	514	ug/L	103	6.1	SW846 6010B	12/18-12/19/03	F6JX21G0
			Dilution Factor: 1						
			Analysis Time..: 12:28						
Magnesium									
	51400	50000	113000	ug/L	124		SW846 6010B	12/18-12/19/03	F6JX21G2
	51400	50000	107000	ug/L	111	6.0	SW846 6010B	12/18-12/19/03	F6JX21G3
			Dilution Factor: 1						
			Analysis Time..: 12:28						

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MATRIX SPIKE SAMPLE DATA REPORT

DISSOLVED Metals

Client Lot #...: PB045 **Matrix.....:** WATER
Date Sampled...: 12/11/03 **Date Received..:** 12/12/03

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Manganese									
	55.2	500	629	ug/L	115		SW846 6010B	12/18-12/19/03	F6JX21G5
	55.2	500	588	ug/L	107	6.7	SW846 6010B	12/18-12/19/03	F6JX21G6
			Dilution Factor: 1						
			Analysis Time..: 12:28						
Nickel									
	ND	500	554	ug/L	111		SW846 6010B	12/18-12/19/03	F6JX21EC
	ND	500	519	ug/L	104	6.5	SW846 6010B	12/18-12/19/03	F6JX21ED
			Dilution Factor: 1						
			Analysis Time..: 12:28						
Potassium									
	11100	50000	75600 N	ug/L	129		SW846 6010B	12/18-12/19/03	F6JX21EF
	11100	50000	70400	ug/L	119	7.0	SW846 6010B	12/18-12/19/03	F6JX21EG
			Dilution Factor: 1						
			Analysis Time..: 12:28						
Selenium									
	ND	2000	2040	ug/L	102		SW846 6010B	12/18-12/19/03	F6JX21EJ
	ND	2000	1920	ug/L	96	5.8	SW846 6010B	12/18-12/19/03	F6JX21EK
			Dilution Factor: 1						
			Analysis Time..: 12:28						
Silver									
	ND	50.0	55.8	ug/L	112		SW846 6010B	12/18-12/19/03	F6JX21EM
	ND	50.0	51.8	ug/L	104	7.4	SW846 6010B	12/18-12/19/03	F6JX21EN
			Dilution Factor: 1						
			Analysis Time..: 12:28						
Sodium									
	115000	50000	185000	ug/L	139		SW846 6010B	12/18-12/19/03	F6JX21EQ
			Qualifiers: N						
	115000	50000	173000	ug/L	115	6.8	SW846 6010B	12/18-12/19/03	F6JX21ER
			Dilution Factor: 1						
			Analysis Time..: 12:28						
Thallium									
	ND	2000	2240	ug/L	112		SW846 6010B	12/18-12/19/03	F6JX21EU
	ND	2000	2090	ug/L	104	7.0	SW846 6010B	12/18-12/19/03	F6JX21EV
			Dilution Factor: 1						
			Analysis Time..: 12:28						

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MATRIX SPIKE SAMPLE DATA REPORT

DISSOLVED Metals

Client Lot #...: PB045 **Matrix.....:** WATER
Date Sampled...: 12/11/03 **Date Received..:** 12/12/03

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Vanadium									
	ND	500	568	ug/L	114		SW846 6010B	12/18-12/19/03	F6JX21EX
	ND	500	530	ug/L	106	6.9	SW846 6010B	12/18-12/19/03	F6JX21E0
			Dilution Factor: 1						
			Analysis Time..: 12:28						
Zinc									
	21.7	500	612	ug/L	118		SW846 6010B	12/18-12/19/03	F6JX21E2
	21.7	500	571	ug/L	110	7.0	SW846 6010B	12/18-12/19/03	F6JX21E3
			Dilution Factor: 1						
			Analysis Time..: 12:28						

NOTE(S):

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

N Spiked analyte recovery is outside stated control limits.

Sample Data Summary

SHAW E & I INC

Client Sample ID: DD3007

General Chemistry

Lot-Sample #...: H3L100268-001 **Work Order #...:** F6DQ4 **Matrix.....:** WATER
Date Sampled...: 12/09/03 **Date Received..:** 12/10/03

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride - Automated	**148**	**20.0**	**mg/L**	**MCAWW 325.2**	**12/11/03**	**3345263**
		Dilution Factor: 20		MDL.....: 5.6		
Cyanide, Total	ND	0.010	mg/L	SW846 9012A	12/15/03	3364457
		Dilution Factor: 1		MDL.....: 0.0030		
Hardness, as CaCO3	**81.6**	**5.0**	**mg/L**	**MCAWW 130.2**	**12/22/03**	**3357125**
		Dilution Factor: 1		MDL.....: 2.1		
Nitrate	ND	0.10	mg/L	MCAWW 353.2	12/10/03	3344598
		Dilution Factor: 1		MDL.....: 0.016		
Sulfate	**13.1**	**5.0**	**mg/L**	**MCAWW 375.4**	**12/11/03**	**3345463**
		Dilution Factor: 1		MDL.....: 0.94		
Total Alkalinity	**444**	**5.0**	**mg/L**	**MCAWW 310.1**	**12/10/03**	**3344488**
		Dilution Factor: 1		MDL.....: 1.3		
Total Dissolved Solids	**697**	**10.0**	**mg/L**	**MCAWW 160.1**	**12/11-12/12/03**	**3345541**
		Dilution Factor: 1		MDL.....: 4.3		
Total Organic Carbon	**5.3**	**1.0**	**mg/L**	**SW846 9060**	**12/24/03**	**3360094**
		Dilution Factor: 1		MDL.....: 0.68		
Total Suspended Solids	**4.0**	**4.0**	**mg/L**	**MCAWW 160.2**	**12/12-12/15/03**	**3349480**
		Dilution Factor: 1		MDL.....: 2.8		
Turbidity	**0.58**	**0.50**	**NTU**	**MCAWW 180.1**	**12/10/03**	**3350326**
		Dilution Factor: 1		MDL.....: 0.50		
Turbidity	**1.6**	**0.50**	**NTU**	**MCAWW 180.1**	**12/16/03**	**3350328**
		Dilution Factor: 1		MDL.....: 0.50		

SHAW E & I INC

Client Sample ID: DD3008

General Chemistry

Lot-Sample #...: H3L100268-002 **Work Order #...:** F6DRG **Matrix.....:** WATER
Date Sampled...: 12/09/03 **Date Received..:** 12/10/03

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride - Automated	**2930**	**50.0**	**mg/L**	**MCAWW 325.2**	**12/11/03**	**3345263**
		Dilution Factor: 50		MDL.....: 14.0		
Cyanide, Total	ND	0.010	mg/L	SW846 9012A	12/15/03	3364457
		Dilution Factor: 1		MDL.....: 0.0030		
Hardness, as CaCO3	**1500**	**25.0**	**mg/L**	**MCAWW 130.2**	**12/17/03**	**3351416**
		Dilution Factor: 5		MDL.....: 10.5		
Nitrate	ND	0.10	mg/L	MCAWW 353.2	12/10/03	3344598
		Dilution Factor: 1		MDL.....: 0.016		
Sulfate	ND	5.0	mg/L	MCAWW 375.4	12/11/03	3345463
		Dilution Factor: 1		MDL.....: 0.94		
Total Alkalinity	**432**	**5.0**	**mg/L**	**MCAWW 310.1**	**12/10/03**	**3344488**
		Dilution Factor: 1		MDL.....: 1.3		
Total Dissolved Solids	**3880**	**50.0**	**mg/L**	**MCAWW 160.1**	**12/11-12/12/03**	**3345541**
		Dilution Factor: 5		MDL.....: 21.5		
Total Organic Carbon	**3.9**	**1.0**	**mg/L**	**SW846 9060**	**12/24/03**	**3360094**
		Dilution Factor: 1		MDL.....: 0.68		
Total Suspended Solids	**7.0**	**4.0**	**mg/L**	**MCAWW 160.2**	**12/12-12/15/03**	**3349480**
		Dilution Factor: 1		MDL.....: 2.8		
Turbidity	**1.3**	**0.50**	**NTU**	**MCAWW 180.1**	**12/10/03**	**3350326**
		Dilution Factor: 1		MDL.....: 0.50		
Turbidity	**7.0**	**0.50**	**NTU**	**MCAWW 180.1**	**12/16/03**	**3350328**
		Dilution Factor: 1		MDL.....: 0.50		

SHAW E & I INC

Client Sample ID: DD3002

General Chemistry

Lot-Sample #...: H3L110180-001 **Work Order #...:** F6F1C **Matrix.....:** WATER
Date Sampled...: 12/10/03 **Date Received..:** 12/11/03

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride - Automated	**21300**	**250**	**mg/L**	**MCAWW 325.2**	**12/29/03**	**3363239**
		Dilution Factor: 250		MDL.....: 70.0		
Cyanide, Total	ND	0.010	mg/L	SW846 9012A	12/15/03	3364457
		Dilution Factor: 1		MDL.....: 0.0030		
Hardness, as CaCO3	**9940**	**125**	**mg/L**	**MCAWW 130.2**	**12/17/03**	**3351416**
		Dilution Factor: 25		MDL.....: 52.5		
Nitrate	ND	0.10	mg/L	MCAWW 353.2	12/11/03	3345556
		Dilution Factor: 1		MDL.....: 0.016		
Sulfate	ND	5.0	mg/L	MCAWW 375.4	12/29/03	3363240
		Dilution Factor: 1		MDL.....: 0.94		
Total Alkalinity	**238**	**5.0**	**mg/L**	**MCAWW 310.1**	**12/11/03**	**3346137**
		Dilution Factor: 1		MDL.....: 1.3		
Total Dissolved Solids	**33600**	**400**	**mg/L**	**MCAWW 160.1**	**12/12-12/15/03**	**3346635**
		Dilution Factor: 40		MDL.....: 172		
Total Organic Carbon	ND	1.0	mg/L	SW846 9060	12/16/03	3351144
		Dilution Factor: 1		MDL.....: 0.68		
Total Suspended Solids	**39.0**	**4.0**	**mg/L**	**MCAWW 160.2**	**12/12-12/15/03**	**3346636**
		Dilution Factor: 1		MDL.....: 2.8		
Turbidity	**3.1**	**0.50**	**NTU**	**MCAWW 180.1**	**12/11/03**	**3350327**
		Dilution Factor: 1		MDL.....: 0.50		
Turbidity	**18.4**	**0.50**	**NTU**	**MCAWW 180.1**	**12/16/03**	**3350328**
		Dilution Factor: 1		MDL.....: 0.50		

SHAW E & I INC

Client Sample ID: DD3001

General Chemistry

Lot-Sample #...: H3L110180-002 Work Order #...: F6F2H Matrix.....: WATER
Date Sampled...: 12/10/03 Date Received..: 12/11/03

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride - Automated	132	20.0	mg/L	MCAWW 325.2	12/29/03	3363239
		Dilution Factor: 20		MDL.....: 5.6		
Cyanide, Total	ND	0.010	mg/L	SW846 9012A	12/15/03	3364457
		Dilution Factor: 1		MDL.....: 0.0030		
Hardness, as CaCO3	313	5.0	mg/L	MCAWW 130.2	12/22/03	3357125
		Dilution Factor: 1		MDL.....: 2.1		
Nitrate	0.58	0.50	mg/L	MCAWW 353.2	12/11/03	3345556
		Dilution Factor: 5		MDL.....: 0.080		
Sulfate	54.4	25.0	mg/L	MCAWW 375.4	12/29/03	3363240
		Dilution Factor: 5		MDL.....: 4.7		
Total Alkalinity	255	5.0	mg/L	MCAWW 310.1	12/11/03	3346137
		Dilution Factor: 1		MDL.....: 1.3		
Total Dissolved Solids	584	10.0	mg/L	MCAWW 160.1	12/12-12/15/03	3346635
		Dilution Factor: 1		MDL.....: 4.3		
Total Organic Carbon	1.2	1.0	mg/L	SW846 9060	12/16/03	3351144
		Dilution Factor: 1		MDL.....: 0.68		
Total Suspended Solids	4.0	4.0	mg/L	MCAWW 160.2	12/12-12/15/03	3346636
		Dilution Factor: 1		MDL.....: 2.8		
Turbidity	5.6	0.50	NTU	MCAWW 180.1	12/11/03	3350327
		Dilution Factor: 1		MDL.....: 0.50		
Turbidity	5.2	0.50	NTU	MCAWW 180.1	12/16/03	3350328
		Dilution Factor: 1		MDL.....: 0.50		

SHAW E & I INC

Client Sample ID: DD3003

General Chemistry

Lot-Sample #...: H3L120208-001 **Work Order #...:** F6JXA **Matrix.....:** WATER
Date Sampled...: 12/11/03 **Date Received..:** 12/12/03

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride - Automated	**48.7**	**1.0**	**mg/L**	**MCAWW 325.2**	**12/29/03**	**3363239**
		Dilution Factor: 1		MDL.....: 0.28		
Cyanide, Total	ND	0.010	mg/L	SW846 9012A	12/18/03	3364517
		Dilution Factor: 1		MDL.....: 0.0030		
Hardness, as CaCO3	**130**	**5.0**	**mg/L**	**MCAWW 130.2**	**12/22/03**	**3357125**
		Dilution Factor: 1		MDL.....: 10.5		
Nitrate	ND	0.10	mg/L	MCAWW 353.2	12/13/03	3349149
		Dilution Factor: 1		MDL.....: 0.016		
Sulfate	**32.6**	**25.0**	**mg/L**	**MCAWW 375.4**	**12/29/03**	**3363240**
		Dilution Factor: 5		MDL.....: 4.7		
Total Alkalinity	**726**	**5.0**	**mg/L**	**MCAWW 310.1**	**12/12/03**	**3349139**
		Dilution Factor: 1		MDL.....: 1.3		
Total Dissolved Solids	**779**	**10.0**	**mg/L**	**MCAWW 160.1**	**12/16-12/17/03**	**3350171**
		Dilution Factor: 1		MDL.....: 4.3		
Total Organic Carbon	**1.6**	**1.0**	**mg/L**	**SW846 9060**	**12/24/03**	**3360094**
		Dilution Factor: 1		MDL.....: 0.68		
Total Suspended Solids	**4.0**	**4.0**	**mg/L**	**MCAWW 160.2**	**12/15/03**	**3349364**
		Dilution Factor: 1		MDL.....: 2.8		
Turbidity	**74.0**	**2.5**	**NTU**	**MCAWW 180.1**	**12/12/03**	**3349635**
		Dilution Factor: 5		MDL.....: 2.5		

SHAW E & I INC

Client Sample ID: DD3004

General Chemistry

Lot-Sample #...: H3L120208-002 **Work Order #...:** F6JX2 **Matrix.....:** WATER
Date Sampled...: 12/11/03 **Date Received..:** 12/12/03

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride - Automated	**221**	**20.0**	**mg/L**	**MCAWW 325.2**	**12/29/03**	**3363239**
		Dilution Factor: 20		MDL.....: 5.6		
Cyanide, Total	ND	0.010	mg/L	SW846 9012A	12/15/03	3364457
		Dilution Factor: 1		MDL.....: 0.0030		
Hardness, as CaCO3	**540**	**25.0**	**mg/L**	**MCAWW 130.2**	**12/22/03**	**3357125**
		Dilution Factor: 5		MDL.....: 10.5		
Nitrate	ND	0.10	mg/L	MCAWW 353.2	12/13/03	3349149
		Dilution Factor: 1		MDL.....: 0.016		
Sulfate	**136**	**25.0**	**mg/L**	**MCAWW 375.4**	**12/29/03**	**3363240**
		Dilution Factor: 5		MDL.....: 4.7		
Total Alkalinity	**316**	**5.0**	**mg/L**	**MCAWW 310.1**	**12/12/03**	**3349139**
		Dilution Factor: 1		MDL.....: 1.3		
Total Dissolved Solids	**834**	**10.0**	**mg/L**	**MCAWW 160.1**	**12/16-12/17/03**	**3350171**
		Dilution Factor: 1		MDL.....: 4.3		
Total Organic Carbon	**2.4**	**1.0**	**mg/L**	**SW846 9060**	**12/23/03**	**3360094**
		Dilution Factor: 1		MDL.....: 0.68		
Total Suspended Solids	**8.0**	**4.0**	**mg/L**	**MCAWW 160.2**	**12/15/03**	**3349364**
		Dilution Factor: 1		MDL.....: 2.8		
Turbidity	**64.4**	**1.0**	**NTU**	**MCAWW 180.1**	**12/12/03**	**3349635**
		Dilution Factor: 2		MDL.....: 1.0		

METHOD BLANK REPORT

General Chemistry

Client Lot #...: PB045 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride - Automated		Work Order #: F6FP01AA		MB Lot-Sample #:	A3L110000-263	
	ND	1.0	mg/L	MCAWW 325.2	12/11/03	3345263
		Dilution Factor: 1				
Chloride - Automated		Work Order #: F7D0W1AA		MB Lot-Sample #:	A3L290000-239	
	ND	1.0	mg/L	MCAWW 325.2	12/29/03	3363239
		Dilution Factor: 1				
Cyanide, Total		Work Order #: F7F5Q1AA		MB Lot-Sample #:	H3L300000-457	
	ND	0.010	mg/L	SW846 9012A	12/15/03	3364457
		Dilution Factor: 1				
Cyanide, Total		Work Order #: F7F7X1AA		MB Lot-Sample #:	H3L300000-517	
	ND	0.010	mg/L	SW846 9012A	12/18/03	3364517
		Dilution Factor: 1				
Hardness, as CaCO3		Work Order #: F6X6G1AA		MB Lot-Sample #:	A3L170000-416	
	ND	5.0	mg/L	MCAWW 130.2	12/17/03	3351416
		Dilution Factor: 1				
Hardness, as CaCO3		Work Order #: F683D1AA		MB Lot-Sample #:	A3L230000-125	
	ND	5.0	mg/L	MCAWW 130.2	12/22/03	3357125
		Dilution Factor: 1				
Nitrate		Work Order #: F6E241AA		MB Lot-Sample #:	A3L100000-598	
	ND	0.10	mg/L	MCAWW 353.2	12/10/03	3344598
		Dilution Factor: 1				
Nitrate		Work Order #: F6HCL1AA		MB Lot-Sample #:	A3L110000-556	
	ND	0.10	mg/L	MCAWW 353.2	12/11/03	3345556
		Dilution Factor: 1				
Nitrate		Work Order #: F6NRF1AA		MB Lot-Sample #:	A3L150000-149	
	ND	0.10	mg/L	MCAWW 353.2	12/13/03	3349149
		Dilution Factor: 1				
Sulfate		Work Order #: F6GNK1AA		MB Lot-Sample #:	A3L110000-463	
	ND	5.0	mg/L	MCAWW 375.4	12/11/03	3345463
		Dilution Factor: 1				
Sulfate		Work Order #: F7D0X1AA		MB Lot-Sample #:	A3L290000-240	
	ND	5.0	mg/L	MCAWW 375.4	12/29/03	3363240
		Dilution Factor: 1				

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METHOD BLANK REPORT

General Chemistry

Client Lot #...: PB045 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Alkalinity		Work Order #: F6EDT1AA		MB Lot-Sample #:	A3L100000-488	
	ND	5.0	mg/L	MCAWW 310.1	12/10/03	3344488
		Dilution Factor: 1				
Total Alkalinity		Work Order #: F6H3A1AA		MB Lot-Sample #:	A3L120000-137	
	ND	5.0	mg/L	MCAWW 310.1	12/11/03	3346137
		Dilution Factor: 1				
Total Alkalinity		Work Order #: F6NQ51AA		MB Lot-Sample #:	A3L150000-139	
	ND	5.0	mg/L	MCAWW 310.1	12/12/03	3349139
		Dilution Factor: 1				
Total Dissolved Solids		Work Order #: F6PWL1AA		MB Lot-Sample #:	A3L110000-541	
	ND	10.0	mg/L	MCAWW 160.1	12/11-12/12/03	3345541
		Dilution Factor: 1				
Total Dissolved Solids		Work Order #: F6QED1AA		MB Lot-Sample #:	A3L120000-635	
	ND	10.0	mg/L	MCAWW 160.1	12/12-12/15/03	3346635
		Dilution Factor: 1				
Total Dissolved Solids		Work Order #: F6QGN1AA		MB Lot-Sample #:	A3L160000-171	
	ND	10.0	mg/L	MCAWW 160.1	12/16-12/17/03	3350171
		Dilution Factor: 1				
Total Organic Carbon		Work Order #: F6T9M1AA		MB Lot-Sample #:	A3L170000-144	
	ND	1.0	mg/L	SW846 9060	12/16/03	3351144
		Dilution Factor: 1				
Total Organic Carbon		Work Order #: F7CDD1AA		MB Lot-Sample #:	A3L260000-094	
	ND	1.0	mg/L	SW846 9060	12/23/03	3360094
		Dilution Factor: 1				
Total Suspended Solids		Work Order #: F6PKH1AA		MB Lot-Sample #:	A3L120000-636	
	ND	4.0	mg/L	MCAWW 160.2	12/12-12/15/03	3346636
		Dilution Factor: 1				
Total Suspended Solids		Work Order #: F6PK81AA		MB Lot-Sample #:	A3L150000-480	
	ND	4.0	mg/L	MCAWW 160.2	12/12-12/15/03	3349480
		Dilution Factor: 1				

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METHOD BLANK REPORT

General Chemistry

Client Lot #...: PB045 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Suspended Solids		Work Order #: F6PAR1AA		MB Lot-Sample #:	A3L150000-364	
	ND	4.0	mg/L	MCAWW 160.2	12/15/03	3349364
		Dilution Factor: 1				
Turbidity		Work Order #: F6Q9P1AA		MB Lot-Sample #:	A3L160000-326	
	ND	0.50	NTU	MCAWW 180.1	12/10/03	3350326
		Dilution Factor: 1				
Turbidity		Work Order #: F6Q911AA		MB Lot-Sample #:	A3L160000-327	
	ND	0.50	NTU	MCAWW 180.1	12/11/03	3350327
		Dilution Factor: 1				
Turbidity		Work Order #: F6P5F1AA		MB Lot-Sample #:	A3L150000-635	
	ND	0.50	NTU	MCAWW 180.1	12/12/03	3349635
		Dilution Factor: 1				
Turbidity		Work Order #: F6RAC1AA		MB Lot-Sample #:	A3L160000-328	
	ND	0.50	NTU	MCAWW 180.1	12/16/03	3350328
		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

Lot-Sample #...: PB045 **Matrix.....:** WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Cyanide, Total		WO#:F7F5Q1AC-LCS/F7F5Q1AD-LCSD				LCS Lot-Sample#: H3L300000-457	
	106	(88 - 113)			SW846 9012A	12/15/03	3364457
	105	(88 - 113)	0.94	(0-20)	SW846 9012A	12/15/03	3364457

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

Lot-Sample #...: PB045 **Matrix.....:** WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Cyanide, Total		WO#:F7F5Q1AC-LCS/F7F5Q1AD-LCSD				LCS Lot-Sample#: H3L300000-457		
	0.200	0.212	mg/L	106		SW846 9012A	12/15/03	3364457
	0.200	0.210	mg/L	105	0.94	SW846 9012A	12/15/03	3364457

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 #...: PB045 **Matrix.....:** WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride - Automated		Work Order #: F6FP01AC	LCS Lot-Sample#: A3L110000-263		
	101	(90 - 115)	MCAWW 325.2	12/11/03	3345263
		Dilution Factor: 1			
Chloride - Automated		Work Order #: F7D0W1AC	LCS Lot-Sample#: A3L290000-239		
	108	(90 - 115)	MCAWW 325.2	12/29/03	3363239
		Dilution Factor: 1			
Cyanide, Total		Work Order #: F7F7X1AC	LCS Lot-Sample#: H3L300000-517		
	112	(88 - 113)	SW846 9012A	12/18/03	3364517
		Dilution Factor: 1			
Hardness, as CaCO3		Work Order #: F6X6G1AC	LCS Lot-Sample#: A3L170000-416		
	102	(84 - 116)	MCAWW 130.2	12/17/03	3351416
		Dilution Factor: 1			
Hardness, as CaCO3		Work Order #: F683D1AC	LCS Lot-Sample#: A3L230000-125		
	102	(84 - 116)	MCAWW 130.2	12/22/03	3357125
		Dilution Factor: 1			
Nitrate		Work Order #: F6E241AC	LCS Lot-Sample#: A3L100000-598		
	89	(77 - 116)	MCAWW 353.2	12/10/03	3344598
		Dilution Factor: 1			
Nitrate		Work Order #: F6HCL1AC	LCS Lot-Sample#: A3L110000-556		
	92	(77 - 116)	MCAWW 353.2	12/11/03	3345556
		Dilution Factor: 1			
Nitrate		Work Order #: F6NRF1AC	LCS Lot-Sample#: A3L150000-149		
	92	(77 - 116)	MCAWW 353.2	12/13/03	3349149
		Dilution Factor: 1			
Sulfate		Work Order #: F6GNK1AC	LCS Lot-Sample#: A3L110000-463		
	97	(80 - 112)	MCAWW 375.4	12/11/03	3345463
		Dilution Factor: 1			
Sulfate		Work Order #: F7D0X1AC	LCS Lot-Sample#: A3L290000-240		
	90	(80 - 112)	MCAWW 375.4	12/29/03	3363240
		Dilution Factor: 1			

(Continued on next page)

LABORATORY CONTROL SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: PB045 **Matrix.....:** WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Alkalinity		Work Order #: F6EDT1AC	LCS Lot-Sample#: A3L100000-488		
	100	(90 - 127)	MCAWW 310.1	12/10/03	3344488
		Dilution Factor: 1			
Total Alkalinity		Work Order #: F6H3A1AC	LCS Lot-Sample#: A3L120000-137		
	104	(90 - 127)	MCAWW 310.1	12/11/03	3346137
		Dilution Factor: 1			
Total Alkalinity		Work Order #: F6NQ51AC	LCS Lot-Sample#: A3L150000-139		
	99	(90 - 127)	MCAWW 310.1	12/12/03	3349139
		Dilution Factor: 1			
Total Dissolved Solids		Work Order #: F6PWL1AC	LCS Lot-Sample#: A3L110000-541		
	95	(69 - 120)	MCAWW 160.1	12/11-12/12/03	3345541
		Dilution Factor: 1			
Total Dissolved Solids		Work Order #: F6QED1AC	LCS Lot-Sample#: A3L120000-635		
	107	(69 - 120)	MCAWW 160.1	12/12-12/15/03	3346635
		Dilution Factor: 1			
Total Dissolved Solids		Work Order #: F6QGN1AC	LCS Lot-Sample#: A3L160000-171		
	104	(69 - 120)	MCAWW 160.1	12/16-12/17/03	3350171
		Dilution Factor: 1			
Total Organic Carbon		Work Order #: F6T9M1AC	LCS Lot-Sample#: A3L170000-144		
	94	(88 - 115)	SW846 9060	12/16/03	3351144
		Dilution Factor: 1			
Total Organic Carbon		Work Order #: F7CDD1AC	LCS Lot-Sample#: A3L260000-094		
	96	(88 - 115)	SW846 9060	12/23/03	3360094
		Dilution Factor: 1			
Total Suspended Solids		Work Order #: F6PKH1AC	LCS Lot-Sample#: A3L120000-636		
	96	(66 - 119)	MCAWW 160.2	12/12-12/15/03	3346636
		Dilution Factor: 1			
Total Suspended Solids		Work Order #: F6PAR1AC	LCS Lot-Sample#: A3L150000-364		
	93	(66 - 119)	MCAWW 160.2	12/15/03	3349364
		Dilution Factor: 1			

(Continued on next page)

LABORATORY CONTROL SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: PB045 **Matrix.....:** WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Suspended Solids		Work Order #: F6PK81AC		LCS Lot-Sample#: A3L150000-480	
	93	(66 - 119)	MCAWW 160.2	12/12-12/15/03	3349480
		Dilution Factor: 1			
Turbidity		Work Order #: F6P5F1AC		LCS Lot-Sample#: A3L150000-635	
	104	(75 - 125)	MCAWW 180.1	12/12/03	3349635
		Dilution Factor: 1			
Turbidity		Work Order #: F6Q9P1AC		LCS Lot-Sample#: A3L160000-326	
	106	(75 - 125)	MCAWW 180.1	12/10/03	3350326
		Dilution Factor: 1			
Turbidity		Work Order #: F6Q911AC		LCS Lot-Sample#: A3L160000-327	
	88	(75 - 125)	MCAWW 180.1	12/11/03	3350327
		Dilution Factor: 1			
Turbidity		Work Order #: F6RAC1AC		LCS Lot-Sample#: A3L160000-328	
	89	(75 - 125)	MCAWW 180.1	12/16/03	3350328
		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 #...: PB045 **Matrix.....:** WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride - Automated			Work Order #: F6FP01AC		LCS Lot-Sample#:	A3L110000-263	
	73.5	74.2	mg/L	101	MCAWW 325.2	12/11/03	3345263
			Dilution Factor: 1				
Chloride - Automated			Work Order #: F7D0W1AC		LCS Lot-Sample#:	A3L290000-239	
	73.5	79.2	mg/L	108	MCAWW 325.2	12/29/03	3363239
			Dilution Factor: 1				
Cyanide, Total			Work Order #: F7F7X1AC		LCS Lot-Sample#:	H3L300000-517	
	0.200	0.225	mg/L	112	SW846 9012A	12/18/03	3364517
			Dilution Factor: 1				
Hardness, as CaCO3			Work Order #: F6X6G1AC		LCS Lot-Sample#:	A3L170000-416	
	290	295	mg/L	102	MCAWW 130.2	12/17/03	3351416
			Dilution Factor: 1				
Hardness, as CaCO3			Work Order #: F683D1AC		LCS Lot-Sample#:	A3L230000-125	
	290	296	mg/L	102	MCAWW 130.2	12/22/03	3357125
			Dilution Factor: 1				
Nitrate			Work Order #: F6E241AC		LCS Lot-Sample#:	A3L100000-598	
	1.00	0.888	mg/L	89	MCAWW 353.2	12/10/03	3344598
			Dilution Factor: 1				
Nitrate			Work Order #: F6HCL1AC		LCS Lot-Sample#:	A3L110000-556	
	1.00	0.916	mg/L	92	MCAWW 353.2	12/11/03	3345556
			Dilution Factor: 1				
Nitrate			Work Order #: F6NRF1AC		LCS Lot-Sample#:	A3L150000-149	
	1.00	0.918	mg/L	92	MCAWW 353.2	12/13/03	3349149
			Dilution Factor: 1				
Sulfate			Work Order #: F6GNK1AC		LCS Lot-Sample#:	A3L110000-463	
	32.2	31.1	mg/L	97	MCAWW 375.4	12/11/03	3345463
			Dilution Factor: 1				
Sulfate			Work Order #: F7D0X1AC		LCS Lot-Sample#:	A3L290000-240	
	32.2	28.9	mg/L	90	MCAWW 375.4	12/29/03	3363240
			Dilution Factor: 1				

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LABORATORY CONTROL SAMPLE DATA REPORT

General Chemistry

Client Lot #...: PB045 **Matrix.....:** WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Alkalinity			Work Order #: F6EDT1AC		LCS Lot-Sample#: A3L100000-488		
	54.7	55.0	mg/L	100	MCAWW 310.1	12/10/03	3344488
			Dilution Factor: 1				
Total Alkalinity			Work Order #: F6H3A1AC		LCS Lot-Sample#: A3L120000-137		
	44.4	46.3	mg/L	104	MCAWW 310.1	12/11/03	3346137
			Dilution Factor: 1				
Total Alkalinity			Work Order #: F6NQ51AC		LCS Lot-Sample#: A3L150000-139		
	44.4	44.0	mg/L	99	MCAWW 310.1	12/12/03	3349139
			Dilution Factor: 1				
Total Dissolved Solids			Work Order #: F6PWL1AC		LCS Lot-Sample#: A3L110000-541		
	276	262	mg/L	95	MCAWW 160.1	12/11-12/12/03	3345541
			Dilution Factor: 1				
Total Dissolved Solids			Work Order #: F6QED1AC		LCS Lot-Sample#: A3L120000-635		
	276	296	mg/L	107	MCAWW 160.1	12/12-12/15/03	3346635
			Dilution Factor: 1				
Total Dissolved Solids			Work Order #: F6QGN1AC		LCS Lot-Sample#: A3L160000-171		
	276	287	mg/L	104	MCAWW 160.1	12/16-12/17/03	3350171
			Dilution Factor: 1				
Total Organic Carbon			Work Order #: F6T9M1AC		LCS Lot-Sample#: A3L170000-144		
	39.9	37.4	mg/L	94	SW846 9060	12/16/03	3351144
			Dilution Factor: 1				
Total Organic Carbon			Work Order #: F7CDD1AC		LCS Lot-Sample#: A3L260000-094		
	39.9	38.3	mg/L	96	SW846 9060	12/23/03	3360094
			Dilution Factor: 1				
Total Suspended Solids			Work Order #: F6PKH1AC		LCS Lot-Sample#: A3L120000-636		
	32.4	31.0	mg/L	96	MCAWW 160.2	12/12-12/15/03	3346636
			Dilution Factor: 1				
Total Suspended Solids			Work Order #: F6PAR1AC		LCS Lot-Sample#: A3L150000-364		
	32.4	30.0	mg/L	93	MCAWW 160.2	12/15/03	3349364
			Dilution Factor: 1				

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LABORATORY CONTROL SAMPLE DATA REPORT

General Chemistry

Client Lot #...: PB045 **Matrix.....:** WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Suspended Solids			Work Order #: F6PK81AC LCS Lot-Sample#: A3L150000-480				
	32.4	30.0	mg/L	93	MCAWW 160.2	12/12-12/15/03	3349480
			Dilution Factor: 1				
Turbidity			Work Order #: F6P5F1AC LCS Lot-Sample#: A3L150000-635				
	1.00	1.04	NTU	104	MCAWW 180.1	12/12/03	3349635
			Dilution Factor: 1				
Turbidity			Work Order #: F6Q9P1AC LCS Lot-Sample#: A3L160000-326				
	1.00	1.06	NTU	106	MCAWW 180.1	12/10/03	3350326
			Dilution Factor: 1				
Turbidity			Work Order #: F6Q911AC LCS Lot-Sample#: A3L160000-327				
	1.00	0.880	NTU	88	MCAWW 180.1	12/11/03	3350327
			Dilution Factor: 1				
Turbidity			Work Order #: F6RAC1AC LCS Lot-Sample#: A3L160000-328				
	1.00	0.890	NTU	89	MCAWW 180.1	12/16/03	3350328
			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 #...: PB045 **Matrix.....:** WATER
Date Sampled...: 12/03/03 **Date Received..:** 12/05/03

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride - Automated		WO#: F6D1W1AK-MS/F6D1W1AL-MSD				MS Lot-Sample #: A3L100302-002	
	111	(43 - 167)			MCAWW 325.2	12/11/03	3345263
	104	(43 - 167)	0.92	(0-23)	MCAWW 325.2	12/11/03	3345263
		Dilution Factor: 1					
Chloride - Automated		WO#: F6JX21E8-MS/F6JX21E9-MSD				MS Lot-Sample #: H3L120208-002	
	127	(43 - 167)			MCAWW 325.2	12/29/03	3363239
	118	(43 - 167)	0.91	(0-23)	MCAWW 325.2	12/29/03	3363239
		Dilution Factor: 1					
Cyanide, Total		WO#: F6JXA1DA-MS/F6JXA1DC-MSD				MS Lot-Sample #: H3L120208-001	
	49 N	(77 - 126)			SW846 9012A	12/18/03	3364517
	50 N	(77 - 126)	2.6	(0-20)	SW846 9012A	12/18/03	3364517
		Dilution Factor: 1					
Cyanide, Total		WO#: F6JX21AX-MS/F6JX21A0-MSD				MS Lot-Sample #: H3L120208-002	
	68 N	(77 - 126)			SW846 9012A	12/15/03	3364457
	64 N	(77 - 126)	4.5	(0-20)	SW846 9012A	12/15/03	3364457
		Dilution Factor: 1					
Hardness, as CaCO3		WO#: F6JX21FQ-MS/F6JX21FR-MSD				MS Lot-Sample #: H3L120208-002	
	100	(10 - 176)			MCAWW 130.2	12/22/03	3357125
	95	(10 - 176)	3.4	(0-23)	MCAWW 130.2	12/22/03	3357125
		Dilution Factor: 1					
Hardness, as CaCO3		WO#: F6KN31AM-MS/F6KN31AN-MSD				MS Lot-Sample #: A3L120289-003	
	96	(10 - 176)			MCAWW 130.2	12/17/03	3351416
	97	(10 - 176)	1.6	(0-23)	MCAWW 130.2	12/17/03	3351416
		Dilution Factor: 1					
Nitrate		WO#: F6DQ41DC-MS/F6DQ41DD-MSD				MS Lot-Sample #: H3L100268-001	
	77	(10 - 163)			MCAWW 353.2	12/10/03	3344598
	77	(10 - 163)	0.0	(0-24)	MCAWW 353.2	12/10/03	3344598
		Dilution Factor: 1					
Nitrate		WO#: F6F1C1C9-MS/F6F1C1DA-MSD				MS Lot-Sample #: H3L110180-001	
	59	(10 - 163)			MCAWW 353.2	12/11/03	3345556
	60	(10 - 163)	0.60	(0-24)	MCAWW 353.2	12/11/03	3345556
		Dilution Factor: 1					

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MATRIX SPIKE SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: PB045 **Matrix.....:** WATER
Date Sampled...: 12/03/03 **Date Received..:** 12/05/03

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Nitrate		WO#: F6H4N1CJ-MS/F6H4N1CK-MSD				MS Lot-Sample #: A3L120102-005	
	68	(10 - 163)			MCAWW 353.2	12/13/03	3349149
	68	(10 - 163)	0.12	(0-24)	MCAWW 353.2	12/13/03	3349149
		Dilution Factor: 1					
Sulfate		WO#: F54TE1AP-MS/F54TE1AQ-MSD				MS Lot-Sample #: A3L050283-002	
	96	(22 - 151)			MCAWW 375.4	12/11/03	3345461
	94	(22 - 151)	0.48	(0-31)	MCAWW 375.4	12/11/03	3345461
		Dilution Factor: 1					
Sulfate		WO#: F6JX21FF-MS/F6JX21FG-MSD				MS Lot-Sample #: H3L120208-002	
	86	(22 - 151)			MCAWW 375.4	12/29/03	3363240
	92	(22 - 151)	1.0	(0-31)	MCAWW 375.4	12/29/03	3363240
		Dilution Factor: 1					
Total Alkalinity		WO#: F6DQ41C9-MS/F6DQ41DA-MSD				MS Lot-Sample #: H3L100268-001	
	93	(10 - 160)			MCAWW 310.1	12/10/03	3344488
	95	(10 - 160)	1.1	(0-24)	MCAWW 310.1	12/10/03	3344488
		Dilution Factor: 1					
Total Alkalinity		WO#: F6F2H1C9-MS/F6F2H1DA-MSD				MS Lot-Sample #: H3L110180-002	
	78	(10 - 160)			MCAWW 310.1	12/11/03	3346137
	76	(10 - 160)	2.2	(0-24)	MCAWW 310.1	12/11/03	3346137
		Dilution Factor: 1					
Total Alkalinity		WO#: F6JX21A8-MS/F6JX21A9-MSD				MS Lot-Sample #: H3L120208-002	
	62	(10 - 160)			MCAWW 310.1	12/12/03	3349139
	65	(10 - 160)	2.5	(0-24)	MCAWW 310.1	12/12/03	3349139
		Dilution Factor: 1					
Total Organic Carbon		WO#: F6GAK1AG-MS/F6GAK1AH-MSD				MS Lot-Sample #: A3L110213-008	
	109	(72 - 136)			SW846 9060	12/16/03	3351144
	111	(72 - 136)	1.8	(0-20)	SW846 9060	12/16/03	3351144
		Dilution Factor: 1					
Total Organic Carbon		WO#: F6JX21FJ-MS/F6JX21FK-MSD				MS Lot-Sample #: H3L120208-002	
	94	(72 - 136)			SW846 9060	12/23/03	3360094
	94	(72 - 136)	0.34	(0-20)	SW846 9060	12/23/03	3360094
		Dilution Factor: 1					

NOTE(S):

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

N Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE DATA REPORT

General Chemistry

Client Lot #...: PB045 **Matrix.....:** WATER
Date Sampled...: 12/03/03 **Date Received..:** 12/05/03

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride - Automated			WO#: F6D1W1AK-MS/F6D1W1AL-MSD				MS Lot-Sample #: A3L100302-002		
	178	25.0	206	mg/L	111		MCAWW 325.2	12/11/03	3345263
	178	25.0	204	mg/L	104	0.92	MCAWW 325.2	12/11/03	3345263
			Dilution Factor: 1						
Chloride - Automated			WO#: F6JX21E8-MS/F6JX21E9-MSD				MS Lot-Sample #: H3L120208-002		
	221	25.0	252	mg/L	127		MCAWW 325.2	12/29/03	3363239
	221	25.0	250	mg/L	118	0.91	MCAWW 325.2	12/29/03	3363239
			Dilution Factor: 1						
Cyanide, Total			WO#: F6JXA1DA-MS/F6JXA1DC-MSD				MS Lot-Sample #: H3L120208-001		
	ND	0.200	0.0972	mg/L	49		SW846 9012A	12/18/03	3364517
			Qualifiers: N						
	ND	0.200	0.0998	mg/L	50	2.6	SW846 9012A	12/18/03	3364517
			Qualifiers: N						
			Dilution Factor: 1						
Cyanide, Total			WO#: F6JX21AX-MS/F6JX21A0-MSD				MS Lot-Sample #: H3L120208-002		
	ND	0.200	0.135 N	mg/L	68		SW846 9012A	12/15/03	3364457
	ND	0.200	0.129 N	mg/L	64	4.5	SW846 9012A	12/15/03	3364457
			Dilution Factor: 1						
Hardness, as CaCO3			WO#: F6JX21FQ-MS/F6JX21FR-MSD				MS Lot-Sample #: H3L120208-002		
	540	1000	1540	mg/L	100		MCAWW 130.2	12/22/03	3357125
	540	1000	1490	mg/L	95	3.4	MCAWW 130.2	12/22/03	3357125
			Dilution Factor: 1						
Hardness, as CaCO3			WO#: F6KN31AM-MS/F6KN31AN-MSD				MS Lot-Sample #: A3L120289-003		
	11.2	200	202	mg/L	96		MCAWW 130.2	12/17/03	3351416
	11.2	200	206	mg/L	97	1.6	MCAWW 130.2	12/17/03	3351416
			Dilution Factor: 1						
Nitrate			WO#: F6DQ41DC-MS/F6DQ41DD-MSD				MS Lot-Sample #: H3L100268-001		
	ND	0.250	0.198	mg/L	77		MCAWW 353.2	12/10/03	3344598
	ND	0.250	0.198	mg/L	77	0.0	MCAWW 353.2	12/10/03	3344598
			Dilution Factor: 1						
Nitrate			WO#: F6F1C1C9-MS/F6F1C1DA-MSD				MS Lot-Sample #: H3L110180-001		
	ND	0.250	0.149	mg/L	59		MCAWW 353.2	12/11/03	3345556
	ND	0.250	0.150	mg/L	60	0.60	MCAWW 353.2	12/11/03	3345556
			Dilution Factor: 1						

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MATRIX SPIKE SAMPLE DATA REPORT

General Chemistry

Client Lot #...: PB045 **Matrix.....:** WATER
Date Sampled...: 12/03/03 **Date Received..:** 12/05/03

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Nitrate			WO#: F6H4N1CJ-MS/F6H4N1CK-MSD				MS Lot-Sample #: A3L120102-005		
	0.22	0.250	0.388	mg/L	68		MCAWW 353.2	12/13/03	3349149
	0.22	0.250	0.388	mg/L	68	0.12	MCAWW 353.2	12/13/03	3349149
			Dilution Factor: 1						
Sulfate			WO#: F54TE1AP-MS/F54TE1AQ-MSD				MS Lot-Sample #: A3L050283-002		
	68.4	25.0	92.3	mg/L	96		MCAWW 375.4	12/11/03	3345461
	68.4	25.0	91.9	mg/L	94	0.48	MCAWW 375.4	12/11/03	3345461
			Dilution Factor: 1						
Sulfate			WO#: F6JX21FF-MS/F6JX21FG-MSD				MS Lot-Sample #: H3L120208-002		
	136	25.0	158	mg/L	86		MCAWW 375.4	12/29/03	3363240
	136	25.0	159	mg/L	92	1.0	MCAWW 375.4	12/29/03	3363240
			Dilution Factor: 1						
Total Alkalinity			WO#: F6DQ41C9-MS/F6DQ41DA-MSD				MS Lot-Sample #: H3L100268-001		
	444	500	910	mg/L	93		MCAWW 310.1	12/10/03	3344488
	444	500	921	mg/L	95	1.1	MCAWW 310.1	12/10/03	3344488
			Dilution Factor: 1						
Total Alkalinity			WO#: F6F2H1C9-MS/F6F2H1DA-MSD				MS Lot-Sample #: H3L110180-002		
	255	500	646	mg/L	78		MCAWW 310.1	12/11/03	3346137
	255	500	632	mg/L	76	2.2	MCAWW 310.1	12/11/03	3346137
			Dilution Factor: 1						
Total Alkalinity			WO#: F6JX21A8-MS/F6JX21A9-MSD				MS Lot-Sample #: H3L120208-002		
	316	500	627	mg/L	62		MCAWW 310.1	12/12/03	3349139
	316	500	643	mg/L	65	2.5	MCAWW 310.1	12/12/03	3349139
			Dilution Factor: 1						
Total Organic Carbon			WO#: F6GAK1AG-MS/F6GAK1AH-MSD				MS Lot-Sample #: A3L110213-008		
	ND	25.0	28.2	mg/L	109		SW846 9060	12/16/03	3351144
	ND	25.0	28.8	mg/L	111	1.8	SW846 9060	12/16/03	3351144
			Dilution Factor: 1						
Total Organic Carbon			WO#: F6JX21FJ-MS/F6JX21FK-MSD				MS Lot-Sample #: H3L120208-002		
	2.4	25.0	25.8	mg/L	94		SW846 9060	12/23/03	3360094
	2.4	25.0	25.9	mg/L	94	0.34	SW846 9060	12/23/03	3360094
			Dilution Factor: 1						

NOTE(S):

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

N Spiked analyte recovery is outside stated control limits.

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: H3L100268 **Work Order #...:** F6CQM-SMP F6CQM-DUP **Matrix.....:** WATER

Date Sampled...: 12/09/03 **Date Received..:** 12/10/03

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Dissolved Solids						SD Lot-Sample #:	A3L100133-001	
	1100	1100	mg/L	0.0	(0-20)	MCAWW 160.1	12/11-12/12/03	3345541

Dilution Factor: 1

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: H3L100268 **Work Order #...:** F6DQ4-SMP F6DQ4-DUP **Matrix.....:** WATER

Date Sampled...: 12/09/03 **Date Received..:** 12/10/03

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Turbidity						SD Lot-Sample #:	H3L100268-001	
	0.58	0.56	NTU	3.5	(0-20)	MCAWW 180.1	12/10/03	3350326
			Dilution Factor: 1					
Turbidity						SD Lot-Sample #:	H3L100268-001	
	1.6	1.6	NTU	0.62	(0-20)	MCAWW 180.1	12/16/03	3350328
			Dilution Factor: 1					

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: H3L100268 **Work Order #...:** F6E8D-SMP F6E8D-DUP **Matrix.....:** WATER

Date Sampled...: 12/10/03 **Date Received..:** 12/11/03

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Suspended Solids						SD Lot-Sample #:	A3L110101-002	
	11.0	8.0	mg/L	32	(0-20)	MCAWW 160.2	12/12-12/15/03	3349480

Dilution Factor: 1

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: H3L100268 **Work Order #...:** F6E8R-SMP F6E8R-DUP **Matrix.....:** WATER

Date Sampled...: 12/10/03 **Date Received..:** 12/11/03

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Dissolved Solids						SD Lot-Sample #: A3L110102-001		
	430	434	mg/L	0.93	(0-20)	MCAWW 160.1	12/12-12/15/03	3346635

Dilution Factor: 1

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: H3L100268 **Work Order #...:** F6FND-SMP F6FND-DUP **Matrix.....:** WATER

Date Sampled...: 12/10/03 **Date Received..:** 12/11/03

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Suspended Solids						SD Lot-Sample #:	A3L110142-001	
	17.0	17.0	mg/L	0.0	(0-20)	MCAWW 160.2	12/12-12/15/03	3349480

Dilution Factor: 1

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: H3L100268 **Work Order #...:** F6FWF-SMP F6FWF-DUP **Matrix.....:** WATER

Date Sampled...: 12/10/03 **Date Received..:** 12/11/03

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Dissolved Solids						SD Lot-Sample #:	A3L110166-002	
	825	868	mg/L	5.1	(0-20)	MCAWW 160.1	12/12-12/15/03	3346635

Dilution Factor: 1

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: H3L100268 **Work Order #...:** F6F1C-SMP F6F1C-DUP **Matrix.....:** WATER

Date Sampled...: 12/10/03 **Date Received..:** 12/11/03

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Turbidity						SD Lot-Sample #:	H3L110180-001	
	3.1	3.3	NTU	8.1	(0-20)	MCAWW 180.1	12/11/03	3350327

Dilution Factor: 1

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: H3L100268 **Work Order #...:** F6F2H-SMP F6F2H-DUP **Matrix.....:** WATER

Date Sampled...: 12/10/03 **Date Received..:** 12/11/03

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Suspended Solids						SD Lot-Sample #:	H3L110180-002	
	4.0	4.0	mg/L	0.0	(0-20)	MCAWW 160.2	12/12-12/15/03	3346636

Dilution Factor: 1

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: H3L100268 **Work Order #...:** F6JXA-SMP F6JXA-DUP **Matrix.....:** WATER

Date Sampled...: 12/11/03 **Date Received..:** 12/12/03

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Turbidity						SD Lot-Sample #:	H3L120208-001	
	74.0	73.0	NTU	1.4	(0-20)	MCAWW 180.1	12/12/03	3349635

Dilution Factor: 5

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: H3L100268 **Work Order #...:** F6JX2-SMP F6JX2-DUP **Matrix.....:** WATER

Date Sampled...: 12/11/03 **Date Received..:** 12/12/03

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Suspended Solids						SD Lot-Sample #: H3L120208-002		
	8.0	7.0	mg/L	13	(0-20)	MCAWW 160.2	12/15/03	3349364
			Dilution Factor: 1					
Total Dissolved Solids						SD Lot-Sample #: H3L120208-002		
	834	834	mg/L	0.0	(0-20)	MCAWW 160.1	12/16-12/17/03	3350171
			Dilution Factor: 1					

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: H3L100268 **Work Order #...:** F6KN3-SMP F6KN3-DUP **Matrix.....:** WATER

Date Sampled...: 12/12/03 **Date Received..:** 12/12/03

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Suspended Solids						SD Lot-Sample #:	A3L120289-003	
	18.0	15.0	mg/L	18	(0-20)	MCAWW 160.2	12/15/03	3349364
			Dilution Factor: 1					
Total Dissolved Solids						SD Lot-Sample #:	A3L120289-003	
	2120	2200	mg/L	3.9	(0-20)	MCAWW 160.1	12/16-12/17/03	3350171
			Dilution Factor: 2					

Sample Receipt Documentation

STL-KNOXVILLE

Sample Delivery Group Assignment Form

SHAW E
PBOW

SDG# PB045

*	DATE REC'D	LOT#	CLIENT ID	VOA	BNA	TOC	ALK	TAL	EXP	DISS	CN	CHL	NIT	SUL	TDS	TSS	TURB	HARD
				8260B	8270C	9060	310.1	6010B	8330	6010B	9012	325.2	353.2	375.4	160.1	160.2	180.1	130.2
1,	12/10/2003	H3L100268	DD3007	X	X	NC	NC	X	X	X	X	NC	NC	NC	NC	NC	NC	NC
2			DD3008	X	X	NC	NC	X	X	X	X	NC	NC	NC	NC	NC	NC	NC
3			DD5001	X														
4	12/11/2003	H3L110180	DD3002	X	X	NC	NC	X	X	X	X	NC	NC	NC	NC	NC	NC	NC
5			DD3001	X	X	NC	NC	X	X	X	X	NC	NC	NC	NC	NC	NC	NC
6			DD5002	X														
7	12/12/2003	H3L120208	DD3003	X	X	NC	NC	X	X	X	X	NC	NC	NC	NC	NC	NC	NC
8			DD3004	QC	QC	QC/NC	QC/NC	QC	QC	QC	QC	QC/NC	QC/NC	QC/NC	QC/NC	QC/NC	QC/NC	QC/NC
9			DD3005	X	X			X	X	X								
10			DD5003	X														
11																		
12																		
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24																		

NC = NORTH CANTON
A = STL AUSTIN
D= STL DENVER
WS = STL WEST SACRAMENTO
P = PITTSBURGH
IT = IT CORP KNOX
T = TALLAHASSEE

MATRIX: WATER
ANALYTICAL DUE: 12-31-03
REPORT DUE: 1-5-04
CLOSED? YES

1/12/20043:15 PM

H3L100268

Shaw™
Shaw E & I, Inc.

ANALYSIS REQUEST AND CHAIN-OF-CUSTODY RECORD

REFERENCE COC NO.: PB12 09 03STL-K

PAGE 1 OF 1

Bill To: Accounting
Shaw E & I
312 Directors Drive
Knoxville, TN 37923

Report To: Maureen McMyler
Shaw E & I
312 Directors Drive
Knoxville, TN 37923

Project Name/No: PBOW
Sample Team Member: David Kessler
Profit Center: Knoxville
Project Manager: Steve Downey
Project No.: 843656
Required Report Date: 21 DAYS

Sample Shipment Date: 12/9/03
Laboratory Destination: STL- Knoxville
Laboratory Contact: Jamie McKinney
Project Contact/Phone: Maureen McMyler/865-690-3211
Carrier Waybill No.: 836531447439

Sample Number	Sample Type/ Description	Date/Time Collected	Container Type	Sample Volume	Pre-servative	Requested Testing Program	Condition on Receipt	Disposal Record
DD3007	WATER	12/9/03 1320	2 - Amber	1 L	Cool	Explosives by 8830	Custody Seals Intact	
			1 - HDPE	250 mL	HNO3	Total TAL Metals by 6010B/7470A ph<2	Received Temp. 2°C	
			1 - HDPE	250 mL	HNO3	Dissolved TAL Metals by 6010B/7470A ph<2	1 COOLER / FEDEX	
			2 - Amber	1 L	Cool	TCL SVOCs by 8270C	T# 836531447439	
			3 - Glass	40 mL	HCL	TCL VOCs by 8260B	ADF 12-10-03	
			1 - HDPE	1 L	NaOH	Cyanide by 9010/9012 ph>12		
DD3008	WATER	12/9/03 1535	2 - Amber	1 L	Cool	Explosives by 8830		
			1 - HDPE	250 mL	HNO3	Total TAL Metals by 6010B/7470A ph<2		
			1 - HDPE	250 mL	HNO3	Dissolved TAL Metals by 6010B/7470A ph<2		
			2 - Amber	1 L	Cool	TCL SVOCs by 8270C		
			3 - Glass	40 mL	HCL	TCL VOCs by 8260B		
			1 - HDPE	1 L	NaOH	Cyanide by 9010/9012 ph>12		
	WATER		2 - Amber	1 L	Cool	Explosives by 8830		
			1 - HDPE	250 mL	HNO3	Total TAL Metals by 6010B/7470A		
			1 - HDPE	250 mL	HNO3	Dissolved TAL Metals by 6010B/7470A		
			2 - Amber	1 L	Cool	TCL SVOCs by 8270C		
			3 - Glass	40 mL	HCL	TCL VOCs by 8260B		
			1 - HDPE	1 L	NaOH	Cyanide by 9010/9012		
DD5001	TRIP BLANK		2-Glass	40 ml	HCL	TRIP Blank		

Special Instructions:

Possible Hazard Identification:
Non-haz: X Flammable: ____ Poison B: ____ Unknown: ____

Sample Disposal:
Return to Client: ____ Disposal by Lab: X Archive: ____

Turnaround Time:
Normal: X Rush: ____

Level of QC Required:
Definitive: X Project Specific: ____

1. Relinquished by: David Kessler 12 Date: 12/9/03 Time: 1800
2. Relinquished by: Date: Time:
3. Relinquished by: Date: Time:

1. Received by: Andrew D. Flores STL Date: 12-10-03 Time: 09:00
2. Received by: Date: Time:
2. Received by: Date: Time:

Comments:

178

STL KNOXVILLE
SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST

CLIENT: Shaw E&I PROJECT: PBOW Lot No.: H3L100268

TO BE COMPLETED BY SAMPLE RECEIPT ASSOCIATE:

1. Sample Receipt:	YES	NO	NA
a. Do sample container labels match COC? (IDs, Dates, Times)	✓		
b. Is the cooler temperature within acceptance limits? (NOTE: North Carolina, 1668, 1613B: 0-4°C; VOST: 10°C)	✓		
c. Were samples received with correct chemical preservative (excluding Encore)?	✓		
d. Were custody seals present/intact on cooler and/or containers?	✓		
e. Were all of the samples listed on the COC received?	✓		
f. Were all of the sample containers received intact?	✓		
g. Were containers received for VOAs received without headspace?	✓		
h. Were samples received in the appropriate containers?	✓		
i. Did you check for residual chlorine, if necessary?			✓
j. Were samples received within 1/2 of the holding time?	✓		
k. Were samples screened for radioactivity?			✓
l. For aqueous samples for SOG tests (i.e., 1613B, 1668A, 8290, LR PAHs), does the sample(s) have visible solids present?			✓
If yes, was SOG staff notified?			✓
m. Were client's sample documents (RFA/COC) received?	✓		
n. Has the RFA/COC been relinquished? (Signed, Dated, Timed)	✓		
o. Are test/parameters listed for each sample?	✓		
p. Is the matrix of the samples noted?	✓		
q. Is the date/time of sample collection noted?	✗ AKD 12-10-03	✓	
r. Is the client and project name/No. identified?	✓		
s. Was the sampler identified on the RFA/COC?	✓		

SAMPLE RECEIVING ASSOCIATE: Andrew D. Flores DATE: 12-10-03

TO BE COMPLETED BY PROJECT MANAGER :

1. Project manager "Sample Greet":	YES	NO	NA
a. Quote number to be logged-in under 48670			
b. Informed Login associates of special instructions ?			X

PROJECT MANAGER : pm DATE: 12/16/03

Client Sample ID	Analysis Requested	Condition (see legend)	Comments/Action
DDS001	8260B	6B	NO COLLECTION DATE ON COC

☒ Client informed on 12/16/03 by Conference. Person contacted: M McMyer.
☐ Noted actions in comments section above.
☒ No action necessary; process as is.

Project Manager: pm Date: 12/16/03

STL KNOXVILLE
SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST
LEGEND

Lot No.: 1A3L100268

Item	Condition
Cooler:	1a Not received, COC available
	1b Leaking
	1c Other:_____
Temperature:	2a Temp Blank = _____
	2b Cooler Temp = _____
	(cooler temp should be used only if there is no temp blank)
Container:	3a Leaking
	3b Broken
	3c Extra
	3d No labels
	3e Headspace (VOA only)
	3f Other: _____
Samples:	4a Samples received but not on COC
	4b Samples not received but on COC
	4c Holding time expired
	4d Sample received with < ½ holding time remaining
	4e Sample preservative: _____
	4f Other: _____
Custody Seals:	5a None
	5b Not intact
	5c Other:_____
Chain of Custody (COC):	6a Not relinquished by client
	6b Incomplete information
	6c Other:_____
Container Labels:	7a Doesn't match COC
	7b Incomplete information
	7c Marking smeared
	7d Label torn
	7e Other:_____

Other (8): _____

_____

_____

_____

STL KNOXVILLE

SAMPLE LOG-IN (LOT SUMMARY) REVIEW CHECKLIST

CLIENT: Shaw PROJECT: PBOW Lot No.: H3L100268

TO BE COMPLETED BY PROJECT MANAGER:

1. Client Documents (Request for Analysis/Chain of Custody):	YES	NO	NA	
a. Was QuanTIMS lot number documented on all paperwork?	X			
b. Was RFA/COC signed upon receipt, including date/time?		X		STL NC
c. Is preservative check (pH) noted on RFA/COC?		X		
d. Is cooler temperature & custody seal condition noted on COC?		X		

2. Log-in (Lot Folder) Review:	YES	NO	NA
a. Do client IDs on Client Summaries match RFA/COC?	X		
b. Were tests/parameters assigned correctly?	X		
c. Were correct analytical and report due dates assigned?	X		
d. Has the correct fax due date been assigned to the lot?			X
e. Is the correct report format noted in the lot summary?	X		
f. Is percent moisture logged for samples requiring this analysis?			X
g. Are client assigned QC samples properly defined?			X
h. Has a QAS been created for this lot?			X

3. Contract/Subcontract Review:	YES	NO	NA
a. Is there a contract number or PO for this work?	X		
b If the purchase order number is given, is it noted in Lot header?	X		
c. If samples were subcontracted, was copy of COC and associated sample receipt documentation in the folder?		X	

4. SDG Review:	YES	NO	NA
a. If SDG is required, is SDG form in Lot folder?	X		
b Is SDG number noted in Lot header & sample comments?	X		
c. If SDG is complete, has the due date been revised & marked closed?			X

5. Checklist Review:	YES	NO	NA
a. Has Sample Receipt Checklist been filled-out?	X		
b. Was there a CUR?	X		X
c. Were all issues resolved?			X

pm 12/16/03

LOT FOLDER REVIEWED BY: pm DATE: 12/16/03

Severn Trent Laboratories, Inc
SAMPLE ANALYSIS REQUISITION

LABORATORY: STL N Canton
4101 Shuffel Drive NW
North Canton OH 44720,

NEED ANALYTICAL REPORT BY
12/30/03

ATTN:

LAB PURCHASE ORDER: SR055098

CLIENT CODE: 506155 PROJECT MANAGER: Jamie A. McKinney

NUMBER OF SAMPLES IN LOT: 0003

SAMPLE I.D.	SAMPLING DATE	ANALYSIS REQUIRED
H3L100268-001 F6DQ4-1-A7	12/09/03	Solids, Total Suspended "TSS" (160.2) (TSS) METHOD: 160.2
H3L100268-001 F6DQ4-1-A8	12/09/03	Turbidity (180.1) (TURBID) METHOD: 180.1
H3L100268-001 F6DQ4-1-A9	12/09/03	Alkalinity, Total (310.1) (ALK-T) METHOD: 310.1
H3L100268-001 F6DQ4-1-CA	12/09/03	Chloride (325.2, Automated) (CL) METHOD: 325.2
H3L100268-001 F6DQ4-1-CC	12/09/03	Nitrate-Nitrite (353.2, Automated) (NO3) METHOD: 353.2
H3L100268-001 F6DQ4-1-CD	12/09/03	Sulfate (Turbidimetric - 375.4) (SO4-TURB) METHOD: 375.4
H3L100268-001 F6DQ4-1-CE	12/09/03	Carbon, Total Organic "TOC" (9060) (TOC) METHOD: 9060
H3L100268-001 F6DQ4-1-CF	12/09/03	Solids, Filterable "TDS" (160.1) (TDS) METHOD: 160.1
H3L100268-001 F6DQ4-1-CG	12/09/03	Hardness, Total (130.2, titrimetric) (HARDNESS) METHOD: 130.2
H3L100268-002 F6DRG-1-AJ	12/09/03	Solids, Total Suspended "TSS" (160.2) (TSS) METHOD: 160.2

****
* CONTINUED *
****

Severn Trent Laboratories, Inc
SAMPLE ANALYSIS REQUISITION

LABORATORY: STL N Canton
4101 Shuffel Drive NW
North Canton OH 44720,

NEED ANALYTICAL REPORT BY
12/30/03
ROUTINE

ATTN:

LAB PURCHASE ORDER: SR055098

CLIENT CODE: 506155 PROJECT MANAGER: Jamie A. McKinney

NUMBER OF SAMPLES IN LOT: 0003

SAMPLE I.D.	SAMPLING DATE	ANALYSIS REQUIRED
H3L100268-002 F6DRG-1-AK	12/09/03	Turbidity (180.1) (TURBID) METHOD: 180.1
H3L100268-002 F6DRG-1-AL	12/09/03	Alkalinity, Total (310.1) (ALK-T) METHOD: 310.1
H3L100268-002 F6DRG-1-CL	12/09/03	Chloride (325.2, Automated) (CL) METHOD: 325.2
H3L100268-002 F6DRG-1-CM	12/09/03	Nitrate-Nitrite (353.2, Automated) (NO3) METHOD: 353.2
H3L100268-002 F6DRG-1-CN	12/09/03	Sulfate (Turbidimetric - 375.4) (SO4-TURB) METHOD: 375.4
H3L100268-002 F6DRG-1-CP	12/09/03	Carbon, Total Organic "TOC" (9060) (TOC) METHOD: 9060
H3L100268-002 F6DRG-1-CQ	12/09/03	Solids, Filterable "TDS" (160.1) (TDS) METHOD: 160.1
H3L100268-002 F6DRG-1-CR	12/09/03	Hardness, Total (130.2, titrimetric) (HARDNESS) METHOD: 130.2

NEED DETECTION LIMIT AND ANALYSIS DATE INCLUDED IN REPORT.

SHIPPING METHOD: FEDEX DATE: 12/10/03

SEND REPORT TO:

SAMPLE RECEIVED BY: _____ DATE: _____

PLEASE SEND A SIGNED COPY OF THIS FORM WITH REPORT AT COMPLETION OF ANALYSIS.

THANK YOU.

STL Knoxville

INT: _____ 12/10/03 13:26:39

STL N Canton
4101 Shuffel Drive NW
North Canton OH 44720,

RELINQUISHED BY: [illegible] DATE/TIME: 12/10/03

RELINQUISHED BY: _____ DATE/TIME: _____

RECEIVED FOR LAB BY: See attached DATE/TIME: 12-11-03

PLEASE RETURN ORIGINAL SAMPLE ANALYSIS REQUISITION

Shaw™
Shaw E & I, Inc.

ANALYSIS REQUEST AND CHAIN-OF-CUSTODY RECORD

REFERENCE COC NO.: PB12 09 03STL

PAGE 1 OF 1

Project Name/No: PBOW/843656
Sample Team Member: David Kessler
Profit Center: Knoxville
Project Manager: Steve Downey
Project No.: 843656
Required Report Date: 21 days

Sample Shipment Date: 12/09/03
Laboratory Destination: STL-North Canton
Laboratory Contact: Ken Kuzior
Project Contact/Phone: Maureen McMyler/865-690-3211
Carrier Waybill No.: 836531447494

Bill To: Accounting
Shaw E & I
312 Directors Drive
Knoxville, TN 37923

Report To: Maureen McMyler
Shaw E & I
312 Directors Drive
Knoxville, TN 37923

Sample Number	Sample Type/ Description	Date/Time Collected	Container Type	Sample Volume	Pre-servative	Requested Testing Program	Condition on Receipt	Disposal Record
DD3007	WATER	12/9/03 1320	2 - Glass	40 mL	H2SO4	TOC by 9060		
			1 - HDPE	1000 mL	Cool	Alkalinity by 310.1; Chloride by 325.2		
						Nitrate by 353.2; Sulfate by 375.4		
						TDS by 160.1; TSS by 160.2		
						Turbidity by 180.1		
			1 - HDPE	250 mL	HNO3	Hardness by 130.2		
DD3008	WATER	12/9/03 1535	2 - Glass	40 mL	H2SO4	TOC by 9060		
			1 - HDPE	1000 mL	Cool	Alkalinity by 310.1; Chloride by 325.2		
						Nitrate by 353.2; Sulfate by 375.4		
						TDS by 160.1; TSS by 160.2		
						Turbidity by 180.1		
			1 - HDPE	250 mL	HNO3	Hardness by 130.2		
	WATER		2 - Glass	40 mL	H2SO4	TOC by 9060		
			1 - HDPE	1000 mL	Cool	Alkalinity by 310.1; Chloride by 325.2		
						Nitrate by 353.2; Sulfate by 375.4		
						TDS by 160.1; TSS by 160.2		
						Turbidity by 180.1		
			1 - HDPE	250 mL	HNO3	Hardness by 130.2		

Special Instructions:

Possible Hazard Identification:
Non-haz: X Flammable: ____ Poison B: ____ Unknown: ____

Sample Disposal:
Return to Client: ____ Disposal by Lab: X Archive: ____

Turnaround Time:
Normal: X Rush: ____

Level of QC Required:
Definitive: X Project Specific: ____

1. Relinquished by: David Kessler Date: 12/9/03 Time: 1800
2. Relinquished by: Date: Time:
3. Relinquished by: Date: Time:

1. Received by: John Dorsett Date: 12-10-03 Time: 9:40
2. Received by: Date: Time:
2. Received by: Date: Time:

Comments:

STL Cooler Receipt Form/Narrative **Lot Number:** H3L100268
North Canton Facility

Client: SHAW Project: ____ Quote#: ____
Cooler Received on: 12-10-03 Opened on: 12-10-03 by: John Dont (Signature)

Fedx ☑ Client Drop Off ☐ UPS ☐ Airborne ☐ FAS ☐ Other: ____
Cooler ☐ Safe ☐ Foam Box ☐ Client Cooler ☑ Other: ____
STL Cooler No#: ____

1. Were custody seals on the outside of the cooler? Yes ☑ No ☐ Intact? Yes ☑ No ☐ NA ☐
   If YES, Quantity ✓
   Were the custody seals signed and dated? Yes ☑ No ☐ NA ☐
2. Shipper's packing slip attached to this form? Yes ☑ No ☐ NA ☐
3. Were custody papers included inside the cooler and relinquished? Yes ☑ No ☐
4. Did you sign the custody papers in the appropriate place? Yes ☑ No ☐
5. Packing material used:
   Peanuts ☐ Bubble Wrap ☑ Vermiculite ☐ Foam ☐ None ☐ Other: ____
6. Cooler temperature upon receipt 0.9 °C (see back of form for multiple coolers/temp)
   METHOD: Temp Vial ☐ Coolant & Sample ☐ Against Bottles ☐ IR ☑ ICE/H_2O Slurry ☐
   COOLANT: Wet Ice ☑ Blue Ice ☐ Dry Ice ☐ Water ☐ None ☐
7. Did all bottles arrive in good condition (Unbroken)? Yes ☑ No ☐
8. Did all bottle labels and tags agree with the custody papers? Yes ☑ No ☐
9. Were samples at the correct pH? (record on back) Yes ☐ No ☐ NA ☑
10. Were correct bottles used for the tests indicated? Yes ☑ No ☐
11. Were air bubbles >6 mm in any VOA vials? Yes ☐ No ☑ NA ☐
12. Was a sufficient amount of sample sent in each bottle? Yes ☑ No ☐

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

√	MACRO	MACRO
1. CHAIN OF CUSTODY		
	SR1A	The chain of custody and sample bottles did not agree. The following discrepancies occurred ____
2. SAMPLE CONDITION		
	SR2A	Sample(s) ____ were received or requested after the recommended holding time had expired.
	SR2B	Sample(s) were received with insufficient volume.
	SR2C	Sample(s) were received in a broken container.
3. SAMPLE PRESERVATION		
	SR3A	Sample(s) ____ were further preserved in sample receiving to meet recommended pH level(s). *Nitric Acid Lot #101503-HNO3; Sulfuric Acid Lot # 112801-H2SO4; Sodium Hydroxide Lot # 101503-NaOH; Hydrochloric Acid Lot # 100902-HCl; Sodium Hydroxide and Zinc Acetate Lot # 112801-CH3COO2ZN/NaOH*
	SR3B	Sample(s) ____ were received with bubble > 6 mm in diameter (cc: PM)
4. Other (see below or back)		

H3L110180

Shaw™
Shaw E & I, Inc.

ANALYSIS REQUEST AND CHAIN-OF-CUSTODY RECORD

REFERENCE COC NO.: PB12 10 03STL-K

PAGE 1 OF 1

Bill To: Accounting
Shaw E & I
312 Directors Drive
Knoxville, TN 37923

Report To: Maureen McMyler
Shaw E & I
312 Directors Drive
Knoxville, TN 37923

Project Name/No: PBOW
Sample Team Member: David Kessler
Profit Center: Knoxville
Project Manager: Steve Downey
Project No.: 843656
Required Report Date: 21 DAYS

Sample Shipment Date: 12/10/03
Laboratory Destination: STL- Knoxville
Laboratory Contact: Jamie McKinney
Project Contact/Phone: Maureen McMyler/865-690-3211
Carrier Waybill No.: 839702140125

Sample Number	Sample Type/ Description	Date/Time Collected	Container Type	Sample Volume	Pre-servative	Requested Testing Program	Condition on Receipt	Disposal Record
DD3002	WATER	12/10/03 1200	2 - Amber	1 L	Cool	Explosives by 8830		
			1 - HDPE	250 mL	HNO3	Total TAL Metals by 6010B/7470A ph2		
			1 - HDPE	250 mL	HNO3	Dissolved TAL Metals by 6010B/7470A ↓		
			1 - Amber	1 L	Cool	TCL SVOCs by 8270C	Receiptem. 2°C	
			3 - Glass	40 mL	HCL	TCL VOCs by 8260B	Custody Seals intact	
			1 - HDPE	1 L	NaOH	Cyanide by 9010/9012 Ph12	1 Cooler Fedex #	
DD3001	WATER	12/10/03 1620	2 - Amber	1 L	Cool	Explosives by 8830	839702140125	
			1 - HDPE	250 mL	HNO3	Total TAL Metals by 6010B/7470A ph2	MPH 12-11-03	
			1 - HDPE	250 mL	HNO3	Dissolved TAL Metals by 6010B/7470A ph2		
			2 - Amber	1 L	Cool	TCL SVOCs by 8270C		
			3 - Glass	40 mL	HCL	TCL VOCs by 8260B		
			1 - HDPE	1 L	NaOH	Cyanide by 9010/9012	Ph12	
	DKK WATER	12/10/03	~~2 - Amber~~	~~1 L~~	Cool	Explosives by 8830		
			~~1 - HDPE~~	~~250 mL~~	HNO3	Total TAL Metals by 6010B/7470A		
			~~1 - HDPE~~	~~250 mL~~	HNO3	Dissolved TAL Metals by 6010B/7470A		
			~~2 - Amber~~	~~1 L~~	Cool	TCL SVOCs by 8270C		
			~~3 - Glass~~	~~40 mL~~	HCL	TCL VOCs by 8260B		
			~~1 - HDPE~~	~~1 L~~	NaOH	Cyanide by 9010/9012		
DD5002	water	12/10/03	2 - Glass	40ml	HCL	TRIP Blank		

Special Instructions:

Possible Hazard Identification:
Non-haz: X Flammable: ____ Poison B: ____ Unknown: ____

Sample Disposal:
Return to Client: ____ Disposal by Lab: X Archive: ____

Turnaround Time:
Normal: X Rush: ____

Level of QC Required:
Definitive: X Project Specific: ____

1. Relinquished by: David Kessler	Date: 12/10/03 Time: 1800	1. Received by: Walter F. Blanco	Date: 12-11-03 Time: 09:15
2. Relinquished by:	Date: Time:	2. Received by:	Date: Time:
3. Relinquished by:	Date: Time:	2. Received by:	Date: Time:

Comments:

STL KNOXVILLE
SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST

CLIENT: Shaw E+I PROJECT: PBOW Lot No.: H3L110180

TO BE COMPLETED BY SAMPLE RECEIPT ASSOCIATE:

	YES	NO	NA
1. Sample Receipt:			
a. Do sample container labels match COC? (IDs, Dates, Times)	✓		
b. Is the cooler temperature within acceptance limits? (NOTE: North Carolina, 1668, 1613B: 0-4°C; VOST: 10°C)	✓		
c. Were samples received with correct chemical preservative (excluding Encore)?	✓		
d. Were custody seals present/intact on cooler and/or containers?	✓		
e. Were all of the samples listed on the COC received?	✓		
f. Were all of the sample containers received intact?	✓	✓ MPH 12-11-03	
g. Were containers received for VOAs received without headspace?	✓		
h. Were samples received in the appropriate containers?	✓		
i. Did you check for residual chlorine, if necessary?			✓
j. Were samples received within 1/2 of the holding time?	✓		
k. Were samples screened for radioactivity?			✓
l. For aqueous samples for SOG tests (i.e., 1613B, 1668A, 8290, LR PAHs), does the sample(s) have visible solids present?			✓
If yes, was SOG staff notified?			✓
m. Were client's sample documents (RFA/COC) received?	✓		
n. Has the RFA/COC been relinquished? (Signed, Dated, Timed)	✓		
o. Are test/parameters listed for each sample?	✓		
p. Is the matrix of the samples noted?	✓		
q. Is the date/time of sample collection noted?	✓		
r. Is the client and project name/No. identified?	✓		
s. Was the sampler identified on the RFA/COC?		✓	

SAMPLE RECEIVING ASSOCIATE: Matthew T. Hornick DATE: 12-11-03

TO BE COMPLETED BY PROJECT MANAGER :

	YES	NO	NA
1. Project manager "Sample Greet":			
a. Quote number to be logged-in under 48670			
b. Informed Login associates of special instructions ?			X

PROJECT MANAGER : MM DATE: 12/16/03

Client Sample ID	Analysis Requested	Condition (see legend)	Comments/Action
PP3002	8330	3F	Rec'd 1 of 2 containers
PP3001	+	+	+

☒ Client informed on 12/16/03 by Conf call. Person contacted: M McMyler.
☐ Noted actions in comments section above.
☒ No action necessary; process as is.
Project Manager: MM Date: 12/16/03

STL KNOXVILLE
SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST
LEGEND

Lot No.: H3L110180

Item	Condition
Cooler:	1a Not received, COC available
	1b Leaking
	1c Other:_____
Temperature:	2a Temp Blank = _____
	2b Cooler Temp = _____
	(cooler temp should be used only if there is no temp blank)
Container:	3a Leaking
	3b Broken
	3c Extra
	3d No labels
	3e Headspace (VOA only)
	3f Other: Recd 1 of 2 containers
Samples:	4a Samples received but not on COC
	4b Samples not received but on COC
	4c Holding time expired
	4d Sample received with < ½ holding time remaining
	4e Sample preservative: _____
	4f Other: _____
Custody Seals:	5a None
	5b Not intact
	5c Other:_____
Chain of Custody (COC):	6a Not relinquished by client
	6b Incomplete information
	6c Other:_____
Container Labels:	7a Doesn't match COC
	7b Incomplete information
	7c Marking smeared
	7d Label torn
	7e Other:_____

Other (8): _____

STL KNOXVILLE

SAMPLE LOG-IN (LOT SUMMARY) REVIEW CHECKLIST

CLIENT: Shaw PROJECT: PBOW Lot No.: H3L110180

TO BE COMPLETED BY PROJECT MANAGER:

1. Client Documents (Request for Analysis/Chain of Custody):	YES	NO	NA	
a. Was QuanTIMS lot number documented on all paperwork?	X			
b. Was RFA/COC signed upon receipt, including date/time?		X		STLNC
c. Is preservative check (pH) noted on RFA/COC?		X		
d. Is cooler temperature & custody seal condition noted on COC?		X		↓

2. Log-in (Lot Folder) Review:	YES	NO	NA
a. Do client IDs on Client Summaries match RFA/COC?	X		
b. Were tests/parameters assigned correctly?	X		
c. Were correct analytical and report due dates assigned?	X		
d. Has the correct fax due date been assigned to the lot?			X
e. Is the correct report format noted in the lot summary?	X		
f. Is percent moisture logged for samples requiring this analysis?			X
g. Are client assigned QC samples properly defined?			X
h. Has a QAS been created for this lot?			X

3. Contract/Subcontract Review:	YES	NO	NA
a. Is there a contract number or PO for this work?	X		
b If the purchase order number is given, is it noted in Lot header?	X		
c. If samples were subcontracted, was copy of COC and associated sample receipt documentation in the folder?		X	

4. SDG Review:	YES	NO	NA
a. If SDG is required, is SDG form in Lot folder?	X		
b Is SDG number noted in Lot header & sample comments?	X		
c. If SDG is complete, has the due date been revised & marked closed?			X

5. Checklist Review:	YES	NO	NA
a. Has Sample Receipt Checklist been filled-out?	X		
b. Was there a CUR?	X		
c. Were all issues resolved?			X

LOT FOLDER REVIEWED BY: PM DATE: 12/16/03

Severn Trent Laboratories, Inc
SAMPLE ANALYSIS REQUISITION

LABORATORY: STL N Canton
4101 Shuffel Drive NW
North Canton OH 44720,

NEED ANALYTICAL REPORT BY
12/30/03

ok 180
12-12-03

ATTN:

LAB PURCHASE ORDER: SR055167

CLIENT CODE: 506155 PROJECT MANAGER: Jamie A. McKinney

C119
12-11-03
AMS

NUMBER OF SAMPLES IN LOT: 0003

SAMPLE I.D.	SAMPLING DATE	ANALYSIS REQUIRED
H3L110180-001 F6F1C-1-A7	12/10/03	Solids, Total Suspended "TSS" (160.2) (TSS) METHOD: 160.2
H3L110180-001 F6F1C-1-A8	12/10/03	Turbidity (180.1) (TURBID) METHOD: 180.1
H3L110180-001 F6F1C-1-A9	12/10/03	Alkalinity, Total (310.1) (ALK-T) METHOD: 310.1
H3L110180-001 F6F1C-1-CA	12/10/03	Chloride (325.2, Automated) (CL) METHOD: 325.2
H3L110180-001 F6F1C-1-CC	12/10/03	Nitrate-Nitrite (353.2, Automated) (NO3) METHOD: 353.2
H3L110180-001 F6F1C-1-CD	12/10/03	Sulfate (Turbidimetric - 375.4) (SO4-TURB) METHOD: 375.4
H3L110180-001 F6F1C-1-CE	12/10/03	Carbon, Total Organic "TOC" (9060) (TOC) METHOD: 9060
H3L110180-001 F6F1C-1-CF	12/10/03	Solids, Filterable "TDS" (160.1) (TDS) METHOD: 160.1
H3L110180-001 F6F1C-1-CG	12/10/03	Hardness, Total (130.2, titrimetric) (HARDNESS) METHOD: 130.2
H3L110180-002 F6F2H-1-AJ	12/10/03	Solids, Total Suspended "TSS" (160.2) (TSS) METHOD: 160.2

XL
1X250
2X40

****
* CONTINUED *
****

Severn Trent Laboratories, Inc
SAMPLE ANALYSIS REQUISITION

LABORATORY: STL N Canton
4101 Shuffel Drive NW
North Canton OH 44720,

NEED ANALYTICAL REPORT BY
12/30/03
ROUTINE

ATTN:

LAB PURCHASE ORDER: SR055167

CLIENT CODE: 506155 PROJECT MANAGER: Jamie A. McKinney

NUMBER OF SAMPLES IN LOT: 0003

SAMPLE I.D.	SAMPLING DATE	ANALYSIS REQUIRED
H3L110180-002 F6F2H-1-AK	12/10/03	Turbidity (180.1) (TURBID) METHOD: 180.1
H3L110180-002 F6F2H-1-AL	12/10/03	Alkalinity, Total (310.1) (ALK-T) METHOD: 310.1
H3L110180-002 F6F2H-1-CL	12/10/03	Chloride (325.2, Automated) (CL) METHOD: 325.2
H3L110180-002 F6F2H-1-CM	12/10/03	Nitrate-Nitrite (353.2, Automated) (NO3) METHOD: 353.2
H3L110180-002 F6F2H-1-CN	12/10/03	Sulfate (Turbidimetric - 375.4) (SO4-TURB) METHOD: 375.4
H3L110180-002 F6F2H-1-CP	12/10/03	Carbon, Total Organic "TOC" (9060) (TOC) METHOD: 9060
H3L110180-002 F6F2H-1-CQ	12/10/03	Solids, Filterable "TDS" (160.1) (TDS) METHOD: 160.1
H3L110180-002 F6F2H-1-CR	12/10/03	Hardness, Total (130.2, titrimetric) (HARDNESS) METHOD: 130.2

NEED DETECTION LIMIT AND ANALYSIS DATE INCLUDED IN REPORT.

SHIPPING METHOD: FEDEX DATE: 12/11/03

SEND REPORT TO: JAMIE MCKINNEY

SAMPLE RECEIVED BY: _____ DATE: _____

PLEASE SEND A SIGNED COPY OF THIS FORM WITH REPORT AT COMPLETION OF ANALYSIS.

THANK YOU.

STL Knoxville

INT: _____ 12/11/03 11:40:47

STL N Canton
4101 Shuffel Drive NW
North Canton OH 44720,

RELINQUISHED BY: Anne Sandus DATE/TIME: 12-11-03 1:50PM

RELINQUISHED BY: _____ DATE/TIME: _____

RECEIVED FOR LAB BY: _____ DATE/TIME: _____

PLEASE RETURN ORIGINAL SAMPLE ANALYSIS REQUISITION

Shaw
Shaw E & I, Inc.

ANALYSIS REQUEST AND CHAIN-OF-CUSTODY RECORD

REFERENCE COC NO.: PB12 10 03STL

PAGE 1 OF 1

Project Name/No: PBOW/843656
Sample Team Member: David Kessler
Profit Center: Knoxville
Project Manager: Steve Downey
Project No.: 843656
Required Report Date: 21 days

Sample Shipment Date: 12/10/03
Laboratory Destination: STL-North Canton
Laboratory Contact: Ken Kuzior
Project Contact/Phone: Maureen McMyler/865-690-3211
Carrier Waybill No.: 839702140158

Bill To: Accounting
Shaw E & I
312 Directors Drive
Knoxville, TN 37923

Report To: Maureen McMyler
Shaw E & I
312 Directors Drive
Knoxville, TN 37923

Sample Number	Sample Type/ Description	Date/Time Collected	Container Type	Sample Volume	Pre-servative	Requested Testing Program	Condition on Receipt	Disposal Record
DP3002	WATER	12/10/03 1200	2 - Glass	40 mL	H2SO4	TOC by 9060		
			1 - HDPE	1000 mL	Cool	Alkalinity by 310.1; Chloride by 325.2		
						Nitrate by 353.2; Sulfate by 375.4		
						TDS by 160.1; TSS by 160.2		
						Turbidity by 180.1		
			1 - HDPE	250 mL	HNO3	Hardness by 130.2		
DD3001	WATER	12/10/03 1620	2 - Glass	40 mL	H2SO4	TOC by 9060		
			1 - HDPE	1000 mL	Cool	Alkalinity by 310.1; Chloride by 325.2		
						Nitrate by 353.2; Sulfate by 375.4		
						TDS by 160.1; TSS by 160.2		
						Turbidity by 180.1		
			1 - HDPE	250 mL	HNO3	Hardness by 130.2		
	DKK	12/10/03						

Special Instructions:

Possible Hazard Identification:
Non-haz: X Flammable: ___ Poison B: ___ Unknown: ___

Sample Disposal:
Return to Client: ___ Disposal by Lab: X Archive: ___

Turnaround Time:
Normal: X Rush: ___

Level of QC Required:
Definitive: X Project Specific: ___

1. Relinquished by: David Kessler Date: 12/10/03 Time: 1800
2. Relinquished by: Date: Time:
3. Relinquished by: Date: Time:

1. Received by: David P. Benson Date: 12-11-03 Time: 1030
2. Received by: Date: Time:
2. Received by: Date: Time:

Comments:

STL Cooler Receipt Form/Narrative
North Canton Facility

Lot Number: H3L110180

Client: Shaw E & I Project: 343656 Quote#:
Cooler Received on: 12-11-03 Opened on: 12-11-03 by: David Benson (Signature)

Fedx ☑ Client Drop Off ☐ UPS ☐ Airborne ☐ FAS ☐ Other:
Cooler ☑ Safe ☐ Foam Box ☐ Client Cooler ☐ Other:
STL Cooler No#: STL-KNOX

1. Were custody seals on the outside of the cooler? Yes ☑ No ☐ Intact? Yes ☑ No ☐ NA ☐
   If YES, Quantity 2
   Were the custody seals signed and dated? Yes ☑ No ☐ NA ☐
2. Shipper's packing slip attached to this form? Yes ☑ No ☐ NA ☐
3. Were custody papers included inside the cooler and relinquished? Yes ☑ No ☐
4. Did you sign the custody papers in the appropriate place? Yes ☑ No ☐
5. Packing material used:
Peanuts ☐ Bubble Wrap ☑ Vermiculite ☐ Foam ☐ None ☐ Other :
6. Cooler temperature upon receipt 2.9 °C (see back of form for multiple coolers/temp)
METHOD: Temp Vial ☐ Coolant & Sample ☐ Against Bottles ☐ IR ☑ ICE/H_2O Slurry ☐
COOLANT: Wet Ice ☑ Blue Ice ☐ Dry Ice ☐ Water ☐ None ☐
7. Did all bottles arrive in good condition (Unbroken)? Yes ☑ No ☐
8. Did all bottle labels and tags agree with the custody papers? Yes ☑ No ☐
9. Were samples at the correct pH? (record on back) Yes ☑ No ☐ NA ☐
10. Were correct bottles used for the tests indicated? Yes ☑ No ☐
11. Were air bubbles >6 mm in any VOA vials? Yes ☐ No ☑ NA ☐
12. Was a sufficient amount of sample sent in each bottle? Yes ☑ No ☐

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

√	MACRO	MACRO
1. CHAIN OF CUSTODY		
	SR1A	The chain of custody and sample bottles did not agree. The following discrepancies occurred
2. SAMPLE CONDITION		
	SR2A	Sample(s) _____ were received or requested after the recommended holding time had expired.
	SR2B	Sample(s) were received with insufficient volume.
	SR2C	Sample(s) were received in a broken container.
3. SAMPLE PRESERVATION		
	SR3A	Sample(s) _____ were further preserved in sample receiving to meet recommended pH level(s). *Nitric Acid Lot #101503-HNO3; Sulfuric Acid Lot # 112801-H2SO4; Sodium Hydroxide Lot # 101503-NaOH; Hydrochloric Acid Lot # 100902-HCl; Sodium Hydroxide and Zinc Acetate Lot # 112801-CH3COO2ZN/NaOH*
	SR3B	Sample(s) _____ were received with bubble > 6 mm in diameter (cc: PM)
4. Other (see below or back)		

page 1 of 3

H3L120208

Shaw™
Shaw E & I, Inc.

ANALYSIS REQUEST AND CHAIN-OF-CUSTODY RECORD

REFERENCE COC NO.: PB12_11_03STL-K

PAGE 1 OF 3

Project Name/No: PBOW
Sample Team Member: David Kessler
Profit Center: Knoxville
Project Manager: Steve Downey
Project No.: 843656
Required Report Date: 21 DAYS

Sample Shipment Date: 12/11/03
Laboratory Destination: STL- Knoxville
Laboratory Contact: Jamie McKinney
Project Contact/Phone: Maureen McMyler/865-690-3211
Carrier Waybill No.: 839702140147

Bill To: Accounting, Shaw E & I, 312 Directors Drive, Knoxville, TN 37923
Report To: Maureen McMyler, Shaw E & I, 312 Directors Drive, Knoxville, TN 37923

Sample Number	Sample Type/ Description	Date/Time Collected	Container Type	Sample Volume	Pre-servative	Requested Testing Program	Condition on Receipt	Disposal Record
DD3003	WATER	12/11/03 1035	1 X - Amber	1 L	Cool	Explosives by 8830		
			1 - HDPE	250 mL	HNO3	Total TAL Metals by 6010B/7470A Ph2		
			1 - HDPE	250 mL	HNO3	Dissolved TAL Metals by 6010B/7470A +		
			2 - Amber	1 L	Cool	TCL SVOCs by 8270C		
			3 - Glass	40 mL	HCL	TCL VOCs by 8260B	Rec'd temp. 3°c	
			1 - HDPE	1 L	NaOH	Cyanide by 9010/9012 Ph12	Custody seals intact	
DD3004	WATER	12/11/03 1355	1 X - Amber	1 L	Cool	Explosives by 8830	2 coolers Fedex#	
			1 - HDPE	250 mL	HNO3	Total TAL Metals by 6010B/7470A Ph2	839702140147	
			1 - HDPE	250 mL	HNO3	Dissolved TAL Metals by 6010B/7470A +	MFH 12-12-03	
			2 - Amber	1 L	Cool	TCL SVOCs by 8270C		
			3 - Glass	40 mL	HCL	TCL VOCs by 8260B		
			1 - HDPE	1 L	NaOH	Cyanide by 9010/9012 Ph12		
	DKK 12/11/03							

Special Instructions:

Possible Hazard Identification:
Non-haz: X Flammable: ___ Poison B: ___ Unknown: ___

Sample Disposal:
Return to Client: ___ Disposal by Lab: X Archive: ___

Turnaround Time:
Normal: X Rush: ___

Level of QC Required:
Definitive: X Project Specific: ___

1. Relinquished by: David Kessler Date: 12/11/03 Time: 1800
2. Relinquished by: Date: Time:
3. Relinquished by: Date: Time:

1. Received by: Matthew F. Howard Date: 12-12-03 Time: 09:00
2. Received by: Date: Time:
2. Received by: Date: Time:

Comments:

page 2 of 3

H3L120208

Shaw
Shaw E & I, Inc.

ANALYSIS REQUEST AND CHAIN-OF-CUSTODY RECORD

REFERENCE COC NO.: PB12 11 03STL-K

PAGE 2 OF 3

Project Name/No: PBOW
Sample Team Member: David Kessler
Profit Center: Knoxville
Project Manager: Steve Downey
Project No.: 843656
Required Report Date: 21 DAYS

Sample Shipment Date: 12/11/03
Laboratory Destination: STL- Knoxville
Laboratory Contact: Jamie McKinney
Project Contact/Phone: Maureen McMyler/865-690-3211
Carrier Waybill No.: 839702140147

Bill To: Accounting
Shaw E & I
312 Directors Drive
Knoxville, TN 37923

Report To: Maureen McMyler
Shaw E & I
312 Directors Drive
Knoxville, TN 37923

Sample Number	Sample Type/ Description	Date/Time Collected	Container Type	Sample Volume	Pre-servative	Requested Testing Program	Condition on Receipt	Disposal Record
DD3004-MS	WATER	12/11/03 1355	1 - Amber	1 L	Cool	Explosives by 8830		
			1 - HDPE	250 mL	HNO3	Total TAL Metals by 6010B/7470A PH2		
			1 - HDPE	250 mL	HNO3	Dissolved TAL Metals by 6010B/7470A +		
			2 - Amber	1 L	Cool	TCL SVOCs by 8270C		
			3 - Glass	40 mL	HCL	TCL VOCs by 8260B		
			1 - HDPE	1 L	NaOH	Cyanide by 9010/9012 PH12		
DD3004-MSD	WATER	12/11/03 1355	1 - Amber	1 L	Cool	Explosives by 8830		
			1 - HDPE	250 mL	HNO3	Total TAL Metals by 6010B/7470A PH2		
			1 - HDPE	250 mL	HNO3	Dissolved TAL Metals by 6010B/7470A +		
			2 - Amber	1 L	Cool	TCL SVOCs by 8270C		
			3 - Glass	40 mL	HCL	TCL VOCs by 8260B		
			1 - HDPE	1 L	NaOH	Cyanide by 9010/9012 PH12		
DKK 12/11/03								

Special Instructions:

Possible Hazard Identification:
Non-haz: X Flammable: ___ Poison B: ___ Unknown: ___

Sample Disposal:
Return to Client: ___ Disposal by Lab: X Archive: ___

Turnaround Time:
Normal: X Rush: ___

Level of QC Required:
Definitive: X Project Specific: ___

1. Relinquished by: David Kessler	Date: 12/11/03 Time: 1800	1. Received by: Matthew F. Howard	Date: 12-12-03 Time: 09:00
2. Relinquished by:	Date: Time:	2. Received by:	Date: Time:
3. Relinquished by:	Date: Time:	2. Received by:	Date: Time:

Comments:

page 3 of 3

H3L120208

Shaw™
Shaw E & I, Inc.

ANALYSIS REQUEST AND CHAIN-OF-CUSTODY RECORD

REFERENCE COC NO.: PB12 11 03STL-K

PAGE 3 OF 3

Project Name/No: PBOW
Sample Team Member: David Kessler
Profit Center: Knoxville
Project Manager: Steve Downey
Project No.: 843656
Required Report Date: 21 DAYS

Sample Shipment Date: 12/11/03
Laboratory Destination: STL- Knoxville
Laboratory Contact: Jamie McKinney
Project Contact/Phone: Maureen McMyler/865-690-3211
Carrier Waybill No.: 839702140147

Bill To: Accounting
Shaw E & I
312 Directors Drive
Knoxville, TN 37923

Report To: Maureen McMyler
Shaw E & I
312 Directors Drive
Knoxville, TN 37923

Sample Number	Sample Type/ Description	Date/Time Collected	Container Type	Sample Volume	Pre-servative	Requested Testing Program	Condition on Receipt	Disposal Record
DD 3005	WATER	12/11/03 1355	1 ~~X~~ - Amber	1 L	Cool	Explosives by 8830		
			1 - HDPE	250 mL	HNO3	Total TAL Metals by 6010B/7470A PH2		
			1 - HDPE	250 mL	HNO3	Dissolved TAL Metals by 6010B/7470A +		
			2 - Amber	1 L	Cool	TCL SVOCs by 8270C		
			3 - Glass	40 mL	HCL	TCL VOCs by 8260B		
			~~1 - HDPE~~	~~1 L~~	~~NaOH~~	~~Cyanide by 9010/9012~~ DKK 12/11/03		
DD 5003	Water	12/11/03	2-Glass	40ml	HCL	TRIP BLANK		

Special Instructions:

Possible Hazard Identification:
Non-haz: X Flammable: ____ Poison B: ____ Unknown: ____

Sample Disposal:
Return to Client: ____ Disposal by Lab: X Archive: ____

Turnaround Time:
Normal: X Rush: ____

Level of QC Required:
Definitive: X Project Specific: ____

1. Relinquished by: David Kessler	Date: 12/11/03 Time: 1800	1. Received by: Walter F. Heard	Date: 12-12-03 Time: 09:00
2. Relinquished by:	Date: Time:	2. Received by:	Date: Time:
3. Relinquished by:	Date: Time:	2. Received by:	Date: Time:

Comments:

STL KNOXVILLE
SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST

CLIENT: Shaw Est I PROJECT: _____ Lot No.: H3L120208

TO BE COMPLETED BY SAMPLE RECEIPT ASSOCIATE:

1. Sample Receipt:	YES	NO	NA
a. Do sample container labels match COC? (IDs, Dates, Times)	✓		
b. Is the cooler temperature within acceptance limits? (NOTE: North Carolina, 1668, 1613B: 0-4°C; VOST: 10°C)	✓		
c. Were samples received with correct chemical preservative (excluding Encore)?	✓		
d. Were custody seals present/intact on cooler and/or containers?	✓		
e. Were all of the samples listed on the COC received?	✓		
f. Were all of the sample containers received intact?	✓		
g. Were containers received for VOAs received without headspace?	✓		
h. Were samples received in the appropriate containers?	✓		
i. Did you check for residual chlorine, if necessary?			✓
j. Were samples received within 1/2 of the holding time?	✓		
k. Were samples screened for radioactivity?			✓
l. For aqueous samples for SOG tests (i.e., 1613B, 1668A, 8290, LR PAHs), does the sample(s) have visible solids present?			✓
If yes, was SOG staff notified?			✓
m. Were client's sample documents (RFA/COC) received?	✓		
n. Has the RFA/COC been relinquished? (Signed, Dated, Timed)	✓		
o. Are test/parameters listed for each sample?	✓		
p. Is the matrix of the samples noted?	✓		
q. Is the date/time of sample collection noted?	✓		
r. Is the client and project name/No. identified?	✓		
s. Was the sampler identified on the RFA/COC?		✓	

SAMPLE RECEIVING ASSOCIATE: Matthew T. Howard DATE: 12-12-03
MTH 12-12-03

TO BE COMPLETED BY PROJECT MANAGER :

1. Project manager "Sample Greet":	YES	NO	NA
a. Quote number to be logged-in under 48670			
b. Informed Login associates of special instructions ?			X

PROJECT MANAGER : SM DATE: 12/15/03

Client Sample ID	Analysis Requested	Condition (see legend)	Comments/Action

☐ Client informed on _____ by _____. Person contacted: _____.
☐ Noted actions in comments section above.
☐ No action necessary; process as is.
Project Manager: _____ Date: _____

STL KNOXVILLE

SAMPLE LOG-IN (LOT SUMMARY) REVIEW CHECKLIST

CLIENT: Shaw PROJECT: Moody Lot No.: H3L120208

TO BE COMPLETED BY PROJECT MANAGER:

1. Client Documents (Request for Analysis/Chain of Custody):	YES	NO	NA	
a. Was QuanTIMS lot number documented on all paperwork?	X			
b. Was RFA/COC signed upon receipt, including date/time?		X		STLNC
c. Is preservative check (pH) noted on RFA/COC?		X		
d. Is cooler temperature & custody seal condition noted on COC?		X		

2. Log-in (Lot Folder) Review:	YES	NO	NA
a. Do client IDs on Client Summaries match RFA/COC?	X		
b. Were tests/parameters assigned correctly?		X	
c. Were correct analytical and report due dates assigned?	X		
d. Has the correct fax due date been assigned to the lot?			X
e. Is the correct report format noted in the lot summary?	X		
f. Is percent moisture logged for samples requiring this analysis?			X
g. Are client assigned QC samples properly defined?		X	
h. Has a QAS been created for this lot?			X

3. Contract/Subcontract Review:	YES	NO	NA
a. Is there a contract number or PO for this work?	X		
b If the purchase order number is given, is it noted in Lot header?	X		
c. If samples were subcontracted, was copy of COC and associated sample receipt documentation in the folder?		X	

4. SDG Review:	YES	NO	NA
a. If SDG is required, is SDG form in Lot folder?	X		
b Is SDG number noted in Lot header & sample comments?	X		
c. If SDG is complete, has the due date been revised & marked closed?			X

5. Checklist Review:	YES	NO	NA
a. Has Sample Receipt Checklist been filled-out?	X		
b. Was there a CUR?			X
c. Were all issues resolved?			X

LOT FOLDER REVIEWED BY: JM DATE: 12/15/03

Delete MS/MSD for TDS & TSS and add duplicate.

QA016R10.doc, 9/5/03

DKO
12-15-03

Severn Trent Laboratories, Inc
SAMPLE ANALYSIS REQUISITION

LABORATORY: STL N Canton
4101 Shuffel Drive NW
North Canton OH 44720,

NEED ANALYTICAL REPORT BY
12/30/03

ATTN:

LAB PURCHASE ORDER: SR055228

CLIENT CODE: 506155 PROJECT MANAGER: Jamie A. McKinney

NUMBER OF SAMPLES IN LOT: 0004

C127
12-12-03
AMS

SAMPLE I.D.	SAMPLING DATE	ANALYSIS REQUIRED
H3L120208-001 F6JXA-1-A7	12/11/03	Solids, Total Suspended "TSS" (160.2) (TSS) METHOD: 160.2
H3L120208-001 F6JXA-1-A8	12/11/03	Turbidity (180.1) (TURBID) METHOD: 180.1
H3L120208-001 F6JXA-1-A9	12/11/03	Alkalinity, Total (310.1) (ALK-T) METHOD: 310.1
H3L120208-001 F6JXA-1-CA	12/11/03	Chloride (325.2, Automated) (CL) METHOD: 325.2
H3L120208-001 F6JXA-1-CC	12/11/03	Nitrate-Nitrite (353.2, Automated) (NO3) METHOD: 353.2
H3L120208-001 F6JXA-1-CD	12/11/03	Sulfate (Turbidimetric - 375.4) (SO4-TURB) METHOD: 375.4
H3L120208-001 F6JXA-1-CE	12/11/03	Carbon, Total Organic "TOC" (9060) (TOC) METHOD: 9060
H3L120208-001 F6JXA-1-CF	12/11/03	Solids, Filterable "TDS" (160.1) (TDS) METHOD: 160.1
H3L120208-001 F6JXA-1-CG	12/11/03	Hardness, Total (130.2, titrimetric) (HARDNESS) METHOD: 130.2
H3L120208-002 F6JX2-1-A1	12/11/03	Solids, Total Suspended "TSS" (160.2) (TSS) METHOD: 160.2

1XL
1X250
2X40
001 + 002
did not
use
-003

dc 12-15-03

****
* CONTINUED *
****

Severn Trent Laboratories, Inc
SAMPLE ANALYSIS REQUISITION

LABORATORY: STL N Canton
4101 Shuffel Drive NW
North Canton OH 44720,

NEED ANALYTICAL REPORT BY
12/30/03
ROUTINE

ATTN:

LAB PURCHASE ORDER: SR055228

CLIENT CODE: 506155 PROJECT MANAGER: Jamie A. McKinney

NUMBER OF SAMPLES IN LOT: 0004

SAMPLE I.D.	SAMPLING DATE	ANALYSIS REQUIRED
H3L120208-002 F6JX2-1-A4	12/11/03	Turbidity (180.1) (TURBID) METHOD: 180.1
H3L120208-002 F6JX2-1-A7	12/11/03	Alkalinity, Total (310.1) (ALK-T) METHOD: 310.1
H3L120208-002 F6JX2-1-E7	12/11/03	Chloride (325.2, Automated) (CL) METHOD: 325.2
H3L120208-002 F6JX2-1-FA	12/11/03	Nitrate-Nitrite (353.2, Automated) (NO3) METHOD: 353.2
H3L120208-002 F6JX2-1-FE	12/11/03	Sulfate (Turbidimetric - 375.4) (SO4-TURB) METHOD: 375.4
H3L120208-002 F6JX2-1-FH	12/11/03	Carbon, Total Organic "TOC" (9060) (TOC) METHOD: 9060
H3L120208-002 F6JX2-1-FL	12/11/03	Solids, Filterable "TDS" (160.1) (TDS) METHOD: 160.1
H3L120208-002 F6JX2-1-FP	12/11/03	Hardness, Total (130.2, titrimetric) (HARDNESS) METHOD: 130.2
H3L120208-002-D F6JX2-1-A3	12/11/03	Solids, Total Suspended "TSS" (160.2) (TSS) METHOD: 160.2
H3L120208-002-D F6JX2-1-A6	12/11/03	Turbidity (180.1) (TURBID) METHOD: 180.1

****
* CONTINUED *
****

Severn Trent Laboratories, Inc
SAMPLE ANALYSIS REQUISITION

LABORATORY: STL N Canton
4101 Shuffel Drive NW
North Canton OH 44720,

NEED ANALYTICAL REPORT BY
12/30/03
ROUTINE

ATTN:

LAB PURCHASE ORDER: SR055228

CLIENT CODE: 506155 PROJECT MANAGER: Jamie A. McKinney

NUMBER OF SAMPLES IN LOT: 0004

SAMPLE I.D.	SAMPLING DATE	ANALYSIS REQUIRED
H3L120208-002-D F6JX2-1-A9	12/11/03	Alkalinity, Total (310.1) (ALK-T) METHOD: 310.1
H3L120208-002-D F6JX2-1-E9	12/11/03	Chloride (325.2, Automated) (CL) METHOD: 325.2
H3L120208-002-D F6JX2-1-FD	12/11/03	Nitrate-Nitrite (353.2, Automated) (NO3) METHOD: 353.2
H3L120208-002-D F6JX2-1-FG	12/11/03	Sulfate (Turbidimetric - 375.4) (SO4-TURB) METHOD: 375.4
H3L120208-002-D F6JX2-1-FK	12/11/03	Carbon, Total Organic "TOC" (9060) (TOC) METHOD: 9060
H3L120208-002-D F6JX2-1-FN	12/11/03	Solids, Filterable "TDS" (160.1) (TDS) METHOD: 160.1
H3L120208-002-D F6JX2-1-FR	12/11/03	Hardness, Total (130.2, titrimetric) (HARDNESS) METHOD: 130.2
H3L120208-002-S F6JX2-1-A2	12/11/03	Solids, Total Suspended "TSS" (160.2) (TSS) METHOD: 160.2
H3L120208-002-S F6JX2-1-A5	12/11/03	Turbidity (180.1) (TURBID) METHOD: 180.1
H3L120208-002-S F6JX2-1-A8	12/11/03	Alkalinity, Total (310.1) (ALK-T) METHOD: 310.1

****
* CONTINUED *
****

Severn Trent Laboratories, Inc
SAMPLE ANALYSIS REQUISITION

LABORATORY: STL N Canton
4101 Shuffel Drive NW
North Canton OH 44720,

NEED ANALYTICAL REPORT BY
12/30/03
ROUTINE

ATTN:

LAB PURCHASE ORDER: SR055228

CLIENT CODE: 506155 PROJECT MANAGER: Jamie A. McKinney

NUMBER OF SAMPLES IN LOT: 0004

SAMPLE I.D.	SAMPLING DATE	ANALYSIS REQUIRED
H3L120208-002-S F6JX2-1-E8	12/11/03	Chloride (325.2, Automated) (CL) METHOD: 325.2
H3L120208-002-S F6JX2-1-FC	12/11/03	Nitrate-Nitrite (353.2, Automated) (NO3) METHOD: 353.2
H3L120208-002-S F6JX2-1-FF	12/11/03	Sulfate (Turbidimetric - 375.4) (SO4-TURB) METHOD: 375.4
H3L120208-002-S F6JX2-1-FJ	12/11/03	Carbon, Total Organic "TOC" (9060) (TOC) METHOD: 9060
H3L120208-002-S F6JX2-1-FM	12/11/03	Solids, Filterable "TDS" (160.1) (TDS) METHOD: 160.1
H3L120208-002-S F6JX2-1-FQ	12/11/03	Hardness, Total (130.2, titrimetric) (HARDNESS) METHOD: 130.2
H3L120208-003 F6J0A-1-AJ	12/11/03	Solids, Total Suspended "TSS" (160.2) (TSS) METHOD: 160.2
H3L120208-003 F6J0A-1-AK	12/11/03	Turbidity (180.1) (TURBID) METHOD: 180.1
H3L120208-003 F6J0A-1-AL	12/11/03	Alkalinity, Total (310.1) (ALK-T) METHOD: 310.1
H3L120208-003 F6J0A-1-CL	12/11/03	Chloride (325.2, Automated) (CL) METHOD: 325.2

****
* CONTINUED *
****

Severn Trent Laboratories, Inc
SAMPLE ANALYSIS REQUISITION

LABORATORY: STL N Canton
4101 Shuffel Drive NW
North Canton OH 44720,

NEED ANALYTICAL REPORT BY
12/30/03
ROUTINE

ATTN:

LAB PURCHASE ORDER: SR055228

CLIENT CODE: 506155 PROJECT MANAGER: Jamie A. McKinney

NUMBER OF SAMPLES IN LOT: 0004

SAMPLE I.D.	SAMPLING DATE	ANALYSIS REQUIRED
H3L120208-003 F6J0A-1-CM	12/11/03	Nitrate-Nitrite (353.2, Automated) (NO3) METHOD: 353.2
H3L120208-003 F6J0A-1-CN	12/11/03	Sulfate (Turbidimetric - 375.4) (SO4-TURB) METHOD: 375.4
H3L120208-003 F6J0A-1-CP	12/11/03	Carbon, Total Organic "TOC" (9060) (TOC) METHOD: 9060
H3L120208-003 F6J0A-1-CQ	12/11/03	Solids, Filterable "TDS" (160.1) (TDS) METHOD: 160.1
H3L120208-003 F6J0A-1-CR	12/11/03	Hardness, Total (130.2, titrimetric) (HARDNESS) METHOD: 130.2

NEED DETECTION LIMIT AND ANALYSIS DATE INCLUDED IN REPORT.

SHIPPING METHOD: FEDEX DATE: 12/12/03

SEND REPORT TO:

SAMPLE RECEIVED BY: _____ DATE: _____

PLEASE SEND A SIGNED COPY OF THIS FORM WITH REPORT AT COMPLETION OF ANALYSIS.

THANK YOU.

STL Knoxville

INT: _____ 12/12/03 12:06:18

STL N Canton
4101 Shuffel Drive NW
North Canton OH 44720,

RELINQUISHED BY: _____ DATE/TIME: _____

RELINQUISHED BY: _____ DATE/TIME: _____

RECEIVED FOR LAB BY: _____ DATE/TIME: _____

PLEASE RETURN ORIGINAL SAMPLE ANALYSIS REQUISITION

page 1 of 2

Shaw™
Shaw E & I, Inc.

ANALYSIS REQUEST AND CHAIN-OF-CUSTODY RECORD

REFERENCE COC NO.: PB12 11 03STL

PAGE 1 OF 2

Project Name/No: PBOW/843656
Sample Team Member: David Kessler
Profit Center: Knoxville
Project Manager: Steve Downey
Project No.: 843656
Required Report Date: 21 days

Sample Shipment Date: 12/11/03
Laboratory Destination: STL-North Canton
Laboratory Contact: Ken Kuzior
Project Contact/Phone: Maureen McMyler/865-690-3211
Carrier Waybill No.: 839702 140136

Bill To: Accounting
Shaw E & I
312 Directors Drive
Knoxville, TN 37923

Report To: Maureen McMyler
Shaw E & I
312 Directors Drive
Knoxville, TN 37923

Sample Number	Sample Type/ Description	Date/Time Collected	Container Type	Sample Volume	Pre-servative	Requested Testing Program	Condition on Receipt	Disposal Record
DD 3003	WATER	12/11/03 1035	2 - Glass	40 mL	H2SO4	TOC by 9060		
			1 - HDPE	1000 mL	Cool	Alkalinity by 310.1; Chloride by 325.2		
						Nitrate by 353.2; Sulfate by 375.4		
						TDS by 160.1; TSS by 160.2		
						Turbidity by 180.1		
			1 - HDPE	250 mL	HNO3	Hardness by 130.2		
DD 3004	WATER	12/11/03 1355	2 - Glass	40 mL	H2SO4	TOC by 9060		
			1 - HDPE	1000 mL	Cool	Alkalinity by 310.1; Chloride by 325.2		
						Nitrate by 353.2; Sulfate by 375.4		
						TDS by 160.1; TSS by 160.2		
						Turbidity by 180.1		
			1 - HDPE	250 mL	HNO3	Hardness by 130.2		
DD 3004-MS	WATER	12/11/03 1355	2 - Glass	40 mL	H2SO4	TOC by 9060		
			1 - HDPE	1000 mL	Cool	Alkalinity by 310.1; Chloride by 325.2		
						Nitrate by 353.2; Sulfate by 375.4		
						TDS by 160 1; TSS by 160.2		
						Turbidity by 180.1		
			1 - HDPE	250 mL	HNO3	Hardness by 130.2		

Special Instructions:

Possible Hazard Identification:
Non-haz: X Flammable: ____ Poison B: ____ Unknown: ____

Sample Disposal:
Return to Client: ____ Disposal by Lab: X Archive: ____

Turnaround Time:
Normal: X Rush: ____

Level of QC Required:
Definitive: X
Project Specific: ____

1. Relinquished by: David Kessler Date: 9/11/03 Time: 1800
2. Relinquished by: Date: Time:
3. Relinquished by: Date: Time:

1. Received by: [signature] Date: 12/12/03 Time: 9:45
2. Received by: Date: Time:
2. Received by: Date: Time:

Comments:

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page 2 of 2

Shaw
Shaw E & I, Inc.

ANALYSIS REQUEST AND CHAIN-OF-CUSTODY RECORD

REFERENCE COC NO.: PB12 11 03STL

PAGE 2 OF 2

Project Name/No: PBOW/843656
Sample Team Member: David Kessler
Profit Center: Knoxville
Project Manager: Steve Downey
Project No.: 843656
Required Report Date: 21 days

Sample Shipment Date: 12/11/03
Laboratory Destination: STL-North Canton
Laboratory Contact: Ken Kuzior
Project Contact/Phone: Maureen McMyler/865-690-3211
Carrier Waybill No.: —

Bill To: Accounting
Shaw E & I
312 Directors Drive
Knoxville, TN 37923

Report To: Maureen McMyler
Shaw E & I
312 Directors Drive
Knoxville, TN 37923

Sample Number	Sample Type/ Description	Date/Time Collected	Container Type	Sample Volume	Pre-servative	Requested Testing Program	Condition on Receipt	Disposal Record
DD3004-MSD	WATER	12/11/03 1355	2 - Glass	40 mL	H2SO4	TOC by 9060		
			1 - HDPE	1000 mL	Cool	Alkalinity by 310.1; Chloride by 325.2		
						Nitrate by 353.2; Sulfate by 375.4		
						TDS by 160.1; TSS by 160.2		
						Turbidity by 180.1		
			1 - HDPE	250 mL	HNO3	Hardness by 130.2		
DD3005	WATER	12/11/03 1355	2 - Glass	40 mL	H2SO4	TOC by 9060		
			1 - HDPE	1000 mL	Cool	Alkalinity by 310.1; Chloride by 325.2		
						Nitrate by 353.2; Sulfate by 375.4		
						TDS by 160.1; TSS by 160.2		
						Turbidity by 180.1		
			1 - HDPE	250 mL	HNO3	Hardness by 130.2		
DKK 12/11/03								

Special Instructions:

Possible Hazard Identification:
Non-haz: X Flammable: ___ Poison B: ___ Unknown: ___

Sample Disposal:
Return to Client: ___ Disposal by Lab: X Archive: ___

Turnaround Time:
Normal: X Rush: ___

Level of QC Required:
Definitive: X

Project Specific: ___

1. Relinquished by: David Kessler Date: 12/11/03 Time: 1800
2. Relinquished by: Date: Time:
3. Relinquished by: Date: Time:

1. Received by: [signature] Date: 12/12/03 Time: 9:45
2. Received by: Date: Time:
2. Received by: Date: Time:

Comments:

208

STL Cooler Receipt Form/Narrative
North Canton Facility

Lot Number: H3L120208

Client: Shaw E and I Inc Project: PBOW Quote#: ____
Cooler Received on: 12/12/03 Opened on: 12/12/03 by: [signature] (Signature)

Fedx ☒ Client Drop Off ☐ UPS ☐ Airborne ☐ FAS ☐ Other: ____
Cooler ☐ Safe ☐ Foam Box ☐ Client Cooler ☒ Other: ____
STL Cooler No#: NA

1. Were custody seals on the outside of the cooler? Yes ☒ No ☐ Intact? Yes ☒ No ☐ NA ☐
   If YES, Quantity 2
   Were the custody seals signed and dated? Yes ☒ No ☐ NA ☐
2. Shipper's packing slip attached to this form? Yes ☒ No ☐ NA ☐
3. Were custody papers included inside the cooler and relinquished? Yes ☒ No ☐
4. Did you sign the custody papers in the appropriate place? Yes ☒ No ☐
5. Packing material used:

Peanuts ☐ Bubble Wrap ☒ Vermiculite ☐ Foam ☐ None ☐ Other : ____

6. Cooler temperature upon receipt 1.9 °C (see back of form for multiple coolers/temp)

METHOD: Temp Vial ☐ Coolant & Sample ☐ Against Bottles ☐ IR ☒ ICE/H_2O Slurry ☐
COOLANT: Wet Ice ☒ Blue Ice ☐ Dry Ice ☐ Water ☐ None ☐

7. Did all bottles arrive in good condition (Unbroken)? Yes ☒ No ☐
8. Did all bottle labels and tags agree with the custody papers? Yes ~~☒~~ No ☒
9. Were samples at the correct pH? (record on back) Yes ☐ No ☐ NA ☒
10. Were correct bottles used for the tests indicated? Yes ☒ No ☐
11. Were air bubbles >6 mm in any VOA vials? Yes ☐ No ☒ NA ☐
12. Was a sufficient amount of sample sent in each bottle? Yes ☒ No ☐

Contacted PM KSK Date: 12-12-03 by: AMS via Voice Mail ☐ Verbal ☑ Other ☐
Concerning: SR1A

√	MACRO	MACRO
1. CHAIN OF CUSTODY		
✓	SR1A	The chain of custody and sample bottles did not agree. The following discrepancies occurred Sample DD3005 on chain of custody but not in cooler
2. SAMPLE CONDITION		
	SR2A	Sample(s) ____ were received or requested after the recommended holding time had expired.
	SR2B	Sample(s) ____ were received with insufficient volume.
	SR2C	Sample(s) ____ were received in a broken container.
3. SAMPLE PRESERVATION		
	SR3A	Sample(s) ____ were further preserved in sample receiving to meet recommended pH level(s). *Nitric Acid Lot #101503-HNO3; Sulfuric Acid Lot # 112801-H2SO4; Sodium Hydroxide Lot # 101503-NaOH; Hydrochloric Acid Lot # 100902-HCl; Sodium Hydroxide and Zinc Acetate Lot # 112801-CH3COO2ZN/NaOH*
	SR3B	Sample(s) ____ were received with bubble > 6 mm in diameter (cc: PM)
4. Other (see below or back)		

STL Cooler Receipt Form/Narrative
North Canton Facility

Client ID	pH	Date	Initials
DD3003	<2	12-17-03	RMS
DD3004	<2<2<2		

Cooler	Temp	Method	Coolant

Discrepancies Cont.

Macro Name:

Macro Name:

Macro Name:

Other Anomalies:

Volatiles

Raw Sample Data

SHAW E & I INC

Client Sample ID: DD3007

GC/MS Volatiles

Lot-Sample #...: H3L100268-001 **Work Order #...:** F6DQ41AC **Matrix.....:** WATER
Date Sampled...: 12/09/03 **Date Received..:** 12/10/03
Prep Date.....: 12/11/03 **Analysis Date..:** 12/11/03
Prep Batch #...: 3345349
Dilution Factor: 1 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Chloromethane	**0.97 J**	**2.0**	**ug/L**	**0.12**
Bromomethane	ND	2.0	ug/L	0.38
Vinyl chloride	ND	1.0	ug/L	0.24
Chloroethane	ND	2.0	ug/L	0.24
Methylene chloride	ND	2.0	ug/L	0.23
Acetone	ND	10	ug/L	1.4
Carbon disulfide	ND	1.0	ug/L	0.10
1,1-Dichloroethene	ND	1.0	ug/L	0.10
1,1-Dichloroethane	ND	1.0	ug/L	0.10
1,2-Dichloroethene (total)	ND	1.0	ug/L	0.20
Chloroform	ND	1.0	ug/L	0.10
1,2-Dichloroethane	ND	1.0	ug/L	0.10
2-Butanone	ND	5.0	ug/L	0.75
1,1,1-Trichloroethane	ND	1.0	ug/L	0.10
Carbon tetrachloride	ND	1.0	ug/L	0.12
Bromodichloromethane	ND	1.0	ug/L	0.10
1,2-Dichloropropane	ND	1.0	ug/L	0.10
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.10
Trichloroethene	ND	1.0	ug/L	0.10
Dibromochloromethane	ND	1.0	ug/L	0.20
1,1,2-Trichloroethane	ND	1.0	ug/L	0.25
Benzene	**2.2**	**1.0**	**ug/L**	**0.10**
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.11
Bromoform	ND	1.0	ug/L	0.14
4-Methyl-2-pentanone	ND	5.0	ug/L	0.40
2-Hexanone	ND	5.0	ug/L	0.76
Tetrachloroethene	ND	1.0	ug/L	0.10
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.15
Toluene	**0.62 J**	**1.0**	**ug/L**	**0.10**
Chlorobenzene	ND	1.0	ug/L	0.10
Ethylbenzene	**0.13 J**	**1.0**	**ug/L**	**0.10**
Styrene	ND	1.0	ug/L	0.10
Xylenes (total)	**0.41 J**	**1.0**	**ug/L**	**0.30**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	97	(79 - 120)
1,2-Dichloroethane-d4	96	(71 - 127)
Toluene-d8	103	(80 - 120)
Bromofluorobenzene	93	(69 - 126)

(Continued on next page)

SHAW E & I INC

Client Sample ID: DD3007

GC/MS Volatiles

Lot-Sample #...: H3L100268-001 **Work Order #...:** F6DQ41AC **Matrix.....:** WATER

NOTE(S):

J Estimated result. Result is less than RL.

Data File: /var/chem/gcms/mx.i/X121103.b/f6dq41ac.d
Report Date: 11-Dec-2003 16:28

STL Knoxville

SW-846 Method 8260A - Volatile Organics

Data file : /var/chem/gcms/mx.i/X121103.b/f6dq41ac.d
Lab Smp Id: F6DQ41AC Client Smp ID: DD3007
Inj Date : 11-DEC-2003 16:07
Operator : 063605 Inst ID: mx.i
Smp Info : F6DQ41AC,1,0,,
Misc Info : X121103,8260B_LM,ms.sub
Comment :
Method : /var/chem/gcms/mx.i/X121103.b/8260B_LM.m
Meth Date : 11-Dec-2003 16:28 tillerm Quant Type: ISTD
Cal Date : 16-SEP-2003 12:52 Cal File: icxi166.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ms.sub
Target Version: 3.50
Processing Host: qmidhp01

12/9/03

Concentration Formula: Amt * DF * Uf*Vt/(Vo*1000) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Unit Correction factor
Vt	25000.00000	Sample Volume Purged
Vo	25.00000	Sample Volume Used

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
* 1 Fluorobenzene	96	4.887	4.885	(1.000)	1387986	10.0000	
* 2 Chlorobenzene-d5	119	7.623	7.624	(1.000)	278654	10.0000	
* 3 1,4 Dichlorobenzene-d4	152	10.817	10.824	(1.000)	309622	10.0000	
$ 5 1,2-Dichloroethane-d4	65	4.583	4.581	(0.938)	172064	9.64870	9.6487
$ 4 Dibromofluoromethane	113	4.297	4.295	(0.879)	224613	9.71783	9.7178
$ 6 Toluene-d8	98	6.291	6.292	(0.825)	1320947	10.3200	10.320
$ 7 4-Bromofluorobenzene	95	8.931	8.932	(0.826)	345098	9.31161	9.3116
11 Chloromethane (spcc)	50	1.201	1.229	(0.246)	41414	0.97454	0.97454
15 Chloroethane	64	1.182	1.655	(0.242)	7528	0 ~~.24758~~	~~0.24758~~
22 Acetone	43	2.016	2.366	(0.412)	19278	4 ~~.13037~~	~~4.1304~~
42 Chloroform (ccc)	83	4.376	4.161	(0.895)	6366	0 ~~.12793~~	~~0.12793~~
45 1,1-Dichloropropene	75	4.638	4.465	(0.949)	5053	~~0.10707~~	~~0.10707~~
46 Benzene	78	4.638	4.642	(0.949)	300663	2.20872	2.2087
47 1,2-Dichloroethane	62	4.644	4.648	(0.950)	4433	~~0.19642~~	~~0.19642~~

MT 12/15/03

Data File: /var/chem/gcms/mx.i/X121103.b/f6dq41ac.d
Report Date: 11-Dec-2003 16:28

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
55 4-Methyl-2-pentanone	43	6.090	6.182	(1.246)	4115	~~0.40827~~	~~0.40827~~
56 Toluene (ccc)	91	6.351	6.353	(0.833)	101766	0.61619	0.61619
58 1,1,2-Trichloroethane	97	6.710	6.712	(0.880)	2573	~~0.20549~~	~~0.20549~~
66 Ethylbenzene (ccc)	106	7.757	7.764	(1.018)	7885	0.13013	0.13013
67 m&p-Xylene	106	7.872	7.880	(1.033)	18135	0.25041	0.25041
68 o-Xylene	106	8.298	8.299	(1.089)	10520	0.16170	0.16170
M 9 Xylene (total)	106				28655	0.41211	0.41211

MT
12/15/03

Data File: /var/chem/gcms/mx.i/X121103.b/f6dq41ac.d
Report Date: 11-Dec-2003 16:28

STL Knoxville

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: mx.i
Lab File ID: f6dq41ac.d
Lab Smp Id: F6DQ41AC
Analysis Type: VOA
Quant Type: ISTD
Operator: 063605
Method File: /var/chem/gcms/mx.i/X121103.b/8260B_LM.m
Misc Info: X121103,8260B_LM,ms.sub

Calibration Date: 11-DEC-2003
Calibration Time: 14:00
Client Smp ID: DD3007
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Fluorobenzene	1419469	709734	2838938	1387986	-2.22
2 Chlorobenzene-d5	292458	146229	584916	278654	-4.72
3 1,4 Dichlorobenze	323231	161616	646462	309622	-4.21

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Fluorobenzene	4.89	4.39	5.39	4.89	0.05
2 Chlorobenzene-d5	7.62	7.12	8.12	7.62	-0.02
3 1,4 Dichlorobenze	10.82	10.32	11.32	10.82	-0.07

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

Data File: /var/chem/gcms/mx.i/X121103.b/f6dq41ac.d
Report Date: 11-Dec-2003 16:28

STL Knoxville

RECOVERY REPORT

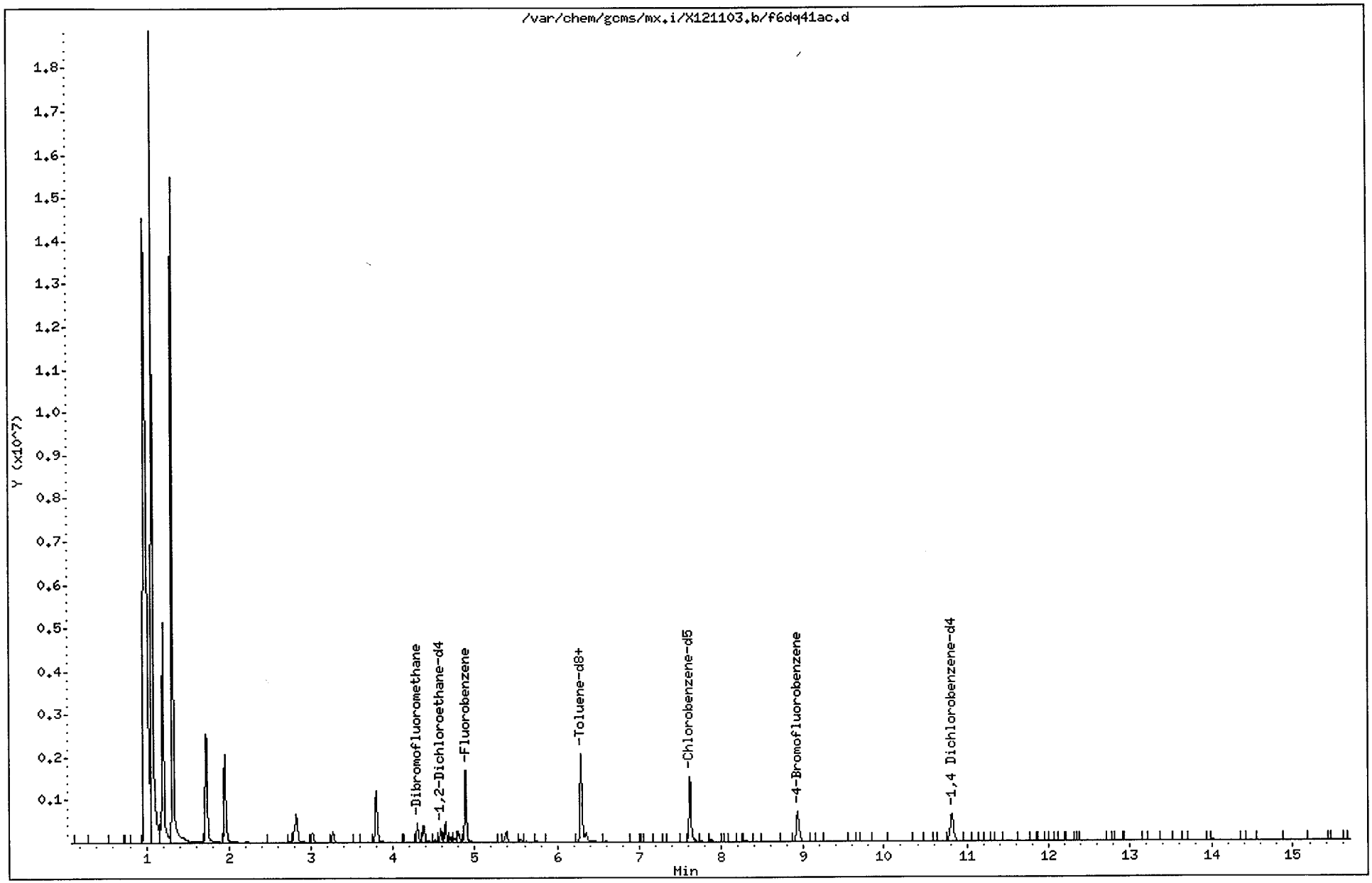
Client Name: SHAW E & I INC
Sample Matrix: LIQUID
Lab Smp Id: F6DQ41AC
Level: LOW
Data Type: MS DATA
SpikeList File: allcmpds.spk
Sublist File: ms.sub
Method File: /var/chem/gcms/mx.i/X121103.b/8260B_LM.m
Misc Info: X121103,8260B_LM,ms.sub

Client SDG: PB045
Fraction: VOA
Client Smp ID: DD3007
Operator: 063605
SampleType: SAMPLE
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 5 1,2-Dichloroethane	10.000	9.6487	96.49	71-127
$ 4 Dibromofluorometha	10.000	9.7178	97.18	79-120
$ 6 Toluene-d8	10.000	10.320	103.20	80-120
$ 7 4-Bromofluorobenze	10.000	9.3116	93.12	69-126

Data File: /var/chem/gcms/mx.i/X121103.b/f6dq41ac.d
Date : 11-DEC-2003 16:07
Client ID: DD3007
Sample Info: F6DQ41AC,1,0,,
Purge Volume: 25.0
Column phase: J+W 624

Instrument: mx.i
Operator: 063605
Column diameter: 0.18



Data File: /var/chem/gcms/mx.i/X121103.b/f6dq41ac.d

Date : 11-DEC-2003 16:07

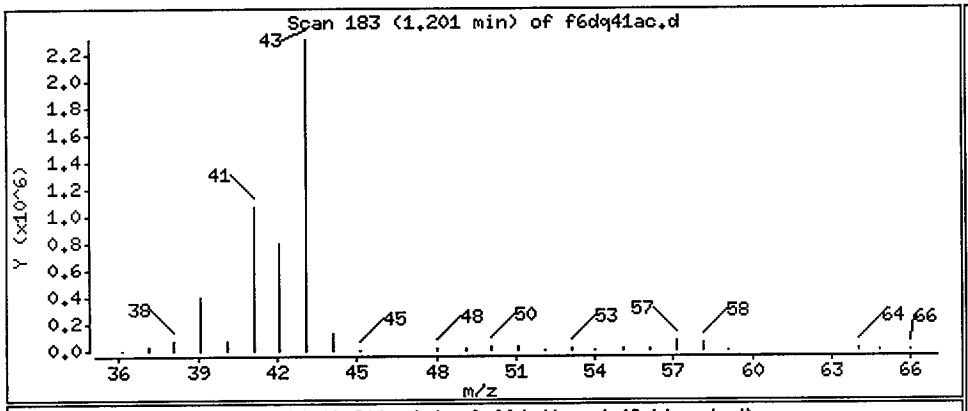
Client ID: DD3007 Instrument: mx.i

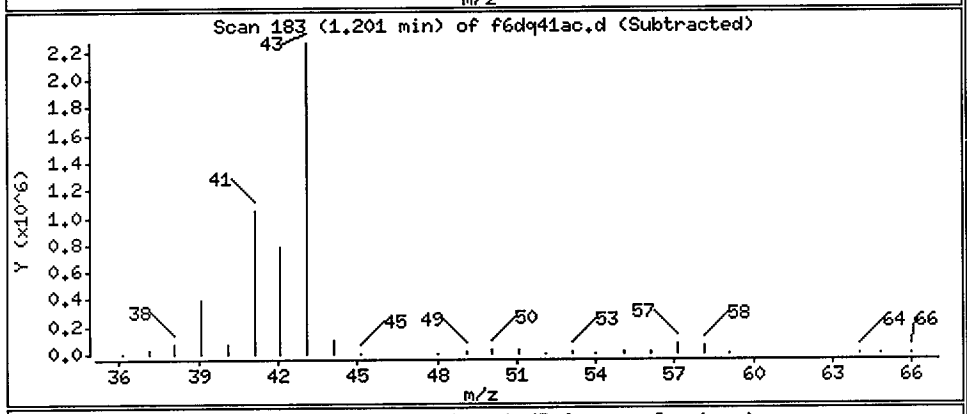
Sample Info: F6DQ41AC,1,0,,

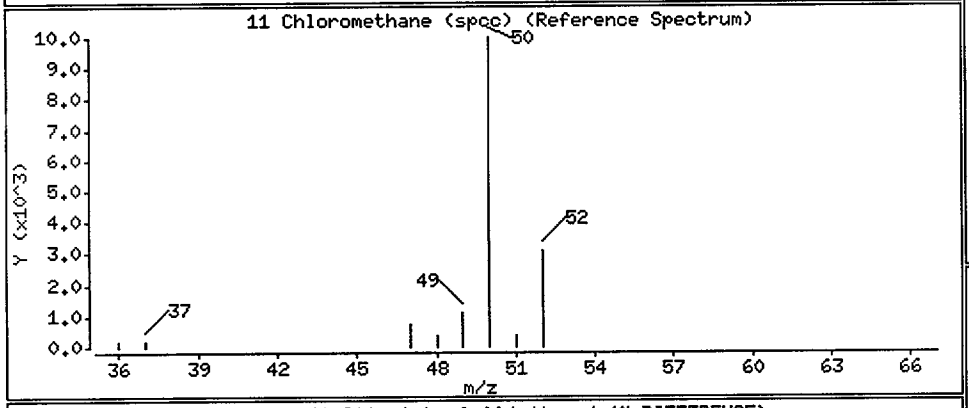
Purge Volume: 25.0 Operator: 063605

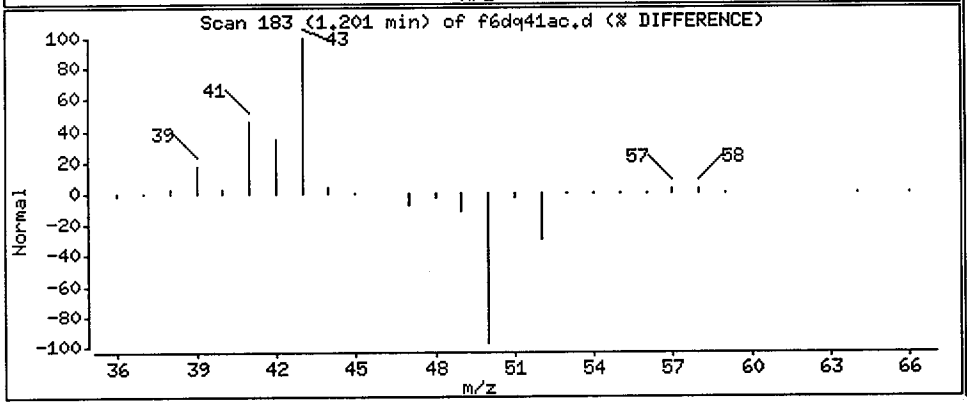
Column phase: J+W 624 Column diameter: 0.18

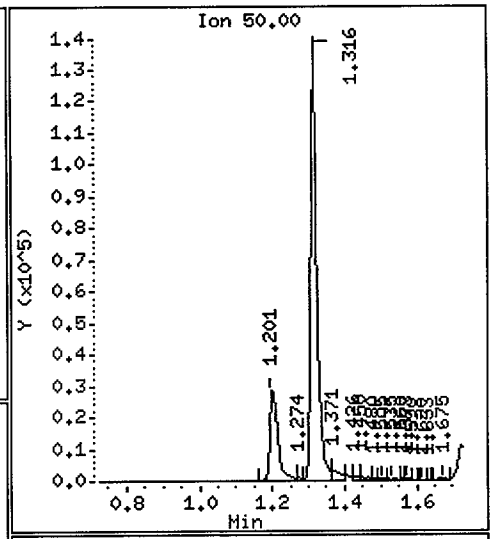
11 Chloromethane (spcc) Concentration: 0.97454 ug/L

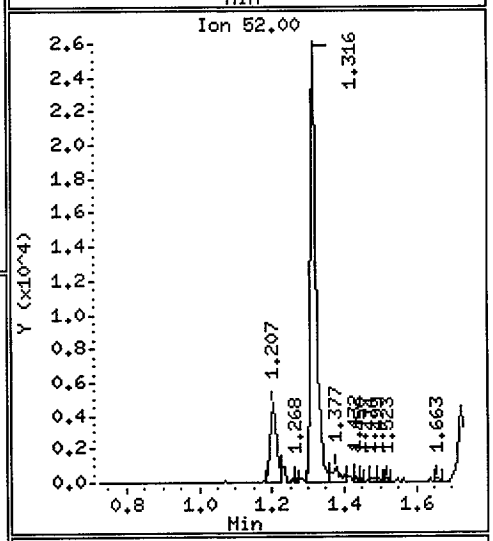


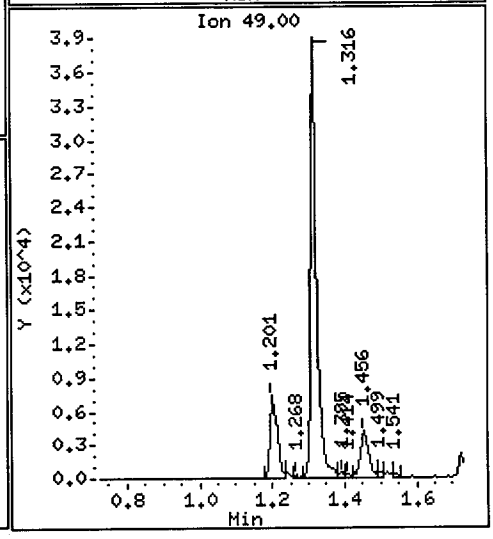












Data File: /var/chem/gcms/mx.i/X121103.b/f6dq41ac.d

Date : 11-DEC-2003 16:07

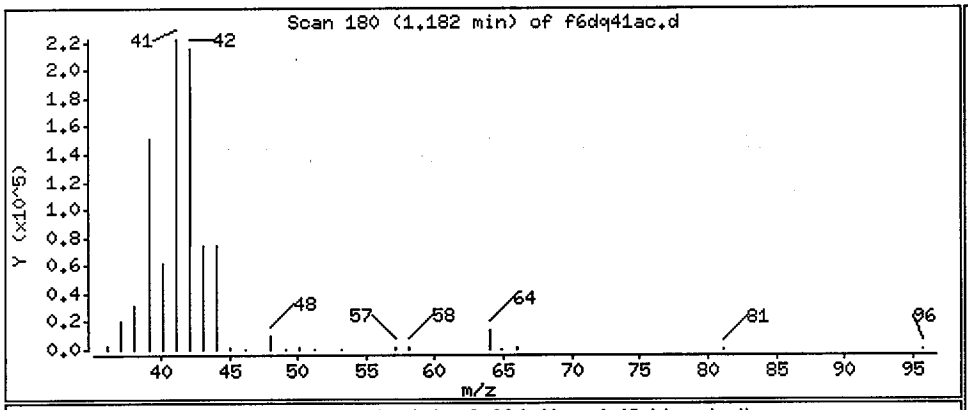
Client ID: DD3007 | Instrument: mx.i

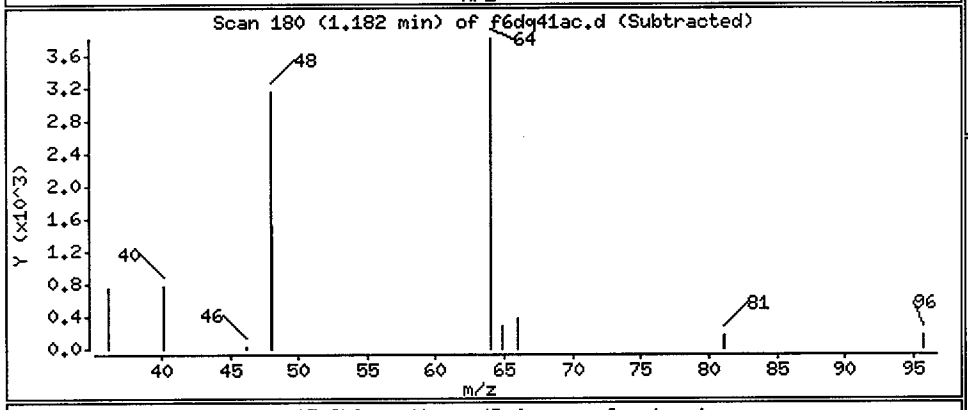
Sample Info: F6DQ41AC,1,0,,

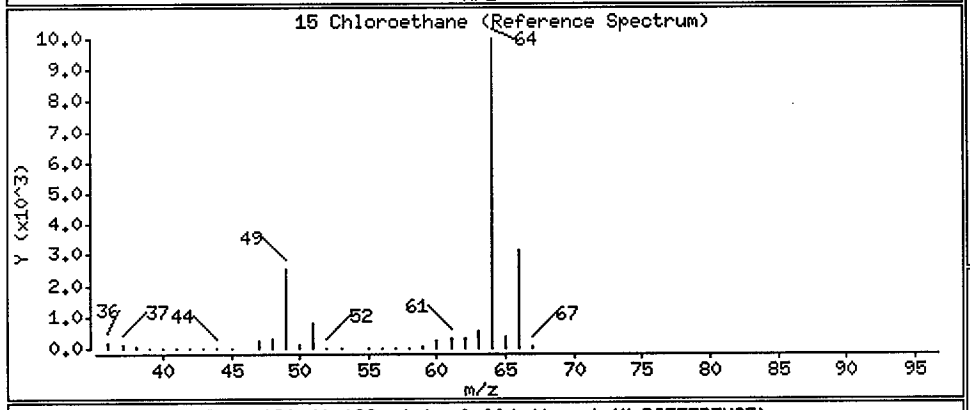
Purge Volume: 25.0 | Operator: 063605

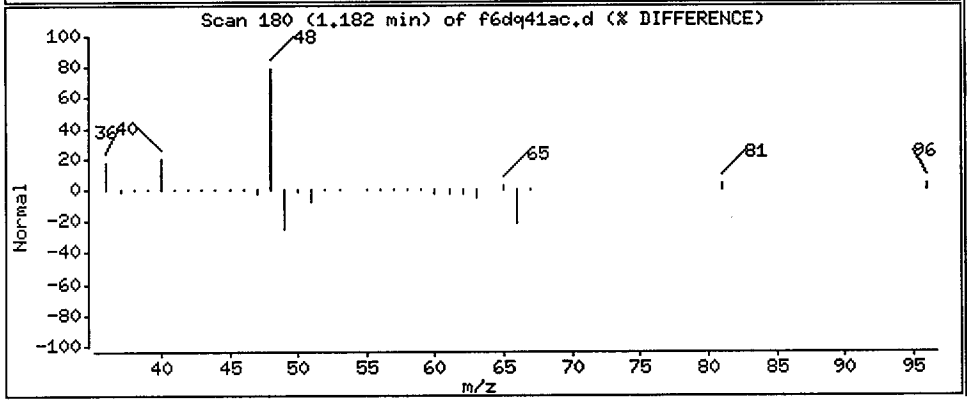
Column phase: J+W 624 | Column diameter: 0.18

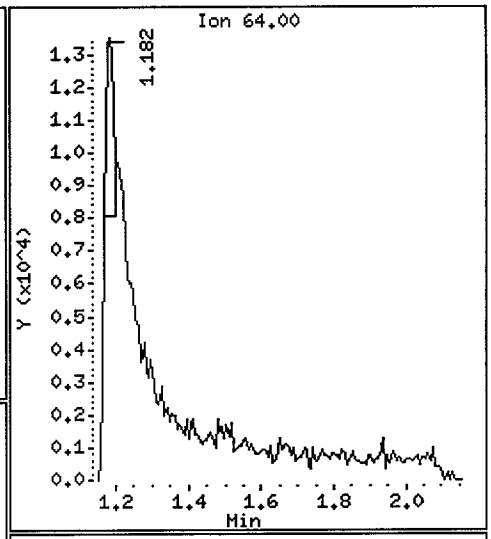
15 Chloroethane | Concentration: 0.24758 ug/L

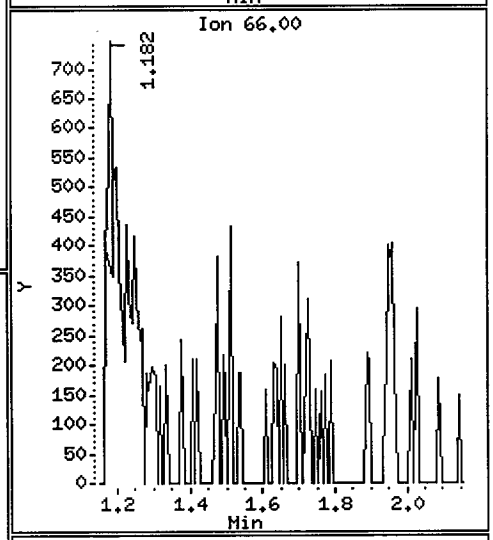


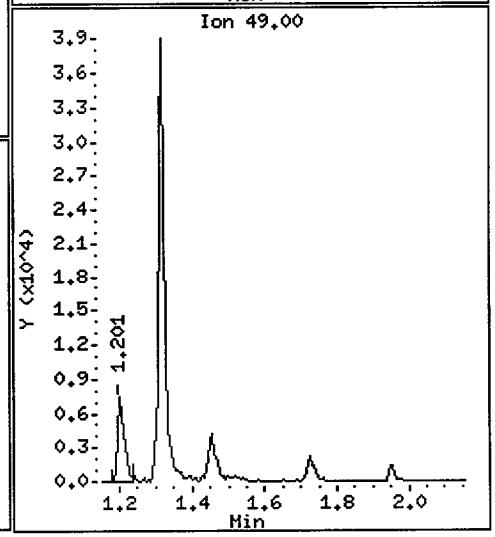












Data File: /var/chem/gcms/mx.i/X121103.b/f6dq41ac.d

Date : 11-DEC-2003 16:07

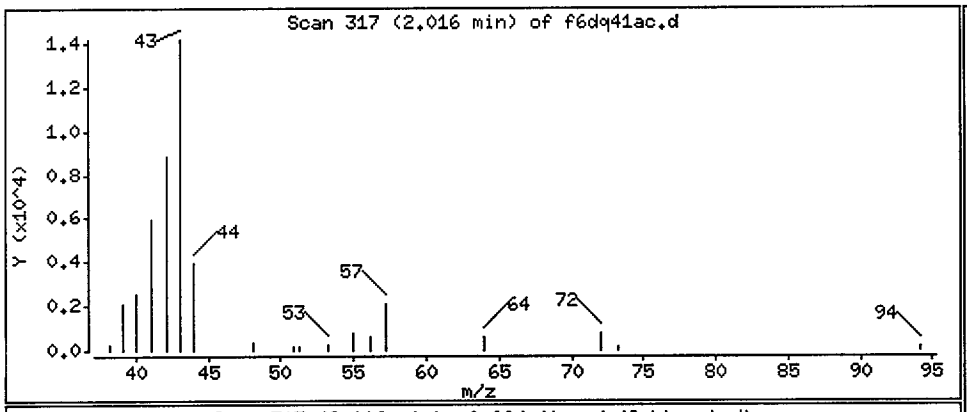
Client ID: DD3007 Instrument: mx.i

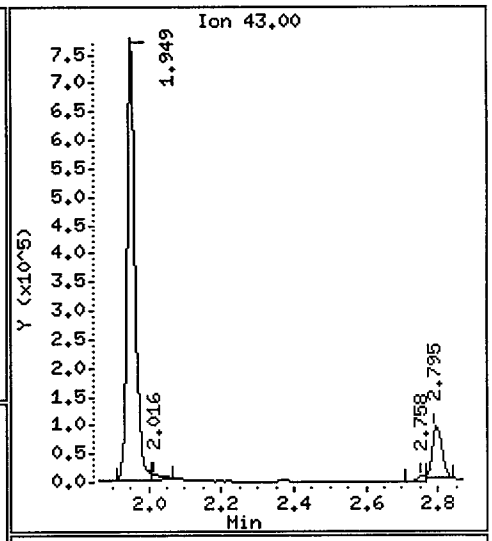
Sample Info: F6DQ41AC,1,0,,

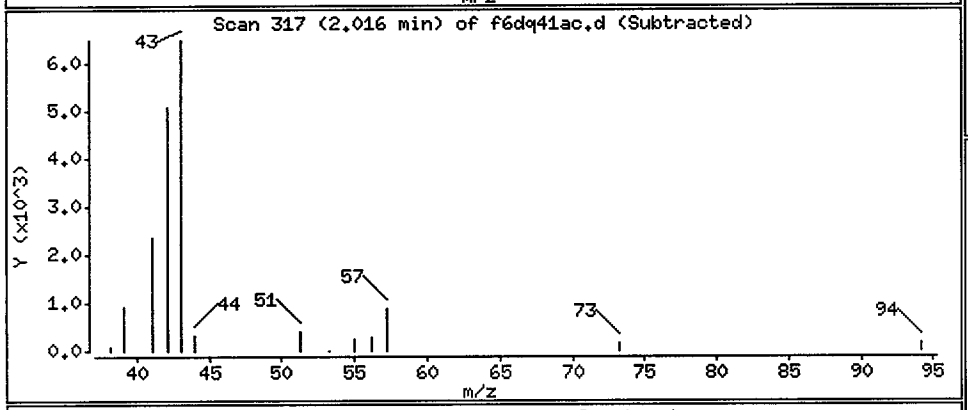
Purge Volume: 25.0 Operator: 063605

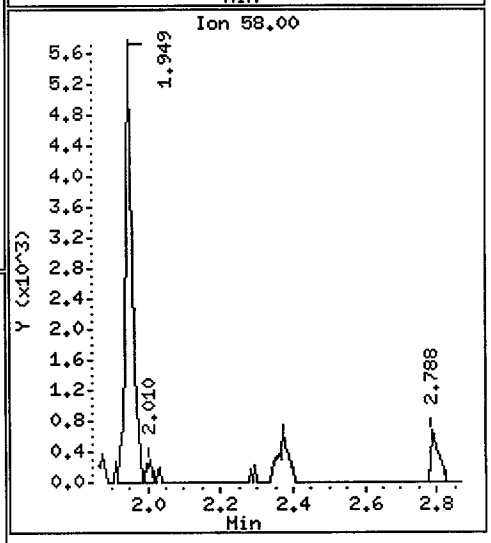
Column phase: J+W 624 Column diameter: 0.18

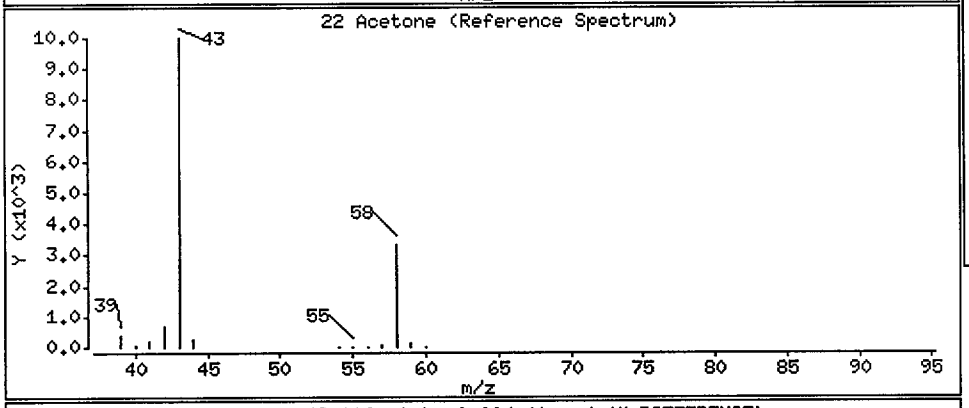
22 Acetone Concentration: 4.1304 ug/L

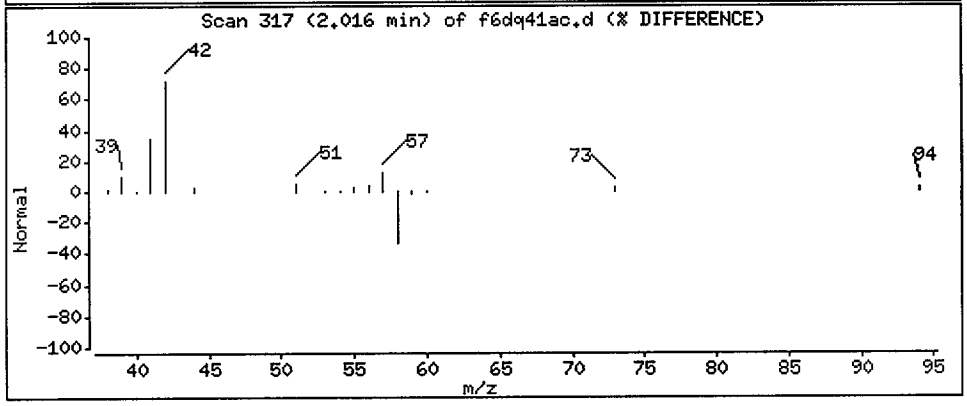












Data File: /var/chem/gcms/mx.i/X121103.b/f6dq41ac.d

Date : 11-DEC-2003 16:07

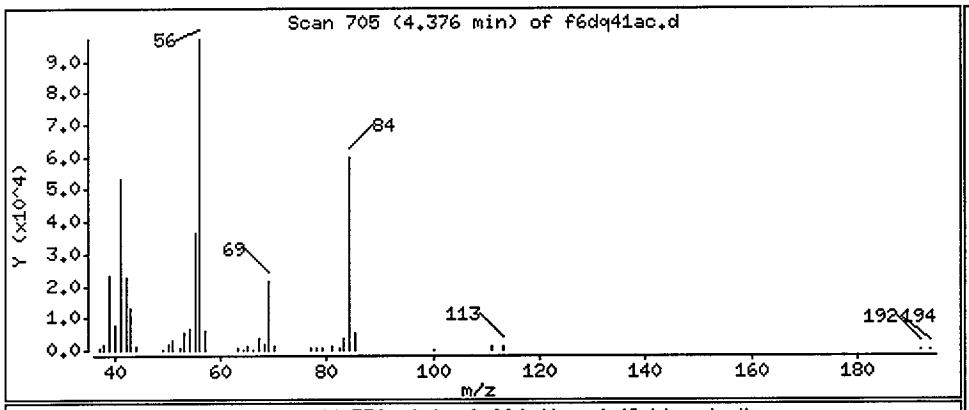
Client ID: DD3007 | Instrument: mx.i

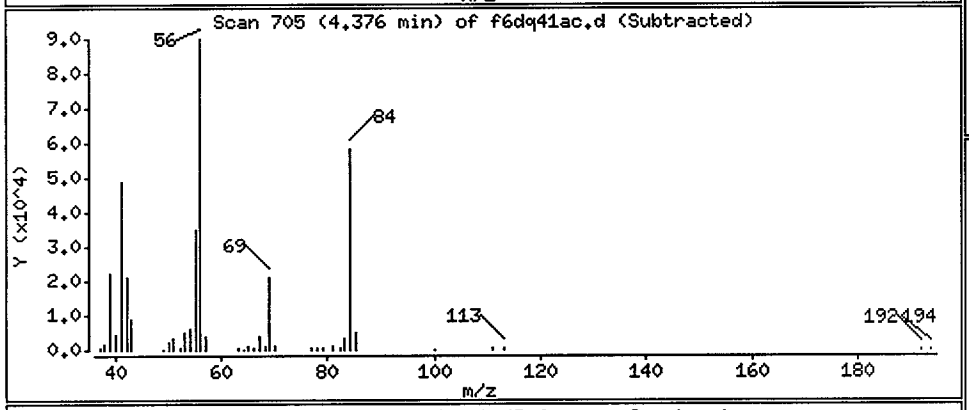
Sample Info: F6DQ41AC,1,0,,

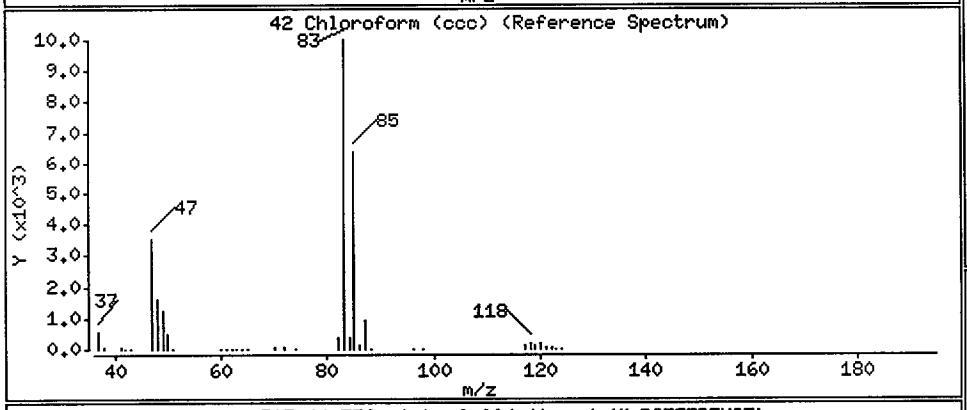
Purge Volume: 25.0 | Operator: 063605

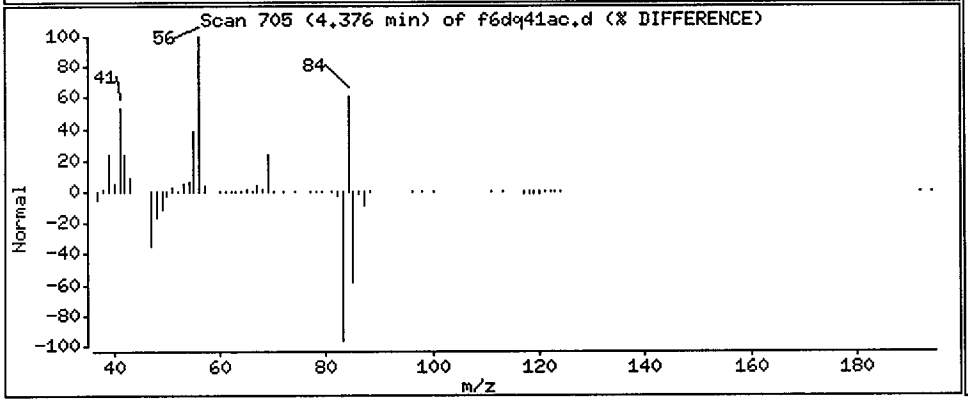
Column phase: J+W 624 | Column diameter: 0.18

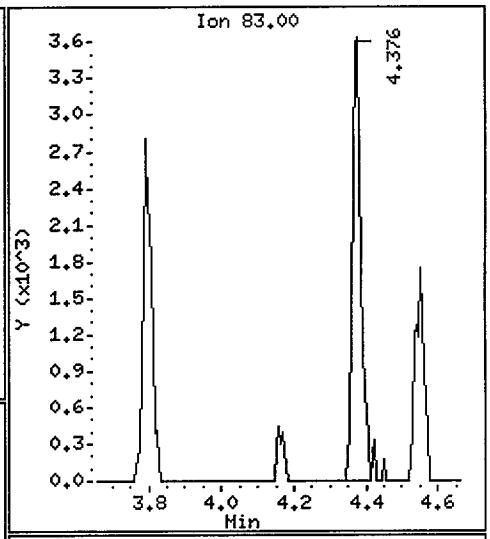
42 Chloroform (ccc) | Concentration: 0.12793 ug/L

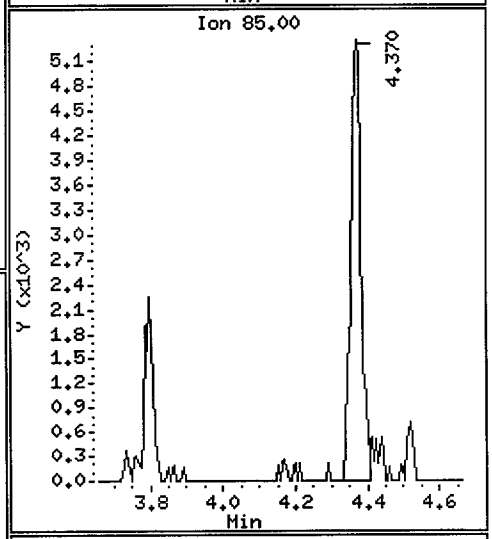


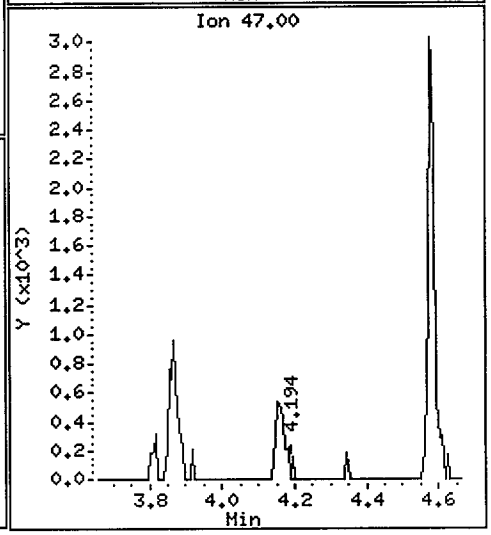












Data File: /var/chem/gcms/mx.i/X121103.b/f6dq41ac.d

Date : 11-DEC-2003 16:07

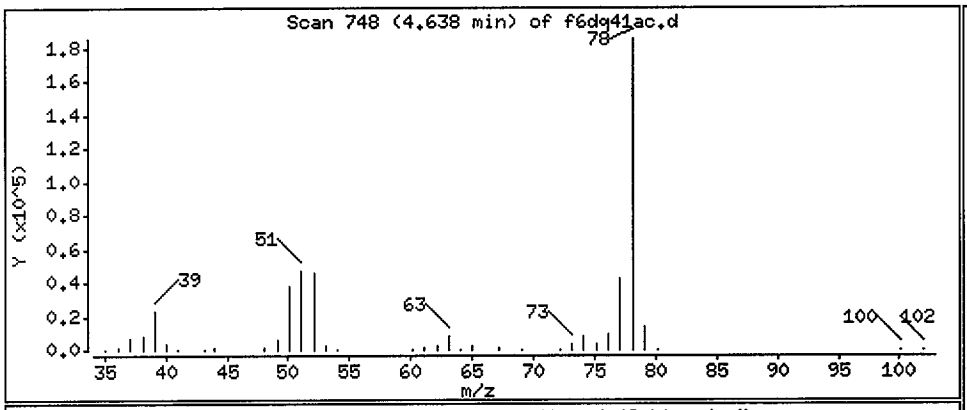
Client ID: DD3007 Instrument: mx.i

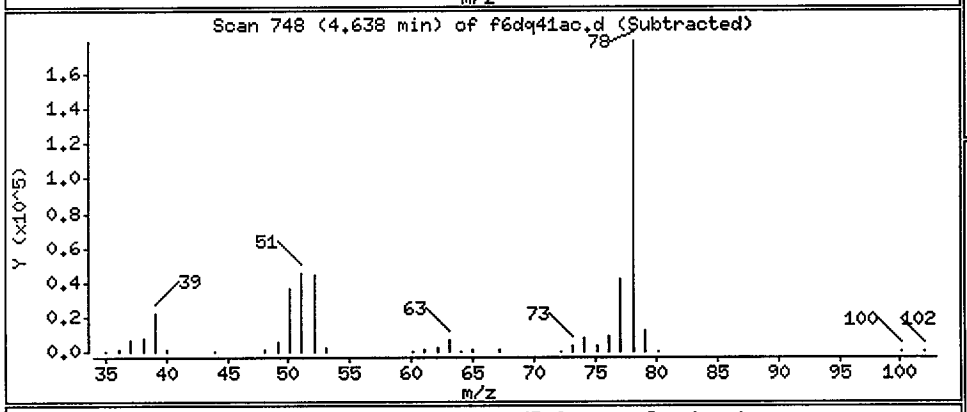
Sample Info: F6DQ41AC,1,0,,

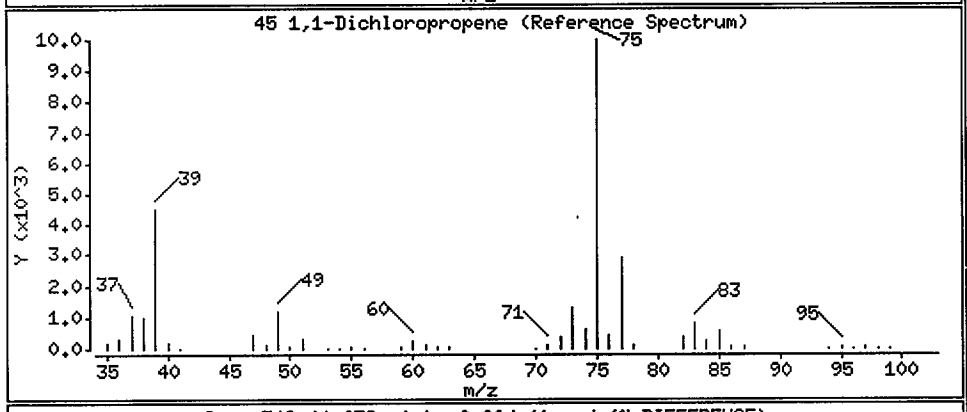
Purge Volume: 25.0 Operator: 063605

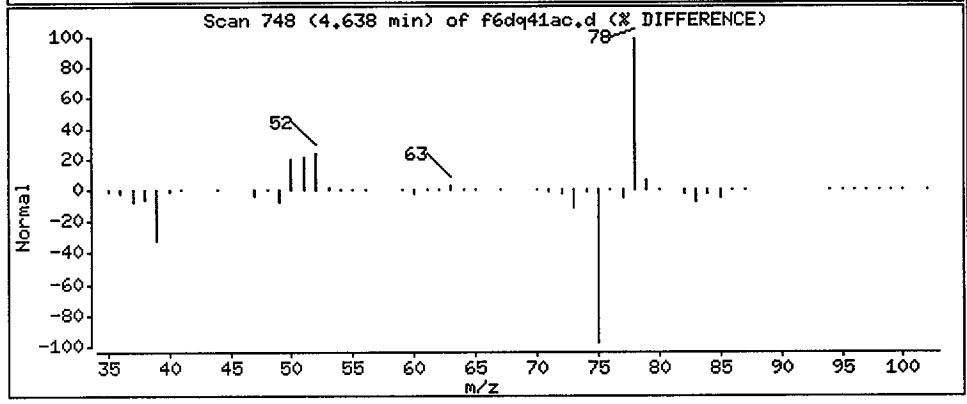
Column phase: J+W 624 Column diameter: 0.18

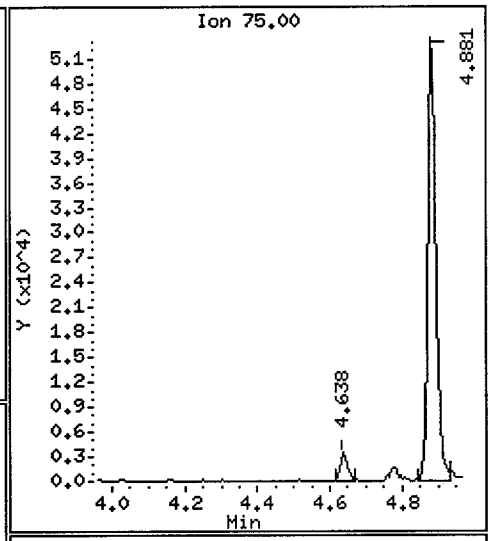
45 1,1-Dichloropropene Concentration: 0.10707 ug/L

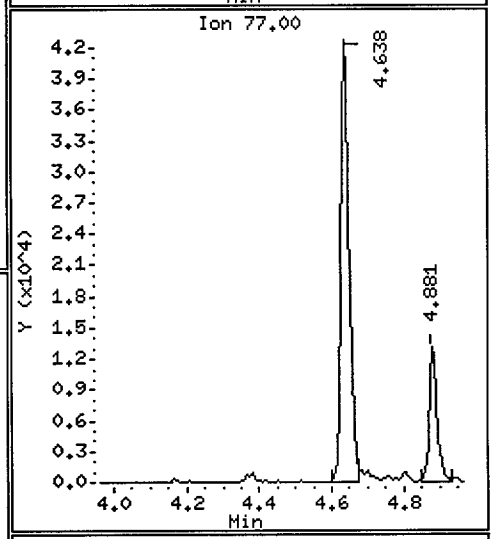


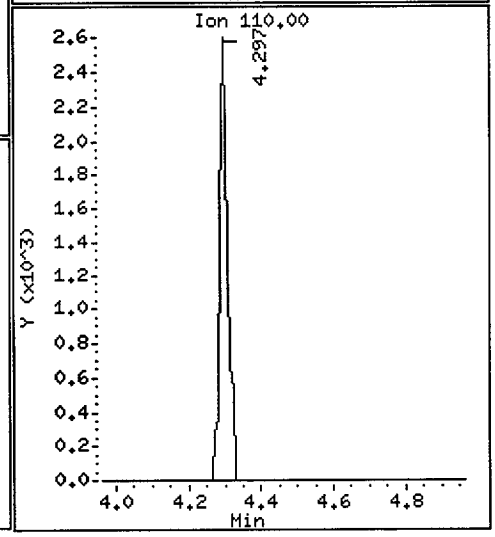












Data File: /var/chem/gcms/mx.i/X121103.b/f6dq41ac.d

Date : 11-DEC-2003 16:07

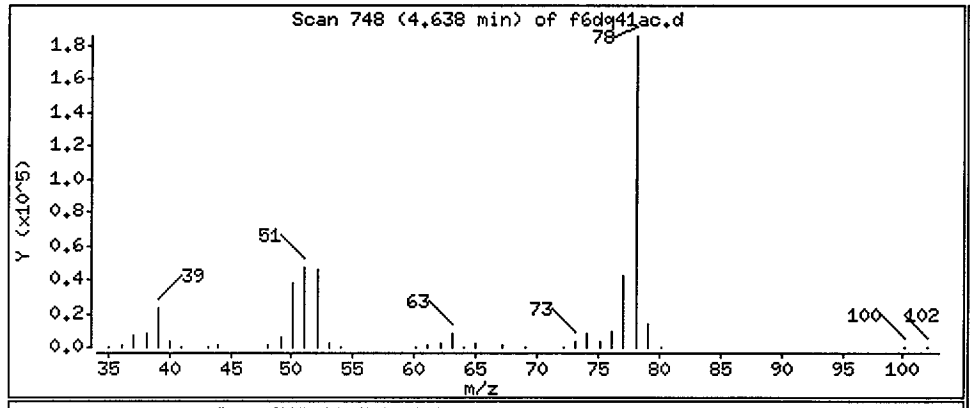
Client ID: DD3007 Instrument: mx.i

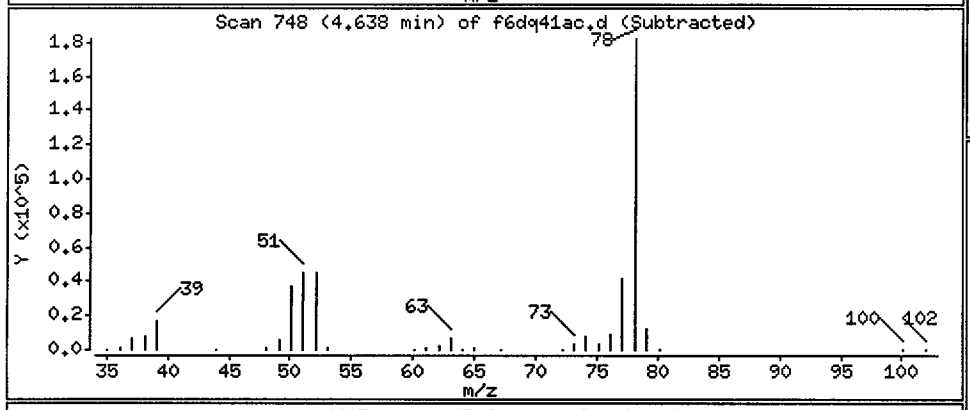
Sample Info: F6DQ41AC,1,0,,

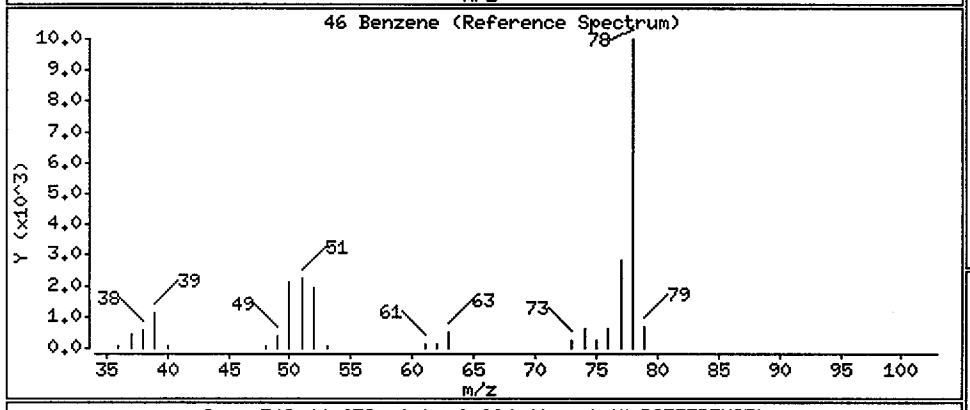
Purge Volume: 25.0 Operator: 063605

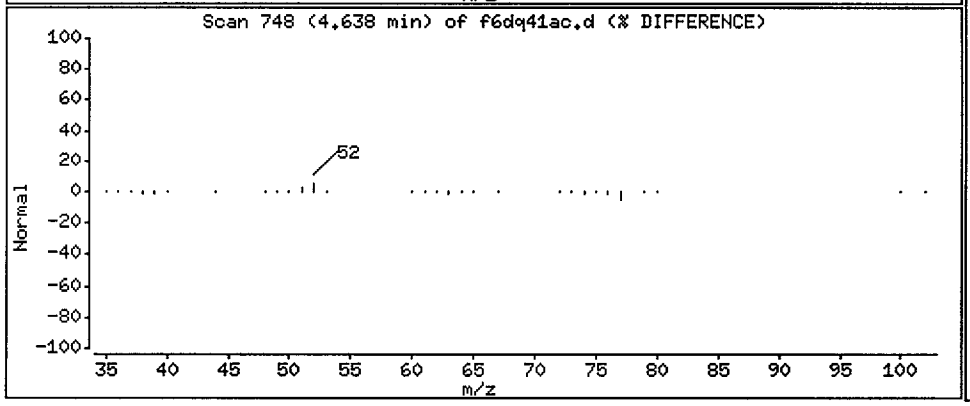
Column phase: J+W 624 Column diameter: 0.18

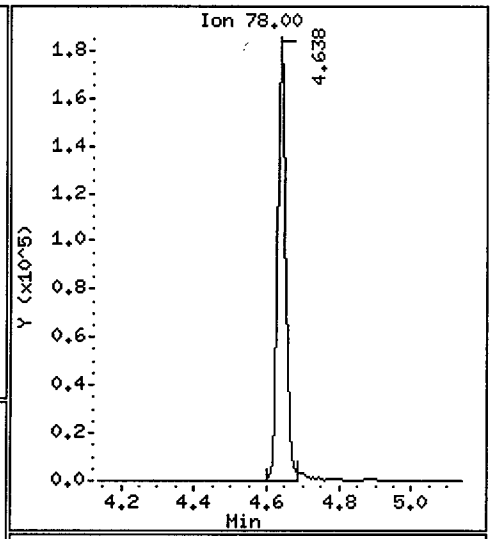
46 Benzene Concentration: 2.2087 ug/L

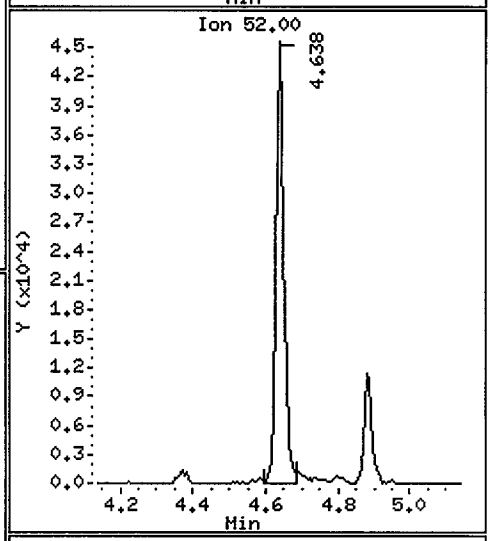


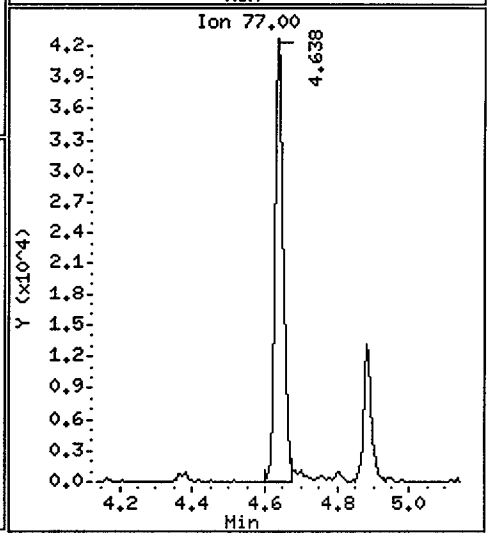












Data File: /var/chem/gcms/mx.i/X121103.b/f6dq41ac.d

Date : 11-DEC-2003 16:07

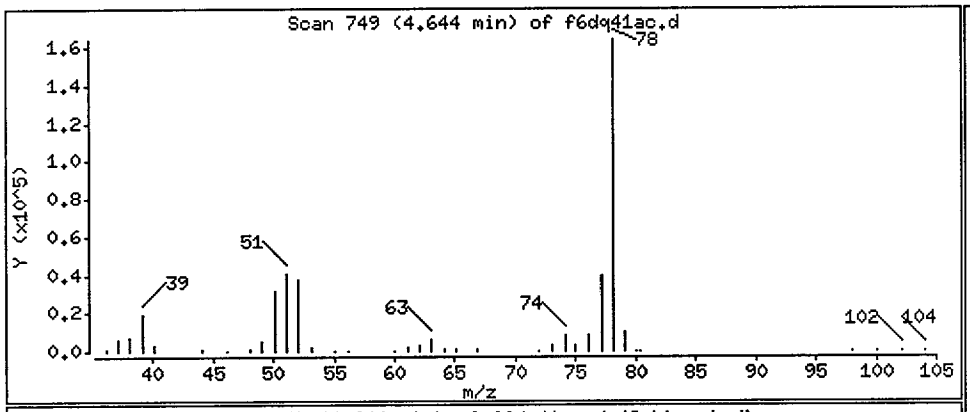
Client ID: DD3007 Instrument: mx.i

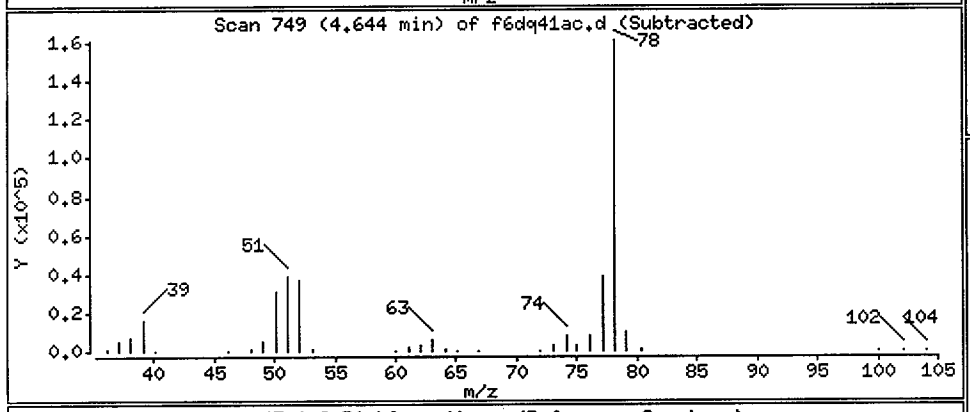
Sample Info: F6DQ41AC,1,0,,

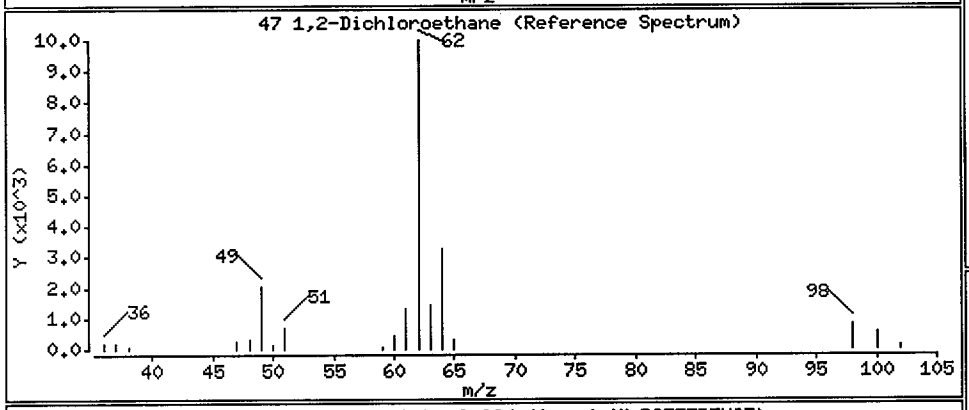
Purge Volume: 25.0 Operator: 063605

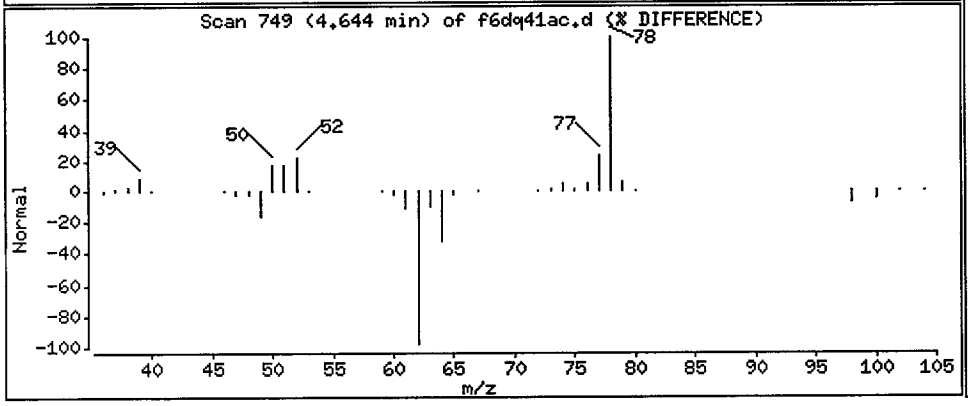
Column phase: J+W 624 Column diameter: 0.18

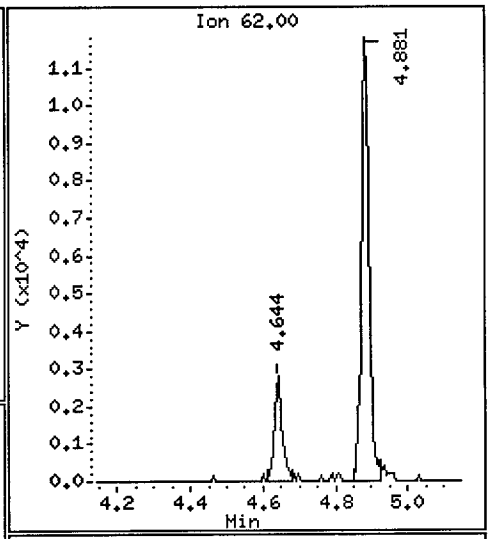
47 1,2-Dichloroethane Concentration: 0.19642 ug/L

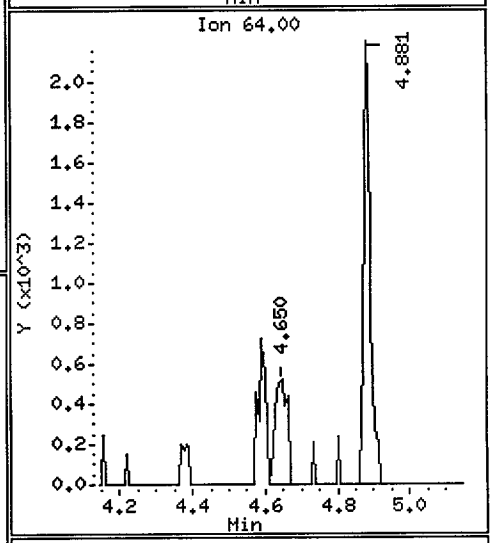


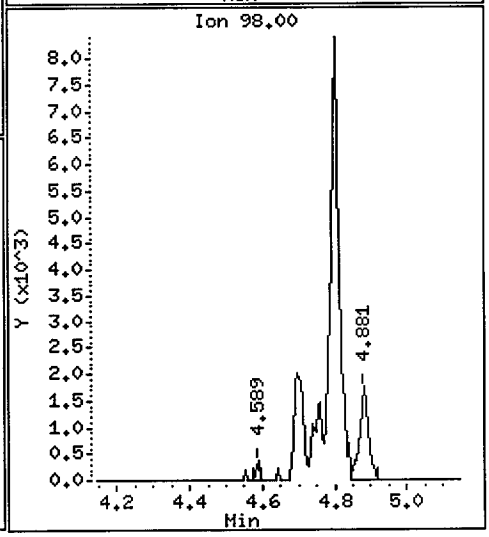












Data File: /var/chem/gcms/mx.i/X121103.b/f6dq41ac.d

Date : 11-DEC-2003 16:07

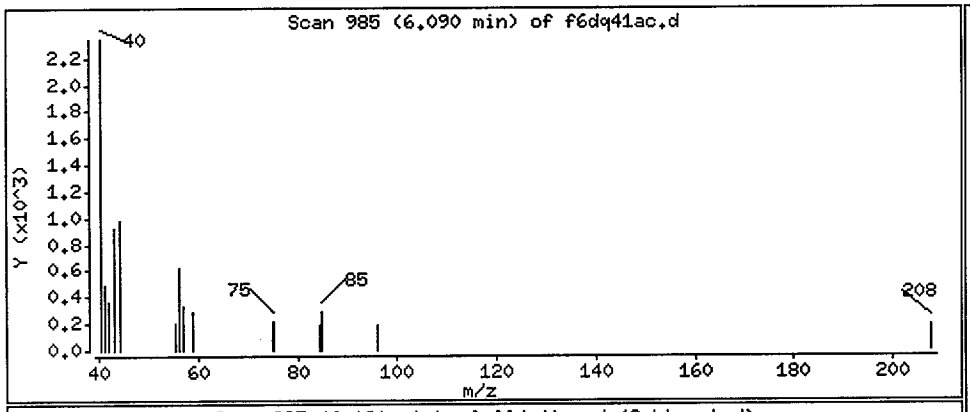
Client ID: DD3007 Instrument: mx.i

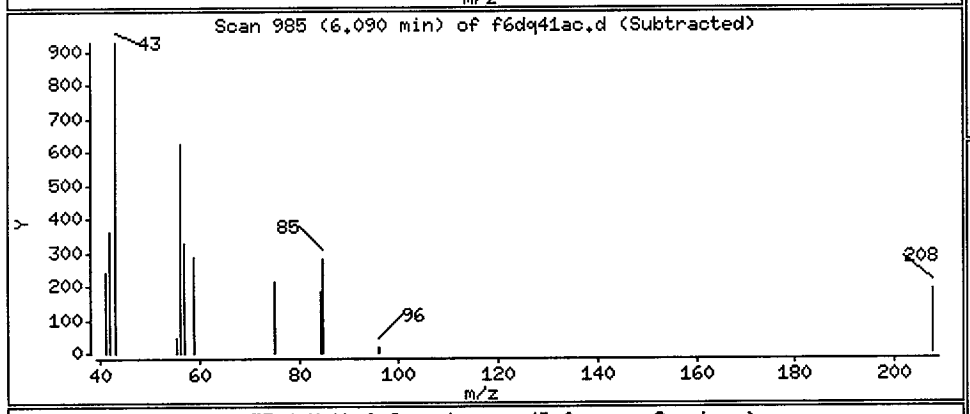
Sample Info: F6DQ41AC,1,0,,

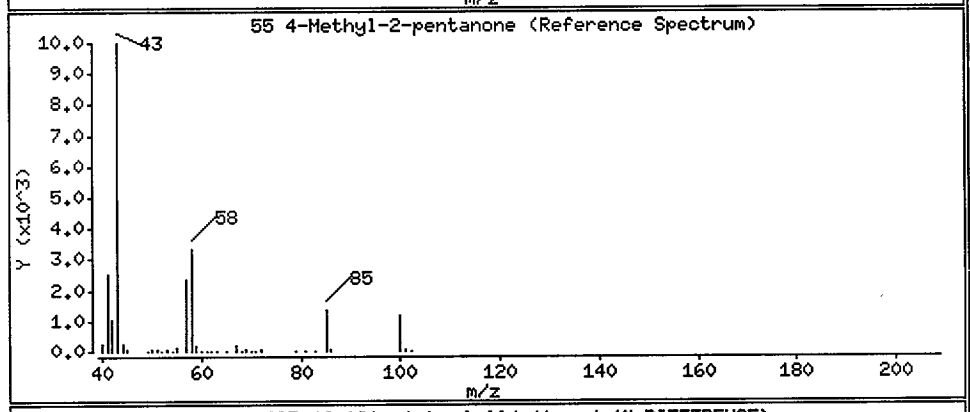
Purge Volume: 25.0 Operator: 063605

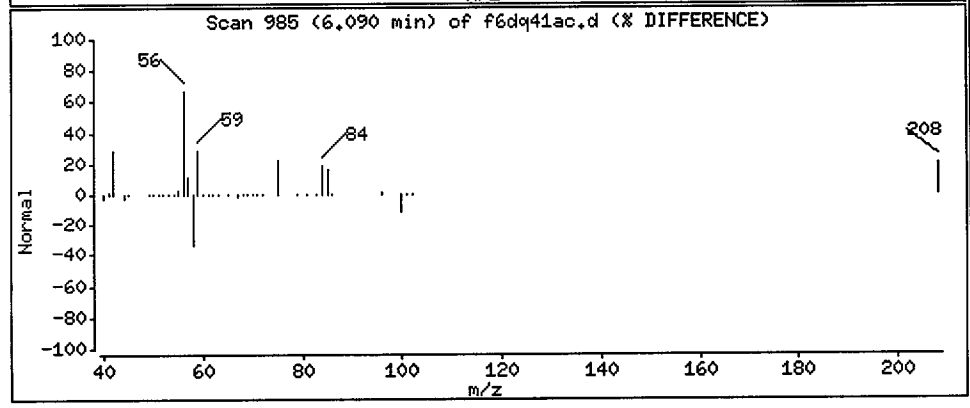
Column phase: J+W 624 Column diameter: 0.18

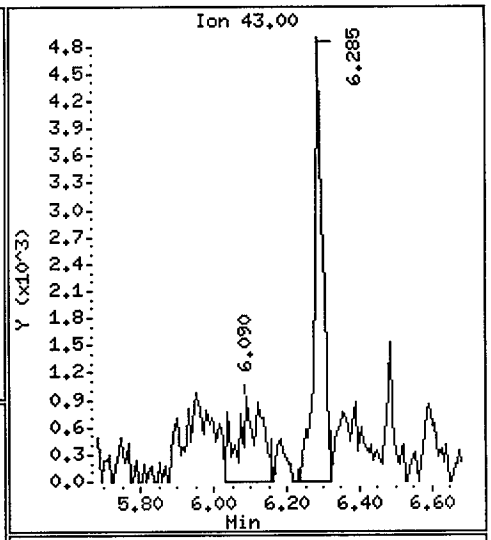
55 4-Methyl-2-pentanone Concentration: 0.40827 ug/L

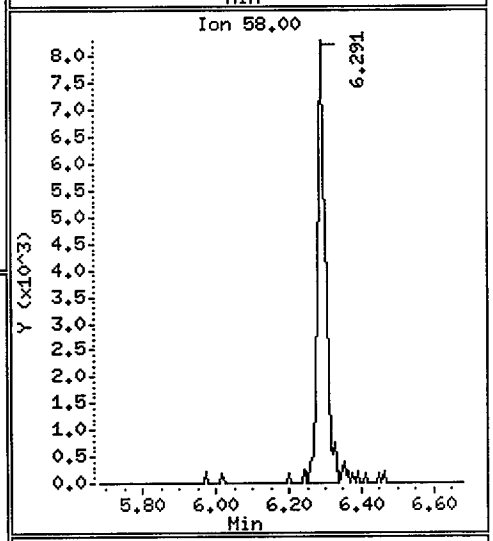


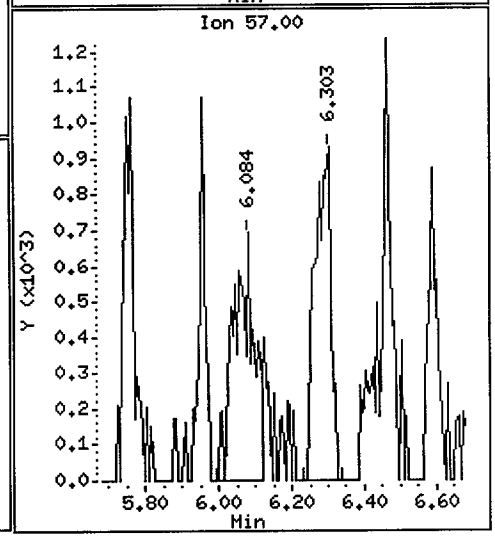












Data File: /var/chem/gcms/mx.i/X121103.b/f6dq41ac.d

Date : 11-DEC-2003 16:07

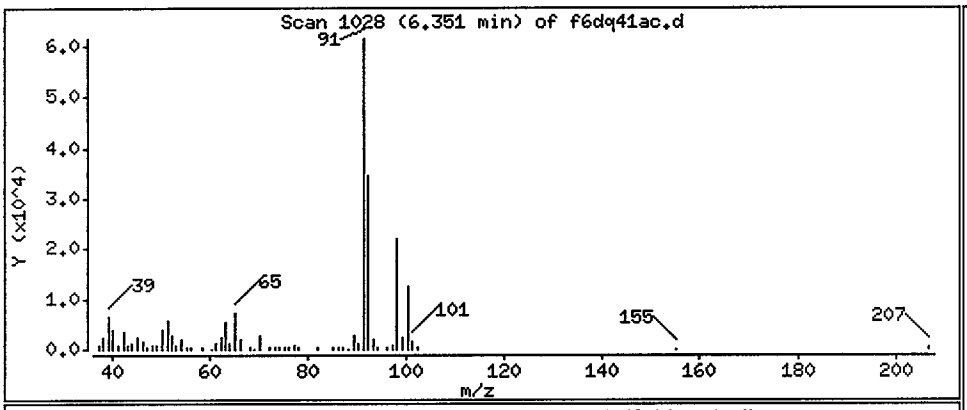
Client ID: DD3007 Instrument: mx.i

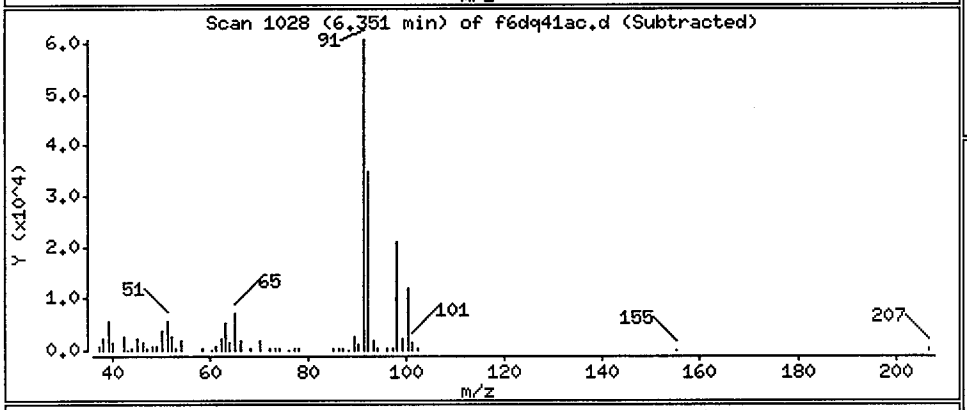
Sample Info: F6DQ41AC,1,0,,

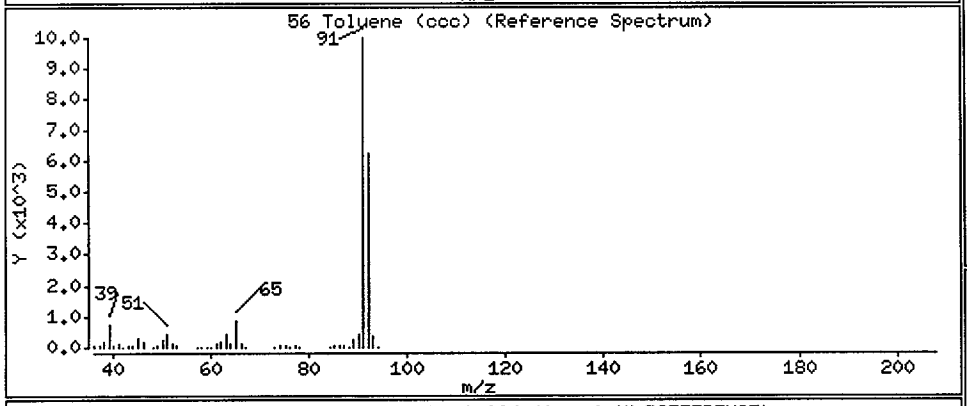
Purge Volume: 25.0 Operator: 063605

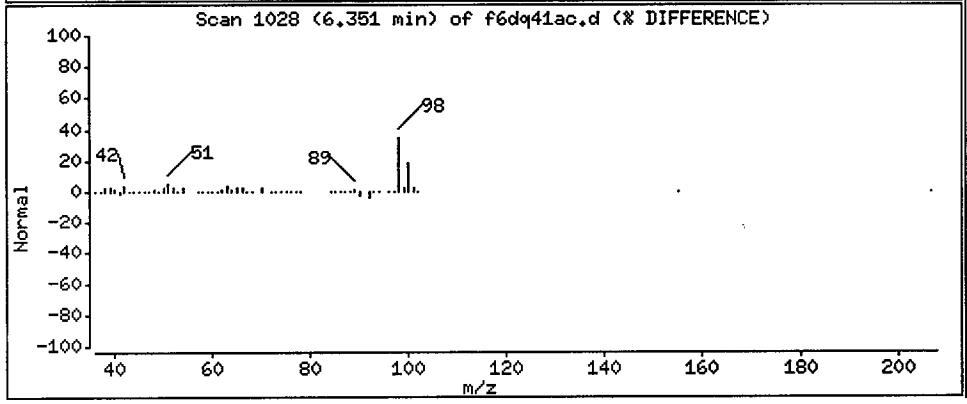
Column phase: J+W 624 Column diameter: 0.18

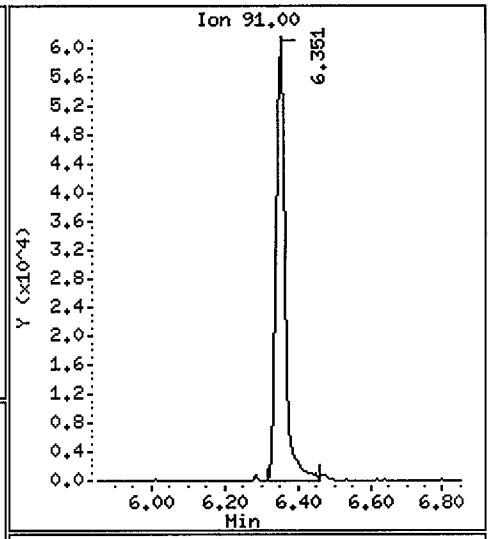
56 Toluene (ccc) Concentration: 0.61619 ug/L

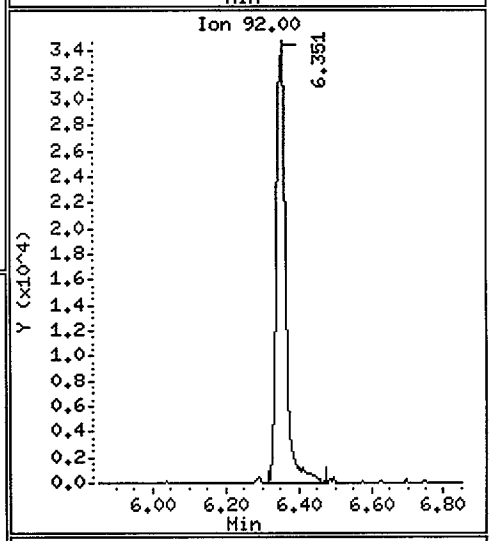


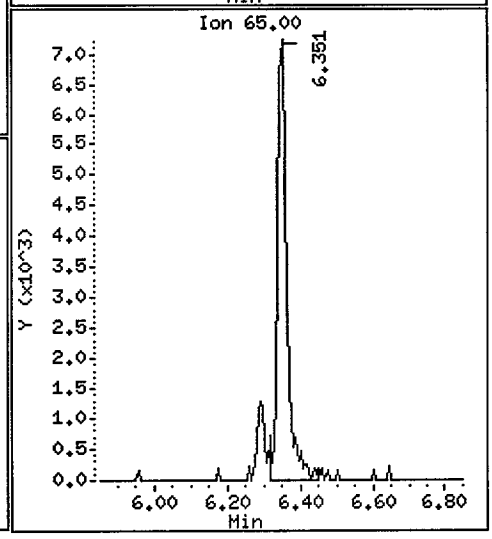












Data File: /var/chem/gcms/mx.i/X121103.b/f6dq41ac.d

Date : 11-DEC-2003 16:07

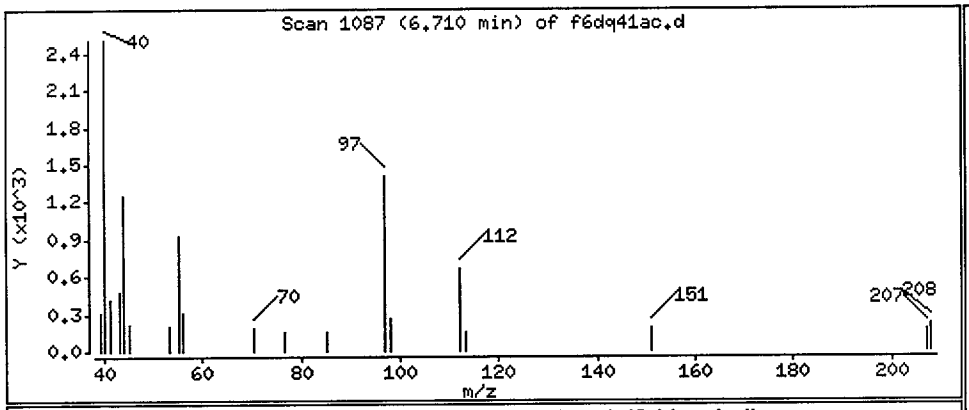
Client ID: DD3007 | Instrument: mx.i

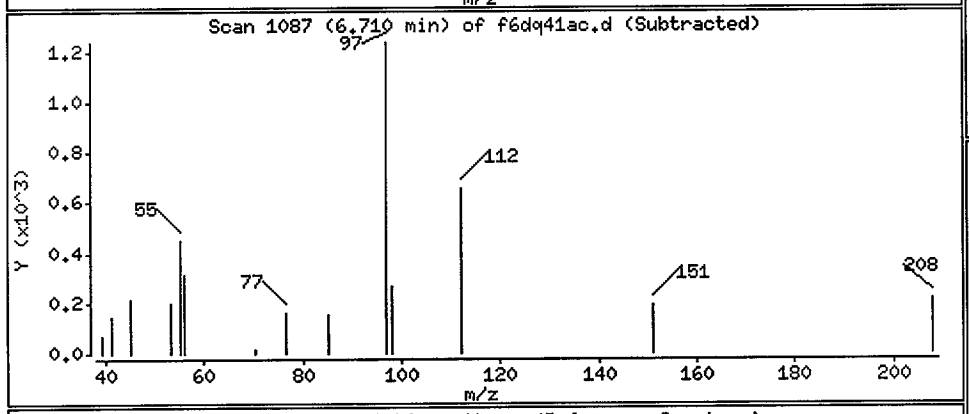
Sample Info: F6DQ41AC,1,0,,

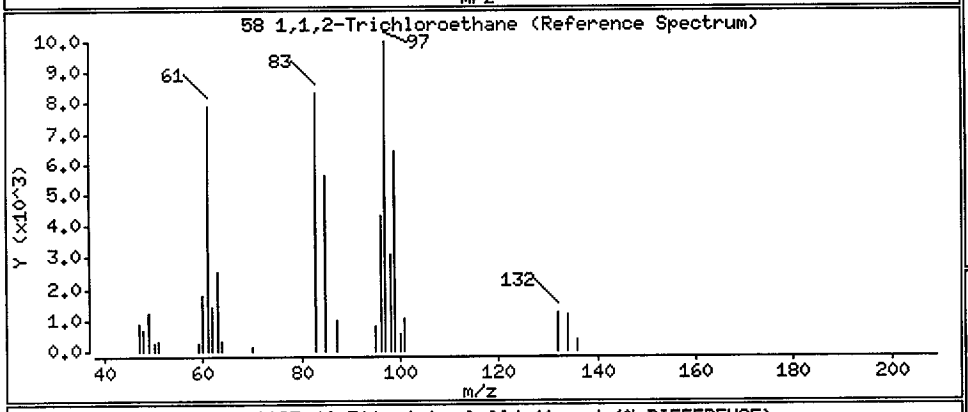
Purge Volume: 25.0 | Operator: 063605

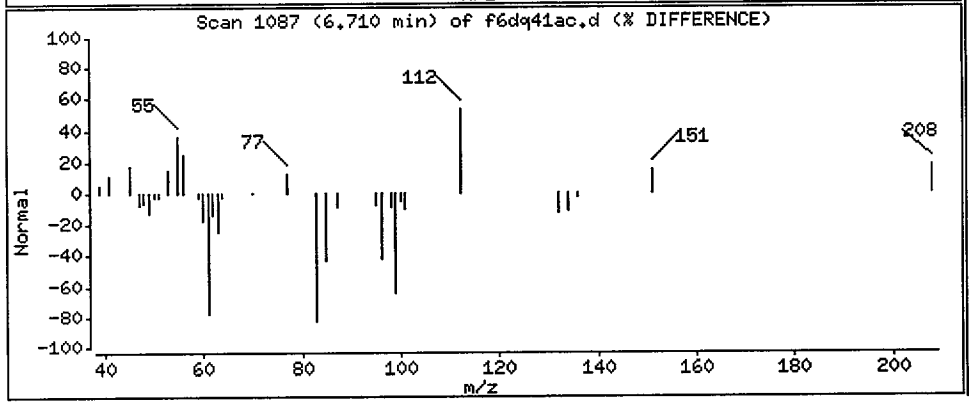
Column phase: J+W 624 | Column diameter: 0.18

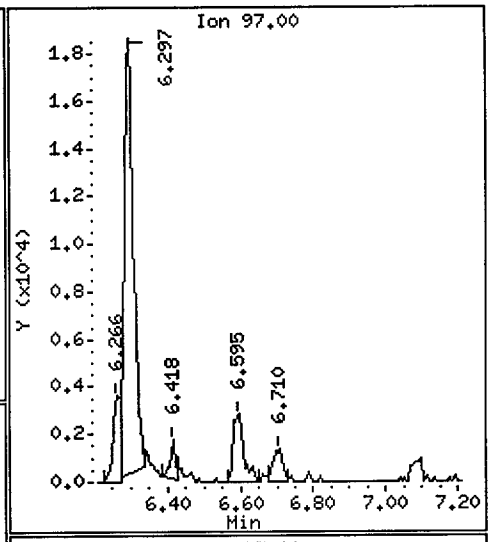
58 1,1,2-Trichloroethane | Concentration: 0.20549 ug/L

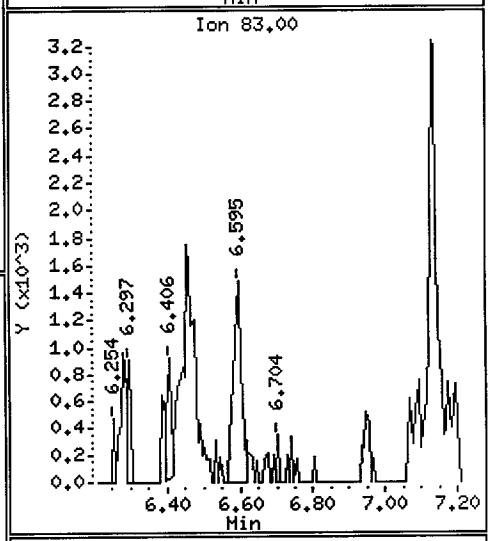


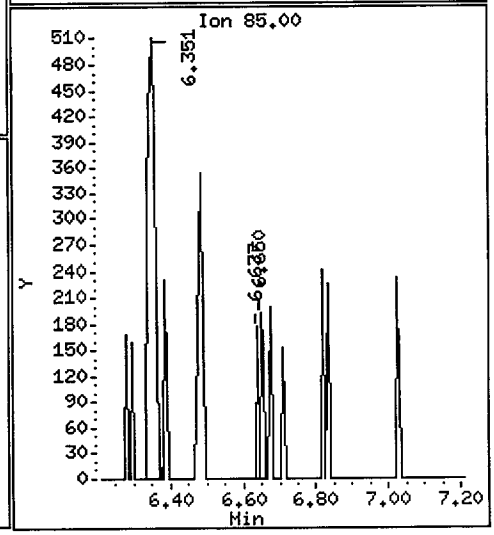












Data File: /var/chem/gcms/mx.i/X121103.b/f6dq41ac.d

Date : 11-DEC-2003 16:07

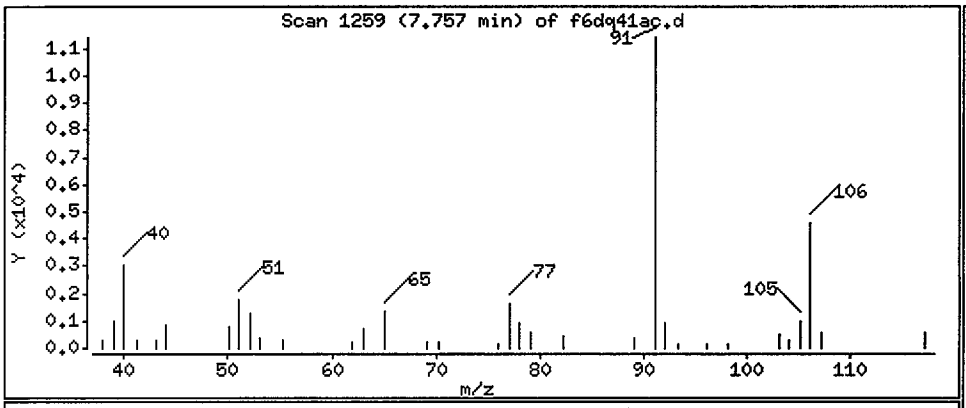
Client ID: DD3007 | Instrument: mx.i

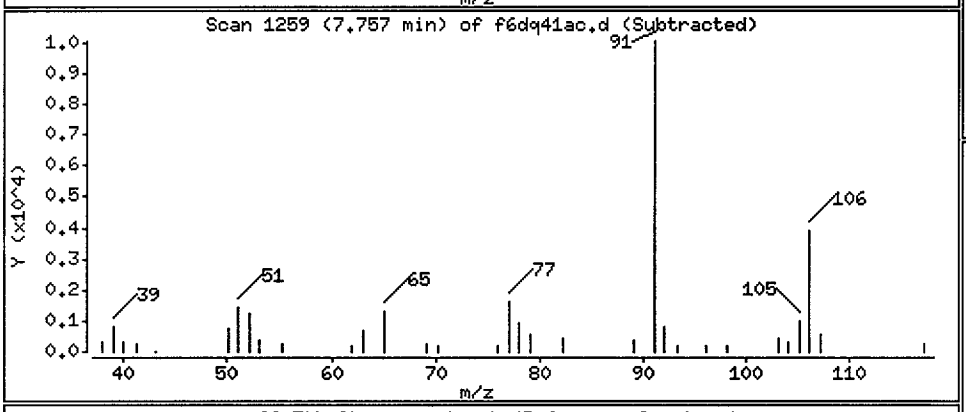
Sample Info: F6DQ41AC,1,0,,

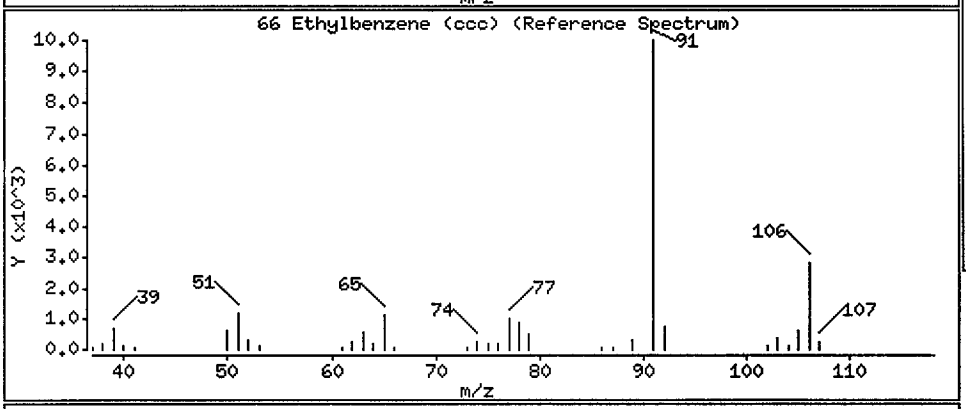
Purge Volume: 25.0 | Operator: 063605

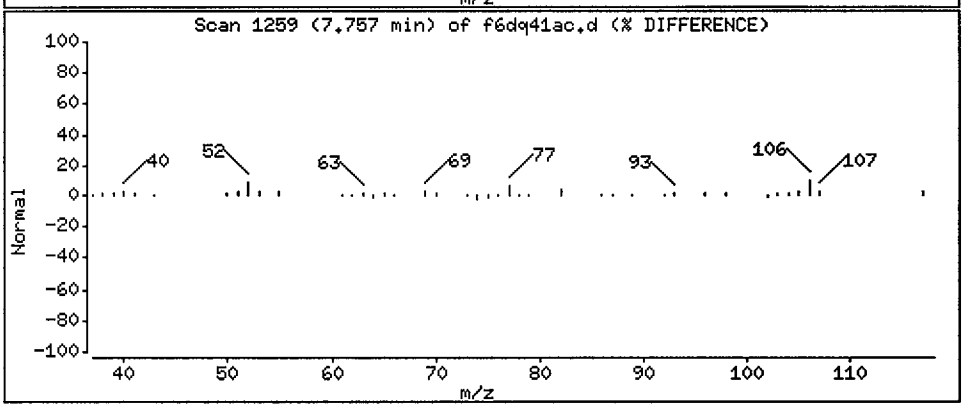
Column phase: J+W 624 | Column diameter: 0.18

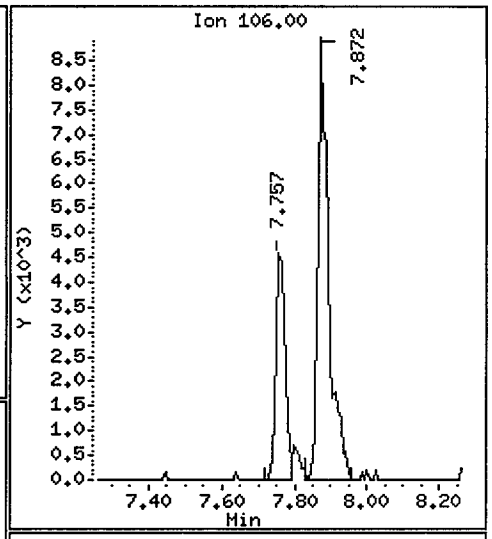
66 Ethylbenzene (ccc) | Concentration: 0.13013 ug/L

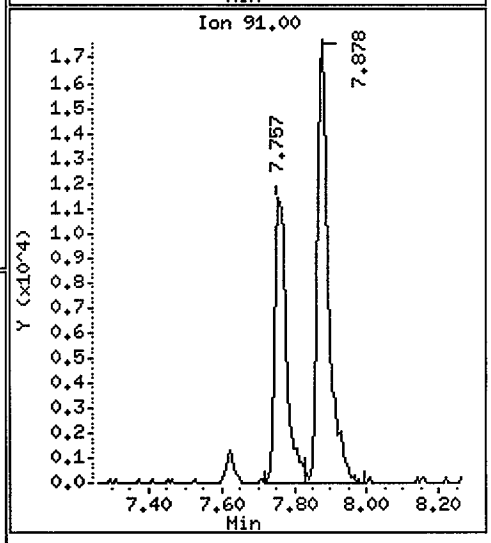












Data File: /var/chem/gcms/mx.i/X121103.b/f6dq41ac.d

Date : 11-DEC-2003 16:07

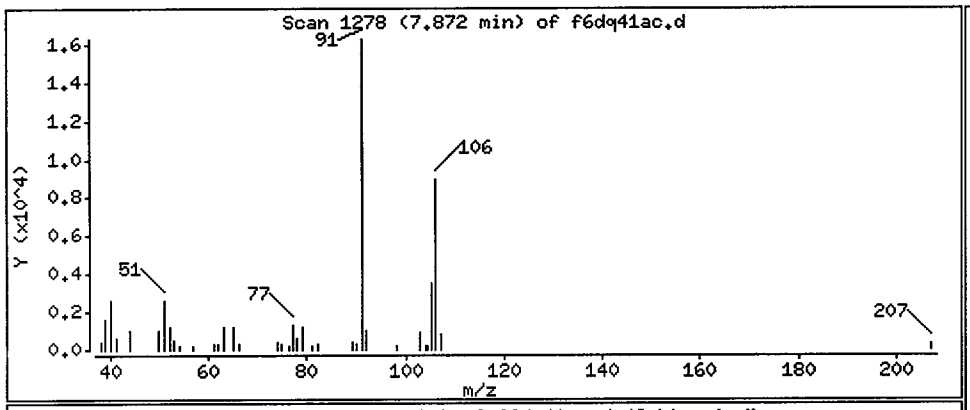
Client ID: DD3007 Instrument: mx.i

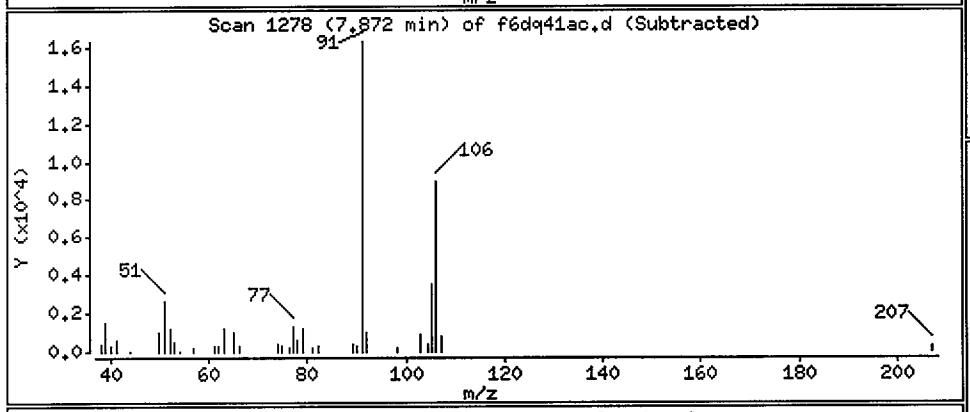
Sample Info: F6DQ41AC,1,0,,

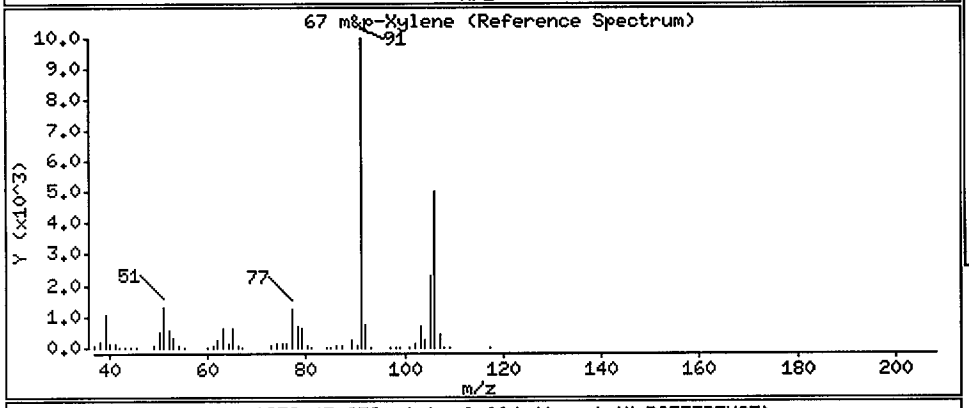
Purge Volume: 25.0 Operator: 063605

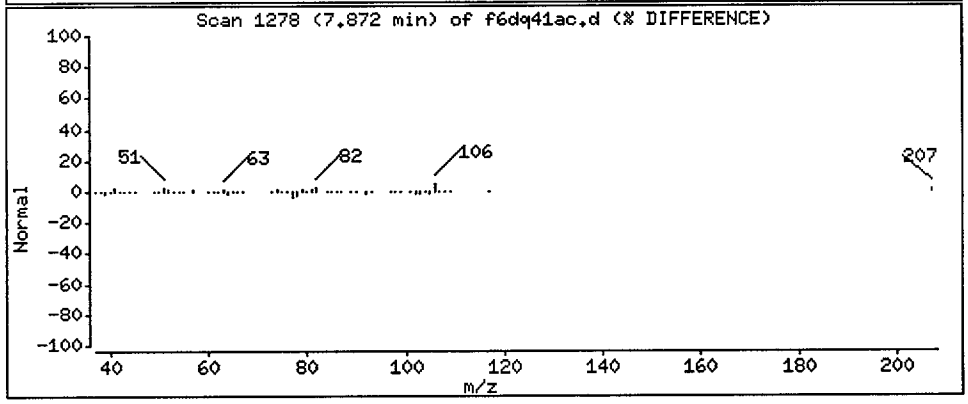
Column phase: J+W 624 Column diameter: 0.18

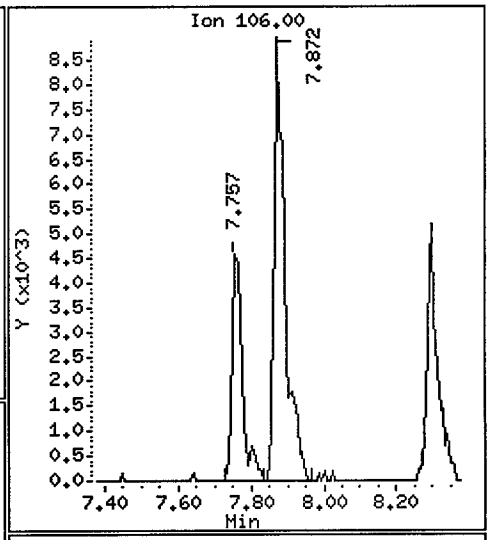
67 m&p-Xylene Concentration: 0.25041 ug/L

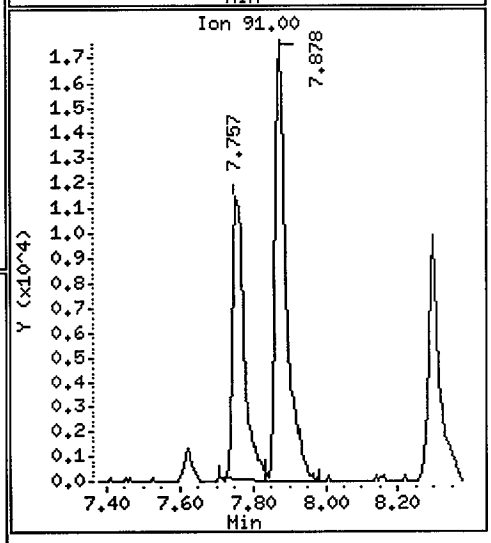












Data File: /var/chem/gcms/mx.i/X121103.b/f6dq41ac.d

Date : 11-DEC-2003 16:07

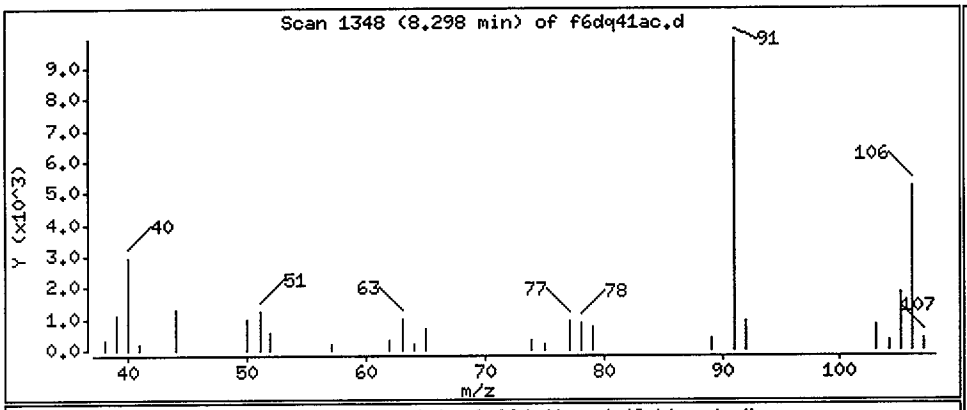
Client ID: DD3007 | Instrument: mx.i

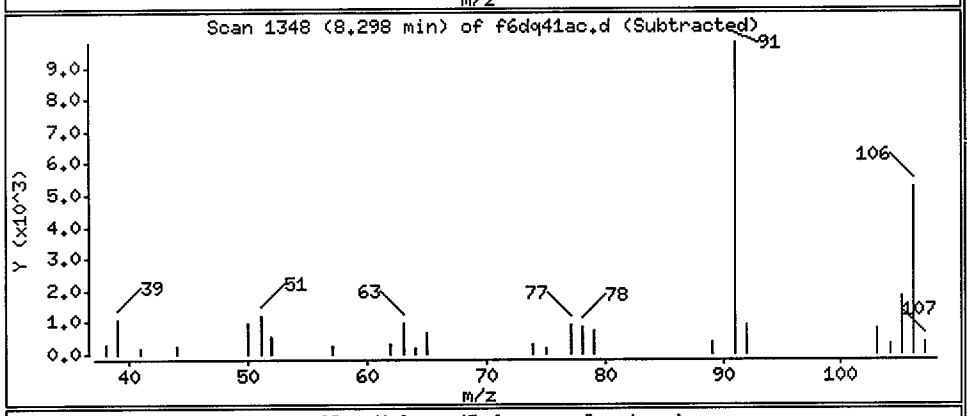
Sample Info: F6DQ41AC,1,0,,

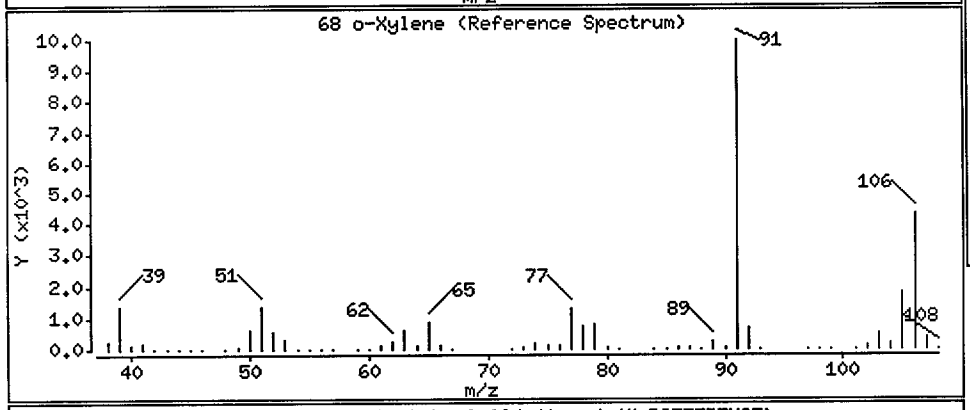
Purge Volume: 25.0 | Operator: 063605

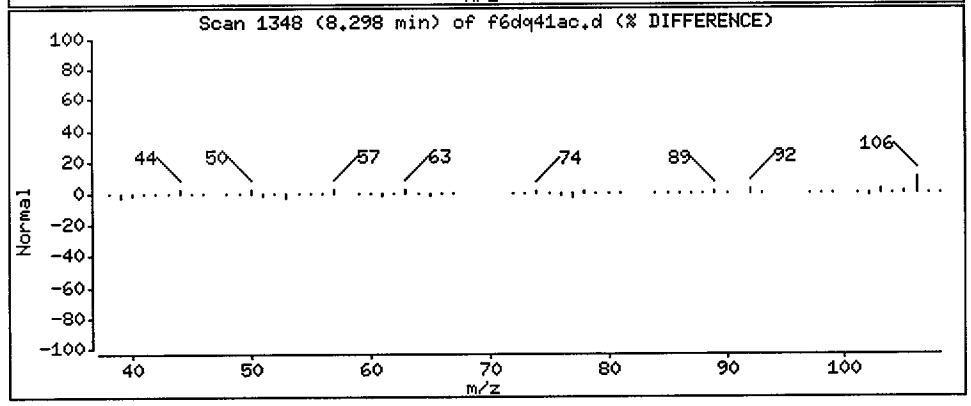
Column phase: J+W 624 | Column diameter: 0.18

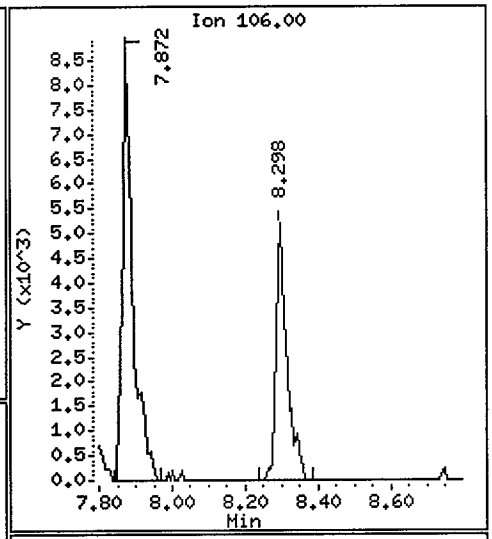
68 o-Xylene | Concentration: 0.16170 ug/L

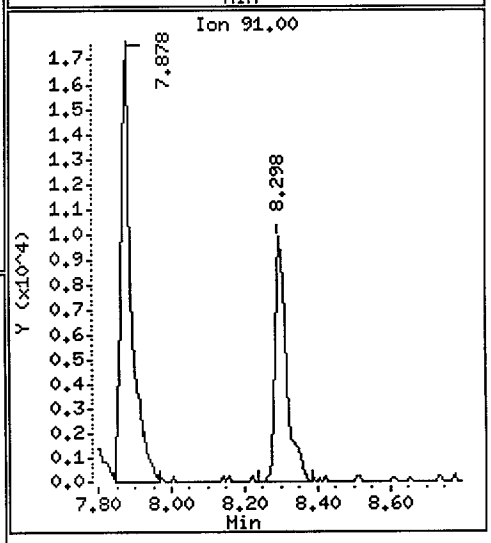












SHAW E & I INC

Client Sample ID: DD3008

GC/MS Volatiles

Lot-Sample #...: H3L100268-002 **Work Order #...:** F6DRG1AN **Matrix.....:** WATER
Date Sampled...: 12/09/03 **Date Received..:** 12/10/03
Prep Date.....: 12/11/03 **Analysis Date..:** 12/11/03
Prep Batch #...: 3345349
Dilution Factor: 1 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Chloromethane	**0.30 J**	**2.0**	**ug/L**	**0.12**
Bromomethane	ND	2.0	ug/L	0.38
Vinyl chloride	ND	1.0	ug/L	0.24
Chloroethane	ND	2.0	ug/L	0.24
Methylene chloride	ND	2.0	ug/L	0.23
Acetone	ND	10	ug/L	1.4
Carbon disulfide	**13**	**1.0**	**ug/L**	**0.10**
1,1-Dichloroethene	ND	1.0	ug/L	0.10
1,1-Dichloroethane	ND	1.0	ug/L	0.10
1,2-Dichloroethene (total)	ND	1.0	ug/L	0.20
Chloroform	ND	1.0	ug/L	0.10
1,2-Dichloroethane	ND	1.0	ug/L	0.10
2-Butanone	ND	5.0	ug/L	0.75
1,1,1-Trichloroethane	ND	1.0	ug/L	0.10
Carbon tetrachloride	ND	1.0	ug/L	0.12
Bromodichloromethane	ND	1.0	ug/L	0.10
1,2-Dichloropropane	ND	1.0	ug/L	0.10
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.10
Trichloroethene	ND	1.0	ug/L	0.10
Dibromochloromethane	ND	1.0	ug/L	0.20
1,1,2-Trichloroethane	ND	1.0	ug/L	0.25
Benzene	**0.96 J**	**1.0**	**ug/L**	**0.10**
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.11
Bromoform	ND	1.0	ug/L	0.14
4-Methyl-2-pentanone	ND	5.0	ug/L	0.40
2-Hexanone	ND	5.0	ug/L	0.76
Tetrachloroethene	ND	1.0	ug/L	0.10
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.15
Toluene	ND	1.0	ug/L	0.10
Chlorobenzene	ND	1.0	ug/L	0.10
Ethylbenzene	**0.87 J**	**1.0**	**ug/L**	**0.10**
Styrene	ND	1.0	ug/L	0.10
Xylenes (total)	**5.1**	**1.0**	**ug/L**	**0.30**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	101	(79 - 120)
1,2-Dichloroethane-d4	102	(71 - 127)
Toluene-d8	101	(80 - 120)
Bromofluorobenzene	93	(69 - 126)

(Continued on next page)

SHAW E & I INC

Client Sample ID: DD3008

GC/MS Volatiles

Lot-Sample #...: H3L100268-002 Work Order #...: F6DRG1AN Matrix.....: WATER

NOTE(S):

J Estimated result. Result is less than RL.

Data File: /chem/gcms/mx.i/X121103.b/f6drg1an.d
Report Date: 11-Dec-2003 16:48

STL Knoxville

SW-846 Method 8260A - Volatile Organics

Data file : /chem/gcms/mx.i/X121103.b/f6drg1an.d
Lab Smp Id: F6DRG1AN Client Smp ID: DD3008
Inj Date : 11-DEC-2003 16:32
Operator : 063605 Inst ID: mx.i
Smp Info : F6DRG1AN,1,0,,
Misc Info : X121103,8260B_LM,ms.sub
Comment :
Method : /var/chem/gcms/mx.i/X121103.b/8260B_LM.m
Meth Date : 11-Dec-2003 16:28 tillerm Quant Type: ISTD
Cal Date : 16-SEP-2003 12:52 Cal File: icxi166.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ms.sub
Target Version: 3.50
Processing Host: qmidhp01

12/19/03

Concentration Formula: Amt * DF * Uf*Vt/(Vo*1000) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Unit Correction factor
Vt	25000.00000	Sample Volume Purged
Vo	25.00000	Sample Volume Used

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
* 1 Fluorobenzene	96	4.888	4.885	(1.000)	1321692	10.0000	
* 2 Chlorobenzene-d5	119	7.624	7.624	(1.000)	289631	10.0000	
* 3 1,4 Dichlorobenzene-d4	152	10.818	10.824	(1.000)	315650	10.0000	
$ 5 1,2-Dichloroethane-d4	65	4.584	4.581	(0.938)	173428	10.2130	10.213
$ 4 Dibromofluoromethane	113	4.298	4.295	(0.879)	221881	10.0812	10.081
$ 6 Toluene-d8	98	6.292	6.292	(0.825)	1340758	10.0778	10.078
$ 7 4-Bromofluorobenzene	95	8.926	8.932	(0.825)	352865	9.33934	9.3393
11 Chloromethane (spcc)	50	1.226	1.229	(0.251)	5234	0.30240	0.30240
15 Chloroethane	64	1.263	1.655	(0.258)	13215	~~0.53680~~	~~0.53680~~
24 Carbon Disulfide	76	2.504	2.500	(0.512)	1191175	12.9180	12.918
22 Acetone	43	2.358	2.366	(0.482)	21154	~~5.45660~~	~~5.4566~~
42 Chloroform (ccc)	83	4.377	4.161	(0.895)	30221	~~0.63771~~	~~0.63771~~
45 1,1-Dichloropropene	75	4.888	4.465	(1.000)	89979	~~2.00226~~	~~2.0023~~
46 Benzene	78	4.639	4.642	(0.949)	124246	0.95851	0.95851

WT 12/15/03

Data File: /chem/gcms/mx.i/X121103.b/f6drg1an.d
Report Date: 11-Dec-2003 16:48

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
	47 1,2-Dichloroethane	62	4.882	4.648	(0.999)	19422	~~0.90360~~	~~0.90368~~
	50 1,2-Dichloropropane (ccc)	63	5.385	5.398	(1.102)	4890	~~0.17063~~	~~0.17063~~
	55 4-Methyl-2-pentanone	43	6.091	6.182	(1.246)	10821	~~1.12744~~	~~1.1274~~
	58 1,1,2-Trichloroethane	97	6.699	6.712	(0.879)	15809	~~1.21441~~	~~1.2144~~
	61 2-Hexanone	43	6.596	6.943	(0.865)	6800	~~0.99241~~	~~0.99241~~
	66 Ethylbenzene (ccc)	106	7.764	7.764	(1.018)	54575	0.86645	0.86644
	67 m&p-Xylene	106	7.874	7.880	(1.033)	308906	4.10360	4.1036
	68 o-Xylene	106	8.299	8.299	(1.089)	65408	0.96725	0.96725
M	9 Xylene (total)	106				374315	5.07085	5.0708
	69 Styrene	104	7.874	8.312	(1.033)	13314	~~0.13230~~	~~0.13230~~
	79 1,3,5-Trimethylbenzene	105	9.571	9.571	(0.885)	51020	0.40895	0.40895
	82 1,2,4-Trimethylbenzene	105	10.191	10.191	(0.942)	193465	1.71803	1.7180

MT
12/15/03
NA

Data File: /chem/gcms/mx.i/X121103.b/f6drg1an.d
Report Date: 11-Dec-2003 16:48

STL Knoxville

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: mx.i
Lab File ID: f6drg1an.d
Lab Smp Id: F6DRG1AN
Analysis Type: VOA
Quant Type: ISTD
Operator: 063605
Method File: /var/chem/gcms/mx.i/X121103.b/8260B_LM.m
Misc Info: X121103,8260B_LM,ms.sub

Calibration Date: 11-DEC-2003
Calibration Time: 14:00
Client Smp ID: DD3008
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Fluorobenzene	1419469	709734	2838938	1321692	-6.89
2 Chlorobenzene-d5	292458	146229	584916	289631	-0.97
3 1,4 Dichlorobenze	323231	161616	646462	315650	-2.35

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Fluorobenzene	4.89	4.39	5.39	4.89	0.07
2 Chlorobenzene-d5	7.62	7.12	8.12	7.62	0.00
3 1,4 Dichlorobenze	10.82	10.32	11.32	10.82	-0.06

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

Data File: /chem/gcms/mx.i/X121103.b/f6drg1an.d
Report Date: 11-Dec-2003 16:48

STL Knoxville

RECOVERY REPORT

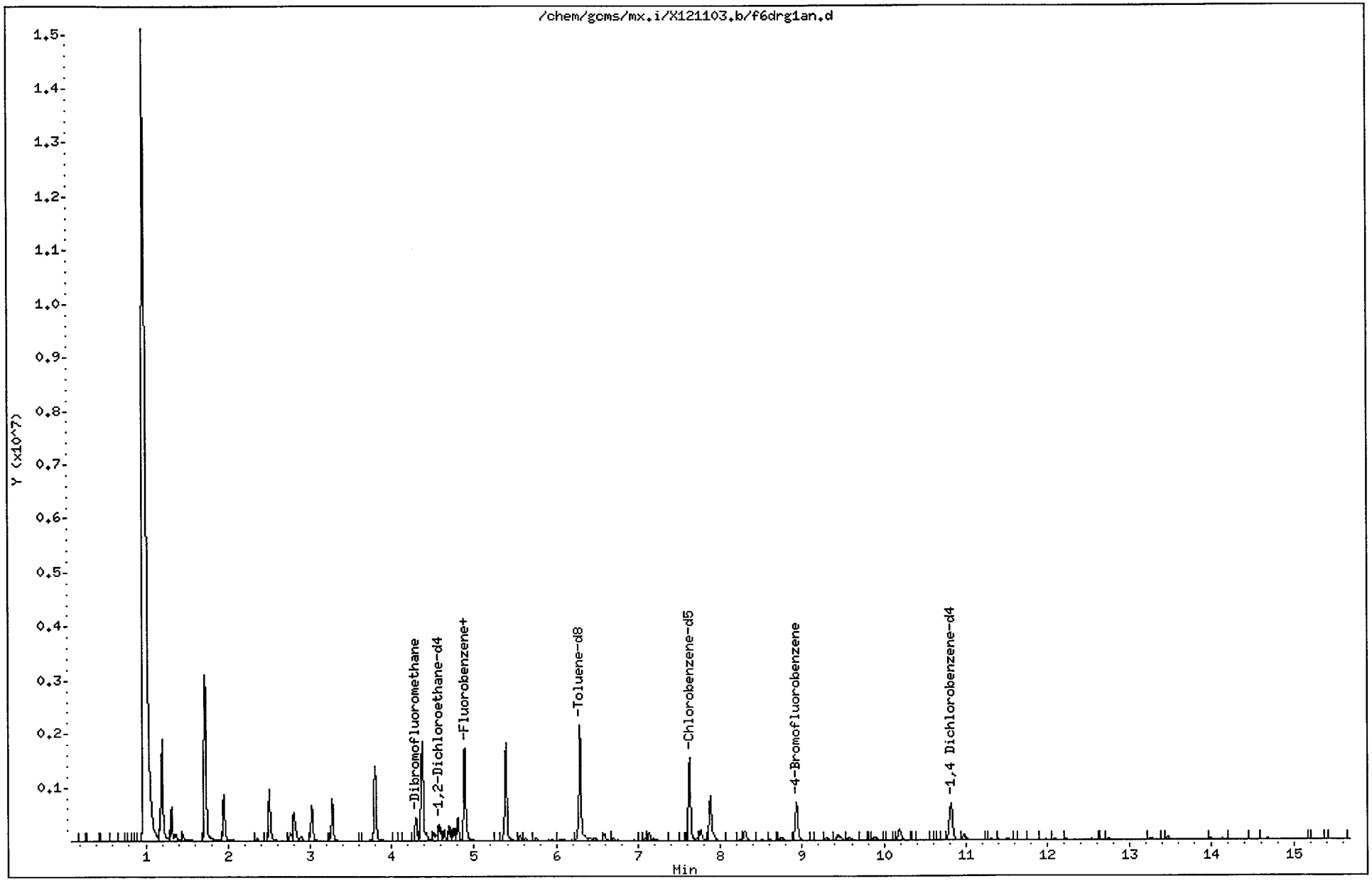
Client Name: SHAW E & I INC
Sample Matrix: LIQUID
Lab Smp Id: F6DRG1AN
Level: LOW
Data Type: MS DATA
SpikeList File: allcmpds.spk
Sublist File: ms.sub
Method File: /var/chem/gcms/mx.i/X121103.b/8260B_LM.m
Misc Info: X121103,8260B_LM,ms.sub

Client SDG: PB045
Fraction: VOA
Client Smp ID: DD3008
Operator: 063605
SampleType: SAMPLE
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 5 1,2-Dichloroethane	10.000	10.213	102.13	71-127
$ 4 Dibromofluorometha	10.000	10.081	100.81	79-120
$ 6 Toluene-d8	10.000	10.078	100.78	80-120
$ 7 4-Bromofluorobenze	10.000	9.3393	93.39	69-126

Data File: /chem/gcms/mx.i/X121103.b/f6drg1an.d
Date : 11-DEC-2003 16:32
Client ID: DD3008
Sample Info: F6DRG1AN,1,0,,
Purge Volume: 25.0
Column phase: J+W 624

Instrument: mx.i
Operator: 063605
Column diameter: 0.18



Data File: /chem/gcms/mx.i/X121103.b/f6drg1an.d

Date : 11-DEC-2003 16:32

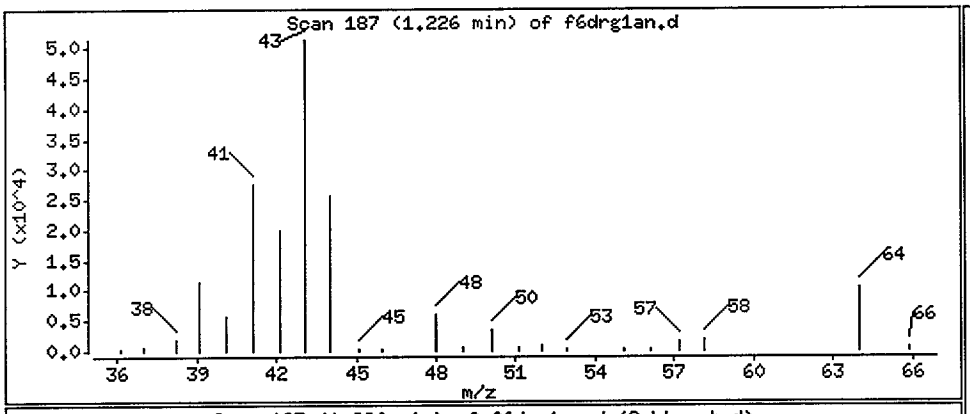
Client ID: DD3008 Instrument: mx.i

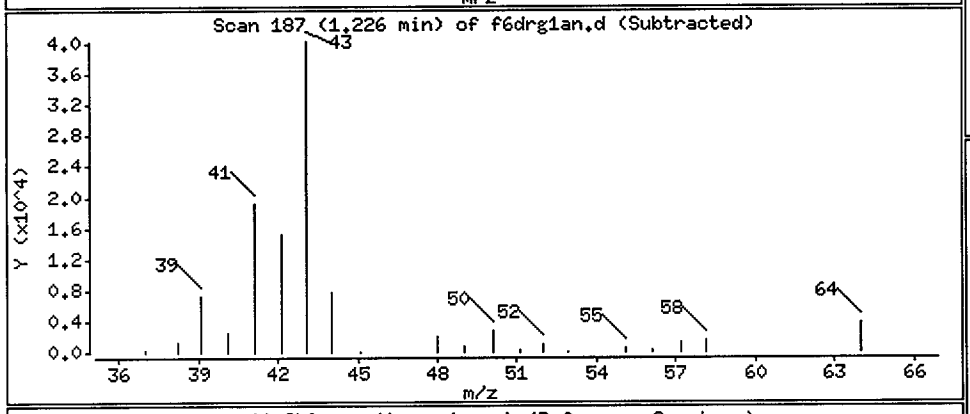
Sample Info: F6DRG1AN,1,0,,

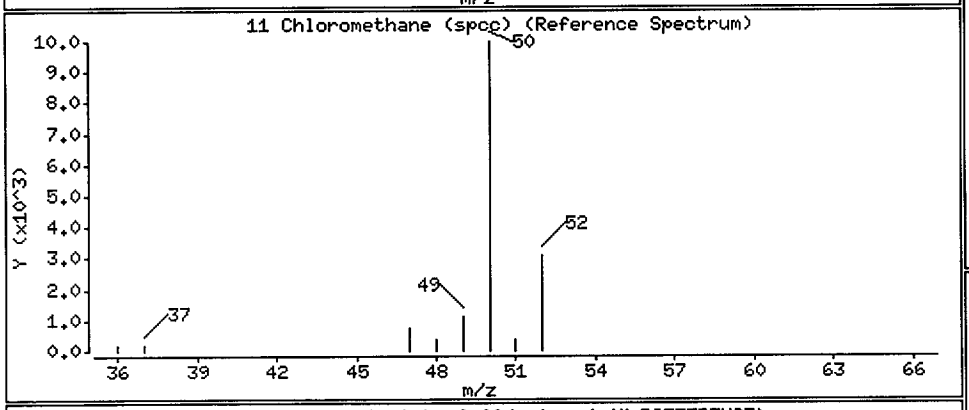
Purge Volume: 25.0 Operator: 063605

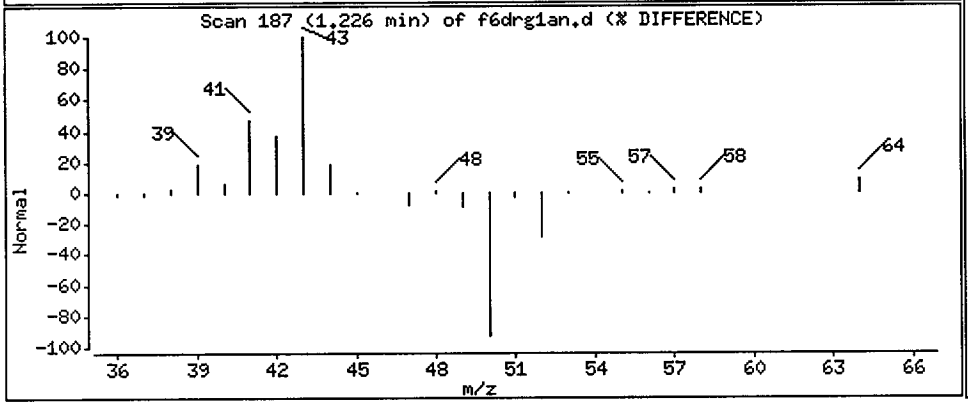
Column phase: J+W 624 Column diameter: 0.18

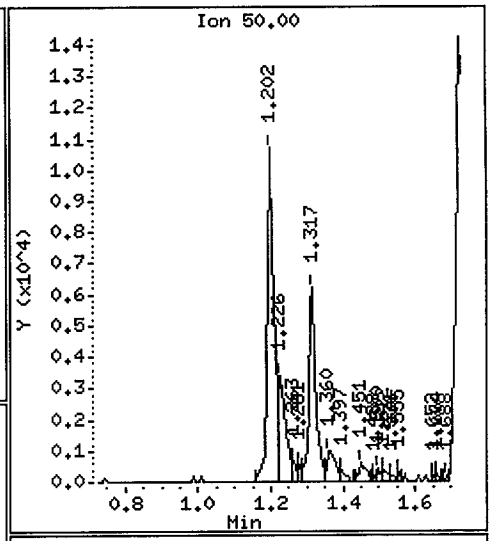
11 Chloromethane (spcc) Concentration: 0.30240 ug/L

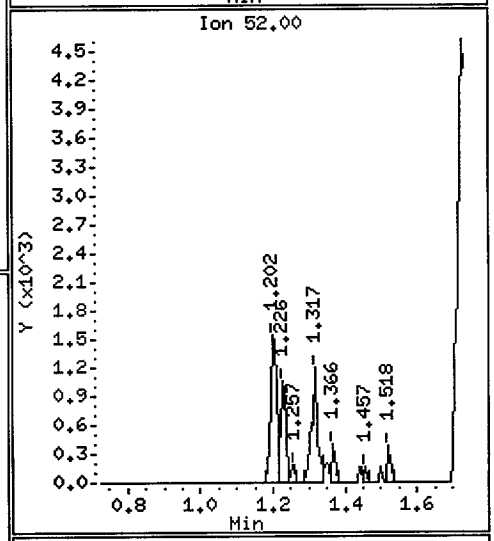


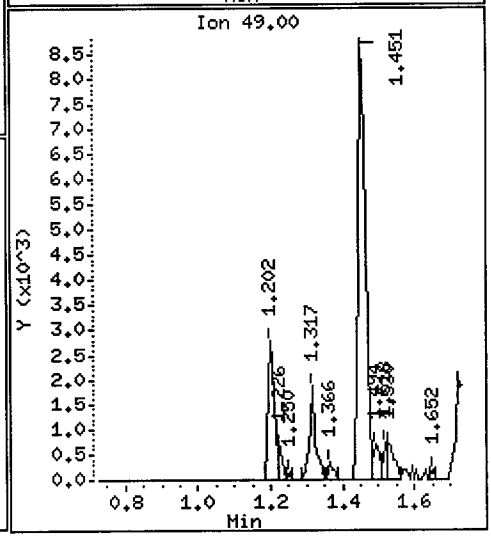












Data File: /chem/gcms/mx.i/X121103.b/f6drg1an.d

Date : 11-DEC-2003 16:32

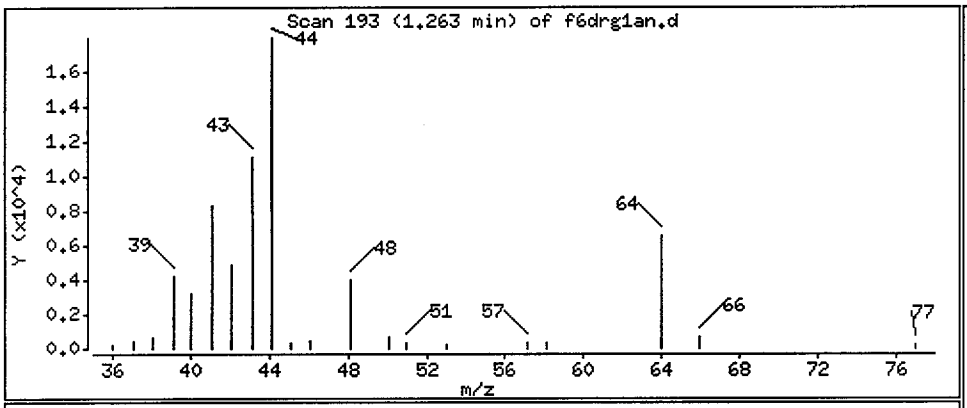
Client ID: DD3008 Instrument: mx.i

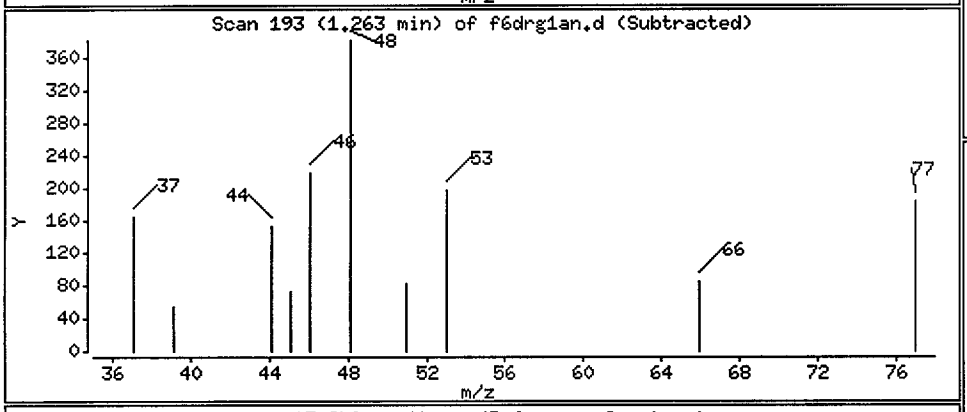
Sample Info: F6DRG1AN,1,0,,

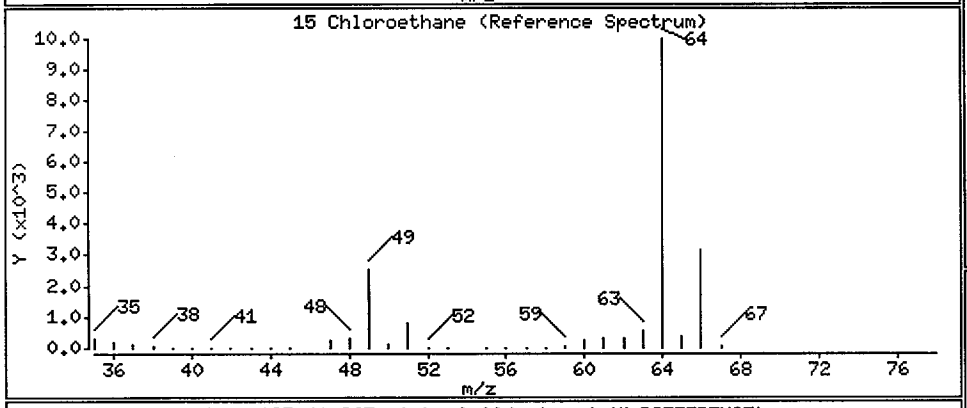
Purge Volume: 25.0 Operator: 063605

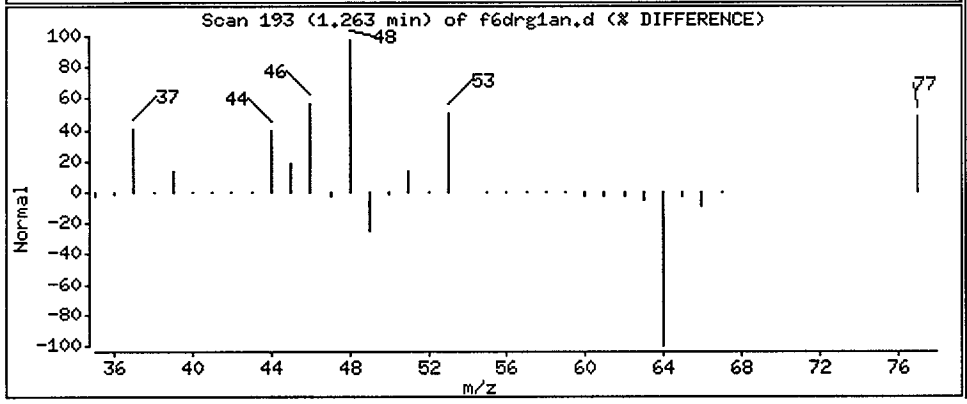
Column phase: J+W 624 Column diameter: 0.18

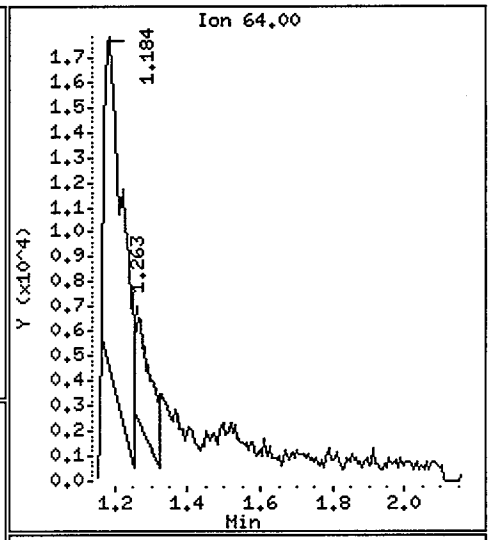
15 Chloroethane Concentration: 0.53680 ug/L

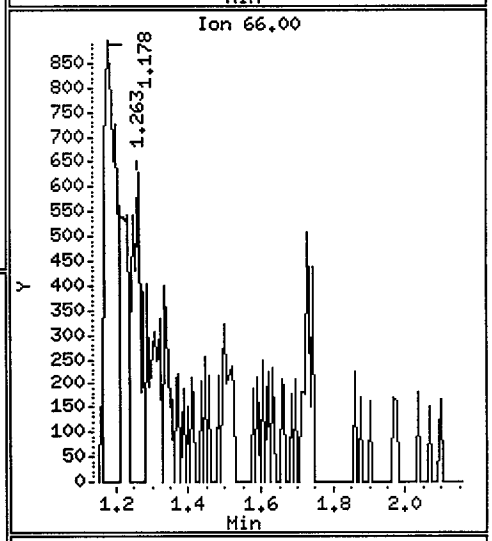


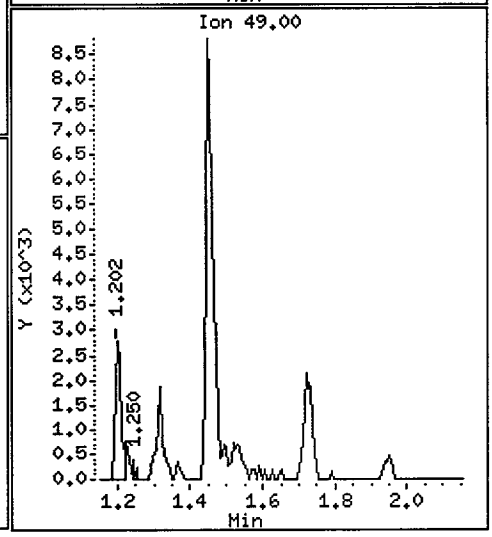












Data File: /chem/gcms/mx.i/X121103.b/f6drg1an.d

Date : 11-DEC-2003 16:32

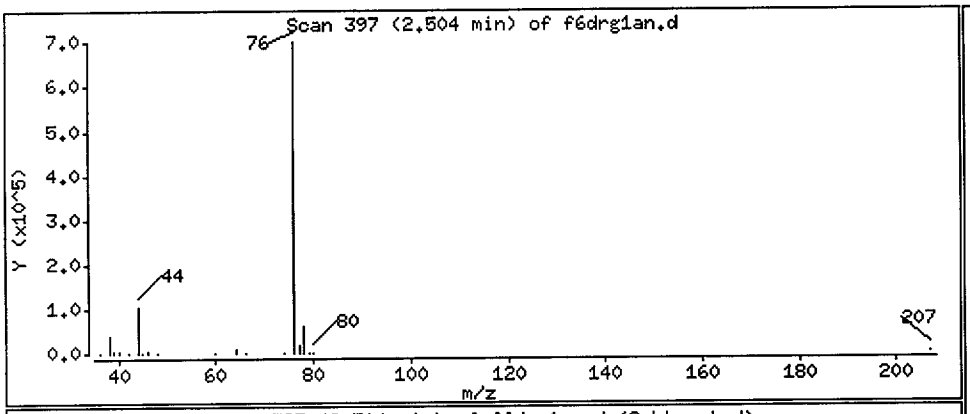
Client ID: DD3008 Instrument: mx.i

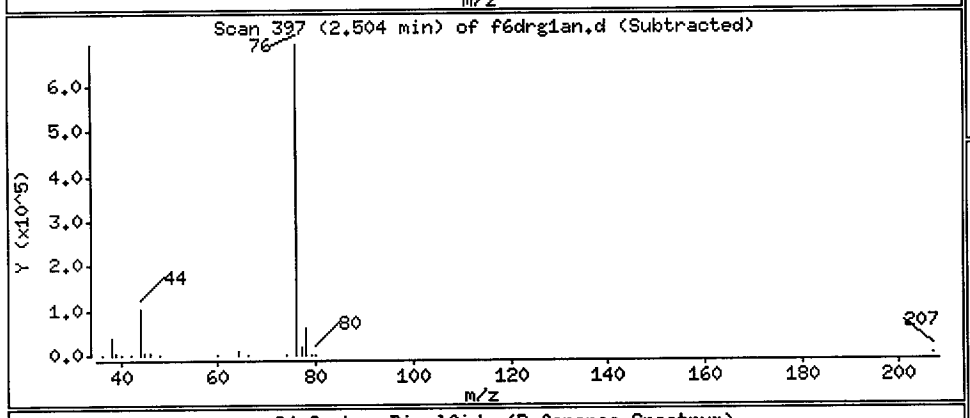
Sample Info: F6DRG1AN,1,0,,

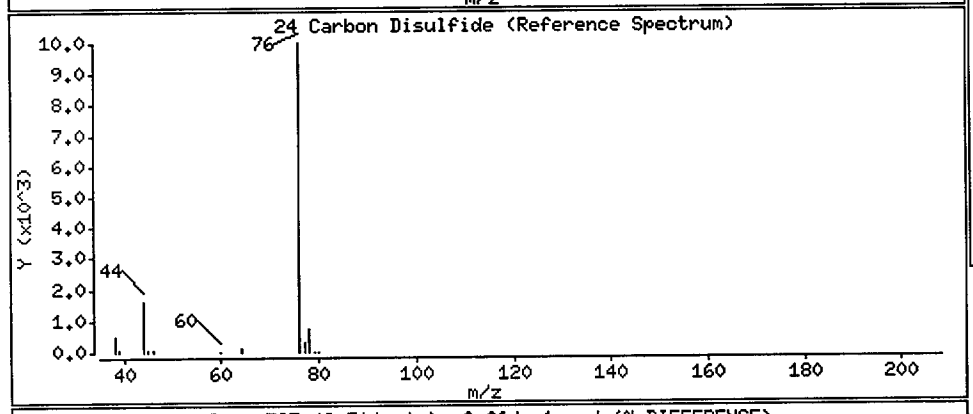
Purge Volume: 25.0 Operator: 063605

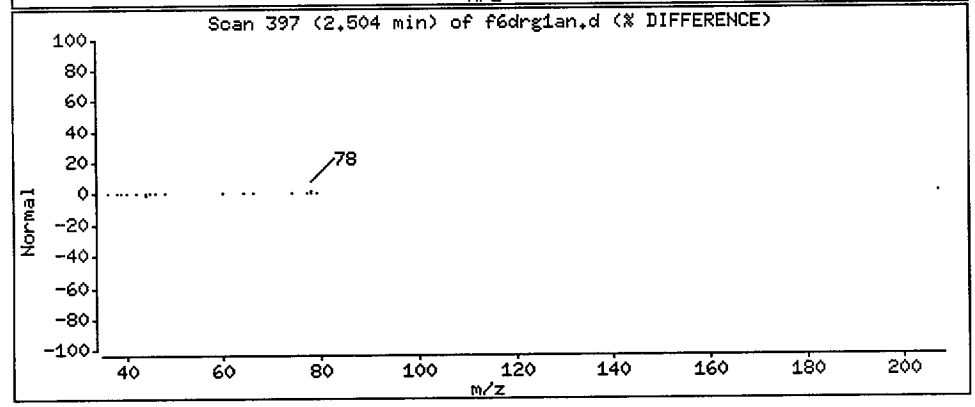
Column phase: J+W 624 Column diameter: 0.18

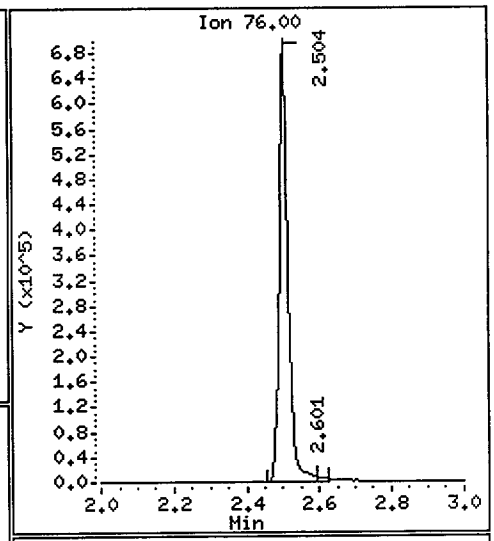
24 Carbon Disulfide Concentration: 12.918 ug/L

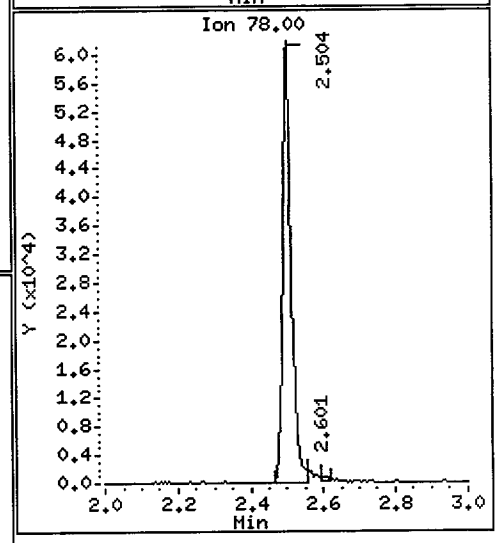












Data File: /chem/gcms/mx.i/X121103.b/f6drg1an.d

Date : 11-DEC-2003 16:32

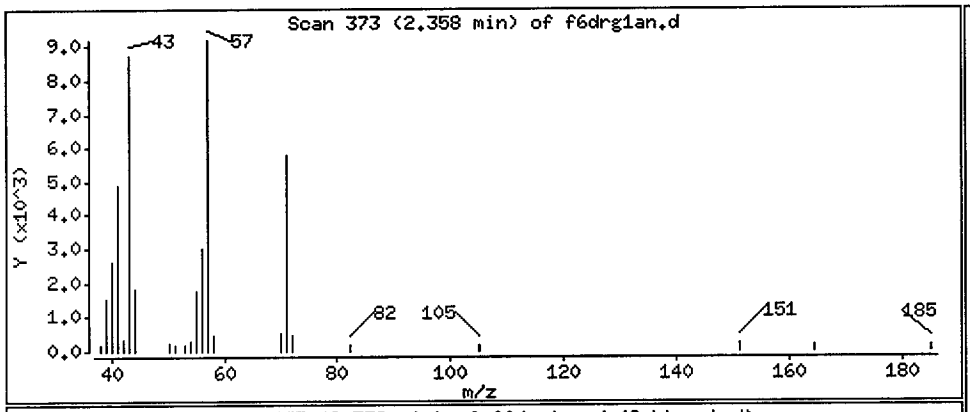
Client ID: DD3008 Instrument: mx.i

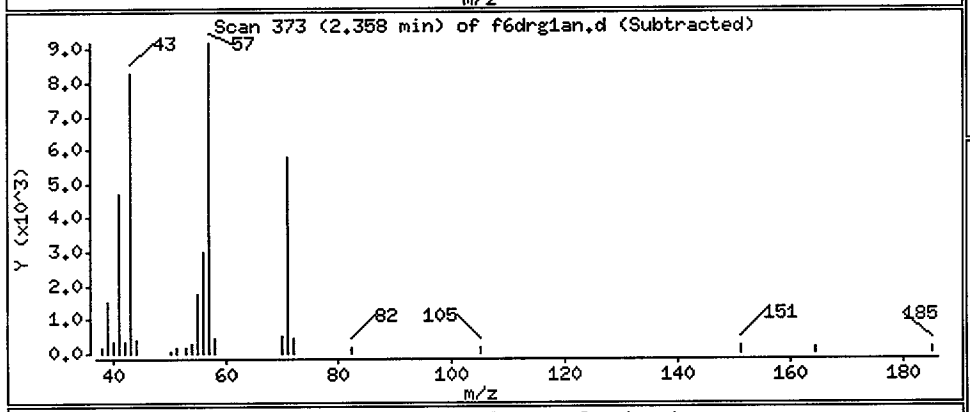
Sample Info: F6DRG1AN,1,0,,

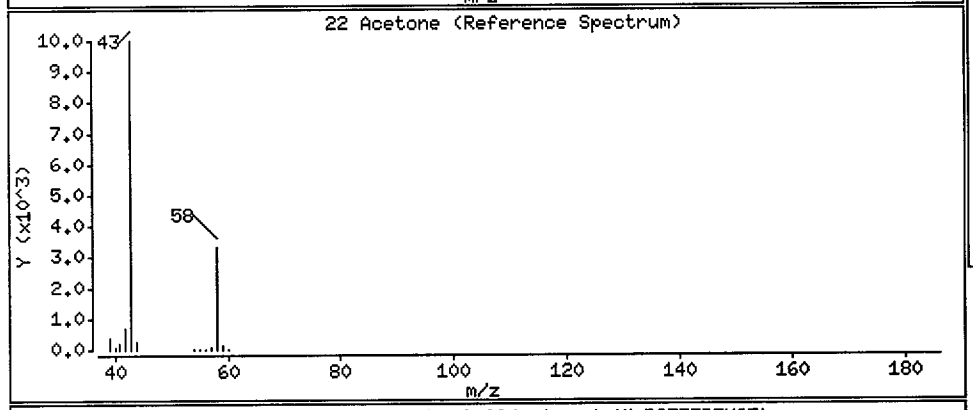
Purge Volume: 25.0 Operator: 063605

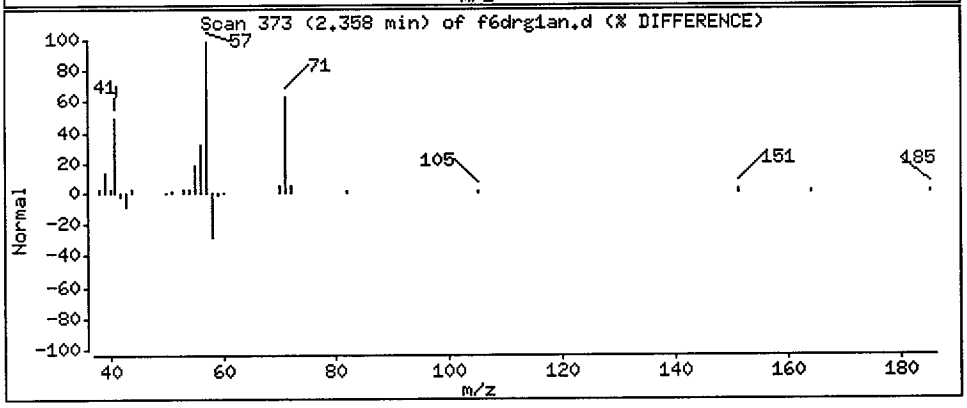
Column phase: J+W 624 Column diameter: 0.18

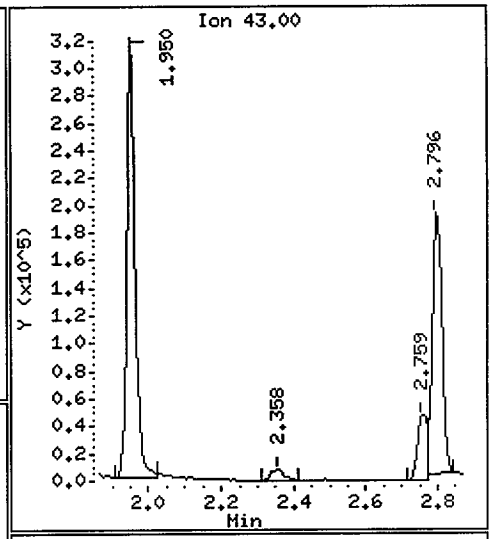
22 Acetone Concentration: 5.4566 ug/L

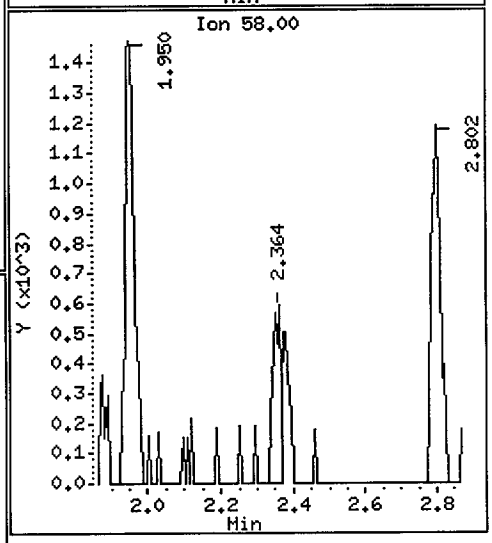












Data File: /chem/gcms/mx.i/X121103.b/f6drg1an.d

Date : 11-DEC-2003 16:32

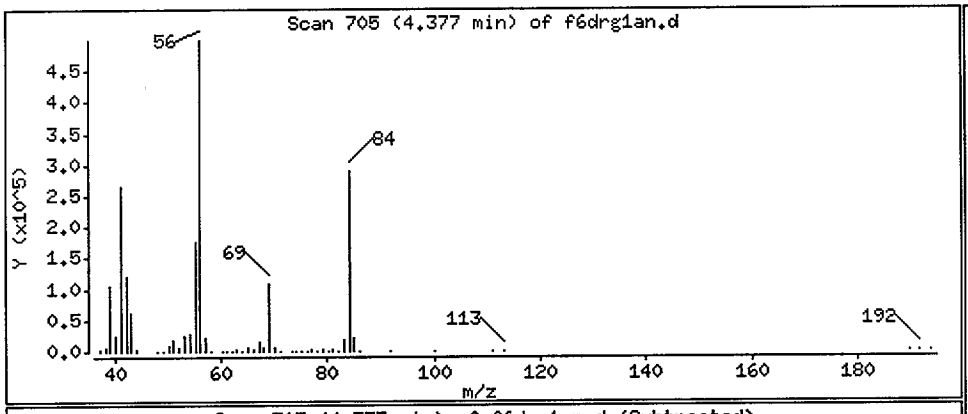
Client ID: DD3008 Instrument: mx.i

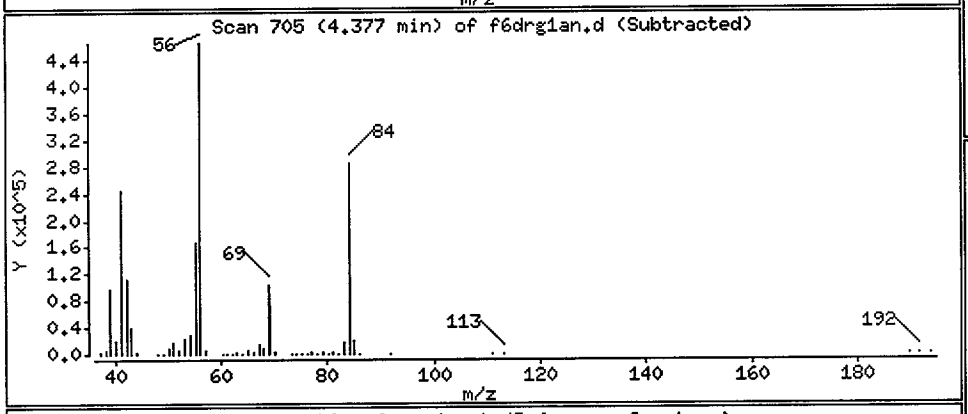
Sample Info: F6DRG1AN,1,0,,

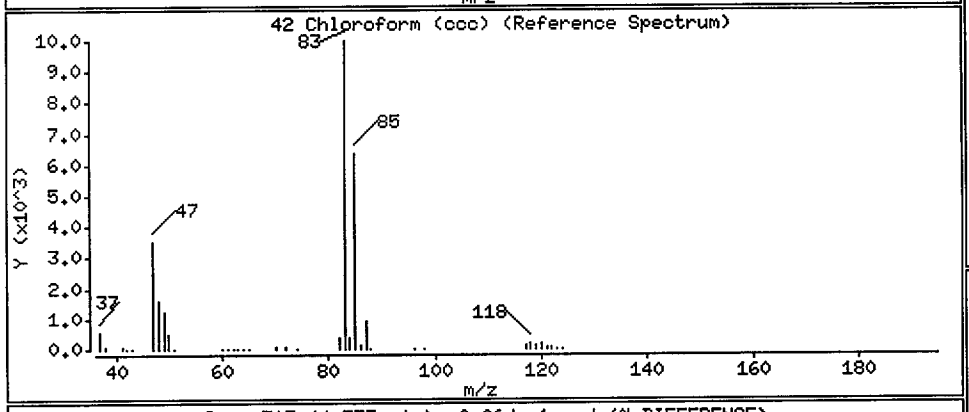
Purge Volume: 25.0 Operator: 063605

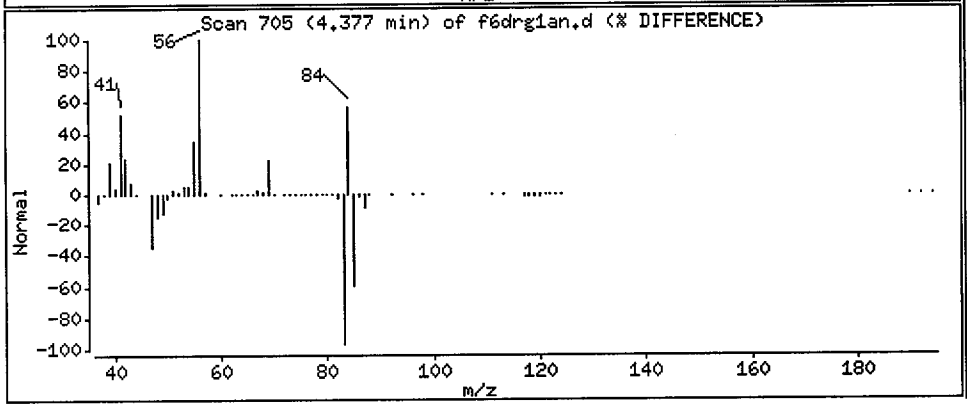
Column phase: J+W 624 Column diameter: 0.18

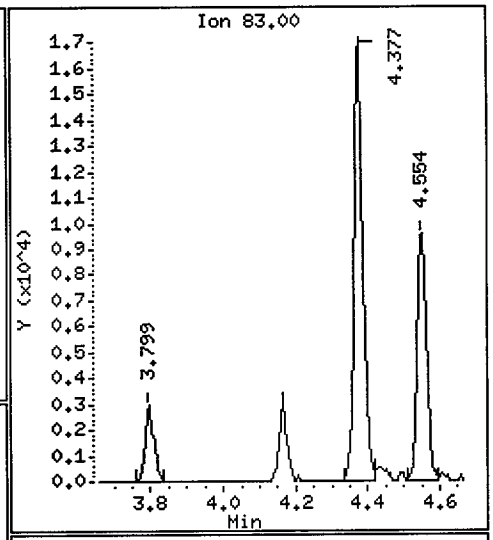
42 Chloroform (ccc) Concentration: 0.63771 ug/L

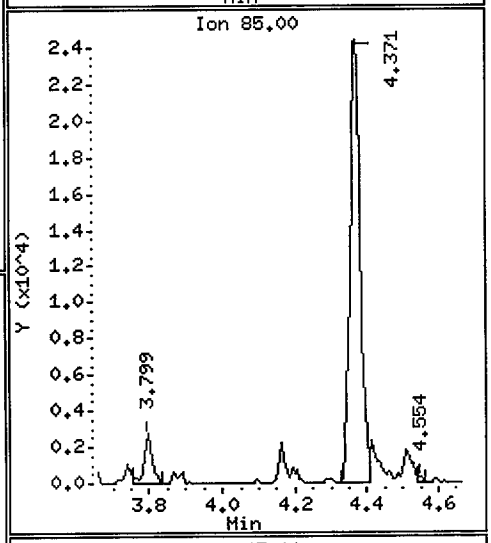


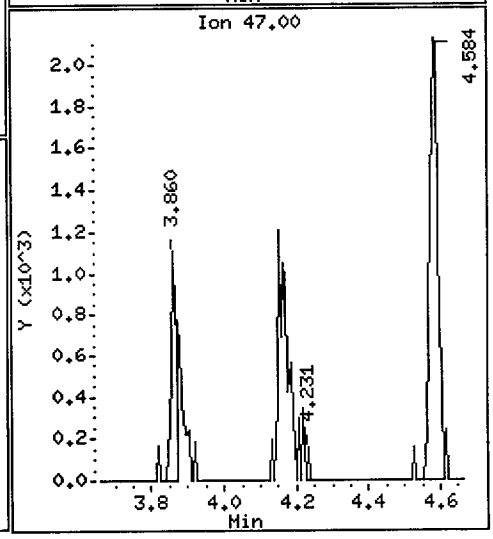












Data File: /chem/gcms/mx.i/X121103.b/f6drg1an.d

Date : 11-DEC-2003 16:32

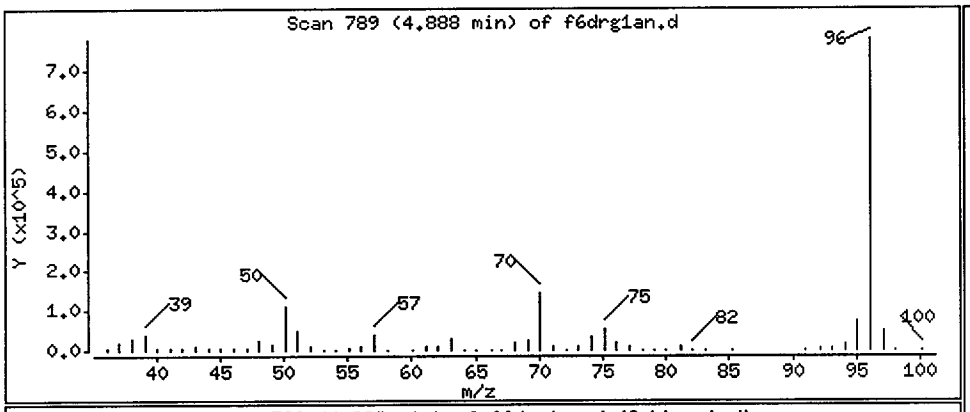
Client ID: DD3008 Instrument: mx.i

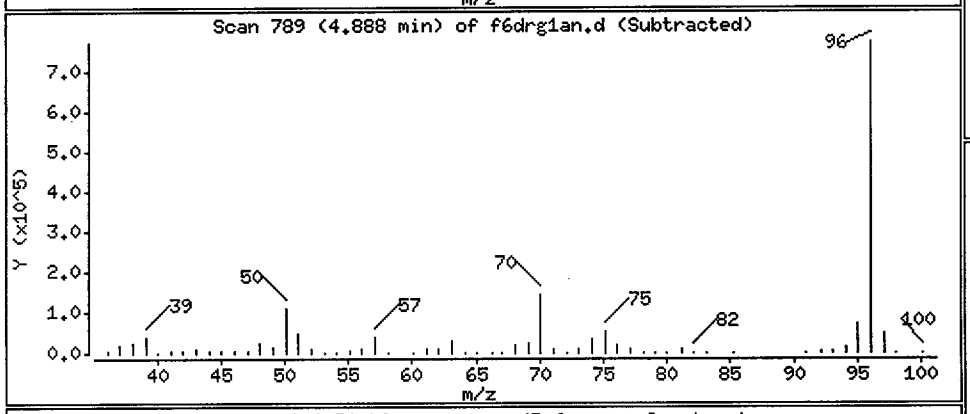
Sample Info: F6DRG1AN,1,0,,

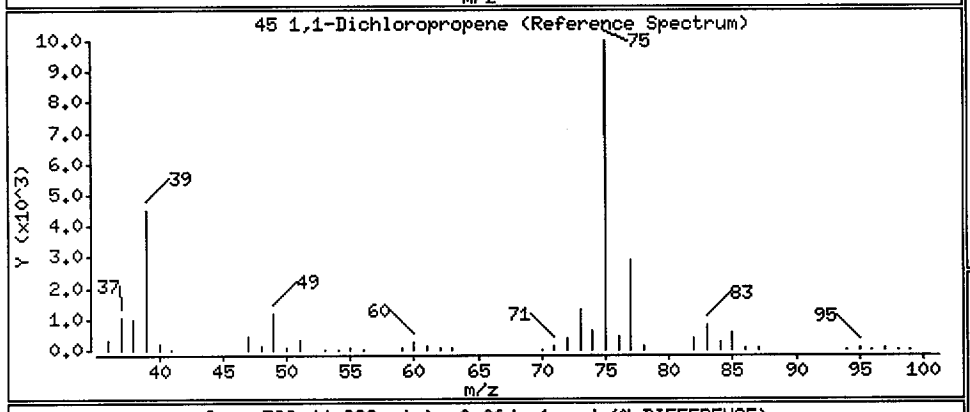
Purge Volume: 25.0 Operator: 063605

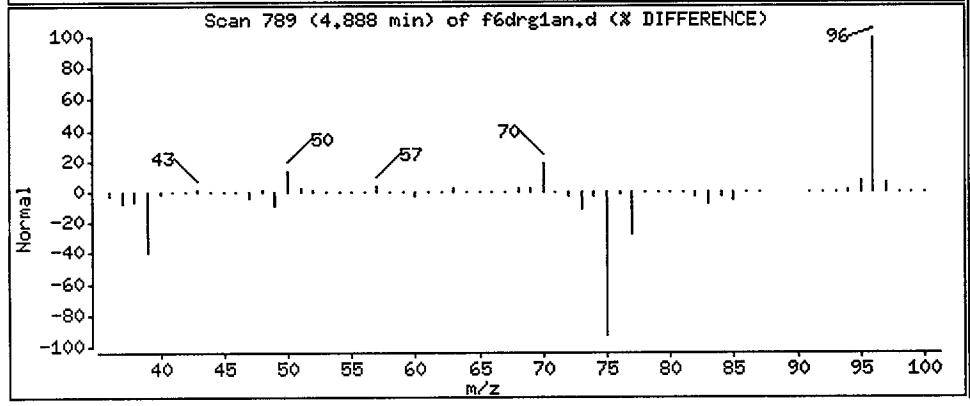
Column phase: J+W 624 Column diameter: 0.18

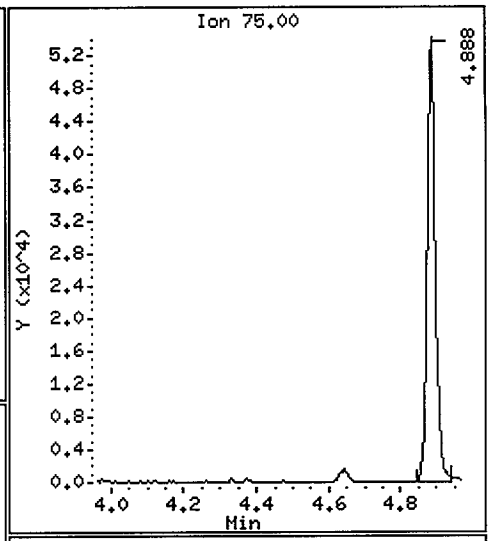
45 1,1-Dichloropropene Concentration: 2.0023 ug/L

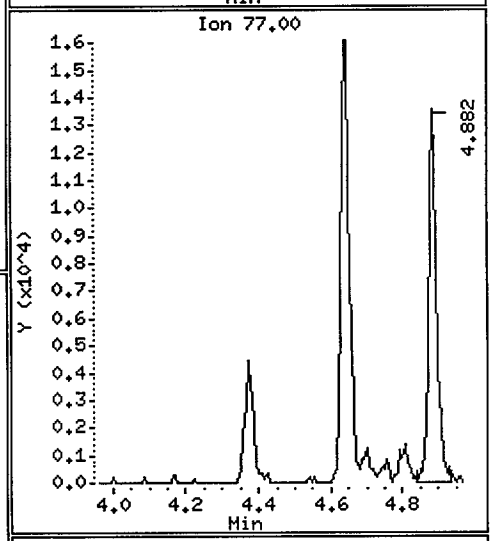


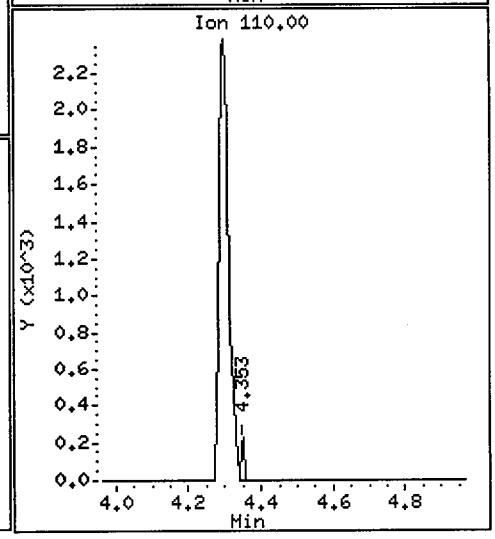












Data File: /chem/gcms/mx.i/X121103.b/f6drg1an.d

Date : 11-DEC-2003 16:32

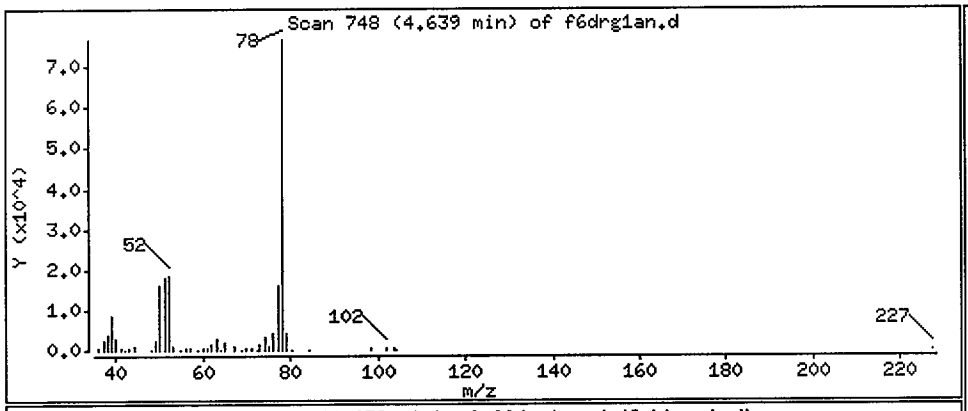
Client ID: DD3008 Instrument: mx.i

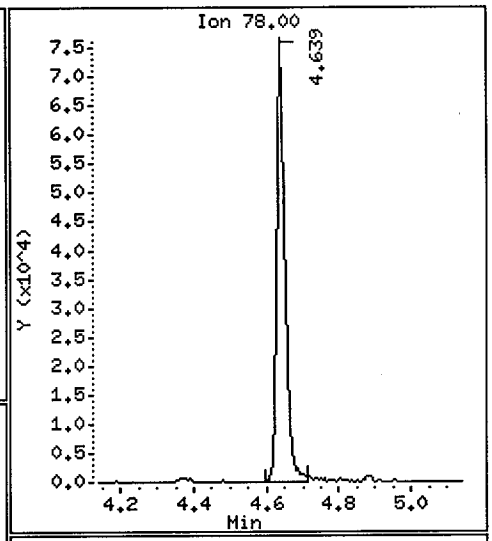
Sample Info: F6DRG1AN,1,0,,

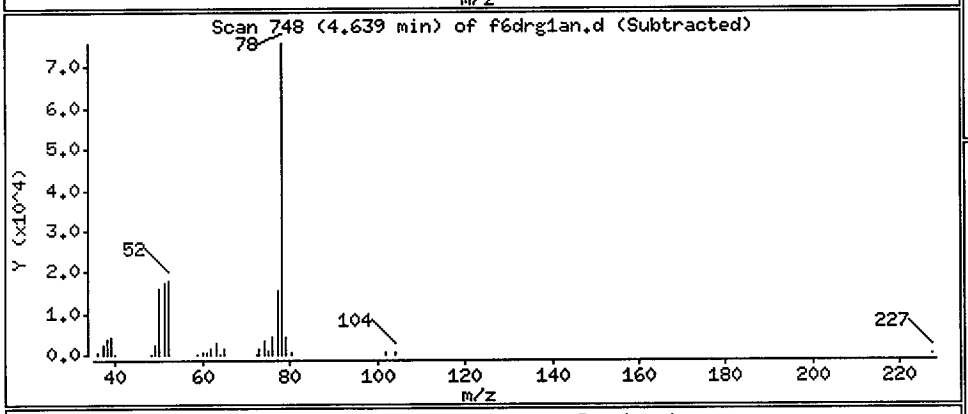
Purge Volume: 25.0 Operator: 063605

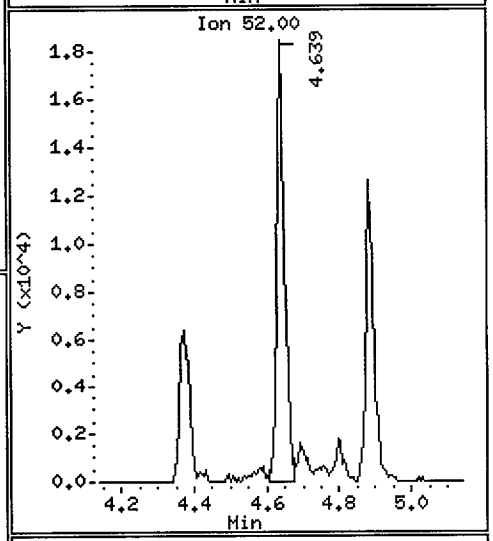
Column phase: J+W 624 Column diameter: 0.18

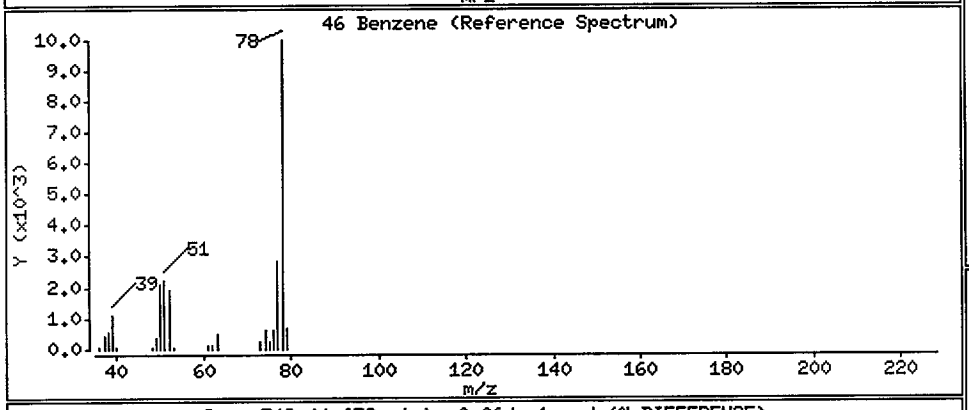
46 Benzene Concentration: 0.95851 ug/L

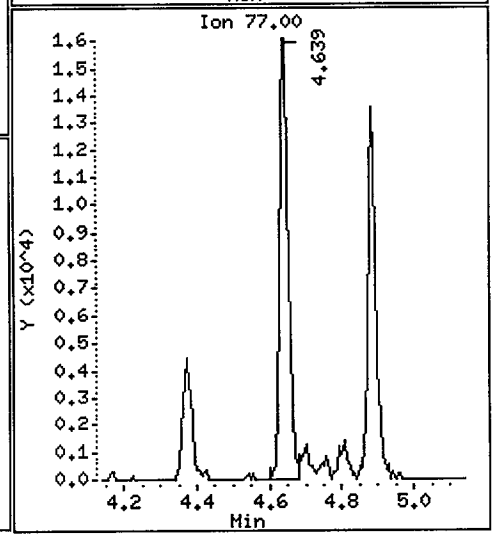


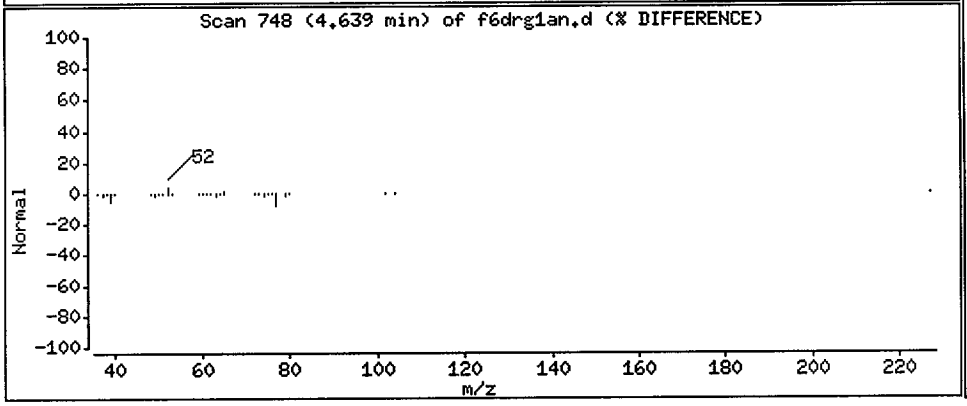












Data File: /chem/gcms/mx.i/X121103.b/f6drg1an.d

Date : 11-DEC-2003 16:32

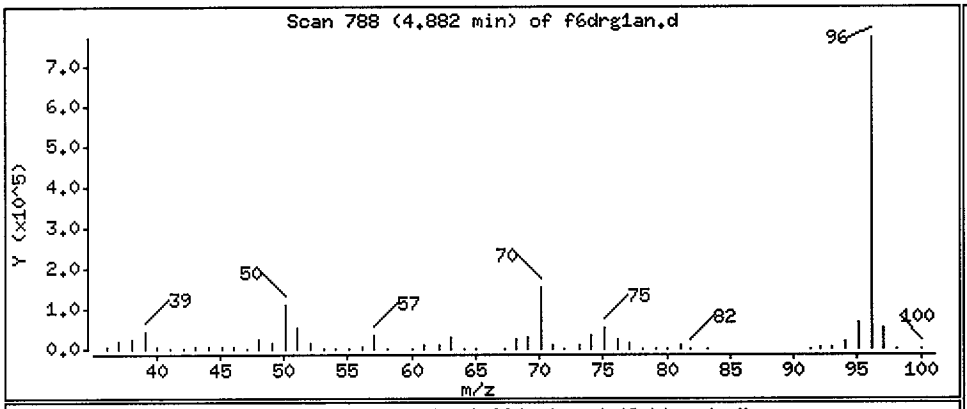
Client ID: DD3008 Instrument: mx.i

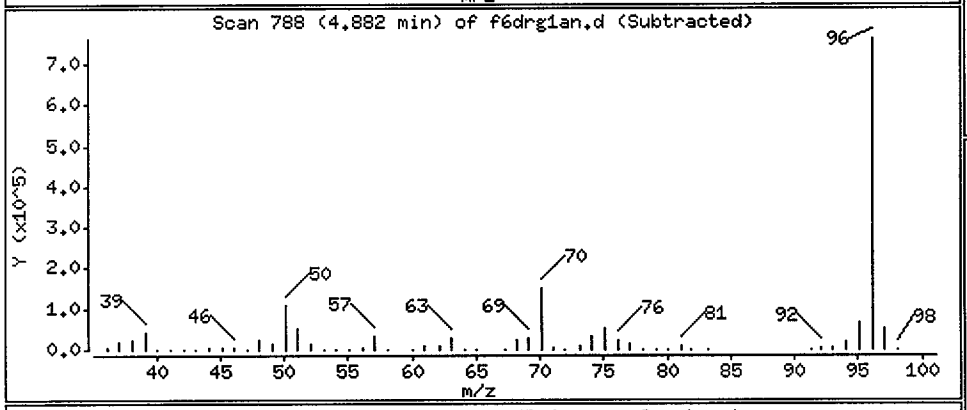
Sample Info: F6DRG1AN,1,0,,

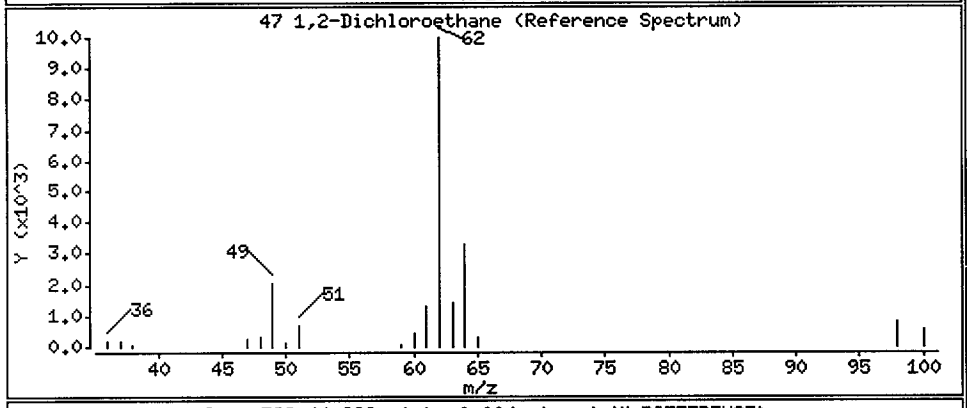
Purge Volume: 25.0 Operator: 063605

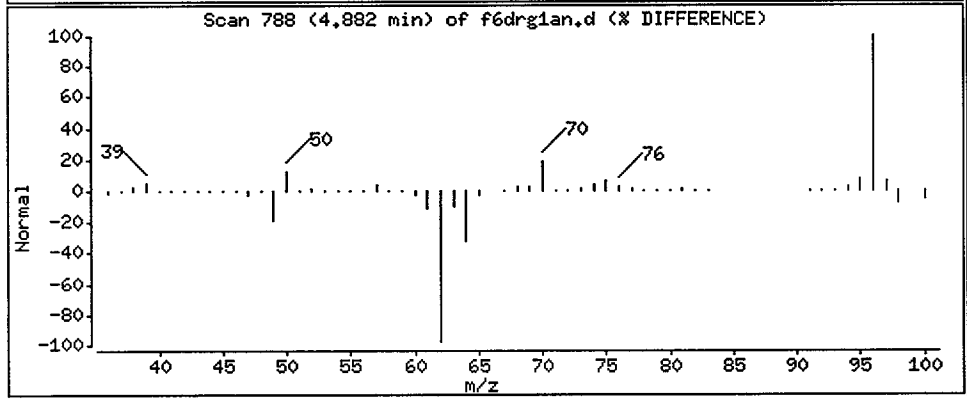
Column phase: J+W 624 Column diameter: 0.18

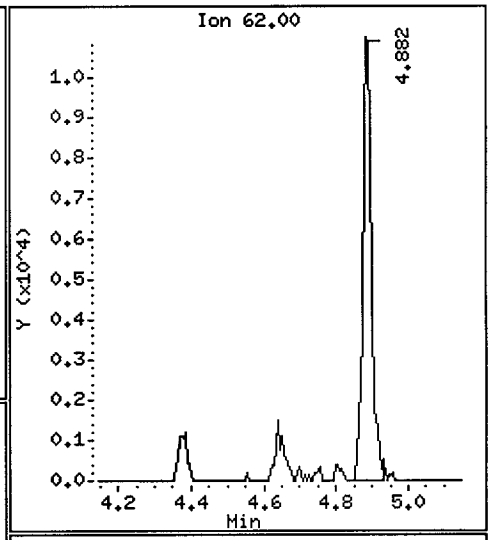
47 1,2-Dichloroethane Concentration: 0.90368 ug/L

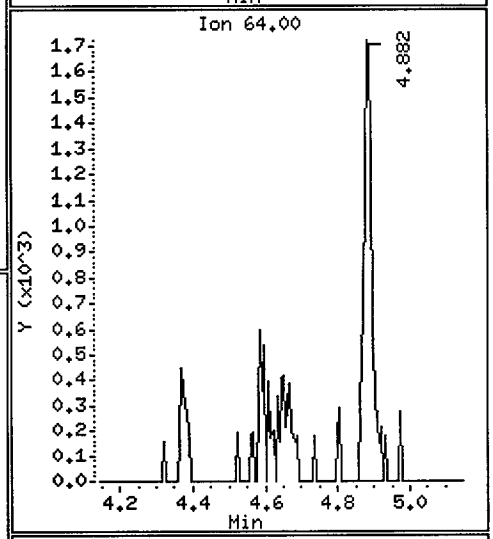


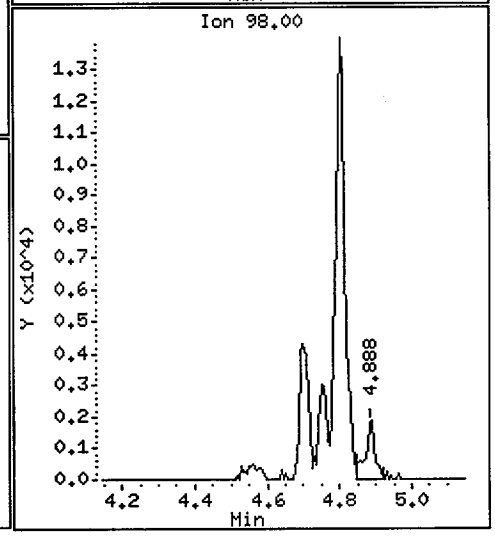












Data File: /chem/gcms/mx.i/X121103.b/f6drg1an.d

Date : 11-DEC-2003 16:32

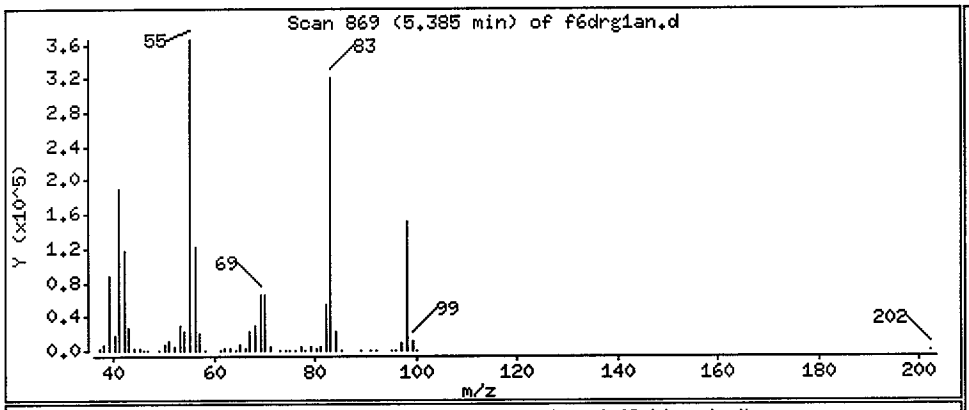
Client ID: DD3008 Instrument: mx.i

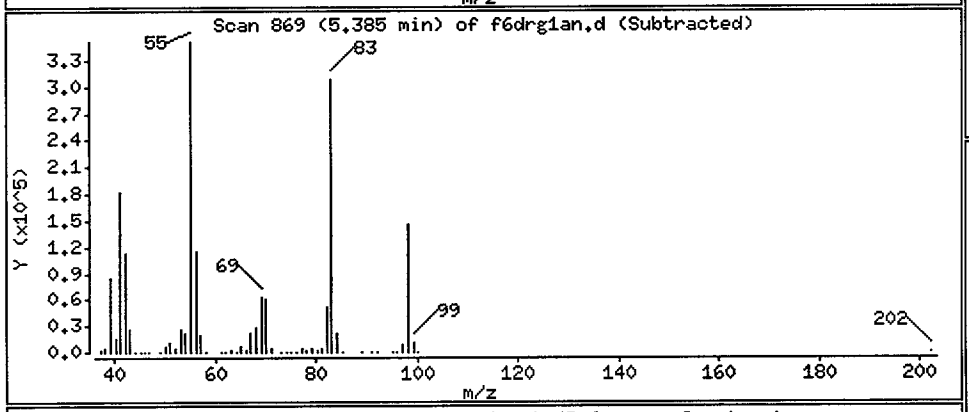
Sample Info: F6DRG1AN,1,0,,

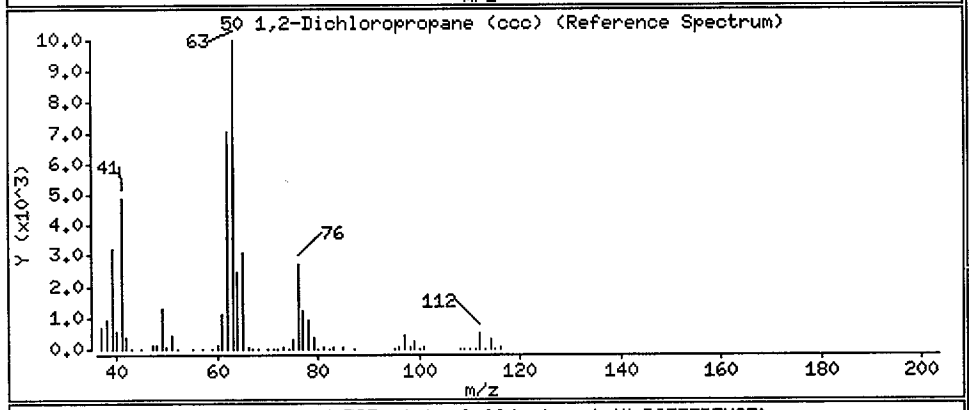
Purge Volume: 25.0 Operator: 063605

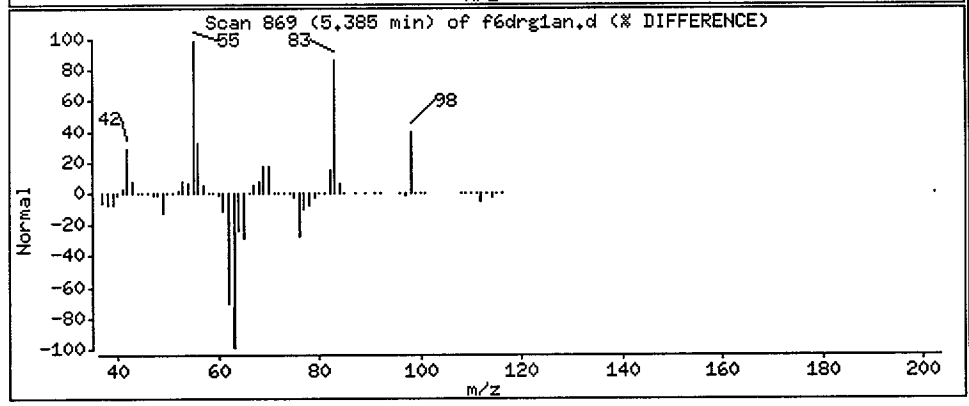
Column phase: J+W 624 Column diameter: 0.18

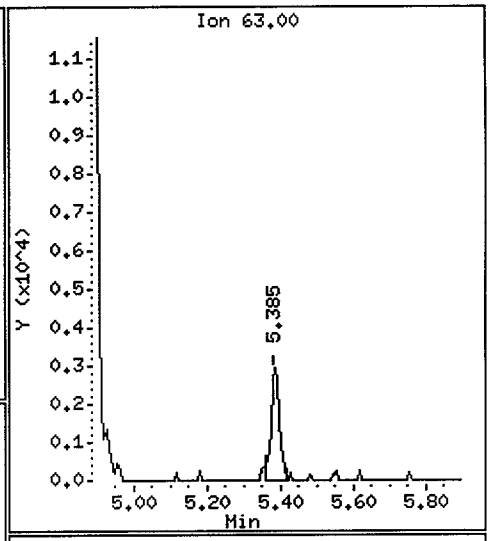
50 1,2-Dichloropropane (ccc) Concentration: 0.17063 ug/L

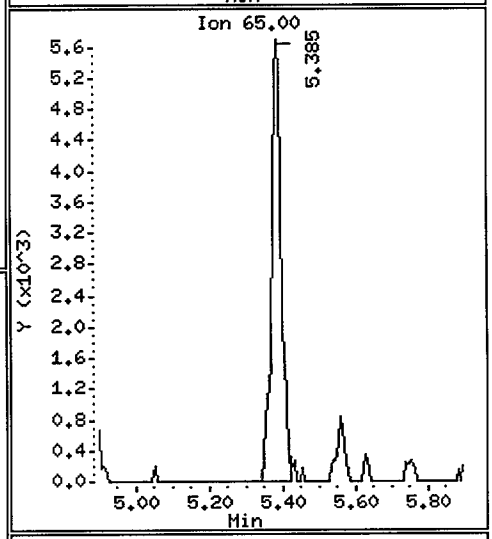


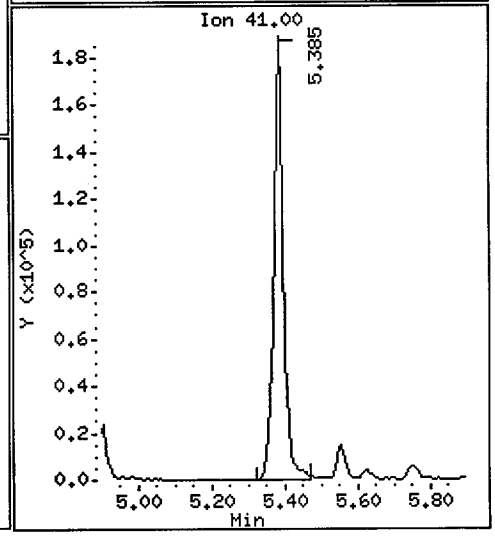












Data File: /chem/gcms/mx.i/X121103.b/f6drg1an.d

Date : 11-DEC-2003 16:32

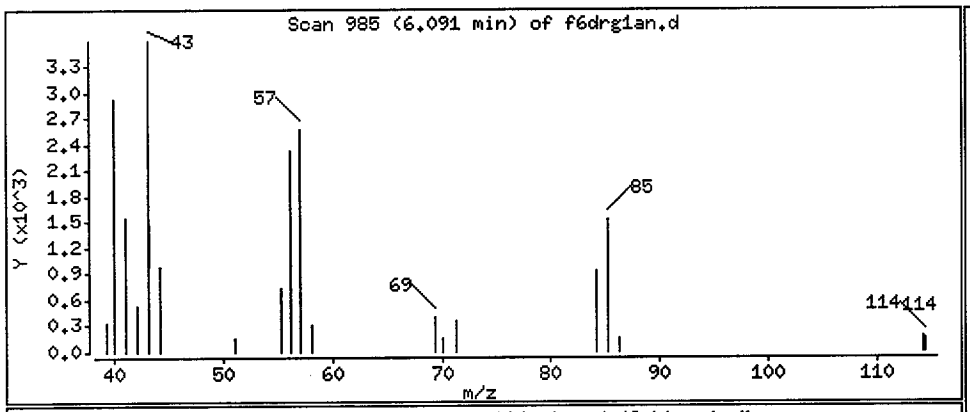
Client ID: DD3008 Instrument: mx.i

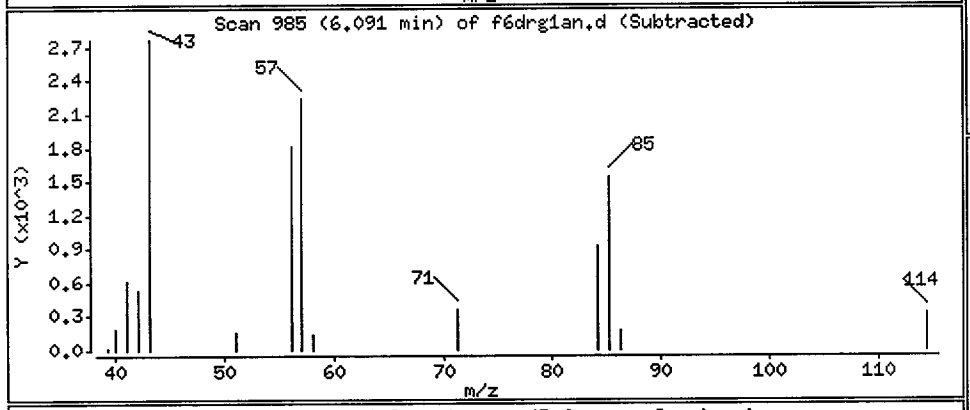
Sample Info: F6DRG1AN,1,0,,

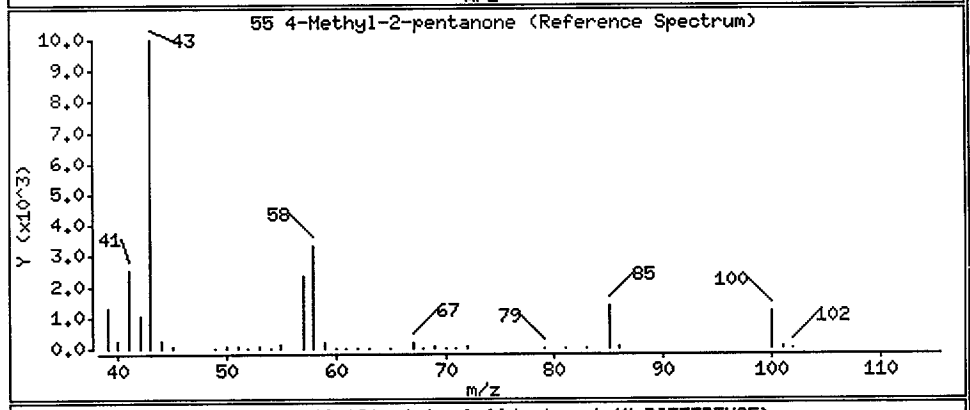
Purge Volume: 25.0 Operator: 063605

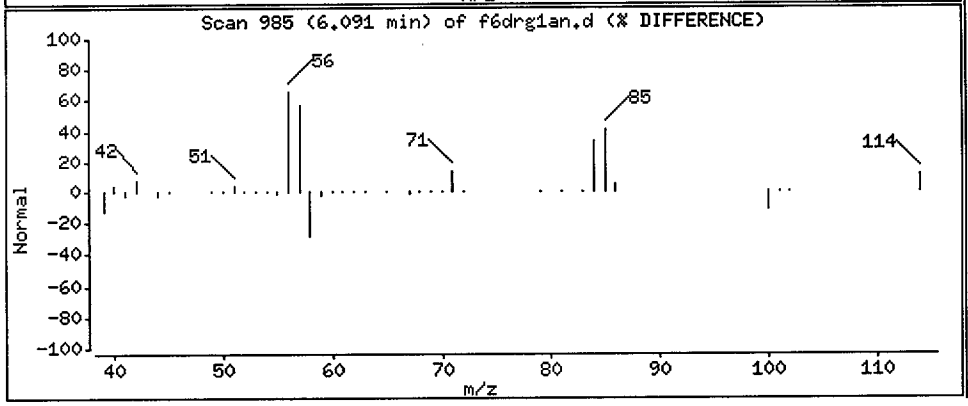
Column phase: J+W 624 Column diameter: 0.18

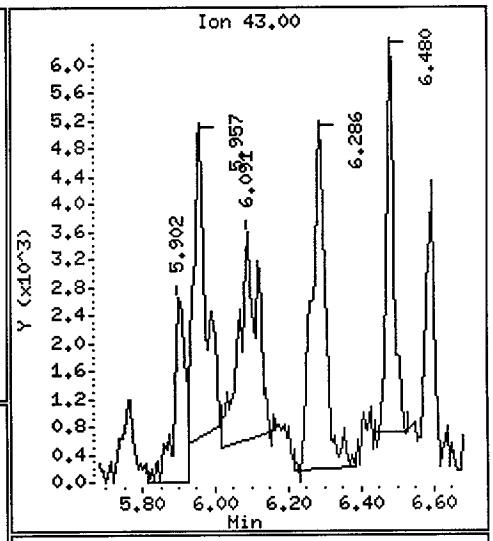
55 4-Methyl-2-pentanone Concentration: 1.1274 ug/L

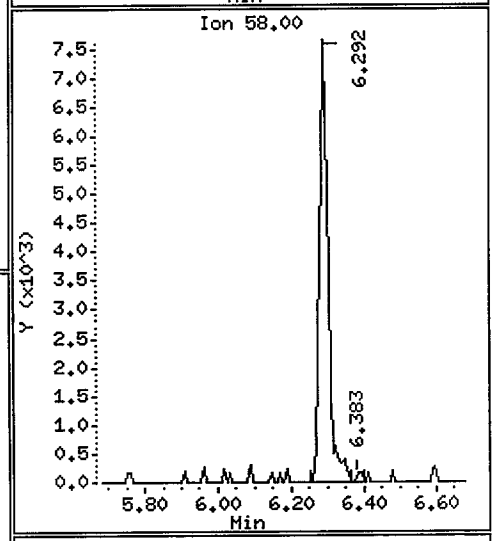


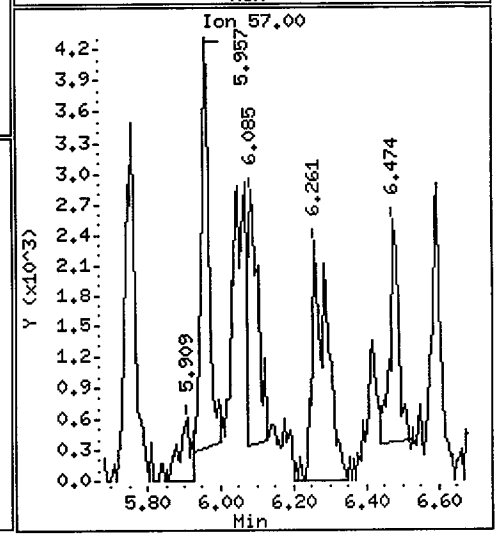












Data File: /chem/gcms/mx.i/X121103.b/f6drg1an.d

Date : 11-DEC-2003 16:32

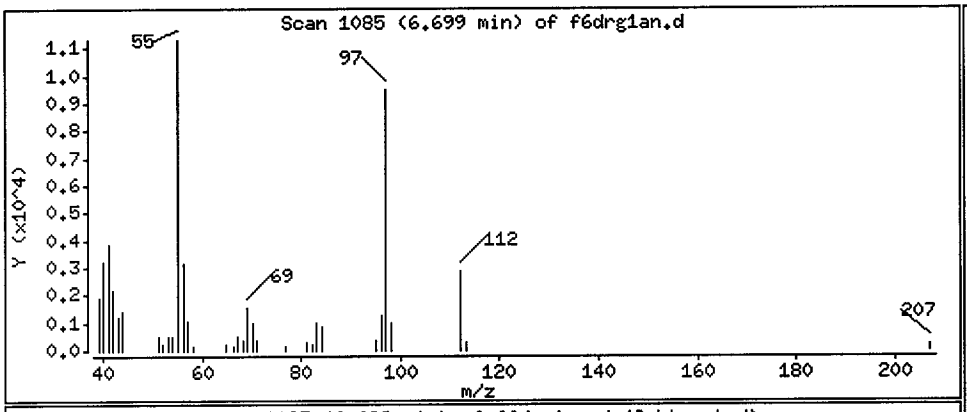
Client ID: DD3008 | Instrument: mx.i

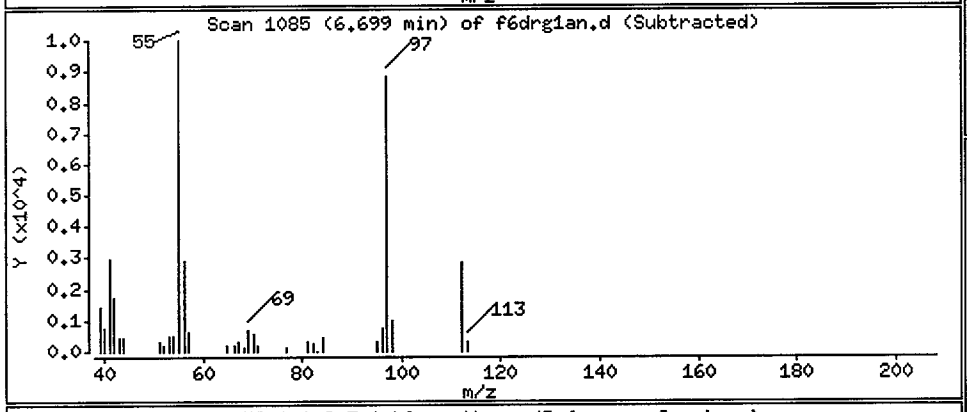
Sample Info: F6DRG1AN,1,0,,

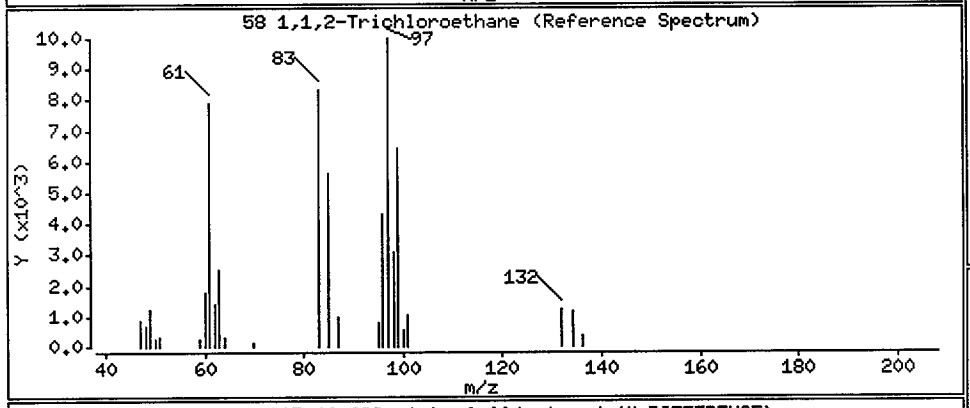
Purge Volume: 25.0 | Operator: 063605

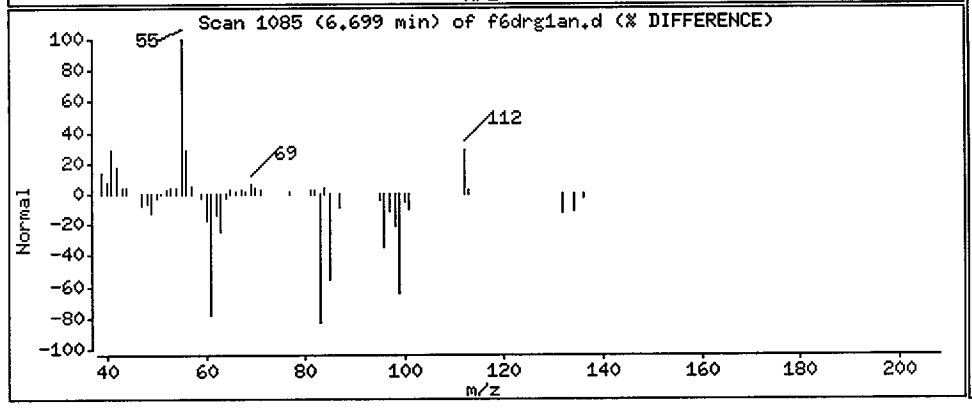
Column phase: J+W 624 | Column diameter: 0.18

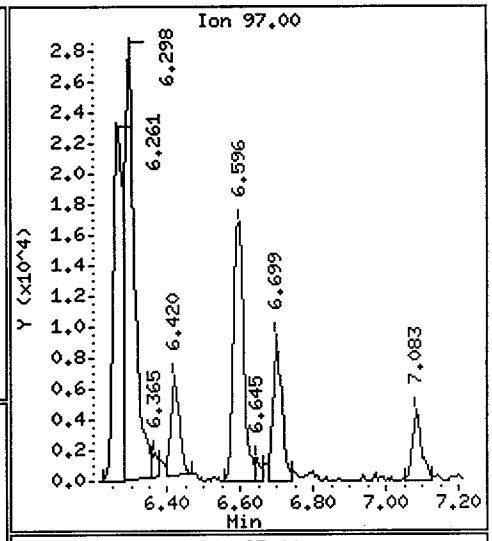
58 1,1,2-Trichloroethane | Concentration: 1.2144 ug/L

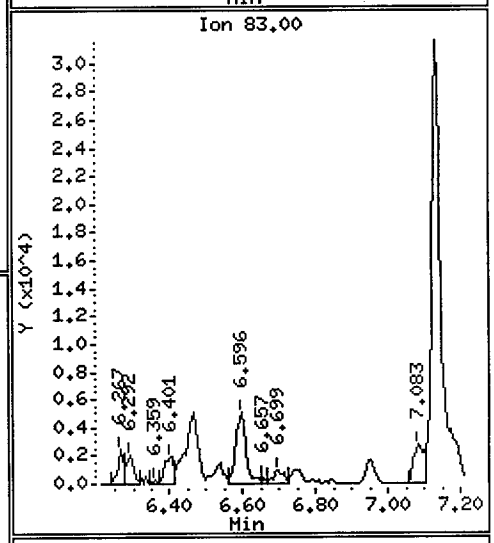


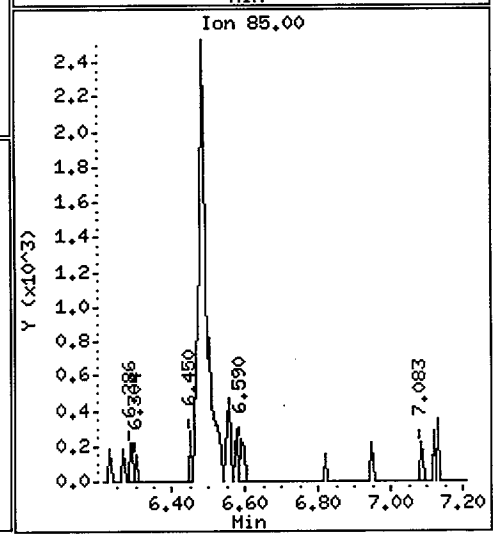












Data File: /chem/gcms/mx.i/X121103.b/f6drg1an.d

Date : 11-DEC-2003 16:32

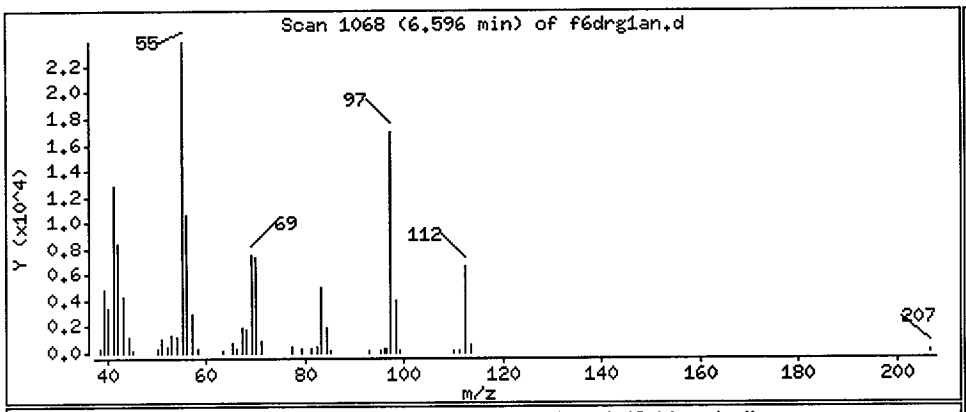
Client ID: DD3008 Instrument: mx.i

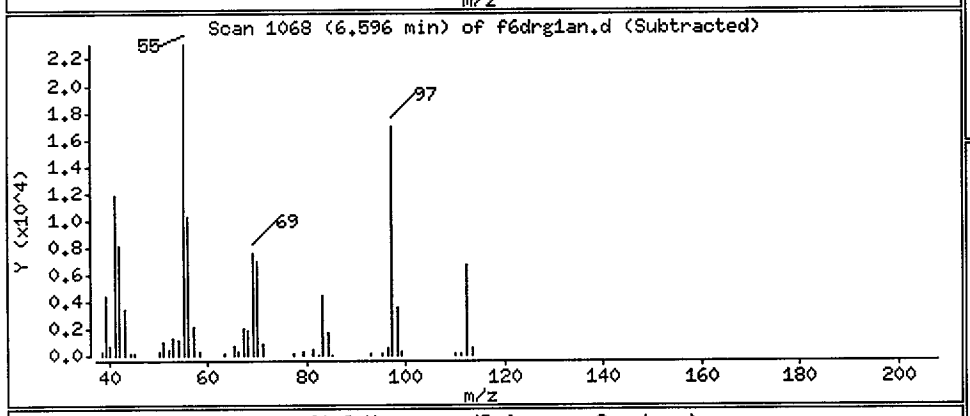
Sample Info: F6DRG1AN,1,0,,

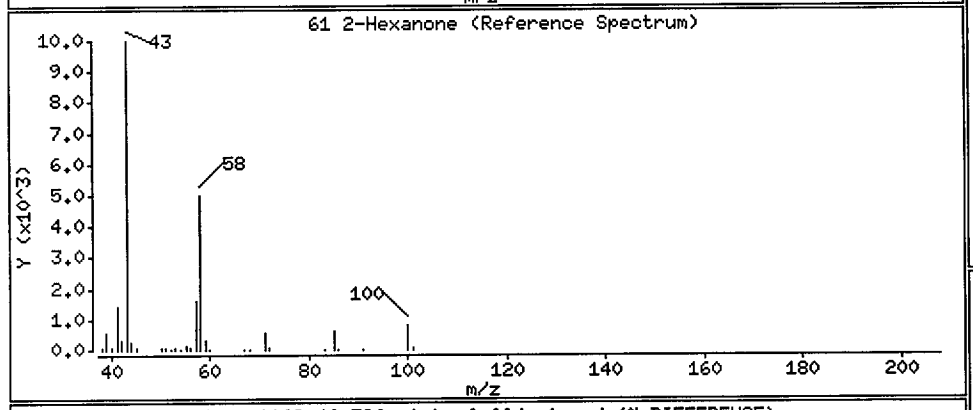
Purge Volume: 25.0 Operator: 063605

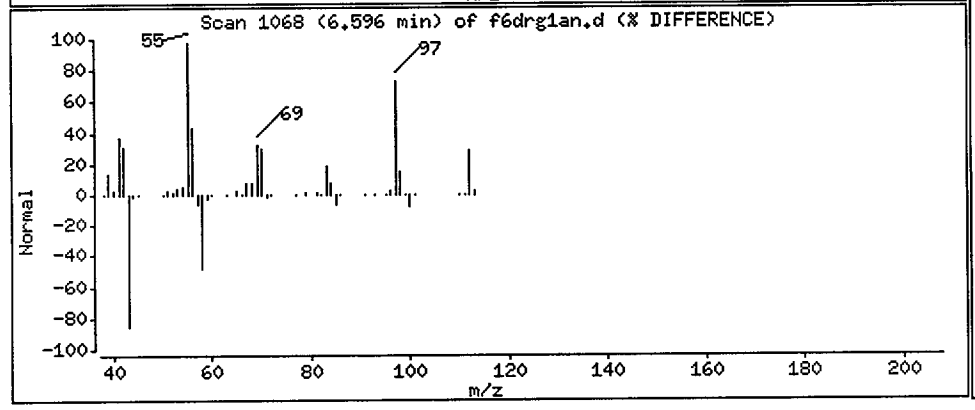
Column phase: J+W 624 Column diameter: 0.18

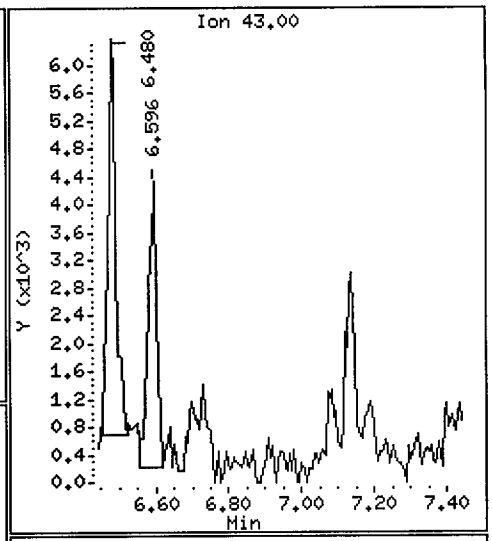
61 2-Hexanone Concentration: 0.99241 ug/L

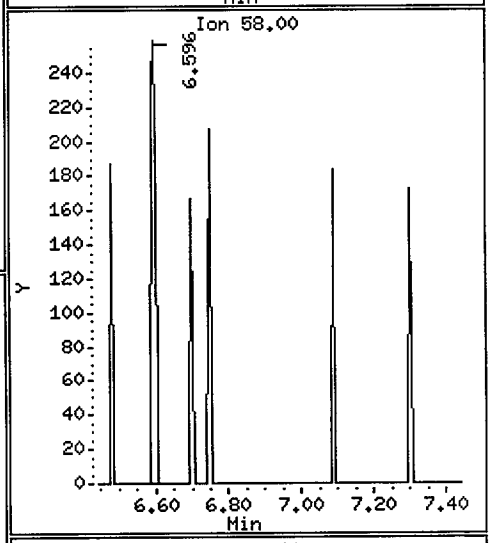


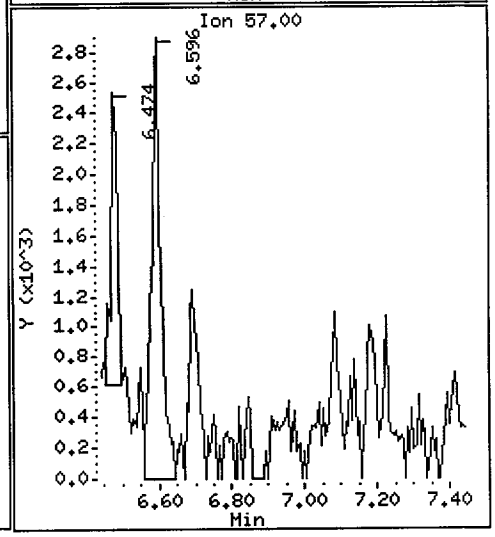












Data File: /chem/gcms/mx.i/X121103.b/f6drg1an.d

Date : 11-DEC-2003 16:32

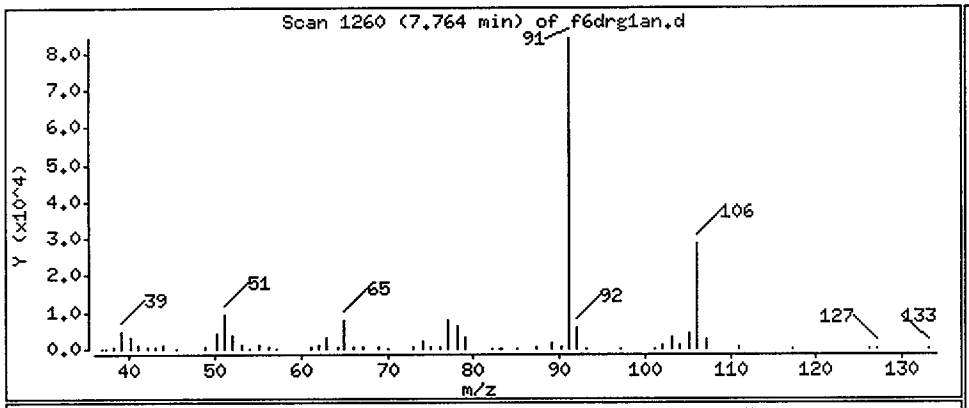
Client ID: DD3008 | Instrument: mx.i

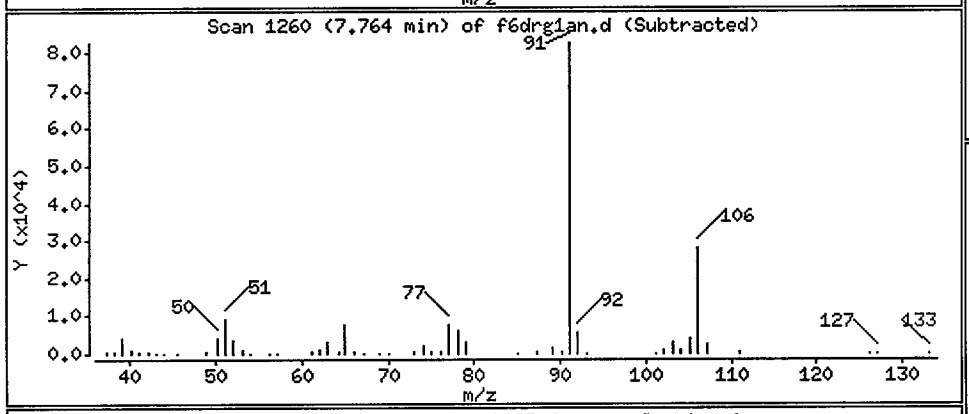
Sample Info: F6DRG1AN,1,0,,

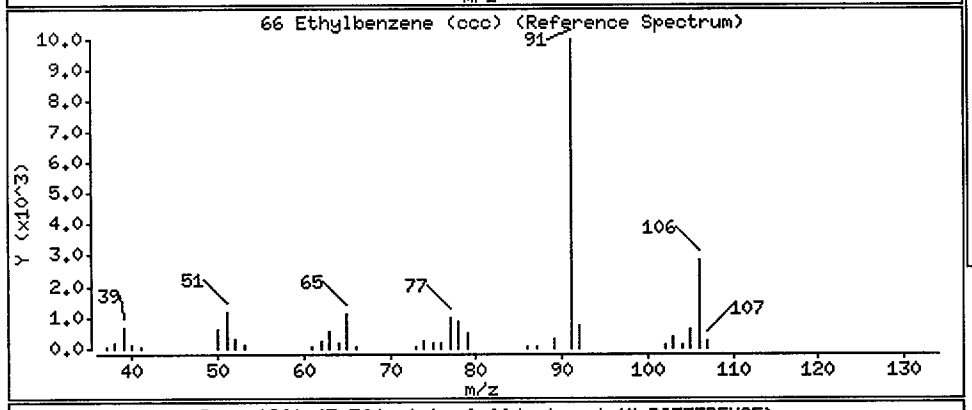
Purge Volume: 25.0 | Operator: 063605

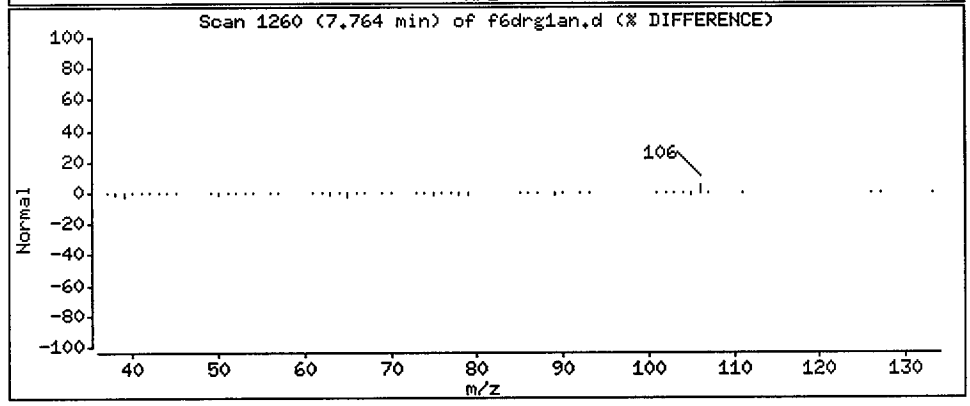
Column phase: J+W 624 | Column diameter: 0.18

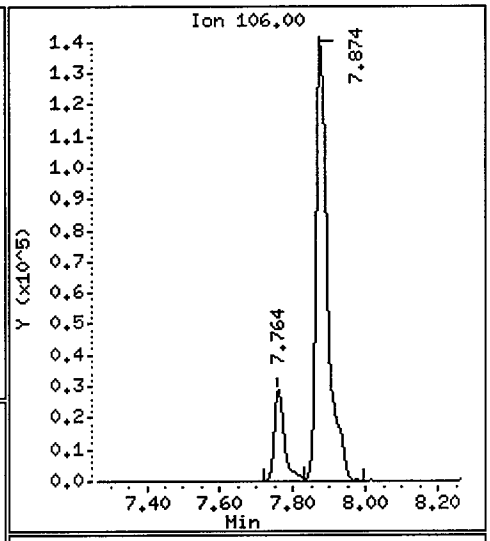
66 Ethylbenzene (ccc) | Concentration: 0.86644 ug/L

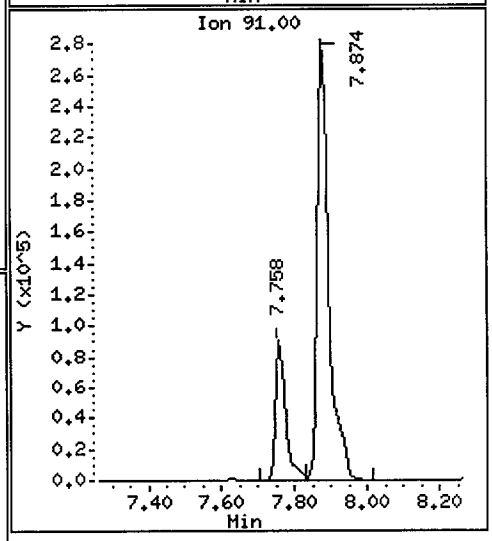












Data File: /chem/gcms/mx.i/X121103.b/f6drg1an.d

Date : 11-DEC-2003 16:32

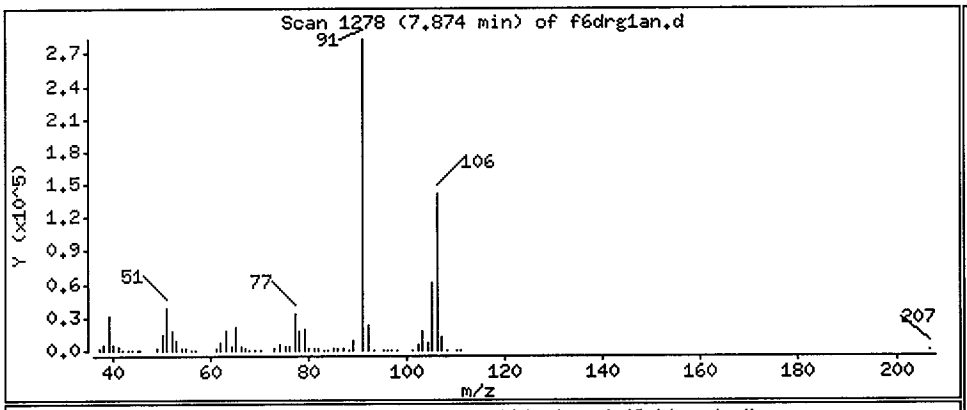
Client ID: DD3008 | Instrument: mx.i

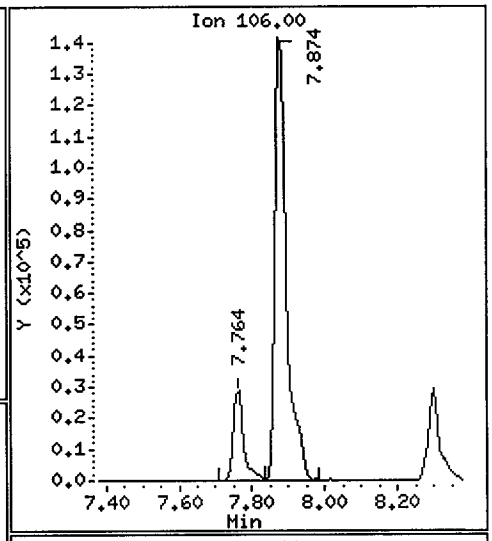
Sample Info: F6DRG1AN,1,0,,

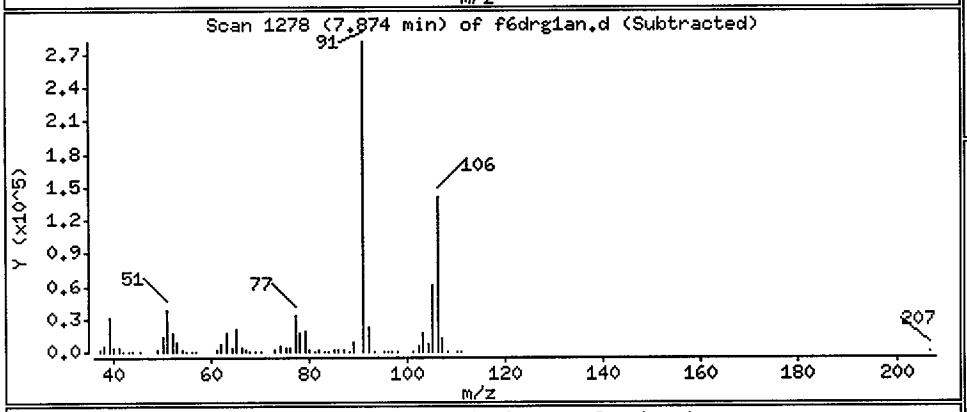
Purge Volume: 25.0 | Operator: 063605

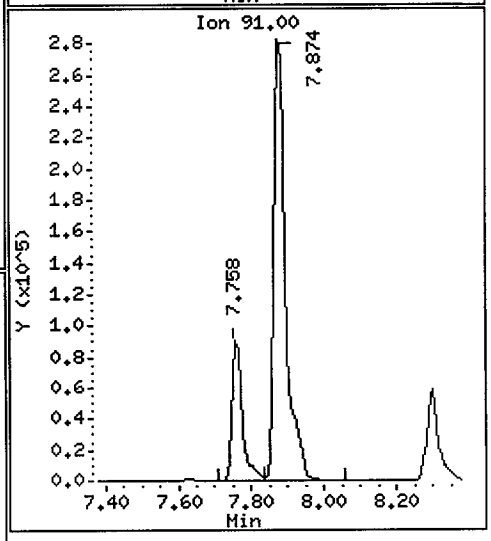
Column phase: J+W 624 | Column diameter: 0.18

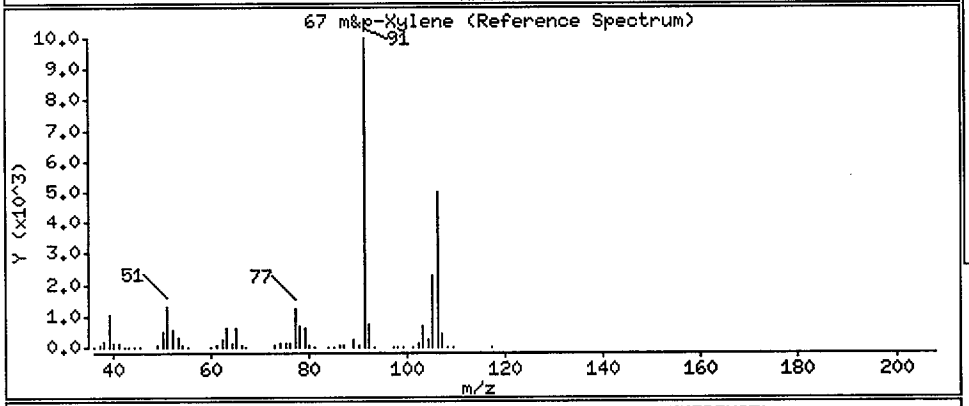
67 m&p-Xylene | Concentration: 4.1036 ug/L

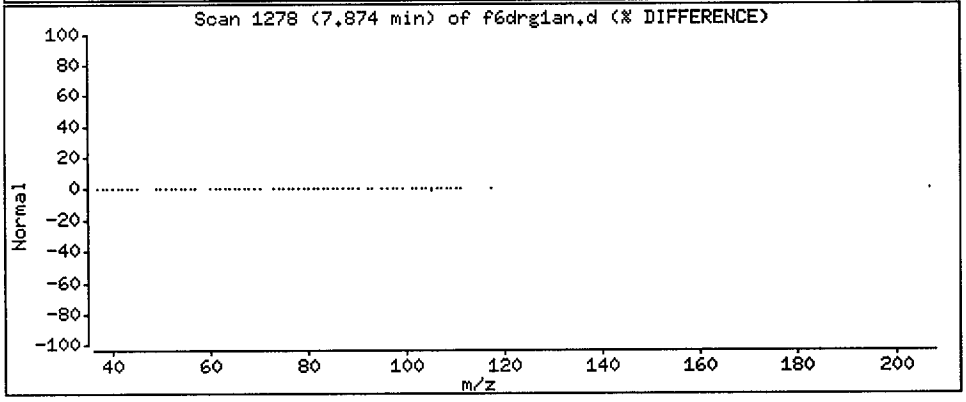












Data File: /chem/gcms/mx.i/X121103.b/f6drg1an.d

Date : 11-DEC-2003 16:32

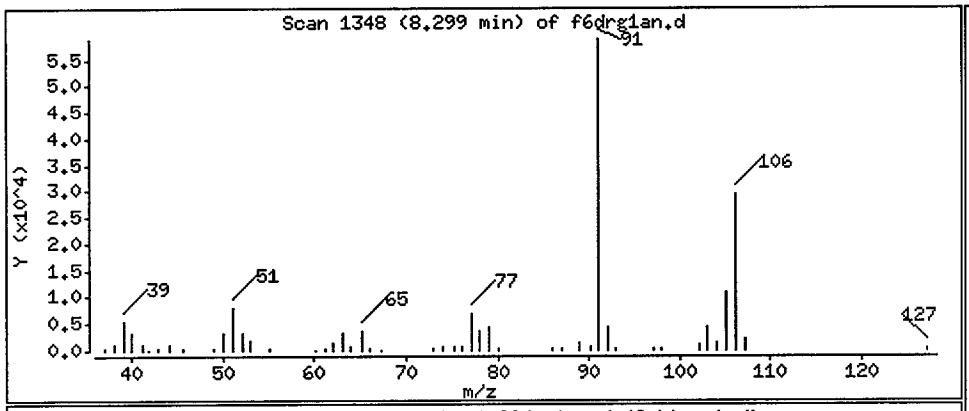
Client ID: DD3008 | Instrument: mx.i

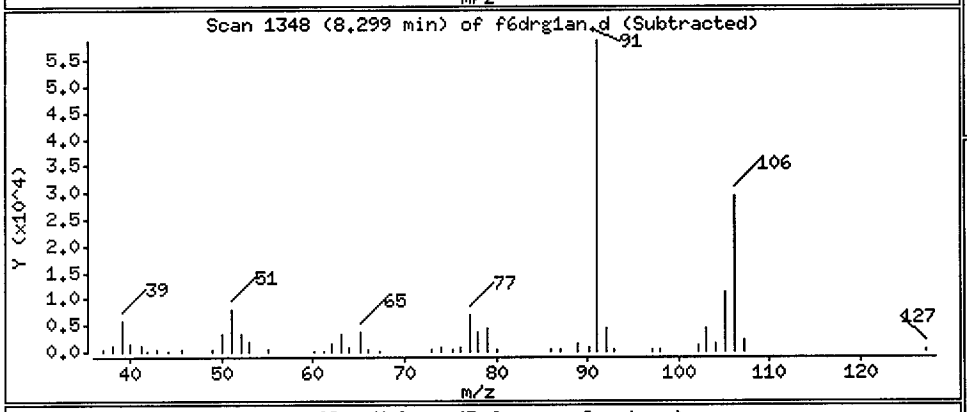
Sample Info: F6DRG1AN,1,0,,

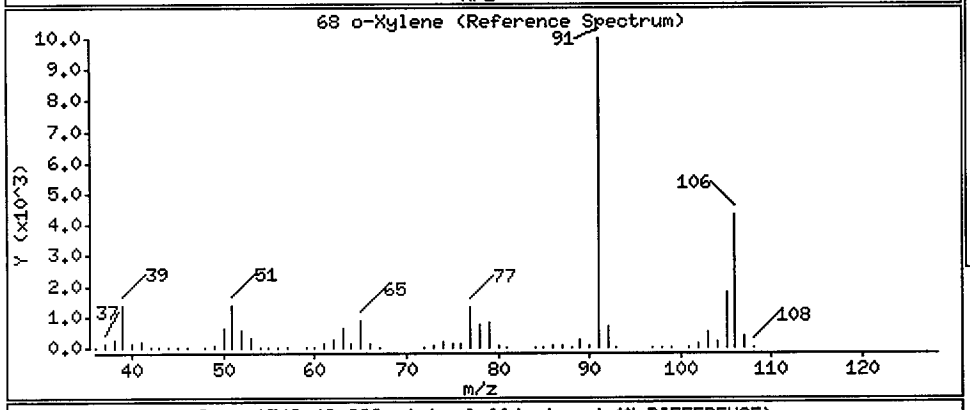
Purge Volume: 25.0 | Operator: 063605

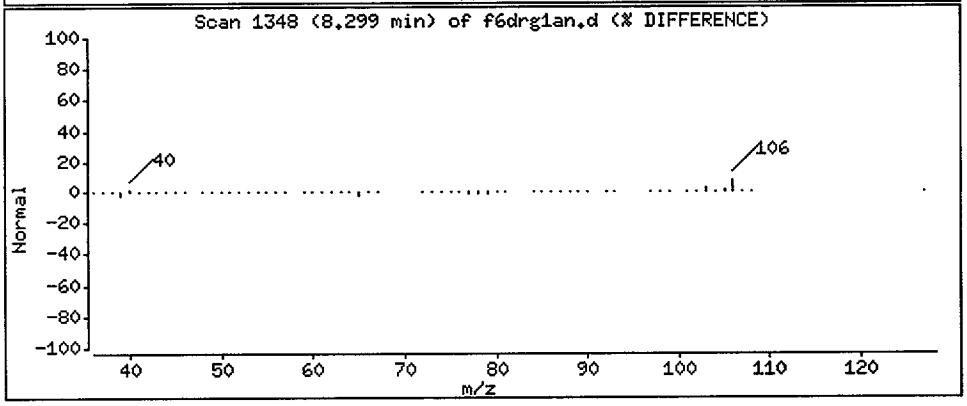
Column phase: J+W 624 | Column diameter: 0.18

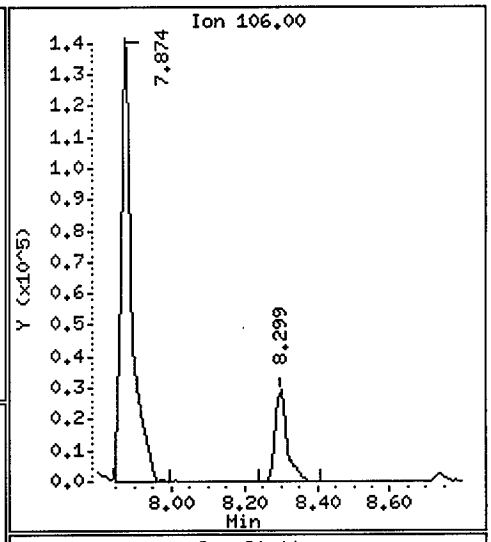
68 o-Xylene | Concentration: 0.96725 ug/L

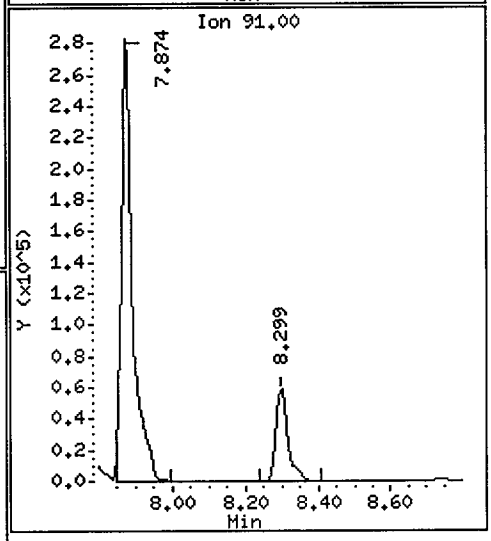












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Date : 11-DEC-2003 16:32

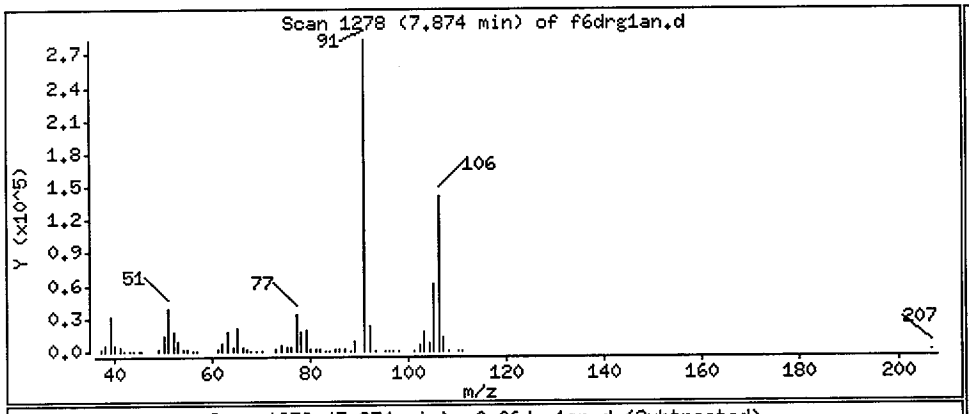
Client ID: DD3008 | Instrument: mx.i

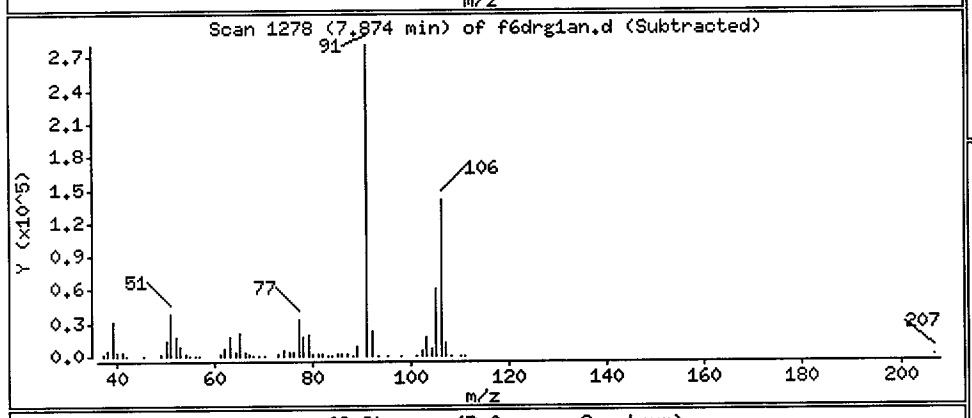
Sample Info: F6DRG1AN,1,0,,

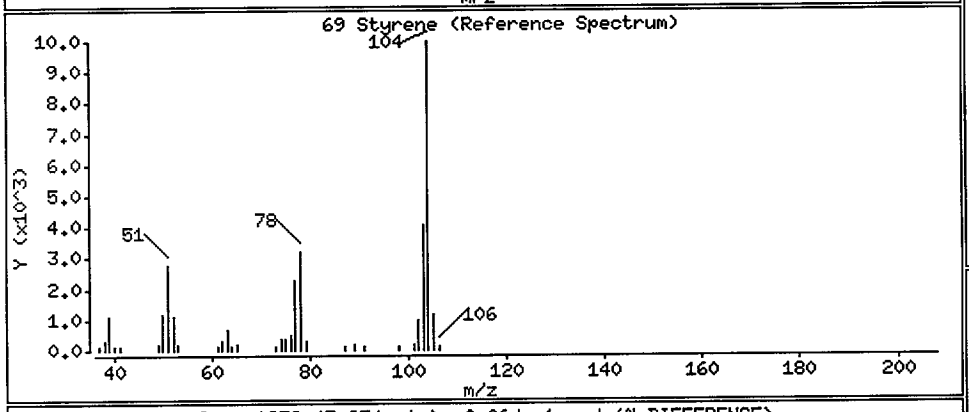
Purge Volume: 25.0 | Operator: 063605

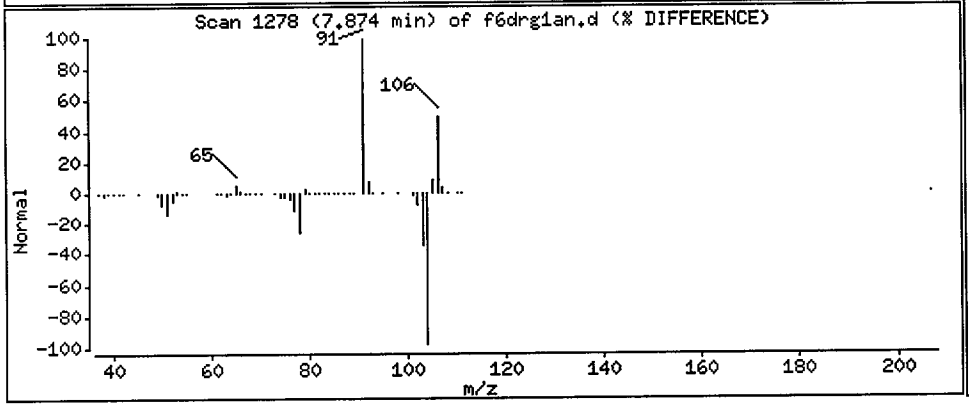
Column phase: J+W 624 | Column diameter: 0.18

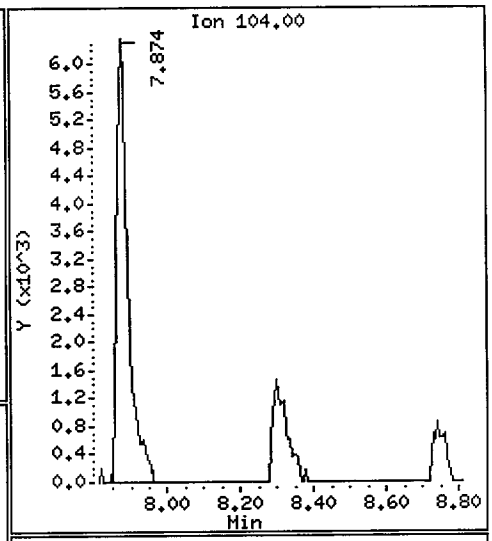
69 Styrene | Concentration: 0.13230 ug/L

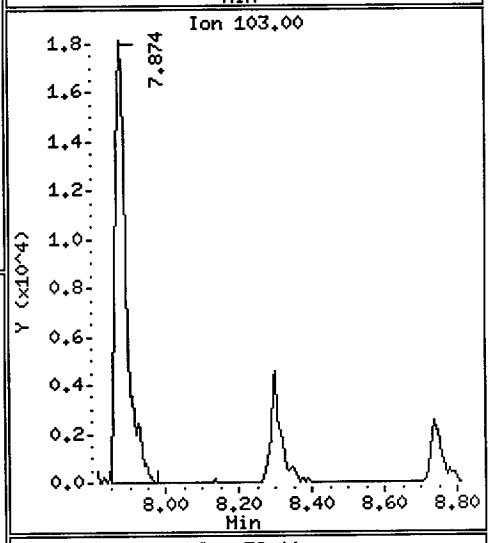


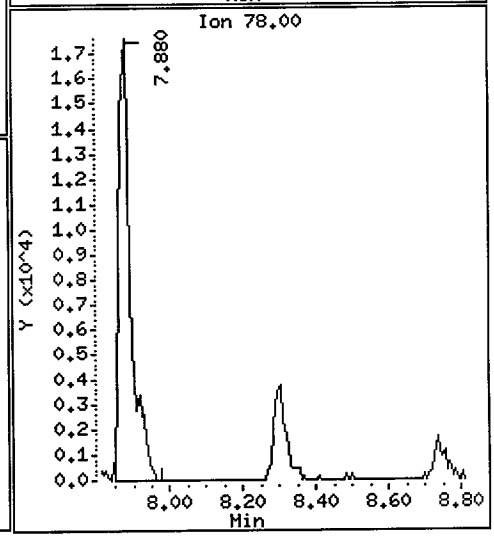












SHAW E & I INC

Client Sample ID: DD5001

GC/MS Volatiles

Lot-Sample #...: H3L100268-003 **Work Order #...:** F6DRK1AA **Matrix.....:** WATER
Date Sampled...: 12/09/03 **Date Received..:** 12/10/03
Prep Date.....: 12/11/03 **Analysis Date..:** 12/11/03
Prep Batch #...: 3345349
Dilution Factor: 1 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Chloromethane	ND	2.0	ug/L	0.12
Bromomethane	ND	2.0	ug/L	0.38
Vinyl chloride	ND	1.0	ug/L	0.24
Chloroethane	ND	2.0	ug/L	0.24
Methylene chloride	ND	2.0	ug/L	0.23
Acetone	ND	10	ug/L	1.4
Carbon disulfide	**0.13 J**	**1.0**	**ug/L**	**0.10**
1,1-Dichloroethene	ND	1.0	ug/L	0.10
1,1-Dichloroethane	ND	1.0	ug/L	0.10
1,2-Dichloroethene (total)	ND	1.0	ug/L	0.20
Chloroform	ND	1.0	ug/L	0.10
1,2-Dichloroethane	ND	1.0	ug/L	0.10
2-Butanone	ND	5.0	ug/L	0.75
1,1,1-Trichloroethane	ND	1.0	ug/L	0.10
Carbon tetrachloride	ND	1.0	ug/L	0.12
Bromodichloromethane	ND	1.0	ug/L	0.10
1,2-Dichloropropane	ND	1.0	ug/L	0.10
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.10
Trichloroethene	ND	1.0	ug/L	0.10
Dibromochloromethane	ND	1.0	ug/L	0.20
1,1,2-Trichloroethane	ND	1.0	ug/L	0.25
Benzene	ND	1.0	ug/L	0.10
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.11
Bromoform	ND	1.0	ug/L	0.14
4-Methyl-2-pentanone	ND	5.0	ug/L	0.40
2-Hexanone	ND	5.0	ug/L	0.76
Tetrachloroethene	ND	1.0	ug/L	0.10
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.15
Toluene	ND	1.0	ug/L	0.10
Chlorobenzene	ND	1.0	ug/L	0.10
Ethylbenzene	ND	1.0	ug/L	0.10
Styrene	ND	1.0	ug/L	0.10
Xylenes (total)	ND	1.0	ug/L	0.30

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	104	(79 - 120)
1,2-Dichloroethane-d4	100	(71 - 127)
Toluene-d8	102	(80 - 120)
Bromofluorobenzene	91	(69 - 126)

(Continued on next page)

SHAW E & I INC

Client Sample ID: DD5001

GC/MS Volatiles

Lot-Sample #...: H3L100268-003 **Work Order #...:** F6DRK1AA **Matrix.....:** WATER

NOTE(S):

J Estimated result. Result is less than RL.

Data File: /chem/gcms/mx.i/X121103.b/f6drk1aa.d
Report Date: 11-Dec-2003 17:13

STL Knoxville

SW-846 Method 8260A - Volatile Organics

Data file : /chem/gcms/mx.i/X121103.b/f6drk1aa.d
Lab Smp Id: F6DRK1AA Client Smp ID: DD5001
Inj Date : 11-DEC-2003 16:56
Operator : 063605 Inst ID: mx.i
Smp Info : F6DRK1AA,1,0,,
Misc Info : X121103,8260B_LM,ms.sub
Comment :
Method : /var/chem/gcms/mx.i/X121103.b/8260B_LM.m
Meth Date : 11-Dec-2003 16:28 tillerm Quant Type: ISTD
Cal Date : 16-SEP-2003 12:52 Cal File: icxi166.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ms.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * Uf*Vt/(Vo*1000) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Unit Correction factor
Vt	25000.00000	Sample Volume Purged
Vo	25.00000	Sample Volume Used

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
* 1 Fluorobenzene	96	4.881	4.885	(1.000)	1353677	10.0000	
* 2 Chlorobenzene-d5	119	7.624	7.624	(1.000)	288097	10.0000	
* 3 1,4 Dichlorobenzene-d4	152	10.818	10.824	(1.000)	329834	10.0000	
$ 5 1,2-Dichloroethane-d4	65	4.583	4.581	(0.939)	173394	9.96973	9.9697
$ 4 Dibromofluoromethane	113	4.297	4.295	(0.880)	233577	10.3618	10.362
$ 6 Toluene-d8	98	6.292	6.292	(0.825)	1355359	10.2418	10.242
$ 7 4-Bromofluorobenzene	95	8.932	8.932	(0.826)	361087	9.14598	9.1460
11 Chloromethane (spcc)	50	1.231	1.229	(0.252)	2781	~~0.25290~~	~~0.25290~~
15 Chloroethane	64	1.177	1.655	(0.241)	58292	~~2.82715~~	~~2.6272~~
24 Carbon Disulfide	76	2.497	2.500	(0.511)	12634	0.13378	0.13378
45 1,1-Dichloropropene	75	4.881	4.465	(1.000)	90524	~~1.96680~~	~~1.9668~~
47 1,2-Dichloroethane	62	4.881	4.648	(1.000)	18970	~~0.86178~~	~~0.86178~~
55 4-Methyl-2-pentanone	43	6.292	6.182	(1.289)	6871	~~0.69897~~	~~0.69897~~
66 Ethylbenzene (ccc)	106	7.874	7.764	(1.033)	8055	~~0.12857~~	~~0.12856~~

12/15/03

Data File: /chem/gcms/mx.i/X121103.b/f6drk1aa.d
Report Date: 11-Dec-2003 17:13

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
67 m&p-Xylene	106	7.874	7.880	(1.033)	8119	0.10844	0.10844
68 o-Xylene	106	7.874	8.299	(1.033)	8038	~~0.11950~~	~~0.11950~~
M 9 Xylene (total)	106				16157	0.22794	~~0.22794~~

MT
12/15/03

Data File: /chem/gcms/mx.i/X121103.b/f6drk1aa.d
Report Date: 11-Dec-2003 17:13

STL Knoxville

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: mx.i
Lab File ID: f6drk1aa.d
Lab Smp Id: F6DRK1AA
Analysis Type: VOA
Quant Type: ISTD
Operator: 063605
Method File: /var/chem/gcms/mx.i/X121103.b/8260B_LM.m
Misc Info: X121103,8260B_LM,ms.sub

Calibration Date: 11-DEC-2003
Calibration Time: 14:00
Client Smp ID: DD5001
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Fluorobenzene	1419469	709734	2838938	1353677	-4.63
2 Chlorobenzene-d5	292458	146229	584916	288097	-1.49
3 1,4 Dichlorobenze	323231	161616	646462	329834	2.04

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Fluorobenzene	4.89	4.39	5.39	4.88	-0.08
2 Chlorobenzene-d5	7.62	7.12	8.12	7.62	0.00
3 1,4 Dichlorobenze	10.82	10.32	11.32	10.82	-0.05

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

Data File: /chem/gcms/mx.i/X121103.b/f6drk1aa.d
Report Date: 11-Dec-2003 17:13

STL Knoxville

RECOVERY REPORT

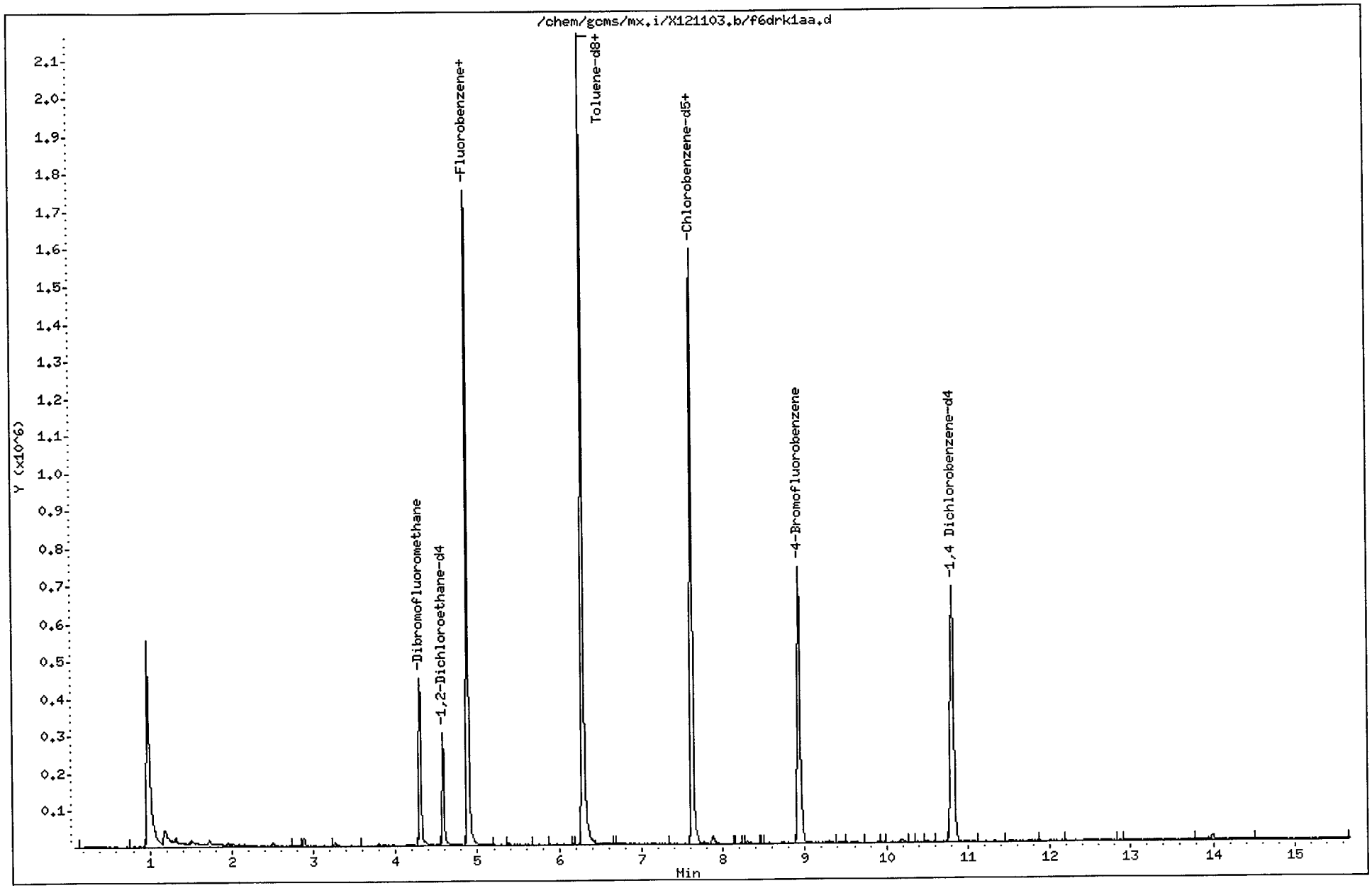
Client Name: SHAW E & I INC
Sample Matrix: LIQUID
Lab Smp Id: F6DRK1AA
Level: LOW
Data Type: MS DATA
SpikeList File: allcmpds.spk
Sublist File: ms.sub
Method File: /var/chem/gcms/mx.i/X121103.b/8260B_LM.m
Misc Info: X121103,8260B_LM,ms.sub

Client SDG: PB045
Fraction: VOA
Client Smp ID: DD5001
Operator: 063605
SampleType: SAMPLE
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 5 1,2-Dichloroethane	10.000	9.9697	99.70	71-127
$ 4 Dibromofluorometha	10.000	10.362	103.62	79-120
$ 6 Toluene-d8	10.000	10.242	102.42	80-120
$ 7 4-Bromofluorobenze	10.000	9.1460	91.46	69-126

Data File: /chem/gcms/mx.i/X121103.b/f6drk1aa.d
Date : 11-DEC-2003 16:56
Client ID: DD5001
Sample Info: F6DRK1AA,1,0,,
Purge Volume: 25.0
Column phase: J+W 624

Instrument: mx.i
Operator: 063605
Column diameter: 0.18



Data File: /chem/gcms/mx.i/X121103.b/f6drk1aa.d

Date : 11-DEC-2003 16:56

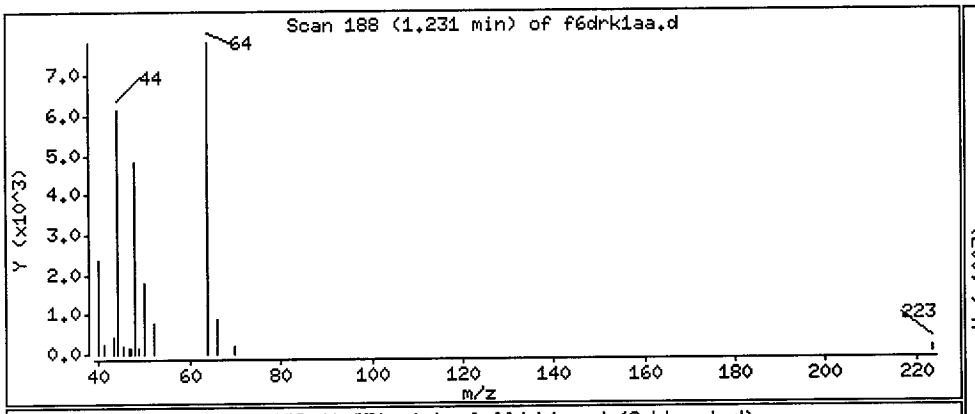
Client ID: DD5001 Instrument: mx.i

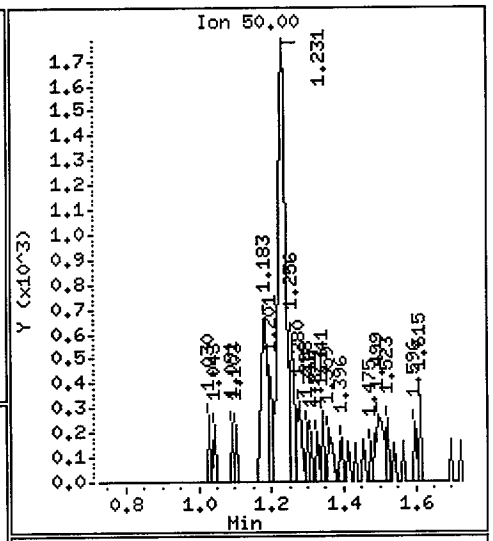
Sample Info: F6DRK1AA,1,0,,

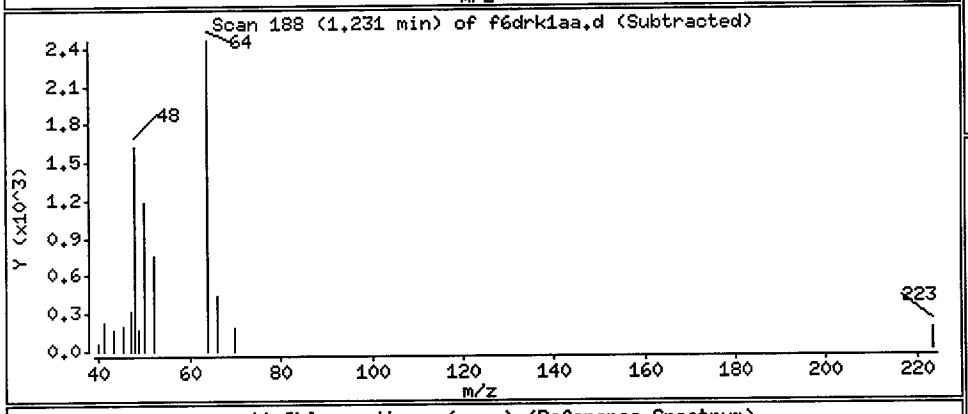
Purge Volume: 25.0 Operator: 063605

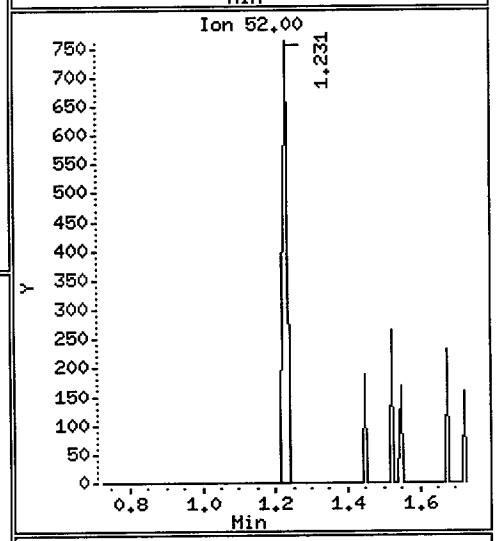
Column phase: J+W 624 Column diameter: 0.18

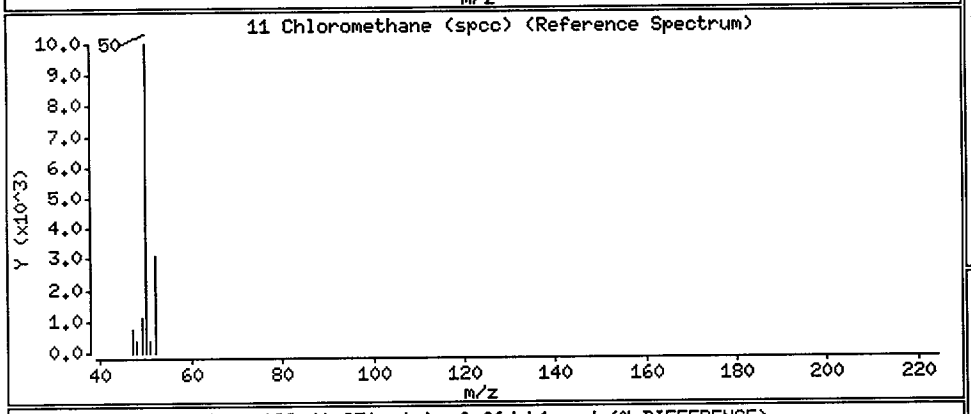
11 Chloromethane (spcc) Concentration: 0.25290 ug/L

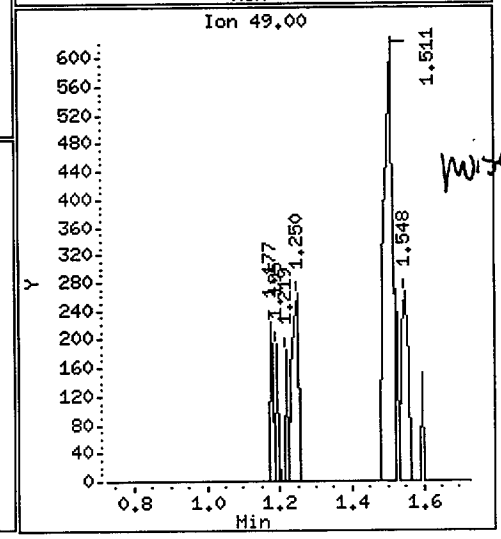


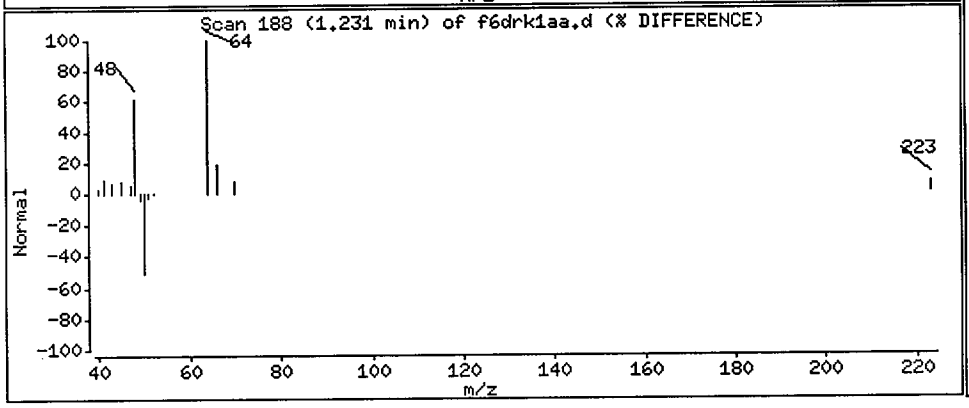












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Data File: /chem/gcms/mx.i/X121103.b/f6drk1aa.d

Date : 11-DEC-2003 16:56

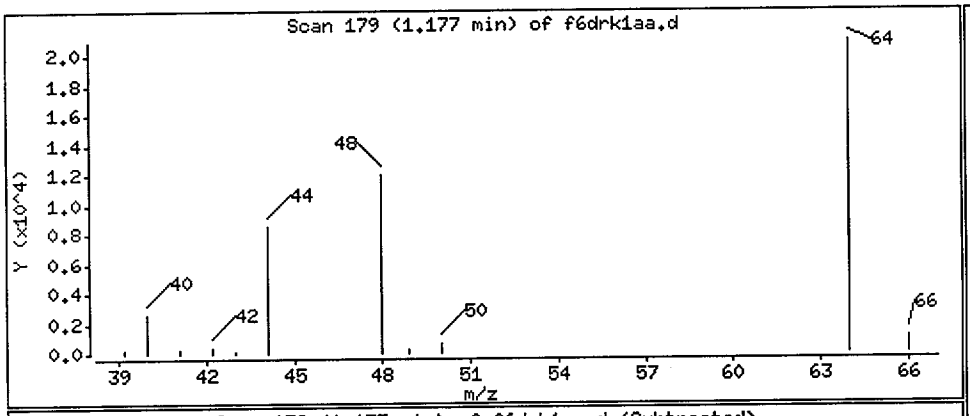
Client ID: DD5001 Instrument: mx.i

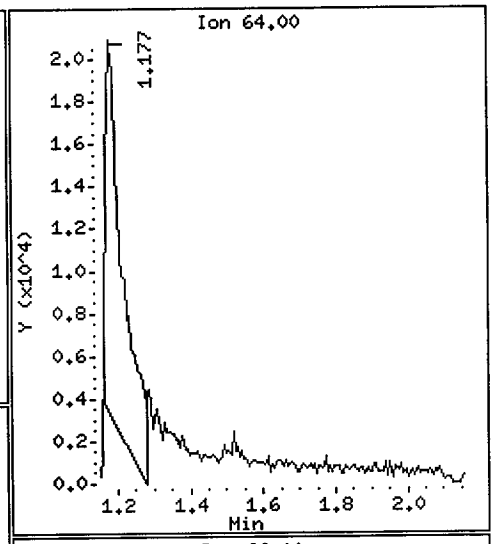
Sample Info: F6DRK1AA,1,0,,

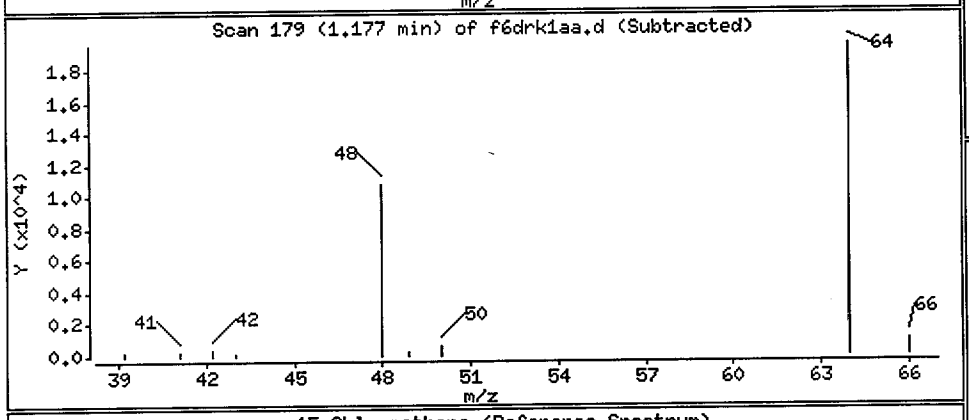
Purge Volume: 25.0 Operator: 063605

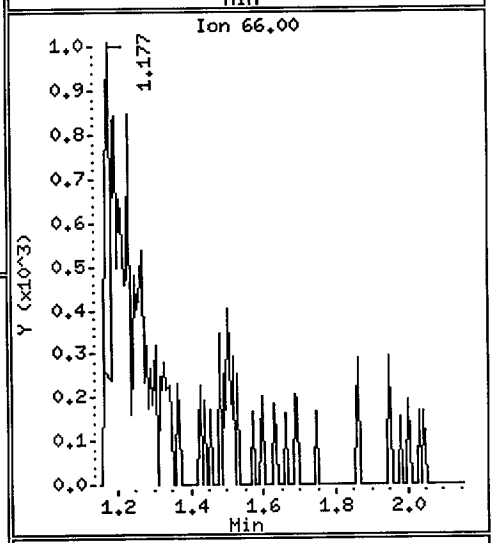
Column phase: J+W 624 Column diameter: 0.18

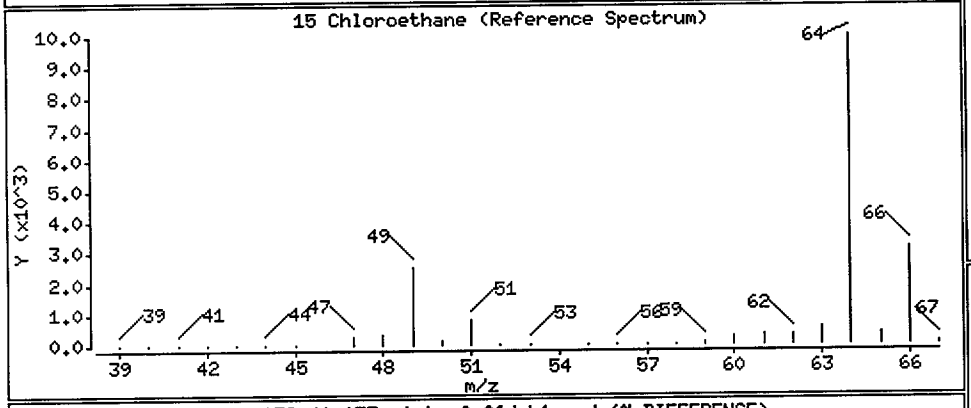
15 Chloroethane Concentration: 2.6272 ug/L

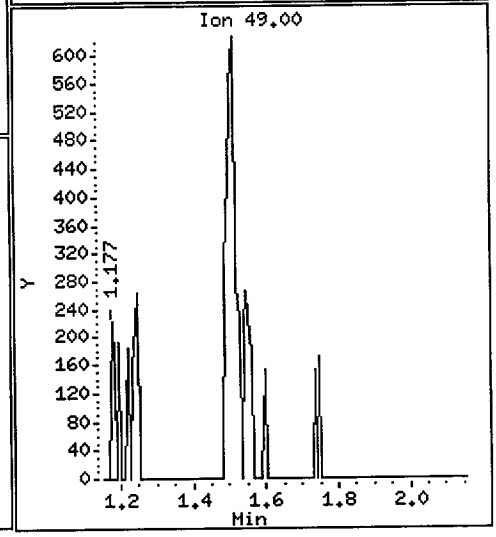


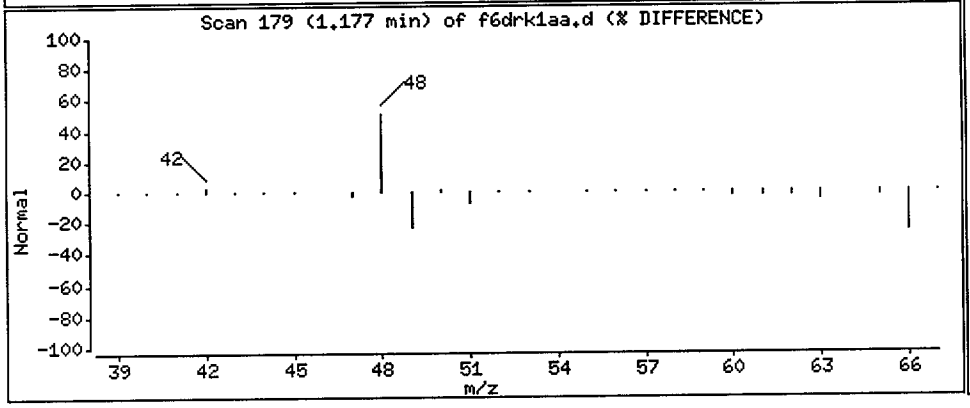












Data File: /chem/gcms/mx.i/X121103.b/f6drk1aa.d

Date : 11-DEC-2003 16:56

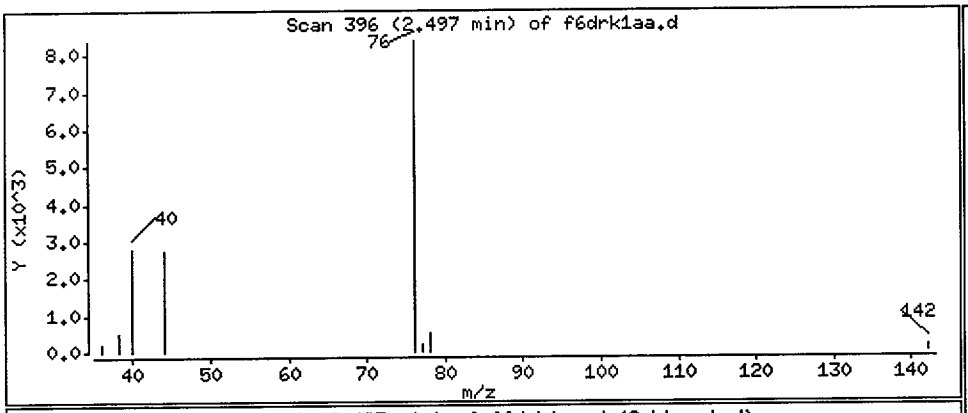
Client ID: DD5001 Instrument: mx.i

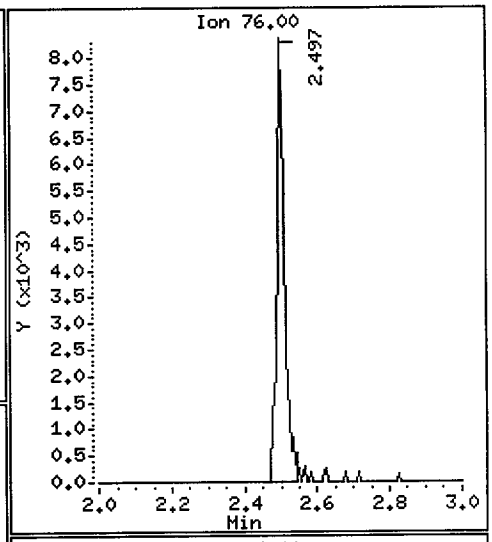
Sample Info: F6DRK1AA,1,0,,

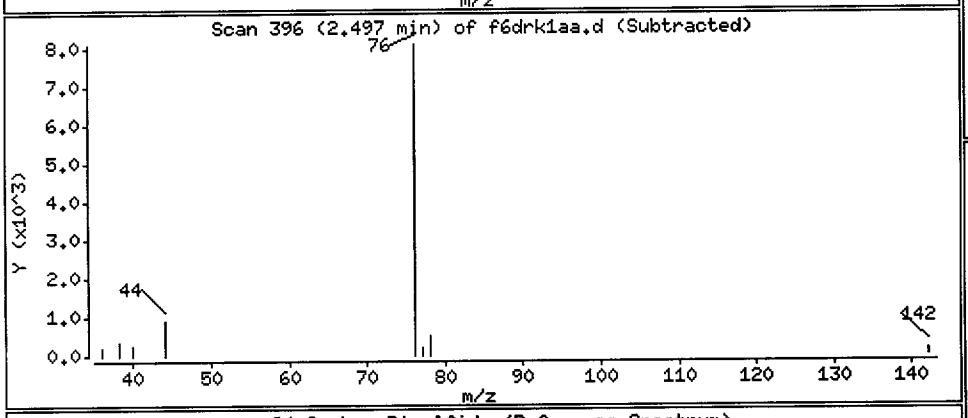
Purge Volume: 25.0 Operator: 063605

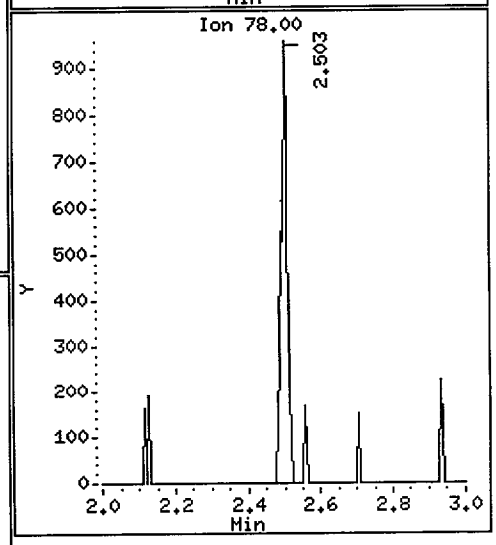
Column phase: J+W 624 Column diameter: 0.18

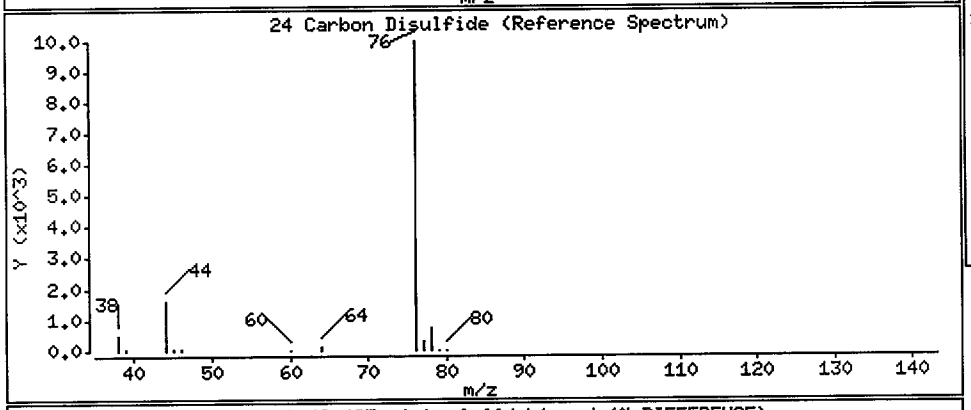
24 Carbon Disulfide Concentration: 0.13378 ug/L

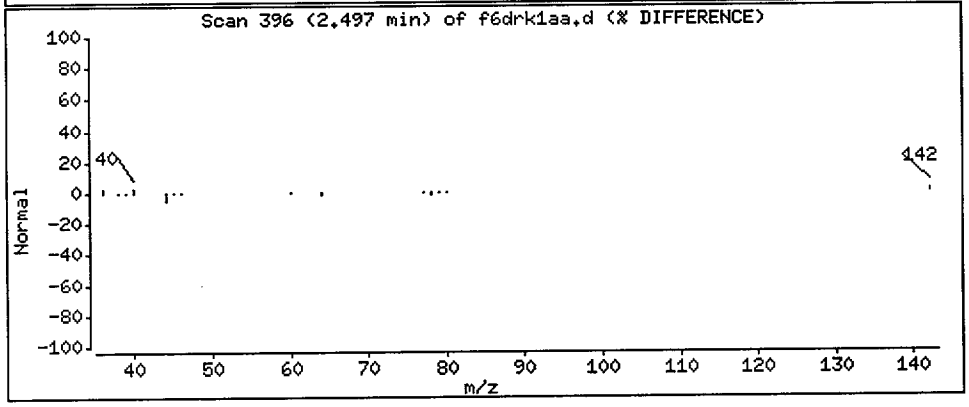












Data File: /chem/gcms/mx.i/X121103.b/f6drk1aa.d

Date : 11-DEC-2003 16:56

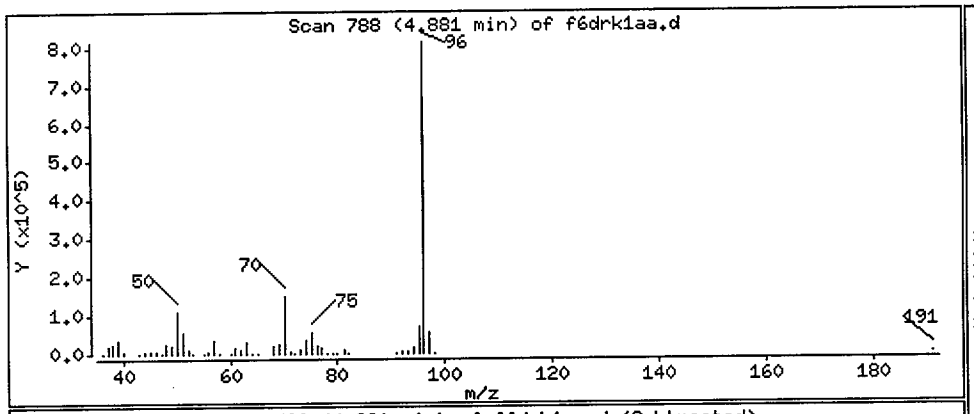
Client ID: DD5001 Instrument: mx.i

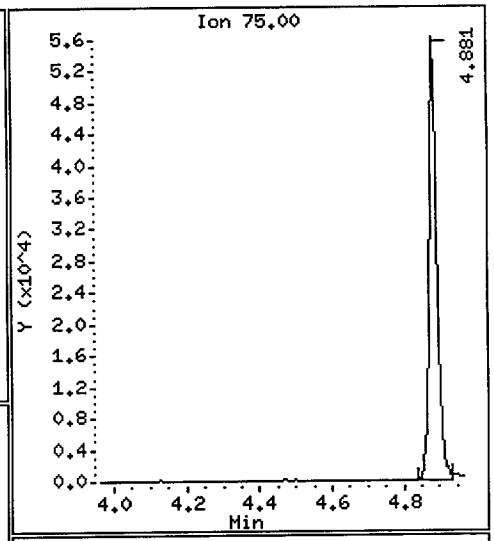
Sample Info: F6DRK1AA,1,0,,

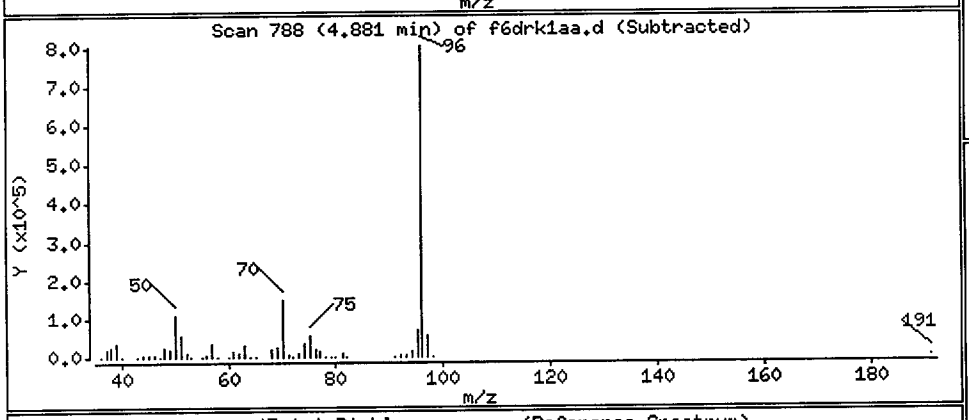
Purge Volume: 25.0 Operator: 063605

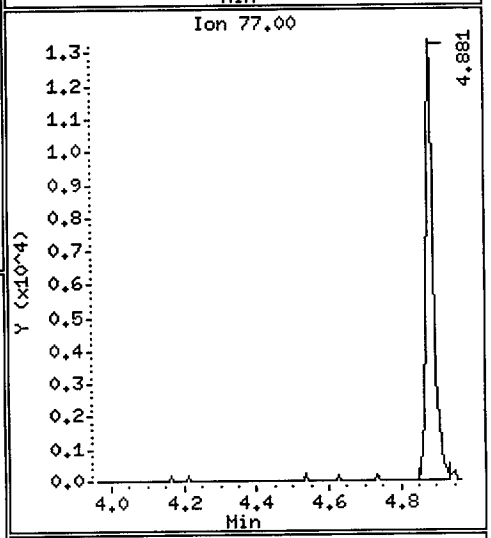
Column phase: J+W 624 Column diameter: 0.18

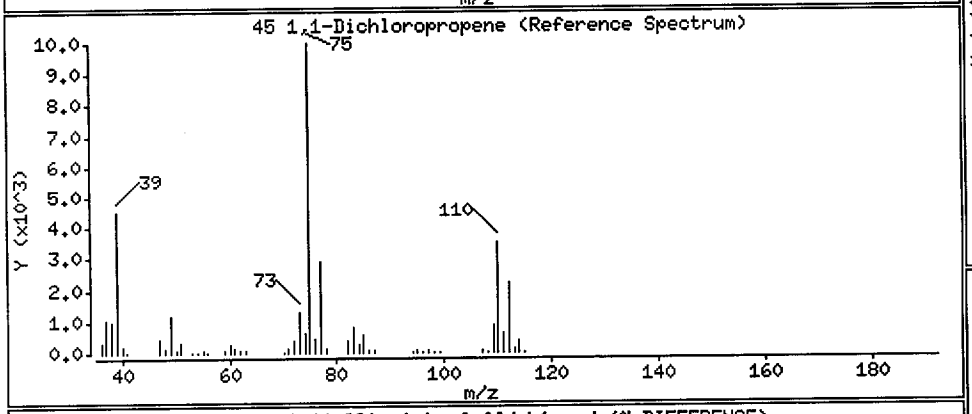
45 1,1-Dichloropropene Concentration: 1.9668 ug/L

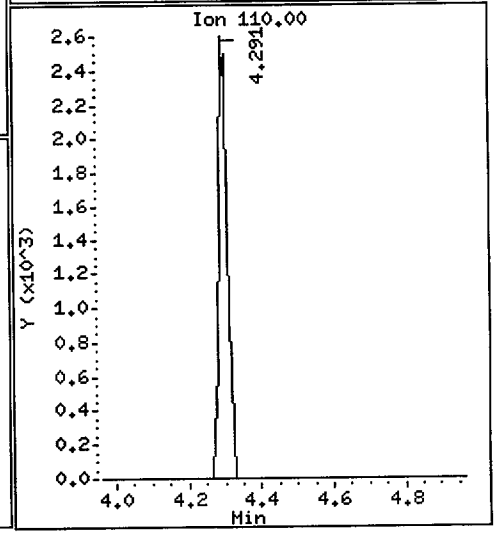


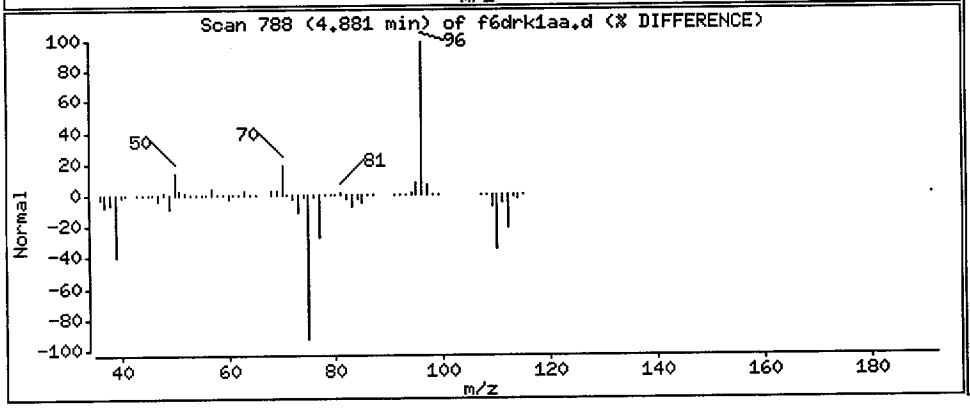












Data File: /chem/gcms/mx.i/X121103.b/f6drk1aa.d

Date : 11-DEC-2003 16:56

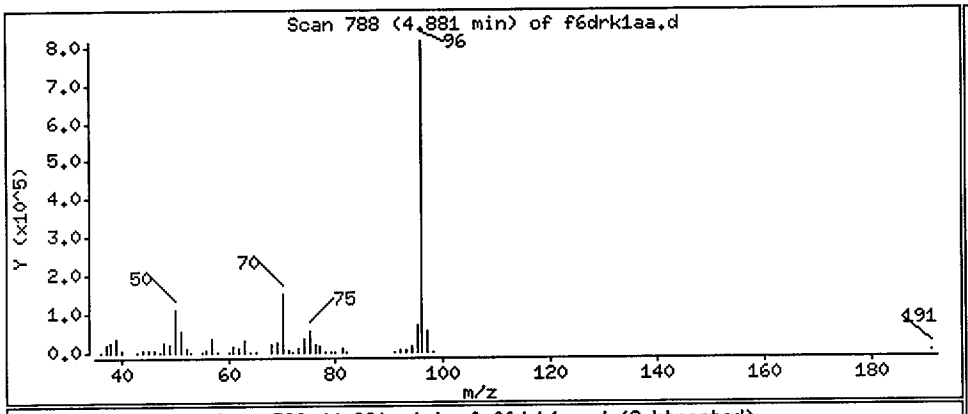
Client ID: DD5001 Instrument: mx.i

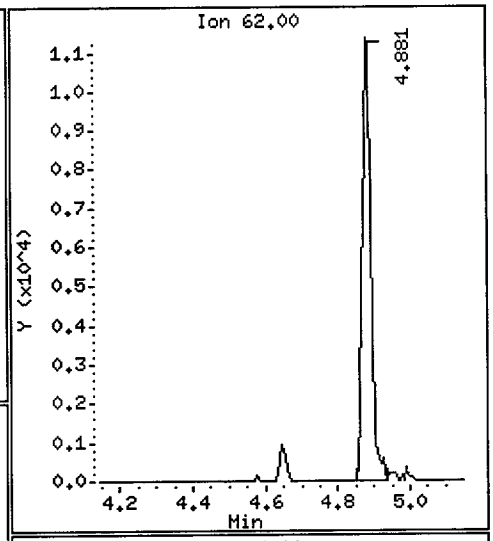
Sample Info: F6DRK1AA,1,0,,

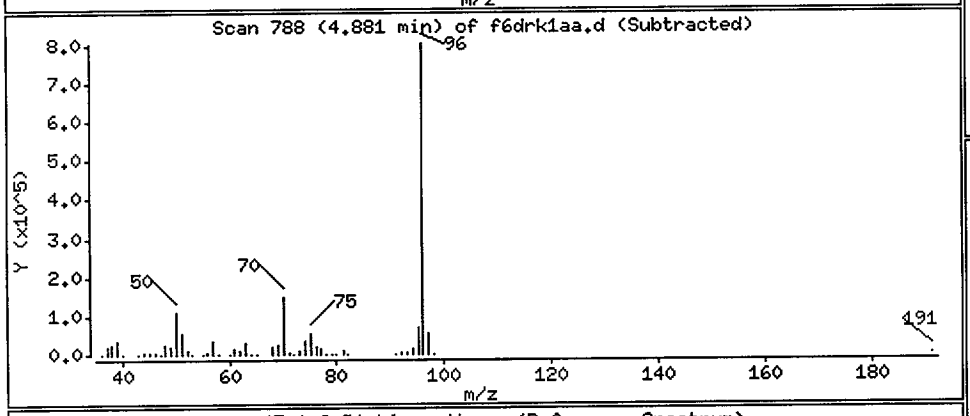
Purge Volume: 25.0 Operator: 063605

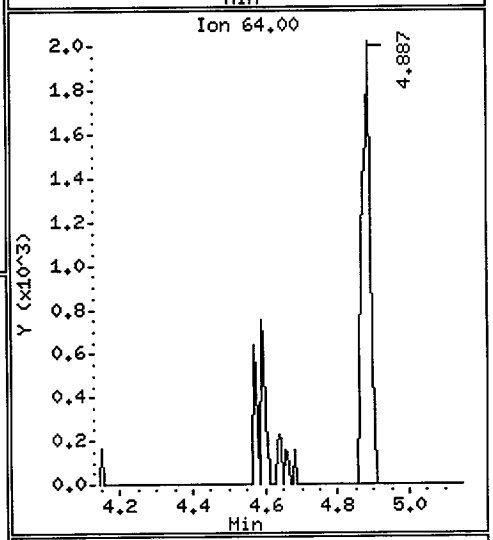
Column phase: J+W 624 Column diameter: 0.18

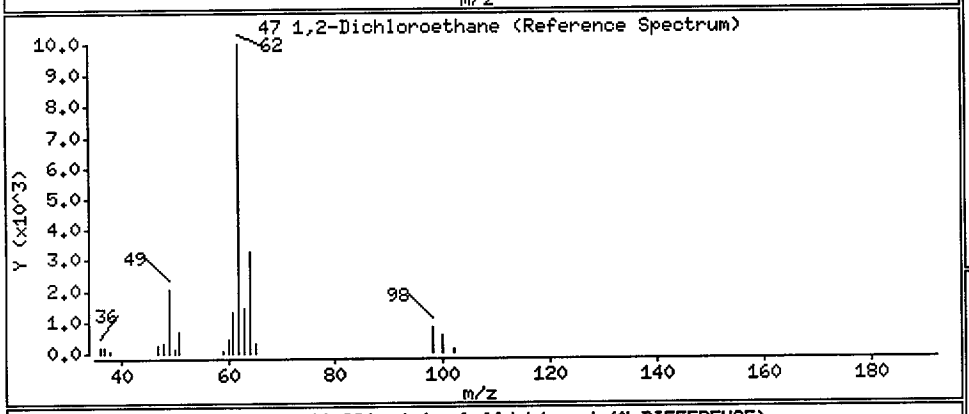
47 1,2-Dichloroethane Concentration: 0.86178 ug/L

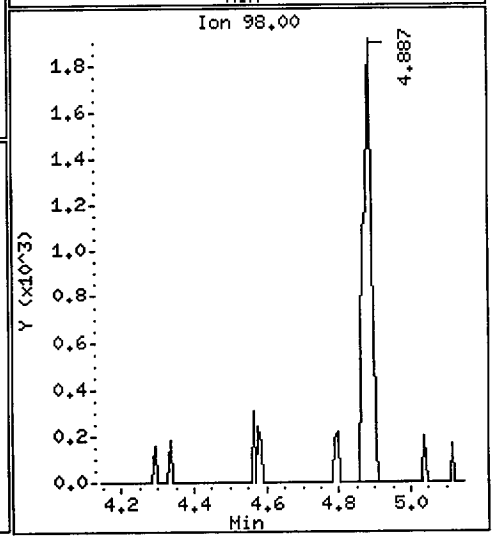


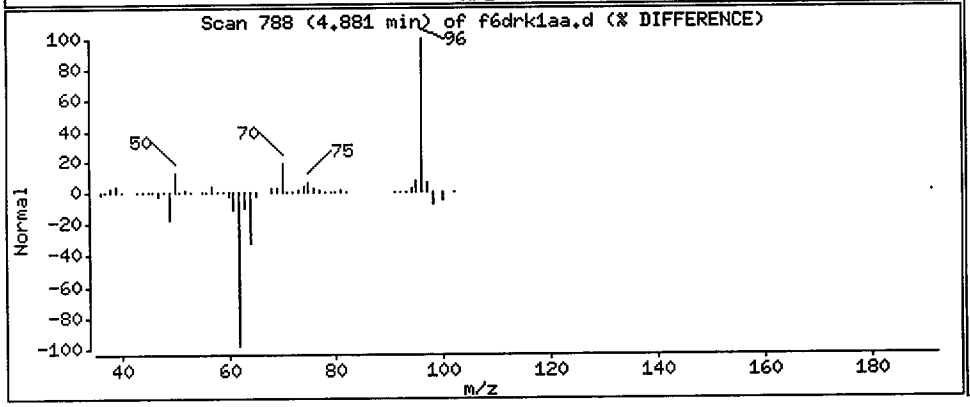












Data File: /chem/gcms/mx.i/X121103.b/f6drk1aa.d

Date : 11-DEC-2003 16:56

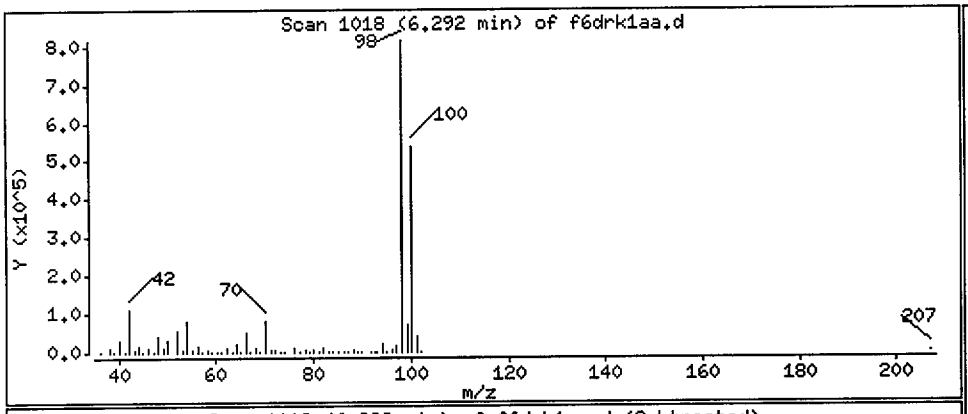
Client ID: DD5001 Instrument: mx.i

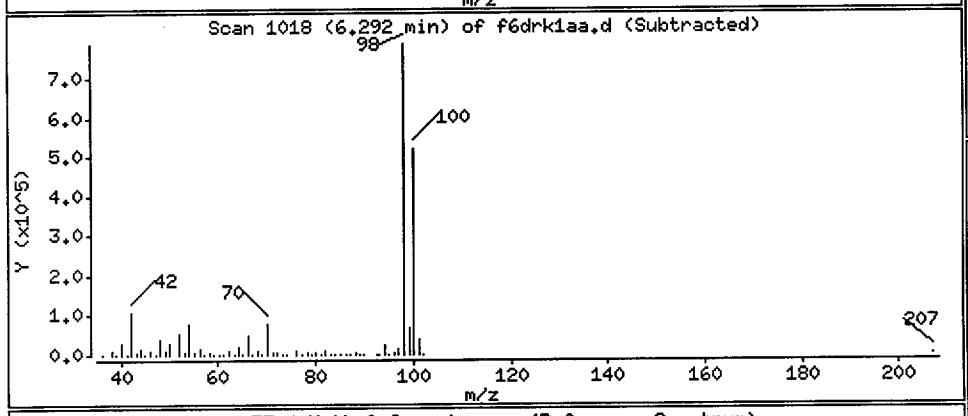
Sample Info: F6DRK1AA,1,0,,

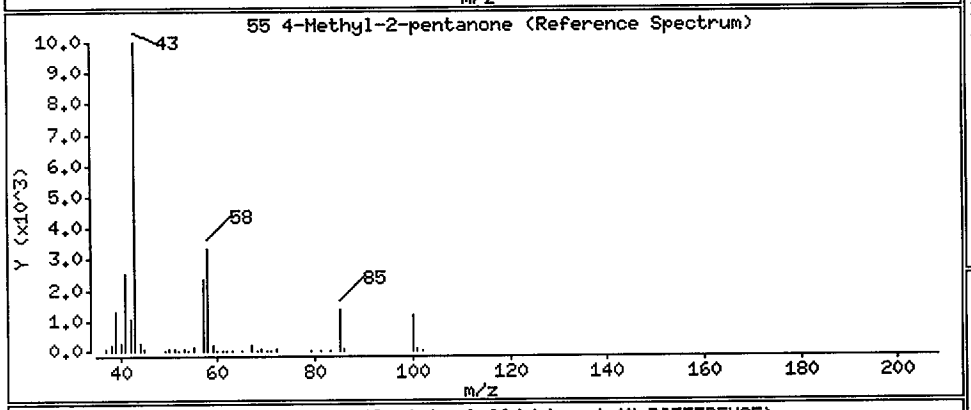
Purge Volume: 25.0 Operator: 063605

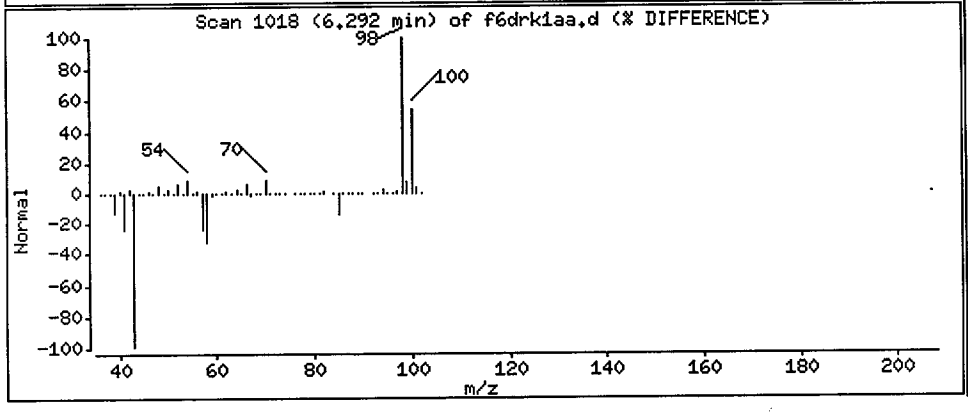
Column phase: J+W 624 Column diameter: 0.18

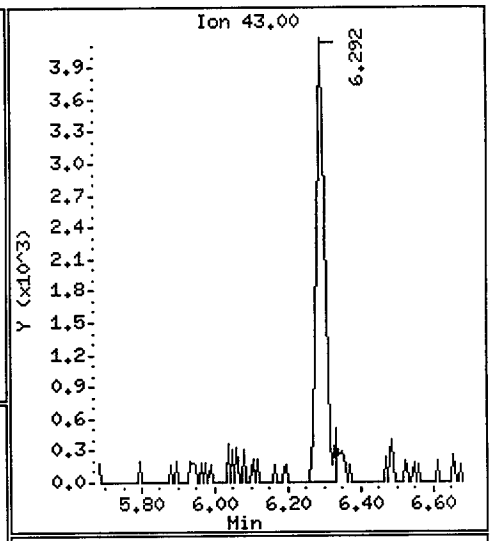
55 4-Methyl-2-pentanone Concentration: 0.69897 ug/L

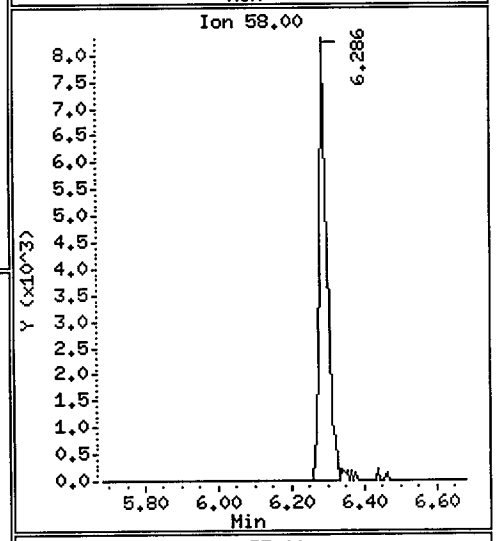


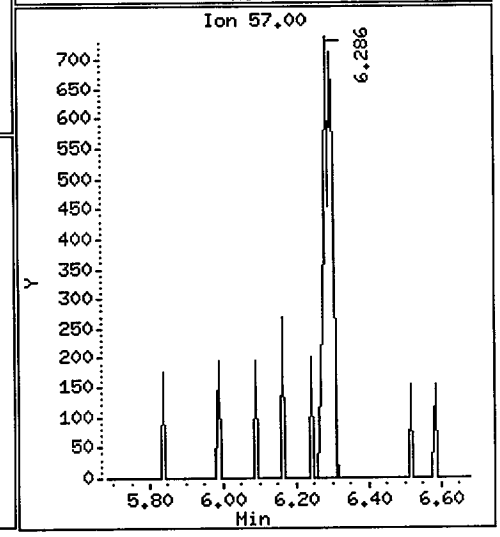












Data File: /chem/gcms/mx.i/X121103.b/f6drk1aa.d

Date : 11-DEC-2003 16:56

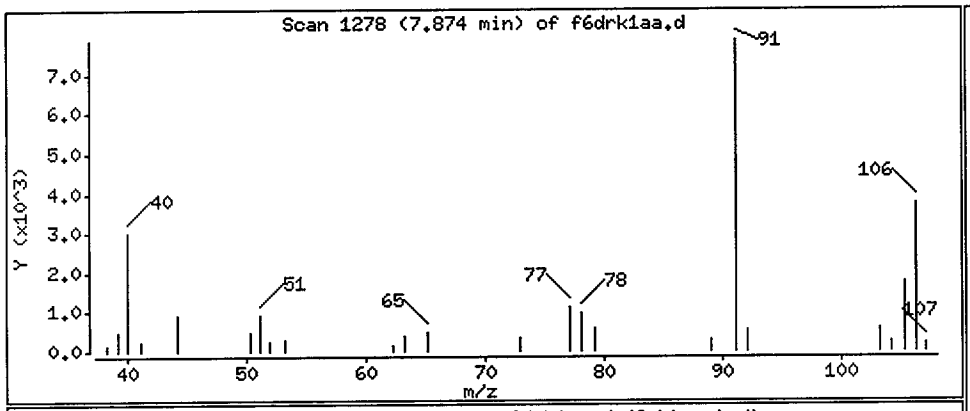
Client ID: DD5001 Instrument: mx.i

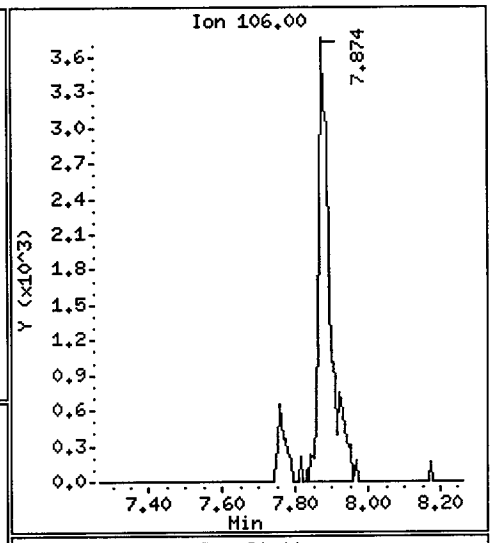
Sample Info: F6DRK1AA,1,0,,

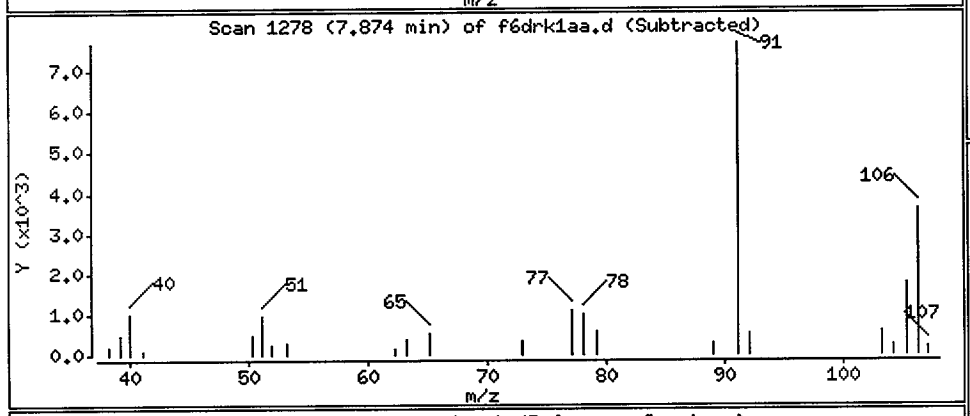
Purge Volume: 25.0 Operator: 063605

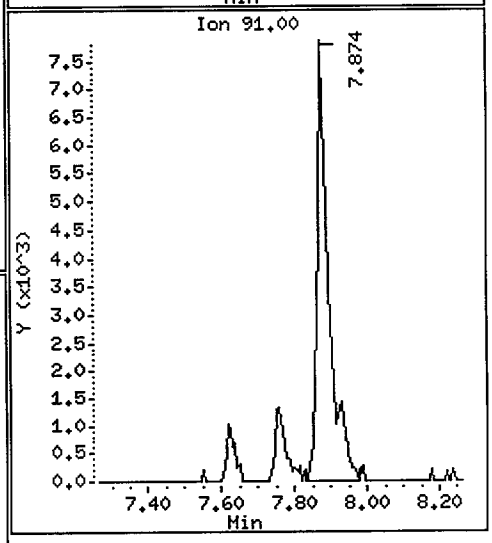
Column phase: J+W 624 Column diameter: 0.18

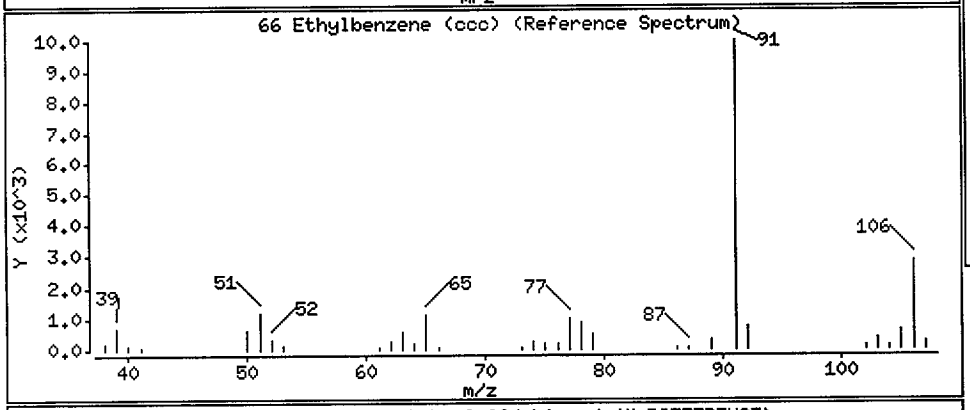
66 Ethylbenzene (ccc) Concentration: 0.12856 ug/L

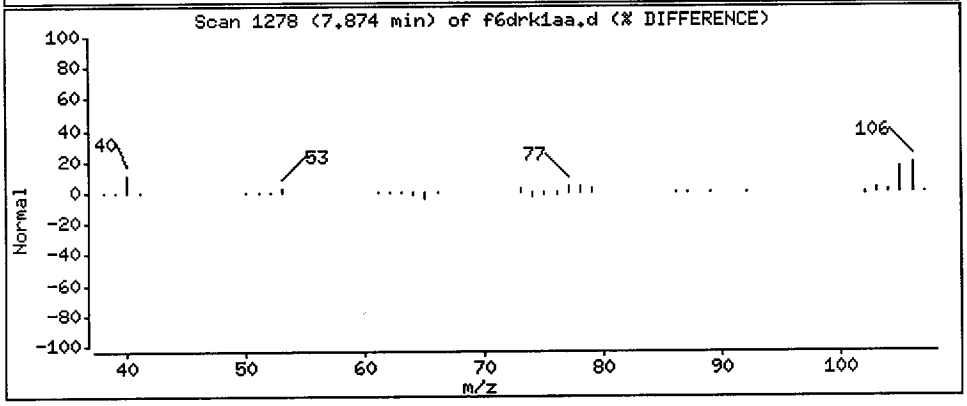












Data File: /chem/gcms/mx.i/X121103.b/f6drk1aa.d

Date : 11-DEC-2003 16:56

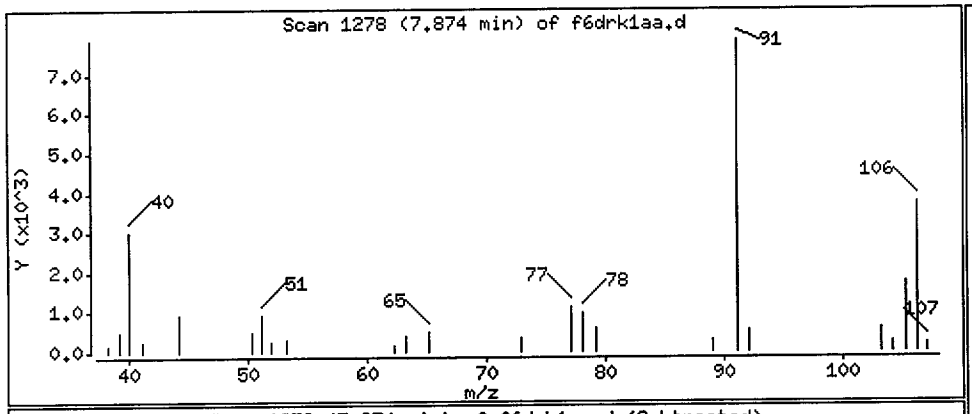
Client ID: DD5001 Instrument: mx.i

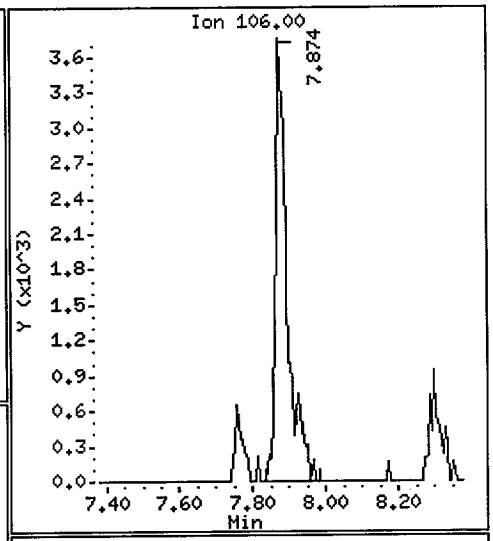
Sample Info: F6DRK1AA,1,0,,

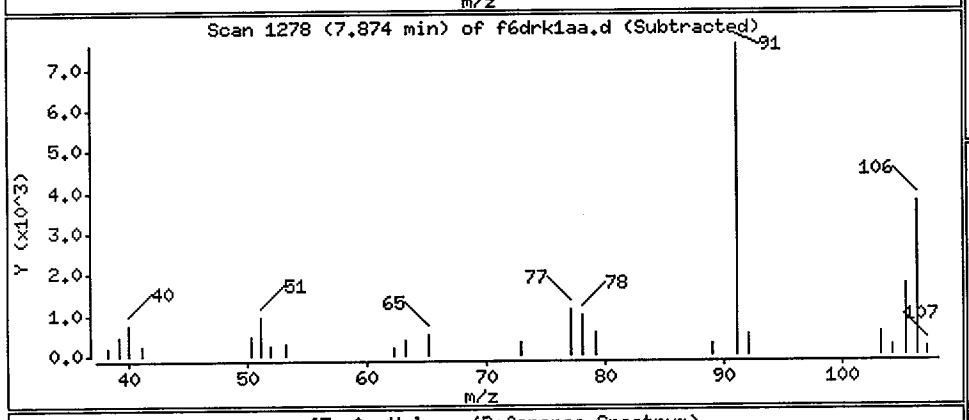
Purge Volume: 25.0 Operator: 063605

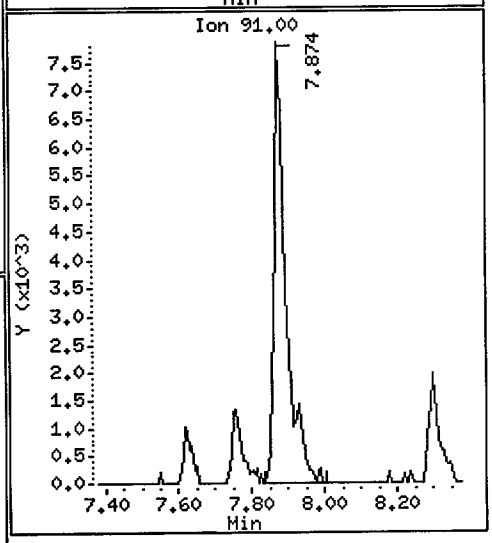
Column phase: J+W 624 Column diameter: 0.18

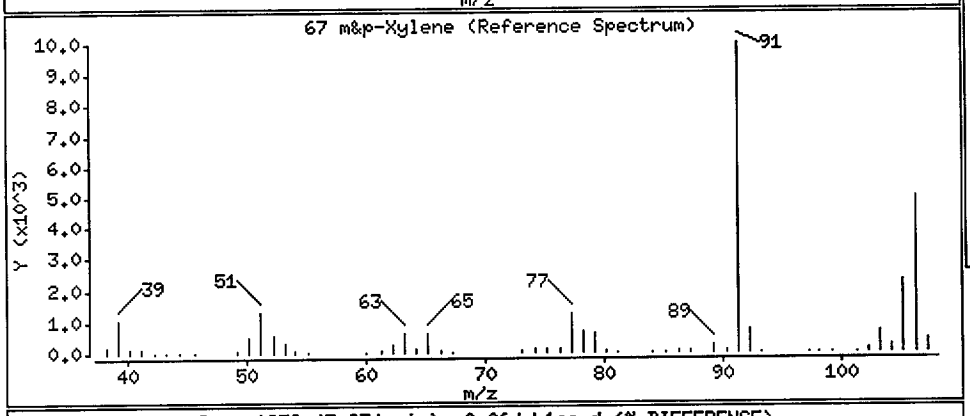
67 m&p-Xylene Concentration: 0.10844 ug/L

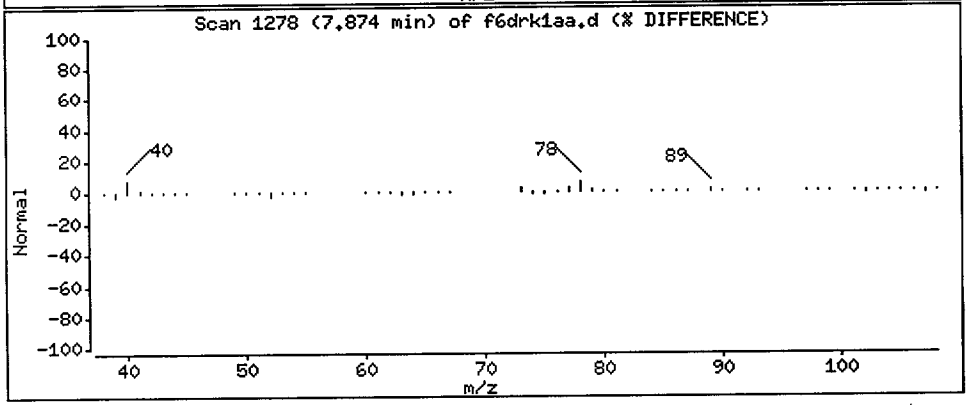












Data File: /chem/gcms/mx.i/X121103.b/f6drk1aa.d

Date : 11-DEC-2003 16:56

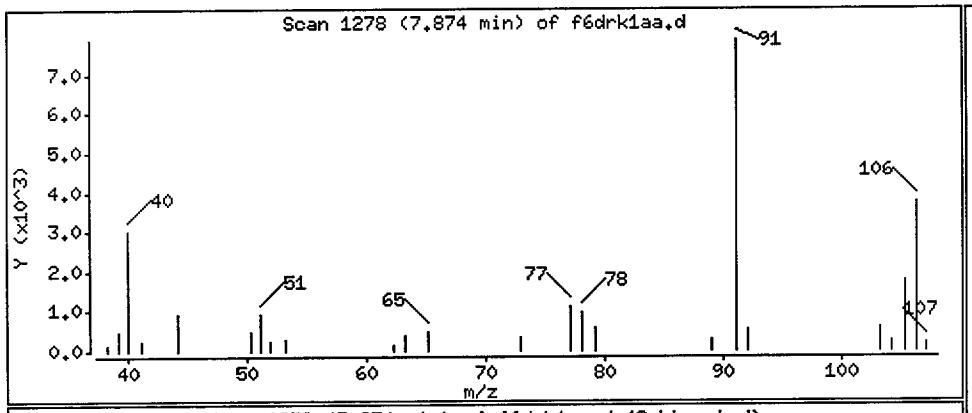
Client ID: DD5001 Instrument: mx.i

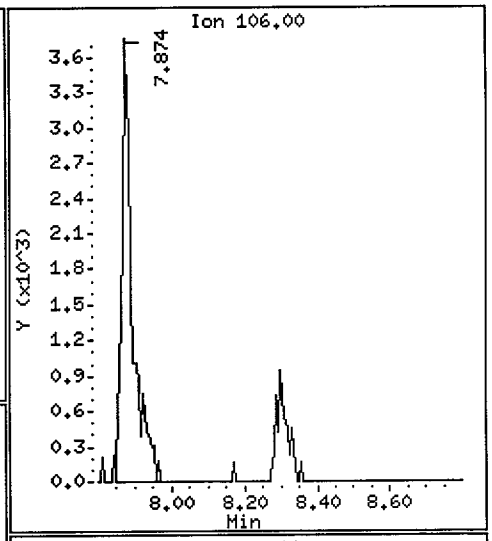
Sample Info: F6DRK1AA,1,0,,

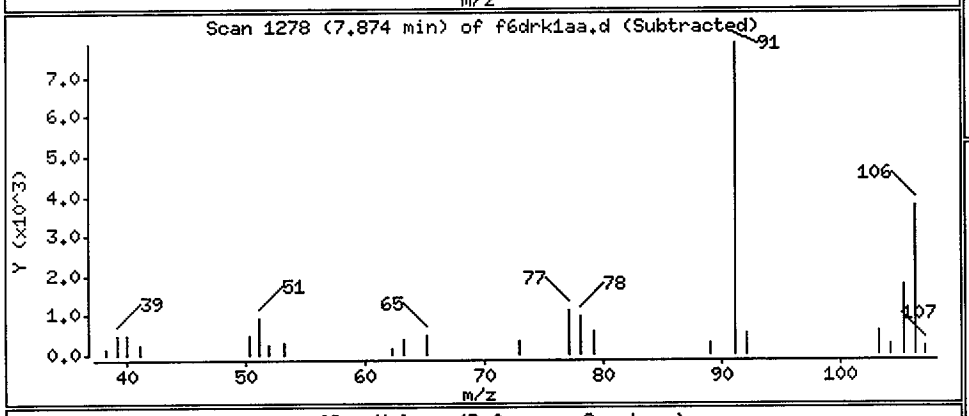
Purge Volume: 25.0 Operator: 063605

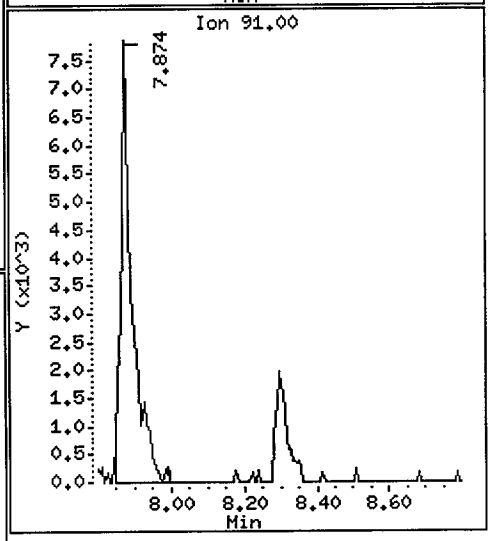
Column phase: J+W 624 Column diameter: 0.18

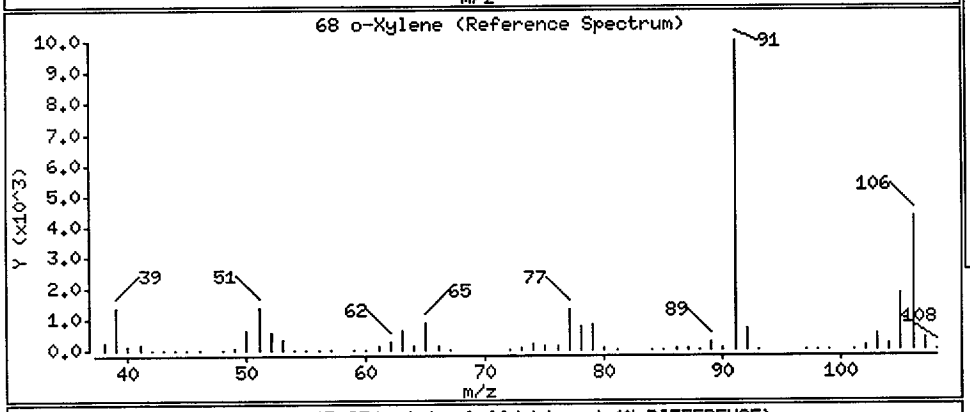
68 o-Xylene Concentration: 0.11950 ug/L

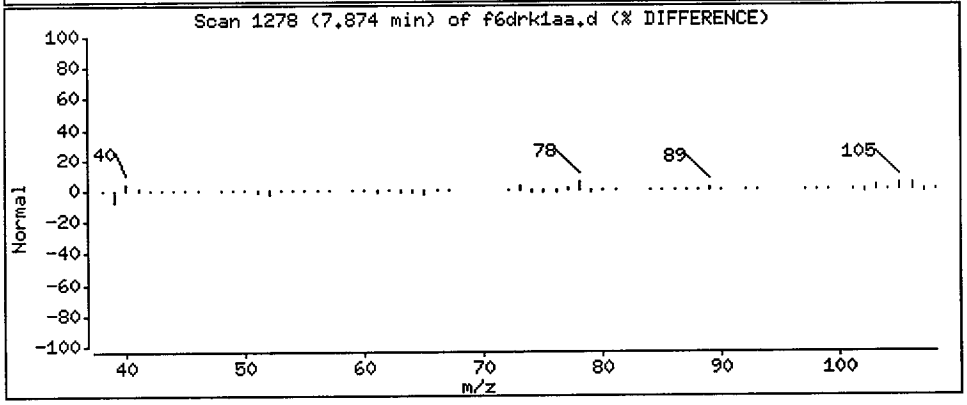












SHAW E & I INC

Client Sample ID: DD3002

GC/MS Volatiles

Lot-Sample #...: H3L110180-001 **Work Order #...:** F6F1C1AC **Matrix.....:** WATER
Date Sampled...: 12/10/03 **Date Received..:** 12/11/03
Prep Date.....: 12/11/03 **Analysis Date..:** 12/11/03
Prep Batch #...: 3345349
Dilution Factor: 1 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Chloromethane	ND	2.0	ug/L	0.12
Bromomethane	ND	2.0	ug/L	0.38
Vinyl chloride	ND	1.0	ug/L	0.24
Chloroethane	ND	2.0	ug/L	0.24
Methylene chloride	ND	2.0	ug/L	0.23
Acetone	ND	10	ug/L	1.4
Carbon disulfide	**0.16 J**	**1.0**	**ug/L**	**0.10**
1,1-Dichloroethene	ND	1.0	ug/L	0.10
1,1-Dichloroethane	ND	1.0	ug/L	0.10
1,2-Dichloroethene (total)	ND	1.0	ug/L	0.20
Chloroform	ND	1.0	ug/L	0.10
1,2-Dichloroethane	ND	1.0	ug/L	0.10
2-Butanone	ND	5.0	ug/L	0.75
1,1,1-Trichloroethane	ND	1.0	ug/L	0.10
Carbon tetrachloride	ND	1.0	ug/L	0.12
Bromodichloromethane	ND	1.0	ug/L	0.10
1,2-Dichloropropane	ND	1.0	ug/L	0.10
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.10
Trichloroethene	ND	1.0	ug/L	0.10
Dibromochloromethane	ND	1.0	ug/L	0.20
1,1,2-Trichloroethane	ND	1.0	ug/L	0.25
Benzene	**1.2**	**1.0**	**ug/L**	**0.10**
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.11
Bromoform	ND	1.0	ug/L	0.14
4-Methyl-2-pentanone	ND	5.0	ug/L	0.40
2-Hexanone	ND	5.0	ug/L	0.76
Tetrachloroethene	ND	1.0	ug/L	0.10
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.15
Toluene	**0.26 J**	**1.0**	**ug/L**	**0.10**
Chlorobenzene	ND	1.0	ug/L	0.10
Ethylbenzene	ND	1.0	ug/L	0.10
Styrene	ND	1.0	ug/L	0.10
Xylenes (total)	ND	1.0	ug/L	0.30

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	105	(79 - 120)
1,2-Dichloroethane-d4	110	(71 - 127)
Toluene-d8	95	(80 - 120)
Bromofluorobenzene	90	(69 - 126)

(Continued on next page)

SHAW E & I INC

Client Sample ID: DD3002

GC/MS Volatiles

Lot-Sample #...: H3L110180-001 Work Order #...: F6F1C1AC Matrix.....: WATER

NOTE(S):

J Estimated result. Result is less than RL.

Data File: /chem/gcms/mx.i/X121103.b/f6f1c1ac.d
Report Date: 11-Dec-2003 22:43

STL Knoxville

SW-846 Method 8260A - Volatile Organics

Data file : /chem/gcms/mx.i/X121103.b/f6f1c1ac.d
Lab Smp Id: F6F1C1AC Client Smp ID: DD3002
Inj Date : 11-DEC-2003 22:27
Operator : 063605 Inst ID: mx.i
Smp Info : F6F1C1AC,1,0,,
Misc Info : X121103,8260B_LM,s.sub
Comment :
Method : /var/chem/gcms/mx.i/X121103.b/8260B_LM.m
Meth Date : 11-Dec-2003 16:28 tillerm Quant Type: ISTD
Cal Date : 16-SEP-2003 12:52 Cal File: icxi166.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: s.sub
Target Version: 3.50
Processing Host: qmidhp01

12/19/03

Concentration Formula: Amt * DF * Uf*Vt/(Vo*1000) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Unit Correction factor
Vt	25000.00000	Sample Volume Purged
Vo	25.00000	Sample Volume Used

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
* 1 Fluorobenzene	96	4.883	4.885	(1.000)	1383826	10.0000	
* 2 Chlorobenzene-d5	119	7.624	7.624	(1.000)	322321	10.0000	
* 3 1,4 Dichlorobenzene-d4	152	10.818	10.824	(1.000)	374907	10.0000	
$ 5 1,2-Dichloroethane-d4	65	4.585	4.581	(0.939)	195290	10.9840	10.984
$ 4 Dibromofluoromethane	113	4.299	4.295	(0.880)	242344	10.5165	10.516
$ 6 Toluene-d8	98	6.292	6.292	(0.825)	1409330	9.51885	9.5188
$ 7 4-Bromofluorobenzene	95	8.926	8.932	(0.825)	405673	9.03995	9.0399
11 Chloromethane (spcc)	50	1.227	1.229	(0.251)	2027	~~0.23759~~	~~0.23759~~
24 Carbon Disulfide	76	2.505	2.500	(0.513)	15215	0.15760	0.15760
22 Acetone	43	1.951	2.366	(0.400)	16952	~~3.10296~~	~~3.1030~~
32 *Hexane	57	2.882	3.267	(0.590)	35878	~~0.28399~~	~~0.20399~~
45 1,1-Dichloropropene	75	4.883	4.465	(1.000)	91996	~~1.95321~~	~~1.9552~~
46 Benzene	78	4.640	4.642	(0.950)	159982	1.17879	1.1788
47 1,2-Dichloroethane	62	4.634	4.648	(0.949)	2759	~~0.12261~~	~~0.12261~~

MT 12/15/03

Data File: /chem/gcms/mx.i/X121103.b/f6f1c1ac.d
Report Date: 11-Dec-2003 22:43

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
55 4-Methyl-2-pentanone	43	6.292	6.182	(1.288)	8285	~~0.82444~~	~~0.82444~~
56 Toluene (ccc)	91	6.353	6.353	(0.833)	49735	0.26035	0.26035
58 1,1,2-Trichloroethane	97	6.298	6.712	(0.826)	35781	~~2.46987~~	~~2.4699~~

MT
12/15/03

Data File: /chem/gcms/mx.i/X121103.b/f6f1c1ac.d
Report Date: 11-Dec-2003 22:43

STL Knoxville

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: mx.i
Lab File ID: f6f1c1ac.d
Lab Smp Id: F6F1C1AC
Analysis Type: VOA
Quant Type: ISTD
Operator: 063605
Method File: /var/chem/gcms/mx.i/X121103.b/8260B_LM.m
Misc Info: X121103,8260B_LM,s.sub

Calibration Date: 11-DEC-2003
Calibration Time: 14:00
Client Smp ID: DD3002
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Fluorobenzene	1419469	709734	2838938	1383826	-2.51
2 Chlorobenzene-d5	292458	146229	584916	322321	10.21
3 1,4 Dichlorobenze	323231	161616	646462	374907	15.99

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Fluorobenzene	4.89	4.39	5.39	4.88	-0.03
2 Chlorobenzene-d5	7.62	7.12	8.12	7.62	0.00
3 1,4 Dichlorobenze	10.82	10.32	11.32	10.82	-0.06

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

Data File: /chem/gcms/mx.i/X121103.b/f6f1c1ac.d
Report Date: 11-Dec-2003 22:43

STL Knoxville

RECOVERY REPORT

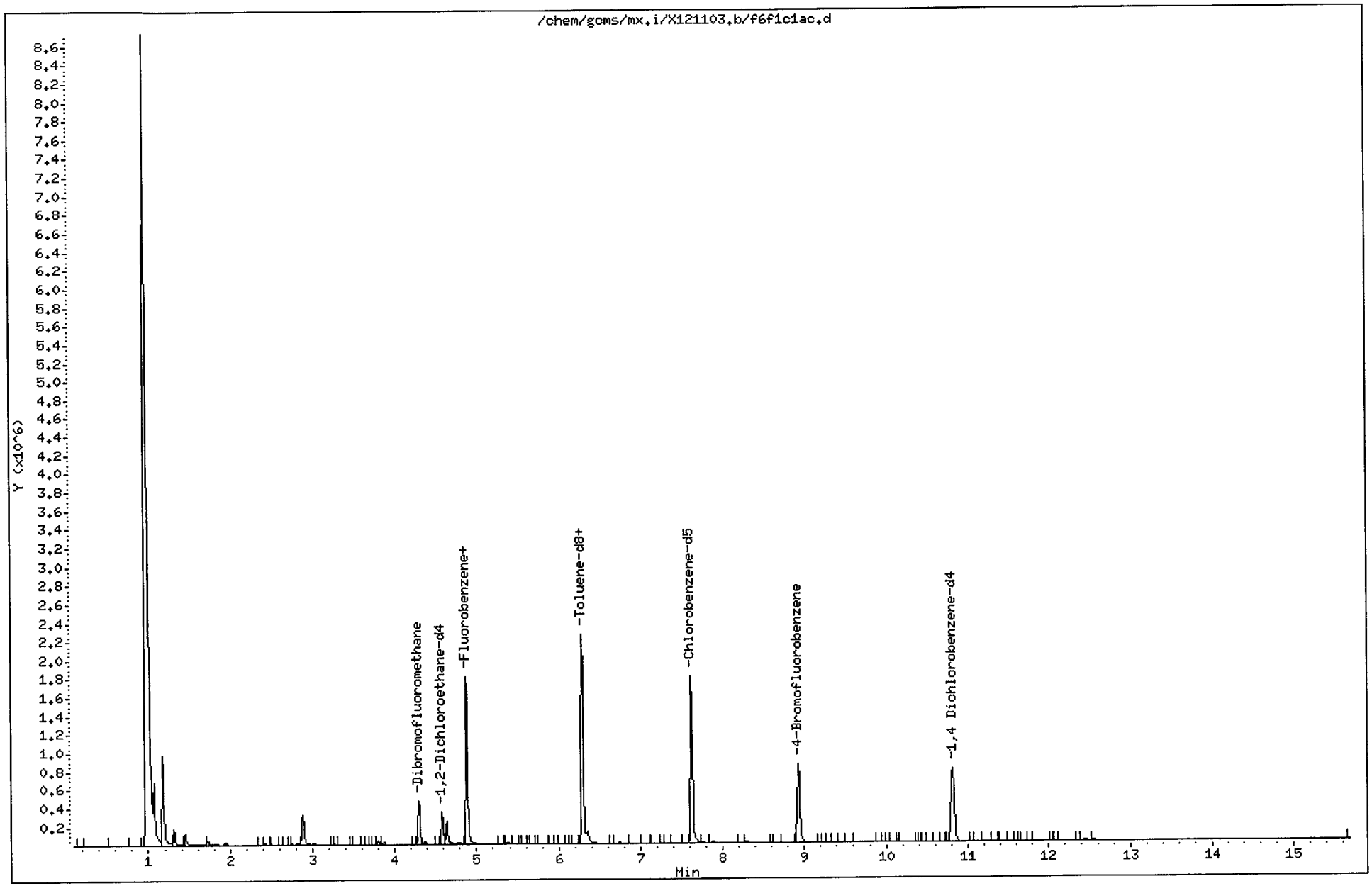
Client Name: SHAW E & I INC
Sample Matrix: LIQUID
Lab Smp Id: F6F1C1AC
Level: LOW
Data Type: MS DATA
SpikeList File: allcmpds.spk
Sublist File: s.sub
Method File: /var/chem/gcms/mx.i/X121103.b/8260B_LM.m
Misc Info: X121103,8260B_LM,s.sub

Client SDG: PB045
Fraction: VOA
Client Smp ID: DD3002
Operator: 063605
SampleType: SAMPLE
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 5 1,2-Dichloroethane	10.000	10.984	109.84	71-127
$ 4 Dibromofluorometha	10.000	10.516	105.16	79-120
$ 6 Toluene-d8	10.000	9.5188	95.19	80-120
$ 7 4-Bromofluorobenze	10.000	9.0399	90.40	69-126

Data File: /chem/gcms/mx.i/X121103.b/f6f1c1ac.d
Date : 11-DEC-2003 22:27
Client ID: DD3002
Sample Info: F6F1C1AC,1,0,,
Purge Volume: 25.0
Column phase: J+W 624

Instrument: mx.i
Operator: 063605
Column diameter: 0.18



Data File: /chem/gcms/mx.i/X121103.b/f6f1c1ac.d

Date : 11-DEC-2003 22:27

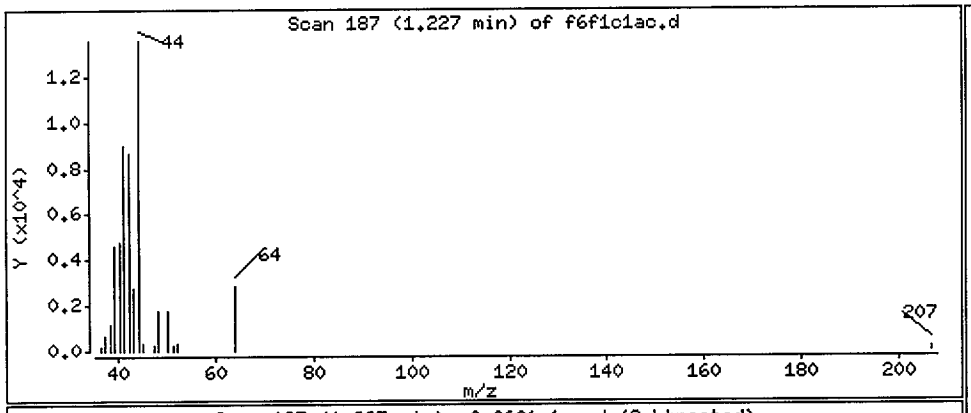
Client ID: DD3002 | Instrument: mx.i

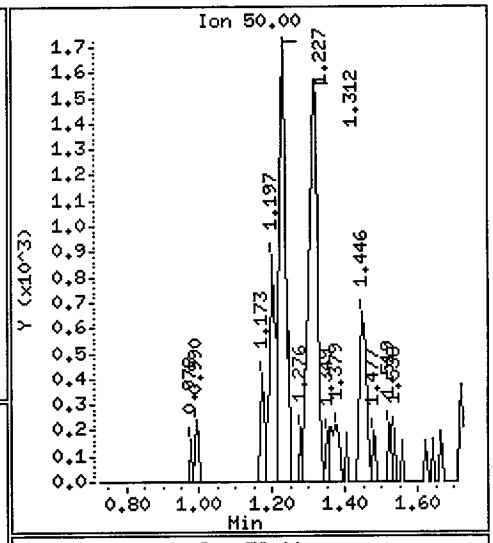
Sample Info: F6F1C1AC,1,0,,

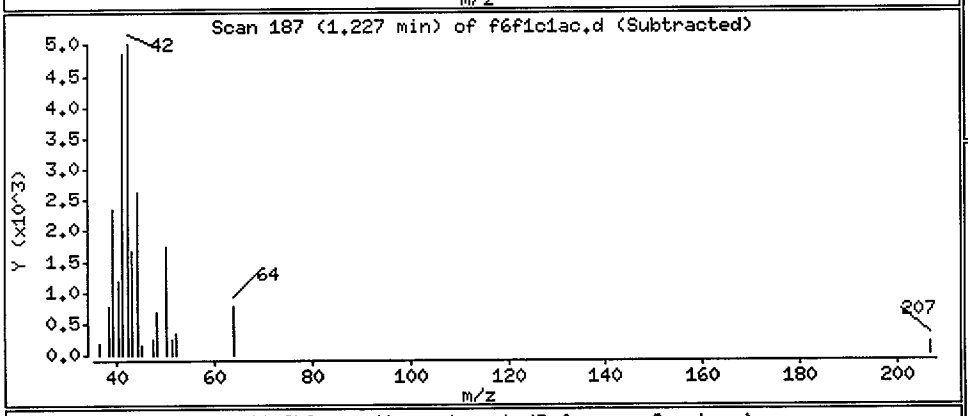
Purge Volume: 25.0 | Operator: 063605

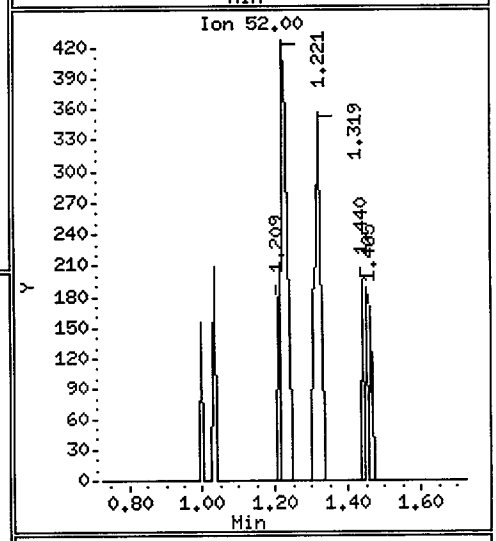
Column phase: J+W 624 | Column diameter: 0.18

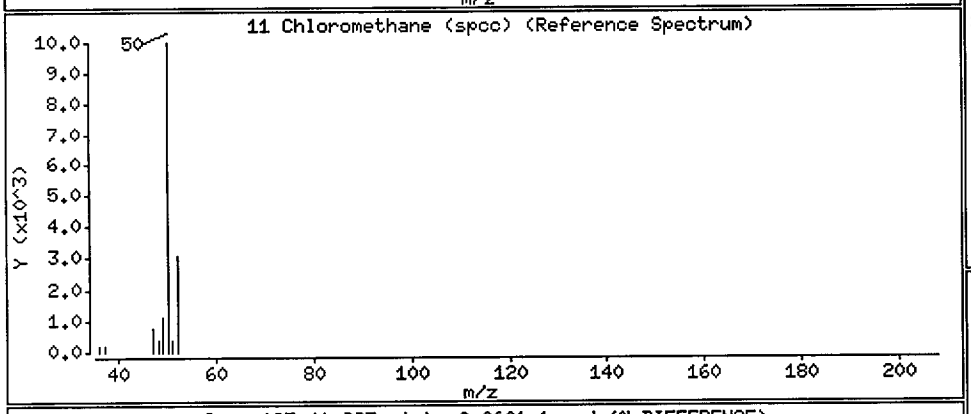
11 Chloromethane (spcc) | Concentration: 0.23759 ug/L

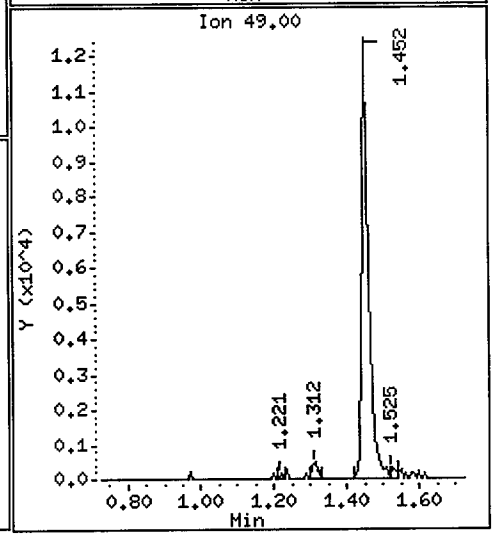


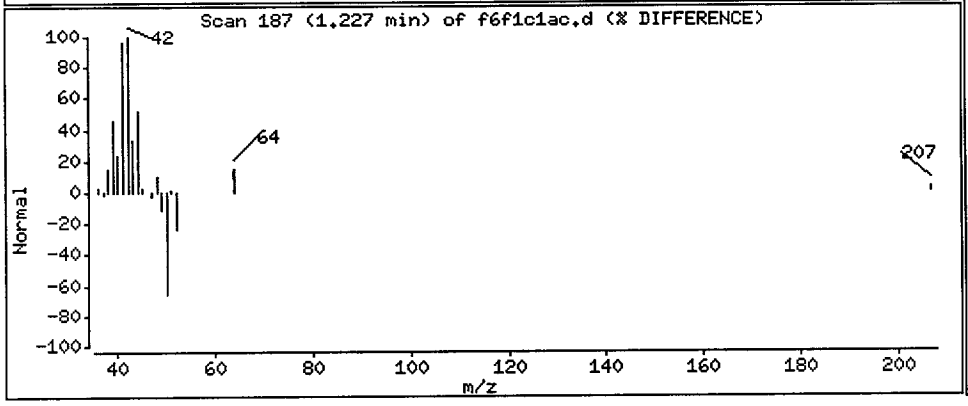












Data File: /chem/gcms/mx.i/X121103.b/f6f1c1ac.d

Date : 11-DEC-2003 22:27

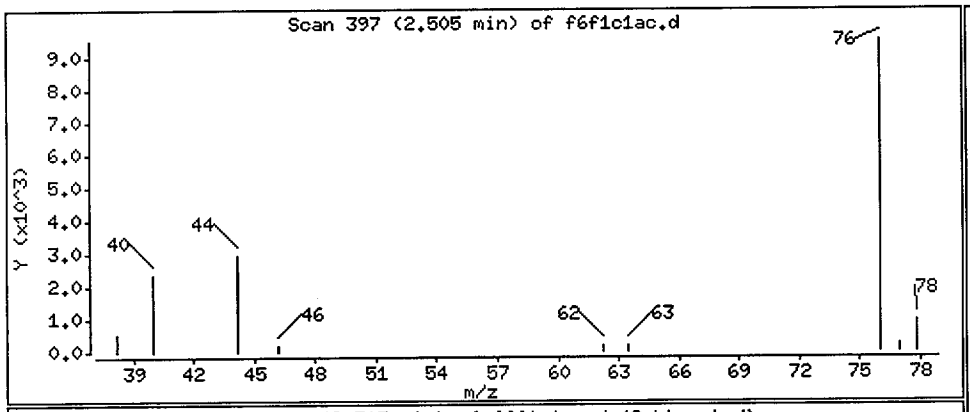
Client ID: DD3002 Instrument: mx.i

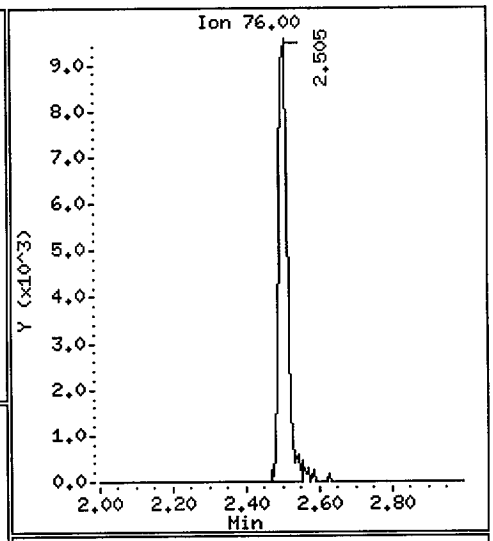
Sample Info: F6F1C1AC,1,0,,

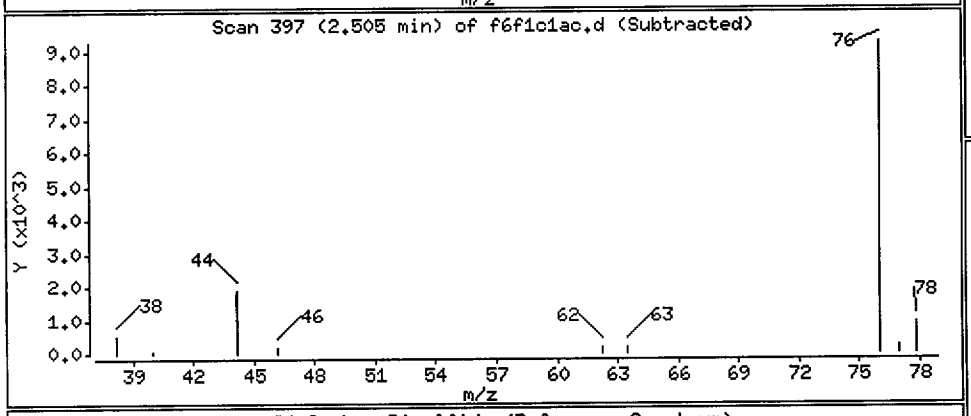
Purge Volume: 25.0 Operator: 063605

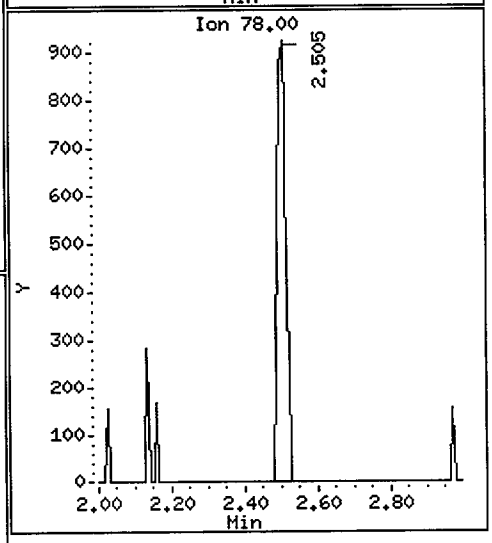
Column phase: J+W 624 Column diameter: 0.18

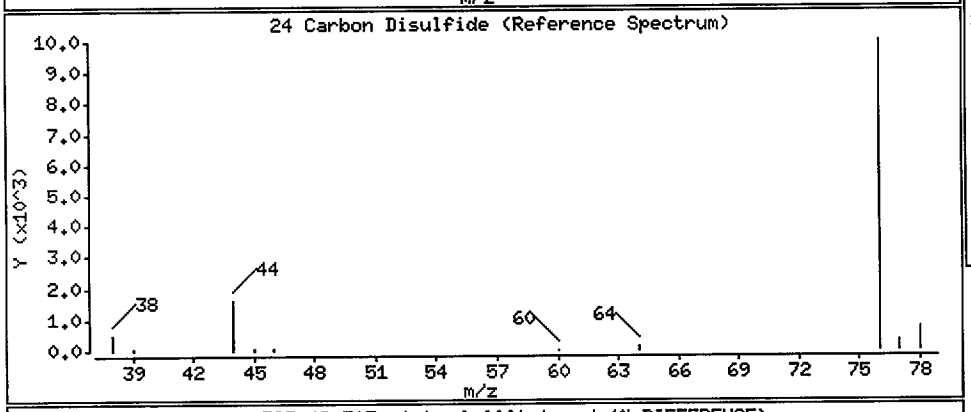
24 Carbon Disulfide Concentration: 0.15760 ug/L

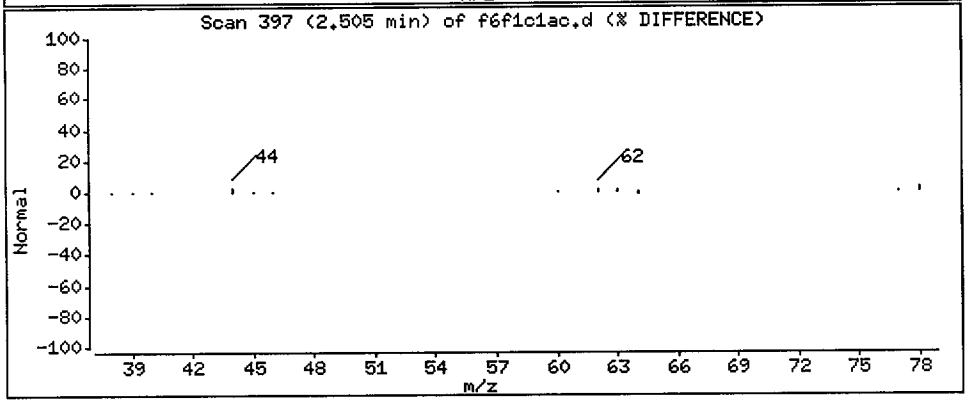












Data File: /chem/gcms/mx.i/X121103.b/f6f1c1ac.d

Date : 11-DEC-2003 22:27

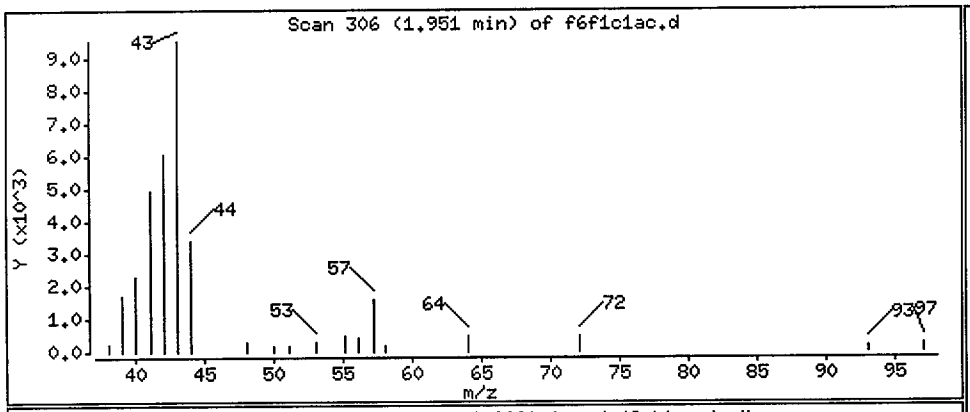
Client ID: DD3002 Instrument: mx.i

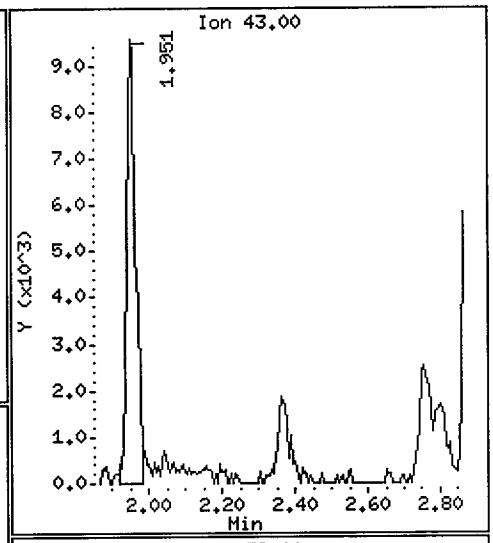
Sample Info: F6F1C1AC,1,0,,

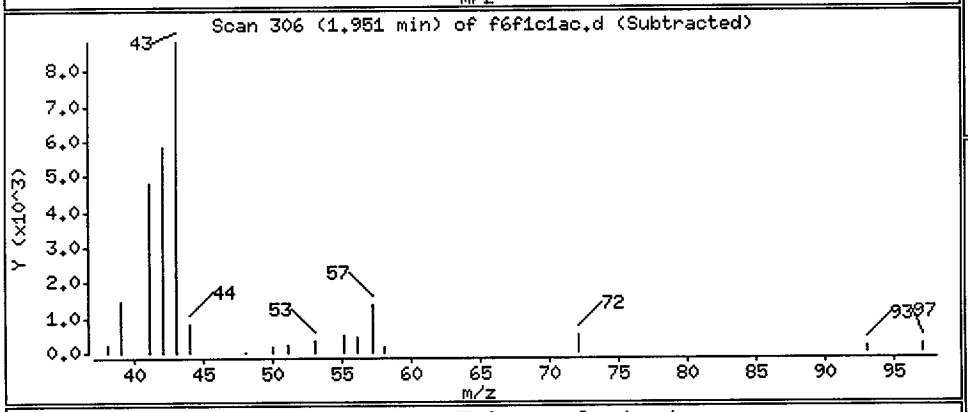
Purge Volume: 25.0 Operator: 063605

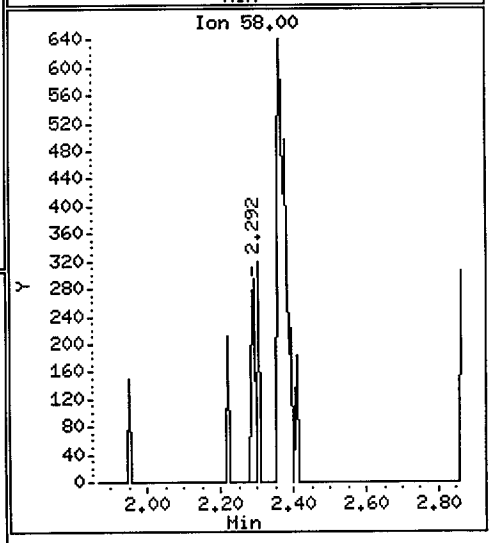
Column phase: J+W 624 Column diameter: 0.18

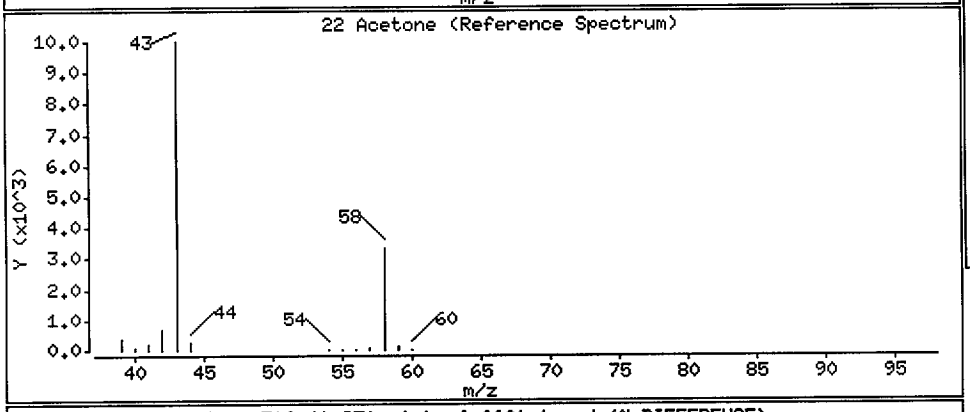
22 Acetone Concentration: 3.1030 ug/L

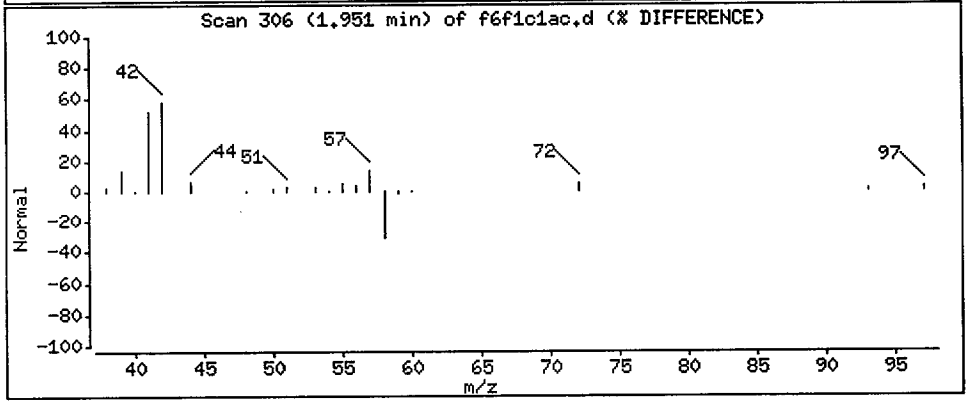












Data File: /chem/gcms/mx.i/X121103.b/f6f1c1ac.d

Date : 11-DEC-2003 22:27

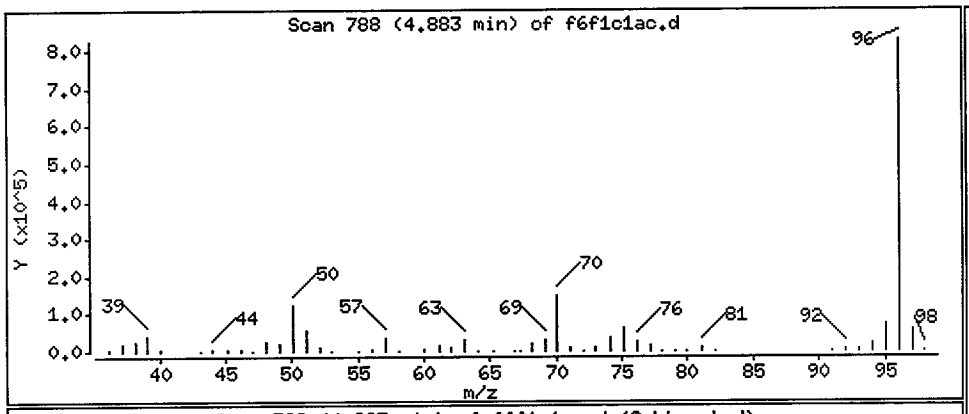
Client ID: DD3002 Instrument: mx.i

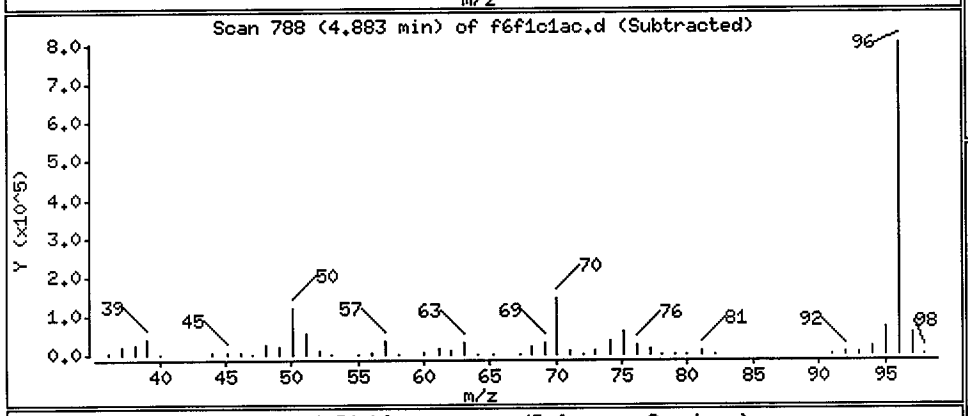
Sample Info: F6F1C1AC,1,0,,

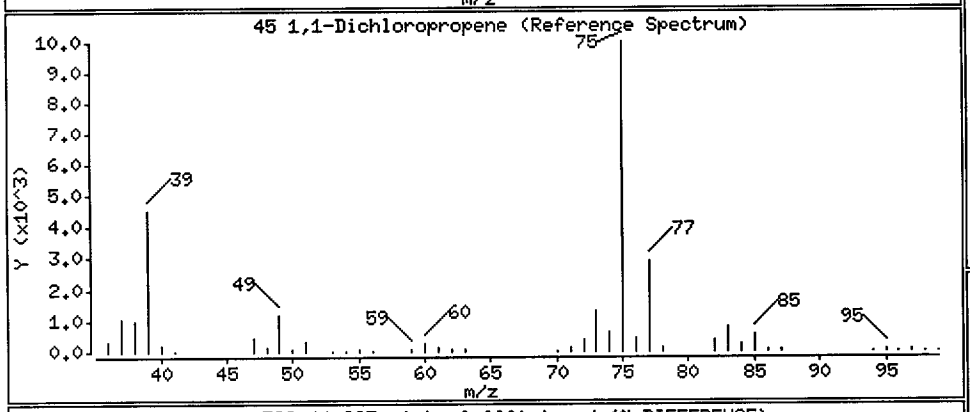
Purge Volume: 25.0 Operator: 063605

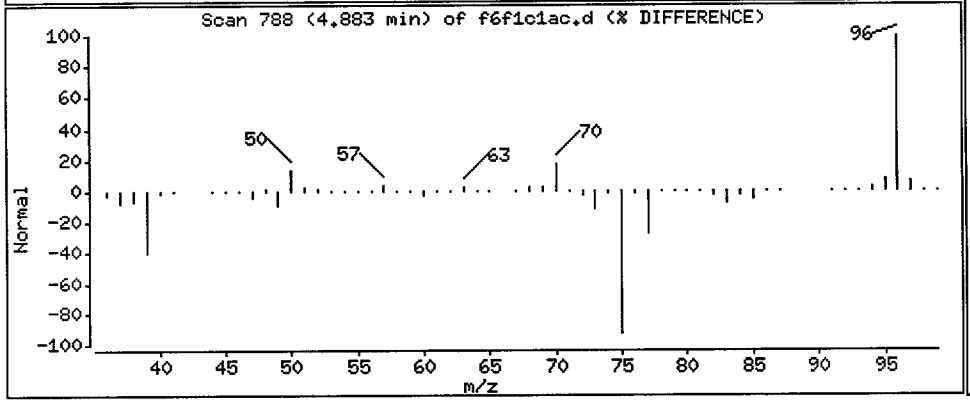
Column phase: J+W 624 Column diameter: 0.18

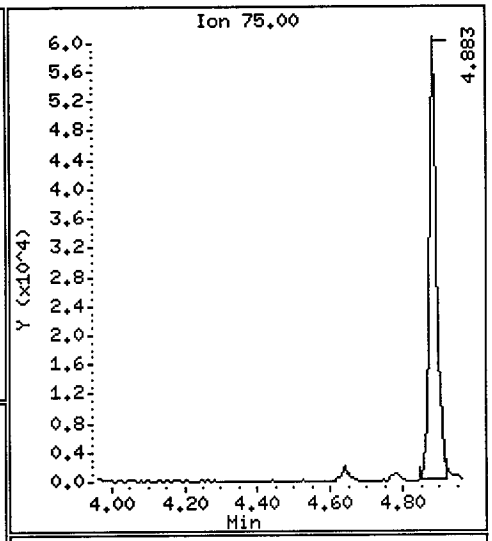
45 1,1-Dichloropropene Concentration: 1.9552 ug/L

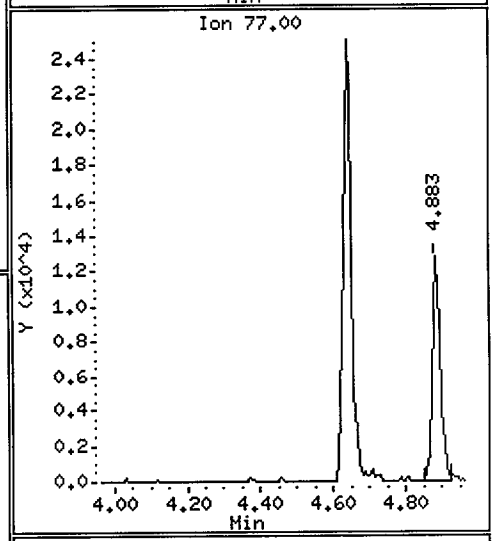


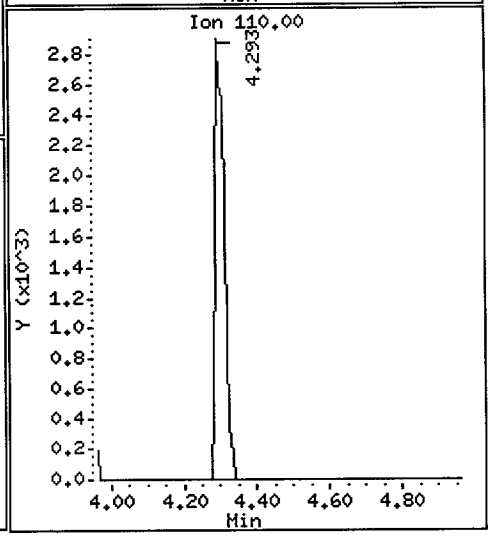












Data File: /chem/gcms/mx.i/X121103.b/f6f1c1ac.d

Date : 11-DEC-2003 22:27

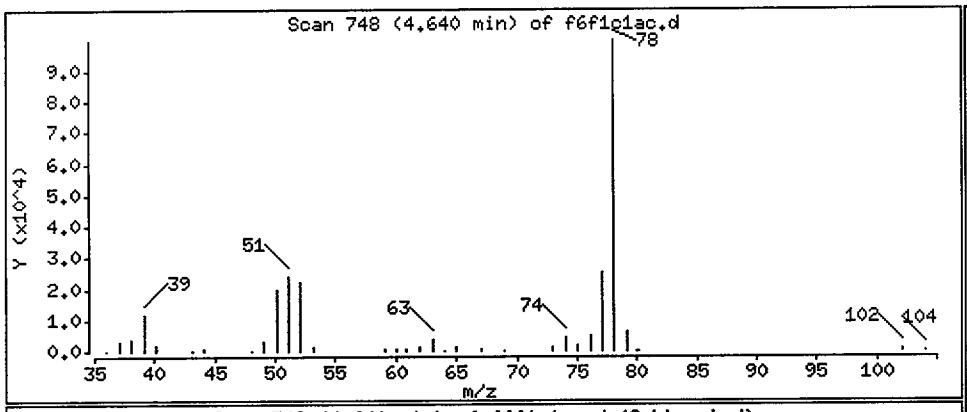
Client ID: DD3002 Instrument: mx.i

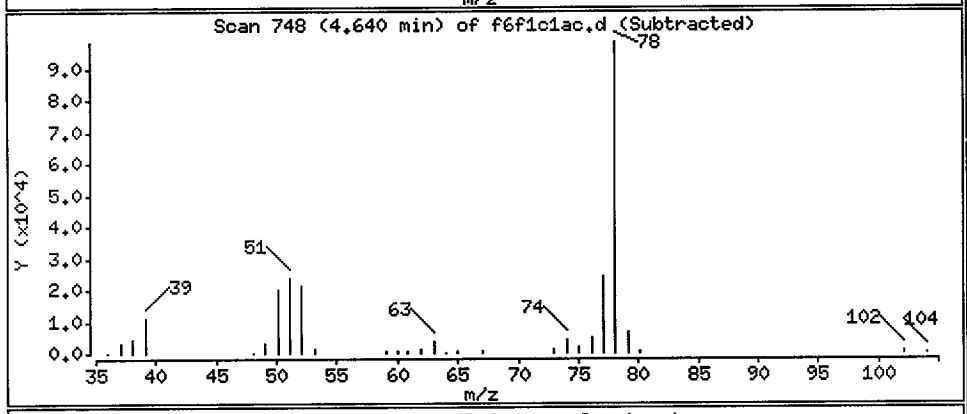
Sample Info: F6F1C1AC,1,0,,

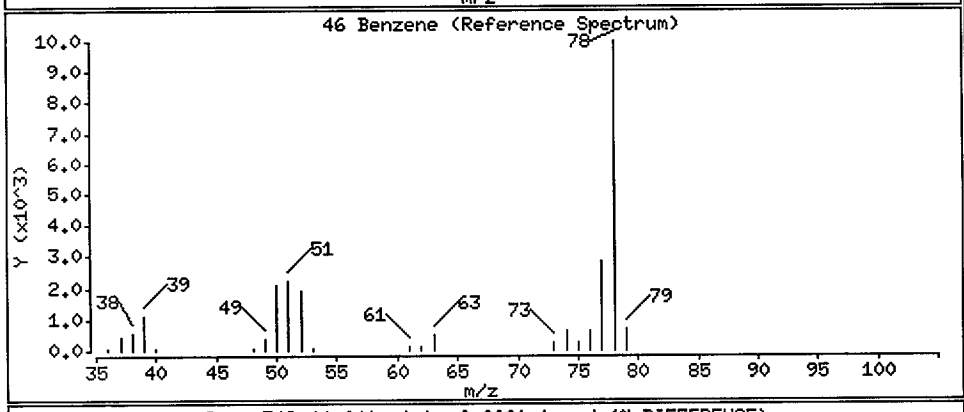
Purge Volume: 25.0 Operator: 063605

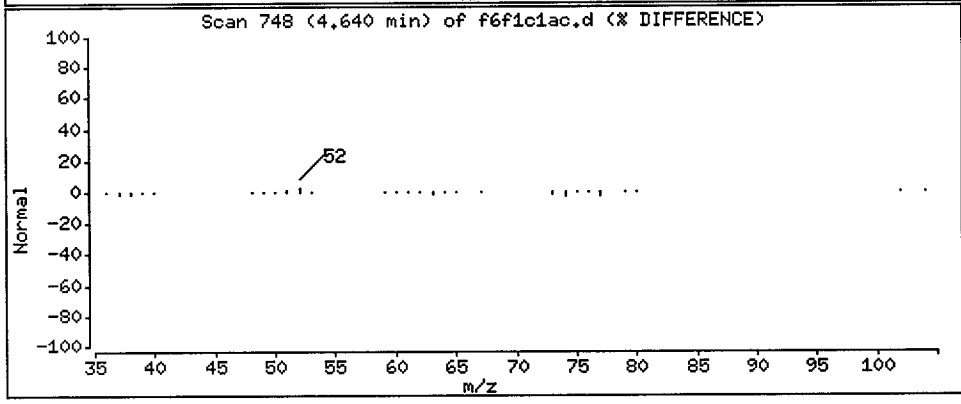
Column phase: J+W 624 Column diameter: 0.18

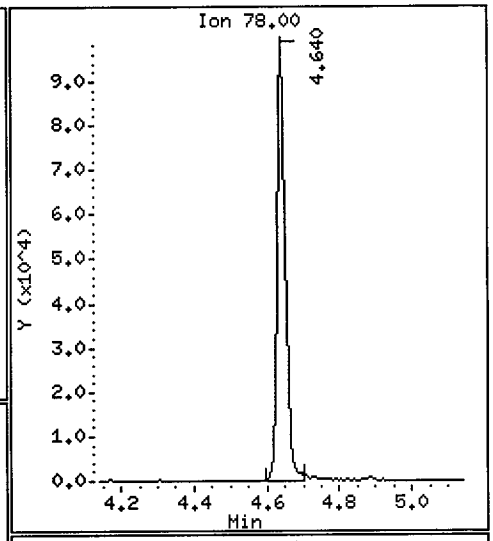
46 Benzene Concentration: 1.1788 ug/L

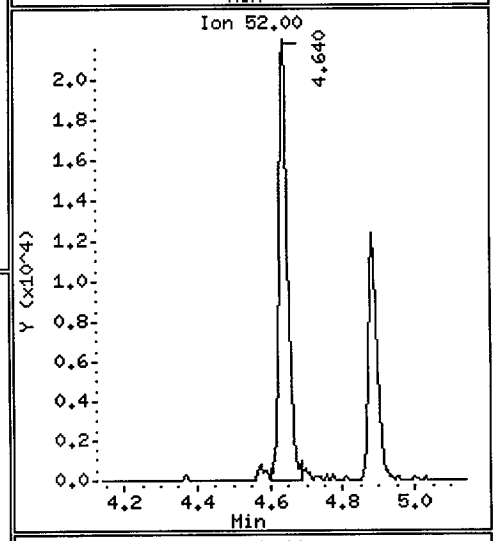


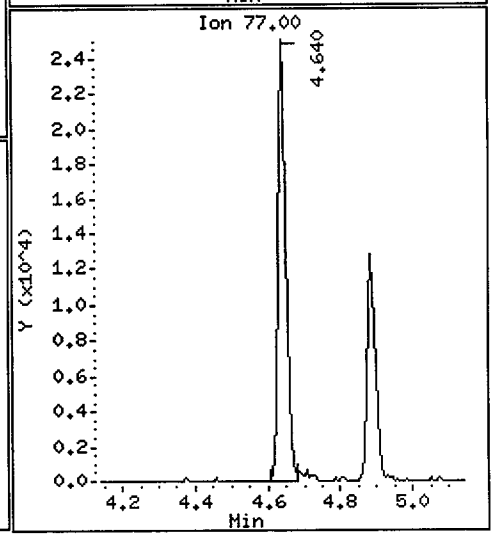












Data File: /chem/gcms/mx.i/X121103.b/f6f1c1ac.d

Date : 11-DEC-2003 22:27

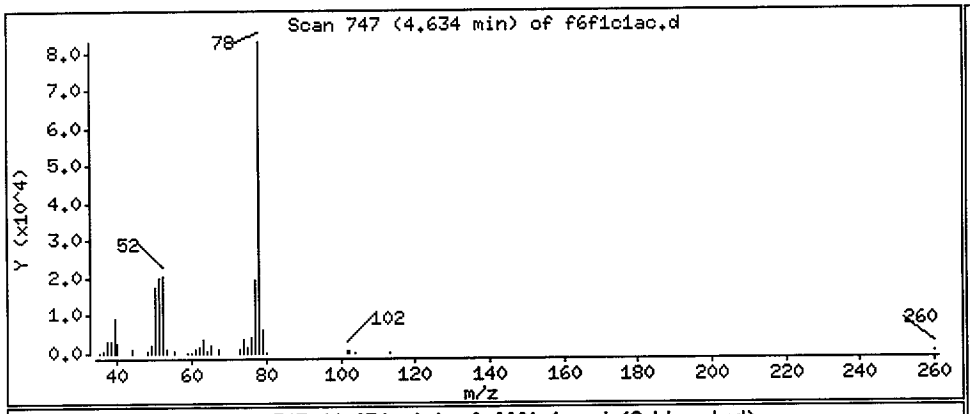
Client ID: DD3002 | Instrument: mx.i

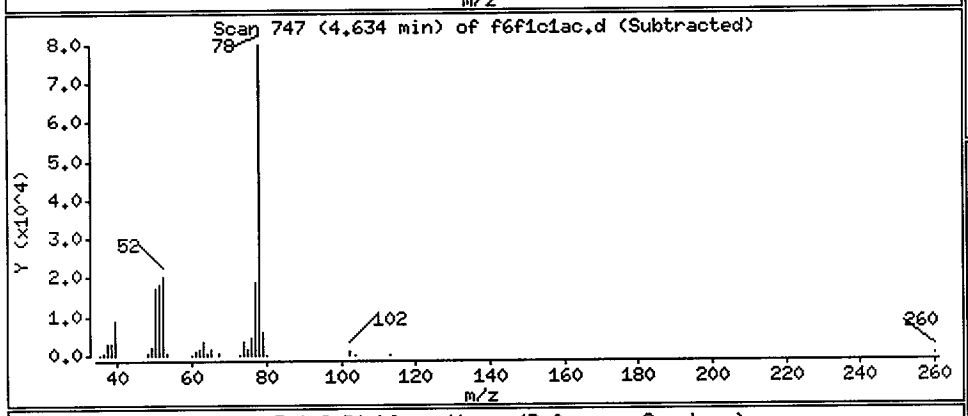
Sample Info: F6F1C1AC,1,0,,

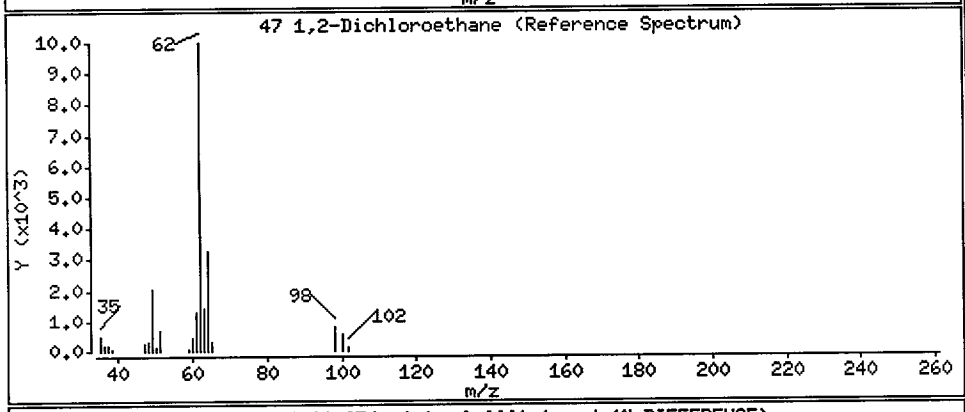
Purge Volume: 25.0 | Operator: 063605

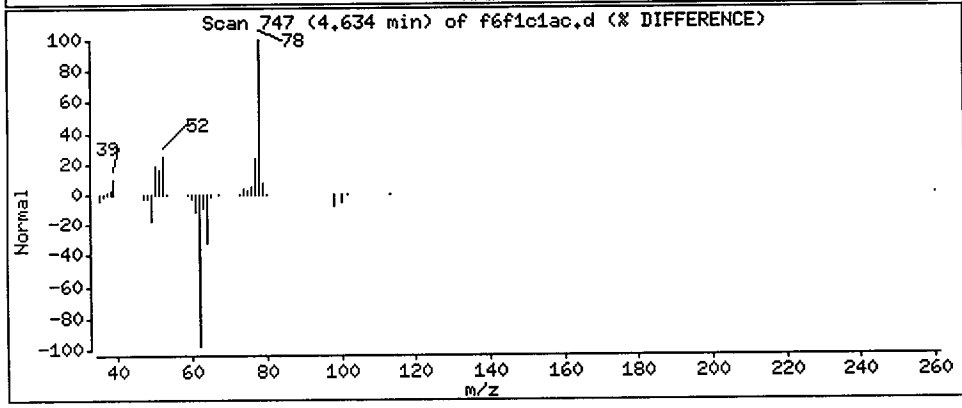
Column phase: J+W 624 | Column diameter: 0.18

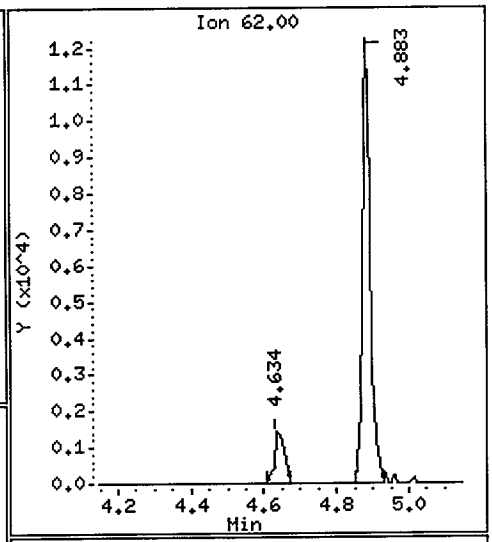
47 1,2-Dichloroethane | Concentration: 0.12261 ug/L

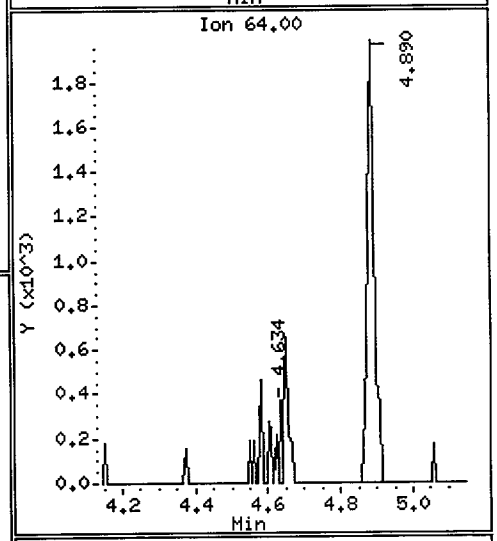


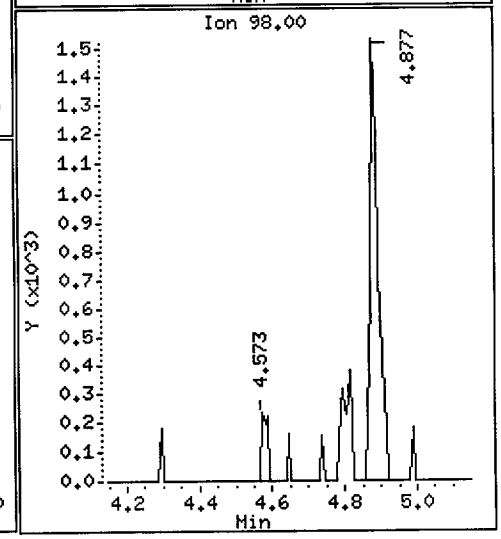












Data File: /chem/gcms/mx.i/X121103.b/f6f1c1ac.d

Date : 11-DEC-2003 22:27

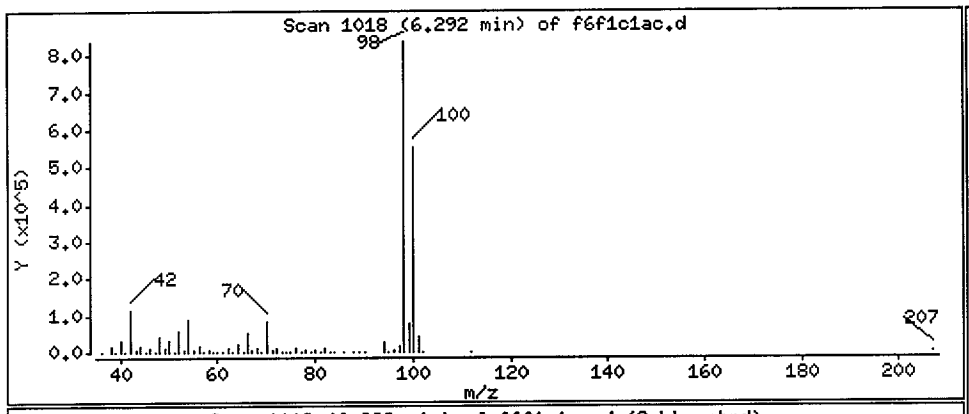
Client ID: DD3002 | Instrument: mx.i

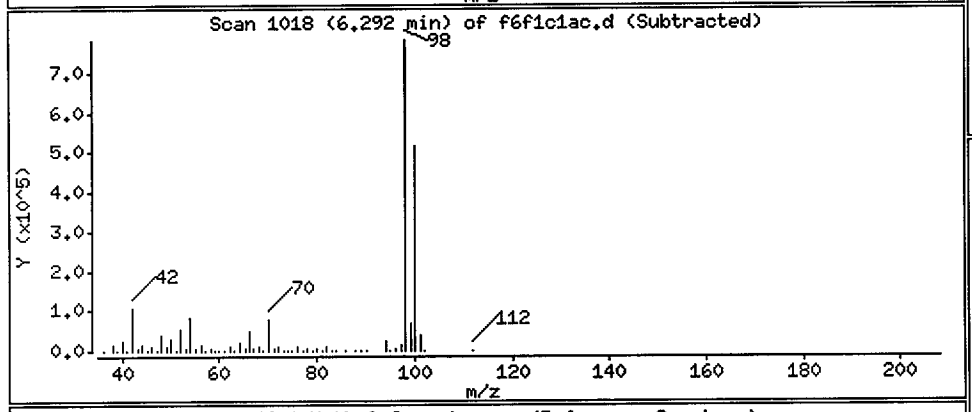
Sample Info: F6F1C1AC,1,0,,

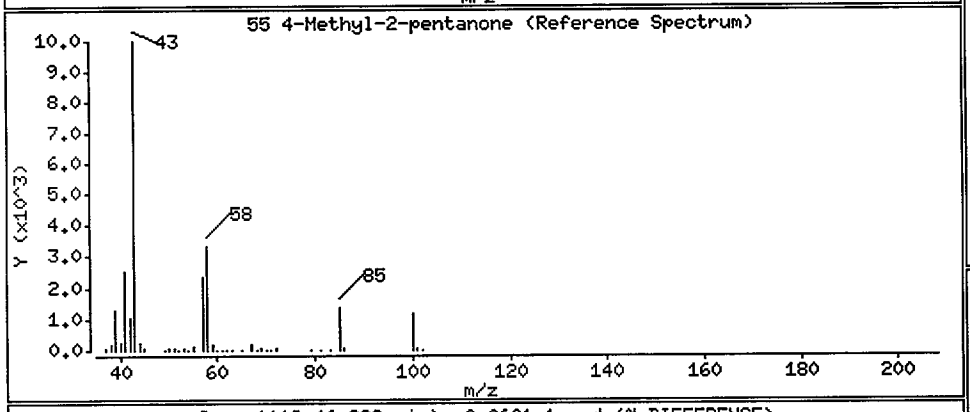
Purge Volume: 25.0 | Operator: 063605

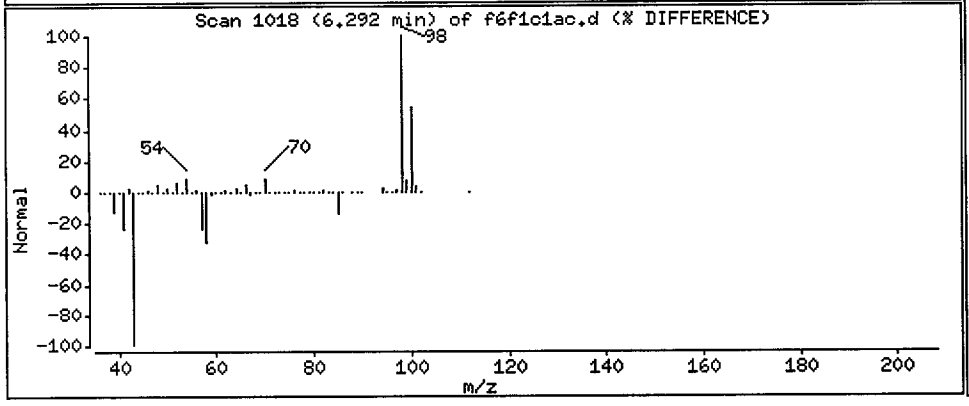
Column phase: J+W 624 | Column diameter: 0.18

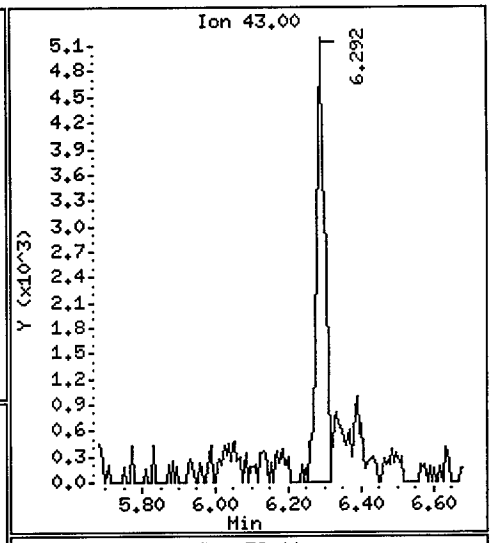
55 4-Methyl-2-pentanone | Concentration: 0.82444 ug/L

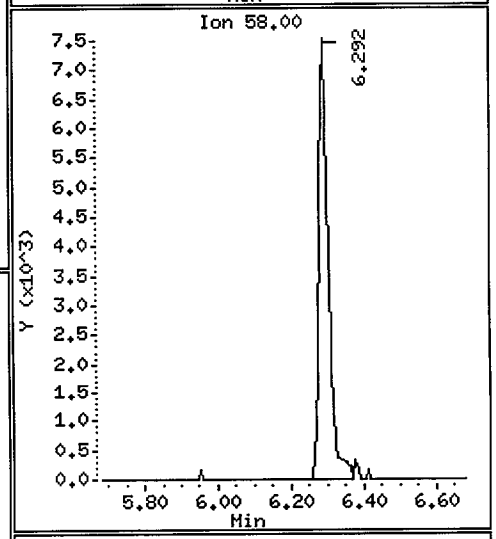


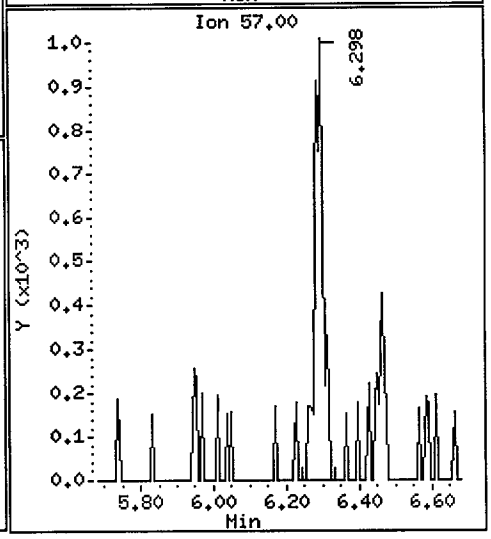












Data File: /chem/gcms/mx.i/X121103.b/f6f1c1ac.d

Date : 11-DEC-2003 22:27

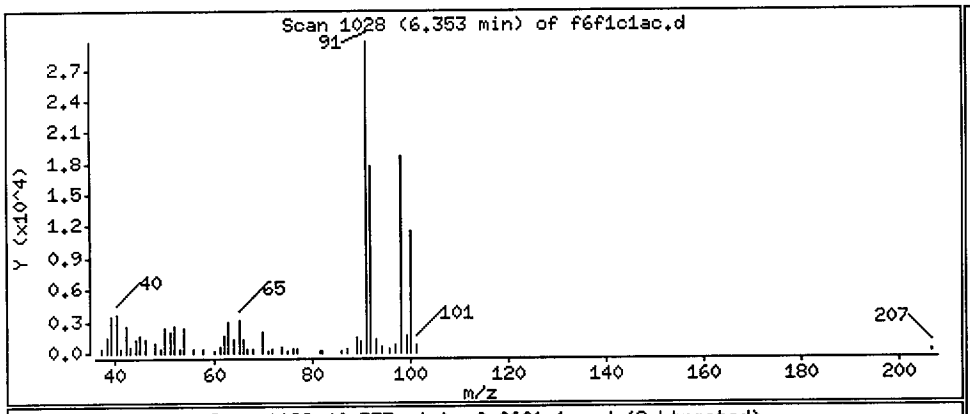
Client ID: DD3002 Instrument: mx.i

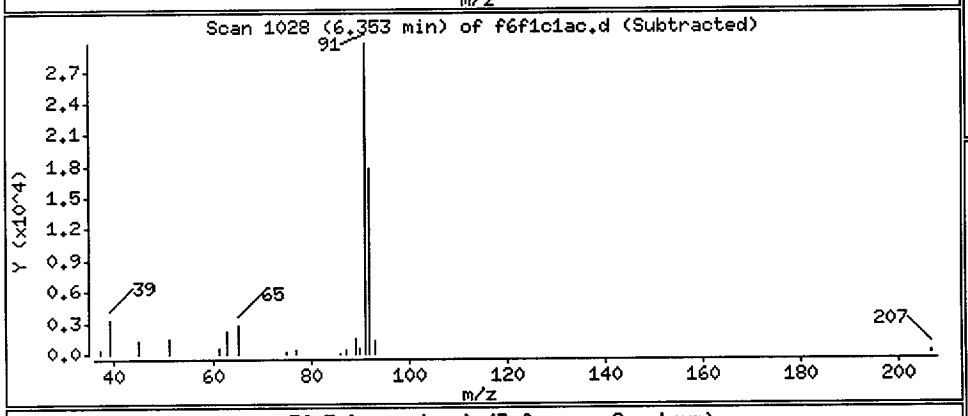
Sample Info: F6F1C1AC,1,0,,

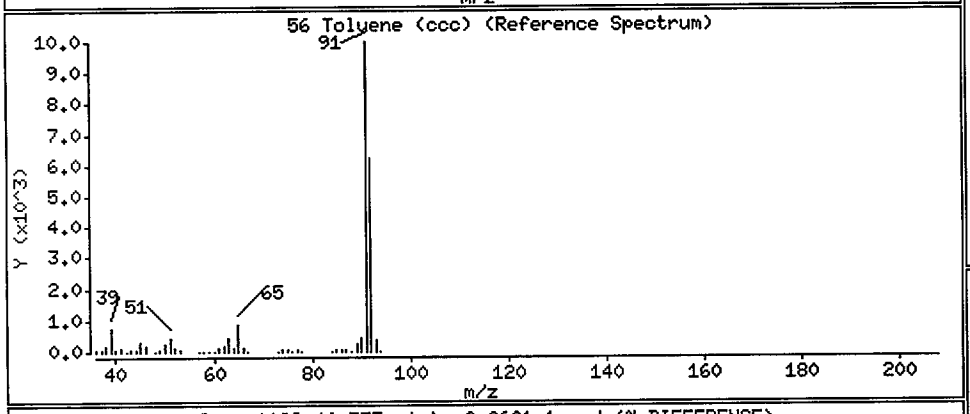
Purge Volume: 25.0 Operator: 063605

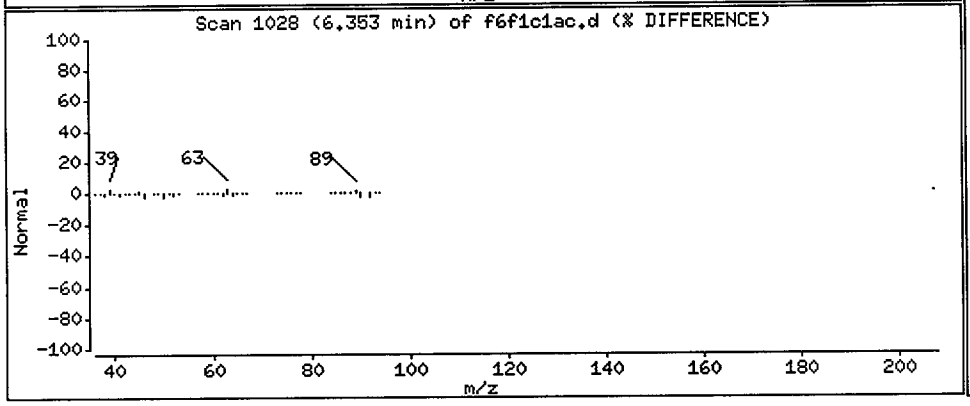
Column phase: J+W 624 Column diameter: 0.18

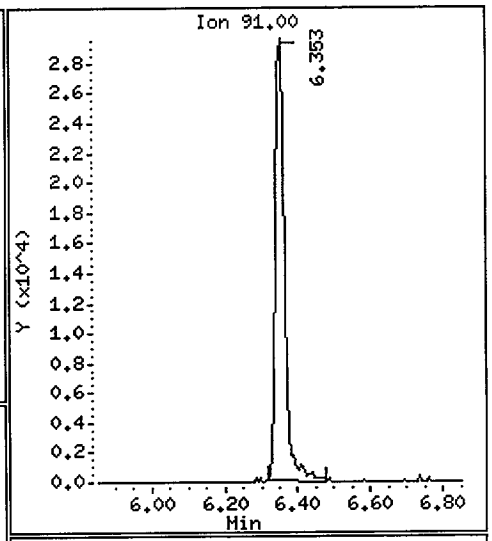
56 Toluene (ccc) Concentration: 0.26035 ug/L

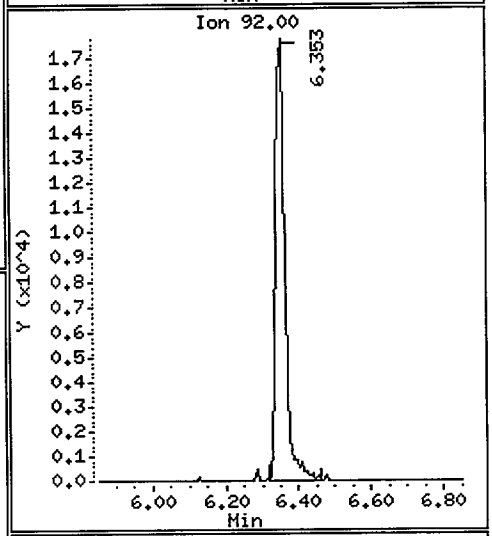


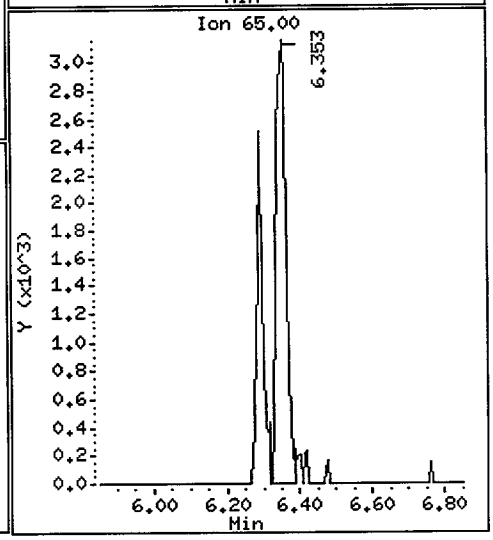












Data File: /chem/gcms/mx.i/X121103.b/f6f1c1ac.d

Date : 11-DEC-2003 22:27

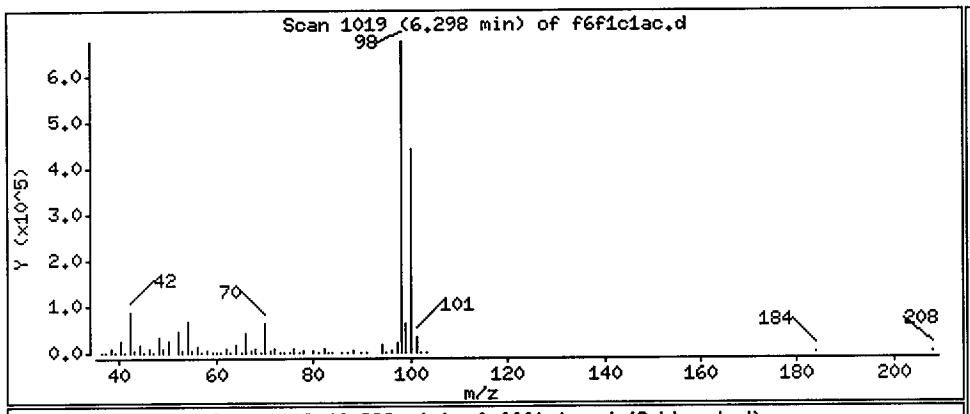
Client ID: DD3002 Instrument: mx.i

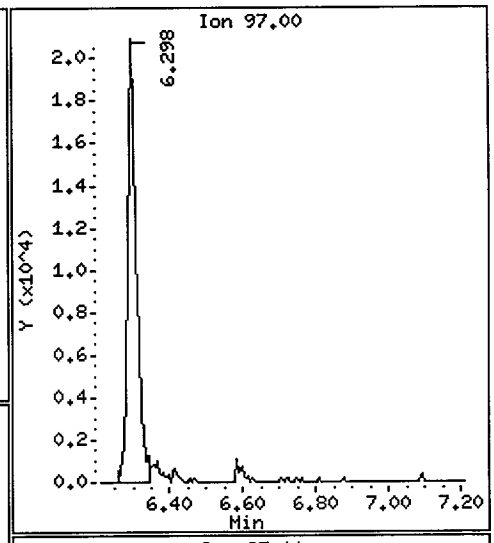
Sample Info: F6F1C1AC,1,0,,

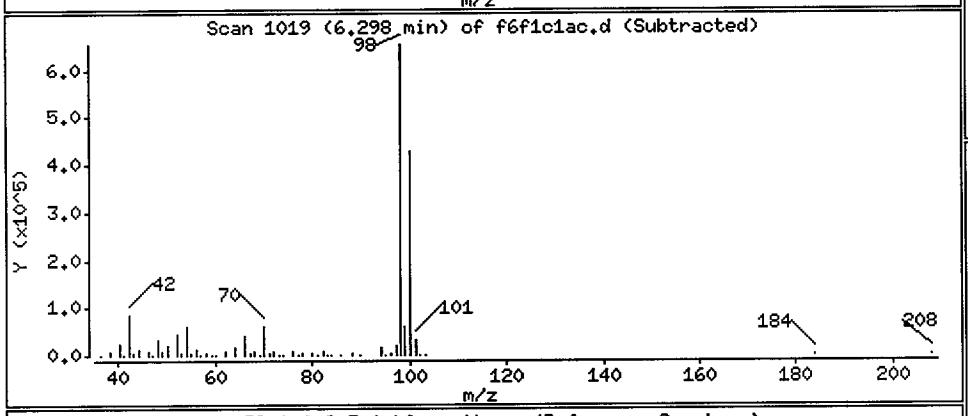
Purge Volume: 25.0 Operator: 063605

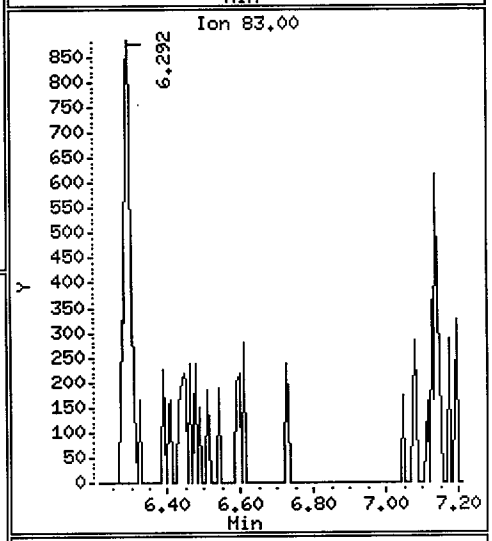
Column phase: J+W 624 Column diameter: 0.18

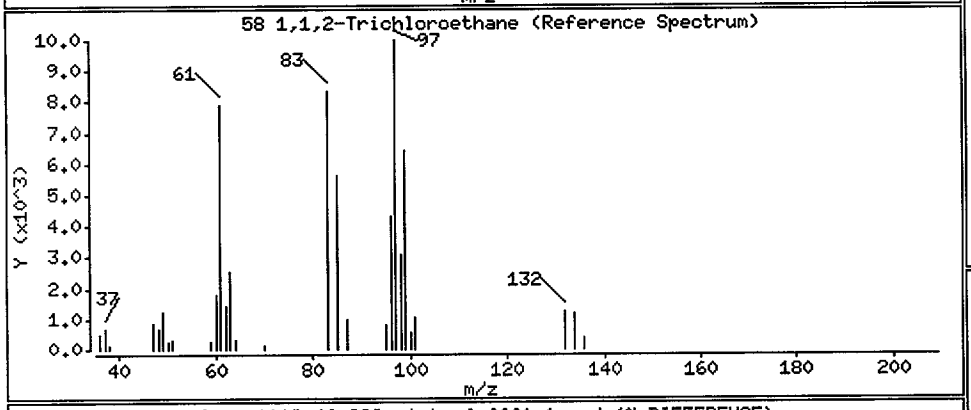
58 1,1,2-Trichloroethane Concentration: 2.4699 ug/L

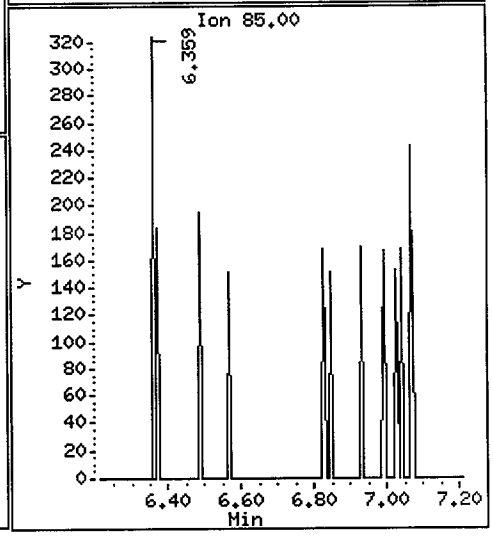


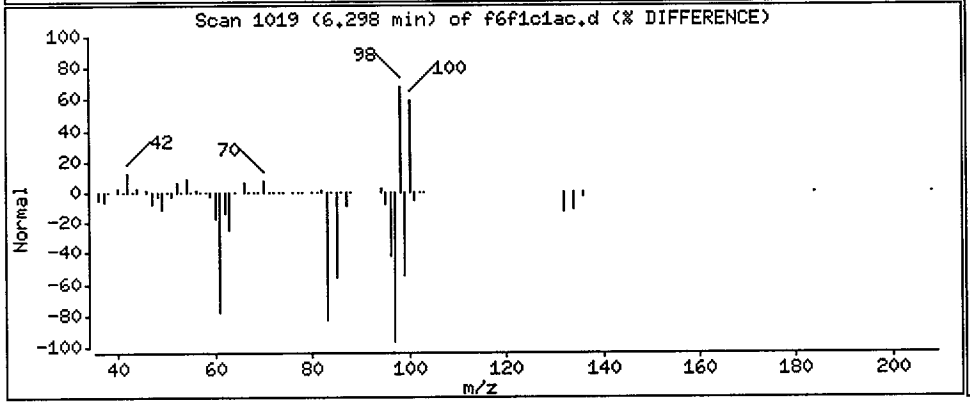












SHAW E & I INC

Client Sample ID: DD3008

GC/MS Volatiles

Lot-Sample #...: H3L100268-002 **Work Order #...:** F6DRG1AN **Matrix.....:** WATER
Date Sampled...: 12/09/03 **Date Received..:** 12/10/03
Prep Date.....: 12/11/03 **Analysis Date..:** 12/11/03
Prep Batch #...: 3345349
Dilution Factor: 1 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Chloromethane	**0.30 J**	**2.0**	**ug/L**	**0.12**
Bromomethane	ND	2.0	ug/L	0.38
Vinyl chloride	ND	1.0	ug/L	0.24
Chloroethane	ND	2.0	ug/L	0.24
Methylene chloride	ND	2.0	ug/L	0.23
Acetone	ND	10	ug/L	1.4
Carbon disulfide	**13**	**1.0**	**ug/L**	**0.10**
1,1-Dichloroethene	ND	1.0	ug/L	0.10
1,1-Dichloroethane	ND	1.0	ug/L	0.10
1,2-Dichloroethene (total)	ND	1.0	ug/L	0.20
Chloroform	ND	1.0	ug/L	0.10
1,2-Dichloroethane	ND	1.0	ug/L	0.10
2-Butanone	ND	5.0	ug/L	0.75
1,1,1-Trichloroethane	ND	1.0	ug/L	0.10
Carbon tetrachloride	ND	1.0	ug/L	0.12
Bromodichloromethane	ND	1.0	ug/L	0.10
1,2-Dichloropropane	ND	1.0	ug/L	0.10
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.10
Trichloroethene	ND	1.0	ug/L	0.10
Dibromochloromethane	ND	1.0	ug/L	0.20
1,1,2-Trichloroethane	ND	1.0	ug/L	0.25
Benzene	**0.96 J**	**1.0**	**ug/L**	**0.10**
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.11
Bromoform	ND	1.0	ug/L	0.14
4-Methyl-2-pentanone	ND	5.0	ug/L	0.40
2-Hexanone	ND	5.0	ug/L	0.76
Tetrachloroethene	ND	1.0	ug/L	0.10
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.15
Toluene	ND	1.0	ug/L	0.10
Chlorobenzene	ND	1.0	ug/L	0.10
Ethylbenzene	**0.87 J**	**1.0**	**ug/L**	**0.10**
Styrene	ND	1.0	ug/L	0.10
Xylenes (total)	**5.1**	**1.0**	**ug/L**	**0.30**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	101	(79 - 120)
1,2-Dichloroethane-d4	102	(71 - 127)
Toluene-d8	101	(80 - 120)
Bromofluorobenzene	93	(69 - 126)

(Continued on next page)

SHAW E & I INC

Client Sample ID: DD3001

GC/MS Volatiles

Lot-Sample #...: H3L110180-002 **Work Order #...:** F6F2H1AN **Matrix.....:** WATER

NOTE(S):

J Estimated result. Result is less than RL.

Data File: /chem/gcms/mx.i/X121103.b/f6f2h1an.d
Report Date: 11-Dec-2003 23:10

STL Knoxville

SW-846 Method 8260A - Volatile Organics

Data file : /chem/gcms/mx.i/X121103.b/f6f2h1an.d
Lab Smp Id: F6F2H1AN Client Smp ID: DD3001
Inj Date : 11-DEC-2003 22:53
Operator : 063605 Inst ID: mx.i
Smp Info : F6F2H1AN,1,0,,
Misc Info : X121103,8260B_LM,s.sub
Comment :
Method : /var/chem/gcms/mx.i/X121103.b/8260B_LM.m
Meth Date : 11-Dec-2003 16:28 tillerm Quant Type: ISTD
Cal Date : 16-SEP-2003 12:52 Cal File: icxi166.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: s.sub
Target Version: 3.50
Processing Host: qmidhp01

12/19/03

Concentration Formula: Amt * DF * Uf*Vt/(Vo*1000) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Unit Correction factor
Vt	25000.00000	Sample Volume Purged
Vo	25.00000	Sample Volume Used

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
* 1 Fluorobenzene	96	4.888	4.885	(1.000)	1343420	10.0000	
* 2 Chlorobenzene-d5	119	7.622	7.624	(1.000)	299014	10.0000	
* 3 1,4 Dichlorobenzene-d4	152	10.816	10.824	(1.000)	341197	10.0000	
$ 5 1,2-Dichloroethane-d4	65	4.583	4.581	(0.938)	175306	10.1566	10.156
$ 4 Dibromofluoromethane	113	4.297	4.295	(0.879)	219077	9.79277	9.7928
$ 6 Toluene-d8	98	6.290	6.292	(0.825)	1381068	10.0550	10.055
$ 7 4-Bromofluorobenzene	95	8.930	8.932	(0.826)	368750	9.02899	9.0290
11 Chloromethane (spcc)	50	1.231	1.229	(0.252)	3317	~~0.26367~~	~~0.26367~~
24 Carbon Disulfide	76	2.503	2.500	(0.512)	28409	0.30311	0.30311
39 2-Butanone	43	3.969	3.887	(0.812)	9803	~~2.54055~~	~~2.5406~~
45 1,1-Dichloropropene	75	4.888	4.465	(1.000)	88856	1.94529	1.9453
47 1,2-Dichloroethane	62	4.881	4.648	(0.999)	18545	0.84892	0.84892
55 4-Methyl-2-pentanone	43	6.284	6.182	(1.286)	7656	~~0.78474~~	~~0.78474~~

12/19/03

12/15/03

Data File: /chem/gcms/mx.i/X121103.b/f6f2h1an.d
Report Date: 11-Dec-2003 23:10

STL Knoxville

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: mx.i
Lab File ID: f6f2h1an.d
Lab Smp Id: F6F2H1AN
Analysis Type: VOA
Quant Type: ISTD
Operator: 063605
Method File: /var/chem/gcms/mx.i/X121103.b/8260B_LM.m
Misc Info: X121103,8260B_LM,s.sub

Calibration Date: 11-DEC-2003
Calibration Time: 14:00
Client Smp ID: DD3001
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Fluorobenzene	1419469	709734	2838938	1343420	-5.36
2 Chlorobenzene-d5	292458	146229	584916	299014	2.24
3 1,4 Dichlorobenze	323231	161616	646462	341197	5.56

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Fluorobenzene	4.89	4.39	5.39	4.89	0.05
2 Chlorobenzene-d5	7.62	7.12	8.12	7.62	-0.02
3 1,4 Dichlorobenze	10.82	10.32	11.32	10.82	-0.07

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

Data File: /chem/gcms/mx.i/X121103.b/f6f2h1an.d
Report Date: 11-Dec-2003 23:10

STL Knoxville

RECOVERY REPORT

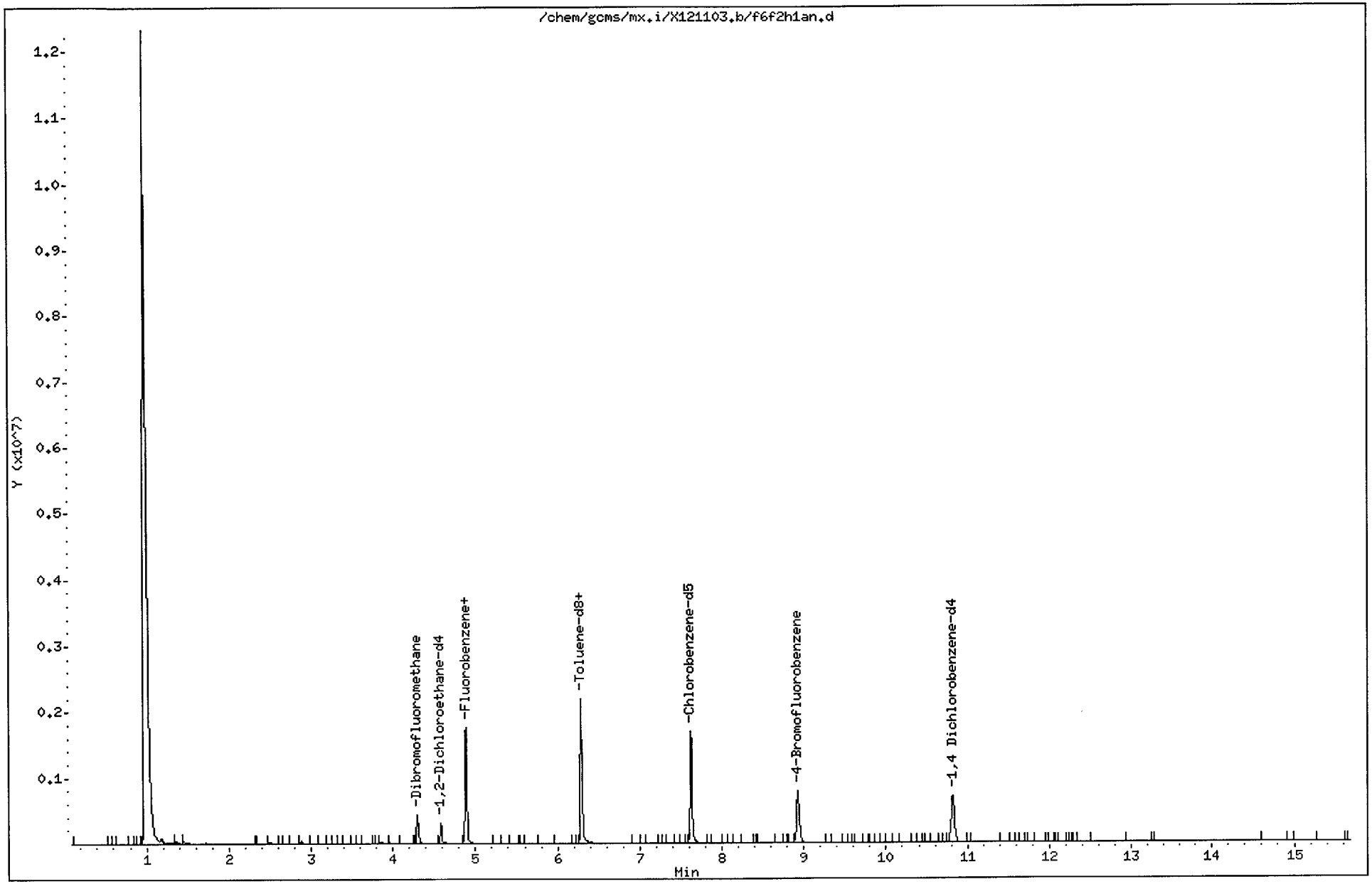
Client Name: SHAW E & I INC
Sample Matrix: LIQUID
Lab Smp Id: F6F2H1AN
Level: LOW
Data Type: MS DATA
SpikeList File: allcmpds.spk
Sublist File: s.sub
Method File: /var/chem/gcms/mx.i/X121103.b/8260B_LM.m
Misc Info: X121103,8260B_LM,s.sub

Client SDG: PB045
Fraction: VOA
Client Smp ID: DD3001
Operator: 063605
SampleType: SAMPLE
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 5 1,2-Dichloroethane	10.000	10.156	101.57	71-127
$ 4 Dibromofluorometha	10.000	9.7928	97.93	79-120
$ 6 Toluene-d8	10.000	10.055	100.55	80-120
$ 7 4-Bromofluorobenze	10.000	9.0290	90.29	69-126

Data File: /chem/gcms/mx.i/X121103.b/f6f2h1an.d
Date : 11-DEC-2003 22:53
Client ID: DD3001
Sample Info: F6F2H1AN,1,0,,
Purge Volume: 25.0
Column phase: J+W 624

Instrument: mx.i
Operator: 063605
Column diameter: 0.18



Data File: /chem/gcms/mx.i/X121103.b/f6f2h1an.d

Date : 11-DEC-2003 22:53

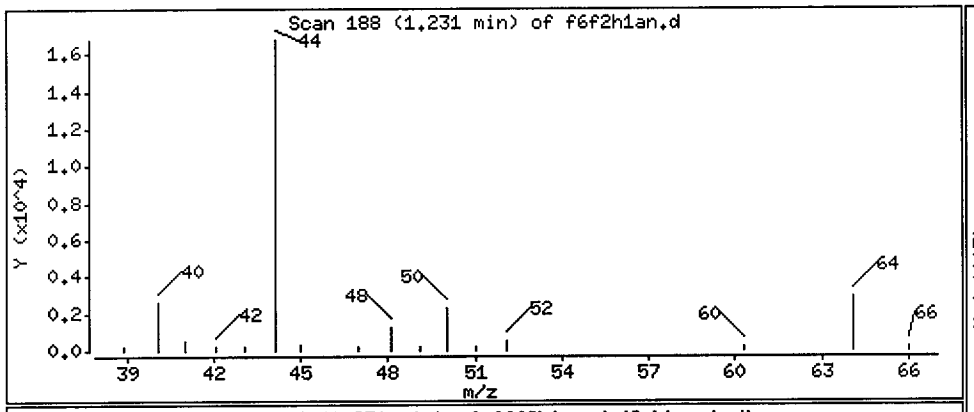
Client ID: DD3001 | Instrument: mx.i

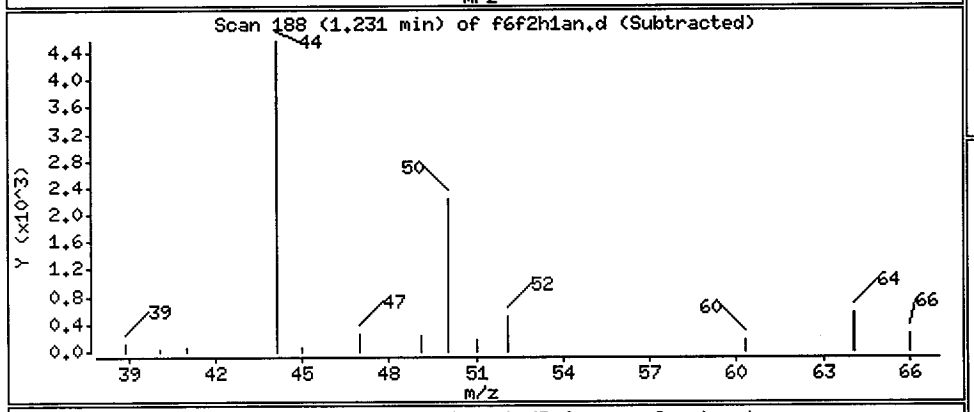
Sample Info: F6F2H1AN,1,0,,

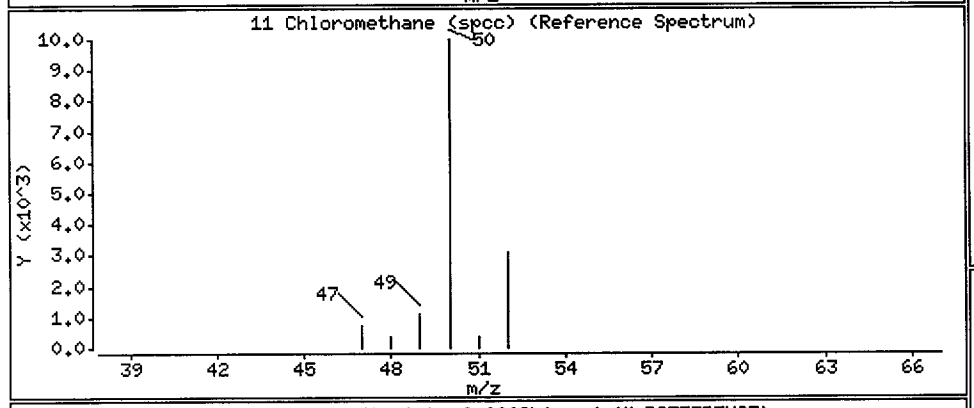
Purge Volume: 25.0 | Operator: 063605

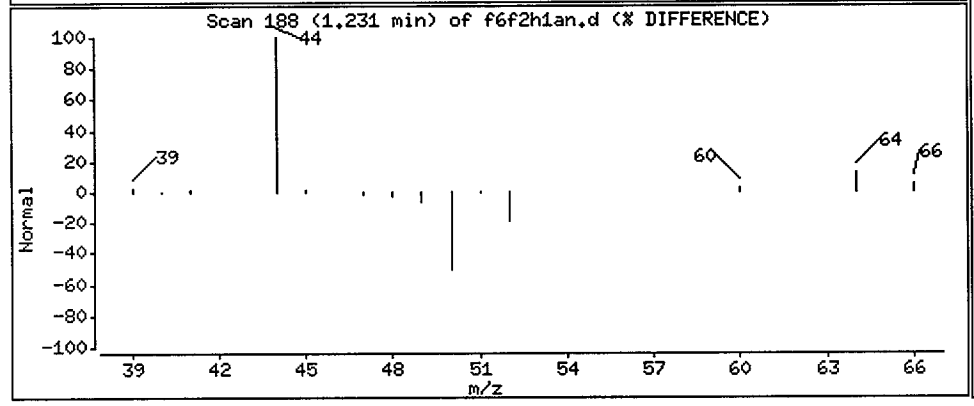
Column phase: J+W 624 | Column diameter: 0.18

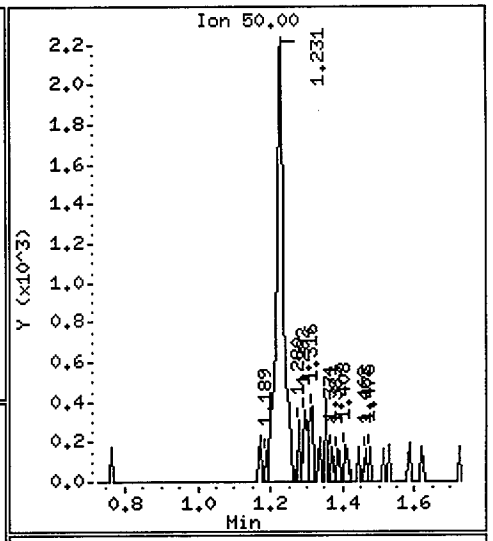
11 Chloromethane (spcc) | Concentration: 0.26367 ug/L

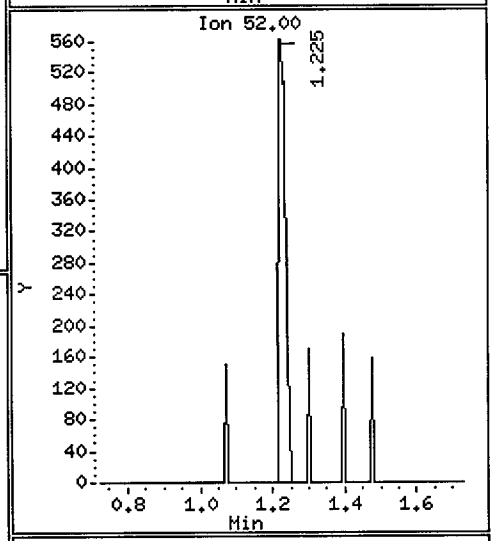


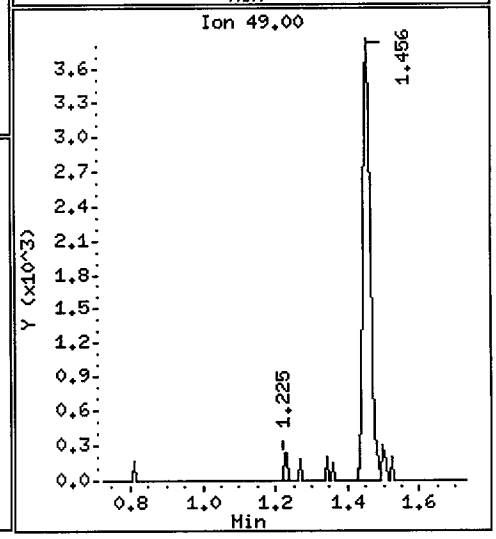












Data File: /chem/gcms/mx.i/X121103.b/f6f2h1an.d

Date : 11-DEC-2003 22:53

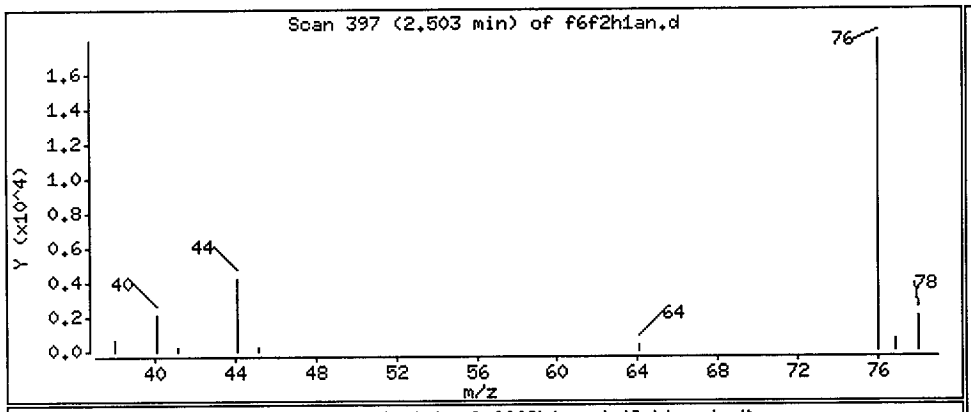
Client ID: DD3001 Instrument: mx.i

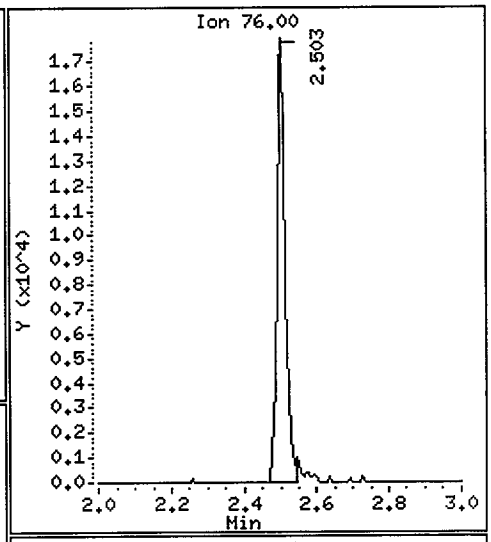
Sample Info: F6F2H1AN,1,0,,

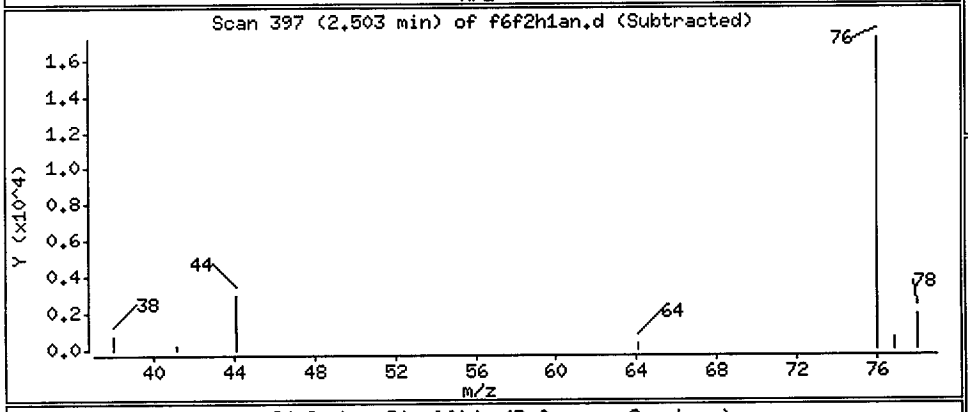
Purge Volume: 25.0 Operator: 063605

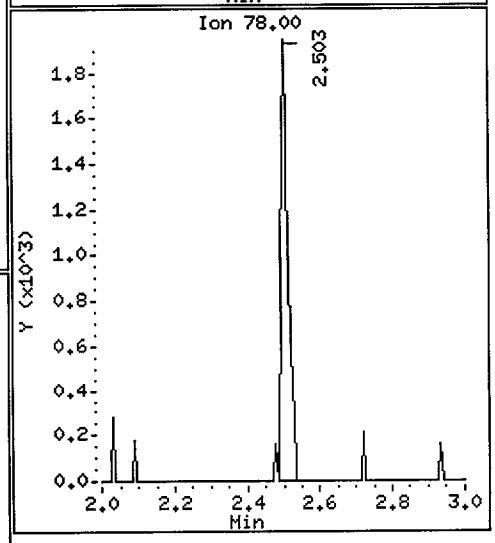
Column phase: J+W 624 Column diameter: 0.18

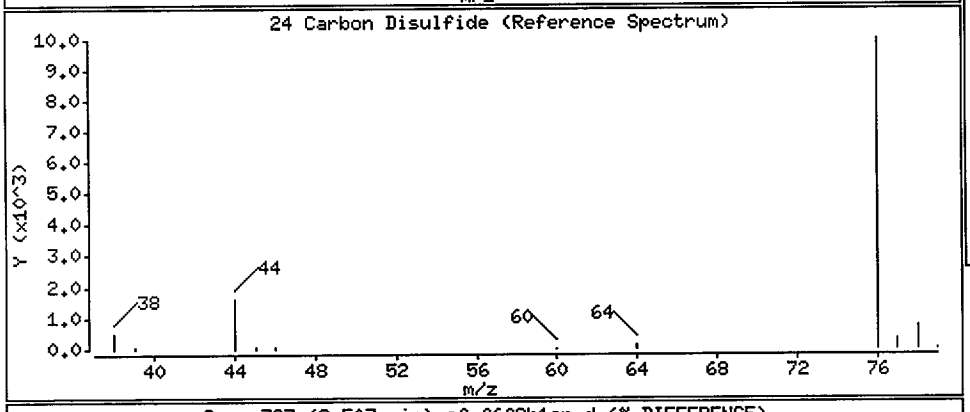
24 Carbon Disulfide Concentration: 0.30311 ug/L

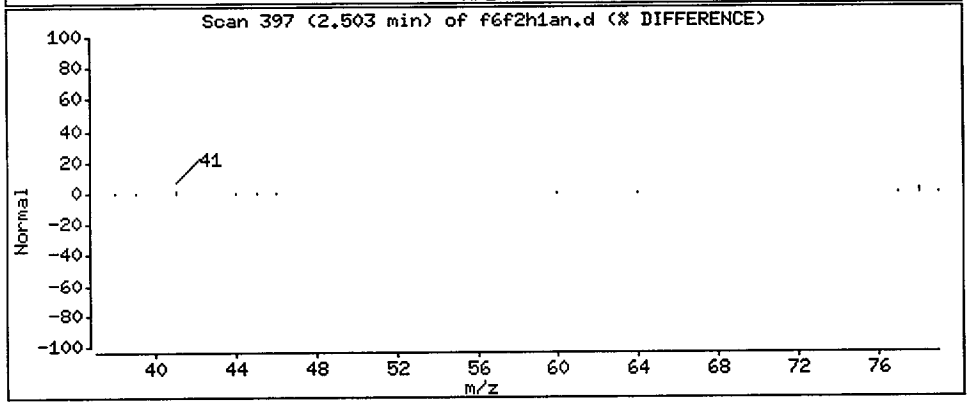












Data File: /chem/gcms/mx.i/X121103.b/f6f2h1an.d

Date : 11-DEC-2003 22:53

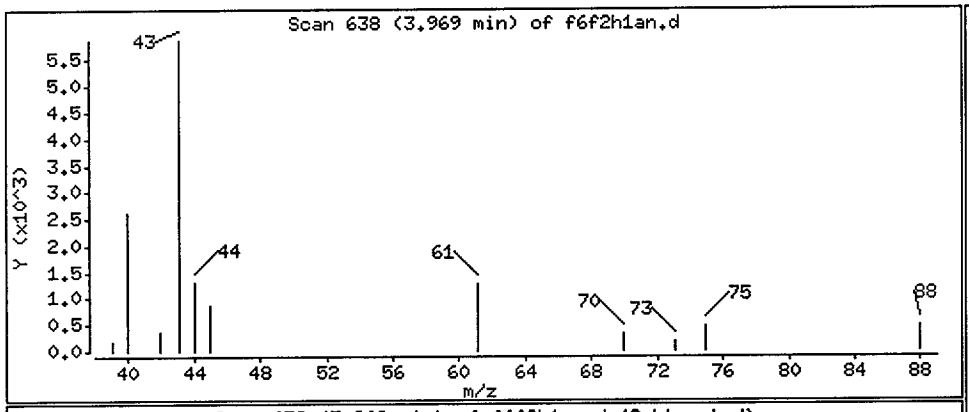
Client ID: DD3001 Instrument: mx.i

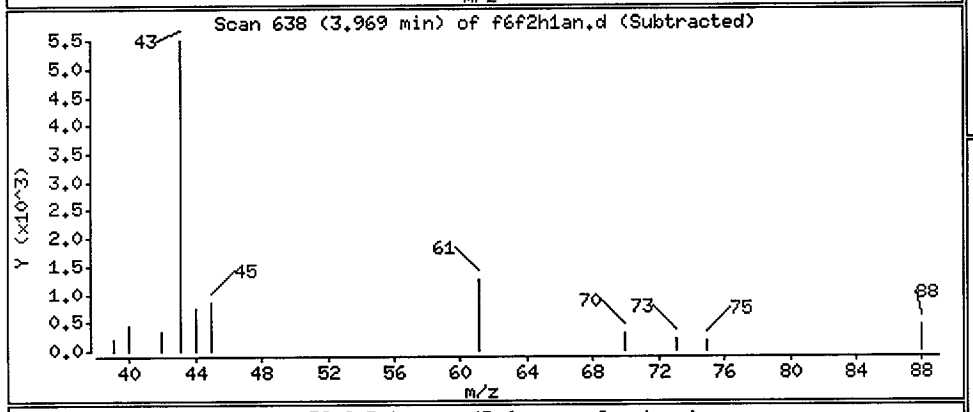
Sample Info: F6F2H1AN,1,0,,

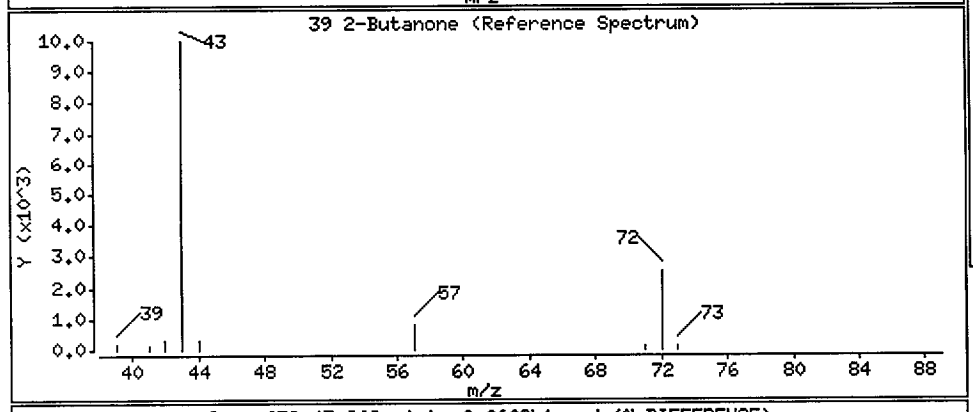
Purge Volume: 25.0 Operator: 063605

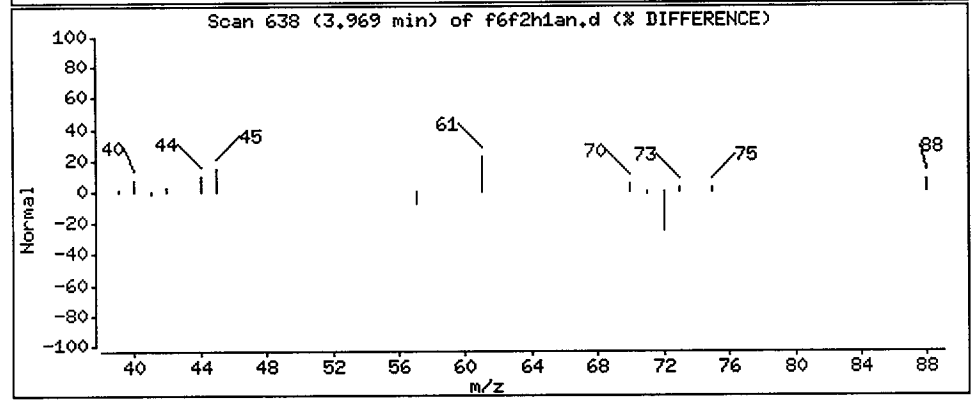
Column phase: J+W 624 Column diameter: 0.18

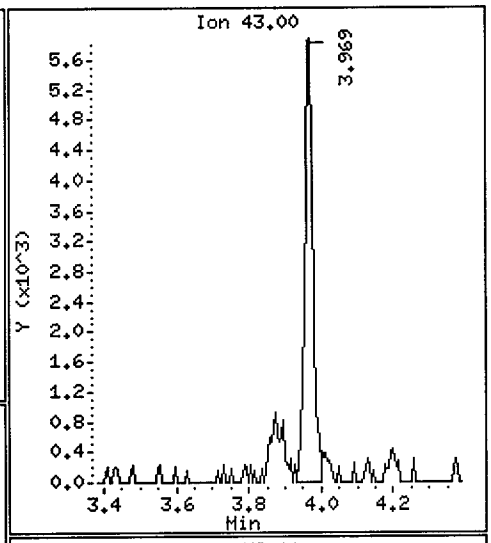
39 2-Butanone Concentration: 2.5406 ug/L

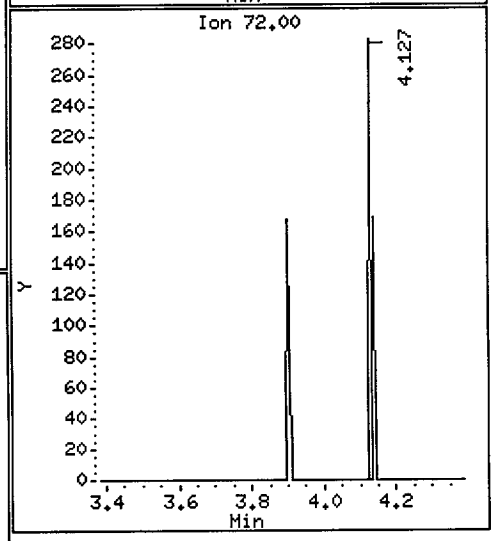












Data File: /chem/gcms/mx.i/X121103.b/f6f2h1an.d

Date : 11-DEC-2003 22:53

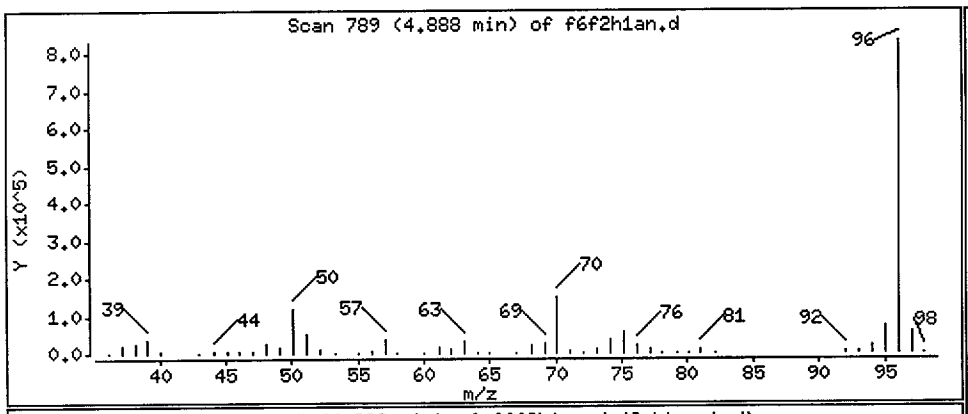
Client ID: DD3001 Instrument: mx.i

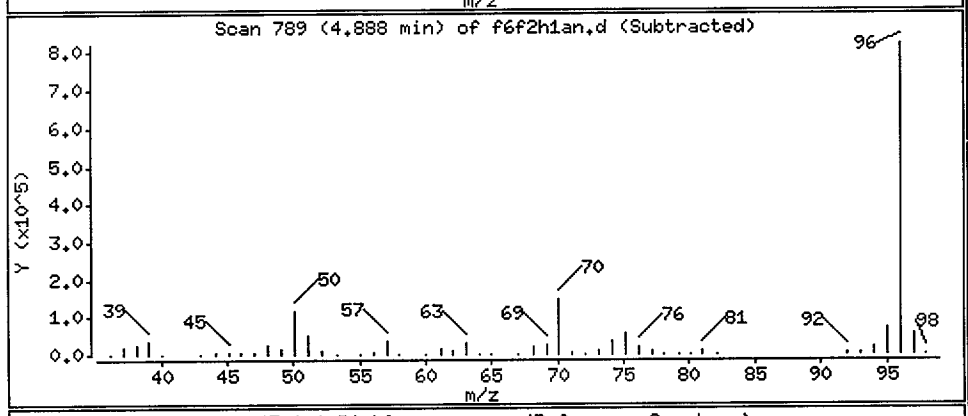
Sample Info: F6F2H1AN,1,0,,

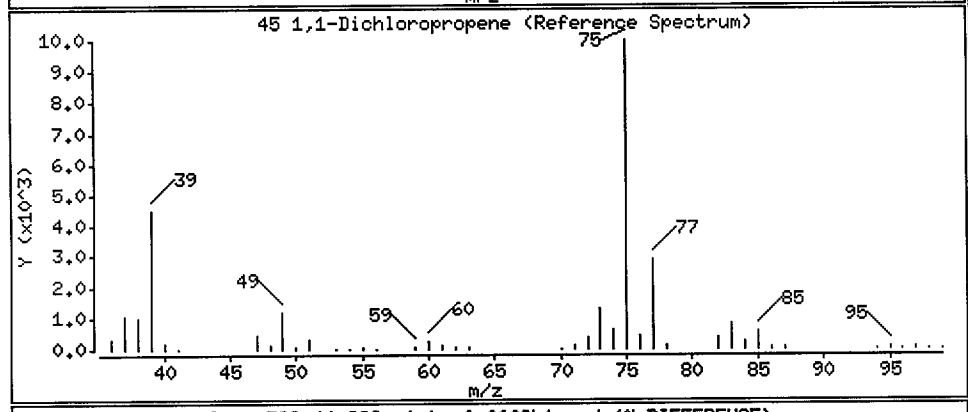
Purge Volume: 25.0 Operator: 063605

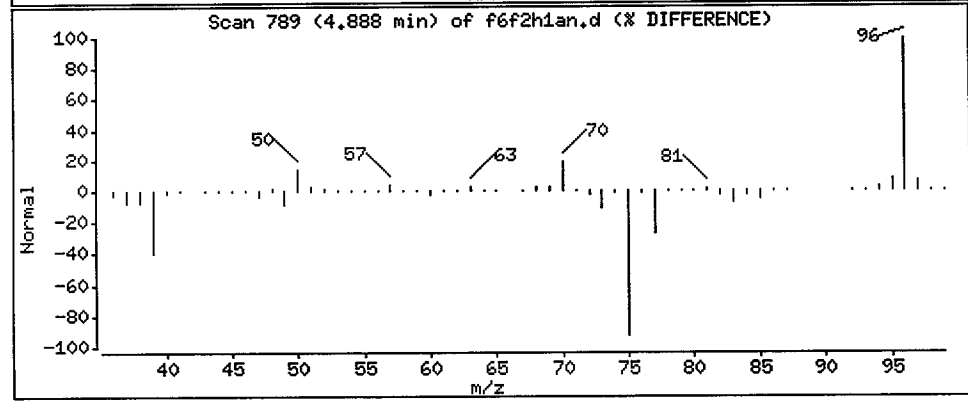
Column phase: J+W 624 Column diameter: 0.18

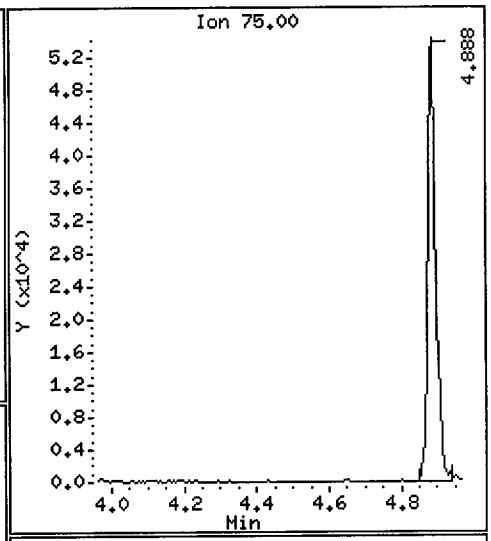
45 1,1-Dichloropropene Concentration: 1.9453 ug/L

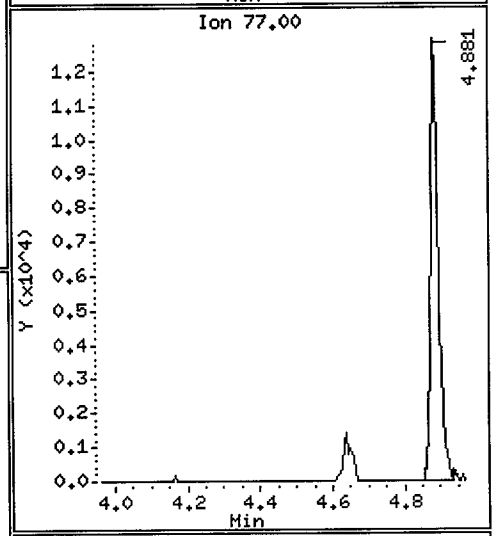


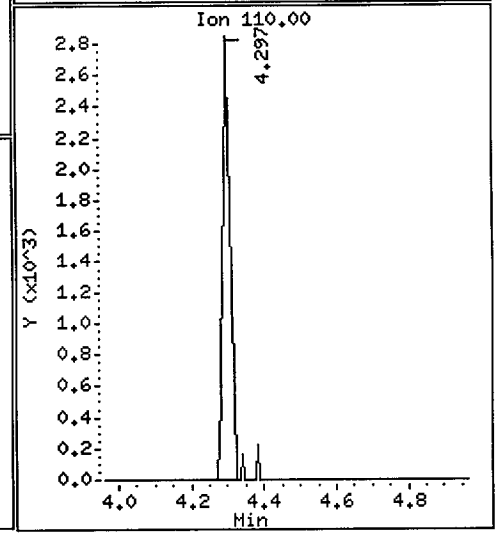












Data File: /chem/gcms/mx.i/X121103.b/f6f2h1an.d

Date : 11-DEC-2003 22:53

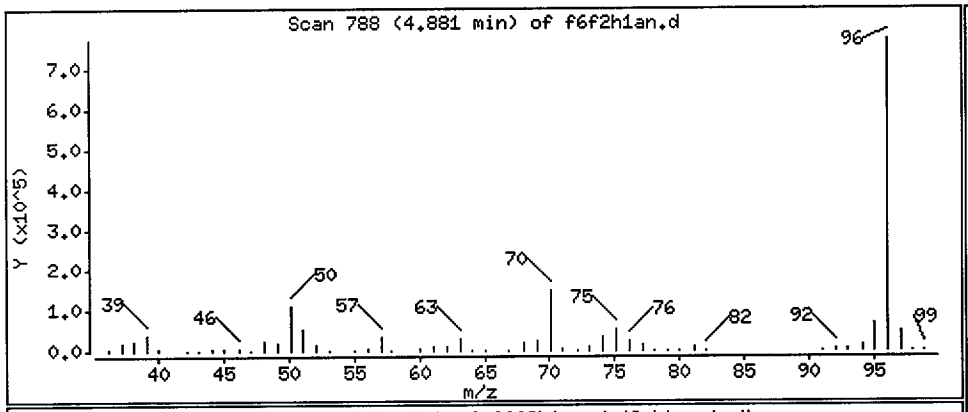
Client ID: DD3001 Instrument: mx.i

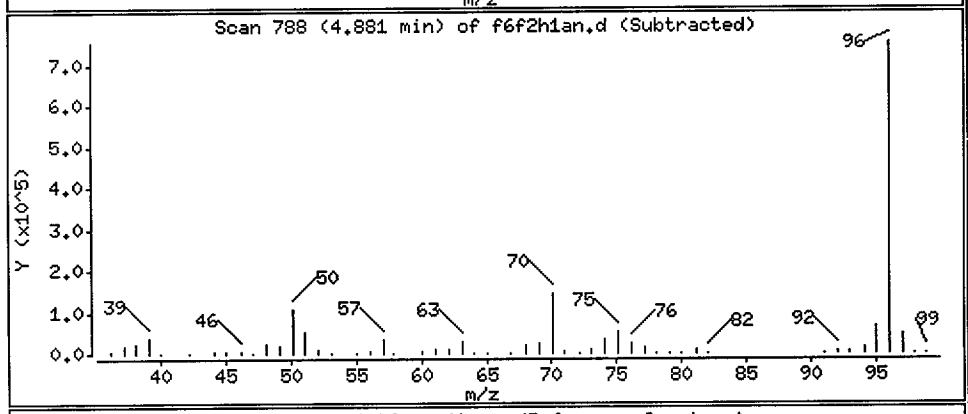
Sample Info: F6F2H1AN,1,0,,

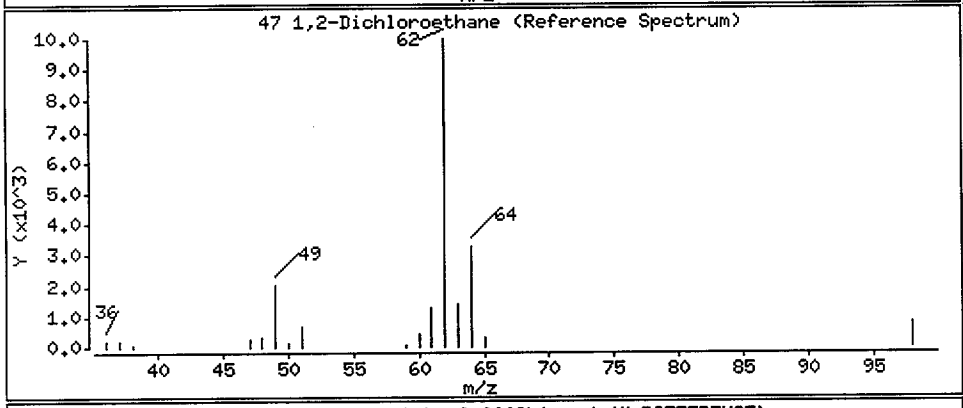
Purge Volume: 25.0 Operator: 063605

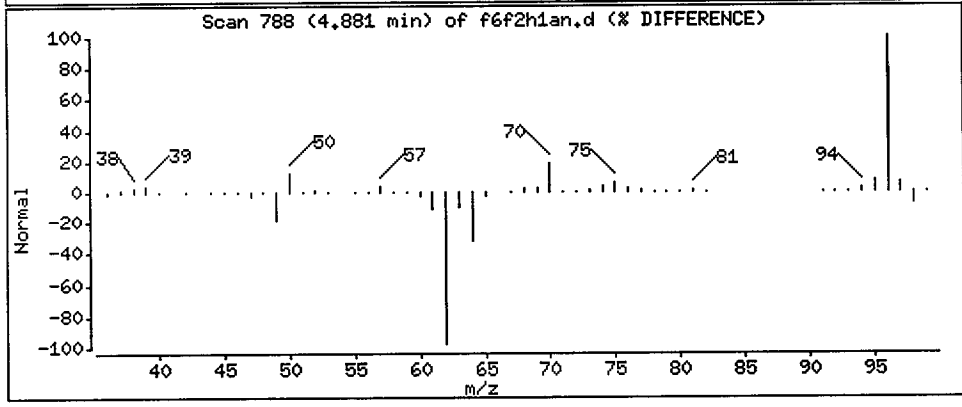
Column phase: J+W 624 Column diameter: 0.18

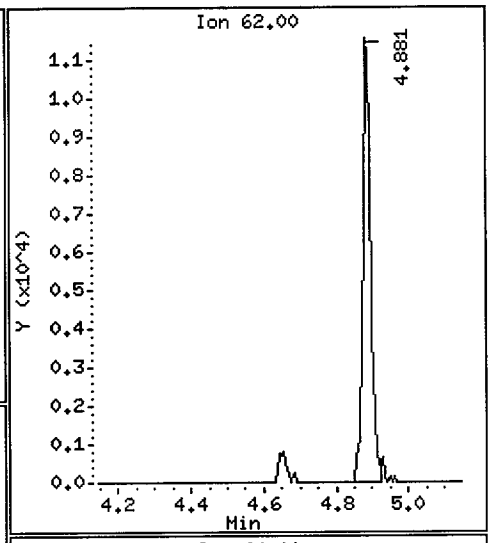
47 1,2-Dichloroethane Concentration: 0.84892 ug/L

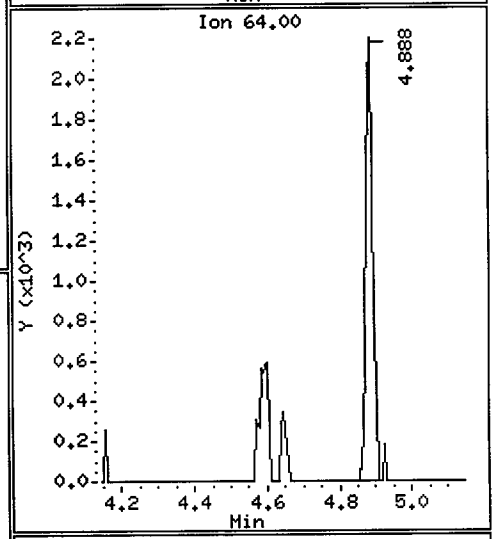


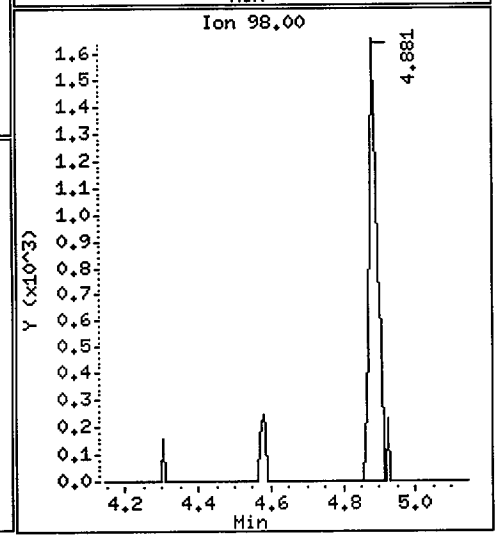












Data File: /chem/gcms/mx.i/X121103.b/f6f2h1an.d

Date : 11-DEC-2003 22:53

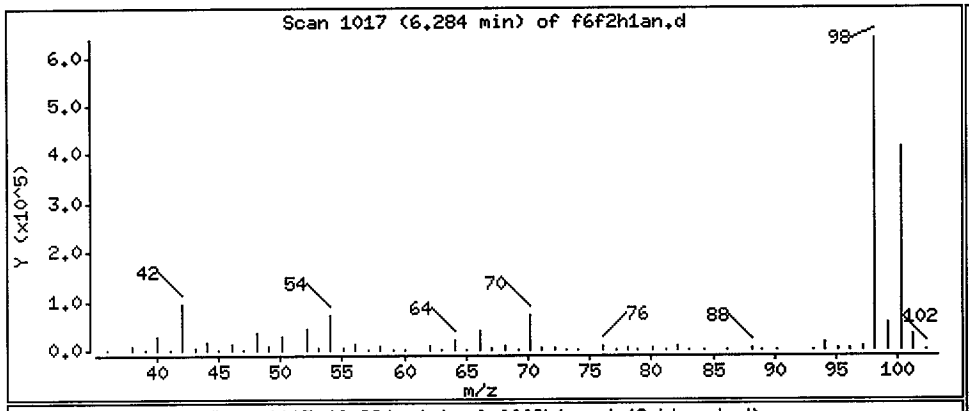
Client ID: DD3001 Instrument: mx.i

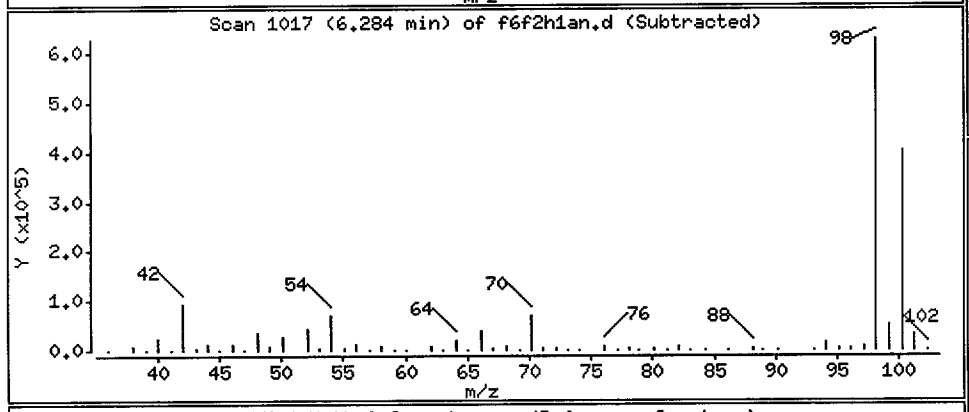
Sample Info: F6F2H1AN,1,0,,

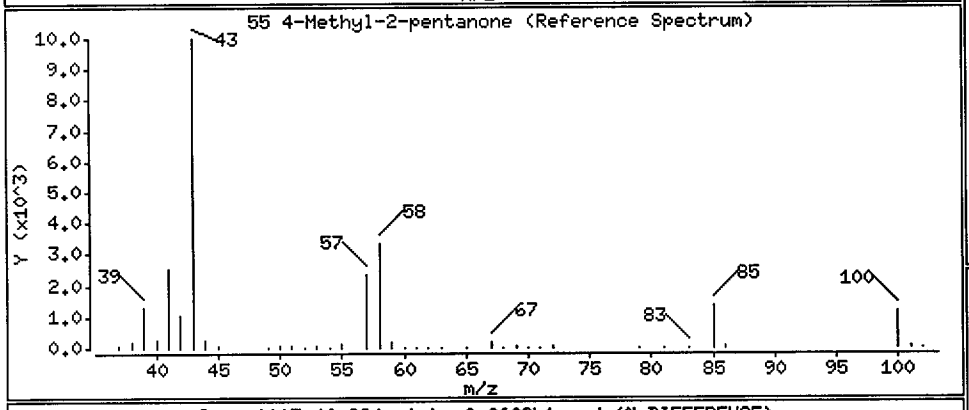
Purge Volume: 25.0 Operator: 063605

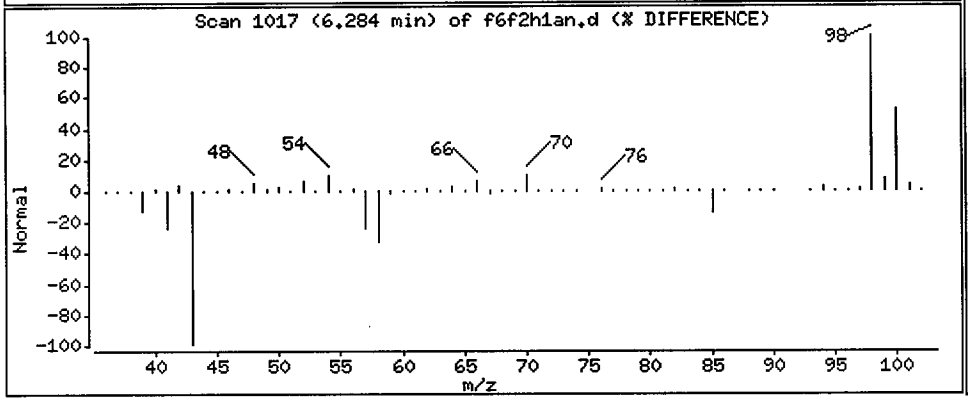
Column phase: J+W 624 Column diameter: 0.18

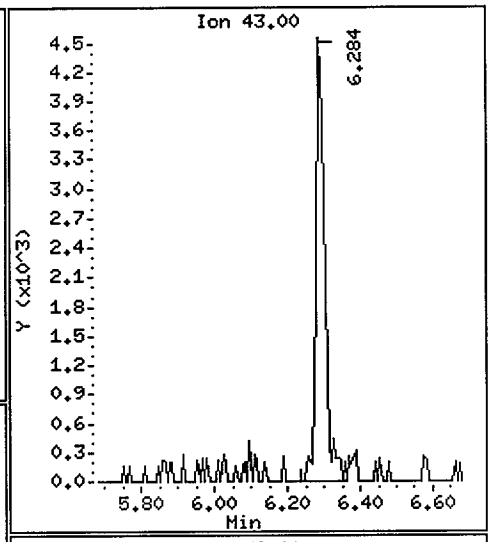
55 4-Methyl-2-pentanone Concentration: 0.78474 ug/L

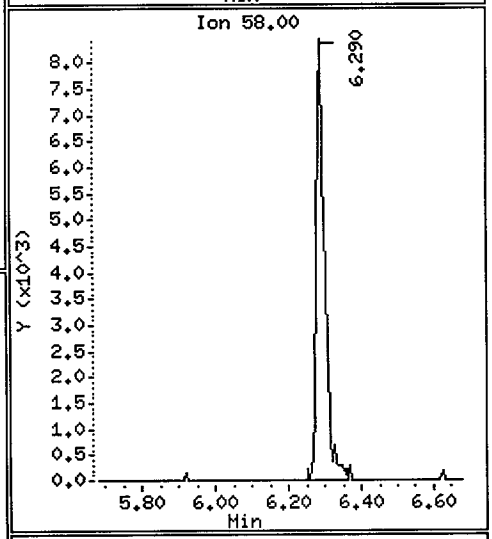


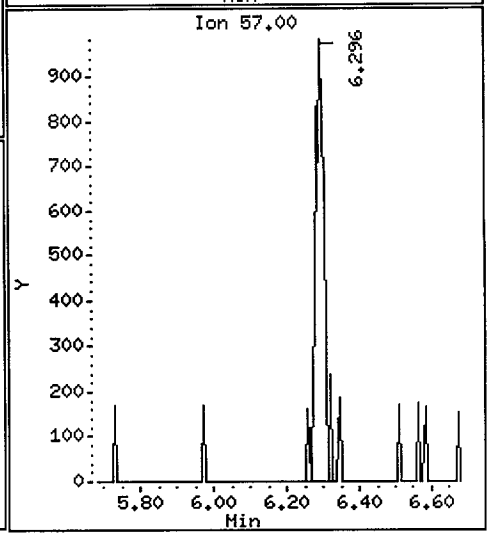












SHAW E & I INC

Client Sample ID: DD5002

GC/MS Volatiles

Lot-Sample #...: H3L110180-003 **Work Order #...:** F6F3C1AA **Matrix.....:** WATER
Date Sampled...: 12/10/03 **Date Received..:** 12/11/03
Prep Date.....: 12/11/03 **Analysis Date..:** 12/11/03
Prep Batch #...: 3345349
Dilution Factor: 1 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Chloromethane	ND	2.0	ug/L	0.12
Bromomethane	ND	2.0	ug/L	0.38
Vinyl chloride	ND	1.0	ug/L	0.24
Chloroethane	ND	2.0	ug/L	0.24
Methylene chloride	ND	2.0	ug/L	0.23
Acetone	ND	10	ug/L	1.4
Carbon disulfide	ND	1.0	ug/L	0.10
1,1-Dichloroethene	ND	1.0	ug/L	0.10
1,1-Dichloroethane	ND	1.0	ug/L	0.10
1,2-Dichloroethene (total)	ND	1.0	ug/L	0.20
Chloroform	**0.29 J**	**1.0**	**ug/L**	**0.10**
1,2-Dichloroethane	ND	1.0	ug/L	0.10
2-Butanone	ND	5.0	ug/L	0.75
1,1,1-Trichloroethane	ND	1.0	ug/L	0.10
Carbon tetrachloride	ND	1.0	ug/L	0.12
Bromodichloromethane	ND	1.0	ug/L	0.10
1,2-Dichloropropane	ND	1.0	ug/L	0.10
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.10
Trichloroethene	ND	1.0	ug/L	0.10
Dibromochloromethane	ND	1.0	ug/L	0.20
1,1,2-Trichloroethane	ND	1.0	ug/L	0.25
Benzene	ND	1.0	ug/L	0.10
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.11
Bromoform	ND	1.0	ug/L	0.14
4-Methyl-2-pentanone	ND	5.0	ug/L	0.40
2-Hexanone	ND	5.0	ug/L	0.76
Tetrachloroethene	ND	1.0	ug/L	0.10
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.15
Toluene	**0.13 J**	**1.0**	**ug/L**	**0.10**
Chlorobenzene	ND	1.0	ug/L	0.10
Ethylbenzene	ND	1.0	ug/L	0.10
Styrene	ND	1.0	ug/L	0.10
Xylenes (total)	ND	1.0	ug/L	0.30

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	100	(79 - 120)
1,2-Dichloroethane-d4	101	(71 - 127)
Toluene-d8	102	(80 - 120)
Bromofluorobenzene	92	(69 - 126)

(Continued on next page)

SHAW E & I INC

Client Sample ID: DD5002

GC/MS Volatiles

Lot-Sample #...: H3L110180-003 **Work Order #...:** F6F3C1AA **Matrix.....:** WATER

NOTE(S):

J Estimated result. Result is less than RL.

Data File: /chem/gcms/mx.i/X121103.b/f6f3c1aa.d
Report Date: 11-Dec-2003 23:36

STL Knoxville

SW-846 Method 8260A - Volatile Organics

Data file : /chem/gcms/mx.i/X121103.b/f6f3c1aa.d
Lab Smp Id: F6F3C1AA Client Smp ID: DD5002
Inj Date : 11-DEC-2003 23:19
Operator : 063605 Inst ID: mx.i
Smp Info : F6F3C1AA,1,0,,
Misc Info : X121103,8260B_LM,s.sub
Comment :
Method : /var/chem/gcms/mx.i/X121103.b/8260B_LM.m
Meth Date : 11-Dec-2003 16:28 tillerm Quant Type: ISTD
Cal Date : 16-SEP-2003 12:52 Cal File: icxi166.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: s.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * Uf*Vt/(Vo*1000) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Unit Correction factor
Vt	25000.00000	Sample Volume Purged
Vo	25.00000	Sample Volume Used

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
* 1 Fluorobenzene	96	4.888	4.885	(1.000)	1313087	10.0000	
* 2 Chlorobenzene-d5	119	7.623	7.624	(1.000)	285172	10.0000	
* 3 1,4 Dichlorobenzene-d4	152	10.817	10.824	(1.000)	327455	10.0000	
$ 5 1,2-Dichloroethane-d4	65	4.584	4.581	(0.938)	170353	10.0976	10.098
$ 4 Dibromofluoromethane	113	4.298	4.295	(0.879)	219147	10.0222	10.022
$ 6 Toluene-d8	98	6.291	6.292	(0.825)	1331085	10.1615	10.162
$ 7 4-Bromofluorobenzene	95	8.925	8.932	(0.825)	358769	9.15329	9.1533
11 Chloromethane (spcc)	50	1.226	1.229	(0.251)	2413	~~0.24726~~	~~0.24726~~
42 Chloroform (ccc)	83	4.164	4.161	(0.852)	13676	0.29049	0.29049
45 1,1-Dichloropropene	75	4.882	4.465	(0.999)	89461	~~2.00379~~	~~2.0038~~
47 1,2-Dichloroethane	62	4.888	4.648	(1.000)	18368	~~0.86024~~	~~0.86024~~
55 4-Methyl-2-pentanone	43	6.285	6.182	(1.286)	7457	~~0.78205~~	~~0.78205~~
56 Toluene (ccc)	91	6.352	6.353	(0.833)	21752	0.12870	0.12870

12/15/03

Data File: /chem/gcms/mx.i/X121103.b/f6f3c1aa.d
Report Date: 11-Dec-2003 23:36

STL Knoxville

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: mx.i
Lab File ID: f6f3c1aa.d
Lab Smp Id: F6F3C1AA
Analysis Type: VOA
Quant Type: ISTD
Operator: 063605
Method File: /var/chem/gcms/mx.i/X121103.b/8260B_LM.m
Misc Info: X121103,8260B_LM,s.sub

Calibration Date: 11-DEC-2003
Calibration Time: 14:00
Client Smp ID: DD5002
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Fluorobenzene	1419469	709734	2838938	1313087	-7.49
2 Chlorobenzene-d5	292458	146229	584916	285172	-2.49
3 1,4 Dichlorobenze	323231	161616	646462	327455	1.31

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Fluorobenzene	4.89	4.39	5.39	4.89	0.06
2 Chlorobenzene-d5	7.62	7.12	8.12	7.62	-0.01
3 1,4 Dichlorobenze	10.82	10.32	11.32	10.82	-0.06

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

Data File: /chem/gcms/mx.i/X121103.b/f6f3c1aa.d
Report Date: 11-Dec-2003 23:36

STL Knoxville

RECOVERY REPORT

Client Name: SHAW E & I INC
Sample Matrix: LIQUID
Lab Smp Id: F6F3C1AA
Level: LOW
Data Type: MS DATA
SpikeList File: allcmpds.spk
Sublist File: s.sub
Method File: /var/chem/gcms/mx.i/X121103.b/8260B_LM.m
Misc Info: X121103,8260B_LM,s.sub

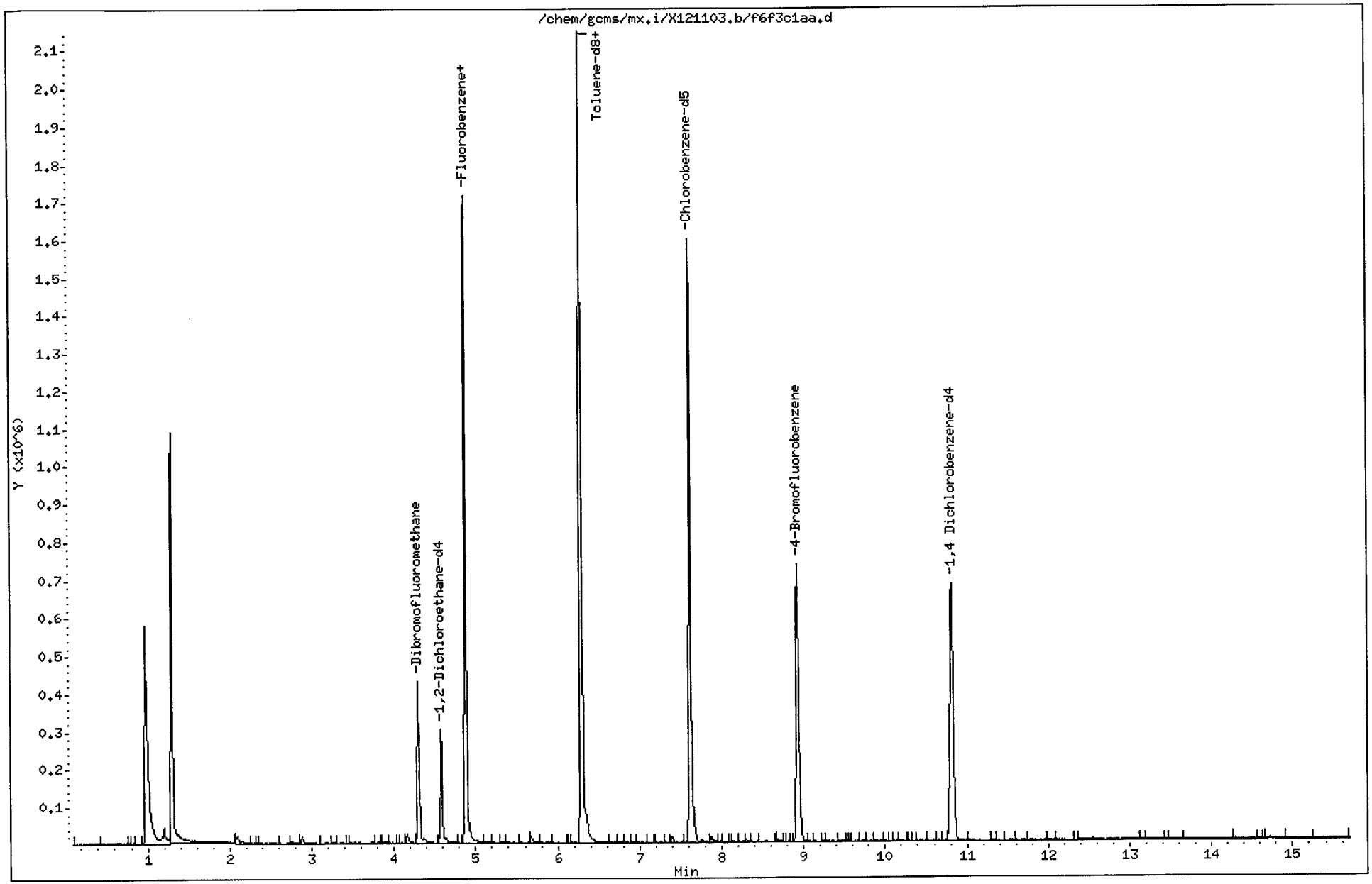
Client SDG: PB045
Fraction: VOA
Client Smp ID: DD5002
Operator: 063605
SampleType: SAMPLE
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 5 1,2-Dichloroethane	10.000	10.098	100.98	71-127
$ 4 Dibromofluorometha	10.000	10.022	100.22	79-120
$ 6 Toluene-d8	10.000	10.162	101.62	80-120
$ 7 4-Bromofluorobenze	10.000	9.1533	91.53	69-126

Data File: /chem/gcms/mx.i/X121103.b/f6f3c1aa.d
Date : 11-DEC-2003 23:19
Client ID: DD5002
Sample Info: F6F3C1AA,1,0,,
Purge Volume: 25.0
Column phase: J+W 624

Instrument: mx.i

Operator: 063605
Column diameter: 0.18



Data File: /chem/gcms/mx.i/X121103.b/f6f3c1aa.d

Date : 11-DEC-2003 23:19

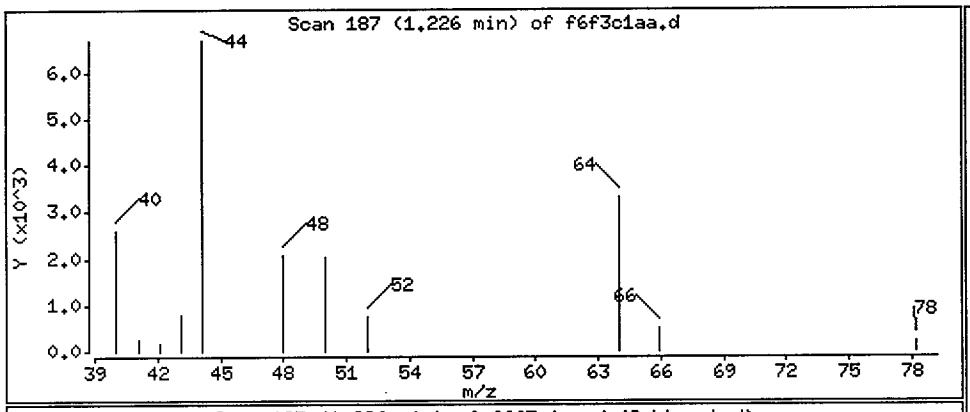
Client ID: DD5002 Instrument: mx.i

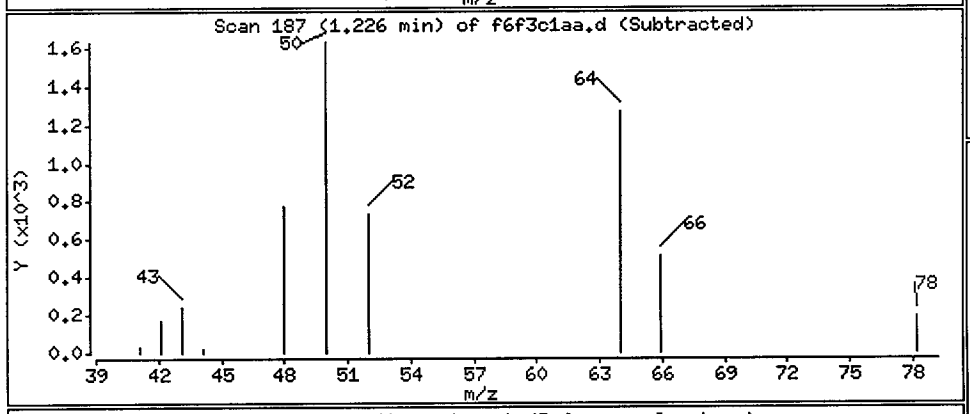
Sample Info: F6F3C1AA,1,0,,

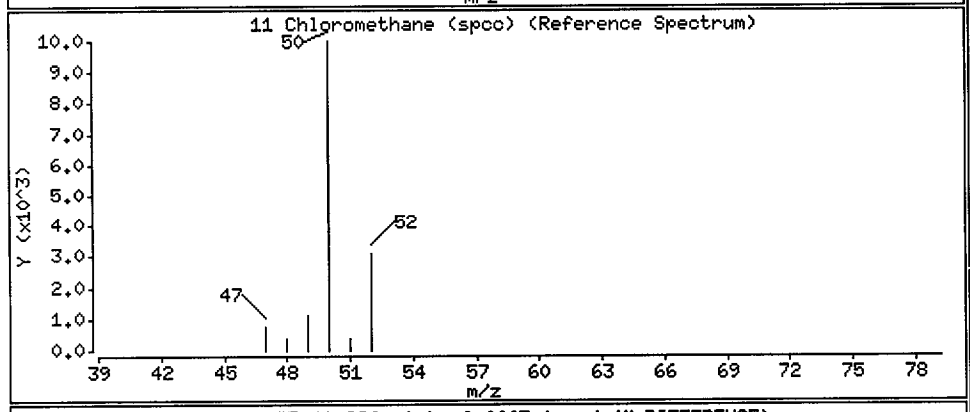
Purge Volume: 25.0 Operator: 063605

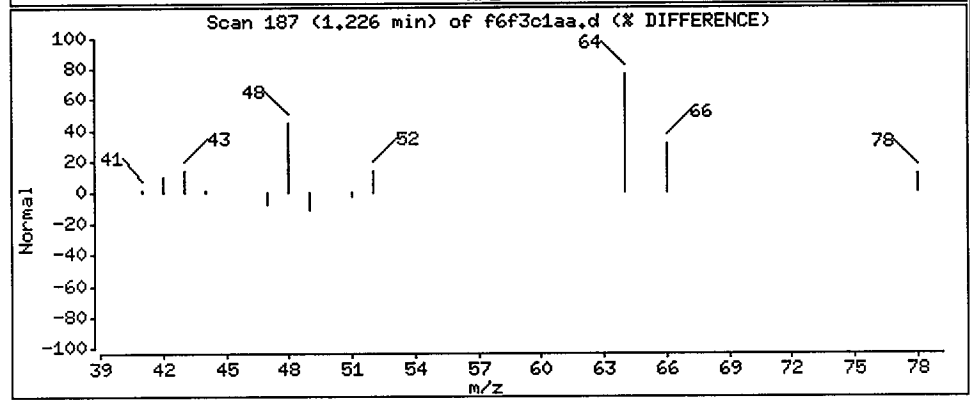
Column phase: J+W 624 Column diameter: 0.18

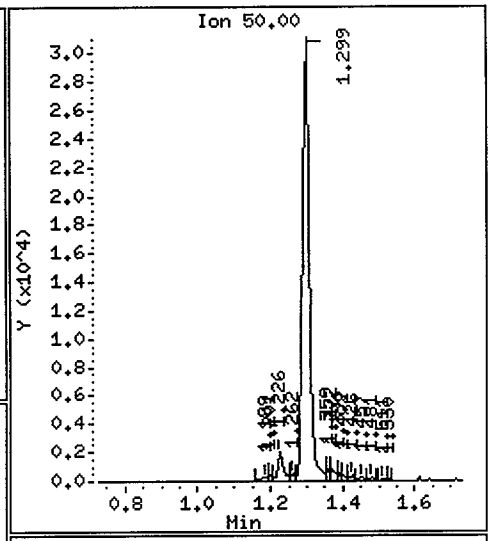
11 Chloromethane (spcc) Concentration: 0.24726 ug/L

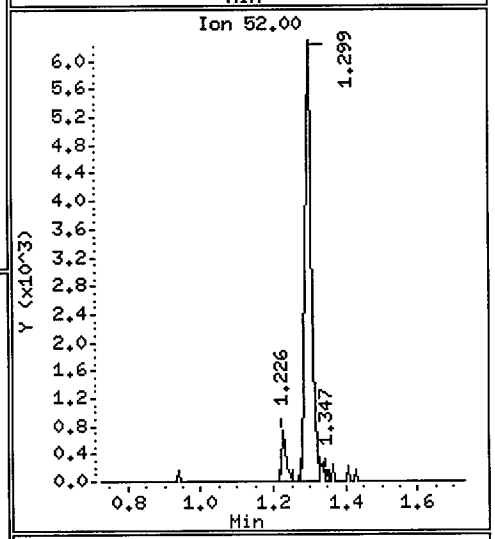


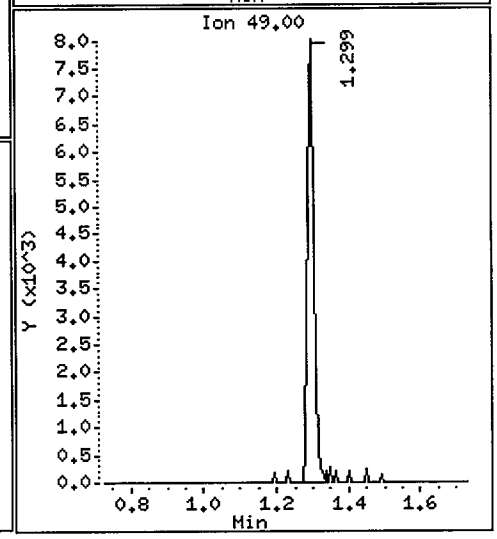












Data File: /chem/gcms/mx.i/X121103.b/f6f3c1aa.d

Date : 11-DEC-2003 23:19

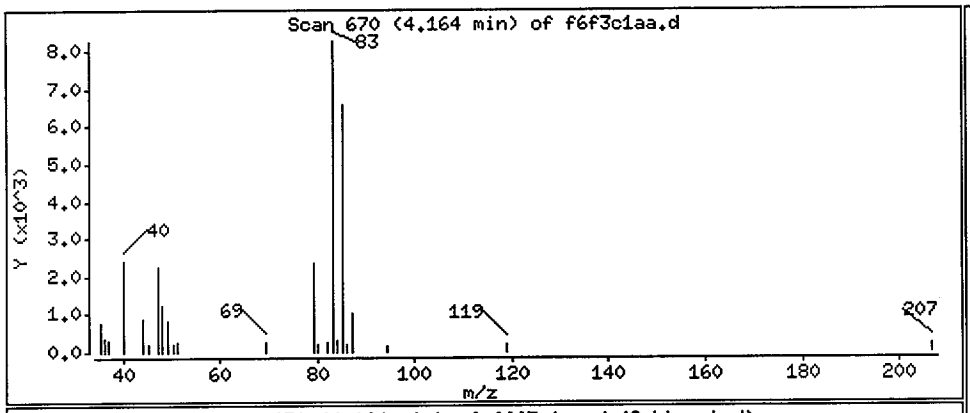
Client ID: DD5002 Instrument: mx.i

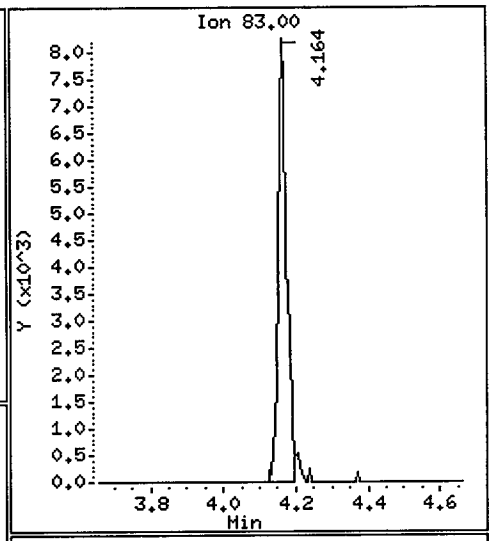
Sample Info: F6F3C1AA,1,0,,

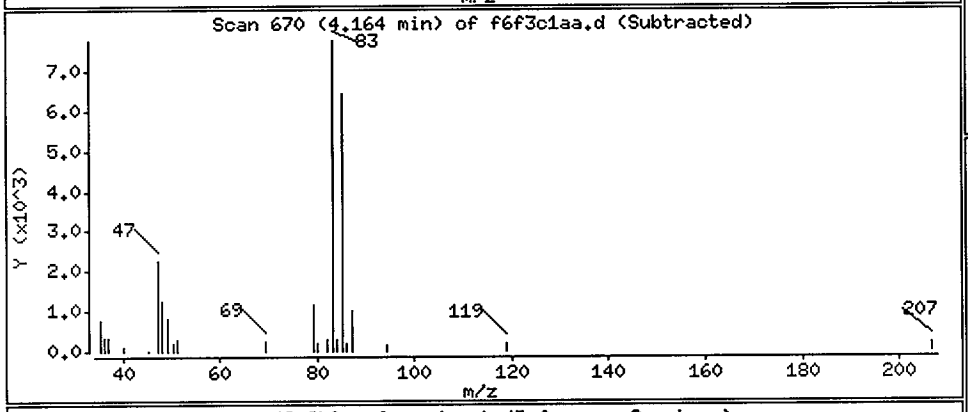
Purge Volume: 25.0 Operator: 063605

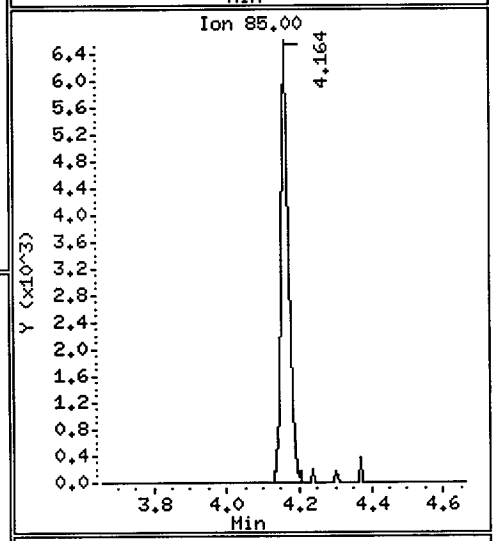
Column phase: J+W 624 Column diameter: 0.18

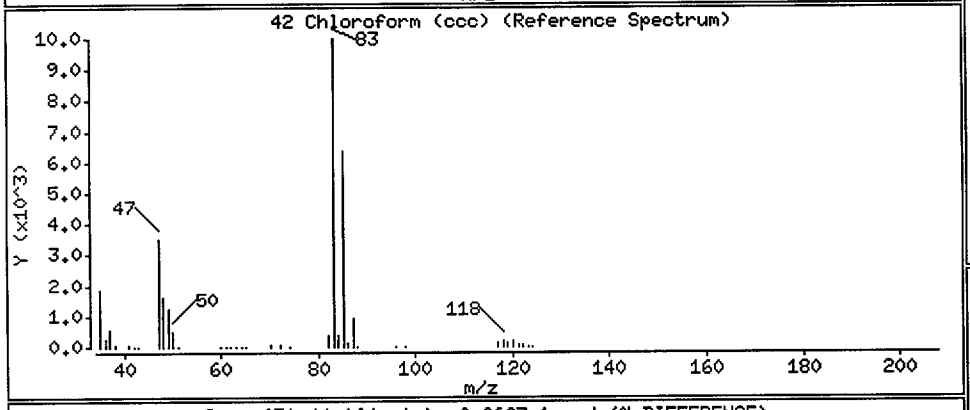
42 Chloroform (ccc) Concentration: 0.29049 ug/L

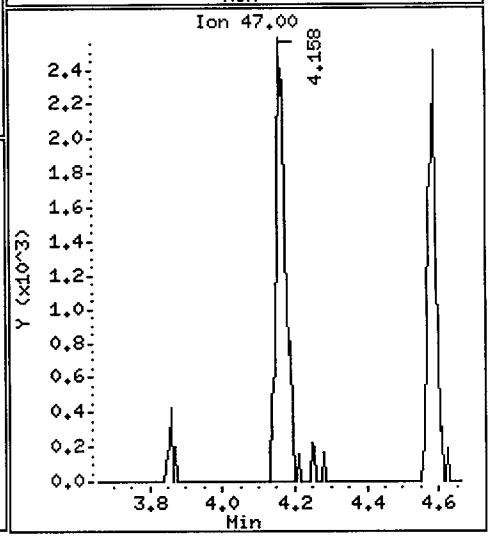


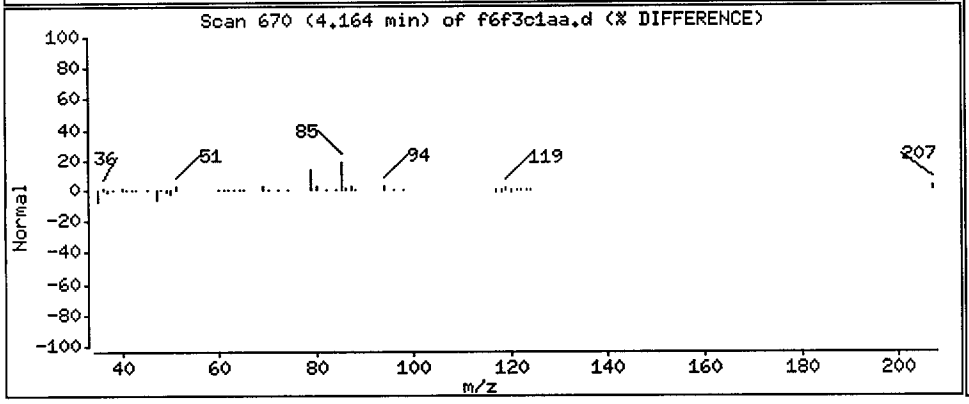












Data File: /chem/gcms/mx.i/X121103.b/f6f3c1aa.d

Date : 11-DEC-2003 23:19

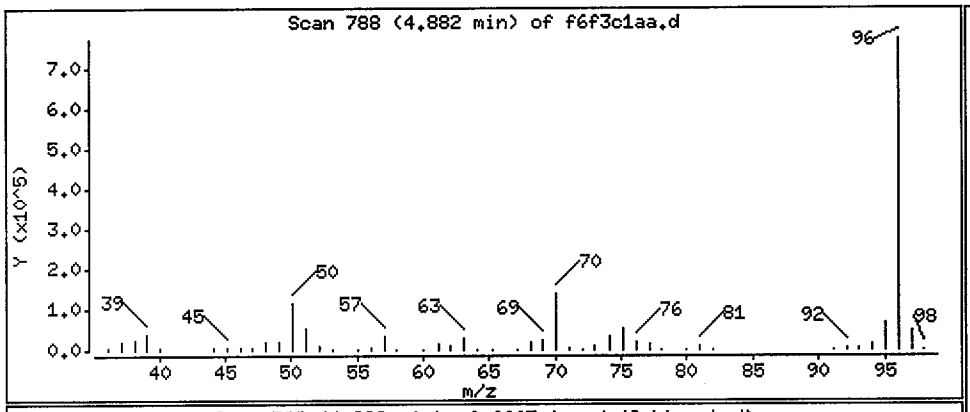
Client ID: DD5002 Instrument: mx.i

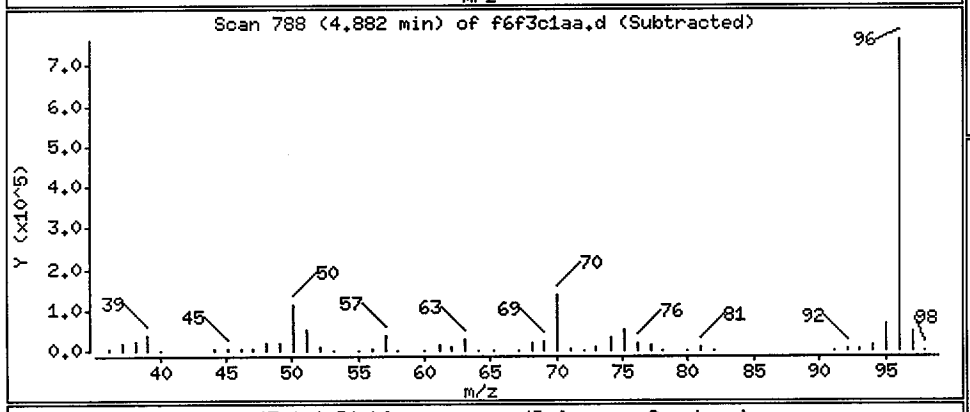
Sample Info: F6F3C1AA,1,0,,

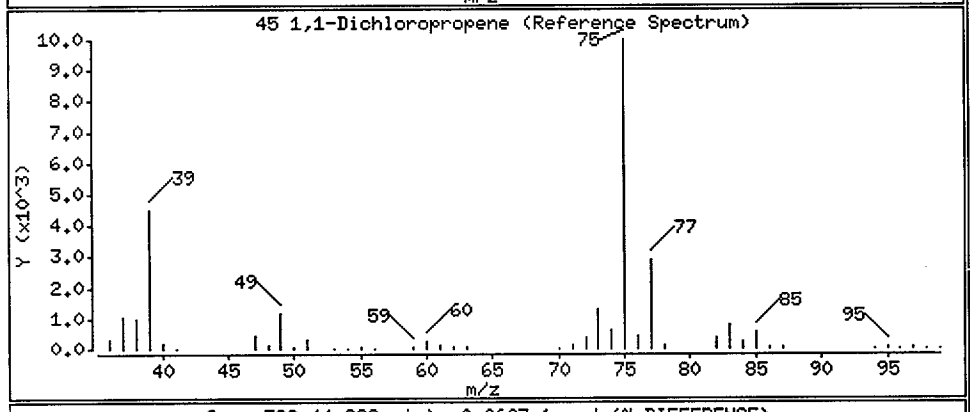
Purge Volume: 25.0 Operator: 063605

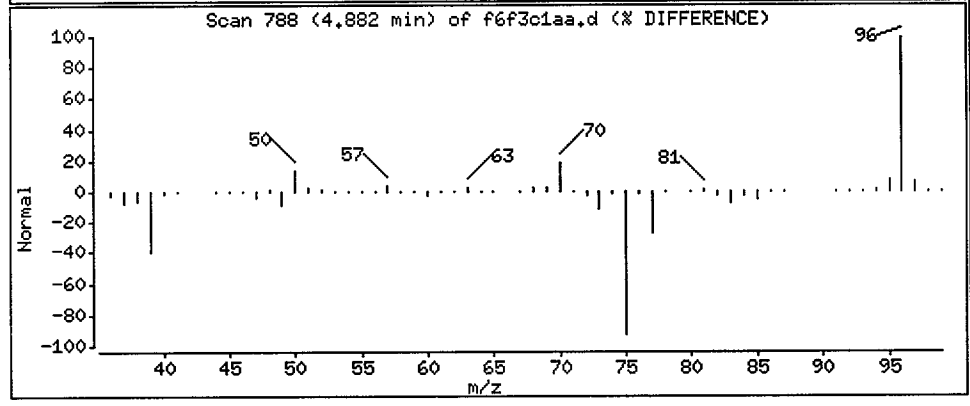
Column phase: J+W 624 Column diameter: 0.18

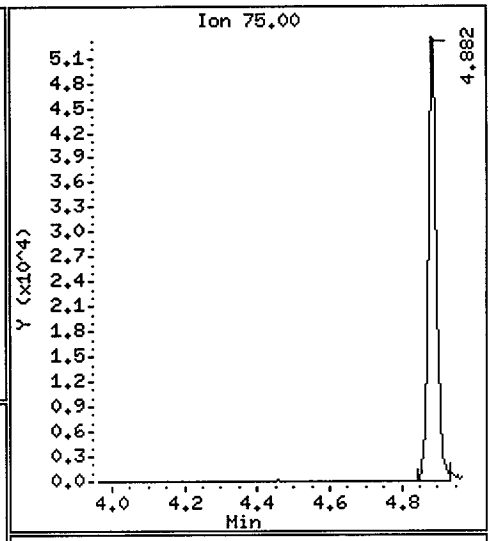
45 1,1-Dichloropropene Concentration: 2.0038 ug/L

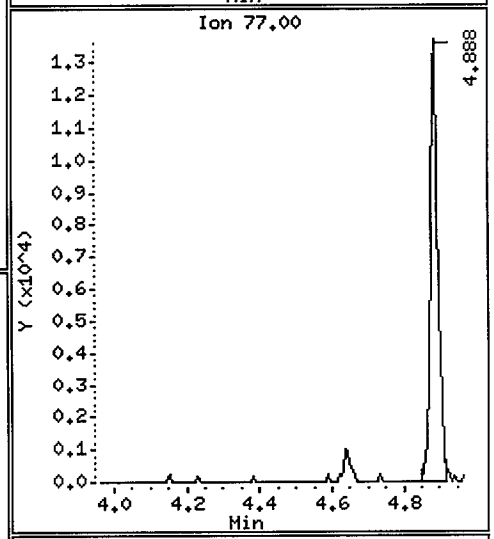


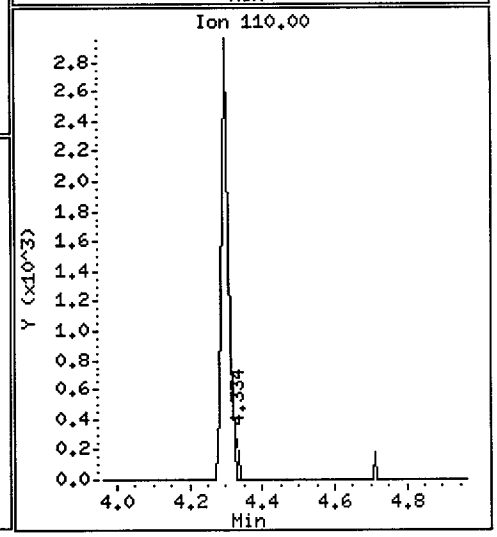












Data File: /chem/gcms/mx.i/X121103.b/f6f3c1aa.d

Date : 11-DEC-2003 23:19

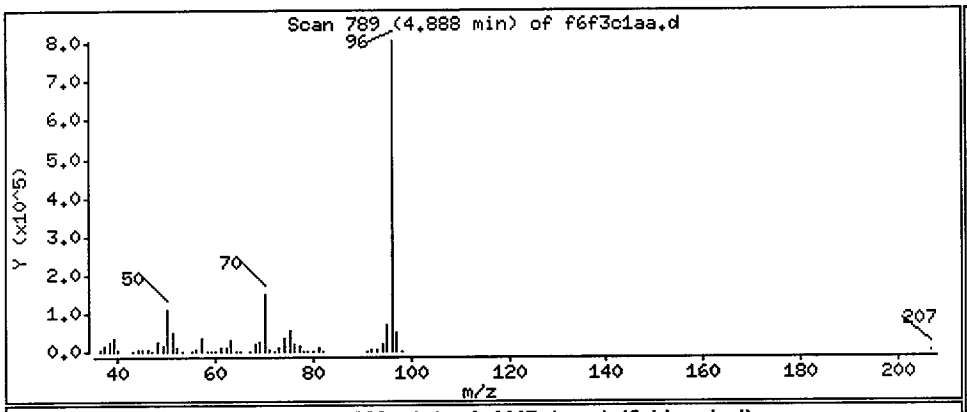
Client ID: DD5002 Instrument: mx.i

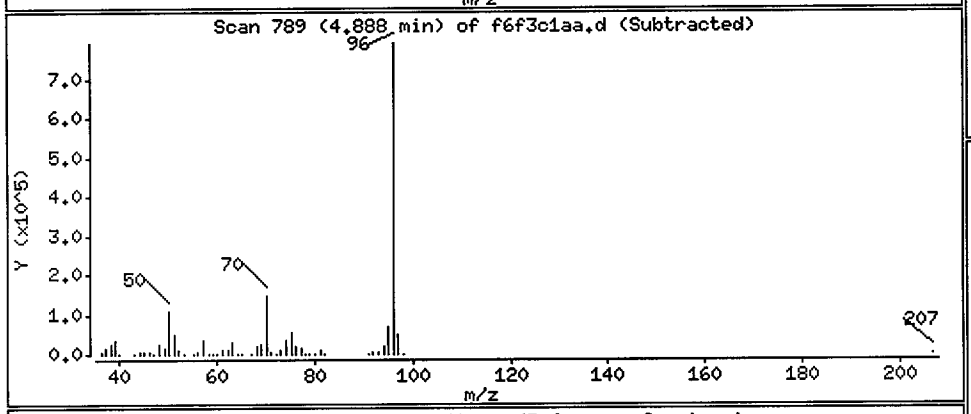
Sample Info: F6F3C1AA,1,0,,

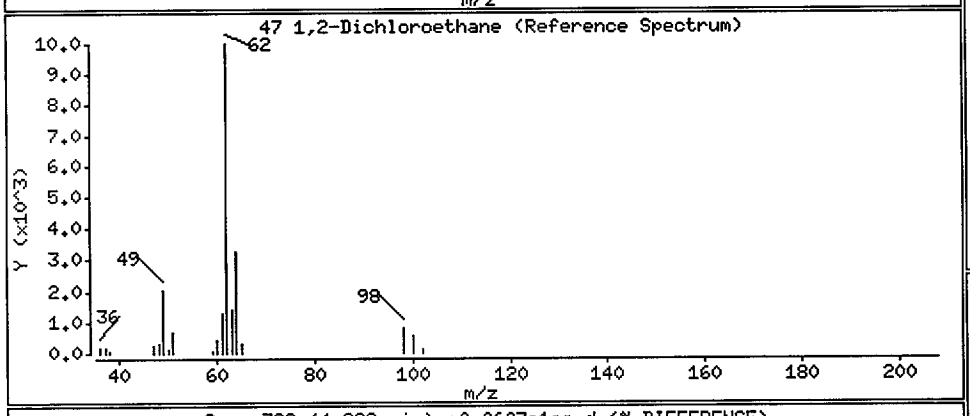
Purge Volume: 25.0 Operator: 063605

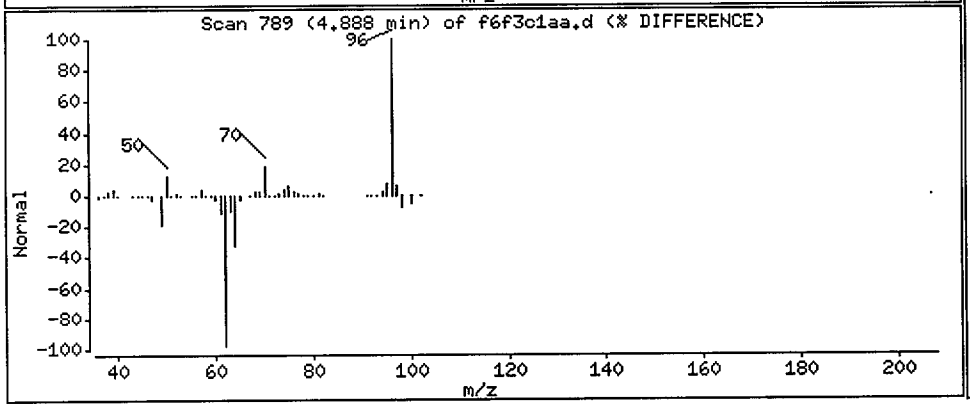
Column phase: J+W 624 Column diameter: 0.18

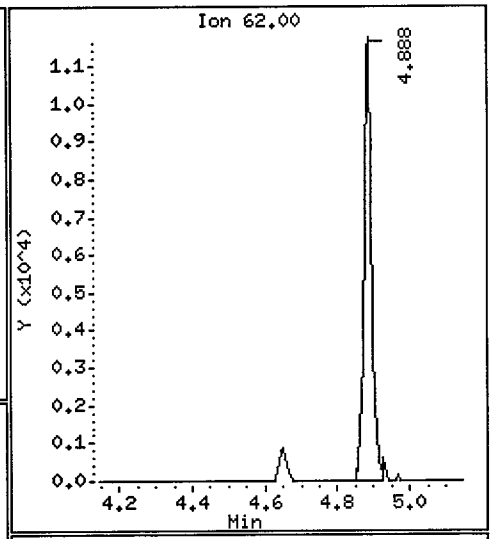
47 1,2-Dichloroethane Concentration: 0.86024 ug/L

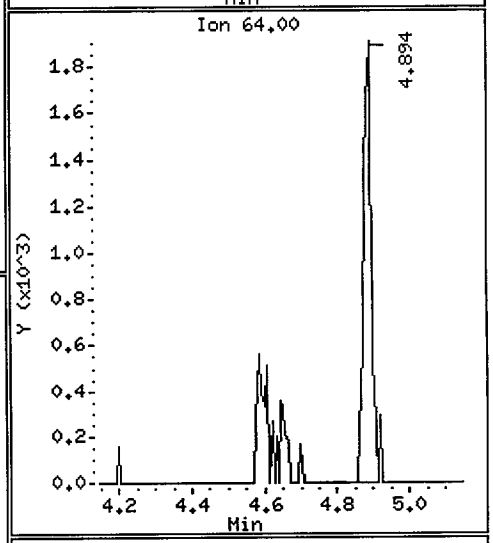


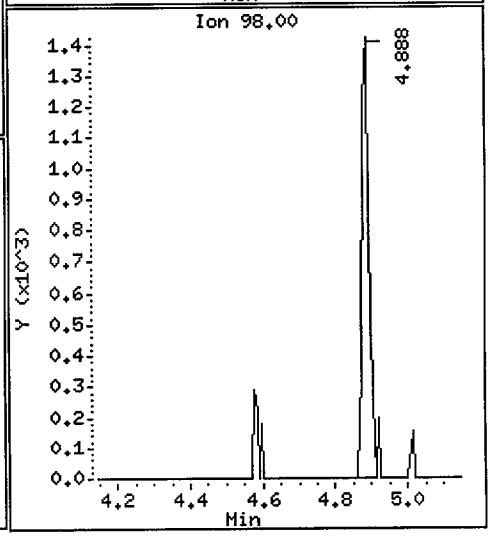












Data File: /chem/gcms/mx.i/X121103.b/f6f3c1aa.d

Date : 11-DEC-2003 23:19

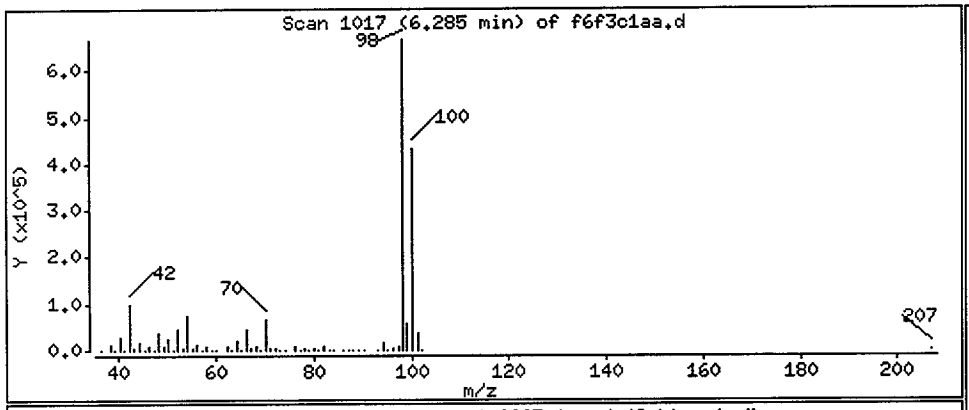
Client ID: DD5002 Instrument: mx.i

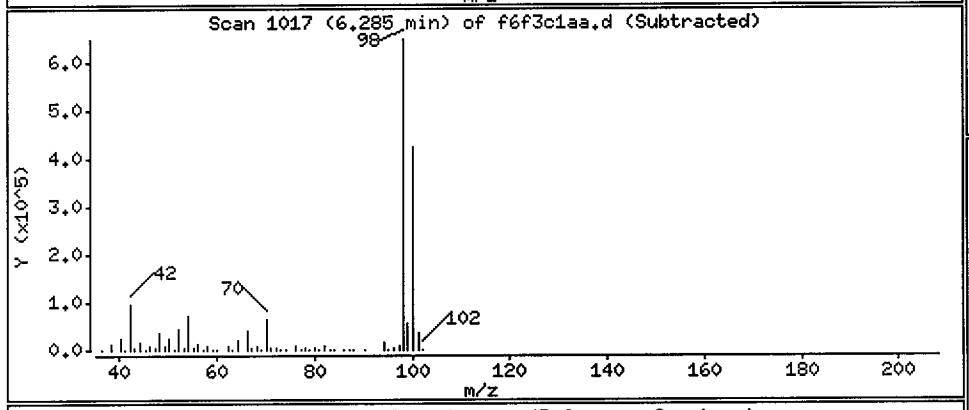
Sample Info: F6F3C1AA,1,0,,

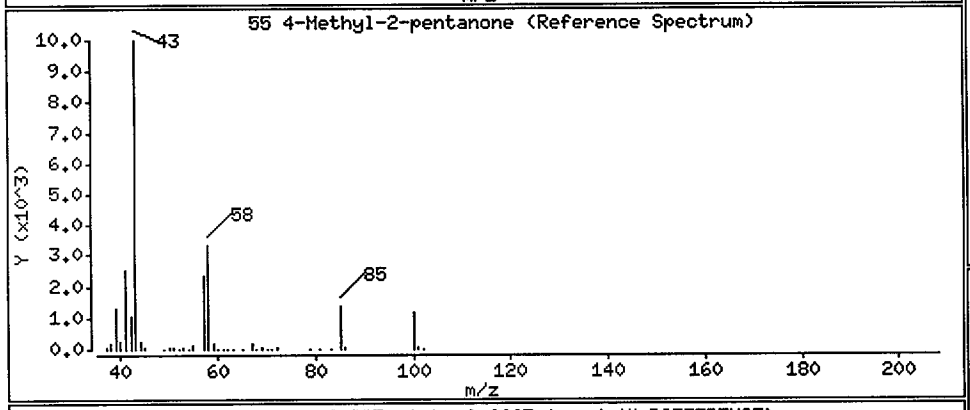
Purge Volume: 25.0 Operator: 063605

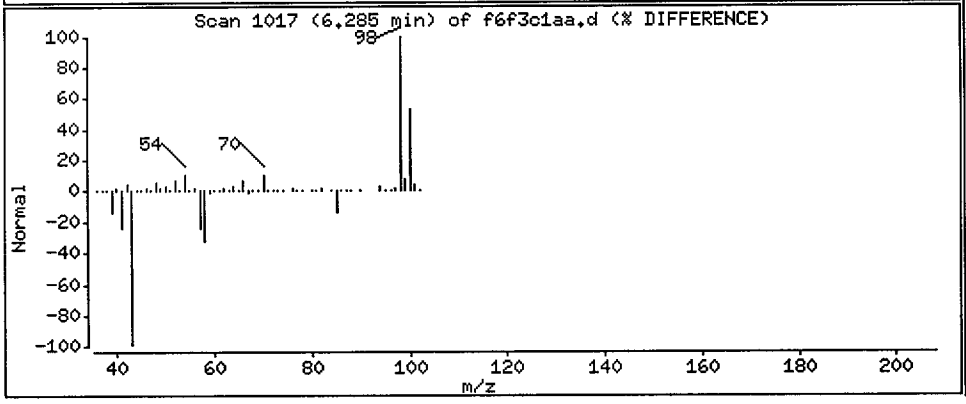
Column phase: J+W 624 Column diameter: 0.18

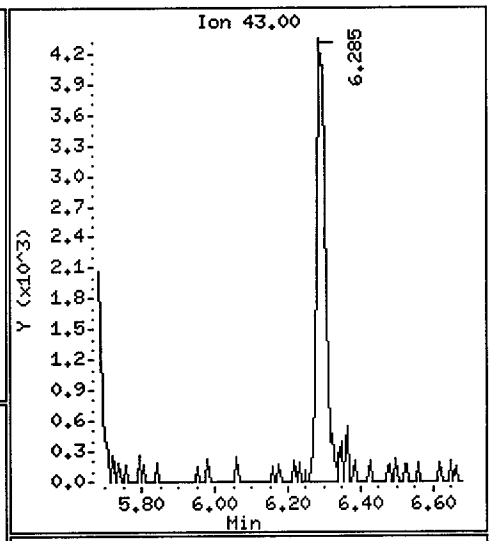
55 4-Methyl-2-pentanone Concentration: 0.78205 ug/L

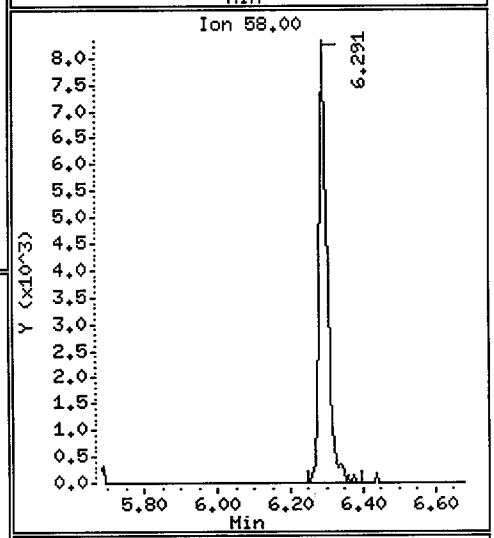


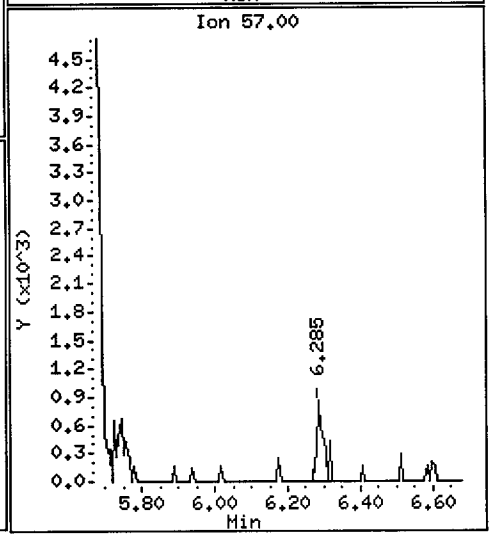












Data File: /chem/gcms/mx.i/X121103.b/f6f3c1aa.d

Date : 11-DEC-2003 23:19

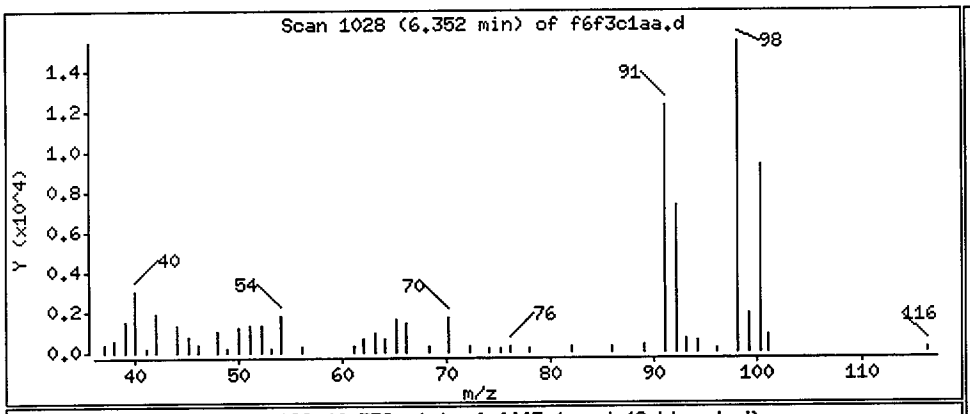
Client ID: DD5002 | Instrument: mx.i

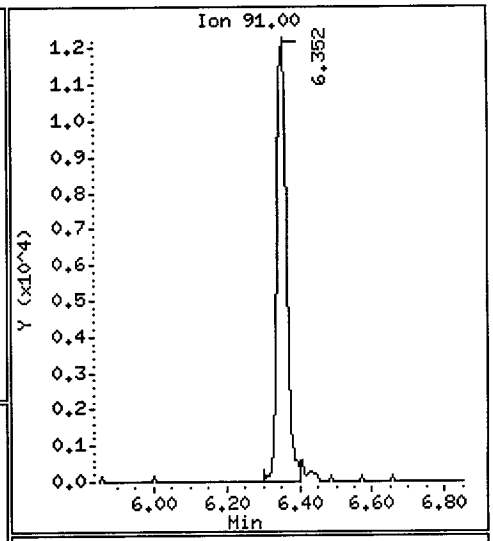
Sample Info: F6F3C1AA,1,0,,

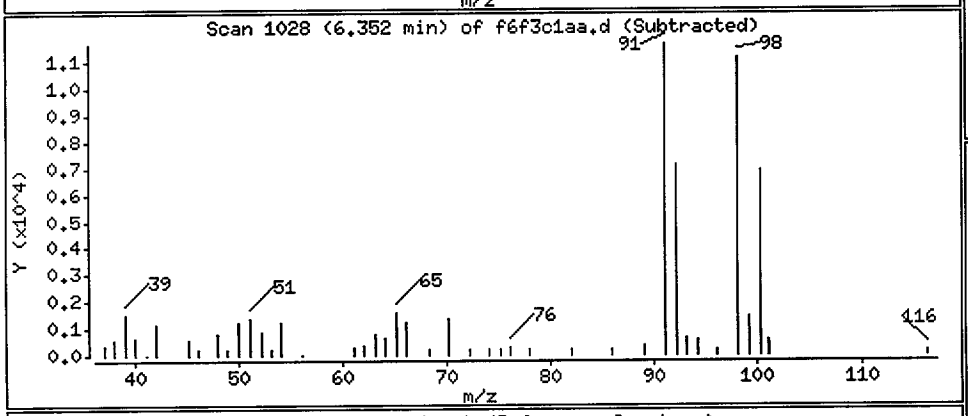
Purge Volume: 25.0 | Operator: 063605

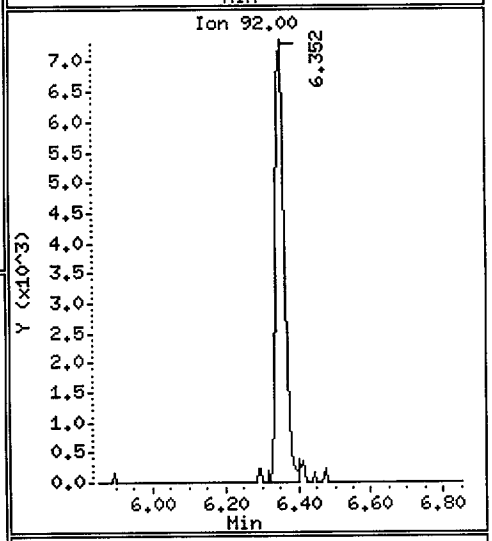
Column phase: J+W 624 | Column diameter: 0.18

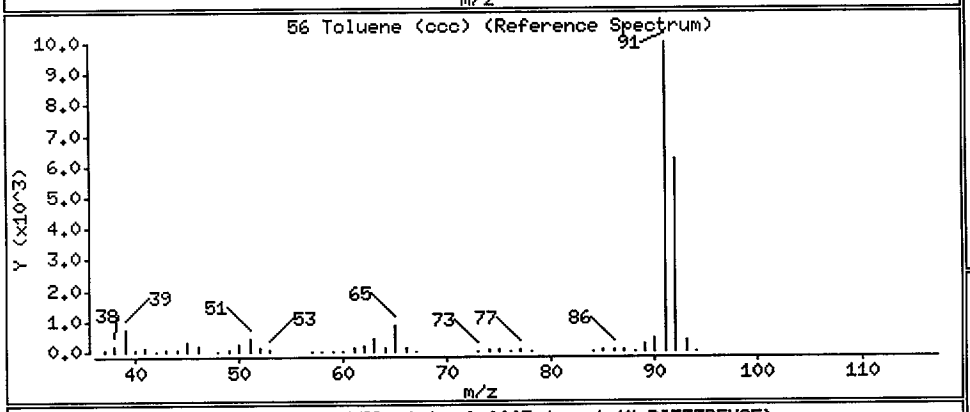
56 Toluene (ccc) | Concentration: 0.12870 ug/L

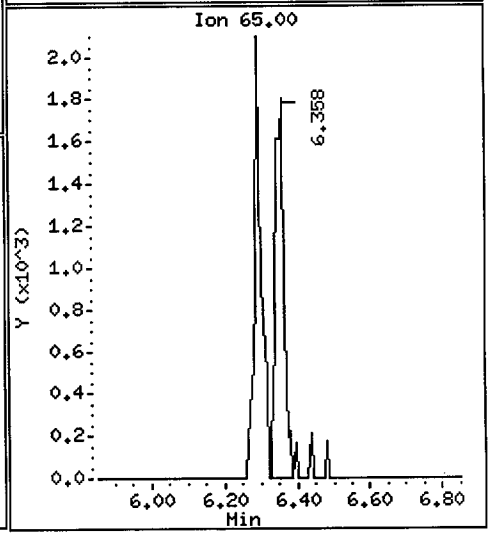


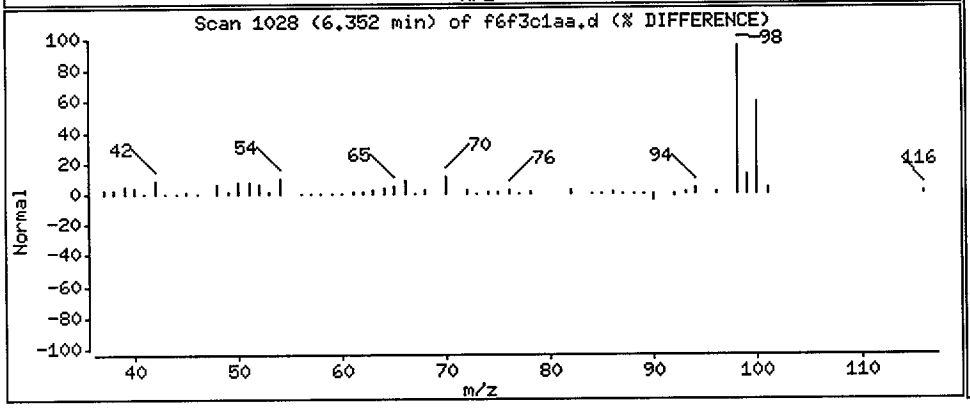












SHAW E & I INC

Client Sample ID: DD3003

GC/MS Volatiles

Lot-Sample #...: H3L120208-001 **Work Order #...:** F6JXA1AC **Matrix.....:** WATER
Date Sampled...: 12/11/03 **Date Received..:** 12/12/03
Prep Date.....: 12/15/03 **Analysis Date..:** 12/15/03
Prep Batch #...: 3349684
Dilution Factor: 10 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Chloromethane	ND	20	ug/L	1.2
Bromomethane	ND	20	ug/L	3.8
Vinyl chloride	ND	10	ug/L	2.4
Chloroethane	ND	20	ug/L	2.4
Methylene chloride	ND	20	ug/L	2.3
Acetone	ND	100	ug/L	14
Carbon disulfide	**3.4 J**	**10**	**ug/L**	**1.0**
1,1-Dichloroethene	ND	10	ug/L	1.0
1,1-Dichloroethane	ND	10	ug/L	1.0
1,2-Dichloroethene (total)	ND	10	ug/L	2.0
Chloroform	ND	10	ug/L	1.0
1,2-Dichloroethane	ND	10	ug/L	1.0
2-Butanone	ND	50	ug/L	7.5
1,1,1-Trichloroethane	ND	10	ug/L	1.0
Carbon tetrachloride	ND	10	ug/L	1.2
Bromodichloromethane	ND	10	ug/L	1.0
1,2-Dichloropropane	ND	10	ug/L	1.0
cis-1,3-Dichloropropene	ND	10	ug/L	1.0
Trichloroethene	ND	10	ug/L	1.0
Dibromochloromethane	ND	10	ug/L	2.0
1,1,2-Trichloroethane	ND	10	ug/L	2.5
Benzene	**36**	**10**	**ug/L**	**1.0**
trans-1,3-Dichloropropene	ND	10	ug/L	1.1
Bromoform	ND	10	ug/L	1.4
4-Methyl-2-pentanone	ND	50	ug/L	4.0
2-Hexanone	ND	50	ug/L	7.6
Tetrachloroethene	ND	10	ug/L	1.0
1,1,2,2-Tetrachloroethane	ND	10	ug/L	1.5
Toluene	**31**	**10**	**ug/L**	**1.0**
Chlorobenzene	ND	10	ug/L	1.0
Ethylbenzene	**10**	**10**	**ug/L**	**1.0**
Styrene	ND	10	ug/L	1.0
Xylenes (total)	**50**	**10**	**ug/L**	**3.0**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	98	(79 - 120)
1,2-Dichloroethane-d4	98	(71 - 127)
Toluene-d8	98	(80 - 120)
Bromofluorobenzene	87	(69 - 126)

(Continued on next page)

SHAW E & I INC

Client Sample ID: DD3003

GC/MS Volatiles

Lot-Sample #...: H3L120208-001 Work Order #...: F6JXA1AC Matrix.....: WATER

NOTE(S):

J Estimated result. Result is less than RL.

Data File: /chem/gcms/mx.i/X121503.b/f6jxa1ac.d
Report Date: 15-Dec-2003 23:48

STL Knoxville

SW-846 Method 8260A - Volatile Organics

Data file : /chem/gcms/mx.i/X121503.b/f6jxa1ac.d
Lab Smp Id: F6JXA1AC Client Smp ID: DD3003
Inj Date : 15-DEC-2003 23:31
Operator : 063605 Inst ID: mx.i
Smp Info : F6JXA1AC,10,0,,
Misc Info : X121503,8260B_LM,s1.sub
Comment :
Method : /var/chem/gcms/mx.i/X121503.b/8260B_LM.m
Meth Date : 15-Dec-2003 18:56 tillerm Quant Type: ISTD
Cal Date : 16-SEP-2003 12:52 Cal File: icxi166.d
Als bottle: 1
Dil Factor: 10.00000
Integrator: HP RTE Compound Sublist: s1.sub
Target Version: 3.50
Processing Host: qmidhp01

12/29/03

Concentration Formula: Amt * DF * Uf*Vt/(Vo*1000) * CpndVariable

Name	Value	Description
DF	10.00000	Dilution Factor
Uf	1.00000	Unit Correction factor
Vt	25000.00000	Sample Volume Purged
Vo	25.00000	Sample Volume Used

Cpnd Variable Local Compound Variable

2x5 IS

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
* 1 Fluorobenzene	96	4.881	4.887	(1.000)	1355301	10.0000	
* 2 Chlorobenzene-d5	119	7.623	7.624	(1.000)	296113	10.0000	
* 3 1,4 Dichlorobenzene-d4	152	10.817	10.818	(1.000)	350906	10.0000	
$ 5 1,2-Dichloroethane-d4	65	4.577	4.583	(0.938)	171368	9.84140	9.8414
$ 4 Dibromofluoromethane	113	4.297	4.297	(0.880)	222304	9.84990	9.8499
$ 6 Toluene-d8	98	6.291	6.292	(0.825)	1336492	9.82580	9.8258
$ 7 4-Bromofluorobenzene	95	8.931	8.926	(0.826)	365085	8.69195	8.6920
11 Chloromethane (spcc)	50	1.243	1.231	(0.255)	24682	0.67257	~~6.7256~~
12 Vinyl Chloride (ccc)	62	1.329	1.316	(0.272)	13250	~~0.25557~~	~~2.5558~~
15 Chloroethane	64	1.438	1.651	(0.295)	3264676	~~152.195~~	~~1521.9(A)~~ E
24 Carbon Disulfide	76	2.503	2.496	(0.513)	32164	0.34016	3.4016
22 Acetone	43	2.351	2.368	(0.482)	50753	~~18.8968~~	~~188.97~~
39 2-Butanone	43	3.878	3.889	(0.794)	5967	~~1.43075~~	~~14.307~~
42 Chloroform (ccc)	83	4.370	4.163	(0.895)	23980	~~0.49348~~	~~4.9348~~

12/16/03

Data File: /chem/gcms/mx.i/X121503.b/f6jxa1ac.d
Report Date: 15-Dec-2003 23:48

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
	46 Benzene	78	4.638	4.638	(0.950)	474571	3.57035	35.703
	47 1,2-Dichloroethane	62	4.638	4.644	(0.950)	5668	~~0.25722~~	~~2.5722~~
	54 cis-1,3-Dichloropropene	75	6.455	6.043	(1.322)	4116	0.11715	1.1715
	55 4-Methyl-2-pentanone	43	6.090	6.183	(1.248)	12826	~~1.30313~~	~~13.031~~
	56 Toluene (ccc)	91	6.352	6.353	(0.833)	549034	3.12836	31.284
	57 trans-1,3-Dichloropropene	75	6.455	6.548	(0.847)	4116	~~0.15671~~	~~1.5671~~
	58 1,1,2-Trichloroethane	97	6.704	6.712	(0.879)	17454	~~1.31142~~	~~13.114~~
	61 2-Hexanone	43	6.479	6.943	(0.850)	5712	~~0.01533~~	~~8.1533~~
	66 Ethylbenzene (ccc)	106	7.763	7.764	(1.018)	67240	1.04415	10.441
	67 m&p-Xylene	106	7.879	7.880	(1.034)	287225	3.73205	37.320
	68 o-Xylene	106	8.298	8.300	(1.089)	84378	1.22045	12.204
M	9 Xylene (total)	106				371603	4.95251	49.525
	69 Styrene	104	7.873	8.312	(1.033)	12262	~~0.11917~~	~~1.1917~~

MT
12/16/03

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.

Data File: /chem/gcms/mx.i/X121503.b/f6jxa1ac.d
Report Date: 15-Dec-2003 23:48

STL Knoxville

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: mx.i
Lab File ID: f6jxa1ac.d
Lab Smp Id: F6JXA1AC
Analysis Type: VOA
Quant Type: ISTD
Operator: 063605
Method File: /var/chem/gcms/mx.i/X121503.b/8260B_LM.m
Misc Info: X121503,8260B_LM,s1.sub

Calibration Date: 15-DEC-2003
Calibration Time: 16:45
Client Smp ID: DD3003
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Fluorobenzene	1461276	730638	2922552	1355301	-7.25
2 Chlorobenzene-d5	293714	146857	587428	296113	0.82
3 1,4 Dichlorobenze	323953	161976	647906	350906	8.32

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Fluorobenzene	4.89	4.39	5.39	4.88	-0.12
2 Chlorobenzene-d5	7.62	7.12	8.12	7.62	-0.02
3 1,4 Dichlorobenze	10.82	10.32	11.32	10.82	-0.01

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

Data File: /chem/gcms/mx.i/X121503.b/f6jxa1ac.d
Report Date: 15-Dec-2003 23:48

STL Knoxville

RECOVERY REPORT

Client Name: SHAW E & I INC
Sample Matrix: LIQUID
Lab Smp Id: F6JXA1AC
Level: LOW
Data Type: MS DATA
SpikeList File: allcmpds.spk
Sublist File: s1.sub
Method File: /var/chem/gcms/mx.i/X121503.b/8260B_LM.m
Misc Info: X121503,8260B_LM,s1.sub

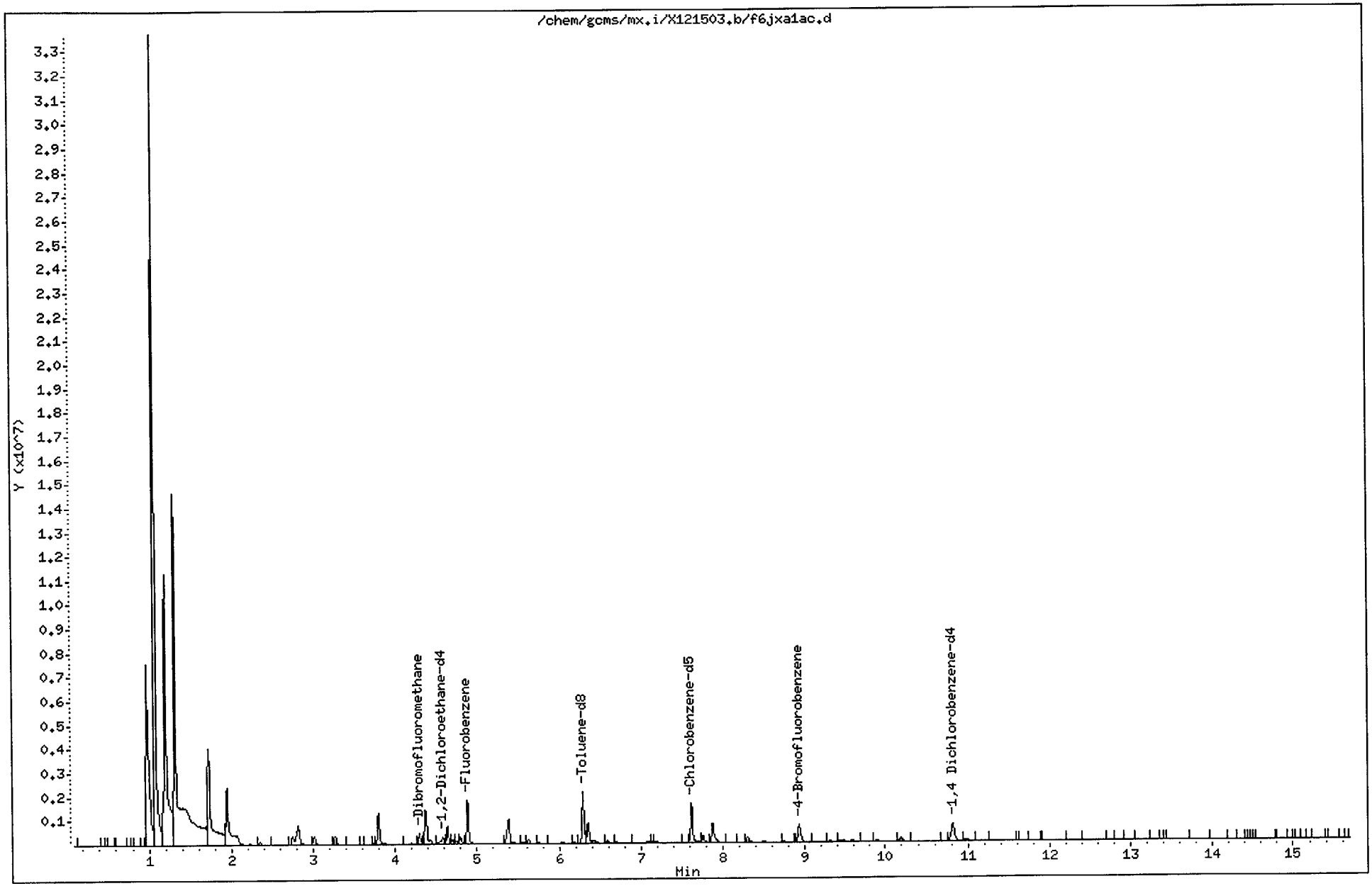
Client SDG: PB045
Fraction: VOA
Client Smp ID: DD3003
Operator: 063605
SampleType: SAMPLE
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 5 1,2-Dichloroethane	10.000	9.8414	98.41	71-127
$ 4 Dibromofluorometha	10.000	9.8499	98.50	79-120
$ 6 Toluene-d8	10.000	9.8258	98.26	80-120
$ 7 4-Bromofluorobenze	10.000	8.6920	86.92	69-126

Data File: /chem/gcms/mx.i/X121503.b/f6jxa1ac.d
Date : 15-DEC-2003 23:31
Client ID: DD3003
Sample Info: F6JXA1AC,10,0,,
Purge Volume: 25.0
Column phase: J+W 624

Instrument: mx.i

Operator: 063605
Column diameter: 0.18



Data File: /chem/gcms/mx.i/X121503.b/f6jxa1ac.d

Date : 15-DEC-2003 23:31

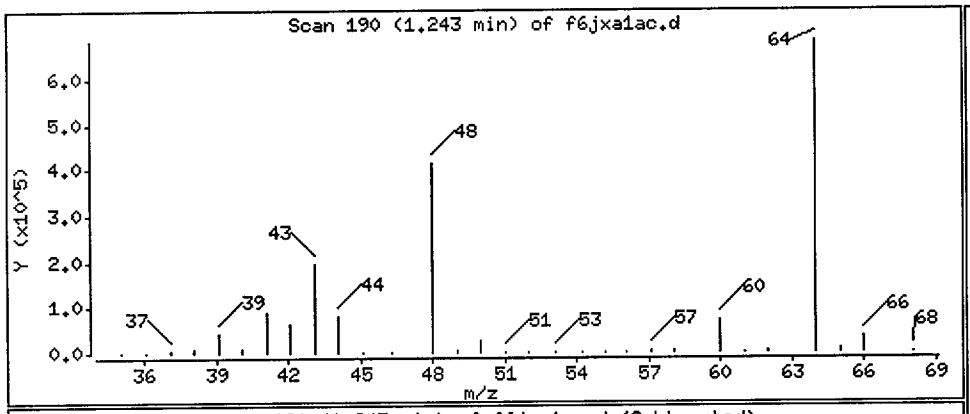
Client ID: DD3003 | Instrument: mx.i

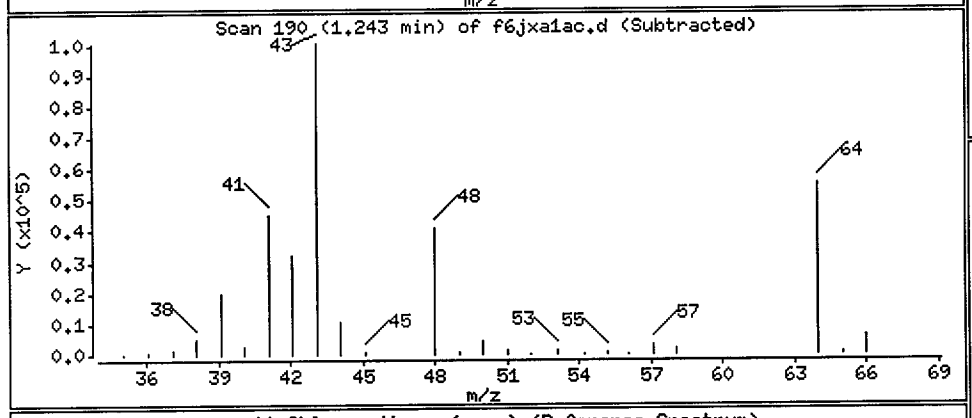
Sample Info: F6JXA1AC,10,0,,

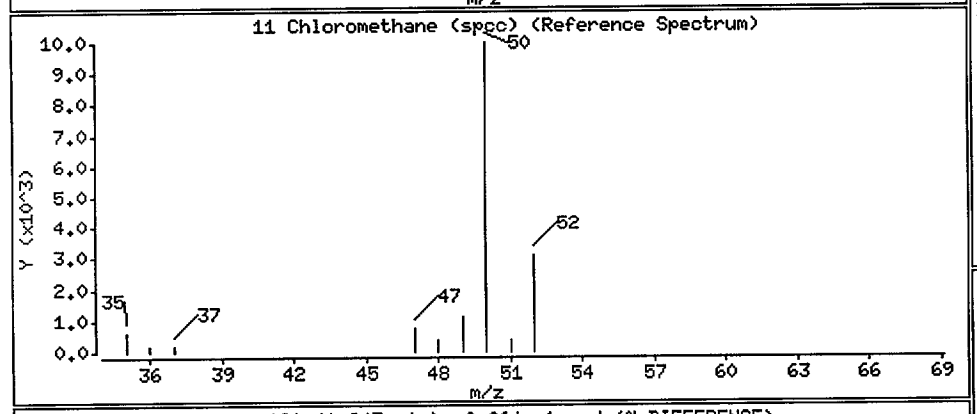
Purge Volume: 25.0 | Operator: 063605

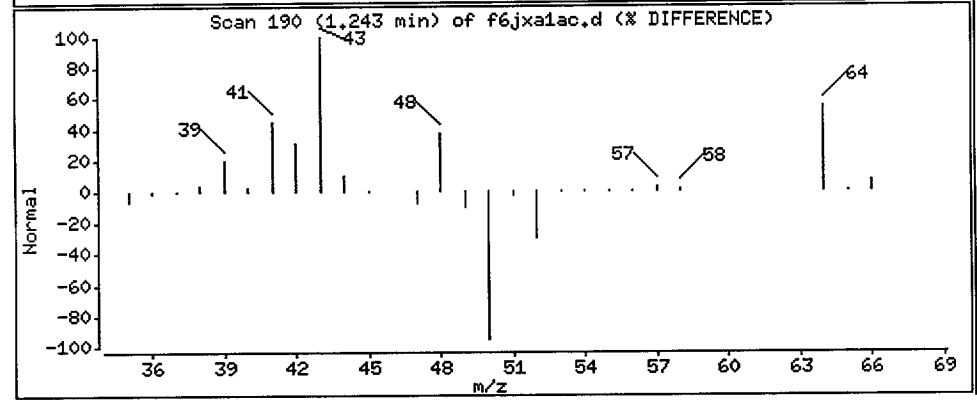
Column phase: J+W 624 | Column diameter: 0.18

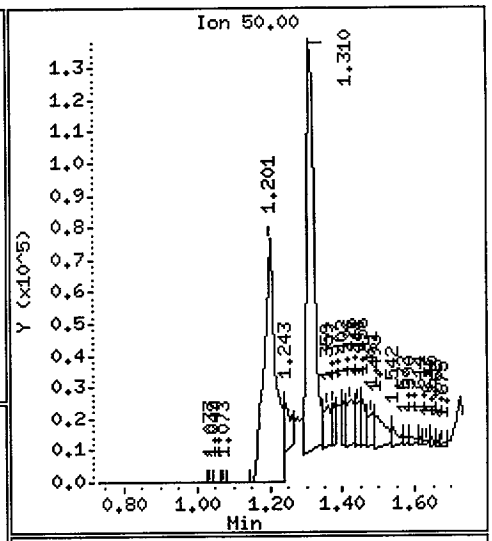
11 Chloromethane (spcc) | Concentration: 6.7256 ug/L

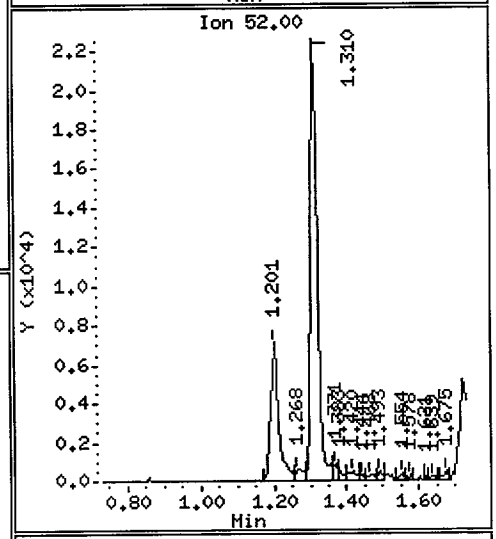


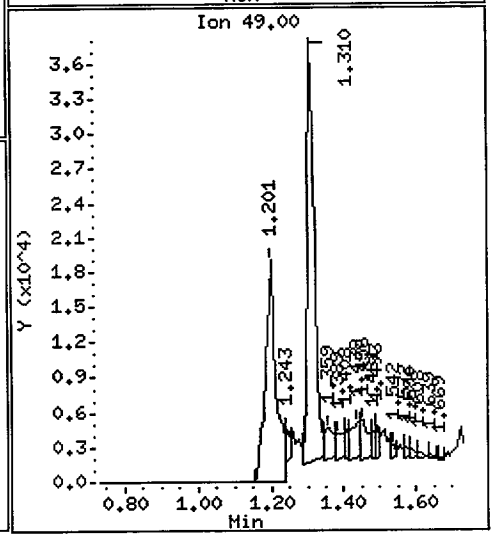












Data File: /chem/gcms/mx.i/X121503.b/f6jxa1ac.d

Date : 15-DEC-2003 23:31

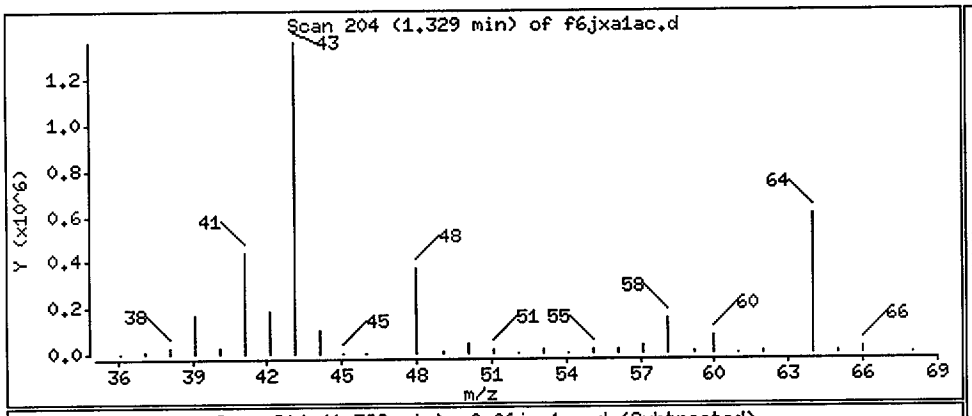
Client ID: DD3003 Instrument: mx.i

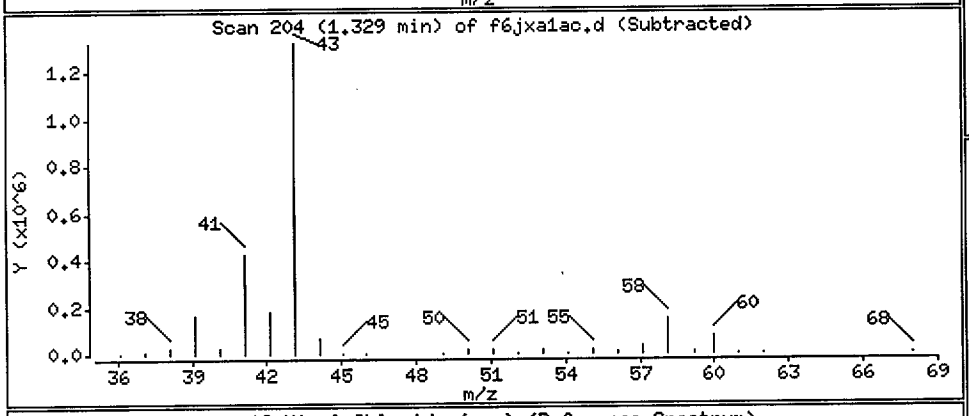
Sample Info: F6JXA1AC,10,0,,

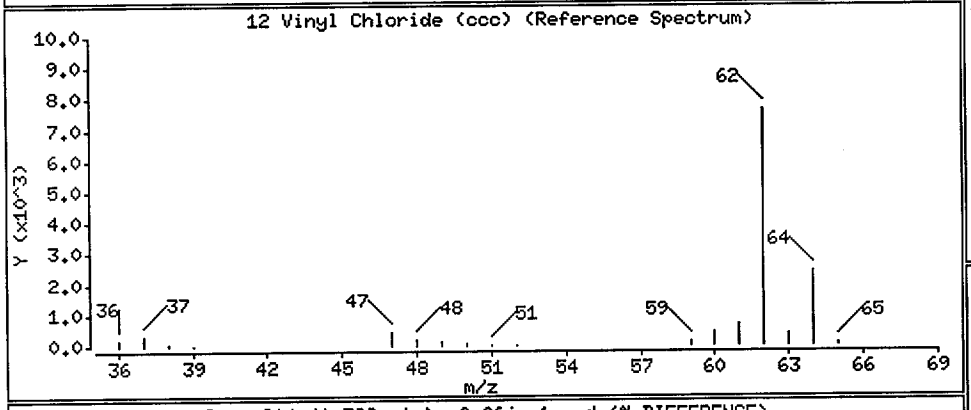
Purge Volume: 25.0 Operator: 063605

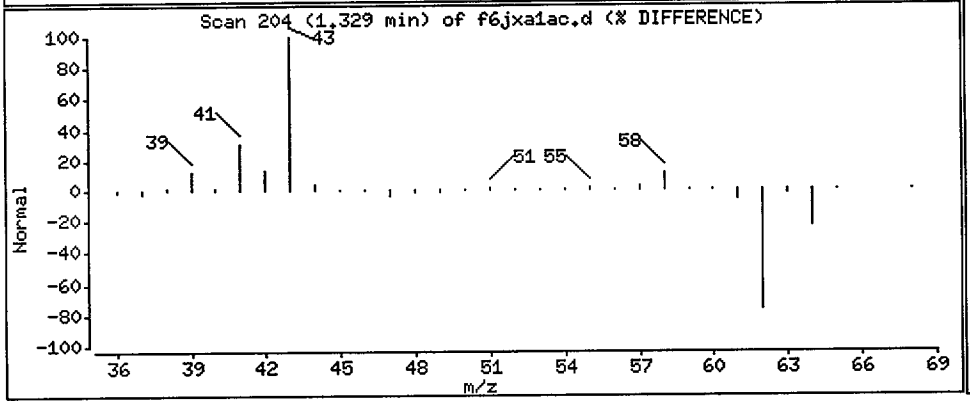
Column phase: J+W 624 Column diameter: 0.18

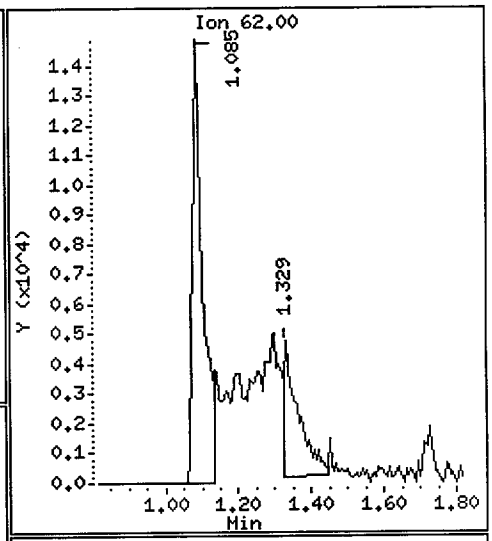
12 Vinyl Chloride (ccc) Concentration: 2.5556 ug/L

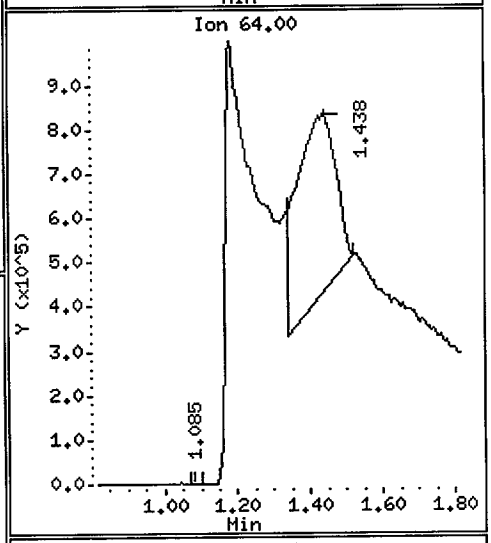


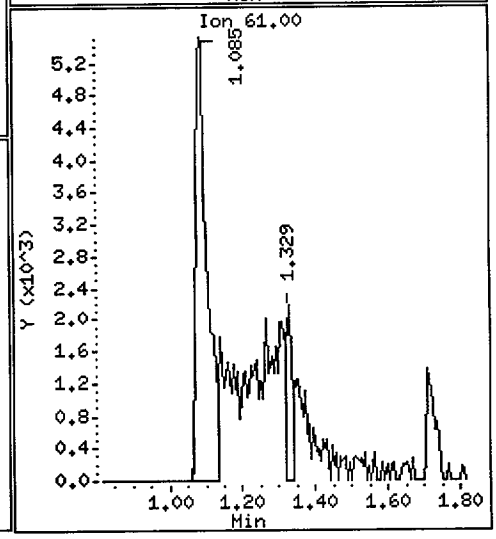












Data File: /chem/gcms/mx.i/X121503.b/f6jxa1ac.d

Date : 15-DEC-2003 23:31

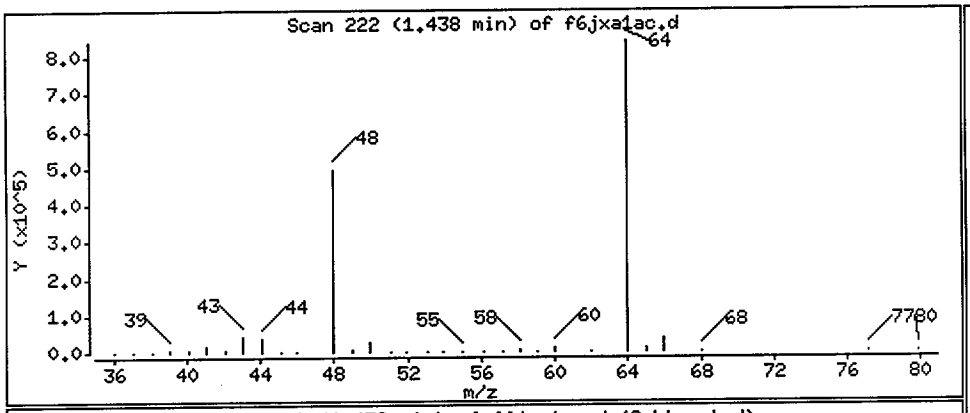
Client ID: DD3003 Instrument: mx.i

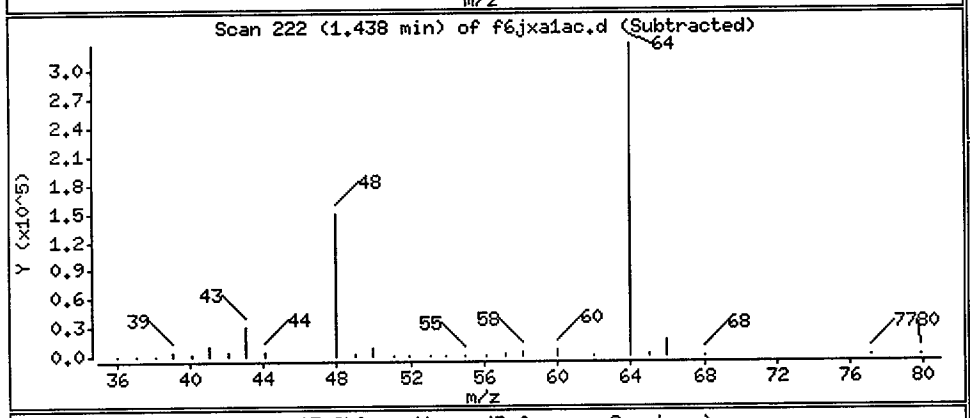
Sample Info: F6JXA1AC,10,0,,

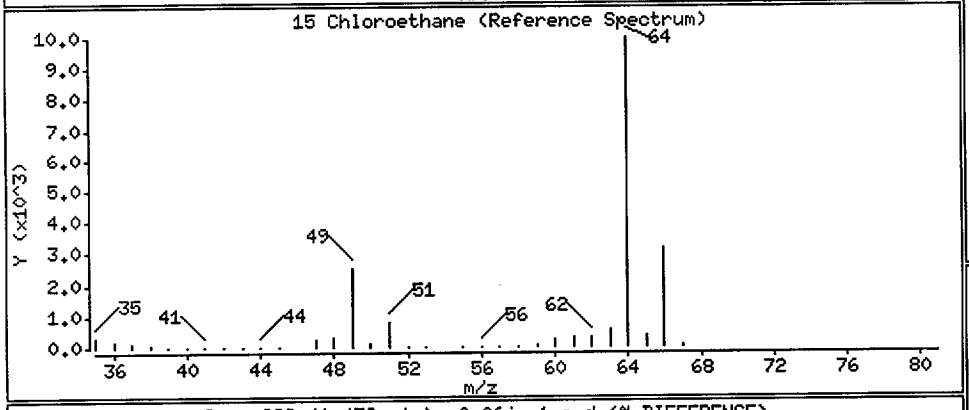
Purge Volume: 25.0 Operator: 063605

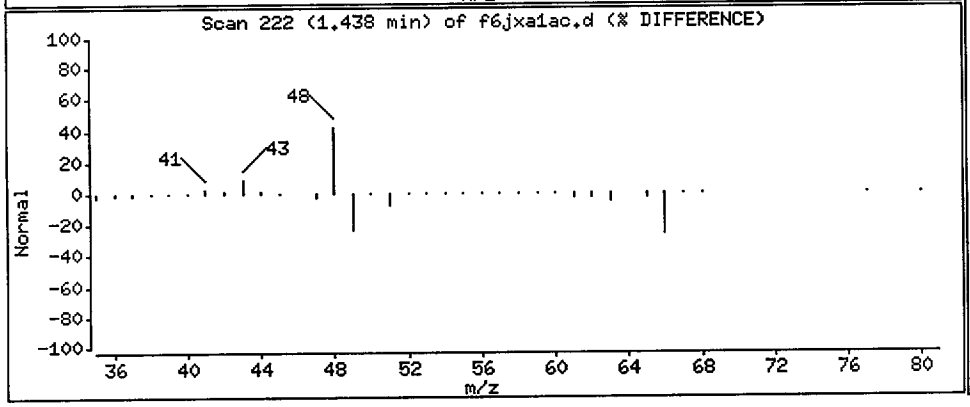
Column phase: J+W 624 Column diameter: 0.18

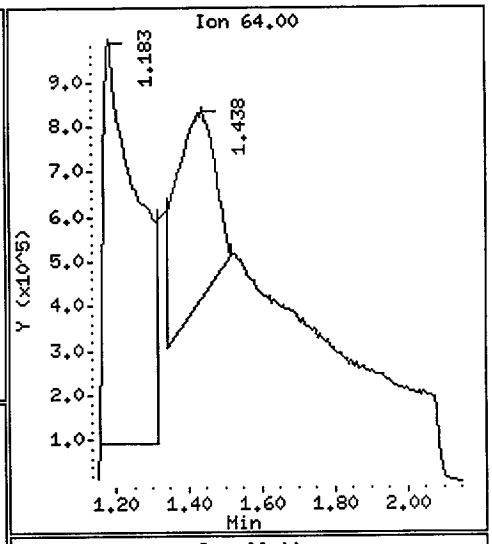
15 Chloroethane Concentration: 1521.9 ug/L

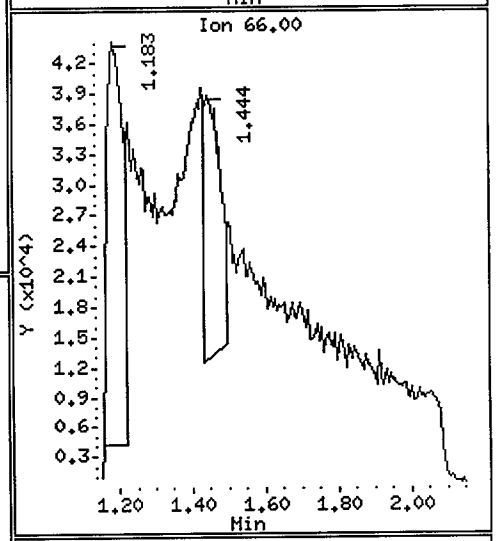


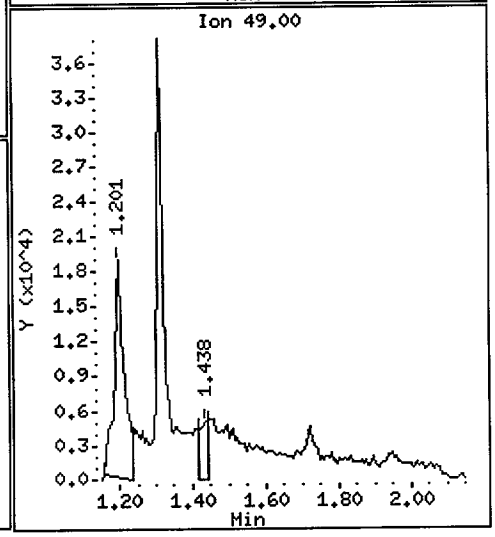












Data File: /chem/gcms/mx.i/X121503.b/f6jxa1ac.d

Date : 15-DEC-2003 23:31

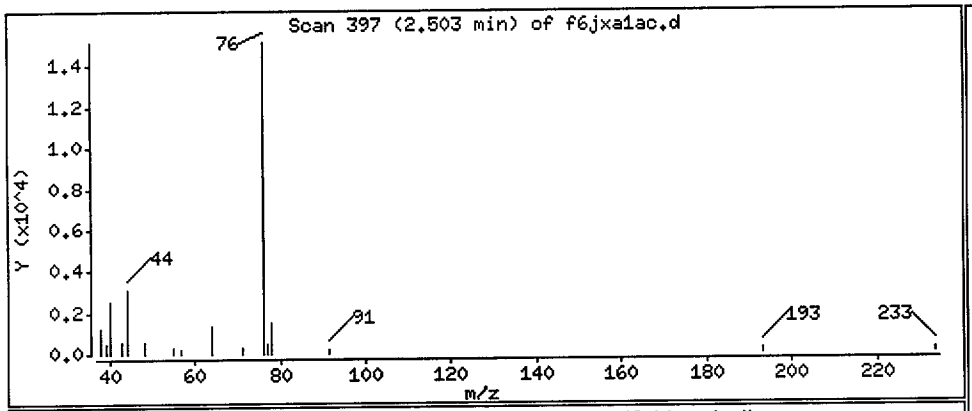
Client ID: DD3003 Instrument: mx.i

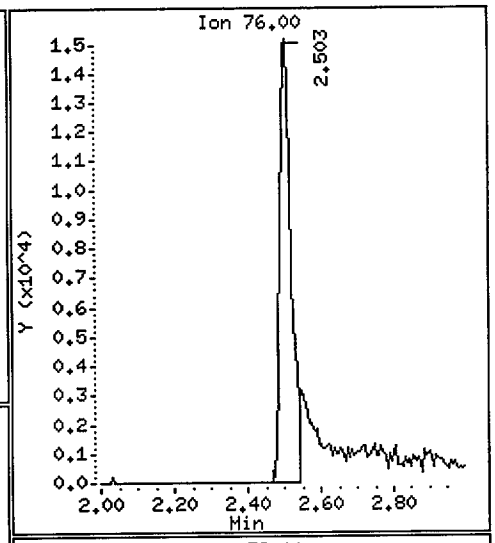
Sample Info: F6JXA1AC,10,0,,

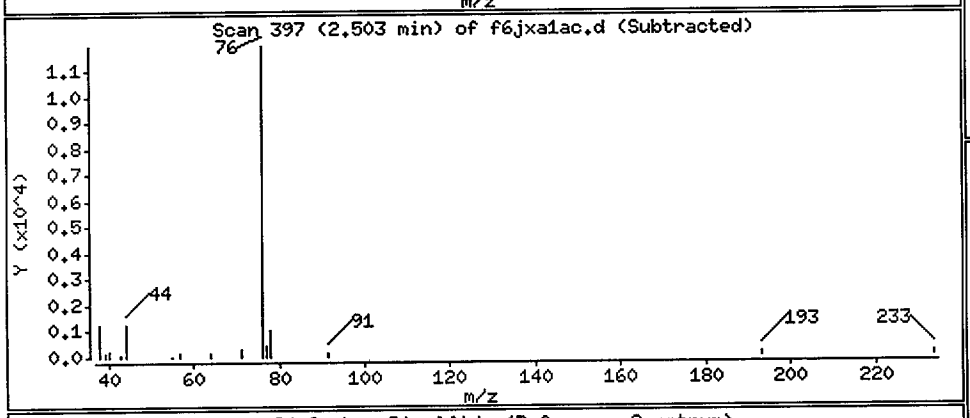
Purge Volume: 25.0 Operator: 063605

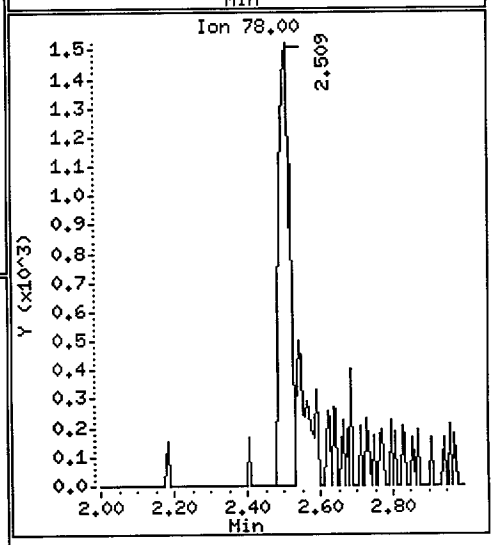
Column phase: J+W 624 Column diameter: 0.18

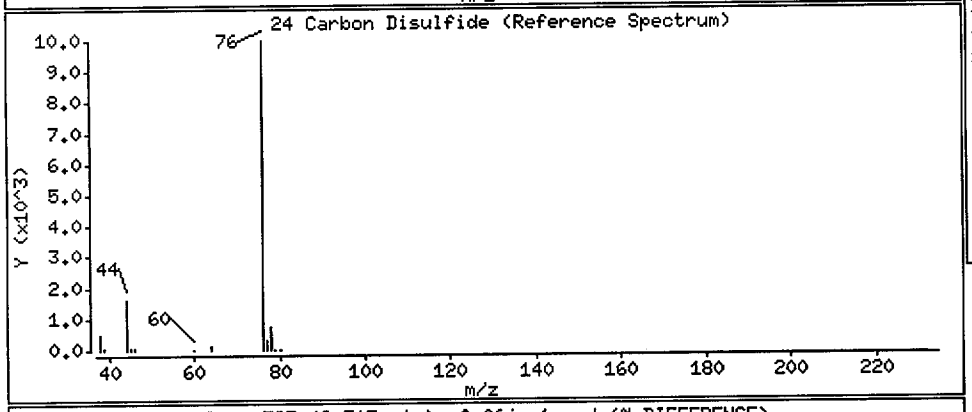
24 Carbon Disulfide Concentration: 3.4016 ug/L

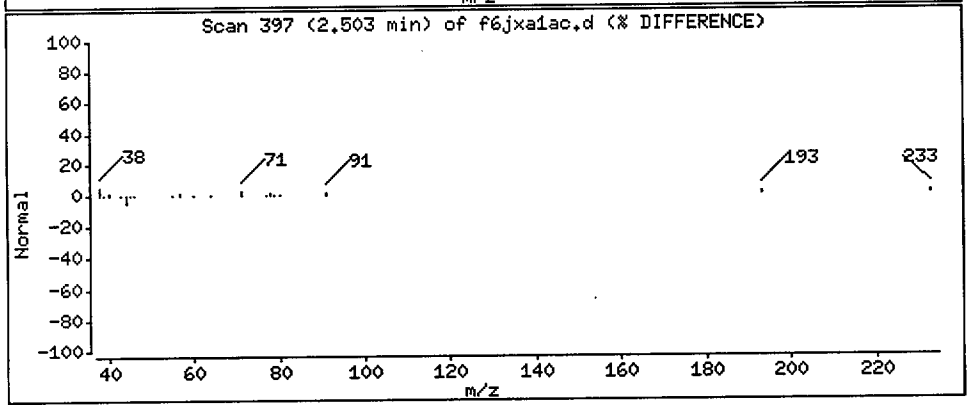












Data File: /chem/gcms/mx.i/X121503.b/f6jxa1ac.d

Date : 15-DEC-2003 23:31

Client ID: DD3003

Instrument: mx.i

Sample Info: F6JXA1AC,10,0,,

Purge Volume: 25.0

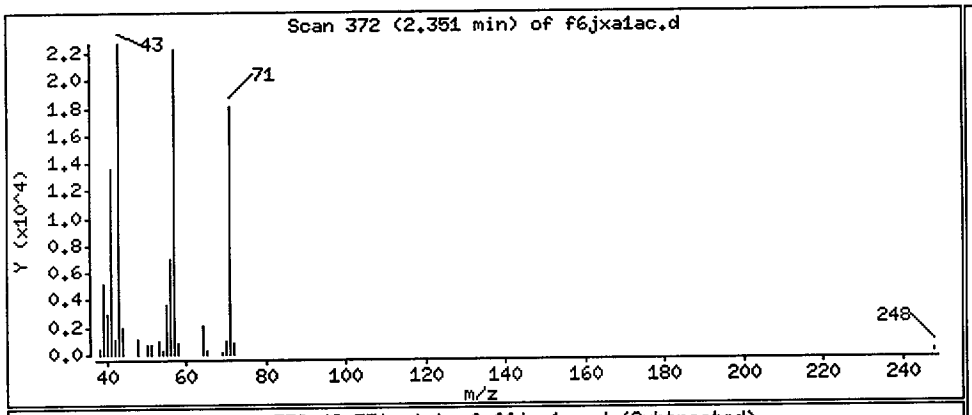
Operator: 063605

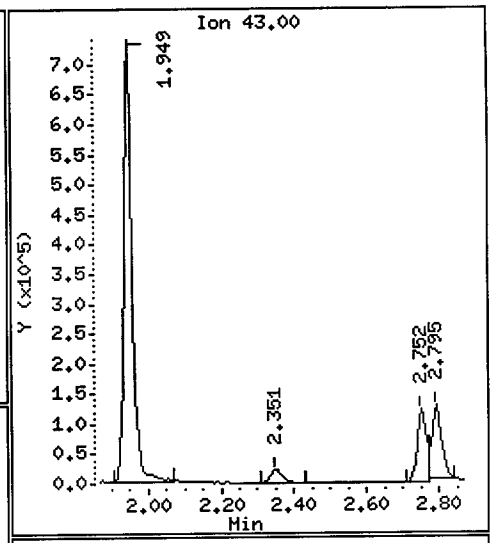
Column phase: J+W 624

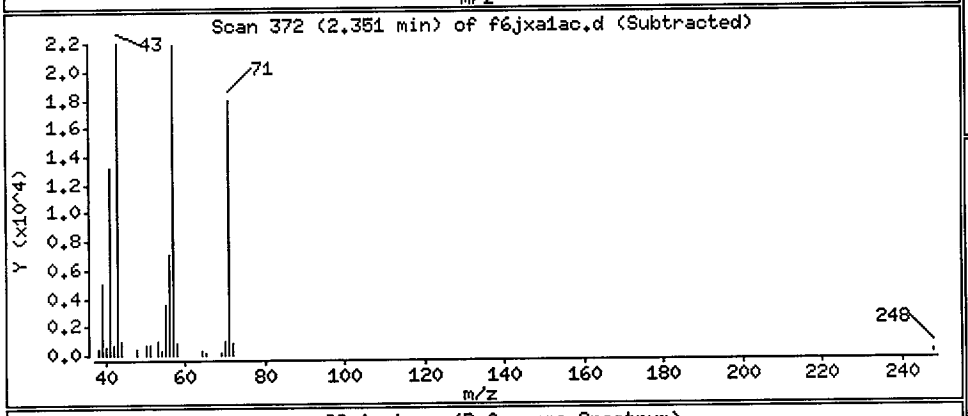
Column diameter: 0.18

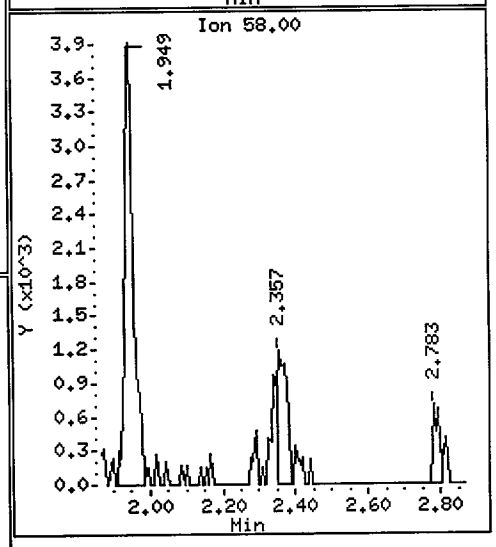
22 Acetone

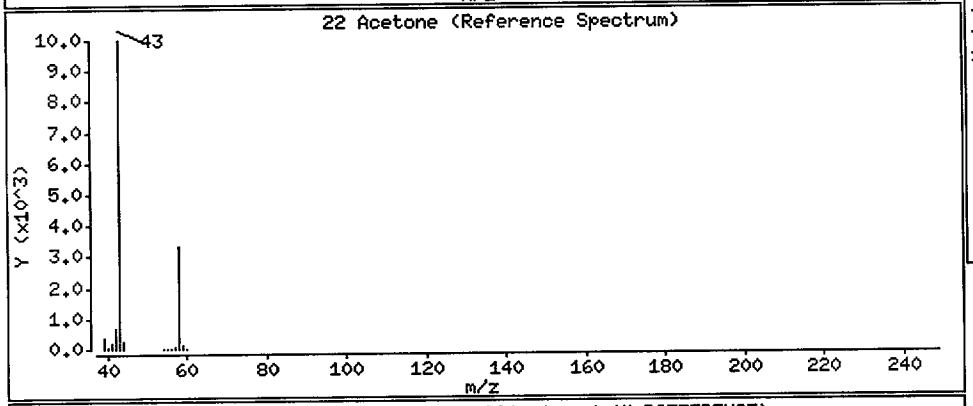
Concentration: 188.97 ug/L

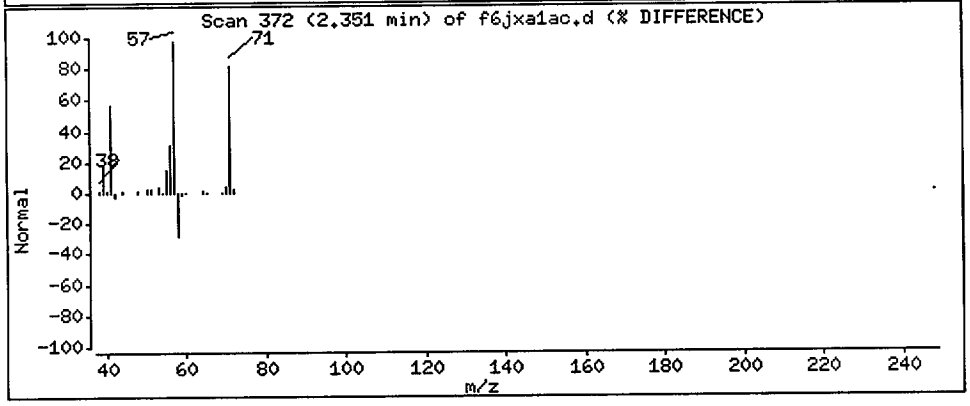












Data File: /chem/gcms/mx.i/X121503.b/f6jxa1ac.d

Date : 15-DEC-2003 23:31

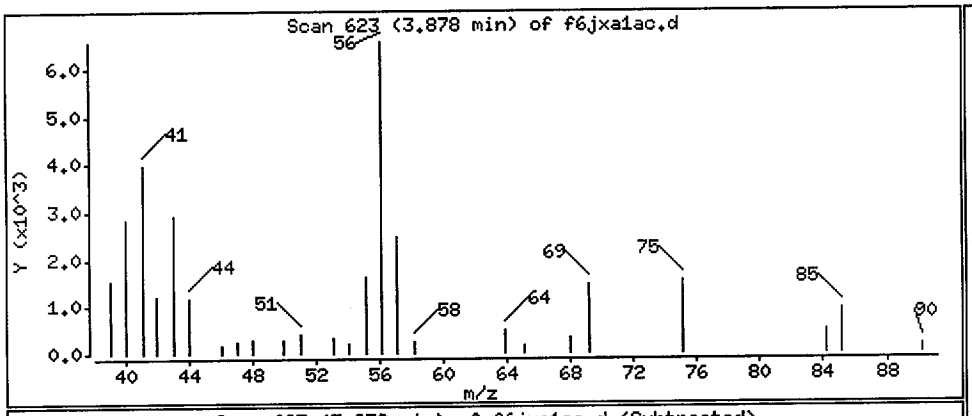
Client ID: DD3003 | Instrument: mx.i

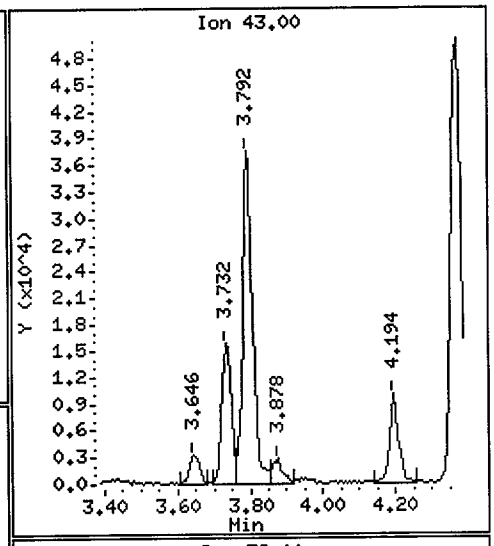
Sample Info: F6JXA1AC,10,0,,

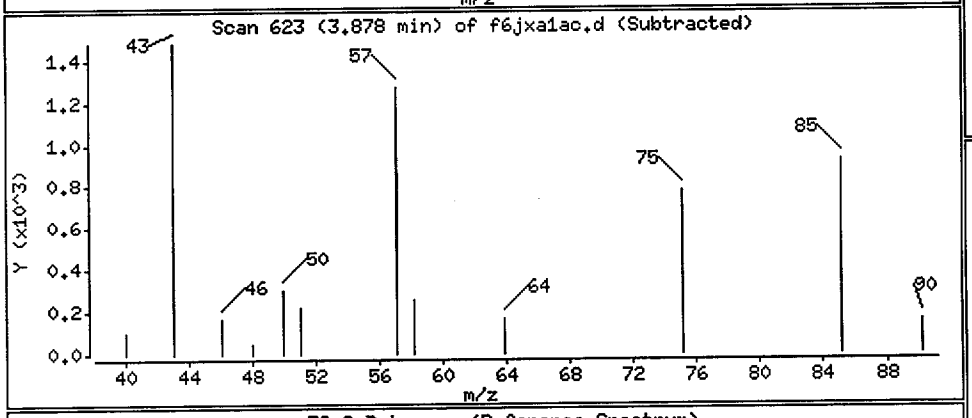
Purge Volume: 25.0 | Operator: 063605

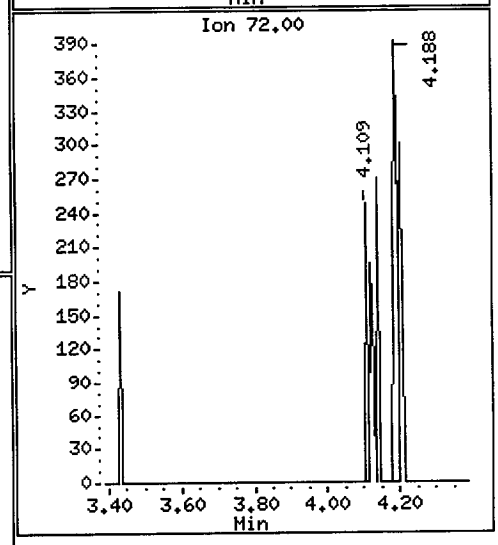
Column phase: J+W 624 | Column diameter: 0.18

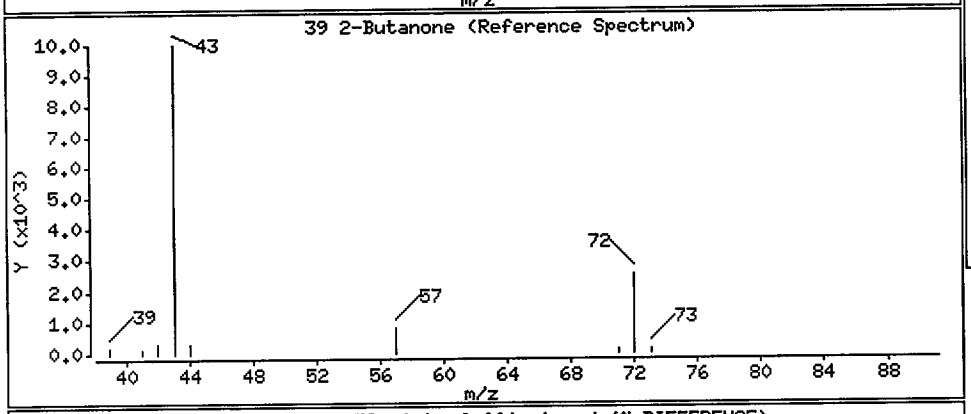
39 2-Butanone | Concentration: 14.307 ug/L

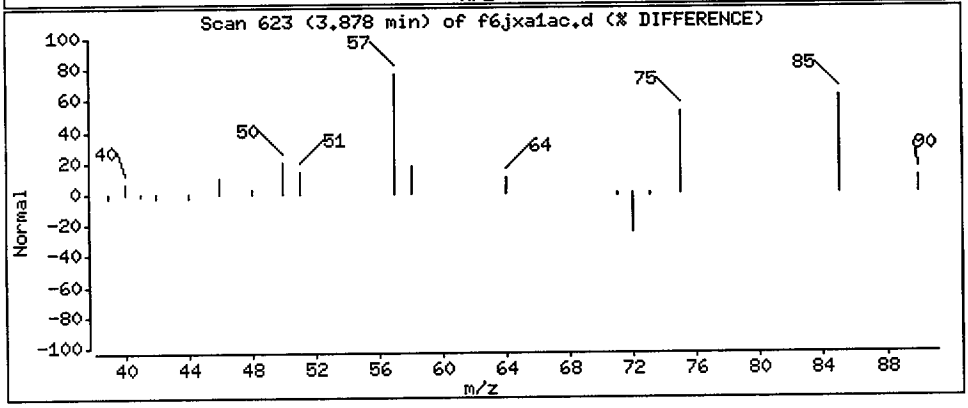












Data File: /chem/gcms/mx.i/X121503.b/f6jxa1ac.d

Date : 15-DEC-2003 23:31

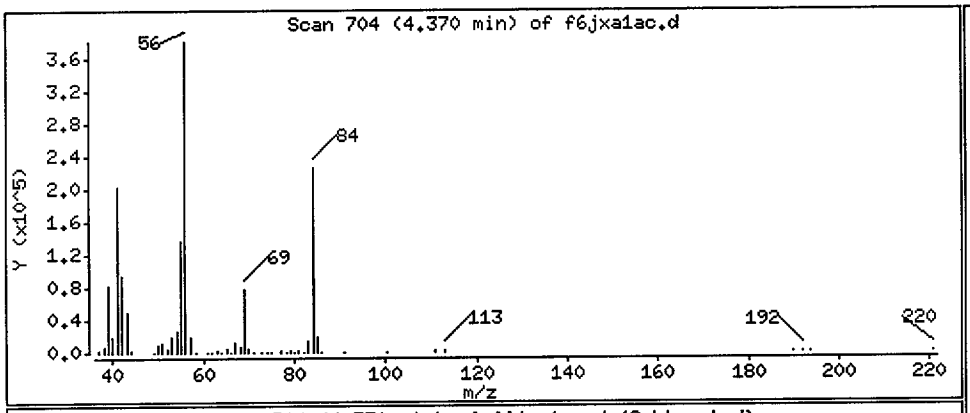
Client ID: DD3003 | Instrument: mx.i

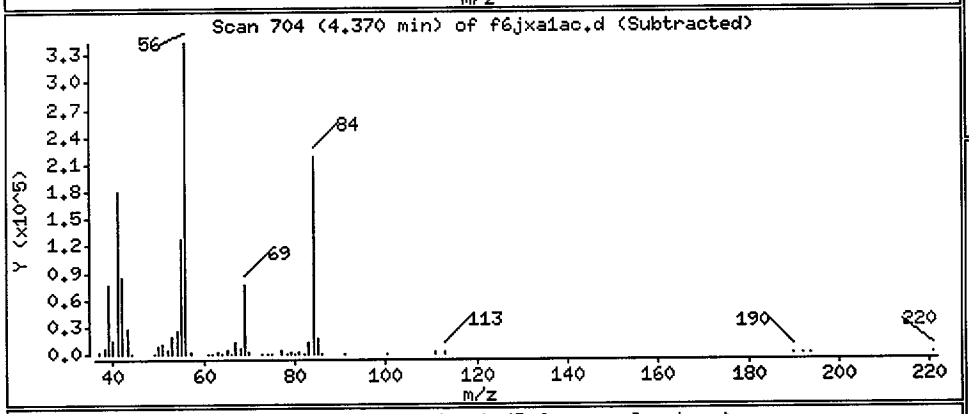
Sample Info: F6JXA1AC,10,0,,

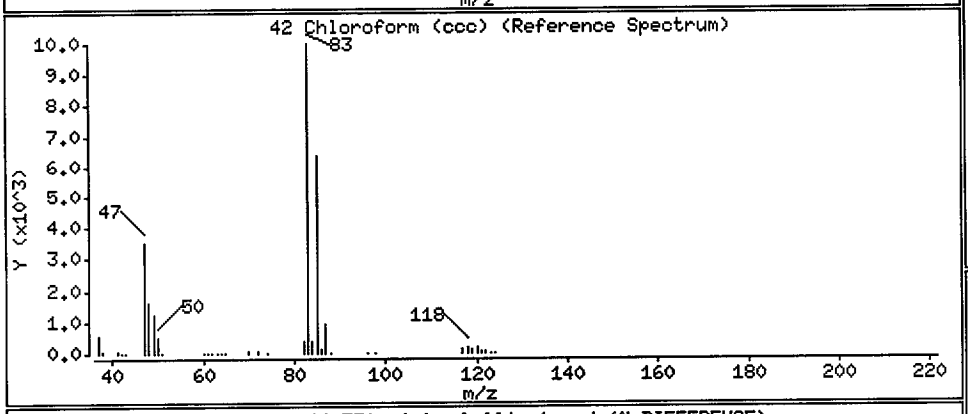
Purge Volume: 25.0 | Operator: 063605

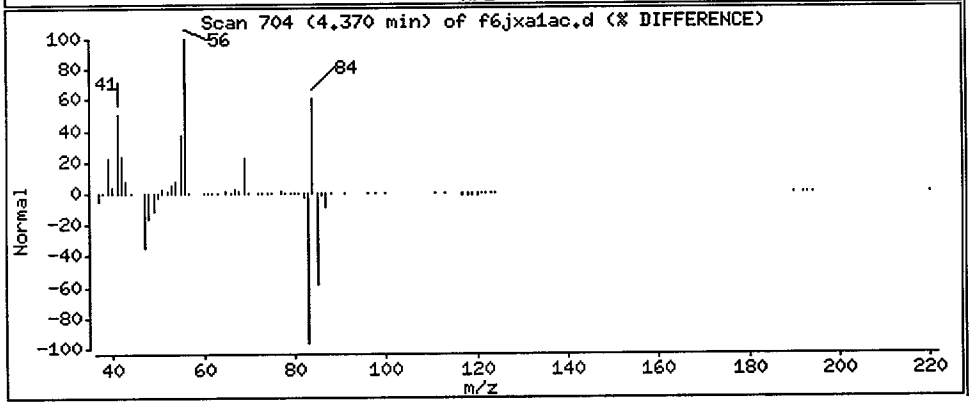
Column phase: J+W 624 | Column diameter: 0.18

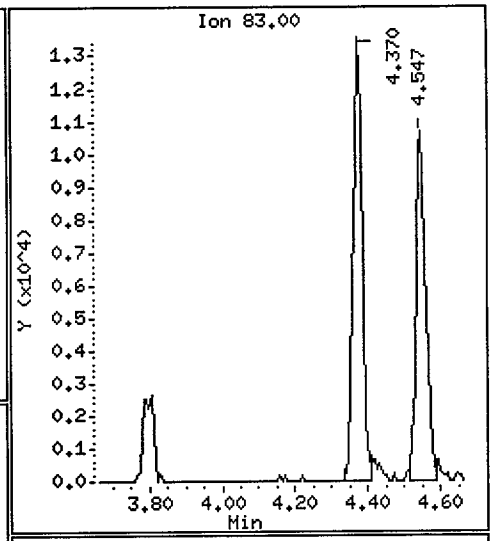
42 Chloroform (ccc) | Concentration: 4.9348 ug/L

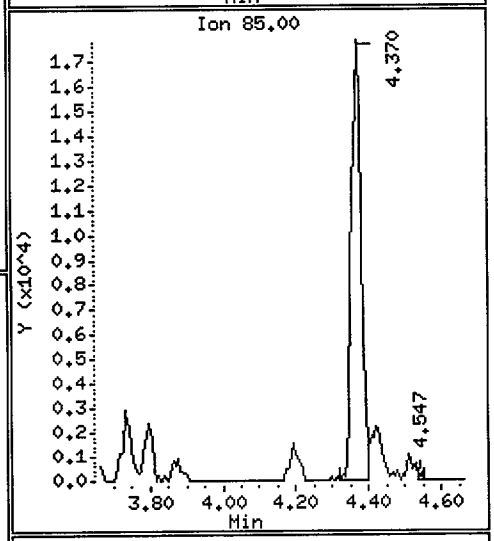


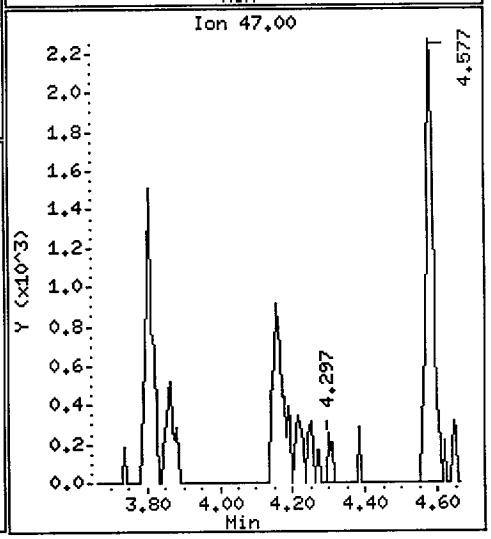












Data File: /chem/gcms/mx.i/X121503.b/f6jxa1ac.d

Date : 15-DEC-2003 23:31

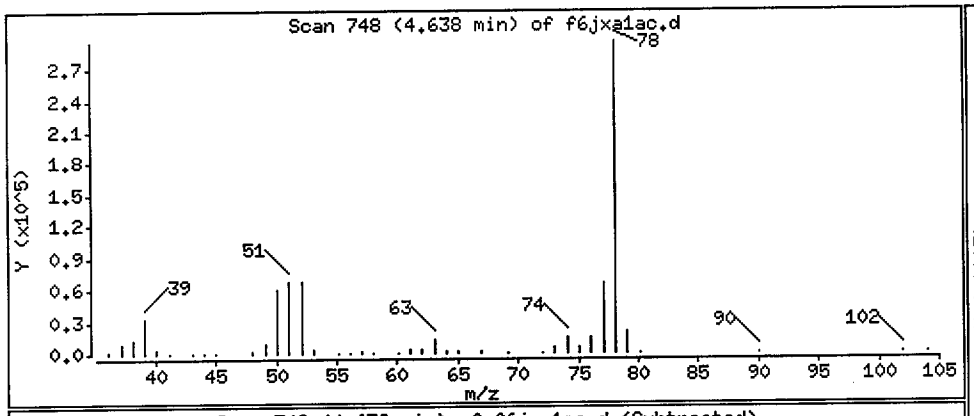
Client ID: DD3003 | Instrument: mx.i

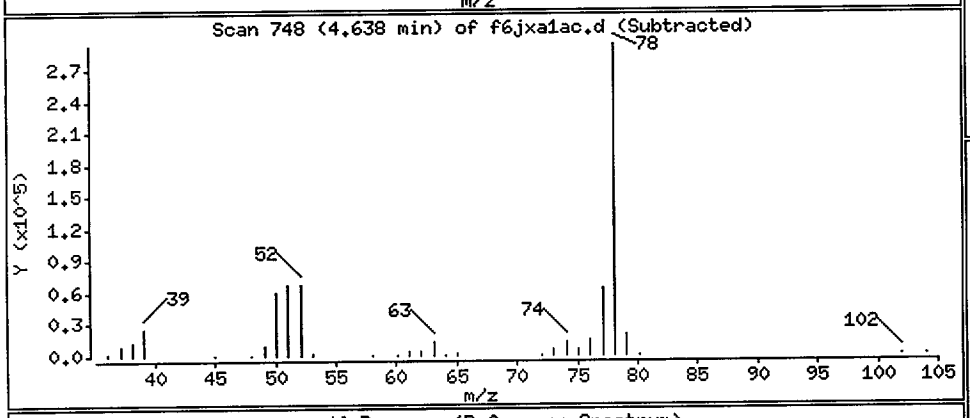
Sample Info: F6JXA1AC,10,0,,

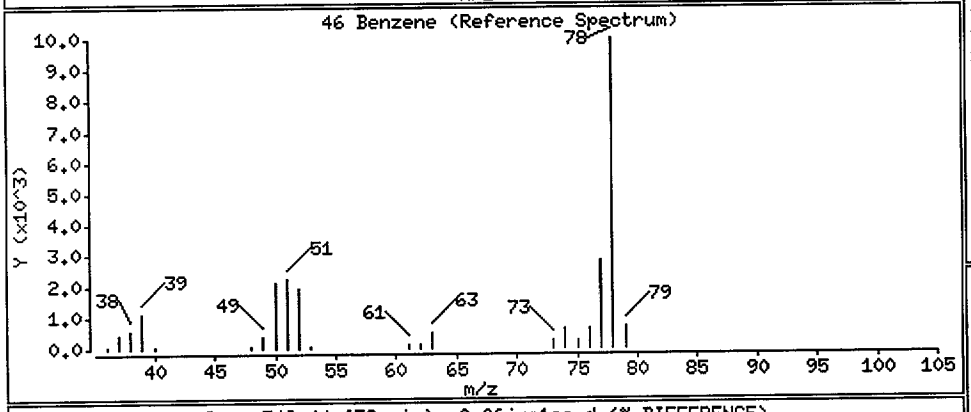
Purge Volume: 25.0 | Operator: 063605

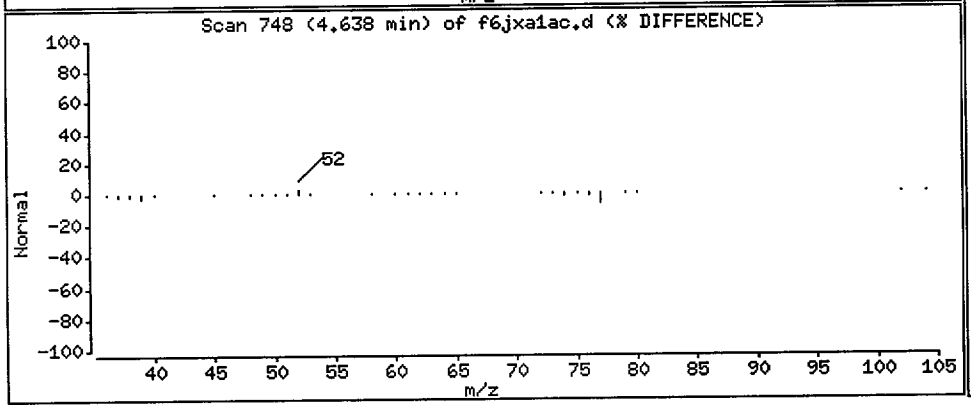
Column phase: J+W 624 | Column diameter: 0.18

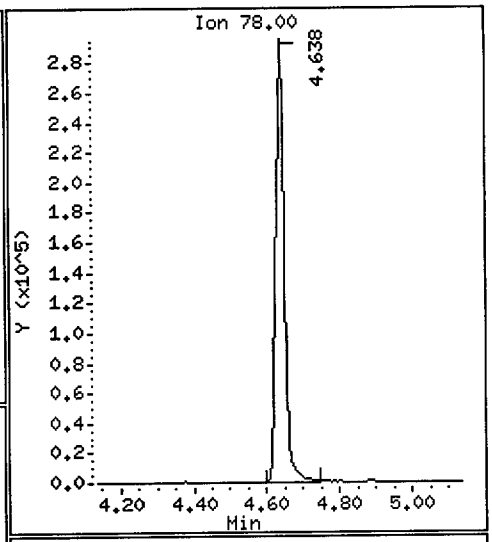
46 Benzene | Concentration: 35.703 ug/L

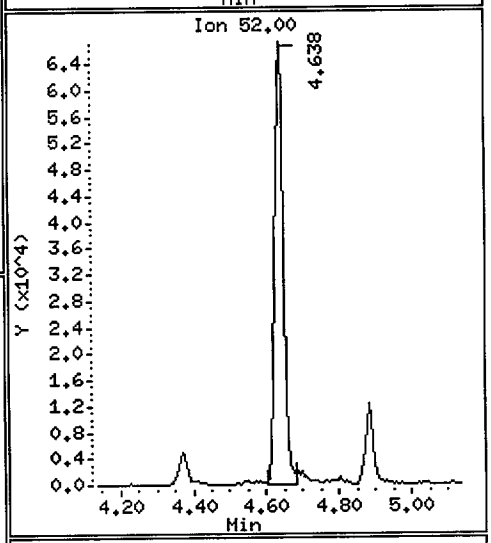


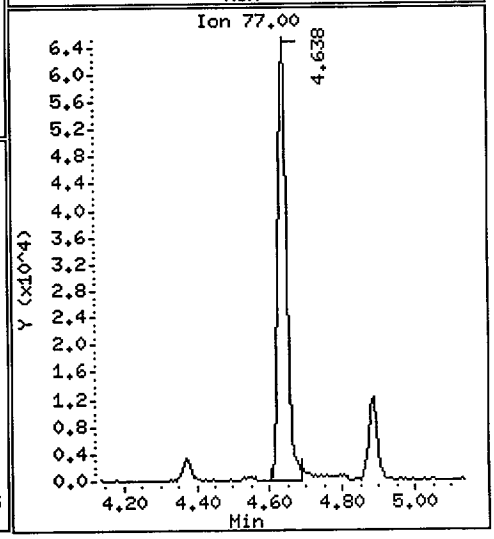












Data File: /chem/gcms/mx.i/X121503.b/f6jxa1ac.d

Date : 15-DEC-2003 23:31

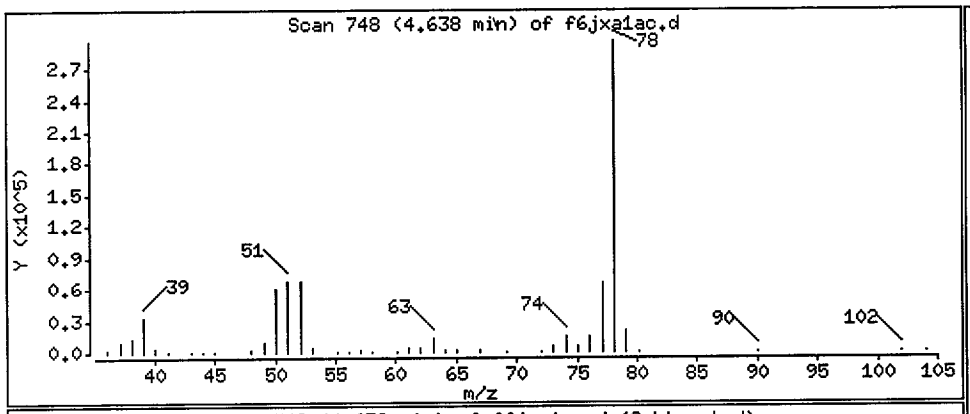
Client ID: DD3003 | Instrument: mx.i

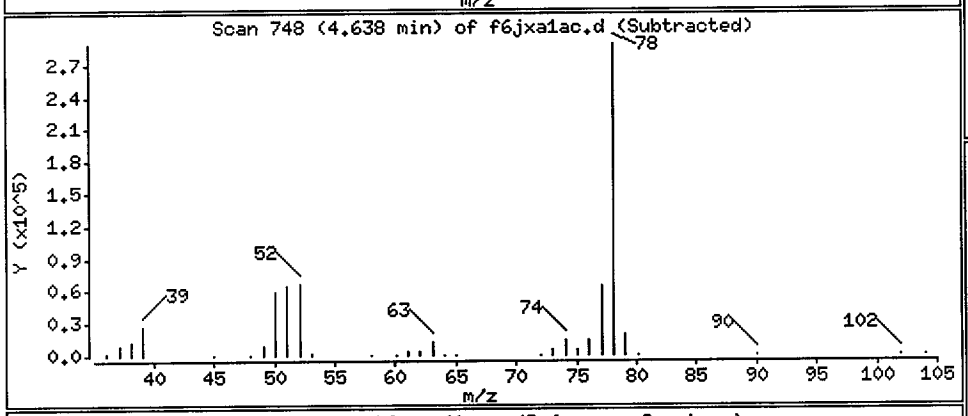
Sample Info: F6JXA1AC,10,0,,

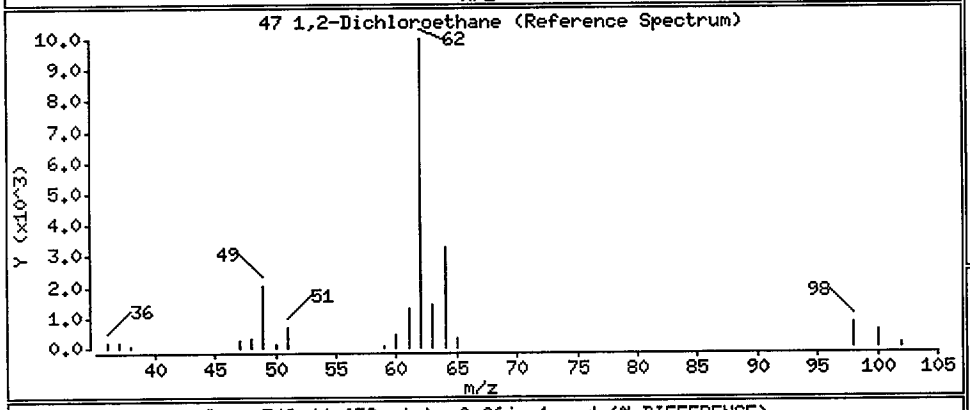
Purge Volume: 25.0 | Operator: 063605

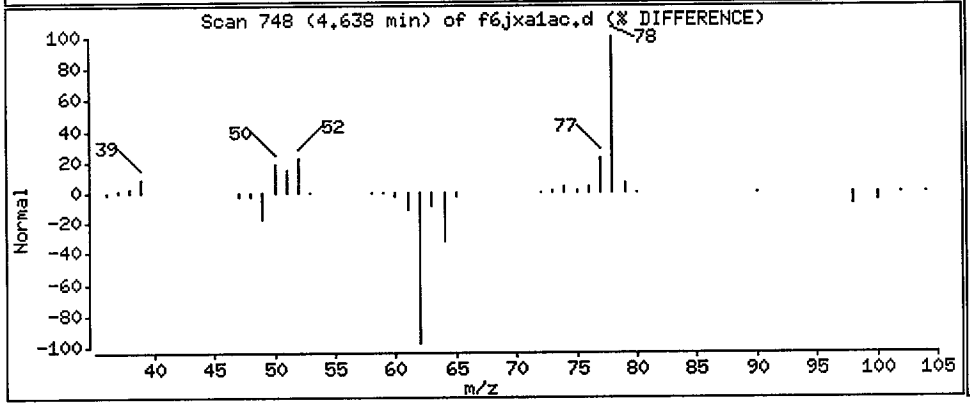
Column phase: J+W 624 | Column diameter: 0.18

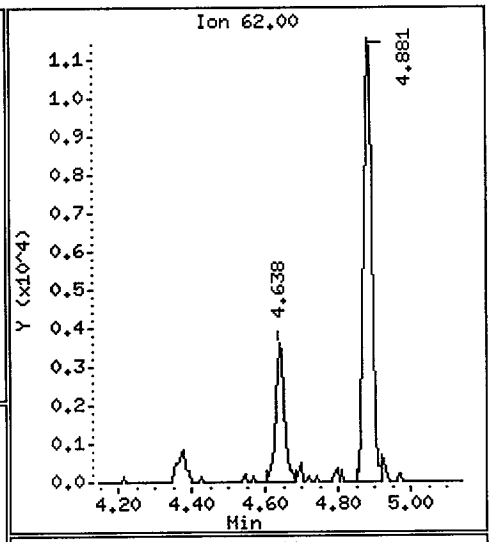
47 1,2-Dichloroethane | Concentration: 2.5722 ug/L

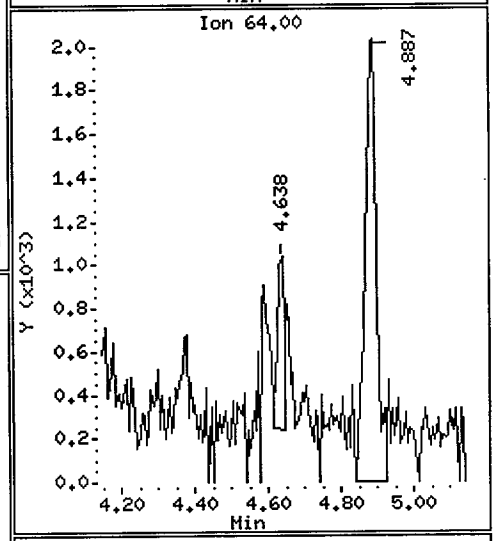


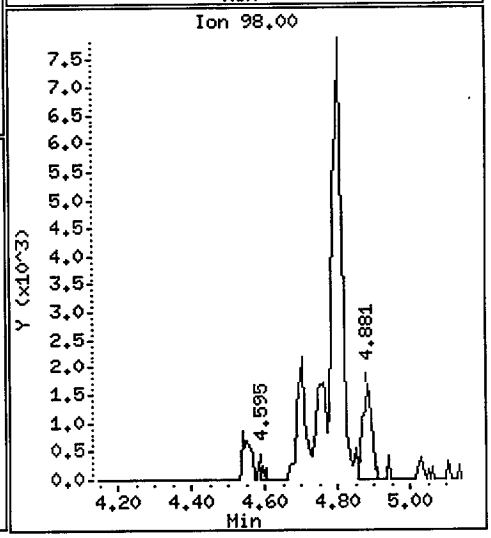












Data File: /chem/gcms/mx.i/X121503.b/f6jxa1ac.d

Date : 15-DEC-2003 23:31

Client ID: DD3003

Instrument: mx.i

Sample Info: F6JXA1AC,10,0,,

Purge Volume: 25.0

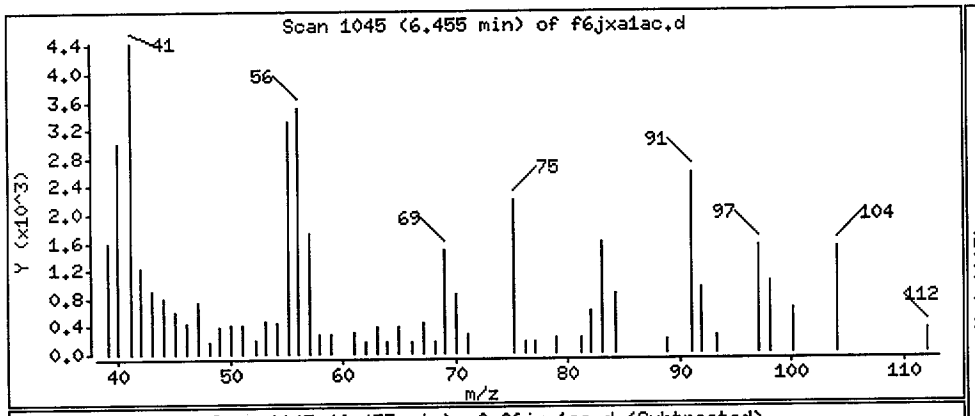
Operator: 063605

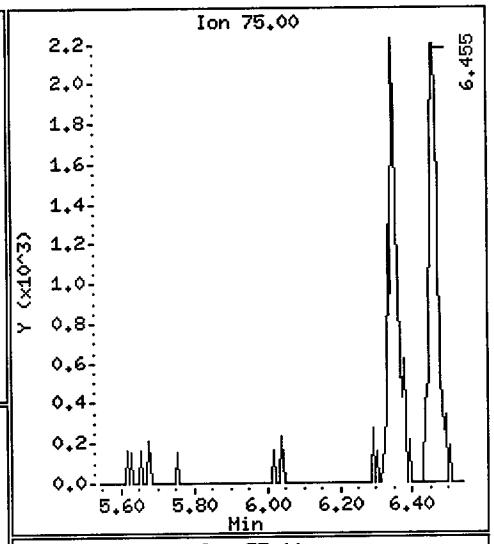
Column phase: J+W 624

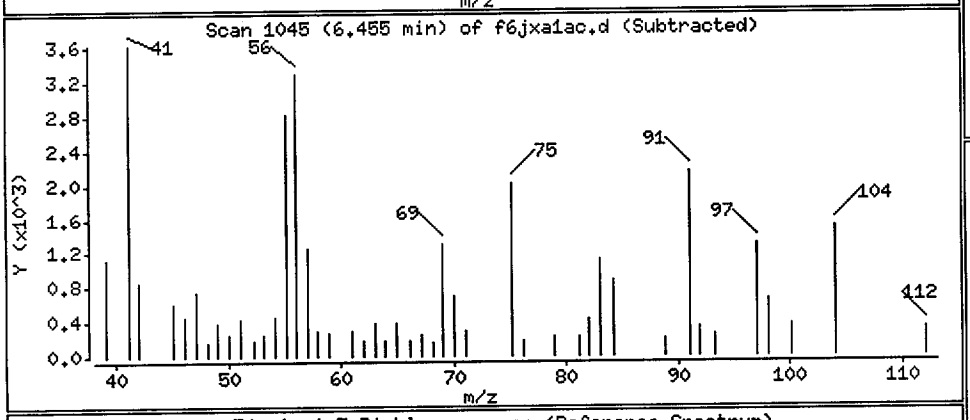
Column diameter: 0.18

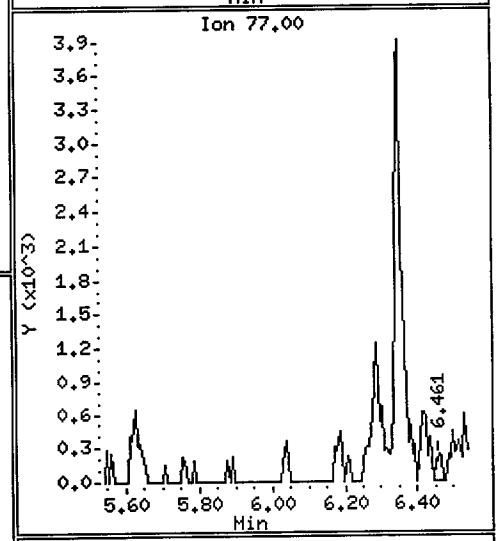
54 cis-1,3-Dichloropropene

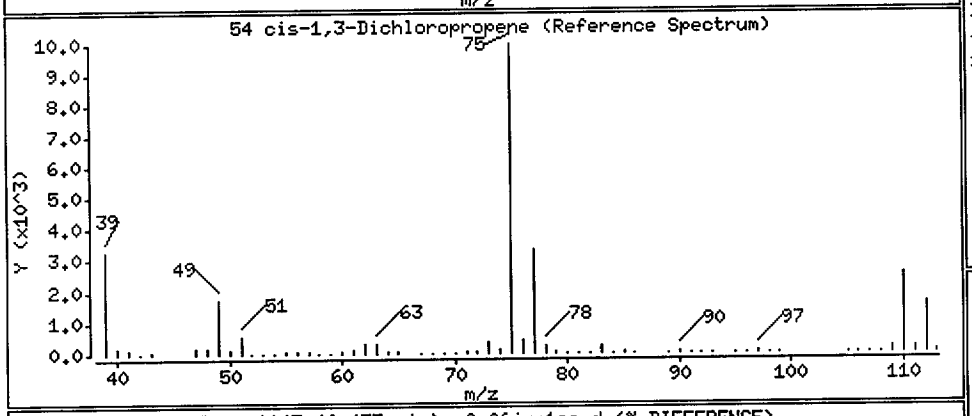
Concentration: 1.1715 ug/L

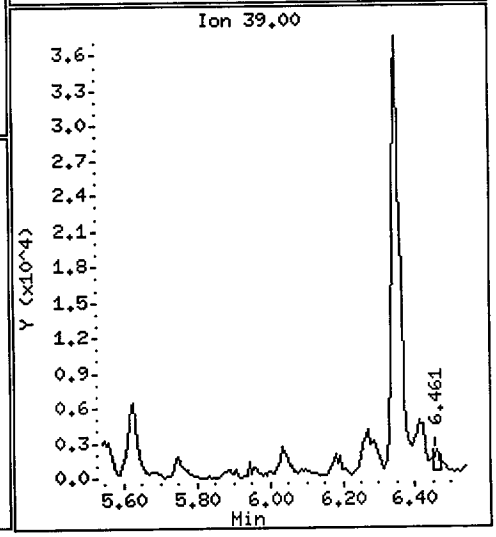


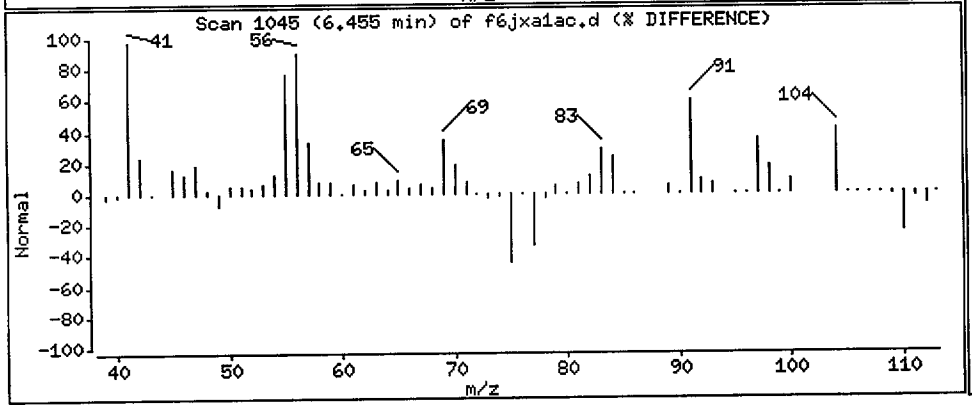












Data File: /chem/gcms/mx.i/X121503.b/f6jxa1ac.d

Date : 15-DEC-2003 23:31

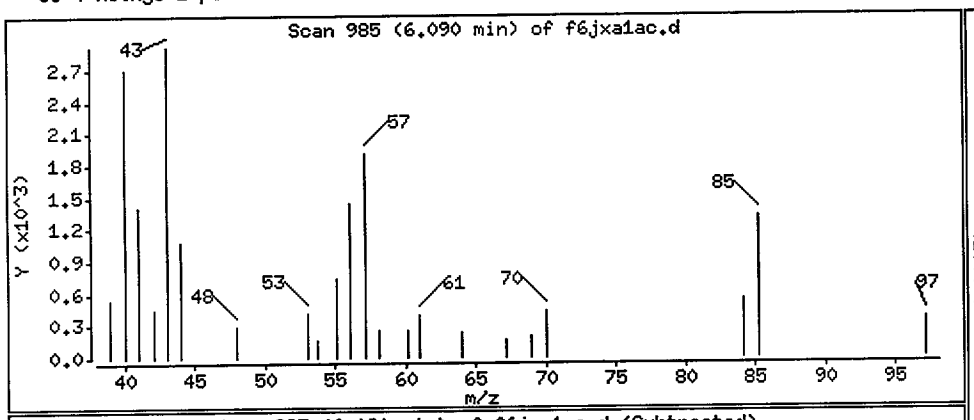
Client ID: DD3003 Instrument: mx.i

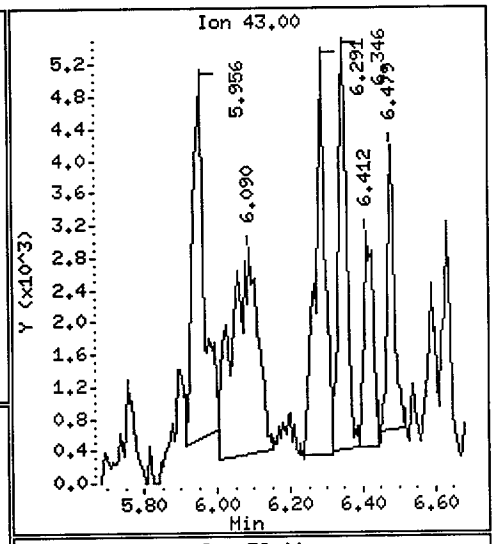
Sample Info: F6JXA1AC,10,0,,

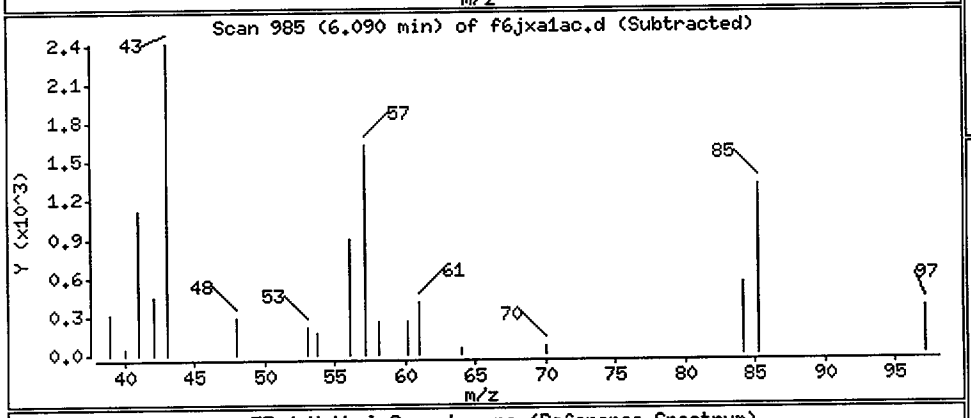
Purge Volume: 25.0 Operator: 063605

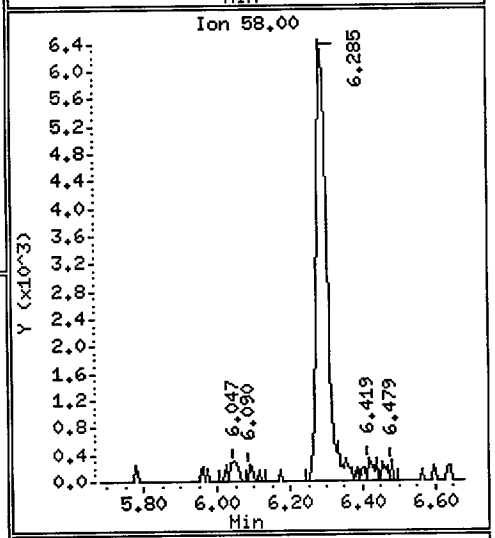
Column phase: J+W 624 Column diameter: 0.18

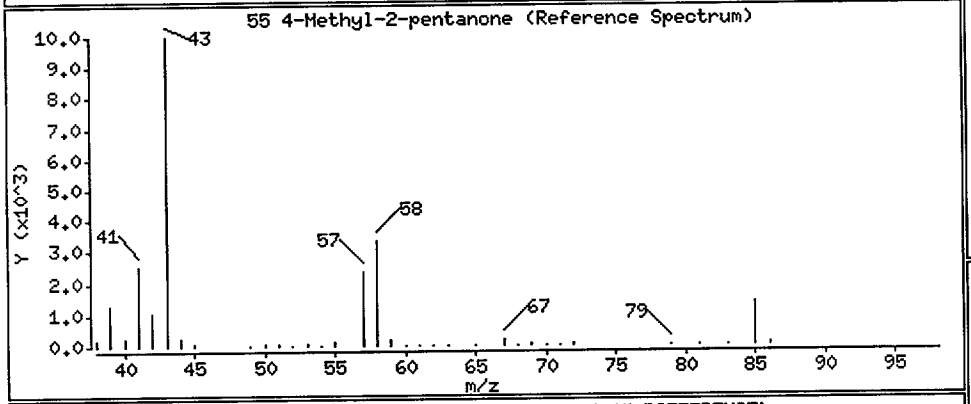
55 4-Methyl-2-pentanone Concentration: 13.031 ug/L

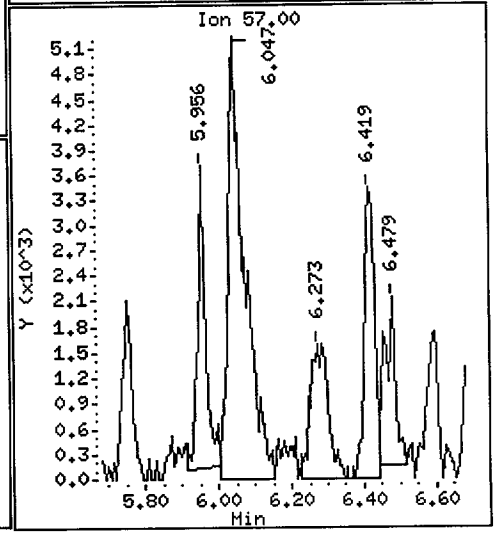


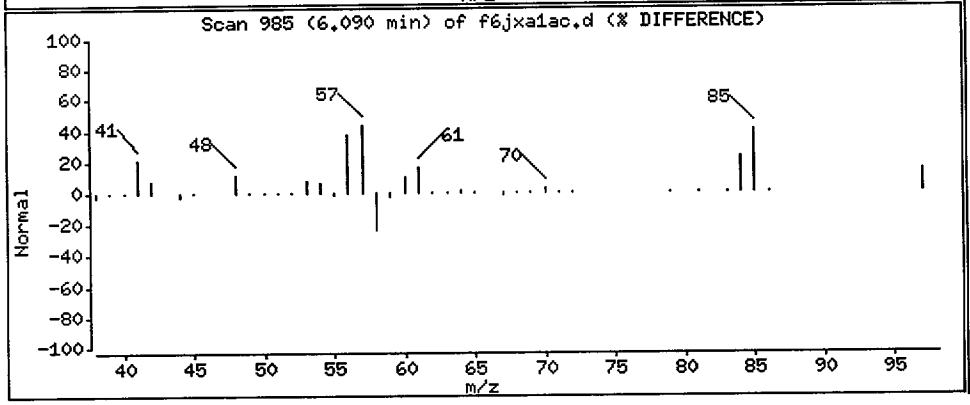












Data File: /chem/gcms/mx.i/X121503.b/f6jxa1ac.d

Date : 15-DEC-2003 23:31

Client ID: DD3003

Instrument: mx.i

Sample Info: F6JXA1AC,10,0,,

Purge Volume: 25.0

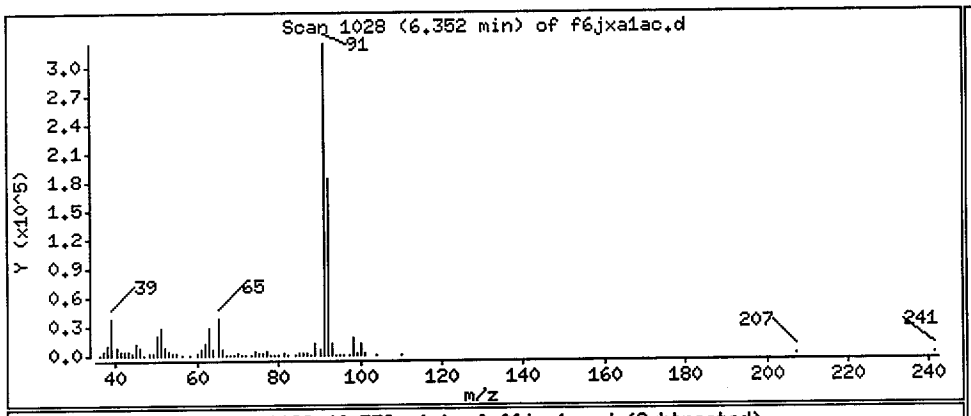
Operator: 063605

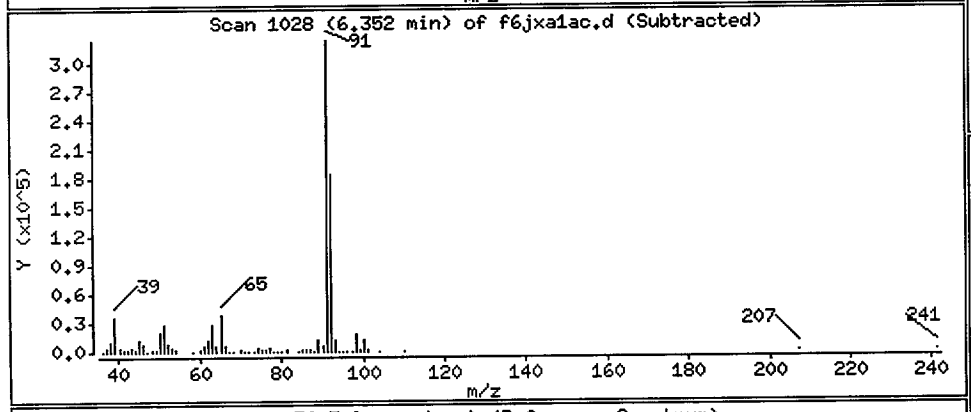
Column phase: J+W 624

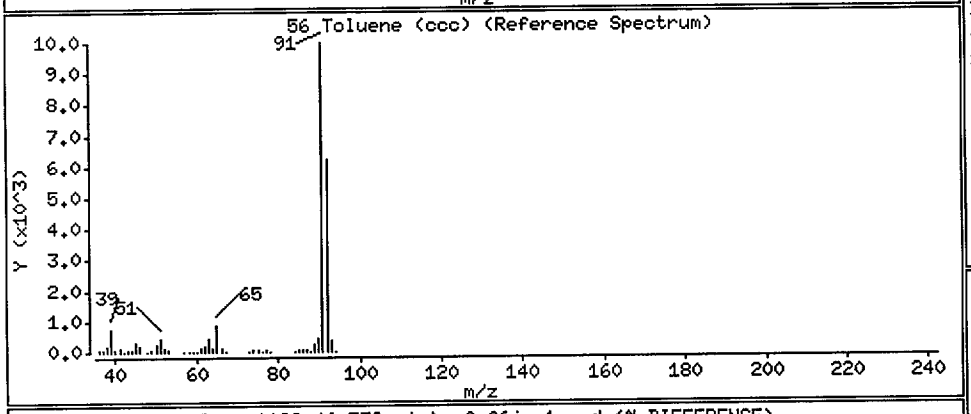
Column diameter: 0.18

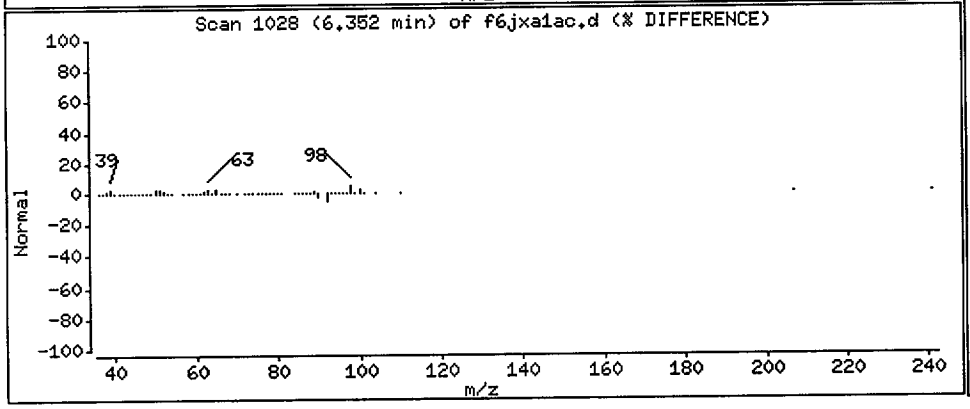
56 Toluene (ccc)

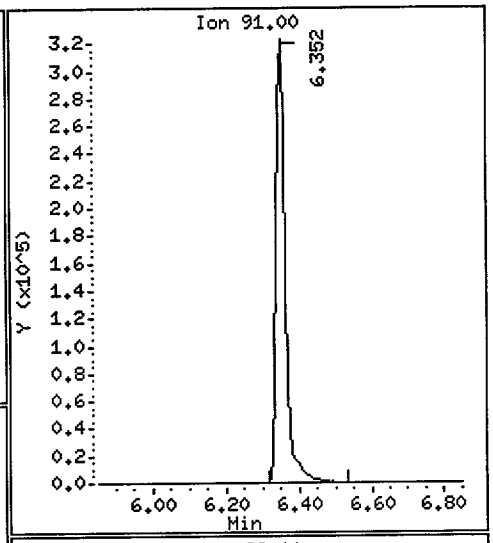
Concentration: 31.284 ug/L

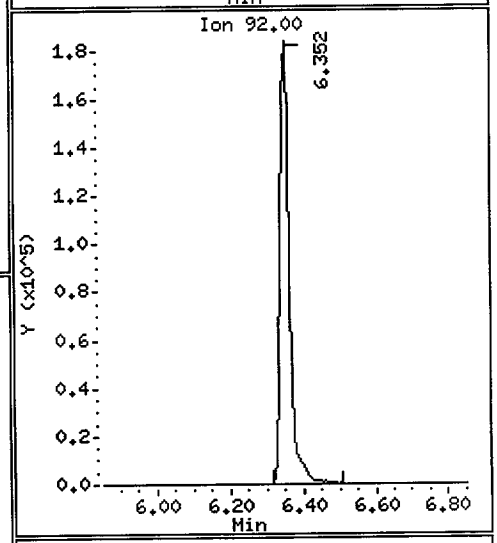


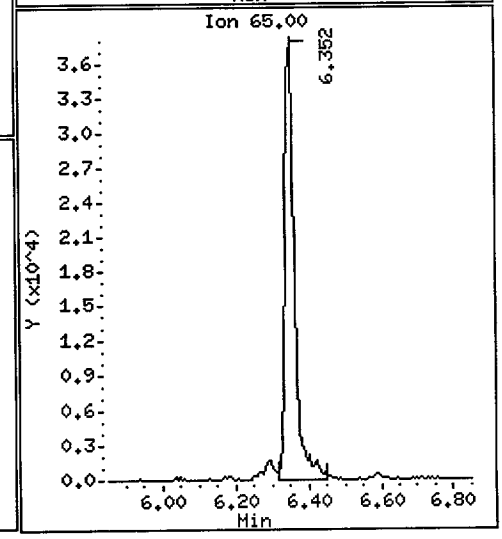












Data File: /chem/gcms/mx.i/X121503.b/f6jxa1ac.d

Date : 15-DEC-2003 23:31

Client ID: DD3003

Instrument: mx.i

Sample Info: F6JXA1AC,10,0,,

Purge Volume: 25.0

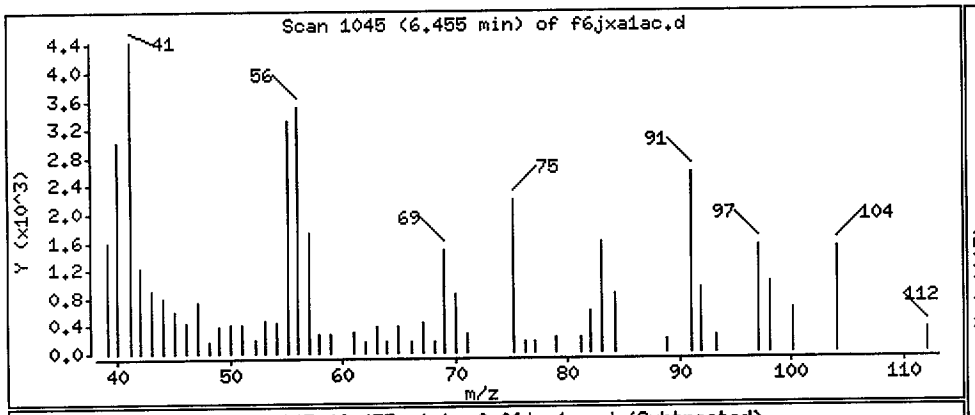
Operator: 063605

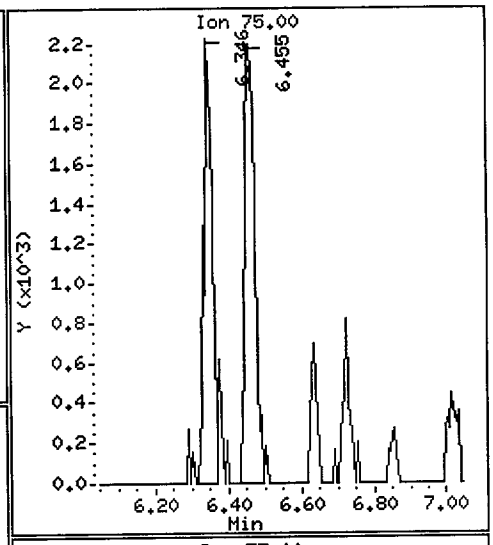
Column phase: J+W 624

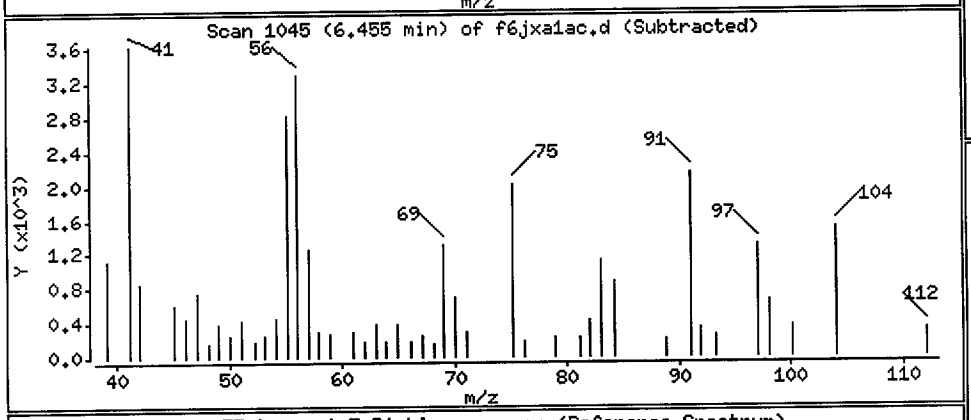
Column diameter: 0.18

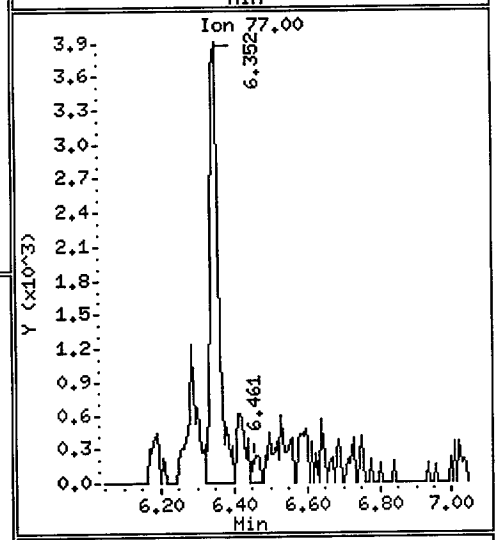
57 trans-1,3-Dichloropropene

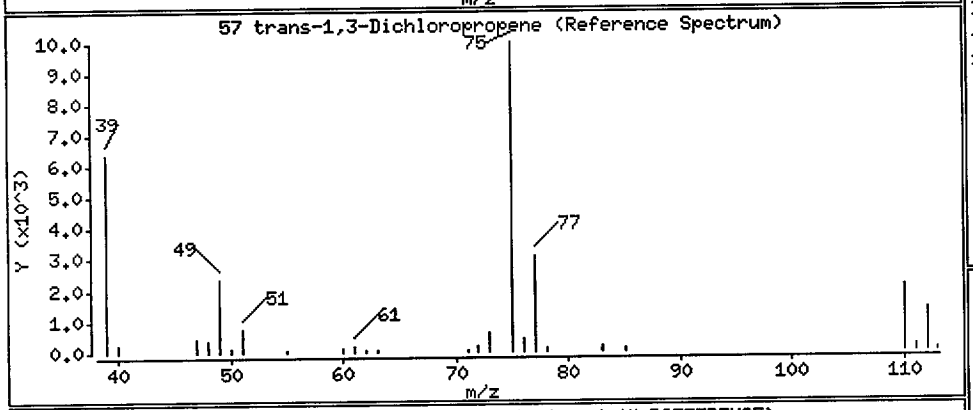
Concentration: 1.5671 ug/L

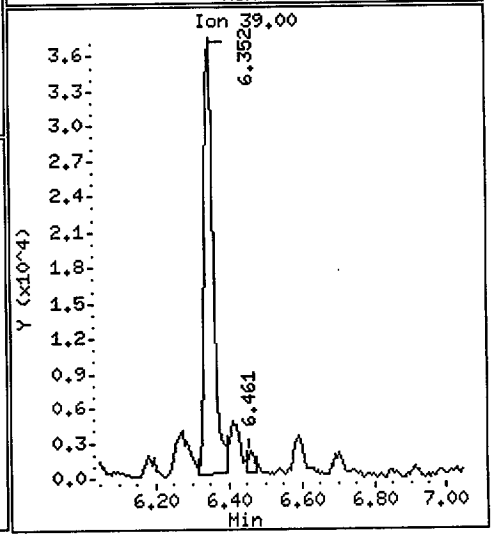


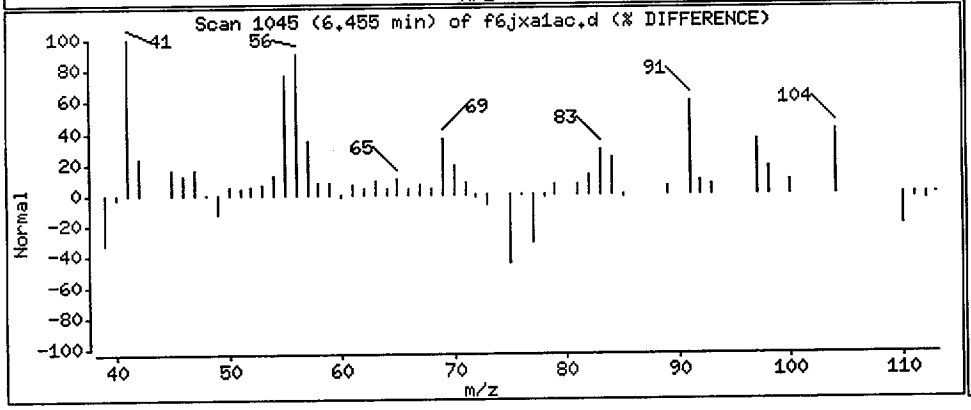












Data File: /chem/gcms/mx.i/X121503.b/f6jxa1ac.d

Date : 15-DEC-2003 23:31

Client ID: DD3003

Instrument: mx.i

Sample Info: F6JXA1AC,10,0,,

Purge Volume: 25.0

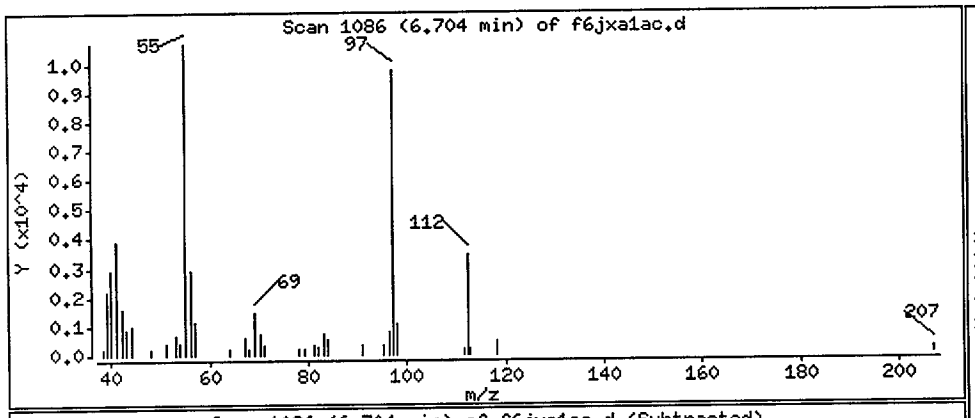
Operator: 063605

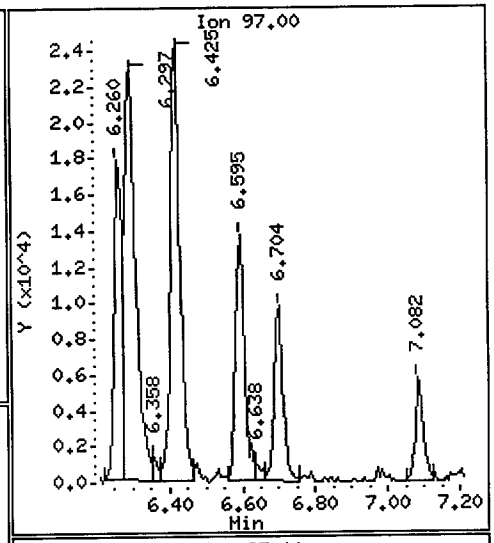
Column phase: J+W 624

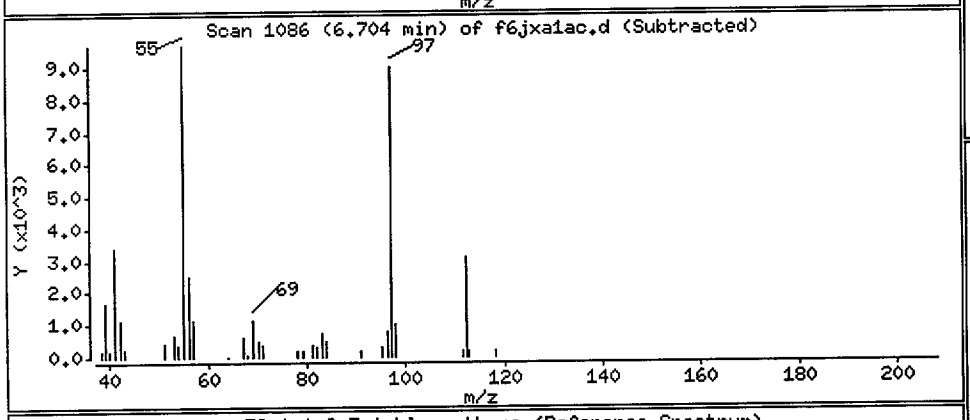
Column diameter: 0.18

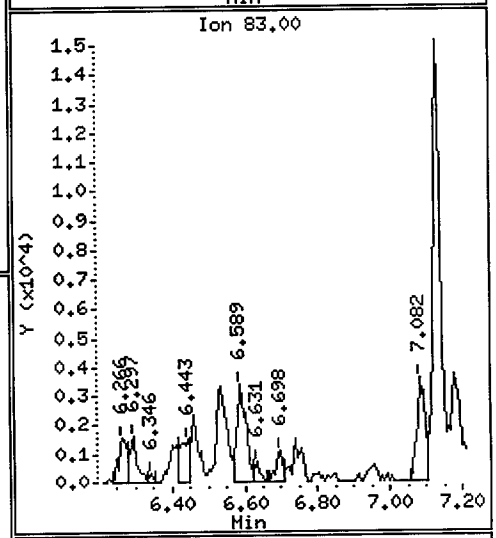
58 1,1,2-Trichloroethane

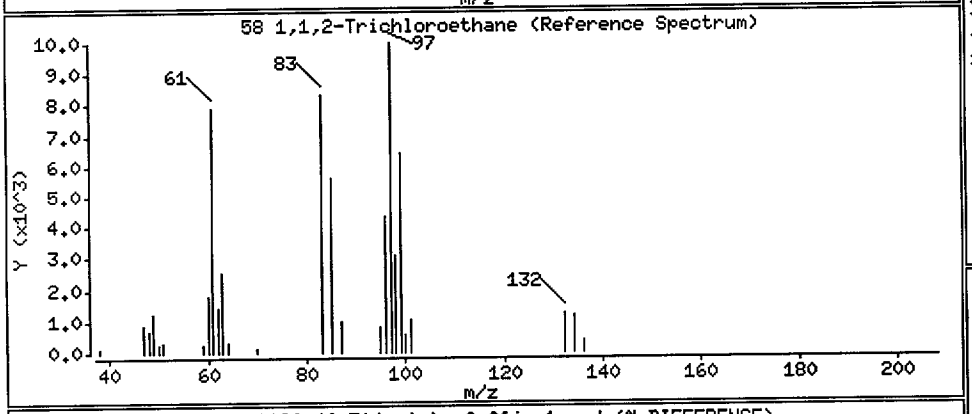
Concentration: 13.114 ug/L

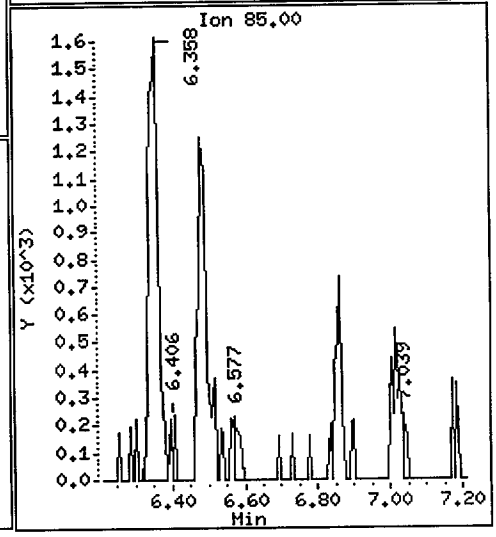


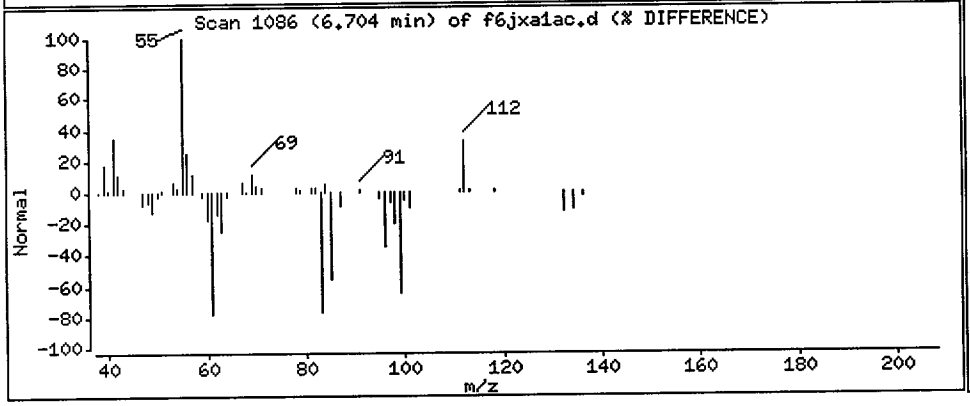












Data File: /chem/gcms/mx.i/X121503.b/f6jxa1ac.d

Date : 15-DEC-2003 23:31

Client ID: DD3003

Instrument: mx.i

Sample Info: F6JXA1AC,10,0,,

Purge Volume: 25.0

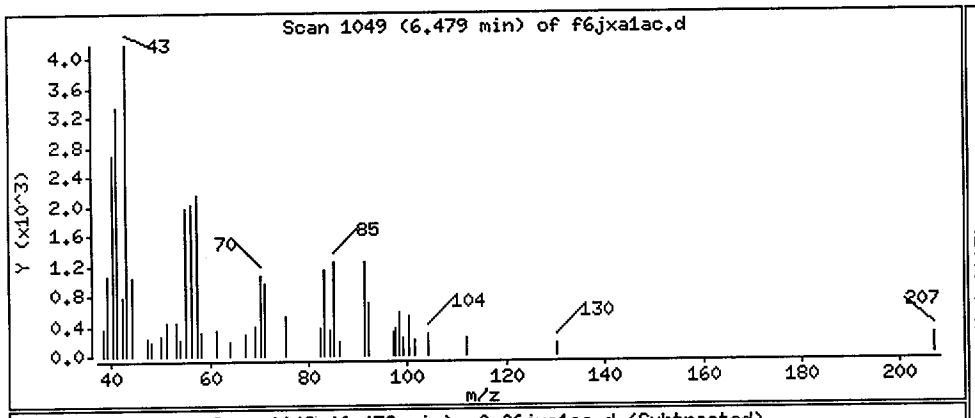
Operator: 063605

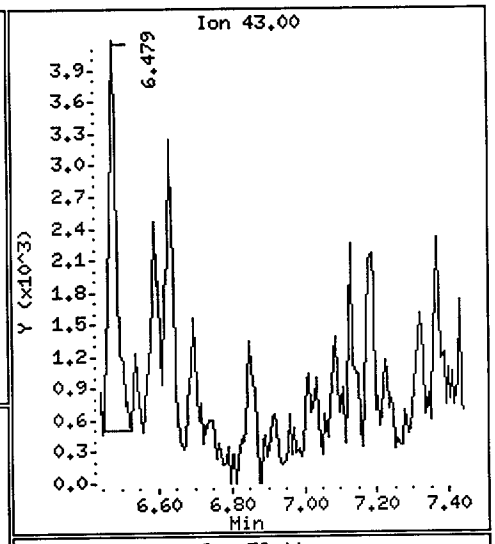
Column phase: J+W 624

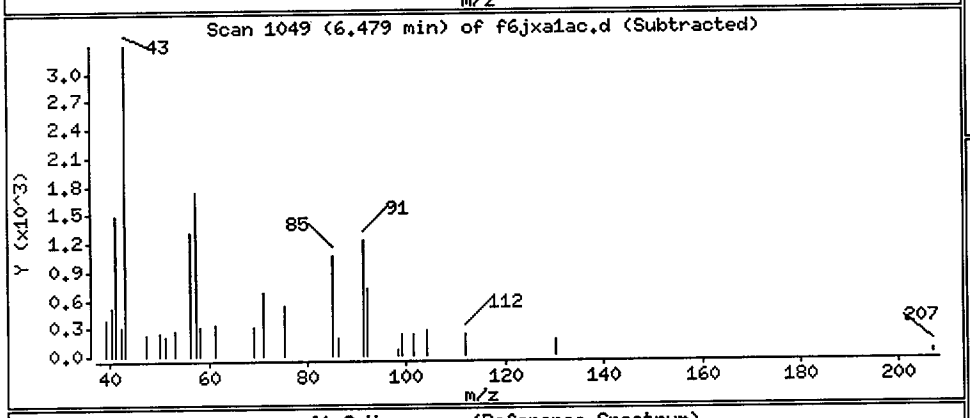
Column diameter: 0.18

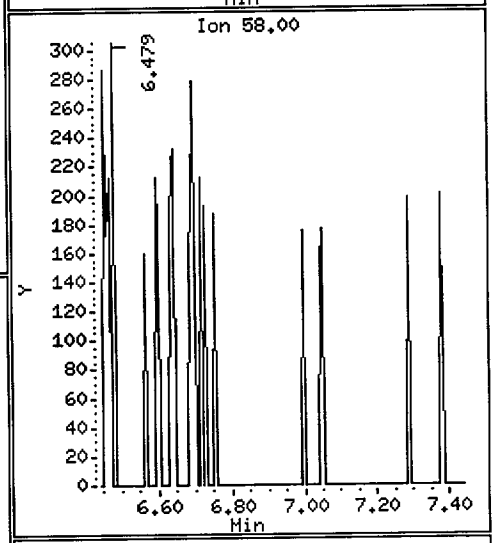
61 2-Hexanone

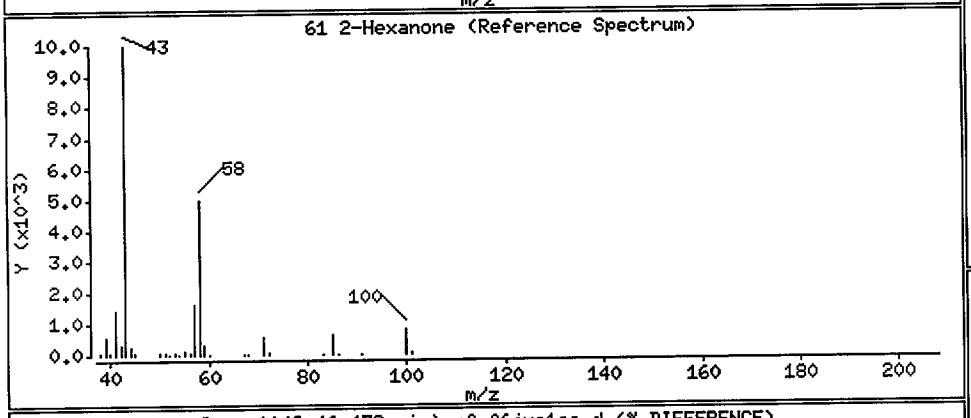
Concentration: 8.1533 ug/L

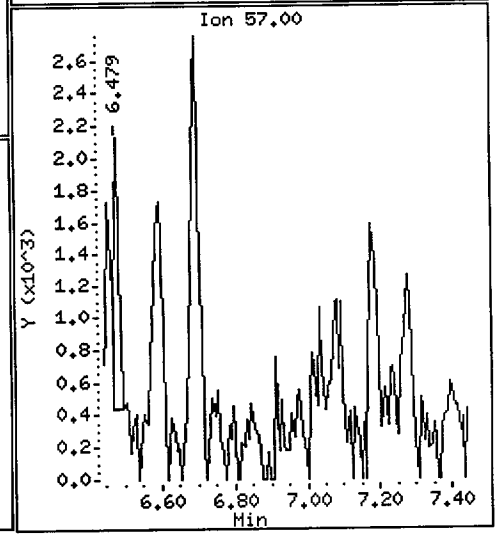


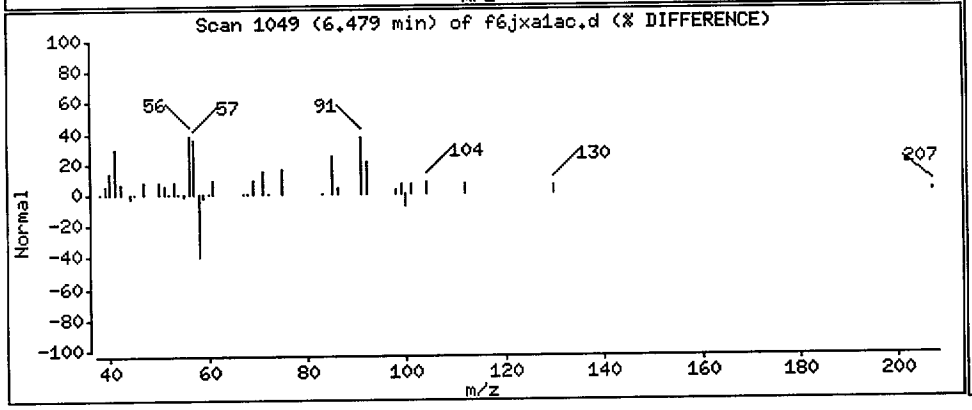












Data File: /chem/gcms/mx.i/X121503.b/f6jxa1ac.d

Date : 15-DEC-2003 23:31

Client ID: DD3003

Instrument: mx.i

Sample Info: F6JXA1AC,10,0,,

Purge Volume: 25.0

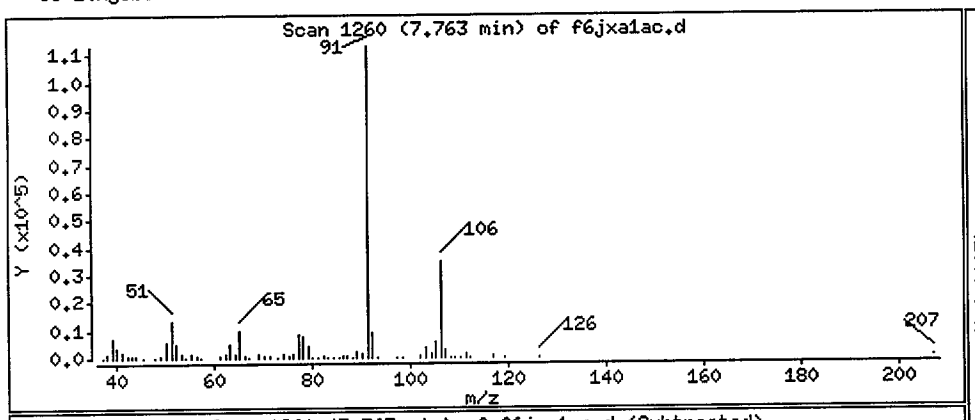
Operator: 063605

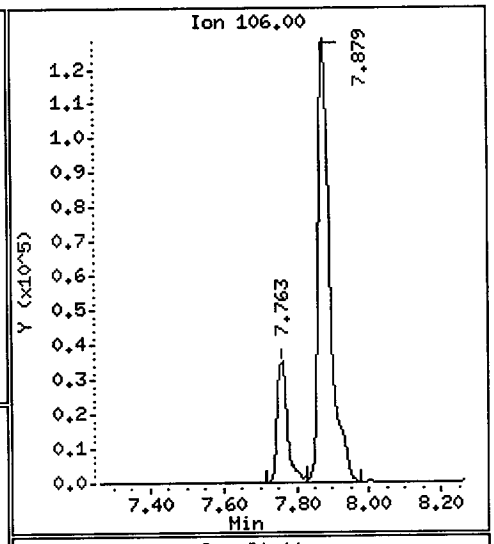
Column phase: J+W 624

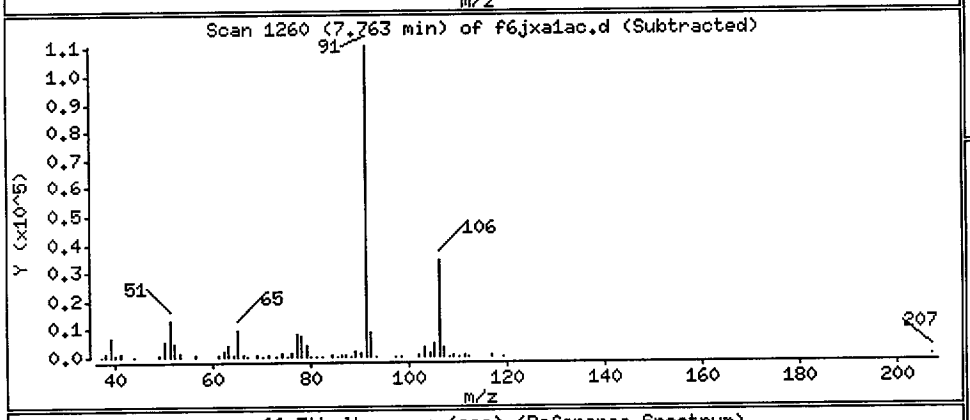
Column diameter: 0.18

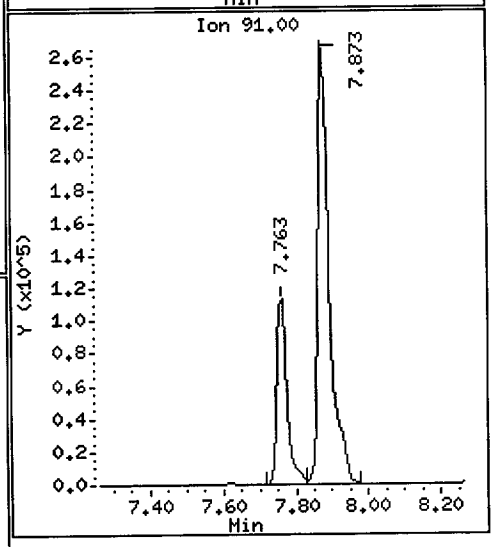
66 Ethylbenzene (ccc)

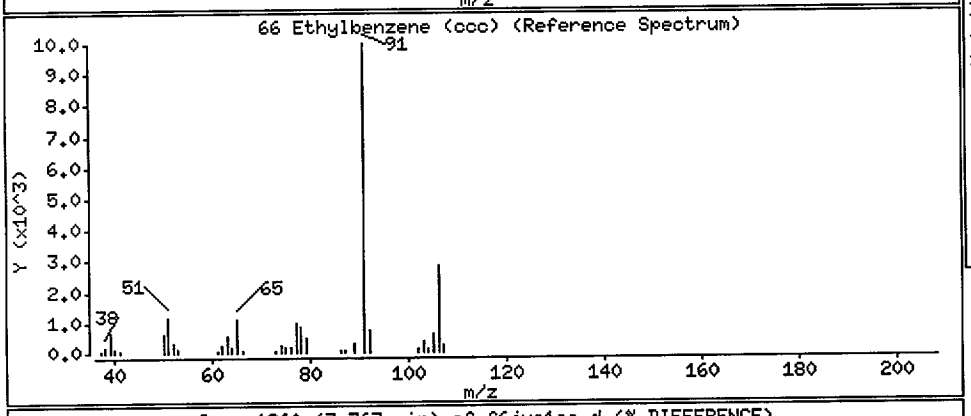
Concentration: 10.441 ug/L

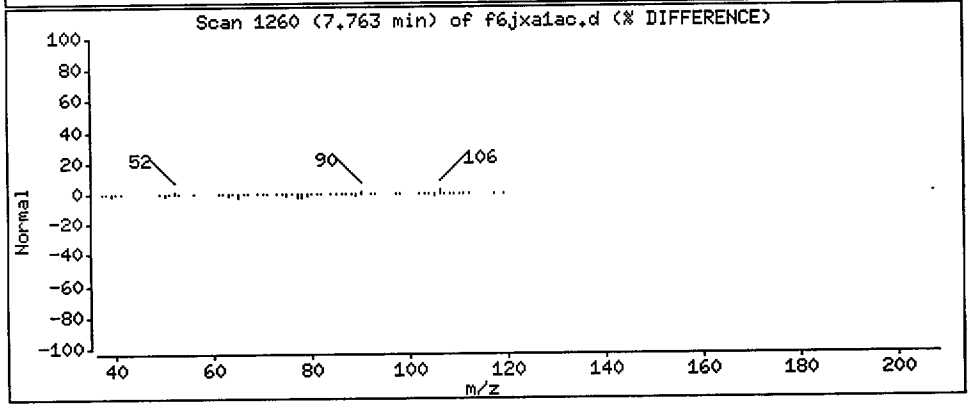












Data File: /chem/gcms/mx.i/X121503.b/f6jxa1ac.d

Date : 15-DEC-2003 23:31

Client ID: DD3003

Instrument: mx.i

Sample Info: F6JXA1AC,10,0,,

Purge Volume: 25.0

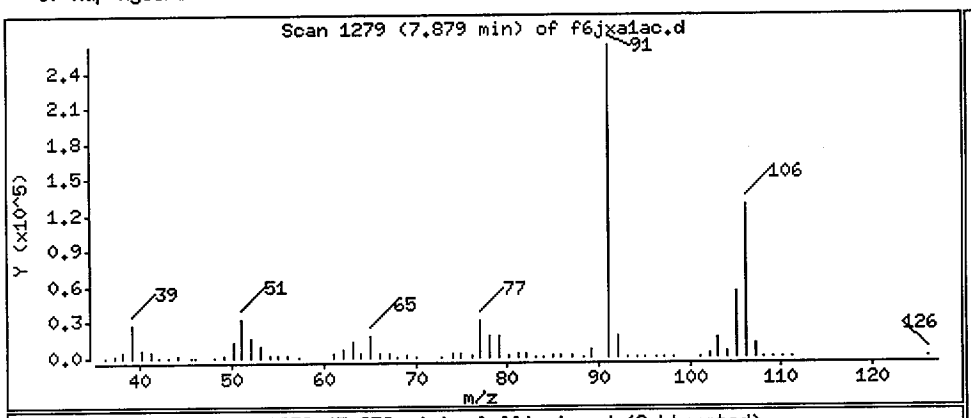
Operator: 063605

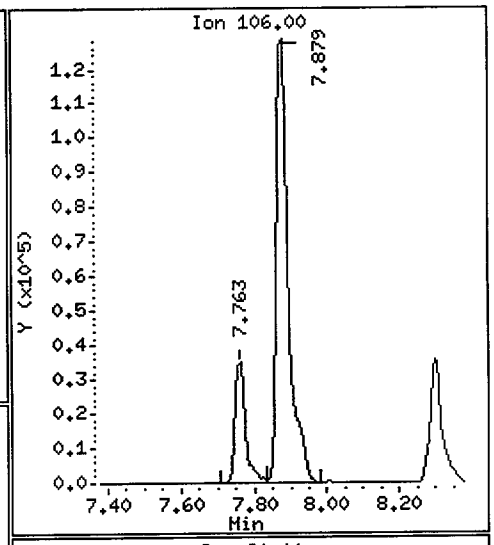
Column phase: J+W 624

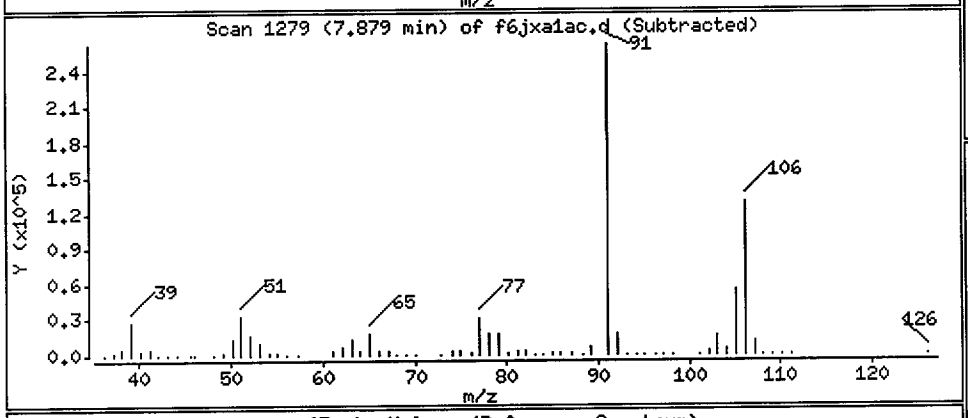
Column diameter: 0.18

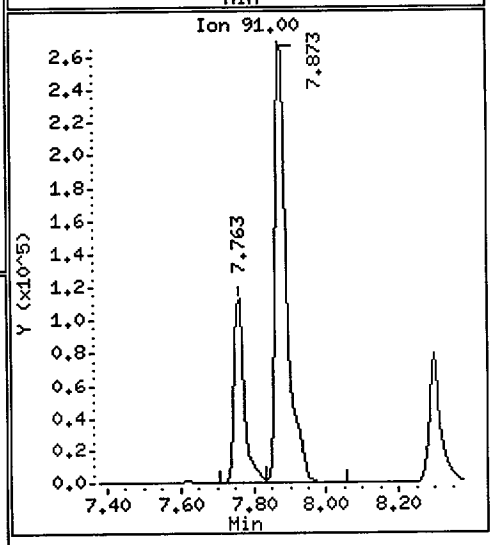
67 m&p-Xylene

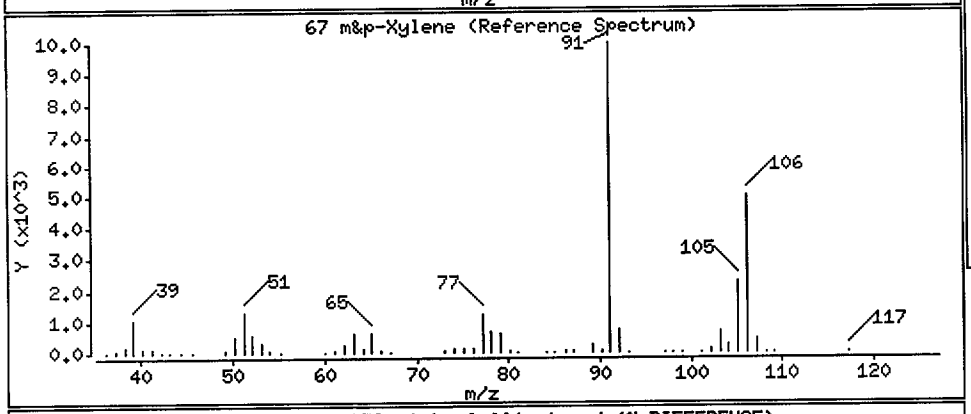
Concentration: 37.320 ug/L

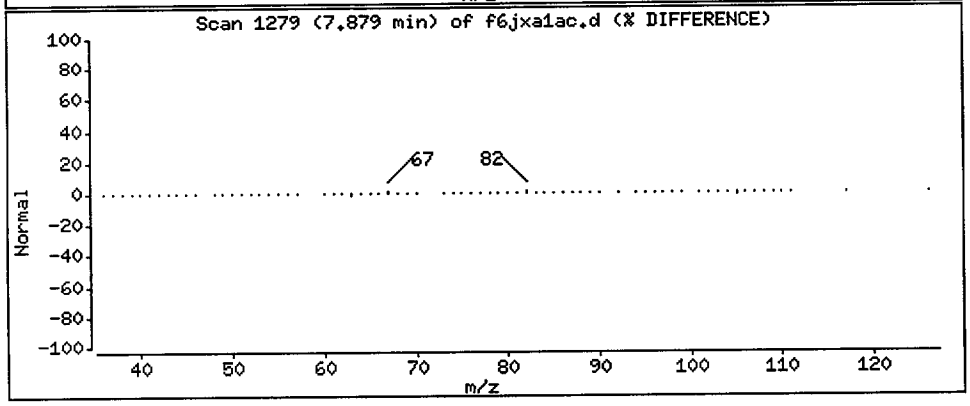












Data File: /chem/gcms/mx.i/X121503.b/f6jxa1ac.d

Date : 15-DEC-2003 23:31

Client ID: DD3003

Instrument: mx.i

Sample Info: F6JXA1AC,10,0,,

Purge Volume: 25.0

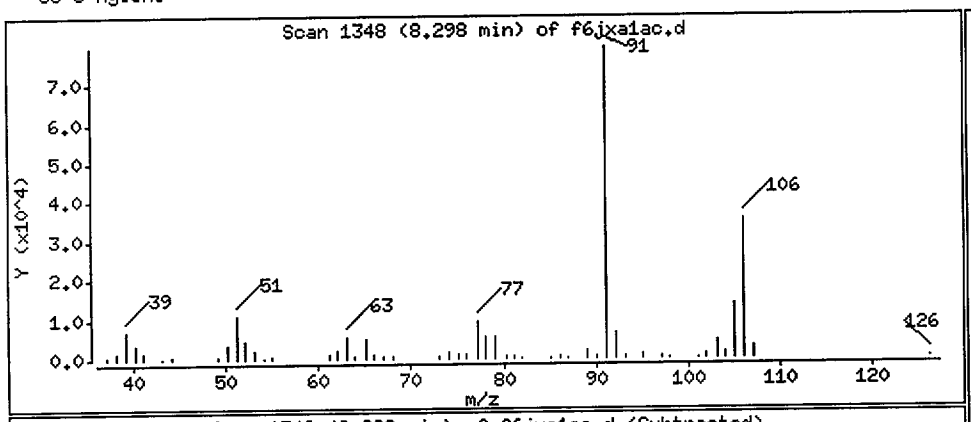
Operator: 063605

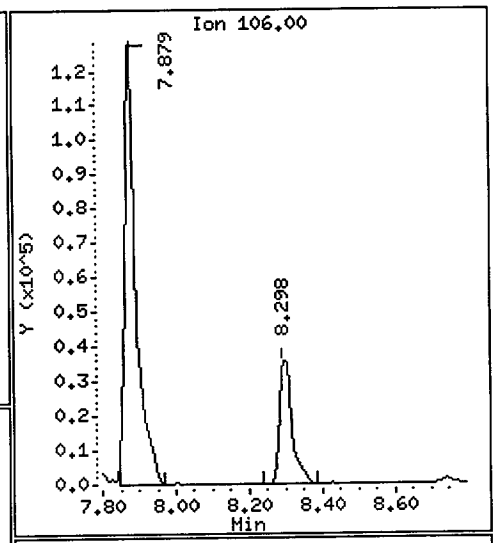
Column phase: J+W 624

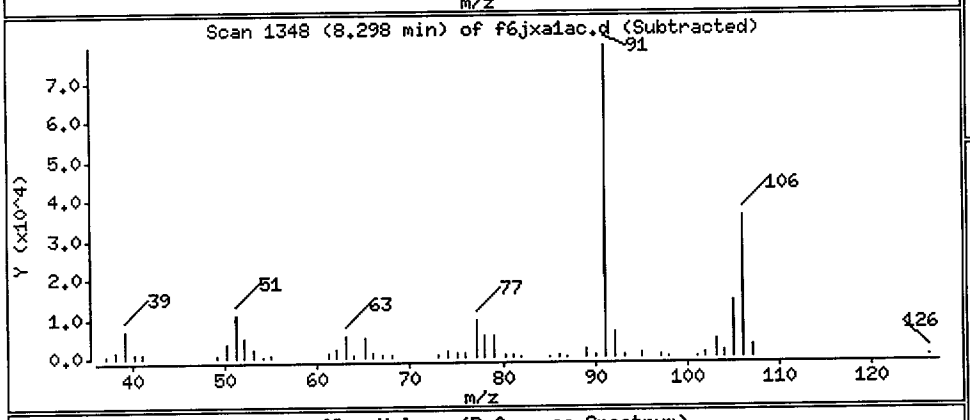
Column diameter: 0.18

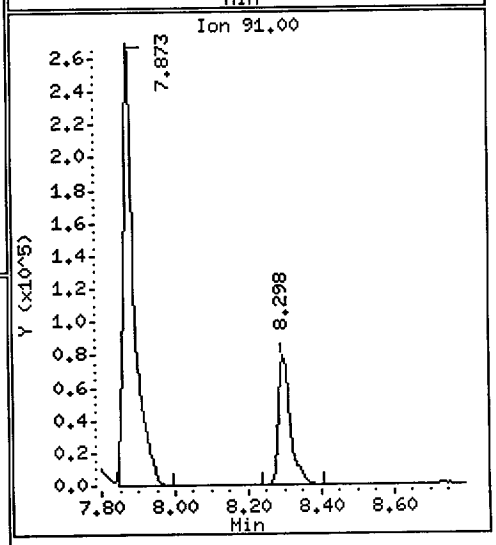
68 o-Xylene

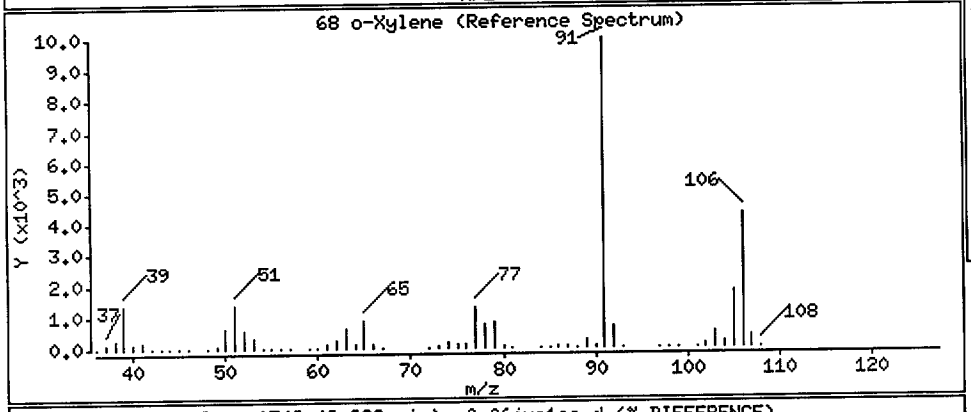
Concentration: 12.204 ug/L

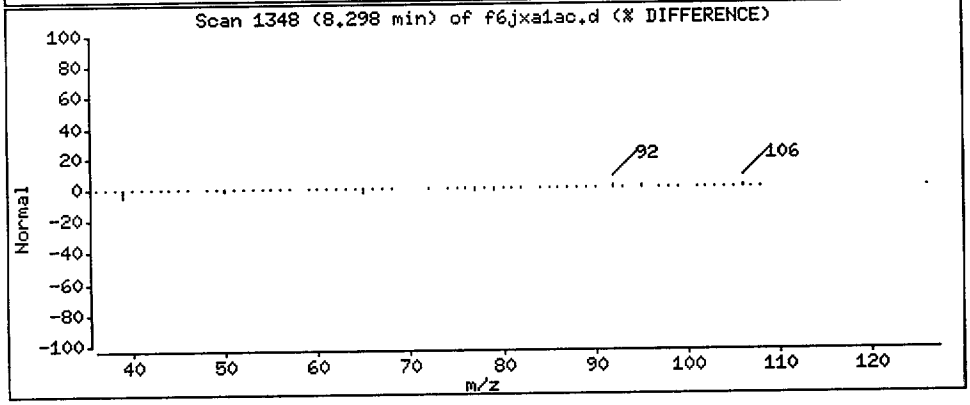












Data File: /chem/gcms/mx.i/X121503.b/f6jxa1ac.d

Date : 15-DEC-2003 23:31

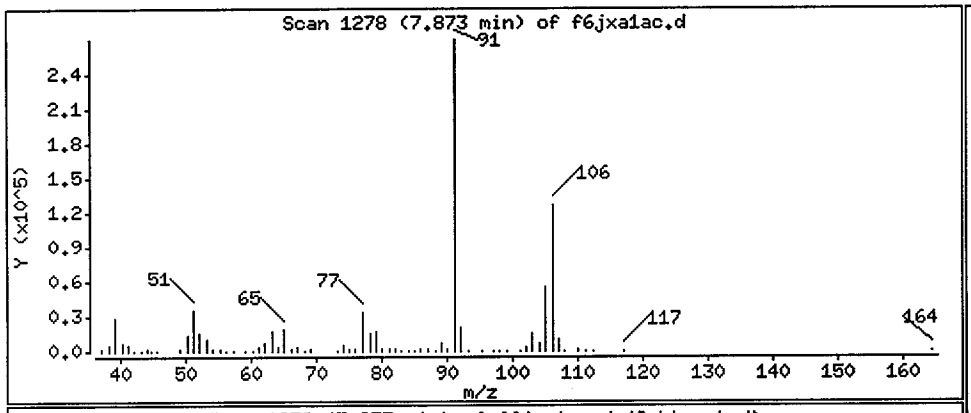
Client ID: DD3003 | Instrument: mx.i

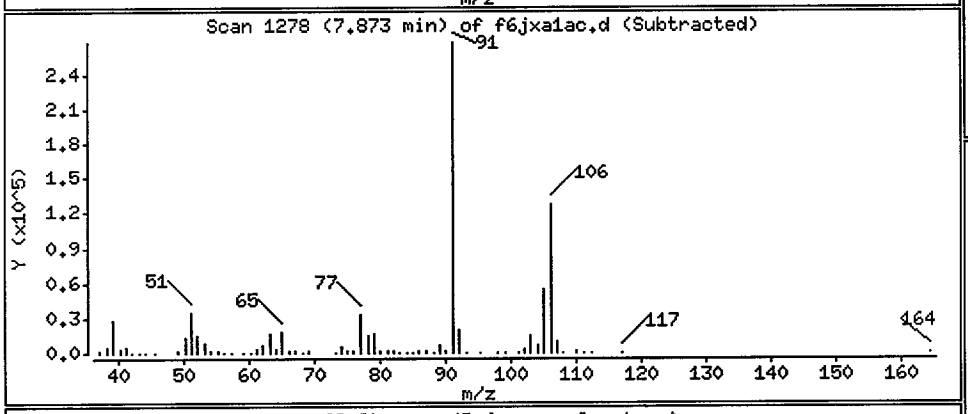
Sample Info: F6JXA1AC,10,0,,

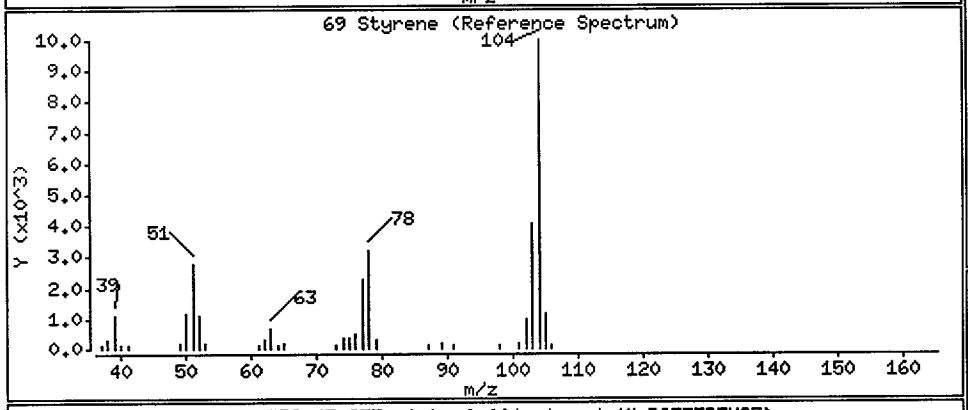
Purge Volume: 25.0 | Operator: 063605

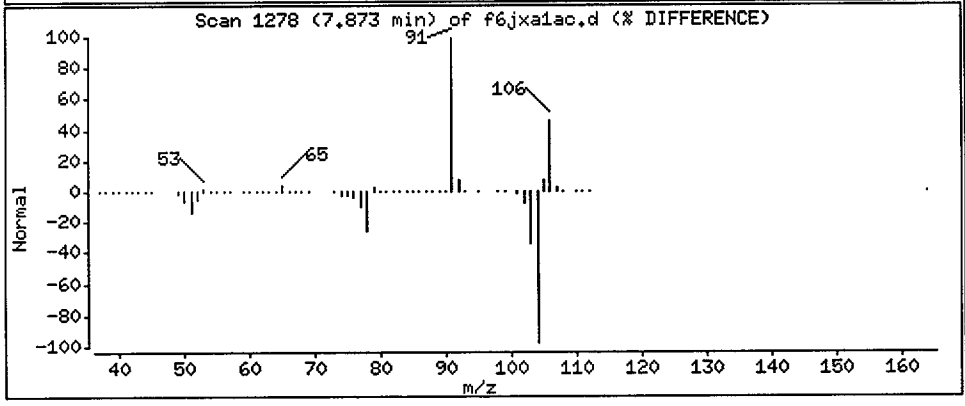
Column phase: J+W 624 | Column diameter: 0.18

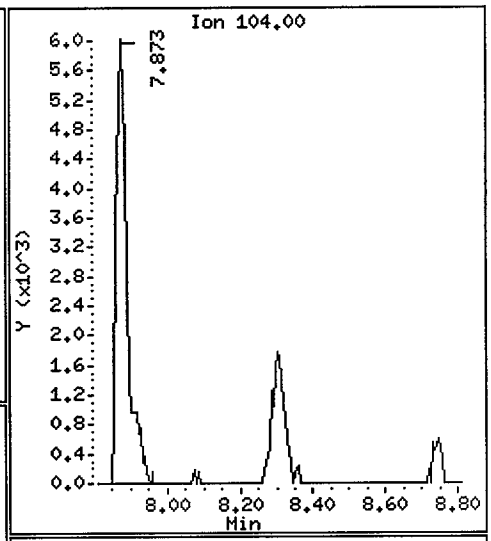
69 Styrene | Concentration: 1.1917 ug/L

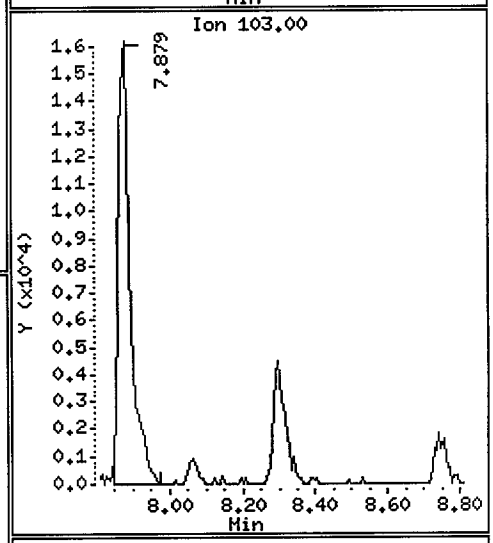


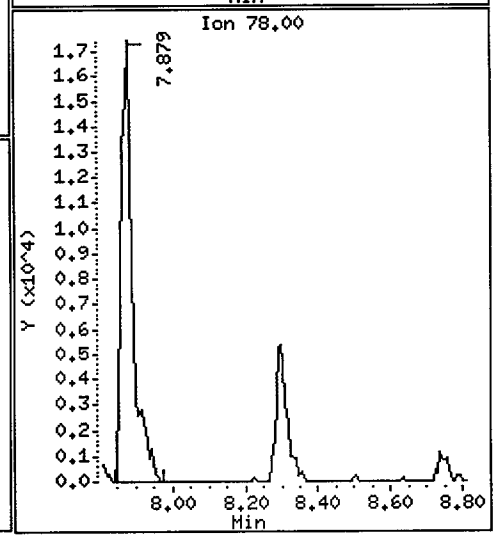












SHAW E & I INC

Client Sample ID: DD3004

GC/MS Volatiles

Lot-Sample #...: H3L120208-002 **Work Order #...:** F6JX21CE **Matrix.....:** WATER
Date Sampled...: 12/11/03 **Date Received..:** 12/12/03
Prep Date.....: 12/15/03 **Analysis Date..:** 12/15/03
Prep Batch #...: 3349684
Dilution Factor: 1 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Chloromethane	ND	2.0	ug/L	0.12
Bromomethane	ND	2.0	ug/L	0.38
Vinyl chloride	ND	1.0	ug/L	0.24
Chloroethane	ND	2.0	ug/L	0.24
Methylene chloride	ND	2.0	ug/L	0.23
Acetone	ND	10	ug/L	1.4
Carbon disulfide	**0.77 J**	**1.0**	**ug/L**	**0.10**
1,1-Dichloroethene	ND	1.0	ug/L	0.10
1,1-Dichloroethane	ND	1.0	ug/L	0.10
1,2-Dichloroethene (total)	ND	1.0	ug/L	0.20
Chloroform	ND	1.0	ug/L	0.10
1,2-Dichloroethane	ND	1.0	ug/L	0.10
2-Butanone	ND	5.0	ug/L	0.75
1,1,1-Trichloroethane	ND	1.0	ug/L	0.10
Carbon tetrachloride	ND	1.0	ug/L	0.12
Bromodichloromethane	ND	1.0	ug/L	0.10
1,2-Dichloropropane	ND	1.0	ug/L	0.10
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.10
Trichloroethene	ND	1.0	ug/L	0.10
Dibromochloromethane	ND	1.0	ug/L	0.20
1,1,2-Trichloroethane	ND	1.0	ug/L	0.25
Benzene	ND	1.0	ug/L	0.10
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.11
Bromoform	ND	1.0	ug/L	0.14
4-Methyl-2-pentanone	ND	5.0	ug/L	0.40
2-Hexanone	ND	5.0	ug/L	0.76
Tetrachloroethene	ND	1.0	ug/L	0.10
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.15
Toluene	ND	1.0	ug/L	0.10
Chlorobenzene	ND	1.0	ug/L	0.10
Ethylbenzene	ND	1.0	ug/L	0.10
Styrene	ND	1.0	ug/L	0.10
Xylenes (total)	ND	1.0	ug/L	0.30

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	91	(79 - 120)
1,2-Dichloroethane-d4	92	(71 - 127)
Toluene-d8	98	(80 - 120)
Bromofluorobenzene	88	(69 - 126)

(Continued on next page)

SHAW E & I INC

Client Sample ID: DD3004

GC/MS Volatiles

Lot-Sample #...: H3L120208-002 **Work Order #...:** F6JX21CE **Matrix.....:** WATER

NOTE(S):

J Estimated result. Result is less than RL.

Data File: /chem/gcms/mx.i/X121503.b/f6jx21ce.d
Report Date: 16-Dec-2003 00:12

STL Knoxville

SW-846 Method 8260A - Volatile Organics

Data file : /chem/gcms/mx.i/X121503.b/f6jx21ce.d
Lab Smp Id: F6JX21CE Client Smp ID: DD3004
Inj Date : 15-DEC-2003 23:56
Operator : 063605 Inst ID: mx.i
Smp Info : F6JX21CE,1,0,,
Misc Info : X121503,8260B_LM,s1.sub
Comment :
Method : /var/chem/gcms/mx.i/X121503.b/8260B_LM.m
Meth Date : 15-Dec-2003 18:56 tillerm Quant Type: ISTD
Cal Date : 16-SEP-2003 12:52 Cal File: icxi166.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: s1.sub
Target Version: 3.50
Processing Host: qmidhp01

12/19/03

Concentration Formula: Amt * DF * Uf*Vt/(Vo*1000) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Unit Correction factor
Vt	25000.00000	Sample Volume Purged
Vo	25.00000	Sample Volume Used

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
* 1 Fluorobenzene	96	4.888	4.887	(1.000)	1376590	10.0000	
* 2 Chlorobenzene-d5	119	7.624	7.624	(1.000)	286500	10.0000	
* 3 1,4 Dichlorobenzene-d4	152	10.817	10.818	(1.000)	333663	10.0000	
$ 5 1,2-Dichloroethane-d4	65	4.584	4.583	(0.938)	163330	9.23473	9.2347
$ 4 Dibromofluoromethane	113	4.298	4.297	(0.879)	207517	9.05251	9.0525
$ 6 Toluene-d8	98	6.291	6.292	(0.825)	1283249	9.75094	9.7509
$ 7 4-Bromofluorobenzene	95	8.926	8.926	(0.825)	350170	8.76765	8.7676
11 Chloromethane (spcc)	50	1.226	1.231	(0.251)	14575	~~0.47455~~	~~0.47455~~
15 Chloroethane	64	1.403	1.651	(0.287)	7388728	~~339.242~~	~~339.24(A)~~
24 Carbon Disulfide	76	2.504	2.496	(0.512)	73922	0.76970	0.76970
22 Acetone	43	1.956	2.368	(0.400)	38937	~~13.1534~~	~~13.153~~
47 1,2-Dichloroethane	62	4.882	4.644	(0.999)	18090	~~0.80013~~	~~0.80813~~
55 4-Methyl-2-pentanone	43	6.285	6.183	(1.286)	7544	~~0.75470~~	~~0.75470~~
66 Ethylbenzene (ccc)	106	7.879	7.764	(1.034)	9734	~~0.15623~~	~~0.15623~~

12/16/03

Data File: /chem/gcms/mx.i/X121503.b/f6jx21ce.d
Report Date: 16-Dec-2003 00:12

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
67 m&p-Xylene	106	7.879	7.880	(1.034)	9734	0.13073	0.13072
68 o-Xylene	106	7.879	8.300	(1.034)	9800	~~0.14652~~	~~0.14653~~
M 9 Xylene (total)	106				19535	0.27724	~~0.27724~~

MV
12/16/03

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.

Data File: /chem/gcms/mx.i/X121503.b/f6jx21ce.d
Report Date: 16-Dec-2003 00:12

STL Knoxville

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: mx.i
Lab File ID: f6jx21ce.d
Lab Smp Id: F6JX21CE
Analysis Type: VOA
Quant Type: ISTD
Operator: 063605
Method File: /var/chem/gcms/mx.i/X121503.b/8260B_LM.m
Misc Info: X121503,8260B_LM,s1.sub

Calibration Date: 15-DEC-2003
Calibration Time: 16:45
Client Smp ID: DD3004
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Fluorobenzene	1461276	730638	2922552	1376590	-5.80
2 Chlorobenzene-d5	293714	146857	587428	286500	-2.46
3 1,4 Dichlorobenze	323953	161976	647906	333663	3.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Fluorobenzene	4.89	4.39	5.39	4.89	0.03
2 Chlorobenzene-d5	7.62	7.12	8.12	7.62	-0.01
3 1,4 Dichlorobenze	10.82	10.32	11.32	10.82	-0.01

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

Data File: /chem/gcms/mx.i/X121503.b/f6jx21ce.d
Report Date: 16-Dec-2003 00:12

STL Knoxville

RECOVERY REPORT

Client Name: SHAW E & I INC
Sample Matrix: LIQUID
Lab Smp Id: F6JX21CE
Level: LOW
Data Type: MS DATA
SpikeList File: allcmpds.spk
Sublist File: s1.sub
Method File: /var/chem/gcms/mx.i/X121503.b/8260B_LM.m
Misc Info: X121503,8260B_LM,s1.sub

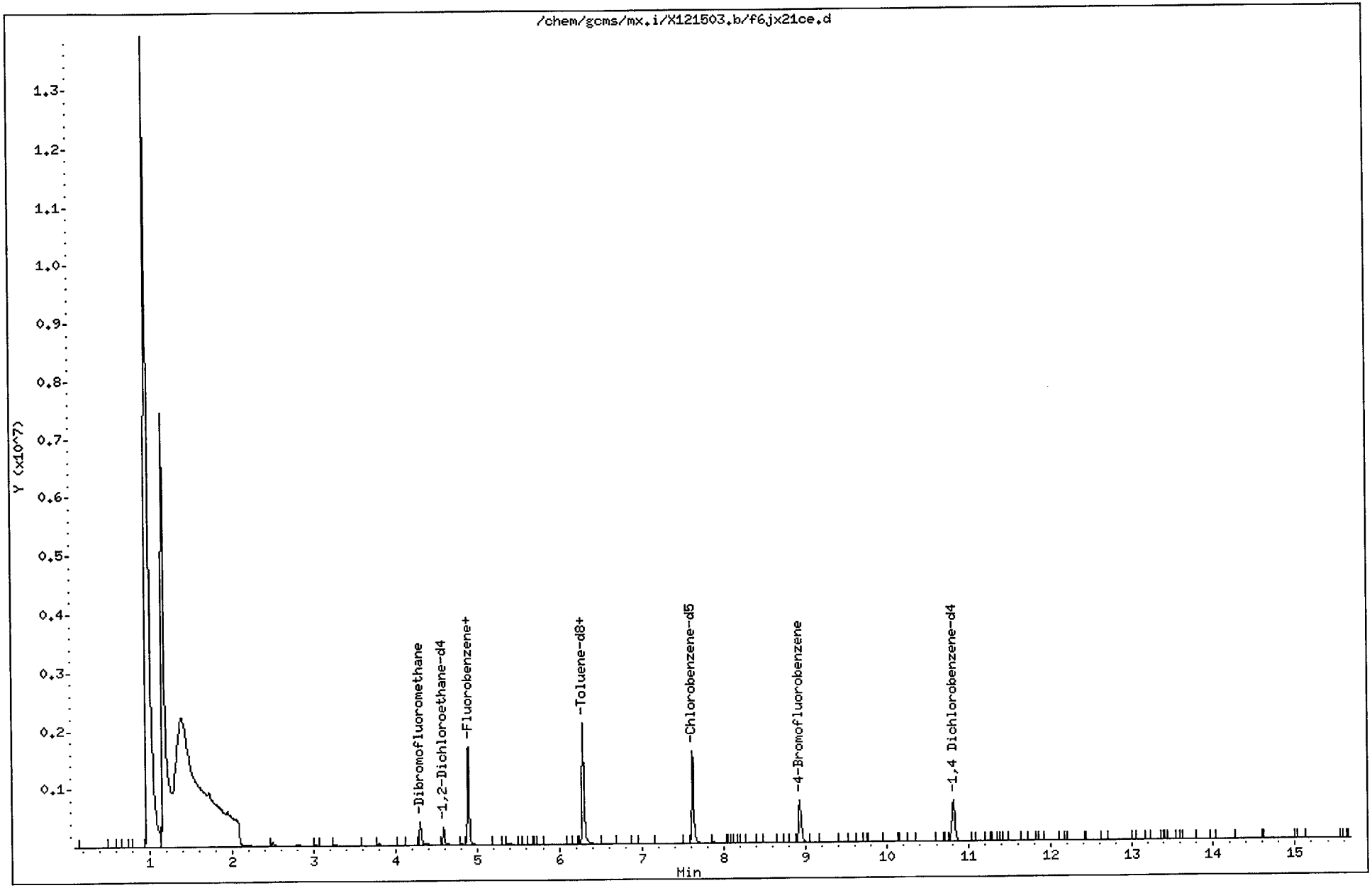
Client SDG: PB045
Fraction: VOA
Client Smp ID: DD3004
Operator: 063605
SampleType: SAMPLE
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 5 1,2-Dichloroethane	10.000	9.2347	92.35	71-127
$ 4 Dibromofluorometha	10.000	9.0525	90.53	79-120
$ 6 Toluene-d8	10.000	9.7509	97.51	80-120
$ 7 4-Bromofluorobenze	10.000	8.7676	87.68	69-126

Data File: /chem/gcms/mx.i/X121503.b/f6jx21ce.d
Date : 15-DEC-2003 23:56
Client ID: DD3004
Sample Info: F6JX21CE,1,0,,
Purge Volume: 25.0
Column phase: J+W 624

Instrument: mx.i

Operator: 063605
Column diameter: 0.18



Data File: /chem/gcms/mx.i/X121503.b/f6jx21ce.d

Date : 15-DEC-2003 23:56

Client ID: DD3004

Instrument: mx.i

Sample Info: F6JX21CE,1,0,,

Purge Volume: 25.0

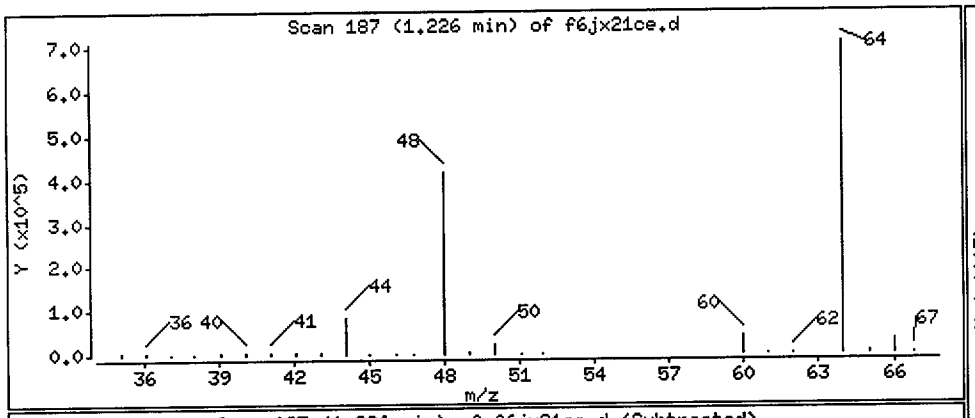
Operator: 063605

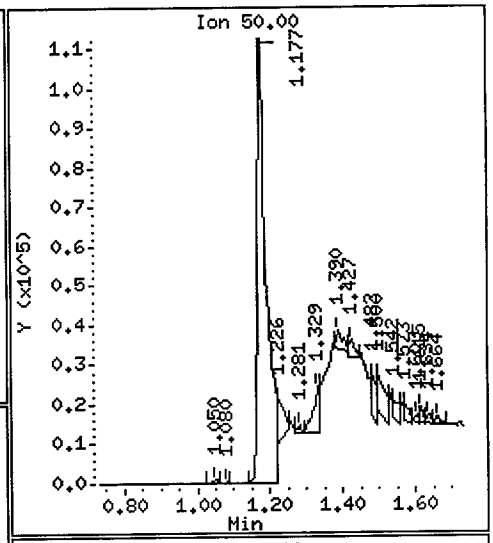
Column phase: J+W 624

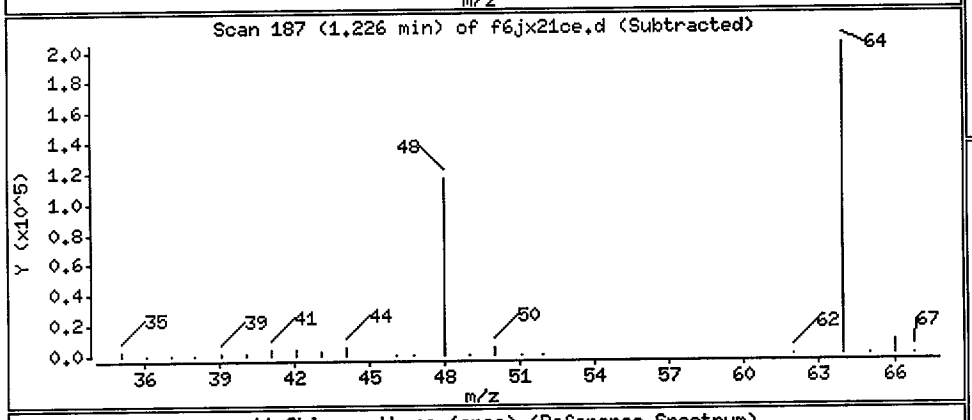
Column diameter: 0.18

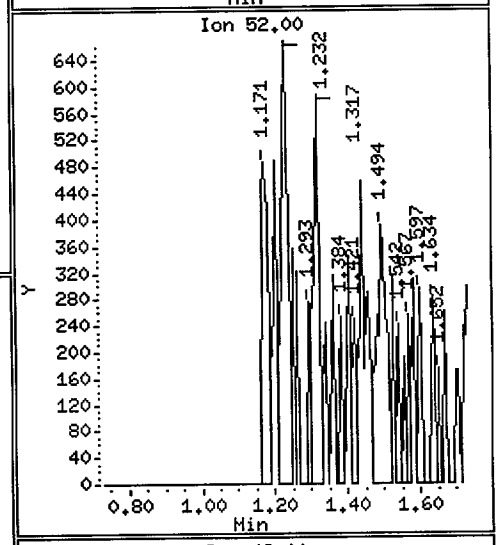
11 Chloromethane (spcc)

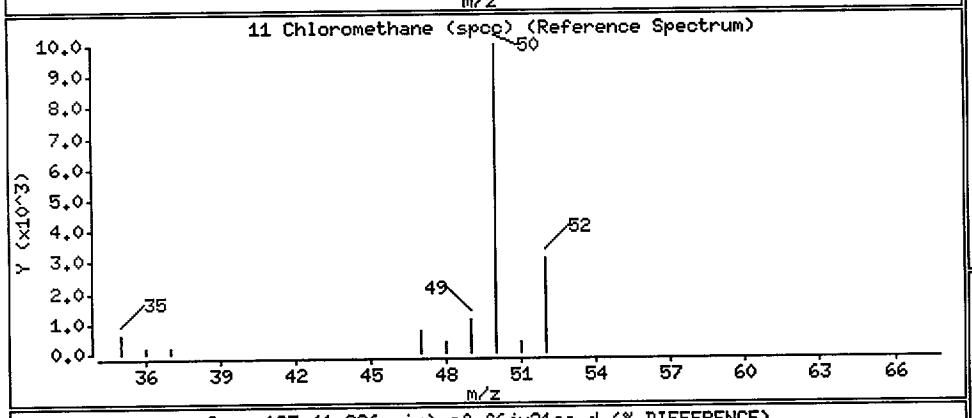
Concentration: 0.47455 ug/L

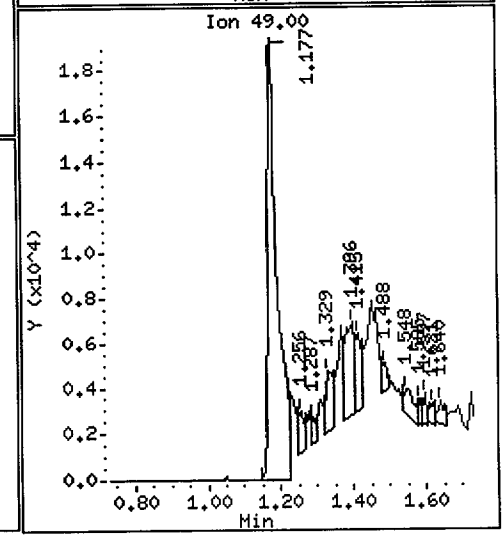


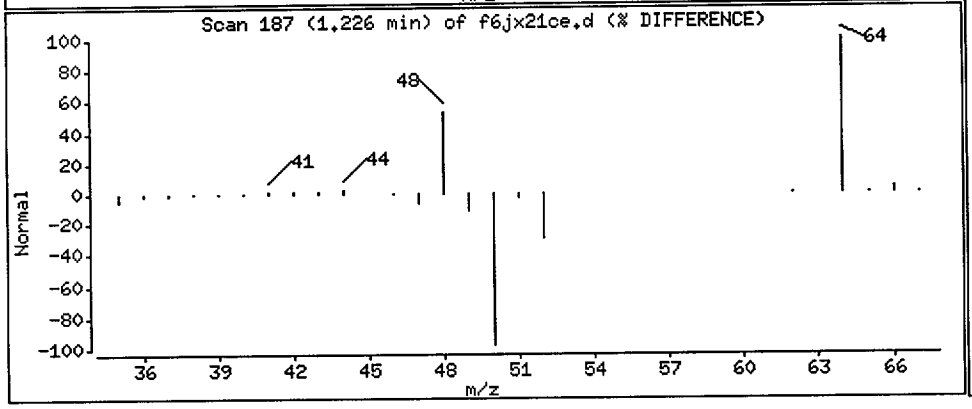












Data File: /chem/gcms/mx.i/X121503.b/f6jx21ce.d

Date : 15-DEC-2003 23:56

Client ID: DD3004

Instrument: mx.i

Sample Info: F6JX21CE,1,0,,

Purge Volume: 25.0

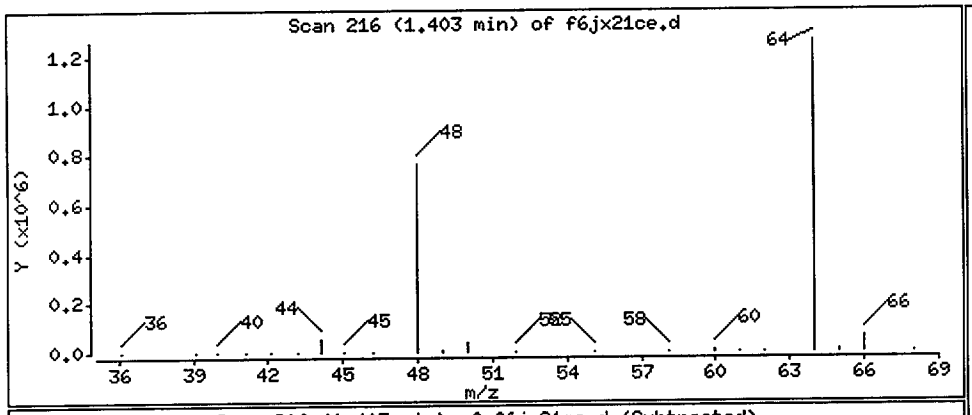
Operator: 063605

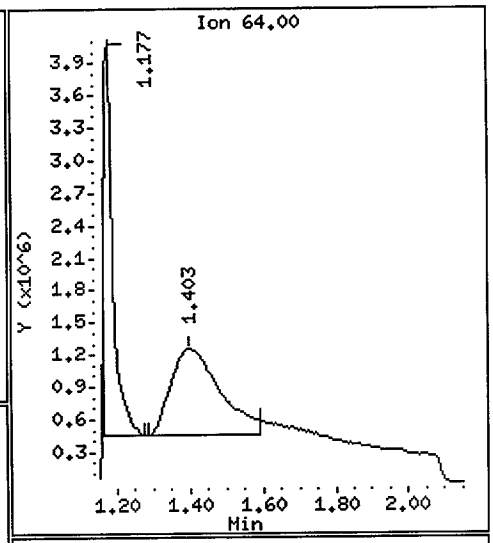
Column phase: J+W 624

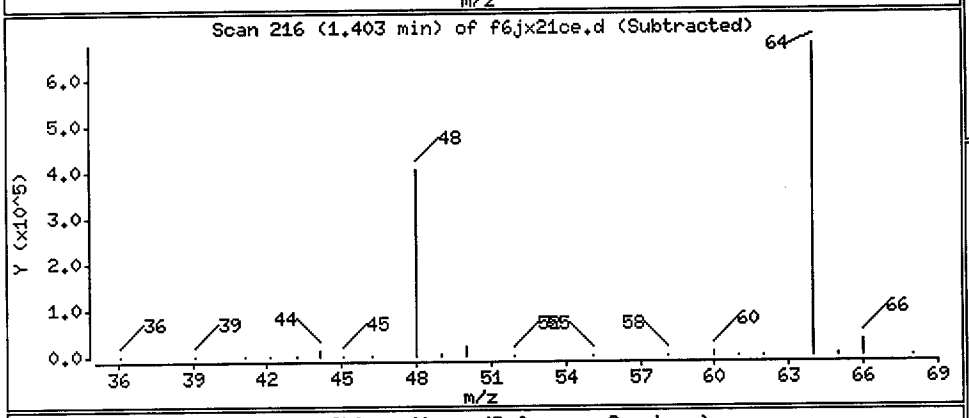
Column diameter: 0.18

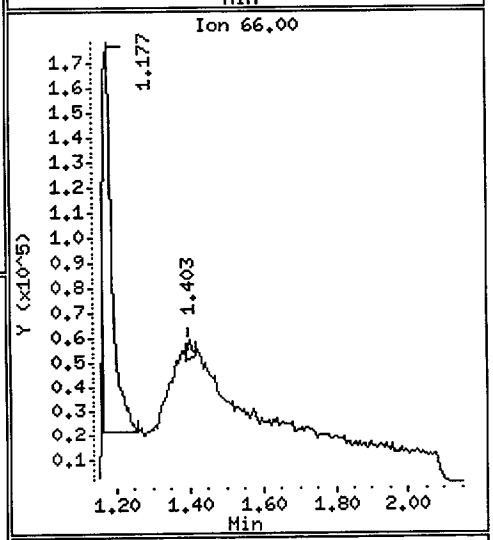
15 Chloroethane

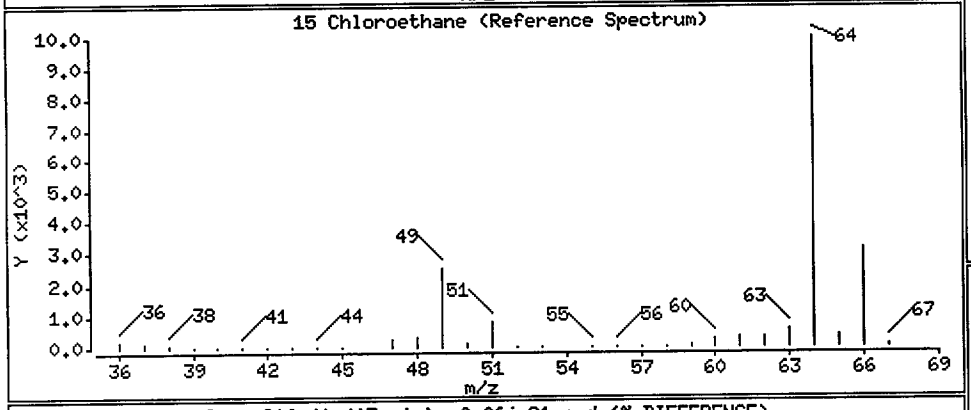
Concentration: 339.24 ug/L

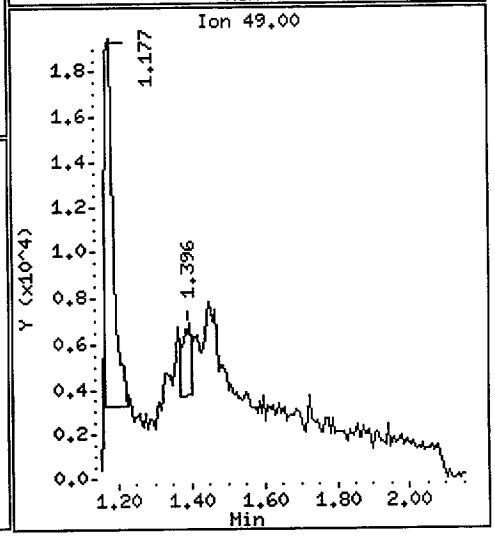


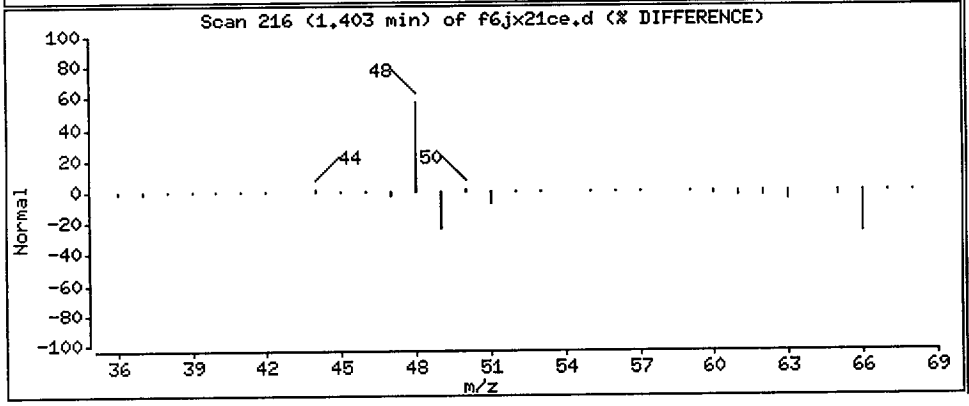












Data File: /chem/gcms/mx.i/X121503.b/f6jx21ce.d

Date : 15-DEC-2003 23:56

Client ID: DD3004

Instrument: mx.i

Sample Info: F6JX21CE,1,0,,

Purge Volume: 25.0

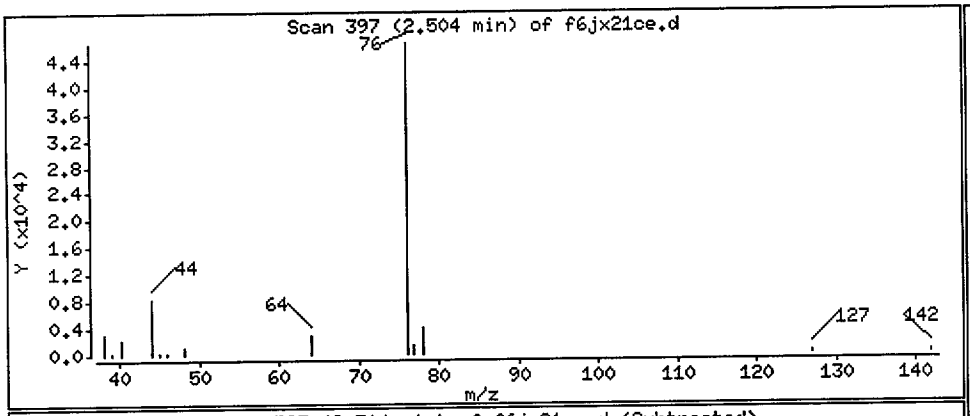
Operator: 063605

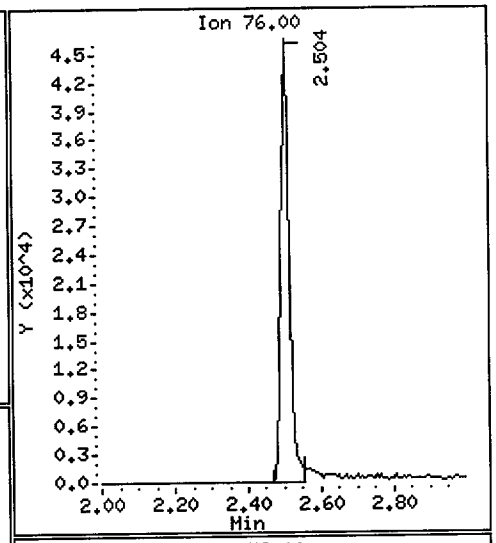
Column phase: J+W 624

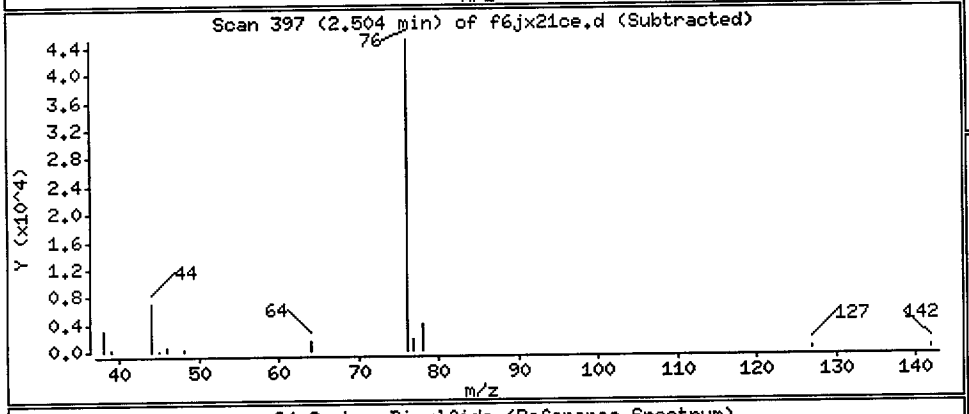
Column diameter: 0.18

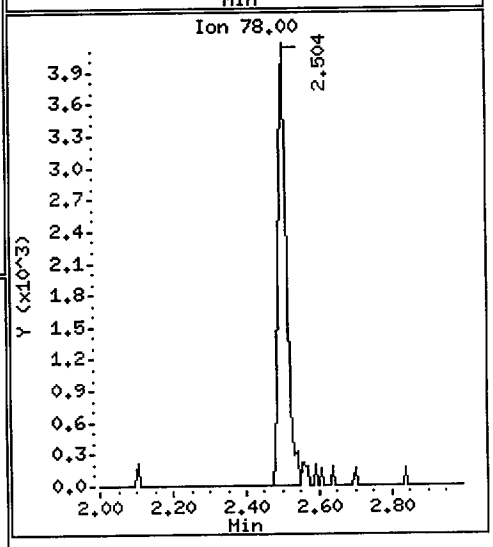
24 Carbon Disulfide

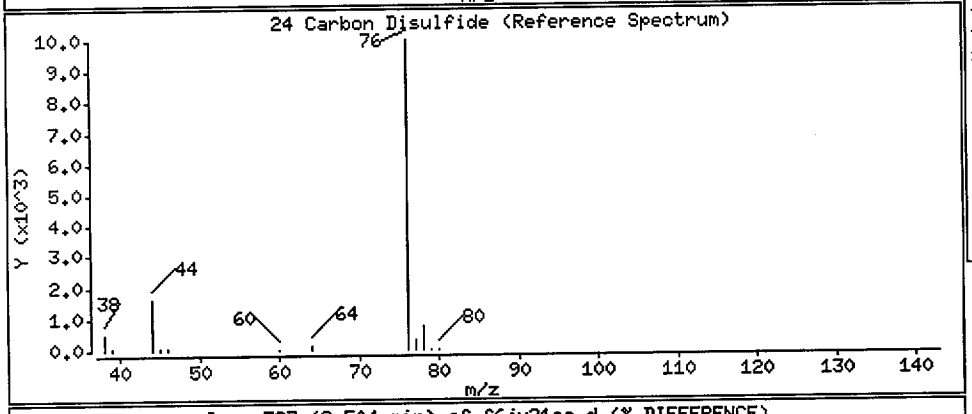
Concentration: 0.76970 ug/L

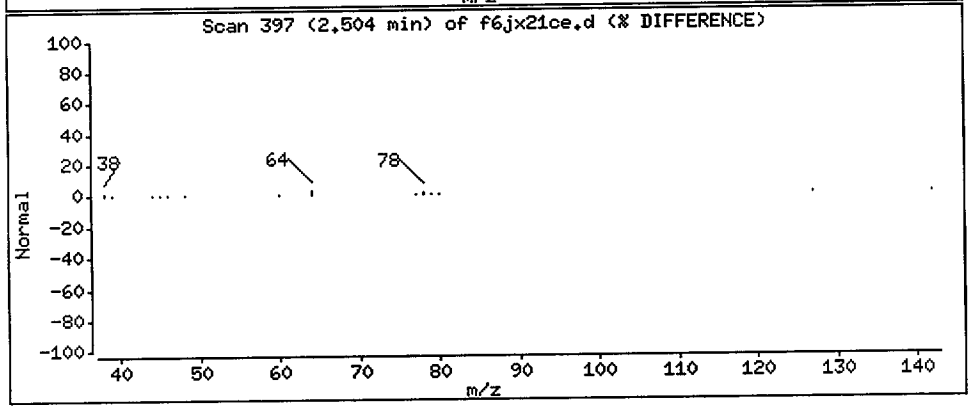












Data File: /chem/gcms/mx.i/X121503.b/f6jx21ce.d

Date : 15-DEC-2003 23:56

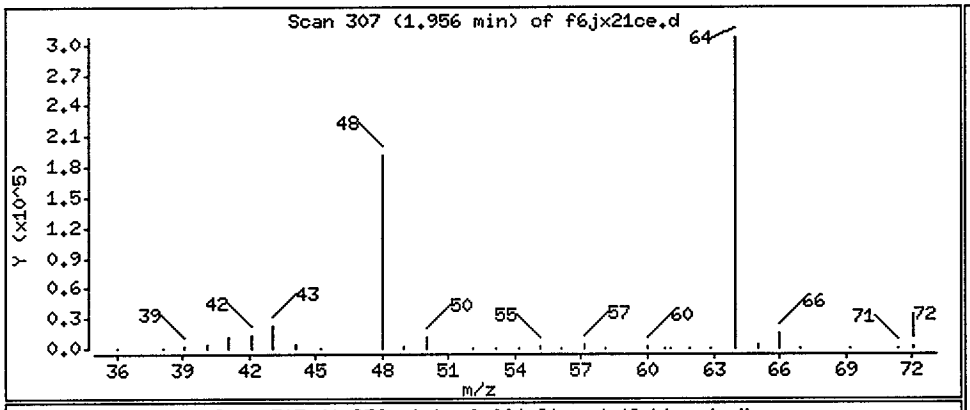
Client ID: DD3004 Instrument: mx.i

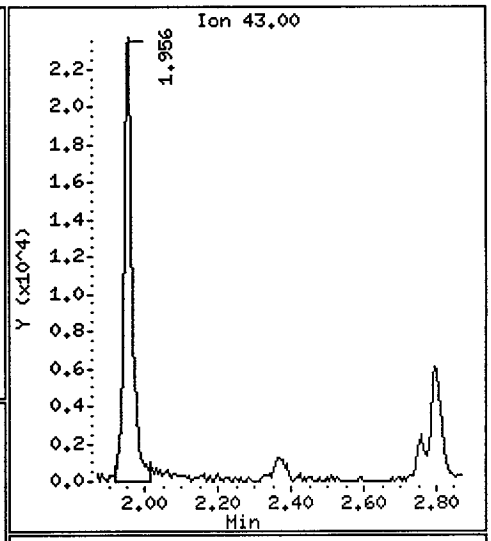
Sample Info: F6JX21CE,1,0,,

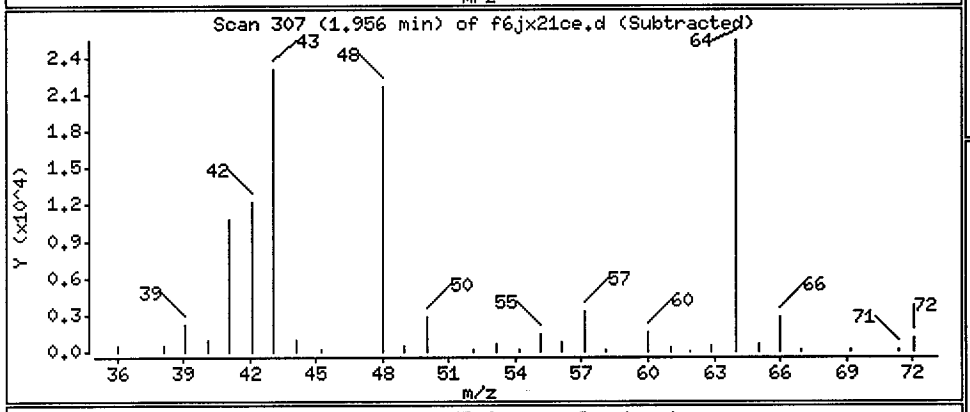
Purge Volume: 25.0 Operator: 063605

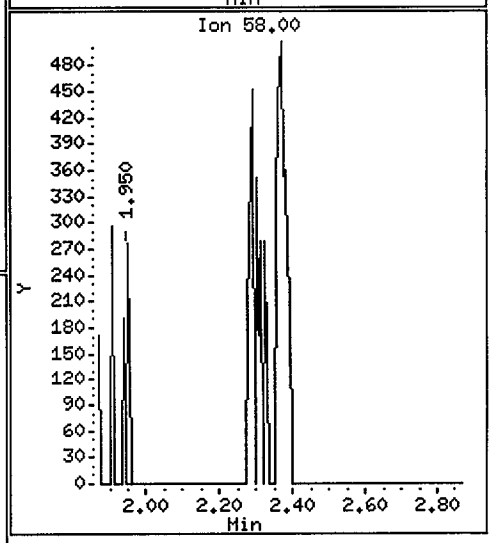
Column phase: J+W 624 Column diameter: 0.18

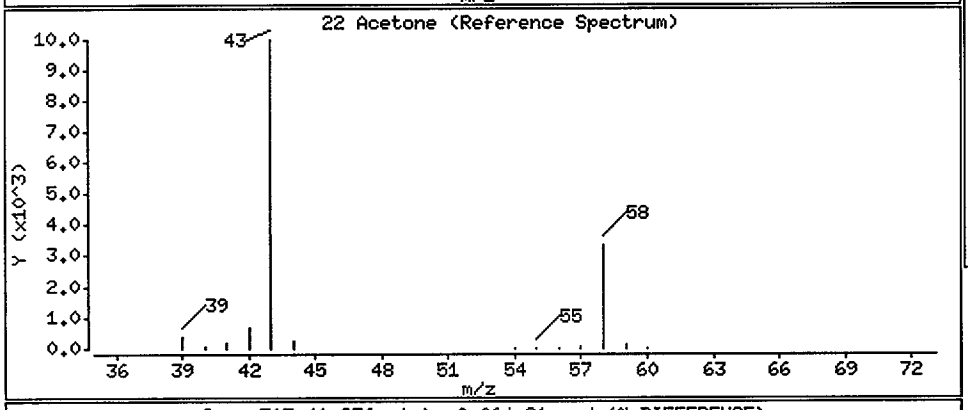
22 Acetone Concentration: 13.153 ug/L

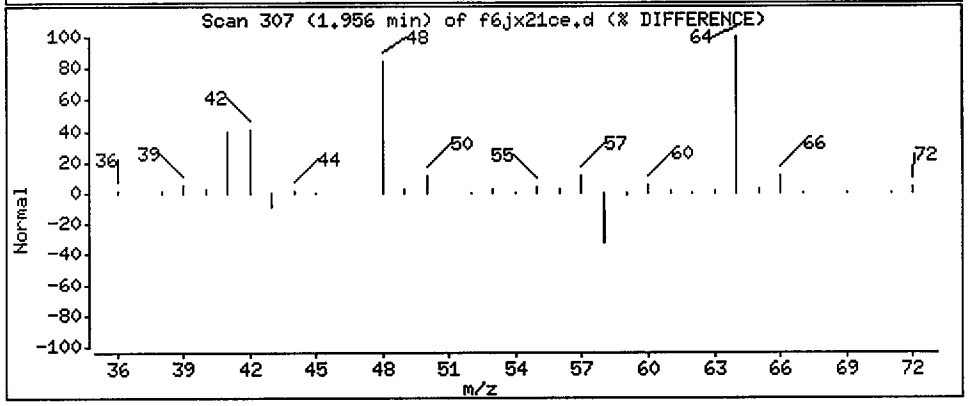












Data File: /chem/gcms/mx.i/X121503.b/f6jx21ce.d

Date : 15-DEC-2003 23:56

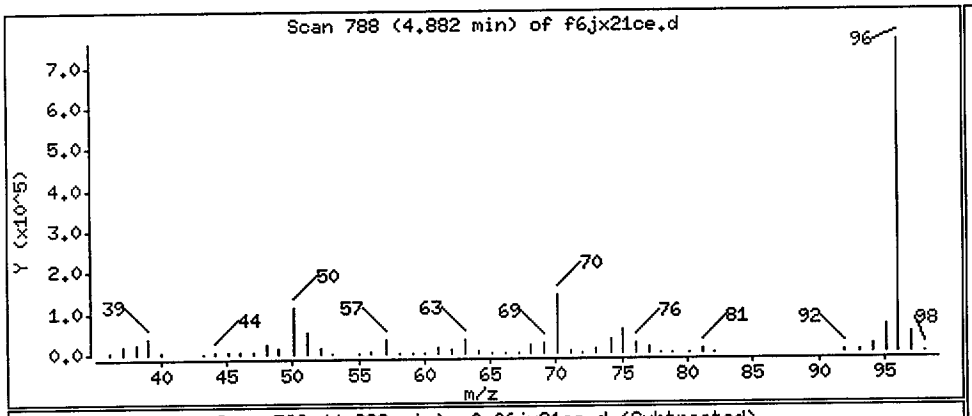
Client ID: DD3004 Instrument: mx.i

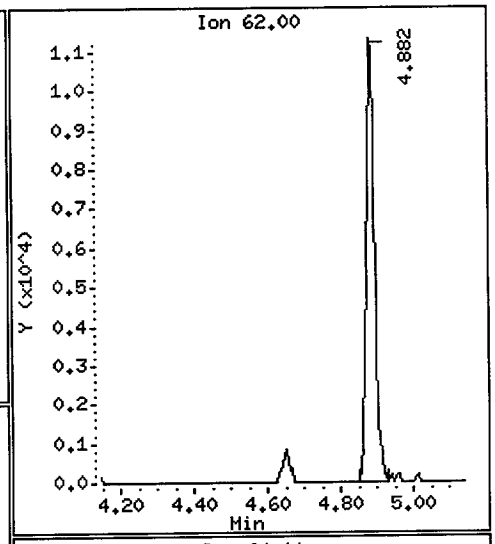
Sample Info: F6JX21CE,1,0,,

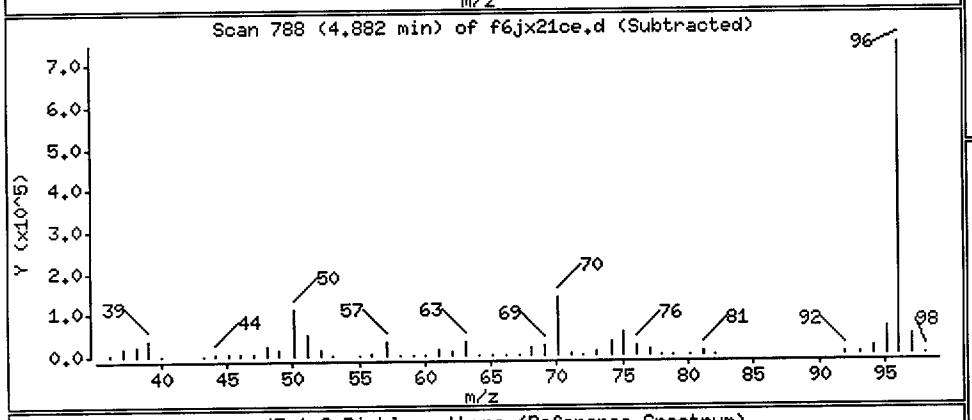
Purge Volume: 25.0 Operator: 063605

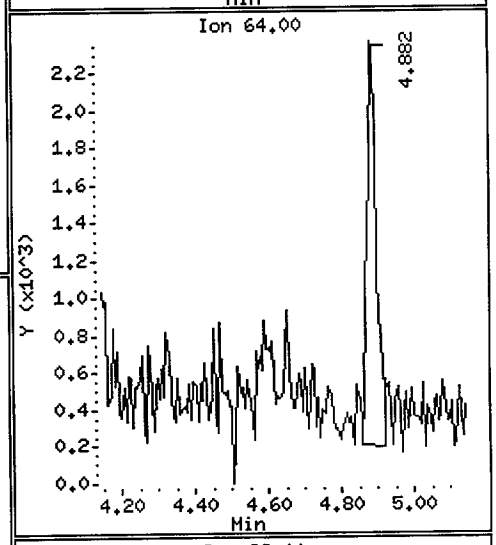
Column phase: J+W 624 Column diameter: 0.18

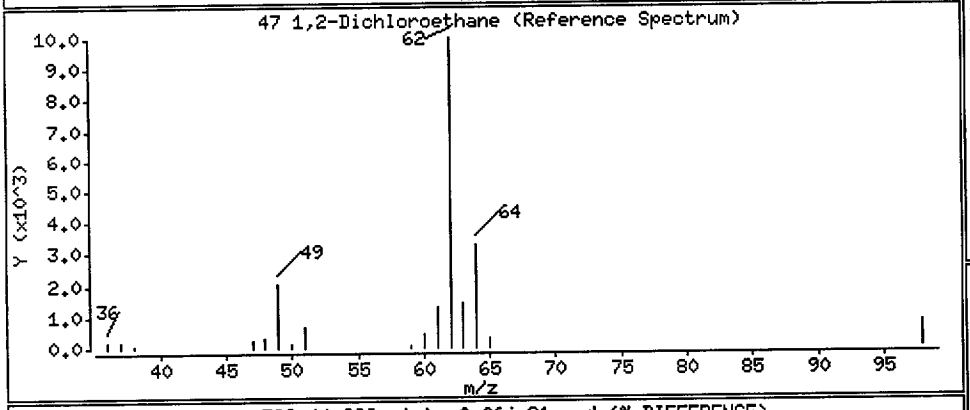
47 1,2-Dichloroethane Concentration: 0.80813 ug/L

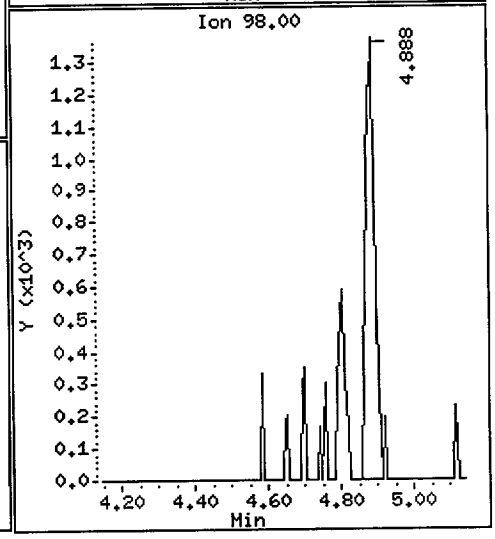


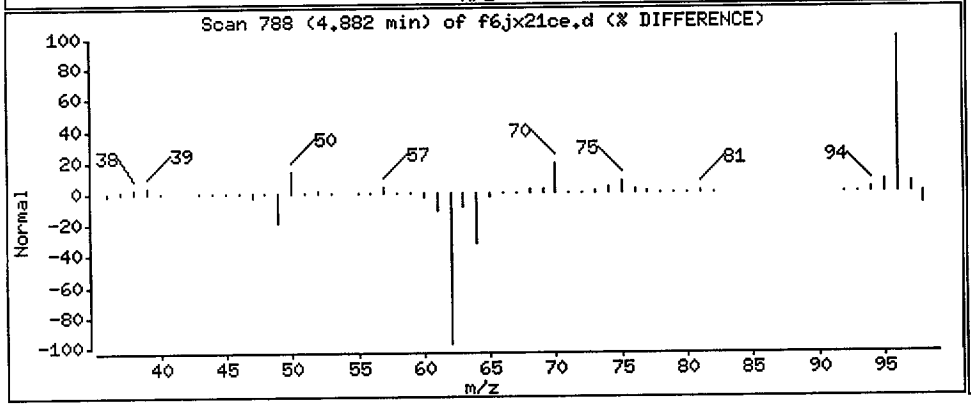












Data File: /chem/gcms/mx.i/X121503.b/f6jx21ce.d

Date : 15-DEC-2003 23:56

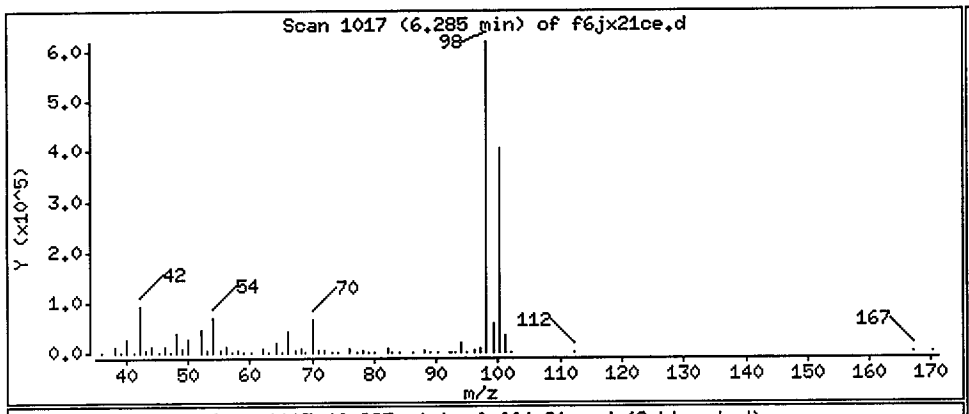
Client ID: DD3004 | Instrument: mx.i

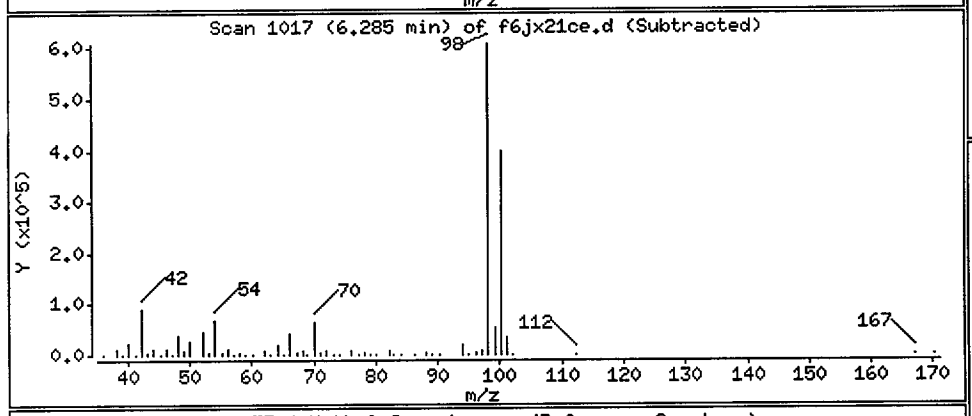
Sample Info: F6JX21CE,1,0,,

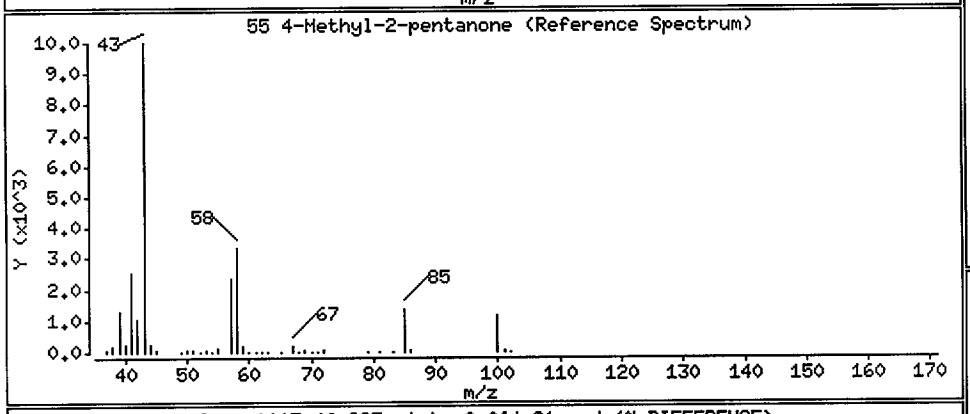
Purge Volume: 25.0 | Operator: 063605

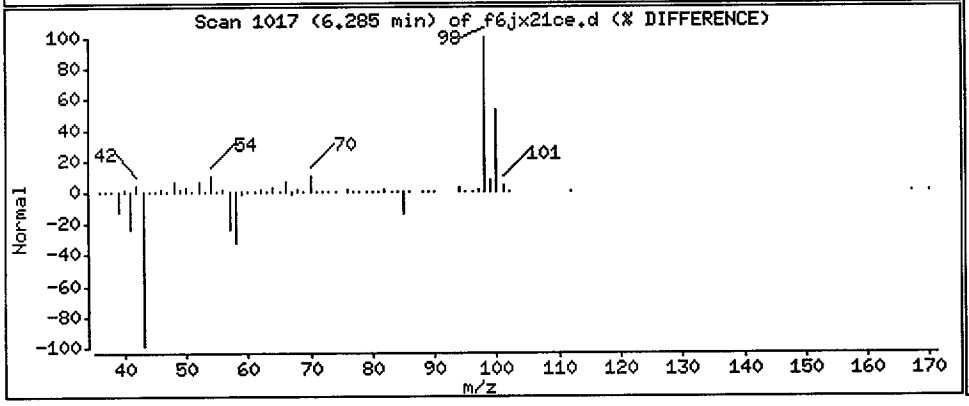
Column phase: J+W 624 | Column diameter: 0.18

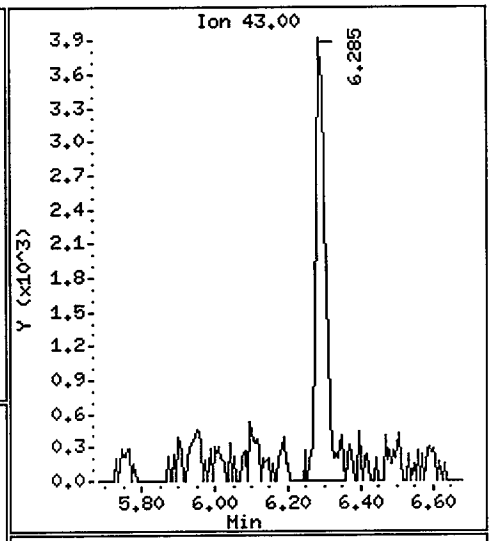
55 4-Methyl-2-pentanone | Concentration: 0.75470 ug/L

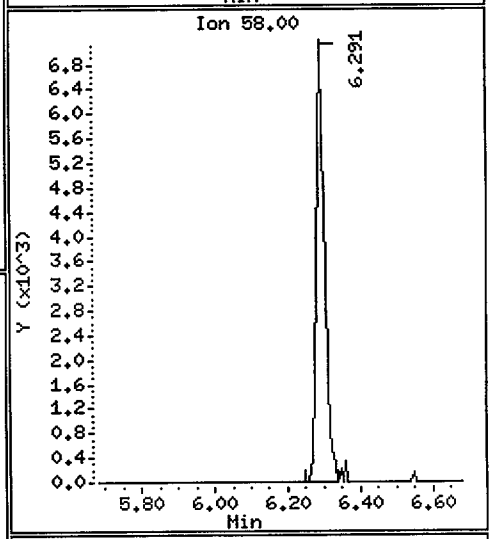


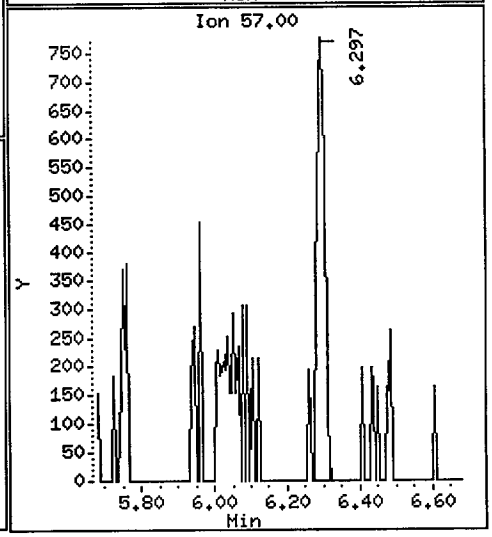












Data File: /chem/gcms/mx.i/X121503.b/f6jx21ce.d

Date : 15-DEC-2003 23:56

Client ID: DD3004

Instrument: mx.i

Sample Info: F6JX21CE,1,0,,

Purge Volume: 25.0

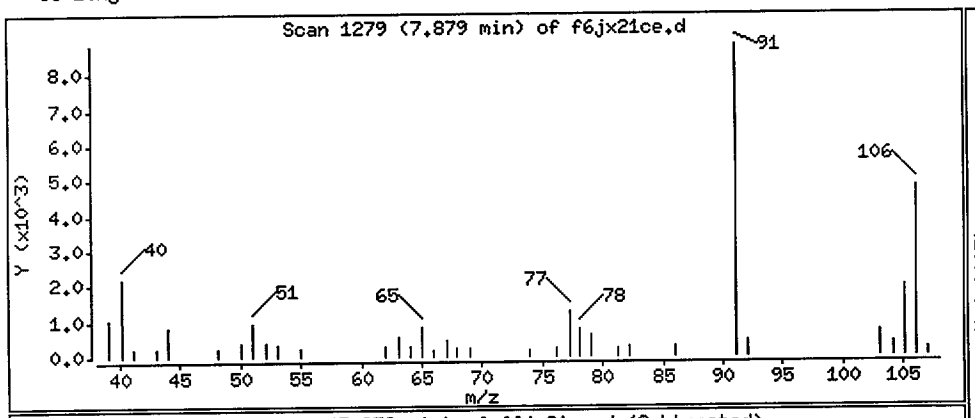
Operator: 063605

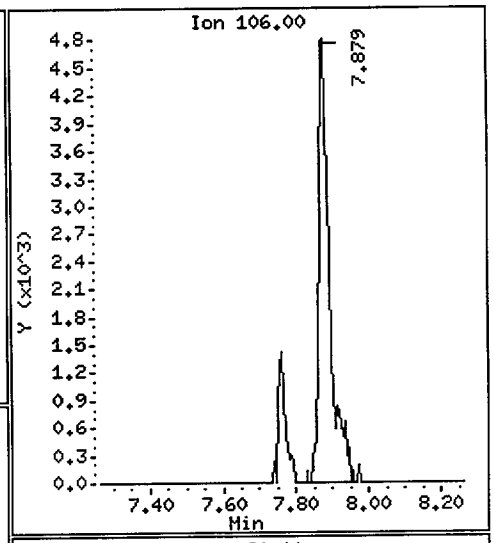
Column phase: J+W 624

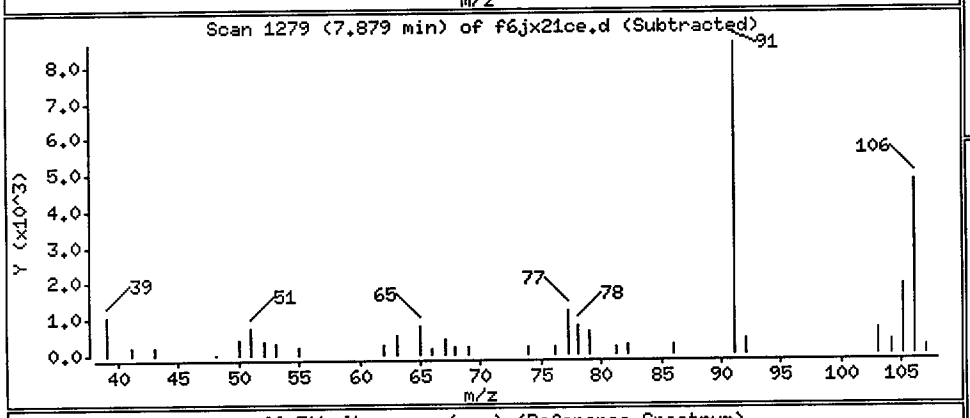
Column diameter: 0.18

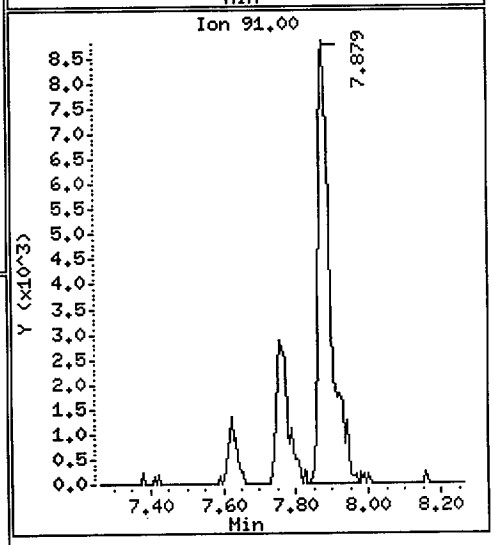
66 Ethylbenzene (ccc)

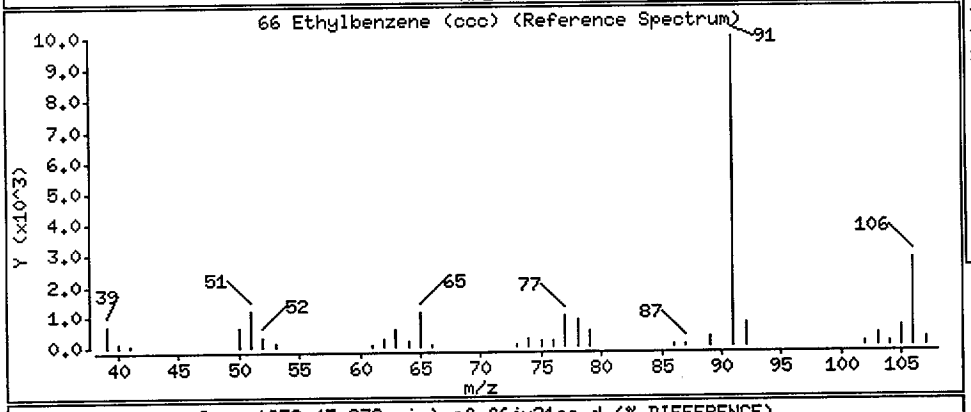
Concentration: 0.15623 ug/L

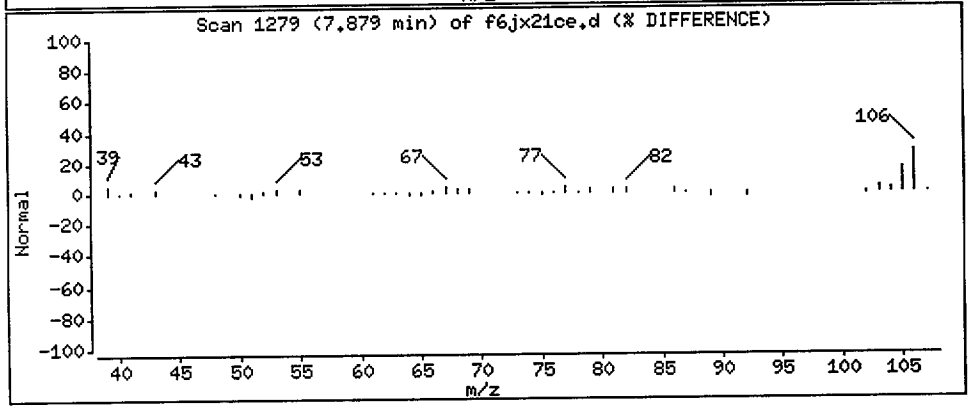












Data File: /chem/gcms/mx.i/X121503.b/f6jx21ce.d

Date : 15-DEC-2003 23:56

Client ID: DD3004

Instrument: mx.i

Sample Info: F6JX21CE,1,0,,

Purge Volume: 25.0

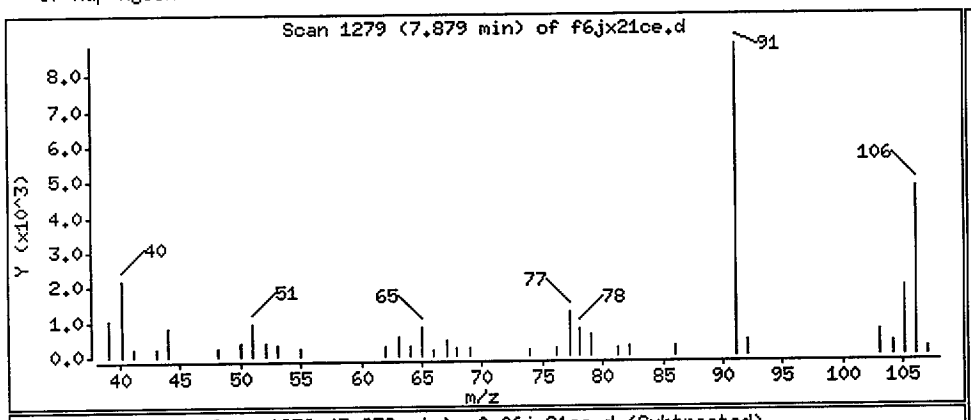
Operator: 063605

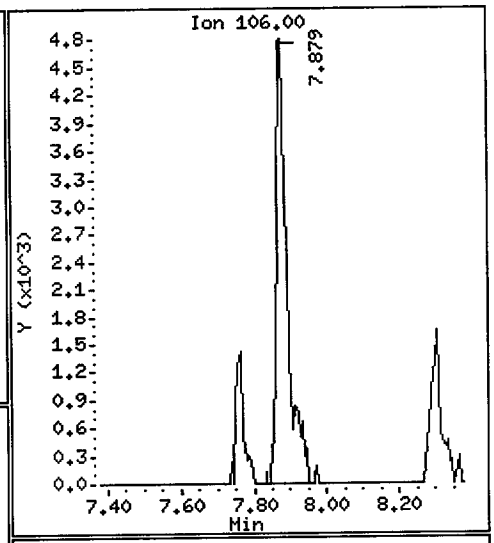
Column phase: J+W 624

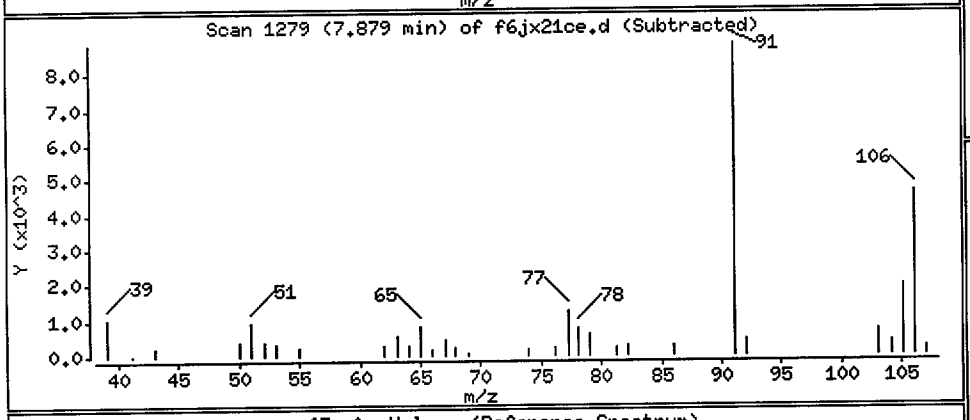
Column diameter: 0.18

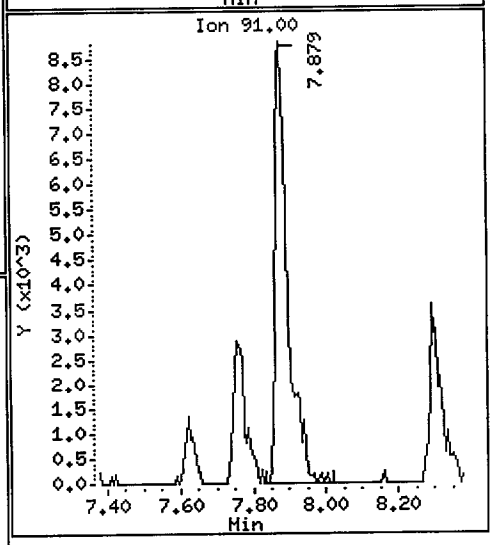
67 m&p-Xylene

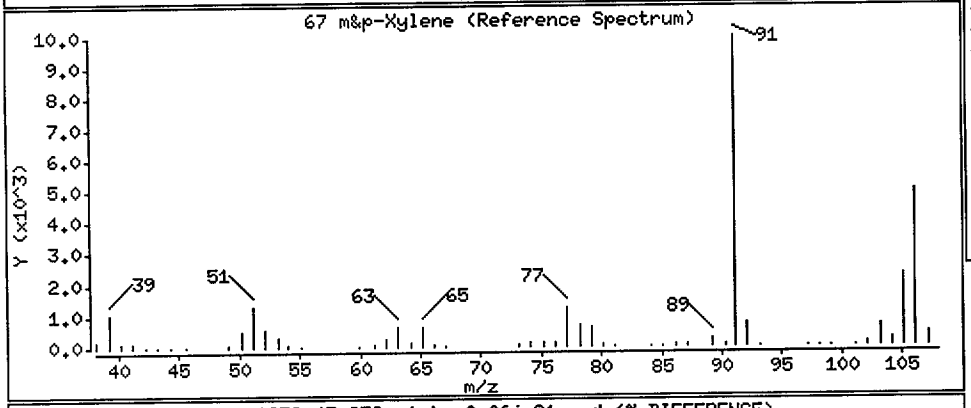
Concentration: 0.13072 ug/L

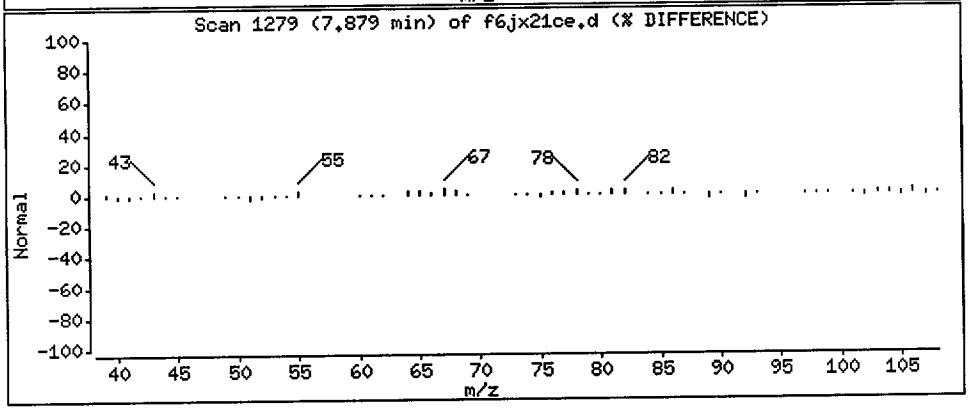












Data File: /chem/gcms/mx.i/X121503.b/f6jx21ce.d

Date : 15-DEC-2003 23:56

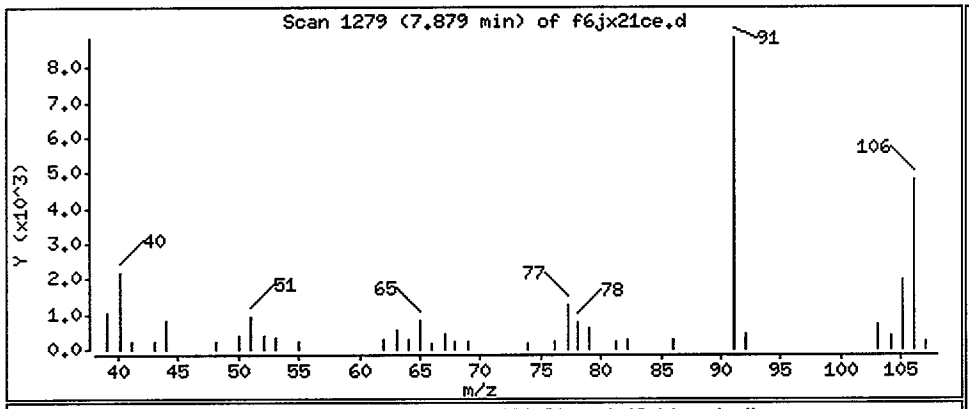
Client ID: DD3004 Instrument: mx.i

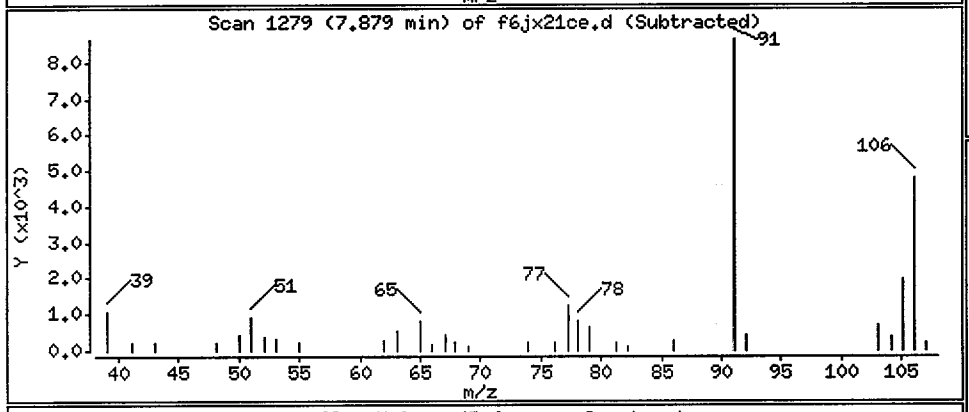
Sample Info: F6JX21CE,1,0,,

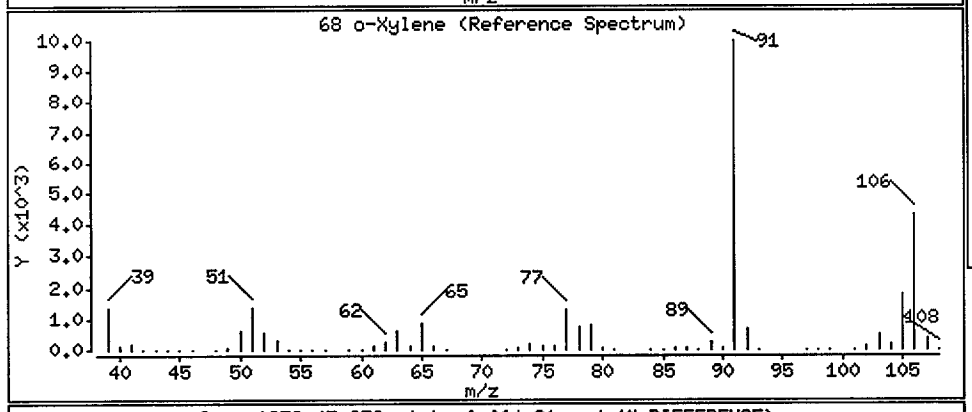
Purge Volume: 25.0 Operator: 063605

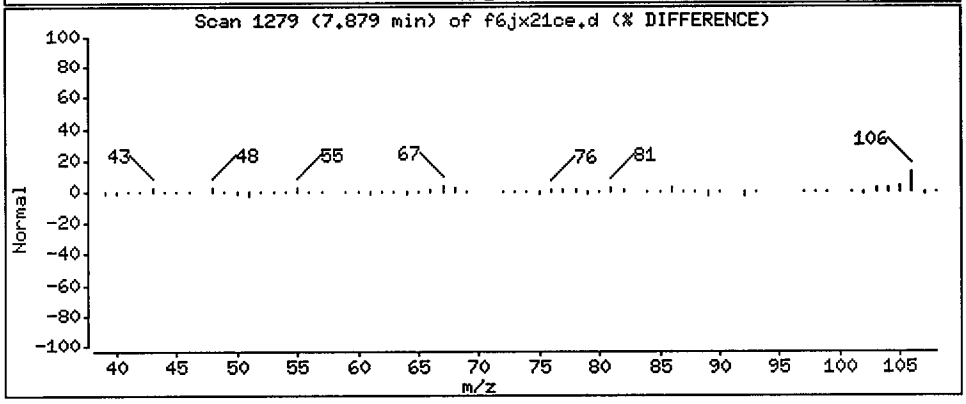
Column phase: J+W 624 Column diameter: 0.18

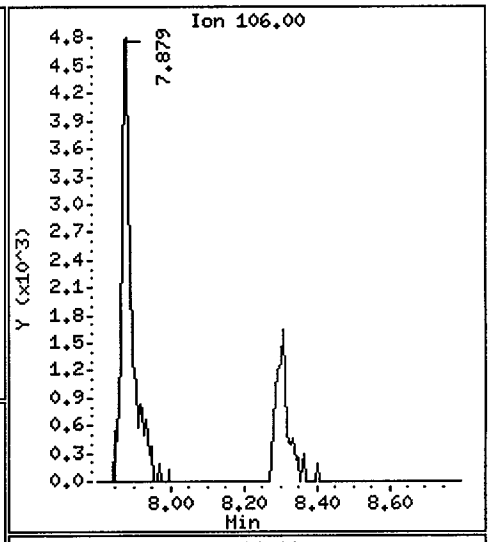
68 o-Xylene Concentration: 0.14652 ug/L

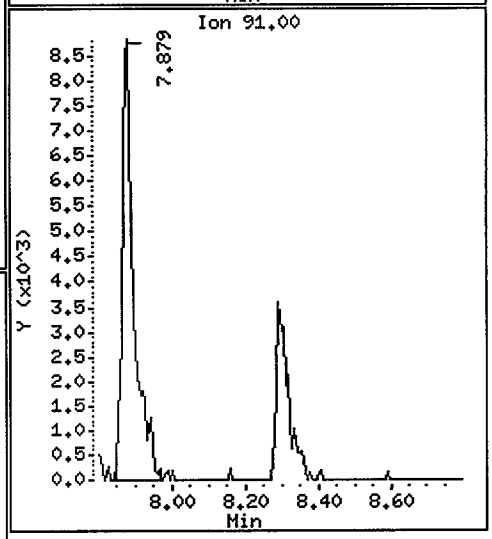












SHAW E & I INC

Client Sample ID: DD3005

GC/MS Volatiles

Lot-Sample #...: H3L120208-003 **Work Order #...:** F6J0A1AN **Matrix.....:** WATER
Date Sampled...: 12/11/03 **Date Received..:** 12/12/03
Prep Date.....: 12/15/03 **Analysis Date..:** 12/16/03
Prep Batch #...: 3349684
Dilution Factor: 1 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Chloromethane	ND	2.0	ug/L	0.12
Bromomethane	ND	2.0	ug/L	0.38
Vinyl chloride	ND	1.0	ug/L	0.24
Chloroethane	ND	2.0	ug/L	0.24
Methylene chloride	ND	2.0	ug/L	0.23
Acetone	ND	10	ug/L	1.4
Carbon disulfide	**1.4**	**1.0**	**ug/L**	**0.10**
1,1-Dichloroethene	ND	1.0	ug/L	0.10
1,1-Dichloroethane	ND	1.0	ug/L	0.10
1,2-Dichloroethene (total)	ND	1.0	ug/L	0.20
Chloroform	ND	1.0	ug/L	0.10
1,2-Dichloroethane	ND	1.0	ug/L	0.10
2-Butanone	ND	5.0	ug/L	0.75
1,1,1-Trichloroethane	ND	1.0	ug/L	0.10
Carbon tetrachloride	ND	1.0	ug/L	0.12
Bromodichloromethane	ND	1.0	ug/L	0.10
1,2-Dichloropropane	ND	1.0	ug/L	0.10
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.10
Trichloroethene	ND	1.0	ug/L	0.10
Dibromochloromethane	ND	1.0	ug/L	0.20
1,1,2-Trichloroethane	ND	1.0	ug/L	0.25
Benzene	ND	1.0	ug/L	0.10
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.11
Bromoform	ND	1.0	ug/L	0.14
4-Methyl-2-pentanone	ND	5.0	ug/L	0.40
2-Hexanone	ND	5.0	ug/L	0.76
Tetrachloroethene	ND	1.0	ug/L	0.10
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.15
Toluene	ND	1.0	ug/L	0.10
Chlorobenzene	ND	1.0	ug/L	0.10
Ethylbenzene	ND	1.0	ug/L	0.10
Styrene	ND	1.0	ug/L	0.10
Xylenes (total)	ND	1.0	ug/L	0.30

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	91	(79 - 120)
1,2-Dichloroethane-d4	90	(71 - 127)
Toluene-d8	98	(80 - 120)
Bromofluorobenzene	86	(69 - 126)

Data File: /chem/gcms/mx.i/X121503.b/f6j0a1an.d
Report Date: 16-Dec-2003 00:37

STL Knoxville

SW-846 Method 8260A - Volatile Organics

Data file : /chem/gcms/mx.i/X121503.b/f6j0a1an.d
Lab Smp Id: F6J0A1AN Client Smp ID: DD3005
Inj Date : 16-DEC-2003 00:21
Operator : 063605 Inst ID: mx.i
Smp Info : F6J0A1AN,1,0,,
Misc Info : X121503,8260B_LM,s1.sub
Comment :
Method : /var/chem/gcms/mx.i/X121503.b/8260B_LM.m
Meth Date : 15-Dec-2003 18:56 tillerm Quant Type: ISTD
Cal Date : 16-SEP-2003 12:52 Cal File: icxi166.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: s1.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * Uf*Vt/(Vo*1000) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Unit Correction factor
Vt	25000.00000	Sample Volume Purged
Vo	25.00000	Sample Volume Used

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
* 1 Fluorobenzene	96	4.887	4.887	(1.000)	1397230	10.0000	
* 2 Chlorobenzene-d5	119	7.624	7.624	(1.000)	283631	10.0000	
* 3 1,4 Dichlorobenzene-d4	152	10.824	10.818	(1.000)	331544	10.0000	
$ 5 1,2-Dichloroethane-d4	65	4.583	4.583	(0.938)	161055	8.97158	8.9716
$ 4 Dibromofluoromethane	113	4.303	4.297	(0.880)	212163	9.11845	9.1184
$ 6 Toluene-d8	98	6.292	6.292	(0.825)	1276597	9.79850	9.7985
$ 7 4-Bromofluorobenzene	95	8.932	8.926	(0.825)	342927	8.64119	8.6412
11 Chloromethane (spcc)	50	1.285	1.231	(0.263)	14825	~~0.47513~~	~~0.47512~~
15 Chloroethane	64	1.663	1.651	(0.340)	25587	~~1.06245~~	~~1.0624~~
24 Carbon Disulfide	76	2.502	2.496	(0.512)	133285	1.36730	1.3673
22 Acetone	43	1.955	2.368	(0.400)	34823	~~11.0462~~	~~11.046~~
39 2-Butanone	43	3.968	3.889	(0.812)	10179	~~2.53600~~	~~2.5360~~
47 1,2-Dichloroethane	62	4.887	4.644	(1.000)	18340	~~0.80721~~	~~0.80721~~
55 4-Methyl-2-pentanone	43	6.292	6.183	(1.287)	6890	~~0.67905~~	~~0.67905~~

MT 12/16/03

Data File: /chem/gcms/mx.i/X121503.b/f6j0a1an.d
Report Date: 16-Dec-2003 00:37

STL Knoxville

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: mx.i
Lab File ID: f6j0a1an.d
Lab Smp Id: F6J0A1AN
Analysis Type: VOA
Quant Type: ISTD
Operator: 063605
Method File: /var/chem/gcms/mx.i/X121503.b/8260B_LM.m
Misc Info: X121503,8260B_LM,s1.sub

Calibration Date: 15-DEC-2003
Calibration Time: 16:45
Client Smp ID: DD3005
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Fluorobenzene	1461276	730638	2922552	1397230	-4.38
2 Chlorobenzene-d5	293714	146857	587428	283631	-3.43
3 1,4 Dichlorobenze	323953	161976	647906	331544	2.34

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Fluorobenzene	4.89	4.39	5.39	4.89	0.00
2 Chlorobenzene-d5	7.62	7.12	8.12	7.62	-0.01
3 1,4 Dichlorobenze	10.82	10.32	11.32	10.82	0.05

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

Data File: /chem/gcms/mx.i/X121503.b/f6j0a1an.d
Report Date: 16-Dec-2003 00:37

STL Knoxville

RECOVERY REPORT

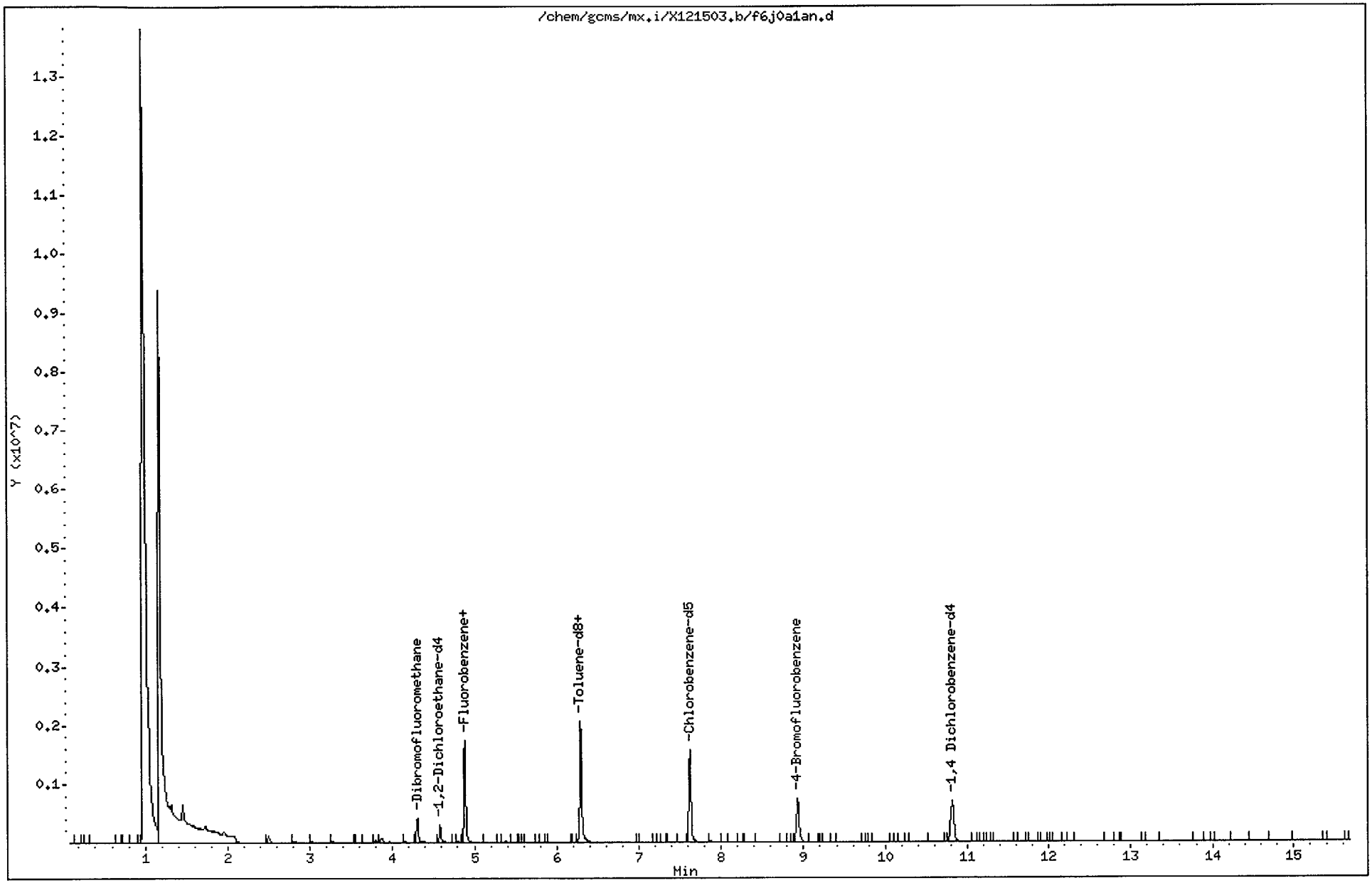
Client Name: SHAW E & I INC
Sample Matrix: LIQUID
Lab Smp Id: F6J0A1AN
Level: LOW
Data Type: MS DATA
SpikeList File: allcmpds.spk
Sublist File: s1.sub
Method File: /var/chem/gcms/mx.i/X121503.b/8260B_LM.m
Misc Info: X121503,8260B_LM,s1.sub

Client SDG: PB045
Fraction: VOA
Client Smp ID: DD3005
Operator: 063605
SampleType: SAMPLE
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 5 1,2-Dichloroethane	10.000	8.9716	89.72	71-127
$ 4 Dibromofluorometha	10.000	9.1184	91.18	79-120
$ 6 Toluene-d8	10.000	9.7985	97.99	80-120
$ 7 4-Bromofluorobenze	10.000	8.6412	86.41	69-126

Data File: /chem/gcms/mx.i/X121503.b/f6j0a1an.d
Date : 16-DEC-2003 00:21
Client ID: DD3005
Sample Info: F6J0A1AN,1,0,,
Purge Volume: 25.0
Column phase: J+W 624

Instrument: mx.i
Operator: 063605
Column diameter: 0.18



Data File: /chem/gcms/mx.i/X121503.b/f6j0a1an.d

Date : 16-DEC-2003 00:21

Client ID: DD3005

Instrument: mx.i

Sample Info: F6J0A1AN,1,0,,

Purge Volume: 25.0

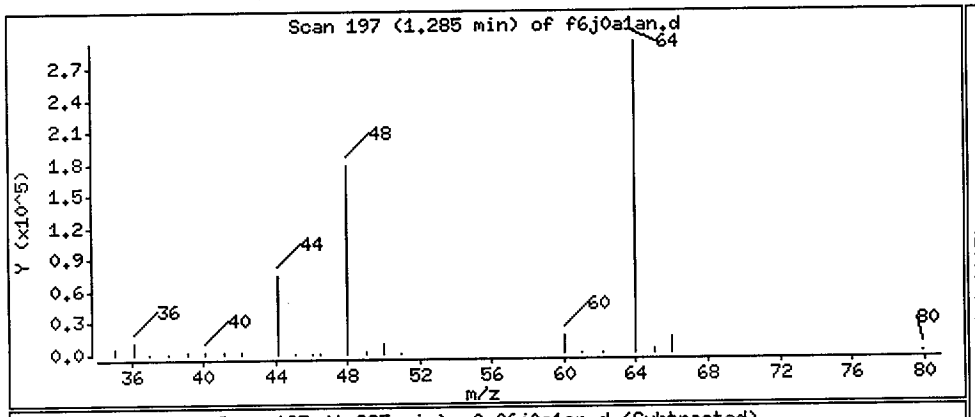
Operator: 063605

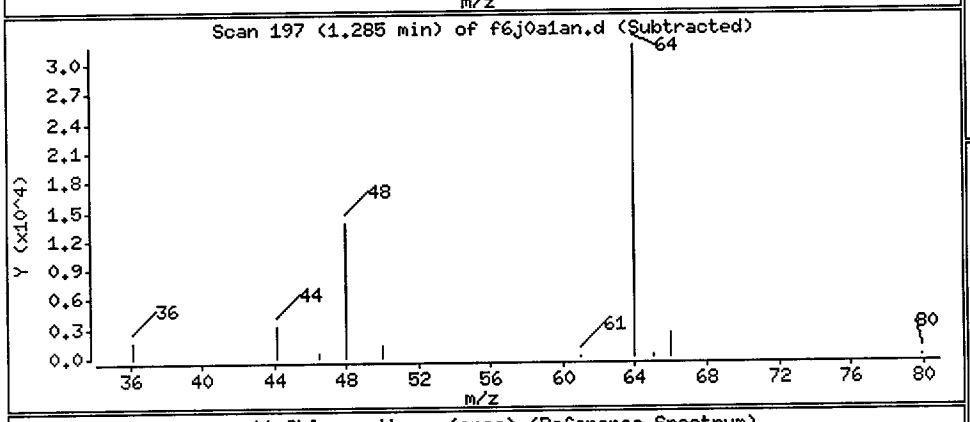
Column phase: J+W 624

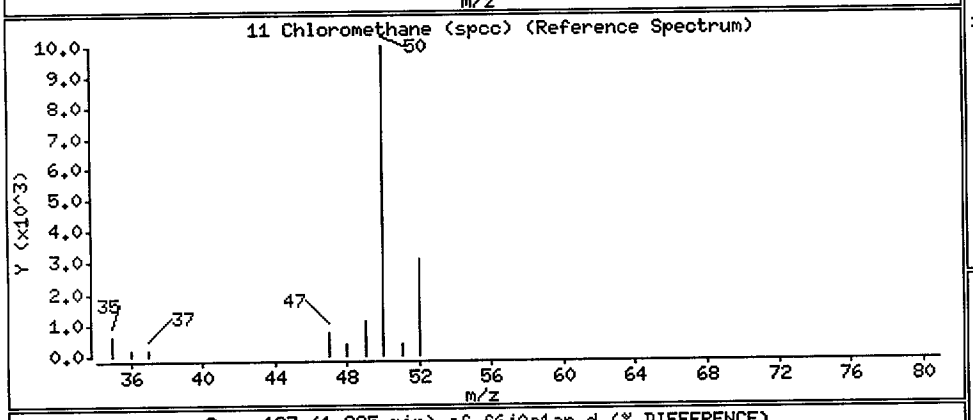
Column diameter: 0.18

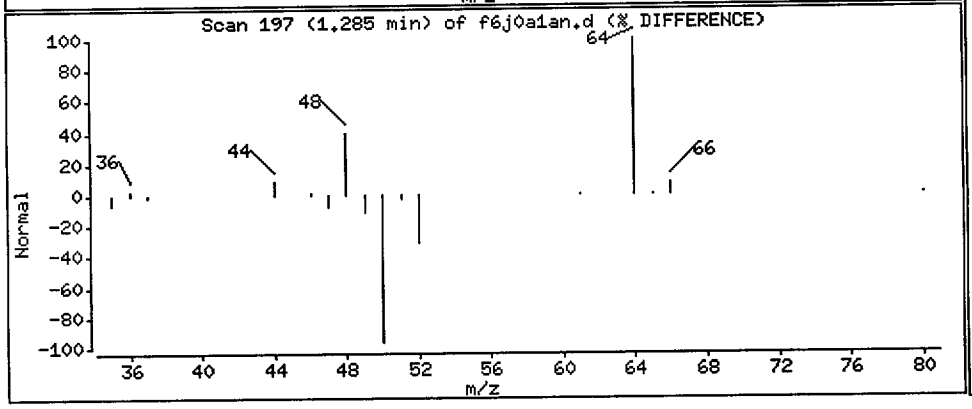
11 Chloromethane (spcc)

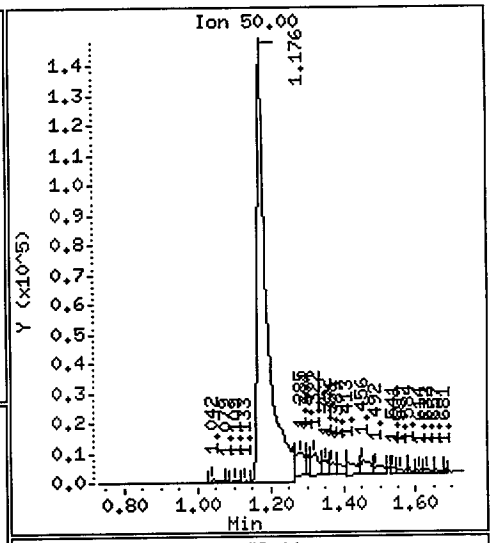
Concentration: 0.47512 ug/L

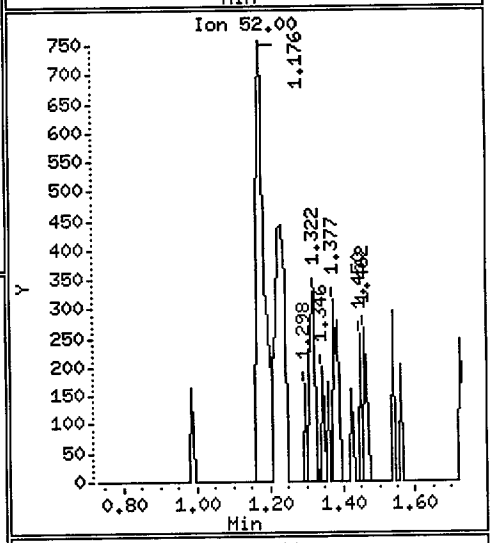


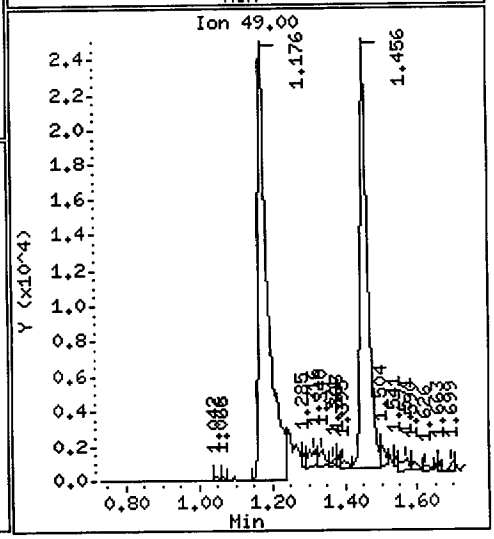












Data File: /chem/gcms/mx.i/X121503.b/f6j0a1an.d

Date : 16-DEC-2003 00:21

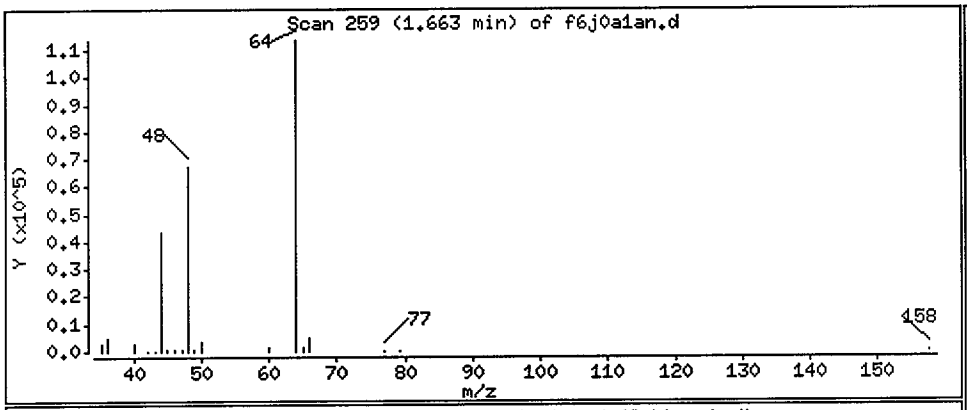
Client ID: DD3005 | Instrument: mx.i

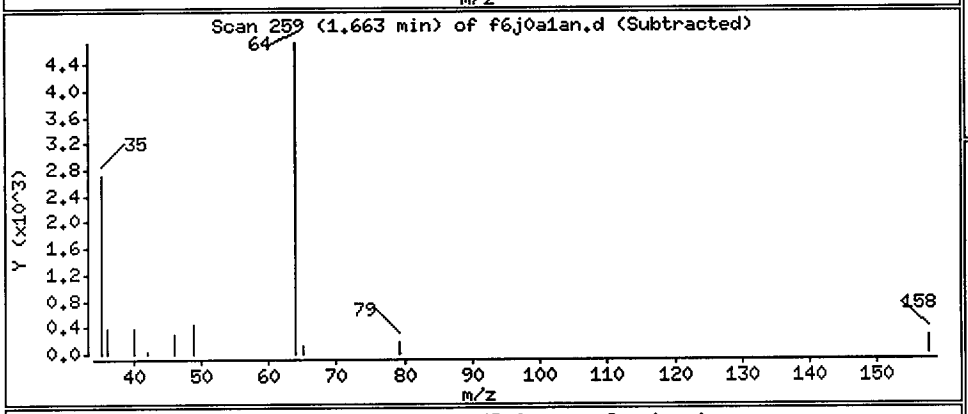
Sample Info: F6J0A1AN,1,0,,

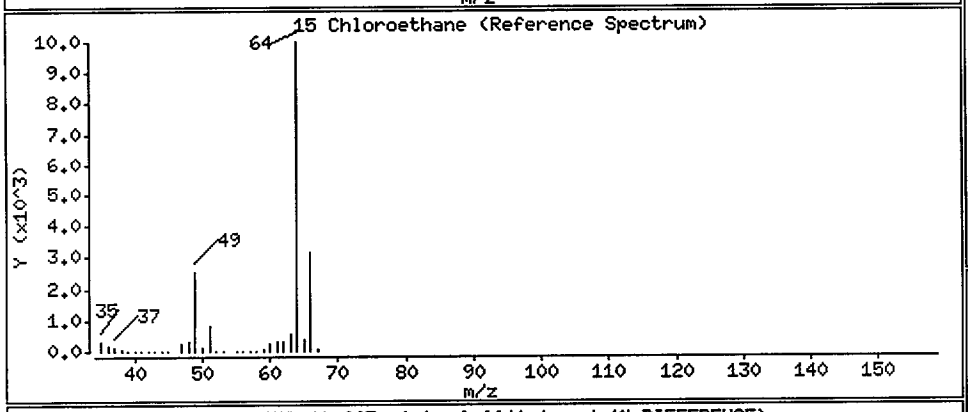
Purge Volume: 25.0 | Operator: 063605

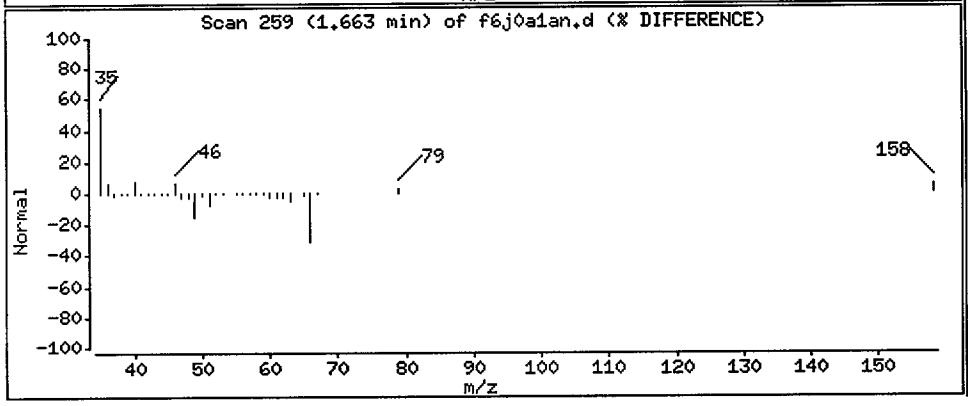
Column phase: J+W 624 | Column diameter: 0.18

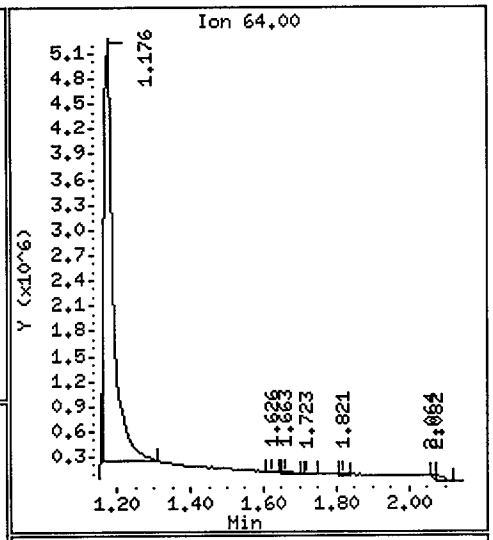
15 Chloroethane | Concentration: 1.0624 ug/L

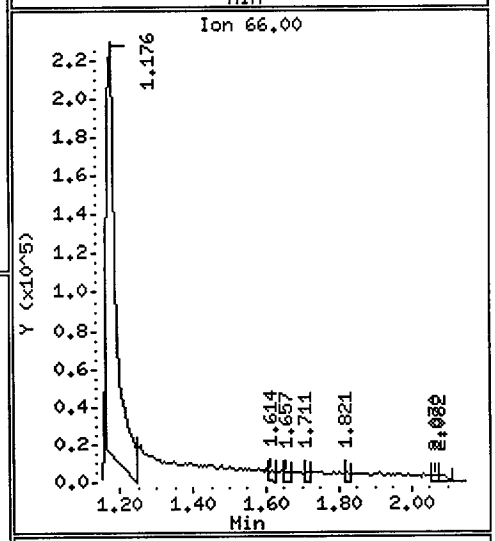


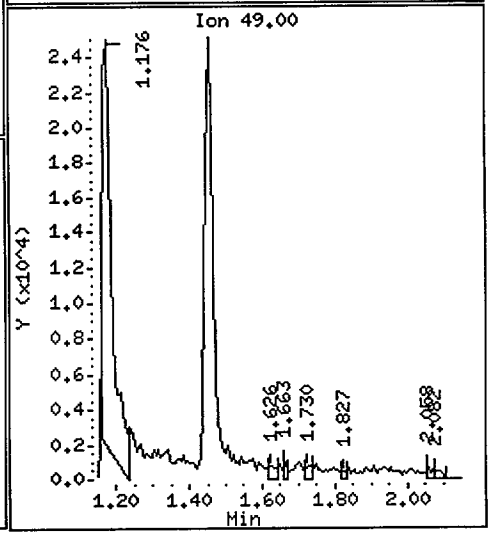












Data File: /chem/gcms/mx.i/X121503.b/f6j0a1an.d

Date : 16-DEC-2003 00:21

Client ID: DD3005

Instrument: mx.i

Sample Info: F6J0A1AN,1,0,,

Purge Volume: 25.0

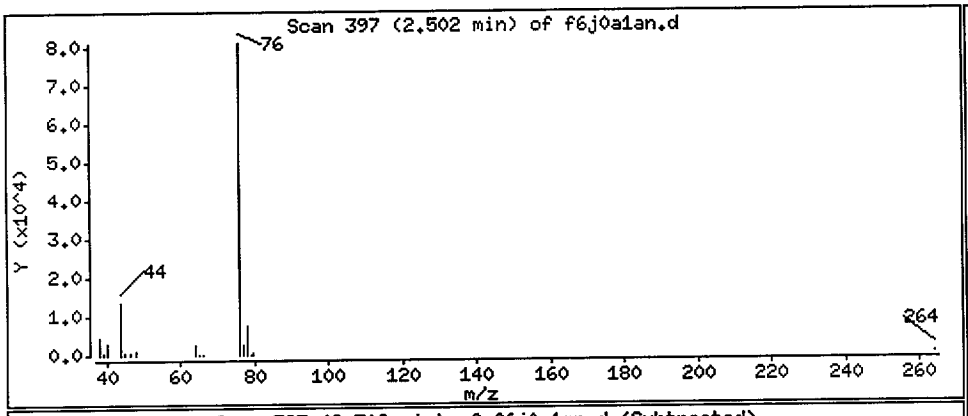
Operator: 063605

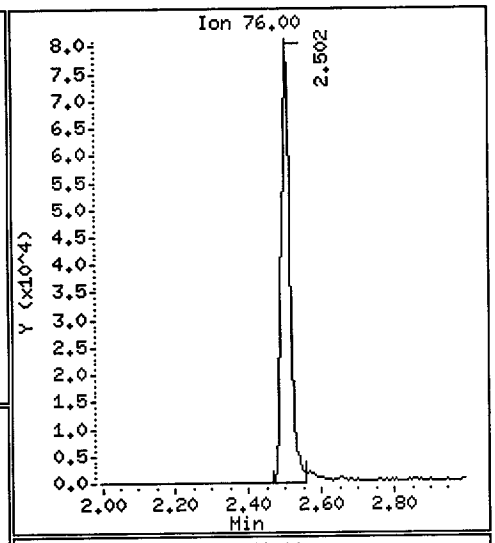
Column phase: J+W 624

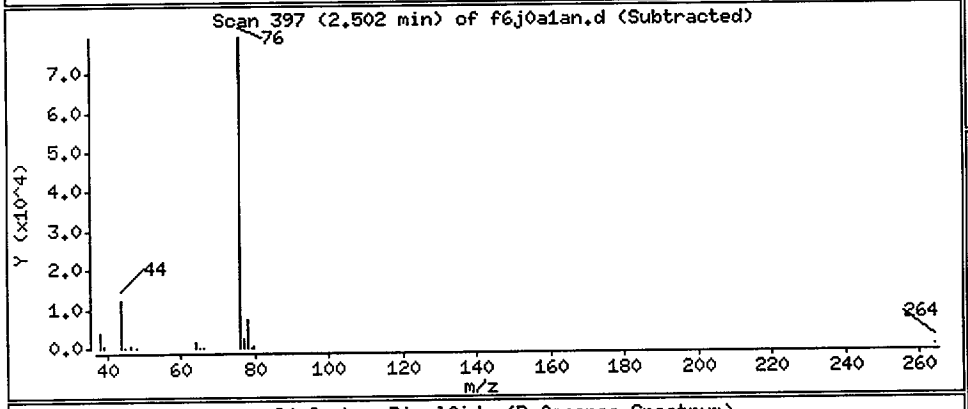
Column diameter: 0.18

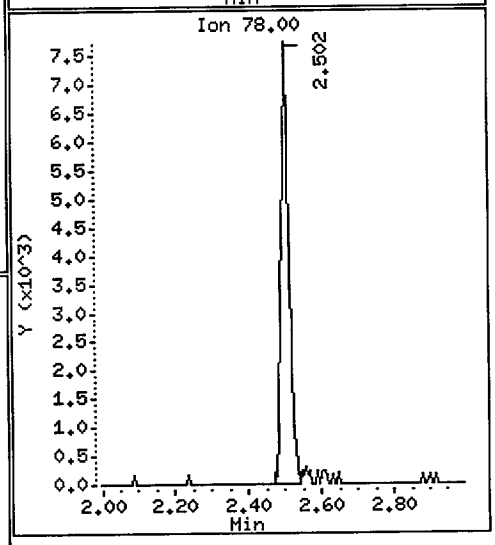
24 Carbon Disulfide

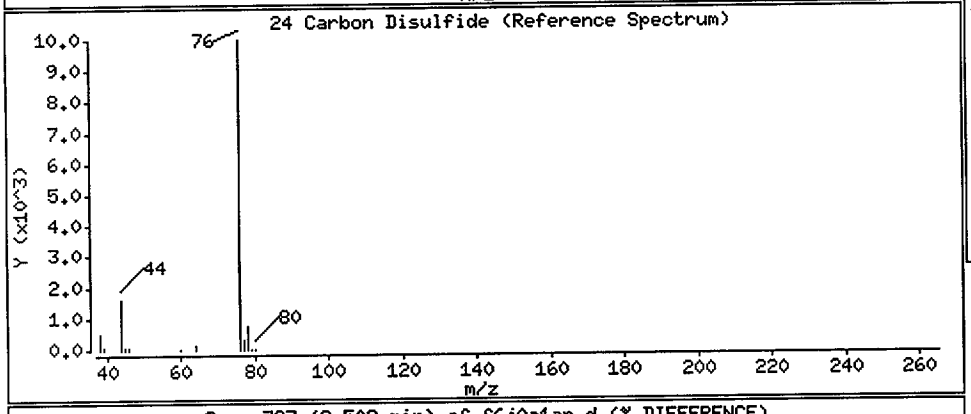
Concentration: 1.3673 ug/L

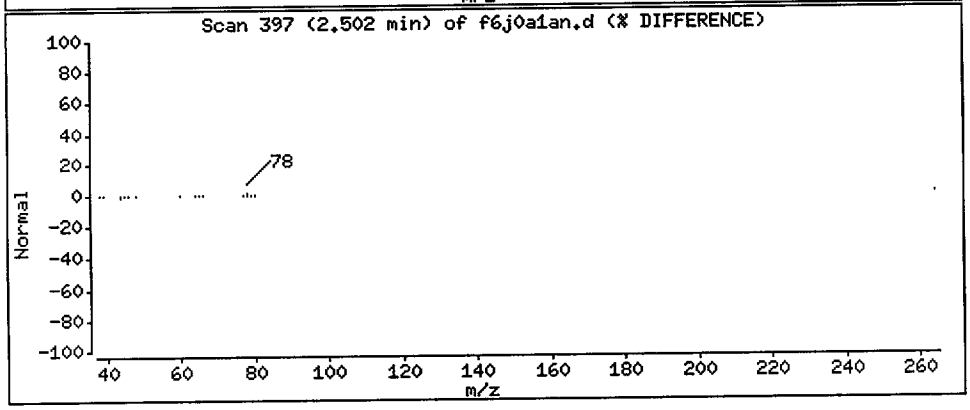












Data File: /chem/gcms/mx.i/X121503.b/f6j0a1an.d

Date : 16-DEC-2003 00:21

Client ID: DD3005

Instrument: mx.i

Sample Info: F6J0A1AN,1,0,,

Purge Volume: 25.0

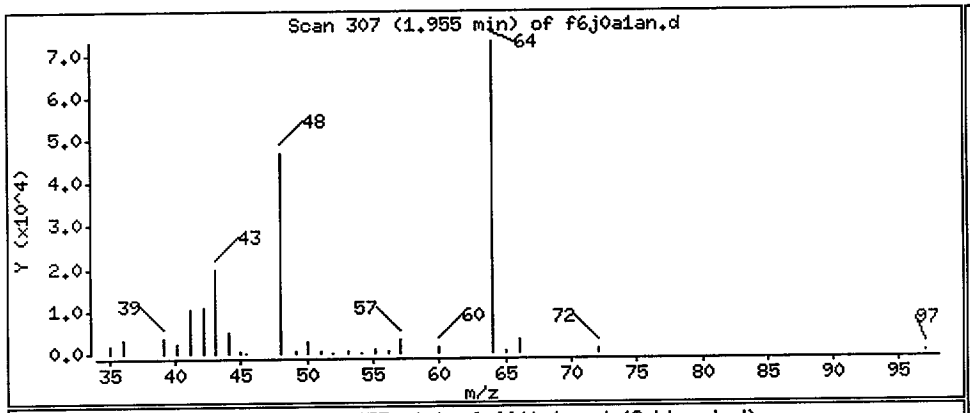
Operator: 063605

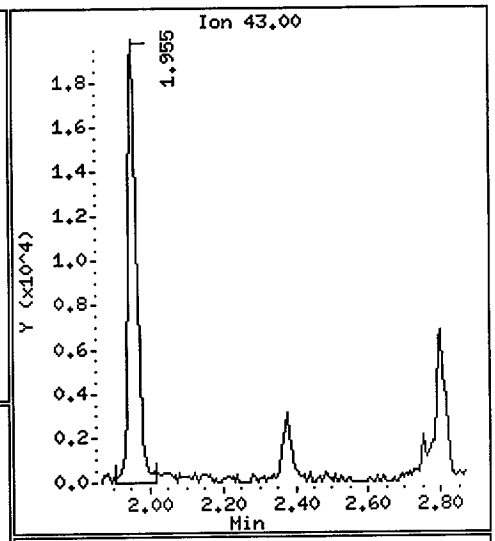
Column phase: J+W 624

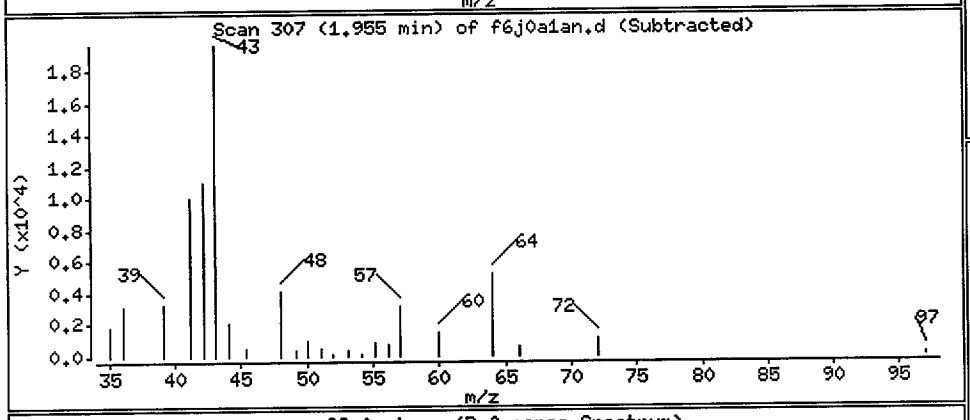
Column diameter: 0.18

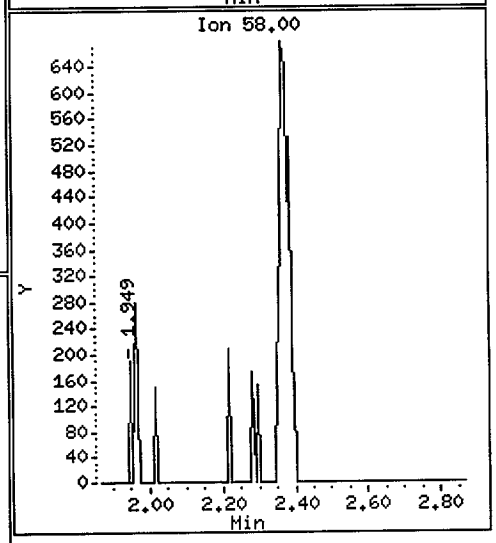
22 Acetone

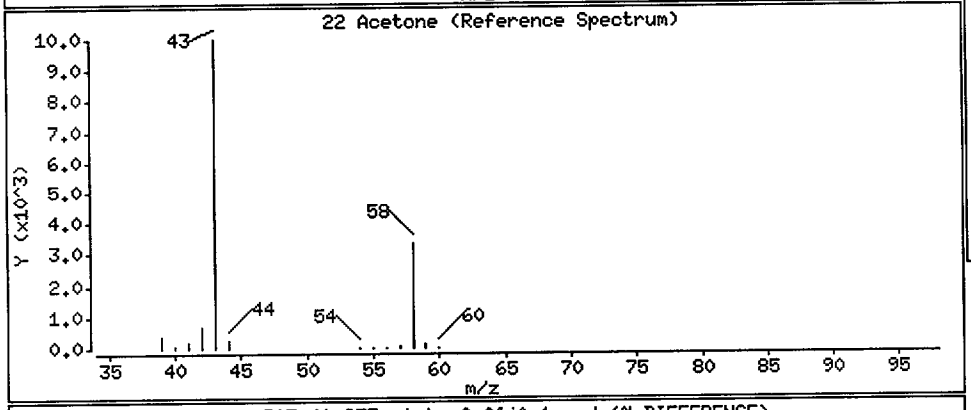
Concentration: 11.046 ug/L

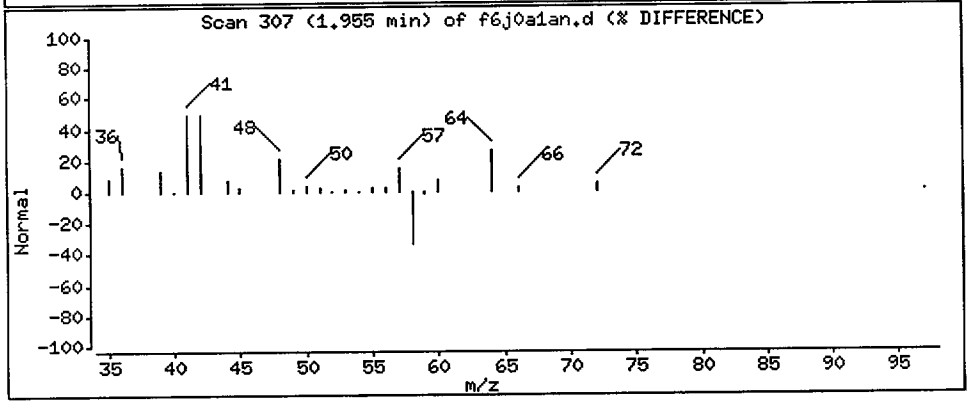












Data File: /chem/gcms/mx.i/X121503.b/f6j0a1an.d

Date : 16-DEC-2003 00:21

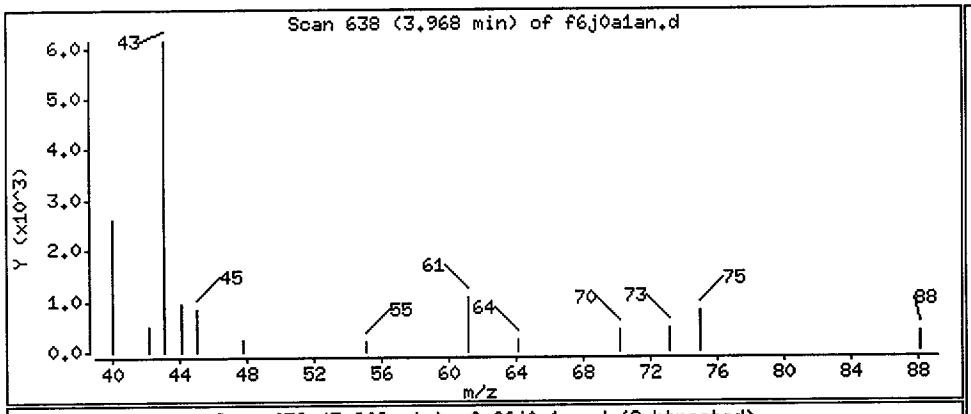
Client ID: DD3005 | Instrument: mx.i

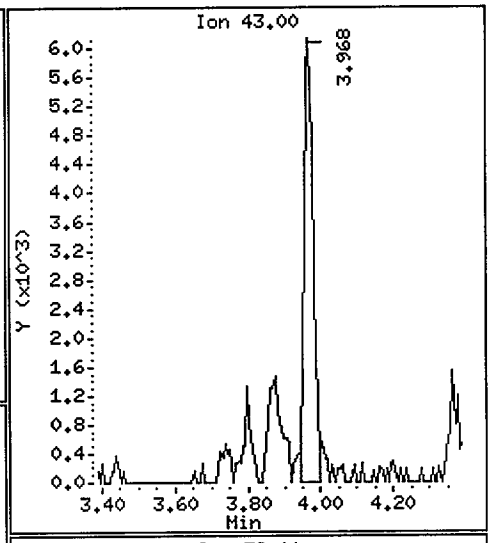
Sample Info: F6J0A1AN,1,0,,

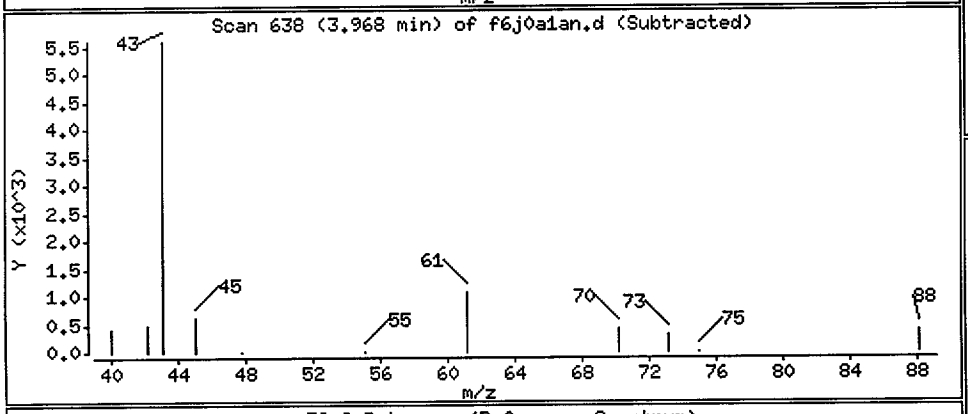
Purge Volume: 25.0 | Operator: 063605

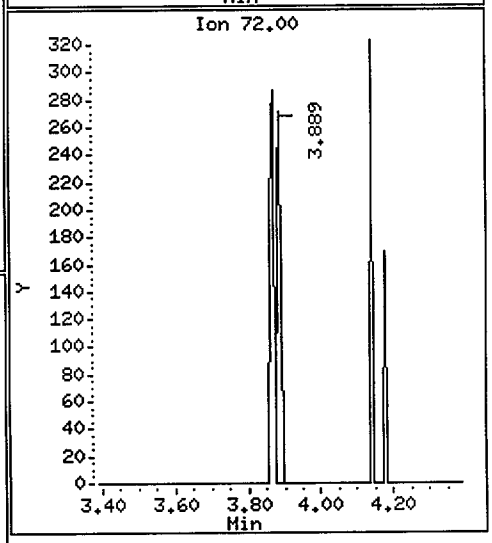
Column phase: J+W 624 | Column diameter: 0.18

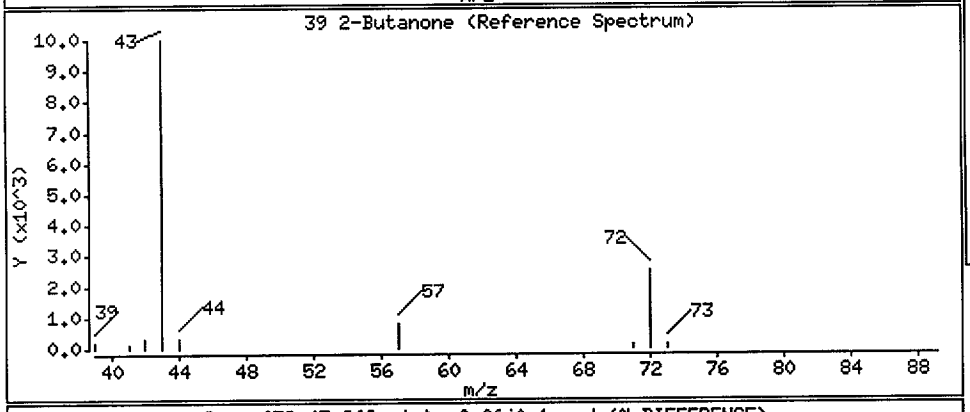
39 2-Butanone | Concentration: 2.5360 ug/L

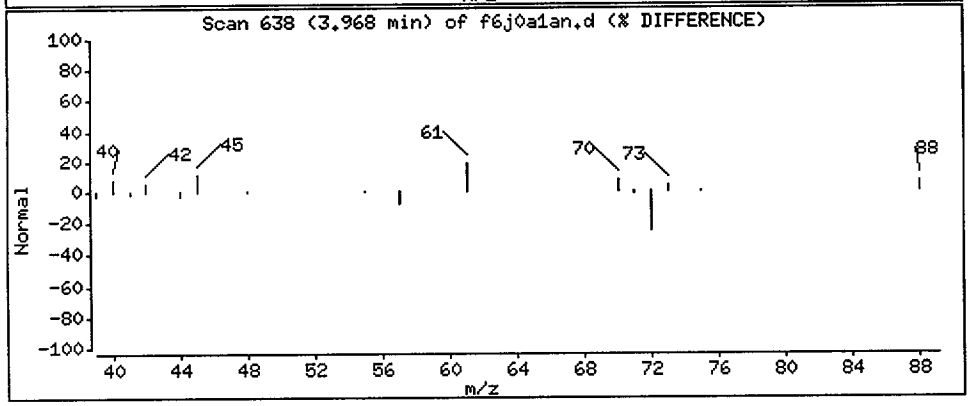












Data File: /chem/gcms/mx.i/X121503.b/f6j0a1an.d

Date : 16-DEC-2003 00:21

Client ID: DD3005

Instrument: mx.i

Sample Info: F6J0A1AN,1,0,,

Purge Volume: 25.0

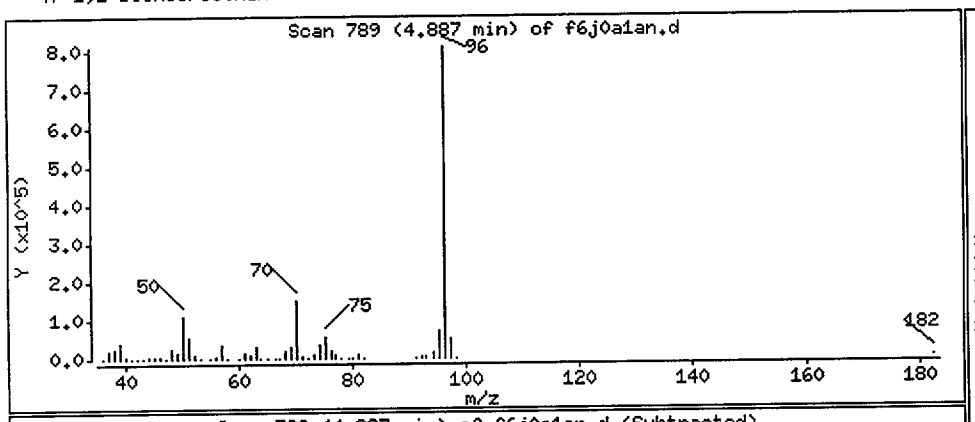
Operator: 063605

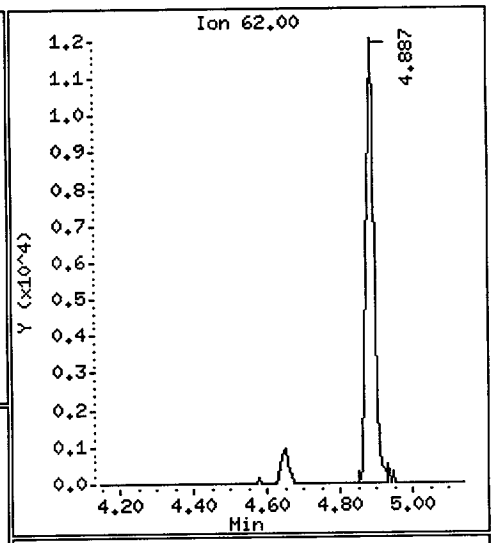
Column phase: J+W 624

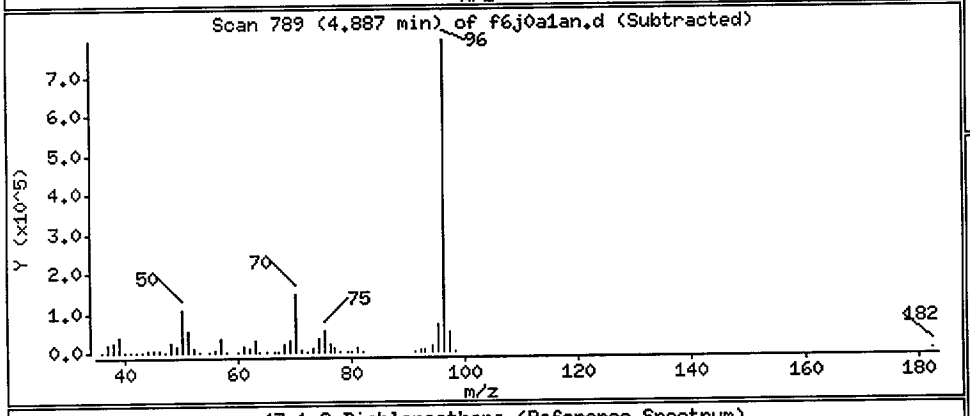
Column diameter: 0.18

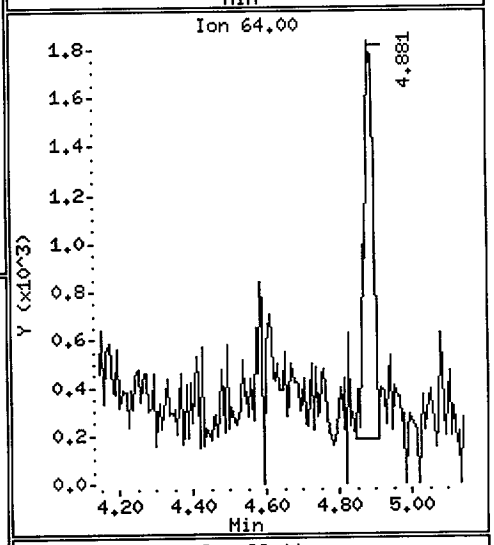
47 1,2-Dichloroethane

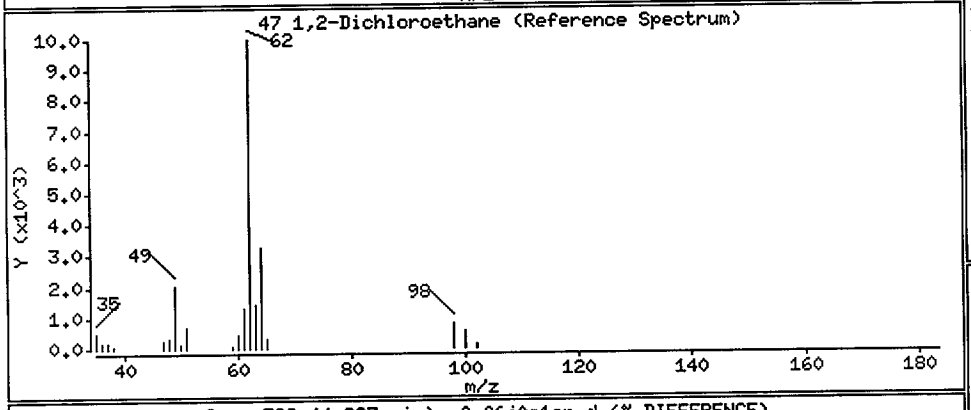
Concentration: 0.80721 ug/L

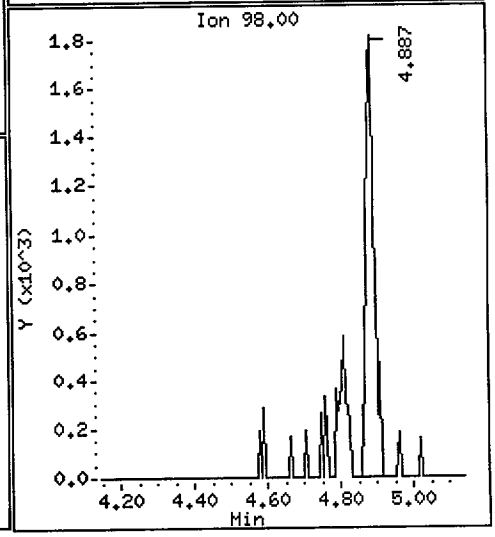


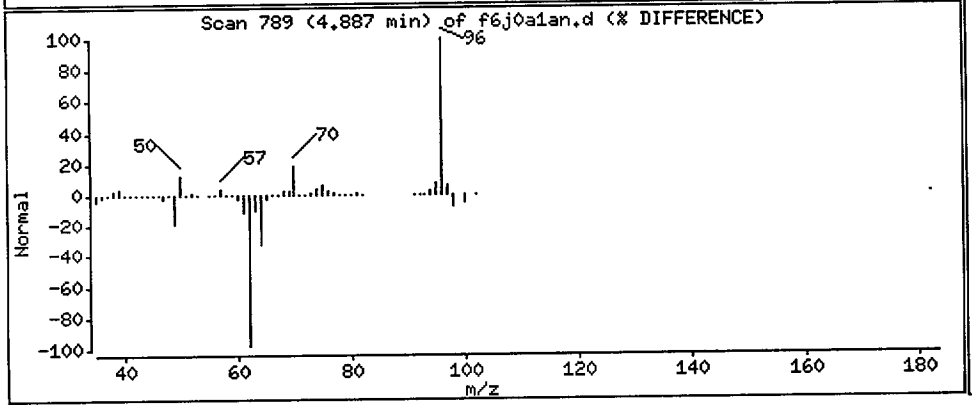












Data File: /chem/gcms/mx.i/X121503.b/f6j0a1an.d

Date : 16-DEC-2003 00:21

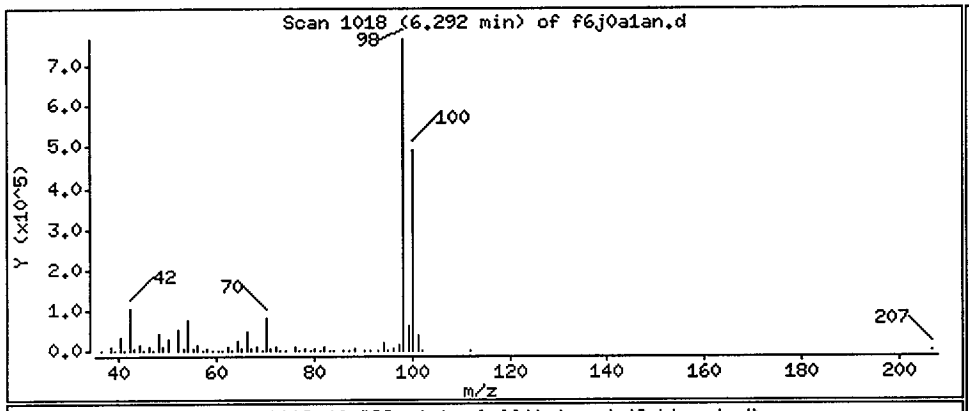
Client ID: DD3005 Instrument: mx.i

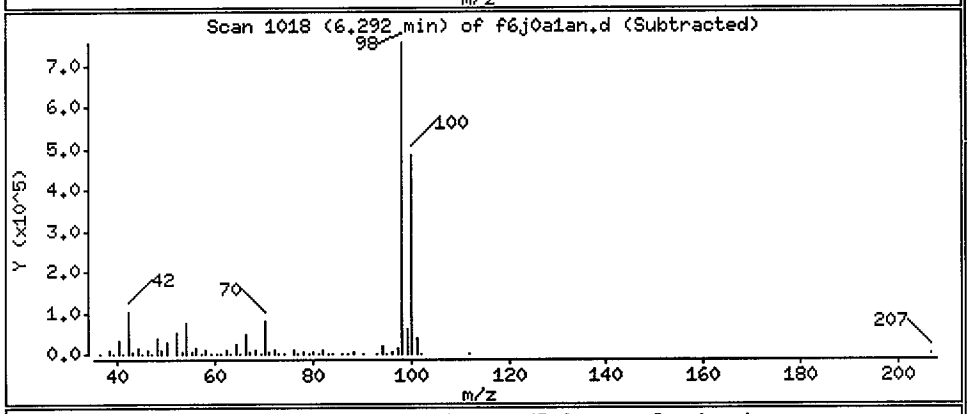
Sample Info: F6J0A1AN,1,0,,

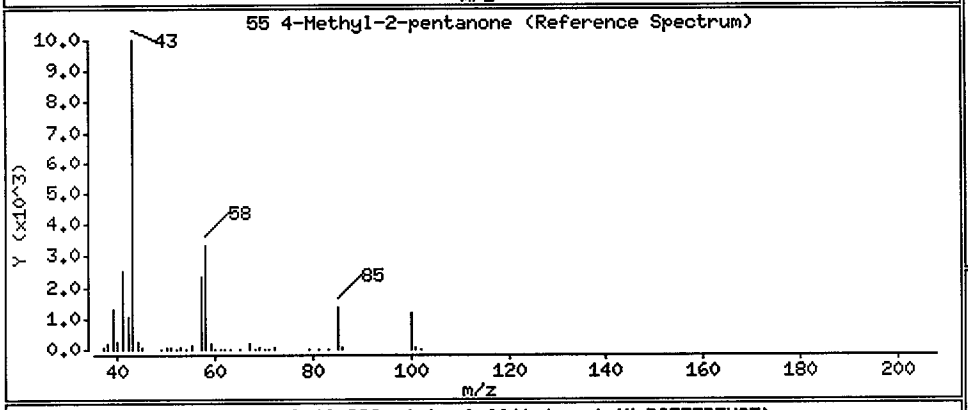
Purge Volume: 25.0 Operator: 063605

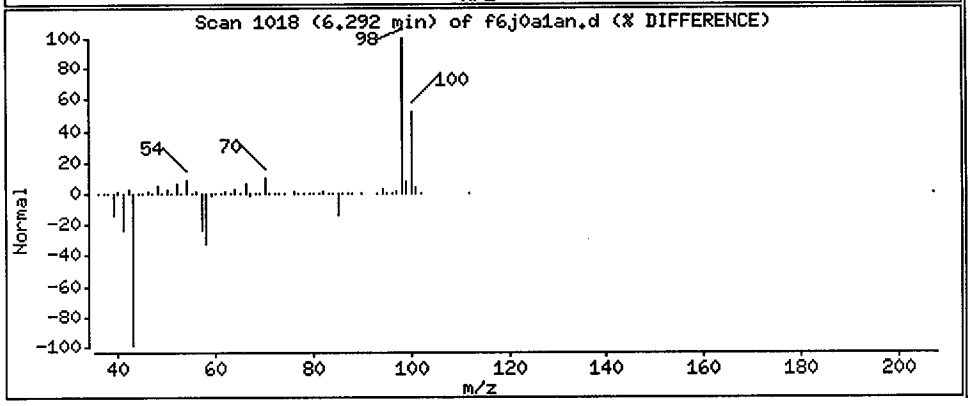
Column phase: J+W 624 Column diameter: 0.18

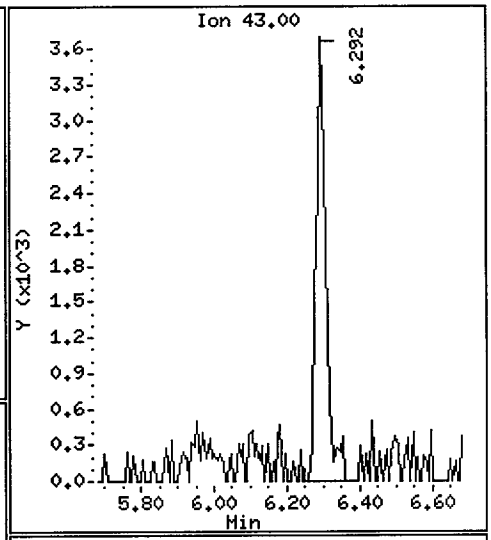
55 4-Methyl-2-pentanone Concentration: 0.67905 ug/L

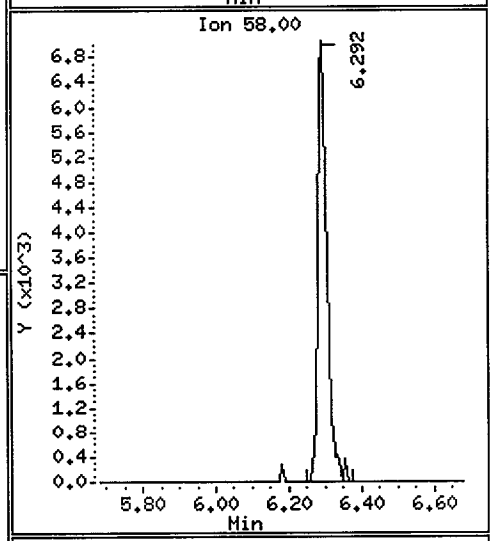


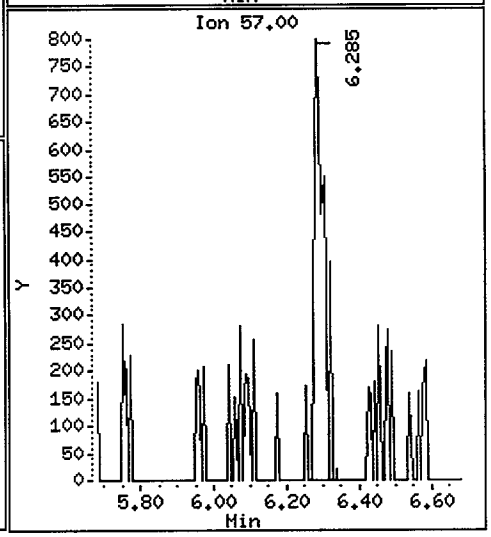












SHAW E & I INC

Client Sample ID: DD5003

GC/MS Volatiles

Lot-Sample #...: H3L120208-004 **Work Order #...:** F6J0Q1AA **Matrix.....:** WATER
Date Sampled...: 12/11/03 **Date Received..:** 12/12/03
Prep Date.....: 12/15/03 **Analysis Date..:** 12/16/03
Prep Batch #...: 3349684
Dilution Factor: 1 **Method.....:** SW846 8260B

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Chloromethane	ND	2.0	ug/L	0.12
Bromomethane	ND	2.0	ug/L	0.38
Vinyl chloride	ND	1.0	ug/L	0.24
Chloroethane	ND	2.0	ug/L	0.24
Methylene chloride	ND	2.0	ug/L	0.23
Acetone	ND	10	ug/L	1.4
Carbon disulfide	ND	1.0	ug/L	0.10
1,1-Dichloroethene	ND	1.0	ug/L	0.10
1,1-Dichloroethane	ND	1.0	ug/L	0.10
1,2-Dichloroethene (total)	ND	1.0	ug/L	0.20
Chloroform	**0.25 J**	**1.0**	**ug/L**	**0.10**
1,2-Dichloroethane	ND	1.0	ug/L	0.10
2-Butanone	ND	5.0	ug/L	0.75
1,1,1-Trichloroethane	ND	1.0	ug/L	0.10
Carbon tetrachloride	ND	1.0	ug/L	0.12
Bromodichloromethane	ND	1.0	ug/L	0.10
1,2-Dichloropropane	ND	1.0	ug/L	0.10
cis-1,3-Dichloropropene	ND	1.0	ug/L	0.10
Trichloroethene	ND	1.0	ug/L	0.10
Dibromochloromethane	ND	1.0	ug/L	0.20
1,1,2-Trichloroethane	ND	1.0	ug/L	0.25
Benzene	ND	1.0	ug/L	0.10
trans-1,3-Dichloropropene	ND	1.0	ug/L	0.11
Bromoform	ND	1.0	ug/L	0.14
4-Methyl-2-pentanone	ND	5.0	ug/L	0.40
2-Hexanone	ND	5.0	ug/L	0.76
Tetrachloroethene	ND	1.0	ug/L	0.10
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.15
Toluene	**0.12 J**	**1.0**	**ug/L**	**0.10**
Chlorobenzene	ND	1.0	ug/L	0.10
Ethylbenzene	ND	1.0	ug/L	0.10
Styrene	ND	1.0	ug/L	0.10
Xylenes (total)	ND	1.0	ug/L	0.30

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	94	(79 - 120)
1,2-Dichloroethane-d4	95	(71 - 127)
Toluene-d8	100	(80 - 120)
Bromofluorobenzene	89	(69 - 126)

(Continued on next page)

SHAW E & I INC

Client Sample ID: DD5003

GC/MS Volatiles

Lot-Sample #...: H3L120208-004 **Work Order #...:** F6J0Q1AA **Matrix.....:** WATER

NOTE(S):

J Estimated result. Result is less than RL.

Data File: /chem/gcms/mx.i/X121503.b/f6j0q1aa.d
Report Date: 16-Dec-2003 01:02

STL Knoxville

SW-846 Method 8260A - Volatile Organics

Data file : /chem/gcms/mx.i/X121503.b/f6j0q1aa.d
Lab Smp Id: F6J0Q1AA Client Smp ID: DD5003
Inj Date : 16-DEC-2003 00:46
Operator : 063605 Inst ID: mx.i
Smp Info : F6J0Q1AA,1,0,,
Misc Info : X121503,8260B_LM,s1.sub
Comment :
Method : /var/chem/gcms/mx.i/X121503.b/8260B_LM.m
Meth Date : 15-Dec-2003 18:56 tillerm Quant Type: ISTD
Cal Date : 16-SEP-2003 12:52 Cal File: icxi166.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: s1.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * Uf*Vt/(Vo*1000) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Unit Correction factor
Vt	25000.00000	Sample Volume Purged
Vo	25.00000	Sample Volume Used

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
* 1 Fluorobenzene	96	4.883	4.887	(1.000)	1399601	10.0000	
* 2 Chlorobenzene-d5	119	7.623	7.624	(1.000)	282488	10.0000	
* 3 1,4 Dichlorobenzene-d4	152	10.823	10.818	(1.000)	331931	10.0000	
$ 5 1,2-Dichloroethane-d4	65	4.579	4.583	(0.938)	170341	9.47280	9.4728
$ 4 Dibromofluoromethane	113	4.299	4.297	(0.880)	219922	9.43591	9.4359
$ 6 Toluene-d8	98	6.291	6.292	(0.825)	1302203	10.0355	10.035
$ 7 4-Bromofluorobenzene	95	8.925	8.926	(0.825)	353558	8.89870	8.8987
11 Chloromethane (spcc)	50	1.233	1.231	(0.252)	10785	~~0.39968~~	~~0.39968~~
15 Chloroethane	64	1.604	1.651	(0.328)	10555	~~0.38149~~	~~0.38149~~
42 Chloroform (ccc)	83	4.165	4.163	(0.853)	12719	0.25345	0.25345
47 1,2-Dichloroethane	62	4.883	4.644	(1.000)	18783	0.82531	0.82531
55 4-Methyl-2-pentanone	43	6.285	6.183	(1.287)	6958	~~0.68461~~	~~0.68461~~
56 Toluene (ccc)	91	6.352	6.353	(0.833)	20777	0.12410	0.12410
58 1,1,2-Trichloroethane	97	6.297	6.712	(0.826)	31272	~~2.46297~~	~~2.4630~~

MT 12/16/03

Data File: /chem/gcms/mx.i/X121503.b/f6j0q1aa.d
Report Date: 16-Dec-2003 01:02

STL Knoxville

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: mx.i
Lab File ID: f6j0q1aa.d
Lab Smp Id: F6J0Q1AA
Analysis Type: VOA
Quant Type: ISTD
Operator: 063605
Method File: /var/chem/gcms/mx.i/X121503.b/8260B_LM.m
Misc Info: X121503,8260B_LM,s1.sub

Calibration Date: 15-DEC-2003
Calibration Time: 16:45
Client Smp ID: DD5003
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Fluorobenzene	1461276	730638	2922552	1399601	-4.22
2 Chlorobenzene-d5	293714	146857	587428	282488	-3.82
3 1,4 Dichlorobenze	323953	161976	647906	331931	2.46

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Fluorobenzene	4.89	4.39	5.39	4.88	-0.09
2 Chlorobenzene-d5	7.62	7.12	8.12	7.62	-0.01
3 1,4 Dichlorobenze	10.82	10.32	11.32	10.82	0.05

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

Data File: /chem/gcms/mx.i/X121503.b/f6j0q1aa.d
Report Date: 16-Dec-2003 01:02

STL Knoxville

RECOVERY REPORT

Client Name: SHAW E & I INC
Sample Matrix: LIQUID
Lab Smp Id: F6J0Q1AA
Level: LOW
Data Type: MS DATA
SpikeList File: allcmpds.spk
Sublist File: s1.sub
Method File: /var/chem/gcms/mx.i/X121503.b/8260B_LM.m
Misc Info: X121503,8260B_LM,s1.sub

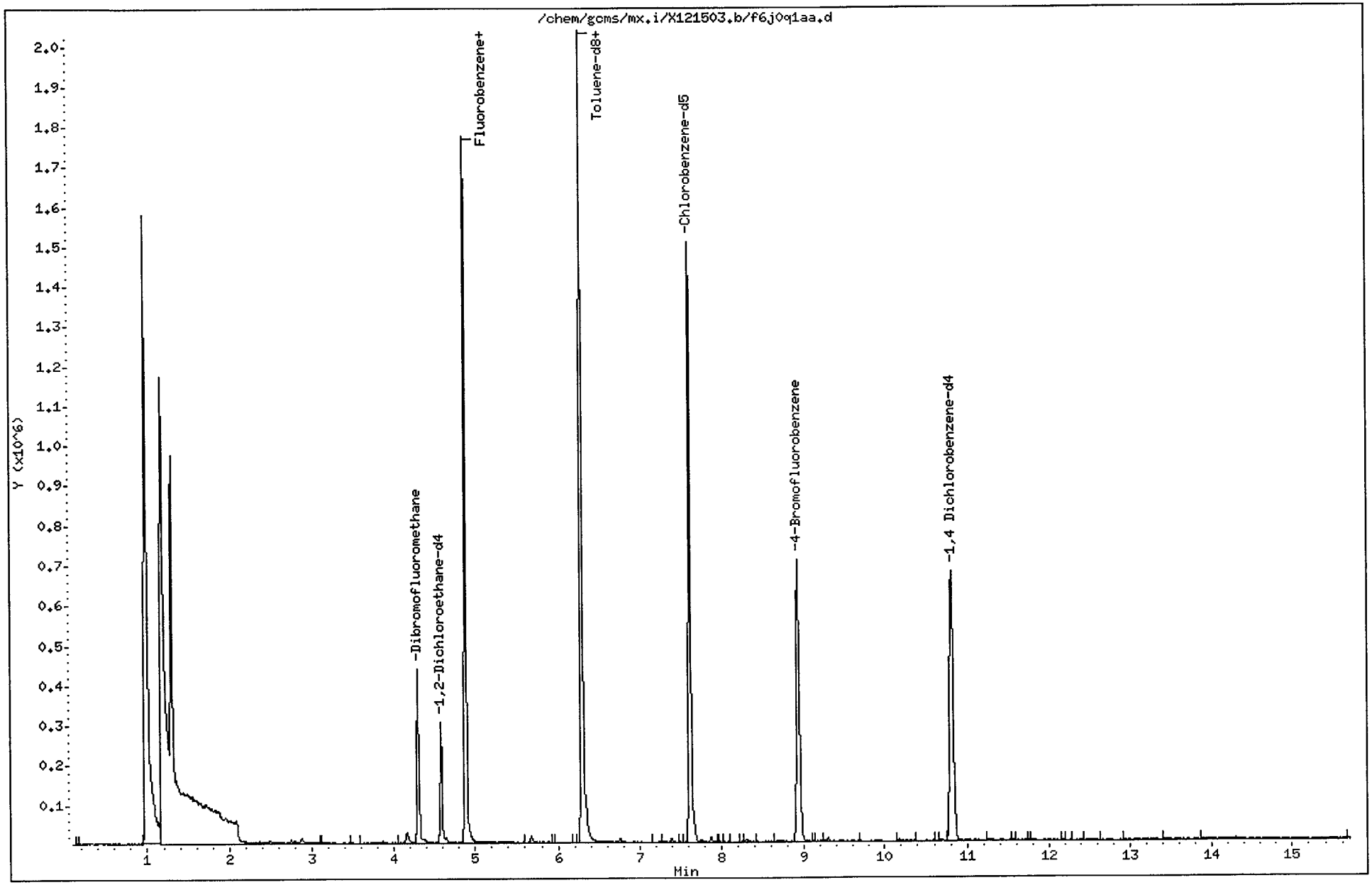
Client SDG: PB045
Fraction: VOA
Client Smp ID: DD5003
Operator: 063605
SampleType: SAMPLE
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 5 1,2-Dichloroethane	10.000	9.4728	94.73	71-127
$ 4 Dibromofluorometha	10.000	9.4359	94.36	79-120
$ 6 Toluene-d8	10.000	10.035	100.35	80-120
$ 7 4-Bromofluorobenze	10.000	8.8987	88.99	69-126

Data File: /chem/gcms/mx.i/X121503.b/f6j0q1aa.d
Date : 16-DEC-2003 00:46
Client ID: DD5003
Sample Info: F6J0Q1AA,1,0,,
Purge Volume: 25.0
Column phase: J+W 624

Instrument: mx.i

Operator: 063605
Column diameter: 0.18



Data File: /chem/gcms/mx.i/X121503.b/f6j0q1aa.d

Date : 16-DEC-2003 00:46

Client ID: DD5003

Instrument: mx.i

Sample Info: F6J0Q1AA,1,0,,

Purge Volume: 25.0

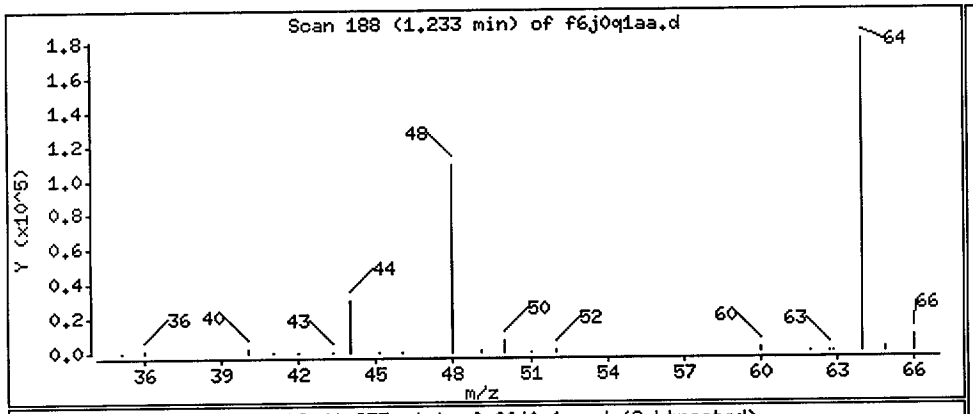
Operator: 063605

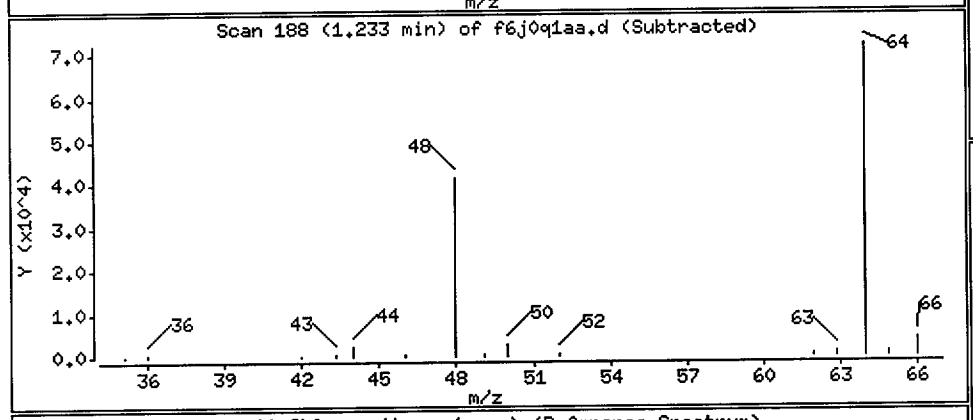
Column phase: J+W 624

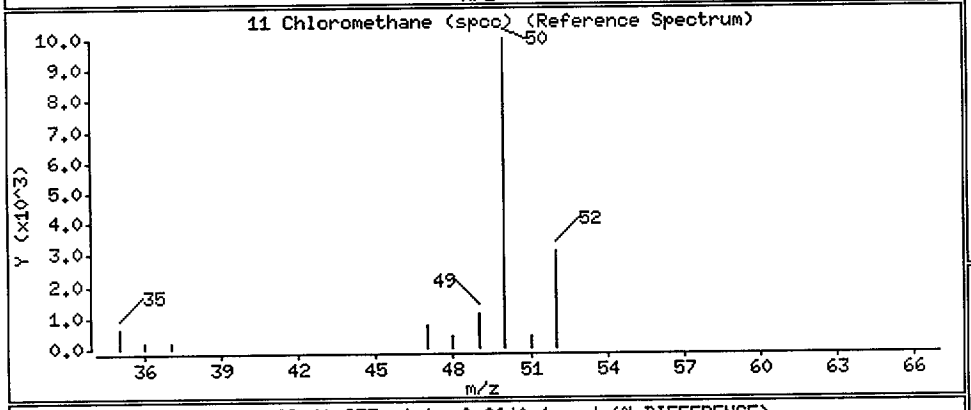
Column diameter: 0.18

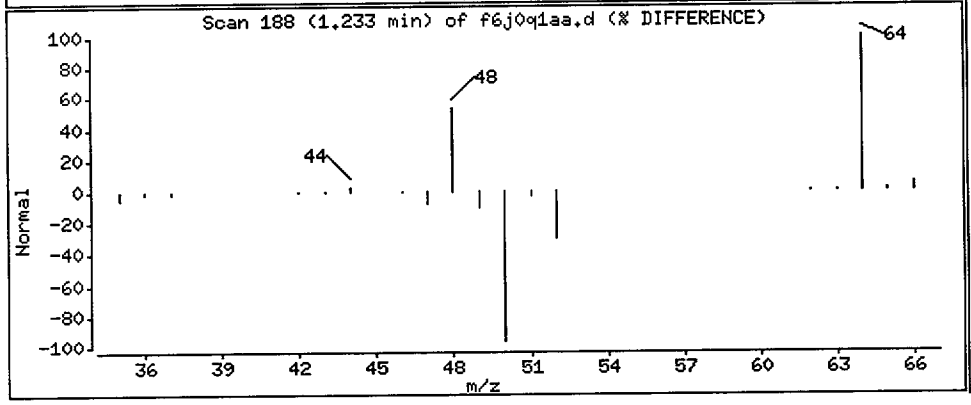
11 Chloromethane (spcc)

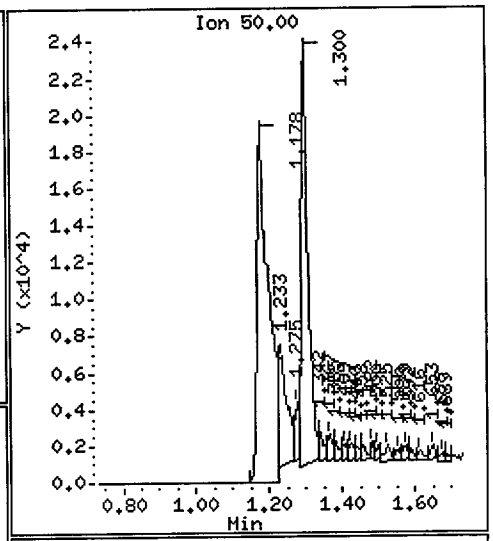
Concentration: 0.39968 ug/L

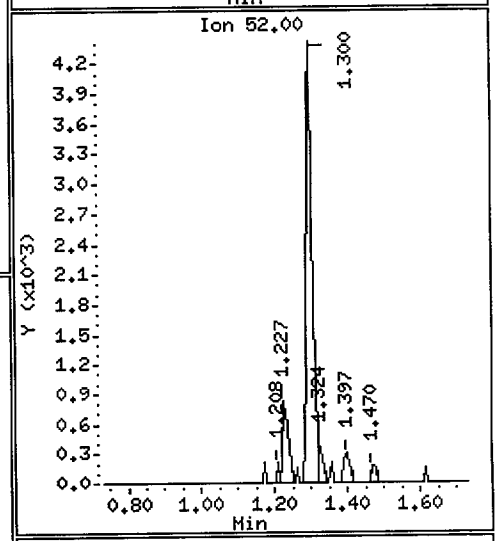


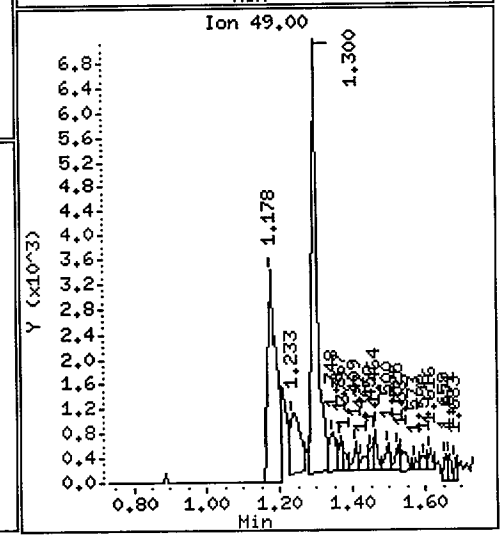












Data File: /chem/gcms/mx.i/X121503.b/f6j0q1aa.d

Date : 16-DEC-2003 00:46

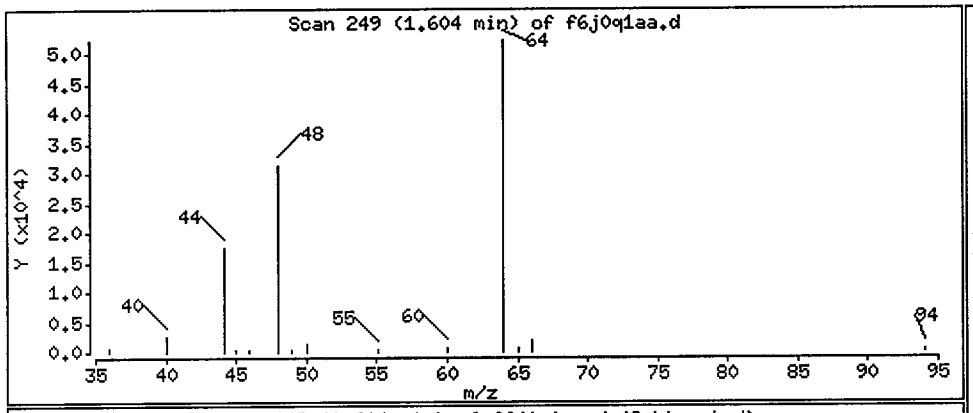
Client ID: DD5003 | Instrument: mx.i

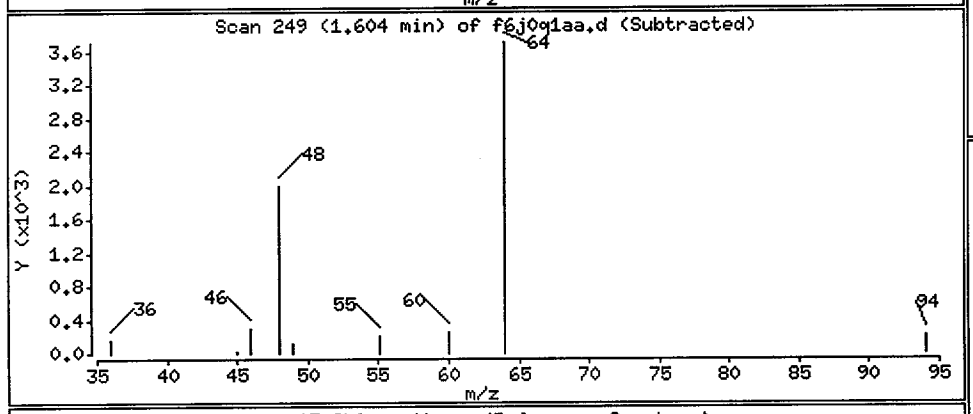
Sample Info: F6J0Q1AA,1,0,,

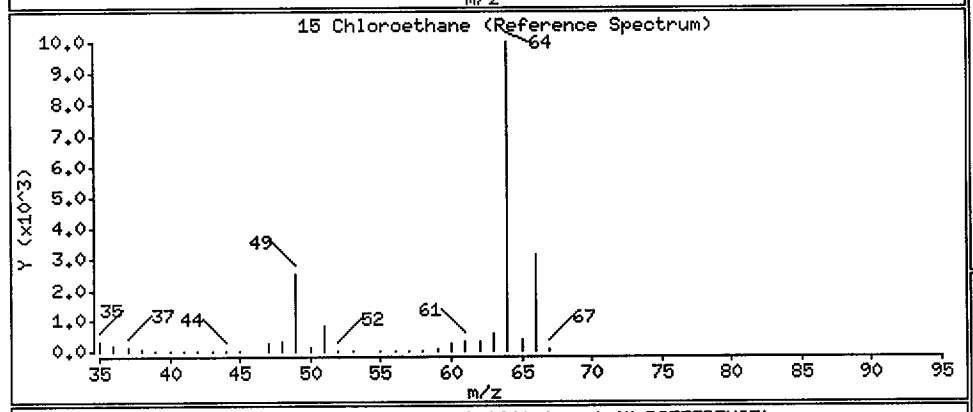
Purge Volume: 25.0 | Operator: 063605

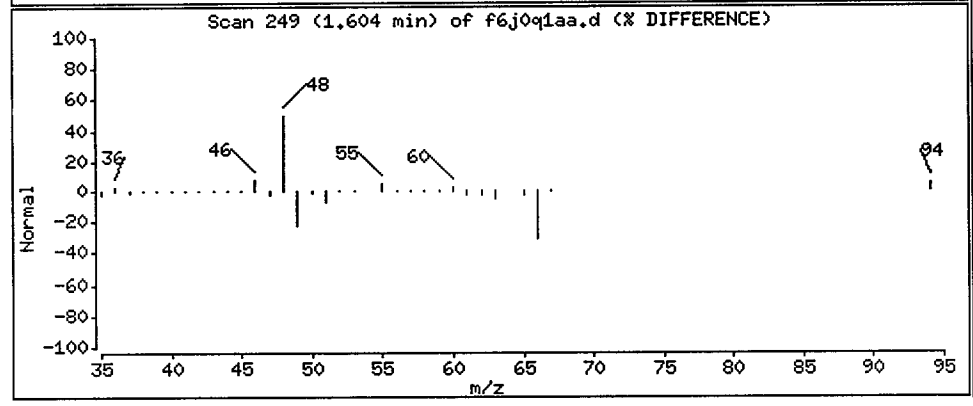
Column phase: J+W 624 | Column diameter: 0.18

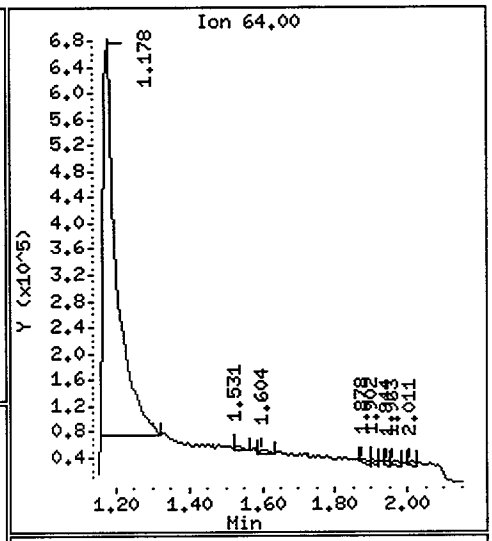
15 Chloroethane | Concentration: 0.38149 ug/L

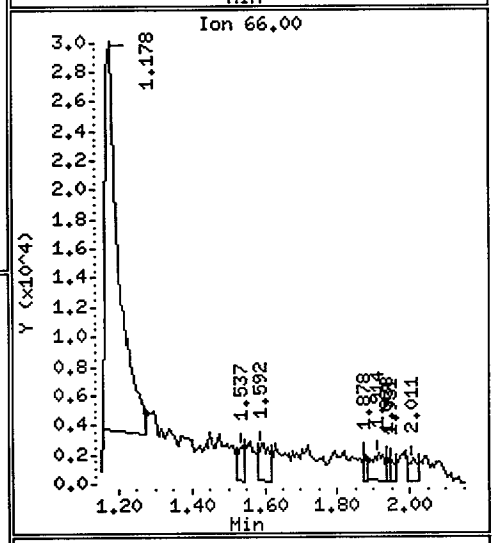


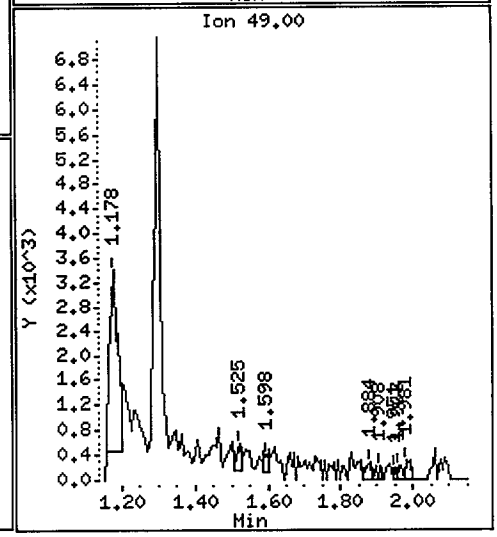












Data File: /chem/gcms/mx.i/X121503.b/f6j0q1aa.d

Date : 16-DEC-2003 00:46

Client ID: DD5003

Instrument: mx.i

Sample Info: F6J0Q1AA,1,0,,

Purge Volume: 25.0

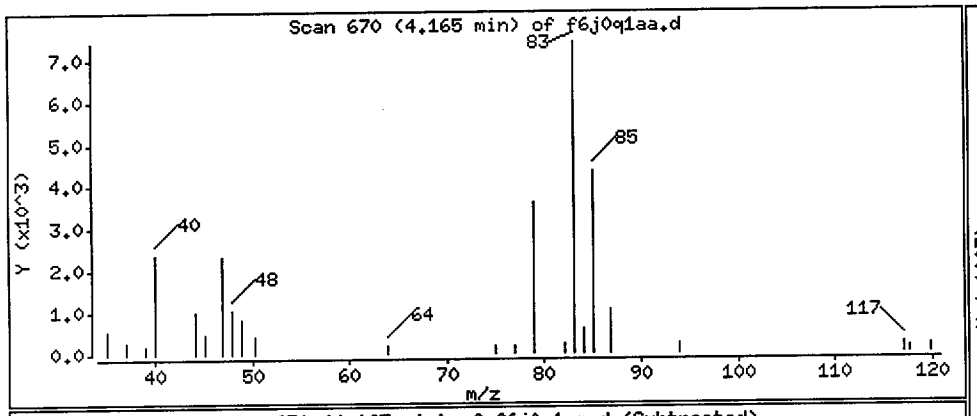
Operator: 063605

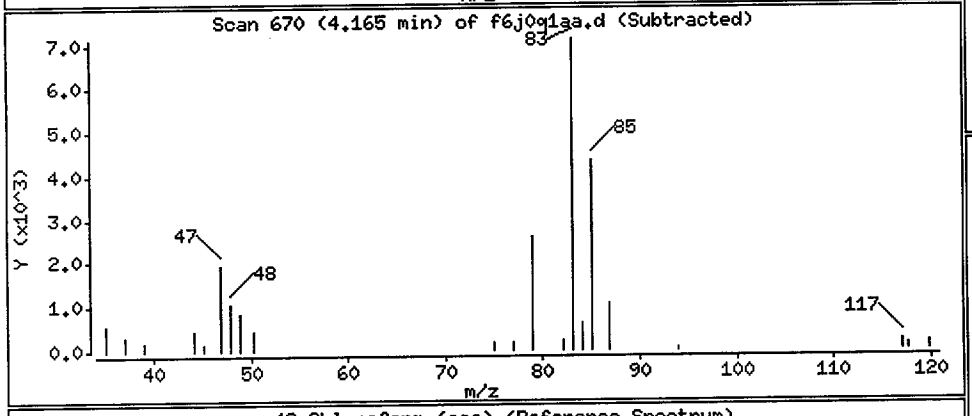
Column phase: J+W 624

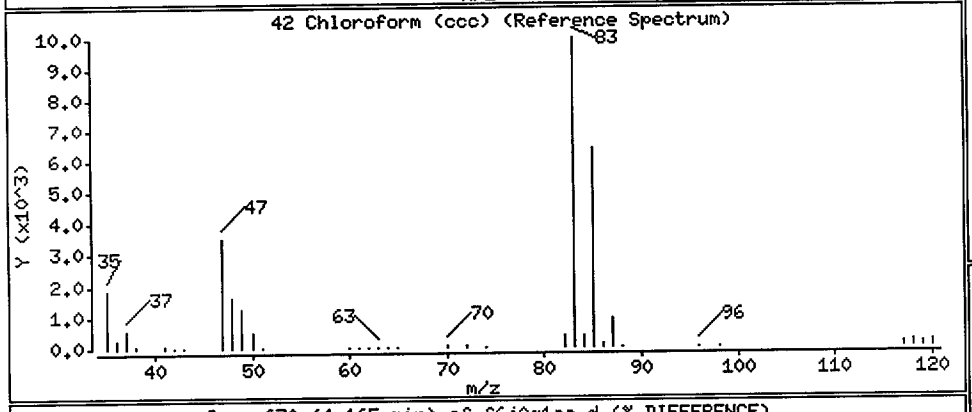
Column diameter: 0.18

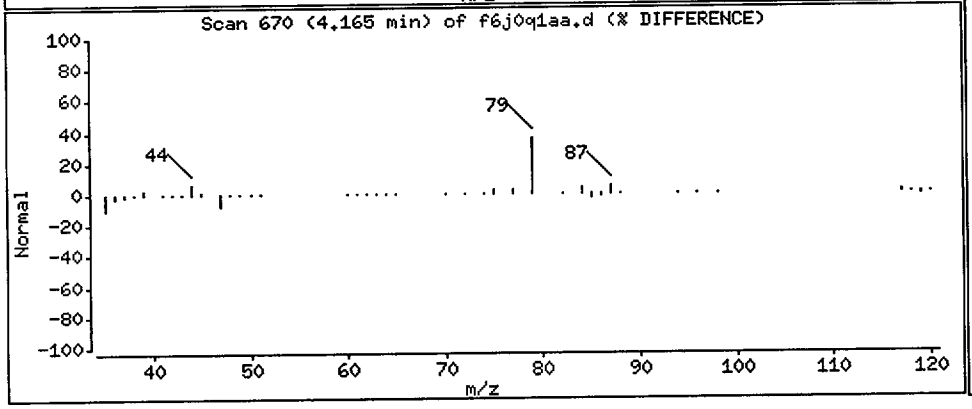
42 Chloroform (ccc)

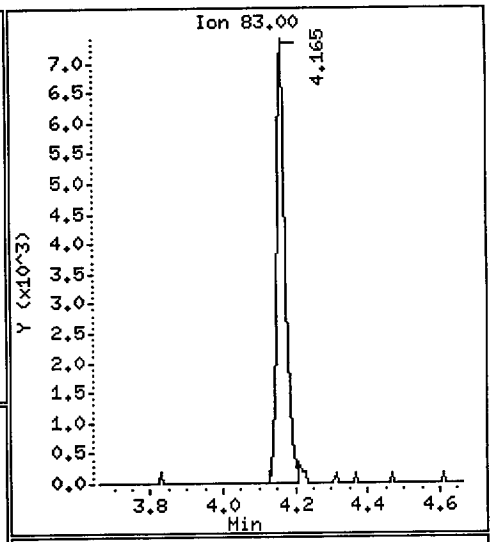
Concentration: 0.25345 ug/L

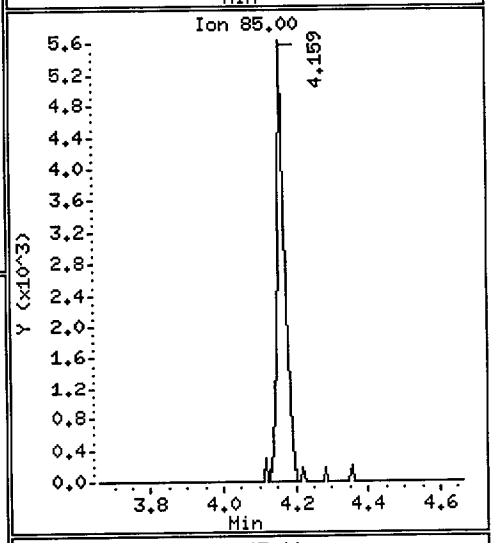


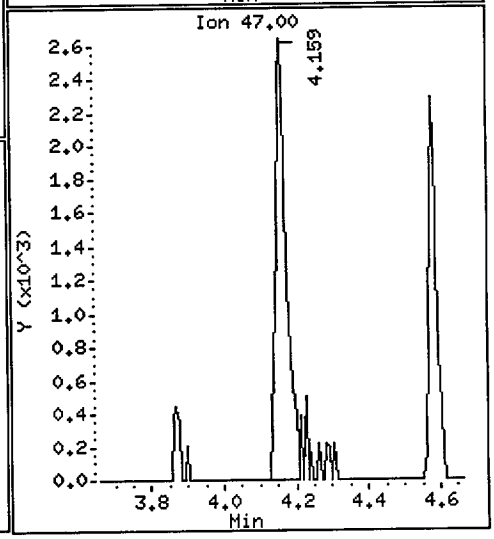












Data File: /chem/gcms/mx.i/X121503.b/f6j0q1aa.d

Date : 16-DEC-2003 00:46

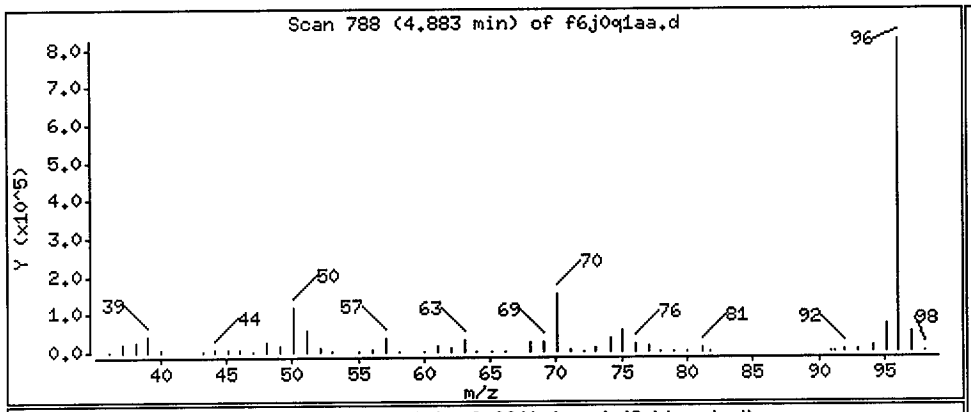
Client ID: DD5003 Instrument: mx.i

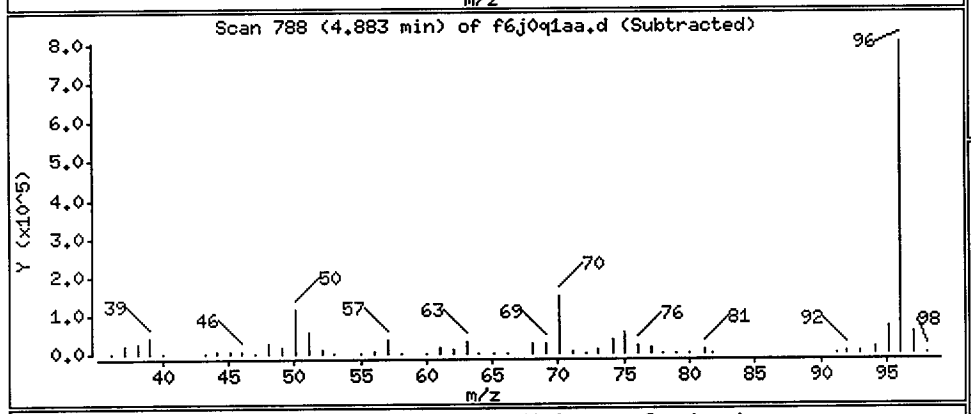
Sample Info: F6J0Q1AA,1,0,,

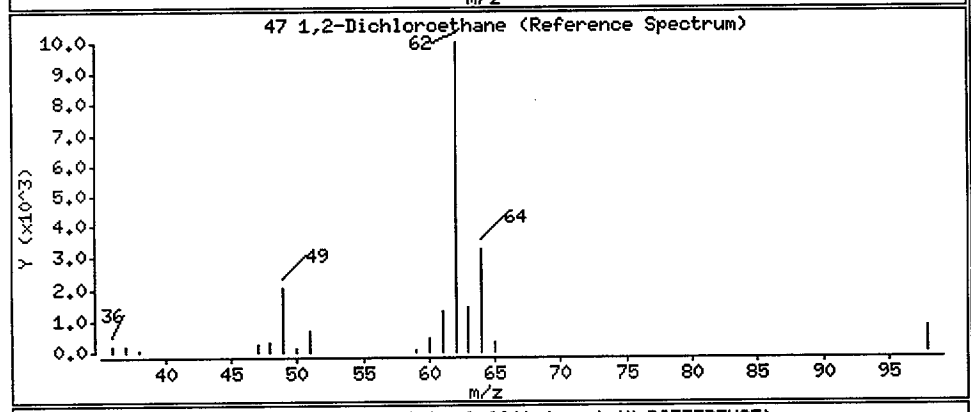
Purge Volume: 25.0 Operator: 063605

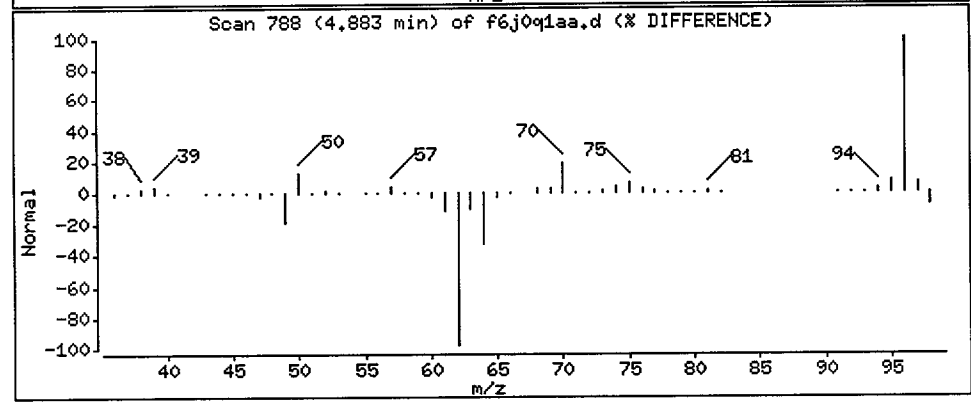
Column phase: J+W 624 Column diameter: 0.18

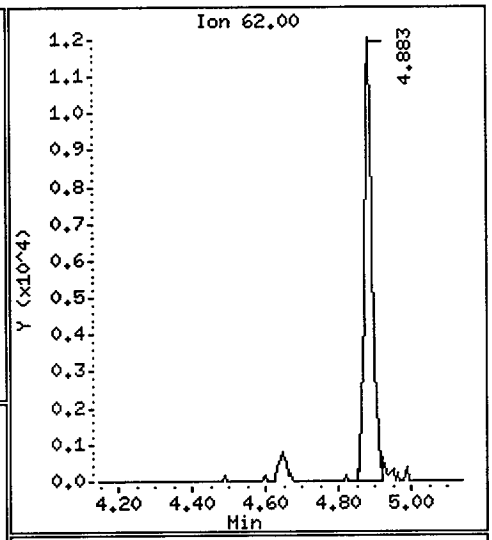
47 1,2-Dichloroethane Concentration: 0.82531 ug/L

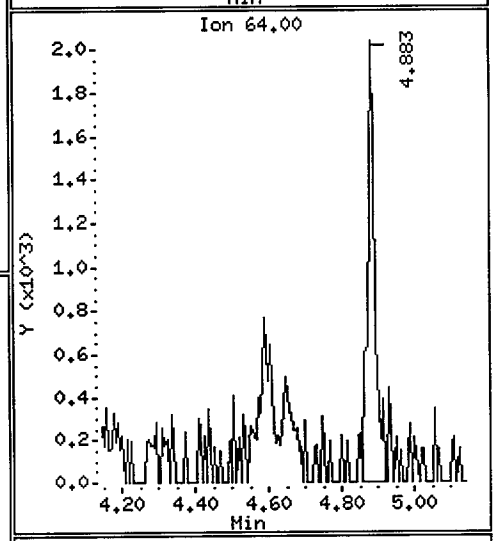


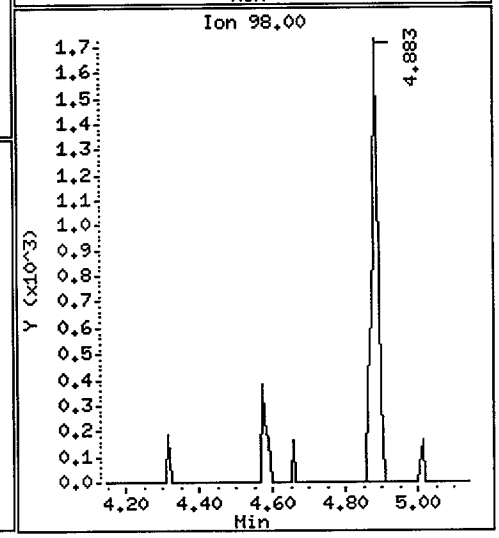












Data File: /chem/gcms/mx.i/X121503.b/f6j0q1aa.d

Date : 16-DEC-2003 00:46

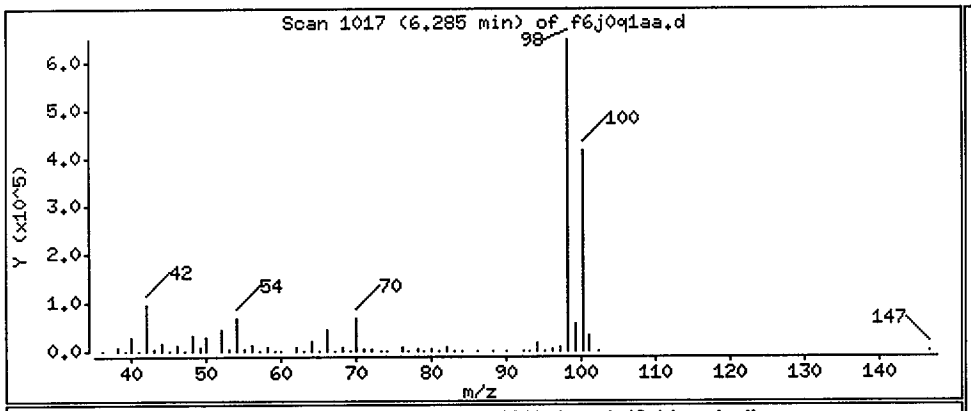
Client ID: DD5003 Instrument: mx.i

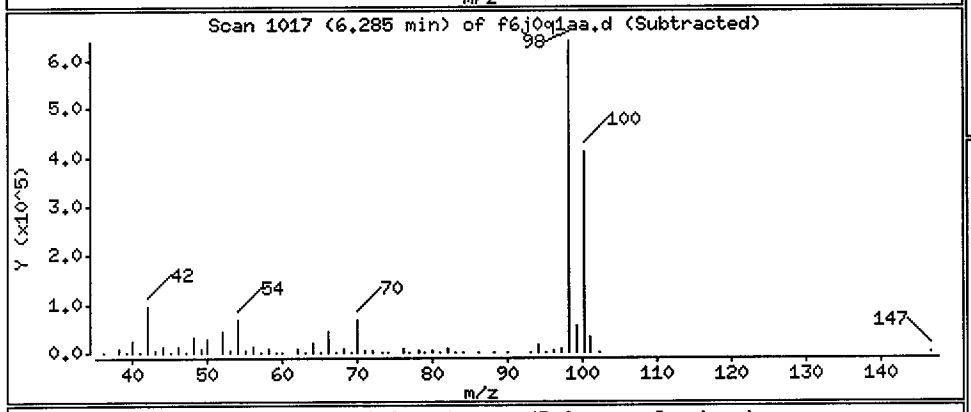
Sample Info: F6J0Q1AA,1,0,,

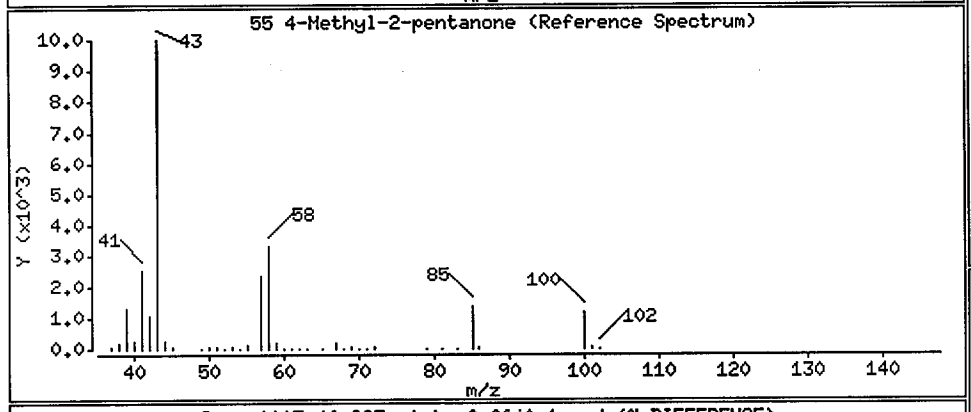
Purge Volume: 25.0 Operator: 063605

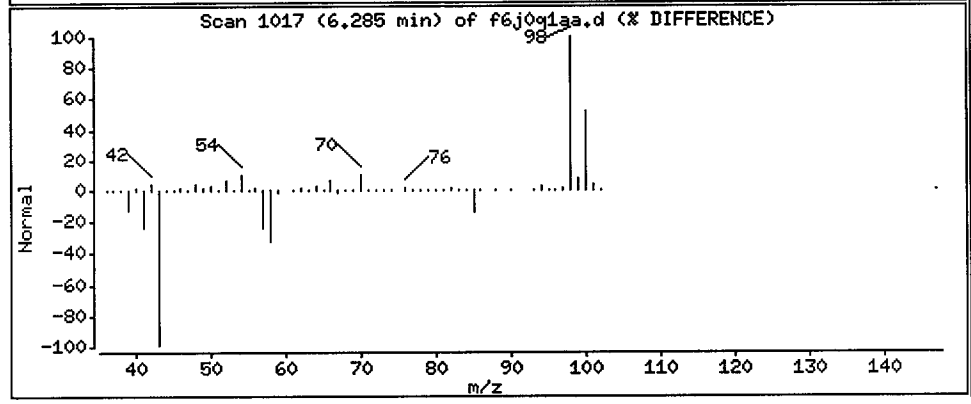
Column phase: J+W 624 Column diameter: 0.18

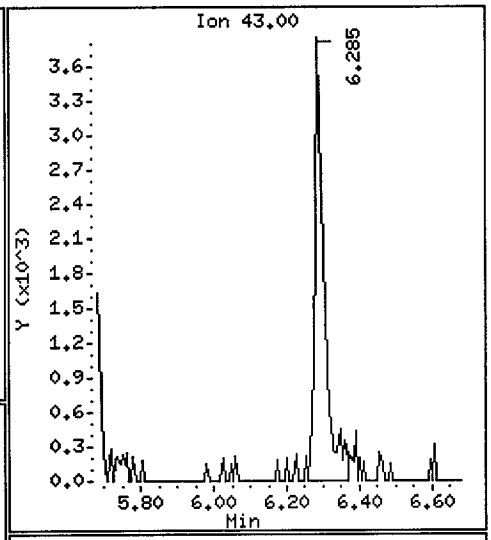
55 4-Methyl-2-pentanone Concentration: 0.68461 ug/L

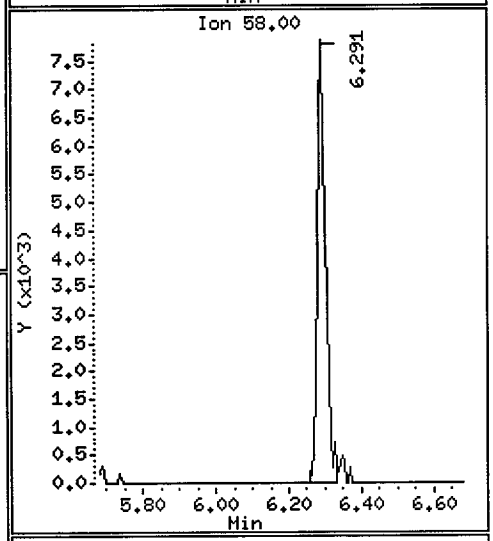


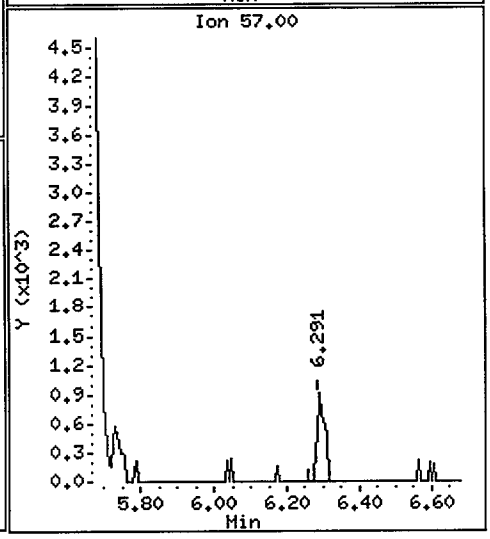












Data File: /chem/gcms/mx.i/X121503.b/f6j0q1aa.d

Date : 16-DEC-2003 00:46

Client ID: DD5003

Instrument: mx.i

Sample Info: F6J0Q1AA,1,0,,

Purge Volume: 25.0

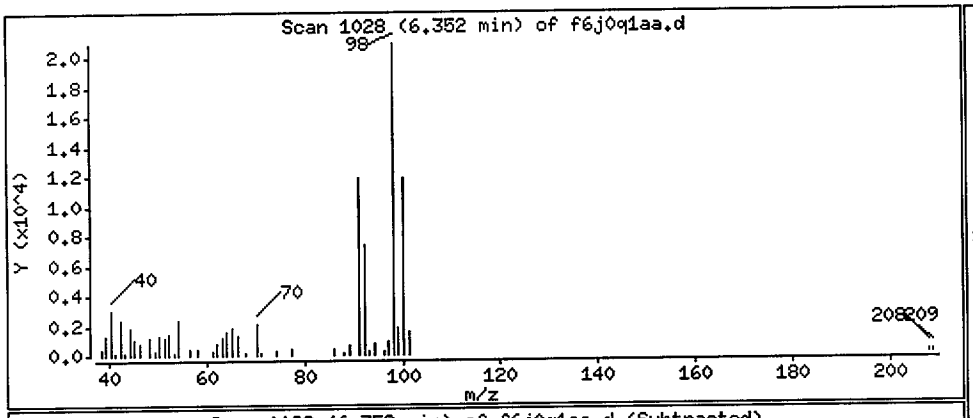
Operator: 063605

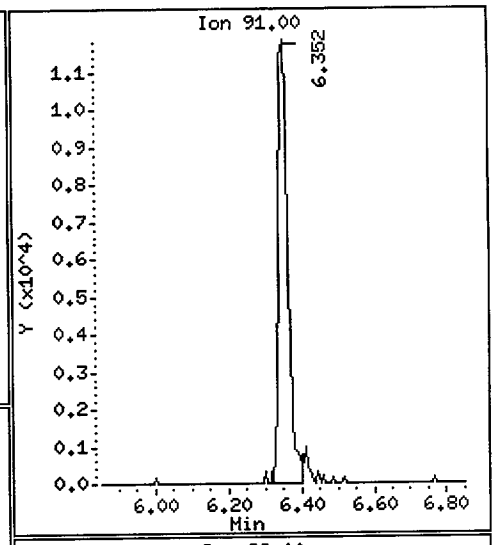
Column phase: J+W 624

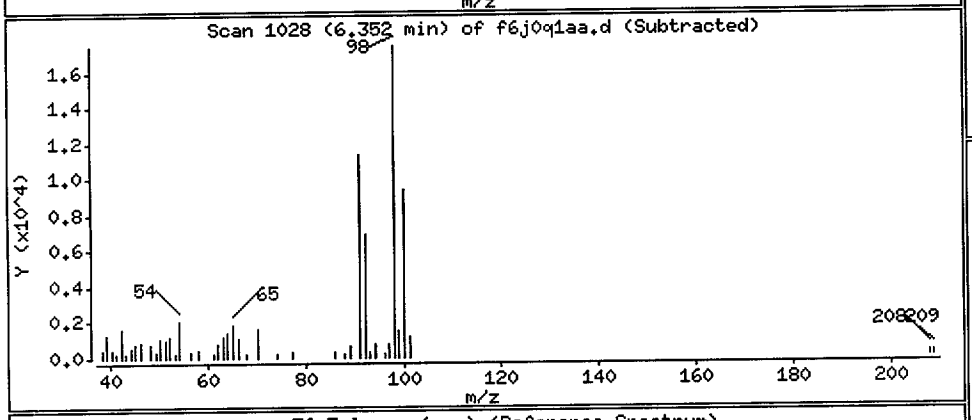
Column diameter: 0.18

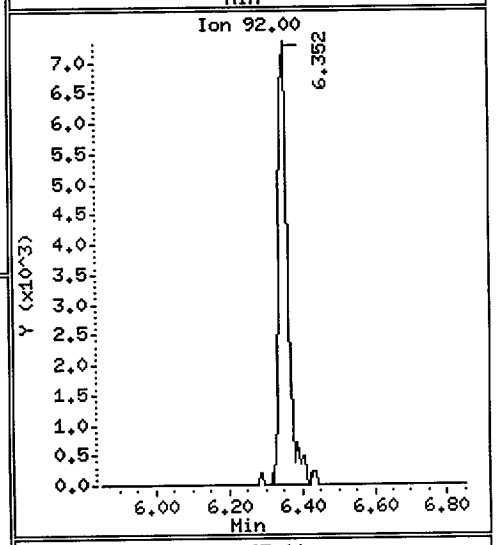
56 Toluene (ccc)

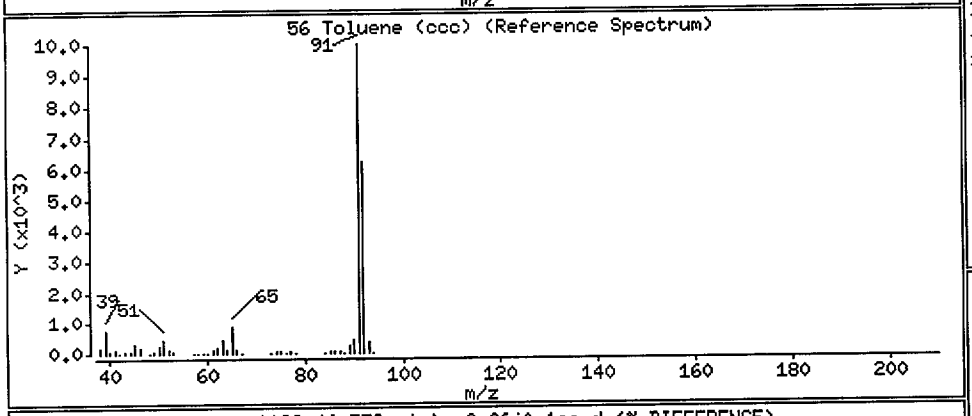
Concentration: 0.12410 ug/L

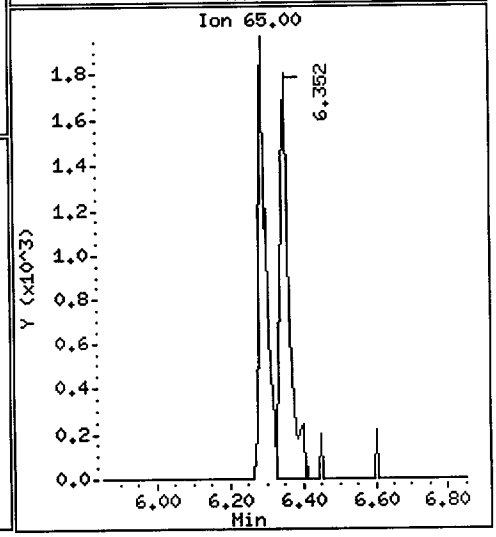


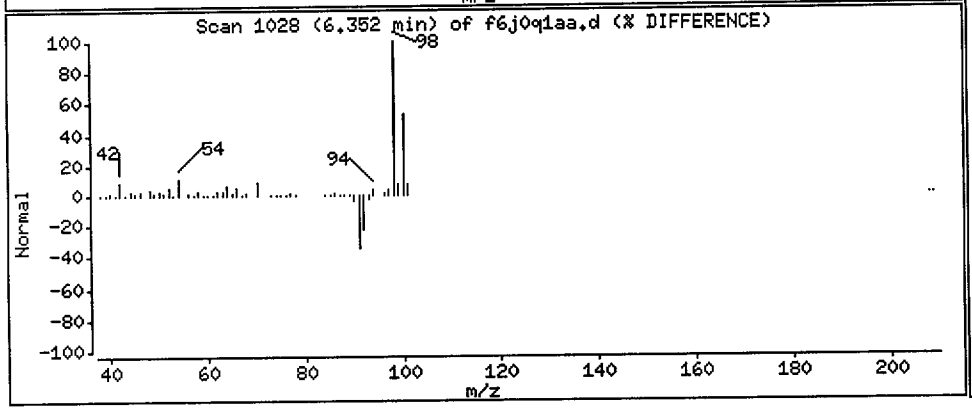












Data File: /chem/gcms/mx.i/X121503.b/f6j0q1aa.d

Date : 16-DEC-2003 00:46

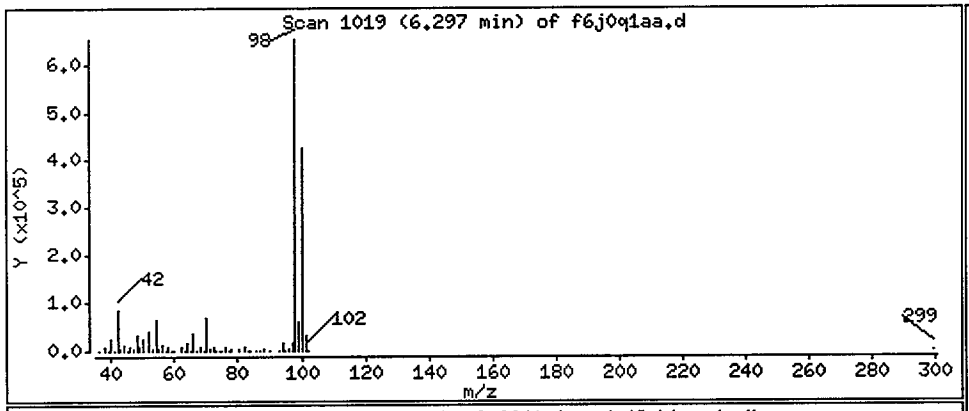
Client ID: DD5003 Instrument: mx.i

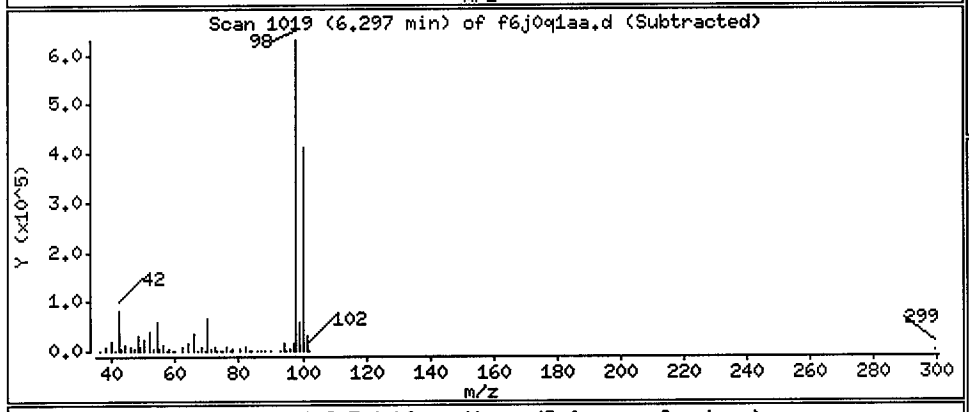
Sample Info: F6J0Q1AA,1,0,,

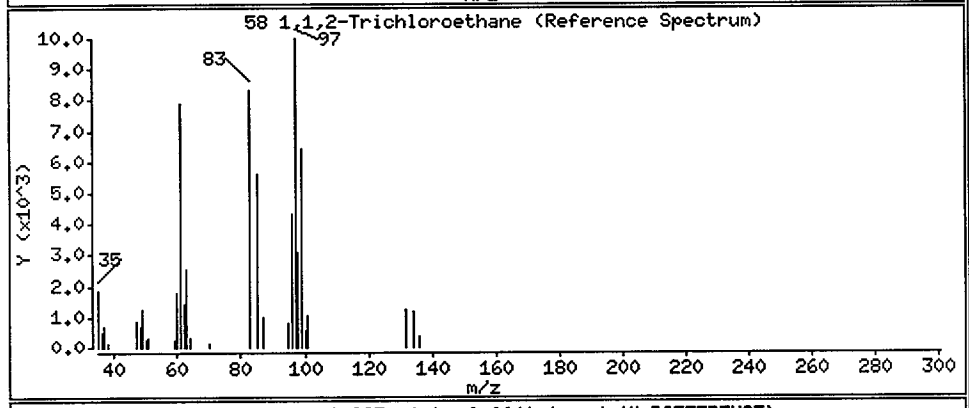
Purge Volume: 25.0 Operator: 063605

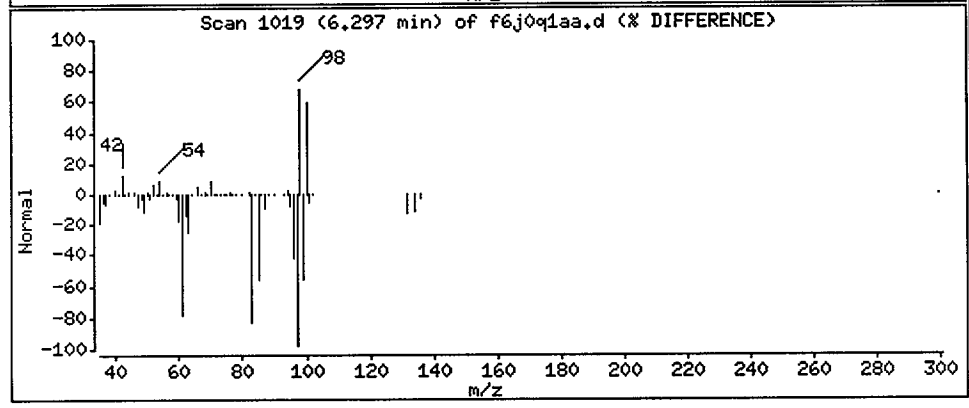
Column phase: J+W 624 Column diameter: 0.18

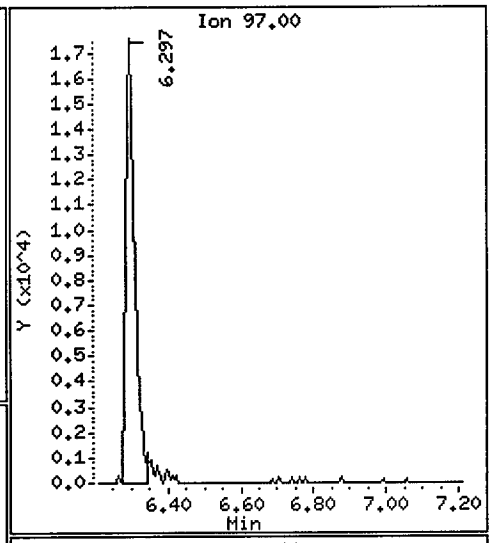
58 1,1,2-Trichloroethane Concentration: 2.4630 ug/L

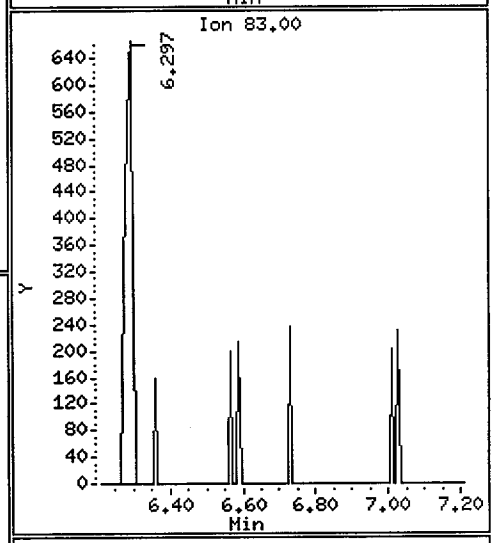


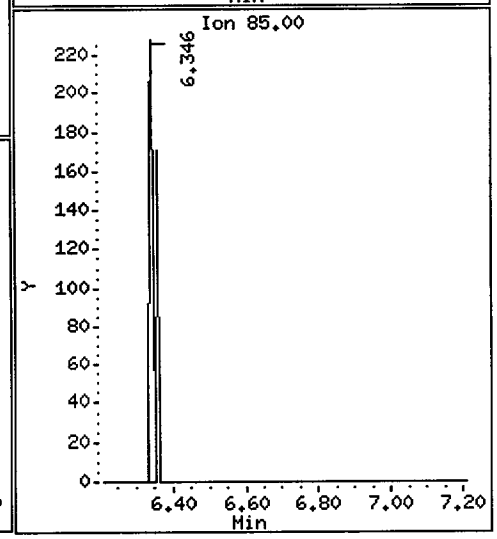












Standards Data

STL Volatile GC/MS Initial Calibration Data Review / Narrative Checklist
Method: 8260B – KNOX-MS-0015, Rev. 3

Analysis Date:	9/16/03	Instrument:	MX	ICAL Batch/Scan Name:	XD91603I	Scanned ☒

Review Items	N/A	Yes	No	If No, why is data reportable?	2nd ✓
1. Did BFB meet tune criteria?		✓			✓
2. Were all standards injected within 12 hr of BFB?		✓			✓
3. Was date/time of analysis verified between analysis header and logbook as correct?		✓			✓
4. Were ≥ 5 levels of each compound/surrogate analyzed?		✓			✓
5. 8260B: Was low level standard at or below RL?		✓			✓
6. Was the primary ion used for all compounds?		✓		o *Secondary ion used due to interferences for:* ____	✓
7. Do the average RFs for SPCCs meet minimum RF?		✓			✓
8. Are %RSD <30% for CCCs?		✓			✓
9. Was the average of all %RSDs ≤ 15%?	✓			o Average was >15% and a curve was used for those analytes with %RSD >15%.	NA
10. If curves were used, is correlation coefficient ≥0.990?		✓			✓
11. If manual integrations were performed, are they clearly identified, initialed, dated and reason given?	✓			Reasons: 1)Corrected split peak; 2)Unresolved peak; 3)tailing; 4)RT shift; 5)wrong peak selected; 6)other	NA
12. Have alternate hits/manual integrations been verified as correct and are correct RFs listed in ICAL summary?	✓	✓			NA
13. Was ICAL summary form processed using the correct method?		✓			✓
14. Are the ICAL start and end dates/times correct on ICAL summary?		✓			✓
15. Elution order checked on isomeric pairs?					
• cis- and trans- isomers		✓			✓
• trichlorofluoromethane and Freon 113		✓			✓
• ethyl benzene / m/p-xylene / o-xylene		✓			✓
• n-propylbenzene / 2-chlorotoluene / 4-chlorotoluene		✓			✓
• 1,3,5-trimethylbenzene / 1,2,4-trimethylbenzene / sec-butylbenzene		✓			✓
• 1,3- , 1,4- , and 1,2-dichlorobenzene		✓			✓
• 1,2,4 and 1,2,3 -trichlorobenzene		✓			✓
• chlorobenzene and chlorobenzene-d5		✓			✓
16. If criteria were not met, was a NCM generated, approved by supervisor, and copy included in folder?	✓				NA
17. Does the ICAL folder contain **complete** data in the following order? Data review checklist, tune pass/fail page, m/z list, tune chromatogram, Target ICAL summary, Avg. %RSD summary, and curves, followed by Quan reports, chromatograms and manual integrations for all standards, in order from low to high standard.		✓			✓
18. Was the 2nd source calibration verification standard within acceptance criteria and are results in ICAL folder?		✓			✓

Analyst:	Date: 9/16/03	2nd Level Reviewer :	Date: 9/16/03
Comments:		Comments:	

STL Knoxville GC/MS Volatiles Run Log - Instrument MX

Target Batch	X091603I	XXXXXXXXX	XXXXXXXXX	XXXXXXXXXXXXXX	XXXXXXXX
QuantIMS Batch	3259311	3259309	—	XXXXXXXXXXXXXX	XXXXXXXX
Method	8260B	XXXXXXXXX	XXXXXXXXX	Matrix	25mL
SOP#	KNOX-MS-0015	XXXXXXXXX	XXXXXXXXX	IS Amt/ID 0.936mL	VOA 5446
Intitial Cal Batch	X091603I	XXXXXXXXX	XXXXXXXXX	SS Amt/ID	
CCAL IS Areas	1092374	232022	306625	Heated? Y 9/16/03	Y N

☒ Date/Time Verified Preventive Maintenance Performed ☒ NA or ☒ Cleaned Source, Changed trap + injector liner

Lot	Lab File ID	Time	ALS #	Archon Method/ Dil. Factor	MS Dilution Factor	Volume/ Weight Purged	pH	Init	Standards ID/Spike ID/ and/or Comments
Tune	SBFXJ16	0954	—	—	1	1.0mL	NA	KA	1.0mL VOA5456
ICAL 00.3	ICXJ167	1017 1042	18	20/1 (+)		25mL			VOA 5456 4.0mL / VOA 5453 100mL / VOA 5457 1.0mL / Final Vol. mL 50D
01	1	1042	19						2.0mL / 20mL / 1.0mL / 100
02	2	1108	20						4.0mL / 20mL / 2.0mL / 100
10	3	1134	21	2/1					— / — / 5.0mL / 50.
20	4	1200	22						10mL / — / 10mL
40	5	1226	23						30mL / — / 20mL
80	6	1252	24						— / — / 40mL
~~LCS~~	~~SOEP91AA~~		25						~~5.0mL VOA5450~~ (Jacads Spike)
LCS	SOEP91AA	1318	25						1.0mL + 10mL VOA5456 → 50mL
LCS	FOEQJ1AC	1344	26						10mL VOA5456 → 50mL
LCSD	1AD	1410	27						
BLK	FXOCP1AA	1436	28						1.0mL extract → 50mL
BLK	FOEQJ1AA	1502	29						+ HII
H3I110401	FX5XK1AA	1528	30						
↓ *	FX5XL1AA	1554	31			<2			
I090102	FXVHP1AA	1620	32			<2			5-Sub
I050129 ms	FXNCW1A5	1646	33			NA	MT		1mL + 10mL VOA5458 → 50mL
msd	1AG	1712	34						
	1AK	1738	35						1mL → 250mL
Jacads mix	JACADS	1804	36						
I110401	FX5XL2AA ✓	1850	37		5	NA			
I090102	FXVHF1A5 ✓	1856	38		1	<2			10mL → 50mL
I150178	FOC7X1AA	1922	39			<2			
I100211	FX1F61AA	1947	40						
I120138	FX64D1AA	2013	41						
	M1AC	2040	42	22/2	2				RRDrg
	T1AG	2106	43						
I100211	FX1HN1AA	2132	44						RRDrg
BLK	BLK1	2159	45				NA		

Analyst/Date: 9/17/03

(+) Does not contain VOA5446

Data File: /chem/gcms/mx.i/X091603I.b/sbfxi16.d

Date : 16-SEP-2003 09:54

Client ID: TUNE

Instrument: mx.i

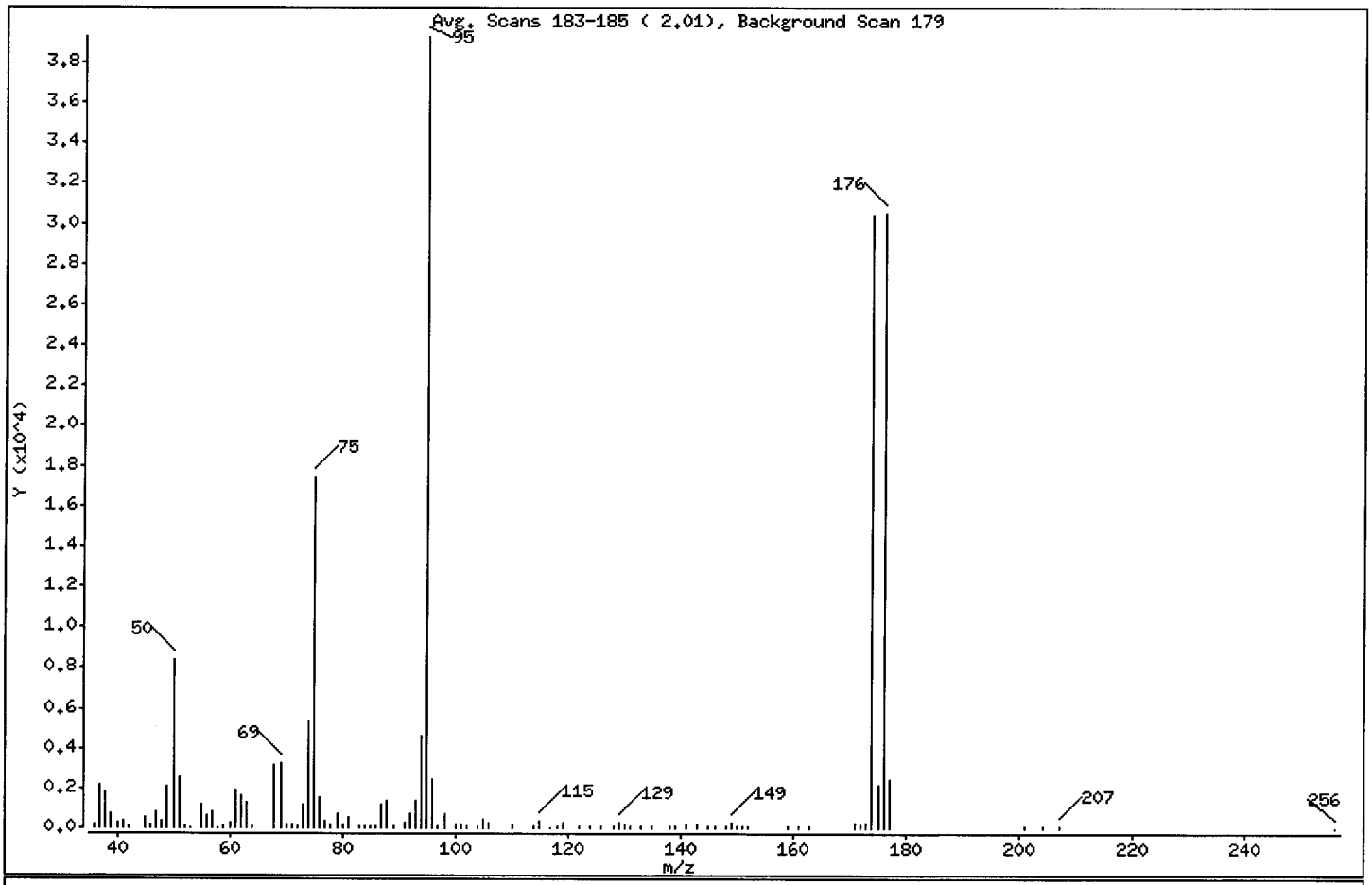
Sample Info: SBFXI16,1,3,,BFB,TUNE

Operator: 22980

Column phase: J & W 624

Column diameter: 0.18

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	21.40
75	30.00 - 60.00% of mass 95	44.40
96	5.00 - 9.00% of mass 95	6.23
173	Less than 2.00% of mass 174	0.77 (1.00)
174	50.00 - 120.00% of mass 95	77.47
175	5.00 - 9.00% of mass 174	5.48 (7.08)
176	95.00 - 101.00% of mass 174	77.74 (100.35)
177	5.00 - 9.00% of mass 176	6.12 (7.87)

Data File: /chem/gcms/mx.i/X091603I.b/sbfxi16.d

Date : 16-SEP-2003 09:54

Client ID: TUNE

Instrument: mx.i

Sample Info: SBFXI16,1,3,,BFB,TUNE

Operator: 22980

Column phase: J & W 624

Column diameter: 0.18

Data File: sbfxi16.d
Spectrum: Avg. Scans 183-185 (2.01), Background Scan 179
Location of Maximum: 95.00
Number of points: 101

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	194	68.00	3175	96.00	2447	141.00	178
37.00	2171	69.00	3258	97.00	50	143.00	177
38.00	1767	70.00	140	98.00	716	145.00	60
39.00	760	71.00	181	100.00	142	146.00	131
40.00	228	72.00	97	101.00	153	148.00	72
41.00	331	73.00	1208	102.00	62	149.00	233
42.00	120	74.00	5358	104.00	98	150.00	51
45.00	571	75.00	17432	105.00	416	151.00	56
46.00	148	76.00	1495	106.00	294	152.00	69
47.00	822	77.00	322	110.00	196	159.00	69
48.00	342	78.00	215	114.00	108	161.00	116
49.00	2056	79.00	728	115.00	358	163.00	51
50.00	8404	80.00	176	117.00	33	171.00	243
51.00	2571	81.00	561	118.00	83	172.00	179
52.00	130	83.00	114	119.00	305	173.00	304
53.00	10	84.00	82	122.00	53	174.00	30424
55.00	1173	85.00	86	124.00	124	175.00	2153
56.00	676	86.00	56	126.00	70	176.00	30528
57.00	842	87.00	1171	128.00	114	177.00	2403
58.00	43	88.00	1341	129.00	232	201.00	58
59.00	105	89.00	53	130.00	208	204.00	53
60.00	313	91.00	307	131.00	119	207.00	64
61.00	1875	92.00	717	133.00	55	256.00	19
62.00	1654	93.00	1387	135.00	67		
63.00	1229	94.00	4573	138.00	102		
64.00	124	95.00	39264	139.00	63		

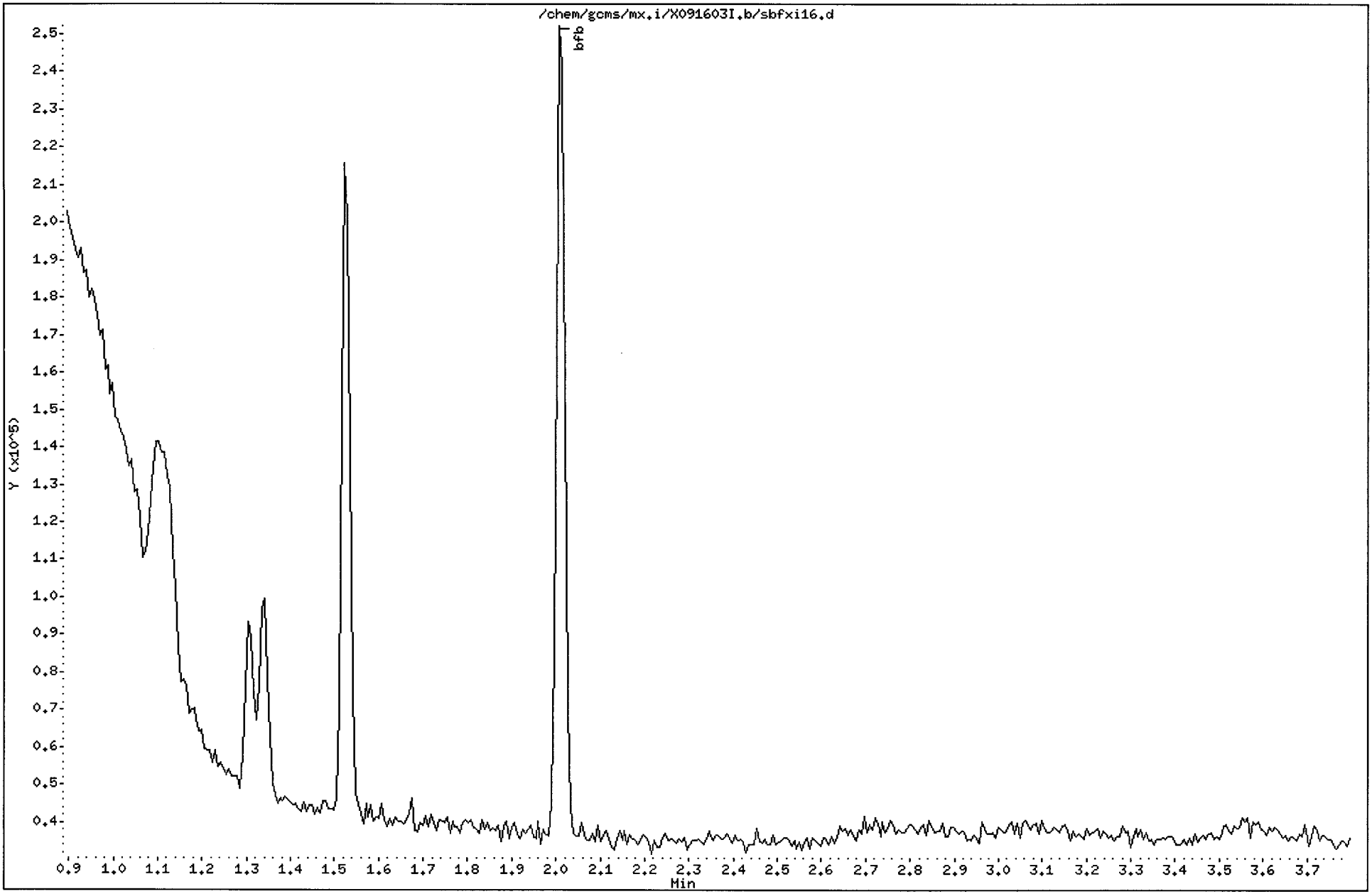
Data File: /chem/gcms/mx.i/X091603I.b/sbfxi16.d
Date : 16-SEP-2003 09:54
Client ID: TUNE
Sample Info: SBFXI16,1,3,,BFB,TUNE

Instrument: mx.i

Operator: 22980

Column phase: J & W 624

Column diameter: 0.18



Report Date : 16-Sep-2003 13:29

STL Knoxville

INITIAL CALIBRATION DATA

Start Cal Date : 16-SEP-2003 10:17
End Cal Date : 16-SEP-2003 12:52
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/gcms/mx.i/X091603I.b/8260B_LM.m
Cal Date : 16-Sep-2003 13:19 gosss

Calibration File Names:
Level 1: /var/chem/gcms/mx.i/X091603I.b/icxi161.d
Level 2: /var/chem/gcms/mx.i/X091603I.b/icxi162.d
Level 3: /var/chem/gcms/mx.i/X091603I.b/icxi163.d
Level 4: /var/chem/gcms/mx.i/X091603I.b/icxi164.d
Level 5: /chem/gcms/mx.i/X091603I.b/icxi165.d
Level 6: /chem/gcms/mx.i/X091603I.b/icxi166.d
Level 7: /var/chem/gcms/mx.i/X091603I.b/icxi167.d

Compound	1 Level 1	2 Level 2	10 Level 3	20 Level 4	40 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	0.3200 Level 7										
M 8 1,2-Dichloroethene (total)	0.24626	0.24530	0.22591	0.21128	0.21567	0.20897					
	+++++						AVRG		0.22557		7.40598
M 9 Xylene (total)	180892	359386	1655937	3213102	6373226	12079909					
	56844						LINR	-0.21365	2.09649		0.99810
10 Dichlorodifluoromethane	0.27720	0.25571	0.24337	0.23569	0.24926	0.24657					
	0.31096						AVRG		0.25982		10.02869
11 Chloromethane (spcc)	45578	88667	407163	794645	1665551	3353997					
	18649						LINR	0.01995	0.38499		0.99963

Calc Chk

Report Date : 16-Sep-2003 13:29

STL Knoxville

INITIAL CALIBRATION DATA

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Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/gcms/mx.i/X091603I.b/8260B_LM.m
Cal Date : 16-Sep-2003 13:19 gosss

Compound	1 Level 1 0.3200 Level 7	2 Level 2	10 Level 3	20 Level 4	40 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
12 Vinyl Chloride (ccc)	34128 13308	65706	320984	631755	1296715	2538731	LINR	-0.00790	0.29224		0.99984
13 *1,3-Butadiene	0.25676 0.26291	0.26935	0.25846	0.24494	0.25256	0.25990	AVRG		0.25784		2.99751
14 Bromomethane	13381 6282	26201	128239	261320	569212	1106083	LINR	0.02796	0.12795		0.99930
15 Chloroethane	19632 7465	35915	172928	341570	703038	1374144	LINR	-0.00953	0.15817		0.99982
16 *Vinyl Bromide	0.17905 0.17793	0.18078	0.17797	0.16940	0.17749	0.17774	AVRG		0.17719		2.04159
17 Trichlorofluoromethane	0.34155 0.44751	0.33179	0.30996	0.30187	0.31262	0.30771	AVRG		0.33615		15.20431
18 *2-Chloropropane	0.57069 0.57939	0.54864	0.51804	0.49721	0.52576	0.51407	AVRG		0.53626		5.72710

Calc Check 9/18/03

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Cal Date : 16-Sep-2003 13:19 gosss

Compound	1 Level 1 0.3200 Level 7	2 Level 2	10 Level 3	20 Level 4	40 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
19 *Acrolein Not Spiked 9/16/03	+++++ +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00
20 1,1-Dichloroethene (ccc)	0.19756 0.21071	0.19129	0.18135	0.17541	0.18164	0.17093	AVRG		0.18698		7.39017
21 *Freon 113	0.16091 0.17212	0.16149	0.14787	0.14457	0.14594	0.14351	AVRG		0.15377		7.18968
22 Acetone	11151 +++++	20397	70840	153456	302027	554367	LINR	-0.45752	0.01595		0.99818
23 *Iodomethane	0.23683 0.24435	0.22933	0.23447	0.22849	0.25915	0.23978	AVRG		0.23891		4.40474
24 Carbon Disulfide	0.74738 0.75418	0.70091	0.66506	0.63621	0.69532	0.68463	AVRG		0.69767		6.05065
25 *2-propanol	6413 +++++	14831	47729	89076	179270	351546	LINR	-0.83670	0.00400		0.99974

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Cal Date : 16-Sep-2003 13:19 gosss

Compound	1 Level 1 0.3200 Level 7	2 Level 2	10 Level 3	20 Level 4	40 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
26 *Acetonitrile	0.00424	0.00468	0.00414	0.00410	0.00427	0.00417					
	+++++						AVRG		0.00427		4.95555
27 Methylene Chloride	22163	40644	165496	338028	676211	1266524					
	+++++						LINR	-0.08162	0.14575		0.99906
135 *t-butanol	0.00601	0.00603	0.00523	0.00513	0.00534	0.00528					
	0.00706						AVRG		0.00572		12.14581
29 *Acrylonitrile	0.02448	0.02403	0.02258	0.02253	0.02304	0.02265					
	0.02529						AVRG		0.02351		4.64279
30 trans-1,2-Dichloroethene	0.23976	0.23742	0.23388	0.21215	0.21743	0.21293					
	0.26412						AVRG		0.23110		8.07439
31 *MTBE	0.24860	0.24959	0.23331	0.22337	0.23353	0.22636					
	0.29392						AVRG		0.24410		9.90067
32 *Hexane	0.93536	0.95590	0.89201	0.84546	0.88885	0.87101					
	1.00193						AVRG		0.91293		5.93221

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Cal Date : 16-Sep-2003 13:19 gosss

Compound	1 Level 1	2 Level 2	10 Level 3	20 Level 4	40 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	0.3200 Level 7										
33 1,1-Dichloroethane (spcc)	0.46644	0.46172	0.43446	0.41926	0.42785	0.41913					
	0.48010						AVRG		0.44414		5.59363
34 *Vinyl Acetate	0.01740	0.01639	0.01448	0.01466	0.01507	0.01577					
	0.01902						AVRG		0.01611		10.20162
37 2,2-Dichloropropane	0.37535	0.35916	0.33556	0.31205	0.31761	0.31032					
	0.37414						AVRG		0.34060		8.44384
38 cis 1,2-Dichloroethene	0.25276	0.25319	0.21795	0.21042	0.21391	0.20500					
	0.26434						AVRG		0.23108		10.65748
39 2-Butanone	11681	24418	114353	225779	459253	907501					
	5089						LINR	-0.02579	0.02608		0.99991
40 Bromochloromethane	0.06576	0.06357	0.05988	0.05867	0.06009	0.05824					
	0.07388						AVRG		0.06287		8.85022
41 *THF	0.02096	0.02083	0.01866	0.01827	0.01870	0.01868					
	+++++						AVRG		0.01935		6.24405

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Compound	1 Level 1 0.3200 Level 7	2 Level 2	10 Level 3	20 Level 4	40 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
42 Chloroform (ccc)	0.38653 0.39286	0.37359	0.35031	0.33052	0.34399	0.33212	AVRG		0.35856		7.15692
43 1,1,1-Trichloroethane	0.40993 0.44040	0.41850	0.38109	0.35989	0.37123	0.36869	AVRG		0.39282		7.69787
44 Carbon Tetrachloride	0.34576 0.36418	0.34464	0.32710	0.30606	0.31580	0.30094	AVRG		0.32921		7.07397
45 1,1-Dichloropropene	0.36958 0.38668	0.35809	0.32880	0.31095	0.31936	0.30662	AVRG		0.34001		9.21510
46 Benzene	1.05429 1.08596	1.02503	0.94720	0.90219	0.93683	0.91370	AVRG		0.98074		7.46482
47 1,2-Dichloroethane	0.17835 0.18263	0.16237	0.15561	0.15173	0.15629	0.15132	AVRG		0.16261		7.87219
49 Trichloroethene	0.27919 0.29036	0.26908	0.25721	0.24382	0.25576	0.24898	AVRG		0.26349		6.38114

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Compound	1 Level 1 0.3200 Level 7	2 Level 2	10 Level 3	20 Level 4	40 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
50 1,2-Dichloropropane (ccc)	0.22254	0.22883	0.20988	0.20502	0.21318	0.21028					
	0.22829						AVRG		0.21686		4.42254
129 Methyl Methacrylate	0.09359	0.09249	0.08558	0.08281	0.08707	0.08531					
	0.11497						AVRG		0.09169		11.98579
51 Dibromomethane	0.06070	0.06393	0.05612	0.05559	0.05715	0.05586					
	0.06382						AVRG		0.05902		6.32191
52 Bromodichloromethane	0.22192	0.23049	0.20856	0.20298	0.21171	0.20897					
	0.23137						AVRG		0.21657		5.23608
53 *2-Chloroethylvinylether	0.05493	0.05628	0.05265	0.05220	0.05348	0.05337					
	+++++						AVRG		0.05382		2.82809
54 cis-1,3-Dichloropropene	0.26572	0.27013	0.24924	0.24305	0.25619	0.25069					
	0.27980						AVRG		0.25926		5.04819
55 4-Methyl-2-pentanone	0.07428	0.07396	0.06886	0.06822	0.07128	0.07198					
	0.07978						AVRG		0.07262		5.37495

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Integrator : HP RTE
Method file : /var/chem/gcms/mx.i/X091603I.b/8260B_LM.m
Cal Date : 16-Sep-2003 13:19 gosss

Compound	1 Level 1	2 Level 2	10 Level 3	20 Level 4	40 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	0.3200 Level 7										
56 Toluene (ccc)	6.49652	6.43159	5.59361	5.19522	5.35959	5.14552					
	7.26594						AVRG		5.92685		13.69164
57 trans-1,3-Dichloropropene	0.95377	0.94171	0.82993	0.80038	0.83977	0.81921					
	1.02487						AVRG		0.88709		9.65838
134 Ethyl Methacrylate	0.62901	0.65041	0.55168	0.53922	0.55766	0.53820					
	0.69521						AVRG		0.59448		10.61130
58 1,1,2-Trichloroethane	0.48501	0.48910	0.41715	0.39867	0.42070	0.40600					
	0.52966						AVRG		0.44947		11.34698
59 Tetrachloroethene	1.30818	1.27559	1.14693	1.05169	1.07327	1.00689					
	1.39855						AVRG		1.18016		12.57993
60 1,3-Dichloropropane	0.83877	0.81704	0.73302	0.68877	0.71725	0.67283					
	0.91562						AVRG		0.76904		11.67055
61 2-Hexanone	0.25951	0.24994	0.22432	0.21310	0.22421	0.22237					
	0.26276						AVRG		0.23660		8.53363

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Compound	1 Level 1 0.3200 Level 7	2 Level 2	10 Level 3	20 Level 4	40 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
62 Chlorodibromomethane	0.63336	0.62649	0.55052	0.53335	0.55984	0.54755					
	0.59457						AVRG		0.57796		6.95553
63 1,2-Dibromoethane	0.44477	0.44498	0.39406	0.38238	0.40810	0.39713					
	0.48245						AVRG		0.42198		8.57894
64 Chlorobenzene (spcc)	3.62242	3.57508	3.10832	2.90787	3.02441	2.88944					
	3.88911						AVRG		3.28809		12.16949
65 1,1,1,2-Tetrachloroethane	0.98698	1.02623	0.88892	0.83844	0.88272	0.85538					
	1.07399						AVRG		0.93609		9.83498
66 Ethylbenzene (ccc)	2.38473	2.37987	2.06345	1.93854	1.98763	1.85415					
	2.61496						AVRG		2.17476		13.08576
67 m&p-Xylene	2.89764	2.91223	2.46488	2.28312	2.32870	2.13423					
	3.17261						AVRG		2.59906		15.09203
68 o-Xylene	2.67825	2.57830	2.20721	2.08190	2.11326	1.96408					
	2.72070						AVRG		2.33482		13.46383

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Compound	1 Level 1 0.3200 Level 7	2 Level 2	10 Level 3	20 Level 4	40 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
69 Styrene	3.77887	3.83615	3.32470	3.11227	3.18022	2.97115					
	4.12004						AVRG		3.47477		12.51010
70 Bromoform (spcc)	0.34893	0.35478	0.31733	0.30733	0.32795	0.32072					
	0.37145						AVRG		0.33550		6.93025
71 Isopropylbenzene	7.90565	8.01008	6.90107	6.49328	6.70113	6.26821					
	8.88729						AVRG		7.30953		13.24406
72 *cis-1,4-dichloro-2-butene	0.13987	0.13902	0.13430	0.13331	0.14447	0.14392					
	+++++						AVRG		0.13915		3.35856
73 Bromobenzene	1.23235	1.28515	1.08552	1.02181	1.05575	0.99315					
	1.40237						AVRG		1.15373		13.36796
74 1,1,2,2-Tetrachloroethane(sp)	11311	22336	107201	208404	428163	816128					
	4065						LINR	-0.06470	0.42386		0.99861
75 1,2,3-Trichloropropane	3113	5849	29584	57372	119827	230840					
	1333						LINR	0.04833	0.10405		0.99912

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Compound	1 Level 1 0.3200 Level 7	2 Level 2	10 Level 3	20 Level 4	40 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
76 *trans-1,4-dichloro-2-butene	0.12911 +++++	0.11682	0.10236	0.09839	0.11176	0.11861	AVRG		0.11284		9.97563
77 n-Propylbenzene	6.88812 7.75489	6.84325	5.98854	5.77664	6.23336	6.29737	AVRG		6.54031		10.31135
78 2-Chlorotoluene	3.71279 4.10395	3.72716	3.25409	3.11649	3.35375	3.41781	AVRG		3.52658		9.63266
79 1,3,5-Trimethylbenzene	4.23365 4.71256	4.25501	3.59858	3.48979	3.70300	3.67456	AVRG		3.95245		11.44198
80 4-Chlorotoluene	4.14070 4.71458	4.21776	3.51914	3.39520	3.63072	3.56925	AVRG		3.88390		12.44796
81 tert-Butylbenzene	4.18356 4.64654	4.16320	3.60102	3.52300	3.71935	3.68613	AVRG		3.93183		10.43395
82 1,2,4-Trimethylbenzene	3.76813 4.16795	3.79955	3.23491	3.18130	3.37907	3.44169	AVRG		3.56751		10.01384

Report Date : 16-Sep-2003 13:29

STL Knoxville

INITIAL CALIBRATION DATA

Start Cal Date : 16-SEP-2003 10:17
End Cal Date : 16-SEP-2003 12:52
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/gcms/mx.i/X091603I.b/8260B_LM.m
Cal Date : 16-Sep-2003 13:19 gosss

Compound	1 Level 1 0.3200 Level 7	2 Level 2	10 Level 3	20 Level 4	40 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
83 sec-Butylbenzene	6.22912 6.90265	6.17193	5.27647	5.16310	5.49738	5.49996	AVRG		5.82008		10.85960
84 1,3-Dichlorobenzene	1.97299 2.13477	2.01956	1.74516	1.70611	1.81493	1.80937	AVRG		1.88613		8.39448
85 p-Isopropyltoluene	4.94561 5.62405	4.96678	4.18043	4.03293	4.28246	4.24884	AVRG		4.61158		12.59278
86 1,4-Dichlorobenzene	1.86541 1.97786	1.86929	1.57938	1.52442	1.64184	1.61897	AVRG		1.72531		10.15190
87 1,2-Dichlorobenzene	1.46962 1.55745	1.51875	1.30694	1.26218	1.35143	1.33450	AVRG		1.40012		8.14565
88 n-Butylbenzene	4.30865 4.76300	4.33320	3.52172	3.49779	3.67799	3.69932	AVRG		3.97166		12.41129
89 1,2-Dibromo-3-chloropropane	+++++ +++++	0.06273	0.06033	0.05982	0.06610	0.06518	AVRG		0.06283		4.47143

Report Date : 16-Sep-2003 13:29

STL Knoxville

INITIAL CALIBRATION DATA

Start Cal Date : 16-SEP-2003 10:17
End Cal Date : 16-SEP-2003 12:52
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/gcms/mx.i/X091603I.b/8260B_LM.m
Cal Date : 16-Sep-2003 13:19 gosss

Compound	1 Level 1 0.3200 Level 7	2 Level 2	10 Level 3	20 Level 4	40 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
90 1,2,4-Trichlorobenzene	0.71453 0.90958	0.79437	0.65166	0.66767	0.73902	0.76539	AVRG		0.74889		11.62716
91 Hexachlorobutadiene	29046 10709	58242	247697	522292	1033662	1972970	LINR	0.02220	0.88865		0.99962
92 Napthalene	0.64020 0.77230	0.67816	0.57226	0.58057	0.62269	0.66570	AVRG		0.64741		10.48695
93 1,2,3-Trichlorobenzene	0.51424 0.61729	0.53745	0.44423	0.46125	0.50049	0.53018	AVRG		0.51502		11.01439
M 94 *1,4-dichloro-2-butene(total)	0.15566 +++++	0.14786	0.13478	0.13019	0.14128	0.13994	AVRG		0.14162		6.44298
$ 4 Dibromofluoromethane	0.18401 +++++	0.17968	0.15360	0.15656	0.15878	+++++	AVRG		0.16653		8.51853
$ 5 1,2-Dichloroethane-d4	0.14459 +++++	0.13433	0.11722	0.12328	0.12298	+++++	AVRG		0.12848		8.50535

Report Date : 16-Sep-2003 13:29

STL Knoxville

INITIAL CALIBRATION DATA

Start Cal Date : 16-SEP-2003 10:17
End Cal Date : 16-SEP-2003 12:52
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/gcms/mx.i/X091603I.b/8260B_LM.m
Cal Date : 16-Sep-2003 13:19 gosss

Compound	1 Level 1 0.3200 Level 7	2 Level 2	10 Level 3	20 Level 4	40 Level 5	80 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
$ 6 Toluene-d8	5.40461 +++++	5.16549	4.13979	4.11941	4.13799	+++++	AVRG		4.59346		13.86797
$ 7 4-Bromofluorobenzene	1.38521 +++++	1.28929	1.08068	1.09217	1.13755	+++++	AVRG		1.19698		11.20814

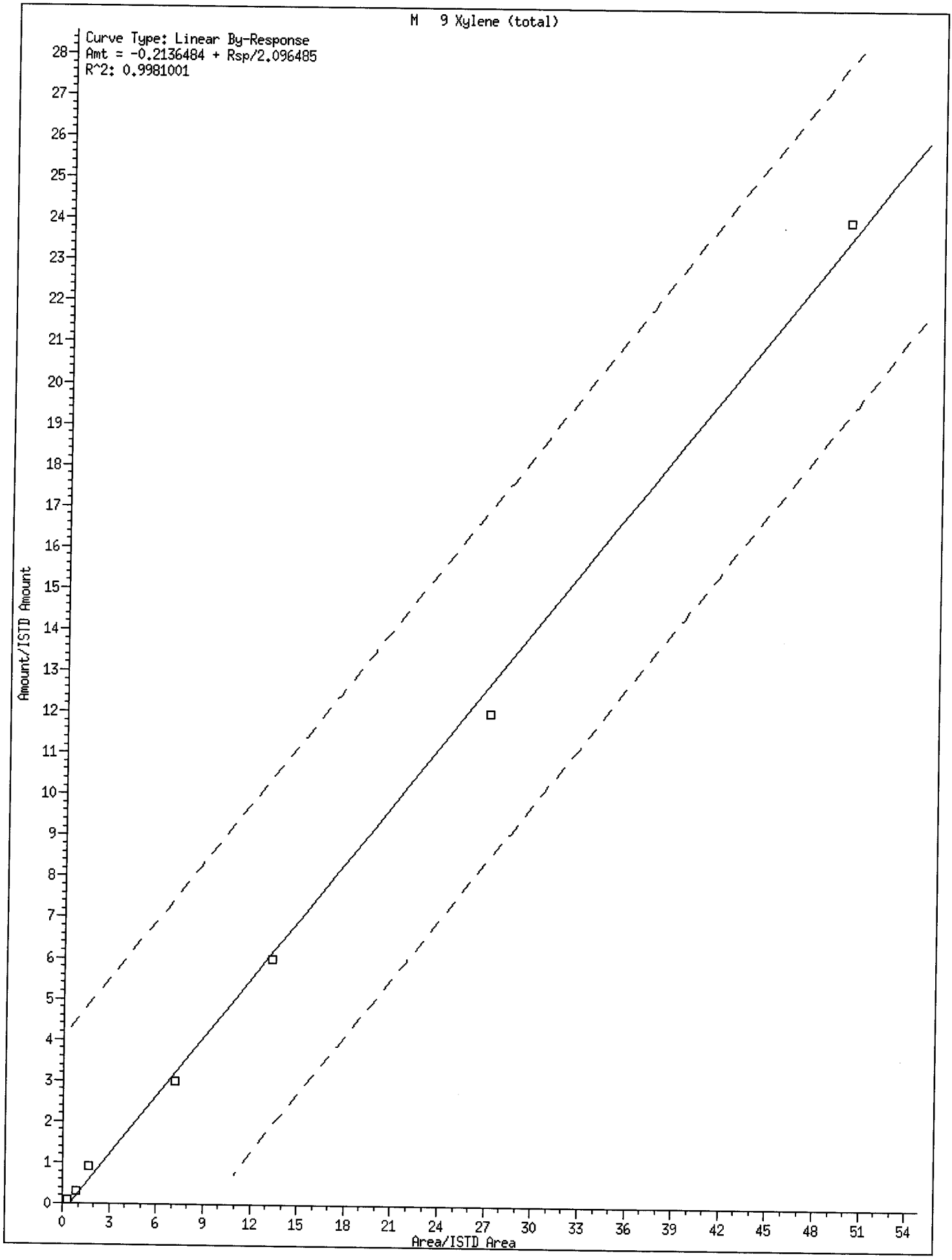
Report Date : 16-Sep-2003 13:29

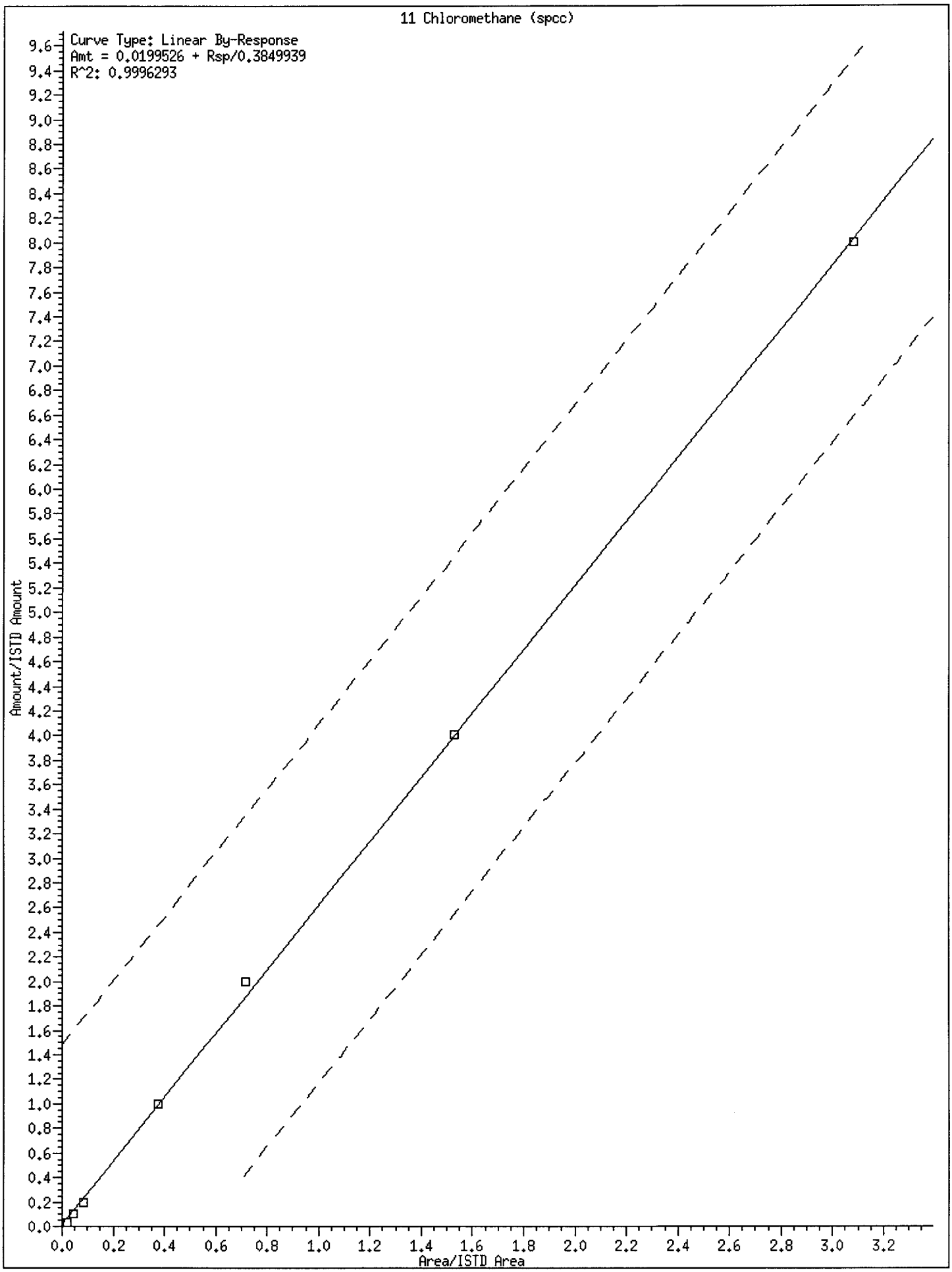
STL Knoxville

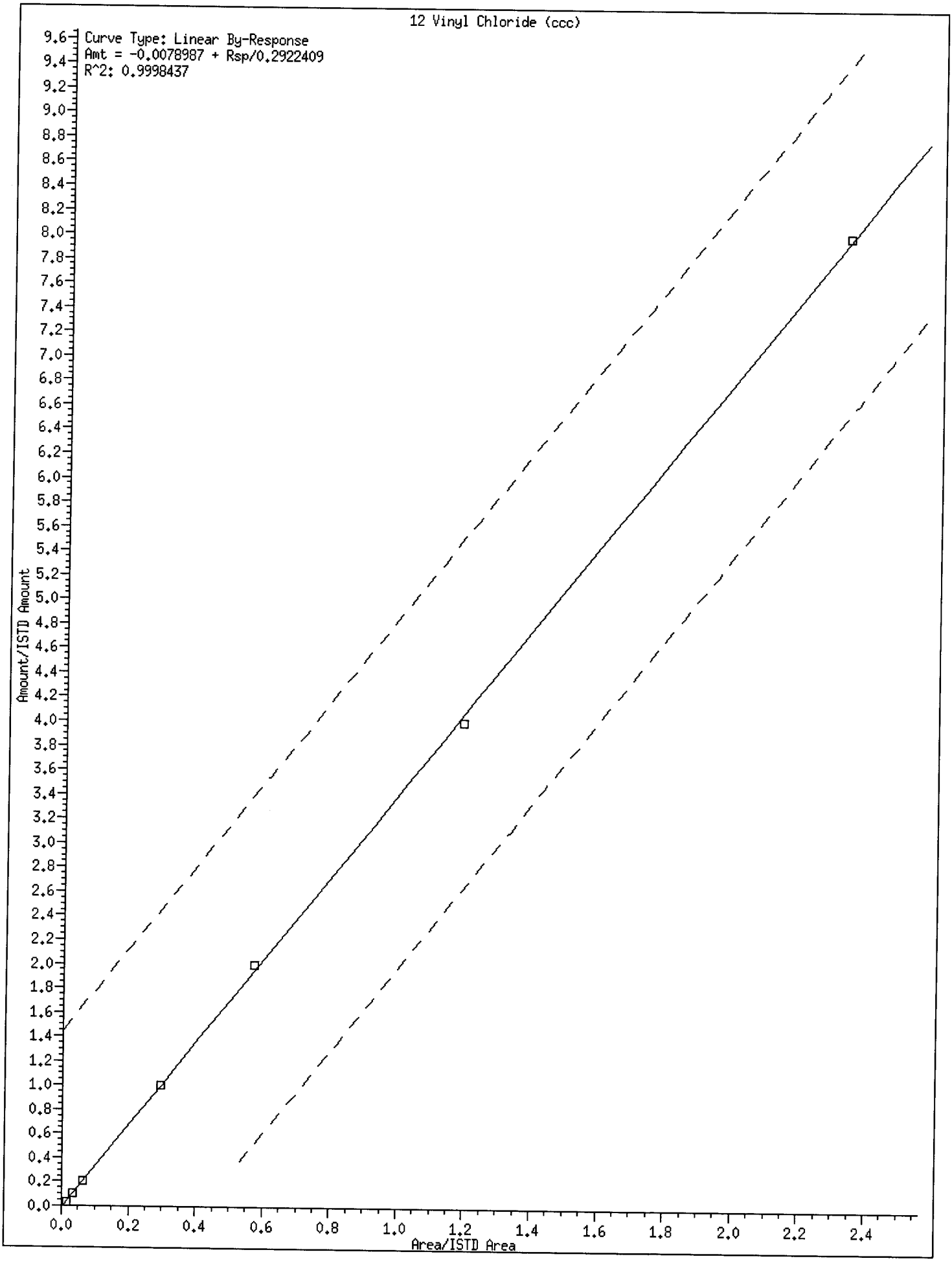
INITIAL CALIBRATION DATA

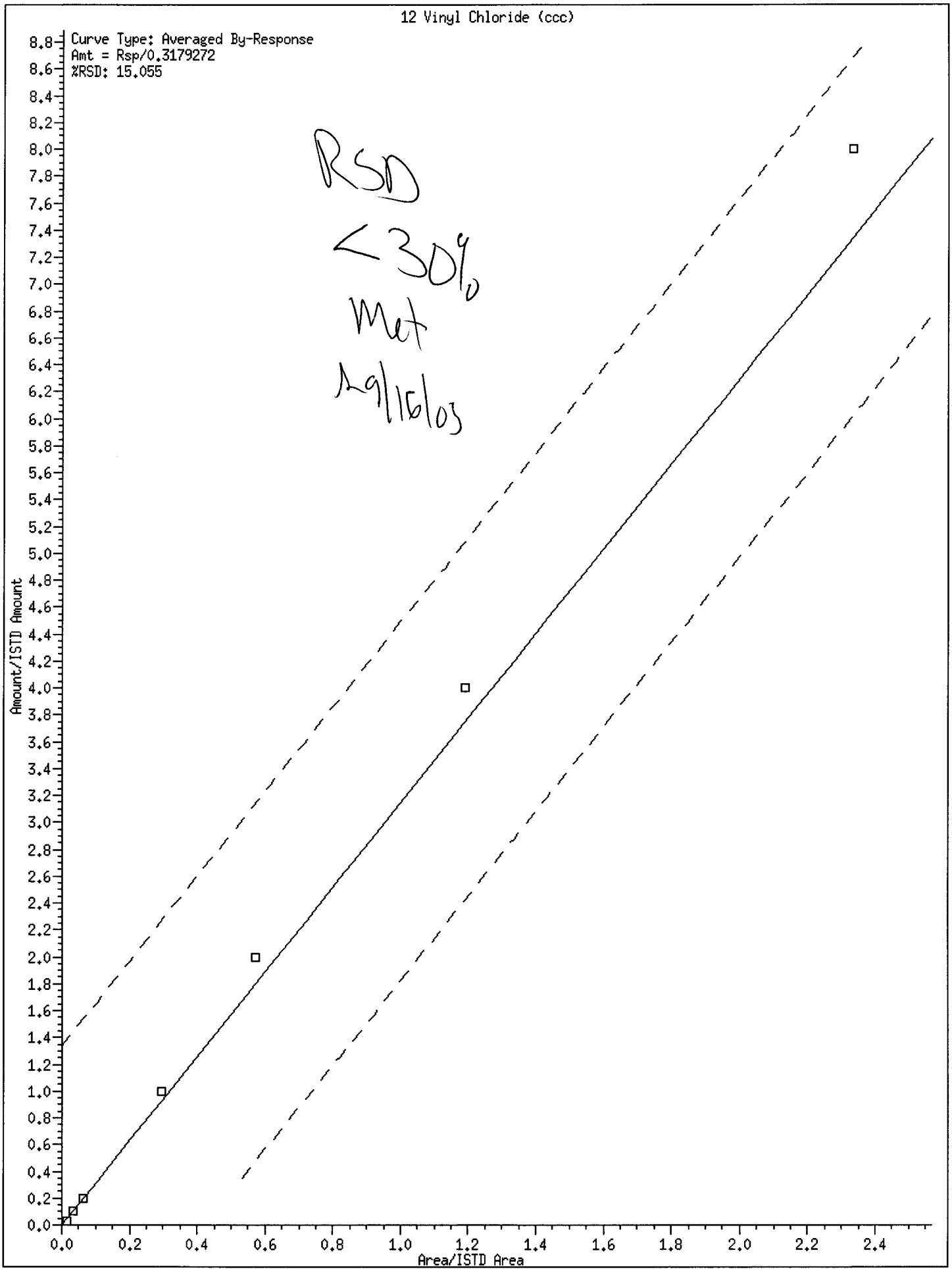
Start Cal Date : 16-SEP-2003 10:17
End Cal Date : 16-SEP-2003 12:52
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/gcms/mx.i/X091603I.b/8260B_LM.m
Cal Date : 16-Sep-2003 13:19 gosss

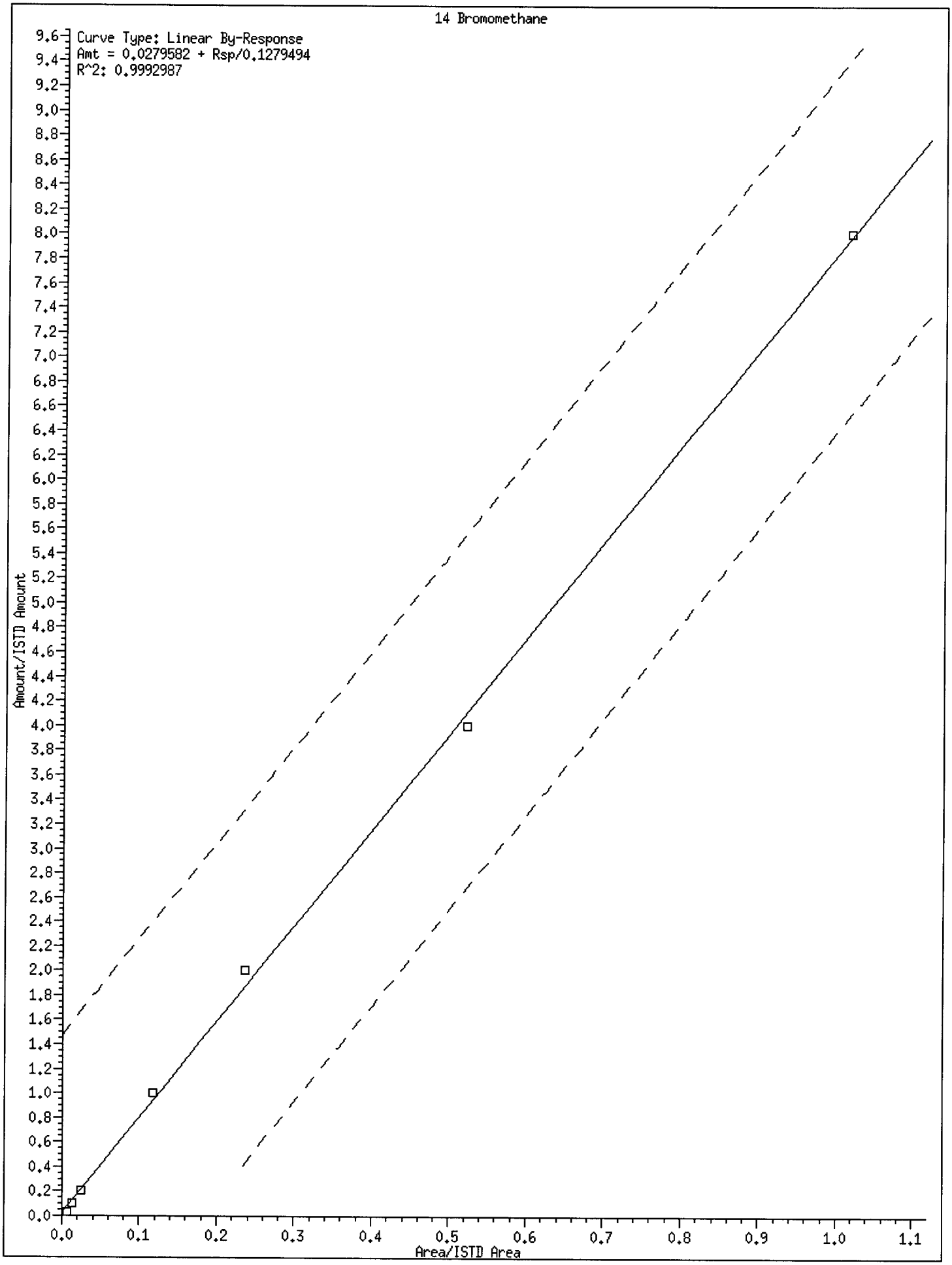
Curve	Formula	Units
Averaged	Amt = Rsp/m1	Response
Linear	Amt = b + Rsp/m1	Response

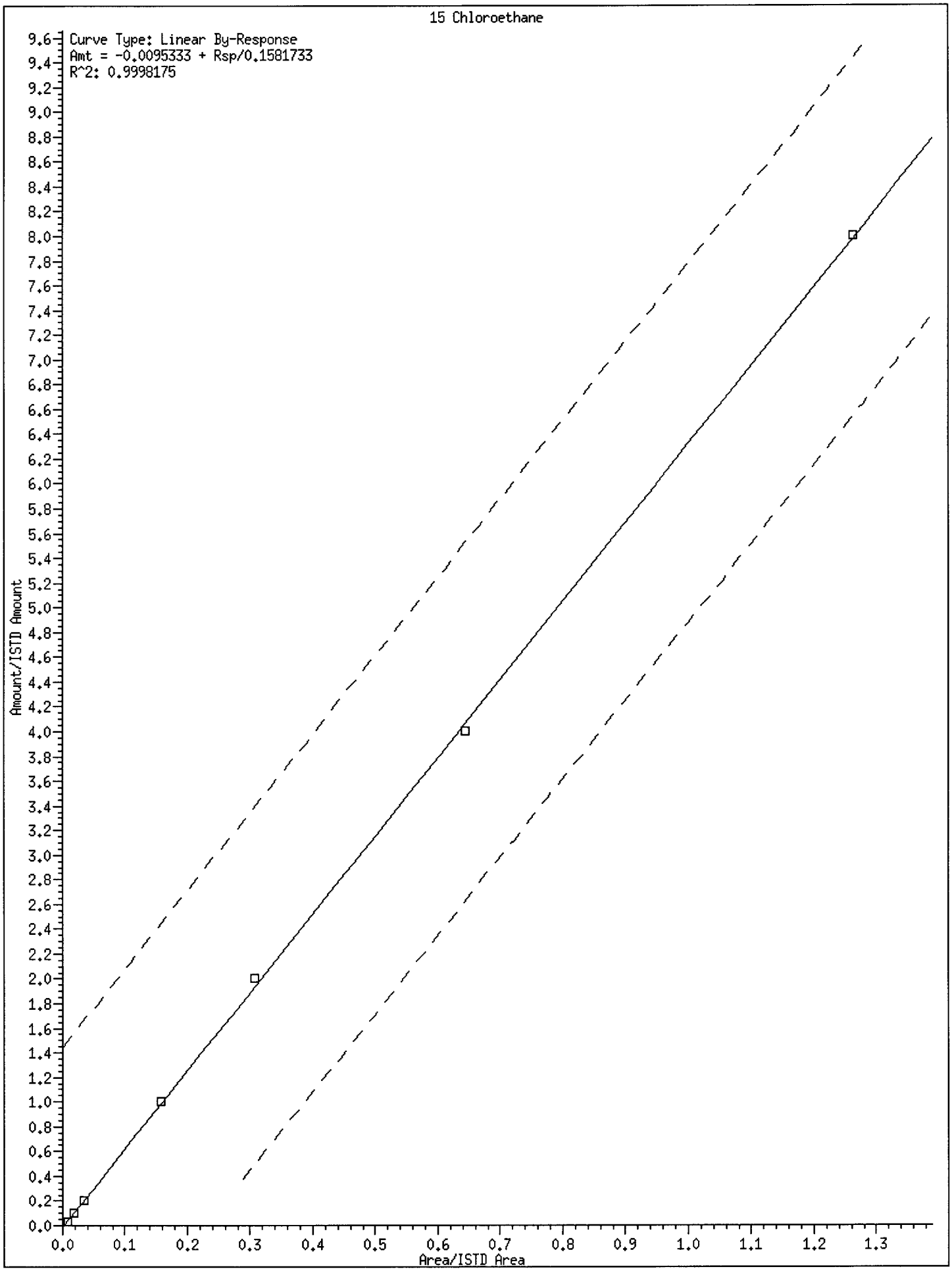

M 9 Xylene (total)
Curve Type: Linear By-Response
Amt = -0.2136484 + Rsp/2.096485
R^2: 0.9981001
Amount/ISTD Amount
Area/ISTD Area
0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
0
3
6
9
12
15
18
21
24
27
30
33
36
39
42
45
48
51
54

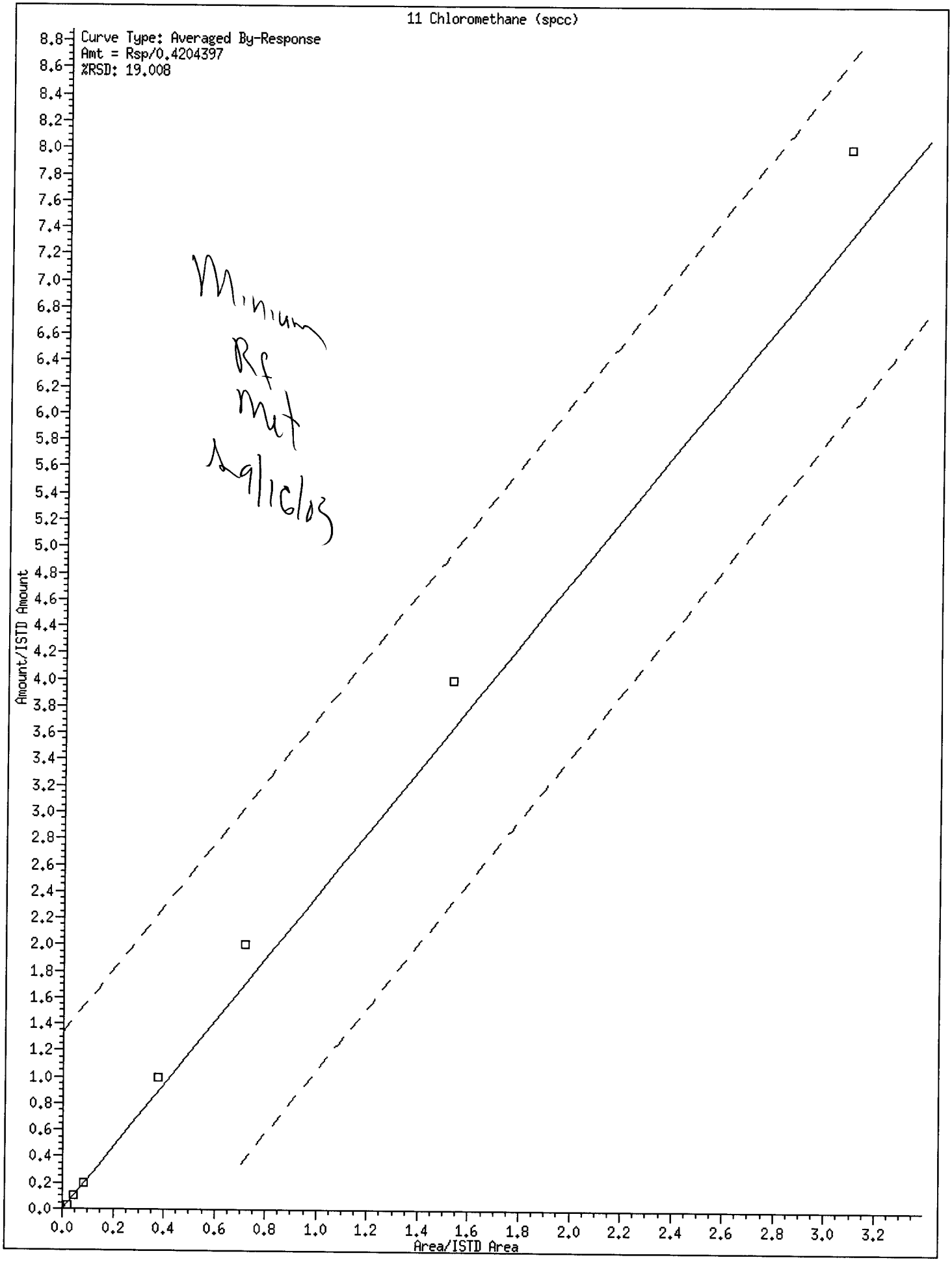

11 Chloromethane (spcc)
Curve Type: Linear By-Response
Amt = 0.0199526 + Rsp/0.3849939
R^2: 0.9996293
Amount/ISTD Amount
Area/ISTD Area

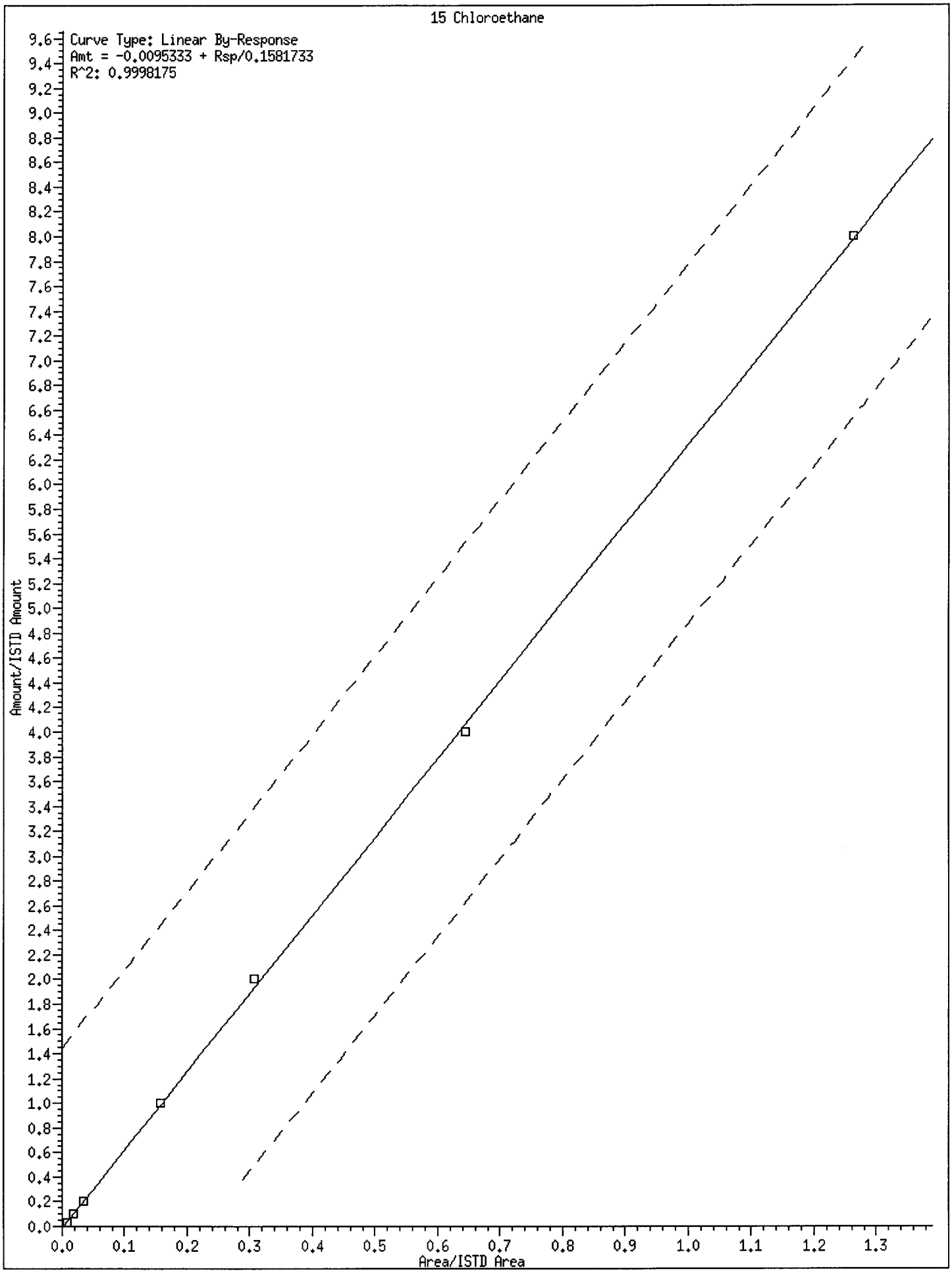

12 Vinyl Chloride (ccc)
Curve Type: Linear By-Response
Amt = -0.0078987 + Rsp/0.2922409
R^2: 0.9998437
Amount/ISTD Amount
Area/ISTD Area

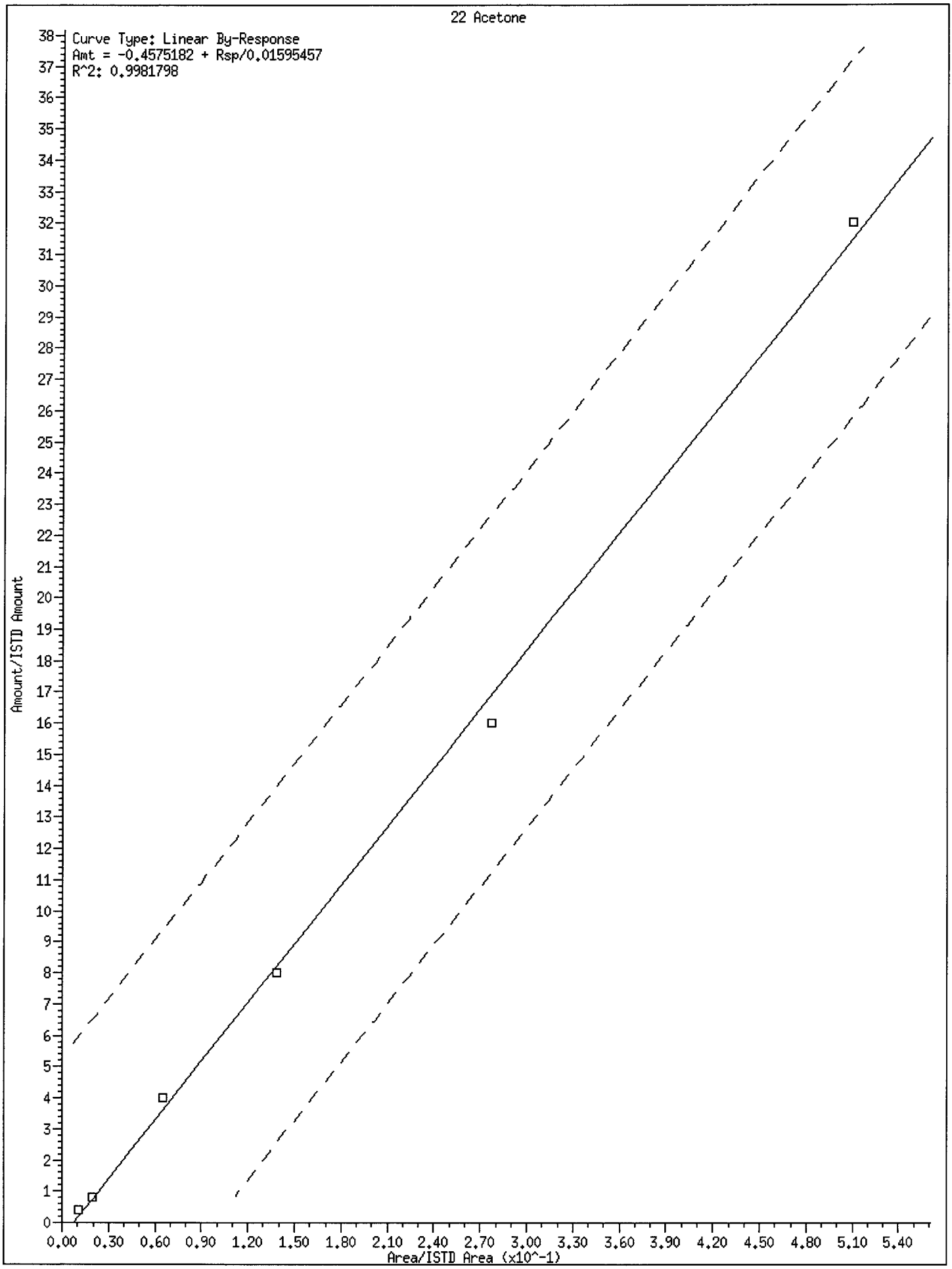

12 Vinyl Chloride (ccc)
Curve Type: Averaged By-Response
Amt = Rsp/0.3179272
%RSD: 15.055
Amount/ISTD Amount
Area/ISTD Area
RSD
< 30%
Met
Ag 9/16/03

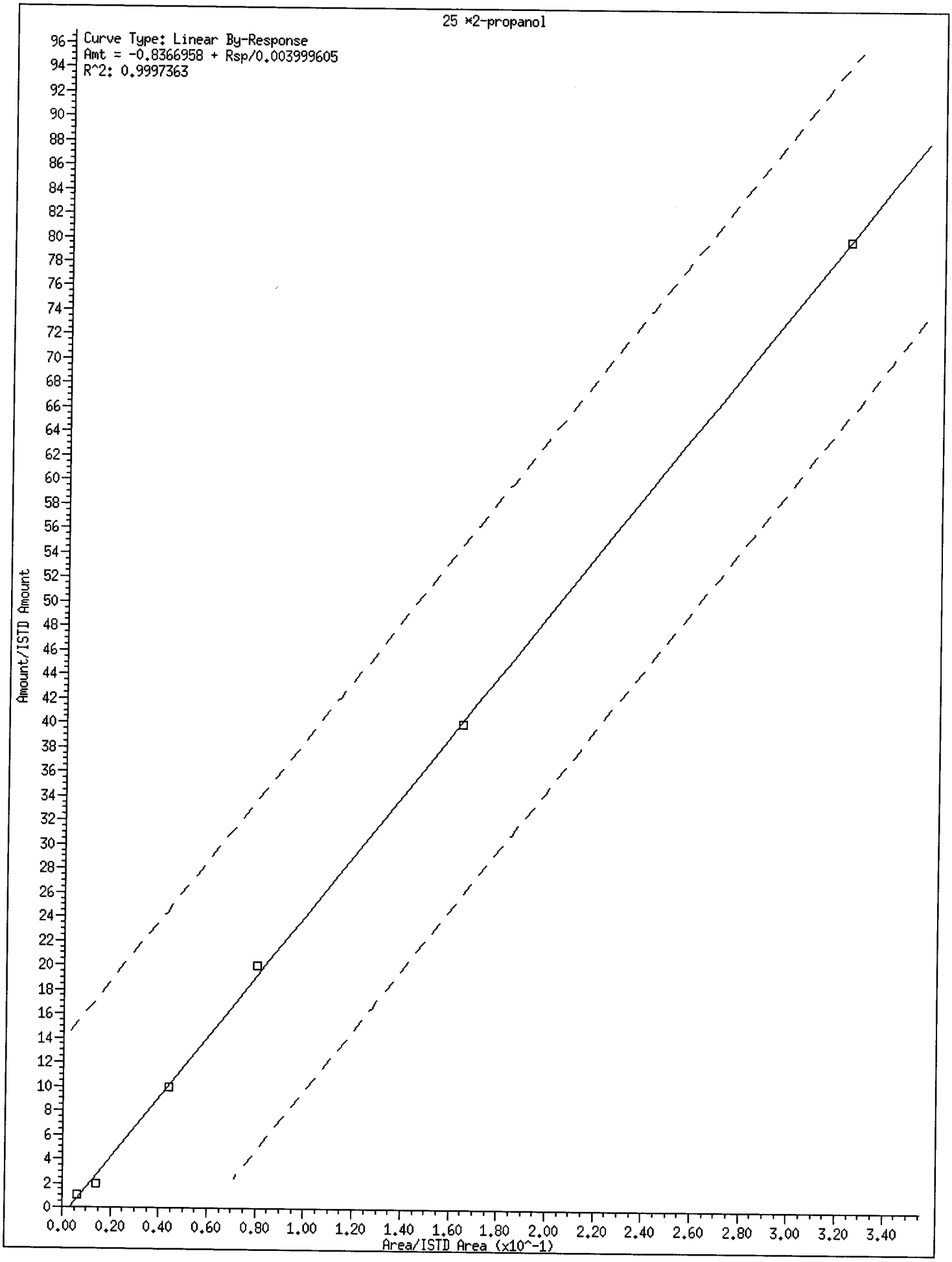

14 Bromomethane
Curve Type: Linear By-Response
Amt = 0.0279582 + Rsp/0.1279494
R^2: 0.9992987
Amount/ISTD Amount
Area/ISTD Area
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
2.2
2.4
2.6
2.8
3.0
3.2
3.4
3.6
3.8
4.0
4.2
4.4
4.6
4.8
5.0
5.2
5.4
5.6
5.8
6.0
6.2
6.4
6.6
6.8
7.0
7.2
7.4
7.6
7.8
8.0
8.2
8.4
8.6
8.8
9.0
9.2
9.4
9.6
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
1.1

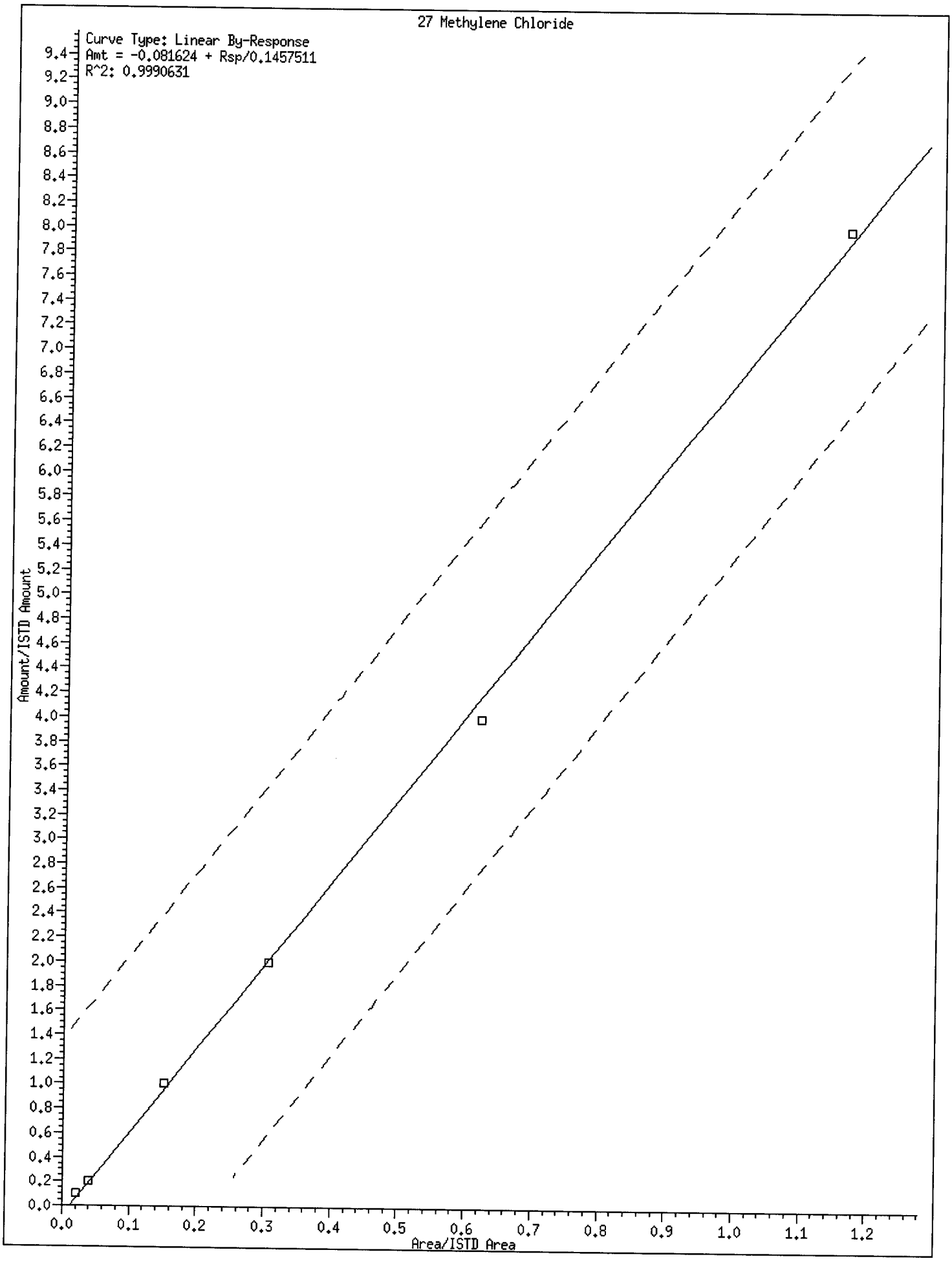

15 Chloroethane
Curve Type: Linear By-Response
Amt = -0.0095333 + Rsp/0.1581733
R^2: 0.9998175
Amount/ISTD Amount
Area/ISTD Area
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
2.2
2.4
2.6
2.8
3.0
3.2
3.4
3.6
3.8
4.0
4.2
4.4
4.6
4.8
5.0
5.2
5.4
5.6
5.8
6.0
6.2
6.4
6.6
6.8
7.0
7.2
7.4
7.6
7.8
8.0
8.2
8.4
8.6
8.8
9.0
9.2
9.4
9.6
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

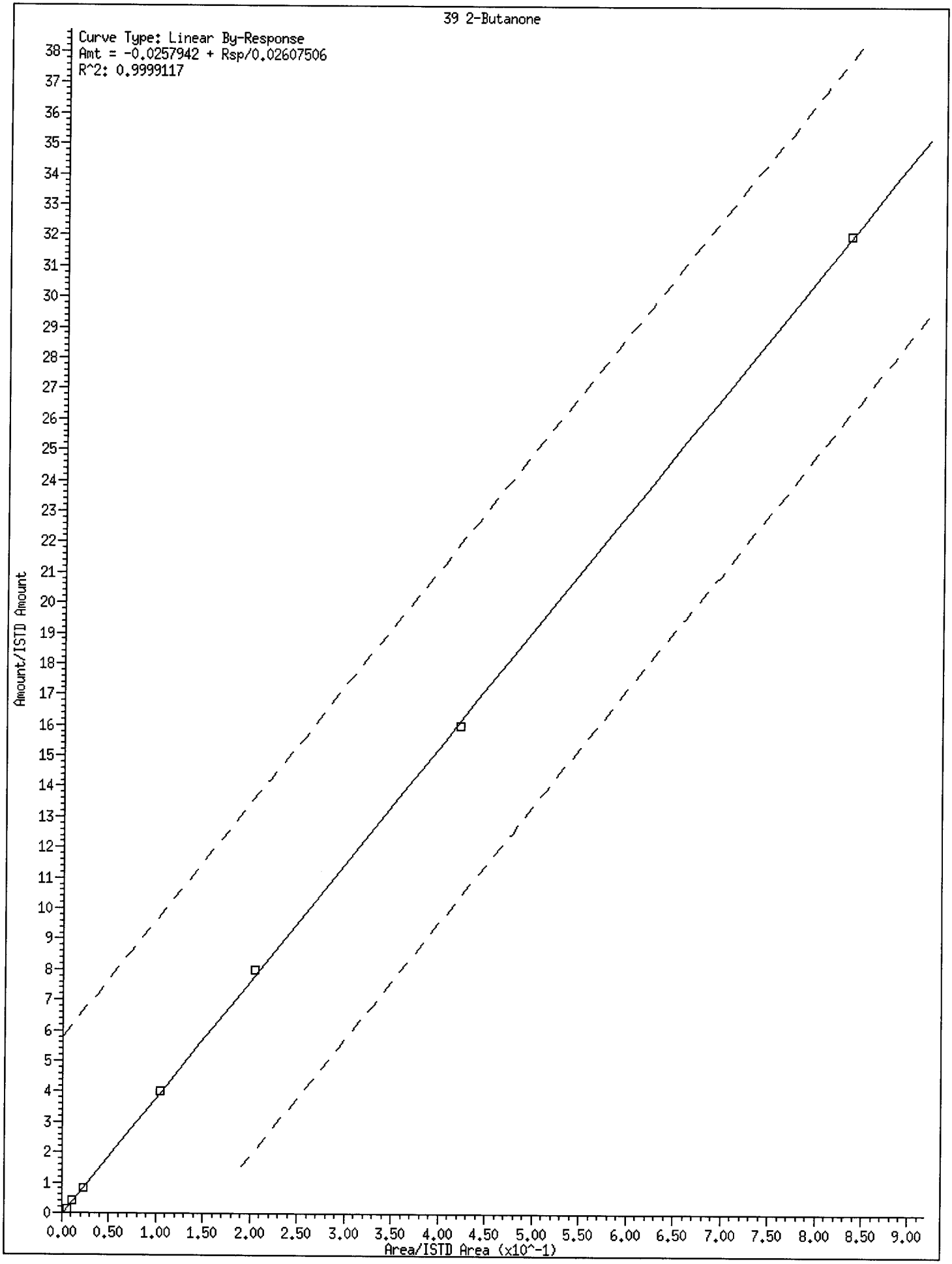

11 Chloromethane (spcc)
Curve Type: Averaged By-Response
Amt = Rsp/0.4204397
%RSD: 19.008
Amount/ISTD Amount
Area/ISTD Area
Minimum
Rf
Met
Aq/16/03

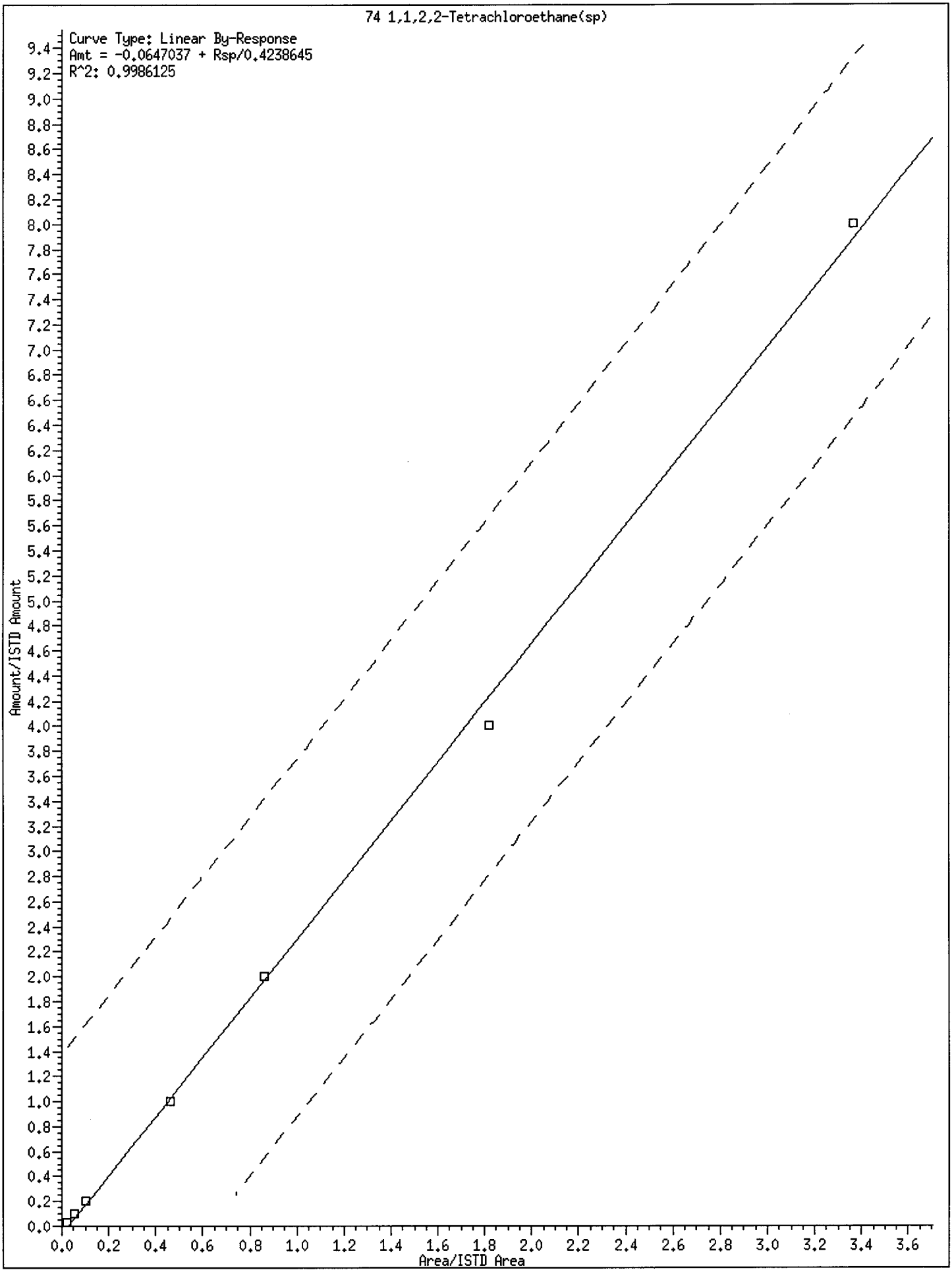

15 Chloroethane
Curve Type: Linear By-Response
Amt = -0.0095333 + Rsp/0.1581733
R^2: 0.9998175
Amount/ISTD Amount
Area/ISTD Area

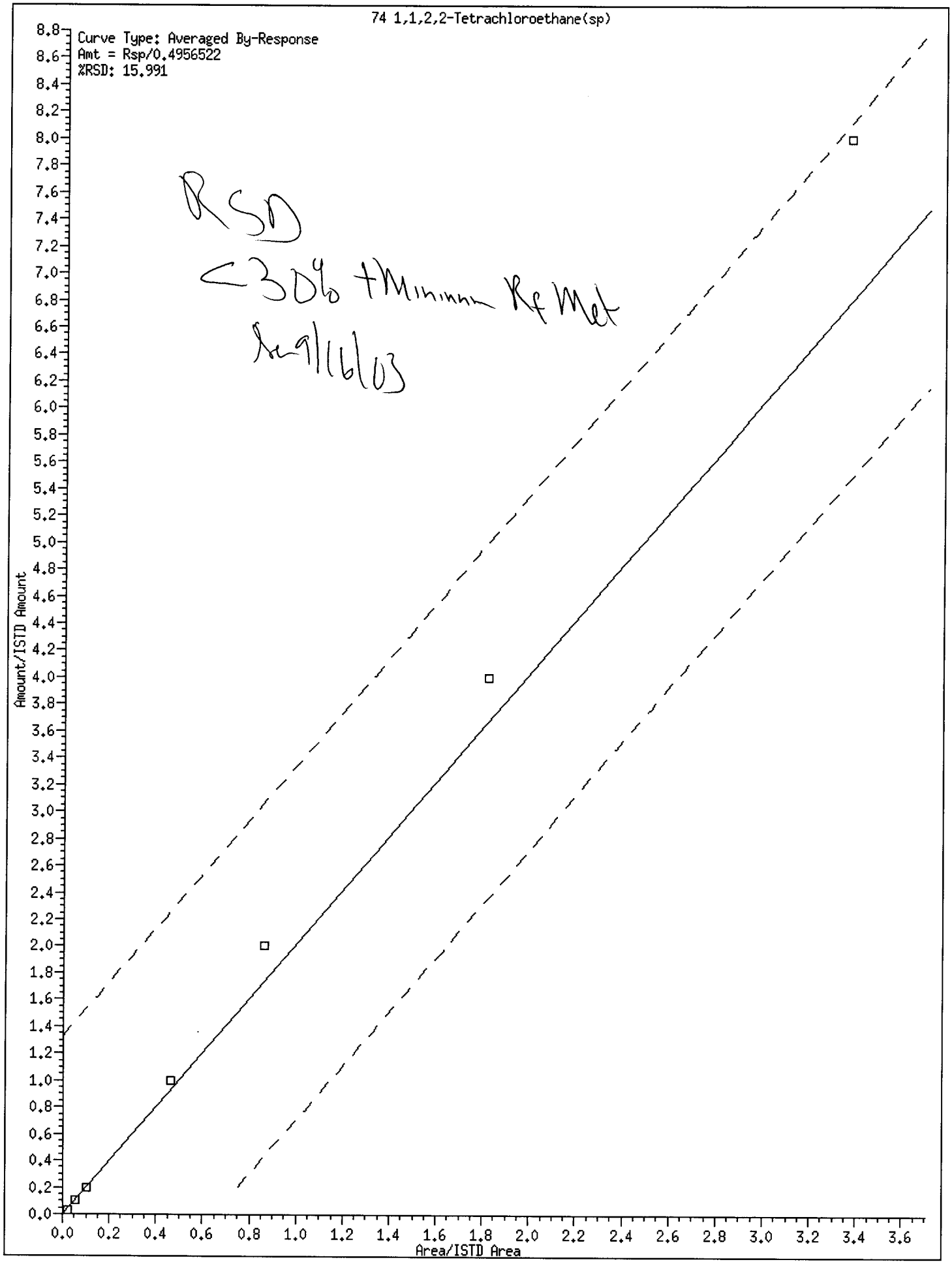

22 Acetone
Curve Type: Linear By-Response
Amt = -0.4575182 + Rsp/0.01595457
R^2: 0.9981798
Amount/ISTD Amount
Area/ISTD Area (x10^-1)
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38
0.00 0.30 0.60 0.90 1.20 1.50 1.80 2.10 2.40 2.70 3.00 3.30 3.60 3.90 4.20 4.50 4.80 5.10 5.40

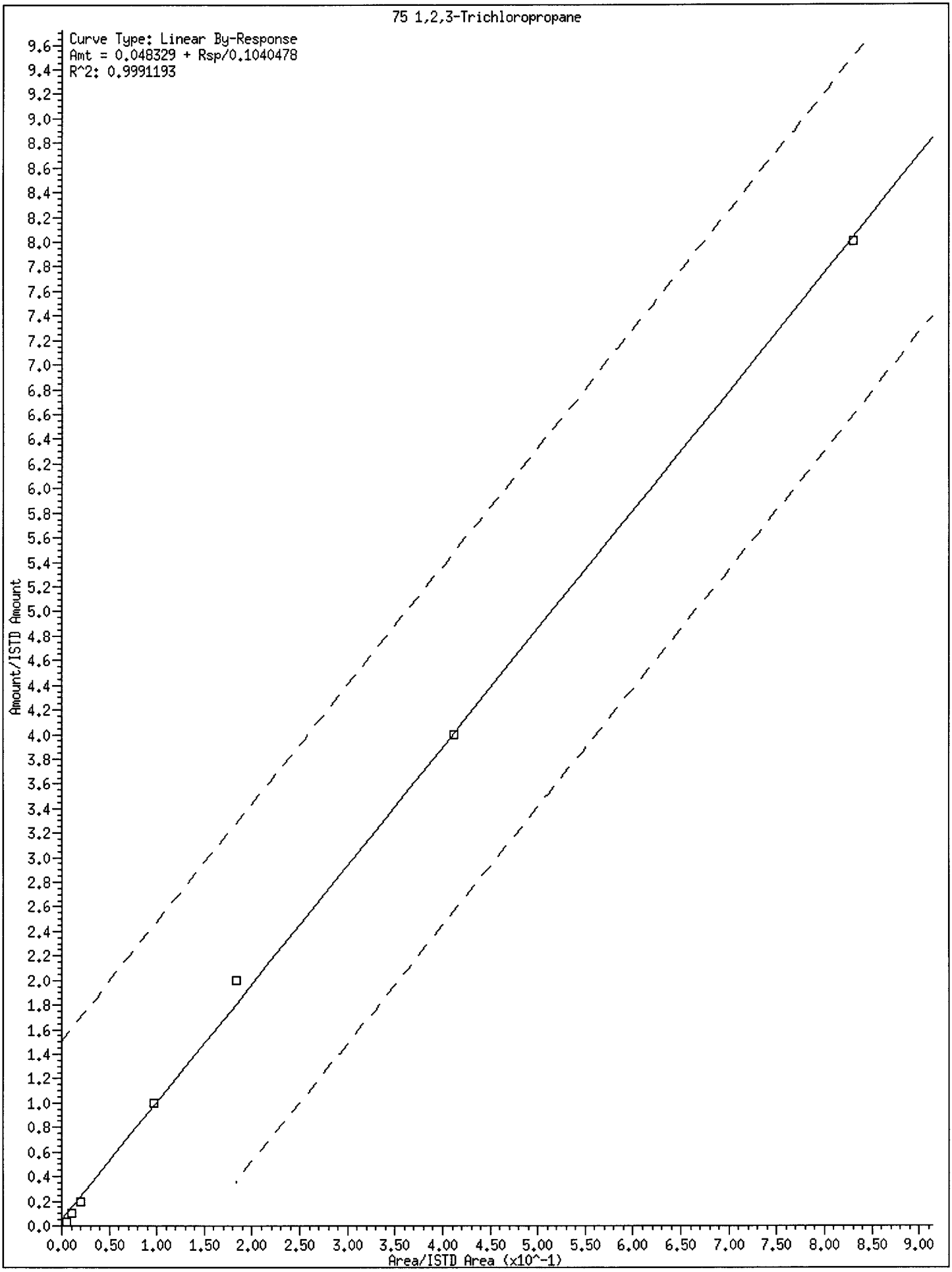

25 *2-propanol
Curve Type: Linear By-Response
Amt = -0.8366958 + Rsp/0.003999605
R^2: 0.9997363
Amount/ISTD Amount
Area/ISTD Area (x10^-1)

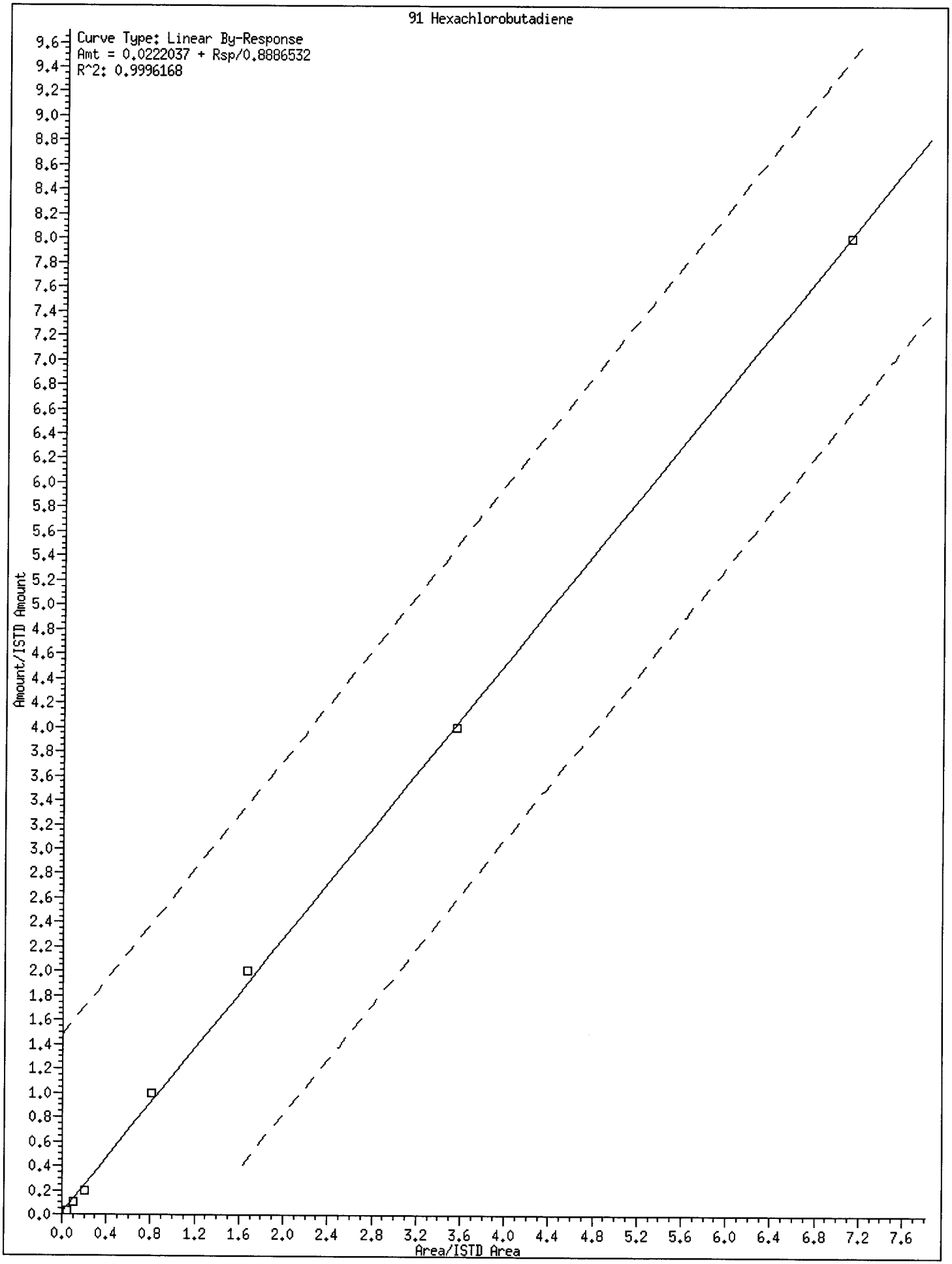

27 Methylene Chloride
Curve Type: Linear By-Response
Amt = -0.081624 + Rsp/0.1457511
R^2: 0.9990631
Amount/ISTD Amount
Area/ISTD Area
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
2.2
2.4
2.6
2.8
3.0
3.2
3.4
3.6
3.8
4.0
4.2
4.4
4.6
4.8
5.0
5.2
5.4
5.6
5.8
6.0
6.2
6.4
6.6
6.8
7.0
7.2
7.4
7.6
7.8
8.0
8.2
8.4
8.6
8.8
9.0
9.2
9.4
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


39 2-Butanone
Curve Type: Linear By-Response
Amt = -0.0257942 + Rsp/0.02607506
R^2: 0.9999117
Amount/ISTD Amount
Area/ISTD Area (x10^-1)
0.00 0.50 1.00 1.50 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 6.00 6.50 7.00 7.50 8.00 8.50 9.00
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38


74 1,1,2,2-Tetrachloroethane(sp)
Curve Type: Linear By-Response
Amt = -0.0647037 + Rsp/0.4238645
R^2: 0.9986125
Amount/ISTD Amount
Area/ISTD Area


74 1,1,2,2-Tetrachloroethane(sp)
Curve Type: Averaged By-Response
Amt = Rsp/0.4956522
%RSD: 15.991
RSD
<30% tMinimum Rq Met
Ser 9/16/03
Amount/ISTD Amount
Area/ISTD Area


75 1,2,3-Trichloropropane
Curve Type: Linear By-Response
Amt = 0.048329 + Rsp/0.1040478
R^2: 0.9991193
Amount/ISTD Amount
Area/ISTD Area (x10^-1)


91 Hexachlorobutadiene
Curve Type: Linear By-Response
Amt = 0.0222037 + Rsp/0.8886532
R^2: 0.9996168
Amount/ISTD Amount
Area/ISTD Area

Data File: /var/chem/gcms/mx.i/X091603I.b/icxi167.d
Report Date: 16-Sep-2003 12:26

STL Knoxville

SW-846 Method 8260A - Volatile Organics

Data file : /var/chem/gcms/mx.i/X091603I.b/icxi167.d
Lab Smp Id: ICXI167 Client Smp ID: VSTD00.3
Inj Date : 16-SEP-2003 10:17
Operator : 22980 Inst ID: mx.i
Smp Info : ICXI167,1,1,7,,VSTD00.3
Misc Info : X091603I,8260B_LM,all.sub,,
Comment :
Method : /var/chem/gcms/mx.i/X091603I.b/8260B_LM.m
Meth Date : 16-Sep-2003 12:26 gosss Quant Type: ISTD
Cal Date : 16-SEP-2003 10:17 Cal File: icxi167.d
Als bottle: 7 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * Uf*Vt/(Vo*1000) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Unit Correction factor
Vt	25000.00000	Sample Volume Purged
Vo	25.00000	Sample Volume Used

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
*	1 Fluorobenzene	96	4.888	4.886	(1.000)	984756	10.0000	
*	2 Chlorobenzene-d5	119	7.629	7.628	(1.000)	195940	10.0000	
*	3 1,4 Dichlorobenzene-d4	152	10.822	10.827	(1.000)	262689	10.0000	
$	4 Dibromofluoromethane	113	4.304	4.302	(0.881)	10308	0.32000	0.48594
$	5 1,2-Dichloroethane-d4	65	4.584	4.588	(0.938)	8241	0.32000	0.61592
$	6 Toluene-d8	98	6.297	6.297	(0.825)	66176	0.32000	0.42424
$	7 4-Bromofluorobenzene	95	8.937	8.936	(0.826)	22289	0.32000	0.50198
M	8 1,2-Dichloroethene (total)	96				16653	0.32000	0.70877
M	9 Xylene (total)	106				56844	0.96000	1.0943
	10 Dichlorodifluoromethane	85	1.106	1.103	(0.226)	9799	0.32000	0.37608
	11 Chloromethane (spcc)	50	1.233	1.237	(0.252)	18649	0.32000	0.43529
	12 Vinyl Chloride (ccc)	62	1.318	1.322	(0.270)	13308	0.32000	0.41300
	13 *1,3-Butadiene	39	1.349	1.353	(0.276)	8285	0.32000	0.32548
	14 Bromomethane	94	1.574	1.572	(0.322)	6282	0.32000	0.46520

Data File: /var/chem/gcms/mx.i/X091603I.b/icxi167.d
Report Date: 16-Sep-2003 12:26

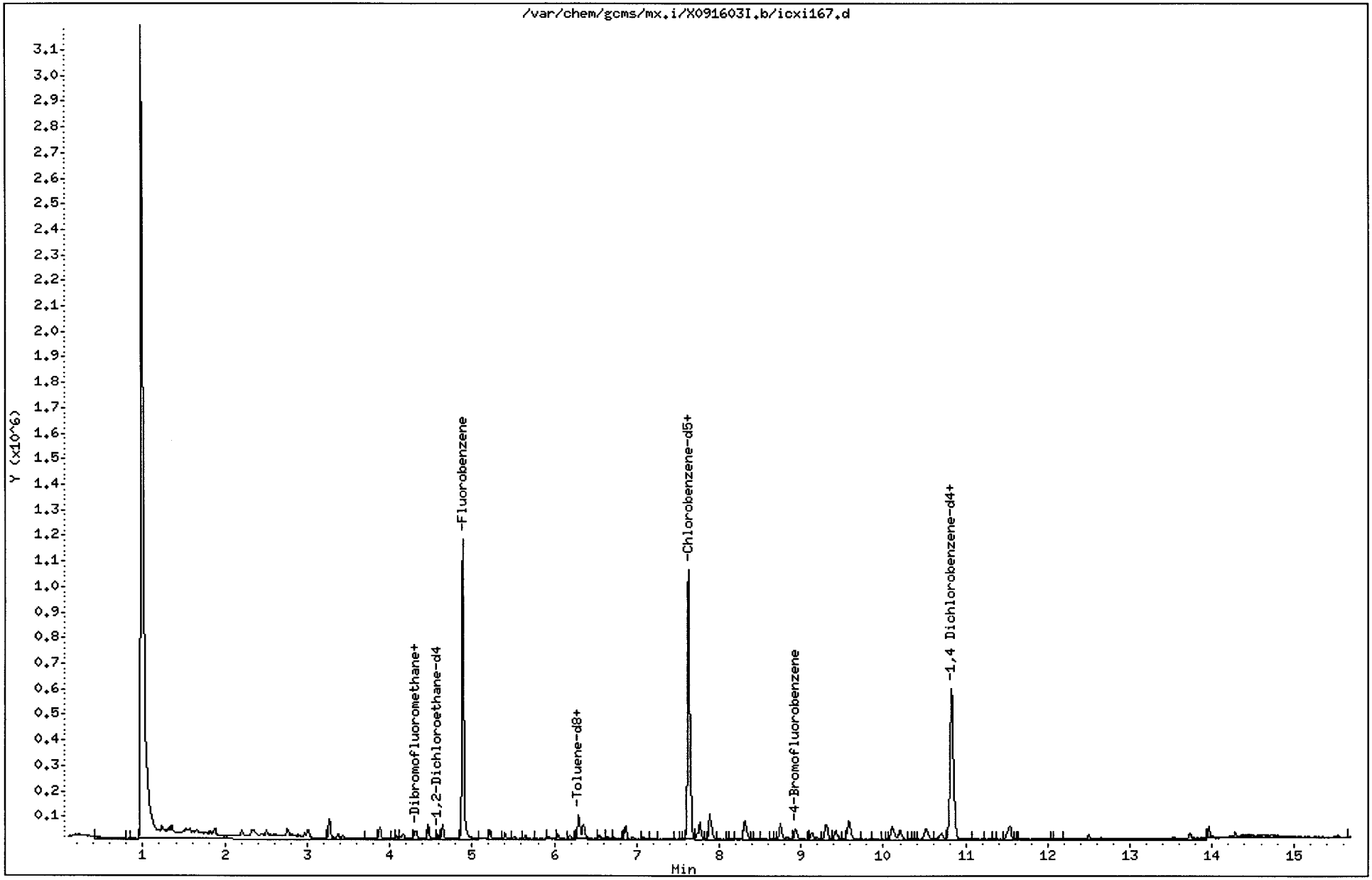
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
15 Chloroethane	64	1.653	1.657	(0.338)	7465	0.32000	0.41853
16 *Vinyl Bromide	106	1.817	1.815	(0.372)	5607	0.32000	0.32164
17 Trichlorofluoromethane	101	1.878	1.882	(0.384)	14102	0.32000	0.41324
18 *2-Chloropropane	43	2.206	2.204	(0.451)	18258	0.32000	0.34158
19 *Acrolein	56	1.306	1.298	(0.267)	568	0.32000	
20 1,1-Dichloroethene (ccc)	96	2.328	2.332	(0.476)	6640	0.32000	0.35254
21 *Freon 113	151	2.352	2.350	(0.481)	5424	0.32000	0.34995
22 Acetone	43	2.377	2.374	(0.486)	7922	1.28000	2.7369
23 *Iodomethane	142	2.450	2.447	(0.501)	7700	0.32000	0.33316
24 Carbon Disulfide	76	2.504	2.502	(0.512)	23766	0.32000	0.34440
25 *2-propanol	45	2.541	2.539	(0.520)	6678	0.32000	12.620
26 *Acetonitrile	40	2.614	2.612	(0.535)	5608	0.32000	13.265
27 Methylene Chloride	84	2.760	2.757	(0.565)	9893	0.32000	0.56859
29 *Acrylonitrile	53	2.967	2.970	(0.607)	15939	6.40000	6.8058
30 trans-1,2-Dichloroethene	96	3.009	3.007	(0.616)	8323	0.32000	0.35592
31 *MTBE	73	3.021	3.025	(0.618)	9262	0.32000	0.37658
32 *Hexane	57	3.271	3.268	(0.669)	31573	0.32000	0.34619
33 1,1-Dichloroethane (spcc)	63	3.374	3.372	(0.690)	15129	0.32000	0.33960
34 *Vinyl Acetate	86	3.435	3.439	(0.703)	1199	0.64000	0.74279
37 2,2-Dichloropropane	77	3.885	3.883	(0.795)	11790	0.32000	0.34085
38 cis 1,2-Dichloroethene	96	3.885	3.883	(0.795)	8330	0.32000	0.35285
39 2-Butanone	43	3.897	3.901	(0.797)	5089	1.28000	1.7386
40 Bromochloromethane	128	4.085	4.089	(0.836)	2328	0.32000	0.36737
41 *THF	42	4.134	4.132	(0.846)	6353	0.32000	3.2784
42 Chloroform (ccc)	83	4.165	4.168	(0.852)	12380	0.32000	0.34277
43 1,1,1-Trichloroethane	97	4.323	4.320	(0.884)	13878	0.32000	0.35060
44 Carbon Tetrachloride	117	4.469	4.472	(0.914)	11476	0.32000	0.34524
45 1,1-Dichloropropene	75	4.469	4.466	(0.914)	12185	0.32000	0.35270
46 Benzene	78	4.645	4.643	(0.950)	34221	0.32000	0.34649
47 1,2-Dichloroethane	62	4.651	4.649	(0.951)	5755	0.32000	0.35176
49 Trichloroethene	130	5.215	5.214	(1.067)	9150	0.32000	0.34679
50 1,2-Dichloropropane (ccc)	63	5.397	5.397	(1.104)	7194	0.32000	0.33371
129 Methyl Methacrylate	41	5.519	5.518	(1.129)	3623	0.32000	0.39185
51 Dibromomethane	93	5.495	5.500	(1.124)	2011	0.32000	0.34018
52 Bromodichloromethane	83	5.647	5.646	(1.155)	7291	0.32000	0.33798
53 *2-Chloroethylvinylether	63	5.920	5.920	(1.211)	3775	0.32000	0.70968
54 cis-1,3-Dichloropropene	75	6.048	6.047	(1.237)	8817	0.32000	0.34227
55 4-Methyl-2-pentanone	43	6.182	6.187	(1.265)	10056	1.28000	1.3984
56 Toluene (ccc)	91	6.358	6.357	(0.833)	45558	0.32000	0.37522
57 trans-1,3-Dichloropropene	75	6.553	6.546	(0.859)	6426	0.32000	0.36034
134 Ethyl Methacrylate	69	6.644	6.643	(0.871)	4359	0.32000	0.36285
58 1,1,2-Trichloroethane	97	6.717	6.716	(0.880)	3321	0.32000	0.36534
59 Tetrachloroethene	164	6.863	6.862	(0.900)	8769	0.32000	0.36203
60 1,3-Dichloropropane	76	6.869	6.868	(0.900)	5741	0.32000	0.36687
61 2-Hexanone	43	6.948	6.947	(0.911)	6590	1.28000	1.3902
62 Chlorodibromomethane	129	7.082	7.081	(0.928)	3728	0.32000	0.32376
63 1,2-Dibromoethane	107	7.179	7.184	(0.941)	3025	0.32000	0.35926

Data File: /var/chem/gcms/mx.i/X091603I.b/icxi167.d
Report Date: 16-Sep-2003 12:26

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
	64 Chlorobenzene (spcc)	112	7.653	7.653	(1.003)	24385	0.32000	0.36383
	65 1,1,1,2-Tetrachloroethane	131	7.732	7.732	(1.014)	6734	0.32000	0.35691
	66 Ethylbenzene (ccc)	106	7.769	7.768	(1.018)	16396	0.32000	0.36761
	67 m&p-Xylene	106	7.884	7.884	(1.033)	39785	0.64000	0.73940
	68 o-Xylene	106	8.304	8.303	(1.088)	17059	0.32000	0.35488
	69 Styrene	104	8.316	8.322	(1.090)	25833	0.32000	0.36276
	70 Bromoform (spcc)	173	8.511	8.516	(1.116)	2329	0.32000	0.34963
	71 Isopropylbenzene	105	8.748	8.747	(1.147)	55724	0.32000	0.37227
	72 *cis-1,4-dichloro-2-butene	88	8.809	8.814	(1.155)	826	0.32000	0.30854
	73 Bromobenzene	156	9.131	9.131	(1.197)	8793	0.32000	0.37228
	74 1,1,2,2-Tetrachloroethane(sp)	83	9.125	9.124	(1.196)	4065	0.32000	0.39994
	75 1,2,3-Trichloropropane	110	9.168	9.179	(0.847)	1333	0.32000	0.45410
	76 *trans-1,4-dichloro-2-butene	53	9.210	9.203	(0.851)	1708	0.32000	0.58226
	77 n-Propylbenzene	91	9.307	9.307	(0.860)	65188	0.32000	0.37315
	78 2-Chlorotoluene	91	9.423	9.422	(0.871)	34498	0.32000	0.36654
	79 1,3,5-Trimethylbenzene	105	9.581	9.581	(0.885)	39614	0.32000	0.37162
	80 4-Chlorotoluene	91	9.587	9.587	(0.886)	39631	0.32000	0.37740
	81 tert-Butylbenzene	119	10.116	10.116	(0.935)	39059	0.32000	0.36956
	82 1,2,4-Trimethylbenzene	105	10.201	10.201	(0.943)	35036	0.32000	0.36738
	83 sec-Butylbenzene	105	10.518	10.523	(0.972)	58024	0.32000	0.37132
	84 1,3-Dichlorobenzene	146	10.700	10.700	(0.989)	17945	0.32000	0.35659
	85 p-Isopropyltoluene	119	10.816	10.821	(0.999)	47276	0.32000	0.37889
	86 1,4-Dichlorobenzene	146	10.864	10.876	(1.004)	16626	0.32000	0.35894
	87 1,2-Dichlorobenzene	146	11.503	11.502	(1.063)	13092	0.32000	0.35024
	88 n-Butylbenzene	91	11.533	11.539	(1.066)	40038	0.32000	0.37312
	89 1,2-Dibromo-3-chloropropane	157	12.646	12.658	(1.169)	616	0.32000	0.38468
	90 1,2,4-Trichlorobenzene	180	13.729	13.728	(1.269)	7646	0.32000	0.38935
	91 Hexachlorobutadiene	225	13.954	13.959	(1.289)	10709	0.32000	0.41109
	92 Napthalene	128	13.996	13.996	(1.293)	6492	0.32000	0.38097
	93 1,2,3-Trichlorobenzene	180	14.282	14.281	(1.320)	5189	0.32000	0.38364
M	94 *1,4-dichloro-2-butene(total)	53				2534	0.32000	0.89080

Data File: /var/chem/gcms/mx.i/X091603I.b/icxi167.d
Date : 16-SEP-2003 10:17
Client ID: VSTD00.3
Sample Info: ICXI167,1,1,7,,VSTD00.3
Purge Volume: 25.0
Column phase: J+W 624

Instrument: mx.i
Operator: 22980
Column diameter: 0.18



Data File: /var/chem/gcms/mx.i/X091603I.b/icxi161.d
Report Date: 16-Sep-2003 12:26

STL Knoxville

SW-846 Method 8260A - Volatile Organics

Data file : /var/chem/gcms/mx.i/X091603I.b/icxi161.d
Lab Smp Id: ICXI161 Client Smp ID: VSTD001
Inj Date : 16-SEP-2003 10:42
Operator : 22980 Inst ID: mx.i
Smp Info : ICXI161,1,1,1,,VSTD001
Misc Info : X091603I,8260B_LM,all.sub,,
Comment :
Method : /var/chem/gcms/mx.i/X091603I.b/8260B_LM.m
Meth Date : 16-Sep-2003 12:26 gosss Quant Type: ISTD
Cal Date : 16-SEP-2003 10:42 Cal File: icxi161.d
Als bottle: 1 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * Uf*Vt/(Vo*1000) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Unit Correction factor
Vt	25000.00000	Sample Volume Purged
Vo	25.00000	Sample Volume Used

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
*	1 Fluorobenzene	96	4.887	4.886	(1.000)	1053278	10.0000	
*	2 Chlorobenzene-d5	119	7.629	7.628	(1.000)	213479	10.0000	
*	3 1,4 Dichlorobenzene-d4	152	10.828	10.827	(1.000)	283488	10.0000	
$	4 Dibromofluoromethane	113	4.303	4.302	(0.881)	19381	1.00000	1.0001
$	5 1,2-Dichloroethane-d4	65	4.583	4.588	(0.938)	15229	1.00000	1.1163
$	6 Toluene-d8	98	6.297	6.297	(0.825)	115377	1.00000	0.92783
$	7 4-Bromofluorobenzene	95	8.937	8.936	(0.825)	39269	1.00000	1.0027
M	8 1,2-Dichloroethene (total)	96				51876	2.00000	2.0640
M	9 Xylene (total)	106				180892	3.00000	3.2021
	10 Dichlorodifluoromethane	85	1.104	1.103	(0.226)	29197	1.00000	1.0477
	11 Chloromethane (spcc)	50	1.232	1.237	(0.252)	45578	1.00000	0.99463
	12 Vinyl Chloride (ccc)	62	1.317	1.322	(0.270)	34128	1.00000	0.99022
	13 *1,3-Butadiene	39	1.354	1.353	(0.277)	27044	1.00000	0.99333
	14 Bromomethane	94	1.573	1.572	(0.322)	13381	1.00000	0.92643

Data File: /var/chem/gcms/mx.i/X091603I.b/icxi161.d
Report Date: 16-Sep-2003 12:26

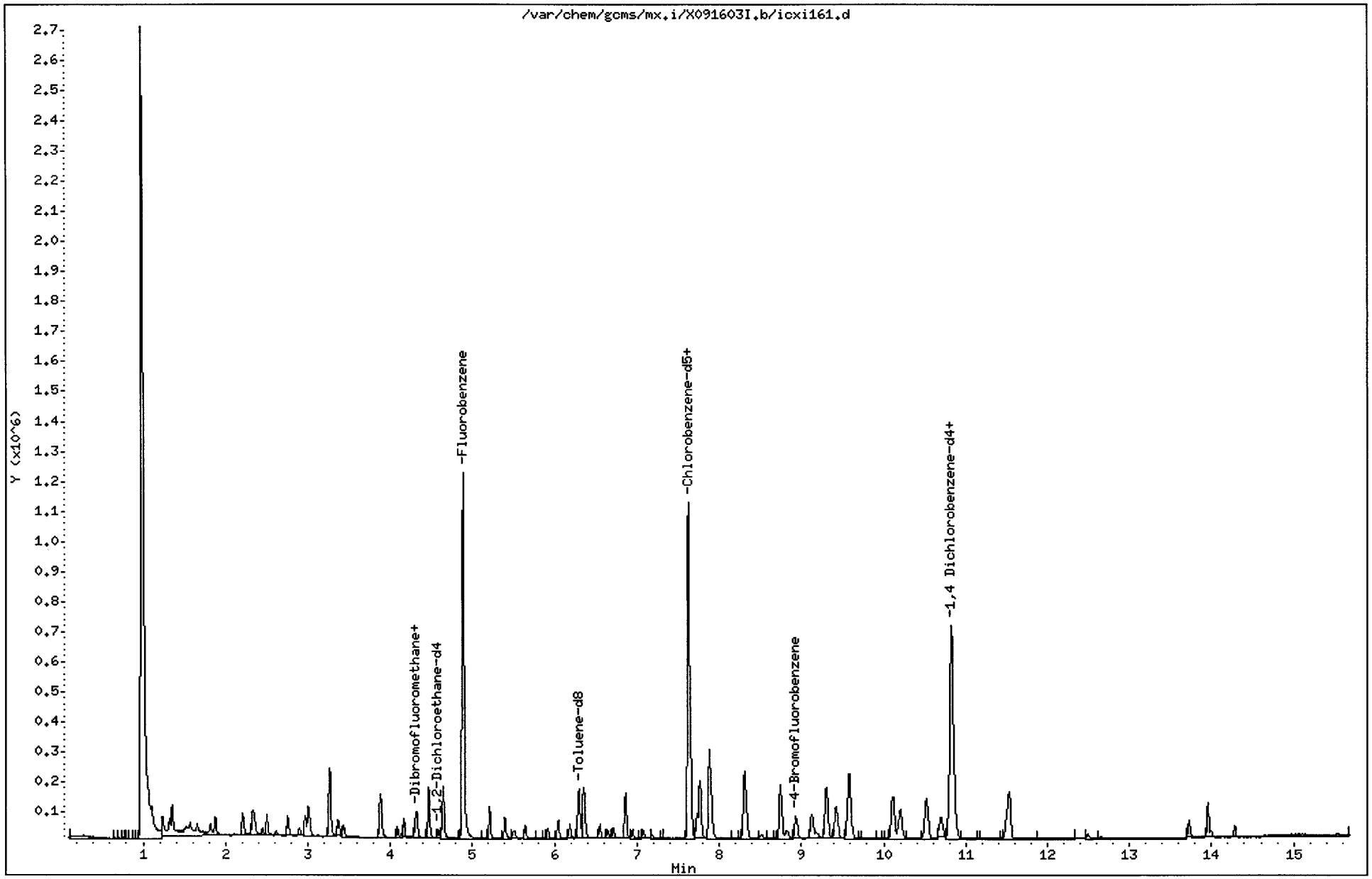
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
15 Chloroethane	64	1.658	1.657	(0.339)	19632	1.00000	1.0291
16 *Vinyl Bromide	106	1.816	1.815	(0.372)	18859	1.00000	1.0114
17 Trichlorofluoromethane	101	1.883	1.882	(0.385)	35975	1.00000	0.98561
18 *2-Chloropropane	43	2.205	2.204	(0.451)	60110	1.00000	1.0514
19 *Acrolein	56	1.299	1.298	(0.266)	941	10.0000	
20 1,1-Dichloroethene (ccc)	96	2.327	2.332	(0.476)	20809	1.00000	1.0329
21 *Freon 113	151	2.351	2.350	(0.481)	16948	1.00000	1.0223
22 Acetone	43	2.375	2.374	(0.486)	11151	4.00000	3.6018
23 *Iodomethane	142	2.448	2.447	(0.501)	24945	1.00000	1.0091
24 Carbon Disulfide	76	2.503	2.502	(0.512)	78720	1.00000	1.0665
25 *2-propanol	45	2.546	2.539	(0.521)	6413	10.0000	11.330
26 *Acetonitrile	40	2.619	2.612	(0.536)	8936	20.0000	19.762
27 Methylene Chloride	84	2.759	2.757	(0.564)	22163	1.00000	1.1909
135 *t-butanol	59	2.898	2.903	(0.593)	31640	50.0000	51.004
29 *Acrylonitrile	53	2.971	2.970	(0.608)	51559	20.0000	20.583
30 trans-1,2-Dichloroethene	96	3.008	3.007	(0.615)	25253	1.00000	1.0096
31 *MTBE	73	3.020	3.025	(0.618)	26184	1.00000	0.99535
32 *Hexane	57	3.269	3.268	(0.669)	98519	1.00000	1.0100
33 1,1-Dichloroethane (spcc)	63	3.373	3.372	(0.690)	49129	1.00000	1.0310
34 *Vinyl Acetate	86	3.440	3.439	(0.704)	3666	2.00000	2.1234
37 2,2-Dichloropropane	77	3.884	3.883	(0.795)	39535	1.00000	1.0686
38 cis 1,2-Dichloroethene	96	3.884	3.883	(0.795)	26623	1.00000	1.0544
39 2-Butanone	43	3.902	3.901	(0.798)	11681	4.00000	3.7311
40 Bromochloromethane	128	4.084	4.089	(0.836)	6926	1.00000	1.0219
41 *THF	42	4.133	4.132	(0.846)	8830	4.00000	4.2601
42 Chloroform (ccc)	83	4.163	4.168	(0.852)	40712	1.00000	1.0539
43 1,1,1-Trichloroethane	97	4.321	4.320	(0.884)	43177	1.00000	1.0198
44 Carbon Tetrachloride	117	4.473	4.472	(0.915)	36418	1.00000	1.0243
45 1,1-Dichloropropene	75	4.467	4.466	(0.914)	38927	1.00000	1.0535
46 Benzene	78	4.644	4.643	(0.950)	111046	1.00000	1.0512
47 1,2-Dichloroethane	62	4.650	4.649	(0.951)	18785	1.00000	1.0735
49 Trichloroethene	130	5.215	5.214	(1.067)	29406	1.00000	1.0420
50 1,2-Dichloropropane (ccc)	63	5.397	5.397	(1.104)	23440	1.00000	1.0166
129 Methyl Methacrylate	41	5.519	5.518	(1.129)	9858	1.00000	0.99685
51 Dibromomethane	93	5.501	5.500	(1.126)	6393	1.00000	1.0111
52 Bromodichloromethane	83	5.647	5.646	(1.155)	23374	1.00000	1.0130
53 *2-Chloroethylvinylether	63	5.920	5.920	(1.211)	11571	2.00000	2.0338
54 cis-1,3-Dichloropropene	75	6.048	6.047	(1.238)	27988	1.00000	1.0158
55 4-Methyl-2-pentanone	43	6.188	6.187	(1.266)	31293	4.00000	4.0687
56 Toluene (ccc)	91	6.358	6.357	(0.833)	138687	1.00000	1.0484
57 trans-1,3-Dichloropropene	75	6.547	6.546	(0.858)	20361	1.00000	1.0479
134 Ethyl Methacrylate	69	6.644	6.643	(0.871)	13428	1.00000	1.0259
58 1,1,2-Trichloroethane	97	6.711	6.716	(0.880)	10354	1.00000	1.0455
59 Tetrachloroethene	164	6.863	6.862	(0.900)	27927	1.00000	1.0582
60 1,3-Dichloropropane	76	6.869	6.868	(0.900)	17906	1.00000	1.0502
61 2-Hexanone	43	6.954	6.947	(0.912)	22160	4.00000	4.2907
62 Chlorodibromomethane	129	7.076	7.081	(0.927)	13521	1.00000	1.0778

Data File: /var/chem/gcms/mx.i/X091603I.b/icxi161.d
Report Date: 16-Sep-2003 12:26

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
	63 1,2-Dibromoethane	107	7.179	7.184	(0.941)	9495	1.00000	1.0350
	64 Chlorobenzene (spcc)	112	7.654	7.653	(1.003)	77331	1.00000	1.0590
	65 1,1,1,2-Tetrachloroethane	131	7.733	7.732	(1.014)	21070	1.00000	1.0250
	66 Ethylbenzene (ccc)	106	7.769	7.768	(1.018)	50909	1.00000	1.0476
	67 m&p-Xylene	106	7.885	7.884	(1.033)	123717	2.00000	2.1104
	68 o-Xylene	106	8.304	8.303	(1.088)	57175	1.00000	1.0917
	69 Styrene	104	8.316	8.322	(1.090)	80671	1.00000	1.0397
	70 Bromoform (spcc)	173	8.517	8.516	(1.116)	7449	1.00000	1.0264
	71 Isopropylbenzene	105	8.748	8.747	(1.147)	168769	1.00000	1.0348
	72 *cis-1,4-dichloro-2-butene	88	8.803	8.814	(1.154)	2986	1.00000	1.0238
	73 Bromobenzene	156	9.137	9.131	(1.198)	26308	1.00000	1.0223
	74 1,1,2,2-Tetrachloroethane(sp)	83	9.119	9.124	(1.195)	11311	1.00000	1.0214
	75 1,2,3-Trichloropropane	110	9.174	9.179	(0.847)	3113	1.00000	0.98267
	76 *trans-1,4-dichloro-2-butene	53	9.210	9.203	(0.851)	3660	1.00000	1.1562
	77 n-Propylbenzene	91	9.308	9.307	(0.860)	195270	1.00000	1.0358
	78 2-Chlorotoluene	91	9.423	9.422	(0.870)	105253	1.00000	1.0362
	79 1,3,5-Trimethylbenzene	105	9.587	9.581	(0.885)	120019	1.00000	1.0433
	80 4-Chlorotoluene	91	9.587	9.587	(0.885)	117384	1.00000	1.0358
	81 tert-Butylbenzene	119	10.110	10.116	(0.934)	118599	1.00000	1.0398
	82 1,2,4-Trimethylbenzene	105	10.202	10.201	(0.942)	106822	1.00000	1.0379
	83 sec-Butylbenzene	105	10.518	10.523	(0.971)	176588	1.00000	1.0471
	84 1,3-Dichlorobenzene	146	10.700	10.700	(0.988)	55932	1.00000	1.0299
	85 p-Isopropyltoluene	119	10.822	10.821	(0.999)	140202	1.00000	1.0412
	86 1,4-Dichlorobenzene	146	10.871	10.876	(1.004)	52882	1.00000	1.0579
	87 1,2-Dichlorobenzene	146	11.503	11.502	(1.062)	41662	1.00000	1.0328
	88 n-Butylbenzene	91	11.533	11.539	(1.065)	122145	1.00000	1.0548
	89 1,2-Dibromo-3-chloropropane	157	12.658	12.658	(1.169)	1988	1.00000	1.1504
	90 1,2,4-Trichlorobenzene	180	13.729	13.728	(1.268)	20256	1.00000	0.95581
	91 Hexachlorobutadiene	225	13.960	13.959	(1.289)	29046	1.00000	1.0332
	92 Napthalene	128	13.996	13.996	(1.293)	18149	1.00000	0.98690
	93 1,2,3-Trichlorobenzene	180	14.276	14.281	(1.318)	14578	1.00000	0.99873
M	94 *1,4-dichloro-2-butene(total)	53				6646	2.00000	2.1799

Data File: /var/chem/gcms/mx.i/X091603I.b/icxi161.d
Date : 16-SEP-2003 10:42
Client ID: VSTD001
Sample Info: ICXI161,1,1,1,,VSTD001
Purge Volume: 25.0
Column phase: J+W 624

Instrument: mx.i
Operator: 22980
Column diameter: 0.18



Data File: /var/chem/gcms/mx.i/X091603I.b/icxi162.d
Report Date: 16-Sep-2003 12:26

STL Knoxville

SW-846 Method 8260A - Volatile Organics

Data file : /var/chem/gcms/mx.i/X091603I.b/icxi162.d
Lab Smp Id: ICXI162 Client Smp ID: VSTD002
Inj Date : 16-SEP-2003 11:08
Operator : 22980 Inst ID: mx.i
Smp Info : ICXI162,1,1,2,,VSTD002
Misc Info : X091603I,8260B_LM,all.sub,,
Comment :
Method : /var/chem/gcms/mx.i/X091603I.b/8260B_LM.m
Meth Date : 16-Sep-2003 12:26 gosss Quant Type: ISTD
Cal Date : 16-SEP-2003 11:08 Cal File: icxi162.d
Als bottle: 2 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * Uf*Vt/(Vo*1000) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Unit Correction factor
Vt	25000.00000	Sample Volume Purged
Vo	25.00000	Sample Volume Used

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
*	1 Fluorobenzene	96	4.886	4.886	(1.000)	1056413	10.0000	
*	2 Chlorobenzene-d5	119	7.629	7.628	(1.000)	213850	10.0000	
*	3 1,4 Dichlorobenzene-d4	152	10.821	10.827	(1.000)	286855	10.0000	
$	4 Dibromofluoromethane	113	4.302	4.302	(0.881)	37963	2.00000	2.1365
$	5 1,2-Dichloroethane-d4	65	4.582	4.588	(0.938)	28382	2.00000	2.1359
$	6 Toluene-d8	98	6.297	6.297	(0.825)	220928	2.00000	2.1516
$	7 4-Bromofluorobenzene	95	8.930	8.936	(0.825)	73968	2.00000	2.1160
M	8 1,2-Dichloroethene (total)	96				103657	4.00000	4.1119
M	9 Xylene (total)	106				359386	9.00000	6.3439
	10 Dichlorodifluoromethane	85	1.104	1.103	(0.226)	54028	2.00000	1.9329
	11 Chloromethane (spcc)	50	1.237	1.237	(0.253)	88667	2.00000	1.9292
	12 Vinyl Chloride (ccc)	62	1.323	1.322	(0.271)	65706	2.00000	1.9008
	13 *1,3-Butadiene	39	1.353	1.353	(0.277)	56909	2.00000	2.0841
	14 Bromomethane	94	1.572	1.572	(0.322)	26201	2.00000	1.8086

Data File: /var/chem/gcms/mx.i/X091603I.b/icxi162.d
Report Date: 16-Sep-2003 12:26

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
15 Chloroethane	64	1.657	1.657	(0.339)	35915	2.00000	1.8770
16 *Vinyl Bromide	106	1.815	1.815	(0.371)	38195	2.00000	2.0424
17 Trichlorofluoromethane	101	1.882	1.882	(0.385)	70102	2.00000	1.9149
18 *2-Chloropropane	43	2.204	2.204	(0.451)	115919	2.00000	2.0215
19 *Acrolein	56	1.298	1.298	(0.266)	964	20.0000	
20 1,1-Dichloroethene (ccc)	96	2.332	2.332	(0.477)	40417	2.00000	2.0003
21 *Freon 113	151	2.350	2.350	(0.481)	34119	2.00000	2.0520
22 Acetone	43	2.381	2.374	(0.487)	20397	8.00000	6.5688
23 *Iodomethane	142	2.448	2.447	(0.501)	48453	2.00000	1.9543
24 Carbon Disulfide	76	2.502	2.502	(0.512)	148090	2.00000	2.0005
25 *2-propanol	45	2.539	2.539	(0.520)	14831	20.0000	26.126
26 *Acetonitrile	40	2.612	2.612	(0.535)	19780	40.0000	43.615
27 Methylene Chloride	84	2.758	2.757	(0.564)	40644	2.00000	2.1775
135 *t-butanol	59	2.898	2.903	(0.593)	63693	100.000	102.37
29 *Acrylonitrile	53	2.971	2.970	(0.608)	101556	40.0000	40.422
30 trans-1,2-Dichloroethene	96	3.007	3.007	(0.615)	50163	2.00000	1.9996
31 *MTBE	73	3.025	3.025	(0.619)	52734	2.00000	1.9986
32 *Hexane	57	3.269	3.268	(0.669)	201964	2.00000	2.0643
33 1,1-Dichloroethane (spcc)	63	3.372	3.372	(0.690)	97554	2.00000	2.0412
34 *Vinyl Acetate	86	3.439	3.439	(0.704)	6926	4.00000	3.9997
37 2,2-Dichloropropane	77	3.883	3.883	(0.795)	75884	2.00000	2.0450
38 cis 1,2-Dichloroethene	96	3.883	3.883	(0.795)	53494	2.00000	2.1122
39 2-Butanone	43	3.895	3.901	(0.797)	24418	8.00000	7.7763
40 Bromochloromethane	128	4.090	4.089	(0.837)	13431	2.00000	1.9757
41 *THF	42	4.132	4.132	(0.846)	17604	8.00000	8.4681
42 Chloroform (ccc)	83	4.169	4.168	(0.853)	78934	2.00000	2.0373
43 1,1,1-Trichloroethane	97	4.321	4.320	(0.884)	88422	2.00000	2.0823
44 Carbon Tetrachloride	117	4.473	4.472	(0.915)	72816	2.00000	2.0420
45 1,1-Dichloropropene	75	4.467	4.466	(0.914)	75659	2.00000	2.0415
46 Benzene	78	4.643	4.643	(0.950)	216570	2.00000	2.0440
47 1,2-Dichloroethane	62	4.649	4.649	(0.951)	34306	2.00000	1.9547
49 Trichloroethene	130	5.214	5.214	(1.067)	56851	2.00000	2.0085
50 1,2-Dichloropropane (ccc)	63	5.397	5.397	(1.105)	48347	2.00000	2.0906
129 Methyl Methacrylate	41	5.518	5.518	(1.129)	19542	2.00000	1.9702
51 Dibromomethane	93	5.500	5.500	(1.126)	13507	2.00000	2.1299
52 Bromodichloromethane	83	5.646	5.646	(1.156)	48698	2.00000	2.1043
53 *2-Chloroethylvinylether	63	5.920	5.920	(1.212)	23783	4.00000	4.1678
54 cis-1,3-Dichloropropene	75	6.048	6.047	(1.238)	57074	2.00000	2.0653
55 4-Methyl-2-pentanone	43	6.187	6.187	(1.266)	62508	8.00000	8.1031
56 Toluene (ccc)	91	6.352	6.357	(0.833)	275079	2.00000	2.0758
57 trans-1,3-Dichloropropene	75	6.546	6.546	(0.858)	40277	2.00000	2.0694
134 Ethyl Methacrylate	69	6.650	6.643	(0.872)	27818	2.00000	2.1217
58 1,1,2-Trichloroethane	97	6.710	6.716	(0.880)	20919	2.00000	2.1086
59 Tetrachloroethene	164	6.862	6.862	(0.900)	54557	2.00000	2.0637
60 1,3-Dichloropropane	76	6.862	6.868	(0.900)	34945	2.00000	2.0461
61 2-Hexanone	43	6.948	6.947	(0.911)	42760	8.00000	8.2650
62 Chlorodibromomethane	129	7.075	7.081	(0.927)	26795	2.00000	2.1322

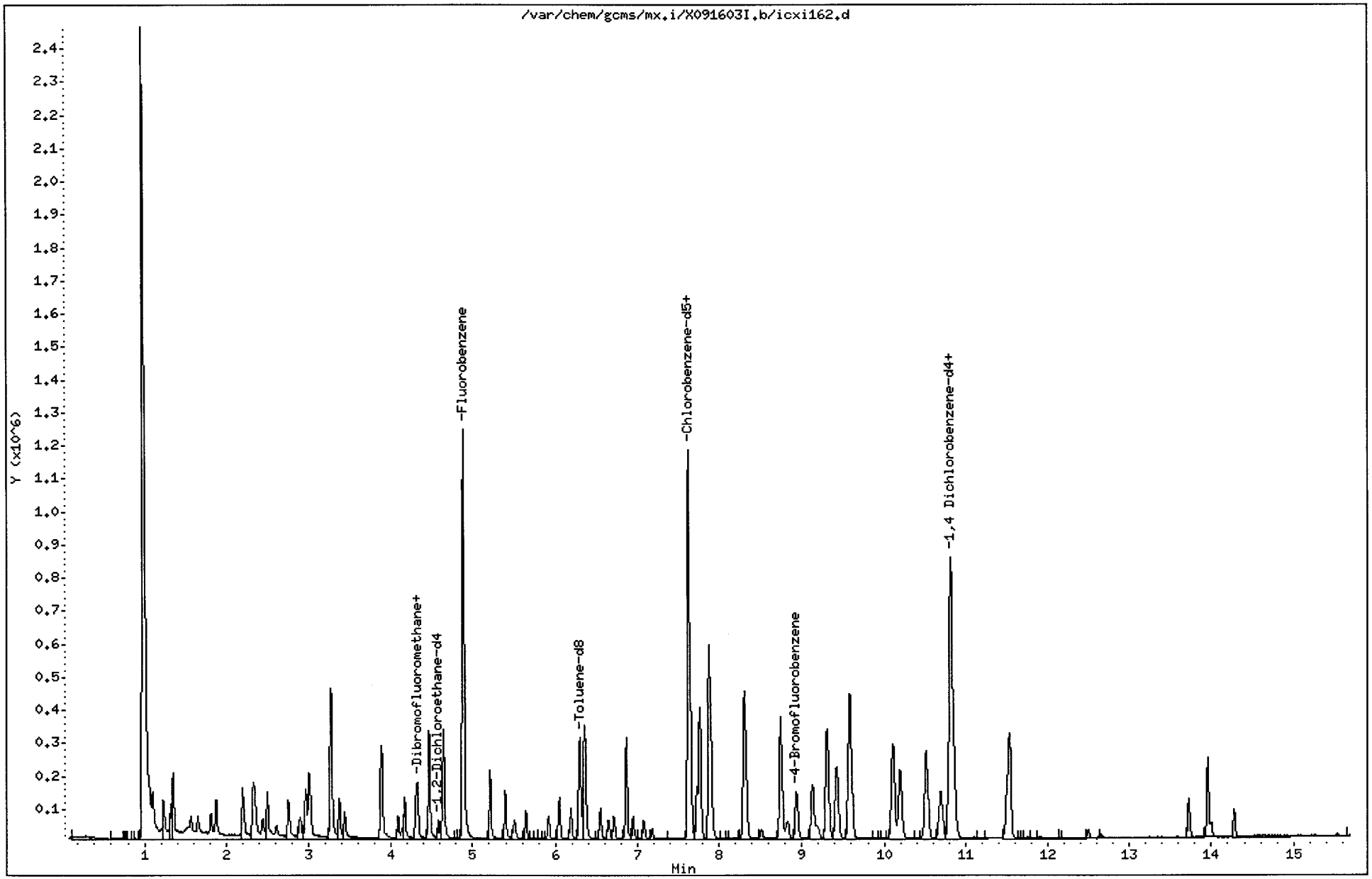
Data File: /var/chem/gcms/mx.i/X091603I.b/icxi162.d
Report Date: 16-Sep-2003 12:26

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
	63 1,2-Dibromoethane	107	7.179	7.184	(0.941)	19032	2.00000	2.0710
	64 Chlorobenzene (spcc)	112	7.659	7.653	(1.004)	152906	2.00000	2.0903
	65 1,1,1,2-Tetrachloroethane	131	7.732	7.732	(1.014)	43892	2.00000	2.1315
	66 Ethylbenzene (ccc)	106	7.762	7.768	(1.018)	101787	2.00000	2.0910
	67 m&p-Xylene	106	7.884	7.884	(1.033)	249112	4.00000	4.2420
	68 o-Xylene	106	8.310	8.303	(1.089)	110274	2.00000	2.1019
	69 Styrene	104	8.316	8.322	(1.090)	164072	2.00000	2.1110
	70 Bromoform (spcc)	173	8.510	8.516	(1.116)	15174	2.00000	2.0872
	71 Isopropylbenzene	105	8.748	8.747	(1.147)	342591	2.00000	2.0970
	72 *cis-1,4-dichloro-2-butene	88	8.815	8.814	(1.155)	5946	2.00000	2.0350
	73 Bromobenzene	156	9.131	9.131	(1.197)	54966	2.00000	2.1322
	74 1,1,2,2-Tetrachloroethane(sp)	83	9.125	9.124	(1.196)	22336	2.00000	2.0135
	75 1,2,3-Trichloropropane	110	9.179	9.179	(0.848)	5849	2.00000	1.8247
	76 *trans-1,4-dichloro-2-butene	53	9.198	9.203	(0.850)	6702	2.00000	2.0922
	77 n-Propylbenzene	91	9.307	9.307	(0.860)	392604	2.00000	2.0580
	78 2-Chlorotoluene	91	9.423	9.422	(0.871)	213831	2.00000	2.0805
	79 1,3,5-Trimethylbenzene	105	9.581	9.581	(0.885)	244114	2.00000	2.0971
	80 4-Chlorotoluene	91	9.587	9.587	(0.886)	241977	2.00000	2.1102
	81 tert-Butylbenzene	119	10.110	10.116	(0.934)	238847	2.00000	2.0695
	82 1,2,4-Trimethylbenzene	105	10.195	10.201	(0.942)	217984	2.00000	2.0932
	83 sec-Butylbenzene	105	10.517	10.523	(0.972)	354090	2.00000	2.0751
	84 1,3-Dichlorobenzene	146	10.700	10.700	(0.989)	115864	2.00000	2.1084
	85 p-Isopropyltoluene	119	10.815	10.821	(0.999)	284949	2.00000	2.0913
	86 1,4-Dichlorobenzene	146	10.870	10.876	(1.004)	107243	2.00000	2.1202
	87 1,2-Dichlorobenzene	146	11.502	11.502	(1.063)	87132	2.00000	2.1346
	88 n-Butylbenzene	91	11.533	11.539	(1.066)	248600	2.00000	2.1216
	89 1,2-Dibromo-3-chloropropane	157	12.652	12.658	(1.169)	3599	2.00000	2.0582
	90 1,2,4-Trichlorobenzene	180	13.728	13.728	(1.269)	45574	2.00000	2.1252
	91 Hexachlorobutadiene	225	13.959	13.959	(1.290)	58242	2.00000	2.0474
	92 Napthalene	128	13.996	13.996	(1.293)	38907	2.00000	2.0908
	93 1,2,3-Trichlorobenzene	180	14.282	14.281	(1.320)	30834	2.00000	2.0876
M	94 *1,4-dichloro-2-butene(total)	53				12648	4.00000	4.1273

Data File: /var/chem/gcms/mx.i/X091603I.b/icxi162.d
Date : 16-SEP-2003 11:08
Client ID: VSTD002
Sample Info: ICXI162,1,1,2,,VSTD002
Purge Volume: 25.0
Column phase: J+W 624

Instrument: mx.i

Operator: 22980
Column diameter: 0.18



Data File: /var/chem/gcms/mx.i/X091603I.b/icxi163.d
Report Date: 16-Sep-2003 12:26

STL Knoxville

SW-846 Method 8260A - Volatile Organics

Data file : /var/chem/gcms/mx.i/X091603I.b/icxi163.d
Lab Smp Id: ICXI163 Client Smp ID: VSTD010
Inj Date : 16-SEP-2003 11:34
Operator : 22980 Inst ID: mx.i
Smp Info : ICXI163,1,1,3,,VSTD010
Misc Info : X091603I,8260B_LM,all.sub,,
Comment :
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Meth Date : 16-Sep-2003 12:26 gosss Quant Type: ISTD
Cal Date : 16-SEP-2003 11:34 Cal File: icxi163.d
Als bottle: 3 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * Uf*Vt/(Vo*1000) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Unit Correction factor
Vt	25000.00000	Sample Volume Purged
Vo	25.00000	Sample Volume Used

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
*	1 Fluorobenzene	96	4.886	4.886	(1.000)	1092374	10.0000	
*	2 Chlorobenzene-d5	119	7.628	7.628	(1.000)	232022	10.0000	
*	3 1,4 Dichlorobenzene-d4	152	10.827	10.827	(1.000)	306625	10.0000	
$	4 Dibromofluoromethane	113	4.302	4.302	(0.880)	167791	10.0000	9.7626
$	5 1,2-Dichloroethane-d4	65	4.588	4.588	(0.939)	128052	10.0000	9.5604
$	6 Toluene-d8	98	6.297	6.297	(0.825)	960523	10.0000	9.8690
$	7 4-Bromofluorobenzene	95	8.936	8.936	(0.825)	331364	10.0000	9.7924
M	8 1,2-Dichloroethene (total)	96				493564	20.0000	18.940
M	9 Xylene (total)	106				1655937	30.0000	26.949
	10 Dichlorodifluoromethane	85	1.103	1.103	(0.226)	265856	10.0000	9.1982
	11 Chloromethane (spcc)	50	1.237	1.237	(0.253)	407163	10.0000	8.5674
	12 Vinyl Chloride (ccc)	62	1.322	1.322	(0.271)	320984	10.0000	8.9800
	13 *1,3-Butadiene	39	1.353	1.353	(0.277)	282332	10.0000	9.9990
	14 Bromomethane	94	1.572	1.572	(0.322)	128239	10.0000	8.5608

Data File: /var/chem/gcms/mx.i/X091603I.b/icxi163.d
Report Date: 16-Sep-2003 12:26

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
15 Chloroethane	64	1.657	1.657	(0.339)	172928	10.0000	8.7401
16 *Vinyl Bromide	106	1.815	1.815	(0.371)	194405	10.0000	10.053
17 Trichlorofluoromethane	101	1.882	1.882	(0.385)	338596	10.0000	8.9446
18 *2-Chloropropane	43	2.204	2.204	(0.451)	565892	10.0000	9.5439
19 *Acrolein	56	1.298	1.298	(0.266)	1845	100.000	
20 1,1-Dichloroethene (ccc)	96	2.332	2.332	(0.477)	198101	10.0000	9.4815
21 *Freon 113	151	2.350	2.350	(0.481)	161530	10.0000	9.3951
22 Acetone	43	2.374	2.374	(0.486)	70840	40.0000	22.063
23 *Iodomethane	142	2.447	2.447	(0.501)	256127	10.0000	9.9904
24 Carbon Disulfide	76	2.502	2.502	(0.512)	726489	10.0000	9.4906
25 *2-propanol	45	2.539	2.539	(0.520)	47729	100.000	81.309
26 *Acetonitrile	40	2.612	2.612	(0.534)	90543	200.000	193.07
27 Methylene Chloride	84	2.757	2.757	(0.564)	165496	10.0000	8.5747
135 *t-butanol	59	2.903	2.903	(0.594)	285395	500.000	443.59
29 *Acrylonitrile	53	2.970	2.970	(0.608)	493317	200.000	189.89
30 trans-1,2-Dichloroethene	96	3.007	3.007	(0.615)	255479	10.0000	9.8488
31 *MTBE	73	3.025	3.025	(0.619)	254864	10.0000	9.3415
32 *Hexane	57	3.268	3.268	(0.669)	974408	10.0000	9.6316
33 1,1-Dichloroethane (spcc)	63	3.372	3.372	(0.690)	474598	10.0000	9.6036
34 *Vinyl Acetate	86	3.439	3.439	(0.704)	31628	20.0000	17.663
37 2,2-Dichloropropane	77	3.883	3.883	(0.795)	366553	10.0000	9.5532
38 cis 1,2-Dichloroethene	96	3.883	3.883	(0.795)	238085	10.0000	9.0914
39 2-Butanone	43	3.901	3.901	(0.798)	114353	40.0000	35.219
40 Bromochloromethane	128	4.089	4.089	(0.837)	65412	10.0000	9.3055
41 *THF	42	4.132	4.132	(0.846)	81521	40.0000	37.923
42 Chloroform (ccc)	83	4.168	4.168	(0.853)	382667	10.0000	9.5514
43 1,1,1-Trichloroethane	97	4.320	4.320	(0.884)	416293	10.0000	9.4807
44 Carbon Tetrachloride	117	4.472	4.472	(0.915)	357316	10.0000	9.6905
45 1,1-Dichloropropene	75	4.466	4.466	(0.914)	359171	10.0000	9.3723
46 Benzene	78	4.643	4.643	(0.950)	1034694	10.0000	9.4443
47 1,2-Dichloroethane	62	4.649	4.649	(0.951)	169979	10.0000	9.3661
49 Trichloroethene	130	5.214	5.214	(1.067)	280971	10.0000	9.5999
50 1,2-Dichloropropane (ccc)	63	5.397	5.397	(1.105)	229272	10.0000	9.5875
129 Methyl Methacrylate	41	5.518	5.518	(1.129)	93482	10.0000	9.1147
51 Dibromomethane	93	5.500	5.500	(1.126)	61308	10.0000	9.3492
52 Bromodichloromethane	83	5.646	5.646	(1.156)	227821	10.0000	9.5204
53 *2-Chloroethylvinylether	63	5.920	5.920	(1.212)	115031	20.0000	19.495
54 cis-1,3-Dichloropropene	75	6.047	6.047	(1.238)	272266	10.0000	9.5281
55 4-Methyl-2-pentanone	43	6.187	6.187	(1.266)	300905	40.0000	37.723
56 Toluene (ccc)	91	6.357	6.357	(0.833)	1297841	10.0000	9.0269
57 trans-1,3-Dichloropropene	75	6.546	6.546	(0.858)	192562	10.0000	9.1188
134 Ethyl Methacrylate	69	6.643	6.643	(0.871)	128001	10.0000	8.9981
58 1,1,2-Trichloroethane	97	6.716	6.716	(0.880)	96789	10.0000	8.9919
59 Tetrachloroethene	164	6.862	6.862	(0.900)	266114	10.0000	9.2780
60 1,3-Dichloropropane	76	6.868	6.868	(0.900)	170076	10.0000	9.1782
61 2-Hexanone	43	6.947	6.947	(0.911)	208189	40.0000	37.089
62 Chlorodibromomethane	129	7.081	7.081	(0.928)	127733	10.0000	9.3680

Data File: /var/chem/gcms/mx.i/X091603I.b/icxi163.d
Report Date: 16-Sep-2003 12:26

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
	63 1,2-Dibromoethane	107	7.184	7.184	(0.942)	91430	10.0000	9.1699
	64 Chlorobenzene (spcc)	112	7.653	7.653	(1.003)	721199	10.0000	9.0872
	65 1,1,1,2-Tetrachloroethane	131	7.732	7.732	(1.014)	206249	10.0000	9.2316
	66 Ethylbenzene (ccc)	106	7.768	7.768	(1.018)	478765	10.0000	9.0649
	67 m&p-Xylene	106	7.884	7.884	(1.033)	1143815	20.0000	17.952
	68 o-Xylene	106	8.303	8.303	(1.088)	512122	10.0000	8.9970
	69 Styrene	104	8.322	8.322	(1.091)	771404	10.0000	9.1478
	70 Bromoform (spcc)	173	8.516	8.516	(1.116)	73628	10.0000	9.3343
	71 Isopropylbenzene	105	8.747	8.747	(1.147)	1601201	10.0000	9.0334
	72 *cis-1,4-dichloro-2-butene	88	8.814	8.814	(1.155)	31161	10.0000	9.8297
	73 Bromobenzene	156	9.131	9.131	(1.197)	251864	10.0000	9.0052
	74 1,1,2,2-Tetrachloroethane(sp)	83	9.124	9.124	(1.196)	107201	10.0000	8.9070
	75 1,2,3-Trichloropropane	110	9.179	9.179	(0.848)	29584	10.0000	8.6340
	76 *trans-1,4-dichloro-2-butene	53	9.203	9.203	(0.850)	31385	10.0000	9.1661
	77 n-Propylbenzene	91	9.307	9.307	(0.860)	1836236	10.0000	9.0049
	78 2-Chlorotoluene	91	9.422	9.422	(0.870)	997786	10.0000	9.0823
	79 1,3,5-Trimethylbenzene	105	9.581	9.581	(0.885)	1103414	10.0000	8.8680
	80 4-Chlorotoluene	91	9.587	9.587	(0.885)	1079055	10.0000	8.8034
	81 tert-Butylbenzene	119	10.116	10.116	(0.934)	1104163	10.0000	8.9500
	82 1,2,4-Trimethylbenzene	105	10.201	10.201	(0.942)	991905	10.0000	8.9107
	83 sec-Butylbenzene	105	10.523	10.523	(0.972)	1617898	10.0000	8.8700
	84 1,3-Dichlorobenzene	146	10.700	10.700	(0.988)	535111	10.0000	9.1097
	85 p-Isopropyltoluene	119	10.821	10.821	(0.999)	1281825	10.0000	8.8010
	86 1,4-Dichlorobenzene	146	10.876	10.876	(1.004)	484276	10.0000	8.9571
	87 1,2-Dichlorobenzene	146	11.502	11.502	(1.062)	400741	10.0000	9.1845
	88 n-Butylbenzene	91	11.539	11.539	(1.066)	1079846	10.0000	8.6214
	89 1,2-Dibromo-3-chloropropane	157	12.658	12.658	(1.169)	18498	10.0000	9.8964
	90 1,2,4-Trichlorobenzene	180	13.728	13.728	(1.268)	199816	10.0000	8.7172
	91 Hexachlorobutadiene	225	13.959	13.959	(1.289)	247697	10.0000	8.1461
	92 Napthalene	128	13.996	13.996	(1.293)	175468	10.0000	8.8216
	93 1,2,3-Trichlorobenzene	180	14.281	14.281	(1.319)	136211	10.0000	8.6276
M	94 *1,4-dichloro-2-butene(total)	53				62546	20.0000	18.996

Data File: /var/chem/gcms/mx.i/X091603I.b/icxi163.d
Date : 16-SEP-2003 11:34
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Sample Info: ICXI163,1,1,3,,VSTD010
Purge Volume: 25.0
Column phase: J+W 624

Instrument: mx.i
Operator: 22980
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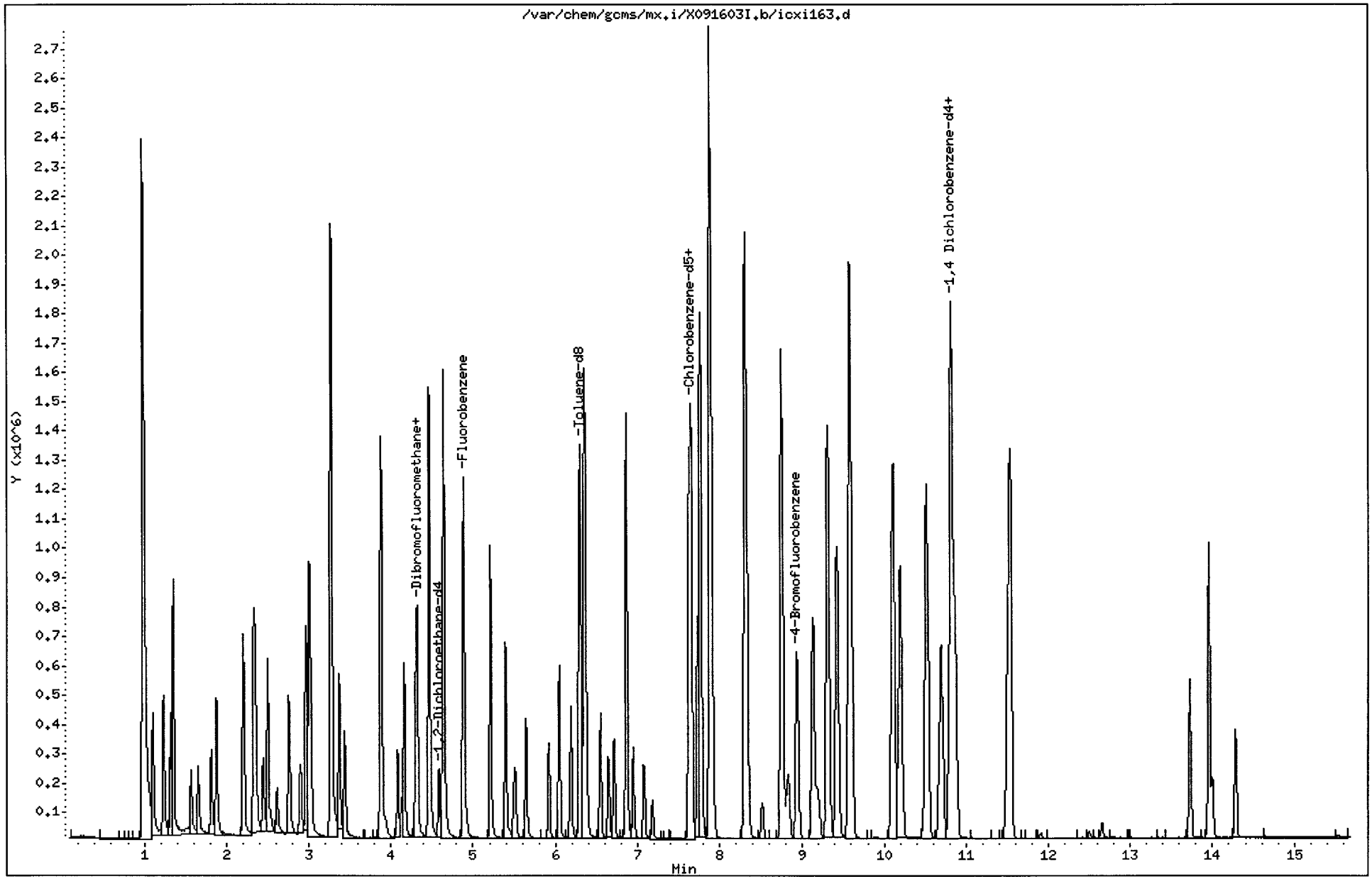

Data File: /var/chem/gcms/mx.i/X091603I.b/icxi164.d
Report Date: 16-Sep-2003 12:26

STL Knoxville

SW-846 Method 8260A - Volatile Organics

Data file : /var/chem/gcms/mx.i/X091603I.b/icxi164.d
Lab Smp Id: ICXI164 Client Smp ID: VSTD020
Inj Date : 16-SEP-2003 12:00
Operator : 22980 Inst ID: mx.i
Smp Info : ICXI164,1,1,4,,VSTD020
Misc Info : X091603I,8260B_LM,all.sub,,
Comment :
Method : /var/chem/gcms/mx.i/X091603I.b/8260B_LM.m
Meth Date : 16-Sep-2003 12:26 gosss Quant Type: ISTD
Cal Date : 16-SEP-2003 12:00 Cal File: icxi164.d
Als bottle: 4 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * Uf*Vt/(Vo*1000) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Unit Correction factor
Vt	25000.00000	Sample Volume Purged
Vo	25.00000	Sample Volume Used

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
*	1 Fluorobenzene	96	4.888	4.886	(1.000)	1108652	10.0000	
*	2 Chlorobenzene-d5	119	7.628	7.628	(1.000)	241654	10.0000	
*	3 1,4 Dichlorobenzene-d4	152	10.827	10.827	(1.000)	312088	10.0000	
$	4 Dibromofluoromethane	113	4.304	4.302	(0.881)	347138	20.0000	20.101
$	5 1,2-Dichloroethane-d4	65	4.584	4.588	(0.938)	273342	20.0000	20.187
$	6 Toluene-d8	98	6.297	6.297	(0.825)	1990942	20.0000	20.052
$	7 4-Bromofluorobenzene	95	8.936	8.936	(0.825)	681705	20.0000	20.089
M	8 1,2-Dichloroethene (total)	96				936960	40.0000	35.422
M	9 Xylene (total)	106				3213102	60.0000	50.229
	10 Dichlorodifluoromethane	85	1.105	1.103	(0.226)	522596	20.0000	17.816
	11 Chloromethane (spcc)	50	1.233	1.237	(0.252)	794645	20.0000	16.475
	12 Vinyl Chloride (ccc)	62	1.318	1.322	(0.270)	631755	20.0000	17.415
	13 *1,3-Butadiene	39	1.354	1.353	(0.277)	543102	20.0000	18.952
	14 Bromomethane	94	1.567	1.572	(0.321)	261320	20.0000	17.189

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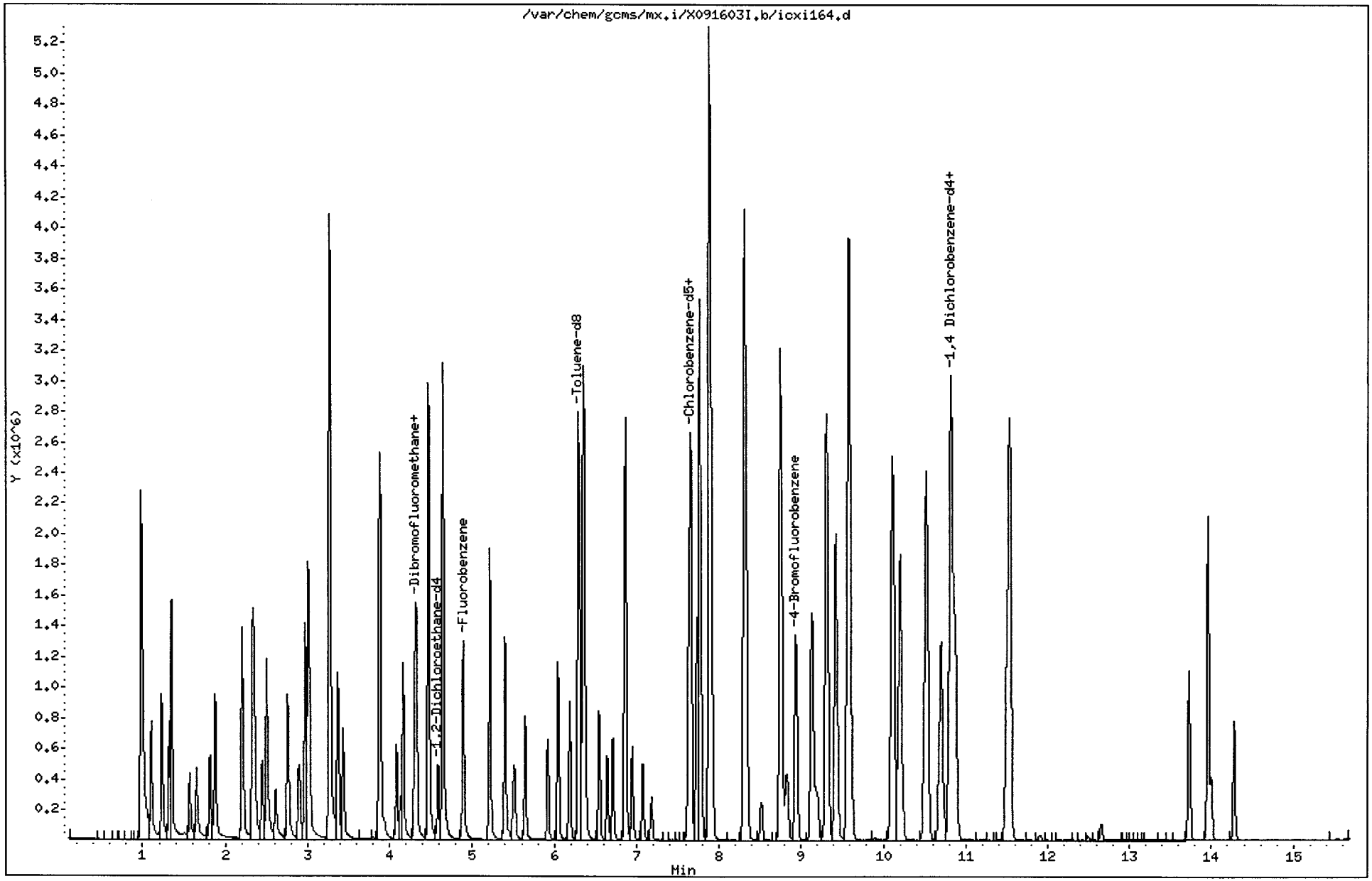
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
15 Chloroethane	64	1.658	1.657	(0.339)	341570	20.0000	17.010
16 *Vinyl Bromide	106	1.817	1.815	(0.372)	375616	20.0000	19.139
17 Trichlorofluoromethane	101	1.877	1.882	(0.384)	669343	20.0000	17.422
18 *2-Chloropropane	43	2.206	2.204	(0.451)	1102470	20.0000	18.320
19 *Acrolein	56	1.300	1.298	(0.266)	2355	200.000	
20 1,1-Dichloroethene (ccc)	96	2.327	2.332	(0.476)	388936	20.0000	18.342
21 *Freon 113	151	2.352	2.350	(0.481)	320548	20.0000	18.370
22 Acetone	43	2.376	2.374	(0.486)	153456	80.0000	47.092
23 *Iodomethane	142	2.449	2.447	(0.501)	506634	20.0000	19.471
24 Carbon Disulfide	76	2.504	2.502	(0.512)	1410675	20.0000	18.158
25 *2-propanol	45	2.540	2.539	(0.520)	89076	200.000	149.52
26 *Acetonitrile	40	2.613	2.612	(0.535)	182024	400.000	382.45
27 Methylene Chloride	84	2.759	2.757	(0.565)	338028	20.0000	17.257
135 *t-butanol	59	2.899	2.903	(0.593)	568572	1000.00	870.76
29 *Acrylonitrile	53	2.972	2.970	(0.608)	999246	400.000	378.98
30 trans-1,2-Dichloroethene	96	3.009	3.007	(0.616)	470397	20.0000	17.868
31 *MTBE	73	3.021	3.025	(0.618)	495284	20.0000	17.887
32 *Hexane	57	3.270	3.268	(0.669)	1874631	20.0000	18.258
33 1,1-Dichloroethane (spcc)	63	3.373	3.372	(0.690)	929628	20.0000	18.535
34 *Vinyl Acetate	86	3.440	3.439	(0.704)	65031	40.0000	35.785
37 2,2-Dichloropropane	77	3.878	3.883	(0.793)	691912	20.0000	17.768
38 cis 1,2-Dichloroethene	96	3.884	3.883	(0.795)	466563	20.0000	17.554
39 2-Butanone	43	3.896	3.901	(0.797)	225779	80.0000	68.515
40 Bromochloromethane	128	4.085	4.089	(0.836)	130082	20.0000	18.234
41 *THF	42	4.134	4.132	(0.846)	162032	80.0000	74.270
42 Chloroform (ccc)	83	4.164	4.168	(0.852)	732853	20.0000	18.023
43 1,1,1-Trichloroethane	97	4.322	4.320	(0.884)	797986	20.0000	17.907
44 Carbon Tetrachloride	117	4.468	4.472	(0.914)	678628	20.0000	18.134
45 1,1-Dichloropropene	75	4.468	4.466	(0.914)	689481	20.0000	17.727
46 Benzene	78	4.644	4.643	(0.950)	2000438	20.0000	17.991
47 1,2-Dichloroethane	62	4.650	4.649	(0.951)	336426	20.0000	18.265
49 Trichloroethene	130	5.214	5.214	(1.067)	540629	20.0000	18.200
50 1,2-Dichloropropane (ccc)	63	5.397	5.397	(1.104)	454594	20.0000	18.731
129 Methyl Methacrylate	41	5.518	5.518	(1.129)	183618	20.0000	17.640
51 Dibromomethane	93	5.500	5.500	(1.125)	123256	20.0000	18.520
52 Bromodichloromethane	83	5.646	5.646	(1.155)	450076	20.0000	18.532
53 *2-Chloroethylvinylether	63	5.920	5.920	(1.211)	231501	40.0000	38.657
54 cis-1,3-Dichloropropene	75	6.047	6.047	(1.237)	538907	20.0000	18.582
55 4-Methyl-2-pentanone	43	6.187	6.187	(1.266)	605094	80.0000	74.744
56 Toluene (ccc)	91	6.357	6.357	(0.833)	2510893	20.0000	16.768
57 trans-1,3-Dichloropropene	75	6.546	6.546	(0.858)	386831	20.0000	17.588
134 Ethyl Methacrylate	69	6.649	6.643	(0.872)	260607	20.0000	17.590
58 1,1,2-Trichloroethane	97	6.716	6.716	(0.880)	192681	20.0000	17.187
59 Tetrachloroethene	164	6.862	6.862	(0.900)	508290	20.0000	17.015
60 1,3-Dichloropropane	76	6.868	6.868	(0.900)	332889	20.0000	17.248
61 2-Hexanone	43	6.947	6.947	(0.911)	411979	80.0000	70.469
62 Chlorodibromomethane	129	7.081	7.081	(0.928)	257773	20.0000	18.152

Data File: /var/chem/gcms/mx.i/X091603I.b/icxi164.d
Report Date: 16-Sep-2003 12:26

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
63	1,2-Dibromoethane	107	7.178	7.184	(0.941)	184806	20.0000	17.796
64	Chlorobenzene (spcc)	112	7.653	7.653	(1.003)	1405397	20.0000	17.002
65	1,1,1,2-Tetrachloroethane	131	7.732	7.732	(1.014)	405223	20.0000	17.414
66	Ethylbenzene (ccc)	106	7.768	7.768	(1.018)	936914	20.0000	17.032
67	m&p-Xylene	106	7.890	7.884	(1.034)	2206901	40.0000	33.256
68	o-Xylene	106	8.310	8.303	(1.089)	1006201	20.0000	16.972
69	Styrene	104	8.322	8.322	(1.091)	1504185	20.0000	17.127
70	Bromoform (spcc)	173	8.516	8.516	(1.116)	148533	20.0000	18.080
71	Isopropylbenzene	105	8.747	8.747	(1.147)	3138252	20.0000	16.999
72	*cis-1,4-dichloro-2-butene	88	8.808	8.814	(1.155)	64432	20.0000	19.515
73	Bromobenzene	156	9.131	9.131	(1.197)	493847	20.0000	16.953
74	1,1,2,2-Tetrachloroethane(sp)	83	9.124	9.124	(1.196)	208404	20.0000	16.625
75	1,2,3-Trichloropropane	110	9.179	9.179	(0.848)	57372	20.0000	16.451
76	*trans-1,4-dichloro-2-butene	53	9.204	9.203	(0.850)	61414	20.0000	17.622
77	n-Propylbenzene	91	9.307	9.307	(0.860)	3605641	20.0000	17.373
78	2-Chlorotoluene	91	9.422	9.422	(0.870)	1945238	20.0000	17.396
79	1,3,5-Trimethylbenzene	105	9.581	9.581	(0.885)	2178242	20.0000	17.200
80	4-Chlorotoluene	91	9.587	9.587	(0.885)	2119201	20.0000	16.987
81	tert-Butylbenzene	119	10.116	10.116	(0.934)	2198972	20.0000	17.512
82	1,2,4-Trimethylbenzene	105	10.201	10.201	(0.942)	1985693	20.0000	17.526
83	sec-Butylbenzene	105	10.523	10.523	(0.972)	3222682	20.0000	17.359
84	1,3-Dichlorobenzene	146	10.700	10.700	(0.988)	1064916	20.0000	17.812
85	p-Isopropyltoluene	119	10.821	10.821	(0.999)	2517258	20.0000	16.981
86	1,4-Dichlorobenzene	146	10.870	10.876	(1.004)	951507	20.0000	17.291
87	1,2-Dichlorobenzene	146	11.502	11.502	(1.062)	787822	20.0000	17.740
88	n-Butylbenzene	91	11.539	11.539	(1.066)	2183238	20.0000	17.126
89	1,2-Dibromo-3-chloropropane	157	12.652	12.658	(1.169)	37337	20.0000	19.626
90	1,2,4-Trichlorobenzene	180	13.728	13.728	(1.268)	416742	20.0000	17.862
91	Hexachlorobutadiene	225	13.959	13.959	(1.289)	522292	20.0000	16.876
92	Napthalene	128	13.996	13.996	(1.293)	362375	20.0000	17.899
93	1,2,3-Trichlorobenzene	180	14.281	14.281	(1.319)	287903	20.0000	17.916
M 94	*1,4-dichloro-2-butene(total)	53				125846	40.0000	37.137

Data File: /var/chem/gcms/mx.i/X091603I.b/icxi164.d
Date : 16-SEP-2003 12:00
Client ID: VSTD020
Sample Info: ICXI164,1,1,4,,VSTD020
Purge Volume: 25.0
Column phase: J+W 624

Instrument: mx.i
Operator: 22980
Column diameter: 0.18



Data File: /chem/gcms/mx.i/X091603I.b/icxi165.d
Report Date: 16-Sep-2003 12:43

STL Knoxville

SW-846 Method 8260A - Volatile Organics

Data file : /chem/gcms/mx.i/X091603I.b/icxi165.d
Lab Smp Id: ICXI165 Client Smp ID: VSTD040
Inj Date : 16-SEP-2003 12:26
Operator : 22980 Inst ID: mx.i
Smp Info : ICXI165,1,1,5,,VSTD040
Misc Info : X091603I,8260B_LM,all.sub,,
Comment :
Method : /var/chem/gcms/mx.i/X091603I.b/8260B_LM.m
Meth Date : 16-Sep-2003 12:43 chemist Quant Type: ISTD
Cal Date : 16-SEP-2003 12:26 Cal File: icxi165.d
Als bottle: 1 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * Uf*Vt/(Vo*1000) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Unit Correction factor
Vt	25000.00000	Sample Volume Purged
Vo	25.00000	Sample Volume Used

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
*	1 Fluorobenzene	96	4.886	4.886	(1.000)	1089398	10.0000	
*	2 Chlorobenzene-d5	119	7.628	7.628	(1.000)	235325	10.0000	
*	3 1,4 Dichlorobenzene-d4	152	10.833	10.827	(1.000)	290784	10.0000	
$	4 Dibromofluoromethane	113	4.303	4.302	(0.881)	691905	40.0000	38.140
$	5 1,2-Dichloroethane-d4	65	4.588	4.588	(0.939)	535913	40.0000	38.289
$	6 Toluene-d8	98	6.296	6.297	(0.825)	3895087	40.0000	36.034
$	7 4-Bromofluorobenzene	95	8.936	8.936	(0.825)	1323122	40.0000	38.014
M	8 1,2-Dichloroethene (total)	96				1879614	80.0000	73.492
M	9 Xylene (total)	106				6373226	120.000	104.87
	10 Dichlorodifluoromethane	85	1.104	1.103	(0.226)	1086179	40.0000	38.050
	11 Chloromethane (spcc)	50	1.238	1.237	(0.253)	1665551	40.0000	35.868
	12 Vinyl Chloride (ccc)	62	1.323	1.322	(0.271)	1296715	40.0000	36.934
	13 *1,3-Butadiene	39	1.353	1.353	(0.277)	1100535	40.0000	39.232
	14 Bromomethane	94	1.572	1.572	(0.322)	569212	40.0000	38.406

Data File: /chem/gcms/mx.i/X091603I.b/icxi165.d
Report Date: 16-Sep-2003 12:43

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
15 Chloroethane	64	1.657	1.657	(0.339)	703038	40.0000	36.291
16 *Vinyl Bromide	106	1.815	1.815	(0.372)	773421	40.0000	40.087
17 Trichlorofluoromethane	101	1.876	1.882	(0.384)	1362249	40.0000	36.683
18 *2-Chloropropane	43	2.205	2.204	(0.451)	2291040	40.0000	38.948
19 *Acrolein	56	1.305	1.298	(0.267)	2798	400.000	
20 1,1-Dichloroethene (ccc)	96	2.332	2.332	(0.477)	791511	40.0000	38.308
21 *Freon 113	151	2.351	2.350	(0.481)	635967	40.0000	37.546
22 Acetone	43	2.375	2.374	(0.486)	302027	160.000	160.79
23 *Iodomethane	142	2.448	2.447	(0.501)	1129275	40.0000	43.414(A)
24 Carbon Disulfide	76	2.503	2.502	(0.512)	3029938	40.0000	39.742
25 *2-propanol	45	2.539	2.539	(0.520)	179270	400.000	321.29
26 *Acetonitrile	40	2.612	2.612	(0.535)	371907	800.000	796.18
27 Methylene Chloride	84	2.758	2.757	(0.564)	676211	40.0000	40.229
135 *t-butanol	59	2.904	2.903	(0.594)	1164272	2000.00	1843.0
29 *Acrylonitrile	53	2.971	2.970	(0.608)	2007728	800.000	779.00
30 trans-1,2-Dichloroethene	96	3.007	3.007	(0.615)	947469	40.0000	37.148
31 *MTBE	73	3.026	3.025	(0.619)	1017650	40.0000	37.811
32 *Hexane	57	3.275	3.268	(0.670)	3873225	40.0000	38.649
33 1,1-Dichloroethane (spcc)	63	3.372	3.372	(0.690)	1864381	40.0000	38.174
34 *Vinyl Acetate	86	3.439	3.439	(0.704)	131295	80.0000	74.531(A)
37 2,2-Dichloropropane	77	3.883	3.883	(0.795)	1384029	40.0000	36.756
38 cis 1,2-Dichloroethene	96	3.883	3.883	(0.795)	932144	40.0000	36.344
39 2-Butanone	43	3.901	3.901	(0.798)	459253	160.000	144.56
40 Bromochloromethane	128	4.090	4.089	(0.837)	261838	40.0000	37.768
41 *THF	42	4.132	4.132	(0.846)	325871	160.000	153.54
42 Chloroform (ccc)	83	4.169	4.168	(0.853)	1498957	40.0000	37.908
43 1,1,1-Trichloroethane	97	4.321	4.320	(0.884)	1617683	40.0000	37.419
44 Carbon Tetrachloride	117	4.473	4.472	(0.915)	1376121	40.0000	37.829
45 1,1-Dichloropropene	75	4.467	4.466	(0.914)	1391626	40.0000	36.965
46 Benzene	78	4.643	4.643	(0.950)	4082311	40.0000	37.778
47 1,2-Dichloroethane	62	4.655	4.649	(0.953)	681056	40.0000	38.005
49 Trichloroethene	130	5.214	5.214	(1.067)	1114497	40.0000	38.474
50 1,2-Dichloropropane (ccc)	63	5.396	5.397	(1.104)	928958	40.0000	39.123
129 Methyl Methacrylate	41	5.518	5.518	(1.129)	379399	40.0000	37.548
51 Dibromomethane	93	5.500	5.500	(1.125)	249048	40.0000	38.389
52 Bromodichloromethane	83	5.646	5.646	(1.155)	922554	40.0000	38.875
53 *2-Chloroethylvinylether	63	5.919	5.920	(1.211)	466098	80.0000	79.364
54 cis-1,3-Dichloropropene	75	6.047	6.047	(1.238)	1116365	40.0000	39.310
55 4-Methyl-2-pentanone	43	6.187	6.187	(1.266)	1242386	160.000	156.80
56 Toluene (ccc)	91	6.357	6.357	(0.833)	5044978	40.0000	35.394
57 trans-1,3-Dichloropropene	75	6.552	6.546	(0.859)	790471	40.0000	37.389
134 Ethyl Methacrylate	69	6.649	6.643	(0.872)	524921	40.0000	36.939
58 1,1,2-Trichloroethane	97	6.716	6.716	(0.880)	396002	40.0000	36.845
59 Tetrachloroethene	164	6.862	6.862	(0.900)	1010270	40.0000	35.508
60 1,3-Dichloropropane	76	6.868	6.868	(0.900)	675144	40.0000	36.544
61 2-Hexanone	43	6.947	6.947	(0.911)	844193	160.000	150.11
62 Chlorodibromomethane	129	7.081	7.081	(0.928)	526982	40.0000	38.410

Data File: /chem/gcms/mx.i/X091603I.b/icxi165.d
Report Date: 16-Sep-2003 12:43

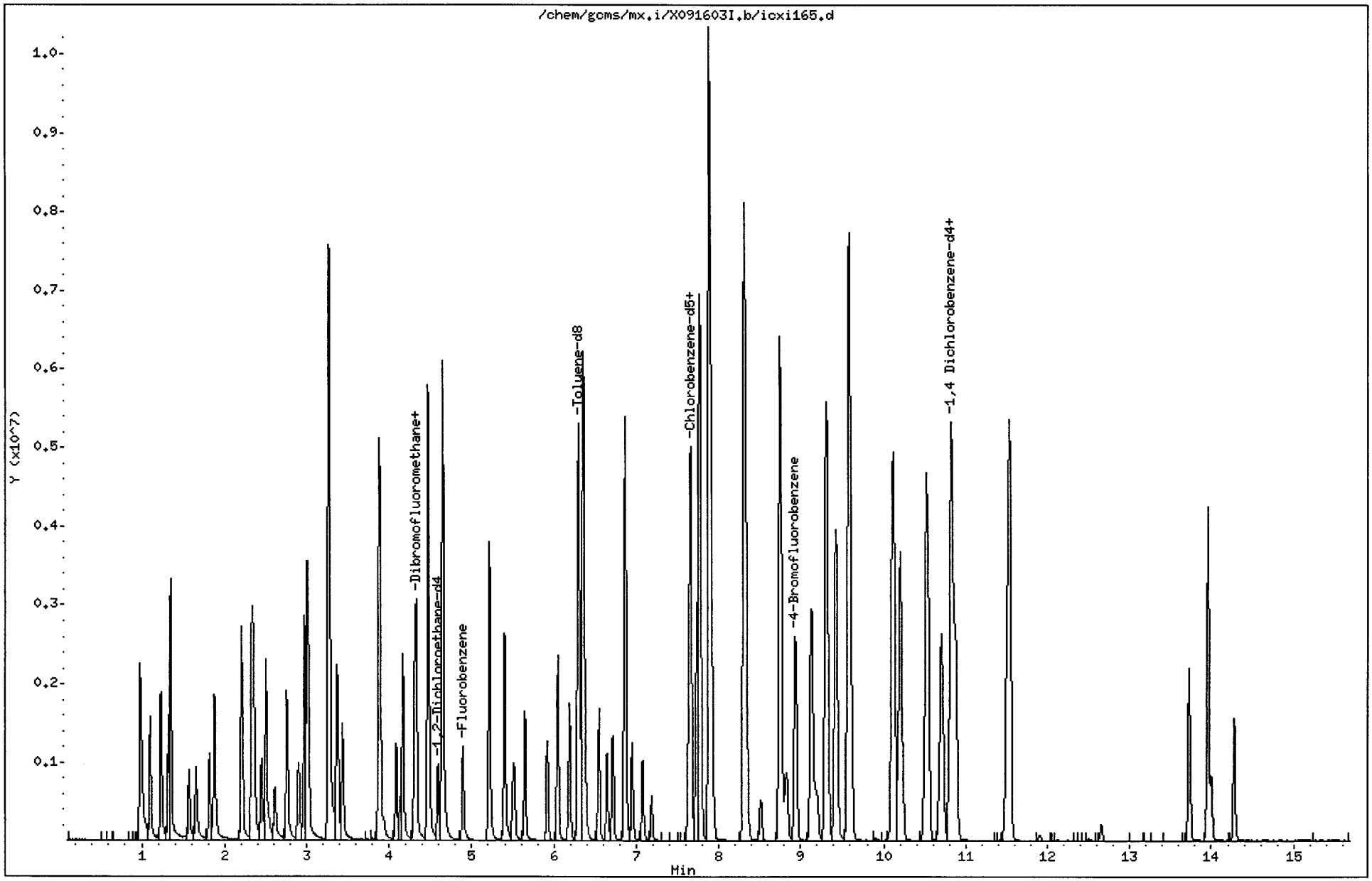
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
63	1,2-Dibromoethane	107	7.184	7.184	(0.942)	384146	40.0000	38.308
64	Chlorobenzene (spcc)	112	7.659	7.653	(1.004)	2846876	40.0000	36.063
65	1,1,1,2-Tetrachloroethane	131	7.732	7.732	(1.014)	830903	40.0000	37.185
66	Ethylbenzene (ccc)	106	7.768	7.768	(1.018)	1870960	40.0000	35.681
67	m&p-Xylene	106	7.890	7.884	(1.034)	4384011	80.0000	69.603
68	o-Xylene	106	8.309	8.303	(1.089)	1989214	40.0000	35.271
69	Styrene	104	8.322	8.322	(1.091)	2993537	40.0000	35.746
70	Bromoform (spcc)	173	8.516	8.516	(1.116)	308704	40.0000	38.816
71	Isopropylbenzene	105	8.753	8.747	(1.147)	6307778	40.0000	35.820
72	*cis-1,4-dichloro-2-butene	88	8.814	8.814	(1.155)	135991	40.0000	41.816
73	Bromobenzene	156	9.136	9.131	(1.198)	993774	40.0000	35.773
74	1,1,2,2-Tetrachloroethane(sp)	83	9.124	9.124	(1.196)	428163	40.0000	35.810
75	1,2,3-Trichloropropane	110	9.179	9.179	(0.847)	119827	40.0000	37.363
76	*trans-1,4-dichloro-2-butene	53	9.203	9.203	(0.850)	129987	40.0000	40.025
77	n-Propylbenzene	91	9.313	9.307	(0.860)	7250250	40.0000	37.888
78	2-Chlorotoluene	91	9.428	9.422	(0.870)	3900864	40.0000	37.845
79	1,3,5-Trimethylbenzene	105	9.580	9.581	(0.884)	4307094	40.0000	37.041
80	4-Chlorotoluene	91	9.586	9.587	(0.885)	4223017	40.0000	36.894
81	tert-Butylbenzene	119	10.116	10.116	(0.934)	4326107	40.0000	37.448
82	1,2,4-Trimethylbenzene	105	10.207	10.201	(0.942)	3930313	40.0000	37.666
83	sec-Butylbenzene	105	10.523	10.523	(0.971)	6394197	40.0000	37.439
84	1,3-Dichlorobenzene	146	10.705	10.700	(0.988)	2111005	40.0000	38.231
85	p-Isopropyltoluene	119	10.821	10.821	(0.999)	4981084	40.0000	36.664
86	1,4-Dichlorobenzene	146	10.876	10.876	(1.004)	1909686	40.0000	37.678
87	1,2-Dichlorobenzene	146	11.502	11.502	(1.062)	1571892	40.0000	38.309
88	n-Butylbenzene	91	11.539	11.539	(1.065)	4278005	40.0000	36.624
89	1,2-Dibromo-3-chloropropane	157	12.651	12.658	(1.168)	76889	40.0000	42.480
90	1,2,4-Trichlorobenzene	180	13.728	13.728	(1.267)	859577	40.0000	39.618
91	Hexachlorobutadiene	225	13.959	13.959	(1.289)	1033662	40.0000	36.477
92	Napthalene	128	14.002	13.996	(1.292)	724275	40.0000	38.655
93	1,2,3-Trichlorobenzene	180	14.281	14.281	(1.318)	582136	40.0000	39.063
M 94	*1,4-dichloro-2-butene(total)	53				265979	80.0000	81.841

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.

Data File: /chem/gcms/mx.i/X091603I.b/icxi165.d
Date : 16-SEP-2003 12:26
Client ID: VSTD040
Sample Info: ICXI165,1,1,5,,VSTD040
Purge Volume: 25.0
Column phase: J+W 624

Instrument: mx.i
Operator: 22980
Column diameter: 0.18



Data File: /chem/gcms/mx.i/X091603I.b/icxi166.d
Report Date: 16-Sep-2003 13:08

STL Knoxville

SW-846 Method 8260A - Volatile Organics

Data file : /chem/gcms/mx.i/X091603I.b/icxi166.d
Lab Smp Id: ICXI166 Client Smp ID: VSTD080
Inj Date : 16-SEP-2003 12:52
Operator : 22980 Inst ID: mx.i
Smp Info : ICXI166,1,1,6,,VSTD080
Misc Info : X091603I,8260B_LM,all.sub,,
Comment :
Method : /var/chem/gcms/mx.i/X091603I.b/8260B_LM.m
Meth Date : 16-Sep-2003 13:08 chemist Quant Type: ISTD
Cal Date : 16-SEP-2003 12:52 Cal File: icxi166.d
Als bottle: 1 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * Uf*Vt/(Vo*1000) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Unit Correction factor
Vt	25000.00000	Sample Volume Purged
Vo	25.00000	Sample Volume Used

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
* 1 Fluorobenzene	96	4.891	4.886	(1.000)	1087392	10.0000	
* 2 Chlorobenzene-d5	119	7.629	7.628	(1.000)	242275	10.0000	
* 3 1,4 Dichlorobenzene-d4	152	10.834	10.827	(1.000)	277713	10.0000	
$ 4 Dibromofluoromethane	113	4.302	4.302	(0.879)	163295	80.0000	9.0179
$ 5 1,2-Dichloroethane-d4	65	4.587	4.588	(0.938)	131381	80.0000	9.4039
$ 6 Toluene-d8	98	6.297	6.297	(0.825)	995852	80.0000	8.9484
$ 7 4-Bromofluorobenzene	95	8.937	8.936	(0.825)	350634	80.0000	10.548
M 8 1,2-Dichloroethene (total)	96				3635672	160.000	144.68
M 9 Xylene (total)	106				12079909	240.000	198.68
10 Dichlorodifluoromethane	85	1.103	1.103	(0.225)	2144985	80.0000	75.920
11 Chloromethane (spcc)	50	1.237	1.237	(0.253)	3353997	80.0000	73.362
12 Vinyl Chloride (ccc)	62	1.322	1.322	(0.270)	2538731	80.0000	73.435
13 *1,3-Butadiene	39	1.352	1.353	(0.276)	2260897	80.0000	80.639(A)
14 Bromomethane	94	1.571	1.572	(0.321)	1106083	80.0000	75.473

Data File: /chem/gcms/mx.i/X091603I.b/icxi166.d
Report Date: 16-Sep-2003 13:08

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
15 Chloroethane	64	1.656	1.657	(0.339)	1374144	80.0000	72.216
16 *Vinyl Bromide	106	1.814	1.815	(0.371)	1546185	80.0000	80.247(A)
17 Trichlorofluoromethane	101	1.881	1.882	(0.385)	2676811	80.0000	73.233
18 *2-Chloropropane	43	2.210	2.204	(0.452)	4471924	80.0000	76.689
19 *Acrolein	56	1.303	1.298	(0.266)	5058	800.000	
20 1,1-Dichloroethene (ccc)	96	2.331	2.332	(0.477)	1486903	80.0000	73.129
21 *Freon 113	151	2.349	2.350	(0.480)	1248397	80.0000	74.660
22 Acetone	43	2.380	2.374	(0.487)	554367	320.000	314.96
23 *Iodomethane	142	2.447	2.447	(0.500)	2085871	80.0000	80.290(A)
24 Carbon Disulfide	76	2.508	2.502	(0.513)	5955691	80.0000	78.505
25 *2-propanol	45	2.544	2.539	(0.520)	351546	800.000	654.22
26 *Acetonitrile	40	2.611	2.612	(0.534)	724783	1600.00	1561.9
27 Methylene Chloride	84	2.757	2.757	(0.564)	1266524	80.0000	79.096
135 *t-butanol	59	2.903	2.903	(0.593)	2295216	4000.00	3687.5
29 *Acrylonitrile	53	2.976	2.970	(0.608)	3941351	1600.00	1541.4
30 trans-1,2-Dichloroethene	96	3.006	3.007	(0.615)	1852309	80.0000	73.711(A)
31 *MTBE	73	3.024	3.025	(0.618)	1969177	80.0000	74.188
32 *Hexane	57	3.274	3.268	(0.669)	7577031	80.0000	76.327
33 1,1-Dichloroethane (spcc)	63	3.371	3.372	(0.689)	3646057	80.0000	75.495
34 *Vinyl Acetate	86	3.438	3.439	(0.703)	274285	160.000	156.55(A)
37 2,2-Dichloropropane	77	3.882	3.883	(0.794)	2699540	80.0000	72.889(A)
38 cis 1,2-Dichloroethene	96	3.882	3.883	(0.794)	1783363	80.0000	70.972(A)
39 2-Butanone	43	3.900	3.901	(0.797)	907501	320.000	290.58
40 Bromochloromethane	128	4.089	4.089	(0.836)	506631	80.0000	74.110
41 *THF	42	4.137	4.132	(0.846)	650128	320.000	309.00
42 Chloroform (ccc)	83	4.168	4.168	(0.852)	2889123	80.0000	74.100
43 1,1,1-Trichloroethane	97	4.326	4.320	(0.884)	3207306	80.0000	75.086
44 Carbon Tetrachloride	117	4.472	4.472	(0.914)	2617906	80.0000	73.130
45 1,1-Dichloropropene	75	4.472	4.466	(0.914)	2667345	80.0000	72.144
46 Benzene	78	4.642	4.643	(0.949)	7948440	80.0000	74.532(A)
47 1,2-Dichloroethane	62	4.654	4.649	(0.952)	1316391	80.0000	74.446
49 Trichloroethene	130	5.215	5.214	(1.066)	2165948	80.0000	75.597
50 1,2-Dichloropropane (ccc)	63	5.397	5.397	(1.103)	1829221	80.0000	77.571
129 Methyl Methacrylate	41	5.519	5.518	(1.128)	742089	80.0000	74.431
51 Dibromomethane	93	5.501	5.500	(1.125)	485944	80.0000	75.713
52 Bromodichloromethane	83	5.647	5.646	(1.154)	1817847	80.0000	77.192
53 *2-Chloroethylvinylether	63	5.926	5.920	(1.212)	928632	160.000	158.68
54 cis-1,3-Dichloropropene	75	6.048	6.047	(1.236)	2180813	80.0000	77.356
55 4-Methyl-2-pentanone	43	6.188	6.187	(1.265)	2504741	320.000	317.18
56 Toluene (ccc)	91	6.358	6.357	(0.833)	9973039	80.0000	69.454(A)
57 trans-1,3-Dichloropropene	75	6.547	6.546	(0.858)	1587798	80.0000	73.878
134 Ethyl Methacrylate	69	6.650	6.643	(0.872)	1043135	80.0000	72.426
58 1,1,2-Trichloroethane	97	6.717	6.716	(0.880)	786906	80.0000	72.262
59 Tetrachloroethene	164	6.869	6.862	(0.900)	1951549	80.0000	68.254
60 1,3-Dichloropropane	76	6.869	6.868	(0.900)	1304077	80.0000	69.991
61 2-Hexanone	43	6.954	6.947	(0.912)	1723968	320.000	300.75
62 Chlorodibromomethane	129	7.082	7.081	(0.928)	1061271	80.0000	75.792(A)

Data File: /chem/gcms/mx.i/X091603I.b/icxi166.d
Report Date: 16-Sep-2003 13:08

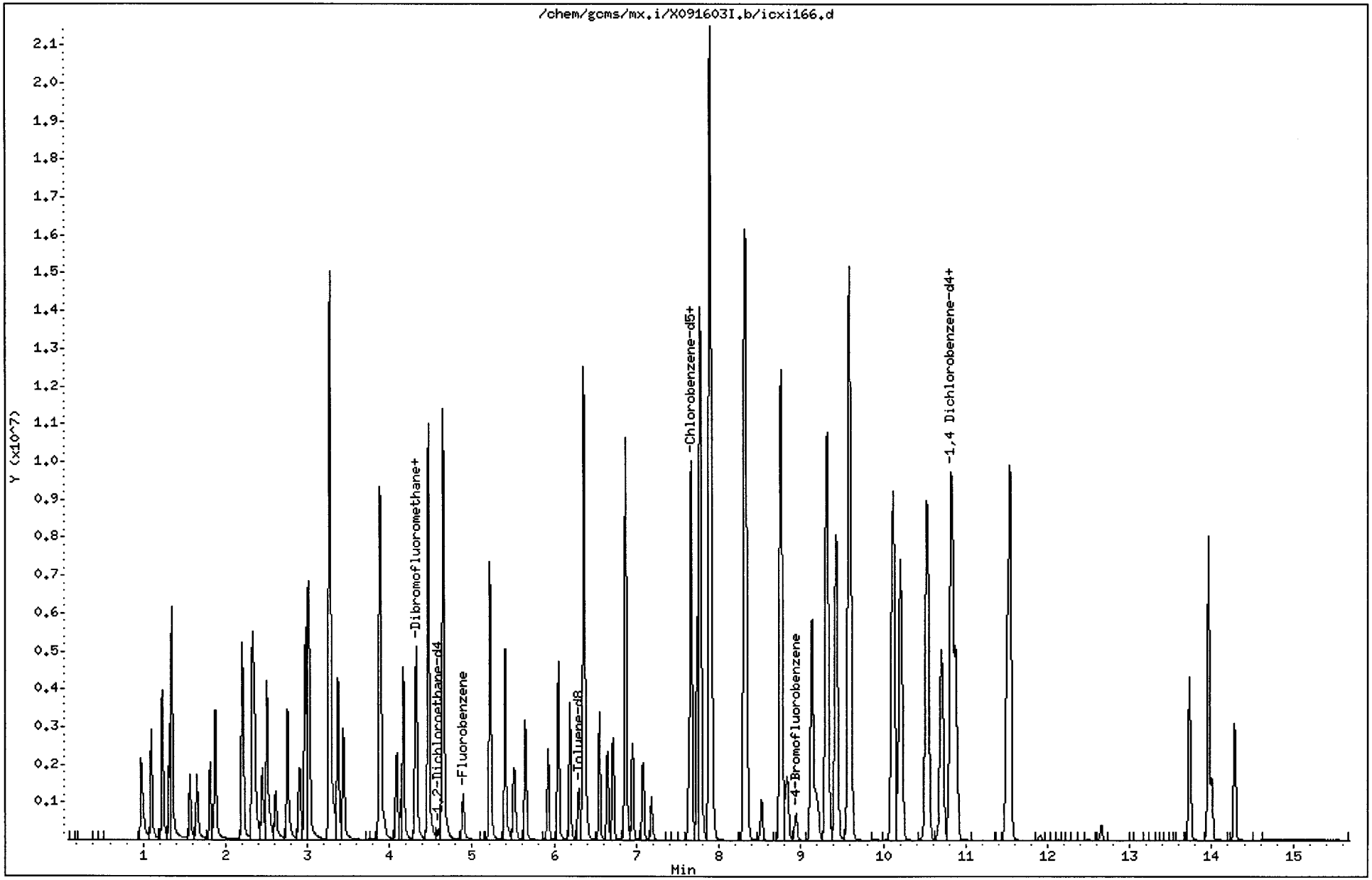
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
	63 1,2-Dibromoethane	107	7.185	7.184	(0.942)	769727	80.0000	75.289
	64 Chlorobenzene (spcc)	112	7.660	7.653	(1.004)	5600309	80.0000	70.301
	65 1,1,1,2-Tetrachloroethane	131	7.733	7.732	(1.014)	1657904	80.0000	73.102
	66 Ethylbenzene (ccc)	106	7.769	7.768	(1.018)	3593712	80.0000	68.206
	67 m&p-Xylene	106	7.891	7.884	(1.034)	8273129	160.000	131.38(A)
	68 o-Xylene	106	8.310	8.303	(1.089)	3806780	80.0000	67.297
	69 Styrene	104	8.322	8.322	(1.091)	5758686	80.0000	68.405(A)
	70 Bromoform (spcc)	173	8.517	8.516	(1.116)	621619	80.0000	76.476
	71 Isopropylbenzene	105	8.754	8.747	(1.147)	12149042	80.0000	68.603(A)
	72 *cis-1,4-dichloro-2-butene	88	8.815	8.814	(1.155)	278954	80.0000	82.744(A)
	73 Bromobenzene	156	9.137	9.131	(1.198)	1924919	80.0000	68.865
	74 1,1,2,2-Tetrachloroethane(sp)	83	9.131	9.124	(1.197)	816128	80.0000	67.963
	75 1,2,3-Trichloropropane	110	9.180	9.179	(0.847)	230840	80.0000	75.994
	76 *trans-1,4-dichloro-2-butene	53	9.210	9.203	(0.850)	263520	80.0000	84.092(A)
	77 n-Propylbenzene	91	9.320	9.307	(0.860)	13990895	80.0000	77.028(A)
	78 2-Chlorotoluene	91	9.429	9.422	(0.870)	7593371	80.0000	77.532
	79 1,3,5-Trimethylbenzene	105	9.587	9.581	(0.885)	8163787	80.0000	74.375
	80 4-Chlorotoluene	91	9.593	9.587	(0.885)	7929809	80.0000	73.518
	81 tert-Butylbenzene	119	10.123	10.116	(0.934)	8189498	80.0000	75.001
	82 1,2,4-Trimethylbenzene	105	10.208	10.201	(0.942)	7646415	80.0000	77.178
	83 sec-Butylbenzene	105	10.530	10.523	(0.972)	12219283	80.0000	75.599(A)
	84 1,3-Dichlorobenzene	146	10.706	10.700	(0.988)	4019881	80.0000	76.744
	85 p-Isopropyltoluene	119	10.828	10.821	(0.999)	9439668	80.0000	73.707(A)
	86 1,4-Dichlorobenzene	146	10.883	10.876	(1.004)	3596871	80.0000	75.069
	87 1,2-Dichlorobenzene	146	11.509	11.502	(1.062)	2964860	80.0000	76.250
	88 n-Butylbenzene	91	11.540	11.539	(1.065)	8218792	80.0000	74.514(A)
	89 1,2-Dibromo-3-chloropropane	157	12.658	12.658	(1.168)	144803	80.0000	82.985(A)
	90 1,2,4-Trichlorobenzene	180	13.729	13.728	(1.267)	1700471	80.0000	81.762(A)
	91 Hexachlorobutadiene	225	13.960	13.959	(1.289)	1972970	80.0000	73.838
	92 Napthalene	128	14.002	13.996	(1.292)	1478987	80.0000	82.260(A)
	93 1,2,3-Trichlorobenzene	180	14.282	14.281	(1.318)	1177901	80.0000	82.355(A)
M	94 *1,4-dichloro-2-butene(total)	53				542474	160.000	166.84

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.

Data File: /chem/gcms/mx.i/X091603I.b/icxi166.d
Date : 16-SEP-2003 12:52
Client ID: VSTD080
Sample Info: ICXI166,1,1,6,,VSTD080
Purge Volume: 25.0
Column phase: J+W 624

Instrument: mx.i
Operator: 22980
Column diameter: 0.18



Data File: /var/chem/gcms/mx.i/X091603I.b/f0eqj1ac.d
Report Date: 21-Nov-2003 10:49

STL Knoxville

SW-846 Method 8260A - Volatile Organics

Data file : /var/chem/gcms/mx.i/X091603I.b/f0eqj1ac.d
Lab Smp Id: F0EQJ1AC Client Smp ID: INTRA-LAB CHECK
Inj Date : 16-SEP-2003 13:44
Operator : 22980 Inst ID: mx.i
Smp Info : F0EQJ1AC,1,3,,LCS
Misc Info : X091603I,8260B_LM,1-all.sub,,
Comment :
Method : /var/chem/gcms/mx.i/X091603I.b/8260B_LM.m
Meth Date : 21-Nov-2003 10:49 gosss Quant Type: ISTD
Cal Date : 16-SEP-2003 12:52 Cal File: icxi166.d
Als bottle: 1 QC Sample: METHOD SPIKE
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 1-all.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * Uf*Vt/(Vo*1000) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Unit Correction factor
Vt	25000.00000	Sample Volume Purged
Vo	25.00000	Sample Volume Used

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
* 1 Fluorobenzene	96	4.886	4.886	(1.000)	1060253	10.0000	
* 2 Chlorobenzene-d5	119	7.629	7.628	(1.000)	230809	10.0000	
* 3 1,4 Dichlorobenzene-d4	152	10.821	10.827	(1.000)	300534	10.0000	
$ 5 1,2-Dichloroethane-d4	65	4.588	4.588	(0.939)	128908	9.46312	9.4631
$ 4 Dibromofluoromethane	113	4.302	4.302	(0.880)	164198	9.29991	9.2999
$ 6 Toluene-d8	98	6.297	6.297	(0.825)	939644	8.86278	8.8628
$ 7 4-Bromofluorobenzene	95	8.936	8.936	(0.826)	328944	9.14410	9.1441
10 Dichlorodifluoromethane	85	1.103	1.103	(0.226)	312111	11.3297	11.330
11 Chloromethane (spcc)	50	1.237	1.237	(0.253)	472742	11.7809	11.781
12 Vinyl Chloride (ccc)	62	1.322	1.322	(0.271)	341630	10.9467	10.947
14 Bromomethane	94	1.571	1.572	(0.322)	132131	10.0196	10.020
15 Chloroethane	64	1.657	1.657	(0.339)	184038	10.8787	10.879
17 Trichlorofluoromethane	101	1.882	1.882	(0.385)	357893	10.0419	10.042
20 1,1-Dichloroethene (ccc)	96	2.332	2.332	(0.477)	200417	10.1093	10.109

Data File: /var/chem/gcms/mx.i/X091603I.b/f0eqj1ac.d
Report Date: 21-Nov-2003 10:49

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
	21 *Freon 113	151	2.350	2.350	(0.481)	168038	10.3067	10.307
	24 Carbon Disulfide	76	2.502	2.502	(0.512)	2196704	29.6969	29.697
	22 Acetone	43	2.374	2.374	(0.486)	40361	19.2847	19.285
	27 Methylene Chloride	84	2.757	2.757	(0.564)	177778	10.6880	10.688
	30 trans-1,2-Dichloroethene	96	3.007	3.007	(0.615)	236522	9.65313	9.6531
	31 *MTBE	73	3.025	3.025	(0.619)	761923	29.4400	29.440
	33 1,1-Dichloroethane (spcc)	63	3.372	3.372	(0.690)	461141	9.79281	9.7928
	37 2,2-Dichloropropane	77	3.882	3.883	(0.795)	387067	10.7185	10.718
	38 cis 1,2-Dichloroethene	96	3.882	3.883	(0.795)	241459	9.85523	9.8552
M	8 1,2-Dichloroethene (total)	96				477981	19.5084	19.508
	39 2-Butanone	43	3.895	3.901	(0.797)	64372	23.0265	23.026
	40 Bromochloromethane	128	4.083	4.089	(0.836)	67423	10.1152	10.115
	42 Chloroform (ccc)	83	4.168	4.168	(0.853)	381870	10.0449	10.045
	43 1,1,1-Trichloroethane	97	4.320	4.320	(0.884)	413082	9.91822	9.9182
	44 Carbon Tetrachloride	117	4.472	4.472	(0.915)	352900	10.1104	10.110
	45 1,1-Dichloropropene	75	4.466	4.466	(0.914)	349938	9.70707	9.7071
	46 Benzene	78	4.643	4.643	(0.950)	1043964	10.0397	10.040
	47 1,2-Dichloroethane	62	4.649	4.649	(0.951)	170699	9.90070	9.9007
	49 Trichloroethene	130	5.214	5.214	(1.067)	277529	9.93438	9.9344
	50 1,2-Dichloropropane (ccc)	63	5.397	5.397	(1.105)	228685	9.94598	9.9460
	51 Dibromomethane	93	5.500	5.500	(1.126)	60805	9.71638	9.7164
	52 Bromodichloromethane	83	5.646	5.646	(1.156)	229997	10.0164	10.016
	54 cis-1,3-Dichloropropene	75	6.047	6.047	(1.238)	278527	10.1327	10.133
	55 4-Methyl-2-pentanone	43	6.187	6.187	(1.266)	166397	21.6103	21.610
	56 Toluene (ccc)	91	6.358	6.357	(0.833)	1279894	9.35612	9.3561
	57 trans-1,3-Dichloropropene	75	6.546	6.546	(0.858)	198567	9.69810	9.6981
	58 1,1,2-Trichloroethane	97	6.716	6.716	(0.880)	99142	9.55659	9.5566
	59 Tetrachloroethene	164	6.862	6.862	(0.900)	257493	9.45308	9.4531
	60 1,3-Dichloropropane	76	6.868	6.868	(0.900)	166600	9.38581	9.3858
	61 2-Hexanone	43	6.947	6.947	(0.911)	115355	21.1235	21.124
	62 Chlorodibromomethane	129	7.075	7.081	(0.927)	129143	9.68105	9.6810
	63 1,2-Dibromoethane	107	7.179	7.184	(0.941)	93459	9.59569	9.5957
	64 Chlorobenzene (spcc)	112	7.653	7.653	(1.003)	705178	9.29183	9.2918
	66 Ethylbenzene (ccc)	106	7.768	7.768	(1.018)	478865	9.53999	9.5400
	65 1,1,1,2-Tetrachloroethane	131	7.732	7.732	(1.014)	208215	9.63694	9.6369
	67 m&p-Xylene	106	7.884	7.884	(1.033)	1137621	18.9639	18.964
	68 o-Xylene	106	8.304	8.303	(1.088)	509243	9.44973	9.4497
M	9 Xylene (total)	106				1646864	28.4136	28.414
	69 Styrene	104	8.316	8.322	(1.090)	759219	9.46645	9.4664
	70 Bromoform (spcc)	173	8.516	8.516	(1.116)	75079	9.69567	9.6957
	71 Isopropylbenzene	105	8.748	8.747	(1.147)	1562387	9.26074	9.2607
	73 Bromobenzene	156	9.131	9.131	(1.197)	250354	9.40154	9.4015
	74 1,1,2,2-Tetrachloroethane(sp)	83	9.118	9.124	(1.195)	105538	10.1407	10.141
	77 n-Propylbenzene	91	9.307	9.307	(0.860)	1850917	9.41660	9.4166
	75 1,2,3-Trichloropropane	110	9.179	9.179	(0.848)	28947	9.74048	9.7405
	78 2-Chlorotoluene	91	9.423	9.422	(0.871)	1013458	9.56221	9.5622
	79 1,3,5-Trimethylbenzene	105	9.581	9.581	(0.885)	1125358	9.47393	9.4739

Data File: /var/chem/gcms/mx.i/X091603I.b/f0eqj1ac.d
Report Date: 21-Nov-2003 10:49

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
80 4-Chlorotoluene	91	9.587	9.587	(0.886)	1079562	9.24879	9.2488
81 tert-Butylbenzene	119	10.116	10.116	(0.935)	1111248	9.40421	9.4042
82 1,2,4-Trimethylbenzene	105	10.201	10.201	(0.943)	1002493	9.35022	9.3502
83 sec-Butylbenzene	105	10.523	10.523	(0.972)	1620037	9.26193	9.2619
84 1,3-Dichlorobenzene	146	10.700	10.700	(0.989)	539114	9.51076	9.5108
85 p-Isopropyltoluene	119	10.821	10.821	(1.000)	1293737	9.33473	9.3347
86 1,4-Dichlorobenzene	146	10.870	10.876	(1.004)	497273	9.59034	9.5903
88 n-Butylbenzene	91	11.539	11.539	(1.066)	1121868	9.39885	9.3988
87 1,2-Dichlorobenzene	146	11.502	11.502	(1.063)	409293	9.72689	9.7269
89 1,2-Dibromo-3-chloropropane	157	12.652	12.658	(1.169)	19632	10.3966	10.396
90 1,2,4-Trichlorobenzene	180	13.728	13.728	(1.269)	223622	9.93583	9.9358
91 Hexachlorobutadiene	225	13.959	13.959	(1.290)	283063	10.8208	10.821
92 Napthalene	128	13.996	13.996	(1.293)	199774	10.2675	10.268
93 1,2,3-Trichlorobenzene	180	14.282	14.281	(1.320)	160708	10.3830	10.383

Data File: /var/chem/gcms/mx.i/X091603I.b/f0eqj1ac.d
Report Date: 21-Nov-2003 10:49

STL Knoxville

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: mx.i
Lab File ID: f0eqj1ac.d
Lab Smp Id: F0EQJ1AC
Analysis Type: VOA
Quant Type: ISTD
Operator: 22980
Method File: /var/chem/gcms/mx.i/X091603I.b/8260B_LM.m
Misc Info: X091603I,8260B_LM,1-all.sub,,

Calibration Date: 16-SEP-2003
Calibration Time: 11:34
Client Smp ID: INTRA-LAB CHECK
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Fluorobenzene	1092374	546187	2184748	1060253	-2.94
2 Chlorobenzene-d5	232022	116011	464044	230809	-0.52
3 1,4 Dichlorobenze	306625	153312	613250	300534	-1.99

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Fluorobenzene	4.89	4.39	5.39	4.89	0.00
2 Chlorobenzene-d5	7.63	7.13	8.13	7.63	0.00
3 1,4 Dichlorobenze	10.83	10.33	11.33	10.82	-0.05

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

Data File: /var/chem/gcms/mx.i/X091603I.b/f0eqj1ac.d
Report Date: 21-Nov-2003 10:49

STL Knoxville

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: F0EQJ1AC
Level: LOW
Data Type: MS DATA
SpikeList File: ssallcmpds.spk
Sublist File: 1-all.sub
Method File: /var/chem/gcms/mx.i/X091603I.b/8260B_LM.m
Misc Info: X091603I,8260B_LM,1-all.sub,,

Client SDG: H3I160000
Fraction: VOA
Client Smp ID: INTRA-LAB CHECK
Operator: 22980
SampleType: METHOD SPIKE
Quant Type: ISTD

	SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
	10 Dichlorodifluorome	10.000	11.330	113.30	65-135
	11 Chloromethane (spc	10.000	11.781	117.81	65-135
	12 Vinyl Chloride (cc	10.000	10.947	109.47	65-135
	14 Bromomethane	10.000	10.020	100.20	65-135
	15 Chloroethane	10.000	10.879	108.79	65-135
	17 Trichlorofluoromet	10.000	10.042	100.42	65-135
	20 1,1-Dichloroethene	10.000	10.109	101.09	65-135
	21 *Freon 113	10.000	10.307	103.07	65-135
	24 Carbon Disulfide	30.000	29.697	98.99	65-135
	22 Acetone	20.000	19.285	96.42	65-135
	27 Methylene Chloride	10.000	10.688	106.88	65-135
	30 trans-1,2-Dichloro	10.000	9.6531	96.53	65-135
	31 *MTBE	30.000	29.440	98.13	65-135
	33 1,1-Dichloroethane	10.000	9.7928	97.93	65-135
	37 2,2-Dichloropropan	10.000	10.718	107.18	65-135
	38 cis 1,2-Dichloroet	10.000	9.8552	98.55	65-135
	39 2-Butanone	20.000	23.026	115.13	65-135
M	8 1,2-Dichloroethene	20.000	19.508	97.54	65-135
	40 Bromochloromethane	10.000	10.115	101.15	65-135
	42 Chloroform (ccc)	10.000	10.045	100.45	65-135
	43 1,1,1-Trichloroeth	10.000	9.9182	99.18	65-135
	44 Carbon Tetrachlori	10.000	10.110	101.10	65-135
	45 1,1-Dichloropropen	10.000	9.7071	97.07	65-135
	46 Benzene	10.000	10.040	100.40	65-135
	47 1,2-Dichloroethane	10.000	9.9007	99.01	65-135
	49 Trichloroethene	10.000	9.9344	99.34	65-135
	50 1,2-Dichloropropan	10.000	9.9460	99.46	65-135
	51 Dibromomethane	10.000	9.7164	97.16	65-135
	52 Bromodichlorometha	10.000	10.016	100.16	65-135
	54 cis-1,3-Dichloropr	10.000	10.133	101.33	65-135
	55 4-Methyl-2-pentano	20.000	21.610	108.05	65-135
	56 Toluene (ccc)	10.000	9.3561	93.56	65-135
	57 trans-1,3-Dichloro	10.000	9.6981	96.98	65-135

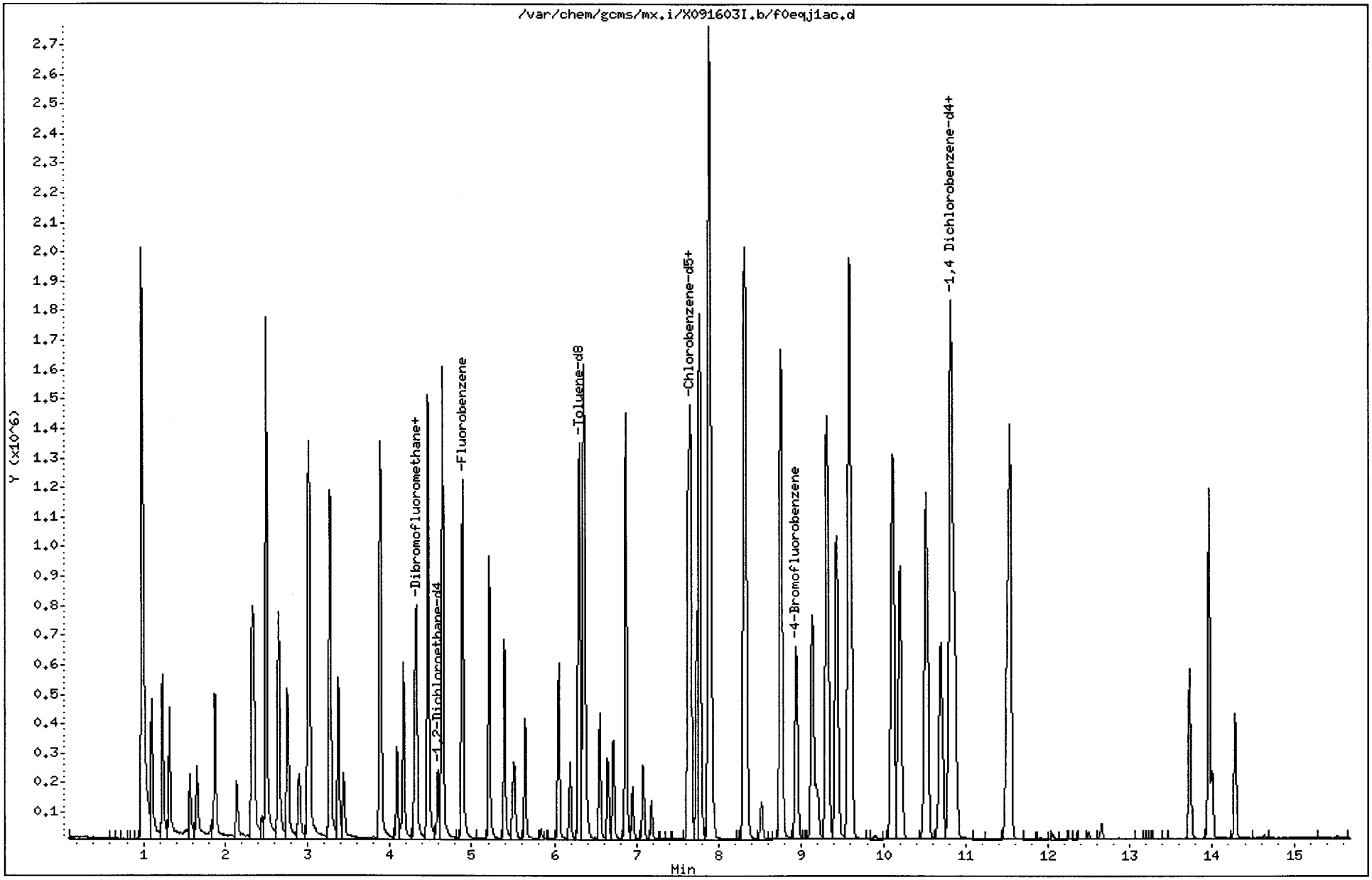
Data File: /var/chem/gcms/mx.i/X091603I.b/f0eqj1ac.d
Report Date: 21-Nov-2003 10:49

	SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
	58 1,1,2-Trichloroeth	10.000	9.5566	95.57	65-135
	59 Tetrachloroethene	10.000	9.4531	94.53	65-135
	60 1,3-Dichloropropan	10.000	9.3858	93.86	65-135
	61 2-Hexanone	20.000	21.124	105.62	65-135
	62 Chlorodibromometha	10.000	9.6810	96.81	65-135
	63 1,2-Dibromoethane	10.000	9.5957	95.96	65-135
	64 Chlorobenzene (spc	10.000	9.2918	92.92	65-135
	66 Ethylbenzene (ccc)	10.000	9.5400	95.40	65-135
	65 1,1,1,2-Tetrachlor	10.000	9.6369	96.37	65-135
	67 m&p-Xylene	20.000	18.964	94.82	65-135
	68 o-Xylene	10.000	9.4497	94.50	65-135
M	9 Xylene (total)	30.000	28.414	94.71	65-135
	69 Styrene	10.000	9.4664	94.66	65-135
	70 Bromoform (spcc)	10.000	9.6957	96.96	65-135
	71 Isopropylbenzene	10.000	9.2607	92.61	65-135
	73 Bromobenzene	10.000	9.4015	94.02	65-135
	74 1,1,2,2-Tetrachlor	10.000	10.141	101.41	65-135
	77 n-Propylbenzene	10.000	9.4166	94.17	65-135
	75 1,2,3-Trichloropro	10.000	9.7405	97.40	65-135
	78 2-Chlorotoluene	10.000	9.5622	95.62	65-135
	79 1,3,5-Trimethylben	10.000	9.4739	94.74	65-135
	80 4-Chlorotoluene	10.000	9.2488	92.49	65-135
	81 tert-Butylbenzene	10.000	9.4042	94.04	65-135
	82 1,2,4-Trimethylben	10.000	9.3502	93.50	65-135
	83 sec-Butylbenzene	10.000	9.2619	92.62	65-135
	84 1,3-Dichlorobenzen	10.000	9.5108	95.11	65-135
	85 p-Isopropyltoluene	10.000	9.3347	93.35	65-135
	86 1,4-Dichlorobenzen	10.000	9.5903	95.90	65-135
	88 n-Butylbenzene	10.000	9.3988	93.99	65-135
	87 1,2-Dichlorobenzen	10.000	9.7269	97.27	65-135
	89 1,2-Dibromo-3-chlo	10.000	10.396	103.97	65-135
	90 1,2,4-Trichloroben	10.000	9.9358	99.36	65-135
	91 Hexachlorobutadien	10.000	10.821	108.21	65-135
	92 Napthalene	10.000	10.268	102.68	65-135
	93 1,2,3-Trichloroben	10.000	10.383	103.83	65-135

	SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$	5 1,2-Dichloroethane	10.000	9.4631	94.63	71-127
$	4 Dibromofluorometha	10.000	9.2999	93.00	79-120
$	6 Toluene-d8	10.000	8.8628	88.63	80-120
$	7 4-Bromofluorobenze	10.000	9.1441	91.44	69-126

Data File: /var/chem/gcms/mx.i/X091603I.b/f0eqj1ac.d
Date : 16-SEP-2003 13:44
Client ID: INTRA-LAB CHECK
Sample Info: F0EQJ1AC,1,3,,LCS
Purge Volume: 25.0
Column phase: J+W 624

Instrument: mx.i
Operator: 22980
Column diameter: 0.18



STL Volatile GC/MS Continuing Calibration Review / Narrative Checklist
Method: 8260B - KNOX-MS-0015, Rev. 3

Analysis Date:	12/11/03	CCAL Batch/ Scan Name:	X121103	Instrument:	MX	ICAL Batch/ Scan Name:	X091603I	Scanned θ

Review Items	N/A	Yes	No	If No, why is data reportable?	2nd √
1. Did BFB meet tune criteria?		✓			✓
2. Were all standards injected within 12 hr of BFB?		✓			✓
3. Was date/time of analysis verified between analysis header and logbook as correct?		✓			✓
4. Was the primary ion used for all compounds?		✓		o*Secondary ion used due to interferences for:*_____	✓
5. Do the RFs for SPCCs meet minimum RF?		✓			✓
6. Is the %D or drift ≤20% for all CCCs?		✓			✓
7. Is the %D or drift ≤ 50% for all other compounds? [Up to 6 TCLs may have %D or drift > 50%; any more and the calibration is INVALID].		✓		o %D or drift > 50% for the following TCLs: _____	✓
8. Are the internal standard responses within limits? 8260B: 50-200% of the mid-level ICAL standard		✓			✓
9. Are the internal standard retention times within limits? 8260B: 30 seconds of the mid-level ICAL standard		✓			✓
10. If manual integrations were performed, are they clearly identified, initialed, dated and reason given?	✓			Reasons: 1)Corrected split peak; 2)Unresolved peak; 3)tailing; 4)RT shift; 5)wrong peak selected; 6)other	NA
11. Have alternate hits/manual integrations been verified as correct and are correct RFs listed in CCAL summary?	✓				NA
12. Was the correct ICAL used for quantitation? (Verify date & time of ICAL is documented correctly on CCAL)		✓			✓
13. Is the first IS documented correctly on the log?		✓			✓
14. Elution order checked on isomeric pairs/coeluters?		✓			✓
• cis- and trans- isomers					
• trichlorofluoromethane and Freon 113		✓			✓
• ethyl benzene / m/p-xylene / o-xylene		✓			✓
• n-propylbenzene / 2-chlorotoluene / 4-chlorotoluene		✓			✓
• 1,3,5-trimethylbenzene / 1,2,4-trimethylbenzene / sec-butylbenzene		✓			✓
• 1,3- , 1,4- , and 1,2-dichlorobenzene		✓			✓
• 1,2,4 and 1,2,3 -trichlorobenzene		✓			✓
• chlorobenzene and chlorobenzene-d5		✓			✓
15. If criteria were not met, was a NCM generated, approved by supervisor, and copy included in folder?	✓				NA
16. Does the CCAL folder contain **complete** data in the following order? Data review checklist, tune pass/fail page, m/z list, tune chromatogram, Target CCAL summary, Quan report, chromatogram and manual integrations.		✓			✓

Analyst: MT	Date: 12/11/03	2nd Level Reviewer :	Date: 12/11/03
Comments:		**Comments:**	

STL Knoxville GC/MS Volatiles Run Log - Instrument MX

Target Batch	X121103	XXXXXXXXX	XXXXXXXXX	XXXXXXXXXXXXXX	XXXXXXXX
QuantIMS Batch	3345349	3345378	—	XXXXXXXXXXXXXX	XXXXXXXX
Method	826C03	XXXXXXXXX	XXXXXXXXX	Matrix	water
SOP#	KnoxMS0015	XXXXXXXXX	XXXXXXXXX	IS Amt/ID 0.938ml	VOA5549
Intitial Cal Batch	X091603I	XXXXXXXXX	XXXXXXXXX	SS Amt/ID	
CCAL IS Areas	1419469	292458	323231	Heated?	Y (N)

☒ Date/Time Verified Preventive Maintenance Performed ☒NA or ☐ _____

Lot	Lab File ID	Time	ALS #	Archon Method/ Dil. Factor	MS Dilution Factor	Volume/ Weight Purged	pH	Init	Standards ID/Spike ID/ and/or Comments
Tune	BFXL11	1343	—	—	1	—	NA	MT	1ml VOA 5547
CCV	CCXL113	1400	18	20/1		25mL			5ml VOA 5548
LCS	FLFW31AC	1425	19						also FLF3P1AC
LCSD	FLFW31AD	1450	20						also FLF3P1AD
BLK	MBTBLK	1515	21						
	FLFW31AA	1540	22						also FLF3P1AA
L100268	FLDQ41AC	1607	23						
	RG1AN	1632	24						
	RK1AA	1656	25						
~~L100257~~	~~JBG~~								MT 12/11/03
L100237	FLDKD1AA	1722	26						
	KL	1748	27						
	JG	1814	28	21/10	10				RR1/2
L100246	MC	1839	29	22/1	1				
	MX	1904	30						
	MZ	1929	31						
	MS	1956	32						
	NA	2021	33						
	NJ	2046	34						
~~L110177~~	~~FLFX5~~		~~35~~						MT 12/11/03
L100227	FLDGD	2112	~~36~~ 35						
	GZ	2137	~~37~~ 36						MT 12/11/03
	GG	2202	~~38~~ 37						
L110180	FLFF1C1AC	2227	38						
	FLFF2H1AN	2253	39						
	FLFF3C1AA	2319	40						
L100227	FLDG51AA	2345	41	23/2	2				
L100237	FLDJG2AA	0010	42						

12/12/03

Analyst/Date: _____ / 12/12/03

Data File: /chem/gcms/mx.i/X121103.b/bfxl11.d

Date : 11-DEC-2003 13:43

Client ID: TUNE

Instrument: mx.i

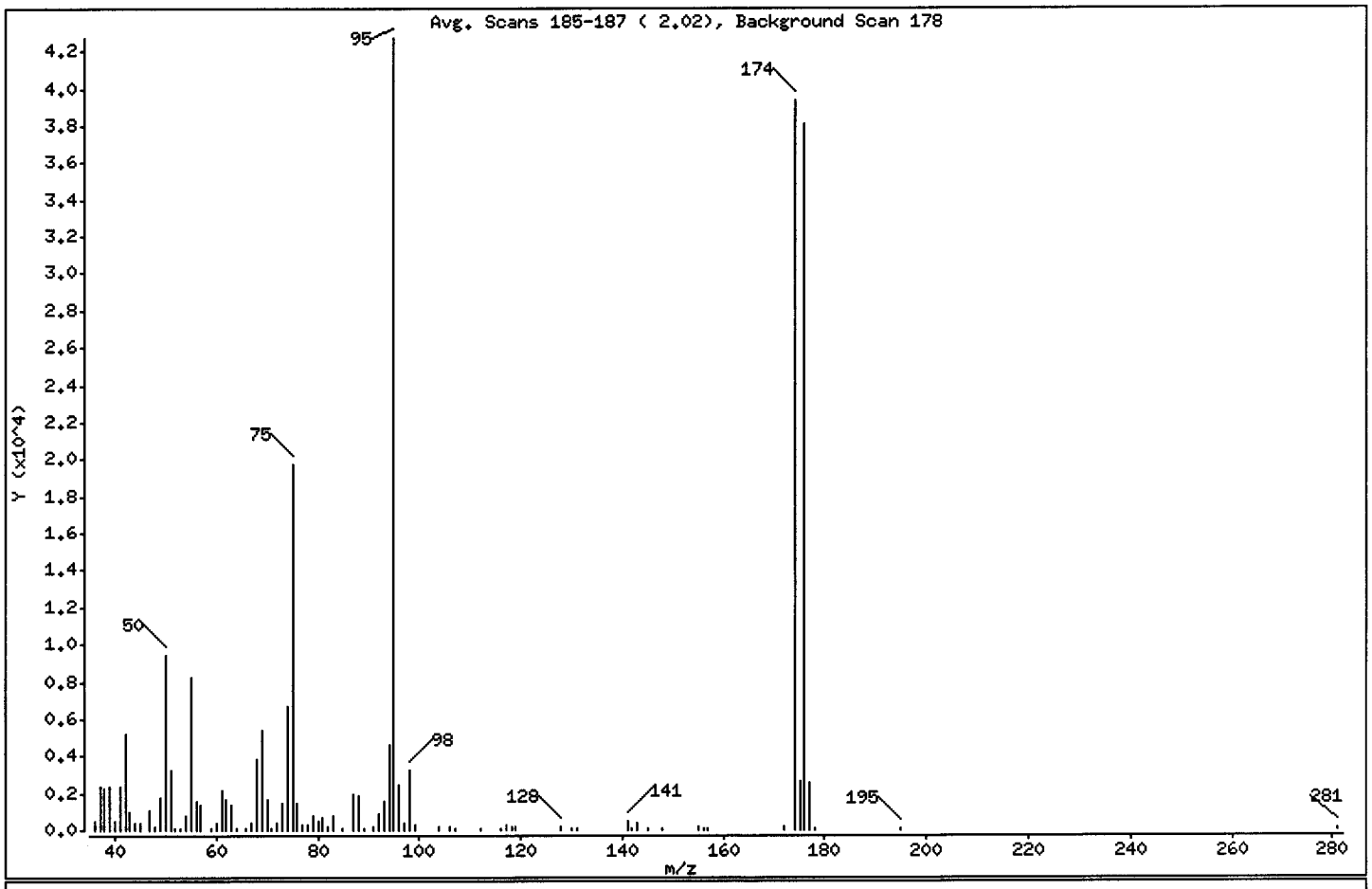
Sample Info: BFXL11,1,3,,BFB,TUNE

Operator: 063605

Column phase: J & W 624

Column diameter: 0.18

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	22.17
75	30.00 - 60.00% of mass 95	46.21
96	5.00 - 9.00% of mass 95	5.74
173	Less than 2.00% of mass 174	0.00 (0.00)
174	50.00 - 120.00% of mass 95	92.20
175	5.00 - 9.00% of mass 174	6.16 (6.69)
176	95.00 - 101.00% of mass 174	89.21 (96.76)
177	5.00 - 9.00% of mass 176	5.96 (6.68)

Data File: /chem/gcms/mx.i/X121103.b/bfxl11.d

Date : 11-DEC-2003 13:43

Client ID: TUNE

Instrument: mx.i

Sample Info: BFXL11,1,3,,BFB,TUNE

Operator: 063605

Column phase: J & W 624

Column diameter: 0.18

Data File: bfxl11.d
Spectrum: Avg. Scans 185-187 (2.02), Background Scan 178
Location of Maximum: 95.00
Number of points: 85

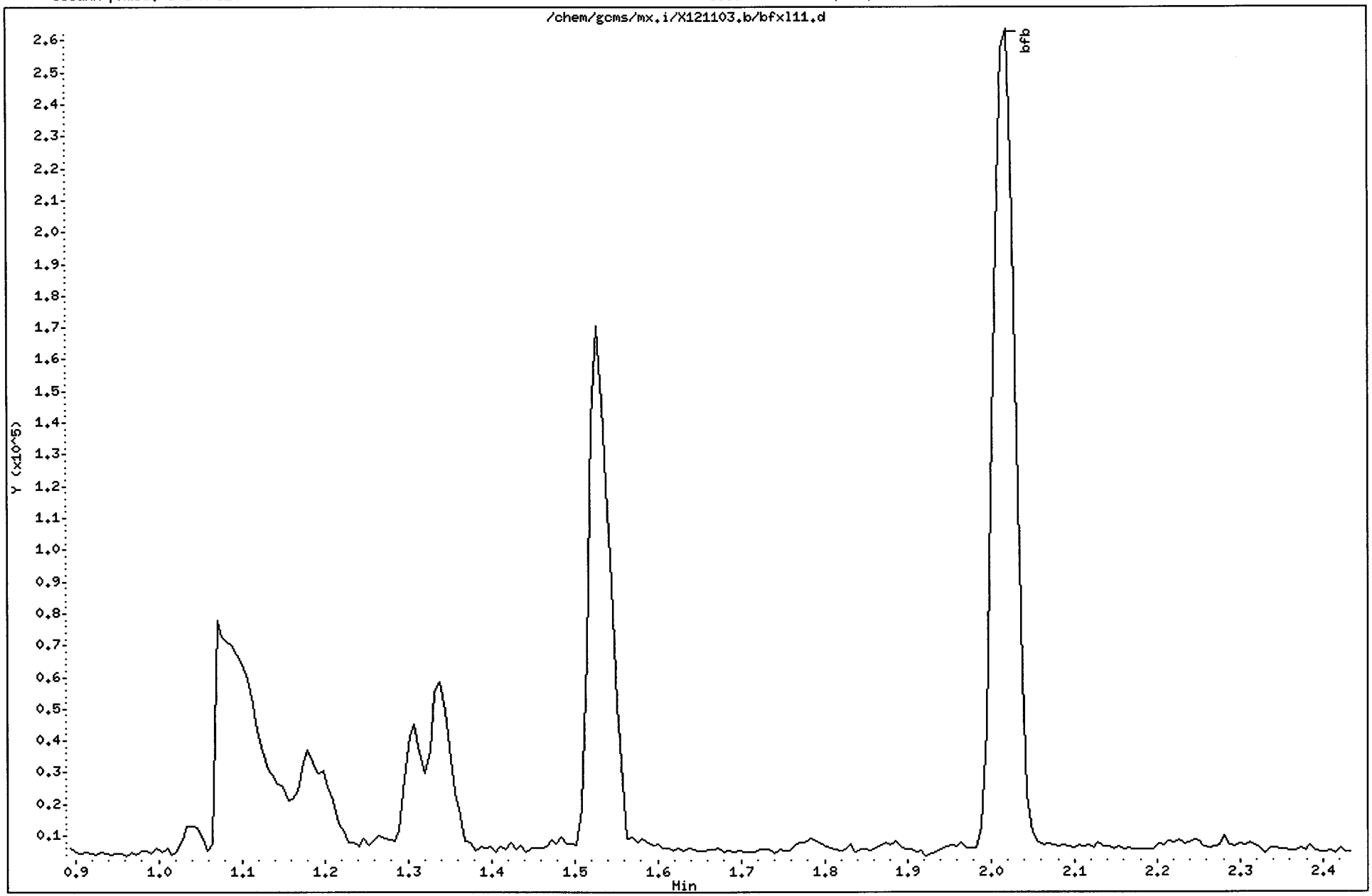
m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	477	60.00	429	83.00	759	128.00	213
37.00	2320	61.00	2132	85.00	64	130.00	146
38.00	2261	62.00	1711	87.00	2012	131.00	58
39.00	2357	63.00	1354	88.00	1828	141.00	496
40.00	513	64.00	57	89.00	64	142.00	55
41.00	2318	66.00	60	91.00	156	143.00	427
42.00	5253	67.00	367	92.00	917	145.00	54
43.00	1019	68.00	3871	93.00	1591	148.00	50
44.00	377	69.00	5430	94.00	4588	155.00	179
45.00	360	70.00	1647	95.00	42712	156.00	81
47.00	1092	71.00	138	96.00	2452	157.00	77
48.00	232	72.00	355	97.00	421	172.00	153
49.00	1742	73.00	1518	98.00	3288	174.00	39376
50.00	9468	74.00	6676	99.00	288	175.00	2633
51.00	3273	75.00	19736	104.00	182	176.00	38104
52.00	147	76.00	1521	106.00	150	177.00	2547
53.00	131	77.00	260	107.00	54	178.00	61
54.00	742	78.00	280	112.00	56	195.00	57
55.00	8256	79.00	826	116.00	53	281.00	83
56.00	1535	80.00	447	117.00	332		
57.00	1374	81.00	687	118.00	163		
59.00	52	82.00	169	119.00	174		

Data File: /chem/gcms/mx.i/X121103.b/bfxl11.d
Date : 11-DEC-2003 13:43
Client ID: TUNE
Sample Info: BFXL11,1,3,,BFB,TUNE

Instrument: mx.i

Operator: 063605

Column phase: J & W 624
Column diameter: 0.18



Data File: /chem/gcms/mx.i/X121103.b/ccxl113.d
Report Date: 11-Dec-2003 14:16

STL Knoxville

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: mx.i
Lab File ID: ccxl113.d
Analysis Type: WATER
Lab Sample ID: CCXL113
Method: /var/chem/gcms/mx.i/X121103.b/8260B_LM.m

Injection Date: 11-DEC-2003 14:00
Init. Cal. Date(s): 16-SEP-2003 16-SEP-2003
Init. Cal. Times: 10:17 12:52
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF10	CCAL RRF10	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
$ 5 1,2-Dichloroethane-d4	0.12848	0.12182	0.12182	0.000	5.18312	50.00000	Averaged
$ 4 Dibromofluoromethane	0.16653	0.16248	0.16248	0.000	2.42992	50.00000	Averaged
$ 6 Toluene-d8	4.59346	4.68204	4.68204	0.000	-1.92843	50.00000	Averaged
$ 7 4-Bromofluorobenzene	1.19698	1.12617	1.12617	0.000	5.91550	50.00000	Averaged
10 Dichlorodifluoromethane	0.25982	0.18809	0.18809	0.000	27.60904	50.00000	Averaged
11 Chloromethane (spcc)	10.42981	10.00000	0.39386	0.100	-4.29815	50.00000	Linear
12 Vinyl Chloride (ccc)	8.97814	10.00000	0.26469	0.000	10.21864	19.00000	Linear
14 Bromomethane	9.50320	10.00000	0.11802	0.000	4.96795	50.00000	Linear
15 Chloroethane	9.00320	10.00000	0.14391	0.000	9.96801	50.00000	Linear
17 Trichlorofluoromethane	0.33615	0.30458	0.30458	0.000	9.39156	50.00000	Averaged
20 1,1-Dichloroethene (ccc)	0.18698	0.17983	0.17983	0.000	3.82720	19.00000	Averaged
21 *Freon 113	0.15377	0.16496	0.16496	0.000	-7.27713	50.00000	Averaged
24 Carbon Disulfide	0.69767	0.60591	0.60591	0.000	13.15188	50.00000	Averaged
22 Acetone	34.58505	40.00000	0.01562	0.000	13.53737	50.00000	Linear
27 Methylene Chloride	8.07098	10.00000	0.12953	0.000	19.29020	50.00000	Linear
30 trans-1,2-Dichloroethene	0.23110	0.21425	0.21425	0.000	7.28797	50.00000	Averaged
31 *MTBE	0.24410	0.19254	0.19254	0.000	21.12175	50.00000	Averaged
32 *Hexane	0.91293	0.91112	0.91112	0.000	0.19765	50.00000	Averaged
33 1,1-Dichloroethane (spcc)	0.44414	0.40997	0.40997	0.100	7.69226	50.00000	Averaged
37 2,2-Dichloropropane	0.34060	0.32671	0.32671	0.000	4.07849	50.00000	Averaged
38 cis 1,2-Dichloroethene	0.23108	0.20311	0.20311	0.000	12.10659	50.00000	Averaged
M 8 1,2-Dichloroethene (total)	0.22557	0.20868	0.20868	0.000	7.48595	50.00000	Averaged
39 2-Butanone	38.12665	40.00000	0.02502	0.000	4.68338	50.00000	Linear
40 Bromochloromethane	0.06287	0.05370	0.05370	0.000	14.57842	50.00000	Averaged
42 Chloroform (ccc)	0.35856	0.30519	0.30519	0.000	14.88321	19.00000	Averaged
43 1,1,1-Trichloroethane	0.39282	0.36148	0.36148	0.000	7.97821	50.00000	Averaged
44 Carbon Tetrachloride	0.32921	0.31702	0.31702	0.000	3.70149	50.00000	Averaged
45 1,1-Dichloropropene	0.34001	0.31417	0.31417	0.000	7.60165	50.00000	Averaged
46 Benzene	0.98074	0.84534	0.84534	0.000	13.80659	50.00000	Averaged
47 1,2-Dichloroethane	0.16261	0.14955	0.14955	0.000	8.03577	50.00000	Averaged
49 Trichloroethene	0.26349	0.25682	0.25682	0.000	2.52924	50.00000	Averaged
50 1,2-Dichloropropane (ccc)	0.21686	0.20004	0.20004	0.000	7.75674	19.00000	Averaged
51 Dibromomethane	0.05902	0.05070	0.05070	0.000	14.10042	50.00000	Averaged
52 Bromodichloromethane	0.21657	0.18450	0.18450	0.000	14.80942	50.00000	Averaged
54 cis-1,3-Dichloropropene	0.25926	0.21218	0.21218	0.000	18.15769	50.00000	Averaged

Data File: /chem/gcms/mx.i/X121103.b/ccxl113.d
Report Date: 11-Dec-2003 14:16

STL Knoxville

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: mx.i
Lab File ID: ccxl113.d
Analysis Type: WATER
Lab Sample ID: CCXL113
Method: /var/chem/gcms/mx.i/X121103.b/8260B_LM.m

Injection Date: 11-DEC-2003 14:00
Init. Cal. Date(s): 16-SEP-2003 16-SEP-2003
Init. Cal. Times: 10:17 12:52
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF10	CCAL RRF10	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
55 4-Methyl-2-pentanone	0.07262	0.06194	0.06194	0.000	14.71423	50.00000	Averaged
56 Toluene (ccc)	5.92685	4.90693	4.90693	0.000	17.20854	19.00000	Averaged
57 trans-1,3-Dichloropropene	0.88709	0.70241	0.70241	0.000	20.81864	50.00000	Averaged
58 1,1,2-Trichloroethane	0.44947	0.37228	0.37228	0.000	17.17444	50.00000	Averaged
59 Tetrachloroethene	1.18016	1.15857	1.15857	0.000	1.82924	50.00000	Averaged
60 1,3-Dichloropropane	0.76904	0.63955	0.63955	0.000	16.83770	50.00000	Averaged
61 2-Hexanone	0.23660	0.19799	0.19799	0.000	16.32119	50.00000	Averaged
62 Chlorodibromomethane	0.57796	0.51621	0.51621	0.000	10.68326	50.00000	Averaged
63 1,2-Dibromoethane	0.42198	0.34987	0.34987	0.000	17.08830	50.00000	Averaged
64 Chlorobenzene (spcc)	3.28809	2.70630	2.70630	0.300	17.69390	50.00000	Averaged
66 Ethylbenzene (ccc)	2.17476	1.77268	1.77268	0.000	18.48871	19.00000	Averaged
65 1,1,1,2-Tetrachloroethane	0.93609	0.78511	0.78511	0.000	16.12967	50.00000	Averaged
67 m&p-Xylene	2.59906	1.94876	1.94876	0.000	25.02052	50.00000	Averaged
68 o-Xylene	2.33482	1.71950	1.71950	0.000	26.35392	50.00000	Averaged
M 9 Xylene (total)	22.36050	30.00000	1.87234	0.000	25.46499	50.00000	Linear
69 Styrene	3.47477	2.32245	2.32245	0.000	33.16244	50.00000	Averaged
70 Bromoform (spcc)	0.33550	0.25084	0.25084	0.100	25.23456	50.00000	Averaged
71 Isopropylbenzene	7.30953	5.55126	5.55126	0.000	24.05453	50.00000	Averaged
73 Bromobenzene	1.15373	0.85637	0.85637	0.000	25.77329	50.00000	Averaged
74 1,1,2,2-Tetrachloroethane(s	7.96163	10.00000	0.36489	0.300	20.38374	50.00000	Linear
77 n-Propylbenzene	6.54031	5.14340	5.14340	0.000	21.35841	50.00000	Averaged
75 1,2,3-Trichloropropane	8.53065	10.00000	0.08373	0.000	14.69355	50.00000	Linear
78 2-Chlorotoluene	3.52658	2.86786	2.86786	0.000	18.67875	50.00000	Averaged
79 1,3,5-Trimethylbenzene	3.95245	3.32408	3.32408	0.000	15.89823	50.00000	Averaged
80 4-Chlorotoluene	3.88390	2.96703	2.96703	0.000	23.60708	50.00000	Averaged
81 tert-Butylbenzene	3.93183	3.10554	3.10554	0.000	21.01528	50.00000	Averaged
82 1,2,4-Trimethylbenzene	3.56751	3.00991	3.00991	0.000	15.63002	50.00000	Averaged
83 sec-Butylbenzene	5.82008	4.61421	4.61421	0.000	20.71920	50.00000	Averaged
84 1,3-Dichlorobenzene	1.88613	1.60113	1.60113	0.000	15.11028	50.00000	Averaged
85 p-Isopropyltoluene	4.61158	3.72162	3.72162	0.000	19.29833	50.00000	Averaged
86 1,4-Dichlorobenzene	1.72531	1.40940	1.40940	0.000	18.31044	50.00000	Averaged
88 n-Butylbenzene	3.97166	3.33392	3.33392	0.000	16.05731	50.00000	Averaged
87 1,2-Dichlorobenzene	1.40012	1.16683	1.16683	0.000	16.66197	50.00000	Averaged
89 1,2-Dibromo-3-chloropropane	0.06283	0.05318	0.05318	0.000	15.35668	50.00000	Averaged
90 1,2,4-Trichlorobenzene	0.74889	0.74063	0.74063	0.000	1.10277	50.00000	Averaged

Data File: /chem/gcms/mx.i/X121103.b/ccxl113.d
Report Date: 11-Dec-2003 14:16

STL Knoxville

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: mx.i
Lab File ID: ccxl113.d
Analysis Type: WATER
Lab Sample ID: CCXL113
Method: /var/chem/gcms/mx.i/X121103.b/8260B_LM.m

Injection Date: 11-DEC-2003 14:00
Init. Cal. Date(s): 16-SEP-2003 16-SEP-2003
Init. Cal. Times: 10:17 12:52
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF10	CCAL RRF10	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
91 Hexachlorobutadiene	10.26635	10.00000	0.89259	0.000	-2.66346	50.00000	Linear
92 Napthalene	0.64741	0.55645	0.55645	0.000	14.04952	50.00000	Averaged
93 1,2,3-Trichlorobenzene	0.51502	0.48380	0.48380	0.000	6.06055	50.00000	Averaged

Data File: /chem/gcms/mx.i/X121103.b/ccxl113.d
Report Date: 11-Dec-2003 14:16

STL Knoxville

SW-846 Method 8260A - Volatile Organics

Data file : /chem/gcms/mx.i/X121103.b/ccxl113.d
Lab Smp Id: CCXL113 Client Smp ID: VSTD010
Inj Date : 11-DEC-2003 14:00
Operator : 063605 Inst ID: mx.i
Smp Info : CCXL113,1,2,3,,VSTD010
Misc Info : X121103,8260B_LM,1-all.sub
Comment :
Method : /var/chem/gcms/mx.i/X121103.b/8260B_LM.m
Meth Date : 11-Dec-2003 14:16 chemist Quant Type: ISTD
Cal Date : 16-SEP-2003 12:52 Cal File: icxi166.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 1-all.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * Uf*Vt/(Vo*1000) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Unit Correction factor
Vt	25000.00000	Sample Volume Purged
Vo	25.00000	Sample Volume Used

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
* 1 Fluorobenzene	96	4.885	4.885	(1.000)	1419469	10.0000	
* 2 Chlorobenzene-d5	119	7.624	7.624	(1.000)	292458	10.0000	
* 3 1,4 Dichlorobenzene-d4	152	10.824	10.824	(1.000)	323231	10.0000	
$ 5 1,2-Dichloroethane-d4	65	4.581	4.581	(0.938)	172921	10.0000	9.4817
$ 4 Dibromofluoromethane	113	4.295	4.295	(0.879)	230634	10.0000	9.7570
$ 6 Toluene-d8	98	6.292	6.292	(0.825)	1369301	10.0000	10.193
$ 7 4-Bromofluorobenzene	95	8.932	8.932	(0.825)	364014	10.0000	9.4084
10 Dichlorodifluoromethane	85	1.101	1.101	(0.225)	266987	10.0000	7.2391
11 Chloromethane (spcc)	50	1.229	1.229	(0.252)	559071	10.0000	10.430
12 Vinyl Chloride (ccc)	62	1.314	1.314	(0.269)	375713	10.0000	8.9781
14 Bromomethane	94	1.570	1.570	(0.321)	167519	10.0000	9.5032
15 Chloroethane	64	1.655	1.655	(0.339)	204282	10.0000	9.0032
17 Trichlorofluoromethane	101	1.874	1.874	(0.384)	432335	10.0000	9.0608
20 1,1-Dichloroethene (ccc)	96	2.324	2.324	(0.476)	255260	10.0000	9.6173

Data File: /chem/gcms/mx.i/X121103.b/ccxl113.d
Report Date: 11-Dec-2003 14:16

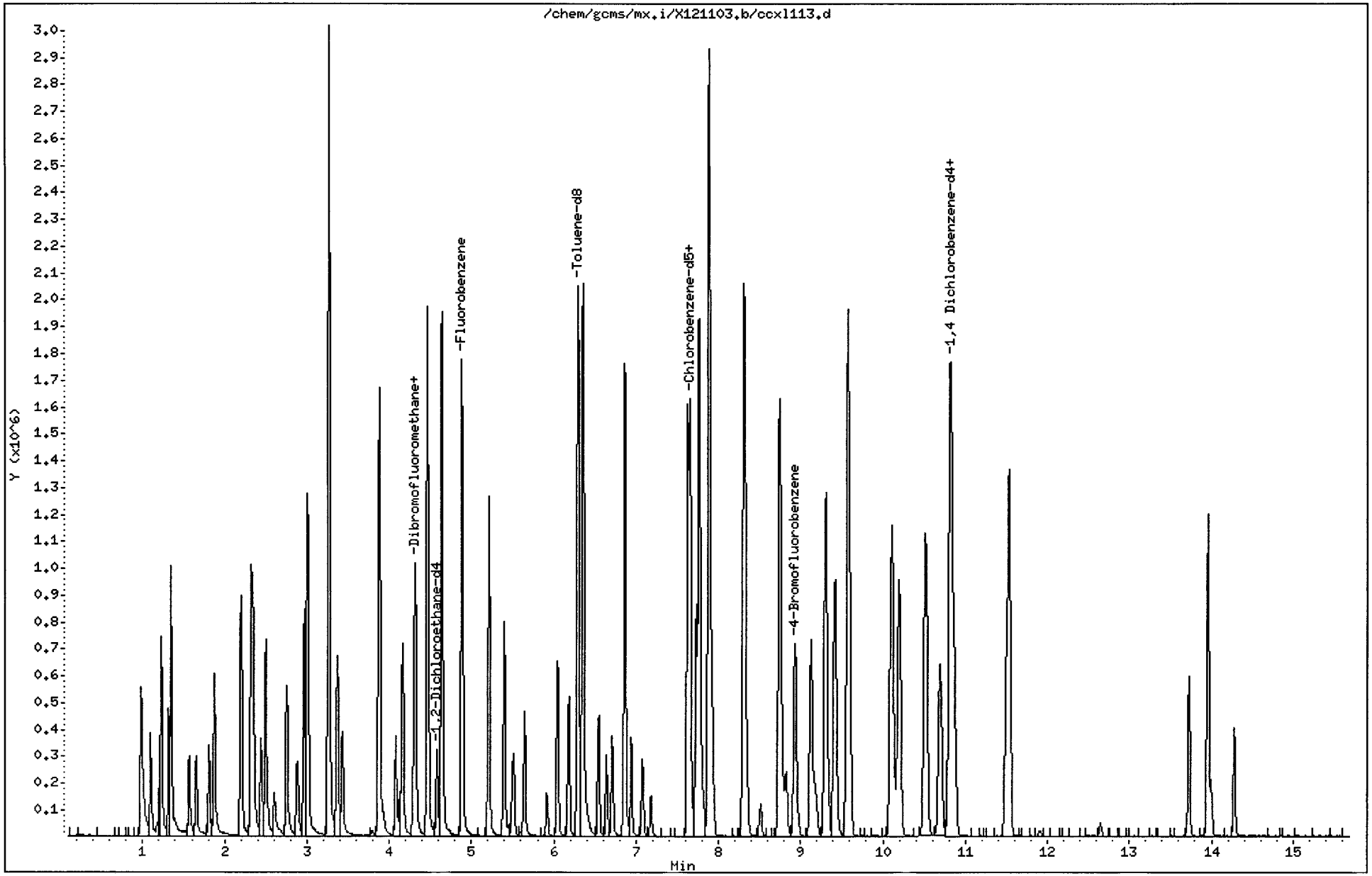
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
	21 *Freon 113	151	2.348	2.348	(0.481)	234159	10.0000	10.728
	24 Carbon Disulfide	76	2.500	2.500	(0.512)	860076	10.0000	8.6848
	22 Acetone	43	2.366	2.366	(0.484)	88686	40.0000	34.585
	27 Methylene Chloride	84	2.756	2.756	(0.564)	183866	10.0000	8.0710
	30 trans-1,2-Dichloroethene	96	3.005	3.005	(0.615)	304128	10.0000	9.2712
	31 *MTBE	73	3.017	3.017	(0.618)	273305	10.0000	7.8878
	32 *Hexane	57	3.267	3.267	(0.669)	1293312	10.0000	9.9802
	33 1,1-Dichloroethane (spcc)	63	3.370	3.370	(0.690)	581944	10.0000	9.2308
	37 2,2-Dichloropropane	77	3.875	3.875	(0.793)	463751	10.0000	9.5922
	38 cis 1,2-Dichloroethene	96	3.881	3.881	(0.795)	288303	10.0000	8.7893
M	8 1,2-Dichloroethene (total)	96				592431	20.0000	18.060
	39 2-Butanone	43	3.887	3.887	(0.796)	142071	40.0000	38.127
	40 Bromochloromethane	128	4.082	4.082	(0.836)	76229	10.0000	8.5422
	42 Chloroform (ccc)	83	4.161	4.161	(0.852)	433213	10.0000	8.5117
	43 1,1,1-Trichloroethane	97	4.319	4.319	(0.884)	513109	10.0000	9.2022
	44 Carbon Tetrachloride	117	4.465	4.465	(0.914)	450006	10.0000	9.6298
	45 1,1-Dichloropropene	75	4.465	4.465	(0.914)	445947	10.0000	9.2398
	46 Benzene	78	4.642	4.642	(0.950)	1199927	10.0000	8.6193
	47 1,2-Dichloroethane	62	4.648	4.648	(0.951)	212276	10.0000	9.1964
	49 Trichloroethene	130	5.209	5.209	(1.066)	364550	10.0000	9.7471
	50 1,2-Dichloropropane (ccc)	63	5.398	5.398	(1.105)	283949	10.0000	9.2243
	51 Dibromomethane	93	5.495	5.495	(1.125)	71968	10.0000	8.5900
	52 Bromodichloromethane	83	5.641	5.641	(1.155)	261888	10.0000	8.5190
	54 cis-1,3-Dichloropropene	75	6.042	6.042	(1.237)	301189	10.0000	8.1842
	55 4-Methyl-2-pentanone	43	6.182	6.182	(1.266)	351673	40.0000	34.114
	56 Toluene (ccc)	91	6.353	6.353	(0.833)	1435072	10.0000	8.2791
	57 trans-1,3-Dichloropropene	75	6.547	6.547	(0.859)	205426	10.0000	7.9181
	58 1,1,2-Trichloroethane	97	6.712	6.712	(0.880)	108875	10.0000	8.2826
	59 Tetrachloroethene	164	6.858	6.858	(0.899)	338833	10.0000	9.8171
	60 1,3-Dichloropropane	76	6.864	6.864	(0.900)	187042	10.0000	8.3162
	61 2-Hexanone	43	6.943	6.943	(0.911)	231609	40.0000	33.472
	62 Chlorodibromomethane	129	7.077	7.077	(0.928)	150970	10.0000	8.9317
	63 1,2-Dibromoethane	107	7.174	7.174	(0.941)	102323	10.0000	8.2912
	64 Chlorobenzene (spcc)	112	7.648	7.648	(1.003)	791480	10.0000	8.2306
	66 Ethylbenzene (ccc)	106	7.764	7.764	(1.018)	518434	10.0000	8.1511
	65 1,1,1,2-Tetrachloroethane	131	7.728	7.728	(1.014)	229610	10.0000	8.3870
	67 m&p-Xylene	106	7.880	7.880	(1.034)	1139862	20.0000	14.996
	68 o-Xylene	106	8.299	8.299	(1.089)	502882	10.0000	7.3646
M	9 Xylene (total)	106				1642745	30.0000	22.360
	69 Styrene	104	8.312	8.312	(1.090)	679220	10.0000	6.6838
	70 Bromoform (spcc)	173	8.512	8.512	(1.116)	73359	10.0000	7.4765
	71 Isopropylbenzene	105	8.743	8.743	(1.147)	1623511	10.0000	7.5945
	73 Bromobenzene	156	9.127	9.127	(1.197)	250453	10.0000	7.4227
	74 1,1,2,2-Tetrachloroethane(sp)	83	9.121	9.121	(1.196)	106715	10.0000	7.9616
	77 n-Propylbenzene	91	9.303	9.303	(0.859)	1662510	10.0000	7.8642
	75 1,2,3-Trichloropropane	110	9.175	9.175	(0.848)	27064	10.0000	8.5306
	78 2-Chlorotoluene	91	9.419	9.419	(0.870)	926981	10.0000	8.1321

Data File: /chem/gcms/mx.i/X121103.b/ccxl113.d
Report Date: 11-Dec-2003 14:16

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
79 1,3,5-Trimethylbenzene	105	9.571	9.571	(0.884)	1074447	10.0000	8.4102
80 4-Chlorotoluene	91	9.583	9.583	(0.885)	959037	10.0000	7.6393
81 tert-Butylbenzene	119	10.106	10.106	(0.934)	1003809	10.0000	7.8985
82 1,2,4-Trimethylbenzene	105	10.191	10.191	(0.942)	972898	10.0000	8.4370
83 sec-Butylbenzene	105	10.514	10.514	(0.971)	1491458	10.0000	7.9281
84 1,3-Dichlorobenzene	146	10.690	10.690	(0.988)	517535	10.0000	8.4890
85 p-Isopropyltoluene	119	10.812	10.812	(0.999)	1202946	10.0000	8.0702
86 1,4-Dichlorobenzene	146	10.861	10.861	(1.003)	455561	10.0000	8.1690
88 n-Butylbenzene	91	11.530	11.530	(1.065)	1077628	10.0000	8.3943
87 1,2-Dichlorobenzene	146	11.499	11.499	(1.062)	377157	10.0000	8.3338
89 1,2-Dibromo-3-chloropropane	157	12.649	12.649	(1.169)	17190	10.0000	8.4643
90 1,2,4-Trichlorobenzene	180	13.726	13.726	(1.268)	239394	10.0000	9.8897
91 Hexachlorobutadiene	225	13.957	13.957	(1.289)	288513	10.0000	10.266
92 Napthalene	128	13.994	13.994	(1.293)	179863	10.0000	8.5950
93 1,2,3-Trichlorobenzene	180	14.279	14.279	(1.319)	156381	10.0000	9.3939

Data File: /chem/gcms/mx.i/X121103.b/ccxl113.d
Date : 11-DEC-2003 14:00
Client ID: VSTD010
Sample Info: CCXL113,1,2,3,,VSTD010
Purge Volume: 25.0
Column phase: J+W 624

Instrument: mx.i
Operator: 063605
Column diameter: 0.18



STL Volatile GC/MS Continuing Calibration Review / Narrative Checklist
Method: 8260B - KNOX-MS-0015, Rev. 3

Analysis Date:	12/15/03	CCAL Batch/ Scan Name:	X121503	Instrument:	MX	ICAL Batch/ Scan Name:	X091603I ~~X100903E~~ MT 12/15/03	Scanned θ

Review Items	N/A	Yes	No	If No, why is data reportable?	2nd √
1. Did BFB meet tune criteria?		✓			✓
2. Were all standards injected within 12 hr of BFB?		✓			✓
3. Was date/time of analysis verified between analysis header and logbook as correct?		✓			✓
4. Was the primary ion used for all compounds?		✓		o*Secondary ion used due to interferences for:*_____	✓
5. Do the RFs for SPCCs meet minimum RF?		✓			✓
6. Is the %D or drift ≤20% for all CCCs?		✓			✓
7. Is the %D or drift ≤ 50% for all other compounds? [Up to 6 TCLs may have %D or drift > 50%; any more and the calibration is INVALID].		✓		o %D or drift > 50% for the following TCLs: _____ 2-CLEVE → 69.3%	✓
8. Are the internal standard responses within limits? 8260B: 50-200% of the mid-level ICAL standard		✓			✓
9. Are the internal standard retention times within limits? 8260B: 30 seconds of the mid-level ICAL standard		✓			✓
10. If manual integrations were performed, are they clearly identified, initialed, dated and reason given?	✓			Reasons: 1)Corrected split peak; 2)Unresolved peak; 3)tailing; 4)RT shift; 5)wrong peak selected; 6)other	NA
11. Have alternate hits/manual integrations been verified as correct and are correct RFs listed in CCAL summary?	✓				NA
12. Was the correct ICAL used for quantitation? (Verify date & time of ICAL is documented correctly on CCAL)		✓			✓
13. Is the first IS documented correctly on the log?		✓			✓
14. Elution order checked on isomeric pairs/coeluters?					
• cis- and trans- isomers		✓			✓
• trichlorofluoromethane and Freon 113		✓			✓
• ethyl benzene / m/p-xylene / o-xylene		✓			✓
• n-propylbenzene / 2-chlorotoluene / 4-chlorotoluene		✓			✓
• 1,3,5-trimethylbenzene / 1,2,4-trimethylbenzene / sec-butylbenzene		✓			✓
• 1,3- , 1,4- , and 1,2-dichlorobenzene		✓			✓
• 1,2,4 and 1,2,3 -trichlorobenzene		✓			✓
• chlorobenzene and chlorobenzene-d5		✓			✓
15. If criteria were not met, was a NCM generated, approved by supervisor, and copy included in folder?	✓				NA
16. Does the CCAL folder contain **complete** data in the following order? Data review checklist, tune pass/fail page, m/z list, tune chromatogram, Target CCAL summary, Quan report, chromatogram and manual integrations.		✓			✓

Analyst: MT	Date: 12/15/03	2nd Level Reviewer : [signature]	Date: 12/15/03
Comments:		**Comments:**	

STL Knoxville GC/MS Volatiles Run Log - Instrument MX

Target Batch	X121503	XXXXXXXXX	XXXXXXXXX	XXXXXXXXXXXXXX	XXXXXXXX
QuantIMS Batch	3345378	3349452	3349684	XXXXXXXXXXXXXX	XXXXXXXX
Method	8260	XXXXXXXXX	XXXXXXXXX	Matrix	water
SOP#	KnoxMS0015	XXXXXXXXX	XXXXXXXXX	IS Amt/ID 0.938	VOA5549
Intitial Cal Batch MT 12/16/03 X121603L	~~X100903E~~	XXXXXXXXX	XXXXXXXXX	SS Amt/ID	
CCAL IS Areas	1461276	293714	323953	Heated?	Y (N)

☒ Date/Time Verified Preventive Maintenance Performed ☒ NA or ☐ _____

Lot	Lab File ID	Time	ALS #	Archon Method/ Dil. Factor	MS Dilution Factor	Volume/ Weight Purged	pH	Init	Standards ID/Spike ID/ and/or Comments
Tune	BFXL15	1629	—	—	1	—	NA	MT	Int VOA5547
CCV	CCXL153	1645	18	20/1		25mL			Std VOA5553 → 50mL
LCS	FCeF3P1AC	1710	19						also FCeP5A1AC, FCeP8J1AC
LCSD	FCeF3P1AD	1735	20						also FCeP5A1AD
BLK	METBLK	1800	21						
↓	FCeF3P1AA	1825	22						also FCeP5A1AA, FCeP8J1AA
L110177	FCeFX51AA	1852	23				<2		
L130120	FCeMEK1AA	1916	24						
L130112	FCeL8R1AA	1941	25						
L120196	FCeJVE	2007	26	21/5			~~NA~~ <2		1-all MT 12/16/03
L120281	FCe KLM	2032	27				NA		clbz
↓	FCeKL6	2058	28						↓
L100290	FCeDXC	2124	29						Fuller
L120260	FCeKEE	2149	30						clbz
	FCeKFJ	2215	31						
↓	FCeKGD	2240	32	↓	↓		↓		↓
L110268	FCeGMO	2306	33	22/50	10		<2		Fluor
L120208	FCeJXA1AC	2331	34	23/10	↓				
	X21CE	2356	35	24/1	1				
	OA1AN	0021	36						
	OQ1AA	0046	37						
MS	X21CF	0111	38						
↓ MSD	X21CG	0136	39	↓	↓	↓	↓	↓	Std VOA5553 → 50mL ↓

MT 12/16/03

Analyst/Date: MT 12/16/03 / _____

Data File: /chem/gcms/mx.i/X121503.b/bfxl15.d

Date : 15-DEC-2003 16:29

Client ID: TUNE

Instrument: mx.i

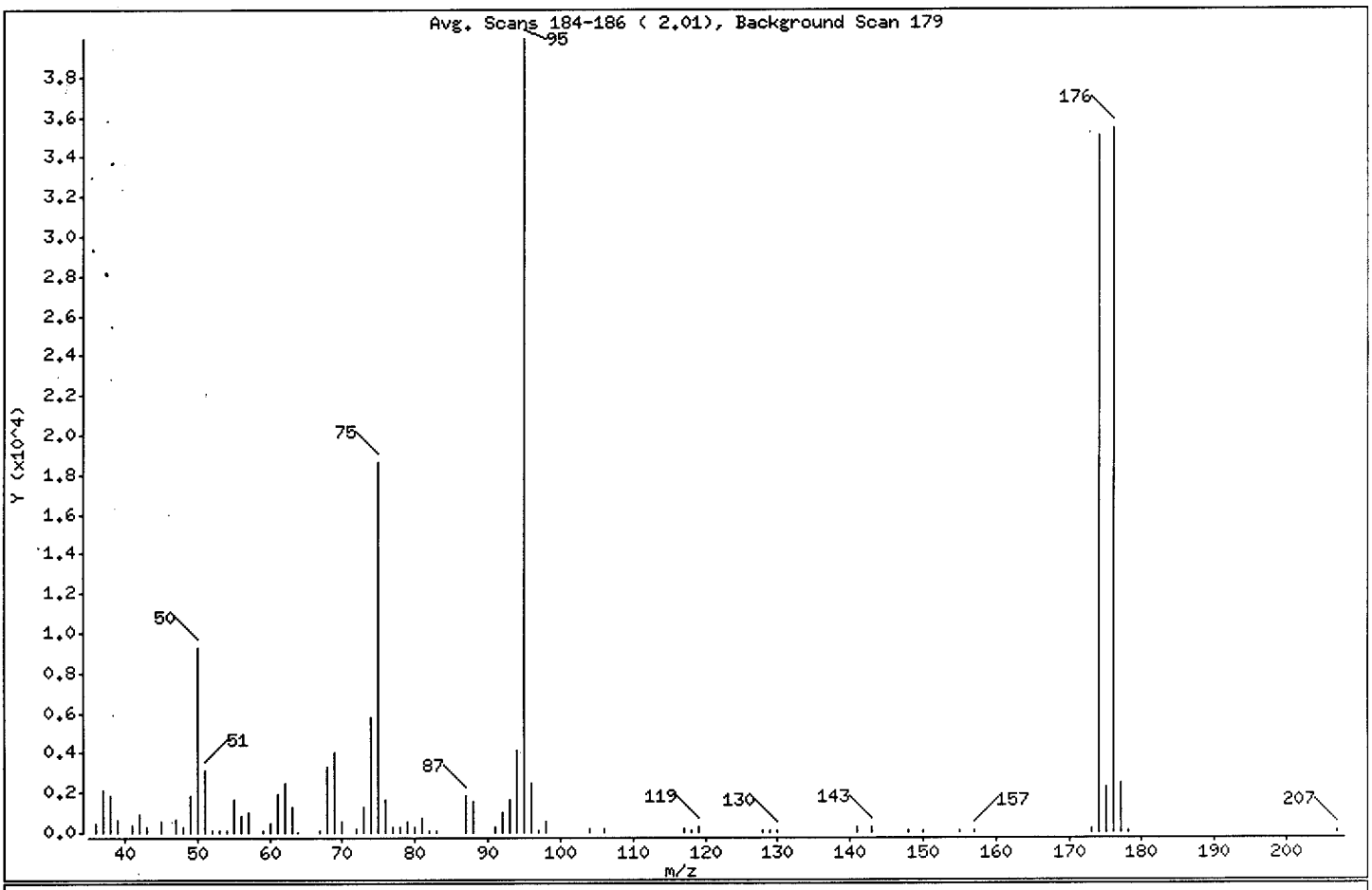
Sample Info: BFXL15,1,3,,BFB,TUNE

Operator: 063605

Column phase: J & W 624

Column diameter: 0.18

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	23.27
75	30.00 - 60.00% of mass 95	46.71
96	5.00 - 9.00% of mass 95	6.32
173	Less than 2.00% of mass 174	0.57 (0.65)
174	50.00 - 120.00% of mass 95	87.93
175	5.00 - 9.00% of mass 174	5.70 (6.48)
176	95.00 - 101.00% of mass 174	88.66 (100.84)
177	5.00 - 9.00% of mass 176	6.18 (6.97)

Data File: /chem/gcms/mx.i/X121503.b/bfxl15.d

Date : 15-DEC-2003 16:29

Client ID: TUNE

Instrument: mx.i

Sample Info: BFXL15,1,3,,BFB,TUNE

Operator: 063605

Column phase: J & W 624

Column diameter: 0.18

Data File: bfxl15.d
Spectrum: Avg. Scans 184-186 (2.01), Background Scan 179
Location of Maximum: 95.00
Number of points: 72

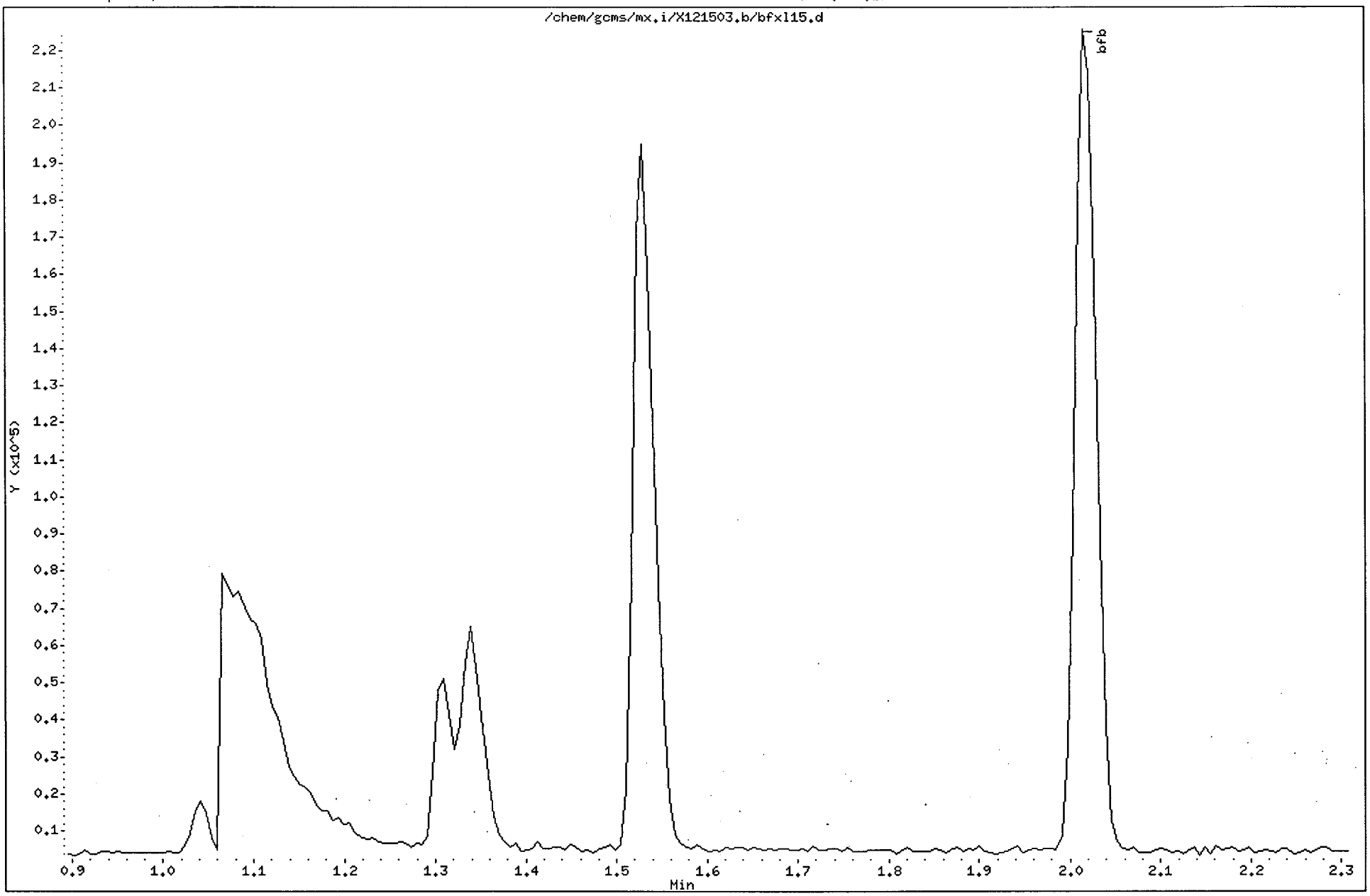
m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	418	59.00	61	81.00	700	129.00	64
37.00	2120	60.00	459	82.00	71	130.00	125
38.00	1792	61.00	1941	83.00	50	141.00	261
39.00	682	62.00	2439	87.00	1834	143.00	317
41.00	410	63.00	1319	88.00	1538	148.00	83
42.00	902	64.00	4	91.00	268	150.00	58
43.00	277	67.00	60	92.00	1038	155.00	106
45.00	594	68.00	3284	93.00	1652	157.00	110
47.00	683	69.00	4049	94.00	4161	173.00	229
48.00	312	70.00	574	95.00	39904	174.00	35088
49.00	1816	72.00	193	96.00	2521	175.00	2274
50.00	9285	73.00	1274	97.00	71	176.00	35376
51.00	3110	74.00	5801	98.00	578	177.00	2465
52.00	122	75.00	18640	104.00	146	178.00	118
53.00	122	76.00	1639	106.00	158	207.00	57
54.00	58	77.00	282	117.00	164		
55.00	1614	78.00	234	118.00	130		
56.00	854	79.00	590	119.00	247		
57.00	1029	80.00	309	128.00	66		

Data File: /chem/gcms/mx.i/X121503.b/bfxl15.d
Date : 15-DEC-2003 16:29
Client ID: TUNE
Sample Info: BFXL15,1,3,,BFB,TUNE

Instrument: mx.i

Operator: 063605

Column phase: J & W 624
Column diameter: 0.18



Data File: /chem/gcms/mx.i/X121503.b/ccxl153.d
Report Date: 15-Dec-2003 17:01

STL Knoxville

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: mx.i
Lab File ID: ccxl153.d
Analysis Type: WATER
Lab Sample ID: CCXL153
Method: /var/chem/gcms/mx.i/X121503.b/8260B_LM.m

Injection Date: 15-DEC-2003 16:45
Init. Cal. Date(s): 16-SEP-2003 16-SEP-2003
Init. Cal. Times: 10:17 12:52
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF10	CCAL RRF10	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
$ 4 Dibromofluoromethane	0.16653	0.14402	0.14402	0.000	13.51458	50.00000	Averaged
$ 5 1,2-Dichloroethane-d4	0.12848	0.10937	0.10937	0.000	14.87167	50.00000	Averaged
$ 6 Toluene-d8	4.59346	4.38520	4.38520	0.000	4.53387	50.00000	Averaged
$ 7 4-Bromofluorobenzene	1.19698	1.06658	1.06658	0.000	10.89373	50.00000	Averaged
M 8 1,2-Dichloroethene (total)	0.22557	0.20215	0.20215	0.000	10.38231	50.00000	Averaged
M 9 Xylene (total)	23.15974	30.00000	1.93986	0.000	22.80086	50.00000	Linear
10 Dichlorodifluoromethane	0.25982	0.21867	0.21867	0.000	15.84111	50.00000	Averaged
11 Chloromethane (spcc)	10.88361	10.00000	0.41133	0.100	-8.83610	50.00000	Linear
12 Vinyl Chloride (ccc)	9.26629	10.00000	0.27311	0.000	7.33712	19.00000	Linear
13 *1,3-Butadiene	0.25784	0.22604	0.22604	0.000	12.33304	50.00000	Averaged
14 Bromomethane	9.27638	10.00000	0.11511	0.000	7.23615	50.00000	Linear
15 Chloroethane	9.06354	10.00000	0.14487	0.000	9.36457	50.00000	Linear
16 *Vinyl Bromide	0.17719	0.14248	0.14248	0.000	19.59276	50.00000	Averaged
17 Trichlorofluoromethane	0.33615	0.29893	0.29893	0.000	11.07128	50.00000	Averaged
18 *2-Chloropropane	0.53626	0.47974	0.47974	0.000	10.53901	50.00000	Averaged
19 *Acrolein	++++	0.00017	0.00017	0.000	++++	50.00000	Averaged
20 1,1-Dichloroethene (ccc)	0.18698	0.17320	0.17320	0.000	7.36997	19.00000	Averaged
21 *Freon 113	0.15377	0.16045	0.16045	0.000	-4.34433	50.00000	Averaged
22 Acetone	30.19815	40.00000	0.01387	0.000	24.50461	50.00000	Linear
23 *Iodomethane	0.23891	0.24408	0.24408	0.000	-2.16357	50.00000	Averaged
24 Carbon Disulfide	0.69767	0.64711	0.64711	0.000	7.24701	50.00000	Averaged
25 *2-propanol	63.03155	100	0.00286	0.000	36.96845	50.00000	Linear
26 *Acetonitrile	0.00427	0.00333	0.00333	0.000	22.05128	50.00000	Averaged
27 Methylene Chloride	7.72083	10.00000	0.12443	0.000	22.79172	50.00000	Linear
135 *t-butanol	0.00572	0.00453	0.00453	0.000	20.78984	50.00000	Averaged
29 *Acrylonitrile	0.02351	0.01982	0.01982	0.000	15.71903	50.00000	Averaged
30 trans-1,2-Dichloroethene	0.23110	0.21103	0.21103	0.000	8.68391	50.00000	Averaged
31 *MTBE	0.24410	0.20489	0.20489	0.000	16.06253	50.00000	Averaged
32 *Hexane	0.91293	0.94739	0.94739	0.000	-3.77481	50.00000	Averaged
33 1,1-Dichloroethane (spcc)	0.44414	0.39856	0.39856	0.100	10.26175	50.00000	Averaged
34 *Vinyl Acetate	0.01611	0.01146	0.01146	0.000	28.86405	50.00000	Averaged
37 2,2-Dichloropropane	0.34060	0.32209	0.32209	0.000	5.43490	50.00000	Averaged
38 cis 1,2-Dichloroethene	0.23108	0.19327	0.19327	0.000	16.36499	50.00000	Averaged
39 2-Butanone	36.52831	40.00000	0.02398	0.000	8.67923	50.00000	Linear
40 Bromochloromethane	0.06287	0.05289	0.05289	0.000	15.87851	50.00000	Averaged
41 *THF	0.01935	0.01508	0.01508	0.000	22.06047	50.00000	Averaged

not spiked
MT
12/15/03

Data File: /chem/gcms/mx.i/X121503.b/ccxl153.d
Report Date: 15-Dec-2003 17:01

STL Knoxville

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: mx.i
Lab File ID: ccxl153.d
Analysis Type: WATER
Lab Sample ID: CCXL153
Method: /var/chem/gcms/mx.i/X121503.b/8260B_LM.m

Injection Date: 15-DEC-2003 16:45
Init. Cal. Date(s): 16-SEP-2003 16-SEP-2003
Init. Cal. Times: 10:17 12:52
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF10	CCAL RRF10	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
42 Chloroform (ccc)	0.35856	0.30303	0.30303	0.000	15.48691	19.00000	Averaged	
43 1,1,1-Trichloroethane	0.39282	0.36329	0.36329	0.000	7.51774	50.00000	Averaged	
44 Carbon Tetrachloride	0.32921	0.31444	0.31444	0.000	4.48539	50.00000	Averaged	
45 1,1-Dichloropropene	0.34001	0.31439	0.31439	0.000	7.53438	50.00000	Averaged	
46 Benzene	0.98074	0.85854	0.85854	0.000	12.46048	50.00000	Averaged	
47 1,2-Dichloroethane	0.16261	0.14260	0.14260	0.000	12.30525	50.00000	Averaged	
49 Trichloroethene	0.26349	0.25867	0.25867	0.000	1.82814	50.00000	Averaged	
50 1,2-Dichloropropane (ccc)	0.21686	0.19920	0.19920	0.000	8.14333	19.00000	Averaged	
129 Methyl Methacrylate	0.09169	0.06493	0.06493	0.000	29.18126	50.00000	Averaged	
51 Dibromomethane	0.05902	0.04826	0.04826	0.000	18.23260	50.00000	Averaged	
52 Bromodichloromethane	0.21657	0.17959	0.17959	0.000	17.07653	50.00000	Averaged	
53 *2-Chloroethylvinylether	0.05382	0.01651	0.01651	0.000	69.33087	50.00000	Averaged	<-
54 cis-1,3-Dichloropropene	0.25926	0.21433	0.21433	0.000	17.32865	50.00000	Averaged	
55 4-Methyl-2-pentanone	0.07262	0.05816	0.05816	0.000	19.92070	50.00000	Averaged	
56 Toluene (ccc)	5.92685	5.08341	5.08341	0.000	14.23082	19.00000	Averaged	
57 trans-1,3-Dichloropropene	0.88709	0.72242	0.72242	0.000	18.56303	50.00000	Averaged	
134 Ethyl Methacrylate	0.59448	0.41658	0.41658	0.000	29.92492	50.00000	Averaged	
58 1,1,2-Trichloroethane	0.44947	0.37539	0.37539	0.000	16.48173	50.00000	Averaged	
59 Tetrachloroethene	1.18016	1.18894	1.18894	0.000	-0.74439	50.00000	Averaged	
60 1,3-Dichloropropane	0.76904	0.64248	0.64248	0.000	16.45721	50.00000	Averaged	
61 2-Hexanone	0.23660	0.19407	0.19407	0.000	17.97625	50.00000	Averaged	
62 Chlorodibromomethane	0.57796	0.49876	0.49876	0.000	13.70253	50.00000	Averaged	
63 1,2-Dibromoethane	0.42198	0.34917	0.34917	0.000	17.25402	50.00000	Averaged	
64 Chlorobenzene (spcc)	3.28809	2.75150	2.75150	0.300	16.31919	50.00000	Averaged	
65 1,1,1,2-Tetrachloroethane	0.93609	0.81300	0.81300	0.000	13.14972	50.00000	Averaged	
66 Ethylbenzene (ccc)	2.17476	1.85474	1.85474	0.000	14.71541	19.00000	Averaged	
67 m&p-Xylene	2.59906	2.02724	2.02724	0.000	22.00090	50.00000	Averaged	
68 o-Xylene	2.33482	1.76510	1.76510	0.000	24.40077	50.00000	Averaged	
69 Styrene	3.47477	2.36660	2.36660	0.000	31.89194	50.00000	Averaged	
70 Bromoform (spcc)	0.33550	0.26652	0.26652	0.100	20.56153	50.00000	Averaged	
71 Isopropylbenzene	7.30953	5.80399	5.80399	0.000	20.59697	50.00000	Averaged	
72 *cis-1,4-dichloro-2-butene	0.13915	0.10090	0.10090	0.000	27.49249	50.00000	Averaged	
73 Bromobenzene	1.15373	0.88316	0.88316	0.000	23.45197	50.00000	Averaged	
74 1,1,2,2-Tetrachloroethane(s	7.61363	10.00000	0.35014	0.300	23.86373	50.00000	Linear	
75 1,2,3-Trichloropropane	8.98015	10.00000	0.08841	0.000	10.19846	50.00000	Linear	

Data File: /chem/gcms/mx.i/X121503.b/ccxl153.d
Report Date: 15-Dec-2003 17:01

STL Knoxville

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: mx.i
Lab File ID: ccxl153.d
Analysis Type: WATER
Lab Sample ID: CCXL153
Method: /var/chem/gcms/mx.i/X121503.b/8260B_LM.m

Injection Date: 15-DEC-2003 16:45
Init. Cal. Date(s): 16-SEP-2003 16-SEP-2003
Init. Cal. Times: 10:17 12:52
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF10	CCAL RRF10	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
76 *trans-1,4-dichloro-2-buten	0.11284	0.09175	0.09175	0.000	18.69133	50.00000	Averaged
77 n-Propylbenzene	6.54031	5.45608	5.45608	0.000	16.57758	50.00000	Averaged
78 2-Chlorotoluene	3.52658	2.97090	2.97090	0.000	15.75675	50.00000	Averaged
79 1,3,5-Trimethylbenzene	3.95245	3.41591	3.41591	0.000	13.57489	50.00000	Averaged
80 4-Chlorotoluene	3.88390	3.09957	3.09957	0.000	20.19441	50.00000	Averaged
81 tert-Butylbenzene	3.93183	3.30764	3.30764	0.000	15.87518	50.00000	Averaged
82 1,2,4-Trimethylbenzene	3.56751	2.99174	2.99174	0.000	16.13923	50.00000	Averaged
83 sec-Butylbenzene	5.82008	4.82902	4.82902	0.000	17.02826	50.00000	Averaged
84 1,3-Dichlorobenzene	1.88613	1.64547	1.64547	0.000	12.75909	50.00000	Averaged
85 p-Isopropyltoluene	4.61158	3.87622	3.87622	0.000	15.94606	50.00000	Averaged
86 1,4-Dichlorobenzene	1.72531	1.45115	1.45115	0.000	15.89056	50.00000	Averaged
87 1,2-Dichlorobenzene	1.40012	1.17176	1.17176	0.000	16.30999	50.00000	Averaged
88 n-Butylbenzene	3.97166	3.49149	3.49149	0.000	12.09012	50.00000	Averaged
89 1,2-Dibromo-3-chloropropane	0.06283	0.05524	0.05524	0.000	12.07978	50.00000	Averaged
90 1,2,4-Trichlorobenzene	0.74889	0.64051	0.64051	0.000	14.47188	50.00000	Averaged
91 Hexachlorobutadiene	10.12282	10.00000	0.87984	0.000	-1.22815	50.00000	Linear
92 Napthalene	0.64741	0.57394	0.57394	0.000	11.34849	50.00000	Averaged
93 1,2,3-Trichlorobenzene	0.51502	0.44165	0.44165	0.000	14.24587	50.00000	Averaged
M 94 *1,4-dichloro-2-butene(tota	0.14162	0.10104	0.10104	0.000	28.65087	50.00000	Averaged

Data File: /chem/gcms/mx.i/X121503.b/ccxl153.d
Report Date: 15-Dec-2003 17:01

STL Knoxville

SW-846 Method 8260A - Volatile Organics

Data file : /chem/gcms/mx.i/X121503.b/ccxl153.d
Lab Smp Id: CCXL153 Client Smp ID: VSTD010
Inj Date : 15-DEC-2003 16:45
Operator : 063605 Inst ID: mx.i
Smp Info : CCXL153,1,2,3,,VSTD010
Misc Info : X121503,8260B_LM
Comment :
Method : /var/chem/gcms/mx.i/X121503.b/8260B_LM.m
Meth Date : 15-Dec-2003 17:01 chemist Quant Type: ISTD
Cal Date : 16-SEP-2003 12:52 Cal File: icxi166.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * Uf*Vt/(Vo*1000) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Unit Correction factor
Vt	25000.00000	Sample Volume Purged
Vo	25.00000	Sample Volume Used

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
* 1 Fluorobenzene	96	4.887	4.887	(1.000)	1461276	10.0000	
* 2 Chlorobenzene-d5	119	7.624	7.624	(1.000)	293714	10.0000	
* 3 1,4 Dichlorobenzene-d4	152	10.818	10.818	(1.000)	323953	10.0000	
$ 4 Dibromofluoromethane	113	4.297	4.297	(0.879)	210453	10.0000	8.6485
$ 5 1,2-Dichloroethane-d4	65	4.583	4.583	(0.938)	159824	10.0000	8.5128
$ 6 Toluene-d8	98	6.292	6.292	(0.825)	1287994	10.0000	9.5466
$ 7 4-Bromofluorobenzene	95	8.926	8.926	(0.825)	345523	10.0000	8.9106
M 8 1,2-Dichloroethene (total)	96				590787	20.0000	17.495
M 9 Xylene (total)	106				1709295	30.0000	23.160
10 Dichlorodifluoromethane	85	1.097	1.097	(0.224)	319531	10.0000	8.4159
11 Chloromethane (spcc)	50	1.231	1.231	(0.252)	601068	10.0000	10.884
12 Vinyl Chloride (ccc)	62	1.316	1.316	(0.269)	399085	10.0000	9.2663
13 *1,3-Butadiene	39	1.346	1.346	(0.276)	330306	10.0000	8.7667
14 Bromomethane	94	1.565	1.565	(0.320)	168212	10.0000	9.2764

Data File: /chem/gcms/mx.i/X121503.b/ccxl153.d
Report Date: 15-Dec-2003 17:01

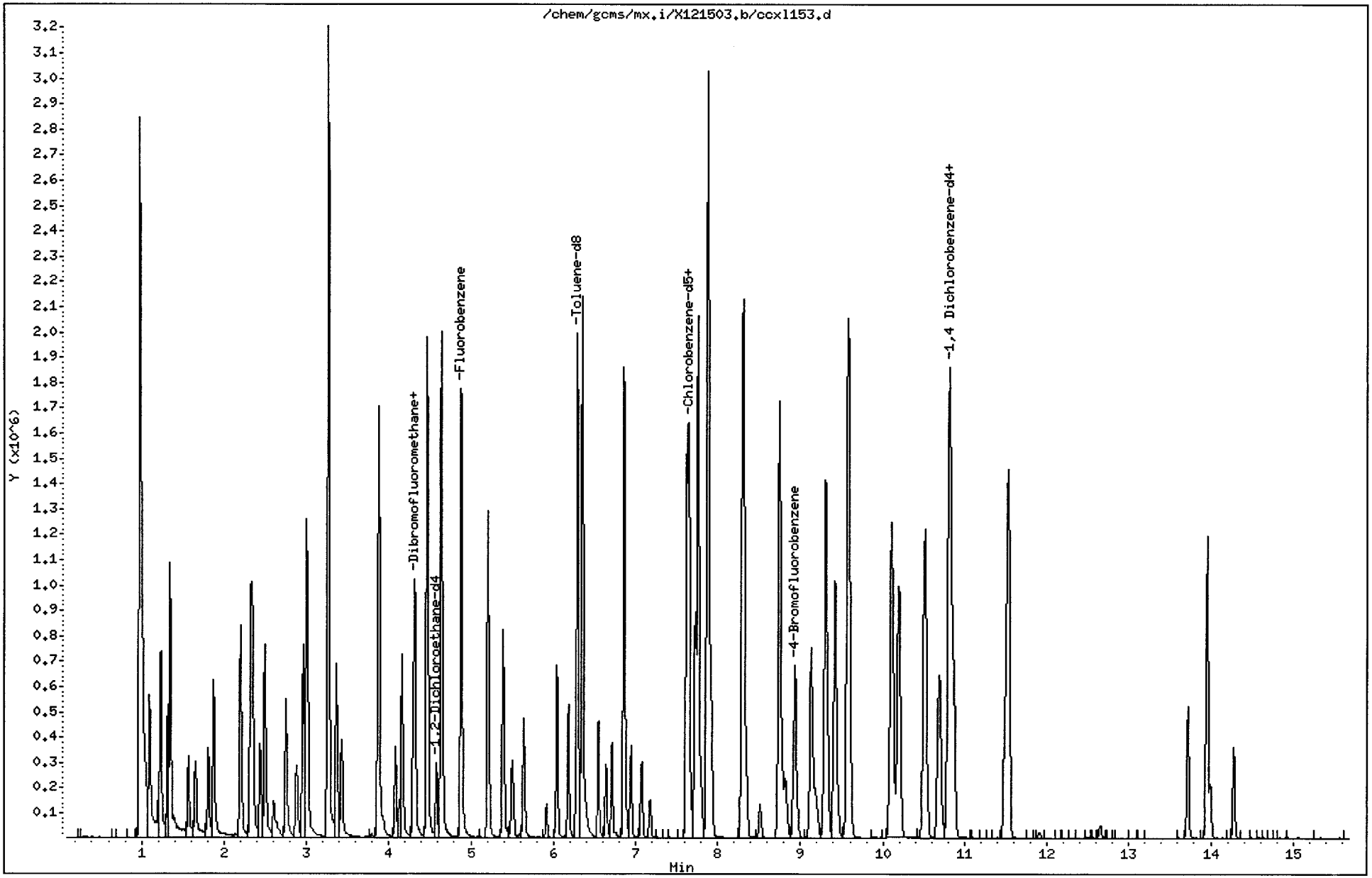
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
15 Chloroethane	64	1.651	1.651	(0.338)	211693	10.0000	9.0635
16 *Vinyl Bromide	106	1.809	1.809	(0.370)	208197	10.0000	8.0407
17 Trichlorofluoromethane	101	1.876	1.876	(0.384)	436818	10.0000	8.8929
18 *2-Chloropropane	43	2.204	2.204	(0.451)	701035	10.0000	8.9461
19 *Acrolein	56	1.298	1.298	(0.266)	2540	100.000	
20 1,1-Dichloroethene (ccc)	96	2.326	2.326	(0.476)	253099	10.0000	9.2630
21 *Freon 113	151	2.344	2.344	(0.480)	234465	10.0000	10.434
22 Acetone	43	2.368	2.368	(0.485)	81070	40.0000	30.198
23 *Iodomethane	142	2.441	2.441	(0.500)	356673	10.0000	10.216
24 Carbon Disulfide	76	2.496	2.496	(0.511)	945607	10.0000	9.2753
25 *2-propanol	45	2.521	2.521	(0.516)	41729	100.000	63.032
26 *Acetonitrile	40	2.606	2.606	(0.533)	97217	200.000	155.90
27 Methylene Chloride	84	2.752	2.752	(0.563)	181824	10.0000	7.7208
135 *t-butanol	59	2.886	2.886	(0.590)	331278	500.000	396.05
29 *Acrylonitrile	53	2.959	2.959	(0.605)	579203	200.000	168.56
30 trans-1,2-Dichloroethene	96	3.007	3.007	(0.615)	308371	10.0000	9.1316
31 *MTBE	73	3.013	3.013	(0.617)	299400	10.0000	8.3937
32 *Hexane	57	3.269	3.269	(0.669)	1384399	10.0000	10.377
33 1,1-Dichloroethane (spcc)	63	3.366	3.366	(0.689)	582408	10.0000	8.9738
34 *Vinyl Acetate	86	3.433	3.433	(0.702)	33498	20.0000	14.227
37 2,2-Dichloropropane	77	3.877	3.877	(0.793)	470659	10.0000	9.4565
38 cis 1,2-Dichloroethene	96	3.877	3.877	(0.793)	282415	10.0000	8.3635
39 2-Butanone	43	3.889	3.889	(0.796)	140166	40.0000	36.528
40 Bromochloromethane	128	4.084	4.084	(0.836)	77280	10.0000	8.4121
41 *THF	42	4.127	4.127	(0.844)	88146	40.0000	31.176
42 Chloroform (ccc)	83	4.163	4.163	(0.852)	442809	10.0000	8.4513
43 1,1,1-Trichloroethane	97	4.315	4.315	(0.883)	530865	10.0000	9.2482
44 Carbon Tetrachloride	117	4.467	4.467	(0.914)	459489	10.0000	9.5515
45 1,1-Dichloropropene	75	4.467	4.467	(0.914)	459416	10.0000	9.2466
46 Benzene	78	4.638	4.638	(0.949)	1254560	10.0000	8.7540
47 1,2-Dichloroethane	62	4.644	4.644	(0.950)	208383	10.0000	8.7695
49 Trichloroethene	130	5.209	5.209	(1.066)	377987	10.0000	9.8172
50 1,2-Dichloropropane (ccc)	63	5.392	5.392	(1.103)	291087	10.0000	9.1857
129 Methyl Methacrylate	41	5.513	5.513	(1.128)	94884	10.0000	7.0819
51 Dibromomethane	93	5.495	5.495	(1.124)	70524	10.0000	8.1767
52 Bromodichloromethane	83	5.641	5.641	(1.154)	262427	10.0000	8.2923
53 *2-Chloroethylvinylether	63	5.915	5.915	(1.210)	48240	20.0000	6.1338
54 cis-1,3-Dichloropropene	75	6.043	6.043	(1.236)	313201	10.0000	8.2671
55 4-Methyl-2-pentanone	43	6.183	6.183	(1.265)	339930	40.0000	32.032
56 Toluene (ccc)	91	6.353	6.353	(0.833)	1493070	10.0000	8.5769
57 trans-1,3-Dichloropropene	75	6.548	6.548	(0.859)	212185	10.0000	8.1437
134 Ethyl Methacrylate	69	6.639	6.639	(0.871)	122356	10.0000	7.0075
58 1,1,2-Trichloroethane	97	6.712	6.712	(0.880)	110257	10.0000	8.3518
59 Tetrachloroethene	164	6.858	6.858	(0.899)	349209	10.0000	10.074
60 1,3-Dichloropropane	76	6.864	6.864	(0.900)	188705	10.0000	8.3543
61 2-Hexanone	43	6.943	6.943	(0.911)	228003	40.0000	32.809
62 Chlorodibromomethane	129	7.077	7.077	(0.928)	146493	10.0000	8.6297

Data File: /chem/gcms/mx.i/X121503.b/ccxl153.d
Report Date: 15-Dec-2003 17:01

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
	63 1,2-Dibromoethane	107	7.180	7.180	(0.942)	102557	10.0000	8.2746
	64 Chlorobenzene (spcc)	112	7.655	7.655	(1.004)	808154	10.0000	8.3681
	65 1,1,1,2-Tetrachloroethane	131	7.728	7.728	(1.014)	238789	10.0000	8.6850
	66 Ethylbenzene (ccc)	106	7.764	7.764	(1.018)	544762	10.0000	8.5284
	67 m&p-Xylene	106	7.880	7.880	(1.034)	1190859	20.0000	15.600
	68 o-Xylene	106	8.300	8.300	(1.089)	518435	10.0000	7.5599
	69 Styrene	104	8.312	8.312	(1.090)	695103	10.0000	6.8108
	70 Bromoform (spcc)	173	8.513	8.513	(1.116)	78279	10.0000	7.9438
	71 Isopropylbenzene	105	8.744	8.744	(1.147)	1704713	10.0000	7.9403
	72 *cis-1,4-dichloro-2-butene	88	8.811	8.811	(1.156)	29634	10.0000	7.2508
	73 Bromobenzene	156	9.127	9.127	(1.197)	259395	10.0000	7.6548
	74 1,1,2,2-Tetrachloroethane(sp)	83	9.121	9.121	(1.196)	102841	10.0000	7.6136
	75 1,2,3-Trichloropropane	110	9.176	9.176	(0.848)	28640	10.0000	8.9802
	76 *trans-1,4-dichloro-2-butene	53	9.206	9.206	(0.851)	29722	10.0000	8.1309
	77 n-Propylbenzene	91	9.303	9.303	(0.860)	1767517	10.0000	8.3422
	78 2-Chlorotoluene	91	9.413	9.413	(0.870)	962434	10.0000	8.4243
	79 1,3,5-Trimethylbenzene	105	9.571	9.571	(0.885)	1106595	10.0000	8.6425
	80 4-Chlorotoluene	91	9.577	9.577	(0.885)	1004117	10.0000	7.9806
	81 tert-Butylbenzene	119	10.106	10.106	(0.934)	1071522	10.0000	8.4125
	82 1,2,4-Trimethylbenzene	105	10.192	10.192	(0.942)	969186	10.0000	8.3861
	83 sec-Butylbenzene	105	10.514	10.514	(0.972)	1564379	10.0000	8.2972
	84 1,3-Dichlorobenzene	146	10.690	10.690	(0.988)	533057	10.0000	8.7241
	85 p-Isopropyltoluene	119	10.812	10.812	(0.999)	1255714	10.0000	8.4054
	86 1,4-Dichlorobenzene	146	10.861	10.861	(1.004)	470104	10.0000	8.4109
	87 1,2-Dichlorobenzene	146	11.500	11.500	(1.063)	379596	10.0000	8.3690
	88 n-Butylbenzene	91	11.530	11.530	(1.066)	1131079	10.0000	8.7910
	89 1,2-Dibromo-3-chloropropane	157	12.649	12.649	(1.169)	17895	10.0000	8.7920
	90 1,2,4-Trichlorobenzene	180	13.726	13.726	(1.269)	207495	10.0000	8.5528
	91 Hexachlorobutadiene	225	13.957	13.957	(1.290)	285025	10.0000	10.123
	92 Napthalene	128	14.000	14.000	(1.294)	185929	10.0000	8.8652
	93 1,2,3-Trichlorobenzene	180	14.280	14.280	(1.320)	143073	10.0000	8.5754
M	94 *1,4-dichloro-2-butene(total)	53				59356	20.0000	15.382

Data File: /chem/gcms/mx.i/X121503.b/ccxl153.d
Date : 15-DEC-2003 16:45
Client ID: VSTD010
Sample Info: CCXL153,1,2,3,,VSTD010
Purge Volume: 25.0
Column phase: J+W 624

Instrument: mx.i
Operator: 063605
Column diameter: 0.18



Raw QC Data

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: PB045
MB Lot-Sample #: H3L110000-349

Work Order #...: F6FW31AA
Prep Date.....: 12/11/03
Prep Batch #...: 3345349

Matrix.....: WATER

Analysis Date..: 12/11/03
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Chloromethane	ND	2.0	ug/L	SW846 8260B
Bromomethane	ND	2.0	ug/L	SW846 8260B
Vinyl chloride	ND	1.0	ug/L	SW846 8260B
Chloroethane	ND	2.0	ug/L	SW846 8260B
Methylene chloride	ND	2.0	ug/L	SW846 8260B
Acetone	ND	10	ug/L	SW846 8260B
Carbon disulfide	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethene (total)	ND	1.0	ug/L	SW846 8260B
Chloroform	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B
2-Butanone	ND	5.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
Trichloroethene	ND	1.0	ug/L	SW846 8260B
Dibromochloromethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Benzene	ND	1.0	ug/L	SW846 8260B
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
Bromoform	ND	1.0	ug/L	SW846 8260B
4-Methyl-2-pentanone	ND	5.0	ug/L	SW846 8260B
2-Hexanone	ND	5.0	ug/L	SW846 8260B
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
Toluene	ND	1.0	ug/L	SW846 8260B
Chlorobenzene	ND	1.0	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B
Styrene	ND	1.0	ug/L	SW846 8260B
Xylenes (total)	ND	1.0	ug/L	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	103	(79 - 120)
1,2-Dichloroethane-d4	104	(71 - 127)
Toluene-d8	101	(80 - 120)
Bromofluorobenzene	94	(69 - 126)

(Continued on next page)

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: PB045 **Work Order #...:** F6FW31AA **Matrix.....:** WATER

NOTE(S):

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

Data File: /var/chem/gcms/mx.i/X121103.b/f6fw31aa.d
Report Date: 11-Dec-2003 16:28

STL Knoxville

SW-846 Method 8260A - Volatile Organics

Data file : /var/chem/gcms/mx.i/X121103.b/f6fw31aa.d
Lab Smp Id: F6FW31AA Client Smp ID: INTRA-LAB BLANK
Inj Date : 11-DEC-2003 15:40
Operator : 063605 Inst ID: mx.i
Smp Info : F6FW31AA,1,3,,BLANK
Misc Info : X121103,8260B_LM,1-all.sub
Comment :
Method : /var/chem/gcms/mx.i/X121103.b/8260B_LM.m
Meth Date : 11-Dec-2003 16:28 tillerm Quant Type: ISTD
Cal Date : 16-SEP-2003 12:52 Cal File: icxi166.d
Als bottle: 1 QC Sample: METHOD BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 1-all.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * Uf*Vt/(Vo*1000) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Unit Correction factor
Vt	25000.00000	Sample Volume Purged
Vo	25.00000	Sample Volume Used

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
* 1 Fluorobenzene	96	4.887	4.885	(1.000)	1337426	10.0000	
* 2 Chlorobenzene-d5	119	7.624	7.624	(1.000)	292136	10.0000	
* 3 1,4 Dichlorobenzene-d4	152	10.818	10.824	(1.000)	323974	10.0000	
$ 5 1,2-Dichloroethane-d4	65	4.583	4.581	(0.938)	178495	10.3877	10.388
$ 4 Dibromofluoromethane	113	4.297	4.295	(0.879)	228990	10.2817	10.282
$ 6 Toluene-d8	98	6.292	6.292	(0.825)	1354726	10.0955	10.095
$ 7 4-Bromofluorobenzene	95	8.932	8.932	(0.826)	363303	9.36856	9.3686
11 Chloromethane (spcc)	50	1.231	1.229	(0.252)	1301	~~0.22401~~	~~0.22401~~
15 Chloroethane	64	1.249	1.655	(0.256)	9257	0.34228	0.34228
45 1,1-Dichloropropene	75	4.887	4.465	(1.000)	94259	2.07283	2.0728
47 1,2-Dichloroethane	62	4.881	4.648	(0.999)	19203	0.88300	0.88300
55 4-Methyl-2-pentanone	43	6.292	6.182	(1.287)	7624	0.78499	0.78499
58 1,1,2-Trichloroethane	97	6.298	6.712	(0.826)	31982	2.43670	2.4357
90 1,2,4-Trichlorobenzene	180	13.720	13.726	(1.268)	4671	0.19253	0.19253

12/11/03

Data File: /var/chem/gcms/mx.i/X121103.b/f6fw31aa.d
Report Date: 11-Dec-2003 16:28

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
91 Hexachlorobutadiene	225	13.963	13.957	(1.291)	3125	0.33060	0.33060
92 Napthalene	128	13.999	13.994	(1.294)	27911	1.33072	1.3307
93 1,2,3-Trichlorobenzene	180	14.279	14.279	(1.320)	4408	0.26421	0.26421

Data File: /var/chem/gcms/mx.i/X121103.b/f6fw31aa.d
Report Date: 11-Dec-2003 16:28

STL Knoxville

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: mx.i
Lab File ID: f6fw31aa.d
Lab Smp Id: F6FW31AA
Analysis Type: VOA
Quant Type: ISTD
Operator: 063605
Method File: /var/chem/gcms/mx.i/X121103.b/8260B_LM.m
Misc Info: X121103,8260B_LM,1-all.sub

Calibration Date: 11-DEC-2003
Calibration Time: 14:00
Client Smp ID: INTRA-LAB BLANK
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Fluorobenzene	1419469	709734	2838938	1337426	-5.78
2 Chlorobenzene-d5	292458	146229	584916	292136	-0.11
3 1,4 Dichlorobenze	323231	161616	646462	323974	0.23

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Fluorobenzene	4.89	4.39	5.39	4.89	0.04
2 Chlorobenzene-d5	7.62	7.12	8.12	7.62	0.00
3 1,4 Dichlorobenze	10.82	10.32	11.32	10.82	-0.06

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

Data File: /var/chem/gcms/mx.i/X121103.b/f6fw31aa.d
Report Date: 11-Dec-2003 16:28

STL Knoxville

RECOVERY REPORT

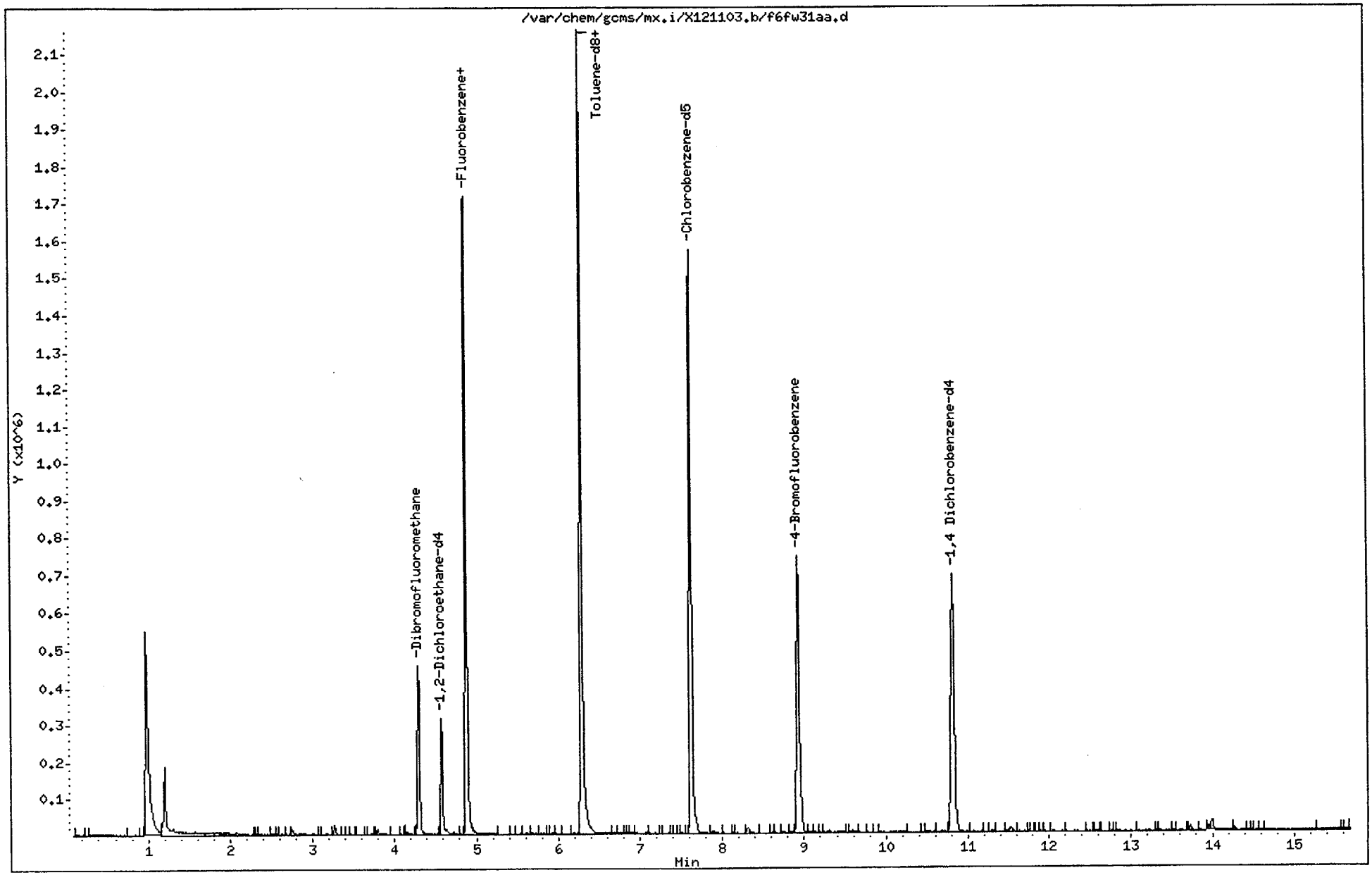
Client Name:
Sample Matrix: LIQUID
Lab Smp Id: F6FW31AA
Level: LOW
Data Type: MS DATA
SpikeList File: allcmpds.spk
Sublist File: 1-all.sub
Method File: /var/chem/gcms/mx.i/X121103.b/8260B_LM.m
Misc Info: X121103,8260B_LM,1-all.sub

Client SDG: H3L110000
Fraction: VOA
Client Smp ID: INTRA-LAB BLANK
Operator: 063605
SampleType: METHOD BLANK
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 5 1,2-Dichloroethane	10.000	10.388	103.88	71-127
$ 4 Dibromofluorometha	10.000	10.282	102.82	79-120
$ 6 Toluene-d8	10.000	10.095	100.95	80-120
$ 7 4-Bromofluorobenze	10.000	9.3686	93.69	69-126

Data File: /var/chem/gcms/mx.i/X121103.b/f6fw31aa.d
Date : 11-DEC-2003 15:40
Client ID: INTRA-LAB BLANK
Sample Info: F6FW31AA,1,3,,BLANK
Purge Volume: 25.0
Column phase: J+W 624

Instrument: mx.i
Operator: 063605
Column diameter: 0.18



Data File: /var/chem/gcms/mx.i/X121103.b/f6fw31aa.d

Date : 11-DEC-2003 15:40

Client ID: INTRA-LAB BLANK

Instrument: mx.i

Sample Info: F6FW31AA,1,3,,BLANK

Purge Volume: 25.0

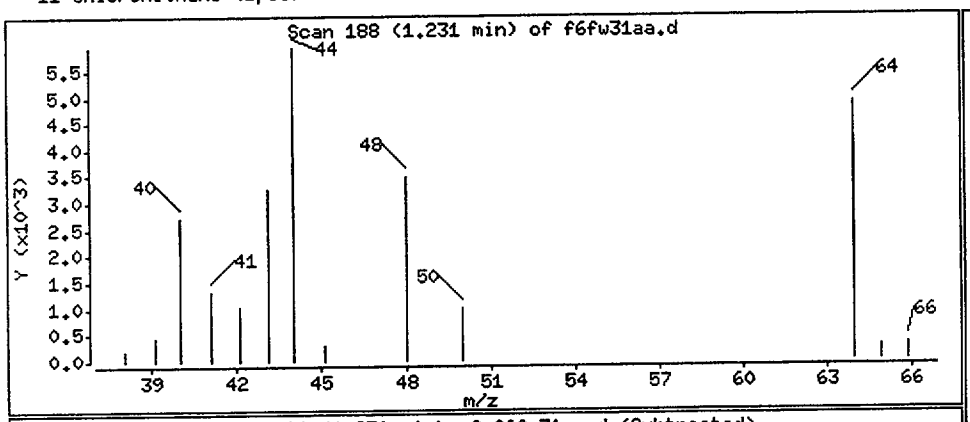
Operator: 063605

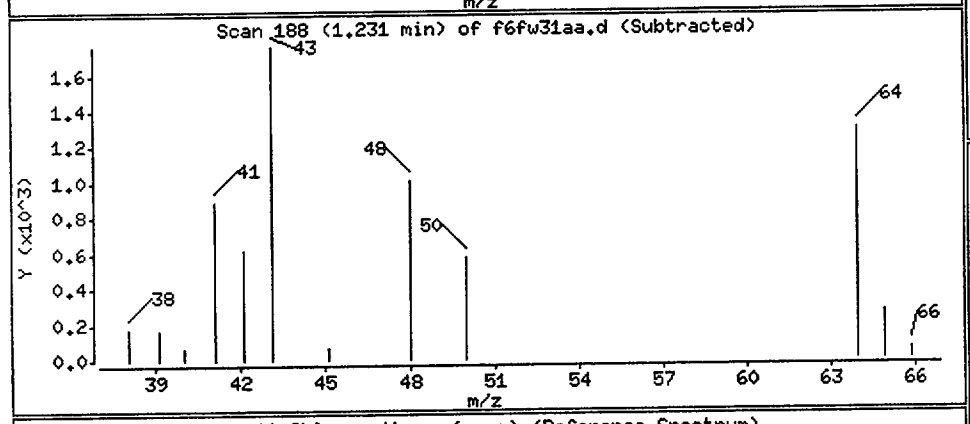
Column phase: J+W 624

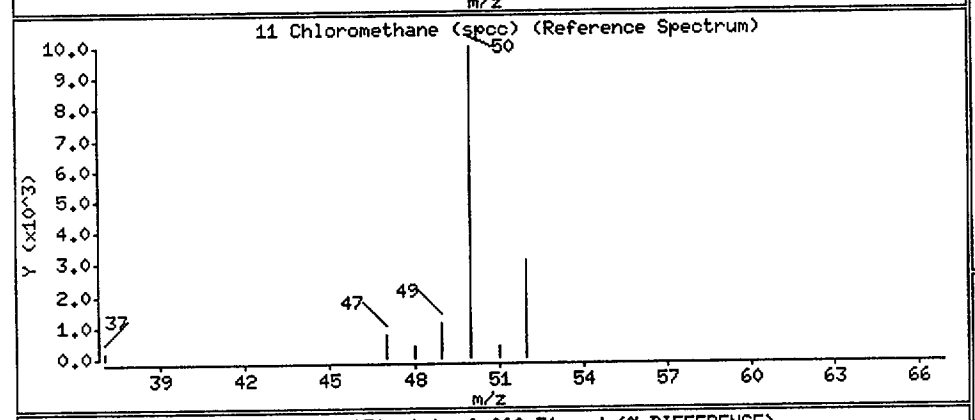
Column diameter: 0.18

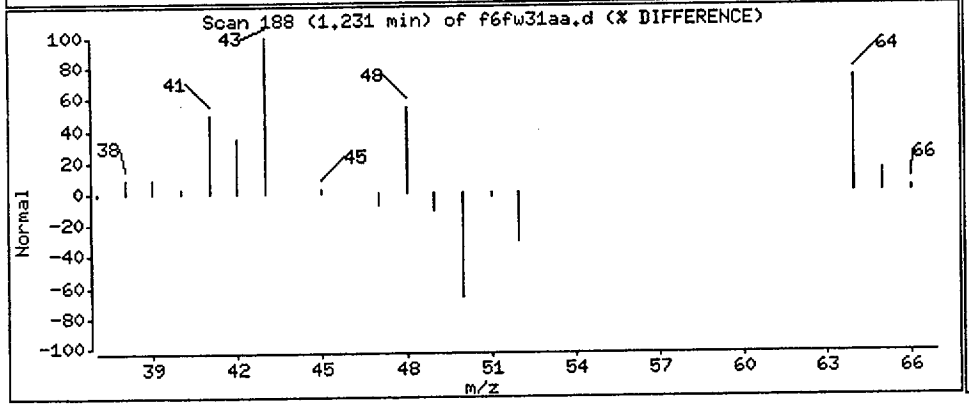
11 Chloromethane (spcc)

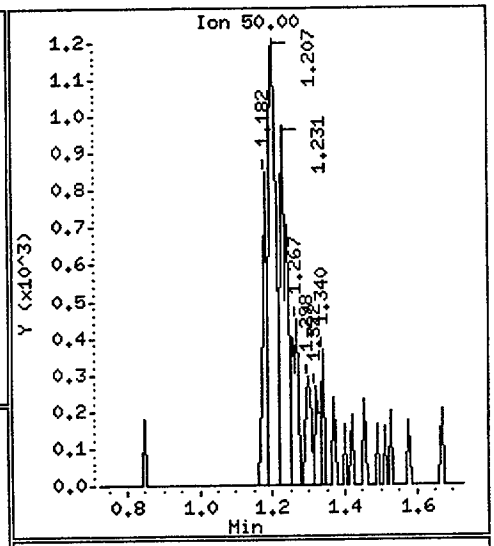
Concentration: 0.22481 ug/L

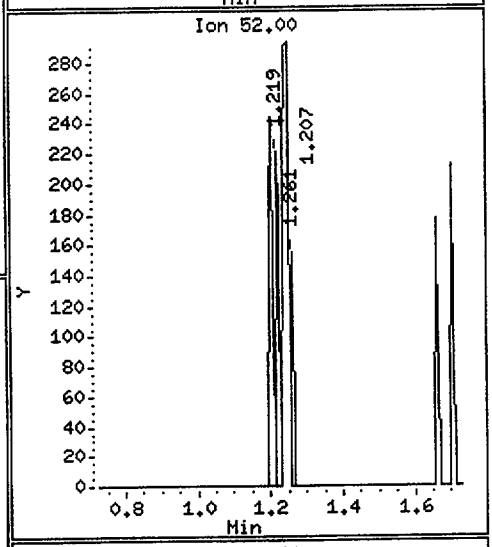


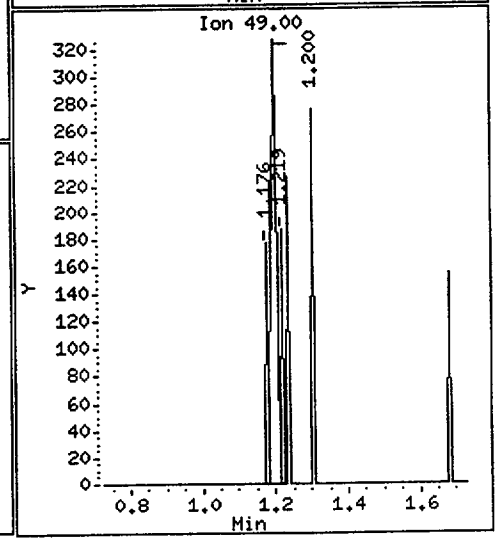












Data File: /var/chem/gcms/mx.i/X121103.b/f6fw31aa.d

Date : 11-DEC-2003 15:40

Client ID: INTRA-LAB BLANK

Instrument: mx.i

Sample Info: F6FW31AA,1,3,,BLANK

Purge Volume: 25.0

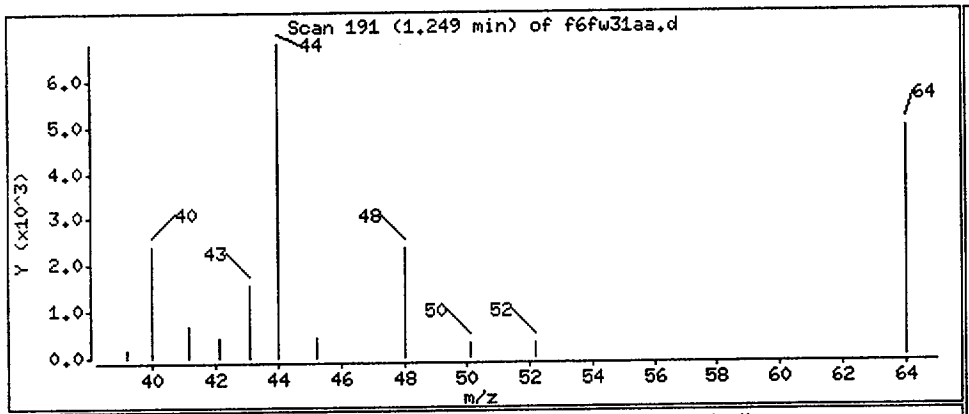
Operator: 063605

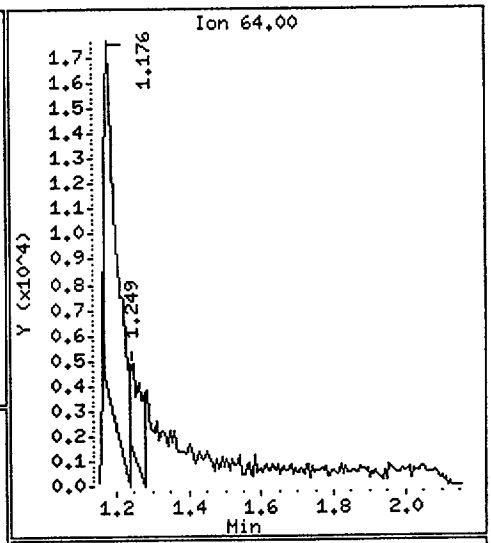
Column phase: J+W 624

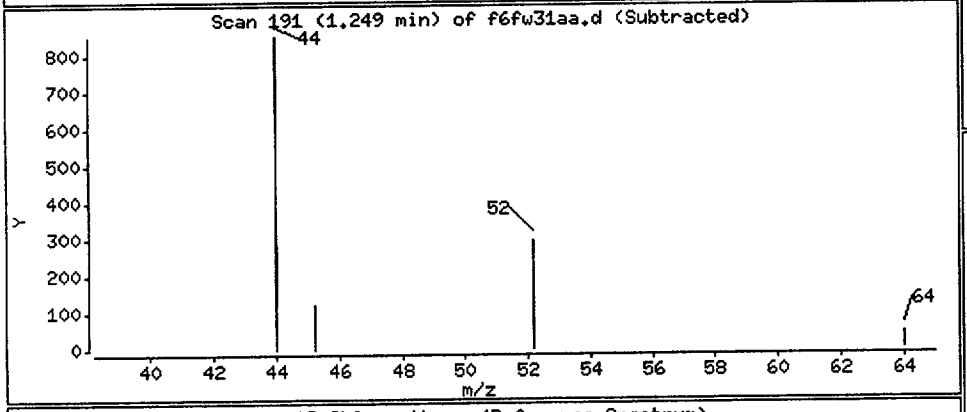
Column diameter: 0.18

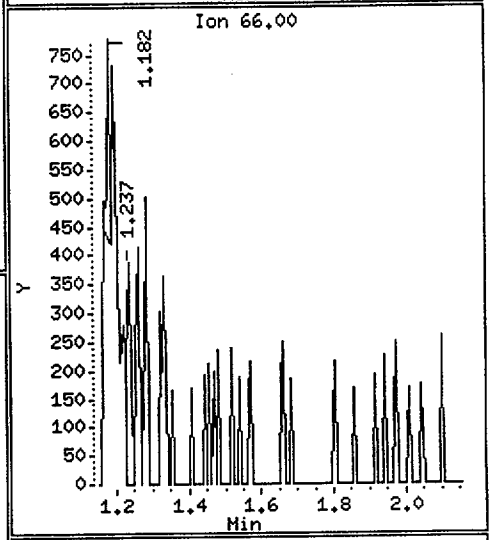
15 Chloroethane

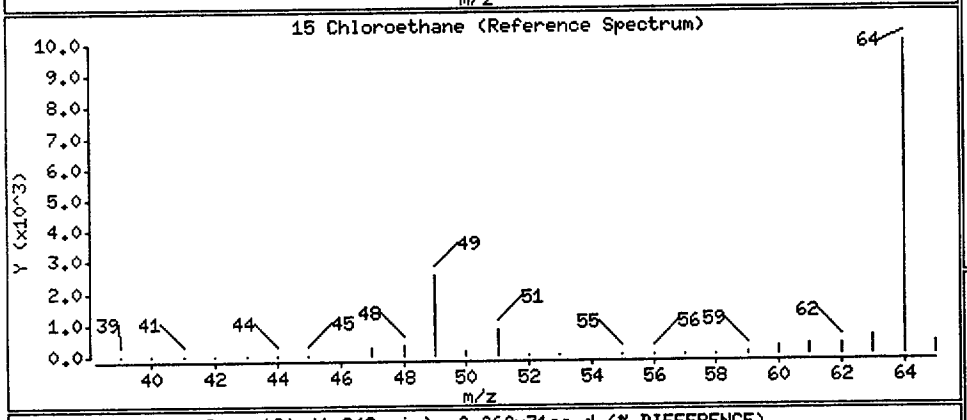
Concentration: 0.34228 ug/L

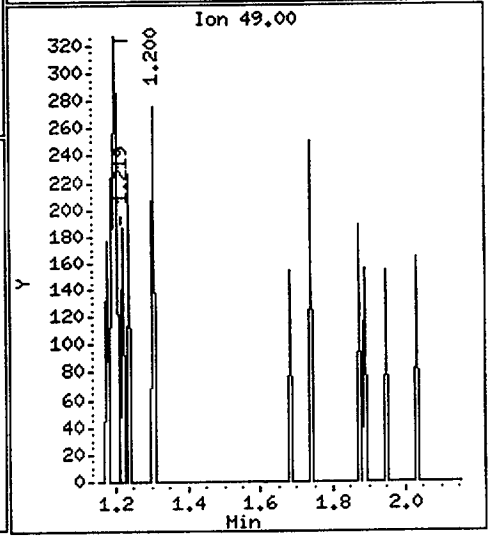


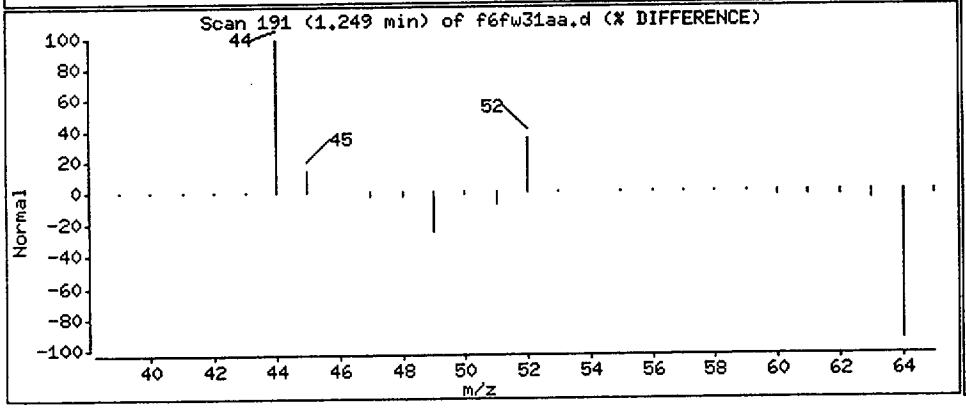












Data File: /var/chem/gcms/mx.i/X121103.b/f6fw31aa.d

Date : 11-DEC-2003 15:40

Client ID: INTRA-LAB BLANK

Instrument: mx.i

Sample Info: F6FW31AA,1,3,,BLANK

Purge Volume: 25.0

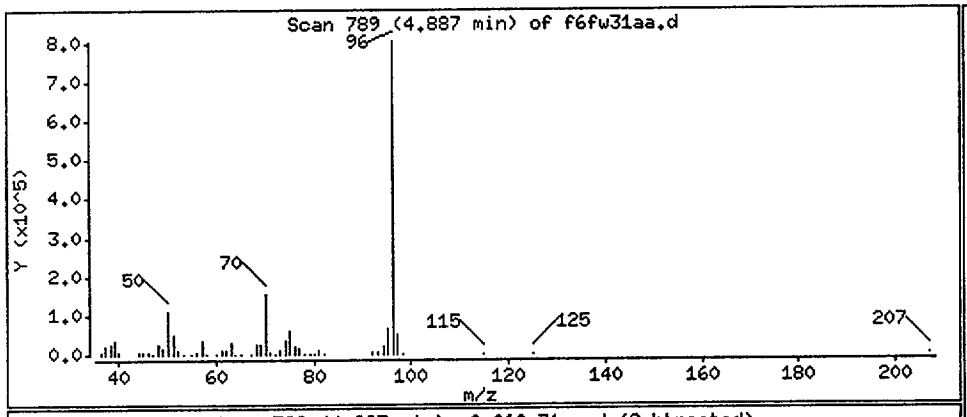
Operator: 063605

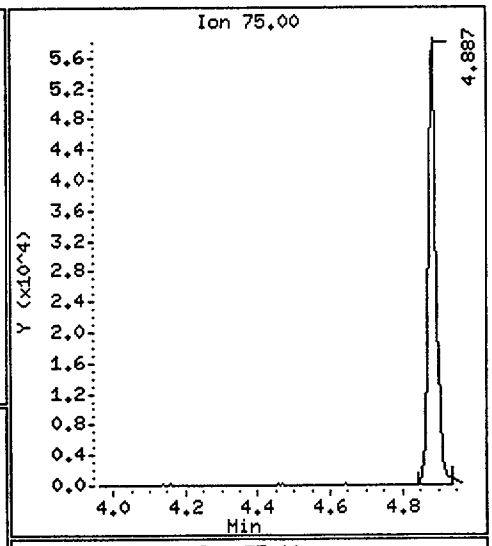
Column phase: J+W 624

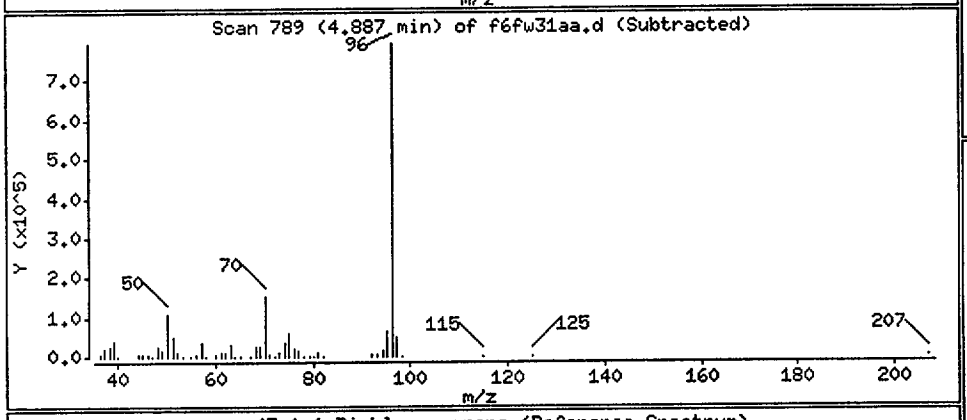
Column diameter: 0.18

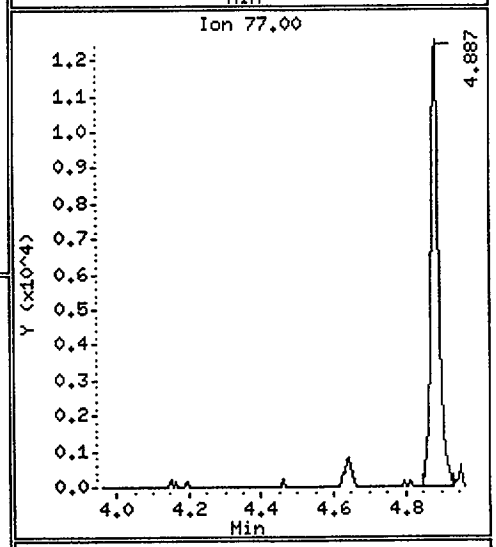
45 1,1-Dichloropropene

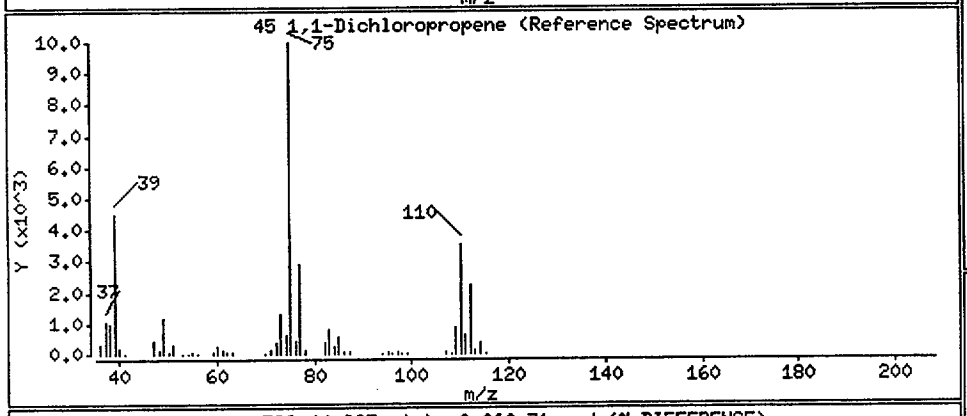
Concentration: 2.0728 ug/L

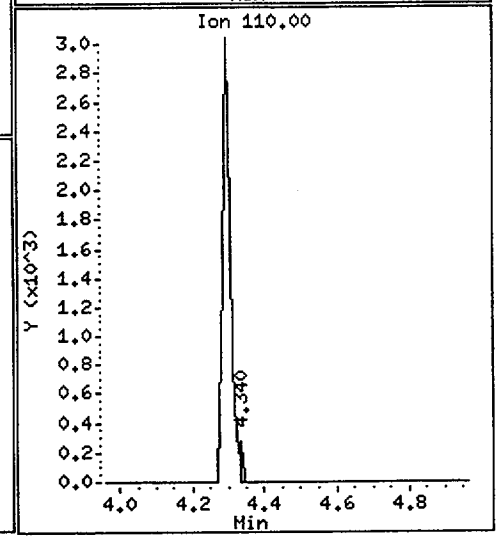


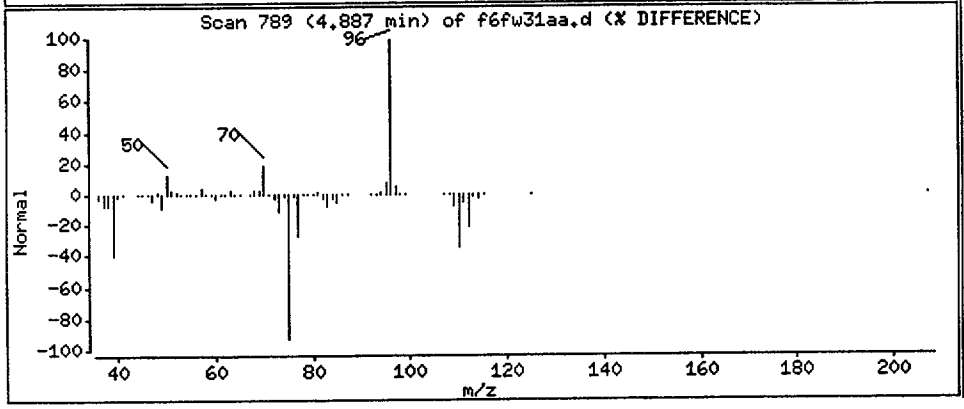












Data File: /var/chem/gcms/mx.i/X121103.b/f6fw31aa.d

Date : 11-DEC-2003 15:40

Client ID: INTRA-LAB BLANK

Instrument: mx.i

Sample Info: F6FW31AA,1,3,,BLANK

Purge Volume: 25.0

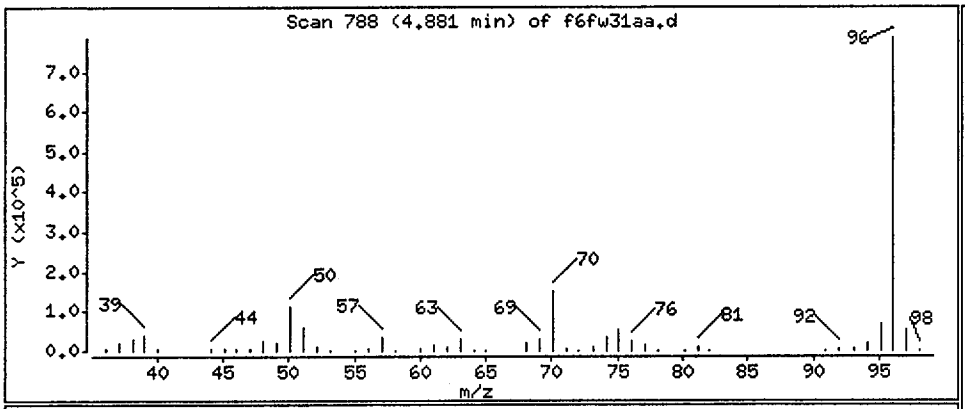
Operator: 063605

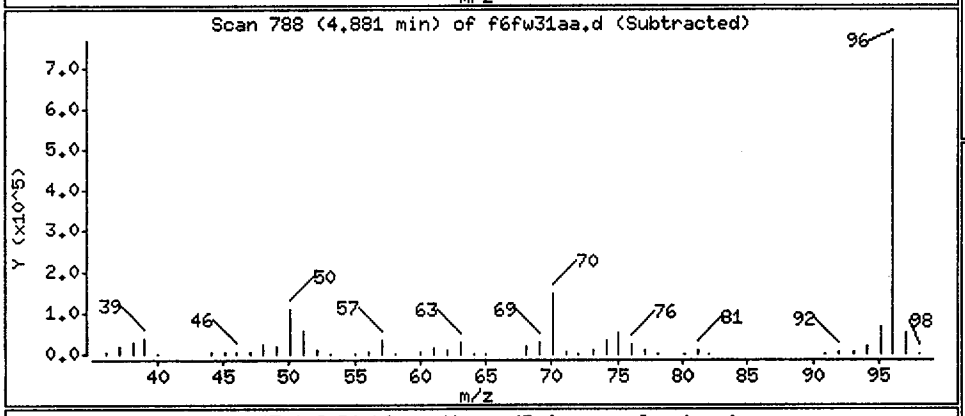
Column phase: J+W 624

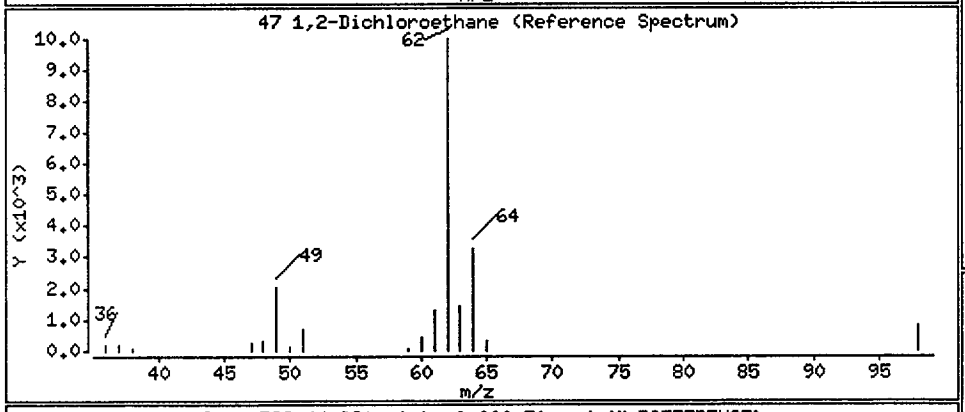
Column diameter: 0.18

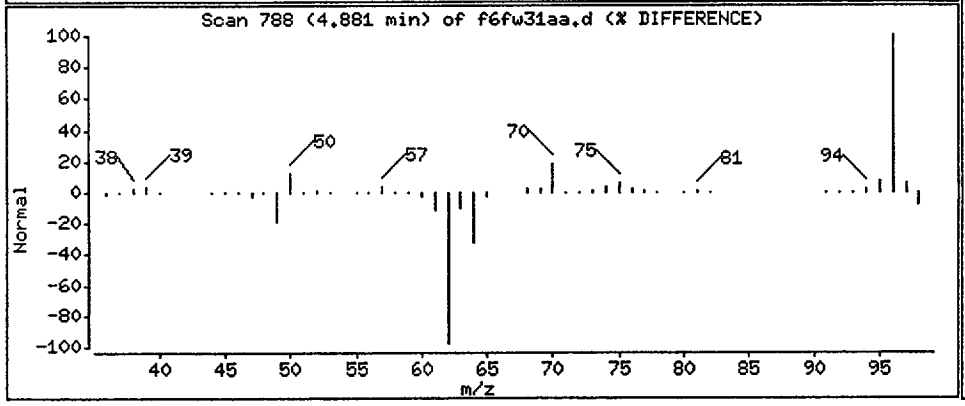
47 1,2-Dichloroethane

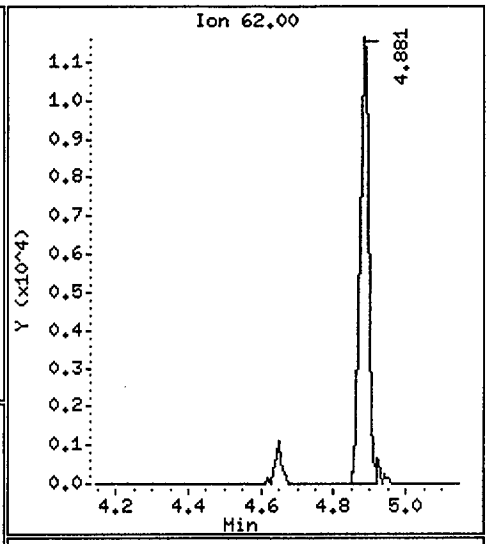
Concentration: 0.88300 ug/L

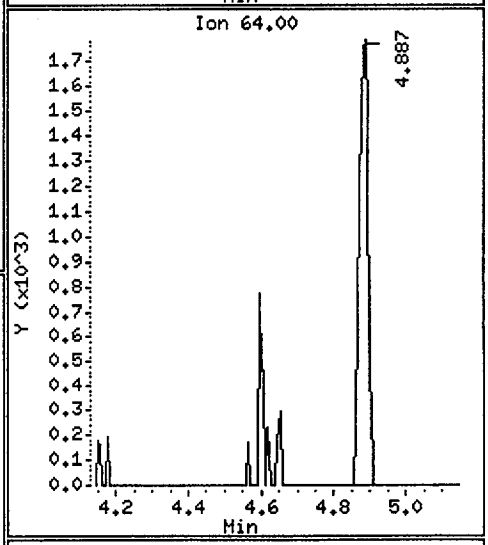


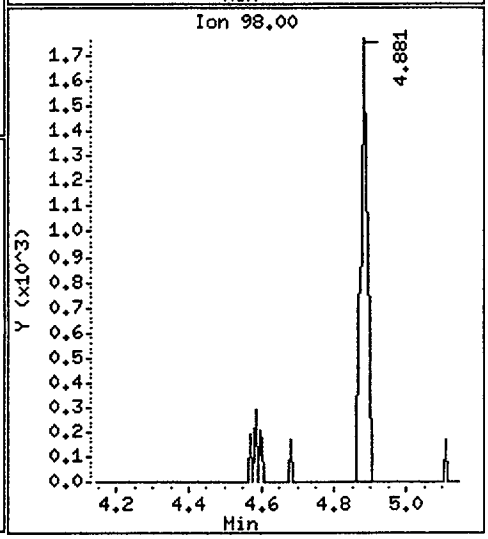












Data File: /var/chem/gcms/mx.i/X121103.b/f6fw31aa.d

Date : 11-DEC-2003 15:40

Client ID: INTRA-LAB BLANK

Instrument: mx.i

Sample Info: F6FW31AA,1,3,,BLANK

Purge Volume: 25.0

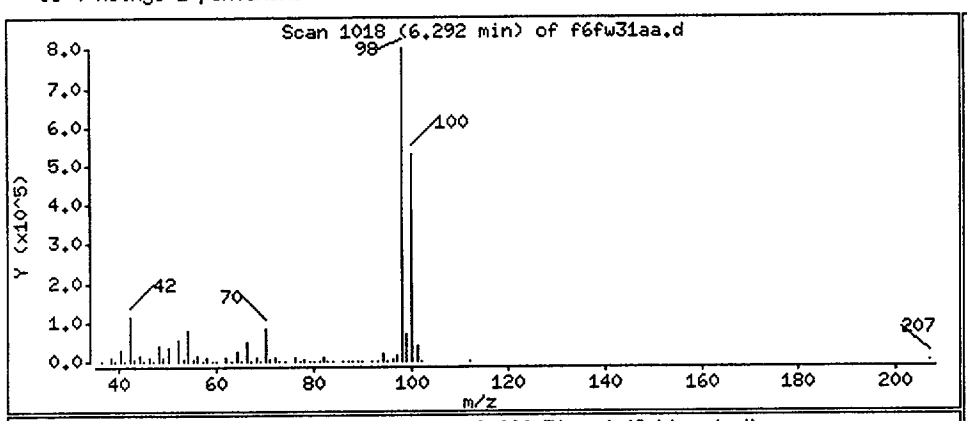
Operator: 063605

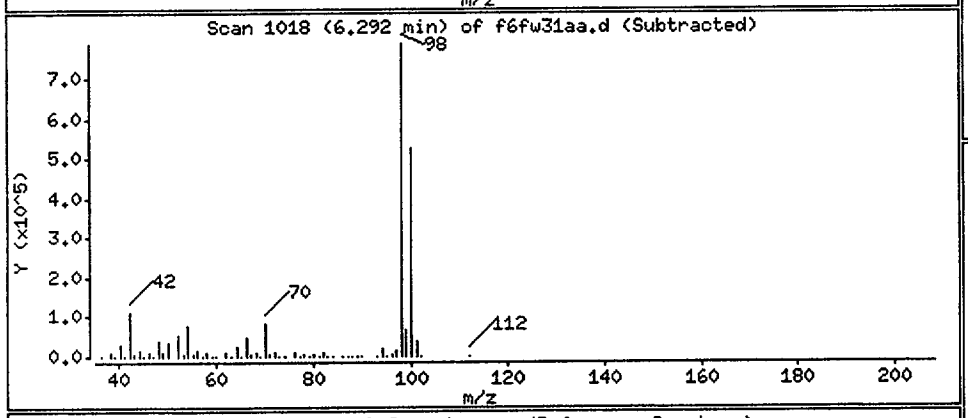
Column phase: J+W 624

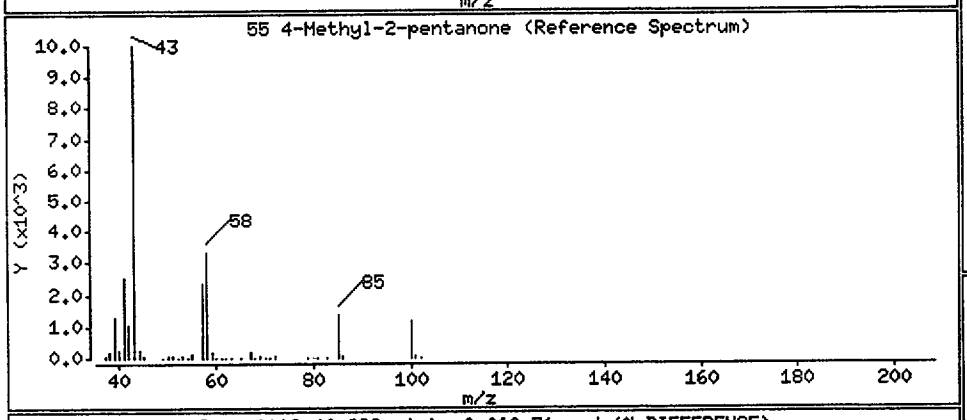
Column diameter: 0.18

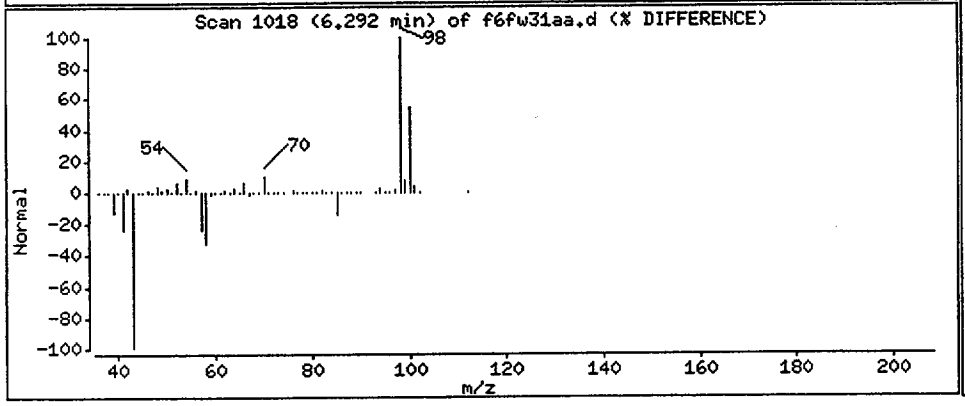
55 4-Methyl-2-pentanone

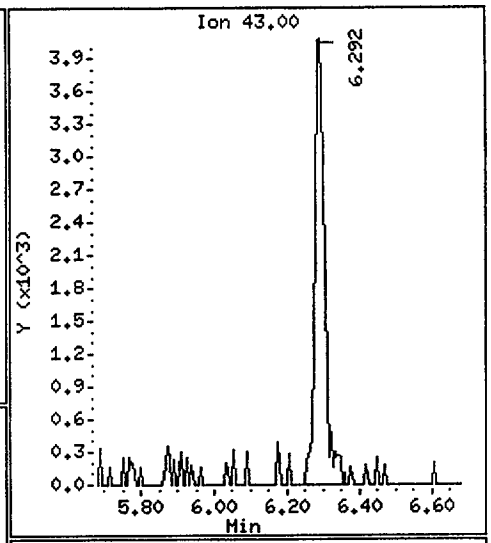
Concentration: 0.78499 ug/L

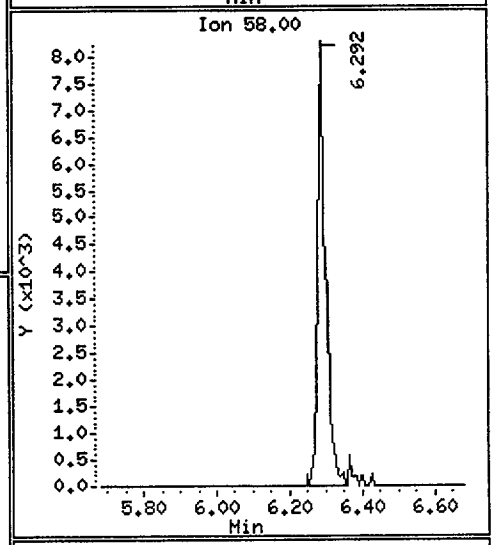


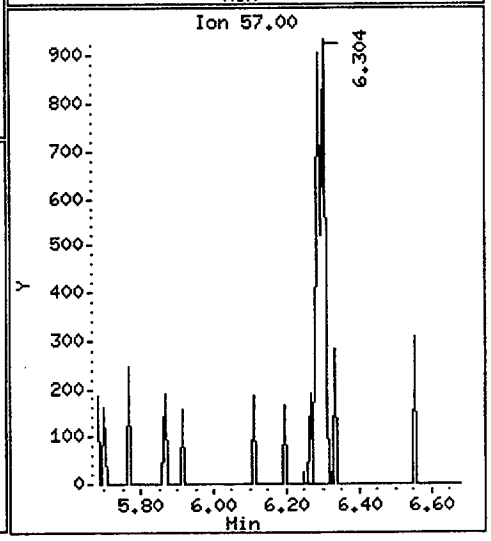












Data File: /var/chem/gcms/mx.i/X121103.b/f6fw31aa.d

Date : 11-DEC-2003 15:40

Client ID: INTRA-LAB BLANK

Instrument: mx.i

Sample Info: F6FW31AA,1,3,,BLANK

Purge Volume: 25.0

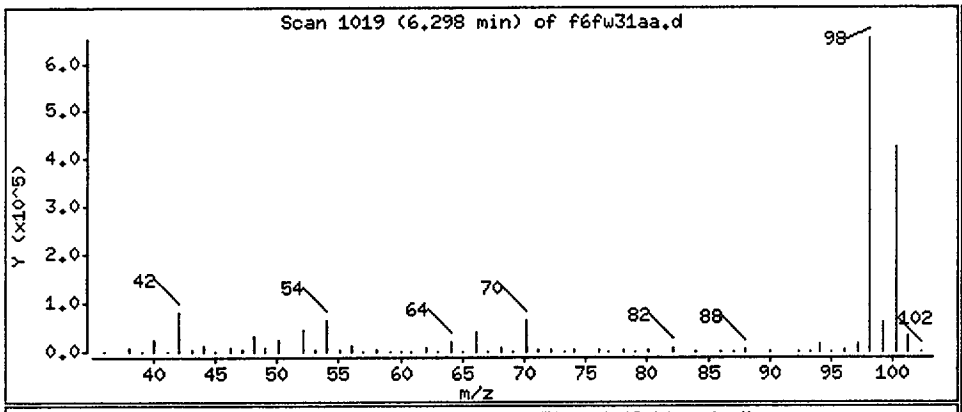
Operator: 063605

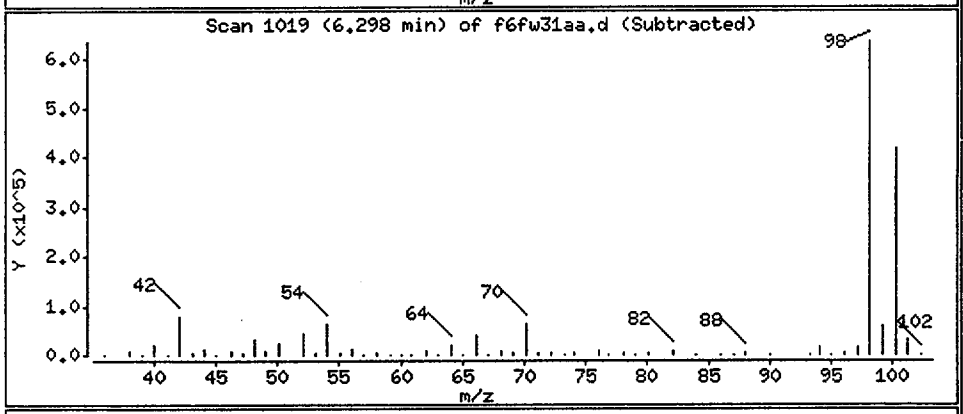
Column phase: J+W 624

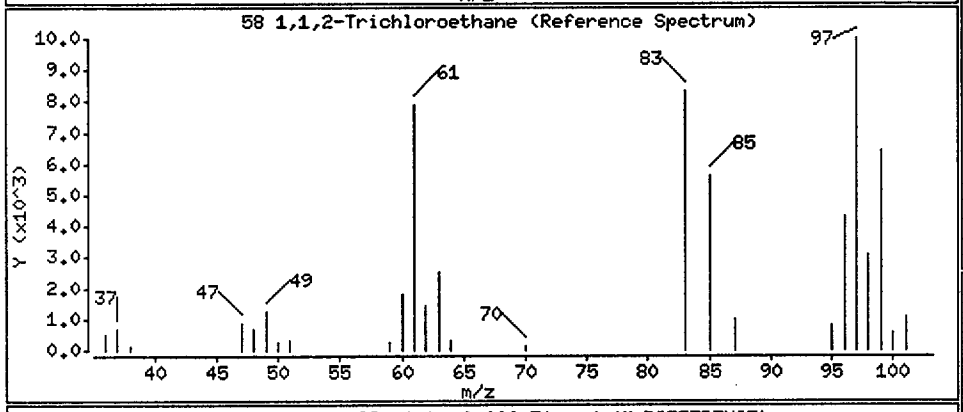
Column diameter: 0.18

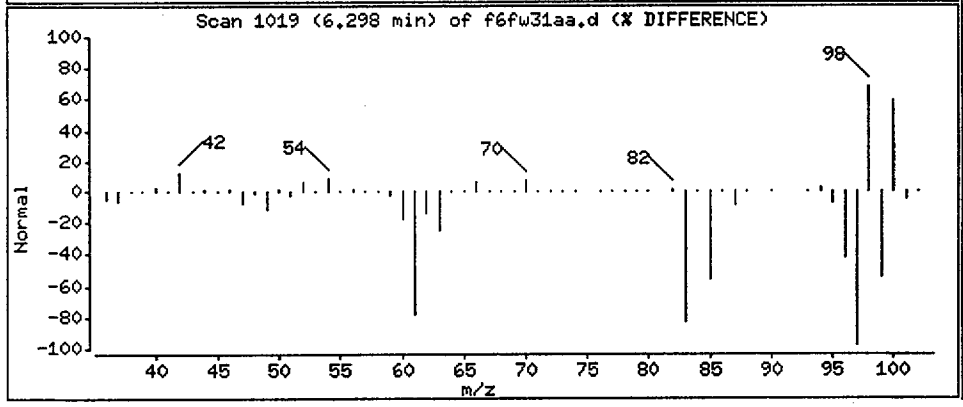
58 1,1,2-Trichloroethane

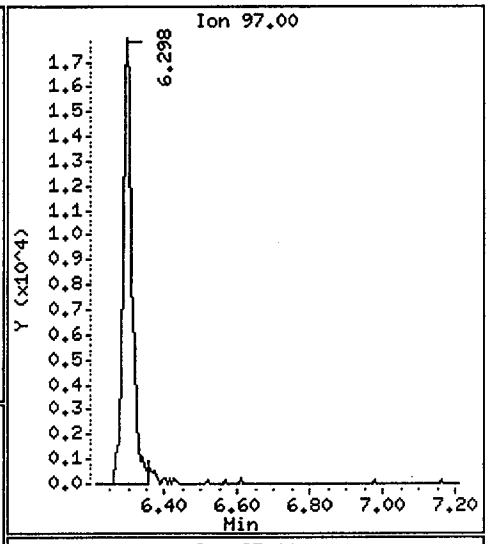
Concentration: 2.4357 ug/L

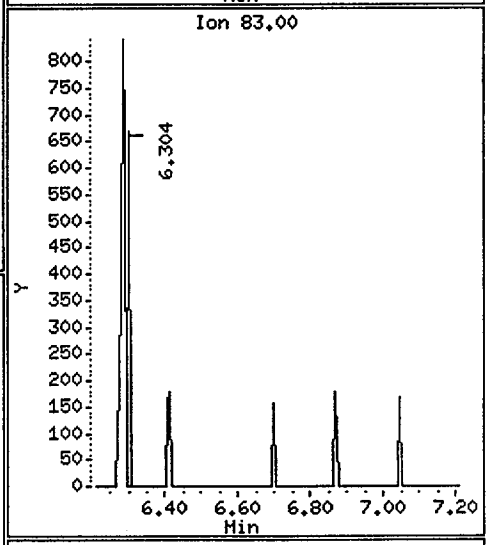


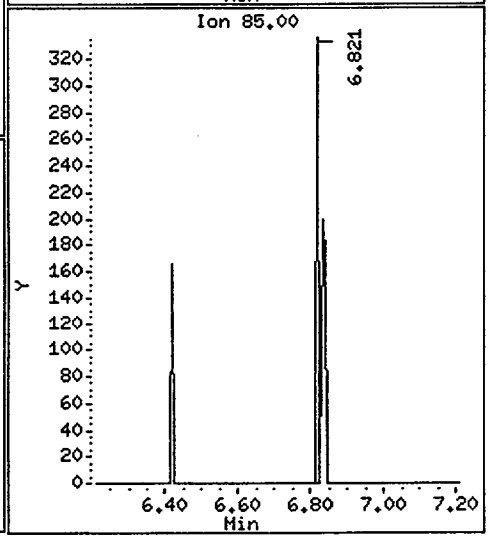












LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: PB045 **Work Order #...:** F6FW31AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: H3L110000-349 F6FW31AD-LCSD
Prep Date.....: 12/11/03 **Analysis Date..:** 12/11/03
Prep Batch #...: 3345349
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,1-Dichloroethene	**95**	**(70 - 128)**			**SW846 8260B**
	111	**(70 - 128)**	**16**	**(0-26)**	**SW846 8260B**
Trichloroethene	**94**	**(80 - 121)**			**SW846 8260B**
	115	**(80 - 121)**	**19**	**(0-20)**	**SW846 8260B**
Benzene	**85**	**(80 - 121)**			**SW846 8260B**
	101	**(80 - 121)**	**17**	**(0-20)**	**SW846 8260B**
Toluene	**84**	**(77 - 124)**			**SW846 8260B**
	97	**(77 - 124)**	**14**	**(0-20)**	**SW846 8260B**
Chlorobenzene	**83**	**(80 - 121)**			**SW846 8260B**
	94	**(80 - 121)**	**12**	**(0-20)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	96	(79 - 120)
	96	(79 - 120)
1,2-Dichloroethane-d4	93	(71 - 127)
	95	(71 - 127)
Toluene-d8	104	(80 - 120)
	102	(80 - 120)
Bromofluorobenzene	95	(69 - 126)
	96	(69 - 126)

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

GC/MS Volatiles

Client Lot #...: PB045 **Work Order #...:** F6FW31AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: H3L110000-349 F6FW31AD-LCSD
Prep Date.....: 12/11/03 **Analysis Date..:** 12/11/03
Prep Batch #...: 3345349
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
1,1-Dichloroethene	**10.0**	**9.46**	**ug/L**	**95**		**SW846 8260B**
	10.0	**11.1**	**ug/L**	**111**	**16**	**SW846 8260B**
Trichloroethene	**10.0**	**9.44**	**ug/L**	**94**		**SW846 8260B**
	10.0	**11.5**	**ug/L**	**115**	**19**	**SW846 8260B**
Benzene	**10.0**	**8.53**	**ug/L**	**85**		**SW846 8260B**
	10.0	**10.1**	**ug/L**	**101**	**17**	**SW846 8260B**
Toluene	**10.0**	**8.40**	**ug/L**	**84**		**SW846 8260B**
	10.0	**9.70**	**ug/L**	**97**	**14**	**SW846 8260B**
Chlorobenzene	**10.0**	**8.31**	**ug/L**	**83**		**SW846 8260B**
	10.0	**9.39**	**ug/L**	**94**	**12**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	96	(79 - 120)
	96	(79 - 120)
1,2-Dichloroethane-d4	93	(71 - 127)
	95	(71 - 127)
Toluene-d8	104	(80 - 120)
	102	(80 - 120)
Bromofluorobenzene	95	(69 - 126)
	96	(69 - 126)

NOTE(S):

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

Bold print denotes control parameters

Data File: /chem/gcms/mx.i/X121103.b/f6fw31ac.d
Report Date: 11-Dec-2003 14:41

STL Knoxville

SW-846 Method 8260A - Volatile Organics

Data file : /chem/gcms/mx.i/X121103.b/f6fw31ac.d
Lab Smp Id: F6FW31AC Client Smp ID: INTRA-LAB CHECK
Inj Date : 11-DEC-2003 14:25
Operator : 063605 Inst ID: mx.i
Smp Info : F6FW31AC,1,3,,LCS
Misc Info : X121103,8260B_LM,1-all.sub
Comment :
Method : /var/chem/gcms/mx.i/X121103.b/8260B_LM.m
Meth Date : 11-Dec-2003 14:16 chemist Quant Type: ISTD
Cal Date : 16-SEP-2003 12:52 Cal File: icxi166.d
Als bottle: 1 QC Sample: METHOD SPIKE
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 1-all.sub
Target Version: 3.50
Processing Host: qmidhp01

12/19/03

Concentration Formula: Amt * DF * Uf*Vt/(Vo*1000) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Unit Correction factor
Vt	25000.00000	Sample Volume Purged
Vo	25.00000	Sample Volume Used

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
* 1 Fluorobenzene	96	4.882	4.885	(1.000)	1476224	10.0000	
* 2 Chlorobenzene-d5	119	7.624	7.624	(1.000)	296063	10.0000	
* 3 1,4 Dichlorobenzene-d4	152	10.824	10.824	(1.000)	339336	10.0000	
$ 5 1,2-Dichloroethane-d4	65	4.584	4.581	(0.939)	176518	9.30682	9.3068
$ 4 Dibromofluoromethane	113	4.298	4.295	(0.880)	236708	9.62898	9.6290
$ 6 Toluene-d8	98	6.292	6.292	(0.825)	1416103	10.4129	10.413
$ 7 4-Bromofluorobenzene	95	8.926	8.932	(0.825)	385027	9.47926	9.4792
10 Dichlorodifluoromethane	85	1.098	1.101	(0.225)	257509	6.71368	6.7137(R)
11 Chloromethane (spcc)	50	1.226	1.229	(0.251)	574426	10.3067	10.307
12 Vinyl Chloride (ccc)	62	1.317	1.314	(0.270)	389264	8.94403	8.9440
14 Bromomethane	94	1.567	1.570	(0.321)	159526	8.72541	8.7254
15 Chloroethane	64	1.652	1.655	(0.338)	202874	8.59310	8.5931
17 Trichlorofluoromethane	101	1.871	1.874	(0.383)	430920	8.68396	8.6840
20 1,1-Dichloroethene (ccc)	96	2.327	2.324	(0.477)	261150	9.46090	9.4609

Data File: /chem/gcms/mx.i/X121103.b/f6fw31ac.d
Report Date: 11-Dec-2003 14:41

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
	21 *Freon 113	151	2.345	2.348	(0.480)	232881	10.2590	10.259
	24 Carbon Disulfide	76	2.498	2.500	(0.512)	870124	8.44848	8.4485
	22 Acetone	43	2.370	2.366	(0.485)	85149	31.5777	31.578
	27 Methylene Chloride	84	2.753	2.756	(0.564)	184437	7.75580	7.7558
	30 trans-1,2-Dichloroethene	96	3.002	3.005	(0.615)	304365	8.92173	8.9217
	31 *MTBE	73	3.015	3.017	(0.617)	275054	7.63312	7.6331
	32 *Hexane	57	3.270	3.267	(0.670)	1306020	9.69083	9.6908
	33 1,1-Dichloroethane (spcc)	63	3.367	3.370	(0.690)	586484	8.94514	8.9451
	37 2,2-Dichloropropane	77	3.878	3.875	(0.794)	472506	9.39750	9.3975
	38 cis 1,2-Dichloroethene	96	3.878	3.881	(0.794)	285142	8.35875	8.3587
M	8 1,2-Dichloroethene (total)	96				589508	17.2805	17.280
	39 2-Butanone	43	3.891	3.887	(0.797)	142546	36.7743	36.774
	40 Bromochloromethane	128	4.079	4.082	(0.836)	77319	8.33122	8.3312
	42 Chloroform (ccc)	83	4.164	4.161	(0.853)	454844	8.59310	8.5931
	43 1,1,1-Trichloroethane	97	4.316	4.319	(0.884)	520871	8.98225	8.9822
	44 Carbon Tetrachloride	117	4.469	4.465	(0.915)	452036	9.30140	9.3014
	45 1,1-Dichloropropene	75	4.462	4.465	(0.914)	446879	8.90316	8.9032
	46 Benzene	78	4.639	4.642	(0.950)	1235311	8.53236	8.5324
	47 1,2-Dichloroethane	62	4.645	4.648	(0.951)	209434	8.72448	8.7245
	49 Trichloroethene	130	5.209	5.209	(1.067)	367007	9.43551	9.4355
	50 1,2-Dichloropropane (ccc)	63	5.397	5.398	(1.106)	289489	9.04271	9.0427
	51 Dibromomethane	93	5.495	5.495	(1.125)	70310	8.06936	8.0694
	52 Bromodichloromethane	83	5.641	5.641	(1.155)	270196	8.45137	8.4514
	54 cis-1,3-Dichloropropene	75	6.042	6.042	(1.238)	310292	8.10743	8.1074
	55 4-Methyl-2-pentanone	43	6.182	6.182	(1.266)	350510	32.6942	32.694
	56 Toluene (ccc)	91	6.353	6.353	(0.833)	1474767	8.40455	8.4046
	57 trans-1,3-Dichloropropene	75	6.547	6.547	(0.859)	207178	7.88845	7.8884
	58 1,1,2-Trichloroethane	97	6.711	6.712	(0.880)	113735	8.54691	8.5469
	59 Tetrachloroethene	164	6.857	6.858	(0.899)	344407	9.85707	9.8571
	60 1,3-Dichloropropane	76	6.864	6.864	(0.900)	189443	8.32040	8.3204
	61 2-Hexanone	43	6.943	6.943	(0.911)	233248	33.2980	33.298
	62 Chlorodibromomethane	129	7.076	7.077	(0.928)	151301	8.84228	8.8423
	63 1,2-Dibromoethane	107	7.180	7.174	(0.942)	105355	8.43287	8.4329
	64 Chlorobenzene (spcc)	112	7.648	7.648	(1.003)	809347	8.31393	8.3139
	66 Ethylbenzene (ccc)	106	7.764	7.764	(1.018)	540447	8.39377	8.3938
	65 1,1,1,2-Tetrachloroethane	131	7.727	7.728	(1.014)	239074	8.62637	8.6264
	67 m&p-Xylene	106	7.880	7.880	(1.034)	1193328	15.5081	15.508
	68 o-Xylene	106	8.299	8.299	(1.089)	523966	7.57994	7.5799
M	9 Xylene (total)	106				1717294	23.0881	23.088
	69 Styrene	104	8.311	8.312	(1.090)	709764	6.89927	6.8993(R)
	70 Bromoform (spcc)	173	8.512	8.512	(1.117)	76083	7.65974	7.6597
	71 Isopropylbenzene	105	8.743	8.743	(1.147)	1709772	7.90067	7.9007
	73 Bromobenzene	156	9.127	9.127	(1.197)	254465	7.44972	7.4497
	74 1,1,2,2-Tetrachloroethane(sp)	83	9.121	9.121	(1.196)	106108	7.80843	7.8084
	77 n-Propylbenzene	91	9.303	9.303	(0.859)	1771249	7.98089	7.9809
	75 1,2,3-Trichloropropane	110	9.175	9.175	(0.848)	29130	8.73392	8.7339
	78 2-Chlorotoluene	91	9.419	9.419	(0.870)	965943	8.07176	8.0718

Data File: /chem/gcms/mx.i/X121103.b/f6fw31ac.d
Report Date: 11-Dec-2003 14:41

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
79 1,3,5-Trimethylbenzene	105	9.577	9.571	(0.885)	1123071	8.37357	8.3736
80 4-Chlorotoluene	91	9.577	9.583	(0.885)	1004160	7.61911	7.6191
81 tert-Butylbenzene	119	10.106	10.106	(0.934)	1081230	8.10389	8.1039
82 1,2,4-Trimethylbenzene	105	10.191	10.191	(0.942)	996800	8.23403	8.2340
83 sec-Butylbenzene	105	10.514	10.514	(0.971)	1572730	7.96333	7.9633
84 1,3-Dichlorobenzene	146	10.690	10.690	(0.988)	535831	8.37196	8.3720
85 p-Isopropyltoluene	119	10.812	10.812	(0.999)	1255600	8.02363	8.0236
86 1,4-Dichlorobenzene	146	10.860	10.861	(1.003)	467201	7.98008	7.9801
88 n-Butylbenzene	91	11.530	11.530	(1.065)	1112706	8.25615	8.2562
87 1,2-Dichlorobenzene	146	11.499	11.499	(1.062)	391726	8.24493	8.2449
89 1,2-Dibromo-3-chloropropane	157	12.655	12.649	(1.169)	17903	8.39730	8.3973
90 1,2,4-Trichlorobenzene	180	13.720	13.726	(1.268)	220312	8.66947	8.6695
91 Hexachlorobutadiene	225	13.957	13.957	(1.289)	284618	9.66050	9.6605
92 Napthalene	128	13.993	13.994	(1.293)	187104	8.51676	8.5168
93 1,2,3-Trichlorobenzene	180	14.279	14.279	(1.319)	148187	8.47930	8.4793

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Data File: /chem/gcms/mx.i/X121103.b/f6fw31ac.d
Report Date: 11-Dec-2003 14:41

STL Knoxville

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: mx.i
Lab File ID: f6fw31ac.d
Lab Smp Id: F6FW31AC
Analysis Type: VOA
Quant Type: ISTD
Operator: 063605
Method File: /var/chem/gcms/mx.i/X121103.b/8260B_LM.m
Misc Info: X121103,8260B_LM,1-all.sub

Calibration Date: 11-DEC-2003
Calibration Time: 14:00
Client Smp ID: INTRA-LAB CHECK
Level: LOW
Sample Type: WATER

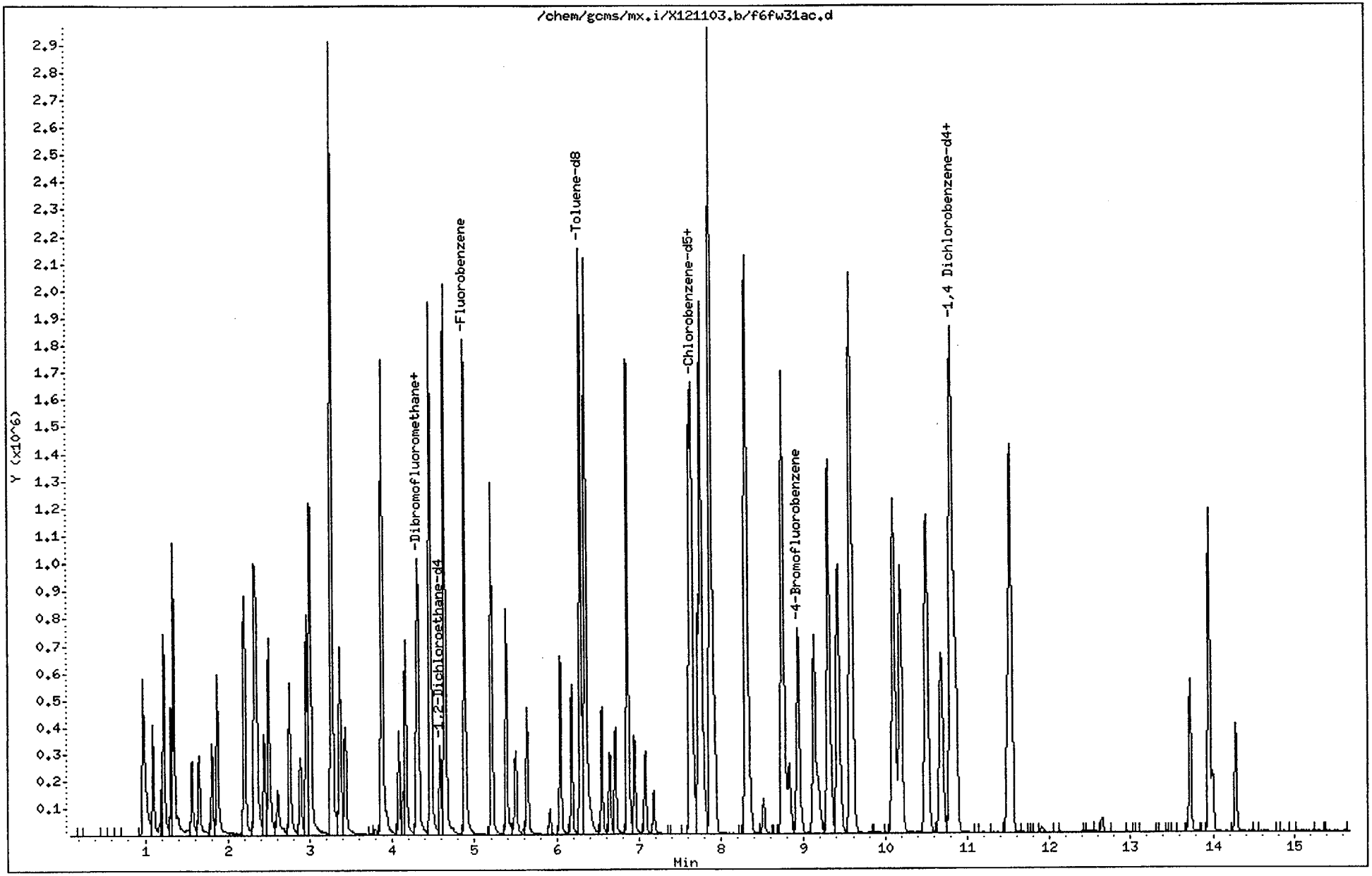
COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Fluorobenzene	1419469	709734	2838938	1476224	4.00
2 Chlorobenzene-d5	292458	146229	584916	296063	1.23
3 1,4 Dichlorobenze	323231	161616	646462	339336	4.98

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Fluorobenzene	4.89	4.39	5.39	4.88	-0.06
2 Chlorobenzene-d5	7.62	7.12	8.12	7.62	0.00
3 1,4 Dichlorobenze	10.82	10.32	11.32	10.82	0.00

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

Data File: /chem/gcms/mx.i/X121103.b/f6fw31ac.d
Date : 11-DEC-2003 14:25
Client ID: INTRA-LAB CHECK
Sample Info: F6FW31AC,1,3,,LCS
Purge Volume: 25.0
Column phase: J+W 624

Instrument: mx.i
Operator: 063605
Column diameter: 0.18



Data File: /chem/gcms/mx.i/X121103.b/f6fw31ad.d
Report Date: 11-Dec-2003 15:07

STL Knoxville

SW-846 Method 8260A - Volatile Organics

Data file : /chem/gcms/mx.i/X121103.b/f6fw31ad.d
Lab Smp Id: F6FW31AD
Client Smp ID: INTRA-LAB CHECK
Inj Date : 11-DEC-2003 14:50
Operator : 063605
Inst ID: mx.i
Smp Info : F6FW31AD,1,3,,LCSD
Misc Info : X121103,8260B_LM,1-all.sub
Comment :
Method : /var/chem/gcms/mx.i/X121103.b/8260B_LM.m
Meth Date : 11-Dec-2003 14:16 chemist
Quant Type: ISTD
Cal Date : 16-SEP-2003 12:52
Cal File: icxi166.d
Als bottle: 1
QC Sample: METHOD SPIKE
Dil Factor: 1.00000
Integrator: HP RTE
Compound Sublist: 1-all.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * Uf*Vt/(Vo*1000) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Unit Correction factor
Vt	25000.00000	Sample Volume Purged
Vo	25.00000	Sample Volume Used

Cpnd Variable — Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
* 1 Fluorobenzene	96	4.885	4.885	(1.000)	1305726	10.0000	
* 2 Chlorobenzene-d5	119	7.624	7.624	(1.000)	267845	10.0000	
* 3 1,4 Dichlorobenzene-d4	152	10.818	10.824	(1.000)	285876	10.0000	
$ 5 1,2-Dichloroethane-d4	65	4.581	4.581	(0.938)	158907	9.47226	9.4723
$ 4 Dibromofluoromethane	113	4.301	4.295	(0.880)	207928	9.56271	9.5627
$ 6 Toluene-d8	98	6.292	6.292	(0.825)	1255061	10.2010	10.201
$ 7 4-Bromofluorobenzene	95	8.932	8.932	(0.826)	329275	9.62267	9.6227
10 Dichlorodifluoromethane	85	1.095	1.101	(0.224)	272702	8.03815	8.0381
11 Chloromethane (spcc)	50	1.229	1.229	(0.252)	590740	11.9509	11.951
12 Vinyl Chloride (ccc)	62	1.314	1.314	(0.269)	409546	10.6537	10.654
14 Bromomethane	94	1.564	1.570	(0.320)	171485	10.5440	10.544
15 Chloroethane	64	1.655	1.655	(0.339)	214667	10.2986	10.299
17 Trichlorofluoromethane	101	1.874	1.874	(0.384)	450457	10.2630	10.263
20 1,1-Dichloroethene (ccc)	96	2.330	2.324	(0.477)	271507	11.1205	11.120

Data File: /chem/gcms/mx.i/X121103.b/f6fw31ad.d
Report Date: 11-Dec-2003 15:07

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
	21 *Freon 113	151	2.348	2.348	(0.481)	251393	12.5206	12.520
	24 Carbon Disulfide	76	2.500	2.500	(0.512)	901597	9.89714	9.8971
	22 Acetone	43	2.373	2.366	(0.486)	91208	39.2070	39.207
	27 Methylene Chloride	84	2.756	2.756	(0.564)	198684	9.62374	9.6237
	30 trans-1,2-Dichloroethene	96	3.005	3.005	(0.615)	327998	10.8699	10.870
	31 *MTBE	73	3.018	3.017	(0.618)	278066	8.72433	8.7243
	32 *Hexane	57	3.273	3.267	(0.670)	1385211	11.6206	11.620
	33 1,1-Dichloroethane (spcc)	63	3.370	3.370	(0.690)	636281	10.9718	10.972
	37 2,2-Dichloropropane	77	3.881	3.875	(0.795)	481301	10.8223	10.822
	38 cis 1,2-Dichloroethene	96	3.881	3.881	(0.795)	304672	10.0975	10.097
M	8 1,2-Dichloroethene (total)	96				632670	20.9674	20.967
	39 2-Butanone	43	3.894	3.887	(0.797)	139699	40.7734	40.773
	40 Bromochloromethane	128	4.082	4.082	(0.836)	78043	9.50721	9.5072
	42 Chloroform (ccc)	83	4.167	4.161	(0.853)	475077	10.1473	10.147
	43 1,1,1-Trichloroethane	97	4.319	4.319	(0.884)	546358	10.6520	10.652
	44 Carbon Tetrachloride	117	4.471	4.465	(0.915)	479860	11.1632	11.163
	45 1,1-Dichloropropene	75	4.465	4.465	(0.914)	472605	10.6452	10.645
	46 Benzene	78	4.642	4.642	(0.950)	1297579	10.1327	10.133
	47 1,2-Dichloroethane	62	4.648	4.648	(0.951)	215890	10.1678	10.168
	49 Trichloroethene	130	5.209	5.209	(1.066)	394120	11.4556	11.456
	50 1,2-Dichloropropane (ccc)	63	5.397	5.398	(1.105)	298172	10.5301	10.530
	51 Dibromomethane	93	5.501	5.495	(1.126)	72785	9.44413	9.4441
	52 Bromodichloromethane	83	5.647	5.641	(1.156)	273006	9.65430	9.6543
	54 cis-1,3-Dichloropropene	75	6.042	6.042	(1.237)	316720	9.35596	9.3560
	55 4-Methyl-2-pentanone	43	6.182	6.182	(1.265)	347677	36.6645	36.664
	56 Toluene (ccc)	91	6.352	6.353	(0.833)	1539387	9.69705	9.6970
	57 trans-1,3-Dichloropropene	75	6.547	6.547	(0.859)	208839	8.78943	8.7894
	58 1,1,2-Trichloroethane	97	6.711	6.712	(0.880)	111172	9.23446	9.2344
	59 Tetrachloroethene	164	6.857	6.858	(0.899)	359440	11.3711	11.371
	60 1,3-Dichloropropane	76	6.863	6.864	(0.900)	195349	9.48368	9.4837
	61 2-Hexanone	43	6.943	6.943	(0.911)	232425	36.6761	36.676
	62 Chlorodibromomethane	129	7.076	7.077	(0.928)	150782	9.74031	9.7403
	63 1,2-Dibromoethane	107	7.180	7.174	(0.942)	105535	9.33728	9.3373
	64 Chlorobenzene (spcc)	112	7.654	7.648	(1.004)	826925	9.38941	9.3894
	66 Ethylbenzene (ccc)	106	7.764	7.764	(1.018)	558043	9.58015	9.5802
	65 1,1,1,2-Tetrachloroethane	131	7.727	7.728	(1.014)	243809	9.72405	9.7240
	67 m&p-Xylene	106	7.879	7.880	(1.034)	1226209	17.6143	17.614
	68 o-Xylene	106	8.299	8.299	(1.089)	540608	8.64463	8.6446
M	9 Xylene (total)	106				1766818	26.2589	26.259
	69 Styrene	104	8.311	8.312	(1.090)	711478	7.64454	7.6445
	70 Bromoform (spcc)	173	8.512	8.512	(1.116)	76864	8.55368	8.5537
	71 Isopropylbenzene	105	8.743	8.743	(1.147)	1758001	8.97937	8.9794
	73 Bromobenzene	156	9.133	9.127	(1.198)	260702	8.43641	8.4364
	74 1,1,2,2-Tetrachloroethane(sp)	83	9.120	9.121	(1.196)	106163	8.70413	8.7041
	77 n-Propylbenzene	91	9.303	9.303	(0.860)	1817172	9.71897	9.7190
	75 1,2,3-Trichloropropane	110	9.175	9.175	(0.848)	29336	10.3460	10.346
	78 2-Chlorotoluene	91	9.419	9.419	(0.871)	992680	9.84643	9.8464

Data File: /chem/gcms/mx.i/X121103.b/f6fw31ad.d
Report Date: 11-Dec-2003 15:07

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
79 1,3,5-Trimethylbenzene	105	9.577	9.571	(0.885)	1145600	10.1389	10.139
80 4-Chlorotoluene	91	9.577	9.583	(0.885)	1022248	9.20683	9.2068
81 tert-Butylbenzene	119	10.106	10.106	(0.934)	1122368	9.98535	9.9854
82 1,2,4-Trimethylbenzene	105	10.197	10.191	(0.943)	1002790	9.83256	9.8326
83 sec-Butylbenzene	105	10.514	10.514	(0.972)	1610556	9.67986	9.6798
84 1,3-Dichlorobenzene	146	10.690	10.690	(0.988)	539201	10.0001	10.000
85 p-Isopropyltoluene	119	10.812	10.812	(0.999)	1287366	9.76505	9.7650
86 1,4-Dichlorobenzene	146	10.860	10.861	(1.004)	476204	9.65492	9.6549
88 n-Butylbenzene	91	11.530	11.530	(1.066)	1129174	9.94513	9.9451
87 1,2-Dichlorobenzene	146	11.499	11.499	(1.063)	388013	9.69400	9.6940
89 1,2-Dibromo-3-chloropropane	157	12.655	12.649	(1.170)	18192	10.1283	10.128
90 1,2,4-Trichlorobenzene	180	13.726	13.726	(1.269)	212072	9.90581	9.9058
91 Hexachlorobutadiene	225	13.957	13.957	(1.290)	291417	11.6931	11.693
92 Napthalene	128	13.993	13.994	(1.294)	191868	10.3668	10.367
93 1,2,3-Trichlorobenzene	180	14.279	14.279	(1.320)	143851	9.77048	9.7705

Data File: /chem/gcms/mx.i/X121103.b/f6fw31ad.d
Report Date: 11-Dec-2003 15:07

STL Knoxville

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: mx.i
Lab File ID: f6fw31ad.d
Lab Smp Id: F6FW31AD
Analysis Type: VOA
Quant Type: ISTD
Operator: 063605
Method File: /var/chem/gcms/mx.i/X121103.b/8260B_LM.m
Misc Info: X121103,8260B_LM,1-all.sub

Calibration Date: 11-DEC-2003
Calibration Time: 14:00
Client Smp ID: INTRA-LAB CHECK
Level: LOW
Sample Type: WATER

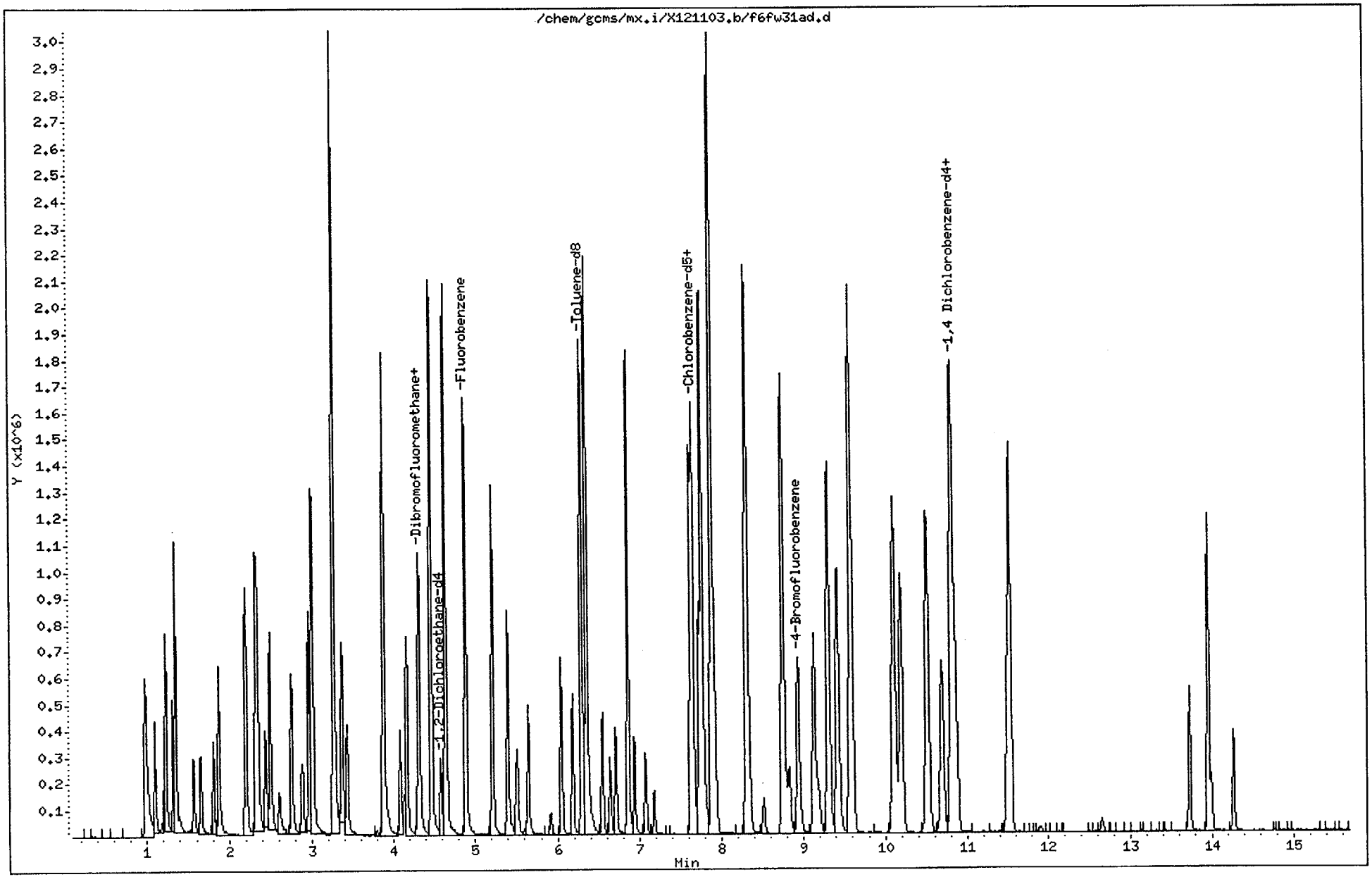
COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Fluorobenzene	1419469	709734	2838938	1305726	-8.01
2 Chlorobenzene-d5	292458	146229	584916	267845	-8.42
3 1,4 Dichlorobenze	323231	161616	646462	285876	-11.56

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Fluorobenzene	4.89	4.39	5.39	4.89	0.00
2 Chlorobenzene-d5	7.62	7.12	8.12	7.62	0.00
3 1,4 Dichlorobenze	10.82	10.32	11.32	10.82	-0.06

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

Data File: /chem/gcms/mx.i/X121103.b/f6fw31ad.d
Date : 11-DEC-2003 14:50
Client ID: INTRA-LAB CHECK
Sample Info: F6FW31AD,1,3,,LCSD
Purge Volume: 25.0
Column phase: J+W 624

Instrument: mx.i
Operator: 063605
Column diameter: 0.18



METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: PB045 **Work Order #...:** F6P8J1AA **Matrix.....:** WATER
MB Lot-Sample #: H3L150000-684

Prep Date.....: 12/15/03
Analysis Date..: 12/15/03 **Prep Batch #...:** 3349684
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Chloromethane	ND	2.0	ug/L	SW846 8260B
Bromomethane	ND	2.0	ug/L	SW846 8260B
Vinyl chloride	ND	1.0	ug/L	SW846 8260B
Chloroethane	ND	2.0	ug/L	SW846 8260B
Methylene chloride	ND	2.0	ug/L	SW846 8260B
Acetone	ND	10	ug/L	SW846 8260B
Carbon disulfide	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethene	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethene (total)	ND	1.0	ug/L	SW846 8260B
Chloroform	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethane	ND	1.0	ug/L	SW846 8260B
2-Butanone	ND	5.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Carbon tetrachloride	ND	1.0	ug/L	SW846 8260B
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
cis-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
Trichloroethene	ND	1.0	ug/L	SW846 8260B
Dibromochloromethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Benzene	ND	1.0	ug/L	SW846 8260B
trans-1,3-Dichloropropene	ND	1.0	ug/L	SW846 8260B
Bromoform	ND	1.0	ug/L	SW846 8260B
4-Methyl-2-pentanone	ND	5.0	ug/L	SW846 8260B
2-Hexanone	ND	5.0	ug/L	SW846 8260B
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
Toluene	ND	1.0	ug/L	SW846 8260B
Chlorobenzene	ND	1.0	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B
Styrene	ND	1.0	ug/L	SW846 8260B
Xylenes (total)	ND	1.0	ug/L	SW846 8260B

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	98	(79 - 120)
1,2-Dichloroethane-d4	99	(71 - 127)
Toluene-d8	98	(80 - 120)
Bromofluorobenzene	87	(69 - 126)

(Continued on next page)

METHOD BLANK REPORT

GC/MS Volatiles

Client Lot #...: PB045 **Work Order #...:** F6P8J1AA **Matrix.....:** WATER

NOTE(S):

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

Data File: /var/chem/gcms/mx.i/X121503.b/f6f3p1aa.d
Report Date: 16-Dec-2003 17:14

STL Knoxville

SW-846 Method 8260A - Volatile Organics

Data file : /var/chem/gcms/mx.i/X121503.b/f6f3p1aa.d
Lab Smp Id: F6P8J1AA Client Smp ID: INTRA-LAB BLANK
Inj Date : 15-DEC-2003 18:25
Operator : 063605 Inst ID: mx.i
Smp Info : F6P8J1AA,1,3,,BLANK
Misc Info : X121503,8260B_LM,all.sub
Comment :
Method : /var/chem/gcms/mx.i/X121503.b/8260B_LM.m
Meth Date : 16-Dec-2003 16:52 tillerm Quant Type: ISTD
Cal Date : 16-SEP-2003 12:52 Cal File: icxi166.d
Als bottle: 1 QC Sample: METHOD BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 1-all.sub
Target Version: 3.50
Processing Host: qmidhp01

12/19/03

Concentration Formula: Amt * DF * Uf*Vt/(Vo*1000) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Unit Correction factor
Vt	25000.00000	Sample Volume Purged
Vo	25.00000	Sample Volume Used

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
* 1 Fluorobenzene	96	4.882	4.887	(1.000)	1287455	10.0000	
* 2 Chlorobenzene-d5	119	7.623	7.624	(1.000)	278536	10.0000	
* 3 1,4 Dichlorobenzene-d4	152	10.817	10.818	(1.000)	331702	10.0000	
$ 5 1,2-Dichloroethane-d4	65	4.584	4.583	(0.939)	163434	9.88042	9.8804
$ 4 Dibromofluoromethane	113	4.298	4.297	(0.880)	210495	9.81815	9.8182
$ 6 Toluene-d8	98	6.291	6.292	(0.825)	1260156	9.84926	9.8492
$ 7 4-Bromofluorobenzene	95	8.931	8.926	(0.826)	345158	8.69327	8.6933
11 Chloromethane (spcc)	50	1.238	1.231	(0.254)	895	0.21760	0.21760
45 1,1-Dichloropropene	75	4.882	4.467	(1.000)	89384	2.04191	2.0419
47 1,2-Dichloroethane	62	4.882	4.644	(1.000)	17659	0.84350	0.84350
55 4-Methyl-2-pentanone	43	6.291	6.183	(1.289)	6794	0.72665	0.72664
90 1,2,4-Trichlorobenzene	180	13.725	13.726	(1.269)	5813	0.23404	0.23404
91 Hexachlorobutadiene	225	13.956	13.957	(1.290)	3162	0.32932	0.32932
92 Napthalene	128	13.999	14.000	(1.294)	34007	1.58360	1.5836

MT 12/16/03

Data File: /var/chem/gcms/mx.i/X121503.b/f6f3p1aa.d
Report Date: 16-Dec-2003 17:14

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
93 1,2,3-Trichlorobenzene	180	14.278	14.280	(1.320)	4771	0.27932	0.27932

Data File: /var/chem/gcms/mx.i/X121503.b/f6f3p1aa.d
Report Date: 16-Dec-2003 17:14

STL Knoxville

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: mx.i
Lab File ID: f6f3p1aa.d
Lab Smp Id: F6P8J1AA
Analysis Type: VOA
Quant Type: ISTD
Operator: 063605
Method File: /var/chem/gcms/mx.i/X121503.b/8260B_LM.m
Misc Info: X121503,8260B_LM,all.sub

Calibration Date: 15-DEC-2003
Calibration Time: 16:45
Client Smp ID: INTRA-LAB BLANK
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Fluorobenzene	1461276	730638	2922552	1287455	-11.90
2 Chlorobenzene-d5	293714	146857	587428	278536	-5.17
3 1,4 Dichlorobenze	323953	161976	647906	331702	2.39

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Fluorobenzene	4.89	4.39	5.39	4.88	-0.11
2 Chlorobenzene-d5	7.62	7.12	8.12	7.62	-0.02
3 1,4 Dichlorobenze	10.82	10.32	11.32	10.82	-0.01

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

Data File: /var/chem/gcms/mx.i/X121503.b/f6f3p1aa.d
Report Date: 16-Dec-2003 17:14

STL Knoxville

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: F6P8J1AA
Level: LOW
Data Type: MS DATA
SpikeList File: allcmpds.spk
Sublist File: 1-all.sub
Method File: /var/chem/gcms/mx.i/X121503.b/8260B_LM.m
Misc Info: X121503,8260B_LM,all.sub

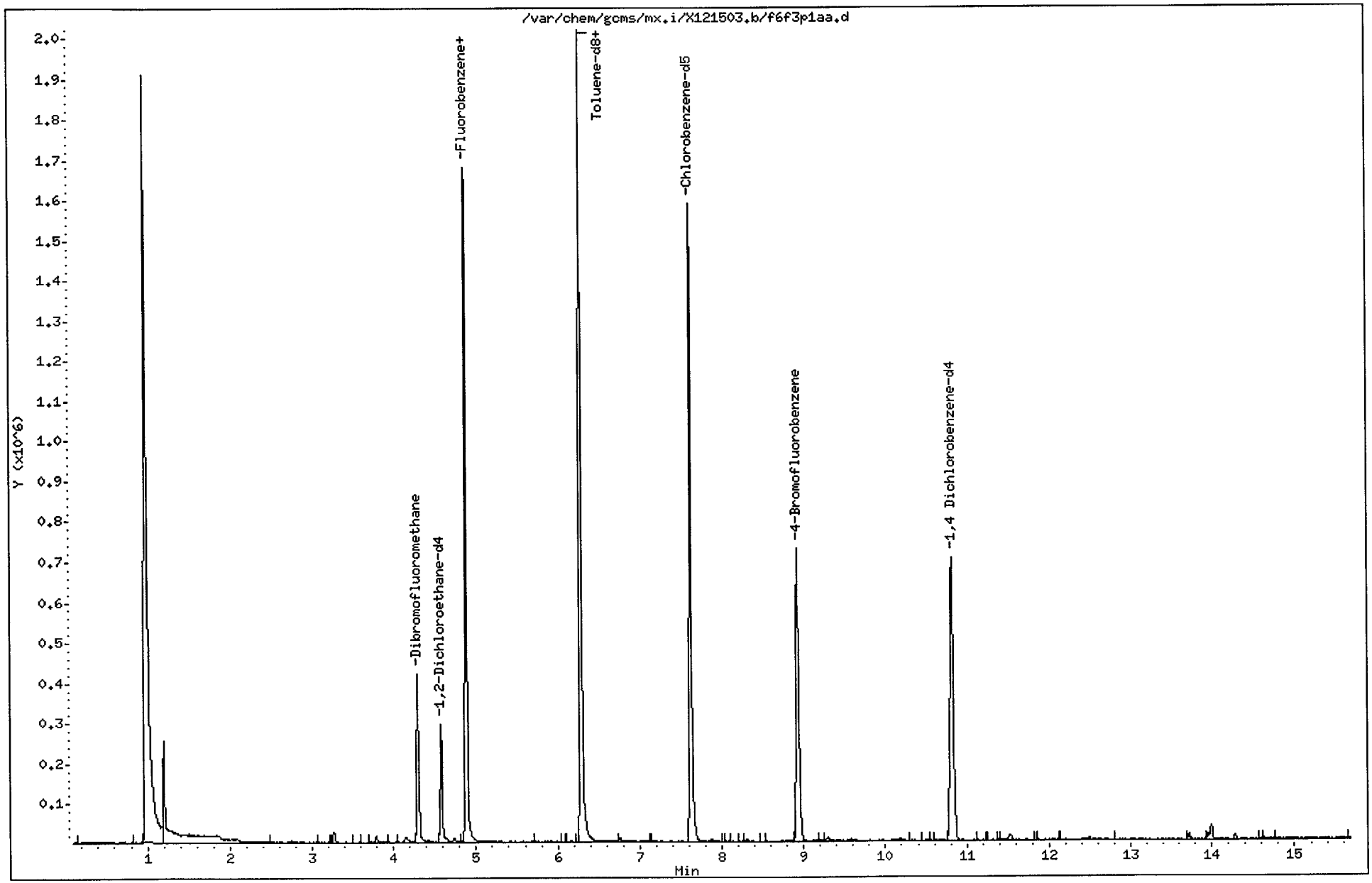
Client SDG:
Fraction: VOA
Client Smp ID: INTRA-LAB BLANK
Operator: 063605
SampleType: METHOD BLANK
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 5 1,2-Dichloroethane	10.000	9.8804	98.80	71-127
$ 4 Dibromofluorometha	10.000	9.8182	98.18	79-120
$ 6 Toluene-d8	10.000	9.8492	98.49	80-120
$ 7 4-Bromofluorobenze	10.000	8.6933	86.93	69-126

Data File: /var/chem/gcms/mx.i/X121503.b/f6f3p1aa.d
Date : 15-DEC-2003 18:25
Client ID: INTRA-LAB BLANK
Sample Info: F6P8J1AA,1,3,,BLANK
Purge Volume: 25.0
Column phase: J+W 624

Instrument: mx.i

Operator: 063605
Column diameter: 0.18



Data File: /var/chem/gcms/mx.i/X121503.b/f6f3p1aa.d

Date : 15-DEC-2003 18:25

Client ID: INTRA-LAB BLANK

Instrument: mx.i

Sample Info: F6P8J1AA,1,3,,BLANK

Purge Volume: 25.0

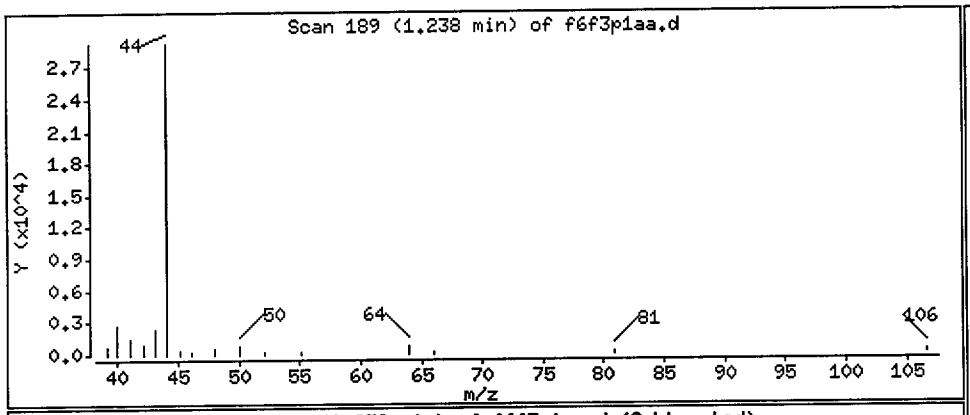
Operator: 063605

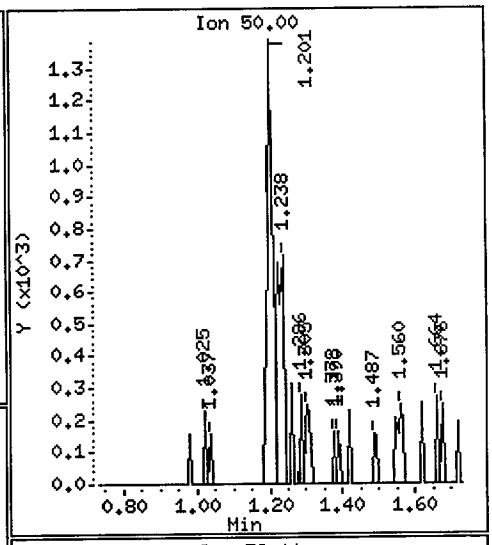
Column phase: J+W 624

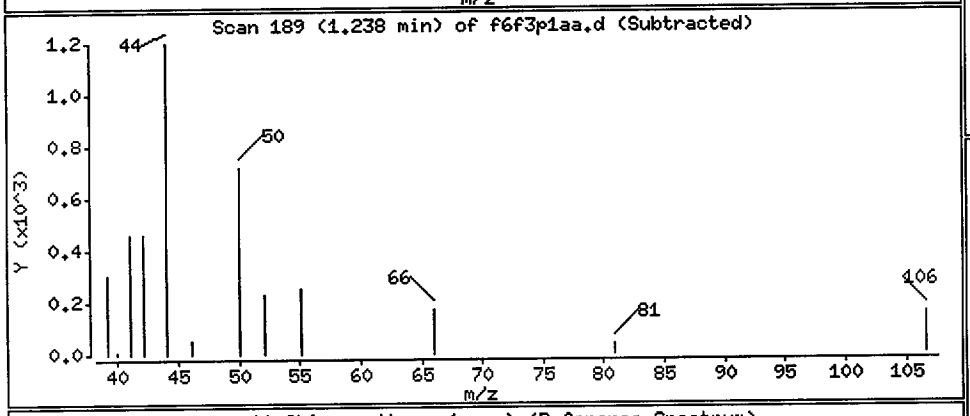
Column diameter: 0.18

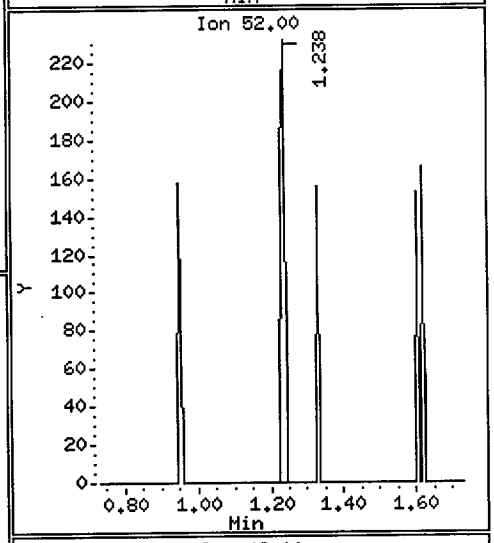
11 Chloromethane (spcc)

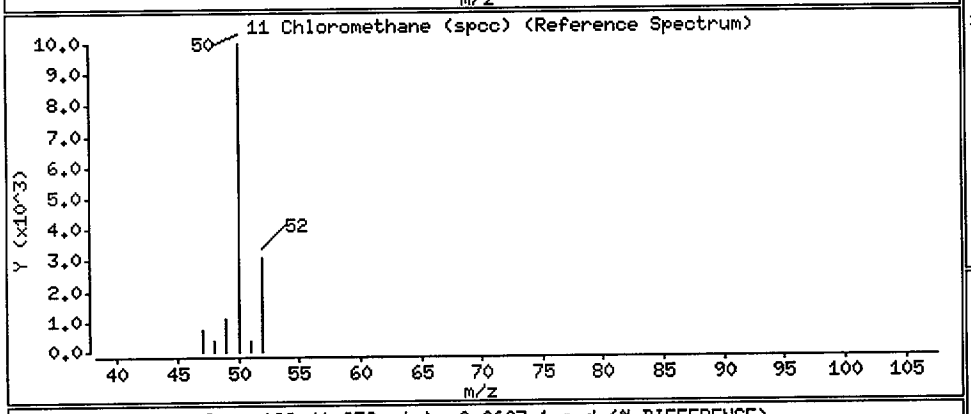
Concentration: 0.21760 ug/L

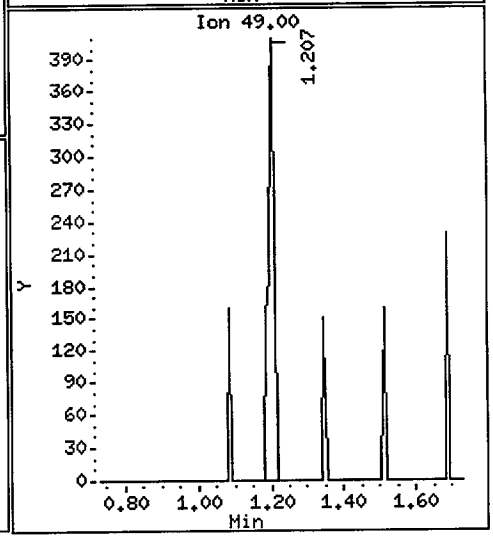


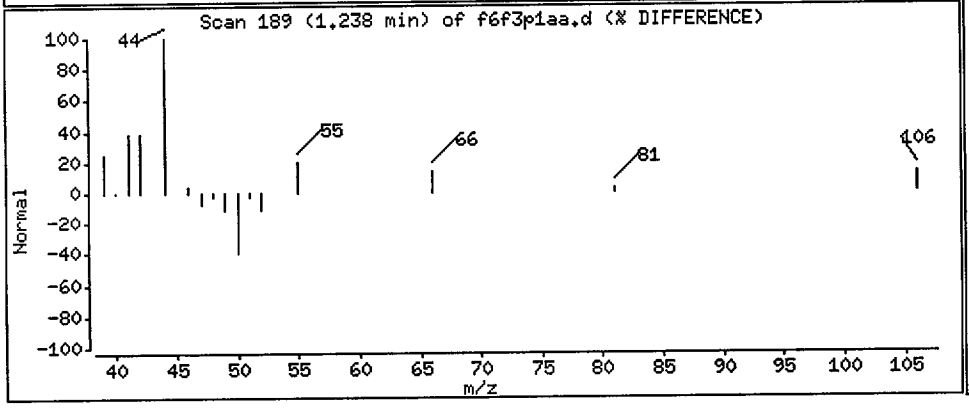












Data File: /var/chem/gcms/mx.i/X121503.b/f6f3p1aa.d

Date : 15-DEC-2003 18:25

Client ID: INTRA-LAB BLANK

Instrument: mx.i

Sample Info: F6P8J1AA,1,3,,BLANK

Purge Volume: 25.0

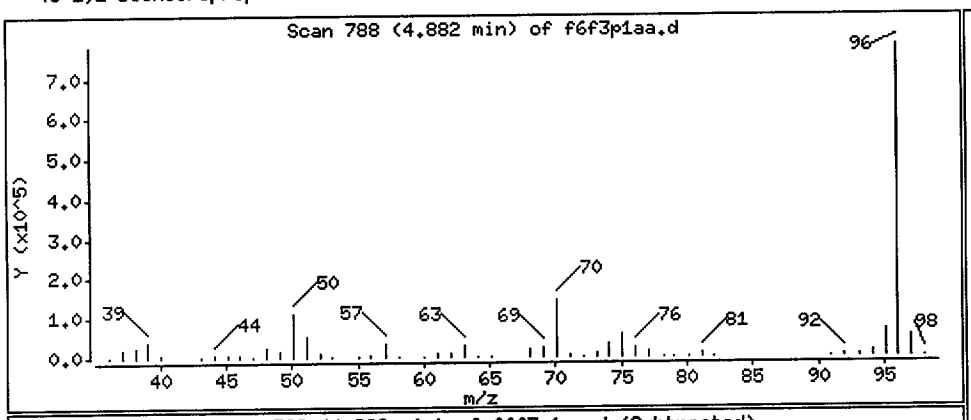
Operator: 063605

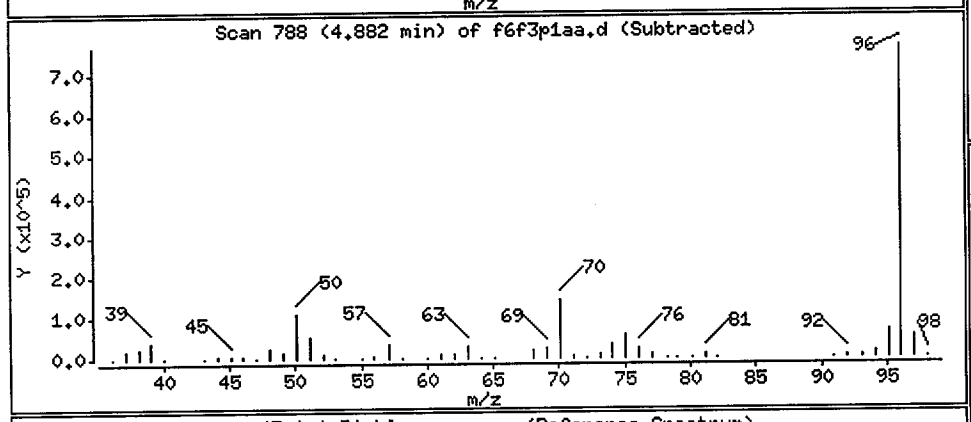
Column phase: J+W 624

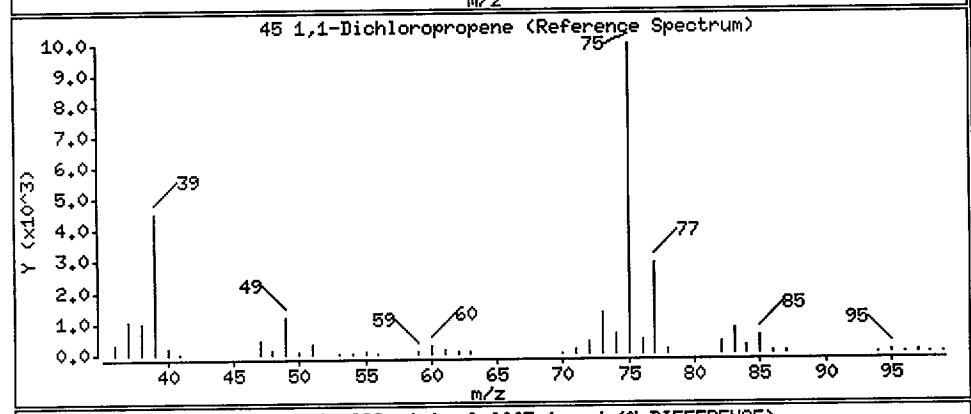
Column diameter: 0.18

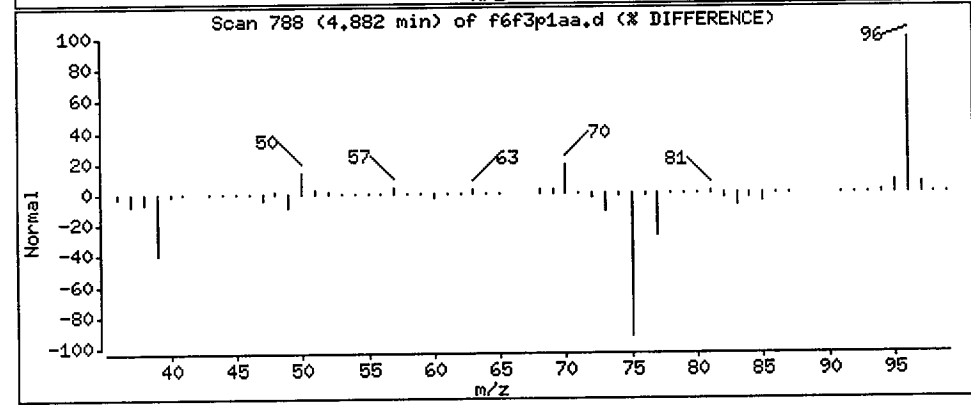
45 1,1-Dichloropropene

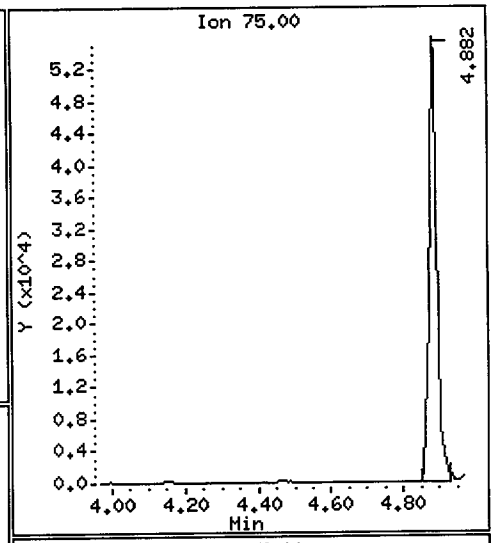
Concentration: 2.0419 ug/L

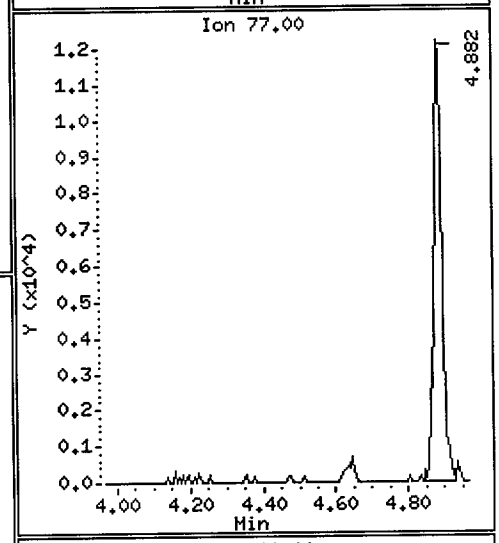


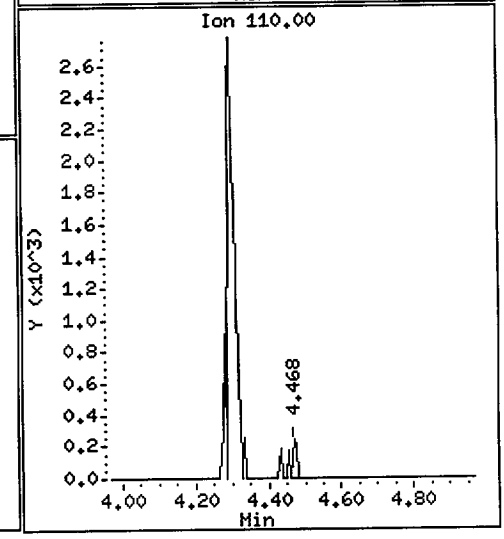












Data File: /var/chem/gcms/mx.i/X121503.b/f6f3p1aa.d

Date : 15-DEC-2003 18:25

Client ID: INTRA-LAB BLANK

Instrument: mx.i

Sample Info: F6P8J1AA,1,3,,BLANK

Purge Volume: 25.0

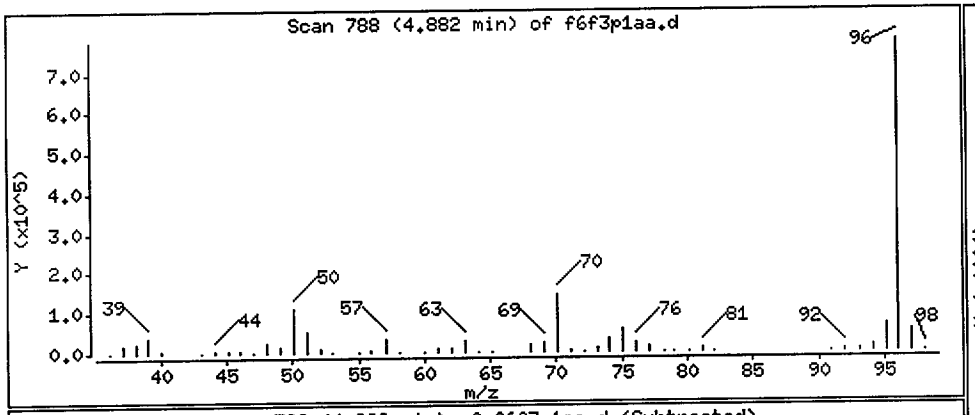
Operator: 063605

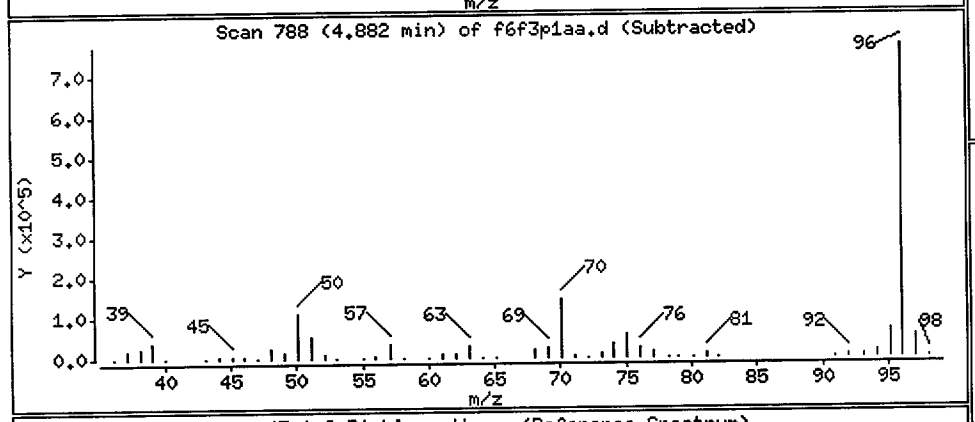
Column phase: J+W 624

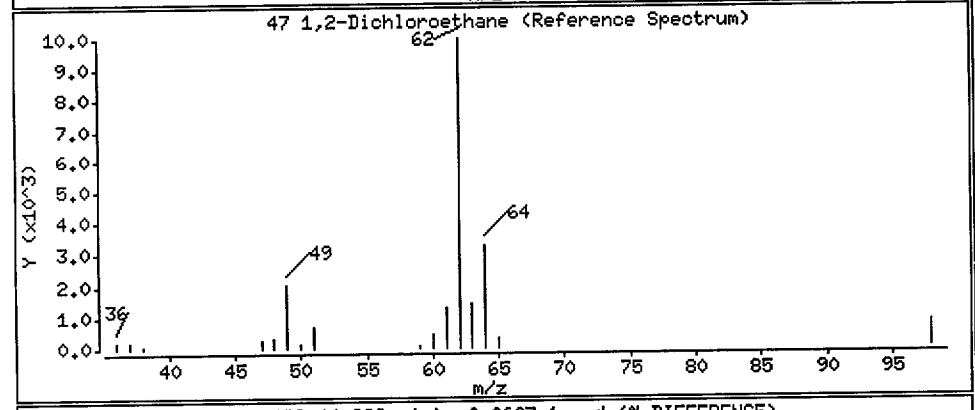
Column diameter: 0.18

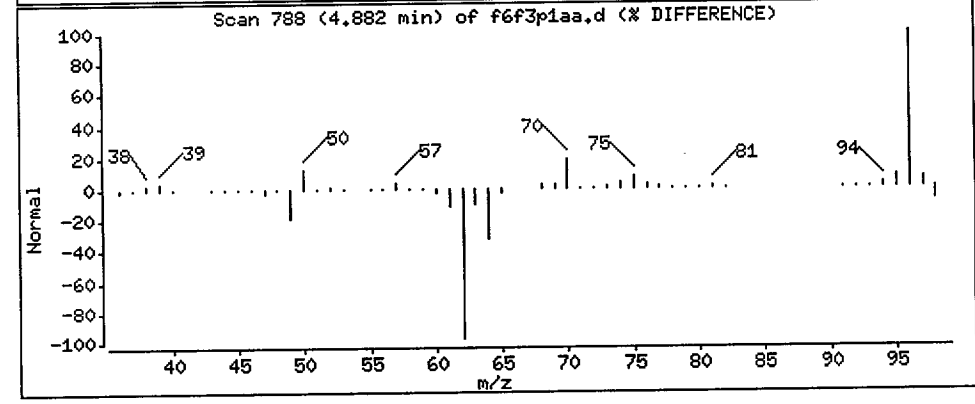
47 1,2-Dichloroethane

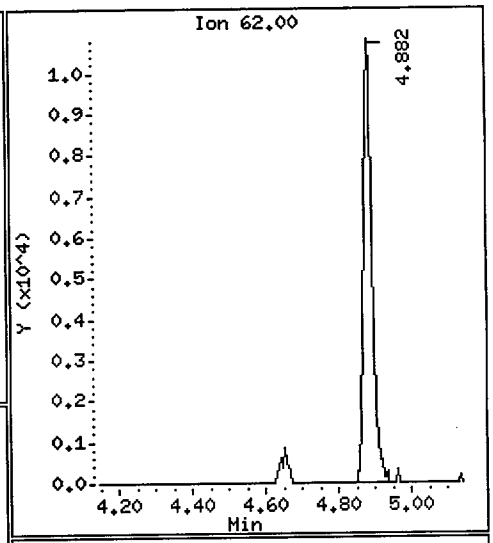
Concentration: 0.84350 ug/L

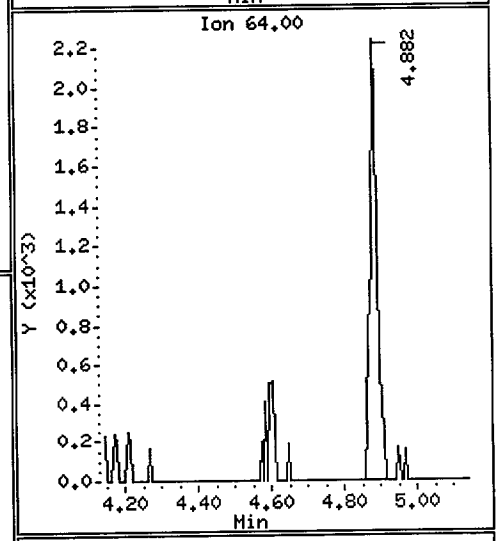


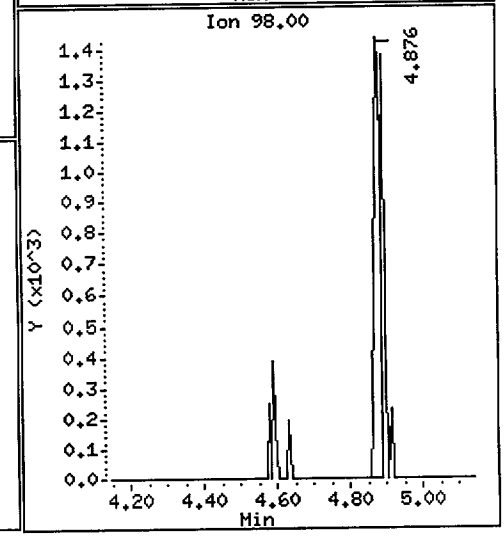












Data File: /var/chem/gcms/mx.i/X121503.b/f6f3p1aa.d

Date : 15-DEC-2003 18:25

Client ID: INTRA-LAB BLANK

Instrument: mx.i

Sample Info: F6P8J1AA,1,3,,BLANK

Purge Volume: 25.0

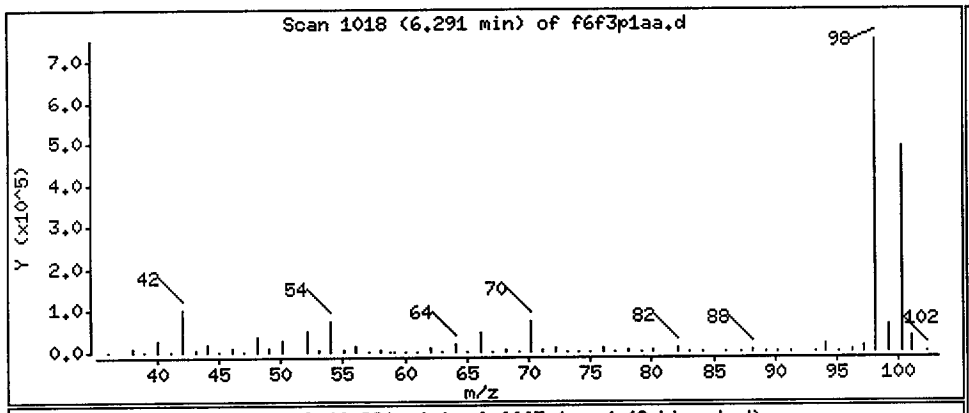
Operator: 063605

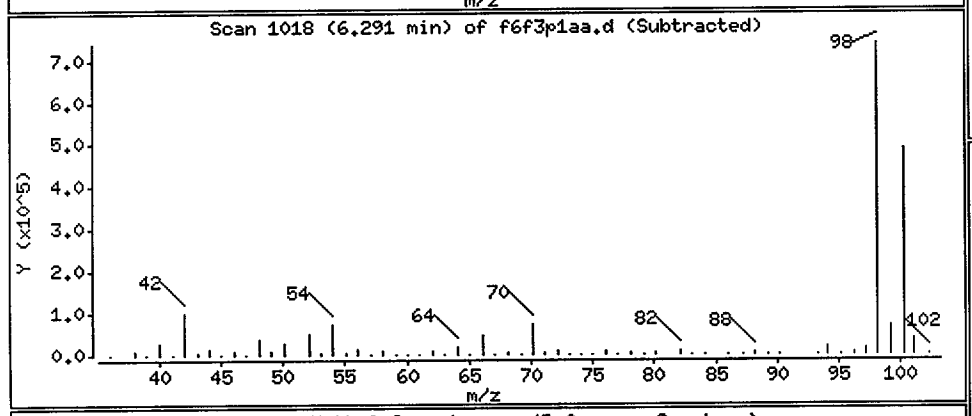
Column phase: J+W 624

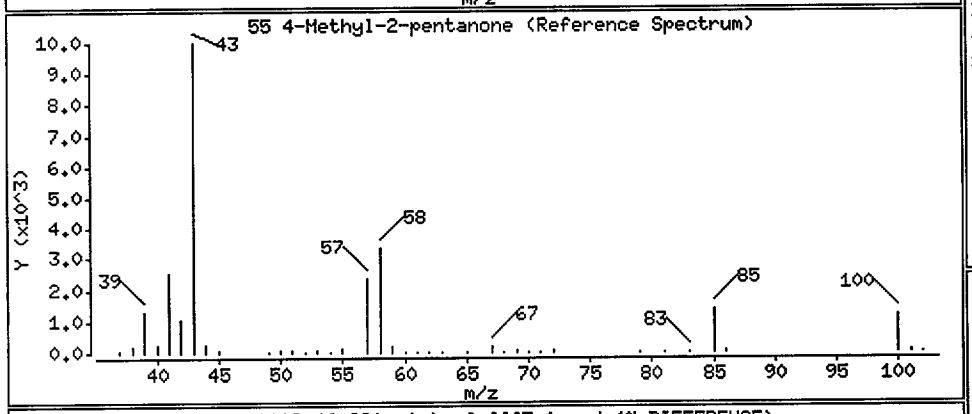
Column diameter: 0.18

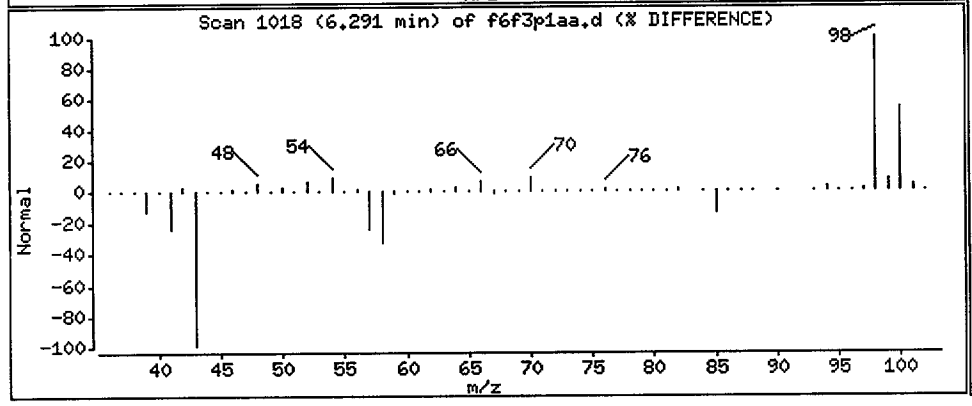
55 4-Methyl-2-pentanone

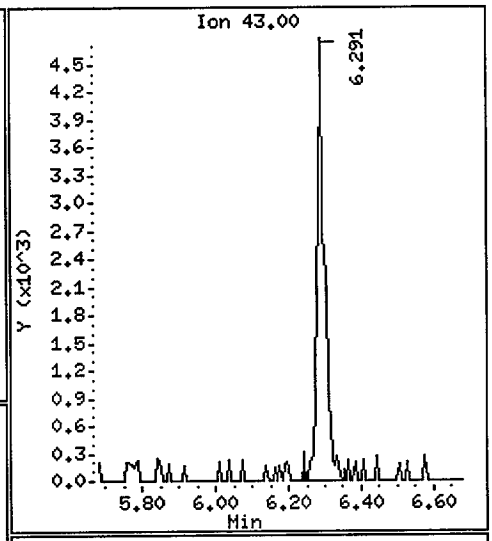
Concentration: 0.72664 ug/L

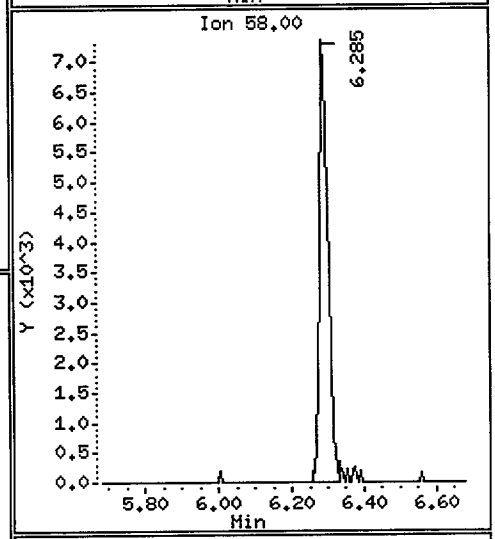


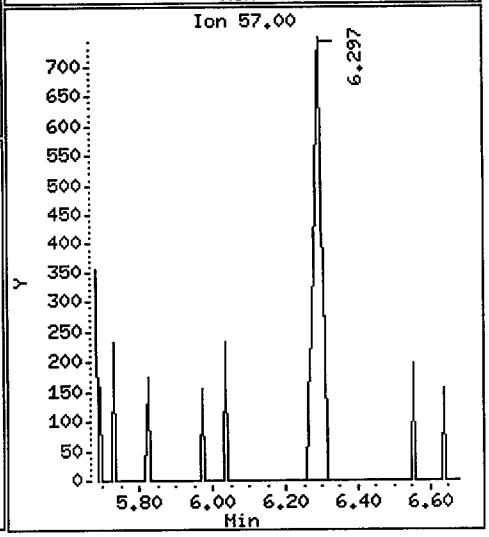












LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: PB045 **Work Order #...:** F6P8J1AC **Matrix.....:** WATER
LCS Lot-Sample#: H3L150000-684
Prep Date.....: 12/15/03 **Analysis Date..:** 12/15/03
Prep Batch #...: 3349684
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
1,1-Dichloroethene	**115**	**(70 - 128)**	**SW846 8260B**
Trichloroethene	**118**	**(80 - 121)**	**SW846 8260B**
Benzene	**107**	**(80 - 121)**	**SW846 8260B**
Toluene	**96**	**(77 - 124)**	**SW846 8260B**
Chlorobenzene	**96**	**(80 - 121)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	95	(79 - 120)
1,2-Dichloroethane-d4	92	(71 - 127)
Toluene-d8	96	(80 - 120)
Bromofluorobenzene	90	(69 - 126)

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

GC/MS Volatiles

Client Lot #...: PB045 **Work Order #...:** F6P8J1AC **Matrix.....:** WATER
LCS Lot-Sample#: H3L150000-684
Prep Date.....: 12/15/03 **Analysis Date..:** 12/15/03
Prep Batch #...: 3349684
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
1,1-Dichloroethene	**10.0**	**11.5**	**ug/L**	**115**	**SW846 8260B**
Trichloroethene	**10.0**	**11.8**	**ug/L**	**118**	**SW846 8260B**
Benzene	**10.0**	**10.7**	**ug/L**	**107**	**SW846 8260B**
Toluene	**10.0**	**9.64**	**ug/L**	**96**	**SW846 8260B**
Chlorobenzene	**10.0**	**9.58**	**ug/L**	**96**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	95	(79 - 120)
1,2-Dichloroethane-d4	92	(71 - 127)
Toluene-d8	96	(80 - 120)
Bromofluorobenzene	90	(69 - 126)

NOTE(S):

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

Bold print denotes control parameters

Data File: /var/chem/gcms/mx.i/X121503.b/f6f3p1ac.d
Report Date: 16-Dec-2003 17:15

STL Knoxville

SW-846 Method 8260A - Volatile Organics

Data file : /var/chem/gcms/mx.i/X121503.b/f6f3p1ac.d
Lab Smp Id: F6P8J1AC Client Smp ID: INTRA-LAB CHECK
Inj Date : 15-DEC-2003 17:10
Operator : 063605 Inst ID: mx.i
Smp Info : F6P8J1AC,1,3,,LCS
Misc Info : X121503,8260B_LM,plexus.sub
Comment :
Method : /var/chem/gcms/mx.i/X121503.b/8260B_LM.m
Meth Date : 16-Dec-2003 16:52 tillerm Quant Type: ISTD
Cal Date : 16-SEP-2003 12:52 Cal File: icxi166.d
Als bottle: 1 QC Sample: METHOD SPIKE
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 1-all.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * Uf*Vt/(Vo*1000) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Unit Correction factor
Vt	25000.00000	Sample Volume Purged
Vo	25.00000	Sample Volume Used

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
* 1 Fluorobenzene	96	4.887	4.887	(1.000)	1225766	10.0000	
* 2 Chlorobenzene-d5	119	7.624	7.624	(1.000)	269268	10.0000	
* 3 1,4 Dichlorobenzene-d4	152	10.818	10.818	(1.000)	303488	10.0000	
$ 5 1,2-Dichloroethane-d4	65	4.583	4.583	(0.938)	145422	9.23395	9.2340
$ 4 Dibromofluoromethane	113	4.297	4.297	(0.879)	194325	9.52010	9.5201
$ 6 Toluene-d8	98	6.292	6.292	(0.825)	1187459	9.60050	9.6005
$ 7 4-Bromofluorobenzene	95	8.932	8.926	(0.826)	327778	9.02300	9.0230
10 Dichlorodifluoromethane	85	1.097	1.097	(0.224)	319934	10.0455	10.046
11 Chloromethane (spcc)	50	1.225	1.231	(0.251)	626657	13.4786	13.479
12 Vinyl Chloride (ccc)	62	1.316	1.316	(0.269)	409573	11.3546	11.355
14 Bromomethane	94	1.566	1.565	(0.320)	178104	11.6357	11.636
15 Chloroethane	64	1.651	1.651	(0.338)	225661	11.5437	11.544
17 Trichlorofluoromethane	101	1.876	1.876	(0.384)	453929	11.0167	11.017
20 1,1-Dichloroethene (ccc)	96	2.326	2.326	(0.476)	264165	11.5256	11.526

Data File: /var/chem/gcms/mx.i/X121503.b/f6f3p1ac.d
Report Date: 16-Dec-2003 17:15

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
	21 *Freon 113	151	2.344	2.344	(0.480)	234032	12.4162	12.416
	24 Carbon Disulfide	76	2.496	2.496	(0.511)	878118	10.2682	10.268
	22 Acetone	43	2.369	2.368	(0.485)	87732	40.2859	40.286
	23 *Iodomethane	142	2.442	2.441	(0.500)	370324	12.6454	12.645
	27 Methylene Chloride	84	2.752	2.752	(0.563)	184773	9.52611	9.5261
	29 *Acrylonitrile	53	2.965	2.959	(0.607)	604811	209.833	209.83
	30 trans-1,2-Dichloroethene	96	3.001	3.007	(0.614)	310962	10.9776	10.978
	31 *MTBE	73	3.013	3.013	(0.617)	281800	9.41823	9.4182
	32 *Hexane	57	3.269	3.269	(0.669)	1413169	12.6284	12.628
	33 1,1-Dichloroethane (spcc)	63	3.366	3.366	(0.689)	589859	10.8349	10.835
	37 2,2-Dichloropropane	77	3.877	3.877	(0.793)	469358	11.2423	11.242
	38 cis 1,2-Dichloroethene	96	3.877	3.877	(0.793)	289841	10.2326	10.232
M	8 1,2-Dichloroethene (total)	96				600804	21.2101	21.210
	39 2-Butanone	43	3.889	3.889	(0.796)	140451	43.6854	43.685
	40 Bromochloromethane	128	4.084	4.084	(0.836)	78795	10.2251	10.225
	42 Chloroform (ccc)	83	4.163	4.163	(0.852)	461082	10.4909	10.491
	43 1,1,1-Trichloroethane	97	4.315	4.315	(0.883)	529109	10.9887	10.989
	44 Carbon Tetrachloride	117	4.467	4.467	(0.914)	473107	11.7241	11.724
	45 1,1-Dichloropropene	75	4.461	4.467	(0.913)	465848	11.1775	11.177
	46 Benzene	78	4.638	4.638	(0.949)	1287552	10.7103	10.710
	47 1,2-Dichloroethane	62	4.644	4.644	(0.950)	212302	10.6510	10.651
	49 Trichloroethene	130	5.209	5.209	(1.066)	381990	11.8273	11.827
	50 1,2-Dichloropropane (ccc)	63	5.398	5.392	(1.104)	299446	11.2650	11.265
	51 Dibromomethane	93	5.495	5.495	(1.124)	74441	10.2892	10.289
	52 Bromodichloromethane	83	5.641	5.641	(1.154)	272713	10.2730	10.273
	54 cis-1,3-Dichloropropene	75	6.042	6.043	(1.236)	325197	10.2330	10.233
	55 4-Methyl-2-pentanone	43	6.182	6.183	(1.265)	360847	40.5357	40.536
	56 Toluene (ccc)	91	6.353	6.353	(0.833)	1538714	9.64158	9.6416
	57 trans-1,3-Dichloropropene	75	6.547	6.548	(0.859)	218526	9.14853	9.1485
	58 1,1,2-Trichloroethane	97	6.712	6.712	(0.880)	114345	9.44786	9.4479
	59 Tetrachloroethene	164	6.858	6.858	(0.899)	357270	11.2427	11.243
	60 1,3-Dichloropropane	76	6.864	6.864	(0.900)	200879	9.70061	9.7006
	61 2-Hexanone	43	6.943	6.943	(0.911)	239981	37.6682	37.668
	62 Chlorodibromomethane	129	7.077	7.077	(0.928)	159020	10.2182	10.218
	63 1,2-Dibromoethane	107	7.180	7.180	(0.942)	106932	9.41090	9.4109
	64 Chlorobenzene (spcc)	112	7.649	7.655	(1.003)	848101	9.57896	9.5790
	66 Ethylbenzene (ccc)	106	7.758	7.764	(1.018)	552916	9.44197	9.4420
	65 1,1,1,2-Tetrachloroethane	131	7.728	7.728	(1.014)	251274	9.96878	9.9688
	67 m&p-Xylene	106	7.880	7.880	(1.034)	1234231	17.6358	17.636
	68 o-Xylene	106	8.299	8.300	(1.089)	543162	8.63956	8.6396
M	9 Xylene (total)	106				1777393	26.2754	26.275
	69 Styrene	104	8.312	8.312	(1.090)	743534	7.94675	7.9467
	70 Bromoform (spcc)	173	8.512	8.513	(1.116)	82082	9.08599	9.0860
	71 Isopropylbenzene	105	8.744	8.744	(1.147)	1754999	8.91665	8.9166
	73 Bromobenzene	156	9.127	9.127	(1.197)	272810	8.78158	8.7816
	74 1,1,2,2-Tetrachloroethane(sp)	83	9.121	9.121	(1.196)	112155	9.17966	9.1797
	77 n-Propylbenzene	91	9.303	9.303	(0.860)	1830395	9.22155	9.2216

Data File: /var/chem/gcms/mx.i/X121503.b/f6f3p1ac.d
Report Date: 16-Dec-2003 17:15

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
75 1,2,3-Trichloropropane	110	9.175	9.176	(0.848)	30381	10.1046	10.104
78 2-Chlorotoluene	91	9.419	9.413	(0.871)	996844	9.31390	9.3139
79 1,3,5-Trimethylbenzene	105	9.571	9.571	(0.885)	1149757	9.58512	9.5851
80 4-Chlorotoluene	91	9.577	9.577	(0.885)	1058869	8.98320	8.9832
81 tert-Butylbenzene	119	10.106	10.106	(0.934)	1103306	9.24611	9.2461
82 1,2,4-Trimethylbenzene	105	10.197	10.192	(0.943)	1027070	9.48620	9.4862
83 sec-Butylbenzene	105	10.514	10.514	(0.972)	1609243	9.11066	9.1107
84 1,3-Dichlorobenzene	146	10.690	10.690	(0.988)	562018	9.81832	9.8183
85 p-Isopropyltoluene	119	10.812	10.812	(0.999)	1297436	9.27029	9.2703
86 1,4-Dichlorobenzene	146	10.861	10.861	(1.004)	488326	9.32613	9.3261
88 n-Butylbenzene	91	11.530	11.530	(1.066)	1152517	9.56164	9.5616
87 1,2-Dichlorobenzene	146	11.499	11.500	(1.063)	399270	9.39634	9.3963
89 1,2-Dibromo-3-chloropropane	157	12.655	12.649	(1.170)	19509	10.2312	10.231
90 1,2,4-Trichlorobenzene	180	13.726	13.726	(1.269)	224918	9.89613	9.8961
91 Hexachlorobutadiene	225	13.957	13.957	(1.290)	296581	11.2189	11.219
92 Napthalene	128	13.994	14.000	(1.294)	211978	10.7887	10.789
93 1,2,3-Trichlorobenzene	180	14.279	14.280	(1.320)	149509	9.56539	9.5654

Data File: /var/chem/gcms/mx.i/X121503.b/f6f3p1ac.d
Report Date: 16-Dec-2003 17:15

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INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: mx.i
Lab File ID: f6f3p1ac.d
Lab Smp Id: F6P8J1AC
Analysis Type: VOA
Quant Type: ISTD
Operator: 063605
Method File: /var/chem/gcms/mx.i/X121503.b/8260B_LM.m
Misc Info: X121503,8260B_LM,plexus.sub

Calibration Date: 15-DEC-2003
Calibration Time: 16:45
Client Smp ID: INTRA-LAB CHECK
Level: LOW
Sample Type: WATER

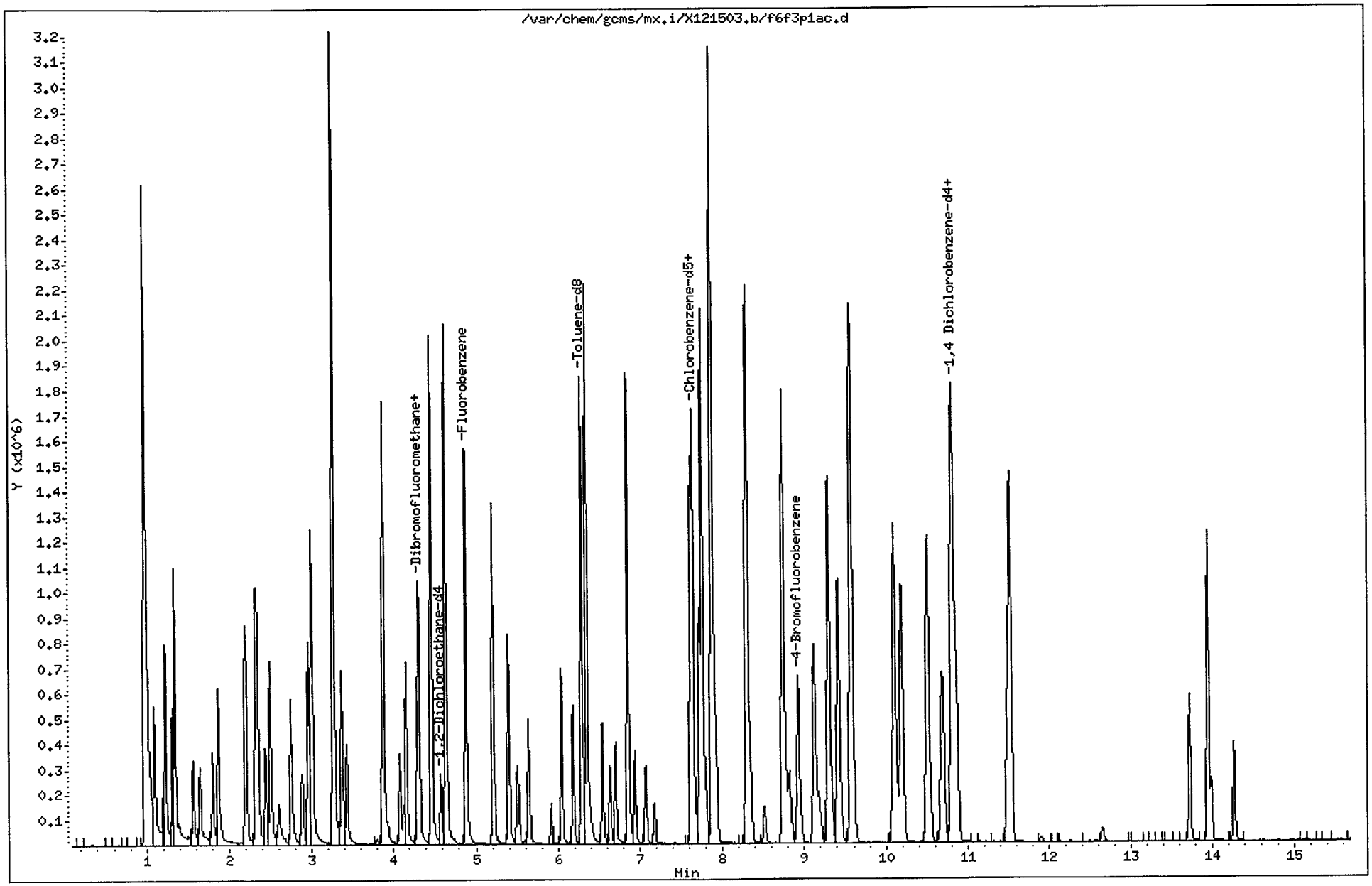
COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Fluorobenzene	1461276	730638	2922552	1225766	-16.12
2 Chlorobenzene-d5	293714	146857	587428	269268	-8.32
3 1,4 Dichlorobenze	323953	161976	647906	303488	-6.32

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Fluorobenzene	4.89	4.39	5.39	4.89	0.00
2 Chlorobenzene-d5	7.62	7.12	8.12	7.62	0.00
3 1,4 Dichlorobenze	10.82	10.32	11.32	10.82	0.00

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

Data File: /var/chem/gcms/mx.i/X121503.b/f6f3p1ac.d
Date : 15-DEC-2003 17:10
Client ID: INTRA-LAB CHECK
Sample Info: F6P8J1AC,1,3,,LCS
Purge Volume: 25.0
Column phase: J+W 624

Instrument: mx.i
Operator: 063605
Column diameter: 0.18



MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Volatiles

Client Lot #...: PB045 **Work Order #...:** F6JX21CF-MS **Matrix.....:** WATER
MS Lot-Sample #: H3L120208-002 F6JX21CG-MSD
Date Sampled...: 12/11/03 **Date Received..:** 12/12/03
Prep Date.....: 12/15/03 **Analysis Date..:** 12/16/03
Prep Batch #...: 3349684
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
1,1-Dichloroethene	**98**	**(62 - 128)**			**SW846 8260B**
	112	**(62 - 128)**	**14**	**(0-26)**	**SW846 8260B**
Trichloroethene	**97**	**(56 - 137)**			**SW846 8260B**
	108	**(56 - 137)**	**11**	**(0-20)**	**SW846 8260B**
Benzene	**89**	**(73 - 125)**			**SW846 8260B**
	99	**(73 - 125)**	**11**	**(0-20)**	**SW846 8260B**
Toluene	**86**	**(69 - 129)**			**SW846 8260B**
	93	**(69 - 129)**	**8.4**	**(0-20)**	**SW846 8260B**
Chlorobenzene	**84**	**(71 - 125)**			**SW846 8260B**
	91	**(71 - 125)**	**8.3**	**(0-20)**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	93	(79 - 120)
	97	(79 - 120)
1,2-Dichloroethane-d4	93	(71 - 127)
	94	(71 - 127)
Toluene-d8	99	(80 - 120)
	100	(80 - 120)
Bromofluorobenzene	87	(69 - 126)
	89	(69 - 126)

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

GC/MS Volatiles

Client Lot #...: PB045
MS Lot-Sample #: H3L120208-002
Date Sampled...: 12/11/03
Prep Date.....: 12/15/03
Prep Batch #...: 3349684
Dilution Factor: 1

Work Order #...: F6JX21CF-MS
F6JX21CG-MSD
Date Received..: 12/12/03
Analysis Date..: 12/16/03

Matrix.....: WATER

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
1,1-Dichloroethene	**ND**	**10.0**	**9.76**	**ug/L**	**98**		**SW846 8260B**
	ND	**10.0**	**11.2**	**ug/L**	**112**	**14**	**SW846 8260B**
Trichloroethene	**ND**	**10.0**	**9.74**	**ug/L**	**97**		**SW846 8260B**
	ND	**10.0**	**10.8**	**ug/L**	**108**	**11**	**SW846 8260B**
Benzene	**ND**	**10.0**	**8.89**	**ug/L**	**89**		**SW846 8260B**
	ND	**10.0**	**9.89**	**ug/L**	**99**	**11**	**SW846 8260B**
Toluene	**ND**	**10.0**	**8.59**	**ug/L**	**86**		**SW846 8260B**
	ND	**10.0**	**9.34**	**ug/L**	**93**	**8.4**	**SW846 8260B**
Chlorobenzene	**ND**	**10.0**	**8.41**	**ug/L**	**84**		**SW846 8260B**
	ND	**10.0**	**9.13**	**ug/L**	**91**	**8.3**	**SW846 8260B**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Dibromofluoromethane	93	(79 - 120)
	97	(79 - 120)
1,2-Dichloroethane-d4	93	(71 - 127)
	94	(71 - 127)
Toluene-d8	99	(80 - 120)
	100	(80 - 120)
Bromofluorobenzene	87	(69 - 126)
	89	(69 - 126)

NOTE(S):

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

Bold print denotes control parameters

Data File: /var/chem/gcms/mx.i/X121503.b/f6jx21cf.d
Report Date: 16-Dec-2003 15:42

STL Knoxville

SW-846 Method 8260A - Volatile Organics

Data file : /var/chem/gcms/mx.i/X121503.b/f6jx21cf.d
Lab Smp Id: F6JX21CF Client Smp ID: DD3004
Inj Date : 16-DEC-2003 01:11
Operator : 063605 Inst ID: mx.i
Smp Info : F6JX21CF,1,3,,MS
Misc Info : X121503,8260,1-all.sub
Comment :
Method : /var/chem/gcms/mx.i/X121503.b/8260B_LM.m
Meth Date : 15-Dec-2003 18:56 tillerm Quant Type: ISTD
Cal Date : 16-SEP-2003 12:52 Cal File: icxi166.d
Als bottle: 1 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 1-all.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * Uf*Vt/(Vo*1000) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Unit Correction factor
Vt	25000.00000	Sample Volume Purged
Vo	25.00000	Sample Volume Used

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
* 1 Fluorobenzene	96	4.888	4.887	(1.000)	1417079	10.0000	
* 2 Chlorobenzene-d5	119	7.623	7.624	(1.000)	289626	10.0000	
* 3 1,4 Dichlorobenzene-d4	152	10.823	10.818	(1.000)	353026	10.0000	
$ 5 1,2-Dichloroethane-d4	65	4.583	4.583	(0.938)	168546	9.25739	9.2574
$ 4 Dibromofluoromethane	113	4.297	4.297	(0.879)	219239	9.29060	9.2906
$ 6 Toluene-d8	98	6.291	6.292	(0.825)	1322856	9.94339	9.9434
$ 7 4-Bromofluorobenzene	95	8.931	8.926	(0.825)	367964	8.70787	8.7079
10 Dichlorodifluoromethane	85	1.098	1.097	(0.225)	301891	8.19929	8.1993
11 Chloromethane (spcc)	50	1.225	1.231	(0.251)	617645	11.5207	11.521
12 Vinyl Chloride (ccc)	62	1.317	1.316	(0.269)	387202	9.27083	9.2708
14 Bromomethane	94	1.566	1.565	(0.320)	148137	8.44979	8.4498
15 Chloroethane	64	1.651	1.651	(0.338)	183965	8.11215	8.1121
17 Trichlorofluoromethane	101	1.876	1.876	(0.384)	430349	9.03441	9.0344
20 1,1-Dichloroethene (ccc)	96	2.326	2.326	(0.476)	258520	9.75649	9.7565

Data File: /var/chem/gcms/mx.i/X121503.b/f6jx21cf.d
Report Date: 16-Dec-2003 15:42

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
	21 *Freon 113	151	2.351	2.344	(0.481)	227899	10.4586	10.458
	24 Carbon Disulfide	76	2.503	2.496	(0.512)	992353	10.0374	10.037
	22 Acetone	43	2.369	2.368	(0.485)	84859	32.9585	32.958
	23 *Iodomethane	142	2.448	2.441	(0.501)	419072	12.3781	12.378
	27 Methylene Chloride	84	2.758	2.752	(0.564)	180155	7.90626	7.9063
	29 *Acrylonitrile	53	2.965	2.959	(0.607)	582243	174.732	174.73
	30 trans-1,2-Dichloroethene	96	3.008	3.007	(0.615)	294247	8.98511	8.9851
	31 *MTBE	73	3.020	3.013	(0.618)	209758	6.06401	6.0640
	32 *Hexane	57	3.269	3.269	(0.669)	1273908	9.84707	9.8471
	33 1,1-Dichloroethane (spcc)	63	3.373	3.366	(0.690)	581253	9.23536	9.2354
	37 2,2-Dichloropropane	77	3.878	3.877	(0.793)	409644	8.48728	8.4873
	38 cis 1,2-Dichloroethene	96	3.878	3.877	(0.793)	284756	8.69585	8.6958
M	8 1,2-Dichloroethene (total)	96				579004	17.6810	17.681
	39 2-Butanone	43	3.896	3.889	(0.797)	141363	37.9997	38.000
	40 Bromochloromethane	128	4.085	4.084	(0.836)	73667	8.26899	8.2690
	42 Chloroform (ccc)	83	4.164	4.163	(0.852)	438088	8.62199	8.6220
	43 1,1,1-Trichloroethane	97	4.322	4.315	(0.884)	483651	8.68850	8.6885
	44 Carbon Tetrachloride	117	4.468	4.467	(0.914)	396162	8.49193	8.4919
	45 1,1-Dichloropropene	75	4.468	4.467	(0.914)	445928	9.25502	9.2550
	46 Benzene	78	4.638	4.638	(0.949)	1235081	8.88681	8.8868
	47 1,2-Dichloroethane	62	4.650	4.644	(0.951)	211470	9.17697	9.1770
	49 Trichloroethene	130	5.214	5.209	(1.067)	363758	9.74229	9.7423
	50 1,2-Dichloropropane (ccc)	63	5.396	5.392	(1.104)	287222	9.34638	9.3464
	51 Dibromomethane	93	5.500	5.495	(1.125)	69358	8.29229	8.2923
	52 Bromodichloromethane	83	5.646	5.641	(1.155)	227037	7.39782	7.3978
	54 cis-1,3-Dichloropropene	75	6.047	6.043	(1.237)	253863	6.90988	6.9099(R)
	55 4-Methyl-2-pentanone	43	6.181	6.183	(1.265)	355531	34.5466	34.547
	56 Toluene (ccc)	91	6.351	6.353	(0.833)	1474081	8.58734	8.5873
	57 trans-1,3-Dichloropropene	75	6.546	6.548	(0.859)	164775	6.41337	6.4134(R)
	58 1,1,2-Trichloroethane	97	6.710	6.712	(0.880)	111486	8.56412	8.5641
	59 Tetrachloroethene	164	6.862	6.858	(0.900)	336351	9.84043	9.8404
	60 1,3-Dichloropropane	76	6.862	6.864	(0.900)	192963	8.66334	8.6633
	61 2-Hexanone	43	6.942	6.943	(0.911)	227725	33.2320	33.232
	62 Chlorodibromomethane	129	7.075	7.077	(0.928)	112099	6.69682	6.6968(R)
	63 1,2-Dibromoethane	107	7.179	7.180	(0.942)	105540	8.63548	8.6355
	64 Chlorobenzene (spcc)	112	7.653	7.655	(1.004)	800661	8.40749	8.4075
	66 Ethylbenzene (ccc)	106	7.763	7.764	(1.018)	538884	8.55550	8.5555
	65 1,1,1,2-Tetrachloroethane	131	7.726	7.728	(1.014)	217782	8.03276	8.0328
	67 m&p-Xylene	106	7.878	7.880	(1.034)	1185186	15.7446	15.745
	68 o-Xylene	106	8.298	8.300	(1.089)	527183	7.79597	7.7960
M	9 Xylene (total)	106				1712369	23.5406	23.540
	69 Styrene	104	8.310	8.312	(1.090)	653135	6.48990	6.4899(R)
	70 Bromoform (spcc)	173	8.511	8.513	(1.117)	49205	5.06390	5.0639(R)
	71 Isopropylbenzene	105	8.742	8.744	(1.147)	1691224	7.98865	7.9886
	73 Bromobenzene	156	9.132	9.127	(1.198)	253503	7.58652	7.5865
	74 1,1,2,2-Tetrachloroethane(sp)	83	9.119	9.121	(1.196)	109398	8.26436	8.2644
	77 n-Propylbenzene	91	9.302	9.303	(0.859)	1778672	7.70353	7.7035

Data File: /var/chem/gcms/mx.i/X121503.b/f6jx21cf.d
Report Date: 16-Dec-2003 15:42

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
75 1,2,3-Trichloropropane	110	9.174	9.176	(0.848)	30492	8.78470	8.7847
78 2-Chlorotoluene	91	9.418	9.413	(0.870)	971327	7.80197	7.8020
79 1,3,5-Trimethylbenzene	105	9.576	9.571	(0.885)	1122508	8.04481	8.0448
80 4-Chlorotoluene	91	9.582	9.577	(0.885)	1007459	7.34770	7.3477
81 tert-Butylbenzene	119	10.105	10.106	(0.934)	1076551	7.75590	7.7559
82 1,2,4-Trimethylbenzene	105	10.190	10.192	(0.942)	985151	7.82221	7.8222
83 sec-Butylbenzene	105	10.513	10.514	(0.971)	1575111	7.66609	7.6661
84 1,3-Dichlorobenzene	146	10.689	10.690	(0.988)	538393	8.08577	8.0858
85 p-Isopropyltoluene	119	10.817	10.812	(0.999)	1256181	7.71604	7.7160
86 1,4-Dichlorobenzene	146	10.865	10.861	(1.004)	469296	7.70501	7.7050
88 n-Butylbenzene	91	11.528	11.530	(1.065)	1063468	7.58480	7.5848
87 1,2-Dichlorobenzene	146	11.498	11.500	(1.062)	395098	7.99340	7.9934
89 1,2-Dibromo-3-chloropropane	157	12.654	12.649	(1.169)	16171	7.29040	7.2904
90 1,2,4-Trichlorobenzene	180	13.725	13.726	(1.268)	200721	7.59222	7.5922
91 Hexachlorobutadiene	225	13.956	13.957	(1.289)	278012	9.08388	9.0839
92 Napthalene	128	13.998	14.000	(1.293)	148863	6.51327	6.5133(R)
93 1,2,3-Trichlorobenzene	180	14.278	14.280	(1.319)	134680	7.40754	7.4075

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Data File: /var/chem/gcms/mx.i/X121503.b/f6jx21cf.d
Report Date: 16-Dec-2003 15:42

STL Knoxville

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: mx.i
Lab File ID: f6jx21cf.d
Lab Smp Id: F6JX21CF
Analysis Type: VOA
Quant Type: ISTD
Operator: 063605
Method File: /var/chem/gcms/mx.i/X121503.b/8260B_LM.m
Misc Info: X121503,8260,1-all.sub

Calibration Date: 15-DEC-2003
Calibration Time: 16:45
Client Smp ID: DD3004
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Fluorobenzene	1461276	730638	2922552	1417079	-3.02
2 Chlorobenzene-d5	293714	146857	587428	289626	-1.39
3 1,4 Dichlorobenze	323953	161976	647906	353026	8.97

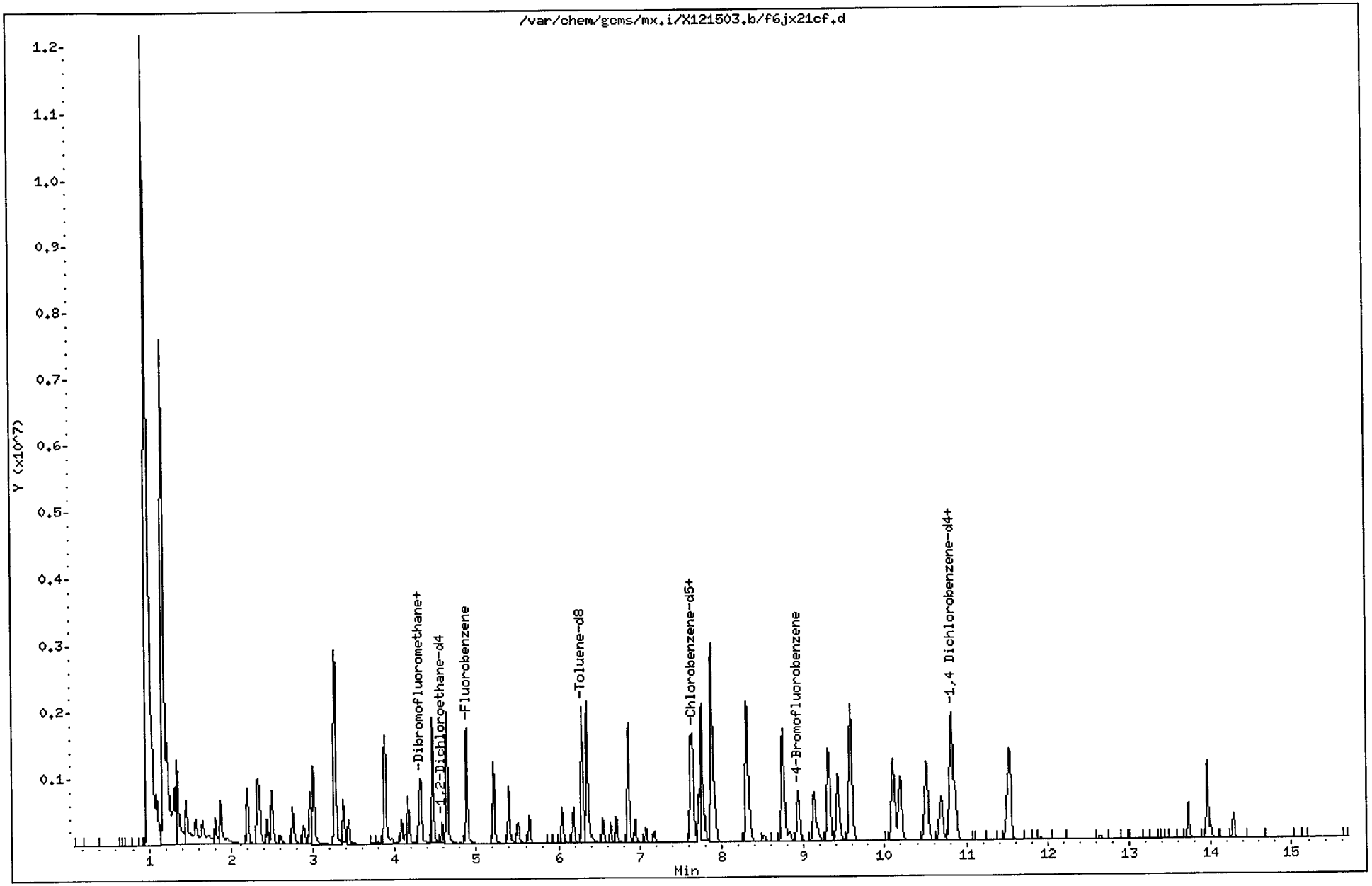
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Fluorobenzene	4.89	4.39	5.39	4.89	0.01
2 Chlorobenzene-d5	7.62	7.12	8.12	7.62	-0.02
3 1,4 Dichlorobenze	10.82	10.32	11.32	10.82	0.04

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

Data File: /var/chem/gcms/mx.i/X121503.b/f6jx21cf.d
Date : 16-DEC-2003 01:11
Client ID: DD3004
Sample Info: F6JX21CF,1,3,,MS
Purge Volume: 25.0
Column phase: J+W 624

Instrument: mx.i

Operator: 063605
Column diameter: 0.18



Data File: /var/chem/gcms/mx.i/X121503.b/f6jx21cg.d
Report Date: 16-Dec-2003 15:42

STL Knoxville

SW-846 Method 8260A - Volatile Organics

Data file : /var/chem/gcms/mx.i/X121503.b/f6jx21cg.d
Lab Smp Id: F6JX21CG Client Smp ID: DD3004
Inj Date : 16-DEC-2003 01:36
Operator : 063605 Inst ID: mx.i
Smp Info : F6JX21CG,1,3,,MSD
Misc Info : X121503,8260,1-all.sub
Comment :
Method : /var/chem/gcms/mx.i/X121503.b/8260B_LM.m
Meth Date : 15-Dec-2003 18:56 tillerm Quant Type: ISTD
Cal Date : 16-SEP-2003 12:52 Cal File: icxi166.d
Als bottle: 1 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 1-all.sub
Target Version: 3.50
Processing Host: qmidhp01

12/19/03

Concentration Formula: Amt * DF * Uf*Vt/(Vo*1000) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Unit Correction factor
Vt	25000.00000	Sample Volume Purged
Vo	25.00000	Sample Volume Used

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
* 1 Fluorobenzene	96	4.884	4.887	(1.000)	1317137	10.0000	
* 2 Chlorobenzene-d5	119	7.623	7.624	(1.000)	272705	10.0000	
* 3 1,4 Dichlorobenzene-d4	152	10.823	10.818	(1.000)	319853	10.0000	
$ 5 1,2-Dichloroethane-d4	65	4.586	4.583	(0.939)	159176	9.40612	9.4061
$ 4 Dibromofluoromethane	113	4.300	4.297	(0.880)	213518	9.73472	9.7347
$ 6 Toluene-d8	98	6.291	6.292	(0.825)	1254501	10.0147	10.015
$ 7 4-Bromofluorobenzene	95	8.931	8.926	(0.825)	342478	8.94530	8.9453
10 Dichlorodifluoromethane	85	1.094	1.097	(0.224)	319301	9.33016	9.3302
11 Chloromethane (spcc)	50	1.228	1.231	(0.251)	609124	12.2117	12.212
12 Vinyl Chloride (ccc)	62	1.313	1.316	(0.269)	391242	10.0852	10.085
14 Bromomethane	94	1.569	1.565	(0.321)	150176	9.19069	9.1907
15 Chloroethane	64	1.654	1.651	(0.339)	196241	9.32414	9.3241
17 Trichlorofluoromethane	101	1.873	1.876	(0.383)	457966	10.3437	10.344
20 1,1-Dichloroethene (ccc)	96	2.329	2.326	(0.477)	276381	11.2220	11.222

Data File: /var/chem/gcms/mx.i/X121503.b/f6jx21cg.d
Report Date: 16-Dec-2003 15:42

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
	21 *Freon 113	151	2.347	2.344	(0.481)	240214	11.8601	11.860
	24 Carbon Disulfide	76	2.499	2.496	(0.512)	1032133	11.2319	11.232
	22 Acetone	43	2.372	2.368	(0.486)	82141	34.5131	34.513
	23 *Iodomethane	142	2.445	2.441	(0.501)	434139	13.7961	13.796
	27 Methylene Chloride	84	2.755	2.752	(0.564)	189605	9.06035	9.0604
	29 *Acrylonitrile	53	2.962	2.959	(0.606)	604807	195.275	195.28
	30 trans-1,2-Dichloroethene	96	3.004	3.007	(0.615)	315955	10.3801	10.380
	31 *MTBE	73	3.016	3.013	(0.618)	207997	6.46939	6.4694
	32 *Hexane	57	3.272	3.269	(0.670)	1304536	10.8490	10.849
	33 1,1-Dichloroethane (spcc)	63	3.369	3.366	(0.690)	597295	10.2103	10.210
	37 2,2-Dichloropropane	77	3.880	3.877	(0.794)	430809	9.60307	9.6031
	38 cis 1,2-Dichloroethene	96	3.880	3.877	(0.794)	296857	9.75323	9.7532
M	8 1,2-Dichloroethene (total)	96				612813	20.1333	20.133
	39 2-Butanone	43	3.892	3.889	(0.797)	140234	40.5739	40.574
	40 Bromochloromethane	128	4.087	4.084	(0.837)	78312	9.45742	9.4574
	42 Chloroform (ccc)	83	4.166	4.163	(0.853)	460892	9.75905	9.7590
	43 1,1,1-Trichloroethane	97	4.318	4.315	(0.884)	516749	9.98746	9.9875
	44 Carbon Tetrachloride	117	4.470	4.467	(0.915)	417062	9.61826	9.6182
	45 1,1-Dichloropropene	75	4.464	4.467	(0.914)	463090	10.3405	10.340
	46 Benzene	78	4.641	4.638	(0.950)	1278169	9.89469	9.8947
	47 1,2-Dichloroethane	62	4.647	4.644	(0.951)	212904	9.94024	9.9402
	49 Trichloroethene	130	5.214	5.209	(1.068)	376428	10.8466	10.847
	50 1,2-Dichloropropane (ccc)	63	5.397	5.392	(1.105)	292335	10.2346	10.234
	51 Dibromomethane	93	5.500	5.495	(1.126)	72588	9.33699	9.3370
	52 Bromodichloromethane	83	5.646	5.641	(1.156)	230330	8.07459	8.0746
	54 cis-1,3-Dichloropropene	75	6.048	6.043	(1.238)	247017	7.23371	7.2337
	55 4-Methyl-2-pentanone	43	6.181	6.183	(1.266)	348569	36.4401	36.440
	56 Toluene (ccc)	91	6.352	6.353	(0.833)	1509826	9.34135	9.3414
	57 trans-1,3-Dichloropropene	75	6.546	6.548	(0.859)	153812	6.35813	6.3581(R)
	58 1,1,2-Trichloroethane	97	6.711	6.712	(0.880)	113516	9.26113	9.2611
	59 Tetrachloroethene	164	6.863	6.858	(0.900)	352983	10.9678	10.968
	60 1,3-Dichloropropane	76	6.863	6.864	(0.900)	189478	9.03477	9.0348
	61 2-Hexanone	43	6.948	6.943	(0.911)	232621	36.0529	36.053
	62 Chlorodibromomethane	129	7.076	7.077	(0.928)	111414	7.06892	7.0689
	63 1,2-Dibromoethane	107	7.179	7.180	(0.942)	103718	9.01300	9.0130
	64 Chlorobenzene (spcc)	112	7.654	7.655	(1.004)	819024	9.13398	9.1340
	66 Ethylbenzene (ccc)	106	7.763	7.764	(1.018)	562699	9.48793	9.4879
	65 1,1,1,2-Tetrachloroethane	131	7.727	7.728	(1.014)	216960	8.49901	8.4990
	67 m&p-Xylene	106	7.879	7.880	(1.034)	1238015	17.4669	17.467
	68 o-Xylene	106	8.298	8.300	(1.089)	544423	8.55049	8.5505
M	9 Xylene (total)	106				1782439	26.0174	26.017
	69 Styrene	104	8.311	8.312	(1.090)	668914	7.05913	7.0591
	70 Bromoform (spcc)	173	8.511	8.513	(1.117)	47169	5.15559	5.1556(R)
	71 Isopropylbenzene	105	8.743	8.744	(1.147)	1765376	8.85635	8.8563
	73 Bromobenzene	156	9.132	9.127	(1.198)	253426	8.05483	8.0548
	74 1,1,2,2-Tetrachloroethane(sp)	83	9.120	9.121	(1.196)	107662	8.66710	8.6671
	77 n-Propylbenzene	91	9.302	9.303	(0.859)	1852786	8.85678	8.8568

Data File: /var/chem/gcms/mx.i/X121503.b/f6jx21cg.d
Report Date: 16-Dec-2003 15:42

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
75 1,2,3-Trichloropropane	110	9.181	9.176	(0.848)	30509	9.65064	9.6506
78 2-Chlorotoluene	91	9.418	9.413	(0.870)	1012297	8.97437	8.9744
79 1,3,5-Trimethylbenzene	105	9.576	9.571	(0.885)	1161155	9.18487	9.1849
80 4-Chlorotoluene	91	9.576	9.577	(0.885)	1043003	8.39588	8.3959
81 tert-Butylbenzene	119	10.105	10.106	(0.934)	1136665	9.03831	9.0383
82 1,2,4-Trimethylbenzene	105	10.197	10.192	(0.942)	1026934	8.99966	8.9997
83 sec-Butylbenzene	105	10.513	10.514	(0.971)	1666490	8.95205	8.9520
84 1,3-Dichlorobenzene	146	10.689	10.690	(0.988)	554984	9.19939	9.1994
85 p-Isopropyltoluene	119	10.817	10.812	(0.999)	1317126	8.92949	8.9295
86 1,4-Dichlorobenzene	146	10.866	10.861	(1.004)	482767	8.74823	8.7482
88 n-Butylbenzene	91	11.529	11.530	(1.065)	1138647	8.96325	8.9632
87 1,2-Dichlorobenzene	146	11.498	11.500	(1.062)	410315	9.16222	9.1622
89 1,2-Dibromo-3-chloropropane	157	12.654	12.649	(1.169)	16051	7.98689	7.9869
90 1,2,4-Trichlorobenzene	180	13.725	13.726	(1.268)	214867	8.97019	8.9702
91 Hexachlorobutadiene	225	13.956	13.957	(1.289)	295983	10.6353	10.635
92 Napthalene	128	13.999	14.000	(1.293)	177521	8.57275	8.5727
93 1,2,3-Trichlorobenzene	180	14.278	14.280	(1.319)	148801	9.03305	9.0330

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Data File: /var/chem/gcms/mx.i/X121503.b/f6jx21cg.d
Report Date: 16-Dec-2003 15:42

STL Knoxville

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: mx.i
Lab File ID: f6jx21cg.d
Lab Smp Id: F6JX21CG
Analysis Type: VOA
Quant Type: ISTD
Operator: 063605
Method File: /var/chem/gcms/mx.i/X121503.b/8260B_LM.m
Misc Info: X121503,8260,1-all.sub

Calibration Date: 15-DEC-2003
Calibration Time: 16:45
Client Smp ID: DD3004
Level: LOW
Sample Type: WATER

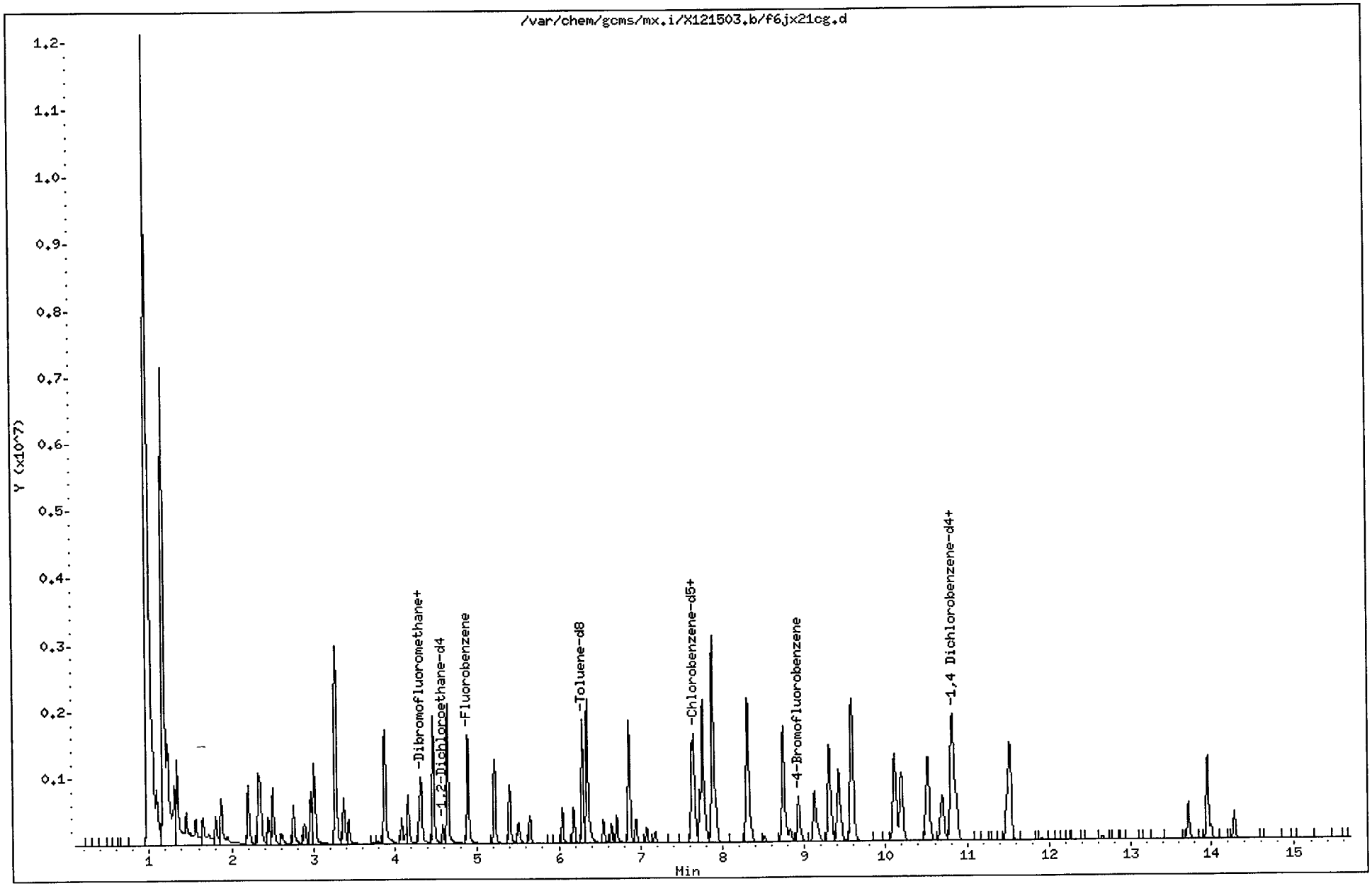
COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 Fluorobenzene	1461276	730638	2922552	1317137	-9.86
2 Chlorobenzene-d5	293714	146857	587428	272705	-7.15
3 1,4 Dichlorobenze	323953	161976	647906	319853	-1.27

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 Fluorobenzene	4.89	4.39	5.39	4.88	-0.06
2 Chlorobenzene-d5	7.62	7.12	8.12	7.62	-0.02
3 1,4 Dichlorobenze	10.82	10.32	11.32	10.82	0.05

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

Data File: /var/chem/gcms/mx.i/X121503.b/f6jx21cg.d
Date : 16-DEC-2003 01:36
Client ID: DD3004
Sample Info: F6JX21CG,1,3,,MSD
Purge Volume: 25.0
Column phase: J+W 624

Instrument: mx.i
Operator: 063605
Column diameter: 0.18



Miscellaneous Data

STL Volatile GC/MS Data Review / Narrative Checklist **LOT/Project #** PB045

Method: 8260B - KNOX-MS-0015, Rev. 3

Instrument:	MX					
Scanned File Names:	X091603F					
	X121603					
	X121503					

Review Items **A. Tune / Calibration**	N/A	Yes	No	Why is data reportable?	2nd √
1. Were all samples injected within 12 hr of BFB?		✓			✓
2. Has a Continuing Calibration Checklist been completed for each analytical batch?		✓			✓
3. Was the correct ICAL used for quantitation?		✓			✓
B. CLIENT SAMPLE AND QC SAMPLE Results					
1. Were all special project requirements met?		✓			✓
2. Were prep/dilution factors & header information verified?		✓			✓
3. Was date/time of analysis verified between analysis header and logbook as correct?		✓			✓
4. Sample analyses done within preparation and analytical holding time (HT)? *If no, list samples:* _____		✓		o *[ht1] HT expired upon receipt.* o *[ht2] Client requested analysis after HT expired.** o**Reanalysis done after HT expired. See [sur4].**	✓
5. Was pH ≤2 for all samples? *If no, list samples:* _____		✓		o *[pH] pH >2. Sample analyzed within 14 days.*	✓
6. Are surrogates and internal standards within QC limits? *If no, list samples and reason (e.g.,* **sur1***):* Sample / Reason / Sample / Reason		✓		o [sur1] MS/MSD surr.%R demonstrated same effect. o [sur2] Reanalysis demonstrated same effect. o **[sur3] Not enough sample to reanalyze.** o **[sur4] Reanalysis done outside HT. Rerun shows original %R were wrong; both sets data reported.** o **[sur5] At client's request, data was flagged as estimated & released without further investigation.*** o [sur6] Dilution showed acceptable %R. o [sur7] Obvious matrix interference. o **[sur12] Surr.%R high and all targets ND.** o **[is1] Per client, reanalysis was not performed. *** o [is2] Reanalysis confirmed a matrix effect. o [is3] Reanalysis at dilution was acceptable. o [is4] MS/MSD IS %R demonstrated same effect. **8260B ONLY ↓** o [isb1] Sample bracketed by acceptable runs. o [isb2] IS and associated surr. %R out, but sample bracketed by acceptable runs. o [isb3] IS and unassociated surr. %R out. Reanalysis confirmed a matrix effect.	✓
6. Are internal standards <0.5min of last CCAL?		✓			✓
7. Were positive hits evaluated using qualitative identification criteria and technical judgement?		✓			✓
8. Are positive results within calibration range? *If no, list samples:* _____		✓		o **[dil5] At client's request, sample was analyzed with minimum dilution even though some analytes were outside of calibration range.***	✓
9. For diluted analyses, was the largest analyte targeted to be above 50% of calibration range? *List samples and reason (e.g.,* dil1*):* Sample / Reason / Sample / Reason	✓	NA 1 of 3		o [dil1] Conc. of (ANALYTE) > calibration range. RLs adjusted accordingly. o [dil2] Conc. of several compounds > calibration range. RLs adjusted accordingly. o [dil3] Conc. of (ANALYTE) > calibration range. Both analyses reported to provide lowest RLs. o [dil4] Conc. of several compounds > calibration range. Both analyses reported to provide lowest RLs.	NA

* Such action must be taken in consultation with client.

STL Volatile GC/MS Data Review / Narrative Checklist
Method: 8260B - KNOX-MS-0015, Rev. 3

LOT/Project # PB045

B. CLIENT SAMPLE AND QC SAMPLE Results	N/A	Yes	No	Why is data reportable?	2nd √
10. For initial analysis, was the largest analyte > 20% of calibration range? *List samples and reason (e.g.,* elev1*):* Sample / Reason: DD 3003 / elev5		✓		o [elev1] Elevated RL for (ANALYTE) due to sample matrix interferences. o [elev2] Elevated RL for (ANALYTE) due to interfering analyte. o [elev3] Elevated RLs for all analytes due to difficult sample matrix. o [elev4] Diluted based on screening results. o [elev5] Elevated RLs for all analytes due to presence of non-target compounds.	✓
11. If manual integrations were performed, are they clearly identified, initialed, dated and reason given?	✓			Reasons: 1)Corrected split peak; 2)Unresolved peak; 3)tailing; 4)RT shift; 5)wrong peak selected; 6)other	NA
12. Have alternate hits and manual integrations been verified as correct?	✓				NA
13. Final report acceptable? (Results correct, RLs calculated correctly, units correct, surrogate %R correct, appropriate flags used, dilution factor correct, and extraction/ analysis dates correct.)		✓			✓
14. Was a narrative prepared and all deviations noted?		✓			✓
C. Preparation/Matrix QC					
1. LCS done per prep batch and all analytes within laboratory established QC limits? *If no, list LCS ID:*		✓		o **[lcs2] Insufficient sample for reanalysis.*** o **[lcs3] LCS %R high and all analyte(s) were <RL in associated samples.**	✓
2. Method blank done per prep batch and method blank or instrument blank analyzed with each sequence?		✓			✓
3. Method blank surrogate recoveries within QC limits?		✓		o **[mb1] All sample surrogates OK and there is no analyte >RL in samples associated with blank.***	✓
4. Are all analytes present in the method blank < RL? *If no, list blank ID:*		✓		o [mb2] Common lab contaminant <5x RL.* o **[mb3] No analyte > RL in associated samples.*** o **[mb4] Sample results > 20x higher than blank.** o **[mb5] Insufficient sample for reanalysis ***	✓
5. MS/MSD done per batch?		✓		☐ [lcsd] Insufficient sample. LCS/LCSD analyzed.	✓
6. MS/MSD recoveries and RPDs within laboratory generated QC limits? *If no, list MS/MSD ID:*		✓		o [ms1] LCS acceptable - sample matrix effects. o [ms2] LCS acceptable. High native analyte concentration relative to spike level. o [rpd] LCS acceptable. RPD out due to lack of sample homogeneity.	✓
7. Were MS run #'s assigned correctly?		✓			✓
D. Other					
1. Are all nonconformances documented appropriately and copy included with deliverable?	✓				NA
2. Are the correct scanned file names listed at the top of the data review checklist?		✓			✓
3. Were the standards scanned properly with runlogs?		✓			✓

Analyst: MT	Date: 12/17/03	2nd Level Reviewer: [illegible]	Date: 12/29/03
Comments:		**Comments:**	

* Such action must be taken in consultation with client.

RQC058

Severn Trent Laboratories, Inc.
EXTRACTION BENCH WORKSHEET

Run Date: 12/11/03
Time: 17:05:16

LEV 1	LEV 2		LEV 1	LEV 2	
_	_	Blank	_	_	Weights/Volumes
_	_	Check	_	_	Spike & Surrogate Worksheet
_	_	MS/MSD	_	_	Vial contains correct volume
			_	_	Labels, greenbars, worksheets
			_	_	computer batch: correct & all match
			_	_	Anomalies to Extraction Method

_ Expanded Deliverable
_ COC Completed
_ Bench Sheet Copied
_ Package Submitted to AnalyticalGroup
_ Bench Sheet Copied per COC

Extractionist: _____
_____
Concentrationist: _____
_____

QC BATCH: 3345349

PREP DATE: 12/11/03 12:00
COMP DATE: 12/11/03 24:00

Reviewer/Date: _____ / 0/00/00

Volatile Organics, GC/MS (8260B)
PURGE AND TRAP - 25 mL purge (Waters)

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
0/00/00	1/02/04	H3L100227-001 **F6DGD-1-AA**	D	25	QK	WATER	**25.00mL** 25.00mL	NA	NA	NA		.0		.0	
COMMENTS:															
0/00/00	1/02/04	H3L100227-002 **F6DG2-1-AA**	D	25	QK	WATER	**25.00mL** 25.00mL	NA	NA	NA		.0		.0	
COMMENTS:															
0/00/00	1/02/04	H3L100227-003 **F6DG5-1-AA**	D	25	QK	WATER	**25.00mL** 25.00mL	NA	NA	NA		.0		.0	
COMMENTS:															
0/00/00	1/02/04	H3L100227-004 **F6DG6-1-AA**	D	25	QK	WATER	**25.00mL** 25.00mL	NA	NA	NA		.0		.0	
COMMENTS:															
0/00/00	12/26/03	H3L100237-002 **F6DJ6-1-AA**	D	25	QK	WATER	**25.00mL** 25.00mL	NA	NA	NA		.0		.0	
COMMENTS:															
0/00/00	12/26/03	H3L100237-002 **F6DJ6-2-AA**	D	25	QK	WATER	**25.00mL** 25.00mL	NA	NA	NA		.0		.0	
COMMENTS:															
0/00/00	12/26/03	H3L100237-003 **F6DKD-1-AA**	D	25	QK	WATER	**25.00mL** 25.00mL	NA	NA	NA		.0		.0	
COMMENTS:															

RQC058

Severn Trent Laboratories, Inc.
EXTRACTION BENCH WORKSHEET

Run Date: 12/11/03
Time: 17:05:16

QC BATCH: 3345349

PREP DATE: 12/11/03 12:00
COMP DATE: 12/11/03 24:00

EXTR EXPR	ANL DUE	LOT#,MSRUN#/ WORK ORDER	TEST FLGS	EXT	MTH	MATRIX	INIT/FIN WT/VOL	INIT	PH"S ADJI	ADJ2	SOLVENTS EXTRACTION VOL	EXCHANGE VOL	SPIKE STANDARD/ SURROGATE ID
0/00/00	12/26/03	H3L100237-004 **F6DKL-1-AA**	D	25	QK	WATER	**25.00mL** 25.00mL	NA	NA	NA	.0	.0	
COMMENTS:													
0/00/00	12/26/03	H3L100246-001 **F6DMC-1-AA**	D	25	QK	WATER	**25.00mL** 25.00mL	NA	NA	NA	.0	.0	
COMMENTS:													
0/00/00	12/26/03	H3L100246-002 **F6DMX-1-AA**	D	25	QK	WATER	**25.00mL** 25.00mL	NA	NA	NA	.0	.0	
COMMENTS:													
0/00/00	12/26/03	H3L100246-003 **F6DM2-1-AA**	D	25	QK	WATER	**25.00mL** 25.00mL	NA	NA	NA	.0	.0	
COMMENTS:													
0/00/00	12/26/03	H3L100246-004 **F6DM5-1-AA**	D	25	QK	WATER	**25.00mL** 25.00mL	NA	NA	NA	.0	.0	
COMMENTS:													
0/00/00	12/26/03	H3L100246-005 **F6DNA-1-AA**	D	25	QK	WATER	**25.00mL** 25.00mL	NA	NA	NA	.0	.0	
COMMENTS:													
0/00/00	12/26/03	H3L100246-006 **F6DNJ-1-AA**	D	25	QK	WATER	**25.00mL** 25.00mL	NA	NA	NA	.0	.0	
COMMENTS:													
0/00/00	12/31/03	H3L100268-001 **F6DQ4-1-AC**	D	25	QK	WATER	**25.00mL** 25.00mL	NA	NA	NA	.0	.0	
COMMENTS:													
0/00/00	12/31/03	H3L100268-002 **F6DRG-1-AN**	D	25	QK	WATER	**25.00mL** 25.00mL	NA	NA	NA	.0	.0	
COMMENTS:													
0/00/00	12/31/03	H3L100268-003 **F6DRK-1-AA**	D	25	QK	WATER	**25.00mL** 25.00mL	NA	NA	NA	.0	.0	
COMMENTS:													

RQC058

Severn Trent Laboratories, Inc.
EXTRACTION BENCH WORKSHEET

Run Date: 12/11/03
Time: 17:05:16

QC BATCH: 3345349

PREP DATE: 12/11/03 12:00
COMP DATE: 12/11/03 24:00

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
0/00/00	0/00/00	H3L110000-349 **F6FW3-1-AAB**		25	QK	WATER	**25.00mL** 25.00mL	NA	NA	NA		.0		.0	
COMMENTS:															
0/00/00	0/00/00	H3L110000-349 **F6FW3-1-ACC**		25	QK	WATER	**25.00mL** 25.00mL	NA	NA	NA		.0		.0	
COMMENTS:															
0/00/00	0/00/00	H3L110000-349 **F6FW3-1-ADL**	R	25	QK	WATER	**25.00mL** 25.00mL	NA	NA	NA		.0		.0	
COMMENTS:															
0/00/00	12/31/03	H3L110180-001 **F6F1C-1-AC**	D	25	QK	WATER	**25.00mL** 25.00mL	NA	NA	NA		.0		.0	
COMMENTS:															
0/00/00	12/31/03	H3L110180-002 **F6F2H-1-AN**	D	25	QK	WATER	**25.00mL** 25.00mL	NA	NA	NA		.0		.0	
COMMENTS:															
0/00/00	12/31/03	H3L110180-003 **F6F3C-1-AA**	D	25	QK	WATER	**25.00mL** 25.00mL	NA	NA	NA		.0		.0	
COMMENTS:															

R = RUSH C = CLP
E = EPA 600 D = EXP.DEL)
M = CLIENT REQ MS/MSD

NUMBER OF WORK ORDERS IN BATCH: 23

RQC058

Severn Trent Laboratories, Inc.
EXTRACTION BENCH WORKSHEET

Run Date: 12/15/03
Time: 17:46:40

LEV 1	LEV 2		LEV 1	LEV 2	
_	_	Blank	_	_	Weights/Volumes
_	_	Check	_	_	Spike & Surrogate Worksheet
_	_	MS/MSD	_	_	Vial contains correct volume
			_	_	Labels, greenbars, worksheets
			_	_	computer batch: correct & all match
			_	_	Anomalies to Extraction Method

_ Expanded Deliverable
_ COC Completed
_ Bench Sheet Copied
_ Package Submitted to AnalyticalGroup
_ Bench Sheet Copied per COC

Extractionist: _____

Concentrationist: _____

Reviewer/Date: _____ / 0/00/00

QC BATCH: 3349684

PREP DATE: 12/15/03 12:00
COMP DATE: 12/15/03 24:00

Volatile Organics, GC/MS (8260B)
PURGE AND TRAP - 25 mL purge (Waters)

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
0/00/00	12/31/03	H3L120208-001 **F6JXA-1-AC**	D	25	QK	WATER	**25.00mL** 25.00mL	NA	NA	NA		.0		.0	
COMMENTS:															
0/00/00	12/31/03	H3L120208-002 3349407 **F6JX2-1-CE**	D	25	QK	WATER	**25.00mL** 25.00mL	NA	NA	NA		.0		.0	
COMMENTS:															
0/00/00	12/31/03	H3L120208-002 3349407 **F6JX2-1-CFS**	D	25	QK	WATER	**25.00mL** 25.00mL	NA	NA	NA		.0		.0	
COMMENTS:															
0/00/00	12/31/03	H3L120208-002 3349407 **F6JX2-1-CGD**	D	25	QK	WATER	**25.00mL** 25.00mL	NA	NA	NA		.0		.0	
COMMENTS:															
0/00/00	12/31/03	H3L120208-003 **F6J0A-1-AN**	D	25	QK	WATER	**25.00mL** 25.00mL	NA	NA	NA		.0		.0	
COMMENTS:															
0/00/00	12/31/03	H3L120208-004 **F6J0Q-1-AA**	D	25	QK	WATER	**25.00mL** 25.00mL	NA	NA	NA		.0		.0	
COMMENTS:															
0/00/00	0/00/00	H3L150000-684 **F6P8J-1-AA**B		25	QK	WATER	**25.00mL** 25.00mL	NA	NA	NA		.0		.0	
COMMENTS:															

RQC058

Severn Trent Laboratories, Inc.
EXTRACTION BENCH WORKSHEET

Run Date: 12/15/03
Time: 17:46:40

QC BATCH: 3349684

PREP DATE: 12/15/03 12:00
COMP DATE: 12/15/03 24:00

EXTR EXPR	ANL DUE	LOT#,MSRUN#/ WORK ORDER	TEST FLGS	EXT	MTH	MATRIX	INIT/FIN WT/VOL	INIT	PH"S ADJI	ADJ2	SOLVENTS EXTRACTION	VOL	EXCHANGE	VOL	SPIKE STANDARD/ SURROGATE ID
0/00/00	0/00/00	H3L150000-684 **F6P8J-1-ACC**		25	QK	WATER	**25.00mL** 25.00mL	NA	NA	NA		.0		.0	

COMMENTS:

R = RUSH C = CLP
E = EPA 600 D = EXP.DEL)
M = CLIENT REQ MS/MSD

NUMBER OF WORK ORDERS IN BATCH: 8

Semi-Volatiles

Raw Sample Data

SHAW E & I INC

Client Sample ID: DD3007

GC/MS Semivolatiles

Lot-Sample #...: H3L100268-001 **Work Order #...:** F6DQ41AD **Matrix.....:** WATER
Date Sampled...: 12/09/03 **Date Received..:** 12/10/03
Prep Date.....: 12/12/03 **Analysis Date..:** 12/15/03
Prep Batch #...: 3346158
Dilution Factor: 1 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Phenol	ND	10	ug/L	1.8
bis(2-Chloroethyl)-ether	ND	10	ug/L	1.6
2-Chlorophenol	ND	10	ug/L	1.2
1,3-Dichlorobenzene	ND	10	ug/L	1.6
1,4-Dichlorobenzene	ND	10	ug/L	1.4
1,2-Dichlorobenzene	ND	10	ug/L	1.7
2-Methylphenol	ND	10	ug/L	2.0
2,2'-oxybis(1-Chloro-propane)	ND	10	ug/L	1.4
4-Methylphenol	ND	10	ug/L	3.6
N-Nitrosodi-n-propyl-amine	ND	10	ug/L	2.1
Hexachloroethane	ND	10	ug/L	1.9
Nitrobenzene	ND	10	ug/L	1.8
Isophorone	ND	10	ug/L	1.6
2-Nitrophenol	ND	10	ug/L	2.4
2,4-Dimethylphenol	ND	10	ug/L	3.7
bis(2-Chloroethoxy) methane	ND	10	ug/L	1.5
2,4-Dichlorophenol	ND	10	ug/L	2.0
1,2,4-Trichloro-benzene	ND	10	ug/L	1.5
Naphthalene	ND	10	ug/L	1.7
4-Chloroaniline	ND	10	ug/L	1.8
Hexachlorobutadiene	ND	10	ug/L	1.4
4-Chloro-3-methylphenol	ND	10	ug/L	2.2
2-Methylnaphthalene	ND	10	ug/L	1.6
Hexachlorocyclopenta-diene	ND	50	ug/L	7.9
2,4,6-Trichloro-phenol	ND	10	ug/L	2.0
2,4,5-Trichloro-phenol	ND	10	ug/L	1.6
2-Chloronaphthalene	ND	10	ug/L	1.6
2-Nitroaniline	ND	50	ug/L	1.4
Dimethyl phthalate	ND	10	ug/L	1.1
Acenaphthylene	ND	10	ug/L	1.7
2,6-Dinitrotoluene	ND	10	ug/L	1.7

(Continued on next page)

SHAW E & I INC

Client Sample ID: DD3007

GC/MS Semivolatiles

Lot-Sample #...: H3L100268-001 **Work Order #...:** F6DQ41AD **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
3-Nitroaniline	ND	50	ug/L	1.3
Acenaphthene	ND	10	ug/L	1.5
2,4-Dinitrophenol	ND	50	ug/L	15
4-Nitrophenol	ND	50	ug/L	15
Dibenzofuran	ND	10	ug/L	1.6
2,4-Dinitrotoluene	ND	10	ug/L	1.6
Diethyl phthalate	ND	10	ug/L	1.3
4-Chlorophenyl phenyl ether	ND	10	ug/L	1.6
Fluorene	ND	10	ug/L	1.3
4-Nitroaniline	ND	50	ug/L	1.3
4,6-Dinitro-2-methylphenol	ND	50	ug/L	11
N-Nitrosodiphenylamine	ND	10	ug/L	1.6
4-Bromophenyl phenyl ether	ND	10	ug/L	1.4
Hexachlorobenzene	ND	10	ug/L	0.90
Pentachlorophenol	ND	50	ug/L	8.6
Phenanthrene	ND	10	ug/L	0.84
Anthracene	ND	10	ug/L	0.83
Carbazole	ND	10	ug/L	1.2
Di-n-butyl phthalate	ND	10	ug/L	1.4
Fluoranthene	ND	10	ug/L	1.3
Pyrene	ND	10	ug/L	0.96
Butyl benzyl phthalate	ND	10	ug/L	1.3
3,3'-Dichlorobenzidine	ND	50	ug/L	1.2
Benzo(a)anthracene	ND	10	ug/L	1.2
Chrysene	ND	10	ug/L	0.98
bis(2-Ethylhexyl) phthalate	ND	10	ug/L	2.2
Di-n-octyl phthalate	ND	10	ug/L	2.4
Benzo(b)fluoranthene	ND	10	ug/L	2.1
Benzo(k)fluoranthene	ND	10	ug/L	1.7
Benzo(a)pyrene	ND	10	ug/L	1.6
Indeno(1,2,3-cd)pyrene	ND	10	ug/L	2.1
Dibenz(a,h)anthracene	ND	10	ug/L	2.5
Benzo(ghi)perylene	ND	10	ug/L	2.1

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	74	(29 - 110)
Phenol-d5	89	(41 - 115)
Nitrobenzene-d5	96	(46 - 117)
2-Fluorobiphenyl	91	(44 - 116)
2,4,6-Tribromophenol	110	(31 - 138)
Terphenyl-d14	94	(36 - 134)

Data File: /var/chem/gcms/md.i/D121503.b/f6dq41ad.d
Report Date: 17-Dec-2003 11:56

STL Knoxville

SW-846 Method 8270C

Data file : /var/chem/gcms/md.i/D121503.b/f6dq41ad.d
Lab Smp Id: F6DQ41AD Client Smp ID: DD3007
Inj Date : 15-DEC-2003 21:26
Operator : 3386 Inst ID: md.i
Smp Info : F6DQ41AD,,0,,,
Misc Info : D121503,8270a9,8270.sub
Comment : Semivolatile Organic Compounds by GC/MS
Method : /var/chem/gcms/md.i/D121503.b/8270a9.m
Meth Date : 17-Dec-2003 11:53 layk Quant Type: ISTD
Cal Date : 07-NOV-2003 13:02 Cal File: a9dk076.d
Als bottle: 13
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8270.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Unit Correction factor
Vt	1000.00000	Volume of final extract (uL)
Vo	1000.00000	Volume of sample extracted (mL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/uL)	FINAL (ug/L)
* 1 1,4-Dichlorobenzene-d4	152	4.317	4.317	(1.000)	111908	20.0000	
* 2 Naphthalene-d8	136	5.945	5.945	(1.000)	404081	20.0000	
* 3 Acenaphthene-d10	164	8.589	8.589	(1.000)	232724	20.0000	
* 4 Phenanthrene-d10	188	10.070	10.070	(1.000)	399826	20.0000	
* 5 Chrysene-d12	240	12.173	12.173	(1.000)	400953	20.0000	
* 6 Perylene-d12	264	13.424	13.425	(1.000)	278942	20.0000	
$ 7 2-Fluorophenol	112	3.154	3.154	(0.731)	409915	55.8569	55.8
$ 8 Phenol-d5	99	3.988	3.994	(0.924)	539128	66.9569	67.0
$ 9 Nitrobenzene-d5	82	4.999	4.999	(0.841)	297257	48.0482	48.0
$ 10 2-Fluorobiphenyl	172	7.684	7.684	(0.895)	705525	45.7388	45.7
$ 11 2,4,6-Tribromophenol	330	9.458	9.459	(0.939)	151800	82.5518	82.6
$ 12 Terphenyl-d14	244	11.339	11.339	(0.931)	776870	46.8202	46.8
56 Fluorene	166	9.458	9.194	(1.101)	11415	0.67216	~~0.673~~
58 Diethyl phthalate	149	9.165	9.171	(1.067)	12820	0.83481	0.835

12/17/03

Data File: /var/chem/gcms/md.i/D121503.b/f6dq41ad.d
Report Date: 17-Dec-2003 11:56

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/uL)	FINAL (ug/L)
60 4,6-Dinitro-2-methylphenol	198	9.288	9.318	(0.922)	890	10.3933	~~10.4~~
63 4-Bromophenyl phenyl ether	248	9.458	9.676	(0.939)	8505	2.38216	~~2.38~~

12/17/03

Data File: /var/chem/gcms/md.i/D121503.b/f6dq41ad.d
Report Date: 17-Dec-2003 11:56

STL Knoxville

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: md.i
Lab File ID: f6dq41ad.d
Lab Smp Id: F6DQ41AD
Analysis Type: SV
Quant Type: ISTD
Operator: 3386
Method File: /var/chem/gcms/md.i/D121503.b/8270a9.m
Misc Info: D121503,8270a9,8270.sub

Calibration Date: 15-DEC-2003
Calibration Time: 17:05
Client Smp ID: DD3007
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	114826	57413	229652	111908	-2.54
2 Naphthalene-d8	425133	212566	850266	404081	-4.95
3 Acenaphthene-d10	235031	117516	470062	232724	-0.98
4 Phenanthrene-d10	408242	204121	816484	399826	-2.06
5 Chrysene-d12	410532	205266	821064	400953	-2.33
6 Perylene-d12	297061	148530	594122	278942	-6.10

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	4.32	3.82	4.82	4.32	0.00
2 Naphthalene-d8	5.94	5.44	6.44	5.94	0.00
3 Acenaphthene-d10	8.59	8.09	9.09	8.59	0.00
4 Phenanthrene-d10	10.07	9.57	10.57	10.07	0.00
5 Chrysene-d12	12.17	11.67	12.67	12.17	0.00
6 Perylene-d12	13.42	12.92	13.92	13.42	0.00

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

Data File: /var/chem/gcms/md.i/D121503.b/f6dq41ad.d
Report Date: 17-Dec-2003 11:56

STL Knoxville

RECOVERY REPORT

Client Name: SHAW E & I INC
Sample Matrix: LIQUID
Lab Smp Id: F6DQ41AD
Level: LOW
Data Type: MS DATA
SpikeList File: allspike.spk
Sublist File: 8270.sub
Method File: /var/chem/gcms/md.i/D121503.b/8270a9.m
Misc Info: D121503,8270a9,8270.sub

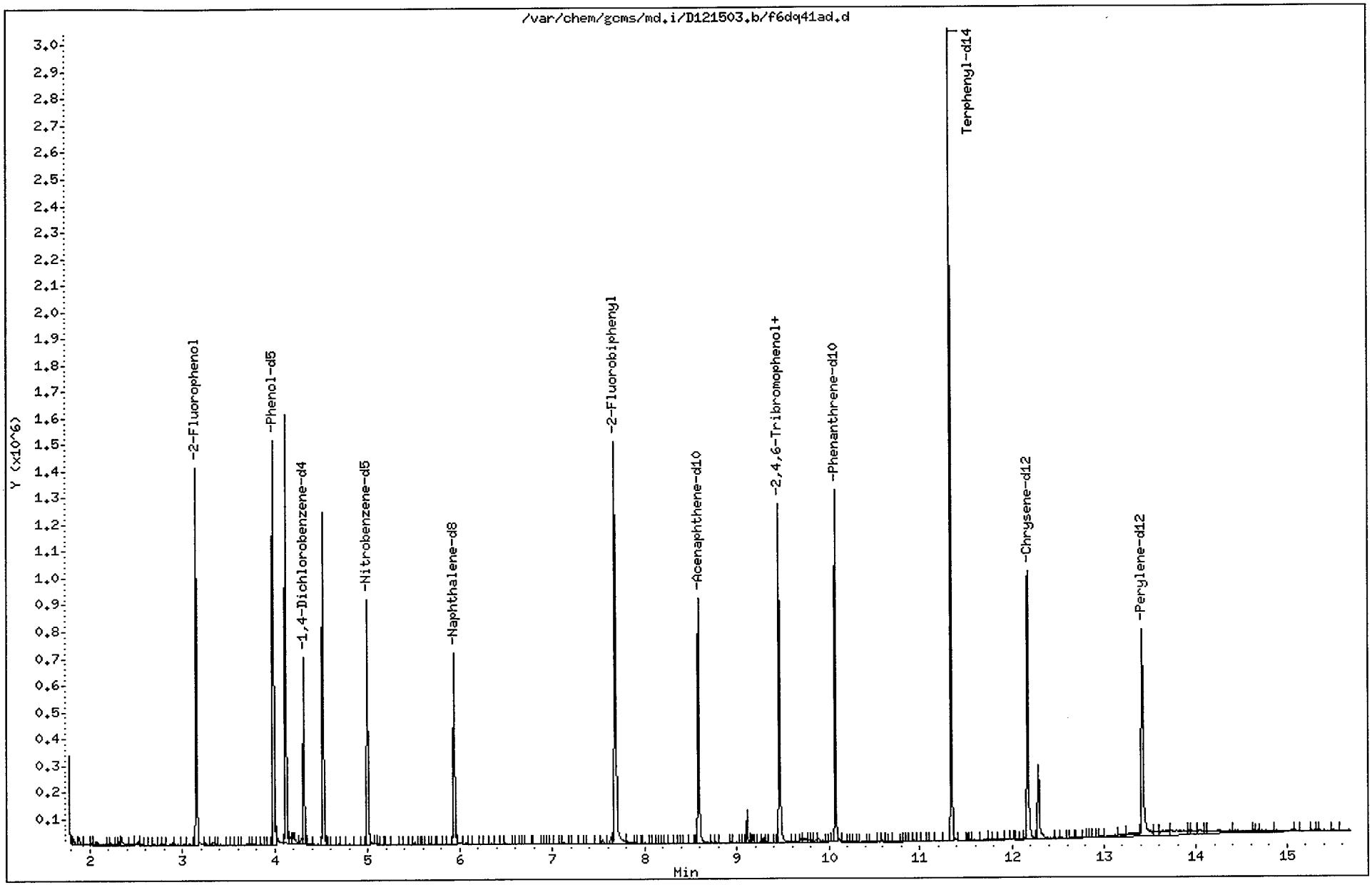
Client SDG: PB045
Fraction: SV
Client Smp ID: DD3007
Operator: 3386
SampleType: SAMPLE
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 7 2-Fluorophenol	75.0	55.8	74.48	29-110
$ 8 Phenol-d5	75.0	67.0	89.28	41-115
$ 9 Nitrobenzene-d5	50.0	48.0	96.10	46-117
$ 10 2-Fluorobiphenyl	50.0	45.7	91.48	44-116
$ 11 2,4,6-Tribromophen	75.0	82.6	110.07	31-138
$ 12 Terphenyl-d14	50.0	46.8	93.64	0-132

Data File: /var/chem/gcms/md.i/D121503.b/f6dq41ad.d
Date : 15-DEC-2003 21:26
Client ID: DD3007
Sample Info: F6DQ41AD,,0,,,
Volume Injected (uL): 1.0
Column phase: ZB-5

Instrument: md.i

Operator: 3386
Column diameter: 0.25



Data File: /var/chem/gcms/md.i/D121503.b/f6dq41ad.d

Date : 15-DEC-2003 21:26

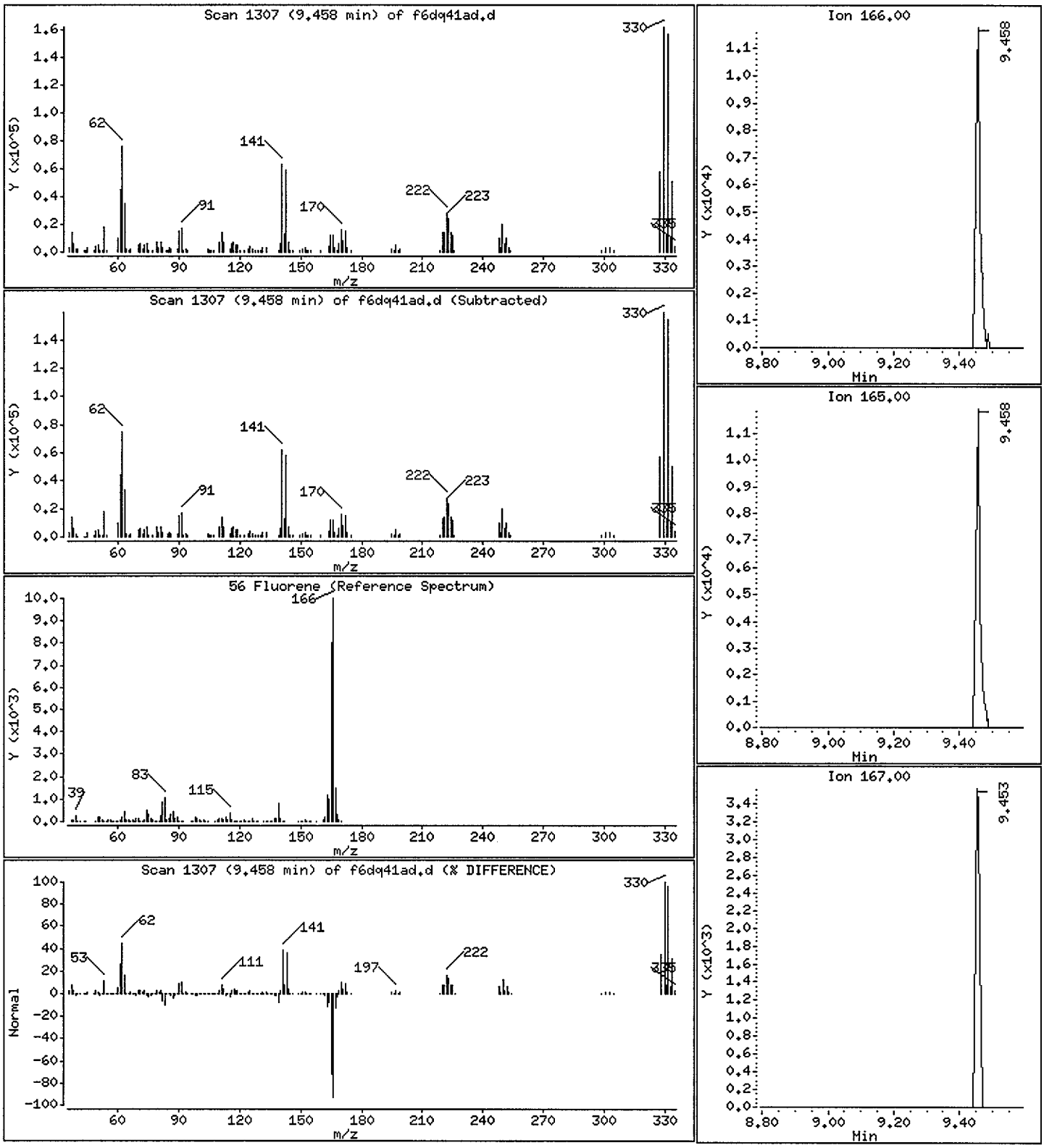
Client ID: DD3007 Instrument: md.i

Sample Info: F6DQ41AD,,0,,,

Volume Injected (uL): 1.0 Operator: 3386

Column phase: ZB-5 Column diameter: 0.25

56 Fluorene Concentration: 0.672 ug/L



Data File: /var/chem/gcms/md.i/D121503.b/f6dq41ad.d

Date : 15-DEC-2003 21:26

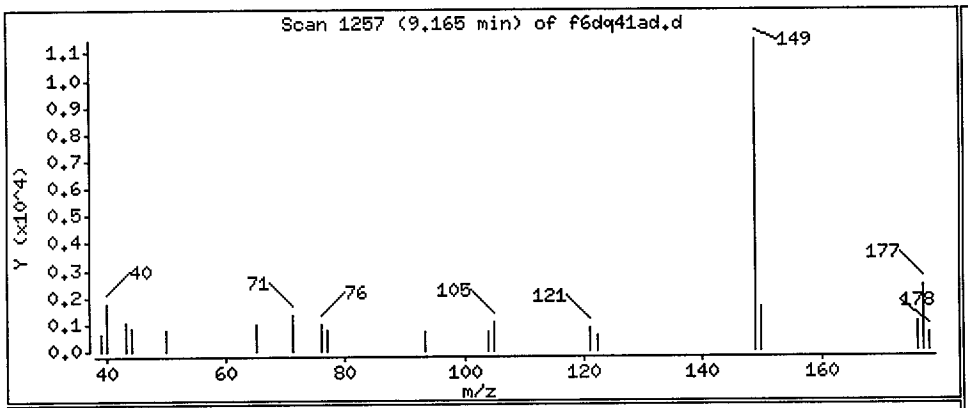
Client ID: DD3007 Instrument: md.i

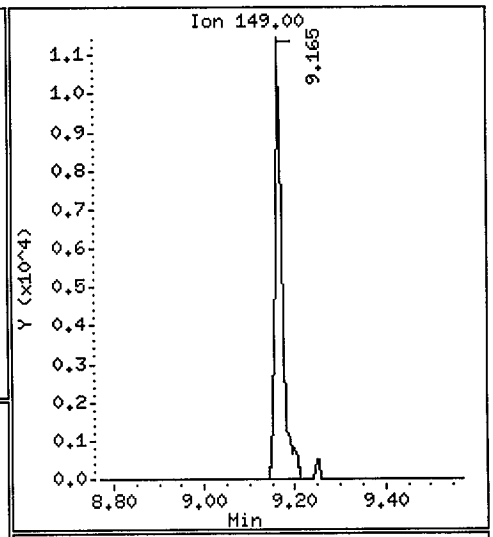
Sample Info: F6DQ41AD,,0,,,

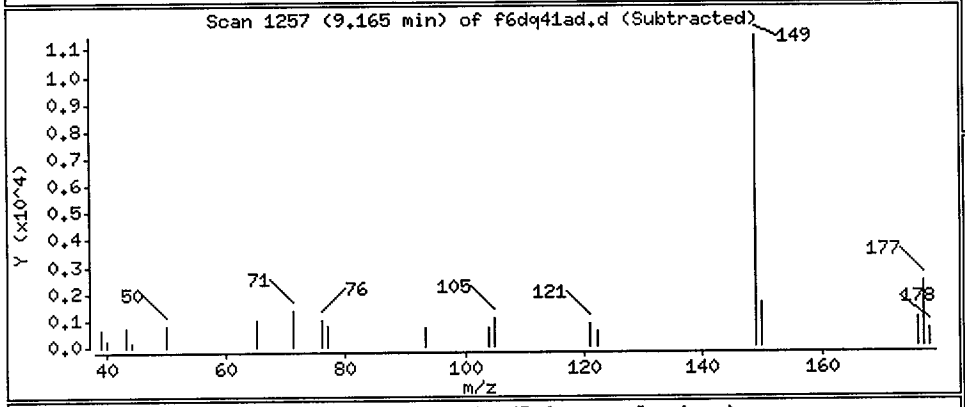
Volume Injected (uL): 1.0 Operator: 3386

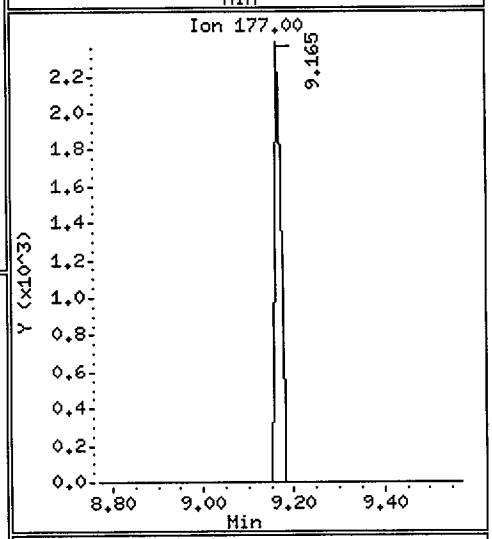
Column phase: ZB-5 Column diameter: 0.25

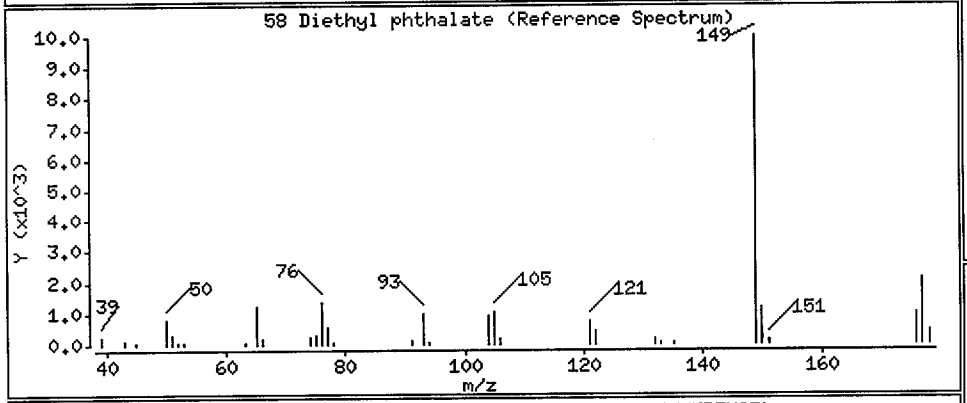
58 Diethyl phthalate Concentration: 0.835 ug/L

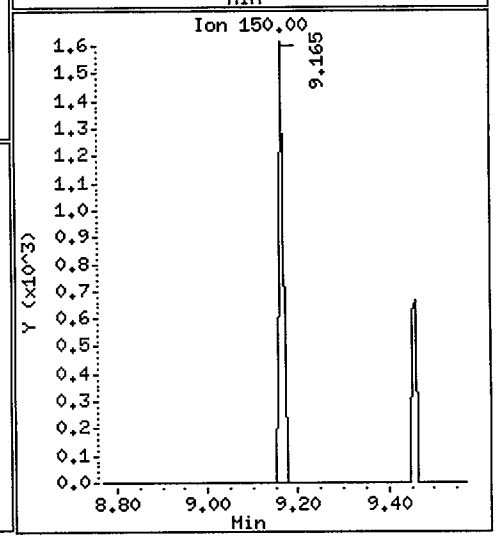


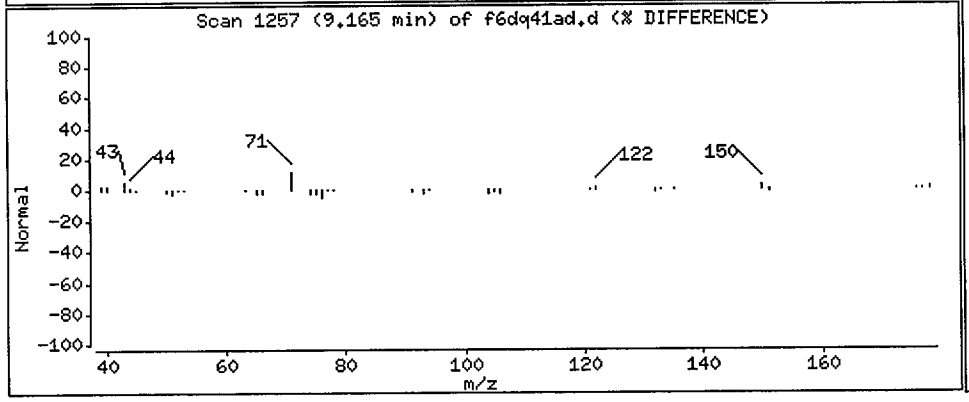












Data File: /var/chem/gcms/md.i/D121503.b/f6dq41ad.d

Date : 15-DEC-2003 21:26

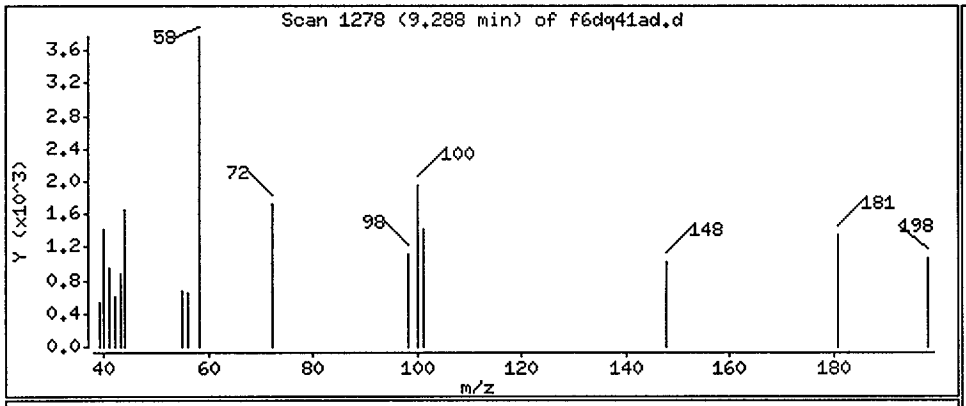
Client ID: DD3007 Instrument: md.i

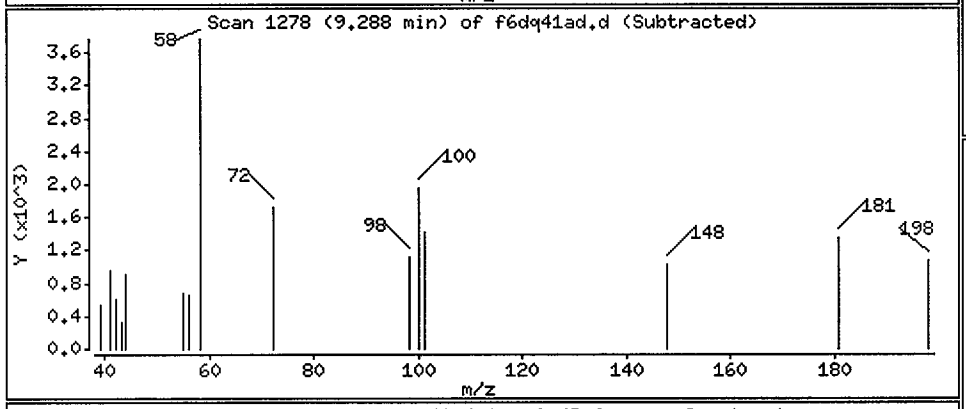
Sample Info: F6DQ41AD,,0,,,

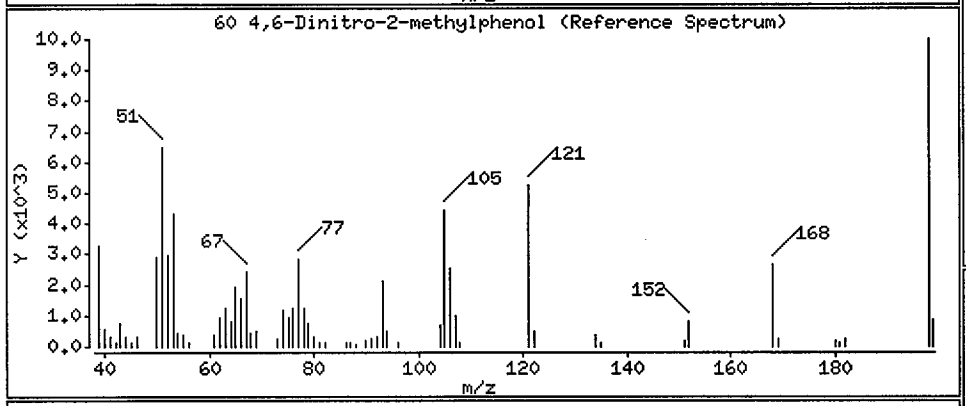
Volume Injected (uL): 1.0 Operator: 3386

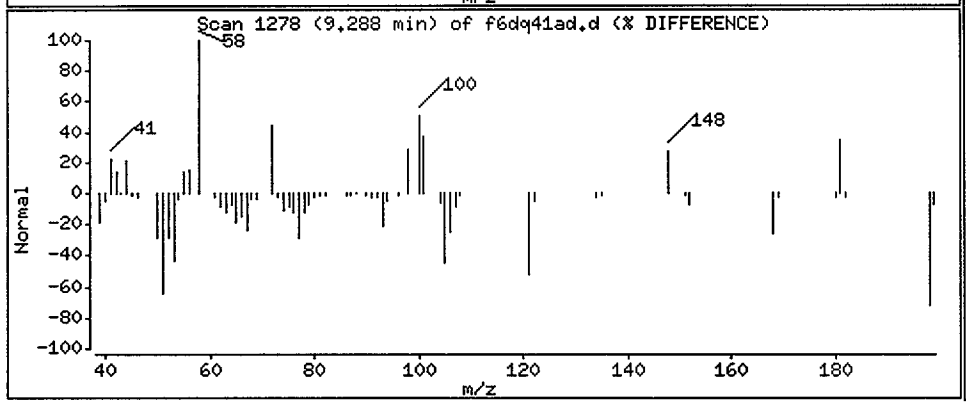
Column phase: ZB-5 Column diameter: 0.25

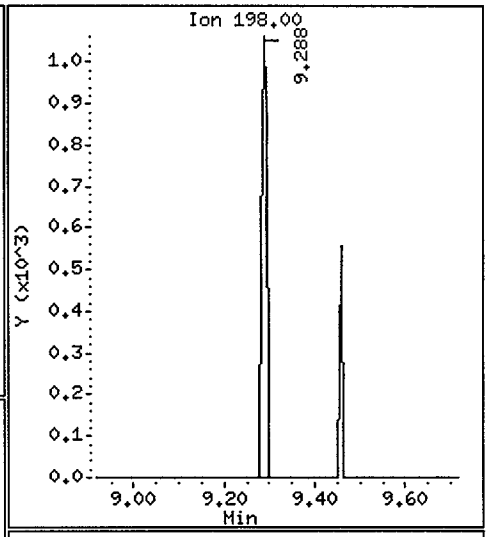
60 4,6-Dinitro-2-methylphenol Concentration: 10.4 ug/L

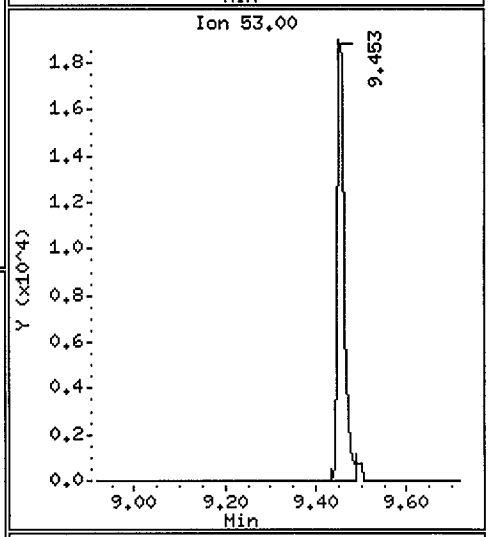


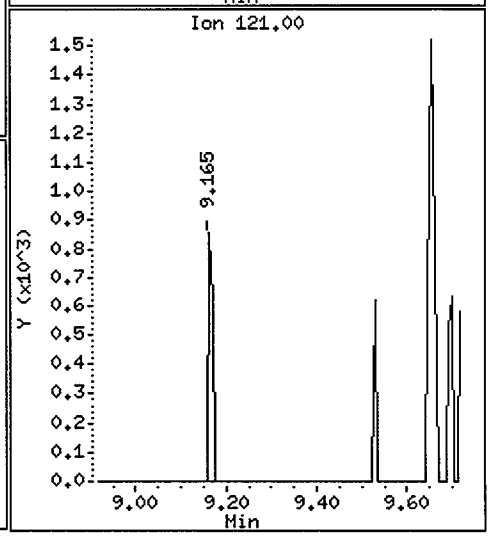












Data File: /var/chem/gcms/md.i/D121503.b/f6dq41ad.d

Date : 15-DEC-2003 21:26

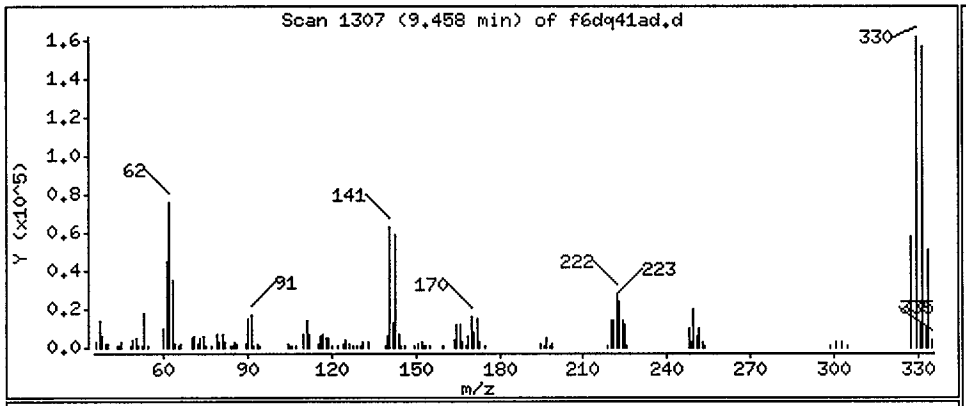
Client ID: DD3007 Instrument: md.i

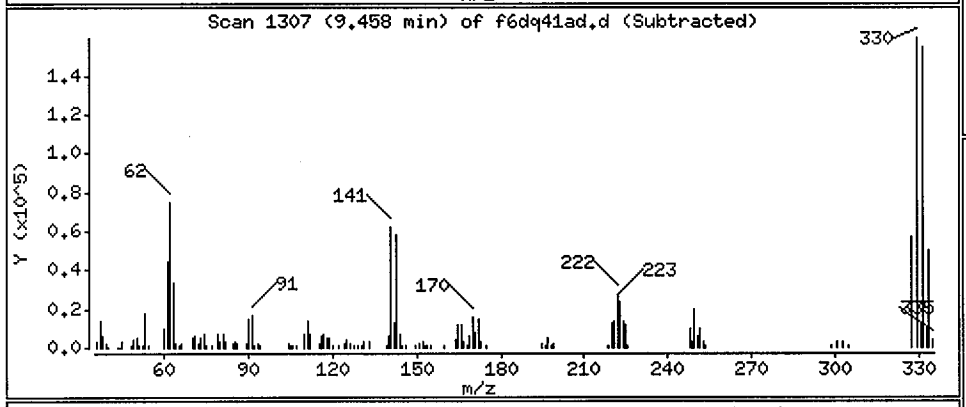
Sample Info: F6DQ41AD,,0,,,

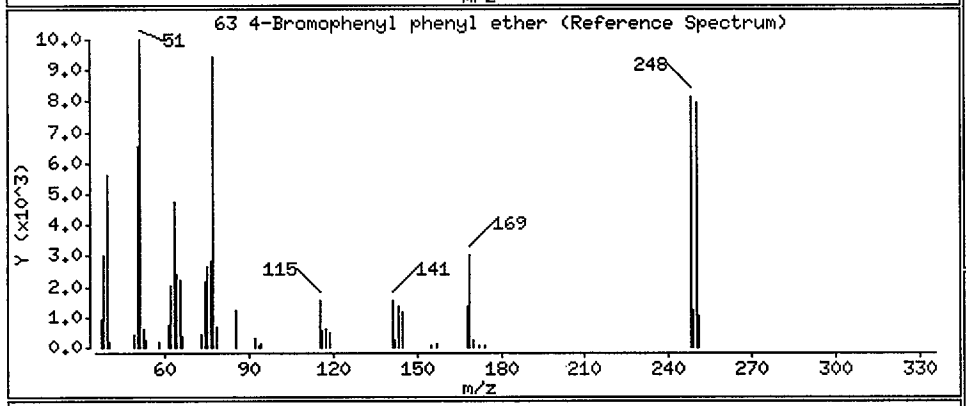
Volume Injected (uL): 1.0 Operator: 3386

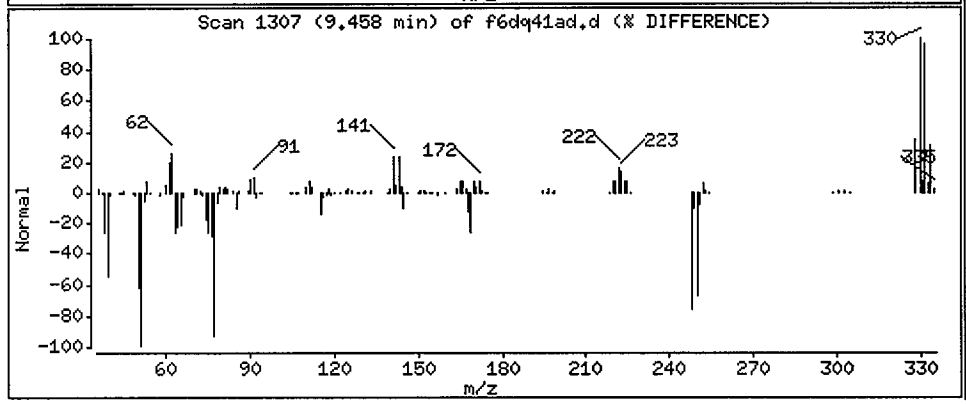
Column phase: ZB-5 Column diameter: 0.25

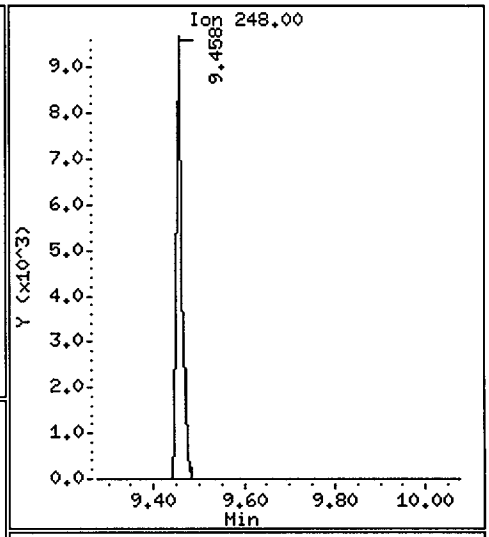
63 4-Bromophenyl phenyl ether Concentration: 2.38 ug/L

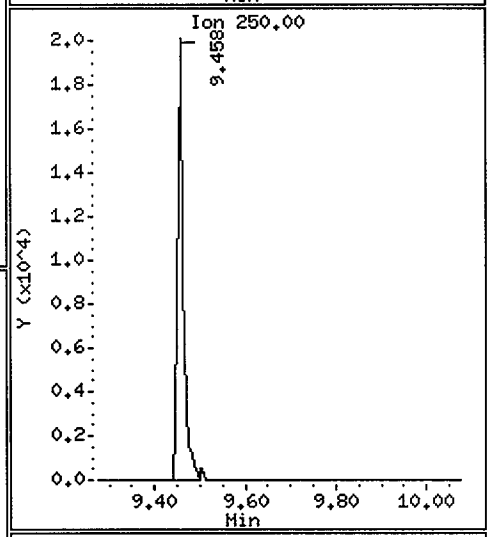


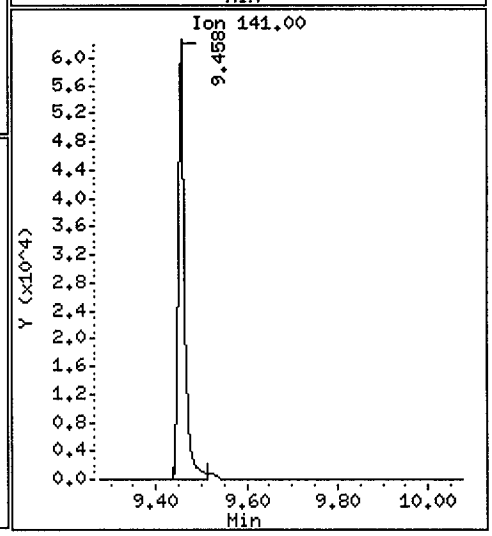












SHAW E & I INC

Client Sample ID: DD3008

GC/MS Semivolatiles

Lot-Sample #...: H3L100268-002 **Work Order #...:** F6DRG1AP **Matrix.....:** WATER
Date Sampled...: 12/09/03 **Date Received..:** 12/10/03
Prep Date.....: 12/12/03 **Analysis Date..:** 12/15/03
Prep Batch #...: 3346158
Dilution Factor: 1 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Phenol	ND	10	ug/L	1.8
bis(2-Chloroethyl)-ether	ND	10	ug/L	1.6
2-Chlorophenol	ND	10	ug/L	1.2
1,3-Dichlorobenzene	ND	10	ug/L	1.6
1,4-Dichlorobenzene	ND	10	ug/L	1.4
1,2-Dichlorobenzene	ND	10	ug/L	1.7
2-Methylphenol	ND	10	ug/L	2.0
2,2'-oxybis(1-Chloro-propane)	ND	10	ug/L	1.4
4-Methylphenol	ND	10	ug/L	3.6
N-Nitrosodi-n-propyl-amine	ND	10	ug/L	2.1
Hexachloroethane	ND	10	ug/L	1.9
Nitrobenzene	ND	10	ug/L	1.8
Isophorone	ND	10	ug/L	1.6
2-Nitrophenol	ND	10	ug/L	2.4
2,4-Dimethylphenol	ND	10	ug/L	3.7
bis(2-Chloroethoxy) methane	ND	10	ug/L	1.5
2,4-Dichlorophenol	ND	10	ug/L	2.0
1,2,4-Trichloro-benzene	ND	10	ug/L	1.5
Naphthalene	ND	10	ug/L	1.7
4-Chloroaniline	ND	10	ug/L	1.8
Hexachlorobutadiene	ND	10	ug/L	1.4
4-Chloro-3-methylphenol	ND	10	ug/L	2.2
2-Methylnaphthalene	ND	10	ug/L	1.6
Hexachlorocyclopenta-diene	ND	50	ug/L	7.9
2,4,6-Trichloro-phenol	ND	10	ug/L	2.0
2,4,5-Trichloro-phenol	ND	10	ug/L	1.6
2-Chloronaphthalene	ND	10	ug/L	1.6
2-Nitroaniline	ND	50	ug/L	1.4
Dimethyl phthalate	ND	10	ug/L	1.1
Acenaphthylene	ND	10	ug/L	1.7
2,6-Dinitrotoluene	ND	10	ug/L	1.7

(Continued on next page)

SHAW E & I INC

Client Sample ID: DD3008

GC/MS Semivolatiles

Lot-Sample #...: H3L100268-002 **Work Order #...:** F6DRG1AP **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
3-Nitroaniline	ND	50	ug/L	1.3
Acenaphthene	ND	10	ug/L	1.5
2,4-Dinitrophenol	ND	50	ug/L	15
4-Nitrophenol	ND	50	ug/L	15
Dibenzofuran	ND	10	ug/L	1.6
2,4-Dinitrotoluene	ND	10	ug/L	1.6
Diethyl phthalate	ND	10	ug/L	1.3
4-Chlorophenyl phenyl ether	ND	10	ug/L	1.6
Fluorene	ND	10	ug/L	1.3
4-Nitroaniline	ND	50	ug/L	1.3
4,6-Dinitro-2-methylphenol	ND	50	ug/L	11
N-Nitrosodiphenylamine	ND	10	ug/L	1.6
4-Bromophenyl phenyl ether	ND	10	ug/L	1.4
Hexachlorobenzene	ND	10	ug/L	0.90
Pentachlorophenol	ND	50	ug/L	8.6
Phenanthrene	ND	10	ug/L	0.84
Anthracene	ND	10	ug/L	0.83
Carbazole	ND	10	ug/L	1.2
Di-n-butyl phthalate	ND	10	ug/L	1.4
Fluoranthene	ND	10	ug/L	1.3
Pyrene	ND	10	ug/L	0.96
Butyl benzyl phthalate	ND	10	ug/L	1.3
3,3'-Dichlorobenzidine	ND	50	ug/L	1.2
Benzo(a)anthracene	ND	10	ug/L	1.2
Chrysene	ND	10	ug/L	0.98
bis(2-Ethylhexyl) phthalate	ND	10	ug/L	2.2
Di-n-octyl phthalate	ND	10	ug/L	2.4
Benzo(b)fluoranthene	ND	10	ug/L	2.1
Benzo(k)fluoranthene	ND	10	ug/L	1.7
Benzo(a)pyrene	ND	10	ug/L	1.6
Indeno(1,2,3-cd)pyrene	ND	10	ug/L	2.1
Dibenz(a,h)anthracene	ND	10	ug/L	2.5
Benzo(ghi)perylene	ND	10	ug/L	2.1

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	56	(29 - 110)
Phenol-d5	72	(41 - 115)
Nitrobenzene-d5	75	(46 - 117)
2-Fluorobiphenyl	76	(44 - 116)
2,4,6-Tribromophenol	98	(31 - 138)
Terphenyl-d14	89	(36 - 134)

Data File: /var/chem/gcms/md.i/D121503.b/f6drg1ap.d
Report Date: 17-Dec-2003 11:56

STL Knoxville

SW-846 Method 8270C

Data file : /var/chem/gcms/md.i/D121503.b/f6drg1ap.d
Lab Smp Id: F6DRG1AP Client Smp ID: DD3008
Inj Date : 15-DEC-2003 21:50
Operator : 3386 Inst ID: md.i
Smp Info : F6DRG1AP,,0,,,
Misc Info : D121503,8270a9,8270.sub
Comment : Semivolatile Organic Compounds by GC/MS
Method : /var/chem/gcms/md.i/D121503.b/8270a9.m
Meth Date : 17-Dec-2003 11:53 layk Quant Type: ISTD
Cal Date : 07-NOV-2003 13:02 Cal File: a9dk076.d
Als bottle: 14
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8270.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Unit Correction factor
Vt	1000.00000	Volume of final extract (uL)
Vo	1000.00000	Volume of sample extracted (mL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/uL)	FINAL (ug/L)
* 1 1,4-Dichlorobenzene-d4	152	4.317	4.317	(1.000)	113730	20.0000	
* 2 Naphthalene-d8	136	5.945	5.945	(1.000)	398497	20.0000	
* 3 Acenaphthene-d10	164	8.589	8.589	(1.000)	224516	20.0000	
* 4 Phenanthrene-d10	188	10.070	10.070	(1.000)	384341	20.0000	
* 5 Chrysene-d12	240	12.173	12.173	(1.000)	394019	20.0000	
* 6 Perylene-d12	264	13.425	13.425	(1.000)	279586	20.0000	
$ 7 2-Fluorophenol	112	3.154	3.154	(0.731)	313703	42.0616	42.1
$ 8 Phenol-d5	99	3.988	3.994	(0.924)	439292	53.6835	53.7
$ 9 Nitrobenzene-d5	82	4.999	4.999	(0.841)	228533	37.4573	37.4
$ 10 2-Fluorobiphenyl	172	7.684	7.684	(0.895)	568292	38.1890	38.2
$ 11 2,4,6-Tribromophenol	330	9.459	9.459	(0.939)	130102	73.6024	73.6
$ 12 Terphenyl-d14	244	11.339	11.339	(0.931)	721743	44.2634	44.3
56 Fluorene	166	9.459	9.194	(1.101)	9779	0.59685	0.597
58 Diethyl phthalate	149	9.165	9.171	(1.067)	11169	0.75385	0.754

Data File: /var/chem/gcms/md.i/D121503.b/f6drg1ap.d
Report Date: 17-Dec-2003 11:56

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/uL)	FINAL (ug/L)
63 4-Bromophenyl phenyl ether	248	9.459	9.676	(0.939)	7848	2.28677	~~2.29~~
76 Bis(2-ethylhexyl) phthalate	149	12.191	12.191	(1.001)	11633	0.85168	0.852

12/17/03

Data File: /var/chem/gcms/md.i/D121503.b/f6drg1ap.d
Report Date: 17-Dec-2003 11:56

STL Knoxville

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: md.i
Lab File ID: f6drg1ap.d
Lab Smp Id: F6DRG1AP
Analysis Type: SV
Quant Type: ISTD
Operator: 3386
Method File: /var/chem/gcms/md.i/D121503.b/8270a9.m
Misc Info: D121503,8270a9,8270.sub

Calibration Date: 15-DEC-2003
Calibration Time: 17:05
Client Smp ID: DD3008
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	114826	57413	229652	113730	-0.95
2 Naphthalene-d8	425133	212566	850266	398497	-6.27
3 Acenaphthene-d10	235031	117516	470062	224516	-4.47
4 Phenanthrene-d10	408242	204121	816484	384341	-5.85
5 Chrysene-d12	410532	205266	821064	394019	-4.02
6 Perylene-d12	297061	148530	594122	279586	-5.88

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	4.32	3.82	4.82	4.32	0.00
2 Naphthalene-d8	5.94	5.44	6.44	5.94	0.00
3 Acenaphthene-d10	8.59	8.09	9.09	8.59	0.00
4 Phenanthrene-d10	10.07	9.57	10.57	10.07	0.00
5 Chrysene-d12	12.17	11.67	12.67	12.17	0.00
6 Perylene-d12	13.42	12.92	13.92	13.42	0.00

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

Data File: /var/chem/gcms/md.i/D121503.b/f6drg1ap.d
Report Date: 17-Dec-2003 11:56

STL Knoxville

RECOVERY REPORT

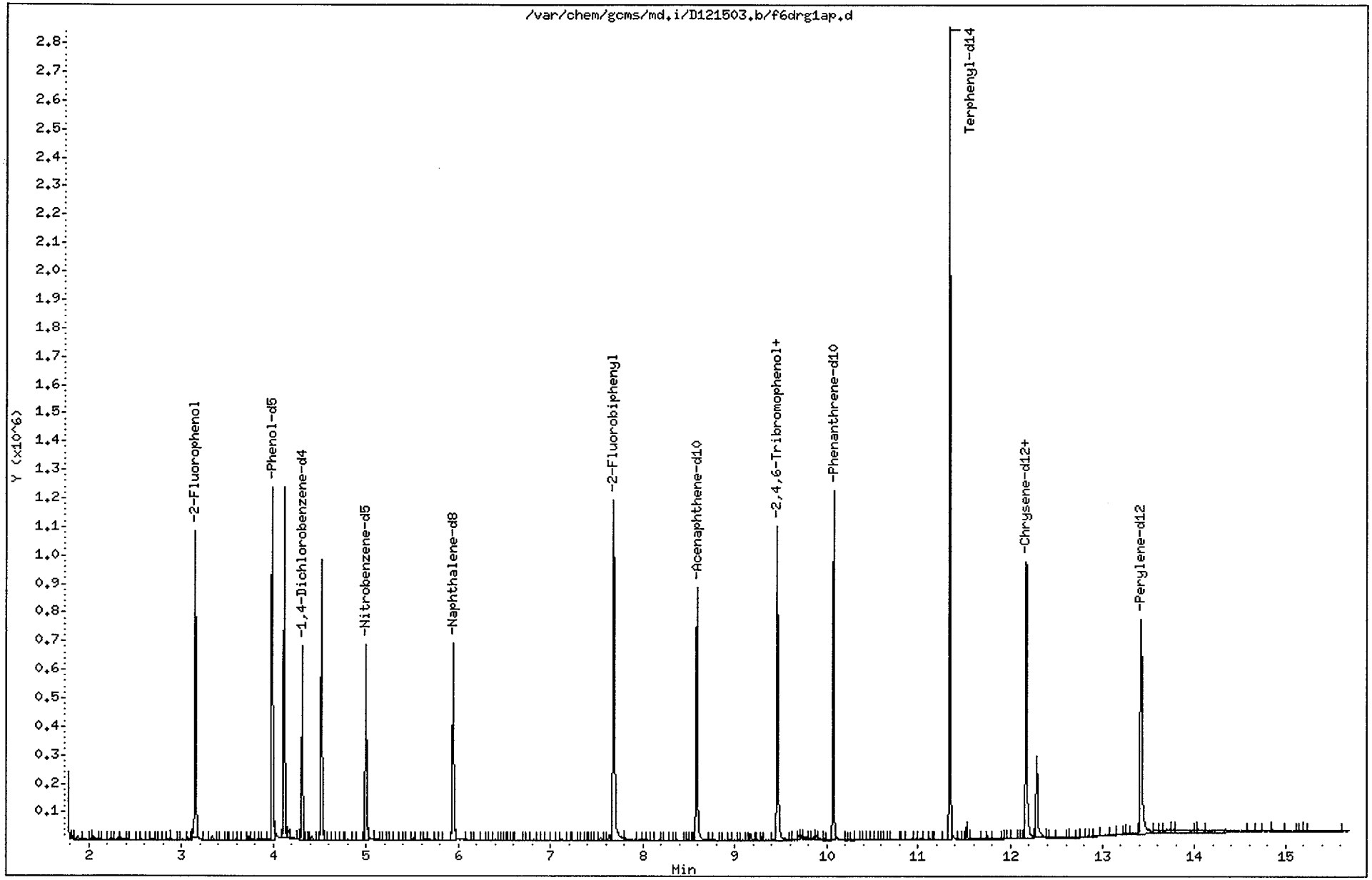
Client Name: SHAW E & I INC
Sample Matrix: LIQUID
Lab Smp Id: F6DRG1AP
Level: LOW
Data Type: MS DATA
SpikeList File: allspike.spk
Sublist File: 8270.sub
Method File: /var/chem/gcms/md.i/D121503.b/8270a9.m
Misc Info: D121503,8270a9,8270.sub

Client SDG: PB045
Fraction: SV
Client Smp ID: DD3008
Operator: 3386
SampleType: SAMPLE
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 7 2-Fluorophenol	75.0	42.1	56.08	29-110
$ 8 Phenol-d5	75.0	53.7	71.58	41-115
$ 9 Nitrobenzene-d5	50.0	37.4	74.91	46-117
$ 10 2-Fluorobiphenyl	50.0	38.2	76.38	44-116
$ 11 2,4,6-Tribromophen	75.0	73.6	98.14	31-138
$ 12 Terphenyl-d14	50.0	44.3	88.53	0-132

Data File: /var/chem/gcms/md.i/D121503.b/f6drg1ap.d
Date : 15-DEC-2003 21:50
Client ID: DD3008
Sample Info: F6DRG1AP,,0,,,
Volume Injected (uL): 1.0
Column phase: ZB-5

Instrument: md.i
Operator: 3386
Column diameter: 0.25



Data File: /var/chem/gcms/md.i/D121503.b/f6drg1ap.d

Date : 15-DEC-2003 21:50

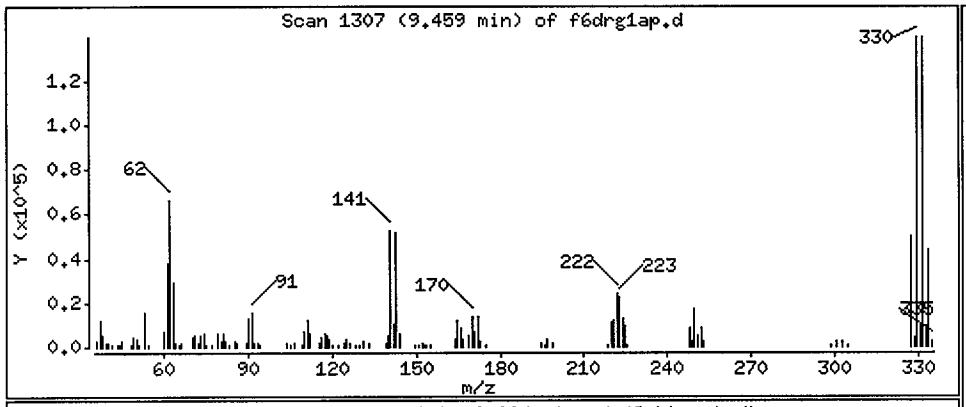
Client ID: DD3008 | Instrument: md.i

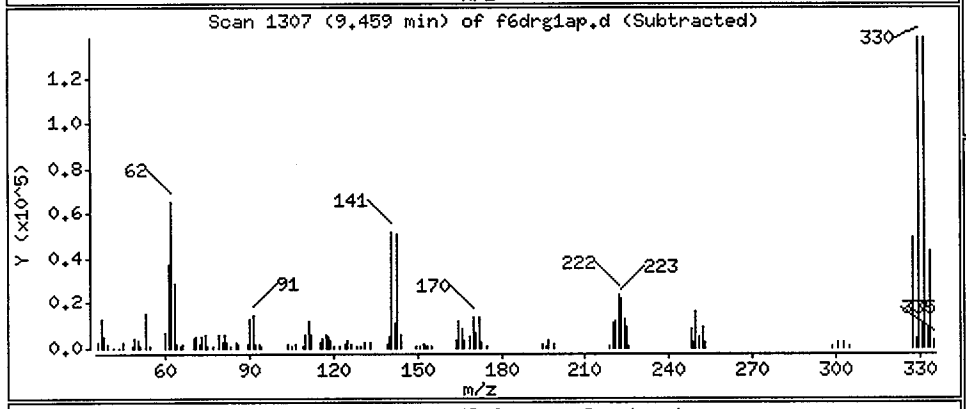
Sample Info: F6DRG1AP,,0,,,

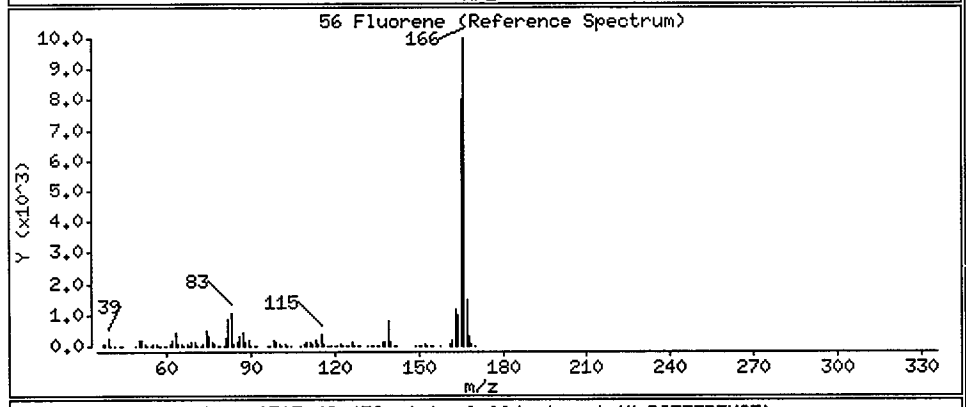
Volume Injected (uL): 1.0 | Operator: 3386

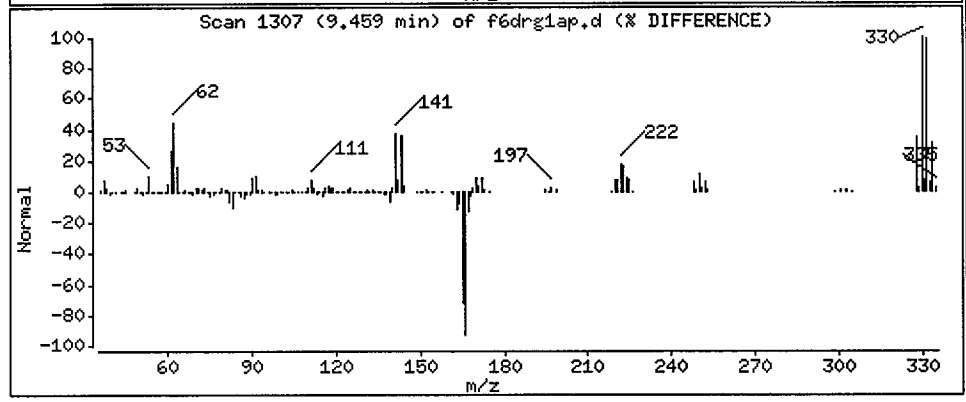
Column phase: ZB-5 | Column diameter: 0.25

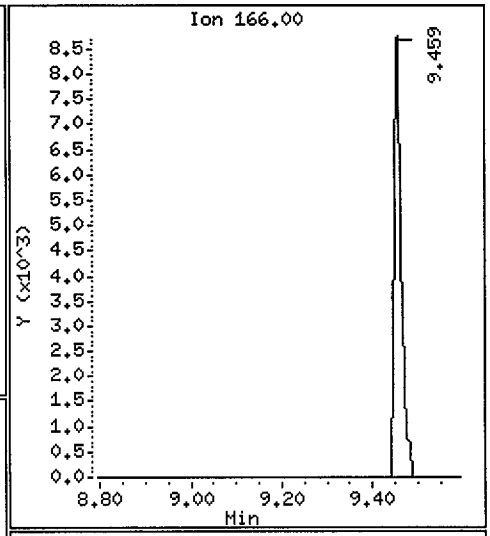
56 Fluorene | Concentration: 0.597 ug/L

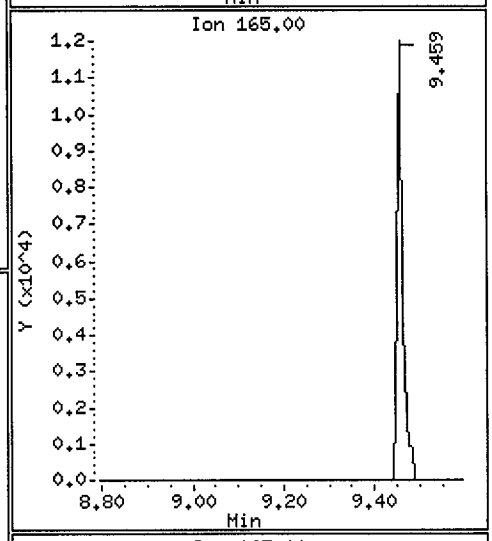


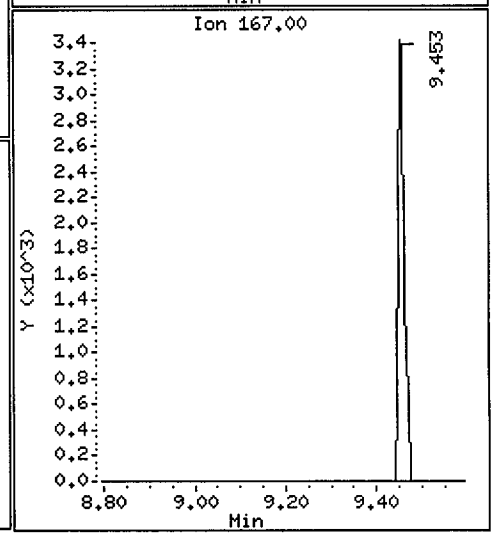












Data File: /var/chem/gcms/md.i/D121503.b/f6drg1ap.d

Date : 15-DEC-2003 21:50

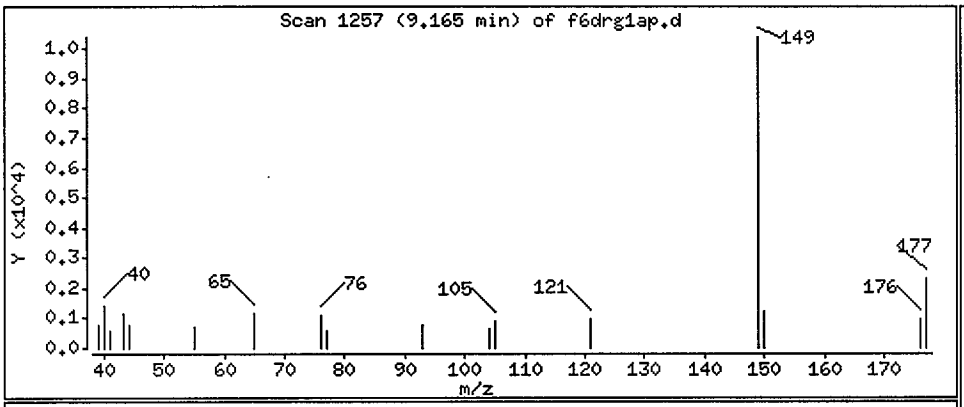
Client ID: DD3008 Instrument: md.i

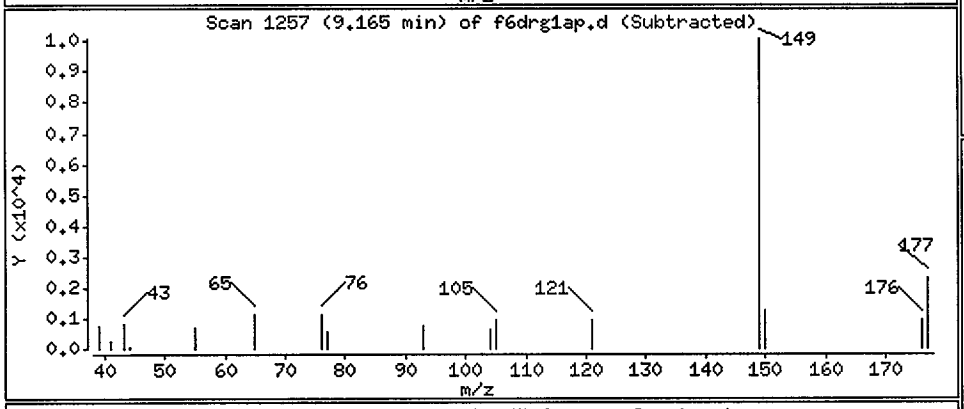
Sample Info: F6DRG1AP,,0,,,

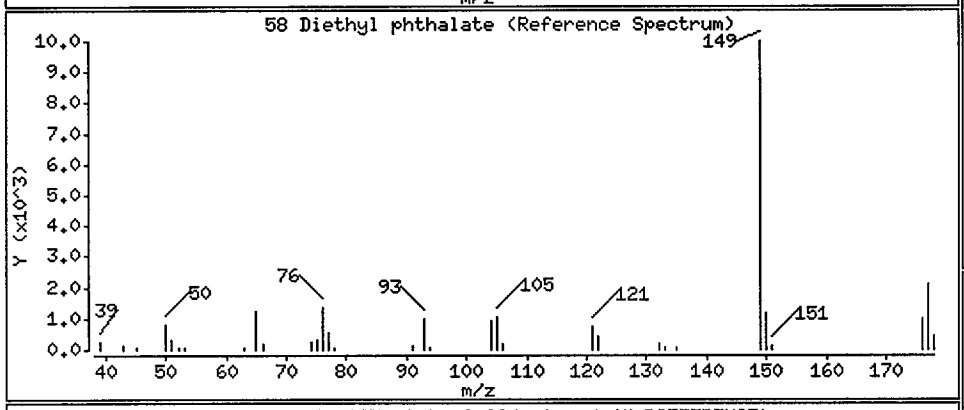
Volume Injected (uL): 1.0 Operator: 3386

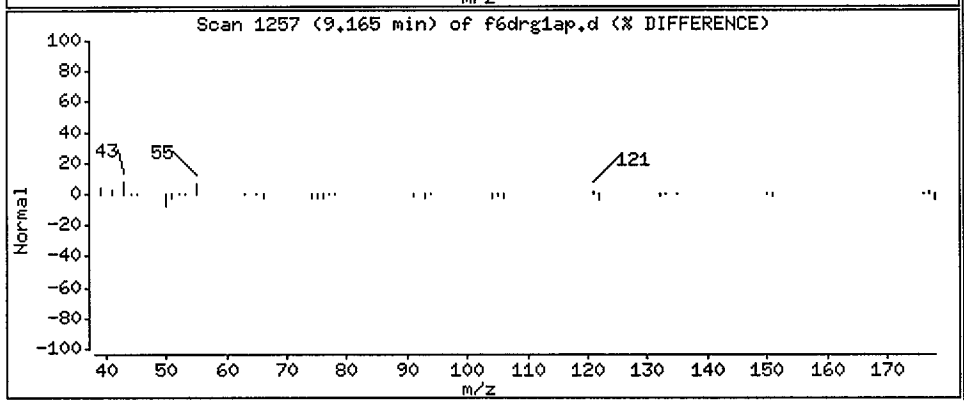
Column phase: ZB-5 Column diameter: 0.25

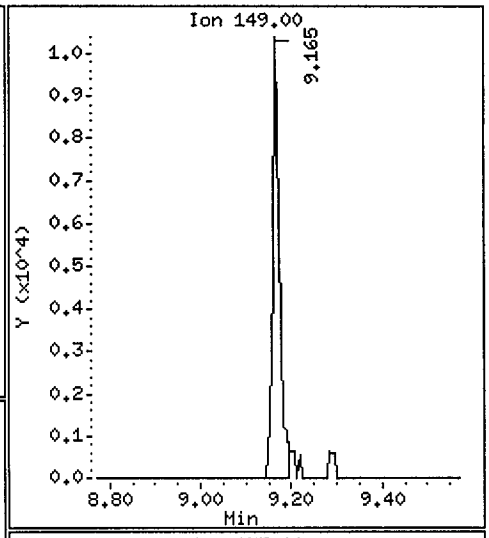
58 Diethyl phthalate Concentration: 0.754 ug/L

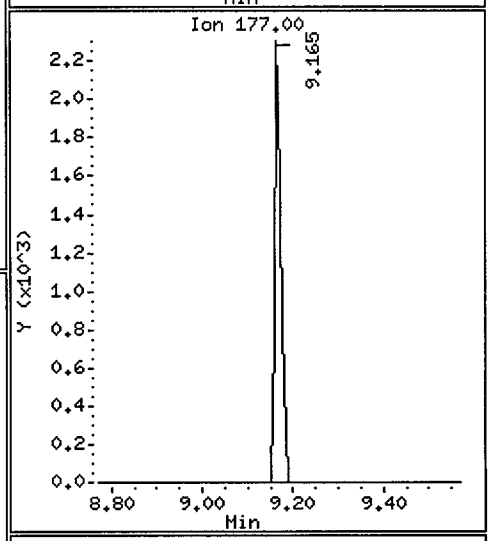


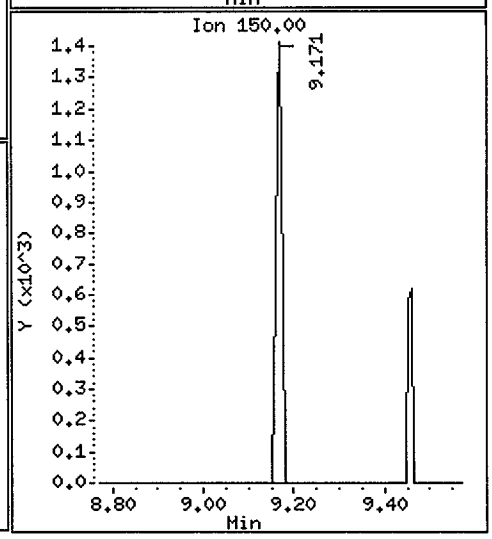












Data File: /var/chem/gcms/md.i/D121503.b/f6drg1ap.d

Date : 15-DEC-2003 21:50

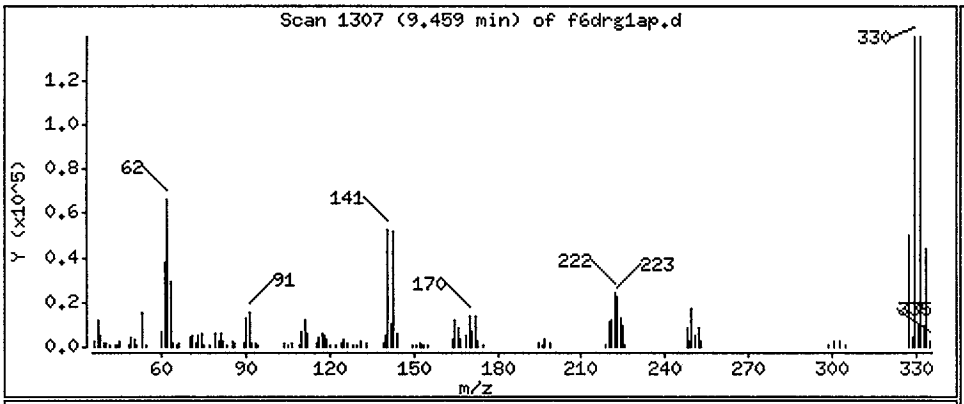
Client ID: DD3008 Instrument: md.i

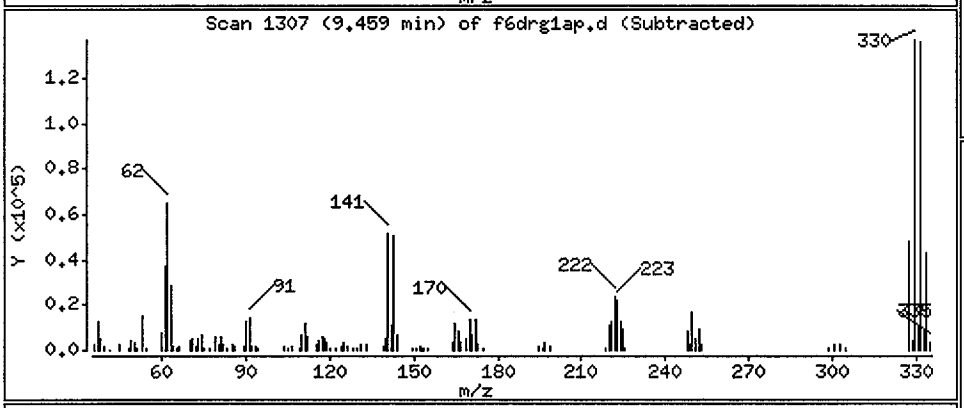
Sample Info: F6DRG1AP,,0,,,

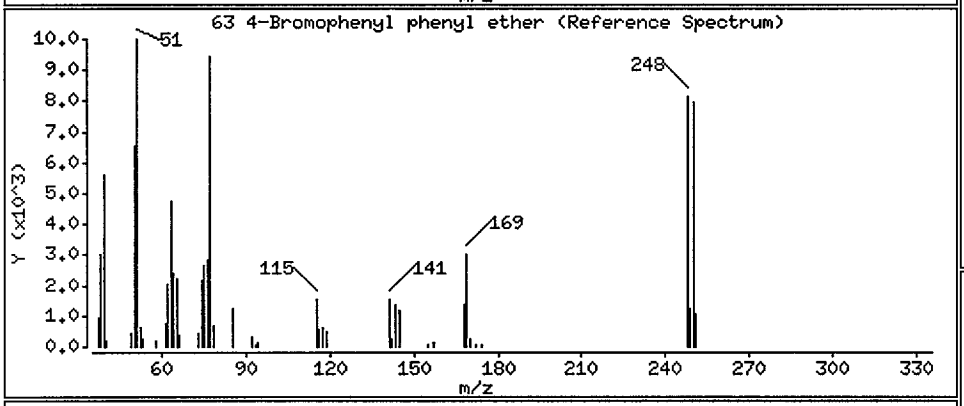
Volume Injected (uL): 1.0 Operator: 3386

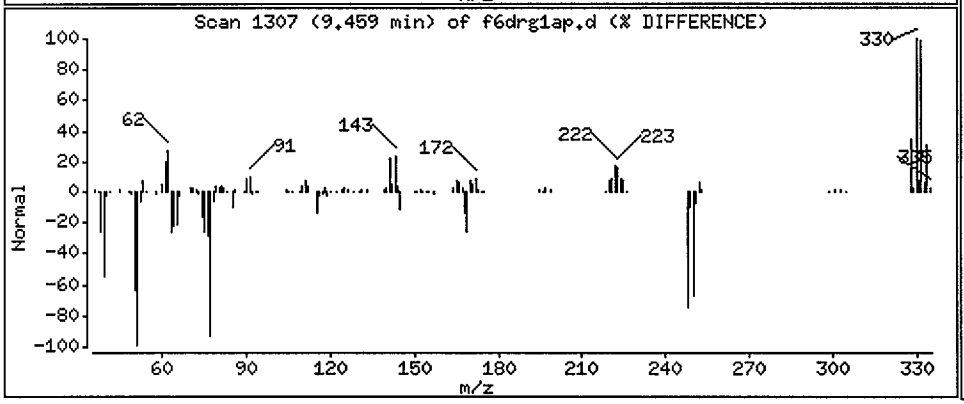
Column phase: ZB-5 Column diameter: 0.25

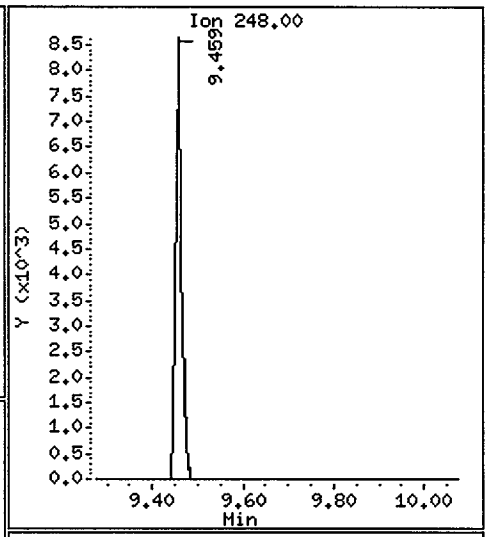
63 4-Bromophenyl phenyl ether Concentration: 2.29 ug/L

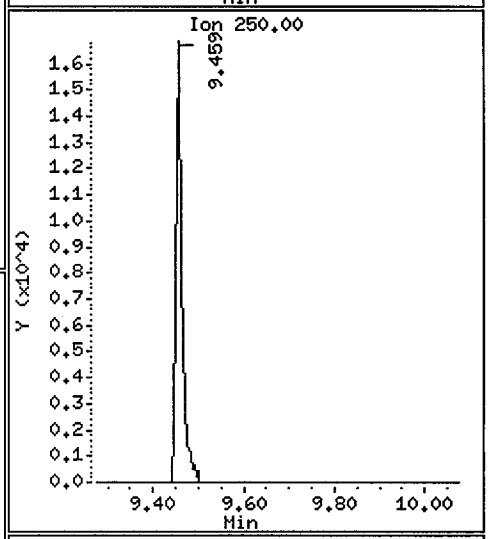


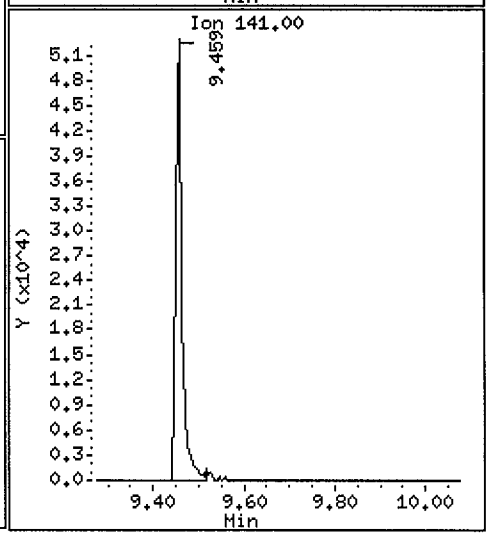












Data File: /var/chem/gcms/md.i/D121503.b/f6drg1ap.d

Date : 15-DEC-2003 21:50

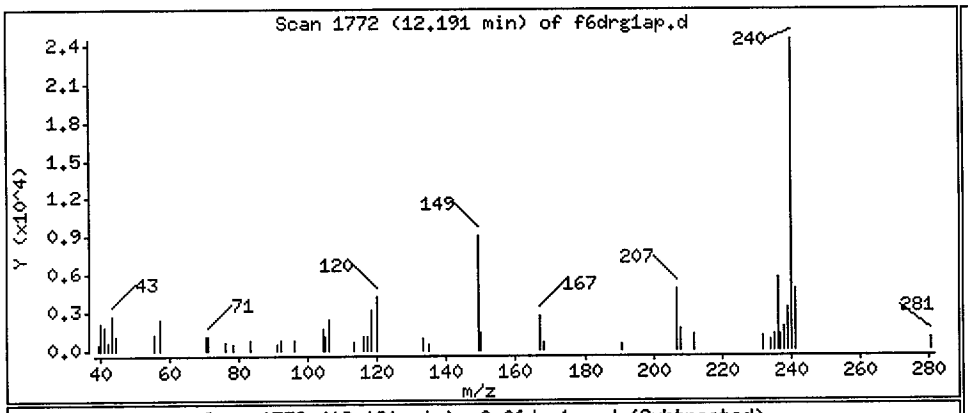
Client ID: DD3008 | Instrument: md.i

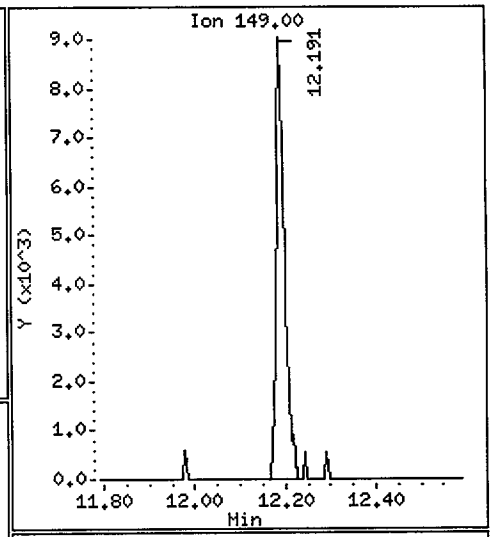
Sample Info: F6DRG1AP,,0,,,

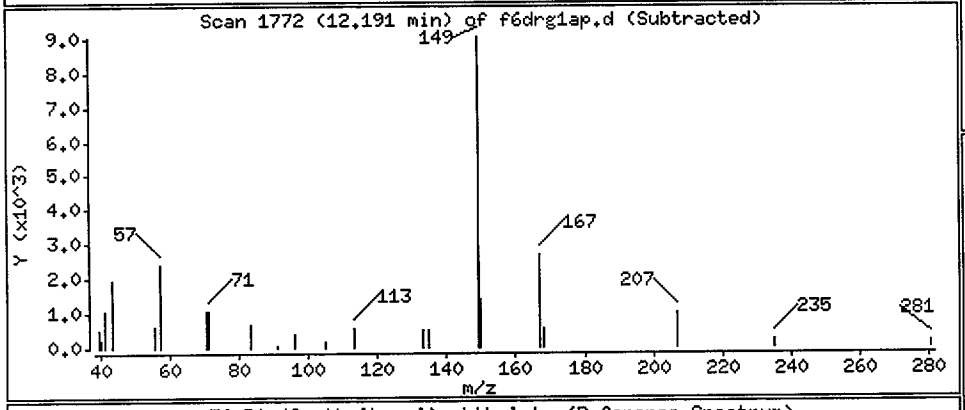
Volume Injected (uL): 1.0 | Operator: 3386

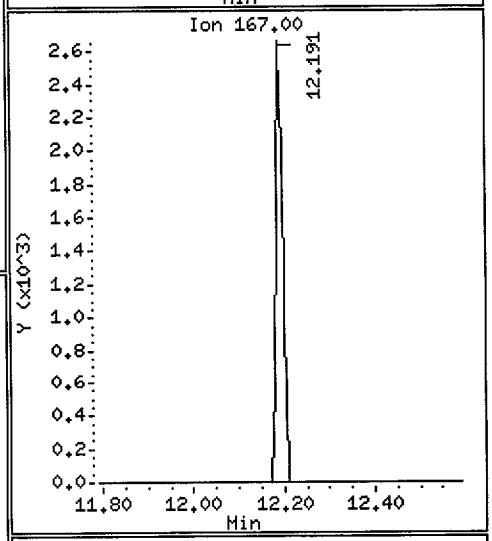
Column phase: ZB-5 | Column diameter: 0.25

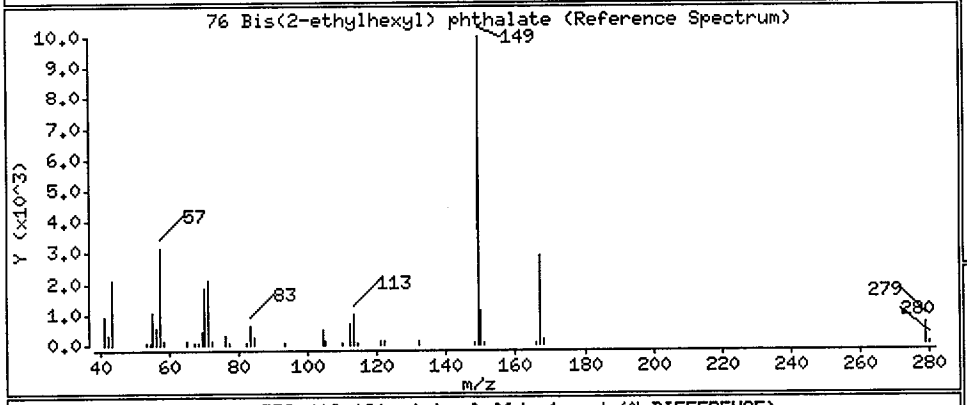
76 Bis(2-ethylhexyl) phthalate | Concentration: 0.852 ug/L

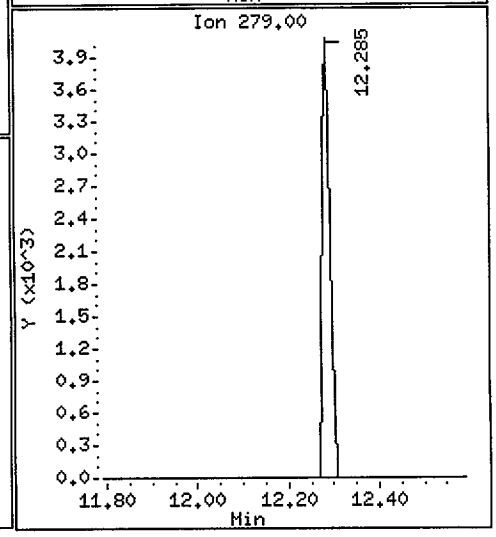


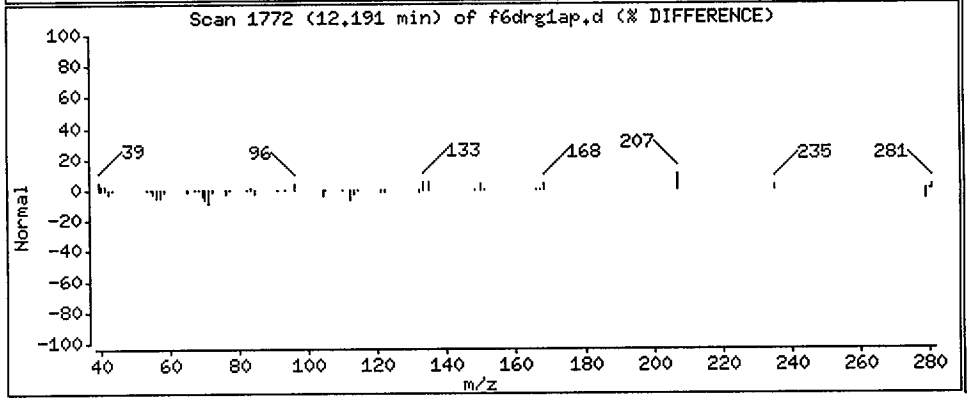












SHAW E & I INC

Client Sample ID: DD3002

GC/MS Semivolatiles

Lot-Sample #...: H3L110180-001 **Work Order #...:** F6F1C1AD **Matrix.....:** WATER
Date Sampled...: 12/10/03 **Date Received..:** 12/11/03
Prep Date.....: 12/12/03 **Analysis Date..:** 12/15/03
Prep Batch #...: 3346158
Dilution Factor: 1 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Phenol	ND	10	ug/L	1.8
bis(2-Chloroethyl)-ether	ND	10	ug/L	1.6
2-Chlorophenol	ND	10	ug/L	1.2
1,3-Dichlorobenzene	ND	10	ug/L	1.6
1,4-Dichlorobenzene	ND	10	ug/L	1.4
1,2-Dichlorobenzene	ND	10	ug/L	1.7
2-Methylphenol	ND	10	ug/L	2.0
2,2'-oxybis(1-Chloro-propane)	ND	10	ug/L	1.4
4-Methylphenol	ND	10	ug/L	3.6
N-Nitrosodi-n-propyl-amine	ND	10	ug/L	2.1
Hexachloroethane	ND	10	ug/L	1.9
Nitrobenzene	ND	10	ug/L	1.8
Isophorone	ND	10	ug/L	1.6
2-Nitrophenol	ND	10	ug/L	2.4
2,4-Dimethylphenol	ND	10	ug/L	3.7
bis(2-Chloroethoxy) methane	ND	10	ug/L	1.5
2,4-Dichlorophenol	ND	10	ug/L	2.0
1,2,4-Trichloro-benzene	ND	10	ug/L	1.5
Naphthalene	ND	10	ug/L	1.7
4-Chloroaniline	ND	10	ug/L	1.8
Hexachlorobutadiene	ND	10	ug/L	1.4
4-Chloro-3-methylphenol	ND	10	ug/L	2.2
2-Methylnaphthalene	ND	10	ug/L	1.6
Hexachlorocyclopenta-diene	ND	50	ug/L	7.9
2,4,6-Trichloro-phenol	ND	10	ug/L	2.0
2,4,5-Trichloro-phenol	ND	10	ug/L	1.6
2-Chloronaphthalene	ND	10	ug/L	1.6
2-Nitroaniline	ND	50	ug/L	1.4
Dimethyl phthalate	ND	10	ug/L	1.1
Acenaphthylene	ND	10	ug/L	1.7
2,6-Dinitrotoluene	ND	10	ug/L	1.7

(Continued on next page)

SHAW E & I INC

Client Sample ID: DD3002

GC/MS Semivolatiles

Lot-Sample #...: H3L110180-001 **Work Order #...:** F6F1C1AD **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
3-Nitroaniline	ND	50	ug/L	1.3
Acenaphthene	ND	10	ug/L	1.5
2,4-Dinitrophenol	ND	50	ug/L	15
4-Nitrophenol	ND	50	ug/L	15
Dibenzofuran	ND	10	ug/L	1.6
2,4-Dinitrotoluene	ND	10	ug/L	1.6
Diethyl phthalate	ND	10	ug/L	1.3
4-Chlorophenyl phenyl ether	ND	10	ug/L	1.6
Fluorene	ND	10	ug/L	1.3
4-Nitroaniline	ND	50	ug/L	1.3
4,6-Dinitro-2-methylphenol	ND	50	ug/L	11
N-Nitrosodiphenylamine	ND	10	ug/L	1.6
4-Bromophenyl phenyl ether	ND	10	ug/L	1.4
Hexachlorobenzene	ND	10	ug/L	0.90
Pentachlorophenol	ND	50	ug/L	8.6
Phenanthrene	ND	10	ug/L	0.84
Anthracene	ND	10	ug/L	0.83
Carbazole	ND	10	ug/L	1.2
Di-n-butyl phthalate	ND	10	ug/L	1.4
Fluoranthene	ND	10	ug/L	1.3
Pyrene	ND	10	ug/L	0.96
Butyl benzyl phthalate	ND	10	ug/L	1.3
3,3'-Dichlorobenzidine	ND	50	ug/L	1.2
Benzo(a)anthracene	ND	10	ug/L	1.2
Chrysene	ND	10	ug/L	0.98
bis(2-Ethylhexyl) phthalate	ND	10	ug/L	2.2
Di-n-octyl phthalate	ND	10	ug/L	2.4
Benzo(b)fluoranthene	ND	10	ug/L	2.1
Benzo(k)fluoranthene	ND	10	ug/L	1.7
Benzo(a)pyrene	ND	10	ug/L	1.6
Indeno(1,2,3-cd)pyrene	ND	10	ug/L	2.1
Dibenz(a,h)anthracene	ND	10	ug/L	2.5
Benzo(ghi)perylene	ND	10	ug/L	2.1

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	69	(29 - 110)
Phenol-d5	81	(41 - 115)
Nitrobenzene-d5	86	(46 - 117)
2-Fluorobiphenyl	80	(44 - 116)
2,4,6-Tribromophenol	97	(31 - 138)
Terphenyl-d14	89	(36 - 134)

Data File: /var/chem/gcms/md.i/D121503.b/f6f1c1ad.d
Report Date: 17-Dec-2003 11:56

STL Knoxville

SW-846 Method 8270C

Data file : /var/chem/gcms/md.i/D121503.b/f6f1c1ad.d
Lab Smp Id: F6F1C1AD Client Smp ID: DD3002
Inj Date : 15-DEC-2003 22:14
Operator : 3386 Inst ID: md.i
Smp Info : F6F1C1AD,,0,,,
Misc Info : D121503,8270a9,8270.sub
Comment : Semivolatile Organic Compounds by GC/MS
Method : /var/chem/gcms/md.i/D121503.b/8270a9.m
Meth Date : 17-Dec-2003 11:53 layk Quant Type: ISTD
Cal Date : 07-NOV-2003 13:02 Cal File: a9dk076.d
Als bottle: 15
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8270.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Unit Correction factor
Vt	1000.00000	Volume of final extract (uL)
Vo	930.00000	Volume of sample extracted (mL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/uL)	FINAL (ug/L)
* 1 1,4-Dichlorobenzene-d4	152	4.317	4.317	(1.000)	116473	20.0000	
* 2 Naphthalene-d8	136	5.945	5.945	(1.000)	418613	20.0000	
* 3 Acenaphthene-d10	164	8.589	8.589	(1.000)	241784	20.0000	
* 4 Phenanthrene-d10	188	10.070	10.070	(1.000)	413265	20.0000	
* 5 Chrysene-d12	240	12.173	12.173	(1.000)	399927	20.0000	
* 6 Perylene-d12	264	13.425	13.425	(1.000)	281109	20.0000	
$ 7 2-Fluorophenol	112	3.154	3.154	(0.731)	394212	51.6115	55.5
$ 8 Phenol-d5	99	3.988	3.994	(0.924)	509563	60.8045	65.4
$ 9 Nitrobenzene-d5	82	4.999	4.999	(0.841)	274342	42.8049	46.0
$ 10 2-Fluorobiphenyl	172	7.684	7.684	(0.895)	644433	40.2127	43.2
$ 11 2,4,6-Tribromophenol	330	9.459	9.459	(0.939)	138451	72.8440	78.3
$ 12 Terphenyl-d14	244	11.339	11.339	(0.931)	736857	44.5227	47.9
56 Fluorene	166	9.459	9.194	(1.101)	9855	0.55855	0.600
58 Diethyl phthalate	149	9.165	9.171	(1.067)	11060	0.69322	0.745

Data File: /var/chem/gcms/md.i/D121503.b/f6f1c1ad.d
Report Date: 17-Dec-2003 11:56

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/uL)	CONCENTRATIONS FINAL (ug/L)
63 4-Bromophenyl phenyl ether	248	9.459	9.676	(0.939)	8515	2.30727	2.48

12/17/03

Data File: /var/chem/gcms/md.i/D121503.b/f6f1c1ad.d
Report Date: 17-Dec-2003 11:56

STL Knoxville

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: md.i
Lab File ID: f6f1c1ad.d
Lab Smp Id: F6F1C1AD
Analysis Type: SV
Quant Type: ISTD
Operator: 3386
Method File: /var/chem/gcms/md.i/D121503.b/8270a9.m
Misc Info: D121503,8270a9,8270.sub

Calibration Date: 15-DEC-2003
Calibration Time: 17:05
Client Smp ID: DD3002
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	114826	57413	229652	116473	1.43
2 Naphthalene-d8	425133	212566	850266	418613	-1.53
3 Acenaphthene-d10	235031	117516	470062	241784	2.87
4 Phenanthrene-d10	408242	204121	816484	413265	1.23
5 Chrysene-d12	410532	205266	821064	399927	-2.58
6 Perylene-d12	297061	148530	594122	281109	-5.37

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	4.32	3.82	4.82	4.32	0.00
2 Naphthalene-d8	5.94	5.44	6.44	5.94	0.00
3 Acenaphthene-d10	8.59	8.09	9.09	8.59	0.00
4 Phenanthrene-d10	10.07	9.57	10.57	10.07	0.00
5 Chrysene-d12	12.17	11.67	12.67	12.17	0.00
6 Perylene-d12	13.42	12.92	13.92	13.42	0.00

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

Data File: /var/chem/gcms/md.i/D121503.b/f6f1c1ad.d
Report Date: 17-Dec-2003 11:56

STL Knoxville

RECOVERY REPORT

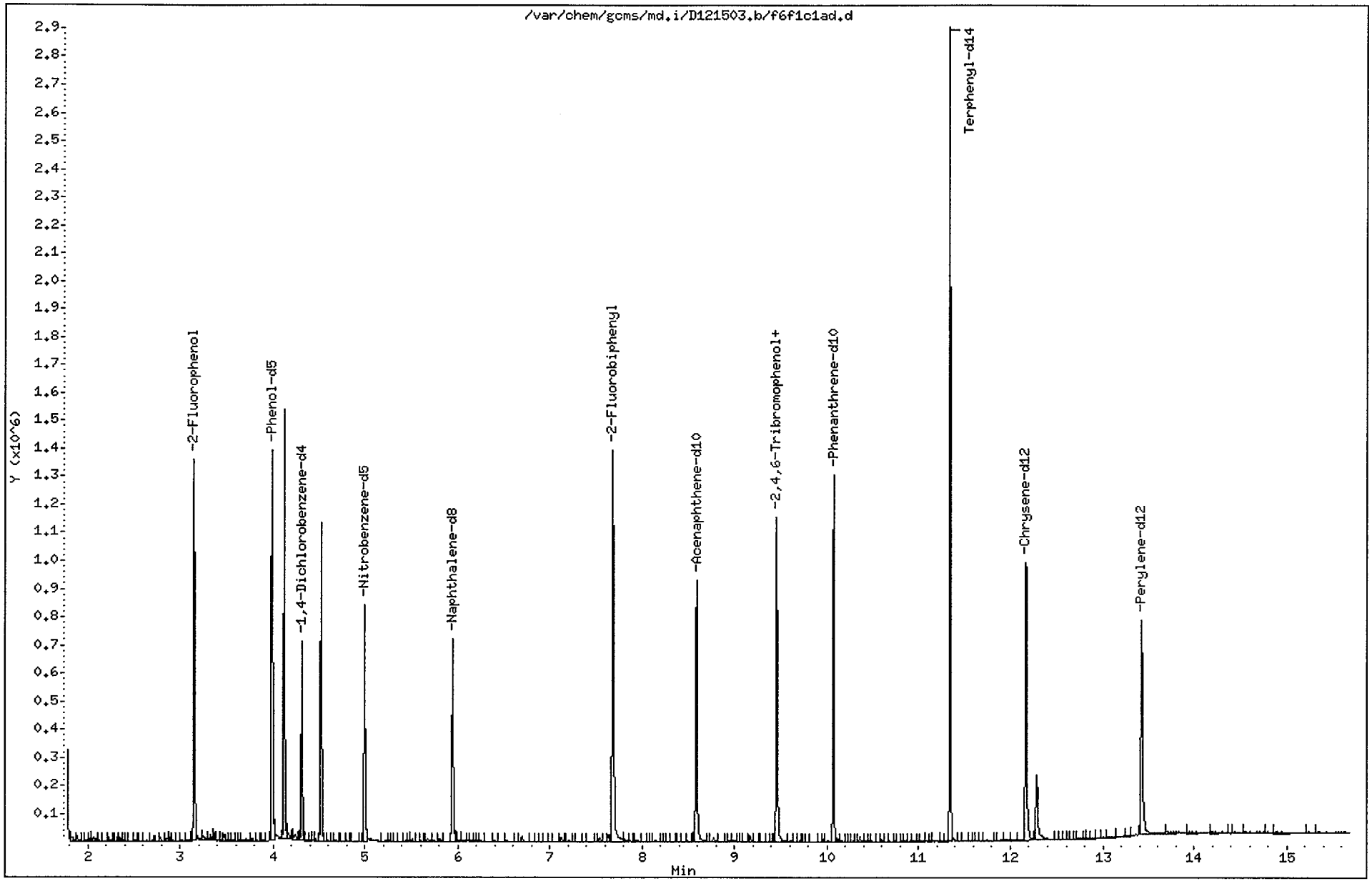
Client Name: SHAW E & I INC
Sample Matrix: LIQUID
Lab Smp Id: F6F1C1AD
Level: LOW
Data Type: MS DATA
SpikeList File: allspike.spk
Sublist File: 8270.sub
Method File: /var/chem/gcms/md.i/D121503.b/8270a9.m
Misc Info: D121503,8270a9,8270.sub

Client SDG: PB045
Fraction: SV
Client Smp ID: DD3002
Operator: 3386
SampleType: SAMPLE
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 7 2-Fluorophenol	80.6	55.5	68.82	29-110
$ 8 Phenol-d5	80.6	65.4	81.07	41-115
$ 9 Nitrobenzene-d5	53.8	46.0	85.61	46-117
$ 10 2-Fluorobiphenyl	53.8	43.2	80.43	44-116
$ 11 2,4,6-Tribromophen	80.6	78.3	97.13	31-138
$ 12 Terphenyl-d14	53.8	47.9	89.05	0-132

Data File: /var/chem/gcms/md.i/D121503.b/f6f1c1ad.d
Date : 15-DEC-2003 22:14
Client ID: DD3002
Sample Info: F6F1C1AD,,0,,,
Volume Injected (uL): 1.0
Column phase: ZB-5

Instrument: md.i
Operator: 3386
Column diameter: 0.25



Data File: /var/chem/gcms/md.i/D121503.b/f6f1c1ad.d

Date : 15-DEC-2003 22:14

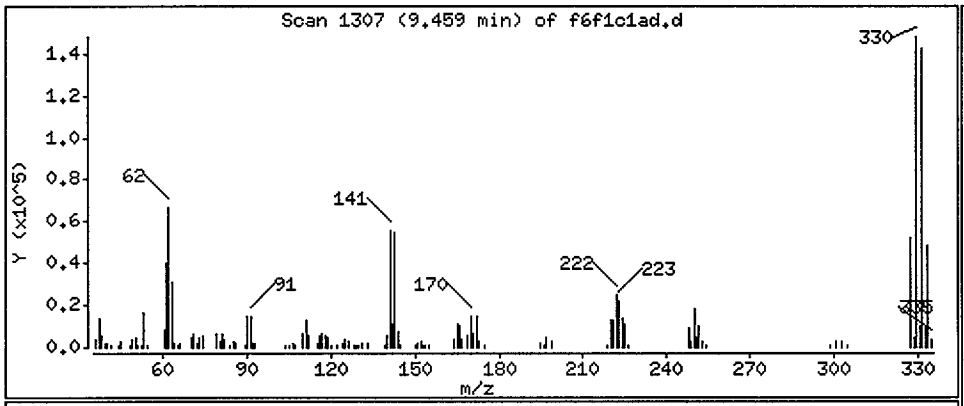
Client ID: DD3002 Instrument: md.i

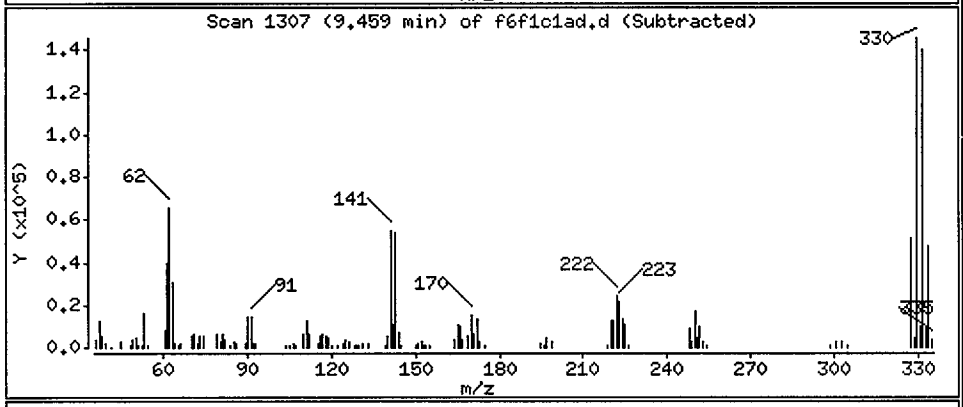
Sample Info: F6F1C1AD,,0,,,

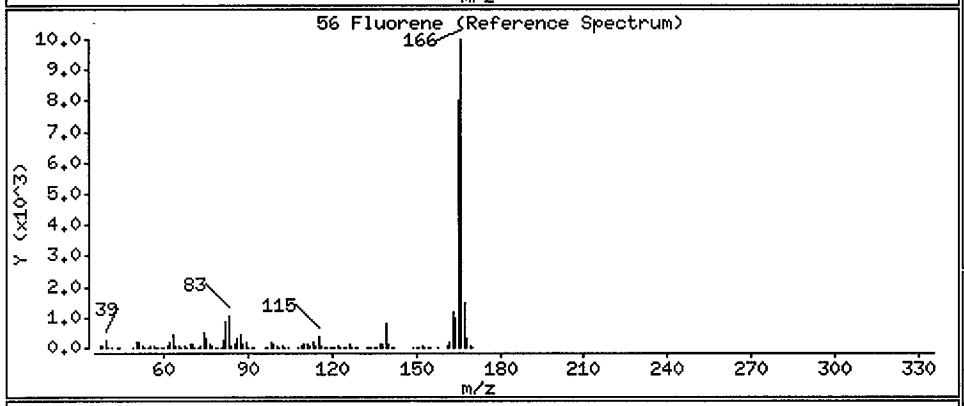
Volume Injected (uL): 1.0 Operator: 3386

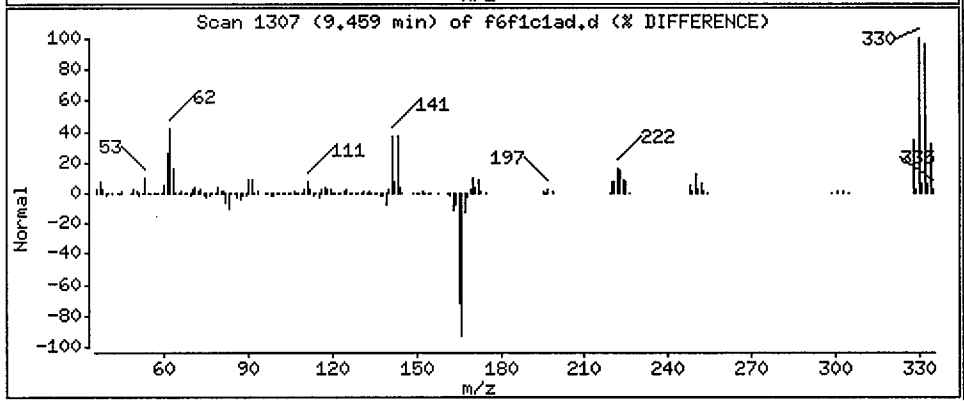
Column phase: ZB-5 Column diameter: 0.25

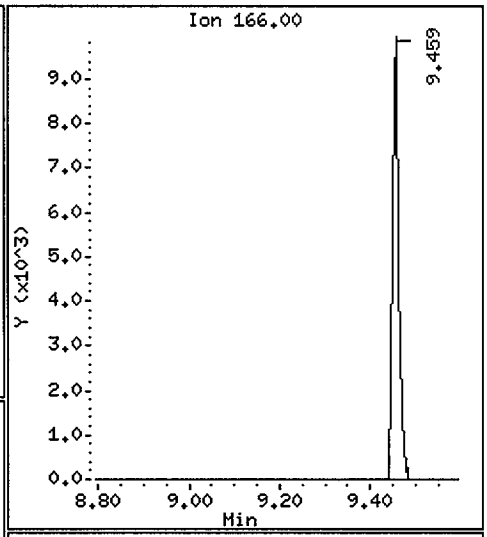
56 Fluorene Concentration: 0.600 ug/L

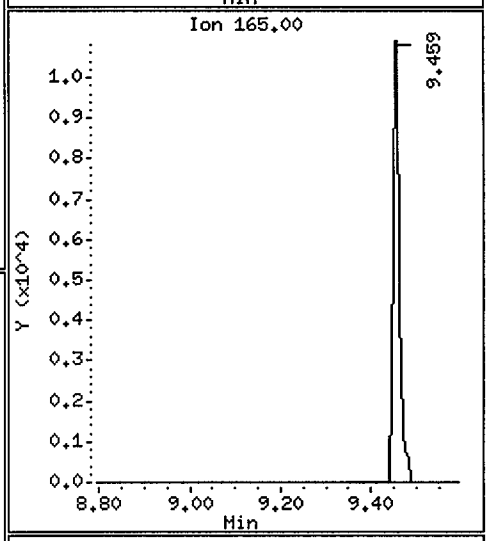


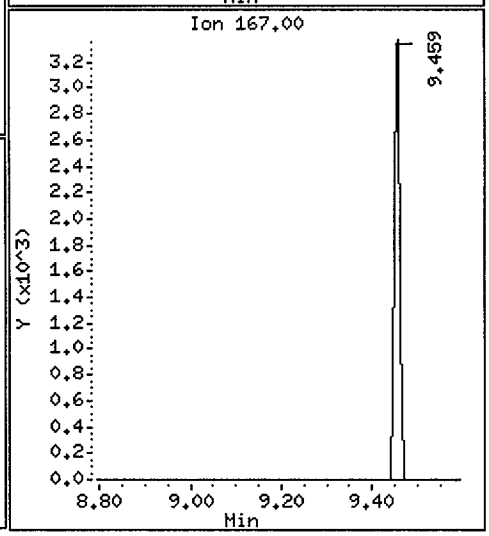












Data File: /var/chem/gcms/md.i/D121503.b/f6f1c1ad.d

Date : 15-DEC-2003 22:14

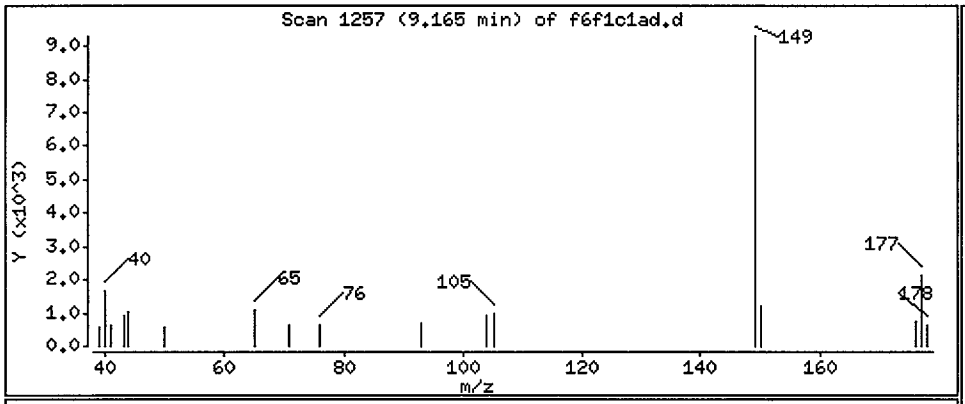
Client ID: DD3002 Instrument: md.i

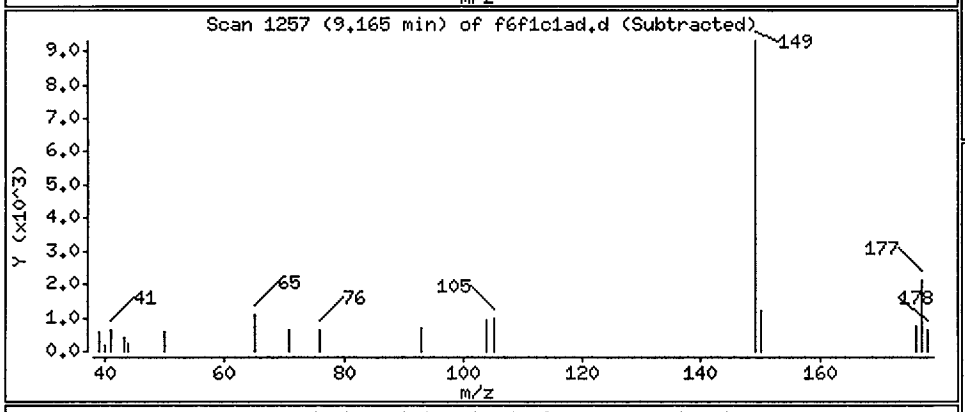
Sample Info: F6F1C1AD,,0,,,

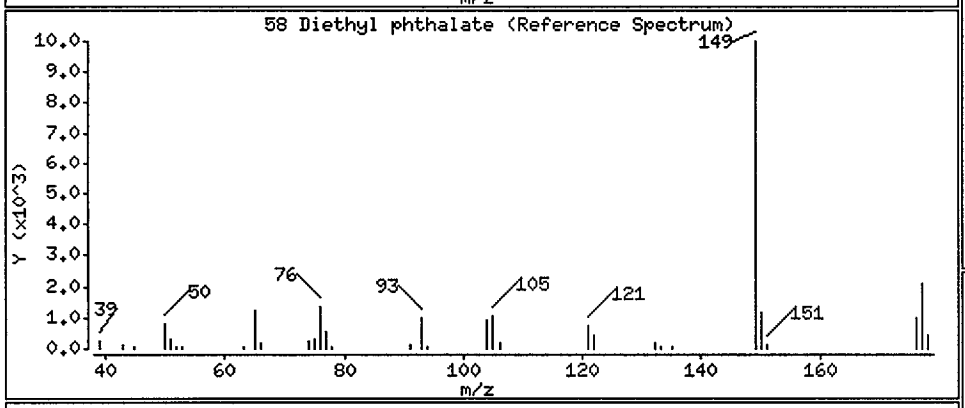
Volume Injected (uL): 1.0 Operator: 3386

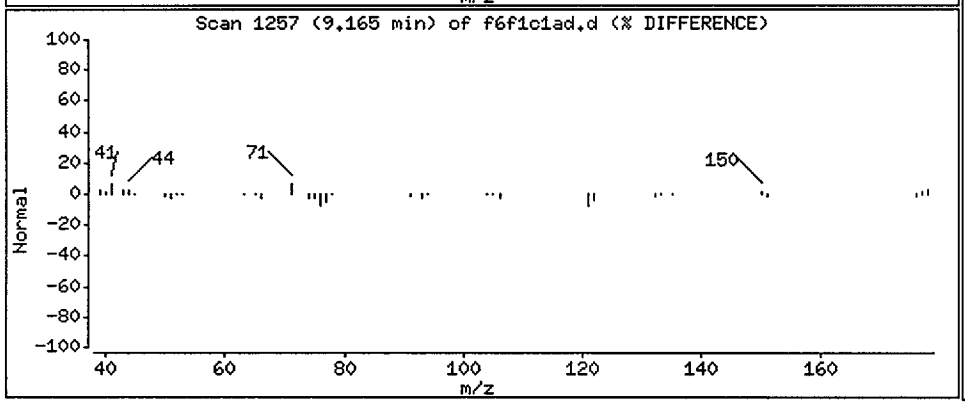
Column phase: ZB-5 Column diameter: 0.25

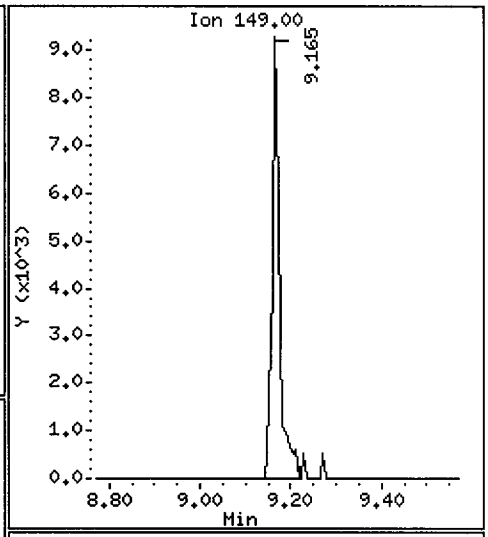
58 Diethyl phthalate Concentration: 0.745 ug/L

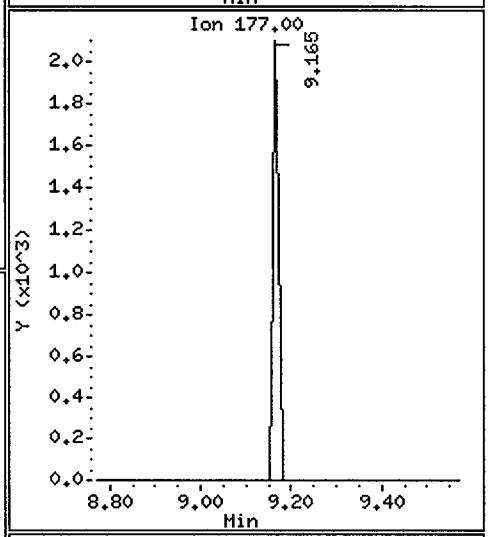


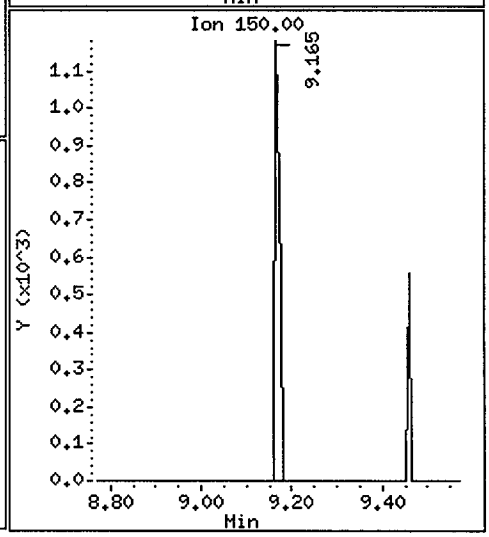












Data File: /var/chem/gcms/md.i/D121503.b/f6f1c1ad.d

Date : 15-DEC-2003 22:14

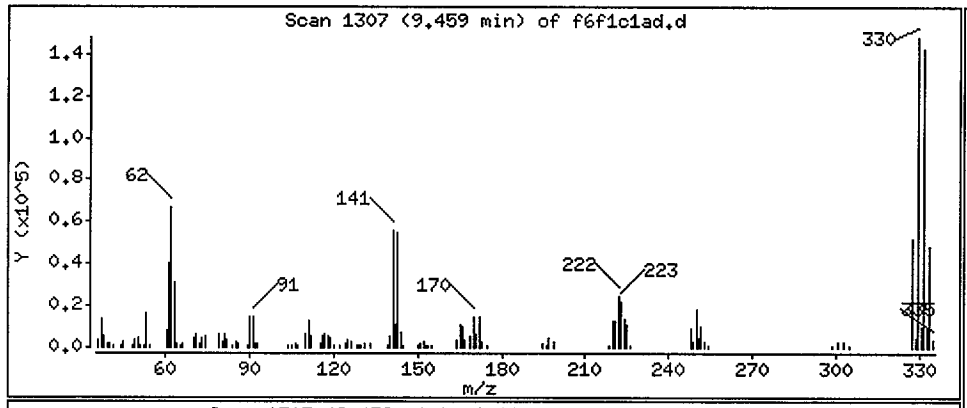
Client ID: DD3002 Instrument: md.i

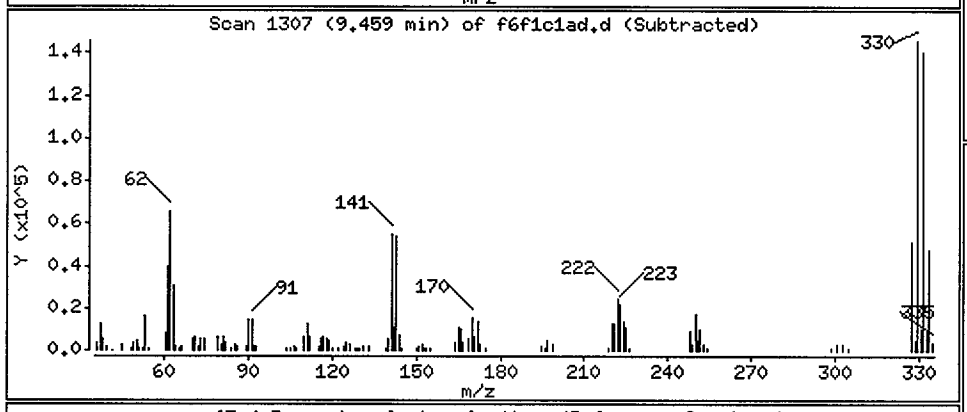
Sample Info: F6F1C1AD,,0,,,

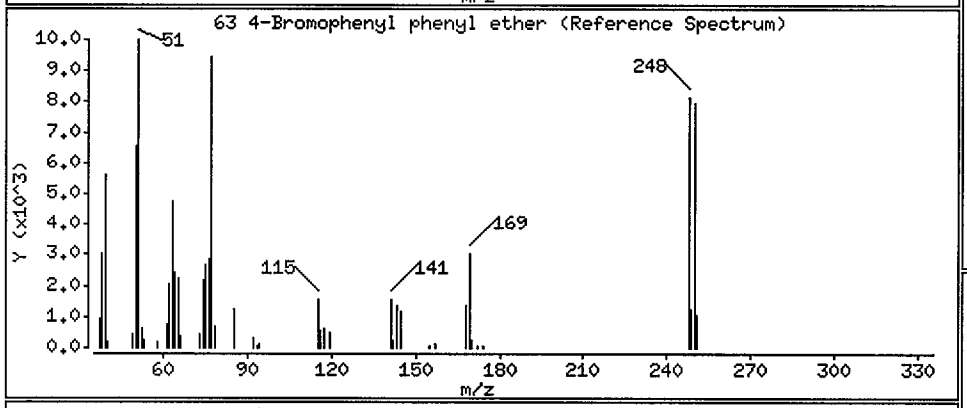
Volume Injected (uL): 1.0 Operator: 3386

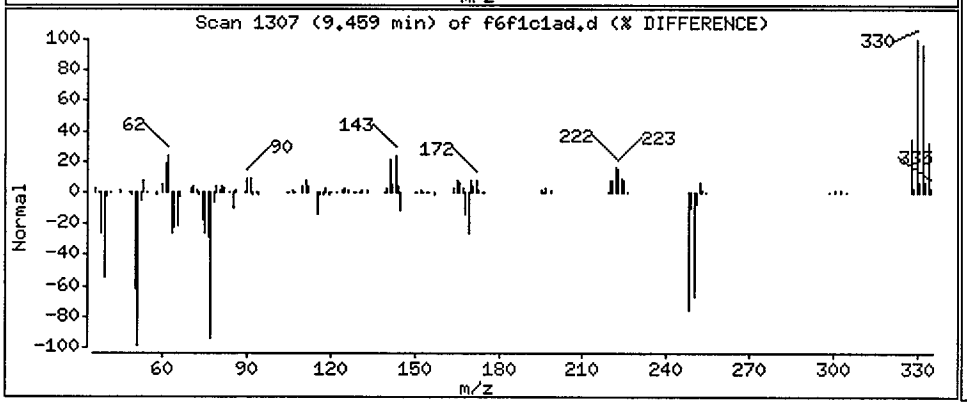
Column phase: ZB-5 Column diameter: 0.25

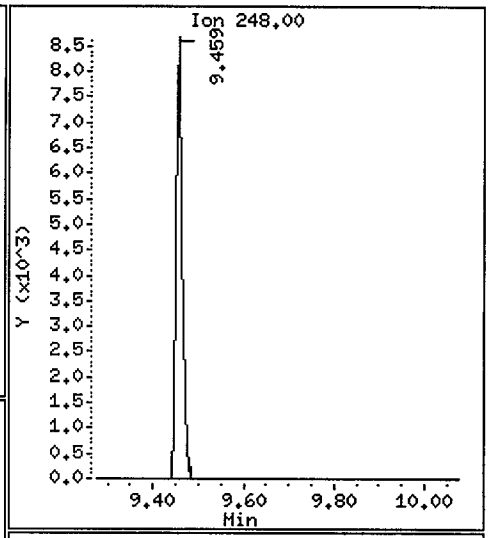
63 4-Bromophenyl phenyl ether Concentration: 2.48 ug/L

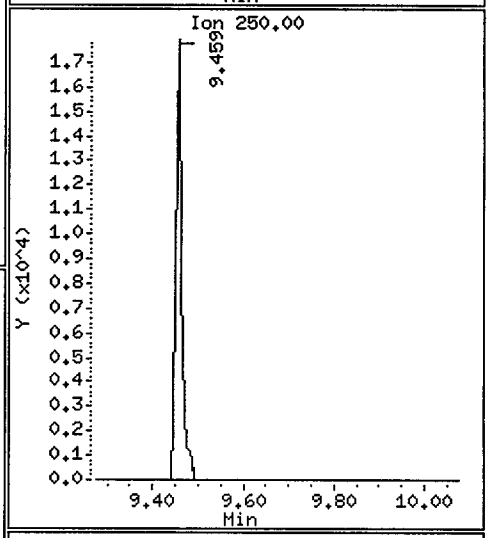


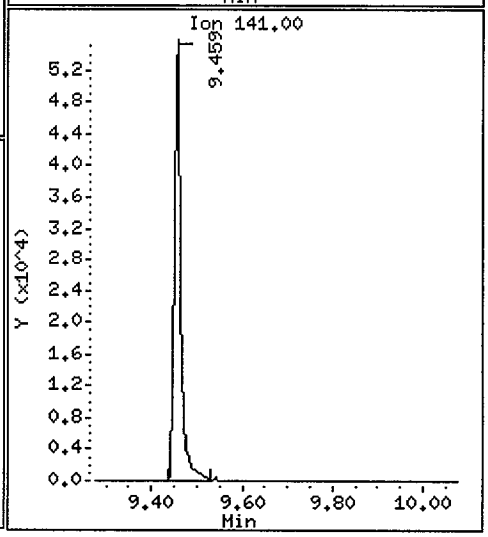












SHAW E & I INC

Client Sample ID: DD3001

GC/MS Semivolatiles

Lot-Sample #...: H3L110180-002 **Work Order #...:** F6F2H1AP **Matrix.....:** WATER
Date Sampled...: 12/10/03 **Date Received..:** 12/11/03
Prep Date.....: 12/12/03 **Analysis Date..:** 12/15/03
Prep Batch #...: 3346158
Dilution Factor: 1 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Phenol	ND	10	ug/L	1.8
bis(2-Chloroethyl)-ether	ND	10	ug/L	1.6
2-Chlorophenol	ND	10	ug/L	1.2
1,3-Dichlorobenzene	ND	10	ug/L	1.6
1,4-Dichlorobenzene	ND	10	ug/L	1.4
1,2-Dichlorobenzene	ND	10	ug/L	1.7
2-Methylphenol	ND	10	ug/L	2.0
2,2'-oxybis(1-Chloro-propane)	ND	10	ug/L	1.4
4-Methylphenol	ND	10	ug/L	3.6
N-Nitrosodi-n-propyl-amine	ND	10	ug/L	2.1
Hexachloroethane	ND	10	ug/L	1.9
Nitrobenzene	ND	10	ug/L	1.8
Isophorone	ND	10	ug/L	1.6
2-Nitrophenol	ND	10	ug/L	2.4
2,4-Dimethylphenol	ND	10	ug/L	3.7
bis(2-Chloroethoxy) methane	ND	10	ug/L	1.5
2,4-Dichlorophenol	ND	10	ug/L	2.0
1,2,4-Trichloro-benzene	ND	10	ug/L	1.5
Naphthalene	ND	10	ug/L	1.7
4-Chloroaniline	ND	10	ug/L	1.8
Hexachlorobutadiene	ND	10	ug/L	1.4
4-Chloro-3-methylphenol	ND	10	ug/L	2.2
2-Methylnaphthalene	ND	10	ug/L	1.6
Hexachlorocyclopenta-diene	ND	50	ug/L	7.9
2,4,6-Trichloro-phenol	ND	10	ug/L	2.0
2,4,5-Trichloro-phenol	ND	10	ug/L	1.6
2-Chloronaphthalene	ND	10	ug/L	1.6
2-Nitroaniline	ND	50	ug/L	1.4
Dimethyl phthalate	ND	10	ug/L	1.1
Acenaphthylene	ND	10	ug/L	1.7
2,6-Dinitrotoluene	ND	10	ug/L	1.7

(Continued on next page)

SHAW E & I INC

Client Sample ID: DD3001

GC/MS Semivolatiles

Lot-Sample #...: H3L110180-002 **Work Order #...:** F6F2H1AP **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
3-Nitroaniline	ND	50	ug/L	1.3
Acenaphthene	ND	10	ug/L	1.5
2,4-Dinitrophenol	ND	50	ug/L	15
4-Nitrophenol	ND	50	ug/L	15
Dibenzofuran	ND	10	ug/L	1.6
2,4-Dinitrotoluene	ND	10	ug/L	1.6
Diethyl phthalate	ND	10	ug/L	1.3
4-Chlorophenyl phenyl ether	ND	10	ug/L	1.6
Fluorene	ND	10	ug/L	1.3
4-Nitroaniline	ND	50	ug/L	1.3
4,6-Dinitro-2-methylphenol	ND	50	ug/L	11
N-Nitrosodiphenylamine	ND	10	ug/L	1.6
4-Bromophenyl phenyl ether	ND	10	ug/L	1.4
Hexachlorobenzene	ND	10	ug/L	0.90
Pentachlorophenol	ND	50	ug/L	8.6
Phenanthrene	ND	10	ug/L	0.84
Anthracene	ND	10	ug/L	0.83
Carbazole	ND	10	ug/L	1.2
Di-n-butyl phthalate	ND	10	ug/L	1.4
Fluoranthene	ND	10	ug/L	1.3
Pyrene	ND	10	ug/L	0.96
Butyl benzyl phthalate	ND	10	ug/L	1.3
3,3'-Dichlorobenzidine	ND	50	ug/L	1.2
Benzo(a)anthracene	ND	10	ug/L	1.2
Chrysene	ND	10	ug/L	0.98
bis(2-Ethylhexyl) phthalate	ND	10	ug/L	2.2
Di-n-octyl phthalate	ND	10	ug/L	2.4
Benzo(b)fluoranthene	ND	10	ug/L	2.1
Benzo(k)fluoranthene	ND	10	ug/L	1.7
Benzo(a)pyrene	ND	10	ug/L	1.6
Indeno(1,2,3-cd)pyrene	ND	10	ug/L	2.1
Dibenz(a,h)anthracene	ND	10	ug/L	2.5
Benzo(ghi)perylene	ND	10	ug/L	2.1

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	65	(29 - 110)
Phenol-d5	78	(41 - 115)
Nitrobenzene-d5	85	(46 - 117)
2-Fluorobiphenyl	85	(44 - 116)
2,4,6-Tribromophenol	98	(31 - 138)
Terphenyl-d14	95	(36 - 134)

Data File: /var/chem/gcms/md.i/D121503.b/f6f2h1ap.d
Report Date: 17-Dec-2003 11:57

STL Knoxville

SW-846 Method 8270C

Data file : /var/chem/gcms/md.i/D121503.b/f6f2h1ap.d
Lab Smp Id: F6F2H1AP Client Smp ID: DD3001
Inj Date : 15-DEC-2003 22:38
Operator : 3386 Inst ID: md.i
Smp Info : F6F2H1AP,,0,,,
Misc Info : D121503,8270a9,8270.sub
Comment : Semivolatile Organic Compounds by GC/MS
Method : /var/chem/gcms/md.i/D121503.b/8270a9.m
Meth Date : 17-Dec-2003 11:53 layk Quant Type: ISTD
Cal Date : 07-NOV-2003 13:02 Cal File: a9dk076.d
Als bottle: 16
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8270.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Unit Correction factor
Vt	1000.00000	Volume of final extract (uL)
Vo	1000.00000	Volume of sample extracted (mL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/uL)	FINAL (ug/L)
* 1 1,4-Dichlorobenzene-d4	152	4.317	4.317	(1.000)	111696	20.0000	
* 2 Naphthalene-d8	136	5.945	5.945	(1.000)	404347	20.0000	
* 3 Acenaphthene-d10	164	8.589	8.589	(1.000)	229790	20.0000	
* 4 Phenanthrene-d10	188	10.070	10.070	(1.000)	390797	20.0000	
* 5 Chrysene-d12	240	12.173	12.173	(1.000)	387874	20.0000	
* 6 Perylene-d12	264	13.425	13.425	(1.000)	266700	20.0000	
$ 7 2-Fluorophenol	112	3.154	3.154	(0.731)	355995	48.6014	48.6
$ 8 Phenol-d5	99	3.988	3.994	(0.924)	470551	58.5508	58.6
$ 9 Nitrobenzene-d5	82	4.999	4.999	(0.841)	262907	42.4680	42.5
$ 10 2-Fluorobiphenyl	172	7.684	7.684	(0.895)	644409	42.3101	42.3
$ 11 2,4,6-Tribromophenol	330	9.459	9.459	(0.939)	131509	73.1693	73.2
$ 12 Terphenyl-d14	244	11.339	11.339	(0.931)	760947	47.4070	47.4
56 Fluorene	166	9.453	9.194	(1.101)	9688	0.57774	0.578
58 Diethyl phthalate	149	9.165	9.171	(1.067)	9768	0.64415	0.644

12/17/03

Data File: /var/chem/gcms/md.i/D121503.b/f6f2h1ap.d
Report Date: 17-Dec-2003 11:57

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/uL)	FINAL (ug/L)
63 4-Bromophenyl phenyl ether	248	9.459	9.676	(0.939)	7413	2.12420	~~2.12~~
69 Di-n-butyl phthalate	149	10.410	10.598	(1.034)	20302	0.84667	~~0.847~~

12/17/03

Data File: /var/chem/gcms/md.i/D121503.b/f6f2h1ap.d
Report Date: 17-Dec-2003 11:57

STL Knoxville

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: md.i
Lab File ID: f6f2h1ap.d
Lab Smp Id: F6F2H1AP
Analysis Type: SV
Quant Type: ISTD
Operator: 3386
Method File: /var/chem/gcms/md.i/D121503.b/8270a9.m
Misc Info: D121503,8270a9,8270.sub

Calibration Date: 15-DEC-2003
Calibration Time: 17:05
Client Smp ID: DD3001
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	114826	57413	229652	111696	-2.73
2 Naphthalene-d8	425133	212566	850266	404347	-4.89
3 Acenaphthene-d10	235031	117516	470062	229790	-2.23
4 Phenanthrene-d10	408242	204121	816484	390797	-4.27
5 Chrysene-d12	410532	205266	821064	387874	-5.52
6 Perylene-d12	297061	148530	594122	266700	-10.22

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	4.32	3.82	4.82	4.32	0.00
2 Naphthalene-d8	5.94	5.44	6.44	5.95	0.00
3 Acenaphthene-d10	8.59	8.09	9.09	8.59	0.00
4 Phenanthrene-d10	10.07	9.57	10.57	10.07	0.00
5 Chrysene-d12	12.17	11.67	12.67	12.17	0.00
6 Perylene-d12	13.42	12.92	13.92	13.42	0.00

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

Data File: /var/chem/gcms/md.i/D121503.b/f6f2h1ap.d
Report Date: 17-Dec-2003 11:57

STL Knoxville

RECOVERY REPORT

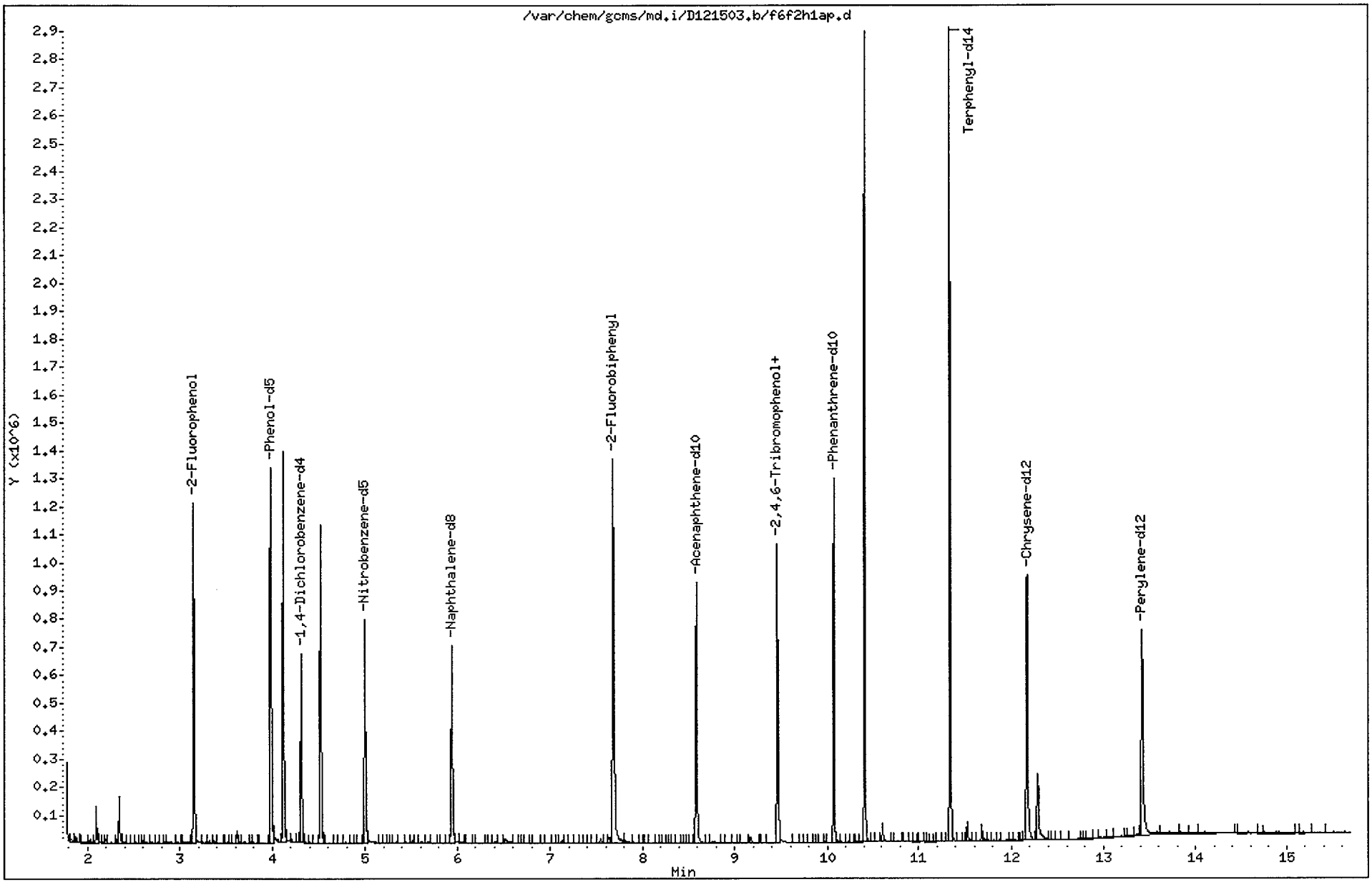
Client Name: SHAW E & I INC
Sample Matrix: LIQUID
Lab Smp Id: F6F2H1AP
Level: LOW
Data Type: MS DATA
SpikeList File: allspike.spk
Sublist File: 8270.sub
Method File: /var/chem/gcms/md.i/D121503.b/8270a9.m
Misc Info: D121503,8270a9,8270.sub

Client SDG: PB045
Fraction: SV
Client Smp ID: DD3001
Operator: 3386
SampleType: SAMPLE
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 7 2-Fluorophenol	75.0	48.6	64.80	29-110
$ 8 Phenol-d5	75.0	58.6	78.07	41-115
$ 9 Nitrobenzene-d5	50.0	42.5	84.94	46-117
$ 10 2-Fluorobiphenyl	50.0	42.3	84.62	44-116
$ 11 2,4,6-Tribromophen	75.0	73.2	97.56	31-138
$ 12 Terphenyl-d14	50.0	47.4	94.81	0-132

Data File: /var/chem/gcms/md.i/D121503.b/f6f2h1ap.d
Date : 15-DEC-2003 22:38
Client ID: DD3001
Sample Info: F6F2H1AP,,0,,,
Volume Injected (uL): 1.0
Column phase: ZB-5

Instrument: md.i
Operator: 3386
Column diameter: 0.25



Data File: /var/chem/gcms/md.i/D121503.b/f6f2h1ap.d

Date : 15-DEC-2003 22:38

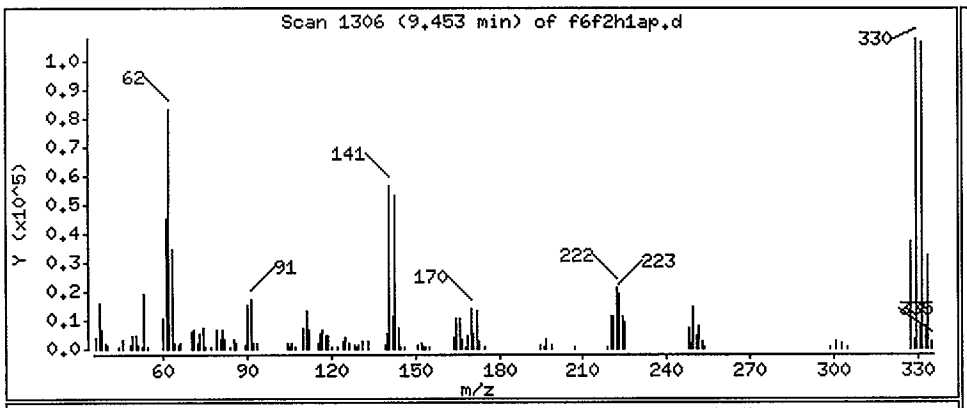
Client ID: DD3001 | Instrument: md.i

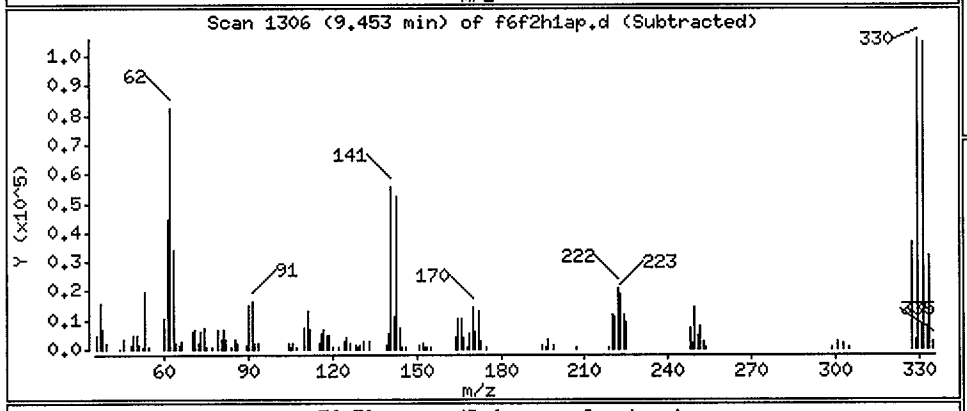
Sample Info: F6F2H1AP,,0,,,

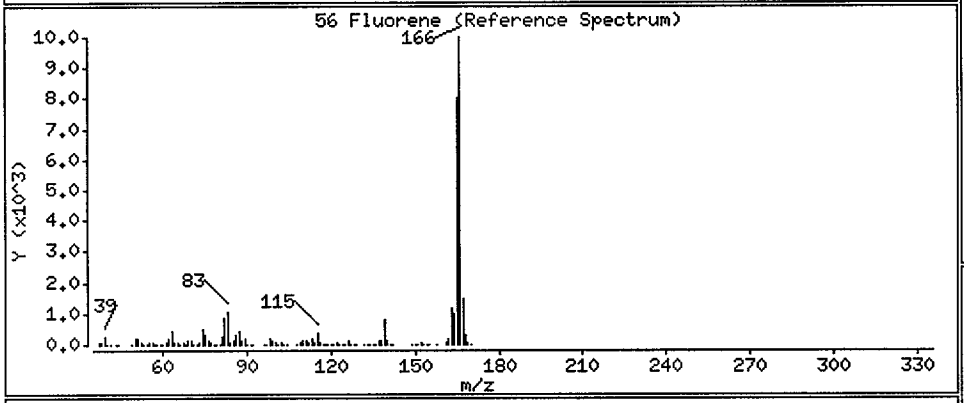
Volume Injected (uL): 1.0 | Operator: 3386

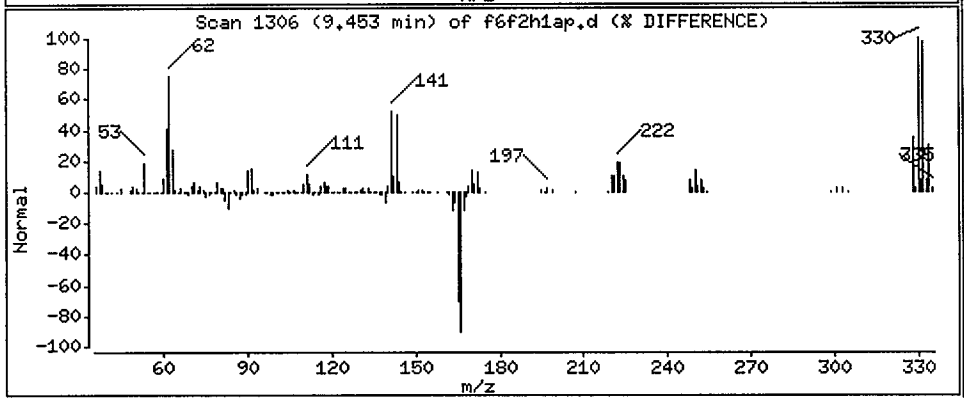
Column phase: ZB-5 | Column diameter: 0.25

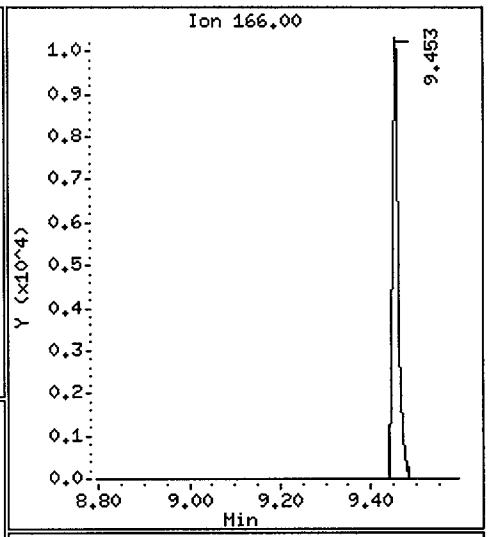
56 Fluorene | Concentration: 0.578 ug/L

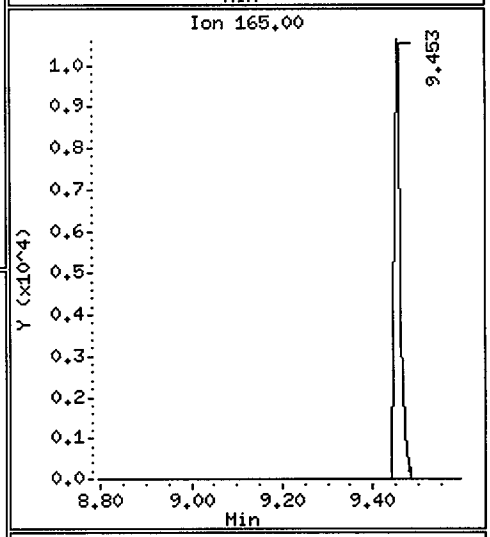


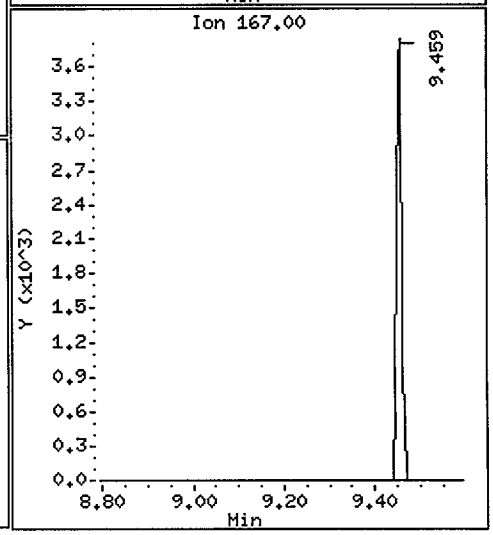












Data File: /var/chem/gcms/md.i/D121503.b/f6f2h1ap.d

Date : 15-DEC-2003 22:38

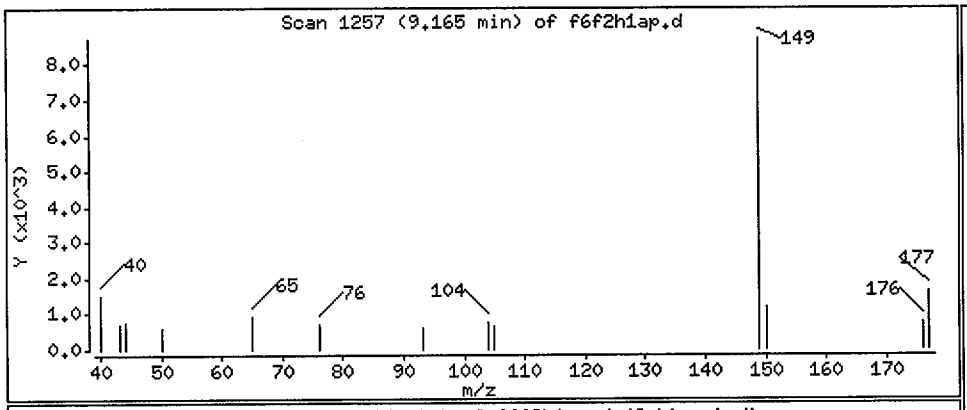
Client ID: DD3001 Instrument: md.i

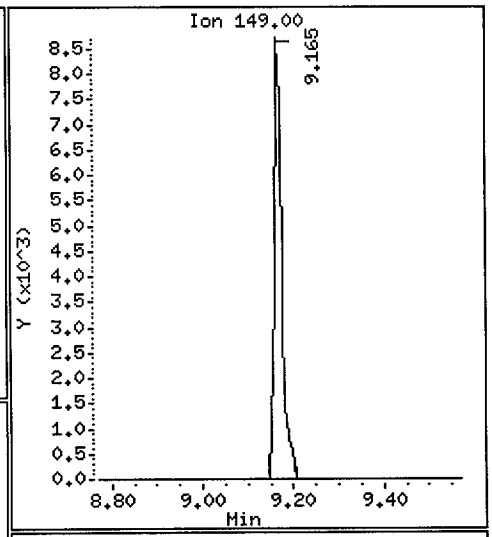
Sample Info: F6F2H1AP,,0,,,

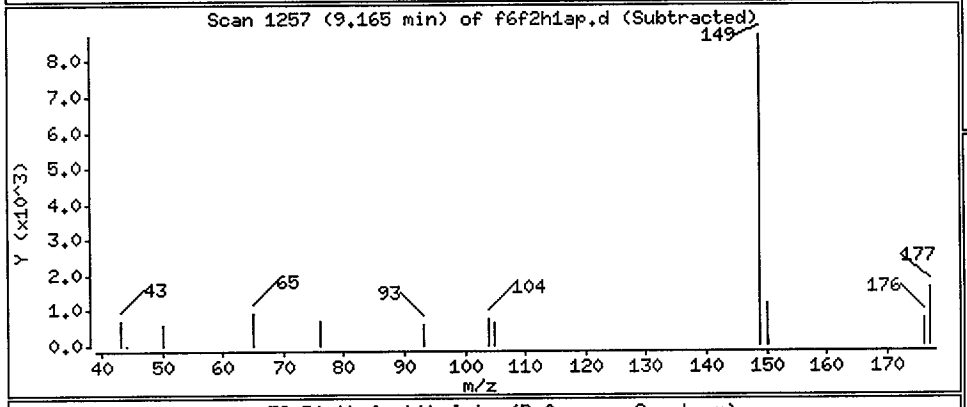
Volume Injected (uL): 1.0 Operator: 3386

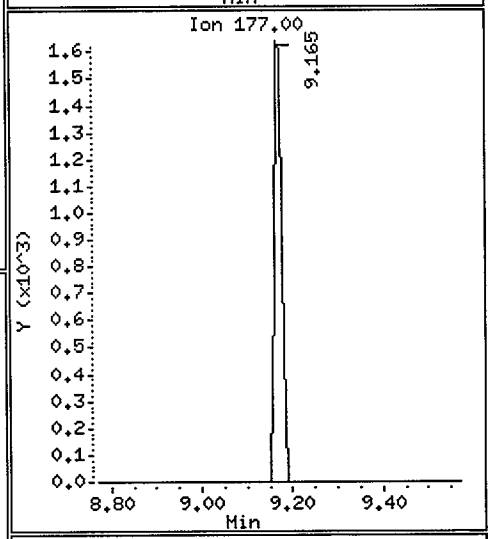
Column phase: ZB-5 Column diameter: 0.25

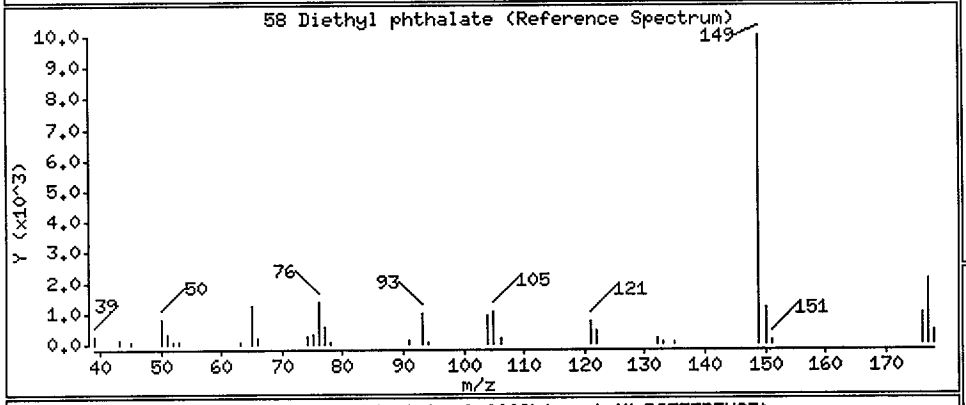
58 Diethyl phthalate Concentration: 0.644 ug/L

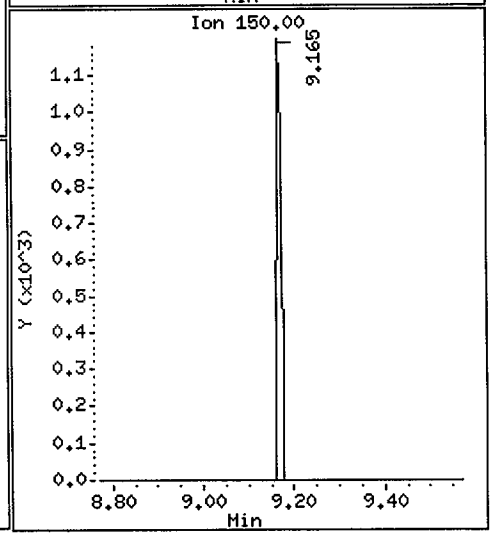


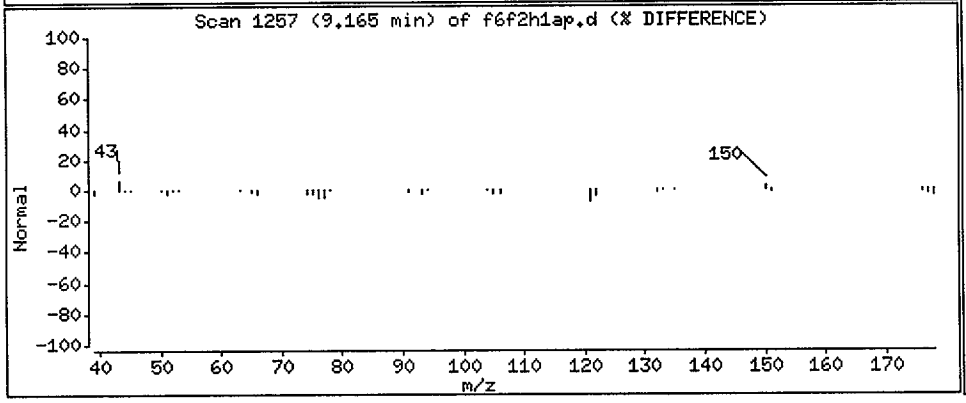












Data File: /var/chem/gcms/md.i/D121503.b/f6f2h1ap.d

Date : 15-DEC-2003 22:38

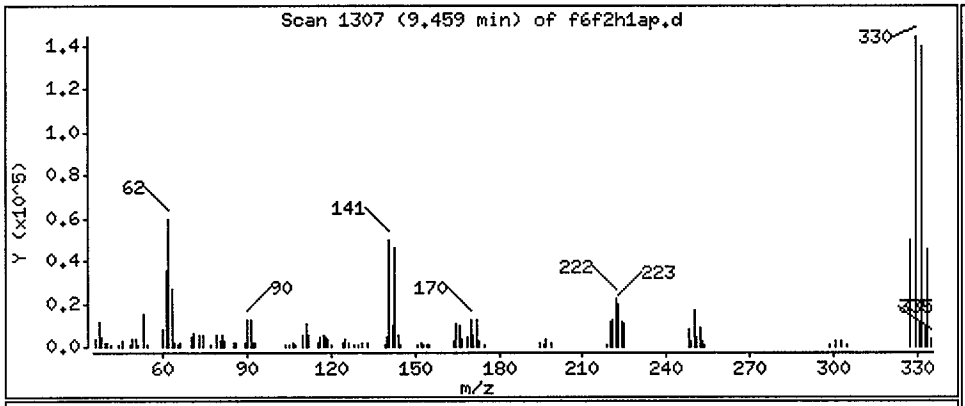
Client ID: DD3001 Instrument: md.i

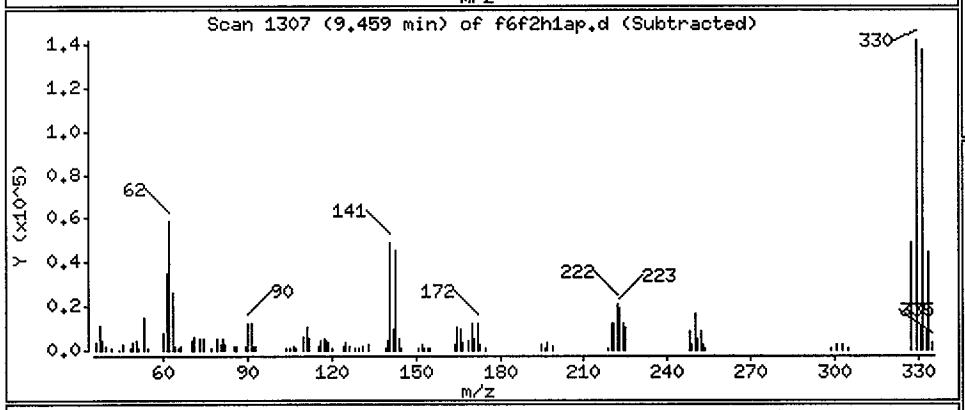
Sample Info: F6F2H1AP,,0,,,

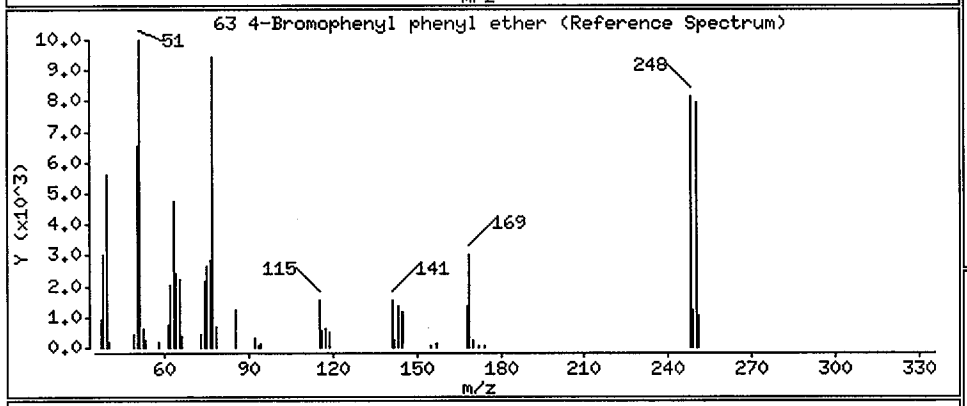
Volume Injected (uL): 1.0 Operator: 3386

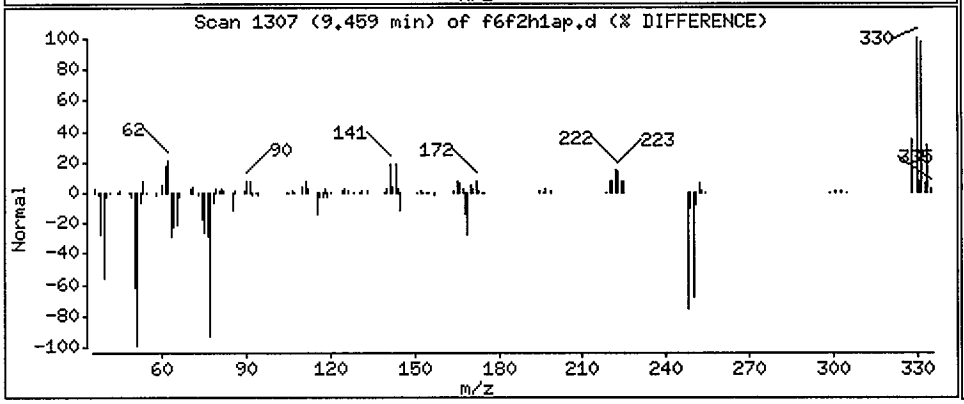
Column phase: ZB-5 Column diameter: 0.25

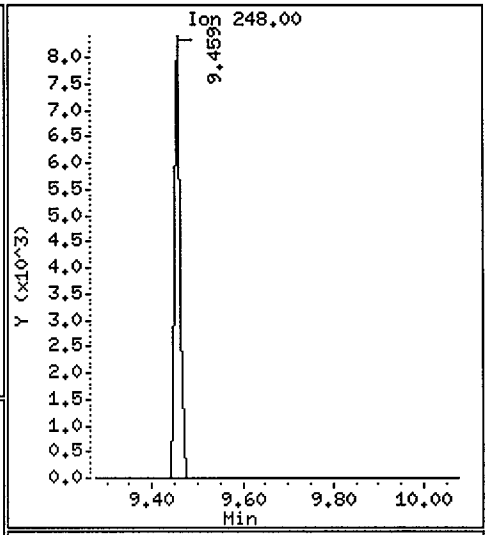
63 4-Bromophenyl phenyl ether Concentration: 2.12 ug/L

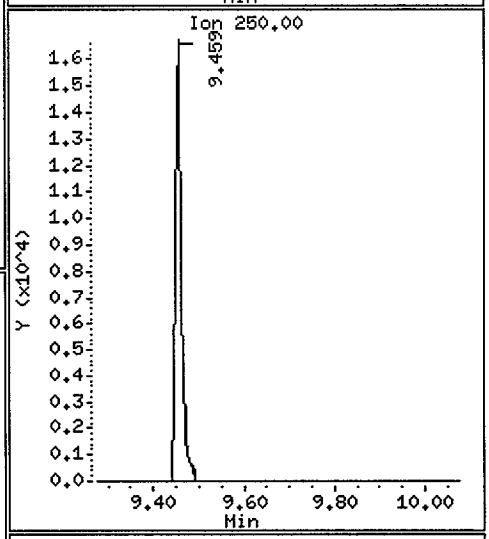


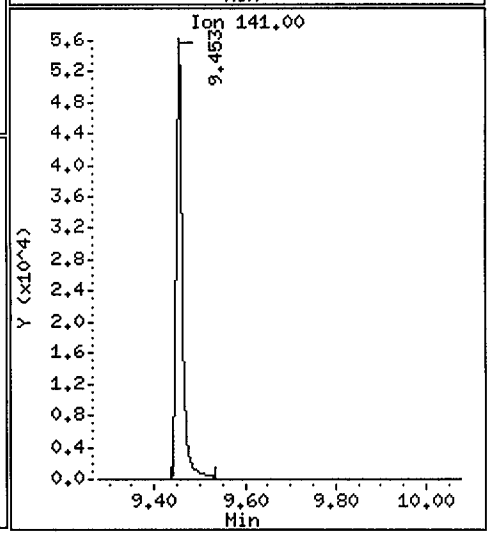












Data File: /var/chem/gcms/md.i/D121503.b/f6f2h1ap.d

Date : 15-DEC-2003 22:38

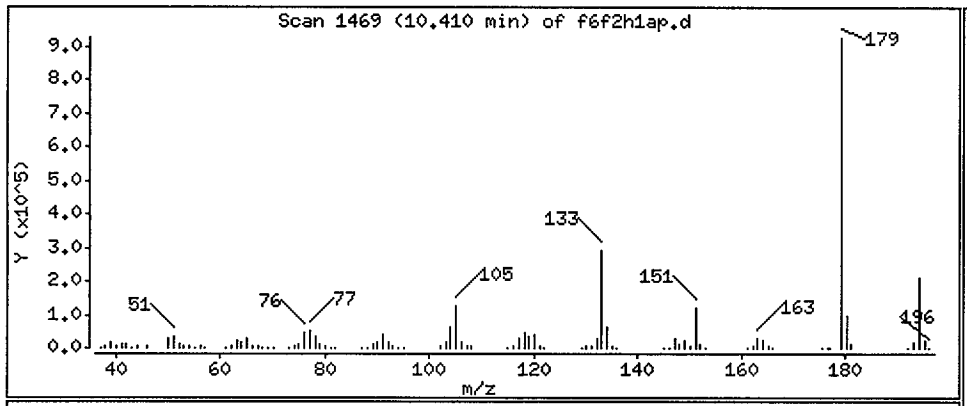
Client ID: DD3001 Instrument: md.i

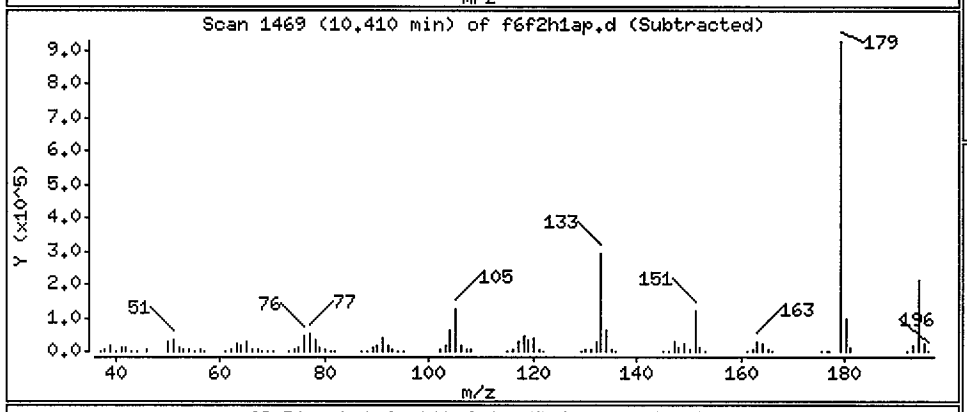
Sample Info: F6F2H1AP,,0,,,

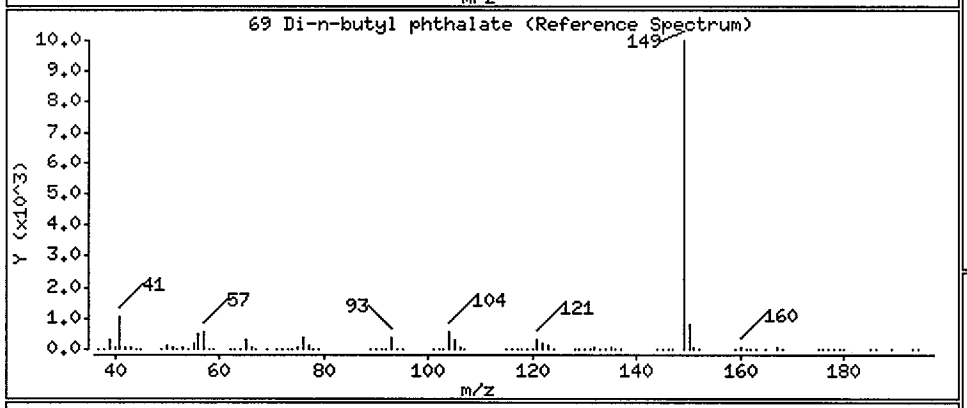
Volume Injected (uL): 1.0 Operator: 3386

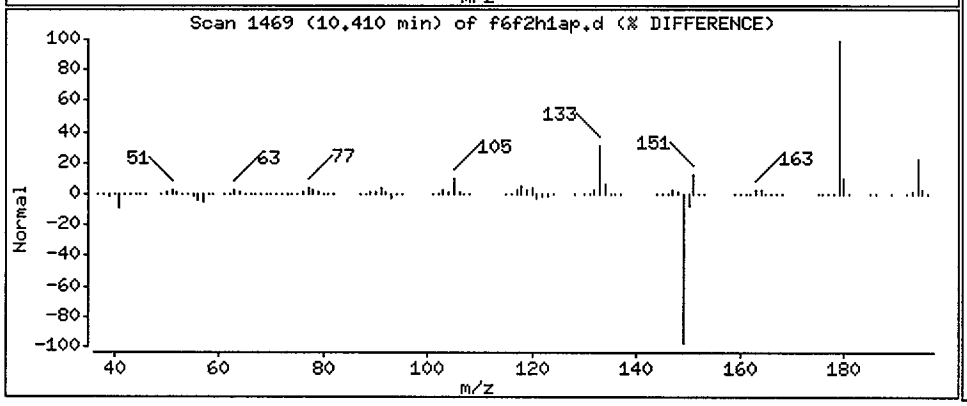
Column phase: ZB-5 Column diameter: 0.25

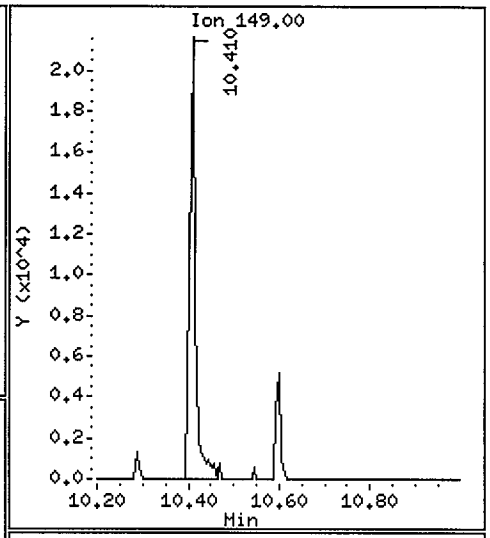
69 Di-n-butyl phthalate Concentration: 0.847 ug/L

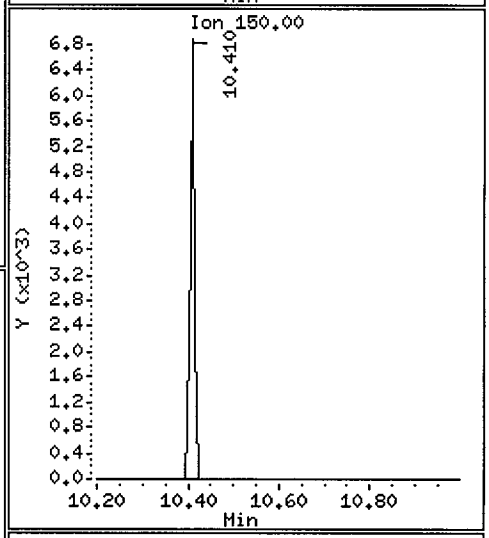


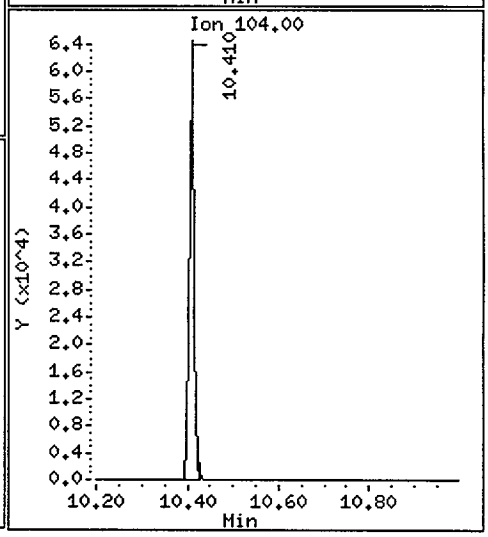












SHAW E & I INC

Client Sample ID: DD3003

GC/MS Semivolatiles

Lot-Sample #...: H3L120208-001 **Work Order #...:** F6JXA1AD **Matrix.....:** WATER
Date Sampled...: 12/11/03 **Date Received..:** 12/12/03
Prep Date.....: 12/15/03 **Analysis Date..:** 12/18/03
Prep Batch #...: 3349288
Dilution Factor: 1 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Phenol	ND	10	ug/L	1.8
bis(2-Chloroethyl)-ether	ND	10	ug/L	1.6
2-Chlorophenol	ND	10	ug/L	1.2
1,3-Dichlorobenzene	ND	10	ug/L	1.6
1,4-Dichlorobenzene	ND	10	ug/L	1.4
1,2-Dichlorobenzene	ND	10	ug/L	1.7
2-Methylphenol	ND	10	ug/L	2.0
2,2'-oxybis(1-Chloro-propane)	ND	10	ug/L	1.4
4-Methylphenol	ND	10	ug/L	3.6
N-Nitrosodi-n-propyl-amine	ND	10	ug/L	2.1
Hexachloroethane	ND	10	ug/L	1.9
Nitrobenzene	ND	10	ug/L	1.8
Isophorone	ND	10	ug/L	1.6
2-Nitrophenol	ND	10	ug/L	2.4
2,4-Dimethylphenol	ND	10	ug/L	3.7
bis(2-Chloroethoxy) methane	ND	10	ug/L	1.5
2,4-Dichlorophenol	ND	10	ug/L	2.0
1,2,4-Trichloro-benzene	ND	10	ug/L	1.5
Naphthalene	**2.3 J**	**10**	**ug/L**	**1.7**
4-Chloroaniline	ND	10	ug/L	1.8
Hexachlorobutadiene	ND	10	ug/L	1.4
4-Chloro-3-methylphenol	ND	10	ug/L	2.2
2-Methylnaphthalene	**2.9 J**	**10**	**ug/L**	**1.6**
Hexachlorocyclopenta-diene	ND	50	ug/L	7.9
2,4,6-Trichloro-phenol	ND	10	ug/L	2.0
2,4,5-Trichloro-phenol	ND	10	ug/L	1.6
2-Chloronaphthalene	ND	10	ug/L	1.6
2-Nitroaniline	ND	50	ug/L	1.4
Dimethyl phthalate	ND	10	ug/L	1.1
Acenaphthylene	ND	10	ug/L	1.7
2,6-Dinitrotoluene	ND	10	ug/L	1.7

(Continued on next page)

SHAW E & I INC

Client Sample ID: DD3003

GC/MS Semivolatiles

Lot-Sample #...: H3L120208-001 **Work Order #...:** F6JXA1AD **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
3-Nitroaniline	ND	50	ug/L	1.3
Acenaphthene	ND	10	ug/L	1.5
2,4-Dinitrophenol	ND	50	ug/L	15
4-Nitrophenol	ND	50	ug/L	15
Dibenzofuran	ND	10	ug/L	1.6
2,4-Dinitrotoluene	ND	10	ug/L	1.6
Diethyl phthalate	ND	10	ug/L	1.3
4-Chlorophenyl phenyl ether	ND	10	ug/L	1.6
Fluorene	ND	10	ug/L	1.3
4-Nitroaniline	ND	50	ug/L	1.3
4,6-Dinitro-2-methylphenol	ND	50	ug/L	11
N-Nitrosodiphenylamine	ND	10	ug/L	1.6
4-Bromophenyl phenyl ether	ND	10	ug/L	1.4
Hexachlorobenzene	ND	10	ug/L	0.90
Pentachlorophenol	ND	50	ug/L	8.6
Phenanthrene	ND	10	ug/L	0.84
Anthracene	ND	10	ug/L	0.83
Carbazole	ND	10	ug/L	1.2
Di-n-butyl phthalate	ND	10	ug/L	1.4
Fluoranthene	ND	10	ug/L	1.3
Pyrene	ND	10	ug/L	0.96
Butyl benzyl phthalate	ND	10	ug/L	1.3
3,3'-Dichlorobenzidine	ND	50	ug/L	1.2
Benzo(a)anthracene	ND	10	ug/L	1.2
Chrysene	ND	10	ug/L	0.98
bis(2-Ethylhexyl) phthalate	ND	10	ug/L	2.2
Di-n-octyl phthalate	ND	10	ug/L	2.4
Benzo(b)fluoranthene	ND	10	ug/L	2.1
Benzo(k)fluoranthene	ND	10	ug/L	1.7
Benzo(a)pyrene	ND	10	ug/L	1.6
Indeno(1,2,3-cd)pyrene	ND	10	ug/L	2.1
Dibenz(a,h)anthracene	ND	10	ug/L	2.5
Benzo(ghi)perylene	ND	10	ug/L	2.1

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	75	(29 - 110)
Phenol-d5	88	(41 - 115)
Nitrobenzene-d5	89	(46 - 117)
2-Fluorobiphenyl	85	(44 - 116)
2,4,6-Tribromophenol	110	(31 - 138)
Terphenyl-d14	89	(36 - 134)

(Continued on next page)

SHAW E & I INC

Client Sample ID: DD3003

GC/MS Semivolatiles

Lot-Sample #...: H3L120208-001 Work Order #...: F6JXA1AD Matrix.....: WATER

NOTE(S):

J Estimated result. Result is less than RL.

Data File: /var/chem/gcms/md.i/D121803.b/f6jxa1ad.d
Report Date: 19-Dec-2003 12:33

STL Knoxville

SW-846 Method 8270C

Data file : /var/chem/gcms/md.i/D121803.b/f6jxa1ad.d
Lab Smp Id: F6JXA1AD Client Smp ID: DD3003
Inj Date : 18-DEC-2003 16:55
Operator : 3386 Inst ID: md.i
Smp Info : F6JXA1AD,,0,,,
Misc Info : D121803,8270a9,8270.sub
Comment : Semivolatile Organic Compounds by GC/MS
Method : /var/chem/gcms/md.i/D121803.b/8270a9.m
Meth Date : 19-Dec-2003 12:19 tajh Quant Type: ISTD
Cal Date : 07-NOV-2003 13:02 Cal File: a9dk076.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8270.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Unit Correction factor
Vt	1000.00000	Volume of final extract (uL)
Vo	1000.00000	Volume of sample extracted (mL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/uL)	FINAL (ug/L)
* 1 1,4-Dichlorobenzene-d4	152	4.318	4.318	(1.000)	71179	20.0000	
* 2 Naphthalene-d8	136	5.945	5.945	(1.000)	270976	20.0000	
* 3 Acenaphthene-d10	164	8.589	8.589	(1.000)	174219	20.0000	
* 4 Phenanthrene-d10	188	10.070	10.070	(1.000)	322012	20.0000	
* 5 Chrysene-d12	240	12.167	12.167	(1.000)	363157	20.0000	
* 6 Perylene-d12	264	13.425	13.419	(1.000)	273613	20.0000	
$ 7 2-Fluorophenol	112	3.154	3.154	(0.731)	260968	55.9087	55.9
$ 8 Phenol-d5	99	3.988	3.989	(0.924)	338410	66.0780	66.1
$ 9 Nitrobenzene-d5	82	4.999	4.999	(0.841)	184788	44.5406	44.5
$ 10 2-Fluorobiphenyl	172	7.684	7.684	(0.895)	490351	42.4644	42.5
$ 11 2,4,6-Tribromophenol	330	9.459	9.459	(0.939)	122646	82.8143	82.8
$ 12 Terphenyl-d14	244	11.339	11.339	(0.932)	670501	44.6153	44.6
24 2,2'-Oxybis(1-Chloropropane)	45	4.288	4.664	(0.993)	5761	0.75464	~~0.755~~
37 Naphthalene	128	5.969	5.975	(1.004)	34422	2.33116	2.33
38 4-Chloroaniline	127	5.969	6.086	(1.004)	4126	0.58737	~~0.587~~

UM 12-19-03

Data File: /var/chem/gcms/md.i/D121803.b/f6jxa1ad.d
Report Date: 19-Dec-2003 12:33

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/uL)	FINAL (ug/L)
41 2-Methylnaphthalene	142	6.997	6.991	(1.177)	27644	2.88247	2.88
56 Fluorene	166	9.453	9.188	(1.101)	8732	0.68685	~~0.687~~
58 Diethyl phthalate	149	9.165	9.171	(1.067)	7495	0.65192	0.652
61 N-Ndpa / diphenylamine (ccc)	169	9.453	9.335	(0.939)	4691	0.56178	~~0.562~~
63 4-Bromophenyl phenyl ether	248	9.459	9.676	(0.939)	6562	2.28205	~~2.28~~

KM
12-19-03

Data File: /var/chem/gcms/md.i/D121803.b/f6jxa1ad.d
Report Date: 19-Dec-2003 12:33

STL Knoxville

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: md.i
Lab File ID: f6jxa1ad.d
Lab Smp Id: F6JXA1AD
Analysis Type: SV
Quant Type: ISTD
Operator: 3386
Method File: /var/chem/gcms/md.i/D121803.b/8270a9.m
Misc Info: D121803,8270a9,8270.sub

Calibration Date: 18-DEC-2003
Calibration Time: 10:33
Client Smp ID: DD3003
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	87290	43645	174580	71179	-18.46
2 Naphthalene-d8	333200	166600	666400	270976	-18.67
3 Acenaphthene-d10	191379	95690	382758	174219	-8.97
4 Phenanthrene-d10	352152	176076	704304	322012	-8.56
5 Chrysene-d12	404756	202378	809512	363157	-10.28
6 Perylene-d12	323296	161648	646592	273613	-15.37

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	4.32	3.82	4.82	4.32	0.00
2 Naphthalene-d8	5.95	5.45	6.45	5.95	0.00
3 Acenaphthene-d10	8.59	8.09	9.09	8.59	0.00
4 Phenanthrene-d10	10.07	9.57	10.57	10.07	0.00
5 Chrysene-d12	12.17	11.67	12.67	12.17	0.00
6 Perylene-d12	13.42	12.92	13.92	13.42	0.04

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

Data File: /var/chem/gcms/md.i/D121803.b/f6jxa1ad.d
Report Date: 19-Dec-2003 12:33

STL Knoxville

RECOVERY REPORT

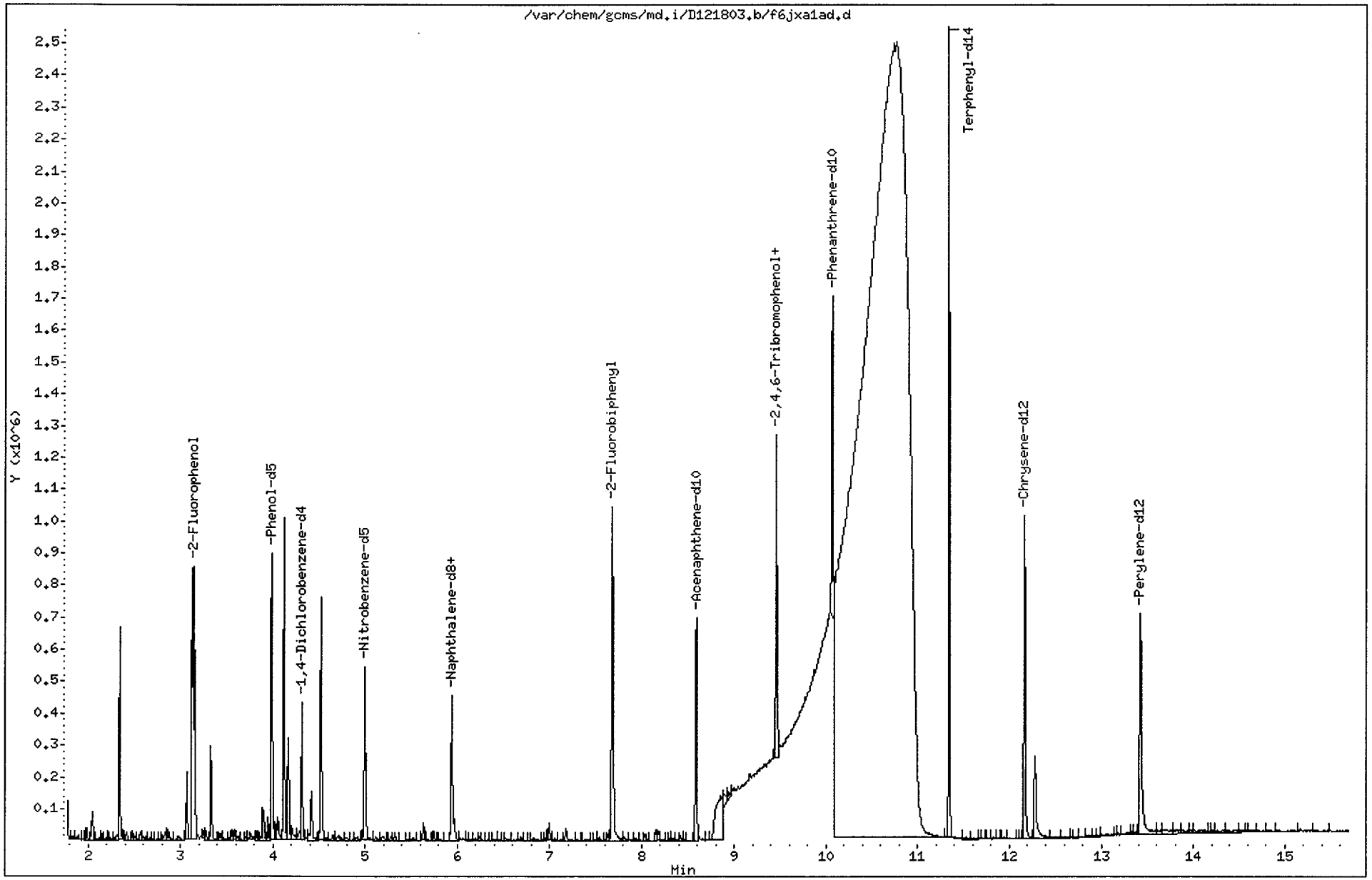
Client Name: SHAW E & I INC
Sample Matrix: LIQUID
Lab Smp Id: F6JXA1AD
Level: LOW
Data Type: MS DATA
SpikeList File: allspike.spk
Sublist File: 8270.sub
Method File: /var/chem/gcms/md.i/D121803.b/8270a9.m
Misc Info: D121803,8270a9,8270.sub

Client SDG: PB045
Fraction: SV
Client Smp ID: DD3003
Operator: 3386
SampleType: SAMPLE
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 7 2-Fluorophenol	75.0	55.9	74.54	29-110
$ 8 Phenol-d5	75.0	66.1	88.10	41-115
$ 9 Nitrobenzene-d5	50.0	44.5	89.08	46-117
$ 10 2-Fluorobiphenyl	50.0	42.5	84.93	44-116
$ 11 2,4,6-Tribromophen	75.0	82.8	110.42	31-138
$ 12 Terphenyl-d14	50.0	44.6	89.23	0-132

Data File: /var/chem/gcms/md.i/D121803.b/f6jxa1ad.d
Date : 18-DEC-2003 16:55
Client ID: DD3003
Sample Info: F6JXA1AD,,0,,,
Volume Injected (uL): 1.0
Column phase: ZB-5

Instrument: md.i
Operator: 3386
Column diameter: 0.25



Data File: /var/chem/gcms/md.i/D121803.b/f6jxa1ad.d

Date : 18-DEC-2003 16:55

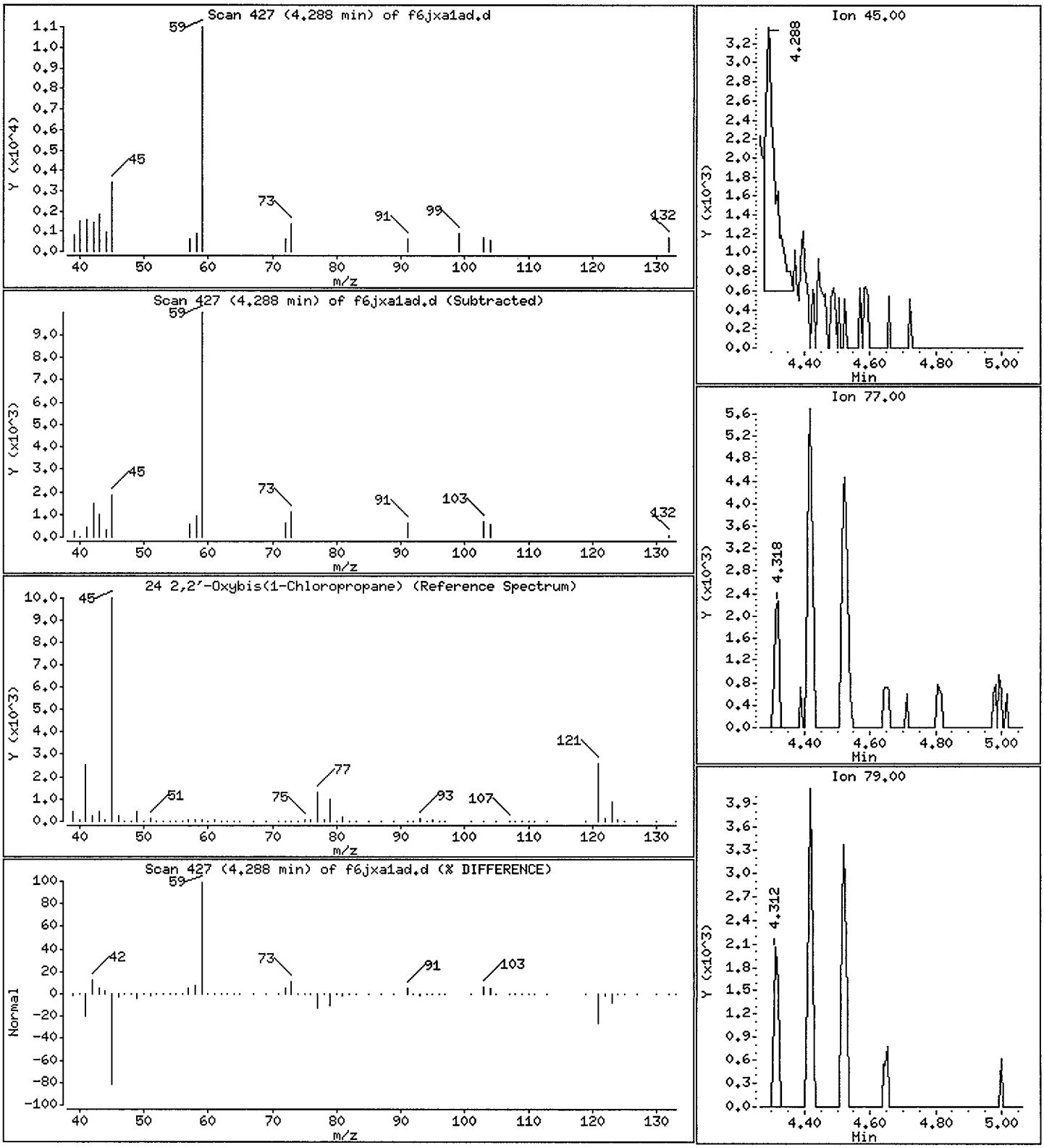
Client ID: DD3003 Instrument: md.i

Sample Info: F6JXA1AD,,0,,,

Volume Injected (uL): 1.0 Operator: 3386

Column phase: ZB-5 Column diameter: 0.25

24 2,2'-Oxybis(1-Chloropropane) Concentration: 0.755 ug/L



Data File: /var/chem/gcms/md.i/D121803.b/f6jxa1ad.d

Date : 18-DEC-2003 16:55

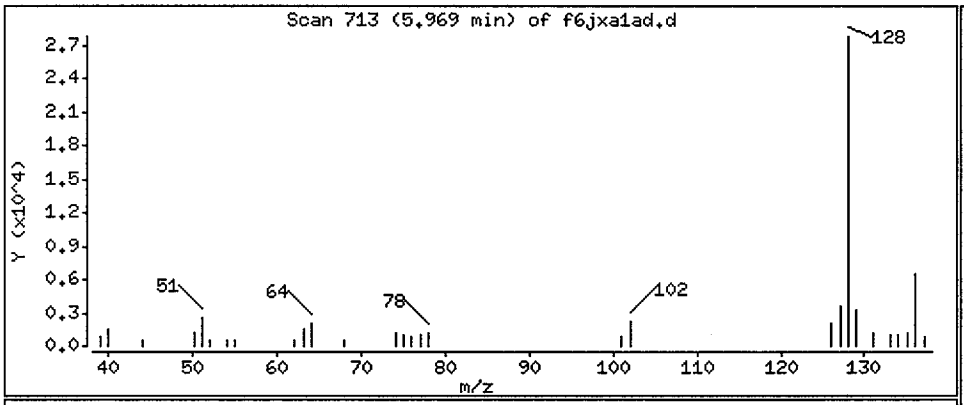
Client ID: DD3003 Instrument: md.i

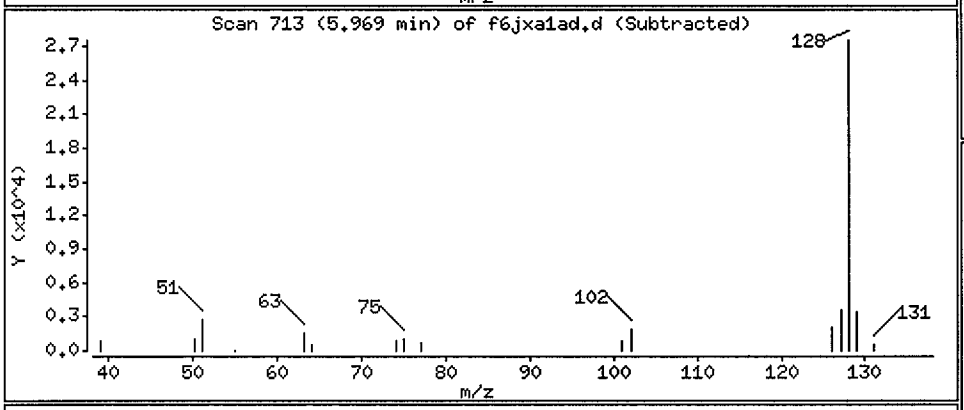
Sample Info: F6JXA1AD,,0,,,

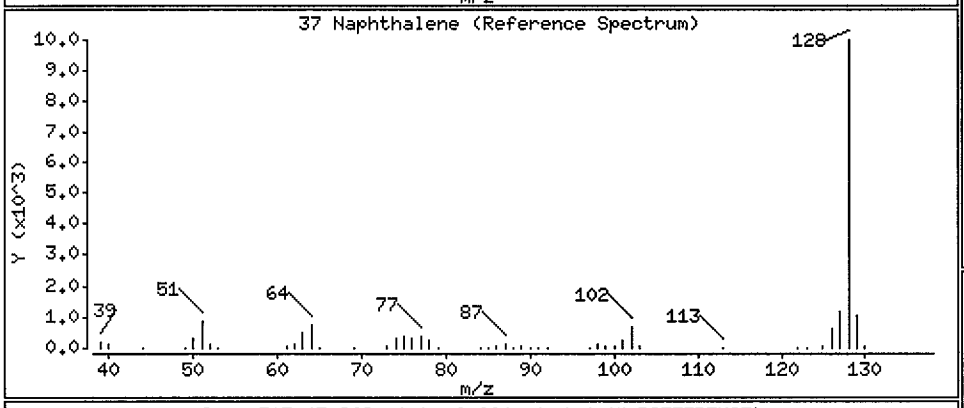
Volume Injected (uL): 1.0 Operator: 3386

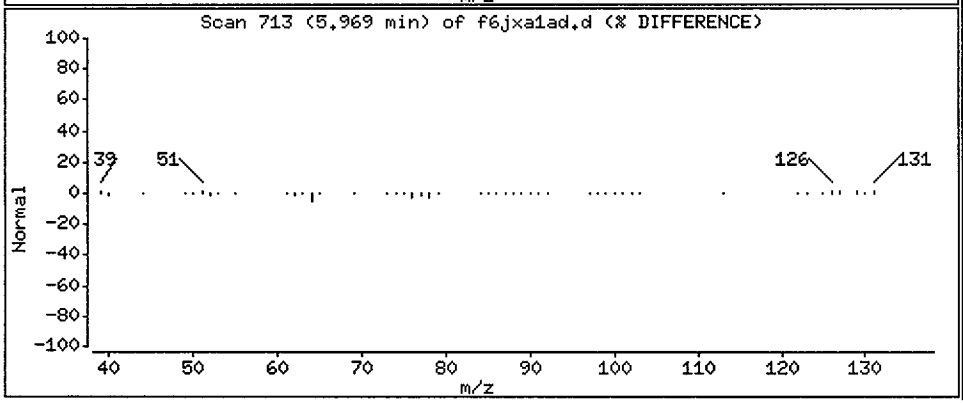
Column phase: ZB-5 Column diameter: 0.25

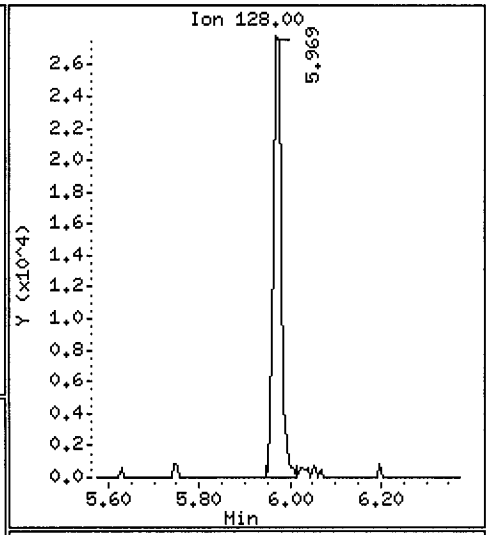
37 Naphthalene Concentration: 2.33 ug/L

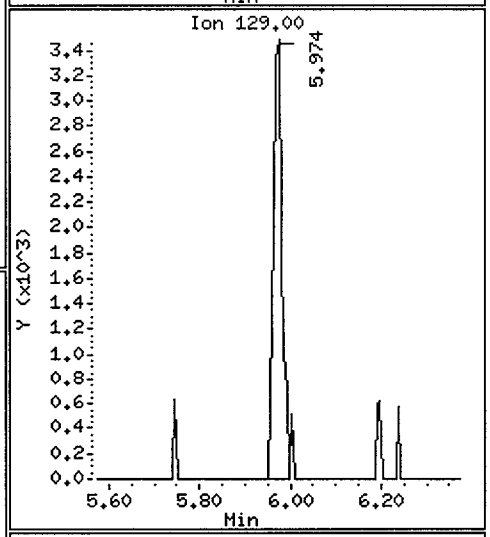


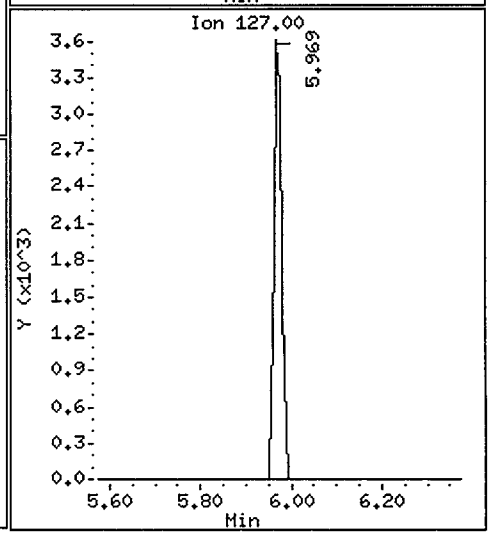












Data File: /var/chem/gcms/md.i/D121803.b/f6jxa1ad.d

Date : 18-DEC-2003 16:55

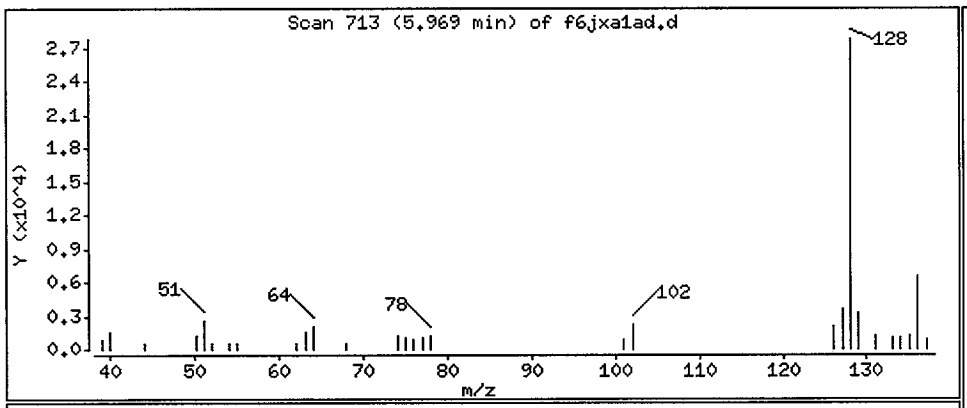
Client ID: DD3003 Instrument: md.i

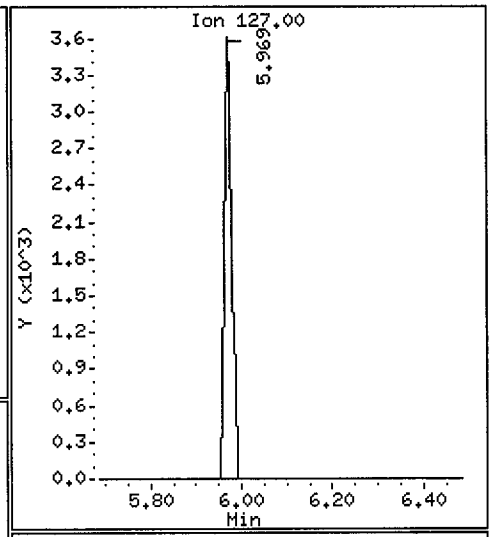
Sample Info: F6JXA1AD,,0,,,

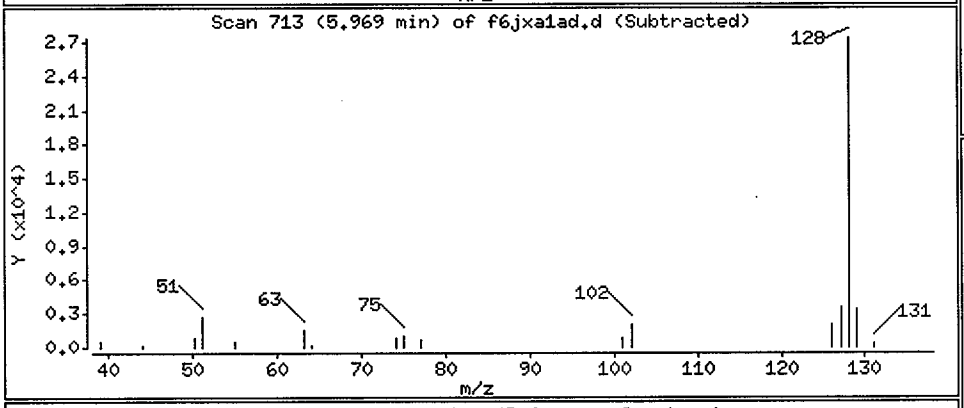
Volume Injected (uL): 1.0 Operator: 3386

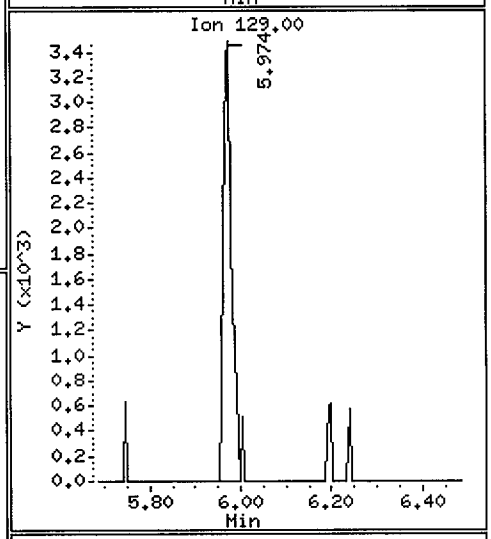
Column phase: ZB-5 Column diameter: 0.25

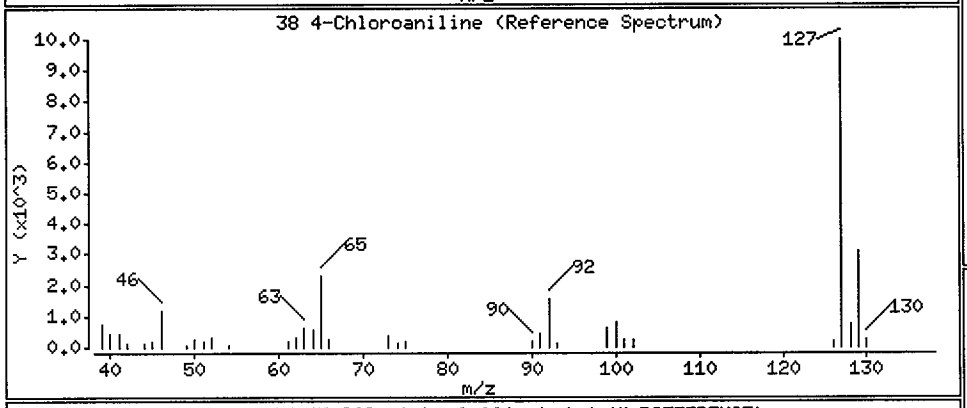
38 4-Chloroaniline Concentration: 0.587 ug/L

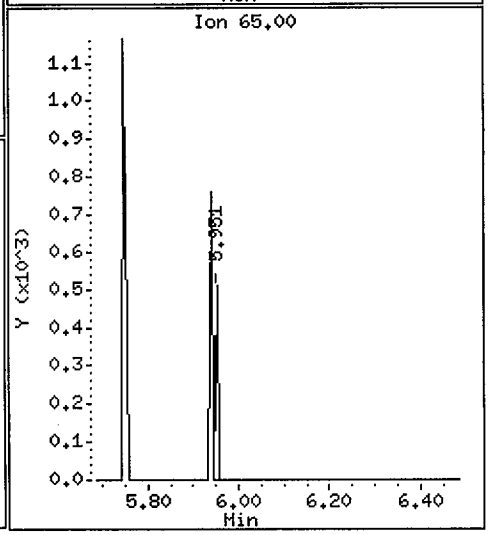


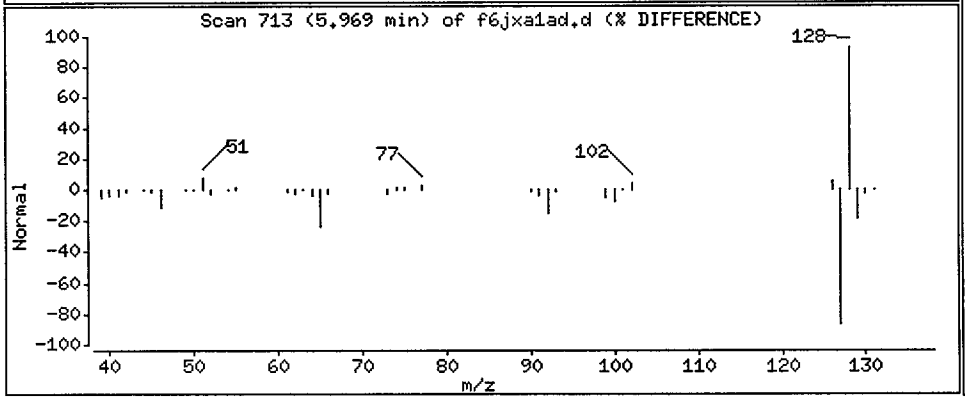












Data File: /var/chem/gcms/md.i/D121803.b/f6jxa1ad.d

Date : 18-DEC-2003 16:55

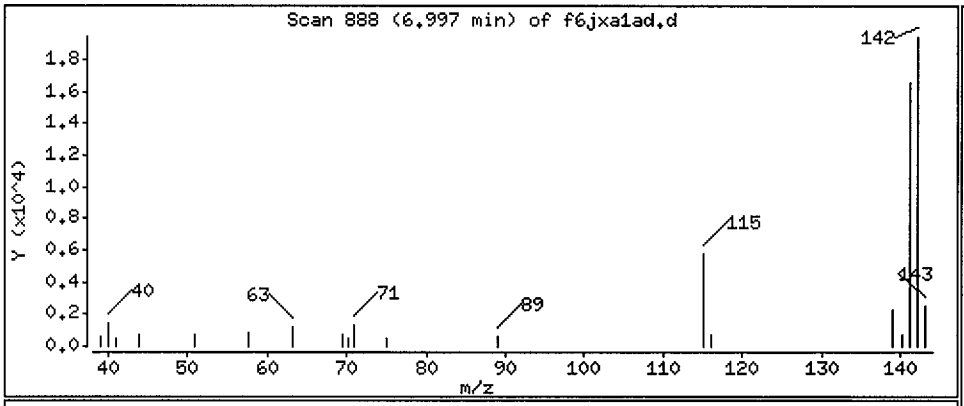
Client ID: DD3003 Instrument: md.i

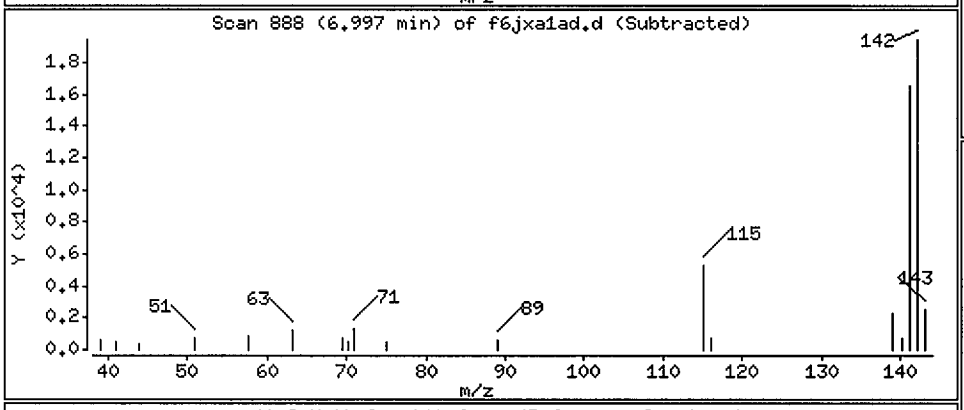
Sample Info: F6JXA1AD,,0,,,

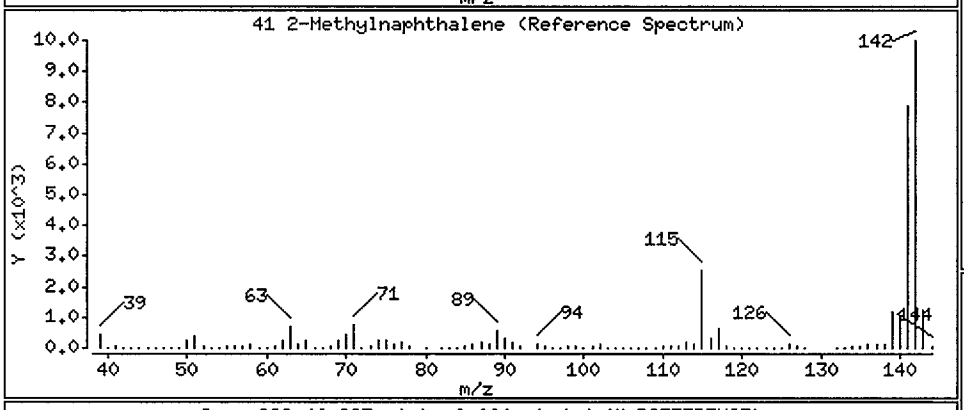
Volume Injected (uL): 1.0 Operator: 3386

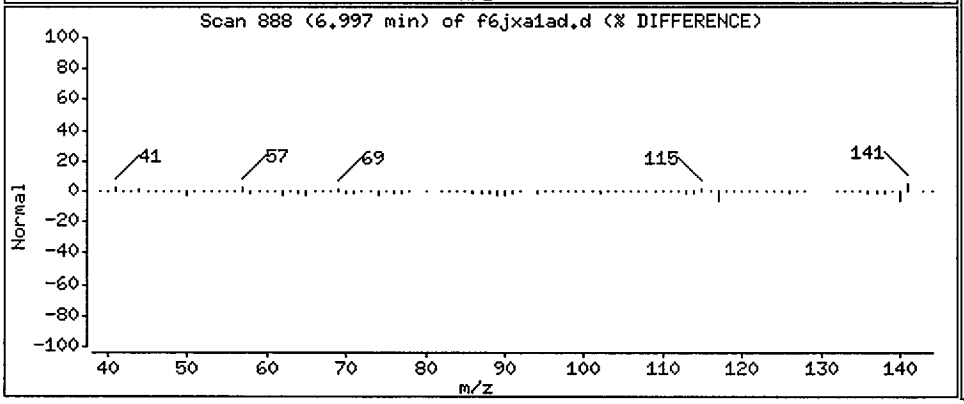
Column phase: ZB-5 Column diameter: 0.25

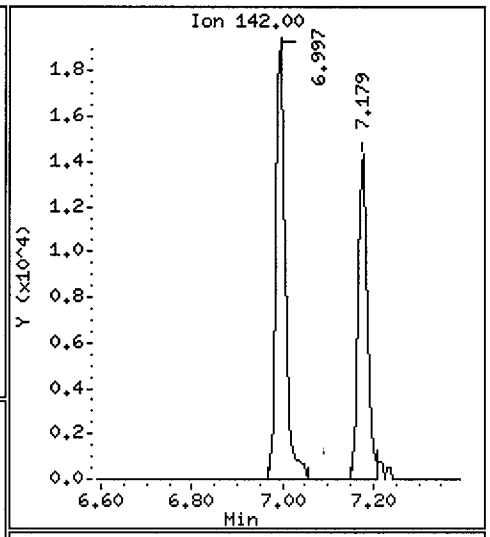
41 2-Methylnaphthalene Concentration: 2.88 ug/L

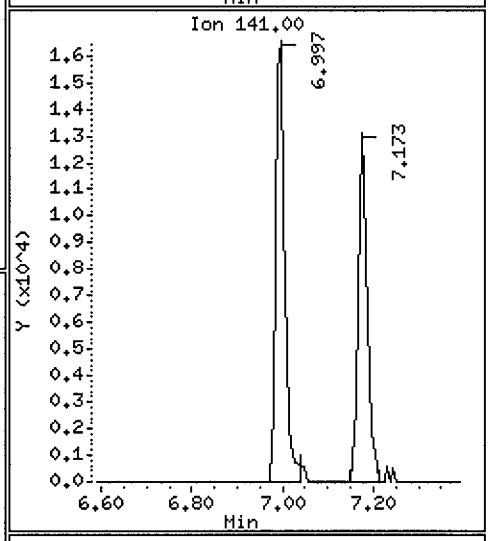


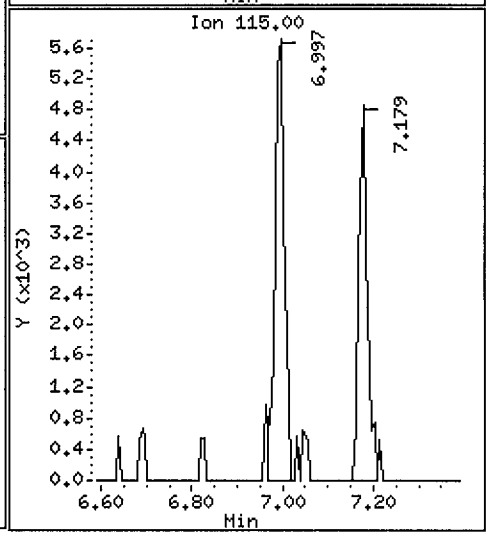












Data File: /var/chem/gcms/md.i/D121803.b/f6jxa1ad.d

Date : 18-DEC-2003 16:55

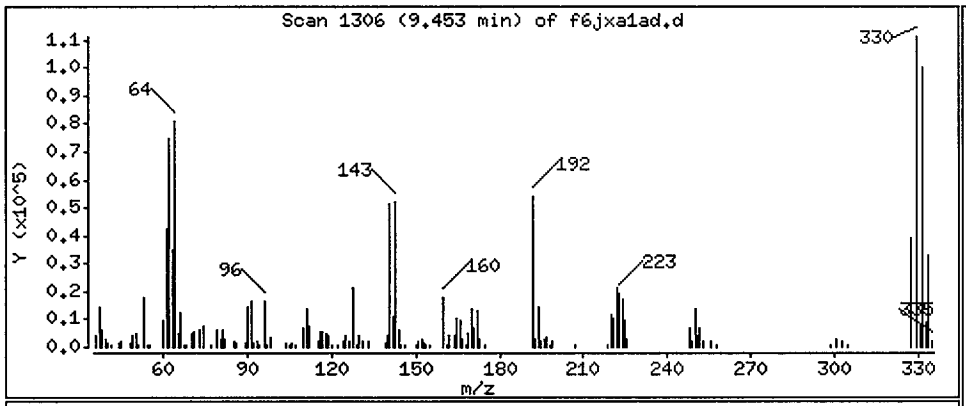
Client ID: DD3003 Instrument: md.i

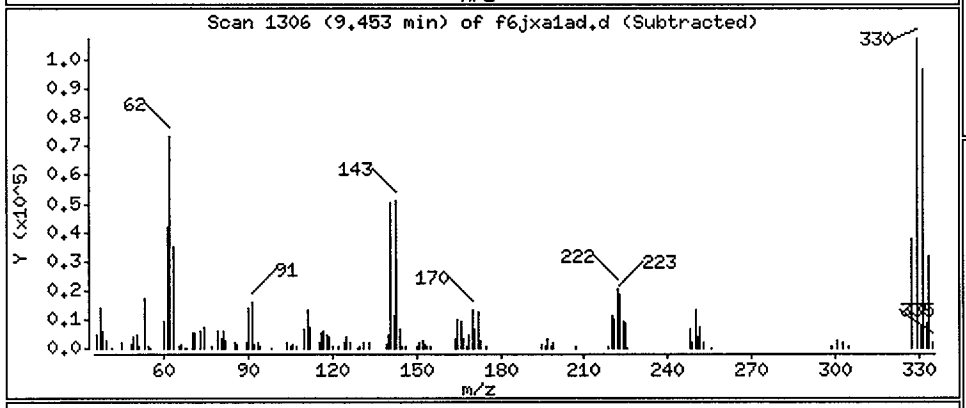
Sample Info: F6JXA1AD,,0,,,

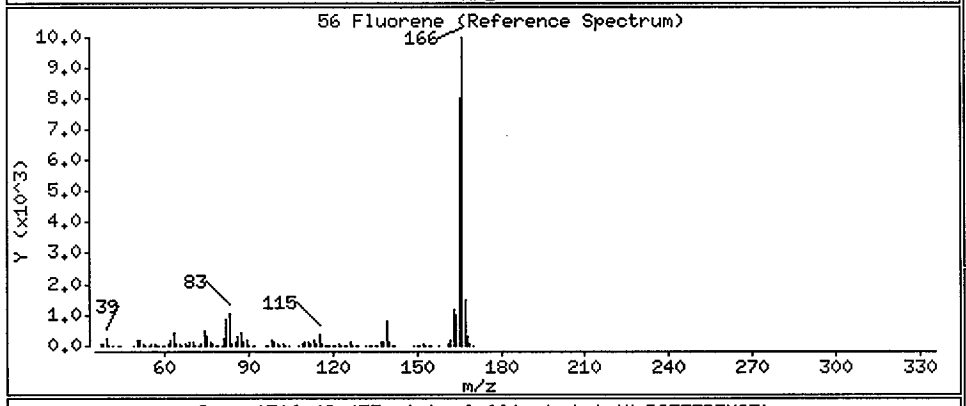
Volume Injected (uL): 1.0 Operator: 3386

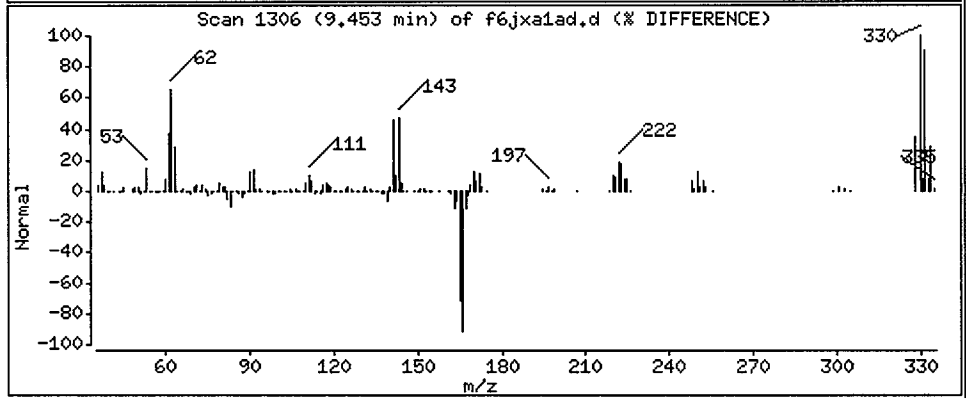
Column phase: ZB-5 Column diameter: 0.25

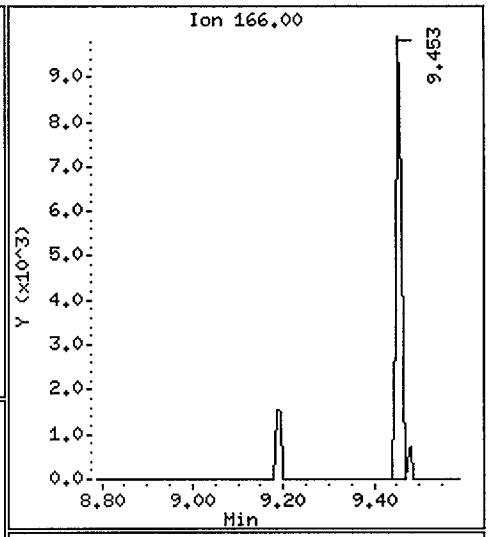
56 Fluorene Concentration: 0.687 ug/L

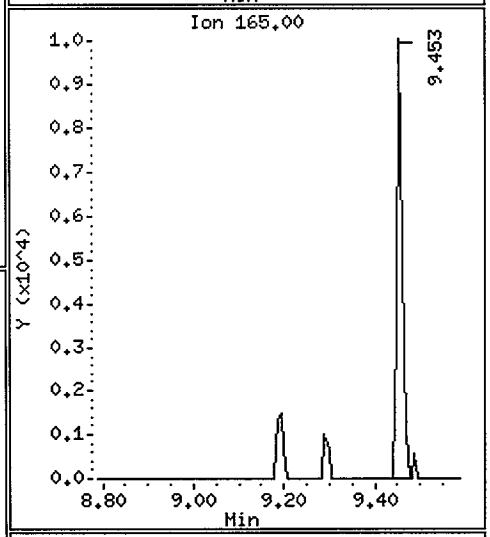


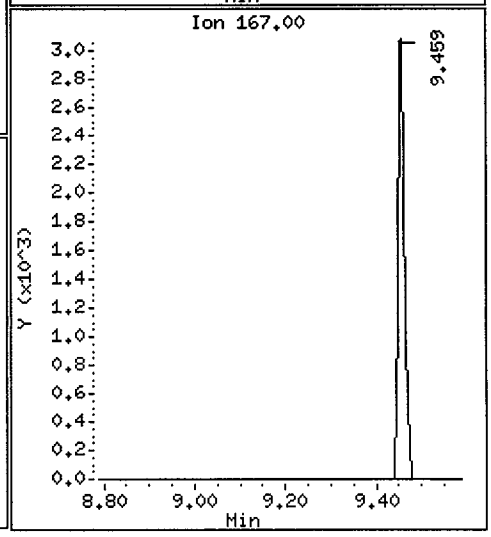












Data File: /var/chem/gcms/md.i/D121803.b/f6jxa1ad.d

Date : 18-DEC-2003 16:55

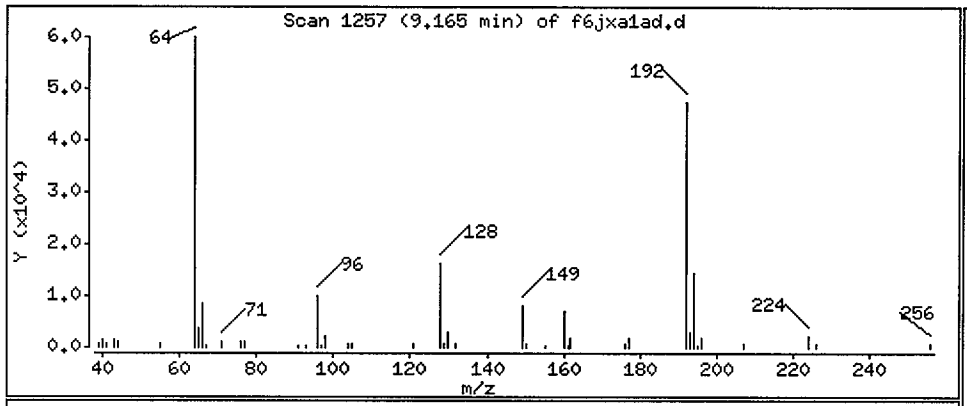
Client ID: DD3003 Instrument: md.i

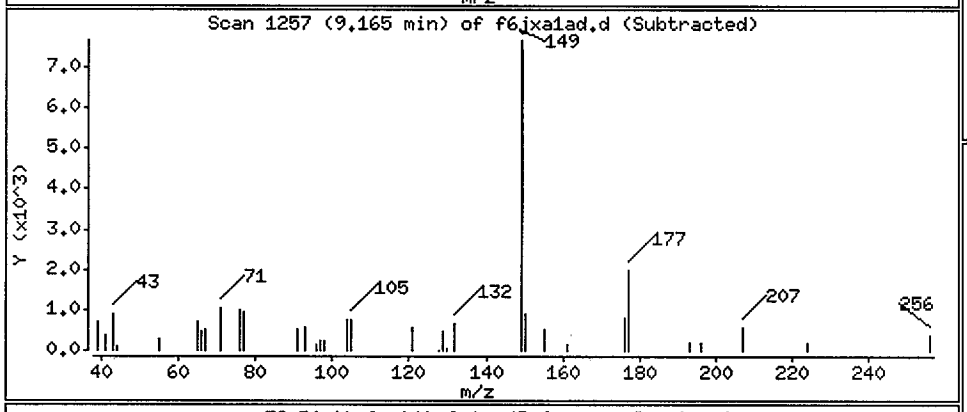
Sample Info: F6JXA1AD,,0,,,

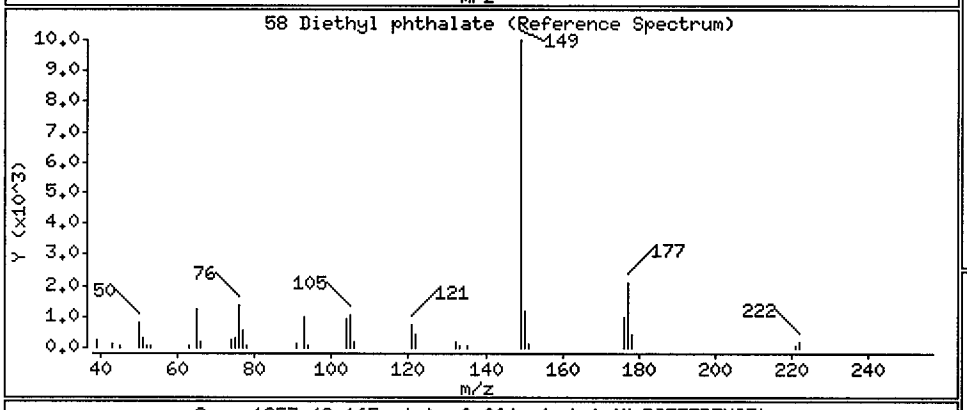
Volume Injected (uL): 1.0 Operator: 3386

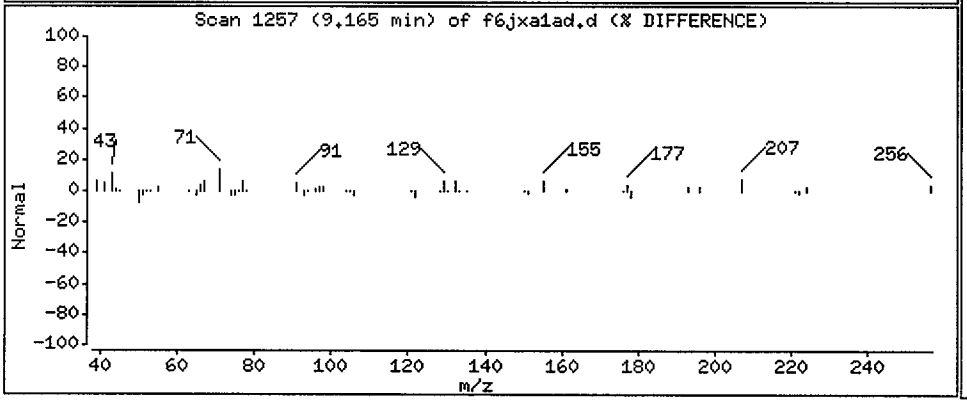
Column phase: ZB-5 Column diameter: 0.25

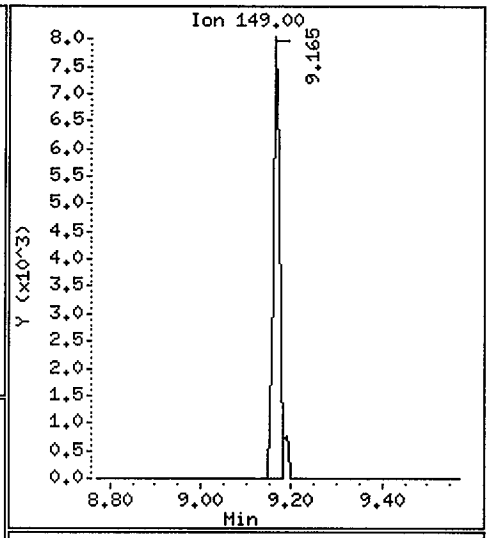
58 Diethyl phthalate Concentration: 0.652 ug/L

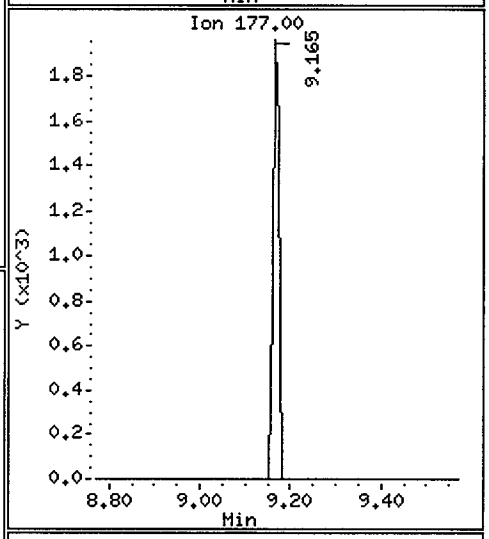


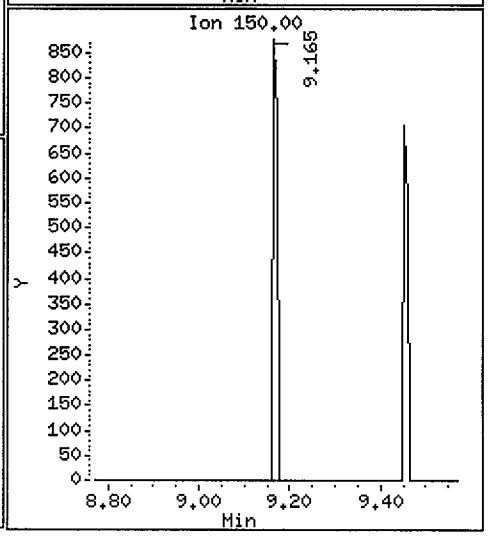












Data File: /var/chem/gcms/md.i/D121803.b/f6jxa1ad.d

Date : 18-DEC-2003 16:55

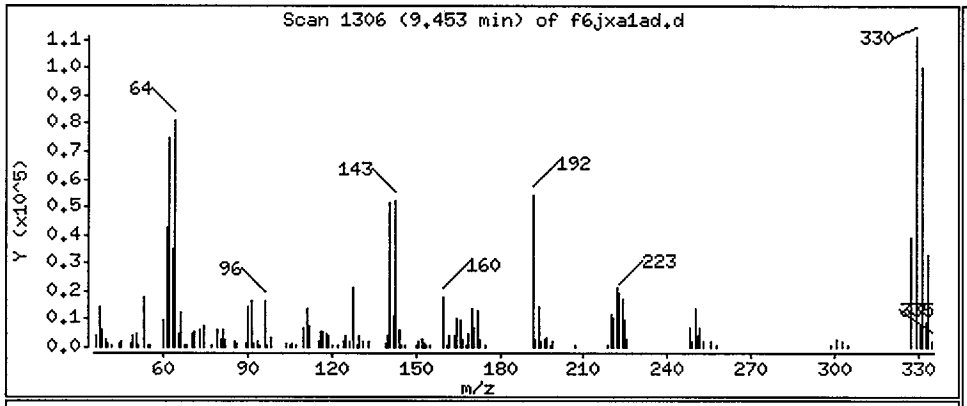
Client ID: DD3003 Instrument: md.i

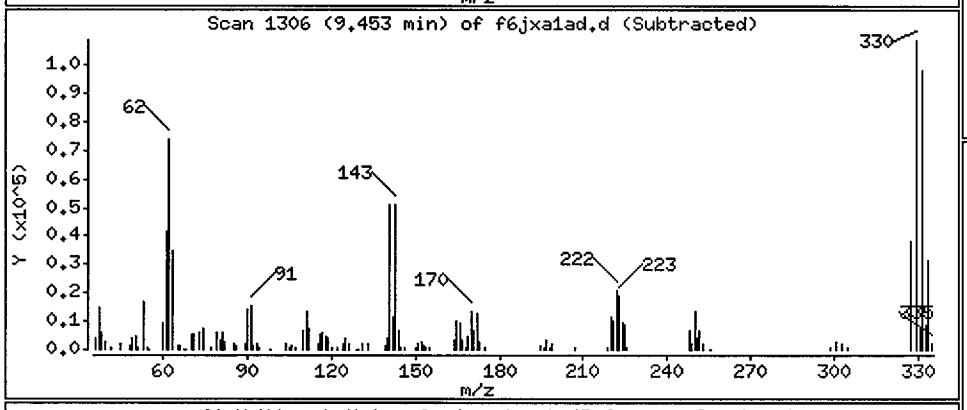
Sample Info: F6JXA1AD,,0,,,

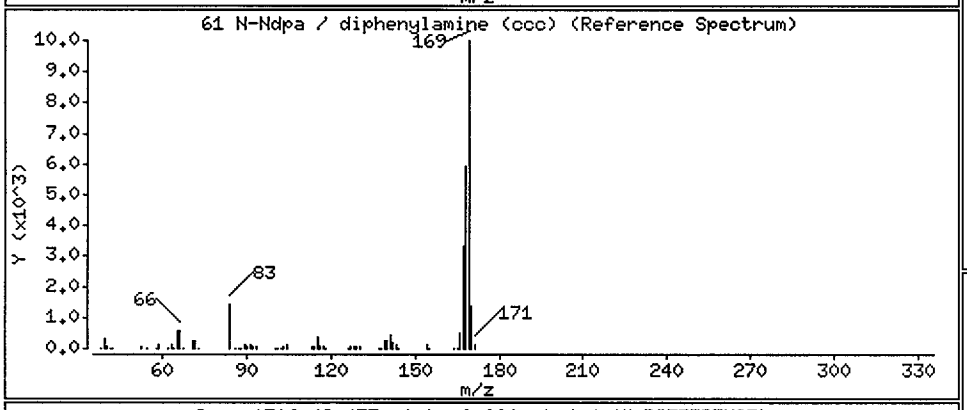
Volume Injected (uL): 1.0 Operator: 3386

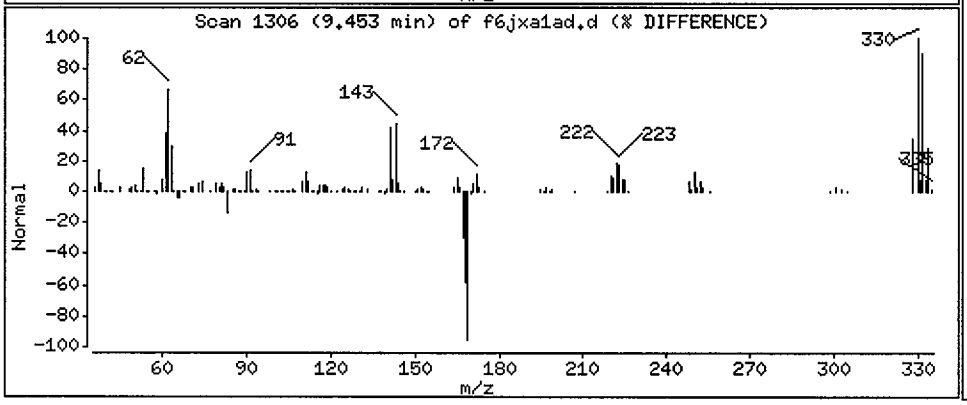
Column phase: ZB-5 Column diameter: 0.25

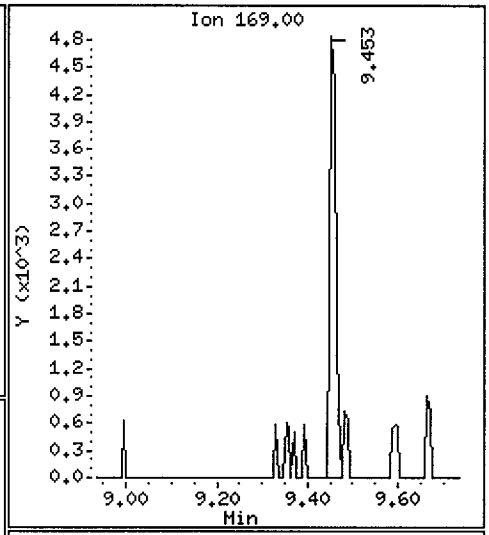
61 N-Ndpa / diphenylamine (ccc) Concentration: 0.562 ug/L

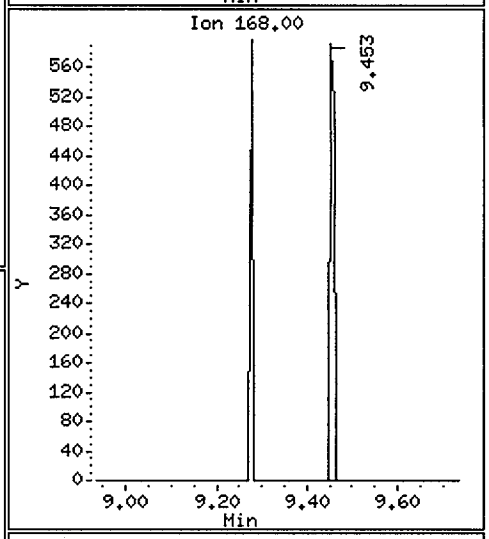


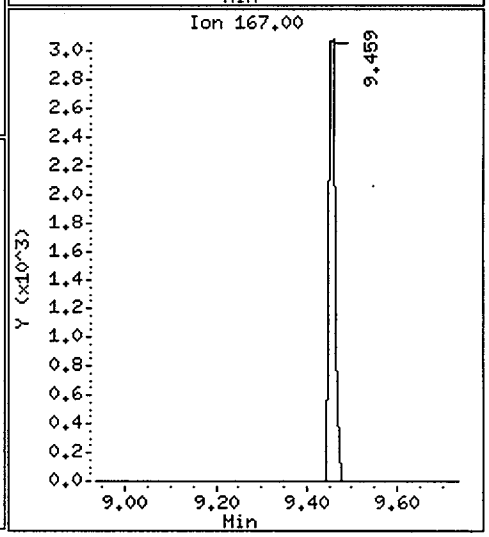












Data File: /var/chem/gcms/md.i/D121803.b/f6jxa1ad.d

Date : 18-DEC-2003 16:55

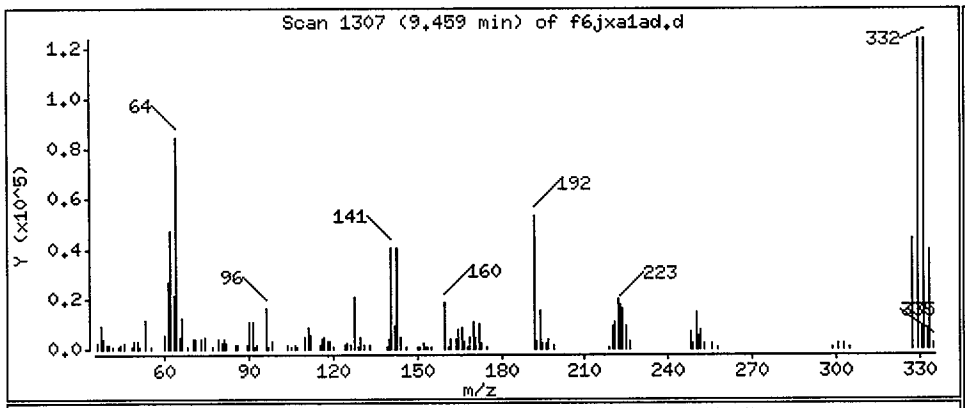
Client ID: DD3003 Instrument: md.i

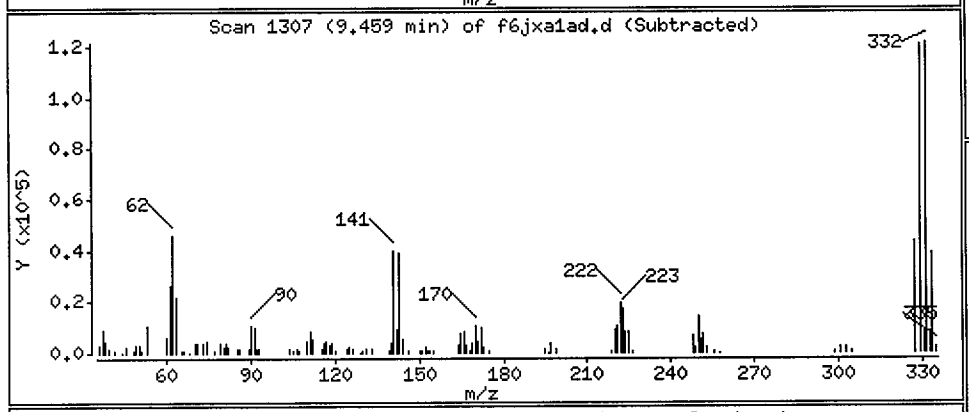
Sample Info: F6JXA1AD,,0,,,

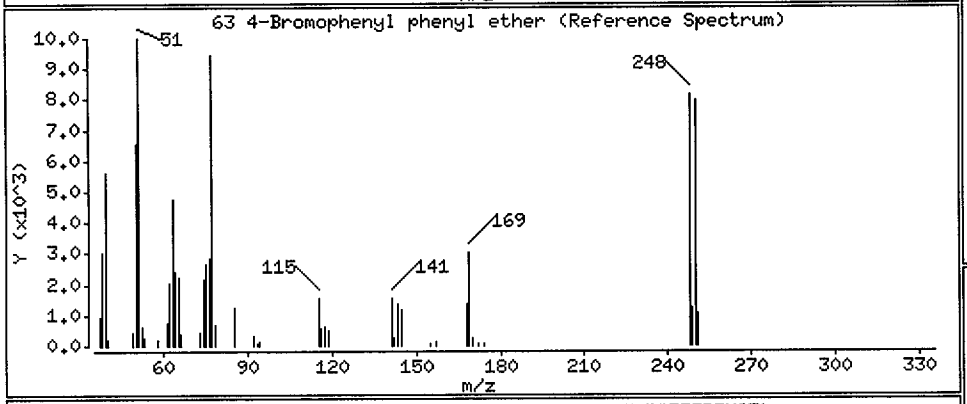
Volume Injected (uL): 1.0 Operator: 3386

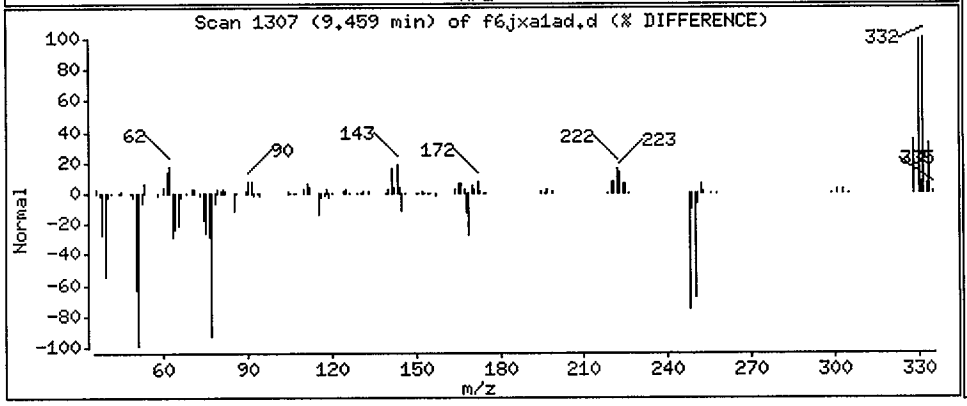
Column phase: ZB-5 Column diameter: 0.25

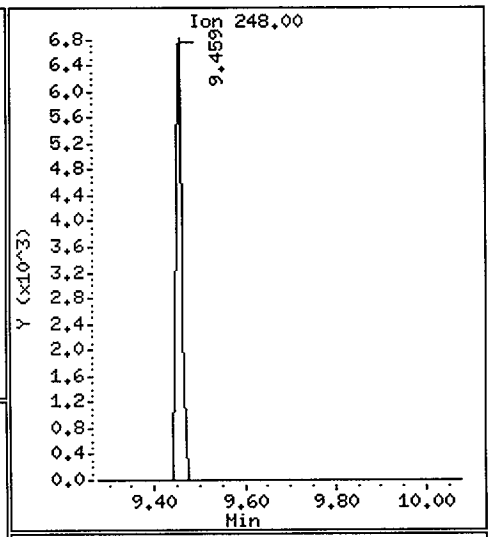
63 4-Bromophenyl phenyl ether Concentration: 2.28 ug/L

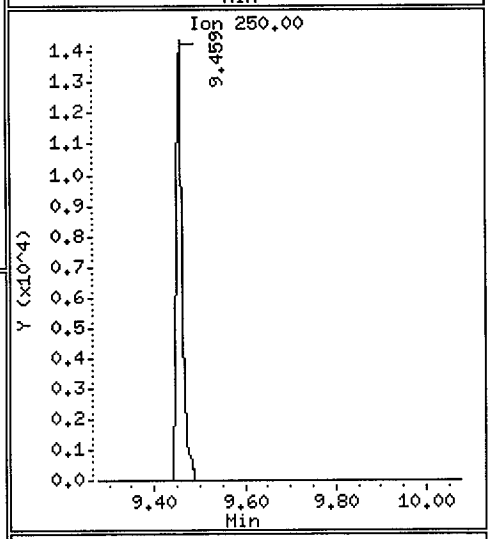


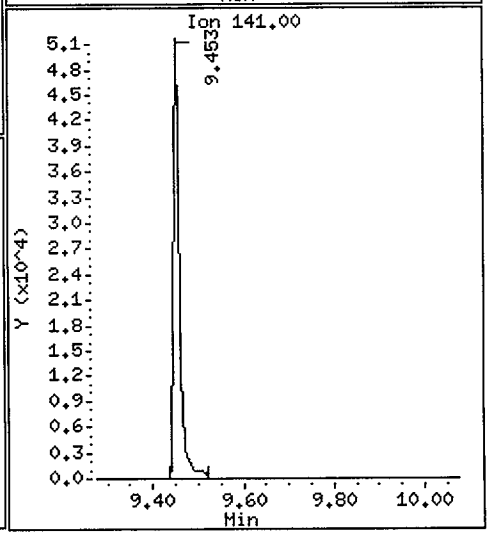












SHAW E & I INC

Client Sample ID: DD3004

GC/MS Semivolatiles

Lot-Sample #...: H3L120208-002 **Work Order #...:** F6JX21CH **Matrix.....:** WATER
Date Sampled...: 12/11/03 **Date Received..:** 12/12/03
Prep Date.....: 12/15/03 **Analysis Date..:** 12/18/03
Prep Batch #...: 3349288
Dilution Factor: 1 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Phenol	ND	10	ug/L	1.8
bis(2-Chloroethyl)-ether	ND	10	ug/L	1.6
2-Chlorophenol	ND	10	ug/L	1.2
1,3-Dichlorobenzene	ND	10	ug/L	1.6
1,4-Dichlorobenzene	ND	10	ug/L	1.4
1,2-Dichlorobenzene	ND	10	ug/L	1.7
2-Methylphenol	ND	10	ug/L	2.0
2,2'-oxybis(1-Chloro-propane)	ND	10	ug/L	1.4
4-Methylphenol	ND	10	ug/L	3.6
N-Nitrosodi-n-propyl-amine	ND	10	ug/L	2.1
Hexachloroethane	ND	10	ug/L	1.9
Nitrobenzene	ND	10	ug/L	1.8
Isophorone	ND	10	ug/L	1.6
2-Nitrophenol	ND	10	ug/L	2.4
2,4-Dimethylphenol	ND	10	ug/L	3.7
bis(2-Chloroethoxy) methane	ND	10	ug/L	1.5
2,4-Dichlorophenol	ND	10	ug/L	2.0
1,2,4-Trichloro-benzene	ND	10	ug/L	1.5
Naphthalene	ND	10	ug/L	1.7
4-Chloroaniline	ND	10	ug/L	1.8
Hexachlorobutadiene	ND	10	ug/L	1.4
4-Chloro-3-methylphenol	ND	10	ug/L	2.2
2-Methylnaphthalene	ND	10	ug/L	1.6
Hexachlorocyclopenta-diene	ND	50	ug/L	7.9
2,4,6-Trichloro-phenol	ND	10	ug/L	2.0
2,4,5-Trichloro-phenol	ND	10	ug/L	1.6
2-Chloronaphthalene	ND	10	ug/L	1.6
2-Nitroaniline	ND	50	ug/L	1.4
Dimethyl phthalate	ND	10	ug/L	1.1
Acenaphthylene	ND	10	ug/L	1.7
2,6-Dinitrotoluene	ND	10	ug/L	1.7

(Continued on next page)

SHAW E & I INC

Client Sample ID: DD3004

GC/MS Semivolatiles

Lot-Sample #...: H3L120208-002 **Work Order #...:** F6JX21CH **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
3-Nitroaniline	ND	50	ug/L	1.3
Acenaphthene	ND	10	ug/L	1.5
2,4-Dinitrophenol	ND	50	ug/L	15
4-Nitrophenol	ND	50	ug/L	15
Dibenzofuran	ND	10	ug/L	1.6
2,4-Dinitrotoluene	ND	10	ug/L	1.6
Diethyl phthalate	ND	10	ug/L	1.3
4-Chlorophenyl phenyl ether	ND	10	ug/L	1.6
Fluorene	ND	10	ug/L	1.3
4-Nitroaniline	ND	50	ug/L	1.3
4,6-Dinitro-2-methylphenol	ND	50	ug/L	11
N-Nitrosodiphenylamine	ND	10	ug/L	1.6
4-Bromophenyl phenyl ether	ND	10	ug/L	1.4
Hexachlorobenzene	ND	10	ug/L	0.90
Pentachlorophenol	ND	50	ug/L	8.6
Phenanthrene	ND	10	ug/L	0.84
Anthracene	ND	10	ug/L	0.83
Carbazole	ND	10	ug/L	1.2
Di-n-butyl phthalate	ND	10	ug/L	1.4
Fluoranthene	ND	10	ug/L	1.3
Pyrene	ND	10	ug/L	0.96
Butyl benzyl phthalate	ND	10	ug/L	1.3
3,3'-Dichlorobenzidine	ND	50	ug/L	1.2
Benzo(a)anthracene	ND	10	ug/L	1.2
Chrysene	ND	10	ug/L	0.98
bis(2-Ethylhexyl) phthalate	ND	10	ug/L	2.2
Di-n-octyl phthalate	ND	10	ug/L	2.4
Benzo(b)fluoranthene	ND	10	ug/L	2.1
Benzo(k)fluoranthene	ND	10	ug/L	1.7
Benzo(a)pyrene	ND	10	ug/L	1.6
Indeno(1,2,3-cd)pyrene	ND	10	ug/L	2.1
Dibenz(a,h)anthracene	ND	10	ug/L	2.5
Benzo(ghi)perylene	ND	10	ug/L	2.1

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	62	(29 - 110)
Phenol-d5	80	(41 - 115)
Nitrobenzene-d5	80	(46 - 117)
2-Fluorobiphenyl	78	(44 - 116)
2,4,6-Tribromophenol	104	(31 - 138)
Terphenyl-d14	88	(36 - 134)

Data File: /var/chem/gcms/md.i/D121803.b/f6jx21ch.d
Report Date: 19-Dec-2003 12:33

STL Knoxville

SW-846 Method 8270C

Data file : /var/chem/gcms/md.i/D121803.b/f6jx21ch.d
Lab Smp Id: F6JX21CH Client Smp ID: DD3004
Inj Date : 18-DEC-2003 17:18
Operator : 3386 Inst ID: md.i
Smp Info : F6JX21CH,,0,,,
Misc Info : D121803,8270a9,8270.sub
Comment : Semivolatile Organic Compounds by GC/MS
Method : /var/chem/gcms/md.i/D121803.b/8270a9.m
Meth Date : 19-Dec-2003 12:19 tajh Quant Type: ISTD
Cal Date : 07-NOV-2003 13:02 Cal File: a9dk076.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8270.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Unit Correction factor
Vt	1000.00000	Volume of final extract (uL)
Vo	980.00000	Volume of sample extracted (mL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/uL)	FINAL (ug/L)
* 1 1,4-Dichlorobenzene-d4	152	4.317	4.318	(1.000)	73563	20.0000	
* 2 Naphthalene-d8	136	5.945	5.945	(1.000)	282950	20.0000	
* 3 Acenaphthene-d10	164	8.589	8.589	(1.000)	179900	20.0000	
* 4 Phenanthrene-d10	188	10.070	10.070	(1.000)	324184	20.0000	
* 5 Chrysene-d12	240	12.167	12.167	(1.000)	372587	20.0000	
* 6 Perylene-d12	264	13.425	13.419	(1.000)	268057	20.0000	
$ 7 2-Fluorophenol	112	3.154	3.154	(0.731)	225490	46.7425	47.7
$ 8 Phenol-d5	99	3.988	3.989	(0.924)	317299	59.9480	61.2
$ 9 Nitrobenzene-d5	82	4.999	4.999	(0.841)	172687	39.8624	40.7
$ 10 2-Fluorobiphenyl	172	7.684	7.684	(0.895)	466633	39.1343	39.9
$ 11 2,4,6-Tribromophenol	330	9.459	9.459	(0.939)	116697	78.2695	79.9
$ 12 Terphenyl-d14	244	11.339	11.339	(0.932)	681820	44.2202	45.1
56 Fluorene	166	9.453	9.188	(1.101)	8028	0.61148	~~0.624~~
63 4-Bromophenyl phenyl ether	248	9.453	9.676	(0.939)	6710	2.31778	~~2.36~~

KM 12-19-03

Data File: /var/chem/gcms/md.i/D121803.b/f6jx21ch.d
Report Date: 19-Dec-2003 12:33

STL Knoxville

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: md.i
Lab File ID: f6jx21ch.d
Lab Smp Id: F6JX21CH
Analysis Type: SV
Quant Type: ISTD
Operator: 3386
Method File: /var/chem/gcms/md.i/D121803.b/8270a9.m
Misc Info: D121803,8270a9,8270.sub

Calibration Date: 18-DEC-2003
Calibration Time: 10:33
Client Smp ID: DD3004
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	87290	43645	174580	73563	-15.73
2 Naphthalene-d8	333200	166600	666400	282950	-15.08
3 Acenaphthene-d10	191379	95690	382758	179900	-6.00
4 Phenanthrene-d10	352152	176076	704304	324184	-7.94
5 Chrysene-d12	404756	202378	809512	372587	-7.95
6 Perylene-d12	323296	161648	646592	268057	-17.09

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	4.32	3.82	4.82	4.32	0.00
2 Naphthalene-d8	5.95	5.45	6.45	5.95	0.00
3 Acenaphthene-d10	8.59	8.09	9.09	8.59	0.00
4 Phenanthrene-d10	10.07	9.57	10.57	10.07	0.00
5 Chrysene-d12	12.17	11.67	12.67	12.17	0.00
6 Perylene-d12	13.42	12.92	13.92	13.42	0.04

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

Data File: /var/chem/gcms/md.i/D121803.b/f6jx21ch.d
Report Date: 19-Dec-2003 12:33

STL Knoxville

RECOVERY REPORT

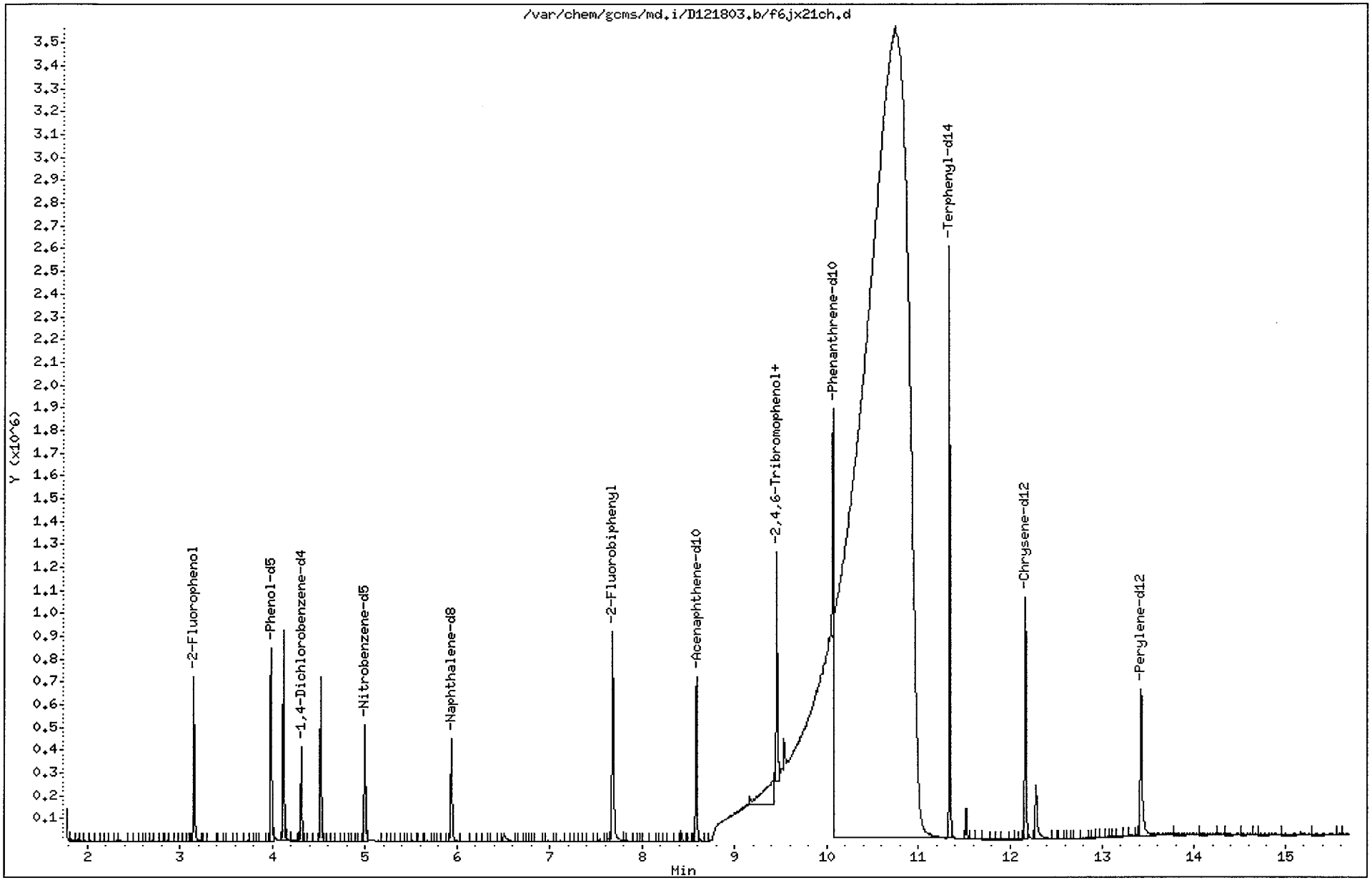
Client Name: SHAW E & I INC
Sample Matrix: LIQUID
Lab Smp Id: F6JX21CH
Level: LOW
Data Type: MS DATA
SpikeList File: allspike.spk
Sublist File: 8270.sub
Method File: /var/chem/gcms/md.i/D121803.b/8270a9.m
Misc Info: D121803,8270a9,8270.sub

Client SDG: PB045
Fraction: SV
Client Smp ID: DD3004
Operator: 3386
SampleType: SAMPLE
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 7 2-Fluorophenol	76.5	47.7	62.32	29-110
$ 8 Phenol-d5	76.5	61.2	79.93	41-115
$ 9 Nitrobenzene-d5	51.0	40.7	79.72	46-117
$ 10 2-Fluorobiphenyl	51.0	39.9	78.27	44-116
$ 11 2,4,6-Tribromophen	76.5	79.9	104.36	31-138
$ 12 Terphenyl-d14	51.0	45.1	88.44	0-132

Data File: /var/chem/gcms/md.i/D121803.b/f6jx21ch.d
Date : 18-DEC-2003 17:18
Client ID: DD3004
Sample Info: F6JX21CH,,0,,,
Volume Injected (uL): 1.0
Column phase: ZB-5

Instrument: md.i
Operator: 3386
Column diameter: 0.25



Data File: /var/chem/gcms/md.i/D121803.b/f6jx21ch.d

Date : 18-DEC-2003 17:18

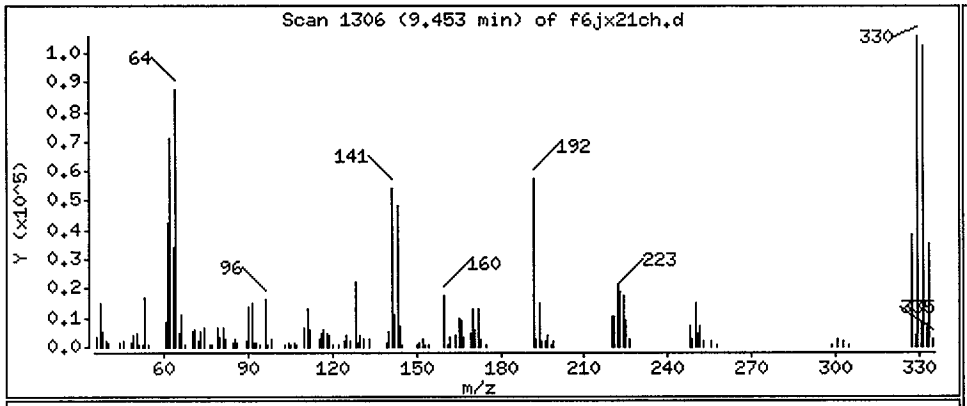
Client ID: DD3004 Instrument: md.i

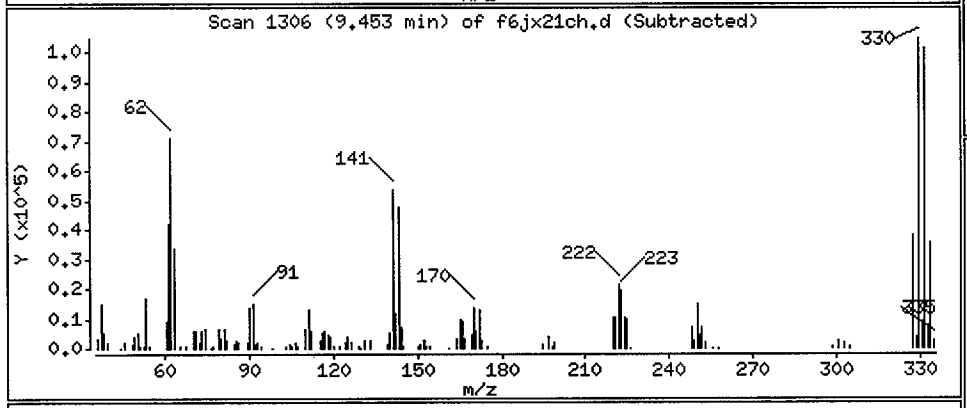
Sample Info: F6JX21CH,,0,,,

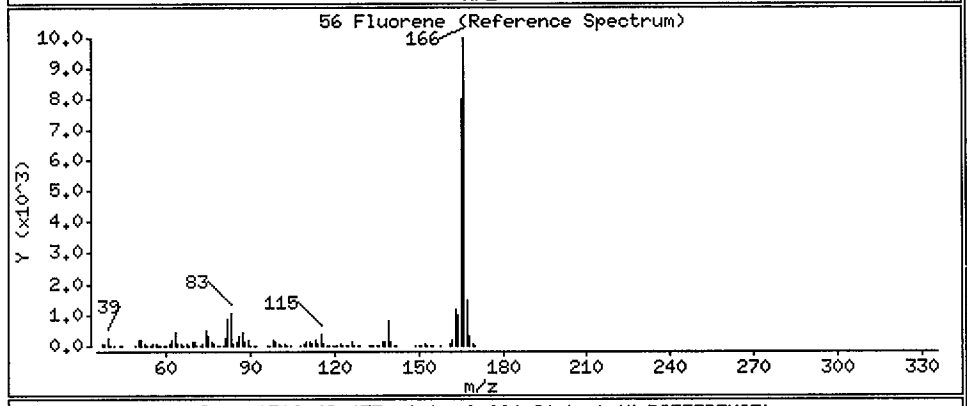
Volume Injected (uL): 1.0 Operator: 3386

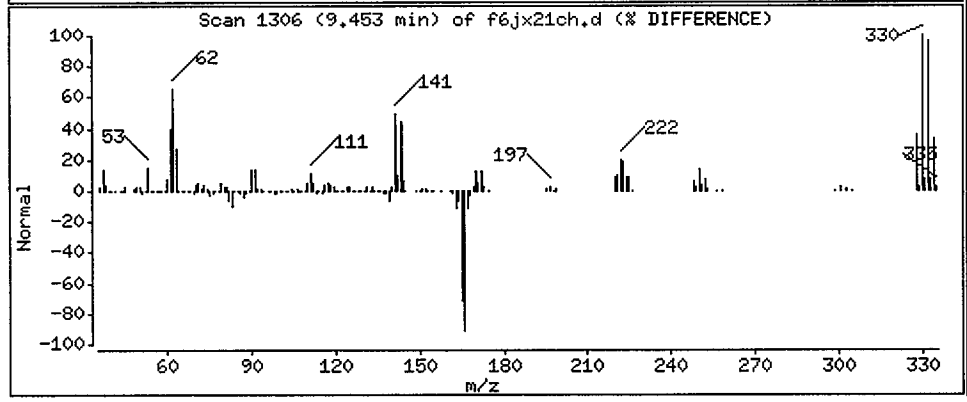
Column phase: ZB-5 Column diameter: 0.25

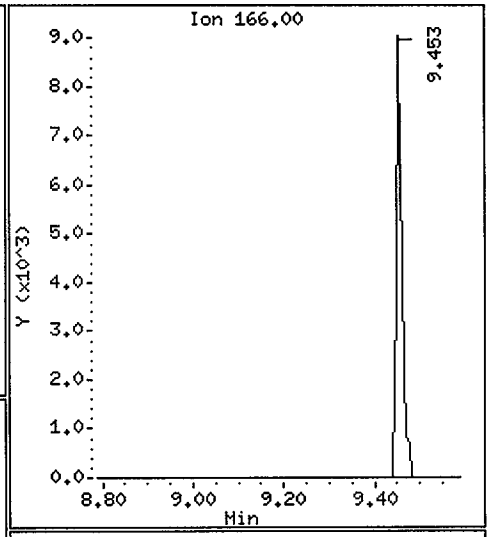
56 Fluorene Concentration: 0.624 ug/L

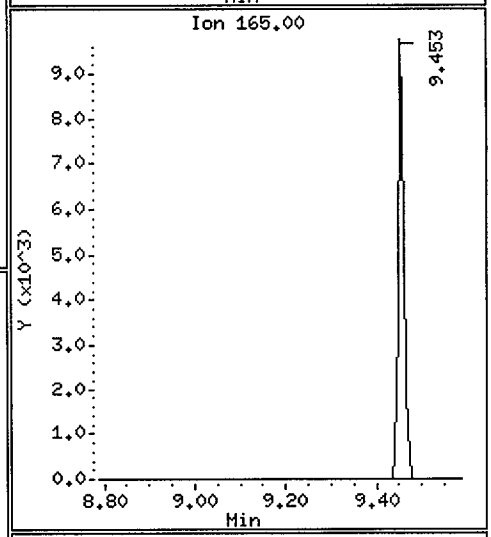


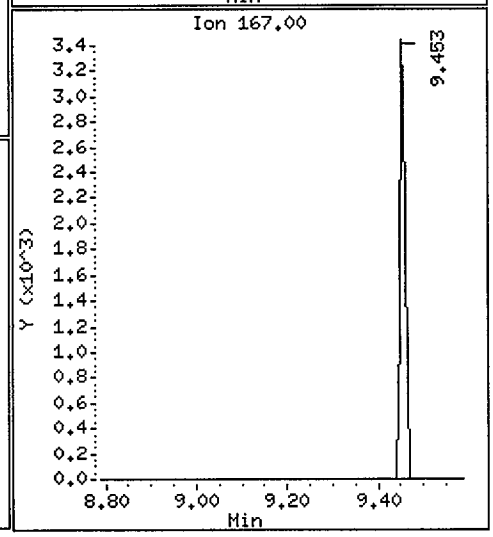












Data File: /var/chem/gcms/md.i/D121803.b/f6jx21ch.d

Date : 18-DEC-2003 17:18

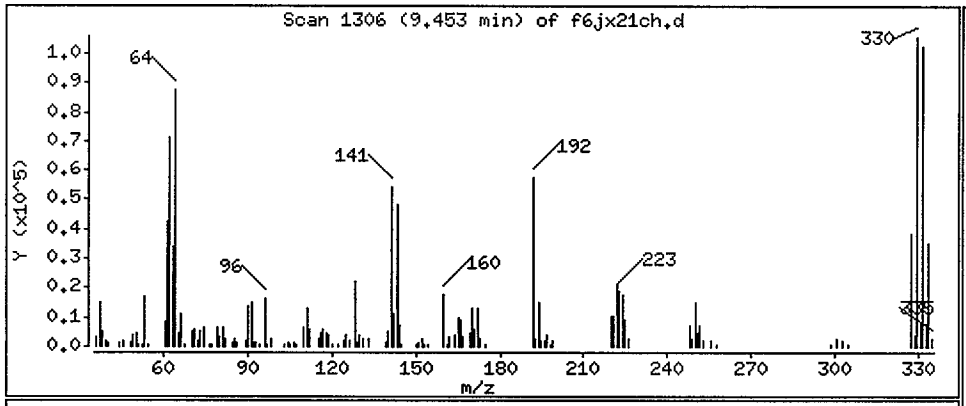
Client ID: DD3004 Instrument: md.i

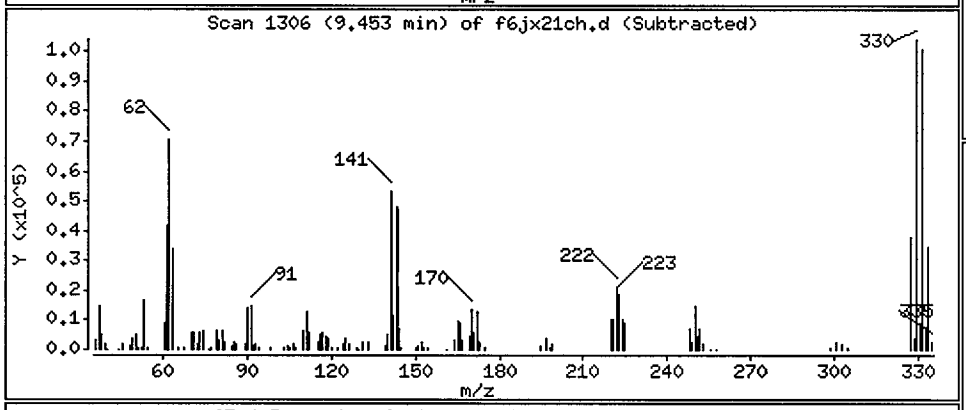
Sample Info: F6JX21CH,,0,,,

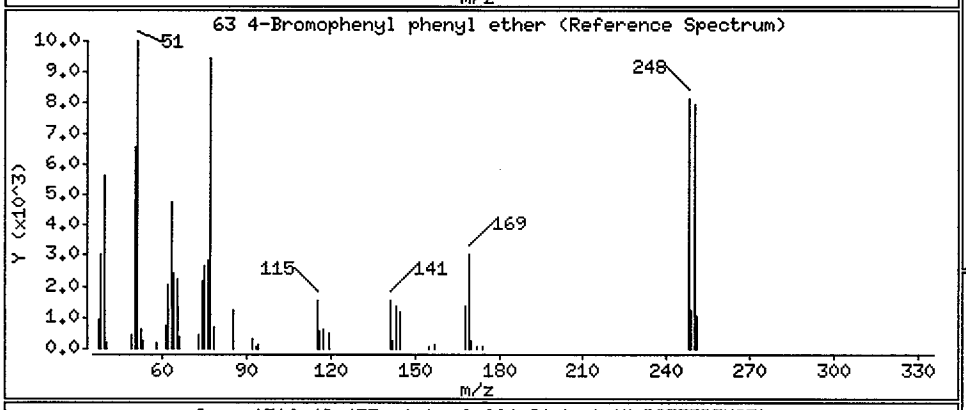
Volume Injected (uL): 1.0 Operator: 3386

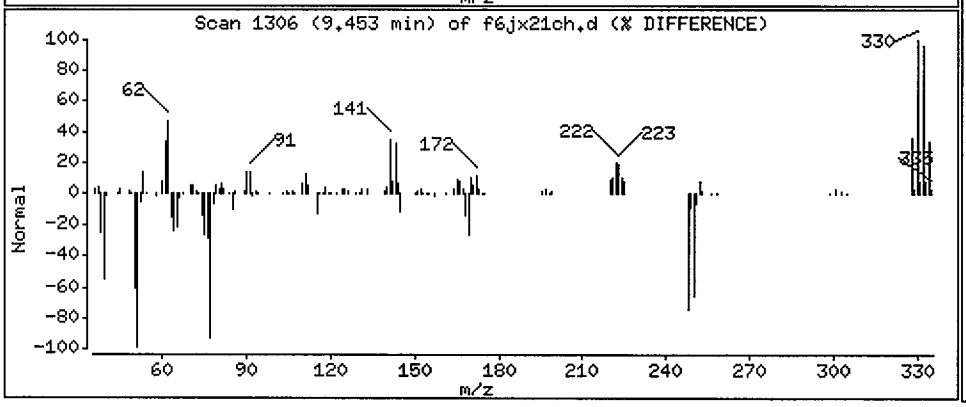
Column phase: ZB-5 Column diameter: 0.25

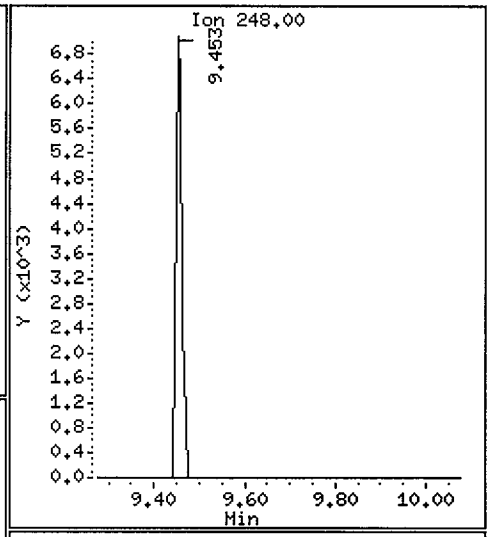
63 4-Bromophenyl phenyl ether Concentration: 2.36 ug/L

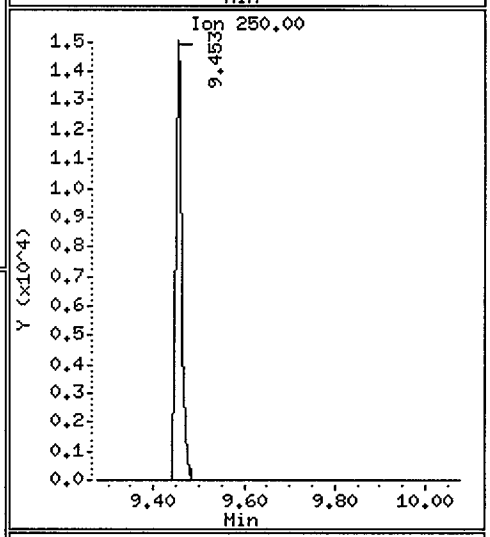


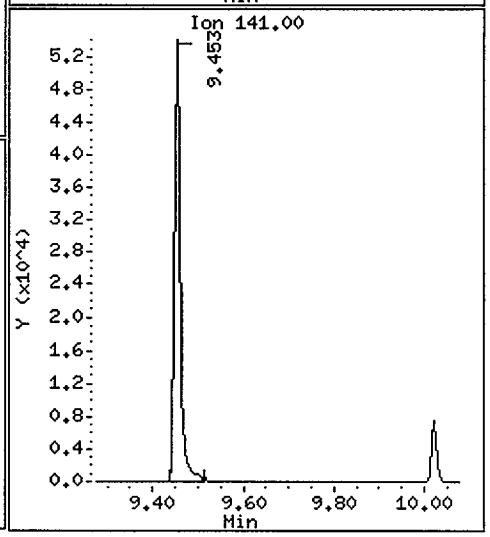












SHAW E & I INC

Client Sample ID: DD3005

GC/MS Semivolatiles

Lot-Sample #...: H3L120208-003 **Work Order #...:** F6J0A1AP **Matrix.....:** WATER
Date Sampled...: 12/11/03 **Date Received..:** 12/12/03
Prep Date.....: 12/15/03 **Analysis Date..:** 12/18/03
Prep Batch #...: 3349288
Dilution Factor: 1 **Method.....:** SW846 8270C

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Phenol	ND	10	ug/L	1.8
bis(2-Chloroethyl)-ether	ND	10	ug/L	1.6
2-Chlorophenol	ND	10	ug/L	1.2
1,3-Dichlorobenzene	ND	10	ug/L	1.6
1,4-Dichlorobenzene	ND	10	ug/L	1.4
1,2-Dichlorobenzene	ND	10	ug/L	1.7
2-Methylphenol	ND	10	ug/L	2.0
2,2'-oxybis(1-Chloro-propane)	ND	10	ug/L	1.4
4-Methylphenol	ND	10	ug/L	3.6
N-Nitrosodi-n-propyl-amine	ND	10	ug/L	2.1
Hexachloroethane	ND	10	ug/L	1.9
Nitrobenzene	ND	10	ug/L	1.8
Isophorone	ND	10	ug/L	1.6
2-Nitrophenol	ND	10	ug/L	2.4
2,4-Dimethylphenol	ND	10	ug/L	3.7
bis(2-Chloroethoxy) methane	ND	10	ug/L	1.5
2,4-Dichlorophenol	ND	10	ug/L	2.0
1,2,4-Trichloro-benzene	ND	10	ug/L	1.5
Naphthalene	ND	10	ug/L	1.7
4-Chloroaniline	ND	10	ug/L	1.8
Hexachlorobutadiene	ND	10	ug/L	1.4
4-Chloro-3-methylphenol	ND	10	ug/L	2.2
2-Methylnaphthalene	ND	10	ug/L	1.6
Hexachlorocyclopenta-diene	ND	50	ug/L	7.9
2,4,6-Trichloro-phenol	ND	10	ug/L	2.0
2,4,5-Trichloro-phenol	ND	10	ug/L	1.6
2-Chloronaphthalene	ND	10	ug/L	1.6
2-Nitroaniline	ND	50	ug/L	1.4
Dimethyl phthalate	ND	10	ug/L	1.1
Acenaphthylene	ND	10	ug/L	1.7
2,6-Dinitrotoluene	ND	10	ug/L	1.7

(Continued on next page)

SHAW E & I INC

Client Sample ID: DD3005

GC/MS Semivolatiles

Lot-Sample #...: H3L120208-003 **Work Order #...:** F6J0A1AP **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
3-Nitroaniline	ND	50	ug/L	1.3
Acenaphthene	ND	10	ug/L	1.5
2,4-Dinitrophenol	ND	50	ug/L	15
4-Nitrophenol	ND	50	ug/L	15
Dibenzofuran	ND	10	ug/L	1.6
2,4-Dinitrotoluene	ND	10	ug/L	1.6
Diethyl phthalate	ND	10	ug/L	1.3
4-Chlorophenyl phenyl ether	ND	10	ug/L	1.6
Fluorene	ND	10	ug/L	1.3
4-Nitroaniline	ND	50	ug/L	1.3
4,6-Dinitro-2-methylphenol	ND	50	ug/L	11
N-Nitrosodiphenylamine	ND	10	ug/L	1.6
4-Bromophenyl phenyl ether	ND	10	ug/L	1.4
Hexachlorobenzene	ND	10	ug/L	0.90
Pentachlorophenol	ND	50	ug/L	8.6
Phenanthrene	ND	10	ug/L	0.84
Anthracene	ND	10	ug/L	0.83
Carbazole	ND	10	ug/L	1.2
Di-n-butyl phthalate	ND	10	ug/L	1.4
Fluoranthene	ND	10	ug/L	1.3
Pyrene	ND	10	ug/L	0.96
Butyl benzyl phthalate	ND	10	ug/L	1.3
3,3'-Dichlorobenzidine	ND	50	ug/L	1.2
Benzo(a)anthracene	ND	10	ug/L	1.2
Chrysene	ND	10	ug/L	0.98
bis(2-Ethylhexyl) phthalate	ND	10	ug/L	2.2
Di-n-octyl phthalate	ND	10	ug/L	2.4
Benzo(b)fluoranthene	ND	10	ug/L	2.1
Benzo(k)fluoranthene	ND	10	ug/L	1.7
Benzo(a)pyrene	ND	10	ug/L	1.6
Indeno(1,2,3-cd)pyrene	ND	10	ug/L	2.1
Dibenz(a,h)anthracene	ND	10	ug/L	2.5
Benzo(ghi)perylene	ND	10	ug/L	2.1

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	44	(29 - 110)
Phenol-d5	50	(41 - 115)
Nitrobenzene-d5	55	(46 - 117)
2-Fluorobiphenyl	49	(44 - 116)
2,4,6-Tribromophenol	61	(31 - 138)
Terphenyl-d14	53	(36 - 134)

Data File: /var/chem/gcms/md.i/D121803.b/f6j0a1ap.d
Report Date: 19-Dec-2003 12:33

STL Knoxville

SW-846 Method 8270C

Data file : /var/chem/gcms/md.i/D121803.b/f6j0a1ap.d
Lab Smp Id: F6J0A1AP Client Smp ID: DD3005
Inj Date : 18-DEC-2003 18:30
Operator : 3386 Inst ID: md.i
Smp Info : F6J0A1AP,,0,,,
Misc Info : D121803,8270a9,8270.sub
Comment : Semivolatile Organic Compounds by GC/MS
Method : /var/chem/gcms/md.i/D121803.b/8270a9.m
Meth Date : 19-Dec-2003 12:19 tajh Quant Type: ISTD
Cal Date : 07-NOV-2003 13:02 Cal File: a9dk076.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8270.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Unit Correction factor
Vt	1000.00000	Volume of final extract (uL)
Vo	980.00000	Volume of sample extracted (mL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/uL)	FINAL (ug/L)
* 1 1,4-Dichlorobenzene-d4	152	4.318	4.318	(1.000)	53815	20.0000	
* 2 Naphthalene-d8	136	5.945	5.945	(1.000)	199215	20.0000	
* 3 Acenaphthene-d10	164	8.589	8.589	(1.000)	135417	20.0000	
* 4 Phenanthrene-d10	188	10.070	10.070	(1.000)	258660	20.0000	
* 5 Chrysene-d12	240	12.167	12.167	(1.000)	316663	20.0000	
* 6 Perylene-d12	264	13.425	13.419	(1.000)	248669	20.0000	
$ 7 2-Fluorophenol	112	3.154	3.154	(0.731)	116170	32.9177	33.6
$ 8 Phenol-d5	99	3.988	3.989	(0.924)	146282	37.7789	38.5
$ 9 Nitrobenzene-d5	82	4.999	4.999	(0.841)	84603	27.7380	28.3
$ 10 2-Fluorobiphenyl	172	7.684	7.684	(0.895)	222177	24.7535	25.2
$ 11 2,4,6-Tribromophenol	330	9.459	9.459	(0.939)	54062	45.4451	46.4
$ 12 Terphenyl-d14	244	11.339	11.339	(0.932)	346514	26.4424	27.0
58 Diethyl phthalate	149	9.165	9.171	(1.067)	5634	0.63046	0.643
63 4-Bromophenyl phenyl ether	248	9.459	9.676	(0.939)	3420	1.48093	1.51

12-19-03

Data File: /var/chem/gcms/md.i/D121803.b/f6j0a1ap.d
Report Date: 19-Dec-2003 12:33

STL Knoxville

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: md.i
Lab File ID: f6j0a1ap.d
Lab Smp Id: F6J0A1AP
Analysis Type: SV
Quant Type: ISTD
Operator: 3386
Method File: /var/chem/gcms/md.i/D121803.b/8270a9.m
Misc Info: D121803,8270a9,8270.sub

Calibration Date: 18-DEC-2003
Calibration Time: 10:33
Client Smp ID: DD3005
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	87290	43645	174580	53815	-38.35
2 Naphthalene-d8	333200	166600	666400	199215	-40.21
3 Acenaphthene-d10	191379	95690	382758	135417	-29.24
4 Phenanthrene-d10	352152	176076	704304	258660	-26.55
5 Chrysene-d12	404756	202378	809512	316663	-21.76
6 Perylene-d12	323296	161648	646592	248669	-23.08

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	4.32	3.82	4.82	4.32	0.00
2 Naphthalene-d8	5.95	5.45	6.45	5.95	0.00
3 Acenaphthene-d10	8.59	8.09	9.09	8.59	0.00
4 Phenanthrene-d10	10.07	9.57	10.57	10.07	0.00
5 Chrysene-d12	12.17	11.67	12.67	12.17	0.00
6 Perylene-d12	13.42	12.92	13.92	13.42	0.04

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

Data File: /var/chem/gcms/md.i/D121803.b/f6j0a1ap.d
Report Date: 19-Dec-2003 12:33

STL Knoxville

RECOVERY REPORT

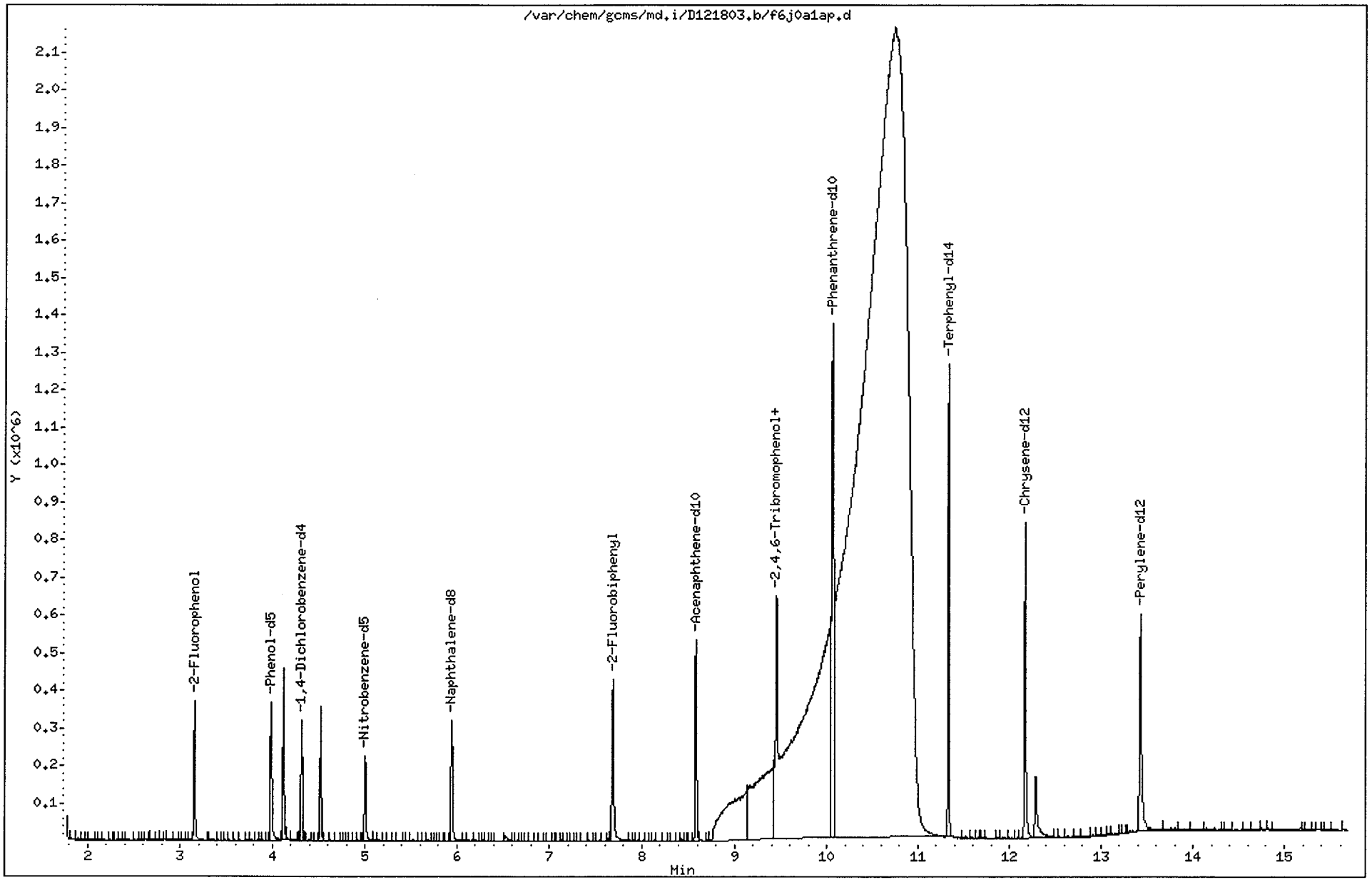
Client Name: SHAW E & I INC
Sample Matrix: LIQUID
Lab Smp Id: F6J0A1AP
Level: LOW
Data Type: MS DATA
SpikeList File: allspike.spk
Sublist File: 8270.sub
Method File: /var/chem/gcms/md.i/D121803.b/8270a9.m
Misc Info: D121803,8270a9,8270.sub

Client SDG: PB045
Fraction: SV
Client Smp ID: DD3005
Operator: 3386
SampleType: SAMPLE
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 7 2-Fluorophenol	76.5	33.6	43.89	29-110
$ 8 Phenol-d5	76.5	38.5	50.37	41-115
$ 9 Nitrobenzene-d5	51.0	28.3	55.48	46-117
$ 10 2-Fluorobiphenyl	51.0	25.2	49.51	44-116
$ 11 2,4,6-Tribromophen	76.5	46.4	60.59	31-138
$ 12 Terphenyl-d14	51.0	27.0	52.88	0-132

Data File: /var/chem/gcms/md.i/D121803.b/f6j0a1ap.d
Date : 18-DEC-2003 18:30
Client ID: DD3005
Sample Info: F6J0A1AP,,0,,,
Volume Injected (uL): 1.0
Column phase: ZB-5

Instrument: md.i
Operator: 3386
Column diameter: 0.25



Data File: /var/chem/gcms/md.i/D121803.b/f6j0a1ap.d

Date : 18-DEC-2003 18:30

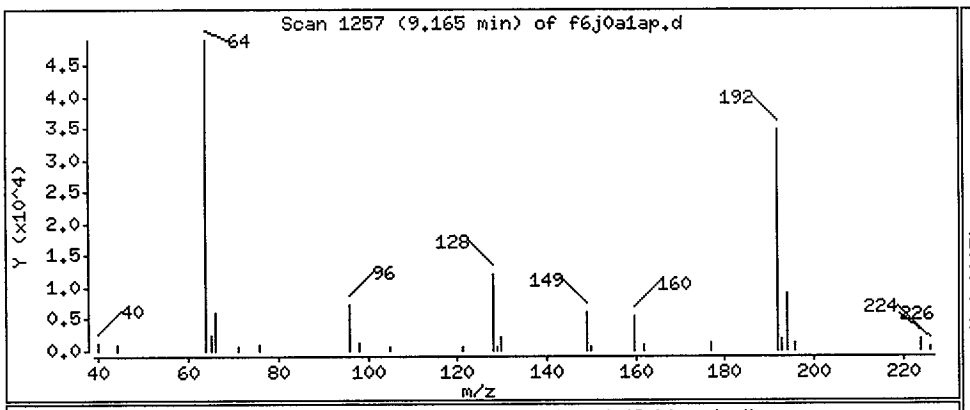
Client ID: DD3005 Instrument: md.i

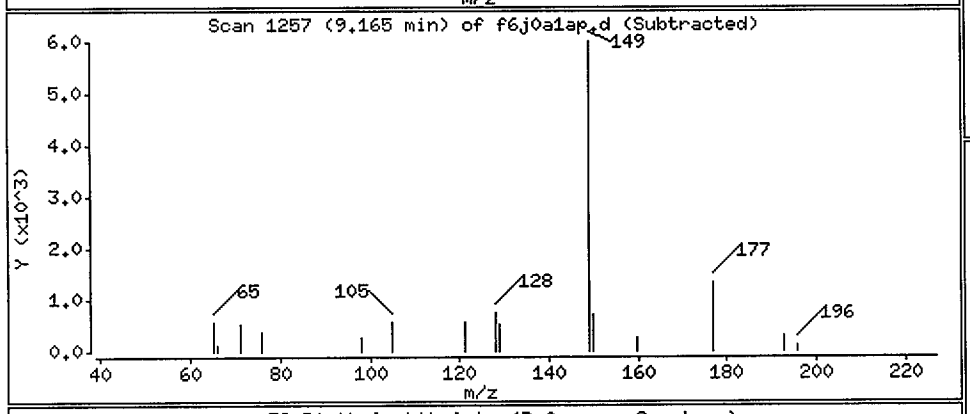
Sample Info: F6J0A1AP,,0,,,

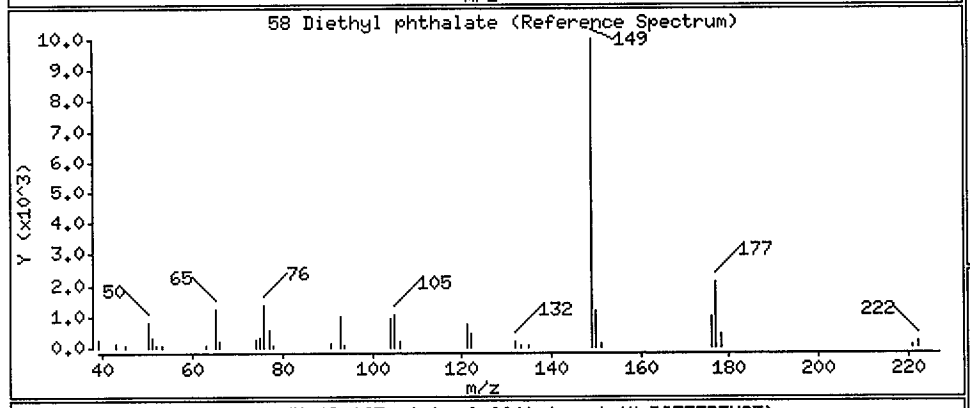
Volume Injected (uL): 1.0 Operator: 3386

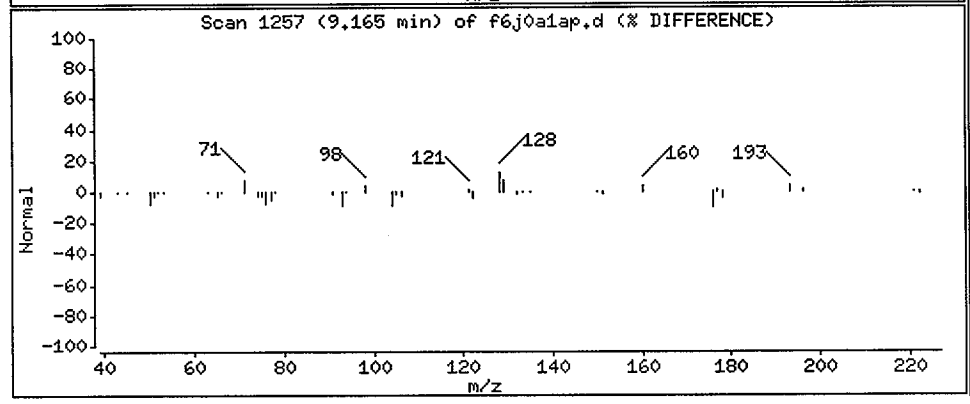
Column phase: ZB-5 Column diameter: 0.25

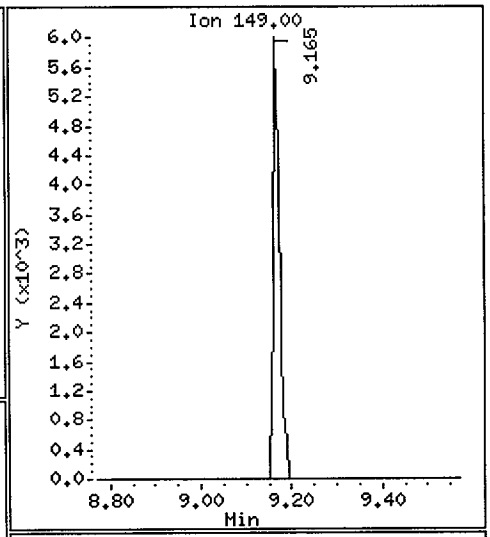
58 Diethyl phthalate Concentration: 0.643 ug/L

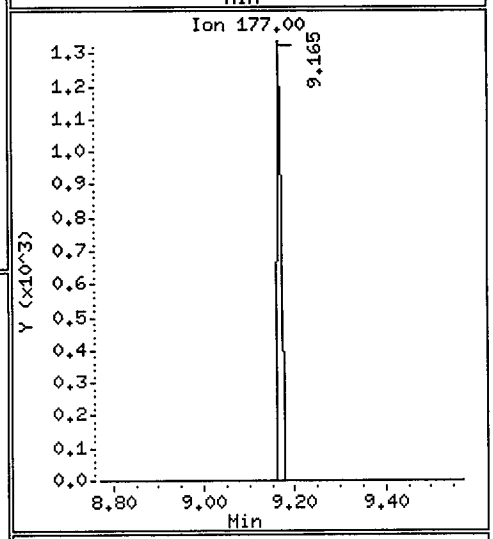


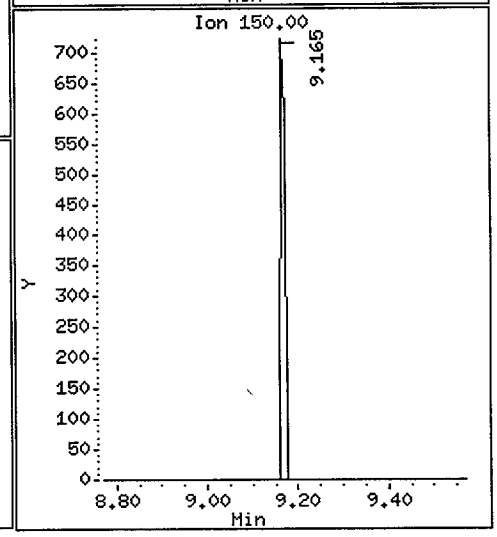












Data File: /var/chem/gcms/md.i/D121803.b/f6j0a1ap.d

Date : 18-DEC-2003 18:30

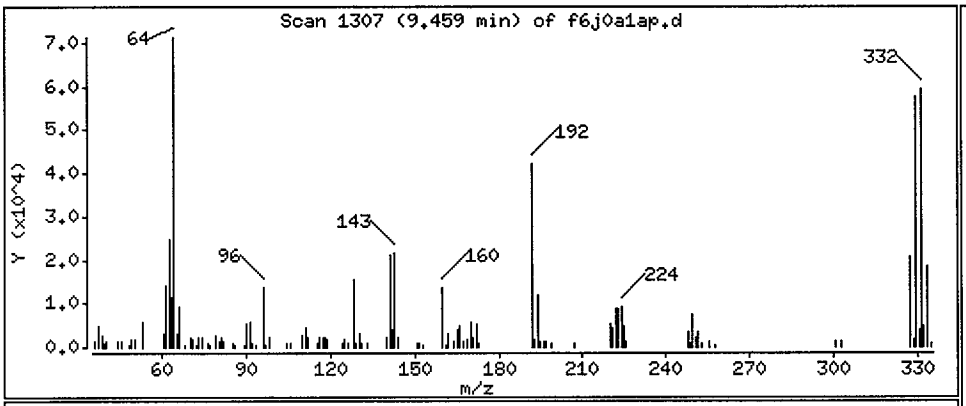
Client ID: DD3005 Instrument: md.i

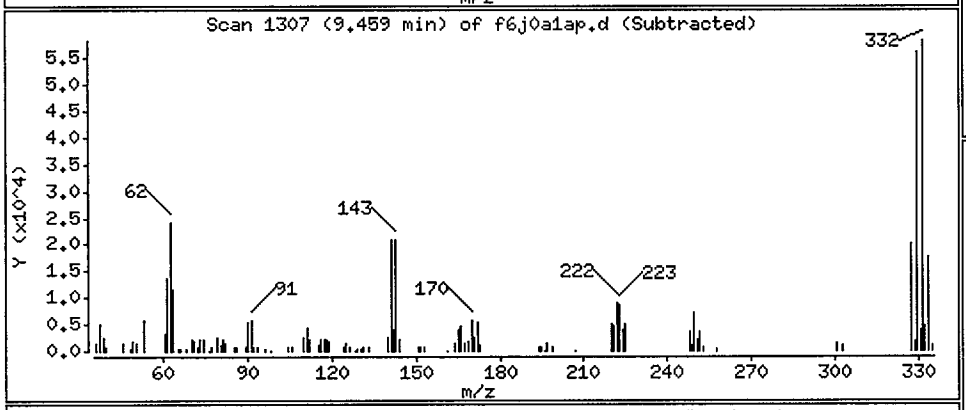
Sample Info: F6J0A1AP,,0,,,

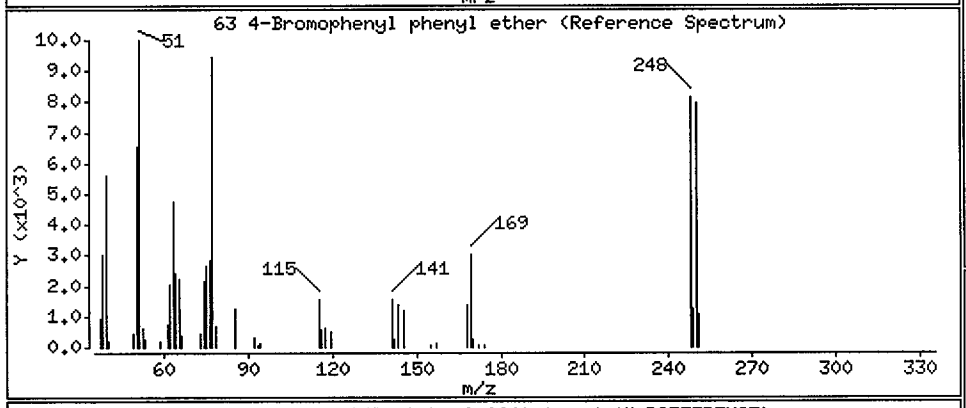
Volume Injected (uL): 1.0 Operator: 3386

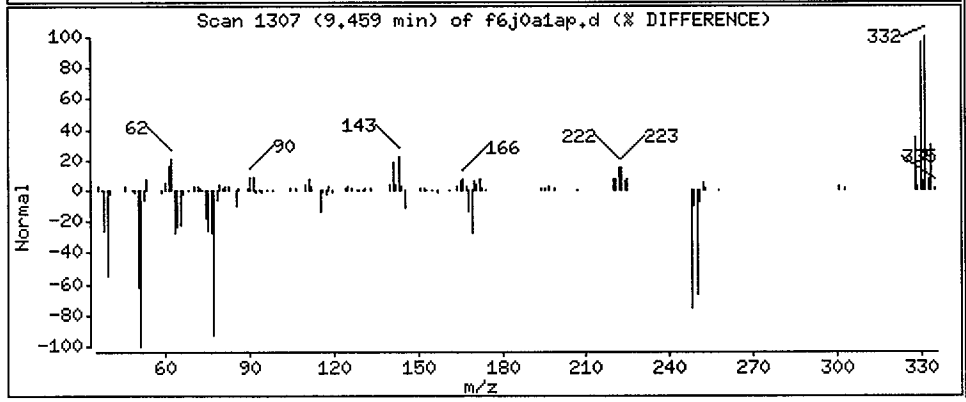
Column phase: ZB-5 Column diameter: 0.25

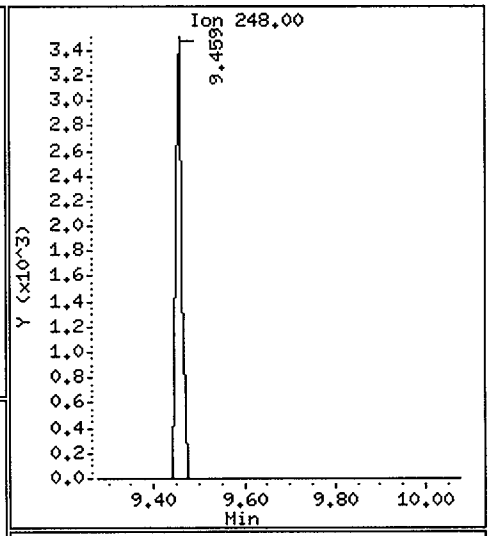
63 4-Bromophenyl phenyl ether Concentration: 1.51 ug/L

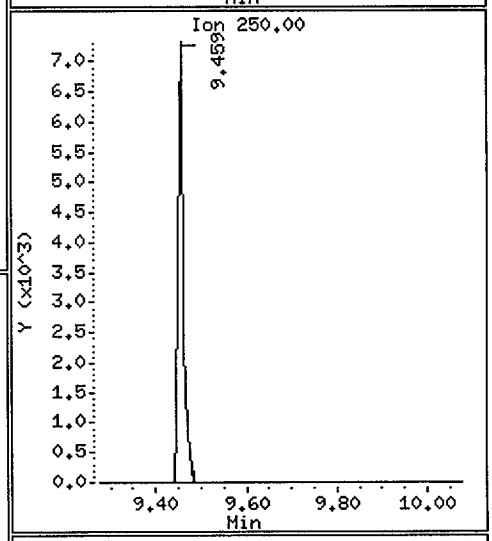


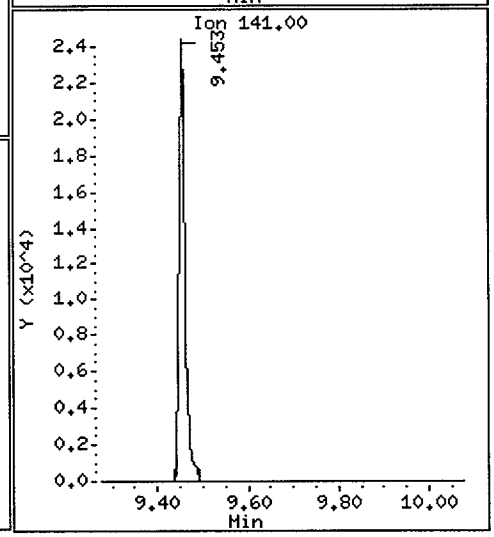












Standards Data

STL Knoxville Semivolatile GC/MS Initial Calibration Data Review / Narrative Checklist
Method 8270C - KNOX-MS-0016 Rev 1 and Method TO-13A Mod – KNOX-MS-0017, Rev. 0

Analysis Date:	11/7/03	Instrument::	MD	ICAL Batch/Scan Name:	D110703I	Scanned □

Review Items	N/A	Yes	No	If No, why is data reportable?	2nd
1. Did DFTPP meet tune criteria?		✓			✓
2. Was DDT breakdown ≤20% & benzidine tailing ≤3 and PCP tailing ≤5?		✓			✓
3. Were all standards injected within 12 hr of DFTPP?		✓			✓
4. Was date/time of analysis verified between analysis header and logbook as correct?		✓			✓
5. Were ≥ 5 levels of each compound/surrogate analyzed?		✓			✓
6. Was low level standard at or below RL?		✓			✓
7. Was the primary ion used for all compounds?		✓		❑ *Secondary ion used due to interferences for:* _____	✓
8. Are the average RFs for SPCCs ≥ 0.050? (8270C)		✓			✓
9. Do the RRFs meet minimum criteria? (TO-13A Mod)		✓			✓
10. Are %RSD <30% for CCCs? (8270C)		✓			✓
11. Are %RSD≤ 30% for all target analytes? (TO-13A Mod)		✓			✓
12. Was the average of all %RSDs ≤ 15% & all individual analytes ≤40%RSD?		✓		❑ Average was >15% and a curve was used for those analytes with %RSD >15%.	✓
13. If curves were used, is correlation coefficient ≥0.990?		✓			✓
14. If manual integrations were performed, are they clearly identified, initialed, dated and reason given?	✓ 11/12/03	✓		Reasons: 1)Corrected split peak; 2)Unresolved peak; 3)tailing; 4)RT shift; 5)wrong peak selected; 6)other	✓
15. Have alternate hits/manual integrations been verified as correct and are correct RFs listed in ICAL summary?	✓				NA
16. Was ICAL summary form processed using the correct method?		✓			✓
17. Are the ICAL start and end dates/times correct on ICAL summary?		✓			✓
18. Elution order checked on isomeric pairs?					
• 1,4-dichlorobenzene-d4 / 1,2-dichlorobenzene		✓			✓
• aniline / bis(2-chloroethyl)ether		✓			✓
• 1,3- , 1,4- , 1,2-dichlorobenzene		✓			✓
• benzyl alcohol / 2-methylphenol / 4-methylphenol		✓			✓
• 2,4,6- and 2,4,5-trichlorophenol		✓			✓
• phenanthrene / anthracene		✓			✓
• fluoranthene / pyrene		✓			✓
• benzo(a)anthracene / chrysene		✓			✓
• benzo(b)fluoranthene / benzo(k)fluoranthene		✓			✓
• indeno(1,2,3-cd)pyrene / benzo(g,h,i)perylene		✓			✓
19. If criteria were not met, was a NCM generated, approved by supervisor, and copy included in folder?	✓				NA
20. Does the ICAL folder contain **complete** data in the following order? Data review checklist, tune pass/fail page, m/z list, tune chromatogram, Target ICAL summary, Avg. %RSD summary, and curves, followed by Quan reports, chromatograms and manual integrations for all standards, in order from low to high standard.		✓			✓
21. Was the 2nd source calibration verification standard within acceptance criteria and are results in ICAL folder?		✓			✓

Analyst:	Date: 11/9/03	2nd Level Reviewer:	Date: 111203
Comments:		Comments:	
Reworked due to M.S-D of #55 & #92 JW 11-11-03		Since Avg RSD ≤ 15%, All analytes may use avg. RF. However all except #178 were changed to linear or quadratic for better fits.	

STL Knoxville
Instrument MD Run/Maintenance Log

See maint. log 2366 pg 41-46

Preventive Maintenance Performed ☐ NA ☑ inj. Changed Col. Date/Time Verified ☑

Target Batch	D1107031			Date	11/7/03
ICAL Batch	↓			Analyst	HM
LCS #1	148146			Internal Std ID*	EM1886 see log

* was added to all standards and extracts at 3 ul per 300 ul of standard or extract unless noted. Instrument injection volume is 1 ul unless otherwise noted.

Lot	Filename	Time	Dil.	Matrix	Batch	Comments
tune	DFADK07	0941		EM1894A		
Kal 200	ICDFDK078	0952		EM1871A		
120	ICDK075	1015		B		
60	4	1039		C		
40	3	1103		D		
25	2	1127		E		
10	1	1150		F		
2	7	1214		EM1896		
8270 SS	ICVDK07	1238		EM1873		
A9 160	A9DK076	1349	KM 11-8-03	EM1879A		time: 1302
120	5	1325		B		
60	4	1349		C		
40	3	1413		D		
10	1	1437		E		
A9 SS	A9VK07	1500		EM1889		
Blk	F38AC1AA	1524	1/2.5	TD13	3310206	
LCS	1AC	1548	—			
H3K060118	F376M1AA	1612	1/2.5			
	6X	1635				
	60	1659				
	62	1723				
	63	1747				
	66	1810				
	67	1834				
	69	1858				
	7E	1921				
Blk	F31JC1AA	1945		TCLP	3308295	
LCS	323	2009				
H3J290128	MK0	2032				
S	MK0 1AD	2056				
D	1AE	2120				

KM 11-8-03

Comments

Data File: /chem/gcms/md.i/D110703I.b/dfdk07.d

Date : 07-NOV-2003 09:41

Client ID: Tune

Instrument: md.i

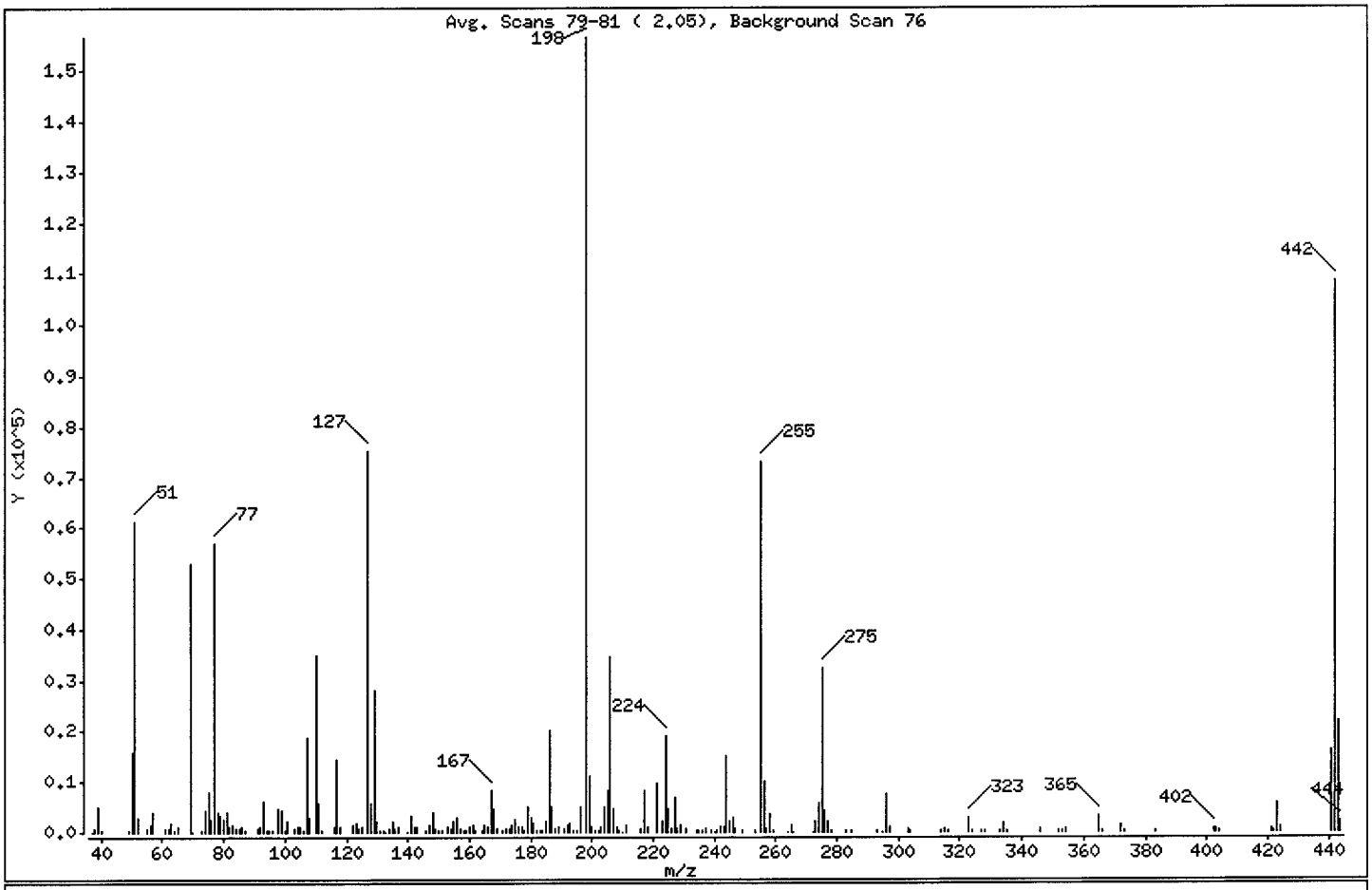
Sample Info: DFDK07,,3,,DFTPP,

Operator: 7126

Column phase: ZB-5

Column diameter: 0.25

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	30.00 - 60.00% of mass 198	39.05
68	Less than 1.99% of mass 69	0.00 (0.00)
69	Present, but less than mass 198	33.78
70	Less than 1.99% of mass 69	0.11 (0.33)
127	40.00 - 60.00% of mass 198	48.12
197	Less than 0.99% of mass 198	0.00
199	5.00 - 9.00% of mass 198	7.02
275	10.00 - 30.00% of mass 198	20.71
365	1.01 - 100.00% of mass 198	2.01
441	Present, but less than mass 443	10.27
442	40.01 - 110.00% of mass 198	69.13
443	17.00 - 23.00% of mass 442	14.01 (20.26)

Data File: /chem/gcms/md.i/D110703I.b/dfdk07.d

Date : 07-NOV-2003 09:41

Client ID: Tune

Instrument: md.i

Sample Info: DFDK07,,3,,DFTPP,

Operator: 7126

Column phase: ZB-5

Column diameter: 0.25

Data File: dfdk07.d

Spectrum: Avg. Scans 79-81 (2.05), Background Scan 76

Location of Maximum: 198.00

Number of points: 215

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	168	118.00	1029	183.00	202	255.00	72920
38.00	756	122.00	1350	184.00	268	256.00	10095
39.00	5039	123.00	1696	185.00	2310	257.00	705
40.00	215	124.00	867	186.00	19984	258.00	3437
49.00	329	125.00	1029	187.00	4988	259.00	359
50.00	15694	127.00	75352	188.00	692	264.00	62
51.00	61160	128.00	5626	189.00	928	265.00	1582
52.00	2988	129.00	28056	191.00	613	266.00	109
55.00	641	130.00	2294	192.00	1486	272.00	167
56.00	1595	131.00	521	193.00	1732	273.00	2259
57.00	3798	132.00	194	194.00	539	274.00	5913
61.00	615	133.00	178	195.00	397	275.00	32432
62.00	709	134.00	678	196.00	4902	276.00	4387
63.00	1831	135.00	2274	198.00	156608	277.00	2229
64.00	186	136.00	886	199.00	10996	278.00	455
65.00	963	137.00	1197	200.00	964	283.00	191
69.00	52904	140.00	180	201.00	471	285.00	399
70.00	174	141.00	3089	202.00	417	293.00	320
73.00	476	142.00	1242	203.00	950	295.00	174
74.00	4318	143.00	1072	204.00	4942	296.00	7437
75.00	7755	146.00	447	205.00	8292	297.00	1252
76.00	2668	147.00	1494	206.00	34640	303.00	787
77.00	56976	148.00	3984	207.00	4656	304.00	238
78.00	3993	149.00	765	208.00	1233	314.00	231
79.00	3271	150.00	197	209.00	202	315.00	818
80.00	2547	151.00	476	210.00	175	316.00	212
81.00	3949	153.00	925	211.00	1450	323.00	2908
82.00	1188	154.00	649	216.00	819	324.00	335
83.00	1297	155.00	2257	217.00	8142	327.00	277
84.00	578	156.00	2795	218.00	937	328.00	270
85.00	789	157.00	616	221.00	9624	333.00	202
86.00	1181	158.00	539	223.00	2029	334.00	1794
87.00	436	159.00	331	224.00	18928	335.00	417
91.00	804	160.00	1158	225.00	4844	346.00	702
92.00	963	161.00	1419	226.00	555	352.00	507

Data File: /chem/gcms/md.i/D110703I.b/dfdk07.d

Date : 07-NOV-2003 09:41

Client ID: Tune

Instrument: md.i

Sample Info: DFDK07,,3,,DFTPP,

Operator: 7126

Column phase: ZB-5

Column diameter: 0.25

Data File: dfdk07.d
Spectrum: Avg. Scans 79-81 (2.05), Background Scan 76
Location of Maximum: 198.00
Number of points: 215

m/z	Y	m/z	Y	m/z	Y	m/z	Y
93.00	6233	162.00	466	227.00	6808	353.00	341
94.00	499	164.00	223	228.00	869	354.00	642
95.00	426	165.00	1435	229.00	1513	365.00	3151
96.00	445	166.00	1098	231.00	792	366.00	375
98.00	4582	167.00	8237	234.00	275	372.00	1387
99.00	4200	168.00	4545	235.00	274	373.00	252
100.00	474	169.00	691	236.00	207	383.00	343
101.00	2228	171.00	220	237.00	633	402.00	690
103.00	547	172.00	576	239.00	194	403.00	584
104.00	1141	173.00	891	240.00	167	404.00	183
105.00	1122	174.00	1411	241.00	245	421.00	731
106.00	344	175.00	2557	242.00	997	422.00	455
107.00	18768	176.00	1008	243.00	1063	423.00	5645
108.00	2811	177.00	1222	244.00	15272	424.00	1033
110.00	34944	178.00	266	245.00	2131	441.00	16080
111.00	5639	179.00	5010	246.00	2944	442.00	108272
112.00	510	180.00	3044	247.00	543	443.00	21936
116.00	913	181.00	1736	249.00	337	444.00	1999
117.00	14297	182.00	193	253.00	258		

Data File: /chem/gcms/md.i/D110703I.b/dfdk07.d

Date : 07-NOV-2003 09:41

Client ID: Tune

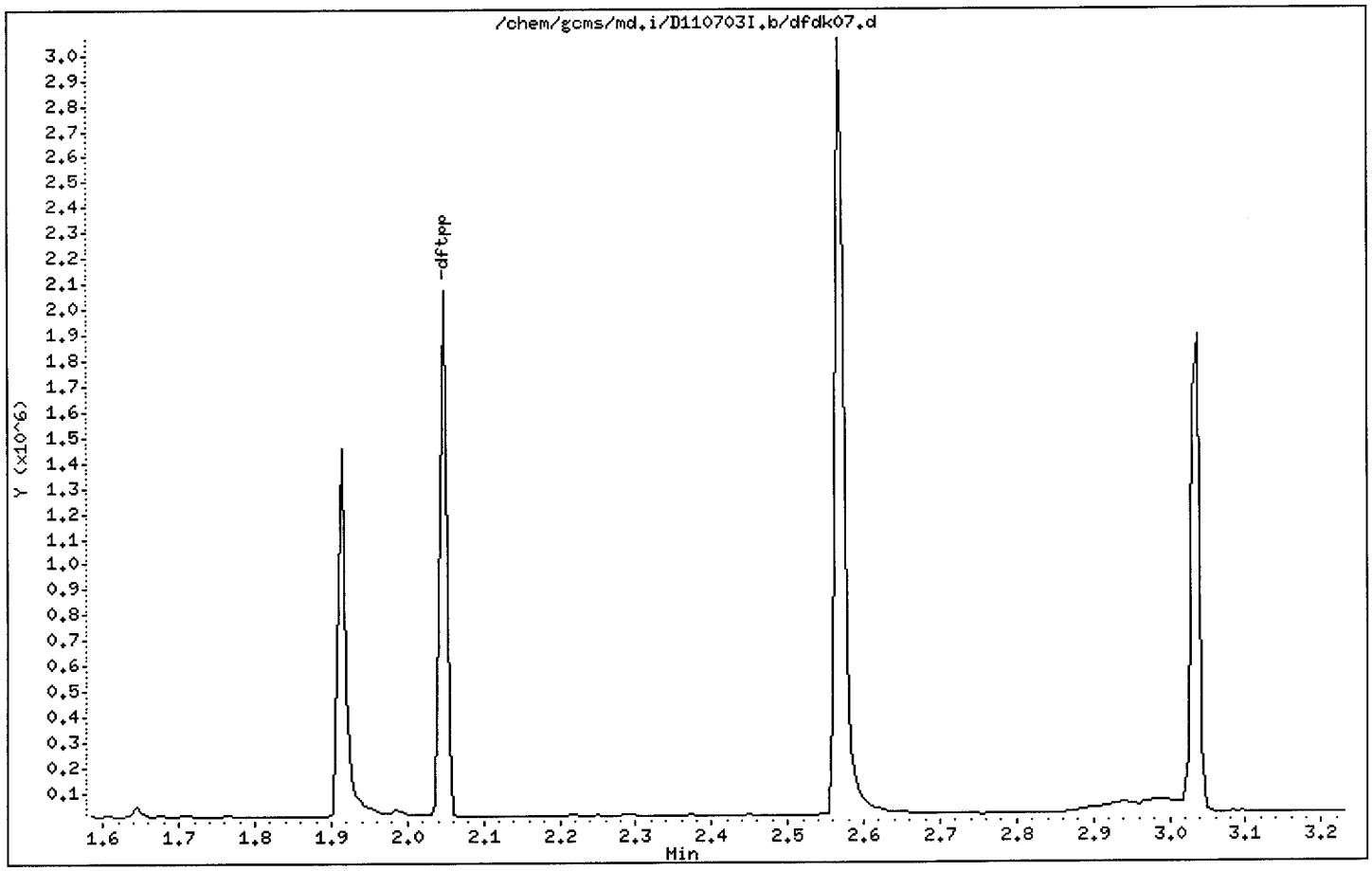
Instrument: md.i

Sample Info: DFDK07,,3,,DFTPP,

Operator: 7126

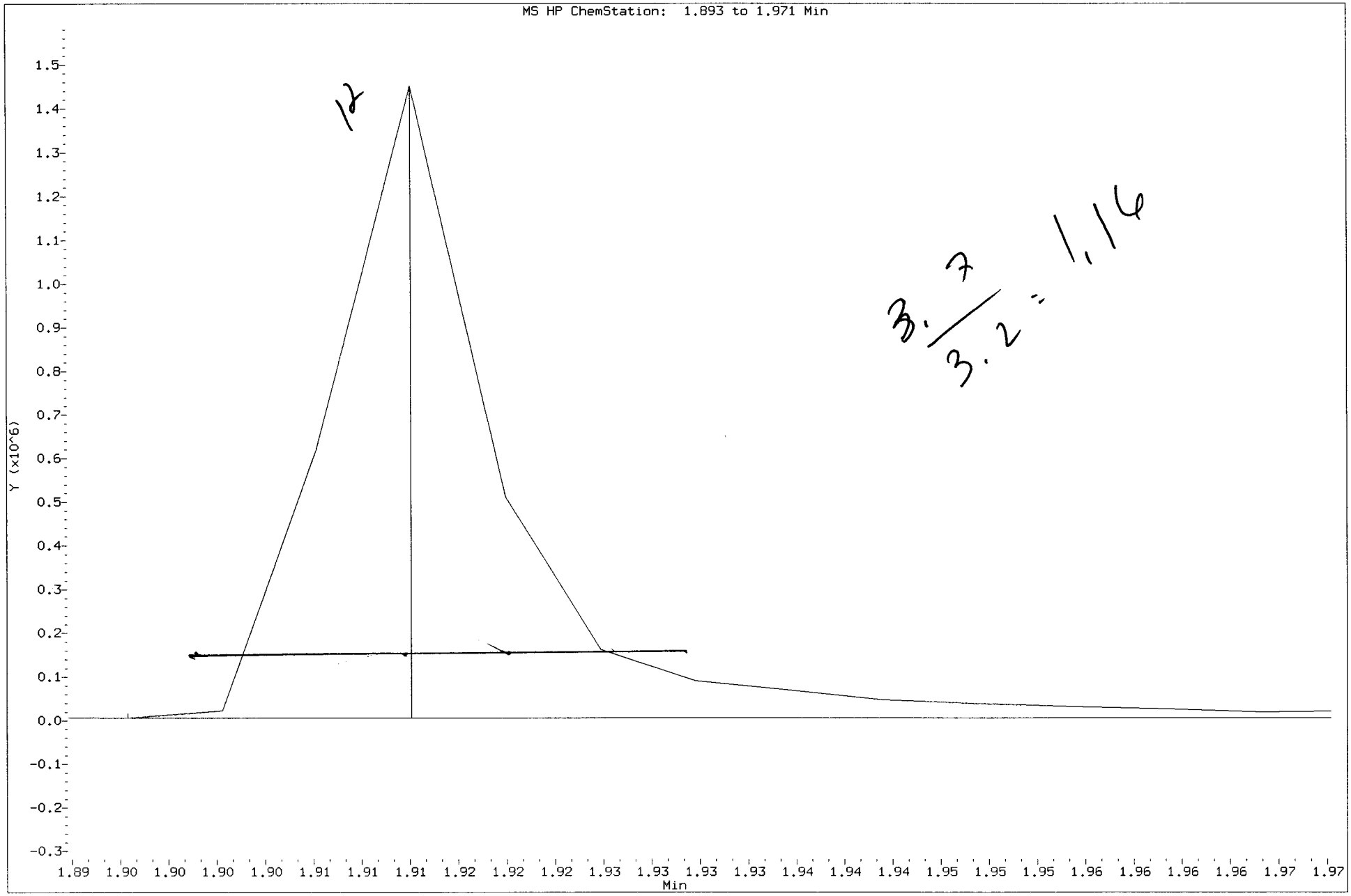
Column phase: ZB-5

Column diameter: 0.25



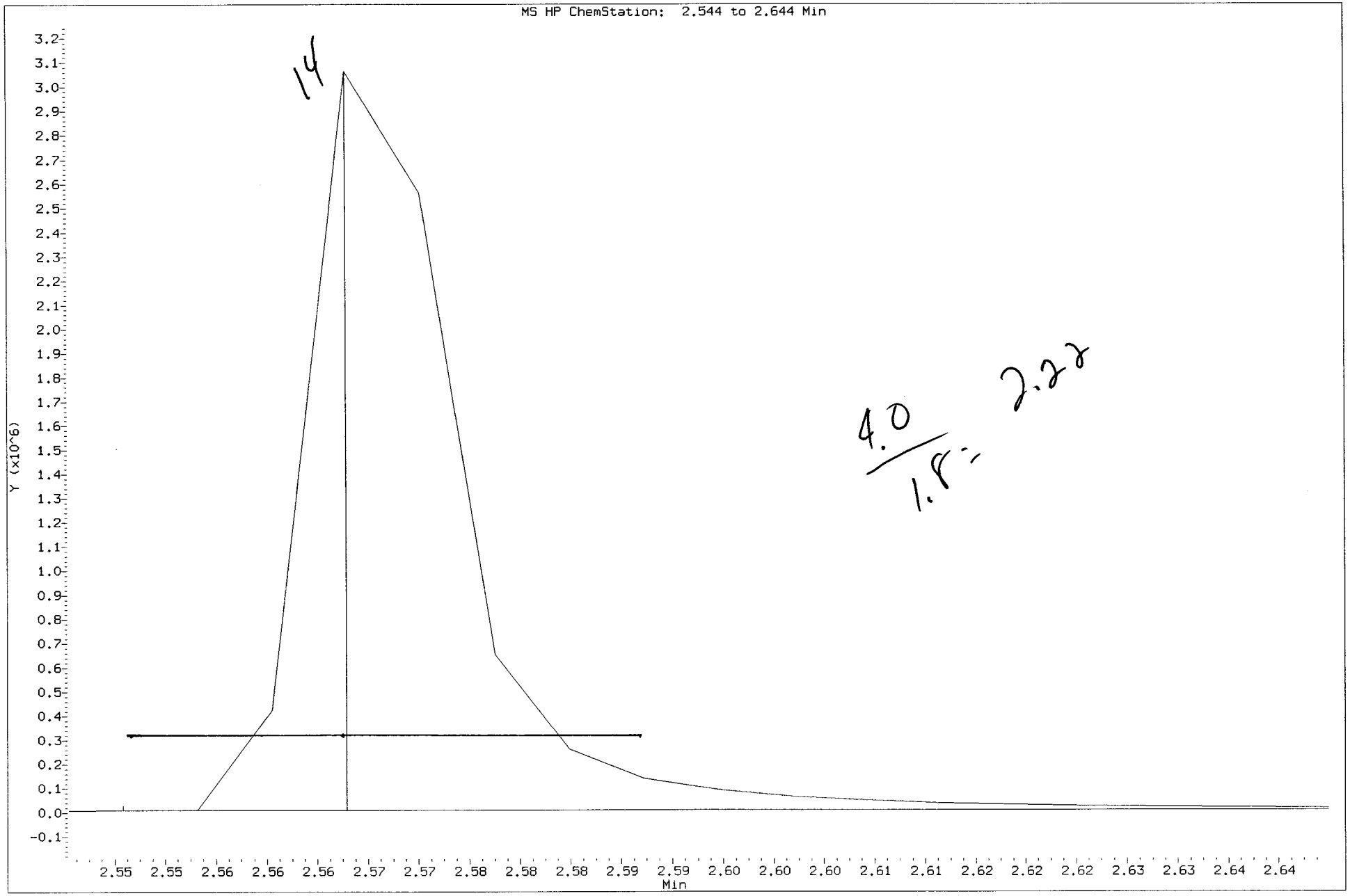
PUP

Data File: /var/chem/gcms/md.i/D110703I.b/dfdk07.d
Injection Date: 07-NOV-2003 09:41
Instrument: md.i
Client Sample ID: Tune



Benzidine

Data File: /var/chem/gcms/md.i/D110703I.b/dfdk07.d
Injection Date: 07-NOV-2003 09:41
Instrument: md.i
Client Sample ID: Tune



Report Date: 11-Nov-2003 16:49

Calibration History

Method : /var/chem/gcms/md.i/D110703I.b/8270a9.m
Start Cal Date: 07-NOV-2003 09:52
End Cal Date : 07-NOV-2003 14:37

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 1 , Cal Amount: 10.00000		
07-NOV-2003 14:37	appdx9	/var/chem/gcms/md.i/D110703I.b/a9dk071.d
07-NOV-2003 11:50	8270c13pyr	/var/chem/gcms/md.i/D110703I.b/icdk071.d
Cal Level: 2 , Cal Amount: 25.00000		
07-NOV-2003 11:27	8270c13pyr	/var/chem/gcms/md.i/D110703I.b/icdk072.d
Cal Level: 3 , Cal Amount: 40.00000		
07-NOV-2003 14:13	appdx9	/var/chem/gcms/md.i/D110703I.b/a9dk073.d
07-NOV-2003 11:03	8270c13pyr	/var/chem/gcms/md.i/D110703I.b/icdk073.d
Cal Level: 4 , Cal Amount: 60.00000		
07-NOV-2003 13:49	appdx9	/var/chem/gcms/md.i/D110703I.b/a9dk074.d
07-NOV-2003 10:39	8270c13pyr	/var/chem/gcms/md.i/D110703I.b/icdk074.d
Cal Level: 5 , Cal Amount: 120.00000		
07-NOV-2003 13:25	appdx9	/var/chem/gcms/md.i/D110703I.b/a9dk075.d
07-NOV-2003 10:15	8270dxnC13	/var/chem/gcms/md.i/D110703I.b/icdk075.d
Cal Level: 6 , Cal Amount: 160.00000		
07-NOV-2003 13:02	appdx9	/var/chem/gcms/md.i/D110703I.b/a9dk076.d
Cal Level: 7 , Cal Amount: 2.00000		
07-NOV-2003 12:14	low	/var/chem/gcms/md.i/D110703I.b/icdk077.d

| Cal Level: 8 , Cal Amount: 200.00000 |

07-NOV-2003 09:52	8270	/var/chem/gcms/md.i/D110703I.b/icdk078.d

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Calibration File Names:
Level 1: /var/chem/gcms/md.i/D110703I.b/a9dk071.d
Level 2: /var/chem/gcms/md.i/D110703I.b/icdk072.d
Level 3: /var/chem/gcms/md.i/D110703I.b/a9dk073.d
Level 4: /var/chem/gcms/md.i/D110703I.b/a9dk074.d
Level 5: /var/chem/gcms/md.i/D110703I.b/a9dk075.d
Level 6: /var/chem/gcms/md.i/D110703I.b/a9dk076.d
Level 7: /var/chem/gcms/md.i/D110703I.b/icdk077.d
Level 8: /var/chem/gcms/md.i/D110703I.b/icdk078.d

Compound	10 Level 1	25 Level 2	40 Level 3	60 Level 4	120 Level 5	160 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	2 Level 7	200 Level 8									
175 1,4-Dioxane	0.42313	0.43141	0.43480	0.42475	0.46948	+++++					
	0.46587	+++++					AVRG		0.44158		4.68673
13 N-Nitrosodimethylamine	0.67749	0.69308	0.69334	0.63850	0.63486	+++++					
	+++++	0.61183					AVRG		0.65818		5.22185
14 Pyridine	1.31001	1.26609	1.26402	1.21988	1.19907	+++++					
	1.40626	1.18371					AVRG		1.26415		6.03903

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Compound	10 Level 1	25 Level 2	40 Level 3	60 Level 4	120 Level 5	160 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	2 Level 7	200 Level 8									
15 Phenol (ccc)	1.29058	1.36926	1.43661	1.43939	1.36149	+++++					
	+++++	1.22480					AVRG		1.35369		6.19121
16 Aniline	2.18435	2.19770	2.17395	2.14533	1.99651	+++++					
	+++++	1.78026					AVRG		2.07968		7.89088
17 Bis(2-chloroethyl)ether	1.17343	1.17141	1.15395	1.14832	1.07263	+++++					
	+++++	0.98535					AVRG		1.11751		6.67119
18 2-Chlorophenol	1.29189	1.36056	1.35444	1.35270	1.27169	+++++					
	+++++	1.16562					AVRG		1.29948		5.79285
19 1,3-Dichlorobenzene	1.56070	1.56008	1.56316	1.54078	1.41694	+++++					
	+++++	1.27348					AVRG		1.48586		7.96070
20 1,4-Dichlorobenzene (ccc)	1.57798	1.56479	1.54793	1.51413	1.41251	+++++					
	+++++	1.28254					AVRG		1.48331		7.74843
21 Benzyl alcohol	0.74696	0.81630	0.82074	0.82870	0.78708	+++++					
	+++++	0.74027					AVRG		0.79001		4.89179

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	2 Level 7	200 Level 8									
22 1,2-Dichlorobenzene	1.50913	1.49746	1.49112	1.45564	1.35702	+++++					
	+++++	1.21148					AVRG		1.42031		8.19391
23 2-Methylphenol	1.02644	1.10586	1.16943	1.15466	1.09570	+++++					
	+++++	1.01176					AVRG		1.09397		5.90162
24 2,2'-Oxybis(1-Chloropropane)	2.21942	2.22723	2.21848	2.20718	2.08605	+++++					
	+++++	1.91294					AVRG		2.14522		5.85551
25 4-Methylphenol	1.00712	1.14804	1.18995	1.19893	1.14775	+++++					
	+++++	1.04618					AVRG		1.12299		6.99094
26 3&4 Methylphenol	1.00712	1.14804	1.18995	1.19893	1.14775	+++++					
	+++++	1.04618					AVRG		1.12299		6.99094
27 N-Nitroso-di-n-propylamine###	0.70876	0.76470	0.75560	0.77113	0.73912	+++++					
	+++++	0.69405					AVRG		0.73889		4.23834
28 Hexachloroethane	0.52089	0.53959	0.53876	0.53101	0.49917	+++++					
	+++++	0.45904					AVRG		0.51474		6.04526

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Compound	10 Level 1	25 Level 2	40 Level 3	60 Level 4	120 Level 5	160 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	2 Level 7	200 Level 8									
29 Nitrobenzene	0.28861	0.29725	0.29728	0.29302	0.28475	+++++					
	+++++	0.26980					AVRG		0.28845		3.59489
30 Isophorone	0.55706	0.58080	0.60377	0.60139	0.57085	+++++					
	+++++	0.54706					AVRG		0.57682		3.99650
31 2-Nitrophenol (ccc)	0.14086	0.16945	0.18121	0.18710	0.18809	+++++					
	+++++	0.18372					AVRG		0.17507		10.30909
32 2,4-Dimethyphenol	0.26926	0.31705	0.33809	0.33221	0.32360	+++++					
	+++++	0.30442					AVRG		0.31411		7.93525
33 Bis(2-chloroethoxy)methane	0.37541	0.38769	0.38516	0.38155	0.35723	+++++					
	+++++	0.33912					AVRG		0.37103		5.13585
34 Benzoic acid	+++++	79503	169389	299288	611763	+++++					
	+++++	1055544					LINR	0.50140	0.21077		0.99849
35 2,4-Dichlorophenol (ccc)	0.22276	0.27314	0.29191	0.29853	0.28970	+++++					
	+++++	0.27960					AVRG		0.27594		9.99647

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	2 Level 7	200 Level 8									
36 1,2,4-Trichlorobenzene	0.33160	0.33666	0.33449	0.32736	0.30559	+++++					
	+++++	0.29059					AVRG		0.32105		5.81473
37 Naphthalene	1.17583	1.14989	1.13134	1.09468	0.95640	+++++					
	1.17171	0.94917					AVRG		1.08986		8.94652
38 4-Chloroaniline	0.52332	0.52800	0.54711	0.53918	0.50376	+++++					
	+++++	0.46959					AVRG		0.51849		5.43401
39 Hexachlorobutadiene (ccc)	0.17483	0.17259	0.17451	0.16971	0.16084	+++++					
	+++++	0.15162					AVRG		0.16735		5.54266
40 4-Chloro-3-methylphenol (ccc)	0.18314	0.23768	0.26141	0.26550	0.26133	+++++					
	+++++	0.25122					AVRG		0.24338		12.80868
41 2-Methylnaphthalene	0.72031	0.74592	0.73542	0.72521	0.68281	+++++					
	+++++	0.63751					AVRG		0.70786		5.73534
42 Hexachlorocyclopentadiene####	0.22912	0.27754	0.30224	0.31238	0.33086	+++++					
	+++++	0.33531					AVRG		0.29791		13.30874

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Compound	10 Level 1	25 Level 2	40 Level 3	60 Level 4	120 Level 5	160 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	2 Level 7	200 Level 8									
43 2,4,6-Trichlorophenol (ccc)	0.25530	0.31184	0.34645	0.36000	0.36854	+++++					
	+++++	0.36925					AVRG		0.33523		13.30199
44 2,4,5-Trichlorphenol	0.32942	0.37475	0.40169	0.40668	0.41096	+++++					
	+++++	0.41065					AVRG		0.38902		8.27185
45 2-Chloronaphthalene	1.16290	1.22663	1.25060	1.23687	1.20737	+++++					
	+++++	1.15598					AVRG		1.20672		3.25749
46 2-Nitroaniline	0.26583	0.32698	0.34380	0.35089	0.35560	+++++					
	+++++	0.35768					AVRG		0.33346		10.47770
47 Acenaphthylene	2.10725	2.21698	2.22342	2.20464	2.08924	+++++					
	1.91997	1.93017					AVRG		2.09881		6.19025
48 Dimethyl phthalate	1.30186	1.32647	1.35502	1.35778	1.31613	+++++					
	+++++	1.29134					AVRG		1.32477		2.06038
49 2,6-Dinitrotoluene	0.21592	0.26848	0.29378	0.30666	0.31164	+++++					
	+++++	0.31820					AVRG		0.28578		13.46120

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Compound	10 Level 1	25 Level 2	40 Level 3	60 Level 4	120 Level 5	160 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	2 Level 7	200 Level 8									
50 3-Nitroaniline	0.37132	0.41684	0.44063	0.45437	0.44501	+++++					
	+++++	0.44916					AVRG		0.42956		7.29850
51 Acenaphthene (ccc)	1.36550	1.37775	1.37769	1.34163	1.27627	+++++					
	1.42642	1.19326					AVRG		1.33693		5.83355
52 2,4-Dinitrophenol ##spcc##	+++++	21283	53286	106343	281312	+++++					
	+++++	467767					WLINR	0.90743	0.18574		0.99343
53 Dibenzofuran	1.72716	1.78095	1.76403	1.73524	1.60798	+++++					
	+++++	1.46087					AVRG		1.67937		7.32828
54 4-Nitrophenol ##spcc##	+++++	0.11927	0.14567	0.14506	0.15362	+++++					
	+++++	0.15136					AVRG		0.14299		9.62220
55 2,4-Dinitrotoluene	0.28909	0.37190	0.39588	0.41865	0.42764	+++++					
	+++++	0.43425					AVRG		0.38957		13.93757
56 Fluorene	1.52894	1.54480	1.53327	1.51076	1.38686	+++++					
	1.47050	1.24194					AVRG		1.45958		7.55195

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	2 Level 7	200 Level 8									
57 4-Chlorophenyl phenyl ether	0.64526	0.65238	0.65126	0.63793	0.60725	+++++					
	+++++	0.56733					AVRG		0.62690		5.35540
58 Diethyl phthalate	1.35004	1.34053	1.34962	1.34572	1.29272	+++++					
	+++++	1.24043					AVRG		1.31984		3.37777
59 4-Nitroaniline	0.41522	0.46078	0.47914	0.47518	0.48059	+++++					
	+++++	0.48196					AVRG		0.46548		5.54329
60 4,6-Dinitro-2-methylphenol	+++++	52596	110777	194400	434372	+++++					
	+++++	692497					LINR	0.50451	0.14688		0.99966
61 N-Ndpa / diphenylamine (ccc)	0.53542	0.54432	0.53138	0.53428	0.50601	+++++					
	+++++	0.46089					AVRG		0.51872		5.99975
62 1,2-Diphenylhydrazine/azobnz	0.73263	0.75323	0.74231	0.73206	0.68645	+++++					
	+++++	0.62121					AVRG		0.71132		6.98387
63 4-Bromophenyl phenyl ether	0.17983	0.18740	0.18406	0.18313	0.17385	+++++					
	+++++	0.16339					AVRG		0.17861		4.90111

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	2 Level 7	200 Level 8									
64 Hexachlorobenzene	0.22686	0.22682	0.21547	0.21860	0.19921	+++++					
	+++++	0.18230					AVRG		0.21154		8.29700
65 Pentachlorophenol (ccc)	+++++	0.12091	0.13024	0.13724	0.13906	+++++					
	+++++	0.13151					AVRG		0.13179		5.41265
66 Phenanthrene	1.33569	1.33629	1.29754	1.26635	1.12113	+++++					
	1.39686	0.95369					AVRG		1.24394		12.41198
67 Anthracene	1.36263	1.38734	1.29331	1.27822	1.12555	+++++					
	1.27276	0.97238					AVRG		1.24174		11.70818
68 Carbazole	1.34991	1.38339	1.32032	1.30675	1.15716	+++++					
	+++++	0.99194					AVRG		1.25158		11.91219
69 Di-n-butyl phthalate	1.25547	1.33165	1.32644	1.30235	1.15937	+++++					
	+++++	0.98789					AVRG		1.22720		10.87628
70 Fluoranthene (ccc)	1.41514	1.43990	1.37250	1.37022	1.18381	+++++					
	1.35183	1.02175					AVRG		1.30788		11.51940

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	2 Level 7	200 Level 8									
71 Pyrene	1.46475	1.44911	1.45633	1.39364	1.26866	+++++					
	1.43138	1.09638					AVRG		1.36575		10.00502
72 Butyl benzyl phthalate	0.56594	0.60540	0.63700	0.62560	0.60045	+++++					
	+++++	0.55053					AVRG		0.59749		5.61277
73 Benzo(a)Anthracene	1.19654	1.22751	1.23651	1.20977	1.15413	+++++					
	1.11805	1.02707					AVRG		1.16708		6.38687
74 3,3'-Dichlorobenzidine	0.37981	0.43070	0.44705	0.44421	0.43172	+++++					
	+++++	0.38740					AVRG		0.42015		6.93711
75 Chrysene	1.24923	1.21104	1.17436	1.13479	1.00978	+++++					
	1.32129	0.89090					AVRG		1.14163		12.89569
76 Bis(2-ethylhexyl) phthalate	0.71669	0.77682	0.78739	0.76205	0.69805	+++++					
	0.49619	0.61620					AVRG		0.69334		15.11802
77 Di-n-octyl phthalate (ccc)	1.38733	1.81255	1.88396	1.99254	1.86752	+++++					
	+++++	1.64533					AVRG		1.76487		12.30082

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	2 Level 7	200 Level 8									
78 Benzo(b)fluoranthene	254772	726517	1397944	1944521	3883515	+++++					
	31656	5819196					LINR	-0.05508	1.62987		0.99787
79 Benzo(k)fluoranthene	2.17920	2.23646	1.94784	2.07095	1.72446	+++++					
	2.23183	1.44094					AVRG		1.97595		15.09713
80 Benzo(a)pyrene (ccc)	1.75988	1.83588	1.76134	1.73676	1.59246	+++++					
	1.38638	1.41321					AVRG		1.64085		10.98241
85 Benzo(e)pyrene	1.39756	1.63236	1.46174	1.45670	1.37620	+++++					
	1.69888	+++++					AVRG		1.50391		8.72765
81 Indeno(1,2,3-cd)pyrene	1.61968	1.79855	1.80602	1.80801	1.72611	+++++					
	1.10665	1.60221					AVRG		1.63818		15.25313
82 Dibenz(a,h)anthracene	228165	645845	1078699	1641471	3018291	+++++					
	24331	4175960					WLINR	0.00834	1.28766		0.99006
83 Benzo(g,h,i)perylene	1.45678	1.50603	1.49211	1.52713	1.52769	+++++					
	1.01492	1.50378					AVRG		1.43263		12.96572

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	2 Level 7	200 Level 8									
176 2-Picoline	1.26324	+++++	1.28367	1.22357	1.18703	1.12219					
	+++++	+++++					AVRG		1.21594		5.28351
86 N-nitrosomethylethylamine	0.73447	+++++	0.73113	0.70983	0.71701	0.69214					
	+++++	+++++					AVRG		0.71691		2.38994
87 Methyl methanosulfonate	0.36784	+++++	0.38483	0.37197	0.37988	0.36106					
	+++++	+++++					AVRG		0.37312		2.53361
88 N-nitrosodiethylamine	0.58569	+++++	0.61020	0.58186	0.57975	0.55258					
	+++++	+++++					AVRG		0.58202		3.52095
89 Ethyl methanosulfonate	0.78586	+++++	0.82625	0.81340	0.79561	0.76946					
	+++++	+++++					AVRG		0.79811		2.80403
90 Pentachloroethane	0.47830	+++++	0.48695	0.46920	0.45565	0.42152					
	+++++	+++++					AVRG		0.46232		5.53449
91 acetophenone	1.54459	+++++	1.59639	1.53117	1.44849	1.36187					
	+++++	+++++					AVRG		1.49650		6.15409

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Integrator : HP RTE
Method file : /var/chem/gcms/md.i/D110703I.b/8270a9.m
Cal Date : 11-Nov-2003 16:42 wilesd

Compound	10 Level 1	25 Level 2	40 Level 3	60 Level 4	120 Level 5	160 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	2 Level 7	200 Level 8									
92 m-cresol	0.78067	+++++	1.03413	1.06638	1.05977	0.99769					
	+++++	+++++					AVRG		0.98773		12.03270
93 n-nitrosopyrrolidine	0.53491	+++++	0.62333	0.62923	0.61798	0.57984					
	+++++	+++++					AVRG		0.59706		6.65870
94 n-nitrosomorpholine	0.67278	+++++	0.71105	0.69688	0.67863	0.65104					
	+++++	+++++					AVRG		0.68208		3.37509
95 o-toluidine	1.81719	+++++	1.90708	1.87744	1.84096	1.73637					
	+++++	+++++					AVRG		1.83580		3.55902
96 n-nitrosopiperidine	0.22335	+++++	0.25157	0.24131	0.24147	0.23453					
	+++++	+++++					AVRG		0.23844		4.36213
97 2,6-dichlorophenol	0.19976	+++++	0.26749	0.27366	0.28421	0.27864					
	+++++	+++++					AVRG		0.26075		13.28779
98 hexachloropropene	0.15472	+++++	0.17366	0.17390	0.17729	0.17208					
	+++++	+++++					AVRG		0.17033		5.24209

Report Date : 11-Nov-2003 16:49

STL Knoxville

INITIAL CALIBRATION DATA

Start Cal Date : 07-NOV-2003 09:52
End Cal Date : 07-NOV-2003 14:37
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/gcms/md.i/D110703I.b/8270a9.m
Cal Date : 11-Nov-2003 16:42 wilesd

Compound	10 Level 1	25 Level 2	40 Level 3	60 Level 4	120 Level 5	160 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	2 Level 7	200 Level 8									
99 N-nitro-di-n-butylamine	0.16009	+++++	0.19121	0.18683	0.18795	0.18279					
	+++++	+++++					AVRG		0.18177		6.87156
100 Isosafrole	0.23727	+++++	0.27612	0.26831	0.26792	0.25698					
	+++++	+++++					AVRG		0.26132		5.76751
101 1,2,4,5-tetrachlorobenzene	0.27717	+++++	0.30038	0.28717	0.28615	0.27812					
	+++++	+++++					AVRG		0.28580		3.26358
102 safrole	0.44590	+++++	0.52550	0.52590	0.52418	0.51626					
	+++++	+++++					AVRG		0.50755		6.83411
103 1-chloronaphthalene	1.23740	+++++	1.26044	1.20463	1.13032	1.07530					
	+++++	+++++					AVRG		1.18162		6.52657
104 m-dinitrobenzene	12220	+++++	67132	123163	263814	354938					
	+++++	+++++					LINR	0.31645	0.16506		0.99951
105 pentachlorobenzene	0.47068	+++++	0.47368	0.45647	0.43919	0.41353					
	+++++	+++++					AVRG		0.45071		5.51828

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Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/gcms/md.i/D110703I.b/8270a9.m
Cal Date : 11-Nov-2003 16:42 wilesd

Compound	10 Level 1	25 Level 2	40 Level 3	60 Level 4	120 Level 5	160 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	2 Level 7	200 Level 8									
106 1-naphthylamine	1.21238	++++++	1.39511	1.35587	1.29440	1.24742					
	++++++	++++++					AVRG		1.30103		5.78201
107 2-naphthylamine	1.52156	++++++	1.52925	1.44137	1.31901	1.24570					
	++++++	++++++					AVRG		1.41138		8.88599
108 2,3,4,6-tetrachlorophenol	25749	++++++	137433	231934	477305	632193					
	++++++	++++++					LINR	0.15443	0.28956		0.99961
109 5-nitro-o-toluidine	0.29988	++++++	0.39314	0.39789	0.40314	0.39340					
	++++++	++++++					AVRG		0.37749		11.54338
110 diphenylamine	1.15885	++++++	1.22890	1.15253	1.07932	1.02037					
	++++++	++++++					AVRG		1.12799		7.10440
111 1,3,5-trinitrobenzene	10696	++++++	70611	136725	338694	454374					
	++++++	++++++					WLINR	0.41856	0.11902		0.99174
112 phenacetin	0.30069	++++++	0.36521	0.34468	0.35181	0.32471					
	++++++	++++++					AVRG		0.33742		7.47250

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Target Version : 3.50
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Method file : /var/chem/gcms/md.i/D110703I.b/8270a9.m
Cal Date : 11-Nov-2003 16:42 wilesd

Compound	10 Level 1	25 Level 2	40 Level 3	60 Level 4	120 Level 5	160 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	2 Level 7	200 Level 8									
113 4-aminobiphenyl	0.85405	+++++	0.89542	0.86634	0.82884	0.76556					
	+++++	+++++					AVRG		0.84204		5.82043
114 pentachloronitrobenzene	0.06602	+++++	0.07314	0.07139	0.07157	0.06814					
	+++++	+++++					AVRG		0.07006		4.13454
115 Dinoseb	11596	+++++	84808	167051	416693	572794					
	+++++	+++++					WLINR	0.45014	0.14893		0.99068
178 N-Nitroquinoline-n-oxide	0.03784	+++++	0.04373	0.03772	0.02839	0.02338					
	+++++	+++++					AVRG		0.03421		23.89011
177 Methapyrilene HCL	0.29579	+++++	0.35353	0.32930	0.32752	0.30255					
	+++++	+++++					AVRG		0.32174		7.19321
84 Benzidine	0.74485	+++++	0.91614	0.89379	0.85469	0.77303					
	+++++	+++++					AVRG		0.83650		8.94275
116 p-(dimethylamino)azobenzene	0.29152	+++++	0.34153	0.32333	0.31362	0.28832					
	+++++	+++++					AVRG		0.31166		7.14371

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INITIAL CALIBRATION DATA

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Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/gcms/md.i/D110703I.b/8270a9.m
Cal Date : 11-Nov-2003 16:42 wilesd

Compound	10 Level 1	25 Level 2	40 Level 3	60 Level 4	120 Level 5	160 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	2 Level 7	200 Level 8									
118 2-acetylaminofluorene	81112	+++++	435115	748847	1527157	1923868					
	+++++	+++++					LINR	0.07219	0.49474		0.99696
117 o-tolidine	0.68661	+++++	0.80941	0.78445	0.76657	0.66486					
	+++++	+++++					AVRG		0.74238		8.51097
119 7,12-dimethylbenz(a)anthracen	0.47104	+++++	0.52924	0.52551	0.49829	0.46697					
	+++++	+++++					AVRG		0.49821		5.87096
120 3-methylcholanthrene	0.63007	+++++	0.80637	0.81105	0.80781	0.79621					
	+++++	+++++					AVRG		0.77030		10.20238
$ 7 2-Fluorophenol	1.31851	1.37166	1.36407	1.35912	1.28522	+++++					
	+++++	1.17073					AVRG		1.31155		5.82725
$ 8 Phenol-d5	1.38160	1.46058	1.51010	1.51576	1.43891	+++++					
	+++++	1.32712					AVRG		1.43901		5.12785
$ 9 Nitrobenzene-d5	0.28826	0.30855	0.31732	0.31807	0.30746	+++++					
	+++++	0.29759					AVRG		0.30621		3.77405

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INITIAL CALIBRATION DATA

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Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/gcms/md.i/D110703I.b/8270a9.m
Cal Date : 11-Nov-2003 16:42 wilesd

Compound	10 Level 1	25 Level 2	40 Level 3	60 Level 4	120 Level 5	160 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	2 Level 7	200 Level 8									
$ 10 2-Fluorobiphenyl	1.33089	1.34631	1.34897	1.35240	1.30540	+++++					
	+++++	1.26969					AVRG		1.32561		2.44581
$ 11 2,4,6-Tribromophenol	0.07948	0.09250	0.09641	0.10012	0.09362	+++++					
	+++++	0.08976					AVRG		0.09198		7.68598
$ 12 Terphenyl-d14	0.87581	0.88695	0.86200	0.85230	0.79086	+++++					
	+++++	0.69803					AVRG		0.82766		8.67552
$ 172 13C3-1,2,3-naphthalene	1.16520	1.12231	1.08957	1.03590	0.93149	+++++					
	+++++	+++++					AVRG		1.06889		8.43594
$ 173 Pyridine-d5	1.37401	1.26252	1.40165	1.34083	+++++	+++++					
	1.31349	+++++					AVRG		1.33850		4.03230

Report Date : 11-Nov-2003 16:49

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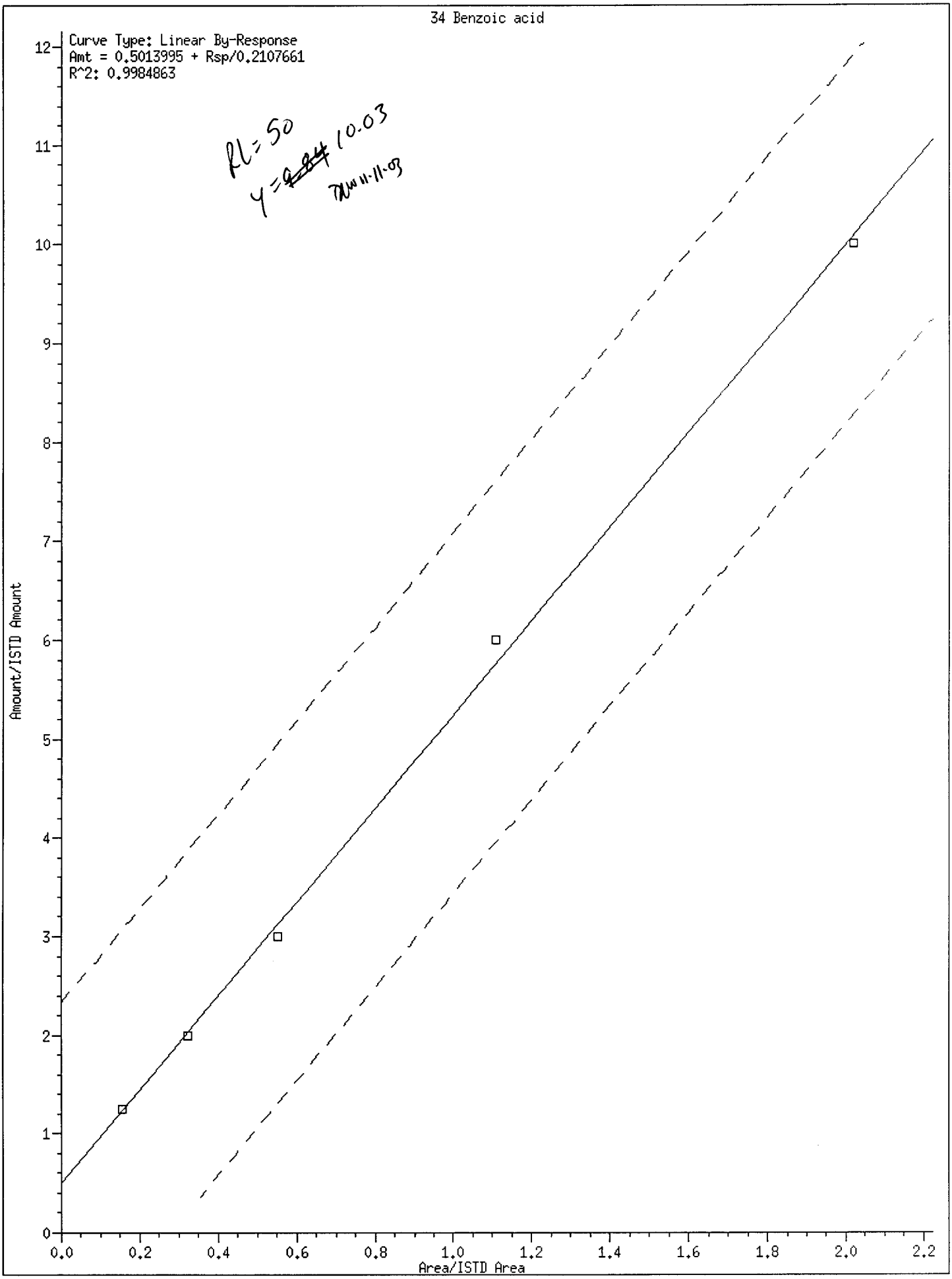
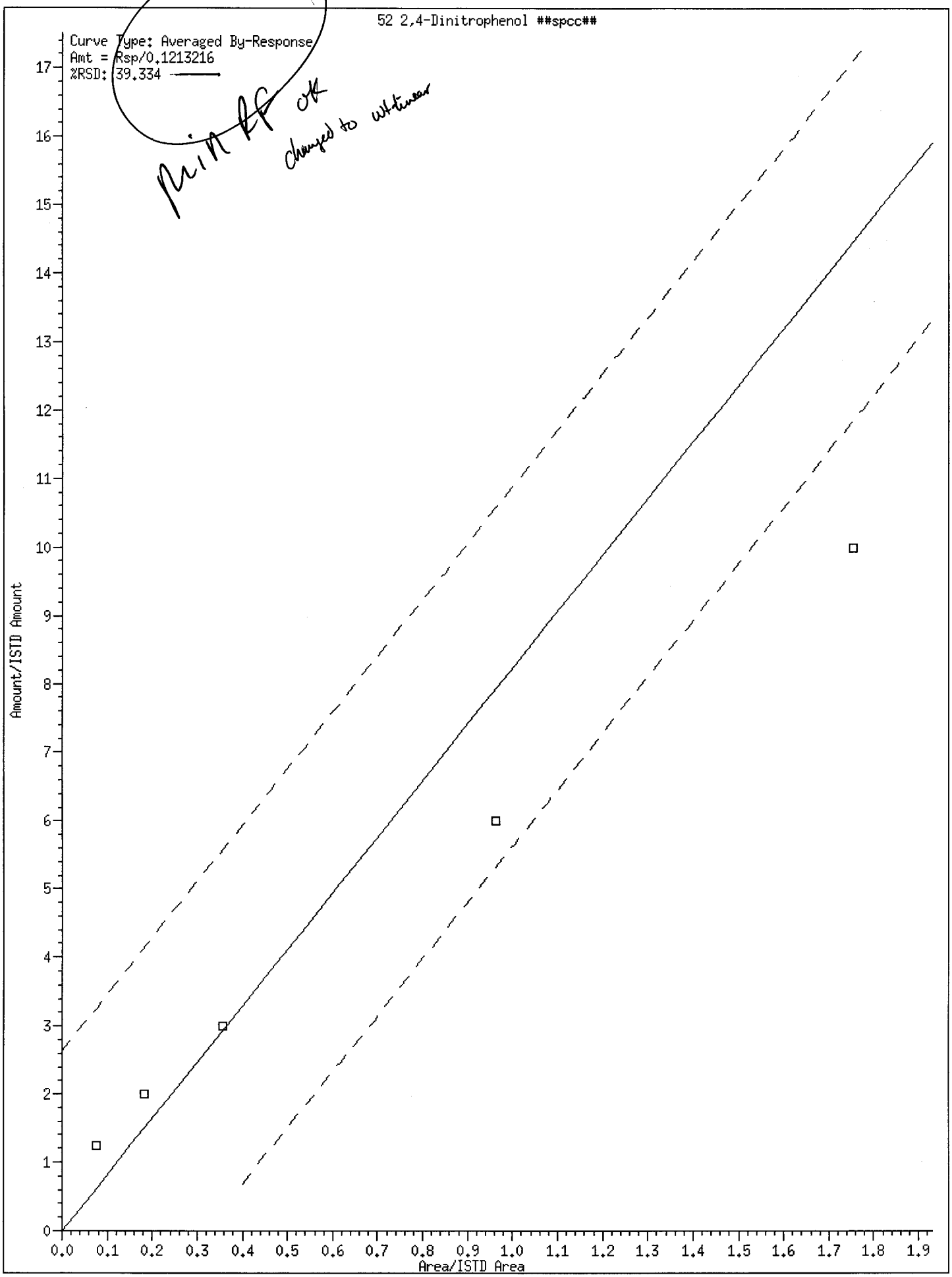
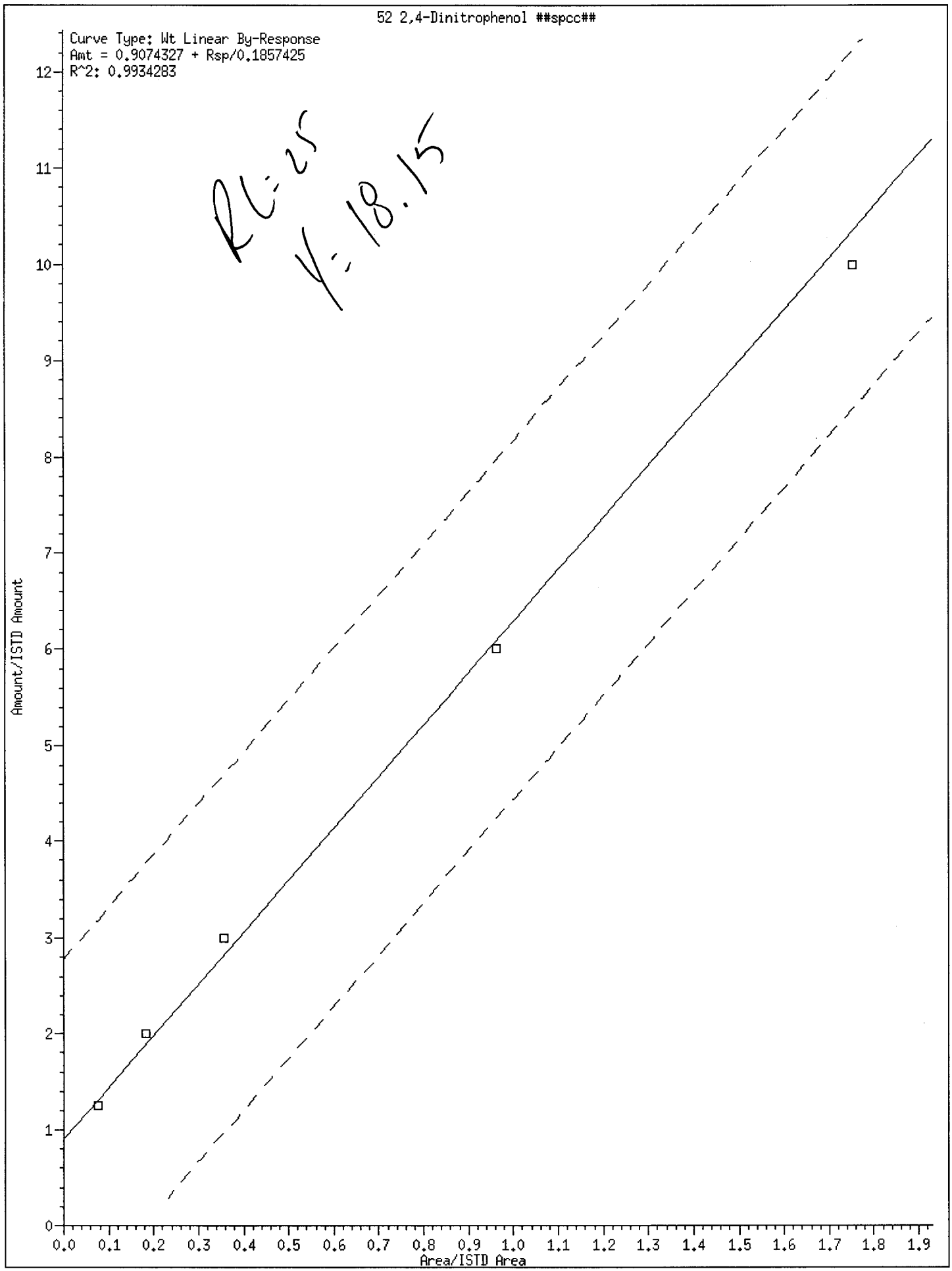
Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/gcms/md.i/D110703I.b/8270a9.m
Cal Date : 11-Nov-2003 16:42 wilesd

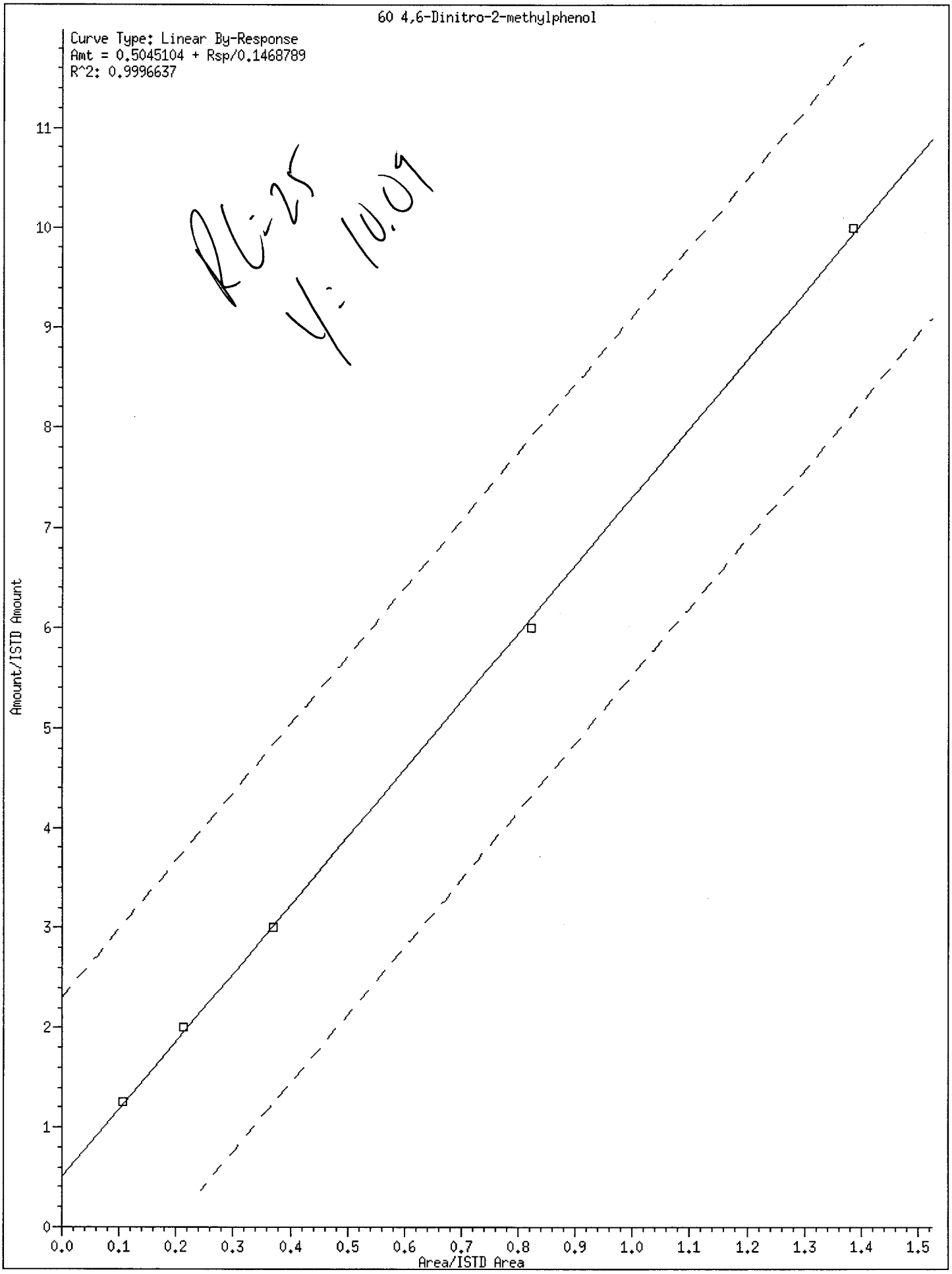
Curve	Formula	Units
Averaged	Amt = Rsp/ml	Response
Linear	Amt = b + Rsp/ml	Response
Wt Linear	Amt = b + Rsp/ml	Response

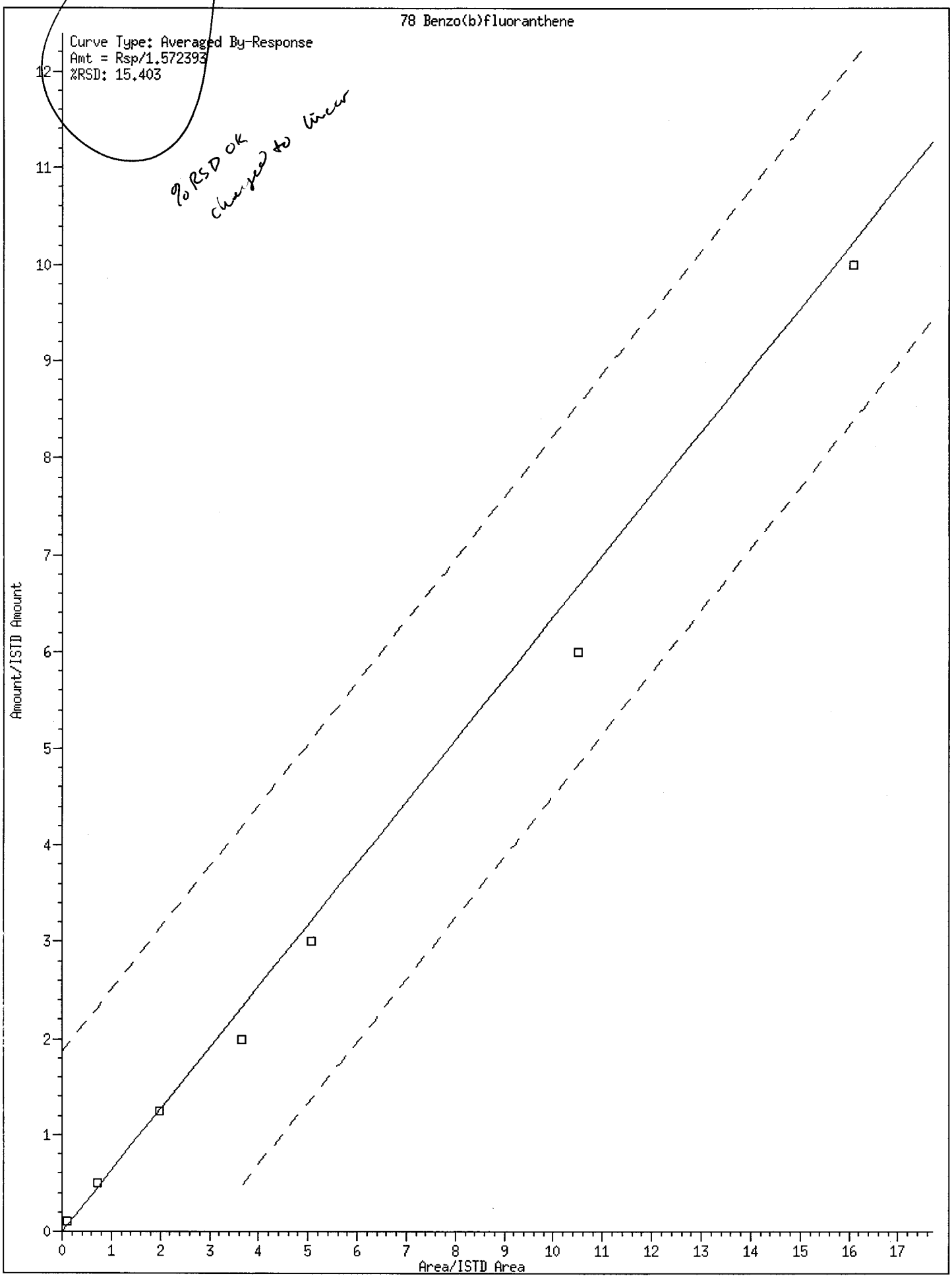

34 Benzoic acid
Curve Type: Linear By-Response
Amt = 0.5013995 + Rsp/0.2107661
R^2: 0.9984863
RL = 50
y = ~~0.84~~ 10.03
TW 11-11-03
Amount/ISTD Amount
Area/ISTD Area
0
1
2
3
4
5
6
7
8
9
10
11
12
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
2.2

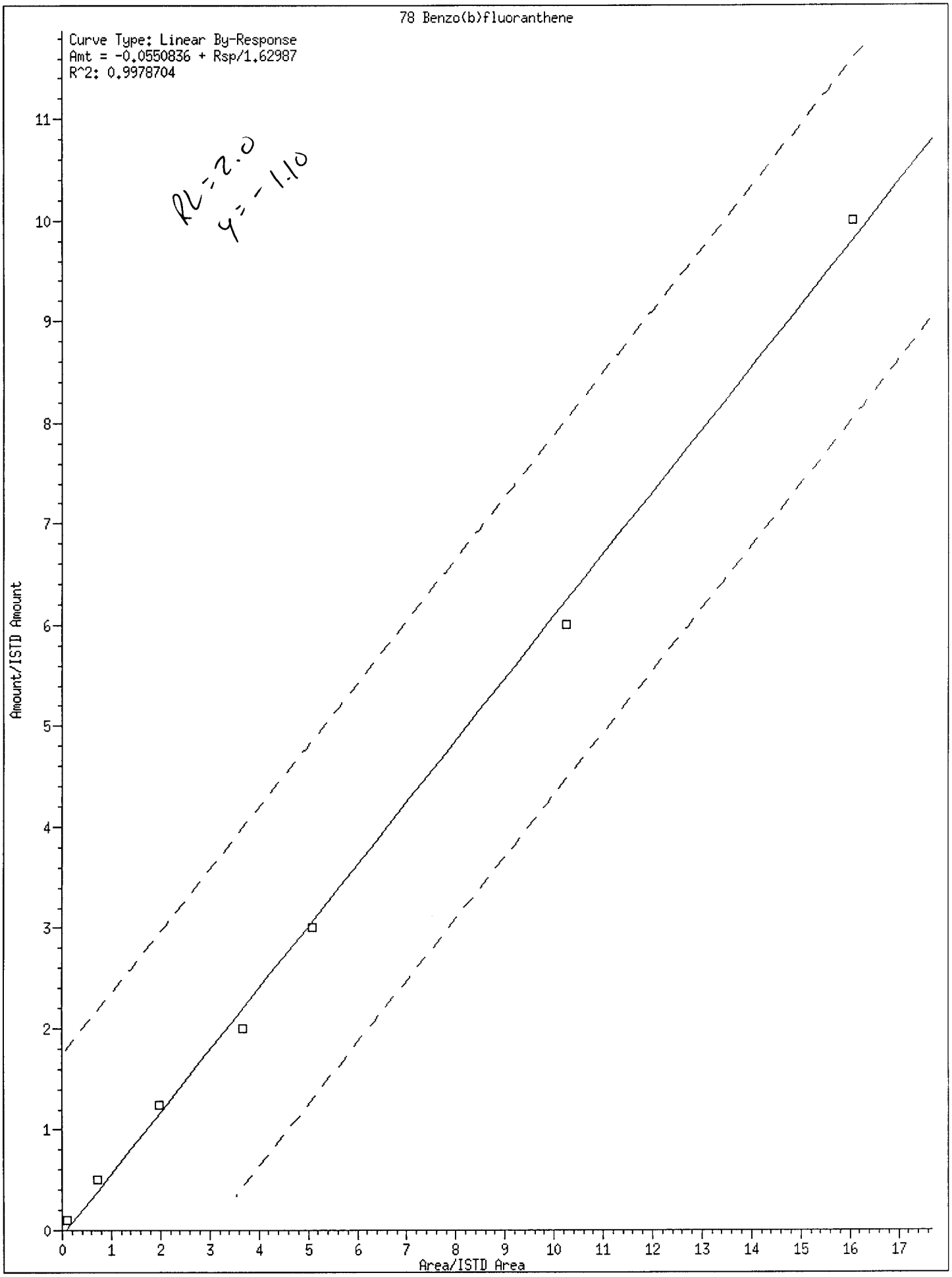


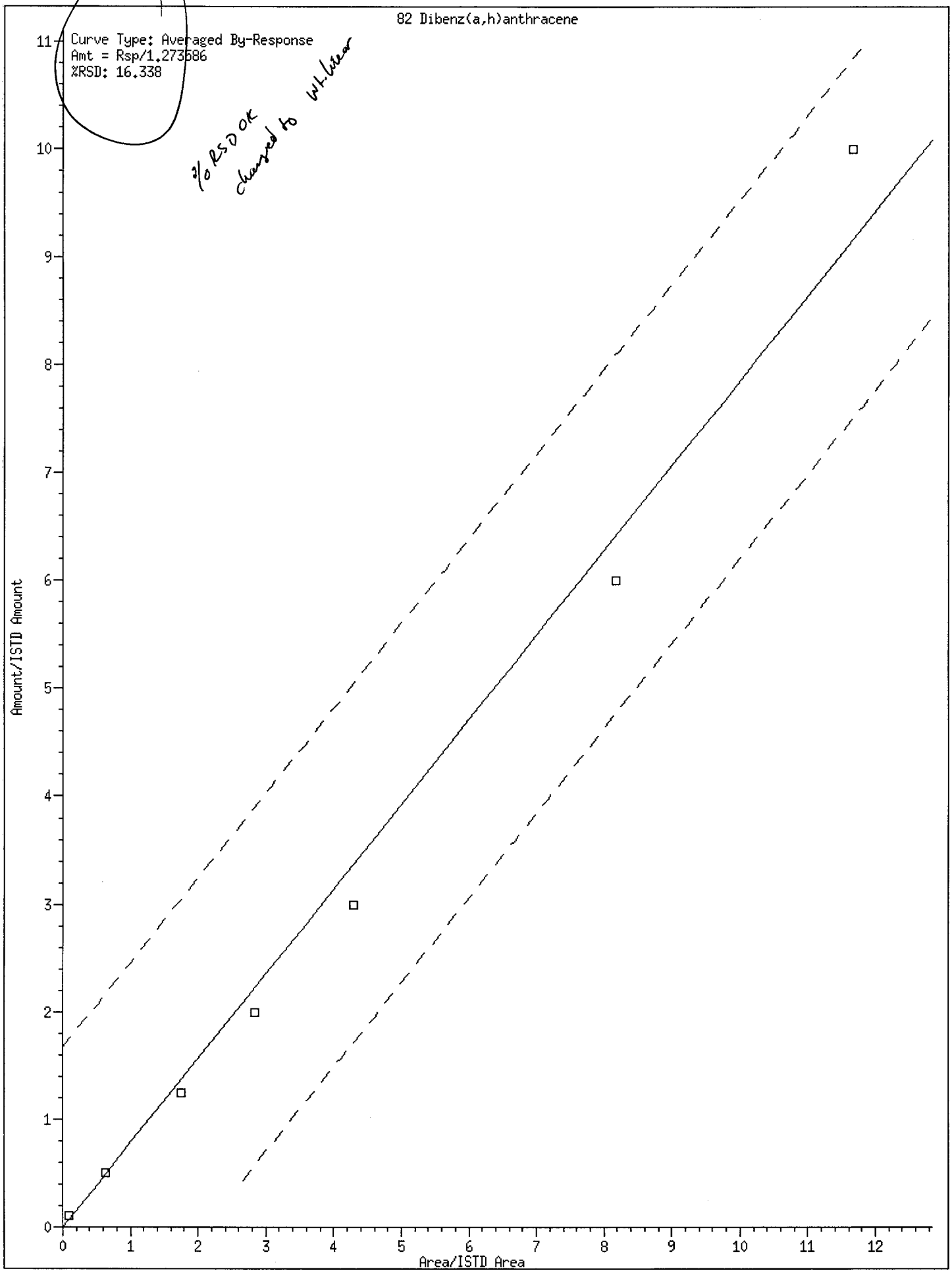
PrintRF ok
changed to wtlinear

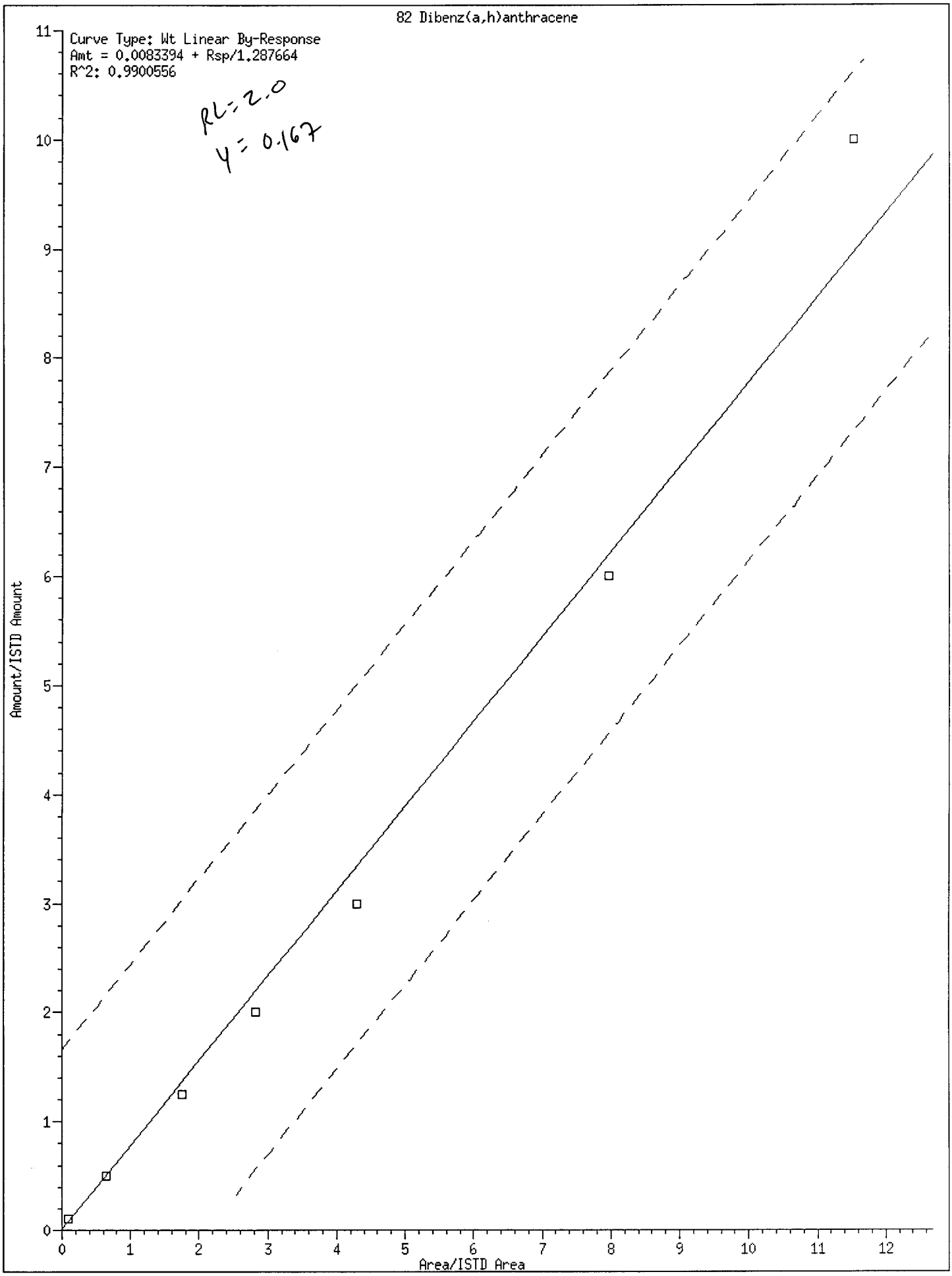

52 2,4-Dinitrophenol ##spcc##
Curve Type: Wt Linear By-Response
Amt = 0.9074327 + Rsp/0.1857425
R^2: 0.9934283
RL: 25
Y: 18.15
Amount/ISTD Amount
Area/ISTD Area
0
1
2
3
4
5
6
7
8
9
10
11
12
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
1.1
1.2
1.3
1.4
1.5
1.6
1.7
1.8
1.9

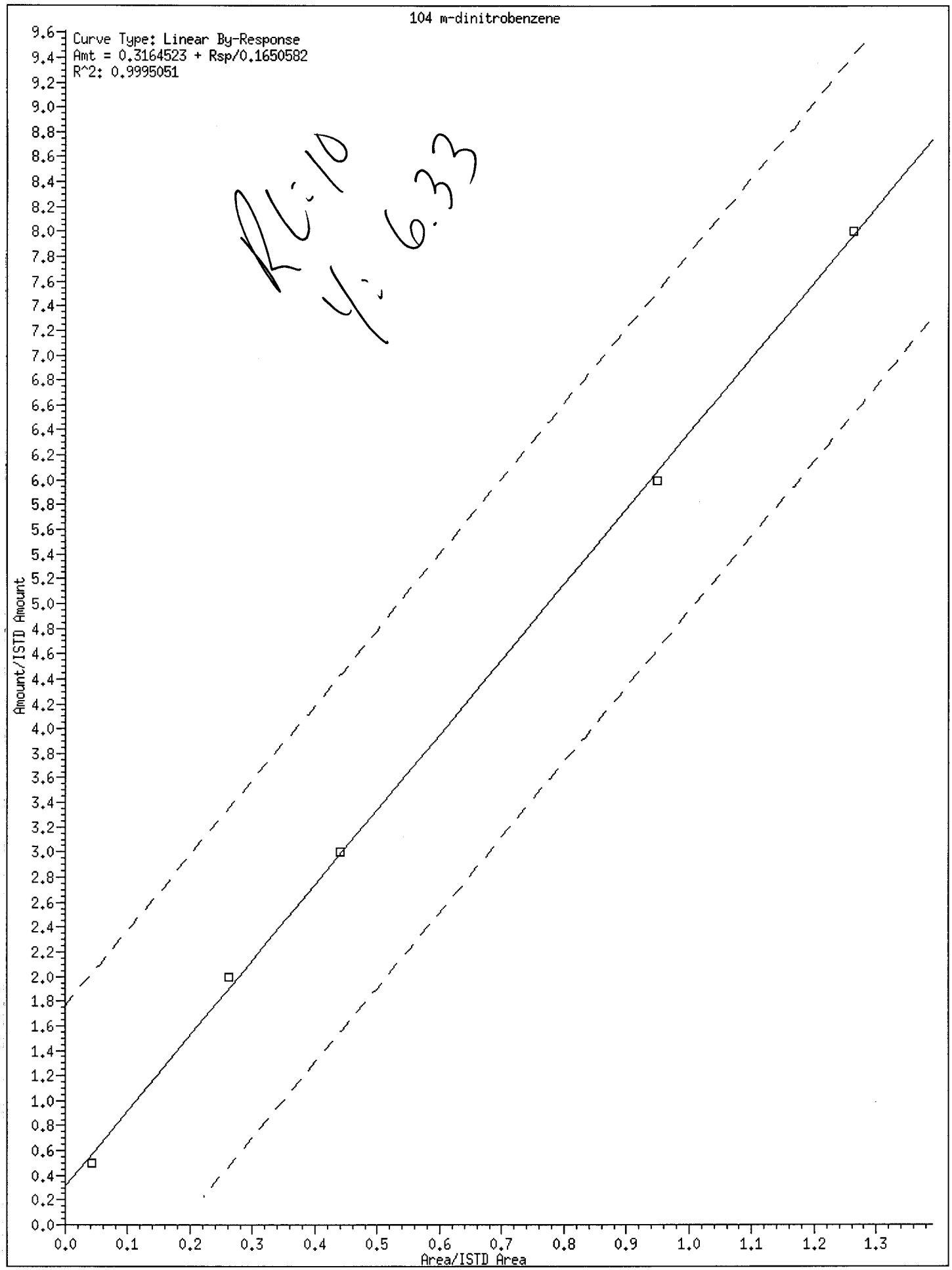

60 4,6-Dinitro-2-methylphenol
Curve Type: Linear By-Response
Amt = 0.5045104 + Rsp/0.1468789
R^2: 0.9996637
RL-25
Y: 10.09
Amount/ISTD Amount
Area/ISTD Area
0
1
2
3
4
5
6
7
8
9
10
11
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
1.1
1.2
1.3
1.4
1.5

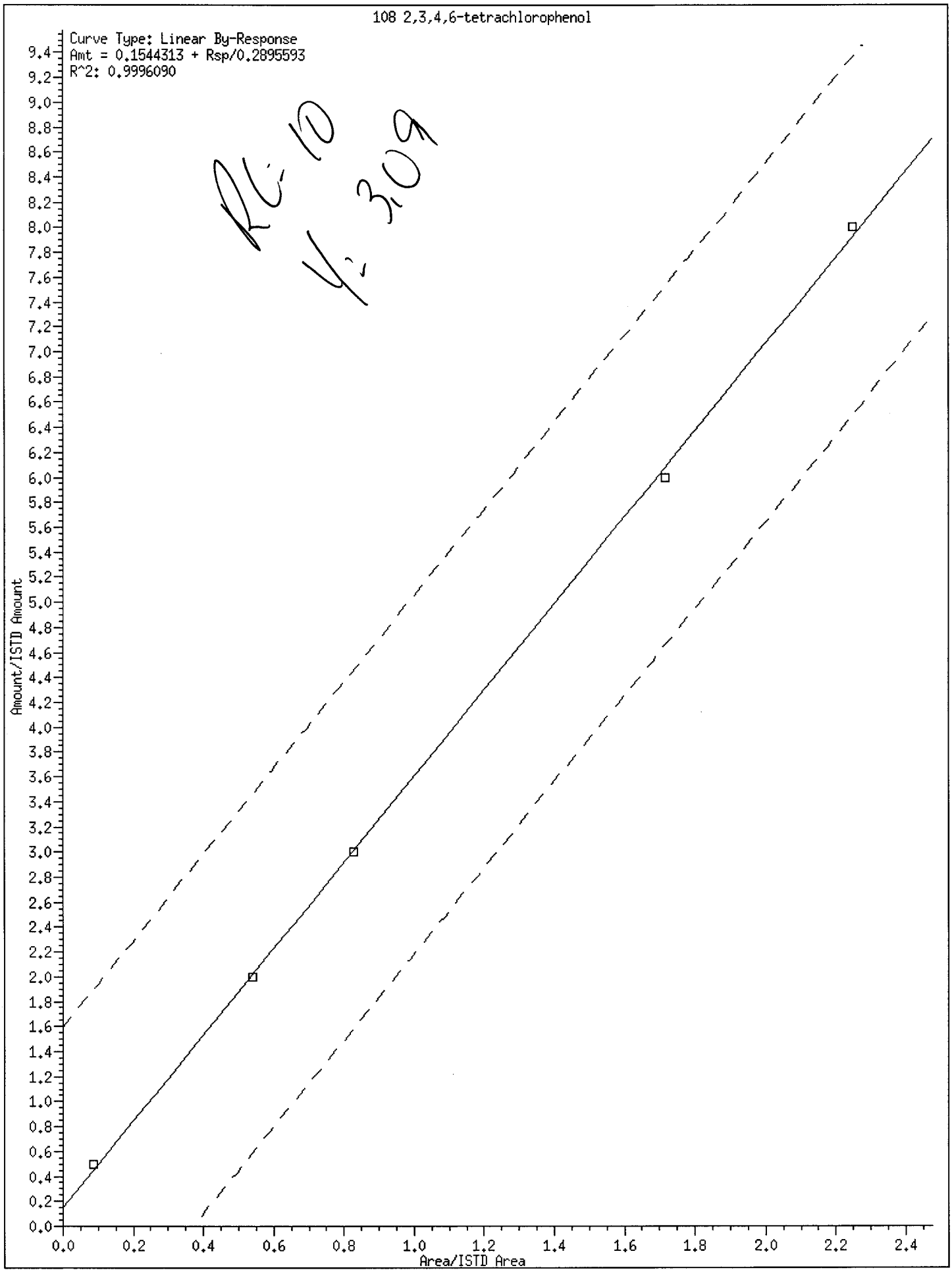

78 Benzo(b)fluoranthene
Curve Type: Averaged By-Response
Amt = Rsp/1.572393
%RSD: 15.403
%RSD ok
changed to linear
Amount/ISTD Amount
Area/ISTD Area
0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17

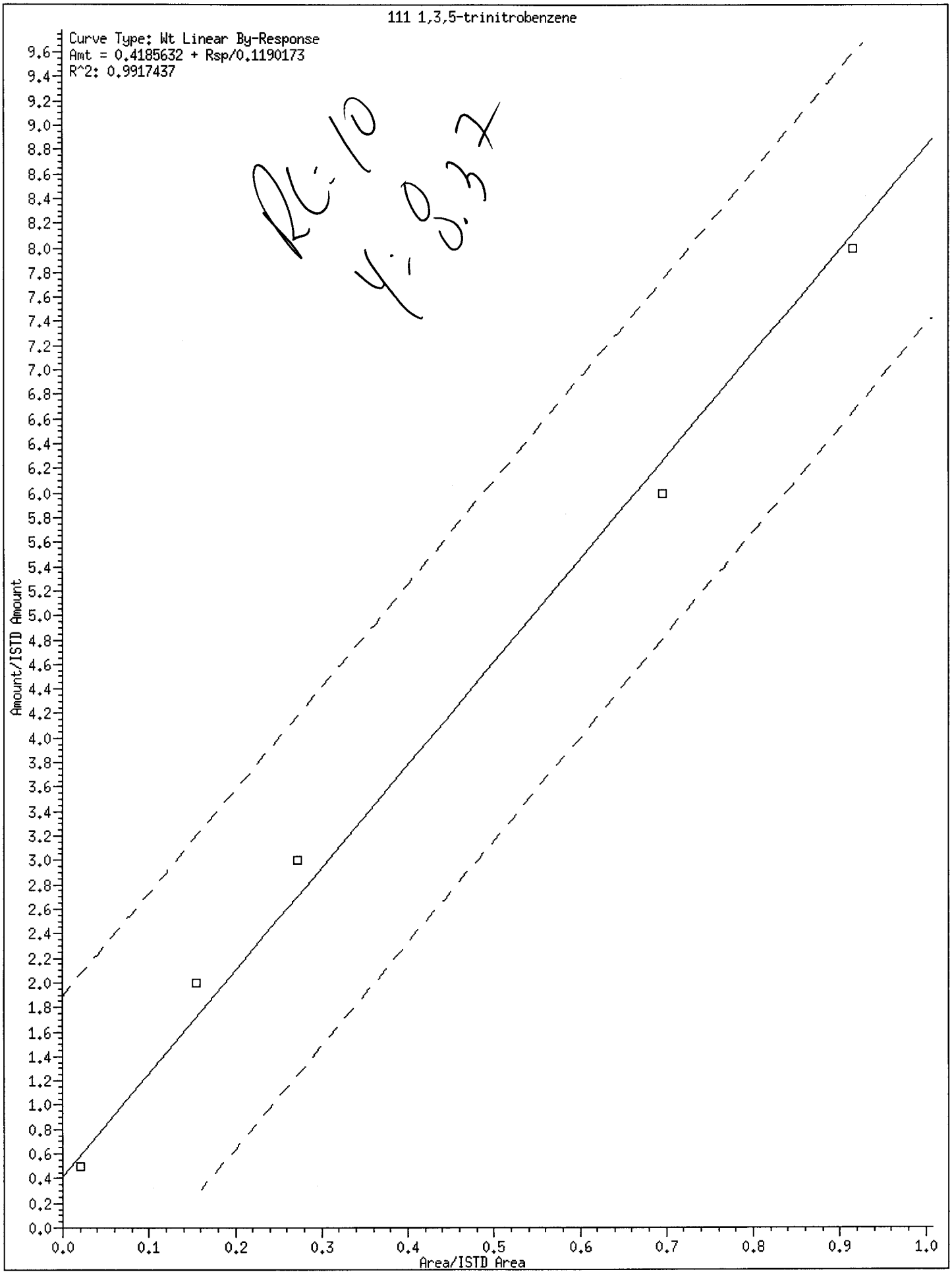

78 Benzo(b)fluoranthene
Curve Type: Linear By-Response
Amt = -0.0550836 + Rsp/1.62987
R^2: 0.9978704
RL=2.0
Y=-1.10
Amount/ISTD Amount
Area/ISTD Area
0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17

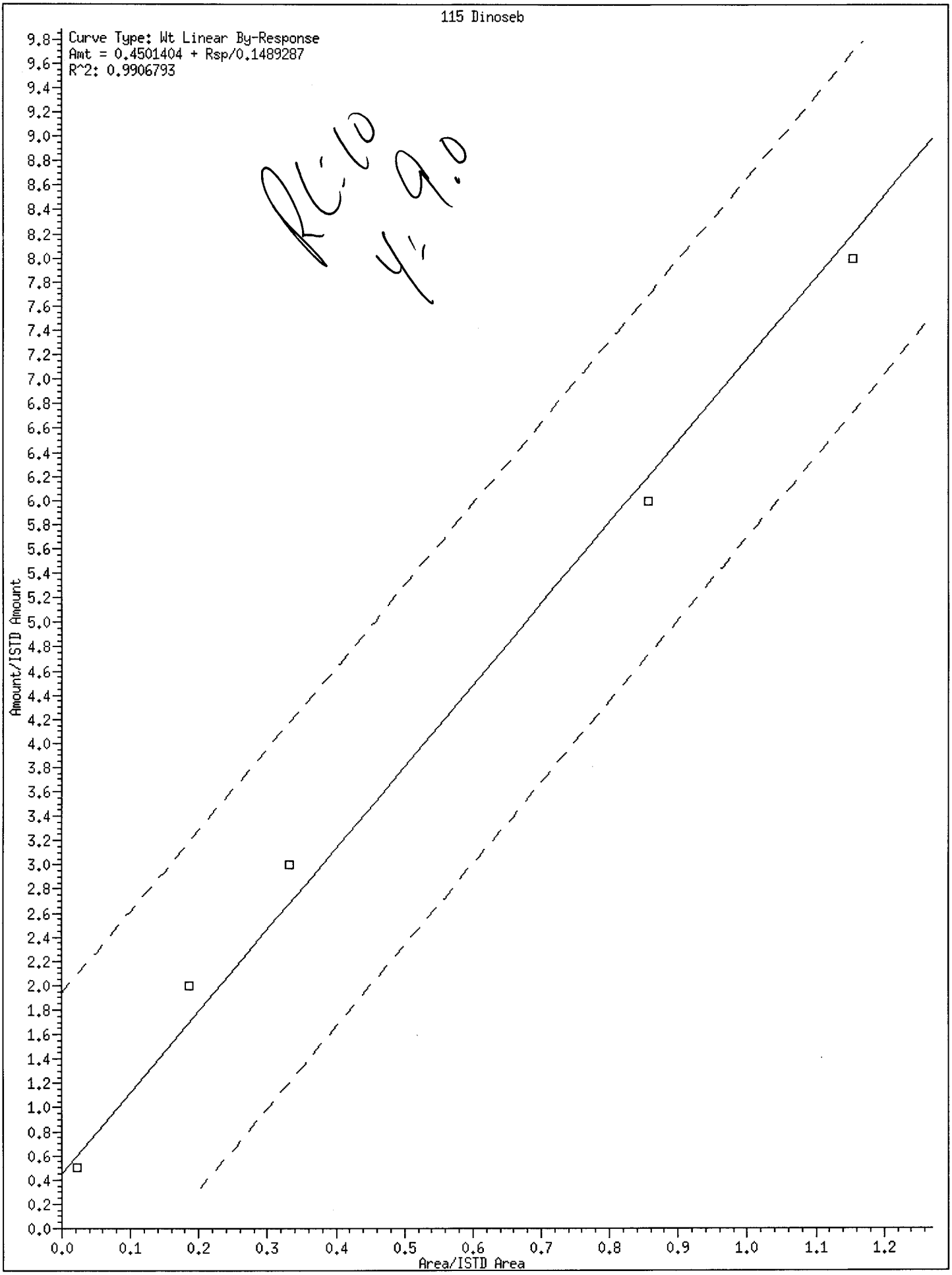

82 Dibenz(a,h)anthracene
Curve Type: Averaged By-Response
Amt = Rsp/1.273686
%RSD: 16.338
% RSD OK
changed to Wt. linear
Amount/ISTD Amount
Area/ISTD Area
0
1
2
3
4
5
6
7
8
9
10
11
12

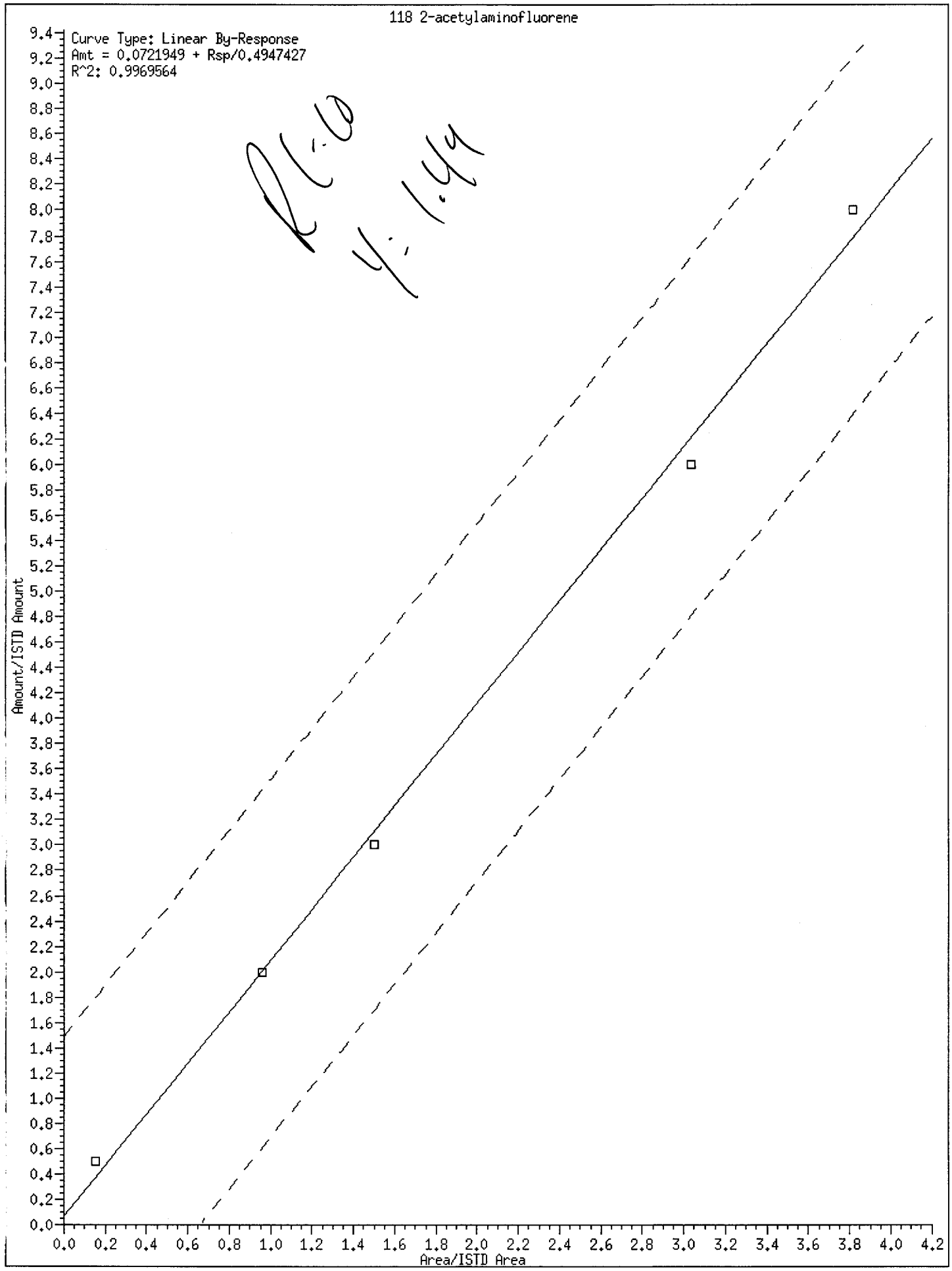

82 Dibenz(a,h)anthracene
Curve Type: Wt Linear By-Response
Amt = 0.0083394 + Rsp/1.287664
R^2: 0.9900556
RL=2.0
y=0.167
Amount/ISTD Amount
Area/ISTD Area
0
1
2
3
4
5
6
7
8
9
10
11
12


104 m-dinitrobenzene
Curve Type: Linear By-Response
Amt = 0.3164523 + Rsp/0.1650582
R^2: 0.9995051
Amount/ISTD Amount
Area/ISTD Area
RL: 10
Y: 6.33


108 2,3,4,6-tetrachlorophenol
Curve Type: Linear By-Response
Amt = 0.1544313 + Rsp/0.2895593
R^2: 0.9996090
RT: 10
Y: 309
Amount/ISTD Amount
Area/ISTD Area


111 1,3,5-trinitrobenzene
Curve Type: Wt Linear By-Response
Amt = 0.4185632 + Rsp/0.1190173
R^2: 0.9917437
Amount/ISTD Amount
Area/ISTD Area
RL: 10
Y: 0.37


115 Dinoseb
Curve Type: Wt Linear By-Response
Amt = 0.4501404 + Rsp/0.1489287
R^2: 0.9906793
Amount/ISTD Amount
Area/ISTD Area
RC 10
4.0


118 2-acetylaminofluorene
Curve Type: Linear By-Response
Amt = 0.0721949 + Rsp/0.4947427
R^2: 0.9969564
Amount/ISTD Amount
Area/ISTD Area

Report Date: 11/09/2003 16:16 AVG_RSD.mac Rev 1.0 Page: 1

STL INITIAL CALIBRATION AVERAGE %RSD REPORT

Start Cal Date: 07-NOV-2003 09:52
End Cal Date : 07-NOV-2003 14:37
Quant Method : ISTD
Integrator : HP RTE
Method File : /var/chem/gcms/md.i/D110703I.b/8270a9.m

Calibration File Names:
Level 1: /var/chem/gcms/md.i/D110703I.b/a9dk071.d
Level 2: /var/chem/gcms/md.i/D110703I.b/icdk072.d
Level 3: /var/chem/gcms/md.i/D110703I.b/a9dk073.d
Level 4: /var/chem/gcms/md.i/D110703I.b/a9dk074.d
Level 5: /var/chem/gcms/md.i/D110703I.b/a9dk075.d
Level 6: /var/chem/gcms/md.i/D110703I.b/a9dk076.d
Level 7: /var/chem/gcms/md.i/D110703I.b/icdk077.d
Level 8: /var/chem/gcms/md.i/D110703I.b/icdk078.d

Compound	CType	%RSD
16 Aniline	AVRG	7.89088
15 Phenol (ccc)	AVRG	6.19121
17 Bis(2-chloroethyl)ether	AVRG	6.67119
18 2-Chlorophenol	AVRG	5.79285
19 1,3-Dichlorobenzene	AVRG	7.96070
20 1,4-Dichlorobenzene (ccc)	AVRG	7.74843
13 N-Nitrosodimethylamine	AVRG	5.20225
21 Benzyl alcohol	AVRG	4.89179
22 1,2-Dichlorobenzene	AVRG	8.19391
23 2-Methylphenol	AVRG	5.90162
24 2,2'-Oxybis(1-Chloropropane)	AVRG	5.85551
27 N-Nitroso-di-n-propylamine###	AVRG	4.23834
25 4-Methylphenol	AVRG	6.99094
28 Hexachloroethane	AVRG	6.04526
29 Nitrobenzene	AVRG	3.59489
30 Isophorone	AVRG	3.99650
31 2-Nitrophenol (ccc)	AVRG	10.30909
32 2,4-Dimethyphenol	AVRG	7.93525
33 Bis(2-chloroethoxy)methane	AVRG	5.13585
34 Benzoic acid	AVRG	18.48157
35 2,4-Dichlorophenol (ccc)	AVRG	9.99647
36 1,2,4-Trichlorobenzene	AVRG	5.81473
38 4-Chloroaniline	AVRG	5.43401
39 Hexachlorobutadiene (ccc)	AVRG	5.54266
40 4-Chloro-3-methylphenol (ccc)	AVRG	12.80868
41 2-Methylnaphthalene	AVRG	5.73534
42 Hexachlorocyclopentadiene####	AVRG	13.30874
43 2,4,6-Trichlorophenol (ccc)	AVRG	13.30199
44 2,4,5-Trichlorphenol	AVRG	8.27185
45 2-Chloronaphthalene	AVRG	3.25749
46 2-Nitroaniline	AVRG	10.47770
49 2,6-Dinitrotoluene	AVRG	13.46120
50 3-Nitroaniline	AVRG	7.29850
52 2,4-Dinitrophenol ##spcc##	AVRG	39.33397
53 Dibenzofuran	AVRG	7.32828
54 4-Nitrophenol ##spcc##	AVRG	9.62220
55 2,4-Dinitrotoluene	AVRG	13.46120
48 Dimethyl phthalate	AVRG	2.06038
58 Diethyl phthalate	AVRG	3.37779
57 4-Chlorophenyl phenyl ether	AVRG	5.35540
59 4-Nitroaniline	AVRG	5.54329

STL INITIAL CALIBRATION AVERAGE %RSD REPORT

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End Cal Date : 07-NOV-2003 14:37
Quant Method : ISTD
Integrator : HP RTE
Method File : /var/chem/gcms/md.i/D110703I.b/8270a9.m

Compound	CType	%RSD
60 4,6-Dinitro-2-methylphenol	AVRG	19.02899
61 N-Ndpa / diphenylamine (ccc)	AVRG	5.99975
62 1,2-Diphenylhydrazine/azobnz	AVRG	6.98378
63 4-Bromophenyl phenyl ether	AVRG	4.90111
64 Hexachlorobenzene	AVRG	8.29700
65 Pentachlorophenol (ccc)	AVRG	5.41265
69 Di-n-butyl phthalate	AVRG	10.87628
72 Butyl benzyl phthalate	AVRG	5.61277
74 3,3'-Dichlorobenzidine	AVRG	6.93711
37 Naphthalene	AVRG	8.94652
73 Benzo(a)Anthracene	AVRG	6.38687
51 Acenaphthene (ccc)	AVRG	5.83355
81 Indeno(1,2,3-cd)pyrene	AVRG	14.52741
75 Chrysene	AVRG	12.89569
83 Benzo(g,h,i)perylene	AVRG	13.15684
56 Fluorene	AVRG	7.55195
82 Dibenz(a,h)anthracene	AVRG	16.33821
47 Acenaphthylene	AVRG	6.19025
78 Benzo(b)fluoranthene	AVRG	15.40339
79 Benzo(k)fluoranthene	AVRG	14.73517
66 Phenanthrene	AVRG	12.41198
67 Anthracene	AVRG	11.70818
80 Benzo(a)pyrene (ccc)	AVRG	10.88619
85 Benzo(e)pyrene	AVRG	8.30655
70 Fluoranthene (ccc)	AVRG	11.51940
71 Pyrene	AVRG	10.00502
76 Bis(2-ethylhexyl) phthalate	AVRG	15.11802
77 Di-n-octyl phthalate (ccc)	AVRG	12.50746
14 Pyridine	AVRG	6.02760
68 Carbazole	AVRG	11.91219
84 Benzidine	AVRG	8.94273
26 3&4 Methylphenol	AVRG	6.99094
91 acetophenone	AVRG	6.15390
92 m-cresol	AVRG	7.37254
93 n-nitrosopyrrolidine	AVRG	6.65864
94 n-nitrosomorpholine	AVRG	3.37491
95 o-toluidine	AVRG	3.55882
96 n-nitrosopiperidine	AVRG	4.36212
97 2,6-dichlorophenol	AVRG	13.28779
98 hexachloropropene	AVRG	5.24209
101 1,2,4,5-tetrachlorobenzene	AVRG	3.26356
102 safrole	AVRG	6.83412
103 1-chloronaphthalene	AVRG	6.52649
104 m-dinitrobenzene	AVRG	22.90381
105 pentachlorobenzene	AVRG	5.51819
106 1-naphthylamine	AVRG	5.78197
107 2-naphthylamine	AVRG	8.88591
108 2,3,4,6-tetrachlorophenol	AVRG	17.89377
109 5-nitro-o-toluidine	AVRG	11.54339
110 diphenylamine	AVRG	7.10433
111 1,3,5-trinitrobenzene	AVRG	35.43179

Report Date: 11/09/2003 16:16 AVG_RSD.mac Rev 1.0 Page: 3

STL INITIAL CALIBRATION AVERAGE %RSD REPORT

Start Cal Date: 07-NOV-2003 09:52
End Cal Date : 07-NOV-2003 14:37
Quant Method : ISTD
Integrator : HP RTE
Method File : /var/chem/gcms/md.i/D110703I.b/8270a9.m

Compound	CType	%RSD
112 phenacetin	AVRG	7.47249
114 pentachloronitrobenzene	AVRG	4.13458
120 3-methylcholanthrene	AVRG	9.97521
86 N-nitrosomethylethylamine	AVRG	2.38974
87 Methyl methanosulfonate	AVRG	2.53347
88 N-nitrosodiethylamine	AVRG	3.52080
89 Ethyl methanosulfonate	AVRG	2.80388
90 Pentachloroethane	AVRG	5.53433
99 N-nitro-di-n-butylamine	AVRG	6.87156
100 Isosafrole	AVRG	5.76750
113 4-aminobiphenyl	AVRG	5.82040
115 Dinoseb	AVRG	38.76392
116 p-(dimethylamino)azobenzene	AVRG	7.14369
117 o-tolidine	AVRG	8.51133
118 2-acetylaminofluorene	AVRG	18.70782
119 7,12-dimethylbenz(a)anthracen	AVRG	5.87092
175 1,4-Dioxane	AVRG	4.68673
176 2-Picoline	AVRG	5.28332
177 Methapyrilene HCL	AVRG	7.19319
178 N-Nitroquinoline-n-oxide	AVRG	23.89017
7 2-Fluorophenol	AVRG	5.82725
8 Phenol-d5	AVRG	5.12785
11 2,4,6-Tribromophenol	AVRG	7.68598
10 2-Fluorobiphenyl	AVRG	2.44581
9 Nitrobenzene-d5	AVRG	3.77405
12 Terphenyl-d14	AVRG	8.67552
172 13C3-1,2,3-naphthalene	AVRG	8.43594
173 Pyridine-d5	AVRG	4.03230

Reported as AVERAGE.

Number of Compounds	120
Number of Averaged Compounds	120
Total Average RSD	8.890

OK
11/9/03 H

Data File: /var/chem/gcms/md.i/D110703I.b/icdk077.d
Report Date: 11-Nov-2003 16:50

STL Knoxville

SW-846 Method 8270C

Data file : /var/chem/gcms/md.i/D110703I.b/icdk077.d
Lab Smp Id: ICDK077 Client Smp ID: VSTD002
Inj Date : 07-NOV-2003 12:14
Operator : 7126 Inst ID: md.i
Smp Info : ICDK077,,1,7,,VSTD002,
Misc Info : D110703I,8270a9,low.sub
Comment : Semivolatile Organic Compounds by GC/MS
Method : /var/chem/gcms/md.i/D110703I.b/8270a9.m
Meth Date : 11-Nov-2003 16:49 wilesd Quant Type: ISTD
Cal Date : 07-NOV-2003 12:14 Cal File: icdk077.d
Als bottle: 2 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: low.sub
Target Version: 3.50

Concentration Formula: Amt * DF * (Vt*Sf)/(Vo*Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Sf	1.00000	Prep split factor
Vo	1.00000	Volume of sample extracted (1=total samp
Uf	1000.00000	unit correction factor

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)
* 1 1,4-Dichlorobenzene-d4	152	4.364	4.364	(1.000)	111480	20.0000	
* 2 Naphthalene-d8	136	6.003	6.003	(1.000)	396891	20.0000	
* 3 Acenaphthene-d10	164	8.641	8.641	(1.000)	224155	20.0000	
* 4 Phenanthrene-d10	188	10.110	10.116	(1.000)	404680	20.0000	
* 5 Chrysene-d12	240	12.219	12.219	(1.000)	409220	20.0000	
* 6 Perylene-d12	264	13.477	13.477	(1.000)	285600	20.0000	
$ 7 2-Fluorophenol	112	3.195	3.195	(0.732)	13350	2.00000	1.79
$ 8 Phenol-d5	99	4.029	4.041	(0.923)	12125	2.00000	1.49
$ 9 Nitrobenzene-d5	82	5.057	5.064	(0.842)	10141	2.00000	1.66
$ 10 2-Fluorobiphenyl	172	7.742	7.755	(0.896)	26754	2.00000	1.78
$ 11 2,4,6-Tribromophenol	330	9.499	9.506	(0.940)	2002	2.00000	1.07
$ 12 Terphenyl-d14	244	11.379	11.386	(0.931)	33549	2.00000	1.92
$ 173 Pyridine-d5	84	2.213	2.213	(0.507)	1171419	160.000	157(A)
175 1,4-Dioxane	88	1.990	1.990	(0.456)	415481	160.000	169(A)

Data File: /var/chem/gcms/md.i/D110703I.b/icdk077.d
Report Date: 11-Nov-2003 16:50

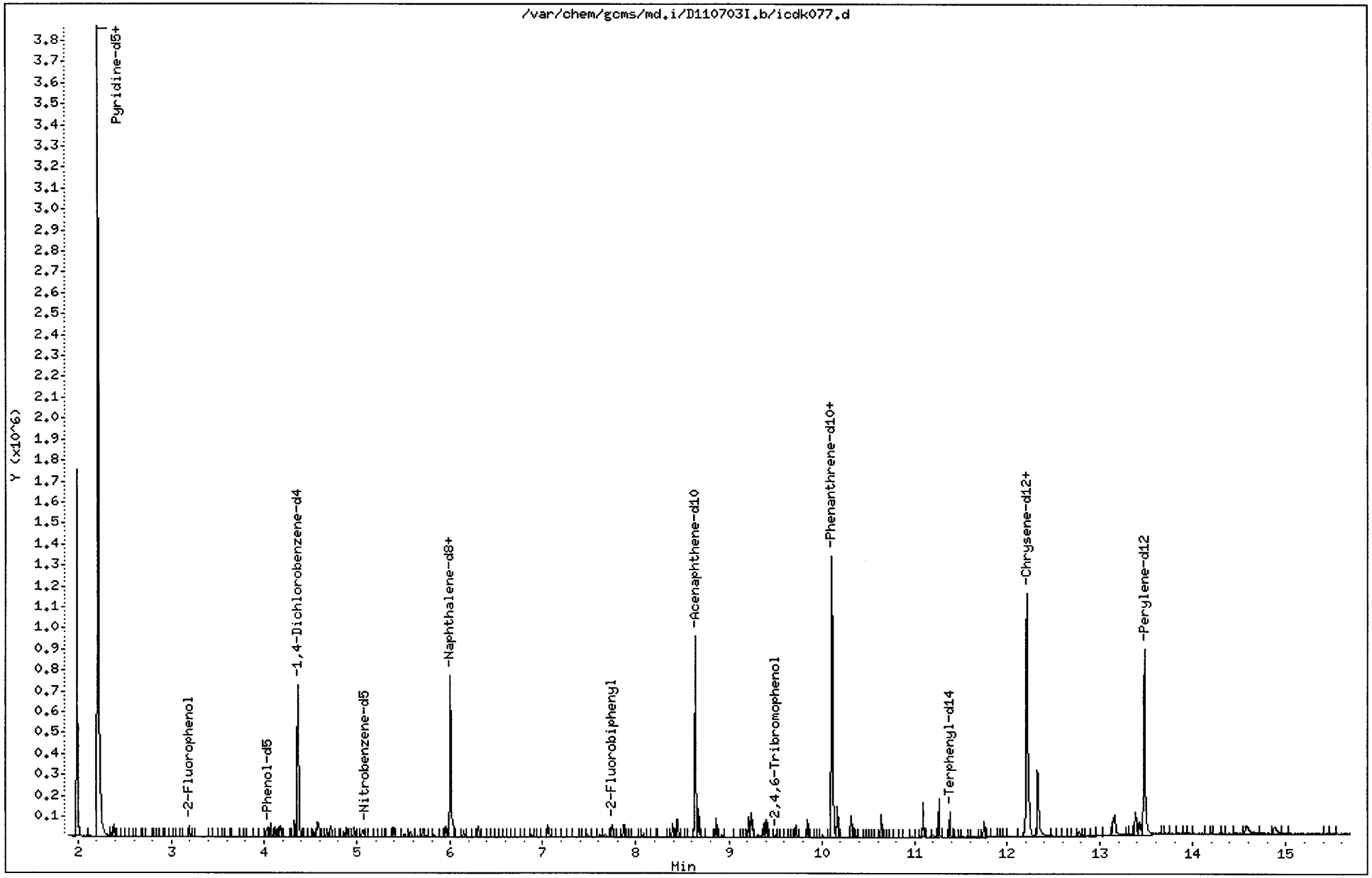
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)
14 Pyridine	79	2.231	2.226	(0.511)	15677	2.00000	2.20
37 Naphthalene	128	6.032	6.039	(1.005)	46504	2.00000	2.10
47 Acenaphthylene	152	8.447	8.454	(0.978)	43037	2.00000	1.80
51 Acenaphthene (ccc)	153	8.676	8.683	(1.004)	31974	2.00000	2.10
56 Fluorene	166	9.235	9.247	(1.069)	32962	2.00000	1.97
66 Phenanthrene	178	10.128	10.140	(1.002)	56528	2.00000	2.16
67 Anthracene	178	10.169	10.175	(1.006)	51506	2.00000	1.98
70 Fluoranthene (ccc)	202	11.091	11.098	(1.097)	54706	2.00000	1.99
71 Pyrene	202	11.262	11.268	(0.922)	58575	2.00000	2.03
73 Benzo(a)Anthracene	228	12.202	12.214	(0.999)	45753	2.00000	1.88
75 Chrysene	228	12.243	12.255	(1.002)	54070	2.00000	2.23
76 Bis(2-ethylhexyl) phthalate	149	12.243	12.244	(1.002)	20305	2.00000	1.40
78 Benzo(b)fluoranthene	252	13.142	13.154	(0.975)	31656	2.00000	2.06
79 Benzo(k)fluoranthene	252	13.159	13.178	(0.976)	63741	2.00000	2.16
85 Benzo(e)pyrene	252	13.383	13.383	(0.993)	48520	2.00000	2.26
80 Benzo(a)pyrene (ccc)	252	13.424	13.442	(0.996)	39595	2.00000	1.65
82 Dibenz(a,h)anthracene	278	14.587	14.606	(1.082)	24331	2.00000	1.88
81 Indeno(1,2,3-cd)pyrene	276	14.575	14.600	(1.082)	31606	2.00000	1.35
83 Benzo(g,h,i)perylene	276	14.881	14.911	(1.104)	28986	2.00000	1.43

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.

Data File: /var/chem/gcms/md.i/D110703I.b/icdk077.d
Date : 07-NOV-2003 12:14
Client ID: VSTD002
Sample Info: ICDK077,,1,7,,VSTD002,
Volume Injected (uL): 1.0
Column phase: ZB-5

Instrument: md.i
Operator: 7126
Column diameter: 0.25



Data File: /var/chem/gcms/md.i/D110703I.b/icdk071.d
Report Date: 11-Nov-2003 16:50

STL Knoxville

SW-846 Method 8270C

Data file : /var/chem/gcms/md.i/D110703I.b/icdk071.d
Lab Smp Id: ICDK071 Client Smp ID: VSTD010
Inj Date : 07-NOV-2003 11:50
Operator : 7126 Inst ID: md.i
Smp Info : ICDK071,,1,1,,VSTD010,
Misc Info : D110703I,8270a9,8270dxnC13.sub
Comment : Semivolatile Organic Compounds by GC/MS
Method : /var/chem/gcms/md.i/D110703I.b/8270a9.m
Meth Date : 11-Nov-2003 16:49 wilesd Quant Type: ISTD
Cal Date : 07-NOV-2003 11:50 Cal File: icdk071.d
Als bottle: 8 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8270c13pyr.sub
Target Version: 3.50

Concentration Formula: Amt * DF * (Vt*Sf)/(Vo*Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Sf	1.00000	Prep split factor
Vo	1.00000	Volume of sample extracted (1=total samp
Uf	1000.00000	unit correction factor

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)
* 1 1,4-Dichlorobenzene-d4	152	4.364	4.364	(1.000)	136639	20.0000	
* 2 Naphthalene-d8	136	6.003	6.003	(1.000)	498239	20.0000	
* 3 Acenaphthene-d10	164	8.641	8.641	(1.000)	275012	20.0000	
* 4 Phenanthrene-d10	188	10.110	10.116	(1.000)	483797	20.0000	
* 5 Chrysene-d12	240	12.219	12.219	(1.000)	498676	20.0000	
* 6 Perylene-d12	264	13.477	13.477	(1.000)	356916	20.0000	
$ 7 2-Fluorophenol	112	3.194	3.195	(0.732)	90080	10.0000	9.74
$ 8 Phenol-d5	99	4.029	4.041	(0.923)	94390	10.0000	9.42
$ 9 Nitrobenzene-d5	82	5.057	5.064	(0.842)	71811	10.0000	9.36
$ 10 2-Fluorobiphenyl	172	7.742	7.755	(0.896)	183006	10.0000	9.90
$ 11 2,4,6-Tribromophenol	330	9.499	9.506	(0.940)	19227	10.0000	8.63
$ 12 Terphenyl-d14	244	11.379	11.386	(0.931)	218373	10.0000	10.1
$ 172 13C3-1,2,3-naphthalene	131	6.032	6.039	(1.005)	290274	10.0000	10.6
$ 173 Pyridine-d5	84	2.219	2.213	(0.509)	938714	100.000	102

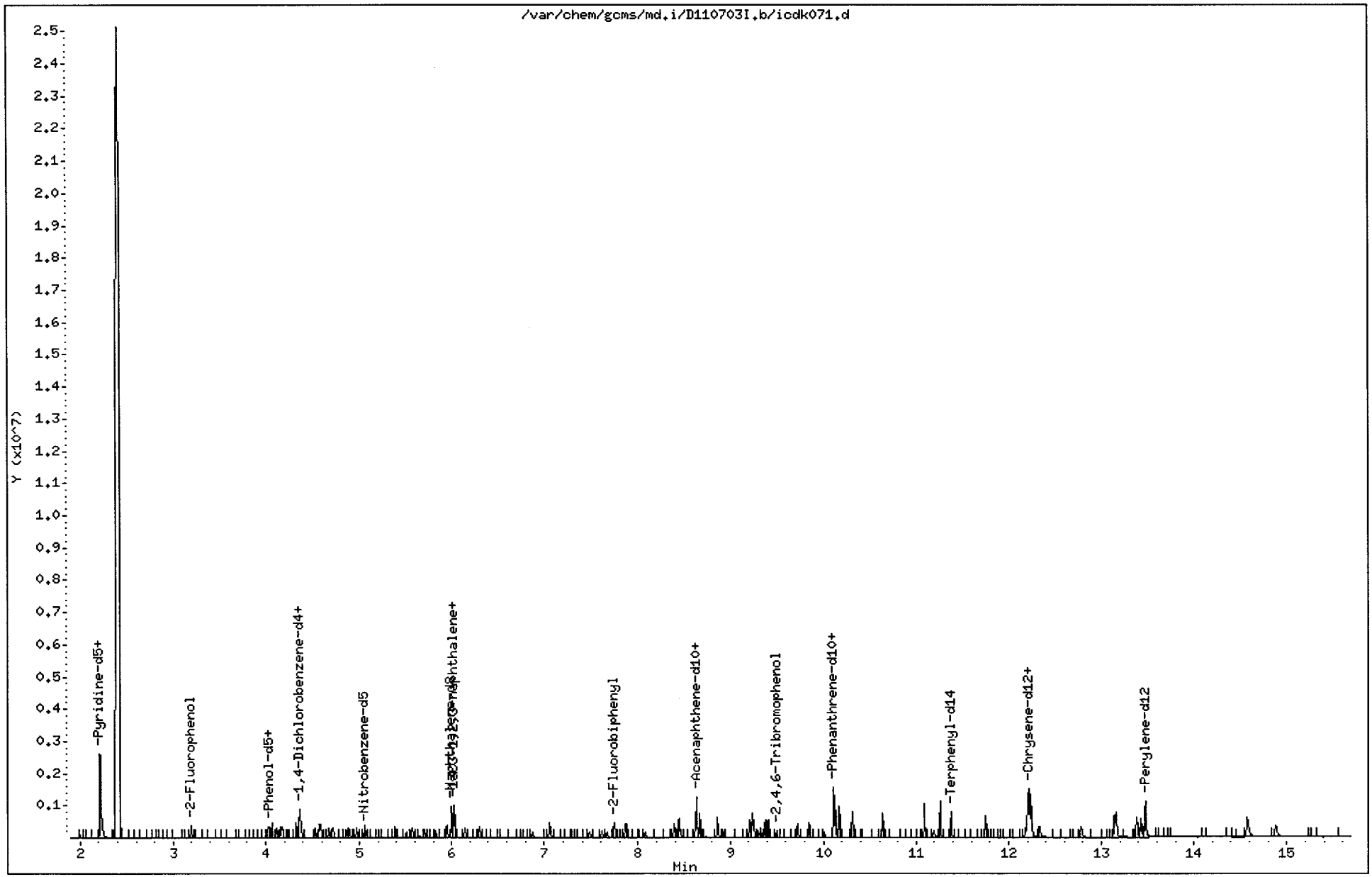
Data File: /var/chem/gcms/md.i/D110703I.b/icdk071.d
Report Date: 11-Nov-2003 16:50

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)
175 1,4-Dioxane	88	1.996	1.990	(0.457)	28908	10.0000	9.87
13 N-Nitrosodimethylamine	74	2.213	2.208	(0.507)	46286	10.0000	10.0
14 Pyridine	79	2.231	2.226	(0.511)	89499	10.0000	10.4
15 Phenol (ccc)	94	4.040	4.053	(0.926)	88172	10.0000	9.32
16 Aniline	93	4.070	4.077	(0.933)	149234	10.0000	10.0
17 Bis(2-chloroethyl)ether	93	4.123	4.135	(0.945)	80168	10.0000	10.1
18 2-Chlorophenol	128	4.181	4.188	(0.958)	88261	10.0000	9.64
19 1,3-Dichlorobenzene	146	4.328	4.335	(0.992)	106626	10.0000	10.0
20 1,4-Dichlorobenzene (ccc)	146	4.381	4.388	(1.004)	107807	10.0000	10.2
21 Benzyl alcohol	108	4.528	4.541	(1.038)	51032	10.0000	9.30
22 1,2-Dichlorobenzene	146	4.593	4.594	(1.052)	103103	10.0000	10.1
23 2-Methylphenol	108	4.681	4.688	(1.073)	70126	10.0000	9.21
24 2,2'-Oxybis(1-Chloropropane)	45	4.716	4.723	(1.081)	151630	10.0000	10.0
25 4-Methylphenol	108	4.857	4.876	(1.113)	68806	10.0000	8.86
26 3&4 Methylphenol	108	4.857	4.876	(1.113)	68806	10.0000	8.86
27 N-Nitroso-di-n-propylamine###	70	4.892	4.905	(1.121)	48422	10.0000	9.45
28 Hexachloroethane	117	4.969	4.975	(1.139)	35587	10.0000	9.78
29 Nitrobenzene	77	5.080	5.093	(0.846)	71898	10.0000	9.82
30 Isophorone	82	5.386	5.399	(0.897)	138775	10.0000	9.51
31 2-Nitrophenol (ccc)	139	5.509	5.516	(0.918)	35091	10.0000	8.30
32 2,4-Dimethyphenol	107	5.568	5.581	(0.928)	67079	10.0000	8.57
33 Bis(2-chloroethoxy)methane	93	5.703	5.716	(0.950)	93521	10.0000	9.82
34 Benzoic acid	122	5.650	5.780	(0.941)	25758	10.0000	16.0
35 2,4-Dichlorophenol (ccc)	162	5.827	5.839	(0.971)	55493	10.0000	8.20
36 1,2,4-Trichlorobenzene	180	5.950	5.957	(0.991)	82609	10.0000	9.97
37 Naphthalene	128	6.032	6.039	(1.005)	292922	10.0000	10.3
38 4-Chloroaniline	127	6.144	6.156	(1.023)	130368	10.0000	9.79
39 Hexachlorobutadiene (ccc)	225	6.303	6.309	(1.050)	43553	10.0000	10.1
40 4-Chloro-3-methylphenol (ccc)	107	6.878	6.885	(1.146)	45624	10.0000	7.73
41 2-Methylnaphthalene	142	7.060	7.067	(1.176)	179444	10.0000	9.84
42 Hexachlorocyclopentadiene####	237	7.478	7.484	(0.865)	31505	10.0000	8.17
43 2,4,6-Trichlorophenol (ccc)	196	7.613	7.619	(0.881)	35105	10.0000	8.02
44 2,4,5-Trichlorphenol	196	7.672	7.678	(0.888)	45297	10.0000	8.71
45 2-Chloronaphthalene	162	7.871	7.878	(0.911)	159906	10.0000	9.54
46 2-Nitroaniline	65	8.083	8.095	(0.935)	36553	10.0000	8.26
47 Acenaphthylene	152	8.447	8.454	(0.978)	289760	10.0000	9.63
48 Dimethyl phthalate	163	8.394	8.407	(0.971)	179013	10.0000	9.75
49 2,6-Dinitrotoluene	165	8.465	8.477	(0.980)	29690	10.0000	7.96
50 3-Nitroaniline	138	8.623	8.642	(0.998)	51059	10.0000	8.82
51 Acenaphthene (ccc)	153	8.676	8.683	(1.004)	187764	10.0000	10.0
52 2,4-Dinitrophenol ##spcc##	184	8.747	8.759	(1.012)	3807	10.0000	17.5
53 Dibenzofuran	168	8.864	8.871	(1.026)	237495	10.0000	9.86
54 4-Nitrophenol ##spcc##	109	8.858	8.865	(1.025)	9503	10.0000	5.06
55 2,4-Dinitrotoluene	165	8.923	8.936	(1.033)	39751	10.0000	7.84
56 Fluorene	166	9.234	9.247	(1.069)	210238	10.0000	10.0
57 4-Chlorophenyl phenyl ether	204	9.252	9.259	(1.071)	88727	10.0000	9.98
58 Diethyl phthalate	149	9.211	9.224	(1.066)	185638	10.0000	10.0

Data File: /var/chem/gcms/md.i/D110703I.b/icdk071.d
Report Date: 11-Nov-2003 16:50

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)
59 4-Nitroaniline	138	9.305	9.329	(1.077)	57095	10.0000	9.07
60 4,6-Dinitro-2-methylphenol	198	9.346	9.365	(0.924)	13124	10.0000	14.8
61 N-Ndpa / diphenylamine (ccc)	169	9.381	9.394	(0.928)	129518	10.0000	9.98
62 1,2-Diphenylhydrazine/azobnz	77	9.411	9.417	(0.931)	177223	10.0000	9.90
63 4-Bromophenyl phenyl ether	248	9.722	9.729	(0.962)	43501	10.0000	9.79
64 Hexachlorobenzene	284	9.851	9.858	(0.974)	54878	10.0000	10.2
65 Pentachlorophenol (ccc)	266	10.010	10.017	(0.990)	21422	10.0000	6.84
66 Phenanthrene	178	10.128	10.140	(1.002)	323101	10.0000	10.2
67 Anthracene	178	10.169	10.175	(1.006)	329618	10.0000	10.2
68 Carbazole	167	10.310	10.322	(1.020)	326542	10.0000	10.1
69 Di-n-butyl phthalate	149	10.639	10.645	(1.052)	303696	10.0000	9.63
70 Fluoranthene (ccc)	202	11.091	11.098	(1.097)	342321	10.0000	10.1
71 Pyrene	202	11.261	11.268	(0.922)	365219	10.0000	10.2
72 Butyl benzyl phthalate	149	11.755	11.756	(0.962)	141111	10.0000	9.30
73 Benzo(a)Anthracene	228	12.202	12.214	(0.999)	298342	10.0000	9.83
74 3,3'-Dichlorobenzidine	252	12.184	12.185	(0.997)	94701	10.0000	8.93
75 Chrysene	228	12.243	12.255	(1.002)	311481	10.0000	10.5
76 Bis(2-ethylhexyl) phthalate	149	12.243	12.244	(1.002)	178698	10.0000	9.42
77 Di-n-octyl phthalate (ccc)	149	12.783	12.784	(0.949)	247581	10.0000	7.84
78 Benzo(b)fluoranthene	252	13.142	13.154	(0.975)	254772	10.0000	9.86
79 Benzo(k)fluoranthene	252	13.159	13.178	(0.976)	388895	10.0000	10.3
85 Benzo(e)pyrene	252	13.383	13.383	(0.993)	249406	10.0000	9.40
80 Benzo(a)pyrene (ccc)	252	13.430	13.442	(0.996)	314065	10.0000	9.92
81 Indeno(1,2,3-cd)pyrene	276	14.575	14.600	(1.082)	289045	10.0000	9.21
82 Dibenz(a,h)anthracene	278	14.581	14.606	(1.082)	228165	10.0000	9.93
83 Benzo(g,h,i)perylene	276	14.881	14.911	(1.104)	259974	10.0000	9.74

Data File: /var/chem/gcms/md.i/D110703I.b/icdk071.d
Date : 07-NOV-2003 11:50
Client ID: VSTD010 Instrument: md.i
Sample Info: ICDK071,,1,1,,VSTD010,
Volume Injected (uL): 1.0 Operator: 7126
Column phase: ZB-5 Column diameter: 0.25



Data File: /var/chem/gcms/md.i/D110703I.b/icdk072.d
Report Date: 11-Nov-2003 16:50

STL Knoxville

SW-846 Method 8270C

Data file : /var/chem/gcms/md.i/D110703I.b/icdk072.d
Lab Smp Id: ICDK072 Client Smp ID: VSTD025
Inj Date : 07-NOV-2003 11:27
Operator : 7126 Inst ID: md.i
Smp Info : ICDK072,,1,2,,VSTD025,
Misc Info : D110703I,8270a9,8270dxnC13.sub
Comment : Semivolatile Organic Compounds by GC/MS
Method : /var/chem/gcms/md.i/D110703I.b/8270a9.m
Meth Date : 11-Nov-2003 16:49 wilesd Quant Type: ISTD
Cal Date : 07-NOV-2003 11:27 Cal File: icdk072.d
Als bottle: 7 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8270c13pyr.sub
Target Version: 3.50

Concentration Formula: Amt * DF * (Vt*Sf)/(Vo*Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Sf	1.00000	Prep split factor
Vo	1.00000	Volume of sample extracted (1=total samp
Uf	1000.00000	unit correction factor

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)
* 1 1,4-Dichlorobenzene-d4	152	4.364	4.364	(1.000)	141169	20.0000	
* 2 Naphthalene-d8	136	6.003	6.003	(1.000)	514986	20.0000	
* 3 Acenaphthene-d10	164	8.641	8.641	(1.000)	283463	20.0000	
* 4 Phenanthrene-d10	188	10.110	10.116	(1.000)	493723	20.0000	
* 5 Chrysene-d12	240	12.219	12.219	(1.000)	518709	20.0000	
* 6 Perylene-d12	264	13.477	13.477	(1.000)	366816	20.0000	
$ 7 2-Fluorophenol	112	3.194	3.195	(0.732)	242045	25.0000	25.1
$ 8 Phenol-d5	99	4.029	4.041	(0.923)	257736	25.0000	24.4
$ 9 Nitrobenzene-d5	82	5.057	5.064	(0.842)	198623	25.0000	24.5
$ 10 2-Fluorobiphenyl	172	7.742	7.755	(0.896)	477035	25.0000	24.9
$ 11 2,4,6-Tribromophenol	330	9.499	9.506	(0.940)	57088	25.0000	24.0
$ 12 Terphenyl-d14	244	11.379	11.386	(0.931)	575086	25.0000	25.6
$ 172 13C3-1,2,3-naphthalene	131	6.032	6.039	(1.005)	722465	25.0000	25.9
$ 173 Pyridine-d5	84	2.231	2.213	(0.511)	222786	25.0000	23.6

Data File: /var/chem/gcms/md.i/D110703I.b/icdk072.d
Report Date: 11-Nov-2003 16:50

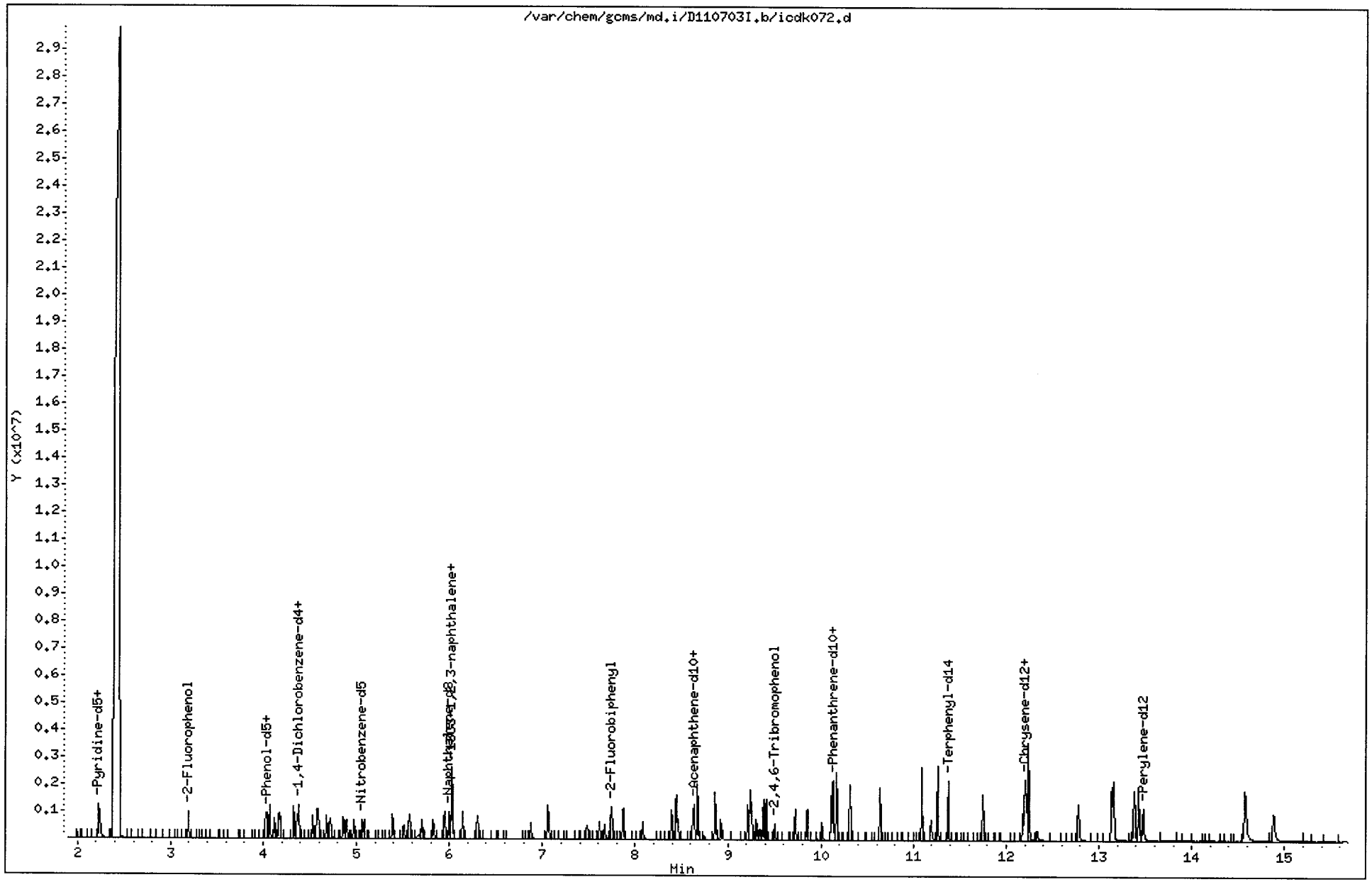
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)
175 1,4-Dioxane	88	1.996	1.990	(0.457)	76128	25.0000	25.1
13 N-Nitrosodimethylamine	74	2.225	2.208	(0.510)	122301	25.0000	25.7
14 Pyridine	79	2.237	2.226	(0.513)	223415	25.0000	25.3
15 Phenol (ccc)	94	4.040	4.053	(0.926)	241622	25.0000	24.2
16 Aniline	93	4.070	4.077	(0.933)	387809	25.0000	25.3
17 Bis(2-chloroethyl)ether	93	4.123	4.135	(0.945)	206709	25.0000	25.3
18 2-Chlorophenol	128	4.181	4.188	(0.958)	240087	25.0000	25.1
19 1,3-Dichlorobenzene	146	4.328	4.335	(0.992)	275294	25.0000	25.1
20 1,4-Dichlorobenzene (ccc)	146	4.381	4.388	(1.004)	276124	25.0000	25.4
21 Benzyl alcohol	108	4.528	4.541	(1.038)	144045	25.0000	24.8
22 1,2-Dichlorobenzene	146	4.593	4.594	(1.052)	264243	25.0000	25.3
23 2-Methylphenol	108	4.681	4.688	(1.073)	195141	25.0000	24.2
24 2,2'-Oxybis(1-Chloropropane)	45	4.716	4.723	(1.081)	393020	25.0000	25.1
25 4-Methylphenol	108	4.857	4.876	(1.113)	202584	25.0000	24.3
26 3&4 Methylphenol	108	4.857	4.876	(1.113)	202584	25.0000	24.3
27 N-Nitroso-di-n-propylamine###	70	4.892	4.905	(1.121)	134940	25.0000	25.0
28 Hexachloroethane	117	4.975	4.975	(1.140)	95217	25.0000	25.1
29 Nitrobenzene	77	5.080	5.093	(0.846)	191348	25.0000	25.1
30 Isophorone	82	5.386	5.399	(0.897)	373877	25.0000	24.4
31 2-Nitrophenol (ccc)	139	5.509	5.516	(0.918)	109081	25.0000	23.6
32 2,4-Dimethyphenol	107	5.568	5.581	(0.928)	204094	25.0000	24.1
33 Bis(2-chloroethoxy)methane	93	5.703	5.716	(0.950)	249568	25.0000	25.2
34 Benzoic acid	122	5.674	5.780	(0.945)	79503	25.0000	25.0
35 2,4-Dichlorophenol (ccc)	162	5.827	5.839	(0.971)	175832	25.0000	23.7
36 1,2,4-Trichlorobenzene	180	5.950	5.957	(0.991)	216721	25.0000	25.3
37 Naphthalene	128	6.032	6.039	(1.005)	740224	25.0000	25.5
38 4-Chloroaniline	127	6.144	6.156	(1.023)	339889	25.0000	24.5
39 Hexachlorobutadiene (ccc)	225	6.308	6.309	(1.051)	111103	25.0000	25.0
40 4-Chloro-3-methylphenol (ccc)	107	6.878	6.885	(1.146)	153000	25.0000	23.3
41 2-Methylnaphthalene	142	7.061	7.067	(1.176)	480176	25.0000	25.4
42 Hexachlorocyclopentadiene####	237	7.484	7.484	(0.866)	98341	25.0000	23.3
43 2,4,6-Trichlorophenol (ccc)	196	7.613	7.619	(0.881)	110495	25.0000	23.0
44 2,4,5-Trichlorphenol	196	7.672	7.678	(0.888)	132784	25.0000	23.8
45 2-Chloronaphthalene	162	7.871	7.878	(0.911)	434629	25.0000	24.8
46 2-Nitroaniline	65	8.083	8.095	(0.935)	115859	25.0000	24.0
47 Acenaphthylene	152	8.447	8.454	(0.978)	785539	25.0000	25.0
48 Dimethyl phthalate	163	8.394	8.407	(0.971)	470007	25.0000	24.6
49 2,6-Dinitrotoluene	165	8.465	8.477	(0.980)	95130	25.0000	23.2
50 3-Nitroaniline	138	8.629	8.642	(0.999)	147700	25.0000	23.8
51 Acenaphthene (ccc)	153	8.676	8.683	(1.004)	488175	25.0000	25.2
52 2,4-Dinitrophenol ##spcc##	184	8.747	8.759	(1.012)	21283	25.0000	25.2
53 Dibenzofuran	168	8.864	8.871	(1.026)	631043	25.0000	25.3
54 4-Nitrophenol ##spcc##	109	8.858	8.865	(1.025)	42260	25.0000	21.8
55 2,4-Dinitrotoluene	165	8.923	8.936	(1.033)	131776	25.0000	23.5
56 Fluorene	166	9.240	9.247	(1.069)	547367	25.0000	25.2
57 4-Chlorophenyl phenyl ether	204	9.252	9.259	(1.071)	231158	25.0000	25.2
58 Diethyl phthalate	149	9.211	9.224	(1.066)	474989	25.0000	24.9

Data File: /var/chem/gcms/md.i/D110703I.b/icdk072.d
Report Date: 11-Nov-2003 16:50

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)
59 4-Nitroaniline	138	9.305	9.329	(1.077)	163267	25.0000	24.4
60 4,6-Dinitro-2-methylphenol	198	9.346	9.365	(0.924)	52596	25.0000	25.3
61 N-Ndpa / diphenylamine (ccc)	169	9.381	9.394	(0.928)	335931	25.0000	25.4
62 1,2-Diphenylhydrazine/azobnz	77	9.411	9.417	(0.931)	464860	25.0000	25.4
63 4-Bromophenyl phenyl ether	248	9.722	9.729	(0.962)	115652	25.0000	25.3
64 Hexachlorobenzene	284	9.851	9.858	(0.974)	139983	25.0000	25.7
65 Pentachlorophenol (ccc)	266	10.010	10.017	(0.990)	74617	25.0000	23.3
66 Phenanthrene	178	10.133	10.140	(1.002)	824698	25.0000	25.7
67 Anthracene	178	10.169	10.175	(1.006)	856203	25.0000	26.3
68 Carbazole	167	10.316	10.322	(1.020)	853765	25.0000	25.9
69 Di-n-butyl phthalate	149	10.639	10.645	(1.052)	821834	25.0000	25.2
70 Fluoranthene (ccc)	202	11.091	11.098	(1.097)	888641	25.0000	25.8
71 Pyrene	202	11.262	11.268	(0.922)	939585	25.0000	25.3
72 Butyl benzyl phthalate	149	11.755	11.756	(0.962)	392530	25.0000	24.3
73 Benzo(a)Anthracene	228	12.202	12.214	(0.999)	795900	25.0000	25.0
74 3,3'-Dichlorobenzidine	252	12.184	12.185	(0.997)	279262	25.0000	24.4
75 Chrysene	228	12.243	12.255	(1.002)	785223	25.0000	25.8
76 Bis(2-ethylhexyl) phthalate	149	12.237	12.244	(1.001)	503680	25.0000	25.0
77 Di-n-octyl phthalate (ccc)	149	12.777	12.784	(0.948)	831089	25.0000	23.9
78 Benzo(b)fluoranthene	252	13.142	13.154	(0.975)	726517	25.0000	23.8
79 Benzo(k)fluoranthene	252	13.159	13.178	(0.976)	1025460	25.0000	26.8
85 Benzo(e)pyrene	252	13.383	13.383	(0.993)	748471	25.0000	26.9
80 Benzo(a)pyrene (ccc)	252	13.424	13.442	(0.996)	841789	25.0000	25.8
81 Indeno(1,2,3-cd)pyrene	276	14.575	14.600	(1.082)	824669	25.0000	24.9
82 Dibenz(a,h)anthracene	278	14.581	14.606	(1.082)	645845	25.0000	25.0
83 Benzo(g,h,i)perylene	276	14.881	14.911	(1.104)	690544	25.0000	25.0

Data File: /var/chem/gcms/md.i/D110703I.b/icdk072.d
Date : 07-NOV-2003 11:27
Client ID: VSTD025
Sample Info: ICDK072,,1,2,,VSTD025,
Volume Injected (uL): 1.0
Column phase: ZB-5

Instrument: md.i
Operator: 7126
Column diameter: 0.25



Data File: /var/chem/gcms/md.i/D110703I.b/icdk073.d
Report Date: 11-Nov-2003 16:50

STL Knoxville

SW-846 Method 8270C

Data file : /var/chem/gcms/md.i/D110703I.b/icdk073.d
Lab Smp Id: ICDK073 Client Smp ID: VSTD040
Inj Date : 07-NOV-2003 11:03
Operator : 7126 Inst ID: md.i
Smp Info : ICDK073,,1,3,,VSTD040,
Misc Info : D110703I,8270a9,8270dxnC13.sub
Comment : Semivolatile Organic Compounds by GC/MS
Method : /var/chem/gcms/md.i/D110703I.b/8270a9.m
Meth Date : 11-Nov-2003 16:49 wilesd Quant Type: ISTD
Cal Date : 07-NOV-2003 11:03 Cal File: icdk073.d
Als bottle: 6 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8270c13pyr.sub
Target Version: 3.50

Concentration Formula: Amt * DF * (Vt*Sf)/(Vo*Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Sf	1.00000	Prep split factor
Vo	1.00000	Volume of sample extracted (1=total samp
Uf	1000.00000	unit correction factor

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)
* 1 1,4-Dichlorobenzene-d4	152	4.364	4.364	(1.000)	143527	20.0000	
* 2 Naphthalene-d8	136	6.003	6.003	(1.000)	522057	20.0000	
* 3 Acenaphthene-d10	164	8.641	8.641	(1.000)	290742	20.0000	
* 4 Phenanthrene-d10	188	10.110	10.116	(1.000)	519822	20.0000	
* 5 Chrysene-d12	240	12.219	12.219	(1.000)	521365	20.0000	
* 6 Perylene-d12	264	13.477	13.477	(1.000)	381132	20.0000	
$ 7 2-Fluorophenol	112	3.195	3.195	(0.732)	391561	40.0000	40.1
$ 8 Phenol-d5	99	4.029	4.041	(0.923)	433479	40.0000	39.9
$ 9 Nitrobenzene-d5	82	5.057	5.064	(0.842)	331321	40.0000	40.0
$ 10 2-Fluorobiphenyl	172	7.748	7.755	(0.897)	784406	40.0000	39.9
$ 11 2,4,6-Tribromophenol	330	9.499	9.506	(0.940)	100229	40.0000	39.2
$ 12 Terphenyl-d14	244	11.379	11.386	(0.931)	898829	40.0000	40.2
$ 172 13C3-1,2,3-naphthalene	131	6.032	6.039	(1.005)	1137637	40.0000	41.0
$ 173 Pyridine-d5	84	2.237	2.213	(0.513)	100587	10.0000	10.2

Data File: /var/chem/gcms/md.i/D110703I.b/icdk073.d
Report Date: 11-Nov-2003 16:50

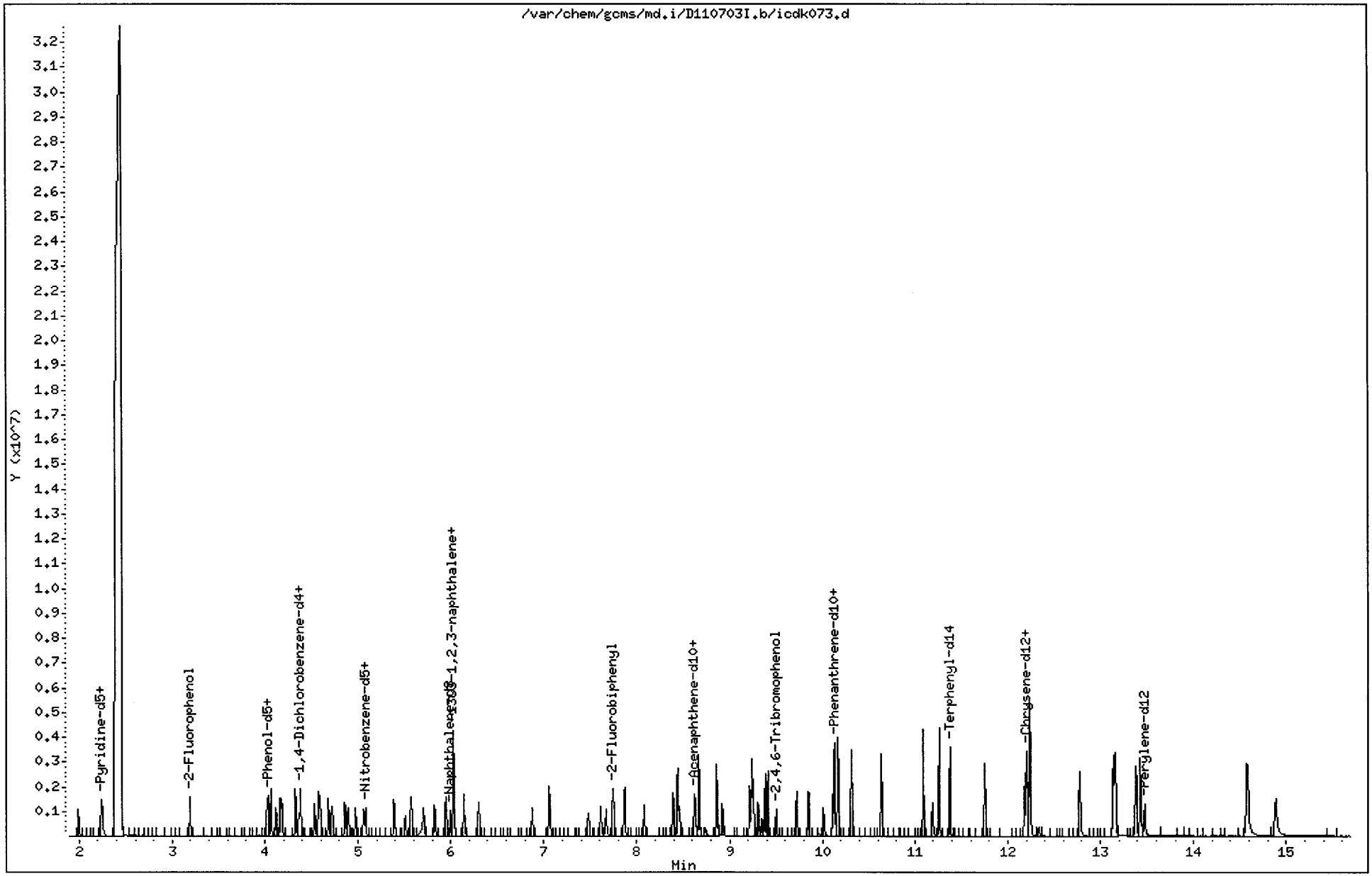
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)
175 1,4-Dioxane	88	1.996	1.990	(0.457)	312028	100.000	101
13 N-Nitrosodimethylamine	74	2.237	2.208	(0.513)	199026	40.0000	41.6
14 Pyridine	79	2.243	2.226	(0.514)	362841	40.0000	40.7
15 Phenol (ccc)	94	4.041	4.053	(0.926)	412386	40.0000	40.0
16 Aniline	93	4.070	4.077	(0.933)	624042	40.0000	40.3
17 Bis(2-chloroethyl)ether	93	4.123	4.135	(0.945)	331246	40.0000	40.1
18 2-Chlorophenol	128	4.182	4.188	(0.958)	388797	40.0000	40.0
19 1,3-Dichlorobenzene	146	4.328	4.335	(0.992)	448712	40.0000	40.3
20 1,4-Dichlorobenzene (ccc)	146	4.381	4.388	(1.004)	444340	40.0000	40.4
21 Benzyl alcohol	108	4.534	4.541	(1.039)	235596	40.0000	39.8
22 1,2-Dichlorobenzene	146	4.593	4.594	(1.052)	428033	40.0000	40.5
23 2-Methylphenol	108	4.681	4.688	(1.073)	335690	40.0000	40.2
24 2,2'-Oxybis(1-Chloropropane)	45	4.716	4.723	(1.081)	636823	40.0000	40.1
25 4-Methylphenol	108	4.857	4.876	(1.113)	341581	40.0000	39.8
26 3&4 Methylphenol	108	4.857	4.876	(1.113)	341581	40.0000	39.8
27 N-Nitroso-di-n-propylamine###	70	4.893	4.905	(1.121)	216899	40.0000	39.6
28 Hexachloroethane	117	4.969	4.975	(1.139)	154653	40.0000	40.3
29 Nitrobenzene	77	5.081	5.093	(0.846)	310390	40.0000	40.3
30 Isophorone	82	5.386	5.399	(0.897)	630402	40.0000	40.1
31 2-Nitrophenol (ccc)	139	5.509	5.516	(0.918)	189208	40.0000	39.4
32 2,4-Dimethyphenol	107	5.574	5.581	(0.929)	353006	40.0000	40.4
33 Bis(2-chloroethoxy)methane	93	5.709	5.716	(0.951)	402156	40.0000	40.2
34 Benzoic acid	122	5.697	5.780	(0.949)	169389	40.0000	40.0
35 2,4-Dichlorophenol (ccc)	162	5.827	5.839	(0.971)	304790	40.0000	39.6
36 1,2,4-Trichlorobenzene	180	5.950	5.957	(0.991)	349241	40.0000	40.4
37 Naphthalene	128	6.032	6.039	(1.005)	1181245	40.0000	40.6
38 4-Chloroaniline	127	6.144	6.156	(1.023)	571244	40.0000	40.3
39 Hexachlorobutadiene (ccc)	225	6.309	6.309	(1.051)	182210	40.0000	40.6
40 4-Chloro-3-methylphenol (ccc)	107	6.878	6.885	(1.146)	272938	40.0000	39.7
41 2-Methylnaphthalene	142	7.061	7.067	(1.176)	767864	40.0000	40.3
42 Hexachlorocyclopentadiene####	237	7.484	7.484	(0.866)	175748	40.0000	39.3
43 2,4,6-Trichlorophenol (ccc)	196	7.613	7.619	(0.881)	201453	40.0000	39.2
44 2,4,5-Trichlorphenol	196	7.672	7.678	(0.888)	233575	40.0000	39.8
45 2-Chloronaphthalene	162	7.871	7.878	(0.911)	727203	40.0000	40.2
46 2-Nitroaniline	65	8.083	8.095	(0.935)	199917	40.0000	39.6
47 Acenaphthylene	152	8.447	8.454	(0.978)	1292882	40.0000	40.2
48 Dimethyl phthalate	163	8.394	8.407	(0.971)	787921	40.0000	40.0
49 2,6-Dinitrotoluene	165	8.465	8.477	(0.980)	170828	40.0000	39.1
50 3-Nitroaniline	138	8.629	8.642	(0.999)	256221	40.0000	39.4
51 Acenaphthene (ccc)	153	8.676	8.683	(1.004)	801104	40.0000	40.5
52 2,4-Dinitrophenol ##spcc##	184	8.747	8.759	(1.012)	53286	40.0000	40.0
53 Dibenzofuran	168	8.864	8.871	(1.026)	1025757	40.0000	40.3
54 4-Nitrophenol ##spcc##	109	8.859	8.865	(1.025)	84704	40.0000	40.1
55 2,4-Dinitrotoluene	165	8.923	8.936	(1.033)	230197	40.0000	38.9
56 Fluorene	166	9.240	9.247	(1.069)	891573	40.0000	40.3
57 4-Chlorophenyl phenyl ether	204	9.252	9.259	(1.071)	378698	40.0000	40.4
58 Diethyl phthalate	149	9.217	9.224	(1.067)	784782	40.0000	40.0

Data File: /var/chem/gcms/md.i/D110703I.b/icdk073.d
Report Date: 11-Nov-2003 16:50

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)
59 4-Nitroaniline	138	9.311	9.329	(1.077)	278611	40.0000	40.2
60 4,6-Dinitro-2-methylphenol	198	9.352	9.365	(0.925)	110777	40.0000	40.0
61 N-Ndpa / diphenylamine (ccc)	169	9.381	9.394	(0.928)	552448	40.0000	39.9
62 1,2-Diphenylhydrazine/azobnz	77	9.411	9.417	(0.931)	771736	40.0000	40.3
63 4-Bromophenyl phenyl ether	248	9.722	9.729	(0.962)	191353	40.0000	40.1
64 Hexachlorobenzene	284	9.852	9.858	(0.974)	224008	40.0000	39.7
65 Pentachlorophenol (ccc)	266	10.010	10.017	(0.990)	135402	40.0000	39.0
66 Phenanthrene	178	10.134	10.140	(1.002)	1348977	40.0000	40.5
67 Anthracene	178	10.169	10.175	(1.006)	1344582	40.0000	40.2
68 Carbazole	167	10.316	10.322	(1.020)	1372666	40.0000	40.2
69 Di-n-butyl phthalate	149	10.639	10.645	(1.052)	1379026	40.0000	40.4
70 Fluoranthene (ccc)	202	11.091	11.098	(1.097)	1426912	40.0000	40.0
71 Pyrene	202	11.262	11.268	(0.922)	1518563	40.0000	40.9
72 Butyl benzyl phthalate	149	11.755	11.756	(0.962)	664217	40.0000	40.4
73 Benzo(a)Anthracene	228	12.202	12.214	(0.999)	1289344	40.0000	40.4
74 3,3'-Dichlorobenzidine	252	12.178	12.185	(0.997)	466149	40.0000	40.1
75 Chrysene	228	12.243	12.255	(1.002)	1224544	40.0000	40.7
76 Bis(2-ethylhexyl) phthalate	149	12.237	12.244	(1.001)	821033	40.0000	40.6
77 Di-n-octyl phthalate (ccc)	149	12.778	12.784	(0.948)	1436073	40.0000	38.9
78 Benzo(b)fluoranthene	252	13.142	13.154	(0.975)	1397944	40.0000	40.0
79 Benzo(k)fluoranthene	252	13.159	13.178	(0.976)	1484770	40.0000	38.8
85 Benzo(e)pyrene	252	13.383	13.383	(0.993)	1114229	40.0000	40.1
80 Benzo(a)pyrene (ccc)	252	13.430	13.442	(0.996)	1342608	40.0000	40.3
81 Indeno(1,2,3-cd)pyrene	276	14.575	14.600	(1.082)	1376666	40.0000	40.0
82 Dibenz(a,h)anthracene	278	14.581	14.606	(1.082)	1078699	40.0000	40.0
83 Benzo(g,h,i)perylene	276	14.887	14.911	(1.105)	1137380	40.0000	39.5

Data File: /var/chem/gcms/md.i/D110703I.b/icdk073.d
Date : 07-NOV-2003 11:03
Client ID: VSTD040
Sample Info: ICDK073,,1,3,,VSTD040,
Volume Injected (uL): 1.0
Column phase: ZB-5

Instrument: md.i
Operator: 7126
Column diameter: 0.25



Data File: /var/chem/gcms/md.i/D110703I.b/icdk074.d
Report Date: 11-Nov-2003 16:50

STL Knoxville

SW-846 Method 8270C

Data file : /var/chem/gcms/md.i/D110703I.b/icdk074.d
Lab Smp Id: ICDK074 Client Smp ID: VSTD060
Inj Date : 07-NOV-2003 10:39
Operator : 7126 Inst ID: md.i
Smp Info : ICDK074,,1,4,,VSTD060,
Misc Info : D110703I,8270a9,8270dxnC13.sub
Comment : Semivolatile Organic Compounds by GC/MS
Method : /var/chem/gcms/md.i/D110703I.b/8270a9.m
Meth Date : 11-Nov-2003 16:49 wilesd Quant Type: ISTD
Cal Date : 07-NOV-2003 13:49 Cal File: a9dk074.d
Als bottle: 5 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8270c13pyr.sub
Target Version: 3.50

Concentration Formula: Amt * DF * (Vt*Sf)/(Vo*Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Sf	1.00000	Prep split factor
Vo	1.00000	Volume of sample extracted (1=total samp
Uf	1000.00000	unit correction factor

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	ON-COL (ng/uL)
* 1 1,4-Dichlorobenzene-d4	152	4.369	4.364	(1.000)	148146	20.0000	
* 2 Naphthalene-d8	136	6.003	6.003	(1.000)	542780	20.0000	
* 3 Acenaphthene-d10	164	8.641	8.641	(1.000)	298099	20.0000	
* 4 Phenanthrene-d10	188	10.116	10.116	(1.000)	526476	20.0000	
* 5 Chrysene-d12	240	12.219	12.219	(1.000)	541318	20.0000	
* 6 Perylene-d12	264	13.476	13.477	(1.000)	382650	20.0000	
$ 7 2-Fluorophenol	112	3.194	3.195	(0.731)	604044	60.0000	60.0
$ 8 Phenol-d5	99	4.034	4.041	(0.923)	673661	60.0000	60.0
$ 9 Nitrobenzene-d5	82	5.057	5.064	(0.842)	517930	60.0000	60.0
$ 10 2-Fluorobiphenyl	172	7.748	7.755	(0.897)	1209451	60.0000	60.0
$ 11 2,4,6-Tribromophenol	330	9.505	9.506	(0.940)	158135	60.0000	60.0
$ 12 Terphenyl-d14	244	11.379	11.386	(0.931)	1384101	60.0000	60.0
$ 172 13C3-1,2,3-naphthalene	131	6.032	6.039	(1.005)	1686794	60.0000	60.0
$ 173 Pyridine-d5	84	2.237	2.213	(0.512)	595914	60.0000	60.0

Data File: /var/chem/gcms/md.i/D110703I.b/icdk074.d
Report Date: 11-Nov-2003 16:50

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)
175 1,4-Dioxane	88	1.996	1.990	(0.457)	188776	60.0000	60.0
13 N-Nitrosodimethylamine	74	2.254	2.208	(0.516)	283775	60.0000	60.0
14 Pyridine	79	2.248	2.226	(0.515)	542159	60.0000	60.0
15 Phenol (ccc)	94	4.046	4.053	(0.926)	639720	60.0000	60.0
16 Aniline	93	4.076	4.077	(0.933)	953467	60.0000	60.0
17 Bis(2-chloroethyl)ether	93	4.128	4.135	(0.945)	510355	60.0000	60.0
18 2-Chlorophenol	128	4.187	4.188	(0.958)	601191	60.0000	60.0
19 1,3-Dichlorobenzene	146	4.328	4.335	(0.991)	684783	60.0000	60.0
20 1,4-Dichlorobenzene (ccc)	146	4.381	4.388	(1.003)	672936	60.0000	60.0
21 Benzyl alcohol	108	4.534	4.541	(1.038)	368304	60.0000	60.0
22 1,2-Dichlorobenzene	146	4.593	4.594	(1.051)	646942	60.0000	60.0
23 2-Methylphenol	108	4.681	4.688	(1.071)	513176	60.0000	60.0
24 2,2'-Oxybis(1-Chloropropane)	45	4.722	4.723	(1.081)	980953	60.0000	60.0
25 4-Methylphenol	108	4.863	4.876	(1.113)	532850	60.0000	60.0
26 3&4 Methylphenol	108	4.863	4.876	(1.113)	532850	60.0000	60.0
27 N-Nitroso-di-n-propylamine###	70	4.898	4.905	(1.121)	342720	60.0000	60.0
28 Hexachloroethane	117	4.975	4.975	(1.139)	235999	60.0000	60.0
29 Nitrobenzene	77	5.080	5.093	(0.846)	477141	60.0000	60.0
30 Isophorone	82	5.392	5.399	(0.898)	979266	60.0000	60.0
31 2-Nitrophenol (ccc)	139	5.509	5.516	(0.918)	304656	60.0000	60.0
32 2,4-Dimethyphenol	107	5.574	5.581	(0.929)	540944	60.0000	60.0
33 Bis(2-chloroethoxy)methane	93	5.709	5.716	(0.951)	621287	60.0000	60.0
34 Benzoic acid	122	5.715	5.780	(0.952)	299288	60.0000	60.0
35 2,4-Dichlorophenol (ccc)	162	5.832	5.839	(0.972)	486112	60.0000	60.0
36 1,2,4-Trichlorobenzene	180	5.950	5.957	(0.991)	533052	60.0000	60.0
37 Naphthalene	128	6.032	6.039	(1.005)	1782507	60.0000	60.0
38 4-Chloroaniline	127	6.150	6.156	(1.024)	877961	60.0000	60.0
39 Hexachlorobutadiene (ccc)	225	6.308	6.309	(1.051)	276349	60.0000	60.0
40 4-Chloro-3-methylphenol (ccc)	107	6.878	6.885	(1.146)	432323	60.0000	60.0
41 2-Methylnaphthalene	142	7.060	7.067	(1.176)	1180884	60.0000	60.0
42 Hexachlorocyclopentadiene####	237	7.483	7.484	(0.866)	279363	60.0000	60.0
43 2,4,6-Trichlorophenol (ccc)	196	7.613	7.619	(0.881)	321946	60.0000	60.0
44 2,4,5-Trichlorphenol	196	7.671	7.678	(0.888)	363692	60.0000	60.0
45 2-Chloronaphthalene	162	7.871	7.878	(0.911)	1106133	60.0000	60.0
46 2-Nitroaniline	65	8.083	8.095	(0.935)	313799	60.0000	60.0
47 Acenaphthylene	152	8.447	8.454	(0.978)	1971602	60.0000	60.0
48 Dimethyl phthalate	163	8.400	8.407	(0.972)	1214261	60.0000	60.0
49 2,6-Dinitrotoluene	165	8.470	8.477	(0.980)	274248	60.0000	60.0
50 3-Nitroaniline	138	8.629	8.642	(0.999)	406345	60.0000	60.0
51 Acenaphthene (ccc)	153	8.676	8.683	(1.004)	1199818	60.0000	60.0
52 2,4-Dinitrophenol ##spcc##	184	8.747	8.759	(1.012)	106343	60.0000	60.0
53 Dibenzofuran	168	8.864	8.871	(1.026)	1551817	60.0000	60.0
54 4-Nitrophenol ##spcc##	109	8.858	8.865	(1.025)	129724	60.0000	60.0
55 2,4-Dinitrotoluene	165	8.929	8.936	(1.033)	374393	60.0000	60.0
56 Fluorene	166	9.240	9.247	(1.069)	1351070	60.0000	60.0
57 4-Chlorophenyl phenyl ether	204	9.258	9.259	(1.071)	570495	60.0000	60.0
58 Diethyl phthalate	149	9.217	9.224	(1.067)	1203469	60.0000	60.0

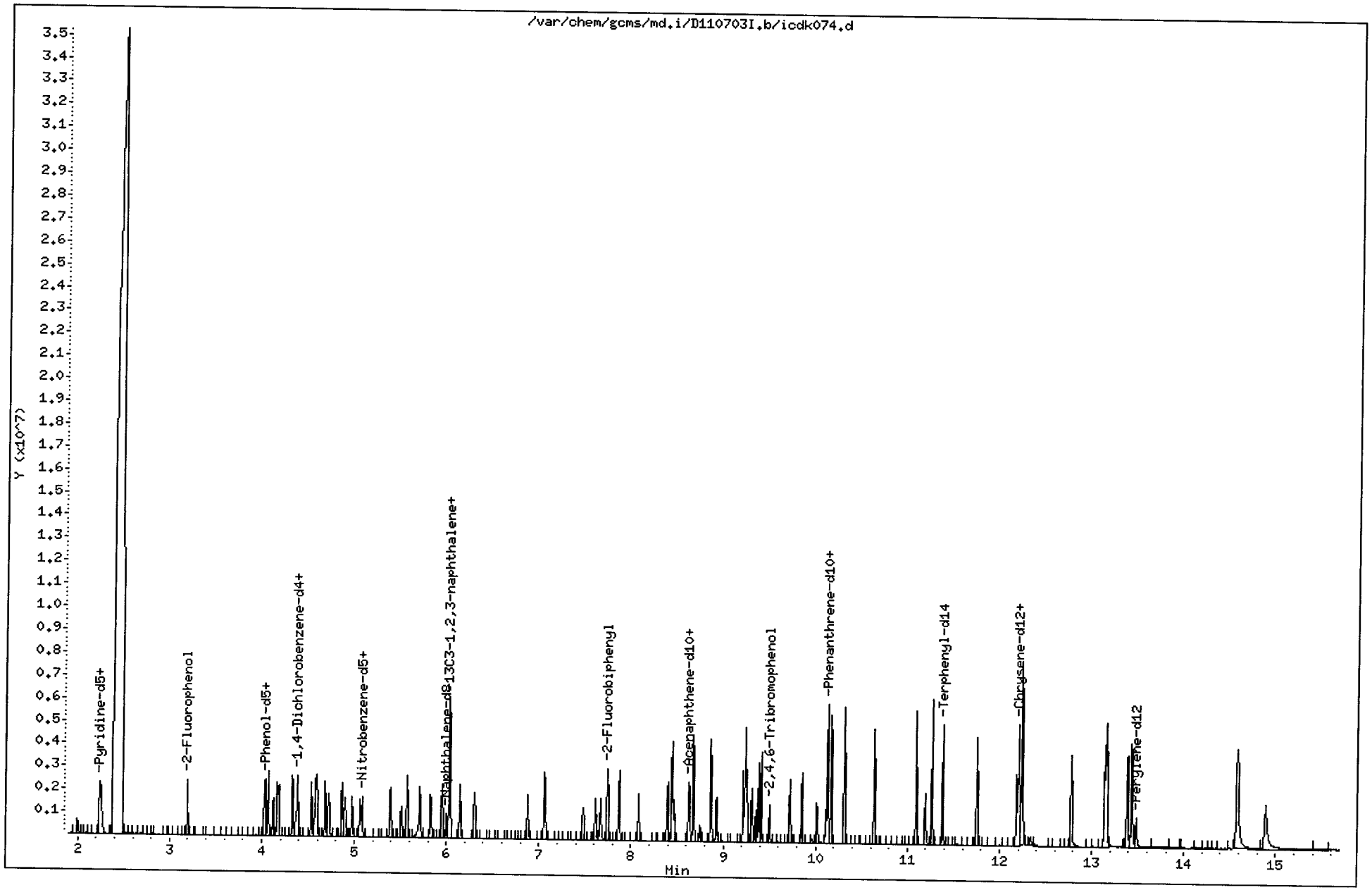
Data File: /var/chem/gcms/md.i/D110703I.b/icdk074.d
Report Date: 11-Nov-2003 16:50

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)
59 4-Nitroaniline	138	9.311	9.329	(1.078)	424952	60.0000	60.0
60 4,6-Dinitro-2-methylphenol	198	9.352	9.365	(0.924)	194400	60.0000	60.0
61 N-Ndpa / diphenylamine (ccc)	169	9.381	9.394	(0.927)	843856	60.0000	60.0
62 1,2-Diphenylhydrazine/azobnz	77	9.411	9.417	(0.930)	1156243	60.0000	60.0
63 4-Bromophenyl phenyl ether	248	9.722	9.729	(0.961)	289241	60.0000	60.0
64 Hexachlorobenzene	284	9.851	9.858	(0.974)	345266	60.0000	60.0
65 Pentachlorophenol (ccc)	266	10.010	10.017	(0.990)	216767	60.0000	60.0
66 Phenanthrene	178	10.133	10.140	(1.002)	2000107	60.0000	60.0
67 Anthracene	178	10.169	10.175	(1.005)	2018860	60.0000	60.0
68 Carbazole	167	10.315	10.322	(1.020)	2063921	60.0000	60.0
69 Di-n-butyl phthalate	149	10.639	10.645	(1.052)	2056972	60.0000	60.0
70 Fluoranthene (ccc)	202	11.097	11.098	(1.097)	2164162	60.0000	60.0
71 Pyrene	202	11.267	11.268	(0.922)	2263213	60.0000	60.0
72 Butyl benzyl phthalate	149	11.755	11.756	(0.962)	1015948	60.0000	60.0
73 Benzo(a)Anthracene	228	12.207	12.214	(0.999)	1964608	60.0000	60.0
74 3,3'-Dichlorobenzidine	252	12.184	12.185	(0.997)	721379	60.0000	60.0
75 Chrysene	228	12.243	12.255	(1.002)	1842849	60.0000	60.0
76 Bis(2-ethylhexyl) phthalate	149	12.243	12.244	(1.002)	1237540	60.0000	60.0
77 Di-n-octyl phthalate (ccc)	149	12.783	12.784	(0.949)	2287335	60.0000	60.0
78 Benzo(b)fluoranthene	252	13.147	13.154	(0.976)	1944521	60.0000	60.0
79 Benzo(k)fluoranthene	252	13.165	13.178	(0.977)	2377342	60.0000	60.0
85 Benzo(e)pyrene	252	13.388	13.383	(0.993)	1672224	60.0000	60.0
80 Benzo(a)pyrene (ccc)	252	13.429	13.442	(0.996)	1993717	60.0000	60.0
81 Indeno(1,2,3-cd)pyrene	276	14.581	14.600	(1.082)	2075504	60.0000	60.0
82 Dibenz(a,h)anthracene	278	14.587	14.606	(1.082)	1641471	60.0000	60.0
83 Benzo(g,h,i)perylene	276	14.893	14.911	(1.105)	1753064	60.0000	60.0

Data File: /var/chem/gcms/md.i/D110703I.b/icdk074.d
Date : 07-NOV-2003 10:39
Client ID: VSTD060
Sample Info: ICDK074,,1,4,,VSTD060,
Volume Injected (uL): 1.0
Column phase: ZB-5

Instrument: md.i

Operator: 7126
Column diameter: 0.25



Data File: /var/chem/gcms/md.i/D110703I.b/icdk075.d
Report Date: 11-Nov-2003 16:50

STL Knoxville

SW-846 Method 8270C

Data file : /var/chem/gcms/md.i/D110703I.b/icdk075.d
Lab Smp Id: ICDK075 Client Smp ID: VSTD120
Inj Date : 07-NOV-2003 10:15
Operator : 7126 Inst ID: md.i
Smp Info : ICDK075,,1,5,,VSTD120,
Misc Info : D110703I,8270a9,8270dxnC13.sub
Comment : Semivolatile Organic Compounds by GC/MS
Method : /var/chem/gcms/md.i/D110703I.b/8270a9.m
Meth Date : 11-Nov-2003 16:49 wilesd Quant Type: ISTD
Cal Date : 07-NOV-2003 10:15 Cal File: icdk075.d
Als bottle: 4 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8270dxnC13.sub
Target Version: 3.50

Concentration Formula: Amt * DF * (Vt*Sf)/(Vo*Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Sf	1.00000	Prep split factor
Vo	1.00000	Volume of sample extracted (1=total samp
Uf	1000.00000	unit correction factor

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)
* 1 1,4-Dichlorobenzene-d4	152	4.370	4.364	(1.000)	151315	20.0000	
* 2 Naphthalene-d8	136	6.010	6.003	(1.000)	551194	20.0000	
* 3 Acenaphthene-d10	164	8.642	8.641	(1.000)	292147	20.0000	
* 4 Phenanthrene-d10	188	10.117	10.116	(1.000)	528014	20.0000	
* 5 Chrysene-d12	240	12.226	12.219	(1.000)	515759	20.0000	
* 6 Perylene-d12	264	13.483	13.477	(1.000)	379083	20.0000	
$ 7 2-Fluorophenol	112	3.201	3.195	(0.732)	1166836	120.000	115
$ 8 Phenol-d5	99	4.035	4.041	(0.923)	1306374	120.000	118
$ 9 Nitrobenzene-d5	82	5.064	5.064	(0.843)	1016812	120.000	120
$ 10 2-Fluorobiphenyl	172	7.749	7.755	(0.897)	2288216	120.000	117
$ 11 2,4,6-Tribromophenol	330	9.505	9.506	(0.940)	296588	120.000	122
$ 12 Terphenyl-d14	244	11.380	11.386	(0.931)	2447373	120.000	111
$ 172 13C3-1,2,3-naphthalene	131	6.039	6.039	(1.005)	3080596	120.000	104
175 1,4-Dioxane	88	2.008	1.990	(0.460)	7104	2.00000	2.15

Data File: /var/chem/gcms/md.i/D110703I.b/icdk075.d
Report Date: 11-Nov-2003 16:50

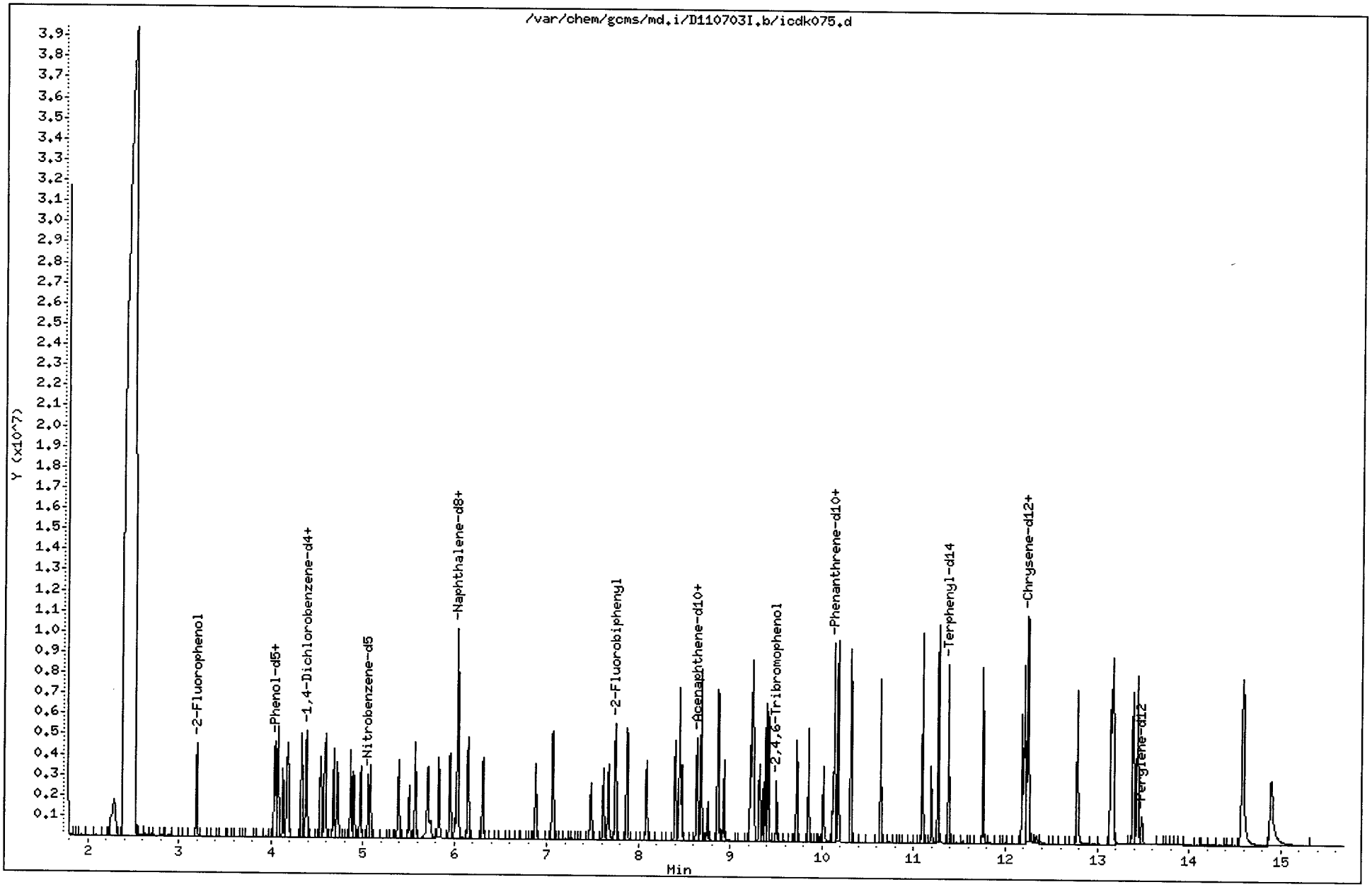
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)
13 N-Nitrosodimethylamine	74	2.302	2.208	(0.527)	576383	120.000	114
14 Pyridine	79	2.284	2.226	(0.523)	1088626	120.000	115
15 Phenol (ccc)	94	4.047	4.053	(0.926)	1236087	120.000	118
16 Aniline	93	4.076	4.077	(0.933)	1812611	120.000	112
17 Bis(2-chloroethyl)ether	93	4.129	4.135	(0.945)	973829	120.000	112
18 2-Chlorophenol	128	4.188	4.188	(0.958)	1154553	120.000	115
19 1,3-Dichlorobenzene	146	4.335	4.335	(0.992)	1286423	120.000	111
20 1,4-Dichlorobenzene (ccc)	146	4.388	4.388	(1.004)	1282405	120.000	111
21 Benzyl alcohol	108	4.541	4.541	(1.039)	714583	120.000	118
22 1,2-Dichlorobenzene	146	4.593	4.594	(1.051)	1232028	120.000	111
23 2-Methylphenol	108	4.682	4.688	(1.071)	994772	120.000	118
24 2,2'-Oxybis(1-Chloropropane)	45	4.723	4.723	(1.081)	1893906	120.000	114
25 4-Methylphenol	108	4.870	4.876	(1.114)	1042031	120.000	121
26 3&4 Methylphenol	108	4.870	4.876	(1.114)	1042031	120.000	121
27 N-Nitroso-di-n-propylamine###	70	4.899	4.905	(1.121)	671038	120.000	118
28 Hexachloroethane	117	4.975	4.975	(1.138)	453195	120.000	114
29 Nitrobenzene	77	5.087	5.093	(0.846)	941700	120.000	117
30 Isophorone	82	5.393	5.399	(0.897)	1887881	120.000	118
31 2-Nitrophenol (ccc)	139	5.510	5.516	(0.917)	622054	120.000	130
32 2,4-Dimethyphenol	107	5.581	5.581	(0.929)	1070202	120.000	123
33 Bis(2-chloroethoxy)methane	93	5.716	5.716	(0.951)	1181408	120.000	114
34 Benzoic acid	122	5.751	5.780	(0.957)	611763	120.000	119
35 2,4-Dichlorophenol (ccc)	162	5.833	5.839	(0.971)	958074	120.000	126
36 1,2,4-Trichlorobenzene	180	5.957	5.957	(0.991)	1010635	120.000	112
37 Naphthalene	128	6.039	6.039	(1.005)	3162984	120.000	104
38 4-Chloroaniline	127	6.151	6.156	(1.023)	1666003	120.000	114
39 Hexachlorobutadiene (ccc)	225	6.309	6.309	(1.050)	531915	120.000	113
40 4-Chloro-3-methylphenol (ccc)	107	6.879	6.885	(1.145)	864245	120.000	130
41 2-Methylnaphthalene	142	7.067	7.067	(1.176)	2258172	120.000	113
42 Hexachlorocyclopentadiene####	237	7.484	7.484	(0.866)	579955	120.000	137
43 2,4,6-Trichlorophenol (ccc)	196	7.619	7.619	(0.882)	646012	120.000	135
44 2,4,5-Trichlorphenol	196	7.672	7.678	(0.888)	720369	120.000	128
45 2-Chloronaphthalene	162	7.872	7.878	(0.911)	2116370	120.000	119
46 2-Nitroaniline	65	8.089	8.095	(0.936)	623329	120.000	130
47 Acenaphthylene	152	8.448	8.454	(0.978)	3662187	120.000	116
48 Dimethyl phthalate	163	8.401	8.407	(0.972)	2307018	120.000	119
49 2,6-Dinitrotoluene	165	8.471	8.477	(0.980)	546260	120.000	134
50 3-Nitroaniline	138	8.636	8.642	(0.999)	780051	120.000	125
51 Acenaphthene (ccc)	153	8.683	8.683	(1.005)	2237156	120.000	114
52 2,4-Dinitrophenol ##spcc##	184	8.753	8.759	(1.013)	281312	120.000	125
53 Dibenzofuran	168	8.871	8.871	(1.026)	2818591	120.000	112
54 4-Nitrophenol ##spcc##	109	8.859	8.865	(1.025)	269286	120.000	131
55 2,4-Dinitrotoluene	165	8.930	8.936	(1.033)	749604	120.000	135
56 Fluorene	166	9.241	9.247	(1.069)	2430995	120.000	111
57 4-Chlorophenyl phenyl ether	204	9.259	9.259	(1.071)	1064431	120.000	114
58 Diethyl phthalate	149	9.218	9.224	(1.067)	2265980	120.000	116
59 4-Nitroaniline	138	9.323	9.329	(1.079)	842423	120.000	125

Data File: /var/chem/gcms/md.i/D110703I.b/icdk075.d
Report Date: 11-Nov-2003 16:50

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)
60 4,6-Dinitro-2-methylphenol	198	9.359	9.365	(0.925)	434372	120.000	120
61 N-Ndpa / diphenylamine (ccc)	169	9.388	9.394	(0.928)	1603067	120.000	114
62 1,2-Diphenylhydrazine/azobnz	77	9.411	9.417	(0.930)	2174742	120.000	113
63 4-Bromophenyl phenyl ether	248	9.723	9.729	(0.961)	550758	120.000	115
64 Hexachlorobenzene	284	9.852	9.858	(0.974)	631120	120.000	110
65 Pentachlorophenol (ccc)	266	10.017	10.017	(0.990)	440548	120.000	126
66 Phenanthrene	178	10.134	10.140	(1.002)	3551828	120.000	106
67 Anthracene	178	10.175	10.175	(1.006)	3565822	120.000	105
68 Carbazole	167	10.316	10.322	(1.020)	3665968	120.000	106
69 Di-n-butyl phthalate	149	10.639	10.645	(1.052)	3672977	120.000	109
70 Fluoranthene (ccc)	202	11.098	11.098	(1.097)	3750408	120.000	105
71 Pyrene	202	11.268	11.268	(0.922)	3925946	120.000	108
72 Butyl benzyl phthalate	149	11.756	11.756	(0.962)	1858120	120.000	119
73 Benzo(a)Anthracene	228	12.208	12.214	(0.999)	3571519	120.000	115
74 3,3'-Dichlorobenzidine	252	12.185	12.185	(0.997)	1335981	120.000	121
75 Chrysene	228	12.249	12.255	(1.002)	3124813	120.000	105
76 Bis(2-ethylhexyl) phthalate	149	12.238	12.244	(1.001)	2160166	120.000	112
77 Di-n-octyl phthalate (ccc)	149	12.784	12.784	(0.948)	4247676	120.000	125
78 Benzo(b)fluoranthene	252	13.148	13.154	(0.975)	3883515	120.000	119
79 Benzo(k)fluoranthene	252	13.172	13.178	(0.977)	3922271	120.000	102
85 Benzo(e)pyrene	252	13.389	13.383	(0.993)	3130161	120.000	113
80 Benzo(a)pyrene (ccc)	252	13.436	13.442	(0.996)	3622039	120.000	110
81 Indeno(1,2,3-cd)pyrene	276	14.588	14.600	(1.082)	3926036	120.000	118
82 Dibenz(a,h)anthracene	278	14.594	14.606	(1.082)	3018291	120.000	116
83 Benzo(g,h,i)perylene	276	14.899	14.911	(1.105)	3474720	120.000	122

Data File: /var/chem/gcms/md.i/D110703I.b/icdk075.d
Date : 07-NOV-2003 10:15
Client ID: VSTD120
Sample Info: ICDK075,,1,5,,VSTD120,
Volume Injected (uL): 1.0
Column phase: ZB-5

Instrument: md.i
Operator: 7126
Column diameter: 0.25



Data File: /var/chem/gcms/md.i/D110703I.b/icdk078.d
Report Date: 11-Nov-2003 16:50

STL Knoxville

SW-846 Method 8270C

Data file : /var/chem/gcms/md.i/D110703I.b/icdk078.d
Lab Smp Id: ICDK078 Client Smp ID: VSTD200
Inj Date : 07-NOV-2003 09:52
Operator : 7126 Inst ID: md.i
Smp Info : ICDK078,,1,8,,VSTD200,
Misc Info : D110703I,8270a9,8270.sub
Comment : Semivolatile Organic Compounds by GC/MS
Method : /var/chem/gcms/md.i/D110703I.b/8270a9.m
Meth Date : 11-Nov-2003 16:49 wilesd Quant Type: ISTD
Cal Date : 07-NOV-2003 09:52 Cal File: icdk078.d
Als bottle: 3 Calibration Sample, Level: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8270.sub
Target Version: 3.50

Concentration Formula: Amt * DF * (Vt*Sf)/(Vo*Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Sf	1.00000	Prep split factor
Vo	1.00000	Volume of sample extracted (1=total samp
Uf	1000.00000	unit correction factor

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)
* 1 1,4-Dichlorobenzene-d4	152	4.370	4.364	(1.000)	146129	20.0000	
* 2 Naphthalene-d8	136	6.010	6.003	(1.000)	522281	20.0000	
* 3 Acenaphthene-d10	164	8.642	8.641	(1.000)	266524	20.0000	
* 4 Phenanthrene-d10	188	10.117	10.116	(1.000)	499633	20.0000	
* 5 Chrysene-d12	240	12.226	12.219	(1.000)	482254	20.0000	
* 6 Perylene-d12	264	13.483	13.477	(1.000)	362079	20.0000	
$ 7 2-Fluorophenol	112	3.195	3.195	(0.731)	1710779	200.000	178(A)
$ 8 Phenol-d5	99	4.041	4.041	(0.925)	1939304	200.000	184(A)
$ 9 Nitrobenzene-d5	82	5.064	5.064	(0.843)	1554259	200.000	194(A)
$ 10 2-Fluorobiphenyl	172	7.755	7.755	(0.897)	3384017	200.000	192(A)
$ 11 2,4,6-Tribromophenol	330	9.506	9.506	(0.940)	448489	200.000	195(A)
$ 12 Terphenyl-d14	244	11.386	11.386	(0.931)	3366260	200.000	169(A)
13 N-Nitrosodimethylamine	74	2.208	2.208	(0.505)	894061	200.000	186(A)
14 Pyridine	79	2.226	2.226	(0.509)	1729738	200.000	187(A)

Data File: /var/chem/gcms/md.i/D110703I.b/icdk078.d
Report Date: 11-Nov-2003 16:50

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)
15 Phenol (ccc)	94	4.053	4.053	(0.927)	1789784	200.000	181(A)
16 Aniline	93	4.077	4.077	(0.933)	2601476	200.000	171(A)
17 Bis(2-chloroethyl)ether	93	4.135	4.135	(0.946)	1439883	200.000	176(A)
18 2-Chlorophenol	128	4.188	4.188	(0.958)	1703306	200.000	179(A)
19 1,3-Dichlorobenzene	146	4.335	4.335	(0.992)	1860927	200.000	171(A)
20 1,4-Dichlorobenzene (ccc)	146	4.388	4.388	(1.004)	1874161	200.000	173(A)
21 Benzyl alcohol	108	4.541	4.541	(1.039)	1081754	200.000	187(A)
22 1,2-Dichlorobenzene	146	4.594	4.594	(1.051)	1770318	200.000	170(A)
23 2-Methylphenol	108	4.688	4.688	(1.073)	1478470	200.000	185(A)
24 2,2'-Oxybis(1-Chloropropane)	45	4.723	4.723	(1.081)	2795356	200.000	178(A)
25 4-Methylphenol	108	4.876	4.876	(1.116)	1528767	200.000	186(A)
26 3&4 Methylphenol	108	4.876	4.876	(1.116)	1528767	200.000	186(A)
27 N-Nitroso-di-n-propylamine###	70	4.905	4.905	(1.122)	1014207	200.000	188(A)
28 Hexachloroethane	117	4.975	4.975	(1.138)	670793	200.000	178(A)
29 Nitrobenzene	77	5.093	5.093	(0.847)	1409135	200.000	187(A)
30 Isophorone	82	5.399	5.399	(0.898)	2857210	200.000	190(A)
31 2-Nitrophenol (ccc)	139	5.516	5.516	(0.918)	959547	200.000	210(A)
32 2,4-Dimethyphenol	107	5.581	5.581	(0.929)	1589934	200.000	194(A)
33 Bis(2-chloroethoxy)methane	93	5.716	5.716	(0.951)	1771184	200.000	183(A)
34 Benzoic acid	122	5.780	5.780	(0.962)	1055544	200.000	202(A)
35 2,4-Dichlorophenol (ccc)	162	5.839	5.839	(0.972)	1460298	200.000	203(A)
36 1,2,4-Trichlorobenzene	180	5.957	5.957	(0.991)	1517681	200.000	181(A)
37 Naphthalene	128	6.039	6.039	(1.005)	4957313	200.000	174(A)
38 4-Chloroaniline	127	6.156	6.156	(1.024)	2452569	200.000	181(A)
39 Hexachlorobutadiene (ccc)	225	6.309	6.309	(1.050)	791870	200.000	181(A)
40 4-Chloro-3-methylphenol (ccc)	107	6.885	6.885	(1.146)	1312058	200.000	206(A)
41 2-Methylnaphthalene	142	7.067	7.067	(1.176)	3329590	200.000	180(A)
42 Hexachlorocyclopentadiene####	237	7.484	7.484	(0.866)	893678	200.000	225(A)
43 2,4,6-Trichlorophenol (ccc)	196	7.619	7.619	(0.882)	984133	200.000	220(A)
44 2,4,5-Trichlorphenol	196	7.678	7.678	(0.888)	1094474	200.000	211(A)
45 2-Chloronaphthalene	162	7.878	7.878	(0.912)	3080961	200.000	192(A)
46 2-Nitroaniline	65	8.095	8.095	(0.937)	953311	200.000	214(A)
47 Acenaphthylene	152	8.454	8.454	(0.978)	5144370	200.000	184(A)
48 Dimethyl phthalate	163	8.407	8.407	(0.973)	3441723	200.000	195(A)
49 2,6-Dinitrotoluene	165	8.477	8.477	(0.981)	848068	200.000	223(A)
50 3-Nitroaniline	138	8.642	8.642	(1.000)	1197115	200.000	209(A)
51 Acenaphthene (ccc)	153	8.683	8.683	(1.005)	3180321	200.000	178(A)
52 2,4-Dinitrophenol ##spcc##	184	8.759	8.759	(1.014)	467767	200.000	207(A)
53 Dibenzofuran	168	8.871	8.871	(1.026)	3893578	200.000	174(A)
54 4-Nitrophenol ##spcc##	109	8.865	8.865	(1.026)	403398	200.000	212(A)
55 2,4-Dinitrotoluene	165	8.936	8.936	(1.034)	1157391	200.000	223(A)
56 Fluorene	166	9.247	9.247	(1.070)	3310059	200.000	170(A)
57 4-Chlorophenyl phenyl ether	204	9.259	9.259	(1.071)	1512083	200.000	181(A)
58 Diethyl phthalate	149	9.224	9.224	(1.067)	3306051	200.000	188(A)
59 4-Nitroaniline	138	9.329	9.329	(1.080)	1284534	200.000	207(A)
60 4,6-Dinitro-2-methylphenol	198	9.365	9.365	(0.926)	692497	200.000	199(A)
61 N-Ndpa / diphenylamine (ccc)	169	9.394	9.394	(0.929)	2302762	200.000	178(A)

Data File: /var/chem/gcms/md.i/D110703I.b/icdk078.d
Report Date: 11-Nov-2003 16:50

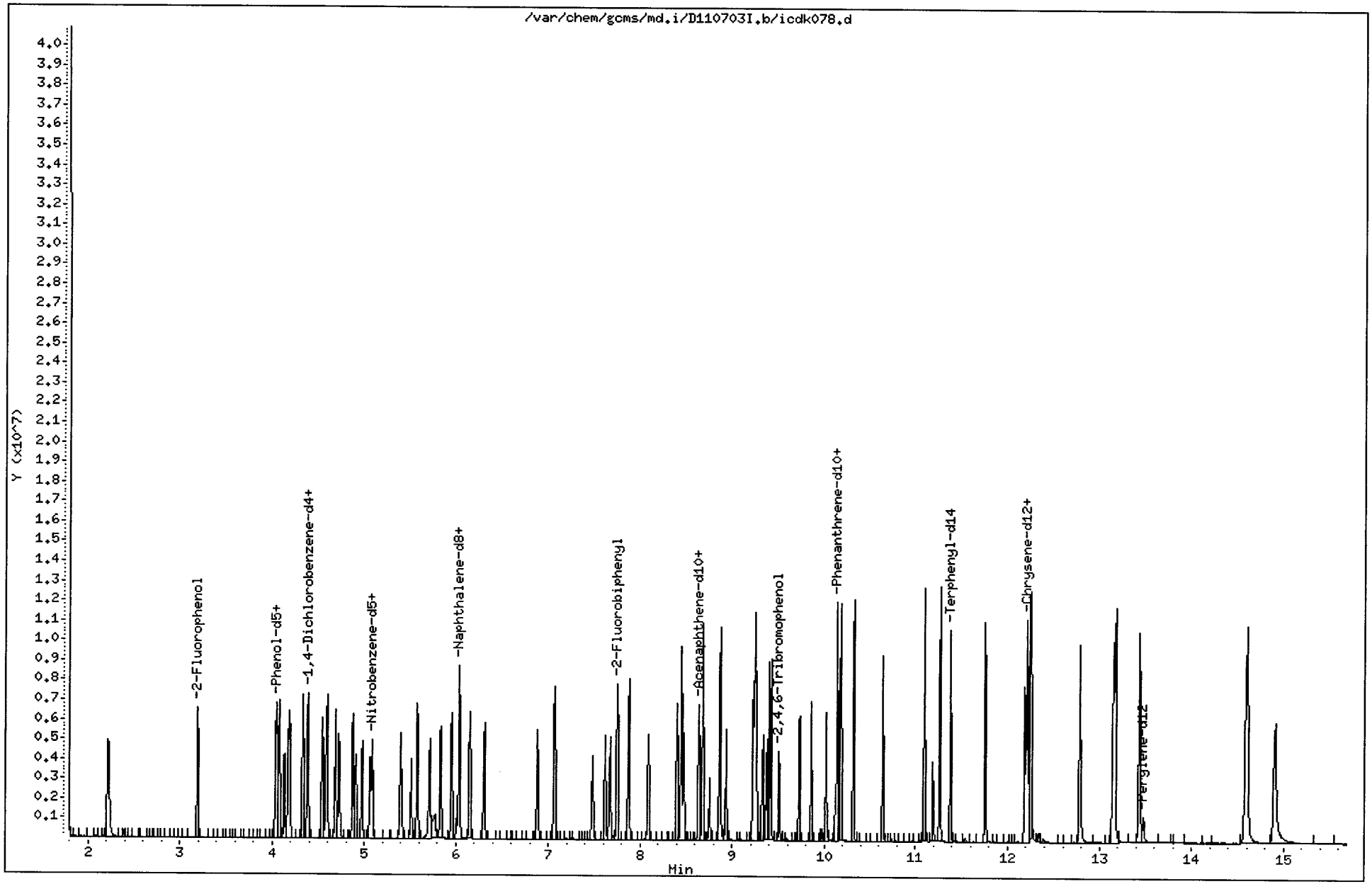
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)
62 1,2-Diphenylhydrazine/azobnz	77	9.417	9.417	(0.931)	3103781	200.000	175(A)
63 4-Bromophenyl phenyl ether	248	9.729	9.729	(0.962)	816347	200.000	183(A)
64 Hexachlorobenzene	284	9.858	9.858	(0.974)	910849	200.000	172(A)
65 Pentachlorophenol (ccc)	266	10.017	10.017	(0.990)	657060	200.000	200(A)
66 Phenanthrene	178	10.140	10.140	(1.002)	4764970	200.000	153
67 Anthracene	178	10.175	10.175	(1.006)	4858343	200.000	157
68 Carbazole	167	10.322	10.322	(1.020)	4956078	200.000	158
69 Di-n-butyl phthalate	149	10.645	10.645	(1.052)	4935832	200.000	161(A)
70 Fluoranthene (ccc)	202	11.098	11.098	(1.097)	5105021	200.000	156
71 Pyrene	202	11.268	11.268	(0.922)	5287330	200.000	160(A)
72 Butyl benzyl phthalate	149	11.756	11.756	(0.962)	2654939	200.000	184(A)
73 Benzo(a)Anthracene	228	12.214	12.214	(0.999)	4953064	200.000	176(A)
74 3,3'-Dichlorobenzidine	252	12.185	12.185	(0.997)	1868254	200.000	184(A)
75 Chrysene	228	12.255	12.255	(1.002)	4296402	200.000	156
76 Bis(2-ethylhexyl) phthalate	149	12.244	12.244	(1.001)	2971643	200.000	178(A)
77 Di-n-octyl phthalate (ccc)	149	12.784	12.784	(0.948)	5957392	200.000	186(A)
78 Benzo(b)fluoranthene	252	13.154	13.154	(0.976)	5819196	200.000	196(A)
79 Benzo(k)fluoranthene	252	13.178	13.178	(0.977)	5217356	200.000	146
80 Benzo(a)pyrene (ccc)	252	13.442	13.442	(0.997)	5116934	200.000	172(A)
81 Indeno(1,2,3-cd)pyrene	276	14.600	14.600	(1.083)	5801264	200.000	196(A)
82 Dibenz(a,h)anthracene	278	14.606	14.606	(1.083)	4175960	200.000	179(A)
83 Benzo(g,h,i)perylene	276	14.911	14.911	(1.106)	5444879	200.000	210(A)

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.

Data File: /var/chem/gcms/md.i/D110703I.b/icdk078.d
Date : 07-NOV-2003 09:52
Client ID: VSTD200
Sample Info: ICDK078,,1,8,,VSTD200,
Volume Injected (uL): 1.0
Column phase: ZB-5

Instrument: md.i
Operator: 7126
Column diameter: 0.25



Data File: /var/chem/gcms/md.i/D110703I.b/a9dk071.d
Report Date: 11-Nov-2003 16:50

STL Knoxville

SW-846 Method 8270C

Data file : /var/chem/gcms/md.i/D110703I.b/a9dk071.d
Lab Smp Id: A9DK071 Client Smp ID: VSTD010
Inj Date : 07-NOV-2003 14:37
Operator : 7126 Inst ID: md.i
Smp Info : A9DK071,,1,1,,VSTD010,
Misc Info : D110703I,8270a9,appdx9.sub
Comment : Semivolatile Organic Compounds by GC/MS
Method : /var/chem/gcms/md.i/D110703I.b/8270a9.m
Meth Date : 11-Nov-2003 16:49 wilesd Quant Type: ISTD
Cal Date : 07-NOV-2003 14:37 Cal File: a9dk071.d
Als bottle: 14 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: appdx9.sub
Target Version: 3.50

Concentration Formula: Amt * DF * (Vt*Sf)/(Vo*Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Sf	1.00000	Prep split factor
Vo	1.00000	Volume of sample extracted (1=total samp
Uf	1000.00000	unit correction factor

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)
* 1 1,4-Dichlorobenzene-d4	152	4.364	4.364	(1.000)	149136	20.0000	
* 2 Naphthalene-d8	136	6.003	6.003	(1.000)	534026	20.0000	
* 3 Acenaphthene-d10	164	8.641	8.641	(1.000)	292543	20.0000	
* 4 Phenanthrene-d10	188	10.110	10.116	(1.000)	531157	20.0000	
* 5 Chrysene-d12	240	12.219	12.219	(1.000)	534634	20.0000	
* 6 Perylene-d12	264	13.477	13.477	(1.000)	369970	20.0000	
176 2-Picoline	93	2.742	2.730	(0.628)	94197	10.0000	10.0
86 N-nitrosomethylethylamine	42	2.830	2.824	(0.649)	54768	10.0000	10.1
87 Methyl methanosulfonate	80	3.077	3.077	(0.705)	27429	10.0000	9.81
88 N-nitrosodiethylamine	102	3.400	3.400	(0.779)	43674	10.0000	9.88
89 Ethyl methanosulfonate	79	3.670	3.670	(0.841)	58600	10.0000	9.72
90 Pentachloroethane	167	4.082	4.082	(0.935)	35666	10.0000	10.0
91 acetophenone	105	4.857	4.863	(1.113)	115177	10.0000	9.92
92 m-cresol	108	4.869	4.875	(1.116)	58213	10.0000	8.13

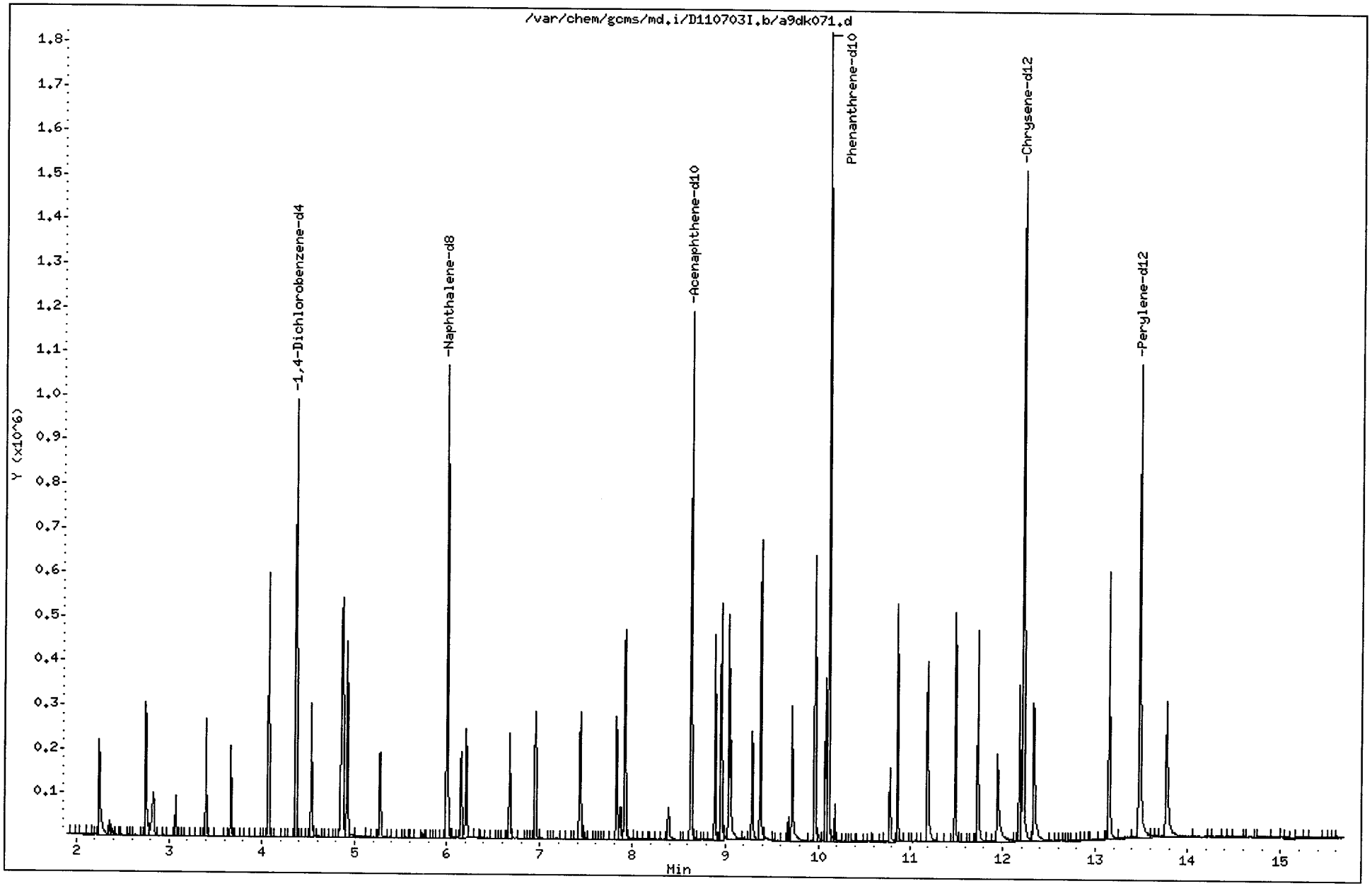
Data File: /var/chem/gcms/md.i/D110703I.b/a9dk071.d
Report Date: 11-Nov-2003 16:50

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)
93 n-nitrosopyrrolidine	100	4.845	4.857	(1.110)	39887	10.0000	8.98
94 n-nitrosomorpholine	56	4.869	4.887	(1.116)	50168	10.0000	9.70
95 o-toluidine	106	4.916	4.928	(1.127)	135504	10.0000	9.73
96 n-nitrosopiperidine	42	5.274	5.280	(0.879)	59638	10.0000	9.36
97 2,6-dichlorophenol	162	6.156	6.156	(1.025)	53339	10.0000	8.09
98 hexachloropropene	213	6.209	6.214	(1.034)	41313	10.0000	9.24
99 N-nitro-di-n-butylamine	84	6.673	6.685	(1.112)	42745	10.0000	8.92
100 Isosafrole	162	6.955	6.955	(1.159)	63354	10.0000	9.10
101 1,2,4,5-tetrachlorobenzene	216	7.431	7.437	(1.238)	74007	10.0000	9.62
102 safrole	162	7.824	7.830	(0.905)	65222	10.0000	8.93
103 1-chloronaphthalene	162	7.918	7.924	(0.916)	180997	10.0000	10.0
104 m-dinitrobenzene	76	8.388	8.394	(0.971)	12220	10.0000	10.6
105 pentachlorobenzene	250	8.894	8.894	(1.029)	68847	10.0000	10.1
106 1-naphthylamine	143	8.958	8.964	(1.037)	177336	10.0000	9.18
107 2-naphthylamine	143	9.041	9.046	(1.046)	222561	10.0000	10.2
108 2,3,4,6-tetrachlorophenol	232	9.058	9.064	(1.048)	25749	10.0000	9.88
109 5-nitro-o-toluidine	152	9.287	9.299	(1.075)	43864	10.0000	8.25
110 diphenylamine	169	9.381	9.387	(1.086)	169507	10.0000	9.82
111 1,3,5-trinitrobenzene	75	9.675	9.681	(0.957)	10696	10.0000	10.2
112 phenacetin	108	9.710	9.728	(0.960)	79856	10.0000	8.93
113 4-aminobiphenyl	169	9.963	9.969	(0.985)	226818	10.0000	9.79
114 pentachloronitrobenzene	237	10.075	10.081	(0.996)	17534	10.0000	9.41
115 Dinoseb	211	10.180	10.180	(1.007)	11596	10.0000	10.3
178 N-Nitroquinoline-n-oxide	174	10.780	10.786	(1.066)	10049	10.0000	9.52
177 Methapyrilene HCL	97	10.862	10.868	(1.074)	78556	10.0000	9.07
84 Benzidine	184	11.191	11.197	(1.107)	197817	10.0000	8.75
116 p-(dimethylamino)azobenzene	120	11.491	11.497	(1.137)	77421	10.0000	9.14
117 o-tolidine	212	11.737	11.738	(1.161)	182349	10.0000	9.03
119 7,12-dimethylbenz(a)anthracen	256	13.148	13.154	(1.076)	125918	10.0000	9.26
118 2-acetylaminofluorene	181	11.949	11.955	(0.978)	81112	10.0000	10.1
120 3-methylcholanthrene	268	13.776	13.782	(1.022)	116553	10.0000	8.41

Data File: /var/chem/gcms/md.i/D110703I.b/a9dk071.d
Date : 07-NOV-2003 14:37
Client ID: VSTD010
Sample Info: A9DK071,,1,1,,VSTD010,
Volume Injected (uL): 1.0
Column phase: ZB-5

Instrument: md.i

Operator: 7126
Column diameter: 0.25



Data File: /var/chem/gcms/md.i/D110703I.b/a9dk073.d
Report Date: 11-Nov-2003 16:50

STL Knoxville

SW-846 Method 8270C

Data file : /var/chem/gcms/md.i/D110703I.b/a9dk073.d
Lab Smp Id: A9DK073 Client Smp ID: VSTD040
Inj Date : 07-NOV-2003 14:13
Operator : 7126 Inst ID: md.i
Smp Info : A9DK073,,1,3,,VSTD040,
Misc Info : D110703I,8270a9,appdx9.sub
Comment : Semivolatile Organic Compounds by GC/MS
Method : /var/chem/gcms/md.i/D110703I.b/8270a9.m
Meth Date : 11-Nov-2003 16:49 wilesd Quant Type: ISTD
Cal Date : 07-NOV-2003 14:13 Cal File: a9dk073.d
Als bottle: 13 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: appdx9.sub
Target Version: 3.50

Concentration Formula: Amt * DF * (Vt*Sf)/(Vo*Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Sf	1.00000	Prep split factor
Vo	1.00000	Volume of sample extracted (1=total samp
Uf	1000.00000	unit correction factor

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)
* 1 1,4-Dichlorobenzene-d4	152	4.364	4.364	(1.000)	126652	20.0000	
* 2 Naphthalene-d8	136	6.003	6.003	(1.000)	456444	20.0000	
* 3 Acenaphthene-d10	164	8.641	8.641	(1.000)	255073	20.0000	
* 4 Phenanthrene-d10	188	10.110	10.116	(1.000)	454054	20.0000	
* 5 Chrysene-d12	240	12.219	12.219	(1.000)	454605	20.0000	
* 6 Perylene-d12	264	13.483	13.477	(1.000)	306315	20.0000	
176 2-Picoline	93	2.736	2.730	(0.627)	325159	40.0000	41.0
86 N-nitrosomethylethylamine	42	2.824	2.824	(0.647)	185197	40.0000	40.6
87 Methyl methanosulfonate	80	3.071	3.077	(0.704)	97479	40.0000	40.7
88 N-nitrosodiethylamine	102	3.400	3.400	(0.779)	154566	40.0000	41.0
89 Ethyl methanosulfonate	79	3.665	3.670	(0.840)	209293	40.0000	40.3
90 Pentachloroethane	167	4.082	4.082	(0.935)	123347	40.0000	40.7
91 acetophenone	105	4.857	4.863	(1.113)	404373	40.0000	40.8
92 m-cresol	108	4.869	4.875	(1.116)	261948	40.0000	39.4

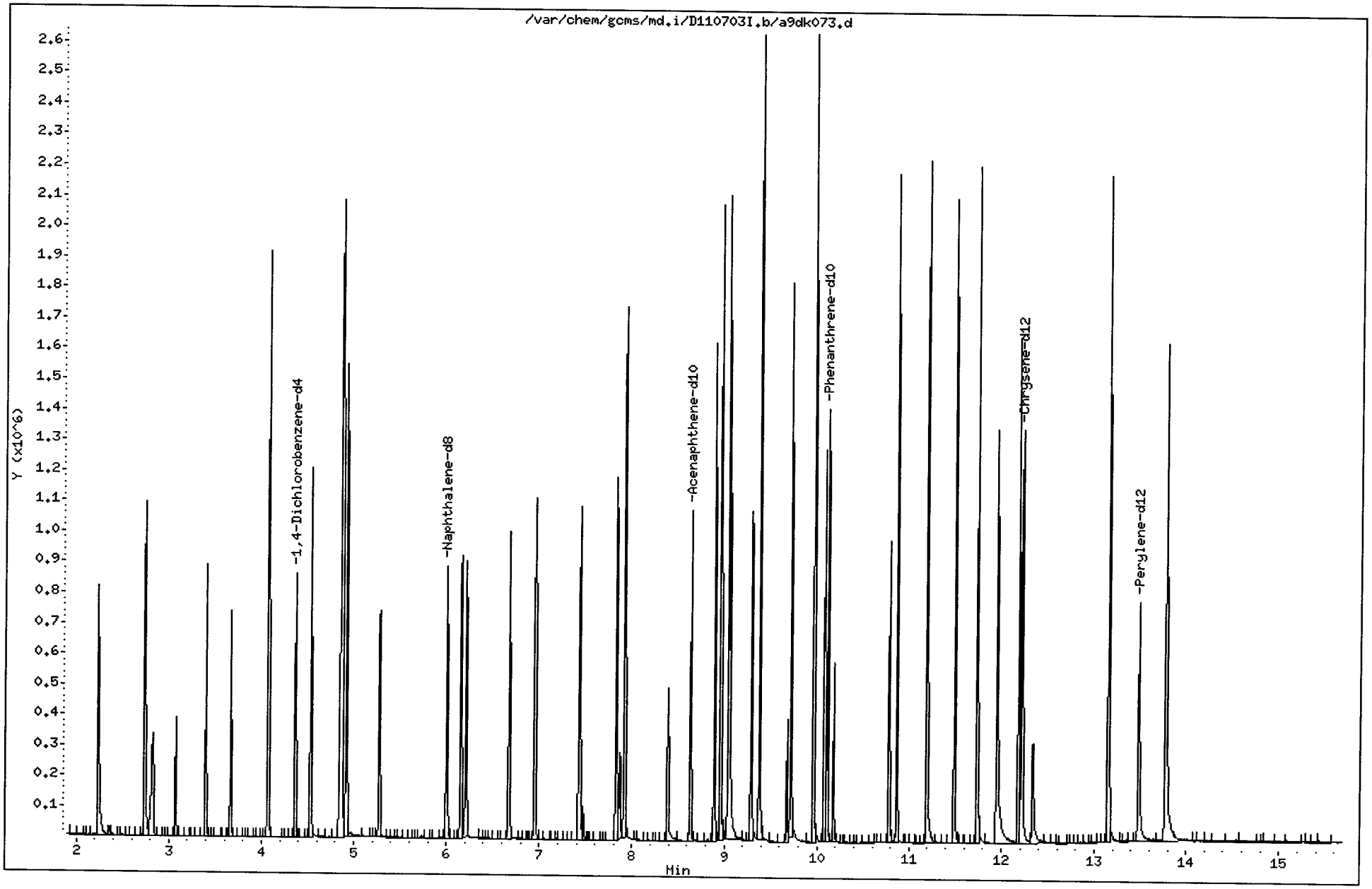
Data File: /var/chem/gcms/md.i/D110703I.b/a9dk073.d
Report Date: 11-Nov-2003 16:50

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)
93 n-nitrosopyrrolidine	100	4.846	4.857	(1.110)	157892	40.0000	39.8
94 n-nitrosomorpholine	56	4.869	4.887	(1.116)	180111	40.0000	40.4
95 o-toluidine	106	4.916	4.928	(1.127)	483071	40.0000	40.3
96 n-nitrosopiperidine	42	5.269	5.280	(0.878)	229655	40.0000	40.8
97 2,6-dichlorophenol	162	6.156	6.156	(1.025)	244188	40.0000	39.5
98 hexachloropropene	213	6.209	6.214	(1.034)	158531	40.0000	40.0
99 N-nitro-di-n-butylamine	84	6.673	6.685	(1.112)	174549	40.0000	40.5
100 Isosafrole	162	6.955	6.955	(1.159)	252067	40.0000	40.6
101 1,2,4,5-tetrachlorobenzene	216	7.431	7.437	(1.238)	274209	40.0000	40.9
102 safrole	162	7.824	7.830	(0.905)	268083	40.0000	40.0
103 1-chloronaphthalene	162	7.918	7.924	(0.916)	643007	40.0000	40.9
104 m-dinitrobenzene	76	8.394	8.394	(0.971)	67132	40.0000	40.0
105 pentachlorobenzene	250	8.894	8.894	(1.029)	241645	40.0000	40.7
106 1-naphthylamine	143	8.958	8.964	(1.037)	711710	40.0000	40.6
107 2-naphthylamine	143	9.041	9.046	(1.046)	780141	40.0000	41.2
108 2,3,4,6-tetrachlorophenol	232	9.058	9.064	(1.048)	137433	40.0000	40.0
109 5-nitro-o-toluidine	152	9.293	9.299	(1.075)	200557	40.0000	39.8
110 diphenylamine	169	9.381	9.387	(1.086)	626918	40.0000	41.3
111 1,3,5-trinitrobenzene	75	9.675	9.681	(0.957)	70611	40.0000	40.0
112 phenacetin	108	9.716	9.728	(0.961)	331651	40.0000	41.2
113 4-aminobiphenyl	169	9.963	9.969	(0.985)	813138	40.0000	40.7
114 pentachloronitrobenzene	237	10.075	10.081	(0.996)	66423	40.0000	40.5
115 Dinoseb	211	10.181	10.180	(1.007)	84808	40.0000	40.0
178 N-Nitroquinoline-n-oxide	174	10.780	10.786	(1.066)	39708	40.0000	42.9
177 Methapyrilene HCL	97	10.862	10.868	(1.074)	321043	40.0000	41.4
84 Benzidine	184	11.191	11.197	(1.107)	831956	40.0000	40.5
116 p-(dimethylamino)azobenzene	120	11.491	11.497	(1.137)	310148	40.0000	41.1
117 o-tolidine	212	11.738	11.738	(1.161)	735036	40.0000	40.6
119 7,12-dimethylbenz(a)anthracen	256	13.154	13.154	(1.076)	481194	40.0000	40.1
118 2-acetylaminofluorene	181	11.949	11.955	(0.978)	435115	40.0000	40.0
120 3-methylcholanthrene	268	13.776	13.782	(1.022)	494004	40.0000	39.9

Data File: /var/chem/gcms/md.i/D110703I.b/a9dk073.d
Date : 07-NOV-2003 14:13
Client ID: VSTD040
Sample Info: A9DK073,,1,3,,VSTD040,
Volume Injected (uL): 1.0
Column phase: ZB-5

Instrument: md.i

Operator: 7126
Column diameter: 0.25



Data File: /var/chem/gcms/md.i/D110703I.b/a9dk074.d
Report Date: 11-Nov-2003 16:50

STL Knoxville

SW-846 Method 8270C

Data file : /var/chem/gcms/md.i/D110703I.b/a9dk074.d
Lab Smp Id: A9DK074 Client Smp ID: VSTD060
Inj Date : 07-NOV-2003 13:49
Operator : 7126 Inst ID: md.i
Smp Info : A9DK074,,1,4,,VSTD060,
Misc Info : D110703I,8270a9,appdx9.sub
Comment : Semivolatile Organic Compounds by GC/MS
Method : /var/chem/gcms/md.i/D110703I.b/8270a9.m
Meth Date : 11-Nov-2003 16:49 wilesd Quant Type: ISTD
Cal Date : 07-NOV-2003 13:49 Cal File: a9dk074.d
Als bottle: 12 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: appdx9.sub
Target Version: 3.50

Concentration Formula: Amt * DF * (Vt*Sf)/(Vo*Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Sf	1.00000	Prep split factor
Vo	1.00000	Volume of sample extracted (1=total samp
Uf	1000.00000	unit correction factor

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)
* 1 1,4-Dichlorobenzene-d4	152	4.364	4.364	(1.000)	136526	20.0000	
* 2 Naphthalene-d8	136	6.003	6.003	(1.000)	507418	20.0000	
* 3 Acenaphthene-d10	164	8.641	8.641	(1.000)	280207	20.0000	
* 4 Phenanthrene-d10	188	10.116	10.116	(1.000)	501631	20.0000	
* 5 Chrysene-d12	240	12.219	12.219	(1.000)	497734	20.0000	
* 6 Perylene-d12	264	13.477	13.477	(1.000)	342280	20.0000	
176 2-Picoline	93	2.730	2.730	(0.626)	501146	60.0000	60.0
86 N-nitrosomethylethylamine	42	2.824	2.824	(0.647)	290729	60.0000	60.0
87 Methyl methanosulfonate	80	3.071	3.077	(0.704)	152350	60.0000	60.0
88 N-nitrosodiethylamine	102	3.400	3.400	(0.779)	238317	60.0000	60.0
89 Ethyl methanosulfonate	79	3.670	3.670	(0.841)	333151	60.0000	60.0
90 Pentachloroethane	167	4.082	4.082	(0.935)	192172	60.0000	60.0
91 acetophenone	105	4.863	4.863	(1.114)	627134	60.0000	60.0
92 m-cresol	108	4.869	4.875	(1.116)	436765	60.0000	60.0

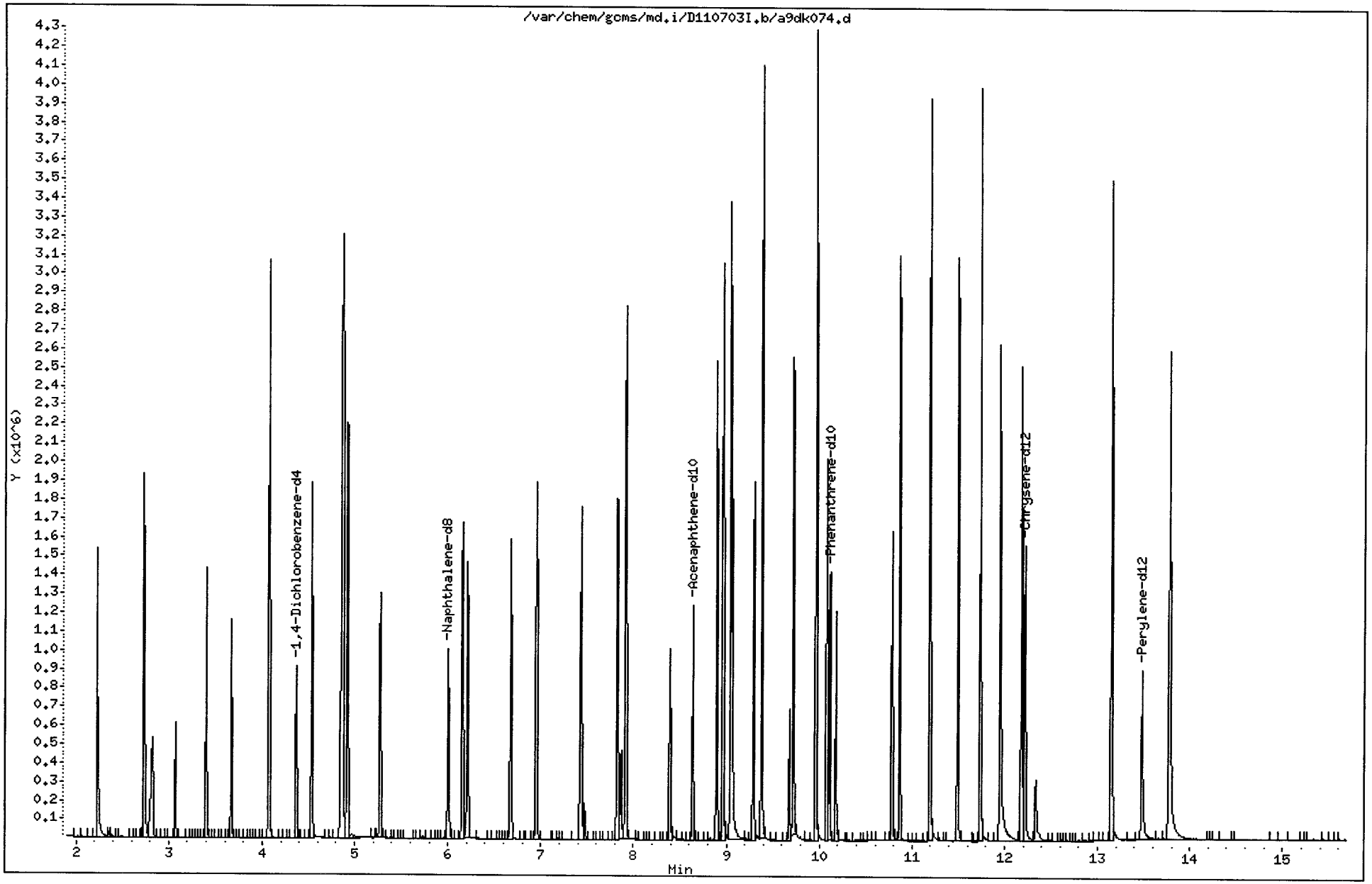
Data File: /var/chem/gcms/md.i/D110703I.b/a9dk074.d
Report Date: 11-Nov-2003 16:50

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)
93 n-nitrosopyrrolidine	100	4.851	4.857	(1.112)	257720	60.0000	60.0
94 n-nitrosomorpholine	56	4.875	4.887	(1.117)	285425	60.0000	60.0
95 o-toluidine	106	4.922	4.928	(1.128)	768957	60.0000	60.0
96 n-nitrosopiperidine	42	5.274	5.280	(0.879)	367330	60.0000	60.0
97 2,6-dichlorophenol	162	6.156	6.156	(1.025)	416573	60.0000	60.0
98 hexachloropropene	213	6.209	6.214	(1.034)	264725	60.0000	60.0
99 N-nitro-di-n-butylamine	84	6.679	6.685	(1.113)	284402	60.0000	60.0
100 Isosafrole	162	6.955	6.955	(1.159)	408431	60.0000	60.0
101 1,2,4,5-tetrachlorobenzene	216	7.437	7.437	(1.239)	437144	60.0000	60.0
102 safrole	162	7.830	7.830	(0.906)	442086	60.0000	60.0
103 1-chloronaphthalene	162	7.918	7.924	(0.916)	1012637	60.0000	60.0
104 m-dinitrobenzene	76	8.394	8.394	(0.971)	123163	60.0000	60.0
105 pentachlorobenzene	250	8.894	8.894	(1.029)	383715	60.0000	60.0
106 1-naphthylamine	143	8.958	8.964	(1.037)	1139769	60.0000	60.0
107 2-naphthylamine	143	9.041	9.046	(1.046)	1211648	60.0000	60.0
108 2,3,4,6-tetrachlorophenol	232	9.058	9.064	(1.048)	231934	60.0000	60.0
109 5-nitro-o-toluidine	152	9.293	9.299	(1.075)	334477	60.0000	60.0
110 diphenylamine	169	9.381	9.387	(1.086)	968839	60.0000	60.0
111 1,3,5-trinitrobenzene	75	9.675	9.681	(0.956)	136725	60.0000	60.0
112 phenacetin	108	9.716	9.728	(0.960)	518709	60.0000	60.0
113 4-aminobiphenyl	169	9.963	9.969	(0.985)	1303752	60.0000	60.0
114 pentachloronitrobenzene	237	10.081	10.081	(0.996)	107440	60.0000	60.0
115 Dinoseb	211	10.181	10.180	(1.006)	167051	60.0000	60.0
178 N-Nitroquinoline-n-oxide	174	10.780	10.786	(1.066)	56765	60.0000	60.0
177 Methapyrilene HCL	97	10.862	10.868	(1.074)	495557	60.0000	60.0
84 Benzidine	184	11.191	11.197	(1.106)	1345060	60.0000	60.0
116 p-(dimethylamino)azobenzene	120	11.491	11.497	(1.136)	486573	60.0000	60.0
117 o-tolidine	212	11.738	11.738	(1.160)	1180518	60.0000	60.0
119 7,12-dimethylbenz(a)anthracen	256	13.154	13.154	(1.076)	784694	60.0000	60.0
118 2-acetylaminofluorene	181	11.949	11.955	(0.978)	748847	60.0000	60.0
120 3-methylcholanthrene	268	13.776	13.782	(1.022)	832821	60.0000	60.0

Data File: /var/chem/gcms/md.i/D110703I.b/a9dk074.d
Date : 07-NOV-2003 13:49
Client ID: VSTD060
Sample Info: A9DK074,,1,4,,VSTD060,
Volume Injected (uL): 1.0
Column phase: ZB-5

Instrument: md.i

Operator: 7126
Column diameter: 0.25



Data File: /var/chem/gcms/md.i/D110703I.b/a9dk075.d
Report Date: 11-Nov-2003 16:50

STL Knoxville

SW-846 Method 8270C

Data file : /var/chem/gcms/md.i/D110703I.b/a9dk075.d
Lab Smp Id: A9DK075 Client Smp ID: VSTD120
Inj Date : 07-NOV-2003 13:25
Operator : 7126 Inst ID: md.i
Smp Info : A9DK075,,1,5,,VSTD120,
Misc Info : D110703I,8270a9,appdx9.sub
Comment : Semivolatile Organic Compounds by GC/MS
Method : /var/chem/gcms/md.i/D110703I.b/8270a9.m
Meth Date : 11-Nov-2003 16:49 wilesd Quant Type: ISTD
Cal Date : 07-NOV-2003 13:25 Cal File: a9dk075.d
Als bottle: 11 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: appdx9.sub
Target Version: 3.50

Concentration Formula: Amt * DF * (Vt*Sf)/(Vo*Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Sf	1.00000	Prep split factor
Vo	1.00000	Volume of sample extracted (1=total samp
Uf	1000.00000	unit correction factor

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	ON-COL (ng/uL)
* 1 1,4-Dichlorobenzene-d4	152	4.364	4.364	(1.000)	133130	20.0000	
* 2 Naphthalene-d8	136	6.003	6.003	(1.000)	497979	20.0000	
* 3 Acenaphthene-d10	164	8.641	8.641	(1.000)	277937	20.0000	
* 4 Phenanthrene-d10	188	10.116	10.116	(1.000)	486699	20.0000	
* 5 Chrysene-d12	240	12.219	12.219	(1.000)	503113	20.0000	
* 6 Perylene-d12	264	13.477	13.477	(1.000)	344541	20.0000	
176 2-Picoline	93	2.730	2.730	(0.626)	948178	120.000	115
86 N-nitrosomethylethylamine	42	2.824	2.824	(0.647)	572732	120.000	119
87 Methyl methanosulfonate	80	3.071	3.077	(0.704)	303443	120.000	121
88 N-nitrosodiethylamine	102	3.400	3.400	(0.779)	463091	120.000	118
89 Ethyl methanosulfonate	79	3.670	3.670	(0.841)	635516	120.000	118
90 Pentachloroethane	167	4.082	4.082	(0.935)	363966	120.000	116
91 acetophenone	105	4.863	4.863	(1.114)	1157021	120.000	114
92 m-cresol	108	4.875	4.875	(1.117)	846527	120.000	129

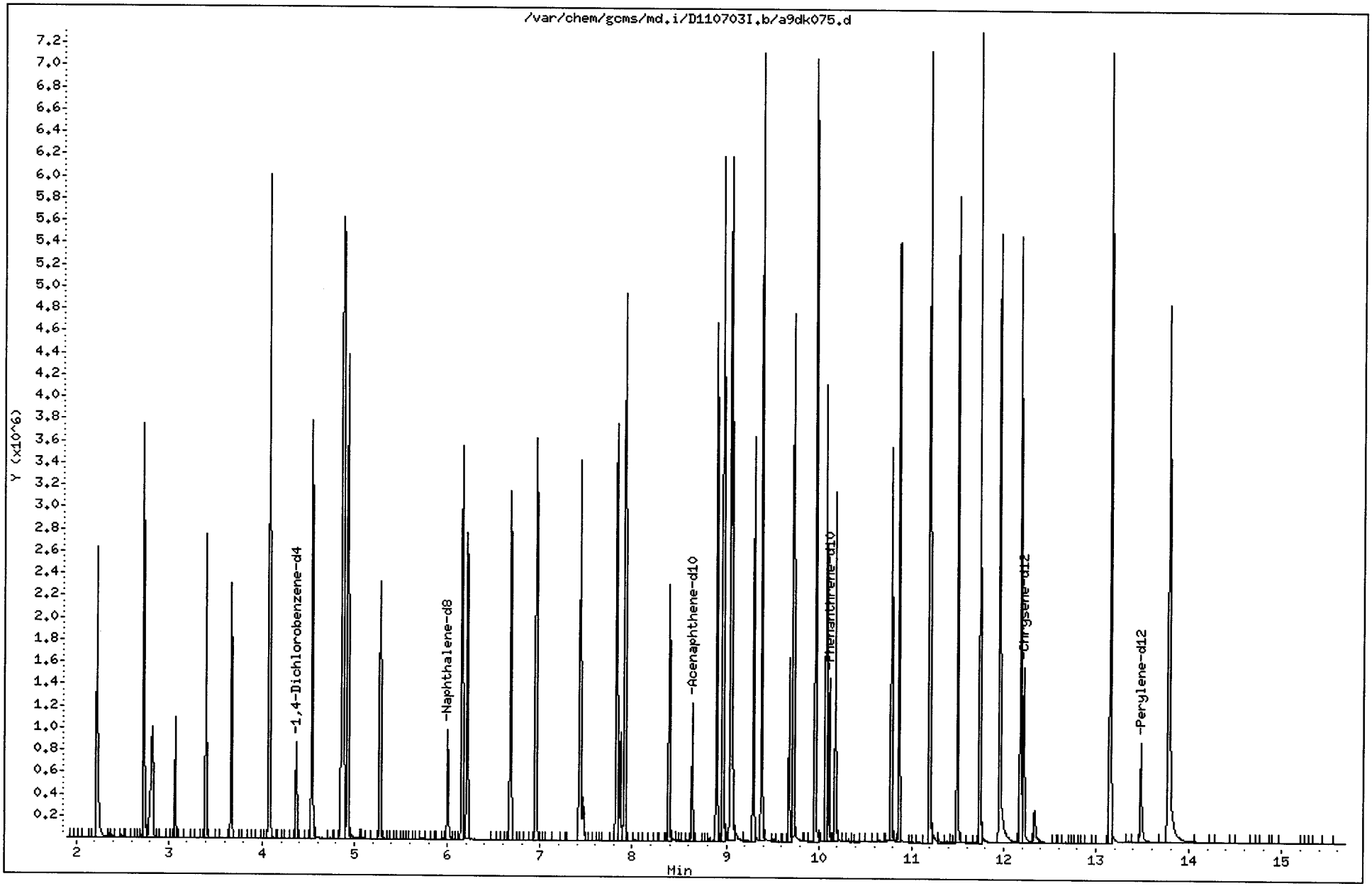
Data File: /var/chem/gcms/md.i/D110703I.b/a9dk075.d
Report Date: 11-Nov-2003 16:50

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)
93 n-nitrosopyrrolidine	100	4.857	4.857	(1.113)	493627	120.000	123
94 n-nitrosomorpholine	56	4.881	4.887	(1.118)	542079	120.000	118
95 o-toluidine	106	4.922	4.928	(1.128)	1470519	120.000	119
96 n-nitrosopiperidine	42	5.280	5.280	(0.880)	721481	120.000	121
97 2,6-dichlorophenol	162	6.156	6.156	(1.025)	849182	120.000	133
98 hexachloropropene	213	6.209	6.214	(1.034)	529713	120.000	125
99 N-nitro-di-n-butylamine	84	6.679	6.685	(1.113)	561571	120.000	124
100 Isosafrole	162	6.955	6.955	(1.159)	800498	120.000	122
101 1,2,4,5-tetrachlorobenzene	216	7.437	7.437	(1.239)	854979	120.000	119
102 safrole	162	7.830	7.830	(0.906)	874126	120.000	124
103 1-chloronaphthalene	162	7.918	7.924	(0.916)	1884950	120.000	112
104 m-dinitrobenzene	76	8.394	8.394	(0.971)	263814	120.000	121
105 pentachlorobenzene	250	8.894	8.894	(1.029)	732407	120.000	114
106 1-naphthylamine	143	8.964	8.964	(1.037)	2158573	120.000	118
107 2-naphthylamine	143	9.047	9.046	(1.047)	2199615	120.000	109
108 2,3,4,6-tetrachlorophenol	232	9.064	9.064	(1.049)	477305	120.000	120
109 5-nitro-o-toluidine	152	9.293	9.299	(1.075)	672283	120.000	130
110 diphenylamine	169	9.381	9.387	(1.086)	1799904	120.000	112
111 1,3,5-trinitrobenzene	75	9.681	9.681	(0.957)	338694	120.000	127
112 phenacetin	108	9.722	9.728	(0.961)	1027339	120.000	124
113 4-aminobiphenyl	169	9.963	9.969	(0.985)	2420363	120.000	115
114 pentachloronitrobenzene	237	10.081	10.081	(0.996)	209011	120.000	122
115 Dinoseb	211	10.181	10.180	(1.006)	416693	120.000	127
178 N-Nitroquinoline-n-oxide	174	10.786	10.786	(1.066)	82913	120.000	92.3
177 Methapyrilene HCL	97	10.868	10.868	(1.074)	956410	120.000	120
84 Benzidine	184	11.191	11.197	(1.106)	2495865	120.000	120
116 p-(dimethylamino)azobenzene	120	11.497	11.497	(1.136)	915837	120.000	118
117 o-tolidine	212	11.738	11.738	(1.160)	2238539	120.000	121
119 7,12-dimethylbenz(a)anthracen	256	13.154	13.154	(1.076)	1504166	120.000	118
118 2-acetylaminofluorene	181	11.955	11.955	(0.978)	1527157	120.000	119
120 3-methylcholanthrene	268	13.776	13.782	(1.022)	1669945	120.000	127

Data File: /var/chem/gcms/md.i/D110703I.b/a9dk075.d
Date : 07-NOV-2003 13:25
Client ID: VSTD120
Sample Info: A9DK075,,1,5,,VSTD120,
Volume Injected (uL): 1.0
Column phase: ZB-5

Instrument: md.i

Operator: 7126
Column diameter: 0.25



Data File: /var/chem/gcms/md.i/D110703I.b/a9dk076.d
Report Date: 11-Nov-2003 16:50

STL Knoxville

SW-846 Method 8270C

Data file : /var/chem/gcms/md.i/D110703I.b/a9dk076.d
Lab Smp Id: A9DK076 Client Smp ID: VSTD160
Inj Date : 07-NOV-2003 13:02
Operator : 7126 Inst ID: md.i
Smp Info : A9DK076,,1,6,,VSTD160,
Misc Info : D110703I,8270a9,appdx9.sub
Comment : Semivolatile Organic Compounds by GC/MS
Method : /var/chem/gcms/md.i/D110703I.b/8270a9.m
Meth Date : 11-Nov-2003 16:49 wilesd Quant Type: ISTD
Cal Date : 07-NOV-2003 13:02 Cal File: a9dk076.d
Als bottle: 10 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: appdx9.sub
Target Version: 3.50

Concentration Formula: Amt * DF * (Vt*Sf)/(Vo*Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Sf	1.00000	Prep split factor
Vo	1.00000	Volume of sample extracted (1=total samp
Uf	1000.00000	unit correction factor

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)
* 1 1,4-Dichlorobenzene-d4	152	4.364	4.364	(1.000)	135283	20.0000	
* 2 Naphthalene-d8	136	6.003	6.003	(1.000)	501972	20.0000	
* 3 Acenaphthene-d10	164	8.641	8.641	(1.000)	280854	20.0000	
* 4 Phenanthrene-d10	188	10.116	10.116	(1.000)	495855	20.0000	
* 5 Chrysene-d12	240	12.219	12.219	(1.000)	503616	20.0000	
* 6 Perylene-d12	264	13.477	13.477	(1.000)	334833	20.0000	
176 2-Picoline	93	2.730	2.730	(0.626)	1214501	160.000	148
86 N-nitrosomethylethylamine	42	2.824	2.824	(0.647)	749081	160.000	154
87 Methyl methanosulfonate	80	3.077	3.077	(0.705)	390767	160.000	155
88 N-nitrosodiethylamine	102	3.400	3.400	(0.779)	598035	160.000	152
89 Ethyl methanosulfonate	79	3.670	3.670	(0.841)	832755	160.000	154
90 Pentachloroethane	167	4.082	4.082	(0.935)	456194	160.000	146
91 acetophenone	105	4.863	4.863	(1.114)	1473901	160.000	146
92 m-cresol	108	4.875	4.875	(1.117)	1079764	160.000	162(A)

Data File: /var/chem/gcms/md.i/D110703I.b/a9dk076.d
Report Date: 11-Nov-2003 16:50

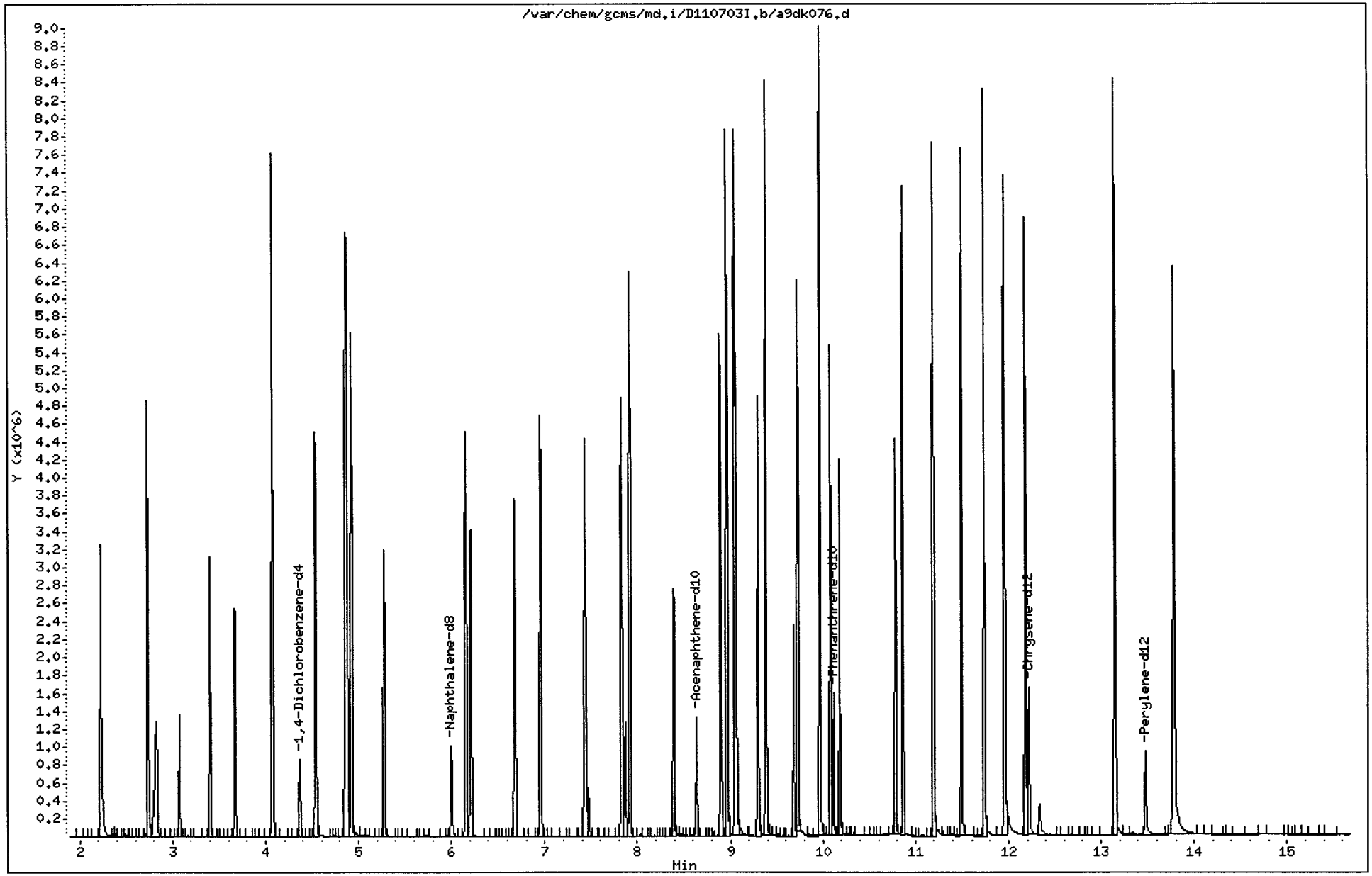
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)
93 n-nitrosopyrrolidine	100	4.857	4.857	(1.113)	627540	160.000	155
94 n-nitrosomorpholine	56	4.887	4.887	(1.120)	704601	160.000	153
95 o-toluidine	106	4.928	4.928	(1.129)	1879212	160.000	151
96 n-nitrosopiperidine	42	5.280	5.280	(0.880)	941802	160.000	157
97 2,6-dichlorophenol	162	6.156	6.156	(1.025)	1118960	160.000	171(A)
98 hexachloropropene	213	6.214	6.214	(1.035)	691027	160.000	162(A)
99 N-nitro-di-n-butylamine	84	6.685	6.685	(1.114)	734035	160.000	161(A)
100 Isosafrole	162	6.955	6.955	(1.159)	1031987	160.000	157
101 1,2,4,5-tetrachlorobenzene	216	7.437	7.437	(1.239)	1116862	160.000	156
102 safrole	162	7.830	7.830	(0.906)	1159958	160.000	163(A)
103 1-chloronaphthalene	162	7.924	7.924	(0.917)	2416019	160.000	146
104 m-dinitrobenzene	76	8.394	8.394	(0.971)	354938	160.000	159
105 pentachlorobenzene	250	8.894	8.894	(1.029)	929138	160.000	147
106 1-naphthylamine	143	8.964	8.964	(1.037)	2802747	160.000	153
107 2-naphthylamine	143	9.046	9.046	(1.047)	2798877	160.000	141
108 2,3,4,6-tetrachlorophenol	232	9.064	9.064	(1.049)	632193	160.000	158
109 5-nitro-o-toluidine	152	9.299	9.299	(1.076)	883893	160.000	167(A)
110 diphenylamine	169	9.387	9.387	(1.086)	2292603	160.000	145
111 1,3,5-trinitrobenzene	75	9.681	9.681	(0.957)	454374	160.000	162(A)
112 phenacetin	108	9.728	9.728	(0.962)	1288066	160.000	154
113 4-aminobiphenyl	169	9.969	9.969	(0.985)	3036850	160.000	145
114 pentachloronitrobenzene	237	10.081	10.081	(0.996)	270320	160.000	156
115 Dinoseb	211	10.180	10.180	(1.006)	572794	160.000	164(A)
178 N-Nitroquinoline-n-oxide	174	10.786	10.786	(1.066)	92739	160.000	109
177 Methapyrilene HCL	97	10.868	10.868	(1.074)	1200185	160.000	150
84 Benzidine	184	11.197	11.197	(1.107)	3066482	160.000	148
116 p-(dimethylamino)azobenzene	120	11.497	11.497	(1.136)	1143716	160.000	148
117 o-tolidine	212	11.738	11.738	(1.160)	2637391	160.000	143
119 7,12-dimethylbenz(a)anthracen	256	13.154	13.154	(1.076)	1881404	160.000	150
118 2-acetylaminofluorene	181	11.955	11.955	(0.978)	1923868	160.000	156
120 3-methylcholanthrene	268	13.782	13.782	(1.023)	2132771	160.000	165(A)

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.

Data File: /var/chem/gcms/md.i/D110703I.b/a9dk076.d
Date : 07-NOV-2003 13:02
Client ID: VSTD160
Sample Info: A9DK076,,1,6,,VSTD160,
Volume Injected (uL): 1.0
Column phase: ZB-5

Instrument: md.i
Operator: 7126
Column diameter: 0.25



Data File: /var/chem/gcms/md.i/D110703I.b/icvdk07.d
Report Date: 11-Nov-2003 17:28

STL Knoxville

SW-846 Method 8270C

Data file : /var/chem/gcms/md.i/D110703I.b/icvdk07.d
Lab Smp Id: ICVDK07 Client Smp ID: SECOND SOURCE 8270
Inj Date : 07-NOV-2003 12:38
Operator : 7126 Inst ID: md.i
Smp Info : ICVDK07,,3,,,SECOND SOURCE,
Misc Info : D110703I,8270a9,8270dxnC13.sub
Comment : Semivolatile Organic Compounds by GC/MS
Method : /var/chem/gcms/md.i/D110703I.b/8270a9.m
Meth Date : 11-Nov-2003 17:24 wilesd Quant Type: ISTD
Cal Date : 07-NOV-2003 13:49 Cal File: a9dk074.d
Als bottle: 9 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8270dxnC13.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * (Vt*Sf)/(Vo*Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Sf	1.00000	Prep split factor
Vo	1.00000	Volume of sample extracted (1=total samp
Uf	1000.00000	unit correction factor

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/uL)	FINAL (ug)
* 1 1,4-Dichlorobenzene-d4	152	4.364	4.369	(1.000)	138962	20.0000	
* 2 Naphthalene-d8	136	6.003	6.003	(1.000)	506966	20.0000	
* 3 Acenaphthene-d10	164	8.641	8.641	(1.000)	280485	20.0000	
* 4 Phenanthrene-d10	188	10.110	10.116	(1.000)	495714	20.0000	
* 5 Chrysene-d12	240	12.219	12.219	(1.000)	506260	20.0000	
* 6 Perylene-d12	264	13.477	13.476	(1.000)	364294	20.0000	
$ 7 2-Fluorophenol	112	3.194	3.194	(0.732)	275888	30.2748	30.3(R)
$ 8 Phenol-d5	99	4.029	4.034	(0.923)	295450	29.5498	29.5(R)
$ 9 Nitrobenzene-d5	82	5.057	5.057	(0.842)	443452	57.1321	57.1
$ 10 2-Fluorobiphenyl	172	7.748	7.748	(0.897)	1057781	56.8984	56.9
$ 11 2,4,6-Tribromophenol	330	9.505	9.505	(0.940)	68487	30.0401	30.0(R)
$ 12 Terphenyl-d14	244	11.379	11.379	(0.931)	1249489	59.6400	59.6
$ 172 13C3-1,2,3-naphthalene	131	6.032	6.032	(1.005)	1625613	59.9976	60.0

Data File: /var/chem/gcms/md.i/D110703I.b/icvdk07.d
Report Date: 11-Nov-2003 17:28

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/uL)	FINAL (ug)
175 1,4-Dioxane	88	1.996	1.996	(0.457)	157143	51.2182	51.2
13 N-Nitrosodimethylamine	74	2.254	2.254	(0.517)	261449	57.1707	57.2
14 Pyridine	79	2.248	2.248	(0.515)	468190	53.3039	53.3
15 Phenol (ccc)	94	4.040	4.046	(0.926)	593406	63.0909	63.1
16 Aniline	93	4.070	4.076	(0.933)	779422	53.9398	53.9
17 Bis(2-chloroethyl)ether	93	4.123	4.128	(0.945)	454534	58.5393	58.5
18 2-Chlorophenol	128	4.187	4.187	(0.960)	532325	58.9577	59.0
19 1,3-Dichlorobenzene	146	4.328	4.328	(0.992)	604528	58.5562	58.6
20 1,4-Dichlorobenzene (ccc)	146	4.381	4.381	(1.004)	628145	60.9482	60.9
21 Benzyl alcohol	108	4.534	4.534	(1.039)	330861	60.2765	60.3
22 1,2-Dichlorobenzene	146	4.593	4.593	(1.052)	587102	59.4929	59.5
23 2-Methylphenol	108	4.681	4.681	(1.073)	463134	60.9303	60.9
24 2,2'-Oxybis(1-Chloropropane)	45	4.722	4.722	(1.082)	867993	58.2343	58.2
25 4-Methylphenol	108	4.863	4.863	(1.114)	492058	63.0627	63.1
26 3&4 Methylphenol	108	4.863	4.863	(1.114)	492058	63.0627	63.1
27 N-Nitroso-di-n-propylamine###	70	4.892	4.898	(1.121)	307339	59.8646	59.9
28 Hexachloroethane	117	4.975	4.975	(1.140)	216944	60.6583	60.6
29 Nitrobenzene	77	5.080	5.080	(0.846)	421662	57.6692	57.7
30 Isophorone	82	5.392	5.392	(0.898)	879106	60.1245	60.1
31 2-Nitrophenol (ccc)	139	5.509	5.509	(0.918)	262980	59.2592	59.2
32 2,4-Dimethyphenol	107	5.574	5.574	(0.929)	487407	61.2164	61.2
33 Bis(2-chloroethoxy)methane	93	5.709	5.709	(0.951)	550921	58.5782	58.6
34 Benzoic acid	122	5.715	5.715	(0.952)	253485	57.4743	57.5
35 2,4-Dichlorophenol (ccc)	162	5.827	5.832	(0.971)	438353	62.6700	62.7
36 1,2,4-Trichlorobenzene	180	5.950	5.950	(0.991)	492974	60.5766	60.6
37 Naphthalene	128	6.032	6.032	(1.005)	1498724	54.2503	54.2
38 4-Chloroaniline	127	6.144	6.150	(1.023)	760603	57.8720	57.9
39 Hexachlorobutadiene (ccc)	225	6.308	6.308	(1.051)	253937	59.8621	59.9
40 4-Chloro-3-methylphenol (ccc)	107	6.878	6.878	(1.146)	384124	62.2647	62.3
41 2-Methylnaphthalene	142	7.060	7.060	(1.176)	1093266	60.9294	60.9
42 Hexachlorocyclopentadiene####	237	7.484	7.483	(0.866)	246912	59.0990	59.1
43 2,4,6-Trichlorophenol (ccc)	196	7.613	7.613	(0.881)	295224	62.7957	62.8
44 2,4,5-Trichlorphenol	196	7.672	7.671	(0.888)	324955	59.5617	59.6
45 2-Chloronaphthalene	162	7.871	7.871	(0.911)	1014735	59.9605	60.0
46 2-Nitroaniline	65	8.083	8.083	(0.935)	273494	58.4814	58.5
47 Acenaphthylene	152	8.447	8.447	(0.978)	1663571	56.5183	56.5
48 Dimethyl phthalate	163	8.400	8.400	(0.972)	1104798	59.4654	59.5
49 2,6-Dinitrotoluene	165	8.471	8.470	(0.980)	247765	61.8202	61.8
50 3-Nitroaniline	138	8.629	8.629	(0.999)	360118	59.7784	59.8
51 Acenaphthene (ccc)	153	8.676	8.676	(1.004)	1026396	54.7427	54.7
52 2,4-Dinitrophenol ##spcc##	184	8.747	8.747	(1.012)	76843	47.6481	47.6
53 Dibenzofuran	168	8.864	8.864	(1.026)	1412963	59.9935	60.0
54 4-Nitrophenol ##spcc##	109	8.858	8.858	(1.025)	117690	58.6868	58.7
55 2,4-Dinitrotoluene	165	8.929	8.929	(1.033)	330661	60.5230	60.5(M)
56 Fluorene	166	9.240	9.240	(1.069)	1140686	55.7261	55.7
57 4-Chlorophenyl phenyl ether	204	9.252	9.258	(1.071)	520994	59.2589	59.2
58 Diethyl phthalate	149	9.217	9.217	(1.067)	1080785	58.3899	58.4

Data File: /var/chem/gcms/md.i/D110703I.b/icvdk07.d
Report Date: 11-Nov-2003 17:28

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/uL)	FINAL (ug)
59 4-Nitroaniline	138	9.311	9.311	(1.077)	382235	58.5534	58.6
60 4,6-Dinitro-2-methylphenol	198	9.352	9.352	(0.925)	162512	54.7303	54.7
61 N-Ndpa / diphenylamine (ccc)	169	9.381	9.381	(0.928)	816983	63.5450	63.5
62 1,2-Diphenylhydrazine/azobnz	77	9.411	9.411	(0.931)	1045357	59.2925	59.3
63 4-Bromophenyl phenyl ether	248	9.722	9.722	(0.962)	261532	59.0775	59.1
64 Hexachlorobenzene	284	9.851	9.851	(0.974)	318393	60.7240	60.7
65 Pentachlorophenol (ccc)	266	10.010	10.010	(0.990)	194671	59.5957	59.6
66 Phenanthrene	178	10.133	10.133	(1.002)	1725766	55.9736	56.0
67 Anthracene	178	10.169	10.169	(1.006)	1706452	55.4449	55.4
68 Carbazole	167	10.316	10.315	(1.020)	1848217	59.5790	59.6
69 Di-n-butyl phthalate	149	10.639	10.639	(1.052)	1885802	61.9985	62.0
70 Fluoranthene (ccc)	202	11.091	11.097	(1.097)	1829145	56.4260	56.4
71 Pyrene	202	11.267	11.267	(0.922)	1933438	55.9261	55.9
72 Butyl benzyl phthalate	149	11.755	11.755	(0.962)	909022	60.1040	60.1
73 Benzo(a)Anthracene	228	12.207	12.207	(0.999)	1663086	56.2950	56.3
74 3,3'-Dichlorobenzidine	252	12.184	12.184	(0.997)	633758	59.5905	59.6
75 Chrysene	228	12.243	12.243	(1.002)	1610398	55.7269	55.7
76 Bis(2-ethylhexyl) phthalate	149	12.243	12.243	(1.002)	1110483	63.2734	63.3
77 Di-n-octyl phthalate (ccc)	149	12.783	12.783	(0.949)	2012678	62.6093	62.6
78 Benzo(b)fluoranthene	252	13.148	13.147	(0.976)	1641770	54.1999	54.2
79 Benzo(k)fluoranthene	252	13.165	13.165	(0.977)	2068043	57.4594	57.4
85 Benzo(e)pyrene	252	13.388	13.388	(0.993)	1653034	60.3446	60.3
80 Benzo(a)pyrene (ccc)	252	13.430	13.429	(0.996)	1706805	57.1077	57.1
81 Indeno(1,2,3-cd)pyrene	276	14.581	14.581	(1.082)	1794148	60.1279	60.1
82 Dibenz(a,h)anthracene	278	14.587	14.587	(1.082)	1500939	64.1607	64.2
83 Benzo(g,h,i)perylene	276	14.893	14.893	(1.105)	1497801	57.3981	57.4

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Data File: /var/chem/gcms/md.i/D110703I.b/icvdk07.d
Report Date: 11-Nov-2003 17:28

STL Knoxville

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: md.i
Lab File ID: icvdk07.d
Lab Smp Id: ICVDK07
Analysis Type: SV
Quant Type: ISTD
Operator: 7126
Method File: /var/chem/gcms/md.i/D110703I.b/8270a9.m
Misc Info: D110703I,8270a9,8270dxnC13.sub

Calibration Date: 07-NOV-2003
Calibration Time: 10:39
Client Smp ID: SECOND SOURCE 8270
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	148146	74073	296292	138962	-6.20
2 Naphthalene-d8	542780	271390	1085560	506966	-6.60
3 Acenaphthene-d10	298099	149050	596198	280485	-5.91
4 Phenanthrene-d10	526476	263238	1052952	495714	-5.84
5 Chrysene-d12	541318	270659	1082636	506260	-6.48
6 Perylene-d12	382650	191325	765300	364294	-4.80

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	4.37	3.87	4.87	4.36	-0.13
2 Naphthalene-d8	6.00	5.50	6.50	6.00	0.00
3 Acenaphthene-d10	8.64	8.14	9.14	8.64	0.00
4 Phenanthrene-d10	10.12	9.62	10.62	10.11	-0.06
5 Chrysene-d12	12.22	11.72	12.72	12.22	0.00
6 Perylene-d12	13.48	12.98	13.98	13.48	0.00

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

Data File: /var/chem/gcms/md.i/D110703I.b/icvdk07.d
Report Date: 11-Nov-2003 17:28

STL Knoxville

RECOVERY REPORT

Client Name:
Sample Matrix: GAS
Lab Smp Id: ICVDK07
Level: LOW
Data Type: MS DATA
SpikeList File: 8270ss.spk
Sublist File: 8270dxnC13.sub
Method File: /var/chem/gcms/md.i/D110703I.b/8270a9.m
Misc Info: D110703I,8270a9,8270dxnC13.sub

Client SDG: D110703I
Fraction: SV
Client Smp ID: SECOND SOURCE 8270
Operator: 7126
SampleType: BLANK
Quant Type: ISTD

SPIKE COMPOUND	CONC ADDED ug	CONC RECOVERED ug	% RECOVERED	LIMITS
$ 7 2-Fluorophenol	60.0	30.3	50.46*	65-135
$ 8 Phenol-d5	60.0	29.5	49.25*	65-135
$ 9 Nitrobenzene-d5	60.0	57.1	95.22	65-135
$ 10 2-Fluorobiphenyl	60.0	56.9	94.83	65-135
$ 11 2,4,6-Tribromophen	60.0	30.0	50.07*	65-135
$ 12 Terphenyl-d14	60.0	59.6	99.40	65-135
175 1,4-Dioxane	60.0	51.2	85.36	65-135
13 N-Nitrosodimethyla	60.0	57.2	95.28	65-135
14 Pyridine	60.0	53.3	88.84	65-135
15 Phenol (ccc)	60.0	63.1	105.15	65-135
16 Aniline	60.0	53.9	89.90	65-135
17 Bis(2-chloroethyl)	60.0	58.5	97.57	65-135
18 2-Chlorophenol	60.0	59.0	98.26	65-135
19 1,3-Dichlorobenzen	60.0	58.6	97.59	65-135
20 1,4-Dichlorobenzen	60.0	60.9	101.58	65-135
21 Benzyl alcohol	60.0	60.3	100.46	65-135
22 1,2-Dichlorobenzen	60.0	59.5	99.15	65-135
23 2-Methylphenol	60.0	60.9	101.55	65-135
24 2,2'-Oxybis(1-Chlo	60.0	58.2	97.06	65-135
25 4-Methylphenol	60.0	63.1	105.10	65-135
26 3&4 Methylphenol	60.0	63.1	105.10	65-135
27 N-Nitroso-di-n-pro	60.0	59.9	99.77	65-135
28 Hexachloroethane	60.0	60.6	101.10	65-135
29 Nitrobenzene	60.0	57.7	96.12	65-135
30 Isophorone	60.0	60.1	100.21	65-135
31 2-Nitrophenol (ccc	60.0	59.2	98.77	65-135
32 2,4-Dimethyphenol	60.0	61.2	102.03	65-135
33 Bis(2-chloroethoxy	60.0	58.6	97.63	65-135
34 Benzoic acid	60.0	57.5	95.79	65-135
35 2,4-Dichlorophenol	60.0	62.7	104.45	65-135
36 1,2,4-Trichloroben	60.0	60.6	100.96	65-135
37 Naphthalene	60.0	54.2	90.42	65-135
38 4-Chloroaniline	60.0	57.9	96.45	65-135

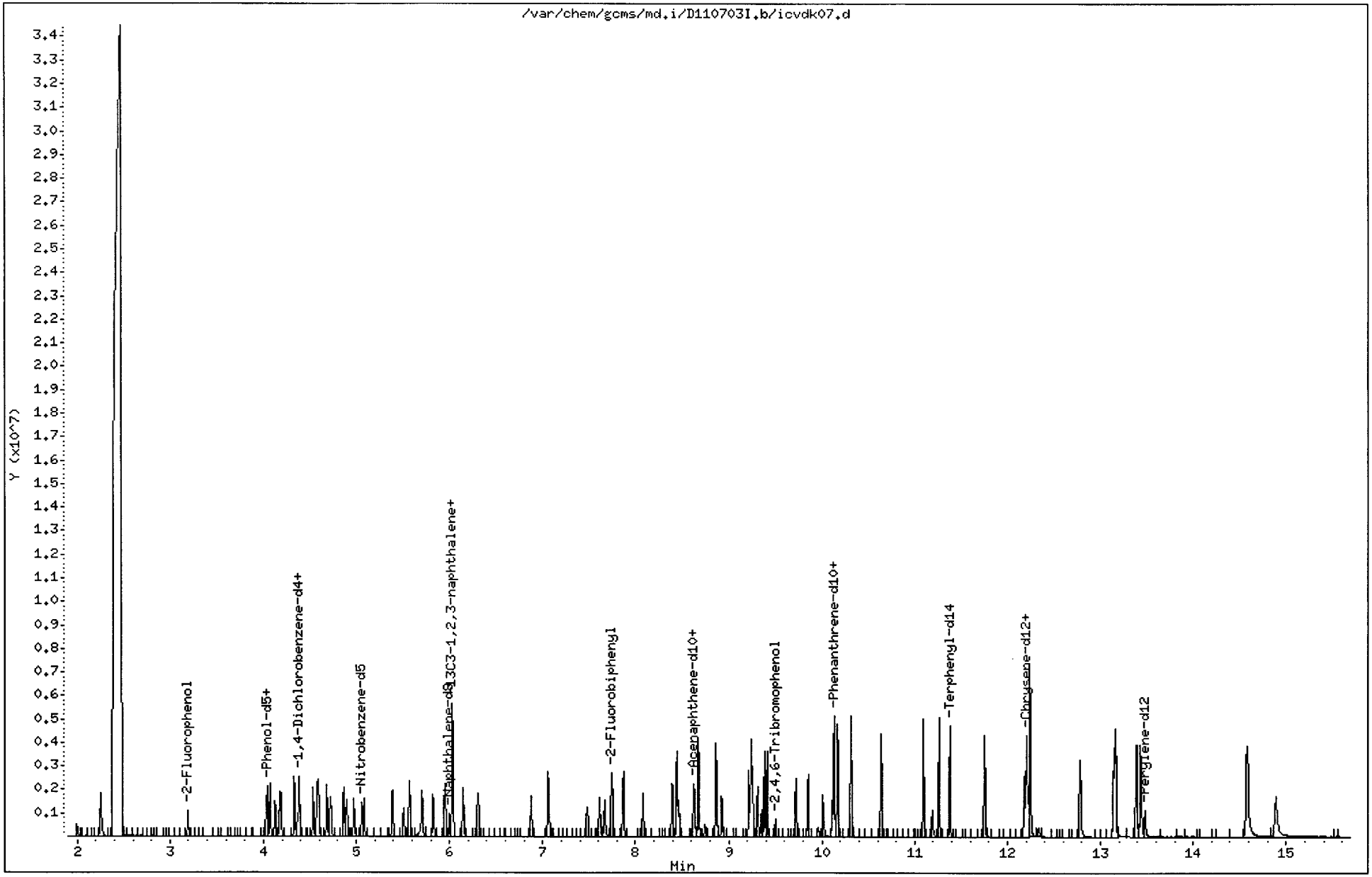
BNA085 not used for surr per MLR. error. TMW 11-11-03

Data File: /var/chem/gcms/md.i/D110703I.b/icvdk07.d
Report Date: 11-Nov-2003 17:28

SPIKE COMPOUND	CONC ADDED ug	CONC RECOVERED ug	% RECOVERED	LIMITS
39 Hexachlorobutadien	60.0	59.9	99.77	65-135
40 4-Chloro-3-methylp	60.0	62.3	103.77	65-135
41 2-Methylnaphthalen	60.0	60.9	101.55	65-135
42 Hexachlorocyclopen	60.0	59.1	98.50	65-135
43 2,4,6-Trichlorophe	60.0	62.8	104.66	65-135
44 2,4,5-Trichlorphen	60.0	59.6	99.27	65-135
45 2-Chloronaphthalen	60.0	60.0	99.93	65-135
46 2-Nitroaniline	60.0	58.5	97.47	65-135
47 Acenaphthylene	60.0	56.5	94.20	65-135
48 Dimethyl phthalate	60.0	59.5	99.11	65-135
49 2,6-Dinitrotoluene	60.0	61.8	103.03	65-135
50 3-Nitroaniline	60.0	59.8	99.63	65-135
51 Acenaphthene (ccc)	60.0	54.7	91.24	65-135
52 2,4-Dinitrophenol	60.0	47.6	79.41	65-135
53 Dibenzofuran	60.0	60.0	99.99	65-135
54 4-Nitrophenol ##sp	60.0	58.7	97.81	65-135
55 2,4-Dinitrotoluene	60.0	60.5	100.87	65-135
56 Fluorene	60.0	55.7	92.88	65-135
57 4-Chlorophenyl phe	60.0	59.2	98.76	65-135
58 Diethyl phthalate	60.0	58.4	97.32	65-135
59 4-Nitroaniline	60.0	58.6	97.59	65-135
60 4,6-Dinitro-2-meth	60.0	54.7	91.22	65-135
61 N-Ndpa / diphenyla	60.0	63.5	105.91	65-135
62 1,2-Diphenylhydraz	60.0	59.3	98.82	65-135
63 4-Bromophenyl phen	60.0	59.1	98.46	65-135
64 Hexachlorobenzene	60.0	60.7	101.21	65-135
65 Pentachlorophenol	60.0	59.6	99.33	65-135
66 Phenanthrene	60.0	56.0	93.29	65-135
67 Anthracene	60.0	55.4	92.41	65-135
68 Carbazole	60.0	59.6	99.30	65-135
69 Di-n-butyl phthala	60.0	62.0	103.33	65-135
70 Fluoranthene (ccc)	60.0	56.4	94.04	65-135
71 Pyrene	60.0	55.9	93.21	65-135
72 Butyl benzyl phtha	60.0	60.1	100.17	65-135
73 Benzo(a)Anthracene	60.0	56.3	93.83	65-135
74 3,3'-Dichlorobenzi	60.0	59.6	99.32	65-135
75 Chrysene	60.0	55.7	92.88	65-135
76 Bis(2-ethylhexyl)	60.0	63.3	105.46	65-135
77 Di-n-octyl phthala	60.0	62.6	104.35	65-135
78 Benzo(b)fluoranthe	60.0	54.2	90.33	65-135
79 Benzo(k)fluoranthe	60.0	57.4	95.77	65-135
80 Benzo(a)pyrene (cc	60.0	57.1	95.18	65-135
85 Benzo(e)pyrene	60.0	60.3	100.57	65-135
81 Indeno(1,2,3-cd)py	60.0	60.1	100.21	65-135
82 Dibenz(a,h)anthrac	60.0	64.2	106.93	65-135
83 Benzo(g,h,i)peryle	60.0	57.4	95.66	65-135

Data File: /var/chem/gcms/md.i/D110703I.b/icvdk07.d
Date : 07-NOV-2003 12:38
Client ID: SECOND SOURCE 8270
Sample Info: ICVDK07,,3,,,SECOND SOURCE,
Volume Injected (uL): 1.0
Column phase: ZB-5

Instrument: md.i
Operator: 7126
Column diameter: 0.25



Data File Name: icvdk07.d

Inj. Date and Time: 07-NOV-2003 12:38

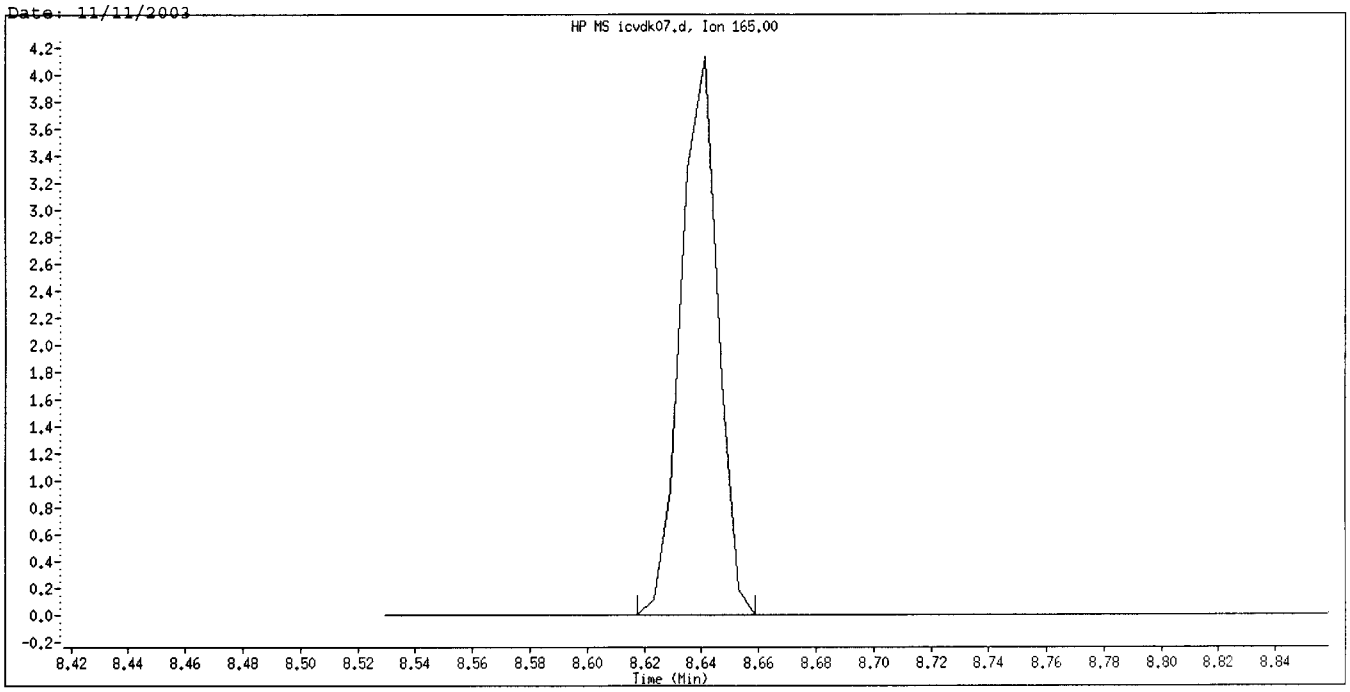
Instrument ID: md.i

Client ID: SECOND SOURCE 8270

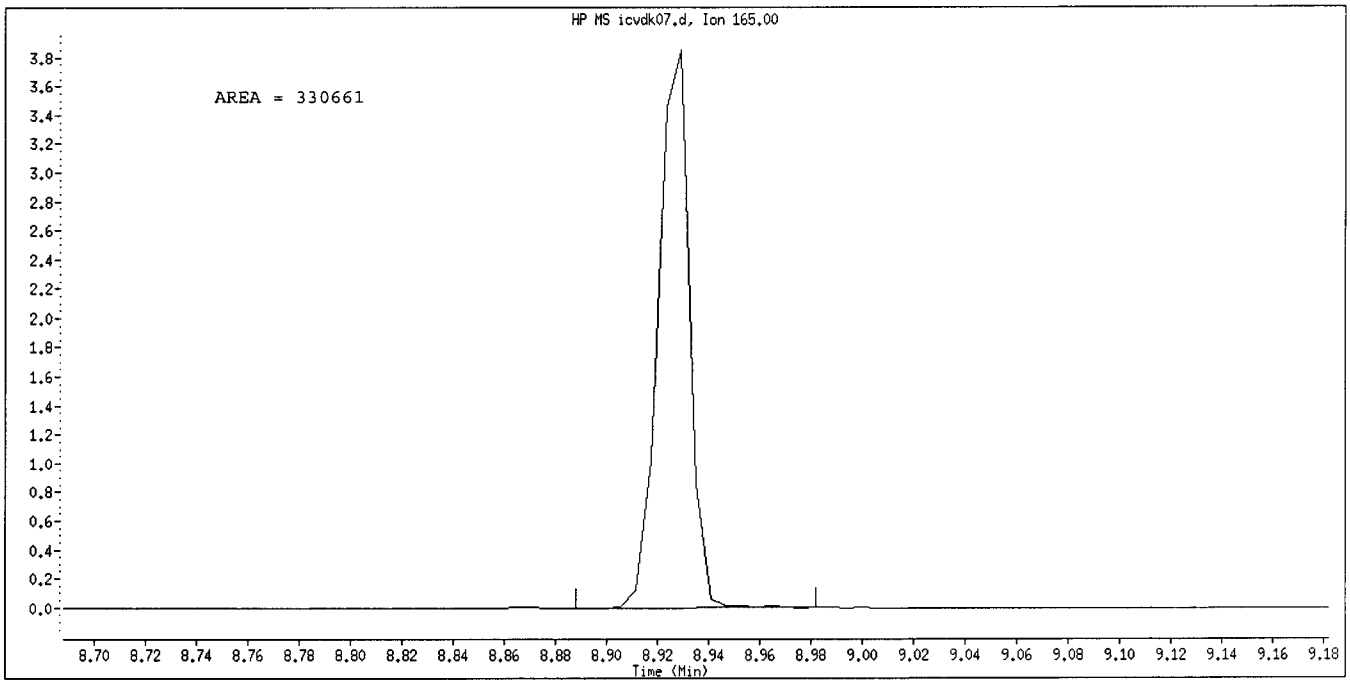
Compound Name: 2,4-Dinitrotoluene

CAS #: 121-14-2

Report ~~Date: 11/11/2003~~



Original Integration



Manual Integration

Manually Integrated By: wilesd

Manual Integration Reason: Analyte not Identified by the Data System

DW 11/11/03

Data File: /var/chem/gcms/md.i/D110703I.b/a9vdk07.d
Report Date: 11-Nov-2003 17:27

STL Knoxville

SW-846 Method 8270C

Data file : /var/chem/gcms/md.i/D110703I.b/a9vdk07.d
Lab Smp Id: A9VDK07 Client Smp ID: SECOND SOURCE
Inj Date : 07-NOV-2003 15:00
Operator : 7126 Inst ID: md.i
Smp Info : A9VDK07,,3,,,SECOND SOURCE,
Misc Info : D110703I,8270a9,appdx9.sub
Comment : Semivolatile Organic Compounds by GC/MS
Method : /var/chem/gcms/md.i/D110703I.b/8270a9.m
Meth Date : 11-Nov-2003 17:24 wilesd Quant Type: ISTD
Cal Date : 07-NOV-2003 13:49 Cal File: a9dk074.d
Als bottle: 15 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: appdx9.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * (Vt*Sf)/(Vo*Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Sf	1.00000	Prep split factor
Vo	1.00000	Volume of sample extracted (1=total samp
Uf	1000.00000	unit correction factor

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/uL)	FINAL (ug)
* 1 1,4-Dichlorobenzene-d4	152	4.364	4.369	(1.000)	113351	20.0000	
* 2 Naphthalene-d8	136	6.003	6.003	(1.000)	427121	20.0000	
* 3 Acenaphthene-d10	164	8.641	8.641	(1.000)	239553	20.0000	
* 4 Phenanthrene-d10	188	10.110	10.116	(1.000)	421953	20.0000	
* 5 Chrysene-d12	240	12.219	12.219	(1.000)	424434	20.0000	
* 6 Perylene-d12	264	13.477	13.476	(1.000)	277697	20.0000	
176 2-Picoline	93	2.736	2.730	(0.627)	460779	66.8630	66.9
86 N-nitrosomethylethylamine	42	2.830	2.824	(0.649)	265107	65.2467	65.2
87 Methyl methanosulfonate	80	3.071	3.077	(0.704)	150805	71.3141	71.3
88 N-nitrosodiethylamine	102	3.400	3.400	(0.779)	212012	64.2733	64.3
89 Ethyl methanosulfonate	79	3.670	3.670	(0.841)	305800	67.6046	67.6
90 Pentachloroethane	167	4.082	4.082	(0.935)	179170	68.3791	68.4
91 acetophenone	105	4.863	4.863	(1.114)	577130	68.0458	68.0

Data File: /var/chem/gcms/md.i/D110703I.b/a9vdk07.d
Report Date: 11-Nov-2003 17:27

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/uL)	FINAL (ug)
92 m-cresol	108	4.869	4.875	(1.116)	391565	69.9474	69.9(H)
93 n-nitrosopyrrolidine	100	4.845	4.857	(1.110)	233070	68.8771	68.9
94 n-nitrosomorpholine	56	4.875	4.887	(1.117)	264724	68.4802	68.5
95 o-toluidine	106	4.916	4.928	(1.127)	698668	67.1504	67.2
96 n-nitrosopiperidine	42	5.274	5.280	(0.879)	336042	65.9910	66.0
97 2,6-dichlorophenol	162	6.156	6.156	(1.025)	385309	69.1929	69.2
98 hexachloropropene	213	6.209	6.214	(1.034)	235819	64.8286	64.8
99 N-nitro-di-n-butylamine	84	6.679	6.685	(1.113)	262321	67.5750	67.6
100 Isosafrole	162	6.955	6.955	(1.159)	368983	66.1172	66.1
101 1,2,4,5-tetrachlorobenzene	216	7.437	7.437	(1.239)	401324	65.7534	65.8
102 safrole	162	7.830	7.830	(0.906)	405663	66.7293	66.7
103 1-chloronaphthalene	162	7.918	7.924	(0.916)	905294	63.9647	64.0
104 m-dinitrobenzene	76	8.394	8.394	(0.971)	106396	60.1457	60.1
105 pentachlorobenzene	250	8.894	8.894	(1.029)	350334	64.8954	64.9
106 1-naphthylamine	143	8.958	8.964	(1.037)	1037785	66.5958	66.6
107 2-naphthylamine	143	9.041	9.046	(1.046)	1111062	65.7238	65.7
108 2,3,4,6-tetrachlorophenol	232	9.058	9.064	(1.048)	207377	62.8818	62.9
109 5-nitro-o-toluidine	152	9.293	9.299	(1.075)	299088	66.1490	66.1
110 diphenylamine	169	9.381	9.387	(1.086)	902736	66.8162	66.8
111 1,3,5-trinitrobenzene	75	9.675	9.681	(0.957)	118451	55.5444	55.5
112 phenacetin	108	9.716	9.728	(0.961)	479926	67.4173	67.4
113 4-aminobiphenyl	169	9.963	9.969	(0.985)	1189564	66.9607	67.0
114 pentachloronitrobenzene	237	10.081	10.081	(0.997)	100670	68.1117	68.1
115 Dinoseb	211	10.180	10.180	(1.007)	143723	54.7447	54.7
178 N-Nitroquinoline-n-oxide	174	10.780	10.786	(1.066)	57464	79.6147	79.6
177 Methapyrilene HCL	97	10.862	10.868	(1.074)	469718	69.1992	69.2
84 Benzidine	184	11.191	11.197	(1.107)	1216360	68.9226	68.9
116 p-(dimethylamino)azobenzene	120	11.491	11.497	(1.137)	440121	66.9348	66.9
117 o-tolidine	212	11.737	11.738	(1.161)	1100518	70.2644	70.3
119 7,12-dimethylbenz(a)anthracen	256	13.148	13.154	(1.076)	721102	68.2029	68.2
118 2-acetylaminofluorene	181	11.949	11.955	(0.978)	662500	64.5435	64.5
120 3-methylcholanthrene	268	13.776	13.782	(1.022)	727035	67.9757	68.0

QC Flag Legend

H - Operator selected an alternate compound hit.

Data File: /var/chem/gcms/md.i/D110703I.b/a9vdk07.d
Report Date: 11-Nov-2003 17:27

STL Knoxville

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: md.i
Lab File ID: a9vdk07.d
Lab Smp Id: A9VDK07
Analysis Type: SV
Quant Type: ISTD
Operator: 7126
Method File: /var/chem/gcms/md.i/D110703I.b/8270a9.m
Misc Info: D110703I,8270a9,appdx9.sub

Calibration Date: 07-NOV-2003
Calibration Time: 10:39
Client Smp ID: SECOND SOURCE
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	148146	74073	296292	113351	-23.49
2 Naphthalene-d8	542780	271390	1085560	427121	-21.31
3 Acenaphthene-d10	298099	149050	596198	239553	-19.64
4 Phenanthrene-d10	526476	263238	1052952	421953	-19.85
5 Chrysene-d12	541318	270659	1082636	424434	-21.59
6 Perylene-d12	382650	191325	765300	277697	-27.43

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	4.37	3.87	4.87	4.36	-0.13
2 Naphthalene-d8	6.00	5.50	6.50	6.00	0.00
3 Acenaphthene-d10	8.64	8.14	9.14	8.64	0.00
4 Phenanthrene-d10	10.12	9.62	10.62	10.11	-0.06
5 Chrysene-d12	12.22	11.72	12.72	12.22	0.00
6 Perylene-d12	13.48	12.98	13.98	13.48	0.00

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

Data File: /var/chem/gcms/md.i/D110703I.b/a9vdk07.d
Report Date: 11-Nov-2003 17:27

STL Knoxville

RECOVERY REPORT

Client Name:
Sample Matrix: GAS
Lab Smp Id: A9VDK07
Level: LOW
Data Type: MS DATA
SpikeList File: a9lcs.spk
Sublist File: appdx9.sub
Method File: /var/chem/gcms/md.i/D110703I.b/8270a9.m
Misc Info: D110703I,8270a9,appdx9.sub

Client SDG: D110703I
Fraction: SV
Client Smp ID: SECOND SOURCE
Operator: 7126
SampleType: LCS
Quant Type: ISTD

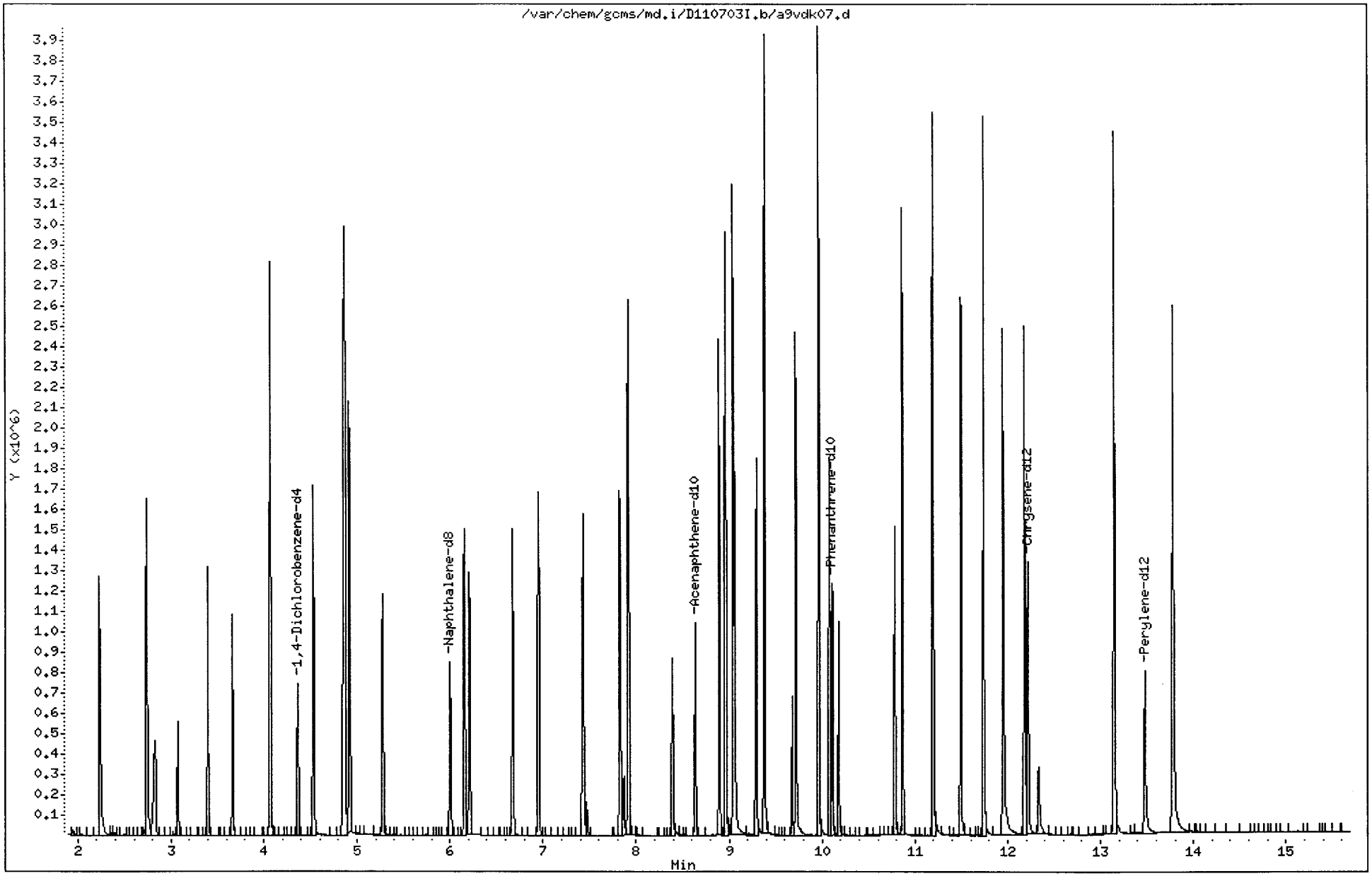
SPIKE	COMPOUND	CONC ADDED ug	CONC RECOVERED ug	% RECOVERED	LIMITS
86	N-nitrosomethyleth	60.0	65.2	108.74	65-135
87	Methyl methanosulf	60.0	71.3	118.86	65-135
88	N-nitrosodiethylam	60.0	64.3	107.12	65-135
89	Ethyl methanosulfo	60.0	67.6	112.67	65-135
90	Pentachloroethane	60.0	68.4	113.97	65-135
91	acetophenone	60.0	68.0	113.41	65-135
92	m-cresol	60.0	69.9	116.58	65-135
93	n-nitrosopyrrolidi	60.0	68.9	114.80	65-135
94	n-nitrosomorpholin	60.0	68.5	114.13	65-135
95	o-toluidine	60.0	67.2	111.92	65-135
96	n-nitrosopiperidin	60.0	66.0	109.99	65-135
97	2,6-dichlorophenol	60.0	69.2	115.32	65-135
98	hexachloropropene	60.0	64.8	108.05	65-135
99	N-nitro-di-n-butyl	60.0	67.6	112.62	65-135
100	Isosafrole	60.0	66.1	110.20	65-135
101	1,2,4,5-tetrachlor	60.0	65.8	109.59	65-135
102	safrole	60.0	66.7	111.22	65-135
103	1-chloronaphthalen	60.0	64.0	106.61	65-135
104	m-dinitrobenzene	60.0	60.1	100.24	65-135
105	pentachlorobenzene	60.0	64.9	108.16	65-135
106	1-naphthylamine	60.0	66.6	110.99	65-135
107	2-naphthylamine	60.0	65.7	109.54	65-135
108	2,3,4,6-tetrachlor	60.0	62.9	104.80	65-135
109	5-nitro-o-toluidin	60.0	66.1	110.25	65-135
110	diphenylamine	60.0	66.8	111.36	65-135
111	1,3,5-trinitrobenz	60.0	55.5	92.57	65-135
112	phenacetin	60.0	67.4	112.36	65-135
113	4-aminobiphenyl	60.0	67.0	111.60	65-135
114	pentachloronitrobe	60.0	68.1	113.52	65-135
115	Dinoseb	60.0	54.7	91.24	65-135
84	Benzidine	60.0	68.9	114.87	65-135
116	p-(dimethylamino)a	60.0	66.9	111.56	65-135
118	2-acetylaminofluor	60.0	64.5	107.57	65-135

Data File: /var/chem/gcms/md.i/D110703I.b/a9vdk07.d
Report Date: 11-Nov-2003 17:27

SPIKE COMPOUND	CONC ADDED ug	CONC RECOVERED ug	% RECOVERED	LIMITS
117 o-tolidine	60.0	70.3	117.11	65-135
119 7,12-dimethylbenz(	60.0	68.2	113.67	65-135
120 3-methylcholanthre	60.0	68.0	113.29	65-135
176 2-Picoline	60.0	66.9	111.44	65-135
177 Methapyrilene HCL	60.0	69.2	115.33	65-135
178 N-Nitroquinoline-n	60.0	79.6	132.69	65-135

Data File: /var/chem/gcms/md.i/D110703I.b/a9vdk07.d
Date : 07-NOV-2003 15:00
Client ID: SECOND SOURCE
Sample Info: A9VDK07,,3,,,SECOND SOURCE,
Volume Injected (uL): 1.0
Column phase: ZB-5

Instrument: md.i
Operator: 7126
Column diameter: 0.25



STL Knoxville Semivolatile GC/MS Continuing Calibration Review / Narrative Checklist
Method 8270C - KNOX-MS-0016 Rev 1 and Method TO-13A Mod – KNOX-MS-0017, Rev. 0

Analysis Date:	12-15-03	CCAL Batch/ Scan Name:	D121503	Instrument:	MD	ICAL Batch/ Scan Name:	D110403I	Scanned

Review Items	N/A	Yes	No	If No, why is data reportable?	2nd ✓
1. Did DFTPP meet tune criteria?		✓			✓
2. Was DDT breakdown ≤20% & benzidine tailing ≤3 and PCP tailing ≤5?		✓			✓
3. Were all standards injected within 12 hr of DFTPP?		✓			✓
4. Was date/time of analysis verified between analysis header and logbook as correct?		✓			✓
5. Was the primary ion used for all compounds?		✓		θ *Secondary ion used due to interferences for:* _____	✓
6. Are the RFs for SPCCs ≥0.050?		✓			✓
7. Is the %D or drift ≤20% for all CCCs? (8270C)		✓			✓
8. Is the %D or drift ≤30% for all target analytes? (TO-13A Mod)		✓			✓
9. Is the %D or drift ≤ 30% for all other compounds? [Up to 3 TCLs may have %D or drift ≤ 50%; any more and the calibration is INVALID; 3 add'l allowed for App IX].		✓		θ %D or drift > 30% for the following TCLs: _____	✓
10. Are the internal standard responses within limits? (50-200% of the mid-level ICAL standard)		✓			✓
11. Are the internal standard retention times within limits? (30 seconds of the mid-level ICAL standard)		✓			✓
12. If manual integrations were performed, are they clearly identified, initialed, dated and reason given?	✓			Reasons: 1)Corrected split peak; 2)Unresolved peak; 3)tailing; 4)RT shift; 5)wrong peak selected; 6)other	NA
13. If automatic identification of a peak was not achieved, list those analytes: _____	✓				NA
14. Have alternate hits/manual integrations been verified as correct and are correct RFs listed in CCAL summary?	✓				NA
15. Was the correct ICAL used for quantitation? (Verify date & time of ICAL is documented correctly on CCAL)		✓			✓
16. Is the first IS documented correctly on the log?		✓			✓
17. Elution order checked on isomeric pairs/coeluters?		✓			✓
• 1,4-dichlorobenzene-d4 / 1,2-dichlorobenzene		✓			✓
• aniline / bis(2-chloroethyl)ether		✓			✓
• 1,3- , 1,4- , 1,2-dichlorobenzene		✓			✓
• benzyl alcohol / 2-methylphenol / 4-methylphenol		✓			✓
• 2,4,6- and 2,4,5-trichlorophenol		✓			✓
• phenanthrene / anthracene		✓			✓
• fluoranthene / pyrene		✓			✓
• benzo(a)anthracene / chrysene		✓			✓
• benzo(b)fluoranthene / benzo(k)fluoranthene		✓			✓
• indeno(1,2,3-cd)pyrene / benzo(g,h,i)perylene		✓			✓
18. If criteria were not met, was a NCM generated, approved by supervisor, and copy included in folder?	✓				NA
19. Does the CCAL folder contain **complete** data in the following order? Data review checklist, tune pass/fail page, m/z list, tune chromatogram, Target CCAL summary, Quan report, chromatogram and manual integrations.		✓			

Analyst: VM	Date: 12-15-03	2nd Level Reviewer :	Date: 12/16/03
Comments:		Comments:	

STL Knoxville
Instrument MD Run/Maintenance Log

Preventive Maintenance Performed ☐ NA ☒ inj. **Date/Time Verified** ☒

Target Batch	D121503			Date	12-15-03
ICAL Batch	D110703I			Analyst	KM
IS #1	114826			Internal Std ID*	EM1913

* was added to all standards and extracts at 3 ul per 300 ul of standard or extract unless noted. Instrument injection volume is 1 ul unless otherwise noted.

Lot	Filename	Time	Dil.	Matrix	Batch	Comments
Tune	DFDL15	1654		EM1894A		
CCV	CCDL154	1705		EM1913		
CCV-A9	A9DL154	1729		EM1914		
Blk	F6CKX1AA	1753	—	XAD	3344194	
LCS	C	1817				
LCSD	D	1840				
H3L090215	F6AJ61AA	1904				
MS	C	1928				
MSD	D	1952				
Blk	F6H4R1AA	2015	—	water	3346158	
LCS	C	2039				
LCSD	D	2102				
H3L00266	F6DQ41AD	2126				
	RB1AP	2150				
H3L10180	F6FIC1AD	2214				
	2H 1AP	2238				
Blk	F6H801AA	2302	—	TOB	3346220	
LCS	C	2325	—			
H3L120109	F6H602AA	2349	1/10			DNU
	622AA	0013	1/50			
	642AA	0037	1/75			
	7G1AA	0101	1/4			
	601AA	0124	1/4			
	621AA	0148	1/4			
	641AA	0212	1/4			
H3L090215	F6AHD1AA	0236	—	XAD	3344194	E for phenol
	HK	0259				E for phenol
	H3	0323				E for phenol
	JJ	0347				E for phenol
	JN	0411				OK
	JB	0435				E for phenol
Lot Check	LB15963	0458	1/2			*outside tune time ok for lot check
	KM 12-17-03					

Comments:

Data File: /chem/gcms/md.i/D121503.b/dfdl15.d

Date : 15-DEC-2003 16:54

Client ID: Tune

Instrument: md.i

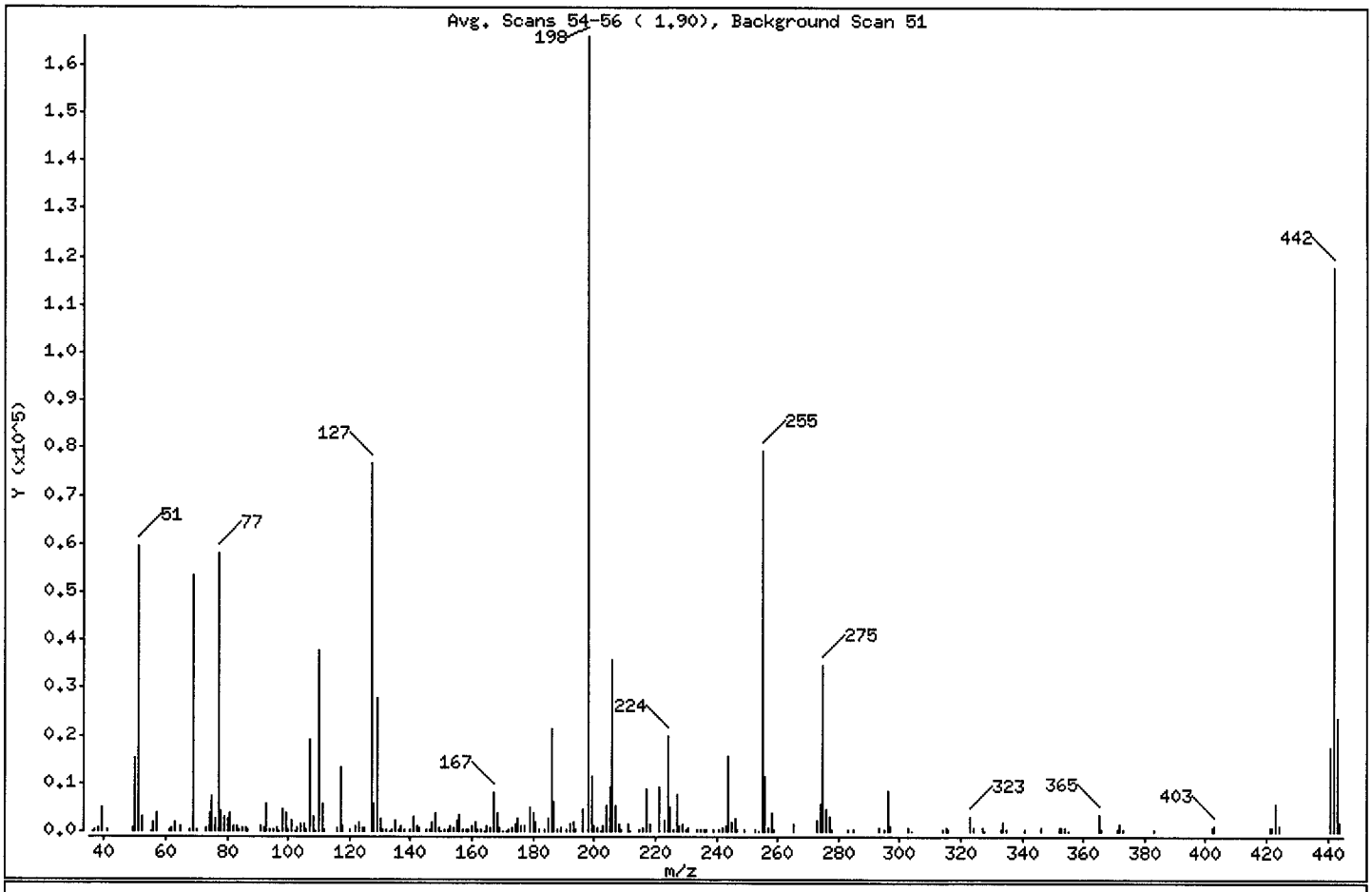
Sample Info: DFDL15,,3,,DFTPP,

Operator: 3386

Column phase: ZB-5

Column diameter: 0.25

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	30.00 - 60.00% of mass 198	35.80
68	Less than 1.99% of mass 69	0.16 (0.50)
69	Present, but less than mass 198	32.12
70	Less than 1.99% of mass 69	0.12 (0.39)
127	40.00 - 60.00% of mass 198	46.21
197	Less than 0.99% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.96
275	10.00 - 30.00% of mass 198	20.94
365	1.01 - 100.00% of mass 198	2.03
441	Present, but less than mass 443	10.53
442	40.01 - 110.00% of mass 198	71.04
443	17.00 - 23.00% of mass 442	14.22 (20.02)

Data File: /chem/gcms/md.i/D121503.b/dfdl15.d

Date : 15-DEC-2003 16:54

Client ID: Tune

Instrument: md.i

Sample Info: DFDL15,,3,,DFTPP,

Operator: 3386

Column phase: ZB-5

Column diameter: 0.25

Data File: dfdl15.d
Spectrum: Avg. Scans 54-56 (1.90), Background Scan 51
Location of Maximum: 198.00
Number of points: 223

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	173	116.00	892	177.00	1306	249.00	442
37.00	195	117.00	13535	179.00	5127	253.00	487
38.00	792	118.00	1027	180.00	3734	254.00	178
39.00	5003	120.00	289	181.00	1722	255.00	79328
41.00	257	122.00	1177	182.00	258	256.00	11274
49.00	758	123.00	1904	184.00	349	257.00	826
50.00	15078	124.00	834	185.00	2804	258.00	3884
51.00	59440	125.00	852	186.00	21344	259.00	497
52.00	3046	127.00	76736	187.00	5949	265.00	1428
55.00	80	128.00	5807	188.00	373	273.00	2467
56.00	1789	129.00	27928	189.00	829	274.00	5876
57.00	3716	130.00	2594	191.00	456	275.00	34768
61.00	567	131.00	331	192.00	1619	276.00	4519
62.00	753	132.00	445	193.00	1993	277.00	3066
63.00	2091	133.00	176	194.00	302	278.00	282
65.00	1194	134.00	547	196.00	4580	283.00	249
68.00	266	135.00	2250	198.00	166016	285.00	499
69.00	53328	136.00	528	199.00	11564	293.00	756
70.00	206	137.00	1182	200.00	1010	295.00	220
73.00	775	138.00	240	201.00	589	296.00	8338
74.00	3992	140.00	232	202.00	175	297.00	1120
75.00	7417	141.00	3154	203.00	1065	303.00	898
76.00	2722	142.00	1047	204.00	5391	304.00	190
77.00	57952	143.00	704	205.00	9235	314.00	222
78.00	4095	145.00	279	206.00	36032	315.00	889
79.00	3186	146.00	473	207.00	5414	316.00	507
80.00	2538	147.00	1938	208.00	1443	323.00	3181
81.00	3686	148.00	3810	209.00	496	324.00	609
82.00	967	149.00	871	211.00	1391	327.00	606
83.00	1076	150.00	183	212.00	173	328.00	179
84.00	346	151.00	526	215.00	257	333.00	214
85.00	733	152.00	303	216.00	708	334.00	1767
86.00	920	153.00	1109	217.00	8672	335.00	342
87.00	381	154.00	694	218.00	1397	341.00	238
91.00	1267	155.00	2133	221.00	9241	346.00	694

Data File: /chem/gcms/md.i/D121503.b/dfdl15.d

Date : 15-DEC-2003 16:54

Client ID: Tune

Instrument: md.i

Sample Info: DFDL15,,3,,DFTPP,

Operator: 3386

Column phase: ZB-5

Column diameter: 0.25

Data File: dfdl15.d

Spectrum: Avg. Scans 54-56 (1.90), Background Scan 51

Location of Maximum: 198.00

Number of points: 223

m/z	Y	m/z	Y	m/z	Y	m/z	Y
92.00	911	156.00	3249	223.00	2217	352.00	674
93.00	5773	157.00	358	224.00	19896	353.00	750
94.00	305	158.00	543	225.00	4958	354.00	850
95.00	205	159.00	383	226.00	311	355.00	187
96.00	627	160.00	977	227.00	7673	365.00	3378
97.00	180	161.00	1764	228.00	1049	366.00	465
98.00	4466	162.00	340	229.00	1608	371.00	209
99.00	3980	163.00	191	230.00	224	372.00	1569
100.00	336	164.00	187	231.00	577	373.00	191
101.00	2260	165.00	1088	234.00	455	383.00	417
102.00	172	166.00	861	235.00	441	402.00	682
103.00	717	167.00	7935	236.00	206	403.00	1007
104.00	1388	168.00	3889	237.00	536	421.00	746
105.00	1676	169.00	679	239.00	262	422.00	884
106.00	385	170.00	177	241.00	314	423.00	5776
107.00	18936	171.00	182	242.00	796	424.00	1143
108.00	3007	172.00	365	243.00	1160	441.00	17488
109.00	190	173.00	628	244.00	15838	442.00	117968
110.00	37856	174.00	1661	245.00	1804	443.00	23616
111.00	5815	175.00	2855	246.00	2645	444.00	2039
112.00	510	176.00	1116	247.00	415		

Data File: /chem/gcms/md.i/D121503.b/dfdl15.d

Date : 15-DEC-2003 16:54

Client ID: Tune

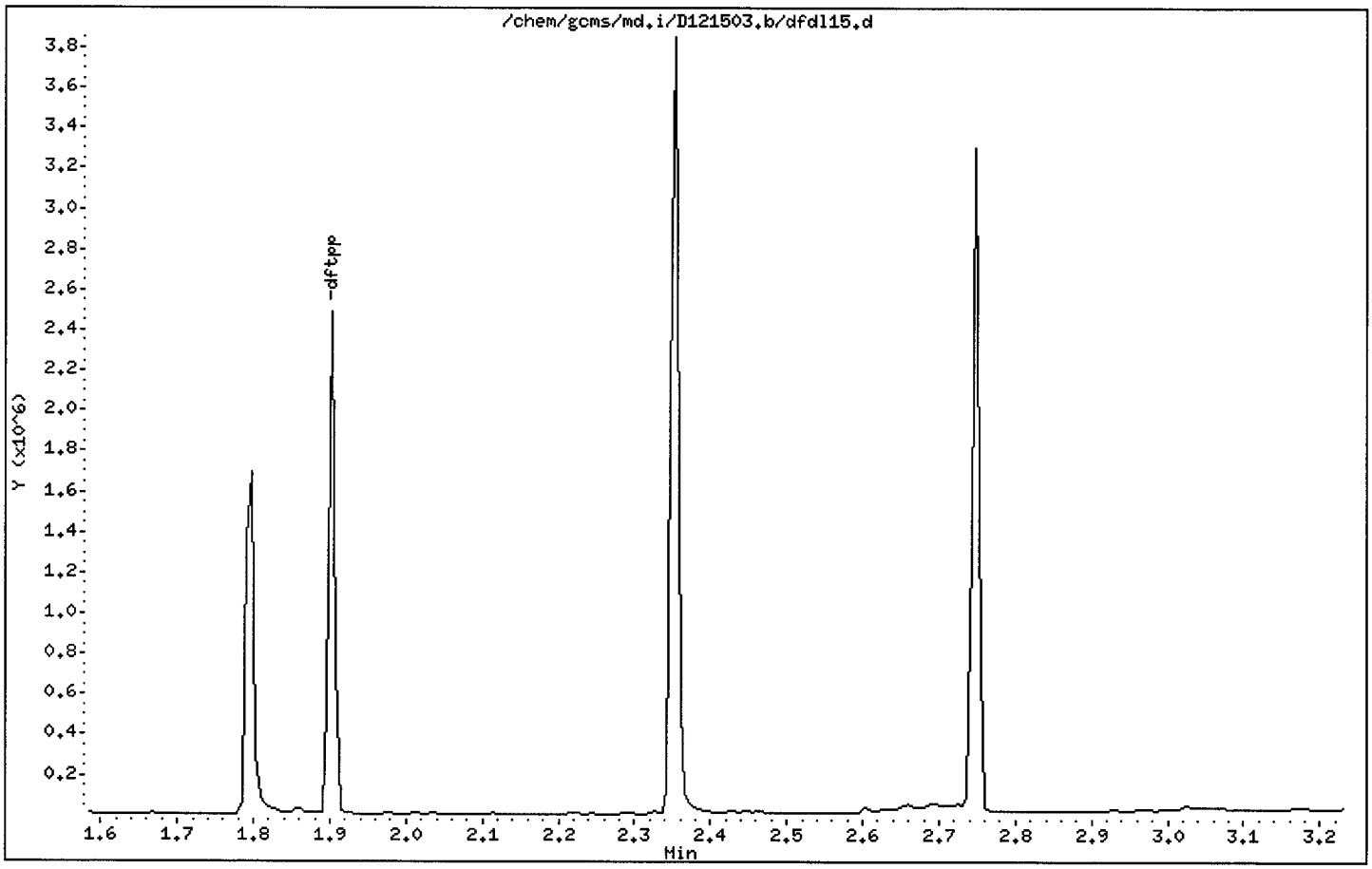
Instrument: md.i

Sample Info: DFDL15,,3,,DFTPP,

Operator: 3386

Column phase: ZB-5

Column diameter: 0.25

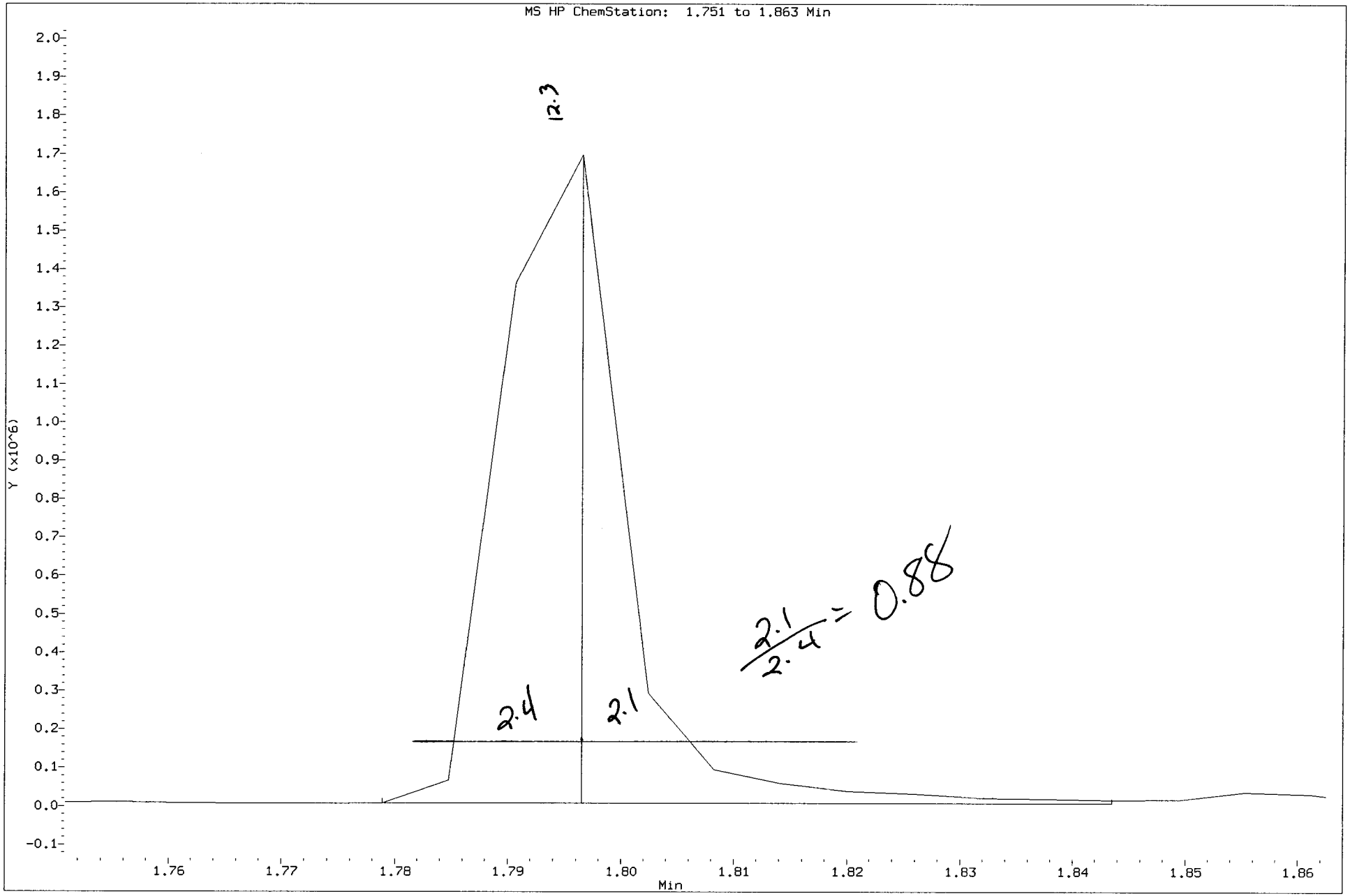


no breakdown

KM 12-15-03

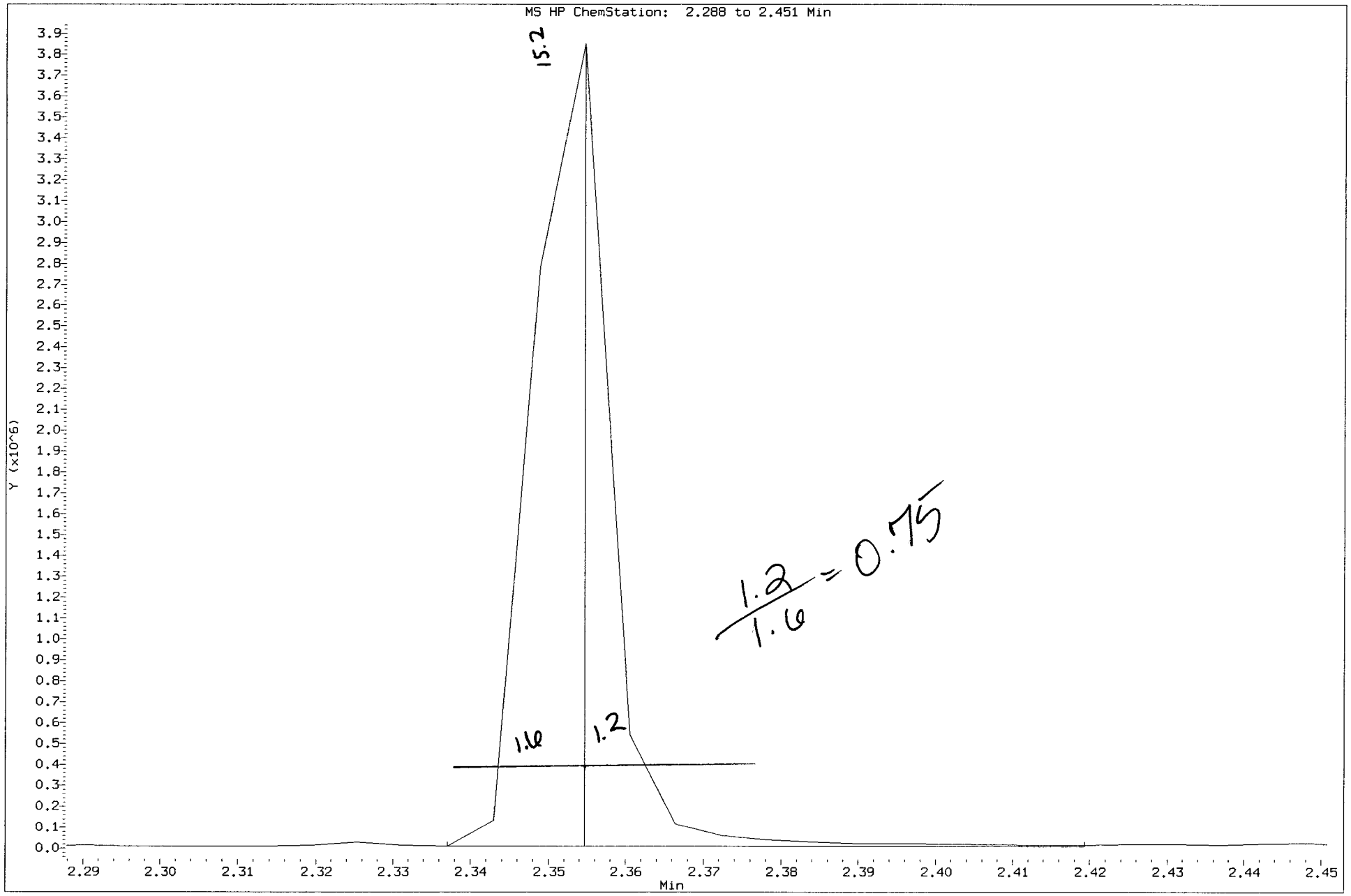
PCP

Data File: /var/chem/gcms/md.i/D121503.b/dfdl15.d
Injection Date: 15-DEC-2003 16:54
Instrument: md.i
Client Sample ID: Tune



Benzidine

Data File: /var/chem/gcms/md.i/D121503.b/dfdl15.d
Injection Date: 15-DEC-2003 16:54
Instrument: md.i
Client Sample ID: Tune



Data File: /chem/gcms/md.i/D121503.b/ccdl154.d
Report Date: 15-Dec-2003 17:25

STL Knoxville

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: md.i
Lab File ID: ccdl154.d
Analysis Type: AIR
Lab Sample ID: CCDL154
Method: /chem/gcms/md.i/D121503.b/8270a9.m

Injection Date: 15-DEC-2003 17:05
Init. Cal. Date(s): 07-NOV-2003 07-NOV-2003
Init. Cal. Times: 09:52 14:37
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF60	CCAL RRF60	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
$ 7 2-Fluorophenol	1.31155	1.38334	1.38334	0.000	-5.47348	30.00000	Averaged
$ 8 Phenol-d5	1.43901	1.54428	1.54428	0.000	-7.31548	30.00000	Averaged
$ 9 Nitrobenzene-d5	0.30621	0.32335	0.32335	0.000	-5.59871	30.00000	Averaged
$ 10 2-Fluorobiphenyl	1.32561	1.33774	1.33774	0.000	-0.91477	30.00000	Averaged
$ 11 2,4,6-Tribromophenol	0.09198	0.10059	0.10059	0.000	-9.35629	30.00000	Averaged
$ 12 Terphenyl-d14	0.82766	0.85166	0.85166	0.000	-2.90019	30.00000	Averaged
$ 172 13C3-1,2,3-naphthalene	1.06889	1.04497	1.04497	0.000	2.23785	30.00000	Averaged
175 1,4-Dioxane	0.44158	0.39993	0.39993	0.000	9.43015	30.00000	Averaged
13 N-Nitrosodimethylamine	0.65818	0.66713	0.66713	0.000	-1.35861	30.00000	Averaged
14 Pyridine	1.26415	1.22831	1.22831	0.000	2.83483	30.00000	Averaged
15 Phenol (ccc)	1.35369	1.45157	1.45157	0.000	-7.23019	20.00000	Averaged
16 Aniline	2.07968	2.10428	2.10428	0.000	-1.18261	30.00000	Averaged
17 Bis(2-chloroethyl)ether	1.11751	1.13677	1.13677	0.000	-1.72305	30.00000	Averaged
18 2-Chlorophenol	1.29948	1.37976	1.37976	0.000	-6.17789	30.00000	Averaged
19 1,3-Dichlorobenzene	1.48586	1.54877	1.54877	0.000	-4.23379	30.00000	Averaged
20 1,4-Dichlorobenzene (ccc)	1.48331	1.53752	1.53752	0.000	-3.65427	20.00000	Averaged
21 Benzyl alcohol	0.79001	0.80479	0.80479	0.000	-1.87115	30.00000	Averaged
22 1,2-Dichlorobenzene	1.42031	1.46384	1.46384	0.000	-3.06479	30.00000	Averaged
23 2-Methylphenol	1.09397	1.18028	1.18028	0.000	-7.88873	30.00000	Averaged
24 2,2'-Oxybis(1-Chloropropane	2.14522	1.97629	1.97629	0.000	7.87453	30.00000	Averaged
25 4-Methylphenol	1.12299	1.25198	1.25198	0.000	-11.48565	30.00000	Averaged
26 3&4 Methylphenol	1.12299	1.25198	1.25198	0.000	-11.48565	30.00000	Averaged
27 N-Nitroso-di-n-propylamine#	0.73889	0.75979	0.75979	0.050	-2.82798	30.00000	Averaged
28 Hexachloroethane	0.51474	0.54070	0.54070	0.000	-5.04217	30.00000	Averaged
29 Nitrobenzene	0.28845	0.29730	0.29730	0.000	-3.06895	30.00000	Averaged
30 Isophorone	0.57682	0.58707	0.58707	0.000	-1.77643	30.00000	Averaged
31 2-Nitrophenol (ccc)	0.17507	0.20713	0.20713	0.000	-18.31098	20.00000	Averaged
32 2,4-Dimethyphenol	0.31411	0.33947	0.33947	0.000	-8.07456	30.00000	Averaged
33 Bis(2-chloroethoxy)methane	0.37103	0.37230	0.37230	0.000	-0.34299	30.00000	Averaged
34 Benzoic acid	62.43799	60.00000	0.18410	0.000	-4.06331	30.00000	Linear
35 2,4-Dichlorophenol (ccc)	0.27594	0.30736	0.30736	0.000	-11.38804	20.00000	Averaged
36 1,2,4-Trichlorobenzene	0.32105	0.32897	0.32897	0.000	-2.46659	30.00000	Averaged
37 Naphthalene	1.08986	1.06479	1.06479	0.700	2.30055	30.00000	Averaged
38 4-Chloroaniline	0.51849	0.52394	0.52394	0.000	-1.05142	30.00000	Averaged
39 Hexachlorobutadiene (ccc)	0.16735	0.17308	0.17308	0.000	-3.42201	20.00000	Averaged

Data File: /chem/gcms/md.i/D121503.b/ccdl154.d
Report Date: 15-Dec-2003 17:25

STL Knoxville

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: md.i
Lab File ID: ccdl154.d
Analysis Type: AIR
Lab Sample ID: CCDL154
Method: /chem/gcms/md.i/D121503.b/8270a9.m

Injection Date: 15-DEC-2003 17:05
Init. Cal. Date(s): 07-NOV-2003 07-NOV-2003
Init. Cal. Times: 09:52 14:37
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF60	CCAL RRF60	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
40 4-Chloro-3-methylphenol (cc	0.24338	0.27398	0.27398	0.000	-12.57253	20.00000	Averaged
41 2-Methylnaphthalene	0.70786	0.73162	0.73162	0.000	-3.35575	30.00000	Averaged
42 Hexachlorocyclopentadiene##	0.29791	0.27618	0.27618	0.050	7.29274	30.00000	Averaged
43 2,4,6-Trichlorophenol (ccc)	0.33523	0.37044	0.37044	0.000	-10.50286	20.00000	Averaged
44 2,4,5-Trichlorphenol	0.38902	0.41219	0.41219	0.000	-5.95587	30.00000	Averaged
45 2-Chloronaphthalene	1.20672	1.22559	1.22559	0.000	-1.56373	30.00000	Averaged
46 2-Nitroaniline	0.33346	0.35169	0.35169	0.000	-5.46407	30.00000	Averaged
47 Acenaphthylene	2.09881	2.19431	2.19431	1.300	-4.55016	30.00000	Averaged
48 Dimethyl phthalate	1.32477	1.34338	1.34338	0.000	-1.40505	30.00000	Averaged
49 2,6-Dinitrotoluene	0.28578	0.31675	0.31675	0.000	-10.83736	30.00000	Averaged
50 3-Nitroaniline	0.42956	0.44846	0.44846	0.000	-4.40084	30.00000	Averaged
51 Acenaphthene (ccc)	1.33693	1.33387	1.33387	0.800	0.22867	20.00000	Averaged
52 2,4-Dinitrophenol ##spcc##	73.94382	60.00000	0.17273	0.050	-23.23970	30.00000	Wt Linear
53 Dibenzofuran	1.67937	1.73027	1.73027	0.000	-3.03069	30.00000	Averaged
54 4-Nitrophenol ##spcc##	0.14299	0.15049	0.15049	0.050	-5.23863	30.00000	Averaged
55 2,4-Dinitrotoluene	0.38957	0.43161	0.43161	0.000	-10.79113	30.00000	Averaged
56 Fluorene	1.45958	1.48052	1.48052	0.900	-1.43470	30.00000	Averaged
57 4-Chlorophenyl phenyl ether	0.62690	0.62039	0.62039	0.000	1.03852	30.00000	Averaged
58 Diethyl phthalate	1.31984	1.34565	1.34565	0.000	-1.95525	30.00000	Averaged
59 4-Nitroaniline	0.46548	0.47448	0.47448	0.000	-1.93403	30.00000	Averaged
60 4,6-Dinitro-2-methylphenol	68.86719	60.00000	0.14388	0.000	-14.77865	30.00000	Linear
61 N-Ndpa / diphenylamine (ccc	0.51872	0.52963	0.52963	0.000	-2.10299	20.00000	Averaged
62 1,2-Diphenylhydrazine/azobn	0.71132	0.72466	0.72466	0.000	-1.87557	30.00000	Averaged
63 4-Bromophenyl phenyl ether	0.17861	0.18721	0.18721	0.000	-4.81765	30.00000	Averaged
64 Hexachlorobenzene	0.21154	0.21822	0.21822	0.000	-3.15659	30.00000	Averaged
65 Pentachlorophenol (ccc)	0.13179	0.13125	0.13125	0.000	0.41046	20.00000	Averaged
66 Phenanthrene	1.24394	1.26432	1.26432	0.700	-1.63848	30.00000	Averaged
67 Anthracene	1.24174	1.27762	1.27762	0.700	-2.88964	30.00000	Averaged
68 Carbazole	1.25158	1.31369	1.31369	0.000	-4.96232	30.00000	Averaged
69 Di-n-butyl phthalate	1.22720	1.32333	1.32333	0.000	-7.83361	30.00000	Averaged
70 Fluoranthene (ccc)	1.30788	1.35955	1.35955	0.600	-3.95082	20.00000	Averaged
71 Pyrene	1.36575	1.43494	1.43494	0.600	-5.06613	30.00000	Averaged
72 Butyl benzyl phthalate	0.59749	0.62711	0.62711	0.000	-4.95837	30.00000	Averaged
73 Benzo(a)Anthracene	1.16708	1.23931	1.23931	0.800	-6.18842	30.00000	Averaged
74 3,3'-Dichlorobenzidine	0.42015	0.42826	0.42826	0.000	-1.93077	30.00000	Averaged

Data File: /chem/gcms/md.i/D121503.b/ccdl154.d
Report Date: 15-Dec-2003 17:25

STL Knoxville

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: md.i
Lab File ID: ccdl154.d
Analysis Type: AIR
Lab Sample ID: CCDL154
Method: /chem/gcms/md.i/D121503.b/8270a9.m

Injection Date: 15-DEC-2003 17:05
Init. Cal. Date(s): 07-NOV-2003 07-NOV-2003
Init. Cal. Times: 09:52 14:37
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF60	CCAL RRF60	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
75 Chrysene	1.14163	1.12724	1.12724	0.700	1.26035	30.00000	Averaged
76 Bis(2-ethylhexyl) phthalate	0.69334	0.76105	0.76105	0.000	-9.76534	30.00000	Averaged
77 Di-n-octyl phthalate (ccc)	1.76487	1.95983	1.95983	0.000	-11.04679	20.00000	Averaged
78 Benzo(b)fluoranthene	60.60602	60.00000	1.67626	0.700	-1.01004	30.00000	Linear
79 Benzo(k)fluoranthene	1.97595	2.04207	2.04207	0.700	-3.34620	30.00000	Averaged
85 Benzo(e)pyrene	1.50391	1.50307	1.50307	0.700	0.05535	30.00000	Averaged
80 Benzo(a)pyrene (ccc)	1.64085	1.69972	1.69972	0.700	-3.58791	20.00000	Averaged
81 Indeno(1,2,3-cd)pyrene	1.63818	1.75762	1.75762	0.500	-7.29114	30.00000	Averaged
82 Dibenz(a,h)anthracene	65.00791	60.00000	1.39156	0.400	-8.34652	30.00000	Wt Linear
83 Benzo(g,h,i)perylene	1.43263	1.58633	1.58633	0.500	-10.72827	30.00000	Averaged

Data File: /chem/gcms/md.i/D121503.b/ccdl154.d
Report Date: 15-Dec-2003 17:25

STL Knoxville

SW-846 Method 8270C

Data file : /chem/gcms/md.i/D121503.b/ccdl154.d
Lab Smp Id: CCDL154 Client Smp ID: VSTD060
Inj Date : 15-DEC-2003 17:05
Operator : 3386 Inst ID: md.i
Smp Info : CCDL154,,2,4,,VSTD060,
Misc Info : D121503,8270a9,8270dxnC13.sub
Comment : Semivolatile Organic Compounds by GC/MS
Method : /chem/gcms/md.i/D121503.b/8270a9.m
Meth Date : 15-Dec-2003 17:25 chemist Quant Type: ISTD
Cal Date : 07-NOV-2003 13:02 Cal File: a9dk076.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8270dxnC13.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * (Vt*Sf)/(Vo*Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Sf	1.00000	Prep split factor
Vo	1.00000	Volume of sample extracted (1=total samp
Uf	1000.00000	unit correction factor

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)
* 1 1,4-Dichlorobenzene-d4	152	4.317	4.317	(1.000)	114826	20.0000	
* 2 Naphthalene-d8	136	5.945	5.945	(1.000)	425133	20.0000	
* 3 Acenaphthene-d10	164	8.589	8.589	(1.000)	235031	20.0000	
* 4 Phenanthrene-d10	188	10.070	10.070	(1.000)	408242	20.0000	
* 5 Chrysene-d12	240	12.173	12.173	(1.000)	410532	20.0000	
* 6 Perylene-d12	264	13.425	13.425	(1.000)	297061	20.0000	
$ 7 2-Fluorophenol	112	3.154	3.154	(0.731)	476533	60.0000	63.3
$ 8 Phenol-d5	99	3.994	3.994	(0.925)	531974	60.0000	64.4
$ 9 Nitrobenzene-d5	82	4.999	4.999	(0.841)	412403	60.0000	63.4
$ 10 2-Fluorobiphenyl	172	7.684	7.684	(0.895)	943231	60.0000	60.5
$ 11 2,4,6-Tribromophenol	330	9.459	9.459	(0.939)	123193	60.0000	65.6
$ 12 Terphenyl-d14	244	11.339	11.339	(0.931)	1048904	60.0000	61.7
$ 172 13C3-1,2,3-naphthalene	131	5.974	5.974	(1.005)	1332759	60.0000	58.6

Data File: /chem/gcms/md.i/D121503.b/ccdl154.d
Report Date: 15-Dec-2003 17:25

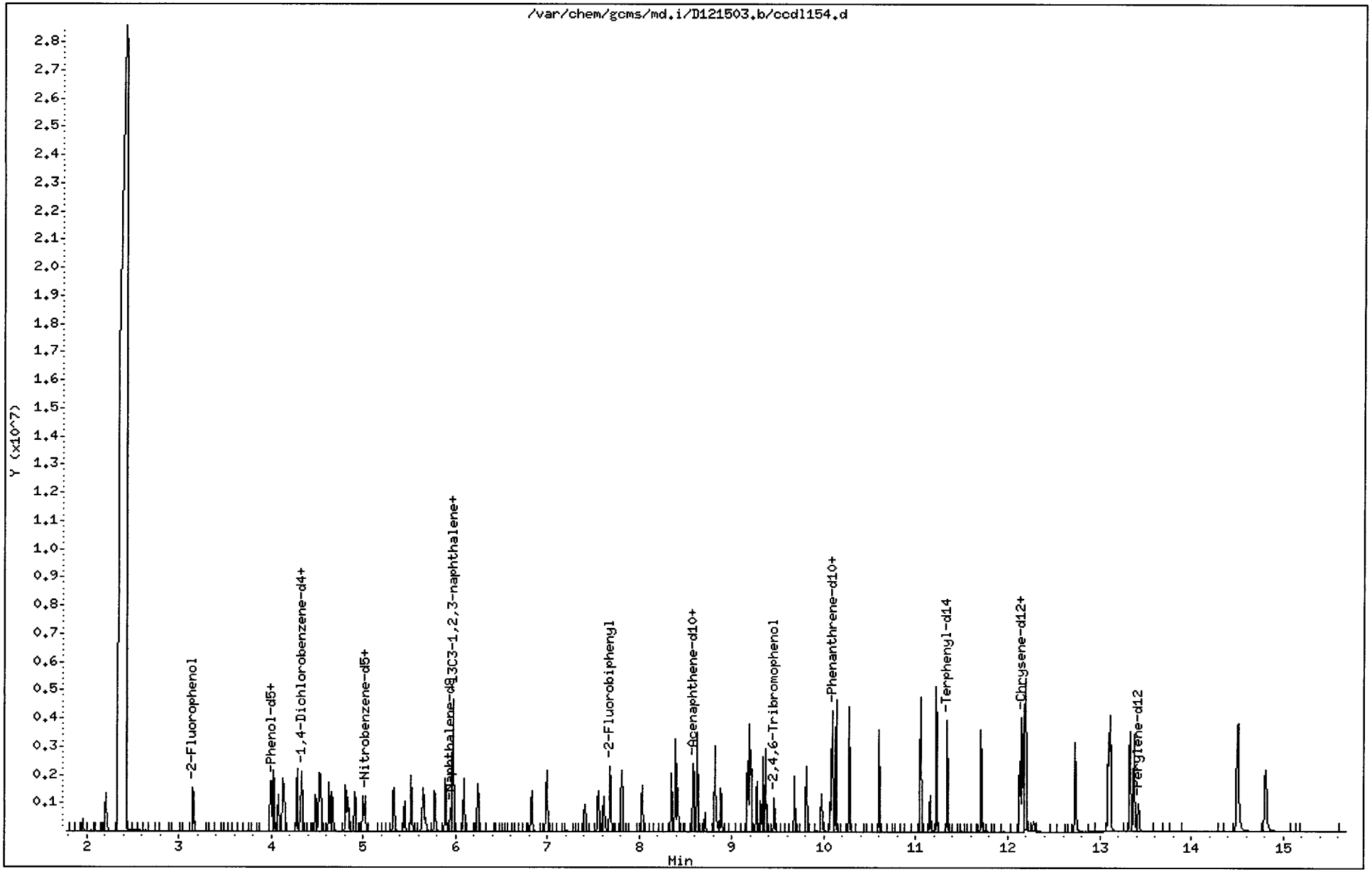
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)
175 1,4-Dioxane	88	1.955	1.955	(0.453)	137769	60.0000	54.3
13 N-Nitrosodimethylamine	74	2.214	2.214	(0.513)	229811	60.0000	60.8
14 Pyridine	79	2.208	2.208	(0.511)	423128	60.0000	58.3
15 Phenol (ccc)	94	4.006	4.006	(0.928)	500036	60.0000	64.3
16 Aniline	93	4.024	4.024	(0.932)	724883	60.0000	60.7
17 Bis(2-chloroethyl)ether	93	4.077	4.077	(0.944)	391595	60.0000	61.0
18 2-Chlorophenol	128	4.141	4.141	(0.959)	475301	60.0000	63.7
19 1,3-Dichlorobenzene	146	4.282	4.282	(0.992)	533519	60.0000	62.5
20 1,4-Dichlorobenzene (ccc)	146	4.335	4.335	(1.004)	529644	60.0000	62.2
21 Benzyl alcohol	108	4.482	4.482	(1.038)	277234	60.0000	61.1
22 1,2-Dichlorobenzene	146	4.535	4.535	(1.050)	504263	60.0000	61.8
23 2-Methylphenol	108	4.635	4.635	(1.073)	406581	60.0000	64.7
24 2,2'-Oxybis(1-Chloropropane)	45	4.664	4.664	(1.080)	680793	60.0000	55.3
25 4-Methylphenol	108	4.811	4.811	(1.114)	431282	60.0000	66.9
26 3&4 Methylphenol	108	4.811	4.811	(1.114)	431282	60.0000	66.9
27 N-Nitroso-di-n-propylamine###	70	4.835	4.835	(1.120)	261732	60.0000	61.7
28 Hexachloroethane	117	4.911	4.911	(1.137)	186259	60.0000	63.0
29 Nitrobenzene	77	5.023	5.023	(0.845)	379180	60.0000	61.8
30 Isophorone	82	5.334	5.334	(0.897)	748746	60.0000	61.1
31 2-Nitrophenol (ccc)	139	5.451	5.451	(0.917)	264173	60.0000	71.0
32 2,4-Dimethyphenol	107	5.522	5.522	(0.929)	432957	60.0000	64.8
33 Bis(2-chloroethoxy)methane	93	5.651	5.651	(0.951)	474830	60.0000	60.2
34 Benzoic acid	122	5.675	5.675	(0.955)	234806	60.0000	62.4
35 2,4-Dichlorophenol (ccc)	162	5.775	5.775	(0.971)	392012	60.0000	66.8
36 1,2,4-Trichlorobenzene	180	5.892	5.892	(0.991)	419564	60.0000	61.5
37 Naphthalene	128	5.974	5.974	(1.005)	1358029	60.0000	58.6
38 4-Chloroaniline	127	6.092	6.092	(1.025)	668235	60.0000	60.6
39 Hexachlorobutadiene (ccc)	225	6.245	6.245	(1.050)	220741	60.0000	62.0
40 4-Chloro-3-methylphenol (ccc)	107	6.826	6.826	(1.148)	349429	60.0000	67.5
41 2-Methylnaphthalene	142	6.997	6.997	(1.177)	933107	60.0000	62.0
42 Hexachlorocyclopentadiene####	237	7.408	7.408	(0.862)	194734	60.0000	55.6
43 2,4,6-Trichlorophenol (ccc)	196	7.555	7.555	(0.880)	261193	60.0000	66.3
44 2,4,5-Trichlorphenol	196	7.620	7.620	(0.887)	290635	60.0000	63.6
45 2-Chloronaphthalene	162	7.813	7.813	(0.910)	864159	60.0000	60.9
46 2-Nitroaniline	65	8.031	8.031	(0.935)	247971	60.0000	63.3
47 Acenaphthylene	152	8.395	8.395	(0.977)	1547194	60.0000	62.7
48 Dimethyl phthalate	163	8.348	8.348	(0.972)	947209	60.0000	60.8
49 2,6-Dinitrotoluene	165	8.419	8.419	(0.980)	223338	60.0000	66.5
50 3-Nitroaniline	138	8.583	8.583	(0.999)	316207	60.0000	62.6
51 Acenaphthene (ccc)	153	8.624	8.624	(1.004)	940507	60.0000	59.9
52 2,4-Dinitrophenol ##spcc##	184	8.707	8.707	(1.014)	121787	60.0000	73.9
53 Dibenzofuran	168	8.818	8.818	(1.027)	1220002	60.0000	61.8
54 4-Nitrophenol ##spcc##	109	8.830	8.830	(1.028)	106106	60.0000	63.1
55 2,4-Dinitrotoluene	165	8.883	8.883	(1.034)	304323	60.0000	66.5
56 Fluorene	166	9.194	9.194	(1.070)	1043907	60.0000	60.9
57 4-Chlorophenyl phenyl ether	204	9.206	9.206	(1.072)	437434	60.0000	59.4
58 Diethyl phthalate	149	9.171	9.171	(1.068)	948809	60.0000	61.2

Data File: /chem/gcms/md.i/D121503.b/ccdl154.d
Report Date: 15-Dec-2003 17:25

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)
59 4-Nitroaniline	138	9.271	9.271	(1.079)	334553	60.0000	61.2
60 4,6-Dinitro-2-methylphenol	198	9.318	9.318	(0.925)	176219	60.0000	68.9
61 N-Ndpa / diphenylamine (ccc)	169	9.341	9.341	(0.928)	648646	60.0000	61.3
62 1,2-Diphenylhydrazine/azobnz	77	9.365	9.365	(0.930)	887508	60.0000	61.1
63 4-Bromophenyl phenyl ether	248	9.676	9.676	(0.961)	229284	60.0000	62.9
64 Hexachlorobenzene	284	9.805	9.805	(0.974)	267262	60.0000	61.9
65 Pentachlorophenol (ccc)	266	9.976	9.976	(0.991)	160745	60.0000	59.8
66 Phenanthrene	178	10.087	10.087	(1.002)	1548442	60.0000	61.0
67 Anthracene	178	10.128	10.128	(1.006)	1564739	60.0000	61.7
68 Carbazole	167	10.275	10.275	(1.020)	1608907	60.0000	63.0
69 Di-n-butyl phthalate	149	10.598	10.598	(1.052)	1620716	60.0000	64.7
70 Fluoranthene (ccc)	202	11.051	11.051	(1.097)	1665079	60.0000	62.4
71 Pyrene	202	11.221	11.221	(0.922)	1767271	60.0000	63.0
72 Butyl benzyl phthalate	149	11.709	11.709	(0.962)	772347	60.0000	63.0
73 Benzo(a)Anthracene	228	12.155	12.155	(0.999)	1526324	60.0000	63.7
74 3,3'-Dichlorobenzidine	252	12.132	12.132	(0.997)	527444	60.0000	61.2
75 Chrysene	228	12.197	12.197	(1.002)	1388305	60.0000	59.2
76 Bis(2-ethylhexyl) phthalate	149	12.191	12.191	(1.001)	937305	60.0000	65.8
77 Di-n-octyl phthalate (ccc)	149	12.731	12.731	(0.948)	1746570	60.0000	66.6
78 Benzo(b)fluoranthene	252	13.096	13.096	(0.975)	1493853	60.0000	60.6
79 Benzo(k)fluoranthene	252	13.113	13.113	(0.977)	1819860	60.0000	62.0
85 Benzo(e)pyrene	252	13.331	13.331	(0.993)	1339515	60.0000	60.0
80 Benzo(a)pyrene (ccc)	252	13.378	13.378	(0.996)	1514759	60.0000	62.2
81 Indeno(1,2,3-cd)pyrene	276	14.506	14.506	(1.081)	1566359	60.0000	64.4
82 Dibenz(a,h)anthracene	278	14.512	14.512	(1.081)	1240135	60.0000	65.0
83 Benzo(g,h,i)perylene	276	14.811	14.811	(1.103)	1413709	60.0000	66.4

Data File: /var/chem/gcms/md.i/D121503.b/ccdl154.d
Date : 15-DEC-2003 17:05
Client ID: VSTD060
Sample Info: CCDL154,,2,4,,VSTD060,
Volume Injected (uL): 1.0
Column phase: ZB-5

Instrument: md.i
Operator: 3386
Column diameter: 0.25



Data File: /chem/gcms/md.i/D121503.b/a9dl154.d
Report Date: 15-Dec-2003 17:48

STL Knoxville

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: md.i
Lab File ID: a9dl154.d
Analysis Type: AIR
Lab Sample ID: A9DL154
Method: /chem/gcms/md.i/D121503.b/8270a9.m

Injection Date: 15-DEC-2003 17:29
Init. Cal. Date(s): 07-NOV-2003 07-NOV-2003
Init. Cal. Times: 09:52 14:37
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF60	CCAL RRF60	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
176 2-Picoline	1.21594	1.28821	1.28821	0.000	-5.94407	30.00000	Averaged
86 N-nitrosomethylethylamine	0.71691	0.68743	0.68743	0.000	4.11213	30.00000	Averaged
87 Methyl methanosulfonate	0.37312	0.41729	0.41729	0.000	-11.83900	30.00000	Averaged
88 N-nitrosodiethylamine	0.58202	0.60675	0.60675	0.000	-4.24905	30.00000	Averaged
89 Ethyl methanosulfonate	0.79811	0.87506	0.87506	0.000	-9.64118	30.00000	Averaged
90 Pentachloroethane	0.46232	0.50972	0.50972	0.000	-10.25114	30.00000	Averaged
91 acetophenone	1.49650	1.67807	1.67807	0.000	-12.13320	30.00000	Averaged
92 m-cresol	0.98773	1.23523	1.23523	0.000	-25.05815	30.00000	Averaged
93 n-nitrosopyrrolidine	0.59706	0.69646	0.69646	0.000	-16.64870	30.00000	Averaged
94 n-nitrosomorpholine	0.68208	0.72308	0.72308	0.000	-6.01218	30.00000	Averaged
95 o-toluidine	1.83580	2.00155	2.00155	0.000	-9.02868	30.00000	Averaged
96 n-nitrosopiperidine	0.23844	0.23646	0.23646	0.000	0.83054	30.00000	Averaged
97 2,6-dichlorophenol	0.26075	0.31158	0.31158	0.000	-19.49207	30.00000	Averaged
98 hexachloropropene	0.17033	0.19109	0.19109	0.000	-12.19045	30.00000	Averaged
99 N-nitro-di-n-butylamine	0.18177	0.19733	0.19733	0.000	-8.55771	30.00000	Averaged
100 Isosafrole	0.26132	0.28720	0.28720	0.000	-9.90373	30.00000	Averaged
101 1,2,4,5-tetrachlorobenzene	0.28580	0.31185	0.31185	0.000	-9.11764	30.00000	Averaged
102 safrole	0.50755	0.56754	0.56754	0.000	-11.81917	30.00000	Averaged
103 1-chloronaphthalene	1.18162	1.22931	1.22931	0.000	-4.03643	30.00000	Averaged
104 m-dinitrobenzene	71.81285	60.00000	0.18014	0.000	-19.68809	30.00000	Linear
105 pentachlorobenzene	0.45071	0.48308	0.48308	0.000	-7.18238	30.00000	Averaged
106 1-naphthylamine	1.30103	1.41836	1.41836	0.000	-9.01824	30.00000	Averaged
107 2-naphthylamine	1.41138	1.46886	1.46886	0.000	-4.07247	30.00000	Averaged
108 2,3,4,6-tetrachlorophenol	68.76333	60.00000	0.31695	0.000	-14.60556	30.00000	Linear
109 5-nitro-o-toluidine	0.37749	0.43602	0.43602	0.000	-15.50604	30.00000	Averaged
110 diphenylamine	1.12799	1.20794	1.20794	0.000	-7.08768	30.00000	Averaged
111 1,3,5-trinitrobenzene	72.82224	60.00000	0.12785	0.000	-21.37039	30.00000	Wt Linear
112 phenacetin	0.33742	0.36132	0.36132	0.000	-7.08267	30.00000	Averaged
113 4-aminobiphenyl	0.84204	0.87078	0.87078	0.000	-3.41321	30.00000	Averaged
114 pentachloronitrobenzene	0.07006	0.08040	0.08040	0.000	-14.77138	30.00000	Averaged
115 Dinoseb	76.88237	60.00000	0.16849	0.000	-28.13728	30.00000	Wt Linear
178 N-Nitroquinoline-n-oxide	0.03421	0.03128	0.03128	0.000	8.56476	30.00000	Averaged
177 Methapyrilene HCL	0.32174	0.35183	0.35183	0.000	-9.35429	30.00000	Averaged
84 Benzidine	0.83650	0.92887	0.92887	0.000	-11.04284	30.00000	Averaged
116 p-(dimethylamino)azobenzene	0.31166	0.33314	0.33314	0.000	-6.89235	30.00000	Averaged

Data File: /chem/gcms/md.i/D121503.b/a9dl154.d
Report Date: 15-Dec-2003 17:48

STL Knoxville

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: md.i
Lab File ID: a9dl154.d
Analysis Type: AIR
Lab Sample ID: A9DL154
Method: /chem/gcms/md.i/D121503.b/8270a9.m

Injection Date: 15-DEC-2003 17:29
Init. Cal. Date(s): 07-NOV-2003 07-NOV-2003
Init. Cal. Times: 09:52 14:37
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF60	CCAL RRF60	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
117 o-tolidine	0.74238	0.83850	0.83850	0.000	-12.94752	30.00000	Averaged
119 7,12-dimethylbenz(a)anthrac	0.49821	0.56382	0.56382	0.000	-13.16913	30.00000	Averaged
118 2-acetylaminofluorene	68.00977	60.00000	0.54888	0.000	-13.34961	30.00000	Linear
120 3-methylcholanthrene	0.77030	0.83774	0.83774	0.000	-8.75480	30.00000	Averaged

Data File: /chem/gcms/md.i/D121503.b/a9dl154.d
Report Date: 15-Dec-2003 17:48

STL Knoxville

SW-846 Method 8270C

Data file : /chem/gcms/md.i/D121503.b/a9dl154.d
Lab Smp Id: A9DL154 Client Smp ID: VSTD060
Inj Date : 15-DEC-2003 17:29
Operator : 3386 Inst ID: md.i
Smp Info : A9DL154,,2,4,,VSTD060,
Misc Info : D121503,8270a9,appdx9.sub
Comment : Semivolatile Organic Compounds by GC/MS
Method : /chem/gcms/md.i/D121503.b/8270a9.m
Meth Date : 15-Dec-2003 17:48 chemist Quant Type: ISTD
Cal Date : 07-NOV-2003 13:02 Cal File: a9dk076.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: appdx9.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * (Vt*Sf)/(Vo*Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Sf	1.00000	Prep split factor
Vo	1.00000	Volume of sample extracted (1=total samp
Uf	1000.00000	unit correction factor

Cpnd Variable Local Compound Variable

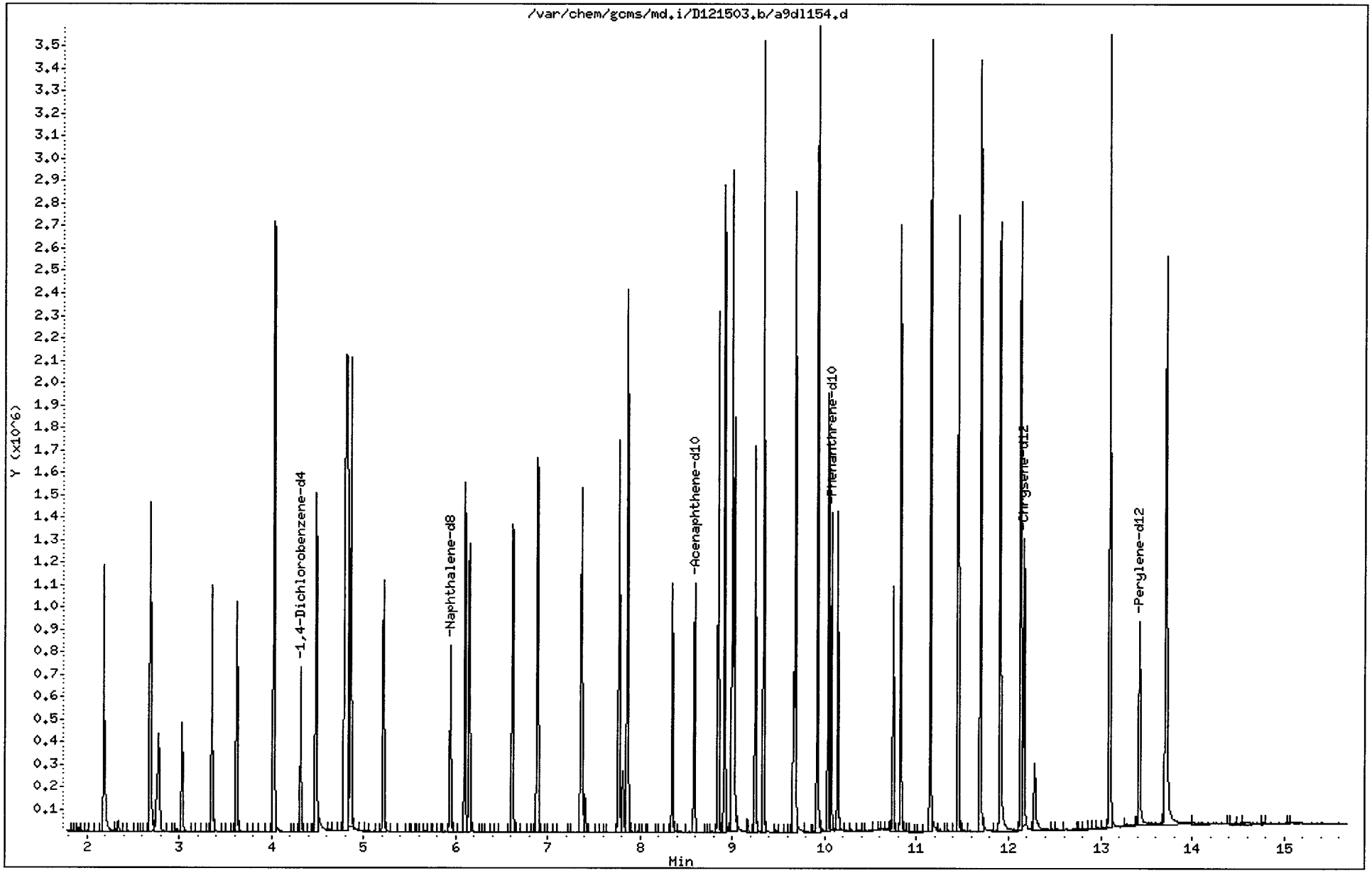
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)
* 1 1,4-Dichlorobenzene-d4	152	4.317	4.317	(1.000)	115841	20.0000	
* 2 Naphthalene-d8	136	5.945	5.945	(1.000)	439659	20.0000	
* 3 Acenaphthene-d10	164	8.589	8.589	(1.000)	244179	20.0000	
* 4 Phenanthrene-d10	188	10.069	10.069	(1.000)	424870	20.0000	
* 5 Chrysene-d12	240	12.167	12.167	(1.000)	433472	20.0000	
* 6 Perylene-d12	264	13.424	13.424	(1.000)	312037	20.0000	
176 2-Picoline	93	2.690	2.690	(0.623)	447687	60.0000	63.6
86 N-nitrosomethylethylamine	42	2.784	2.784	(0.645)	238900	60.0000	57.5
87 Methyl methanosulfonate	80	3.031	3.031	(0.702)	145018	60.0000	67.1
88 N-nitrosodiethylamine	102	3.354	3.354	(0.777)	210859	60.0000	62.5
89 Ethyl methanosulfonate	79	3.624	3.624	(0.839)	304106	60.0000	65.8
90 Pentachloroethane	167	4.029	4.029	(0.933)	177139	60.0000	66.2
91 acetophenone	105	4.805	4.805	(1.113)	583173	60.0000	67.3

Data File: /chem/gcms/md.i/D121503.b/a9dl154.d
Report Date: 15-Dec-2003 17:48

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)
92 m-cresol	108	4.823	4.823	(1.117)	429275	60.0000	75.0
93 n-nitrosopyrrolidine	100	4.793	4.793	(1.110)	242037	60.0000	70.0
94 n-nitrosomorpholine	56	4.817	4.817	(1.116)	251289	60.0000	63.6
95 o-toluidine	106	4.864	4.864	(1.127)	695591	60.0000	65.4
96 n-nitrosopiperidine	42	5.216	5.216	(0.877)	311891	60.0000	59.5
97 2,6-dichlorophenol	162	6.098	6.098	(1.026)	410963	60.0000	71.7
98 hexachloropropene	213	6.151	6.151	(1.035)	252049	60.0000	67.3
99 N-nitro-di-n-butylamine	84	6.615	6.615	(1.113)	260270	60.0000	65.1
100 Isosafrole	162	6.891	6.891	(1.159)	378809	60.0000	65.9
101 1,2,4,5-tetrachlorobenzene	216	7.367	7.367	(1.239)	411328	60.0000	65.5
102 safrole	162	7.766	7.766	(0.904)	415742	60.0000	67.1
103 1-chloronaphthalene	162	7.860	7.860	(0.915)	900519	60.0000	62.4
104 m-dinitrobenzene	76	8.348	8.348	(0.972)	131962	60.0000	71.8
105 pentachlorobenzene	250	8.847	8.847	(1.030)	353875	60.0000	64.3
106 1-naphthylamine	143	8.912	8.912	(1.038)	1039006	60.0000	65.4
107 2-naphthylamine	143	8.994	8.994	(1.047)	1075993	60.0000	62.4
108 2,3,4,6-tetrachlorophenol	232	9.018	9.018	(1.050)	232174	60.0000	68.8
109 5-nitro-o-toluidine	152	9.253	9.253	(1.077)	319402	60.0000	69.3
110 diphenylamine	169	9.335	9.335	(1.087)	884864	60.0000	64.2
111 1,3,5-trinitrobenzene	75	9.664	9.664	(0.960)	162954	60.0000	72.8
112 phenacetin	108	9.682	9.682	(0.961)	460538	60.0000	64.2
113 4-aminobiphenyl	169	9.923	9.923	(0.985)	1109909	60.0000	62.0
114 pentachloronitrobenzene	237	10.034	10.034	(0.996)	102484	60.0000	68.9
115 Dinoseb	211	10.140	10.140	(1.007)	214755	60.0000	76.9
178 N-Nitroquinoline-n-oxide	174	10.745	10.745	(1.067)	39871	60.0000	54.9
177 Methapyrilene HCL	97	10.822	10.822	(1.075)	448451	60.0000	65.6
84 Benzidine	184	11.151	11.151	(1.107)	1183954	60.0000	66.6
116 p-(dimethylamino)azobenzene	120	11.450	11.450	(1.137)	424630	60.0000	64.1
117 o-tolidine	212	11.691	11.691	(1.161)	1068764	60.0000	67.8
119 7,12-dimethylbenz(a)anthracen	256	13.095	13.095	(1.076)	733204	60.0000	67.9
118 2-acetylaminofluorene	181	11.909	11.909	(0.979)	713776	60.0000	68.0
120 3-methylcholanthrene	268	13.712	13.712	(1.021)	784217	60.0000	65.2

Data File: /var/chem/gcms/md.i/D121503.b/a9dl154.d
Date : 15-DEC-2003 17:29
Client ID: VSTD060
Sample Info: A9DL154,,2,4,,VSTD060,
Volume Injected (uL): 1.0
Column phase: ZB-5

Instrument: md.i
Operator: 3386
Column diameter: 0.25



STL Knoxville Semivolatile GC/MS Continuing Calibration Review / Narrative Checklist
Method 8270C - KNOX-MS-0016 Rev 1 and Method TO-13A Mod – KNOX-MS-0017, Rev. 0

Analysis Date:	12-18-03	CCAL Batch/ Scan Name:	D121803	Instrument:	MD	ICAL Batch/ Scan Name:	D110703I	Scanned □

Review Items	N/A	Yes	No	If No, why is data reportable?	2nd ✓
1. Did DFTPP meet tune criteria?		✓			✓
2. Was DDT breakdown ≤20% & benzidine tailing ≤3 and PCP tailing ≤5?		✓			✓
3. Were all standards injected within 12 hr of DFTPP?		✓			✓
4. Was date/time of analysis verified between analysis header and logbook as correct?		✓			✓
5. Was the primary ion used for all compounds?		✓		θ *Secondary ion used due to interferences for:* _____	✓
6. Are the RFs for SPCCs ≥0.050?		✓			✓
7. Is the %D or drift ≤20% for all CCCs? (8270C)		✓			✓
8. Is the %D or drift ≤30% for all target analytes? (TO-13A Mod)		✓			✓
9. Is the %D or drift ≤ 30% for all other compounds? [Up to 3 TCLs may have %D or drift ≤ 50%; any more and the calibration is INVALID; 3 add'l allowed for App IX].		✓		θ %D or drift > 30% for the following TCLs: _____	✓
10. Are the internal standard responses within limits? (50-200% of the mid-level ICAL standard)		✓			✓
11. Are the internal standard retention times within limits? (30 seconds of the mid-level ICAL standard)		✓			✓
12. If manual integrations were performed, are they clearly identified, initialed, dated and reason given?	✓			Reasons: 1)Corrected split peak; 2)Unresolved peak; 3)tailing; 4)RT shift; 5)wrong peak selected; 6)other	NA
13. If automatic identification of a peak was not achieved, list those analytes: _____	✓				NA
14. Have alternate hits/manual integrations been verified as correct and are correct RFs listed in CCAL summary?	✓				NA
15. Was the correct ICAL used for quantitation? (Verify date & time of ICAL is documented correctly on CCAL)		✓			✓
16. Is the first IS documented correctly on the log?		✓			✓
17. Elution order checked on isomeric pairs/coeluters?		✓			✓
• 1,4-dichlorobenzene-d4 / 1,2-dichlorobenzene		✓			✓
• aniline / bis(2-chloroethyl)ether		✓			✓
• 1,3- , 1,4- , 1,2-dichlorobenzene		✓			✓
• benzyl alcohol / 2-methylphenol / 4-methylphenol		✓			✓
• 2,4,6- and 2,4,5-trichlorophenol		✓			✓
• phenanthrene / anthracene		✓			✓
• fluoranthene / pyrene		✓			✓
• benzo(a)anthracene / chrysene		✓			✓
• benzo(b)fluoranthene / benzo(k)fluoranthene		✓			✓
• indeno(1,2,3-cd)pyrene / benzo(g,h,i)perylene		✓			✓
18. If criteria were not met, was a NCM generated, approved by supervisor, and copy included in folder?	✓				NA
19. Does the CCAL folder contain **complete** data in the following order? Data review checklist, tune pass/fail page, m/z list, tune chromatogram, Target CCAL summary, Quan report, chromatogram and manual integrations.		✓			✓

Analyst: [signature]	Date: 12-18-03	2nd Level Reviewer: [signature]	Date: 12/19/03
Comments:		Comments:	

STL Knoxville
Instrument MD Run/Maintenance Log

Preventive Maintenance Performed ❑ NA ☒ inj. **Date/Time Verified** ☒

Target Batch	D121803			Date	12-18-03
ICAL Batch	D110703I			Analyst	UM
IS #1	87290			Internal Std ID*	EM1913

* was added to all standards and extracts at 3 ul per 300 ul of standard or extract unless noted. Instrument injection volume is 1 ul unless otherwise noted.

Lot	Filename	Time	Dil.	Matrix	Batch	Comments
TUNE	DFDL18	1021		EM1894A		
CCV-8270	CCDL184	1033		EM1913		
CCV-A9	A9DL184	1057		EM1914		
Blk	F6NT11AA	1121	—	air	3349172	
LCS	C	1144				
LCSD	D	1208				
H3L130124	F6MGM1AA	1232				
	G9	1256				
	HA	1320				
	HC	1344				
	HD	1407				
	HE	1431				
	HF	1455				
	HG	1519				
	F6N1X1AA	1543				
Blk	F6N421AA	1607	—	water	3349288	
LCS	C	1631				
H3L120208	F6JXA1AD	1655				
	X21CH	1718				
MS	X21CJ	1742				
MSD	X21CK	1806				
	OA1AP	1830				
Blk	F6N4X1AA	1853			3349287	
LCS	C	1918				
LCSD	D	1941				
H3L120196	F6JVL1AA	2005				
H3L120429	F6L0N1AA	2028	1/5	waste	3350160	
MS	C	2052				
MSD	D	2116				
H3L120434	F6L381AA	2139	—			
	391AA	2203	—			

UM 12-21-03

Comments:

Data File: /chem/gcms/md.i/D121803.b/dfdl18.d

Date : 18-DEC-2003 10:21

Client ID: Tune

Instrument: md.i

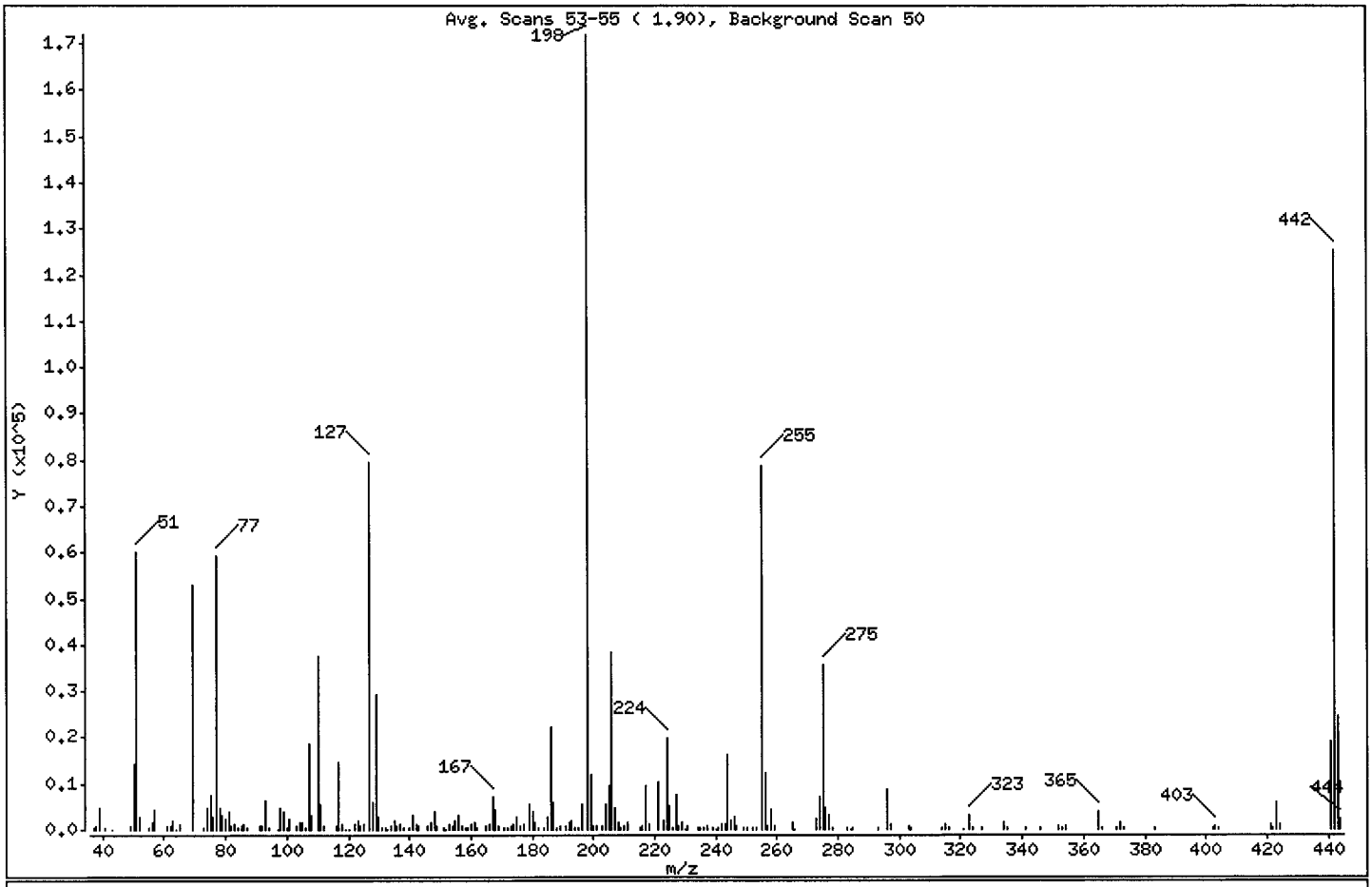
Sample Info: DFDL18,,3,,DFTPP,

Operator: 3386

Column phase: ZB-5

Column diameter: 0.25

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	30.00 - 60.00% of mass 198	35.04
68	Less than 1.99% of mass 69	0.00 (0.00)
69	Present, but less than mass 198	30.80
70	Less than 1.99% of mass 69	0.00 (0.00)
127	40.00 - 60.00% of mass 198	46.15
197	Less than 0.99% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.90
275	10.00 - 30.00% of mass 198	20.72
365	1.01 - 100.00% of mass 198	2.21
441	Present, but less than mass 443	11.11
442	40.01 - 110.00% of mass 198	72.84
443	17.00 - 23.00% of mass 442	14.27 (19.60)

Data File: /chem/gcms/md.i/D121803.b/dfdl18.d

Date : 18-DEC-2003 10:21

Client ID: Tune

Instrument: md.i

Sample Info: DFDL18,,3,,DFTPP,

Operator: 3386

Column phase: ZB-5

Column diameter: 0.25

Data File: dfdl18.d
Spectrum: Avg. Scans 53-55 (1.90), Background Scan 50
Location of Maximum: 198.00
Number of points: 216

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	202	120.00	191	186.00	22184	256.00	12238
38.00	685	122.00	1260	187.00	5887	257.00	898
39.00	4670	123.00	1910	188.00	510	258.00	4187
41.00	210	124.00	888	189.00	824	259.00	688
43.00	150	125.00	996	191.00	769	265.00	1604
49.00	907	127.00	79392	192.00	1686	266.00	2
50.00	14341	128.00	6106	193.00	1812	273.00	2501
51.00	60272	129.00	29112	194.00	222	274.00	6953
52.00	2855	130.00	2716	195.00	248	275.00	35632
55.00	292	131.00	496	196.00	5569	276.00	4883
56.00	1675	132.00	211	198.00	172032	277.00	3009
57.00	4419	133.00	181	199.00	11866	278.00	293
61.00	684	134.00	736	200.00	755	283.00	220
62.00	780	135.00	2170	201.00	897	284.00	177
63.00	1946	136.00	958	203.00	893	285.00	355
64.00	192	137.00	1248	204.00	5689	293.00	416
65.00	1197	138.00	205	205.00	9513	296.00	8676
69.00	52984	140.00	439	206.00	38336	297.00	1052
73.00	526	141.00	3359	207.00	4690	303.00	719
74.00	4769	142.00	1245	208.00	1419	304.00	240
75.00	7554	143.00	839	209.00	411	314.00	314
76.00	2662	146.00	776	210.00	814	315.00	999
77.00	59304	147.00	1540	211.00	1400	316.00	475
78.00	4767	148.00	3955	215.00	221	321.00	196
79.00	3067	149.00	934	216.00	825	323.00	3198
80.00	2371	151.00	566	217.00	9553	324.00	329
81.00	4082	152.00	187	218.00	1193	327.00	366
82.00	982	153.00	1053	221.00	10404	334.00	1728
83.00	1266	154.00	837	223.00	2009	335.00	358
84.00	443	155.00	2027	224.00	19720	341.00	303
85.00	753	156.00	3225	225.00	5098	346.00	493
86.00	1154	157.00	691	226.00	415	352.00	833
87.00	457	158.00	437	227.00	7425	353.00	538
91.00	748	159.00	557	228.00	988	354.00	633
92.00	986	160.00	1048	229.00	1670	365.00	3796

Data File: /chem/gcms/md.i/D121803.b/dfdl18.d

Date : 18-DEC-2003 10:21

Client ID: Tune

Instrument: md.i

Sample Info: DFDL18,,3,,DFTPP,

Operator: 3386

Column phase: ZB-5

Column diameter: 0.25

Data File: dfdl18.d

Spectrum: Avg. Scans 53-55 (1.90), Background Scan 50

Location of Maximum: 198.00

Number of points: 216

m/z	Y	m/z	Y	m/z	Y	m/z	Y
93.00	6373	161.00	1602	230.00	167	366.00	415
94.00	464	162.00	577	231.00	659	371.00	201
97.00	189	165.00	980	234.00	343	372.00	1744
98.00	4613	166.00	1146	235.00	318	373.00	243
99.00	4105	167.00	7308	236.00	328	383.00	243
100.00	243	168.00	4254	237.00	608	402.00	553
101.00	2428	169.00	693	239.00	200	403.00	974
103.00	947	171.00	369	240.00	187	404.00	244
104.00	1489	172.00	378	241.00	437	421.00	1006
105.00	1736	173.00	742	242.00	1023	422.00	448
106.00	333	174.00	1317	243.00	1192	423.00	5902
107.00	18560	175.00	2941	244.00	16083	424.00	1059
108.00	3133	176.00	943	245.00	2022	441.00	19104
110.00	37656	177.00	1158	246.00	2614	442.00	125320
111.00	5593	179.00	5496	247.00	613	443.00	24552
112.00	771	180.00	4098	249.00	301	444.00	2187
116.00	870	181.00	1733	250.00	199		
117.00	14548	182.00	206	252.00	226		
118.00	1091	184.00	469	253.00	382		
119.00	174	185.00	2672	255.00	78704		

Data File: /chem/gcms/md.i/D121803.b/dfdl18.d

Date : 18-DEC-2003 10:21

Client ID: Tune

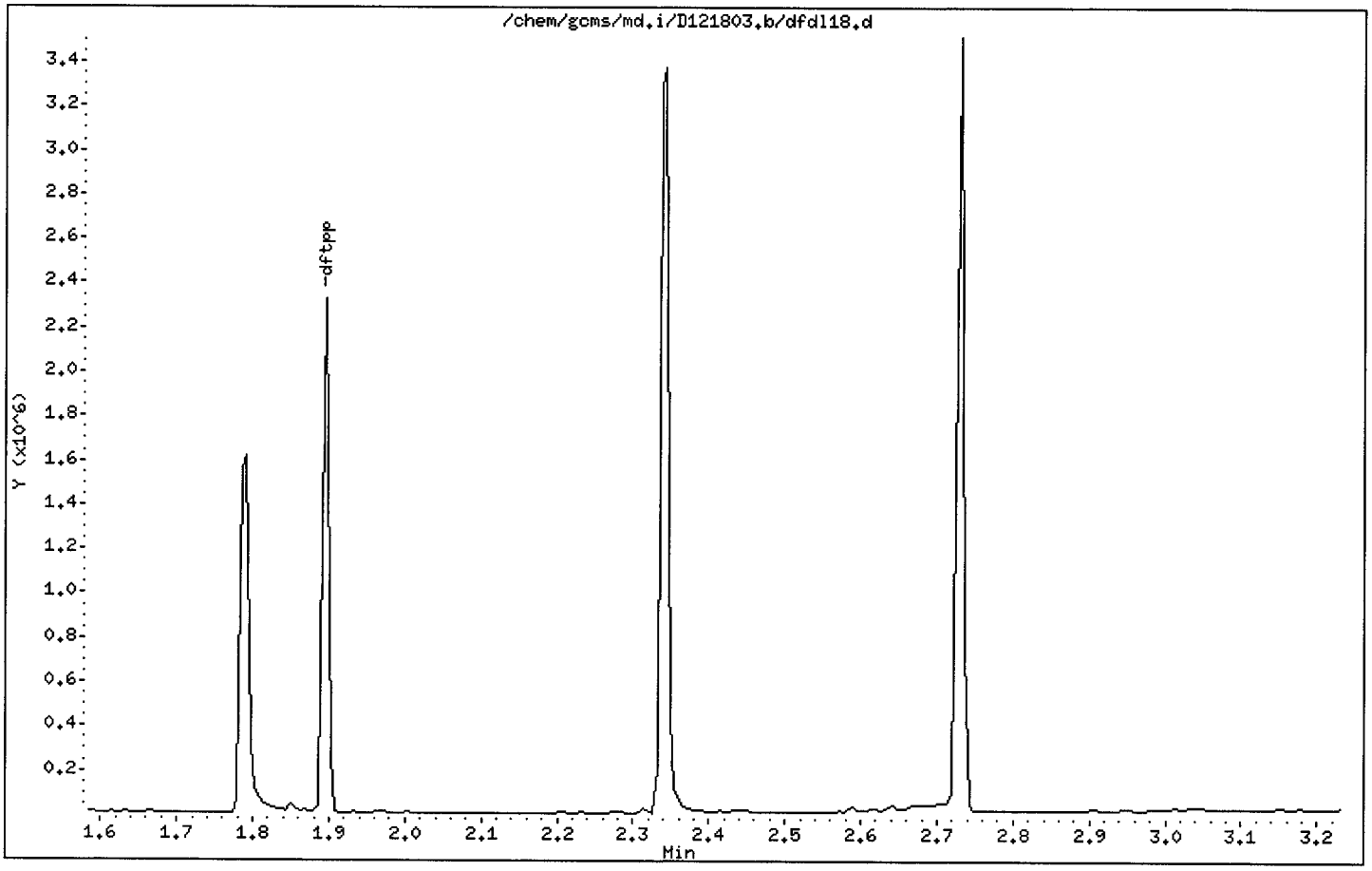
Instrument: md.i

Sample Info: DFDL18,,3,,DFTPP,

Operator: 3386

Column phase: ZB-5

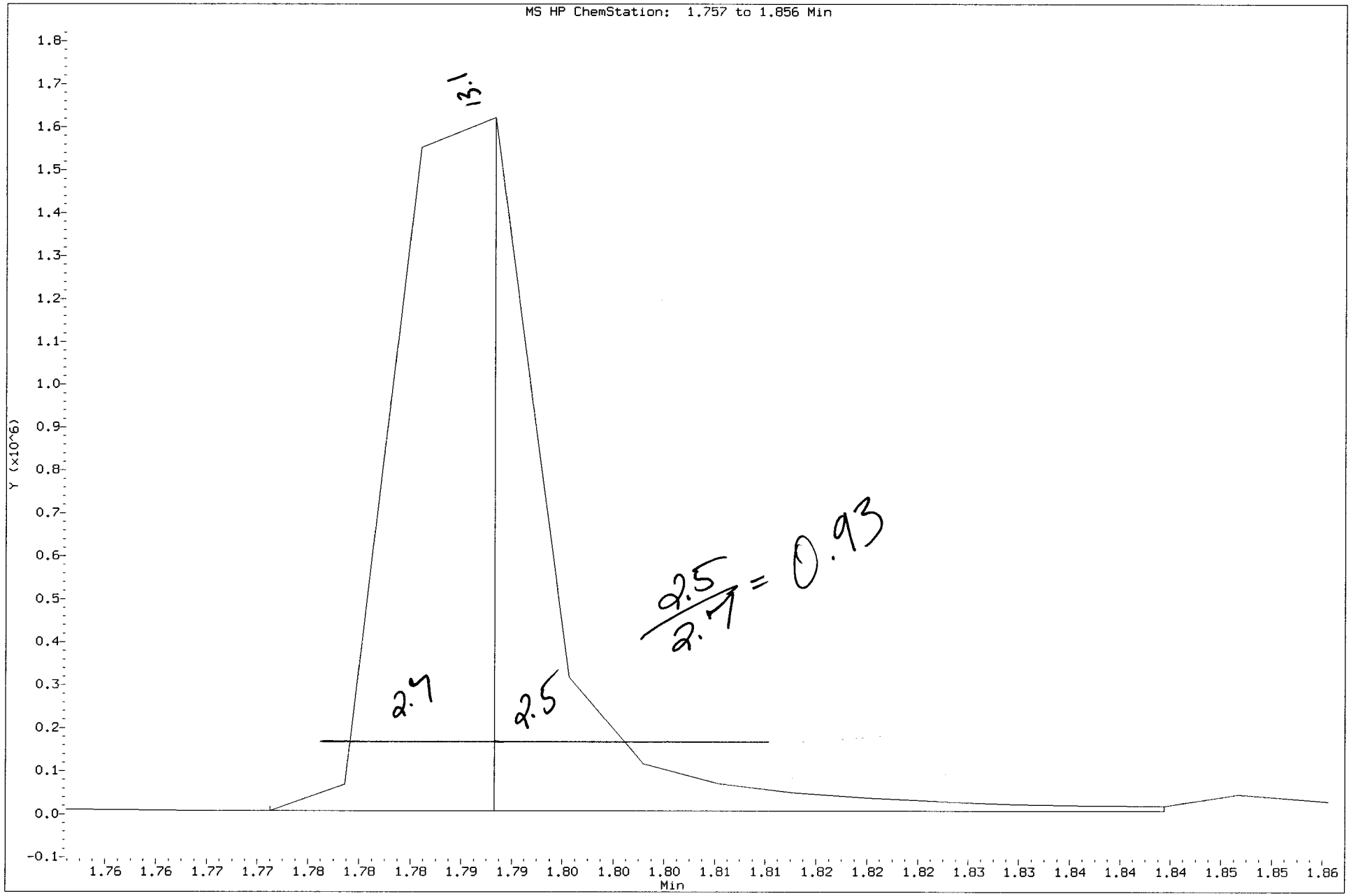
Column diameter: 0.25



no breakdown
KM
12-18-03

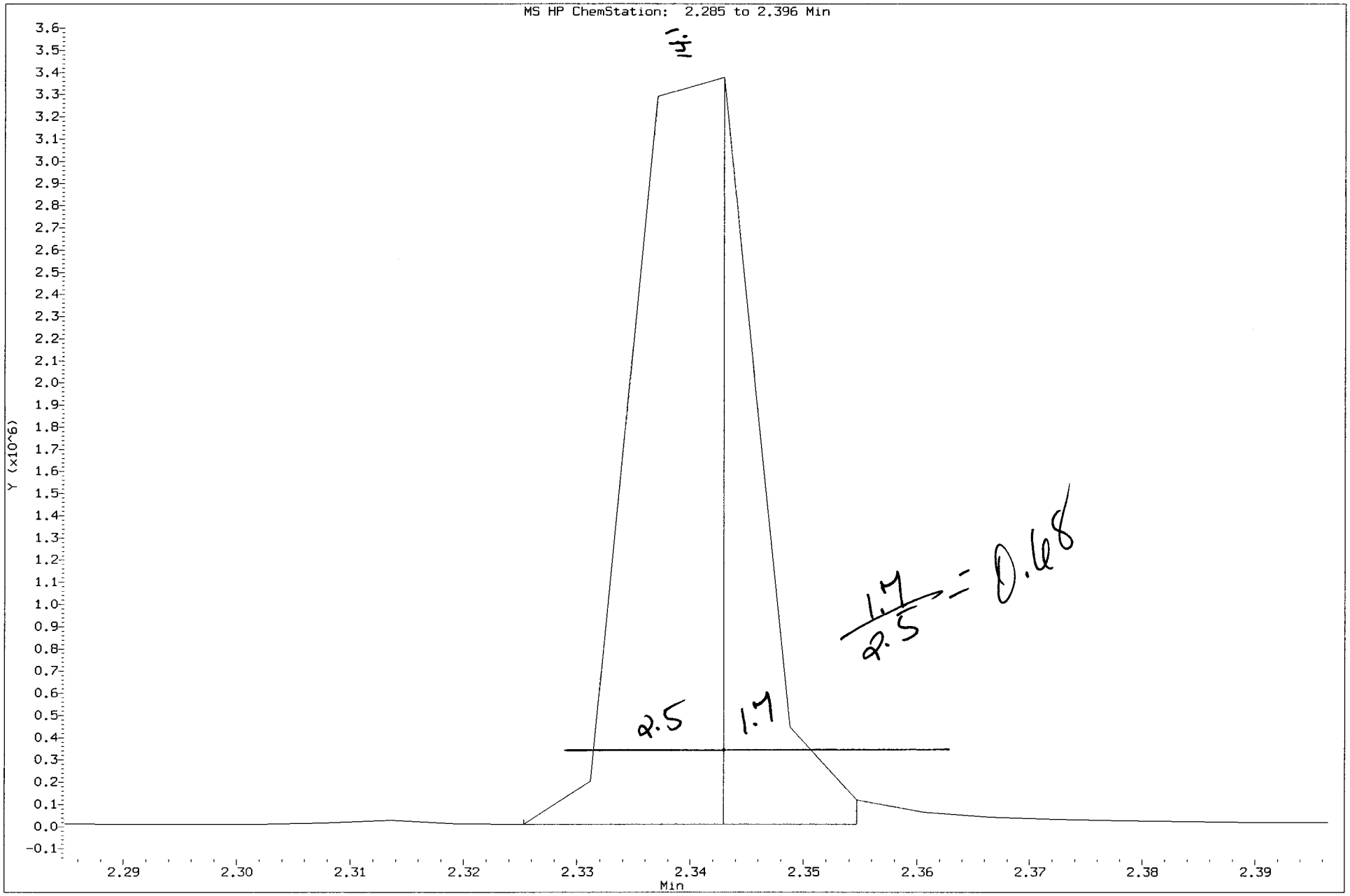
PCP

Data File: /var/chem/gcms/md.i/D121803.b/dfdl18.d
Injection Date: 18-DEC-2003 10:21
Instrument: md.i
Client Sample ID: Tune



Benzidine

Data File: /var/chem/gcms/md.i/D121803.b/dfdl18.d
Injection Date: 18-DEC-2003 10:21
Instrument: md.i
Client Sample ID: Tune



Data File: /chem/gcms/md.i/D121803.b/ccdl184.d
Report Date: 18-Dec-2003 10:52

STL Knoxville

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: md.i
Lab File ID: ccdl184.d
Analysis Type: AIR
Lab Sample ID: CCDL184
Method: /chem/gcms/md.i/D121803.b/8270a9.m

Injection Date: 18-DEC-2003 10:33
Init. Cal. Date(s): 07-NOV-2003 07-NOV-2003
Init. Cal. Times: 09:52 14:37
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF60	CCAL RRF60	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
$ 7 2-Fluorophenol	1.31155	1.33359	1.33359	0.000	-1.68041	30.00000	Averaged
$ 8 Phenol-d5	1.43901	1.55441	1.55441	0.000	-8.01971	30.00000	Averaged
$ 9 Nitrobenzene-d5	0.30621	0.31099	0.31099	0.000	-1.56157	30.00000	Averaged
$ 10 2-Fluorobiphenyl	1.32561	1.33075	1.33075	0.000	-0.38769	30.00000	Averaged
$ 11 2,4,6-Tribromophenol	0.09198	0.10335	0.10335	0.000	-12.35957	30.00000	Averaged
$ 12 Terphenyl-d14	0.82766	0.81621	0.81621	0.000	1.38361	30.00000	Averaged
$ 172 13C3-1,2,3-naphthalene	1.06889	1.08288	1.08288	0.000	-1.30838	30.00000	Averaged
175 1,4-Dioxane	0.44158	0.37451	0.37451	0.000	15.18685	30.00000	Averaged
13 N-Nitrosodimethylamine	0.65818	0.63840	0.63840	0.000	3.00594	30.00000	Averaged
14 Pyridine	1.26415	1.21112	1.21112	0.000	4.19497	30.00000	Averaged
15 Phenol (ccc)	1.35369	1.47951	1.47951	0.000	-9.29469	20.00000	Averaged
16 Aniline	2.07968	2.11396	2.11396	0.000	-1.64813	30.00000	Averaged
17 Bis(2-chloroethyl)ether	1.11751	1.12721	1.12721	0.000	-0.86779	30.00000	Averaged
18 2-Chlorophenol	1.29948	1.37506	1.37506	0.000	-5.81590	30.00000	Averaged
19 1,3-Dichlorobenzene	1.48586	1.52077	1.52077	0.000	-2.34971	30.00000	Averaged
20 1,4-Dichlorobenzene (ccc)	1.48331	1.52099	1.52099	0.000	-2.53974	20.00000	Averaged
21 Benzyl alcohol	0.79001	0.82052	0.82052	0.000	-3.86176	30.00000	Averaged
22 1,2-Dichlorobenzene	1.42031	1.47389	1.47389	0.000	-3.77246	30.00000	Averaged
23 2-Methylphenol	1.09397	1.19631	1.19631	0.000	-9.35435	30.00000	Averaged
24 2,2'-Oxybis(1-Chloropropane	2.14522	1.97504	1.97504	0.000	7.93275	30.00000	Averaged
25 4-Methylphenol	1.12299	1.27648	1.27648	0.000	-13.66718	30.00000	Averaged
26 3&4 Methylphenol	1.12299	1.27648	1.27648	0.000	-13.66718	30.00000	Averaged
27 N-Nitroso-di-n-propylamine#	0.73889	0.77459	0.77459	0.050	-4.83106	30.00000	Averaged
28 Hexachloroethane	0.51474	0.51379	0.51379	0.000	0.18479	30.00000	Averaged
29 Nitrobenzene	0.28845	0.29572	0.29572	0.000	-2.51847	30.00000	Averaged
30 Isophorone	0.57682	0.59498	0.59498	0.000	-3.14756	30.00000	Averaged
31 2-Nitrophenol (ccc)	0.17507	0.20222	0.20222	0.000	-15.50631	20.00000	Averaged
32 2,4-Dimethyphenol	0.31411	0.34003	0.34003	0.000	-8.25222	30.00000	Averaged
33 Bis(2-chloroethoxy)methane	0.37103	0.37179	0.37179	0.000	-0.20680	30.00000	Averaged
34 Benzoic acid	62.60349	60.00000	0.18469	0.000	-4.33915	30.00000	Linear
35 2,4-Dichlorophenol (ccc)	0.27594	0.30711	0.30711	0.000	-11.29417	20.00000	Averaged
36 1,2,4-Trichlorobenzene	0.32105	0.32491	0.32491	0.000	-1.20263	30.00000	Averaged
37 Naphthalene	1.08986	1.11082	1.11082	0.700	-1.92336	30.00000	Averaged
38 4-Chloroaniline	0.51849	0.54044	0.54044	0.000	-4.23322	30.00000	Averaged
39 Hexachlorobutadiene (ccc)	0.16735	0.17276	0.17276	0.000	-3.23592	20.00000	Averaged

Data File: /chem/gcms/md.i/D121803.b/ccdl184.d
Report Date: 18-Dec-2003 10:52

STL Knoxville

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: md.i
Lab File ID: ccdl184.d
Analysis Type: AIR
Lab Sample ID: CCDL184
Method: /chem/gcms/md.i/D121803.b/8270a9.m

Injection Date: 18-DEC-2003 10:33
Init. Cal. Date(s): 07-NOV-2003 07-NOV-2003
Init. Cal. Times: 09:52 14:37
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF60	CCAL RRF60	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
40 4-Chloro-3-methylphenol (cc	0.24338	0.28045	0.28045	0.000	-15.23425	20.00000	Averaged
41 2-Methylnaphthalene	0.70786	0.73966	0.73966	0.000	-4.49166	30.00000	Averaged
42 Hexachlorocyclopentadiene##	0.29791	0.25163	0.25163	0.050	15.53380	30.00000	Averaged
43 2,4,6-Trichlorophenol (ccc)	0.33523	0.36259	0.36259	0.000	-8.16168	20.00000	Averaged
44 2,4,5-Trichlorphenol	0.38902	0.40205	0.40205	0.000	-3.34725	30.00000	Averaged
45 2-Chloronaphthalene	1.20672	1.21964	1.21964	0.000	-1.07062	30.00000	Averaged
46 2-Nitroaniline	0.33346	0.35394	0.35394	0.000	-6.14092	30.00000	Averaged
47 Acenaphthylene	2.09881	2.21250	2.21250	1.300	-5.41698	30.00000	Averaged
48 Dimethyl phthalate	1.32477	1.39466	1.39466	0.000	-5.27579	30.00000	Averaged
49 2,6-Dinitrotoluene	0.28578	0.32179	0.32179	0.000	-12.60073	30.00000	Averaged
50 3-Nitroaniline	0.42956	0.46370	0.46370	0.000	-7.94838	30.00000	Averaged
51 Acenaphthene (ccc)	1.33693	1.36480	1.36480	0.800	-2.08432	20.00000	Averaged
52 2,4-Dinitrophenol ##spcc##	73.86307	60.00000	0.17248	0.050	-23.10512	30.00000	Wt Linear
53 Dibenzofuran	1.67937	1.75165	1.75165	0.000	-4.30358	30.00000	Averaged
54 4-Nitrophenol ##spcc##	0.14299	0.16072	0.16072	0.050	-12.39903	30.00000	Averaged
55 2,4-Dinitrotoluene	0.38957	0.45718	0.45718	0.000	-17.35525	30.00000	Averaged
56 Fluorene	1.45958	1.55336	1.55336	0.900	-6.42495	30.00000	Averaged
57 4-Chlorophenyl phenyl ether	0.62690	0.63627	0.63627	0.000	-1.49516	30.00000	Averaged
58 Diethyl phthalate	1.31984	1.43053	1.43053	0.000	-8.38662	30.00000	Averaged
59 4-Nitroaniline	0.46548	0.51264	0.51264	0.000	-10.13236	30.00000	Averaged
60 4,6-Dinitro-2-methylphenol	68.38493	60.00000	0.14270	0.000	-13.97488	30.00000	Linear
61 N-Ndpa / diphenylamine (ccc	0.51872	0.53254	0.53254	0.000	-2.66568	20.00000	Averaged
62 1,2-Diphenylhydrazine/azobn	0.71132	0.70857	0.70857	0.000	0.38565	30.00000	Averaged
63 4-Bromophenyl phenyl ether	0.17861	0.18417	0.18417	0.000	-3.11491	30.00000	Averaged
64 Hexachlorobenzene	0.21154	0.21953	0.21953	0.000	-3.77351	30.00000	Averaged
65 Pentachlorophenol (ccc)	0.13179	0.13553	0.13553	0.000	-2.83511	20.00000	Averaged
66 Phenanthrene	1.24394	1.28481	1.28481	0.700	-3.28608	30.00000	Averaged
67 Anthracene	1.24174	1.29855	1.29855	0.700	-4.57481	30.00000	Averaged
68 Carbazole	1.25158	1.35015	1.35015	0.000	-7.87544	30.00000	Averaged
69 Di-n-butyl phthalate	1.22720	1.37912	1.37912	0.000	-12.37962	30.00000	Averaged
70 Fluoranthene (ccc)	1.30788	1.43493	1.43493	0.600	-9.71435	20.00000	Averaged
71 Pyrene	1.36575	1.31515	1.31515	0.600	3.70537	30.00000	Averaged
72 Butyl benzyl phthalate	0.59749	0.60118	0.60118	0.000	-0.61893	30.00000	Averaged
73 Benzo(a)Anthracene	1.16708	1.20061	1.20061	0.800	-2.87318	30.00000	Averaged
74 3,3'-Dichlorobenzidine	0.42015	0.44233	0.44233	0.000	-5.27854	30.00000	Averaged

Data File: /chem/gcms/md.i/D121803.b/ccdl184.d
Report Date: 18-Dec-2003 10:52

STL Knoxville

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: md.i
Lab File ID: ccdl184.d
Analysis Type: AIR
Lab Sample ID: CCDL184
Method: /chem/gcms/md.i/D121803.b/8270a9.m

Injection Date: 18-DEC-2003 10:33
Init. Cal. Date(s): 07-NOV-2003 07-NOV-2003
Init. Cal. Times: 09:52 14:37
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF60	CCAL RRF60	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
75 Chrysene	1.14163	1.13741	1.13741	0.700	0.36979	30.00000	Averaged
76 Bis(2-ethylhexyl) phthalate	0.69334	0.74362	0.74362	0.000	-7.25101	30.00000	Averaged
77 Di-n-octyl phthalate (ccc)	1.76487	1.76483	1.76483	0.000	0.00218	20.00000	Averaged
78 Benzo(b)fluoranthene	60.97991	60.00000	1.68641	0.700	-1.63318	30.00000	Linear
79 Benzo(k)fluoranthene	1.97595	1.84169	1.84169	0.700	6.79474	30.00000	Averaged
85 Benzo(e)pyrene	1.50391	1.47395	1.47395	0.700	1.99166	30.00000	Averaged
80 Benzo(a)pyrene (ccc)	1.64085	1.65834	1.65834	0.700	-1.06608	20.00000	Averaged
81 Indeno(1,2,3-cd)pyrene	1.63818	1.78388	1.78388	0.500	-8.89451	30.00000	Averaged
82 Dibenz(a,h)anthracene	64.65533	60.00000	1.38399	0.400	-7.75889	30.00000	Wt Linear
83 Benzo(g,h,i)perylene	1.43263	1.61609	1.61609	0.500	-12.80549	30.00000	Averaged

Data File: /chem/gcms/md.i/D121803.b/ccdl184.d
Report Date: 18-Dec-2003 10:52

STL Knoxville

SW-846 Method 8270C

Data file : /chem/gcms/md.i/D121803.b/ccdl184.d
Lab Smp Id: CCDL184 Client Smp ID: VSTD060
Inj Date : 18-DEC-2003 10:33
Operator : 3386 Inst ID: md.i
Smp Info : CCDL184,,2,4,,VSTD060,
Misc Info : D121803,8270a9,8270dxnC13.sub
Comment : Semivolatile Organic Compounds by GC/MS
Method : /chem/gcms/md.i/D121803.b/8270a9.m
Meth Date : 18-Dec-2003 10:52 chemist Quant Type: ISTD
Cal Date : 07-NOV-2003 13:02 Cal File: a9dk076.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8270dxnC13.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * (Vt*Sf)/(Vo*Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Sf	1.00000	Prep split factor
Vo	1.00000	Volume of sample extracted (1=total samp
Uf	1000.00000	unit correction factor

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)
* 1 1,4-Dichlorobenzene-d4	152	4.318	4.318	(1.000)	87290 ✓	20.0000	
* 2 Naphthalene-d8	136	5.945	5.945	(1.000)	333200 ✓	20.0000	
* 3 Acenaphthene-d10	164	8.589	8.589	(1.000)	191379 ✓	20.0000	
* 4 Phenanthrene-d10	188	10.070	10.070	(1.000)	352152 ✓	20.0000	
* 5 Chrysene-d12	240	12.167	12.167	(1.000)	404756 ✓	20.0000	
* 6 Perylene-d12	264	13.419	13.419	(1.000)	323296 ✓	20.0000	
$ 7 2-Fluorophenol	112	3.154	3.154	(0.731)	349229	60.0000	61.0
$ 8 Phenol-d5	99	3.989	3.989	(0.924)	407057	60.0000	64.8
$ 9 Nitrobenzene-d5	82	4.999	4.999	(0.841)	310866	60.0000	60.9
$ 10 2-Fluorobiphenyl	172	7.684	7.684	(0.895)	764033	60.0000	60.2
$ 11 2,4,6-Tribromophenol	330	9.459	9.459	(0.939)	109186	60.0000	67.4
$ 12 Terphenyl-d14	244	11.339	11.339	(0.932)	991096	60.0000	59.2
$ 172 13C3-1,2,3-naphthalene	131	5.969	5.969	(1.004)	1082448	60.0000	60.8

Data File: /chem/gcms/md.i/D121803.b/ccdl184.d
Report Date: 18-Dec-2003 10:52

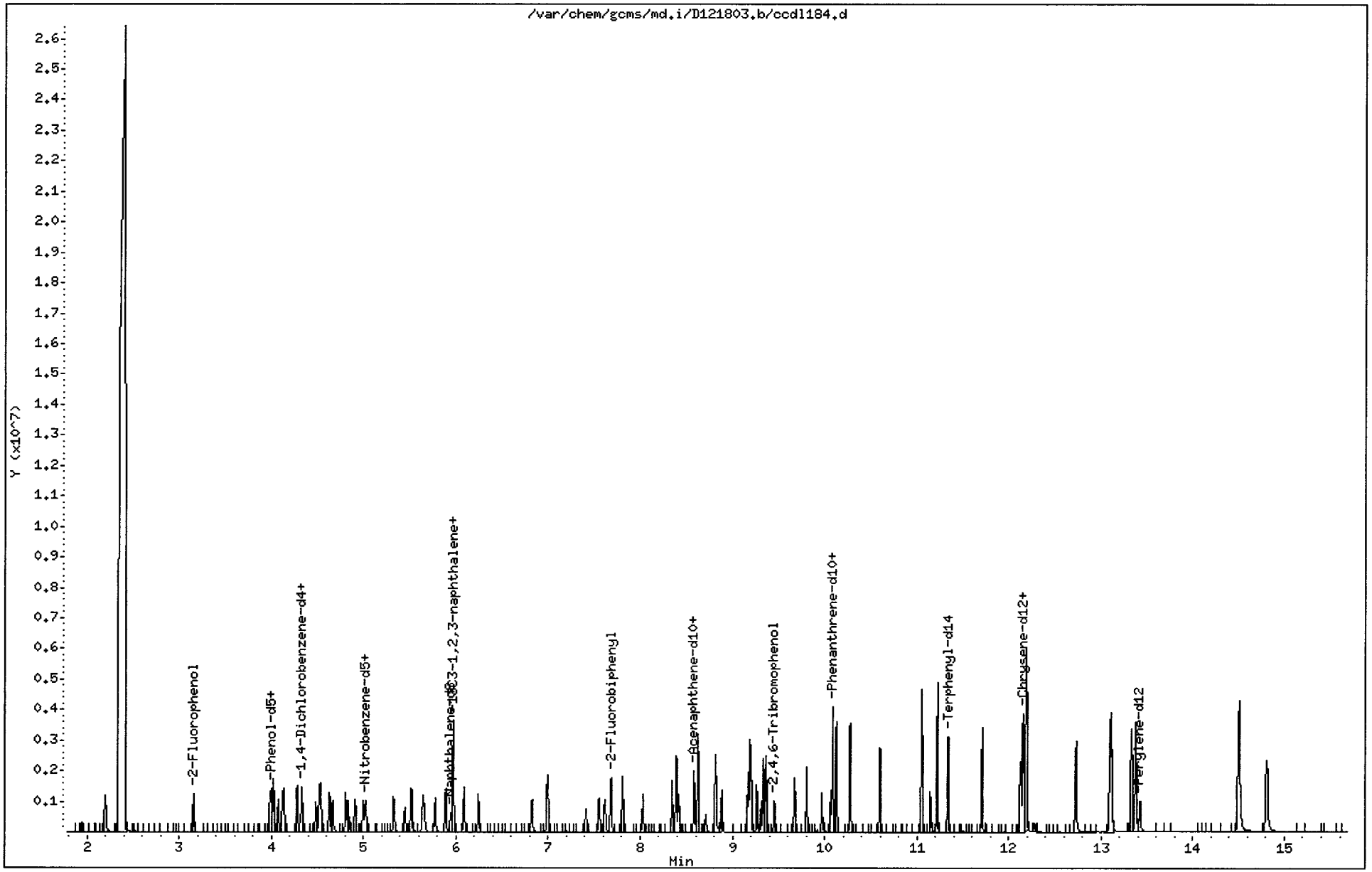
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)
175 1,4-Dioxane	88	1.956	1.956	(0.453)	98074	60.0000	50.9
13 N-Nitrosodimethylamine	74	2.197	2.197	(0.509)	167178	60.0000	58.2
14 Pyridine	79	2.202	2.202	(0.510)	317157	60.0000	57.5
15 Phenol (ccc)	94	4.000	4.000	(0.926)	387442	60.0000	65.6
16 Aniline	93	4.024	4.024	(0.932)	553586	60.0000	61.0
17 Bis(2-chloroethyl)ether	93	4.077	4.077	(0.944)	295185	60.0000	60.5
18 2-Chlorophenol	128	4.135	4.135	(0.958)	360089	60.0000	63.5
19 1,3-Dichlorobenzene	146	4.282	4.282	(0.992)	398247	60.0000	61.4
20 1,4-Dichlorobenzene (ccc)	146	4.335	4.335	(1.004)	398303	60.0000	61.5
21 Benzyl alcohol	108	4.482	4.482	(1.038)	214870	60.0000	62.3
22 1,2-Dichlorobenzene	146	4.535	4.535	(1.050)	385970	60.0000	62.3
23 2-Methylphenol	108	4.629	4.629	(1.072)	313279	60.0000	65.6
24 2,2'-Oxybis(1-Chloropropane)	45	4.664	4.664	(1.080)	517207	60.0000	55.2
25 4-Methylphenol	108	4.811	4.811	(1.114)	334273	60.0000	68.2
26 3&4 Methylphenol	108	4.811	4.811	(1.114)	334273	60.0000	68.2
27 N-Nitroso-di-n-propylamine###	70	4.835	4.835	(1.120)	202843	60.0000	62.9
28 Hexachloroethane	117	4.911	4.911	(1.137)	134547	60.0000	59.9
29 Nitrobenzene	77	5.023	5.023	(0.845)	295597	60.0000	61.5
30 Isophorone	82	5.328	5.328	(0.896)	594740	60.0000	61.9
31 2-Nitrophenol (ccc)	139	5.452	5.452	(0.917)	202139	60.0000	69.3
32 2,4-Dimethyphenol	107	5.516	5.516	(0.928)	339890	60.0000	65.0
33 Bis(2-chloroethoxy)methane	93	5.651	5.651	(0.951)	371645	60.0000	60.1
34 Benzoic acid	122	5.669	5.669	(0.954)	184612	60.0000	62.6
35 2,4-Dichlorophenol (ccc)	162	5.775	5.775	(0.971)	306983	60.0000	66.8
36 1,2,4-Trichlorobenzene	180	5.892	5.892	(0.991)	324780	60.0000	60.7
37 Naphthalene	128	5.975	5.975	(1.005)	1110379	60.0000	61.2
38 4-Chloroaniline	127	6.086	6.086	(1.024)	540224	60.0000	62.5
39 Hexachlorobutadiene (ccc)	225	6.245	6.245	(1.050)	172696	60.0000	61.9
40 4-Chloro-3-methylphenol (ccc)	107	6.826	6.826	(1.148)	280342	60.0000	69.1
41 2-Methylnaphthalene	142	6.991	6.991	(1.176)	739365	60.0000	62.7
42 Hexachlorocyclopentadiene####	237	7.408	7.408	(0.862)	144471	60.0000	50.7
43 2,4,6-Trichlorophenol (ccc)	196	7.555	7.555	(0.880)	208176	60.0000	64.9
44 2,4,5-Trichlorphenol	196	7.614	7.614	(0.886)	230829	60.0000	62.0
45 2-Chloronaphthalene	162	7.808	7.808	(0.909)	700243	60.0000	60.6
46 2-Nitroaniline	65	8.031	8.031	(0.935)	203211	60.0000	63.7
47 Acenaphthylene	152	8.389	8.389	(0.977)	1270279	60.0000	63.2
48 Dimethyl phthalate	163	8.342	8.342	(0.971)	800724	60.0000	63.2
49 2,6-Dinitrotoluene	165	8.419	8.419	(0.980)	184750	60.0000	67.6
50 3-Nitroaniline	138	8.583	8.583	(0.999)	266227	60.0000	64.8
51 Acenaphthene (ccc)	153	8.624	8.624	(1.004)	783581	60.0000	61.2
52 2,4-Dinitrophenol ##spcc##	184	8.707	8.707	(1.014)	99024	60.0000	73.9
53 Dibenzofuran	168	8.812	8.812	(1.026)	1005684	60.0000	62.6
54 4-Nitrophenol ##spcc##	109	8.824	8.824	(1.027)	92277	60.0000	67.4
55 2,4-Dinitrotoluene	165	8.883	8.883	(1.034)	262483	60.0000	70.4
56 Fluorene	166	9.188	9.188	(1.070)	891840	60.0000	63.8
57 4-Chlorophenyl phenyl ether	204	9.206	9.206	(1.072)	365309	60.0000	60.9
58 Diethyl phthalate	149	9.171	9.171	(1.068)	821321	60.0000	65.0

Data File: /chem/gcms/md.i/D121803.b/ccdl184.d
Report Date: 18-Dec-2003 10:52

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)
59 4-Nitroaniline	138	9.265	9.265	(1.079)	294326	60.0000	66.1
60 4,6-Dinitro-2-methylphenol	198	9.312	9.312	(0.925)	150761	60.0000	68.4
61 N-Ndpa / diphenylamine (ccc)	169	9.335	9.335	(0.927)	562610	60.0000	61.6
62 1,2-Diphenylhydrazine/azobnz	77	9.365	9.365	(0.930)	748577	60.0000	59.8
63 4-Bromophenyl phenyl ether	248	9.676	9.676	(0.961)	194569	60.0000	61.9
64 Hexachlorobenzene	284	9.805	9.805	(0.974)	231921	60.0000	62.3
65 Pentachlorophenol (ccc)	266	9.970	9.970	(0.990)	143178	60.0000	61.7
66 Phenanthrene	178	10.087	10.087	(1.002)	1357348	60.0000	62.0
67 Anthracene	178	10.129	10.129	(1.006)	1371860	60.0000	62.7
68 Carbazole	167	10.275	10.275	(1.020)	1426372	60.0000	64.7
69 Di-n-butyl phthalate	149	10.599	10.599	(1.052)	1456978	60.0000	67.4
70 Fluoranthene (ccc)	202	11.051	11.051	(1.097)	1515943	60.0000	65.8
71 Pyrene	202	11.221	11.221	(0.922)	1596943	60.0000	57.8
72 Butyl benzyl phthalate	149	11.709	11.709	(0.962)	729999	60.0000	60.4
73 Benzo(a)Anthracene	228	12.156	12.156	(0.999)	1457870	60.0000	61.7
74 3,3'-Dichlorobenzidine	252	12.132	12.132	(0.997)	537103	60.0000	63.2
75 Chrysene	228	12.191	12.191	(1.002)	1381120	60.0000	59.8
76 Bis(2-ethylhexyl) phthalate	149	12.185	12.185	(1.001)	902951	60.0000	64.4
77 Di-n-octyl phthalate (ccc)	149	12.731	12.731	(0.949)	1711691	60.0000	60.0
78 Benzo(b)fluoranthene	252	13.090	13.090	(0.975)	1635633	60.0000	61.0
79 Benzo(k)fluoranthene	252	13.113	13.113	(0.977)	1786235	60.0000	55.9
85 Benzo(e)pyrene	252	13.331	13.331	(0.993)	1429571	60.0000	58.8
80 Benzo(a)pyrene (ccc)	252	13.372	13.372	(0.996)	1608402	60.0000	60.6
81 Indeno(1,2,3-cd)pyrene	276	14.506	14.506	(1.081)	1730167	60.0000	65.3
82 Dibenz(a,h)anthracene	278	14.506	14.506	(1.081)	1342318	60.0000	64.6
83 Benzo(g,h,i)perylene	276	14.811	14.811	(1.104)	1567424	60.0000	67.7

Data File: /var/chem/gcms/md.i/D121803.b/ccdl184.d
Date : 18-DEC-2003 10:33
Client ID: VSTD060
Sample Info: CCDL184,,2,4,,VSTD060,
Volume Injected (uL): 1.0
Column phase: ZB-5

Instrument: md.i
Operator: 3386
Column diameter: 0.25



Data File: /chem/gcms/md.i/D121803.b/a9dl184.d
Report Date: 18-Dec-2003 11:15

STL Knoxville

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: md.i
Lab File ID: a9dl184.d
Analysis Type: AIR
Lab Sample ID: A9DL184
Method: /chem/gcms/md.i/D121803.b/8270a9.m

Injection Date: 18-DEC-2003 10:57
Init. Cal. Date(s): 07-NOV-2003 07-NOV-2003
Init. Cal. Times: 09:52 14:37
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF60	CCAL RRF60	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
176 2-Picoline	1.21594	1.23635	1.23635	0.000	-1.67906	30.00000	Averaged
86 N-nitrosomethylethylamine	0.71691	0.67465	0.67465	0.000	5.89525	30.00000	Averaged
87 Methyl methanosulfonate	0.37312	0.41045	0.41045	0.000	-10.00683	30.00000	Averaged
88 N-nitrosodiethylamine	0.58202	0.60353	0.60353	0.000	-3.69612	30.00000	Averaged
89 Ethyl methanosulfonate	0.79811	0.88666	0.88666	0.000	-11.09417	30.00000	Averaged
90 Pentachloroethane	0.46232	0.49845	0.49845	0.000	-7.81335	30.00000	Averaged
91 acetophenone	1.49650	1.70596	1.70596	0.000	-13.99675	30.00000	Averaged
92 m-cresol	0.98773	1.24758	1.24758	0.000	-26.30841	30.00000	Averaged
93 n-nitrosopyrrolidine	0.59706	0.70138	0.70138	0.000	-17.47289	30.00000	Averaged
94 n-nitrosomorpholine	0.68208	0.73959	0.73959	0.000	-8.43271	30.00000	Averaged
95 o-toluidine	1.83580	2.03631	2.03631	0.000	-10.92194	30.00000	Averaged
96 n-nitrosopiperidine	0.23844	0.23480	0.23480	0.000	1.52912	30.00000	Averaged
97 2,6-dichlorophenol	0.26075	0.31543	0.31543	0.000	-20.96825	30.00000	Averaged
98 hexachloropropene	0.17033	0.19072	0.19072	0.000	-11.96965	30.00000	Averaged
99 N-nitro-di-n-butylamine	0.18177	0.20139	0.20139	0.000	-10.79332	30.00000	Averaged
100 Isosafrole	0.26132	0.29323	0.29323	0.000	-12.21123	30.00000	Averaged
101 1,2,4,5-tetrachlorobenzene	0.28580	0.31817	0.31817	0.000	-11.32730	30.00000	Averaged
102 safrole	0.50755	0.55680	0.55680	0.000	-9.70294	30.00000	Averaged
103 1-chloronaphthalene	1.18162	1.23937	1.23937	0.000	-4.88745	30.00000	Averaged
104 m-dinitrobenzene	71.20968	60.00000	0.17848	0.000	-18.68281	30.00000	Linear
105 pentachlorobenzene	0.45071	0.48934	0.48934	0.000	-8.57050	30.00000	Averaged
106 1-naphthylamine	1.30103	1.47580	1.47580	0.000	-13.43301	30.00000	Averaged
107 2-naphthylamine	1.41138	1.51906	1.51906	0.000	-7.62972	30.00000	Averaged
108 2,3,4,6-tetrachlorophenol	68.29284	60.00000	0.31467	0.000	-13.82141	30.00000	Linear
109 5-nitro-o-toluidine	0.37749	0.45398	0.45398	0.000	-20.26380	30.00000	Averaged
110 diphenylamine	1.12799	1.22991	1.22991	0.000	-9.03539	30.00000	Averaged
111 1,3,5-trinitrobenzene	70.78998	60.00000	0.12382	0.000	-17.98330	30.00000	Wt Linear
112 phenacetin	0.33742	0.37385	0.37385	0.000	-10.79784	30.00000	Averaged
113 4-aminobiphenyl	0.84204	0.90200	0.90200	0.000	-7.12031	30.00000	Averaged
114 pentachloronitrobenzene	0.07006	0.07872	0.07872	0.000	-12.37287	30.00000	Averaged
115 Dinoseb	75.96838	60.00000	0.16622	0.000	-26.61396	30.00000	Wt Linear
178 N-Nitroquinoline-n-oxide	0.03421	0.03489	0.03489	0.000	-1.97085	30.00000	Averaged
177 Methapyrilene HCL	0.32174	0.36227	0.36227	0.000	-12.59657	30.00000	Averaged
84 Benzidine	0.83650	0.96335	0.96335	0.000	-15.16380	30.00000	Averaged
116 p-(dimethylamino)azobenzene	0.31166	0.34179	0.34179	0.000	-9.66771	30.00000	Averaged

Data File: /chem/gcms/md.i/D121803.b/a9dl184.d
Report Date: 18-Dec-2003 11:15

STL Knoxville

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: md.i
Lab File ID: a9dl184.d
Analysis Type: AIR
Lab Sample ID: A9DL184
Method: /chem/gcms/md.i/D121803.b/8270a9.m

Injection Date: 18-DEC-2003 10:57
Init. Cal. Date(s): 07-NOV-2003 07-NOV-2003
Init. Cal. Times: 09:52 14:37
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF60	CCAL RRF60	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
117 o-tolidine	0.74238	0.88844	0.88844	0.000	-19.67411	30.00000	Averaged
119 7,12-dimethylbenz(a)anthrac	0.49821	0.57143	0.57143	0.000	-14.69660	30.00000	Averaged
118 2-acetylaminofluorene	69.44778	60.00000	0.56074	0.000	-15.74630	30.00000	Linear
120 3-methylcholanthrene	0.77030	0.84029	0.84029	0.000	-9.08584	30.00000	Averaged

Data File: /chem/gcms/md.i/D121803.b/a9dl184.d
Report Date: 18-Dec-2003 11:15

STL Knoxville

SW-846 Method 8270C

Data file : /chem/gcms/md.i/D121803.b/a9dl184.d
Lab Smp Id: A9DL184 Client Smp ID: VSTD060
Inj Date : 18-DEC-2003 10:57
Operator : 3386 Inst ID: md.i
Smp Info : A9DL184,,2,4,,VSTD060,
Misc Info : D121803,8270a9,appdx9.sub
Comment : Semivolatile Organic Compounds by GC/MS
Method : /chem/gcms/md.i/D121803.b/8270a9.m
Meth Date : 18-Dec-2003 11:15 chemist Quant Type: ISTD
Cal Date : 07-NOV-2003 13:02 Cal File: a9dk076.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: appdx9.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * (Vt*Sf)/(Vo*Uf) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Sf	1.00000	Prep split factor
Vo	1.00000	Volume of sample extracted (1=total samp
Uf	1000.00000	unit correction factor

Cpnd Variable Local Compound Variable

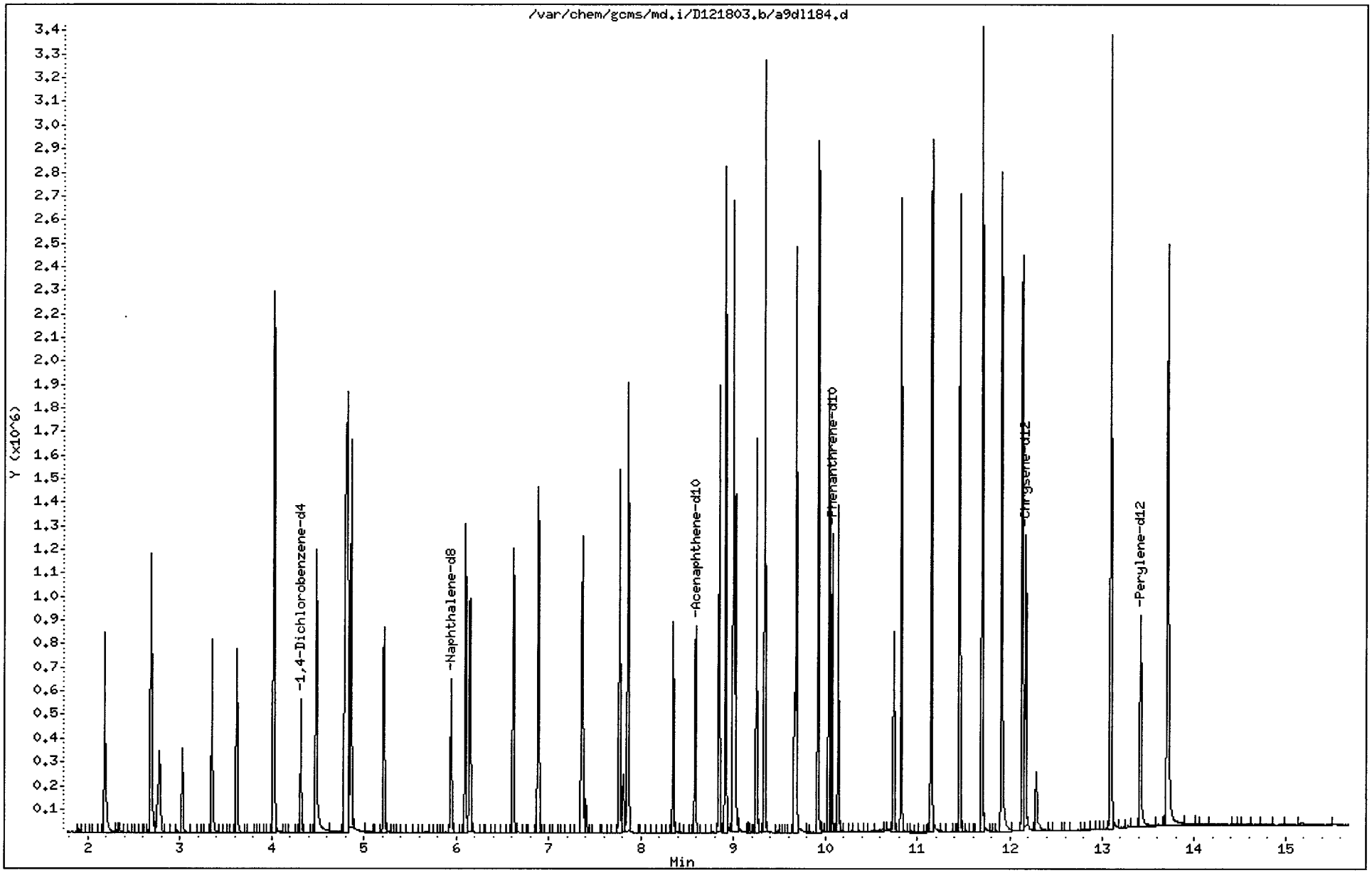
Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)
* 1 1,4-Dichlorobenzene-d4	152	4.317	4.317	(1.000)	94282	20.0000	
* 2 Naphthalene-d8	136	5.945	5.945	(1.000)	358427	20.0000	
* 3 Acenaphthene-d10	164	8.589	8.589	(1.000)	207496	20.0000	
* 4 Phenanthrene-d10	188	10.070	10.070	(1.000)	373086	20.0000	
* 5 Chrysene-d12	240	12.167	12.167	(1.000)	401245	20.0000	
* 6 Perylene-d12	264	13.425	13.425	(1.000)	302929	20.0000	
176 2-Picoline	93	2.684	2.684	(0.622)	349698	60.0000	61.0
86 N-nitrosomethylethylamine	42	2.784	2.784	(0.645)	190822	60.0000	56.5
87 Methyl methanosulfonate	80	3.031	3.031	(0.702)	116095	60.0000	66.0
88 N-nitrosodiethylamine	102	3.354	3.354	(0.777)	170705	60.0000	62.2
89 Ethyl methanosulfonate	79	3.624	3.624	(0.839)	250788	60.0000	66.6
90 Pentachloroethane	167	4.030	4.030	(0.933)	140983	60.0000	64.7
91 acetophenone	105	4.805	4.805	(1.113)	482525	60.0000	68.4

Data File: /chem/gcms/md.i/D121803.b/a9dl184.d
Report Date: 18-Dec-2003 11:15

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/uL)	AMOUNTS ON-COL (ng/uL)
92 m-cresol	108	4.823	4.823	(1.117)	352873	60.0000	75.8
93 n-nitrosopyrrolidine	100	4.793	4.793	(1.110)	198382	60.0000	70.5
94 n-nitrosomorpholine	56	4.817	4.817	(1.116)	209191	60.0000	65.0
95 o-toluidine	106	4.858	4.858	(1.125)	575962	60.0000	66.6
96 n-nitrosopiperidine	42	5.216	5.216	(0.877)	252474	60.0000	59.1
97 2,6-dichlorophenol	162	6.098	6.098	(1.026)	339172	60.0000	72.6
98 hexachloropropene	213	6.151	6.151	(1.035)	205075	60.0000	67.2
99 N-nitro-di-n-butylamine	84	6.615	6.615	(1.113)	216552	60.0000	66.5
100 Isosafrole	162	6.885	6.885	(1.158)	315304	60.0000	67.3
101 1,2,4,5-tetrachlorobenzene	216	7.361	7.361	(1.238)	342121	60.0000	66.8
102 safrole	162	7.766	7.766	(0.904)	346599	60.0000	65.8
103 1-chloronaphthalene	162	7.860	7.860	(0.915)	771494	60.0000	62.9
104 m-dinitrobenzene	76	8.348	8.348	(0.972)	111104	60.0000	71.2
105 pentachlorobenzene	250	8.848	8.848	(1.030)	304607	60.0000	65.1
106 1-naphthylamine	143	8.912	8.912	(1.038)	918671	60.0000	68.0
107 2-naphthylamine	143	8.994	8.994	(1.047)	945600	60.0000	64.6
108 2,3,4,6-tetrachlorophenol	232	9.018	9.018	(1.050)	195881	60.0000	68.3
109 5-nitro-o-toluidine	152	9.247	9.247	(1.077)	282599	60.0000	72.2
110 diphenylamine	169	9.335	9.335	(1.087)	765608	60.0000	65.4
111 1,3,5-trinitrobenzene	75	9.658	9.658	(0.959)	138581	60.0000	70.8
112 phenacetin	108	9.682	9.682	(0.961)	418437	60.0000	66.5
113 4-aminobiphenyl	169	9.917	9.917	(0.985)	1009569	60.0000	64.3
114 pentachloronitrobenzene	237	10.034	10.034	(0.996)	88112	60.0000	67.4
115 Dinoseb	211	10.134	10.134	(1.006)	186041	60.0000	76.0
178 N-Nitroquinoline-n-oxide	174	10.739	10.739	(1.067)	39045	60.0000	61.2
177 Methapyrilene HCL	97	10.822	10.822	(1.075)	405469	60.0000	67.6
84 Benzidine	184	11.151	11.151	(1.107)	1078234	60.0000	69.1
116 p-(dimethylamino)azobenzene	120	11.450	11.450	(1.137)	382556	60.0000	65.8
117 o-tolidine	212	11.691	11.691	(1.161)	994393	60.0000	71.8
119 7,12-dimethylbenz(a)anthracen	256	13.096	13.096	(1.076)	687853	60.0000	68.8
118 2-acetylaminofluorene	181	11.903	11.903	(0.978)	674982	60.0000	69.4
120 3-methylcholanthrene	268	13.713	13.713	(1.021)	763644	60.0000	65.4

Data File: /var/chem/gcms/md.i/D121803.b/a9dl184.d
Date : 18-DEC-2003 10:57
Client ID: VSTD060
Sample Info: A9DL184,,2,4,,VSTD060,
Volume Injected (uL): 1.0
Column phase: ZB-5

Instrument: md.i
Operator: 3386
Column diameter: 0.25



Raw QC Data

METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: H3L100268 **Work Order #...:** F6H4R1AA **Matrix.....:** WATER
MB Lot-Sample #: H3L120000-158

Prep Date.....: 12/12/03
Analysis Date..: 12/15/03 **Prep Batch #...:** 3346158
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Phenol	ND	10	ug/L	SW846 8270C
bis(2-Chloroethyl)-ether	ND	10	ug/L	SW846 8270C
2-Chlorophenol	ND	10	ug/L	SW846 8270C
1,3-Dichlorobenzene	ND	10	ug/L	SW846 8270C
1,4-Dichlorobenzene	ND	10	ug/L	SW846 8270C
1,2-Dichlorobenzene	ND	10	ug/L	SW846 8270C
2-Methylphenol	ND	10	ug/L	SW846 8270C
2,2'-oxybis(1-Chloro-propane)	ND	10	ug/L	SW846 8270C
4-Methylphenol	ND	10	ug/L	SW846 8270C
N-Nitrosodi-n-propyl-amine	ND	10	ug/L	SW846 8270C
Hexachloroethane	ND	10	ug/L	SW846 8270C
Nitrobenzene	ND	10	ug/L	SW846 8270C
Isophorone	ND	10	ug/L	SW846 8270C
2-Nitrophenol	ND	10	ug/L	SW846 8270C
2,4-Dimethylphenol	ND	10	ug/L	SW846 8270C
bis(2-Chloroethoxy) methane	ND	10	ug/L	SW846 8270C
2,4-Dichlorophenol	ND	10	ug/L	SW846 8270C
1,2,4-Trichloro-benzene	ND	10	ug/L	SW846 8270C
Naphthalene	ND	10	ug/L	SW846 8270C
4-Chloroaniline	ND	10	ug/L	SW846 8270C
Hexachlorobutadiene	ND	10	ug/L	SW846 8270C
4-Chloro-3-methylphenol	ND	10	ug/L	SW846 8270C
2-Methylnaphthalene	ND	10	ug/L	SW846 8270C
Hexachlorocyclopenta-diene	ND	50	ug/L	SW846 8270C
2,4,6-Trichloro-phenol	ND	10	ug/L	SW846 8270C
2,4,5-Trichloro-phenol	ND	10	ug/L	SW846 8270C
2-Chloronaphthalene	ND	10	ug/L	SW846 8270C
2-Nitroaniline	ND	50	ug/L	SW846 8270C
Dimethyl phthalate	ND	10	ug/L	SW846 8270C
Acenaphthylene	ND	10	ug/L	SW846 8270C
2,6-Dinitrotoluene	ND	10	ug/L	SW846 8270C
3-Nitroaniline	ND	50	ug/L	SW846 8270C
Acenaphthene	ND	10	ug/L	SW846 8270C

(Continued on next page)

METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: H3L100268 **Work Order #...:** F6H4R1AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
2,4-Dinitrophenol	ND	50	ug/L	SW846 8270C
4-Nitrophenol	ND	50	ug/L	SW846 8270C
Dibenzofuran	ND	10	ug/L	SW846 8270C
2,4-Dinitrotoluene	ND	10	ug/L	SW846 8270C
Diethyl phthalate	ND	10	ug/L	SW846 8270C
4-Chlorophenyl phenyl ether	ND	10	ug/L	SW846 8270C
Fluorene	ND	10	ug/L	SW846 8270C
4-Nitroaniline	ND	50	ug/L	SW846 8270C
4,6-Dinitro-2-methylphenol	ND	50	ug/L	SW846 8270C
N-Nitrosodiphenylamine	ND	10	ug/L	SW846 8270C
4-Bromophenyl phenyl ether	ND	10	ug/L	SW846 8270C
Hexachlorobenzene	ND	10	ug/L	SW846 8270C
Pentachlorophenol	ND	50	ug/L	SW846 8270C
Phenanthrene	ND	10	ug/L	SW846 8270C
Anthracene	ND	10	ug/L	SW846 8270C
Carbazole	ND	10	ug/L	SW846 8270C
Di-n-butyl phthalate	ND	10	ug/L	SW846 8270C
Fluoranthene	ND	10	ug/L	SW846 8270C
Pyrene	ND	10	ug/L	SW846 8270C
Butyl benzyl phthalate	ND	10	ug/L	SW846 8270C
3,3'-Dichlorobenzidine	ND	50	ug/L	SW846 8270C
Benzo(a)anthracene	ND	10	ug/L	SW846 8270C
Chrysene	ND	10	ug/L	SW846 8270C
bis(2-Ethylhexyl) phthalate	ND	10	ug/L	SW846 8270C
Di-n-octyl phthalate	ND	10	ug/L	SW846 8270C
Benzo(b)fluoranthene	ND	10	ug/L	SW846 8270C
Benzo(k)fluoranthene	ND	10	ug/L	SW846 8270C
Benzo(a)pyrene	ND	10	ug/L	SW846 8270C
Indeno(1,2,3-cd)pyrene	ND	10	ug/L	SW846 8270C
Dibenz(a,h)anthracene	ND	10	ug/L	SW846 8270C
Benzo(ghi)perylene	ND	10	ug/L	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	73	(29 - 110)
Phenol-d5	85	(41 - 115)
Nitrobenzene-d5	89	(46 - 117)
2-Fluorobiphenyl	88	(44 - 116)
2,4,6-Tribromophenol	91	(31 - 138)
Terphenyl-d14	94	(36 - 134)

(Continued on next page)

METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: H3L100268 **Work Order #...:** F6H4R1AA **Matrix.....:** WATER

NOTE(S):

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

Data File: /var/chem/gcms/md.i/D121503.b/f6h4r1aa.d
Report Date: 17-Dec-2003 11:56

STL Knoxville

SW-846 Method 8270C

Data file : /var/chem/gcms/md.i/D121503.b/f6h4r1aa.d
Lab Smp Id: F6H4R1AA
Client Smp ID: INTRA-LAB BLANK
Inj Date : 15-DEC-2003 20:15
Operator : 3386
Inst ID: md.i
Smp Info : F6H4R1AA,,3,,BLK,
Misc Info : D121503,8270a9,8270.sub
Comment : Semivolatile Organic Compounds by GC/MS
Method : /var/chem/gcms/md.i/D121503.b/8270a9.m
Meth Date : 17-Dec-2003 11:53 layk
Quant Type: ISTD
Cal Date : 07-NOV-2003 13:02
Cal File: a9dk076.d
Als bottle: 10
QC Sample: METHOD BLANK
Dil Factor: 1.00000
Integrator: HP RTE
Compound Sublist: 8270.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Unit Correction factor
Vt	1000.00000	Volume of final extract (uL)
Vo	1000.00000	Volume of sample extracted (mL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/uL)	FINAL (ug/L)
* 1 1,4-Dichlorobenzene-d4	152	4.317	4.317	(1.000)	110956	20.0000	
* 2 Naphthalene-d8	136	5.945	5.945	(1.000)	405412	20.0000	
* 3 Acenaphthene-d10	164	8.589	8.589	(1.000)	229735	20.0000	
* 4 Phenanthrene-d10	188	10.070	10.070	(1.000)	401110	20.0000	
* 5 Chrysene-d12	240	12.173	12.173	(1.000)	406911	20.0000	
* 6 Perylene-d12	264	13.425	13.425	(1.000)	288561	20.0000	
$ 7 2-Fluorophenol	112	3.154	3.154	(0.731)	398898	54.8219	54.8
$ 8 Phenol-d5	99	3.988	3.994	(0.924)	505839	63.3615	63.4
$ 9 Nitrobenzene-d5	82	4.999	4.999	(0.841)	277121	44.6464	44.6
$ 10 2-Fluorobiphenyl	172	7.684	7.684	(0.895)	667728	43.8517	43.8
$ 11 2,4,6-Tribromophenol	330	9.459	9.459	(0.939)	126539	68.5942	68.6
$ 12 Terphenyl-d14	244	11.339	11.339	(0.931)	791267	46.9896	47.0
56 Fluorene	166	9.459	9.194	(1.101)	9338	0.55697	0.587
58 Diethyl phthalate	149	9.165	9.171	(1.067)	12831	0.84636	0.846

12/17/03

Data File: /var/chem/gcms/md.i/D121503.b/f6h4r1aa.d
Report Date: 17-Dec-2003 11:56

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/uL)	FINAL (ug/L)
63 4-Bromophenyl phenyl ether	248	9.459	9.676	(0.939)	7461	2.08310	~~2.08~~

12/17/03

Data File: /var/chem/gcms/md.i/D121503.b/f6h4r1aa.d
Report Date: 17-Dec-2003 11:56

STL Knoxville

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: md.i
Lab File ID: f6h4r1aa.d
Lab Smp Id: F6H4R1AA
Analysis Type: SV
Quant Type: ISTD
Operator: 3386
Method File: /var/chem/gcms/md.i/D121503.b/8270a9.m
Misc Info: D121503,8270a9,8270.sub

Calibration Date: 15-DEC-2003
Calibration Time: 17:05
Client Smp ID: INTRA-LAB BLANK
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	114826	57413	229652	110956	-3.37
2 Naphthalene-d8	425133	212566	850266	405412	-4.64
3 Acenaphthene-d10	235031	117516	470062	229735	-2.25
4 Phenanthrene-d10	408242	204121	816484	401110	-1.75
5 Chrysene-d12	410532	205266	821064	406911	-0.88
6 Perylene-d12	297061	148530	594122	288561	-2.86

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	4.32	3.82	4.82	4.32	0.00
2 Naphthalene-d8	5.94	5.44	6.44	5.94	0.00
3 Acenaphthene-d10	8.59	8.09	9.09	8.59	0.00
4 Phenanthrene-d10	10.07	9.57	10.57	10.07	0.00
5 Chrysene-d12	12.17	11.67	12.67	12.17	0.00
6 Perylene-d12	13.42	12.92	13.92	13.42	0.00

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

Data File: /var/chem/gcms/md.i/D121503.b/f6h4r1aa.d
Report Date: 17-Dec-2003 11:56

STL Knoxville

RECOVERY REPORT

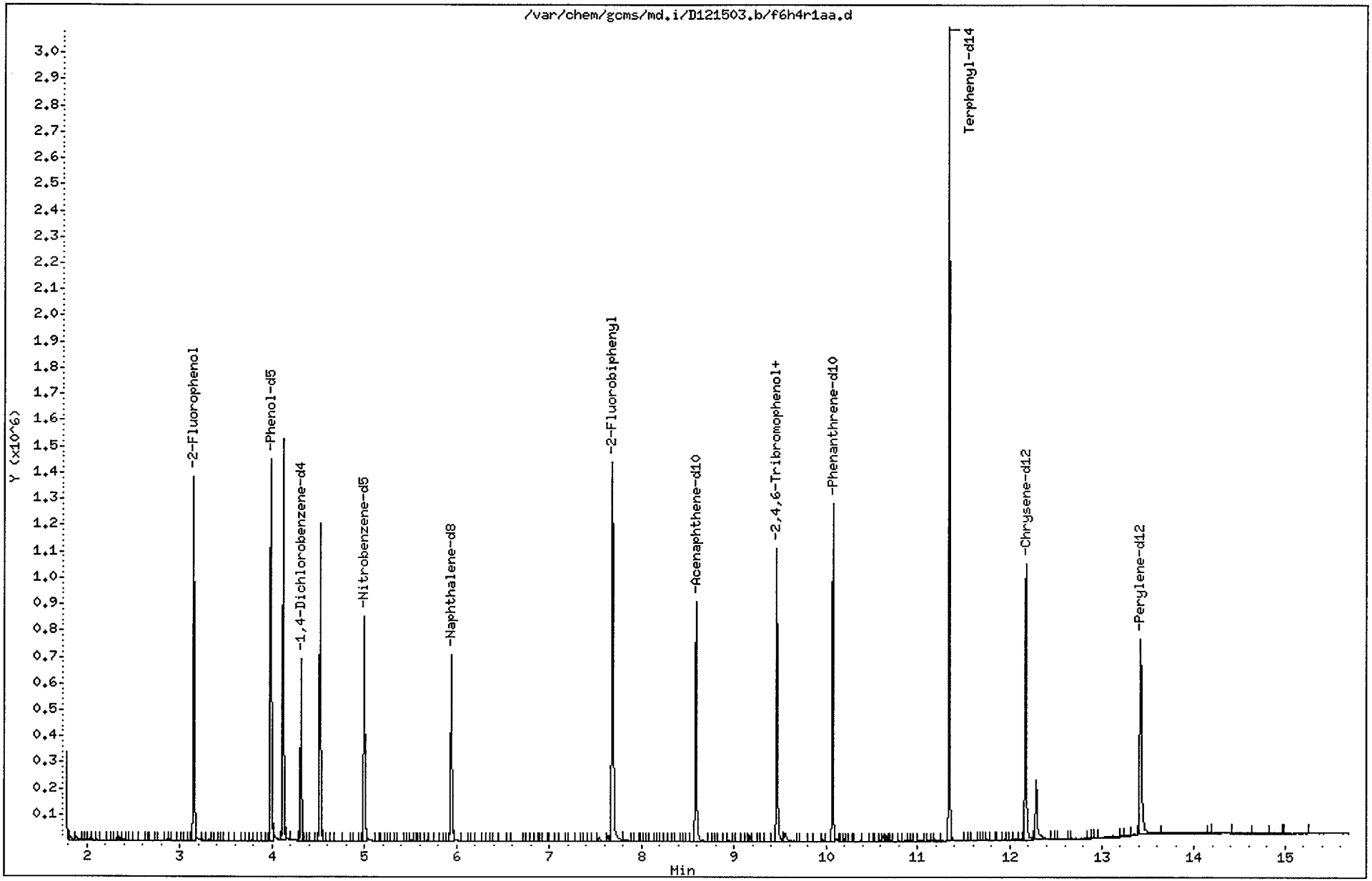
Client Name:
Sample Matrix: LIQUID
Lab Smp Id: F6H4R1AA
Level: LOW
Data Type: MS DATA
SpikeList File: allspike.spk
Sublist File: 8270.sub
Method File: /var/chem/gcms/md.i/D121503.b/8270a9.m
Misc Info: D121503,8270a9,8270.sub

Client SDG: H3L120000
Fraction: SV
Client Smp ID: INTRA-LAB BLANK
Operator: 3386
SampleType: METHOD BLANK
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 7 2-Fluorophenol	75.0	54.8	73.10	29-110
$ 8 Phenol-d5	75.0	63.4	84.48	41-115
$ 9 Nitrobenzene-d5	50.0	44.6	89.29	46-117
$ 10 2-Fluorobiphenyl	50.0	43.8	87.70	44-116
$ 11 2,4,6-Tribromophen	75.0	68.6	91.46	31-138
$ 12 Terphenyl-d14	50.0	47.0	93.98	0-132

Data File: /var/chem/gcms/md.i/D121503.b/f6h4r1aa.d
Date : 15-DEC-2003 20:15
Client ID: INTRA-LAB BLANK
Sample Info: F6H4R1AA,,3,,BLK,
Volume Injected (uL): 1.0
Column phase: ZB-5

Instrument: md.i
Operator: 3386
Column diameter: 0.25



Data File: /var/chem/gcms/md.i/D121503.b/f6h4r1aa.d

Date : 15-DEC-2003 20:15

Client ID: INTRA-LAB BLANK

Instrument: md.i

Sample Info: F6H4R1AA,,3,,BLK,

Volume Injected (uL): 1.0

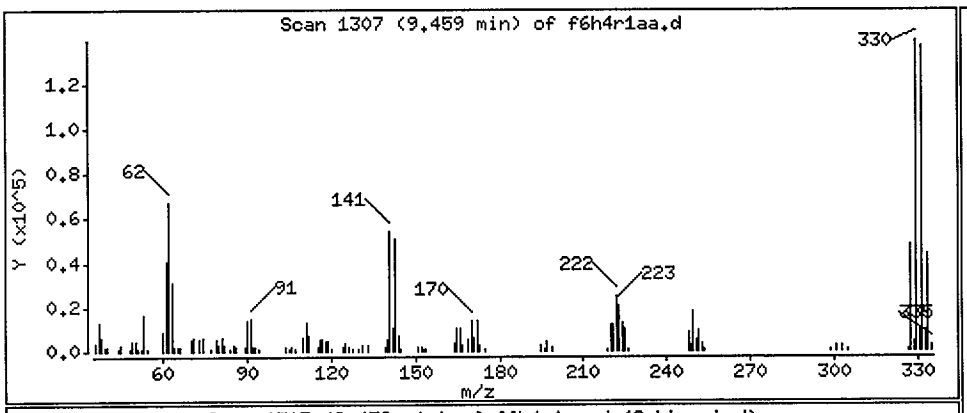
Operator: 3386

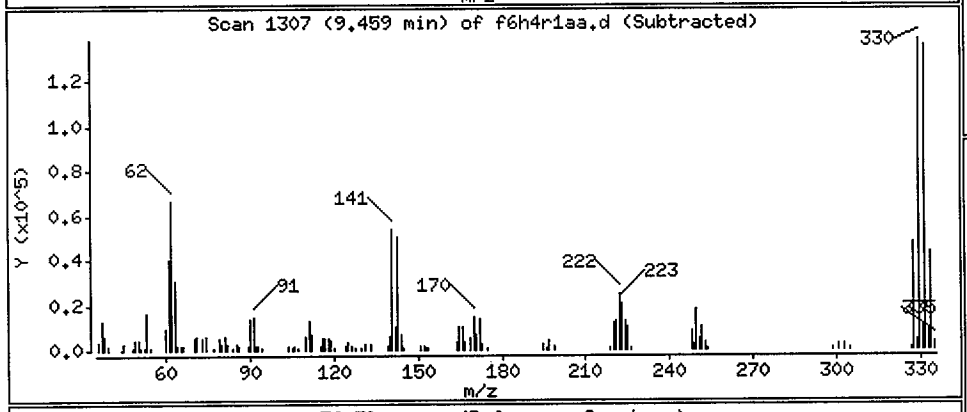
Column phase: ZB-5

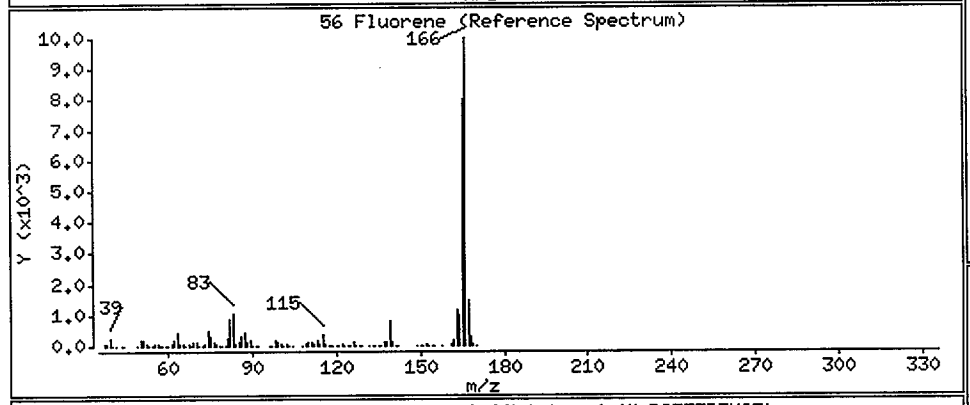
Column diameter: 0.25

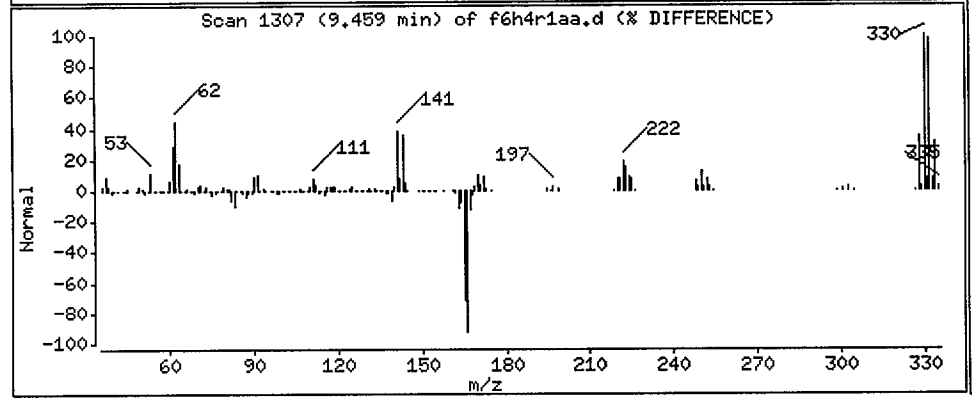
56 Fluorene

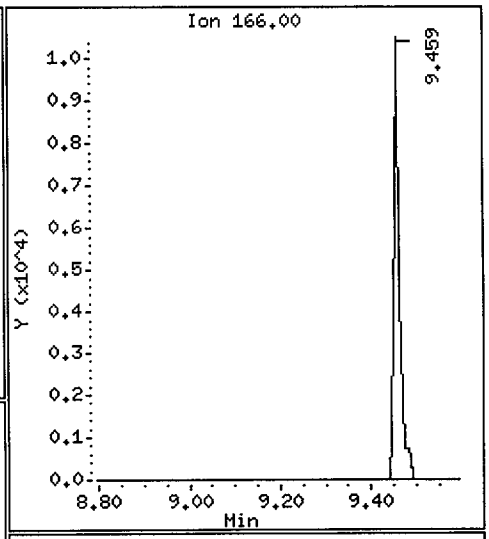
Concentration: 0.557 ug/L

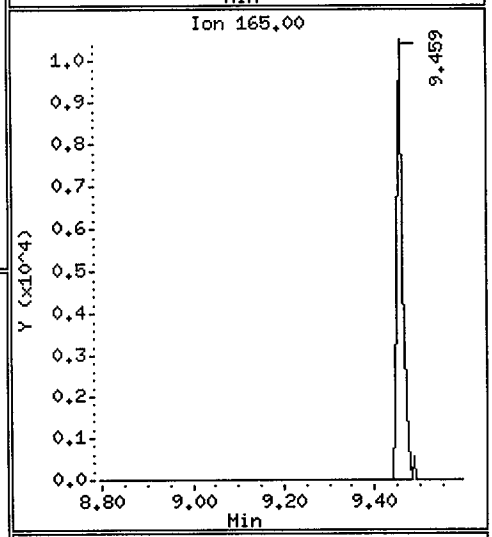


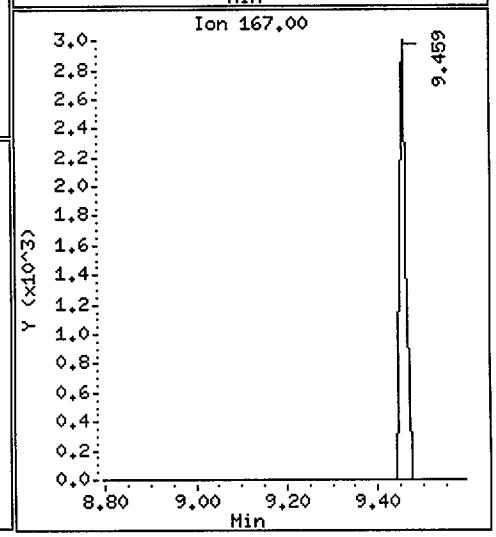












Data File: /var/chem/gcms/md.i/D121503.b/f6h4r1aa.d

Date : 15-DEC-2003 20:15

Client ID: INTRA-LAB BLANK

Instrument: md.i

Sample Info: F6H4R1AA,,3,,BLK,

Volume Injected (uL): 1.0

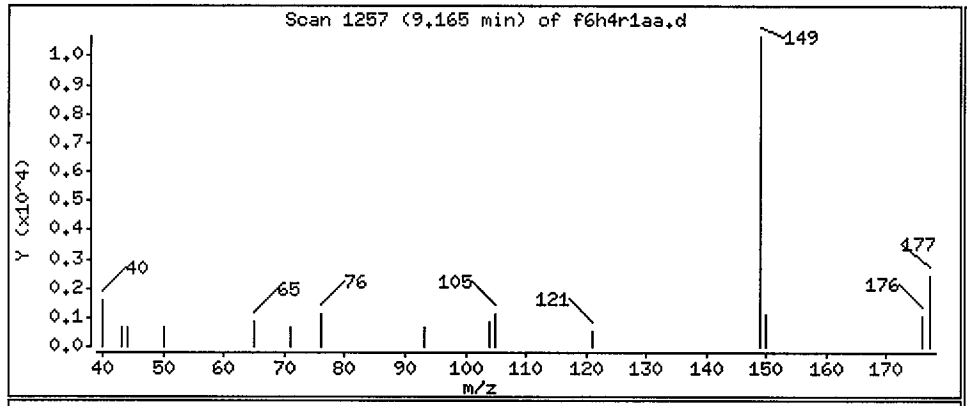
Operator: 3386

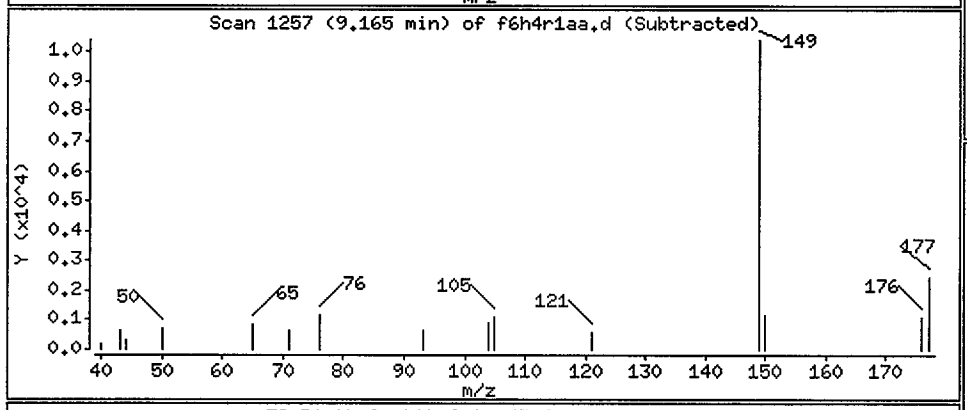
Column phase: ZB-5

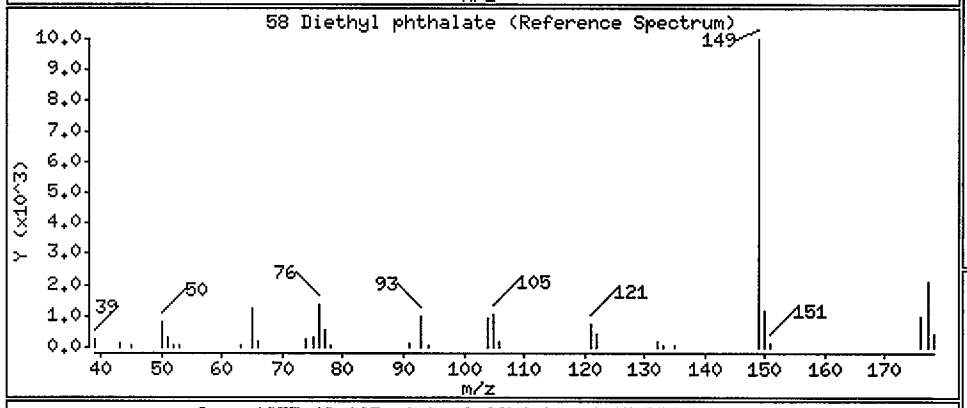
Column diameter: 0.25

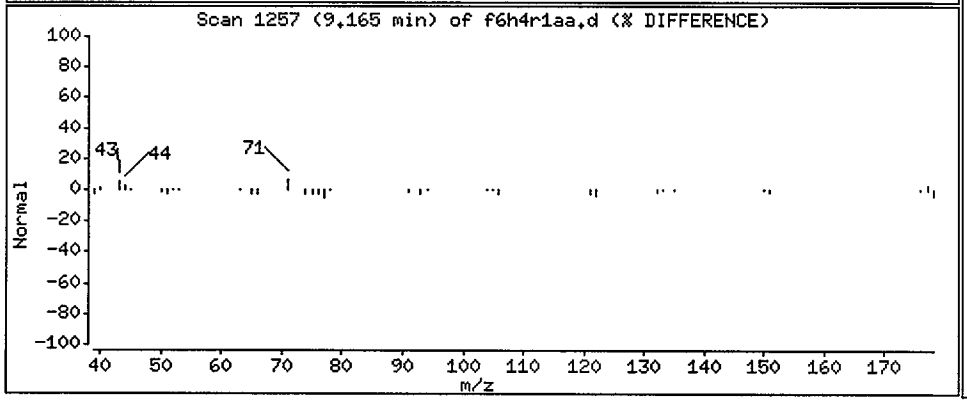
58 Diethyl phthalate

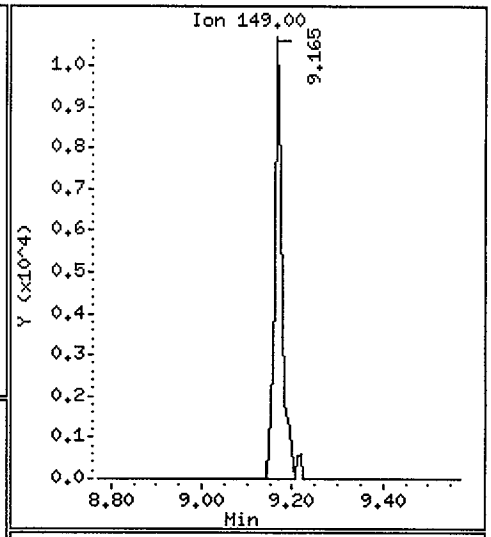
Concentration: 0.846 ug/L

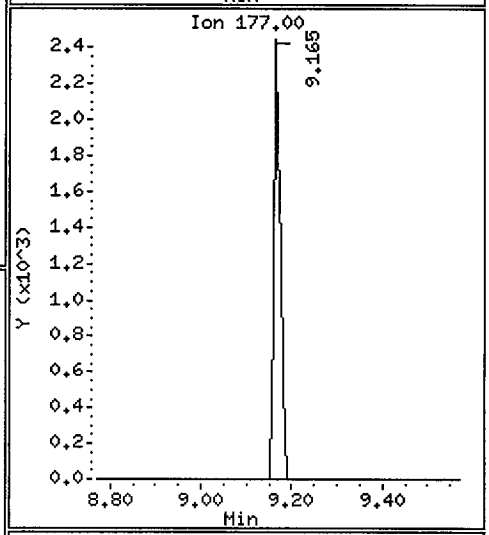


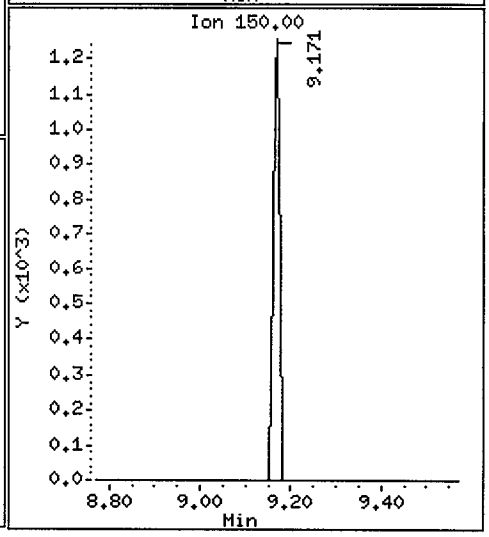












Data File: /var/chem/gcms/md.i/D121503.b/f6h4r1aa.d

Date : 15-DEC-2003 20:15

Client ID: INTRA-LAB BLANK

Instrument: md.i

Sample Info: F6H4R1AA,,3,,BLK,

Volume Injected (uL): 1.0

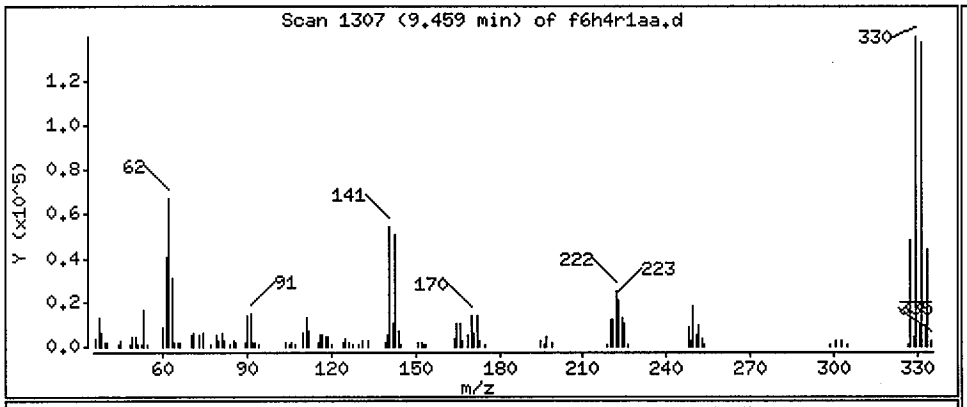
Operator: 3386

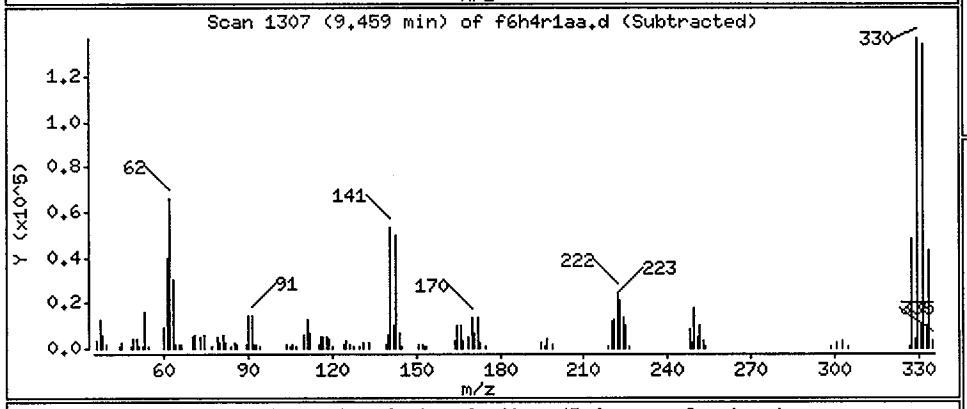
Column phase: ZB-5

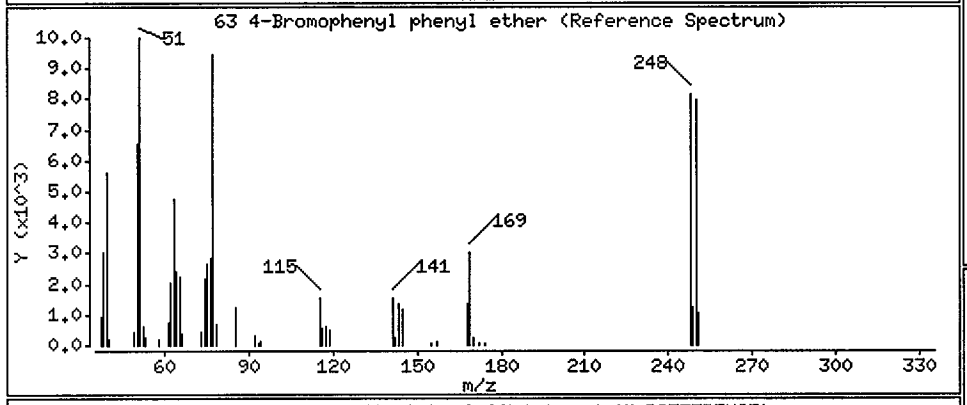
Column diameter: 0.25

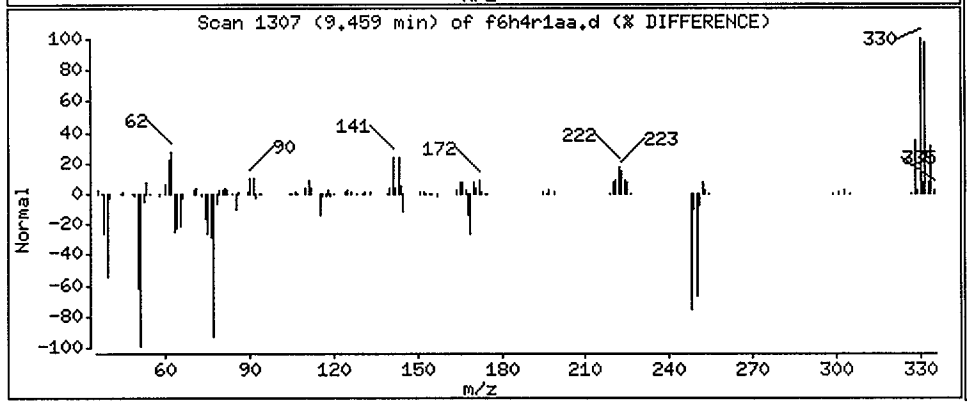
63 4-Bromophenyl phenyl ether

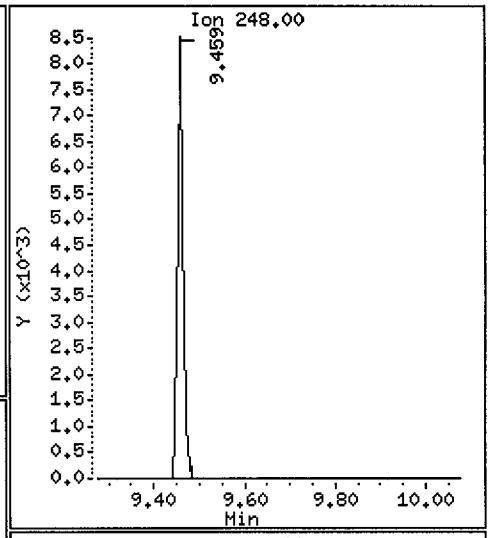
Concentration: 2.08 ug/L

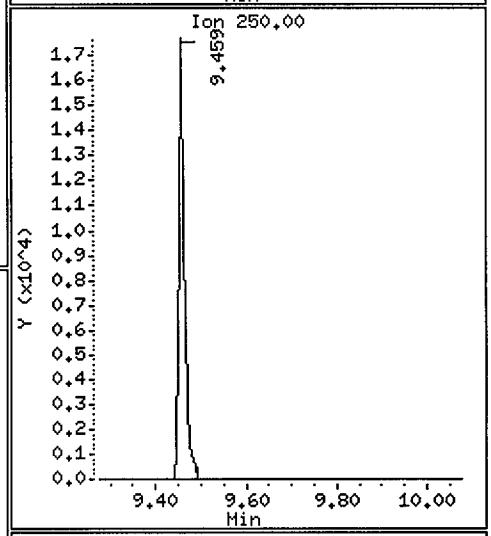


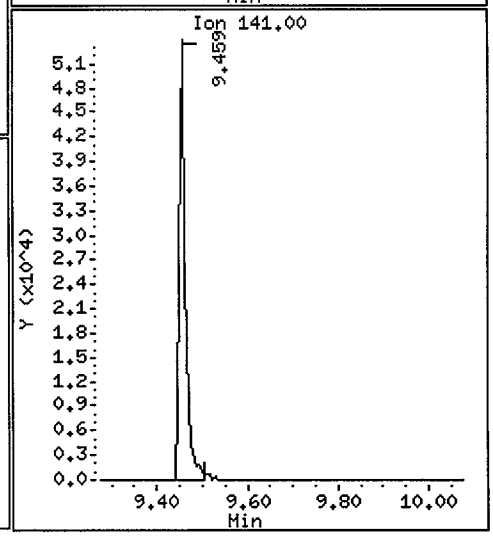












LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: H3L100268 **Work Order #...:** F6H4R1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: H3L120000-158 F6H4R1AD-LCSD
Prep Date.....: 12/12/03 **Analysis Date..:** 12/15/03
Prep Batch #...: 3346158
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Phenol	96	(62 - 103)			SW846 8270C
	96	(62 - 103)	0.93	(0-41)	SW846 8270C
2-Chlorophenol	90	(63 - 103)			SW846 8270C
	89	(63 - 103)	0.22	(0-43)	SW846 8270C
1,4-Dichlorobenzene	86	(65 - 102)			SW846 8270C
	85	(65 - 102)	1.8	(0-37)	SW846 8270C
N-Nitrosodi-n-propyl-amine	92	(65 - 108)			SW846 8270C
	93	(65 - 108)	1.6	(0-36)	SW846 8270C
1,2,4-Trichloro-benzene	88	(67 - 104)			SW846 8270C
	89	(67 - 104)	1.0	(0-36)	SW846 8270C
4-Chloro-3-methylphenol	104	(65 - 108)			SW846 8270C
	111 a	(65 - 108)	6.5	(0-29)	SW846 8270C
Acenaphthene	83	(59 - 100)			SW846 8270C
	88	(59 - 100)	6.0	(0-26)	SW846 8270C
4-Nitrophenol	101	(50 - 122)			SW846 8270C
	109	(50 - 122)	7.6	(0-50)	SW846 8270C
2,4-Dinitrotoluene	105	(69 - 128)			SW846 8270C
	113	(69 - 128)	7.3	(0-25)	SW846 8270C
Pentachlorophenol	93	(64 - 114)			SW846 8270C
	103	(64 - 114)	10	(0-37)	SW846 8270C
Pyrene	87	(52 - 119)			SW846 8270C
	93	(52 - 119)	6.6	(0-27)	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	70	(29 - 110)
	71	(29 - 110)
Phenol-d5	84	(41 - 115)
	86	(41 - 115)
Nitrobenzene-d5	91	(46 - 117)
	93	(46 - 117)
2-Fluorobiphenyl	92	(44 - 116)
	98	(44 - 116)
2,4,6-Tribromophenol	101	(31 - 138)
	111	(31 - 138)
Terphenyl-d14	92	(36 - 134)

(Continued on next page)

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: H3L100268 **Work Order #...:** F6H4R1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: H3L120000-158 F6H4R1AD-LCSD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
	99	(36 - 134)

NOTE(S):

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

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: H3L100268 **Work Order #...:** F6H4R1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: H3L120000-158 F6H4R1AD-LCSD
Prep Date.....: 12/12/03 **Analysis Date..:** 12/15/03
Prep Batch #...: 3346158
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	RPD	METHOD
Phenol	100	95.6	ug/L	96		SW846 8270C
	100	96.5	ug/L	96	0.93	SW846 8270C
2-Chlorophenol	100	89.5	ug/L	90		SW846 8270C
	100	89.3	ug/L	89	0.22	SW846 8270C
1,4-Dichlorobenzene	100	86.1	ug/L	86		SW846 8270C
	100	84.6	ug/L	85	1.8	SW846 8270C
N-Nitrosodi-n-propyl-amine	100	91.9	ug/L	92		SW846 8270C
	100	93.4	ug/L	93	1.6	SW846 8270C
1,2,4-Trichloro-benzene	100	87.9	ug/L	88		SW846 8270C
	100	88.8	ug/L	89	1.0	SW846 8270C
4-Chloro-3-methylphenol	100	104	ug/L	104		SW846 8270C
	100	111 a	ug/L	111	6.5	SW846 8270C
Acenaphthene	100	82.9	ug/L	83		SW846 8270C
	100	88.0	ug/L	88	6.0	SW846 8270C
4-Nitrophenol	100	101	ug/L	101		SW846 8270C
	100	109	ug/L	109	7.6	SW846 8270C
2,4-Dinitrotoluene	100	105	ug/L	105		SW846 8270C
	100	113	ug/L	113	7.3	SW846 8270C
Pentachlorophenol	100	92.9	ug/L	93		SW846 8270C
	100	103	ug/L	103	10	SW846 8270C
Pyrene	100	87.1	ug/L	87		SW846 8270C
	100	93.0	ug/L	93	6.6	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	70	(29 - 110)
	71	(29 - 110)
Phenol-d5	84	(41 - 115)
	86	(41 - 115)
Nitrobenzene-d5	91	(46 - 117)
	93	(46 - 117)
2-Fluorobiphenyl	92	(44 - 116)
	98	(44 - 116)
2,4,6-Tribromophenol	101	(31 - 138)
	111	(31 - 138)
Terphenyl-d14	92	(36 - 134)

(Continued on next page)

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: H3L100268 **Work Order #...:** F6H4R1AC-LCS **Matrix.....:** WATER
LCS Lot-Sample#: H3L120000-158 F6H4R1AD-LCSD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
	99	(36 - 134)

NOTE(S):

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

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

Data File: /var/chem/gcms/md.i/D121503.b/f6h4r1ac.d
Report Date: 17-Dec-2003 11:56

STL Knoxville

SW-846 Method 8270C

Data file : /var/chem/gcms/md.i/D121503.b/f6h4r1ac.d
Lab Smp Id: F6H4R1AC Client Smp ID: INTRA-LAB CHECK
Inj Date : 15-DEC-2003 20:39
Operator : 3386 Inst ID: md.i
Smp Info : F6H4R1AC,,3,,LCS,
Misc Info : D121503,8270a9,8270.sub
Comment : Semivolatile Organic Compounds by GC/MS
Method : /var/chem/gcms/md.i/D121503.b/8270a9.m
Meth Date : 17-Dec-2003 11:53 layk Quant Type: ISTD
Cal Date : 07-NOV-2003 13:02 Cal File: a9dk076.d
Als bottle: 11 QC Sample: METHOD SPIKE
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8270.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Unit Correction factor
Vt	1000.00000	Volume of final extract (uL)
Vo	1000.00000	Volume of sample extracted (mL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/uL)	FINAL (ug/L)
* 1 1,4-Dichlorobenzene-d4	152	4.317	4.317	(1.000)	120646	20.0000	
* 2 Naphthalene-d8	136	5.945	5.945	(1.000)	449346	20.0000	
* 3 Acenaphthene-d10	164	8.589	8.589	(1.000)	248402	20.0000	
* 4 Phenanthrene-d10	188	10.070	10.070	(1.000)	438214	20.0000	
* 5 Chrysene-d12	240	12.173	12.173	(1.000)	406256	20.0000	
* 6 Perylene-d12	264	13.425	13.425	(1.000)	295819	20.0000	
$ 7 2-Fluorophenol	112	3.154	3.154	(0.731)	413510	52.2658	52.3
$ 8 Phenol-d5	99	3.994	3.994	(0.925)	548008	63.1306	63.1
$ 9 Nitrobenzene-d5	82	5.005	4.999	(0.842)	313916	45.6294	45.6
$ 10 2-Fluorobiphenyl	172	7.684	7.684	(0.895)	759560	46.1339	46.1
$ 11 2,4,6-Tribromophenol	330	9.459	9.459	(0.939)	152157	75.4970	75.5
$ 12 Terphenyl-d14	244	11.339	11.339	(0.931)	773600	46.0146	46.0
13 N-Nitrosodimethylamine	74	2.167	2.214	(0.502)	352432	88.7657	88.8
14 Pyridine	79	2.179	2.208	(0.505)	568596	74.5630	74.6

Data File: /var/chem/gcms/md.i/D121503.b/f6h4r1ac.d
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Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/uL)	FINAL (ug/L)
15 Phenol (ccc)	94	4.006	4.006	(0.928)	780474	95.5776	95.6
16 Aniline	93	4.024	4.024	(0.932)	868744	69.2486	69.2
17 Bis(2-chloroethyl)ether	93	4.077	4.077	(0.944)	576916	85.5809	85.6
18 2-Chlorophenol	128	4.141	4.141	(0.959)	701624	89.5058	89.5
19 1,3-Dichlorobenzene	146	4.282	4.282	(0.992)	759404	84.7253	84.7
20 1,4-Dichlorobenzene (ccc)	146	4.335	4.335	(1.004)	770369	86.0960	86.1
21 Benzyl alcohol	108	4.488	4.482	(1.039)	449347	94.2904	94.3
22 1,2-Dichlorobenzene	146	4.535	4.535	(1.050)	746600	87.1410	87.1
23 2-Methylphenol	108	4.635	4.635	(1.073)	602305	91.2696	91.3
24 2,2'-Oxybis(1-Chloropropane)	45	4.664	4.664	(1.080)	963804	74.4791	74.5
25 4-Methylphenol	108	4.823	4.811	(1.117)	1230737	181.679	182(A)
26 3&4 Methylphenol	108	4.823	4.811	(1.117)	1230737	181.679	182(A)
27 N-Nitroso-di-n-propylamine###	70	4.840	4.835	(1.121)	409500	91.8733	91.9
28 Hexachloroethane	117	4.911	4.911	(1.137)	279919	90.1486	90.1
29 Nitrobenzene	77	5.028	5.023	(0.846)	589977	91.0358	91.0
30 Isophorone	82	5.334	5.334	(0.897)	1153324	88.9937	89.0
31 2-Nitrophenol (ccc)	139	5.451	5.451	(0.917)	426830	108.514	108
32 2,4-Dimethyphenol	107	5.522	5.522	(0.929)	469374	66.5109	66.5
33 Bis(2-chloroethoxy)methane	93	5.651	5.651	(0.951)	715343	85.8140	85.8
34 Benzoic acid	122	5.698	5.675	(0.958)	354174	84.8217	84.8
35 2,4-Dichlorophenol (ccc)	162	5.775	5.775	(0.971)	621192	100.198	100
36 1,2,4-Trichlorobenzene	180	5.892	5.892	(0.991)	634016	87.8981	87.9
37 Naphthalene	128	5.974	5.974	(1.005)	2064551	84.3148	84.3
38 4-Chloroaniline	127	6.092	6.092	(1.025)	591241	50.7544	50.8
39 Hexachlorobutadiene (ccc)	225	6.245	6.245	(1.050)	304262	80.9231	80.9
40 4-Chloro-3-methylphenol (ccc)	107	6.826	6.826	(1.148)	570619	104.355	104
41 2-Methylnaphthalene	142	6.997	6.997	(1.177)	1385853	87.1396	87.1
42 Hexachlorocyclopentadiene####	237	7.408	7.408	(0.862)	206816	55.8955	55.9
43 2,4,6-Trichlorophenol (ccc)	196	7.555	7.555	(0.880)	424938	102.061	102
44 2,4,5-Trichlorphenol	196	7.614	7.620	(0.886)	490550	101.527	102
45 2-Chloronaphthalene	162	7.813	7.813	(0.910)	1380770	92.1271	92.1
46 2-Nitroaniline	65	8.031	8.031	(0.935)	358986	86.6767	86.7
47 Acenaphthylene	152	8.395	8.395	(0.977)	2202744	84.5016	84.5
48 Dimethyl phthalate	163	8.354	8.348	(0.973)	1490898	90.6114	90.6
49 2,6-Dinitrotoluene	165	8.424	8.419	(0.981)	385187	108.522	108
50 3-Nitroaniline	138	8.589	8.583	(1.000)	381038	71.4203	71.4
51 Acenaphthene (ccc)	153	8.630	8.624	(1.005)	1376030	82.8692	82.9
52 2,4-Dinitrophenol ##spcc##	184	8.712	8.707	(1.014)	207051	107.900	108
53 Dibenzofuran	168	8.818	8.818	(1.027)	1885472	90.3956	90.4
54 4-Nitrophenol ##spcc##	109	8.824	8.830	(1.027)	178800	100.676	101
55 2,4-Dinitrotoluene	165	8.889	8.883	(1.035)	507188	104.824	105
56 Fluorene	166	9.194	9.194	(1.070)	1536608	84.7635	84.8
57 4-Chlorophenyl phenyl ether	204	9.212	9.206	(1.073)	714650	91.7843	91.8
58 Diethyl phthalate	149	9.171	9.171	(1.068)	1519761	92.7102	92.7
59 4-Nitroaniline	138	9.276	9.271	(1.080)	460773	79.7008	79.7
60 4,6-Dinitro-2-methylphenol	198	9.318	9.318	(0.925)	311432	106.862	107
61 N-Ndpa / diphenylamine (ccc)	169	9.341	9.341	(0.928)	1099349	96.7271	96.7

Data File: /var/chem/gcms/md.i/D121503.b/f6h4r1ac.d
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Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/uL)	FINAL (ug/L)
62 1,2-Diphenylhydrazine/azobnz	77	9.365	9.365	(0.930)	1246735	79.9933	80.0
63 4-Bromophenyl phenyl ether	248	9.682	9.676	(0.961)	407338	104.087	104
64 Hexachlorobenzene	284	9.811	9.805	(0.974)	412190	88.9281	88.9
65 Pentachlorophenol (ccc)	266	9.976	9.976	(0.991)	268361	92.9347	92.9
66 Phenanthrene	178	10.093	10.087	(1.002)	2222886	81.5572	81.6
67 Anthracene	178	10.128	10.128	(1.006)	2281313	83.8488	83.8
68 Carbazole	167	10.275	10.275	(1.020)	2186058	79.7161	79.7
69 Di-n-butyl phthalate	149	10.598	10.598	(1.052)	2525203	93.9129	93.9
70 Fluoranthene (ccc)	202	11.057	11.051	(1.098)	2414004	84.2389	84.2
71 Pyrene	202	11.227	11.221	(0.922)	2416900	87.1197	87.1
72 Butyl benzyl phthalate	149	11.709	11.709	(0.962)	1172449	96.6042	96.6
73 Benzo(a)Anthracene	228	12.161	12.155	(0.999)	2144495	90.4593	90.4
74 3,3'-Dichlorobenzidine	252	12.132	12.132	(0.997)	593946	69.5943	69.6
75 Chrysene	228	12.197	12.197	(1.002)	1936745	83.5174	83.5
76 Bis(2-ethylhexyl) phthalate	149	12.191	12.191	(1.001)	1395442	99.0819	99.1
77 Di-n-octyl phthalate (ccc)	149	12.731	12.731	(0.948)	2698655	103.380	103
78 Benzo(b)fluoranthene	252	13.096	13.096	(0.975)	2336815	95.8320	95.8
79 Benzo(k)fluoranthene	252	13.113	13.113	(0.977)	2306766	78.9279	78.9
85 Benzo(e)pyrene	252	13.378	13.331	(0.996)	2013694	90.5265	~~90.5~~
80 Benzo(a)pyrene (ccc)	252	13.378	13.378	(0.996)	2018486	83.1690	83.2
81 Indeno(1,2,3-cd)pyrene	276	14.512	14.506	(1.081)	2213706	91.3614	91.4
82 Dibenz(a,h)anthracene	278	14.517	14.512	(1.081)	1824691	95.9722	96.0
83 Benzo(g,h,i)perylene	276	14.817	14.811	(1.104)	1978085	93.3499	93.3

12/17/03

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.

Data File: /var/chem/gcms/md.i/D121503.b/f6h4r1ac.d
Report Date: 17-Dec-2003 11:56

STL Knoxville

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: md.i
Lab File ID: f6h4r1ac.d
Lab Smp Id: F6H4R1AC
Analysis Type: SV
Quant Type: ISTD
Operator: 3386
Method File: /var/chem/gcms/md.i/D121503.b/8270a9.m
Misc Info: D121503,8270a9,8270.sub

Calibration Date: 15-DEC-2003
Calibration Time: 17:05
Client Smp ID: INTRA-LAB CHECK
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	114826	57413	229652	120646	5.07
2 Naphthalene-d8	425133	212566	850266	449346	5.70
3 Acenaphthene-d10	235031	117516	470062	248402	5.69
4 Phenanthrene-d10	408242	204121	816484	438214	7.34
5 Chrysene-d12	410532	205266	821064	406256	-1.04
6 Perylene-d12	297061	148530	594122	295819	-0.42

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	4.32	3.82	4.82	4.32	0.00
2 Naphthalene-d8	5.94	5.44	6.44	5.95	0.00
3 Acenaphthene-d10	8.59	8.09	9.09	8.59	0.00
4 Phenanthrene-d10	10.07	9.57	10.57	10.07	0.00
5 Chrysene-d12	12.17	11.67	12.67	12.17	0.00
6 Perylene-d12	13.42	12.92	13.92	13.42	0.00

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

Data File: /var/chem/gcms/md.i/D121503.b/f6h4r1ac.d
Report Date: 17-Dec-2003 11:56

STL Knoxville

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: F6H4R1AC
Level: LOW
Data Type: MS DATA
SpikeList File: allspike.spk
Sublist File: 8270.sub
Method File: /var/chem/gcms/md.i/D121503.b/8270a9.m
Misc Info: D121503,8270a9,8270.sub

Client SDG: H3L120000
Fraction: SV
Client Smp ID: INTRA-LAB CHECK
Operator: 3386
SampleType: METHOD SPIKE
Quant Type: ISTD

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
13 N-Nitrosodimethyla	100	88.8	88.77	35-150
14 Pyridine	100	74.6	74.56	35-150
15 Phenol (ccc)	100	95.6	95.58	35-150
16 Aniline	100	69.2	69.25	35-150
17 Bis(2-chloroethyl)	100	85.6	85.58	35-150
18 2-Chlorophenol	100	89.5	89.51	35-150
19 1,3-Dichlorobenzen	100	84.7	84.73	35-150
20 1,4-Dichlorobenzen	100	86.1	86.10	35-150
21 Benzyl alcohol	100	94.3	94.29	35-150
22 1,2-Dichlorobenzen	100	87.1	87.14	35-150
23 2-Methylphenol	100	91.3	91.27	35-150
24 2,2'-Oxybis(1-Chlo	100	74.5	74.48	35-150
25 4-Methylphenol	200	182	90.84	35-150
26 3&4 Methylphenol	200	182	90.84	35-150
27 N-Nitroso-di-n-pro	100	91.9	91.87	35-150
28 Hexachloroethane	100	90.1	90.15	35-150
29 Nitrobenzene	100	91.0	91.04	35-150
30 Isophorone	100	89.0	88.99	35-150
31 2-Nitrophenol (ccc	100	108	108.51	35-150
32 2,4-Dimethyphenol	100	66.5	66.51	35-150
33 Bis(2-chloroethoxy	100	85.8	85.81	35-150
34 Benzoic acid	100	84.8	84.82	35-150
35 2,4-Dichlorophenol	100	100	100.20	35-150
36 1,2,4-Trichloroben	100	87.9	87.90	35-150
37 Naphthalene	100	84.3	84.31	60-100
38 4-Chloroaniline	100	50.8	50.75	35-150
39 Hexachlorobutadien	100	80.9	80.92	35-150
40 4-Chloro-3-methylp	100	104	104.36	35-150
41 2-Methylnaphthalen	100	87.1	87.14	35-150
42 Hexachlorocyclopen	100	55.9	55.90	35-150
43 2,4,6-Trichlorophe	100	102	102.06	35-150
44 2,4,5-Trichlorphen	100	102	101.53	35-150
45 2-Chloronaphthalen	100	92.1	92.13	35-150

Data File: /var/chem/gcms/md.i/D121503.b/f6h4r1ac.d
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SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
46 2-Nitroaniline	100	86.7	86.68	35-150
47 Acenaphthylene	100	84.5	84.50	60-106
48 Dimethyl phthalate	100	90.6	90.61	35-150
49 2,6-Dinitrotoluene	100	108	108.52	35-150
50 3-Nitroaniline	100	71.4	71.42	35-150
51 Acenaphthene (ccc)	100	82.9	82.87	63-105
52 2,4-Dinitrophenol	100	108	107.90	35-150
53 Dibenzofuran	100	90.4	90.40	35-150
54 4-Nitrophenol ##sp	100	101	100.68	35-150
55 2,4-Dinitrotoluene	100	105	104.82	35-150
56 Fluorene	100	84.8	84.76	60-113
57 4-Chlorophenyl phe	100	91.8	91.78	35-150
58 Diethyl phthalate	100	92.7	92.71	35-150
59 4-Nitroaniline	100	79.7	79.70	35-150
60 4,6-Dinitro-2-meth	100	107	106.86	35-150
61 N-Ndpa / diphenyla	100	96.7	96.73	35-150
62 1,2-Diphenylhydraz	100	80.0	79.99	35-150
63 4-Bromophenyl phen	100	104	104.09	35-150
64 Hexachlorobenzene	100	88.9	88.93	35-150
65 Pentachlorophenol	100	92.9	92.93	35-150
66 Phenanthrene	100	81.6	81.56	65-108
67 Anthracene	100	83.8	83.85	67-114
68 Carbazole	100	79.7	79.72	35-150
69 Di-n-butyl phthala	100	93.9	93.91	35-150
70 Fluoranthene (ccc)	100	84.2	84.24	65-115
71 Pyrene	100	87.1	87.12	70-112
72 Butyl benzyl phtha	100	96.6	96.60	35-150
73 Benzo(a)Anthracene	100	90.4	90.46	70-114
74 3,3'-Dichlorobenzi	100	69.6	69.59	35-150
75 Chrysene	100	83.5	83.52	68-111
76 Bis(2-ethylhexyl)	100	99.1	99.08	35-150
77 Di-n-octyl phthala	100	103	103.38	35-150
78 Benzo(b)fluoranthe	100	95.8	95.83	60-120
79 Benzo(k)fluoranthe	100	78.9	78.93	61-119
80 Benzo(a)pyrene (cc	100	83.2	83.17	67-111
81 Indeno(1,2,3-cd)py	100	91.4	91.36	67-120
82 Dibenz(a,h)anthrac	100	96.0	95.97	71-120
83 Benzo(g,h,i)peryle	100	93.3	93.35	63-120

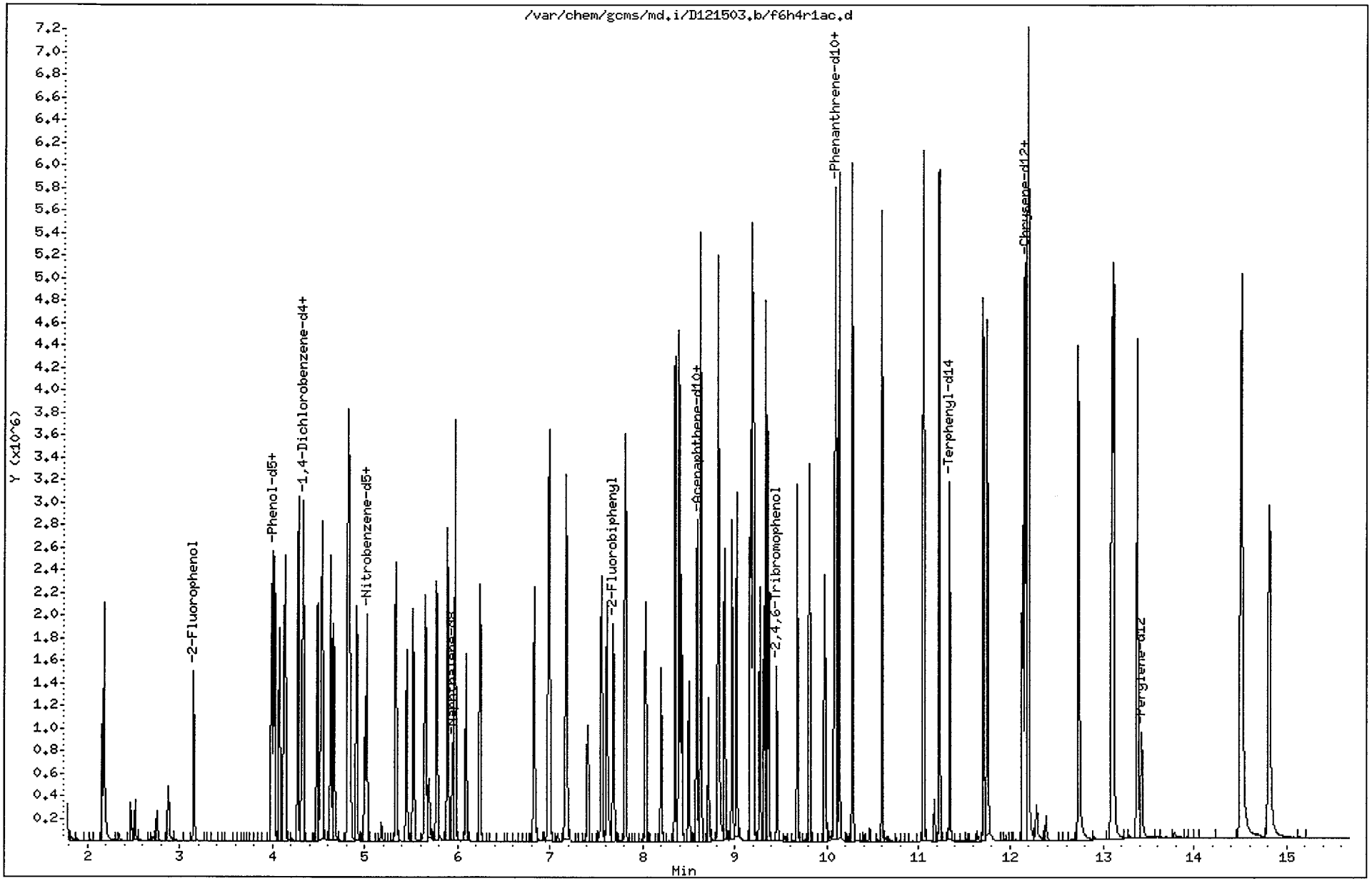
SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 7 2-Fluorophenol	75.0	52.3	69.69	29-110
$ 8 Phenol-d5	75.0	63.1	84.17	41-115

Data File: /var/chem/gcms/md.i/D121503.b/f6h4r1ac.d
Report Date: 17-Dec-2003 11:56

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 9 Nitrobenzene-d5	50.0	45.6	91.26	46-117
$ 10 2-Fluorobiphenyl	50.0	46.1	92.27	44-116
$ 11 2,4,6-Tribromophen	75.0	75.5	100.66	31-138
$ 12 Terphenyl-d14	50.0	46.0	92.03	0-132

Data File: /var/chem/gcms/md.i/D121503.b/f6h4r1ac.d
Date : 15-DEC-2003 20:39
Client ID: INTRA-LAB CHECK
Sample Info: F6H4R1AC,,3,,LCS,
Volume Injected (uL): 1.0
Column phase: ZB-5

Instrument: md.i
Operator: 3386
Column diameter: 0.25



Data File: /var/chem/gcms/md.i/D121503.b/f6h4r1ad.d
Report Date: 17-Dec-2003 11:56

STL Knoxville

SW-846 Method 8270C

Data file : /var/chem/gcms/md.i/D121503.b/f6h4r1ad.d
Lab Smp Id: F6H4R1AD Client Smp ID: INTRA-LAB CHECK
Inj Date : 15-DEC-2003 21:02
Operator : 3386 Inst ID: md.i
Smp Info : F6H4R1AD,,3,,LCSD,
Misc Info : D121503,8270a9,8270.sub
Comment : Semivolatile Organic Compounds by GC/MS
Method : /var/chem/gcms/md.i/D121503.b/8270a9.m
Meth Date : 17-Dec-2003 11:53 layk Quant Type: ISTD
Cal Date : 07-NOV-2003 13:02 Cal File: a9dk076.d
Als bottle: 12 QC Sample: METHOD SPIKE
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8270.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Unit Correction factor
Vt	1000.00000	Volume of final extract (uL)
Vo	1000.00000	Volume of sample extracted (mL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/uL)	FINAL (ug/L)
* 1 1,4-Dichlorobenzene-d4	152	4.317	4.317	(1.000)	116392	20.0000	
* 2 Naphthalene-d8	136	5.945	5.945	(1.000)	434068	20.0000	
* 3 Acenaphthene-d10	164	8.589	8.589	(1.000)	237897	20.0000	
* 4 Phenanthrene-d10	188	10.070	10.070	(1.000)	418566	20.0000	
* 5 Chrysene-d12	240	12.173	12.173	(1.000)	386976	20.0000	
* 6 Perylene-d12	264	13.425	13.425	(1.000)	277997	20.0000	
$ 7 2-Fluorophenol	112	3.154	3.154	(0.731)	405298	53.0998	53.1
$ 8 Phenol-d5	99	3.988	3.994	(0.924)	540143	64.4983	64.5
$ 9 Nitrobenzene-d5	82	5.005	4.999	(0.842)	308397	46.4051	46.4
$ 10 2-Fluorobiphenyl	172	7.684	7.684	(0.895)	773490	49.0544	49.0
$ 11 2,4,6-Tribromophenol	330	9.459	9.459	(0.939)	159673	82.9453	82.9
$ 12 Terphenyl-d14	244	11.339	11.339	(0.931)	791266	49.4103	49.4
13 N-Nitrosodimethylamine	74	2.167	2.214	(0.502)	333379	87.0353	87.0
14 Pyridine	79	2.179	2.208	(0.505)	536280	72.8950	72.9

Data File: /var/chem/gcms/md.i/D121503.b/f6h4r1ad.d
Report Date: 17-Dec-2003 11:56

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/uL)	FINAL (ug/L)
15 Phenol (ccc)	94	4.006	4.006	(0.928)	760448	96.5281	96.5
16 Aniline	93	4.024	4.024	(0.932)	842858	69.6402	69.6
17 Bis(2-chloroethyl)ether	93	4.077	4.077	(0.944)	560187	86.1358	86.1
18 2-Chlorophenol	128	4.135	4.141	(0.958)	675279	89.2928	89.3
19 1,3-Dichlorobenzene	146	4.282	4.282	(0.992)	721249	83.4087	83.4
20 1,4-Dichlorobenzene (ccc)	146	4.335	4.335	(1.004)	730574	84.6321	84.6
21 Benzyl alcohol	108	4.488	4.482	(1.039)	447670	97.3712	97.4
22 1,2-Dichlorobenzene	146	4.535	4.535	(1.050)	703939	85.1640	85.2
23 2-Methylphenol	108	4.635	4.635	(1.073)	584147	91.7527	91.8
24 2,2'-Oxybis(1-Chloropropane)	45	4.664	4.664	(1.080)	943705	75.5907	75.6
25 4-Methylphenol	108	4.823	4.811	(1.117)	1215543	185.993	186(A)
26 3&4 Methylphenol	108	4.823	4.811	(1.117)	1215543	185.993	186(A)
27 N-Nitroso-di-n-propylamine###	70	4.840	4.835	(1.121)	401555	93.3829	93.4
28 Hexachloroethane	117	4.911	4.911	(1.137)	263247	87.8774	87.9
29 Nitrobenzene	77	5.028	5.023	(0.846)	577882	92.3080	92.3
30 Isophorone	82	5.334	5.334	(0.897)	1170553	93.5022	93.5
31 2-Nitrophenol (ccc)	139	5.451	5.451	(0.917)	421305	110.879	111
32 2,4-Dimethyphenol	107	5.522	5.522	(0.929)	453211	66.4809	66.5
33 Bis(2-chloroethoxy)methane	93	5.651	5.651	(0.951)	714627	88.7455	88.7
34 Benzoic acid	122	5.692	5.675	(0.958)	333909	83.0241	83.0
35 2,4-Dichlorophenol (ccc)	162	5.775	5.775	(0.971)	616856	103.001	103
36 1,2,4-Trichlorobenzene	180	5.892	5.892	(0.991)	619151	88.8583	88.8
37 Naphthalene	128	5.974	5.974	(1.005)	2004922	84.7615	84.8
38 4-Chloroaniline	127	6.092	6.092	(1.025)	636834	56.5923	56.6
39 Hexachlorobutadiene (ccc)	225	6.245	6.245	(1.050)	296461	81.6235	81.6
40 4-Chloro-3-methylphenol (ccc)	107	6.826	6.826	(1.148)	586029	110.946	111
41 2-Methylnaphthalene	142	6.997	6.997	(1.177)	1398384	91.0223	91.0
42 Hexachlorocyclopentadiene####	237	7.408	7.408	(0.862)	206031	58.1420	58.1
43 2,4,6-Trichlorophenol (ccc)	196	7.555	7.555	(0.880)	439065	110.110	110
44 2,4,5-Trichlorphenol	196	7.614	7.620	(0.886)	499754	107.999	108
45 2-Chloronaphthalene	162	7.813	7.813	(0.910)	1397321	97.3482	97.3
46 2-Nitroaniline	65	8.031	8.031	(0.935)	370693	93.4555	93.4
47 Acenaphthylene	152	8.395	8.395	(0.977)	2255556	90.3484	90.3
48 Dimethyl phthalate	163	8.354	8.348	(0.973)	1515840	96.1954	96.2
49 2,6-Dinitrotoluene	165	8.425	8.419	(0.981)	404167	118.897	119
50 3-Nitroaniline	138	8.589	8.583	(1.000)	404272	79.1212	79.1
51 Acenaphthene (ccc)	153	8.630	8.624	(1.005)	1399402	87.9981	88.0
52 2,4-Dinitrophenol ##spcc##	184	8.712	8.707	(1.014)	217140	116.429	116
53 Dibenzofuran	168	8.818	8.818	(1.027)	1935768	96.9050	96.9
54 4-Nitrophenol ##spcc##	109	8.824	8.830	(1.027)	186043	109.379	109
55 2,4-Dinitrotoluene	165	8.889	8.883	(1.035)	524645	113.220	113
56 Fluorene	166	9.194	9.194	(1.070)	1558711	89.7795	89.8
57 4-Chlorophenyl phenyl ether	204	9.212	9.206	(1.073)	724466	97.1535	97.2
58 Diethyl phthalate	149	9.171	9.171	(1.068)	1583496	100.864	101
59 4-Nitroaniline	138	9.276	9.271	(1.080)	489274	88.3677	88.4
60 4,6-Dinitro-2-methylphenol	198	9.318	9.318	(0.925)	325812	116.082	116
61 N-Ndpa / diphenylamine (ccc)	169	9.341	9.341	(0.928)	1143649	105.348	105

Data File: /var/chem/gcms/md.i/D121503.b/f6h4r1ad.d
Report Date: 17-Dec-2003 11:56

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/uL)	FINAL (ug/L)
62 1,2-Diphenylhydrazine/azobnz	77	9.365	9.365	(0.930)	1309710	87.9786	88.0
63 4-Bromophenyl phenyl ether	248	9.682	9.676	(0.961)	428958	114.757	115
64 Hexachlorobenzene	284	9.811	9.805	(0.974)	433096	97.8246	97.8
65 Pentachlorophenol (ccc)	266	9.976	9.976	(0.991)	284847	103.274	103
66 Phenanthrene	178	10.093	10.087	(1.002)	2285661	87.7969	87.8
67 Anthracene	178	10.128	10.128	(1.006)	2353599	90.5663	90.6
68 Carbazole	167	10.275	10.275	(1.020)	2272507	86.7585	86.8
69 Di-n-butyl phthalate	149	10.598	10.598	(1.052)	2577933	100.374	100
70 Fluoranthene (ccc)	202	11.057	11.051	(1.098)	2459773	89.8654	89.9
71 Pyrene	202	11.227	11.221	(0.922)	2458712	93.0425	93.0
72 Butyl benzyl phthalate	149	11.709	11.709	(0.962)	1202737	104.037	104
73 Benzo(a)Anthracene	228	12.161	12.155	(0.999)	2183837	96.7085	96.7
74 3,3'-Dichlorobenzidine	252	12.132	12.132	(0.997)	612534	75.3483	75.3
75 Chrysene	228	12.197	12.197	(1.002)	1980368	89.6534	89.6
76 Bis(2-ethylhexyl) phthalate	149	12.191	12.191	(1.001)	1420816	105.910	106
77 Di-n-octyl phthalate (ccc)	149	12.731	12.731	(0.948)	2715803	110.707	111
78 Benzo(b)fluoranthene	252	13.096	13.096	(0.975)	2427999	106.071	106
79 Benzo(k)fluoranthene	252	13.113	13.113	(0.977)	2338458	85.1417	85.1
85 Benzo(e)pyrene	252	13.378	13.331	(0.996)	2063565	98.7158	~~98.7~~
80 Benzo(a)pyrene (ccc)	252	13.378	13.378	(0.996)	2063822	90.4886	90.5
81 Indeno(1,2,3-cd)pyrene	276	14.512	14.506	(1.081)	2280247	100.141	100
82 Dibenz(a,h)anthracene	278	14.517	14.512	(1.081)	1868030	104.536	104
83 Benzo(g,h,i)perylene	276	14.817	14.811	(1.104)	2076068	104.255	104

10/17/03

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.

Data File: /var/chem/gcms/md.i/D121503.b/f6h4r1ad.d
Report Date: 17-Dec-2003 11:56

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INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: md.i
Lab File ID: f6h4r1ad.d
Lab Smp Id: F6H4R1AD
Analysis Type: SV
Quant Type: ISTD
Operator: 3386
Method File: /var/chem/gcms/md.i/D121503.b/8270a9.m
Misc Info: D121503,8270a9,8270.sub

Calibration Date: 15-DEC-2003
Calibration Time: 17:05
Client Smp ID: INTRA-LAB CHECK
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	114826	57413	229652	116392	1.36
2 Naphthalene-d8	425133	212566	850266	434068	2.10
3 Acenaphthene-d10	235031	117516	470062	237897	1.22
4 Phenanthrene-d10	408242	204121	816484	418566	2.53
5 Chrysene-d12	410532	205266	821064	386976	-5.74
6 Perylene-d12	297061	148530	594122	277997	-6.42

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	4.32	3.82	4.82	4.32	0.00
2 Naphthalene-d8	5.94	5.44	6.44	5.95	0.00
3 Acenaphthene-d10	8.59	8.09	9.09	8.59	0.00
4 Phenanthrene-d10	10.07	9.57	10.57	10.07	0.00
5 Chrysene-d12	12.17	11.67	12.67	12.17	0.00
6 Perylene-d12	13.42	12.92	13.92	13.42	0.00

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

Data File: /var/chem/gcms/md.i/D121503.b/f6h4r1ad.d
Report Date: 17-Dec-2003 11:56

STL Knoxville

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: F6H4R1AD
Level: LOW
Data Type: MS DATA
SpikeList File: allspike.spk
Sublist File: 8270.sub
Method File: /var/chem/gcms/md.i/D121503.b/8270a9.m
Misc Info: D121503,8270a9,8270.sub

Client SDG: H3L120000
Fraction: SV
Client Smp ID: INTRA-LAB CHECK
Operator: 3386
SampleType: METHOD SPIKE
Quant Type: ISTD

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
13 N-Nitrosodimethyla	100	87.0	87.04	35-150
14 Pyridine	100	72.9	72.90	35-150
15 Phenol (ccc)	100	96.5	96.53	35-150
16 Aniline	100	69.6	69.64	35-150
17 Bis(2-chloroethyl)	100	86.1	86.14	35-150
18 2-Chlorophenol	100	89.3	89.29	35-150
19 1,3-Dichlorobenzen	100	83.4	83.41	35-150
20 1,4-Dichlorobenzen	100	84.6	84.63	35-150
21 Benzyl alcohol	100	97.4	97.37	35-150
22 1,2-Dichlorobenzen	100	85.2	85.16	35-150
23 2-Methylphenol	100	91.8	91.75	35-150
24 2,2'-Oxybis(1-Chlo	100	75.6	75.59	35-150
25 4-Methylphenol	200	186	93.00	35-150
26 3&4 Methylphenol	200	186	93.00	35-150
27 N-Nitroso-di-n-pro	100	93.4	93.38	35-150
28 Hexachloroethane	100	87.9	87.88	35-150
29 Nitrobenzene	100	92.3	92.31	35-150
30 Isophorone	100	93.5	93.50	35-150
31 2-Nitrophenol (ccc	100	111	110.88	35-150
32 2,4-Dimethyphenol	100	66.5	66.48	35-150
33 Bis(2-chloroethoxy	100	88.7	88.75	35-150
34 Benzoic acid	100	83.0	83.02	35-150
35 2,4-Dichlorophenol	100	103	103.00	35-150
36 1,2,4-Trichloroben	100	88.8	88.86	35-150
37 Naphthalene	100	84.8	84.76	60-100
38 4-Chloroaniline	100	56.6	56.59	35-150
39 Hexachlorobutadien	100	81.6	81.62	35-150
40 4-Chloro-3-methylp	100	111	110.95	35-150
41 2-Methylnaphthalen	100	91.0	91.02	35-150
42 Hexachlorocyclopen	100	58.1	58.14	35-150
43 2,4,6-Trichlorophe	100	110	110.11	35-150
44 2,4,5-Trichlorphen	100	108	108.00	35-150
45 2-Chloronaphthalen	100	97.3	97.35	35-150

Data File: /var/chem/gcms/md.i/D121503.b/f6h4r1ad.d
Report Date: 17-Dec-2003 11:56

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
46 2-Nitroaniline	100	93.4	93.46	35-150
47 Acenaphthylene	100	90.3	90.35	60-106
48 Dimethyl phthalate	100	96.2	96.20	35-150
49 2,6-Dinitrotoluene	100	119	118.90	35-150
50 3-Nitroaniline	100	79.1	79.12	35-150
51 Acenaphthene (ccc)	100	88.0	88.00	63-105
52 2,4-Dinitrophenol	100	116	116.43	35-150
53 Dibenzofuran	100	96.9	96.90	35-150
54 4-Nitrophenol ##sp	100	109	109.38	35-150
55 2,4-Dinitrotoluene	100	113	113.22	35-150
56 Fluorene	100	89.8	89.78	60-113
57 4-Chlorophenyl phe	100	97.2	97.15	35-150
58 Diethyl phthalate	100	101	100.86	35-150
59 4-Nitroaniline	100	88.4	88.37	35-150
60 4,6-Dinitro-2-meth	100	116	116.08	35-150
61 N-Ndpa / diphenyla	100	105	105.35	35-150
62 1,2-Diphenylhydraz	100	88.0	87.98	35-150
63 4-Bromophenyl phen	100	115	114.76	35-150
64 Hexachlorobenzene	100	97.8	97.82	35-150
65 Pentachlorophenol	100	103	103.27	35-150
66 Phenanthrene	100	87.8	87.80	65-108
67 Anthracene	100	90.6	90.57	67-114
68 Carbazole	100	86.8	86.76	35-150
69 Di-n-butyl phthala	100	100	100.37	35-150
70 Fluoranthene (ccc)	100	89.9	89.87	65-115
71 Pyrene	100	93.0	93.04	70-112
72 Butyl benzyl phtha	100	104	104.04	35-150
73 Benzo(a)Anthracene	100	96.7	96.71	70-114
74 3,3'-Dichlorobenzi	100	75.3	75.35	35-150
75 Chrysene	100	89.6	89.65	68-111
76 Bis(2-ethylhexyl)	100	106	105.91	35-150
77 Di-n-octyl phthala	100	111	110.71	35-150
78 Benzo(b)fluoranthe	100	106	106.07	60-120
79 Benzo(k)fluoranthe	100	85.1	85.14	61-119
80 Benzo(a)pyrene (cc	100	90.5	90.49	67-111
81 Indeno(1,2,3-cd)py	100	100	100.14	67-120
82 Dibenz(a,h)anthrac	100	104	104.54	71-120
83 Benzo(g,h,i)peryle	100	104	104.25	63-120

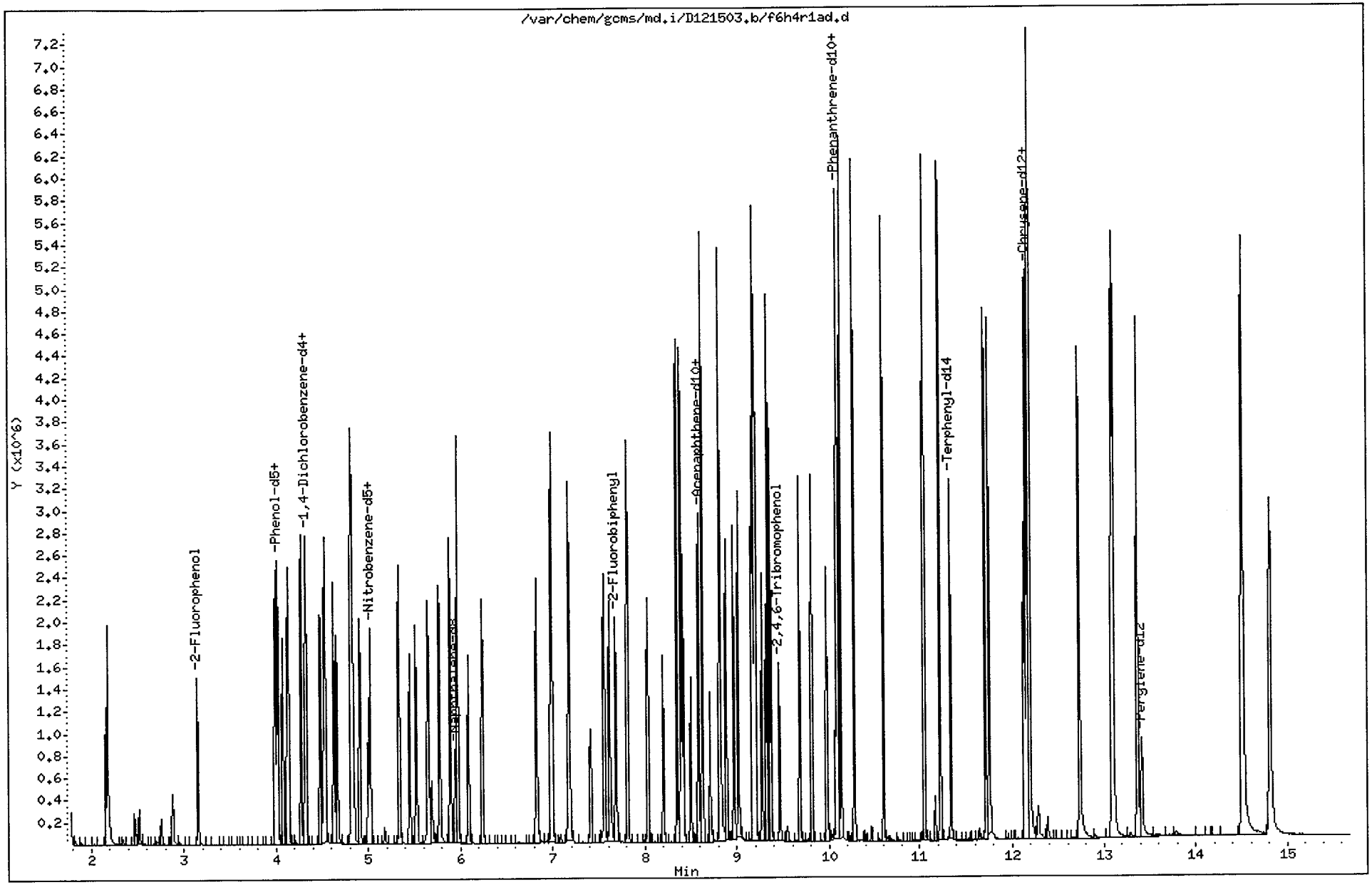
SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 7 2-Fluorophenol	75.0	53.1	70.80	29-110
$ 8 Phenol-d5	75.0	64.5	86.00	41-115

Data File: /var/chem/gcms/md.i/D121503.b/f6h4r1ad.d
Report Date: 17-Dec-2003 11:56

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 9 Nitrobenzene-d5	50.0	46.4	92.81	46-117
$ 10 2-Fluorobiphenyl	50.0	49.0	98.11	44-116
$ 11 2,4,6-Tribromophen	75.0	82.9	110.59	31-138
$ 12 Terphenyl-d14	50.0	49.4	98.82	0-132

Data File: /var/chem/gcms/md.i/D121503.b/f6h4r1ad.d
Date : 15-DEC-2003 21:02
Client ID: INTRA-LAB CHECK
Sample Info: F6H4R1AD,,3,,LCSD,
Volume Injected (uL): 1.0
Column phase: ZB-5

Instrument: md.i
Operator: 3386
Column diameter: 0.25



METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: H3L120208 **Work Order #...:** F6N421AA **Matrix.....:** WATER
MB Lot-Sample #: H3L150000-288

Prep Date.....: 12/15/03
Analysis Date..: 12/18/03 **Prep Batch #...:** 3349288
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Phenol	ND	10	ug/L	SW846 8270C
bis(2-Chloroethyl)-ether	ND	10	ug/L	SW846 8270C
2-Chlorophenol	ND	10	ug/L	SW846 8270C
1,3-Dichlorobenzene	ND	10	ug/L	SW846 8270C
1,4-Dichlorobenzene	ND	10	ug/L	SW846 8270C
1,2-Dichlorobenzene	ND	10	ug/L	SW846 8270C
2-Methylphenol	ND	10	ug/L	SW846 8270C
2,2'-oxybis(1-Chloro-propane)	ND	10	ug/L	SW846 8270C
4-Methylphenol	ND	10	ug/L	SW846 8270C
N-Nitrosodi-n-propyl-amine	ND	10	ug/L	SW846 8270C
Hexachloroethane	ND	10	ug/L	SW846 8270C
Nitrobenzene	ND	10	ug/L	SW846 8270C
Isophorone	ND	10	ug/L	SW846 8270C
2-Nitrophenol	ND	10	ug/L	SW846 8270C
2,4-Dimethylphenol	ND	10	ug/L	SW846 8270C
bis(2-Chloroethoxy) methane	ND	10	ug/L	SW846 8270C
2,4-Dichlorophenol	ND	10	ug/L	SW846 8270C
1,2,4-Trichloro-benzene	ND	10	ug/L	SW846 8270C
Naphthalene	ND	10	ug/L	SW846 8270C
4-Chloroaniline	ND	10	ug/L	SW846 8270C
Hexachlorobutadiene	ND	10	ug/L	SW846 8270C
4-Chloro-3-methylphenol	ND	10	ug/L	SW846 8270C
2-Methylnaphthalene	ND	10	ug/L	SW846 8270C
Hexachlorocyclopenta-diene	ND	50	ug/L	SW846 8270C
2,4,6-Trichloro-phenol	ND	10	ug/L	SW846 8270C
2,4,5-Trichloro-phenol	ND	10	ug/L	SW846 8270C
2-Chloronaphthalene	ND	10	ug/L	SW846 8270C
2-Nitroaniline	ND	50	ug/L	SW846 8270C
Dimethyl phthalate	ND	10	ug/L	SW846 8270C
Acenaphthylene	ND	10	ug/L	SW846 8270C
2,6-Dinitrotoluene	ND	10	ug/L	SW846 8270C
3-Nitroaniline	ND	50	ug/L	SW846 8270C
Acenaphthene	ND	10	ug/L	SW846 8270C

(Continued on next page)

METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: H3L120208 **Work Order #...:** F6N421AA **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
2,4-Dinitrophenol	ND	50	ug/L	SW846 8270C
4-Nitrophenol	ND	50	ug/L	SW846 8270C
Dibenzofuran	ND	10	ug/L	SW846 8270C
2,4-Dinitrotoluene	ND	10	ug/L	SW846 8270C
Diethyl phthalate	ND	10	ug/L	SW846 8270C
4-Chlorophenyl phenyl ether	ND	10	ug/L	SW846 8270C
Fluorene	ND	10	ug/L	SW846 8270C
4-Nitroaniline	ND	50	ug/L	SW846 8270C
4,6-Dinitro-2-methylphenol	ND	50	ug/L	SW846 8270C
N-Nitrosodiphenylamine	ND	10	ug/L	SW846 8270C
4-Bromophenyl phenyl ether	ND	10	ug/L	SW846 8270C
Hexachlorobenzene	ND	10	ug/L	SW846 8270C
Pentachlorophenol	ND	50	ug/L	SW846 8270C
Phenanthrene	ND	10	ug/L	SW846 8270C
Anthracene	ND	10	ug/L	SW846 8270C
Carbazole	ND	10	ug/L	SW846 8270C
Di-n-butyl phthalate	ND	10	ug/L	SW846 8270C
Fluoranthene	ND	10	ug/L	SW846 8270C
Pyrene	ND	10	ug/L	SW846 8270C
Butyl benzyl phthalate	ND	10	ug/L	SW846 8270C
3,3'-Dichlorobenzidine	ND	50	ug/L	SW846 8270C
Benzo(a)anthracene	ND	10	ug/L	SW846 8270C
Chrysene	ND	10	ug/L	SW846 8270C
bis(2-Ethylhexyl) phthalate	ND	10	ug/L	SW846 8270C
Di-n-octyl phthalate	ND	10	ug/L	SW846 8270C
Benzo(b)fluoranthene	ND	10	ug/L	SW846 8270C
Benzo(k)fluoranthene	ND	10	ug/L	SW846 8270C
Benzo(a)pyrene	ND	10	ug/L	SW846 8270C
Indeno(1,2,3-cd)pyrene	ND	10	ug/L	SW846 8270C
Dibenz(a,h)anthracene	ND	10	ug/L	SW846 8270C
Benzo(ghi)perylene	ND	10	ug/L	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	70	(29 - 110)
Phenol-d5	84	(41 - 115)
Nitrobenzene-d5	85	(46 - 117)
2-Fluorobiphenyl	81	(44 - 116)
2,4,6-Tribromophenol	89	(31 - 138)
Terphenyl-d14	91	(36 - 134)

(Continued on next page)

METHOD BLANK REPORT

GC/MS Semivolatiles

Client Lot #...: H3L120208 **Work Order #...:** F6N421AA **Matrix.....:** WATER

NOTE(S):

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

Data File: /var/chem/gcms/md.i/D121803.b/f6n421aa.d
Report Date: 19-Dec-2003 12:33

STL Knoxville

SW-846 Method 8270C

Data file : /var/chem/gcms/md.i/D121803.b/f6n421aa.d
Lab Smp Id: F6N421AA
Client Smp ID: INTRA-LAB BLANK
Inj Date : 18-DEC-2003 16:07
Operator : 3386
Inst ID: md.i
Smp Info : F6N421AA,,3,,BLK,
Misc Info : D121803,8270a9,8270.sub
Comment : Semivolatile Organic Compounds by GC/MS
Method : /var/chem/gcms/md.i/D121803.b/8270a9.m
Meth Date : 19-Dec-2003 12:19 tajh
Quant Type: ISTD
Cal Date : 07-NOV-2003 13:02
Cal File: a9dk076.d
Als bottle: 1
QC Sample: METHOD BLANK
Dil Factor: 1.00000
Integrator: HP RTE
Compound Sublist: 8270.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Unit Correction factor
Vt	1000.00000	Volume of final extract (uL)
Vo	1000.00000	Volume of sample extracted (mL)

Cpnd Variable — Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/uL)	FINAL (ug/L)
* 1 1,4-Dichlorobenzene-d4	152	4.317	4.318	(1.000)	71275	20.0000	
* 2 Naphthalene-d8	136	5.945	5.945	(1.000)	269052	20.0000	
* 3 Acenaphthene-d10	164	8.589	8.589	(1.000)	166807	20.0000	
* 4 Phenanthrene-d10	188	10.070	10.070	(1.000)	303974	20.0000	
* 5 Chrysene-d12	240	12.167	12.167	(1.000)	328347	20.0000	
* 6 Perylene-d12	264	13.425	13.419	(1.000)	253347	20.0000	
$ 7 2-Fluorophenol	112	3.154	3.154	(0.731)	244777	52.3691	52.4
$ 8 Phenol-d5	99	3.988	3.989	(0.924)	322424	62.8713	62.9
$ 9 Nitrobenzene-d5	82	4.999	4.999	(0.841)	175270	42.5487	42.5
$ 10 2-Fluorobiphenyl	172	7.684	7.684	(0.895)	450198	40.7196	40.7
$ 11 2,4,6-Tribromophenol	330	9.458	9.459	(0.939)	93442	66.8392	66.8
$ 12 Terphenyl-d14	244	11.339	11.339	(0.932)	616374	45.3617	45.4
56 Fluorene	166	9.453	9.188	(1.101)	7163	0.58849	~~0.588~~
58 Diethyl phthalate	149	9.171	9.171	(1.068)	7182	0.65246	0.652
63 4-Bromophenyl phenyl ether	248	9.458	9.676	(0.939)	5566	2.05050	~~2.05~~

KM 12-19-03

Data File: /var/chem/gcms/md.i/D121803.b/f6n421aa.d
Report Date: 19-Dec-2003 12:33

STL Knoxville

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: md.i
Lab File ID: f6n421aa.d
Lab Smp Id: F6N421AA
Analysis Type: SV
Quant Type: ISTD
Operator: 3386
Method File: /var/chem/gcms/md.i/D121803.b/8270a9.m
Misc Info: D121803,8270a9,8270.sub

Calibration Date: 18-DEC-2003
Calibration Time: 10:33
Client Smp ID: INTRA-LAB BLANK
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	87290	43645	174580	71275	-18.35
2 Naphthalene-d8	333200	166600	666400	269052	-19.25
3 Acenaphthene-d10	191379	95690	382758	166807	-12.84
4 Phenanthrene-d10	352152	176076	704304	303974	-13.68
5 Chrysene-d12	404756	202378	809512	328347	-18.88
6 Perylene-d12	323296	161648	646592	253347	-21.64

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	4.32	3.82	4.82	4.32	-0.01
2 Naphthalene-d8	5.95	5.45	6.45	5.94	0.00
3 Acenaphthene-d10	8.59	8.09	9.09	8.59	0.00
4 Phenanthrene-d10	10.07	9.57	10.57	10.07	0.00
5 Chrysene-d12	12.17	11.67	12.67	12.17	0.00
6 Perylene-d12	13.42	12.92	13.92	13.42	0.04

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

Data File: /var/chem/gcms/md.i/D121803.b/f6n421aa.d
Report Date: 19-Dec-2003 12:33

STL Knoxville

RECOVERY REPORT

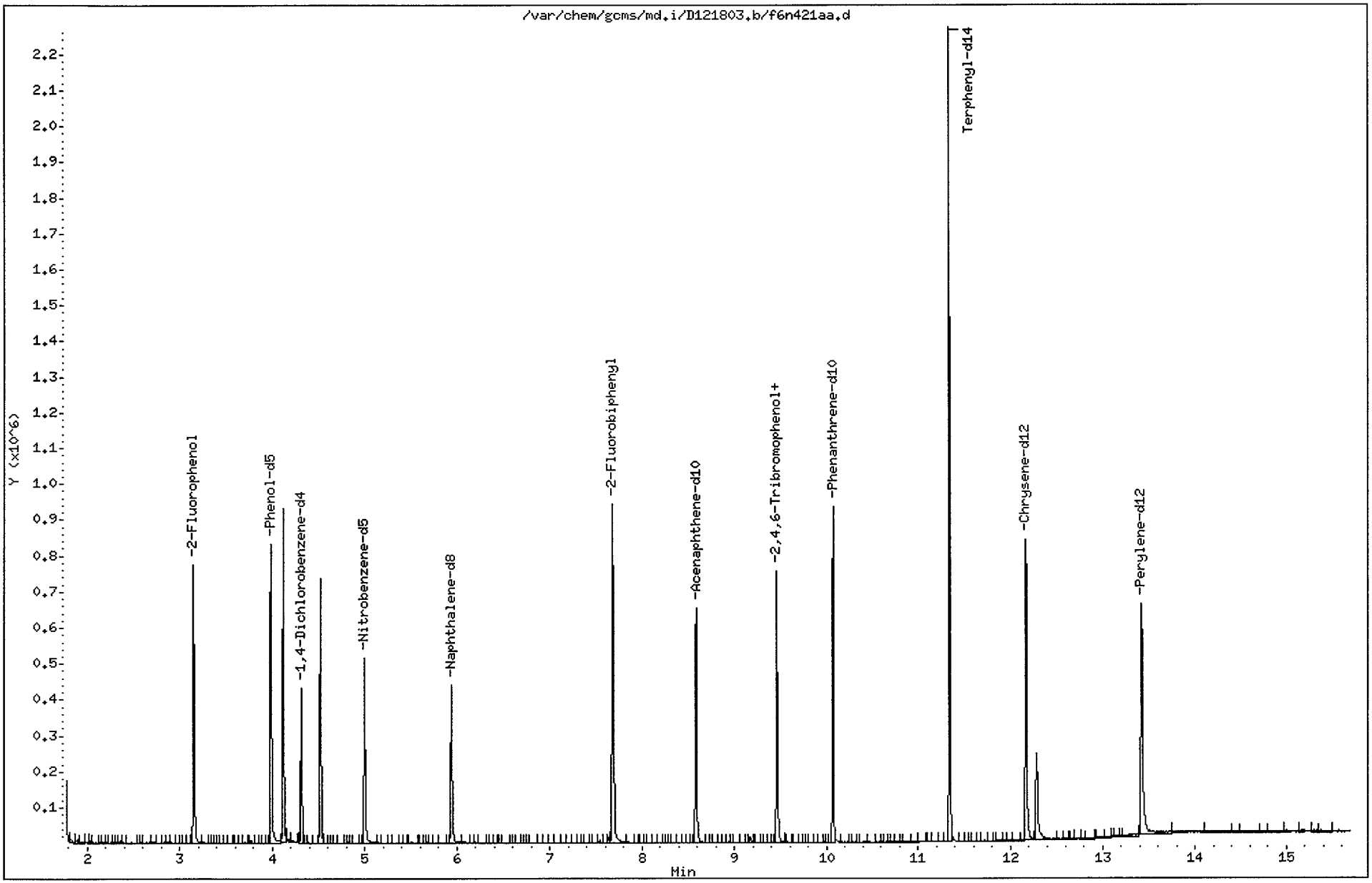
Client Name:
Sample Matrix: LIQUID
Lab Smp Id: F6N421AA
Level: LOW
Data Type: MS DATA
SpikeList File: allspike.spk
Sublist File: 8270.sub
Method File: /var/chem/gcms/md.i/D121803.b/8270a9.m
Misc Info: D121803,8270a9,8270.sub

Client SDG: H3L150000
Fraction: SV
Client Smp ID: INTRA-LAB BLANK
Operator: 3386
SampleType: METHOD BLANK
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 7 2-Fluorophenol	75.0	52.4	69.83	29-110
$ 8 Phenol-d5	75.0	62.9	83.83	41-115
$ 9 Nitrobenzene-d5	50.0	42.5	85.10	46-117
$ 10 2-Fluorobiphenyl	50.0	40.7	81.44	44-116
$ 11 2,4,6-Tribromophen	75.0	66.8	89.12	31-138
$ 12 Terphenyl-d14	50.0	45.4	90.72	0-132

Data File: /var/chem/gcms/md.i/D121803.b/f6n421aa.d
Date : 18-DEC-2003 16:07
Client ID: INTRA-LAB BLANK
Sample Info: F6N421AA,,3,,BLK,
Volume Injected (uL): 1.0
Column phase: ZB-5

Instrument: md.i
Operator: 3386
Column diameter: 0.25



Data File: /var/chem/gcms/md.i/D121803.b/f6n421aa.d

Date : 18-DEC-2003 16:07

Client ID: INTRA-LAB BLANK

Instrument: md.i

Sample Info: F6N421AA,,3,,BLK,

Volume Injected (uL): 1.0

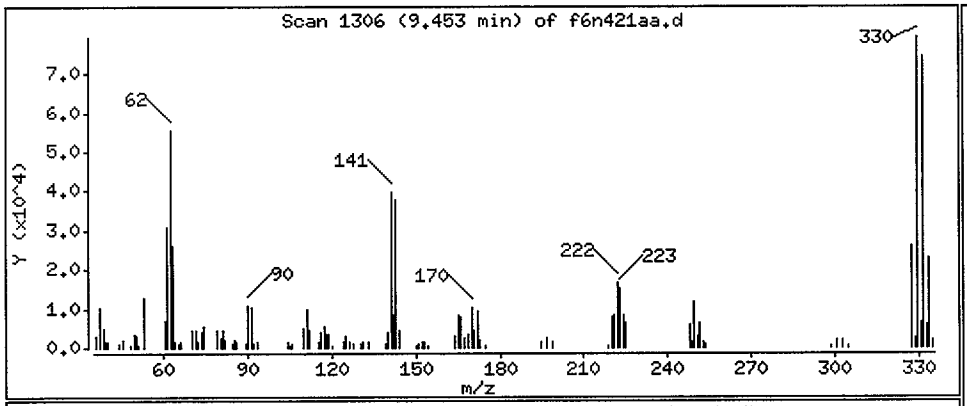
Operator: 3386

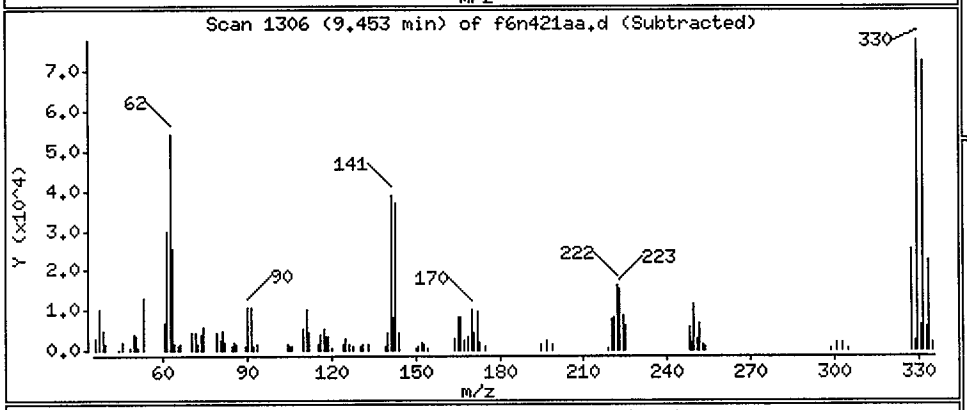
Column phase: ZB-5

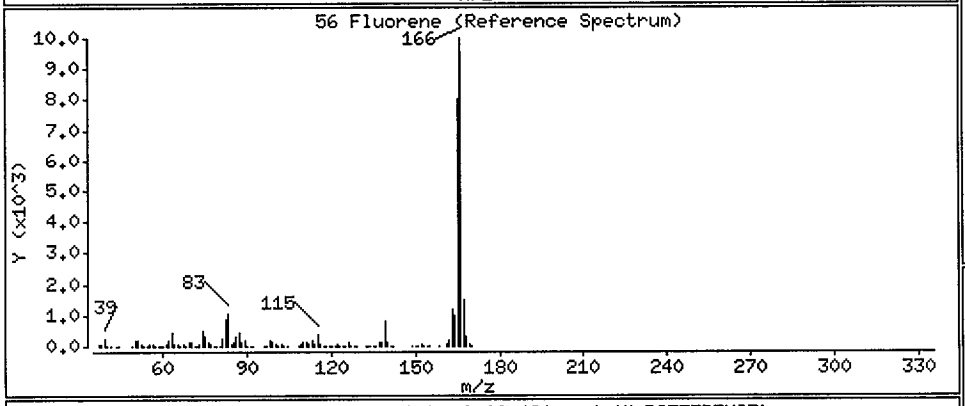
Column diameter: 0.25

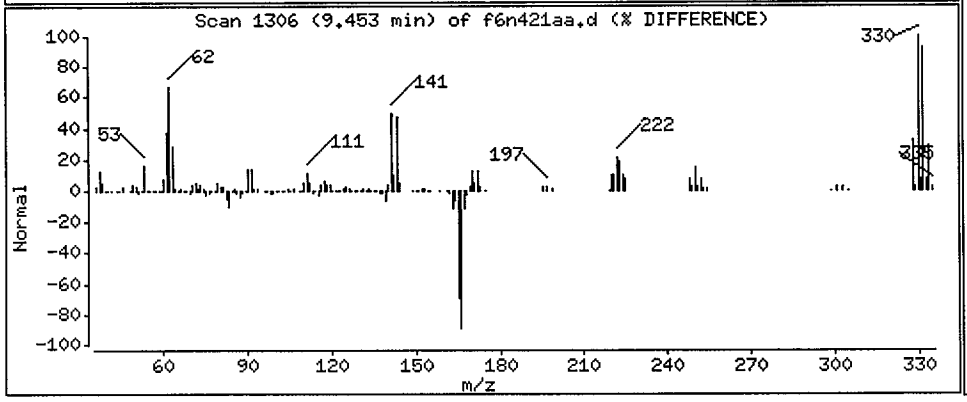
56 Fluorene

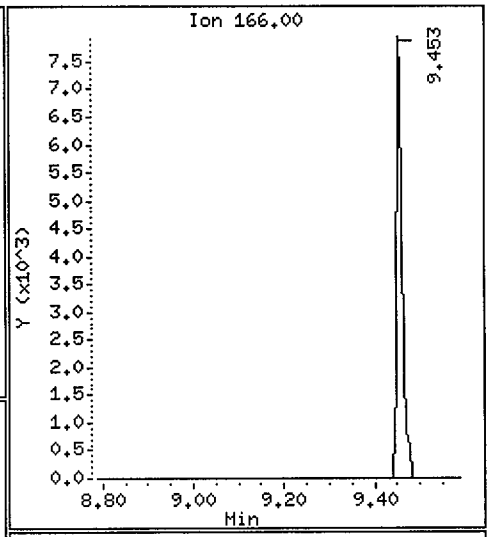
Concentration: 0.588 ug/L

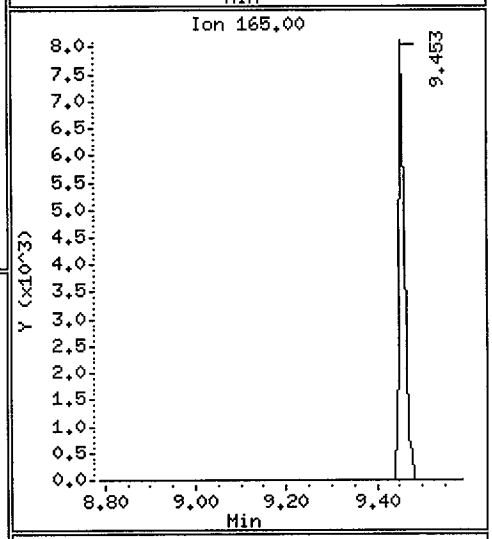


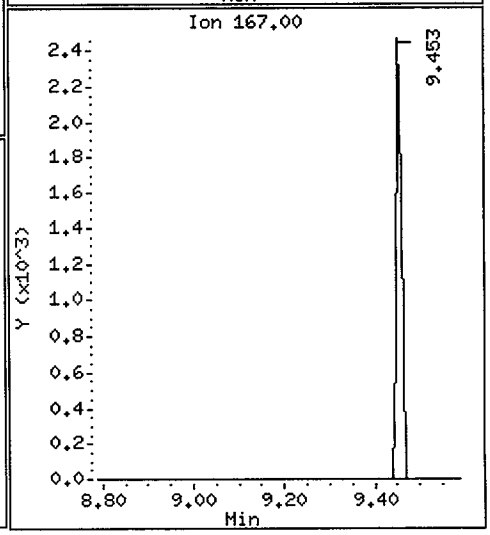












Data File: /var/chem/gcms/md.i/D121803.b/f6n421aa.d

Date : 18-DEC-2003 16:07

Client ID: INTRA-LAB BLANK

Instrument: md.i

Sample Info: F6N421AA,,3,,BLK,

Volume Injected (uL): 1.0

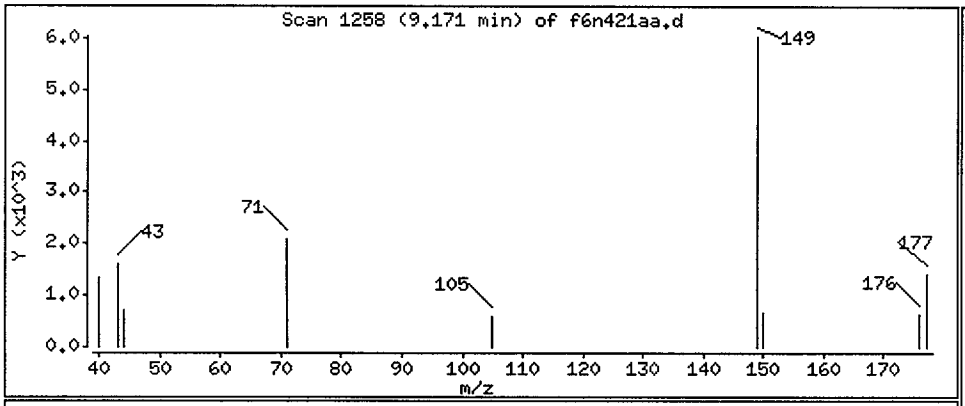
Operator: 3386

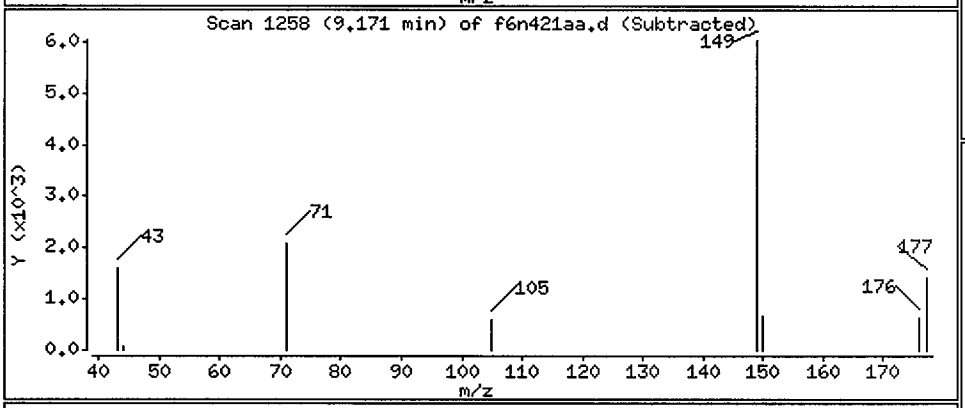
Column phase: ZB-5

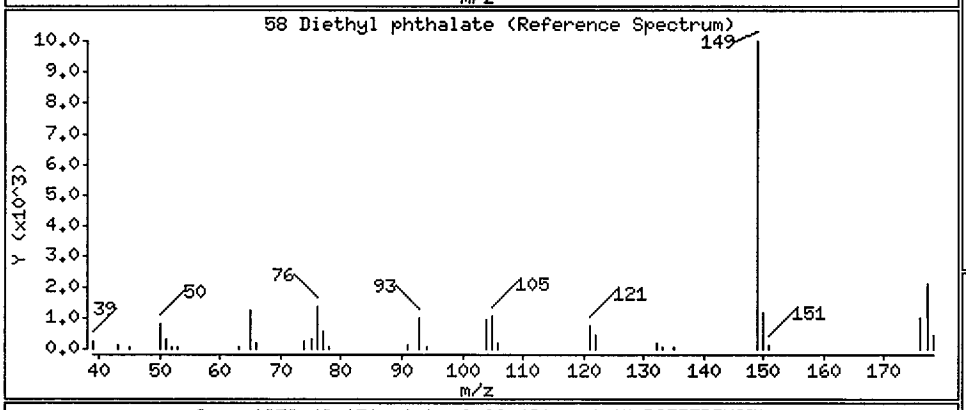
Column diameter: 0.25

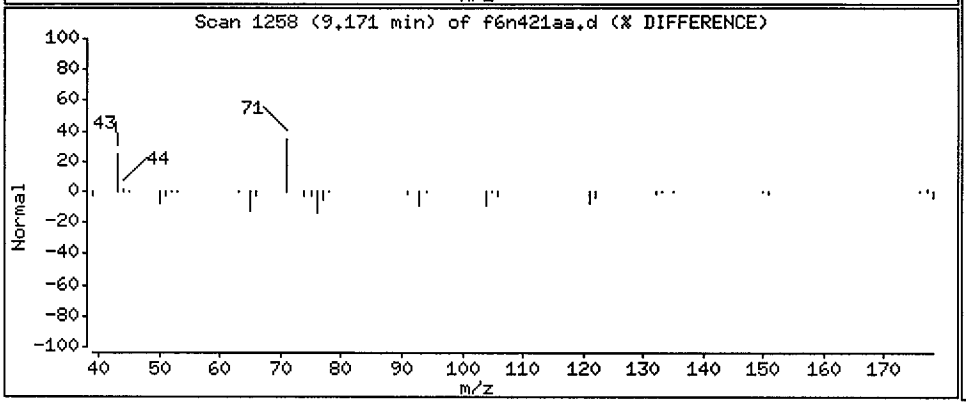
58 Diethyl phthalate

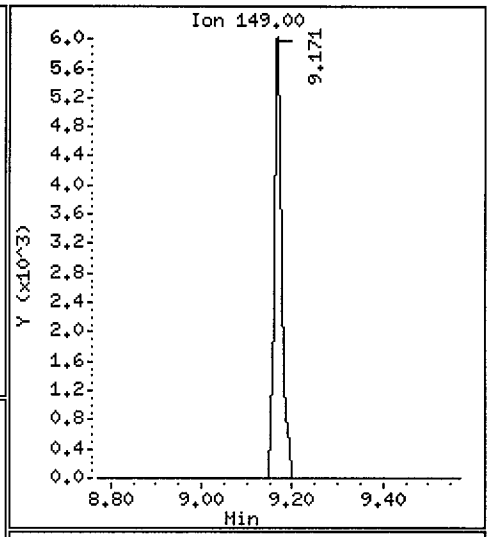
Concentration: 0.652 ug/L

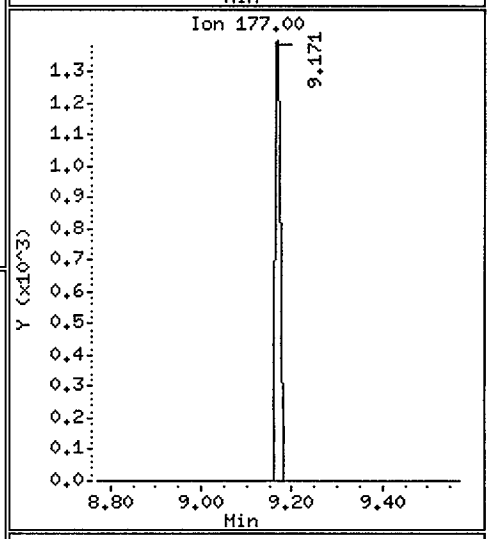


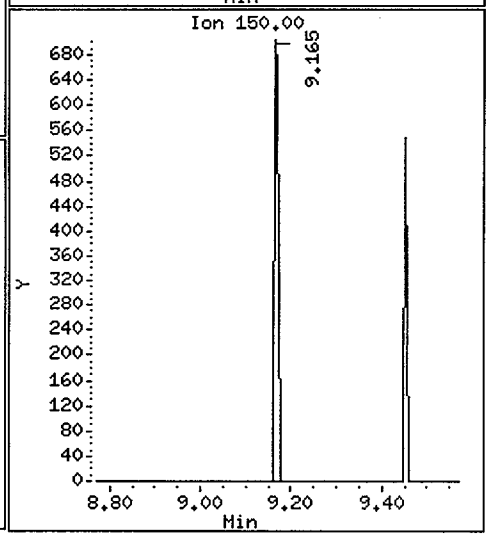












Data File: /var/chem/gcms/md.i/D121803.b/f6n421aa.d

Date : 18-DEC-2003 16:07

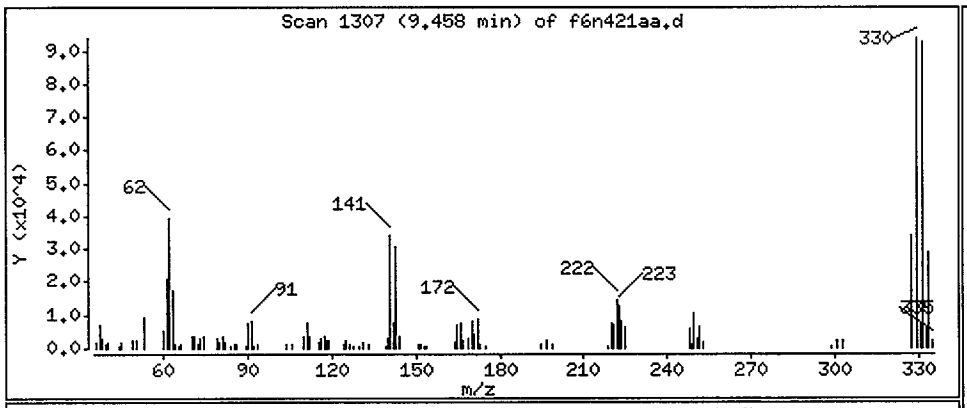
Client ID: INTRA-LAB BLANK | Instrument: md.i

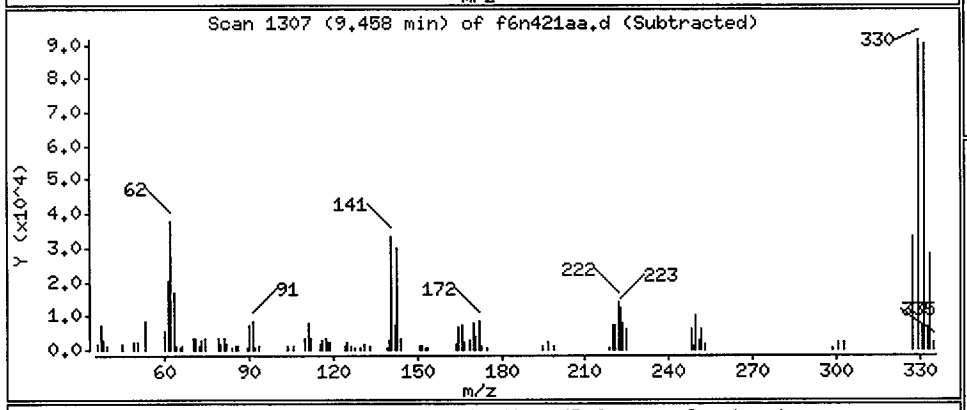
Sample Info: F6N421AA,,3,,BLK,

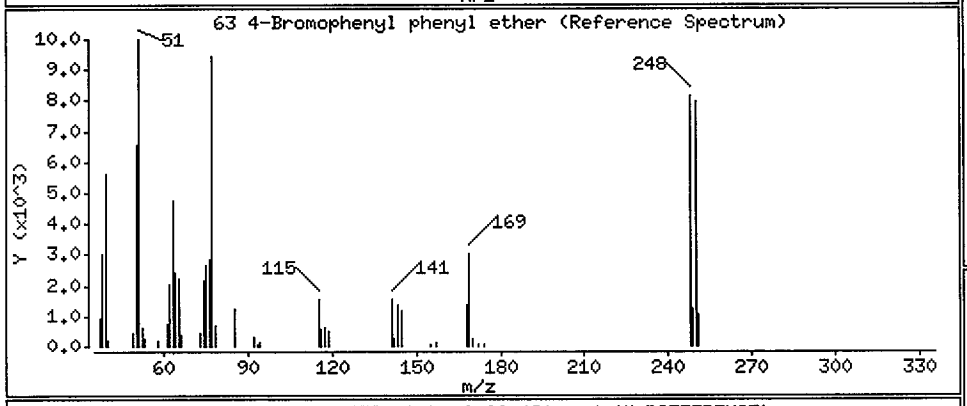
Volume Injected (uL): 1.0 | Operator: 3386

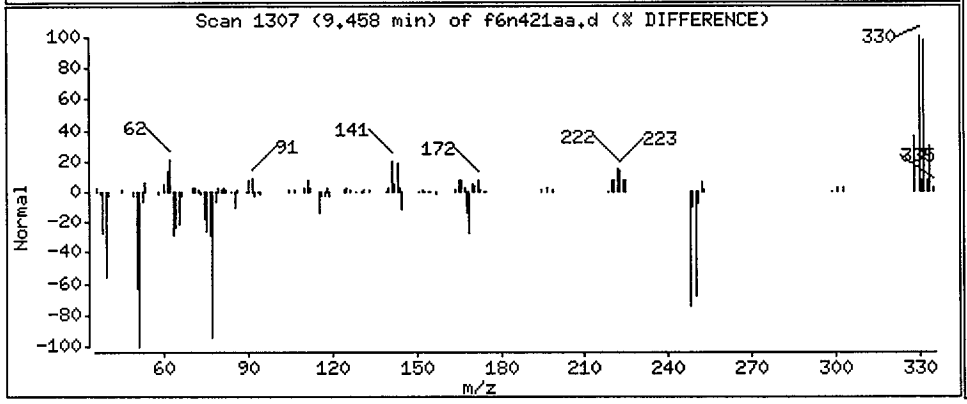
Column phase: ZB-5 | Column diameter: 0.25

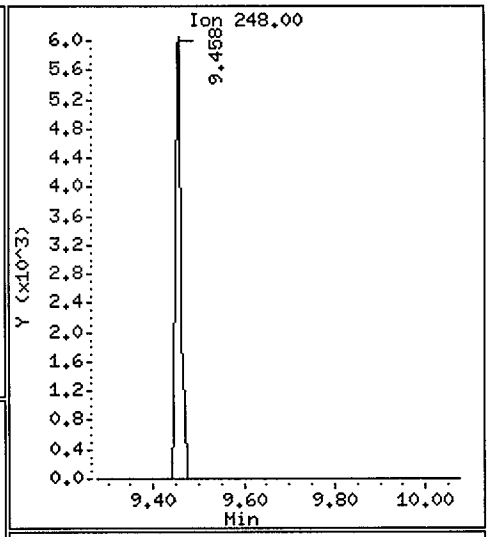
63 4-Bromophenyl phenyl ether | Concentration: 2.05 ug/L

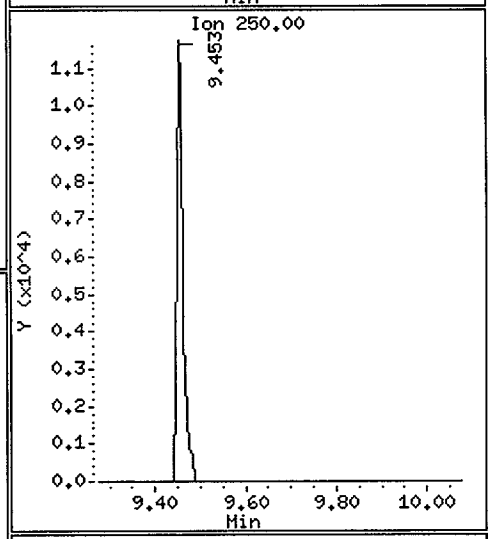


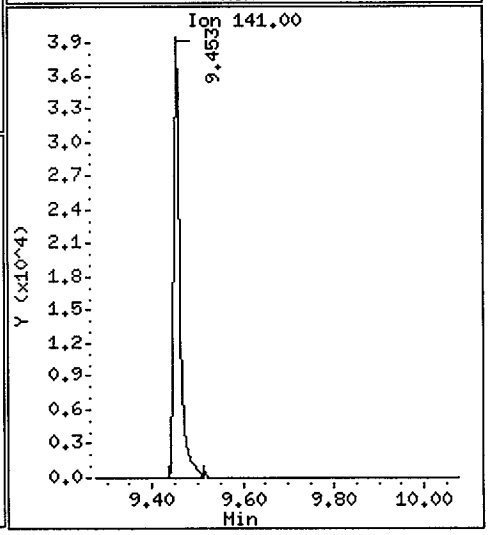












LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: H3L120208 **Work Order #...:** F6N421AC **Matrix.....:** WATER
LCS Lot-Sample#: H3L150000-288
Prep Date.....: 12/15/03 **Analysis Date..:** 12/18/03
Prep Batch #...: 3349288
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Phenol	**105 a**	**(62 - 103)**	**SW846 8270C**
2-Chlorophenol	**98**	**(63 - 103)**	**SW846 8270C**
1,4-Dichlorobenzene	**92**	**(65 - 102)**	**SW846 8270C**
N-Nitrosodi-n-propyl-amine	**99**	**(65 - 108)**	**SW846 8270C**
1,2,4-Trichloro-benzene	**90**	**(67 - 104)**	**SW846 8270C**
4-Chloro-3-methylphenol	**109 a**	**(65 - 108)**	**SW846 8270C**
Acenaphthene	**87**	**(59 - 100)**	**SW846 8270C**
4-Nitrophenol	**106**	**(50 - 122)**	**SW846 8270C**
2,4-Dinitrotoluene	**112**	**(69 - 128)**	**SW846 8270C**
Pentachlorophenol	**94**	**(64 - 114)**	**SW846 8270C**
Pyrene	**79**	**(52 - 119)**	**SW846 8270C**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	74	(29 - 110)
Phenol-d5	93	(41 - 115)
Nitrobenzene-d5	88	(46 - 117)
2-Fluorobiphenyl	91	(44 - 116)
2,4,6-Tribromophenol	98	(31 - 138)
Terphenyl-d14	83	(36 - 134)

NOTE(S):

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

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

LABORATORY CONTROL SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: H3L120208 **Work Order #...:** F6N421AC **Matrix.....:** WATER
LCS Lot-Sample#: H3L150000-288
Prep Date.....: 12/15/03 **Analysis Date..:** 12/18/03
Prep Batch #...: 3349288
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Phenol	**100**	**105 a**	**ug/L**	**105**	**SW846 8270C**
2-Chlorophenol	**100**	**97.6**	**ug/L**	**98**	**SW846 8270C**
1,4-Dichlorobenzene	**100**	**92.1**	**ug/L**	**92**	**SW846 8270C**
N-Nitrosodi-n-propyl-amine	**100**	**98.8**	**ug/L**	**99**	**SW846 8270C**
1,2,4-Trichloro-benzene	**100**	**90.5**	**ug/L**	**90**	**SW846 8270C**
4-Chloro-3-methylphenol	**100**	**109 a**	**ug/L**	**109**	**SW846 8270C**
Acenaphthene	**100**	**86.9**	**ug/L**	**87**	**SW846 8270C**
4-Nitrophenol	**100**	**106**	**ug/L**	**106**	**SW846 8270C**
2,4-Dinitrotoluene	**100**	**112**	**ug/L**	**112**	**SW846 8270C**
Pentachlorophenol	**100**	**94.2**	**ug/L**	**94**	**SW846 8270C**
Pyrene	**100**	**78.8**	**ug/L**	**79**	**SW846 8270C**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	74	(29 - 110)
Phenol-d5	93	(41 - 115)
Nitrobenzene-d5	88	(46 - 117)
2-Fluorobiphenyl	91	(44 - 116)
2,4,6-Tribromophenol	98	(31 - 138)
Terphenyl-d14	83	(36 - 134)

NOTE(S):

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

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

Data File: /var/chem/gcms/md.i/D121803.b/f6n421ac.d
Report Date: 21-Dec-2003 14:14

STL Knoxville

SW-846 Method 8270C

Data file : /var/chem/gcms/md.i/D121803.b/f6n421ac.d
Lab Smp Id: F6N421AC Client Smp ID: INTRA-LAB CHECK
Inj Date : 18-DEC-2003 16:31
Operator : 3386 Inst ID: md.i
Smp Info : F6N421AC,,3,,LCS,
Misc Info : D121803,8270a9,8270.sub
Comment : Semivolatile Organic Compounds by GC/MS
Method : /chem/gcms/md.i/D121803.b/8270a9.m
Meth Date : 19-Dec-2003 12:34 tajh Quant Type: ISTD
Cal Date : 07-NOV-2003 13:02 Cal File: a9dk076.d
Als bottle: 1 QC Sample: METHOD SPIKE
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8270.sub
Target Version: 3.50
Processing Host: qmidhp01

Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Unit Correction factor
Vt	1000.00000	Volume of final extract (uL)
Vo	1000.00000	Volume of sample extracted (mL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/uL)	FINAL (ug/L)
* 1 1,4-Dichlorobenzene-d4	152	4.318	4.318	(1.000)	68445	20.0000	
* 2 Naphthalene-d8	136	5.945	5.945	(1.000)	269885	20.0000	
* 3 Acenaphthene-d10	164	8.589	8.589	(1.000)	158983	20.0000	
* 4 Phenanthrene-d10	188	10.070	10.070	(1.000)	304090	20.0000	
* 5 Chrysene-d12	240	12.173	12.167	(1.000)	354520	20.0000	
* 6 Perylene-d12	264	13.425	13.419	(1.000)	283011	20.0000	
$ 7 2-Fluorophenol	112	3.154	3.154	(0.731)	250616	55.8357	55.8
$ 8 Phenol-d5	99	3.989	3.989	(0.924)	342279	69.5032	69.5
$ 9 Nitrobenzene-d5	82	4.999	4.999	(0.841)	182761	44.2301	44.2
$ 10 2-Fluorobiphenyl	172	7.684	7.684	(0.895)	479770	45.5299	45.5
$ 11 2,4,6-Tribromophenol	330	9.459	9.459	(0.939)	102873	73.5569	73.6
$ 12 Terphenyl-d14	244	11.339	11.339	(0.931)	608522	41.4777	41.5
13 N-Nitrosodimethylamine	74	2.161	2.197	(0.501)	210489	93.4481	93.4
14 Pyridine	79	2.179	2.202	(0.505)	327639	75.7332	75.7

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Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/uL)	FINAL (ug/L)
15 Phenol (ccc)	94	4.000	4.000	(0.926)	487545	105.241	105
16 Aniline	93	4.024	4.024	(0.932)	449461	63.1514	63.2
17 Bis(2-chloroethyl)ether	93	4.077	4.077	(0.944)	348854	91.2177	91.2
18 2-Chlorophenol	128	4.135	4.135	(0.958)	434146	97.6233	97.6
19 1,3-Dichlorobenzene	146	4.276	4.282	(0.990)	459853	90.4337	90.4
20 1,4-Dichlorobenzene (ccc)	146	4.329	4.335	(1.003)	467642	92.1232	92.1
21 Benzyl alcohol	108	4.482	4.482	(1.038)	273378	101.116	101
22 1,2-Dichlorobenzene	146	4.535	4.535	(1.050)	457992	94.2244	94.2
23 2-Methylphenol	108	4.629	4.629	(1.072)	365196	97.5455	97.5
24 2,2'-Oxybis(1-Chloropropane)	45	4.664	4.664	(1.080)	578607	78.8135	78.8
25 4-Methylphenol	108	4.817	4.811	(1.116)	777142	202.214	202(A)
26 3&4 Methylphenol	108	4.817	4.811	(1.116)	777142	202.214	202(A)
27 N-Nitroso-di-n-propylamine###	70	4.835	4.835	(1.120)	249838	98.8018	98.8
28 Hexachloroethane	117	4.911	4.911	(1.137)	166093	94.2863	94.3
29 Nitrobenzene	77	5.023	5.023	(0.845)	358195	92.0236	92.0
30 Isophorone	82	5.328	5.328	(0.896)	720139	92.5181	92.5
31 2-Nitrophenol (ccc)	139	5.452	5.452	(0.917)	250898	106.201	106
32 2,4-Dimethyphenol	107	5.516	5.516	(0.928)	273526	64.5319	64.5
33 Bis(2-chloroethoxy)methane	93	5.651	5.651	(0.951)	442875	88.4561	88.4
34 Benzoic acid	122	5.669	5.669	(0.954)	171578	70.3550	70.4
35 2,4-Dichlorophenol (ccc)	162	5.775	5.775	(0.971)	382497	102.722	103
36 1,2,4-Trichlorobenzene	180	5.892	5.892	(0.991)	392060	90.4969	90.5
37 Naphthalene	128	5.969	5.975	(1.004)	1295750	88.1053	88.1
38 4-Chloroaniline	127	6.086	6.086	(1.024)	367041	52.4596	52.4
39 Hexachlorobutadiene (ccc)	225	6.245	6.245	(1.050)	187541	83.0467	83.0
40 4-Chloro-3-methylphenol (ccc)	107	6.826	6.826	(1.148)	357454	108.841	109
41 2-Methylnaphthalene	142	6.991	6.991	(1.176)	902387	94.4700	94.5
42 Hexachlorocyclopentadiene####	237	7.408	7.408	(0.862)	56410	23.8206	23.8(R)
43 2,4,6-Trichlorophenol (ccc)	196	7.555	7.555	(0.880)	266802	100.121	100
44 2,4,5-Trichlorphenol	196	7.614	7.614	(0.886)	312492	101.051	101
45 2-Chloronaphthalene	162	7.808	7.808	(0.909)	884313	92.1886	92.2
46 2-Nitroaniline	65	8.031	8.031	(0.935)	231809	87.4499	87.4
47 Acenaphthylene	152	8.395	8.389	(0.977)	1449314	86.8698	86.9
48 Dimethyl phthalate	163	8.348	8.342	(0.972)	1012266	96.1247	96.1
49 2,6-Dinitrotoluene	165	8.419	8.419	(0.980)	255723	112.569	112
50 3-Nitroaniline	138	8.583	8.583	(0.999)	280237	82.0699	82.1
51 Acenaphthene (ccc)	153	8.624	8.624	(1.004)	923615	86.9083	86.9
52 2,4-Dinitrophenol ##spcc##	184	8.707	8.707	(1.014)	118113	98.1442	98.1
53 Dibenzofuran	168	8.818	8.812	(1.027)	1283936	96.1780	96.2
54 4-Nitrophenol ##spcc##	109	8.824	8.824	(1.027)	120184	105.732	106
55 2,4-Dinitrotoluene	165	8.883	8.883	(1.034)	348343	112.487	112
56 Fluorene	166	9.194	9.188	(1.070)	1056083	91.0226	91.0
57 4-Chlorophenyl phenyl ether	204	9.206	9.206	(1.072)	483476	97.0186	97.0
58 Diethyl phthalate	149	9.171	9.171	(1.068)	1057022	100.749	101
59 4-Nitroaniline	138	9.271	9.265	(1.079)	328058	88.6607	88.7
60 4,6-Dinitro-2-methylphenol	198	9.312	9.312	(0.925)	200388	99.8207	99.8
61 N-Ndpa / diphenylamine (ccc)	169	9.341	9.335	(0.928)	781347	99.0698	99.1

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Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/uL)	FINAL (ug/L)
62 1,2-Diphenylhydrazine/azobnz	77	9.365	9.365	(0.930)	840988	77.7596	77.8
63 4-Bromophenyl phenyl ether	248	9.676	9.676	(0.961)	281673	103.722	104
64 Hexachlorobenzene	284	9.805	9.805	(0.974)	299120	92.9975	93.0
65 Pentachlorophenol (ccc)	266	9.970	9.970	(0.990)	188711	94.1759	94.2
66 Phenanthrene	178	10.087	10.087	(1.002)	1632135	86.2951	86.3
67 Anthracene	178	10.128	10.129	(1.006)	1663990	88.1348	88.1
68 Carbazole	167	10.275	10.275	(1.020)	1638910	86.1240	86.1
69 Di-n-butyl phthalate	149	10.599	10.599	(1.052)	1905889	102.144	102
70 Fluoranthene (ccc)	202	11.051	11.051	(1.097)	1876093	94.3440	94.3
71 Pyrene	202	11.221	11.221	(0.922)	1907840	78.8060	78.8
72 Butyl benzyl phthalate	149	11.709	11.709	(0.962)	939994	88.7538	88.8
73 Benzo(a)Anthracene	228	12.156	12.156	(0.999)	1837640	88.8277	88.8
74 3,3'-Dichlorobenzidine	252	12.132	12.132	(0.997)	471236	63.2739	63.3
75 Chrysene	228	12.197	12.191	(1.002)	1716703	84.8320	84.8
76 Bis(2-ethylhexyl) phthalate	149	12.191	12.185	(1.001)	1169010	95.1174	95.1
77 Di-n-octyl phthalate (ccc)	149	12.731	12.731	(0.948)	2250798	90.1260	90.1
78 Benzo(b)fluoranthene	252	13.096	13.090	(0.975)	1778229	75.9996	76.0
79 Benzo(k)fluoranthene	252	13.113	13.113	(0.977)	2551016	91.2354	91.2
80 Benzo(a)pyrene (ccc)	252	13.378	13.372	(0.996)	1886290	81.2396	81.2
81 Indeno(1,2,3-cd)pyrene	276	14.512	14.506	(1.081)	2179470	94.0193	94.0
82 Dibenz(a,h)anthracene	278	14.518	14.506	(1.081)	1784154	98.0834	98.1
83 Benzo(g,h,i)perylene	276	14.817	14.811	(1.104)	2005286	98.9164	98.9

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
R - Spike/Surrogate failed recovery limits.

Data File: /var/chem/gcms/md.i/D121803.b/f6n421ac.d
Report Date: 21-Dec-2003 14:14

STL Knoxville

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: md.i
Lab File ID: f6n421ac.d
Lab Smp Id: F6N421AC
Analysis Type: SV
Quant Type: ISTD
Operator: 3386
Method File: /chem/gcms/md.i/D121803.b/8270a9.m
Misc Info: D121803,8270a9,8270.sub

Calibration Date: 18-DEC-2003
Calibration Time: 10:33
Client Smp ID: INTRA-LAB CHECK
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	87290	43645	174580	68445	-21.59
2 Naphthalene-d8	333200	166600	666400	269885	-19.00
3 Acenaphthene-d10	191379	95690	382758	158983	-16.93
4 Phenanthrene-d10	352152	176076	704304	304090	-13.65
5 Chrysene-d12	404756	202378	809512	354520	-12.41
6 Perylene-d12	323296	161648	646592	283011	-12.46

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	4.32	3.82	4.82	4.32	0.00
2 Naphthalene-d8	5.95	5.45	6.45	5.95	0.00
3 Acenaphthene-d10	8.59	8.09	9.09	8.59	0.00
4 Phenanthrene-d10	10.07	9.57	10.57	10.07	0.00
5 Chrysene-d12	12.17	11.67	12.67	12.17	0.05
6 Perylene-d12	13.42	12.92	13.92	13.42	0.04

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

Data File: /var/chem/gcms/md.i/D121803.b/f6n421ac.d
Report Date: 21-Dec-2003 14:14

STL Knoxville

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: F6N421AC
Level: LOW
Data Type: MS DATA
SpikeList File: allspike.spk
Sublist File: 8270.sub
Method File: /chem/gcms/md.i/D121803.b/8270a9.m
Misc Info: D121803,8270a9,8270.sub

Client SDG: H3L150000
Fraction: SV
Client Smp ID: INTRA-LAB CHECK
Operator: 3386
SampleType: METHOD SPIKE
Quant Type: ISTD

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
13 N-Nitrosodimethyla	100	93.4	93.45	35-150
14 Pyridine	100	75.7	75.73	35-150
15 Phenol (ccc)	100	105	105.24	35-150
16 Aniline	100	63.2	63.15	35-150
17 Bis(2-chloroethyl)	100	91.2	91.22	35-150
18 2-Chlorophenol	100	97.6	97.62	35-150
19 1,3-Dichlorobenzen	100	90.4	90.43	35-150
20 1,4-Dichlorobenzen	100	92.1	92.12	35-150
21 Benzyl alcohol	100	101	101.12	35-150
22 1,2-Dichlorobenzen	100	94.2	94.22	35-150
23 2-Methylphenol	100	97.5	97.55	35-150
24 2,2'-Oxybis(1-Chlo	100	78.8	78.81	35-150
25 4-Methylphenol	200	202	101.11	35-150
26 3&4 Methylphenol	200	202	101.11	35-150
27 N-Nitroso-di-n-pro	100	98.8	98.80	35-150
28 Hexachloroethane	100	94.3	94.29	35-150
29 Nitrobenzene	100	92.0	92.02	35-150
30 Isophorone	100	92.5	92.52	35-150
31 2-Nitrophenol (ccc	100	106	106.20	35-150
32 2,4-Dimethyphenol	100	64.5	64.53	35-150
33 Bis(2-chloroethoxy	100	88.4	88.46	35-150
34 Benzoic acid	100	70.4	70.36	35-150
35 2,4-Dichlorophenol	100	103	102.72	35-150
36 1,2,4-Trichloroben	100	90.5	90.50	35-150
37 Naphthalene	100	88.1	88.11	60-100
38 4-Chloroaniline	100	52.4	52.46	35-150
39 Hexachlorobutadien	100	83.0	83.05	35-150
40 4-Chloro-3-methylp	100	109	108.84	35-150
41 2-Methylnaphthalen	100	94.5	94.47	35-150
42 Hexachlorocyclopen	100	23.8	23.82*	35-150
43 2,4,6-Trichlorophe	100	100	100.12	35-150
44 2,4,5-Trichlorphen	100	101	101.05	35-150
45 2-Chloronaphthalen	100	92.2	92.19	35-150

Data File: /var/chem/gcms/md.i/D121803.b/f6n421ac.d
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SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
46 2-Nitroaniline	100	87.4	87.45	35-150
47 Acenaphthylene	100	86.9	86.87	60-106
48 Dimethyl phthalate	100	96.1	96.12	35-150
49 2,6-Dinitrotoluene	100	112	112.57	35-150
50 3-Nitroaniline	100	82.1	82.07	35-150
51 Acenaphthene (ccc)	100	86.9	86.91	63-105
52 2,4-Dinitrophenol	100	98.1	98.14	35-150
53 Dibenzofuran	100	96.2	96.18	35-150
54 4-Nitrophenol ##sp	100	106	105.73	35-150
55 2,4-Dinitrotoluene	100	112	112.49	35-150
56 Fluorene	100	91.0	91.02	60-113
57 4-Chlorophenyl phe	100	97.0	97.02	35-150
58 Diethyl phthalate	100	101	100.75	35-150
59 4-Nitroaniline	100	88.7	88.66	35-150
60 4,6-Dinitro-2-meth	100	99.8	99.82	35-150
61 N-Ndpa / diphenyla	100	99.1	99.07	35-150
62 1,2-Diphenylhydraz	100	77.8	77.76	35-150
63 4-Bromophenyl phen	100	104	103.72	35-150
64 Hexachlorobenzene	100	93.0	93.00	35-150
65 Pentachlorophenol	100	94.2	94.18	35-150
66 Phenanthrene	100	86.3	86.30	65-108
67 Anthracene	100	88.1	88.13	67-114
68 Carbazole	100	86.1	86.12	35-150
69 Di-n-butyl phthala	100	102	102.14	35-150
70 Fluoranthene (ccc)	100	94.3	94.34	65-115
71 Pyrene	100	78.8	78.81	70-112
72 Butyl benzyl phtha	100	88.8	88.75	35-150
73 Benzo(a)Anthracene	100	88.8	88.83	70-114
74 3,3'-Dichlorobenzi	100	63.3	63.27	35-150
75 Chrysene	100	84.8	84.83	68-111
76 Bis(2-ethylhexyl)	100	95.1	95.12	35-150
77 Di-n-octyl phthala	100	90.1	90.13	35-150
78 Benzo(b)fluoranthe	100	76.0	76.00	60-120
79 Benzo(k)fluoranthe	100	91.2	91.24	61-119
80 Benzo(a)pyrene (cc	100	81.2	81.24	67-111
81 Indeno(1,2,3-cd)py	100	94.0	94.02	67-120
82 Dibenz(a,h)anthrac	100	98.1	98.08	71-120
83 Benzo(g,h,i)peryle	100	98.9	98.92	63-120

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 7 2-Fluorophenol	75.0	55.8	74.45	29-110
$ 8 Phenol-d5	75.0	69.5	92.67	41-115

Data File: /var/chem/gcms/md.i/D121803.b/f6n421ac.d
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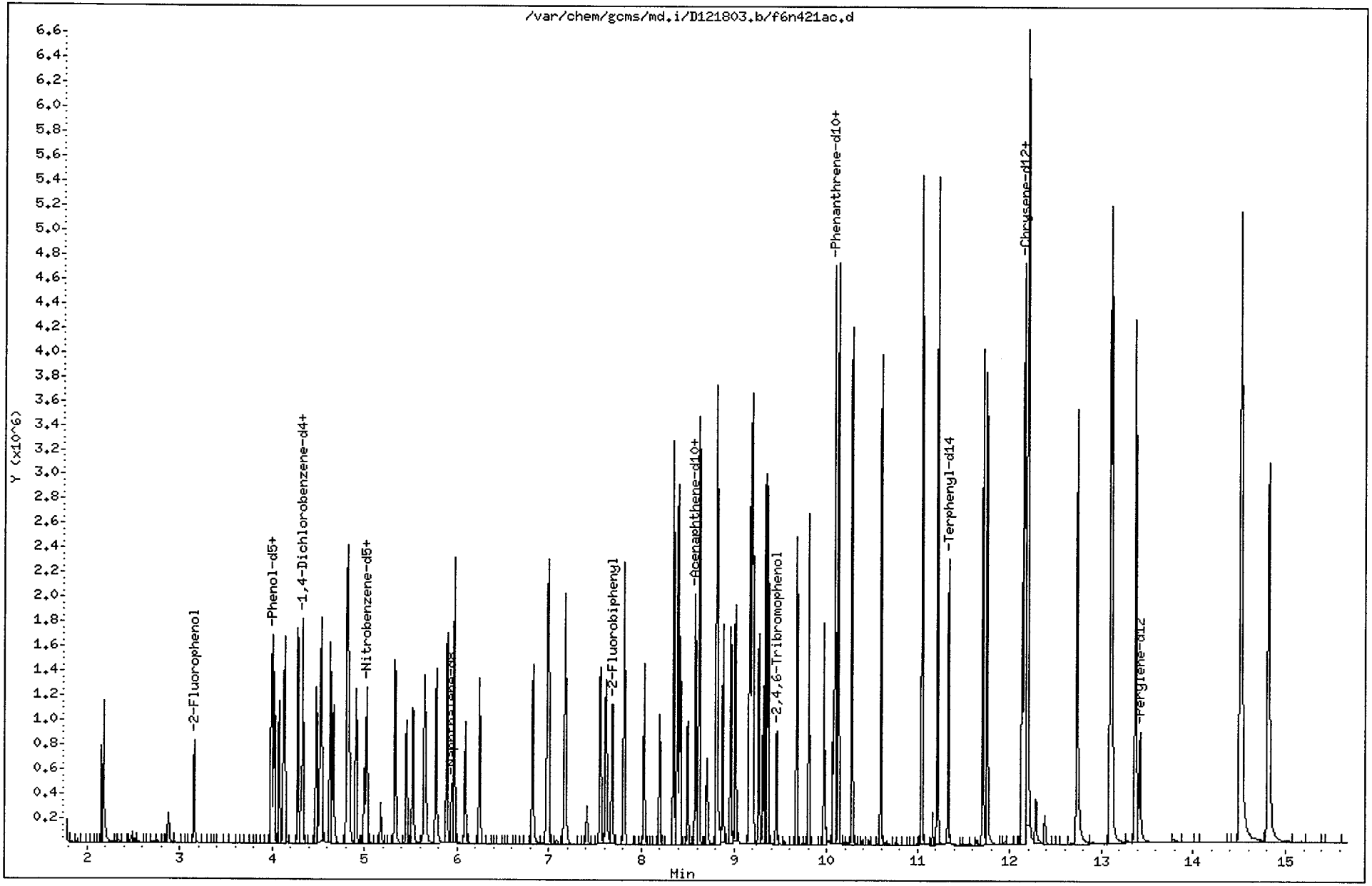
SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 9 Nitrobenzene-d5	50.0	44.2	88.46	46-117
$ 10 2-Fluorobiphenyl	50.0	45.5	91.06	44-116
$ 11 2,4,6-Tribromophen	75.0	73.6	98.08	31-138
$ 12 Terphenyl-d14	50.0	41.5	82.96	0-132

Data File: /var/chem/gcms/md.i/D121803.b/f6n421ac.d
Date : 18-DEC-2003 16:31
Client ID: INTRA-LAB CHECK
Sample Info: F6N421AC,,3,,LCS,
Volume Injected (uL): 1.0
Column phase: ZB-5

Instrument: md.i
Operator: 3386
Column diameter: 0.25



MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: H3L120208 **Work Order #...:** F6JX21CJ-MS **Matrix.....:** WATER
MS Lot-Sample #: H3L120208-002 F6JX21CK-MSD
Date Sampled...: 12/11/03 **Date Received..:** 12/12/03
Prep Date.....: 12/15/03 **Analysis Date..:** 12/18/03
Prep Batch #...: 3349288
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Phenol	113 a	(58 - 103)			SW846 8270C
	112 a	(58 - 103)	0.88	(0-41)	SW846 8270C
2-Chlorophenol	98	(54 - 103)			SW846 8270C
	101	(54 - 103)	3.4	(0-43)	SW846 8270C
1,4-Dichlorobenzene	91	(56 - 102)			SW846 8270C
	93	(56 - 102)	2.1	(0-37)	SW846 8270C
N-Nitrosodi-n-propyl-amine	102	(61 - 108)			SW846 8270C
	101	(61 - 108)	0.98	(0-36)	SW846 8270C
1,2,4-Trichloro-benzene	91	(58 - 104)			SW846 8270C
	91	(58 - 104)	0.11	(0-36)	SW846 8270C
4-Chloro-3-methylphenol	115 a	(65 - 108)			SW846 8270C
	115 a	(65 - 108)	0.0	(0-29)	SW846 8270C
Acenaphthene	88	(59 - 100)			SW846 8270C
	86	(59 - 100)	2.2	(0-26)	SW846 8270C
4-Nitrophenol	115	(50 - 122)			SW846 8270C
	110	(50 - 122)	4.4	(0-50)	SW846 8270C
2,4-Dinitrotoluene	114	(67 - 128)			SW846 8270C
	113	(67 - 128)	0.88	(0-25)	SW846 8270C
Pentachlorophenol	102	(64 - 118)			SW846 8270C
	95	(64 - 118)	7.0	(0-37)	SW846 8270C
Pyrene	85	(51 - 119)			SW846 8270C
	79	(51 - 119)	7.9	(0-27)	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	73	(29 - 110)
	84	(29 - 110)
Phenol-d5	96	(41 - 115)
	97	(41 - 115)
Nitrobenzene-d5	92	(46 - 117)
	93	(46 - 117)
2-Fluorobiphenyl	90	(44 - 116)
	87	(44 - 116)
2,4,6-Tribromophenol	107	(31 - 138)
	101	(31 - 138)

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

GC/MS Semivolatiles

Client Lot #...: H3L120208 **Work Order #...:** F6JX21CJ-MS **Matrix.....:** WATER
MS Lot-Sample #: H3L120208-002 F6JX21CK-MSD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Terphenyl-d14	91	(36 - 134)
	82	(36 - 134)

NOTE(S):

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

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: H3L120208 **Work Order #...:** F6JX21CJ-MS **Matrix.....:** WATER
MS Lot-Sample #: H3L120208-002 F6JX21CK-MSD
Date Sampled...: 12/11/03 **Date Received..:** 12/12/03
Prep Date.....: 12/15/03 **Analysis Date..:** 12/18/03
Prep Batch #...: 3349288
Dilution Factor: 1

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Phenol	ND	100	113	ug/L	113 a		SW846 8270C
	ND	100	112	ug/L	112 a	0.88	SW846 8270C
2-Chlorophenol	ND	100	97.6	ug/L	98		SW846 8270C
	ND	100	101	ug/L	101	3.4	SW846 8270C
1,4-Dichlorobenzene	ND	100	91.3	ug/L	91		SW846 8270C
	ND	100	93.2	ug/L	93	2.1	SW846 8270C
N-Nitrosodi-n-propyl-amine	ND	100	102	ug/L	102		SW846 8270C
	ND	100	101	ug/L	101	0.98	SW846 8270C
1,2,4-Trichloro-benzene	ND	100	90.8	ug/L	91		SW846 8270C
	ND	100	90.9	ug/L	91	0.11	SW846 8270C
4-Chloro-3-methylphenol	ND	100	115	ug/L	115 a		SW846 8270C
	ND	100	115	ug/L	115 a	0.0	SW846 8270C
Acenaphthene	ND	100	88.3	ug/L	88		SW846 8270C
	ND	100	86.4	ug/L	86	2.2	SW846 8270C
4-Nitrophenol	ND	100	115	ug/L	115		SW846 8270C
	ND	100	110	ug/L	110	4.4	SW846 8270C
2,4-Dinitrotoluene	ND	100	114	ug/L	114		SW846 8270C
	ND	100	113	ug/L	113	0.88	SW846 8270C
Pentachlorophenol	ND	100	102	ug/L	102		SW846 8270C
	ND	100	95.1	ug/L	95	7.0	SW846 8270C
Pyrene	ND	100	85.4	ug/L	85		SW846 8270C
	ND	100	78.9	ug/L	79	7.9	SW846 8270C

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
2-Fluorophenol	73	(29 - 110)
	84	(29 - 110)
Phenol-d5	96	(41 - 115)
	97	(41 - 115)
Nitrobenzene-d5	92	(46 - 117)
	93	(46 - 117)
2-Fluorobiphenyl	90	(44 - 116)
	87	(44 - 116)
2,4,6-Tribromophenol	107	(31 - 138)
	101	(31 - 138)

(Continued on next page)

MATRIX SPIKE SAMPLE DATA REPORT

GC/MS Semivolatiles

Client Lot #...: H3L120208 **Work Order #...:** F6JX21CJ-MS **Matrix.....:** WATER
MS Lot-Sample #: H3L120208-002 F6JX21CK-MSD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
Terphenyl-d14	91	(36 - 134)
	82	(36 - 134)

NOTE(S):

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

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

Data File: /var/chem/gcms/md.i/D121803.b/f6jx21cj.d
Report Date: 19-Dec-2003 12:35

STL Knoxville

SW-846 Method 8270C

Data file : /var/chem/gcms/md.i/D121803.b/f6jx21cj.d
Lab Smp Id: F6JX21CJ Client Smp ID: DD3004
Inj Date : 18-DEC-2003 17:42
Operator : 3386 Inst ID: md.i
Smp Info : F6JX21CJ,,3,,MS,
Misc Info : D121803,8270a9,8270.sub
Comment : Semivolatile Organic Compounds by GC/MS
Method : /var/chem/gcms/md.i/D121803.b/8270a9.m
Meth Date : 19-Dec-2003 12:34 tajh Quant Type: ISTD
Cal Date : 07-NOV-2003 13:02 Cal File: a9dk076.d
Als bottle: 1 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8270.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Unit Correction factor
Vt	1000.00000	Volume of final extract (uL)
Vo	1000.00000	Volume of sample extracted (mL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/uL)	FINAL (ug/L)
* 1 1,4-Dichlorobenzene-d4	152	4.317	4.318	(1.000)	72240	20.0000	
* 2 Naphthalene-d8	136	5.945	5.945	(1.000)	291440	20.0000	
* 3 Acenaphthene-d10	164	8.589	8.589	(1.000)	176057	20.0000	
* 4 Phenanthrene-d10	188	10.070	10.070	(1.000)	334829	20.0000	
* 5 Chrysene-d12	240	12.173	12.167	(1.000)	353870	20.0000	
* 6 Perylene-d12	264	13.425	13.419	(1.000)	277682	20.0000	
$ 7 2-Fluorophenol	112	3.154	3.154	(0.731)	261253	55.1473	55.1
$ 8 Phenol-d5	99	3.988	3.989	(0.924)	374460	72.0425	72.0
$ 9 Nitrobenzene-d5	82	4.999	4.999	(0.841)	205408	46.0344	46.0
$ 10 2-Fluorobiphenyl	172	7.684	7.684	(0.895)	527503	45.2049	45.2
$ 11 2,4,6-Tribromophenol	330	9.459	9.459	(0.939)	123634	80.2862	80.3
$ 12 Terphenyl-d14	244	11.339	11.339	(0.931)	669482	45.7165	45.7
13 N-Nitrosodimethylamine	74	2.161	2.197	(0.501)	215337	90.5776	90.6
14 Pyridine	79	2.179	2.202	(0.505)	333522	73.0424	73.0
15 Phenol (ccc)	94	4.000	4.000	(0.926)	553267	113.152	113

Data File: /var/chem/gcms/md.i/D121803.b/f6jx21cj.d
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Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/uL)	FINAL (ug/L)
16 Aniline	93	4.024	4.024	(0.932)	486362	64.7455	64.7
17 Bis(2-chloroethyl)ether	93	4.077	4.077	(0.944)	367296	90.9936	91.0
18 2-Chlorophenol	128	4.135	4.135	(0.958)	458063	97.5893	97.6
19 1,3-Dichlorobenzene	146	4.276	4.282	(0.990)	471812	87.9102	87.9
20 1,4-Dichlorobenzene (ccc)	146	4.329	4.335	(1.003)	489137	91.2947	91.3
21 Benzyl alcohol	108	4.482	4.482	(1.038)	293087	102.710	103
22 1,2-Dichlorobenzene	146	4.535	4.535	(1.050)	474459	92.4834	92.5
23 2-Methylphenol	108	4.629	4.629	(1.072)	404559	102.382	102
24 2,2'-Oxybis(1-Chloropropane)	45	4.664	4.664	(1.080)	623942	80.5232	80.5
25 4-Methylphenol	108	4.817	4.811	(1.116)	856550	211.165	211(A)
26 3&4 Methylphenol	108	4.817	4.811	(1.116)	856550	211.165	211(A)
27 N-Nitroso-di-n-propylamine###	70	4.834	4.835	(1.120)	273310	102.405	102
28 Hexachloroethane	117	4.911	4.911	(1.137)	171212	92.0857	92.1
29 Nitrobenzene	77	5.022	5.023	(0.845)	391466	93.1329	93.1
30 Isophorone	82	5.328	5.328	(0.896)	783886	93.2595	93.2
31 2-Nitrophenol (ccc)	139	5.451	5.452	(0.917)	284498	111.517	112
32 2,4-Dimethyphenol	107	5.522	5.516	(0.929)	363183	79.3473	79.3
33 Bis(2-chloroethoxy)methane	93	5.651	5.651	(0.951)	481060	88.9765	89.0
34 Benzoic acid	122	5.686	5.669	(0.956)	266970	96.9527	97.0
35 2,4-Dichlorophenol (ccc)	162	5.775	5.775	(0.971)	420774	104.644	105
36 1,2,4-Trichlorobenzene	180	5.892	5.892	(0.991)	425038	90.8530	90.8
37 Naphthalene	128	5.968	5.975	(1.004)	1402864	88.3336	88.3
38 4-Chloroaniline	127	6.086	6.086	(1.024)	393662	52.1032	52.1
39 Hexachlorobutadiene (ccc)	225	6.245	6.245	(1.050)	200300	82.1366	82.1
40 4-Chloro-3-methylphenol (ccc)	107	6.826	6.826	(1.148)	408713	115.244	115
41 2-Methylnaphthalene	142	6.991	6.991	(1.176)	979476	94.9564	95.0
42 Hexachlorocyclopentadiene####	237	7.408	7.408	(0.862)	55584	21.1956	21.2(R)
43 2,4,6-Trichlorophenol (ccc)	196	7.555	7.555	(0.880)	302068	102.362	102
44 2,4,5-Trichlorphenol	196	7.614	7.614	(0.886)	347743	101.545	102
45 2-Chloronaphthalene	162	7.808	7.808	(0.909)	983868	92.6201	92.6
46 2-Nitroaniline	65	8.031	8.031	(0.935)	267146	91.0073	91.0
47 Acenaphthylene	152	8.395	8.389	(0.977)	1608501	87.0613	87.1
48 Dimethyl phthalate	163	8.348	8.342	(0.972)	1116504	95.7409	95.7
49 2,6-Dinitrotoluene	165	8.419	8.419	(0.980)	288556	114.704	115
50 3-Nitroaniline	138	8.583	8.583	(0.999)	301471	79.7264	79.7
51 Acenaphthene (ccc)	153	8.624	8.624	(1.004)	1039538	88.3299	88.3
52 2,4-Dinitrophenol ##spcc##	184	8.712	8.707	(1.014)	147535	108.381	108
53 Dibenzofuran	168	8.818	8.812	(1.027)	1425046	96.3958	96.4
54 4-Nitrophenol ##spcc##	109	8.824	8.824	(1.027)	144996	115.190	115
55 2,4-Dinitrotoluene	165	8.889	8.883	(1.035)	391531	114.172	114
56 Fluorene	166	9.194	9.188	(1.070)	1183660	92.1246	92.1
57 4-Chlorophenyl phenyl ether	204	9.206	9.206	(1.072)	536735	97.2607	97.3
58 Diethyl phthalate	149	9.171	9.171	(1.068)	1170426	100.739	101
59 4-Nitroaniline	138	9.271	9.265	(1.079)	375601	91.6653	91.7
60 4,6-Dinitro-2-methylphenol	198	9.318	9.312	(0.925)	240540	107.912	108
61 N-Ndpa / diphenylamine (ccc)	169	9.341	9.335	(0.928)	904763	104.186	104
62 1,2-Diphenylhydrazine/azobnz	77	9.365	9.365	(0.930)	936061	78.6044	78.6

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Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/uL)	FINAL (ug/L)
63 4-Bromophenyl phenyl ether	248	9.676	9.676	(0.961)	315811	105.617	106
64 Hexachlorobenzene	284	9.805	9.805	(0.974)	333480	94.1617	94.2
65 Pentachlorophenol (ccc)	266	9.970	9.970	(0.990)	224499	101.750	102
66 Phenanthrene	178	10.087	10.087	(1.002)	1777753	85.3650	85.4
67 Anthracene	178	10.128	10.129	(1.006)	1841461	88.5804	88.6
68 Carbazole	167	10.275	10.275	(1.020)	1789888	85.4227	85.4
69 Di-n-butyl phthalate	149	10.598	10.599	(1.052)	1998005	97.2499	97.2
70 Fluoranthene (ccc)	202	11.057	11.051	(1.098)	2038405	93.0955	93.1
71 Pyrene	202	11.221	11.221	(0.922)	2064747	85.4438	85.4
72 Butyl benzyl phthalate	149	11.709	11.709	(0.962)	1001673	94.7511	94.8
73 Benzo(a)Anthracene	228	12.155	12.156	(0.999)	1951079	94.4842	94.5
74 3,3'-Dichlorobenzidine	252	12.132	12.132	(0.997)	617975	83.1293	83.1
75 Chrysene	228	12.197	12.191	(1.002)	1800427	89.1326	89.1
76 Bis(2-ethylhexyl) phthalate	149	12.185	12.185	(1.001)	1227467	100.057	100
77 Di-n-octyl phthalate (ccc)	149	12.731	12.731	(0.948)	2373804	96.8753	96.9
78 Benzo(b)fluoranthene	252	13.096	13.090	(0.975)	1835311	80.0016	80.0
79 Benzo(k)fluoranthene	252	13.113	13.113	(0.977)	2719916	99.1426	99.1
85 Benzo(e)pyrene	252	13.378	13.331	(0.996)	1977840	94.7221	~~94.7~~
80 Benzo(a)pyrene (ccc)	252	13.378	13.372	(0.996)	1976791	86.7710	86.8
81 Indeno(1,2,3-cd)pyrene	276	14.512	14.506	(1.081)	2207626	97.0614	97.1
82 Dibenz(a,h)anthracene	278	14.517	14.506	(1.081)	1811822	101.510	102
83 Benzo(g,h,i)perylene	276	14.817	14.811	(1.104)	2014244	101.265	101

KM 12-19-03

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
R - Spike/Surrogate failed recovery limits.

Data File: /var/chem/gcms/md.i/D121803.b/f6jx21cj.d
Report Date: 19-Dec-2003 12:35

STL Knoxville

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: md.i
Lab File ID: f6jx21cj.d
Lab Smp Id: F6JX21CJ
Analysis Type: SV
Quant Type: ISTD
Operator: 3386
Method File: /var/chem/gcms/md.i/D121803.b/8270a9.m
Misc Info: D121803,8270a9,8270.sub

Calibration Date: 18-DEC-2003
Calibration Time: 10:33
Client Smp ID: DD3004
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	87290	43645	174580	72240	-17.24
2 Naphthalene-d8	333200	166600	666400	291440	-12.53
3 Acenaphthene-d10	191379	95690	382758	176057	-8.01
4 Phenanthrene-d10	352152	176076	704304	334829	-4.92
5 Chrysene-d12	404756	202378	809512	353870	-12.57
6 Perylene-d12	323296	161648	646592	277682	-14.11

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	4.32	3.82	4.82	4.32	0.00
2 Naphthalene-d8	5.95	5.45	6.45	5.94	0.00
3 Acenaphthene-d10	8.59	8.09	9.09	8.59	0.00
4 Phenanthrene-d10	10.07	9.57	10.57	10.07	0.00
5 Chrysene-d12	12.17	11.67	12.67	12.17	0.05
6 Perylene-d12	13.42	12.92	13.92	13.42	0.04

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

Data File: /var/chem/gcms/md.i/D121803.b/f6jx21cj.d
Report Date: 19-Dec-2003 12:35

STL Knoxville

RECOVERY REPORT

Client Name: SHAW E & I INC
Sample Matrix: LIQUID
Lab Smp Id: F6JX21CJ
Level: LOW
Data Type: MS DATA
SpikeList File: allspike.spk
Sublist File: 8270.sub
Method File: /var/chem/gcms/md.i/D121803.b/8270a9.m
Misc Info: D121803,8270a9,8270.sub

Client SDG: PB045
Fraction: SV
Client Smp ID: DD3004
Operator: 3386
SampleType: MS
Quant Type: ISTD

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
13 N-Nitrosodimethyla	100	90.6	90.58	35-150
14 Pyridine	100	73.0	73.04	35-150
15 Phenol (ccc)	100	113	113.15	35-150
16 Aniline	100	64.7	64.75	35-150
17 Bis(2-chloroethyl)	100	91.0	90.99	35-150
18 2-Chlorophenol	100	97.6	97.59	35-150
19 1,3-Dichlorobenzen	100	87.9	87.91	35-150
20 1,4-Dichlorobenzen	100	91.3	91.29	35-150
21 Benzyl alcohol	100	103	102.71	35-150
22 1,2-Dichlorobenzen	100	92.5	92.48	35-150
23 2-Methylphenol	100	102	102.38	35-150
24 2,2'-Oxybis(1-Chlo	100	80.5	80.52	35-150
25 4-Methylphenol	200	211	105.58	35-150
26 3&4 Methylphenol	200	211	105.58	35-150
27 N-Nitroso-di-n-pro	100	102	102.41	35-150
28 Hexachloroethane	100	92.1	92.09	35-150
29 Nitrobenzene	100	93.1	93.13	35-150
30 Isophorone	100	93.2	93.26	35-150
31 2-Nitrophenol (ccc	100	112	111.52	35-150
32 2,4-Dimethyphenol	100	79.3	79.35	35-150
33 Bis(2-chloroethoxy	100	89.0	88.98	35-150
34 Benzoic acid	100	97.0	96.95	35-150
35 2,4-Dichlorophenol	100	105	104.64	35-150
36 1,2,4-Trichloroben	100	90.8	90.85	35-150
37 Naphthalene	100	88.3	88.33	60-100
38 4-Chloroaniline	100	52.1	52.10	35-150
39 Hexachlorobutadien	100	82.1	82.14	35-150
40 4-Chloro-3-methylp	100	115	115.24	35-150
41 2-Methylnaphthalen	100	95.0	94.96	35-150
42 Hexachlorocyclopen	100	21.2	21.20*	35-150
43 2,4,6-Trichlorophe	100	102	102.36	35-150
44 2,4,5-Trichlorphen	100	102	101.55	35-150
45 2-Chloronaphthalen	100	92.6	92.62	35-150

Data File: /var/chem/gcms/md.i/D121803.b/f6jx21cj.d
Report Date: 19-Dec-2003 12:35

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
46 2-Nitroaniline	100	91.0	91.01	35-150
47 Acenaphthylene	100	87.1	87.06	60-106
48 Dimethyl phthalate	100	95.7	95.74	35-150
49 2,6-Dinitrotoluene	100	115	114.70	35-150
50 3-Nitroaniline	100	79.7	79.73	35-150
51 Acenaphthene (ccc)	100	88.3	88.33	63-105
52 2,4-Dinitrophenol	100	108	108.38	35-150
53 Dibenzofuran	100	96.4	96.40	35-150
54 4-Nitrophenol ##sp	100	115	115.19	35-150
55 2,4-Dinitrotoluene	100	114	114.17	35-150
56 Fluorene	100	92.1	92.12	60-113
57 4-Chlorophenyl phe	100	97.3	97.26	35-150
58 Diethyl phthalate	100	101	100.74	35-150
59 4-Nitroaniline	100	91.7	91.67	35-150
60 4,6-Dinitro-2-meth	100	108	107.91	35-150
61 N-Ndpa / diphenyla	100	104	104.19	35-150
62 1,2-Diphenylhydraz	100	78.6	78.60	35-150
63 4-Bromophenyl phen	100	106	105.62	35-150
64 Hexachlorobenzene	100	94.2	94.16	35-150
65 Pentachlorophenol	100	102	101.75	35-150
66 Phenanthrene	100	85.4	85.37	65-108
67 Anthracene	100	88.6	88.58	67-114
68 Carbazole	100	85.4	85.42	35-150
69 Di-n-butyl phthala	100	97.2	97.25	35-150
70 Fluoranthene (ccc)	100	93.1	93.10	65-115
71 Pyrene	100	85.4	85.44	70-112
72 Butyl benzyl phtha	100	94.8	94.75	35-150
73 Benzo(a)Anthracene	100	94.5	94.48	70-114
74 3,3'-Dichlorobenzi	100	83.1	83.13	35-150
75 Chrysene	100	89.1	89.13	68-111
76 Bis(2-ethylhexyl)	100	100	100.06	35-150
77 Di-n-octyl phthala	100	96.9	96.88	35-150
78 Benzo(b)fluoranthe	100	80.0	80.00	60-120
79 Benzo(k)fluoranthe	100	99.1	99.14	61-119
80 Benzo(a)pyrene (cc	100	86.8	86.77	67-111
81 Indeno(1,2,3-cd)py	100	97.1	97.06	67-120
82 Dibenz(a,h)anthrac	100	102	101.51	71-120
83 Benzo(g,h,i)peryle	100	101	101.26	63-120

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 7 2-Fluorophenol	75.0	55.1	73.53	29-110
$ 8 Phenol-d5	75.0	72.0	96.06	41-115

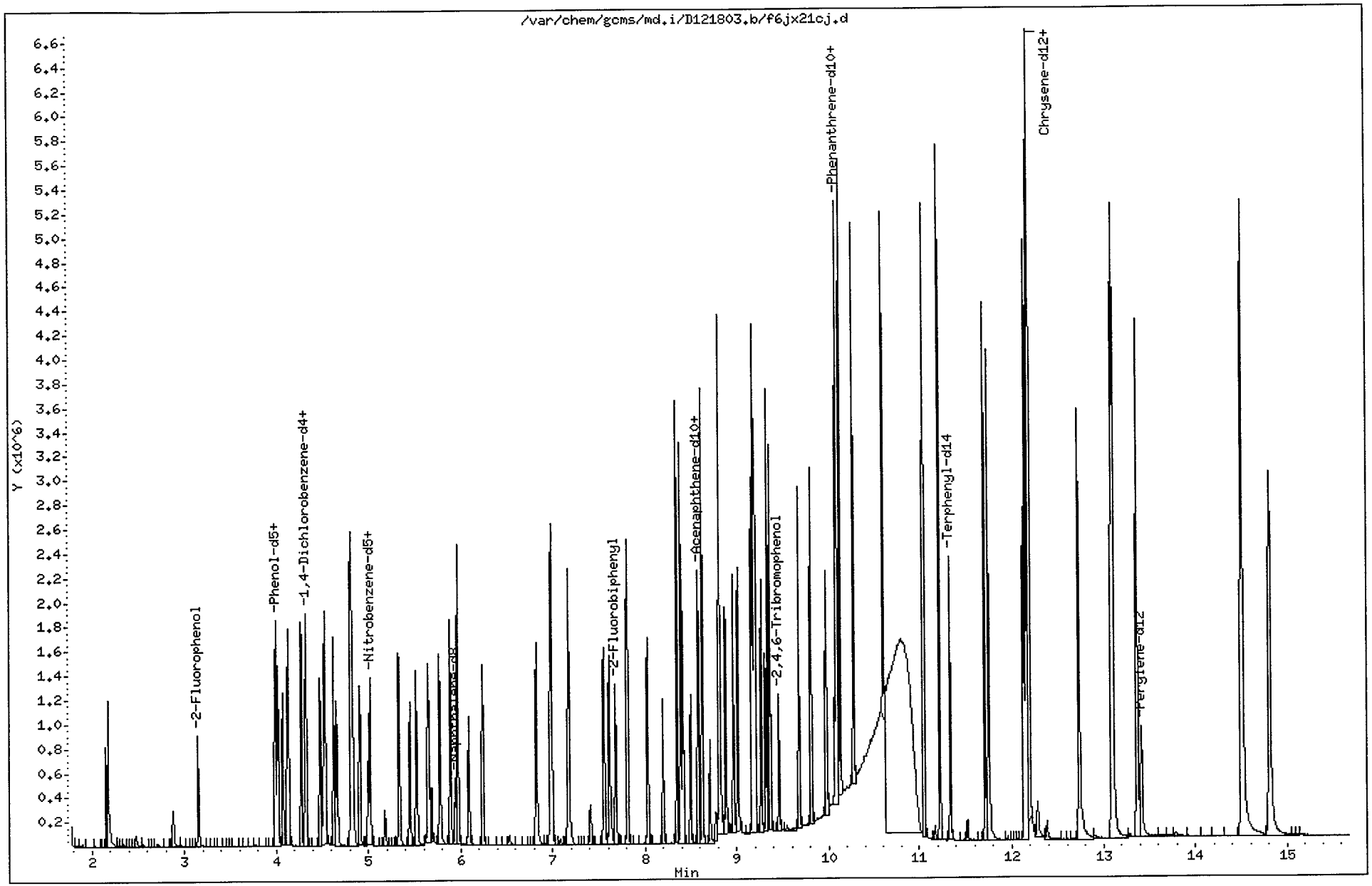
Data File: /var/chem/gcms/md.i/D121803.b/f6jx21cj.d
Report Date: 19-Dec-2003 12:35

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 9 Nitrobenzene-d5	50.0	46.0	92.07	46-117
$ 10 2-Fluorobiphenyl	50.0	45.2	90.41	44-116
$ 11 2,4,6-Tribromophen	75.0	80.3	107.05	31-138
$ 12 Terphenyl-d14	50.0	45.7	91.43	0-132

Data File: /var/chem/gcms/md.i/D121803.b/f6jx21cj.d
Date : 18-DEC-2003 17:42
Client ID: DD3004
Sample Info: F6JX21CJ,,3,,MS,
Volume Injected (uL): 1.0
Column phase: ZB-5

Instrument: md.i

Operator: 3386
Column diameter: 0.25



Data File: /var/chem/gcms/md.i/D121803.b/f6jx21ck.d
Report Date: 19-Dec-2003 12:35

STL Knoxville

SW-846 Method 8270C

Data file : /var/chem/gcms/md.i/D121803.b/f6jx21ck.d
Lab Smp Id: F6JX21CK Client Smp ID: DD3004
Inj Date : 18-DEC-2003 18:06
Operator : 3386 Inst ID: md.i
Smp Info : F6JX21CK,,3,,MSD,
Misc Info : D121803,8270a9,8270.sub
Comment : Semivolatile Organic Compounds by GC/MS
Method : /var/chem/gcms/md.i/D121803.b/8270a9.m
Meth Date : 19-Dec-2003 12:34 tajh Quant Type: ISTD
Cal Date : 07-NOV-2003 13:02 Cal File: a9dk076.d
Als bottle: 1 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8270.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Uf * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	Unit Correction factor
Vt	1000.00000	Volume of final extract (uL)
Vo	1000.00000	Volume of sample extracted (mL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/uL)	FINAL (ug/L)
* 1 1,4-Dichlorobenzene-d4	152	4.312	4.318	(1.000)	59013	20.0000	
* 2 Naphthalene-d8	136	5.945	5.945	(1.000)	238174	20.0000	
* 3 Acenaphthene-d10	164	8.589	8.589	(1.000)	146923	20.0000	
* 4 Phenanthrene-d10	188	10.070	10.070	(1.000)	287590	20.0000	
* 5 Chrysene-d12	240	12.173	12.167	(1.000)	338379	20.0000	
* 6 Perylene-d12	264	13.425	13.419	(1.000)	272301	20.0000	
$ 7 2-Fluorophenol	112	3.154	3.154	(0.732)	243168	62.8347	62.8
$ 8 Phenol-d5	99	3.989	3.989	(0.925)	309426	72.8737	72.9
$ 9 Nitrobenzene-d5	82	4.999	4.999	(0.841)	170050	46.6334	46.6
$ 10 2-Fluorobiphenyl	172	7.684	7.684	(0.895)	425709	43.7157	43.7
$ 11 2,4,6-Tribromophenol	330	9.459	9.459	(0.939)	100100	75.6812	75.7
$ 12 Terphenyl-d14	244	11.339	11.339	(0.931)	573132	40.9289	40.9
13 N-Nitrosodimethylamine	74	2.161	2.197	(0.501)	181560	93.4868	93.5
14 Pyridine	79	2.179	2.202	(0.505)	276157	74.0349	74.0
15 Phenol (ccc)	94	4.000	4.000	(0.928)	447557	112.049	112

Data File: /var/chem/gcms/md.i/D121803.b/f6jx21ck.d
Report Date: 19-Dec-2003 12:35

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/uL)	FINAL (ug/L)
16 Aniline	93	4.024	4.024	(0.933)	356273	58.0580	58.0
17 Bis(2-chloroethyl)ether	93	4.077	4.077	(0.945)	312935	94.9027	94.9
18 2-Chlorophenol	128	4.135	4.135	(0.959)	387836	101.147	101
19 1,3-Dichlorobenzene	146	4.276	4.282	(0.992)	399754	91.1785	91.2
20 1,4-Dichlorobenzene (ccc)	146	4.329	4.335	(1.004)	408068	93.2345	93.2
21 Benzyl alcohol	108	4.482	4.482	(1.040)	242135	103.873	104
22 1,2-Dichlorobenzene	146	4.535	4.535	(1.052)	397678	94.8914	94.9
23 2-Methylphenol	108	4.629	4.629	(1.074)	337425	104.532	104
24 2,2'-Oxybis(1-Chloropropane)	45	4.664	4.664	(1.082)	512163	80.9123	80.9
25 4-Methylphenol	108	4.817	4.811	(1.117)	710438	214.400	214(A)
26 3&4 Methylphenol	108	4.817	4.811	(1.117)	710438	214.400	214(A)
27 N-Nitroso-di-n-propylamine###	70	4.835	4.835	(1.121)	220401	101.090	101
28 Hexachloroethane	117	4.911	4.911	(1.139)	145576	95.8465	95.8
29 Nitrobenzene	77	5.023	5.023	(0.845)	322852	93.9870	94.0
30 Isophorone	82	5.328	5.328	(0.896)	640106	93.1852	93.2
31 2-Nitrophenol (ccc)	139	5.452	5.452	(0.917)	232621	111.575	112
32 2,4-Dimethyphenol	107	5.522	5.516	(0.929)	319756	85.4831	85.5
33 Bis(2-chloroethoxy)methane	93	5.651	5.651	(0.951)	391675	88.6455	88.6
34 Benzoic acid	122	5.675	5.669	(0.955)	183510	83.1410	83.1
35 2,4-Dichlorophenol (ccc)	162	5.775	5.775	(0.971)	350755	106.739	107
36 1,2,4-Trichlorobenzene	180	5.892	5.892	(0.991)	347412	90.8680	90.9
37 Naphthalene	128	5.969	5.975	(1.004)	1136346	87.5539	87.6
38 4-Chloroaniline	127	6.086	6.086	(1.024)	321889	52.1317	52.1
39 Hexachlorobutadiene (ccc)	225	6.245	6.245	(1.050)	166762	83.6777	83.7
40 4-Chloro-3-methylphenol (ccc)	107	6.826	6.826	(1.148)	334433	115.389	115
41 2-Methylnaphthalene	142	6.991	6.991	(1.176)	804114	95.3900	95.4
42 Hexachlorocyclopentadiene####	237	7.408	7.408	(0.862)	56066	25.6190	25.6(R)
43 2,4,6-Trichlorophenol (ccc)	196	7.555	7.555	(0.880)	242209	98.3532	98.4
44 2,4,5-Trichlorphenol	196	7.614	7.614	(0.886)	281914	98.6464	98.6
45 2-Chloronaphthalene	162	7.808	7.808	(0.909)	805658	90.8830	90.9
46 2-Nitroaniline	65	8.031	8.031	(0.935)	216105	88.2178	88.2
47 Acenaphthylene	152	8.395	8.389	(0.977)	1310769	85.0146	85.0
48 Dimethyl phthalate	163	8.348	8.342	(0.972)	908396	93.3419	93.3
49 2,6-Dinitrotoluene	165	8.419	8.419	(0.980)	233620	111.281	111
50 3-Nitroaniline	138	8.583	8.583	(0.999)	250430	79.3609	79.4
51 Acenaphthene (ccc)	153	8.624	8.624	(1.004)	848937	86.4384	86.4
52 2,4-Dinitrophenol ##spcc##	184	8.707	8.707	(1.014)	114598	102.135	102
53 Dibenzofuran	168	8.818	8.812	(1.027)	1178840	95.5538	95.6
54 4-Nitrophenol ##spcc##	109	8.824	8.824	(1.027)	115813	110.250	110
55 2,4-Dinitrotoluene	165	8.883	8.883	(1.034)	324228	113.294	113
56 Fluorene	166	9.194	9.188	(1.070)	973147	90.7592	90.8
57 4-Chlorophenyl phenyl ether	204	9.206	9.206	(1.072)	441903	95.9550	96.0
58 Diethyl phthalate	149	9.171	9.171	(1.068)	964111	99.4364	99.4
59 4-Nitroaniline	138	9.271	9.265	(1.079)	314789	92.0579	92.0
60 4,6-Dinitro-2-methylphenol	198	9.312	9.312	(0.925)	192829	101.390	101
61 N-Ndpa / diphenylamine (ccc)	169	9.341	9.335	(0.928)	743520	99.6825	99.7
62 1,2-Diphenylhydrazine/azobnz	77	9.365	9.365	(0.930)	775770	75.8448	75.8

Data File: /var/chem/gcms/md.i/D121803.b/f6jx21ck.d
Report Date: 19-Dec-2003 12:35

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/uL)	FINAL (ug/L)
63 4-Bromophenyl phenyl ether	248	9.676	9.676	(0.961)	264535	103.000	103
64 Hexachlorobenzene	284	9.805	9.805	(0.974)	277893	91.3549	91.4
65 Pentachlorophenol (ccc)	266	9.970	9.970	(0.990)	180220	95.0989	95.1
66 Phenanthrene	178	10.087	10.087	(1.002)	1510084	84.4228	84.4
67 Anthracene	178	10.129	10.129	(1.006)	1576156	88.2723	88.3
68 Carbazole	167	10.275	10.275	(1.020)	1553184	86.3020	86.3
69 Di-n-butyl phthalate	149	10.599	10.599	(1.052)	1733588	98.2400	98.2
70 Fluoranthene (ccc)	202	11.051	11.051	(1.097)	1834077	97.5227	97.5
71 Pyrene	202	11.221	11.221	(0.922)	1822255	78.8612	78.9
72 Butyl benzyl phthalate	149	11.709	11.709	(0.962)	893142	88.3526	88.4
73 Benzo(a)Anthracene	228	12.156	12.156	(0.999)	1765561	89.4144	89.4
74 3,3'-Dichlorobenzidine	252	12.132	12.132	(0.997)	569294	80.0867	80.1
75 Chrysene	228	12.197	12.191	(1.002)	1667527	86.3325	86.3
76 Bis(2-ethylhexyl) phthalate	149	12.191	12.185	(1.001)	1094584	93.3099	93.3
77 Di-n-octyl phthalate (ccc)	149	12.731	12.731	(0.948)	2155244	89.6940	89.7
78 Benzo(b)fluoranthene	252	13.096	13.090	(0.975)	1743629	77.4728	77.5
79 Benzo(k)fluoranthene	252	13.113	13.113	(0.977)	2474185	91.9678	92.0
85 Benzo(e)pyrene	252	13.378	13.331	(0.996)	1841108	89.9163	~~89.9~~
80 Benzo(a)pyrene (ccc)	252	13.378	13.372	(0.996)	1842378	82.4691	82.5
81 Indeno(1,2,3-cd)pyrene	276	14.512	14.506	(1.081)	2129799	95.4901	95.5
82 Dibenz(a,h)anthracene	278	14.512	14.506	(1.081)	1748003	99.8725	99.9
83 Benzo(g,h,i)perylene	276	14.817	14.811	(1.104)	1953916	100.173	100

KM
12-19-03

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
R - Spike/Surrogate failed recovery limits.

Data File: /var/chem/gcms/md.i/D121803.b/f6jx21ck.d
Report Date: 19-Dec-2003 12:35

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INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: md.i
Lab File ID: f6jx21ck.d
Lab Smp Id: F6JX21CK
Analysis Type: SV
Quant Type: ISTD
Operator: 3386
Method File: /var/chem/gcms/md.i/D121803.b/8270a9.m
Misc Info: D121803,8270a9,8270.sub

Calibration Date: 18-DEC-2003
Calibration Time: 10:33
Client Smp ID: DD3004
Level: LOW
Sample Type: WATER

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	87290	43645	174580	59013	-32.39
2 Naphthalene-d8	333200	166600	666400	238174	-28.52
3 Acenaphthene-d10	191379	95690	382758	146923	-23.23
4 Phenanthrene-d10	352152	176076	704304	287590	-18.33
5 Chrysene-d12	404756	202378	809512	338379	-16.40
6 Perylene-d12	323296	161648	646592	272301	-15.77

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
1 1,4-Dichlorobenze	4.32	3.82	4.82	4.31	-0.14
2 Naphthalene-d8	5.95	5.45	6.45	5.95	0.00
3 Acenaphthene-d10	8.59	8.09	9.09	8.59	0.00
4 Phenanthrene-d10	10.07	9.57	10.57	10.07	0.00
5 Chrysene-d12	12.17	11.67	12.67	12.17	0.05
6 Perylene-d12	13.42	12.92	13.92	13.42	0.04

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

Data File: /var/chem/gcms/md.i/D121803.b/f6jx21ck.d
Report Date: 19-Dec-2003 12:35

STL Knoxville

RECOVERY REPORT

Client Name: SHAW E & I INC
Sample Matrix: LIQUID
Lab Smp Id: F6JX21CK
Level: LOW
Data Type: MS DATA
SpikeList File: allspike.spk
Sublist File: 8270.sub
Method File: /var/chem/gcms/md.i/D121803.b/8270a9.m
Misc Info: D121803,8270a9,8270.sub

Client SDG: PB045
Fraction: SV
Client Smp ID: DD3004
Operator: 3386
SampleType: MSD
Quant Type: ISTD

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
13 N-Nitrosodimethyla	100	93.5	93.49	35-150
14 Pyridine	100	74.0	74.03	35-150
15 Phenol (ccc)	100	112	112.05	35-150
16 Aniline	100	58.0	58.06	35-150
17 Bis(2-chloroethyl)	100	94.9	94.90	35-150
18 2-Chlorophenol	100	101	101.15	35-150
19 1,3-Dichlorobenzen	100	91.2	91.18	35-150
20 1,4-Dichlorobenzen	100	93.2	93.23	35-150
21 Benzyl alcohol	100	104	103.87	35-150
22 1,2-Dichlorobenzen	100	94.9	94.89	35-150
23 2-Methylphenol	100	104	104.53	35-150
24 2,2'-Oxybis(1-Chlo	100	80.9	80.91	35-150
25 4-Methylphenol	200	214	107.20	35-150
26 3&4 Methylphenol	200	214	107.20	35-150
27 N-Nitroso-di-n-pro	100	101	101.09	35-150
28 Hexachloroethane	100	95.8	95.85	35-150
29 Nitrobenzene	100	94.0	93.99	35-150
30 Isophorone	100	93.2	93.19	35-150
31 2-Nitrophenol (ccc	100	112	111.58	35-150
32 2,4-Dimethyphenol	100	85.5	85.48	35-150
33 Bis(2-chloroethoxy	100	88.6	88.65	35-150
34 Benzoic acid	100	83.1	83.14	35-150
35 2,4-Dichlorophenol	100	107	106.74	35-150
36 1,2,4-Trichloroben	100	90.9	90.87	35-150
37 Naphthalene	100	87.6	87.55	60-100
38 4-Chloroaniline	100	52.1	52.13	35-150
39 Hexachlorobutadien	100	83.7	83.68	35-150
40 4-Chloro-3-methylp	100	115	115.39	35-150
41 2-Methylnaphthalen	100	95.4	95.39	35-150
42 Hexachlorocyclopen	100	25.6	25.62*	35-150
43 2,4,6-Trichlorophe	100	98.4	98.35	35-150
44 2,4,5-Trichlorphen	100	98.6	98.65	35-150
45 2-Chloronaphthalen	100	90.9	90.88	35-150

Data File: /var/chem/gcms/md.i/D121803.b/f6jx21ck.d
Report Date: 19-Dec-2003 12:35

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
46 2-Nitroaniline	100	88.2	88.22	35-150
47 Acenaphthylene	100	85.0	85.01	60-106
48 Dimethyl phthalate	100	93.3	93.34	35-150
49 2,6-Dinitrotoluene	100	111	111.28	35-150
50 3-Nitroaniline	100	79.4	79.36	35-150
51 Acenaphthene (ccc)	100	86.4	86.44	63-105
52 2,4-Dinitrophenol	100	102	102.14	35-150
53 Dibenzofuran	100	95.6	95.55	35-150
54 4-Nitrophenol ##sp	100	110	110.25	35-150
55 2,4-Dinitrotoluene	100	113	113.29	35-150
56 Fluorene	100	90.8	90.76	60-113
57 4-Chlorophenyl phe	100	96.0	95.96	35-150
58 Diethyl phthalate	100	99.4	99.44	35-150
59 4-Nitroaniline	100	92.0	92.06	35-150
60 4,6-Dinitro-2-meth	100	101	101.39	35-150
61 N-Ndpa / diphenyla	100	99.7	99.68	35-150
62 1,2-Diphenylhydraz	100	75.8	75.84	35-150
63 4-Bromophenyl phen	100	103	103.00	35-150
64 Hexachlorobenzene	100	91.4	91.35	35-150
65 Pentachlorophenol	100	95.1	95.10	35-150
66 Phenanthrene	100	84.4	84.42	65-108
67 Anthracene	100	88.3	88.27	67-114
68 Carbazole	100	86.3	86.30	35-150
69 Di-n-butyl phthala	100	98.2	98.24	35-150
70 Fluoranthene (ccc)	100	97.5	97.52	65-115
71 Pyrene	100	78.9	78.86	70-112
72 Butyl benzyl phtha	100	88.4	88.35	35-150
73 Benzo(a)Anthracene	100	89.4	89.41	70-114
74 3,3'-Dichlorobenzi	100	80.1	80.09	35-150
75 Chrysene	100	86.3	86.33	68-111
76 Bis(2-ethylhexyl)	100	93.3	93.31	35-150
77 Di-n-octyl phthala	100	89.7	89.69	35-150
78 Benzo(b)fluoranthe	100	77.5	77.47	60-120
79 Benzo(k)fluoranthe	100	92.0	91.97	61-119
80 Benzo(a)pyrene (cc	100	82.5	82.47	67-111
81 Indeno(1,2,3-cd)py	100	95.5	95.49	67-120
82 Dibenz(a,h)anthrac	100	99.9	99.87	71-120
83 Benzo(g,h,i)peryle	100	100	100.17	63-120

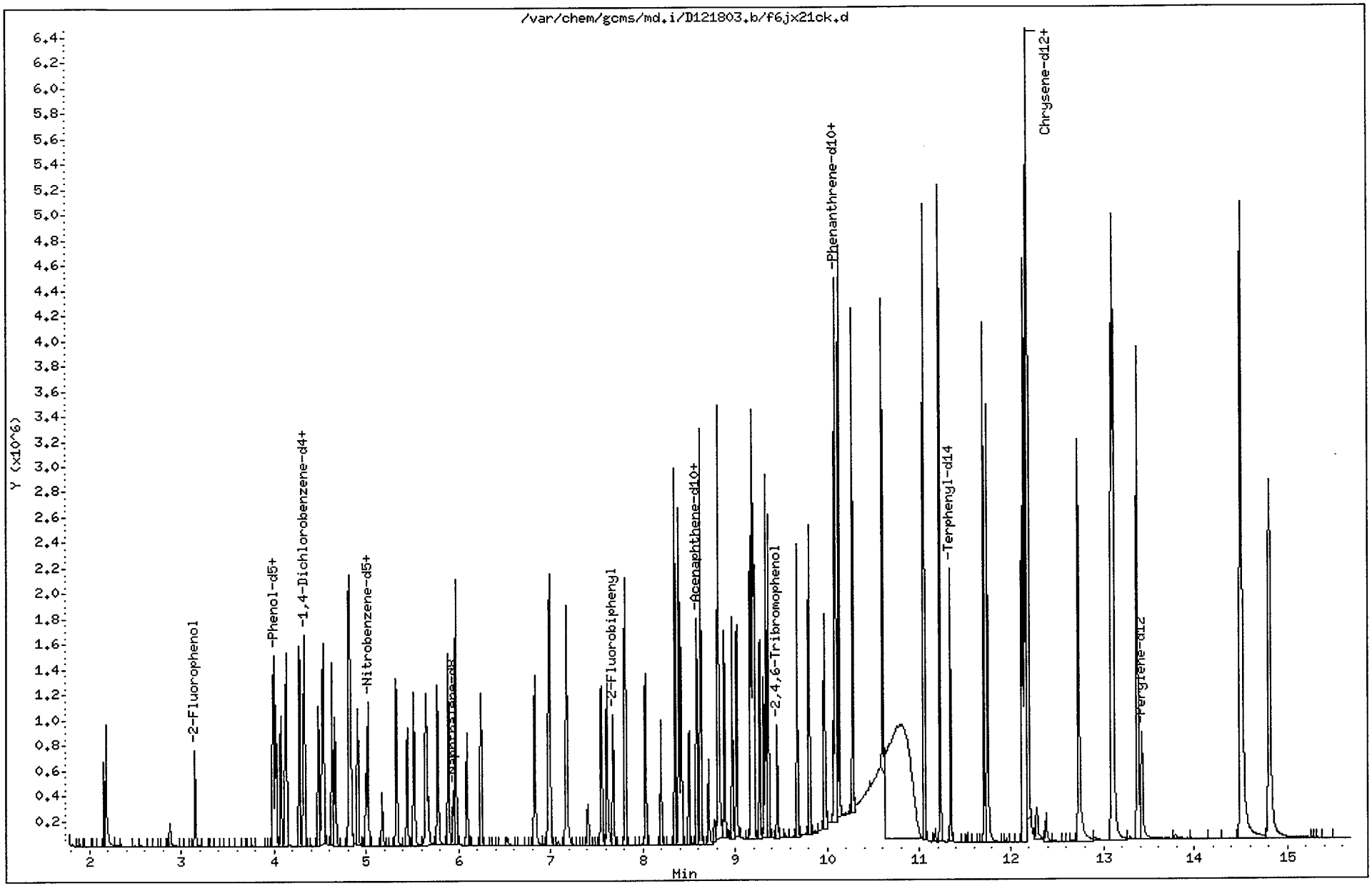
SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 7 2-Fluorophenol	75.0	62.8	83.78	29-110
$ 8 Phenol-d5	75.0	72.9	97.16	41-115

Data File: /var/chem/gcms/md.i/D121803.b/f6jx21ck.d
Report Date: 19-Dec-2003 12:35

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 9 Nitrobenzene-d5	50.0	46.6	93.27	46-117
$ 10 2-Fluorobiphenyl	50.0	43.7	87.43	44-116
$ 11 2,4,6-Tribromophen	75.0	75.7	100.91	31-138
$ 12 Terphenyl-d14	50.0	40.9	81.86	0-132

Data File: /var/chem/gcms/md.i/D121803.b/f6jx21ck.d
Date : 18-DEC-2003 18:06
Client ID: DD3004
Sample Info: F6JX21CK,,3,,MSD,
Volume Injected (uL): 1.0
Column phase: ZB-5

Instrument: md.i
Operator: 3386
Column diameter: 0.25



Miscellaneous Data

STL Knoxville Semivolatile GC/MS Data Review / Narrative Checklist LOT/Project # PB045

Method 8270C - KNOX-MS-0016 Rev 1 & Method TO-13A Mod – KNOX-MS-0017, Rev. 0 Page 1 of 2

Instrument:	MD					
Scanned File Names:	D110703I					
	D121503					
	D121803					

Review Items **A. Tune / Calibration**	N/A	Yes	No	If No, why is data reportable?	2nd ✓
1. Were all samples injected within 12 hr of DFTPP?		✓			✓
2. Has a Continuing Calibration Checklist been completed for each analytical batch?		✓			✓
3. Was the correct ICAL used for quantitation?		✓			✓
B. CLIENT SAMPLE AND QC SAMPLE Results					
1. Were all special project requirements met?		✓			✓
2. Were prep/dilution factors & header information verified?		✓			✓
3. Was date/time of analysis verified between analysis header and logbook as correct?		✓			✓
4. Sample prep and analyses done within preparation and analytical holding time (HT)? *If no, list samples and NCM #:* _____		✓		θ *[ht1] HT expired upon receipt.* θ *[ht2] Client requested analysis after HT expired.* * θ **Re-extraction done after HT expired. See [sur4].**	✓
5. Are surrogates and internal standards within QC limits? *If no, list samples, reason (e.g.,* **sur1***) and NCM #:* _____ Sample / Reason / Sample / Reason		✓		θ [sur1] MS/MSD surr.%R demonstrated same effect. θ [sur2] Re-extraction demonstrated same effect. θ **[sur3] Not enough sample for re-extraction.** θ **[sur4] Re-extraction done outside HT. Rerun shows original %R were wrong; both data reported.** θ **[sur5] Upon client approval, data was flagged as estimated & released without further investigation.*** θ [sur7] Obvious matrix interference. Explain: _____ θ **[sur12] Surr.%R high and all targets ND.** θ [isc1] Samples bracketed by acceptable runs. θ **[sur13] Surr.%R low. Sample consumed.** θ **[sur14 Surr.%R high. Sample consumed.**	✓
6. Are internal standards <0.5min of last CCAL?		✓			✓
7. Were positive hits evaluated using qualitative identification criteria and technical judgment?		✓			✓
8. Are positive results within calibration range? *If no, list samples:* _____		✓		θ [dil5] At client's request, sample was analyzed with minimum dilution even though some analytes were outside of calibration range.*	✓
9. For initial analysis, was the largest analyte > 20% of calibration range? *List samples and reason (e.g.,* **elev1***):* Sample(s) / Reason	✓			θ [elev1] Elevated RL for (ANALYTE) due to sample matrix interferences. θ [elev2] Elevated RL for (ANALYTE) due to interfering analyte. θ [elev3] Elevated RLs for all analytes due to difficult sample matrix. θ [elev4] Diluted based on screening results. θ [elev5] Elevated RLs for all analytes due to presence of non-target compounds.	✓

* Such action must be taken in consultation with client.

NOTE: Nonconformance memos are required for **bold** and *italicized* autotext statements: **Bold** = deficiency, *italicized* = anomoly.

STL Knoxville Semivolatile GC/MS Data Review / Narrative Checklist LOT/Project # PB045
Method 8270C - KNOX-MS-0016 Rev 1 & Method TO-13A Mod – KNOX-MS-0017, Rev. 0 Page 2 of 2

B. CLIENT SAMPLE AND QC SAMPLE Results	N/A	Yes	No	If No, why is data reportable?	2nd ✓
10. For diluted analyses, was the largest analyte targeted to be above 50% of calibration range? *List samples and reason (e.g.,* **dil1***):* Sample Reason Sample Reason	✓			θ [dil1] Conc. of (ANALYTE) > calibration range. RLs adjusted accordingly. θ [dil2] Conc. of several compounds > calibration range. RLs adjusted accordingly. θ [dil3] Conc. of (ANALYTE) > calibration range. Both analyses reported to provide lowest RLs. θ [dil4] Conc. of several compounds > calibration range. Both analyses reported to provide lowest RLs.	NA
11. If manual integrations were performed, are they clearly identified, initialed, dated and reason given?	✓			Reasons: 1)Corrected split peak; 2)Unresolved peak; 3)tailing; 4)RT shift; 5)wrong peak selected; 6)other	NA
12. Have alternate hits and manual integrations been verified as correct?	✓				NA
13. Were the analytes that were not automatically identified in the CCAL searched for manually in the samples?	✓				
14. Final report acceptable? (Results correct, RLs calculated correctly, units correct, surrogate %R correct, appropriate flags used, dilution factor correct, and extraction/ analysis dates correct.)		✓			✓
C. Preparation/Matrix QC					
1. LCS done per prep batch and all analytes within laboratory established QC limits? *If no, list LCS ID and NCM #:* F6H4R1AD, F6N421AC 08-04123, 08-04134			✓	**θ [lcs2] Insufficient sample for reanalysis.*** **θ [lcs3] LCS %R high and all analyte(s) were <RL in associated samples.**	✓
2. Method blank done per prep batch and method blank or instrument blank analyzed with each sequence?		✓			✓
3. Method blank surrogate recoveries within QC limits?		✓		**θ [mb1] Sample surrogates OK and there is no analyte >RL in samples associated with blank.***	✓
4. Are all analytes present in the method blank < RL? *If no, list blank ID and NCM #:*		✓		**θ [mb2] Common lab contaminant <5x RL.*** **θ [mb3] No analyte > RL in associated samples.*** **θ [mb4] Sample results > 20x higher than blank.** **θ [mb5] Insufficient sample for reanalysis.***	✓
5. MS/MSD done per batch and are all recoveries and RPDs within laboratory generated QC limits? *If no, list MS/MSD ID:* F6JX21CJ, 1CK Recoveries ok, no hits above RL			✓	θ [ms1] LCS acceptable - sample matrix effects. θ [ms2] LCS acceptable. High native analyte concentration relative to spike level. θ [rpd] LCS acceptable. RPD out due to lack of sample homogeneity.	✓
6. Were MS run #'s assigned correctly?		✓			✓
D. Other					
1. Are all nonconformances documented appropriately and copy included with deliverable?		✓			✓
2. Are the correct scanned file names listed at the top of the data review checklist?		✓			✓
3. Were the standards scanned properly with runlogs?		✓			✓
4. Was a narrative prepared and all deviations noted?		✓			✓
5. If COA, are all analytes >15% RSD, using avg RRF in ICAL, listed in the narrative?	✓				NA

Analyst: UM	Date: 12-2-03	2nd Level Reviewer: u	Date: 122203
Comments:		Comments:	

* Such action must be taken in consultation with client.

833

BNA(8270)

STL KNOXVILLE

Extraction Sheet - Waters

Batch 3349288

Extracted By: Raj

Extraction Start time/date 14.30 hrs 12.15.03

Extraction Start time/date 13.30 hrs 12.16.03

Extraction Conc by/date AOR/

SOP # ☑ KNOX-OP-0011 or _____

Spiked by: Raj

Witness Surr/Spike: MJR

Extraction Stop Time/Date: 9.00 hrs 12.16.03

Extraction Stop Time/Date: 8:00 12.17.03

Conc. Method Used: KD

Glassware inspected by: Raj / MJR

Reagent Lot No:

Methylene Chloride Y 45E51

Acetone NA

Sodium Sulfate Y4/6/3

Hexane NA

Sulfuric Acid Y12A01

Sodium Hydroxide 033674

Other _____

Sample Lot Numbers: H3L120208

Relinquished by: MJR Date: 12.18.03 Time: 9:00

Received by: ↓ Date: ↓ Time: ↓

Comments: F6JXA, F6JX2, F6JX2(MS), F6JX2(MSD) has an foul odor.

RQC058

Severn Trent Laboratories, Inc.
EXTRACTION BENCH WORKSHEET

Run Date: 12/17/03
Time: 14:02:47

LEV 1	LEV 2		LEV 1	LEV 2	
Y	Y	Blank	Y	Y	Weights/Volumes
Y	Y	Check	Y	Y	Spike & Surrogate Worksheet
Y	Y	MS/MSD	Y	Y	Vial contains correct volume
			Y	Y	Labels, greenbars, worksheets
					computer batch: correct & all match
			_	_	Anomalies to Extraction Method

Y Expanded Deliverable
Y COC Completed
Y Bench Sheet Copied
Y Package Submitted to AnalyticalGroup
Y Bench Sheet Copied per COC

Extractionist: 888811 Rajnikant Contractor

Concentrationist: 014113 Annette J. Ribet
060062 Marcus J. Ramsey

QC BATCH: 3349288

PREP DATE: 12/15/03 14:30
COMP DATE: 12/17/03 8:00

Reviewer/Date: RIBETA / 12/17/03

Base/Neutrals and Acids (8270C)
LIQ/LIQ, CONT (A/B/N) - Acid->Base

EXTR EXPR	ANL DUE	LOT#,MSRUN#/ WORK ORDER	TEST FLGS	EXT	MTH	MATRIX	INIT/FIN WT/VOL	PH"S INIT	ADJ1	ADJ2	SOLVENTS EXTRACTION	VOL	EXCHANGE	VOL	SPIKE STANDARD/ SURROGATE ID
12/18/03	12/31/03	H3L120208-001 **F6JXA-1-AD**	D	49	QL	WATER	**1000mL** 1.00mL	7.0	2.0	12.0	MECL2	450.0		.0	OP30793 500 UL
COMMENTS:															
12/18/03	12/31/03	H3L120208-002 **F6JX2-1-CH**	D	49	QL	WATER	**980mL** 1.00mL	7.0	2.0	12.0	MECL2	450.0		.0	OP30793 500 UL
COMMENTS:															
12/18/03	12/31/03	H3L120208-002 **F6JX2-1-CJS**	D	49	QL	WATER	**1000mL** 1.00mL	7.0	2.0	12.0	MECL2	450.0		.0	OP30812 1.0 ML OP30793 500 UL
COMMENTS:															
12/18/03	12/31/03	H3L120208-002 **F6JX2-1-CKD**	D	49	QL	WATER	**1000mL** 1.00mL	7.0	2.0	12.0	MECL2	450.0		.0	OP30812 1.0 ML OP30793 500 UL
COMMENTS:															
12/18/03	12/31/03	H3L120208-003 **F6J0A-1-AP**	D	49	QL	WATER	**980mL** 1.00mL	7.0	2.0	12.0	MECL2	450.0		.0	OP30793 500 UL
COMMENTS:															
12/18/03	0/00/00	H3L150000-288 **F6N42-1-AAB**		49	QL	WATER	**1000mL** 1.00mL	7.0	2.0	12.0	MECL2	450.0		.0	OP30793 500 UL
COMMENTS:															
12/18/03	0/00/00	H3L150000-288 **F6N42-1-ACC**		49	QL	WATER	**1000mL** 1.00mL	7.0	2.0	12.0	MECL2	450.0		.0	OP30812 1.0 ML OP30793 500 UL
COMMENTS:															

SAMPLES F6JXA,F6JX2,MS/MSD HAD A FOUL ODOR.

R = RUSH C = CLP
E = EPA 600 D = EXP.DEL)

NUMBER OF WORK ORDERS IN BATCH: 7

835

BNA (8270)

STL KNOXVILLE

Extraction Sheet - Waters

Batch 3346158

Extracted By: Raj

Extraction Start time/date 14.00hrs 12.12.03

Extraction Start time/date 10:00 12-13-03

Extraction Conc by/date AJR 12-15-03

SOP # ☑ KNOX-OP-0011 or _____

Spiked by: Raj

Witness Surr/Spike: MGN

Extraction Stop Time/Date: 8:00 12-13-03

Extraction Stop Time/Date: 7:30 12-14-03

Conc. Method Used: KD

Glassware inspected by: Raj / MGN

Reagent Lot No:

Methylene Chloride Y37E40

Acetone NA

Sodium Sulfate Y41613

Hexane NA

Sulfuric Acid Y12A01

Sodium Hydroxide 033674

Other _____

Sample Lot Numbers: H3L100268

H3L110180

Relinquished by: AJR Date: 12-15-03 Time: 15:00

Received by: JW Date: ↓ Time: ↓

Comments: F6DRG has an foul odor. F6F2H · no pink

OP015R6.DOC, 01/17/02

RQC058

Severn Trent Laboratories, Inc.
EXTRACTION BENCH WORKSHEET

Run Date: 12/15/03
Time: 12:08:39

LEV 1	LEV 2		LEV 1	LEV 2	
Y	Y	Blank	Y	Y	Weights/Volumes
Y	Y	Check	Y	Y	Spike & Surrogate Worksheet
_	_	MS/MSD	Y	Y	Vial contains correct volume
_	_		Y	Y	Labels, greenbars, worksheets computer batch: correct & all match
			_	_	Anomalies to Extraction Method

Y Expanded Deliverable
Y COC Completed
Y Bench Sheet Copied
Y Package Submitted to AnalyticalGroup
Y Bench Sheet Copied per COC

Extractionist: 888811 Rajnikant Contractor

Concentrationist: 014113 Annette J. Ribet

Reviewer/Date: RIBETA / 12/15/03

QC BATCH: 3346158

PREP DATE: 12/12/03 14:00
COMP DATE: 12/14/03 7:30

Base/Neutrals and Acids (8270C)
LIQ/LIQ, CONT (A/B/N) - Acid->Base

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	VOL	SPIKE STANDARD/ SURROGATE ID
12/16/03	12/31/03	H3L100268-001 **F6DQ4-1-AD**	D	49	QL	WATER	**1000mL** 1.00mL	7.0	2.0	12.0	MECL2	450.0		.0	OP30791 500 UL
COMMENTS:															
12/16/03	12/31/03	H3L100268-002 **F6DRG-1-AP**	D	49	QL	WATER	**1000mL** 1.00mL	7.0	2.0	12.0	MECL2	450.0		.0	OP30791 500 UL
COMMENTS:															
12/17/03	12/31/03	H3L110180-001 **F6F1C-1-AD**	D	49	QL	WATER	**930mL** 1.00mL	7.0	2.0	12.0	MECL2	450.0		.0	OP30791 500 UL
COMMENTS:															
12/17/03	12/31/03	H3L110180-002 **F6F2H-1-AP**	D	49	QL	WATER	**1000mL** 1.00mL	7.0	2.0	12.0	MECL2	450.0		.0	OP30791 500 UL
COMMENTS:															
12/16/03	0/00/00	H3L120000-158 **F6H4R-1-AA**B		49	QL	WATER	**1000mL** 1.00mL	7.0	2.0	12.0	MECL2	450.0		.0	OP30791 500 UL
COMMENTS:															
12/16/03	0/00/00	H3L120000-158 **F6H4R-1-AC**C		49	QL	WATER	**1000mL** 1.00mL	7.0	2.0	12.0	MECL2	450.0		.0	OP30810 1.0 ML OP30791 500 UL
COMMENTS:															
12/16/03	0/00/00	H3L120000-158 **F6H4R-1-AD**L	R	49	QL	WATER	**1000mL** 1.00mL	7.0	2.0	12.0	MECL2	450.0		.0	OP30810 1.0 ML OP30791 500 UL
COMMENTS:															

F6DRG HAD A FOUL ODOR. SAMPLE F6F2H DID NOT HOLD THE PINK TINT OF THE SURROGATE DURING THE ACID EXTRACTION.

R = RUSH C = CLP
E = EPA 600 D = EXP.DEL)

NUMBER OF WORK ORDERS IN BATCH: 7

Explosives

Raw Sample Data

SHAW E & I INC

Client Sample ID: DD3007

HPLC

Lot-Sample #...: H3L100268-001 **Work Order #...:** F6DQ41AA **Matrix.....:** WATER
Date Sampled...: 12/09/03 **Date Received..:** 12/10/03
Prep Date.....: 12/16/03 **Analysis Date..:** 12/17/03
Prep Batch #...: 3350322
Dilution Factor: 1 **Method.....:** SW846 8330

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
HMX	ND	0.50	ug/L	0.10
RDX	ND	0.50	ug/L	0.13
1,3,5-Trinitrobenzene	ND	0.20	ug/L	0.11
1,3-Dinitrobenzene	ND	0.20	ug/L	0.080
Tetryl	ND	0.20	ug/L	0.17
Nitrobenzene	ND	0.20	ug/L	0.070
2,4,6-Trinitrotoluene	ND	0.20	ug/L	0.080
4-Amino-2,6-dinitrotoluene	ND	0.20	ug/L	0.11
2-Amino-4,6-dinitrotoluene	ND	0.20	ug/L	0.090
2,6-Dinitrotoluene	ND	0.20	ug/L	0.11
2,4-Dinitrotoluene	ND	0.20	ug/L	0.070
2-Nitrotoluene	ND	0.20	ug/L	0.14
4-Nitrotoluene	ND	0.20	ug/L	0.17
3-Nitrotoluene	ND	0.20	ug/L	0.13

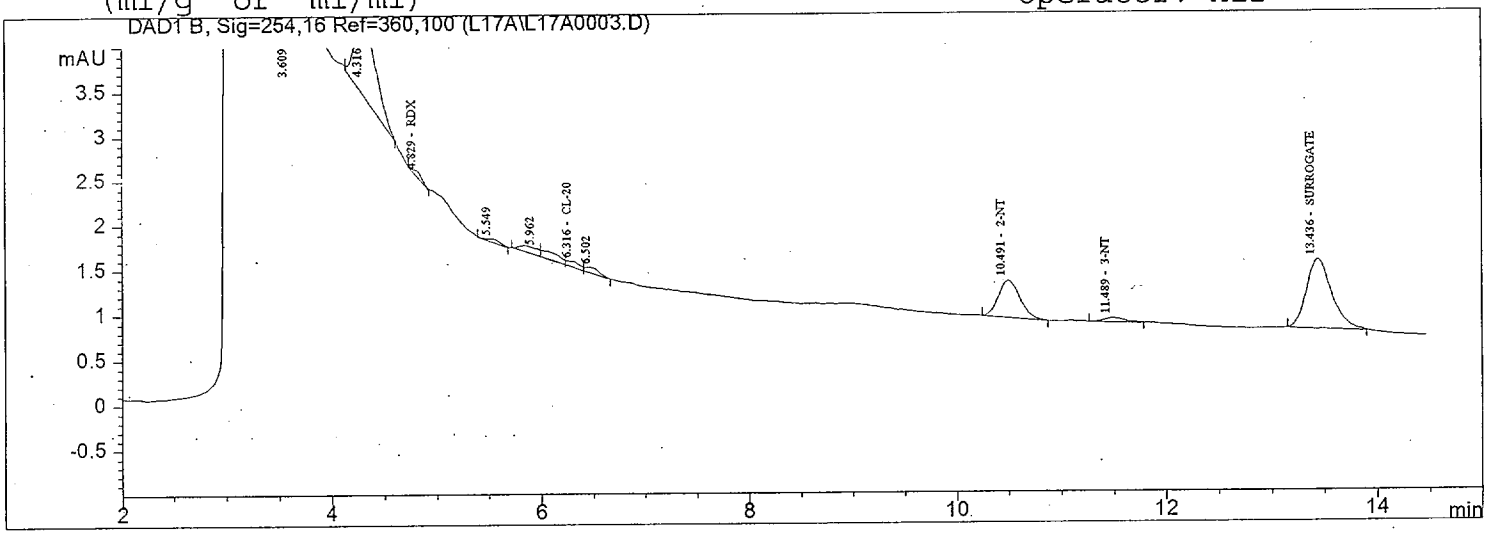
SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1-Chloro-3-nitrobenzene	88	(52 - 139)

STL-KNOXVILLE Explosives Analysis

Sample Number: F6DQ41AA Print Time:12/17/03 10:29:15

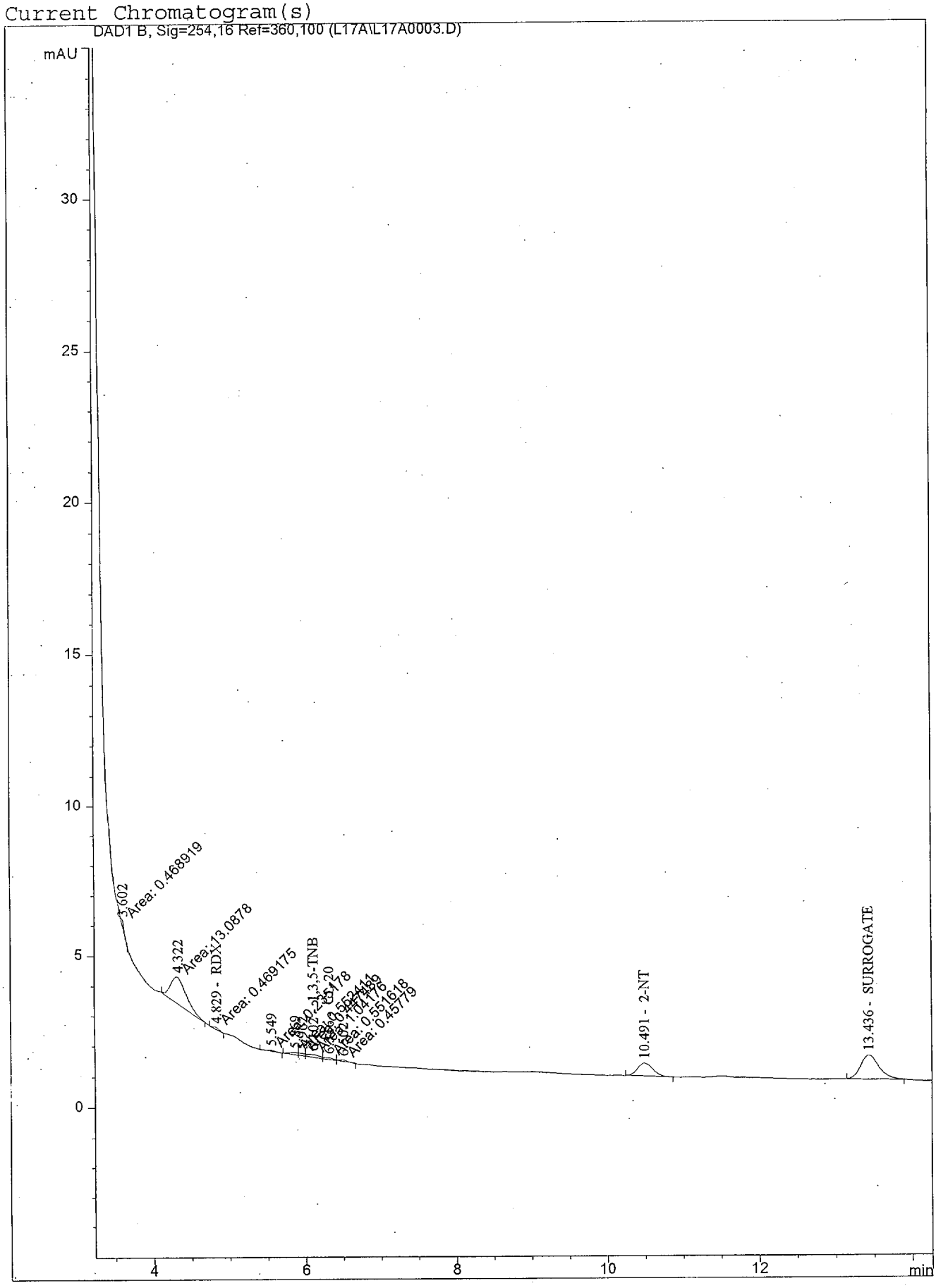
Instrument Name: Ace Data Acquisition Time:12/17/03 10:11:59
Data File name: H:\ACE\DATA\L17A\L17A0003.D
Method File: H:\ACE\METHOD\L17A2.M
Sequence File: H:\ACE\SEQUENCE\L17A.S

Dilution: 1.000 Sample Amount: 500.000
Multiplier : 0.010000 Injection Volume (ul): 30.000
(Final Vol / Sample Amt)
(ml/g or ml/ml) Operator: klr



#	Exp.RT	Meas.RT	Compound Name	Height	Amt (ppb)
1	0.000	3.609		0.29515	0.0000
2	3.853	0.000	HMX	0.00000	0.0000
3	0.000	4.316		0.86644	0.0000
4	4.917	4.829	RDX	0.07504	0.0914
5	0.000	5.549		0.04680	0.0000
6	0.000	5.962		0.07610	0.0000
7	6.056	6.102	1,3,5-TNB	0.08863	0.0544
8	6.260	6.316	CL-20	0.06698	0.1307
9	0.000	6.502		0.06604	0.0000
10	6.711	0.000	TETRYL	0.00000	0.0000
11	6.898	0.000	1,3-DNB	0.00000	0.0000
12	7.525	0.000	NB	0.00000	0.0000
13	8.099	0.000	TNT	0.00000	0.0000
14	8.320	0.000	4-AMINO	0.00000	0.0000
15	8.713	0.000	2-AMINO	0.00000	0.0000
16	8.887	0.000	2,6-DNT	0.00000	0.0000
17	9.287	0.000	2,4-DNT	0.00000	0.0000
18	10.349	10.491	2-NT	0.41702	0.7926 MD
19	11.115	0.000	4-NT	0.00000	0.0000
20	11.702	11.489	3-NT	0.05266	0.0989
21	13.276	13.436	SURROGATE	0.77904	1.5522

Current Chromatogram(s)

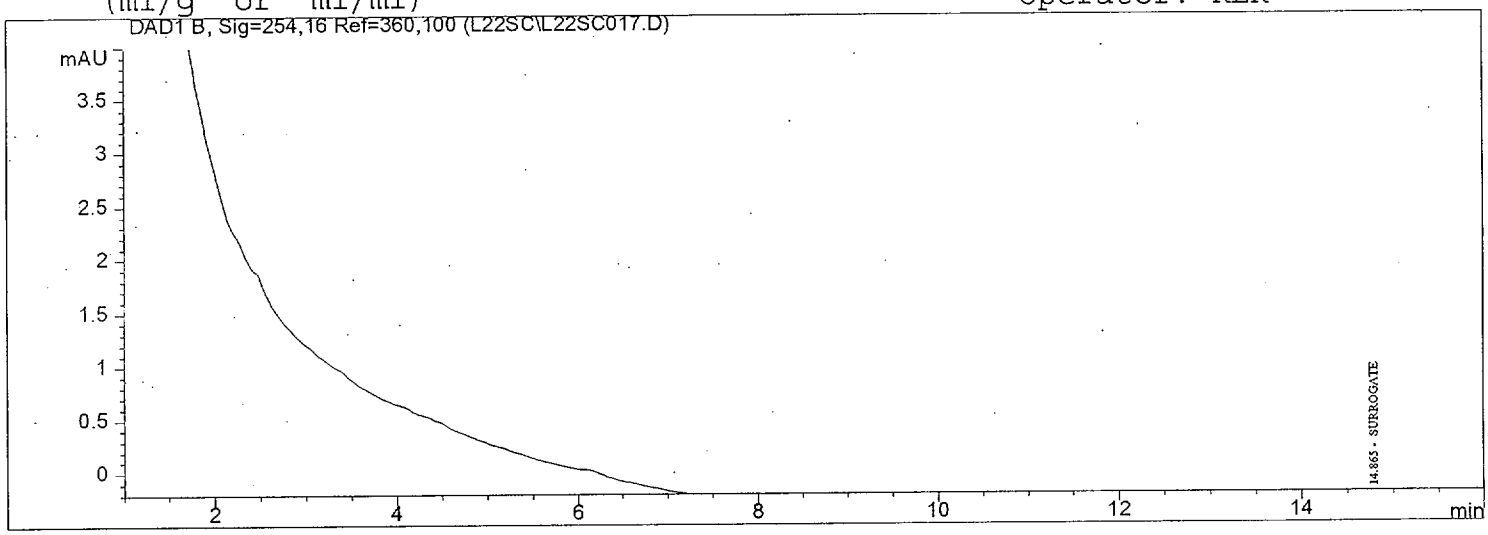


STL-KNOXVILLE Explosives Confirmation Analysis

Sample Number: F6DQ41AA Print Time:12/23/03 08:03:51

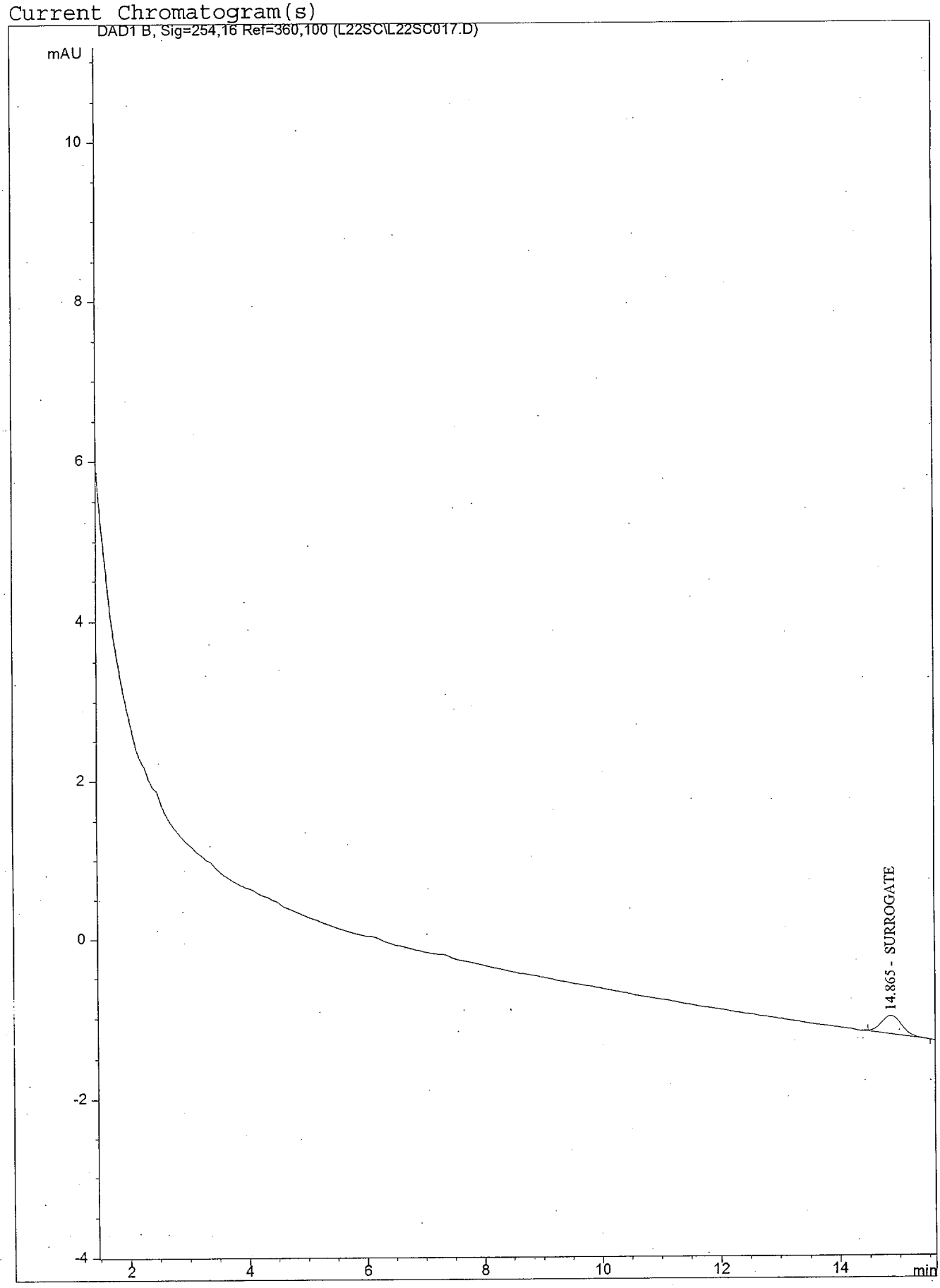
Instrument Name: Semika Data Acquisition Time:12/23/03 00:27:27
Data File name: H:\SEMEKA\DATA\L22SC\L22SC017.D
Method File: H:\SEMEKA\METHODS\L22SC.M
Sequence File:

Dilution: 1.000 Sample Amount: 500.000
Multiplier : 0.010000 Injection Volume (ul): 40.000
(Final Vol / Sample Amt)
(ml/g or ml/ml) Operator: KLR



#	Exp.RT	Meas.RT	Compound Name	Height	Amt (ppb)
1	2.239	0.000	1,3,5-TNB	0.00000	0.0000
2	2.377	0.000	HMX	0.00000	0.0000
3	2.803	0.000	RDX	0.00000	0.0000
4	3.664	0.000	1,3-DNB	0.00000	0.0000
5	4.534	0.000	TNT	0.00000	0.0000
6	5.166	0.000	NB	0.00000	0.0000
7	6.128	0.000	TETRYL	0.00000	0.0000
8	7.702	0.000	2,4-DNT	0.00000	0.0000
9	9.175	0.000	2,6-DNT	0.00000	0.0000
10	10.147	0.000	2-AMINO	0.00000	0.0000
11	11.342	0.000	4-AMINO	0.00000	0.0000
12	12.563	0.000	2- & 4-NT	0.00000	0.0000
13	13.906	0.000	3-NT	0.00000	0.0000
14	14.823	14.865	SURROGATE	0.22196	1.4083

Current Chromatogram(s)



SHAW E & I INC

Client Sample ID: DD3008

HPLC

Lot-Sample #...: H3L100268-002 **Work Order #...:** F6DRG1AM **Matrix.....:** WATER
Date Sampled...: 12/09/03 **Date Received..:** 12/10/03
Prep Date.....: 12/16/03 **Analysis Date..:** 12/17/03
Prep Batch #...: 3350322
Dilution Factor: 1 **Method.....:** SW846 8330

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
HMX	ND	0.50	ug/L	0.10
RDX	ND	0.50	ug/L	0.13
1,3,5-Trinitrobenzene	ND	0.20	ug/L	0.11
1,3-Dinitrobenzene	ND	0.20	ug/L	0.080
Tetryl	ND	0.20	ug/L	0.17
Nitrobenzene	ND	0.20	ug/L	0.070
2,4,6-Trinitrotoluene	ND	0.20	ug/L	0.080
4-Amino-2,6-dinitrotoluene	ND	0.20	ug/L	0.11
2-Amino-4,6-dinitrotoluene	ND	0.20	ug/L	0.090
2,6-Dinitrotoluene	ND	0.20	ug/L	0.11
2,4-Dinitrotoluene	ND	0.20	ug/L	0.070
2-Nitrotoluene	ND	0.20	ug/L	0.14
4-Nitrotoluene	ND	0.20	ug/L	0.17
3-Nitrotoluene	ND	0.20	ug/L	0.13

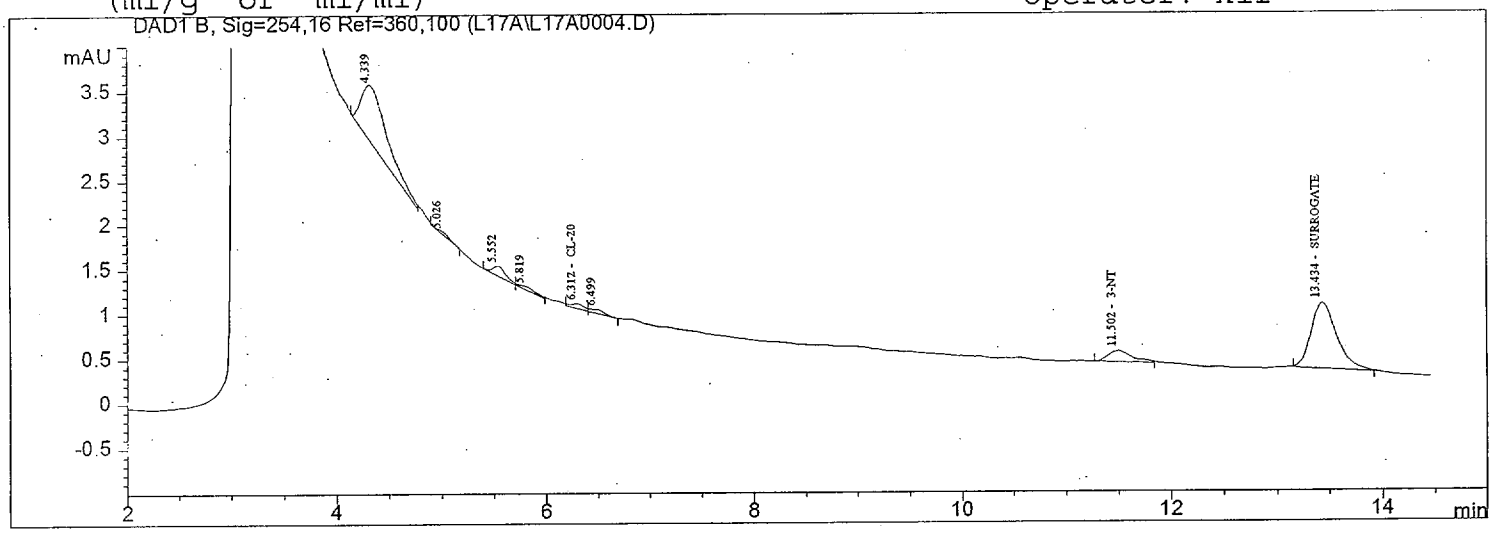
SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1-Chloro-3-nitrobenzene	84	(52 - 139)

STL-KNOXVILLE Explosives Analysis

Sample Number: F6DRG1AM Print Time:12/17/03 10:49:07

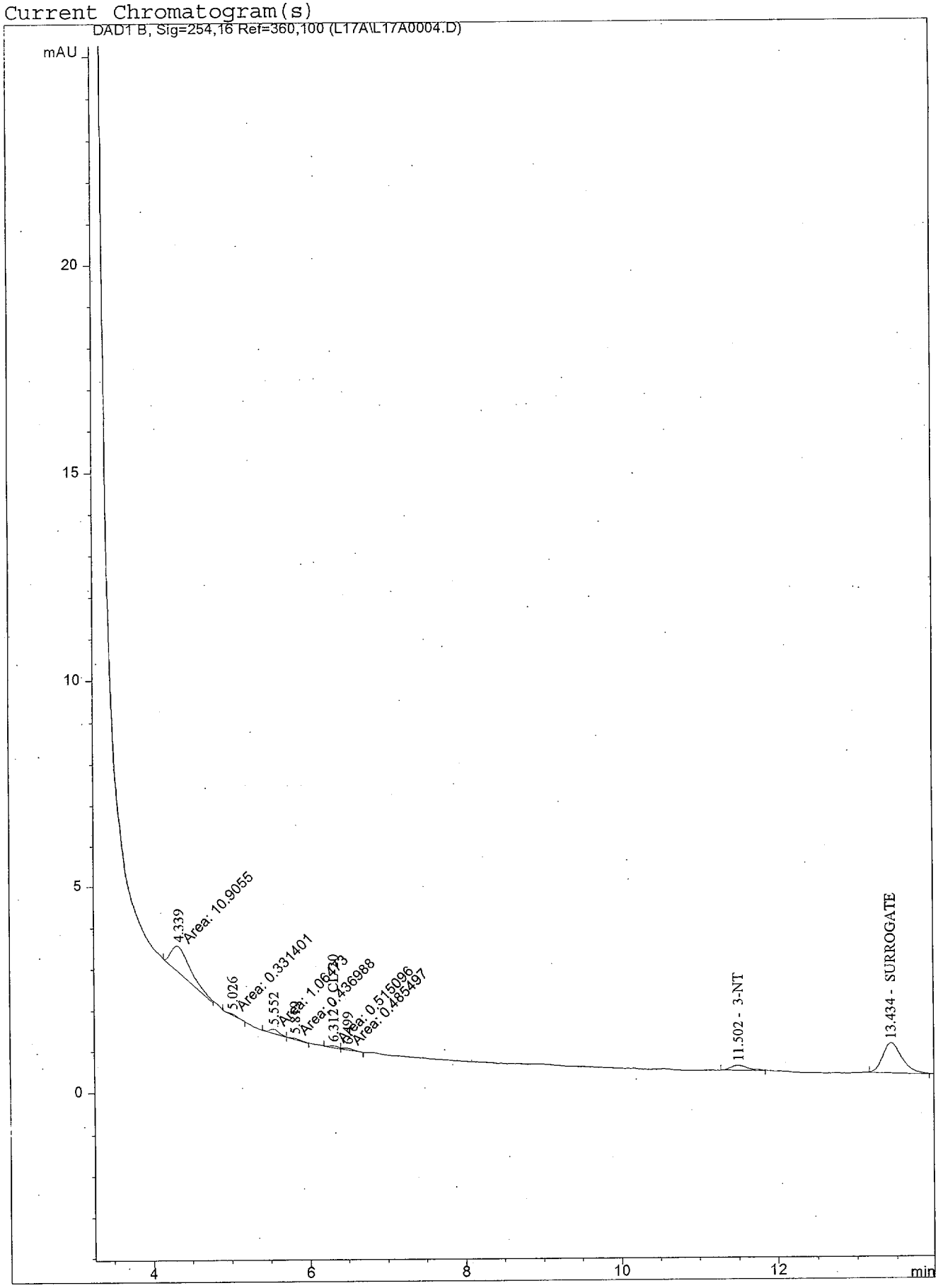
Instrument Name: Ace Data Acquisition Time:12/17/03 10:29:50
Data File name: H:\ACE\DATA\L17A\L17A0004.D
Method File: H:\ACE\METHOD\L17A2.M
Sequence File: H:\ACE\SEQUENCE\L17A.S

Dilution: 1.000 Sample Amount: 500.000
Multiplier : 0.010000 Injection Volume (ul): 30.000
(Final Vol / Sample Amt)
(ml/g or ml/ml) Operator: klr



#	Exp.RT	Meas.RT	Compound Name	Height	Amt (ppb)
1	3.853	0.000	HMX	0.00000	0.0000
2	0.000	4.339		0.63515	0.0000
3	4.917	0.000	RDX	0.00000	0.0000
4	0.000	5.026		0.04142	0.0000
5	0.000	5.552		0.11961	0.0000
6	0.000	5.819		0.04128	0.0000
7	6.056	0.000	1,3,5-TNB	0.00000	0.0000
8	6.260	6.312	CL-20	0.05808	0.1133
9	0.000	6.499		0.05171	0.0000
10	6.711	0.000	TETRYL	0.00000	0.0000
11	6.898	0.000	1,3-DNB	0.00000	0.0000
12	7.525	0.000	NB	0.00000	0.0000
13	8.099	0.000	TNT	0.00000	0.0000
14	8.320	0.000	4-AMINO	0.00000	0.0000
15	8.713	0.000	2-AMINO	0.00000	0.0000
16	8.887	0.000	2,6-DNT	0.00000	0.0000
17	9.287	0.000	2,4-DNT	0.00000	0.0000
18	10.349	0.000	2-NT	0.00000	0.0000
19	11.115	0.000	4-NT	0.00000	0.0000
20	11.702	11.502	3-NT	0.12303	~~0.2311~~ ND
21	13.276	13.434	SURROGATE	0.74498	1.4844

Current Chromatogram(s)

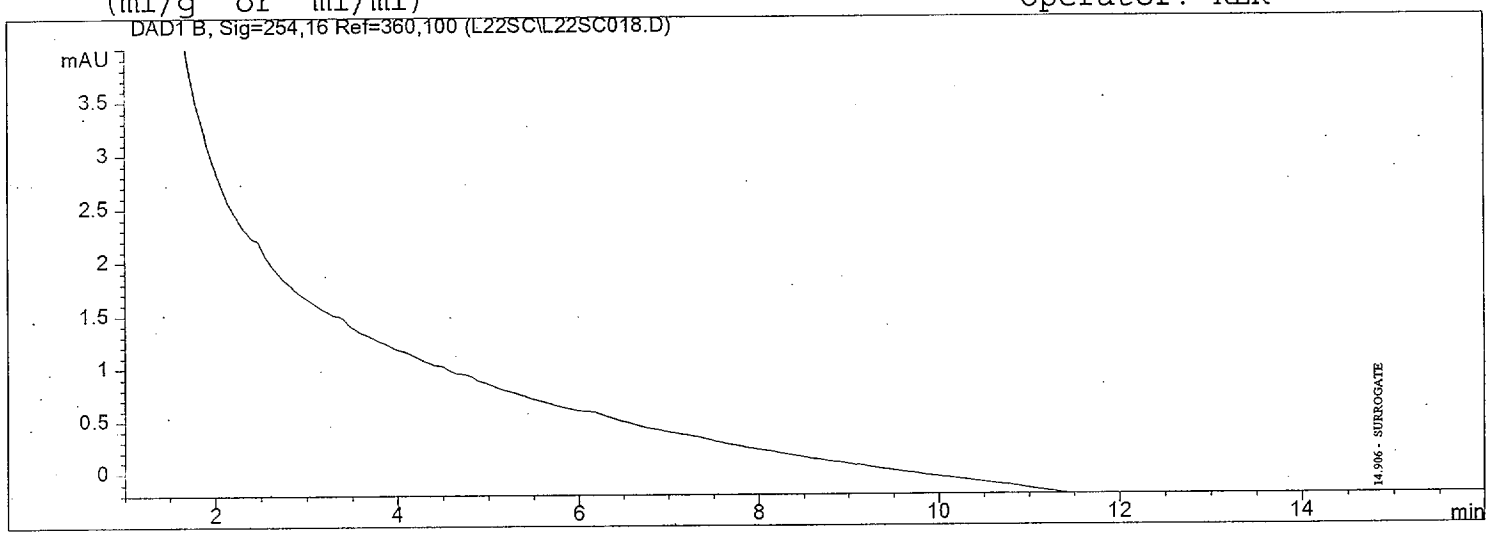


STL-KNOXVILLE Explosives Confirmation Analysis

Sample Number: F6DRG1AM Print Time:12/23/03 08:04:29

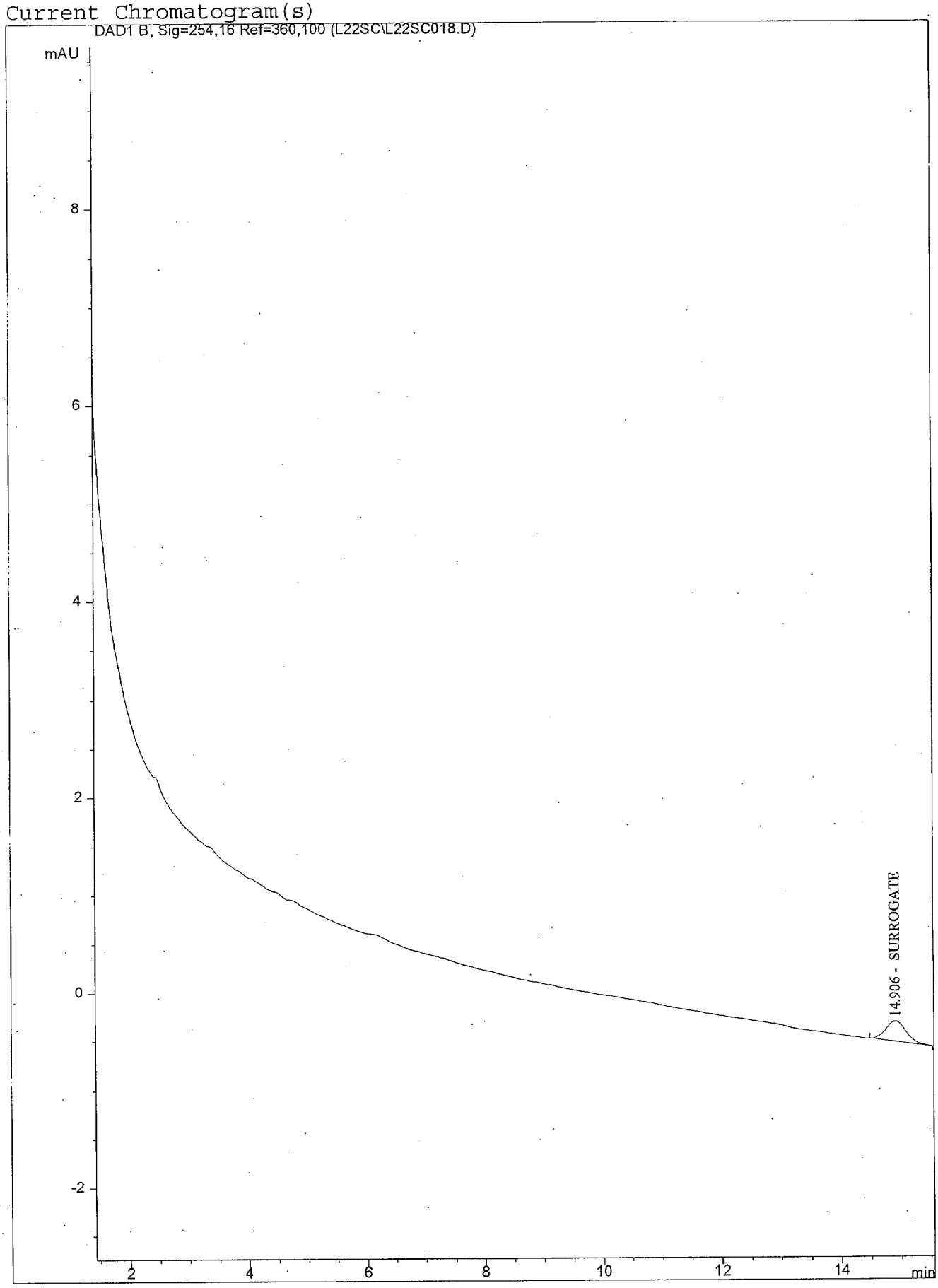
Instrument Name: Semika Data Acquisition Time:12/23/03 00:45:36
Data File name: H:\SEMEKA\DATA\L22SC\L22SC018.D
Method File: H:\SEMEKA\METHODS\L22SC.M
Sequence File:

Dilution: 1.000 Sample Amount: 500.000
Multiplier : 0.010000 Injection Volume (ul): 40.000
(Final Vol / Sample Amt)
(ml/g or ml/ml) Operator: KLR



#	Exp.RT	Meas.RT	Compound Name	Height	Amt (ppb)
1	2.239	0.000	1,3,5-TNB	0.00000	0.0000
2	2.377	0.000	HMX	0.00000	0.0000
3	2.803	0.000	RDX	0.00000	0.0000
4	3.664	0.000	1,3-DNB	0.00000	0.0000
5	4.534	0.000	TNT	0.00000	0.0000
6	5.166	0.000	NB	0.00000	0.0000
7	6.128	0.000	TETRYL	0.00000	0.0000
8	7.702	0.000	2,4-DNT	0.00000	0.0000
9	9.175	0.000	2,6-DNT	0.00000	0.0000
10	10.147	0.000	2-AMINO	0.00000	0.0000
11	11.342	0.000	4-AMINO	0.00000	0.0000
12	12.563	0.000	2- & 4-NT	0.00000	0.0000
13	13.906	0.000	3-NT	0.00000	0.0000
14	14.823	14.906	SURROGATE	0.20789	1.3190

Current Chromatogram(s)



SHAW E & I INC

Client Sample ID: DD3002

HPLC

Lot-Sample #...: H3L110180-001 **Work Order #...:** F6F1C1AA **Matrix.....:** WATER
Date Sampled...: 12/10/03 **Date Received..:** 12/11/03
Prep Date.....: 12/16/03 **Analysis Date..:** 12/17/03
Prep Batch #...: 3350322
Dilution Factor: 1 **Method.....:** SW846 8330

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
HMX	ND	0.50	ug/L	0.10
RDX	ND	0.50	ug/L	0.13
1,3,5-Trinitrobenzene	ND	0.20	ug/L	0.11
1,3-Dinitrobenzene	ND	0.20	ug/L	0.080
Tetryl	ND	0.20	ug/L	0.17
Nitrobenzene	ND	0.20	ug/L	0.070
2,4,6-Trinitrotoluene	ND	0.20	ug/L	0.080
4-Amino-2,6-dinitrotoluene	ND	0.20	ug/L	0.11
2-Amino-4,6-dinitrotoluene	ND	0.20	ug/L	0.090
2,6-Dinitrotoluene	ND	0.20	ug/L	0.11
2,4-Dinitrotoluene	ND	0.20	ug/L	0.070
2-Nitrotoluene	ND	0.20	ug/L	0.14
4-Nitrotoluene	ND	0.20	ug/L	0.17
3-Nitrotoluene	ND	0.20	ug/L	0.13

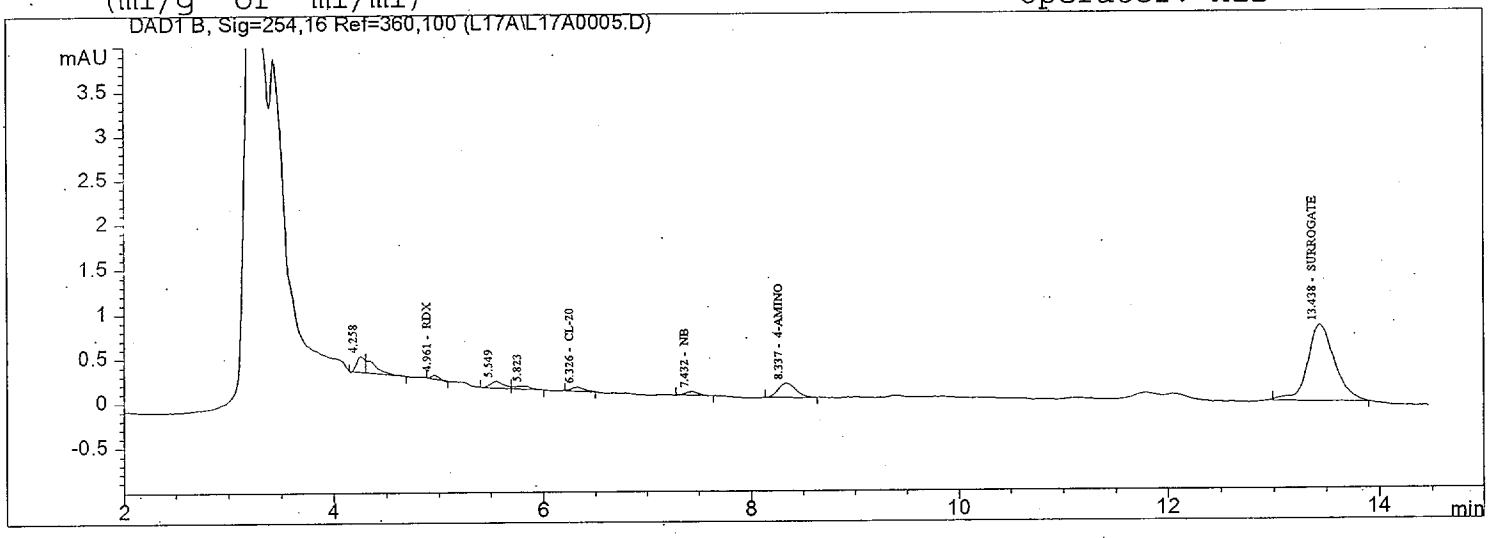
SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1-Chloro-3-nitrobenzene	98	(52 - 139)

STL-KNOXVILLE Explosives Analysis

Sample Number: F6F1C1AA Print Time:12/17/03 12:11:52

Instrument Name: Ace Data Acquisition Time:12/17/03 10:47:45
Data File name: H:\ACE\DATA\L17A\L17A0005.D
Method File: H:\ACE\METHOD\L17A2.M
Sequence File: H:\ACE\SEQUENCE\L17A.S

Dilution: 1.000 Sample Amount: 500.000
Multiplier : 0.010000 Injection Volume (ul): 30.000
(Final Vol / Sample Amt)
(ml/g or ml/ml) Operator: klr



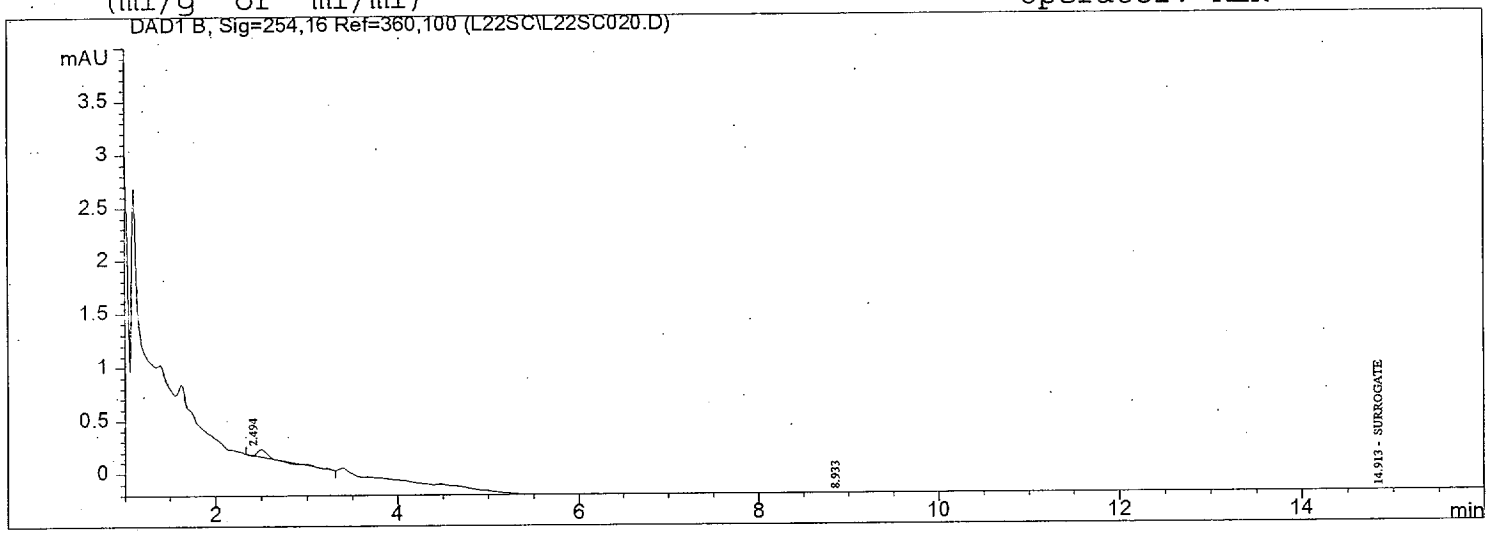
#	Exp.RT	Meas.RT	Compound Name	Height	Amt (ppb)
1	3.853	0.000	HMX	0.00000	0.0000
2	0.000	4.258		0.17999	0.0000
3	0.000	4.307		0.13903	0.0000
4	4.917	4.961	RDX	0.04862	0.0593
5	0.000	5.549		0.07578	0.0000
6	0.000	5.823		0.03567	0.0000
7	6.056	0.000	1,3,5-TNB	0.00000	0.0000
8	6.260	6.326	CL-20	0.05004	0.0976
9	6.711	0.000	TETRYL	0.00000	0.0000
10	6.898	0.000	1,3-DNB	0.00000	0.0000
11	7.525	7.432	NB	0.04341	0.0369
12	8.099	0.000	TNT	0.00000	0.0000
13	8.320	8.337	4-AMINO	0.16326	0.1985 ND
14	8.713	0.000	2-AMINO	0.00000	0.0000
15	8.887	0.000	2,6-DNT	0.00000	0.0000
16	9.287	0.000	2,4-DNT	0.00000	0.0000
17	10.349	0.000	2-NT	0.00000	0.0000
18	11.115	0.000	4-NT	0.00000	0.0000
19	11.702	0.000	3-NT	0.00000	0.0000
20	13.276	13.438	SURROGATE	0.86728	1.7281

STL-KNOXVILLE Explosives Confirmation Analysis

Sample Number: F6F1C1AA Print Time:12/23/03 08:06:16

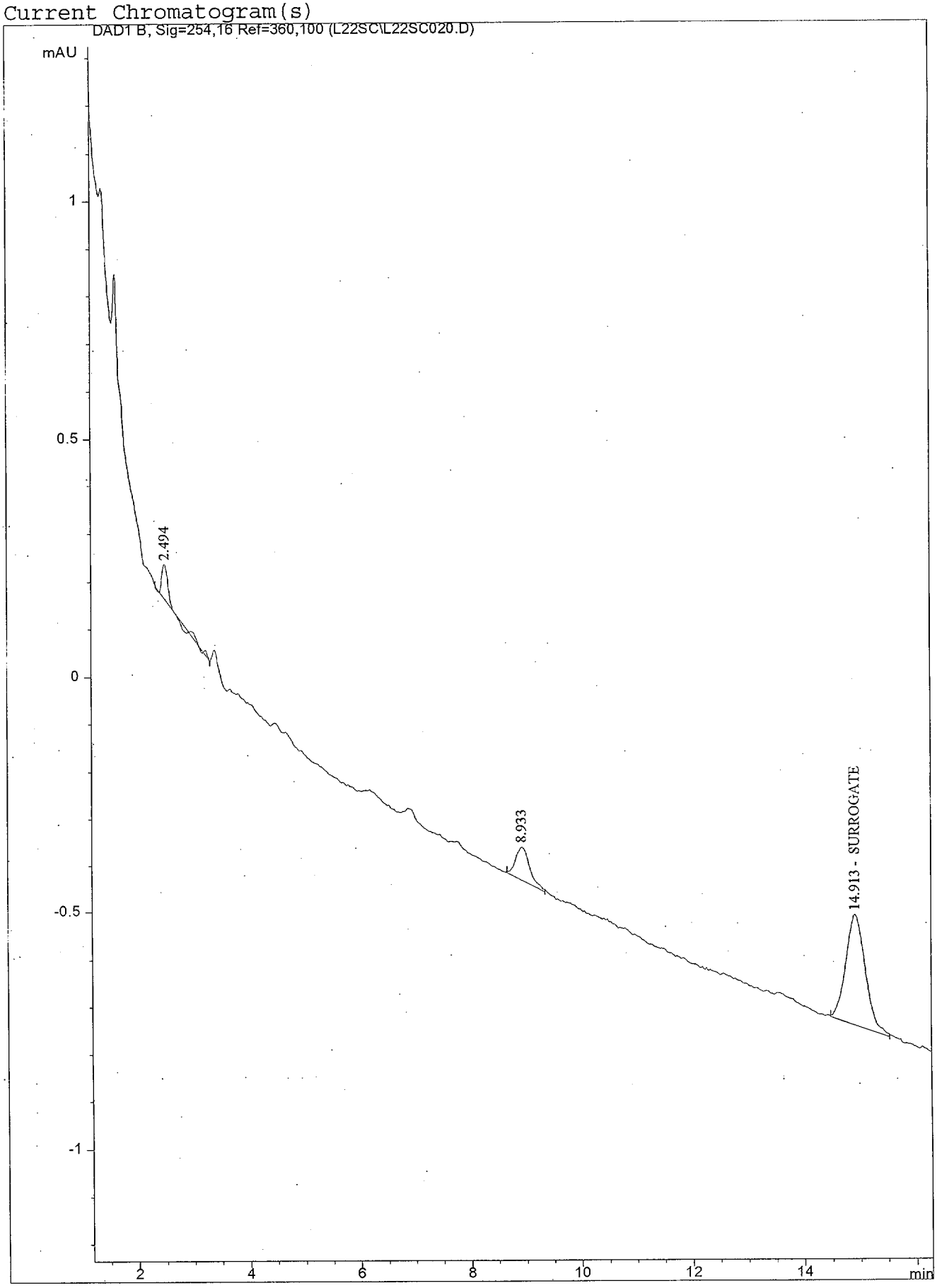
Instrument Name: Semika Data Acquisition Time:12/23/03 01:22:03
Data File name: H:\SEMEKA\DATA\L22SC\L22SC020.D
Method File: H:\SEMEKA\METHODS\L22SC.M
Sequence File:

Dilution: 1.000 Sample Amount: 500.000
Multiplier : 0.010000 Injection Volume (ul): 40.000
(Final Vol / Sample Amt)
(ml/g or ml/ml) Operator: KLR



#	Exp.RT	Meas.RT	Compound Name	Height	Amt (ppb)
1	2.239	0.000	1,3,5-TNB	0.00000	0.0000
2	2.377	0.000	HMX	0.00000	0.0000
3	0.000	2.494		0.07179	0.0000
4	2.803	0.000	RDX	0.00000	0.0000
5	3.664	0.000	1,3-DNB	0.00000	0.0000
6	4.534	0.000	TNT	0.00000	0.0000
7	5.166	0.000	NB	0.00000	0.0000
8	6.128	0.000	TETRYL	0.00000	0.0000
9	7.702	0.000	2,4-DNT	0.00000	0.0000
10	0.000	8.933		0.07299	0.0000
11	9.175	0.000	2,6-DNT	0.00000	0.0000
12	10.147	0.000	2-AMINO	0.00000	0.0000
13	11.342	0.000	4-AMINO	0.00000	0.0000
14	12.563	0.000	2- & 4-NT	0.00000	0.0000
15	13.906	0.000	3-NT	0.00000	0.0000
16	14.823	14.913	SURROGATE	0.23148	1.4687

Current Chromatogram(s)



SHAW E & I INC

Client Sample ID: DD3001

HPLC

Lot-Sample #...: H3L110180-002 **Work Order #...:** F6F2H1AM **Matrix.....:** WATER
Date Sampled...: 12/10/03 **Date Received..:** 12/11/03
Prep Date.....: 12/16/03 **Analysis Date..:** 12/17/03
Prep Batch #...: 3350322
Dilution Factor: 1 **Method.....:** SW846 8330

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
HMX	ND	0.50	ug/L	0.10
RDX	ND	0.50	ug/L	0.13
1,3,5-Trinitrobenzene	ND	0.20	ug/L	0.11
1,3-Dinitrobenzene	ND	0.20	ug/L	0.080
Tetryl	ND	0.20	ug/L	0.17
Nitrobenzene	ND	0.20	ug/L	0.070
2,4,6-Trinitrotoluene	ND	0.20	ug/L	0.080
4-Amino-2,6-dinitrotoluene	ND	0.20	ug/L	0.11
2-Amino-4,6-dinitrotoluene	ND	0.20	ug/L	0.090
2,6-Dinitrotoluene	ND	0.20	ug/L	0.11
2,4-Dinitrotoluene	ND	0.20	ug/L	0.070
2-Nitrotoluene	ND	0.20	ug/L	0.14
4-Nitrotoluene	ND	0.20	ug/L	0.17
3-Nitrotoluene	ND	0.20	ug/L	0.13

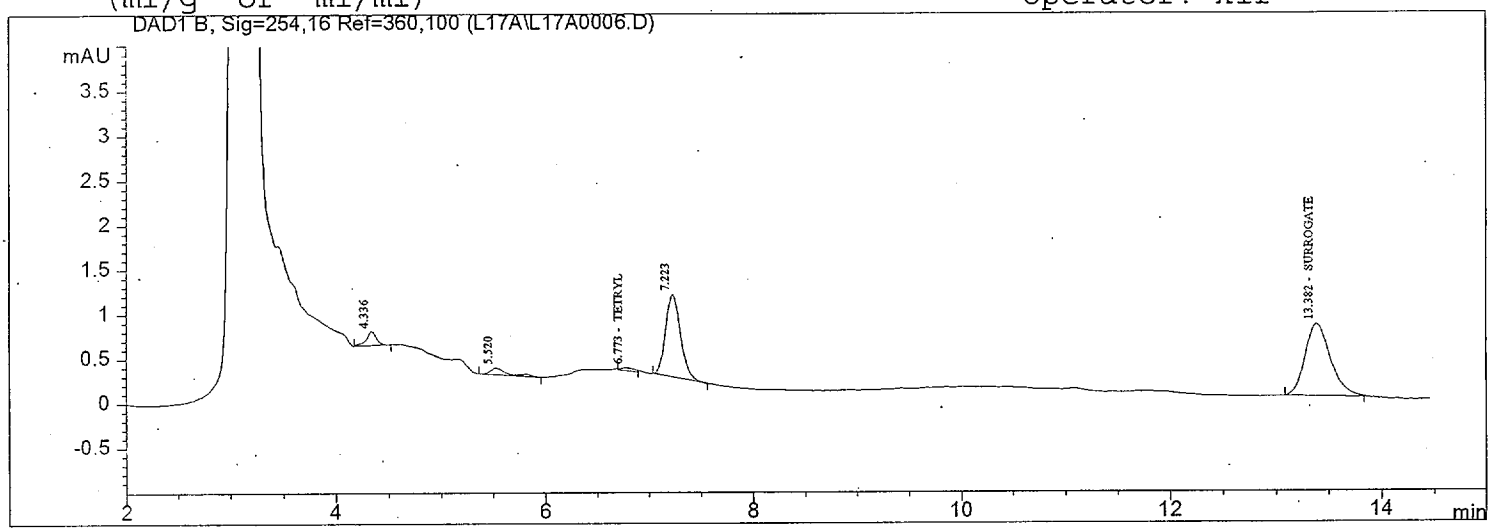
SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1-Chloro-3-nitrobenzene	92	(52 - 139)

STL-KNOXVILLE Explosives Analysis

Sample Number: F6F2H1AM Print Time:12/17/03 11:21:03

Instrument Name: Ace Data Acquisition Time:12/17/03 11:05:37
Data File name: H:\ACE\DATA\L17A\L17A0006.D
Method File: H:\ACE\METHOD\L17A2.M
Sequence File: H:\ACE\SEQUENCE\L17A.S

Dilution: 1.000 Sample Amount: 500.000
Multiplier : 0.010000 Injection Volume (ul): 30.000
(Final Vol / Sample Amt)
(ml/g or ml/ml) Operator: klr



#	Exp.RT	Meas.RT	Compound Name	Height	Amt (ppb)
1	3.853	0.000	HMX	0.00000	0.0000
2	0.000	4.336		0.15522	0.0000
3	4.917	0.000	RDX	0.00000	0.0000
4	0.000	5.520		0.07436	0.0000
5	6.056	0.000	1,3,5-TNB	0.00000	0.0000
6	6.260	0.000	CL-20	0.00000	0.0000
7	6.711	6.773	TETRYL	0.03547	0.0358
8	6.898	0.000	1,3-DNB	0.00000	0.0000
9	0.000	7.223		0.92410	0.0000
10	7.525	0.000	NB	0.00000	0.0000
11	8.099	0.000	TNT	0.00000	0.0000
12	8.320	0.000	4-AMINO	0.00000	0.0000
13	8.713	0.000	2-AMINO	0.00000	0.0000
14	8.887	0.000	2,6-DNT	0.00000	0.0000
15	9.287	0.000	2,4-DNT	0.00000	0.0000
16	10.349	0.000	2-NT	0.00000	0.0000
17	11.115	0.000	4-NT	0.00000	0.0000
18	11.702	0.000	3-NT	0.00000	0.0000
19	13.276	13.382	SURROGATE	0.81292	1.6197

SHAW E & I INC

Client Sample ID: DD3003

HPLC

Lot-Sample #...: H3L120208-001 **Work Order #...:** F6JXA1AA **Matrix.....:** WATER
Date Sampled...: 12/11/03 **Date Received..:** 12/12/03
Prep Date.....: 12/16/03 **Analysis Date..:** 12/17/03
Prep Batch #...: 3350322
Dilution Factor: 1 **Method.....:** SW846 8330

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
HMX	ND	0.50	ug/L	0.10
RDX	ND	0.50	ug/L	0.13
1,3,5-Trinitrobenzene	ND	0.20	ug/L	0.11
1,3-Dinitrobenzene	ND	0.20	ug/L	0.080
Tetryl	ND	0.20	ug/L	0.17
Nitrobenzene	ND	0.20	ug/L	0.070
2,4,6-Trinitrotoluene	ND	0.20	ug/L	0.080
4-Amino-2,6-dinitrotoluene	ND	0.20	ug/L	0.11
2-Amino-4,6-dinitrotoluene	ND	0.20	ug/L	0.090
2,6-Dinitrotoluene	ND	0.20	ug/L	0.11
2,4-Dinitrotoluene	ND	0.20	ug/L	0.070
2-Nitrotoluene	ND	0.20	ug/L	0.14
4-Nitrotoluene	ND	0.20	ug/L	0.17
3-Nitrotoluene	ND	0.20	ug/L	0.13

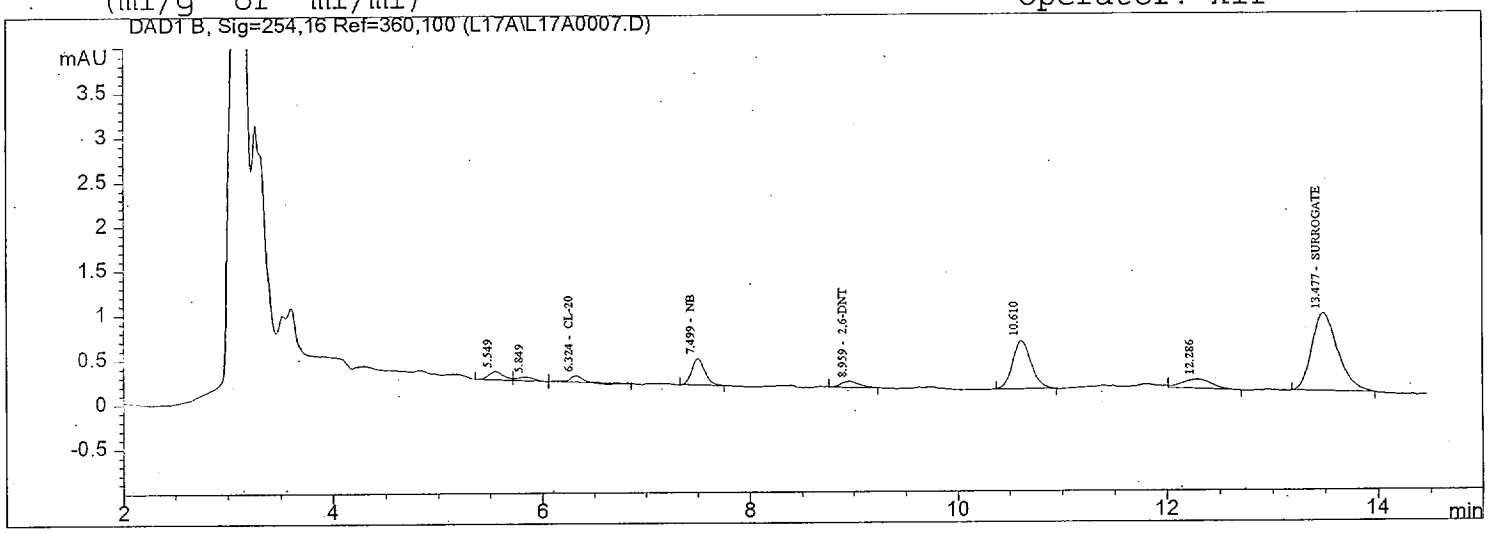
SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1-Chloro-3-nitrobenzene	97	(52 - 139)

STL-KNOXVILLE Explosives Analysis

Sample Number: F6JXA1AA Print Time:12/17/03 12:12:16

Instrument Name: Ace Data Acquisition Time:12/17/03 11:23:28
Data File name: H:\ACE\DATA\L17A\L17A0007.D
Method File: H:\ACE\METHOD\L17A2.M
Sequence File: H:\ACE\SEQUENCE\L17A.S

Dilution: 1.000 Sample Amount: 500.000
Multiplier : 0.010000 Injection Volume (ul): 30.000
(Final Vol / Sample Amt)
(ml/g or ml/ml) Operator: klr



#	Exp.RT	Meas.RT	Compound Name	Height	Amt (ppb)
1	3.853	0.000	HMX	0.00000	0.0000
2	4.917	0.000	RDX	0.00000	0.0000
3	0.000	5.549		0.09354	0.0000
4	0.000	5.849		0.04822	0.0000
5	6.056	0.000	1,3,5-TNB	0.00000	0.0000
6	6.260	6.324	CL-20	0.07526	0.1468
7	6.711	0.000	TETRYL	0.00000	0.0000
8	6.898	0.000	1,3-DNB	0.00000	0.0000
9	7.525	7.499	NB	0.29520	0.2508 ND
10	8.099	0.000	TNT	0.00000	0.0000
11	8.320	0.000	4-AMINO	0.00000	0.0000
12	8.713	0.000	2-AMINO	0.00000	0.0000
13	8.887	8.959	2,6-DNT	0.07066	0.0836
14	9.287	0.000	2,4-DNT	0.00000	0.0000
15	10.349	0.000	2-NT	0.00000	0.0000
16	0.000	10.610		0.53867	0.0000
17	11.115	0.000	4-NT	0.00000	0.0000
18	11.702	0.000	3-NT	0.00000	0.0000
19	0.000	12.286		0.10962	0.0000
20	13.276	13.477	SURROGATE	0.86529	1.7241

STL-KNOXVILLE Explosives Confirmation Analysis

Sample Number: F6JXA1AA

Print Time:12/23/03 08:07:08

Instrument Name: Semika

Data Acquisition Time:12/23/03 01:40:18

Data File name: H:\SEMEKA\DATA\L22SC\L22SC021.D

Method File: H:\SEMEKA\METHODS\L22SC.M

Sequence File:

Dilution: 1.000

Sample Amount: 500.000

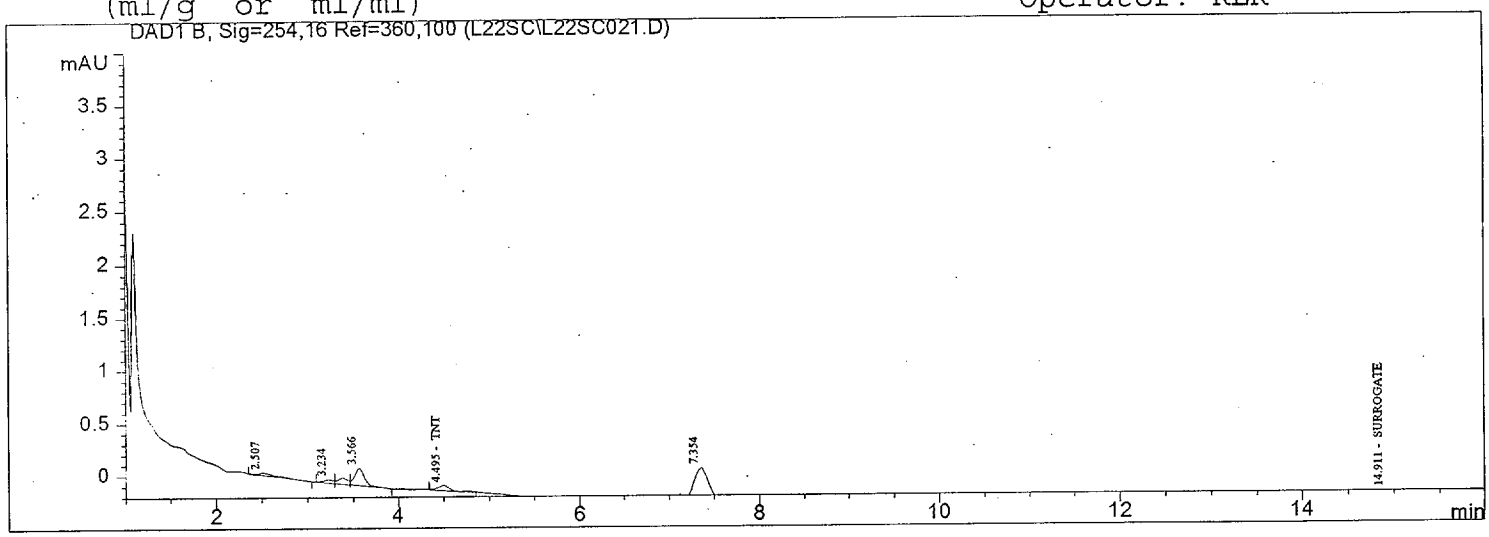
Multiplier : 0.010000

Injection Volume (ul): 40.000

(Final Vol / Sample Amt)

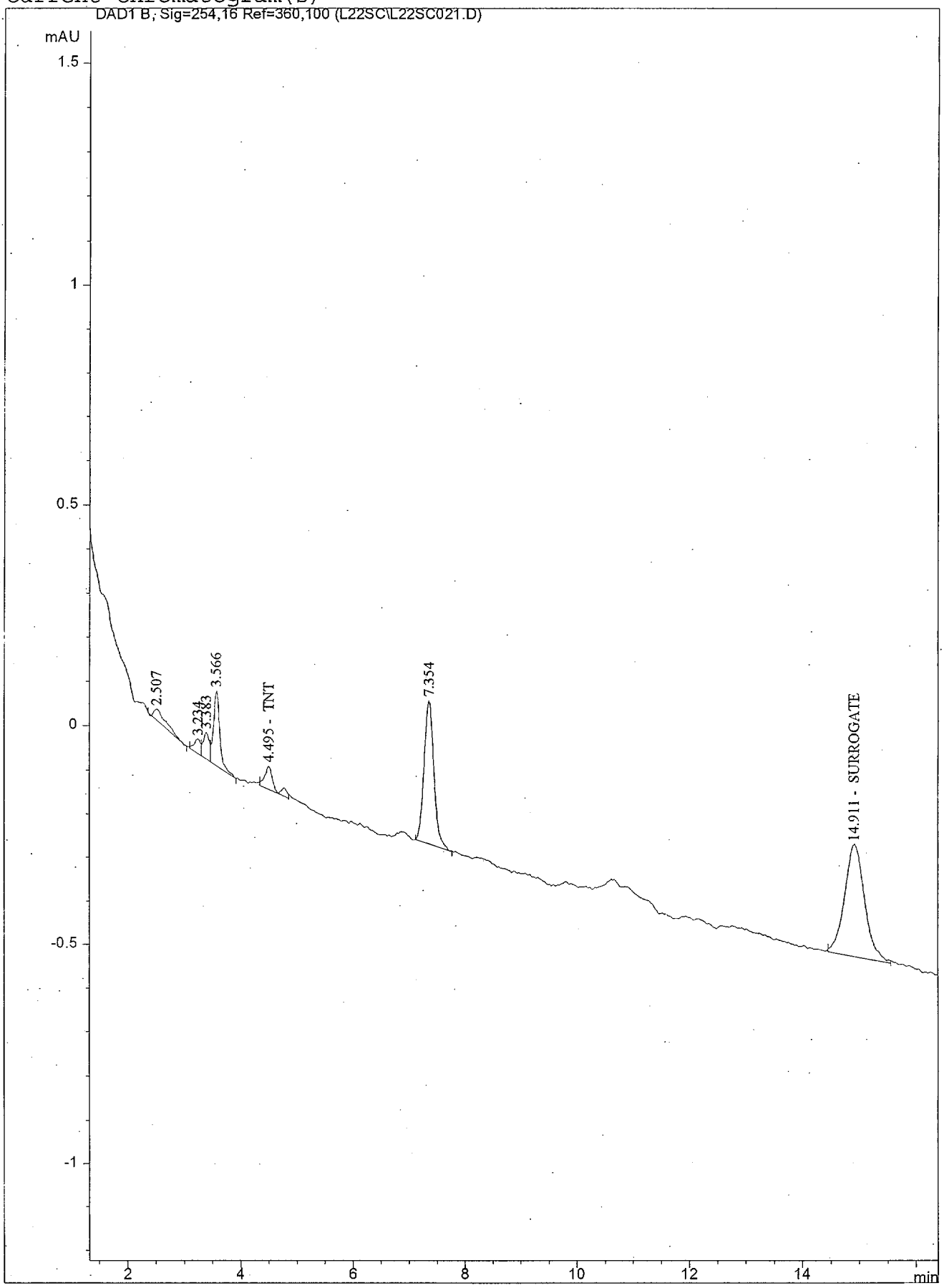
(ml/g or ml/ml)

Operator: KLR



#	Exp.RT	Meas.RT	Compound Name	Height	Amt (ppb)
1	2.239	0.000	1,3,5-TNB	0.00000	0.0000
2	2.377	0.000	HMX	0.00000	0.0000
3	0.000	2.507		0.02415	0.0000
4	2.803	0.000	RDX	0.00000	0.0000
5	0.000	3.234		0.03245	0.0000
6	0.000	3.383		0.05903	0.0000
7	0.000	3.566		0.16939	0.0000
8	3.664	0.000	1,3-DNB	0.00000	0.0000
9	4.534	4.495	TNT	0.05166	0.0552
10	5.166	0.000	NB	0.00000	0.0000
11	6.128	0.000	TETRYL	0.00000	0.0000
12	0.000	7.354		0.32545	0.0000
13	7.702	0.000	2,4-DNT	0.00000	0.0000
14	9.175	0.000	2,6-DNT	0.00000	0.0000
15	10.147	0.000	2-AMINO	0.00000	0.0000
16	11.342	0.000	4-AMINO	0.00000	0.0000
17	12.563	0.000	2- & 4-NT	0.00000	0.0000
18	13.906	0.000	3-NT	0.00000	0.0000
19	14.823	14.911	SURROGATE	0.25539	1.6204

Current Chromatogram(s)



SHAW E & I INC

Client Sample ID: DD3004

HPLC

Lot-Sample #...: H3L120208-002 **Work Order #...:** F6JX21CA **Matrix.....:** WATER
Date Sampled...: 12/11/03 **Date Received..:** 12/12/03
Prep Date.....: 12/16/03 **Analysis Date..:** 12/17/03
Prep Batch #...: 3350322
Dilution Factor: 1 **Method.....:** SW846 8330

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
HMX	ND	0.50	ug/L	0.10
RDX	ND	0.50	ug/L	0.13
1,3,5-Trinitrobenzene	ND	0.20	ug/L	0.11
1,3-Dinitrobenzene	ND	0.20	ug/L	0.080
Tetryl	ND	0.20	ug/L	0.17
Nitrobenzene	ND	0.20	ug/L	0.070
2,4,6-Trinitrotoluene	ND	0.20	ug/L	0.080
4-Amino-2,6-dinitrotoluene	ND	0.20	ug/L	0.11
2-Amino-4,6-dinitrotoluene	ND	0.20	ug/L	0.090
2,6-Dinitrotoluene	ND	0.20	ug/L	0.11
2,4-Dinitrotoluene	ND	0.20	ug/L	0.070
2-Nitrotoluene	ND	0.20	ug/L	0.14
4-Nitrotoluene	ND	0.20	ug/L	0.17
3-Nitrotoluene	ND	0.20	ug/L	0.13

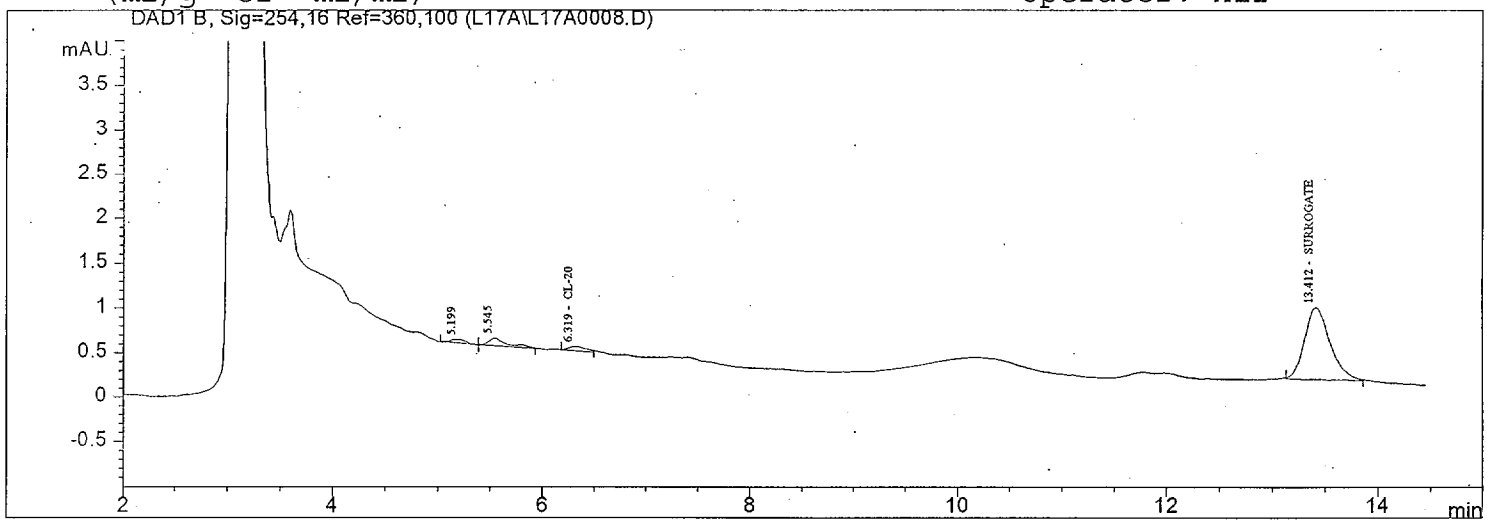
SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1-Chloro-3-nitrobenzene	91	(52 - 139)

STL-KNOXVILLE Explosives Analysis

Sample Number: F6JX21CA Print Time:12/17/03 11:56:46

Instrument Name: Ace Data Acquisition Time:12/17/03 11:41:20
Data File name: H:\ACE\DATA\L17A\L17A0008.D
Method File: H:\ACE\METHOD\L17A2.M
Sequence File: H:\ACE\SEQUENCE\L17A.S

Dilution: 1.000 Sample Amount: 500.000
Multiplier : 0.010000 Injection Volume (ul): 30.000
(Final Vol / Sample Amt)
(ml/g or ml/ml) Operator: klr



#	Exp.RT	Meas.RT	Compound Name	Height	Amt (ppb)
1	3.853	0.000	HMX	0.00000	0.0000
2	4.917	0.000	RDX	0.00000	0.0000
3	0.000	5.199		0.04549	0.0000
4	0.000	5.545		0.08891	0.0000
5	6.056	0.000	1,3,5-TNB	0.00000	0.0000
6	6.260	6.319	CL-20	0.05157	0.1006
7	6.711	0.000	TETRYL	0.00000	0.0000
8	6.898	0.000	1,3-DNB	0.00000	0.0000
9	7.525	0.000	NB	0.00000	0.0000
10	8.099	0.000	TNT	0.00000	0.0000
11	8.320	0.000	4-AMINO	0.00000	0.0000
12	8.713	0.000	2-AMINO	0.00000	0.0000
13	8.887	0.000	2,6-DNT	0.00000	0.0000
14	9.287	0.000	2,4-DNT	0.00000	0.0000
15	10.349	0.000	2-NT	0.00000	0.0000
16	11.115	0.000	4-NT	0.00000	0.0000
17	11.702	0.000	3-NT	0.00000	0.0000
18	13.276	13.412	SURROGATE	0.81136	1.6166

SHAW E & I INC

Client Sample ID: DD3005

HPLC

Lot-Sample #...: H3L120208-003 **Work Order #...:** F6J0A1AM **Matrix.....:** WATER
Date Sampled...: 12/11/03 **Date Received..:** 12/12/03
Prep Date.....: 12/16/03 **Analysis Date..:** 12/17/03
Prep Batch #...: 3350322
Dilution Factor: 1 **Method.....:** SW846 8330

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
HMX	ND	0.50	ug/L	0.10
RDX	ND	0.50	ug/L	0.13
1,3,5-Trinitrobenzene	ND	0.20	ug/L	0.11
1,3-Dinitrobenzene	ND	0.20	ug/L	0.080
Tetryl	ND	0.20	ug/L	0.17
Nitrobenzene	ND	0.20	ug/L	0.070
2,4,6-Trinitrotoluene	ND	0.20	ug/L	0.080
4-Amino-2,6-dinitrotoluene	ND	0.20	ug/L	0.11
2-Amino-4,6-dinitrotoluene	ND	0.20	ug/L	0.090
2,6-Dinitrotoluene	ND	0.20	ug/L	0.11
2,4-Dinitrotoluene	ND	0.20	ug/L	0.070
2-Nitrotoluene	ND	0.20	ug/L	0.14
4-Nitrotoluene	ND	0.20	ug/L	0.17
3-Nitrotoluene	ND	0.20	ug/L	0.13

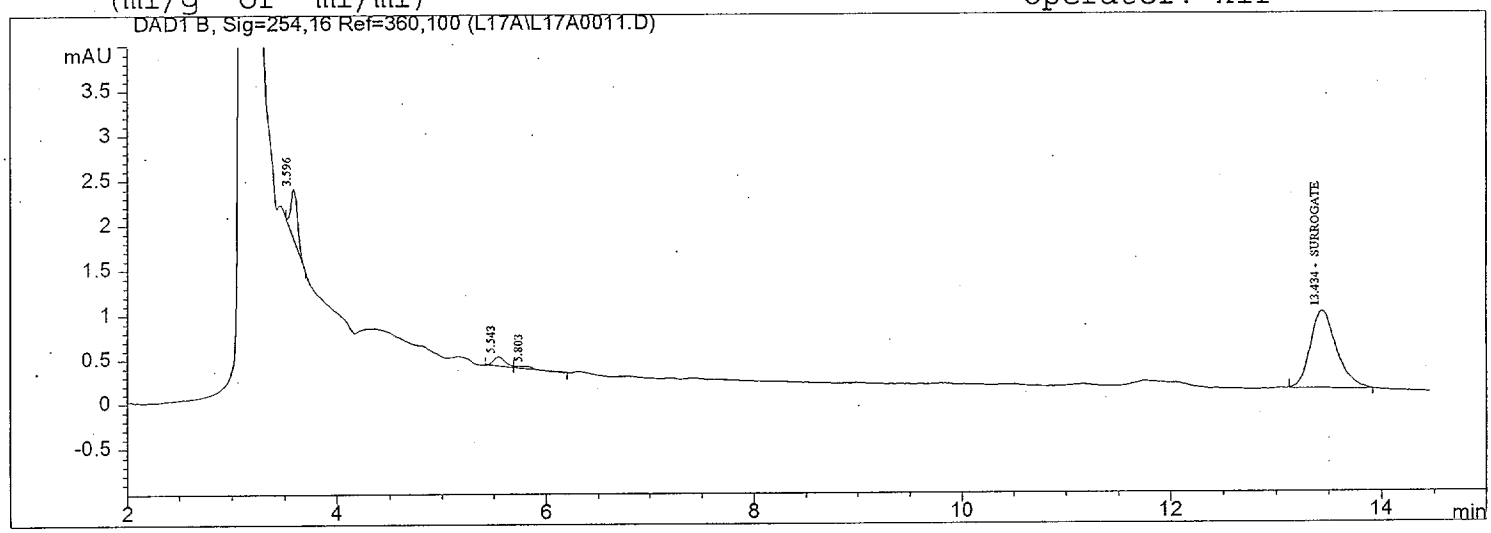
SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1-Chloro-3-nitrobenzene	99	(52 - 139)

STL-KNOXVILLE Explosives Analysis

Sample Number: F6J0A1AM Print Time:12/17/03 12:51:20

Instrument Name: Ace Data Acquisition Time:12/17/03 12:34:57
Data File name: H:\ACE\DATA\L17A\L17A0011.D
Method File: H:\ACE\METHOD\L17A2.M
Sequence File: H:\ACE\SEQUENCE\L17A.S

Dilution: 1.000 Sample Amount: 500.000
Multiplier : 0.010000 Injection Volume (ul): 30.000
(Final Vol / Sample Amt)
(ml/g or ml/ml) Operator: klr



#	Exp.RT	Meas.RT	Compound Name	Height	Amt (ppb)
1	0.000	3.596		0.57785	0.0000
2	3.853	0.000	HMX	0.00000	0.0000
3	4.917	0.000	RDX	0.00000	0.0000
4	0.000	5.543		0.10583	0.0000
5	0.000	5.803		0.03167	0.0000
6	6.056	0.000	1,3,5-TNB	0.00000	0.0000
7	6.260	0.000	CL-20	0.00000	0.0000
8	6.711	0.000	TETRYL	0.00000	0.0000
9	6.898	0.000	1,3-DNB	0.00000	0.0000
10	7.525	0.000	NB	0.00000	0.0000
11	8.099	0.000	TNT	0.00000	0.0000
12	8.320	0.000	4-AMINO	0.00000	0.0000
13	8.713	0.000	2-AMINO	0.00000	0.0000
14	8.887	0.000	2,6-DNT	0.00000	0.0000
15	9.287	0.000	2,4-DNT	0.00000	0.0000
16	10.349	0.000	2-NT	0.00000	0.0000
17	11.115	0.000	4-NT	0.00000	0.0000
18	11.702	0.000	3-NT	0.00000	0.0000
19	13.276	13.434	SURROGATE	0.87811	1.7496

Standards Data

STL Knoxville HPLC Initial Calibration Data Review / Narrative Checklist
Methods 8330 by KNOX-LC-0001 Rev 9 and 8332 by KNOX-LC-0005, Rev. 0

 8330 + CL-20 ICAL

Analysis Date:	11/13/03	Instrument/File ID:	K13A2CAL	Scanned ☑

Review Items **A. Initial Calibration**	Yes	No	NA	2nd ✓	If No, why is data reportable?
1. Were at least ***5-levels*** of each analyte and surrogate analyzed?	✓			✓	
2. Were ***all standard used*** in the curve?	✓			✓	☐ [ic1] Lowest std removed, but RL adjusted. ☐ [ic2] Highest std removed, but linear range adjusted. ☐ [ic3] Std _____ reanalyzed, and reanalysis used.
3. Is low level standard concentration ≤ ***RL***?	✓			✓	
4. Are ***%RSD*** ≤20% or ***correlation*** coefficients ≥0.995? (No 2nd or 3rd order curves allowed.)	✓			✓	
5. Was a ***2nd source*** verification standard analyzed & were calculated concentrations < ***15%D*** from cal. std?	✓		~~✓~~	~~N/A~~ ✓ mof 11/24/03	2nd Source Analyzed on 11/26/03
6. Was each run checked for ***saturation***?	✓			✓	
7. Is ***integration*** acceptable?	✓			✓	
8. If ***manual integrations*** were performed, are they clearly identified, initialed, dated and reason given?	✓			✓	Reasons: 1) Corrected split peak; 2) Unresolved peak; 3) Tailing; 4) RT shift; 5) Wrong peak selected; 6) Other
9. Was ICAL method file processed using the ***correct data files***? (Analyst should compare area or peak height on chromatograms to calibration summary for all analytes. 2nd level reviewer should check 20% of analytes.)	✓			✓	
10. Were the standards ***scanned properly***?	✓				

Analyst: KM	Date: 11/13/03	2nd Level Reviewer : mof	Date: 11/14/03
Comments:		Comments:	

STL KNOXVILLE--EXPLOSIVES RUNLOG

Operator: KLR
PM Performed: Yes
Inj. Vol.: 30ul
Instrument: ACE

Sample ID	File Name	Dilution	Run Time
CL-20 STD AMB	K13A0001.D	1.000	11/13/03 13:44:52
CL-20 STD CLE	K13A0002.D	1.000	11/13/03 14:02:43
CL-20 STD AMB	K13A0003.D	1.000	11/13/03 14:20:36
CL-20 STD CLE	K13A0004.D	1.000	11/13/03 14:38:27
ICAL #1 LC144	K13A0005.D	1.000	11/13/03 14:56:13
ICAL #2 LC144	K13A0006.D	1.000	11/13/03 15:13:51
ICAL #3 LC144	K13A0007.D	1.000	11/13/03 15:31:39
ICAL #4 LC144	K13A0008.D	1.000	11/13/03 15:49:21
ICAL #5 LC144	K13A0009.D	1.000	11/13/03 16:07:00
ICAL #6 LC144	K13A0010.D	1.000	11/13/03 16:24:47

STL KNOXVILLE--EXPLOSIVES RUNLOG

Operator: Kh
PM Performed: No
Inj. Vol.: 30ul
Instrument: ACE

DNU, wrong injection volume
Kh 11/26/03
No Data Reported

Sample ID	File Name	Dilution	Run Time
WARM UP	K26A0001.D	1.000	11/26/03 11:06:14
> MRL LC1468	K26A0002.D	1.000	11/26/03 11:24:07
CCV LC1468	K26A0003.D	1.000	11/26/03 11:42:02
8330 ICV LC14	K26A0004.D	1.000	11/26/03 11:59:58
CCV LC1468	K26A0005.D	1.000	11/26/03 12:17:54
MRL LC1468	K26A0006.D	1.000	11/26/03 12:35:42

Calibration Table

Calib. Data Modified : 11/19/03 10:34:51 AM

Calculate : External Standard
Based on : Peak Height

Rel. Reference Window : 4.000 %
Abs. Reference Window : 0.000 min
Rel. Non-ref. Window : 4.000 %
Abs. Non-ref. Window : 0.000 min
Uncalibrated Peaks : not reported
Partial Calibration : No recalibration if peaks missing

Curve Type : Linear
Origin : Forced
Weight : Equal

Recalibration Settings:
Average Response : Average all calibrations
Average Retention Time: Average all calibrations

Calibration Report Options :
Printout of recalibrations within a sequence:
Normal Report after Recalibration
If the sequence is done with bracketing:
Results of first cycle (ending previous bracket)

Signal 1: DAD1 B, Sig=254,16 Ref=360,100

RetTime [min]	Sig	Lvl	Amount [ppb]	Height	Amt/Height	Ref	Grp	Name
3.845	1	1	20.00000	2.04113e-1	97.98482			HMX
		2	60.00000	6.28491e-1	95.46684			
		3	120.00000	1.26521	94.84621			
		4	240.00000	2.34692	102.26191			
		5	480.00000	4.78683	100.27508			
		6	960.00000	9.56118	100.40597			
4.881	1	1	20.00000	1.75274e-1	114.10698			RDX
		2	60.00000	5.27783e-1	113.68299			
		3	120.00000	1.01540	118.17980			
		4	240.00000	2.07907	115.43610			
		5	480.00000	4.08311	117.55748			
		6	960.00000	7.77138	123.53014			
6.022	1	1	20.00000	3.34959e-1	59.70873			1,3,5-TNB
		2	60.00000	1.01470	59.13073			
		3	120.00000	1.97959	60.61874			
		4	240.00000	4.04869	59.27851			
		5	480.00000	8.00663	59.95028			
		6	960.00000	15.51764	61.86507			
6.231	1	1	20.00000	1.00455e-1	199.09328			CL-20
		2	60.00000	2.94324e-1	203.85711			
		3	120.00000	6.01837e-1	199.38952			
		4	240.00000	1.25228	191.65101			

RetTime [min]	Sig	Lvl	Amount [ppb]	Height	Amt/Height	Ref	Grp	Name
		5	480.00000	2.45420	195.58308			
		6	960.00000	4.92168	195.05529			
6.678	1	1	20.00000	2.10254e-1	95.12292			TETRYL
		2	60.00000	6.15741e-1	97.44350			
		3	120.00000	1.21057	99.12725			
		4	240.00000	2.45253	97.85806			
		5	480.00000	4.80682	99.85806			
		6	960.00000	9.45330	101.55182			
6.863	1	1	20.00000	4.50926e-1	44.35319			1,3-DNB
		2	60.00000	1.31996	45.45606			
		3	120.00000	2.57586	46.58646			
		4	240.00000	5.23097	45.88057			
		5	480.00000	10.28920	46.65087			
		6	960.00000	20.01932	47.95368			
7.491	1	1	20.00000	2.52535e-1	79.19681			NB
		2	60.00000	7.45097e-1	80.52638			
		3	120.00000	1.44743	82.90562			
		4	240.00000	2.96638	80.90658			
		5	480.00000	5.78918	82.91329			
		6	960.00000	11.18705	85.81352			
8.071	1	1	20.00000	2.46157e-1	81.24885			TNT
		2	60.00000	7.40933e-1	80.97902			
		3	120.00000	1.45100	82.70181			
		4	240.00000	2.89864	82.79740			
		5	480.00000	5.73870	83.64260			
		6	960.00000	11.29598	84.98597			
8.281	1	1	20.00000	1.74501e-1	114.61280			4-AMINO
		2	60.00000	5.14048e-1	116.72058			
		3	120.00000	1.01977	117.67344			
		4	240.00000	2.01564	119.06891			
		5	480.00000	3.96145	121.16785			
		6	960.00000	7.87488	121.90656			
8.679	1	1	20.00000	2.14993e-1	93.02619			2-AMINO
		2	60.00000	6.29300e-1	95.34397			
		3	120.00000	1.21583	98.69781			
		4	240.00000	2.44140	98.30435			
		5	480.00000	4.83610	99.25359			
		6	960.00000	9.38538	102.28678			
8.858	1	1	20.00000	1.83016e-1	109.28019			2,6-DNT
		2	60.00000	5.41511e-1	110.80113			
		3	120.00000	1.05645	113.58760			
		4	240.00000	2.05827	116.60281			
		5	480.00000	4.10223	117.00951			
		6	960.00000	8.07735	118.85080			
9.261	1	1	20.00000	2.76379e-1	72.36435			2,4-DNT
		2	60.00000	8.31559e-1	72.15366			
		3	120.00000	1.62177	73.99309			
		4	240.00000	3.25950	73.63083			
		5	480.00000	6.45645	74.34427			
		6	960.00000	12.68954	75.65286			
10.331	1	1	20.00000	1.12088e-1	178.43128			2-NT
		2	60.00000	3.36358e-1	178.38117			
		3	120.00000	6.48957e-1	184.91204			
		4	240.00000	1.29501	185.32652			
		5	480.00000	2.55032	188.21188			
		6	960.00000	5.02671	190.97964			

RetTime [min]	Sig	Lvl	Amount [ppb]	Height	Amt/Height	Ref	Grp	Name
11.105	1	1	20.00000	8.93713e-2	223.78560			4-NT
		2	60.00000	2.62631e-1	228.45770			
		3	120.00000	5.22483e-1	229.67234			
		4	240.00000	1.02902	233.23085			
		5	480.00000	2.04578	234.62961			
		6	960.00000	4.02541	238.48476			
11.694	1	1	20.00000	1.17519e-1	170.18453			3-NT
		2	60.00000	3.35363e-1	178.91077			
		3	120.00000	6.60656e-1	181.63754			
		4	240.00000	1.31114	183.04676			
		5	480.00000	2.57905	186.11492			
		6	960.00000	5.08572	188.76369			
13.271	1	1	11.77000	6.43706e-2	182.84748			SURROGATE
		2	35.30000	1.90240e-1	185.55499			
		3	70.60000	3.73461e-1	189.04273			
		4	141.20000	7.16028e-1	197.19892			
		5	282.40000	1.43205	197.20039			
		6	564.80000	2.82209	200.13549			

4 Warnings or Errors :

Warning : Overlapping peak time windows at 6.022 min, signal 1
Warning : Overlapping peak time windows at 6.678 min, signal 1
Warning : Overlapping peak time windows at 8.071 min, signal 1
Warning : Overlapping peak time windows at 8.679 min, signal 1

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Peak Sum Table

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No Entries in table

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Calibration Curves

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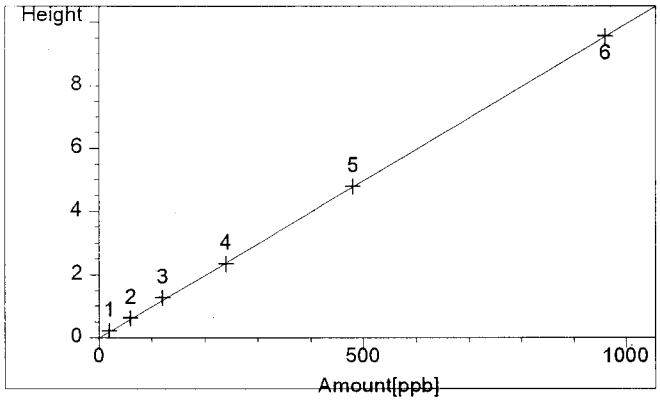
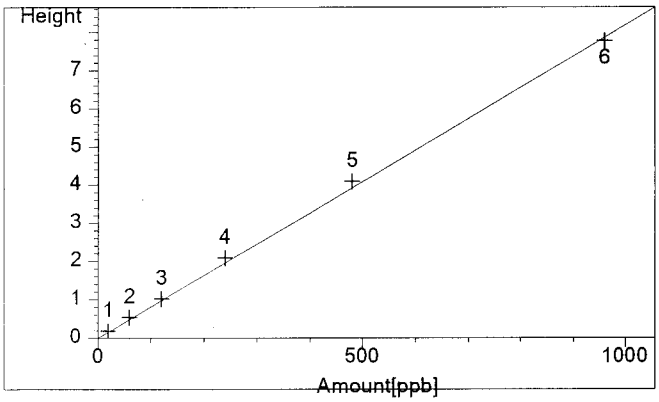
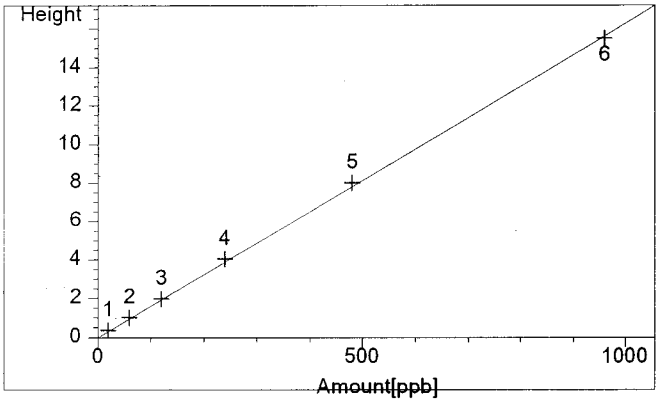


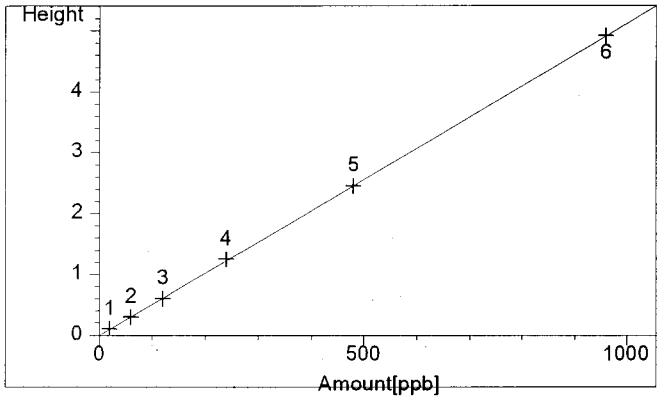
HMX at exp. RT: 3.845
DAD1 B, Sig=254,16 Ref=360,100
Correlation: 0.99997
Residual Std. Dev.: 0.03950
Formula: y = mx
m: 9.96197e-3
x: Amount[ppb]
y: Height



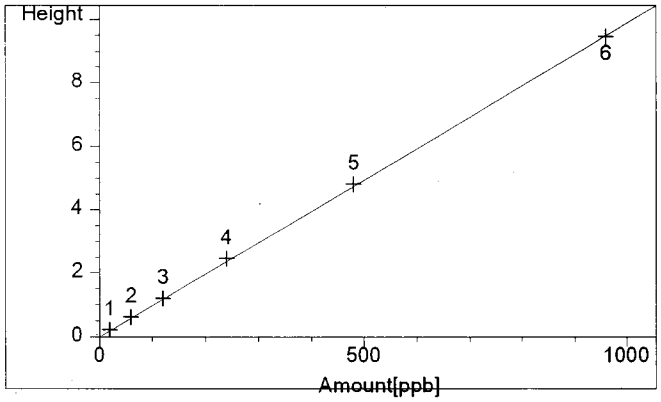
RDX at exp. RT: 4.881
DAD1 B, Sig=254,16 Ref=360,100
Correlation: 0.99972
Residual Std. Dev.: 0.09639
Formula: y = mx
m: 8.20555e-3
x: Amount[ppb]
y: Height



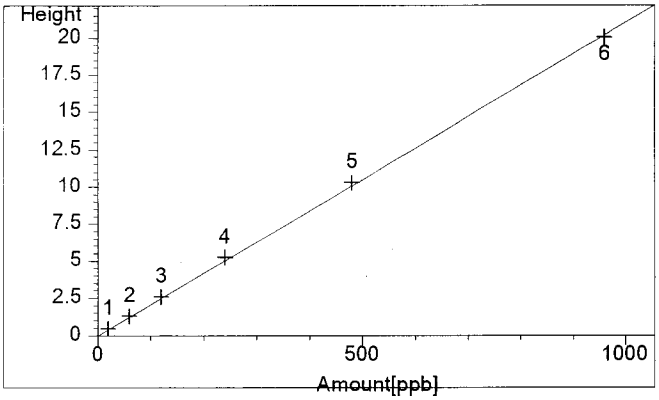
1,3,5-TNB at exp. RT: 6.022
DAD1 B, Sig=254,16 Ref=360,100
Correlation: 0.99989
Residual Std. Dev.: 0.11918
Formula: y = mx
m: 1.63004e-2
x: Amount[ppb]
y: Height



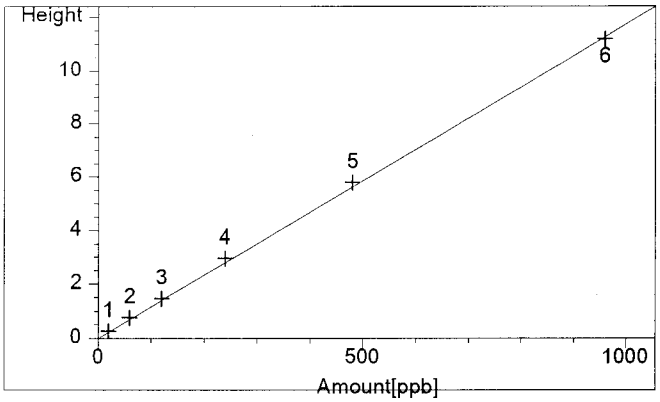
CL-20 at exp. RT: 6.231
DAD1 B, Sig=254,16 Ref=360,100
Correlation: 0.99999
Residual Std. Dev.: 0.01328
Formula: y = mx
m: 5.12644e-3
x: Amount[ppb]
y: Height



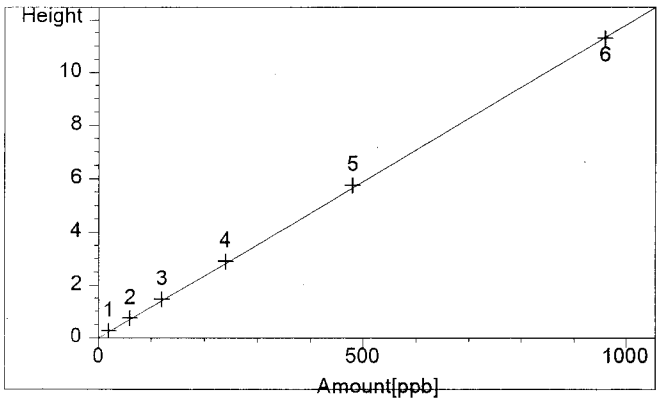
TETRYL at exp. RT: 6.678
DAD1 B, Sig=254,16 Ref=360,100
Correlation: 0.99995
Residual Std. Dev.: 0.05013
Formula: y = mx
m: 9.90022e-3
x: Amount[ppb]
y: Height



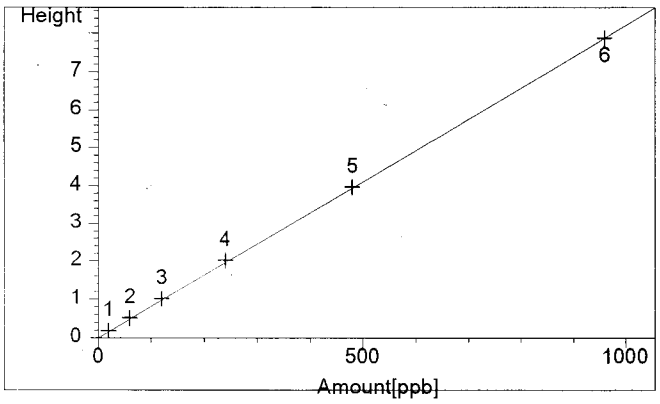
1,3-DNB at exp. RT: 6.863
DAD1 B, Sig=254,16 Ref=360,100
Correlation: 0.99990
Residual Std. Dev.: 0.14649
Formula: y = mx
m: 2.10180e-2
x: Amount [ppb]
y: Height



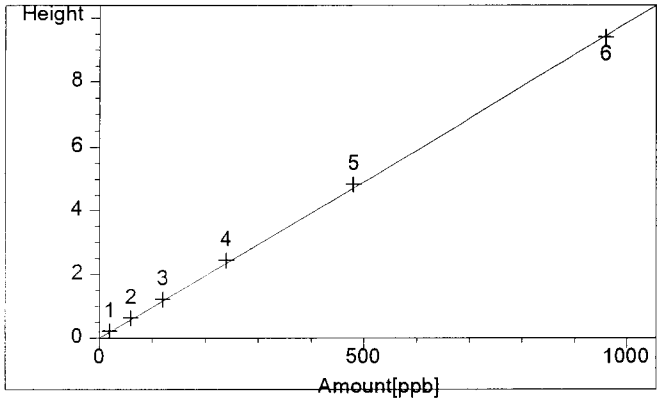
NB at exp. RT: 7.491
DAD1 B, Sig=254,16 Ref=360,100
Correlation: 0.99984
Residual Std. Dev.: 0.10501
Formula: y = mx
m: 1.17702e-2
x: Amount [ppb]
y: Height



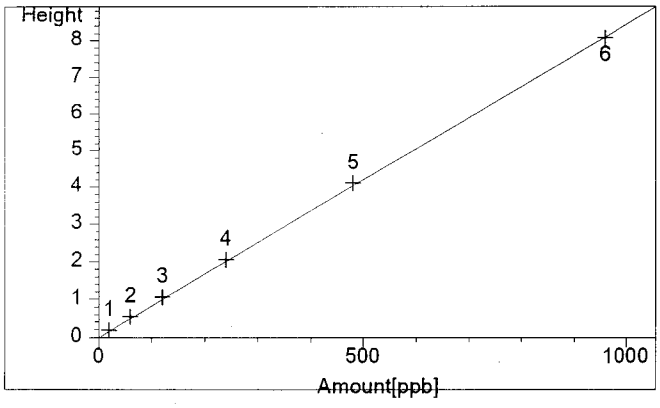
TNT at exp. RT: 8.071
DAD1 B, Sig=254,16 Ref=360,100
Correlation: 0.99996
Residual Std. Dev.: 0.05068
Formula: y = mx
m: 1.18224e-2
x: Amount [ppb]
y: Height



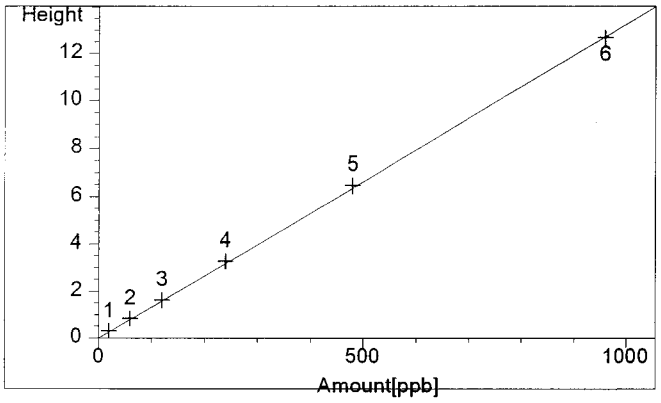
4-AMINO at exp. RT: 8.281
DAD1 B, Sig=254,16 Ref=360,100
Correlation: 0.99998
Residual Std. Dev.: 0.02812
Formula: y = mx
m: 8.22626e-3
x: Amount [ppb]
y: Height



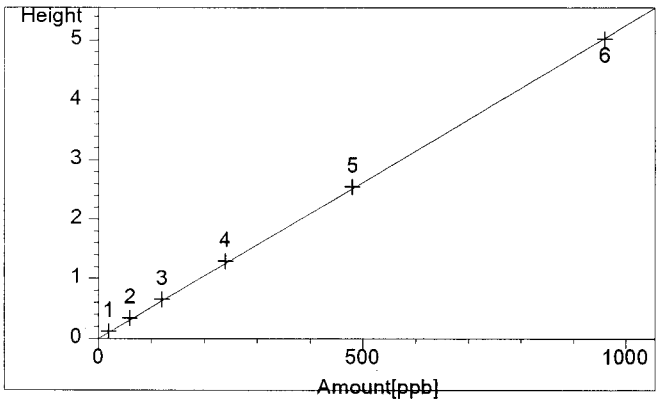
2-AMINO at exp. RT: 8.679
DAD1 B, Sig=254,16 Ref=360,100
Correlation: 0.99989
Residual Std. Dev.: 0.07145
Formula: y = mx
m: 9.85764e-3
x: Amount[ppb]
y: Height



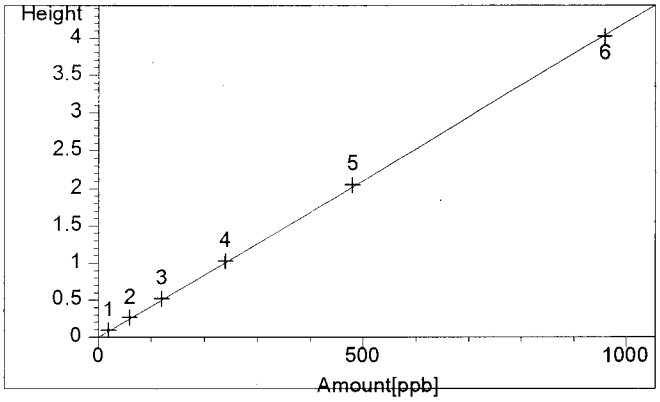
2,6-DNT at exp. RT: 8.858
DAD1 B, Sig=254,16 Ref=360,100
Correlation: 0.99996
Residual Std. Dev.: 0.03856
Formula: y = mx
m: 8.45296e-3
x: Amount[ppb]
y: Height



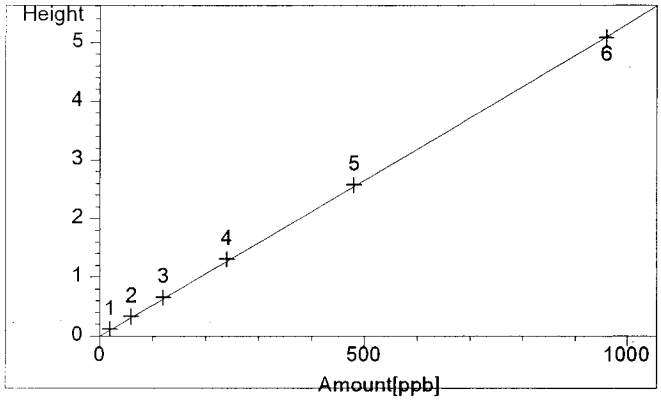
2,4-DNT at exp. RT: 9.261
DAD1 B, Sig=254,16 Ref=360,100
Correlation: 0.99996
Residual Std. Dev.: 0.05927
Formula: y = mx
m: 1.32845e-2
x: Amount[ppb]
y: Height



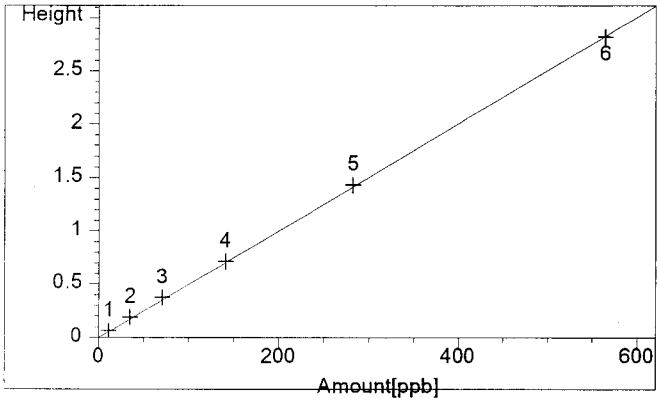
2-NT at exp. RT: 10.331
DAD1 B, Sig=254,16 Ref=360,100
Correlation: 0.99996
Residual Std. Dev.: 0.02462
Formula: y = mx
m: 5.26132e-3
x: Amount[ppb]
y: Height



4-NT at exp. RT: 11.105
DAD1 B, Sig=254,16 Ref=360,100
Correlation: 0.99996
Residual Std. Dev.: 0.01815
Formula: y = mx
m: 4.21301e-3
x: Amount[ppb]
y: Height



3-NT at exp. RT: 11.694
DAD1 B, Sig=254,16 Ref=360,100
Correlation: 0.99995
Residual Std. Dev.: 0.02513
Formula: y = mx
m: 5.32302e-3
x: Amount[ppb]
y: Height



SURROGATE at exp. RT: 13.271
DAD1 B, Sig=254,16 Ref=360,100
Correlation: 0.99995
Residual Std. Dev.: 0.01410
Formula: y = mx
m: 5.01880e-3
x: Amount[ppb]
y: Height

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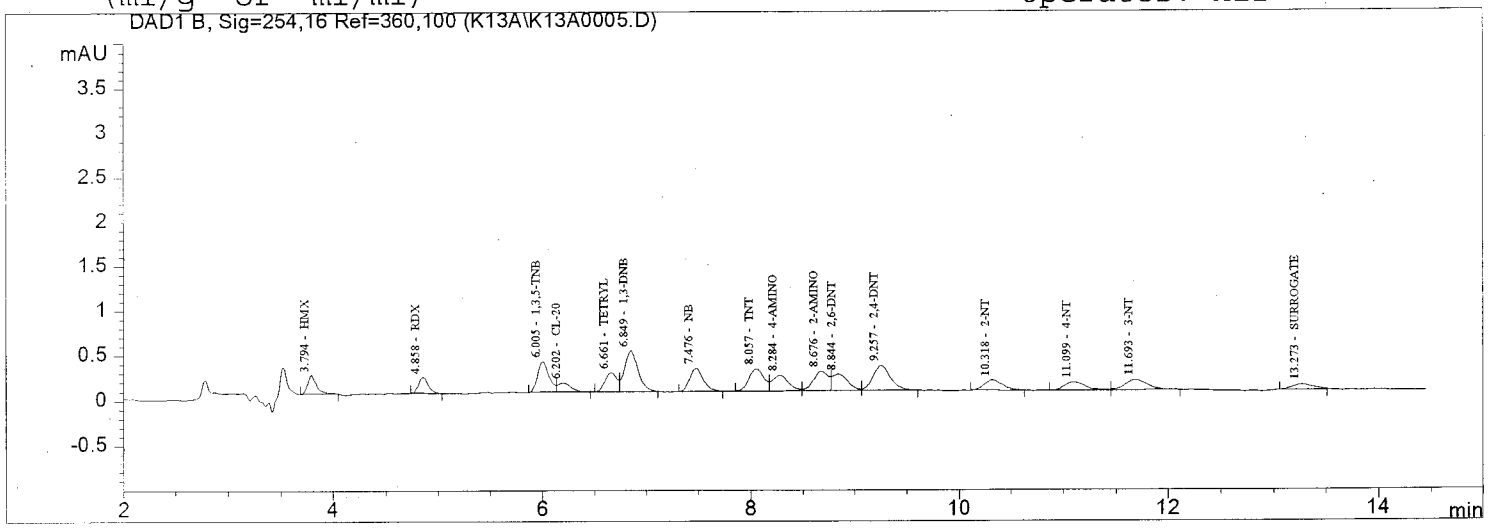
STL-KNOXVILLE Explosives Analysis

Sample Number: ICAL #1 LC1444 20PPB
Print Time:11/13/03 16:50:18 ->
Instrument Name: Ace
Data Acquisition Time:11/13/03 14:56:13
Data File name: H:\ACE\DATA\K13A\K13A0005.D
Method File: H:\ACE\METHOD\K13A2CAL.M
Sequence File:

Dilution: 1.000
Sample Amount: 0.000
Multiplier (Final Vol / Sample Amt) (ml/g or ml/ml): 1.000000
Injection Volume (ul): 5.000
Operator: klr

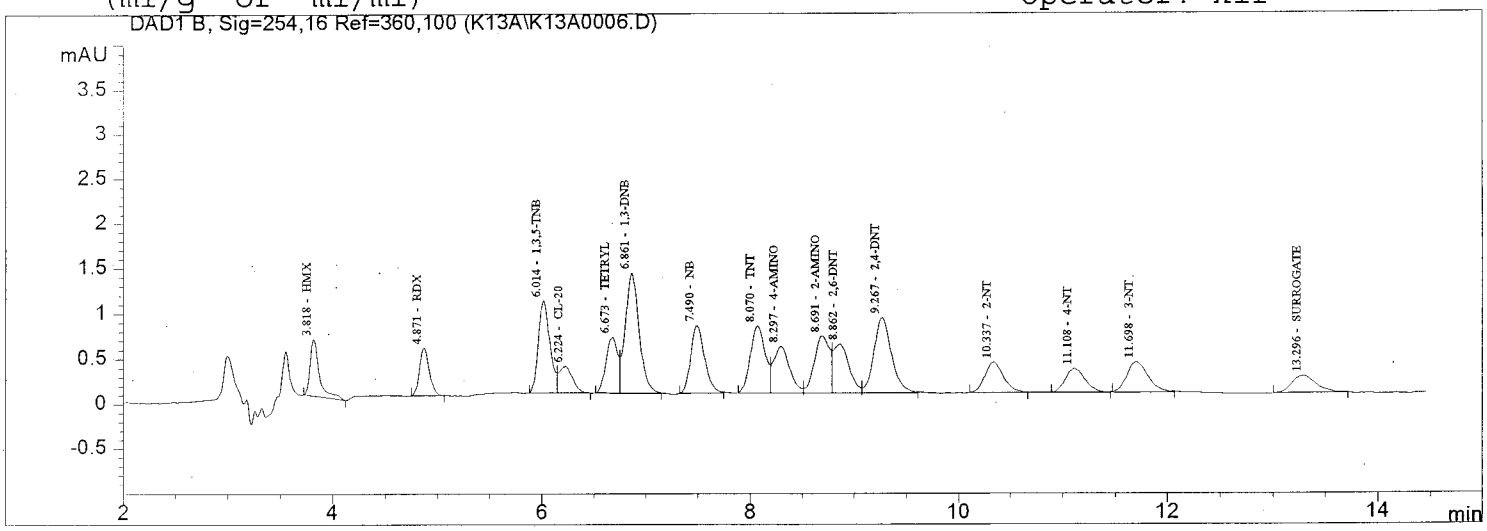


#	Exp.RT	Meas.RT	Compound Name	Height	Amt (ppb)
1	3.845	3.794	HMX	0.20411	20.4959
2	4.881	4.858	RDX	0.17527	21.3604
3	6.022	6.005	1,3,5-TNB	0.33496	20.5491
4	6.231	6.202	CL-20	0.10046	19.5956
5	6.678	6.661	TETRYL	0.21025	21.2373
6	6.863	6.849	1,3-DNB	0.45093	21.4543
7	7.491	7.476	NB	0.25254	21.4556
8	8.071	8.057	TNT	0.24616	20.8213
9	8.281	8.284	4-AMINO	0.17450	21.2126
10	8.679	8.676	2-AMINO	0.21499	21.8098
11	8.858	8.844	2,6-DNT	0.18302	21.6511
12	9.261	9.257	2,4-DNT	0.27638	20.8046
13	10.331	10.318	2-NT	0.11209	21.3042
14	11.105	11.099	4-NT	0.08937	21.2131
15	11.694	11.693	3-NT	0.11752	22.0776
16	13.271	13.273	SURROGATE	0.06437	12.8259

STL-KNOXVILLE Explosives Analysis

Sample Number: ICAL #2 LC1444 60PPB
Print Time:11/13/03 16:51:00 ->
Instrument Name: Ace
Data Acquisition Time:11/13/03 15:13:51
Data File name: H:\ACE\DATA\K13A\K13A0006.D
Method File: H:\ACE\METHOD\K13A2CAL.M
Sequence File:

Dilution: 1.000
Sample Amount: 0.000
Multiplier (Final Vol / Sample Amt) (ml/g or ml/ml): 1.000000
Injection Volume (ul): 15.000
Operator: klr

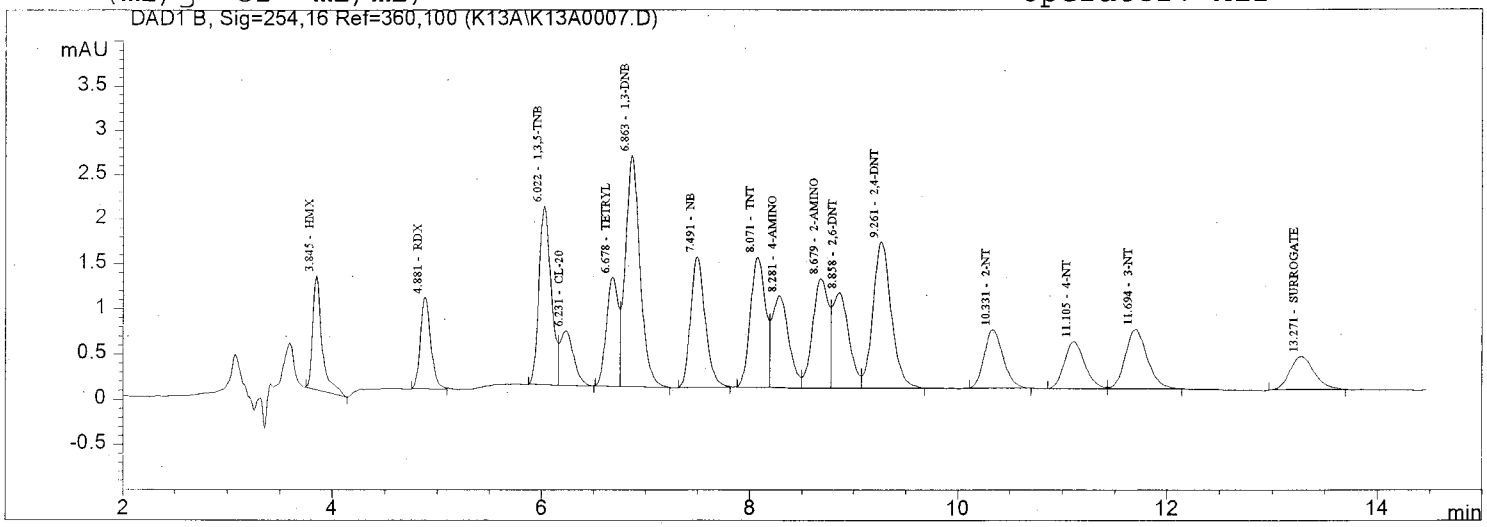


#	Exp.RT	Meas.RT	Compound Name	Height	Amt (ppb)
1	3.845	3.818	HMX	0.62849	63.1096
2	4.881	4.871	RDX	0.52778	64.3203
3	6.022	6.014	1,3,5-TNB	1.01470	62.2499
4	6.231	6.224	CL-20	0.29432	57.4129
5	6.678	6.673	TETRYL	0.61574	62.1947
6	6.863	6.861	1,3-DNB	1.31996	62.8012
7	7.491	7.490	NB	0.74510	63.3039
8	8.071	8.070	TNT	0.74093	62.6720
9	8.281	8.297	4-AMINO	0.51405	62.4887
10	8.679	8.691	2-AMINO	0.62930	63.8389
11	8.858	8.862	2,6-DNT	0.54151	64.0616
12	9.261	9.267	2,4-DNT	0.83156	62.5961
13	10.331	10.337	2-NT	0.33636	63.9304
14	11.105	11.108	4-NT	0.26263	62.3380
15	11.694	11.698	3-NT	0.33536	63.0024
16	13.271	13.296	SURROGATE	0.19024	37.9055

STL-KNOXVILLE Explosives Analysis

Sample Number: ICAL #3 LC1444 Print Time:11/13/03 16:51:37
120PPB ->
Instrument Name: Ace Data Acquisition Time:11/13/03 15:31:39
Data File name: H:\ACE\DATA\K13A\K13A0007.D
Method File: H:\ACE\METHOD\K13A2CAL.M
Sequence File:

Dilution: 1.000 Sample Amount: 0.000
Multiplier : 1.000000 Injection Volume (ul): 30.000
(Final Vol / Sample Amt)
(ml/g or ml/ml) Operator: klr

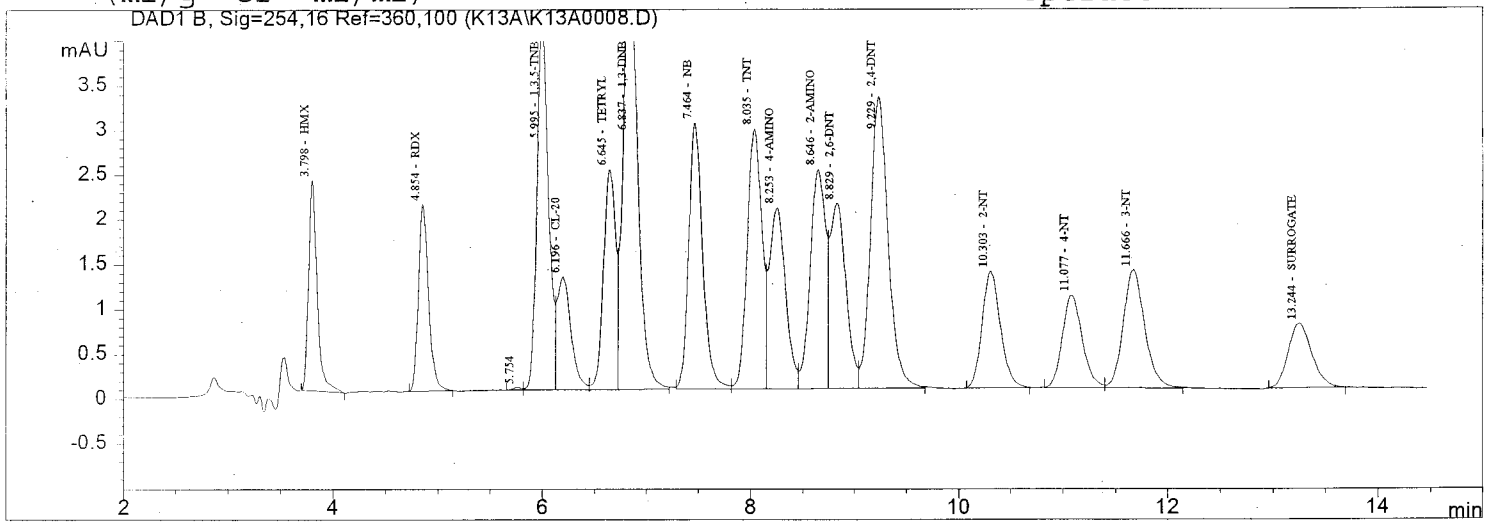


#	Exp.RT	Meas.RT	Compound Name	Height	Amt (ppb)
1	3.845	3.845	HMX	1.26521	127.0450
2	4.881	4.881	RDX	1.01540	123.7457
3	6.022	6.022	1,3,5-TNB	1.97959	121.4437
4	6.231	6.231	CL-20	0.60184	117.3987
5	6.678	6.678	TETRYL	1.21057	122.2766
6	6.863	6.863	1,3-DNB	2.57586	122.5547
7	7.491	7.491	NB	1.44743	122.9745
8	8.071	8.071	TNT	1.45100	122.7329
9	8.281	8.281	4-AMINO	1.01977	123.9654
10	8.679	8.679	2-AMINO	1.21583	123.3391
11	8.858	8.858	2,6-DNT	1.05645	124.9802
12	9.261	9.261	2,4-DNT	1.62177	122.0801
13	10.331	10.331	2-NT	0.64896	123.3450
14	11.105	11.105	4-NT	0.52248	124.0166
15	11.694	11.694	3-NT	0.66066	124.1132
16	13.271	13.271	SURROGATE	0.37346	74.4123

STL-KNOXVILLE Explosives Analysis

Sample Number: ICAL #4 LC1447 240PPB
Print Time:11/13/03 16:52:23 ->
Instrument Name: Ace
Data Acquisition Time:11/13/03 15:49:21
Data File name: H:\ACE\DATA\K13A\K13A0008.D
Method File: H:\ACE\METHOD\K13A2CAL.M
Sequence File:

Dilution: 1.000
Sample Amount: 0.000
Multiplier (Final Vol / Sample Amt) (ml/g or ml/ml): 1.000000
Injection Volume (ul): 7.500
Operator: klr

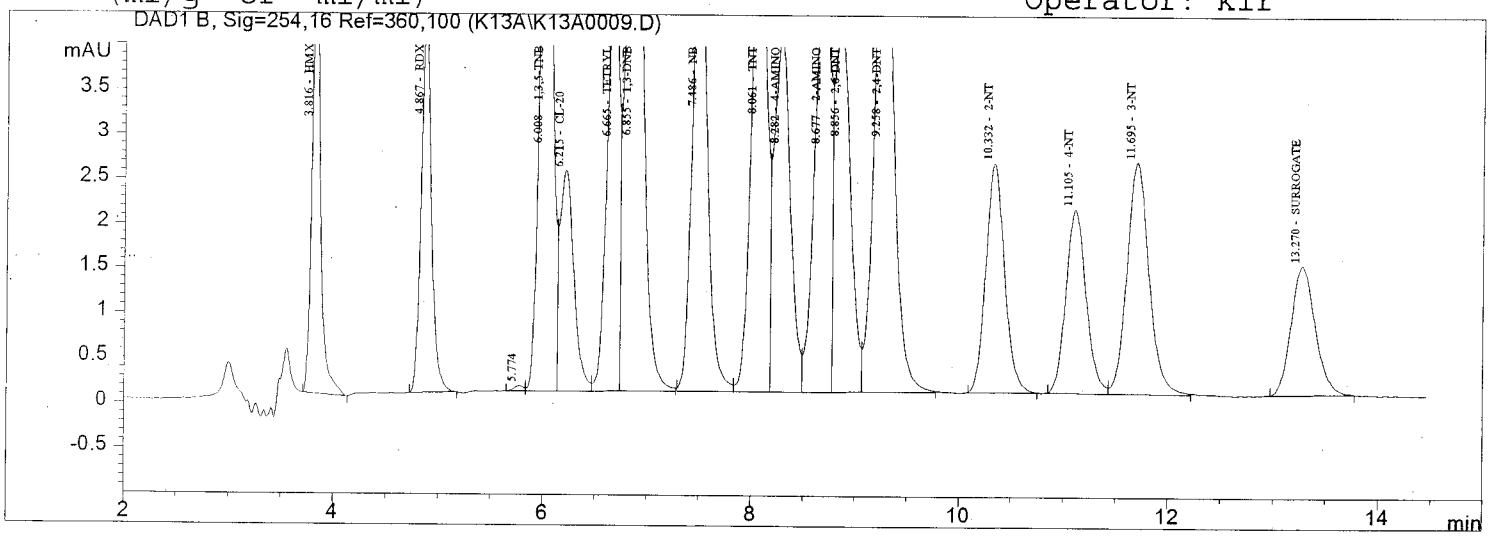


#	Exp.RT	Meas.RT	Compound Name	Height	Amt (ppb)
1	3.845	3.798	HMX	2.34692	235.6643
2	4.881	4.854	RDX	2.07907	253.3738
3	0.000	5.754		0.03189	0.0000
4	6.022	5.995	1,3,5-TNB	4.04869	248.3789
5	6.231	6.196	CL-20	1.25228	244.2780
6	6.678	6.645	TETRYL	2.45253	247.7250
7	6.863	6.837	1,3-DNB	5.23097	248.8805
8	7.491	7.464	NB	2.96638	252.0259
9	8.071	8.035	TNT	2.89864	245.1824
10	8.281	8.253	4-AMINO	2.01564	245.0252
11	8.679	8.646	2-AMINO	2.44140	247.6655
12	8.858	8.829	2,6-DNT	2.05827	243.4968
13	9.261	9.229	2,4-DNT	3.25950	245.3614
14	10.331	10.303	2-NT	1.29501	246.1383
15	11.105	11.077	4-NT	1.02902	244.2488
16	11.694	11.666	3-NT	1.31114	246.3153
17	13.271	13.244	SURROGATE	0.71603	142.6692

STL-KNOXVILLE Explosives Analysis

Sample Number: ICAL #5 LC1447 480PPB
Print Time:11/13/03 16:52:46 ->
Instrument Name: Ace
Data Acquisition Time:11/13/03 16:07:00
Data File name: H:\ACE\DATA\K13A\K13A0009.D
Method File: H:\ACE\METHOD\K13A2CAL.M
Sequence File:

Dilution: 1.000
Sample Amount: 0.000
Multiplier (Final Vol / Sample Amt) (ml/g or ml/ml): 1.000000
Injection Volume (ul): 15.000
Operator: klr

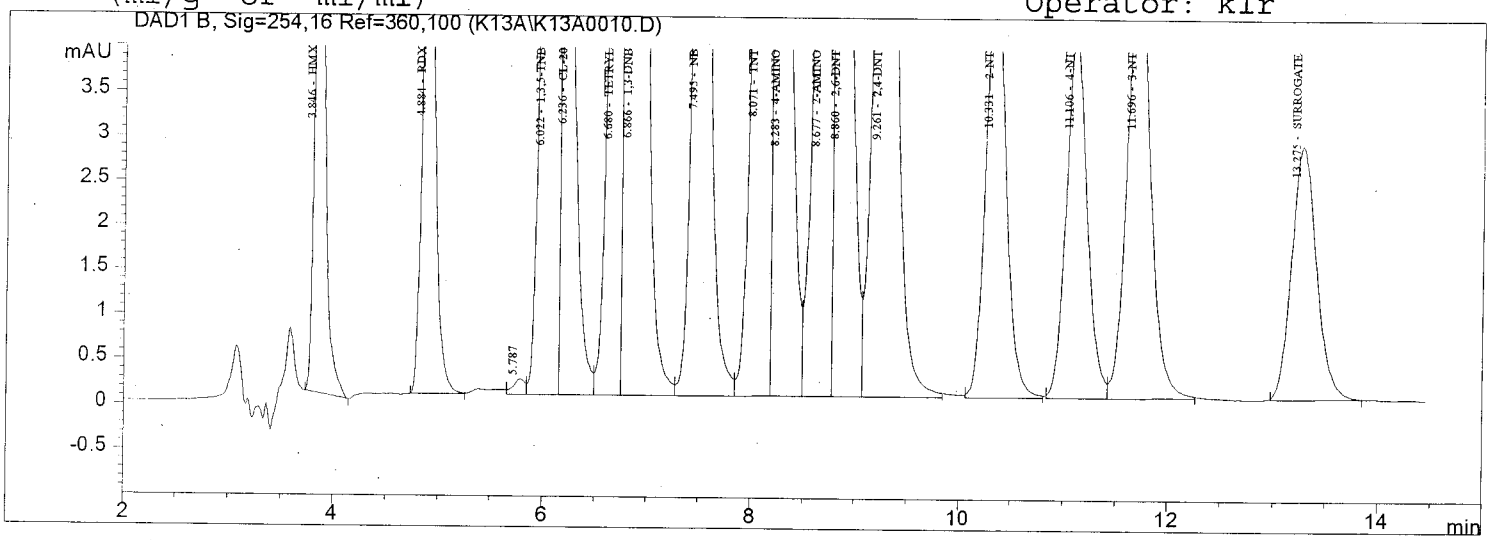


#	Exp.RT	Meas.RT	Compound Name	Height	Amt (ppb)
1	3.845	3.816	HMX	4.78683	480.6674
2	4.881	4.867	RDX	4.08311	497.6032
3	0.000	5.774		0.05802	0.0000
4	6.022	6.008	1,3,5-TNB	8.00663	491.1914
5	6.231	6.215	CL-20	2.45420	478.7340
6	6.678	6.665	TETRYL	4.80682	485.5269
7	6.863	6.855	1,3-DNB	10.28920	489.5420
8	7.491	7.486	NB	5.78918	491.8524
9	8.071	8.061	TNT	5.73870	485.4097
10	8.281	8.282	4-AMINO	3.96145	481.5614
11	8.679	8.677	2-AMINO	4.83610	490.5938
12	8.858	8.856	2,6-DNT	4.10223	485.3008
13	9.261	9.258	2,4-DNT	6.45645	486.0136
14	10.331	10.332	2-NT	2.55032	484.7297
15	11.105	11.105	4-NT	2.04578	485.5854
16	11.694	11.695	3-NT	2.57905	484.5094
17	13.271	13.270	SURROGATE	1.43205	285.3362

STL-KNOXVILLE Explosives Analysis

Sample Number: ICAL #6 LC1447 960PPB
Print Time:11/13/03 16:53:09
Instrument Name: Ace
Data Acquisition Time:11/13/03 16:24:47
Data File name: H:\ACE\DATA\K13A\K13A0010.D
Method File: H:\ACE\METHOD\K13A2CAL.M
Sequence File:

Dilution: 1.000
Sample Amount: 0.000
Multiplier (Final Vol / Sample Amt) (ml/g or ml/ml): 1.000000
Injection Volume (ul): 30.000
Operator: klr



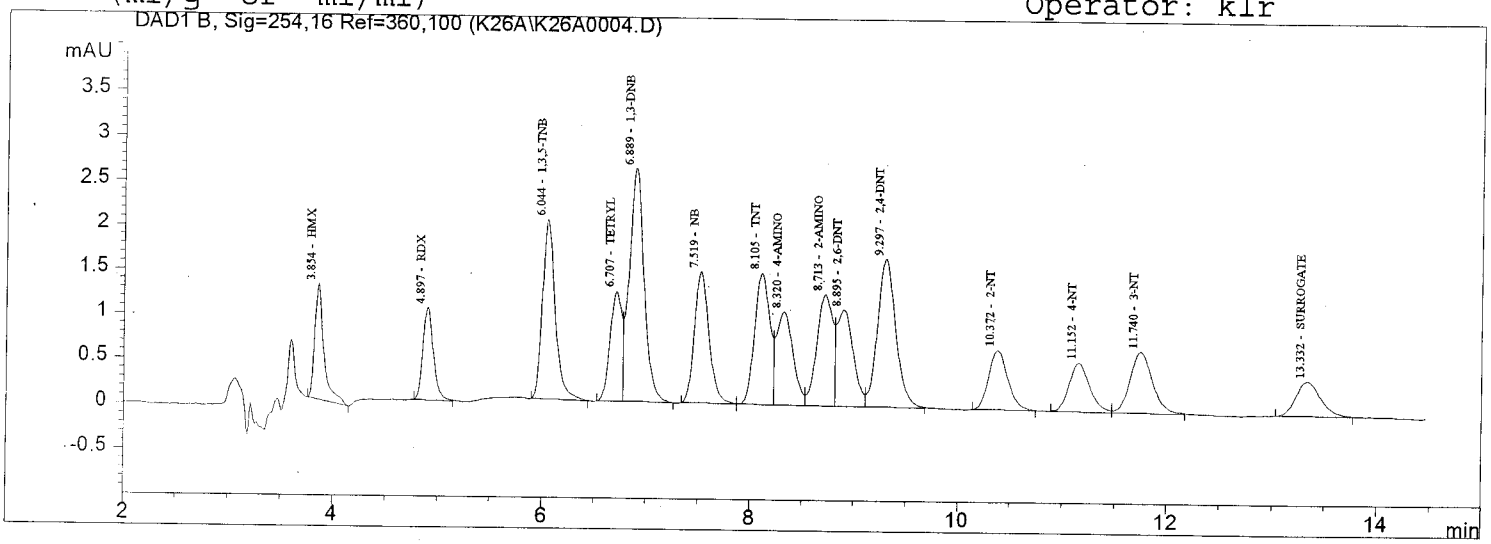
#	Exp.RT	Meas.RT	Compound Name	Height	Amt (ppb)
1	3.845	3.846	HMX	9.56118	960.0816
2	4.881	4.884	RDX	7.77138	947.0884
3	0.000	5.787		0.17335	0.0000
4	6.022	6.022	1,3,5-TNB	15.51764	951.9770
5	6.231	6.236	CL-20	4.92168	960.0588
6	6.678	6.680	TETRYL	9.45330	954.8578
7	6.863	6.866	1,3-DNB	20.01932	952.4842
8	7.491	7.495	NB	11.18705	950.4587
9	8.071	8.071	TNT	11.29598	955.4738
10	8.281	8.283	4-AMINO	7.87488	957.2865
11	8.679	8.677	2-AMINO	9.38538	952.0917
12	8.858	8.860	2,6-DNT	8.07735	955.5646
13	9.261	9.261	2,4-DNT	12.68954	955.2138
14	10.331	10.331	2-NT	5.02671	955.4096
15	11.105	11.106	4-NT	4.02541	955.4716
16	11.694	11.696	3-NT	5.08572	955.4214
17	13.271	13.275	SURROGATE	2.82209	562.3032

STL-KNOXVILLE Explosives Analysis

Sample Number: 8330 ICV LC1467 Print Time:11/26/03 12:15:07

Instrument Name: Ace Data Acquisition Time:11/26/03 11:59:58
Data File name: H:\ACE\DATA\K26A\K26A0004.D
Method File: H:\ACE\METHOD\K26A2.M
Sequence File: H:\ACE\SEQUENCE\K26A.S

Dilution: 1.000 Sample Amount: 0.000
Multiplier : 1.000000 Injection Volume (ul): 30.000
(Final Vol / Sample Amt)
(ml/g or ml/ml) Operator: klr



#	Exp.RT	Meas.RT	Compound Name	Height	Amt (ppb)
1	3.854	3.854	HMX	1.28061	128.5497
2	4.898	4.897	RDX	1.03292	125.8811
3	6.042	6.044	1,3,5-TNB	2.00905	123.2513
4	6.256	0.000	CL-20	0.00000	0.0000
5	6.704	6.707	TETRYL	1.22603	123.8382
6	6.889	6.889	1,3-DNB	2.60797	124.0828
7	7.518	7.519	NB	1.46713	124.6482
8	8.100	8.105	TNT	1.46475	123.8965
9	8.325	8.320	4-AMINO	1.03467	125.7769
10	8.722	8.713	2-AMINO	1.24033	125.8247
11	8.893	8.895	2,6-DNT	1.06998	126.5802
12	9.301	9.297	2,4-DNT	1.65353	124.4708
13	10.374	10.372	2-NT	0.65889	125.2319
14	11.153	11.152	4-NT	0.53507	127.0032
15	11.746	11.740	3-NT	0.67339	126.5050
16	13.332	13.332	SURROGATE	0.38299	76.3113

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STL Knoxville
Check Standard Report

Sample Name: 8330 ICV LC1467
Analysis Time: 11/26/03 11:59:58
File Name: H:\ACE\DATA\K26A\K26A0004.D
Method: H:\ACE\METHOD\K26A2.M

Component	Spike Amt.	Result	% Diff.
HMX	120	128.5497	7.1248
RDX	120	125.8811	4.9009
1,3,5-TNB	120	123.2513	2.7094
CL-20	~~120~~ NA	0.0000	~~100~~ NA
TETRYL	120	123.8382	3.1985
1,3-DNB	120	124.0828	3.4023
NB	120	124.6482	3.8735
TNT	120	123.8965	3.2471
4-AMINO	120	125.7769	4.8141
2-AMINO	120	125.8247	4.8539
2,6-DNT	120	126.5802	5.4835
2,4-DNT	120	124.4708	3.7257
2-NT	120	125.2319	4.3599
4-NT	120	127.0032	5.836
3-NT	120	126.5050	5.4208
SURROGATE	70.6	76.3113	8.0897

KGW 11/26/03

STL Knoxville HPLC Continuing Calibration Data Review / Narrative Checklist
Methods 8330 by KNOX-LC-0001 Rev 10 and 8332 by KNOX-LC-0005, Rev. 0
Page 1 of 1

Analysis Date:	12/17/03	CCAL File ID:	L17A2	ICAL File ID:	K13A2CAL	Scanned ☐

Review Items A. Continuing Calibration	Yes	No	NA	2nd √	If No, why is data reportable?
1. Was the ***correct ICAL*** used for quantitation?	✓			✓	
2. Were the ***same process parameters*** used for the CCAL standards and the ICAL?	✓			✓	
3. Were ***CCAL standards*** run at beginning of sequence, and after ***every 10 injections or 12 hours*** and at end of sequence?	✓			✓	
4. Were ***RTs updated*** for the first CCAL standard (at least every 24 hours)?	✓			✓	☐ Samples were analyzed immediately after ICAL, therefore RTs were updated from ICAL midpoint. ☐ See Comment No. _____.
5. Is ***%D ≤ 15%*** for each CCAL?	✓			✓	☐ CCAL response increased and all sample results were ND.
6. Is ***integration*** acceptable?	✓			✓	
7. If ***manual integrations*** were performed, are they clearly identified, initialed, dated and reason given?	✓			✓	Reasons: 1) Corrected split peak; 2) Unresolved peak; 3) Tailing; 4) RT shift; 5) Wrong peak selected; 6) Other
8. Were the standards ***scanned properly***?	✓				

Analyst: [signature]	Date: 12/18/03	2nd Level Reviewer : [signature]	Date: 12/19/03
Comments:		Comments:	

STL KNOXVILLE--EXPLOSIVES RUNLOG

Operator: Kh
PM Performed: No
Inj. Vol.: 30ul
Instrument: ACE

Sample ID	File Name	Dilution	Run Time
MRL LC1482	L17A0001.D	1.000	12/17/03 09:36:19
CCV LC1482	L17A0002.D	1.000	12/17/03 09:54:02
F6DQ41AA	L17A0003.D	1.000	12/17/03 10:11:59
F6DRG1AM	L17A0004.D	1.000	12/17/03 10:29:50
F6F1C1AA	L17A0005.D	1.000	12/17/03 10:47:45
F6F2H1AM	L17A0006.D	1.000	12/17/03 11:05:37
F6JXA1AA	L17A0007.D	1.000	12/17/03 11:23:28
F6JX21CA	L17A0008.D	1.000	12/17/03 11:41:20
F6JX21CC MS	L17A0009.D	1.000	12/17/03 11:59:13
F6JX21CD MSD	L17A0010.D	1.000	12/17/03 12:17:05
F6J0A1AM	L17A0011.D	1.000	12/17/03 12:34:57
F6Q8D1AA BLK	L17A0012.D	1.000	12/17/03 12:52:49
CCV LC1482	L17A0013.D	1.000	12/17/03 13:10:44
F6Q8D1AC LCS	L17A0014.D	1.000	12/17/03 13:28:38
CCV LC1482	L17A0015.D	1.000	12/17/03 13:46:33
MRL LC1482	L17A0016.D	1.000	12/17/03 14:04:19

Calibration Table

Calib. Data Modified : 12/5/03 9:29:26 AM

Calculate : External Standard
Based on : Peak Height

Rel. Reference Window : 4.000 %
Abs. Reference Window : 0.000 min
Rel. Non-ref. Window : 4.000 %
Abs. Non-ref. Window : 0.000 min
Uncalibrated Peaks : not reported
Partial Calibration : No recalibration if peaks missing

Curve Type : Linear
Origin : Forced
Weight : Equal

Recalibration Settings:
Average Response : Average all calibrations
Average Retention Time: Average all calibrations

Calibration Report Options :
Printout of recalibrations within a sequence:
Normal Report after Recalibration
If the sequence is done with bracketing:
Results of first cycle (ending previous bracket)

Signal 1: DAD1 B, Sig=254,16 Ref=360,100

RetTime [min]	Sig	Lvl	Amount [ppb]	Height	Amt/Height	Ref	Grp	Name
3.853	1	1	20.00000	2.04113e-1	97.98482			HMX
		2	60.00000	6.28491e-1	95.46684			
		3	120.00000	1.26521	94.84621			
		4	240.00000	2.34692	102.26191			
		5	480.00000	4.78683	100.27508			
		6	960.00000	9.56118	100.40597			
4.917	1	1	20.00000	1.75274e-1	114.10698			RDX
		2	60.00000	5.27783e-1	113.68299			
		3	120.00000	1.01540	118.17980			
		4	240.00000	2.07907	115.43610			
		5	480.00000	4.08311	117.55748			
		6	960.00000	7.77138	123.53014			
6.056	1	1	20.00000	3.34959e-1	59.70873			1,3,5-TNB
		2	60.00000	1.01470	59.13073			
		3	120.00000	1.97959	60.61874			
		4	240.00000	4.04869	59.27851			
		5	480.00000	8.00663	59.95028			
		6	960.00000	15.51764	61.86507			
6.260	1	1	20.00000	1.00455e-1	199.09328			CL-20
		2	60.00000	2.94324e-1	203.85711			
		3	120.00000	6.01837e-1	199.38952			
		4	240.00000	1.25228	191.65101			

RetTime [min]	Sig	Lvl	Amount [ppb]	Height	Amt/Height	Ref	Grp	Name
		5	480.00000	2.45420	195.58308			
		6	960.00000	4.92168	195.05529			
6.711	1	1	20.00000	2.10254e-1	95.12292			TETRYL
		2	60.00000	6.15741e-1	97.44350			
		3	120.00000	1.21057	99.12725			
		4	240.00000	2.45253	97.85806			
		5	480.00000	4.80682	99.85806			
		6	960.00000	9.45330	101.55182			
6.898	1	1	20.00000	4.50926e-1	44.35319			1,3-DNB
		2	60.00000	1.31996	45.45606			
		3	120.00000	2.57586	46.58646			
		4	240.00000	5.23097	45.88057			
		5	480.00000	10.28920	46.65087			
		6	960.00000	20.01932	47.95368			
7.525	1	1	20.00000	2.52535e-1	79.19681			NB
		2	60.00000	7.45097e-1	80.52638			
		3	120.00000	1.44743	82.90562			
		4	240.00000	2.96638	80.90658			
		5	480.00000	5.78918	82.91329			
		6	960.00000	11.18705	85.81352			
8.099	1	1	20.00000	2.46157e-1	81.24885			TNT
		2	60.00000	7.40933e-1	80.97902			
		3	120.00000	1.45100	82.70181			
		4	240.00000	2.89864	82.79740			
		5	480.00000	5.73870	83.64260			
		6	960.00000	11.29598	84.98597			
8.320	1	1	20.00000	1.74501e-1	114.61280			4-AMINO
		2	60.00000	5.14048e-1	116.72058			
		3	120.00000	1.01977	117.67344			
		4	240.00000	2.01564	119.06891			
		5	480.00000	3.96145	121.16785			
		6	960.00000	7.87488	121.90656			
8.713	1	1	20.00000	2.14993e-1	93.02619			2-AMINO
		2	60.00000	6.29300e-1	95.34397			
		3	120.00000	1.21583	98.69781			
		4	240.00000	2.44140	98.30435			
		5	480.00000	4.83610	99.25359			
		6	960.00000	9.38538	102.28678			
8.887	1	1	20.00000	1.83016e-1	109.28019			2,6-DNT
		2	60.00000	5.41511e-1	110.80113			
		3	120.00000	1.05645	113.58760			
		4	240.00000	2.05827	116.60281			
		5	480.00000	4.10223	117.00951			
		6	960.00000	8.07735	118.85080			
9.287	1	1	20.00000	2.76379e-1	72.36435			2,4-DNT
		2	60.00000	8.31559e-1	72.15366			
		3	120.00000	1.62177	73.99309			
		4	240.00000	3.25950	73.63083			
		5	480.00000	6.45645	74.34427			
		6	960.00000	12.68954	75.65286			
10.349	1	1	20.00000	1.12088e-1	178.43128			2-NT
		2	60.00000	3.36358e-1	178.38117			
		3	120.00000	6.48957e-1	184.91204			
		4	240.00000	1.29501	185.32652			
		5	480.00000	2.55032	188.21188			
		6	960.00000	5.02671	190.97964			

RetTime [min]	Sig	Lvl	Amount [ppb]	Height	Amt/Height	Ref	Grp	Name
11.115	1	1	20.00000	8.93713e-2	223.78560			4-NT
		2	60.00000	2.62631e-1	228.45770			
		3	120.00000	5.22483e-1	229.67234			
		4	240.00000	1.02902	233.23085			
		5	480.00000	2.04578	234.62961			
		6	960.00000	4.02541	238.48476			
11.702	1	1	20.00000	1.17519e-1	170.18453			3-NT
		2	60.00000	3.35363e-1	178.91077			
		3	120.00000	6.60656e-1	181.63754			
		4	240.00000	1.31114	183.04676			
		5	480.00000	2.57905	186.11492			
		6	960.00000	5.08572	188.76369			
13.276	1	1	11.77000	6.43706e-2	182.84748			SURROGATE
		2	35.30000	1.90240e-1	185.55499			
		3	70.60000	3.73461e-1	189.04273			
		4	141.20000	7.16028e-1	197.19892			
		5	282.40000	1.43205	197.20039			
		6	564.80000	2.82209	200.13549			

1 Warnings or Errors :

Error : Calibration compound(s) missing

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Peak Sum Table

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No Entries in table

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Calibration Curves

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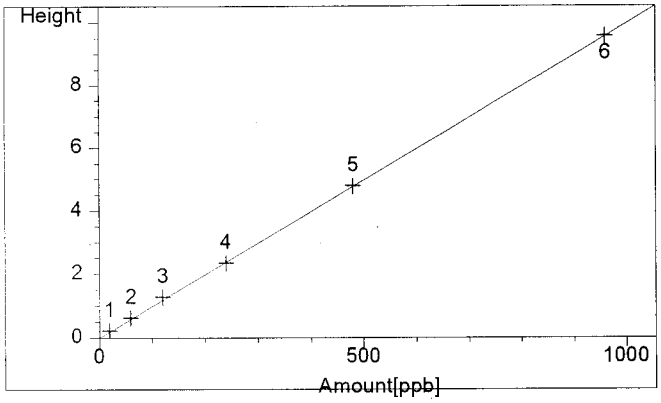
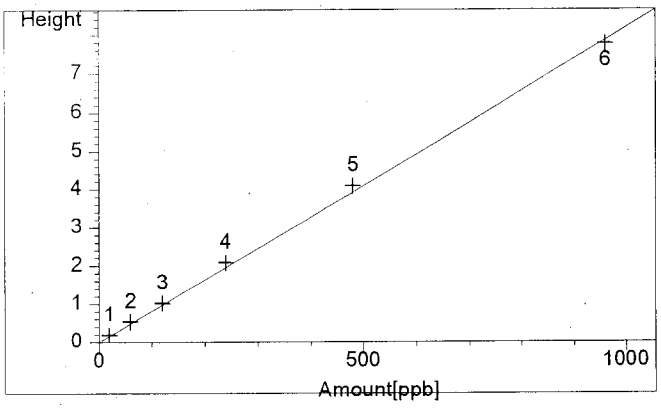
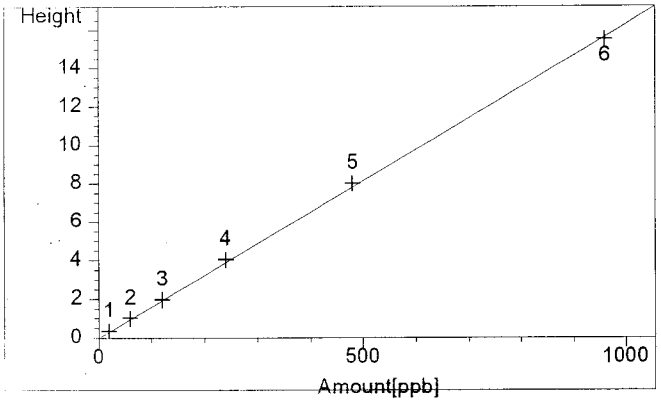


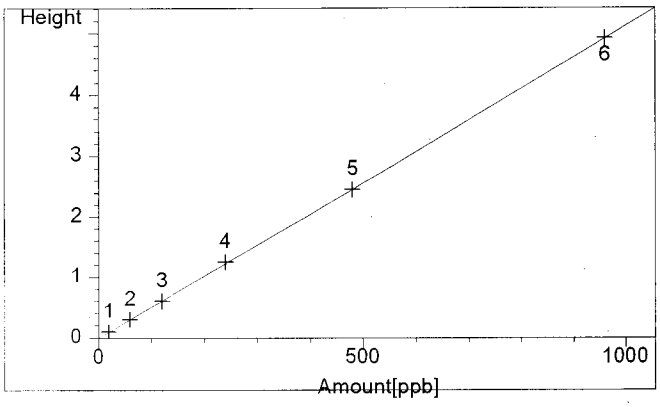
HMX at exp. RT: 3.853
DAD1 B, Sig=254,16 Ref=360,100
Correlation: 0.99997
Residual Std. Dev.: 0.03950
Formula: y = mx
m: 9.96197e-3
x: Amount[ppb]
y: Height



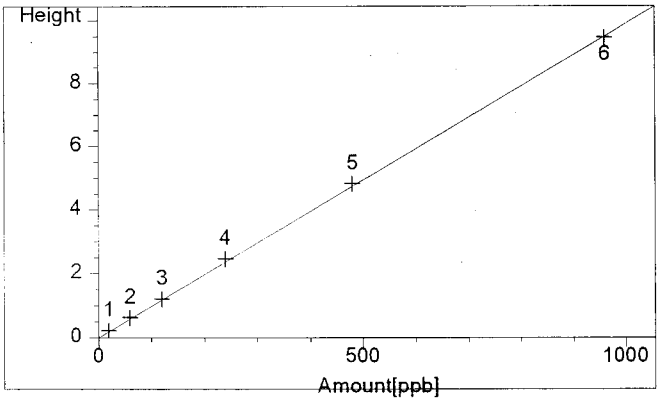
RDX at exp. RT: 4.917
DAD1 B, Sig=254,16 Ref=360,100
Correlation: 0.99972
Residual Std. Dev.: 0.09639
Formula: y = mx
m: 8.20555e-3
x: Amount[ppb]
y: Height



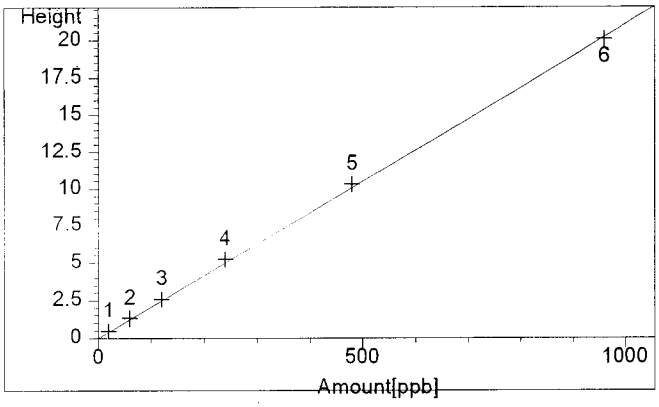
1,3,5-TNB at exp. RT: 6.056
DAD1 B, Sig=254,16 Ref=360,100
Correlation: 0.99989
Residual Std. Dev.: 0.11918
Formula: y = mx
m: 1.63004e-2
x: Amount[ppb]
y: Height



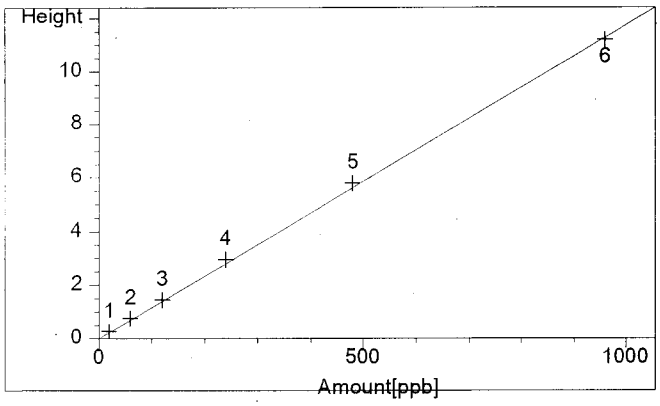
CL-20 at exp. RT: 6.260
DAD1 B, Sig=254,16 Ref=360,100
Correlation: 0.99999
Residual Std. Dev.: 0.01328
Formula: y = mx
m: 5.12644e-3
x: Amount[ppb]
y: Height



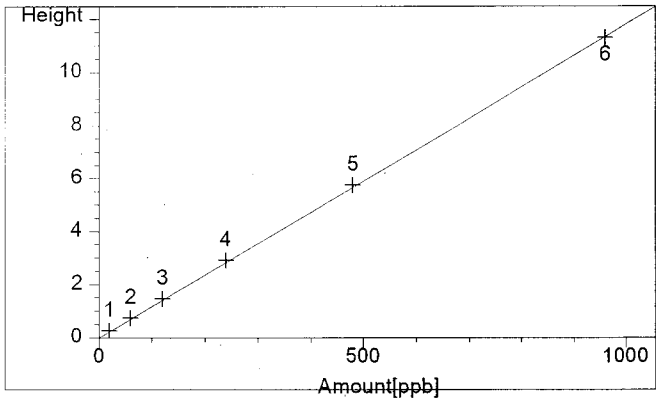
TETRYL at exp. RT: 6.711
DAD1 B, Sig=254,16 Ref=360,100
Correlation: 0.99995
Residual Std. Dev.: 0.05013
Formula: y = mx
m: 9.90022e-3
x: Amount[ppb]
y: Height



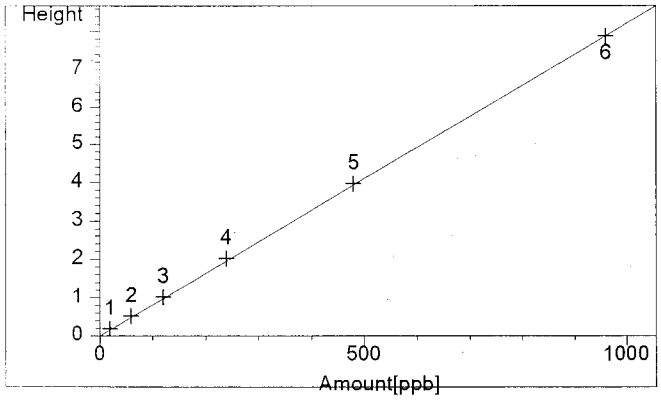
1,3-DNB at exp. RT: 6.898
DAD1 B, Sig=254,16 Ref=360,100
Correlation: 0.99990
Residual Std. Dev.: 0.14649
Formula: y = mx
m: 2.10180e-2
x: Amount[ppb]
y: Height



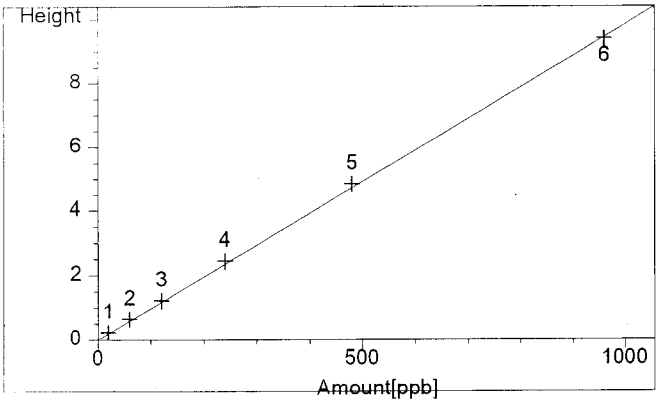
NB at exp. RT: 7.525
DAD1 B, Sig=254,16 Ref=360,100
Correlation: 0.99984
Residual Std. Dev.: 0.10501
Formula: y = mx
m: 1.17702e-2
x: Amount[ppb]
y: Height



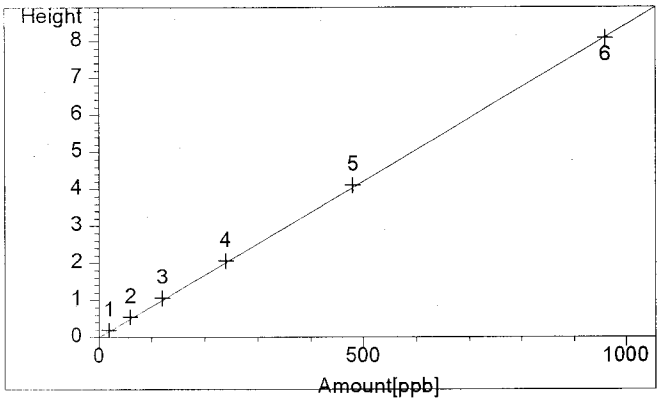
TNT at exp. RT: 8.099
DAD1 B, Sig=254,16 Ref=360,100
Correlation: 0.99996
Residual Std. Dev.: 0.05068
Formula: y = mx
m: 1.18224e-2
x: Amount[ppb]
y: Height



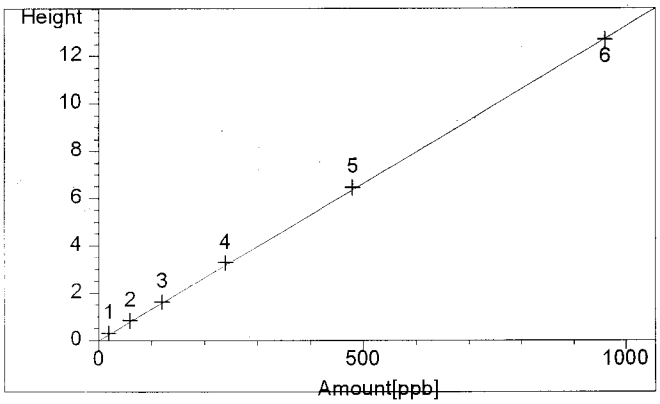
4-AMINO at exp. RT: 8.320
DAD1 B, Sig=254,16 Ref=360,100
Correlation: 0.99998
Residual Std. Dev.: 0.02812
Formula: y = mx
m: 8.22626e-3
x: Amount[ppb]
y: Height



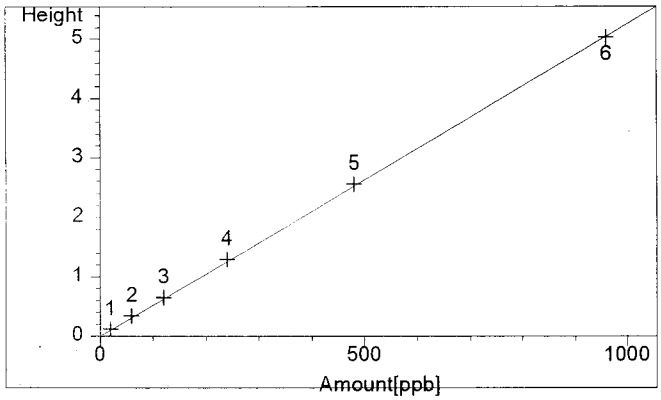
2-AMINO at exp. RT: 8.713
DAD1 B, Sig=254,16 Ref=360,100
Correlation: 0.99989
Residual Std. Dev.: 0.07145
Formula: y = mx
m: 9.85764e-3
x: Amount[ppb]
y: Height



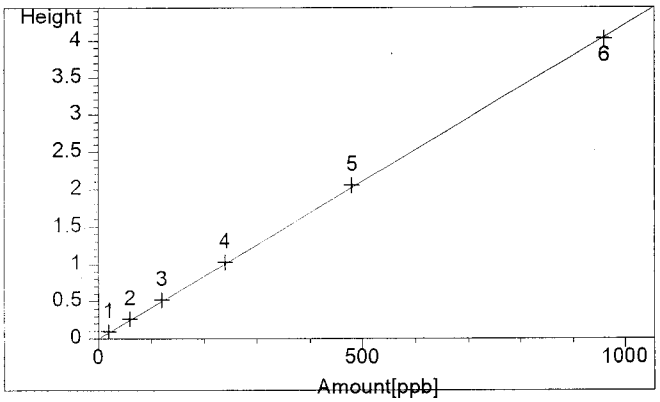
2,6-DNT at exp. RT: 8.887
DAD1 B, Sig=254,16 Ref=360,100
Correlation: 0.99996
Residual Std. Dev.: 0.03856
Formula: y = mx
m: 8.45296e-3
x: Amount[ppb]
y: Height



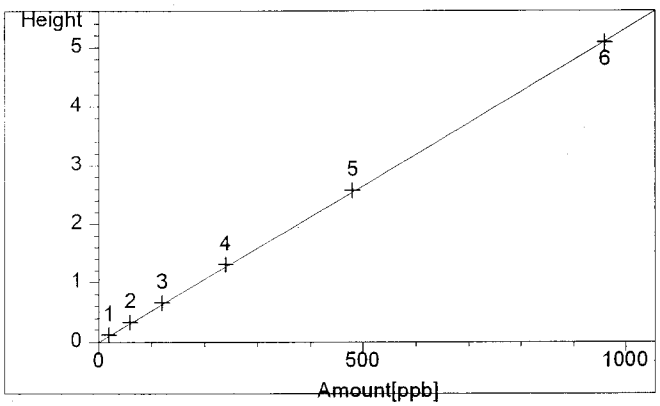
2,4-DNT at exp. RT: 9.287
DAD1 B, Sig=254,16 Ref=360,100
Correlation: 0.99996
Residual Std. Dev.: 0.05927
Formula: y = mx
m: 1.32845e-2
x: Amount[ppb]
y: Height



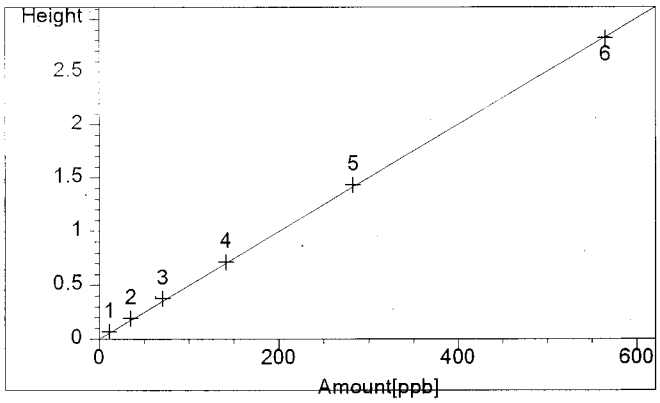
2-NT at exp. RT: 10.349
DAD1 B, Sig=254,16 Ref=360,100
Correlation: 0.99996
Residual Std. Dev.: 0.02462
Formula: y = mx
m: 5.26132e-3
x: Amount[ppb]
y: Height



4-NT at exp. RT: 11.115
DAD1 B, Sig=254,16 Ref=360,100
Correlation: 0.99996
Residual Std. Dev.: 0.01815
Formula: y = mx
m: 4.21301e-3
x: Amount[ppb]
y: Height



3-NT at exp. RT: 11.702
DAD1 B, Sig=254,16 Ref=360,100
Correlation: 0.99995
Residual Std. Dev.: 0.02513
Formula: y = mx
m: 5.32302e-3
x: Amount[ppb]
y: Height



SURROGATE at exp. RT: 13.276
DAD1 B, Sig=254,16 Ref=360,100
Correlation: 0.99995
Residual Std. Dev.: 0.01410
Formula: y = mx
m: 5.01880e-3
x: Amount[ppb]
y: Height

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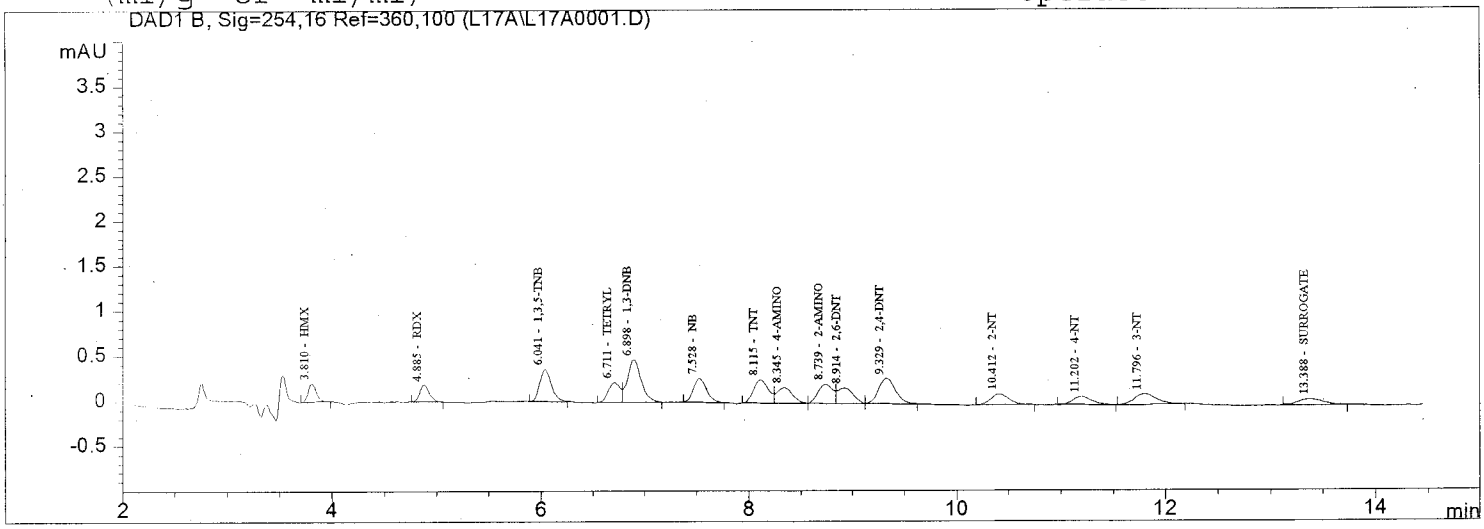
STL-KNOXVILLE Explosives Analysis

Sample Number: MRL LC1482 Print Time:12/17/03 09:51:44

Instrument Name: Ace Data Acquisition Time:12/17/03 09:36:19
Data File name: H:\ACE\DATA\L17A\L17A0001.D
Method File: H:\ACE\METHOD\L17A2.M
Sequence File: H:\ACE\SEQUENCE\L17A.S

Dilution: 1.000 Sample Amount: 0.000
Multiplier : 1.000000 Injection Volume (ul): 5.000
(Final Vol / Sample Amt)
(ml/g or ml/ml) Operator: klr



#	Exp.RT	Meas.RT	Compound Name	Height	Amt (ppb)
1	3.853	3.810	HMX	0.20496	20.5738
2	4.917	4.885	RDX	0.18889	23.0201
3	6.056	6.041	1,3,5-TNB	0.35812	21.9698
4	6.260	0.000	CL-20	0.00000	0.0000
5	6.711	6.711	TETRYL	0.21996	22.2174
6	6.898	6.898	1,3-DNB	0.46849	22.2899
7	7.525	7.528	NB	0.26506	22.5201
8	8.099	8.115	TNT	0.25959	21.9571
9	8.320	8.345	4-AMINO	0.17497	21.2694
10	8.713	8.739	2-AMINO	0.21401	21.7096
11	8.887	8.914	2,6-DNT	0.17585	20.8036
12	9.287	9.329	2,4-DNT	0.28433	21.4029
13	10.349	10.412	2-NT	0.11991	22.7903
14	11.115	11.202	4-NT	0.09134	21.6801
15	11.702	11.796	3-NT	0.12109	22.7479
16	13.276	13.388	SURROGATE	0.06920	13.7882

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STL Knoxville

Reporting Limit Check Standard Report

Sample Name: MRL LC1482
Analysis Time: 12/17/03 09:36:19
File Name: H:\ACE\DATA\L17A\L17A0001.D
Method: H:\ACE\METHOD\L17A2.M

Component	Spike Amt.	Result	% Diff.
HMX	20	20.5738	2.868
RDX	20	23.0201	15.10
1,3,5-TNB	20	21.9698	9.849
CL-20	~~20~~	~~0.0000~~	~~-100~~
TETRYL	20	22.2174	11.08
1,3-DNB	20	22.2899	11.44
NB	20	22.5201	12.60
TNT	20	21.9571	9.785
4-AMINO	20	21.2694	6.347
2-AMINO	20	21.7096	8.547
2,6-DNT	20	20.8036	4.018
2,4-DNT	20	21.4029	7.014
2-NT	20	22.7903	13.95
4-NT	20	21.6801	8.400
3-NT	20	22.7479	13.73

NA
KH
12/18/03

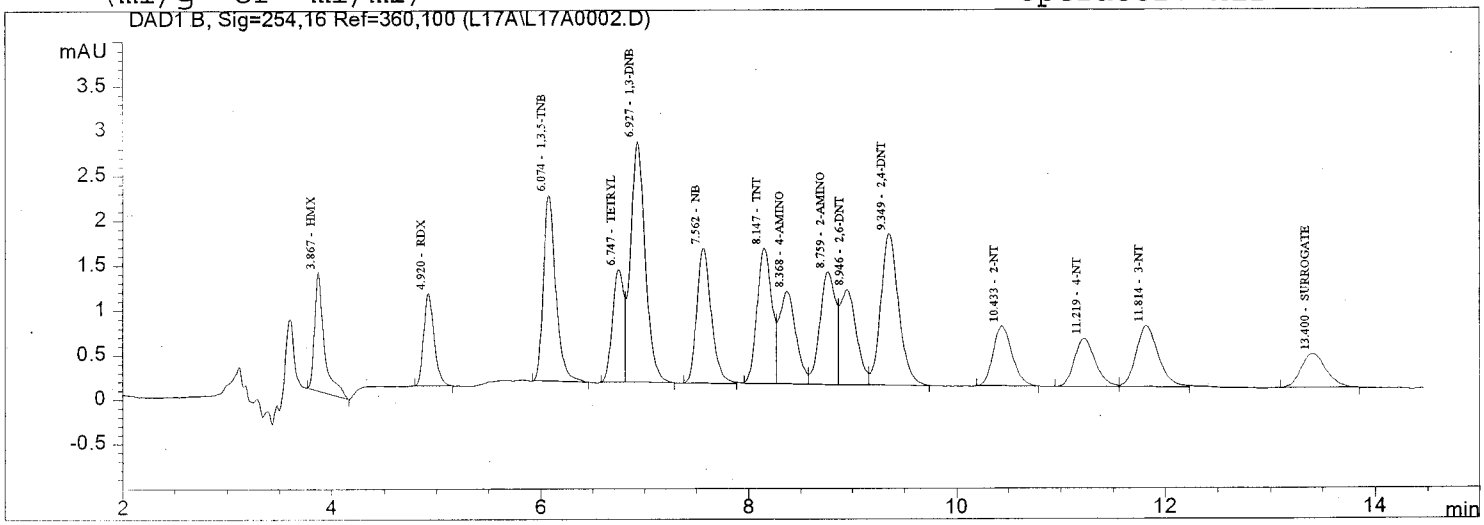
---Note: No criteria (for informational purposes only)

STL-KNOXVILLE Explosives Analysis

Sample Number: CCV LC1482 Print Time:12/17/03 10:09:29

Instrument Name: Ace Data Acquisition Time:12/17/03 09:54:02
Data File name: H:\ACE\DATA\L17A\L17A0002.D
Method File: H:\ACE\METHOD\L17A2.M
Sequence File: H:\ACE\SEQUENCE\L17A.S

Dilution: 1.000 Sample Amount: 0.000
Multiplier : 1.000000 Injection Volume (ul): 30.000
(Final Vol / Sample Amt)
(ml/g or ml/ml) Operator: klr



#	Exp.RT	Meas.RT	Compound Name	Height	Amt (ppb)
1	3.853	3.867	HMX	1.32401	132.9068
2	4.917	4.920	RDX	1.04420	127.2558
3	6.056	6.074	1,3,5-TNB	2.07502	127.2984
4	6.260	0.000	CL-20	0.00000	0.0000
5	6.711	6.747	TETRYL	1.26280	127.5530
6	6.898	6.927	1,3-DNB	2.69187	128.0745
7	7.525	7.562	NB	1.50465	127.8359
8	8.099	8.147	TNT	1.51569	128.2047
9	8.320	8.368	4-AMINO	1.03973	126.3915
10	8.713	8.759	2-AMINO	1.26043	127.8634
11	8.887	8.946	2,6-DNT	1.06870	126.4289
12	9.287	9.349	2,4-DNT	1.69118	127.3046
13	10.349	10.433	2-NT	0.67917	129.0881
14	11.115	11.219	4-NT	0.54681	129.7902
15	11.702	11.814	3-NT	0.68700	129.0621
16	13.276	13.400	SURROGATE	0.38162	76.0378

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STL Knoxville
Check Standard Report

Sample Name: CCV LC1482
Analysis Time: 12/17/03 09:54:02
File Name: H:\ACE\DATA\L17A\L17A0002.D
Method: H:\ACE\METHOD\L17A2.M

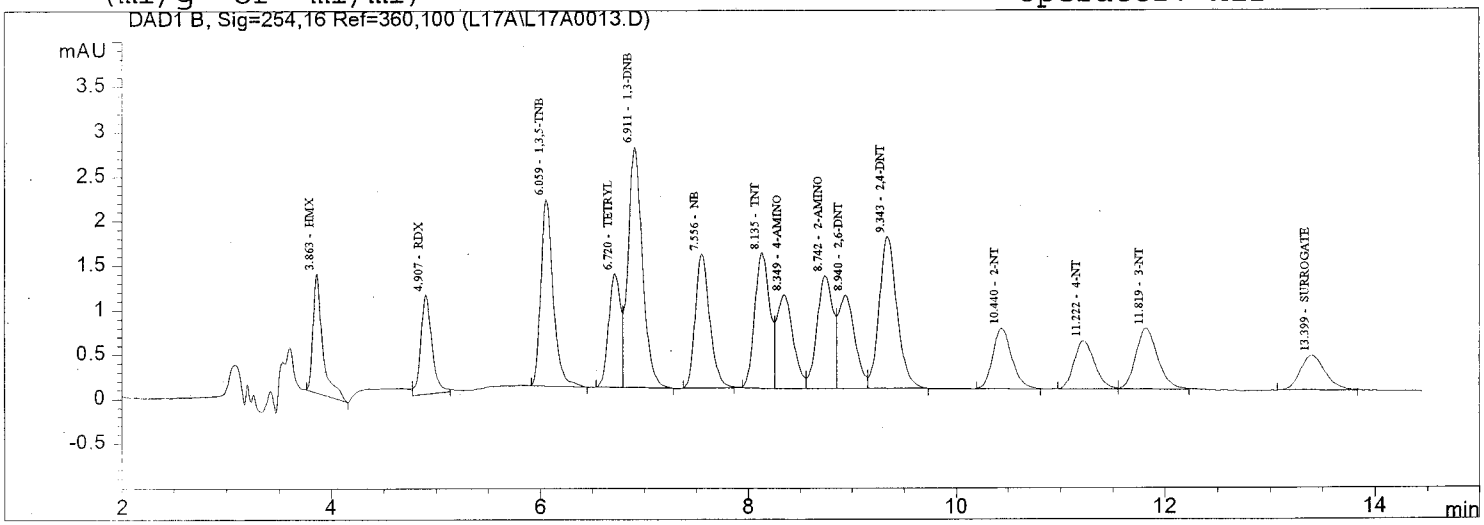
Component	Spike Amt.	Result	% Diff.
HMX	120	132.9068	10.7557
RDX	120	127.2558	6.0465
1,3,5-TNB	120	127.2984	6.082
CL-20	~~120~~ NA	~~0.0000~~	~~100~~
TETRYL	120	127.5530	6.2942
1,3-DNB	120 KIK 12/18/03	128.0745	6.7288
NB	120	127.8359	6.5299
TNT	120	128.2047	6.8373
4-AMINO	120	126.3915	5.3262
2-AMINO	120	127.8634	6.5528
2,6-DNT	120	126.4289	5.3574
2,4-DNT	120	127.3046	6.0872
2-NT	120	129.0881	7.5734
4-NT	120	129.7902	8.1585
3-NT	120	129.0621	7.5517
SURROGATE	70.6	76.0378	7.7023

STL-KNOXVILLE Explosives Analysis

Sample Number: CCV LC1482 Print Time:12/17/03 13:26:10

Instrument Name: Ace Data Acquisition Time:12/17/03 13:10:44
Data File name: H:\ACE\DATA\L17A\L17A0013.D
Method File: H:\ACE\METHOD\L17A2.M
Sequence File: H:\ACE\SEQUENCE\L17A.S

Dilution: 1.000 Sample Amount: 0.000
Multiplier : 1.000000 Injection Volume (ul): 30.000
(Final Vol / Sample Amt)
(ml/g or ml/ml) Operator: klr



#	Exp.RT	Meas.RT	Compound Name	Height	Amt (ppb)
1	3.853	3.863	HMX	1.34340	134.8528
2	4.917	4.907	RDX	1.11788	136.2349
3	6.056	6.059	1,3,5-TNB	2.09817	128.7188
4	6.260	0.000	CL-20	0.00000	0.0000
5	6.711	6.720	TETRYL	1.27650	128.9362
6	6.898	6.911	1,3-DNB	2.70007	128.4646
7	7.525	7.556	NB	1.50184	127.5970
8	8.099	8.135	TNT	1.51780	128.3839
9	8.320	8.349	4-AMINO	1.05562	128.3234
10	8.713	8.742	2-AMINO	1.26577	128.4048
11	8.887	8.940	2,6-DNT	1.05423	124.7176
12	9.287	9.343	2,4-DNT	1.70687	128.4859
13	10.349	10.440	2-NT	0.68471	130.1400
14	11.115	11.222	4-NT	0.54935	130.3934
15	11.702	11.819	3-NT	0.69365	130.3123
16	13.276	13.399	SURROGATE	0.39451	78.6063

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STL Knoxville
Check Standard Report

Sample Name: CCV LC1482
Analysis Time: 12/17/03 13:10:44
File Name: H:\ACE\DATA\L17A\L17A0013.D
Method: H:\ACE\METHOD\L17A2.M

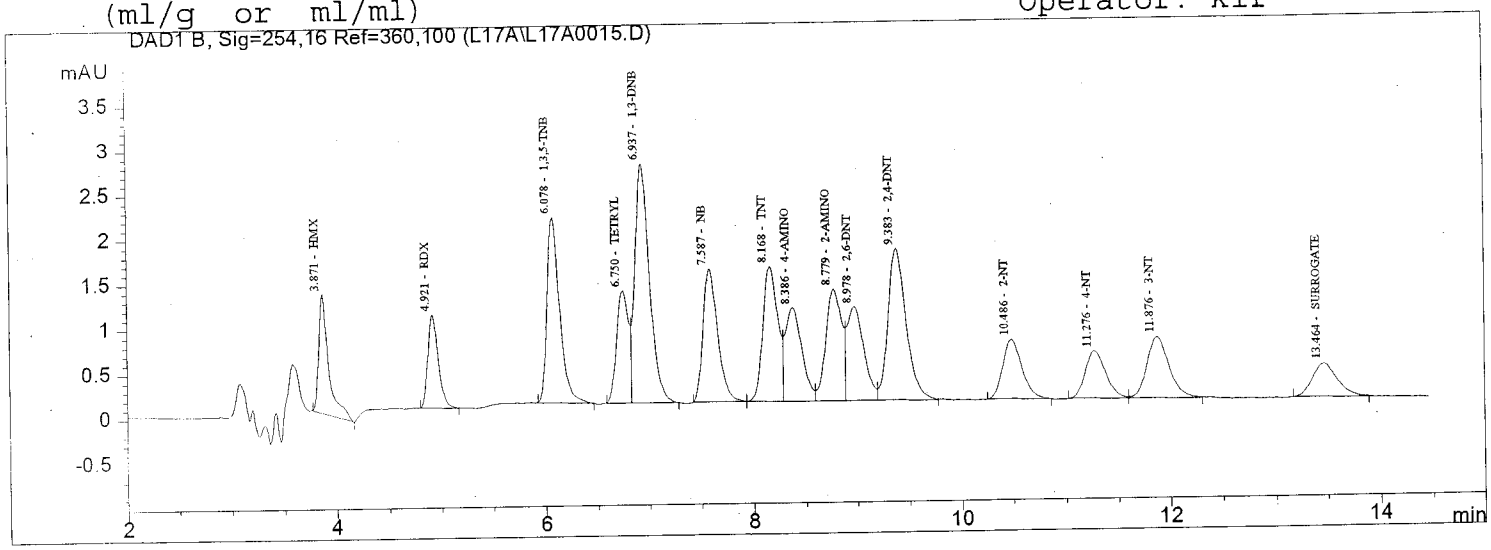
Component	Spike Amt.	Result	% Diff.
HMX	120	134.8528	12.3773
RDX	120	136.2349	13.5291
1,3,5-TNB	120	128.7188	7.2657
CL-20	~~120~~ NA	~~0.0000~~	~~100~~
TETRYL	120 KK	128.9362	7.4468
1,3-DNB	120 12/18/03	128.4646	7.0538
NB	120	127.5970	6.3308
TNT	120	128.3839	6.9866
4-AMINO	120	128.3234	6.9362
2-AMINO	120	128.4048	7.004
2,6-DNT	120	124.7176	3.9313
2,4-DNT	120	128.4859	7.0716
2-NT	120	130.1400	8.45
4-NT	120	130.3934	8.6612
3-NT	120	130.3123	8.5936
SURROGATE	70.6	78.6063	11.3404

STL-KNOXVILLE Explosives Analysis

Sample Number: CCV LC1482 Print Time:12/17/03 14:02:00

Instrument Name: Ace Data Acquisition Time:12/17/03 13:46:33
Data File name: H:\ACE\DATA\L17A\L17A0015.D
Method File: H:\ACE\METHOD\L17A2.M
Sequence File: H:\ACE\SEQUENCE\L17A.S

Dilution: 1.000 Sample Amount: 0.000
Multiplier : 1.000000 Injection Volume (ul): 30.000
(Final Vol / Sample Amt)
(ml/g or ml/ml) Operator: klr



#	Exp.RT	Meas.RT	Compound Name	Height	Amt (ppb)
1	3.853	3.871	HMX	1.33437	133.9465
2	4.917	4.921	RDX	1.04548	127.4114
3	6.056	6.078	1,3,5-TNB	2.06777	126.8535
4	6.260	0.000	CL-20	0.00000	0.0000
5	6.711	6.750	TETRYL	1.25549	126.8144
6	6.898	6.937	1,3-DNB	2.66622	126.8542
7	7.525	7.587	NB	1.48591	126.2442
8	8.099	8.168	TNT	1.50866	127.6107
9	8.320	8.386	4-AMINO	1.04240	126.7164
10	8.713	8.779	2-AMINO	1.25079	126.8854
11	8.887	8.978	2,6-DNT	1.04337	123.4321
12	9.287	9.383	2,4-DNT	1.69446	127.5518
13	10.349	10.486	2-NT	0.66879	127.1137
14	11.115	11.276	4-NT	0.53609	127.2470
15	11.702	11.876	3-NT	0.68517	128.7184
16	13.276	13.464	SURROGATE	0.37859	75.4345

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STL Knoxville
Check Standard Report

Sample Name: CCV LC1482
Analysis Time: 12/17/03 13:46:33
File Name: H:\ACE\DATA\L17A\L17A0015.D
Method: H:\ACE\METHOD\L17A2.M

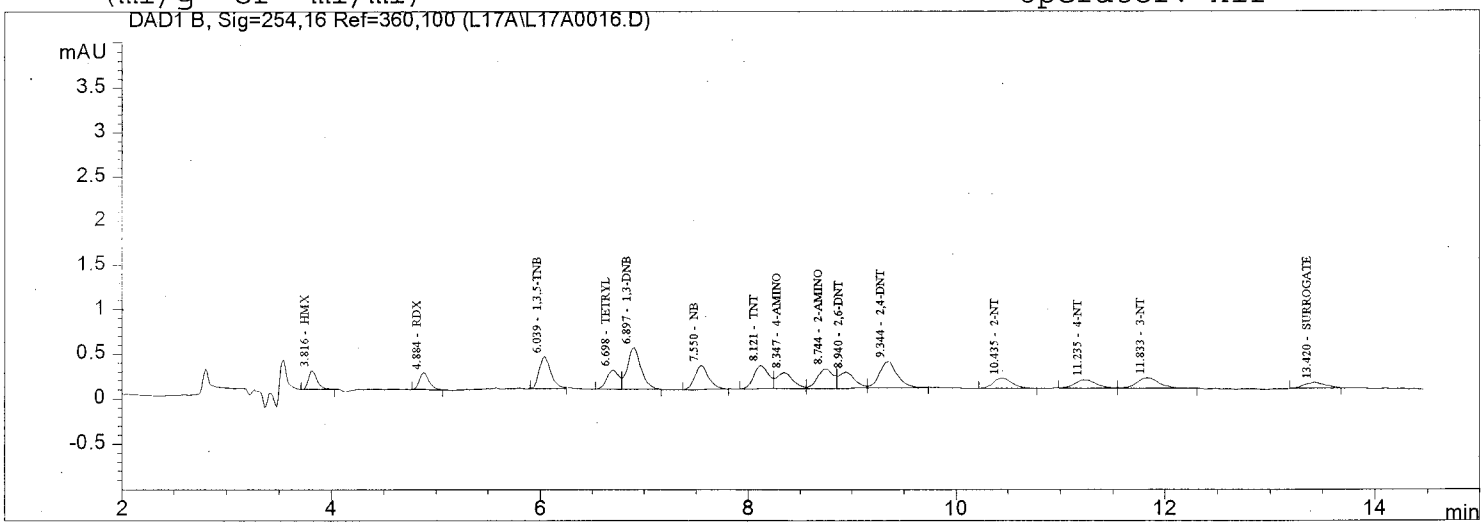
Component	Spike Amt.	Result	% Diff.
HMX	120	133.9465	11.6221
RDX	120	127.4114	6.1762
1,3,5-TNB	120	126.8535	5.7112
CL-20	~~120~~ NA	~~0.0000~~	~~100~~
TETRYL	120	126.8144	5.6787
1,3-DNB	120 KLM 12/18/03	126.8542	5.7118
NB	120	126.2442	5.2035
TNT	120	127.6107	6.3422
4-AMINO	120	126.7164	5.597
2-AMINO	120	126.8854	5.7378
2,6-DNT	120	123.4321	2.8601
2,4-DNT	120	127.5518	6.2932
2-NT	120	127.1137	5.9281
4-NT	120	127.2470	6.0392
3-NT	120	128.7184	7.2653
SURROGATE	70.6	75.4345	6.8477

STL-KNOXVILLE Explosives Analysis

Sample Number: MRL LC1482 Print Time:12/17/03 14:19:48

Instrument Name: Ace Data Acquisition Time:12/17/03 14:04:19
Data File name: H:\ACE\DATA\L17A\L17A0016.D
Method File: H:\ACE\METHOD\L17A2.M
Sequence File: H:\ACE\SEQUENCE\L17A.S

Dilution: 1.000 Sample Amount: 0.000
Multiplier : 1.000000 Injection Volume (ul): 5.000
(Final Vol / Sample Amt)
(ml/g or ml/ml) Operator: klr



#	Exp.RT	Meas.RT	Compound Name	Height	Amt (ppb)
1	3.853	3.816	HMX	0.20944	21.0237
2	4.917	4.884	RDX	0.18786	22.8947
3	6.056	6.039	1,3,5-TNB	0.35801	21.9634
4	6.260	0.000	CL-20	0.00000	0.0000
5	6.711	6.698	TETRYL	0.21420	21.6362
6	6.898	6.897	1,3-DNB	0.46605	22.1738
7	7.525	7.550	NB	0.26702	22.6863
8	8.099	8.121	TNT	0.26590	22.4912
9	8.320	8.347	4-AMINO	0.18590	22.5978
10	8.713	8.744	2-AMINO	0.22469	22.7930
11	8.887	8.940	2,6-DNT	0.18300	21.6495
12	9.287	9.344	2,4-DNT	0.29864	22.4804
13	10.349	10.435	2-NT	0.11305	21.4872
14	11.115	11.235	4-NT	0.09831	23.3348
15	11.702	11.833	3-NT	0.12128	22.7840
16	13.276	13.420	SURROGATE	0.06764	13.4783

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STL Knoxville

Reporting Limit Check Standard Report

Sample Name: MRL LC1482
Analysis Time: 12/17/03 14:04:19
File Name: H:\ACE\DATA\L17A\L17A0016.D
Method: H:\ACE\METHOD\L17A2.M

Component	Spike Amt.	Result	% Diff.
HMX	20	21.0237	5.118
RDX	20	22.8947	14.47
1,3,5-TNB	20	21.9634	9.817
CL-20	~~20~~ NA	~~0.0000~~	~~-100~~
TETRYL	20	21.6362	8.180
1,3-DNB	20 KM 12/18/03	22.1738	10.86
NB	20	22.6863	13.43
TNT	20	22.4912	12.45
4-AMINO	20	22.5978	12.98
2-AMINO	20	22.7930	13.96
2,6-DNT	20	21.6495	8.247
2,4-DNT	20	22.4804	12.40
2-NT	20	21.4872	7.436
4-NT	20	23.3348	16.67
3-NT	20	22.7840	13.92

---Note: No criteria (for informational purposes only)

STL Knoxville HPLC Initial Calibration Data Review / Narrative Checklist
Methods 8330 by KNOX-LC-0001 Rev 10 and 8332 by KNOX-LC-0005, Rev. 0
 C8/CN confirmation

Analysis Date:	12/22/03	Instrument/File ID:	L225CICAL	Scanned ☐

Review Items **A. Initial Calibration**	Yes	No	NA	2nd √	If No, why is data reportable?
1. Were at least ***5-levels*** of each analyte and surrogate analyzed?	✓			✓	
2. Were ***all standard used*** in the curve?	✓			✓	☐ [ic1] Lowest std removed, but RL adjusted. ☐ [ic2] Highest std removed, but linear range adjusted. ☐ [ic3] Std _____ reanalyzed, and reanalysis used.
3. Is low level standard concentration ≤ ***RL***?	✓			✓	
4. Are ***%RSD*** ≤20% or ***correlation*** coefficients ≥0.995? (No 2nd or 3rd order curves allowed.)	✓			✓	
5. Was a ***2nd source*** verification standard analyzed & were calculated concentrations < ***15%D*** from cal. std?	✓			✓	
6. Was each run checked for ***saturation***?	✓			✓	
7. Is ***integration*** acceptable?	✓			✓	
8. If ***manual integrations*** were performed, are they clearly identified, initialed, dated and reason given?	✓			✓	Reasons: 1) Corrected split peak; 2) Unresolved peak; 3) Tailing; 4) RT shift; 5) Wrong peak selected; 6) Other
9. Was ICAL method file processed using the ***correct data files***? (Analyst should compare area or peak height on chromatograms to calibration summary for all analytes. 2nd level reviewer should check 20% of analytes.)	✓			✓	
10. Were the standards ***scanned properly***?	✓				

Analyst: KCR	Date: 12/23/03	2nd Level Reviewer : L	Date: 12/23/03
Comments:		Comments:	
		* 3-NT is 16% D on CCV, L225C022	

STL KNOXVILLE--EXPLOSIVES RUNLOG

Operator: KH
PM Performed: No
Inj. Vol.: 30ul
Instrument: SEMEKA

Sample ID	File Name	Dilution	Run Time
ICAL#1 LC1492	L22SC001.D	1.000	12/22/03 19:37:19
ICAL#2 LC1492	L22SC002.D	1.000	12/22/03 19:55:18
ICAL#3 LC1492	L22SC003.D	1.000	12/22/03 20:13:24
ICAL#4 LC1493	L22SC004.D	1.000	12/22/03 20:31:31
ICAL#5 LC1493	L22SC005.D	1.000	12/22/03 20:49:31
ICAL#6 LC1493	L22SC006.D	1.000	12/22/03 21:07:39
8330 ICV LC14	L22SC007.D	1.000	12/22/03 21:25:54
F6Q131AE	L22SC008.D	1.000	12/22/03 21:44:09
F6Q211AA	L22SC009.D	1.000	12/22/03 22:02:19
F6VDJ1AC	L22SC010.D	1.000	12/22/03 22:20:32
F6QXV1AE	L22SC011.D	1.000	12/22/03 22:38:43
F6Q251AD	L22SC012.D	1.000	12/22/03 22:56:55
F6Q3D1AC	L22SC013.D	1.000	12/22/03 23:15:07
F6Q3M1AJ	L22SC014.D	1.000	12/22/03 23:33:17
F6Q6N1AD/5	L22SC015.D	5.000	12/22/03 23:51:17
RINSE	L22SC016.D	1.000	12/23/03 00:09:17
F6DQ41AA	L22SC017.D	1.000	12/23/03 00:27:27
F6DRG1AM	L22SC018.D	1.000	12/23/03 00:45:36
CCV LC1492	L22SC019.D	1.000	12/23/03 01:03:50
F6F1C1AA	L22SC020.D	1.000	12/23/03 01:22:03
F6JXA1AA	L22SC021.D	1.000	12/23/03 01:40:18
CCV LC1492	L22SC022.D	1.000	12/23/03 01:58:33
MRL LC1492	L22SC023.D	1.000	12/23/03 02:16:36

Calibration Table

Calib. Data Modified : Tuesday, December 23, 2003 7:16:56 AM

Calculate : External Standard
Based on : Peak Height

Rel. Reference Window : 4.000 %
Abs. Reference Window : 0.000 min
Rel. Non-ref. Window : 4.000 %
Abs. Non-ref. Window : 0.000 min
Uncalibrated Peaks : not reported
Partial Calibration : No recalibration if peaks missing

Curve Type : Linear
Origin : Forced
Weight : Equal

Recalibration Settings:
Average Response : Average all calibrations
Average Retention Time: Average all calibrations

Calibration Report Options :
Printout of recalibrations within a sequence:
Normal Report after Recalibration
If the sequence is done with bracketing:
Results of first cycle (ending previous bracket)

Signal 1: DAD1 B, Sig=254,16 Ref=360,100

RetTime [min]	Lvl Sig		Amount [ppb]	Height	Amt/Height	Ref	Grp	Name
2.239	1	1	20.00000	3.64578e-1	54.85802			1,3,5-TNB
		2	60.00000	1.07470	55.82957			
		3	120.00000	2.10751	56.93915			
		4	240.00000	4.38016	54.79254			
		5	480.00000	8.68645	55.25845			
		6	960.00000	16.90643	56.78314			
2.377	1	1	20.00000	1.52835e-1	130.86050			HMX
		2	60.00000	4.40034e-1	136.35317			
		3	120.00000	8.73612e-1	137.36081			
		4	240.00000	1.75117	137.05132			
		5	480.00000	3.44792	139.21428			
		6	960.00000	6.79734	141.23173			
2.803	1	1	20.00000	1.46769e-1	136.26897			RDX
		2	60.00000	4.28696e-1	139.95925			
		3	120.00000	7.89485e-1	151.99791			
		4	240.00000	1.74346	137.65733			
		5	480.00000	3.40745	140.86791			
		6	960.00000	6.18974	155.09527			
3.664	1	1	20.00000	3.33644e-1	59.94417			1,3-DNB
		2	60.00000	9.55339e-1	62.80495			
		3	120.00000	1.75097	68.53359			
		4	240.00000	3.99193	60.12130			

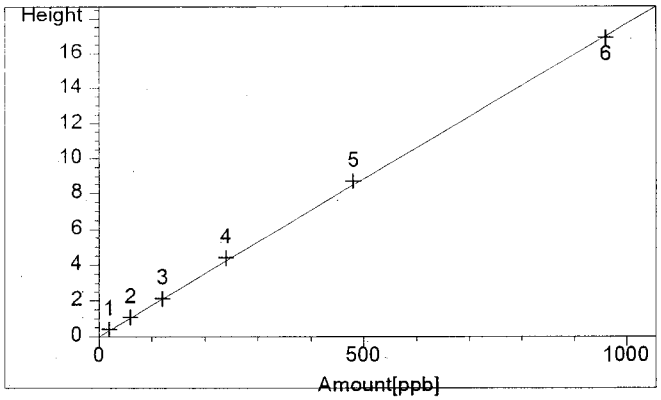
RetTime [min]	Sig	Lvl	Amount [ppb]	Height	Amt/Height	Ref	Grp	Name
		5	480.00000	7.78256	61.67635			
		6	960.00000	13.98791	68.63070			
4.534	1	1	20.00000	1.91627e-1	104.36946			TNT
		2	60.00000	5.60001e-1	107.14257			
		3	120.00000	1.10465	108.63150			
		4	240.00000	2.30206	104.25424			
		5	480.00000	4.60288	104.28250			
		6	960.00000	8.92027	107.62004			
5.166	1	1	20.00000	1.31830e-1	151.71000			NB
		2	60.00000	3.63356e-1	165.12746			
		3	120.00000	6.51027e-1	184.32408			
		4	240.00000	1.54231	155.61057			
		5	480.00000	3.00300	159.84013			
		6	960.00000	5.18528	185.13963			
6.128	1	1	20.00000	1.07219e-1	186.53429			TETRYL
		2	60.00000	3.13076e-1	191.64682			
		3	120.00000	6.18461e-1	194.03007			
		4	240.00000	1.27172	188.72062			
		5	480.00000	2.53301	189.49757			
		6	960.00000	4.97723	192.87844			
7.702	1	1	20.00000	1.40937e-1	141.90769			2,4-DNT
		2	60.00000	4.20580e-1	142.66021			
		3	120.00000	7.79849e-1	153.87597			
		4	240.00000	1.70783	140.52892			
		5	480.00000	3.40794	140.84741			
		6	960.00000	6.31985	151.90234			
9.175	1	1	20.00000	7.36899e-2	271.40775			2,6-DNT
		2	60.00000	2.13583e-1	280.92128			
		3	120.00000	4.08683e-1	293.62639			
		4	240.00000	8.82456e-1	271.96829			
		5	480.00000	1.74298	275.39097			
		6	960.00000	3.24883	295.49140			
10.147	1	1	20.00000	6.96827e-2	287.01512			2-AMINO
		2	60.00000	2.08247e-1	288.11883			
		3	120.00000	3.79294e-1	316.37696			
		4	240.00000	8.43254e-1	284.61172			
		5	480.00000	1.66155	288.88752			
		6	960.00000	2.93906	326.63555			
11.342	1	1	20.00000	5.24880e-2	381.03962			4-AMINO
		2	60.00000	1.47337e-1	407.22971			
		3	120.00000	2.69429e-1	445.38710			
		4	240.00000	6.12759e-1	391.67138			
		5	480.00000	1.21033	396.58586			
		6	960.00000	2.13200	450.28088			
12.563	1	1	40.00000	3.45396e-2	1158.09254			2- & 4-NT
		2	120.00000	1.08783e-1	1103.11642			
		3	240.00000	2.10978e-1	1137.55799			
		4	480.00000	4.36876e-1	1098.70911			
		5	960.00000	8.69365e-1	1104.25383			
		6	1920.00000	1.64240	1169.01830			
13.906	1	1	20.00000	2.50651e-2	797.92186			3-NT
		2	60.00000	8.83220e-2	679.33251			
		3	120.00000	1.69748e-1	706.92887			
		4	240.00000	3.55202e-1	675.67206			
		5	480.00000	7.14215e-1	672.06667			
		6	960.00000	1.31557	729.72093			

RetTime [min]	Lvl Sig		Amount [ppb]	Height	Amt/Height	Ref	Grp	Name
14.823	1	1	11.77000	1.93817e-2	607.27486			SURROGATE
		2	35.30000	5.95416e-2	592.86253			
		3	70.60000	1.10474e-1	639.06264			
		4	141.20000	2.36138e-1	597.95520			
		5	282.40000	4.66511e-1	605.34469			
		6	564.80000	8.75890e-1	644.83013			

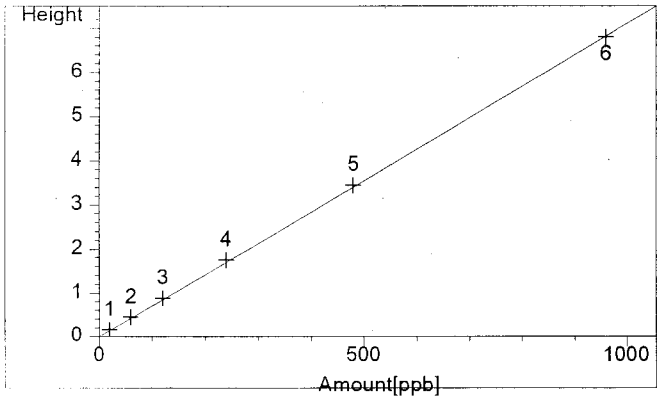
Peak Sum Table

No Entries in table

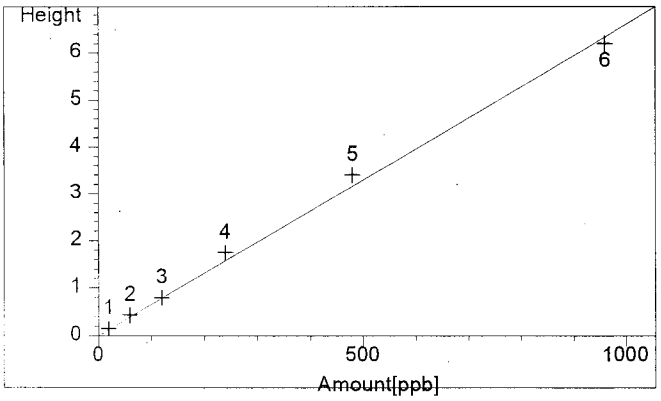
Calibration Curves



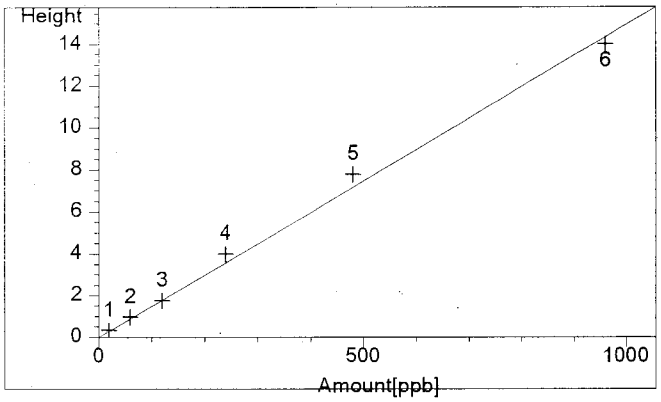
1,3,5-TNB at exp. RT: 2.239
DAD1 B, Sig=254,16 Ref=360,100
Correlation: 0.99992
Residual Std. Dev.: 0.10982
Formula: y = mx
m: 1.77326e-2
x: Amount[ppb]
y: Height



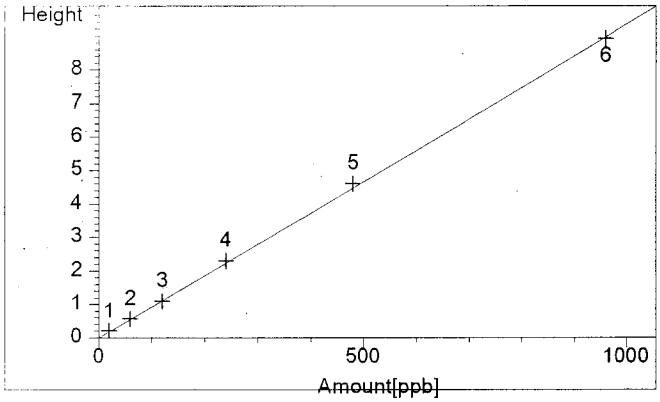
HMX at exp. RT: 2.377
DAD1 B, Sig=254,16 Ref=360,100
Correlation: 0.99996
Residual Std. Dev.: 0.03077
Formula: y = mx
m: 7.11321e-3
x: Amount[ppb]
y: Height



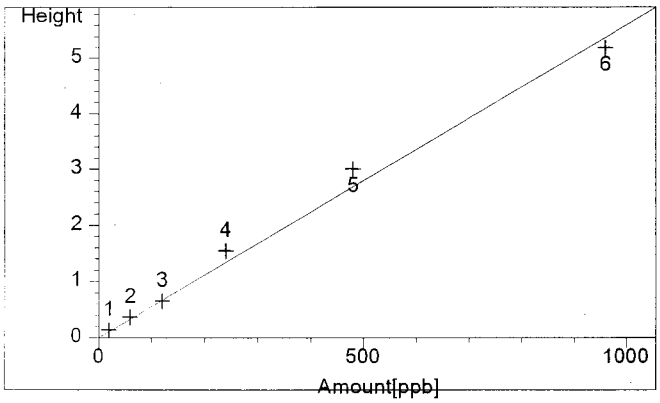
RDX at exp. RT: 2.803
DAD1 B, Sig=254,16 Ref=360,100
Correlation: 0.99902
Residual Std. Dev.: 0.14510
Formula: y = mx
m: 6.61202e-3
x: Amount[ppb]
y: Height



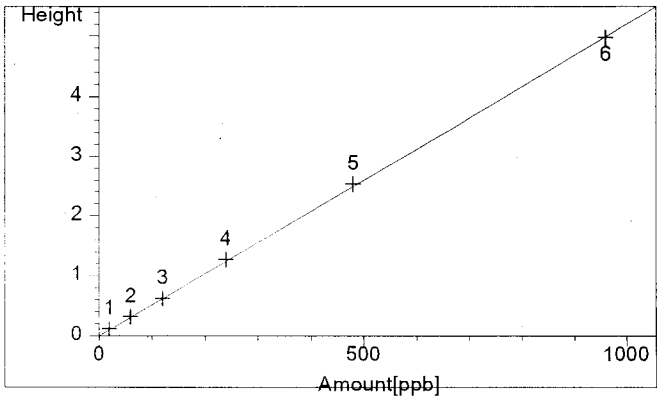
1,3-DNB at exp. RT: 3.664
DAD1 B, Sig=254,16 Ref=360,100
Correlation: 0.99879
Residual Std. Dev.: 0.36577
Formula: y = mx
m: 1.49806e-2
x: Amount[ppb]
y: Height



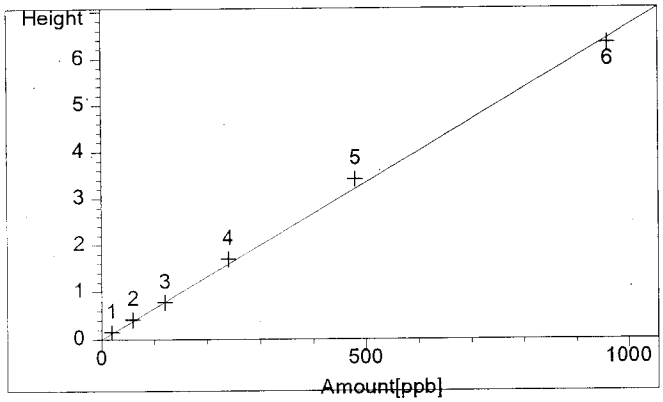
TNT at exp. RT: 4.534
DAD1 B, Sig=254,16 Ref=360,100
Correlation: 0.99991
Residual Std. Dev.: 0.06301
Formula: y = mx
m: 9.36102e-3
x: Amount[ppb]
y: Height



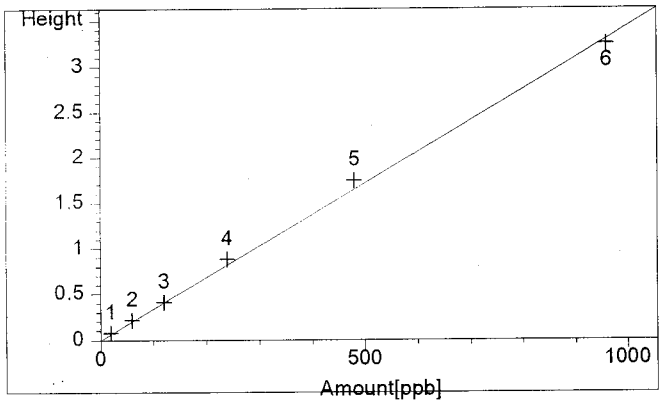
NB at exp. RT: 5.166
DAD1 B, Sig=254,16 Ref=360,100
Correlation: 0.99773
Residual Std. Dev.: 0.18779
Formula: y = mx
m: 5.61239e-3
x: Amount[ppb]
y: Height



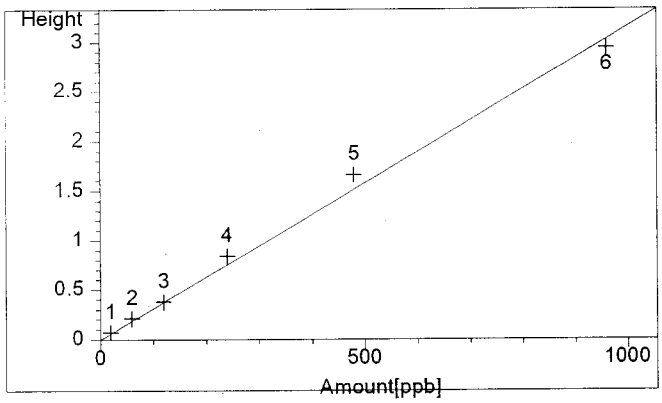
TETRYL at exp. RT: 6.128
DAD1 B, Sig=254,16 Ref=360,100
Correlation: 0.99997
Residual Std. Dev.: 0.02064
Formula: y = mx
m: 5.20712e-3
x: Amount[ppb]
y: Height



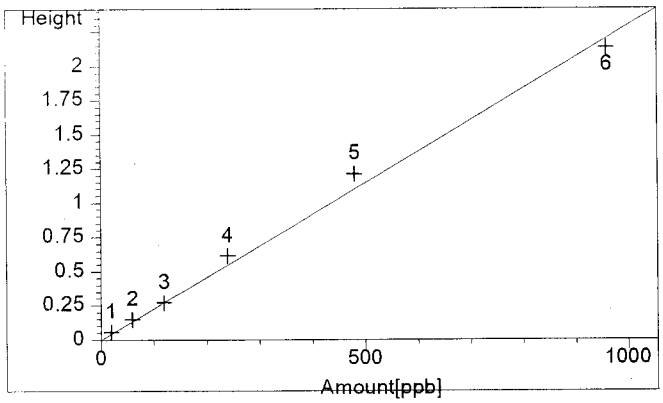
2,4-DNT at exp. RT: 7.702
DAD1 B, Sig=254,16 Ref=360,100
Correlation: 0.99945
Residual Std. Dev.: 0.10984
Formula: y = mx
m: 6.70552e-3
x: Amount[ppb]
y: Height



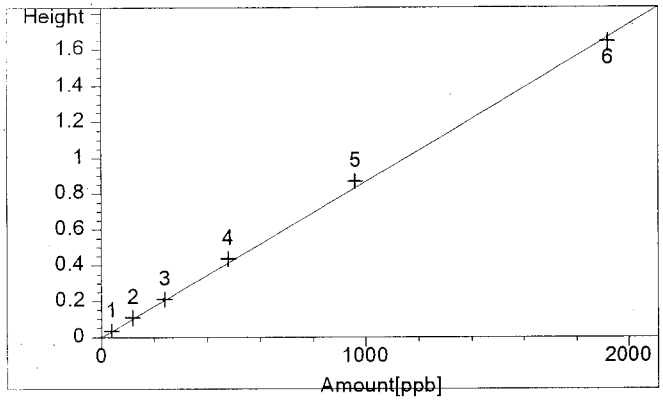
2,6-DNT at exp. RT: 9.175
DAD1 B, Sig=254,16 Ref=360,100
Correlation: 0.99950
Residual Std. Dev.: 0.05401
Formula: y = mx
m: 3.44513e-3
x: Amount[ppb]
y: Height



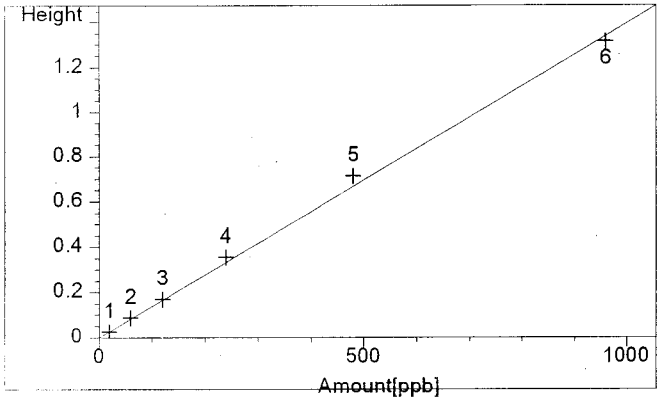
2-AMINO at exp. RT: 10.147
DAD1 B, Sig=254,16 Ref=360,100
Correlation: 0.99848
Residual Std. Dev.: 0.08658
Formula: y = mx
m: 3.16028e-3
x: Amount[ppb]
y: Height



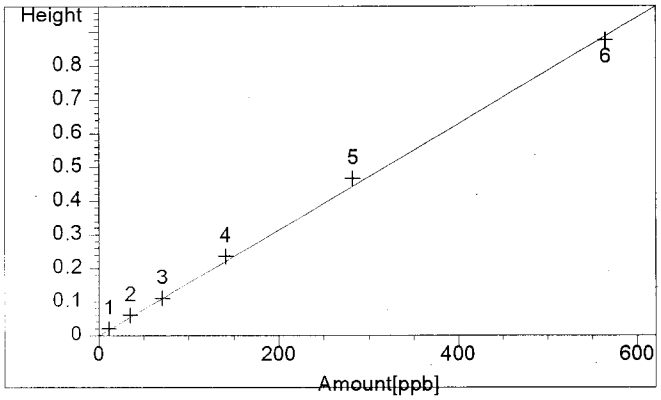
4-AMINO at exp. RT: 11.342
DAD1 B, Sig=254,16 Ref=360,100
Correlation: 0.99839
Residual Std. Dev.: 0.06465
Formula: y = mx
m: 2.29395e-3
x: Amount[ppb]
y: Height



2- & 4-NT at exp. RT: 12.563
DAD1 B, Sig=254,16 Ref=360,100
Correlation: 0.99969
Residual Std. Dev.: 0.02156
Formula: y = mx
m: 8.67829e-4
x: Amount[ppb]
y: Height



3-NT at exp. RT: 13.906
DAD1 B, Sig=254,16 Ref=360,100
Correlation: 0.99938
Residual Std. Dev.: 0.02444
Formula: y = mx
m: 1.39836e-3
x: Amount[ppb]
y: Height



SURROGATE at exp. RT: 14.823
DAD1 B, Sig=254,16 Ref=360,100
Correlation: 0.99959
Residual Std. Dev.: 0.01315
Formula: y = mx
m: 1.57607e-3
x: Amount[ppb]
y: Height

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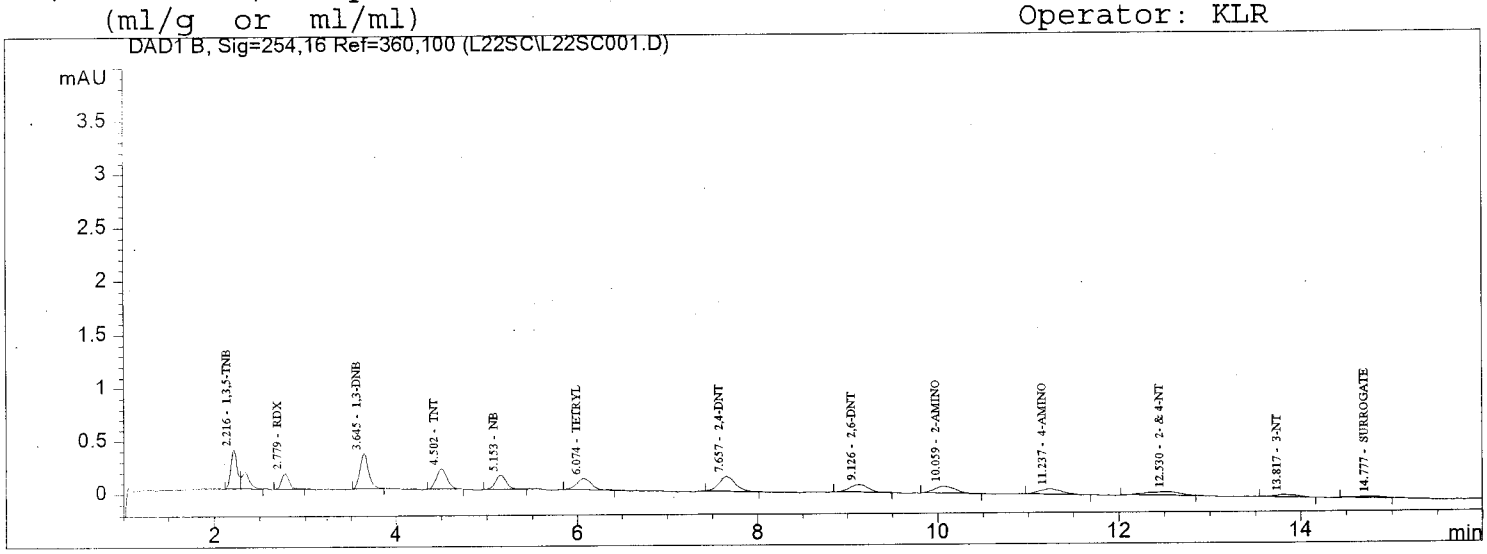
STL-KNOXVILLE Explosives Confirmation Analysis

Sample Number: ICAL#1 LC1492 Print Time:12/23/03 07:14:36

Instrument Name: Semika Data Acquisition Time:12/22/03 19:37:19
Data File name: H:\SEMEKA\DATA\L22SC\L22SC001.D
Method File: H:\SEMEKA\METHODS\L22SC.M
Sequence File:

Dilution: 1.000 Sample Amount: 0.000
Multiplier : 1.000000 Injection Volume (ul): 6.670
(Final Vol / Sample Amt)
(ml/g or ml/ml) Operator: KLR



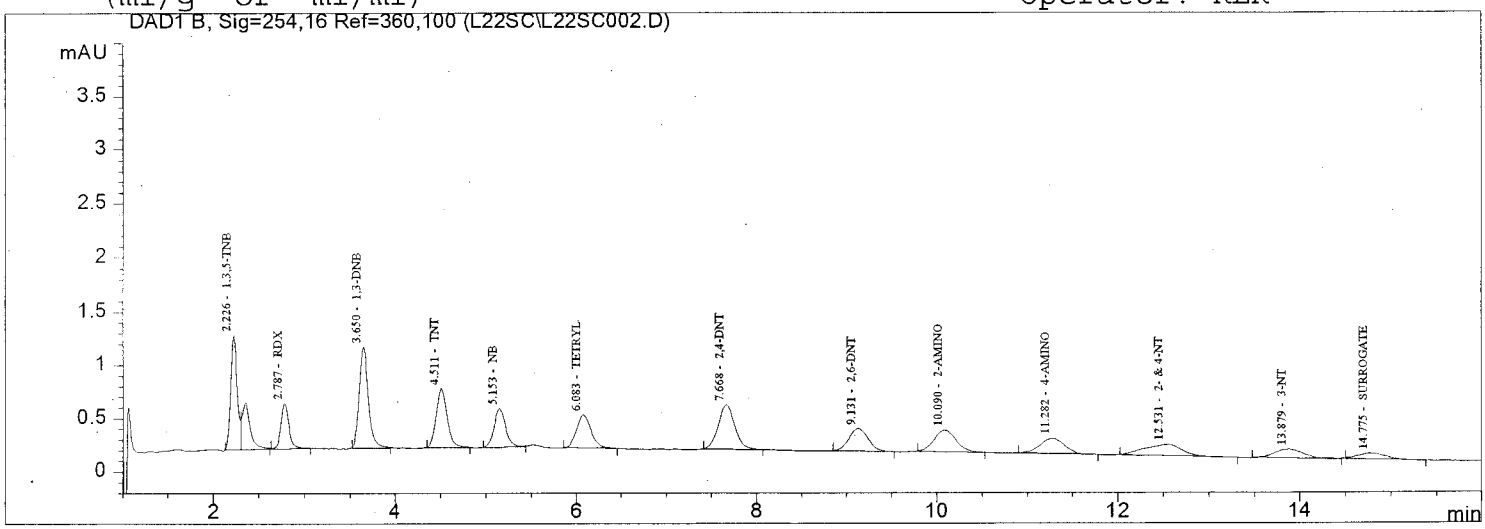
#	Exp.RT	Meas.RT	Compound Name	Height	Amt (ppb)
1	2.216	2.216	1,3,5-TNB	0.36458	20.5598
2	2.338	2.338	HMX	0.15283	21.4860
3	2.779	2.779	RDX	0.14677	22.1973
4	3.645	3.645	1,3-DNB	0.33364	22.2717
5	4.502	4.502	TNT	0.19163	20.4707
6	5.153	5.153	NB	0.13183	23.4892
7	6.074	6.074	TETRYL	0.10722	20.5908
8	7.657	7.657	2,4-DNT	0.14094	21.0180
9	9.126	9.126	2,6-DNT	0.07369	21.3896
10	10.059	10.059	2-AMINO	0.06968	22.0496
11	11.237	11.237	4-AMINO	0.05249	22.8811
12	12.530	12.530	2- & 4-NT	0.03454	39.7999
13	13.817	13.817	3-NT	0.02507	17.9246
14	14.777	14.777	SURROGATE	0.01938	12.2975

STL-KNOXVILLE Explosives Confirmation Analysis

Sample Number: ICAL#2 LC1492 Print Time:12/23/03 07:15:10

Instrument Name: Semika Data Acquisition Time:12/22/03 19:55:18
Data File name: H:\SEMEKA\DATA\L22SC\L22SC002.D
Method File: H:\SEMEKA\METHODS\L22SC.M
Sequence File:

Dilution: 1.000 Sample Amount: 0.000
Multiplier : 1.000000 Injection Volume (ul): 20.000
(Final Vol / Sample Amt)
(ml/g or ml/ml) Operator: KLR



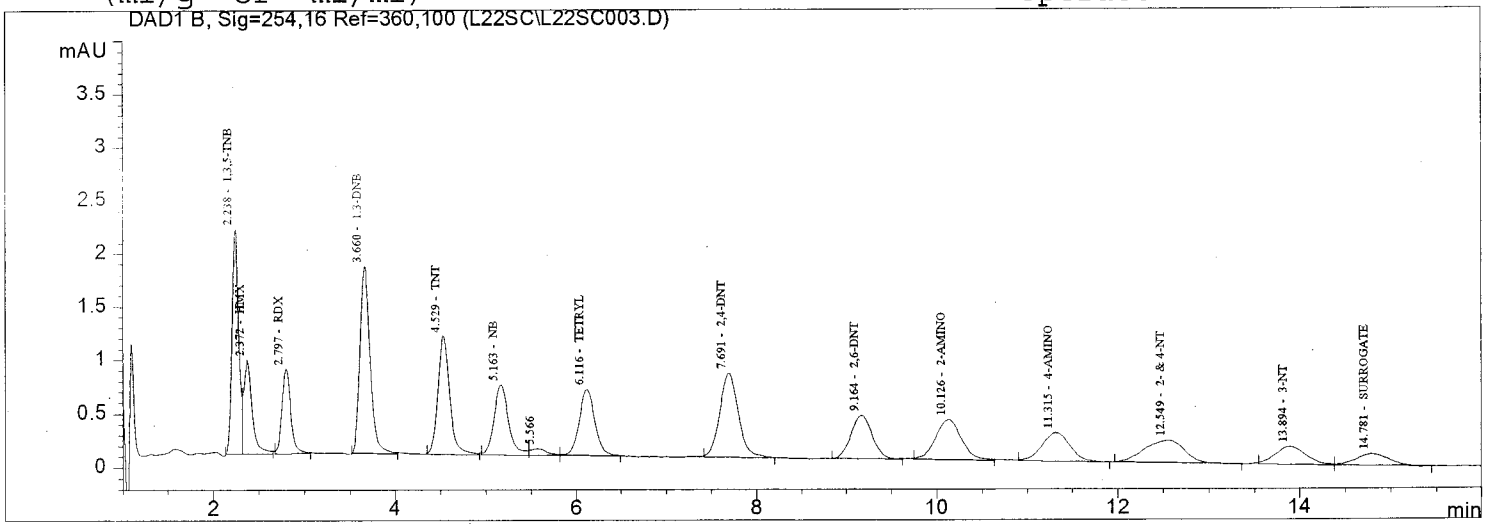
#	Exp.RT	Meas.RT	Compound Name	Height	Amt (ppb)
1	2.226	2.226	1,3,5-TNB	1.07470	60.6060
2	2.355	2.355	HMX	0.44003	61.8615
3	2.787	2.787	RDX	0.42870	64.8359
4	3.650	3.650	1,3-DNB	0.95534	63.7717
5	4.511	4.511	TNT	0.56000	59.8227
6	5.153	5.153	NB	0.36336	64.7416
7	6.083	6.083	TETRYL	0.31308	60.1246
8	7.668	7.668	2,4-DNT	0.42058	62.7214
9	9.131	9.131	2,6-DNT	0.21358	61.9956
10	10.090	10.090	2-AMINO	0.20825	65.8953
11	11.282	11.282	4-AMINO	0.14734	64.2286
12	12.531	12.531	2- & 4-NT	0.10878	125.3504
13	13.879	13.879	3-NT	0.08832	63.1610
14	14.775	14.775	SURROGATE	0.05954	37.7785

STL-KNOXVILLE Explosives Confirmation Analysis

Sample Number: ICAL#3 LC1492 Print Time:12/23/03 07:15:43

Instrument Name: Semika Data Acquisition Time:12/22/03 20:13:24
Data File name: H:\SEMEKA\DATA\L22SC\L22SC003.D
Method File: H:\SEMEKA\METHODS\L22SC.M
Sequence File:

Dilution: 1.000 Sample Amount: 0.000
Multiplier : 1.000000 Injection Volume (ul): 40.000
(Final Vol / Sample Amt)
(ml/g or ml/ml) Operator: KLR



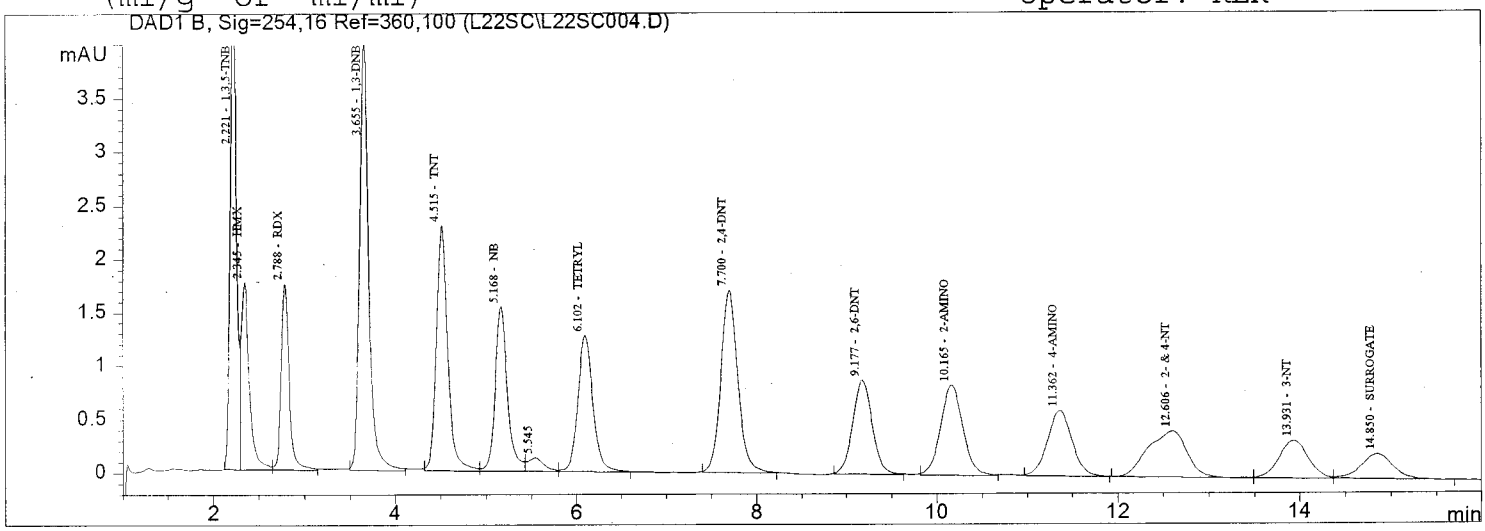
#	Exp.RT	Meas.RT	Compound Name	Height	Amt (ppb)
1	2.238	2.238	1,3,5-TNB	2.10751	118.8499
2	2.372	2.372	HMX	0.87361	122.8154
3	2.797	2.797	RDX	0.78948	119.4015
4	3.660	3.660	1,3-DNB	1.75097	116.8821
5	4.529	4.529	TNT	1.10465	118.0055
6	5.163	5.163	NB	0.65103	115.9981
7	0.000	5.566		0.06402	0.0000
8	6.116	6.116	TETRYL	0.61846	118.7722
9	7.691	7.691	2,4-DNT	0.77985	116.2995
10	9.164	9.164	2,6-DNT	0.40868	118.6261
11	10.126	10.126	2-AMINO	0.37929	120.0193
12	11.315	11.315	4-AMINO	0.26943	117.4520
13	12.549	12.549	2- & 4-NT	0.21098	243.1104
14	13.894	13.894	3-NT	0.16975	121.3907
15	14.781	14.781	SURROGATE	0.11047	70.0947

STL-KNOXVILLE Explosives Confirmation Analysis

Sample Number: ICAL#4 LC1493 Print Time:12/23/03 07:16:08

Instrument Name: Semika Data Acquisition Time:12/22/03 20:31:31
Data File name: H:\SEMEKA\DATA\L22SC\L22SC004.D
Method File: H:\SEMEKA\METHODS\L22SC.M
Sequence File:

Dilution: 1.000 Sample Amount: 0.000
Multiplier : 1.000000 Injection Volume (ul): 10.000
(Final Vol / Sample Amt)
(ml/g or ml/ml) Operator: KLR



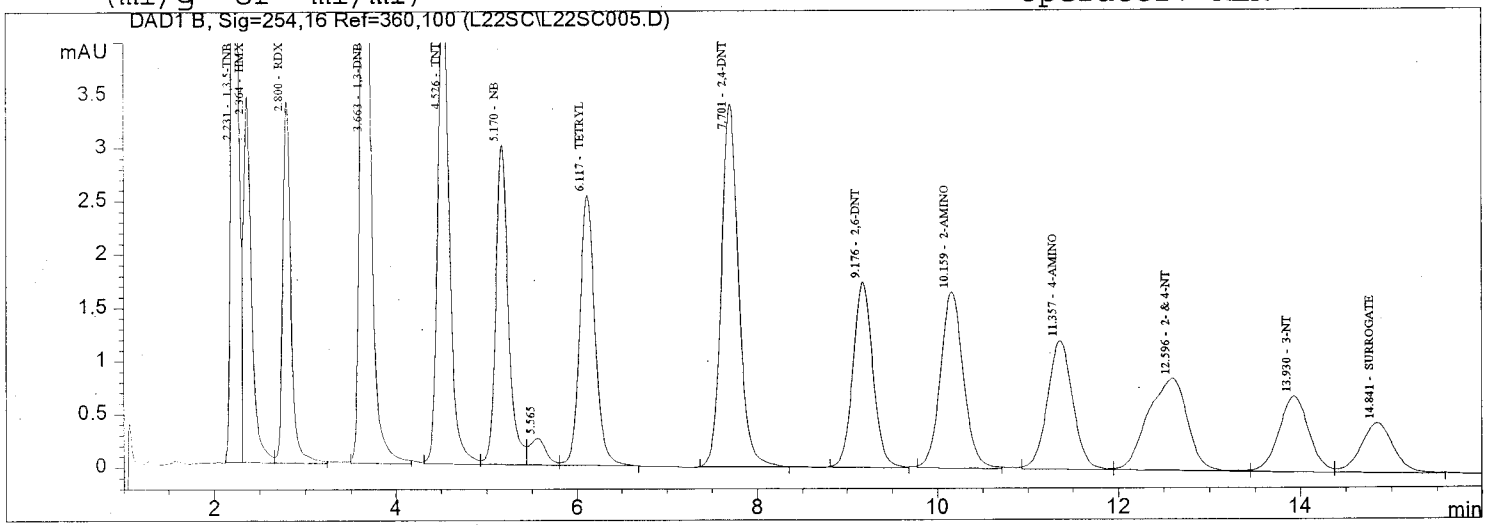
#	Exp.RT	Meas.RT	Compound Name	Height	Amt (ppb)
1	2.221	2.221	1,3,5-TNB	4.38016	247.0122
2	2.345	2.345	HMX	1.75117	246.1855
3	2.788	2.788	RDX	1.74346	263.6805
4	3.655	3.655	1,3-DNB	3.99193	266.4730
5	4.515	4.515	TNT	2.30206	245.9203
6	5.168	5.168	NB	1.54231	274.8046
7	0.000	5.545		0.13026	0.0000
8	6.102	6.102	TETRYL	1.27172	244.2274
9	7.700	7.700	2,4-DNT	1.70783	254.6905
10	9.177	9.177	2,6-DNT	0.88246	256.1458
11	10.165	10.165	2-AMINO	0.84325	266.8292
12	11.362	11.362	4-AMINO	0.61276	267.1200
13	12.606	12.606	2- & 4-NT	0.43688	503.4128
14	13.931	13.931	3-NT	0.35520	254.0125
15	14.850	14.850	SURROGATE	0.23614	149.8270

STL-KNOXVILLE Explosives Confirmation Analysis

Sample Number: ICAL#5 LC1493 Print Time:12/23/03 07:16:35

Instrument Name: Semika Data Acquisition Time:12/22/03 20:49:31
Data File name: H:\SEMEKA\DATA\L22SC\L22SC005.D
Method File: H:\SEMEKA\METHODS\L22SC.M
Sequence File:

Dilution: 1.000 Sample Amount: 0.000
Multiplier : 1.000000 Injection Volume (ul): 20.000
(Final Vol / Sample Amt)
(ml/g or ml/ml) Operator: KLR



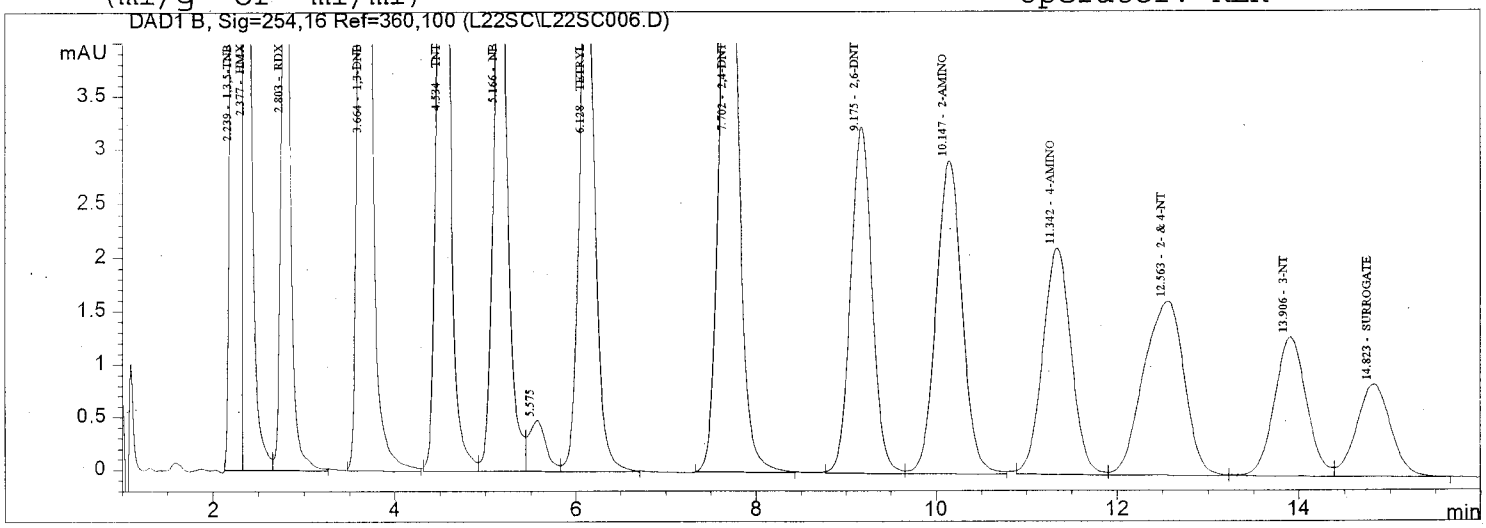
#	Exp.RT	Meas.RT	Compound Name	Height	Amt (ppb)
1	2.231	2.231	1,3,5-TNB	8.68645	489.8591
2	2.364	2.364	HMX	3.44792	484.7210
3	2.800	2.800	RDX	3.40745	515.3417
4	3.663	3.663	1,3-DNB	7.78256	519.5089
5	4.526	4.526	TNT	4.60288	491.7073
6	5.170	5.170	NB	3.00300	535.0658
7	0.000	5.565		0.25372	0.0000
8	6.117	6.117	TETRYL	2.53301	486.4520
9	7.701	7.701	2,4-DNT	3.40794	508.2292
10	9.176	9.176	2,6-DNT	1.74298	505.9245
11	10.159	10.159	2-AMINO	1.66155	525.7597
12	11.357	11.357	4-AMINO	1.21033	527.6197
13	12.596	12.596	2- & 4-NT	0.86937	1001.7701
14	13.930	13.930	3-NT	0.71421	510.7504
15	14.841	14.841	SURROGATE	0.46651	295.9962

STL-KNOXVILLE Explosives Confirmation Analysis

Sample Number: ICAL#6 LC1493 Print Time:12/23/03 07:17:02

Instrument Name: Semika Data Acquisition Time:12/22/03 21:07:39
Data File name: H:\SEMEKA\DATA\L22SC\L22SC006.D
Method File: H:\SEMEKA\METHODS\L22SC.M
Sequence File:

Dilution: 1.000 Sample Amount: 0.000
Multiplier : 1.000000 Injection Volume (ul): 40.000
(Final Vol / Sample Amt)
(ml/g or ml/ml) Operator: KLR



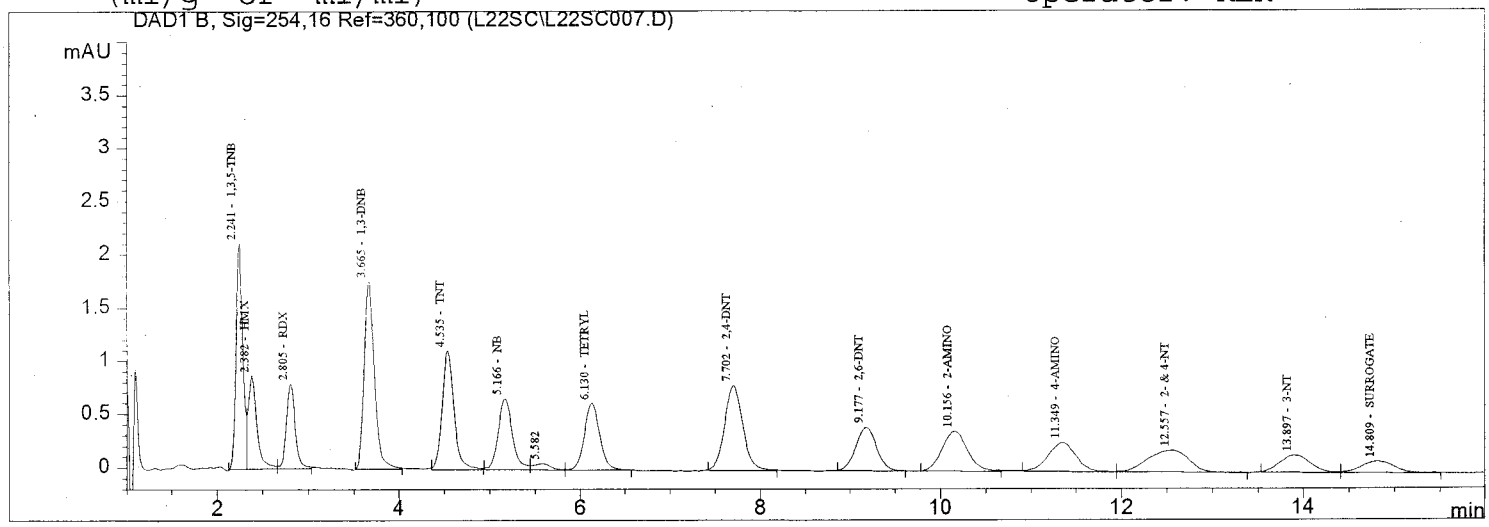
#	Exp.RT	Meas.RT	Compound Name	Height	Amt (ppb)
1	2.239	2.239	1,3,5-TNB	16.90643	953.4116
2	2.377	2.377	HMX	6.79734	955.5939
3	2.803	2.803	RDX	6.18974	936.1358
4	3.664	3.664	1,3-DNB	13.98791	933.7340
5	4.534	4.534	TNT	8.92027	952.9168
6	5.166	5.166	NB	5.18528	923.8972
7	0.000	5.575		0.48485	0.0000
8	6.128	6.128	TETRYL	4.97723	955.8505
9	7.702	7.702	2,4-DNT	6.31985	942.4840
10	9.175	9.175	2,6-DNT	3.24883	943.0193
11	10.147	10.147	2-AMINO	2.93906	929.9993
12	11.342	11.342	4-AMINO	2.13200	929.4043
13	12.563	12.563	2- & 4-NT	1.64240	1892.5427
14	13.906	13.906	3-NT	1.31557	940.7935
15	14.823	14.823	SURROGATE	0.87589	555.7424

STL-KNOXVILLE Explosives Confirmation Analysis

Sample Number: 8330 ICV LC1494 Print Time:12/23/03 07:17:44

Instrument Name: Semika Data Acquisition Time:12/22/03 21:25:54
Data File name: H:\SEMEKA\DATA\L22SC\L22SC007.D
Method File: H:\SEMEKA\METHODS\L22SC.M
Sequence File:

Dilution: 1.000 Sample Amount: 0.000
Multiplier : 1.000000 Injection Volume (ul): 40.000
(Final Vol / Sample Amt)
(ml/g or ml/ml) Operator: KLR



#	Exp.RT	Meas.RT	Compound Name	Height	Amt (ppb)
1	2.239	2.241	1,3,5-TNB	2.12178	119.6544
2	2.377	2.382	HMX	0.87453	122.9442
3	2.803	2.805	RDX	0.79463	120.1800
4	3.664	3.665	1,3-DNB	1.76867	118.0636
5	4.534	4.535	TNT	1.11569	119.1843
6	5.166	5.166	NB	0.66409	118.3256
7	0.000	5.582		0.06204	0.0000
8	6.128	6.130	TETRYL	0.62334	119.7100
9	7.702	7.702	2,4-DNT	0.79615	118.7304
10	9.175	9.177	2,6-DNT	0.40853	118.5827
11	10.147	10.156	2-AMINO	0.37352	118.1906
12	11.342	11.349	4-AMINO	0.27108	118.1715
13	12.563	12.557	2- & 4-NT	0.20825	239.9669
14	13.906	13.897	3-NT	0.16771	119.9338
15	14.823	14.809	SURROGATE	0.11162	70.8243

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STL Knoxville
Check Standard Report

Sample Name: 8330 ICV LC1494
Analysis Time: 12/22/03 21:25:54
File Name: H:\SEMEKA\DATA\L22SC\L22SC007.D
Method: H:\SEMEKA\METHODS\L22SC.M

Component	Spike Amt.	Result	% Diff.	
1,3,5-TNB	120	119.6544	-0.288	
HMX	120	122.9442	2.4535	
RDX	120	120.1800	0.15	
1,3-DNB	120	118.0636	-1.6137	✓
TNT	120	119.1843	-0.6798	
NB	120	118.3256	-1.3953	
TETRYL	120	119.7100	-0.2417	
2,4-DNT	120	118.7304	-1.058	
2,6-DNT	120	118.5827	-1.1811	
2-AMINO	120	118.1906	-1.5078	-0.0138%
4-AMINO	120	118.1715	-1.5238	
2- & 4-NT	~~120~~ 240	239.9669	~~-99.9724~~	~~-0.3379%~~
3-NT	120	119.9338	-0.0552	
SURROGATE	70.6 KLM 12/23/03	70.8243	0.3177	KLM 12/23/03

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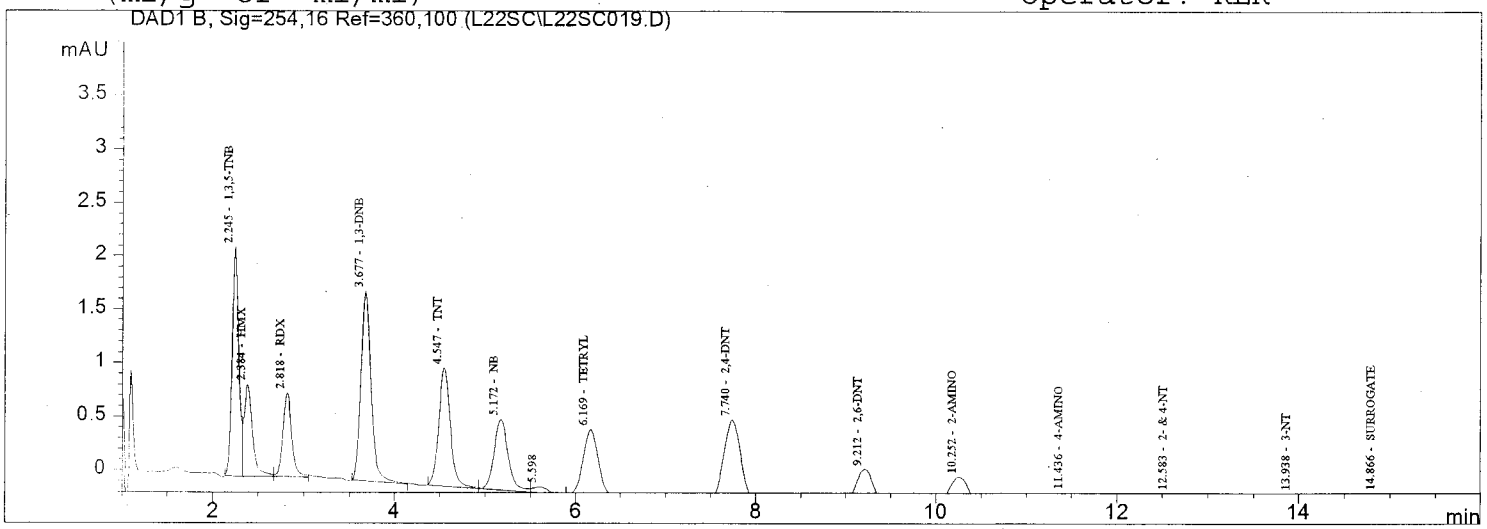
STL-KNOXVILLE Explosives Confirmation Analysis

Sample Number: CCV LC1492 Print Time:12/23/03 07:18:10

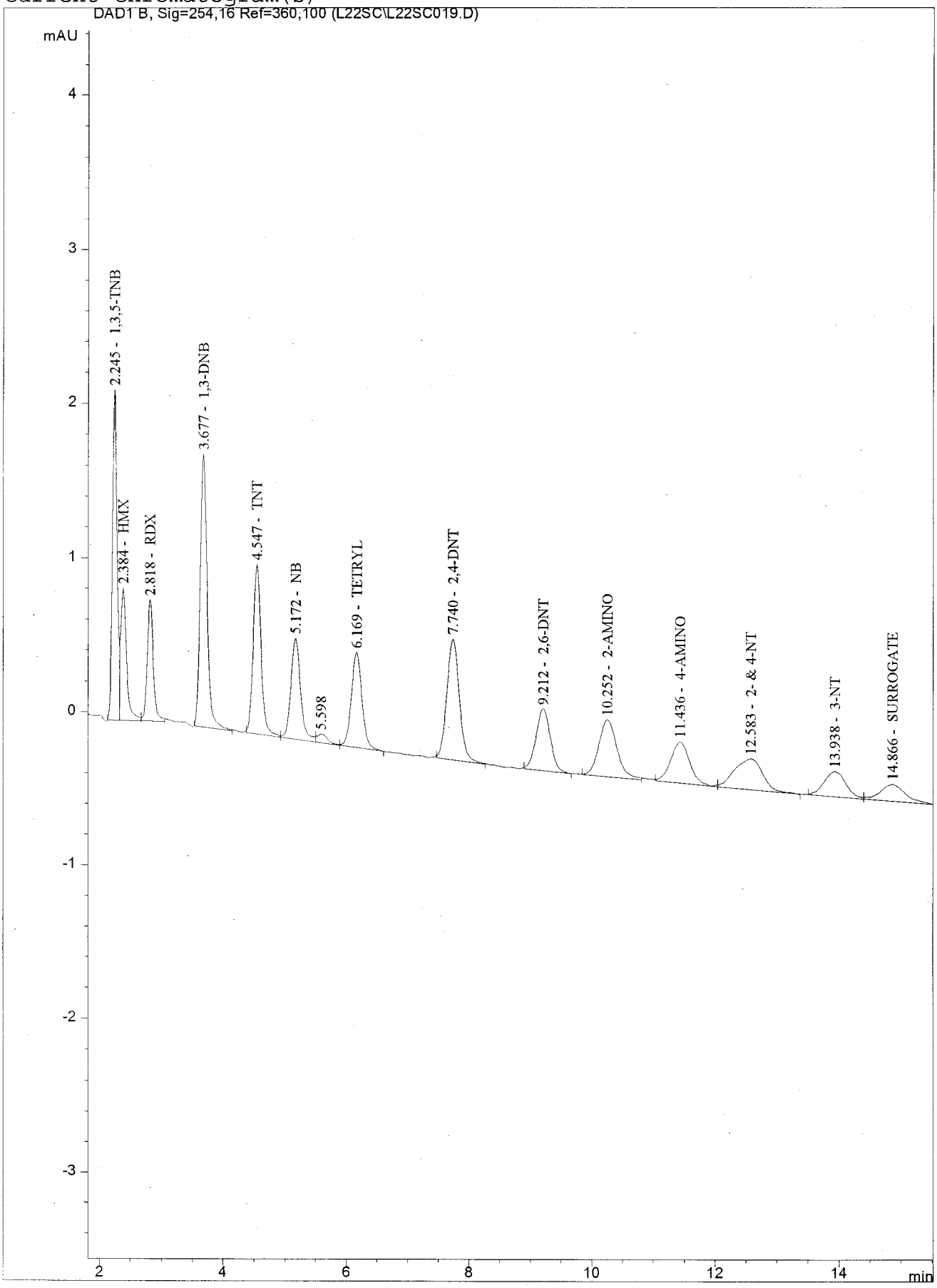
Instrument Name: Semika Data Acquisition Time:12/23/03 01:03:50
Data File name: H:\SEMEKA\DATA\L22SC\L22SC019.D
Method File: H:\SEMEKA\METHODS\L22SC.M
Sequence File:

Dilution: 1.000 Sample Amount: 0.000
Multiplier : 1.000000 Injection Volume (ul): 40.000
(Final Vol / Sample Amt)
(ml/g or ml/ml) Operator: KLR



#	Exp.RT	Meas.RT	Compound Name	Height	Amt (ppb)
1	2.239	2.245	1,3,5-TNB	2.14536	120.9845
2	2.377	2.384	HMX	0.86096	121.0371
3	2.803	2.818	RDX	0.78741	119.0873
4	3.664	3.677	1,3-DNB	1.77481	118.4739
5	4.534	4.547	TNT	1.10299	117.8277
6	5.166	5.172	NB	0.65788	117.2190
7	0.000	5.598		0.05718	0.0000
8	6.128	6.169	TETRYL	0.62043	119.1505
9	7.702	7.740	2,4-DNT	0.78949	117.7375
10	9.175	9.212	2,6-DNT	0.40414	117.3086
11	10.147	10.252	2-AMINO	0.37290	117.9965
12	11.342	11.436	4-AMINO	0.26969	117.5668
13	12.563	12.583	2- & 4-NT	0.20300	233.9115
14	13.906	13.938	3-NT	0.16719	119.5627
15	14.823	14.866	SURROGATE	0.11104	70.4540

Current Chromatogram(s)



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STL Knoxville
Check Standard Report

Sample Name: CCV LC1492
Analysis Time: 12/23/03 01:03:50
File Name: H:\SEMEKA\DATA\L22SC\L22SC019.D
Method: H:\SEMEKA\METHODS\L22SC.M

Component	Spike Amt.	Result	% Diff.
1,3,5-TNB	120	120.9845	0.8204
HMX	120	121.0371	0.8642
RDX	120	119.0873	-0.7606
1,3-DNB	120	118.4739	-1.2717
TNT	120	117.8277	-1.8103
NB	120	117.2190	-2.3175
TETRYL	120	119.1505	-0.7079
2,4-DNT	120	117.7375	-1.8854
2,6-DNT	120	117.3086	-2.2428
2-AMINO	120	117.9965	-1.6696
4-AMINO	120	117.5668	-2.0277
2- & 4-NT	~~120~~ 240	233.9115	~~94.9262~~ -2.57%
3-NT	120	119.5627	-0.3644
SURROGATE	70.6	70.4540	-0.2068

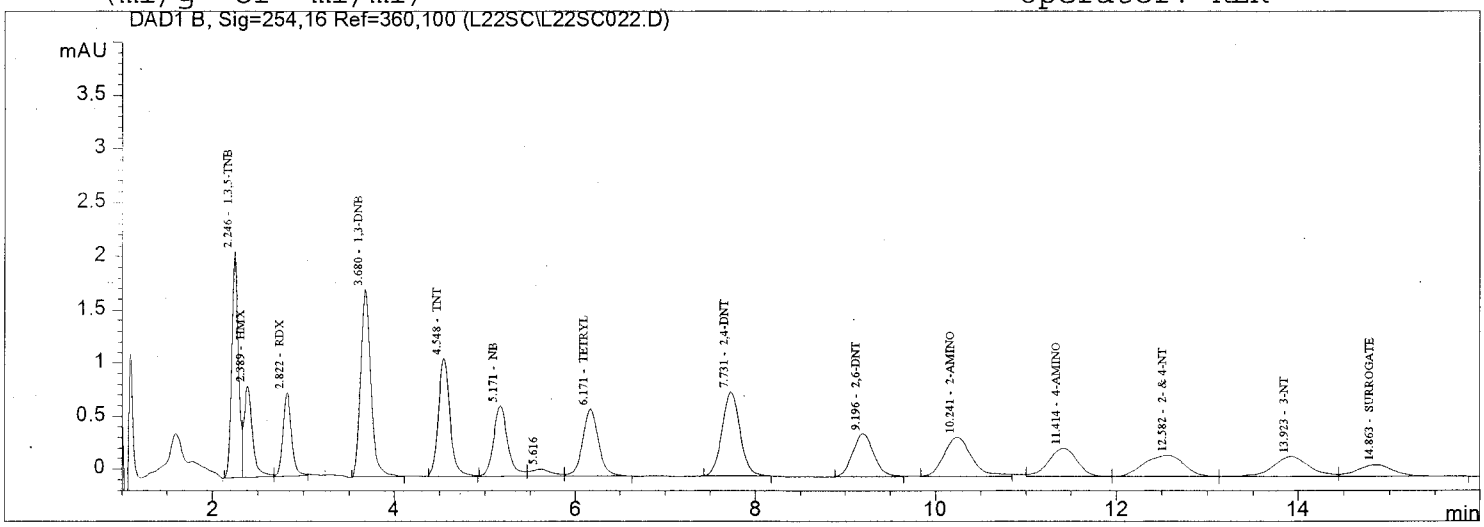
ICK 12/23/03

STL-KNOXVILLE Explosives Confirmation Analysis

Sample Number: CCV LC1492 Print Time:12/23/03 07:19:03

Instrument Name: Semika Data Acquisition Time:12/23/03 01:58:33
Data File name: H:\SEMEKA\DATA\L22SC\L22SC022.D
Method File: H:\SEMEKA\METHODS\L22SC.M
Sequence File:

Dilution: 1.000 Sample Amount: 0.000
Multiplier : 1.000000 Injection Volume (ul): 40.000
(Final Vol / Sample Amt)
(ml/g or ml/ml) Operator: KLR



#	Exp.RT	Meas.RT	Compound Name	Height	Amt (ppb)
1	2.239	2.246	1,3,5-TNB	2.13148	120.2014
2	2.377	2.389	HMX	0.86706	121.8949
3	2.803	2.822	RDX	0.79268	119.8851
4	3.664	3.680	1,3-DNB	1.76796	118.0164
5	4.534	4.548	TNT	1.11682	119.3049
6	5.166	5.171	NB	0.66805	119.0311
7	0.000	5.616		0.07286	0.0000
8	6.128	6.171	TETRYL	0.63806	122.5368
9	7.702	7.731	2,4-DNT	0.79847	119.0769
10	9.175	9.196	2,6-DNT	0.40819	118.4845
11	10.147	10.241	2-AMINO	0.37584	118.9276
12	11.342	11.414	4-AMINO	0.27140	118.3102
13	12.563	12.582	2- & 4-NT	0.20162	232.3244
14	13.906	13.923	3-NT	0.19399	138.7231
15	14.823	14.863	SURROGATE	0.11422	72.4724

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STL Knoxville
Check Standard Report

Sample Name: CCV LC1492
Analysis Time: 12/23/03 01:58:33
File Name: H:\SEMEKA\DATA\L22SC\L22SC022.D
Method: H:\SEMEKA\METHODS\L22SC.M

Component	Spike Amt.	Result	% Diff.
1,3,5-TNB	120	120.2014	0.1678
HMX	120	121.8949	1.5791
RDX	120	119.8851	-0.0958
1,3-DNB	120	118.0164	-1.653
TNT	120	119.3049	-0.5792
NB	120	119.0311	-0.8074
TETRYL	120	122.5368	2.114
2,4-DNT	120	119.0769	-0.7693
2,6-DNT	120	118.4845	-1.2629
2-AMINO	120	118.9276	-0.8937
4-AMINO	120	118.3102	-1.4082
2- & 4-NT	~~120~~ 240	232.3244	~~93.6037~~ ~~0.3~~ -3.25%
3-NT	120	138.7231	15.6026
SURROGATE	70.6	72.4724	2.6521

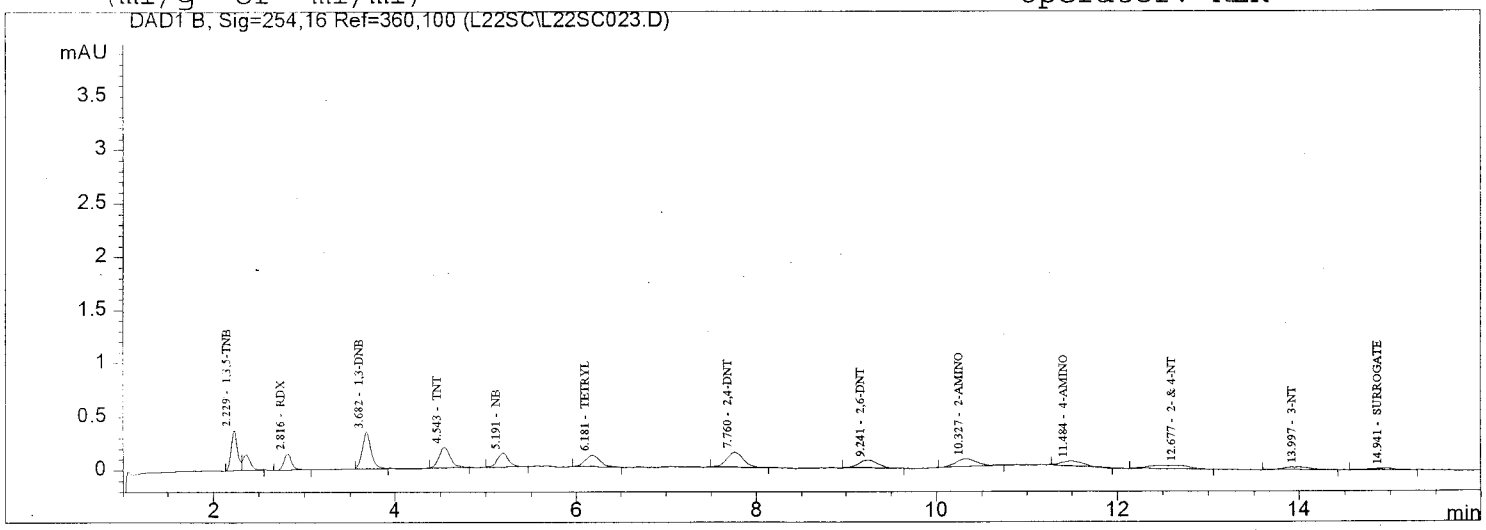
KLK 12/23/03

STL-KNOXVILLE Explosives Confirmation Analysis

Sample Number: MRL LC1492 Print Time:12/23/03 07:19:27

Instrument Name: Semika Data Acquisition Time:12/23/03 02:16:36
Data File name: H:\SEMEKA\DATA\L22SC\L22SC023.D
Method File: H:\SEMEKA\METHODS\L22SC.M
Sequence File:

Dilution: 1.000 Sample Amount: 0.000
Multiplier : 1.000000 Injection Volume (ul): 6.670
(Final Vol / Sample Amt)
(ml/g or ml/ml) Operator: KLR



#	Exp.RT	Meas.RT	Compound Name	Height	Amt (ppb)
1	2.239	2.229	1,3,5-TNB	0.37236	20.9988
2	2.377	2.364	HMX	0.14930	20.9896
3	2.803	2.816	RDX	0.15015	22.7092
4	3.664	3.682	1,3-DNB	0.34397	22.9608
5	4.534	4.543	TNT	0.19416	20.7415
6	5.166	5.191	NB	0.12981	23.1293
7	6.128	6.181	TETRYL	0.10852	20.8404
8	7.702	7.760	2,4-DNT	0.14020	20.9082
9	9.175	9.241	2,6-DNT	0.07296	21.1784
10	10.147	10.327	2-AMINO	0.07394	23.3982
11	11.342	11.484	4-AMINO	0.04653	20.2838
12	12.563	12.677	2- & 4-NT	0.03556	40.9780
13	13.906	13.997	3-NT	0.03065	21.9195
14	14.823	14.941	SURROGATE	0.01725	10.9429

==========

STL Knoxville
Reporting Limit Check Standard Report

Sample Name: MRL LC1492
Analysis Time: 12/23/03 02:16:36
File Name: H:\SEMEKA\DATA\L22SC\L22SC023.D
Method: H:\SEMEKA\METHODS\L22SC.M

Component	Spike Amt.	Result	% Diff.
1,3,5-TNB	20	20.9988	4.994
HMX	20	20.9896	4.948
RDX	20	22.7092	13.54
1,3-DNB	20	22.9608	14.80
TNT	20	20.7415	3.707
NB	20	23.1293	15.64
TETRYL	20	20.8404	4.201
2,4-DNT	20	20.9082	4.541
2,6-DNT	20	21.1784	5.892
2-AMINO	20	23.3982	16.99
4-AMINO	20	20.2838	1.419
2- & 4-NT	~~20~~ 40	40.9780	~~104.8~~ 2.415%
3-NT	20	21.9195	9.597

KLW 12/23/03

---Note: No criteria (for informational purposes only)

Raw QC Data

METHOD BLANK REPORT

HPLC

Client Lot #...: PB045 **Work Order #...:** F6Q8D1AA **Matrix.....:** WATER
MB Lot-Sample #: H3L160000-322

Prep Date.....: 12/16/03
Analysis Date..: 12/17/03 **Prep Batch #...:** 3350322
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
HMX	ND	0.50	ug/L	SW846 8330
RDX	ND	0.50	ug/L	SW846 8330
1,3,5-Trinitrobenzene	ND	0.20	ug/L	SW846 8330
1,3-Dinitrobenzene	ND	0.20	ug/L	SW846 8330
Tetryl	ND	0.20	ug/L	SW846 8330
Nitrobenzene	ND	0.20	ug/L	SW846 8330
2,4,6-Trinitrotoluene	ND	0.20	ug/L	SW846 8330
4-Amino-2,6-dinitrotoluene	ND	0.20	ug/L	SW846 8330
2-Amino-4,6-dinitrotoluene	ND	0.20	ug/L	SW846 8330
2,6-Dinitrotoluene	ND	0.20	ug/L	SW846 8330
2,4-Dinitrotoluene	ND	0.20	ug/L	SW846 8330
2-Nitrotoluene	ND	0.20	ug/L	SW846 8330
4-Nitrotoluene	ND	0.20	ug/L	SW846 8330
3-Nitrotoluene	ND	0.20	ug/L	SW846 8330

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1-Chloro-3-nitrobenzene	94	(52 - 139)

NOTE(S):

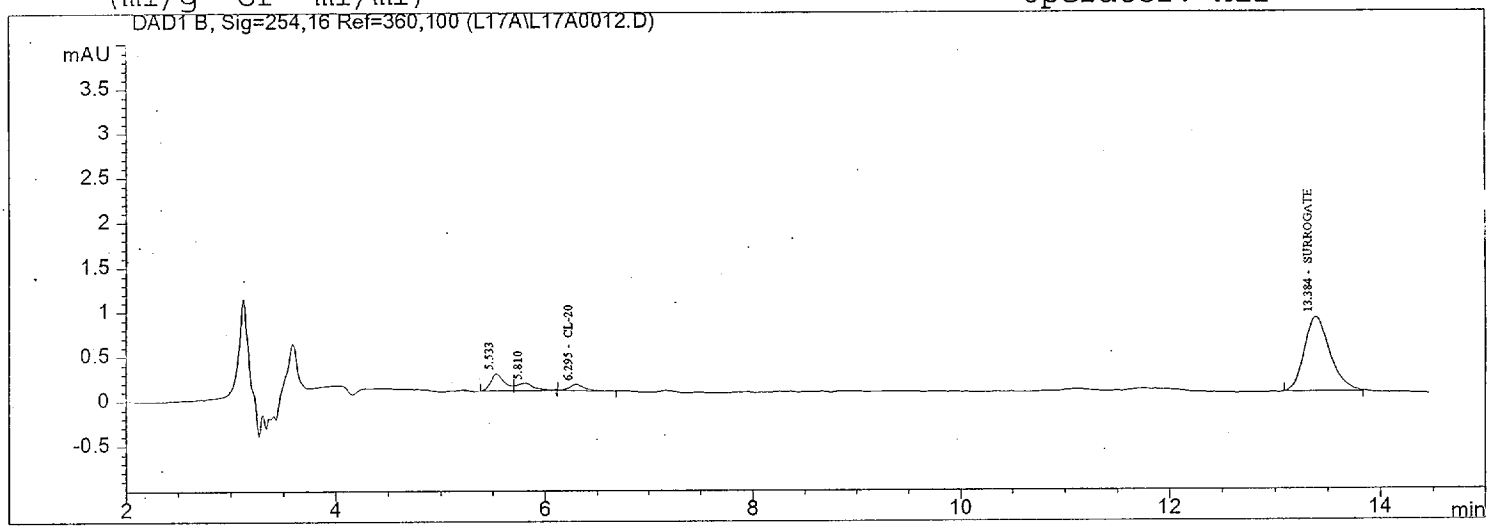
Calculations are performed before rounding to avoid round-off errors in calculated results.

STL-KNOXVILLE Explosives Analysis

Sample Number: F6Q8D1AA BLK Print Time:12/17/03 13:08:16

Instrument Name: Ace Data Acquisition Time:12/17/03 12:52:49
Data File name: H:\ACE\DATA\L17A\L17A0012.D
Method File: H:\ACE\METHOD\L17A2.M
Sequence File: H:\ACE\SEQUENCE\L17A.S

Dilution: 1.000 Sample Amount: 500.000
Multiplier : 0.010000 Injection Volume (ul): 30.000
(Final Vol / Sample Amt)
(ml/g or ml/ml) Operator: klr



#	Exp.RT	Meas.RT	Compound Name	Height	Amt (ppb)
1	3.853	0.000	HMX	0.00000	0.0000
2	4.917	0.000	RDX	0.00000	0.0000
3	0.000	5.533		0.19420	0.0000
4	0.000	5.810		0.09100	0.0000
5	6.056	0.000	1,3,5-TNB	0.00000	0.0000
6	6.260	6.295	CL-20	0.07770	0.1516
7	6.711	0.000	TETRYL	0.00000	0.0000
8	6.898	0.000	1,3-DNB	0.00000	0.0000
9	7.525	0.000	NB	0.00000	0.0000
10	8.099	0.000	TNT	0.00000	0.0000
11	8.320	0.000	4-AMINO	0.00000	0.0000
12	8.713	0.000	2-AMINO	0.00000	0.0000
13	8.887	0.000	2,6-DNT	0.00000	0.0000
14	9.287	0.000	2,4-DNT	0.00000	0.0000
15	10.349	0.000	2-NT	0.00000	0.0000
16	11.115	0.000	4-NT	0.00000	0.0000
17	11.702	0.000	3-NT	0.00000	0.0000
18	13.276	13.384	SURROGATE	0.83556	1.6649

LABORATORY CONTROL SAMPLE EVALUATION REPORT

HPLC

Client Lot #...: PB045 **Work Order #...:** F6Q8D1AC **Matrix.....:** WATER
LCS Lot-Sample#: H3L160000-322
Prep Date.....: 12/16/03 **Analysis Date..:** 12/17/03
Prep Batch #...: 3350322
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
HMX	**103**	**(71 - 122)**	**SW846 8330**
RDX	**110**	**(77 - 127)**	**SW846 8330**
1,3,5-Trinitrobenzene	**108**	**(75 - 121)**	**SW846 8330**
1,3-Dinitrobenzene	**108**	**(75 - 121)**	**SW846 8330**
Tetryl	**106**	**(73 - 119)**	**SW846 8330**
Nitrobenzene	**99**	**(61 - 114)**	**SW846 8330**
2,4,6-Trinitrotoluene	**108**	**(76 - 120)**	**SW846 8330**
4-Amino-2,6-dinitrotoluene	**101**	**(69 - 113)**	**SW846 8330**
2-Amino-4,6-dinitrotoluene	**103**	**(69 - 113)**	**SW846 8330**
2,6-Dinitrotoluene	**102**	**(74 - 120)**	**SW846 8330**
2,4-Dinitrotoluene	**106**	**(73 - 118)**	**SW846 8330**
2-Nitrotoluene	**92**	**(50 - 109)**	**SW846 8330**
4-Nitrotoluene	**96**	**(56 - 111)**	**SW846 8330**
3-Nitrotoluene	**95**	**(56 - 110)**	**SW846 8330**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1-Chloro-3-nitrobenzene	95	(52 - 139)

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

HPLC

Client Lot #...: PB045 **Work Order #...:** F6Q8D1AC **Matrix.....:** WATER
LCS Lot-Sample#: H3L160000-322
Prep Date.....: 12/16/03 **Analysis Date..:** 12/17/03
Prep Batch #...: 3350322
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
HMX	**3.00**	**3.09**	**ug/L**	**103**	**SW846 8330**
RDX	**3.00**	**3.30**	**ug/L**	**110**	**SW846 8330**
1,3,5-Trinitrobenzene	**3.00**	**3.24**	**ug/L**	**108**	**SW846 8330**
1,3-Dinitrobenzene	**3.00**	**3.25**	**ug/L**	**108**	**SW846 8330**
Tetryl	**3.00**	**3.18**	**ug/L**	**106**	**SW846 8330**
Nitrobenzene	**3.00**	**2.96**	**ug/L**	**99**	**SW846 8330**
2,4,6-Trinitrotoluene	**3.00**	**3.23**	**ug/L**	**108**	**SW846 8330**
4-Amino-2,6-dinitrotoluene	**3.00**	**3.03**	**ug/L**	**101**	**SW846 8330**
2-Amino-4,6-dinitrotoluene	**3.00**	**3.10**	**ug/L**	**103**	**SW846 8330**
2,6-Dinitrotoluene	**3.00**	**3.07**	**ug/L**	**102**	**SW846 8330**
2,4-Dinitrotoluene	**3.00**	**3.18**	**ug/L**	**106**	**SW846 8330**
2-Nitrotoluene	**3.00**	**2.75**	**ug/L**	**92**	**SW846 8330**
4-Nitrotoluene	**3.00**	**2.89**	**ug/L**	**96**	**SW846 8330**
3-Nitrotoluene	**3.00**	**2.86**	**ug/L**	**95**	**SW846 8330**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1-Chloro-3-nitrobenzene	95	(52 - 139)

NOTE(S):

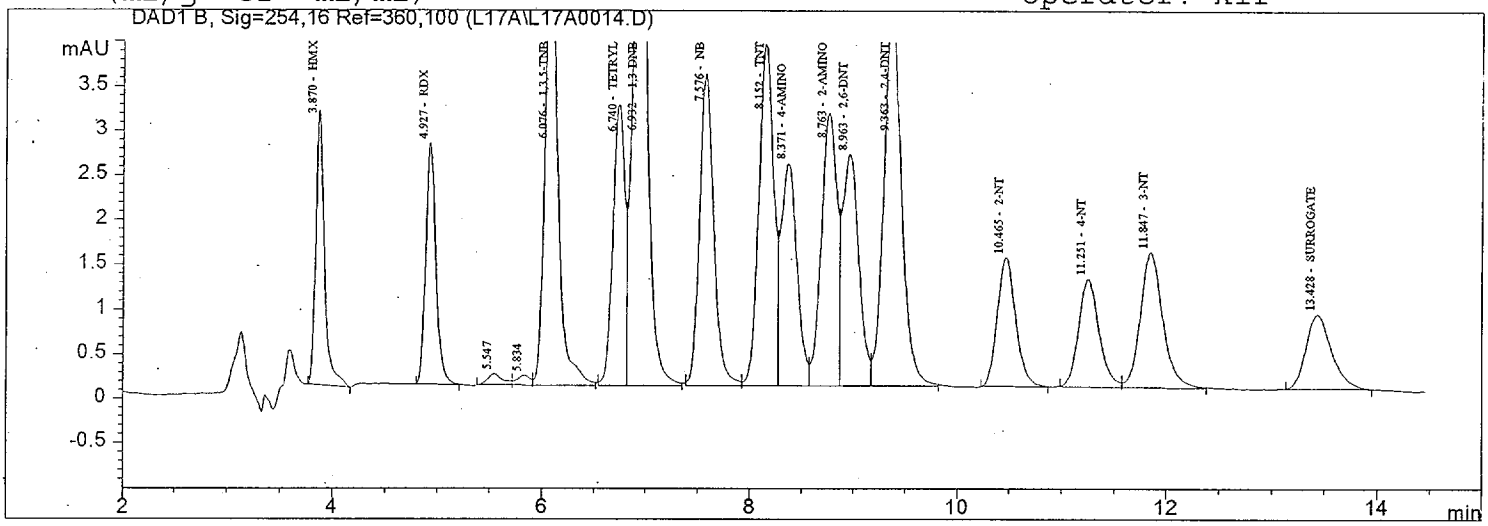
Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Sample Number: F6Q8D1AC LCS Print Time:12/17/03 13:44:05

Instrument Name: Ace Data Acquisition Time:12/17/03 13:28:38
Data File name: H:\ACE\DATA\L17A\L17A0014.D
Method File: H:\ACE\METHOD\L17A2.M
Sequence File: H:\ACE\SEQUENCE\L17A.S

Dilution: 1.000 Sample Amount: 500.000
Multiplier : 0.010000 Injection Volume (ul): 30.000
(Final Vol / Sample Amt)
(ml/g or ml/ml) Operator: klr



#	Exp.RT	Meas.RT	Compound Name	Height	Amt (ppb)
1	3.853	3.870	HMX	3.08264	3.0944
2	4.917	4.927	RDX	2.70802	3.3002
3	0.000	5.547		0.12806	0.0000
4	0.000	5.834		0.11131	0.0000
5	6.056	6.076	1,3,5-TNB	5.27615	3.2368
6	6.260	0.000	CL-20	0.00000	0.0000
7	6.711	6.740	TETRYL	3.14363	3.1753
8	6.898	6.932	1,3-DNB	6.83279	3.2509
9	7.525	7.576	NB	3.48796	2.9634
10	8.099	8.152	TNT	3.82350	3.2341
11	8.320	8.371	4-AMINO	2.49480	3.0327
12	8.713	8.763	2-AMINO	3.05592	3.1001
13	8.887	8.963	2,6-DNT	2.59715	3.0725
14	9.287	9.363	2,4-DNT	4.22867	3.1832
15	10.349	10.465	2-NT	1.44492	2.7463
16	11.115	11.251	4-NT	1.21628	2.8870
17	11.702	11.847	3-NT	1.52027	2.8560
18	13.276	13.428	SURROGATE	0.84766	1.6890

MATRIX SPIKE SAMPLE EVALUATION REPORT

HPLC

Client Lot #...: PB045 **Work Order #...:** F6JX21CC-MS **Matrix.....:** WATER
MS Lot-Sample #: H3L120208-002 F6JX21CD-MSD
Date Sampled...: 12/11/03 **Date Received..:** 12/12/03
Prep Date.....: 12/16/03 **Analysis Date..:** 12/17/03
Prep Batch #...: 3350322
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
HMX	96	(67 - 122)			SW846 8330
	93	(67 - 122)	3.3	(0-40)	SW846 8330
RDX	103	(70 - 133)			SW846 8330
	101	(70 - 133)	2.4	(0-35)	SW846 8330
1,3,5-Trinitrobenzene	100	(62 - 127)			SW846 8330
	97	(62 - 127)	3.4	(0-33)	SW846 8330
1,3-Dinitrobenzene	98	(70 - 121)			SW846 8330
	93	(70 - 121)	4.7	(0-42)	SW846 8330
Tetryl	21 a	(38 - 132)			SW846 8330
	11 a,p	(38 - 132)	59	(0-37)	SW846 8330
Nitrobenzene	96	(61 - 114)			SW846 8330
	87	(61 - 114)	9.7	(0-36)	SW846 8330
2,4,6-Trinitrotoluene	99	(67 - 120)			SW846 8330
	95	(67 - 120)	4.8	(0-34)	SW846 8330
4-Amino-2,6-dinitrotoluene	96	(68 - 113)			SW846 8330
	90	(68 - 113)	5.5	(0-43)	SW846 8330
2-Amino-4,6-dinitrotoluene	98	(59 - 125)			SW846 8330
	94	(59 - 125)	4.8	(0-34)	SW846 8330
2,6-Dinitrotoluene	99	(74 - 120)			SW846 8330
	93	(74 - 120)	6.0	(0-32)	SW846 8330
2,4-Dinitrotoluene	101	(72 - 118)			SW846 8330
	97	(72 - 118)	4.3	(0-36)	SW846 8330
2-Nitrotoluene	91	(46 - 118)			SW846 8330
	82	(46 - 118)	11	(0-38)	SW846 8330
4-Nitrotoluene	92	(56 - 111)			SW846 8330
	86	(56 - 111)	7.2	(0-33)	SW846 8330
3-Nitrotoluene	94	(56 - 121)			SW846 8330
	87	(56 - 121)	8.3	(0-36)	SW846 8330

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1-Chloro-3-nitrobenzene	102	(52 - 139)
	91	(52 - 139)

(Continued on next page)

MATRIX SPIKE SAMPLE EVALUATION REPORT

HPLC

Client Lot #...: PB045 **Work Order #...:** F6JX21CC-MS **Matrix.....:** WATER
MS Lot-Sample #: H3L120208-002 F6JX21CD-MSD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS

NOTE(S):

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

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

p Relative percent difference (RPD) is outside stated control limits.

STL Knoxville HPLC Data Review / Narrative Checklist

~~LOT#~~ SDG PB045

Methods 8330 by KNOX-LC-0001 Rev 10 and 8332 by KNOX-LC-0005, Rev. 0

Analysis Date:	12/17/03			
Instrument/File ID:	K L17A2			
ICAL File or Date:	K13A2CAL			

Review Items **A. Calibration**	Yes	No	NA	2nd √	If No, why is data reportable?
1. Has a ***CCAL Checklist*** been completed for all calibrations?	✓			✓	
2. Was the ***correct ICAL*** used for quantitation?	✓			✓	
B. CLIENT SAMPLE AND QC SAMPLE Results	**Yes**	**No**	**NA**	**2nd √**	
1. Were all ***special project requirements*** met?	✓			✓	
2. Were sample ***IDs***, prep ***factors***, DFs ***verified***?	✓			✓	
3. Sample analyses done within preparation and analytical ***holding time*** (HT)? *If no, list samples:* _____	✓			✓	☐*[ht1] HT expired upon receipt.* ☐*[ht2] Client requested analysis after HT expired.* * ☐**Re-extraction done after HT expired.**
4. Are ***surrogates*** within QC limits? *If no, list samples and reason (e.g.,* sur1*):* Sample Reason Sample Reason _____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____ _____	✓			✓	☐[sur1] MS/MSD surr.%R demonstrated same effect. ☐[sur2] Re-extraction demonstrated same effect. ☐**[sur3] Not enough sample for re-extraction.** ☐**[sur4] Re-extraction done outside HT. Rerun %R acceptable; both sets of data reported.** ☐[sur7] Obvious matrix interference. ☐**[sur12] Surr.%R high and all targets ND.**
5. Do positive hits meet ***qualitative identification criteria*** (RT and 2nd column confirmation)?	✓			✓	
6. Are positive results within ***calibration range***?	✓			✓	
7. Were peaks checked for ***saturation***?	✓			✓	
8. Is ***integration*** acceptable?	✓			✓	
9. If ***manual integrations*** were performed, are they clearly identified, initialed, dated and reason given?	✓			✓	Reasons: 1) Corrected split peak; 2) Unresolved peak; 3) Tailing; 4) RT shift; 5) Wrong peak selected; 6) Other
10. Is largest ***analyte diluted*** to 20-100% of calibration range? *If no, list sample(s):* _____	✓			✓	☐[elev5] Elevated RLs reported due to matrix interferences.
11. Final ***report acceptable***? (Results correct, RLs calculated correctly, units correct, surrogate %R correct, appropriate flags used, **deviations noted in narrative**, dilution factor correct, and extraction/ analysis dates correct.)	✓			✓	
C. Preparation/Matrix QC	**Yes**	**No**	**NA**	**2nd √**	
1. ***LCS*** done per prep batch and all analytes within laboratory established QC limits? *If no, list LCS ID:* _____	✓			✓	☐**[lcs2] Insufficient sample for reanalysis.*** ☐**[lcs3] LCS %R high and all analyte(s) were <RL in associated samples.**
2. ***Method blank*** done per prep batch, all surrogate recoveries OK, and all analytes present in the method blank < RL? *If no, list blank ID:* _____	✓			✓	☐**[mb1] Sample surrogates OK and there is no analyte >RL in samples associated with blank.*** ☐**[mb3] No analyte > RL in associated samples.*** ☐**[mb4] Sample results > 20x higher than blank.**
3. ***MS/MSD*** done per batch?	✓			✓	☐ [lcsd] Insufficient sample. LCS/LCSD analyzed.
4. ***MS/MSD*** recoveries and RPDs within laboratory generated control limits? *If no, list MS/MSD ID:* Tetryl-Lab		✓		✓	☐[ms1] LCS acceptable - sample matrix effects. ☐[ms2] LCS acceptable. High native analyte concentration relative to spike level.
5. Were ***MS run #'s*** assigned correctly?	✓			✓	
D. Other	**Yes**	**No**	**NA**	**2nd √**	
1. Are all ***nonconformances*** documented appropriately?			✓	✓	
2. Are the correct ***scanned file names*** provided with report?	✓			✓	

Analyst: [signature]	**Date:** 12/23/03	**2nd Level Reviewer:** MOP	**Date:** 12/23/03
Comments:		**Comments:**	

* Such action must be taken in consultation with client.

MATRIX SPIKE SAMPLE DATA REPORT

HPLC

Client Lot #...: PB045 **Work Order #...:** F6JX21CC-MS **Matrix.....:** WATER
MS Lot-Sample #: H3L120208-002 F6JX21CD-MSD
Date Sampled...: 12/11/03 **Date Received..:** 12/12/03
Prep Date.....: 12/16/03 **Analysis Date..:** 12/17/03
Prep Batch #...: 3350322
Dilution Factor: 1

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
HMX	ND	3.00	2.88	ug/L	96		SW846 8330
	ND	3.00	2.79	ug/L	93	3.3	SW846 8330
RDX	ND	3.00	3.10	ug/L	103		SW846 8330
	ND	3.00	3.02	ug/L	101	2.4	SW846 8330
1,3,5-Trinitrobenzene	ND	3.00	3.00	ug/L	100		SW846 8330
	ND	3.00	2.90	ug/L	97	3.4	SW846 8330
1,3-Dinitrobenzene	ND	3.00	2.93	ug/L	98		SW846 8330
	ND	3.00	2.80	ug/L	93	4.7	SW846 8330
Tetryl	ND	3.00	0.627	ug/L	21 a		SW846 8330
	ND	3.00	0.342	ug/L	11 a,p	59	SW846 8330
Nitrobenzene	ND	3.00	2.88	ug/L	96		SW846 8330
	ND	3.00	2.61	ug/L	87	9.7	SW846 8330
2,4,6-Trinitrotoluene	ND	3.00	2.98	ug/L	99		SW846 8330
	ND	3.00	2.84	ug/L	95	4.8	SW846 8330
4-Amino-2,6-dinitrotoluene	ND	3.00	2.87	ug/L	96		SW846 8330
	ND	3.00	2.72	ug/L	90	5.5	SW846 8330
2-Amino-4,6-dinitrotoluene	ND	3.00	2.95	ug/L	98		SW846 8330
	ND	3.00	2.81	ug/L	94	4.8	SW846 8330
2,6-Dinitrotoluene	ND	3.00	2.96	ug/L	99		SW846 8330
	ND	3.00	2.79	ug/L	93	6.0	SW846 8330
2,4-Dinitrotoluene	ND	3.00	3.03	ug/L	101		SW846 8330
	ND	3.00	2.90	ug/L	97	4.3	SW846 8330
2-Nitrotoluene	ND	3.00	2.73	ug/L	91		SW846 8330
	ND	3.00	2.45	ug/L	82	11	SW846 8330
4-Nitrotoluene	ND	3.00	2.77	ug/L	92		SW846 8330
	ND	3.00	2.58	ug/L	86	7.2	SW846 8330
3-Nitrotoluene	ND	3.00	2.82	ug/L	94		SW846 8330
	ND	3.00	2.60	ug/L	87	8.3	SW846 8330

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
1-Chloro-3-nitrobenzene	102	(52 - 139)
	91	(52 - 139)

(Continued on next page)

MATRIX SPIKE SAMPLE DATA REPORT

HPLC

Client Lot #...: PB045 **Work Order #...:** F6JX21CC-MS **Matrix.....:** WATER
MS Lot-Sample #: H3L120208-002 F6JX21CD-MSD

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS

NOTE(S):

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

Bold print denotes control parameters

a Spiked analyte recovery is outside stated control limits.

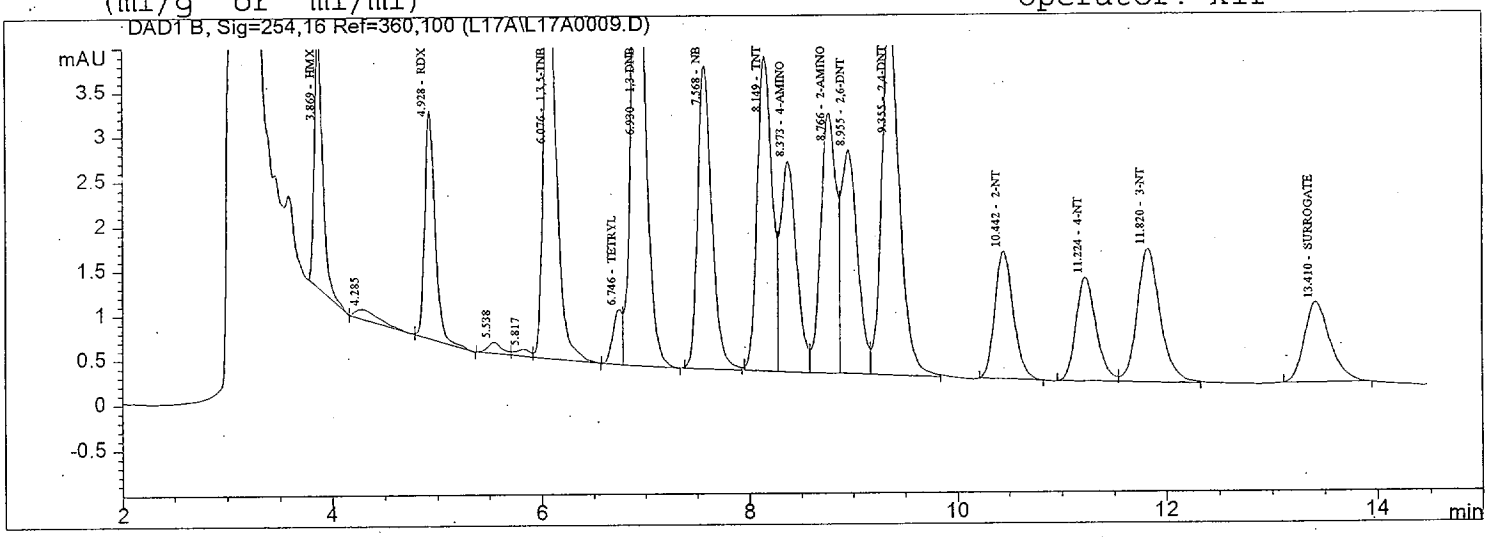
p Relative percent difference (RPD) is outside stated control limits.

STL-KNOXVILLE Explosives Analysis

Sample Number: F6JX21CC MS Print Time:12/17/03 12:14:40

Instrument Name: Ace Data Acquisition Time:12/17/03 11:59:13
Data File name: H:\ACE\DATA\L17A\L17A0009.D
Method File: H:\ACE\METHOD\L17A2.M
Sequence File: H:\ACE\SEQUENCE\L17A.S

Dilution: 1.000 Sample Amount: 500.000
Multiplier : 0.010000 Injection Volume (ul): 30.000
(Final Vol / Sample Amt)
(ml/g or ml/ml) Operator: klr



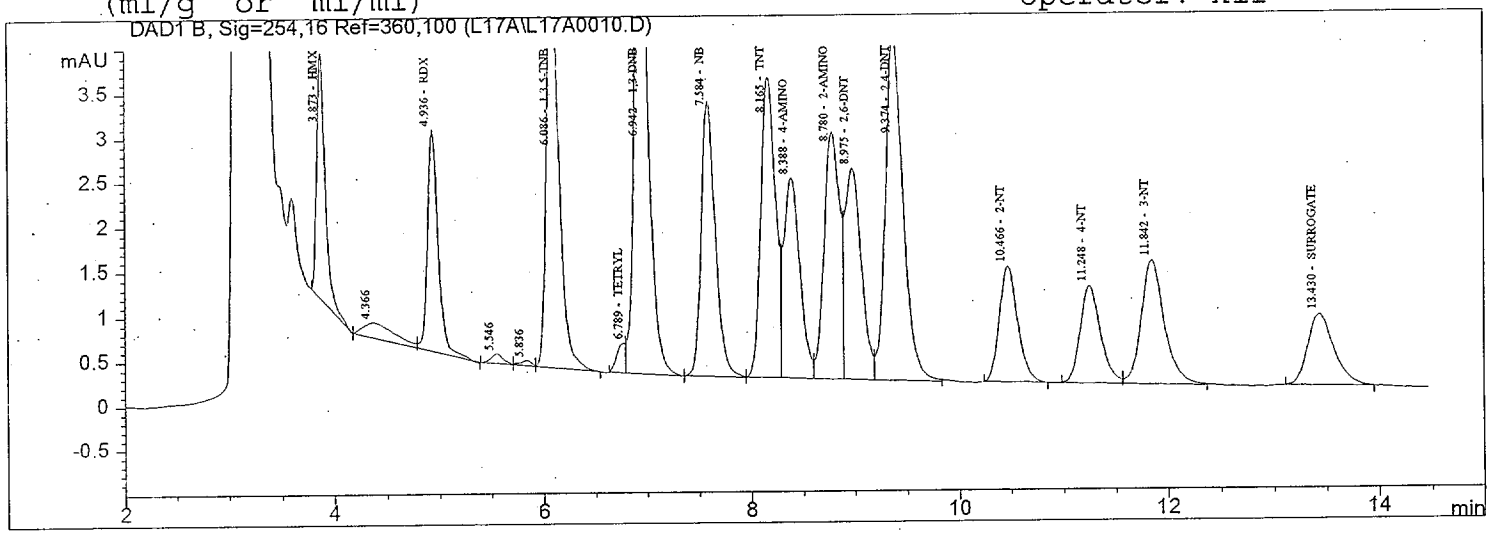
#	Exp.RT	Meas.RT	Compound Name	Height	Amt (ppb)
1	3.853	3.869	HMX	2.86805	2.8790
2	0.000	4.285		0.11440	0.0000
3	4.917	4.928	RDX	2.54103	3.0967
4	0.000	5.538		0.12882	0.0000
5	0.000	5.817		0.08217	0.0000
6	6.056	6.076	1,3,5-TNB	4.89740	3.0045
7	6.260	0.000	CL-20	0.00000	0.0000
8	6.711	6.746	TETRYL	0.62114	0.6274
9	6.898	6.930	1,3-DNB	6.15980	2.9307
10	7.525	7.568	NB	3.39034	2.8805
11	8.099	8.149	TNT	3.52223	2.9793
12	8.320	8.373	4-AMINO	2.35943	2.8682
13	8.713	8.766	2-AMINO	2.90444	2.9464
14	8.887	8.955	2,6-DNT	2.50397	2.9622
15	9.287	9.355	2,4-DNT	4.02728	3.0316
16	10.349	10.442	2-NT	1.43604	2.7294
17	11.115	11.224	4-NT	1.16774	2.7717
18	11.702	11.820	3-NT	1.50259	2.8228
19	13.276	13.410	SURROGATE	0.90893	1.8111

STL-KNOXVILLE Explosives Analysis

Sample Number: F6JX21CD MSD Print Time:12/17/03 12:35:32

Instrument Name: Ace Data Acquisition Time:12/17/03 12:17:05
Data File name: H:\ACE\DATA\L17A\L17A0010.D
Method File: H:\ACE\METHOD\L17A2.M
Sequence File: H:\ACE\SEQUENCE\L17A.S

Dilution: 1.000 Sample Amount: 500.000
Multiplier : 0.010000 Injection Volume (ul): 30.000
(Final Vol / Sample Amt)
(ml/g or ml/ml) Operator: klr



#	Exp.RT	Meas.RT	Compound Name	Height	Amt (ppb)
1	3.853	3.873	HMX	2.77486	2.7855
2	0.000	4.366		0.17307	0.0000
3	4.917	4.936	RDX	2.47995	3.0223
4	0.000	5.546		0.11033	0.0000
5	0.000	5.836		0.06204	0.0000
6	6.056	6.086	1,3,5-TNB	4.73288	2.9035
7	6.260	0.000	CL-20	0.00000	0.0000
8	6.711	6.789	TETRYL	0.33828	0.3417
9	6.898	6.942	1,3-DNB	5.87540	2.7954
10	7.525	7.584	NB	3.07638	2.6137
11	8.099	8.165	TNT	3.35633	2.8390
12	8.320	8.388	4-AMINO	2.23339	2.7150
13	8.713	8.780	2-AMINO	2.76800	2.8080
14	8.887	8.975	2,6-DNT	2.35907	2.7908
15	9.287	9.374	2,4-DNT	3.85883	2.9048
16	10.349	10.466	2-NT	1.28694	2.4460
17	11.115	11.248	4-NT	1.08668	2.5793
18	11.702	11.842	3-NT	1.38286	2.5979
19	13.276	13.430	SURROGATE	0.80499	1.6040

Miscellaneous Data

RQC058

Severn Trent Laboratories, Inc.
EXTRACTION BENCH WORKSHEET

Run Date: 12/16/03
Time: 11:57:51

LEV 1	LEV 2		LEV 1	LEV 2	
_	_	Blank	_	_	Weights/Volumes
_	_	Check	_	_	Spike & Surrogate Worksheet
_	_	MS/MSD	_	_	Vial contains correct volume
			_	_	Labels, greenbars, worksheets
			_	_	computer batch: correct & all match
			_	_	Anomalies to Extraction Method

_ Expanded Deliverable
_ COC Completed
_ Bench Sheet Copied
_ Package Submitted to AnalyticalGroup
_ Bench Sheet Copied per COC

Extractionist: Kh

Concentrationist: Kh

Reviewer/Date: _____ / 0/00/00

****
* QC BATCH: 3350322 *
****

PREP DATE: 12/16/03 15:00
COMP DATE: 12/16/03 20:00

Nitroaromatics & Nitramines: Explosives (8330)
EXTRACTION, SOLID PHASE

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
12/16/03	12/31/03	H3L100268-001 3350188 **F6DQ4-1-AA**	D	20	A0	WATER	**500mL** 5.00mL	NA	NA	NA		.0		.0	LC1369 35.3PPM/25UL
COMMENTS:															
12/16/03	12/31/03	H3L100268-002 **F6DRG-1-AM**	D	20	A0	WATER	**500mL** 5.00mL	NA	NA	NA		.0		.0	LC1369 35.3PPM/25UL
COMMENTS:															
12/17/03	12/31/03	H3L110180-001 3350188 **F6F1C-1-AA**	D	20	A0	WATER	**500mL** 5.00mL	NA	NA	NA		.0		.0	LC1369 35.3PPM/25UL
COMMENTS:															
12/17/03	12/31/03	H3L110180-002 **F6F2H-1-AM**	D	20	A0	WATER	**500mL** 5.00mL	NA	NA	NA		.0		.0	LC1369 35.3PPM/25UL
COMMENTS:															
12/18/03	12/31/03	H3L120208-001 **F6JXA-1-AA**	D	20	A0	WATER	**500mL** 5.00mL	NA	NA	NA		.0		.0	LC1369 35.3PPM/25UL
COMMENTS:															
12/18/03	12/31/03	H3L120208-002 3350188 **F6JX2-1-CA**	D	20	A0	WATER	**500mL** 5.00mL	NA	NA	NA		.0		.0	LC1369 35.3PPM/25UL
COMMENTS:															
12/18/03	12/31/03	H3L120208-002 3350188 **F6JX2-1-CCS**	D	20	A0	WATER	**500mL** 5.00mL	NA	NA	NA		.0		.0	LC1423 60PPM/25UL LC1369 35.3PPM/25UL
COMMENTS:															

RQC058

Severn Trent Laboratories, Inc.
EXTRACTION BENCH WORKSHEET

Run Date: 12/16/03
Time: 11:57:51

****
* QC BATCH: 3350322 *
****

PREP DATE: 12/16/03 15:00
COMP DATE: 12/16/03 20:00

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
12/18/03	12/31/03	H3L120208-002 3350188 **F6JX2-1-CD**D	D	20	A0	WATER	**500mL** 5.00mL	NA	NA	NA		.0		.0	LC1423 60PPM/25UL LC1369 35.3PPM/25UL
COMMENTS:															
12/18/03	12/31/03	H3L120208-003 **F6J0A-1-AM**	D	20	A0	WATER	**500mL** 5.00mL	NA	NA	NA		.0		.0	LC1369 35.3PPM/25UL
COMMENTS:															
12/16/03	0/00/00	H3L160000-322 **F6Q8D-1-AA**B		20	A0	WATER	**500mL** 5.00mL	NA	NA	NA		.0		.0	LC1369 35.3PPM/25UL
COMMENTS:															
12/16/03	0/00/00	H3L160000-322 **F6Q8D-1-AC**C		20	A0	WATER	**500mL** 5.00mL	NA	NA	NA		.0		.0	LC1423 60PPM/25UL LC1369 35.3PPM/25UL
COMMENTS:															

R = RUSH C = CLP
E = EPA 600 D = EXP.DEL)
M = CLIENT REQ MS/MSD
↕

NUMBER OF WORK ORDERS IN BATCH: 11

Metals

Sample Results

SHAW E & I INC

Client Sample ID: DD3007

TOTAL Metals

Lot-Sample #...: H3L100268-001 **Matrix.....:** WATER
Date Sampled...: 12/09/03 **Date Received..:** 12/10/03

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 3352155						
Mercury	ND	0.20	ug/L	SW846 7470A	12/18/03	F6DQ41A5
		Dilution Factor: 1		Analysis Time..: 14:28	MDL.....: 0.030	
Prep Batch #...: 3352178						
Aluminum	**42.6 B**	**200**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6DQ41AE**
		Dilution Factor: 1		Analysis Time..: 11:35	MDL.....: 41.3	
Antimony	ND	60.0	ug/L	SW846 6010B	12/18-12/19/03	F6DQ41AF
		Dilution Factor: 1		Analysis Time..: 11:35	MDL.....: 4.0	
Arsenic	**5.4 B**	**10.0**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6DQ41AG**
		Dilution Factor: 1		Analysis Time..: 11:35	MDL.....: 2.6	
Barium	**395**	**200**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6DQ41AH**
		Dilution Factor: 1		Analysis Time..: 11:35	MDL.....: 0.96	
Beryllium	ND	5.0	ug/L	SW846 6010B	12/18-12/19/03	F6DQ41AJ
		Dilution Factor: 1		Analysis Time..: 11:35	MDL.....: 0.56	
Cadmium	ND	5.0	ug/L	SW846 6010B	12/18-12/19/03	F6DQ41AK
		Dilution Factor: 1		Analysis Time..: 11:35	MDL.....: 0.84	
Calcium	**20000**	**5000**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6DQ41AL**
		Dilution Factor: 1		Analysis Time..: 11:35	MDL.....: 58.2	
Chromium	ND	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6DQ41AM
		Dilution Factor: 1		Analysis Time..: 11:35	MDL.....: 2.8	
Cobalt	ND	50.0	ug/L	SW846 6010B	12/18-12/19/03	F6DQ41AN
		Dilution Factor: 1		Analysis Time..: 11:35	MDL.....: 2.0	
Copper	ND	25.0	ug/L	SW846 6010B	12/18-12/19/03	F6DQ41AP
		Dilution Factor: 1		Analysis Time..: 11:35	MDL.....: 3.0	
Iron	**398**	**100**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6DQ41AQ**
		Dilution Factor: 1		Analysis Time..: 11:35	MDL.....: 45.8	
Lead	ND	3.0	ug/L	SW846 6010B	12/18-12/19/03	F6DQ41AR
		Dilution Factor: 1		Analysis Time..: 11:35	MDL.....: 1.6	

(Continued on next page)

SHAW E & I INC

Client Sample ID: DD3007

TOTAL Metals

Lot-Sample #...: H3L100268-001

Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Magnesium	**7780**	**5000**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6DQ41AT**
		Dilution Factor: 1		Analysis Time..: 11:35	MDL.....: 37.0	
Manganese	**16.6**	**15.0**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6DQ41AU**
		Dilution Factor: 1		Analysis Time..: 11:35	MDL.....: 1.6	
Nickel	ND	40.0	ug/L	SW846 6010B	12/18-12/19/03	F6DQ41AV
		Dilution Factor: 1		Analysis Time..: 11:35	MDL.....: 2.8	
Potassium	**6050**	**5000**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6DQ41AW**
		Dilution Factor: 1		Analysis Time..: 11:35	MDL.....: 66.8	
Selenium	ND	5.0	ug/L	SW846 6010B	12/18-12/19/03	F6DQ41AX
		Dilution Factor: 1		Analysis Time..: 11:35	MDL.....: 1.5	
Silver	ND	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6DQ41A0
		Dilution Factor: 1		Analysis Time..: 11:35	MDL.....: 1.9	
Sodium	**285000**	**5000**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6DQ41A1**
		Dilution Factor: 1		Analysis Time..: 11:35	MDL.....: 464	
Thallium	ND	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6DQ41A2
		Dilution Factor: 1		Analysis Time..: 11:35	MDL.....: 2.4	
Vanadium	ND	50.0	ug/L	SW846 6010B	12/18-12/19/03	F6DQ41A3
		Dilution Factor: 1		Analysis Time..: 11:35	MDL.....: 3.6	
Zinc	**247**	**20.0**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6DQ41A4**
		Dilution Factor: 1		Analysis Time..: 11:35	MDL.....: 2.4	

NOTE(S):

B Estimated result. Result is less than RL.

SHAW E & I INC

Client Sample ID: DD3007

DISSOLVED Metals

Lot-Sample #...: H3L100268-001 **Matrix.....:** WATER
Date Sampled...: 12/09/03 **Date Received..:** 12/10/03

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 3352158						
Mercury	ND	0.20	ug/L	SW846 7470A	12/18/03	F6DQ41C8
		Dilution Factor: 1		Analysis Time..: 14:56	MDL.....: 0.030	
Prep Batch #...: 3352178						
Aluminum	ND	200	ug/L	SW846 6010B	12/18-12/19/03	F6DQ41CH
		Dilution Factor: 1		Analysis Time..: 11:30	MDL.....: 41.3	
Antimony	ND	60.0	ug/L	SW846 6010B	12/18-12/19/03	F6DQ41CJ
		Dilution Factor: 1		Analysis Time..: 11:30	MDL.....: 4.0	
Arsenic	**5.6 B**	**10.0**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6DQ41CK**
		Dilution Factor: 1		Analysis Time..: 11:30	MDL.....: 2.6	
Barium	**374**	**200**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6DQ41CL**
		Dilution Factor: 1		Analysis Time..: 11:30	MDL.....: 0.96	
Beryllium	ND	5.0	ug/L	SW846 6010B	12/18-12/19/03	F6DQ41CM
		Dilution Factor: 1		Analysis Time..: 11:30	MDL.....: 0.56	
Cadmium	ND	5.0	ug/L	SW846 6010B	12/18-12/19/03	F6DQ41CN
		Dilution Factor: 1		Analysis Time..: 11:30	MDL.....: 0.84	
Calcium	**19700**	**5000**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6DQ41CP**
		Dilution Factor: 1		Analysis Time..: 11:30	MDL.....: 58.2	
Chromium	ND	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6DQ41CQ
		Dilution Factor: 1		Analysis Time..: 11:30	MDL.....: 2.8	
Cobalt	ND	50.0	ug/L	SW846 6010B	12/18-12/19/03	F6DQ41CR
		Dilution Factor: 1		Analysis Time..: 11:30	MDL.....: 2.0	
Copper	ND	25.0	ug/L	SW846 6010B	12/18-12/19/03	F6DQ41CT
		Dilution Factor: 1		Analysis Time..: 11:30	MDL.....: 3.0	
Iron	**354**	**100**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6DQ41CU**
		Dilution Factor: 1		Analysis Time..: 11:30	MDL.....: 45.8	
Lead	ND	3.0	ug/L	SW846 6010B	12/18-12/19/03	F6DQ41CV
		Dilution Factor: 1		Analysis Time..: 11:30	MDL.....: 1.6	

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SHAW E & I INC

Client Sample ID: DD3007

DISSOLVED Metals

Lot-Sample #...: H3L100268-001 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Magnesium	**7670**	**5000**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6DQ41CW**
		Dilution Factor: 1		Analysis Time..: 11:30	MDL.....: 37.0	
Manganese	**16.4**	**15.0**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6DQ41CX**
		Dilution Factor: 1		Analysis Time..: 11:30	MDL.....: 1.6	
Nickel	ND	40.0	ug/L	SW846 6010B	12/18-12/19/03	F6DQ41C0
		Dilution Factor: 1		Analysis Time..: 11:30	MDL.....: 2.8	
Potassium	**5920**	**5000**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6DQ41C1**
		Dilution Factor: 1		Analysis Time..: 11:30	MDL.....: 66.8	
Selenium	ND	5.0	ug/L	SW846 6010B	12/18-12/19/03	F6DQ41C2
		Dilution Factor: 1		Analysis Time..: 11:30	MDL.....: 1.5	
Silver	ND	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6DQ41C3
		Dilution Factor: 1		Analysis Time..: 11:30	MDL.....: 1.9	
Sodium	**280000**	**5000**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6DQ41C4**
		Dilution Factor: 1		Analysis Time..: 11:30	MDL.....: 464	
Thallium	**3.8 B**	**10.0**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6DQ41C5**
		Dilution Factor: 1		Analysis Time..: 11:30	MDL.....: 2.4	
Vanadium	ND	50.0	ug/L	SW846 6010B	12/18-12/19/03	F6DQ41C6
		Dilution Factor: 1		Analysis Time..: 11:30	MDL.....: 3.6	
Zinc	**247**	**20.0**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6DQ41C7**
		Dilution Factor: 1		Analysis Time..: 11:30	MDL.....: 2.4	

NOTE(S):

B Estimated result. Result is less than RL.

SHAW E & I INC

Client Sample ID: DD3008

TOTAL Metals

Lot-Sample #...: H3L100268-002 **Matrix.....:** WATER
Date Sampled...: 12/09/03 **Date Received..:** 12/10/03

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 3352155						
Mercury	ND	0.20	ug/L	SW846 7470A	12/18/03	F6DRG1AG
		Dilution Factor: 1		Analysis Time..: 14:30	MDL.....: 0.030	
Prep Batch #...: 3352178						
Aluminum	**49.9 B**	**200**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6DRG1AQ**
		Dilution Factor: 1		Analysis Time..: 11:44	MDL.....: 41.3	
Antimony	ND	60.0	ug/L	SW846 6010B	12/18-12/19/03	F6DRG1AR
		Dilution Factor: 1		Analysis Time..: 11:44	MDL.....: 4.0	
Arsenic	**3.3 B**	**10.0**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6DRG1AT**
		Dilution Factor: 1		Analysis Time..: 11:44	MDL.....: 2.6	
Barium	**11800**	**2000**	**ug/L**	**SW846 6010B**	**12/18-12/22/03**	**F6DRG1AU**
		Dilution Factor: 10		Analysis Time..: 15:25	MDL.....: 9.6	
Beryllium	ND	5.0	ug/L	SW846 6010B	12/18-12/19/03	F6DRG1AV
		Dilution Factor: 1		Analysis Time..: 11:44	MDL.....: 0.56	
Cadmium	ND	5.0	ug/L	SW846 6010B	12/18-12/19/03	F6DRG1AW
		Dilution Factor: 1		Analysis Time..: 11:44	MDL.....: 0.84	
Calcium	**295000**	**5000**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6DRG1AX**
		Dilution Factor: 1		Analysis Time..: 11:44	MDL.....: 58.2	
Chromium	ND	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6DRG1A0
		Dilution Factor: 1		Analysis Time..: 11:44	MDL.....: 2.8	
Cobalt	**3.6 B**	**50.0**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6DRG1A1**
		Dilution Factor: 1		Analysis Time..: 11:44	MDL.....: 2.0	
Copper	ND	25.0	ug/L	SW846 6010B	12/18-12/19/03	F6DRG1A2
		Dilution Factor: 1		Analysis Time..: 11:44	MDL.....: 3.0	
Iron	**1550**	**100**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6DRG1A3**
		Dilution Factor: 1		Analysis Time..: 11:44	MDL.....: 45.8	
Lead	ND G	20.0	ug/L	SW846 6010B	12/18-12/19/03	F6DRG1A4
		Dilution Factor: 1		Analysis Time..: 11:44	MDL.....: 1.6	

(Continued on next page)

SHAW E & I INC

Client Sample ID: DD3008

TOTAL Metals

Lot-Sample #...: H3L100268-002 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Magnesium	**198000**	**5000**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6DRG1A5**
		Dilution Factor: 1		Analysis Time..: 11:44	MDL.....: 37.0	
Manganese	**50.7**	**15.0**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6DRG1A6**
		Dilution Factor: 1		Analysis Time..: 11:44	MDL.....: 1.6	
Nickel	ND	40.0	ug/L	SW846 6010B	12/18-12/19/03	F6DRG1A7
		Dilution Factor: 1		Analysis Time..: 11:44	MDL.....: 2.8	
Potassium	**67800**	**50000**	**ug/L**	**SW846 6010B**	**12/18-12/22/03**	**F6DRG1A8**
		Dilution Factor: 10		Analysis Time..: 15:25	MDL.....: 668	
Selenium	ND	5.0	ug/L	SW846 6010B	12/18-12/19/03	F6DRG1A9
		Dilution Factor: 1		Analysis Time..: 11:44	MDL.....: 1.5	
Silver	ND	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6DRG1AA
		Dilution Factor: 1		Analysis Time..: 11:44	MDL.....: 1.9	
Sodium	**1350000**	**50000**	**ug/L**	**SW846 6010B**	**12/18-12/22/03**	**F6DRG1AC**
		Dilution Factor: 10		Analysis Time..: 15:25	MDL.....: 4640	
Thallium	**2.4 B**	**10.0**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6DRG1AD**
		Dilution Factor: 1		Analysis Time..: 11:44	MDL.....: 2.4	
Vanadium	ND	50.0	ug/L	SW846 6010B	12/18-12/19/03	F6DRG1AE
		Dilution Factor: 1		Analysis Time..: 11:44	MDL.....: 3.6	
Zinc	**507**	**20.0**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6DRG1AF**
		Dilution Factor: 1		Analysis Time..: 11:44	MDL.....: 2.4	

NOTE(S):

B Estimated result. Result is less than RL.

G Elevated reporting limit. The reporting limit is elevated due to matrix interference.

SHAW E & I INC

Client Sample ID: DD3008

DISSOLVED Metals

Lot-Sample #...: H3L100268-002 **Matrix.....:** WATER
Date Sampled...: 12/09/03 **Date Received..:** 12/10/03

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 3352158						
Mercury	ND	0.20	ug/L	SW846 7470A	12/18/03	F6DRG1CK
		Dilution Factor: 1		Analysis Time..: 14:58	MDL.....: 0.030	
Prep Batch #...: 3352178						
Aluminum	**66.9 B**	**200**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6DRG1CT**
		Dilution Factor: 1		Analysis Time..: 11:39	MDL.....: 41.3	
Antimony	ND	60.0	ug/L	SW846 6010B	12/18-12/19/03	F6DRG1CU
		Dilution Factor: 1		Analysis Time..: 11:39	MDL.....: 4.0	
Arsenic	**3.1 B**	**10.0**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6DRG1CV**
		Dilution Factor: 1		Analysis Time..: 11:39	MDL.....: 2.6	
Barium	**10800**	**2000**	**ug/L**	**SW846 6010B**	**12/18-12/22/03**	**F6DRG1CW**
		Dilution Factor: 10		Analysis Time..: 15:21	MDL.....: 9.6	
Beryllium	ND	5.0	ug/L	SW846 6010B	12/18-12/19/03	F6DRG1CX
		Dilution Factor: 1		Analysis Time..: 11:39	MDL.....: 0.56	
Cadmium	ND	5.0	ug/L	SW846 6010B	12/18-12/19/03	F6DRG1C0
		Dilution Factor: 1		Analysis Time..: 11:39	MDL.....: 0.84	
Calcium	**283000**	**5000**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6DRG1C1**
		Dilution Factor: 1		Analysis Time..: 11:39	MDL.....: 58.2	
Chromium	ND	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6DRG1C2
		Dilution Factor: 1		Analysis Time..: 11:39	MDL.....: 2.8	
Cobalt	**3.4 B**	**50.0**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6DRG1C3**
		Dilution Factor: 1		Analysis Time..: 11:39	MDL.....: 2.0	
Copper	ND	25.0	ug/L	SW846 6010B	12/18-12/19/03	F6DRG1C4
		Dilution Factor: 1		Analysis Time..: 11:39	MDL.....: 3.0	
Iron	**1490**	**100**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6DRG1C5**
		Dilution Factor: 1		Analysis Time..: 11:39	MDL.....: 45.8	
Lead	ND G	19.0	ug/L	SW846 6010B	12/18-12/19/03	F6DRG1C6
		Dilution Factor: 1		Analysis Time..: 11:39	MDL.....: 1.6	

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SHAW E & I INC

Client Sample ID: DD3008

DISSOLVED Metals

Lot-Sample #...: H3L100268-002 Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Magnesium	**189000**	**5000**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6DRG1C7**
		Dilution Factor: 1		Analysis Time..: 11:39	MDL.....: 37.0	
Manganese	**49.3**	**15.0**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6DRG1C8**
		Dilution Factor: 1		Analysis Time..: 11:39	MDL.....: 1.6	
Nickel	ND	40.0	ug/L	SW846 6010B	12/18-12/19/03	F6DRG1CA
		Dilution Factor: 1		Analysis Time..: 11:39	MDL.....: 2.8	
Potassium	**60700**	**50000**	**ug/L**	**SW846 6010B**	**12/18-12/22/03**	**F6DRG1CC**
		Dilution Factor: 10		Analysis Time..: 15:21	MDL.....: 668	
Selenium	ND	5.0	ug/L	SW846 6010B	12/18-12/19/03	F6DRG1CD
		Dilution Factor: 1		Analysis Time..: 11:39	MDL.....: 1.5	
Silver	ND	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6DRG1CE
		Dilution Factor: 1		Analysis Time..: 11:39	MDL.....: 1.9	
Sodium	**1250000**	**50000**	**ug/L**	**SW846 6010B**	**12/18-12/22/03**	**F6DRG1CF**
		Dilution Factor: 10		Analysis Time..: 15:21	MDL.....: 4640	
Thallium	**3.8 B**	**10.0**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6DRG1CG**
		Dilution Factor: 1		Analysis Time..: 11:39	MDL.....: 2.4	
Vanadium	ND	50.0	ug/L	SW846 6010B	12/18-12/19/03	F6DRG1CH
		Dilution Factor: 1		Analysis Time..: 11:39	MDL.....: 3.6	
Zinc	**528**	**20.0**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6DRG1CJ**
		Dilution Factor: 1		Analysis Time..: 11:39	MDL.....: 2.4	

NOTE(S):

B Estimated result. Result is less than RL.

G Elevated reporting limit. The reporting limit is elevated due to matrix interference.

SHAW E & I INC

Client Sample ID: DD3002

TOTAL Metals

Lot-Sample #...: H3L110180-001 **Matrix.....:** WATER
Date Sampled...: 12/10/03 **Date Received..:** 12/11/03

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 3352155						
Mercury	ND	0.20	ug/L	SW846 7470A	12/18/03	F6F1C1A5
		Dilution Factor: 1		Analysis Time..: 14:32	MDL.....: 0.030	
Prep Batch #...: 3352178						
Aluminum	**57.9 B**	**200**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6F1C1AE**
		Dilution Factor: 1		Analysis Time..: 12:01	MDL.....: 41.3	
Antimony	ND	60.0	ug/L	SW846 6010B	12/18-12/19/03	F6F1C1AF
		Dilution Factor: 1		Analysis Time..: 12:01	MDL.....: 4.0	
Arsenic	ND	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6F1C1AG
		Dilution Factor: 1		Analysis Time..: 12:01	MDL.....: 2.6	
Barium	**26100**	**4000**	**ug/L**	**SW846 6010B**	**12/18-12/22/03**	**F6F1C1AH**
		Dilution Factor: 20		Analysis Time..: 15:34	MDL.....: 19.2	
Beryllium	ND	5.0	ug/L	SW846 6010B	12/18-12/19/03	F6F1C1AJ
		Dilution Factor: 1		Analysis Time..: 12:01	MDL.....: 0.56	
Cadmium	ND	5.0	ug/L	SW846 6010B	12/18-12/19/03	F6F1C1AK
		Dilution Factor: 1		Analysis Time..: 12:01	MDL.....: 0.84	
Calcium	**2290000**	**100000**	**ug/L**	**SW846 6010B**	**12/18-12/22/03**	**F6F1C1AL**
		Dilution Factor: 20		Analysis Time..: 15:34	MDL.....: 1160	
Chromium	ND	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6F1C1AM
		Dilution Factor: 1		Analysis Time..: 12:01	MDL.....: 2.8	
Cobalt	**6.8 B**	**50.0**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6F1C1AN**
		Dilution Factor: 1		Analysis Time..: 12:01	MDL.....: 2.0	
Copper	ND	25.0	ug/L	SW846 6010B	12/18-12/19/03	F6F1C1AP
		Dilution Factor: 1		Analysis Time..: 12:01	MDL.....: 3.0	
Iron	**2030**	**100**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6F1C1AQ**
		Dilution Factor: 1		Analysis Time..: 12:01	MDL.....: 45.8	
Lead	ND G	118	ug/L	SW846 6010B	12/18-12/19/03	F6F1C1AR
		Dilution Factor: 1		Analysis Time..: 12:01	MDL.....: 1.6	

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SHAW E & I INC

Client Sample ID: DD3002

TOTAL Metals

Lot-Sample #...: H3L110180-001 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Magnesium	**1040000**	**100000**	**ug/L**	**SW846 6010B**	**12/18-12/22/03**	**F6F1C1AT**
		Dilution Factor: 20		Analysis Time..: 15:34	MDL.....: 740	
Manganese	**202**	**15.0**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6F1C1AU**
		Dilution Factor: 1		Analysis Time..: 12:01	MDL.....: 1.6	
Nickel	ND	40.0	ug/L	SW846 6010B	12/18-12/19/03	F6F1C1AV
		Dilution Factor: 1		Analysis Time..: 12:01	MDL.....: 2.8	
Potassium	**72600 B**	**100000**	**ug/L**	**SW846 6010B**	**12/18-12/22/03**	**F6F1C1AW**
		Dilution Factor: 20		Analysis Time..: 15:34	MDL.....: 1340	
Selenium	ND	5.0	ug/L	SW846 6010B	12/18-12/19/03	F6F1C1AX
		Dilution Factor: 1		Analysis Time..: 12:01	MDL.....: 1.5	
Silver	ND	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6F1C1A0
		Dilution Factor: 1		Analysis Time..: 12:01	MDL.....: 1.9	
Sodium	**9130000**	**100000**	**ug/L**	**SW846 6010B**	**12/18-12/22/03**	**F6F1C1A1**
		Dilution Factor: 20		Analysis Time..: 15:34	MDL.....: 9280	
Thallium	ND	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6F1C1A2
		Dilution Factor: 1		Analysis Time..: 12:01	MDL.....: 2.4	
Vanadium	ND	50.0	ug/L	SW846 6010B	12/18-12/19/03	F6F1C1A3
		Dilution Factor: 1		Analysis Time..: 12:01	MDL.....: 3.6	
Zinc	**612**	**20.0**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6F1C1A4**
		Dilution Factor: 1		Analysis Time..: 12:01	MDL.....: 2.4	

NOTE(S):

B Estimated result. Result is less than RL.

G Elevated reporting limit. The reporting limit is elevated due to matrix interference.

SHAW E & I INC

Client Sample ID: DD3002

DISSOLVED Metals

Lot-Sample #...: H3L110180-001 **Matrix.....:** WATER
Date Sampled...: 12/10/03 **Date Received..:** 12/11/03

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 3352158						
Mercury	ND	0.20	ug/L	SW846 7470A	12/18/03	F6F1C1C8
		Dilution Factor: 1		Analysis Time..: 15:00	MDL.....: 0.030	
Prep Batch #...: 3352178						
Aluminum	ND	200	ug/L	SW846 6010B	12/18-12/19/03	F6F1C1CH
		Dilution Factor: 1		Analysis Time..: 11:48	MDL.....: 41.3	
Antimony	ND	60.0	ug/L	SW846 6010B	12/18-12/19/03	F6F1C1CJ
		Dilution Factor: 1		Analysis Time..: 11:48	MDL.....: 4.0	
Arsenic	**4.1 B**	**10.0**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6F1C1CK**
		Dilution Factor: 1		Analysis Time..: 11:48	MDL.....: 2.6	
Barium	**25700**	**4000**	**ug/L**	**SW846 6010B**	**12/18-12/22/03**	**F6F1C1CL**
		Dilution Factor: 20		Analysis Time..: 15:29	MDL.....: 19.2	
Beryllium	ND	5.0	ug/L	SW846 6010B	12/18-12/19/03	F6F1C1CM
		Dilution Factor: 1		Analysis Time..: 11:48	MDL.....: 0.56	
Cadmium	ND	5.0	ug/L	SW846 6010B	12/18-12/19/03	F6F1C1CN
		Dilution Factor: 1		Analysis Time..: 11:48	MDL.....: 0.84	
Calcium	**2240000**	**100000**	**ug/L**	**SW846 6010B**	**12/18-12/22/03**	**F6F1C1CP**
		Dilution Factor: 20		Analysis Time..: 15:29	MDL.....: 1160	
Chromium	ND	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6F1C1CQ
		Dilution Factor: 1		Analysis Time..: 11:48	MDL.....: 2.8	
Cobalt	**6.2 B**	**50.0**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6F1C1CR**
		Dilution Factor: 1		Analysis Time..: 11:48	MDL.....: 2.0	
Copper	ND	25.0	ug/L	SW846 6010B	12/18-12/19/03	F6F1C1CT
		Dilution Factor: 1		Analysis Time..: 11:48	MDL.....: 3.0	
Iron	**1830**	**100**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6F1C1CU**
		Dilution Factor: 1		Analysis Time..: 11:48	MDL.....: 45.8	
Lead	ND G	118	ug/L	SW846 6010B	12/18-12/19/03	F6F1C1CV
		Dilution Factor: 1		Analysis Time..: 11:48	MDL.....: 1.6	

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SHAW E & I INC

Client Sample ID: DD3002

DISSOLVED Metals

Lot-Sample #...: H3L110180-001 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Magnesium	**1020000**	**100000**	**ug/L**	**SW846 6010B**	**12/18-12/22/03**	**F6F1C1CW**
		Dilution Factor: 20		Analysis Time..: 15:29	MDL.....: 740	
Manganese	**200**	**15.0**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6F1C1CX**
		Dilution Factor: 1		Analysis Time..: 11:48	MDL.....: 1.6	
Nickel	ND	40.0	ug/L	SW846 6010B	12/18-12/19/03	F6F1C1C0
		Dilution Factor: 1		Analysis Time..: 11:48	MDL.....: 2.8	
Potassium	**70500 B**	**100000**	**ug/L**	**SW846 6010B**	**12/18-12/22/03**	**F6F1C1C1**
		Dilution Factor: 20		Analysis Time..: 15:29	MDL.....: 1340	
Selenium	ND	5.0	ug/L	SW846 6010B	12/18-12/19/03	F6F1C1C2
		Dilution Factor: 1		Analysis Time..: 11:48	MDL.....: 1.5	
Silver	ND	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6F1C1C3
		Dilution Factor: 1		Analysis Time..: 11:48	MDL.....: 1.9	
Sodium	**9000000**	**100000**	**ug/L**	**SW846 6010B**	**12/18-12/22/03**	**F6F1C1C4**
		Dilution Factor: 20		Analysis Time..: 15:29	MDL.....: 9280	
Thallium	ND	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6F1C1C5
		Dilution Factor: 1		Analysis Time..: 11:48	MDL.....: 2.4	
Vanadium	ND	50.0	ug/L	SW846 6010B	12/18-12/19/03	F6F1C1C6
		Dilution Factor: 1		Analysis Time..: 11:48	MDL.....: 3.6	
Zinc	**673**	**20.0**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6F1C1C7**
		Dilution Factor: 1		Analysis Time..: 11:48	MDL.....: 2.4	

NOTE(S):

B Estimated result. Result is less than RL.

G Elevated reporting limit. The reporting limit is elevated due to matrix interference.

SHAW E & I INC

Client Sample ID: DD3001

TOTAL Metals

Lot-Sample #...: H3L110180-002 **Matrix.....:** WATER
Date Sampled...: 12/10/03 **Date Received..:** 12/11/03

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 3352155						
Mercury	ND	0.20	ug/L	SW846 7470A	12/18/03	F6F2H1AG
		Dilution Factor: 1		Analysis Time..: 14:34	MDL.....: 0.030	
Prep Batch #...: 3352178						
Aluminum	ND	200	ug/L	SW846 6010B	12/18-12/19/03	F6F2H1AQ
		Dilution Factor: 1		Analysis Time..: 12:10	MDL.....: 41.3	
Antimony	ND	60.0	ug/L	SW846 6010B	12/18-12/19/03	F6F2H1AR
		Dilution Factor: 1		Analysis Time..: 12:10	MDL.....: 4.0	
Arsenic	ND	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6F2H1AT
		Dilution Factor: 1		Analysis Time..: 12:10	MDL.....: 2.6	
Barium	**73.2 B**	**200**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6F2H1AU**
		Dilution Factor: 1		Analysis Time..: 12:10	MDL.....: 0.96	
Beryllium	ND	5.0	ug/L	SW846 6010B	12/18-12/19/03	F6F2H1AV
		Dilution Factor: 1		Analysis Time..: 12:10	MDL.....: 0.56	
Cadmium	ND	5.0	ug/L	SW846 6010B	12/18-12/19/03	F6F2H1AW
		Dilution Factor: 1		Analysis Time..: 12:10	MDL.....: 0.84	
Calcium	**86200**	**5000**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6F2H1AX**
		Dilution Factor: 1		Analysis Time..: 12:10	MDL.....: 58.2	
Chromium	ND	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6F2H1A0
		Dilution Factor: 1		Analysis Time..: 12:10	MDL.....: 2.8	
Cobalt	ND	50.0	ug/L	SW846 6010B	12/18-12/19/03	F6F2H1A1
		Dilution Factor: 1		Analysis Time..: 12:10	MDL.....: 2.0	
Copper	ND	25.0	ug/L	SW846 6010B	12/18-12/19/03	F6F2H1A2
		Dilution Factor: 1		Analysis Time..: 12:10	MDL.....: 3.0	
Iron	**908**	**100**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6F2H1A3**
		Dilution Factor: 1		Analysis Time..: 12:10	MDL.....: 45.8	
Lead	ND G	5.0	ug/L	SW846 6010B	12/18-12/19/03	F6F2H1A4
		Dilution Factor: 1		Analysis Time..: 12:10	MDL.....: 1.6	

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SHAW E & I INC

Client Sample ID: DD3001

TOTAL Metals

Lot-Sample #...: H3L110180-002 Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Magnesium	**37100**	**5000**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6F2H1A5**
		Dilution Factor: 1		Analysis Time..: 12:10	MDL.....: 37.0	
Manganese	**166**	**15.0**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6F2H1A6**
		Dilution Factor: 1		Analysis Time..: 12:10	MDL.....: 1.6	
Nickel	**4.8 B**	**40.0**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6F2H1A7**
		Dilution Factor: 1		Analysis Time..: 12:10	MDL.....: 2.8	
Potassium	**7630**	**5000**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6F2H1A8**
		Dilution Factor: 1		Analysis Time..: 12:10	MDL.....: 66.8	
Selenium	ND	5.0	ug/L	SW846 6010B	12/18-12/19/03	F6F2H1A9
		Dilution Factor: 1		Analysis Time..: 12:10	MDL.....: 1.5	
Silver	ND	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6F2H1AA
		Dilution Factor: 1		Analysis Time..: 12:10	MDL.....: 1.9	
Sodium	**86300**	**5000**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6F2H1AC**
		Dilution Factor: 1		Analysis Time..: 12:10	MDL.....: 464	
Thallium	**2.5 B**	**10.0**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6F2H1AD**
		Dilution Factor: 1		Analysis Time..: 12:10	MDL.....: 2.4	
Vanadium	ND	50.0	ug/L	SW846 6010B	12/18-12/19/03	F6F2H1AE
		Dilution Factor: 1		Analysis Time..: 12:10	MDL.....: 3.6	
Zinc	**30.1**	**20.0**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6F2H1AF**
		Dilution Factor: 1		Analysis Time..: 12:10	MDL.....: 2.4	

NOTE(S):

B Estimated result. Result is less than RL.

G Elevated reporting limit. The reporting limit is elevated due to matrix interference.

SHAW E & I INC

Client Sample ID: DD3001

DISSOLVED Metals

Lot-Sample #...: H3L110180-002 **Matrix.....:** WATER
Date Sampled...: 12/10/03 **Date Received..:** 12/11/03

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 3352158						
Mercury	ND	0.20	ug/L	SW846 7470A	12/18/03	F6F2H1CK
		Dilution Factor: 1		Analysis Time..: 15:02	MDL.....: 0.030	
Prep Batch #...: 3352178						
Aluminum	ND	200	ug/L	SW846 6010B	12/18-12/19/03	F6F2H1CT
		Dilution Factor: 1		Analysis Time..: 12:06	MDL.....: 41.3	
Antimony	ND	60.0	ug/L	SW846 6010B	12/18-12/19/03	F6F2H1CU
		Dilution Factor: 1		Analysis Time..: 12:06	MDL.....: 4.0	
Arsenic	ND	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6F2H1CV
		Dilution Factor: 1		Analysis Time..: 12:06	MDL.....: 2.6	
Barium	**81.8 B**	**200**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6F2H1CW**
		Dilution Factor: 1		Analysis Time..: 12:06	MDL.....: 0.96	
Beryllium	ND	5.0	ug/L	SW846 6010B	12/18-12/19/03	F6F2H1CX
		Dilution Factor: 1		Analysis Time..: 12:06	MDL.....: 0.56	
Cadmium	**1.2 B**	**5.0**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6F2H1C0**
		Dilution Factor: 1		Analysis Time..: 12:06	MDL.....: 0.84	
Calcium	**89900**	**5000**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6F2H1C1**
		Dilution Factor: 1		Analysis Time..: 12:06	MDL.....: 58.2	
Chromium	ND	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6F2H1C2
		Dilution Factor: 1		Analysis Time..: 12:06	MDL.....: 2.8	
Cobalt	ND	50.0	ug/L	SW846 6010B	12/18-12/19/03	F6F2H1C3
		Dilution Factor: 1		Analysis Time..: 12:06	MDL.....: 2.0	
Copper	ND	25.0	ug/L	SW846 6010B	12/18-12/19/03	F6F2H1C4
		Dilution Factor: 1		Analysis Time..: 12:06	MDL.....: 3.0	
Iron	**856**	**100**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6F2H1C5**
		Dilution Factor: 1		Analysis Time..: 12:06	MDL.....: 45.8	
Lead	ND G	6.0	ug/L	SW846 6010B	12/18-12/19/03	F6F2H1C6
		Dilution Factor: 1		Analysis Time..: 12:06	MDL.....: 1.6	

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SHAW E & I INC

Client Sample ID: DD3001

DISSOLVED Metals

Lot-Sample #...: H3L110180-002 Matrix.....: WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Magnesium	**40000**	**5000**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6F2H1C7**
		Dilution Factor: 1		Analysis Time..: 12:06	MDL.....: 37.0	
Manganese	**164**	**15.0**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6F2H1C8**
		Dilution Factor: 1		Analysis Time..: 12:06	MDL.....: 1.6	
Nickel	**4.8 B**	**40.0**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6F2H1CA**
		Dilution Factor: 1		Analysis Time..: 12:06	MDL.....: 2.8	
Potassium	**9690**	**5000**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6F2H1CC**
		Dilution Factor: 1		Analysis Time..: 12:06	MDL.....: 66.8	
Selenium	ND	5.0	ug/L	SW846 6010B	12/18-12/19/03	F6F2H1CD
		Dilution Factor: 1		Analysis Time..: 12:06	MDL.....: 1.5	
Silver	ND	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6F2H1CE
		Dilution Factor: 1		Analysis Time..: 12:06	MDL.....: 1.9	
Sodium	**112000**	**5000**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6F2H1CF**
		Dilution Factor: 1		Analysis Time..: 12:06	MDL.....: 464	
Thallium	**2.7 B**	**10.0**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6F2H1CG**
		Dilution Factor: 1		Analysis Time..: 12:06	MDL.....: 2.4	
Vanadium	ND	50.0	ug/L	SW846 6010B	12/18-12/19/03	F6F2H1CH
		Dilution Factor: 1		Analysis Time..: 12:06	MDL.....: 3.6	
Zinc	**35.9**	**20.0**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6F2H1CJ**
		Dilution Factor: 1		Analysis Time..: 12:06	MDL.....: 2.4	

NOTE(S):

B Estimated result. Result is less than RL.

G Elevated reporting limit. The reporting limit is elevated due to matrix interference.

SHAW E & I INC

Client Sample ID: DD3003

TOTAL Metals

Lot-Sample #...: H3L120208-001 **Matrix.....:** WATER
Date Sampled...: 12/11/03 **Date Received..:** 12/12/03

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 3352155						
Mercury	ND	0.20	ug/L	SW846 7470A	12/18/03	F6JXA1A5
		Dilution Factor: 1		Analysis Time..: 14:36	MDL.....: 0.030	
Prep Batch #...: 3352178						
Aluminum	**194 B**	**200**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6JXA1AE**
		Dilution Factor: 1		Analysis Time..: 12:19	MDL.....: 41.3	
Antimony	ND	60.0	ug/L	SW846 6010B	12/18-12/19/03	F6JXA1AF
		Dilution Factor: 1		Analysis Time..: 12:19	MDL.....: 4.0	
Arsenic	ND	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6JXA1AG
		Dilution Factor: 1		Analysis Time..: 12:19	MDL.....: 2.6	
Barium	**642**	**200**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6JXA1AH**
		Dilution Factor: 1		Analysis Time..: 12:19	MDL.....: 0.96	
Beryllium	ND	5.0	ug/L	SW846 6010B	12/18-12/19/03	F6JXA1AJ
		Dilution Factor: 1		Analysis Time..: 12:19	MDL.....: 0.56	
Cadmium	ND	5.0	ug/L	SW846 6010B	12/18-12/19/03	F6JXA1AK
		Dilution Factor: 1		Analysis Time..: 12:19	MDL.....: 0.84	
Calcium	**151000**	**5000**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6JXA1AL**
		Dilution Factor: 1		Analysis Time..: 12:19	MDL.....: 58.2	
Chromium	ND	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6JXA1AM
		Dilution Factor: 1		Analysis Time..: 12:19	MDL.....: 2.8	
Cobalt	**7.7 B**	**50.0**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6JXA1AN**
		Dilution Factor: 1		Analysis Time..: 12:19	MDL.....: 2.0	
Copper	ND	25.0	ug/L	SW846 6010B	12/18-12/19/03	F6JXA1AP
		Dilution Factor: 1		Analysis Time..: 12:19	MDL.....: 3.0	
Iron	ND	100	ug/L	SW846 6010B	12/18-12/19/03	F6JXA1AQ
		Dilution Factor: 1		Analysis Time..: 12:19	MDL.....: 45.8	
Lead	ND G	11.0	ug/L	SW846 6010B	12/18-12/19/03	F6JXA1AR
		Dilution Factor: 1		Analysis Time..: 12:19	MDL.....: 1.6	

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SHAW E & I INC

Client Sample ID: DD3003

TOTAL Metals

Lot-Sample #...: H3L120208-001 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Magnesium	**70800**	**5000**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6JXA1AT**
		Dilution Factor: 1		Analysis Time..: 12:19	MDL.....: 37.0	
Manganese	**25.8**	**15.0**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6JXA1AU**
		Dilution Factor: 1		Analysis Time..: 12:19	MDL.....: 1.6	
Nickel	ND	40.0	ug/L	SW846 6010B	12/18-12/19/03	F6JXA1AV
		Dilution Factor: 1		Analysis Time..: 12:19	MDL.....: 2.8	
Potassium	**24300**	**5000**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6JXA1AW**
		Dilution Factor: 1		Analysis Time..: 12:19	MDL.....: 66.8	
Selenium	ND	5.0	ug/L	SW846 6010B	12/18-12/19/03	F6JXA1AX
		Dilution Factor: 1		Analysis Time..: 12:19	MDL.....: 1.5	
Silver	ND	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6JXA1A0
		Dilution Factor: 1		Analysis Time..: 12:19	MDL.....: 1.9	
Sodium	**67000**	**5000**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6JXA1A1**
		Dilution Factor: 1		Analysis Time..: 12:19	MDL.....: 464	
Thallium	**2.5 B**	**10.0**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6JXA1A2**
		Dilution Factor: 1		Analysis Time..: 12:19	MDL.....: 2.4	
Vanadium	ND	50.0	ug/L	SW846 6010B	12/18-12/19/03	F6JXA1A3
		Dilution Factor: 1		Analysis Time..: 12:19	MDL.....: 3.6	
Zinc	**9.3 B**	**20.0**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6JXA1A4**
		Dilution Factor: 1		Analysis Time..: 12:19	MDL.....: 2.4	

NOTE(S):

B Estimated result. Result is less than RL.

G Elevated reporting limit. The reporting limit is elevated due to matrix interference.

SHAW E & I INC

Client Sample ID: DD3003

DISSOLVED Metals

Lot-Sample #...: H3L120208-001 **Matrix.....:** WATER
Date Sampled...: 12/11/03 **Date Received..:** 12/12/03

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 3352158						
Mercury	ND	0.20	ug/L	SW846 7470A	12/18/03	F6JXA1C8
		Dilution Factor: 1		Analysis Time..: 15:04	MDL.....: 0.030	
Prep Batch #...: 3352178						
Aluminum	**50.8 B**	**200**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6JXA1CH**
		Dilution Factor: 1		Analysis Time..: 12:15	MDL.....: 41.3	
Antimony	ND	60.0	ug/L	SW846 6010B	12/18-12/19/03	F6JXA1CJ
		Dilution Factor: 1		Analysis Time..: 12:15	MDL.....: 4.0	
Arsenic	ND	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6JXA1CK
		Dilution Factor: 1		Analysis Time..: 12:15	MDL.....: 2.6	
Barium	**669**	**200**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6JXA1CL**
		Dilution Factor: 1		Analysis Time..: 12:15	MDL.....: 0.96	
Beryllium	ND	5.0	ug/L	SW846 6010B	12/18-12/19/03	F6JXA1CM
		Dilution Factor: 1		Analysis Time..: 12:15	MDL.....: 0.56	
Cadmium	ND	5.0	ug/L	SW846 6010B	12/18-12/19/03	F6JXA1CN
		Dilution Factor: 1		Analysis Time..: 12:15	MDL.....: 0.84	
Calcium	**152000**	**5000**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6JXA1CP**
		Dilution Factor: 1		Analysis Time..: 12:15	MDL.....: 58.2	
Chromium	ND	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6JXA1CQ
		Dilution Factor: 1		Analysis Time..: 12:15	MDL.....: 2.8	
Cobalt	ND	50.0	ug/L	SW846 6010B	12/18-12/19/03	F6JXA1CR
		Dilution Factor: 1		Analysis Time..: 12:15	MDL.....: 2.0	
Copper	ND	25.0	ug/L	SW846 6010B	12/18-12/19/03	F6JXA1CT
		Dilution Factor: 1		Analysis Time..: 12:15	MDL.....: 3.0	
Iron	ND	100	ug/L	SW846 6010B	12/18-12/19/03	F6JXA1CU
		Dilution Factor: 1		Analysis Time..: 12:15	MDL.....: 45.8	
Lead	ND G	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6JXA1CV
		Dilution Factor: 1		Analysis Time..: 12:15	MDL.....: 1.6	

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SHAW E & I INC

Client Sample ID: DD3003

DISSOLVED Metals

Lot-Sample #...: H3L120208-001 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Magnesium	**71100**	**5000**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6JXA1CW**
		Dilution Factor: 1		Analysis Time..: 12:15	MDL.....: 37.0	
Manganese	**25.5**	**15.0**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6JXA1CX**
		Dilution Factor: 1		Analysis Time..: 12:15	MDL.....: 1.6	
Nickel	ND	40.0	ug/L	SW846 6010B	12/18-12/19/03	F6JXA1C0
		Dilution Factor: 1		Analysis Time..: 12:15	MDL.....: 2.8	
Potassium	**24500**	**5000**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6JXA1C1**
		Dilution Factor: 1		Analysis Time..: 12:15	MDL.....: 66.8	
Selenium	ND	5.0	ug/L	SW846 6010B	12/18-12/19/03	F6JXA1C2
		Dilution Factor: 1		Analysis Time..: 12:15	MDL.....: 1.5	
Silver	ND	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6JXA1C3
		Dilution Factor: 1		Analysis Time..: 12:15	MDL.....: 1.9	
Sodium	**67900**	**5000**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6JXA1C4**
		Dilution Factor: 1		Analysis Time..: 12:15	MDL.....: 464	
Thallium	ND	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6JXA1C5
		Dilution Factor: 1		Analysis Time..: 12:15	MDL.....: 2.4	
Vanadium	ND	50.0	ug/L	SW846 6010B	12/18-12/19/03	F6JXA1C6
		Dilution Factor: 1		Analysis Time..: 12:15	MDL.....: 3.6	
Zinc	ND	20.0	ug/L	SW846 6010B	12/18-12/19/03	F6JXA1C7
		Dilution Factor: 1		Analysis Time..: 12:15	MDL.....: 2.4	

NOTE(S):

B Estimated result. Result is less than RL.

G Elevated reporting limit. The reporting limit is elevated due to matrix interference.

SHAW E & I INC

Client Sample ID: DD3004

TOTAL Metals

Lot-Sample #...: H3L120208-002 **Matrix.....:** WATER
Date Sampled...: 12/11/03 **Date Received..:** 12/12/03

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 3352155						
Mercury	ND	0.20	ug/L	SW846 7470A	12/18/03	F6JX21AT
		Dilution Factor: 1		Analysis Time..: 14:38	MDL.....: 0.030	
Prep Batch #...: 3352178						
Aluminum	**61.2 B**	**200**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6JX21CL**
		Dilution Factor: 1		Analysis Time..: 12:41	MDL.....: 41.3	
Antimony	ND	60.0	ug/L	SW846 6010B	12/18-12/19/03	F6JX21CP
		Dilution Factor: 1		Analysis Time..: 12:41	MDL.....: 4.0	
Arsenic	ND	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6JX21CT
		Dilution Factor: 1		Analysis Time..: 12:41	MDL.....: 2.6	
Barium	**187 B**	**200**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6JX21CW**
		Dilution Factor: 1		Analysis Time..: 12:41	MDL.....: 0.96	
Beryllium	ND	5.0	ug/L	SW846 6010B	12/18-12/19/03	F6JX21C1
		Dilution Factor: 1		Analysis Time..: 12:41	MDL.....: 0.56	
Cadmium	ND	5.0	ug/L	SW846 6010B	12/18-12/19/03	F6JX21C4
		Dilution Factor: 1		Analysis Time..: 12:41	MDL.....: 0.84	
Calcium	**141000**	**5000**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6JX21C7**
		Dilution Factor: 1		Analysis Time..: 12:41	MDL.....: 58.2	
Chromium	ND	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6JX21DA
		Dilution Factor: 1		Analysis Time..: 12:41	MDL.....: 2.8	
Cobalt	ND	50.0	ug/L	SW846 6010B	12/18-12/19/03	F6JX21DE
		Dilution Factor: 1		Analysis Time..: 12:41	MDL.....: 2.0	
Copper	ND	25.0	ug/L	SW846 6010B	12/18-12/19/03	F6JX21DH
		Dilution Factor: 1		Analysis Time..: 12:41	MDL.....: 3.0	
Iron	**140**	**100**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6JX21DL**
		Dilution Factor: 1		Analysis Time..: 12:41	MDL.....: 45.8	
Lead	ND G	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6JX21DP
		Dilution Factor: 1		Analysis Time..: 12:41	MDL.....: 1.6	

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SHAW E & I INC

Client Sample ID: DD3004

TOTAL Metals

Lot-Sample #...: H3L120208-002 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Magnesium	**54000**	**5000**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6JX21DT**
		Dilution Factor: 1		Analysis Time..: 12:41	MDL.....: 37.0	
Manganese	**58.5**	**15.0**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6JX21DW**
		Dilution Factor: 1		Analysis Time..: 12:41	MDL.....: 1.6	
Nickel	ND	40.0	ug/L	SW846 6010B	12/18-12/19/03	F6JX21D1
		Dilution Factor: 1		Analysis Time..: 12:41	MDL.....: 2.8	
Potassium	**11900**	**5000**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6JX21D4**
		Dilution Factor: 1		Analysis Time..: 12:41	MDL.....: 66.8	
Selenium	ND	5.0	ug/L	SW846 6010B	12/18-12/19/03	F6JX21D7
		Dilution Factor: 1		Analysis Time..: 12:41	MDL.....: 1.5	
Silver	ND	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6JX21AA
		Dilution Factor: 1		Analysis Time..: 12:41	MDL.....: 1.9	
Sodium	**122000**	**5000**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6JX21AE**
		Dilution Factor: 1		Analysis Time..: 12:41	MDL.....: 464	
Thallium	**3.0 B**	**10.0**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6JX21AH**
		Dilution Factor: 1		Analysis Time..: 12:41	MDL.....: 2.4	
Vanadium	ND	50.0	ug/L	SW846 6010B	12/18-12/19/03	F6JX21AL
		Dilution Factor: 1		Analysis Time..: 12:41	MDL.....: 3.6	
Zinc	**74.4**	**20.0**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6JX21AP**
		Dilution Factor: 1		Analysis Time..: 12:41	MDL.....: 2.4	

NOTE(S):

B Estimated result. Result is less than RL.

G Elevated reporting limit. The reporting limit is elevated due to matrix interference.

SHAW E & I INC

Client Sample ID: DD3004

DISSOLVED Metals

Lot-Sample #...: H3L120208-002 **Matrix.....:** WATER
Date Sampled...: 12/11/03 **Date Received..:** 12/12/03

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 3352158						
Mercury	ND	0.20	ug/L	SW846 7470A	12/18/03	F6JX21E4
		Dilution Factor: 1		Analysis Time..: 15:06	MDL.....: 0.030	
Prep Batch #...: 3352178						
Aluminum	ND	200	ug/L	SW846 6010B	12/18-12/19/03	F6JX21FT
		Dilution Factor: 1		Analysis Time..: 12:23	MDL.....: 41.3	
Antimony	ND	60.0	ug/L	SW846 6010B	12/18-12/19/03	F6JX21FW
		Dilution Factor: 1		Analysis Time..: 12:23	MDL.....: 4.0	
Arsenic	ND	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6JX21F1
		Dilution Factor: 1		Analysis Time..: 12:23	MDL.....: 2.6	
Barium	**175 B**	**200**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6JX21F4**
		Dilution Factor: 1		Analysis Time..: 12:23	MDL.....: 0.96	
Beryllium	ND	5.0	ug/L	SW846 6010B	12/18-12/19/03	F6JX21F7
		Dilution Factor: 1		Analysis Time..: 12:23	MDL.....: 0.56	
Cadmium	ND	5.0	ug/L	SW846 6010B	12/18-12/19/03	F6JX21GA
		Dilution Factor: 1		Analysis Time..: 12:23	MDL.....: 0.84	
Calcium	**135000**	**5000**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6JX21GE**
		Dilution Factor: 1		Analysis Time..: 12:23	MDL.....: 58.2	
Chromium	ND	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6JX21GH
		Dilution Factor: 1		Analysis Time..: 12:23	MDL.....: 2.8	
Cobalt	ND	50.0	ug/L	SW846 6010B	12/18-12/19/03	F6JX21GL
		Dilution Factor: 1		Analysis Time..: 12:23	MDL.....: 2.0	
Copper	ND	25.0	ug/L	SW846 6010B	12/18-12/19/03	F6JX21GP
		Dilution Factor: 1		Analysis Time..: 12:23	MDL.....: 3.0	
Iron	**74.5 B**	**100**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6JX21GT**
		Dilution Factor: 1		Analysis Time..: 12:23	MDL.....: 45.8	
Lead	ND G	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6JX21GW
		Dilution Factor: 1		Analysis Time..: 12:23	MDL.....: 1.6	

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SHAW E & I INC

Client Sample ID: DD3004

DISSOLVED Metals

Lot-Sample #...: H3L120208-002 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Magnesium	**51400**	**5000**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6JX21G1**
		Dilution Factor: 1		Analysis Time..: 12:23	MDL.....: 37.0	
Manganese	**55.2**	**15.0**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6JX21G4**
		Dilution Factor: 1		Analysis Time..: 12:23	MDL.....: 1.6	
Nickel	ND	40.0	ug/L	SW846 6010B	12/18-12/19/03	F6JX21EA
		Dilution Factor: 1		Analysis Time..: 12:23	MDL.....: 2.8	
Potassium	**11100**	**5000**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6JX21EE**
		Dilution Factor: 1		Analysis Time..: 12:23	MDL.....: 66.8	
Selenium	ND	5.0	ug/L	SW846 6010B	12/18-12/19/03	F6JX21EH
		Dilution Factor: 1		Analysis Time..: 12:23	MDL.....: 1.5	
Silver	ND	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6JX21EL
		Dilution Factor: 1		Analysis Time..: 12:23	MDL.....: 1.9	
Sodium	**115000**	**5000**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6JX21EP**
		Dilution Factor: 1		Analysis Time..: 12:23	MDL.....: 464	
Thallium	ND	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6JX21ET
		Dilution Factor: 1		Analysis Time..: 12:23	MDL.....: 2.4	
Vanadium	ND	50.0	ug/L	SW846 6010B	12/18-12/19/03	F6JX21EW
		Dilution Factor: 1		Analysis Time..: 12:23	MDL.....: 3.6	
Zinc	**21.7**	**20.0**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6JX21E1**
		Dilution Factor: 1		Analysis Time..: 12:23	MDL.....: 2.4	

NOTE(S):

B Estimated result. Result is less than RL.

G Elevated reporting limit. The reporting limit is elevated due to matrix interference.

SHAW E & I INC

Client Sample ID: DD3005

TOTAL Metals

Lot-Sample #...: H3L120208-003 **Matrix.....:** WATER
Date Sampled...: 12/11/03 **Date Received..:** 12/12/03

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 3352155						
Mercury	ND	0.20	ug/L	SW846 7470A	12/18/03	F6J0A1AG
		Dilution Factor: 1		Analysis Time..: 14:44	MDL.....: 0.030	
Prep Batch #...: 3352178						
Aluminum	**47.9 B**	**200**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6J0A1AQ**
		Dilution Factor: 1		Analysis Time..: 13:08	MDL.....: 41.3	
Antimony	ND	60.0	ug/L	SW846 6010B	12/18-12/19/03	F6J0A1AR
		Dilution Factor: 1		Analysis Time..: 13:08	MDL.....: 4.0	
Arsenic	ND	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6J0A1AT
		Dilution Factor: 1		Analysis Time..: 13:08	MDL.....: 2.6	
Barium	**179 B**	**200**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6J0A1AU**
		Dilution Factor: 1		Analysis Time..: 13:08	MDL.....: 0.96	
Beryllium	ND	5.0	ug/L	SW846 6010B	12/18-12/22/03	F6J0A1AV
		Dilution Factor: 1		Analysis Time..: 15:53	MDL.....: 0.56	
Cadmium	ND	5.0	ug/L	SW846 6010B	12/18-12/19/03	F6J0A1AW
		Dilution Factor: 1		Analysis Time..: 13:08	MDL.....: 0.84	
Calcium	**138000**	**5000**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6J0A1AX**
		Dilution Factor: 1		Analysis Time..: 13:08	MDL.....: 58.2	
Chromium	ND	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6J0A1A0
		Dilution Factor: 1		Analysis Time..: 13:08	MDL.....: 2.8	
Cobalt	ND	50.0	ug/L	SW846 6010B	12/18-12/19/03	F6J0A1A1
		Dilution Factor: 1		Analysis Time..: 13:08	MDL.....: 2.0	
Copper	ND	25.0	ug/L	SW846 6010B	12/18-12/19/03	F6J0A1A2
		Dilution Factor: 1		Analysis Time..: 13:08	MDL.....: 3.0	
Iron	**133**	**100**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6J0A1A3**
		Dilution Factor: 1		Analysis Time..: 13:08	MDL.....: 45.8	
Lead	ND G	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6J0A1A4
		Dilution Factor: 1		Analysis Time..: 13:08	MDL.....: 1.6	

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SHAW E & I INC

Client Sample ID: DD3005

TOTAL Metals

Lot-Sample #...: H3L120208-003 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Magnesium	**52700**	**5000**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6J0A1A5**
		Dilution Factor: 1		Analysis Time..: 13:08	MDL.....: 37.0	
Manganese	**56.2**	**15.0**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6J0A1A6**
		Dilution Factor: 1		Analysis Time..: 13:08	MDL.....: 1.6	
Nickel	ND	40.0	ug/L	SW846 6010B	12/18-12/19/03	F6J0A1A7
		Dilution Factor: 1		Analysis Time..: 13:08	MDL.....: 2.8	
Potassium	**10800**	**5000**	**ug/L**	**SW846 6010B**	**12/18-12/22/03**	**F6J0A1A8**
		Dilution Factor: 1		Analysis Time..: 15:53	MDL.....: 66.8	
Selenium	ND	5.0	ug/L	SW846 6010B	12/18-12/19/03	F6J0A1A9
		Dilution Factor: 1		Analysis Time..: 13:08	MDL.....: 1.5	
Silver	ND	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6J0A1AA
		Dilution Factor: 1		Analysis Time..: 13:08	MDL.....: 1.9	
Sodium	**118000**	**5000**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6J0A1AC**
		Dilution Factor: 1		Analysis Time..: 13:08	MDL.....: 464	
Thallium	**3.2 B**	**10.0**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6J0A1AD**
		Dilution Factor: 1		Analysis Time..: 13:08	MDL.....: 2.4	
Vanadium	ND	50.0	ug/L	SW846 6010B	12/18-12/19/03	F6J0A1AE
		Dilution Factor: 1		Analysis Time..: 13:08	MDL.....: 3.6	
Zinc	**69.4**	**20.0**	**ug/L**	**SW846 6010B**	**12/18-12/22/03**	**F6J0A1AF**
		Dilution Factor: 1		Analysis Time..: 15:53	MDL.....: 2.4	

NOTE(S):

B Estimated result. Result is less than RL.

G Elevated reporting limit. The reporting limit is elevated due to matrix interference.

SHAW E & I INC

Client Sample ID: DD3005

DISSOLVED Metals

Lot-Sample #...: H3L120208-003 **Matrix.....:** WATER
Date Sampled...: 12/11/03 **Date Received..:** 12/12/03

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 3352158						
Mercury	ND	0.20	ug/L	SW846 7470A	12/18/03	F6J0A1CK
		Dilution Factor: 1		Analysis Time..: 15:17	MDL.....: 0.030	
Prep Batch #...: 3352178						
Aluminum	**44.1 B**	**200**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6J0A1CT**
		Dilution Factor: 1		Analysis Time..: 13:03	MDL.....: 41.3	
Antimony	ND	60.0	ug/L	SW846 6010B	12/18-12/19/03	F6J0A1CU
		Dilution Factor: 1		Analysis Time..: 13:03	MDL.....: 4.0	
Arsenic	ND	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6J0A1CV
		Dilution Factor: 1		Analysis Time..: 13:03	MDL.....: 2.6	
Barium	**180 B**	**200**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6J0A1CW**
		Dilution Factor: 1		Analysis Time..: 13:03	MDL.....: 0.96	
Beryllium	ND	5.0	ug/L	SW846 6010B	12/18-12/22/03	F6J0A1CX
		Dilution Factor: 1		Analysis Time..: 15:49	MDL.....: 0.56	
Cadmium	ND	5.0	ug/L	SW846 6010B	12/18-12/19/03	F6J0A1C0
		Dilution Factor: 1		Analysis Time..: 13:03	MDL.....: 0.84	
Calcium	**139000**	**5000**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6J0A1C1**
		Dilution Factor: 1		Analysis Time..: 13:03	MDL.....: 58.2	
Chromium	ND	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6J0A1C2
		Dilution Factor: 1		Analysis Time..: 13:03	MDL.....: 2.8	
Cobalt	ND	50.0	ug/L	SW846 6010B	12/18-12/19/03	F6J0A1C3
		Dilution Factor: 1		Analysis Time..: 13:03	MDL.....: 2.0	
Copper	ND	25.0	ug/L	SW846 6010B	12/18-12/19/03	F6J0A1C4
		Dilution Factor: 1		Analysis Time..: 13:03	MDL.....: 3.0	
Iron	**54.3 B**	**100**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6J0A1C5**
		Dilution Factor: 1		Analysis Time..: 13:03	MDL.....: 45.8	
Lead	ND G	9.0	ug/L	SW846 6010B	12/18-12/19/03	F6J0A1C6
		Dilution Factor: 1		Analysis Time..: 13:03	MDL.....: 1.6	

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SHAW E & I INC

Client Sample ID: DD3005

DISSOLVED Metals

Lot-Sample #...: H3L120208-003 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Magnesium	**53400**	**5000**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6J0A1C7**
		Dilution Factor: 1		Analysis Time..: 13:03	MDL.....: 37.0	
Manganese	**56.8**	**15.0**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6J0A1C8**
		Dilution Factor: 1		Analysis Time..: 13:03	MDL.....: 1.6	
Nickel	ND	40.0	ug/L	SW846 6010B	12/18-12/19/03	F6J0A1CA
		Dilution Factor: 1		Analysis Time..: 13:03	MDL.....: 2.8	
Potassium	**11000**	**5000**	**ug/L**	**SW846 6010B**	**12/18-12/22/03**	**F6J0A1CC**
		Dilution Factor: 1		Analysis Time..: 15:49	MDL.....: 66.8	
Selenium	ND	5.0	ug/L	SW846 6010B	12/18-12/19/03	F6J0A1CD
		Dilution Factor: 1		Analysis Time..: 13:03	MDL.....: 1.5	
Silver	ND	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6J0A1CE
		Dilution Factor: 1		Analysis Time..: 13:03	MDL.....: 1.9	
Sodium	**120000**	**5000**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6J0A1CF**
		Dilution Factor: 1		Analysis Time..: 13:03	MDL.....: 464	
Thallium	**6.2 B**	**10.0**	**ug/L**	**SW846 6010B**	**12/18-12/19/03**	**F6J0A1CG**
		Dilution Factor: 1		Analysis Time..: 13:03	MDL.....: 2.4	
Vanadium	ND	50.0	ug/L	SW846 6010B	12/18-12/19/03	F6J0A1CH
		Dilution Factor: 1		Analysis Time..: 13:03	MDL.....: 3.6	
Zinc	**20.8**	**20.0**	**ug/L**	**SW846 6010B**	**12/18-12/22/03**	**F6J0A1CJ**
		Dilution Factor: 1		Analysis Time..: 15:49	MDL.....: 2.4	

NOTE(S):

B Estimated result. Result is less than RL.

G Elevated reporting limit. The reporting limit is elevated due to matrix interference.

QC Summary

METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: PB045 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MB Lot-Sample #: H3L180000-155 **Prep Batch #...:** 3352155						
Mercury	ND	0.20	ug/L	SW846 7470A	12/18/03	F6X6X1AA
		Dilution Factor: 1				
		Analysis Time..: 14:17				
MB Lot-Sample #: H3L180000-178 **Prep Batch #...:** 3352178						
Aluminum	ND	200	ug/L	SW846 6010B	12/18-12/19/03	F6X9W1AG
		Dilution Factor: 1				
		Analysis Time..: 11:08				
Antimony	ND	60.0	ug/L	SW846 6010B	12/18-12/19/03	F6X9W1AH
		Dilution Factor: 1				
		Analysis Time..: 11:08				
Arsenic	ND	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6X9W1AJ
		Dilution Factor: 1				
		Analysis Time..: 11:08				
Barium	ND	200	ug/L	SW846 6010B	12/18-12/19/03	F6X9W1AK
		Dilution Factor: 1				
		Analysis Time..: 11:08				
Beryllium	ND	5.0	ug/L	SW846 6010B	12/18-12/19/03	F6X9W1AL
		Dilution Factor: 1				
		Analysis Time..: 11:08				
Cadmium	ND	5.0	ug/L	SW846 6010B	12/18-12/19/03	F6X9W1AM
		Dilution Factor: 1				
		Analysis Time..: 11:08				
Calcium	ND	5000	ug/L	SW846 6010B	12/18-12/19/03	F6X9W1AN
		Dilution Factor: 1				
		Analysis Time..: 11:08				
Chromium	ND	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6X9W1AP
		Dilution Factor: 1				
		Analysis Time..: 11:08				
Cobalt	ND	50.0	ug/L	SW846 6010B	12/18-12/19/03	F6X9W1AQ
		Dilution Factor: 1				
		Analysis Time..: 11:08				

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METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: PB045 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Copper	ND	25.0	ug/L	SW846 6010B	12/18-12/19/03	F6X9W1AR
		Dilution Factor: 1				
		Analysis Time..: 11:08				
Iron	ND	100	ug/L	SW846 6010B	12/18-12/19/03	F6X9W1AT
		Dilution Factor: 1				
		Analysis Time..: 11:08				
Lead	ND	3.0	ug/L	SW846 6010B	12/18-12/19/03	F6X9W1AU
		Dilution Factor: 1				
		Analysis Time..: 11:08				
Magnesium	ND	5000	ug/L	SW846 6010B	12/18-12/19/03	F6X9W1AV
		Dilution Factor: 1				
		Analysis Time..: 11:08				
Manganese	ND	15.0	ug/L	SW846 6010B	12/18-12/19/03	F6X9W1AW
		Dilution Factor: 1				
		Analysis Time..: 11:08				
Nickel	ND	40.0	ug/L	SW846 6010B	12/18-12/19/03	F6X9W1AX
		Dilution Factor: 1				
		Analysis Time..: 11:08				
Potassium	ND	5000	ug/L	SW846 6010B	12/18-12/19/03	F6X9W1A0
		Dilution Factor: 1				
		Analysis Time..: 11:08				
Selenium	ND	5.0	ug/L	SW846 6010B	12/18-12/19/03	F6X9W1A1
		Dilution Factor: 1				
		Analysis Time..: 11:08				
Silver	ND	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6X9W1AA
		Dilution Factor: 1				
		Analysis Time..: 11:08				
Sodium	ND	5000	ug/L	SW846 6010B	12/18-12/19/03	F6X9W1AC
		Dilution Factor: 1				
		Analysis Time..: 11:08				
Thallium	ND	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6X9W1AD
		Dilution Factor: 1				
		Analysis Time..: 11:08				
Vanadium	ND	50.0	ug/L	SW846 6010B	12/18-12/19/03	F6X9W1AE
		Dilution Factor: 1				
		Analysis Time..: 11:08				

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METHOD BLANK REPORT

TOTAL Metals

Client Lot #...: PB045 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Zinc	ND	20.0	ug/L	SW846 6010B	12/18-12/19/03	F6X9W1AF

Dilution Factor: 1
Analysis Time..: 11:08

NOTE(S):

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

METHOD BLANK REPORT

DISSOLVED Metals

Client Lot #...: PB045 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MB Lot-Sample #: H3L180000-158 **Prep Batch #...:** 3352158						
Mercury	ND	0.20	ug/L	SW846 7470A	12/18/03	F6X621AA
		Dilution Factor: 1				
		Analysis Time..: 14:52				
MB Lot-Sample #: H3L180000-178 **Prep Batch #...:** 3352178						
Aluminum	ND	200	ug/L	SW846 6010B	12/18-12/19/03	F6X9W1CR
		Dilution Factor: 1				
		Analysis Time..: 11:08				
Antimony	ND	60.0	ug/L	SW846 6010B	12/18-12/19/03	F6X9W1CT
		Dilution Factor: 1				
		Analysis Time..: 11:08				
Arsenic	ND	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6X9W1CU
		Dilution Factor: 1				
		Analysis Time..: 11:08				
Barium	ND	200	ug/L	SW846 6010B	12/18-12/19/03	F6X9W1CV
		Dilution Factor: 1				
		Analysis Time..: 11:08				
Beryllium	ND	5.0	ug/L	SW846 6010B	12/18-12/19/03	F6X9W1CW
		Dilution Factor: 1				
		Analysis Time..: 11:08				
Cadmium	ND	5.0	ug/L	SW846 6010B	12/18-12/19/03	F6X9W1CX
		Dilution Factor: 1				
		Analysis Time..: 11:08				
Calcium	ND	5000	ug/L	SW846 6010B	12/18-12/19/03	F6X9W1C0
		Dilution Factor: 1				
		Analysis Time..: 11:08				
Chromium	ND	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6X9W1C1
		Dilution Factor: 1				
		Analysis Time..: 11:08				
Cobalt	ND	50.0	ug/L	SW846 6010B	12/18-12/19/03	F6X9W1C2
		Dilution Factor: 1				
		Analysis Time..: 11:08				

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METHOD BLANK REPORT

DISSOLVED Metals

Client Lot #...: PB045 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Copper	ND	25.0	ug/L	SW846 6010B	12/18-12/19/03	F6X9W1C3
		Dilution Factor: 1				
		Analysis Time..: 11:08				
Iron	ND	100	ug/L	SW846 6010B	12/18-12/19/03	F6X9W1C4
		Dilution Factor: 1				
		Analysis Time..: 11:08				
Lead	ND	3.0	ug/L	SW846 6010B	12/18-12/19/03	F6X9W1C5
		Dilution Factor: 1				
		Analysis Time..: 11:08				
Magnesium	ND	5000	ug/L	SW846 6010B	12/18-12/19/03	F6X9W1C6
		Dilution Factor: 1				
		Analysis Time..: 11:08				
Manganese	ND	15.0	ug/L	SW846 6010B	12/18-12/19/03	F6X9W1C7
		Dilution Factor: 1				
		Analysis Time..: 11:08				
Nickel	ND	40.0	ug/L	SW846 6010B	12/18-12/19/03	F6X9W1C8
		Dilution Factor: 1				
		Analysis Time..: 11:08				
Potassium	ND	5000	ug/L	SW846 6010B	12/18-12/19/03	F6X9W1C9
		Dilution Factor: 1				
		Analysis Time..: 11:08				
Selenium	ND	5.0	ug/L	SW846 6010B	12/18-12/19/03	F6X9W1DA
		Dilution Factor: 1				
		Analysis Time..: 11:08				
Silver	ND	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6X9W1DC
		Dilution Factor: 1				
		Analysis Time..: 11:08				
Sodium	ND	5000	ug/L	SW846 6010B	12/18-12/19/03	F6X9W1DD
		Dilution Factor: 1				
		Analysis Time..: 11:08				
Thallium	ND	10.0	ug/L	SW846 6010B	12/18-12/19/03	F6X9W1DE
		Dilution Factor: 1				
		Analysis Time..: 11:08				
Vanadium	ND	50.0	ug/L	SW846 6010B	12/18-12/19/03	F6X9W1DF
		Dilution Factor: 1				
		Analysis Time..: 11:08				

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METHOD BLANK REPORT

DISSOLVED Metals

Client Lot #...: PB045 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Zinc	ND	20.0	ug/L	SW846 6010B	12/18-12/19/03	F6X9W1DG

Dilution Factor: 1
Analysis Time..: 11:08

NOTE(S):

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

LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: PB045 **Matrix.....:** WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: H3L180000-155 **Prep Batch #...:** 3352155					
Mercury	95	(90 - 110)	SW846 7470A	12/18/03	F6X6X1AC
		Dilution Factor: 1	Analysis Time..: 14:19		
LCS Lot-Sample#: H3L180000-178 **Prep Batch #...:** 3352178					
Aluminum	104	(90 - 110)	SW846 6010B	12/18-12/19/03	F6X9W1A7
		Dilution Factor: 1	Analysis Time..: 11:12		
Antimony	103	(90 - 110)	SW846 6010B	12/18-12/19/03	F6X9W1A8
		Dilution Factor: 1	Analysis Time..: 11:12		
Arsenic	102	(90 - 110)	SW846 6010B	12/18-12/19/03	F6X9W1A9
		Dilution Factor: 1	Analysis Time..: 11:12		
Barium	102	(90 - 110)	SW846 6010B	12/18-12/19/03	F6X9W1CA
		Dilution Factor: 1	Analysis Time..: 11:12		
Beryllium	107	(90 - 115)	SW846 6010B	12/18-12/19/03	F6X9W1CC
		Dilution Factor: 1	Analysis Time..: 11:12		
Cadmium	105	(90 - 110)	SW846 6010B	12/18-12/19/03	F6X9W1CD
		Dilution Factor: 1	Analysis Time..: 11:12		
Calcium	104	(90 - 110)	SW846 6010B	12/18-12/19/03	F6X9W1CE
		Dilution Factor: 1	Analysis Time..: 11:12		
Chromium	104	(89 - 110)	SW846 6010B	12/18-12/19/03	F6X9W1CF
		Dilution Factor: 1	Analysis Time..: 11:12		
Cobalt	105	(90 - 110)	SW846 6010B	12/18-12/19/03	F6X9W1CG
		Dilution Factor: 1	Analysis Time..: 11:12		
Copper	102	(88 - 110)	SW846 6010B	12/18-12/19/03	F6X9W1CH
		Dilution Factor: 1	Analysis Time..: 11:12		
Iron	102	(90 - 110)	SW846 6010B	12/18-12/19/03	F6X9W1CJ
		Dilution Factor: 1	Analysis Time..: 11:12		
Lead	104	(90 - 110)	SW846 6010B	12/18-12/19/03	F6X9W1CK
		Dilution Factor: 1	Analysis Time..: 11:12		

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: PB045 **Matrix.....:** WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Magnesium	102	(90 - 110)	SW846 6010B	12/18-12/19/03	F6X9W1CL
		Dilution Factor: 1	Analysis Time..: 11:12		
Manganese	105	(90 - 111)	SW846 6010B	12/18-12/19/03	F6X9W1CM
		Dilution Factor: 1	Analysis Time..: 11:12		
Nickel	104	(90 - 110)	SW846 6010B	12/18-12/19/03	F6X9W1CN
		Dilution Factor: 1	Analysis Time..: 11:12		
Potassium	108	(89 - 110)	SW846 6010B	12/18-12/19/03	F6X9W1CP
		Dilution Factor: 1	Analysis Time..: 11:12		
Selenium	106	(90 - 114)	SW846 6010B	12/18-12/19/03	F6X9W1CQ
		Dilution Factor: 1	Analysis Time..: 11:12		
Silver	102	(90 - 110)	SW846 6010B	12/18-12/19/03	F6X9W1A2
		Dilution Factor: 1	Analysis Time..: 11:12		
Sodium	103	(90 - 110)	SW846 6010B	12/18-12/19/03	F6X9W1A3
		Dilution Factor: 1	Analysis Time..: 11:12		
Thallium	103	(90 - 110)	SW846 6010B	12/18-12/19/03	F6X9W1A4
		Dilution Factor: 1	Analysis Time..: 11:12		
Vanadium	105	(90 - 110)	SW846 6010B	12/18-12/19/03	F6X9W1A5
		Dilution Factor: 1	Analysis Time..: 11:12		
Zinc	109	(90 - 115)	SW846 6010B	12/18-12/19/03	F6X9W1A6
		Dilution Factor: 1	Analysis Time..: 11:12		

NOTE(S):

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

LABORATORY CONTROL SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: PB045 **Matrix.....:** WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: H3L180000-155 **Prep Batch #...:** 3352155							
Mercury	5.00	4.74	ug/L	95	SW846 7470A	12/18/03	F6X6X1AC
			Dilution Factor: 1		Analysis Time..: 14:19		
LCS Lot-Sample#: H3L180000-178 **Prep Batch #...:** 3352178							
Aluminum	2000	2080	ug/L	104	SW846 6010B	12/18-12/19/03	F6X9W1A7
			Dilution Factor: 1		Analysis Time..: 11:12		
Antimony	500	514	ug/L	103	SW846 6010B	12/18-12/19/03	F6X9W1A8
			Dilution Factor: 1		Analysis Time..: 11:12		
Arsenic	2000	2050	ug/L	102	SW846 6010B	12/18-12/19/03	F6X9W1A9
			Dilution Factor: 1		Analysis Time..: 11:12		
Barium	2000	2040	ug/L	102	SW846 6010B	12/18-12/19/03	F6X9W1CA
			Dilution Factor: 1		Analysis Time..: 11:12		
Beryllium	50.0	53.7	ug/L	107	SW846 6010B	12/18-12/19/03	F6X9W1CC
			Dilution Factor: 1		Analysis Time..: 11:12		
Cadmium	50.0	52.4	ug/L	105	SW846 6010B	12/18-12/19/03	F6X9W1CD
			Dilution Factor: 1		Analysis Time..: 11:12		
Calcium	50000	51900	ug/L	104	SW846 6010B	12/18-12/19/03	F6X9W1CE
			Dilution Factor: 1		Analysis Time..: 11:12		
Chromium	200	208	ug/L	104	SW846 6010B	12/18-12/19/03	F6X9W1CF
			Dilution Factor: 1		Analysis Time..: 11:12		
Cobalt	500	524	ug/L	105	SW846 6010B	12/18-12/19/03	F6X9W1CG
			Dilution Factor: 1		Analysis Time..: 11:12		
Copper	250	254	ug/L	102	SW846 6010B	12/18-12/19/03	F6X9W1CH
			Dilution Factor: 1		Analysis Time..: 11:12		
Iron	1000	1020	ug/L	102	SW846 6010B	12/18-12/19/03	F6X9W1CJ
			Dilution Factor: 1		Analysis Time..: 11:12		
Lead	500	521	ug/L	104	SW846 6010B	12/18-12/19/03	F6X9W1CK
			Dilution Factor: 1		Analysis Time..: 11:12		

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LABORATORY CONTROL SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: PB045 **Matrix.....:** WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Magnesium	50000	51000	ug/L	102	SW846 6010B	12/18-12/19/03	F6X9W1CL
			Dilution Factor: 1		Analysis Time..: 11:12		
Manganese	500	525	ug/L	105	SW846 6010B	12/18-12/19/03	F6X9W1CM
			Dilution Factor: 1		Analysis Time..: 11:12		
Nickel	500	520	ug/L	104	SW846 6010B	12/18-12/19/03	F6X9W1CN
			Dilution Factor: 1		Analysis Time..: 11:12		
Potassium	50000	53900	ug/L	108	SW846 6010B	12/18-12/19/03	F6X9W1CP
			Dilution Factor: 1		Analysis Time..: 11:12		
Selenium	2000	2130	ug/L	106	SW846 6010B	12/18-12/19/03	F6X9W1CQ
			Dilution Factor: 1		Analysis Time..: 11:12		
Silver	50.0	50.8	ug/L	102	SW846 6010B	12/18-12/19/03	F6X9W1A2
			Dilution Factor: 1		Analysis Time..: 11:12		
Sodium	50000	51300	ug/L	103	SW846 6010B	12/18-12/19/03	F6X9W1A3
			Dilution Factor: 1		Analysis Time..: 11:12		
Thallium	2000	2070	ug/L	103	SW846 6010B	12/18-12/19/03	F6X9W1A4
			Dilution Factor: 1		Analysis Time..: 11:12		
Vanadium	500	524	ug/L	105	SW846 6010B	12/18-12/19/03	F6X9W1A5
			Dilution Factor: 1		Analysis Time..: 11:12		
Zinc	500	544	ug/L	109	SW846 6010B	12/18-12/19/03	F6X9W1A6
			Dilution Factor: 1		Analysis Time..: 11:12		

NOTE(S):

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

LABORATORY CONTROL SAMPLE EVALUATION REPORT

DISSOLVED Metals

Client Lot #...: PB045 **Matrix.....:** WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: H3L180000-158 **Prep Batch #...:** 3352158					
Mercury	97	(90 - 110)	SW846 7470A	12/18/03	F6X621AC
		Dilution Factor: 1	Analysis Time..: 14:54		
LCS Lot-Sample#: H3L180000-178 **Prep Batch #...:** 3352178					
Aluminum	104	(90 - 110)	SW846 6010B	12/18-12/19/03	F6X9W1DH
		Dilution Factor: 1	Analysis Time..: 11:12		
Antimony	103	(90 - 110)	SW846 6010B	12/18-12/19/03	F6X9W1DJ
		Dilution Factor: 1	Analysis Time..: 11:12		
Arsenic	102	(90 - 110)	SW846 6010B	12/18-12/19/03	F6X9W1DK
		Dilution Factor: 1	Analysis Time..: 11:12		
Barium	102	(90 - 110)	SW846 6010B	12/18-12/19/03	F6X9W1DL
		Dilution Factor: 1	Analysis Time..: 11:12		
Beryllium	107	(90 - 115)	SW846 6010B	12/18-12/19/03	F6X9W1DM
		Dilution Factor: 1	Analysis Time..: 11:12		
Cadmium	105	(90 - 110)	SW846 6010B	12/18-12/19/03	F6X9W1DN
		Dilution Factor: 1	Analysis Time..: 11:12		
Calcium	104	(90 - 110)	SW846 6010B	12/18-12/19/03	F6X9W1DP
		Dilution Factor: 1	Analysis Time..: 11:12		
Chromium	104	(89 - 110)	SW846 6010B	12/18-12/19/03	F6X9W1DQ
		Dilution Factor: 1	Analysis Time..: 11:12		
Cobalt	105	(90 - 110)	SW846 6010B	12/18-12/19/03	F6X9W1DR
		Dilution Factor: 1	Analysis Time..: 11:12		
Copper	102	(88 - 110)	SW846 6010B	12/18-12/19/03	F6X9W1DT
		Dilution Factor: 1	Analysis Time..: 11:12		
Iron	102	(90 - 110)	SW846 6010B	12/18-12/19/03	F6X9W1DU
		Dilution Factor: 1	Analysis Time..: 11:12		
Lead	104	(90 - 110)	SW846 6010B	12/18-12/19/03	F6X9W1DV
		Dilution Factor: 1	Analysis Time..: 11:12		

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

DISSOLVED Metals

Client Lot #...: PB045 **Matrix.....:** WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Magnesium	102	(90 - 110)	SW846 6010B	12/18-12/19/03	F6X9W1DW
		Dilution Factor: 1	Analysis Time..: 11:12		
Manganese	105	(90 - 111)	SW846 6010B	12/18-12/19/03	F6X9W1DX
		Dilution Factor: 1	Analysis Time..: 11:12		
Nickel	104	(90 - 110)	SW846 6010B	12/18-12/19/03	F6X9W1D0
		Dilution Factor: 1	Analysis Time..: 11:12		
Potassium	108	(89 - 110)	SW846 6010B	12/18-12/19/03	F6X9W1D1
		Dilution Factor: 1	Analysis Time..: 11:12		
Selenium	106	(90 - 114)	SW846 6010B	12/18-12/19/03	F6X9W1D2
		Dilution Factor: 1	Analysis Time..: 11:12		
Silver	102	(90 - 110)	SW846 6010B	12/18-12/19/03	F6X9W1D3
		Dilution Factor: 1	Analysis Time..: 11:12		
Sodium	103	(90 - 110)	SW846 6010B	12/18-12/19/03	F6X9W1D4
		Dilution Factor: 1	Analysis Time..: 11:12		
Thallium	103	(90 - 110)	SW846 6010B	12/18-12/19/03	F6X9W1D5
		Dilution Factor: 1	Analysis Time..: 11:12		
Vanadium	105	(90 - 110)	SW846 6010B	12/18-12/19/03	F6X9W1D6
		Dilution Factor: 1	Analysis Time..: 11:12		
Zinc	109	(90 - 115)	SW846 6010B	12/18-12/19/03	F6X9W1D7
		Dilution Factor: 1	Analysis Time..: 11:12		

NOTE(S):

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

LABORATORY CONTROL SAMPLE DATA REPORT

DISSOLVED Metals

Client Lot #...: PB045 **Matrix.....:** WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
LCS Lot-Sample#: H3L180000-158 **Prep Batch #...:** 3352158							
Mercury	5.00	4.85	ug/L	97	SW846 7470A	12/18/03	F6X621AC
			Dilution Factor: 1		Analysis Time..: 14:54		
LCS Lot-Sample#: H3L180000-178 **Prep Batch #...:** 3352178							
Aluminum	2000	2080	ug/L	104	SW846 6010B	12/18-12/19/03	F6X9W1DH
			Dilution Factor: 1		Analysis Time..: 11:12		
Antimony	500	514	ug/L	103	SW846 6010B	12/18-12/19/03	F6X9W1DJ
			Dilution Factor: 1		Analysis Time..: 11:12		
Arsenic	2000	2050	ug/L	102	SW846 6010B	12/18-12/19/03	F6X9W1DK
			Dilution Factor: 1		Analysis Time..: 11:12		
Barium	2000	2040	ug/L	102	SW846 6010B	12/18-12/19/03	F6X9W1DL
			Dilution Factor: 1		Analysis Time..: 11:12		
Beryllium	50.0	53.7	ug/L	107	SW846 6010B	12/18-12/19/03	F6X9W1DM
			Dilution Factor: 1		Analysis Time..: 11:12		
Cadmium	50.0	52.4	ug/L	105	SW846 6010B	12/18-12/19/03	F6X9W1DN
			Dilution Factor: 1		Analysis Time..: 11:12		
Calcium	50000	51900	ug/L	104	SW846 6010B	12/18-12/19/03	F6X9W1DP
			Dilution Factor: 1		Analysis Time..: 11:12		
Chromium	200	208	ug/L	104	SW846 6010B	12/18-12/19/03	F6X9W1DQ
			Dilution Factor: 1		Analysis Time..: 11:12		
Cobalt	500	524	ug/L	105	SW846 6010B	12/18-12/19/03	F6X9W1DR
			Dilution Factor: 1		Analysis Time..: 11:12		
Copper	250	254	ug/L	102	SW846 6010B	12/18-12/19/03	F6X9W1DT
			Dilution Factor: 1		Analysis Time..: 11:12		
Iron	1000	1020	ug/L	102	SW846 6010B	12/18-12/19/03	F6X9W1DU
			Dilution Factor: 1		Analysis Time..: 11:12		
Lead	500	521	ug/L	104	SW846 6010B	12/18-12/19/03	F6X9W1DV
			Dilution Factor: 1		Analysis Time..: 11:12		

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LABORATORY CONTROL SAMPLE DATA REPORT

DISSOLVED Metals

Client Lot #...: PB045 **Matrix.....:** WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Magnesium	50000	51000	ug/L	102	SW846 6010B	12/18-12/19/03	F6X9W1DW
			Dilution Factor: 1		Analysis Time..: 11:12		
Manganese	500	525	ug/L	105	SW846 6010B	12/18-12/19/03	F6X9W1DX
			Dilution Factor: 1		Analysis Time..: 11:12		
Nickel	500	520	ug/L	104	SW846 6010B	12/18-12/19/03	F6X9W1D0
			Dilution Factor: 1		Analysis Time..: 11:12		
Potassium	50000	53900	ug/L	108	SW846 6010B	12/18-12/19/03	F6X9W1D1
			Dilution Factor: 1		Analysis Time..: 11:12		
Selenium	2000	2130	ug/L	106	SW846 6010B	12/18-12/19/03	F6X9W1D2
			Dilution Factor: 1		Analysis Time..: 11:12		
Silver	50.0	50.8	ug/L	102	SW846 6010B	12/18-12/19/03	F6X9W1D3
			Dilution Factor: 1		Analysis Time..: 11:12		
Sodium	50000	51300	ug/L	103	SW846 6010B	12/18-12/19/03	F6X9W1D4
			Dilution Factor: 1		Analysis Time..: 11:12		
Thallium	2000	2070	ug/L	103	SW846 6010B	12/18-12/19/03	F6X9W1D5
			Dilution Factor: 1		Analysis Time..: 11:12		
Vanadium	500	524	ug/L	105	SW846 6010B	12/18-12/19/03	F6X9W1D6
			Dilution Factor: 1		Analysis Time..: 11:12		
Zinc	500	544	ug/L	109	SW846 6010B	12/18-12/19/03	F6X9W1D7
			Dilution Factor: 1		Analysis Time..: 11:12		

NOTE(S):

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

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: PB045 **Matrix.....:** WATER
Date Sampled...: 12/11/03 **Date Received..:** 12/12/03

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: H3L120208-002 **Prep Batch #...:** 3352155							
Mercury	96	(73 - 125)			SW846 7470A	12/18/03	F6JX21AU
	97	(73 - 125)	0.92	(0-20)	SW846 7470A	12/18/03	F6JX21AV
		Dilution Factor: 1					
		Analysis Time..: 14:40					
MS Lot-Sample #: H3L120208-002 **Prep Batch #...:** 3352178							
Aluminum	105	(75 - 125)			SW846 6010B	12/18-12/19/03	F6JX21CM
	107	(75 - 125)	1.9	(0-20)	SW846 6010B	12/18-12/19/03	F6JX21CN
		Dilution Factor: 1					
		Analysis Time..: 12:55					
Antimony	104	(75 - 125)			SW846 6010B	12/18-12/19/03	F6JX21CQ
	127 N	(75 - 125)	20	(0-20)	SW846 6010B	12/18-12/19/03	F6JX21CR
		Dilution Factor: 1					
		Analysis Time..: 12:55					
Arsenic	104	(75 - 125)			SW846 6010B	12/18-12/19/03	F6JX21CU
	107	(75 - 125)	2.0	(0-20)	SW846 6010B	12/18-12/19/03	F6JX21CV
		Dilution Factor: 1					
		Analysis Time..: 12:55					
Barium	103	(75 - 125)			SW846 6010B	12/18-12/19/03	F6JX21CX
	105	(75 - 125)	1.6	(0-20)	SW846 6010B	12/18-12/19/03	F6JX21C0
		Dilution Factor: 1					
		Analysis Time..: 12:55					
Beryllium	105	(75 - 125)			SW846 6010B	12/18-12/22/03	F6JX21C2
	106	(75 - 125)	0.83	(0-20)	SW846 6010B	12/18-12/22/03	F6JX21C3
		Dilution Factor: 1					
		Analysis Time..: 15:40					
Cadmium	104	(75 - 125)			SW846 6010B	12/18-12/19/03	F6JX21C5
	107	(75 - 125)	2.5	(0-20)	SW846 6010B	12/18-12/19/03	F6JX21C6
		Dilution Factor: 1					
		Analysis Time..: 12:55					
Calcium	98	(75 - 125)			SW846 6010B	12/18-12/19/03	F6JX21C8
	103	(75 - 125)	1.3	(0-20)	SW846 6010B	12/18-12/19/03	F6JX21C9
		Dilution Factor: 1					
		Analysis Time..: 12:55					

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MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: PB045 **Matrix.....:** WATER
Date Sampled...: 12/11/03 **Date Received..:** 12/12/03

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Chromium	104	(75 - 125)			SW846 6010B	12/18-12/19/03	F6JX21DC
	107	(75 - 125)	2.5	(0-20)	SW846 6010B	12/18-12/19/03	F6JX21DD
		Dilution Factor: 1					
		Analysis Time..: 12:55					
Cobalt	106	(75 - 125)			SW846 6010B	12/18-12/19/03	F6JX21DF
	108	(75 - 125)	2.1	(0-20)	SW846 6010B	12/18-12/19/03	F6JX21DG
		Dilution Factor: 1					
		Analysis Time..: 12:55					
Copper	103	(75 - 125)			SW846 6010B	12/18-12/19/03	F6JX21DJ
	105	(75 - 125)	1.7	(0-20)	SW846 6010B	12/18-12/19/03	F6JX21DK
		Dilution Factor: 1					
		Analysis Time..: 12:55					
Iron	105	(75 - 125)			SW846 6010B	12/18-12/19/03	F6JX21DM
	109	(75 - 125)	3.2	(0-20)	SW846 6010B	12/18-12/19/03	F6JX21DN
		Dilution Factor: 1					
		Analysis Time..: 12:55					
Lead	102	(75 - 125)			SW846 6010B	12/18-12/19/03	F6JX21DQ
	104	(75 - 125)	2.1	(0-20)	SW846 6010B	12/18-12/19/03	F6JX21DR
		Dilution Factor: 1					
		Analysis Time..: 12:55					
Magnesium	105	(75 - 125)			SW846 6010B	12/18-12/19/03	F6JX21DU
	108	(75 - 125)	1.5	(0-20)	SW846 6010B	12/18-12/19/03	F6JX21DV
		Dilution Factor: 1					
		Analysis Time..: 12:55					
Manganese	106	(75 - 125)			SW846 6010B	12/18-12/19/03	F6JX21DX
	108	(75 - 125)	1.9	(0-20)	SW846 6010B	12/18-12/19/03	F6JX21D0
		Dilution Factor: 1					
		Analysis Time..: 12:55					
Nickel	103	(75 - 125)			SW846 6010B	12/18-12/19/03	F6JX21D2
	106	(75 - 125)	2.3	(0-20)	SW846 6010B	12/18-12/19/03	F6JX21D3
		Dilution Factor: 1					
		Analysis Time..: 12:55					
Potassium	115	(75 - 125)			SW846 6010B	12/18-12/22/03	F6JX21D5
	116	(75 - 125)	0.36	(0-20)	SW846 6010B	12/18-12/22/03	F6JX21D6
		Dilution Factor: 1					
		Analysis Time..: 15:40					

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MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: PB045 **Matrix.....:** WATER
Date Sampled...: 12/11/03 **Date Received..:** 12/12/03

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Selenium	95	(75 - 125)			SW846 6010B	12/18-12/19/03	F6JX21D8
	95	(75 - 125)	0.73	(0-20)	SW846 6010B	12/18-12/19/03	F6JX21D9
		Dilution Factor: 1					
		Analysis Time..: 12:55					
Silver	104	(75 - 125)			SW846 6010B	12/18-12/19/03	F6JX21AC
	107	(75 - 125)	2.7	(0-20)	SW846 6010B	12/18-12/19/03	F6JX21AD
		Dilution Factor: 1					
		Analysis Time..: 12:55					
Sodium	103	(75 - 125)			SW846 6010B	12/18-12/19/03	F6JX21AF
	106	(75 - 125)	0.81	(0-20)	SW846 6010B	12/18-12/19/03	F6JX21AG
		Dilution Factor: 1					
		Analysis Time..: 12:55					
Thallium	104	(75 - 125)			SW846 6010B	12/18-12/19/03	F6JX21AJ
	106	(75 - 125)	2.4	(0-20)	SW846 6010B	12/18-12/19/03	F6JX21AK
		Dilution Factor: 1					
		Analysis Time..: 12:55					
Vanadium	106	(75 - 125)			SW846 6010B	12/18-12/19/03	F6JX21AM
	108	(75 - 125)	2.2	(0-20)	SW846 6010B	12/18-12/19/03	F6JX21AN
		Dilution Factor: 1					
		Analysis Time..: 12:55					
Zinc	107	(75 - 125)			SW846 6010B	12/18-12/22/03	F6JX21AQ
	108	(75 - 125)	0.64	(0-20)	SW846 6010B	12/18-12/22/03	F6JX21AR
		Dilution Factor: 1					
		Analysis Time..: 15:40					

NOTE(S):

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

N Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: PB045 **Matrix.....:** WATER
Date Sampled...: 12/11/03 **Date Received..:** 12/12/03

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: H3L120208-002 **Prep Batch #...:** 3352155									
Mercury									
	ND	1.00	0.965	ug/L	96		SW846 7470A	12/18/03	F6JX21AU
	ND	1.00	0.974	ug/L	97	0.92	SW846 7470A	12/18/03	F6JX21AV
			Dilution Factor: 1						
			Analysis Time..: 14:40						
MS Lot-Sample #: H3L120208-002 **Prep Batch #...:** 3352178									
Aluminum									
	61.2	2000	2150	ug/L	105		SW846 6010B	12/18-12/19/03	F6JX21CM
	61.2	2000	2200	ug/L	107	1.9	SW846 6010B	12/18-12/19/03	F6JX21CN
			Dilution Factor: 1						
			Analysis Time..: 12:55						
Antimony									
	ND	500	520	ug/L	104		SW846 6010B	12/18-12/19/03	F6JX21CQ
	ND	500	634 N	ug/L	127	20	SW846 6010B	12/18-12/19/03	F6JX21CR
			Dilution Factor: 1						
			Analysis Time..: 12:55						
Arsenic									
	ND	2000	2090	ug/L	104		SW846 6010B	12/18-12/19/03	F6JX21CU
	ND	2000	2130	ug/L	107	2.0	SW846 6010B	12/18-12/19/03	F6JX21CV
			Dilution Factor: 1						
			Analysis Time..: 12:55						
Barium									
	187	2000	2240	ug/L	103		SW846 6010B	12/18-12/19/03	F6JX21CX
	187	2000	2280	ug/L	105	1.6	SW846 6010B	12/18-12/19/03	F6JX21C0
			Dilution Factor: 1						
			Analysis Time..: 12:55						
Beryllium									
	ND	50.0	52.6	ug/L	105		SW846 6010B	12/18-12/22/03	F6JX21C2
	ND	50.0	53.1	ug/L	106	0.83	SW846 6010B	12/18-12/22/03	F6JX21C3
			Dilution Factor: 1						
			Analysis Time..: 15:40						
Cadmium									
	ND	50.0	52.0	ug/L	104		SW846 6010B	12/18-12/19/03	F6JX21C5
	ND	50.0	53.3	ug/L	107	2.5	SW846 6010B	12/18-12/19/03	F6JX21C6
			Dilution Factor: 1						
			Analysis Time..: 12:55						

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MATRIX SPIKE SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: PB045 **Matrix.....:** WATER
Date Sampled...: 12/11/03 **Date Received..:** 12/12/03

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Calcium									
	141000	50000	190000	ug/L	98		SW846 6010B	12/18-12/19/03	F6JX21C8
	141000	50000	192000	ug/L	103	1.3	SW846 6010B	12/18-12/19/03	F6JX21C9
			Dilution Factor: 1						
			Analysis Time..: 12:55						
Chromium									
	ND	200	208	ug/L	104		SW846 6010B	12/18-12/19/03	F6JX21DC
	ND	200	214	ug/L	107	2.5	SW846 6010B	12/18-12/19/03	F6JX21DD
			Dilution Factor: 1						
			Analysis Time..: 12:55						
Cobalt									
	ND	500	528	ug/L	106		SW846 6010B	12/18-12/19/03	F6JX21DF
	ND	500	539	ug/L	108	2.1	SW846 6010B	12/18-12/19/03	F6JX21DG
			Dilution Factor: 1						
			Analysis Time..: 12:55						
Copper									
	ND	250	258	ug/L	103		SW846 6010B	12/18-12/19/03	F6JX21DJ
	ND	250	262	ug/L	105	1.7	SW846 6010B	12/18-12/19/03	F6JX21DK
			Dilution Factor: 1						
			Analysis Time..: 12:55						
Iron									
	140	1000	1190	ug/L	105		SW846 6010B	12/18-12/19/03	F6JX21DM
	140	1000	1230	ug/L	109	3.2	SW846 6010B	12/18-12/19/03	F6JX21DN
			Dilution Factor: 1						
			Analysis Time..: 12:55						
Lead									
	ND	500	510	ug/L	102		SW846 6010B	12/18-12/19/03	F6JX21DQ
	ND	500	521	ug/L	104	2.1	SW846 6010B	12/18-12/19/03	F6JX21DR
			Dilution Factor: 1						
			Analysis Time..: 12:55						
Magnesium									
	54000	50000	106000	ug/L	105		SW846 6010B	12/18-12/19/03	F6JX21DU
	54000	50000	108000	ug/L	108	1.5	SW846 6010B	12/18-12/19/03	F6JX21DV
			Dilution Factor: 1						
			Analysis Time..: 12:55						

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MATRIX SPIKE SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: PB045 **Matrix.....:** WATER
Date Sampled...: 12/11/03 **Date Received..:** 12/12/03

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Manganese									
	58.5	500	587	ug/L	106		SW846 6010B	12/18-12/19/03	F6JX21DX
	58.5	500	598	ug/L	108	1.9	SW846 6010B	12/18-12/19/03	F6JX21D0
			Dilution Factor: 1						
			Analysis Time..: 12:55						
Nickel									
	ND	500	516	ug/L	103		SW846 6010B	12/18-12/19/03	F6JX21D2
	ND	500	528	ug/L	106	2.3	SW846 6010B	12/18-12/19/03	F6JX21D3
			Dilution Factor: 1						
			Analysis Time..: 12:55						
Potassium									
	11900	50000	69600	ug/L	115		SW846 6010B	12/18-12/22/03	F6JX21D5
	11900	50000	69800	ug/L	116	0.36	SW846 6010B	12/18-12/22/03	F6JX21D6
			Dilution Factor: 1						
			Analysis Time..: 15:40						
Selenium									
	ND	2000	1890	ug/L	95		SW846 6010B	12/18-12/19/03	F6JX21D8
	ND	2000	1910	ug/L	95	0.73	SW846 6010B	12/18-12/19/03	F6JX21D9
			Dilution Factor: 1						
			Analysis Time..: 12:55						
Silver									
	ND	50.0	51.8	ug/L	104		SW846 6010B	12/18-12/19/03	F6JX21AC
	ND	50.0	53.3	ug/L	107	2.7	SW846 6010B	12/18-12/19/03	F6JX21AD
			Dilution Factor: 1						
			Analysis Time..: 12:55						
Sodium									
	122000	50000	174000	ug/L	103		SW846 6010B	12/18-12/19/03	F6JX21AF
	122000	50000	175000	ug/L	106	0.81	SW846 6010B	12/18-12/19/03	F6JX21AG
			Dilution Factor: 1						
			Analysis Time..: 12:55						
Thallium									
	3.0	2000	2080	ug/L	104		SW846 6010B	12/18-12/19/03	F6JX21AJ
	3.0	2000	2130	ug/L	106	2.4	SW846 6010B	12/18-12/19/03	F6JX21AK
			Dilution Factor: 1						
			Analysis Time..: 12:55						

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MATRIX SPIKE SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: PB045 **Matrix.....:** WATER
Date Sampled...: 12/11/03 **Date Received..:** 12/12/03

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Vanadium									
	ND	500	528	ug/L	106		SW846 6010B	12/18-12/19/03	F6JX21AM
	ND	500	540	ug/L	108	2.2	SW846 6010B	12/18-12/19/03	F6JX21AN
			Dilution Factor: 1						
			Analysis Time..: 12:55						
Zinc									
	74.4	500	609	ug/L	107		SW846 6010B	12/18-12/22/03	F6JX21AQ
	74.4	500	613	ug/L	108	0.64	SW846 6010B	12/18-12/22/03	F6JX21AR
			Dilution Factor: 1						
			Analysis Time..: 15:40						

NOTE(S):

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

N Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE EVALUATION REPORT

DISSOLVED Metals

Client Lot #...: PB045 **Matrix.....:** WATER
Date Sampled...: 12/11/03 **Date Received..:** 12/12/03

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: H3L120208-002 **Prep Batch #...:** 3352158							
Mercury	98	(73 - 125)			SW846 7470A	12/18/03	F6JX21E5
	98	(73 - 125)	0.0	(0-20)	SW846 7470A	12/18/03	F6JX21E6
		Dilution Factor: 1					
		Analysis Time..: 15:09					
MS Lot-Sample #: H3L120208-002 **Prep Batch #...:** 3352178							
Aluminum	117	(75 - 125)			SW846 6010B	12/18-12/19/03	F6JX21FU
	107	(75 - 125)	9.2	(0-20)	SW846 6010B	12/18-12/19/03	F6JX21FV
		Dilution Factor: 1					
		Analysis Time..: 12:28					
Antimony	112	(75 - 125)			SW846 6010B	12/18-12/19/03	F6JX21FX
	103	(75 - 125)	7.8	(0-20)	SW846 6010B	12/18-12/19/03	F6JX21F0
		Dilution Factor: 1					
		Analysis Time..: 12:28					
Arsenic	113	(75 - 125)			SW846 6010B	12/18-12/19/03	F6JX21F2
	105	(75 - 125)	7.3	(0-20)	SW846 6010B	12/18-12/19/03	F6JX21F3
		Dilution Factor: 1					
		Analysis Time..: 12:28					
Barium	112	(75 - 125)			SW846 6010B	12/18-12/19/03	F6JX21F5
	103	(75 - 125)	7.8	(0-20)	SW846 6010B	12/18-12/19/03	F6JX21F6
		Dilution Factor: 1					
		Analysis Time..: 12:28					
Beryllium	115	(75 - 125)			SW846 6010B	12/18-12/19/03	F6JX21F8
	108	(75 - 125)	5.7	(0-20)	SW846 6010B	12/18-12/19/03	F6JX21F9
		Dilution Factor: 1					
		Analysis Time..: 12:28					
Cadmium	112	(75 - 125)			SW846 6010B	12/18-12/19/03	F6JX21GC
	105	(75 - 125)	6.3	(0-20)	SW846 6010B	12/18-12/19/03	F6JX21GD
		Dilution Factor: 1					
		Analysis Time..: 12:28					
Calcium	133 N	(75 - 125)			SW846 6010B	12/18-12/19/03	F6JX21GF
	112	(75 - 125)	5.4	(0-20)	SW846 6010B	12/18-12/19/03	F6JX21GG
		Dilution Factor: 1					
		Analysis Time..: 12:28					

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MATRIX SPIKE SAMPLE EVALUATION REPORT

DISSOLVED Metals

Client Lot #...: PB045 **Matrix.....:** WATER
Date Sampled...: 12/11/03 **Date Received..:** 12/12/03

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Chromium	112	(75 - 125)			SW846 6010B	12/18-12/19/03	F6JX21GJ
	105	(75 - 125)	6.2	(0-20)	SW846 6010B	12/18-12/19/03	F6JX21GK
		Dilution Factor: 1					
		Analysis Time..: 12:28					
Cobalt	113	(75 - 125)			SW846 6010B	12/18-12/19/03	F6JX21GM
	106	(75 - 125)	6.4	(0-20)	SW846 6010B	12/18-12/19/03	F6JX21GN
		Dilution Factor: 1					
		Analysis Time..: 12:28					
Copper	112	(75 - 125)			SW846 6010B	12/18-12/19/03	F6JX21GQ
	103	(75 - 125)	8.6	(0-20)	SW846 6010B	12/18-12/19/03	F6JX21GR
		Dilution Factor: 1					
		Analysis Time..: 12:28					
Iron	112	(75 - 125)			SW846 6010B	12/18-12/19/03	F6JX21GU
	104	(75 - 125)	6.9	(0-20)	SW846 6010B	12/18-12/19/03	F6JX21GV
		Dilution Factor: 1					
		Analysis Time..: 12:28					
Lead	109	(75 - 125)			SW846 6010B	12/18-12/19/03	F6JX21GX
	103	(75 - 125)	6.1	(0-20)	SW846 6010B	12/18-12/19/03	F6JX21G0
		Dilution Factor: 1					
		Analysis Time..: 12:28					
Magnesium	124	(75 - 125)			SW846 6010B	12/18-12/19/03	F6JX21G2
	111	(75 - 125)	6.0	(0-20)	SW846 6010B	12/18-12/19/03	F6JX21G3
		Dilution Factor: 1					
		Analysis Time..: 12:28					
Manganese	115	(75 - 125)			SW846 6010B	12/18-12/19/03	F6JX21G5
	107	(75 - 125)	6.7	(0-20)	SW846 6010B	12/18-12/19/03	F6JX21G6
		Dilution Factor: 1					
		Analysis Time..: 12:28					
Nickel	111	(75 - 125)			SW846 6010B	12/18-12/19/03	F6JX21EC
	104	(75 - 125)	6.5	(0-20)	SW846 6010B	12/18-12/19/03	F6JX21ED
		Dilution Factor: 1					
		Analysis Time..: 12:28					
Potassium	129 N	(75 - 125)			SW846 6010B	12/18-12/19/03	F6JX21EF
	119	(75 - 125)	7.0	(0-20)	SW846 6010B	12/18-12/19/03	F6JX21EG
		Dilution Factor: 1					
		Analysis Time..: 12:28					

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MATRIX SPIKE SAMPLE EVALUATION REPORT

DISSOLVED Metals

Client Lot #...: PB045 **Matrix.....:** WATER
Date Sampled...: 12/11/03 **Date Received..:** 12/12/03

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Selenium	102	(75 - 125)			SW846 6010B	12/18-12/19/03	F6JX21EJ
	96	(75 - 125)	5.8	(0-20)	SW846 6010B	12/18-12/19/03	F6JX21EK
		Dilution Factor: 1					
		Analysis Time..: 12:28					
Silver	112	(75 - 125)			SW846 6010B	12/18-12/19/03	F6JX21EM
	104	(75 - 125)	7.4	(0-20)	SW846 6010B	12/18-12/19/03	F6JX21EN
		Dilution Factor: 1					
		Analysis Time..: 12:28					
Sodium	139 N	(75 - 125)			SW846 6010B	12/18-12/19/03	F6JX21EQ
	115	(75 - 125)	6.8	(0-20)	SW846 6010B	12/18-12/19/03	F6JX21ER
		Dilution Factor: 1					
		Analysis Time..: 12:28					
Thallium	112	(75 - 125)			SW846 6010B	12/18-12/19/03	F6JX21EU
	104	(75 - 125)	7.0	(0-20)	SW846 6010B	12/18-12/19/03	F6JX21EV
		Dilution Factor: 1					
		Analysis Time..: 12:28					
Vanadium	114	(75 - 125)			SW846 6010B	12/18-12/19/03	F6JX21EX
	106	(75 - 125)	6.9	(0-20)	SW846 6010B	12/18-12/19/03	F6JX21E0
		Dilution Factor: 1					
		Analysis Time..: 12:28					
Zinc	118	(75 - 125)			SW846 6010B	12/18-12/19/03	F6JX21E2
	110	(75 - 125)	7.0	(0-20)	SW846 6010B	12/18-12/19/03	F6JX21E3
		Dilution Factor: 1					
		Analysis Time..: 12:28					

NOTE(S):

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

N Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE DATA REPORT

DISSOLVED Metals

Client Lot #...: PB045 **Matrix.....:** WATER
Date Sampled...: 12/11/03 **Date Received..:** 12/12/03

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
MS Lot-Sample #: H3L120208-002 **Prep Batch #...:** 3352158									
Mercury									
	ND	1.00	0.983	ug/L	98		SW846 7470A	12/18/03	F6JX21E5
	ND	1.00	0.983	ug/L	98	0.0	SW846 7470A	12/18/03	F6JX21E6
			Dilution Factor: 1						
			Analysis Time..: 15:09						
MS Lot-Sample #: H3L120208-002 **Prep Batch #...:** 3352178									
Aluminum									
	ND	2000	2350	ug/L	117		SW846 6010B	12/18-12/19/03	F6JX21FU
	ND	2000	2140	ug/L	107	9.2	SW846 6010B	12/18-12/19/03	F6JX21FV
			Dilution Factor: 1						
			Analysis Time..: 12:28						
Antimony									
	ND	500	559	ug/L	112		SW846 6010B	12/18-12/19/03	F6JX21FX
	ND	500	517	ug/L	103	7.8	SW846 6010B	12/18-12/19/03	F6JX21F0
			Dilution Factor: 1						
			Analysis Time..: 12:28						
Arsenic									
	ND	2000	2250	ug/L	113		SW846 6010B	12/18-12/19/03	F6JX21F2
	ND	2000	2090	ug/L	105	7.3	SW846 6010B	12/18-12/19/03	F6JX21F3
			Dilution Factor: 1						
			Analysis Time..: 12:28						
Barium									
	175	2000	2410	ug/L	112		SW846 6010B	12/18-12/19/03	F6JX21F5
	175	2000	2230	ug/L	103	7.8	SW846 6010B	12/18-12/19/03	F6JX21F6
			Dilution Factor: 1						
			Analysis Time..: 12:28						
Beryllium									
	ND	50.0	57.4	ug/L	115		SW846 6010B	12/18-12/19/03	F6JX21F8
	ND	50.0	54.2	ug/L	108	5.7	SW846 6010B	12/18-12/19/03	F6JX21F9
			Dilution Factor: 1						
			Analysis Time..: 12:28						
Cadmium									
	ND	50.0	55.9	ug/L	112		SW846 6010B	12/18-12/19/03	F6JX21GC
	ND	50.0	52.4	ug/L	105	6.3	SW846 6010B	12/18-12/19/03	F6JX21GD
			Dilution Factor: 1						
			Analysis Time..: 12:28						

(Continued on next page)

MATRIX SPIKE SAMPLE DATA REPORT

DISSOLVED Metals

Client Lot #...: PB045 **Matrix.....:** WATER
Date Sampled...: 12/11/03 **Date Received..:** 12/12/03

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Calcium									
	135000	50000	201000	ug/L	133		SW846 6010B	12/18-12/19/03	F6JX21GF
			Qualifiers: N						
	135000	50000	191000	ug/L	112	5.4	SW846 6010B	12/18-12/19/03	F6JX21GG
			Dilution Factor: 1						
			Analysis Time..: 12:28						
Chromium									
	ND	200	224	ug/L	112		SW846 6010B	12/18-12/19/03	F6JX21GJ
	ND	200	211	ug/L	105	6.2	SW846 6010B	12/18-12/19/03	F6JX21GK
			Dilution Factor: 1						
			Analysis Time..: 12:28						
Cobalt									
	ND	500	566	ug/L	113		SW846 6010B	12/18-12/19/03	F6JX21GM
	ND	500	531	ug/L	106	6.4	SW846 6010B	12/18-12/19/03	F6JX21GN
			Dilution Factor: 1						
			Analysis Time..: 12:28						
Copper									
	ND	250	279	ug/L	112		SW846 6010B	12/18-12/19/03	F6JX21GQ
	ND	250	256	ug/L	103	8.6	SW846 6010B	12/18-12/19/03	F6JX21GR
			Dilution Factor: 1						
			Analysis Time..: 12:28						
Iron									
	74.5	1000	1200	ug/L	112		SW846 6010B	12/18-12/19/03	F6JX21GU
	74.5	1000	1120	ug/L	104	6.9	SW846 6010B	12/18-12/19/03	F6JX21GV
			Dilution Factor: 1						
			Analysis Time..: 12:28						
Lead									
	ND	500	546	ug/L	109		SW846 6010B	12/18-12/19/03	F6JX21GX
	ND	500	514	ug/L	103	6.1	SW846 6010B	12/18-12/19/03	F6JX21G0
			Dilution Factor: 1						
			Analysis Time..: 12:28						
Magnesium									
	51400	50000	113000	ug/L	124		SW846 6010B	12/18-12/19/03	F6JX21G2
	51400	50000	107000	ug/L	111	6.0	SW846 6010B	12/18-12/19/03	F6JX21G3
			Dilution Factor: 1						
			Analysis Time..: 12:28						

(Continued on next page)

MATRIX SPIKE SAMPLE DATA REPORT

DISSOLVED Metals

Client Lot #...: PB045 **Matrix.....:** WATER
Date Sampled...: 12/11/03 **Date Received..:** 12/12/03

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Manganese									
	55.2	500	629	ug/L	115		SW846 6010B	12/18-12/19/03	F6JX21G5
	55.2	500	588	ug/L	107	6.7	SW846 6010B	12/18-12/19/03	F6JX21G6
			Dilution Factor: 1						
			Analysis Time..: 12:28						
Nickel									
	ND	500	554	ug/L	111		SW846 6010B	12/18-12/19/03	F6JX21EC
	ND	500	519	ug/L	104	6.5	SW846 6010B	12/18-12/19/03	F6JX21ED
			Dilution Factor: 1						
			Analysis Time..: 12:28						
Potassium									
	11100	50000	75600 N	ug/L	129		SW846 6010B	12/18-12/19/03	F6JX21EF
	11100	50000	70400	ug/L	119	7.0	SW846 6010B	12/18-12/19/03	F6JX21EG
			Dilution Factor: 1						
			Analysis Time..: 12:28						
Selenium									
	ND	2000	2040	ug/L	102		SW846 6010B	12/18-12/19/03	F6JX21EJ
	ND	2000	1920	ug/L	96	5.8	SW846 6010B	12/18-12/19/03	F6JX21EK
			Dilution Factor: 1						
			Analysis Time..: 12:28						
Silver									
	ND	50.0	55.8	ug/L	112		SW846 6010B	12/18-12/19/03	F6JX21EM
	ND	50.0	51.8	ug/L	104	7.4	SW846 6010B	12/18-12/19/03	F6JX21EN
			Dilution Factor: 1						
			Analysis Time..: 12:28						
Sodium									
	115000	50000	185000	ug/L	139		SW846 6010B	12/18-12/19/03	F6JX21EQ
			Qualifiers: N						
	115000	50000	173000	ug/L	115	6.8	SW846 6010B	12/18-12/19/03	F6JX21ER
			Dilution Factor: 1						
			Analysis Time..: 12:28						
Thallium									
	ND	2000	2240	ug/L	112		SW846 6010B	12/18-12/19/03	F6JX21EU
	ND	2000	2090	ug/L	104	7.0	SW846 6010B	12/18-12/19/03	F6JX21EV
			Dilution Factor: 1						
			Analysis Time..: 12:28						

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MATRIX SPIKE SAMPLE DATA REPORT

DISSOLVED Metals

Client Lot #...: PB045 **Matrix.....:** WATER
Date Sampled...: 12/11/03 **Date Received..:** 12/12/03

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Vanadium									
	ND	500	568	ug/L	114		SW846 6010B	12/18-12/19/03	F6JX21EX
	ND	500	530	ug/L	106	6.9	SW846 6010B	12/18-12/19/03	F6JX21E0
			Dilution Factor: 1						
			Analysis Time..: 12:28						
Zinc									
	21.7	500	612	ug/L	118		SW846 6010B	12/18-12/19/03	F6JX21E2
	21.7	500	571	ug/L	110	7.0	SW846 6010B	12/18-12/19/03	F6JX21E3
			Dilution Factor: 1						
			Analysis Time..: 12:28						

NOTE(S):

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

N Spiked analyte recovery is outside stated control limits.

Quality Control Results SuperTrace ICP

STL Knoxville

ICP Data Reporting Form

Initial Calibration Verification

Units: ug/L (ppb)

Instrument ID: TJA 61-E SuperTrace ICP

Data File Name: s121903.arc

Elem	True Conc	ICV 19-Dec-03 10:37 AM Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec
Ag	500.0	488.91	**97.8**										
Al	12500.0	12435.04	**99.5**										
As	250.0	252.62	**101.0**										
Ba	1000.0	1006.19	**100.6**										
Be	1000.0	1036.53	**103.7**										
Ca	25000.0	25823.02	**103.3**										
Cd	250.0	260.95	**104.4**										
Co	1000.0	1043.10	**104.3**										
Cr	1000.0	1030.78	**103.1**										
Cu	1000.0	991.20	**99.1**										
Fe	12500.0	12916.04	**103.3**										
K	25000.0	25330.95	**101.3**										
Mg	25000.0	24842.47	**99.4**										
Mn	1000.0	1036.97	**103.7**										
Na	25000.0	24349.33	**97.4**										
Ni	1000.0	1045.95	**104.6**										
Pb	250.0	258.90	**103.6**										
Sb	250.0	248.01	**99.2**										
Se	250.0	252.68	**101.1**										
Tl	500.0	510.66	**102.1**										
V	1000.0	1026.05	**102.6**										
Zn	1000.0	1062.16	**106.2**										

STL Knoxville

ICP Data Reporting Form

Continuing Calibration Verification

Units: ug/L (ppb)

Instrument ID: TJA 61-E SuperTrace ICP

Data File Name: s121903.arc

Elem	True Conc	CCV1 19-Dec-03 10:59 AM Found	% Rec	CCV2 19-Dec-03 11:52 AM Found	% Rec	CCV3 19-Dec-03 12:46 PM Found	% Rec	CCV4 19-Dec-03 1:39 PM Found	% Rec	CCV5 19-Dec-03 2:43 PM Found	% Rec	CCV6 19-Dec-03 3:37 PM Found	% Rec
Ag	1000.0	991.94	**99.2**	1019.16	**101.9**	1017.23	**101.7**	1050.19	**105.0**	1008.43	**100.8**	1019.67	**102.0**
Al	25000.0	24788.21	**99.2**	25560.78	**102.2**	25469.65	**101.9**	26246.70	**105.0**	25147.95	**100.6**	25382.63	**101.5**
As	500.0	502.05	**100.4**	516.75	**103.4**	516.73	**103.3**	538.22	**107.6**	515.33	**103.1**	521.92	**104.4**
Ba	2000.0	2013.81	**100.7**	2069.75	**103.5**	2050.88	**102.5**	2103.71	**105.2**	2025.75	**101.3**	2050.98	**102.5**
Be	2000.0	2058.73	**102.9**	2112.62	**105.6**	2113.76	**105.7**	2210.10	**110.5** *	2108.06	**105.4**	2125.07	**106.3**
Ca	50000.0	50627.58	**101.3**	51705.11	**103.4**	52185.69	**104.4**	55010.48	**110.0**	52397.97	**104.8**	52784.21	**105.6**
Cd	500.0	508.84	**101.8**	519.40	**103.9**	520.38	**104.1**	549.09	**109.8**	524.18	**104.8**	528.34	**105.7**
Co	2000.0	2029.90	**101.5**	2079.47	**104.0**	2084.50	**104.2**	2191.87	**109.6**	2094.31	**104.7**	2112.18	**105.6**
Cr	2000.0	2026.00	**101.3**	2072.14	**103.6**	2070.34	**103.5**	2168.25	**108.4**	2058.56	**102.9**	2077.39	**103.9**
Cu	2000.0	1988.24	**99.4**	2047.59	**102.4**	2035.60	**101.8**	2079.92	**104.0**	2004.40	**100.2**	2027.51	**101.4**
Fe	25000.0	25289.36	**101.2**	25948.52	**103.8**	25979.79	**103.9**	27230.87	**108.9**	25961.00	**103.8**	26124.96	**104.5**
K	50000.0	52444.49	**104.9**	54227.84	**108.5**	54358.54	**108.7**	56059.93	**112.1** *	54236.09	**108.5**	54922.81	**109.8**
Mg	50000.0	49262.06	**98.5**	50486.17	**101.0**	50728.61	**101.5**	53534.62	**107.1**	51212.76	**102.4**	51669.54	**103.3**
Mn	2000.0	2034.57	**101.7**	2084.58	**104.2**	2082.60	**104.1**	2176.34	**108.8**	2082.34	**104.1**	2102.58	**105.1**
Na	50000.0	49136.85	**98.3**	49948.85	**99.9**	49595.86	**99.2**	51032.64	**102.1**	49139.99	**98.3**	49508.25	**99.0**
Ni	2000.0	2035.94	**101.8**	2077.38	**103.9**	2072.15	**103.6**	2182.43	**109.1**	2079.77	**104.0**	2099.99	**105.0**
Pb	500.0	507.85	**101.6**	517.48	**103.5**	519.58	**103.9**	546.92	**109.4**	517.38	**103.5**	520.13	**104.0**
Sb	500.0	499.35	**99.9**	510.75	**102.2**	511.64	**102.3**	528.06	**105.6**	510.56	**102.1**	514.71	**102.9**
Se	500.0	500.83	**100.2**	513.11	**102.6**	513.73	**102.7**	532.38	**106.5**	512.99	**102.6**	518.09	**103.6**
Tl	1000.0	1012.14	**101.2**	1037.58	**103.8**	1040.88	**104.1**	1083.52	**108.4**	1042.45	**104.2**	1046.54	**104.7**
V	2000.0	2024.26	**101.2**	2076.20	**103.8**	2074.63	**103.7**	2160.78	**108.0**	2069.12	**103.5**	2087.26	**104.4**
Zn	2000.0	2070.00	**103.5**	2122.25	**106.1**	2122.47	**106.1**	2216.30	**110.8** *	2113.75	**105.7**	2134.40	**106.7**

* The affected samples were reanalyzed on 12-22-03.
MTM 12-30-03

STL Knoxville

ICP Data Reporting Form

Contract Required Detection Limit Standard(s)

Units: ug/L (ppb)

Instrument ID: TJA 61-E SuperTrace ICP

Data File Name: s121903.arc

Elem	True Conc	CRI1 19-Dec-03 10:46 AM Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec
Ag	10.0	9.68	**96.8**										
Al	400.0	391.78	**97.9**										
As	20.0	21.50	**107.5**										
Ba	20.0	19.88	**99.4**										
Be	10.0	10.36	**103.6**										
Ca	10000.0	10043.31	**100.4**										
Cd	4.0	3.81	**95.3**										
Co	100.0	102.97	**103.0**										
Cr	10.0	10.00	**100.0**										
Cu	50.0	46.38	**92.8**										
Fe	200.0	195.62	**97.8**										
K	10000.0	8308.16	**83.1**										
Mg	10000.0	9837.48	**98.4**										
Mn	30.0	30.92	**103.1**										
Na	10000.0	9717.30	**97.2**										
Ni	80.0	82.05	**102.6**										
Pb	6.0	5.48	**91.3**										
Sb	20.0	18.54	**92.7**										
Se	10.0	10.11	**101.1**										
Tl	20.0	21.76	**108.8**										
V	100.0	101.27	**101.3**										
Zn	40.0	44.27	**110.7**										

STL Knoxville

ICP Data Reporting Form

Initial Calibration Blank(s)

Units: ug/L (ppb)

Instrument ID: TJA 61-E SuperTrace ICP

Data File Name: s121903.arc

Elem	Reporting Limit	ICB 19-Dec-03 10:41 AM											
		Found	Flag	Found	Flag	Found	Flag	Found	Flag	Found	Flag	Found	Flag
Ag	10.0	0.7	U										
Al	200.0	13.0	U										
As	10.0	1.8	U										
Ba	50.0	0.2	U										
Be	5.0	0.1	B										
Ca	5000.0	13.0	U										
Cd	5.0	0.2	U										
Co	50.0	0.4	U										
Cr	10.0	0.6	U										
Cu	25.0	0.5	U										
Fe	100.0	-10.5	B										
K	5000.0	8.5	U										
Mg	5000.0	12.2	U										
Mn	15.0	0.3	U										
Na	5000.0	-379.8	B										
Ni	40.0	1.3	U										
Pb	3.0	1.2	U										
Sb	60.0	1.7	U										
Se	5.0	2.4	U										
Tl	10.0	2.2	B										
V	50.0	0.5	U										
Zn	20.0	0.3	U										

B - Analyte concentration is between IDL and Reporting Limit
U - Analyte concentration is less than IDL

STL Knoxville

ICP Data Reporting Form

Continuing Calibration Blank(s)

Units: ug/L (ppb)

Instrument ID: TJA 61-E SuperTrace ICP

Data File Name: s121903.arc

Elem	Reporting Limit	CCB1 19-Dec-03 11:04 AM		CCB2 19-Dec-03 11:57 AM		CCB3 19-Dec-03 12:50 PM		CCB4 19-Dec-03 1:43 PM		CCB5 19-Dec-03 2:48 PM		CCB6 19-Dec-03 3:41 PM	
		Found	Flag	Found	Flag	Found	Flag	Found	Flag	Found	Flag	Found	Flag
Ag	10.0	0.7	U	0.7	U	0.7	U	0.7	U	0.7	U	0.7	U
Al	200.0	13.0	U	17.2	B	20.4	B	26.1	B	36.1	B	42.5	B
As	10.0	1.8	U	1.8	U	1.8	U	1.8	U	1.8	U	1.8	U
Ba	50.0	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Be	5.0	0.2	B	-0.1	B	0.1	U	0.1	U	0.1	U	0.1	U
Ca	5000.0	13.0	U	13.0	U	13.0	U	13.0	U	13.0	U	13.0	U
Cd	5.0	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Co	50.0	-0.6	B	0.4	U	0.4	U	0.4	U	-0.7	B	-0.4	B
Cr	10.0	0.6	U	0.6	U	0.6	U	0.6	U	0.6	U	0.6	U
Cu	25.0	-0.6	B	-0.7	B	-1.0	B	-1.6	B	-2.4	B	-2.5	B
Fe	100.0	-17.7	B	-12.0	B	8.1	U	8.1	U	-12.9	B	8.1	U
K	5000.0	8.5	U	8.5	U	8.5	U	8.5	U	8.5	U	8.5	U
Mg	5000.0	12.2	U	12.2	U	12.2	U	12.2	U	12.2	U	12.2	U
Mn	15.0	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U	0.3	U
Na	5000.0	-387.4	B	-327.3	B	-319.1	B	-241.1	B	-473.0	B	-332.2	B
Ni	40.0	1.3	U	1.3	U	1.3	U	1.3	U	1.3	U	1.3	U
Pb	3.0	1.2	U	1.2	U	1.2	U	1.2	U	1.7	B	1.2	U
Sb	60.0	-1.7	B	1.7	U	1.7	U	1.7	U	1.7	U	1.7	U
Se	5.0	2.4	U	2.4	U	2.4	U	2.4	U	2.4	U	2.4	U
Tl	10.0	2.9	B	1.7	U	2.5	B	2.5	B	1.7	U	2.3	B
V	50.0	-0.8	B	-0.6	B	-0.6	B	0.5	U	-1.1	B	-0.8	B
Zn	20.0	0.3	U	0.3	U	0.3	U	0.3	U	0.5	B	0.4	B

B - Analyte concentration is between IDL and Reporting Limit
U - Analyte concentration is less than IDL

STL Knoxville

ICP Data Reporting Form

Interference Check Standard A

Units: ug/L (ppb)

Instrument ID: TJA 61-E SuperTrace ICP

Data File Name: s121903.arc

Elem	True Conc	Reporting Limit	ICSA1 19-Dec-03 10:50 AM Found	Found	Found	Found	Found
Ag		10	-1				
Al	500000		482427				
As		10	4				
Ba		50	2				
Be		5	-1				
Ca	500000		498345				
Cd		5	-3				
Co		50	0				
Cr		10	-1				
Cu		25	7				
Fe	200000		202391				
K		5000	603				
Mg	500000		550395				
Mn		15	-1				
Na		5000	-442				
Ni		40	1				
Pb		3	-1				
Sb		60	5				
Se		5	6				
Tl		10	1				
V		50	3				
Zn		20	4				

STL Knoxville

ICP Data Reporting Form

Interference Check Standard AB

Units: ug/L (ppb)

Instrument ID: TJA 61-E SuperTrace ICP

Data File Name: s121903.arc

Elem	True Conc	ICSAB1 19-Dec-03 10:55 AM Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec
Ag	200	215.6	**107.8**										
Al	500000	477172.1	**95.4**										
As	100	107.7	**107.7**										
Ba	500	535.5	**107.1**										
Be	500	517.0	**103.4**										
Ca	500000	487068.8	**97.4**										
Cd	1000	971.2	**97.1**										
Co	500	494.8	**99.0**										
Cr	500	498.9	**99.8**										
Cu	500	553.8	**110.8**										
Fe	200000	198935.4	**99.5**										
K	10000	9803.4	**98.0**										
Mg	500000	539636.8	**107.9**										
Mn	500	513.1	**102.6**										
Na	10000	11415.4	**114.2**										
Ni	1000	971.1	**97.1**										
Pb	50	47.4	**94.9**										
Sb	600	624.0	**104.0**										
Se	50	53.3	**106.6**										
Tl	100	97.9	**97.9**										
V	500	519.8	**104.0**										
Zn	1000	1067.8	**106.8**										

STL Knoxville

ICP Data Reporting Form

Serial Dilution(s)

Units: ug/L (ppb)

Instrument ID: TJA 61-E SuperTrace ICP

Data File Name: s121903.arc

Element	F6JX2F	F6JX2PF	Percent Difference
Ag	0.68 U	3.40 U	
Al	31.36 B	132.40 B	322.2
As	1.96 B	9.00 U	100.0
Ba	174.97	174.80 B	0.1
Be	0.11 U	0.55 U	
Ca	134563.65	133106.05	1.1
Cd	0.16 U	0.80 U	
Co	0.42 U	2.10 U	
Cr	0.55 U	2.75 U	
Cu	0.53 U	2.65 U	
Fe	74.52 B	40.50 U	100.0
K	11097.69	5006.20 B	54.9 E
Mg	51387.16	49719.35	3.2
Mn	55.18	55.75 B	1.0
Na	115231.15	110655.25	4.0
Ni	1.30 U	6.50 U	
Pb	1.20 U	6.00 U	
Sb	1.70 U	8.50 U	
Se	2.40 U	12.00 U	
Tl	1.77 B	22.00 B	1142.9
V	0.50 U	2.50 U	
Zn	21.68	26.20 B	20.8 E

B - Analyte concentration is between IDL and Reporting Limit
U - Analyte concentration is less than IDL
E - Percent Difference is greater than 10 and [OS]>50 times IDL

STL Knoxville

ICP Data Reporting Form

Instrument Detection Limits

Units: ug/L (ppb)

IDL Completion Date: 23-Apr-03

Instrument ID: TJA 61-E SuperTrace ICP

Data File Name: s121903.arc

Element	Wavelength (nm)	Reporting Limit	IDL
Ag	328.07	10.0	0.68
Al	308.21	200	13.0
As	189.04	10.0	1.8
Ba	493.41	50.0	0.17
Be	313.04	5.0	0.11
Ca	317.93	5000	13.0
Cd	226.50	5.0	0.16
Co	228.62	50.0	0.42
Cr	267.72	10.0	0.55
Cu	324.75	25.0	0.53
Fe	271.44	100	8.1
K	766.49	5000	8.5
Mg	279.08	5000	12.2
Mn	257.61	15.0	0.31
Na	330.23	5000	170
Ni	231.60	40.0	1.3
Pb	220.35	3.0	1.2
Sb	206.84	60.0	1.7
Se	196.03	5.0	2.4
Tl	190.86	10.0	1.7
V	292.40	50.0	0.50
Zn	213.86	20.0	0.29

STL Knoxville

ICP Data Reporting Form

Inter-Element Correction Factors

Instrument: TJA 61-E SuperTrace ICP **Date of IEC's:** 1/7/2003

Interfering Element	Correction Factor(s)
Aluminum	V(0.002605)
Antimony	Cr(0.01058), Ni(-0.00072), V(-0.00876)
Antimony	Cr(0.0101), Ni(-0.00965)
Arsenic	Cr(-0.00313), Mo(-0.00139)
Beryllium	V(0.00031)
Boron	Co(-0.00249)
Cadmium	Co(-0.00012), Fe(0.0001)
Calcium	Fe(-0.00023)
Chromium	Al(0.00001), Fe(-0.000016)
Cobalt	Ti(0.001989)
Iron	Al(0.000227), Co(0.075169), Pb(0.002849), V(0.01037)
Lead	Al(0.00046), Ca(0.00006), Fe(0.00011), Mo(-0.00163)
Lead	Al(-0.0004), Ca(0.000074), Fe(0.000033), Mn(0.000182), V(-0.00049)
Molybdenum	Pb(0.00107)
Selenium	Al(0.000017), Fe(-0.00008), Mn(0.000352), Pb(0.000435)
Selenium	Fe(-0.0002), Mn(0.000545), Pb(0.000474)
Silica	Mg(0.00012)
Silver	Cu(0.000187), Pb(0.000155)
Strontium	Ca(0.000056)
Thallium	Al(-0.000021), Co(0.0036), Fe(-0.00004), Mn(-0.001845), V(0.00212)
Tin	Pb(0.0006)
Titanium	Cr(0.00027), Pb(0.00051)
Vanadium	Mo(-0.0017)
Zinc	Cu(0.000568), Fe(0.000101), Ni(0.00517)

STL Knoxville

ICP Data Reporting Form

Linear Dynamic Ranges

Units: ug/L (ppb)

LDR Date: 20-Oct-03

Instrument ID: TJA 61-E SuperTrace ICP

Data File Name: s121903.arc

Element	Linear Dynamic Range
Ag	2000.0
Al	500000.0
As	10000.0
Ba	10000.0
Be	10000.0
Ca	500000.0
Cd	10000.0
Co	20000.0
Cr	20000.0
Cu	10000.0
Fe	400000.0
K	100000.0
Mg	500000.0
Mn	20000.0
Na	600000.0
Ni	20000.0
Pb	10000.0
Sb	10000.0
Se	10000.0
Tl	20000.0
V	20000.0
Zn	10000.0

STL Knoxville

Data Reporting Form

Preparation Log

Preparation Batch: 3352178 **Matrix:** Water

Project Number: PB045

Sample ID	Prep Date	Weight (g)	Volume (ml)
F6X9WB	18-Dec-03	NA	50.0
F6X9WC	18-Dec-03	NA	50.0
F6DQ4	18-Dec-03	NA	50.0
F6DQ4F	18-Dec-03	NA	50.0
F6DRG	18-Dec-03	NA	50.0
F6DRGF	18-Dec-03	NA	50.0
F6F1C	18-Dec-03	NA	50.0
F6F1CF	18-Dec-03	NA	50.0
F6F2H	18-Dec-03	NA	50.0
F6F2HF	18-Dec-03	NA	50.0
F6J0A	18-Dec-03	NA	50.0
F6J0AF	18-Dec-03	NA	50.0
F6JX2 F	18-Dec-03	NA	50.0
F6JX2	18-Dec-03	NA	50.0
F6JX2D	18-Dec-03	NA	50.0
F6JX2DF	18-Dec-03	NA	50.0
F6JX2S	18-Dec-03	NA	50.0
F6JX2SF	18-Dec-03	NA	50.0
F6JXA	18-Dec-03	NA	50.0
F6JXAF	18-Dec-03	NA	50.0

STL Knoxville

ICP Data Reporting Form

Analysis Run Log

Instrument ID: TJA 61-E SuperTrace ICP

Data File Name: s121903.arc

Sample Name	Date of Analysis	Time of Analysis
S0	19-Dec-03	10:24 AM
S1	19-Dec-03	10:28 AM
S2	19-Dec-03	10:33 AM
ICV	19-Dec-03	10:37 AM
ICB	19-Dec-03	10:41 AM
CRI1	19-Dec-03	10:46 AM
ICSA1	19-Dec-03	10:50 AM
ICSAB1	19-Dec-03	10:55 AM
CCV1	19-Dec-03	10:59 AM
CCB1	19-Dec-03	11:04 AM
F6X9WB	19-Dec-03	11:08 AM
F6X9WC	19-Dec-03	11:12 AM
F60FHB	19-Dec-03	11:17 AM
F60FHC	19-Dec-03	11:21 AM
F6DKD	19-Dec-03	11:26 AM
F6DQ4F	19-Dec-03	11:30 AM
F6DQ4	19-Dec-03	11:35 AM
F6DRGF	19-Dec-03	11:39 AM
F6DRG	19-Dec-03	11:44 AM
F6F1CF	19-Dec-03	11:48 AM
CCV2	19-Dec-03	11:52 AM
CCB2	19-Dec-03	11:57 AM
F6F1C	19-Dec-03	12:01 PM
F6F2HF	19-Dec-03	12:06 PM
F6F2H	19-Dec-03	12:10 PM
F6JXAF	19-Dec-03	12:15 PM
F6JXA	19-Dec-03	12:19 PM
F6JX2	19-Dec-03	12:23 PM
F6JX2SF	19-Dec-03	12:28 PM
F6JX2DF	19-Dec-03	12:32 PM
F6JX2P	19-Dec-03	12:37 PM
ZZZZZZ	19-Dec-03	12:41 PM

STL Knoxville

ICP Data Reporting Form

Analysis Run Log

Instrument ID: TJA 61-E SuperTrace ICP

Data File Name: s121903.arc

Sample Name	Date of Analysis	Time of Analysis
CCV3	19-Dec-03	12:46 PM
CCB3	19-Dec-03	12:50 PM
F6JX2S	19-Dec-03	12:55 PM
F6JX2D	19-Dec-03	12:59 PM
F6J0AF	19-Dec-03	1:03 PM
F6J0A	19-Dec-03	1:08 PM
F6RVR	19-Dec-03	1:12 PM
F6RT9	19-Dec-03	1:17 PM
F6RT9S	19-Dec-03	1:21 PM
F6RT9D	19-Dec-03	1:26 PM
F6RVK	19-Dec-03	1:30 PM
ZZZZZZ	19-Dec-03	1:35 PM
CCV4	19-Dec-03	1:39 PM
CCB4	19-Dec-03	1:43 PM
F6VL5	19-Dec-03	1:48 PM
F6VMA	19-Dec-03	1:52 PM
F6VMD	19-Dec-03	2:02 PM
F6VL5Z20	19-Dec-03	2:07 PM
F6VMAZ100	19-Dec-03	2:13 PM
F6VMDZ20	19-Dec-03	2:17 PM
F6LMVS	19-Dec-03	2:21 PM
F6LMVD	19-Dec-03	2:26 PM
F6LPT	19-Dec-03	2:30 PM
F6LPTS	19-Dec-03	2:35 PM
CCV5	19-Dec-03	2:43 PM
CCB5	19-Dec-03	2:48 PM
F6LPTD	19-Dec-03	2:52 PM
F6LW1	19-Dec-03	2:56 PM
F6LW5	19-Dec-03	3:01 PM
F6L2G	19-Dec-03	3:05 PM
F6L2GS	19-Dec-03	3:10 PM
F6L2Q	19-Dec-03	3:14 PM

STL Knoxville

ICP Data Reporting Form

Analysis Run Log

Instrument ID: TJA 61-E SuperTrace ICP

Data File Name: s121903.arc

Sample Name	Date of Analysis	Time of Analysis
F6L2GD	19-Dec-03	3:19 PM
F6L2QS	19-Dec-03	3:23 PM
F6L2QD	19-Dec-03	3:28 PM
F6L40	19-Dec-03	3:32 PM
CCV6	19-Dec-03	3:37 PM
CCB6	19-Dec-03	3:41 PM

STL Knoxville

Sample ID Nomenclature

The laboratory sample ID consists of 5 alpha-numeric characters followed by a suffix in the 6th position that designates the sample type:

Suffix	Sample Type
B	Method Blank
C	Laboratory Control Sample
L	Laboratory Control Sample Duplicate
S	Matrix Spike
D	Matrix Spike Duplicate
X	Sample Duplicate
P	Serial Dilution
A	Post Digestion Spike
Z#	Dilution; # = Dilution Factor

STL Knoxville

ICP Data Reporting Form

Initial Calibration Verification

Units: ug/L (ppb)

Instrument ID: TJA 61-E SuperTrace ICP

Data File Name: s122203.arc

Elem	True Conc	ICV 22-Dec-03 2:50 PM Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec
Ba	1000.0	1009.86	**101.0**										
Be	1000.0	1029.22	**102.9**										
Ca	25000.0	25583.52	**102.3**										
K	25000.0	25144.54	**100.6**										
Mg	25000.0	24773.57	**99.1**										
Na	25000.0	24354.45	**97.4**										
Zn	1000.0	1060.92	**106.1**										

STL Knoxville

ICP Data Reporting Form

Continuing Calibration Verification

Units: ug/L (ppb)

Instrument ID: TJA 61-E SuperTrace ICP

Data File Name: s122203.arc

Elem	True Conc	CCV1 22-Dec-03 3:12 PM		CCV2 22-Dec-03 4:06 PM		CCV3 22-Dec-03 5:11 PM		CCV4 22-Dec-03 5:30 PM					
		Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec
Ba	2000.0	2009.03	**100.5**	1996.90	**99.8**	1997.27	**99.9**	1995.44	**99.8**				
Be	2000.0	2046.73	**102.3**	2045.29	**102.3**	2076.51	**103.8**	2068.36	**103.4**				
Ca	50000.0	50111.14	**100.2**	50080.33	**100.2**	51019.70	**102.0**	50850.74	**101.7**				
K	50000.0	52102.77	**104.2**	52200.67	**104.4**	52866.65	**105.7**	52779.33	**105.6**				
Mg	50000.0	49089.22	**98.2**	49370.16	**98.7**	50585.78	**101.2**	50558.60	**101.1**				
Na	50000.0	48945.28	**97.9**	48387.50	**96.8**	48048.84	**96.1**	47866.96	**95.7**				
Zn	2000.0	2067.01	**103.4**	2069.73	**103.5**	2091.50	**104.6**	2092.06	**104.6**				

STL Knoxville

ICP Data Reporting Form

Contract Required Detection Limit Standard(s)

Units: ug/L (ppb)

Instrument ID: TJA 61-E SuperTrace ICP

Data File Name: s122203.arc

		CRI1 22-Dec-03 2:58 PM											
Elem	True Conc	Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec
Ba	20.0	19.95	**99.8**										
Be	10.0	10.08	**100.8**										
Ca	10000.0	9888.83	**98.9**										
K	10000.0	8147.43	**81.5**										
Mg	10000.0	9736.13	**97.4**										
Na	10000.0	9673.97	**96.7**										
Zn	40.0	43.77	**109.4**										

STL Knoxville

ICP Data Reporting Form

Initial Calibration Blank(s)

Units: ug/L (ppb)

Instrument ID: TJA 61-E SuperTrace ICP

Data File Name: s122203.arc

Elem	Reporting Limit	ICB 22-Dec-03 2:54 PM											
		Found	Flag	Found	Flag	Found	Flag	Found	Flag	Found	Flag	Found	Flag
Ba	50.0	0.2	U										
Be	5.0	0.2	B										
Ca	5000.0	13.0	U										
K	5000.0	8.5	U										
Mg	5000.0	12.2	U										
Na	5000.0	-365.1	B										
Zn	20.0	0.3	U										

B - Analyte concentration is between IDL and Reporting Limit
U - Analyte concentration is less than IDL

STL Knoxville

ICP Data Reporting Form

Continuing Calibration Blank(s)

Units: ug/L (ppb)

Instrument ID: TJA 61-E SuperTrace ICP

Data File Name: s122203.arc

Elem	Reporting Limit	CCB1 22-Dec-03 3:16 PM		CCB2 22-Dec-03 4:11 PM		CCB3 22-Dec-03 5:15 PM		CCB4 22-Dec-03 5:34 PM					
		Found	Flag	Found	Flag	Found	Flag	Found	Flag	Found	Flag	Found	Flag
Ba	50.0	0.2	U	0.2	U	0.2	U	0.2	B				
Be	5.0	0.1	U	0.2	B	0.1	U	0.2	B				
Ca	5000.0	13.0	U	13.0	U	13.0	U	16.9	B				
K	5000.0	8.5	U	8.5	U	8.5	U	8.5	U				
Mg	5000.0	12.2	U	12.2	U	12.2	U	12.2	U				
Na	5000.0	-320.2	B	-385.4	B	-414.0	B	-436.2	B				
Zn	20.0	0.3	U	0.3	U	1.0	B	3.7	B				

B - Analyte concentration is between IDL and Reporting Limit
U - Analyte concentration is less than IDL

STL Knoxville

ICP Data Reporting Form

Interference Check Standard A

Units: ug/L (ppb)

Instrument ID: TJA 61-E SuperTrace ICP

Data File Name: s122203.arc

Elem	True Conc	Reporting Limit	ICSA1 22-Dec-03 3:03 PM Found	Found	Found	Found	Found
Al	500000		474059				
Ba		50	2				
Be		5	-1				
Ca	500000		485092				
Fe	200000		198375				
K		5000	581				
Mg	500000		542011				
Na		5000	-376				
Zn		20	5				

STL Knoxville

ICP Data Reporting Form

Interference Check Standard AB

Units: ug/L (ppb)

Instrument ID: TJA 61-E SuperTrace ICP

Data File Name: s122203.arc

Elem	True Conc	ICSAB1 22-Dec-03 3:07 PM Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec
Al	500000	471495.8	**94.3**										
Ba	500	530.6	**106.1**										
Be	500	512.8	**102.6**										
Ca	500000	481078.3	**96.2**										
Fe	200000	197201.6	**98.6**										
K	10000	9592.9	**95.9**										
Mg	500000	537779.7	**107.6**										
Na	10000	11231.5	**112.3**										
Zn	1000	1062.3	**106.2**										

STL Knoxville

ICP Data Reporting Form

Instrument Detection Limits

Units: ug/L (ppb)

IDL Completion Date: 23-Apr-03

Instrument ID: TJA 61-E SuperTrace ICP

Data File Name: s122203.arc

Element	Wavelength (nm)	Reporting Limit	IDL
Ba	493.41	50.0	0.17
Be	313.04	5.0	0.11
Ca	317.93	5000	13.0
K	766.49	5000	8.5
Mg	279.08	5000	12.2
Na	330.23	5000	170
Zn	213.86	20.0	0.29

STL Knoxville

ICP Data Reporting Form

Inter-Element Correction Factors

Instrument: TJA 61-E SuperTrace ICP **Date of IEC's:** 1/7/2003

Interfering Element	Correction Factor(s)
Aluminum	V(0.002605)
Antimony	Cr(0.01058), Ni(-0.00072), V(-0.00876)
Antimony	Cr(0.0101), Ni(-0.00965)
Arsenic	Cr(-0.00313), Mo(-0.00139)
Beryllium	V(0.00031)
Boron	Co(-0.00249)
Cadmium	Co(-0.00012), Fe(0.0001)
Calcium	Fe(-0.00023)
Chromium	Al(0.00001), Fe(-0.000016)
Cobalt	Ti(0.001989)
Iron	Al(0.000227), Co(0.075169), Pb(0.002849), V(0.01037)
Lead	Al(0.00046), Ca(0.00006), Fe(0.00011), Mo(-0.00163)
Lead	Al(-0.0004), Ca(0.000074), Fe(0.000033), Mn(0.000182), V(-0.00049)
Molybdenum	Pb(0.00107)
Selenium	Al(0.000017), Fe(-0.00008), Mn(0.000352), Pb(0.000435)
Selenium	Fe(-0.0002), Mn(0.000545), Pb(0.000474)
Silica	Mg(0.00012)
Silver	Cu(0.000187), Pb(0.000155)
Strontium	Ca(0.000056)
Thallium	Al(-0.000021), Co(0.0036), Fe(-0.00004), Mn(-0.001845), V(0.00212)
Tin	Pb(0.0006)
Titanium	Cr(0.00027), Pb(0.00051)
Vanadium	Mo(-0.0017)
Zinc	Cu(0.000568), Fe(0.000101), Ni(0.00517)

STL Knoxville

ICP Data Reporting Form

Linear Dynamic Ranges

Units: ug/L (ppb)

LDR Date: 20-Oct-03

Instrument ID: TJA 61-E SuperTrace ICP

Data File Name: s122203.arc

Element	Linear Dynamic Range
Ba	10000.0
Be	10000.0
Ca	500000.0
K	100000.0
Mg	500000.0
Na	600000.0
Zn	10000.0

STL Knoxville

ICP Data Reporting Form

Analysis Run Log

Instrument ID: TJA 61-E SuperTrace ICP

Data File Name: s122203.arc

Sample Name	Date of Analysis	Time of Analysis
S0	22-Dec-03	2:36 PM
S1	22-Dec-03	2:41 PM
S2	22-Dec-03	2:45 PM
ICV	22-Dec-03	2:50 PM
ICB	22-Dec-03	2:54 PM
CRI1	22-Dec-03	2:58 PM
ICSA1	22-Dec-03	3:03 PM
ICSAB1	22-Dec-03	3:07 PM
CCV1	22-Dec-03	3:12 PM
CCB1	22-Dec-03	3:16 PM
F6DRGFZ10	22-Dec-03	3:21 PM
F6DRGZ10	22-Dec-03	3:25 PM
F6F1CFZ20	22-Dec-03	3:29 PM
F6F1CZ20	22-Dec-03	3:34 PM
F6JX2S	22-Dec-03	3:40 PM
F6JX2D	22-Dec-03	3:44 PM
F6J0AF	22-Dec-03	3:49 PM
F6J0A	22-Dec-03	3:53 PM
F6RVR	22-Dec-03	3:57 PM
F6RT9	22-Dec-03	4:02 PM
CCV2	22-Dec-03	4:06 PM
CCB2	22-Dec-03	4:11 PM
F6VL5	22-Dec-03	4:15 PM
F6VMA	22-Dec-03	4:20 PM
F6VMD	22-Dec-03	4:24 PM
F6RT9S	22-Dec-03	4:28 PM
F6RT9D	22-Dec-03	4:33 PM
F6RVK	22-Dec-03	4:37 PM
ZZZZZZ	22-Dec-03	4:42 PM
F6VL5Z20	22-Dec-03	4:46 PM
F6VMAZ100	22-Dec-03	4:51 PM
F6VMDZ20	22-Dec-03	5:06 PM

STL Knoxville

ICP Data Reporting Form

Analysis Run Log

Instrument ID: TJA 61-E SuperTrace ICP

Data File Name: s122203.arc

Sample Name	Date of Analysis	Time of Analysis
CCV3	22-Dec-03	5:11 PM
CCB3	22-Dec-03	5:15 PM
F6VMAZ100	22-Dec-03	5:20 PM
F6VMDZ20	22-Dec-03	5:25 PM
CCV4	22-Dec-03	5:30 PM
CCB4	22-Dec-03	5:34 PM
ZZZZZZ	22-Dec-03	5:39 PM

STL Knoxville

Sample ID Nomenclature

The laboratory sample ID consists of 5 alpha-numeric characters followed by a suffix in the 6th position that designates the sample type:

Suffix	Sample Type
B	Method Blank
C	Laboratory Control Sample
L	Laboratory Control Sample Duplicate
S	Matrix Spike
D	Matrix Spike Duplicate
X	Sample Duplicate
P	Serial Dilution
A	Post Digestion Spike
Z#	Dilution; # = Dilution Factor

Quality Control Results Mercury

STL Knoxville

Mercury Data Reporting Form

Initial Calibration Verification

Units: ug/L (ppb)

Instrument ID: Leeman HydraAA Hg An

Data File Name: H121803.PRN

Elem	True Conc	Ck2icv 12/18/2003 1:47 PM											
		Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec
Hg	2.5	2.55	**102.0**										

STL Knoxville

Mercury Data Reporting Form

Continuing Calibration Verification

Units: ug/L (ppb)

Instrument ID: Leeman HydraAA Hg An

Data File Name: H121803.PRN

Elem	True Conc	Ck3ccv 12/18/2003 1:54 PM		Ck3ccv 12/18/2003 2:21 PM		Ck3ccv 12/18/2003 2:46 PM		Ck3ccv 12/18/2003 3:11 PM		Ck3ccv 12/18/2003 3:37 PM		Ck3ccv 12/18/2003 3:54 PM	
		Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec
Hg	5.0	5.28	**105.6**	5.17	**103.4**	5.12	**102.4**	5.09	**101.8**	4.99	**99.8**	4.94	**98.8**

STL Knoxville

Mercury Data Reporting Form

Continuing Calibration Verification

Units: ug/L (ppb)

Instrument ID: Leeman HydraAA Hg An

Data File Name: H121803.PRN

Elem	True Conc	Ck3ccv 12/18/2003 4:30 PM Found	% Rec	Ck3ccv 12/18/2003 4:37 PM Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec
Hg	5.0	4.89	**97.8**	4.93	**98.6**								

STL Knoxville

Mercury Data Reporting Form

Contract Required Detection Limit Standard(s)

Units: ug/L (ppb)

Instrument ID: Leeman HydraAA Hg An

Data File Name: H121803.PRN

Elem	True Conc	CRA 12/18/2003 1:52 PM Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec	Found	% Rec
Hg	0.2	0.17	**86.5**										

STL Knoxville

Mercury Data Reporting Form

Initial Calibration Blank(s)

Units: ug/L (ppb)

Instrument ID: Leeman HydraAA Hg An

Data File Name: H121803.PRN

Elem	Reporting Limit	ICB 12/18/2003 1:49 PM Found	Flag	Found	Flag	Found	Flag	Found	Flag	Found	Flag	Found	Flag
Hg	0.2	-0.04	B										

Mercury Report Generator Version 2.0

B - Analyte concentration is between IDL and Reporting Limit
U - Analyte concentration is less than IDL

Form 3 Equivalent

STL Knoxville

Mercury Data Reporting Form

Continuing Calibration Blank(s)

Units: ug/L (ppb)

Instrument ID: Leeman HydraAA Hg An

Data File Name: H121803.PRN

Elem	Reporting Limit	Ck1ccb 12/18/2003 1:56 PM		Ck1ccb 12/18/2003 2:24 PM		Ck1ccb 12/18/2003 2:48 PM		Ck1ccb 12/18/2003 3:13 PM		Ck1ccb 12/18/2003 3:39 PM		Ck1ccb 12/18/2003 3:56 PM	
		Found	Flag	Found	Flag	Found	Flag	Found	Flag	Found	Flag	Found	Flag
Hg	0.2	-0.06	B	-0.04	B	-0.05	B	-0.05	B	-0.05	B	-0.07	B

B - Analyte concentration is between IDL and Reporting Limit
U - Analyte concentration is less than IDL

STL Knoxville

Mercury Data Reporting Form

Continuing Calibration Blank(s)

Units: ug/L (ppb)

Instrument ID: Leeman HydraAA Hg An

Data File Name: H121803.PRN

Elem	Reporting Limit	Ck1ccb 12/18/2003 4:33 PM		Ck1ccb 12/18/2003 4:40 PM									
		Found	Flag	Found	Flag	Found	Flag	Found	Flag	Found	Flag	Found	Flag
Hg	0.2	-0.04	B	-0.04	B								

B - Analyte concentration is between IDL and Reporting Limit
U - Analyte concentration is less than IDL

STL Knoxville

Mercury Data Reporting Form

Instrument Detection Limits

Units: ug/L (ppb)

IDL Completion Date:9/10/2003

Instrument ID: Leeman HydraAA Hg An

Data File Name: H121803.PRN

Element	Wavelength (nm)	Reporting Limit	IDL
Hg	253.70	0.2	0.02

STL Knoxville

Mercury Data Reporting Form

Preparation Log

Preparation Batch: 3352155 **Matrix:** Water

Project Number: PB045

Sample ID	Prep Date	Weight (g)	Volume (ml)
F6X6XB	12/18/2003	NA	50.0
F6X6XC	12/18/2003	NA	50.0
F6DQ4	12/18/2003	NA	50.0
F6DRG	12/18/2003	NA	50.0
F6F1C	12/18/2003	NA	50.0
F6F2H	12/18/2003	NA	50.0
F6J0A	12/18/2003	NA	50.0
F6JX2	12/18/2003	NA	50.0
F6JX2D	12/18/2003	NA	50.0
F6JX2S	12/18/2003	NA	50.0
F6JXA	12/18/2003	NA	50.0

STL Knoxville

Mercury Data Reporting Form

Preparation Log

Preparation Batch: 3352158 **Matrix:** Water

Project Number: PB045

Sample ID	Prep Date	Weight (g)	Volume (ml)
F6X62BF	12/18/2003	NA	50.0
F6X62CF	12/18/2003	NA	50.0
F6DQ4F	12/18/2003	NA	50.0
F6DRGF	12/18/2003	NA	50.0
F6F1CF	12/18/2003	NA	50.0
F6F2HF	12/18/2003	NA	50.0
F6J0AF	12/18/2003	NA	50.0
F6JX2DF	12/18/2003	NA	50.0
F6JX2F	12/18/2003	NA	50.0
F6JX2SF	12/18/2003	NA	50.0
F6JXAF	12/18/2003	NA	50.0

STL Knoxville

Mercury Data Reporting Form

Analysis Run Log

Instrument ID: Leeman HydraAA Hg An

Data File Name: H121803.PRN

Sample Name	Date Of Analysis	Time Of Analysis
Std01Rep1	12/18/2003	1:25 PM
Std02Rep1	12/18/2003	1:28 PM
Std03Rep1	12/18/2003	1:30 PM
Std04Rep1	12/18/2003	1:32 PM
Std05Rep1	12/18/2003	1:34 PM
Std06Rep1	12/18/2003	1:36 PM
Std07Rep1	12/18/2003	1:38 PM
Ck2icv	12/18/2003	1:47 PM
ICB	12/18/2003	1:49 PM
CRA	12/18/2003	1:52 PM
Ck3ccv	12/18/2003	1:54 PM
Ck1ccb	12/18/2003	1:56 PM
IDL-BLANK	12/18/2003	1:58 PM
IDL-1	12/18/2003	2:00 PM
IDL-2	12/18/2003	2:03 PM
IDL-3	12/18/2003	2:06 PM
IDL-4	12/18/2003	2:09 PM
IDL-5	12/18/2003	2:11 PM
IDL-6	12/18/2003	2:13 PM
IDL-7	12/18/2003	2:15 PM
F6X6XB	12/18/2003	2:17 PM
F6X6XC	12/18/2003	2:19 PM
Ck3ccv	12/18/2003	2:21 PM
Ck1ccb	12/18/2003	2:24 PM
F6DKD	12/18/2003	2:26 PM
F6DQ4	12/18/2003	2:28 PM
F6DRG	12/18/2003	2:30 PM
F6F1C	12/18/2003	2:32 PM
F6F2H	12/18/2003	2:34 PM
F6JXA	12/18/2003	2:36 PM
F6JX2	12/18/2003	2:38 PM

STL Knoxville

Mercury Data Reporting Form

Analysis Run Log

Instrument ID: Leeman HydraAA Hg An

Data File Name: H121803.PRN

Sample Name	Date Of Analysis	Time Of Analysis
F6JX2S	12/18/2003	2:40 PM
F6JX2D	12/18/2003	2:42 PM
F6J0A	12/18/2003	2:44 PM
Ck3ccv	12/18/2003	2:46 PM
Ck1ccb	12/18/2003	2:48 PM
F6RVR	12/18/2003	2:50 PM
F6X62BF	12/18/2003	2:52 PM
F6X62CF	12/18/2003	2:54 PM
F6DQ4F	12/18/2003	2:56 PM
F6DRGF	12/18/2003	2:58 PM
F6F1CF	12/18/2003	3:00 PM
F6F2HF	12/18/2003	3:02 PM
F6JXAF	12/18/2003	3:04 PM
F6JX2F	12/18/2003	3:06 PM
F6JX2SF	12/18/2003	3:09 PM
Ck3ccv	12/18/2003	3:11 PM
Ck1ccb	12/18/2003	3:13 PM
F6JX2DF	12/18/2003	3:15 PM
F6J0AF	12/18/2003	3:17 PM
F6X6PB	12/18/2003	3:19 PM
F6X6PC	12/18/2003	3:21 PM
F6X6PL	12/18/2003	3:23 PM
F6J9K	12/18/2003	3:25 PM
F6J9V	12/18/2003	3:28 PM
F6X6TB	12/18/2003	3:31 PM
F6X6TC	12/18/2003	3:33 PM
F6QWT	12/18/2003	3:35 PM
Ck3ccv	12/18/2003	3:37 PM
Ck1ccb	12/18/2003	3:39 PM
F6QWTS	12/18/2003	3:41 PM
F6QWTD	12/18/2003	3:44 PM

STL Knoxville

Mercury Data Reporting Form

Analysis Run Log

Instrument ID: Leeman HydraAA Hg An

Data File Name: H121803.PRN

Sample Name	Date Of Analysis	Time Of Analysis
F6QW2	12/18/2003	3:46 PM
F6QW4	12/18/2003	3:47 PM
F6QW4S	12/18/2003	3:49 PM
F6QW4D	12/18/2003	3:52 PM
Ck3ccv	12/18/2003	3:54 PM
Ck1ccb	12/18/2003	3:56 PM
Ck3ccv	12/18/2003	4:30 PM
Ck1ccb	12/18/2003	4:33 PM
F6QWTA	12/18/2003	4:35 PM
Ck3ccv	12/18/2003	4:37 PM
Ck1ccb	12/18/2003	4:40 PM

STL Knoxville

Sample ID Nomenclature

The sample ID consists of 5 alpha-numeric characters followed by a suffix in the 6th position that designates the sample type:

Suffix	Sample Type:
B	Method Blank
C	Laboratory Control Sample
L	Laboratory Control Sample Duplicate
S	Matrix Spike
D	Matrix Spike Duplicate
X	Sample Duplicate
P	Serial Dilution
A	Post Digestion Spike
Z#	Dilution; # = Dilution Factor

Raw Data
SuperTrace ICP

STL Knoxville
ICP Analysis Cover Sheet

Chart Number:	5 12 19 03	**Date of Analysis:**	12-19-03
Instrument:	ST	**Analyst:**	dgs

Standard	ID #
Calibration Std. ID #:	
CCV (1:1 dil. of Cal. Std. ID#):	2641-35
ICV ID #:	2642-20
ICSA ID #:	2630A-20
ICSAB ID #:	2630B-20
CRI ID #:	2631-12-19

Maintenance performed ✓

Daily	Monthly or As Needed	Semi-annually	Annually
Check gases Check that argon tank pressure is 50-60 psi and that a spare tank is available. Check aspiration tubing.	Clean plasma torch assembly to remove accumulated deposits.	Replace coolant water filter (may require replacement more or less frequently, depending on the quality of water).	Notify manufacturer service engineer for scheduled preventive maintenance service.
Check vacuum pump gauge. (<10 millitorr)	Clean nebulizer and drain chamber; keep free flowing to maintain optimum performance.		Change vacuum pump oil.
Check that cooling water supply system is full and drain bottle is not full. Also ensure drain tubing is clear, tight fitting and has few bends.	Clean filters on back of power unit to remove dust.		
Check that nebulizer is not clogged.	Replace when needed: peristaltic pump tubing sample capillary tubing autosampler sipper probe.		
Check that capillary tubing is clean and in good condition.	Check yttrium position.		
Check that peristaltic pump windings are secure.	Check O-rings		
Check that high voltage switch is on.	Clean/lubricate pump rollers, autosampler arm.		
Check that exhaust screens are clean.	Check vacuum pump oil.		
Check that torch, glassware, aerosol injector tube, bonnet are clean.			

Comments: _____

```
--------------------------------------------------------------------------------
:       Instrument Upload                                    Run Log - Page  1 :
:       Started Tue Dec 23 11:57:18 2003 by SZELAGOK                           :
:       Data File: UPL$KNX_DATA_ROOT:<TJA>S121903.ARC;1                        :
--------------------------------------------------------------------------------
```

#	WorkOrder	Dilution	Date	Time	Batch	Lot	Instrument
1	S0	1	19-DEC-2003	10:24:00			ST
2	S1	1	19-DEC-2003	10:28:00			ST
3	S2	1	19-DEC-2003	10:33:00			ST
4	ICV	1	19-DEC-2003	10:37:00			ST
5	ICB	1	19-DEC-2003	10:41:00			ST
6	CRI1	1	19-DEC-2003	10:46:00			ST
7	ICSA1	1	19-DEC-2003	10:50:00			ST
8	ICSAB1	1	19-DEC-2003	10:55:00			ST
9	CCV1	1	19-DEC-2003	10:59:00			ST
10	CCB1	1	19-DEC-2003	11:04:00			ST
11	F6X9WB	1	19-DEC-2003	11:08:00	3352178	H3L180000	ST
12	F6X9WC	1	19-DEC-2003	11:12:00	3352178	H3L180000	ST
13	F60FHB	1	19-DEC-2003	11:17:00	3352193	H3L180000	ST
14	F60FHC	1	19-DEC-2003	11:21:00	3352193	H3L180000	ST
15	F6DKD	1	19-DEC-2003	11:26:00	3352178	H3L100237	ST
16	F6DQ4F	1	19-DEC-2003	11:30:00	3352178	PB045	ST
17	F6DQ4	1	19-DEC-2003	11:35:00	3352178	PB045	ST
18	F6DRGF	1	19-DEC-2003	11:39:00	3352178	PB045	ST
19	F6DRG	1	19-DEC-2003	11:44:00	3352178	PB045	ST
20	F6F1CF	1	19-DEC-2003	11:48:00	3352178	PB045	ST
21	CCV2	1	19-DEC-2003	11:52:00			ST
22	CCB2	1	19-DEC-2003	11:57:00			ST
23	F6F1C	1	19-DEC-2003	12:01:00	3352178	PB045	ST
24	F6F2HF	1	19-DEC-2003	12:06:00	3352178	PB045	ST
25	F6F2H	1	19-DEC-2003	12:10:00	3352178	PB045	ST
26	F6JXAF	1	19-DEC-2003	12:15:00	3352178	PB045	ST
27	F6JXA	1	19-DEC-2003	12:19:00	3352178	PB045	ST
28	F6JX2F	1	19-DEC-2003	12:23:00	3352178	PB045	ST
29	F6JX2SF	1	19-DEC-2003	12:28:00	3352178	PB045	ST
30	F6JX2DF	1	19-DEC-2003	12:32:00	3352178	PB045	ST
31	F6JX2P5F	1	19-DEC-2003	12:37:00			ST
32	F6JX2	1	19-DEC-2003	12:41:00	3352178	PB045	ST
33	CCV3	1	19-DEC-2003	12:46:00			ST
34	CCB3	1	19-DEC-2003	12:50:00			ST
35	F6JX2S	1	19-DEC-2003	12:55:00	3352178	PB045	ST
36	F6JX2D	1	19-DEC-2003	12:59:00	3352178	PB045	ST
37	F6J0AF	1	19-DEC-2003	13:03:00	3352178	PB045	ST
38	F6J0A	1	19-DEC-2003	13:08:00	3352178	PB045	ST
39	F6RVR	1	19-DEC-2003	13:12:00	3352178	H3L160273	ST
40	F6RT9	1	19-DEC-2003	13:17:00	3352193	H3L160273	ST
41	F6RT9S	1	19-DEC-2003	13:21:00	3352193	H3L160273	ST
42	F6RT9D	1	19-DEC-2003	13:26:00	3352193	H3L160273	ST
43	F6RVK	1	19-DEC-2003	13:30:00	3352193	H3L160273	ST
44	F6RT9P5	1	19-DEC-2003	13:35:00			ST

---------- (continued) ----------

```
-------------------------------------------------------------------------------
:       Instrument Upload                                   Run Log - Page  2 :
:       Started Tue Dec 23 11:57:18 2003 by SZELAGOK                          :
:       Data File: UPL$KNX_DATA_ROOT:<TJA>S121903.ARC;1                       :
-------------------------------------------------------------------------------
```

#	WorkOrder	Dilution	Date	Time	Batch	Lot	Instrument
45	CCV4	1	19-DEC-2003	13:39:00			ST
46	CCB4	1	19-DEC-2003	13:43:00			ST
47	F6VL5	1	19-DEC-2003	13:48:00	3352193	H3L170134	ST
48	F6VMA	1	19-DEC-2003	13:52:00	3352193	H3L170134	ST
49	F6VMD	1	19-DEC-2003	14:02:00	3352193	H3L170134	ST
50	F6VL5Z20	1	19-DEC-2003	14:07:00	3352193	H3L170134	ST
51	F6VMAZ100	100	19-DEC-2003	14:13:00	3352193	H3L170134	ST
52	F6VMDZ20	1	19-DEC-2003	14:17:00	3352193	H3L170134	ST
53	F6LMVS	1	19-DEC-2003	14:21:00	3349170	H3L120369	ST
54	F6LMVD	1	19-DEC-2003	14:26:00	3349170	H3L120369	ST
55	F6LPT	1	19-DEC-2003	14:30:00	3349170	H3L120369	ST
56	F6LPTS	1	19-DEC-2003	14:35:00	3349170	H3L120369	ST
57	CCV5	1	19-DEC-2003	14:43:00			ST
58	CCB5	1	19-DEC-2003	14:48:00			ST
59	F6LPTD	1	19-DEC-2003	14:52:00	3349170	H3L120369	ST
60	F6LW1	1	19-DEC-2003	14:56:00	3349170	H3L120423	ST
61	F6LW5	1	19-DEC-2003	15:01:00	3349170	H3L120423	ST
62	F6L2G	1	19-DEC-2003	15:05:00	3349170	H3L120429	ST
63	F6L2GS	1	19-DEC-2003	15:10:00	3349170	H3L120429	ST
64	F6L2Q	1	19-DEC-2003	15:14:00	3349170	H3L120429	ST
65	F6L2GD	1	19-DEC-2003	15:19:00	3349170	H3L120429	ST
66	F6L2QS	1	19-DEC-2003	15:23:00	3349170	H3L120429	ST
67	F6L2QD	1	19-DEC-2003	15:28:00	3349170	H3L120429	ST
68	F6L40	1	19-DEC-2003	15:32:00	3349170	H3L120434	ST
69	CCV6	1	19-DEC-2003	15:37:00			ST
70	CCB6	1	19-DEC-2003	15:41:00			ST

---------- End of Report ----------

STL Knoxville ICP Chart Review Checklist
Method: 6010B/200.7 - KNOX-MT-0007, Rev 1
Page 1 of 2

Chart Name:	5 121903	Instrument:	5T

A. Calibration/Instrument Run QC	NA	Yes	No	If No, why is data reportable?
1. Instrument calibrated per SOP?		✓		
2. ICV analyzed at beginning of run & within limits? (6010B = 90 - 110%R **and** <5% RSD) (200.7 = 95 - 105%R **and** <3% RSD)		✓		
3. CCV analyzed at appropriate frequency and within control limits? (6010B & SDWA 200.7 = 90 - 110%R **and** <5% RSD) (CWA 200.7 = 95 – 105%R)			✓	If no, list details: CCV4 failed for Be, K Zn
4. ICB/CCB analyzed at appropriate frequency and within +/- RL?		✓		If no, list details:
5. ICSA/ICSAB run at required frequency? (6010B & SDWA 200.7 = beginning of run; CWA 200.7 = beginning and end of run)		✓		
6. ICSAB interferents and analytes within limits? (80 - 120%R)		✓		
7. ICSA criteria for non-interfering elements met? (RLs ≤10 ppb within +/- 2x **SOP** RL from zero) (RLs >10 ppb within +/- 1x **SOP** RL from zero) *If no, list analytes:*		✓		☐ [ics1] Results outside limits due to contamination. ☐ [ics2] Interfering elements not present in sample at level which would result in false result >±2x RL. ☐ [ics3] Concentration of affected analyte in sample is more than 10x analyte signal in ICSA.
8. Were all exposures for the QC standards used?		✓		If no, list details:
B. Client Sample and QC Sample Results	**NA**	**Yes**	**No**	
1. Were samples with concentrations > the linear range for any parameter diluted and reanalyzed?			✓	Comments: some dilutions on the next run
2. Were RLs elevated due to matrix effects?		✓		Comments:
3. Internal standard (IS) response ± 30% of ICB IS? *If no, list details:*		✓		☐ [is] High IS response. Sample(s) rerun at dilution. ☐ Low IS response. Sample(s) reanalyzed.
C. Preparation/Matrix QC	**NA**	**Yes**	**No**	
1. Method blank done per prep batch and < RL? *If no, list blank ID and reason, i.e. [Autotext]:* *Blank ID* *[Autotext]* *Blank ID* *[Autotext]*		✓		☐ **[mb3] No analyte >RL in associated samples.*** ☐ **[mb4] Sample results >20x blank.** ☐ **[mb5] Insufficient sample for reanalysis.***
2. LCS done per prep batch and within QC limits? (6010B = 80 – 120%R or inhouse limits; 200.7 = 85 - 115%R) *If no, list LCS ID:*		✓		☐ **[lcs2] Insufficient sample for reanalysis.** ☐ **[lcs3] LCS recovery > QC limits and sample results are < RL.***
3. MS/MSD or MS/DUP run at required frequency?		✓		☐ [lcsd] Insufficient sample – lcs/lcsd analyzed.
4. MS/MSD %R and RPD within QC limits? *If no, list MS/MSD ID and [Autotext]:* *MS/MSD ID* *[Autotext]* *MS/MSD ID* *[Autotext]* F6 RT9 MSD 3			✓	[ms1] [msd1] LCS acceptable - matrix effects. [ms2] [msd2] Native analyte > 4x spike level. [ms3] [msd3] Matrix effects and native analyte > 4x spike level.
5. PDS or PDS/PDSD analyzed at required frequency? *PDS ID* *Spike Level* *CLQC or Batch*	✓			

Such action must be taken in consultation with client.

STL Knoxville ICP Chart Review Checklist
Method: 6010B/200.7 - KNOX-MT-0007, Rev 1
Page 2 of 2

Chart Name:	S 12 19 03

C. Preparation/Matrix QC (continued)	NA	Yes	No	If No, why is data reportable?
6. Serial dilution done per prep batch?		✓		
7. Was serial dilution reanalyzed at a dilution?	✓			Comments:
8. Was the original sample analyzed on same chart as serial dilution?		✓		If no, list details:
D. Other	**NA**	**Yes**	**No**	
1. Are nonconformances documented appropriately?	✓			NCM #
2. Calculations checked for error? (Document manual calculation checks in comments section.)		✓		
3. All client/project specific requirements met? (Review PM checklists, Lot Summary or Client Analysis Summary, QAS.)		✓		List requirements added since log-in:
4. Were all samples labelled correctly in the autosampler table?		✓		If no, list details:

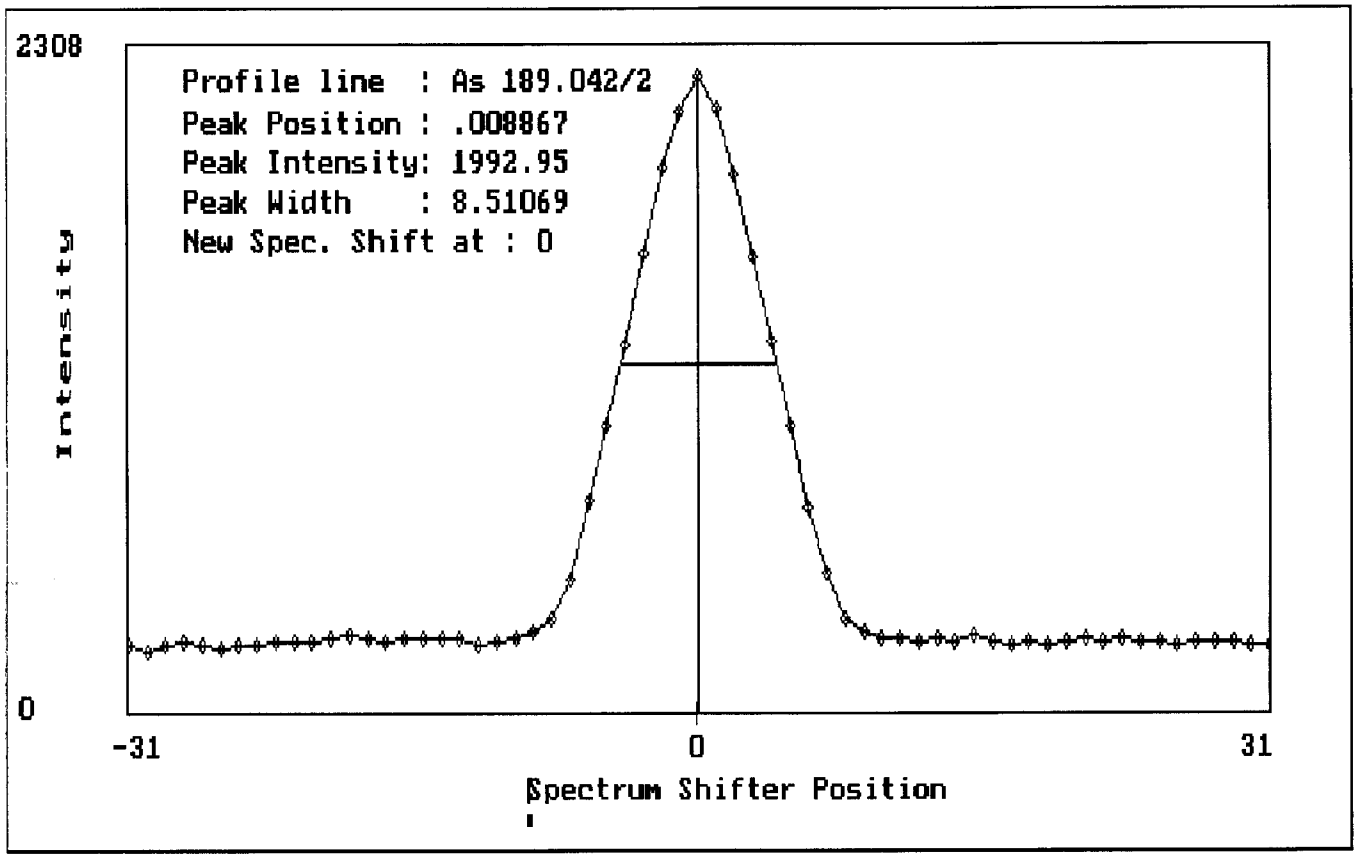
Analyst: dgs **Date:** 12-23-03

Comments:

F6RT9 (Ba) 336.63 µg/L x 0.05L / 0.5g = 33.6 mg/kg

Dl (Ba) 200 µg/L x 0.05L / 0.5g = 20.0 mg/kg

NOTE: Nonconformance memos are required for **bold** and *italicized* [autotext] statements: **Bold** = deficiency, *italicized* = anomoly.


2308
Profile line : As 189.042/2
Peak Position : .008867
Peak Intensity: 1992.95
Peak Width : 8.51069
New Spec. Shift at : 0
Intensity
0
-31
0
31
Spectrum Shifter Position

AutoSampler Report Table: KRYSTYNA 12/19/03 10:14:51 AM page 1

Table Name: KRYSTYNA Autosampler Type: TYPE TJA
Sample Positions: 0/192 QC Positions: 9/19 # Sets: 1
Rinse Station location is rack -1, pos. -1.

--- Racks ---

Rack #	Type	Usage	#Pos Left	Analyses/Pos
1	Aux. (L) Rack	STD/QC/BLANK	9	10
2	Sample (16mm)	Samples	0	1
3	Sample (16mm)	Samples	0	1
4	Sample (16mm)	Samples	0	1
5	Sample (16mm)	Samples	0	1

--- Sample Sets ---

Set#	Type	Prepare?	Description	Method	#Pos	Rack#	StartPos
1	Normal	No		TRA10103	192	2	1

--- Preparation Info ---

Set#	Uptake	Uptake#2	Final	Dil.Factor

No Samples Prepared.

Rack #1

Pos	Row	Col	Sample Name	Set #	#Used	Type
1	1	1	S0	-NA-	1	Standard
2	1	2	S1	-NA-	1	Standard
3	1	3	S2	-NA-	1	QC Standard
4	1	4	ICV	-NA-	1	QC Standard
5	1	5	CCV1	-NA-	1	QC Standard
6	1	6	CCV2	-NA-	1	QC Standard
7	1	7	CCV3	-NA-	1	QC Standard
8	1	8	CCV4	-NA-	1	QC Standard
9	1	9	CCV5	-NA-	1	QC Standard
10	1	10	CCV6	-NA-	1	QC Standard
(11...19	Not Used)					

Rack #2

Pos	Row	Col	Sample Name	Set #	#Used	Type
1	1	1	ICB	1	-NA-	Sample
2	1	2	CRI1	1	-NA-	Sample
3	1	3	ICSA1	1	-NA-	Sample
4	1	4	ICSAB1	1	-NA-	Sample
5	1	5	CCB1	1	-NA-	Sample
6	1	6	F6X9WB	1	-NA-	Sample
7	1	7	F6X9WC	1	-NA-	Sample
8	1	8	F60FHB	1	-NA-	Sample
9	1	9	F60FHC	1	-NA-	Sample
10	1	10	F6DKD	1	-NA-	Sample
11	1	11	F6DQ4F	1	-NA-	Sample

AutoSampler Report Table: KRYSTYNA 12/19/03 10:14:51 AM page 2

Rack #2

Pos	Row	Col	Sample Name	Set #	#Used	Type
12	1	12	F6DQ4	1	-NA-	Sample
13	2	1	F6DRGF	1	-NA-	Sample
14	2	2	F6DRG	1	-NA-	Sample
15	2	3	F6F1CF	1	-NA-	Sample
16	2	4	CCB2	1	-NA-	Sample
17	2	5	F6F1C	1	-NA-	Sample
18	2	6	F6F2HF	1	-NA-	Sample
19	2	7	F6F2H	1	-NA-	Sample
20	2	8	F6JXAF	1	-NA-	Sample
21	2	9	F6JXA	1	-NA-	Sample
22	2	10	F6JX2F	1	-NA-	Sample
23	2	11	F6JX2SF	1	-NA-	Sample
24	2	12	F6JX2DF	1	-NA-	Sample
25	3	1	F6JX2P5F	1	-NA-	Sample
26	3	2	F6JX2	1	-NA-	Sample
27	3	3	CCB3	1	-NA-	Sample
28	3	4	F6JX2S	1	-NA-	Sample
29	3	5	F6JX2D	1	-NA-	Sample
30	3	6	F6J0AF	1	-NA-	Sample
31	3	7	F6J0A	1	-NA-	Sample
32	3	8	F6RVR	1	-NA-	Sample
33	3	9	F6RT9	1	-NA-	Sample
34	3	10	F6RT9S	1	-NA-	Sample
35	3	11	F6RT9D	1	-NA-	Sample
36	3	12	F6RVK	1	-NA-	Sample
37	4	1	F6RT9P5	1	-NA-	Sample
38	4	2	CCB4	1	-NA-	Sample
39	4	3	F6VL5	1	-NA-	Sample
40	4	4	F6VMA	1	-NA-	Sample
41	4	5	F6VMD	1	-NA-	Sample
42	4	6	F6VL5Z20	1	-NA-	Sample
43	4	7	F6VMAZ20	1	-NA-	Sample
44	4	8	F6VMDZ20	1	-NA-	Sample
45	4	9	F6LMVS	1	-NA-	Sample
46	4	10	F6LMVD	1	-NA-	Sample
47	4	11	F6LPT	1	-NA-	Sample
48	4	12	F6LPTS	1	-NA-	Sample

Rack #3

Pos	Row	Col	Sample Name	Set #	#Used	Type
1	1	1	CCB5	1	-NA-	Sample
2	1	2	F6LPTD	1	-NA-	Sample
3	1	3	F6LW1	1	-NA-	Sample
4	1	4	F6LW5	1	-NA-	Sample
5	1	5	F6L2G	1	-NA-	Sample
6	1	6	F6L2GS	1	-NA-	Sample
7	1	7	F6L2Q	1	-NA-	Sample
8	1	8	F6L2GD	1	-NA-	Sample
9	1	9	F6L2QS	1	-NA-	Sample
10	1	10	F6L2QD	1	-NA-	Sample
11	1	11	F6L40	1	-NA-	Sample

AutoSampler Report Table: KRYSTYNA 12/19/03 10:14:51 AM page 3

Rack #3

Pos	Row	Col	Sample Name	Set #	#Used	Type
12	1	12	CCB6	1	-NA-	Sample
13	2	1	(empty)	1	-NA-	-NA-
14	2	2	(empty)	1	-NA-	-NA-
15	2	3	(empty)	1	-NA-	-NA-
16	2	4	(empty)	1	-NA-	-NA-
17	2	5	(empty)	1	-NA-	-NA-
18	2	6	(empty)	1	-NA-	-NA-
19	2	7	(empty)	1	-NA-	-NA-
20	2	8	(empty)	1	-NA-	-NA-
21	2	9	(empty)	1	-NA-	-NA-
22	2	10	(empty)	1	-NA-	-NA-
23	2	11	(empty)	1	-NA-	-NA-
24	2	12	(empty)	1	-NA-	-NA-
25	3	1	(empty)	1	-NA-	-NA-
26	3	2	(empty)	1	-NA-	-NA-
27	3	3	(empty)	1	-NA-	-NA-
28	3	4	(empty)	1	-NA-	-NA-
29	3	5	(empty)	1	-NA-	-NA-
30	3	6	(empty)	1	-NA-	-NA-
31	3	7	(empty)	1	-NA-	-NA-
32	3	8	(empty)	1	-NA-	-NA-
33	3	9	(empty)	1	-NA-	-NA-
34	3	10	(empty)	1	-NA-	-NA-
35	3	11	(empty)	1	-NA-	-NA-
36	3	12	(empty)	1	-NA-	-NA-
37	4	1	(empty)	1	-NA-	-NA-
38	4	2	(empty)	1	-NA-	-NA-
39	4	3	(empty)	1	-NA-	-NA-
40	4	4	(empty)	1	-NA-	-NA-
41	4	5	(empty)	1	-NA-	-NA-
42	4	6	(empty)	1	-NA-	-NA-
43	4	7	(empty)	1	-NA-	-NA-
44	4	8	(empty)	1	-NA-	-NA-
45	4	9	(empty)	1	-NA-	-NA-
46	4	10	(empty)	1	-NA-	-NA-
47	4	11	(empty)	1	-NA-	-NA-
48	4	12	(empty)	1	-NA-	-NA-

Rack #4

Pos	Row	Col	Sample Name	Set #	#Used	Type
1	1	1	(empty)	1	-NA-	-NA-
2	1	2	(empty)	1	-NA-	-NA-
3	1	3	(empty)	1	-NA-	-NA-
4	1	4	(empty)	1	-NA-	-NA-
5	1	5	(empty)	1	-NA-	-NA-
6	1	6	(empty)	1	-NA-	-NA-
7	1	7	(empty)	1	-NA-	-NA-
8	1	8	(empty)	1	-NA-	-NA-
9	1	9	(empty)	1	-NA-	-NA-
10	1	10	(empty)	1	-NA-	-NA-
11	1	11	(empty)	1	-NA-	-NA-

AutoSampler Report Table: KRYSTYNA 12/19/03 10:14:51 AM page 4

Rack #4

Pos	Row	Col	Sample Name	Set #	#Used	Type
12	1	12	(empty)	1	-NA-	-NA-
13	2	1	(empty)	1	-NA-	-NA-
14	2	2	(empty)	1	-NA-	-NA-
15	2	3	(empty)	1	-NA-	-NA-
16	2	4	(empty)	1	-NA-	-NA-
17	2	5	(empty)	1	-NA-	-NA-
18	2	6	(empty)	1	-NA-	-NA-
19	2	7	(empty)	1	-NA-	-NA-
20	2	8	(empty)	1	-NA-	-NA-
21	2	9	(empty)	1	-NA-	-NA-
22	2	10	(empty)	1	-NA-	-NA-
23	2	11	(empty)	1	-NA-	-NA-
24	2	12	(empty)	1	-NA-	-NA-
25	3	1	(empty)	1	-NA-	-NA-
26	3	2	(empty)	1	-NA-	-NA-
27	3	3	(empty)	1	-NA-	-NA-
28	3	4	(empty)	1	-NA-	-NA-
29	3	5	(empty)	1	-NA-	-NA-
30	3	6	(empty)	1	-NA-	-NA-
31	3	7	(empty)	1	-NA-	-NA-
32	3	8	(empty)	1	-NA-	-NA-
33	3	9	(empty)	1	-NA-	-NA-
34	3	10	(empty)	1	-NA-	-NA-
35	3	11	(empty)	1	-NA-	-NA-
36	3	12	(empty)	1	-NA-	-NA-
37	4	1	(empty)	1	-NA-	-NA-
38	4	2	(empty)	1	-NA-	-NA-
39	4	3	(empty)	1	-NA-	-NA-
40	4	4	(empty)	1	-NA-	-NA-
41	4	5	(empty)	1	-NA-	-NA-
42	4	6	(empty)	1	-NA-	-NA-
43	4	7	(empty)	1	-NA-	-NA-
44	4	8	(empty)	1	-NA-	-NA-
45	4	9	(empty)	1	-NA-	-NA-
46	4	10	(empty)	1	-NA-	-NA-
47	4	11	(empty)	1	-NA-	-NA-
48	4	12	(empty)	1	-NA-	-NA-

Rack #5

Pos	Row	Col	Sample Name	Set #	#Used	Type
1	1	1	(empty)	1	-NA-	-NA-
2	1	2	(empty)	1	-NA-	-NA-
3	1	3	(empty)	1	-NA-	-NA-
4	1	4	(empty)	1	-NA-	-NA-
5	1	5	(empty)	1	-NA-	-NA-
6	1	6	(empty)	1	-NA-	-NA-
7	1	7	(empty)	1	-NA-	-NA-
8	1	8	(empty)	1	-NA-	-NA-
9	1	9	(empty)	1	-NA-	-NA-
10	1	10	(empty)	1	-NA-	-NA-
11	1	11	(empty)	1	-NA-	-NA-

AutoSampler Report Table: KRYSTYNA 12/19/03 10:14:51 AM page 5

Rack #5

Pos	Row	Col	Sample Name	Set #	#Used	Type
12	1	12	(empty)	1	-NA-	-NA-
13	2	1	(empty)	1	-NA-	-NA-
14	2	2	(empty)	1	-NA-	-NA-
15	2	3	(empty)	1	-NA-	-NA-
16	2	4	(empty)	1	-NA-	-NA-
17	2	5	(empty)	1	-NA-	-NA-
18	2	6	(empty)	1	-NA-	-NA-
19	2	7	(empty)	1	-NA-	-NA-
20	2	8	(empty)	1	-NA-	-NA-
21	2	9	(empty)	1	-NA-	-NA-
22	2	10	(empty)	1	-NA-	-NA-
23	2	11	(empty)	1	-NA-	-NA-
24	2	12	(empty)	1	-NA-	-NA-
25	3	1	(empty)	1	-NA-	-NA-
26	3	2	(empty)	1	-NA-	-NA-
27	3	3	(empty)	1	-NA-	-NA-
28	3	4	(empty)	1	-NA-	-NA-
29	3	5	(empty)	1	-NA-	-NA-
30	3	6	(empty)	1	-NA-	-NA-
31	3	7	(empty)	1	-NA-	-NA-
32	3	8	(empty)	1	-NA-	-NA-
33	3	9	(empty)	1	-NA-	-NA-
34	3	10	(empty)	1	-NA-	-NA-
35	3	11	(empty)	1	-NA-	-NA-
36	3	12	(empty)	1	-NA-	-NA-
37	4	1	(empty)	1	-NA-	-NA-
38	4	2	(empty)	1	-NA-	-NA-
39	4	3	(empty)	1	-NA-	-NA-
40	4	4	(empty)	1	-NA-	-NA-
41	4	5	(empty)	1	-NA-	-NA-
42	4	6	(empty)	1	-NA-	-NA-
43	4	7	(empty)	1	-NA-	-NA-
44	4	8	(empty)	1	-NA-	-NA-
45	4	9	(empty)	1	-NA-	-NA-
46	4	10	(empty)	1	-NA-	-NA-
47	4	11	(empty)	1	-NA-	-NA-
48	4	12	(empty)	1	-NA-	-NA-

Standardization Rpt. 12/19/03 10:28:28 AM page 1

Method: TRA10103 Standard: S0
Run Time: 12/19/03 10:24:05

Elem	Al	Sb\1	Sb\2	As	Ba	Be	Cd
Avge	.02414	-.01025	.00010	-.00171	.00085	-.02233	.01165
SDev	.00026	.00786	.00930	.00060	.00011	.00011	.00391
%RSD	1.0958	76.704	9215.3	35.320	12.628	.50713	33.525
#1	.02444	-.00131	-.00960	-.00138	.00097	-.02244	.00787
#2	.02406	-.01334	.00894	-.00241	.00076	-.02234	.01567
#3	.02393	-.01609	.00096	-.00134	.00083	-.02221	.01142

Elem	Ca	Cr	Co	Cu	Fe	Pb/1	Pb/2
Avge	-.00126	.00301	-.00048	.00099	-.00131	.04626	-.01091
SDev	.00008	.00158	.00007	.00011	.00059	.01815	.01175
%RSD	6.4325	52.695	14.103	10.888	45.465	39.236	107.67
#1	-.00131	.00235	-.00041	.00110	-.00097	.02541	-.00373
#2	-.00117	.00481	-.00048	.00096	-.00096	.05850	-.02447
#3	-.00131	.00186	-.00055	.00089	-.00199	.05488	-.00454

Elem	Pb	Mg	Mn	K_	Ni	Se/1	Se/2
Avge	-.00030	.00094	.00000	.45264	.00034	-.01400	.01242
SDev	.00068	.00021	.00000	.00186	.00062	.00219	.00207
%RSD	227.16	22.169	.00000	.41168	180.37	15.643	16.645
#1	-.00062	.00076	.00000	.45147	-.00028	-.01636	.01408
#2	.00048	.00117	.00000	.45166	.00034	-.01361	.01011
#3	-.00076	.00089	.00000	.45479	.00096	-.01204	.01307

Elem	Ag	Na	Tl	V_	Zn	B_	Mo
Avge	-.00039	.00066	-.02300	.00030	.00014	.00548	-.00034
SDev	.00048	.00296	.00235	.00004	.00012	.00048	.00007
%RSD	124.04	447.97	10.239	13.578	86.603	8.6850	20.223
#1	-.00090	-.00235	-.02175	.00035	.00021	.00497	-.00041
#2	.00007	.00357	-.02571	.00027	.00021	.00591	-.00027
#3	-.00034	.00076	-.02153	.00028	.00000	.00557	-.00034

Elem	Li	Sr	Ti	Sn	Si
Avge	.00007	.00007	-.00057	-.00009	.01868
SDev	.00000	.00000	.00008	.00021	.00032
%RSD	.23956	.23956	13.640	228.67	1.6947
#1	.00007	.00007	-.00048	-.00028	.01899
#2	.00007	.00007	-.00062	.00014	.01835
#3	.00007	.00007	-.00062	-.00014	.01871

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	14524	--	--	--	--	--	--
SDev	34.74680	--	--	--	--	--	--
%RSD	.2392430	--	--	--	--	--	--
#1	14484	--	--	--	--	--	--
#2	14546	--	--	--	--	--	--
#3	14541	--	--	--	--	--	--

Standardization Rpt. 12/19/03 10:32:55 AM page 1

Method: TRA10103 Standard: S1
Run Time: 12/19/03 10:28:33

Elem	Al	Sb\1	Sb\2	As	Ba	Be	Cd
Avge	3.5387	4.7985	3.5925	2.6485	5.5854	10.468	38.426
SDev	.0113	.0152	.0114	.0109	.0143	.030	.121
%RSD	.31906	.31696	.31684	.41326	.25523	.28581	.31529
#1	3.5257	4.7896	3.5793	2.6361	5.5690	10.433	38.286
#2	3.5454	4.7898	3.5991	2.6570	5.5922	10.486	38.494
#3	3.5451	4.8160	3.5990	2.6524	5.5950	10.484	38.498

Elem	Ca	Cr	Co	Cu	Fe	Pb/1	Pb/2
Avge	10.484	17.627	3.3199	3.0142	7.3717	6.2078	9.3453
SDev	.042	.058	.0097	.0086	.0203	.0095	.0462
%RSD	.39921	.33152	.29369	.28589	.27542	.15373	.49408
#1	10.436	17.559	3.3087	3.0044	7.3483	6.1979	9.2921
#2	10.509	17.664	3.3265	3.0173	7.3825	6.2169	9.3744
#3	10.507	17.657	3.3246	3.0207	7.3843	6.2086	9.3694

Elem	Pb	Mg	Mn	K_	Ni	Se/1	Se/2
Avge	.15348	34.584	.94886	30.810	2.4091	1.4447	1.3895
SDev	.00229	.127	.00305	.064	.0084	.0067	.0045
%RSD	1.4892	.36806	.32189	.20907	.34800	.46279	.32176
#1	.15086	34.437	.94535	30.736	2.3995	1.4388	1.3860
#2	.15450	34.663	.95091	30.841	2.4152	1.4520	1.3879
#3	.15508	34.653	.95032	30.853	2.4126	1.4432	1.3946

Elem	Ag	Na	Tl	V_	Zn	B_	Mo
Avge	5.1683	2.6353	3.8339	1.4161	3.5596	2.1872	2.2134
SDev	.0160	.0114	.0125	.0055	.0116	.0057	.0079
%RSD	.30908	.43190	.32613	.38676	.32699	.26209	.35862
#1	5.1504	2.6222	3.8210	1.4098	3.5462	2.1808	2.2043
#2	5.1811	2.6414	3.8349	1.4197	3.5659	2.1890	2.2174
#3	5.1735	2.6423	3.8459	1.4187	3.5668	2.1918	2.2187

Elem	Li	Sr	Ti	Sn	Si
Avge	10.190	4.5111	2.3355	1.3061	1.0566
SDev	.027	.0113	.0066	.0060	.0035
%RSD	.26306	.24968	.28241	.46258	.33426
#1	10.159	4.4981	2.3279	1.2993	1.0526
#2	10.206	4.5177	2.3396	1.3107	1.0587
#3	10.205	4.5174	2.3389	1.3084	1.0587

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	14104	--	--	--	--	--	--
SDev	24.95964	--	--	--	--	--	--
%RSD	.1769649	--	--	--	--	--	--
#1	14132	--	--	--	--	--	--
#2	14084	--	--	--	--	--	--
#3	14096	--	--	--	--	--	--

Standardization Report 12/19/03 10:32:57 AM page 1

Method: TRA10103 Slope = Conc(SIR)/IR

Element	Wavelen	High std	Low std	Slope	Y-intercept	Date Standardized
Pb	220.353	NONE	NONE	.000000	.000000	*NOT STANDARDIZED
Se	196.026	NONE	NONE	.000000	.000000	*NOT STANDARDIZED
Sb	206.838	NONE	NONE	.000000	.000000	*NOT STANDARDIZED
Al	308.215	S1	S0	14.2294	-.343569	12/19/03 10:28:33
Sb\1	206.831	S1	S0	.208871	.002140	12/19/03 10:28:33
Sb\2	206.832	S1	S0	.278869	-.000028	12/19/03 10:28:33
As	189.042	S1	S0	.370509	.000633	12/19/03 10:28:33
Ba	493.409	S1	S0	.716261	-.000608	12/19/03 10:28:33
Be	313.042	S1	S0	.381439	.008518	12/19/03 10:28:33
Cd	226.502	S1	S0	.026189	-.000305	12/19/03 10:28:33
Ca	317.933	S1	S0	9.53597	.012038	12/19/03 10:28:33
Cr	267.716	S1	S0	.227065	-.000682	12/19/03 10:28:33
Co	228.616	S1	S0	1.20706	.000582	12/19/03 10:28:33
Cu	324.753	S1	S0	1.32751	-.001310	12/19/03 10:28:33
Fe	271.441	S1	S0	6.82982	.008932	12/19/03 10:28:33
Pb/1	220.351	S1	S0	.165711	-.007666	12/19/03 10:28:33
Pb/2	220.352	S1	S0	.106015	.001157	12/19/03 10:28:33
Pb	283.306	S1	S0	6.50292	.001944	12/19/03 10:28:33
Mg	279.078	S1	S0	2.89156	-.002720	12/19/03 10:28:33
Mn	257.610	S1	S0	4.21557	.000000	12/19/03 10:28:33
K_	766.491	S1	S0	1.44285	-.052201	12/19/03 10:28:33
Ni	231.604	S1	S0	1.66060	-.000570	12/19/03 10:28:33
Se/1	196.021	S1	S0	.684621	.009587	12/19/03 10:28:33
Se/2	196.022	S1	S0	.720558	-.008949	12/19/03 10:28:33
Ag	328.068	S1	S0	.387118	.000151	12/19/03 10:28:33
Na	330.232	S1	S0	1.38230	-.000698	12/19/03 10:28:33
Tl	190.864	S1	S0	.521774	.011998	12/19/03 10:28:33
V_	292.402	S1	S0	2.82055	-.000842	12/19/03 10:28:33
Zn	213.856	S1	S0	1.13161	-.000156	12/19/03 10:28:33
B_	249.678	S1	S0	1.82888	-.010031	12/19/03 10:28:33
Mo	202.030	S1	S0	1.80734	.000622	12/19/03 10:28:33
Li	670.784	S1	S0	.392552	-.000027	12/19/03 10:28:33
Sr	421.552	S1	S0	.887962	-.000061	12/19/03 10:28:33
Ti	334.941	S1	S0	1.71298	.000983	12/19/03 10:28:33
Sn	189.989	S1	S0	3.06271	.000282	12/19/03 10:28:33
Si	288.158	S1	S0	3.86531	-.072214	12/19/03 10:28:33

Analysis Report QC Standard 12/19/03 10:37:23 AM page 1

Method: TRA10103 Sample Name: S2 Operator: KGS
Run Time: 12/19/03 10:33:01
Comment:
Mode: CONC Corr. Factor: 1

Elem	Pb	Se	Sb	Al	Sb\1	Sb\2	As
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.25767	.25109	.24626	12.363	.24580	.24717	.25136
SDev	.00124	.00181	.00135	.015	.00044	.00329	.00078
%RSD	.48252	.72108	.54934	.12316	.18019	1.3292	.31193
#1	.25909	.25317	.24625	12.349	.24558	.24758	.25075
#2	.25714	.25019	.24762	12.362	.24631	.25023	.25109
#3	.25678	.24991	.24491	12.379	.24552	.24369	.25224
Errors	QC Pass	QC Pass	QC Pass	QC Pass	NOCHECK	NOCHECK	QC Pass
Value	.25000	.25000	.25000	12.500			.25000
Range	10.500	10.500	10.500	10.500			10.500

Elem	Ba	Be	Cd	Ca	Cr	Co	Cu
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.0034	1.0371	.25930	25.620	1.0251	1.0332	.99028
SDev	.0027	.0007	.00055	.058	.0015	.0010	.00268
%RSD	.26643	.06573	.21103	.22580	.14959	.09782	.27035
#1	1.0004	1.0379	.25990	25.686	1.0268	1.0344	.98719
#2	1.0048	1.0368	.25882	25.578	1.0238	1.0324	.99177
#3	1.0051	1.0367	.25918	25.596	1.0247	1.0329	.99189
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1.0000	1.0000	.25000	25.000	1.0000	1.0000	1.0000
Range	10.500	10.500	10.500	10.500	10.500	10.500	10.500

Elem	Fe	Pb/1	Pb/2	Mg	Mn	K_	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	12.811	.25970	.25666	24.645	1.0302	25.138	1.0389
SDev	.011	.00229	.00094	.029	.0006	.046	.0011
%RSD	.08338	.88158	.36656	.11951	.05813	.18391	.10808
#1	12.815	.26193	.25767	24.679	1.0309	25.085	1.0402
#2	12.799	.25981	.25581	24.626	1.0298	25.156	1.0383
#3	12.819	.25736	.25649	24.630	1.0300	25.172	1.0382
Errors	QC Pass	NOCHECK	NOCHECK	QC Pass	QC Pass	QC Pass	QC Pass
Value	12.500			25.000	1.0000	25.000	1.0000
Range	10.500			10.500	10.500	10.500	10.500

Elem	Se/1	Se/2	Ag	Na	Tl	V_	Zn
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.25214	.25056	.48867	24.166	.50745	1.0187	1.0573
SDev	.00129	.00237	.00134	.044	.00247	.0020	.0008
%RSD	.51148	.94693	.27513	.18167	.48598	.19595	.07322
#1	.25315	.25319	.48715	24.117	.50919	1.0206	1.0576
#2	.25069	.24994	.48972	24.201	.50463	1.0166	1.0578
#3	.25259	.24857	.48914	24.179	.50854	1.0189	1.0564
Errors	NOCHECK	NOCHECK	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass

Value			.50000	25.000	.50000	1.0000	1.0000
Range			10.500	10.500	10.500	10.500	10.500

Elem	B_	Mo	Li	Sr	Ti	Sn	Si
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.98238	1.0216	1.0133	1.0247	1.0060	1.0183	1.0138
SDev	.00441	.0022	.0025	.0016	.0006	.0057	.0005
%RSD	.44888	.21142	.24302	.15144	.05962	.55754	.04750
#1	.97753	1.0236	1.0105	1.0229	1.0053	1.0244	1.0143
#2	.98344	1.0218	1.0151	1.0255	1.0064	1.0132	1.0134
#3	.98615	1.0193	1.0143	1.0256	1.0062	1.0172	1.0137
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Range	10.500	10.500	10.500	10.500	10.500	10.500	10.500

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	14532	--	--	--	--	--	--
SDev	66.80951	--	--	--	--	--	--
%RSD	.4597497	--	--	--	--	--	--
#1	14472	--	--	--	--	--	--
#2	14520	--	--	--	--	--	--
#3	14604	--	--	--	--	--	--

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Method: TRA10103 Sample Name: ICV Operator: KGS
Run Time: 12/19/03 10:37:28
Comment:
Mode: CONC Corr. Factor: 1

Elem	Pb	Se	Sb	Al	Sb\1	Sb\2	As
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.25890	.25268	.24801	12.435	.24838	.24727	.25262
SDev	.00137	.00146	.00089	.049	.00181	.00122	.00322
%RSD	.52922	.57906	.35748	.39160	.72992	.49398	1.2752
#1	.25887	.25120	.24720	12.379	.24646	.24867	.25051
#2	.26029	.25412	.24896	12.455	.25007	.24673	.25103
#3	.25755	.25272	.24788	12.470	.24861	.24641	.25633
Errors	QC Pass	QC Pass	QC Pass	QC Pass	NOCHECK	NOCHECK	QC Pass
Value	.25000	.25000	.25000	12.500			.25000
Range	10.500	10.500	10.500	10.500			10.500

Elem	Ba	Be	Cd	Ca	Cr	Co	Cu
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.0062	1.0365	.26096	25.823	1.0308	1.0431	.99120
SDev	.0036	.0029	.00064	.104	.0032	.0041	.00478
%RSD	.36190	.28220	.24625	.40117	.31128	.39264	.48185
#1	1.0028	1.0346	.26069	25.799	1.0296	1.0406	.98710
#2	1.0058	1.0399	.26169	25.937	1.0344	1.0478	.99007
#3	1.0100	1.0351	.26049	25.734	1.0283	1.0409	.99644
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1.0000	1.0000	.25000	25.000	1.0000	1.0000	1.0000
Range	10.500	10.500	10.500	10.500	10.500	10.500	10.500

Elem	Fe	Pb/1	Pb/2	Mg	Mn	K_	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	12.916	.25972	.25850	24.842	1.0370	25.331	1.0460
SDev	.045	.00198	.00110	.087	.0030	.091	.0079
%RSD	.34686	.76295	.42702	.34858	.28594	.36074	.75188
#1	12.931	.25921	.25870	24.796	1.0349	25.232	1.0409
#2	12.952	.26191	.25948	24.942	1.0404	25.348	1.0550
#3	12.866	.25804	.25730	24.789	1.0357	25.413	1.0420
Errors	QC Pass	NOCHECK	NOCHECK	QC Pass	QC Pass	QC Pass	QC Pass
Value	12.500			25.000	1.0000	25.000	1.0000
Range	10.500			10.500	10.500	10.500	10.500

Elem	Se/1	Se/2	Ag	Na	Tl	V_	Zn
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.25585	.25110	.48892	24.349	.51067	1.0261	1.0622
SDev	.00307	.00323	.00128	.066	.00253	.0027	.0027
%RSD	1.2016	1.2879	.26286	.27285	.49618	.26151	.25730
#1	.25886	.24737	.48747	24.276	.50904	1.0237	1.0598
#2	.25598	.25320	.48935	24.368	.51359	1.0290	1.0651
#3	.25272	.25272	.48993	24.405	.50938	1.0255	1.0616
Errors	NOCHECK	NOCHECK	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass

Value			.50000	25.000	.50000	1.0000	1.0000
Range			10.500	10.500	10.500	10.500	10.500
Elem	B_	Mo	Li	Sr	Ti	Sn	Si
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.97711	1.0171	1.0112	1.0279	1.0049	1.0141	1.0249
SDev	.00218	.0029	.0041	.0029	.0026	.0051	.0044
%RSD	.22275	.28931	.40314	.27887	.26332	.50387	.42797
#1	.97509	1.0147	1.0072	1.0247	1.0019	1.0183	1.0202
#2	.97942	1.0204	1.0109	1.0286	1.0071	1.0157	1.0256
#3	.97684	1.0162	1.0154	1.0303	1.0055	1.0084	1.0289
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Range	10.500	10.500	10.500	10.500	10.500	10.500	10.500
IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	14502	--	--	--	--	--	--
SDev	32.93441	--	--	--	--	--	--
%RSD	.2270995	--	--	--	--	--	--
#1	14489	--	--	--	--	--	--
#2	14478	--	--	--	--	--	--
#3	14540	--	--	--	--	--	--

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Method: TRA10103 Sample Name: ICB Operator: KGS
Run Time: 12/19/03 10:41:55
Comment:
Mode: CONC Corr. Factor: 1

Elem	Pb	Se	Sb	Al	Sb\1	Sb\2	As
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00119	-.00022	.00007	.00151	.00001	.00018	.00076
SDev	.00088	.00148	.00048	.00820	.00034	.00085	.00008
%RSD	73.758	668.89	718.26	544.74	2664.2	483.97	9.9739
#1	.00221	-.00066	-.00025	-.00791	-.00008	-.00059	.00081
#2	.00078	.00143	.00062	.00534	.00038	.00109	.00067
#3	.00060	-.00143	-.00017	.00709	-.00026	.00003	.00079
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass
High	.00305	.00505	.06005	.20005			.01005
Low	-.00305	-.00505	-.06005	-.20005			-.01005

Elem	Ba	Be	Cd	Ca	Cr	Co	Cu
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00005	.00011	-.00008	-.00036	-.00009	-.00033	-.00019
SDev	.00006	.00015	.00005	.00003	.00031	.00017	.00014
%RSD	109.69	131.33	58.738	8.1956	351.52	50.665	73.945
#1	-.00002	.00028	-.00005	-.00039	-.00031	-.00049	-.00022
#2	-.00002	.00000	-.00013	-.00037	-.00022	-.00016	-.00004
#3	-.00012	.00006	-.00006	-.00033	.00026	-.00032	-.00031
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.20005	.00505	.00505	5.0000	.01005	.05005	.02505
Low	-.20005	-.00505	-.00505	-5.0000	-.01005	-.05005	-.02505

Elem	Fe	Pb/1	Pb/2	Mg	Mn	K_	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.01053	.00198	.00080	-.00285	.00010	.00131	.00045
SDev	.00728	.00033	.00116	.00168	.00017	.00085	.00012
%RSD	69.164	16.721	144.75	59.027	173.21	65.311	25.462
#1	-.01866	.00233	.00214	-.00351	.00029	.00032	.00045
#2	-.00463	.00192	.00021	-.00094	.00000	.00179	.00057
#3	-.00829	.00168	.00006	-.00410	.00000	.00181	.00034
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass
High	.10005			5.0000	.01505	5.0000	.04005
Low	-.10005			-5.0000	-.01505	-5.0000	-.04005

Elem	Se/1	Se/2	Ag	Na	Tl	V_	Zn
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00432	-.00249	-.00011	-.37981	.00218	-.00045	.00005
SDev	.00215	.00124	.00042	.09932	.00175	.00051	.00012
%RSD	49.677	49.967	400.60	26.151	79.988	112.66	241.12
#1	.00447	-.00322	-.00022	-.28262	.00395	-.00064	.00008
#2	.00640	-.00105	-.00046	-.48114	.00214	.00013	-.00008
#3	.00211	-.00320	.00036	-.37565	.00046	-.00084	.00015
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass

High			.01005	5.0000	.01005	.05005	.02005
Low			-.01005	-5.0000	-.01005	-.05005	-.02005

Elem	B_	Mo	Li	Sr	Ti	Sn	Si
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00182	.00124	.00038	.00002	-.00011	.00035	-.00264
SDev	.00054	.00129	.00004	.00003	.00018	.00175	.00292
%RSD	29.626	104.11	10.887	176.70	161.03	496.59	110.45
#1	.00126	.00273	.00043	.00006	-.00031	.00175	-.00595
#2	.00187	.00062	.00038	-.00000	.00004	-.00161	-.00153
#3	.00233	.00038	.00035	-.00000	-.00007	.00091	-.00044
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.05005	.04005	.00505	.00505	.00505	.10005	.10005
Low	-.05005	-.04005	-.00505	-.00505	-.00505	-.10005	-.10005
IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	14611	--	--	--	--	--	--
SDev	34.24793	--	--	--	--	--	--
%RSD	.2344004	--	--	--	--	--	--
#1	14583	--	--	--	--	--	--
#2	14600	--	--	--	--	--	--
#3	14649	--	--	--	--	--	--

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Method: TRA10103 Sample Name: CRI1 Operator: KGS
Run Time: 12/19/03 10:46:22
Comment:
Mode: CONC Corr. Factor: 1

Elem	Pb	Se	Sb	Al	Sb\1	Sb\2	As
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00549	.01012	.01854	.39178	.01759	.02045	.02150
SDev	.00077	.00109	.00097	.00261	.00154	.00026	.00069
%RSD	14.077	10.774	5.2256	.66538	8.7351	1.2564	3.2112
#1	.00498	.00902	.01932	.39384	.01891	.02015	.02071
#2	.00638	.01120	.01885	.38885	.01796	.02062	.02195
#3	.00511	.01013	.01746	.39266	.01590	.02057	.02185
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass
High	.00902	.01504	.03008	.60160			.03008
Low	.00298	.00496	.00992	.19840			.00992

Elem	Ba	Be	Cd	Ca	Cr	Co	Cu
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.01989	.01036	.00382	10.043	.01001	.10297	.04638
SDev	.00015	.00004	.00010	.029	.00023	.00064	.00039
%RSD	.76118	.38922	2.5072	.28666	2.3152	.62380	.84148
#1	.01994	.01032	.00388	10.027	.00999	.10288	.04642
#2	.02000	.01038	.00386	10.077	.01025	.10366	.04676
#3	.01972	.01039	.00371	10.027	.00978	.10238	.04598
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.03002	.01504	.00602	15.040	.01504	.15040	.07520
Low	.00992	.00496	.00198	4.9600	.00496	.04960	.02480

Elem	Fe	Pb/1	Pb/2	Mg	Mn	K_	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.19563	.00593	.00527	9.8375	.03093	8.3082	.08205
SDev	.00558	.00144	.00066	.0359	.00011	.0110	.00070
%RSD	2.8514	24.246	12.474	.36478	.35451	.13224	.85485
#1	.19835	.00441	.00526	9.8086	.03089	8.3131	.08279
#2	.19932	.00727	.00593	9.8777	.03105	8.3158	.08139
#3	.18921	.00610	.00462	9.8262	.03084	8.2956	.08197
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass
High	.30080			15.040	.04512	15.040	.12032
Low	.09920			4.9600	.01488	4.9600	.03968

Elem	Se/1	Se/2	Ag	Na	Tl	V_	Zn
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.01464	.00786	.00969	9.7173	.02176	.10128	.04427
SDev	.00177	.00110	.00009	.1036	.00368	.00064	.00032
%RSD	12.055	14.021	.89567	1.0663	16.891	.62800	.73512
#1	.01263	.00721	.00963	9.7729	.02124	.10167	.04401
#2	.01534	.00913	.00979	9.7812	.02567	.10162	.04464
#3	.01595	.00723	.00964	9.5978	.01837	.10054	.04417
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass

High			.01504	15.040	.03008	.15040	.06016
Low			.00496	4.9600	.00992	.04960	.01984

Elem	B_	Mo	Li	Sr	Ti	Sn	Si
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.39994	.08129	.10418	.10452	.10383	.20292	1.0627
SDev	.00127	.00057	.00012	.00015	.00035	.00148	.0013
%RSD	.31856	.70610	.11785	.14548	.33670	.72999	.11874
#1	.39928	.08083	.10404	.10446	.10386	.20121	1.0622
#2	.40141	.08112	.10425	.10469	.10416	.20373	1.0641
#3	.39912	.08193	.10425	.10441	.10346	.20383	1.0617
Errors	NOCHECK	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High		.12032					
Low		.03968					

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	14585	--	--	--	--	--	--
SDev	51.62358	--	--	--	--	--	--
%RSD	.3539510	--	--	--	--	--	--
#1	14602	--	--	--	--	--	--
#2	14527	--	--	--	--	--	--
#3	14626	--	--	--	--	--	--

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Method: TRA10103 Sample Name: ICSA1 Operator: KGS
Run Time: 12/19/03 10:50:48
Comment:
Mode: CONC Corr. Factor: 1

Elem	Pb	Se	Sb	Al	Sb\1	Sb\2	As
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00112	.00595	.00523	482.43	.00560	.00449	.00378
SDev	.00184	.00113	.00137	5.64	.00108	.00482	.00190
%RSD	164.56	18.933	26.237	1.1687	19.337	107.35	50.296
#1	-.00045	.00702	.00679	485.40	.00573	.00892	.00159
#2	-.00321	.00477	.00471	485.96	.00446	.00521	.00496
#3	.00029	.00606	.00420	475.92	.00662	-.00065	.00479
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass
High	.00600	.01000	.06000	602.45			.02000
Low	-.00600	-.01000	-.06000	397.55			-.02000

Elem	Ba	Be	Cd	Ca	Cr	Co	Cu
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00174	-.00063	-.00322	498.34	-.00064	.00028	.00656
SDev	.00008	.00005	.00007	9.05	.00090	.00006	.00028
%RSD	4.4975	7.5522	2.1754	1.8163	140.10	19.800	4.3056
#1	.00181	-.00069	-.00315	502.41	-.00002	.00022	.00675
#2	.00176	-.00059	-.00329	504.65	-.00024	.00031	.00623
#3	.00166	-.00062	-.00322	487.97	-.00167	.00031	.00669
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.05000	.01000	.01000	602.45	.02000	.05000	.02500
Low	-.05000	-.01000	-.01000	397.55	-.02000	-.05000	-.02500

Elem	Fe	Pb/1	Pb/2	Mg	Mn	K_	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	202.39	.02549	-.01441	550.40	-.00064	.60273	.00108
SDev	3.02	.01072	.00763	8.53	.00031	.01096	.00089
%RSD	1.4899	42.070	52.925	1.5501	49.038	1.8178	82.187
#1	203.81	.03053	-.01591	554.29	-.00032	.59914	.00160
#2	204.43	.03277	-.02117	556.28	-.00065	.59402	.00160
#3	198.93	.01318	-.00614	540.61	-.00095	.61503	.00006
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	LC Pass	NOCHECK	LC Pass
High	240.98			602.45	.01500		.04000
Low	159.02			397.55	-.01500		-.04000

Elem	Se/1	Se/2	Ag	Na	Tl	V_	Zn
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00350	.00717	-.00109	-.44213	.00143	.00282	.00378
SDev	.00494	.00323	.00075	.19307	.00154	.00025	.00023
%RSD	141.17	45.030	68.735	43.667	107.69	8.8950	6.0599
#1	.00587	.00759	-.00080	-.32179	-.00024	.00306	.00357
#2	.00681	.00375	-.00053	-.33978	.00174	.00284	.00375
#3	-.00218	.01017	-.00195	-.66482	.00279	.00256	.00403
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	NOCHECK	LC Pass

High			.02000	5000.0	.02000		.02000
Low			-.02000	-5000.0	-.02000		-.02000

Elem	B_	Mo	Li	Sr	Ti	Sn	Si
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00085	-.00099	.00068	-.01984	-.00215	.00069	-.03118
SDev	.00079	.00029	.00003	.00042	.00003	.00304	.00188
%RSD	92.073	29.831	3.6721	2.1069	1.5990	438.03	6.0337
#1	-.00005	-.00132	.00070	-.02002	-.00218	.00169	-.02973
#2	.00135	-.00077	.00070	-.02015	-.00217	.00310	-.03330
#3	.00127	-.00088	.00065	-.01937	-.00211	-.00272	-.03049
Errors	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High		.04000	.05000	.05000	.05000	.10000	.50000
Low		-.04000	-.05000	-.05000	-.05000	-.10000	-.50000

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	13103	--	--	--	--	--	--
SDev	146.2717	--	--	--	--	--	--
%RSD	1.116307	--	--	--	--	--	--
#1	13015	--	--	--	--	--	--
#2	13023	--	--	--	--	--	--
#3	13272	--	--	--	--	--	--

Analysis Report 12/19/03 10:59:36 AM page 1

Method: TRA10103 Sample Name: ICSAB1 Operator: KGS
Run Time: 12/19/03 10:55:14
Comment:
Mode: CONC Corr. Factor: 1

Elem	Pb	Se	Sb	Al	Sb\1	Sb\2	As
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.04743	.05333	.62401	477.17	.62573	.62056	.10773
SDev	.00153	.00240	.01633	11.08	.01773	.01369	.00333
%RSD	3.2145	4.5049	2.6165	2.3222	2.8341	2.2056	3.0947
#1	.04716	.05423	.62974	482.51	.63092	.62738	.11036
#2	.04908	.05515	.63670	484.57	.64028	.62951	.10884
#3	.04607	.05061	.60559	464.43	.60598	.60481	.10398
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass
High	.06024	.06024	.72294	602.45			.12049
Low	.03976	.03976	.47706	397.55			.07951

Elem	Ba	Be	Cd	Ca	Cr	Co	Cu
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.53555	.51702	.97117	487.07	.49889	.49477	.55385
SDev	.01237	.01208	.02393	11.52	.01169	.01133	.01257
%RSD	2.3094	2.3356	2.4641	2.3653	2.3437	2.2909	2.2698
#1	.54174	.52303	.98341	492.70	.50465	.50027	.56036
#2	.54360	.52492	.98651	494.69	.50658	.50231	.56183
#3	.52131	.50312	.94360	473.82	.48544	.48174	.53936
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.60245	.60245	1.2049	602.45	.60245	.60245	.60245
Low	.39755	.39755	.79510	397.55	.39755	.39755	.39755

Elem	Fe	Pb/1	Pb/2	Mg	Mn	K_	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	198.94	.06661	.03786	539.64	.51307	9.8034	.97115
SDev	4.74	.00529	.00068	12.77	.01206	.2679	.02058
%RSD	2.3804	7.9438	1.8052	2.3668	2.3498	2.7325	2.1187
#1	201.20	.06425	.03862	545.79	.51914	9.9391	.98330
#2	202.12	.07268	.03730	548.17	.52088	9.9762	.98276
#3	193.49	.06291	.03766	524.95	.49918	9.4948	.94739
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass
High	240.98			602.45	.60245	12.049	1.2049
Low	159.02			397.55	.39755	7.9510	.79510

Elem	Se/1	Se/2	Ag	Na	Tl	V_	Zn
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.05091	.05454	.21558	11.415	.09791	.51978	1.0678
SDev	.00342	.00297	.00484	.192	.00358	.01250	.0242
%RSD	6.7181	5.4396	2.2463	1.6845	3.6559	2.4054	2.2683
#1	.05470	.05399	.21820	11.452	.10032	.52655	1.0793
#2	.04997	.05774	.21854	11.587	.09963	.52744	1.0841
#3	.04806	.05188	.20999	11.207	.09380	.50535	1.0400
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass

High			.24098	12.049	.12049	.60245	1.2049
Low			.15902	7.9510	.07951	.39755	.79510

Elem	B_	Mo	Li	Sr	Ti	Sn	Si
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.0292	1.0029	1.1659	1.0618	1.0226	.98901	.99218
SDev	.0236	.0227	.0264	.0248	.0238	.02277	.02497
%RSD	2.2884	2.2619	2.2602	2.3347	2.3300	2.3026	2.5167
#1	1.0397	1.0146	1.1794	1.0746	1.0347	.99959	1.0066
#2	1.0457	1.0174	1.1828	1.0775	1.0379	1.0046	1.0066
#3	1.0022	.97678	1.1355	1.0332	.99515	.96287	.96335
Errors	NOCHECK	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High		1.2049					
Low		.79510					

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	13205	--	--	--	--	--	--
SDev	280.9088	--	--	--	--	--	--
%RSD	2.127225	--	--	--	--	--	--
#1	13065	--	--	--	--	--	--
#2	13022	--	--	--	--	--	--
#3	13529	--	--	--	--	--	--

Analysis Report QC Standard 12/19/03 11:04:03 AM page 1

Method: TRA10103 Sample Name: CCV1 Operator: KGS
Run Time: 12/19/03 10:59:40
Comment:
Mode: CONC Corr. Factor: 1

Elem	Pb	Se	Sb	Al	Sb\1	Sb\2	As
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.50786	.50083	.49936	24.788	.49914	.49979	.50205
SDev	.00296	.00135	.00308	.173	.00367	.00190	.00416
%RSD	.58244	.27034	.61651	.69737	.73451	.38069	.82854
#1	.51122	.50163	.50276	24.987	.50319	.50191	.50684
#2	.50564	.49927	.49854	24.671	.49820	.49921	.49938
#3	.50672	.50161	.49677	24.707	.49604	.49823	.49993
Errors	QC Pass	QC Pass	QC Pass	QC Pass	NOCHECK	NOCHECK	QC Pass
Value	.50000	.50000	.50000	25.000			.50000
Range	10.500	10.500	10.500	10.500			10.500

Elem	Ba	Be	Cd	Ca	Cr	Co	Cu
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.0138	2.0587	.50885	50.628	2.0260	2.0299	1.9882
SDev	.0126	.0130	.00355	.321	.0127	.0122	.0139
%RSD	.62613	.63236	.69730	.63487	.62609	.60009	.69874
#1	2.0283	2.0737	.51293	50.996	2.0405	2.0439	2.0043
#2	2.0081	2.0499	.50655	50.406	2.0170	2.0214	1.9800
#3	2.0051	2.0526	.50706	50.481	2.0205	2.0245	1.9804
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	2.0000	2.0000	.50000	50.000	2.0000	2.0000	2.0000
Range	10.500	10.500	10.500	10.500	10.500	10.500	10.500

Elem	Fe	Pb/1	Pb/2	Mg	Mn	K_	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	25.289	.50774	.50792	49.262	2.0346	52.444	2.0359
SDev	.165	.00233	.00332	.327	.0129	.337	.0134
%RSD	.65121	.45944	.65416	.66387	.63339	.64327	.65855
#1	25.476	.51043	.51161	49.634	2.0494	52.834	2.0511
#2	25.163	.50658	.50518	49.019	2.0261	52.240	2.0310
#3	25.230	.50622	.50697	49.133	2.0283	52.260	2.0257
Errors	QC Pass	NOCHECK	NOCHECK	QC Pass	QC Pass	QC Pass	QC Pass
Value	25.000			50.000	2.0000	50.000	2.0000
Range	10.500			10.500	10.500	10.500	10.500

Elem	Se/1	Se/2	Ag	Na	Tl	V_	Zn
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.50065	.50093	.99195	49.137	1.0121	2.0243	2.0700
SDev	.00338	.00307	.00587	.356	.0009	.0133	.0133
%RSD	.67546	.61277	.59171	.72545	.08984	.65889	.64392
#1	.49680	.50404	.99869	49.548	1.0132	2.0396	2.0852
#2	.50202	.49790	.98916	48.944	1.0118	2.0158	2.0601
#3	.50313	.50085	.98799	48.918	1.0115	2.0174	2.0647
Errors	NOCHECK	NOCHECK	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass

Value			1.0000	50.000	1.0000	2.0000	2.0000
Range			10.500	10.500	10.500	10.500	10.500
Elem	B_	Mo	Li	Sr	Ti	Sn	Si
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.9834	2.0240	2.0338	2.0394	2.0204	2.0223	1.9944
SDev	.0166	.0119	.0126	.0130	.0134	.0151	.0148
%RSD	.83805	.58925	.61769	.63838	.66156	.74577	.74440
#1	2.0023	2.0375	2.0482	2.0544	2.0359	2.0393	2.0115
#2	1.9766	2.0149	2.0255	2.0324	2.0121	2.0107	1.9876
#3	1.9712	2.0197	2.0276	2.0313	2.0133	2.0169	1.9843
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000
Range	10.500	10.500	10.500	10.500	10.500	10.500	10.500
IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	14309	--	--	--	--	--	--
SDev	116.3883	--	--	--	--	--	--
%RSD	.8134043	--	--	--	--	--	--
#1	14175	--	--	--	--	--	--
#2	14369	--	--	--	--	--	--
#3	14383	--	--	--	--	--	--

Analysis Report 12/19/03 11:08:29 AM page 1

Method: TRA10103 Sample Name: CCB1 Operator: KGS
Run Time: 12/19/03 11:04:07
Comment:
Mode: CONC Corr. Factor: 1

Elem	Pb	Se	Sb	Al	Sb\1	Sb\2	As
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00065	-.00038	-.00170	-.00219	-.00305	.00100	.00051
SDev	.00064	.00118	.00084	.00445	.00154	.00148	.00111
%RSD	98.851	308.38	49.580	203.06	50.554	148.34	216.73
#1	.00092	-.00001	-.00148	.00294	-.00187	-.00070	.00164
#2	-.00008	.00056	-.00099	-.00500	-.00248	.00200	.00047
#3	.00110	-.00170	-.00263	-.00452	-.00479	.00169	-.00058
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass
High	.00305	.00505	.06005	.20005			.01005
Low	-.00305	-.00505	-.06005	-.20005			-.01005

Elem	Ba	Be	Cd	Ca	Cr	Co	Cu
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00010	.00016	.00003	.00055	-.00013	-.00062	-.00065
SDev	.00007	.00003	.00007	.00270	.00038	.00021	.00050
%RSD	72.031	14.991	195.73	487.23	294.53	33.035	77.168
#1	-.00012	.00019	.00001	.00358	.00008	-.00065	-.00013
#2	-.00002	.00015	-.00002	-.00032	-.00057	-.00041	-.00068
#3	-.00017	.00016	.00011	-.00160	.00011	-.00082	-.00113
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.20005	.00505	.00505	5.0000	.01005	.05005	.02505
Low	-.20005	-.00505	-.00505	-5.0000	-.01005	-.05005	-.02505

Elem	Fe	Pb/1	Pb/2	Mg	Mn	K_	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.01770	.00370	-.00088	-.00397	.00000	.00124	.00015
SDev	.00496	.00333	.00166	.00428	.00000	.00015	.00068
%RSD	28.018	89.825	188.77	107.98	.00000	12.327	465.89
#1	-.01198	.00071	.00103	.00063	.00000	.00121	.00079
#2	-.02036	.00311	-.00168	-.00469	.00000	.00141	-.00057
#3	-.02076	.00729	-.00198	-.00784	.00000	.00111	.00022
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass
High	.10005			5.0000	.01505	5.0000	.04005
Low	-.10005			-5.0000	-.01505	-5.0000	-.04005

Elem	Se/1	Se/2	Ag	Na	Tl	V_	Zn
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00350	-.00232	.00006	-.38741	.00291	-.00084	.00005
SDev	.00198	.00207	.00031	.10991	.00138	.00038	.00004
%RSD	56.542	89.216	483.70	28.371	47.319	45.757	80.335
#1	.00127	-.00065	-.00009	-.35655	.00335	-.00084	.00007
#2	.00506	-.00168	-.00014	-.50945	.00137	-.00122	.00000
#3	.00418	-.00464	.00041	-.29622	.00401	-.00046	.00008
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass

High			.01005	5.0000	.01005	.05005	.02005
Low			-.01005	-5.0000	-.01005	-.05005	-.02005

Elem	B_	Mo	Li	Sr	Ti	Sn	Si
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00048	.00227	.00022	-.00002	-.00011	.00181	-.00337
SDev	.00032	.00105	.00004	.00003	.00007	.00206	.00099
%RSD	66.851	46.309	18.455	167.56	62.698	113.64	29.421
#1	.00045	.00333	.00027	-.00000	-.00007	-.00055	-.00234
#2	.00082	.00222	.00021	-.00000	-.00018	.00279	-.00344
#3	.00018	.00124	.00019	-.00006	-.00007	.00320	-.00432
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.05005	.04005	.00505	.00505	.00505	.10005	.10005
Low	-.05005	-.04005	-.00505	-.00505	-.00505	-.10005	-.10005

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	14672	--	--	--	--	--	--
SDev	14.88997	--	--	--	--	--	--
%RSD	.1014822	--	--	--	--	--	--
#1	14660	--	--	--	--	--	--
#2	14668	--	--	--	--	--	--
#3	14689	--	--	--	--	--	--

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Method: TRA10103 Sample Name: F6X9WB Operator: KGS
Run Time: 12/19/03 11:08:33
Comment:
Mode: CONC Corr. Factor: 1

Elem	Pb	Se	Sb	Al	Sb\1	Sb\2	As
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00031	.00033	.00098	.00875	.00106	.00080	.00035
SDev	.00072	.00034	.00095	.00170	.00107	.00096	.00060
%RSD	227.63	104.85	97.349	19.452	100.25	120.57	170.18
#1	.00043	.00011	.00134	.00709	.00116	.00170	.00030
#2	-.00045	.00015	-.00010	.00867	-.00005	-.00021	.00098
#3	.00096	.00072	.00169	.01049	.00208	.00091	-.00022
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass
High	.00305	.00505	.06005	.20005			.01005
Low	-.00305	-.00505	-.06005	-.20005			-.01005

Elem	Ba	Be	Cd	Ca	Cr	Co	Cu
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00007	-.00002	-.00001	.00109	-.00020	.00019	-.00036
SDev	.00005	.00009	.00006	.00040	.00028	.00013	.00019
%RSD	75.462	381.00	663.99	36.933	135.77	64.882	52.323
#1	-.00006	.00007	-.00000	.00082	-.00016	.00033	-.00030
#2	-.00002	-.00011	.00005	.00155	.00005	.00017	-.00058
#3	-.00012	-.00003	-.00007	.00089	-.00050	.00008	-.00022
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.20005	.00505	.00505	5.0000	.01005	.05005	.02505
Low	-.20005	-.00505	-.00505	-5.0000	-.01005	-.05005	-.02505

Elem	Fe	Pb/1	Pb/2	Mg	Mn	K_	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00362	-.00140	.00117	.00219	.00010	.00087	-.00026
SDev	.00467	.00253	.00203	.00031	.00017	.00058	.00086
%RSD	128.86	180.99	173.42	14.074	173.21	66.392	326.97
#1	.00087	.00089	.00020	.00228	.00029	.00020	.00058
#2	-.00329	-.00097	-.00020	.00245	.00000	.00121	-.00023
#3	-.00844	-.00411	.00350	.00185	.00000	.00120	-.00114
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass
High	.10005			5.0000	.01505	5.0000	.04005
Low	-.10005			-5.0000	-.01505	-5.0000	-.04005

Elem	Se/1	Se/2	Ag	Na	Tl	V_	Zn
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00177	-.00039	.00005	-.38696	.00239	-.00032	.00034
SDev	.00151	.00046	.00040	.11345	.00020	.00011	.00016
%RSD	85.201	116.48	876.26	29.318	8.2301	35.064	48.394
#1	.00186	-.00077	.00034	-.29440	.00221	-.00025	.00015
#2	.00022	.00012	.00020	-.35296	.00260	-.00026	.00047
#3	.00323	-.00053	-.00041	-.51353	.00235	-.00045	.00040
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass

High			.01005	5.0000	.01005	.05005	.02005
Low			-.01005	-5.0000	-.01005	-.05005	-.02005

Elem	B_	Mo	Li	Sr	Ti	Sn	Si
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00071	.00087	.00010	.00002	.00008	-.00049	.00085
SDev	.00096	.00025	.00002	.00004	.00006	.00196	.00098
%RSD	136.67	28.511	15.962	174.57	83.098	396.51	115.65
#1	-.00129	.00087	.00011	.00006	.00015	-.00184	.00003
#2	.00041	.00062	.00008	-.00000	.00004	.00176	.00194
#3	-.00123	.00112	.00011	-.00000	.00004	-.00140	.00058
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.05005	.04005	.00505	.00505	.00505	.10005	.10005
Low	-.05005	-.04005	-.00505	-.00505	-.00505	-.10005	-.10005

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	14513	--	--	--	--	--	--
SDev	57.59739	--	--	--	--	--	--
%RSD	.3968774	--	--	--	--	--	--
#1	14446	--	--	--	--	--	--
#2	14543	--	--	--	--	--	--
#3	14549	--	--	--	--	--	--

Analysis Report 12/19/03 11:17:21 AM page 1

Method: TRA10103 Sample Name: F6X9WC Operator: KGS
Run Time: 12/19/03 11:12:59
Comment:
Mode: CONC Corr. Factor: 1

Elem	Pb	Se	Sb	Al	Sb\1	Sb\2	As
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.52106	2.1260	.51392	2.0760	.51372	.51431	2.0467
SDev	.00190	.0133	.00311	.0196	.00351	.00246	.0184
%RSD	.36392	.62656	.60595	.94614	.68247	.47852	.90094
#1	.52238	2.1356	.51668	2.0917	.51707	.51590	2.0608
#2	.51889	2.1108	.51054	2.0540	.51008	.51147	2.0258
#3	.52191	2.1315	.51452	2.0823	.51401	.51555	2.0534
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass
High	.55000	2.2800	.55000	2.2000			2.2000
Low	.45000	1.8000	.45000	1.8000			1.8000

Elem	Ba	Be	Cd	Ca	Cr	Co	Cu
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.0407	.05368	.05238	51.924	.20835	.52389	.25404
SDev	.0140	.00037	.00036	.390	.00210	.00412	.00234
%RSD	.68704	.69759	.69304	.75110	1.0057	.78574	.92239
#1	2.0493	.05392	.05252	52.213	.20986	.52776	.25576
#2	2.0246	.05325	.05197	51.481	.20596	.51957	.25137
#3	2.0483	.05388	.05266	52.080	.20923	.52435	.25499
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	2.2000	.05750	.05500	55.000	.22000	.55000	.27500
Low	1.8000	.04500	.04500	45.000	.17800	.45000	.22000

Elem	Fe	Pb/1	Pb/2	Mg	Mn	K_	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.0223	.52215	.52051	51.016	.52513	53.924	.52029
SDev	.0141	.00277	.00299	.406	.00375	.319	.00413
%RSD	1.3829	.53116	.57503	.79531	.71422	.59121	.79451
#1	1.0370	.51988	.52363	51.310	.52795	54.154	.52307
#2	1.0088	.52134	.51766	50.553	.52087	53.560	.51554
#3	1.0211	.52524	.52024	51.185	.52656	54.058	.52226
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass
High	1.1000			55.000	.55500	55.000	.55000
Low	.90000			45.000	.45000	44.500	.45000

Elem	Se/1	Se/2	Ag	Na	Tl	V_	Zn
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.1157	2.1311	.05081	51.315	2.0681	.52394	.54424
SDev	.0105	.0150	.00023	.309	.0111	.00349	.00372
%RSD	.49403	.70189	.44572	.60235	.53536	.66667	.68338
#1	2.1208	2.1430	.05088	51.464	2.0766	.52686	.54711
#2	2.1037	2.1143	.05056	50.960	2.0556	.52007	.54004
#3	2.1226	2.1360	.05099	51.521	2.0720	.52488	.54558
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass

High			.05500	55.000	2.2000	.55000	.57500
Low			.04500	45.000	1.8000	.45000	.45000

Elem	B_	Mo	Li	Sr	Ti	Sn	Si
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.0095	1.0420	1.0672	1.0450	1.0427	2.0935	10.041
SDev	.0097	.0067	.0070	.0074	.0075	.0206	.077
%RSD	.96371	.64167	.65712	.70795	.71734	.98443	.76850
#1	1.0148	1.0461	1.0723	1.0498	1.0483	2.1097	10.093
#2	.99823	1.0343	1.0592	1.0364	1.0342	2.0703	9.9525
#3	1.0153	1.0457	1.0701	1.0486	1.0456	2.1005	10.078
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	1.1200	1.1000	1.2000	1.2000	1.2000	2.2000	12.000
Low	.89000	.90000	.80000	.80000	.80000	1.8000	8.0000

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	14389	--	--	--	--	--	--
SDev	80.37389	--	--	--	--	--	--
%RSD	.5585886	--	--	--	--	--	--
#1	14325	--	--	--	--	--	--
#2	14479	--	--	--	--	--	--
#3	14363	--	--	--	--	--	--

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Method: TRA10103 Sample Name: F60FHB Operator: KGS
Run Time: 12/19/03 11:17:25
Comment:
Mode: CONC Corr. Factor: 1

Elem	Pb	Se	Sb	Al	Sb\1	Sb\2	As
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00178	-.00003	.00015	.01107	-.00093	.00233	.00203
SDev	.00057	.00042	.00092	.00526	.00189	.00196	.00159
%RSD	31.957	1684.6	605.38	47.549	202.64	84.436	77.953
#1	.00243	-.00015	.00010	.01715	.00006	.00018	.00387
#2	.00141	-.00037	-.00074	.00812	-.00312	.00403	.00117
#3	.00150	.00045	.00109	.00794	.00025	.00277	.00107
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass
High	.00305	.00505	.06005	.20005			.01005
Low	-.00305	-.00505	-.06005	-.20005			-.01005

Elem	Ba	Be	Cd	Ca	Cr	Co	Cu
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00000	-.00002	.00005	.01051	.00077	-.00022	-.00055
SDev	.00008	.00003	.00007	.00265	.00034	.00047	.00046
%RSD	13416.	151.03	133.18	25.185	44.340	213.03	84.230
#1	.00008	-.00004	.00002	.01335	.00115	-.00009	-.00012
#2	-.00007	.00001	.00013	.01007	.00052	-.00074	-.00104
#3	-.00002	-.00001	.00000	.00811	.00063	.00017	-.00049
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.20005	.00505	.00505	5.0000	.01005	.05005	.02505
Low	-.20005	-.00505	-.00505	-5.0000	-.01005	-.05005	-.02505

Elem	Fe	Pb/1	Pb/2	Mg	Mn	K_	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00500	.00493	.00021	.00047	.00019	.00103	.00011
SDev	.00842	.00093	.00041	.00366	.00017	.00017	.00041
%RSD	168.32	18.849	199.11	780.55	86.604	16.778	358.90
#1	-.01041	.00595	.00068	.00367	.00029	.00086	-.00023
#2	-.00930	.00414	.00005	-.00351	.00000	.00120	.00057
#3	.00470	.00469	-.00010	.00125	.00029	.00103	-.00000
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass
High	.10005			5.0000	.01505	5.0000	.04005
Low	-.10005			-5.0000	-.01505	-5.0000	-.04005

Elem	Se/1	Se/2	Ag	Na	Tl	V_	Zn
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00141	-.00074	-.00015	-.35067	.00297	-.00039	.00125
SDev	.00041	.00082	.00040	.05496	.00237	.00012	.00028
%RSD	29.402	111.04	264.42	15.672	79.799	29.914	22.241
#1	.00173	-.00109	-.00004	-.28819	.00169	-.00025	.00157
#2	.00155	-.00133	-.00059	-.39152	.00570	-.00045	.00109
#3	.00094	.00020	.00018	-.37230	.00151	-.00045	.00109
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass

High			.01005	5.0000	.01005	.05005	.02005
Low			-.01005	-5.0000	-.01005	-.05005	-.02005

Elem	B_	Mo	Li	Sr	Ti	Sn	Si
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00179	.00133	.00014	.00004	.00008	.00569	H.16233
SDev	.00050	.00119	.00003	.00003	.00013	.00055	.02264
%RSD	27.637	89.146	20.412	88.204	171.33	9.5919	13.945
#1	.00235	.00249	.00016	.00006	.00015	.00621	H.18570
#2	.00139	.00013	.00013	-.00000	-.00008	.00512	H.16078
#3	.00164	.00137	.00011	.00006	.00016	.00575	H.14050
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC High
High	.05005	.04005	.00505	.00505	.00505	.10005	.10005
Low	-.05005	-.04005	-.00505	-.00505	-.00505	-.10005	-.10005

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	14539	--	--	--	--	--	--
SDev	53.27877	--	--	--	--	--	--
%RSD	.3664599	--	--	--	--	--	--
#1	14477	--	--	--	--	--	--
#2	14566	--	--	--	--	--	--
#3	14573	--	--	--	--	--	--

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Method: TRA10103 Sample Name: F60FHC Operator: KGS
Run Time: 12/19/03 11:21:51
Comment:
Mode: CONC Corr. Factor: 1

Elem	Pb	Se	Sb	Al	Sb\1	Sb\2	As
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.50129	1.9055	.47561	1.9752	.47515	.47651	1.9160
SDev	.00187	.0105	.00505	.0199	.00633	.00327	.0100
%RSD	.37369	.55178	1.0624	1.0093	1.3322	.68699	.52246
#1	.49919	1.8961	.47002	1.9522	.46792	.47424	1.9047
#2	.50189	1.9037	.47693	1.9855	.47788	.47503	1.9201
#3	.50279	1.9169	.47986	1.9879	.47966	.48026	1.9234
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass
High	.55000	2.2000	.55000	2.2000			2.2000
Low	.45000	1.7400	.44000	1.8000			1.7800

Elem	Ba	Be	Cd	Ca	Cr	Co	Cu
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.9701	.05191	.05105	50.442	.20434	.50683	.24744
SDev	.0152	.00031	.00050	.373	.00192	.00394	.00250
%RSD	.77264	.59997	.98155	.73848	.93919	.77834	1.0114
#1	1.9526	.05157	.05067	50.019	.20247	.50234	.24455
#2	1.9773	.05200	.05086	50.583	.20425	.50842	.24896
#3	1.9805	.05217	.05162	50.722	.20631	.50973	.24881
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	2.2000	.05600	.05500	55.000	.22000	.55000	.27500
Low	1.8000	.04500	.04500	45.000	.18000	.45000	.22500

Elem	Fe	Pb/1	Pb/2	Mg	Mn	K_	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.0113	.50348	.50019	48.925	.51054	51.110	.50464
SDev	.0152	.00571	.00397	.371	.00366	.377	.00343
%RSD	1.4988	1.1344	.79429	.75926	.71718	.73681	.67939
#1	.99393	.50496	.49630	48.503	.50632	50.693	.50069
#2	1.0181	.49717	.50425	49.073	.51239	51.211	.50639
#3	1.0218	.50831	.50003	49.200	.51290	51.425	.50685
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass
High	1.1000			55.000	.55000	55.000	.55000
Low	.90000			44.500	.45000	42.000	.45000

Elem	Se/1	Se/2	Ag	Na	Tl	V_	Zn
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.8748	1.9209	.04828	48.610	1.9766	.51036	.51807
SDev	.0091	.0117	.00094	.455	.0249	.00372	.00424
%RSD	.48760	.61162	1.9440	.93633	1.2582	.72956	.81792
#1	1.8700	1.9091	.04767	48.127	1.9492	.50609	.51323
#2	1.8691	1.9209	.04780	48.674	1.9826	.51209	.51985
#3	1.8854	1.9326	.04936	49.030	1.9978	.51290	.52112
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass

High			.05500	55.000	2.2000	.55000	.55000
Low			.04500	44.000	1.8000	.45000	.45000

Elem	B_	Mo	Li	Sr	Ti	Sn	Si
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.93704	1.0104	1.0071	1.0098	1.0103	2.0215	L3.9817
SDev	.00579	.0092	.0081	.0075	.0071	.0156	.0262
%RSD	.61762	.90600	.80435	.73803	.69817	.77321	.65868
#1	.93041	.99981	.99814	1.0013	1.0022	2.0082	L3.9520
#2	.93963	1.0155	1.0091	1.0130	1.0135	2.0175	L3.9916
#3	.94107	1.0158	1.0140	1.0151	1.0151	2.0387	L4.0016
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Low
High	1.2000	1.2000	1.2000	1.2000	1.2000	2.2000	12.000
Low	.80000	.80000	.80000	.80000	.80000	1.8000	8.0000

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	14425	--	--	--	--	--	--
SDev	43.64584	--	--	--	--	--	--
%RSD	.3025624	--	--	--	--	--	--
#1	14470	--	--	--	--	--	--
#2	14422	--	--	--	--	--	--
#3	14383	--	--	--	--	--	--

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Method: TRA10103 Sample Name: F6DKD Operator: KGS
Run Time: 12/19/03 11:26:17
Comment:
Mode: CONC Corr. Factor: 1

Elem	Pb	Se	Sb	Al	Sb\1	Sb\2	As
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00021	.00059	.00125	.28608	.00095	.00185	.00110
SDev	.00079	.00185	.00091	.00035	.00134	.00167	.00036
%RSD	380.41	314.85	72.602	.12084	140.59	90.071	32.343
#1	.00109	.00231	.00054	.28647	-.00057	.00274	.00086
#2	-.00006	-.00136	.00228	.28598	.00197	.00288	.00150
#3	-.00041	.00081	.00095	.28580	.00146	-.00007	.00093
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass
High	10.000	10.000	10.000	500.00			10.000
Low	-.00300	-.00500	-.06000	-.20000			-.01000

Elem	Ba	Be	Cd	Ca	Cr	Co	Cu
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.02640	-.00008	-.00008	1.0447	.00057	.00396	.00439
SDev	.00019	.00003	.00014	.0061	.00024	.00012	.00012
%RSD	.73992	38.113	171.85	.58762	42.447	3.0216	2.6370
#1	.02618	-.00011	-.00003	1.0386	.00085	.00392	.00449
#2	.02657	-.00008	.00003	1.0508	.00045	.00387	.00427
#3	.02644	-.00005	-.00024	1.0447	.00041	.00410	.00441
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.000	10.000	10.000	500.00	20.000	20.000	10.000
Low	-.05000	-.00500	-.00500	-5.0000	-.01000	-.05000	-.02500

Elem	Fe	Pb/1	Pb/2	Mg	Mn	K_	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.36153	-.00237	.00149	.73002	.07115	.00091	.00070
SDev	.00827	.00427	.00096	.00288	.00024	.00047	.00075
%RSD	2.2882	180.57	64.057	.39430	.33751	52.315	107.63
#1	.35553	.00245	.00041	.72673	.07109	.00037	.00150
#2	.35808	-.00385	.00183	.73126	.07142	.00128	.00001
#3	.37096	-.00570	.00223	.73207	.07095	.00108	.00058
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass
High	400.00			500.00	20.000	100.00	20.000
Low	-.10000			-5.0000	-.01500	-5.0000	-.04000

Elem	Se/1	Se/2	Ag	Na	Tl	V_	Zn
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00474	-.00149	-.00056	66.332	.00390	-.00006	.02828
SDev	.00515	.00154	.00052	.194	.00151	.00034	.00018
%RSD	108.48	103.81	92.124	.29249	38.741	610.37	.62741
#1	.01068	-.00186	.00002	66.368	.00308	-.00025	.02815
#2	.00153	-.00281	-.00072	66.505	.00297	-.00025	.02848
#3	.00202	.00021	-.00098	66.122	.00564	.00033	.02821
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass

High			2.0000	600.00	20.000	20.000	10.000
Low			-.01000	-5.0000	-.01000	-.05000	-.02000
Elem	B_	Mo	Li	Sr	Ti	Sn	Si
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.02883	.00050	.00088	.01507	.00448	.00099	3.5353
SDev	.00016	.00058	.00003	.00003	.00023	.00054	.0169
%RSD	.56111	115.96	3.2546	.22981	5.2431	54.362	.47671
#1	.02894	.00100	.00084	.01504	.00455	.00049	3.5209
#2	.02890	.00062	.00088	.01511	.00422	.00157	3.5538
#3	.02864	-.00013	.00090	.01507	.00468	.00092	3.5311
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.000	10.000	4.0000	10.000	10.000	10.000	10.000
Low	-.50000	-.04000	-.05000	-.05000	-.05000	-.10000	-.10000
IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	14358	--	--	--	--	--	--
SDev	64.92789	--	--	--	--	--	--
%RSD	.4522130	--	--	--	--	--	--
#1	14409	--	--	--	--	--	--
#2	14285	--	--	--	--	--	--
#3	14379	--	--	--	--	--	--

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Method: TRA10103 Sample Name: F6DQ4F Operator: KGS
Run Time: 12/19/03 11:30:43
Comment:
Mode: CONC Corr. Factor: 1

Elem	Pb	Se	Sb	Al	Sb\1	Sb\2	As
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00219	-.00014	.00156	.02783	.00157	.00154	.00563
SDev	.00106	.00270	.00159	.00870	.00386	.00297	.00024
%RSD	48.289	1910.4	101.86	31.268	246.25	193.05	4.3246
#1	-.00099	-.00306	.00095	.01825	.00004	.00278	.00580
#2	-.00298	.00039	.00336	.03525	.00596	-.00185	.00535
#3	-.00262	.00225	.00036	.02998	-.00130	.00368	.00572
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass
High	10.000	10.000	10.000	500.00			10.000
Low	-.00300	-.00500	-.06000	-.20000			-.01000

Elem	Ba	Be	Cd	Ca	Cr	Co	Cu
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.37356	-.00015	-.00010	19.660	-.00013	.00069	-.00011
SDev	.00840	.00022	.00015	.393	.00058	.00043	.00048
%RSD	2.2482	147.35	148.62	1.9979	453.58	61.624	429.35
#1	.36482	.00009	.00004	19.250	.00025	.00033	-.00041
#2	.37429	-.00021	-.00026	19.695	-.00079	.00117	.00044
#3	.38157	-.00034	-.00008	20.034	.00017	.00058	-.00037
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.000	10.000	10.000	500.00	20.000	20.000	10.000
Low	-.05000	-.00500	-.00500	-5.0000	-.01000	-.05000	-.02500

Elem	Fe	Pb/1	Pb/2	Mg	Mn	K_	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.35375	-.00573	-.00043	7.6714	.01639	5.9162	-.00014
SDev	.01604	.00717	.00254	.1588	.00028	.1787	.00078
%RSD	4.5345	125.08	590.46	2.0707	1.7315	3.0206	548.62
#1	.33715	-.00022	-.00137	7.5038	.01609	5.7332	-.00034
#2	.36917	-.01383	.00244	7.6907	.01641	5.9254	-.00080
#3	.35494	-.00313	-.00236	7.8197	.01666	6.0902	.00072
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass
High	400.00			500.00	20.000	100.00	20.000
Low	-.10000			-5.0000	-.01500	-5.0000	-.04000

Elem	Se/1	Se/2	Ag	Na	Tl	V_	Zn
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00399	-.00221	.00005	280.07	.00376	-.00000	.24700
SDev	.00443	.00452	.00097	5.60	.00231	.00040	.00547
%RSD	110.85	205.13	1934.0	2.0011	61.493	15294.	2.2126
#1	.00555	-.00736	.00076	274.22	.00358	-.00040	.24127
#2	-.00100	.00109	-.00106	280.59	.00616	.00039	.24759
#3	.00744	-.00034	.00045	285.39	.00155	.00001	.25215
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass

High			2.0000	600.00	20.000	20.000	10.000
Low			-.01000	-5.0000	-.01000	-.05000	-.02000
Elem	B_	Mo	Li	Sr	Ti	Sn	Si
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.5851	.03144	.28800	.65073	.00031	-.00058	3.7478
SDev	.0577	.00041	.00668	.01475	.00028	.00074	.0875
%RSD	2.2336	1.3019	2.3203	2.2661	88.607	129.01	2.3360
#1	2.5245	.03105	.28104	.63548	.00017	.00028	3.6541
#2	2.5912	.03140	.28861	.65180	.00063	-.00100	3.7620
#3	2.6395	.03187	.29436	.66492	.00014	-.00101	3.8275
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.000	10.000	4.0000	10.000	10.000	10.000	10.000
Low	-.50000	-.04000	-.05000	-.05000	-.05000	-.10000	-.10000
IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	14409	--	--	--	--	--	--
SDev	250.0302	--	--	--	--	--	--
%RSD	1.735275	--	--	--	--	--	--
#1	14669	--	--	--	--	--	--
#2	14386	--	--	--	--	--	--
#3	14171	--	--	--	--	--	--

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Method: TRA10103 Sample Name: F6DQ4 Operator: KGS
Run Time: 12/19/03 11:35:09
Comment:
Mode: CONC Corr. Factor: 1

Elem	Pb	Se	Sb	Al	Sb\1	Sb\2	As
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00196	.00024	-.00055	.04256	-.00129	.00093	.00546
SDev	.00087	.00139	.00094	.00269	.00101	.00080	.00035
%RSD	44.502	587.98	169.42	6.3306	77.997	86.503	6.4729
#1	-.00232	.00153	-.00146	.04212	-.00224	.00010	.00585
#2	-.00097	.00041	.00041	.04010	-.00024	.00170	.00536
#3	-.00261	-.00124	-.00060	.04544	-.00140	.00099	.00516
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass
High	10.000	10.000	10.000	500.00			10.000
Low	-.00300	-.00500	-.06000	-.20000			-.01000

Elem	Ba	Be	Cd	Ca	Cr	Co	Cu
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.39547	-.00010	-.00003	19.971	.00000	.00016	-.00006
SDev	.00142	.00011	.00009	.099	.00024	.00037	.00035
%RSD	.35907	105.90	348.68	.49670	5052.6	239.08	552.18
#1	.39711	-.00023	-.00006	19.936	.00020	-.00010	-.00046
#2	.39460	-.00005	-.00010	19.894	-.00027	-.00001	.00009
#3	.39470	-.00003	.00008	20.083	.00008	.00058	.00019
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.000	10.000	10.000	500.00	20.000	20.000	10.000
Low	-.05000	-.00500	-.00500	-5.0000	-.01000	-.05000	-.02500

Elem	Fe	Pb/1	Pb/2	Mg	Mn	K_	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.39820	-.00222	-.00184	7.7763	.01664	6.0548	.00029
SDev	.00446	.00160	.00086	.0327	.00007	.0210	.00058
%RSD	1.1200	71.995	46.909	.42031	.39400	.34611	200.53
#1	.40045	-.00162	-.00267	7.7727	.01671	6.0776	-.00010
#2	.39306	-.00101	-.00095	7.7455	.01658	6.0364	.00001
#3	.40108	-.00404	-.00189	7.8106	.01663	6.0503	.00095
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass
High	400.00			500.00	20.000	100.00	20.000
Low	-.10000			-5.0000	-.01500	-5.0000	-.04000

Elem	Se/1	Se/2	Ag	Na	Tl	V_	Zn
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00519	-.00224	.00003	284.51	.00094	-.00045	.24719
SDev	.00144	.00162	.00035	1.02	.00179	.00011	.00071
%RSD	27.775	72.587	1046.6	.35872	190.24	25.300	.28555
#1	.00685	-.00112	-.00023	285.68	-.00018	-.00059	.24727
#2	.00423	-.00149	-.00009	283.82	-.00001	-.00039	.24644
#3	.00450	-.00410	.00042	284.03	.00300	-.00039	.24785
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass

High			2.0000	600.00	20.000	20.000	10.000
Low			-.01000	-5.0000	-.01000	-.05000	-.02000
Elem	B_	Mo	Li	Sr	Ti	Sn	Si
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.6525	.03400	.29059	.65801	.00046	-.00030	3.8397
SDev	.0075	.00043	.00130	.00242	.00014	.00090	.0145
%RSD	.28406	1.2778	.44866	.36730	30.228	304.25	.37789
#1	2.6608	.03349	.29209	.66073	.00038	-.00059	3.8531
#2	2.6460	.03425	.28989	.65612	.00038	.00071	3.8243
#3	2.6507	.03424	.28978	.65719	.00062	-.00101	3.8416
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.000	10.000	4.0000	10.000	10.000	10.000	10.000
Low	-.50000	-.04000	-.05000	-.05000	-.05000	-.10000	-.10000
IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	14188	--	--	--	--	--	--
SDev	55.87497	--	--	--	--	--	--
%RSD	.3938153	--	--	--	--	--	--
#1	14130	--	--	--	--	--	--
#2	14242	--	--	--	--	--	--
#3	14193	--	--	--	--	--	--

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Method: TRA10103 Sample Name: F6DRGF Operator: KGS
Run Time: 12/19/03 11:39:36
Comment:
Mode: CONC Corr. Factor: 1

Elem	Pb	Se	Sb	Al	Sb\1	Sb\2	As
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L-.01829	-.00111	-.00309	.06689	-.00510	.00094	.00314
SDev	.00075	.00071	.00044	.00213	.00032	.00068	.00141
%RSD	4.0958	63.448	14.309	3.1791	6.3517	72.108	44.995
#1	L-.01752	-.00179	-.00358	.06883	-.00547	.00020	.00372
#2	L-.01835	-.00038	-.00272	.06461	-.00485	.00154	.00418
#3	L-.01901	-.00117	-.00296	.06723	-.00499	.00109	.00153
Errors	LC Low	LC Pass	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass
High	10.000	10.000	10.000	500.00			10.000
Low	-.00300	-.00500	-.06000	-.20000			-.01000

Elem	Ba	Be	Cd	Ca	Cr	Co	Cu
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	H11.142	-.00053	-.00009	282.66	-.00037	.00342	-.00043
SDev	.028	.00007	.00013	.92	.00021	.00051	.00061
%RSD	.25262	13.715	147.87	.32657	55.270	14.904	143.09
#1	H11.138	-.00061	.00001	281.87	-.00015	.00401	.00022
#2	H11.117	-.00047	-.00004	282.45	-.00055	.00317	-.00050
#3	H11.172	-.00050	-.00023	283.68	-.00042	.00309	-.00100
Errors	LC High	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.000	10.000	10.000	500.00	20.000	20.000	10.000
Low	-.05000	-.00500	-.00500	-5.0000	-.01000	-.05000	-.02500

Elem	Fe	Pb/1	Pb/2	Mg	Mn	K_	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.4872	-.01743	-.01873	189.49	.04933	H106.52	.00091
SDev	.0088	.00200	.00119	.59	.00020	.19	.00019
%RSD	.59237	11.494	6.3511	.31307	.39870	.17757	20.980
#1	1.4974	-.01570	-.01842	189.04	.04913	H106.61	.00096
#2	1.4825	-.01962	-.01772	189.27	.04934	H106.30	.00108
#3	1.4817	-.01695	-.02004	190.17	.04952	H106.64	.00070
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	LC Pass	LC High	LC Pass
High	400.00			500.00	20.000	100.00	20.000
Low	-.10000			-5.0000	-.01500	-5.0000	-.04000

Elem	Se/1	Se/2	Ag	Na	Tl	V_	Zn
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00206	-.00270	-.00013	H1355.0	.00378	-.00141	.52792
SDev	.00208	.00004	.00024	2.7	.00089	.00070	.00169
%RSD	100.60	1.4770	180.89	.19615	23.613	49.228	.31952
#1	.00004	-.00270	.00001	H1354.7	.00358	-.00062	.52694
#2	.00419	-.00266	.00001	H1352.5	.00476	-.00192	.52694
#3	.00197	-.00274	-.00041	H1357.8	.00301	-.00170	.52986
Errors	NOCHECK	NOCHECK	LC Pass	LC High	LC Pass	LC Pass	LC Pass

High			2.0000	600.00	20.000	20.000	10.000
Low			-.01000	-5.0000	-.01000	-.05000	-.02000
Elem	B_	Mo	Li	Sr	Ti	Sn	Si
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	H12.824	.00293	1.7847	H12.821	-.00094	.00169	3.4098
SDev	.031	.00064	.0044	.028	.00007	.00131	.0095
%RSD	.24402	21.852	.24547	.21472	7.4584	77.409	.27849
#1	H12.813	.00367	1.7865	H12.818	-.00086	.00146	3.4063
#2	H12.799	.00256	1.7796	H12.795	-.00097	.00052	3.4026
#3	H12.859	.00257	1.7878	H12.850	-.00098	.00310	3.4206
Errors	LC High	LC Pass	LC Pass	LC High	LC Pass	LC Pass	LC Pass
High	10.000	10.000	4.0000	10.000	10.000	10.000	10.000
Low	-.50000	-.04000	-.05000	-.05000	-.05000	-.10000	-.10000
IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	13047	--	--	--	--	--	--
SDev	24.49980	--	--	--	--	--	--
%RSD	.1877870	--	--	--	--	--	--
#1	13043	--	--	--	--	--	--
#2	13073	--	--	--	--	--	--
#3	13024	--	--	--	--	--	--

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Method: TRA10103 Sample Name: F6DRG Operator: KGS
Run Time: 12/19/03 11:44:03
Comment:
Mode: CONC Corr. Factor: 1

Elem	Pb	Se	Sb	Al	Sb\1	Sb\2	As
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L-.01958	-.00156	-.00442	.04990	-.00696	.00068	.00333
SDev	.00095	.00146	.00038	.00369	.00045	.00077	.00089
%RSD	4.8768	93.351	8.5642	7.3966	6.4930	112.25	26.737
#1	L-.01888	-.00068	-.00415	.05357	-.00701	.00157	.00417
#2	L-.02067	-.00076	-.00425	.04996	-.00649	.00024	.00240
#3	L-.01919	-.00325	-.00485	.04619	-.00739	.00024	.00343
Errors	LC Low	LC Pass	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass
High	10.000	10.000	10.000	500.00			10.000
Low	-.00300	-.00500	-.06000	-.20000			-.01000

Elem	Ba	Be	Cd	Ca	Cr	Co	Cu
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	H11.726	-.00036	-.00011	294.58	.00014	.00357	-.00020
SDev	.052	.00004	.00027	2.23	.00019	.00011	.00010
%RSD	.44407	10.697	250.75	.75868	136.32	3.0820	49.825
#1	H11.666	-.00034	.00017	292.11	.00026	.00350	-.00021
#2	H11.759	-.00041	-.00037	295.18	.00025	.00352	-.00010
#3	H11.753	-.00034	-.00013	296.46	-.00008	.00370	-.00030
Errors	LC High	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.000	10.000	10.000	500.00	20.000	20.000	10.000
Low	-.05000	-.00500	-.00500	-5.0000	-.01000	-.05000	-.02500

Elem	Fe	Pb/1	Pb/2	Mg	Mn	K_	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.5506	-.01845	-.02014	197.75	.05067	H110.63	.00043
SDev	.0073	.00064	.00111	1.35	.00047	.47	.00082
%RSD	.46933	3.4875	5.5276	.68203	.93031	.42629	188.84
#1	1.5423	-.01806	-.01929	196.24	.05024	H110.09	.00131
#2	1.5561	-.01920	-.02140	198.18	.05061	H110.95	.00031
#3	1.5534	-.01811	-.01973	198.83	.05118	H110.84	-.00032
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	LC Pass	LC High	LC Pass
High	400.00			500.00	20.000	100.00	20.000
Low	-.10000			-5.0000	-.01500	-5.0000	-.04000

Elem	Se/1	Se/2	Ag	Na	Tl	V_	Zn
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00491	-.00480	.00011	H1404.8	.00243	-.00112	.50710
SDev	.00130	.00283	.00028	5.1	.00241	.00025	.00256
%RSD	26.579	58.976	264.96	.36271	98.822	21.936	.50486
#1	.00386	-.00295	.00010	H1399.1	.00164	-.00127	.50415
#2	.00450	-.00339	-.00017	H1408.9	.00053	-.00127	.50858
#3	.00637	-.00805	.00039	H1406.5	.00514	-.00084	.50858
Errors	NOCHECK	NOCHECK	LC Pass	LC High	LC Pass	LC Pass	LC Pass

High			2.0000	600.00	20.000	20.000	10.000
Low			-.01000	-5.0000	-.01000	-.05000	-.02000

Elem	B_	Mo	Li	Sr	Ti	Sn	Si
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	H13.309	.00126	1.8573	H13.224	-.00109	.00199	3.5597
SDev	.061	.00076	.0069	.061	.00001	.00071	.0182
%RSD	.45513	59.827	.37366	.46474	.72627	35.977	.51255
#1	H13.239	.00049	1.8498	H13.153	-.00108	.00121	3.5388
#2	H13.351	.00200	1.8636	H13.260	-.00110	.00261	3.5729
#3	H13.336	.00131	1.8584	H13.259	-.00110	.00214	3.5672

Errors	LC High	LC Pass	LC Pass	LC High	LC Pass	LC Pass	LC Pass
High	10.000	10.000	4.0000	10.000	10.000	10.000	10.000
Low	-.50000	-.04000	-.05000	-.05000	-.05000	-.10000	-.10000

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	13200	--	--	--	--	--	--
SDev	50.71557	--	--	--	--	--	--
%RSD	.3842199	--	--	--	--	--	--
#1	13257	--	--	--	--	--	--
#2	13162	--	--	--	--	--	--
#3	13180	--	--	--	--	--	--

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Method: TRA10103 Sample Name: F6F1CF Operator: KGS
Run Time: 12/19/03 11:48:29
Comment:
Mode: CONC Corr. Factor: 1

Elem	Pb	Se	Sb	Al	Sb\1	Sb\2	As
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L-.11720	-.00138	-.00060	.04047	-.00268	.00357	.00413
SDev	.00174	.00090	.00091	.00361	.00180	.00087	.00164
%RSD	1.4861	64.817	152.25	8.9266	67.183	24.323	39.774
#1	L-.11794	-.00060	.00037	.04453	-.00076	.00265	.00245
#2	L-.11845	-.00236	-.00074	.03928	-.00294	.00369	.00419
#3	L-.11521	-.00119	-.00144	.03760	-.00434	.00438	.00573
Errors	LC Low	LC Pass	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass
High	10.000	10.000	10.000	500.00			10.000
Low	-.00300	-.00500	-.06000	-.20000			-.01000

Elem	Ba	Be	Cd	Ca	Cr	Co	Cu
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	H25.310	-.00016	-.00017	H1799.2	-.00083	.00618	-.00034
SDev	.071	.00010	.00003	28.7	.00050	.00029	.00048
%RSD	.27930	64.650	15.674	1.5950	60.071	4.6751	140.32
#1	H25.391	-.00025	-.00019	H1801.1	-.00047	.00636	.00021
#2	H25.260	-.00005	-.00014	H1826.8	-.00139	.00633	-.00068
#3	H25.279	-.00019	-.00019	H1769.5	-.00062	.00585	-.00056
Errors	LC High	LC Pass	LC Pass	LC High	LC Pass	LC Pass	LC Pass
High	10.000	10.000	10.000	500.00	20.000	20.000	10.000
Low	-.05000	-.00500	-.00500	-5.0000	-.01000	-.05000	-.02500

Elem	Fe	Pb/1	Pb/2	Mg	Mn	K_	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.8313	-.09748	-.12705	H1009.3	.19983	H170.03	.00106
SDev	.0282	.00325	.00100	7.4	.00128	.69	.00046
%RSD	1.5413	3.3304	.78666	.73209	.64002	.40525	43.540
#1	1.8465	-.09907	-.12736	H1011.8	.20020	H170.72	.00133
#2	1.8487	-.09961	-.12786	H1015.1	.20088	H169.34	.00132
#3	1.7987	-.09374	-.12593	H1001.0	.19841	H170.04	.00053
Errors	LC Pass	NOCHECK	NOCHECK	LC High	LC Pass	LC High	LC Pass
High	400.00			500.00	20.000	100.00	20.000
Low	-.10000			-5.0000	-.01500	-5.0000	-.04000

Elem	Se/1	Se/2	Ag	Na	Tl	V_	Zn
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00544	-.00479	-.00045	H5561.0	.00205	-.00227	.67347
SDev	.00516	.00266	.00029	19.4	.00199	.00055	.00231
%RSD	94.848	55.516	63.803	.34956	97.161	24.438	.34339
#1	.00253	-.00216	-.00013	H5576.8	.00058	-.00245	.67540
#2	.00239	-.00473	-.00067	H5539.3	.00432	-.00164	.67409
#3	.01139	-.00747	-.00056	H5566.8	.00125	-.00270	.67091
Errors	NOCHECK	NOCHECK	LC Pass	LC High	LC Pass	LC Pass	LC Pass

High			2.0000	600.00	20.000	20.000	10.000
Low			-.01000	-5.0000	-.01000	-.05000	-.02000
Elem	B_	Mo	Li	Sr	Ti	Sn	Si
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	H14.241	.00085	H10.193	H48.494	-.01331	.00222	3.5901
SDev	.041	.00078	.081	.399	.00008	.00197	.0108
%RSD	.29002	90.962	.79115	.82279	.63332	88.951	.30100
#1	H14.287	.00166	H10.244	H48.704	-.01323	.00291	3.6023
#2	H14.207	.00011	H10.100	H48.744	-.01330	-.00001	3.5862
#3	H14.229	.00079	H10.235	H48.034	-.01340	.00375	3.5817
Errors	LC High	LC Pass	LC High	LC High	LC Pass	LC Pass	LC Pass
High	10.000	10.000	4.0000	10.000	10.000	10.000	10.000
Low	-.50000	-.04000	-.05000	-.05000	-.05000	-.10000	-.10000
IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	10548	--	--	--	--	--	--
SDev	58.33007	--	--	--	--	--	--
%RSD	.5529953	--	--	--	--	--	--
#1	10486	--	--	--	--	--	--
#2	10555	--	--	--	--	--	--
#3	10602	--	--	--	--	--	--

Analysis Report QC Standard 12/19/03 11:57:18 AM page 1

Method: TRA10103 Sample Name: CCV2 Operator: KGS
Run Time: 12/19/03 11:52:55
Comment:
Mode: CONC Corr. Factor: 1

Elem	Pb	Se	Sb	Al	Sb\1	Sb\2	As
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.51748	.51312	.51075	25.561	.50910	.51407	.51676
SDev	.00553	.00454	.00662	.376	.00720	.00549	.00509
%RSD	1.0682	.88520	1.2967	1.4707	1.4133	1.0676	.98401
#1	.52167	.51712	.51560	25.886	.51450	.51780	.52124
#2	.51956	.51405	.51346	25.647	.51187	.51665	.51781
#3	.51122	.50818	.50321	25.149	.50093	.50777	.51123
Errors	QC Pass	QC Pass	QC Pass	QC Pass	NOCHECK	NOCHECK	QC Pass
Value	.50000	.50000	.50000	25.000			.50000
Range	10.500	10.500	10.500	10.500			10.500

Elem	Ba	Be	Cd	Ca	Cr	Co	Cu
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.0698	2.1126	.51941	51.705	2.0721	2.0795	2.0476
SDev	.0296	.0291	.00731	.705	.0291	.0286	.0301
%RSD	1.4322	1.3783	1.4067	1.3632	1.4034	1.3739	1.4684
#1	2.0951	2.1380	.52549	52.306	2.0970	2.1043	2.0741
#2	2.0770	2.1191	.52143	51.880	2.0792	2.0858	2.0538
#3	2.0372	2.0808	.51130	50.929	2.0402	2.0483	2.0149
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	2.0000	2.0000	.50000	50.000	2.0000	2.0000	2.0000
Range	10.500	10.500	10.500	10.500	10.500	10.500	10.500

Elem	Fe	Pb/1	Pb/2	Mg	Mn	K_	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	25.949	.51572	.51836	50.486	2.0846	54.228	2.0774
SDev	.367	.00549	.00566	.687	.0288	.776	.0295
%RSD	1.4162	1.0635	1.0911	1.3602	1.3805	1.4303	1.4202
#1	26.278	.52085	.52208	51.091	2.1096	54.853	2.1036
#2	26.015	.51636	.52116	50.627	2.0911	54.471	2.0831
#3	25.552	.50994	.51186	49.740	2.0531	53.360	2.0455
Errors	QC Pass	NOCHECK	NOCHECK	QC Pass	QC Pass	QC Pass	QC Pass
Value	25.000			50.000	2.0000	50.000	2.0000
Range	10.500			10.500	10.500	10.500	10.500

Elem	Se/1	Se/2	Ag	Na	Tl	V_	Zn
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.50897	.51519	1.0192	49.949	1.0376	2.0762	2.1223
SDev	.00248	.00569	.0146	.598	.0123	.0294	.0293
%RSD	.48714	1.1039	1.4358	1.1976	1.1901	1.4151	1.3802
#1	.51027	.52054	1.0324	50.469	1.0494	2.1015	2.1478
#2	.51052	.51581	1.0217	50.083	1.0386	2.0832	2.1287
#3	.50611	.50921	1.0034	49.295	1.0247	2.0440	2.0903
Errors	NOCHECK	NOCHECK	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass

Value			1.0000	50.000	1.0000	2.0000	2.0000
Range			10.500	10.500	10.500	10.500	10.500
Elem	B_	Mo	Li	Sr	Ti	Sn	Si
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.0290	2.0695	2.0856	2.0780	2.0753	2.0650	2.0432
SDev	.0296	.0244	.0277	.0292	.0296	.0262	.0275
%RSD	1.4582	1.1789	1.3280	1.4073	1.4255	1.2699	1.3483
#1	2.0546	2.0896	2.1093	2.1030	2.1009	2.0895	2.0678
#2	2.0358	2.0766	2.0924	2.0853	2.0820	2.0681	2.0483
#3	1.9966	2.0424	2.0552	2.0459	2.0429	2.0374	2.0134
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000
Range	10.500	10.500	10.500	10.500	10.500	10.500	10.500
IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	13949	--	--	--	--	--	--
SDev	203.2192	--	--	--	--	--	--
%RSD	1.456907	--	--	--	--	--	--
#1	13756	--	--	--	--	--	--
#2	13929	--	--	--	--	--	--
#3	14161	--	--	--	--	--	--

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Method: TRA10103 Sample Name: CCB2 Operator: KGS
Run Time: 12/19/03 11:57:22
Comment:
Mode: CONC Corr. Factor: 1

Elem	Pb	Se	Sb	Al	Sb\1	Sb\2	As
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00010	.00083	-.00061	.01721	-.00153	.00123	.00115
SDev	.00070	.00109	.00186	.00712	.00334	.00172	.00150
%RSD	691.57	131.58	303.49	41.348	218.08	139.33	130.95
#1	-.00070	.00208	.00049	.02142	.00111	-.00075	-.00000
#2	.00058	.00030	.00043	.02122	-.00041	.00212	.00285
#3	.00043	.00010	-.00275	.00899	-.00529	.00232	.00060
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass
High	.00305	.00505	.06005	.20005			.01005
Low	-.00305	-.00505	-.06005	-.20005			-.01005

Elem	Ba	Be	Cd	Ca	Cr	Co	Cu
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00006	-.00011	.00010	-.00084	-.00006	-.00020	-.00069
SDev	.00009	.00013	.00021	.00105	.00019	.00029	.00005
%RSD	155.73	118.20	220.38	125.18	320.08	141.44	7.3664
#1	.00005	-.00019	-.00005	-.00003	-.00017	.00007	-.00066
#2	-.00011	-.00019	-.00000	-.00203	-.00017	-.00018	-.00075
#3	-.00011	.00004	.00034	-.00047	.00016	-.00050	-.00067
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.20005	.00505	.00505	5.0000	.01005	.05005	.02505
Low	-.20005	-.00505	-.00505	-5.0000	-.01005	-.05005	-.02505

Elem	Fe	Pb/1	Pb/2	Mg	Mn	K_	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.01205	.00213	-.00091	-.00136	.00000	.00096	.00008
SDev	.00915	.00326	.00058	.00203	.00000	.00013	.00063
%RSD	75.963	152.64	63.803	149.09	.00000	13.269	761.38
#1	-.00451	-.00163	-.00024	.00094	.00000	.00094	-.00034
#2	-.02224	.00411	-.00118	-.00211	.00000	.00084	-.00022
#3	-.00941	.00392	-.00131	-.00292	.00000	.00109	.00080
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass
High	.10005			5.0000	.01505	5.0000	.04005
Low	-.10005			-5.0000	-.01505	-5.0000	-.04005

Elem	Se/1	Se/2	Ag	Na	Tl	V_	Zn
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00400	-.00075	-.00007	-.32733	.00155	-.00058	.00008
SDev	.00184	.00218	.00032	.02866	.00124	.00023	.00001
%RSD	46.165	290.28	428.43	8.7550	79.558	38.981	7.1988
#1	.00328	.00148	.00021	-.34854	.00269	-.00084	.00009
#2	.00261	-.00086	-.00042	-.33873	.00024	-.00044	.00009
#3	.00609	-.00288	-.00001	-.29473	.00174	-.00045	.00008
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass

High			.01005	5.0000	.01005	.05005	.02005
Low			-.01005	-5.0000	-.01005	-.05005	-.02005

Elem	B_	Mo	Li	Sr	Ti	Sn	Si
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00181	.00139	.00036	.00002	-.00001	.00028	-.00310
SDev	.00142	.00114	.00005	.00003	.00006	.00077	.00164
%RSD	78.183	82.194	14.319	162.64	422.18	276.32	52.853
#1	.00282	.00253	.00039	.00000	.00002	-.00058	-.00213
#2	.00243	.00138	.00039	.00000	.00002	.00093	-.00217
#3	.00019	.00025	.00030	.00006	-.00008	.00049	-.00499
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.05005	.04005	.00505	.00505	.00505	.10005	.10005
Low	-.05005	-.04005	-.00505	-.00505	-.00505	-.10005	-.10005

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	14319	--	--	--	--	--	--
SDev	147.5047	--	--	--	--	--	--
%RSD	1.030132	--	--	--	--	--	--
#1	14230	--	--	--	--	--	--
#2	14238	--	--	--	--	--	--
#3	14489	--	--	--	--	--	--

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Method: TRA10103 Sample Name: F6F1C Operator: KGS
Run Time: 12/19/03 12:01:48
Comment:
Mode: CONC Corr. Factor: 1

Elem	Pb	Se	Sb	Al	Sb\1	Sb\2	As
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L-.11758	-.00116	-.00004	.05787	-.00058	.00102	.00257
SDev	.00154	.00146	.00046	.00919	.00132	.00140	.00340
%RSD	1.3123	125.78	1038.4	15.876	230.17	137.07	132.21
#1	L-.11936	-.00031	.00048	.06806	.00093	-.00042	.00527
#2	L-.11678	-.00033	-.00037	.05530	-.00111	.00111	.00369
#3	L-.11661	-.00285	-.00025	.05023	-.00155	.00237	-.00125
Errors	LC Low	LC Pass	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass
High	10.000	10.000	10.000	500.00			10.000
Low	-.00300	-.00500	-.06000	-.20000			-.01000

Elem	Ba	Be	Cd	Ca	Cr	Co	Cu
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	H25.725	-.00034	.00005	H1799.6	-.00034	.00682	.00164
SDev	.138	.00012	.00012	26.5	.00047	.00047	.00059
%RSD	.53599	34.289	230.15	1.4702	136.62	6.8377	36.192
#1	H25.884	-.00046	-.00004	H1827.2	.00014	.00734	.00226
#2	H25.639	-.00033	.00001	H1774.5	-.00038	.00644	.00108
#3	H25.651	-.00023	.00019	H1797.2	-.00079	.00667	.00158
Errors	LC High	LC Pass	LC Pass	LC High	LC Pass	LC Pass	LC Pass
High	10.000	10.000	10.000	500.00	20.000	20.000	10.000
Low	-.05000	-.00500	-.00500	-5.0000	-.01000	-.05000	-.02500

Elem	Fe	Pb/1	Pb/2	Mg	Mn	K_	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.0251	-.10430	-.12421	H1019.2	.20159	H173.46	.00091
SDev	.0335	.00471	.00054	9.7	.00210	.79	.00102
%RSD	1.6524	4.5175	.43532	.95202	1.0419	.45427	112.15
#1	2.0596	-.10952	-.12428	H1029.5	.20379	H174.37	.00134
#2	1.9928	-.10302	-.12365	H1010.3	.19960	H173.09	-.00026
#3	2.0229	-.10036	-.12472	H1017.6	.20137	H172.93	.00163
Errors	LC Pass	NOCHECK	NOCHECK	LC High	LC Pass	LC High	LC Pass
High	400.00			500.00	20.000	100.00	20.000
Low	-.10000			-5.0000	-.01500	-5.0000	-.04000

Elem	Se/1	Se/2	Ag	Na	Tl	V_	Zn
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00454	-.00401	-.00065	H5624.5	.00157	-.00190	.61189
SDev	.00465	.00059	.00021	21.8	.00045	.00149	.00457
%RSD	102.31	14.792	32.019	.38673	28.688	78.437	.74681
#1	.00598	-.00345	-.00087	H5648.6	.00190	-.00029	.61682
#2	.00830	-.00463	-.00045	H5618.6	.00176	-.00324	.60779
#3	-.00065	-.00394	-.00064	H5606.3	.00106	-.00218	.61107
Errors	NOCHECK	NOCHECK	LC Pass	LC High	LC Pass	LC Pass	LC Pass

High			2.0000	600.00	20.000	20.000	10.000
Low			-.01000	-5.0000	-.01000	-.05000	-.02000
Elem	B_	Mo	Li	Sr	Ti	Sn	Si
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	H14.484	.00258	H10.408	H48.468	-.01320	.00203	3.6806
SDev	.071	.00131	.045	.517	.00017	.00030	.0210
%RSD	.49155	50.771	.43098	1.0667	1.2572	14.988	.56960
#1	H14.566	.00392	H10.456	H49.049	-.01301	.00234	3.7048
#2	H14.439	.00251	H10.402	H48.057	-.01329	.00202	3.6690
#3	H14.446	.00131	H10.367	H48.299	-.01330	.00173	3.6680
Errors	LC High	LC Pass	LC High	LC High	LC Pass	LC Pass	LC Pass
High	10.000	10.000	4.0000	10.000	10.000	10.000	10.000
Low	-.50000	-.04000	-.05000	-.05000	-.05000	-.10000	-.10000
IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	10505	--	--	--	--	--	--
SDev	86.92106	--	--	--	--	--	--
%RSD	.8273999	--	--	--	--	--	--
#1	10405	--	--	--	--	--	--
#2	10560	--	--	--	--	--	--
#3	10551	--	--	--	--	--	--

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Method: TRA10103 Sample Name: F6F2HF Operator: KGS
Run Time: 12/19/03 12:06:14
Comment:
Mode: CONC Corr. Factor: 1

Elem	Pb	Se	Sb	Al	Sb\1	Sb\2	As
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L-.00598	.00079	-.00033	.02876	-.00087	.00075	.00072
SDev	.00050	.00118	.00042	.00493	.00063	.00041	.00052
%RSD	8.4099	149.72	128.83	17.146	72.457	54.701	72.541
#1	L-.00541	.00213	.00008	.02639	-.00042	.00108	.00118
#2	L-.00636	-.00006	-.00030	.03443	-.00060	.00029	.00015
#3	L-.00618	.00029	-.00077	.02547	-.00159	.00088	.00084
Errors	LC Low	LC Pass	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass
High	10.000	10.000	10.000	500.00			10.000
Low	-.00300	-.00500	-.06000	-.20000			-.01000

Elem	Ba	Be	Cd	Ca	Cr	Co	Cu
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.08178	-.00031	.00117	89.873	-.00023	.00160	-.00078
SDev	.00038	.00005	.00019	.320	.00011	.00025	.00030
%RSD	.45983	16.240	16.671	.35568	48.753	15.718	38.491
#1	.08193	-.00033	.00098	89.724	-.00033	.00135	-.00056
#2	.08206	-.00035	.00116	90.240	-.00024	.00160	-.00066
#3	.08136	-.00025	.00136	89.655	-.00011	.00185	-.00112
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.000	10.000	10.000	500.00	20.000	20.000	10.000
Low	-.05000	-.00500	-.00500	-5.0000	-.01000	-.05000	-.02500

Elem	Fe	Pb/1	Pb/2	Mg	Mn	K_	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.85552	-.00562	-.00616	40.000	.16437	9.6947	.00475
SDev	.00703	.00129	.00039	.149	.00069	.0584	.00022
%RSD	.82185	22.922	6.3285	.37222	.42177	.60208	4.7255
#1	.86118	-.00450	-.00587	39.942	.16411	9.6925	.00456
#2	.85774	-.00703	-.00602	40.169	.16516	9.7542	.00470
#3	.84765	-.00534	-.00661	39.889	.16385	9.6375	.00500
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass
High	400.00			500.00	20.000	100.00	20.000
Low	-.10000			-5.0000	-.01500	-5.0000	-.04000

Elem	Se/1	Se/2	Ag	Na	Tl	V_	Zn
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00512	-.00137	.00010	112.20	.00275	-.00110	.03588
SDev	.00181	.00215	.00014	.58	.00119	.00011	.00018
%RSD	35.426	156.41	137.79	.51358	43.111	10.350	.50949
#1	.00498	.00071	.00023	111.98	.00408	-.00124	.03576
#2	.00699	-.00358	.00010	112.86	.00233	-.00104	.03609
#3	.00338	-.00125	-.00004	111.78	.00183	-.00104	.03581
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass

High			2.0000	600.00	20.000	20.000	10.000
Low			-.01000	-5.0000	-.01000	-.05000	-.02000
Elem	B_	Mo	Li	Sr	Ti	Sn	Si
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.5608	.00071	.15772	1.0162	-.00030	.00014	3.0416
SDev	.0075	.00041	.00082	.0051	.00007	.00012	.0155
%RSD	.48341	57.805	.52063	.50350	23.260	89.478	.50878
#1	1.5596	.00088	.15770	1.0165	-.00022	.00028	3.0386
#2	1.5689	.00024	.15855	1.0211	-.00034	.00007	3.0584
#3	1.5539	.00100	.15691	1.0109	-.00033	.00007	3.0279
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.000	10.000	4.0000	10.000	10.000	10.000	10.000
Low	-.50000	-.04000	-.05000	-.05000	-.05000	-.10000	-.10000
IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	14243	--	--	--	--	--	--
SDev	57.61431	--	--	--	--	--	--
%RSD	.4045174	--	--	--	--	--	--
#1	14231	--	--	--	--	--	--
#2	14192	--	--	--	--	--	--
#3	14305	--	--	--	--	--	--

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Method: TRA10103 Sample Name: F6F2H Operator: KGS
Run Time: 12/19/03 12:10:40
Comment:
Mode: CONC Corr. Factor: 1

Elem	Pb	Se	Sb	Al	Sb\1	Sb\2	As
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L-.00490	-.00082	-.00149	.03914	-.00275	.00102	.00256
SDev	.00026	.00112	.00201	.00480	.00200	.00244	.00220
%RSD	5.2906	136.74	134.35	12.264	72.783	238.15	86.244
#1	L-.00513	.00047	-.00316	.03406	-.00391	-.00167	.00327
#2	L-.00495	-.00150	-.00205	.04361	-.00390	.00166	.00432
#3	L-.00462	-.00144	.00073	.03973	-.00044	.00308	.00008
Errors	LC Low	LC Pass	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass
High	10.000	10.000	10.000	500.00			10.000
Low	-.00300	-.00500	-.06000	-.20000			-.01000

Elem	Ba	Be	Cd	Ca	Cr	Co	Cu
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.07316	-.00018	-.00008	86.180	-.00048	.00081	.00155
SDev	.00056	.00004	.00020	.233	.00019	.00035	.00046
%RSD	.76706	23.741	248.67	.27081	40.357	43.647	29.875
#1	.07255	-.00013	-.00025	86.218	-.00048	.00041	.00112
#2	.07366	-.00019	-.00012	86.392	-.00028	.00092	.00150
#3	.07325	-.00020	.00014	85.930	-.00067	.00109	.00204
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.000	10.000	10.000	500.00	20.000	20.000	10.000
Low	-.05000	-.00500	-.00500	-5.0000	-.01000	-.05000	-.02500

Elem	Fe	Pb/1	Pb/2	Mg	Mn	K_	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.90827	-.00256	-.00606	37.131	.16577	7.6346	.00476
SDev	.01174	.00144	.00086	.095	.00057	.0509	.00036
%RSD	1.2927	56.169	14.139	.25672	.34547	.66649	7.6608
#1	.89979	-.00136	-.00701	37.117	.16559	7.5993	.00492
#2	.92167	-.00416	-.00534	37.232	.16641	7.6929	.00435
#3	.90334	-.00218	-.00584	37.043	.16531	7.6115	.00502
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass
High	400.00			500.00	20.000	100.00	20.000
Low	-.10000			-5.0000	-.01500	-5.0000	-.04000

Elem	Se/1	Se/2	Ag	Na	Tl	V_	Zn
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00534	-.00390	.00018	86.305	.00254	-.00130	.03011
SDev	.00238	.00097	.00007	.493	.00127	.00011	.00010
%RSD	44.470	24.770	40.238	.57131	50.125	8.7740	.33965
#1	.00758	-.00307	.00021	85.799	.00400	-.00144	.03000
#2	.00284	-.00367	.00010	86.784	.00168	-.00124	.03020
#3	.00561	-.00496	.00023	86.332	.00194	-.00124	.03013
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass

High			2.0000	600.00	20.000	20.000	10.000
Low			-.01000	-5.0000	-.01000	-.05000	-.02000
Elem	B_	Mo	Li	Sr	Ti	Sn	Si
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.2029	.00020	.12237	.84536	-.00026	.00057	2.9670
SDev	.0074	.00123	.00071	.00464	.00018	.00237	.0132
%RSD	.61521	614.30	.57630	.54890	70.790	418.89	.44632
#1	1.1954	.00050	.12175	.84183	-.00046	-.00101	2.9594
#2	1.2102	.00126	.12314	.85062	-.00010	-.00058	2.9823
#3	1.2030	-.00115	.12221	.84363	-.00022	.00329	2.9594
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.000	10.000	4.0000	10.000	10.000	10.000	10.000
Low	-.50000	-.04000	-.05000	-.05000	-.05000	-.10000	-.10000
IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	14216	--	--	--	--	--	--
SDev	35.63705	--	--	--	--	--	--
%RSD	.2506858	--	--	--	--	--	--
#1	14206	--	--	--	--	--	--
#2	14186	--	--	--	--	--	--
#3	14255	--	--	--	--	--	--

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Method: TRA10103 Sample Name: F6JXAF Operator: KGS
Run Time: 12/19/03 12:15:06
Comment:
Mode: CONC Corr. Factor: 1

Elem	Pb	Se	Sb	Al	Sb\1	Sb\2	As
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L-.00948	-.00134	-.00155	.05078	-.00334	.00205	.00213
SDev	.00062	.00065	.00059	.00456	.00067	.00135	.00097
%RSD	6.5282	48.336	37.843	8.9818	19.979	65.525	45.747
#1	L-.00877	-.00086	-.00222	.05538	-.00383	.00101	.00195
#2	L-.00985	-.00108	-.00120	.05069	-.00258	.00158	.00126
#3	L-.00983	-.00207	-.00122	.04626	-.00361	.00357	.00319
Errors	LC Low	LC Pass	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass
High	10.000	10.000	10.000	500.00			10.000
Low	-.00300	-.00500	-.06000	-.20000			-.01000

Elem	Ba	Be	Cd	Ca	Cr	Co	Cu
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.66918	-.00013	.00004	152.14	.00029	.00018	-.00077
SDev	.00617	.00014	.00019	1.13	.00035	.00021	.00040
%RSD	.92264	111.57	479.21	.74224	118.07	116.83	51.185
#1	.67631	-.00029	.00005	153.22	-.00002	.00041	-.00045
#2	.66559	-.00003	-.00015	150.97	.00023	-.00001	-.00122
#3	.66564	-.00006	.00022	152.23	.00067	.00015	-.00065
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.000	10.000	10.000	500.00	20.000	20.000	10.000
Low	-.05000	-.00500	-.00500	-5.0000	-.01000	-.05000	-.02500

Elem	Fe	Pb/1	Pb/2	Mg	Mn	K_	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.02020	-.00739	-.01053	71.129	.02548	24.542	.00018
SDev	.00563	.00069	.00125	.572	.00019	.245	.00041
%RSD	27.869	9.3772	11.917	.80471	.74100	.99875	233.82
#1	-.01556	-.00813	-.00908	71.722	.02569	24.825	-.00021
#2	-.01858	-.00727	-.01115	70.580	.02533	24.387	.00013
#3	-.02646	-.00676	-.01136	71.084	.02543	24.415	.00061
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass
High	400.00			500.00	20.000	100.00	20.000
Low	-.10000			-5.0000	-.01500	-5.0000	-.04000

Elem	Se/1	Se/2	Ag	Na	Tl	V_	Zn
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00329	-.00365	.00034	67.927	.00021	-.00131	.00226
SDev	.00254	.00089	.00038	.621	.00094	.00012	.00010
%RSD	77.258	24.413	110.22	.91439	441.64	9.1756	4.3640
#1	.00305	-.00281	.00013	68.636	.00060	-.00145	.00236
#2	.00595	-.00459	.00013	67.476	-.00086	-.00124	.00217
#3	.00088	-.00355	.00078	67.671	.00090	-.00124	.00225
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass

High			2.0000	600.00	20.000	20.000	10.000
Low			-.01000	-5.0000	-.01000	-.05000	-.02000
Elem	B_	Mo	Li	Sr	Ti	Sn	Si
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	6.0343	-.00024	.19904	4.6553	-.00023	-.00066	4.4322
SDev	.0573	.00046	.00190	.0404	.00011	.00025	.0427
%RSD	.95005	193.53	.95243	.86695	47.787	37.209	.96230
#1	6.1000	-.00067	.20123	4.7018	-.00012	-.00038	4.4813
#2	5.9946	-.00027	.19797	4.6292	-.00034	-.00080	4.4043
#3	6.0082	.00024	.19792	4.6350	-.00023	-.00080	4.4109
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.000	10.000	4.0000	10.000	10.000	10.000	10.000
Low	-.50000	-.04000	-.05000	-.05000	-.05000	-.10000	-.10000
IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	14061	--	--	--	--	--	--
SDev	103.8992	--	--	--	--	--	--
%RSD	.7389033	--	--	--	--	--	--
#1	13946	--	--	--	--	--	--
#2	14148	--	--	--	--	--	--
#3	14090	--	--	--	--	--	--

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Method: TRA10103 Sample Name: F6JXA Operator: KGS
Run Time: 12/19/03 12:19:32
Comment:
Mode: CONC Corr. Factor: 1

Elem	Pb	Se	Sb	Al	Sb\1	Sb\2	As
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L-.01083	-.00014	.00037	.19428	.00046	.00018	.00206
SDev	.00042	.00139	.00089	.00443	.00186	.00127	.00138
%RSD	3.8575	1014.4	241.73	2.2783	401.82	704.04	66.972
#1	L-.01131	-.00167	.00084	.19039	.00185	-.00119	.00352
#2	L-.01062	.00103	.00092	.19909	.00118	.00041	.00079
#3	L-.01055	.00022	-.00066	.19336	-.00165	.00132	.00185
Errors	LC Low	LC Pass	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass
High	10.000	10.000	10.000	500.00			10.000
Low	-.00300	-.00500	-.06000	-.20000			-.01000

Elem	Ba	Be	Cd	Ca	Cr	Co	Cu
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.64181	-.00008	-.00006	151.00	-.00002	.00766	-.00056
SDev	.00365	.00011	.00009	.70	.00035	.00030	.00019
%RSD	.56886	139.23	142.11	.46429	1967.0	3.8632	34.569
#1	.63775	.00004	.00003	150.71	.00039	.00759	-.00056
#2	.64484	-.00017	-.00013	151.79	-.00019	.00799	-.00036
#3	.64282	-.00010	-.00008	150.48	-.00026	.00742	-.00075
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.000	10.000	10.000	500.00	20.000	20.000	10.000
Low	-.05000	-.00500	-.00500	-5.0000	-.01000	-.05000	-.02500

Elem	Fe	Pb/1	Pb/2	Mg	Mn	K_	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00683	-.01175	-.01037	70.832	.02584	24.311	.00076
SDev	.01029	.00107	.00039	.347	.00015	.150	.00036
%RSD	150.73	9.1312	3.7683	.48919	.59730	.61820	46.378
#1	-.00083	-.01265	-.01064	70.600	.02567	24.146	.00108
#2	-.00094	-.01204	-.00992	71.231	.02589	24.440	.00038
#3	-.01871	-.01056	-.01054	70.666	.02596	24.346	.00084
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass
High	400.00			500.00	20.000	100.00	20.000
Low	-.10000			-5.0000	-.01500	-5.0000	-.04000

Elem	Se/1	Se/2	Ag	Na	Tl	V_	Zn
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00598	-.00319	.00002	67.006	.00251	-.00064	.00927
SDev	.00241	.00111	.00019	.332	.00209	.00020	.00023
%RSD	40.212	34.757	1193.8	.49610	83.347	31.087	2.5315
#1	.00323	-.00411	.00010	66.630	.00449	-.00084	.00913
#2	.00703	-.00196	.00015	67.261	.00032	-.00064	.00954
#3	.00768	-.00350	-.00020	67.126	.00272	-.00044	.00914
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass

High			2.0000	600.00	20.000	20.000	10.000
Low			-.01000	-5.0000	-.01000	-.05000	-.02000
Elem	B_	Mo	Li	Sr	Ti	Sn	Si
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	5.9835	.00032	.19602	4.5999	.00131	-.00008	4.4552
SDev	.0336	.00058	.00131	.0225	.00019	.00063	.0245
%RSD	.56181	180.89	.66928	.49006	14.309	764.91	.54888
#1	5.9469	.00088	.19452	4.5759	.00135	.00028	4.4316
#2	6.0129	-.00028	.19697	4.6206	.00147	-.00081	4.4804
#3	5.9908	.00037	.19656	4.6033	.00110	.00028	4.4536
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.000	10.000	4.0000	10.000	10.000	10.000	10.000
Low	-.50000	-.04000	-.05000	-.05000	-.05000	-.10000	-.10000
IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	14084	--	--	--	--	--	--
SDev	70.66056	--	--	--	--	--	--
%RSD	.5017117	--	--	--	--	--	--
#1	14124	--	--	--	--	--	--
#2	14002	--	--	--	--	--	--
#3	14125	--	--	--	--	--	--

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Method: TRA10103 Sample Name: F6JX2F Operator: KGS
Run Time: 12/19/03 12:23:58
Comment:
Mode: CONC Corr. Factor: 1

Elem	Pb	Se	Sb	Al	Sb\1	Sb\2	As
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L-.00918	-.00112	-.00135	.03137	-.00172	-.00061	.00196
SDev	.00046	.00144	.00138	.00139	.00232	.00058	.00037
%RSD	5.0375	127.71	102.20	4.4450	135.38	94.969	18.946
#1	L-.00953	-.00275	-.00122	.03293	-.00166	-.00034	.00184
#2	L-.00936	-.00057	-.00004	.03025	.00058	-.00127	.00238
#3	L-.00866	-.00005	-.00278	.03092	-.00407	-.00021	.00167
Errors	LC Low	LC Pass	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass
High	10.000	10.000	10.000	500.00			10.000
Low	-.00300	-.00500	-.06000	-.20000			-.01000

Elem	Ba	Be	Cd	Ca	Cr	Co	Cu
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.17497	-.00007	-.00008	134.56	.00003	.00021	-.00011
SDev	.00079	.00001	.00020	.29	.00009	.00030	.00005
%RSD	.45208	17.288	239.86	.21481	286.25	143.47	48.193
#1	.17496	-.00008	-.00010	134.67	-.00004	.00024	-.00008
#2	.17418	-.00007	.00012	134.24	.00014	.00050	-.00008
#3	.17577	-.00005	-.00027	134.78	-.00001	-.00010	-.00018
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.000	10.000	10.000	500.00	20.000	20.000	10.000
Low	-.05000	-.00500	-.00500	-5.0000	-.01000	-.05000	-.02500

Elem	Fe	Pb/1	Pb/2	Mg	Mn	K_	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.07453	-.01046	-.00854	51.387	.05519	11.098	.00014
SDev	.00578	.00136	.00052	.117	.00012	.056	.00035
%RSD	7.7510	12.965	6.0681	.22689	.22311	.50538	255.67
#1	.07955	-.01202	-.00828	51.408	.05532	11.109	-.00022
#2	.07582	-.00981	-.00914	51.262	.05507	11.037	.00049
#3	.06822	-.00956	-.00821	51.492	.05517	11.147	.00014
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass
High	400.00			500.00	20.000	100.00	20.000
Low	-.10000			-5.0000	-.01500	-5.0000	-.04000

Elem	Se/1	Se/2	Ag	Na	Tl	V_	Zn
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00348	-.00342	-.00017	115.23	.00177	-.00124	.02168
SDev	.00505	.00139	.00054	.20	.00180	.00053	.00017
%RSD	144.98	40.502	317.39	.17448	101.93	42.758	.79893
#1	-.00072	-.00377	.00021	115.21	-.00006	-.00145	.02187
#2	.00209	-.00190	.00007	115.04	.00355	-.00064	.02153
#3	.00909	-.00461	-.00078	115.44	.00183	-.00164	.02165
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass

High			2.0000	600.00	20.000	20.000	10.000
Low			-.01000	-5.0000	-.01000	-.05000	-.02000
Elem	B_	Mo	Li	Sr	Ti	Sn	Si
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.0644	.00015	.15730	2.1548	-.00028	-.00030	5.5943
SDev	.0053	.00045	.00065	.0074	.00019	.00243	.0190
%RSD	.25854	299.87	.41623	.34555	68.570	822.41	.33970
#1	2.0645	.00011	.15731	2.1546	-.00024	.00247	5.5951
#2	2.0590	.00062	.15664	2.1475	-.00011	-.00211	5.5750
#3	2.0696	-.00028	.15795	2.1624	-.00048	-.00124	5.6130
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.000	10.000	4.0000	10.000	10.000	10.000	10.000
Low	-.50000	-.04000	-.05000	-.05000	-.05000	-.10000	-.10000
IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	14055	--	--	--	--	--	--
SDev	31.34459	--	--	--	--	--	--
%RSD	.2230140	--	--	--	--	--	--
#1	14022	--	--	--	--	--	--
#2	14084	--	--	--	--	--	--
#3	14059	--	--	--	--	--	--

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Method: TRA10103 Sample Name: F6JX2SF Operator: KGS
Run Time: 12/19/03 12:28:24
Comment:
Mode: CONC Corr. Factor: 1

Elem	Pb	Se	Sb	Al	Sb\1	Sb\2	As
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.54640	2.0397	.55944	2.3472	.55752	.56330	2.2500
SDev	.00142	.0093	.00140	.0088	.00068	.00285	.0071
%RSD	.25986	.45433	.24957	.37322	.12158	.50539	.31439
#1	.54631	2.0430	.56073	2.3550	.55819	.56581	2.2525
#2	.54503	2.0292	.55796	2.3377	.55684	.56020	2.2420
#3	.54786	2.0468	.55965	2.3490	.55754	.56388	2.2555
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass
High	10.000	10.000	10.000	500.00			10.000
Low	-.00300	-.00500	-.06000	-.20000			-.01000

Elem	Ba	Be	Cd	Ca	Cr	Co	Cu
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.4134	.05738	.05586	201.09	.22397	.56597	.27918
SDev	.0090	.00013	.00011	.37	.00085	.00067	.00050
%RSD	.37415	.21933	.20439	.18562	.38153	.11886	.17945
#1	2.4219	.05734	.05577	201.00	.22475	.56567	.27973
#2	2.4039	.05728	.05584	200.77	.22306	.56550	.27876
#3	2.4143	.05752	.05599	201.50	.22410	.56674	.27905
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.000	10.000	10.000	500.00	20.000	20.000	10.000
Low	-.05000	-.00500	-.00500	-5.0000	-.01000	-.05000	-.02500

Elem	Fe	Pb/1	Pb/2	Mg	Mn	K_	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.1970	.54733	.54594	113.35	.62919	75.558	.55397
SDev	.0080	.00426	.00217	.24	.00125	.216	.00144
%RSD	.67030	.77851	.39816	.21032	.19858	.28592	.26041
#1	1.1938	.55151	.54371	113.36	.62992	75.758	.55555
#2	1.2061	.54300	.54604	113.11	.62775	75.329	.55272
#3	1.1911	.54749	.54805	113.58	.62991	75.587	.55362
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass
High	400.00			500.00	20.000	100.00	20.000
Low	-.10000			-5.0000	-.01500	-5.0000	-.04000

Elem	Se/1	Se/2	Ag	Na	Tl	V_	Zn
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.0251	2.0469	.05576	184.73	2.2385	.56763	.61222
SDev	.0101	.0090	.00022	.41	.0021	.00119	.00159
%RSD	.49743	.43776	.39988	.22262	.09392	.21008	.25928
#1	2.0305	2.0493	.05591	184.91	2.2398	.56798	.61281
#2	2.0135	2.0370	.05587	184.26	2.2361	.56630	.61042
#3	2.0314	2.0545	.05550	185.03	2.2397	.56861	.61343
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass

High			2.0000	600.00	20.000	20.000	10.000
Low			-.01000	-5.0000	-.01000	-.05000	-.02000
Elem	B_	Mo	Li	Sr	Ti	Sn	Si
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	3.3632	1.1220	1.3610	3.4409	1.1248	2.2617	H16.951
SDev	.0107	.0041	.0049	.0119	.0031	.0111	.054
%RSD	.31670	.36696	.35896	.34630	.27141	.48932	.31831
#1	3.3669	1.1204	1.3650	3.4520	1.1269	2.2710	H16.985
#2	3.3512	1.1189	1.3556	3.4283	1.1213	2.2495	H16.889
#3	3.3715	1.1267	1.3625	3.4424	1.1263	2.2647	H16.980
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC High
High	10.000	10.000	4.0000	10.000	10.000	10.000	10.000
Low	-.50000	-.04000	-.05000	-.05000	-.05000	-.10000	-.10000
IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	13116	--	--	--	--	--	--
SDev	41.18214	--	--	--	--	--	--
%RSD	.3139764	--	--	--	--	--	--
#1	13070	--	--	--	--	--	--
#2	13149	--	--	--	--	--	--
#3	13130	--	--	--	--	--	--

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Method: TRA10103 Sample Name: F6JX2DF Operator: KGS
Run Time: 12/19/03 12:32:51
Comment:
Mode: CONC Corr. Factor: 1

Elem	Pb	Se	Sb	Al	Sb\1	Sb\2	As
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.51397	1.9245	.51739	2.1413	.51551	.52116	2.0915
SDev	.00247	.0017	.00282	.0037	.00386	.00312	.0035
%RSD	.48008	.08627	.54520	.17330	.74962	.59922	.16612
#1	.51172	1.9255	.51781	2.1451	.51768	.51808	2.0889
#2	.51358	1.9253	.51998	2.1412	.51781	.52433	2.0901
#3	.51661	1.9225	.51439	2.1377	.51105	.52106	2.0954
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass
High	10.000	10.000	10.000	500.00			10.000
Low	-.00300	-.00500	-.06000	-.20000			-.01000

Elem	Ba	Be	Cd	Ca	Cr	Co	Cu
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.2324	.05420	.05245	190.51	.21056	.53065	.25628
SDev	.0039	.00023	.00004	.80	.00102	.00062	.00073
%RSD	.17444	.42369	.07800	.42021	.48505	.11657	.28569
#1	2.2368	.05400	.05240	189.72	.20942	.53002	.25707
#2	2.2302	.05414	.05246	190.48	.21089	.53069	.25616
#3	2.2300	.05445	.05248	191.32	.21138	.53125	.25562
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.000	10.000	10.000	500.00	20.000	20.000	10.000
Low	-.05000	-.00500	-.00500	-5.0000	-.01000	-.05000	-.02500

Elem	Fe	Pb/1	Pb/2	Mg	Mn	K_	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.1172	.51636	.51278	106.74	.58836	70.411	.51912
SDev	.0096	.00469	.00162	.35	.00144	.182	.00155
%RSD	.86360	.90765	.31522	.32695	.24410	.25809	.29848
#1	1.1258	.51325	.51096	106.42	.58695	70.618	.51746
#2	1.1190	.51408	.51334	106.69	.58832	70.276	.51938
#3	1.1068	.52175	.51404	107.11	.58982	70.339	.52053
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass
High	400.00			500.00	20.000	100.00	20.000
Low	-.10000			-5.0000	-.01500	-5.0000	-.04000

Elem	Se/1	Se/2	Ag	Na	Tl	V_	Zn
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.9067	1.9333	.05179	172.62	2.0875	.52974	.57074
SDev	.0052	.0018	.00030	.14	.0101	.00028	.00063
%RSD	.27110	.09299	.58881	.07965	.48343	.05271	.11104
#1	1.9125	1.9320	.05148	172.64	2.0760	.52986	.57092
#2	1.9053	1.9354	.05179	172.47	2.0919	.52942	.57003
#3	1.9024	1.9326	.05209	172.74	2.0947	.52994	.57126
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass

High			2.0000	600.00	20.000	20.000	10.000
Low			-.01000	-5.0000	-.01000	-.05000	-.02000
Elem	B_	Mo	Li	Sr	Ti	Sn	Si
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	3.1279	1.0505	1.2562	3.2058	1.0475	2.1305	H15.772
SDev	.0045	.0030	.0030	.0018	.0007	.0110	.017
%RSD	.14263	.28662	.23517	.05518	.06851	.51752	.10955
#1	3.1311	1.0480	1.2595	3.2076	1.0470	2.1187	H15.785
#2	3.1228	1.0497	1.2541	3.2041	1.0473	2.1320	H15.752
#3	3.1298	1.0538	1.2548	3.2055	1.0483	2.1406	H15.778
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC High
High	10.000	10.000	4.0000	10.000	10.000	10.000	10.000
Low	-.50000	-.04000	-.05000	-.05000	-.05000	-.10000	-.10000
IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	13671	--	--	--	--	--	--
SDev	21.59367	--	--	--	--	--	--
%RSD	.1579559	--	--	--	--	--	--
#1	13646	--	--	--	--	--	--
#2	13679	--	--	--	--	--	--
#3	13687	--	--	--	--	--	--

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Method: TRA10103 Sample Name: F6JX2P5F Operator: KGS
Run Time: 12/19/03 12:37:18
Comment:
Mode: CONC Corr. Factor: 1

Elem	Pb	Se	Sb	Al	Sb\1	Sb\2	As
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00068	.00044	-.00051	.02648	-.00173	.00193	.00141
SDev	.00033	.00037	.00068	.00350	.00133	.00106	.00072
%RSD	49.030	83.459	133.53	13.231	77.185	54.917	51.274
#1	-.00087	.00027	-.00129	.03041	-.00323	.00260	.00175
#2	-.00087	.00086	-.00022	.02369	-.00069	.00071	.00058
#3	-.00029	.00019	-.00002	.02534	-.00127	.00248	.00191
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass
High	10.000	10.000	10.000	500.00			10.000
Low	-.00300	-.00500	-.06000	-.20000			-.01000

Elem	Ba	Be	Cd	Ca	Cr	Co	Cu
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.03497	-.00021	-.00015	26.621	.00017	-.00040	-.00109
SDev	.00013	.00005	.00016	.111	.00064	.00072	.00005
%RSD	.37555	21.985	109.61	.41587	369.19	177.21	4.8829
#1	.03512	-.00027	-.00001	26.729	.00079	.00033	-.00112
#2	.03491	-.00018	-.00033	26.508	-.00049	-.00111	-.00112
#3	.03487	-.00019	-.00011	26.627	.00022	-.00043	-.00103
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.000	10.000	10.000	500.00	20.000	20.000	10.000
Low	-.05000	-.00500	-.00500	-5.0000	-.01000	-.05000	-.02500

Elem	Fe	Pb/1	Pb/2	Mg	Mn	K_	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00690	.00135	-.00169	9.9439	.01115	1.0012	.00025
SDev	.00240	.00133	.00051	.0396	.00021	.0083	.00093
%RSD	34.736	98.919	30.342	.39782	1.9179	.82898	373.49
#1	.00891	.00187	-.00224	9.9795	.01132	1.0097	.00095
#2	.00425	-.00017	-.00122	9.9013	.01091	.99315	-.00080
#3	.00754	.00234	-.00161	9.9508	.01122	1.0008	.00059
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass
High	400.00			500.00	20.000	100.00	20.000
Low	-.10000			-5.0000	-.01500	-5.0000	-.04000

Elem	Se/1	Se/2	Ag	Na	Tl	V_	Zn
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00491	-.00179	-.00016	22.131	.00441	-.00110	.00525
SDev	.00153	.00130	.00060	.207	.00171	.00023	.00010
%RSD	31.063	72.863	365.86	.93640	38.908	20.781	1.9425
#1	.00600	-.00259	.00045	22.351	.00535	-.00084	.00536
#2	.00317	-.00028	-.00074	21.939	.00243	-.00123	.00523
#3	.00555	-.00249	-.00020	22.103	.00544	-.00124	.00515
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass

High			2.0000	600.00	20.000	20.000	10.000
Low			-.01000	-5.0000	-.01000	-.05000	-.02000
Elem	B_	Mo	Li	Sr	Ti	Sn	Si
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.40286	.00122	.03052	.43636	-.00022	-.00187	1.0840
SDev	.00257	.00073	.00014	.00169	.00011	.00056	.0067
%RSD	.63682	59.708	.45349	.38831	52.024	29.995	.61721
#1	.40513	.00203	.03067	.43828	-.00011	-.00123	1.0916
#2	.40008	.00100	.03042	.43507	-.00033	-.00207	1.0813
#3	.40338	.00062	.03045	.43573	-.00022	-.00229	1.0790
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.000	10.000	4.0000	10.000	10.000	10.000	10.000
Low	-.50000	-.04000	-.05000	-.05000	-.05000	-.10000	-.10000
IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	14241	--	--	--	--	--	--
SDev	76.23796	--	--	--	--	--	--
%RSD	.5353441	--	--	--	--	--	--
#1	14154	--	--	--	--	--	--
#2	14297	--	--	--	--	--	--
#3	14271	--	--	--	--	--	--

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Method: TRA10103 Sample Name: F6JX2 Operator: KGS
Run Time: 12/19/03 12:41:44
Comment:
Mode: CONC Corr. Factor: 1

Elem	Pb	Se	Sb	Al	Sb\1	Sb\2	As
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L-.00926	-.00018	-.00077	.06120	-.00141	.00051	.00126
SDev	.00151	.00013	.00126	.00479	.00161	.00065	.00144
%RSD	16.306	74.408	163.71	7.8280	114.14	126.71	113.83
#1	L-.01100	-.00029	.00022	.06626	-.00002	.00070	-.00037
#2	L-.00828	-.00022	-.00219	.05674	-.00317	-.00021	.00184
#3	L-.00850	-.00003	-.00034	.06059	-.00103	.00105	.00232
Errors	LC Low	LC Pass	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass
High	10.000	10.000	10.000	500.00			10.000
Low	-.00300	-.00500	-.06000	-.20000			-.01000

Elem	Ba	Be	Cd	Ca	Cr	Co	Cu
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.18733	-.00078	-.00007	141.00	-.00005	-.00010	-.00105
SDev	.00118	.00004	.00010	.73	.00046	.00005	.00006
%RSD	.63026	4.7243	137.79	.51770	940.33	46.803	5.4916
#1	.18869	-.00082	.00003	141.83	.00035	-.00005	-.00101
#2	.18658	-.00074	-.00017	140.46	.00006	-.00013	-.00102
#3	.18672	-.00079	-.00007	140.71	-.00055	-.00013	-.00111
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.000	10.000	10.000	500.00	20.000	20.000	10.000
Low	-.05000	-.00500	-.00500	-5.0000	-.01000	-.05000	-.02500

Elem	Fe	Pb/1	Pb/2	Mg	Mn	K_	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.13953	-.00721	-.01028	54.032	.05850	11.947	-.00020
SDev	.00254	.00160	.00147	.271	.00028	.070	.00045
%RSD	1.8191	22.179	14.249	.50124	.48172	.58494	224.34
#1	.14245	-.00906	-.01197	54.341	.05882	12.026	.00030
#2	.13788	-.00617	-.00934	53.833	.05836	11.896	-.00032
#3	.13826	-.00642	-.00954	53.923	.05831	11.918	-.00057
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass
High	400.00			500.00	20.000	100.00	20.000
Low	-.10000			-5.0000	-.01500	-5.0000	-.04000

Elem	Se/1	Se/2	Ag	Na	Tl	V_	Zn
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00507	-.00280	-.00046	122.36	.00303	-.00105	.07443
SDev	.00207	.00094	.00022	.51	.00114	.00021	.00051
%RSD	40.836	33.755	47.400	.41976	37.627	19.922	.68311
#1	.00274	-.00180	-.00068	122.94	.00382	-.00126	.07498
#2	.00669	-.00367	-.00025	121.98	.00172	-.00105	.07397
#3	.00578	-.00293	-.00045	122.15	.00355	-.00084	.07433
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass

High			2.0000	600.00	20.000	20.000	10.000
Low			-.01000	-5.0000	-.01000	-.05000	-.02000
Elem	B_	Mo	Li	Sr	Ti	Sn	Si
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.2037	.00022	.16852	2.2863	-.00054	.00257	6.0032
SDev	.0130	.00061	.00069	.0120	.00013	.00416	.0329
%RSD	.58950	276.60	.41028	.52541	24.066	161.88	.54806
#1	2.2185	.00076	.16930	2.3001	-.00055	.00737	6.0411
#2	2.1942	.00035	.16798	2.2793	-.00067	.00028	5.9816
#3	2.1985	-.00045	.16829	2.2794	-.00041	.00006	5.9870
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.000	10.000	4.0000	10.000	10.000	10.000	10.000
Low	-.50000	-.04000	-.05000	-.05000	-.05000	-.10000	-.10000
IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	13476	--	--	--	--	--	--
SDev	64.74603	--	--	--	--	--	--
%RSD	.4804380	--	--	--	--	--	--
#1	13402	--	--	--	--	--	--
#2	13508	--	--	--	--	--	--
#3	13520	--	--	--	--	--	--

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Method: TRA10103 Sample Name: CCV3 Operator: KGS
Run Time: 12/19/03 12:46:11
Comment:
Mode: CONC Corr. Factor: 1

Elem	Pb	Se	Sb	Al	Sb\1	Sb\2	As
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.51959	.51374	.51164	25.470	.51021	.51452	.51673
SDev	.00153	.00263	.00290	.094	.00364	.00291	.00153
%RSD	.29399	.51116	.56691	.36964	.71259	.56528	.29644
#1	.51845	.51137	.51190	25.470	.51183	.51204	.51498
#2	.51899	.51328	.50862	25.376	.50604	.51379	.51783
#3	.52132	.51656	.51440	25.564	.51275	.51772	.51738
Errors	QC Pass	QC Pass	QC Pass	QC Pass	NOCHECK	NOCHECK	QC Pass
Value	.50000	.50000	.50000	25.000			.50000
Range	10.500	10.500	10.500	10.500			10.500

Elem	Ba	Be	Cd	Ca	Cr	Co	Cu
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.0509	2.1138	.52038	52.186	2.0703	2.0845	2.0356
SDev	.0071	.0074	.00205	.244	.0084	.0089	.0072
%RSD	.34531	.35205	.39315	.46762	.40429	.42770	.35197
#1	2.0529	2.1096	.51844	51.979	2.0644	2.0785	2.0395
#2	2.0430	2.1094	.52018	52.123	2.0668	2.0803	2.0273
#3	2.0567	2.1224	.52252	52.455	2.0799	2.0947	2.0399
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	2.0000	2.0000	.50000	50.000	2.0000	2.0000	2.0000
Range	10.500	10.500	10.500	10.500	10.500	10.500	10.500

Elem	Fe	Pb/1	Pb/2	Mg	Mn	K_	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	25.980	.51758	.52059	50.729	2.0826	54.359	2.0722
SDev	.098	.00072	.00249	.208	.0078	.147	.0082
%RSD	.37597	.13834	.47865	.40931	.37419	.26969	.39638
#1	25.901	.51731	.51902	50.571	2.0783	54.382	2.0635
#2	25.949	.51839	.51928	50.651	2.0779	54.202	2.0731
#3	26.089	.51704	.52346	50.964	2.0916	54.492	2.0798
Errors	QC Pass	NOCHECK	NOCHECK	QC Pass	QC Pass	QC Pass	QC Pass
Value	25.000			50.000	2.0000	50.000	2.0000
Range	10.500			10.500	10.500	10.500	10.500

Elem	Se/1	Se/2	Ag	Na	Tl	V_	Zn
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.51382	.51369	1.0172	49.596	1.0409	2.0746	2.1225
SDev	.00228	.00408	.0042	.100	.0072	.0075	.0069
%RSD	.44335	.79413	.40895	.20248	.69192	.36079	.32393
#1	.51214	.51099	1.0153	49.502	1.0361	2.0700	2.1185
#2	.51641	.51171	1.0144	49.583	1.0373	2.0706	2.1185
#3	.51291	.51839	1.0220	49.702	1.0492	2.0833	2.1304
Errors	NOCHECK	NOCHECK	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass

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Value			1.0000	50.000	1.0000	2.0000	2.0000
Range			10.500	10.500	10.500	10.500	10.500
Elem	B_	Mo	Li	Sr	Ti	Sn	Si
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.0008	2.0716	2.0720	2.0666	2.0708	2.0723	2.0302
SDev	.0080	.0103	.0059	.0071	.0070	.0038	.0096
%RSD	.40114	.49811	.28485	.34571	.33873	.18503	.47512
#1	1.9970	2.0629	2.0731	2.0669	2.0686	2.0718	2.0284
#2	1.9955	2.0689	2.0656	2.0593	2.0651	2.0688	2.0216
#3	2.0101	2.0830	2.0772	2.0736	2.0787	2.0764	2.0406
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000
Range	10.500	10.500	10.500	10.500	10.500	10.500	10.500
IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	13957	--	--	--	--	--	--
SDev	20.41729	--	--	--	--	--	--
%RSD	.1462829	--	--	--	--	--	--
#1	13941	--	--	--	--	--	--
#2	13980	--	--	--	--	--	--
#3	13951	--	--	--	--	--	--

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Method: TRA10103 Sample Name: CCB3 Operator: KGS
Run Time: 12/19/03 12:50:38
Comment:
Mode: CONC Corr. Factor: 1

Elem	Pb	Se	Sb	Al	Sb\1	Sb\2	As
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00000	-.00003	-.00095	.02042	-.00128	-.00028	.00119
SDev	.00004	.00116	.00194	.00068	.00378	.00189	.00023
%RSD	1948.4	3861.1	204.49	3.3103	295.24	664.52	19.578
#1	.00004	.00109	-.00078	.02113	-.00047	-.00139	.00094
#2	.00000	-.00124	-.00297	.02035	-.00540	.00190	.00124
#3	-.00004	.00006	.00090	.01978	.00203	-.00137	.00140
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass
High	.00305	.00505	.06005	.20005			.01005
Low	-.00305	-.00505	-.06005	-.20005			-.01005

Elem	Ba	Be	Cd	Ca	Cr	Co	Cu
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00007	-.00002	-.00005	-.00055	.00035	-.00019	-.00103
SDev	.00006	.00004	.00010	.00107	.00041	.00023	.00041
%RSD	88.286	273.23	200.11	193.17	119.42	121.09	39.933
#1	-.00010	-.00005	-.00012	.00062	-.00001	-.00027	-.00131
#2	-.00010	.00003	.00007	-.00147	.00080	.00007	-.00122
#3	.00000	-.00003	-.00011	-.00081	.00025	-.00036	-.00056
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.20005	.00505	.00505	5.0000	.01005	.05005	.02505
Low	-.20005	-.00505	-.00505	-5.0000	-.01005	-.05005	-.02505

Elem	Fe	Pb/1	Pb/2	Mg	Mn	K_	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00151	.00127	-.00064	-.00095	.00010	.00013	.00033
SDev	.00344	.00540	.00267	.00225	.00017	.00014	.00080
%RSD	227.83	425.60	419.50	238.18	173.21	102.17	242.88
#1	-.00547	.00024	-.00007	-.00170	.00000	.00027	.00060
#2	.00022	.00711	-.00355	-.00272	.00030	.00000	.00096
#3	.00072	-.00355	.00170	.00159	.00000	.00013	-.00057
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass
High	.10005			5.0000	.01505	5.0000	.04005
Low	-.10005			-5.0000	-.01505	-5.0000	-.04005

Elem	Se/1	Se/2	Ag	Na	Tl	V_	Zn
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00230	-.00119	-.00013	-.31913	.00249	-.00064	.00024
SDev	.00345	.00342	.00034	.22082	.00251	.00040	.00014
%RSD	150.25	287.27	260.85	69.194	101.17	62.274	57.727
#1	-.00015	.00170	-.00048	-.52605	.00539	-.00103	.00008
#2	.00624	-.00497	.00021	-.08664	.00102	-.00064	.00032
#3	.00080	-.00031	-.00012	-.34471	.00105	-.00024	.00033
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass

High			.01005	5.0000	.01005	.05005	.02005
Low			-.01005	-5.0000	-.01005	-.05005	-.02005

Elem	B_	Mo	Li	Sr	Ti	Sn	Si
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00019	.00220	.00017	.00002	.00001	.00021	-.00368
SDev	.00082	.00141	.00003	.00004	.00021	.00033	.00178
%RSD	434.50	64.049	16.221	161.00	1521.6	156.71	48.363
#1	-.00076	.00368	.00019	.00000	-.00010	-.00015	-.00526
#2	.00059	.00203	.00014	.00000	-.00011	.00028	-.00403
#3	.00074	.00088	.00017	.00006	.00025	.00050	-.00175
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.05005	.04005	.00505	.00505	.00505	.10005	.10005
Low	-.05005	-.04005	-.00505	-.00505	-.00505	-.10005	-.10005

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	14139	--	--	--	--	--	--
SDev	55.85104	--	--	--	--	--	--
%RSD	.3950242	--	--	--	--	--	--
#1	14202	--	--	--	--	--	--
#2	14115	--	--	--	--	--	--
#3	14098	--	--	--	--	--	--

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Method: TRA10103 Sample Name: F6JX2S Operator: KGS
Run Time: 12/19/03 12:55:04
Comment:
Mode: CONC Corr. Factor: 1

Elem	Pb	Se	Sb	Al	Sb\1	Sb\2	As
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.51014	1.8931	.51974	2.1538	.51849	.52226	2.0891
SDev	.00145	.0050	.00033	.0054	.00052	.00185	.0027
%RSD	.28383	.26344	.06322	.24922	.10109	.35365	.13148
#1	.51155	1.8944	.52012	2.1600	.51805	.52426	2.0923
#2	.50866	1.8876	.51959	2.1512	.51907	.52062	2.0873
#3	.51022	1.8974	.51952	2.1503	.51833	.52191	2.0878
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass
High	10.000	10.000	10.000	500.00			10.000
Low	-.00300	-.00500	-.06000	-.20000			-.01000

Elem	Ba	Be	Cd	Ca	Cr	Co	Cu
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.2407	.05394	.05202	189.78	.20836	.52821	.25777
SDev	.0045	.00002	.00016	.08	.00004	.00058	.00046
%RSD	.20025	.04447	.30120	.04193	.01780	.11005	.17805
#1	2.2459	.05394	.05184	189.85	.20835	.52884	.25791
#2	2.2378	.05392	.05211	189.69	.20841	.52808	.25726
#3	2.2385	.05397	.05212	189.79	.20834	.52770	.25814
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.000	10.000	10.000	500.00	20.000	20.000	10.000
Low	-.05000	-.00500	-.00500	-5.0000	-.01000	-.05000	-.02500

Elem	Fe	Pb/1	Pb/2	Mg	Mn	K_	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.1870	.50980	.51032	106.49	.58657	71.180	.51569
SDev	.0030	.00460	.00191	.11	.00048	.135	.00360
%RSD	.25038	.90185	.37340	.10526	.08216	.18980	.69892
#1	1.1894	.51045	.51211	106.58	.58702	71.335	.51541
#2	1.1880	.50491	.51053	106.37	.58606	71.121	.51224
#3	1.1837	.51403	.50831	106.53	.58663	71.085	.51943
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass
High	400.00			500.00	20.000	100.00	20.000
Low	-.10000			-5.0000	-.01500	-5.0000	-.04000

Elem	Se/1	Se/2	Ag	Na	Tl	V_	Zn
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.8712	1.9041	.05184	174.07	2.0790	.52807	.61861
SDev	.0040	.0063	.00084	.37	.0031	.00043	.00116
%RSD	.21537	.33175	1.6255	.21041	.14843	.08222	.18700
#1	1.8753	1.9039	.05092	174.34	2.0764	.52797	.61992
#2	1.8672	1.8978	.05203	173.66	2.0781	.52771	.61771
#3	1.8712	1.9105	.05258	174.22	2.0824	.52855	.61820
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass

High			2.0000	600.00	20.000	20.000	10.000
Low			-.01000	-5.0000	-.01000	-.05000	-.02000
Elem	B_	Mo	Li	Sr	Ti	Sn	Si
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	3.1435	1.0477	1.2667	3.2080	1.0487	2.1167	H15.868
SDev	.0052	.0011	.0022	.0057	.0010	.0023	.020
%RSD	.16688	.10188	.17604	.17669	.10003	.10962	.12795
#1	3.1482	1.0485	1.2690	3.2144	1.0499	2.1187	H15.889
#2	3.1443	1.0481	1.2646	3.2037	1.0479	2.1142	H15.849
#3	3.1378	1.0465	1.2664	3.2058	1.0484	2.1173	H15.865
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC High
High	10.000	10.000	4.0000	10.000	10.000	10.000	10.000
Low	-.50000	-.04000	-.05000	-.05000	-.05000	-.10000	-.10000
IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	13823	--	--	--	--	--	--
SDev	36.24849	--	--	--	--	--	--
%RSD	.2622397	--	--	--	--	--	--
#1	13781	--	--	--	--	--	--
#2	13847	--	--	--	--	--	--
#3	13840	--	--	--	--	--	--

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Method: TRA10103 Sample Name: F6JX2D Operator: KGS
Run Time: 12/19/03 12:59:30
Comment:
Mode: CONC Corr. Factor: 1

Elem	Pb	Se	Sb	Al	Sb\1	Sb\2	As
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.52109	1.9070	.63379	2.1957	.63345	.63448	2.1306
SDev	.00338	.0041	.00188	.0074	.00287	.00440	.0056
%RSD	.64938	.21457	.29644	.33618	.45311	.69343	.26485
#1	.52414	1.9114	.63561	2.1985	.63412	.63860	2.1360
#2	.52166	1.9033	.63186	2.1873	.63030	.63498	2.1312
#3	.51745	1.9063	.63390	2.2012	.63592	.62985	2.1247
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass
High	10.000	10.000	10.000	500.00			10.000
Low	-.00300	-.00500	-.06000	-.20000			-.01000

Elem	Ba	Be	Cd	Ca	Cr	Co	Cu
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.2777	.05506	.05333	192.33	.21358	.53921	.26227
SDev	.0040	.00048	.00056	1.70	.00209	.00330	.00168
%RSD	.17473	.86585	1.0571	.88304	.97755	.61143	.63898
#1	2.2769	.05543	.05396	193.85	.21569	.54275	.26189
#2	2.2741	.05522	.05313	192.66	.21353	.53866	.26082
#3	2.2820	.05452	.05289	190.50	.21152	.53622	.26411
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.000	10.000	10.000	500.00	20.000	20.000	10.000
Low	-.05000	-.00500	-.00500	-5.0000	-.01000	-.05000	-.02500

Elem	Fe	Pb/1	Pb/2	Mg	Mn	K_	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.2251	.52181	.52073	108.13	.59786	72.010	.52794
SDev	.0062	.00673	.00182	.74	.00316	.197	.00528
%RSD	.50512	1.2907	.35030	.68206	.52922	.27333	1.0006
#1	1.2259	.52708	.52268	108.82	.60072	72.046	.53278
#2	1.2185	.52412	.52044	108.22	.59839	71.797	.52874
#3	1.2308	.51422	.51907	107.36	.59446	72.186	.52230
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass
High	400.00			500.00	20.000	100.00	20.000
Low	-.10000			-5.0000	-.01500	-5.0000	-.04000

Elem	Se/1	Se/2	Ag	Na	Tl	V_	Zn
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.8905	1.9152	.05329	175.49	2.1294	.53999	.62910
SDev	.0037	.0047	.00073	.38	.0087	.00228	.00232
%RSD	.19514	.24568	1.3779	.21397	.40832	.42249	.36854
#1	1.8947	1.9197	.05413	175.57	2.1356	.54235	.63121
#2	1.8892	1.9103	.05289	175.08	2.1332	.53982	.62948
#3	1.8877	1.9156	.05284	175.82	2.1194	.53780	.62662
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass

High			2.0000	600.00	20.000	20.000	10.000
Low			-.01000	-5.0000	-.01000	-.05000	-.02000
Elem	B_	Mo	Li	Sr	Ti	Sn	Si
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	3.1710	1.2825	1.2852	3.2379	1.2791	2.5897	H18.058
SDev	.0026	.0035	.0051	.0033	.0040	.0176	.036
%RSD	.08165	.26911	.39970	.10101	.31079	.67846	.20174
#1	3.1715	1.2844	1.2846	3.2413	1.2823	2.5971	H18.098
#2	3.1682	1.2845	1.2805	3.2348	1.2805	2.6023	H18.026
#3	3.1733	1.2785	1.2907	3.2375	1.2747	2.5696	H18.050
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC High
High	10.000	10.000	4.0000	10.000	10.000	10.000	10.000
Low	-.50000	-.04000	-.05000	-.05000	-.05000	-.10000	-.10000
IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	13712	--	--	--	--	--	--
SDev	73.70786	--	--	--	--	--	--
%RSD	.5375295	--	--	--	--	--	--
#1	13628	--	--	--	--	--	--
#2	13745	--	--	--	--	--	--
#3	13764	--	--	--	--	--	--

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Method: TRA10103 Sample Name: F6J0AF Operator: KGS
Run Time: 12/19/03 13:03:56
Comment:
Mode: CONC Corr. Factor: 1

Elem	Pb	Se	Sb	Al	Sb\1	Sb\2	As
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L-.00892	.00041	-.00154	.04413	-.00290	.00121	.00169
SDev	.00038	.00272	.00109	.00359	.00146	.00148	.00170
%RSD	4.3064	666.04	70.969	8.1425	50.386	122.50	100.82
#1	L-.00906	.00324	-.00044	.04767	-.00197	.00262	.00028
#2	L-.00921	.00016	-.00154	.04049	-.00215	-.00033	.00121
#3	L-.00848	-.00218	-.00262	.04423	-.00459	.00133	.00357
Errors	LC Low	LC Pass	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass
High	10.000	10.000	10.000	500.00			10.000
Low	-.00300	-.00500	-.06000	-.20000			-.01000

Elem	Ba	Be	Cd	Ca	Cr	Co	Cu
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.17977	-.00032	-.00011	139.15	.00028	.00000	-.00137
SDev	.00063	.00005	.00020	.77	.00022	.00018	.00022
%RSD	.35279	15.963	180.74	.55505	78.551	4892.4	16.056
#1	.17967	-.00038	-.00012	138.55	.00005	.00006	-.00112
#2	.17919	-.00030	.00009	138.89	.00049	-.00020	-.00150
#3	.18045	-.00028	-.00030	140.02	.00030	.00015	-.00150
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.000	10.000	10.000	500.00	20.000	20.000	10.000
Low	-.05000	-.00500	-.00500	-5.0000	-.01000	-.05000	-.02500

Elem	Fe	Pb/1	Pb/2	Mg	Mn	K_	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.05432	-.00603	-.01036	53.407	.05682	11.715	.00027
SDev	.00654	.00175	.00095	.277	.00036	.059	.00052
%RSD	12.040	29.097	9.1910	.51869	.62757	.50316	196.08
#1	.06005	-.00804	-.00956	53.222	.05644	11.674	-.00009
#2	.04719	-.00480	-.01141	53.273	.05689	11.689	.00003
#3	.05570	-.00525	-.01010	53.725	.05714	11.782	.00087
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass
High	400.00			500.00	20.000	100.00	20.000
Low	-.10000			-5.0000	-.01500	-5.0000	-.04000

Elem	Se/1	Se/2	Ag	Na	Tl	V_	Zn
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00829	-.00352	.00025	120.23	.00616	-.00125	.02163
SDev	.00123	.00347	.00024	.40	.00200	.00035	.00003
%RSD	14.892	98.309	95.503	.33649	32.401	28.340	.14432
#1	.00952	.00011	.00032	120.16	.00813	-.00084	.02167
#2	.00829	-.00390	.00046	119.87	.00623	-.00145	.02161
#3	.00705	-.00679	-.00001	120.67	.00413	-.00145	.02162
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass

High			2.0000	600.00	20.000	20.000	10.000
Low			-.01000	-5.0000	-.01000	-.05000	-.02000
Elem	B_	Mo	Li	Sr	Ti	Sn	Si
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.1362	.00132	.16456	2.2436	-.00037	.00028	5.7881
SDev	.0092	.00089	.00063	.0080	.00012	.00249	.0271
%RSD	.42930	67.256	.38084	.35853	33.083	890.99	.46820
#1	2.1302	.00231	.16436	2.2404	-.00025	.00160	5.7791
#2	2.1317	.00062	.16405	2.2377	-.00037	.00182	5.7666
#3	2.1468	.00101	.16526	2.2528	-.00050	-.00259	5.8185
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.000	10.000	4.0000	10.000	10.000	10.000	10.000
Low	-.50000	-.04000	-.05000	-.05000	-.05000	-.10000	-.10000
IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	13898	--	--	--	--	--	--
SDev	30.86078	--	--	--	--	--	--
%RSD	.2220487	--	--	--	--	--	--
#1	13893	--	--	--	--	--	--
#2	13931	--	--	--	--	--	--
#3	13870	--	--	--	--	--	--

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Method: TRA10103 Sample Name: F6J0A Operator: KGS
Run Time: 12/19/03 13:08:22
Comment:
Mode: CONC Corr. Factor: 1

Elem	Pb	Se	Sb	Al	Sb\1	Sb\2	As
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L-.00952	.00137	-.00024	.04789	-.00124	.00175	.00251
SDev	.00022	.00029	.00108	.00521	.00251	.00192	.00085
%RSD	2.3531	21.112	443.57	10.875	202.11	109.34	33.729
#1	L-.00932	.00139	.00056	.04390	.00098	-.00030	.00337
#2	L-.00976	.00164	.00019	.05378	-.00075	.00206	.00168
#3	L-.00948	.00107	-.00148	.04599	-.00396	.00350	.00247
Errors	LC Low	LC Pass	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass
High	10.000	10.000	10.000	500.00			10.000
Low	-.00300	-.00500	-.06000	-.20000			-.01000

Elem	Ba	Be	Cd	Ca	Cr	Co	Cu
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.17885	-.00032	-.00000	137.79	-.00027	.00014	-.00154
SDev	.00212	.00008	.00018	1.79	.00029	.00055	.00049
%RSD	1.1869	24.229	7731.9	1.3016	109.84	376.45	32.081
#1	.17640	-.00024	.00020	135.72	.00006	.00075	-.00112
#2	.18023	-.00039	-.00015	138.80	-.00050	-.00029	-.00208
#3	.17991	-.00033	-.00005	138.84	-.00036	-.00003	-.00141
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.000	10.000	10.000	500.00	20.000	20.000	10.000
Low	-.05000	-.00500	-.00500	-5.0000	-.01000	-.05000	-.02500

Elem	Fe	Pb/1	Pb/2	Mg	Mn	K_	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.13301	-.00913	-.00971	52.655	.05617	11.484	-.00057
SDev	.00479	.00150	.00083	.683	.00076	.160	.00021
%RSD	3.6000	16.431	8.5580	1.2980	1.3495	1.3959	36.393
#1	.13789	-.01026	-.00884	51.866	.05529	11.300	-.00045
#2	.13280	-.00970	-.00979	53.049	.05657	11.598	-.00081
#3	.12832	-.00743	-.01050	53.050	.05664	11.553	-.00045
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass
High	400.00			500.00	20.000	100.00	20.000
Low	-.10000			-5.0000	-.01500	-5.0000	-.04000

Elem	Se/1	Se/2	Ag	Na	Tl	V_	Zn
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00650	-.00120	-.00008	118.44	.00318	-.00111	.07160
SDev	.00053	.00070	.00032	1.38	.00178	.00052	.00077
%RSD	8.1192	58.117	397.36	1.1683	55.813	46.402	1.0824
#1	.00645	-.00114	.00024	116.85	.00456	-.00104	.07074
#2	.00600	-.00053	-.00041	119.34	.00118	-.00166	.07223
#3	.00705	-.00192	-.00007	119.14	.00382	-.00064	.07185
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass

High			2.0000	600.00	20.000	20.000	10.000
Low			-.01000	-5.0000	-.01000	-.05000	-.02000
Elem	B_	Mo	Li	Sr	Ti	Sn	Si
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.1193	.00075	.16206	2.1981	-.00045	.00131	5.7757
SDev	.0266	.00086	.00194	.0264	.00015	.00024	.0724
%RSD	1.2568	114.23	1.1970	1.2001	32.058	18.653	1.2529
#1	2.0887	.00088	.15989	2.1679	-.00036	.00159	5.6922
#2	2.1378	-.00016	.16363	2.2168	-.00038	.00117	5.8189
#3	2.1312	.00154	.16265	2.2097	-.00062	.00117	5.8161
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.000	10.000	4.0000	10.000	10.000	10.000	10.000
Low	-.50000	-.04000	-.05000	-.05000	-.05000	-.10000	-.10000
IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	13887	--	--	--	--	--	--
SDev	126.3243	--	--	--	--	--	--
%RSD	.9096851	--	--	--	--	--	--
#1	14029	--	--	--	--	--	--
#2	13787	--	--	--	--	--	--
#3	13844	--	--	--	--	--	--

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Method: TRA10103 Sample Name: F6RVR Operator: KGS
Run Time: 12/19/03 13:12:49
Comment:
Mode: CONC Corr. Factor: 1

Elem	Pb	Se	Sb	Al	Sb\1	Sb\2	As
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.03755	.00064	.00075	20.579	.00090	.00044	.00350
SDev	.00037	.00106	.00027	.011	.00085	.00090	.00102
%RSD	.98764	166.09	36.181	.05540	94.625	205.72	29.283
#1	.03718	.00009	.00105	20.581	.00184	-.00052	.00463
#2	.03754	.00186	.00066	20.566	.00070	.00057	.00322
#3	.03792	-.00004	.00054	20.588	.00017	.00127	.00264
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass
High	10.000	10.000	10.000	500.00			10.000
Low	-.00300	-.00500	-.06000	-.20000			-.01000

Elem	Ba	Be	Cd	Ca	Cr	Co	Cu
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.12472	.00035	.00002	9.1657	.02040	.00094	.00611
SDev	.00013	.00006	.00009	.0199	.00036	.00054	.00044
%RSD	.10753	18.152	414.65	.21727	1.7644	57.155	7.1161
#1	.12457	.00029	.00008	9.1440	.02081	.00156	.00649
#2	.12475	.00035	.00007	9.1697	.02020	.00063	.00620
#3	.12483	.00042	-.00008	9.1833	.02018	.00063	.00563
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.000	10.000	10.000	500.00	20.000	20.000	10.000
Low	-.05000	-.00500	-.00500	-5.0000	-.01000	-.05000	-.02500

Elem	Fe	Pb/1	Pb/2	Mg	Mn	K_	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	3.1763	.03668	.03798	1.7831	.03690	.15965	.00565
SDev	.0071	.00221	.00061	.0037	.00013	.00048	.00067
%RSD	.22389	6.0215	1.6033	.20554	.34978	.30081	11.916
#1	3.1834	.03419	.03868	1.7793	.03685	.15911	.00489
#2	3.1691	.03749	.03756	1.7866	.03680	.15978	.00616
#3	3.1763	.03838	.03770	1.7835	.03705	.16004	.00592
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass
High	400.00			500.00	20.000	100.00	20.000
Low	-.10000			-5.0000	-.01500	-5.0000	-.04000

Elem	Se/1	Se/2	Ag	Na	Tl	V_	Zn
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00559	-.00183	-.00028	7.1274	.00352	.03718	.02607
SDev	.00240	.00273	.00012	.0914	.00253	.00025	.00008
%RSD	42.836	149.00	43.546	1.2825	71.858	.67313	.31172
#1	.00575	-.00273	-.00029	7.1411	.00579	.03743	.02616
#2	.00312	.00123	-.00015	7.0300	.00398	.03718	.02605
#3	.00791	-.00400	-.00040	7.2112	.00079	.03693	.02601
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass

High			2.0000	600.00	20.000	20.000	10.000
Low			-.01000	-5.0000	-.01000	-.05000	-.02000
Elem	B_	Mo	Li	Sr	Ti	Sn	Si
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.06112	.00332	.00590	.11837	.06123	.00235	H24.550
SDev	.00071	.00120	.00005	.00035	.00015	.00243	.017
%RSD	1.1534	36.097	.87483	.29684	.23728	103.48	.07079
#1	.06032	.00467	.00585	.11798	.06136	.00307	H24.530
#2	.06137	.00289	.00595	.11850	.06127	-.00036	H24.556
#3	.06166	.00239	.00591	.11865	.06107	.00434	H24.563
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC High
High	10.000	10.000	4.0000	10.000	10.000	10.000	10.000
Low	-.50000	-.04000	-.05000	-.05000	-.05000	-.10000	-.10000
IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	14318	--	--	--	--	--	--
SDev	19.34282	--	--	--	--	--	--
%RSD	.1350930	--	--	--	--	--	--
#1	14299	--	--	--	--	--	--
#2	14318	--	--	--	--	--	--
#3	14338	--	--	--	--	--	--

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Method: TRA10103 Sample Name: F6RT9 Operator: KGS
Run Time: 12/19/03 13:17:15
Comment:
Mode: CONC Corr. Factor: 1

Elem	Pb	Se	Sb	Al	Sb\1	Sb\2	As
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.07338	.00381	.00151	49.258	.00062	.00330	.01138
SDev	.00087	.00029	.00107	.139	.00235	.00150	.00020
%RSD	1.1833	7.6474	71.087	.28198	380.89	45.306	1.7216
#1	.07380	.00414	.00228	49.412	.00235	.00212	.01116
#2	.07396	.00358	.00198	49.142	.00156	.00280	.01146
#3	.07238	.00372	.00028	49.219	-.00206	.00498	.01153
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass
High	10.000	10.000	10.000	500.00			10.000
Low	-.00300	-.00500	-.06000	-.20000			-.01000

Elem	Ba	Be	Cd	Ca	Cr	Co	Cu
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.33663	.00085	-.00103	1.7666	.08595	.00128	.01026
SDev	.00093	.00003	.00017	.0028	.00009	.00031	.00020
%RSD	.27504	2.9993	16.414	.16068	.10525	24.310	1.9121
#1	.33765	.00082	-.00122	1.7699	.08603	.00115	.01048
#2	.33585	.00086	-.00093	1.7649	.08596	.00106	.01011
#3	.33639	.00087	-.00094	1.7650	.08585	.00164	.01018
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.000	10.000	10.000	500.00	20.000	20.000	10.000
Low	-.05000	-.00500	-.00500	-5.0000	-.01000	-.05000	-.02500

Elem	Fe	Pb/1	Pb/2	Mg	Mn	K_	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	42.936	.07990	.07013	.58588	.04448	.04315	.00752
SDev	.094	.00101	.00127	.00486	.00023	.00136	.00035
%RSD	.21849	1.2581	1.8119	.82954	.52896	3.1503	4.6604
#1	43.044	.07900	.07121	.59029	.04475	.04468	.00749
#2	42.877	.08099	.07045	.58668	.04439	.04269	.00789
#3	42.887	.07970	.06873	.58067	.04431	.04208	.00719
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass
High	400.00			500.00	20.000	100.00	20.000
Low	-.10000			-5.0000	-.01500	-5.0000	-.04000

Elem	Se/1	Se/2	Ag	Na	Tl	V_	Zn
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00370	.00387	-.00091	-.39600	-.00077	.24444	.02315
SDev	.00223	.00154	.00021	.07837	.00212	.00060	.00023
%RSD	60.287	39.875	23.568	19.791	273.72	.24708	.97817
#1	.00113	.00564	-.00094	-.46593	-.00121	.24514	.02342
#2	.00507	.00284	-.00111	-.41078	.00153	.24412	.02305
#3	.00489	.00313	-.00069	-.31129	-.00264	.24407	.02300
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass

High			2.0000	600.00	20.000	20.000	10.000
Low			-.01000	-5.0000	-.01000	-.05000	-.02000
Elem	B_	Mo	Li	Sr	Ti	Sn	Si
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00468	.00154	.00817	.29104	.26164	.02091	5.4746
SDev	.00109	.00008	.00001	.00078	.00048	.00113	.0197
%RSD	23.187	5.0075	.08760	.26873	.18486	5.4136	.35944
#1	.00393	.00163	.00817	.29191	.26218	.01962	5.4973
#2	.00419	.00149	.00816	.29040	.26148	.02136	5.4626
#3	.00593	.00149	.00817	.29080	.26125	.02174	5.4639
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.000	10.000	4.0000	10.000	10.000	10.000	10.000
Low	-.50000	-.04000	-.05000	-.05000	-.05000	-.10000	-.10000
IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	14501	--	--	--	--	--	--
SDev	76.49863	--	--	--	--	--	--
%RSD	.5275512	--	--	--	--	--	--
#1	14414	--	--	--	--	--	--
#2	14531	--	--	--	--	--	--
#3	14557	--	--	--	--	--	--

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Method: TRA10103 Sample Name: F6RT9S Operator: KGS
Run Time: 12/19/03 13:21:42
Comment:
Mode: CONC Corr. Factor: 1

Elem	Pb	Se	Sb	Al	Sb\1	Sb\2	As
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.68286	1.8782	.26828	269.53	.26610	.27263	1.9142
SDev	.00572	.0162	.00172	2.76	.00228	.00063	.0220
%RSD	.83709	.86398	.63973	1.0251	.85503	.23227	1.1518
#1	.68017	1.8760	.26660	268.89	.26382	.27217	1.9084
#2	.68943	1.8954	.27003	272.56	.26837	.27335	1.9386
#3	.67899	1.8632	.26819	267.14	.26611	.27237	1.8956
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass
High	10.000	10.000	10.000	500.00			10.000
Low	-.00300	-.00500	-.06000	-.20000			-.01000

Elem	Ba	Be	Cd	Ca	Cr	Co	Cu
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	4.2821	.05379	.04846	52.968	.45862	.51067	.26137
SDev	.0481	.00044	.00034	.470	.00373	.00451	.00247
%RSD	1.1223	.82252	.70324	.88735	.81308	.88217	.94346
#1	4.2762	.05367	.04838	52.828	.45747	.50948	.26099
#2	4.3329	.05429	.04883	53.492	.46279	.51565	.26401
#3	4.2373	.05343	.04816	52.584	.45561	.50688	.25912
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.000	10.000	10.000	500.00	20.000	20.000	10.000
Low	-.05000	-.00500	-.00500	-5.0000	-.01000	-.05000	-.02500

Elem	Fe	Pb/1	Pb/2	Mg	Mn	K_	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	71.331	.70532	.67165	50.510	.55227	53.685	.53098
SDev	.676	.00700	.00611	.469	.00513	.553	.00409
%RSD	.94776	.99196	.90933	.92823	.92905	1.0303	.76950
#1	71.100	.70701	.66677	50.347	.55051	53.512	.53000
#2	72.093	.71132	.67850	51.039	.55805	54.304	.53547
#3	70.802	.69763	.66969	50.144	.54825	53.240	.52748
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass
High	400.00			500.00	20.000	100.00	20.000
Low	-.10000			-5.0000	-.01500	-5.0000	-.04000

Elem	Se/1	Se/2	Ag	Na	Tl	V_	Zn
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.8382	1.8982	.04619	48.991	1.9496	.87145	.58565
SDev	.0131	.0185	.00020	.444	.0218	.00793	.00591
%RSD	.71451	.97298	.43368	.90656	1.1173	.91049	1.0094
#1	1.8424	1.8928	.04642	48.847	1.9354	.86925	.58405
#2	1.8486	1.9187	.04612	49.489	1.9747	.88026	.59220
#3	1.8234	1.8830	.04603	48.637	1.9387	.86485	.58070
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass

High			2.0000	600.00	20.000	20.000	10.000
Low			-.01000	-5.0000	-.01000	-.05000	-.02000
Elem	B_	Mo	Li	Sr	Ti	Sn	Si
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.91025	.92817	1.0472	2.9651	1.1745	1.9454	H13.474
SDev	.01088	.00858	.0116	.0325	.0120	.0160	.130
%RSD	1.1949	.92402	1.1040	1.0952	1.0226	.82412	.96325
#1	.90612	.92390	1.0439	2.9609	1.1716	1.9379	H13.455
#2	.92258	.93804	1.0601	2.9995	1.1876	1.9639	H13.613
#3	.90204	.92256	1.0377	2.9349	1.1641	1.9346	H13.355
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC High
High	10.000	10.000	4.0000	10.000	10.000	10.000	10.000
Low	-.50000	-.04000	-.05000	-.05000	-.05000	-.10000	-.10000
IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	14422	--	--	--	--	--	--
SDev	123.9891	--	--	--	--	--	--
%RSD	.8597059	--	--	--	--	--	--
#1	14419	--	--	--	--	--	--
#2	14300	--	--	--	--	--	--
#3	14548	--	--	--	--	--	--

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Method: TRA10103 Sample Name: F6RT9D Operator: KGS
Run Time: 12/19/03 13:26:08
Comment:
Mode: CONC Corr. Factor: 1

Elem	Pb	Se	Sb	Al	Sb\1	Sb\2	As
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.70658	1.8806	.27689	251.17	.27382	.28305	1.9056
SDev	.00487	.0044	.00244	1.56	.00197	.00368	.0139
%RSD	.68903	.23631	.88180	.62040	.72002	1.3000	.72898
#1	.70189	1.8756	.27444	249.53	.27161	.28012	1.8904
#2	.71161	1.8841	.27932	252.63	.27540	.28718	1.9177
#3	.70623	1.8821	.27691	251.34	.27443	.28186	1.9088
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass
High	10.000	10.000	10.000	500.00			10.000
Low	-.00300	-.00500	-.06000	-.20000			-.01000

Elem	Ba	Be	Cd	Ca	Cr	Co	Cu
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	4.0592	.05325	.04885	53.390	.43958	.50927	.25985
SDev	.0251	.00034	.00024	.368	.00213	.00325	.00164
%RSD	.61821	.63607	.48799	.68973	.48447	.63759	.62990
#1	4.0330	.05289	.04858	53.012	.43726	.50604	.25798
#2	4.0830	.05357	.04903	53.748	.44145	.51253	.26105
#3	4.0616	.05329	.04894	53.410	.44001	.50924	.26050
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.000	10.000	10.000	500.00	20.000	20.000	10.000
Low	-.05000	-.00500	-.00500	-5.0000	-.01000	-.05000	-.02500

Elem	Fe	Pb/1	Pb/2	Mg	Mn	K_	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	55.287	.72644	.69666	50.470	.55884	53.704	.52821
SDev	.358	.00875	.00445	.341	.00346	.262	.00561
%RSD	.64723	1.2043	.63900	.67585	.61952	.48813	1.0623
#1	54.925	.72267	.69152	50.109	.55537	53.417	.52250
#2	55.641	.73644	.69921	50.788	.56229	53.930	.53372
#3	55.293	.72021	.69925	50.513	.55885	53.766	.52841
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass
High	400.00			500.00	20.000	100.00	20.000
Low	-.10000			-5.0000	-.01500	-5.0000	-.04000

Elem	Se/1	Se/2	Ag	Na	Tl	V_	Zn
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.8461	1.8978	.04641	49.178	1.9502	.77745	.59383
SDev	.0064	.0069	.00063	.384	.0169	.00614	.00386
%RSD	.34527	.36464	1.3649	.78116	.86522	.78920	.64999
#1	1.8466	1.8901	.04584	48.828	1.9316	.77093	.58968
#2	1.8522	1.9000	.04709	49.589	1.9644	.78311	.59731
#3	1.8395	1.9034	.04632	49.118	1.9547	.77831	.59452
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass

High			2.0000	600.00	20.000	20.000	10.000
Low			-.01000	-5.0000	-.01000	-.05000	-.02000
Elem	B_	Mo	Li	Sr	Ti	Sn	Si
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.91372	.93695	1.0474	2.7627	1.1928	1.9489	H12.636
SDev	.00511	.00672	.0054	.0162	.0078	.0202	.068
%RSD	.55928	.71761	.51666	.58660	.65339	1.0360	.53575
#1	.90828	.93058	1.0414	2.7461	1.1843	1.9295	H12.563
#2	.91842	.94398	1.0520	2.7784	1.1996	1.9698	H12.697
#3	.91447	.93630	1.0488	2.7636	1.1945	1.9475	H12.649
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC High
High	10.000	10.000	4.0000	10.000	10.000	10.000	10.000
Low	-.50000	-.04000	-.05000	-.05000	-.05000	-.10000	-.10000
IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	14386	--	--	--	--	--	--
SDev	44.46640	--	--	--	--	--	--
%RSD	.3091043	--	--	--	--	--	--
#1	14407	--	--	--	--	--	--
#2	14334	--	--	--	--	--	--
#3	14415	--	--	--	--	--	--

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Method: TRA10103 Sample Name: F6RVK Operator: KGS
Run Time: 12/19/03 13:30:34
Comment:
Mode: CONC Corr. Factor: 1

Elem	Pb	Se	Sb	Al	Sb\1	Sb\2	As
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.06619	.00362	.00029	41.902	-.00053	.00193	.01048
SDev	.00123	.00124	.00027	.085	.00073	.00152	.00127
%RSD	1.8520	34.325	92.360	.20304	137.92	78.699	12.130
#1	.06753	.00309	.00056	41.934	.00004	.00160	.00930
#2	.06591	.00504	.00002	41.805	-.00027	.00060	.01183
#3	.06513	.00273	.00029	41.966	-.00135	.00358	.01031
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass
High	10.000	10.000	10.000	500.00			10.000
Low	-.00300	-.00500	-.06000	-.20000			-.01000

Elem	Ba	Be	Cd	Ca	Cr	Co	Cu
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.56164	.00155	-.00105	2.1629	.08559	.00182	.00920
SDev	.00064	.00006	.00018	.0165	.00073	.00041	.00042
%RSD	.11335	3.9623	16.878	.76382	.85808	22.365	4.5686
#1	.56216	.00149	-.00105	2.1502	.08567	.00202	.00899
#2	.56093	.00154	-.00124	2.1570	.08481	.00136	.00892
#3	.56182	.00162	-.00088	2.1816	.08627	.00210	.00968
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.000	10.000	10.000	500.00	20.000	20.000	10.000
Low	-.05000	-.00500	-.00500	-5.0000	-.01000	-.05000	-.02500

Elem	Fe	Pb/1	Pb/2	Mg	Mn	K_	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	45.648	.07390	.06234	.87623	.02631	.02671	.01092
SDev	.180	.00185	.00113	.00937	.00026	.00251	.00070
%RSD	.39423	2.4996	1.8149	1.0696	.99883	9.3803	6.4069
#1	45.606	.07600	.06331	.87106	.02610	.02552	.01039
#2	45.492	.07251	.06262	.87058	.02623	.02502	.01066
#3	45.845	.07321	.06110	.88705	.02661	.02959	.01171
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass
High	400.00			500.00	20.000	100.00	20.000
Low	-.10000			-5.0000	-.01500	-5.0000	-.04000

Elem	Se/1	Se/2	Ag	Na	Tl	V_	Zn
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00263	.00412	-.00040	-.30910	.00389	.30196	.01430
SDev	.00111	.00138	.00029	.15218	.00049	.00140	.00020
%RSD	41.946	33.516	71.415	49.234	12.624	.46415	1.4367
#1	.00172	.00378	-.00057	-.31535	.00445	.30202	.01429
#2	.00386	.00563	-.00057	-.45806	.00370	.30053	.01411
#3	.00232	.00294	-.00007	-.15389	.00353	.30333	.01452
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass

High			2.0000	600.00	20.000	20.000	10.000
Low			-.01000	-5.0000	-.01000	-.05000	-.02000
Elem	B_	Mo	Li	Sr	Ti	Sn	Si
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00478	.00201	.00402	.55015	.22666	.01497	5.9418
SDev	.00073	.00050	.00006	.00072	.00030	.00276	.0213
%RSD	15.213	24.830	1.5555	.13159	.12999	18.441	.35892
#1	.00404	.00259	.00395	.55043	.22693	.01445	5.9654
#2	.00481	.00172	.00403	.54933	.22670	.01250	5.9238
#3	.00549	.00173	.00408	.55069	.22635	.01795	5.9363
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.000	10.000	4.0000	10.000	10.000	10.000	10.000
Low	-.50000	-.04000	-.05000	-.05000	-.05000	-.10000	-.10000
IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	14739	--	--	--	--	--	--
SDev	45.66440	--	--	--	--	--	--
%RSD	.3098122	--	--	--	--	--	--
#1	14696	--	--	--	--	--	--
#2	14787	--	--	--	--	--	--
#3	14735	--	--	--	--	--	--

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Method: TRA10103 Sample Name: F6RT9P5 Operator: KGS
Run Time: 12/19/03 13:35:01
Comment:
Mode: CONC Corr. Factor: 1

Elem	Pb	Se	Sb	Al	Sb\1	Sb\2	As
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.01651	.00094	-.00014	11.032	-.00069	.00097	.00456
SDev	.00042	.00202	.00061	.001	.00077	.00152	.00043
%RSD	2.5158	215.10	451.40	.01137	112.47	156.90	9.3533
#1	.01697	.00327	.00045	11.032	.00016	.00103	.00419
#2	.01640	-.00014	-.00009	11.034	-.00135	.00245	.00502
#3	.01616	-.00032	-.00077	11.031	-.00086	-.00058	.00446
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass
High	10.000	10.000	10.000	500.00			10.000
Low	-.00300	-.00500	-.06000	-.20000			-.01000

Elem	Ba	Be	Cd	Ca	Cr	Co	Cu
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.07469	-.00053	-.00031	.40009	.01900	-.00018	.00104
SDev	.00003	.00002	.00018	.00016	.00037	.00016	.00015
%RSD	.04550	4.4435	59.965	.04052	1.9424	89.555	14.464
#1	.07469	-.00055	-.00017	.40021	.01859	.00001	.00100
#2	.07472	-.00053	-.00024	.39991	.01930	-.00027	.00091
#3	.07465	-.00050	-.00051	.40017	.01911	-.00027	.00120
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.000	10.000	10.000	500.00	20.000	20.000	10.000
Low	-.05000	-.00500	-.00500	-5.0000	-.01000	-.05000	-.02500

Elem	Fe	Pb/1	Pb/2	Mg	Mn	K_	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	9.5043	.01965	.01495	.12809	.01022	.01317	.00190
SDev	.0118	.00208	.00109	.00038	.00002	.00085	.00101
%RSD	.12419	10.562	7.2687	.29737	.15507	6.4495	53.117
#1	9.4946	.01948	.01572	.12791	.01023	.01231	.00094
#2	9.5174	.02181	.01370	.12783	.01024	.01401	.00296
#3	9.5008	.01767	.01542	.12853	.01020	.01320	.00182
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass
High	400.00			500.00	20.000	100.00	20.000
Low	-.10000			-5.0000	-.01500	-5.0000	-.04000

Elem	Se/1	Se/2	Ag	Na	Tl	V_	Zn
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00419	-.00069	-.00073	-.44200	.00001	.05302	.00605
SDev	.00151	.00246	.00033	.17984	.00115	.00029	.00009
%RSD	36.038	357.99	44.623	40.687	9486.0	.55118	1.4737
#1	.00564	.00208	-.00103	-.58848	.00085	.05282	.00600
#2	.00263	-.00151	-.00038	-.24129	.00048	.05288	.00600
#3	.00431	-.00262	-.00079	-.49624	-.00130	.05335	.00615
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass

High			2.0000	600.00	20.000	20.000	10.000
Low			-.01000	-5.0000	-.01000	-.05000	-.02000
Elem	B_	Mo	Li	Sr	Ti	Sn	Si
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00101	.00035	.00211	.06509	.05943	.00454	1.2729
SDev	.00121	.00068	.00000	.00007	.00016	.00081	.0013
%RSD	120.17	195.96	.15704	.11554	.26244	17.853	.10069
#1	-.00033	.00035	.00212	.06514	.05941	.00376	1.2720
#2	.00204	.00103	.00212	.06514	.05960	.00447	1.2743
#3	.00131	-.00033	.00211	.06501	.05929	.00538	1.2723
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.000	10.000	4.0000	10.000	10.000	10.000	10.000
Low	-.50000	-.04000	-.05000	-.05000	-.05000	-.10000	-.10000
IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	13197	--	--	--	--	--	--
SDev	20.47139	--	--	--	--	--	--
%RSD	.1551250	--	--	--	--	--	--
#1	13193	--	--	--	--	--	--
#2	13178	--	--	--	--	--	--
#3	13219	--	--	--	--	--	--

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Method: TRA10103 Sample Name: CCV4 Operator: KGS
Run Time: 12/19/03 13:39:27
Comment:
Mode: CONC Corr. Factor: 1

Elem	Pb	Se	Sb	Al	Sb\1	Sb\2	As
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.54693	.53239	.52807	26.247	.52667	.53086	.53823
SDev	.00705	.00672	.00449	.244	.00554	.00279	.00547
%RSD	1.2892	1.2614	.85042	.92876	1.0521	.52640	1.0157
#1	.53879	.52470	.52290	25.965	.52028	.52817	.53246
#2	.55087	.53533	.53107	26.381	.52974	.53375	.53890
#3	.55113	.53713	.53022	26.393	.53001	.53066	.54333
Errors	QC Pass	QC Pass	QC Pass	QC Pass	NOCHECK	NOCHECK	QC Pass
Value	.50000	.50000	.50000	25.000			.50000
Range	10.500	10.500	10.500	10.500			10.500

Elem	Ba	Be	Cd	Ca	Cr	Co	Cu
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.1037	Q2.2101	.54910	55.010	2.1683	2.1919	2.0799
SDev	.0185	.0221	.00559	.566	.0225	.0223	.0185
%RSD	.88105	.99837	1.0182	1.0289	1.0383	1.0182	.88932
#1	2.0824	2.1847	.54269	54.360	2.1425	2.1662	2.0586
#2	2.1132	Q2.2218	.55167	Q55.281	2.1780	2.2026	2.0909
#3	2.1156	Q2.2238	Q.55295	Q55.390	2.1843	2.2068	2.0903
Errors	QC Pass	QC Fail	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	2.0000	2.0000	.50000	50.000	2.0000	2.0000	2.0000
Range	10.500	10.500	10.500	10.500	10.500	10.500	10.500

Elem	Fe	Pb/1	Pb/2	Mg	Mn	K_	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	27.231	.54490	.54794	53.535	2.1763	Q56.060	2.1824
SDev	.261	.00684	.00716	.567	.0219	.424	.0212
%RSD	.95879	1.2560	1.3067	1.0585	1.0054	.75689	.97020
#1	26.930	.53700	.53968	52.882	2.1511	Q55.578	2.1580
#2	27.365	.54903	.55179	53.824	2.1877	Q56.224	2.1955
#3	27.398	.54866	.55236	53.898	2.1902	Q56.378	2.1938
Errors	QC Pass	NOCHECK	NOCHECK	QC Pass	QC Pass	QC Fail	QC Pass
Value	25.000			50.000	2.0000	50.000	2.0000
Range	10.500			10.500	10.500	10.500	10.500

Elem	Se/1	Se/2	Ag	Na	Tl	V_	Zn
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.52621	.53547	1.0502	51.033	1.0835	2.1608	Q2.2163
SDev	.00511	.00753	.0082	.437	.0128	.0211	.0223
%RSD	.97199	1.4068	.78106	.85558	1.1834	.97472	1.0049
#1	.52031	.52690	1.0407	50.532	1.0687	2.1366	2.1906
#2	.52900	.53849	1.0547	51.235	1.0917	2.1706	Q2.2291
#3	.52932	.54102	1.0552	51.332	1.0901	2.1752	Q2.2293
Errors	NOCHECK	NOCHECK	QC Pass	QC Pass	QC Pass	QC Pass	QC Fail

Value			1.0000	50.000	1.0000	2.0000	2.0000
Range			10.500	10.500	10.500	10.500	10.500
Elem	B_	Mo	Li	Sr	Ti	Sn	Si
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.0637	2.1663	2.1294	2.1246	2.1478	2.1804	2.0990
SDev	.0200	.0296	.0183	.0193	.0203	.0244	.0198
%RSD	.96702	1.3660	.86165	.91075	.94544	1.1201	.94149
#1	2.0407	2.1322	2.1083	2.1023	2.1244	2.1522	2.0762
#2	2.0732	2.1819	2.1397	2.1346	2.1582	2.1948	2.1097
#3	2.0771	2.1848	2.1404	2.1369	2.1608	2.1941	2.1112
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000
Range	10.500	10.500	10.500	10.500	10.500	10.500	10.500
IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	13567	--	--	--	--	--	--
SDev	89.92699	--	--	--	--	--	--
%RSD	.6628219	--	--	--	--	--	--
#1	13669	--	--	--	--	--	--
#2	13498	--	--	--	--	--	--
#3	13535	--	--	--	--	--	--

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Method: TRA10103 Sample Name: CCB4 Operator: KGS
Run Time: 12/19/03 13:43:54
Comment:
Mode: CONC Corr. Factor: 1

Elem	Pb	Se	Sb	Al	Sb\1	Sb\2	As
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00118	-.00070	.00031	.02607	.00049	-.00004	.00079
SDev	.00081	.00065	.00251	.00430	.00400	.00051	.00011
%RSD	68.999	92.735	804.45	16.489	821.56	1372.5	14.264
#1	.00208	-.00112	-.00249	.02204	-.00401	.00055	.00072
#2	.00050	.00005	.00107	.02557	.00182	-.00042	.00092
#3	.00095	-.00104	.00236	.03059	.00365	-.00024	.00073
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass
High	.00305	.00505	.06005	.20005			.01005
Low	-.00305	-.00505	-.06005	-.20005			-.01005

Elem	Ba	Be	Cd	Ca	Cr	Co	Cu
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00000	.00003	.00002	-.00181	.00027	-.00014	-.00163
SDev	.00018	.00001	.00013	.00327	.00039	.00065	.00043
%RSD	3909.1	17.668	735.91	180.56	141.78	476.23	26.342
#1	-.00020	.00003	-.00013	-.00435	-.00002	-.00089	-.00207
#2	.00006	.00004	.00012	-.00295	.00071	.00015	-.00122
#3	.00016	.00003	.00007	.00188	.00012	.00032	-.00159
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.20005	.00505	.00505	5.0000	.01005	.05005	.02505
Low	-.20005	-.00505	-.00505	-5.0000	-.01005	-.05005	-.02505

Elem	Fe	Pb/1	Pb/2	Mg	Mn	K_	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00215	.00349	.00002	-.00163	.00030	.00111	.00006
SDev	.01648	.00531	.00161	.00566	.00000	.00050	.00077
%RSD	767.79	152.07	6691.1	347.32	.37198	45.179	1223.0
#1	-.02033	.00958	-.00166	-.00810	.00030	.00065	.00002
#2	.00208	.00114	.00019	.00079	.00030	.00164	.00085
#3	.01181	-.00023	.00154	.00242	.00030	.00102	-.00069
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass
High	.10005			5.0000	.01505	5.0000	.04005
Low	-.10005			-5.0000	-.01505	-5.0000	-.04005

Elem	Se/1	Se/2	Ag	Na	Tl	V_	Zn
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00015	-.00098	.00032	-.24111	.00246	-.00030	.00011
SDev	.00194	.00119	.00036	.16777	.00278	.00051	.00017
%RSD	1301.6	121.59	113.87	69.582	113.04	167.14	146.24
#1	.00135	-.00235	.00015	-.41772	-.00066	-.00084	-.00007
#2	.00053	-.00019	.00073	-.08386	.00335	.00017	.00016
#3	-.00233	-.00040	.00007	-.22176	.00469	-.00024	.00025
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass

High			.01005	5.0000	.01005	.05005	.02005
Low			-.01005	-5.0000	-.01005	-.05005	-.02005

Elem	B_	Mo	Li	Sr	Ti	Sn	Si
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00090	.00131	.00038	.00009	.00000	-.00154	-.00509
SDev	.00044	.00030	.00003	.00013	.00025	.00033	.00236
%RSD	48.835	22.886	8.5681	151.78	5835.0	21.728	46.302
#1	-.00126	.00166	.00037	-.00006	-.00024	-.00125	-.00776
#2	-.00101	.00114	.00042	.00013	.00025	-.00191	-.00426
#3	-.00041	.00114	.00036	.00019	.00001	-.00146	-.00327
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.05005	.04005	.00505	.00505	.00505	.10005	.10005
Low	-.05005	-.04005	-.00505	-.00505	-.00505	-.10005	-.10005

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	14012	--	--	--	--	--	--
SDev	52.21608	--	--	--	--	--	--
%RSD	.3726495	--	--	--	--	--	--
#1	13972	--	--	--	--	--	--
#2	13993	--	--	--	--	--	--
#3	14071	--	--	--	--	--	--

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Method: TRA10103 Sample Name: F6VL5 Operator: KGS
Run Time: 12/19/03 13:48:21
Comment:
Mode: CONC Corr. Factor: 1

Elem	Pb	Se	Sb	Al	Sb\1	Sb\2	As
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L-.00303	.00473	.00078	24.162	-.00035	.00305	.00456
SDev	.00064	.00152	.00107	.220	.00141	.00067	.00059
%RSD	21.138	32.186	135.92	.90925	407.46	21.816	12.956
#1	L-.00374	.00298	.00191	24.222	.00100	.00373	.00392
#2	-.00287	.00545	-.00021	23.918	-.00182	.00302	.00468
#3	-.00249	.00576	.00065	24.345	-.00023	.00240	.00509
Errors	LC Low	LC Pass	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass
High	10.000	10.000	10.000	500.00			10.000
Low	-.00300	-.00500	-.06000	-.20000			-.01000

Elem	Ba	Be	Cd	Ca	Cr	Co	Cu
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	H57.089	-.00018	.00157	332.00	.02318	.17601	.01905
SDev	.447	.00008	.00004	2.85	.00041	.00146	.00059
%RSD	.78335	42.423	2.6605	.85716	1.7818	.82803	3.0797
#1	H57.288	-.00026	.00153	332.56	.02303	.17673	.01881
#2	H56.577	-.00011	.00155	328.92	.02286	.17433	.01863
#3	H57.402	-.00017	.00161	334.53	.02365	.17696	.01972
Errors	LC High	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.000	10.000	10.000	500.00	20.000	20.000	10.000
Low	-.05000	-.00500	-.00500	-5.0000	-.01000	-.05000	-.02500

Elem	Fe	Pb/1	Pb/2	Mg	Mn	K_	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	9.8855	.00293	-.00601	13.909	.66766	2.7330	.11263
SDev	.0778	.00252	.00035	.125	.00563	.0327	.00064
%RSD	.78652	86.185	5.7671	.89772	.84352	1.1963	.56360
#1	9.9046	.00004	-.00563	13.937	.66929	2.7493	.11216
#2	9.8000	.00400	-.00631	13.773	.66139	2.6953	.11335
#3	9.9520	.00473	-.00609	14.018	.67230	2.7542	.11239
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass
High	400.00			500.00	20.000	100.00	20.000
Low	-.10000			-5.0000	-.01500	-5.0000	-.04000

Elem	Se/1	Se/2	Ag	Na	Tl	V_	Zn
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.01046	.00187	-.00026	13.041	.00170	.01388	H26.371
SDev	.00607	.00075	.00010	.181	.00176	.00046	.194
%RSD	57.981	40.231	38.936	1.3852	103.67	3.3353	.73688
#1	.00353	.00271	-.00037	13.015	.00093	.01417	H26.449
#2	.01305	.00166	-.00025	12.875	.00045	.01335	H26.150
#3	.01480	.00125	-.00017	13.233	.00372	.01412	H26.514
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	LC High

High			2.0000	600.00	20.000	20.000	10.000
Low			-.01000	-5.0000	-.01000	-.05000	-.02000
Elem	B_	Mo	Li	Sr	Ti	Sn	Si
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.0443	-.00027	.02433	.89616	5.0774	.29510	2.1422
SDev	.0093	.00082	.00018	.00756	.0441	.00360	.0145
%RSD	.89029	305.25	.74401	.84357	.86843	1.2199	.67803
#1	1.0461	-.00098	.02439	.89941	5.0934	.29652	2.1470
#2	1.0343	.00062	.02413	.88752	5.0275	.29101	2.1259
#3	1.0526	-.00044	.02448	.90155	5.1112	.29777	2.1537
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.000	10.000	4.0000	10.000	10.000	10.000	10.000
Low	-.50000	-.04000	-.05000	-.05000	-.05000	-.10000	-.10000
IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	13603	--	--	--	--	--	--
SDev	100.9560	--	--	--	--	--	--
%RSD	.7421696	--	--	--	--	--	--
#1	13523	--	--	--	--	--	--
#2	13716	--	--	--	--	--	--
#3	13569	--	--	--	--	--	--

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Method: TRA10103 Sample Name: F6VMA Operator: KGS
Run Time: 12/19/03 13:52:47
Comment:
Mode: CONC Corr. Factor: 1

Elem	Pb	Se	Sb	Al	Sb\1	Sb\2	As
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	H637.19	L-.28437	L-.31114	26.713	-.32054	-.29233	1.0525
SDev	1.08	.00306	.00368	.101	.00150	.00826	.0069
%RSD	.16879	1.0774	1.1825	.37906	.46779	2.8253	.65116
#1	H635.96	L-.28167	L-.30900	26.608	-.31923	-.28849	1.0457
#2	H637.63	L-.28770	L-.30905	26.721	-.32021	-.28668	1.0525
#3	H637.97	L-.28374	L-.31539	26.810	-.32218	-.30181	1.0594
Errors	LC High	LC Low	LC Low	LC Pass	NOCHECK	NOCHECK	LC Pass
High	10.000	10.000	10.000	500.00			10.000
Low	-.00300	-.00500	-.06000	-.20000			-.01000

Elem	Ba	Be	Cd	Ca	Cr	Co	Cu
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.56007	-.00056	.71919	H708.13	H138.39	.92953	.14562
SDev	.00042	.00004	.00546	5.93	.90	.00650	.00076
%RSD	.07423	6.8921	.75973	.83721	.65043	.69900	.52453
#1	.55969	-.00060	.71344	H701.78	H137.41	.92249	.14482
#2	.56001	-.00053	.71982	H709.09	H138.58	.93080	.14571
#3	.56052	-.00054	.72431	H713.51	H139.17	.93530	.14634
Errors	LC Pass	LC Pass	LC Pass	LC High	LC High	LC Pass	LC Pass
High	10.000	10.000	10.000	500.00	20.000	20.000	10.000
Low	-.05000	-.00500	-.00500	-5.0000	-.01000	-.05000	-.02500

Elem	Fe	Pb/1	Pb/2	Mg	Mn	K_	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	19.584	S96.214	S58.892	52.261	1.4565	1.5855	.01609
SDev	.133	.218	.138	.366	.0073	.0085	.00040
%RSD	.68122	.22610	.23511	.70087	.50461	.53350	2.4968
#1	19.445	S96.413	S59.023	51.866	1.4482	1.5758	.01641
#2	19.598	S96.247	S58.907	52.328	1.4592	1.5902	.01564
#3	19.711	S95.982	S58.747	52.589	1.4621	1.5907	.01622
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass
High	400.00			500.00	20.000	100.00	20.000
Low	-.10000			-5.0000	-.01500	-5.0000	-.04000

Elem	Se/1	Se/2	Ag	Na	Tl	V_	Zn
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.25583	-.29862	L-.11572	25.688	.06008	.08961	H37.123
SDev	.00702	.00183	.00012	.278	.00169	.00090	.211
%RSD	2.7437	.61168	.10225	1.0840	2.8145	1.0038	.56798
#1	-.25193	-.29652	L-.11585	25.405	.05817	.08858	H36.888
#2	-.26393	-.29957	L-.11562	25.699	.06069	.09014	H37.185
#3	-.25162	-.29978	L-.11569	25.962	.06138	.09012	H37.295
Errors	NOCHECK	NOCHECK	LC Low	LC Pass	LC Pass	LC Pass	LC High

High			2.0000	600.00	20.000	20.000	10.000
Low			-.01000	-5.0000	-.01000	-.05000	-.02000

Elem	B_	Mo	Li	Sr	Ti	Sn	Si
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.16218	L-.67009	.05291	.64894	H10.037	L-.27622	2.3756
SDev	.00038	.00077	.00014	.00147	.042	.00396	.0131
%RSD	.23224	.11470	.26681	.22701	.41418	1.4323	.55190
#1	.16182	L-.66926	.05275	.64730	9.9919	L-.28066	2.3617
#2	.16257	L-.67025	.05300	.64936	H10.047	L-.27490	2.3774
#3	.16215	L-.67077	.05298	.65016	H10.073	L-.27308	2.3877

Errors	LC Pass	LC Low	LC Pass	LC Pass	LC High	LC Low	LC Pass
High	10.000	10.000	4.0000	10.000	10.000	10.000	10.000
Low	-.50000	-.04000	-.05000	-.05000	-.05000	-.10000	-.10000

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	13323	--	--	--	--	--	--
SDev	26.37367	--	--	--	--	--	--
%RSD	.1979520	--	--	--	--	--	--
#1	13300	--	--	--	--	--	--
#2	13318	--	--	--	--	--	--
#3	13352	--	--	--	--	--	--

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Method: TRA10103 Sample Name: F6VMD Operator: KGS
Run Time: 12/19/03 14:02:52
Comment:
Mode: CONC Corr. Factor: 1

Elem	Pb	Se	Sb	Al	Sb\1	Sb\2	As
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.17590	.00200	.00694	52.277	.00373	.01338	.00538
SDev	.00037	.00114	.00101	.033	.00128	.00049	.00138
%RSD	.21039	57.164	14.509	.06294	34.315	3.6794	25.752
#1	.17571	.00233	.00792	52.241	.00493	.01393	.00528
#2	.17566	.00295	.00591	52.285	.00238	.01299	.00405
#3	.17633	.00073	.00699	52.306	.00388	.01322	.00681
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass
High	10.000	10.000	10.000	500.00			10.000
Low	-.00300	-.00500	-.06000	-.20000			-.01000

Elem	Ba	Be	Cd	Ca	Cr	Co	Cu
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	H67.408	.00022	.00188	H535.83	.02830	.23069	.03438
SDev	.091	.00005	.00006	1.05	.00029	.00075	.00008
%RSD	.13530	19.873	3.3335	.19617	1.0390	.32390	.23970
#1	H67.507	.00019	.00181	H535.43	.02803	.23038	.03432
#2	H67.389	.00021	.00189	H535.04	.02861	.23014	.03447
#3	H67.327	.00027	.00193	H537.03	.02826	.23154	.03434
Errors	LC High	LC Pass	LC Pass	LC High	LC Pass	LC Pass	LC Pass
High	10.000	10.000	10.000	500.00	20.000	20.000	10.000
Low	-.05000	-.00500	-.00500	-5.0000	-.01000	-.05000	-.02500

Elem	Fe	Pb/1	Pb/2	Mg	Mn	K_	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	21.776	.19045	.16863	24.012	.92302	3.1246	.02452
SDev	.019	.00149	.00068	.038	.00050	.0065	.00058
%RSD	.08902	.78460	.40132	.15763	.05429	.20833	2.3804
#1	21.776	.18873	.16921	23.983	.92314	3.1174	.02508
#2	21.756	.19122	.16789	23.999	.92247	3.1264	.02391
#3	21.795	.19140	.16880	24.055	.92346	3.1301	.02456
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass
High	400.00			500.00	20.000	100.00	20.000
Low	-.10000			-5.0000	-.01500	-5.0000	-.04000

Elem	Se/1	Se/2	Ag	Na	Tl	V_	Zn
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00281	.00160	-.00025	5.3784	.00268	.03497	H28.947
SDev	.00302	.00090	.00037	.1017	.00140	.00021	.077
%RSD	107.47	56.322	147.88	1.8903	52.064	.59421	.26525
#1	.00178	.00261	-.00067	5.3061	.00405	.03511	H29.030
#2	.00622	.00132	.00003	5.3344	.00273	.03507	H28.879
#3	.00044	.00087	-.00011	5.4947	.00126	.03473	H28.931
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	LC High

High			2.0000	600.00	20.000	20.000	10.000
Low			-.01000	-5.0000	-.01000	-.05000	-.02000
Elem	B_	Mo	Li	Sr	Ti	Sn	Si
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.34469	.00008	.05700	.63558	8.9390	.48141	2.5984
SDev	.00159	.00070	.00017	.00015	.0046	.00241	.0039
%RSD	.46166	832.50	.29928	.02347	.05157	.49985	.15165
#1	.34470	.00049	.05680	.63571	8.9395	.48223	2.5981
#2	.34309	-.00072	.05708	.63560	8.9341	.47870	2.6025
#3	.34627	.00049	.05711	.63541	8.9433	.48330	2.5947
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.000	10.000	4.0000	10.000	10.000	10.000	10.000
Low	-.50000	-.04000	-.05000	-.05000	-.05000	-.10000	-.10000
IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	13417	--	--	--	--	--	--
SDev	71.80276	--	--	--	--	--	--
%RSD	.5351747	--	--	--	--	--	--
#1	13339	--	--	--	--	--	--
#2	13431	--	--	--	--	--	--
#3	13480	--	--	--	--	--	--

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Method: TRA10103 Sample Name: F6VL5Z20 Operator: KGS
Run Time: 12/19/03 14:07:19
Comment:
Mode: CONC Corr. Factor: 1

Elem	Pb	Se	Sb	Al	Sb\1	Sb\2	As
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00459	.00067	-.00153	1.2483	-.00340	.00221	.00117
SDev	.00084	.00079	.00069	.0047	.00152	.00102	.00207
%RSD	18.210	116.78	44.868	.37395	44.611	45.973	176.46
#1	.00519	.00007	-.00074	1.2432	-.00166	.00111	.00025
#2	.00493	.00039	-.00193	1.2493	-.00444	.00311	-.00028
#3	.00363	.00157	-.00193	1.2524	-.00410	.00242	.00354
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass
High	10.000	10.000	10.000	500.00			10.000
Low	-.00300	-.00500	-.06000	-.20000			-.01000

Elem	Ba	Be	Cd	Ca	Cr	Co	Cu
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	3.5661	.00013	.00027	17.602	.00156	.00936	-.00077
SDev	.0089	.00003	.00022	.104	.00037	.00051	.00045
%RSD	.24978	20.366	79.519	.59177	24.009	5.4153	58.370
#1	3.5634	.00010	.00012	17.487	.00116	.00894	-.00093
#2	3.5760	.00014	.00018	17.628	.00161	.00921	-.00112
#3	3.5588	.00015	.00052	17.691	.00190	.00992	-.00026
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.000	10.000	10.000	500.00	20.000	20.000	10.000
Low	-.05000	-.00500	-.00500	-5.0000	-.01000	-.05000	-.02500

Elem	Fe	Pb/1	Pb/2	Mg	Mn	K_	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.52743	.00841	.00268	.73933	.03601	.03251	.00676
SDev	.01752	.00193	.00116	.00755	.00019	.00341	.00026
%RSD	3.3217	22.978	43.348	1.0208	.52006	10.488	3.8632
#1	.51637	.00756	.00401	.73267	.03584	.02919	.00655
#2	.51830	.01063	.00209	.73780	.03621	.03233	.00668
#3	.54763	.00706	.00192	.74753	.03598	.03600	.00705
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass
High	400.00			500.00	20.000	100.00	20.000
Low	-.10000			-5.0000	-.01500	-5.0000	-.04000

Elem	Se/1	Se/2	Ag	Na	Tl	V_	Zn
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00545	-.00171	.00048	.41893	-.00014	-.00003	2.7509
SDev	.00545	.00156	.00068	.08816	.00188	.00054	.0105
%RSD	99.856	91.122	144.25	21.045	1306.7	1587.8	.38045
#1	.00064	-.00022	-.00010	.31735	-.00223	-.00024	2.7390
#2	.00435	-.00159	.00029	.47553	.00039	-.00044	2.7549
#3	.01136	-.00333	.00123	.46391	.00141	.00058	2.7587
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass

High			2.0000	600.00	20.000	20.000	10.000
Low			-.01000	-5.0000	-.01000	-.05000	-.02000

Elem	B_	Mo	Li	Sr	Ti	Sn	Si
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.05095	-.00007	.00136	.04582	.26422	.01643	.09997
SDev	.00019	.00066	.00001	.00010	.00114	.00109	.00183
%RSD	.36803	992.61	1.0275	.22806	.43082	6.6476	1.8278
#1	.05075	-.00080	.00138	.04571	.26298	.01625	.10000
#2	.05099	.00010	.00135	.04592	.26447	.01760	.09812
#3	.05111	.00049	.00135	.04582	.26522	.01544	.10178
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.000	10.000	4.0000	10.000	10.000	10.000	10.000
Low	-.50000	-.04000	-.05000	-.05000	-.05000	-.10000	-.10000

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	13971	--	--	--	--	--	--
SDev	26.85255	--	--	--	--	--	--
%RSD	.1921994	--	--	--	--	--	--
#1	13998	--	--	--	--	--	--
#2	13971	--	--	--	--	--	--
#3	13944	--	--	--	--	--	--

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Method: TRA10103 Sample Name: F6VMAZ100 Operator: KGS
Run Time: 12/19/03 14:13:06
Comment:
Mode: CONC Corr. Factor: 1

Elem	Pb	Se	Sb	Al	Sb\1	Sb\2	As
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	8.4420	-.00354	-.00180	.29764	-.00252	-.00037	.01062
SDev	.0567	.00147	.00201	.00226	.00352	.00128	.00092
%RSD	.67215	41.662	111.31	.75924	139.58	345.92	8.6781
#1	8.4890	-.00342	-.00410	.30025	-.00658	.00087	.01168
#2	8.3790	-.00213	-.00036	.29629	-.00040	-.00030	.01000
#3	8.4581	L-.00507	-.00095	.29638	-.00058	-.00168	.01019
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass
High	10.000	10.000	10.000	500.00			10.000
Low	-.00300	-.00500	-.06000	-.20000			-.01000

Elem	Ba	Be	Cd	Ca	Cr	Co	Cu
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00559	-.00024	.00789	7.4844	1.2706	.00981	-.00036
SDev	.00012	.00007	.00016	.0398	.0069	.00073	.00096
%RSD	2.2061	29.189	2.0528	.53195	.54609	7.4781	266.65
#1	.00546	-.00032	.00790	7.5084	1.2766	.00911	-.00141
#2	.00562	-.00018	.00773	7.4385	1.2630	.00975	-.00018
#3	.00570	-.00022	.00805	7.5064	1.2722	.01057	.00050
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.000	10.000	10.000	500.00	20.000	20.000	10.000
Low	-.05000	-.00500	-.00500	-5.0000	-.01000	-.05000	-.02500

Elem	Fe	Pb/1	Pb/2	Mg	Mn	K_	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.19555	8.5276	8.3993	.52939	.01522	.00170	.00038
SDev	.01399	.0645	.0548	.00464	.00012	.00072	.00024
%RSD	7.1533	.75592	.65200	.87749	.76871	42.097	62.529
#1	.17979	8.5930	8.4371	.52583	.01526	.00167	.00039
#2	.20036	8.4641	8.3365	.52769	.01532	.00101	.00014
#3	.20651	8.5258	8.4243	.53464	.01509	.00244	.00062
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass
High	400.00			500.00	20.000	100.00	20.000
Low	-.10000			-5.0000	-.01500	-5.0000	-.04000

Elem	Se/1	Se/2	Ag	Na	Tl	V_	Zn
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00301	-.00380	-.00139	-.05231	.00190	.00030	5.6815
SDev	.00598	.00137	.00010	.02883	.00115	.00104	.0317
%RSD	198.73	36.126	6.9766	55.106	60.503	346.01	.55744
#1	.00040	-.00532	-.00150	-.04250	.00185	-.00084	5.7095
#2	.00049	-.00344	-.00134	-.08476	.00077	.00057	5.6471
#3	-.00992	-.00265	-.00132	-.02967	.00307	.00118	5.6877
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass

High			2.0000	600.00	20.000	20.000	10.000
Low			-.01000	-5.0000	-.01000	-.05000	-.02000
Elem	B_	Mo	Li	Sr	Ti	Sn	Si
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00026	-.00064	.00057	.00640	.10302	.00218	.01998
SDev	.00100	.00089	.00004	.00002	.00044	.00170	.00211
%RSD	388.50	140.08	7.0999	.26821	.42672	77.938	10.583
#1	-.00140	-.00134	.00057	.00640	.10345	.00028	.01754
#2	.00042	.00036	.00062	.00642	.10257	.00356	.02138
#3	.00021	-.00093	.00054	.00639	.10305	.00269	.02101
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.000	10.000	4.0000	10.000	10.000	10.000	10.000
Low	-.50000	-.04000	-.05000	-.05000	-.05000	-.10000	-.10000
IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	13937	--	--	--	--	--	--
SDev	111.8803	--	--	--	--	--	--
%RSD	.8027840	--	--	--	--	--	--
#1	13814	--	--	--	--	--	--
#2	14032	--	--	--	--	--	--
#3	13964	--	--	--	--	--	--

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Method: TRA10103 Sample Name: F6VMDZ20 Operator: KGS
Run Time: 12/19/03 14:17:33
Comment:
Mode: CONC Corr. Factor: 1

Elem	Pb	Se	Sb	Al	Sb\1	Sb\2	As
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.01263	-.00041	.00030	2.6895	-.00013	.00117	.00155
SDev	.00066	.00196	.00142	.0241	.00092	.00246	.00089
%RSD	5.2467	473.80	466.94	.89643	718.02	209.95	57.442
#1	.01312	-.00153	.00194	2.7169	.00092	.00400	.00063
#2	.01288	-.00157	-.00046	2.6714	-.00049	-.00041	.00161
#3	.01187	.00185	-.00057	2.6802	-.00081	-.00008	.00240
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass
High	10.000	10.000	10.000	500.00			10.000
Low	-.00300	-.00500	-.06000	-.20000			-.01000

Elem	Ba	Be	Cd	Ca	Cr	Co	Cu
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	4.3825	-.00001	.00017	28.461	.00250	.01238	.00019
SDev	.0410	.00007	.00019	.309	.00037	.00014	.00031
%RSD	.93535	476.99	111.96	1.0869	14.664	1.1334	166.95
#1	4.4293	-.00008	.00038	28.810	.00262	.01254	.00033
#2	4.3527	.00006	.00012	28.353	.00278	.01226	.00040
#3	4.3655	-.00002	.00001	28.221	.00208	.01235	-.00017
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.000	10.000	10.000	500.00	20.000	20.000	10.000
Low	-.05000	-.00500	-.00500	-5.0000	-.01000	-.05000	-.02500

Elem	Fe	Pb/1	Pb/2	Mg	Mn	K_	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.1503	.01471	.01158	1.2579	.04892	.03214	.00174
SDev	.0137	.00184	.00031	.0150	.00063	.00358	.00015
%RSD	1.1886	12.477	2.6994	1.1952	1.2785	11.138	8.5778
#1	1.1640	.01653	.01143	1.2747	.04964	.03596	.00184
#2	1.1501	.01475	.01194	1.2531	.04855	.03161	.00181
#3	1.1367	.01286	.01138	1.2459	.04856	.02886	.00157
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass
High	400.00			500.00	20.000	100.00	20.000
Low	-.10000			-5.0000	-.01500	-5.0000	-.04000

Elem	Se/1	Se/2	Ag	Na	Tl	V_	Zn
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00111	-.00118	.00008	-.05221	.00037	.00166	3.8125
SDev	.00271	.00237	.00051	.09700	.00135	.00044	.0376
%RSD	243.51	201.71	656.84	185.79	361.99	26.429	.98553
#1	-.00198	-.00130	.00052	.02712	.00069	.00203	3.8558
#2	.00227	-.00348	.00020	-.02340	.00154	.00178	3.7931
#3	.00305	.00126	-.00049	-.16035	-.00111	.00118	3.7887
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass

High			2.0000	600.00	20.000	20.000	10.000
Low			-.01000	-5.0000	-.01000	-.05000	-.02000
Elem	B_	Mo	Li	Sr	Ti	Sn	Si
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.01473	-.00011	.00288	.03241	.46809	.02592	.12593
SDev	.00039	.00049	.00005	.00033	.00458	.00253	.00069
%RSD	2.6682	433.60	1.8432	1.0280	.97801	9.7730	.54860
#1	.01513	.00023	.00294	.03279	.47338	.02878	.12515
#2	.01473	.00011	.00287	.03221	.46552	.02394	.12644
#3	.01434	-.00067	.00284	.03222	.46538	.02504	.12621
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.000	10.000	4.0000	10.000	10.000	10.000	10.000
Low	-.50000	-.04000	-.05000	-.05000	-.05000	-.10000	-.10000
IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	13904	--	--	--	--	--	--
SDev	127.0760	--	--	--	--	--	--
%RSD	.9139296	--	--	--	--	--	--
#1	13758	--	--	--	--	--	--
#2	13979	--	--	--	--	--	--
#3	13976	--	--	--	--	--	--

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Method: TRA10103 Sample Name: F6LMVS Operator: KGS
Run Time: 12/19/03 14:21:59
Comment:
Mode: CONC Corr. Factor: 1

Elem	Pb	Se	Sb	Al	Sb\1	Sb\2	As
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.7125	2.0776	.73872	152.27	.74021	.73574	2.3380
SDev	.0050	.0113	.00280	.59	.00324	.00198	.0052
%RSD	.29191	.54418	.37843	.38982	.43722	.26985	.22139
#1	1.7070	2.0651	.73557	151.58	.73651	.73369	2.3322
#2	1.7137	2.0870	.73969	152.66	.74158	.73590	2.3398
#3	1.7168	2.0808	.74090	152.56	.74253	.73765	2.3421
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass
High	10.000	10.000	10.000	500.00			10.000
Low	-.00300	-.00500	-.06000	-.20000			-.01000

Elem	Ba	Be	Cd	Ca	Cr	Co	Cu
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	3.0192	.05600	.07812	H974.64	7.8759	.52912	2.5199
SDev	.0108	.00018	.00028	2.14	.0245	.00128	.0085
%RSD	.35770	.31859	.35972	.21935	.31149	.24199	.33682
#1	3.0070	.05580	.07835	H972.18	7.8476	.52764	2.5101
#2	3.0273	.05608	.07820	H976.07	7.8903	.52981	2.5248
#3	3.0234	.05613	.07781	H975.67	7.8898	.52991	2.5249
Errors	LC Pass	LC Pass	LC Pass	LC High	LC Pass	LC Pass	LC Pass
High	10.000	10.000	10.000	500.00	20.000	20.000	10.000
Low	-.05000	-.00500	-.00500	-5.0000	-.01000	-.05000	-.02500

Elem	Fe	Pb/1	Pb/2	Mg	Mn	K_	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	243.27	1.7500	1.6938	93.432	4.9464	70.878	.98811
SDev	.71	.0073	.0039	.244	.0142	.296	.00432
%RSD	.29080	.41451	.22868	.26063	.28717	.41705	.43699
#1	242.46	1.7420	1.6895	93.150	4.9300	70.537	.98314
#2	243.72	1.7519	1.6947	93.569	4.9548	71.038	.99032
#3	243.63	1.7562	1.6971	93.575	4.9544	71.060	.99088
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass
High	400.00			500.00	20.000	100.00	20.000
Low	-.10000			-5.0000	-.01500	-5.0000	-.04000

Elem	Se/1	Se/2	Ag	Na	Tl	V_	Zn
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.0433	2.0947	.08170	90.683	1.3810	.62931	9.8003
SDev	.0263	.0071	.00066	.398	.0068	.00202	.0226
%RSD	1.2868	.33892	.80923	.43883	.49044	.32175	.23080
#1	2.0132	2.0910	.08164	90.245	1.3737	.62709	9.7742
#2	2.0552	2.1029	.08106	90.779	1.3821	.62978	9.8145
#3	2.0616	2.0903	.08238	91.024	1.3871	.63105	9.8120
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass

High			2.0000	600.00	20.000	20.000	10.000
Low			-.01000	-5.0000	-.01000	-.05000	-.02000
Elem	B_	Mo	Li	Sr	Ti	Sn	Si
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.2807	1.0385	1.1379	5.4430	2.9718	2.1075	8.4277
SDev	.0047	.0031	.0046	.0174	.0090	.0058	.0401
%RSD	.36499	.30013	.40558	.32056	.30444	.27322	.47631
#1	1.2753	1.0353	1.1326	5.4232	2.9614	2.1016	8.3818
#2	1.2838	1.0387	1.1403	5.4564	2.9780	2.1131	8.4452
#3	1.2829	1.0416	1.1408	5.4493	2.9759	2.1077	8.4561
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.000	10.000	4.0000	10.000	10.000	10.000	10.000
Low	-.50000	-.04000	-.05000	-.05000	-.05000	-.10000	-.10000
IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	13318	--	--	--	--	--	--
SDev	24.97793	--	--	--	--	--	--
%RSD	.1875550	--	--	--	--	--	--
#1	13338	--	--	--	--	--	--
#2	13290	--	--	--	--	--	--
#3	13326	--	--	--	--	--	--

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Method: TRA10103 Sample Name: F6LMVD Operator: KGS
Run Time: 12/19/03 14:26:26
Comment:
Mode: CONC Corr. Factor: 1

Elem	Pb	Se	Sb	Al	Sb\1	Sb\2	As
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.6844	2.0864	.75163	152.61	.75238	.75011	2.3315
SDev	.0072	.0121	.00375	.32	.00405	.00314	.0061
%RSD	.42730	.58208	.49841	.20739	.53833	.41929	.26218
#1	1.6793	2.0795	.74861	152.36	.74904	.74774	2.3261
#2	1.6814	2.0792	.75045	152.51	.75122	.74891	2.3302
#3	1.6927	2.1004	.75582	152.97	.75689	.75368	2.3381
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass
High	10.000	10.000	10.000	500.00			10.000
Low	-.00300	-.00500	-.06000	-.20000			-.01000

Elem	Ba	Be	Cd	Ca	Cr	Co	Cu
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	3.0513	.05452	.07615	H935.81	7.7632	.51881	2.5839
SDev	.0074	.00020	.00050	2.72	.0211	.00150	.0067
%RSD	.24344	.36172	.65488	.29043	.27230	.28854	.25912
#1	3.0475	.05436	.07569	H933.74	7.7490	.51768	2.5797
#2	3.0466	.05446	.07610	H934.80	7.7532	.51825	2.5803
#3	3.0599	.05474	.07668	H938.89	7.7875	.52051	2.5916
Errors	LC Pass	LC Pass	LC Pass	LC High	LC Pass	LC Pass	LC Pass
High	10.000	10.000	10.000	500.00	20.000	20.000	10.000
Low	-.05000	-.00500	-.00500	-5.0000	-.01000	-.05000	-.02500

Elem	Fe	Pb/1	Pb/2	Mg	Mn	K_	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	237.41	1.7182	1.6676	91.922	4.8717	72.548	.91673
SDev	.68	.0095	.0066	.305	.0140	.133	.00280
%RSD	.28776	.55487	.39597	.33149	.28693	.18276	.30551
#1	236.93	1.7150	1.6615	91.694	4.8625	72.445	.91664
#2	237.12	1.7106	1.6668	91.804	4.8648	72.501	.91397
#3	238.20	1.7289	1.6746	92.268	4.8878	72.698	.91957
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass
High	400.00			500.00	20.000	100.00	20.000
Low	-.10000			-5.0000	-.01500	-5.0000	-.04000

Elem	Se/1	Se/2	Ag	Na	Tl	V_	Zn
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.0587	2.1002	.08257	88.299	1.3873	.62138	9.0521
SDev	.0103	.0138	.00024	.214	.0047	.00109	.0277
%RSD	.50129	.65860	.29033	.24287	.33784	.17583	.30651
#1	2.0583	2.0901	.08231	88.180	1.3831	.62037	9.0350
#2	2.0486	2.0945	.08279	88.171	1.3866	.62122	9.0372
#3	2.0692	2.1159	.08260	88.547	1.3924	.62254	9.0841
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass

High			2.0000	600.00	20.000	20.000	10.000
Low			-.01000	-5.0000	-.01000	-.05000	-.02000
Elem	B_	Mo	Li	Sr	Ti	Sn	Si
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.2417	1.0271	1.1667	5.4837	2.9507	2.0715	8.6496
SDev	.0060	.0021	.0039	.0116	.0071	.0035	.0312
%RSD	.48040	.19958	.33026	.21205	.24058	.16843	.36021
#1	1.2374	1.0258	1.1637	5.4767	2.9459	2.0706	8.6272
#2	1.2391	1.0260	1.1654	5.4772	2.9473	2.0686	8.6364
#3	1.2485	1.0294	1.1710	5.4971	2.9589	2.0754	8.6852
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.000	10.000	4.0000	10.000	10.000	10.000	10.000
Low	-.50000	-.04000	-.05000	-.05000	-.05000	-.10000	-.10000
IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	13171	--	--	--	--	--	--
SDev	29.45153	--	--	--	--	--	--
%RSD	.2236138	--	--	--	--	--	--
#1	13159	--	--	--	--	--	--
#2	13204	--	--	--	--	--	--
#3	13149	--	--	--	--	--	--

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Method: TRA10103 Sample Name: F6LPT Operator: KGS
Run Time: 12/19/03 14:30:52
Comment:
Mode: CONC Corr. Factor: 1

Elem	Pb	Se	Sb	Al	Sb\1	Sb\2	As
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.06189	.00303	.00186	41.358	.00206	.00144	.01689
SDev	.00057	.00172	.00127	.090	.00196	.00135	.00081
%RSD	.92260	56.592	68.208	.21734	94.973	93.749	4.8091
#1	.06155	.00455	.00242	41.425	.00360	.00006	.01738
#2	.06255	.00117	.00041	41.394	-.00014	.00150	.01734
#3	.06156	.00338	.00274	41.256	.00273	.00276	.01595
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass
High	10.000	10.000	10.000	500.00			10.000
Low	-.00300	-.00500	-.06000	-.20000			-.01000

Elem	Ba	Be	Cd	Ca	Cr	Co	Cu
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.29513	.00169	.00023	62.667	.06992	.01501	.05841
SDev	.00122	.00004	.00017	.082	.00015	.00022	.00019
%RSD	.41242	2.4265	72.645	.13047	.21884	1.4392	.31824
#1	.29633	.00164	.00011	62.612	.06985	.01500	.05861
#2	.29517	.00171	.00043	62.761	.07009	.01524	.05825
#3	.29389	.00172	.00017	62.629	.06981	.01481	.05836
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.000	10.000	10.000	500.00	20.000	20.000	10.000
Low	-.05000	-.00500	-.00500	-5.0000	-.01000	-.05000	-.02500

Elem	Fe	Pb/1	Pb/2	Mg	Mn	K_	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	43.413	.06818	.05874	18.741	.63392	3.8722	.04595
SDev	.044	.00110	.00050	.036	.00083	.0117	.00050
%RSD	.10114	1.6153	.84776	.19179	.13070	.30257	1.0888
#1	43.415	.06704	.05881	18.721	.63439	3.8817	.04550
#2	43.455	.06924	.05920	18.782	.63441	3.8759	.04649
#3	43.368	.06827	.05822	18.719	.63297	3.8591	.04586
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass
High	400.00			500.00	20.000	100.00	20.000
Low	-.10000			-5.0000	-.01500	-5.0000	-.04000

Elem	Se/1	Se/2	Ag	Na	Tl	V_	Zn
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00112	.00399	-.00027	-.07638	.00261	.08313	.20126
SDev	.00046	.00242	.00020	.01627	.00152	.00028	.00042
%RSD	41.310	60.708	73.806	21.305	58.197	.34292	.21063
#1	.00116	.00625	-.00050	-.09513	.00405	.08298	.20136
#2	.00064	.00143	-.00017	-.06598	.00102	.08346	.20162
#3	.00157	.00428	-.00014	-.06801	.00278	.08296	.20079
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass

High			2.0000	600.00	20.000	20.000	10.000
Low			-.01000	-5.0000	-.01000	-.05000	-.02000
Elem	B_	Mo	Li	Sr	Ti	Sn	Si
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.02998	.00248	.04636	.11011	1.0813	.02616	8.0313
SDev	.00059	.00033	.00022	.00039	.0025	.00020	.0200
%RSD	1.9802	13.125	.46544	.35357	.22966	.78312	.24905
#1	.02955	.00279	.04655	.11049	1.0834	.02638	8.0399
#2	.02975	.00253	.04641	.11014	1.0819	.02613	8.0455
#3	.03066	.00214	.04613	.10971	1.0785	.02597	8.0084
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.000	10.000	4.0000	10.000	10.000	10.000	10.000
Low	-.50000	-.04000	-.05000	-.05000	-.05000	-.10000	-.10000
IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	14242	--	--	--	--	--	--
SDev	55.97382	--	--	--	--	--	--
%RSD	.3930182	--	--	--	--	--	--
#1	14201	--	--	--	--	--	--
#2	14220	--	--	--	--	--	--
#3	14306	--	--	--	--	--	--

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Method: TRA10103 Sample Name: F6LPTS Operator: KGS
Run Time: 12/19/03 14:35:19
Comment:
Mode: CONC Corr. Factor: 1

Elem	Pb	Se	Sb	Al	Sb\1	Sb\2	As
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.55963	1.9707	.41981	65.929	.41840	.42264	1.9871
SDev	.00298	.0082	.00167	.260	.00291	.00132	.0097
%RSD	.53298	.41503	.39776	.39464	.69544	.31183	.49018
#1	.55625	1.9613	.41876	65.634	.41607	.42416	1.9759
#2	.56188	1.9743	.42174	66.028	.42166	.42190	1.9937
#3	.56077	1.9764	.41894	66.125	.41748	.42187	1.9917
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass
High	10.000	10.000	10.000	500.00			10.000
Low	-.00300	-.00500	-.06000	-.20000			-.01000

Elem	Ba	Be	Cd	Ca	Cr	Co	Cu
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.3773	.05437	.05162	97.744	.28243	.53130	.31802
SDev	.0083	.00031	.00027	.620	.00167	.00249	.00052
%RSD	.35070	.57686	.51656	.63426	.59112	.46857	.16387
#1	2.3680	.05401	.05131	97.029	.28051	.52856	.31743
#2	2.3800	.05457	.05180	98.132	.28360	.53342	.31843
#3	2.3840	.05454	.05174	98.070	.28317	.53191	.31820
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.000	10.000	10.000	500.00	20.000	20.000	10.000
Low	-.05000	-.00500	-.00500	-5.0000	-.01000	-.05000	-.02500

Elem	Fe	Pb/1	Pb/2	Mg	Mn	K_	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	44.006	.56736	.55577	67.884	1.0670	63.984	.55349
SDev	.232	.00203	.00359	.401	.0058	.261	.00312
%RSD	.52750	.35717	.64591	.59024	.54055	.40852	.56310
#1	43.739	.56511	.55182	67.423	1.0603	63.699	.54990
#2	44.155	.56796	.55884	68.151	1.0703	64.040	.55534
#3	44.125	.56903	.55665	68.077	1.0703	64.213	.55525
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass
High	400.00			500.00	20.000	100.00	20.000
Low	-.10000			-5.0000	-.01500	-5.0000	-.04000

Elem	Se/1	Se/2	Ag	Na	Tl	V_	Zn
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.9322	1.9899	.04966	50.414	2.0091	.62836	.71787
SDev	.0052	.0127	.00033	.209	.0158	.00325	.00384
%RSD	.26911	.63732	.66604	.41470	.78829	.51725	.53433
#1	1.9333	1.9753	.04989	50.203	1.9909	.62466	.71347
#2	1.9265	1.9982	.04982	50.621	2.0200	.62971	.71970
#3	1.9367	1.9962	.04928	50.419	2.0164	.63073	.72045
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass

High			2.0000	600.00	20.000	20.000	10.000
Low			-.01000	-5.0000	-.01000	-.05000	-.02000
Elem	B_	Mo	Li	Sr	Ti	Sn	Si
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.99329	1.0175	1.1083	1.1444	2.6474	2.0376	H13.805
SDev	.00436	.0043	.0040	.0040	.0121	.0164	.049
%RSD	.43943	.41936	.36364	.35213	.45785	.80277	.35516
#1	.98847	1.0128	1.1038	1.1400	2.6334	2.0187	H13.748
#2	.99444	1.0211	1.1095	1.1455	2.6538	2.0476	H13.830
#3	.99697	1.0186	1.1115	1.1478	2.6550	2.0464	H13.837
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC High
High	10.000	10.000	4.0000	10.000	10.000	10.000	10.000
Low	-.50000	-.04000	-.05000	-.05000	-.05000	-.10000	-.10000
IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	14157	--	--	--	--	--	--
SDev	36.65919	--	--	--	--	--	--
%RSD	.2589557	--	--	--	--	--	--
#1	14194	--	--	--	--	--	--
#2	14120	--	--	--	--	--	--
#3	14156	--	--	--	--	--	--

Analysis Report QC Standard 12/19/03 02:48:00 PM page 1

Method: TRA10103 Sample Name: CCV5 Operator: KGS
Run Time: 12/19/03 14:43:38
Comment:
Mode: CONC Corr. Factor: 1

Elem	Pb	Se	Sb	Al	Sb\1	Sb\2	As
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.51739	.51300	.51057	25.148	.50967	.51238	.51533
SDev	.00082	.00152	.00103	.045	.00057	.00400	.00084
%RSD	.15819	.29681	.20196	.17965	.11264	.78034	.16288
#1	.51671	.51460	.50970	25.104	.51033	.50845	.51504
#2	.51830	.51157	.51030	25.145	.50932	.51225	.51468
#3	.51716	.51283	.51171	25.195	.50935	.51644	.51628
Errors	QC Pass	QC Pass	QC Pass	QC Pass	NOCHECK	NOCHECK	QC Pass
Value	.50000	.50000	.50000	25.000			.50000
Range	10.500	10.500	10.500	10.500			10.500

Elem	Ba	Be	Cd	Ca	Cr	Co	Cu
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.0258	2.1081	.52419	52.398	2.0586	2.0943	2.0044
SDev	.0021	.0038	.00120	.111	.0047	.0039	.0025
%RSD	.10235	.18098	.22932	.21149	.22601	.18409	.12707
#1	2.0238	2.1037	.52299	52.271	2.0533	2.0900	2.0015
#2	2.0256	2.1107	.52417	52.477	2.0622	2.0974	2.0054
#3	2.0279	2.1098	.52540	52.446	2.0602	2.0955	2.0063
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	2.0000	2.0000	.50000	50.000	2.0000	2.0000	2.0000
Range	10.500	10.500	10.500	10.500	10.500	10.500	10.500

Elem	Fe	Pb/1	Pb/2	Mg	Mn	K_	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	25.961	.51509	.51854	51.213	2.0823	54.236	2.0798
SDev	.029	.00486	.00197	.117	.0035	.067	.0027
%RSD	.11106	.94280	.37971	.22893	.16781	.12275	.12784
#1	25.928	.50956	.52028	51.079	2.0783	54.167	2.0767
#2	25.982	.51704	.51893	51.296	2.0842	54.242	2.0812
#3	25.973	.51867	.51640	51.264	2.0845	54.300	2.0814
Errors	QC Pass	NOCHECK	NOCHECK	QC Pass	QC Pass	QC Pass	QC Pass
Value	25.000			50.000	2.0000	50.000	2.0000
Range	10.500			10.500	10.500	10.500	10.500

Elem	Se/1	Se/2	Ag	Na	Tl	V_	Zn
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.50878	.51510	1.0084	49.140	1.0425	2.0691	2.1138
SDev	.00203	.00296	.0024	.165	.0052	.0036	.0040
%RSD	.39959	.57524	.23565	.33479	.50127	.17524	.18758
#1	.50680	.51850	1.0058	48.999	1.0388	2.0650	2.1092
#2	.50868	.51301	1.0091	49.100	1.0401	2.0718	2.1158
#3	.51086	.51381	1.0104	49.321	1.0484	2.0706	2.1163
Errors	NOCHECK	NOCHECK	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass

Value			1.0000	50.000	1.0000	2.0000	2.0000
Range			10.500	10.500	10.500	10.500	10.500
Elem	B_	Mo	Li	Sr	Ti	Sn	Si
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.9880	2.0759	2.0529	2.0375	2.0518	2.0822	2.0026
SDev	.0059	.0065	.0035	.0021	.0028	.0040	.0037
%RSD	.29523	.31465	.17130	.10203	.13834	.19091	.18488
#1	1.9813	2.0684	2.0490	2.0352	2.0485	2.0777	1.9987
#2	1.9924	2.0808	2.0537	2.0382	2.0528	2.0852	2.0060
#3	1.9902	2.0784	2.0559	2.0392	2.0539	2.0837	2.0032
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000
Range	10.500	10.500	10.500	10.500	10.500	10.500	10.500
IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	13899	--	--	--	--	--	--
SDev	13.50128	--	--	--	--	--	--
%RSD	.0971378	--	--	--	--	--	--
#1	13915	--	--	--	--	--	--
#2	13890	--	--	--	--	--	--
#3	13893	--	--	--	--	--	--

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Method: TRA10103 Sample Name: CCB5 Operator: KGS
Run Time: 12/19/03 14:48:05
Comment:
Mode: CONC Corr. Factor: 1

Elem	Pb	Se	Sb	Al	Sb\1	Sb\2	As
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00173	.00055	-.00082	.03614	-.00168	.00089	.00033
SDev	.00068	.00129	.00085	.00415	.00121	.00165	.00189
%RSD	39.377	234.82	102.86	11.481	72.171	185.51	566.58
#1	.00095	-.00093	-.00179	.03943	-.00268	-.00001	-.00039
#2	.00199	.00116	-.00026	.03752	-.00033	-.00012	.00248
#3	.00223	.00143	-.00041	.03148	-.00201	.00280	-.00109
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass
High	.00305	.00505	.06005	.20005			.01005
Low	-.00305	-.00505	-.06005	-.20005			-.01005

Elem	Ba	Be	Cd	Ca	Cr	Co	Cu
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00002	-.00011	-.00010	-.00491	.00054	-.00072	-.00240
SDev	.00018	.00006	.00010	.00071	.00023	.00048	.00051
%RSD	809.64	53.500	94.324	14.476	43.294	67.614	21.239
#1	-.00000	-.00014	-.00018	-.00409	.00050	-.00044	-.00215
#2	.00014	-.00015	.00000	-.00534	.00080	-.00043	-.00205
#3	-.00021	-.00004	-.00013	-.00530	.00033	-.00127	-.00298
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.20005	.00505	.00505	5.0000	.01005	.05005	.02505
Low	-.20005	-.00505	-.00505	-5.0000	-.01005	-.05005	-.02505

Elem	Fe	Pb/1	Pb/2	Mg	Mn	K_	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.01290	.00436	.00041	-.00711	.00000	.00040	-.00053
SDev	.01219	.00405	.00131	.00466	.00000	.00005	.00036
%RSD	94.488	92.946	318.48	65.553	.00000	12.963	67.113
#1	-.01702	.00101	.00092	-.00517	.00000	.00036	-.00022
#2	.00082	.00320	.00139	-.00373	.00000	.00038	-.00092
#3	-.02248	.00886	-.00108	-.01242	.00000	.00045	-.00045
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass
High	.10005			5.0000	.01505	5.0000	.04005
Low	-.10005			-5.0000	-.01505	-5.0000	-.04005

Elem	Se/1	Se/2	Ag	Na	Tl	V_	Zn
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00454	-.00144	-.00004	-.47303	.00055	-.00110	.00051
SDev	.00215	.00088	.00028	.06597	.00100	.00064	.00017
%RSD	47.345	61.137	739.03	13.946	182.52	57.691	32.449
#1	.00211	-.00245	.00012	-.42410	.00038	-.00084	.00057
#2	.00531	-.00092	.00012	-.44693	.00161	-.00064	.00064
#3	.00619	-.00094	-.00036	-.54806	-.00036	-.00183	.00033
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass

High			.01005	5.0000	.01005	.05005	.02005
Low			-.01005	-5.0000	-.01005	-.05005	-.02005

Elem	B_	Mo	Li	Sr	Ti	Sn	Si
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00302	.00160	.00052	.00000	-.00010	-.00043	-.00423
SDev	.00039	.00099	.00010	.00006	.00012	.00183	.00298
%RSD	12.765	61.847	19.319	4167.4	118.57	420.29	70.565
#1	-.00346	.00241	.00061	.00000	-.00010	.00028	-.00304
#2	-.00285	.00189	.00055	.00006	.00002	-.00251	-.00203
#3	-.00275	.00050	.00041	-.00006	-.00022	.00092	-.00763
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.05005	.04005	.00505	.00505	.00505	.10005	.10005
Low	-.05005	-.04005	-.00505	-.00505	-.00505	-.10005	-.10005

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	14253	--	--	--	--	--	--
SDev	56.29615	--	--	--	--	--	--
%RSD	.3949716	--	--	--	--	--	--
#1	14192	--	--	--	--	--	--
#2	14263	--	--	--	--	--	--
#3	14304	--	--	--	--	--	--

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Method: TRA10103 Sample Name: F6LPTD Operator: KGS
Run Time: 12/19/03 14:52:32
Comment:
Mode: CONC Corr. Factor: 1

Elem	Pb	Se	Sb	Al	Sb\1	Sb\2	As
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.57567	1.9898	.41567	72.373	.41489	.41722	2.0175
SDev	.00189	.0042	.00105	.159	.00050	.00219	.0059
%RSD	.32770	.21080	.25325	.21992	.12053	.52435	.29280
#1	.57609	1.9908	.41494	72.514	.41446	.41591	2.0197
#2	.57361	1.9851	.41518	72.200	.41477	.41601	2.0108
#3	.57731	1.9933	.41687	72.405	.41544	.41975	2.0220
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass
High	10.000	10.000	10.000	500.00			10.000
Low	-.00300	-.00500	-.06000	-.20000			-.01000

Elem	Ba	Be	Cd	Ca	Cr	Co	Cu
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.4129	.05508	.05179	127.07	.34158	.53958	.35595
SDev	.0071	.00009	.00010	.26	.00108	.00119	.00133
%RSD	.29617	.16222	.20059	.20288	.31490	.22137	.37418
#1	2.4205	.05511	.05168	127.02	.34182	.53996	.35733
#2	2.4063	.05498	.05181	126.84	.34041	.53824	.35468
#3	2.4119	.05516	.05188	127.35	.34252	.54053	.35585
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.000	10.000	10.000	500.00	20.000	20.000	10.000
Low	-.05000	-.00500	-.00500	-5.0000	-.01000	-.05000	-.02500

Elem	Fe	Pb/1	Pb/2	Mg	Mn	K_	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	55.725	.58666	.57018	84.097	1.2548	76.472	.57794
SDev	.087	.00559	.00068	.184	.0028	.230	.00186
%RSD	.15690	.95274	.11894	.21871	.21924	.30124	.32255
#1	55.764	.58938	.56945	84.069	1.2562	76.670	.57682
#2	55.625	.58023	.57030	83.928	1.2516	76.219	.57691
#3	55.786	.59036	.57079	84.293	1.2565	76.526	.58009
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass
High	400.00			500.00	20.000	100.00	20.000
Low	-.10000			-5.0000	-.01500	-5.0000	-.04000

Elem	Se/1	Se/2	Ag	Na	Tl	V_	Zn
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.9513	2.0090	.05043	61.632	2.0202	.64670	.81832
SDev	.0031	.0050	.00014	.200	.0089	.00085	.00198
%RSD	.15867	.25043	.27404	.32404	.44248	.13181	.24171
#1	1.9501	2.0111	.05028	61.745	2.0116	.64711	.81804
#2	1.9489	2.0032	.05047	61.401	2.0195	.64572	.81651
#3	1.9548	2.0126	.05055	61.749	2.0294	.64727	.82043
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass

High			2.0000	600.00	20.000	20.000	10.000
Low			-.01000	-5.0000	-.01000	-.05000	-.02000
Elem	B_	Mo	Li	Sr	Ti	Sn	Si
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.0243	1.0301	1.1293	1.1848	2.8948	2.0681	H14.630
SDev	.0015	.0021	.0031	.0035	.0065	.0080	.033
%RSD	.14946	.19976	.27579	.29923	.22605	.38691	.22314
#1	1.0239	1.0293	1.1314	1.1884	2.9001	2.0659	H14.655
#2	1.0230	1.0286	1.1257	1.1813	2.8875	2.0614	H14.593
#3	1.0260	1.0324	1.1308	1.1846	2.8969	2.0769	H14.642
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC High
High	10.000	10.000	4.0000	10.000	10.000	10.000	10.000
Low	-.50000	-.04000	-.05000	-.05000	-.05000	-.10000	-.10000
IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	14010	--	--	--	--	--	--
SDev	42.63750	--	--	--	--	--	--
%RSD	.3043406	--	--	--	--	--	--
#1	13980	--	--	--	--	--	--
#2	14059	--	--	--	--	--	--
#3	13990	--	--	--	--	--	--

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Method: TRA10103 Sample Name: F6LW1 Operator: KGS
Run Time: 12/19/03 14:56:59
Comment:
Mode: CONC Corr. Factor: 1

Elem	Pb	Se	Sb	Al	Sb\1	Sb\2	As
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.1859	.01945	.26779	139.31	.27161	.26012	.29916
SDev	.0048	.00039	.00158	.47	.00126	.00484	.00108
%RSD	.40208	2.0160	.58946	.33636	.46300	1.8606	.36145
#1	1.1905	.01969	.26875	139.85	.27059	.26508	.29953
#2	1.1862	.01900	.26864	139.02	.27302	.25987	.30000
#3	1.1810	.01968	.26596	139.07	.27124	.25541	.29794
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass
High	10.000	10.000	10.000	500.00			10.000
Low	-.00300	-.00500	-.06000	-.20000			-.01000

Elem	Ba	Be	Cd	Ca	Cr	Co	Cu
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.91449	.00277	.02629	H905.89	7.4141	.02303	2.1445
SDev	.00323	.00009	.00012	4.44	.0259	.00057	.0078
%RSD	.35296	3.1636	.44127	.48999	.34973	2.4726	.36180
#1	.91789	.00279	.02628	H908.69	7.4379	.02247	2.1501
#2	.91146	.00284	.02641	H908.21	7.4179	.02301	2.1356
#3	.91413	.00267	.02618	H900.78	7.3865	.02361	2.1477
Errors	LC Pass	LC Pass	LC Pass	LC High	LC Pass	LC Pass	LC Pass
High	10.000	10.000	10.000	500.00	20.000	20.000	10.000
Low	-.05000	-.00500	-.00500	-5.0000	-.01000	-.05000	-.02500

Elem	Fe	Pb/1	Pb/2	Mg	Mn	K_	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	233.05	1.2096	1.1741	40.663	4.3329	7.2764	.43747
SDev	.74	.0136	.0004	.124	.0143	.0380	.00327
%RSD	.31809	1.1268	.03259	.30439	.32968	.52182	.74626
#1	233.80	1.2230	1.1744	40.777	4.3468	7.3114	.43949
#2	233.04	1.2100	1.1743	40.681	4.3337	7.2361	.43921
#3	232.31	1.1957	1.1737	40.532	4.3183	7.2818	.43370
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass
High	400.00			500.00	20.000	100.00	20.000
Low	-.10000			-5.0000	-.01500	-5.0000	-.04000

Elem	Se/1	Se/2	Ag	Na	Tl	V_	Zn
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.02537	.01650	.02838	31.415	.01039	.10652	8.5460
SDev	.00434	.00205	.00060	.084	.00185	.00017	.0291
%RSD	17.106	12.406	2.1186	.26767	17.812	.16096	.34028
#1	.03029	.01439	.02843	31.501	.00861	.10652	8.5712
#2	.02376	.01663	.02895	31.333	.01025	.10669	8.5526
#3	.02207	.01848	.02775	31.410	.01230	.10635	8.5142
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass

High			2.0000	600.00	20.000	20.000	10.000
Low			-.01000	-5.0000	-.01000	-.05000	-.02000
Elem	B_	Mo	Li	Sr	Ti	Sn	Si
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.24846	.03870	.02048	4.3218	1.8209	.18394	H10.459
SDev	.00123	.00034	.00018	.0153	.0055	.00151	.019
%RSD	.49647	.87109	.87884	.35414	.30031	.81818	.17878
#1	.24975	.03842	.02035	4.3392	1.8270	.18224	H10.479
#2	.24834	.03908	.02041	4.3101	1.8194	.18446	H10.442
#3	.24729	.03861	.02069	4.3162	1.8164	.18512	H10.455
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC High
High	10.000	10.000	4.0000	10.000	10.000	10.000	10.000
Low	-.50000	-.04000	-.05000	-.05000	-.05000	-.10000	-.10000
IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	13257	--	--	--	--	--	--
SDev	63.21517	--	--	--	--	--	--
%RSD	.4768290	--	--	--	--	--	--
#1	13196	--	--	--	--	--	--
#2	13254	--	--	--	--	--	--
#3	13322	--	--	--	--	--	--

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Method: TRA10103 Sample Name: F6LW5 Operator: KGS
Run Time: 12/19/03 15:01:25
Comment:
Mode: CONC Corr. Factor: 1

Elem	Pb	Se	Sb	Al	Sb\1	Sb\2	As
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.06913	.00302	.00637	47.400	.00546	.00821	.01979
SDev	.00085	.00005	.00094	.153	.00079	.00163	.00058
%RSD	1.2259	1.7689	14.816	.32187	14.422	19.855	2.9333
#1	.06820	.00307	.00733	47.575	.00595	.01009	.01923
#2	.06986	.00297	.00635	47.296	.00587	.00732	.02039
#3	.06933	.00304	.00544	47.329	.00455	.00722	.01977
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass
High	10.000	10.000	10.000	500.00			10.000
Low	-.00300	-.00500	-.06000	-.20000			-.01000

Elem	Ba	Be	Cd	Ca	Cr	Co	Cu
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.33889	.00182	.00011	92.098	.21901	.01750	.24984
SDev	.00148	.00005	.00020	.253	.00087	.00032	.00092
%RSD	.43771	2.5162	176.23	.27448	.39705	1.8043	.36915
#1	.34057	.00176	.00010	92.375	.21995	.01762	.25089
#2	.33777	.00184	.00032	92.040	.21882	.01774	.24943
#3	.33834	.00184	-.00008	91.880	.21824	.01714	.24919
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.000	10.000	10.000	500.00	20.000	20.000	10.000
Low	-.05000	-.00500	-.00500	-5.0000	-.01000	-.05000	-.02500

Elem	Fe	Pb/1	Pb/2	Mg	Mn	K_	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	58.459	.07810	.06465	18.621	.73893	3.6579	.12003
SDev	.154	.00081	.00095	.046	.00199	.0123	.00136
%RSD	.26388	1.0415	1.4625	.24542	.26911	.33742	1.1337
#1	58.630	.07718	.06372	18.672	.74119	3.6722	.11925
#2	58.416	.07838	.06561	18.606	.73819	3.6508	.12160
#3	58.330	.07873	.06463	18.585	.73742	3.6508	.11924
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass
High	400.00			500.00	20.000	100.00	20.000
Low	-.10000			-5.0000	-.01500	-5.0000	-.04000

Elem	Se/1	Se/2	Ag	Na	Tl	V_	Zn
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00306	.00301	-.00083	1.0656	.00277	.09037	.35375
SDev	.00179	.00084	.00064	.0699	.00246	.00058	.00127
%RSD	58.545	27.887	77.714	6.5612	88.904	.64051	.35820
#1	.00513	.00204	-.00130	.98540	-.00006	.09085	.35521
#2	.00205	.00342	-.00010	1.0981	.00445	.09054	.35309
#3	.00200	.00356	-.00108	1.1135	.00390	.08973	.35294
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass

High			2.0000	600.00	20.000	20.000	10.000
Low			-.01000	-5.0000	-.01000	-.05000	-.02000
Elem	B_	Mo	Li	Sr	Ti	Sn	Si
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.11713	.00771	.04654	.22503	1.3975	.03178	H10.972
SDev	.00061	.00052	.00012	.00087	.0060	.00124	.045
%RSD	.52112	6.6782	.24865	.38681	.42988	3.9059	.41026
#1	.11654	.00830	.04667	.22602	1.4044	.03281	H11.023
#2	.11776	.00748	.04645	.22440	1.3941	.03213	H10.939
#3	.11708	.00735	.04650	.22467	1.3940	.03040	H10.955
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC High
High	10.000	10.000	4.0000	10.000	10.000	10.000	10.000
Low	-.50000	-.04000	-.05000	-.05000	-.05000	-.10000	-.10000
IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	14196	--	--	--	--	--	--
SDev	63.76180	--	--	--	--	--	--
%RSD	.4491565	--	--	--	--	--	--
#1	14122	--	--	--	--	--	--
#2	14231	--	--	--	--	--	--
#3	14234	--	--	--	--	--	--

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Method: TRA10103 Sample Name: F6L2G Operator: KGS
Run Time: 12/19/03 15:05:52
Comment:
Mode: CONC Corr. Factor: 1

Elem	Pb	Se	Sb	Al	Sb\1	Sb\2	As
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L-.02915	.00155	.00184	7.0570	.00164	.00223	.01000
SDev	.00054	.00084	.00152	.0834	.00211	.00036	.00036
%RSD	1.8407	53.971	82.691	1.1819	128.33	15.952	3.5529
#1	L-.02854	.00199	.00012	7.1533	-.00074	.00182	.01003
#2	L-.02955	.00208	.00241	7.0100	.00239	.00245	.01033
#3	L-.02936	.00059	.00299	7.0078	.00327	.00243	.00962
Errors	LC Low	LC Pass	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass
High	10.000	10.000	10.000	500.00			10.000
Low	-.00300	-.00500	-.06000	-.20000			-.01000

Elem	Ba	Be	Cd	Ca	Cr	Co	Cu
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.03952	.00014	-.00024	H664.04	.02115	.00797	.01609
SDev	.00053	.00010	.00006	7.08	.00040	.00017	.00029
%RSD	1.3328	69.469	23.267	1.0657	1.9087	2.1457	1.7868
#1	.04013	.00003	-.00019	H672.16	.02161	.00814	.01637
#2	.03914	.00021	-.00023	H659.17	.02094	.00780	.01580
#3	.03930	.00017	-.00030	H660.80	.02090	.00798	.01611
Errors	LC Pass	LC Pass	LC Pass	LC High	LC Pass	LC Pass	LC Pass
High	10.000	10.000	10.000	500.00	20.000	20.000	10.000
Low	-.05000	-.00500	-.00500	-5.0000	-.01000	-.05000	-.02500

Elem	Fe	Pb/1	Pb/2	Mg	Mn	K_	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	25.773	-.01862	-.03441	32.519	.67706	.13867	.02234
SDev	.283	.00227	.00127	.331	.00756	.00596	.00038
%RSD	1.0975	12.170	3.6990	1.0178	1.1167	4.2943	1.6865
#1	26.099	-.01773	-.03394	32.900	.68578	.14546	.02192
#2	25.613	-.01694	-.03585	32.299	.67228	.13436	.02265
#3	25.606	-.02120	-.03344	32.359	.67313	.13618	.02244
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass
High	400.00			500.00	20.000	100.00	20.000
Low	-.10000			-5.0000	-.01500	-5.0000	-.04000

Elem	Se/1	Se/2	Ag	Na	Tl	V_	Zn
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00001	.00233	-.00050	-.15413	.00076	.03600	.06760
SDev	.00584	.00171	.00003	.03083	.00045	.00064	.00084
%RSD	59374.	73.254	5.9400	20.002	59.654	1.7659	1.2485
#1	.00426	.00086	-.00051	-.18763	.00092	.03673	.06856
#2	.00238	.00193	-.00047	-.14782	.00025	.03571	.06699
#3	-.00667	.00421	-.00053	-.12694	.00111	.03555	.06724
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass

High			2.0000	600.00	20.000	20.000	10.000
Low			-.01000	-5.0000	-.01000	-.05000	-.02000

Elem	B_	Mo	Li	Sr	Ti	Sn	Si
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00686	.00102	.01321	.36888	.55265	.02160	2.2687
SDev	.00053	.00058	.00015	.00442	.00612	.00080	.0305
%RSD	7.6706	57.037	1.1039	1.1990	1.1069	3.6910	1.3454
#1	.00682	.00035	.01337	.37398	.55971	.02137	2.3040
#2	.00740	.00128	.01308	.36658	.54896	.02248	2.2518
#3	.00635	.00142	.01318	.36609	.54928	.02094	2.2504
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.000	10.000	4.0000	10.000	10.000	10.000	10.000
Low	-.50000	-.04000	-.05000	-.05000	-.05000	-.10000	-.10000

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	13554	--	--	--	--	--	--
SDev	164.6609	--	--	--	--	--	--
%RSD	1.214870	--	--	--	--	--	--
#1	13364	--	--	--	--	--	--
#2	13657	--	--	--	--	--	--
#3	13640	--	--	--	--	--	--

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Method: TRA10103 Sample Name: F6L2GS Operator: KGS
Run Time: 12/19/03 15:10:19
Comment:
Mode: CONC Corr. Factor: 1

Elem	Pb	Se	Sb	Al	Sb\1	Sb\2	As
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.50876	1.9940	.49328	14.930	.49226	.49533	2.0218
SDev	.00235	.0122	.00420	.063	.00626	.00265	.0144
%RSD	.46264	.61030	.85152	.42467	1.2719	.53514	.71248
#1	.51145	2.0080	.49813	15.003	.49931	.49577	2.0384
#2	.50709	1.9880	.49091	14.889	.49012	.49248	2.0135
#3	.50774	1.9860	.49081	14.898	.48735	.49773	2.0134
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass
High	10.000	10.000	10.000	500.00			10.000
Low	-.00300	-.00500	-.06000	-.20000			-.01000

Elem	Ba	Be	Cd	Ca	Cr	Co	Cu
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.0981	.05329	.05138	192.63	.24269	.52983	.27101
SDev	.0076	.00014	.00009	.58	.00021	.00216	.00164
%RSD	.36298	.26575	.17366	.30291	.08625	.40859	.60466
#1	2.1068	.05346	.05139	193.31	.24280	.53225	.27289
#2	2.0928	.05321	.05147	192.25	.24281	.52806	.27027
#3	2.0947	.05321	.05129	192.34	.24244	.52920	.26987
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.000	10.000	10.000	500.00	20.000	20.000	10.000
Low	-.05000	-.00500	-.00500	-5.0000	-.01000	-.05000	-.02500

Elem	Fe	Pb/1	Pb/2	Mg	Mn	K_	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	24.668	.51594	.50517	96.081	.92713	69.265	.53610
SDev	.063	.00238	.00332	.312	.00272	.256	.00091
%RSD	.25520	.46223	.65699	.32516	.29370	.36941	.16925
#1	24.740	.51651	.50892	96.439	.93027	69.560	.53714
#2	24.623	.51333	.50397	95.861	.92541	69.114	.53571
#3	24.640	.51799	.50262	95.944	.92572	69.121	.53546
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass
High	400.00			500.00	20.000	100.00	20.000
Low	-.10000			-5.0000	-.01500	-5.0000	-.04000

Elem	Se/1	Se/2	Ag	Na	Tl	V_	Zn
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.9537	2.0141	.05053	61.642	2.0285	.57066	.58710
SDev	.0060	.0160	.00022	.197	.0073	.00309	.00232
%RSD	.30942	.79564	.43458	.31935	.35976	.54222	.39477
#1	1.9587	2.0326	.05074	61.868	2.0258	.57398	.58975
#2	1.9554	2.0043	.05030	61.508	2.0230	.57015	.58546
#3	1.9470	2.0055	.05056	61.550	2.0368	.56786	.58610
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass

High			2.0000	600.00	20.000	20.000	10.000
Low			-.01000	-5.0000	-.01000	-.05000	-.02000
Elem	B_	Mo	Li	Sr	Ti	Sn	Si
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.97955	1.0426	1.0838	1.1235	1.9143	2.0931	8.6148
SDev	.00541	.0024	.0040	.0046	.0081	.0093	.0316
%RSD	.55228	.22625	.36764	.41353	.42295	.44419	.36661
#1	.98453	1.0440	1.0884	1.1288	1.9236	2.1016	8.6510
#2	.97379	1.0399	1.0821	1.1206	1.9087	2.0831	8.6001
#3	.98032	1.0440	1.0810	1.1210	1.9107	2.0946	8.5932
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.000	10.000	4.0000	10.000	10.000	10.000	10.000
Low	-.50000	-.04000	-.05000	-.05000	-.05000	-.10000	-.10000
IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	13676	--	--	--	--	--	--
SDev	70.32001	--	--	--	--	--	--
%RSD	.5141991	--	--	--	--	--	--
#1	13595	--	--	--	--	--	--
#2	13721	--	--	--	--	--	--
#3	13712	--	--	--	--	--	--

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Method: TRA10103 Sample Name: F6L2Q Operator: KGS
Run Time: 12/19/03 15:14:46
Comment:
Mode: CONC Corr. Factor: 1

Elem	Pb	Se	Sb	Al	Sb\1	Sb\2	As
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00094	.00813	.00034	.05737	.00031	.00040	.00122
SDev	.00051	.00057	.00149	.00127	.00262	.00192	.00050
%RSD	54.329	7.0290	435.65	2.2074	844.46	473.76	40.809
#1	.00071	.00812	.00206	.05759	.00320	-.00024	.00159
#2	.00152	.00756	-.00062	.05852	-.00038	-.00111	.00140
#3	.00058	.00870	-.00041	.05601	-.00190	.00256	.00065
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass
High	10.000	10.000	10.000	500.00			10.000
Low	-.00300	-.00500	-.06000	-.20000			-.01000

Elem	Ba	Be	Cd	Ca	Cr	Co	Cu
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00930	-.00027	.00056	2.9822	.00124	-.00005	.02812
SDev	.00009	.00005	.00002	.0171	.00010	.00043	.00012
%RSD	1.0122	19.881	4.0472	.57475	8.0024	905.42	.41564
#1	.00941	-.00033	.00057	3.0020	.00113	-.00011	.02816
#2	.00923	-.00026	.00054	2.9728	.00133	.00041	.02821
#3	.00927	-.00022	.00059	2.9718	.00126	-.00044	.02799
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.000	10.000	10.000	500.00	20.000	20.000	10.000
Low	-.05000	-.00500	-.00500	-5.0000	-.01000	-.05000	-.02500

Elem	Fe	Pb/1	Pb/2	Mg	Mn	K_	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.19281	.00116	.00082	3.4674	.08976	90.134	.00076
SDev	.00384	.00266	.00153	.0235	.00044	.391	.00049
%RSD	1.9932	228.35	185.66	.67815	.48832	.43364	63.519
#1	.19708	-.00168	.00190	3.4945	.09026	90.585	.00038
#2	.19172	.00158	.00149	3.4554	.08956	89.923	.00061
#3	.18963	.00359	-.00092	3.4524	.08945	89.893	.00131
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass
High	400.00			500.00	20.000	100.00	20.000
Low	-.10000			-5.0000	-.01500	-5.0000	-.04000

Elem	Se/1	Se/2	Ag	Na	Tl	V_	Zn
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.02220	.00110	.00010	-.34610	.00531	-.00030	.18732
SDev	.00300	.00073	.00044	.11333	.00179	.00042	.00086
%RSD	13.538	66.517	441.41	32.744	33.603	138.49	.46151
#1	.02110	.00164	-.00038	-.45103	.00663	.00017	.18831
#2	.01990	.00140	.00020	-.36134	.00604	-.00044	.18677
#3	.02560	.00027	.00047	-.22592	.00328	-.00064	.18686
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass

High			2.0000	600.00	20.000	20.000	10.000
Low			-.01000	-5.0000	-.01000	-.05000	-.02000
Elem	B_	Mo	Li	Sr	Ti	Sn	Si
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.02645	.00199	.00031	.01074	.00046	.03209	1.6739
SDev	.00067	.00032	.00003	.00005	.00007	.00068	.0097
%RSD	2.5363	15.971	9.1221	.48981	15.025	2.1095	.57733
#1	.02704	.00165	.00031	.01080	.00049	.03198	1.6850
#2	.02572	.00229	.00033	.01071	.00050	.03282	1.6697
#3	.02658	.00203	.00028	.01070	.00038	.03148	1.6671
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.000	10.000	4.0000	10.000	10.000	10.000	10.000
Low	-.50000	-.04000	-.05000	-.05000	-.05000	-.10000	-.10000
IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	14090	--	--	--	--	--	--
SDev	68.62376	--	--	--	--	--	--
%RSD	.4870506	--	--	--	--	--	--
#1	14011	--	--	--	--	--	--
#2	14120	--	--	--	--	--	--
#3	14138	--	--	--	--	--	--

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Method: TRA10103 Sample Name: F6L2GD Operator: KGS
Run Time: 12/19/03 15:19:13
Comment:
Mode: CONC Corr. Factor: 1

Elem	Pb	Se	Sb	Al	Sb\1	Sb\2	As
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.51677	2.0082	.49498	14.454	.49344	.49809	2.0360
SDev	.00362	.0164	.00267	.129	.00197	.00438	.0136
%RSD	.70004	.81596	.53947	.89261	.39843	.87996	.66575
#1	.52051	2.0260	.49783	14.600	.49569	.50212	2.0506
#2	.51329	1.9937	.49254	14.354	.49210	.49342	2.0238
#3	.51652	2.0048	.49458	14.408	.49252	.49872	2.0336
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass
High	10.000	10.000	10.000	500.00			10.000
Low	-.00300	-.00500	-.06000	-.20000			-.01000

Elem	Ba	Be	Cd	Ca	Cr	Co	Cu
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.1200	.05374	.05182	209.08	.23586	.53448	.27647
SDev	.0211	.00025	.00026	1.18	.00197	.00370	.00262
%RSD	.99658	.45833	.50701	.56506	.83297	.69261	.94599
#1	2.1430	.05398	.05204	210.30	.23805	.53842	.27939
#2	2.1015	.05348	.05153	207.94	.23424	.53108	.27435
#3	2.1155	.05376	.05190	209.01	.23530	.53392	.27565
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.000	10.000	10.000	500.00	20.000	20.000	10.000
Low	-.05000	-.00500	-.00500	-5.0000	-.01000	-.05000	-.02500

Elem	Fe	Pb/1	Pb/2	Mg	Mn	K_	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	27.596	.52715	.51159	88.761	.94662	59.880	.53599
SDev	.212	.00499	.00293	.566	.00674	.518	.00240
%RSD	.76654	.94709	.57307	.63819	.71228	.86476	.44824
#1	27.820	.53227	.51464	89.371	.95381	60.438	.53855
#2	27.400	.52230	.50879	88.251	.94043	59.415	.53378
#3	27.568	.52689	.51134	88.662	.94561	59.788	.53565
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass
High	400.00			500.00	20.000	100.00	20.000
Low	-.10000			-5.0000	-.01500	-5.0000	-.04000

Elem	Se/1	Se/2	Ag	Na	Tl	V_	Zn
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.9684	2.0280	.05119	52.375	2.0470	.57371	.59842
SDev	.0076	.0208	.00011	.339	.0160	.00559	.00402
%RSD	.38832	1.0232	.22085	.64797	.78149	.97489	.67160
#1	1.9766	2.0506	.05126	52.761	2.0593	.58003	.60277
#2	1.9615	2.0098	.05125	52.125	2.0289	.56939	.59485
#3	1.9669	2.0237	.05106	52.238	2.0529	.57172	.59762
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass

High			2.0000	600.00	20.000	20.000	10.000
Low			-.01000	-5.0000	-.01000	-.05000	-.02000

Elem	B_	Mo	Li	Sr	Ti	Sn	Si
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.98628	1.0505	1.0928	1.1479	2.0340	2.1078	8.1273
SDev	.00850	.0068	.0098	.0109	.0172	.0101	.0698
%RSD	.86143	.65166	.89775	.95148	.84553	.48006	.85905
#1	.99480	1.0579	1.1035	1.1598	2.0526	2.1182	8.2036
#2	.97781	1.0443	1.0843	1.1383	2.0186	2.0980	8.0667
#3	.98623	1.0493	1.0906	1.1457	2.0308	2.1073	8.1115
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.000	10.000	4.0000	10.000	10.000	10.000	10.000
Low	-.50000	-.04000	-.05000	-.05000	-.05000	-.10000	-.10000

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	13653	--	--	--	--	--	--
SDev	127.2957	--	--	--	--	--	--
%RSD	.9323700	--	--	--	--	--	--
#1	13507	--	--	--	--	--	--
#2	13739	--	--	--	--	--	--
#3	13713	--	--	--	--	--	--

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Method: TRA10103 Sample Name: F6L2QS Operator: KGS
Run Time: 12/19/03 15:23:40
Comment:
Mode: CONC Corr. Factor: 1

Elem	Pb	Se	Sb	Al	Sb\1	Sb\2	As
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.50664	2.1257	.50013	2.1308	.49932	.50177	2.0241
SDev	.00267	.0174	.00172	.0129	.00109	.00361	.0068
%RSD	.52699	.81748	.34310	.60430	.21908	.71922	.33704
#1	.50962	2.1448	.50164	2.1447	.50057	.50377	2.0304
#2	.50580	2.1108	.50050	2.1193	.49878	.50394	2.0169
#3	.50448	2.1214	.49826	2.1285	.49859	.49761	2.0251
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass
High	10.000	10.000	10.000	500.00			10.000
Low	-.00300	-.00500	-.06000	-.20000			-.01000

Elem	Ba	Be	Cd	Ca	Cr	Co	Cu
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.0516	.05326	.05213	55.546	.20942	.52650	.28658
SDev	.0083	.00009	.00011	.167	.00076	.00190	.00120
%RSD	.40378	.16237	.20461	.30089	.36365	.36069	.42027
#1	2.0611	.05336	.05224	55.739	.21029	.52870	.28757
#2	2.0463	.05323	.05213	55.437	.20889	.52540	.28524
#3	2.0473	.05319	.05202	55.462	.20907	.52541	.28694
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.000	10.000	10.000	500.00	20.000	20.000	10.000
Low	-.05000	-.00500	-.00500	-5.0000	-.01000	-.05000	-.02500

Elem	Fe	Pb/1	Pb/2	Mg	Mn	K_	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.2338	.50859	.50566	54.729	.62270	H131.12	.51530
SDev	.0019	.00642	.00203	.185	.00229	.52	.00251
%RSD	.15227	1.2622	.40064	.33745	.36769	.39913	.48729
#1	1.2317	.51388	.50750	54.941	.62534	H131.72	.51797
#2	1.2351	.51043	.50349	54.608	.62142	H130.86	.51493
#3	1.2348	.50145	.50600	54.637	.62132	H130.78	.51299
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	LC Pass	LC High	LC Pass
High	400.00			500.00	20.000	100.00	20.000
Low	-.10000			-5.0000	-.01500	-5.0000	-.04000

Elem	Se/1	Se/2	Ag	Na	Tl	V_	Zn
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.1003	2.1383	.05010	50.087	2.0537	.52751	.71535
SDev	.0148	.0191	.00027	.022	.0030	.00141	.00281
%RSD	.70369	.89189	.53494	.04372	.14656	.26710	.39313
#1	2.1174	2.1585	.05034	50.067	2.0572	.52911	.71858
#2	2.0914	2.1205	.04981	50.084	2.0522	.52645	.71343
#3	2.0922	2.1360	.05015	50.111	2.0518	.52697	.71404
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass

High			2.0000	600.00	20.000	20.000	10.000
Low			-.01000	-5.0000	-.01000	-.05000	-.02000
Elem	B_	Mo	Li	Sr	Ti	Sn	Si
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.0016	1.0497	1.0542	1.0467	1.0405	2.1012	6.4812
SDev	.0042	.0030	.0039	.0039	.0034	.0061	.0251
%RSD	.41708	.28346	.37060	.36861	.32623	.29198	.38710
#1	1.0064	1.0531	1.0587	1.0512	1.0444	2.1081	6.5094
#2	.99959	1.0474	1.0520	1.0443	1.0381	2.0990	6.4614
#3	.99877	1.0486	1.0520	1.0447	1.0391	2.0965	6.4729
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.000	10.000	4.0000	10.000	10.000	10.000	10.000
Low	-.50000	-.04000	-.05000	-.05000	-.05000	-.10000	-.10000
IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	13752	--	--	--	--	--	--
SDev	71.47289	--	--	--	--	--	--
%RSD	.5197259	--	--	--	--	--	--
#1	13671	--	--	--	--	--	--
#2	13778	--	--	--	--	--	--
#3	13807	--	--	--	--	--	--

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Method: TRA10103 Sample Name: F6L2QD Operator: KGS
Run Time: 12/19/03 15:28:07
Comment:
Mode: CONC Corr. Factor: 1

Elem	Pb	Se	Sb	Al	Sb\1	Sb\2	As
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.50478	2.1412	.50649	2.1696	.50548	.50850	2.0384
SDev	.00138	.0094	.00145	.0065	.00094	.00287	.0114
%RSD	.27300	.43777	.28562	.29932	.18586	.56486	.55968
#1	.50613	2.1398	.50715	2.1747	.50636	.50875	2.0449
#2	.50338	2.1326	.50483	2.1623	.50449	.50551	2.0252
#3	.50484	2.1512	.50748	2.1719	.50561	.51124	2.0451
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass
High	10.000	10.000	10.000	500.00			10.000
Low	-.00300	-.00500	-.06000	-.20000			-.01000

Elem	Ba	Be	Cd	Ca	Cr	Co	Cu
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.0926	.05337	.05207	65.822	.21087	.52665	.29408
SDev	.0098	.00016	.00046	.206	.00092	.00188	.00146
%RSD	.46657	.29839	.87775	.31338	.43599	.35662	.49768
#1	2.1014	.05336	.05208	65.889	.21118	.52722	.29546
#2	2.0821	.05322	.05161	65.591	.20984	.52456	.29255
#3	2.0942	.05353	.05252	65.986	.21160	.52819	.29422
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.000	10.000	10.000	500.00	20.000	20.000	10.000
Low	-.05000	-.00500	-.00500	-5.0000	-.01000	-.05000	-.02500

Elem	Fe	Pb/1	Pb/2	Mg	Mn	K_	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.2307	.50996	.50220	65.259	.62544	H146.61	.51651
SDev	.0085	.00145	.00169	.200	.00228	.54	.00312
%RSD	.69064	.28364	.33748	.30638	.36379	.36567	.60451
#1	1.2342	.51019	.50411	65.231	.62673	H147.10	.51678
#2	1.2211	.50841	.50087	65.075	.62282	H146.03	.51326
#3	1.2370	.51127	.50162	65.472	.62678	H146.70	.51949
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	LC Pass	LC High	LC Pass
High	400.00			500.00	20.000	100.00	20.000
Low	-.10000			-5.0000	-.01500	-5.0000	-.04000

Elem	Se/1	Se/2	Ag	Na	Tl	V_	Zn
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.1193	2.1521	.05046	61.281	2.0599	.53194	.72368
SDev	.0111	.0111	.00062	.307	.0074	.00268	.00225
%RSD	.52191	.51754	1.2342	.50159	.35965	.50334	.31118
#1	2.1276	2.1459	.05009	61.320	2.0611	.53343	.72384
#2	2.1067	2.1455	.05010	60.957	2.0519	.52885	.72135
#3	2.1236	2.1650	.05117	61.568	2.0666	.53354	.72585
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass

High			2.0000	600.00	20.000	20.000	10.000
Low			-.01000	-5.0000	-.01000	-.05000	-.02000
Elem	B_	Mo	Li	Sr	Ti	Sn	Si
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.0236	1.0552	1.0789	1.0647	1.0525	2.0984	8.1259
SDev	.0031	.0044	.0040	.0046	.0037	.0058	.0309
%RSD	.30392	.41240	.37164	.43339	.35527	.27462	.38071
#1	1.0247	1.0581	1.0817	1.0688	1.0551	2.0963	8.1542
#2	1.0200	1.0502	1.0743	1.0597	1.0482	2.0940	8.0929
#3	1.0260	1.0573	1.0808	1.0656	1.0541	2.1049	8.1305
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.000	10.000	4.0000	10.000	10.000	10.000	10.000
Low	-.50000	-.04000	-.05000	-.05000	-.05000	-.10000	-.10000
IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	13721	--	--	--	--	--	--
SDev	56.76504	--	--	--	--	--	--
%RSD	.4137166	--	--	--	--	--	--
#1	13661	--	--	--	--	--	--
#2	13774	--	--	--	--	--	--
#3	13727	--	--	--	--	--	--

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Method: TRA10103 Sample Name: F6L40 Operator: KGS
Run Time: 12/19/03 15:32:34
Comment:
Mode: CONC Corr. Factor: 1

Elem	Pb	Se	Sb	Al	Sb\1	Sb\2	As
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.2221	.02049	.31855	138.92	.32059	.31448	.32463
SDev	.0091	.00240	.00420	.68	.00493	.00290	.00185
%RSD	.74648	11.714	1.3174	.48705	1.5370	.92150	.56920
#1	1.2116	.02208	.31386	138.15	.31497	.31162	.32265
#2	1.2260	.01773	.32193	139.41	.32419	.31742	.32631
#3	1.2286	.02166	.31987	139.22	.32260	.31440	.32491
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass
High	10.000	10.000	10.000	500.00			10.000
Low	-.00300	-.00500	-.06000	-.20000			-.01000

Elem	Ba	Be	Cd	Ca	Cr	Co	Cu
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.98089	.00261	.02758	H818.36	7.6318	.03434	2.1295
SDev	.00397	.00006	.00032	6.83	.0574	.00048	.0061
%RSD	.40453	2.1909	1.1606	.83492	.75244	1.3980	.28776
#1	.97643	.00255	.02723	H810.49	7.5656	.03379	2.1228
#2	.98403	.00262	.02786	H821.95	7.6614	.03466	2.1348
#3	.98219	.00266	.02766	H822.66	7.6683	.03457	2.1310
Errors	LC Pass	LC Pass	LC Pass	LC High	LC Pass	LC Pass	LC Pass
High	10.000	10.000	10.000	500.00	20.000	20.000	10.000
Low	-.05000	-.00500	-.00500	-5.0000	-.01000	-.05000	-.02500

Elem	Fe	Pb/1	Pb/2	Mg	Mn	K_	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	209.95	1.2512	1.2075	58.038	4.2610	8.0596	.42273
SDev	1.44	.0060	.0108	.436	.0285	.0377	.00251
%RSD	.68538	.48024	.89282	.75199	.66853	.46738	.59460
#1	208.29	1.2447	1.1951	57.535	4.2281	8.0237	.41983
#2	210.74	1.2522	1.2129	58.278	4.2772	8.0988	.42427
#3	210.82	1.2566	1.2146	58.302	4.2777	8.0562	.42409
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass
High	400.00			500.00	20.000	100.00	20.000
Low	-.10000			-5.0000	-.01500	-5.0000	-.04000

Elem	Se/1	Se/2	Ag	Na	Tl	V_	Zn
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.02902	.01623	.02861	40.736	.00503	.10749	9.0114
SDev	.00481	.00126	.00054	.229	.00152	.00096	.0590
%RSD	16.593	7.7586	1.9004	.56098	30.197	.89313	.65523
#1	.03156	.01734	.02837	40.472	.00328	.10648	8.9433
#2	.02346	.01486	.02824	40.866	.00605	.10760	9.0429
#3	.03203	.01649	.02924	40.869	.00575	.10839	9.0481
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass

High			2.0000	600.00	20.000	20.000	10.000
Low			-.01000	-5.0000	-.01000	-.05000	-.02000
Elem	B_	Mo	Li	Sr	Ti	Sn	Si
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.32055	.03939	.02418	5.1183	1.8960	.17414	H13.689
SDev	.00119	.00070	.00017	.0209	.0103	.00196	.085
%RSD	.36963	1.7780	.71886	.40827	.54062	1.1264	.61836
#1	.31930	.03931	.02398	5.0946	1.8843	.17268	H13.591
#2	.32069	.03874	.02431	5.1341	1.9029	.17336	H13.742
#3	.32166	.04013	.02425	5.1262	1.9009	.17637	H13.733
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC High
High	10.000	10.000	4.0000	10.000	10.000	10.000	10.000
Low	-.50000	-.04000	-.05000	-.05000	-.05000	-.10000	-.10000
IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	13347	--	--	--	--	--	--
SDev	19.36883	--	--	--	--	--	--
%RSD	.1451126	--	--	--	--	--	--
#1	13359	--	--	--	--	--	--
#2	13325	--	--	--	--	--	--
#3	13358	--	--	--	--	--	--

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Method: TRA10103 Sample Name: CCV6 Operator: KGS
Run Time: 12/19/03 15:37:00
Comment:
Mode: CONC Corr. Factor: 1

Elem	Pb	Se	Sb	Al	Sb\1	Sb\2	As
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.52013	.51810	.51471	25.383	.51330	.51754	.52193
SDev	.00196	.00099	.00214	.063	.00312	.00185	.00056
%RSD	.37682	.19103	.41618	.25010	.60783	.35648	.10650
#1	.51787	.51820	.51228	25.313	.50972	.51740	.52233
#2	.52135	.51903	.51631	25.396	.51473	.51946	.52216
#3	.52118	.51706	.51555	25.438	.51544	.51577	.52129
Errors	QC Pass	QC Pass	QC Pass	QC Pass	NOCHECK	NOCHECK	QC Pass
Value	.50000	.50000	.50000	25.000			.50000
Range	10.500	10.500	10.500	10.500			10.500

Elem	Ba	Be	Cd	Ca	Cr	Co	Cu
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.0510	2.1251	.52834	52.784	2.0774	2.1122	2.0275
SDev	.0039	.0064	.00219	.203	.0070	.0062	.0045
%RSD	.18954	.30020	.41370	.38488	.33719	.29314	.22277
#1	2.0471	2.1177	.52587	52.550	2.0694	2.1050	2.0227
#2	2.0510	2.1288	.53003	52.912	2.0803	2.1155	2.0281
#3	2.0549	2.1287	.52913	52.891	2.0825	2.1160	2.0317
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	2.0000	2.0000	.50000	50.000	2.0000	2.0000	2.0000
Range	10.500	10.500	10.500	10.500	10.500	10.500	10.500

Elem	Fe	Pb/1	Pb/2	Mg	Mn	K_	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	26.125	.51866	.52087	51.670	2.1026	54.923	2.1000
SDev	.078	.00188	.00312	.209	.0063	.152	.0101
%RSD	.29844	.36328	.59907	.40378	.29795	.27647	.48320
#1	26.035	.51865	.51749	51.429	2.0954	54.772	2.0883
#2	26.173	.51678	.52363	51.784	2.1056	54.920	2.1067
#3	26.167	.52054	.52150	51.796	2.1067	55.076	2.1050
Errors	QC Pass	NOCHECK	NOCHECK	QC Pass	QC Pass	QC Pass	QC Pass
Value	25.000			50.000	2.0000	50.000	2.0000
Range	10.500			10.500	10.500	10.500	10.500

Elem	Se/1	Se/2	Ag	Na	Tl	V_	Zn
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.51074	.52177	1.0197	49.508	1.0465	2.0873	2.1344
SDev	.00198	.00132	.0018	.071	.0092	.0057	.0074
%RSD	.38675	.25254	.17647	.14283	.87576	.27216	.34525
#1	.51282	.52088	1.0176	49.436	1.0381	2.0807	2.1259
#2	.51052	.52328	1.0211	49.577	1.0453	2.0912	2.1383
#3	.50888	.52114	1.0203	49.512	1.0563	2.0898	2.1390
Errors	NOCHECK	NOCHECK	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass

Value			1.0000	50.000	1.0000	2.0000	2.0000
Range			10.500	10.500	10.500	10.500	10.500
Elem	B_	Mo	Li	Sr	Ti	Sn	Si
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.0084	2.0951	2.0752	2.0544	2.0716	2.0993	2.1237
SDev	.0097	.0098	.0067	.0046	.0054	.0111	.0294
%RSD	.48491	.46648	.32098	.22227	.26041	.52927	1.3840
#1	1.9972	2.0844	2.0682	2.0497	2.0655	2.0865	2.1485
#2	2.0149	2.1035	2.0759	2.0546	2.0735	2.1054	2.1313
#3	2.0132	2.0975	2.0815	2.0589	2.0758	2.1060	2.0912
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000
Range	10.500	10.500	10.500	10.500	10.500	10.500	10.500
IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	13801	--	--	--	--	--	--
SDev	31.12639	--	--	--	--	--	--
%RSD	.2255304	--	--	--	--	--	--
#1	13813	--	--	--	--	--	--
#2	13766	--	--	--	--	--	--
#3	13825	--	--	--	--	--	--

Analysis Report 12/19/03 03:45:49 PM page 1

Method: TRA10103 Sample Name: CCB6 Operator: KGS
Run Time: 12/19/03 15:41:27
Comment:
Mode: CONC Corr. Factor: 1

Elem	Pb	Se	Sb	Al	Sb\1	Sb\2	As
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00109	.00146	-.00015	.04254	-.00128	.00213	.00144
SDev	.00032	.00120	.00164	.00993	.00286	.00143	.00151
%RSD	29.366	82.164	1122.1	23.334	223.09	67.114	104.70
#1	.00106	.00209	-.00015	.03885	-.00056	.00066	.00091
#2	.00078	.00221	-.00179	.03499	-.00443	.00352	.00027
#3	.00142	.00008	.00150	.05378	.00115	.00220	.00315
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass
High	.00305	.00505	.06005	.20005			.01005
Low	-.00305	-.00505	-.06005	-.20005			-.01005

Elem	Ba	Be	Cd	Ca	Cr	Co	Cu
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00005	-.00006	.00003	-.00450	.00041	-.00042	-.00248
SDev	.00008	.00024	.00012	.00099	.00014	.00028	.00021
%RSD	179.31	370.38	419.08	22.083	34.315	65.652	8.4950
#1	.00005	.00002	-.00011	-.00348	.00031	-.00019	-.00272
#2	-.00010	.00012	.00010	-.00546	.00034	-.00036	-.00234
#3	-.00009	-.00033	.00010	-.00456	.00057	-.00073	-.00237
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.20005	.00505	.00505	5.0000	.01005	.05005	.02505
Low	-.20005	-.00505	-.00505	-5.0000	-.01005	-.05005	-.02505

Elem	Fe	Pb/1	Pb/2	Mg	Mn	K_	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00478	.00395	-.00034	-.00380	.00020	.00069	.00077
SDev	.00506	.00120	.00021	.00177	.00017	.00070	.00046
%RSD	105.76	30.301	61.602	46.654	86.623	101.85	59.357
#1	-.00796	.00341	-.00011	-.00538	.00030	.00009	.00025
#2	-.00742	.00312	-.00038	-.00415	.00000	.00052	.00095
#3	.00105	.00532	-.00053	-.00188	.00031	.00147	.00112
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass
High	.10005			5.0000	.01505	5.0000	.04005
Low	-.10005			-5.0000	-.01505	-5.0000	-.04005

Elem	Se/1	Se/2	Ag	Na	Tl	V_	Zn
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00704	-.00133	.00027	-.33217	.00227	-.00084	.00038
SDev	.00143	.00143	.00037	.03226	.00206	.00040	.00013
%RSD	20.273	107.33	138.29	9.7123	90.691	48.356	33.265
#1	.00644	-.00008	.00007	-.36801	.00027	-.00084	.00025
#2	.00867	-.00102	.00070	-.30546	.00438	-.00124	.00040
#3	.00601	-.00289	.00004	-.32303	.00216	-.00043	.00050
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass

High			.01005	5.0000	.01005	.05005	.02005
Low			-.01005	-5.0000	-.01005	-.05005	-.02005

Elem	B_	Mo	Li	Sr	Ti	Sn	Si
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00264	.00144	.00035	.00000	-.00004	-.00139	.02391
SDev	.00069	.00099	.00006	.00006	.00020	.00081	.00299
%RSD	26.142	68.992	17.946	2563.2	544.68	58.233	12.506
#1	-.00266	.00254	.00042	.00006	.00001	-.00102	.02729
#2	-.00332	.00062	.00031	-.00006	.00014	-.00231	.02162
#3	-.00194	.00115	.00031	.00000	-.00026	-.00083	.02283
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.05005	.04005	.00505	.00505	.00505	.10005	.10005
Low	-.05005	-.04005	-.00505	-.00505	-.00505	-.10005	-.10005

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	14033	--	--	--	--	--	--
SDev	213.1399	--	--	--	--	--	--
%RSD	1.518901	--	--	--	--	--	--
#1	14139	--	--	--	--	--	--
#2	14171	--	--	--	--	--	--
#3	13787	--	--	--	--	--	--

STL Knoxville
ICP Analysis Cover Sheet

Chart Number:	S122203	**Date of Analysis:**	12-22-03
Instrument:	ST	**Analyst:**	KSS

Standard	ID #
Calibration Std. ID #:	
CCV (1:1 dil. of Cal. Std. ID#):	2641-36
ICV ID #:	2642-20
ICSA ID #:	2630A-20
ICSAB ID #:	2630B-20
CRI ID #:	2631-12-22

Maintenance performed ✓

Daily	Monthly or As Needed	Semi-annually	Annually
Check gases Check that argon tank pressure is 50-60 psi and that a spare tank is available. Check aspiration tubing.	Clean plasma torch assembly to remove accumulated deposits.	Replace coolant water filter (may require replacement more or less frequently, depending on the quality of water).	Notify manufacturer service engineer for scheduled preventive maintenance service.
Check vacuum pump gauge. (<10 millitorr)	Clean nebulizer and drain chamber; keep free flowing to maintain optimum performance.		Change vacuum pump oil.
Check that cooling water supply system is full and drain bottle is not full. Also ensure drain tubing is clear, tight fitting and has few bends.	Clean filters on back of power unit to remove dust.		
Check that nebulizer is not clogged.	Replace when needed: peristaltic pump tubing sample capillary tubing autosampler sipper probe.		
Check that capillary tubing is clean and in good condition.	Check yttrium position.		
Check that peristaltic pump windings are secure.	Check O-rings		
Check that high voltage switch is on.	Clean/lubricate pump rollers, autosampler arm.		
Check that exhaust screens are clean.	Check vacuum pump oil.		
Check that torch, glassware, aerosol injector tube, bonnet are clean.			

Comments: _____

```
--------------------------------------------------------------------------------
:       Instrument Upload                                   Run Log - Page  1 :
:       Started Tue Dec 23 13:14:05 2003 by SZELAGOK                          :
:       Data File: UPL$KNX_DATA_ROOT:<TJA>S122203.ARC;1                       :
--------------------------------------------------------------------------------
```

#	WorkOrder	Dilution	Date	Time	Batch	Lot	Instrument
1	S0	1	22-DEC-2003	14:36:00			ST
2	S1	1	22-DEC-2003	14:41:00			ST
3	S2	1	22-DEC-2003	14:45:00			ST
4	ICV	1	22-DEC-2003	14:50:00			ST
5	ICB	1	22-DEC-2003	14:54:00			ST
6	CRI1	1	22-DEC-2003	14:58:00			ST
7	ICSA1	1	22-DEC-2003	15:03:00			ST
8	ICSAB1	1	22-DEC-2003	15:07:00			ST
9	CCV1	1	22-DEC-2003	15:12:00			ST
10	CCB1	1	22-DEC-2003	15:16:00			ST
11	F6DRGFZ10	10	22-DEC-2003	15:21:00	3352178	PB045	ST
12	F6DRGZ10	10	22-DEC-2003	15:25:00	3352178	PB045	ST
13	F6F1CFZ20	20	22-DEC-2003	15:29:00	3352178	PB045	ST
14	F6F1CZ20	20	22-DEC-2003	15:34:00	3352178	PB045	ST
15	F6JX2S	1	22-DEC-2003	15:40:00	3352178	PB045	ST
16	F6JX2D	1	22-DEC-2003	15:44:00	3352178	PB045	ST
17	F6J0AF	1	22-DEC-2003	15:49:00	3352178	PB045	ST
18	F6J0A	1	22-DEC-2003	15:53:00	3352178	PB045	ST
19	F6RVR	1	22-DEC-2003	15:57:00	3352178	H3L160273	ST
20	F6RT9	1	22-DEC-2003	16:02:00	3352193	H3L160273	ST
21	CCV2	1	22-DEC-2003	16:06:00			ST
22	CCB2	1	22-DEC-2003	16:11:00			ST
23	ZZZZZZ	1	22-DEC-2003	16:15:00			ST
24	ZZZZZZ	1	22-DEC-2003	16:20:00			ST
25	ZZZZZZ	1	22-DEC-2003	16:24:00			ST
26	F6RT9S	1	22-DEC-2003	16:28:00	3352193	H3L160273	ST
27	F6RT9D	1	22-DEC-2003	16:33:00	3352193	H3L160273	ST
28	F6RVK	1	22-DEC-2003	16:37:00	3352193	H3L160273	ST
29	F6RT9P5	1	22-DEC-2003	16:42:00			ST
30	ZZZZZZ	1	22-DEC-2003	16:46:00			ST
31	ZZZZZZ	1	22-DEC-2003	16:51:00			ST
32	ZZZZZZ	1	22-DEC-2003	17:06:00			ST
33	CCV3	1	22-DEC-2003	17:11:00			ST
34	CCB3	1	22-DEC-2003	17:15:00			ST
35	ZZZZZZ	1	22-DEC-2003	17:20:00			ST
36	ZZZZZZ	1	22-DEC-2003	17:25:00			ST
37	CCV4	1	22-DEC-2003	17:30:00			ST
38	CCB4	1	22-DEC-2003	17:34:00			ST
39		1	22-DEC-2003	17:39:00			ST

---------- End of Report ----------

STL Knoxville ICP Chart Review Checklist
Method: 6010B/200.7 - KNOX-MT-0007, Rev 1
Page 1 of 2

Chart Name:	5122203	Instrument:	5T

A. Calibration/Instrument Run QC	NA	Yes	No	If No, why is data reportable?
1. Instrument calibrated per SOP?		✓		
2. ICV analyzed at beginning of run & within limits? (6010B = 90 - 110%R **and** <5% RSD) (200.7 = 95 - 105%R **and** <3% RSD)		✓		
3. CCV analyzed at appropriate frequency and within control limits? (6010B & SDWA 200.7 = 90 - 110%R **and** <5% RSD) (CWA 200.7 = 95 – 105%R)		✓		If no, list details:
4. ICB/CCB analyzed at appropriate frequency and within +/- RL?		✓		If no, list details:
5. ICSA/ICSAB run at required frequency? (6010B & SDWA 200.7 = beginning of run; CWA 200.7 = beginning and end of run)		✓		
6. ICSAB interferents and analytes within limits? (80 - 120%R)		✓		
7. ICSA criteria for non-interfering elements met? (RLs ≤10 ppb within +/- 2x **SOP** RL from zero) (RLs >10 ppb within +/- 1x **SOP** RL from zero) *If no, list analytes:*		✓		☐ [ics1] Results outside limits due to contamination. ☐ [ics2] Interfering elements not present in sample at level which would result in false result >±2x RL. ☐ [ics3] Concentration of affected analyte in sample is more than 10x analyte signal in ICSA.
8. Were all exposures for the QC standards used?		✓		If no, list details:
B. Client Sample and QC Sample Results	**NA**	**Yes**	**No**	
1. Were samples with concentrations > the linear range for any parameter diluted and reanalyzed?		✓		Comments:
2. Were RLs elevated due to matrix effects?	✓			Comments:
3. Internal standard (IS) response ± 30% of ICB IS? *If no, list details:*		✓		☐ [is] High IS response. Sample(s) rerun at dilution. ☐ Low IS response. Sample(s) reanalyzed.
C. Preparation/Matrix QC	**NA**	**Yes**	**No**	
1. Method blank done per prep batch and < RL? *If no, list blank ID and reason, i.e. [Autotext]:* *Blank ID* *[Autotext]* *Blank ID* *[Autotext]*	✓			☐ **[mb3] No analyte >RL in associated samples.*** ☐ **[mb4] Sample results >20x blank.** ☐ **[mb5] Insufficient sample for reanalysis.***
2. LCS done per prep batch and within QC limits? (6010B = 80 – 120%R or inhouse limits; 200.7 = 85 - 115%R) *If no, list LCS ID:*	✓			☐ **[lcs2] Insufficient sample for reanalysis.** ☐ **[lcs3] LCS recovery > QC limits and sample results are < RL.***
3. MS/MSD or MS/DUP run at required frequency?		✓		☐ [lcsd] Insufficient sample – lcs/lcsd analyzed.
4. MS/MSD %R and RPD within QC limits? *If no, list MS/MSD ID and [Autotext]:* *MS/MSD ID* *[Autotext]* *MS/MSD ID* *[Autotext]* FG RTQ MSD 3			✓	[ms1] [msd1] LCS acceptable - matrix effects. [ms2] [msd2] Native analyte > 4x spike level. [ms3] [msd3] Matrix effects and native analyte > 4x spike level.
5. PDS or PDS/PDSD analyzed at required frequency? *PDS ID* *Spike Level* *CLQC or Batch*	✓			

Such action must be taken in consultation with client.

STL Knoxville ICP Chart Review Checklist
Method: 6010B/200.7 - KNOX-MT-0007, Rev 1
Page 2 of 2

Chart Name:	5 12 22 03

C. Preparation/Matrix QC (continued)	NA	Yes	No	If No, why is data reportable?
6. Serial dilution done per prep batch?		✓		
7. Was serial dilution reanalyzed at a dilution?	✓			Comments:
8. Was the original sample analyzed on same chart as serial dilution?		✓		If no, list details:
D. Other	NA	Yes	No	
1. Are nonconformances documented appropriately?	✓			NCM #
2. Calculations checked for error? (Document manual calculation checks in comments section.)		✓		
3. All client/project specific requirements met? (Review PM checklists, Lot Summary or Client Analysis Summary, QAS.)		✓		List requirements added since log-in:
4. Were all samples labelled correctly in the autosampler table?		✓		If no, list details:

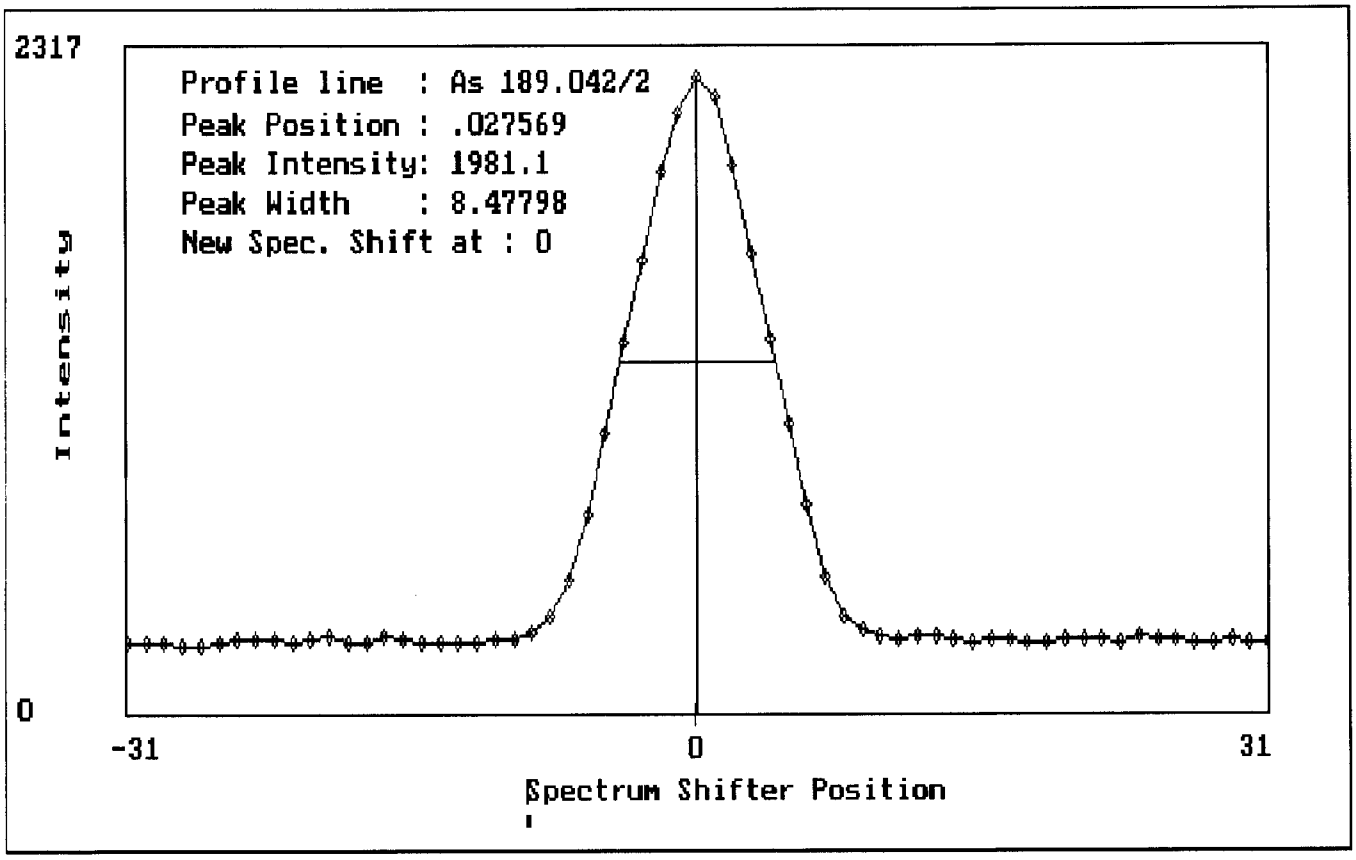
Analyst: dgs **Date:** 12-29-03

Comments:

FGRVK (Zn) 15.97 µg/L x 0.05L/0.5g = 1.60 mg/kg

Al (Zn) 20.0 µg/L x 0.05L/0.5g = 2.0 mg/kg

NOTE: Nonconformance memos are required for **bold** and *italicized* [autotext] statements: **Bold** = deficiency, *italicized* = anomoly.


2317
Profile line : As 189.042/2
Peak Position : .027569
Peak Intensity: 1981.1
Peak Width : 8.47798
New Spec. Shift at : 0
Intensity
0
-31
0
31
Spectrum Shifter Position

AutoSampler Report Table: KRYSTYNA 12/22/03 02:27:28 PM page 1

Table Name: KRYSTYNA Autosampler Type: TYPE TJA
Sample Positions: 0/192 QC Positions: 12/19 # Sets: 1
Rinse Station location is rack -1, pos. -1.

--- Racks ---

Rack #	Type	Usage	#Pos Left	Analyses/Pos
1	Aux. (L) Rack	STD/QC/BLANK	12	10
2	Sample (16mm)	Samples	0	1
3	Sample (16mm)	Samples	0	1
4	Sample (16mm)	Samples	0	1
5	Sample (16mm)	Samples	0	1

--- Sample Sets ---

Set#	Type	Prepare?	Description	Method	#Pos	Rack#	StartPos
1	Normal	No		TRA10103	192	2	1

--- Preparation Info ---

Set#	Uptake	Uptake#2	Final	Dil.Factor

No Samples Prepared.

Rack #1

Pos	Row	Col	Sample Name	Set #	#Used	Type
1	1	1	S0	-NA-	1	Standard
2	1	2	S1	-NA-	1	Standard
3	1	3	S2	-NA-	1	QC Standard
4	1	4	ICV	-NA-	1	QC Standard
5	1	5	CCV1	-NA-	1	QC Standard
6	1	6	CCV2	-NA-	1	QC Standard
7	1	7	CCV3	-NA-	1	QC Standard

(8...19 Not Used)

Rack #2

Pos	Row	Col	Sample Name	Set #	#Used	Type
1	1	1	ICB	1	-NA-	Sample
2	1	2	CRI1	1	-NA-	Sample
3	1	3	ICSA1	1	-NA-	Sample
4	1	4	ICSAB1	1	-NA-	Sample
5	1	5	CCB1	1	-NA-	Sample
6	1	6	F6DRGFZ10	1	-NA-	Sample
7	1	7	F6DRGZ10	1	-NA-	Sample
8	1	8	F6F1CFZ20	1	-NA-	Sample
9	1	9	F6F1CZ20	1	-NA-	Sample
10	1	10	F6JX2S	1	-NA-	Sample
11	1	11	F6JX2D	1	-NA-	Sample
12	1	12	F6J0AF	1	-NA-	Sample
13	2	1	F6J0A	1	-NA-	Sample
14	2	2	F6RVR	1	-NA-	Sample

AutoSampler Report Table: KRYSTYNA 12/22/03 02:27:28 PM page 2

Rack #2

Pos	Row	Col	Sample Name	Set #	#Used	Type
15	2	3	F6RT9	1	-NA-	Sample
16	2	4	CCB2	1	-NA-	Sample
17	2	5	F6RT9S	1	-NA-	Sample
18	2	6	F6RT9D	1	-NA-	Sample
19	2	7	F6RVK	1	-NA-	Sample
20	2	8	F6RT9P5	1	-NA-	Sample
21	2	9	F6VL5	1	-NA-	Sample
22	2	10	F6VMA	1	-NA-	Sample
23	2	11	F6VMD	1	-NA-	Sample
24	2	12	F6VL5Z20	1	-NA-	Sample
25	3	1	F6VMAZ100	1	-NA-	Sample
26	3	2	F6VMDZ20	1	-NA-	Sample
27	3	3	CCB3	1	-NA-	Sample
28	3	4		1	-NA-	Sample
29	3	5	(empty)	1	-NA-	-NA-
30	3	6	(empty)	1	-NA-	-NA-
31	3	7	(empty)	1	-NA-	-NA-
32	3	8	(empty)	1	-NA-	-NA-
33	3	9	(empty)	1	-NA-	-NA-
34	3	10	(empty)	1	-NA-	-NA-
35	3	11	(empty)	1	-NA-	-NA-
36	3	12	(empty)	1	-NA-	-NA-
37	4	1	(empty)	1	-NA-	-NA-
38	4	2	(empty)	1	-NA-	-NA-
39	4	3	(empty)	1	-NA-	-NA-
40	4	4	(empty)	1	-NA-	-NA-
41	4	5	(empty)	1	-NA-	-NA-
42	4	6	(empty)	1	-NA-	-NA-
43	4	7	(empty)	1	-NA-	-NA-
44	4	8	(empty)	1	-NA-	-NA-
45	4	9	(empty)	1	-NA-	-NA-
46	4	10	(empty)	1	-NA-	-NA-
47	4	11	(empty)	1	-NA-	-NA-
48	4	12	(empty)	1	-NA-	-NA-

Rack #3

Pos	Row	Col	Sample Name	Set #	#Used	Type
1	1	1	(empty)	1	-NA-	-NA-
2	1	2	(empty)	1	-NA-	-NA-
3	1	3	(empty)	1	-NA-	-NA-
4	1	4	(empty)	1	-NA-	-NA-
5	1	5	(empty)	1	-NA-	-NA-
6	1	6	(empty)	1	-NA-	-NA-
7	1	7	(empty)	1	-NA-	-NA-
8	1	8	(empty)	1	-NA-	-NA-
9	1	9	(empty)	1	-NA-	-NA-
10	1	10	(empty)	1	-NA-	-NA-
11	1	11	(empty)	1	-NA-	-NA-
12	1	12	(empty)	1	-NA-	-NA-
13	2	1	(empty)	1	-NA-	-NA-
14	2	2	(empty)	1	-NA-	-NA-

AutoSampler Report Table: KRYSTYNA 12/22/03 02:27:28 PM page 3

Rack #3

Pos	Row	Col	Sample Name	Set #	#Used	Type
15	2	3	(empty)	1	-NA-	-NA-
16	2	4	(empty)	1	-NA-	-NA-
17	2	5	(empty)	1	-NA-	-NA-
18	2	6	(empty)	1	-NA-	-NA-
19	2	7	(empty)	1	-NA-	-NA-
20	2	8	(empty)	1	-NA-	-NA-
21	2	9	(empty)	1	-NA-	-NA-
22	2	10	(empty)	1	-NA-	-NA-
23	2	11	(empty)	1	-NA-	-NA-
24	2	12	(empty)	1	-NA-	-NA-
25	3	1	(empty)	1	-NA-	-NA-
26	3	2	(empty)	1	-NA-	-NA-
27	3	3	(empty)	1	-NA-	-NA-
28	3	4	(empty)	1	-NA-	-NA-
29	3	5	(empty)	1	-NA-	-NA-
30	3	6	(empty)	1	-NA-	-NA-
31	3	7	(empty)	1	-NA-	-NA-
32	3	8	(empty)	1	-NA-	-NA-
33	3	9	(empty)	1	-NA-	-NA-
34	3	10	(empty)	1	-NA-	-NA-
35	3	11	(empty)	1	-NA-	-NA-
36	3	12	(empty)	1	-NA-	-NA-
37	4	1	(empty)	1	-NA-	-NA-
38	4	2	(empty)	1	-NA-	-NA-
39	4	3	(empty)	1	-NA-	-NA-
40	4	4	(empty)	1	-NA-	-NA-
41	4	5	(empty)	1	-NA-	-NA-
42	4	6	(empty)	1	-NA-	-NA-
43	4	7	(empty)	1	-NA-	-NA-
44	4	8	(empty)	1	-NA-	-NA-
45	4	9	(empty)	1	-NA-	-NA-
46	4	10	(empty)	1	-NA-	-NA-
47	4	11	(empty)	1	-NA-	-NA-
48	4	12	(empty)	1	-NA-	-NA-

Rack #4

Pos	Row	Col	Sample Name	Set #	#Used	Type
1	1	1	(empty)	1	-NA-	-NA-
2	1	2	(empty)	1	-NA-	-NA-
3	1	3	(empty)	1	-NA-	-NA-
4	1	4	(empty)	1	-NA-	-NA-
5	1	5	(empty)	1	-NA-	-NA-
6	1	6	(empty)	1	-NA-	-NA-
7	1	7	(empty)	1	-NA-	-NA-
8	1	8	(empty)	1	-NA-	-NA-
9	1	9	(empty)	1	-NA-	-NA-
10	1	10	(empty)	1	-NA-	-NA-
11	1	11	(empty)	1	-NA-	-NA-
12	1	12	(empty)	1	-NA-	-NA-
13	2	1	(empty)	1	-NA-	-NA-
14	2	2	(empty)	1	-NA-	-NA-

AutoSampler Report Table: KRYSTYNA 12/22/03 02:27:28 PM page 4

Rack #4

Pos	Row	Col	Sample Name	Set #	#Used	Type
15	2	3	(empty)	1	-NA-	-NA-
16	2	4	(empty)	1	-NA-	-NA-
17	2	5	(empty)	1	-NA-	-NA-
18	2	6	(empty)	1	-NA-	-NA-
19	2	7	(empty)	1	-NA-	-NA-
20	2	8	(empty)	1	-NA-	-NA-
21	2	9	(empty)	1	-NA-	-NA-
22	2	10	(empty)	1	-NA-	-NA-
23	2	11	(empty)	1	-NA-	-NA-
24	2	12	(empty)	1	-NA-	-NA-
25	3	1	(empty)	1	-NA-	-NA-
26	3	2	(empty)	1	-NA-	-NA-
27	3	3	(empty)	1	-NA-	-NA-
28	3	4	(empty)	1	-NA-	-NA-
29	3	5	(empty)	1	-NA-	-NA-
30	3	6	(empty)	1	-NA-	-NA-
31	3	7	(empty)	1	-NA-	-NA-
32	3	8	(empty)	1	-NA-	-NA-
33	3	9	(empty)	1	-NA-	-NA-
34	3	10	(empty)	1	-NA-	-NA-
35	3	11	(empty)	1	-NA-	-NA-
36	3	12	(empty)	1	-NA-	-NA-
37	4	1	(empty)	1	-NA-	-NA-
38	4	2	(empty)	1	-NA-	-NA-
39	4	3	(empty)	1	-NA-	-NA-
40	4	4	(empty)	1	-NA-	-NA-
41	4	5	(empty)	1	-NA-	-NA-
42	4	6	(empty)	1	-NA-	-NA-
43	4	7	(empty)	1	-NA-	-NA-
44	4	8	(empty)	1	-NA-	-NA-
45	4	9	(empty)	1	-NA-	-NA-
46	4	10	(empty)	1	-NA-	-NA-
47	4	11	(empty)	1	-NA-	-NA-
48	4	12	(empty)	1	-NA-	-NA-

Rack #5

Pos	Row	Col	Sample Name	Set #	#Used	Type
1	1	1	(empty)	1	-NA-	-NA-
2	1	2	(empty)	1	-NA-	-NA-
3	1	3	(empty)	1	-NA-	-NA-
4	1	4	(empty)	1	-NA-	-NA-
5	1	5	(empty)	1	-NA-	-NA-
6	1	6	(empty)	1	-NA-	-NA-
7	1	7	(empty)	1	-NA-	-NA-
8	1	8	(empty)	1	-NA-	-NA-
9	1	9	(empty)	1	-NA-	-NA-
10	1	10	(empty)	1	-NA-	-NA-
11	1	11	(empty)	1	-NA-	-NA-
12	1	12	(empty)	1	-NA-	-NA-
13	2	1	(empty)	1	-NA-	-NA-
14	2	2	(empty)	1	-NA-	-NA-

AutoSampler Report Table: KRYSTYNA 12/22/03 02:27:28 PM page 5

Rack #5

Pos	Row	Col	Sample Name	Set #	#Used	Type
15	2	3	(empty)	1	-NA-	-NA-
16	2	4	(empty)	1	-NA-	-NA-
17	2	5	(empty)	1	-NA-	-NA-
18	2	6	(empty)	1	-NA-	-NA-
19	2	7	(empty)	1	-NA-	-NA-
20	2	8	(empty)	1	-NA-	-NA-
21	2	9	(empty)	1	-NA-	-NA-
22	2	10	(empty)	1	-NA-	-NA-
23	2	11	(empty)	1	-NA-	-NA-
24	2	12	(empty)	1	-NA-	-NA-
25	3	1	(empty)	1	-NA-	-NA-
26	3	2	(empty)	1	-NA-	-NA-
27	3	3	(empty)	1	-NA-	-NA-
28	3	4	(empty)	1	-NA-	-NA-
29	3	5	(empty)	1	-NA-	-NA-
30	3	6	(empty)	1	-NA-	-NA-
31	3	7	(empty)	1	-NA-	-NA-
32	3	8	(empty)	1	-NA-	-NA-
33	3	9	(empty)	1	-NA-	-NA-
34	3	10	(empty)	1	-NA-	-NA-
35	3	11	(empty)	1	-NA-	-NA-
36	3	12	(empty)	1	-NA-	-NA-
37	4	1	(empty)	1	-NA-	-NA-
38	4	2	(empty)	1	-NA-	-NA-
39	4	3	(empty)	1	-NA-	-NA-
40	4	4	(empty)	1	-NA-	-NA-
41	4	5	(empty)	1	-NA-	-NA-
42	4	6	(empty)	1	-NA-	-NA-
43	4	7	(empty)	1	-NA-	-NA-
44	4	8	(empty)	1	-NA-	-NA-
45	4	9	(empty)	1	-NA-	-NA-
46	4	10	(empty)	1	-NA-	-NA-
47	4	11	(empty)	1	-NA-	-NA-
48	4	12	(empty)	1	-NA-	-NA-

Standardization Rpt. 12/22/03 02:41:02 PM page 1

Method: TRA10103 Standard: S0
Run Time: 12/22/03 14:36:39

Elem	Al	Sb\1	Sb\2	As	Ba	Be	Cd
Avge	.02776	-.01618	-.00029	.00155	.00078	-.02381	.01198
SDev	.00023	.00847	.00627	.00210	.00008	.00011	.00534
%RSD	.81703	52.359	2176.1	135.33	9.7782	.45429	44.551
#1	.02802	-.01942	-.00666	.00004	.00086	-.02393	.01275
#2	.02758	-.02256	.00587	.00067	.00071	-.02376	.00629
#3	.02769	-.00657	-.00007	.00396	.00078	-.02373	.01688

Elem	Ca	Cr	Co	Cu	Fe	Pb/1	Pb/2
Avge	-.00185	.00774	-.00071	-.00043	-.00263	.05951	-.00845
SDev	.00001	.00109	.00032	.00007	.00046	.01200	.00909
%RSD	.79802	14.047	45.395	16.544	17.625	20.167	107.65
#1	-.00186	.00888	-.00043	-.00043	-.00258	.05682	.00186
#2	-.00184	.00672	-.00106	-.00035	-.00311	.07263	-.01188
#3	-.00184	.00763	-.00064	-.00049	-.00219	.04909	-.01533

Elem	Pb	Mg	Mn	K_	Ni	Se/1	Se/2
Avge	.00023	.00019	.00005	.47093	.00092	-.01033	.01326
SDev	.00066	.00075	.00004	.00470	.00033	.00225	.00198
%RSD	279.41	397.32	86.609	.99774	36.056	21.757	14.944
#1	-.00007	.00007	.00007	.47621	.00129	-.00888	.01548
#2	-.00021	-.00050	.00000	.46720	.00064	-.00919	.01266
#3	.00099	.00099	.00007	.46939	.00085	-.01292	.01165

Elem	Ag	Na	Tl	V_	Zn	B_	Mo
Avge	-.00026	.00075	-.02231	.00014	.00038	.00528	-.00059
SDev	.00057	.00122	.00177	.00021	.00004	.00025	.00046
%RSD	219.39	162.70	7.9459	149.35	10.363	4.6964	77.082
#1	-.00036	-.00064	-.02200	.00014	.00036	.00502	-.00079
#2	.00035	.00163	-.02072	-.00007	.00035	.00530	-.00092
#3	-.00078	.00127	-.02423	.00035	.00042	.00551	-.00007

Elem	Li	Sr	Ti	Sn	Si
Avge	.00125	.00000	-.00064	-.00031	.01770
SDev	.00005	.00000	.00001	.00066	.00008
%RSD	3.6751	.00000	.79802	212.55	.46800
#1	.00129	.00000	-.00064	-.00107	.01777
#2	.00120	.00000	-.00064	.00007	.01761
#3	.00127	.00000	-.00064	.00007	.01773

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	14085	--	--	--	--	--	--
SDev	111.9007	--	--	--	--	--	--
%RSD	.7944749	--	--	--	--	--	--
#1	13956	--	--	--	--	--	--
#2	14140	--	--	--	--	--	--
#3	14159	--	--	--	--	--	--

Standardization Rpt. 12/22/03 02:45:29 PM page 1

Method: TRA10103 Standard: S1
Run Time: 12/22/03 14:41:06

Elem	Al	Sb\1	Sb\2	As	Ba	Be	Cd
Avge	3.6980	4.9460	3.7665	2.7639	5.7749	10.982	40.272
SDev	.0330	.0252	.0273	.0285	.0501	.104	.412
%RSD	.89328	.50946	.72409	1.0306	.86750	.94566	1.0240
#1	3.6599	4.9190	3.7430	2.7325	5.7174	10.863	39.799
#2	3.7189	4.9503	3.7964	2.7881	5.8093	11.051	40.559
#3	3.7151	4.9688	3.7601	2.7711	5.7980	11.033	40.457

Elem	Ca	Cr	Co	Cu	Fe	Pb/1	Pb/2
Avge	11.039	18.425	3.4844	3.1767	7.7627	6.3570	9.7849
SDev	.111	.187	.0332	.0262	.0729	.0561	.0744
%RSD	1.0073	1.0159	.95290	.82634	.93931	.88321	.75986
#1	10.911	18.210	3.4461	3.1466	7.6786	6.3283	9.7021
#2	11.108	18.551	3.5045	3.1953	7.8084	6.4217	9.8064
#3	11.099	18.513	3.5025	3.1881	7.8010	6.3210	9.8461

Elem	Pb	Mg	Mn	K_	Ni	Se/1	Se/2
Avge	.15779	37.001	.99614	32.591	2.5038	1.4659	1.4609
SDev	.00266	.379	.00949	.194	.0265	.0102	.0111
%RSD	1.6845	1.0246	.95238	.59612	1.0583	.69770	.76314
#1	.15536	36.564	.98528	32.367	2.4734	1.4550	1.4480
#2	.16063	37.236	1.0028	32.716	2.5222	1.4753	1.4679
#3	.15738	37.203	1.0004	32.689	2.5157	1.4673	1.4667

Elem	Ag	Na	Tl	V_	Zn	B_	Mo
Avge	5.4462	2.7279	3.9724	1.4833	3.7319	2.2427	2.2881
SDev	.0496	.0234	.0639	.0140	.0344	.0231	.0237
%RSD	.90996	.85712	1.6075	.94478	.92257	1.0307	1.0378
#1	5.3892	2.7010	3.8988	1.4671	3.6922	2.2160	2.2607
#2	5.4786	2.7438	4.0055	1.4918	3.7536	2.2572	2.3034
#3	5.4709	2.7389	4.0129	1.4909	3.7499	2.2548	2.3002

Elem	Li	Sr	Ti	Sn	Si
Avge	10.691	4.6773	2.4634	1.3447	1.0952
SDev	.078	.0398	.0226	.0145	.0103
%RSD	.72699	.85059	.91765	1.0755	.94139
#1	10.601	4.6317	2.4374	1.3281	1.0833
#2	10.737	4.7050	2.4789	1.3550	1.1014
#3	10.735	4.6951	2.4738	1.3509	1.1009

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	13548	--	--	--	--	--	--
SDev	68.02737	--	--	--	--	--	--
%RSD	.5021085	--	--	--	--	--	--
#1	13627	--	--	--	--	--	--
#2	13503	--	--	--	--	--	--
#3	13515	--	--	--	--	--	--

Standardization Report 12/22/03 02:45:30 PM page 1

Method: TRA10103 Slope = Conc(SIR)/IR

Element	Wavelen	High std	Low std	Slope	Y-intercept	Date Standardized
Pb	220.353	NONE	NONE	.000000	.000000	*NOT STANDARDIZED
Se	196.026	NONE	NONE	.000000	.000000	*NOT STANDARDIZED
Sb	206.838	NONE	NONE	.000000	.000000	*NOT STANDARDIZED
Al	308.215	S1	S0	13.6260	-.378278	12/22/03 02:41:06
Sb\1	206.831	S1	S0	.202409	.003275	12/22/03 02:41:06
Sb\2	206.832	S1	S0	.265957	.000077	12/22/03 02:41:06
As	189.042	S1	S0	.355464	-.000552	12/22/03 02:41:06
Ba	493.409	S1	S0	.692747	-.000541	12/22/03 02:41:06
Be	313.042	S1	S0	.363547	.008656	12/22/03 02:41:06
Cd	226.502	S1	S0	.024988	-.000299	12/22/03 02:41:06
Ca	317.933	S1	S0	9.05610	.016718	12/22/03 02:41:06
Cr	267.716	S1	S0	.217288	-.001683	12/22/03 02:41:06
Co	228.616	S1	S0	1.15003	.000815	12/22/03 02:41:06
Cu	324.753	S1	S0	1.25901	.000536	12/22/03 02:41:06
Fe	271.441	S1	S0	6.48479	.017035	12/22/03 02:41:06
Pb/1	220.351	S1	S0	.162134	-.009649	12/22/03 02:41:06
Pb/2	220.352	S1	S0	.101283	.000856	12/22/03 02:41:06
Pb	283.306	S1	S0	6.34706	-.001491	12/22/03 02:41:06
Mg	279.078	S1	S0	2.70264	-.000509	12/22/03 02:41:06
Mn	257.610	S1	S0	4.01568	-.000190	12/22/03 02:41:06
K_	766.491	S1	S0	1.36370	-.041316	12/22/03 02:41:06
Ni	231.604	S1	S0	1.59818	-.001478	12/22/03 02:41:06
Se/1	196.021	S1	S0	.676492	.006991	12/22/03 02:41:06
Se/2	196.022	S1	S0	.685441	-.009091	12/22/03 02:41:06
Ag	328.068	S1	S0	.367375	.000096	12/22/03 02:41:06
Na	330.232	S1	S0	1.33540	-.000787	12/22/03 02:41:06
Tl	190.864	S1	S0	.503778	.011242	12/22/03 02:41:06
V_	292.402	S1	S0	2.69236	-.000382	12/22/03 02:41:06
Zn	213.856	S1	S0	1.07945	-.000409	12/22/03 02:41:06
B_	249.678	S1	S0	1.78333	-.009409	12/22/03 02:41:06
Mo	202.030	S1	S0	1.74820	.001036	12/22/03 02:41:06
Li	670.784	S1	S0	.374191	-.000469	12/22/03 02:41:06
Sr	421.552	S1	S0	.856399	.000000	12/22/03 02:41:06
Ti	334.941	S1	S0	1.62401	.001038	12/22/03 02:41:06
Sn	189.989	S1	S0	2.97448	.000926	12/22/03 02:41:06
Si	288.158	S1	S0	3.72336	-.065913	12/22/03 02:41:06

Analysis Report QC Standard 12/22/03 02:49:57 PM page 1

Method: TRA10103 Sample Name: S2 Operator: KGS
Run Time: 12/22/03 14:45:34
Comment:
Mode: CONC Corr. Factor: 1

Elem	Pb	Se	Sb	Al	Sb\1	Sb\2	As
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.25719	.25486	.24781	12.483	.24818	.24707	.25153
SDev	.00051	.00091	.00072	.027	.00076	.00315	.00076
%RSD	.19760	.35621	.29195	.21278	.30652	1.2756	.30263
#1	.25714	.25404	.24698	12.454	.24845	.24403	.25122
#2	.25671	.25584	.24832	12.490	.24732	.25032	.25240
#3	.25772	.25471	.24813	12.506	.24876	.24687	.25097
Errors	QC Pass	QC Pass	QC Pass	QC Pass	NOCHECK	NOCHECK	QC Pass
Value	.25000	.25000	.25000	12.500			.25000
Range	10.500	10.500	10.500	10.500			10.500

Elem	Ba	Be	Cd	Ca	Cr	Co	Cu
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.0102	1.0283	.25856	25.563	1.0245	1.0392	1.0015
SDev	.0020	.0035	.00093	.104	.0032	.0039	.0023
%RSD	.19375	.34348	.35871	.40736	.31237	.37977	.23113
#1	1.0080	1.0242	.25761	25.445	1.0210	1.0347	.99918
#2	1.0112	1.0306	.25947	25.641	1.0272	1.0416	1.0016
#3	1.0115	1.0300	.25858	25.604	1.0254	1.0414	1.0038
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1.0000	1.0000	.25000	25.000	1.0000	1.0000	1.0000
Range	10.500	10.500	10.500	10.500	10.500	10.500	10.500

Elem	Fe	Pb/1	Pb/2	Mg	Mn	K_	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	12.855	.25650	.25753	24.725	1.0332	25.120	1.0414
SDev	.049	.00159	.00141	.103	.0036	.073	.0048
%RSD	.38196	.61970	.54916	.41638	.34426	.28959	.46146
#1	12.798	.25799	.25671	24.606	1.0291	25.041	1.0359
#2	12.883	.25668	.25672	24.791	1.0356	25.135	1.0435
#3	12.883	.25482	.25917	24.777	1.0349	25.184	1.0448
Errors	QC Pass	NOCHECK	NOCHECK	QC Pass	QC Pass	QC Pass	QC Pass
Value	12.500			25.000	1.0000	25.000	1.0000
Range	10.500			10.500	10.500	10.500	10.500

Elem	Se/1	Se/2	Ag	Na	Tl	V_	Zn
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.25677	.25391	.48982	24.299	.50938	1.0251	1.0595
SDev	.00152	.00203	.00144	.132	.00277	.0038	.0049
%RSD	.59154	.79857	.29468	.54148	.54443	.36914	.45792
#1	.25852	.25181	.48819	24.202	.50736	1.0207	1.0539
#2	.25581	.25585	.49038	24.449	.51254	1.0272	1.0625
#3	.25597	.25408	.49091	24.246	.50824	1.0272	1.0622
Errors	NOCHECK	NOCHECK	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass

Value			.50000	25.000	.50000	1.0000	1.0000
Range			10.500	10.500	10.500	10.500	10.500
Elem	B_	Mo	Li	Sr	Ti	Sn	Si
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.97752	1.0163	1.0124	1.0298	1.0010	1.0088	1.0370
SDev	.00351	.0028	.0034	.0020	.0031	.0015	.0033
%RSD	.35919	.27418	.33466	.19659	.31435	.15215	.31408
#1	.97410	1.0133	1.0089	1.0275	.99742	1.0070	1.0334
#2	.97734	1.0188	1.0128	1.0303	1.0031	1.0099	1.0397
#3	.98112	1.0168	1.0156	1.0315	1.0026	1.0095	1.0378
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Range	10.500	10.500	10.500	10.500	10.500	10.500	10.500
IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	13918	--	--	--	--	--	--
SDev	30.49602	--	--	--	--	--	--
%RSD	.2191105	--	--	--	--	--	--
#1	13951	--	--	--	--	--	--
#2	13891	--	--	--	--	--	--
#3	13912	--	--	--	--	--	--

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Method: TRA10103 Sample Name: ICV Operator: KGS
Run Time: 12/22/03 14:50:02
Comment:
Mode: CONC Corr. Factor: 1

Elem	Pb	Se	Sb	Al	Sb\1	Sb\2	As
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.25628	.25284	.24770	12.481	.24766	.24778	.25192
SDev	.00221	.00271	.00073	.022	.00125	.00080	.00186
%RSD	.86141	1.0711	.29530	.17660	.50292	.32356	.73776
#1	.25509	.25203	.24854	12.469	.24898	.24767	.24995
#2	.25882	.25063	.24721	12.506	.24650	.24863	.25216
#3	.25492	.25586	.24735	12.467	.24750	.24704	.25364
Errors	QC Pass	QC Pass	QC Pass	QC Pass	NOCHECK	NOCHECK	QC Pass
Value	.25000	.25000	.25000	12.500			.25000
Range	10.500	10.500	10.500	10.500			10.500

Elem	Ba	Be	Cd	Ca	Cr	Co	Cu
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.0099	1.0292	.25871	25.584	1.0249	1.0407	.99878
SDev	.0024	.0043	.00127	.129	.0052	.0050	.00245
%RSD	.23869	.41516	.49024	.50525	.50798	.47946	.24548
#1	1.0080	1.0263	.25792	25.498	1.0217	1.0364	.99745
#2	1.0126	1.0341	.26017	25.732	1.0309	1.0462	1.0016
#3	1.0090	1.0272	.25803	25.520	1.0221	1.0396	.99728
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1.0000	1.0000	.25000	25.000	1.0000	1.0000	1.0000
Range	10.500	10.500	10.500	10.500	10.500	10.500	10.500

Elem	Fe	Pb/1	Pb/2	Mg	Mn	K_	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	12.871	.25574	.25654	24.774	1.0339	25.145	1.0442
SDev	.053	.00417	.00127	.118	.0047	.064	.0052
%RSD	.41116	1.6321	.49646	.47632	.45142	.25483	.50143
#1	12.830	.25295	.25615	24.694	1.0310	25.093	1.0410
#2	12.931	.26054	.25797	24.909	1.0393	25.216	1.0503
#3	12.852	.25373	.25551	24.718	1.0315	25.124	1.0415
Errors	QC Pass	NOCHECK	NOCHECK	QC Pass	QC Pass	QC Pass	QC Pass
Value	12.500			25.000	1.0000	25.000	1.0000
Range	10.500			10.500	10.500	10.500	10.500

Elem	Se/1	Se/2	Ag	Na	Tl	V_	Zn
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.25258	.25297	.48980	24.354	.50611	1.0261	1.0609
SDev	.00325	.00245	.00249	.129	.00609	.0045	.0046
%RSD	1.2875	.96828	.50838	.53138	1.2036	.44238	.43546
#1	.25196	.25206	.48796	24.266	.50146	1.0234	1.0582
#2	.24968	.25110	.49264	24.503	.51301	1.0313	1.0663
#3	.25609	.25574	.48881	24.295	.50387	1.0236	1.0583
Errors	NOCHECK	NOCHECK	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass

Value			.50000	25.000	.50000	1.0000	1.0000
Range			10.500	10.500	10.500	10.500	10.500
Elem	B_	Mo	Li	Sr	Ti	Sn	Si
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.97623	1.0147	1.0107	1.0292	1.0014	1.0070	1.0348
SDev	.00344	.0051	.0029	.0030	.0036	.0029	.0019
%RSD	.35252	.50615	.28782	.29201	.36250	.29180	.18017
#1	.97266	1.0094	1.0095	1.0274	.99891	1.0053	1.0343
#2	.97952	1.0196	1.0140	1.0326	1.0056	1.0104	1.0368
#3	.97652	1.0150	1.0085	1.0275	.99976	1.0053	1.0332
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Range	10.500	10.500	10.500	10.500	10.500	10.500	10.500
IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	13872	--	--	--	--	--	--
SDev	73.55584	--	--	--	--	--	--
%RSD	.5302343	--	--	--	--	--	--
#1	13872	--	--	--	--	--	--
#2	13799	--	--	--	--	--	--
#3	13946	--	--	--	--	--	--

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Method: TRA10103 Sample Name: ICB Operator: KGS
Run Time: 12/22/03 14:54:29
Comment:
Mode: CONC Corr. Factor: 1

Elem	Pb	Se	Sb	Al	Sb\1	Sb\2	As
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00009	-.00144	-.00011	.00681	-.00021	.00008	-.00145
SDev	.00067	.00130	.00126	.00665	.00202	.00132	.00051
%RSD	770.65	90.215	1125.5	97.720	968.50	1631.6	34.787
#1	.00063	-.00249	.00129	.01390	.00212	-.00037	-.00151
#2	-.00070	.00001	-.00047	.00071	-.00149	.00157	-.00193
#3	-.00020	-.00183	-.00116	.00582	-.00126	-.00095	-.00092
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass
High	.00305	.00505	.06005	.20005			.01005
Low	-.00305	-.00505	-.06005	-.20005			-.01005

Elem	Ba	Be	Cd	Ca	Cr	Co	Cu
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00005	.00017	.00003	.00054	-.00040	.00027	-.00006
SDev	.00014	.00007	.00019	.00100	.00060	.00074	.00022
%RSD	252.00	43.459	634.55	185.81	152.57	271.72	355.54
#1	.00016	.00011	.00025	.00170	.00026	.00098	.00017
#2	-.00010	.00025	-.00008	.00001	-.00093	-.00049	-.00027
#3	.00010	.00015	-.00008	-.00009	-.00052	.00032	-.00009
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.20005	.00505	.00505	5.0000	.01005	.05005	.02505
Low	-.20005	-.00505	-.00505	-5.0000	-.01005	-.05005	-.02505

Elem	Fe	Pb/1	Pb/2	Mg	Mn	K_	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00198	.00109	-.00067	.00164	.00000	.00040	-.00071
SDev	.01829	.00137	.00121	.00379	.00017	.00036	.00105
%RSD	925.63	126.14	178.96	231.69	10220.	88.611	147.28
#1	.02257	.00054	.00068	.00592	.00010	.00003	.00048
#2	-.01237	.00008	-.00108	-.00128	-.00019	.00075	-.00114
#3	-.00427	.00265	-.00162	.00026	.00010	.00043	-.00148
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass
High	.10005			5.0000	.01505	5.0000	.04005
Low	-.10005			-5.0000	-.01505	-5.0000	-.04005

Elem	Se/1	Se/2	Ag	Na	Tl	V_	Zn
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00105	-.00163	.00014	-.36514	.00192	-.00025	.00008
SDev	.00217	.00135	.00078	.05308	.00124	.00040	.00009
%RSD	207.10	82.772	542.71	14.536	64.605	163.55	105.67
#1	-.00355	-.00197	.00073	-.31946	.00252	.00021	.00013
#2	.00032	-.00014	-.00074	-.42336	.00274	-.00057	-.00002
#3	.00009	-.00278	.00044	-.35260	.00049	-.00038	.00014
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass

High			.01005	5.0000	.01005	.05005	.02005
Low			-.01005	-5.0000	-.01005	-.05005	-.02005

Elem	B_	Mo	Li	Sr	Ti	Sn	Si
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00143	.00246	.00021	.00014	.00003	.00143	-.00015
SDev	.00057	.00154	.00009	.00010	.00028	.00179	.00495
%RSD	39.780	62.544	44.036	66.207	848.58	125.48	3331.7
#1	.00178	.00381	.00031	.00025	.00033	.00350	.00553
#2	.00172	.00277	.00014	.00006	-.00023	.00050	-.00357
#3	.00077	.00079	.00017	.00012	-.00001	.00029	-.00241
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.05005	.04005	.00505	.00505	.00505	.10005	.10005
Low	-.05005	-.04005	-.00505	-.00505	-.00505	-.10005	-.10005
IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	13990	--	--	--	--	--	--
SDev	117.1701	--	--	--	--	--	--
%RSD	.8375254	--	--	--	--	--	--
#1	13863	--	--	--	--	--	--
#2	14094	--	--	--	--	--	--
#3	14013	--	--	--	--	--	--

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Method: TRA10103 Sample Name: CRI1 Operator: KGS
Run Time: 12/22/03 14:58:56
Comment:
Mode: CONC Corr. Factor: 1

Elem	Pb	Se	Sb	Al	Sb\1	Sb\2	As
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00592	.01005	.01977	.40313	.01988	.01957	.01892
SDev	.00050	.00108	.00058	.00618	.00139	.00149	.00046
%RSD	8.4951	10.758	2.9551	1.5334	6.9973	7.5946	2.4023
#1	.00645	.01027	.02042	.40810	.02103	.01921	.01861
#2	.00546	.00888	.01961	.40509	.02027	.01829	.01944
#3	.00585	.01101	.01929	.39621	.01833	.02120	.01871
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass
High	.00902	.01504	.03008	.60160			.03008
Low	.00298	.00496	.00992	.19840			.00992

Elem	Ba	Be	Cd	Ca	Cr	Co	Cu
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.01996	.01008	.00385	9.8888	.00910	.10204	.04672
SDev	.00014	.00002	.00006	.0708	.00009	.00117	.00051
%RSD	.71492	.20419	1.5554	.71627	.99303	1.1475	1.0926
#1	.02010	.01009	.00392	9.9340	.00921	.10285	.04694
#2	.01995	.01006	.00382	9.9253	.00907	.10258	.04709
#3	.01982	.01010	.00382	9.8072	.00903	.10070	.04614
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.03002	.01504	.00602	15.040	.01504	.15040	.07520
Low	.00992	.00496	.00198	4.9600	.00496	.04960	.02480

Elem	Fe	Pb/1	Pb/2	Mg	Mn	K_	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.20368	.00445	.00665	9.7361	.03040	8.1474	.08073
SDev	.00693	.00081	.00086	.0621	.00028	.0668	.00058
%RSD	3.4016	18.182	12.978	.63756	.92912	.81957	.71616
#1	.20513	.00407	.00764	9.7751	.03045	8.1922	.08009
#2	.20977	.00391	.00623	9.7688	.03066	8.1794	.08091
#3	.19614	.00539	.00608	9.6646	.03010	8.0707	.08120
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass
High	.30080			15.040	.04512	15.040	.12032
Low	.09920			4.9600	.01488	4.9600	.03968

Elem	Se/1	Se/2	Ag	Na	Tl	V_	Zn
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.01187	.00915	.00967	9.6740	.02205	.10096	.04378
SDev	.00378	.00154	.00046	.1635	.00078	.00087	.00022
%RSD	31.807	16.845	4.7839	1.6900	3.5477	.86442	.50171
#1	.01571	.00756	.01014	9.7189	.02208	.10150	.04389
#2	.00816	.00924	.00966	9.8103	.02126	.10143	.04392
#3	.01176	.01064	.00921	9.4927	.02282	.09996	.04353
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass

High			.01504	15.040	.03008	.15040	.06016
Low			.00496	4.9600	.00992	.04960	.01984

Elem	B_	Mo	Li	Sr	Ti	Sn	Si
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.40125	.08028	.10403	.10437	.10331	.20211	1.0708
SDev	.00376	.00046	.00070	.00078	.00071	.00321	.0100
%RSD	.93572	.57672	.67497	.74596	.68265	1.5878	.93216
#1	.40305	.07981	.10450	.10492	.10379	.20412	1.0768
#2	.40377	.08074	.10436	.10471	.10364	.20381	1.0763
#3	.39694	.08028	.10322	.10348	.10250	.19841	1.0593
Errors	NOCHECK	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High		.12032					
Low		.03968					

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	13958	--	--	--	--	--	--
SDev	84.22475	--	--	--	--	--	--
%RSD	.6034367	--	--	--	--	--	--
#1	13892	--	--	--	--	--	--
#2	13928	--	--	--	--	--	--
#3	14053	--	--	--	--	--	--

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Method: TRA10103 Sample Name: ICSA1 Operator: KGS
Run Time: 12/22/03 15:03:22
Comment:
Mode: CONC Corr. Factor: 1

Elem	Pb	Se	Sb	Al	Sb\1	Sb\2	As
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00062	.00106	.00421	474.06	.00357	.00550	.00186
SDev	.00170	.00208	.00324	1.16	.00439	.00146	.00072
%RSD	272.16	196.46	77.002	.24575	123.17	26.500	38.891
#1	.00060	-.00133	.00794	475.37	.00855	.00673	.00246
#2	-.00106	.00204	.00256	473.67	.00190	.00389	.00207
#3	.00233	.00247	.00212	473.14	.00025	.00587	.00106
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass
High	.00600	.01000	.06000	602.45			.02000
Low	-.00600	-.01000	-.06000	397.55			-.02000

Elem	Ba	Be	Cd	Ca	Cr	Co	Cu
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00195	-.00080	-.00292	485.09	-.00072	.00048	.00647
SDev	.00006	.00001	.00021	1.49	.00028	.00019	.00049
%RSD	2.9062	1.5664	7.1720	.30799	38.285	38.892	7.6441
#1	.00189	-.00081	-.00269	485.91	-.00049	.00054	.00595
#2	.00199	-.00079	-.00299	486.00	-.00064	.00064	.00694
#3	.00198	-.00080	-.00309	483.37	-.00103	.00027	.00651
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.05000	.01000	.01000	602.45	.02000	.05000	.02500
Low	-.05000	-.01000	-.01000	397.55	-.02000	-.05000	-.02500

Elem	Fe	Pb/1	Pb/2	Mg	Mn	K_	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	198.37	.03405	-.01606	542.01	-.00083	.58052	.00026
SDev	.42	.00250	.00357	1.19	.00000	.00550	.00020
%RSD	.21195	7.3457	22.234	.22006	.28504	.94675	77.303
#1	198.74	.03601	-.01707	542.79	-.00083	.58265	.00030
#2	198.47	.03490	-.01902	542.61	-.00083	.57428	.00043
#3	197.91	.03123	-.01209	540.64	-.00083	.58463	.00004
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	LC Pass	NOCHECK	LC Pass
High	240.98			602.45	.01500		.04000
Low	159.02			397.55	-.01500		-.04000

Elem	Se/1	Se/2	Ag	Na	Tl	V_	Zn
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00029	.00174	-.00067	-.37627	-.00292	.00375	.00469
SDev	.00566	.00030	.00065	.02316	.00096	.00043	.00017
%RSD	1946.4	17.532	97.018	6.1542	32.963	11.463	3.6290
#1	-.00681	.00140	-.00052	-.34984	-.00393	.00326	.00477
#2	.00250	.00181	-.00011	-.39301	-.00281	.00389	.00481
#3	.00343	.00200	-.00139	-.38594	-.00201	.00408	.00450
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	NOCHECK	LC Pass

High			.02000	5000.0	.02000		.02000
Low			-.02000	-5000.0	-.02000		-.02000

Elem	B_	Mo	Li	Sr	Ti	Sn	Si
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00069	-.00123	.00035	-.01908	-.00206	.00392	-.02760
SDev	.00081	.00115	.00008	.00006	.00013	.00015	.00099
%RSD	117.37	93.570	22.046	.30040	6.5228	3.7387	3.5750
#1	.00110	.00006	.00042	-.01910	-.00220	.00401	-.02874
#2	.00122	-.00160	.00036	-.01913	-.00193	.00400	-.02692
#3	-.00024	-.00214	.00027	-.01902	-.00204	.00375	-.02716
Errors	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High		.04000	.05000	.05000	.05000	.10000	.50000
Low		-.04000	-.05000	-.05000	-.05000	-.10000	-.50000

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	12597	--	--	--	--	--	--
SDev	46.67757	--	--	--	--	--	--
%RSD	.3705391	--	--	--	--	--	--
#1	12555	--	--	--	--	--	--
#2	12589	--	--	--	--	--	--
#3	12647	--	--	--	--	--	--

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Method: TRA10103 Sample Name: ICSAB1 Operator: KGS
Run Time: 12/22/03 15:07:48
Comment:
Mode: CONC Corr. Factor: 1

Elem	Pb	Se	Sb	Al	Sb\1	Sb\2	As
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.04734	.05210	.62157	471.50	.62395	.61679	.10524
SDev	.00166	.00211	.00160	.28	.00247	.00425	.00072
%RSD	3.5096	4.0458	.25735	.05888	.39572	.68883	.68261
#1	.04719	.05309	.62335	471.65	.62624	.61758	.10594
#2	.04575	.04968	.62109	471.18	.62133	.62059	.10526
#3	.04907	.05354	.62026	471.66	.62429	.61220	.10451
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass
High	.06024	.06024	.72294	602.45			.12049
Low	.03976	.03976	.47706	397.55			.07951

Elem	Ba	Be	Cd	Ca	Cr	Co	Cu
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.53058	.51285	.96633	481.08	.49385	.49207	.54761
SDev	.00074	.00034	.00090	.59	.00029	.00061	.00094
%RSD	.13878	.06547	.09338	.12343	.05832	.12480	.17223
#1	.53104	.51247	.96532	480.41	.49353	.49140	.54868
#2	.52973	.51298	.96708	481.54	.49409	.49260	.54689
#3	.53097	.51310	.96658	481.28	.49392	.49222	.54726
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.60245	.60245	1.2049	602.45	.60245	.60245	.60245
Low	.39755	.39755	.79510	397.55	.39755	.39755	.39755

Elem	Fe	Pb/1	Pb/2	Mg	Mn	K_	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	197.20	.07829	.03189	537.78	.50778	9.5929	.96951
SDev	.16	.00327	.00117	.41	.00048	.0106	.00164
%RSD	.08367	4.1768	3.6624	.07582	.09474	.11087	.16900
#1	197.03	.07947	.03108	537.31	.50735	9.5974	.96770
#2	197.22	.07459	.03136	537.98	.50769	9.5807	.97088
#3	197.35	.08080	.03322	538.05	.50830	9.6006	.96996
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass
High	240.98			602.45	.60245	12.049	1.2049
Low	159.02			397.55	.39755	7.9510	.79510

Elem	Se/1	Se/2	Ag	Na	Tl	V_	Zn
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.04363	.05633	.21388	11.231	.09884	.51526	1.0623
SDev	.00589	.00047	.00015	.053	.00092	.00033	.0006
%RSD	13.494	.84055	.07257	.47566	.92661	.06331	.05232
#1	.04720	.05602	.21388	11.209	.09903	.51525	1.0629
#2	.03683	.05610	.21372	11.292	.09785	.51558	1.0618
#3	.04686	.05688	.21403	11.193	.09965	.51493	1.0622
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass

High			.24098	12.049	.12049	.60245	1.2049
Low			.15902	7.9510	.07951	.39755	.79510

Elem	B_	Mo	Li	Sr	Ti	Sn	Si
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.0257	.99758	1.1554	1.0487	1.0127	.97963	.98267
SDev	.0011	.00227	.0028	.0012	.0005	.00234	.00145
%RSD	.10557	.22720	.24170	.11870	.05154	.23899	.14750
#1	1.0269	.99513	1.1581	1.0495	1.0131	.97782	.98121
#2	1.0254	.99799	1.1525	1.0472	1.0121	.97879	.98269
#3	1.0248	.99961	1.1556	1.0493	1.0130	.98227	.98411
Errors	NOCHECK	LC Pass	NOCHECK	NOCHECK	NOCHECK	NOCHECK	NOCHECK
High		1.2049					
Low		.79510					

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	12678	--	--	--	--	--	--
SDev	22.72164	--	--	--	--	--	--
%RSD	.1792281	--	--	--	--	--	--
#1	12651	--	--	--	--	--	--
#2	12690	--	--	--	--	--	--
#3	12691	--	--	--	--	--	--

Analysis Report QC Standard 12/22/03 03:16:37 PM page 1

Method: TRA10103 Sample Name: CCV1 Operator: KGS
Run Time: 12/22/03 15:12:15
Comment:
Mode: CONC Corr. Factor: 1

Elem	Pb	Se	Sb	Al	Sb\1	Sb\2	As
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.50637	.49935	.49739	24.722	.49823	.49571	.50114
SDev	.00314	.00497	.00352	.118	.00487	.00085	.00399
%RSD	.61903	.99541	.70854	.47880	.97828	.17052	.79572
#1	.50962	.50506	.49935	24.855	.50083	.49637	.50526
#2	.50614	.49600	.49951	24.685	.50126	.49602	.50084
#3	.50336	.49699	.49333	24.627	.49261	.49476	.49731
Errors	QC Pass	QC Pass	QC Pass	QC Pass	NOCHECK	NOCHECK	QC Pass
Value	.50000	.50000	.50000	25.000			.50000
Range	10.500	10.500	10.500	10.500			10.500

Elem	Ba	Be	Cd	Ca	Cr	Co	Cu
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.0090	2.0467	.50830	50.111	2.0143	2.0256	1.9821
SDev	.0091	.0096	.00292	.254	.0095	.0096	.0079
%RSD	.45421	.46991	.57511	.50735	.47263	.47624	.40039
#1	2.0193	2.0569	.51141	50.375	2.0247	2.0356	1.9911
#2	2.0059	2.0455	.50787	50.091	2.0122	2.0249	1.9791
#3	2.0019	2.0378	.50561	49.868	2.0060	2.0163	1.9760
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	2.0000	2.0000	.50000	50.000	2.0000	2.0000	2.0000
Range	10.500	10.500	10.500	10.500	10.500	10.500	10.500

Elem	Fe	Pb/1	Pb/2	Mg	Mn	K_	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	25.166	.50664	.50624	49.089	2.0237	52.103	2.0338
SDev	.121	.00323	.00367	.239	.0099	.264	.0096
%RSD	.47935	.63699	.72458	.48659	.48998	.50599	.47123
#1	25.293	.51022	.50932	49.345	2.0342	52.402	2.0424
#2	25.155	.50396	.50722	49.049	2.0222	52.004	2.0355
#3	25.052	.50573	.50218	48.873	2.0146	51.903	2.0235
Errors	QC Pass	NOCHECK	NOCHECK	QC Pass	QC Pass	QC Pass	QC Pass
Value	25.000			50.000	2.0000	50.000	2.0000
Range	10.500			10.500	10.500	10.500	10.500

Elem	Se/1	Se/2	Ag	Na	Tl	V_	Zn
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.49967	.49919	.98790	48.945	1.0083	2.0138	2.0670
SDev	.00812	.00411	.00431	.030	.0056	.0097	.0084
%RSD	1.6248	.82274	.43652	.06086	.55253	.48383	.40742
#1	.50779	.50369	.99248	48.968	1.0131	2.0244	2.0757
#2	.49156	.49821	.98732	48.957	1.0096	2.0118	2.0665
#3	.49967	.49566	.98391	48.911	1.0022	2.0052	2.0589
Errors	NOCHECK	NOCHECK	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass

Value			1.0000	50.000	1.0000	2.0000	2.0000
Range			10.500	10.500	10.500	10.500	10.500
Elem	B_	Mo	Li	Sr	Ti	Sn	Si
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.9888	2.0239	2.0317	2.0272	2.0111	2.0105	1.9878
SDev	.0054	.0032	.0067	.0097	.0094	.0110	.0064
%RSD	.27122	.15676	.32969	.47939	.46622	.54676	.32355
#1	1.9947	2.0271	2.0391	2.0382	2.0211	2.0213	1.9929
#2	1.9842	2.0237	2.0300	2.0238	2.0097	2.0110	1.9900
#3	1.9873	2.0208	2.0260	2.0197	2.0025	1.9993	1.9806
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000
Range	10.500	10.500	10.500	10.500	10.500	10.500	10.500
IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	13748	--	--	--	--	--	--
SDev	67.09621	--	--	--	--	--	--
%RSD	.4880517	--	--	--	--	--	--
#1	13673	--	--	--	--	--	--
#2	13768	--	--	--	--	--	--
#3	13802	--	--	--	--	--	--

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Method: TRA10103 Sample Name: CCB1 Operator: KGS
Run Time: 12/22/03 15:16:41
Comment:
Mode: CONC Corr. Factor: 1

Elem	Pb	Se	Sb	Al	Sb\1	Sb\2	As
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00024	-.00092	-.00042	.01147	-.00126	.00125	-.00013
SDev	.00072	.00223	.00084	.00778	.00140	.00090	.00067
%RSD	297.33	243.12	197.27	67.827	110.93	72.628	535.37
#1	-.00033	-.00198	.00015	.00547	-.00077	.00199	-.00047
#2	.00105	.00165	-.00139	.02026	-.00284	.00152	.00065
#3	.00001	-.00243	-.00004	.00869	-.00018	.00024	-.00055
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass
High	.00305	.00505	.06005	.20005			.01005
Low	-.00305	-.00505	-.06005	-.20005			-.01005

Elem	Ba	Be	Cd	Ca	Cr	Co	Cu
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00007	.00006	.00005	.00125	-.00031	.00030	-.00039
SDev	.00006	.00018	.00008	.00071	.00057	.00054	.00035
%RSD	93.216	304.50	180.38	56.637	183.57	179.22	90.884
#1	-.00000	.00021	-.00004	.00205	-.00093	-.00032	-.00079
#2	.00011	-.00014	.00012	.00102	.00017	.00057	-.00019
#3	.00010	.00011	.00006	.00069	-.00016	.00065	-.00018
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.20005	.00505	.00505	5.0000	.01005	.05005	.02505
Low	-.20005	-.00505	-.00505	-5.0000	-.01005	-.05005	-.02505

Elem	Fe	Pb/1	Pb/2	Mg	Mn	K_	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00799	.00035	.00019	.00304	.00000	.00112	-.00065
SDev	.01125	.00141	.00050	.00277	.00017	.00056	.00028
%RSD	140.70	400.37	266.14	91.198	16347.	50.478	43.385
#1	-.00485	-.00113	.00007	.00006	-.00019	.00174	-.00069
#2	.01277	.00168	.00074	.00554	.00010	.00064	-.00090
#3	.01606	.00050	-.00024	.00351	.00009	.00097	-.00035
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass
High	.10005			5.0000	.01505	5.0000	.04005
Low	-.10005			-5.0000	-.01505	-5.0000	-.04005

Elem	Se/1	Se/2	Ag	Na	Tl	V_	Zn
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00181	-.00047	.00036	-.32026	.00416	.00001	.00026
SDev	.00190	.00253	.00056	.17105	.00128	.00033	.00003
%RSD	104.64	535.69	156.78	53.409	30.758	3461.4	13.640
#1	-.00349	-.00123	-.00029	-.48044	.00504	-.00037	.00028
#2	.00025	.00235	.00068	-.14010	.00269	.00021	.00022
#3	-.00221	-.00253	.00069	-.34024	.00475	.00019	.00028
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass

High			.01005	5.0000	.01005	.05005	.02005
Low			-.01005	-5.0000	-.01005	-.05005	-.02005

Elem	B_	Mo	Li	Sr	Ti	Sn	Si
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00049	.00385	-.00015	.00010	.00015	.00161	-.00055
SDev	.00029	.00100	.00005	.00004	.00013	.00227	.00336
%RSD	59.010	25.853	32.790	35.372	81.612	140.91	612.52
#1	.00051	.00473	-.00010	.00006	.00001	.00302	-.00405
#2	.00077	.00407	-.00020	.00012	.00022	-.00101	.00265
#3	.00019	.00277	-.00015	.00012	.00023	.00282	-.00025
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.05005	.04005	.00505	.00505	.00505	.10005	.10005
Low	-.05005	-.04005	-.00505	-.00505	-.00505	-.10005	-.10005

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	14057	--	--	--	--	--	--
SDev	186.4562	--	--	--	--	--	--
%RSD	1.326448	--	--	--	--	--	--
#1	14203	--	--	--	--	--	--
#2	13847	--	--	--	--	--	--
#3	14120	--	--	--	--	--	--

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Method: TRA10103 Sample Name: F6DRGFZ10 Operator: KGS
Run Time: 12/22/03 15:21:07
Comment:
Mode: CONC Corr. Factor: 1

Elem	Pb	Se	Sb	Al	Sb\1	Sb\2	As
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00202	-.00152	-.00026	.01623	-.00037	-.00003	-.00080
SDev	.00051	.00120	.00094	.00915	.00253	.00227	.00086
%RSD	25.294	78.642	365.52	56.373	680.76	9047.8	106.91
#1	-.00156	-.00182	.00077	.02541	.00232	-.00235	-.00014
#2	-.00194	-.00020	-.00046	.01618	-.00073	.00009	-.00050
#3	-.00257	-.00255	-.00108	.00711	-.00271	.00219	-.00177
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass
High	10.000	10.000	10.000	500.00			10.000
Low	-.00300	-.00500	-.06000	-.20000			-.01000

Elem	Ba	Be	Cd	Ca	Cr	Co	Cu
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.0825	.00000	-.00002	27.660	-.00101	.00032	-.00065
SDev	.0079	.00013	.00007	.183	.00026	.00030	.00039
%RSD	.72776	2644.6	290.30	.66268	25.505	94.116	60.019
#1	1.0914	-.00014	-.00006	27.872	-.00130	.00065	-.00020
#2	1.0793	.00005	-.00006	27.553	-.00083	.00023	-.00083
#3	1.0766	.00010	.00005	27.556	-.00088	.00007	-.00092
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.000	10.000	10.000	500.00	20.000	20.000	10.000
Low	-.05000	-.00500	-.00500	-5.0000	-.01000	-.05000	-.02500

Elem	Fe	Pb/1	Pb/2	Mg	Mn	K_	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.14435	-.00111	-.00248	17.402	.00477	6.0711	-.00048
SDev	.00769	.00305	.00229	.113	.00004	.0494	.00081
%RSD	5.3305	274.98	92.442	.64776	.89942	.81448	169.70
#1	.15299	-.00384	-.00042	17.532	.00482	6.1281	-.00124
#2	.14186	-.00168	-.00207	17.344	.00475	6.0457	-.00055
#3	.13822	.00219	-.00494	17.329	.00474	6.0395	.00037
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass
High	400.00			500.00	20.000	100.00	20.000
Low	-.10000			-5.0000	-.01500	-5.0000	-.04000

Elem	Se/1	Se/2	Ag	Na	Tl	V_	Zn
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00050	-.00254	-.00005	125.48	.00157	-.00031	.05181
SDev	.00264	.00142	.00044	.76	.00117	.00030	.00044
%RSD	522.18	55.792	896.83	.60788	74.334	96.299	.85158
#1	-.00223	-.00162	-.00052	126.35	.00272	.00002	.05230
#2	.00304	-.00182	.00004	125.18	.00039	-.00038	.05169
#3	.00071	-.00417	.00033	124.91	.00159	-.00058	.05145
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass

High			2.0000	600.00	20.000	20.000	10.000
Low			-.01000	-5.0000	-.01000	-.05000	-.02000
Elem	B_	Mo	Li	Sr	Ti	Sn	Si
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.1853	.00104	.15366	1.3561	-.00014	.00113	.30533
SDev	.0078	.00144	.00109	.0099	.00023	.00150	.00703
%RSD	.65544	137.98	.70638	.72779	162.96	132.57	2.3016
#1	1.1942	.00168	.15490	1.3674	.00009	-.00060	.31288
#2	1.1808	.00205	.15324	1.3515	-.00014	.00200	.30414
#3	1.1808	-.00060	.15285	1.3494	-.00037	.00200	.29897
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.000	10.000	4.0000	10.000	10.000	10.000	10.000
Low	-.50000	-.04000	-.05000	-.05000	-.05000	-.10000	-.10000
IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	13771	--	--	--	--	--	--
SDev	118.5947	--	--	--	--	--	--
%RSD	.8611690	--	--	--	--	--	--
#1	13637	--	--	--	--	--	--
#2	13818	--	--	--	--	--	--
#3	13860	--	--	--	--	--	--

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Method: TRA10103 Sample Name: F6DRGZ10 Operator: KGS
Run Time: 12/22/03 15:25:33
Comment:
Mode: CONC Corr. Factor: 1

Elem	Pb	Se	Sb	Al	Sb\1	Sb\2	As
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00245	-.00031	-.00017	.01294	-.00019	-.00011	.00010
SDev	.00014	.00176	.00122	.00719	.00155	.00244	.00118
%RSD	5.7788	559.90	734.69	55.571	802.77	2176.8	1140.3
#1	-.00247	-.00232	-.00125	.02093	-.00047	-.00280	.00136
#2	-.00230	.00096	.00115	.01088	.00147	.00051	-.00098
#3	-.00258	.00042	-.00040	.00700	-.00158	.00195	-.00007
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass
High	10.000	10.000	10.000	500.00			10.000
Low	-.00300	-.00500	-.06000	-.20000			-.01000

Elem	Ba	Be	Cd	Ca	Cr	Co	Cu
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.1816	.00006	-.00001	29.992	-.00078	.00043	-.00057
SDev	.0257	.00018	.00008	.649	.00044	.00017	.00018
%RSD	2.1772	318.77	909.03	2.1624	55.540	39.656	31.878
#1	1.2113	-.00015	-.00010	30.740	-.00073	.00056	-.00078
#2	1.1664	.00014	.00004	29.645	-.00038	.00048	-.00047
#3	1.1671	.00019	.00004	29.591	-.00124	.00024	-.00046
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.000	10.000	10.000	500.00	20.000	20.000	10.000
Low	-.05000	-.00500	-.00500	-5.0000	-.01000	-.05000	-.02500

Elem	Fe	Pb/1	Pb/2	Mg	Mn	K_	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.15862	-.00326	-.00204	18.877	.00509	6.7839	.00008
SDev	.01088	.00045	.00042	.401	.00010	.2012	.00038
%RSD	6.8588	13.757	20.709	2.1269	1.9170	2.9655	467.86
#1	.16927	-.00346	-.00197	19.341	.00520	7.0162	.00043
#2	.15907	-.00358	-.00166	18.661	.00504	6.6669	-.00032
#3	.14752	-.00275	-.00250	18.631	.00502	6.6686	.00014
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass
High	400.00			500.00	20.000	100.00	20.000
Low	-.10000			-5.0000	-.01500	-5.0000	-.04000

Elem	Se/1	Se/2	Ag	Na	Tl	V_	Zn
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00054	-.00074	-.00002	135.28	-.00157	-.00038	.05113
SDev	.00497	.00046	.00023	2.40	.00123	.00034	.00106
%RSD	912.60	61.982	1192.4	1.7754	78.506	91.611	2.0799
#1	-.00490	-.00104	.00007	138.05	-.00080	.00002	.05236
#2	.00485	-.00098	.00015	133.99	-.00298	-.00058	.05054
#3	.00168	-.00021	-.00027	133.79	-.00092	-.00058	.05050
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass

High			2.0000	600.00	20.000	20.000	10.000
Low			-.01000	-5.0000	-.01000	-.05000	-.02000
Elem	B_	Mo	Li	Sr	Ti	Sn	Si
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.2710	.00075	.16531	1.4593	-.00014	.00064	.32694
SDev	.0268	.00059	.00348	.0324	.00030	.00089	.01027
%RSD	2.1067	79.142	2.1052	2.2186	207.45	140.19	3.1403
#1	1.3018	.00143	.16933	1.4967	.00007	.00093	.33868
#2	1.2534	.00040	.16338	1.4409	-.00002	-.00036	.32247
#3	1.2577	.00041	.16323	1.4403	-.00048	.00135	.31966
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.000	10.000	4.0000	10.000	10.000	10.000	10.000
Low	-.50000	-.04000	-.05000	-.05000	-.05000	-.10000	-.10000
IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	13703	--	--	--	--	--	--
SDev	250.5773	--	--	--	--	--	--
%RSD	1.828643	--	--	--	--	--	--
#1	13414	--	--	--	--	--	--
#2	13831	--	--	--	--	--	--
#3	13864	--	--	--	--	--	--

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Method: TRA10103 Sample Name: F6F1CFZ20 Operator: KGS
Run Time: 12/22/03 15:29:59
Comment:
Mode: CONC Corr. Factor: 1

Elem	Pb	Se	Sb	Al	Sb\1	Sb\2	As
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L-.00754	-.00239	.00049	.03124	.00059	.00029	-.00136
SDev	.00019	.00213	.00115	.00490	.00208	.00246	.00047
%RSD	2.5010	89.173	234.17	15.690	353.32	840.15	34.392
#1	L-.00758	-.00236	-.00062	.03411	-.00026	-.00134	-.00177
#2	L-.00770	-.00453	.00041	.02558	-.00094	.00312	-.00085
#3	L-.00733	-.00027	.00168	.03402	.00296	-.00090	-.00146
Errors	LC Low	LC Pass	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass
High	10.000	10.000	10.000	500.00			10.000
Low	-.00300	-.00500	-.06000	-.20000			-.01000

Elem	Ba	Be	Cd	Ca	Cr	Co	Cu
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.2860	-.00027	-.00006	112.03	-.00105	.00041	-.00091
SDev	.0029	.00004	.00015	.60	.00034	.00073	.00060
%RSD	.22414	14.059	247.15	.53193	32.625	176.27	65.801
#1	1.2837	-.00031	-.00015	111.39	-.00138	.00039	-.00125
#2	1.2892	-.00024	-.00013	112.12	-.00110	-.00030	-.00125
#3	1.2850	-.00025	.00011	112.57	-.00069	.00116	-.00022
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.000	10.000	10.000	500.00	20.000	20.000	10.000
Low	-.05000	-.00500	-.00500	-5.0000	-.01000	-.05000	-.02500

Elem	Fe	Pb/1	Pb/2	Mg	Mn	K_	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.09205	-.00710	-.00776	50.823	.01053	3.5274	-.00064
SDev	.01114	.00338	.00194	.245	.00017	.0163	.00032
%RSD	12.097	47.694	24.988	.48167	1.6271	.46069	49.315
#1	.09164	-.00832	-.00722	50.559	.01061	3.5092	-.00040
#2	.08113	-.00327	-.00991	50.870	.01033	3.5404	-.00100
#3	.10339	-.00970	-.00615	51.041	.01064	3.5326	-.00052
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass
High	400.00			500.00	20.000	100.00	20.000
Low	-.10000			-5.0000	-.01500	-5.0000	-.04000

Elem	Se/1	Se/2	Ag	Na	Tl	V_	Zn
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00070	-.00323	-.00015	450.01	.00027	-.00078	.03278
SDev	.00286	.00437	.00024	.65	.00043	.00061	.00025
%RSD	409.86	135.48	158.32	.14541	157.80	77.242	.75008
#1	-.00286	-.00211	-.00029	449.30	.00065	-.00078	.03258
#2	.00254	-.00805	-.00029	450.59	-.00019	-.00139	.03271
#3	-.00177	.00048	.00012	450.15	.00036	-.00018	.03305
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass

High			2.0000	600.00	20.000	20.000	10.000
Low			-.01000	-5.0000	-.01000	-.05000	-.02000
Elem	B_	Mo	Li	Sr	Ti	Sn	Si
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.65402	.00056	.53814	5.1155	-.00058	.00070	.15272
SDev	.00109	.00064	.00078	.0094	.00037	.00097	.00343
%RSD	.16627	115.81	.14514	.18404	64.072	137.75	2.2487
#1	.65278	.00012	.53820	5.1063	-.00066	-.00041	.15228
#2	.65448	.00025	.53890	5.1251	-.00090	.00137	.14953
#3	.65481	.00130	.53734	5.1150	-.00017	.00115	.15635
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.000	10.000	4.0000	10.000	10.000	10.000	10.000
Low	-.50000	-.04000	-.05000	-.05000	-.05000	-.10000	-.10000
IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	13365	--	--	--	--	--	--
SDev	15.39399	--	--	--	--	--	--
%RSD	.1151816	--	--	--	--	--	--
#1	13382	--	--	--	--	--	--
#2	13361	--	--	--	--	--	--
#3	13352	--	--	--	--	--	--

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Method: TRA10103 Sample Name: F6F1CZ20 Operator: KGS
Run Time: 12/22/03 15:34:25
Comment:
Mode: CONC Corr. Factor: 1

Elem	Pb	Se	Sb	Al	Sb\1	Sb\2	As
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L-.00767	-.00295	.00117	.02081	.00100	.00149	-.00067
SDev	.00085	.00167	.00098	.00708	.00252	.00287	.00050
%RSD	11.055	56.754	83.970	34.025	251.07	192.04	74.809
#1	L-.00777	-.00387	.00137	.01268	.00286	-.00162	-.00077
#2	L-.00846	-.00396	.00010	.02410	-.00186	.00403	-.00111
#3	L-.00677	-.00102	.00202	.02564	.00200	.00207	-.00013
Errors	LC Low	LC Pass	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass
High	10.000	10.000	10.000	500.00			10.000
Low	-.00300	-.00500	-.06000	-.20000			-.01000

Elem	Ba	Be	Cd	Ca	Cr	Co	Cu
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.3042	-.00013	.00002	114.43	-.00062	.00062	-.00112
SDev	.0108	.00007	.00009	.82	.00088	.00064	.00029
%RSD	.82687	52.624	443.80	.71452	141.61	104.13	25.584
#1	1.2919	-.00006	.00006	113.53	-.00152	.00065	-.00104
#2	1.3121	-.00013	-.00008	114.63	-.00057	-.00004	-.00143
#3	1.3087	-.00019	.00007	115.13	.00023	.00125	-.00087
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.000	10.000	10.000	500.00	20.000	20.000	10.000
Low	-.05000	-.00500	-.00500	-5.0000	-.01000	-.05000	-.02500

Elem	Fe	Pb/1	Pb/2	Mg	Mn	K_	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.10352	-.00697	-.00801	51.861	.01084	3.6309	-.00072
SDev	.01392	.00163	.00102	.383	.00007	.0407	.00090
%RSD	13.444	23.436	12.761	.73841	.63758	1.1219	125.11
#1	.10788	-.00860	-.00735	51.433	.01077	3.5840	-.00136
#2	.08795	-.00699	-.00919	51.976	.01086	3.6567	-.00112
#3	.11474	-.00533	-.00750	52.173	.01090	3.6521	.00031
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass
High	400.00			500.00	20.000	100.00	20.000
Low	-.10000			-5.0000	-.01500	-5.0000	-.04000

Elem	Se/1	Se/2	Ag	Na	Tl	V_	Zn
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00200	-.00342	-.00014	456.30	.00198	-.00065	.02978
SDev	.00198	.00232	.00055	3.75	.00079	.00061	.00023
%RSD	98.902	67.915	400.93	.82245	39.766	94.428	.77996
#1	-.00428	-.00366	-.00031	451.96	.00279	-.00118	.02960
#2	-.00065	-.00561	-.00059	458.49	.00194	-.00078	.02970
#3	-.00108	-.00098	.00048	458.44	.00122	.00002	.03005
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass

High			2.0000	600.00	20.000	20.000	10.000
Low			-.01000	-5.0000	-.01000	-.05000	-.02000
Elem	B_	Mo	Li	Sr	Ti	Sn	Si
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.66251	-.00026	.54405	5.1775	-.00041	.00056	.15610
SDev	.00711	.00091	.00484	.0394	.00001	.00013	.00215
%RSD	1.0730	348.48	.88963	.76023	2.3392	23.222	1.3808
#1	.65471	-.00025	.53847	5.1322	-.00040	.00071	.15366
#2	.66419	-.00117	.54696	5.2035	-.00041	.00048	.15689
#3	.66863	.00064	.54673	5.1968	-.00041	.00048	.15774
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.000	10.000	4.0000	10.000	10.000	10.000	10.000
Low	-.50000	-.04000	-.05000	-.05000	-.05000	-.10000	-.10000
IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	13465	--	--	--	--	--	--
SDev	84.55174	--	--	--	--	--	--
%RSD	.6279466	--	--	--	--	--	--
#1	13558	--	--	--	--	--	--
#2	13444	--	--	--	--	--	--
#3	13393	--	--	--	--	--	--

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Method: TRA10103 Sample Name: F6JX2S Operator: KGS
Run Time: 12/22/03 15:40:08
Comment:
Mode: CONC Corr. Factor: 1

Elem	Pb	Se	Sb	Al	Sb\1	Sb\2	As
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.50002	1.8710	.51774	2.1251	.51865	.51591	2.0441
SDev	.00268	.0159	.00244	.0224	.00103	.00611	.0192
%RSD	.53556	.85188	.47102	1.0557	.19874	1.1836	.94118
#1	.49735	1.8528	.51493	2.0998	.51784	.50910	2.0246
#2	.50001	1.8779	.51917	2.1328	.51832	.52088	2.0447
#3	.50271	1.8823	.51913	2.1426	.51981	.51776	2.0631
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass
High	10.000	10.000	10.000	500.00			10.000
Low	-.00300	-.00500	-.06000	-.20000			-.01000

Elem	Ba	Be	Cd	Ca	Cr	Co	Cu
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.2258	.05265	.05139	183.28	.20425	.51858	.25619
SDev	.0239	.00037	.00043	1.58	.00242	.00478	.00321
%RSD	1.0730	.69873	.83211	.86317	1.1858	.92203	1.2538
#1	2.2001	.05226	.05091	181.52	.20148	.51324	.25280
#2	2.2298	.05272	.05173	183.75	.20529	.52004	.25657
#3	2.2473	.05298	.05153	184.57	.20598	.52246	.25919
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.000	10.000	10.000	500.00	20.000	20.000	10.000
Low	-.05000	-.00500	-.00500	-5.0000	-.01000	-.05000	-.02500

Elem	Fe	Pb/1	Pb/2	Mg	Mn	K_	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.1856	.50364	.49822	104.05	.57434	69.566	.51050
SDev	.0082	.00758	.00237	.96	.00560	.658	.00621
%RSD	.68963	1.5052	.47580	.92461	.97544	.94551	1.2170
#1	1.1763	.49492	.49856	103.00	.56810	68.882	.50436
#2	1.1893	.50867	.49569	104.26	.57600	69.623	.51036
#3	1.1913	.50734	.50039	104.89	.57893	70.194	.51678
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass
High	400.00			500.00	20.000	100.00	20.000
Low	-.10000			-5.0000	-.01500	-5.0000	-.04000

Elem	Se/1	Se/2	Ag	Na	Tl	V_	Zn
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.8698	1.8716	.05186	172.76	2.0375	.51901	.60932
SDev	.0242	.0119	.00079	1.43	.0210	.00485	.00549
%RSD	1.2943	.63319	1.5280	.82500	1.0302	.93423	.90038
#1	1.8424	1.8580	.05095	171.22	2.0141	.51344	.60344
#2	1.8788	1.8774	.05224	173.05	2.0436	.52132	.61021
#3	1.8882	1.8794	.05240	174.02	2.0547	.52227	.61431
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass

High			2.0000	600.00	20.000	20.000	10.000
Low			-.01000	-5.0000	-.01000	-.05000	-.02000
Elem	B_	Mo	Li	Sr	Ti	Sn	Si
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	3.1635	1.0327	1.2527	3.1696	1.0318	2.0847	H15.629
SDev	.0333	.0107	.0124	.0330	.0103	.0268	.148
%RSD	1.0535	1.0380	.98778	1.0415	.99520	1.2853	.94694
#1	3.1295	1.0220	1.2394	3.1339	1.0207	2.0564	H15.469
#2	3.1648	1.0324	1.2547	3.1758	1.0339	2.0881	H15.657
#3	3.1961	1.0435	1.2639	3.1991	1.0409	2.1097	H15.761
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC High
High	10.000	10.000	4.0000	10.000	10.000	10.000	10.000
Low	-.50000	-.04000	-.05000	-.05000	-.05000	-.10000	-.10000
IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	13344	--	--	--	--	--	--
SDev	114.0916	--	--	--	--	--	--
%RSD	.8550304	--	--	--	--	--	--
#1	13475	--	--	--	--	--	--
#2	13277	--	--	--	--	--	--
#3	13279	--	--	--	--	--	--

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Method: TRA10103 Sample Name: F6JX2D Operator: KGS
Run Time: 12/22/03 15:44:35
Comment:
Mode: CONC Corr. Factor: 1

Elem	Pb	Se	Sb	Al	Sb\1	Sb\2	As
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.50496	1.8661	.62153	2.1448	.62142	.62175	2.0656
SDev	.00302	.0127	.00323	.0119	.00217	.00598	.0134
%RSD	.59883	.68157	.52018	.55367	.34897	.96143	.64845
#1	.50151	1.8516	.61781	2.1315	.61906	.61528	2.0501
#2	.50712	1.8754	.62319	2.1541	.62333	.62289	2.0727
#3	.50626	1.8714	.62360	2.1490	.62187	.62707	2.0739
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass
High	10.000	10.000	10.000	500.00			10.000
Low	-.00300	-.00500	-.06000	-.20000			-.01000

Elem	Ba	Be	Cd	Ca	Cr	Co	Cu
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.2414	.05310	.05169	183.03	.20519	.52180	.25789
SDev	.0131	.00030	.00023	1.05	.00131	.00320	.00160
%RSD	.58581	.56268	.44166	.57495	.63760	.61326	.62054
#1	2.2270	.05275	.05144	181.82	.20392	.51813	.25609
#2	2.2528	.05324	.05188	183.62	.20510	.52322	.25918
#3	2.2443	.05330	.05176	183.65	.20654	.52404	.25838
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.000	10.000	10.000	500.00	20.000	20.000	10.000
Low	-.05000	-.00500	-.00500	-5.0000	-.01000	-.05000	-.02500

Elem	Fe	Pb/1	Pb/2	Mg	Mn	K_	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.1901	.50833	.50328	104.29	.57813	69.821	.51330
SDev	.0102	.00606	.00194	.65	.00342	.364	.00725
%RSD	.85913	1.1914	.38438	.62409	.59207	.52155	1.4130
#1	1.1846	.50145	.50153	103.54	.57420	69.451	.50517
#2	1.2019	.51065	.50536	104.66	.58046	70.179	.51566
#3	1.1839	.51287	.50295	104.68	.57974	69.832	.51909
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass
High	400.00			500.00	20.000	100.00	20.000
Low	-.10000			-5.0000	-.01500	-5.0000	-.04000

Elem	Se/1	Se/2	Ag	Na	Tl	V_	Zn
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.8621	1.8681	.05170	172.62	2.0573	.52333	.61330
SDev	.0102	.0140	.00079	.94	.0156	.00268	.00404
%RSD	.54639	.74913	1.5339	.54247	.76023	.51239	.65945
#1	1.8504	1.8522	.05099	171.59	2.0396	.52025	.60864
#2	1.8691	1.8785	.05155	173.42	2.0630	.52518	.61590
#3	1.8667	1.8737	.05256	172.85	2.0693	.52454	.61536
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass

High			2.0000	600.00	20.000	20.000	10.000
Low			-.01000	-5.0000	-.01000	-.05000	-.02000
Elem	B_	Mo	Li	Sr	Ti	Sn	Si
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	3.1686	1.2452	1.2643	3.1646	1.2425	2.5078	H17.611
SDev	.0213	.0114	.0079	.0184	.0076	.0188	.106
%RSD	.67233	.91419	.62149	.58064	.60805	.74973	.60415
#1	3.1440	1.2323	1.2560	3.1441	1.2339	2.4862	H17.489
#2	3.1823	1.2496	1.2716	3.1796	1.2481	2.5173	H17.686
#3	3.1794	1.2537	1.2653	3.1700	1.2455	2.5200	H17.657
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC High
High	10.000	10.000	4.0000	10.000	10.000	10.000	10.000
Low	-.50000	-.04000	-.05000	-.05000	-.05000	-.10000	-.10000
IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	13397	--	--	--	--	--	--
SDev	71.55544	--	--	--	--	--	--
%RSD	.5341197	--	--	--	--	--	--
#1	13479	--	--	--	--	--	--
#2	13348	--	--	--	--	--	--
#3	13364	--	--	--	--	--	--

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Method: TRA10103 Sample Name: F6J0AF Operator: KGS
Run Time: 12/22/03 15:49:02
Comment:
Mode: CONC Corr. Factor: 1

Elem	Pb	Se	Sb	Al	Sb\1	Sb\2	As
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L-.00915	-.00127	.00094	.03961	.00138	.00005	.00137
SDev	.00040	.00102	.00051	.00329	.00068	.00035	.00166
%RSD	4.3188	80.862	53.965	8.3130	49.412	718.28	121.04
#1	L-.00887	-.00100	.00151	.04310	.00216	.00021	.00093
#2	L-.00961	-.00240	.00057	.03917	.00104	-.00035	.00320
#3	L-.00899	-.00040	.00072	.03656	.00094	.00029	-.00002
Errors	LC Low	LC Pass	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass
High	10.000	10.000	10.000	500.00			10.000
Low	-.00300	-.00500	-.06000	-.20000			-.01000

Elem	Ba	Be	Cd	Ca	Cr	Co	Cu
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.17481	-.00011	-.00008	133.00	-.00115	.00079	-.00103
SDev	.00027	.00002	.00005	.57	.00025	.00021	.00009
%RSD	.15690	20.157	66.963	.42521	21.477	26.974	8.3096
#1	.17513	-.00010	-.00014	133.64	-.00112	.00056	-.00095
#2	.17461	-.00009	-.00007	132.79	-.00092	.00098	-.00103
#3	.17471	-.00013	-.00003	132.57	-.00141	.00082	-.00112
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.000	10.000	10.000	500.00	20.000	20.000	10.000
Low	-.05000	-.00500	-.00500	-5.0000	-.01000	-.05000	-.02500

Elem	Fe	Pb/1	Pb/2	Mg	Mn	K_	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.06290	-.01242	-.00752	51.557	.05501	11.003	-.00081
SDev	.00250	.00132	.00113	.207	.00035	.042	.00049
%RSD	3.9703	10.668	15.034	.40063	.63359	.38265	59.918
#1	.06474	-.01395	-.00634	51.792	.05540	11.045	-.00065
#2	.06390	-.01165	-.00859	51.473	.05471	10.961	-.00043
#3	.06005	-.01166	-.00765	51.405	.05493	11.005	-.00136
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass
High	400.00			500.00	20.000	100.00	20.000
Low	-.10000			-5.0000	-.01500	-5.0000	-.04000

Elem	Se/1	Se/2	Ag	Na	Tl	V_	Zn
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00126	-.00253	-.00030	116.55	.00667	-.00038	.02086
SDev	.00347	.00021	.00037	.12	.00105	.00040	.00006
%RSD	274.86	8.2895	123.41	.10315	15.726	104.46	.27975
#1	.00200	-.00250	-.00047	116.66	.00656	-.00077	.02089
#2	-.00252	-.00234	.00012	116.42	.00777	.00002	.02090
#3	.00431	-.00275	-.00055	116.56	.00568	-.00038	.02079
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass

High			2.0000	600.00	20.000	20.000	10.000
Low			-.01000	-5.0000	-.01000	-.05000	-.02000
Elem	B_	Mo	Li	Sr	Ti	Sn	Si
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.1086	.00262	.15887	2.1683	-.00027	-.00046	5.5887
SDev	.0091	.00019	.00026	.0059	.00012	.00164	.0153
%RSD	.42998	7.3131	.16490	.27111	46.585	357.88	.27340
#1	2.1172	.00245	.15900	2.1744	-.00039	-.00214	5.6041
#2	2.0991	.00283	.15857	2.1627	-.00014	-.00038	5.5736
#3	2.1093	.00257	.15905	2.1677	-.00026	.00114	5.5884
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.000	10.000	4.0000	10.000	10.000	10.000	10.000
Low	-.50000	-.04000	-.05000	-.05000	-.05000	-.10000	-.10000
IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	13652	--	--	--	--	--	--
SDev	61.71638	--	--	--	--	--	--
%RSD	.4520757	--	--	--	--	--	--
#1	13581	--	--	--	--	--	--
#2	13677	--	--	--	--	--	--
#3	13697	--	--	--	--	--	--

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Method: TRA10103 Sample Name: F6J0A Operator: KGS
Run Time: 12/22/03 15:53:29
Comment:
Mode: CONC Corr. Factor: 1

Elem	Pb	Se	Sb	Al	Sb\1	Sb\2	As
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L-.00987	-.00163	.00028	.04201	-.00042	.00167	-.00026
SDev	.00034	.00055	.00159	.00366	.00288	.00178	.00083
%RSD	3.4256	33.972	573.84	8.7253	686.67	106.25	312.26
#1	L-.01013	-.00211	.00090	.04402	-.00021	.00312	-.00096
#2	L-.01000	-.00102	-.00153	.04423	-.00339	.00220	.00065
#3	L-.00949	-.00177	.00146	.03778	.00235	-.00031	-.00048
Errors	LC Low	LC Pass	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass
High	10.000	10.000	10.000	500.00			10.000
Low	-.00300	-.00500	-.06000	-.20000			-.01000

Elem	Ba	Be	Cd	Ca	Cr	Co	Cu
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.17372	-.00019	-.00013	131.34	-.00109	.00025	-.00095
SDev	.00296	.00015	.00010	1.91	.00026	.00010	.00026
%RSD	1.7034	77.789	79.295	1.4566	24.035	40.028	27.608
#1	.17475	-.00027	-.00009	131.92	-.00088	.00014	-.00105
#2	.17603	-.00027	-.00005	132.91	-.00101	.00030	-.00114
#3	.17038	-.00002	-.00025	129.21	-.00138	.00032	-.00065
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.000	10.000	10.000	500.00	20.000	20.000	10.000
Low	-.05000	-.00500	-.00500	-5.0000	-.01000	-.05000	-.02500

Elem	Fe	Pb/1	Pb/2	Mg	Mn	K_	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.13527	-.01210	-.00876	50.775	.05396	10.778	.00013
SDev	.01149	.00225	.00153	.763	.00078	.230	.00038
%RSD	8.4964	18.562	17.465	1.5028	1.4383	2.1378	285.76
#1	.12207	-.00952	-.01044	51.038	.05417	10.857	.00006
#2	.14304	-.01319	-.00840	51.371	.05462	10.959	.00054
#3	.14071	-.01360	-.00744	49.915	.05311	10.519	-.00020
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass
High	400.00			500.00	20.000	100.00	20.000
Low	-.10000			-5.0000	-.01500	-5.0000	-.04000

Elem	Se/1	Se/2	Ag	Na	Tl	V_	Zn
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00336	-.00412	.00003	115.18	.00147	-.00031	.06943
SDev	.00257	.00171	.00013	1.68	.00040	.00050	.00106
%RSD	76.450	41.591	368.50	1.4622	27.436	160.74	1.5286
#1	.00588	-.00610	-.00007	115.82	.00173	-.00078	.06976
#2	.00342	-.00324	.00018	116.46	.00167	.00022	.07028
#3	.00076	-.00303	-.00001	113.27	.00101	-.00038	.06824
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass

High			2.0000	600.00	20.000	20.000	10.000
Low			-.01000	-5.0000	-.01000	-.05000	-.02000
Elem	B_	Mo	Li	Sr	Ti	Sn	Si
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	2.0927	.00126	.15703	2.1249	-.00031	.00047	5.5810
SDev	.0381	.00073	.00274	.0350	.00008	.00385	.0978
%RSD	1.8195	58.463	1.7434	1.6492	24.765	817.83	1.7526
#1	2.1057	.00104	.15826	2.1380	-.00040	-.00391	5.6233
#2	2.1225	.00207	.15894	2.1516	-.00028	.00203	5.6505
#3	2.0498	.00066	.15390	2.0853	-.00025	.00330	5.4691
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.000	10.000	4.0000	10.000	10.000	10.000	10.000
Low	-.50000	-.04000	-.05000	-.05000	-.05000	-.10000	-.10000
IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	13596	--	--	--	--	--	--
SDev	167.3015	--	--	--	--	--	--
%RSD	1.230511	--	--	--	--	--	--
#1	13520	--	--	--	--	--	--
#2	13481	--	--	--	--	--	--
#3	13788	--	--	--	--	--	--

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Method: TRA10103 Sample Name: F6RVR Operator: KGS
Run Time: 12/22/03 15:57:55
Comment:
Mode: CONC Corr. Factor: 1

Elem	Pb	Se	Sb	Al	Sb\1	Sb\2	As
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.03502	.00055	.00200	19.701	.00376	-.00151	.00145
SDev	.00162	.00201	.00152	.204	.00243	.00147	.00060
%RSD	4.6168	367.14	75.745	1.0351	64.599	97.608	41.442
#1	.03656	.00279	.00027	19.868	.00122	-.00164	.00089
#2	.03516	-.00108	.00268	19.473	.00401	.00002	.00208
#3	.03334	-.00007	.00307	19.761	.00605	-.00292	.00138
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass
High	10.000	10.000	10.000	500.00			10.000
Low	-.00300	-.00500	-.06000	-.20000			-.01000

Elem	Ba	Be	Cd	Ca	Cr	Co	Cu
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.12021	.00039	-.00018	8.2140	.01838	.00150	.00364
SDev	.00142	.00010	.00014	.0946	.00071	.00021	.00008
%RSD	1.1844	24.241	80.481	1.1518	3.8551	13.799	2.2894
#1	.12148	.00030	-.00005	8.3019	.01907	.00131	.00370
#2	.11867	.00049	-.00033	8.1139	.01841	.00146	.00355
#3	.12046	.00039	-.00016	8.2261	.01765	.00172	.00368
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.000	10.000	10.000	500.00	20.000	20.000	10.000
Low	-.05000	-.00500	-.00500	-5.0000	-.01000	-.05000	-.02500

Elem	Fe	Pb/1	Pb/2	Mg	Mn	K_	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	3.0279	.03147	.03679	1.5731	.03532	.12015	.00406
SDev	.0386	.00559	.00037	.0194	.00042	.00620	.00082
%RSD	1.2733	17.780	1.0107	1.2322	1.1916	5.1626	20.138
#1	3.0588	.03686	.03641	1.5915	.03581	.12634	.00483
#2	2.9847	.03184	.03682	1.5528	.03510	.11394	.00414
#3	3.0403	.02569	.03715	1.5749	.03507	.12016	.00320
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass
High	400.00			500.00	20.000	100.00	20.000
Low	-.10000			-5.0000	-.01500	-5.0000	-.04000

Elem	Se/1	Se/2	Ag	Na	Tl	V_	Zn
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00011	.00076	-.00055	3.9560	.00288	.03601	.02422
SDev	.00371	.00204	.00068	.1880	.00150	.00039	.00032
%RSD	3284.6	267.17	123.09	4.7525	52.139	1.0729	1.3099
#1	.00393	.00222	.00012	4.1657	.00162	.03612	.02442
#2	-.00010	-.00157	-.00053	3.9000	.00248	.03559	.02385
#3	-.00349	.00163	-.00125	3.8024	.00453	.03634	.02439
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass

High			2.0000	600.00	20.000	20.000	10.000
Low			-.01000	-5.0000	-.01000	-.05000	-.02000
Elem	B_	Mo	Li	Sr	Ti	Sn	Si
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.02264	.00460	.00531	.11352	.04168	.00290	H23.502
SDev	.00150	.00070	.00010	.00128	.00054	.00182	.261
%RSD	6.6238	15.209	1.8461	1.1279	1.2869	62.535	1.1085
#1	.02398	.00430	.00541	.11464	.04213	.00477	H23.744
#2	.02294	.00411	.00521	.11212	.04109	.00281	H23.227
#3	.02102	.00540	.00530	.11380	.04182	.00114	H23.536
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC High
High	10.000	10.000	4.0000	10.000	10.000	10.000	10.000
Low	-.50000	-.04000	-.05000	-.05000	-.05000	-.10000	-.10000
IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	14059	--	--	--	--	--	--
SDev	147.7555	--	--	--	--	--	--
%RSD	1.050963	--	--	--	--	--	--
#1	13943	--	--	--	--	--	--
#2	14225	--	--	--	--	--	--
#3	14009	--	--	--	--	--	--

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Method: TRA10103 Sample Name: F6RT9 Operator: KGS
Run Time: 12/22/03 16:02:21
Comment:
Mode: CONC Corr. Factor: 1

Elem	Pb	Se	Sb	Al	Sb\1	Sb\2	As
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.06929	.00215	.00305	47.889	.00454	.00006	.00800
SDev	.00043	.00060	.00354	.079	.00636	.00218	.00075
%RSD	.62392	27.745	116.32	.16511	140.22	3488.8	9.3988
#1	.06956	.00196	.00650	47.802	.01092	-.00236	.00870
#2	.06879	.00281	-.00058	47.906	-.00180	.00186	.00808
#3	.06951	.00166	.00322	47.958	.00449	.00069	.00721
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass
High	10.000	10.000	10.000	500.00			10.000
Low	-.00300	-.00500	-.06000	-.20000			-.01000

Elem	Ba	Be	Cd	Ca	Cr	Co	Cu
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.32823	.00063	-.00095	1.6695	.08209	.00183	.01017
SDev	.00005	.00001	.00010	.0022	.00014	.00048	.00028
%RSD	.01632	1.6458	10.034	.12945	.17283	26.028	2.8019
#1	.32829	.00063	-.00106	1.6718	.08221	.00237	.01049
#2	.32819	.00065	-.00090	1.6674	.08214	.00164	.01005
#3	.32821	.00063	-.00090	1.6694	.08193	.00147	.00996
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.000	10.000	10.000	500.00	20.000	20.000	10.000
Low	-.05000	-.00500	-.00500	-5.0000	-.01000	-.05000	-.02500

Elem	Fe	Pb/1	Pb/2	Mg	Mn	K_	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	41.131	.07140	.06823	.56988	.04291	.03007	.00668
SDev	.042	.00691	.00399	.00319	.00003	.00056	.00033
%RSD	.10267	9.6813	5.8458	.56006	.05977	1.8672	4.9209
#1	41.177	.06389	.07239	.57320	.04290	.03052	.00687
#2	41.122	.07750	.06444	.56683	.04294	.03026	.00688
#3	41.094	.07282	.06786	.56962	.04289	.02944	.00631
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass
High	400.00			500.00	20.000	100.00	20.000
Low	-.10000			-5.0000	-.01500	-5.0000	-.04000

Elem	Se/1	Se/2	Ag	Na	Tl	V_	Zn
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00255	.00449	-.00095	-.47530	.00186	.23668	.02242
SDev	.00464	.00186	.00073	.11631	.00114	.00066	.00012
%RSD	181.99	41.358	76.802	24.471	61.213	.27971	.52147
#1	-.00738	.00663	-.00168	-.59214	.00098	.23739	.02230
#2	.00187	.00328	-.00023	-.35952	.00315	.23608	.02241
#3	-.00214	.00356	-.00093	-.47424	.00145	.23657	.02254
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass

High			2.0000	600.00	20.000	20.000	10.000
Low			-.01000	-5.0000	-.01000	-.05000	-.02000
Elem	B_	Mo	Li	Sr	Ti	Sn	Si
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00554	.00137	.00774	.28601	.23930	.02172	H10.032
SDev	.00139	.00047	.00003	.00014	.00021	.00335	.012
%RSD	25.161	34.247	.45628	.04946	.08930	15.435	.12006
#1	.00419	.00116	.00772	.28599	.23925	.02507	H10.019
#2	.00698	.00190	.00778	.28588	.23911	.01837	H10.033
#3	.00545	.00104	.00772	.28616	.23953	.02171	H10.043
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC High
High	10.000	10.000	4.0000	10.000	10.000	10.000	10.000
Low	-.50000	-.04000	-.05000	-.05000	-.05000	-.10000	-.10000
IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	14163	--	--	--	--	--	--
SDev	8.425469	--	--	--	--	--	--
%RSD	.0594913	--	--	--	--	--	--
#1	14166	--	--	--	--	--	--
#2	14153	--	--	--	--	--	--
#3	14169	--	--	--	--	--	--

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Method: TRA10103 Sample Name: CCV2 Operator: KGS
Run Time: 12/22/03 16:06:48
Comment:
Mode: CONC Corr. Factor: 1

Elem	Pb	Se	Sb	Al	Sb\1	Sb\2	As
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.50618	.50106	.49705	24.630	.49671	.49773	.49983
SDev	.00529	.00498	.00630	.227	.00686	.00564	.00571
%RSD	1.0452	.99439	1.2667	.92030	1.3821	1.1332	1.1423
#1	.51204	.50654	.50429	24.883	.50443	.50402	.50551
#2	.50474	.49984	.49287	24.564	.49128	.49604	.49989
#3	.50175	.49681	.49400	24.444	.49443	.49312	.49409
Errors	QC Pass	QC Pass	QC Pass	QC Pass	NOCHECK	NOCHECK	QC Pass
Value	.50000	.50000	.50000	25.000			.50000
Range	10.500	10.500	10.500	10.500			10.500

Elem	Ba	Be	Cd	Ca	Cr	Co	Cu
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.9969	2.0453	.50879	50.080	2.0049	2.0307	1.9711
SDev	.0176	.0187	.00431	.452	.0183	.0189	.0191
%RSD	.88370	.91428	.84705	.90261	.91488	.93165	.96796
#1	2.0163	2.0665	.51377	50.598	2.0258	2.0524	1.9916
#2	1.9926	2.0379	.50625	49.880	1.9972	2.0220	1.9678
#3	1.9818	2.0314	.50635	49.763	1.9917	2.0177	1.9539
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	2.0000	2.0000	.50000	50.000	2.0000	2.0000	2.0000
Range	10.500	10.500	10.500	10.500	10.500	10.500	10.500

Elem	Fe	Pb/1	Pb/2	Mg	Mn	K_	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	25.140	.50647	.50603	49.370	2.0178	52.201	2.0383
SDev	.236	.00455	.00575	.423	.0184	.457	.0163
%RSD	.93781	.89793	1.1355	.85581	.90982	.87617	.79820
#1	25.407	.51104	.51254	49.851	2.0386	52.704	2.0569
#2	25.054	.50644	.50389	49.202	2.0112	52.087	2.0313
#3	24.960	.50194	.50166	49.058	2.0037	51.811	2.0268
Errors	QC Pass	NOCHECK	NOCHECK	QC Pass	QC Pass	QC Pass	QC Pass
Value	25.000			50.000	2.0000	50.000	2.0000
Range	10.500			10.500	10.500	10.500	10.500

Elem	Se/1	Se/2	Ag	Na	Tl	V_	Zn
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.49849	.50235	.98592	48.388	1.0033	2.0075	2.0697
SDev	.00481	.00586	.00924	.438	.0065	.0180	.0177
%RSD	.96564	1.1666	.93692	.90573	.64690	.89848	.85747
#1	.50361	.50801	.99606	48.887	1.0103	2.0282	2.0896
#2	.49405	.50273	.98369	48.206	1.0021	1.9996	2.0641
#3	.49781	.49631	.97800	48.069	.99745	1.9948	2.0555
Errors	NOCHECK	NOCHECK	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass

Value			1.0000	50.000	1.0000	2.0000	2.0000
Range			10.500	10.500	10.500	10.500	10.500
Elem	B_	Mo	Li	Sr	Ti	Sn	Si
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.9832	2.0221	2.0185	1.9979	2.0064	2.0215	1.9612
SDev	.0154	.0135	.0183	.0183	.0189	.0155	.0212
%RSD	.77798	.66980	.90709	.91466	.94329	.76669	1.0804
#1	1.9992	2.0378	2.0378	2.0182	2.0278	2.0380	1.9854
#2	1.9821	2.0149	2.0165	1.9929	1.9999	2.0191	1.9528
#3	1.9684	2.0138	2.0013	1.9827	1.9917	2.0073	1.9456
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000
Range	10.500	10.500	10.500	10.500	10.500	10.500	10.500
IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	13665	--	--	--	--	--	--
SDev	127.8791	--	--	--	--	--	--
%RSD	.9358240	--	--	--	--	--	--
#1	13520	--	--	--	--	--	--
#2	13714	--	--	--	--	--	--
#3	13761	--	--	--	--	--	--

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Method: TRA10103 Sample Name: CCB2 Operator: KGS
Run Time: 12/22/03 16:11:15
Comment:
Mode: CONC Corr. Factor: 1

Elem	Pb	Se	Sb	Al	Sb\1	Sb\2	As
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00022	-.00017	.00026	.02229	.00012	.00056	.00017
SDev	.00003	.00032	.00081	.00781	.00036	.00194	.00048
%RSD	16.046	192.24	308.31	35.055	303.20	349.03	289.83
#1	-.00025	-.00053	-.00068	.03121	-.00020	-.00162	.00006
#2	-.00018	-.00005	.00074	.01665	.00051	.00120	-.00025
#3	-.00021	.00008	.00073	.01900	.00005	.00209	.00069
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass
High	.00305	.00505	.06005	.20005			.01005
Low	-.00305	-.00505	-.06005	-.20005			-.01005

Elem	Ba	Be	Cd	Ca	Cr	Co	Cu
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00004	.00020	-.00002	-.00017	-.00081	-.00009	-.00142
SDev	.00011	.00008	.00018	.00117	.00036	.00042	.00041
%RSD	278.74	39.996	888.52	692.80	44.534	464.20	29.230
#1	.00016	.00011	-.00004	.00094	-.00049	.00015	-.00111
#2	-.00005	.00025	-.00019	-.00138	-.00120	-.00058	-.00189
#3	.00000	.00023	.00017	-.00006	-.00075	.00016	-.00126
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.20005	.00505	.00505	5.0000	.01005	.05005	.02505
Low	-.20005	-.00505	-.00505	-5.0000	-.01005	-.05005	-.02505

Elem	Fe	Pb/1	Pb/2	Mg	Mn	K_	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00668	.00003	-.00034	.00306	-.00009	.00024	-.00098
SDev	.00834	.00203	.00098	.00336	.00017	.00019	.00111
%RSD	124.84	6534.6	290.69	109.85	180.41	79.554	112.57
#1	.01278	-.00209	.00067	.00577	.00010	.00002	-.00125
#2	-.00282	.00022	-.00038	-.00070	-.00019	.00037	-.00193
#3	.01009	.00196	-.00130	.00411	-.00019	.00032	.00023
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass
High	.10005			5.0000	.01505	5.0000	.04005
Low	-.10005			-5.0000	-.01505	-5.0000	-.04005

Elem	Se/1	Se/2	Ag	Na	Tl	V_	Zn
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00047	-.00049	-.00018	-.38541	.00020	-.00025	-.00004
SDev	.00090	.00063	.00041	.05922	.00304	.00045	.00017
%RSD	192.10	130.20	223.47	15.365	1497.3	179.86	422.15
#1	.00017	-.00088	.00020	-.32218	.00371	.00001	.00007
#2	.00149	-.00082	-.00061	-.43957	-.00152	-.00076	-.00024
#3	-.00024	.00024	-.00014	-.39449	-.00158	.00000	.00005
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass

High			.01005	5.0000	.01005	.05005	.02005
Low			-.01005	-5.0000	-.01005	-.05005	-.02005

Elem	B_	Mo	Li	Sr	Ti	Sn	Si
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00011	.00201	-.00001	.00012	-.00005	.00057	-.00401
SDev	.00136	.00118	.00005	.00006	.00017	.00098	.00271
%RSD	1284.5	58.881	406.33	50.808	350.29	171.42	67.676
#1	.00095	.00332	.00005	.00019	.00009	.00114	-.00105
#2	-.00165	.00104	-.00004	.00006	-.00024	-.00056	-.00637
#3	.00038	.00166	-.00004	.00012	-.00000	.00114	-.00460
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.05005	.04005	.00505	.00505	.00505	.10005	.10005
Low	-.05005	-.04005	-.00505	-.00505	-.00505	-.10005	-.10005

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	13937	--	--	--	--	--	--
SDev	139.9213	--	--	--	--	--	--
%RSD	1.003929	--	--	--	--	--	--
#1	13776	--	--	--	--	--	--
#2	14008	--	--	--	--	--	--
#3	14028	--	--	--	--	--	--

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Method: TRA10103 Sample Name: F6VL5 Operator: KGS
Run Time: 12/22/03 16:15:41
Comment:
Mode: CONC Corr. Factor: 1

Elem	Pb	Se	Sb	Al	Sb\1	Sb\2	As
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	L-.00353	.00353	-.00031	24.502	-.00148	.00203	.00277
SDev	.00092	.00134	.00157	.054	.00247	.00058	.00081
%RSD	25.991	37.928	499.45	.21932	166.25	28.394	29.312
#1	L-.00353	.00507	.00149	24.554	.00136	.00175	.00369
#2	-.00261	.00295	-.00109	24.447	-.00298	.00269	.00245
#3	L-.00444	.00259	-.00135	24.504	-.00284	.00164	.00216
Errors	LC Low	LC Pass	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass
High	10.000	10.000	10.000	500.00			10.000
Low	-.00300	-.00500	-.06000	-.20000			-.01000

Elem	Ba	Be	Cd	Ca	Cr	Co	Cu
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	H58.434	-.00012	.00162	319.35	.02271	.17413	.01753
SDev	.128	.00005	.00007	.63	.00045	.00016	.00037
%RSD	.21934	43.454	4.1869	.19611	1.9625	.09482	2.1134
#1	H58.560	-.00018	.00168	319.66	.02301	.17430	.01719
#2	H58.304	-.00012	.00164	318.63	.02292	.17397	.01793
#3	H58.437	-.00007	.00155	319.76	.02219	.17412	.01747
Errors	LC High	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.000	10.000	10.000	500.00	20.000	20.000	10.000
Low	-.05000	-.00500	-.00500	-5.0000	-.01000	-.05000	-.02500

Elem	Fe	Pb/1	Pb/2	Mg	Mn	K_	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	9.7763	.00203	-.00630	13.607	.65437	2.9254	.11147
SDev	.0178	.00276	.00032	.028	.00104	.0111	.00021
%RSD	.18230	135.58	5.1498	.20735	.15976	.38090	.18980
#1	9.7847	.00278	-.00667	13.626	.65519	2.9329	.11170
#2	9.7558	.00434	-.00608	13.575	.65319	2.9125	.11142
#3	9.7884	-.00102	-.00615	13.620	.65471	2.9307	.11128
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass
High	400.00			500.00	20.000	100.00	20.000
Low	-.10000			-5.0000	-.01500	-5.0000	-.04000

Elem	Se/1	Se/2	Ag	Na	Tl	V_	Zn
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00777	.00142	-.00009	11.278	-.00010	.01400	H25.338
SDev	.00270	.00257	.00031	.045	.00294	.00009	.059
%RSD	34.699	181.14	344.37	.39506	2835.3	.67258	.23456
#1	.00695	.00413	-.00018	11.300	-.00347	.01399	H25.390
#2	.01079	-.00097	.00026	11.307	.00198	.01409	H25.273
#3	.00559	.00109	-.00035	11.227	.00118	.01391	H25.352
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	LC High

High			2.0000	600.00	20.000	20.000	10.000
Low			-.01000	-5.0000	-.01000	-.05000	-.02000
Elem	B_	Mo	Li	Sr	Ti	Sn	Si
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.0505	.00047	.02470	.89323	4.9161	.29449	3.3265
SDev	.0035	.00020	.00007	.00211	.0108	.00223	.0106
%RSD	.33599	42.320	.28727	.23647	.21911	.75843	.31820
#1	1.0545	.00064	.02476	.89539	4.9259	.29654	3.3383
#2	1.0486	.00051	.02462	.89117	4.9045	.29211	3.3180
#3	1.0483	.00025	.02470	.89313	4.9180	.29483	3.3232
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.000	10.000	4.0000	10.000	10.000	10.000	10.000
Low	-.50000	-.04000	-.05000	-.05000	-.05000	-.10000	-.10000
IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	13358	--	--	--	--	--	--
SDev	48.66145	--	--	--	--	--	--
%RSD	.3642899	--	--	--	--	--	--
#1	13302	--	--	--	--	--	--
#2	13392	--	--	--	--	--	--
#3	13379	--	--	--	--	--	--

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Method: TRA10103 Sample Name: F6VMA Operator: KGS
Run Time: 12/22/03 16:20:06
Comment:
Mode: CONC Corr. Factor: 1

Elem	Pb	Se	Sb	Al	Sb\1	Sb\2	As
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	H628.20	L-.27852	L-.32647	25.983	-.34360	-.29215	1.0099
SDev	6.15	.00319	.00344	.242	.00190	.00676	.0088
%RSD	.97867	1.1440	1.0534	.93262	.55261	2.3140	.87076
#1	H635.23	L-.28201	L-.33043	26.263	-.34567	-.29991	1.0200
#2	H625.50	L-.27576	L-.32431	25.841	-.34194	-.28898	1.0040
#3	H623.86	L-.27780	L-.32466	25.845	-.34319	-.28755	1.0057
Errors	LC High	LC Low	LC Low	LC Pass	NOCHECK	NOCHECK	LC Pass
High	10.000	10.000	10.000	500.00			10.000
Low	-.00300	-.00500	-.06000	-.20000			-.01000

Elem	Ba	Be	Cd	Ca	Cr	Co	Cu
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.54984	-.00014	.70586	H682.16	H134.65	.90186	.14028
SDev	.00449	.00008	.00546	4.71	1.27	.00644	.00109
%RSD	.81562	55.627	.77367	.69011	.94586	.71446	.77500
#1	.55492	-.00023	.71193	H687.39	H136.10	.90909	.14153
#2	.54643	-.00008	.70135	H678.26	H133.72	.89673	.13970
#3	.54816	-.00011	.70430	H680.84	H134.12	.89976	.13961
Errors	LC Pass	LC Pass	LC Pass	LC High	LC High	LC Pass	LC Pass
High	10.000	10.000	10.000	500.00	20.000	20.000	10.000
Low	-.05000	-.00500	-.00500	-5.0000	-.01000	-.05000	-.02500

Elem	Fe	Pb/1	Pb/2	Mg	Mn	K_	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	19.054	S95.754	S57.181	51.016	1.4171	1.5326	.01525
SDev	.150	.748	.465	.351	.0110	.0262	.00045
%RSD	.78746	.78076	.81317	.68806	.77359	1.7105	2.9639
#1	19.222	S96.616	S57.718	51.412	1.4298	1.5628	.01577
#2	18.934	S95.357	S56.936	50.746	1.4099	1.5196	.01494
#3	19.007	S95.288	S56.891	50.888	1.4117	1.5155	.01505
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass
High	400.00			500.00	20.000	100.00	20.000
Low	-.10000			-5.0000	-.01500	-5.0000	-.04000

Elem	Se/1	Se/2	Ag	Na	Tl	V_	Zn
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.25462	-.29046	L-.11337	25.244	.06190	.08810	H36.180
SDev	.00590	.00260	.00083	.178	.00103	.00059	.191
%RSD	2.3159	.89527	.72854	.70508	1.6654	.67236	.52757
#1	-.26133	-.29233	L-.11430	25.356	.06141	.08875	H36.389
#2	-.25226	-.28749	L-.11311	25.039	.06121	.08760	H36.015
#3	-.25027	-.29155	L-.11271	25.336	.06308	.08795	H36.135
Errors	NOCHECK	NOCHECK	LC Low	LC Pass	LC Pass	LC Pass	LC High

High			2.0000	600.00	20.000	20.000	10.000
Low			-.01000	-5.0000	-.01000	-.05000	-.02000

Elem	B_	Mo	Li	Sr	Ti	Sn	Si
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.17130	L-.66010	.05146	.62974	9.7497	L-.27511	5.8645
SDev	.00140	.00666	.00047	.00631	.0894	.00516	.0487
%RSD	.82009	1.0092	.90472	1.0027	.91740	1.8765	.82968
#1	.17292	L-.66775	.05199	.63702	9.8530	L-.27819	5.9207
#2	.17041	L-.65695	.05125	.62647	9.6957	L-.27798	5.8360
#3	.17056	L-.65560	.05113	.62573	9.7006	L-.26915	5.8367
Errors	LC Pass	LC Low	LC Pass	LC Pass	LC Pass	LC Low	LC Pass
High	10.000	10.000	4.0000	10.000	10.000	10.000	10.000
Low	-.50000	-.04000	-.05000	-.05000	-.05000	-.10000	-.10000

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	13091	--	--	--	--	--	--
SDev	101.3949	--	--	--	--	--	--
%RSD	.7745274	--	--	--	--	--	--
#1	12974	--	--	--	--	--	--
#2	13145	--	--	--	--	--	--
#3	13154	--	--	--	--	--	--

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Method: TRA10103 Sample Name: F6VMD Operator: KGS
Run Time: 12/22/03 16:24:32
Comment:
Mode: CONC Corr. Factor: 1

Elem	Pb	Se	Sb	Al	Sb\1	Sb\2	As
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.19560	.00209	.00688	54.886	.00479	.01107	.00398
SDev	.00707	.00194	.00110	.086	.00204	.00186	.00037
%RSD	3.6151	92.866	15.943	.15648	42.681	16.759	9.3378
#1	.20336	.00054	.00655	54.984	.00323	.01320	.00403
#2	.19393	.00427	.00598	54.850	.00403	.00989	.00359
#3	.18952	.00146	.00810	54.824	.00710	.01010	.00433
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass
High	10.000	10.000	10.000	500.00			10.000
Low	-.00300	-.00500	-.06000	-.20000			-.01000

Elem	Ba	Be	Cd	Ca	Cr	Co	Cu
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	H72.908	.00024	.00215	H532.28	.03070	.23757	.03280
SDev	.206	.00003	.00005	1.40	.00159	.00124	.00029
%RSD	.28256	14.708	2.3290	.26279	5.1664	.52357	.87663
#1	H73.136	.00020	.00220	H533.82	.03225	.23872	.03304
#2	H72.855	.00025	.00210	H531.09	.03077	.23625	.03248
#3	H72.734	.00027	.00214	H531.93	.02908	.23775	.03287
Errors	LC High	LC Pass	LC Pass	LC High	LC Pass	LC Pass	LC Pass
High	10.000	10.000	10.000	500.00	20.000	20.000	10.000
Low	-.05000	-.00500	-.00500	-5.0000	-.01000	-.05000	-.02500

Elem	Fe	Pb/1	Pb/2	Mg	Mn	K_	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	22.537	.21005	.18839	24.436	.93888	3.9986	.02562
SDev	.081	.00949	.00644	.042	.00259	.0105	.00051
%RSD	.35920	4.5163	3.4173	.17073	.27591	.26347	1.9850
#1	22.629	.21848	.19582	24.476	.94186	4.0106	.02563
#2	22.478	.21191	.18495	24.393	.93760	3.9943	.02511
#3	22.502	.19978	.18440	24.439	.93717	3.9909	.02613
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass
High	400.00			500.00	20.000	100.00	20.000
Low	-.10000			-5.0000	-.01500	-5.0000	-.04000

Elem	Se/1	Se/2	Ag	Na	Tl	V_	Zn
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00076	.00351	-.00065	2.9546	.00165	.03695	H27.594
SDev	.00480	.00136	.00095	.1280	.00185	.00045	.112
%RSD	628.85	38.588	147.64	4.3339	111.94	1.2132	.40537
#1	-.00232	.00197	.00037	3.1022	.00345	.03726	H27.721
#2	.00462	.00409	-.00078	2.8882	-.00025	.03643	H27.512
#3	-.00459	.00449	-.00153	2.8733	.00177	.03715	H27.548
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	LC High

High			2.0000	600.00	20.000	20.000	10.000
Low			-.01000	-5.0000	-.01000	-.05000	-.02000
Elem	B_	Mo	Li	Sr	Ti	Sn	Si
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.35027	-.00038	.06209	.67011	9.4195	.49627	4.8396
SDev	.00218	.00108	.00006	.00143	.0245	.00505	.0067
%RSD	.62365	283.87	.09404	.21258	.25965	1.0170	.13758
#1	.35273	.00037	.06207	.67166	9.4474	.50081	4.8452
#2	.34857	-.00162	.06204	.66979	9.4091	.49083	4.8414
#3	.34949	.00011	.06216	.66887	9.4019	.49716	4.8322
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.000	10.000	4.0000	10.000	10.000	10.000	10.000
Low	-.50000	-.04000	-.05000	-.05000	-.05000	-.10000	-.10000
IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	13151	--	--	--	--	--	--
SDev	55.14393	--	--	--	--	--	--
%RSD	.4193143	--	--	--	--	--	--
#1	13091	--	--	--	--	--	--
#2	13163	--	--	--	--	--	--
#3	13199	--	--	--	--	--	--

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Method: TRA10103 Sample Name: F6RT9S Operator: KGS
Run Time: 12/22/03 16:28:59
Comment:
Mode: CONC Corr. Factor: 1

Elem	Pb	Se	Sb	Al	Sb\1	Sb\2	As
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.66679	1.8510	.23778	269.22	.23739	.23857	1.8616
SDev	.00503	.0172	.00445	1.37	.00546	.00320	.0066
%RSD	.75406	.93002	1.8719	.50815	2.3016	1.3426	.35589
#1	.67221	1.8707	.24246	270.60	.24349	.24038	1.8680
#2	.66228	1.8386	.23359	267.87	.23295	.23487	1.8548
#3	.66588	1.8437	.23730	269.18	.23572	.24046	1.8620
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass
High	10.000	10.000	10.000	500.00			10.000
Low	-.00300	-.00500	-.06000	-.20000			-.01000

Elem	Ba	Be	Cd	Ca	Cr	Co	Cu
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	4.2314	.05235	.04769	50.613	.44697	.49875	.25804
SDev	.0195	.00027	.00047	.352	.00408	.00405	.00155
%RSD	.46053	.51582	.97818	.69606	.91337	.81274	.60223
#1	4.2505	.05264	.04823	51.004	.45142	.50325	.25945
#2	4.2116	.05210	.04741	50.320	.44340	.49539	.25637
#3	4.2321	.05230	.04742	50.514	.44609	.49761	.25830
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.000	10.000	10.000	500.00	20.000	20.000	10.000
Low	-.05000	-.00500	-.00500	-5.0000	-.01000	-.05000	-.02500

Elem	Fe	Pb/1	Pb/2	Mg	Mn	K_	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	69.974	.70355	.64844	49.211	.53845	52.150	.52551
SDev	.477	.00358	.00622	.330	.00352	.204	.00426
%RSD	.68184	.50948	.95922	.67004	.65352	.39120	.81071
#1	70.497	.70570	.65549	49.570	.54232	52.346	.53003
#2	69.562	.69941	.64374	48.921	.53544	51.939	.52157
#3	69.863	.70554	.64608	49.142	.53758	52.165	.52492
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass
High	400.00			500.00	20.000	100.00	20.000
Low	-.10000			-5.0000	-.01500	-5.0000	-.04000

Elem	Se/1	Se/2	Ag	Na	Tl	V_	Zn
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.8293	1.8618	.04561	48.388	1.8914	.85155	.57773
SDev	.0199	.0165	.00076	.262	.0081	.00567	.00366
%RSD	1.0894	.88410	1.6551	.54109	.43087	.66559	.63299
#1	1.8503	1.8808	.04646	48.663	1.8931	.85776	.58183
#2	1.8106	1.8526	.04503	48.142	1.8826	.84665	.57481
#3	1.8270	1.8520	.04534	48.359	1.8986	.85023	.57656
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass

High			2.0000	600.00	20.000	20.000	10.000
Low			-.01000	-5.0000	-.01000	-.05000	-.02000
Elem	B_	Mo	Li	Sr	Ti	Sn	Si
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.91925	.88492	1.0343	2.8956	1.1358	1.9055	H26.042
SDev	.00372	.00514	.0041	.0149	.0064	.0183	.125
%RSD	.40422	.58045	.39366	.51416	.56231	.96274	.47870
#1	.92198	.89072	1.0377	2.9111	1.1427	1.9266	H26.152
#2	.91502	.88094	1.0298	2.8814	1.1301	1.8952	H25.907
#3	.92076	.88309	1.0355	2.8943	1.1346	1.8945	H26.068
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC High
High	10.000	10.000	4.0000	10.000	10.000	10.000	10.000
Low	-.50000	-.04000	-.05000	-.05000	-.05000	-.10000	-.10000
IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	13964	--	--	--	--	--	--
SDev	128.3125	--	--	--	--	--	--
%RSD	.9188628	--	--	--	--	--	--
#1	13820	--	--	--	--	--	--
#2	14065	--	--	--	--	--	--
#3	14009	--	--	--	--	--	--

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Method: TRA10103 Sample Name: F6RT9D Operator: KGS
Run Time: 12/22/03 16:33:25
Comment:
Mode: CONC Corr. Factor: 1

Elem	Pb	Se	Sb	Al	Sb\1	Sb\2	As
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.69201	1.8555	.25011	251.06	.24789	.25455	1.8604
SDev	.00433	.0073	.00214	.68	.00275	.00122	.0032
%RSD	.62544	.39302	.85443	.27215	1.1077	.48097	.17057
#1	.68716	1.8489	.24771	250.27	.24494	.25326	1.8576
#2	.69340	1.8633	.25082	251.48	.24838	.25570	1.8596
#3	.69547	1.8543	.25180	251.43	.25036	.25469	1.8638
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass
High	10.000	10.000	10.000	500.00			10.000
Low	-.00300	-.00500	-.06000	-.20000			-.01000

Elem	Ba	Be	Cd	Ca	Cr	Co	Cu
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	4.0084	.05212	.04801	51.299	.42909	.49915	.25540
SDev	.0107	.00010	.00014	.082	.00052	.00074	.00054
%RSD	.26664	.19962	.28352	.15938	.12174	.14743	.21152
#1	3.9964	.05200	.04790	51.205	.42851	.49830	.25480
#2	4.0169	.05221	.04797	51.336	.42953	.49953	.25583
#3	4.0120	.05214	.04816	51.355	.42922	.49962	.25557
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.000	10.000	10.000	500.00	20.000	20.000	10.000
Low	-.05000	-.00500	-.00500	-5.0000	-.01000	-.05000	-.02500

Elem	Fe	Pb/1	Pb/2	Mg	Mn	K_	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	54.584	.72620	.67494	49.409	.54612	52.079	.52334
SDev	.121	.00229	.00551	.110	.00101	.113	.00054
%RSD	.22105	.31513	.81606	.22344	.18552	.21698	.10395
#1	54.446	.72364	.66895	49.282	.54495	51.949	.52327
#2	54.642	.72804	.67610	49.462	.54679	52.150	.52391
#3	54.665	.72691	.67978	49.483	.54661	52.139	.52283
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass
High	400.00			500.00	20.000	100.00	20.000
Low	-.10000			-5.0000	-.01500	-5.0000	-.04000

Elem	Se/1	Se/2	Ag	Na	Tl	V_	Zn
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.8357	1.8654	.04572	48.193	1.8937	.76281	.58569
SDev	.0125	.0048	.00046	.045	.0057	.00189	.00178
%RSD	.67838	.25467	1.0065	.09326	.30011	.24825	.30377
#1	1.8250	1.8608	.04622	48.142	1.8871	.76062	.58390
#2	1.8493	1.8703	.04564	48.214	1.8969	.76392	.58571
#3	1.8327	1.8652	.04531	48.224	1.8970	.76388	.58746
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass

High			2.0000	600.00	20.000	20.000	10.000
Low			-.01000	-5.0000	-.01000	-.05000	-.02000
Elem	B_	Mo	Li	Sr	Ti	Sn	Si
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.92338	.89788	1.0310	2.6998	1.1499	1.9168	H21.940
SDev	.00309	.00221	.0043	.0056	.0027	.0033	.065
%RSD	.33496	.24621	.41292	.20673	.23197	.17132	.29646
#1	.92005	.89560	1.0261	2.6936	1.1468	1.9132	H21.866
#2	.92616	.89804	1.0331	2.7043	1.1515	1.9195	H21.971
#3	.92395	.90001	1.0337	2.7015	1.1513	1.9178	H21.984
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC High
High	10.000	10.000	4.0000	10.000	10.000	10.000	10.000
Low	-.50000	-.04000	-.05000	-.05000	-.05000	-.10000	-.10000
IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	13969	--	--	--	--	--	--
SDev	17.48249	--	--	--	--	--	--
%RSD	.1251563	--	--	--	--	--	--
#1	13989	--	--	--	--	--	--
#2	13956	--	--	--	--	--	--
#3	13961	--	--	--	--	--	--

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Method: TRA10103 Sample Name: F6RVK Operator: KGS
Run Time: 12/22/03 16:37:50
Comment:
Mode: CONC Corr. Factor: 1

Elem	Pb	Se	Sb	Al	Sb\1	Sb\2	As
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.06485	.00241	.00214	40.276	.00239	.00162	.00878
SDev	.00075	.00039	.00140	.498	.00303	.00214	.00156
%RSD	1.1628	16.325	65.516	1.2354	126.44	132.21	17.775
#1	.06554	.00242	.00375	40.704	.00580	-.00035	.00925
#2	.06496	.00279	.00134	40.393	.00136	.00132	.01005
#3	.06404	.00201	.00131	39.730	.00002	.00390	.00704
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass
High	10.000	10.000	10.000	500.00			10.000
Low	-.00300	-.00500	-.06000	-.20000			-.01000

Elem	Ba	Be	Cd	Ca	Cr	Co	Cu
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.54955	.00173	-.00103	2.0494	.08056	.00205	.00861
SDev	.00739	.00012	.00018	.0252	.00054	.00018	.00034
%RSD	1.3447	6.7824	17.517	1.2294	.67212	8.9734	3.9078
#1	.55575	.00160	-.00119	2.0718	.08099	.00226	.00896
#2	.55152	.00175	-.00107	2.0543	.08075	.00200	.00857
#3	.54137	.00183	-.00083	2.0221	.07995	.00190	.00829
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.000	10.000	10.000	500.00	20.000	20.000	10.000
Low	-.05000	-.00500	-.00500	-5.0000	-.01000	-.05000	-.02500

Elem	Fe	Pb/1	Pb/2	Mg	Mn	K_	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	43.421	.07078	.06188	.83813	.02481	.02176	.01000
SDev	.542	.00320	.00262	.01048	.00048	.00272	.00064
%RSD	1.2473	4.5148	4.2337	1.2506	1.9236	12.500	6.4330
#1	43.900	.06710	.06476	.84824	.02500	.02459	.00966
#2	43.530	.07234	.06128	.83886	.02517	.02152	.00960
#3	42.833	.07289	.05962	.82731	.02427	.01917	.01074
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass
High	400.00			500.00	20.000	100.00	20.000
Low	-.10000			-5.0000	-.01500	-5.0000	-.04000

Elem	Se/1	Se/2	Ag	Na	Tl	V_	Zn
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00062	.00330	-.00070	-.39620	.00342	.28821	.01597
SDev	.00430	.00203	.00076	.15832	.00123	.00396	.00034
%RSD	691.08	61.492	107.89	39.961	35.894	1.3756	2.0957
#1	-.00400	.00563	-.00158	-.57721	.00478	.29216	.01633
#2	.00450	.00194	-.00032	-.28345	.00310	.28826	.01590
#3	.00137	.00233	-.00021	-.32794	.00239	.28423	.01567
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass

High			2.0000	600.00	20.000	20.000	10.000
Low			-.01000	-5.0000	-.01000	-.05000	-.02000
Elem	B_	Mo	Li	Sr	Ti	Sn	Si
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00484	.00120	.00339	.53930	.19874	.01671	H11.040
SDev	.00021	.00054	.00006	.00702	.00241	.00144	.151
%RSD	4.4000	45.307	1.7142	1.3009	1.2128	8.6310	1.3643
#1	.00477	.00177	.00344	.54518	.20075	.01544	H11.178
#2	.00467	.00116	.00341	.54118	.19939	.01828	H11.062
#3	.00508	.00068	.00333	.53153	.19607	.01643	H10.879
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC High
High	10.000	10.000	4.0000	10.000	10.000	10.000	10.000
Low	-.50000	-.04000	-.05000	-.05000	-.05000	-.10000	-.10000
IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	14565	--	--	--	--	--	--
SDev	214.0476	--	--	--	--	--	--
%RSD	1.469617	--	--	--	--	--	--
#1	14348	--	--	--	--	--	--
#2	14570	--	--	--	--	--	--
#3	14776	--	--	--	--	--	--

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Method: TRA10103 Sample Name: F6RT9P5 Operator: KGS
Run Time: 12/22/03 16:42:16
Comment:
Mode: CONC Corr. Factor: 1

Elem	Pb	Se	Sb	Al	Sb\1	Sb\2	As
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.01793	.00077	.00061	10.255	.00067	.00049	.00231
SDev	.00054	.00096	.00030	.044	.00069	.00068	.00059
%RSD	3.0243	124.74	49.582	.43080	102.54	138.01	25.617
#1	.01745	.00062	.00085	10.306	.00090	.00073	.00294
#2	.01852	-.00011	.00072	10.228	.00122	-.00027	.00223
#3	.01783	.00179	.00027	10.231	-.00010	.00101	.00177
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass
High	10.000	10.000	10.000	500.00			10.000
Low	-.00300	-.00500	-.06000	-.20000			-.01000

Elem	Ba	Be	Cd	Ca	Cr	Co	Cu
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.06991	.00031	-.00021	.35186	.01723	.00050	.00051
SDev	.00036	.00006	.00017	.00345	.00031	.00030	.00037
%RSD	.51800	19.698	82.884	.97934	1.7772	59.234	72.390
#1	.07006	.00024	-.00028	.34935	.01688	.00017	.00008
#2	.06950	.00034	-.00001	.35044	.01739	.00059	.00072
#3	.07018	.00034	-.00033	.35579	.01742	.00075	.00072
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.000	10.000	10.000	500.00	20.000	20.000	10.000
Low	-.05000	-.00500	-.00500	-5.0000	-.01000	-.05000	-.02500

Elem	Fe	Pb/1	Pb/2	Mg	Mn	K_	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	8.4578	.01974	.01703	.12205	.00893	.00228	.00146
SDev	.0153	.00353	.00169	.00203	.00018	.00023	.00023
%RSD	.18069	17.893	9.9157	1.6661	2.0512	10.218	15.762
#1	8.4751	.02118	.01559	.11978	.00906	.00201	.00128
#2	8.4522	.02233	.01662	.12268	.00900	.00238	.00172
#3	8.4461	.01572	.01889	.12370	.00872	.00245	.00138
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass
High	400.00			500.00	20.000	100.00	20.000
Low	-.10000			-5.0000	-.01500	-5.0000	-.04000

Elem	Se/1	Se/2	Ag	Na	Tl	V_	Zn
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00037	.00096	.00003	-.42250	.00171	.04828	.00864
SDev	.00195	.00222	.00035	.07051	.00096	.00067	.00073
%RSD	522.71	230.71	1132.6	16.690	56.143	1.3917	8.4198
#1	-.00103	.00145	-.00015	-.43661	.00097	.04751	.00814
#2	.00260	-.00146	.00043	-.34600	.00136	.04855	.00831
#3	-.00045	.00291	-.00020	-.48490	.00280	.04877	.00947
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass

High			2.0000	600.00	20.000	20.000	10.000
Low			-.01000	-5.0000	-.01000	-.05000	-.02000
Elem	B_	Mo	Li	Sr	Ti	Sn	Si
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00095	.00087	.00152	.06079	.07344	.00676	2.8163
SDev	.00068	.00089	.00002	.00027	.00059	.00048	.0149
%RSD	71.772	102.82	1.3603	.45075	.80738	7.1136	.52776
#1	.00035	-.00010	.00150	.06110	.07308	.00650	2.8332
#2	.00169	.00166	.00154	.06065	.07413	.00731	2.8106
#3	.00081	.00104	.00151	.06061	.07312	.00646	2.8051
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.000	10.000	4.0000	10.000	10.000	10.000	10.000
Low	-.50000	-.04000	-.05000	-.05000	-.05000	-.10000	-.10000
IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	13943	--	--	--	--	--	--
SDev	50.48533	--	--	--	--	--	--
%RSD	.3620853	--	--	--	--	--	--
#1	13885	--	--	--	--	--	--
#2	13975	--	--	--	--	--	--
#3	13969	--	--	--	--	--	--

Analysis Report 12/22/03 04:51:04 PM page 1

Method: TRA10103 Sample Name: F6VL5Z20 Operator: KGS
Run Time: 12/22/03 16:46:41
Comment:
Mode: CONC Corr. Factor: 1

Elem	Pb	Se	Sb	Al	Sb\1	Sb\2	As
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00188	-.00057	.00039	1.2437	.00020	.00078	.00062
SDev	.00071	.00080	.00031	.0084	.00063	.00206	.00098
%RSD	37.536	140.93	80.007	.67887	320.33	263.68	157.35
#1	.00191	-.00037	.00019	1.2447	.00090	-.00123	.00176
#2	.00257	.00011	.00075	1.2516	-.00032	.00289	.00002
#3	.00116	-.00146	.00023	1.2348	.00001	.00068	.00009
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass
High	10.000	10.000	10.000	500.00			10.000
Low	-.00300	-.00500	-.06000	-.20000			-.01000

Elem	Ba	Be	Cd	Ca	Cr	Co	Cu
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	3.6174	.00001	.00016	16.358	.00139	.00941	-.00101
SDev	.0207	.00005	.00017	.078	.00020	.00046	.00009
%RSD	.57237	410.61	106.44	.47536	14.702	4.9073	9.0886
#1	3.6001	.00000	.00008	16.270	.00130	.00995	-.00092
#2	3.6404	-.00003	.00035	16.418	.00162	.00917	-.00102
#3	3.6117	.00007	.00004	16.385	.00124	.00912	-.00110
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.000	10.000	10.000	500.00	20.000	20.000	10.000
Low	-.05000	-.00500	-.00500	-5.0000	-.01000	-.05000	-.02500

Elem	Fe	Pb/1	Pb/2	Mg	Mn	K_	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.51980	.00185	.00189	.70130	.03379	.01781	.00515
SDev	.00185	.00338	.00187	.00473	.00033	.00092	.00044
%RSD	.35559	182.21	98.742	.67436	.98356	5.1889	8.6016
#1	.51890	-.00199	.00386	.70219	.03342	.01678	.00544
#2	.51857	.00434	.00169	.70553	.03393	.01810	.00537
#3	.52192	.00322	.00013	.69620	.03404	.01856	.00464
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass
High	400.00			500.00	20.000	100.00	20.000
Low	-.10000			-5.0000	-.01500	-5.0000	-.04000

Elem	Se/1	Se/2	Ag	Na	Tl	V_	Zn
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00160	-.00165	-.00002	.18464	.00131	.00085	2.6243
SDev	.00435	.00160	.00023	.04103	.00120	.00059	.0123
%RSD	272.63	96.835	1169.2	22.221	91.461	69.735	.46688
#1	-.00120	.00005	-.00028	.15734	.00077	.00137	2.6112
#2	.00661	-.00313	.00007	.23182	.00268	.00099	2.6355
#3	-.00062	-.00187	.00015	.16476	.00047	.00020	2.6263
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass

High			2.0000	600.00	20.000	20.000	10.000
Low			-.01000	-5.0000	-.01000	-.05000	-.02000
Elem	B_	Mo	Li	Sr	Ti	Sn	Si
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.05051	.00019	.00098	.04461	.24910	.01713	.16285
SDev	.00092	.00065	.00004	.00032	.00148	.00157	.00562
%RSD	1.8129	332.19	4.2431	.72466	.59338	9.1884	3.4493
#1	.04954	-.00035	.00102	.04438	.24766	.01702	.16286
#2	.05136	.00091	.00100	.04498	.25061	.01562	.16845
#3	.05064	.00003	.00094	.04449	.24901	.01876	.15722
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.000	10.000	4.0000	10.000	10.000	10.000	10.000
Low	-.50000	-.04000	-.05000	-.05000	-.05000	-.10000	-.10000
IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	13825	--	--	--	--	--	--
SDev	49.27555	--	--	--	--	--	--
%RSD	.3564231	--	--	--	--	--	--
#1	13861	--	--	--	--	--	--
#2	13769	--	--	--	--	--	--
#3	13845	--	--	--	--	--	--

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Method: TRA10103 Sample Name: F6VMAZ100 Operator: KGS
Run Time: 12/22/03 16:51:07
Comment:
Mode: CONC Corr. Factor: 1

Elem	Pb	Se	Sb	Al	Sb\1	Sb\2	As
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.01050	-.00054	.00086	2.7580	.00026	.00205	.00027
SDev	.00094	.00178	.00213	.0121	.00344	.00049	.00067
%RSD	8.9849	326.83	249.07	.43874	1325.2	23.981	249.92
#1	.00954	-.00140	.00267	2.7446	.00320	.00162	.00096
#2	.01053	-.00173	-.00149	2.7612	-.00353	.00259	-.00038
#3	.01143	.00150	.00139	2.7682	.00111	.00195	.00023
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass
High	10.000	10.000	10.000	500.00			10.000
Low	-.00300	-.00500	-.06000	-.20000			-.01000

Elem	Ba	Be	Cd	Ca	Cr	Co	Cu
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	4.8237	.00029	.00007	27.983	.00117	.01243	-.00031
SDev	.0224	.00002	.00015	.177	.00024	.00038	.00029
%RSD	.46497	7.7245	204.27	.63347	20.814	3.0700	95.662
#1	4.7998	.00031	.00013	27.778	.00123	.01240	-.00009
#2	4.8271	.00031	.00018	28.087	.00139	.01206	-.00019
#3	4.8443	.00027	-.00009	28.083	.00091	.01282	-.00064
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.000	10.000	10.000	500.00	20.000	20.000	10.000
Low	-.05000	-.00500	-.00500	-5.0000	-.01000	-.05000	-.02500

Elem	Fe	Pb/1	Pb/2	Mg	Mn	K_	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.1735	.01195	.00978	1.2566	.04862	.02639	.00017
SDev	.0061	.00296	.00079	.0075	.00037	.00157	.00069
%RSD	.51892	24.805	8.0743	.59926	.75205	5.9627	420.73
#1	1.1803	.00853	.01005	1.2491	.04820	.02464	-.00057
#2	1.1685	.01382	.00889	1.2565	.04879	.02769	.00082
#3	1.1717	.01349	.01040	1.2642	.04887	.02685	.00025
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass
High	400.00			500.00	20.000	100.00	20.000
Low	-.10000			-5.0000	-.01500	-5.0000	-.04000

Elem	Se/1	Se/2	Ag	Na	Tl	V_	Zn
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00091	-.00127	-.00026	-.37050	-.00141	.00103	3.8058
SDev	.00393	.00308	.00019	.07586	.00070	.00029	.0218
%RSD	434.09	243.19	70.894	20.475	50.000	27.987	.57219
#1	-.00345	-.00037	-.00048	-.45563	-.00215	.00135	3.7808
#2	.00420	-.00470	-.00017	-.34583	-.00075	.00078	3.8163
#3	.00196	.00127	-.00014	-.31005	-.00132	.00097	3.8203
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass

High			2.0000	600.00	20.000	20.000	10.000
Low			-.01000	-5.0000	-.01000	-.05000	-.02000
Elem	B_	Mo	Li	Sr	Ti	Sn	Si
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.01511	-.00018	.00262	.03332	.48584	.02877	.23386
SDev	.00035	.00076	.00004	.00019	.00266	.00110	.00065
%RSD	2.2921	432.99	1.6362	.56814	.54825	3.8061	.27777
#1	.01504	-.00009	.00260	.03313	.48279	.02998	.23423
#2	.01481	.00053	.00267	.03333	.48697	.02846	.23423
#3	.01549	-.00097	.00260	.03351	.48774	.02786	.23311
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.000	10.000	4.0000	10.000	10.000	10.000	10.000
Low	-.50000	-.04000	-.05000	-.05000	-.05000	-.10000	-.10000
IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	13958	--	--	--	--	--	--
SDev	57.77932	--	--	--	--	--	--
%RSD	.4139517	--	--	--	--	--	--
#1	14023	--	--	--	--	--	--
#2	13936	--	--	--	--	--	--
#3	13914	--	--	--	--	--	--

AutoSampler Report Table: KRYSTYNA 12/22/03 05:06:22 PM page 1

Table Name: KRYSTYNA Autosampler Type: TYPE TJA
Sample Positions: 0/192 QC Positions: 11/19 # Sets: 1
Rinse Station location is rack -1, pos. -1.

--- Racks ---

Rack #	Type	Usage	#Pos Left	Analyses/Pos
1	Aux. (L) Rack	STD/QC/BLANK	11	10
2	Sample (16mm)	Samples	0	1
3	Sample (16mm)	Samples	0	1
4	Sample (16mm)	Samples	0	1
5	Sample (16mm)	Samples	0	1

--- Sample Sets ---

Set#	Type	Prepare?	Description	Method	#Pos	Rack#	StartPos
1	Normal	No		TRA10103	192	2	1

--- Preparation Info ---

Set#	Uptake	Uptake#2	Final	Dil.Factor

No Samples Prepared.

Rack #1

Pos	Row	Col	Sample Name	Set #	#Used	Type
1	1	1	S0	-NA-	1	Standard
2	1	2	S1	-NA-	1	Standard
3	1	3	S2	-NA-	1	QC Standard
4	1	4	ICV	-NA-	1	QC Standard
5	1	5	CCV1	-NA-	1	QC Standard
6	1	6	CCV2	-NA-	1	QC Standard
7	1	7	CCV3	-NA-	1	QC Standard
8	1	8	CCV4	-NA-	1	QC Standard

(9...19 Not Used)

Rack #2

Pos	Row	Col	Sample Name	Set #	#Used	Type
1	1	1	ICB	1	-NA-	Sample
2	1	2	CRI1	1	-NA-	Sample
3	1	3	ICSA1	1	-NA-	Sample
4	1	4	ICSAB1	1	-NA-	Sample
5	1	5	CCB1	1	-NA-	Sample
6	1	6	F6DRGFZ10	1	-NA-	Sample
7	1	7	F6DRGZ10	1	-NA-	Sample
8	1	8	F6F1CFZ20	1	-NA-	Sample
9	1	9	F6F1CZ20	1	-NA-	Sample
10	1	10	F6JX2S	1	-NA-	Sample
11	1	11	F6JX2D	1	-NA-	Sample
12	1	12	F6J0AF	1	-NA-	Sample
13	2	1	F6J0A	1	-NA-	Sample

AutoSampler Report Table: KRYSTYNA 12/22/03 05:06:22 PM page 2

Rack #2

Pos	Row	Col	Sample Name	Set #	#Used	Type
14	2	2	F6RVR	1	-NA-	Sample
15	2	3	F6RT9	1	-NA-	Sample
16	2	4	CCB2	1	-NA-	Sample
17	2	5	F6VL5	1	-NA-	Sample
18	2	6	F6VMA	1	-NA-	Sample
19	2	7	F6VMD	1	-NA-	Sample
20	2	8	F6RT9S	1	-NA-	Sample
21	2	9	F6RT9D	1	-NA-	Sample
22	2	10	F6RVK	1	-NA-	Sample
23	2	11	F6RT9P5	1	-NA-	Sample
24	2	12	F6VL5Z20	1	-NA-	Sample
25	3	1	F6VMAZ100	1	-NA-	Sample
26	3	2	F6VMDZ20	1	-NA-	Sample
27	3	3	CCB3	1	-NA-	Sample
28	3	4	F6VMAZ100	1	-NA-	Sample
29	3	5	F6VMA500	1	-NA-	Sample
30	3	6	CCB4	1	-NA-	Sample
31	3	7		1	-NA-	Sample
32	3	8	(empty)	1	-NA-	-NA-
33	3	9	(empty)	1	-NA-	-NA-
34	3	10	(empty)	1	-NA-	-NA-
35	3	11	(empty)	1	-NA-	-NA-
36	3	12	(empty)	1	-NA-	-NA-
37	4	1	(empty)	1	-NA-	-NA-
38	4	2	(empty)	1	-NA-	-NA-
39	4	3	(empty)	1	-NA-	-NA-
40	4	4	(empty)	1	-NA-	-NA-
41	4	5	(empty)	1	-NA-	-NA-
42	4	6	(empty)	1	-NA-	-NA-
43	4	7	(empty)	1	-NA-	-NA-
44	4	8	(empty)	1	-NA-	-NA-
45	4	9	(empty)	1	-NA-	-NA-
46	4	10	(empty)	1	-NA-	-NA-
47	4	11	(empty)	1	-NA-	-NA-
48	4	12	(empty)	1	-NA-	-NA-

Rack #3

Pos	Row	Col	Sample Name	Set #	#Used	Type
1	1	1	(empty)	1	-NA-	-NA-
2	1	2	(empty)	1	-NA-	-NA-
3	1	3	(empty)	1	-NA-	-NA-
4	1	4	(empty)	1	-NA-	-NA-
5	1	5	(empty)	1	-NA-	-NA-
6	1	6	(empty)	1	-NA-	-NA-
7	1	7	(empty)	1	-NA-	-NA-
8	1	8	(empty)	1	-NA-	-NA-
9	1	9	(empty)	1	-NA-	-NA-
10	1	10	(empty)	1	-NA-	-NA-
11	1	11	(empty)	1	-NA-	-NA-
12	1	12	(empty)	1	-NA-	-NA-
13	2	1	(empty)	1	-NA-	-NA-

AutoSampler Report Table: KRYSTYNA 12/22/03 05:06:22 PM page 3

Rack #3

Pos	Row	Col	Sample Name	Set #	#Used	Type
14	2	2	(empty)	1	-NA-	-NA-
15	2	3	(empty)	1	-NA-	-NA-
16	2	4	(empty)	1	-NA-	-NA-
17	2	5	(empty)	1	-NA-	-NA-
18	2	6	(empty)	1	-NA-	-NA-
19	2	7	(empty)	1	-NA-	-NA-
20	2	8	(empty)	1	-NA-	-NA-
21	2	9	(empty)	1	-NA-	-NA-
22	2	10	(empty)	1	-NA-	-NA-
23	2	11	(empty)	1	-NA-	-NA-
24	2	12	(empty)	1	-NA-	-NA-
25	3	1	(empty)	1	-NA-	-NA-
26	3	2	(empty)	1	-NA-	-NA-
27	3	3	(empty)	1	-NA-	-NA-
28	3	4	(empty)	1	-NA-	-NA-
29	3	5	(empty)	1	-NA-	-NA-
30	3	6	(empty)	1	-NA-	-NA-
31	3	7	(empty)	1	-NA-	-NA-
32	3	8	(empty)	1	-NA-	-NA-
33	3	9	(empty)	1	-NA-	-NA-
34	3	10	(empty)	1	-NA-	-NA-
35	3	11	(empty)	1	-NA-	-NA-
36	3	12	(empty)	1	-NA-	-NA-
37	4	1	(empty)	1	-NA-	-NA-
38	4	2	(empty)	1	-NA-	-NA-
39	4	3	(empty)	1	-NA-	-NA-
40	4	4	(empty)	1	-NA-	-NA-
41	4	5	(empty)	1	-NA-	-NA-
42	4	6	(empty)	1	-NA-	-NA-
43	4	7	(empty)	1	-NA-	-NA-
44	4	8	(empty)	1	-NA-	-NA-
45	4	9	(empty)	1	-NA-	-NA-
46	4	10	(empty)	1	-NA-	-NA-
47	4	11	(empty)	1	-NA-	-NA-
48	4	12	(empty)	1	-NA-	-NA-

Rack #4

Pos	Row	Col	Sample Name	Set #	#Used	Type
1	1	1	(empty)	1	-NA-	-NA-
2	1	2	(empty)	1	-NA-	-NA-
3	1	3	(empty)	1	-NA-	-NA-
4	1	4	(empty)	1	-NA-	-NA-
5	1	5	(empty)	1	-NA-	-NA-
6	1	6	(empty)	1	-NA-	-NA-
7	1	7	(empty)	1	-NA-	-NA-
8	1	8	(empty)	1	-NA-	-NA-
9	1	9	(empty)	1	-NA-	-NA-
10	1	10	(empty)	1	-NA-	-NA-
11	1	11	(empty)	1	-NA-	-NA-
12	1	12	(empty)	1	-NA-	-NA-
13	2	1	(empty)	1	-NA-	-NA-

AutoSampler Report Table: KRYSTYNA 12/22/03 05:06:22 PM page 4

Rack #4

Pos	Row	Col	Sample Name	Set #	#Used	Type
14	2	2	(empty)	1	-NA-	-NA-
15	2	3	(empty)	1	-NA-	-NA-
16	2	4	(empty)	1	-NA-	-NA-
17	2	5	(empty)	1	-NA-	-NA-
18	2	6	(empty)	1	-NA-	-NA-
19	2	7	(empty)	1	-NA-	-NA-
20	2	8	(empty)	1	-NA-	-NA-
21	2	9	(empty)	1	-NA-	-NA-
22	2	10	(empty)	1	-NA-	-NA-
23	2	11	(empty)	1	-NA-	-NA-
24	2	12	(empty)	1	-NA-	-NA-
25	3	1	(empty)	1	-NA-	-NA-
26	3	2	(empty)	1	-NA-	-NA-
27	3	3	(empty)	1	-NA-	-NA-
28	3	4	(empty)	1	-NA-	-NA-
29	3	5	(empty)	1	-NA-	-NA-
30	3	6	(empty)	1	-NA-	-NA-
31	3	7	(empty)	1	-NA-	-NA-
32	3	8	(empty)	1	-NA-	-NA-
33	3	9	(empty)	1	-NA-	-NA-
34	3	10	(empty)	1	-NA-	-NA-
35	3	11	(empty)	1	-NA-	-NA-
36	3	12	(empty)	1	-NA-	-NA-
37	4	1	(empty)	1	-NA-	-NA-
38	4	2	(empty)	1	-NA-	-NA-
39	4	3	(empty)	1	-NA-	-NA-
40	4	4	(empty)	1	-NA-	-NA-
41	4	5	(empty)	1	-NA-	-NA-
42	4	6	(empty)	1	-NA-	-NA-
43	4	7	(empty)	1	-NA-	-NA-
44	4	8	(empty)	1	-NA-	-NA-
45	4	9	(empty)	1	-NA-	-NA-
46	4	10	(empty)	1	-NA-	-NA-
47	4	11	(empty)	1	-NA-	-NA-
48	4	12	(empty)	1	-NA-	-NA-

Rack #5

Pos	Row	Col	Sample Name	Set #	#Used	Type
1	1	1	(empty)	1	-NA-	-NA-
2	1	2	(empty)	1	-NA-	-NA-
3	1	3	(empty)	1	-NA-	-NA-
4	1	4	(empty)	1	-NA-	-NA-
5	1	5	(empty)	1	-NA-	-NA-
6	1	6	(empty)	1	-NA-	-NA-
7	1	7	(empty)	1	-NA-	-NA-
8	1	8	(empty)	1	-NA-	-NA-
9	1	9	(empty)	1	-NA-	-NA-
10	1	10	(empty)	1	-NA-	-NA-
11	1	11	(empty)	1	-NA-	-NA-
12	1	12	(empty)	1	-NA-	-NA-
13	2	1	(empty)	1	-NA-	-NA-

AutoSampler Report Table: KRYSTYNA 12/22/03 05:06:22 PM page 5

Rack #5

Pos	Row	Col	Sample Name	Set #	#Used	Type
14	2	2	(empty)	1	-NA-	-NA-
15	2	3	(empty)	1	-NA-	-NA-
16	2	4	(empty)	1	-NA-	-NA-
17	2	5	(empty)	1	-NA-	-NA-
18	2	6	(empty)	1	-NA-	-NA-
19	2	7	(empty)	1	-NA-	-NA-
20	2	8	(empty)	1	-NA-	-NA-
21	2	9	(empty)	1	-NA-	-NA-
22	2	10	(empty)	1	-NA-	-NA-
23	2	11	(empty)	1	-NA-	-NA-
24	2	12	(empty)	1	-NA-	-NA-
25	3	1	(empty)	1	-NA-	-NA-
26	3	2	(empty)	1	-NA-	-NA-
27	3	3	(empty)	1	-NA-	-NA-
28	3	4	(empty)	1	-NA-	-NA-
29	3	5	(empty)	1	-NA-	-NA-
30	3	6	(empty)	1	-NA-	-NA-
31	3	7	(empty)	1	-NA-	-NA-
32	3	8	(empty)	1	-NA-	-NA-
33	3	9	(empty)	1	-NA-	-NA-
34	3	10	(empty)	1	-NA-	-NA-
35	3	11	(empty)	1	-NA-	-NA-
36	3	12	(empty)	1	-NA-	-NA-
37	4	1	(empty)	1	-NA-	-NA-
38	4	2	(empty)	1	-NA-	-NA-
39	4	3	(empty)	1	-NA-	-NA-
40	4	4	(empty)	1	-NA-	-NA-
41	4	5	(empty)	1	-NA-	-NA-
42	4	6	(empty)	1	-NA-	-NA-
43	4	7	(empty)	1	-NA-	-NA-
44	4	8	(empty)	1	-NA-	-NA-
45	4	9	(empty)	1	-NA-	-NA-
46	4	10	(empty)	1	-NA-	-NA-
47	4	11	(empty)	1	-NA-	-NA-
48	4	12	(empty)	1	-NA-	-NA-

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Method: TRA10103 Sample Name: F6VMDZ20 Operator: KGS
Run Time: 12/22/03 17:06:47
Comment:
Mode: CONC Corr. Factor: 1

Elem	Pb	Se	Sb	Al	Sb\1	Sb\2	As
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.42275	-.00035	.00207	.03428	.00231	.00158	.00052
SDev	.00424	.00144	.00020	.00148	.00168	.00304	.00121
%RSD	1.0042	416.20	9.8315	4.3269	72.565	192.31	235.07
#1	.41814	.00032	.00214	.03259	.00417	-.00190	-.00088
#2	.42649	-.00200	.00184	.03488	.00090	.00371	.00109
#3	.42363	.00064	.00222	.03537	.00186	.00294	.00133
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass
High	10.000	10.000	10.000	500.00			10.000
Low	-.00300	-.00500	-.06000	-.20000			-.01000

Elem	Ba	Be	Cd	Ca	Cr	Co	Cu
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00029	.00040	.00028	.36933	.06271	.00072	-.00208
SDev	.00003	.00001	.00015	.00350	.00086	.00025	.00030
%RSD	9.1591	2.9577	52.372	.94666	1.3674	34.411	14.277
#1	.00030	.00041	.00018	.36532	.06174	.00072	-.00243
#2	.00026	.00041	.00020	.37089	.06303	.00047	-.00191
#3	.00031	.00039	.00045	.37177	.06337	.00097	-.00191
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.000	10.000	10.000	500.00	20.000	20.000	10.000
Low	-.05000	-.00500	-.00500	-5.0000	-.01000	-.05000	-.02500

Elem	Fe	Pb/1	Pb/2	Mg	Mn	K_	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.02090	.42776	.42025	.02948	.00087	.00022	-.00110
SDev	.00428	.00688	.00317	.00052	.00017	.00019	.00063
%RSD	20.458	1.6089	.75538	1.7515	19.815	86.607	57.257
#1	.01624	.41984	.41729	.02935	.00067	.00000	-.00045
#2	.02465	.43227	.42360	.03005	.00097	.00032	-.00113
#3	.02181	.43116	.41987	.02904	.00097	.00033	-.00171
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass
High	400.00			500.00	20.000	100.00	20.000
Low	-.10000			-5.0000	-.01500	-5.0000	-.04000

Elem	Se/1	Se/2	Ag	Na	Tl	V_	Zn
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00051	-.00027	-.00050	-.44583	.00269	.00013	.30245
SDev	.00471	.00306	.00081	.10239	.00159	.00022	.00260
%RSD	931.94	1147.7	161.37	22.966	59.137	167.31	.85824
#1	-.00529	.00312	-.00144	-.55856	.00295	.00000	.29946
#2	-.00036	-.00282	-.00010	-.35860	.00413	.00001	.30373
#3	.00413	-.00110	.00003	-.42034	.00098	.00039	.30415
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass

High			2.0000	600.00	20.000	20.000	10.000
Low			-.01000	-5.0000	-.01000	-.05000	-.02000
Elem	B_	Mo	Li	Sr	Ti	Sn	Si
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00322	.00045	-.00032	.00037	.00500	.00149	-.00394
SDev	.00076	.00032	.00006	.00003	.00014	.00117	.00081
%RSD	23.536	70.745	17.774	9.0624	2.7178	78.404	20.535
#1	-.00407	.00079	-.00034	.00041	.00486	.00283	-.00487
#2	-.00299	.00015	-.00025	.00035	.00513	.00093	-.00343
#3	-.00261	.00041	-.00036	.00035	.00501	.00071	-.00351
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.000	10.000	4.0000	10.000	10.000	10.000	10.000
Low	-.50000	-.04000	-.05000	-.05000	-.05000	-.10000	-.10000
IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	13938	--	--	--	--	--	--
SDev	78.62222	--	--	--	--	--	--
%RSD	.5640832	--	--	--	--	--	--
#1	14028	--	--	--	--	--	--
#2	13885	--	--	--	--	--	--
#3	13901	--	--	--	--	--	--

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Method: TRA10103 Sample Name: CCV3 Operator: KGS
Run Time: 12/22/03 17:11:14
Comment:
Mode: CONC Corr. Factor: 1

Elem	Pb	Se	Sb	Al	Sb\1	Sb\2	As
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.51349	.50631	.50322	24.702	.50294	.50379	.50695
SDev	.00197	.00225	.00265	.078	.00173	.00449	.00459
%RSD	.38355	.44383	.52700	.31603	.34465	.89167	.90507
#1	.51254	.50683	.50064	24.616	.50125	.49941	.50175
#2	.51575	.50826	.50594	24.769	.50472	.50839	.50870
#3	.51217	.50385	.50309	24.719	.50286	.50355	.51041
Errors	QC Pass	QC Pass	QC Pass	QC Pass	NOCHECK	NOCHECK	QC Pass
Value	.50000	.50000	.50000	25.000			.50000
Range	10.500	10.500	10.500	10.500			10.500

Elem	Ba	Be	Cd	Ca	Cr	Co	Cu
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.9973	2.0765	.52110	51.020	2.0243	2.0752	1.9674
SDev	.0056	.0076	.00187	.190	.0070	.0073	.0062
%RSD	.28242	.36749	.35846	.37201	.34606	.35119	.31525
#1	1.9911	2.0717	.51992	50.901	2.0184	2.0702	1.9604
#2	2.0022	2.0853	.52326	51.239	2.0320	2.0835	1.9722
#3	1.9985	2.0725	.52013	50.919	2.0224	2.0718	1.9695
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	2.0000	2.0000	.50000	50.000	2.0000	2.0000	2.0000
Range	10.500	10.500	10.500	10.500	10.500	10.500	10.500

Elem	Fe	Pb/1	Pb/2	Mg	Mn	K_	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	25.561	.51383	.51331	50.586	2.0462	52.867	2.0722
SDev	.095	.00357	.00158	.189	.0074	.118	.0103
%RSD	.37059	.69413	.30858	.37317	.36325	.22251	.49910
#1	25.507	.51061	.51350	50.445	2.0401	52.778	2.0633
#2	25.670	.51766	.51480	50.800	2.0545	53.000	2.0835
#3	25.505	.51323	.51164	50.512	2.0440	52.822	2.0697
Errors	QC Pass	NOCHECK	NOCHECK	QC Pass	QC Pass	QC Pass	QC Pass
Value	25.000			50.000	2.0000	50.000	2.0000
Range	10.500			10.500	10.500	10.500	10.500

Elem	Se/1	Se/2	Ag	Na	Tl	V_	Zn
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.50473	.50710	.99034	48.049	1.0160	2.0341	2.0915
SDev	.00417	.00341	.00456	.347	.0090	.0064	.0078
%RSD	.82657	.67276	.46086	.72222	.88788	.31329	.37075
#1	.50048	.51000	.98511	47.650	1.0059	2.0283	2.0843
#2	.50882	.50797	.99354	48.285	1.0233	2.0409	2.0997
#3	.50488	.50334	.99236	48.212	1.0186	2.0331	2.0905
Errors	NOCHECK	NOCHECK	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass

Value			1.0000	50.000	1.0000	2.0000	2.0000
Range			10.500	10.500	10.500	10.500	10.500
Elem	B_	Mo	Li	Sr	Ti	Sn	Si
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.9926	2.0590	2.0178	1.9972	2.0231	2.0682	1.9527
SDev	.0061	.0099	.0069	.0054	.0066	.0132	.0080
%RSD	.30453	.48130	.34337	.27282	.32779	.63728	.41060
#1	1.9866	2.0486	2.0098	1.9919	2.0169	2.0556	1.9445
#2	1.9987	2.0683	2.0220	2.0028	2.0301	2.0819	1.9605
#3	1.9926	2.0602	2.0217	1.9970	2.0224	2.0669	1.9531
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000
Range	10.500	10.500	10.500	10.500	10.500	10.500	10.500
IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	13620	--	--	--	--	--	--
SDev	47.01250	--	--	--	--	--	--
%RSD	.3451714	--	--	--	--	--	--
#1	13673	--	--	--	--	--	--
#2	13583	--	--	--	--	--	--
#3	13604	--	--	--	--	--	--

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Method: TRA10103 Sample Name: CCB3 Operator: KGS
Run Time: 12/22/03 17:15:40
Comment:
Mode: CONC Corr. Factor: 1

Elem	Pb	Se	Sb	Al	Sb\1	Sb\2	As
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00088	-.00056	.00129	.04610	.00199	-.00011	-.00055
SDev	.00036	.00162	.00090	.00067	.00090	.00094	.00088
%RSD	41.093	289.56	70.084	1.4597	45.343	834.79	159.47
#1	.00112	.00007	.00038	.04536	.00114	-.00116	.00033
#2	.00046	.00065	.00218	.04628	.00294	.00067	-.00056
#3	.00104	-.00239	.00131	.04667	.00188	.00016	-.00144
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass
High	.00305	.00505	.06005	.20005			.01005
Low	-.00305	-.00505	-.06005	-.20005			-.01005

Elem	Ba	Be	Cd	Ca	Cr	Co	Cu
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00004	.00002	.00011	-.00233	.00105	.00040	-.00208
SDev	.00013	.00004	.00027	.00064	.00050	.00030	.00043
%RSD	279.95	158.62	253.13	27.571	47.441	75.683	20.420
#1	-.00009	.00005	-.00011	-.00170	.00064	.00015	-.00257
#2	.00016	.00004	.00040	-.00231	.00161	.00073	-.00184
#3	.00006	-.00002	.00002	-.00298	.00092	.00031	-.00184
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.20005	.00505	.00505	5.0000	.01005	.05005	.02505
Low	-.20005	-.00505	-.00505	-5.0000	-.01005	-.05005	-.02505

Elem	Fe	Pb/1	Pb/2	Mg	Mn	K_	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.01385	-.00145	.00204	.00334	-.00009	.00021	-.00094
SDev	.00764	.00169	.00065	.00252	.00017	.00015	.00036
%RSD	55.122	116.73	32.165	75.452	180.67	74.918	37.906
#1	.00854	.00050	.00144	.00126	.00010	.00038	-.00055
#2	.02260	-.00250	.00194	.00615	-.00019	.00012	-.00101
#3	.01042	-.00235	.00274	.00263	-.00019	.00012	-.00125
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass
High	.10005			5.0000	.01505	5.0000	.04005
Low	-.10005			-5.0000	-.01505	-5.0000	-.04005

Elem	Se/1	Se/2	Ag	Na	Tl	V_	Zn
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00044	-.00062	-.00003	-.41401	.00319	-.00018	.00095
SDev	.00233	.00136	.00079	.12770	.00059	.00059	.00024
%RSD	535.85	219.08	2712.8	30.846	18.431	319.44	24.992
#1	-.00033	.00027	-.00060	-.54177	.00290	-.00077	.00069
#2	.00185	.00005	.00087	-.28636	.00387	.00040	.00116
#3	-.00282	-.00218	-.00036	-.41390	.00280	-.00018	.00101
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass

High			.01005	5.0000	.01005	.05005	.02005
Low			-.01005	-5.0000	-.01005	-.05005	-.02005

Elem	B_	Mo	Li	Sr	Ti	Sn	Si
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00096	.00218	-.00022	.00015	.00009	.00193	-.00496
SDev	.00029	.00083	.00004	.00004	.00020	.00076	.00212
%RSD	30.432	38.154	19.098	24.613	217.50	39.262	42.779
#1	-.00112	.00231	-.00022	.00012	-.00014	.00265	-.00614
#2	-.00062	.00294	-.00017	.00019	.00021	.00200	-.00251
#3	-.00113	.00129	-.00025	.00012	.00021	.00114	-.00623
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.05005	.04005	.00505	.00505	.00505	.10005	.10005
Low	-.05005	-.04005	-.00505	-.00505	-.00505	-.10005	-.10005

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	13785	--	--	--	--	--	--
SDev	17.29001	--	--	--	--	--	--
%RSD	.1254256	--	--	--	--	--	--
#1	13766	--	--	--	--	--	--
#2	13801	--	--	--	--	--	--
#3	13788	--	--	--	--	--	--

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Method: TRA10103 Sample Name: F6VMAZ100 Operator: KGS
Run Time: 12/22/03 17:20:07
Comment:
Mode: CONC Corr. Factor: 1

Elem	Pb	Se	Sb	Al	Sb\1	Sb\2	As
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	8.8609	-.00307	-.00051	.30748	-.00063	-.00026	.00993
SDev	.0445	.00112	.00059	.00134	.00136	.00095	.00147
%RSD	.50231	36.575	115.41	.43701	213.78	362.54	14.813
#1	8.9119	-.00363	.00015	.30812	.00088	-.00131	.01158
#2	8.8406	-.00380	-.00071	.30594	-.00106	-.00002	.00875
#3	8.8301	-.00178	-.00097	.30838	-.00173	.00055	.00946
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass
High	10.000	10.000	10.000	500.00			10.000
Low	-.00300	-.00500	-.06000	-.20000			-.01000

Elem	Ba	Be	Cd	Ca	Cr	Co	Cu
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00583	.00018	.00820	7.6265	1.3099	.00989	-.00152
SDev	.00007	.00004	.00015	.0372	.0059	.00037	.00046
%RSD	1.2864	21.900	1.7932	.48738	.44852	3.7470	30.093
#1	.00590	.00013	.00837	7.6669	1.3164	.01028	-.00102
#2	.00575	.00020	.00813	7.6189	1.3082	.00987	-.00164
#3	.00584	.00020	.00810	7.5938	1.3051	.00954	-.00191
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.000	10.000	10.000	500.00	20.000	20.000	10.000
Low	-.05000	-.00500	-.00500	-5.0000	-.01000	-.05000	-.02500

Elem	Fe	Pb/1	Pb/2	Mg	Mn	K_	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.20622	9.0025	8.7902	.55215	.01556	.00009	-.00040
SDev	.00473	.0482	.0454	.00405	.00015	.00012	.00107
%RSD	2.2952	.53530	.51592	.73344	.96912	138.94	265.52
#1	.21109	9.0512	8.8423	.55682	.01555	.00023	-.00090
#2	.20593	9.0015	8.7603	.55012	.01572	.00003	-.00113
#3	.20163	8.9549	8.7678	.54952	.01542	.00000	.00082
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass
High	400.00			500.00	20.000	100.00	20.000
Low	-.10000			-5.0000	-.01500	-5.0000	-.04000

Elem	Se/1	Se/2	Ag	Na	Tl	V_	Zn
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00117	-.00402	-.00202	-.23451	-.00033	.00027	5.8716
SDev	.00203	.00105	.00019	.06163	.00281	.00011	.0258
%RSD	174.09	26.026	9.4316	26.279	859.75	41.882	.43925
#1	-.00075	-.00507	-.00211	-.18460	-.00353	.00020	5.9002
#2	-.00338	-.00401	-.00215	-.21553	.00080	.00039	5.8645
#3	.00063	-.00298	-.00180	-.30339	.00175	.00020	5.8501
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass

High			2.0000	600.00	20.000	20.000	10.000
Low			-.01000	-5.0000	-.01000	-.05000	-.02000
Elem	B_	Mo	Li	Sr	Ti	Sn	Si
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00024	.00024	.00015	.00670	.10698	.00301	.05061
SDev	.00022	.00038	.00003	.00007	.00040	.00216	.00189
%RSD	90.526	162.77	16.133	.98887	.37643	71.919	3.7256
#1	-.00045	.00015	.00013	.00678	.10742	.00524	.05131
#2	-.00026	.00066	.00015	.00667	.10662	.00285	.05205
#3	-.00001	-.00010	.00018	.00666	.10690	.00093	.04848
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.000	10.000	4.0000	10.000	10.000	10.000	10.000
Low	-.50000	-.04000	-.05000	-.05000	-.05000	-.10000	-.10000
IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	13849	--	--	--	--	--	--
SDev	63.03246	--	--	--	--	--	--
%RSD	.4551281	--	--	--	--	--	--
#1	13777	--	--	--	--	--	--
#2	13881	--	--	--	--	--	--
#3	13891	--	--	--	--	--	--

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Method: TRA10103 Sample Name: F6VMDZ20 Operator: KGS
Run Time: 12/22/03 17:25:42
Comment:
Mode: CONC Corr. Factor: 1

Elem	Pb	Se	Sb	Al	Sb\1	Sb\2	As
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.01057	.00002	.00150	2.8778	.00110	.00231	.00052
SDev	.00058	.00109	.00139	.0070	.00238	.00097	.00050
%RSD	5.4662	6208.3	92.571	.24348	216.87	41.977	95.490
#1	.01107	.00115	.00098	2.8704	.00066	.00161	.00029
#2	.00994	-.00102	.00045	2.8787	-.00103	.00342	.00018
#3	.01070	-.00007	.00307	2.8843	.00366	.00190	.00109
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass
High	10.000	10.000	10.000	500.00			10.000
Low	-.00300	-.00500	-.06000	-.20000			-.01000

Elem	Ba	Be	Cd	Ca	Cr	Co	Cu
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	5.0359	.00012	.00015	28.606	.00269	.01295	-.00120
SDev	.0051	.00003	.00010	.135	.00015	.00047	.00016
%RSD	.10125	30.250	66.939	.47293	5.6889	3.6376	13.080
#1	5.0329	.00008	.00018	28.450	.00253	.01277	-.00129
#2	5.0417	.00014	.00023	28.694	.00283	.01259	-.00129
#3	5.0329	.00012	.00004	28.673	.00272	.01348	-.00102
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.000	10.000	10.000	500.00	20.000	20.000	10.000
Low	-.05000	-.00500	-.00500	-5.0000	-.01000	-.05000	-.02500

Elem	Fe	Pb/1	Pb/2	Mg	Mn	K_	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.2129	.01379	.00896	1.2921	.05032	.02851	.00077
SDev	.0110	.00268	.00217	.0042	.00045	.00247	.00049
%RSD	.90979	19.435	24.242	.32400	.90188	8.6495	63.663
#1	1.2010	.01232	.01045	1.2876	.04980	.02571	.00037
#2	1.2152	.01689	.00647	1.2929	.05060	.02951	.00131
#3	1.2227	.01217	.00996	1.2959	.05057	.03033	.00061
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass
High	400.00			500.00	20.000	100.00	20.000
Low	-.10000			-5.0000	-.01500	-5.0000	-.04000

Elem	Se/1	Se/2	Ag	Na	Tl	V_	Zn
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00275	-.00135	.00025	-.36143	.00100	.00203	3.9125
SDev	.00520	.00326	.00024	.10560	.00085	.00011	.0161
%RSD	189.11	242.41	96.268	29.216	85.343	5.2991	.41107
#1	.00452	-.00054	.00020	-.39429	.00031	.00215	3.8941
#2	.00682	-.00493	.00052	-.24331	.00074	.00197	3.9241
#3	-.00310	.00144	.00004	-.44670	.00195	.00196	3.9192
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass

High			2.0000	600.00	20.000	20.000	10.000
Low			-.01000	-5.0000	-.01000	-.05000	-.02000
Elem	B_	Mo	Li	Sr	Ti	Sn	Si
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.01474	.00002	.00272	.03438	.55855	.02704	.27341
SDev	.00037	.00055	.00001	.00005	.00461	.00148	.00158
%RSD	2.4996	2635.2	.30657	.14221	.82480	5.4816	.57592
#1	.01437	.00028	.00273	.03436	.55913	.02762	.27160
#2	.01474	.00040	.00271	.03444	.55368	.02536	.27417
#3	.01511	-.00061	.00271	.03435	.56284	.02815	.27447
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.000	10.000	4.0000	10.000	10.000	10.000	10.000
Low	-.50000	-.04000	-.05000	-.05000	-.05000	-.10000	-.10000
IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	13779	--	--	--	--	--	--
SDev	32.45627	--	--	--	--	--	--
%RSD	.2355446	--	--	--	--	--	--
#1	13816	--	--	--	--	--	--
#2	13756	--	--	--	--	--	--
#3	13766	--	--	--	--	--	--

Analysis Report QC Standard 12/22/03 05:34:30 PM page 1

Method: TRA10103 Sample Name: CCV4 Operator: KGS
Run Time: 12/22/03 17:30:08
Comment:
Mode: CONC Corr. Factor: 1

Elem	Pb	Se	Sb	Al	Sb\1	Sb\2	As
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.51325	.50369	.49944	24.634	.49796	.50243	.50386
SDev	.00131	.00489	.00125	.030	.00150	.00248	.00135
%RSD	.25505	.97106	.24990	.12031	.30149	.49278	.26846
#1	.51457	.50659	.50086	24.667	.49946	.50366	.50251
#2	.51323	.50644	.49898	24.610	.49645	.50404	.50386
#3	.51195	.49804	.49849	24.625	.49795	.49958	.50521
Errors	QC Pass	QC Pass	QC Pass	QC Pass	NOCHECK	NOCHECK	QC Pass
Value	.50000	.50000	.50000	25.000			.50000
Range	10.500	10.500	10.500	10.500			10.500

Elem	Ba	Be	Cd	Ca	Cr	Co	Cu
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.9954	2.0684	.52144	50.851	2.0159	2.0696	1.9593
SDev	.0018	.0005	.00076	.027	.0011	.0013	.0038
%RSD	.09159	.02401	.14553	.05357	.05502	.06428	.19345
#1	1.9975	2.0683	.52156	50.825	2.0149	2.0695	1.9628
#2	1.9948	2.0689	.52214	50.879	2.0171	2.0710	1.9553
#3	1.9941	2.0679	.52063	50.848	2.0158	2.0683	1.9599
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	2.0000	2.0000	.50000	50.000	2.0000	2.0000	2.0000
Range	10.500	10.500	10.500	10.500	10.500	10.500	10.500

Elem	Fe	Pb/1	Pb/2	Mg	Mn	K_	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	25.473	.51652	.51161	50.559	2.0395	52.779	2.0819
SDev	.017	.00569	.00116	.017	.0004	.051	.0043
%RSD	.06705	1.1020	.22734	.03284	.02028	.09682	.20691
#1	25.458	.52093	.51139	50.540	2.0400	52.836	2.0819
#2	25.491	.51852	.51058	50.572	2.0394	52.737	2.0862
#3	25.470	.51009	.51287	50.563	2.0391	52.765	2.0776
Errors	QC Pass	NOCHECK	NOCHECK	QC Pass	QC Pass	QC Pass	QC Pass
Value	25.000			50.000	2.0000	50.000	2.0000
Range	10.500			10.500	10.500	10.500	10.500

Elem	Se/1	Se/2	Ag	Na	Tl	V_	Zn
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.50338	.50385	.98681	47.867	1.0150	2.0261	2.0921
SDev	.00934	.00326	.00080	.144	.0043	.0013	.0009
%RSD	1.8564	.64701	.08118	.30090	.42326	.06237	.04158
#1	.51156	.50411	.98771	48.014	1.0102	2.0251	2.0927
#2	.50538	.50697	.98617	47.861	1.0166	2.0258	2.0924
#3	.49319	.50047	.98655	47.726	1.0183	2.0275	2.0911
Errors	NOCHECK	NOCHECK	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass

Value			1.0000	50.000	1.0000	2.0000	2.0000
Range			10.500	10.500	10.500	10.500	10.500
Elem	B_	Mo	Li	Sr	Ti	Sn	Si
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	1.9983	2.0539	2.0156	1.9868	2.0185	2.0582	1.9340
SDev	.0023	.0026	.0029	.0018	.0005	.0022	.0028
%RSD	.11575	.12853	.14137	.08818	.02708	.10752	.14651
#1	1.9958	2.0510	2.0188	1.9888	2.0191	2.0607	1.9371
#2	1.9990	2.0561	2.0133	1.9856	2.0183	2.0564	1.9332
#3	2.0002	2.0546	2.0148	1.9860	2.0180	2.0576	1.9316
Errors	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass	QC Pass
Value	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000	2.0000
Range	10.500	10.500	10.500	10.500	10.500	10.500	10.500
IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	13597	--	--	--	--	--	--
SDev	27.69854	--	--	--	--	--	--
%RSD	.2037117	--	--	--	--	--	--
#1	13566	--	--	--	--	--	--
#2	13619	--	--	--	--	--	--
#3	13607	--	--	--	--	--	--

Analysis Report 12/22/03 05:38:57 PM page 1

Method: TRA10103 Sample Name: CCB4 Operator: KGS
Run Time: 12/22/03 17:34:35
Comment:
Mode: CONC Corr. Factor: 1

Elem	Pb	Se	Sb	Al	Sb\1	Sb\2	As
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00092	-.00029	.00076	.04509	.00081	.00065	.00014
SDev	.00104	.00080	.00112	.00528	.00109	.00143	.00164
%RSD	113.63	275.55	148.01	11.708	135.07	219.05	1144.8
#1	.00112	.00053	.00020	.03946	.00063	-.00066	-.00072
#2	.00185	-.00033	.00205	.04587	.00198	.00218	.00203
#3	-.00021	-.00106	.00002	.04993	-.00018	.00043	-.00089
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass
High	.00305	.00505	.06005	.20005			.01005
Low	-.00305	-.00505	-.06005	-.20005			-.01005

Elem	Ba	Be	Cd	Ca	Cr	Co	Cu
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00020	.00025	-.00005	.01694	.00062	.00006	-.00274
SDev	.00013	.00001	.00012	.00038	.00041	.00047	.00024
%RSD	63.179	4.5590	267.55	2.2610	67.060	799.59	8.6544
#1	.00007	.00025	-.00014	.01672	.00014	-.00045	-.00296
#2	.00022	.00025	.00009	.01672	.00091	.00014	-.00249
#3	.00032	.00023	-.00009	.01738	.00079	.00048	-.00278
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.20005	.00505	.00505	5.0000	.01005	.05005	.02505
Low	-.20005	-.00505	-.00505	-5.0000	-.01005	-.05005	-.02505

Elem	Fe	Pb/1	Pb/2	Mg	Mn	K_	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00596	.00076	.00100	.00436	-.00019	.00046	-.00090
SDev	.00806	.00236	.00066	.00288	.00000	.00023	.00112
%RSD	135.20	312.03	66.027	66.143	.00000	49.572	125.52
#1	-.00334	.00222	.00058	.00127	-.00019	.00021	-.00171
#2	.01086	.00201	.00176	.00698	-.00019	.00050	.00039
#3	.01036	-.00196	.00066	.00482	-.00019	.00066	-.00136
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass
High	.10005			5.0000	.01505	5.0000	.04005
Low	-.10005			-5.0000	-.01505	-5.0000	-.04005

Elem	Se/1	Se/2	Ag	Na	Tl	V_	Zn
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00130	-.00108	-.00032	-.43625	.00226	-.00038	.00367
SDev	.00505	.00143	.00054	.26410	.00174	.00020	.00019
%RSD	390.03	132.11	172.28	60.539	76.902	51.775	5.2726
#1	.00704	-.00272	-.00093	-.70785	.00033	-.00057	.00347
#2	-.00070	-.00015	.00012	-.18035	.00371	-.00018	.00368
#3	-.00245	-.00037	-.00015	-.42055	.00274	-.00038	.00386
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass

High			.01005	5.0000	.01005	.05005	.02005
Low			-.01005	-5.0000	-.01005	-.05005	-.02005

Elem	B_	Mo	Li	Sr	Ti	Sn	Si
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00181	.00223	-.00028	.00019	.00009	.00100	-.00753
SDev	.00029	.00071	.00003	.00000	.00012	.00270	.00161
%RSD	15.860	31.632	9.7354	.18734	135.87	271.38	21.436
#1	-.00197	.00295	-.00028	.00019	-.00003	-.00212	-.00925
#2	-.00148	.00218	-.00025	.00019	.00009	.00244	-.00728
#3	-.00198	.00155	-.00031	.00019	.00021	.00266	-.00605
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	.05005	.04005	.00505	.00505	.00505	.10005	.10005
Low	-.05005	-.04005	-.00505	-.00505	-.00505	-.10005	-.10005

IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	13689	--	--	--	--	--	--
SDev	25.80885	--	--	--	--	--	--
%RSD	.1885341	--	--	--	--	--	--
#1	13667	--	--	--	--	--	--
#2	13718	--	--	--	--	--	--
#3	13683	--	--	--	--	--	--

Analysis Report 12/22/03 05:43:23 PM page 1

Method: TRA10103 Sample Name: Operator: KGS
Run Time: 12/22/03 17:39:01
Comment:
Mode: CONC Corr. Factor: 1

Elem	Pb	Se	Sb	Al	Sb\1	Sb\2	As
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00079	-.00046	.00165	.04184	.00298	-.00099	-.00006
SDev	.00051	.00092	.00068	.00519	.00123	.00059	.00116
%RSD	64.810	198.22	41.063	12.402	41.382	59.650	2077.0
#1	.00130	.00025	.00154	.04238	.00303	-.00144	-.00097
#2	.00079	-.00150	.00238	.03641	.00418	-.00121	.00124
#3	.00028	-.00014	.00104	.04674	.00172	-.00032	-.00044
Errors	LC Pass	LC Pass	LC Pass	LC Pass	NOCHECK	NOCHECK	LC Pass
High	10.000	10.000	10.000	500.00			10.000
Low	-.00300	-.00500	-.06000	-.20000			-.01000

Elem	Ba	Be	Cd	Ca	Cr	Co	Cu
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.00022	.00016	-.00007	-.00229	.00040	.00011	-.00312
SDev	.00008	.00011	.00008	.00089	.00005	.00035	.00053
%RSD	38.160	64.753	115.67	38.689	12.824	310.50	17.060
#1	.00027	.00018	-.00004	-.00187	.00045	-.00028	-.00288
#2	.00026	.00026	-.00000	-.00169	.00035	.00023	-.00276
#3	.00012	.00005	-.00015	-.00331	.00038	.00039	-.00373
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.000	10.000	10.000	500.00	20.000	20.000	10.000
Low	-.05000	-.00500	-.00500	-5.0000	-.01000	-.05000	-.02500

Elem	Fe	Pb/1	Pb/2	Mg	Mn	K_	Ni
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	.01588	-.00127	.00182	-.00025	-.00009	.00030	-.00183
SDev	.00556	.00127	.00119	.00101	.00017	.00024	.00024
%RSD	34.979	99.938	65.466	403.50	186.34	80.608	12.928
#1	.01372	-.00118	.00254	-.00051	-.00019	.00050	-.00183
#2	.02219	-.00259	.00247	.00086	-.00019	.00004	-.00159
#3	.01173	-.00005	.00044	-.00111	.00011	.00035	-.00207
Errors	LC Pass	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass
High	400.00			500.00	20.000	100.00	20.000
Low	-.10000			-5.0000	-.01500	-5.0000	-.04000

Elem	Se/1	Se/2	Ag	Na	Tl	V_	Zn
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00001	-.00069	-.00044	-.50159	.00143	-.00018	.00160
SDev	.00421	.00092	.00047	.10222	.00326	.00020	.00006
%RSD	30896.	133.29	105.70	20.379	227.44	109.57	3.7663
#1	.00426	-.00175	-.00069	-.51326	-.00198	-.00018	.00158
#2	-.00416	-.00018	-.00073	-.59748	.00451	-.00038	.00156
#3	-.00014	-.00014	.00010	-.39404	.00177	.00002	.00167
Errors	NOCHECK	NOCHECK	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass

High			2.0000	600.00	20.000	20.000	10.000
Low			-.01000	-5.0000	-.01000	-.05000	-.02000
Elem	B_	Mo	Li	Sr	Ti	Sn	Si
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avge	-.00205	.00112	-.00030	.00002	.00017	.00107	-.00883
SDev	.00081	.00059	.00003	.00004	.00018	.00101	.00003
%RSD	39.496	52.840	10.647	172.05	106.04	94.020	.29500
#1	-.00287	.00078	-.00033	.00006	.00032	.00049	-.00885
#2	-.00125	.00078	-.00028	.00000	-.00002	.00049	-.00885
#3	-.00204	.00181	-.00028	.00000	.00020	.00224	-.00880
Errors	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass	LC Pass
High	10.000	10.000	4.0000	10.000	10.000	10.000	10.000
Low	-.50000	-.04000	-.05000	-.05000	-.05000	-.10000	-.10000
IntStd	1	2	3	4	5	6	7
Mode	Counts	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED	NOTUSED
Elem	Y	--	--	--	--	--	--
Wavlen	371.030	--	--	--	--	--	--
Avge	13655	--	--	--	--	--	--
SDev	104.5356	--	--	--	--	--	--
%RSD	.7655278	--	--	--	--	--	--
#1	13637	--	--	--	--	--	--
#2	13768	--	--	--	--	--	--
#3	13561	--	--	--	--	--	--

Raw Data
Mercury

STL Knoxville
Mercury Analysis Cover Sheet

Analyst	KND	**Instrument**	**Leeman Hydra AA Mercury Analyzer**
Run Date	12/18/03	**Chart Name**	H121803

Scan

Daily Maintenance		**As Needed Maintenance**	
☑	Check tubing.	☐	Adjust/change Hg lamp (typically, every 3 months/every year, respectively).
☑	Check maintenance schedule flags.	☐	Clean optical cell.
		☐	Lubricate pump and autosampler arm.
		☐	Check gas tank level. The instrument automatically flags the analyst when the pressure is too low.
		☐	Change the drying tube.

A = PDS

```
--------------------------------------------------------------------------------
:       Instrument Upload                                   Run Log - Page  1 :
:       Started Fri Dec 19 12:32:24 2003 by DAWSONK                           :
:       Data File: UPL$KNX_DATA_ROOT:<LHG>H121803.PRN;1                       :
--------------------------------------------------------------------------------
```

#	WorkOrder	Dilution	Date	Time	Batch	Lot	Instrument
1	CK2ICV	1.00	18-DEC-2003	13:47:24			HG
2	ICB	1.00	18-DEC-2003	13:49:55			HG
3	CRA	1.00	18-DEC-2003	13:52:10			HG
4	CK3CCV	1.00	18-DEC-2003	13:54:19			HG
5	CK1CCB	1.00	18-DEC-2003	13:56:16			HG
6	IDL-BLANK	1.00	18-DEC-2003	13:58:17			HG
7	IDL-1	1.00	18-DEC-2003	14:00:56			HG
8	IDL-2	1.00	18-DEC-2003	14:03:16			HG
9	IDL-3	1.00	18-DEC-2003	14:06:32			HG
10	IDL-4	1.00	18-DEC-2003	14:09:04			HG
11	IDL-5	1.00	18-DEC-2003	14:11:00			HG
12	IDL-6	1.00	18-DEC-2003	14:13:08			HG
13	IDL-7	1.00	18-DEC-2003	14:15:07			HG
14	F6X6XB	1.00	18-DEC-2003	14:17:07	3352155	H3L180000	HG
15	F6X6XC	1.00	18-DEC-2003	14:19:45	3352155	H3L180000	HG
16	CK3CCV	1.00	18-DEC-2003	14:21:51			HG
17	CK1CCB	1.00	18-DEC-2003	14:24:10			HG
18	F6DKD	1.00	18-DEC-2003	14:26:35	3352155	H3L100237	HG
19	F6DQ4	1.00	18-DEC-2003	14:28:31	3352155	PB045	HG
20	F6DRG	1.00	18-DEC-2003	14:30:41	3352155	PB045	HG
21	F6F1C	1.00	18-DEC-2003	14:32:37	3352155	PB045	HG
22	F6F2H	1.00	18-DEC-2003	14:34:34	3352155	PB045	HG
23	F6JXA	1.00	18-DEC-2003	14:36:35	3352155	PB045	HG
24	F6JX2	1.00	18-DEC-2003	14:38:33	3352155	PB045	HG
25	F6JX2S	1.00	18-DEC-2003	14:40:40	3352155	PB045	HG
26	F6JX2D	1.00	18-DEC-2003	14:42:42	3352155	PB045	HG
27	F6J0A	1.00	18-DEC-2003	14:44:40	3352155	PB045	HG
28	CK3CCV	1.00	18-DEC-2003	14:46:40			HG
29	CK1CCB	1.00	18-DEC-2003	14:48:46			HG
30	F6RVR	1.00	18-DEC-2003	14:50:45	3352155	H3L160273	HG
31	F6X62BF	1.00	18-DEC-2003	14:52:42	3352158	H3L180000	HG
32	F6X62CF	1.00	18-DEC-2003	14:54:39	3352158	H3L180000	HG
33	F6DQ4F	1.00	18-DEC-2003	14:56:35	3352158	PB045	HG
34	F6DRGF	1.00	18-DEC-2003	14:58:45	3352158	PB045	HG
35	F6F1CF	1.00	18-DEC-2003	15:00:42	3352158	PB045	HG
36	F6F2HF	1.00	18-DEC-2003	15:02:39	3352158	PB045	HG
37	F6JXAF	1.00	18-DEC-2003	15:04:36	3352158	PB045	HG
38	F6JX2F	1.00	18-DEC-2003	15:06:35	3352158	PB045	HG
39	F6JX2SF	1.00	18-DEC-2003	15:09:25	3352158	PB045	HG
40	CK3CCV	1.00	18-DEC-2003	15:11:25			HG
41	CK1CCB	1.00	18-DEC-2003	15:13:24			HG
42	F6JX2DF	1.00	18-DEC-2003	15:15:23	3352158	PB045	HG
43	F6J0AF	1.00	18-DEC-2003	15:17:23	3352158	PB045	HG
44	F6X6PB	10.0	18-DEC-2003	15:19:52	3352152	H3L180000	HG

---------- (continued) ----------

```
-------------------------------------------------------------------------------
:       Instrument Upload                                   Run Log - Page  2 :
:       Started Fri Dec 19 12:32:24 2003 by DAWSONK                           :
:       Data File: UPL$KNX_DATA_ROOT:<LHG>H121803.PRN;1                       :
-------------------------------------------------------------------------------
```

#	WorkOrder	Dilution	Date	Time	Batch	Lot	Instrument
45	F6X6PC	10.0	18-DEC-2003	15:21:50	3352152	H3L180000	HG
46	F6X6PL	10.0	18-DEC-2003	15:23:46	3352152	H3L180000	HG
47	F6J9K	10.0	18-DEC-2003	15:25:57	3352152	H3L120243	HG
48	F6J9V	10.0	18-DEC-2003	15:28:49	3352152	H3L120243	HG
49	F6X6TB	1.00	18-DEC-2003	15:31:06	3352156	H3L180000	HG
50	F6X6TC	1.00	18-DEC-2003	15:33:13	3352156	H3L180000	HG
51	F6QWT	10.0	18-DEC-2003	15:35:20	3352156	H3L160161	HG
52	CK3CCV	1.00	18-DEC-2003	15:37:36			HG
53	CK1CCB	1.00	18-DEC-2003	15:39:42			HG
54	F6QWTS	10.0	18-DEC-2003	15:41:40	3352156	H3L160161	HG
55	F6QWTD	10.0	18-DEC-2003	15:44:00	3352156	H3L160161	HG
56	F6QW2	10.0	18-DEC-2003	15:46:01	3352156	H3L160161	HG
57	F6QW4	10.0	18-DEC-2003	15:47:58	3352156	H3L160161	HG
58	F6QW4S	10.0	18-DEC-2003	15:49:55	3352156	H3L160161	HG
59	F6QW4D	10.0	18-DEC-2003	15:52:11	3352156	H3L160161	HG
60	CK3CCV	1.00	18-DEC-2003	15:54:32			HG
61	CK1CCB	1.00	18-DEC-2003	15:56:28			HG
62	CK3CCV	1.00	18-DEC-2003	16:30:52			HG
63	CK1CCB	1.00	18-DEC-2003	16:33:09			HG
64	F6QWTA	1.00	18-DEC-2003	16:35:50	3352156	H3L160161	HG
65	CK3CCV	1.00	18-DEC-2003	16:37:49			HG
66	CK1CCB	1.00	18-DEC-2003	16:40:05			HG

---------- End of Report ----------

STL Knoxville

Method Information

Method Name: 7pt.std/SW-846 7470A/7471A/0.2 RL **Element:** Hg **Chart Number:** **H121803.PRN**

Instrument Calibrated Every X Hours:	24	**Number Of Standards To Calibrate With:**	6
Correlation Coefficient Must Be:	0.995	**Run ICV Immediately After Calibration:**	Yes
CRA Need To Be Run:	No	**Number Of Samples Between CCVS:**	10
Duplicate RPD:	20	**Calculate Dupe's By CLP Or SW-846:**	SW-846 Protocol

CRA Recovery Range:	100	**CRA Conc:**	0.2
ICV Recovery Range:	10.5	**ICV Conc:**	2.5
CCV Recovery Range:	20.5	**CCV Conc:**	5
LCS Recovery Range:	10.5	**LCS Spike Level:**	5
MS/MSD Recovery Range:	20.5	**MS Spike Level:**	1

Letter To Signify Blanks:	B	**Position To Signify Blanks:**	6
Letter To Signify LCS's:	C	**Position To Signify LCS's:**	6
Letter To Signify LCSD's:	L	**Position To Signify LCSD's:**	6
LetterToSignifyDilutions:	Z	**Position To Signify Dilutions:**	6
Letter To Signify Duplicates:	X	**Position To Signify Duplicates:**	6
Letter To Signify MS's:	S	**Position To Signify MS's:**	6
Letter To Signify MSD's:	D	**Position To Signify MSD's:**	6
Letters To Signify MSA's:	MSA+	**Position To Signify MSA's:**	6
Number Of Additions:	3		

Standard 1 Conc:	0.1	**Standard 2 Conc:**	0.2	**Standard 3 Conc:**	0.5	**Standard 4 Conc:**	1
Standard 5 Conc:	5	**Standard 6 Conc:**	10	**Standard 7 Conc:**	0	**Standard 8 Conc:**	0

ICB/CCB Check Level: 0.201 **Prep Blank Check Level:** 0.201 **Report Limit:** 0.2

IDL: 0.02 **Date Of IDL:** 9/10/2003

STL Knoxville

Mercury Data Review Checklist

Method: 7pt.std/SW-846 7470A/7471A/0.2 RL **Lot Number(s):**

Analyst:	KND			Instrument:	Leeman Hydra AA Mercury Analyzer		
Run Date:	Dec-18-03	Calibration Number:	1	Chart Name:	H121803.PRN	Element:	Hg

	A. Calibration/Instrument Run QC	N/A	Yes	No	Comments
1.	Instrument calibrated every 24 hours?		X		Calibration was 3 hours and 15 minutes long
2.	Instrument calibrated using a minimum of a blank and 5 standards?		X		
3.	Do standard absorbances increase as standard concentrations increase?		X		
4.	Instrument calibrated with standards at the SOP levels?		X		
5.	Correlation coefficient greater than or equal to 0.995?		X		Correlation coefficient was 0.9998
6.	ICV analyzed directly after calibration?		X		
7.	ICV within specified control limits?		X		
8.	ICB analyzed immediately after ICV?		X		
9.	ICB within acceptable range?		X		
10.	CRA analyzed at the beginning of the run?	X			
11.	CRA results within acceptable range?	X			
12.	All CCV's within specified control limits?		X		
13.	All CCB's within acceptable range?		X		
14.	All CCB's analyzed immediately after CCV's?		X		
	B. Client Sample and QC Sample Results				
1.	Were all sample results within the linear range of the instrument ?		X		
2.	Were there any samples with results more negative than Report Limit?			X	
	C. Preparation/Matrix QC				
1.	Was one method blank prepared for each batch?		X		
2.	Were all method blanks less than the specified level?		X		
3.	Was a Laboratory Control Sample prepared for each batch?		X		
4.	Were all Laboratory Control Sample's within QC limits?			X	See Comments on Next Page
5.	Was an OS/Dup or MS/MSD pair run at required frequency?		X		
6.	Were all Matrix Spike recoveries (MS and MSD's) within QC limits?			X	See Comments on Next Page
7.	Were duplicate samples (OS/Dup or MS/MSD) RPD within QC limits?		X		
	D. Other				
1.	Current IDL data on file?			X	IDL's were due on 12/10/2003
2.	Current MDL data on file?		X		

Comments:

Question Number:	Problem(s) Found:
C4	Method LCS IDL-BLANK at 12/18/2003 1:58:17 PM had -0.7% recovery.
C6	Matrix spike sample F6QWTS at 12/18/2003 3:41:40 PM had 74.1% recovery.
C6	Matrix spike sample F6QWTD at 12/18/2003 3:44:00 PM had 74% recovery.

STL Knoxville
Mercury Data Review Checklist

Analyst: KND **Date:** 12/19/03

Analyst Comments: MS/MSD ~~F6~~ KND 12/19/03 F6QWTS and F6QWTD had low recoveries. As a result and instructed per lot summary, a PDS was performed on the sample F6QWT at the end of the run.

Wallac Database 1.215

File Utility Help

Protocol 7ptcurve Dataset/Proto H121803 /7ptcurve

Protocol | Line info | Cal Curve | Report | Ctrl Chart | Viewer

Reset

Calib Coeffs

New Cal

Update Coeffs

Spike Coeffs

A

B 6.54229e-6

C -4.87798e-2

rho .999886

☑ Calibrated

☑ Accepted

Accept

Type Linear

Rel. Abs. 1526628

Accepted

New

Include S1 Rep 1 ☑

Conc. 10.0

S	Conc.	Calc.	Dev.	Mean	SD or %RSD	Rep 1	Rep 2	Rep 3
01	.00000	-.028	-.028	3226	1	3226		
02	.10000	.074	-.026	18812	0%	18811		
03	.20000	.189	-.011	36398	0%	36397		
04	.50000	.510	.010	85444	0%	85444		
05	1.0000	.996	-.004	159675	0%	159675		
06	5.0000	5.12	.119	789921	0%	789920		

Ready CAP NUM

Wallac Database 1.215

File Utility Help

Protocol 7ptcurve Dataset/Proto H121803 /7ptcurve

Protocol | Line info | Cal Curve | Report | Ctrl Chart | Viewer

Reset

Calib Coeffs

New Cal

Update Coeffs

Spike Coeffs

A

B 6.54229e-6

C -4.87798e-2

rho .999886

☑ Calibrated

☑ Accepted

Accept

Type Linear

Rel. Abs. 1526628

Accepted

New

Include S1 Rep 1 ☑

Conc. 10.0

S	Conc.	Calc.	Dev.	Mean	SD or %RSD	Rep 1	Rep 2	Rep 3
02	.10000	.074	-.026	18812	0%	18811		
03	.20000	.189	-.011	36398	0%	36397		
04	.50000	.510	.010	85444	0%	85444		
05	1.0000	.996	-.004	159675	0%	159675		
06	5.0000	5.12	.119	789921	0%	789920		
07	10.000	9.94	-.061	1526629	0%	1526628		

Ready CAP NUM

1299

```
Line   Conc.  Units     SD/RSD      1       2       3       4       5
-----------------------------------------------------------------------------

*** Standard: 1 Rep: 1              Seq:  0      13:25:59 18 Dec 03   HG

Hg    .000    ppb      3226

*** Standard: 2 Rep: 1              Seq:  1      13:28:01 18 Dec 03   HG

Hg    .100    ppb      18811

*** Standard: 3 Rep: 1              Seq:  2      13:30:17 18 Dec 03   HG

Hg    .200    ppb      36397

*** Standard: 4 Rep: 1              Seq:  3      13:32:34 18 Dec 03   HG

Hg    .500    ppb      85444

*** Standard: 5 Rep: 1              Seq:  4      13:34:42 18 Dec 03   HG

Hg    1.00    ppb      159675

*** Standard: 6 Rep: 1              Seq:  5      13:36:50 18 Dec 03   HG

Hg    5.00    ppb      789920

*** Standard: 7 Rep: 1              Seq:  6      13:38:49 18 Dec 03   HG

Hg    10.0    ppb      1526628

*** Check Standard: 2  Ck2icv       Seq:  7      13:47:24 18 Dec 03   HG
Line   Flag  %Rcv.   Found    True  Units      SD/RSD
Hg           102.     2.55    2.50  ppb         .000  %

*** Sample ID: ICB                  Seq:  8      13:49:55 18 Dec 03   HG
                            ICB
Hg   -.036    ppb       .000  %  -.036

*** Sample ID: CRA                  Seq:  9      13:52:10 18 Dec 03   HG
                            CRA
Hg    .173    ppb       .000  %   .173

*** Check Standard: 3  Ck3ccv       Seq:  10     13:54:19 18 Dec 03   HG
Line   Flag  %Rcv.   Found    True  Units      SD/RSD
Hg           106.     5.28    5.00  ppb         .000  %

*** Check Standard: 1  Ck1ccb       Seq:  11     13:56:16 18 Dec 03   HG
Line   Flag  Found Range(+/-) Units      SD/RSD
Hg          -.056     .101     ppb        .000  %

*** Sample ID: IDL-BLANK            Seq:  12     13:58:17 18 Dec 03   HG

Hg   -.035    ppb       .000  %  -.035

*** Sample ID: IDL-1                Seq:  13     14:00:56 18 Dec 03   HG

Hg    .091    ppb       .000  %   .091

*** Sample ID: IDL-2                Seq:  14     14:03:16 18 Dec 03   HG

Hg    .096    ppb       .000  %   .096
```

1300

```
Line   Conc.  Units     SD/RSD      1       2       3       4       5
-------------------------------------------------------------------------------

*** Sample ID: IDL-3                    Seq:  15     14:06:32 18 Dec 03   HG

Hg    .100    ppb       .000  %   .100

*** Sample ID: IDL-4                    Seq:  16     14:09:04 18 Dec 03   HG

Hg    .099    ppb       .000  %   .099

*** Sample ID: IDL-5                    Seq:  17     14:11:00 18 Dec 03   HG

Hg    .096    ppb       .000  %   .096

*** Sample ID: IDL-6                    Seq:  18     14:13:08 18 Dec 03   HG

Hg    .095    ppb       .000  %   .095

*** Sample ID: IDL-7                    Seq:  19     14:15:07 18 Dec 03   HG

Hg    .084    ppb       .000  %   .084

*** Sample ID: F6X6XB                   Seq:  20     14:17:07 18 Dec 03   HG
                            3352155
Hg   -.035    ppb       .000  %  -.035

*** Sample ID: F6X6XC                   Seq:  21     14:19:45 18 Dec 03   HG

Hg    4.74    ppb       .000  %   4.74

*** Check Standard: 3  Ck3ccv           Seq:  22     14:21:51 18 Dec 03   HG
Line  Flag  %Rcv.   Found    True  Units      SD/RSD
Hg          103.     5.17    5.00  ppb        .000  %

*** Check Standard: 1  Ck1ccb           Seq:  23     14:24:10 18 Dec 03   HG
Line  Flag  Found Range(+/-) Units      SD/RSD
Hg         -.040     .101    ppb        .000  %

*** Sample ID: F6DKD                    Seq:  24     14:26:35 18 Dec 03   HG

Hg   -.017    ppb       .000  %  -.017

*** Sample ID: F6DQ4                    Seq:  25     14:28:31 18 Dec 03   HG

Hg   -.042    ppb       .000  %  -.042

*** Sample ID: F6DRG                    Seq:  26     14:30:41 18 Dec 03   HG

Hg   -.033    ppb       .000  %  -.033

*** Sample ID: F6F1C                    Seq:  27     14:32:37 18 Dec 03   HG

Hg   -.032    ppb       .000  %  -.032

*** Sample ID: F6F2H                    Seq:  28     14:34:34 18 Dec 03   HG

Hg   -.031    ppb       .000  %  -.031

*** Sample ID: F6JXA                    Seq:  29     14:36:35 18 Dec 03   HG

Hg   -.031    ppb       .000  %  -.031
```

```
Line   Conc.  Units     SD/RSD      1       2       3       4       5
-------------------------------------------------------------------------------

*** Sample ID: F6JX2                    Seq:  30     14:38:33 18 Dec 03   HG

Hg   -.035    ppb       .000  %  -.035

*** Sample ID: F6JX2S                   Seq:  31     14:40:40 18 Dec 03   HG

Hg    .965    ppb       .000  %   .965

*** Sample ID: F6JX2D                   Seq:  32     14:42:42 18 Dec 03   HG

Hg    .974    ppb       .000  %   .974

*** Sample ID: F6J0A                    Seq:  33     14:44:40 18 Dec 03   HG

Hg   -.041    ppb       .000  %  -.041

*** Check Standard: 3  Ck3ccv           Seq:  34     14:46:40 18 Dec 03   HG
Line  Flag  %Rcv.   Found    True  Units      SD/RSD
Hg          102.     5.12    5.00  ppb         .000  %

*** Check Standard: 1  Ck1ccb           Seq:  35     14:48:46 18 Dec 03   HG
Line  Flag  Found Range(+/-) Units      SD/RSD
Hg         -.046     .101     ppb        .000  %

*** Sample ID: F6RVR                    Seq:  36     14:50:45 18 Dec 03   HG

Hg   -.024    ppb       .000  %  -.024

*** Sample ID: F6X62BF                  Seq:  37     14:52:42 18 Dec 03   HG
                                 3352158
Hg   -.031    ppb       .000  %  -.031

*** Sample ID: F6X62CF                  Seq:  38     14:54:39 18 Dec 03   HG

Hg    4.85    ppb       .000  %   4.85

*** Sample ID: F6DQ4F                   Seq:  39     14:56:35 18 Dec 03   HG

Hg   -.055    ppb       .000  %  -.055

*** Sample ID: F6DRGF                   Seq:  40     14:58:45 18 Dec 03   HG

Hg   -.032    ppb       .000  %  -.032

*** Sample ID: F6F1CF                   Seq:  41     15:00:42 18 Dec 03   HG

Hg   -.033    ppb       .000  %  -.033

*** Sample ID: F6F2HF                   Seq:  42     15:02:39 18 Dec 03   HG

Hg   -.035    ppb       .000  %  -.035

*** Sample ID: F6JXAF                   Seq:  43     15:04:36 18 Dec 03   HG

Hg   -.036    ppb       .000  %  -.036

*** Sample ID: F6JX2F                   Seq:  44     15:06:35 18 Dec 03   HG

Hg   -.035    ppb       .000  %  -.035
```

```
Line   Conc.  Units     SD/RSD      1       2       3       4       5
-------------------------------------------------------------------------------

*** Sample ID: F6JX2SF                Seq:  45     15:09:25 18 Dec 03   HG

Hg    .983    ppb       .000  %   .983

*** Check Standard: 3  Ck3ccv        Seq:  46     15:11:25 18 Dec 03   HG
Line  Flag  %Rcv.   Found    True  Units      SD/RSD
Hg          102.     5.09    5.00   ppb        .000  %

*** Check Standard: 1  Ck1ccb        Seq:  47     15:13:24 18 Dec 03   HG
Line  Flag  Found Range(+/-) Units      SD/RSD
Hg         -.054     .101     ppb        .000  %

*** Sample ID: F6JX2DF                Seq:  48     15:15:23 18 Dec 03   HG

Hg    .983    ppb       .000  %   .983

*** Sample ID: F6J0AF                 Seq:  49     15:17:23 18 Dec 03   HG

Hg   -.036    ppb       .000  %  -.036

*** Sample ID: F6X6PB                 Seq:  50     15:19:52 18 Dec 03   HG
                            3352152
Hg   -.031    ppb       .000  %  -.031

*** Sample ID: F6X6PC                 Seq:  51     15:21:50 18 Dec 03   HG

Hg    4.71    ppb       .000  %   4.71

*** Sample ID: F6X6PL                 Seq:  52     15:23:46 18 Dec 03   HG

Hg    4.86    ppb       .000  %   4.86

*** Sample ID: F6J9K                  Seq:  53     15:25:57 18 Dec 03   HG

Hg    4.66    ppb       .000  %   4.66

*** Sample ID: F6J9V                  Seq:  54     15:28:49 18 Dec 03   HG

Hg   -.028    ppb       .000  %  -.028

*** Sample ID: F6X6TB                 Seq:  55     15:31:06 18 Dec 03   HG
                            3352156
Hg   -.031    ppb       .000  %  -.031

*** Sample ID: F6X6TC                 Seq:  56     15:33:13 18 Dec 03   HG

Hg    4.95    ppb       .000  %   4.95

*** Sample ID: F6QWT                  Seq:  57     15:35:20 18 Dec 03   HG

Hg    .040    ppb       .000  %   .040

*** Check Standard: 3  Ck3ccv        Seq:  58     15:37:36 18 Dec 03   HG
Line  Flag  %Rcv.   Found    True  Units      SD/RSD
Hg          99.9     4.99    5.00   ppb        .000  %

*** Check Standard: 1  Ck1ccb        Seq:  59     15:39:42 18 Dec 03   HG
Line  Flag  Found Range(+/-) Units      SD/RSD
Hg         -.046     .101     ppb        .000  %
```

Line	Conc.	Units	SD/RSD		1	2	3	4	5

*** Sample ID: F6QWTS Seq: 60 15:41:40 18 Dec 03 HG

Hg .781 ppb .000 % .781

*** Sample ID: F6QWTD Seq: 61 15:44:00 18 Dec 03 HG

Hg .780 ppb .000 % .780

*** Sample ID: F6QW2 Seq: 62 15:46:01 18 Dec 03 HG

Hg 1.66 ppb .000 % 1.66

*** Sample ID: F6QW4 Seq: 63 15:47:58 18 Dec 03 HG

Hg -.050 ppb .000 % -.050

*** Sample ID: F6QW4S Seq: 64 15:49:55 18 Dec 03 HG

Hg 1.02 ppb .000 % 1.02

*** Sample ID: F6QW4D Seq: 65 15:52:11 18 Dec 03 HG

Hg 1.03 ppb .000 % 1.03

*** Check Standard: 3 Ck3ccv Seq: 66 15:54:32 18 Dec 03 HG

Line	Flag	%Rcv.	Found	True	Units	SD/RSD
Hg		98.9	4.94	5.00	ppb	.000 %

*** Check Standard: 1 Ck1ccb Seq: 67 15:56:28 18 Dec 03 HG

Line	Flag	Found	Range(+/-)	Units	SD/RSD
Hg		-.066	.101	ppb	.000 %

```
Line   Conc.  Units     SD/RSD      1       2       3       4       5
-------------------------------------------------------------------------------

*** Check Standard: 3  Ck3ccv       Seq:  68      16:30:52 18 Dec 03   HG
Line  Flag  %Rcv.   Found    True  Units      SD/RSD
Hg          97.8     4.89    5.00   ppb        .000  %

*** Check Standard: 1  Ck1ccb       Seq:  69      16:33:09 18 Dec 03   HG
Line  Flag  Found Range(+/-) Units      SD/RSD
Hg         -.038     .101     ppb        .000  %

*** Sample ID: F6QWTA                Seq:  70      16:35:50 18 Dec 03   HG
                            PDS
Hg    1.14    ppb       .000  %   1.14

*** Check Standard: 3  Ck3ccv       Seq:  71      16:37:49 18 Dec 03   HG
Line  Flag  %Rcv.   Found    True  Units      SD/RSD
Hg          98.6     4.93    5.00   ppb        .000  %

*** Check Standard: 1  Ck1ccb       Seq:  72      16:40:05 18 Dec 03   HG
Line  Flag  Found Range(+/-) Units      SD/RSD
Hg         -.042     .101     ppb        .000  %
```

Miscellaneous Data

STL Knoxville ICP Data Review / Narrative Checklist
Method: 6010B/200.7 - KNOX-MT-0007, Rev 1
Page 1 of 2

Lot / SDG #:	PB045				
Chart Name:	S121903			**Instrument:**	ST 1
Report Type:	☐ Report	☑ Level 4 Package	☐ QDS	☐ Forms Only	☐ Other _____

A. Calibration/Instrument Run QC	1st ✓ NA	1st ✓ Yes	1st ✓ No	**Why is data reportable?**	2nd ✓ NA	2nd ✓ Yes	2nd ✓ No
1. Instrument calibrated per SOP?		✓				✓	
2. ICV analyzed at beginning of run & within limits? (6010B = 90 - 110%R and <5% RSD) (200.7 = 95 - 105%R and <3% RSD)		✓				✓	
3. CCV analyzed at appropriate frequency and within control limits? (6010B & SDWA 200.7=90 - 110%R & <5%RSD) (CWA 200.7 = 95 – 105%R)			✓	If no, list details: CCV4 failed for Ba, K and Zn. Affected samples were run on S122203.			✓
4. ICB/CCB analyzed at appropriate frequency and within +/- RL?		✓		If no, list details: _____		✓	
5. ICSA/ICSAB run at required frequency? (6010B & SDWA 200.7 = beginning of run) (CWA 200.7 = beginning **and end** of run)		✓				✓	
6. ICSAB interferents and analytes within limits? (80 - 120%R)		✓				✓	
7. ICSA criteria for non-interfering elements met? (RLs ≤10 ppb within +/- 2x **SOP** RL from zero) (RLs >10 ppb within +/- 1x **SOP** RL from zero) *If no, list analytes:* _____		✓		☐ [ics1] Results outside limits due to contamination. ☐ [ics2] Interfering elements not present in sample at level which would result in false result >±2x RL. ☐ [ics3] Concentration of affected analyte in sample is more than 10x analyte signal in ICSA. ☐ Element not reported.		✓	
B. Client Sample and QC Sample Results	NA	Yes	No		NA	Yes	No
1. Were samples with concentrations > the linear range for any parameter diluted and reanalyzed?		✓		Dilution Chart #: S122203		✓	
2. Were RLs elevated due to matrix effects? *If yes, list sample ID:* _____	✓			☐ [elev3] All RLs elevated due to difficult matrix.	✓		
3. Internal standard (IS) response ±30% of ICB IS? *If no, list sample ID:* _____		✓		☐ [is] High IS response. Sample(s) rerun at dilution. ☐ Low IS response. Sample(s) reanalyzed.		✓	
C. Preparation/Matrix QC	NA	Yes	No		NA	Yes	No
1. Method blank done per prep batch and < RL?		✓		☐ **[mb3] No analyte >RL in associated samples.*** ☐ **[mb4] Sample results >20x blank.** ☐ **[mb5] Insufficient sample for reanalysis.***		✓	
2. LCS done per prep batch and within QC limits? (6010B = inhouse limits) (200.7 = 85 - 115%R)		✓		☐ **[lcs2] Insufficient sample for reanalysis.** ☐ **[lcs3] LCS recovery > QC limits and sample results are < RL.***		✓	
3. MS/MSD or MS/DUP run at required frequency?		✓		☐ [lcsd] Insufficient sample – lcs/lcsd analyzed.		✓	
4. MS %R or MS/MSD %R & RPD within QC limits? ☐ No QC reported ☐ Batch QC reported ☑ Client QC reported			✓	☐ [ms1] ☑ [msd1] LCS acceptable - matrix effects. ☐ [ms2] ☐ [msd2] Native analyte > 4x spike level. ☐ [ms3] ☐ [msd3] Matrix effects and native analyte > 4x spike level. ☐ [batch] Batch QC on client's sample outside limits.		MM 12-30-03 ✓	
5. DUP RPD within limits? (0-20 RPD for results ≥5xRL; ±RL if result <5xRL)	✓			☐ [rpd] LCS showed acceptable results. Results indicate lack of sample homogeneity.	✓		
6. PDS or PDS/PDSD run at required frequency?	✓				✓		
7. PDS/PDSD within limits? (75-125%R) **Reminder:** Place copy of PDS results in Sample Data Summary and QC Summary sections of report.	✓			☐ [pds1] ☐ [pdsd1] LCS acceptable - matrix effects. ☐ [pds2] ☐ [pdsd2] Native analyte > 4x spike level. ☐ [pds3] ☐ [pdsd3] Matrix effects and native analyte > 4x spike level.	✓		

*Such action must be taken in consultation with client.

STL Knoxville ICP Data Review / Narrative Checklist
Method: 6010B/200.7 - KNOX-MT-0007, Rev 1

Chart Name: S121903

C. Preparation/Matrix QC (continued)	1st ✓ NA	1st ✓ Yes	1st ✓ No	Why is data reportable?	2nd ✓ NA	2nd ✓ Yes	2nd ✓ No
8. Serial dilution done per prep batch? ☑ Client sample ☐ Batch sample		✓				✓	
9. Serial dilution results within limits? (10% D for analytes >50x IDL) *If no, list serial dilution ID/elements:* F6JX2 - K, ZN (dissolved)			✓	☑ [ser] Physical or chemical interference due to sample matrix.			✓
D. Other	NA	Yes	No		NA	Yes	No
1. Are nonconformances documented appropriately?	✓			NCM #	✓		
2. Calculations checked for error? (Document manual calculation checks in comments section.)	✓	✓			✓		
3. Were all spreadsheets reviewed?	✓				✓		
4. All client/project specific requirements met? (Review PM checklists, Lot Summary or Client Analysis Summary, and any applicable QAS.)		✓		Changes to PM checklists, etc.: Date:		✓	
5. Final report acceptable? (Check QuantIMS and QDS forms to assure that **results, RLs, MDLs, units, flags, dilution factors,** & preparation / analysis **dates** are correct.)		✓				✓	
6. Are results present for all samples?		✓				✓	
7. Are all deviations noted in narrative?		✓				✓	
8. For air train projects, was the appropriate autotext selected and reviewed to assure that the train fractions analyzed match the autotext statements?	✓			☐ [MMT1] Multi-metals trains analyzed for ICP & Hg. ☐ [MMT2] Multi-metals trains analyzed for ICP only. ☐ [MMT4] Combined FH/BH analyzed for ICP only.	✓		
9. For PM10 projects, was the appropriate autotext selected?	✓			☐ [pm10] PM10 filters analyzed for ICP & Hg. ☐ [pm10icp] PM10 filters analyzed for ICP only.	✓		
10. For SEP projects, was the appropriate autotext selected?	✓			☐ [SEP] Samples analyzed by SEP for As only.	✓		
11. Are all QC Summary Forms correct? MM 12-30-03	X	✓				✓	
12. Current IDL/LR/IEC data referenced in QC forms?		✓				✓	
13. Was a Filter Lot Check report included for PM10 filters?	✓			☐ [fb1] Filter Lot Check Report in Misc. Section. ☐ [fb2] Filter Lot Check Report after LCS report.	✓		
14. Is the original DRC & Quality Check Report behind narrative with copy in report?		✓				✓	
15. Was the chart scanned properly? (Check .pdf file.)		✓				✓	

1st Level Reviewer: X **Date:** 12/29/03

Comments:

2nd Level Reviewer: Nena J. Meehan **Date:** 12-30-03

Comments:

NOTE: Nonconformance memos are required for **bold** and *italicized* [autotext] statements: **Bold** = deficiency, *italicized* = anomoly.

STL Knoxville

Data Quality Checks

Internal Standard

Date	Time	Lab ID	Problem
29-Dec-03	*3:56 PM*		*There were 68 results successfully verified.*

Relative Standard Deviation

Date	Time	Lab ID	Problem
29-Dec-03	*3:56 PM*		*There were 154 results successfully verified.*

STL Knoxville ICP Data Review / Narrative Checklist
Method: 6010B/200.7 - KNOX-MT-0007, Rev 1

Lot / SDG #:	PB045				
Chart Name:	S122203			**Instrument:**	ST1
Report Type:	☐ Report	☑ Level 4 Package	☐ QDS	☐ Forms Only	☐ Other _____

A. Calibration/Instrument Run QC	1st ✓ NA	1st ✓ Yes	1st ✓ No	**Why is data reportable?**	2nd ✓ NA	2nd ✓ Yes	2nd ✓ No
1. Instrument calibrated per SOP?		✓				✓	
2. ICV analyzed at beginning of run & within limits? (6010B = 90 - 110%R and <5% RSD) (200.7 = 95 - 105%R and <3% RSD)		✓				✓	
3. CCV analyzed at appropriate frequency and within control limits? (6010B & SDWA 200.7=90 - 110%R & <5%RSD) (CWA 200.7 = 95 – 105%R)		✓		If no, list details: _____		✓	
4. ICB/CCB analyzed at appropriate frequency and within +/- RL?		✓		If no, list details: _____		✓	
5. ICSA/ICSAB run at required frequency? (6010B & SDWA 200.7 = beginning of run) (CWA 200.7 = beginning **and end** of run)		✓				✓	
6. ICSAB interferents and analytes within limits? (80 - 120%R)		✓				✓	
7. ICSA criteria for non-interfering elements met? (RLs ≤10 ppb within +/- 2x **SOP** RL from zero) (RLs >10 ppb within +/- 1x **SOP** RL from zero) *If no, list analytes:* _____		✓		☐ [ics1] Results outside limits due to contamination. ☐ [ics2] Interfering elements not present in sample at level which would result in false result >±2x RL. ☐ [ics3] Concentration of affected analyte in sample is more than 10x analyte signal in ICSA. ☐ Element not reported.		✓	
B. Client Sample and QC Sample Results	NA	Yes	No		NA	Yes	No
1. Were samples with concentrations > the linear range for any parameter diluted and reanalyzed?	✓			Dilution Chart #: _____	✓		
2. Were RLs elevated due to matrix effects? *If yes, list sample ID:* _____	✓			☐ [elev3] All RLs elevated due to difficult matrix.	✓		
3. Internal standard (IS) response ±30% of ICB IS? *If no, list sample ID:* _____		✓		☐ [is] High IS response. Sample(s) rerun at dilution. ☐ Low IS response. Sample(s) reanalyzed.		✓	
C. Preparation/Matrix QC	NA	Yes	No		NA	Yes	No
1. Method blank done per prep batch and < RL?	✓			☐ **[mb3] No analyte >RL in associated samples.*** ☐ **[mb4] Sample results >20x blank.** ☐ **[mb5] Insufficient sample for reanalysis.***	✓		
2. LCS done per prep batch and within QC limits? (6010B = inhouse limits) (200.7 = 85 - 115%R)	✓			☐ **[lcs2] Insufficient sample for reanalysis.** ☐ **[lcs3] LCS recovery > QC limits and sample results are < RL.***	✓		
3. MS/MSD or MS/DUP run at required frequency?	X	✓		☐ [lcsd] Insufficient sample – lcs/lcsd analyzed.		✓	
4. MS %R or MS/MSD %R & RPD within QC limits? ☐ No QC reported ☐ Batch QC reported ☑ Client QC reported NTM 12-30-03 x2	X	✓		☐ [ms1] ☐ [msd1] LCS acceptable - matrix effects. ☐ [ms2] ☐ [msd2] Native analyte > 4x spike level. ☐ [ms3] ☐ [msd3] Matrix effects and native analyte > 4x spike level. ☐ [batch] Batch QC on client's sample outside limits.		✓	
5. DUP RPD within limits? (0-20 RPD for results ≥5xRL; ±RL if result <5xRL)	✓			☐ [rpd] LCS showed acceptable results. Results indicate lack of sample homogeneity.	✓		
6. PDS or PDS/PDSD run at required frequency?	✓				✓		
7. PDS/PDSD within limits? (75-125%R) **Reminder:** Place copy of PDS results in Sample Data Summary and QC Summary sections of report.	✓			☐ [pds1] ☐ [pdsd1] LCS acceptable - matrix effects. ☐ [pds2] ☐ [pdsd2] Native analyte > 4x spike level. ☐ [pds3] ☐ [pdsd3] Matrix effects and native analyte > 4x spike level.	✓		

*Such action must be taken in consultation with client.

STL Knoxville ICP Data Review / Narrative Checklist
Method: 6010B/200.7 - KNOX-MT-0007, Rev 1

Chart Name: S122203

C. Preparation/Matrix QC (continued)	1st ✓ NA	1st ✓ Yes	1st ✓ No	Why is data reportable?	2nd ✓ NA	2nd ✓ Yes	2nd ✓ No
8. Serial dilution done per prep batch? ☑ Client sample ☐ Batch sample	✓				✓		
9. Serial dilution results within limits? (10% D for analytes >50x IDL) *If no, list serial dilution ID/elements:* _____	✓			☐ [ser] Physical or chemical interference due to sample matrix.	✓		
D. Other	NA	Yes	No		NA	Yes	No
1. Are nonconformances documented appropriately?	✓			NCM #	✓		
2. Calculations checked for error? (Document manual calculation checks in comments section.)	✓				✓		
3. Were all spreadsheets reviewed?	✓				✓		
4. All client/project specific requirements met? (Review PM checklists, Lot Summary or Client Analysis Summary, and any applicable QAS.)		✓		Changes to PM checklists, etc.: _____ Date: _____		✓	
5. Final report acceptable? (Check QuantIMS and QDS forms to assure that **results, RLs, MDLs, units, flags, dilution factors,** & preparation / analysis **dates** are correct.)		✓				✓	
6. Are results present for all samples?		✓				✓	
7. Are all deviations noted in narrative?		✓				✓	
8. For air train projects, was the appropriate autotext selected and reviewed to assure that the train fractions analyzed match the autotext statements?	✓			☐ [MMT1] Multi-metals trains analyzed for ICP & Hg. ☐ [MMT2] Multi-metals trains analyzed for ICP only. ☐ [MMT4] Combined FH/BH analyzed for ICP only.	✓		
9. For PM10 projects, was the appropriate autotext selected?	✓			☐ [pm10] PM10 filters analyzed for ICP & Hg. ☐ [pm10icp] PM10 filters analyzed for ICP only.	✓		
10. For SEP projects, was the appropriate autotext selected?	✓			☐ [SEP] Samples analyzed by SEP for As only.	✓		
11. Are all QC Summary Forms correct?		✓				✓	
12. Current IDL/LR/IEC data referenced in QC forms?		✓				✓	
13. Was a Filter Lot Check report included for PM10 filters?	✓			☐ [fb1] Filter Lot Check Report in Misc. Section. ☐ [fb2] Filter Lot Check Report after LCS report.	✓		
14. Is the original DRC & Quality Check Report behind narrative with copy in report?		✓				✓	
15. Was the chart scanned properly? (Check .pdf file.)		✓				✓	

1st Level Reviewer: [illegible] **Date:** 12/30/03

Comments:

2nd Level Reviewer: Nena J. Meehan **Date:** 12-30-03

Comments:

NOTE: Nonconformance memos are required for **bold** and *italicized* [autotext] statements: **Bold** = deficiency, *italicized* = anomoly.

STL Knoxville

Data Quality Checks

Internal Standard

Date	Time	Lab ID	Problem
30-Dec-03	*10:13 AM*		*There were 37 results successfully verified.*

Relative Standard Deviation

Date	Time	Lab ID	Problem
30-Dec-03	*10:13 AM*		*There were 35 results successfully verified.*

STL Knoxville

Mercury Data Final Report Checklist

Method 7pt.std/SW-846 7470A/7471A/0.2 RL

LOT Number: PB045

Analyst:	KND			Instrument:	Leeman Hydra AA Mercury Analyzer		
Run Date:	Dec-18-03	Calibration Number:	1	Chart Name:	H121803.PRN	Element:	Hg

Review Items		1st Level N/A	1st Level Yes	1st Level No	Comments	2nd Level
1.	Was the data for this Lot evaluated using the Mercury Data Review Software?		✓			✓
2.	Was data evaluated using the correct method criteria? (Review Mercury Data Review Software method table)		✓			✓
3.	All client/project specific requirements met?		✓			✓
4.	Sample analysis done within holding time (HT)? *If no, list samples:*		✓		☐ [HT1] HT expired upon receipt. ☐ [HT2] Analysis requested after HT expired. ☐ See Comment number	✓
5.	Are all noncomformances documented appropriately?	✓				✓
6.	Final report acceptable?		✓			✓
	* Results correct?		✓			✓
	* Report Limits calculated correctly?		✓			✓
	* Are units correct?		✓			✓
	* Appropriate flags used?		✓			✓
	* Deviations noted in narrative?		✓			✓
	* Dilution factors correct?		✓			✓
	* Preparation/analysis dates correct?		✓			✓
7.	Were MS Run #'s assigned properly?		✓			✓
8.	Were calculations checked for error?		✓			✓
9.	Are all QC Summary forms correct?		✓			✓
10.	Was the chart scanned properly? (Check .pdf file)		✓			✓

Initial Review: 8 **Date:** 12/30/03

Comments:

Second Review: Nena L. Meehan **Date:** 12-30-03

Comments:

RQC057

Severn Trent Laboratories, Inc.
METALS PREP LOG/BATCH SUMMARY

Run Date: 12/18/03
Time: 7:45:43

BATCH NUMBER: 3352178

PREP DATE: 12/18/03 10:00
DUE DATE 12/26/03

COMP DATE: 12/18/03 16:00
INITIALS: AW 3005A

LOT NUMBER	WORK ORDER	QC	ICP/WEIGHT	HG/WEIGHT	GFA/WEIGHT	FLA/WEIGH
			50.0mL			
H3L100237	F6DKD	01	X _____g	_____g	_____g	_____g
WATER	TO DUE DATE:		12/26/03			
H3L100268	F6DQ4	01	X _____g	_____g	_____g	_____g
WATER	DI DUE DATE:		12/31/03			
H3L100268	F6DQ4	01	X _____g	_____g	_____g	_____g
WATER	TO DUE DATE:		12/31/03			
H3L100268	F6DRG	01	X _____g	_____g	_____g	_____g
WATER	DI DUE DATE:		12/31/03			
H3L100268	F6DRG	01	X _____g	_____g	_____g	_____g
WATER	TO DUE DATE:		12/31/03			
H3L110180	F6F1C	01	X _____g	_____g	_____g	_____g
WATER	DI DUE DATE:		12/31/03			
H3L110180	F6F1C	01	X _____g	_____g	_____g	_____g
WATER	TO DUE DATE:		12/31/03			
H3L110180	F6F2H	01	X _____g	_____g	_____g	_____g
WATER	DI DUE DATE:		12/31/03			
H3L110180	F6F2H	01	X _____g	_____g	_____g	_____g
WATER	TO DUE DATE:		12/31/03			
H3L120208	F6JXA	01	X _____g	_____g	_____g	_____g
WATER	DI DUE DATE:		12/31/03			
H3L120208	F6JXA	01	X _____g	_____g	_____g	_____g
WATER	TO DUE DATE:		12/31/03			
H3L120208	F6JX2	01	X _____g	_____g	_____g	_____g
WATER	DI DUE DATE:		12/31/03			
	F6JX2S		_____g	_____g	_____g	_____g
	F6JX2D		_____g	_____g	_____g	_____g
H3L120208	F6JX2	01	X _____g	_____g	_____g	_____g
WATER	TO DUE DATE:		12/31/03			
	F6JX2S		_____g	_____g	_____g	_____g
	F6JX2D		_____g	_____g	_____g	_____g

RQC057

Severn Trent Laboratories, Inc.
METALS PREP LOG/BATCH SUMMARY

Run Date: 12/18/03
Time: 7:45:43

BATCH NUMBER: **3352178**

PREP DATE: 12/18/03 10:00
DUE DATE 12/26/03

COMP DATE: 12/18/03 16:00
INITIALS: JW

LOT NUMBER	WORK ORDER	QC	ICP/WEIGHT	HG/WEIGHT	GFA/WEIGHT	FLA/WEIGH
			50.0mL			
H3L120208	F6J0A	01	X _____g	_____g	_____g	_____g
WATER	**DI** DUE DATE:		12/31/03			
H3L120208	F6J0A	01	X _____g	_____g	_____g	_____g
WATER	**TO** DUE DATE:		12/31/03			
H3L160273	F6RVR	01	X _____g	_____g	_____g	_____g
WATER	**TO** DUE DATE:		1/02/04			
H3L180000	F6X9WB	01	X _____g	_____g	_____g	_____g
WATER	DUE DATE:		0/00/00			
	F6X9WC		_____g	_____g	_____g	_____g

LEVEL 2
BLANK AND CHECK STANDARD ON BATCH _____
MS/MSD AND PDS ON BATCH _____
CURVE PREPPED FOR HG _____
CORRECT SPIKES ADDED _____
SPIKING SOLUTIONS DOCUMENTED ON BATCH LOG_____

COMMENTS: _____
B-BLANK/C-LCS/D-MSD/I-REANALYSIS/L-LCSD/P-SERIAL DLTN/S-MS/X-SAMP DUP/Y-SAMP CONF/Z-PDS
SPIKING WITNESSED BY _____

ICP ELEMENTS WITHIN THE BATCH:

AG AL AS BA BE CA CD CO CR CU FE KX MG MN NA NI PB SB SE TL VX ZN

MS/MSD 1:	ICP - 1	ICP - 2	GFAA	HG	ODD
MS/MSD 2:	ICP - 1	ICP - 2	GFAA	HG	ODD
MS/MSD 3:	ICP - 1	ICP - 2	GFAA	HG	ODD
CHECK :	ICP - 1	ICP - 2	GFAA	HG	ODD
CHECK DUP:	ICP - 1	ICP - 2	GFAA	HG	ODD
STANDARD NUMBERS	_____	_____	____	____	____

STL Knoxville
Metals Prep Spiking Form

Analyst: LDW Date: 12/18/03 Batch: 3352178

1st Level Review & Relinquished By: LDW Date/Time: 12/18/03

2nd Level Review & Received By: LGS Date/Time: 12-19-03

Acid Lot Numbers:

Nitric Acid: Y42048 Hydrochloric Acid: Y41059

30% Hydrogen Peroxide: Hydrofluoric Acid:

Spiking Standards:

(MS) 0.05 ml of _____ into 50 ml Exp. Date: _____

(LCS) 0.25 ml of _____ into 50 ml Exp. Date: _____

0.5 ml of WMEB159132 into 50 ml Exp. Date: 10.04

0.5 ml of WMEB162116 into 50 ml Exp. Date: 1.05

0.5 ml of WMEB162117 into 50 ml Exp. Date: 1.05

0.5 ml of _____ into 50 ml Exp. Date: _____

0.5 ml of _____ into 50 ml Exp. Date: _____

1.0 ml of _____ into 100 ml Exp. Date: _____

1.0 ml of _____ into 100 ml Exp. Date: _____

1.0 ml of _____ into 100 ml Exp. Date: _____

1.0 ml of _____ into 100 ml Exp. Date: _____

1.0 ml of _____ into 100 ml Exp. Date: _____

ICP SOPs (Circle Method Used)

KNOX-IP-0002	NC Groundwaters	3030C		
KNOX-IP-0003	Total Metals in Filters	Air-Total		
KNOX -IP-0004	Soils/Waste	3050B		
KNOX -IP-0005	Aqueous	3005A	3010A	200.7
KNOX-IP-0006	Ontario Hydro	Air-Train		
KNOX-IP-0007	CLP Water/Soils	ILM03.0	ILM04.0	
KNOX-MT-0006	MMT	Air-Train		
KNOX-MT-0008	SEP for As	3010A		

Comments: _____

RQC057

Severn Trent Laboratories, Inc.
METALS PREP LOG/BATCH SUMMARY

Run Date: 12/18/03
Time: 6:38:51

BATCH NUMBER: 3352155

PREP DATE: 12/18/03 9:00 COMP DATE: 12/18/03 12:00
DUE DATE 12/26/03 INITIALS: KND

LOT NUMBER	WORK ORDER	QC	ICP/WEIGHT	HG/WEIGHT	GFA/WEIGHT	FLA/WEIGH
H3L100237	F6DKD	01	_____g	X SD.Dwl _____g	_____g	_____g
WATER	TO DUE DATE:		12/26/03			
H3L100268	F6DQ4	01	_____g	X _____g	_____g	_____g
WATER	TO DUE DATE:		12/31/03			
H3L100268	F6DRG	01	_____g	X _____g	_____g	_____g
WATER	TO DUE DATE:		12/31/03			
H3L110180	F6F1C	01	_____g	X _____g	_____g	_____g
WATER	TO DUE DATE:		12/31/03			
H3L110180	F6F2H	01	_____g	X _____g	_____g	_____g
WATER	TO DUE DATE:		12/31/03			
H3L120208	F6JXA	01	_____g	X _____g	_____g	_____g
WATER	TO DUE DATE:		12/31/03			
H3L120208	F6JX2	01	_____g	X _____g	_____g	_____g
WATER	TO DUE DATE:		12/31/03			
	F6JX2S		_____g	_____g	_____g	_____g
	F6JX2D		_____g	_____g	_____g	_____g
H3L120208	F6J0A	01	_____g	X _____g	_____g	_____g
WATER	TO DUE DATE:		12/31/03			
H3L160273	F6RVR	01	_____g	X _____g	_____g	_____g
WATER	TO DUE DATE:		1/02/04			
H3L180000	F6X6XB	01	_____g	X _____g	_____g	_____g
WATER	DUE DATE:		0/00/00			
	F6X6XC		_____g	_____g	_____g	_____g

LEVEL 2
BLANK AND CHECK STANDARD ON BATCH _____
MS/MSD AND PDS ON BATCH _____
CURVE PREPPED FOR HG _____
CORRECT SPIKES ADDED _____
SPIKING SOLUTIONS DOCUMENTED ON BATCH LOG _____

STL Knoxville
Mercury Prep Spiking Form

Analyst: KND Date: 12/18/03 Batch: 3352155 Bath Temp: 94°
(Acceptance range 90°–95°C)

X 7470A/245.1: KNOX-MT-0009, Rev. 2
θ CLP-aqueous: KNOX-MT-0011, Rev. 0
θ Hg in filters: KNOX-IP-0003, Rev. 2
θ MMT train: KNOX-MT-0006, Rev. 5
θ 7471/245.5: KNOX-MT-0010, Rev. 2
θ CLP-soil: KNOX-MT-0012, Rev. 0
θ Ontario Hydro: KNOX-IP-0006, Rev. 1

Standard Type	Standard ID	Intermediate Std.		Volume Used (ml)	Final Volume (ml)	Final Concentration (ug/L)
		Source	Conc.(ug/L)			
Calibration Std 1	N/A		N/A	N/A	50	Blank
Calibration Std 2	I-CAL-2731-6-8	Spex	100	0.1	50	0.2
Calibration Std 3	I-CAL-		100	0.25	50	0.5
Calibration Std 4	I-CAL-		100	0.5	50	1.0
Calibration Std 5	I-CAL-		100	2.5	50	5.0
Calibration Std 6	I-CAL-		100	5.0	50	10.0

Standard Type	Standard ID	Intermediate Std.		Amount Used	Final Volume/ Weight	Final Concentration
		Source	Conc.(ug/L)			
ICV	I-VER-2730-6-8	Ultra	100	1.25 ml	50 ml	2.5 ug/L
CCV	I-CAL-2731-6-8	Spex	100	2.5 ml	50 ml	5.0 ug/L
CRA	I-CAL-		100	0.1 ml	50 ml	0.2 ug/L
Aqueous LCS	I-CAL-2731-6-8	Spex	100	2.5 ml	50 ml	5.0 ug/L
Aqueous MS	I-CAL-		100	0.5 ml	50 ml	1.0 ug/L
Soil LCS	I-CAL-		100	2.5 ml	0.3 g	0.83 mg/kg
Soil MS	I-CAL-		100	0.5 ml	0.3 g	0.17 mg/kg
CLP Soil LCS	ERA Lot #		100	0.2 g	0.2 g	____ mg/kg
CLP Soil MS	I-CAL-		100	1.0 ml	0.2 g	0.5 mg/kg
TCLP MS	I-CAL-		100	2.5 ml	50 ml	5.0 ug/L
Air (MMT)	I-CAL-		100	0.5 ml	2.5 ml	20 ug/L

Standard Type	Std ID	Intermediate Std.		Amount Used @ ICP prep/final volume	ICP Sample Volume used @ Hg prep	Final Conc. @ Hg prep	Final Concentration
		Source	Conc.(ug/L)				
Air(PM-10)LCS	I-CAL-		10,000	0.250 ml/50ml	5.0 ml	5.0 ug/l	11.25 ug
Air (PM-10) MS	I-CAL-		10,000	0.050 ml/50ml	5.0 ml	1.0 ug/l	2.25 ug

REAGENTS

Conc. H_2SO_4 Lot #:	Y12A01	5% $KMnO_4$ ID #:	B-2640-13-B
Conc. HNO_3 Lot #:	Y39036	5% $K_2S_2O_8$ ID #:	D-2638-7-D
Conc. HCL Lot #:	Y41059	$SnCl_2$ Solution ID #:	A-2637-44-A
12% $NaCl{\cdot}NH_2OH{\cdot}HCL$ ID #:	C-2639-6-A	Aqua Regia ID #:	NA

RQC057

Severn Trent Laboratories, Inc.
METALS PREP LOG/BATCH SUMMARY

Run Date: 12/18/03
Time: 6:38:58

BATCH NUMBER: **3352158**

PREP DATE: 12/18/03 9:00
DUE DATE 12/31/03

COMP DATE: 12/18/03 12:00
INITIALS: KND

LOT NUMBER	WORK ORDER	QC	ICP/WEIGHT	HG/WEIGHT	GFA/WEIGHT	FLA/WEIGH
H3L100268	F6DQ4	01	_____g	X 50.0ml	_____g	_____g
WATER	DI DUE DATE:		12/31/03			
H3L100268	F6DRG	01	_____g	X _____g	_____g	_____g
WATER	DI DUE DATE:		12/31/03			
H3L110180	F6F1C	01	_____g	X _____g	_____g	_____g
WATER	DI DUE DATE:		12/31/03			
H3L110180	F6F2H	01	_____g	X _____g	_____g	_____g
WATER	DI DUE DATE:		12/31/03			
H3L120208	F6JXA	01	_____g	X _____g	_____g	_____g
WATER	DI DUE DATE:		12/31/03			
H3L120208	F6JX2	01	_____g	X _____g	_____g	_____g
WATER	DI DUE DATE:		12/31/03			
	F6JX2S		_____g	_____g	_____g	_____g
	F6JX2D		_____g	_____g	_____g	_____g
H3L120208	F6J0A	01	_____g	X _____g	_____g	_____g
WATER	DI DUE DATE:		12/31/03			
H3L180000	F6X62B	01	_____g	X _____g	_____g	_____g
WATER	DUE DATE:		0/00/00			
	F6X62C		_____g	_____g	_____g	_____g

LEVEL 2
BLANK AND CHECK STANDARD ON BATCH _____
MS/MSD AND PDS ON BATCH _____
CURVE PREPPED FOR HG _____
CORRECT SPIKES ADDED _____
SPIKING SOLUTIONS DOCUMENTED ON BATCH LOG_____

COMMENTS: _____
B-BLANK/C-LCS/D-MSD/I-REANALYSIS/L-LCSD/P-SERIAL DLTN/S-MS/X-SAMP DUP/Y-SAMP CONF/Z-PDS
SPIKING WITNESSED BY _____

STL Knoxville
Mercury Prep Spiking Form

Analyst: KND Date: 12/18/03 Batch: 3352158 Bath Temp: 94°
(Acceptance range 90°–95°C)

X 7470A/245.1: KNOX-MT-0009, Rev. 2
θ CLP-aqueous: KNOX-MT-0011, Rev. 0
θ Hg in filters: KNOX-IP-0003, Rev. 2
θ MMT train: KNOX-MT-0006, Rev. 5
θ 7471/245.5: KNOX-MT-0010, Rev. 2
θ CLP-soil: KNOX-MT-0012, Rev. 0
θ Ontario Hydro: KNOX-IP-0006, Rev. 1

Standard Type	Standard ID	Intermediate Std.		Volume Used (ml)	Final Volume (ml)	Final Concentration (ug/L)
		Source	Conc.(ug/L)			
Calibration Std 1	N/A		N/A	N/A	50	Blank
Calibration Std 2	I-CAL-2731-6-8	Spex	100	0.1	50	0.2
Calibration Std 3	I-CAL-		100	0.25	50	0.5
Calibration Std 4	I-CAL-		100	0.5	50	1.0
Calibration Std 5	I-CAL-		100	2.5	50	5.0
Calibration Std 6	I-CAL-		100	5.0	50	10.0

Standard Type	Standard ID	Intermediate Std.		Amount Used	Final Volume/ Weight	Final Concentration
		Source	Conc.(ug/L)			
ICV	I-VER-2730-6-8	Ultra	100	1.25 ml	50 ml	2.5 ug/L
CCV	I-CAL-2731-6-8	Spex	100	2.5 ml	50 ml	5.0 ug/L
CRA	I-CAL-		100	0.1 ml	50 ml	0.2 ug/L
Aqueous LCS	I-CAL-2731-6-8	Spex	100	2.5 ml	50 ml	5.0 ug/L
Aqueous MS	I-CAL-		100	0.5 ml	50 ml	1.0 ug/L
Soil LCS	I-CAL-		100	2.5 ml	0.3 g	0.83 mg/kg
Soil MS	I-CAL-		100	0.5 ml	0.3 g	0.17 mg/kg
CLP Soil LCS	ERA Lot #		100	0.2 g	0.2 g	____ mg/kg
CLP Soil MS	I-CAL-		100	1.0 ml	0.2 g	0.5 mg/kg
TCLP MS	I-CAL-		100	2.5 ml	50 ml	5.0 ug/L
Air (MMT)	I-CAL-		100	0.5 ml	2.5 ml	20 ug/L

Standard Type	Std ID	Intermediate Std.		Amount Used @ ICP prep/final volume	ICP Sample Volume used @ Hg prep	Final Conc. @ Hg prep	Final Concentration
		Source	Conc.(ug/L)				
Air(PM-10)LCS	I-CAL-		10,000	0.250 ml/50ml	5.0 ml	5.0 ug/l	11.25 ug
Air (PM-10) MS	I-CAL-		10,000	0.050 ml/50ml	5.0 ml	1.0 ug/l	2.25 ug

REAGENTS

Conc. H_2SO_4 Lot #:	Y12A01	5% $KMnO_4$ ID #:	B-2640-13-B
Conc. HNO_3 Lot #:	Y39036	5% $K_2S_2O_8$ ID #:	D-2638-7-D
Conc. HCL Lot #:	Y41059	$SnCl_2$ Solution ID #:	A-2637-44-A
12% $NaCl{\cdot}NH_2OH{\cdot}HCL$ ID #:	C-2639-6-A	Aqua Regia ID #:	NA

Wet Chemistry

Sample Summary

SHAW E & I INC

Client Sample ID: DD3007

General Chemistry

Lot-Sample #...: H3L100268-001 **Work Order #...:** F6DQ4 **Matrix.....:** WATER
Date Sampled...: 12/09/03 **Date Received..:** 12/10/03

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride - Automated	**148**	**20.0**	**mg/L**	**MCAWW 325.2**	**12/11/03**	**3345263**
		Dilution Factor: 20		MDL.....: 5.6		
Cyanide, Total	ND	0.010	mg/L	SW846 9012A	12/15/03	3364457
		Dilution Factor: 1		MDL.....: 0.0030		
Hardness, as CaCO3	**81.6**	**5.0**	**mg/L**	**MCAWW 130.2**	**12/22/03**	**3357125**
		Dilution Factor: 1		MDL.....: 2.1		
Nitrate	ND	0.10	mg/L	MCAWW 353.2	12/10/03	3344598
		Dilution Factor: 1		MDL.....: 0.016		
Sulfate	**13.1**	**5.0**	**mg/L**	**MCAWW 375.4**	**12/11/03**	**3345463**
		Dilution Factor: 1		MDL.....: 0.94		
Total Alkalinity	**444**	**5.0**	**mg/L**	**MCAWW 310.1**	**12/10/03**	**3344488**
		Dilution Factor: 1		MDL.....: 1.3		
Total Dissolved Solids	**697**	**10.0**	**mg/L**	**MCAWW 160.1**	**12/11-12/12/03**	**3345541**
		Dilution Factor: 1		MDL.....: 4.3		
Total Organic Carbon	**5.3**	**1.0**	**mg/L**	**SW846 9060**	**12/24/03**	**3360094**
		Dilution Factor: 1		MDL.....: 0.68		
Total Suspended Solids	**4.0**	**4.0**	**mg/L**	**MCAWW 160.2**	**12/12-12/15/03**	**3349480**
		Dilution Factor: 1		MDL.....: 2.8		
Turbidity	**0.58**	**0.50**	**NTU**	**MCAWW 180.1**	**12/10/03**	**3350326**
		Dilution Factor: 1		MDL.....: 0.50		
Turbidity	**1.6**	**0.50**	**NTU**	**MCAWW 180.1**	**12/16/03**	**3350328**
		Dilution Factor: 1		MDL.....: 0.50		

SHAW E & I INC

Client Sample ID: DD3008

General Chemistry

Lot-Sample #...: H3L100268-002 **Work Order #...:** F6DRG **Matrix.....:** WATER
Date Sampled...: 12/09/03 **Date Received..:** 12/10/03

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride - Automated	**2930**	**50.0**	**mg/L**	**MCAWW 325.2**	**12/11/03**	**3345263**
		Dilution Factor: 50		MDL.....: 14.0		
Cyanide, Total	ND	0.010	mg/L	SW846 9012A	12/15/03	3364457
		Dilution Factor: 1		MDL.....: 0.0030		
Hardness, as CaCO3	**1500**	**25.0**	**mg/L**	**MCAWW 130.2**	**12/17/03**	**3351416**
		Dilution Factor: 5		MDL.....: 10.5		
Nitrate	ND	0.10	mg/L	MCAWW 353.2	12/10/03	3344598
		Dilution Factor: 1		MDL.....: 0.016		
Sulfate	ND	5.0	mg/L	MCAWW 375.4	12/11/03	3345463
		Dilution Factor: 1		MDL.....: 0.94		
Total Alkalinity	**432**	**5.0**	**mg/L**	**MCAWW 310.1**	**12/10/03**	**3344488**
		Dilution Factor: 1		MDL.....: 1.3		
Total Dissolved Solids	**3880**	**50.0**	**mg/L**	**MCAWW 160.1**	**12/11-12/12/03**	**3345541**
		Dilution Factor: 5		MDL.....: 21.5		
Total Organic Carbon	**3.9**	**1.0**	**mg/L**	**SW846 9060**	**12/24/03**	**3360094**
		Dilution Factor: 1		MDL.....: 0.68		
Total Suspended Solids	**7.0**	**4.0**	**mg/L**	**MCAWW 160.2**	**12/12-12/15/03**	**3349480**
		Dilution Factor: 1		MDL.....: 2.8		
Turbidity	**1.3**	**0.50**	**NTU**	**MCAWW 180.1**	**12/10/03**	**3350326**
		Dilution Factor: 1		MDL.....: 0.50		
Turbidity	**7.0**	**0.50**	**NTU**	**MCAWW 180.1**	**12/16/03**	**3350328**
		Dilution Factor: 1		MDL.....: 0.50		

SHAW E & I INC

Client Sample ID: DD3002

General Chemistry

Lot-Sample #...: H3L110180-001 **Work Order #...:** F6F1C **Matrix.....:** WATER
Date Sampled...: 12/10/03 **Date Received..:** 12/11/03

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride - Automated	**21300**	**250**	**mg/L**	**MCAWW 325.2**	**12/29/03**	**3363239**
		Dilution Factor: 250		MDL.....: 70.0		
Cyanide, Total	ND	0.010	mg/L	SW846 9012A	12/15/03	3364457
		Dilution Factor: 1		MDL.....: 0.0030		
Hardness, as CaCO3	**9940**	**125**	**mg/L**	**MCAWW 130.2**	**12/17/03**	**3351416**
		Dilution Factor: 25		MDL.....: 52.5		
Nitrate	ND	0.10	mg/L	MCAWW 353.2	12/11/03	3345556
		Dilution Factor: 1		MDL.....: 0.016		
Sulfate	ND	5.0	mg/L	MCAWW 375.4	12/29/03	3363240
		Dilution Factor: 1		MDL.....: 0.94		
Total Alkalinity	**238**	**5.0**	**mg/L**	**MCAWW 310.1**	**12/11/03**	**3346137**
		Dilution Factor: 1		MDL.....: 1.3		
Total Dissolved Solids	**33600**	**400**	**mg/L**	**MCAWW 160.1**	**12/12-12/15/03**	**3346635**
		Dilution Factor: 40		MDL.....: 172		
Total Organic Carbon	ND	1.0	mg/L	SW846 9060	12/16/03	3351144
		Dilution Factor: 1		MDL.....: 0.68		
Total Suspended Solids	**39.0**	**4.0**	**mg/L**	**MCAWW 160.2**	**12/12-12/15/03**	**3346636**
		Dilution Factor: 1		MDL.....: 2.8		
Turbidity	**3.1**	**0.50**	**NTU**	**MCAWW 180.1**	**12/11/03**	**3350327**
		Dilution Factor: 1		MDL.....: 0.50		
Turbidity	**18.4**	**0.50**	**NTU**	**MCAWW 180.1**	**12/16/03**	**3350328**
		Dilution Factor: 1		MDL.....: 0.50		

SHAW E & I INC

Client Sample ID: DD3001

General Chemistry

Lot-Sample #...: H3L110180-002 Work Order #...: F6F2H Matrix.....: WATER
Date Sampled...: 12/10/03 Date Received..: 12/11/03

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride - Automated	132	20.0	mg/L	MCAWW 325.2	12/29/03	3363239
		Dilution Factor: 20		MDL.....: 5.6		
Cyanide, Total	ND	0.010	mg/L	SW846 9012A	12/15/03	3364457
		Dilution Factor: 1		MDL.....: 0.0030		
Hardness, as CaCO3	313	5.0	mg/L	MCAWW 130.2	12/22/03	3357125
		Dilution Factor: 1		MDL.....: 2.1		
Nitrate	0.58	0.50	mg/L	MCAWW 353.2	12/11/03	3345556
		Dilution Factor: 5		MDL.....: 0.080		
Sulfate	54.4	25.0	mg/L	MCAWW 375.4	12/29/03	3363240
		Dilution Factor: 5		MDL.....: 4.7		
Total Alkalinity	255	5.0	mg/L	MCAWW 310.1	12/11/03	3346137
		Dilution Factor: 1		MDL.....: 1.3		
Total Dissolved Solids	584	10.0	mg/L	MCAWW 160.1	12/12-12/15/03	3346635
		Dilution Factor: 1		MDL.....: 4.3		
Total Organic Carbon	1.2	1.0	mg/L	SW846 9060	12/16/03	3351144
		Dilution Factor: 1		MDL.....: 0.68		
Total Suspended Solids	4.0	4.0	mg/L	MCAWW 160.2	12/12-12/15/03	3346636
		Dilution Factor: 1		MDL.....: 2.8		
Turbidity	5.6	0.50	NTU	MCAWW 180.1	12/11/03	3350327
		Dilution Factor: 1		MDL.....: 0.50		
Turbidity	5.2	0.50	NTU	MCAWW 180.1	12/16/03	3350328
		Dilution Factor: 1		MDL.....: 0.50		

SHAW E & I INC

Client Sample ID: DD3003

General Chemistry

Lot-Sample #...: H3L120208-001 **Work Order #...:** F6JXA **Matrix.....:** WATER
Date Sampled...: 12/11/03 **Date Received..:** 12/12/03

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride - Automated	**48.7**	**1.0**	**mg/L**	**MCAWW 325.2**	**12/29/03**	**3363239**
		Dilution Factor: 1		MDL.....: 0.28		
Cyanide, Total	ND	0.010	mg/L	SW846 9012A	12/18/03	3364517
		Dilution Factor: 1		MDL.....: 0.0030		
Hardness, as CaCO3	**130**	**5.0**	**mg/L**	**MCAWW 130.2**	**12/22/03**	**3357125**
		Dilution Factor: 1		MDL.....: 10.5		
Nitrate	ND	0.10	mg/L	MCAWW 353.2	12/13/03	3349149
		Dilution Factor: 1		MDL.....: 0.016		
Sulfate	**32.6**	**25.0**	**mg/L**	**MCAWW 375.4**	**12/29/03**	**3363240**
		Dilution Factor: 5		MDL.....: 4.7		
Total Alkalinity	**726**	**5.0**	**mg/L**	**MCAWW 310.1**	**12/12/03**	**3349139**
		Dilution Factor: 1		MDL.....: 1.3		
Total Dissolved Solids	**779**	**10.0**	**mg/L**	**MCAWW 160.1**	**12/16-12/17/03**	**3350171**
		Dilution Factor: 1		MDL.....: 4.3		
Total Organic Carbon	**1.6**	**1.0**	**mg/L**	**SW846 9060**	**12/24/03**	**3360094**
		Dilution Factor: 1		MDL.....: 0.68		
Total Suspended Solids	**4.0**	**4.0**	**mg/L**	**MCAWW 160.2**	**12/15/03**	**3349364**
		Dilution Factor: 1		MDL.....: 2.8		
Turbidity	**74.0**	**2.5**	**NTU**	**MCAWW 180.1**	**12/12/03**	**3349635**
		Dilution Factor: 5		MDL.....: 2.5		

SHAW E & I INC

Client Sample ID: DD3004

General Chemistry

Lot-Sample #...: H3L120208-002 **Work Order #...:** F6JX2 **Matrix.....:** WATER
Date Sampled...: 12/11/03 **Date Received..:** 12/12/03

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride - Automated	**221**	**20.0**	**mg/L**	**MCAWW 325.2**	**12/29/03**	**3363239**
		Dilution Factor: 20		MDL.....: 5.6		
Cyanide, Total	ND	0.010	mg/L	SW846 9012A	12/15/03	3364457
		Dilution Factor: 1		MDL.....: 0.0030		
Hardness, as CaCO3	**540**	**25.0**	**mg/L**	**MCAWW 130.2**	**12/22/03**	**3357125**
		Dilution Factor: 5		MDL.....: 10.5		
Nitrate	ND	0.10	mg/L	MCAWW 353.2	12/13/03	3349149
		Dilution Factor: 1		MDL.....: 0.016		
Sulfate	**136**	**25.0**	**mg/L**	**MCAWW 375.4**	**12/29/03**	**3363240**
		Dilution Factor: 5		MDL.....: 4.7		
Total Alkalinity	**316**	**5.0**	**mg/L**	**MCAWW 310.1**	**12/12/03**	**3349139**
		Dilution Factor: 1		MDL.....: 1.3		
Total Dissolved Solids	**834**	**10.0**	**mg/L**	**MCAWW 160.1**	**12/16-12/17/03**	**3350171**
		Dilution Factor: 1		MDL.....: 4.3		
Total Organic Carbon	**2.4**	**1.0**	**mg/L**	**SW846 9060**	**12/23/03**	**3360094**
		Dilution Factor: 1		MDL.....: 0.68		
Total Suspended Solids	**8.0**	**4.0**	**mg/L**	**MCAWW 160.2**	**12/15/03**	**3349364**
		Dilution Factor: 1		MDL.....: 2.8		
Turbidity	**64.4**	**1.0**	**NTU**	**MCAWW 180.1**	**12/12/03**	**3349635**
		Dilution Factor: 2		MDL.....: 1.0		

QC Summary

METHOD BLANK REPORT

General Chemistry

Client Lot #...: PB045 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride - Automated		Work Order #: F6FP01AA		MB Lot-Sample #:	A3L110000-263	
	ND	1.0	mg/L	MCAWW 325.2	12/11/03	3345263
		Dilution Factor: 1				
Chloride - Automated		Work Order #: F7D0W1AA		MB Lot-Sample #:	A3L290000-239	
	ND	1.0	mg/L	MCAWW 325.2	12/29/03	3363239
		Dilution Factor: 1				
Cyanide, Total		Work Order #: F7F5Q1AA		MB Lot-Sample #:	H3L300000-457	
	ND	0.010	mg/L	SW846 9012A	12/15/03	3364457
		Dilution Factor: 1				
Cyanide, Total		Work Order #: F7F7X1AA		MB Lot-Sample #:	H3L300000-517	
	ND	0.010	mg/L	SW846 9012A	12/18/03	3364517
		Dilution Factor: 1				
Hardness, as CaCO3		Work Order #: F6X6G1AA		MB Lot-Sample #:	A3L170000-416	
	ND	5.0	mg/L	MCAWW 130.2	12/17/03	3351416
		Dilution Factor: 1				
Hardness, as CaCO3		Work Order #: F683D1AA		MB Lot-Sample #:	A3L230000-125	
	ND	5.0	mg/L	MCAWW 130.2	12/22/03	3357125
		Dilution Factor: 1				
Nitrate		Work Order #: F6E241AA		MB Lot-Sample #:	A3L100000-598	
	ND	0.10	mg/L	MCAWW 353.2	12/10/03	3344598
		Dilution Factor: 1				
Nitrate		Work Order #: F6HCL1AA		MB Lot-Sample #:	A3L110000-556	
	ND	0.10	mg/L	MCAWW 353.2	12/11/03	3345556
		Dilution Factor: 1				
Nitrate		Work Order #: F6NRF1AA		MB Lot-Sample #:	A3L150000-149	
	ND	0.10	mg/L	MCAWW 353.2	12/13/03	3349149
		Dilution Factor: 1				
Sulfate		Work Order #: F6GNK1AA		MB Lot-Sample #:	A3L110000-463	
	ND	5.0	mg/L	MCAWW 375.4	12/11/03	3345463
		Dilution Factor: 1				
Sulfate		Work Order #: F7D0X1AA		MB Lot-Sample #:	A3L290000-240	
	ND	5.0	mg/L	MCAWW 375.4	12/29/03	3363240
		Dilution Factor: 1				

(Continued on next page)

METHOD BLANK REPORT

General Chemistry

Client Lot #...: PB045 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Alkalinity		Work Order #: F6EDT1AA		MB Lot-Sample #:	A3L100000-488	
	ND	5.0	mg/L	MCAWW 310.1	12/10/03	3344488
		Dilution Factor: 1				
Total Alkalinity		Work Order #: F6H3A1AA		MB Lot-Sample #:	A3L120000-137	
	ND	5.0	mg/L	MCAWW 310.1	12/11/03	3346137
		Dilution Factor: 1				
Total Alkalinity		Work Order #: F6NQ51AA		MB Lot-Sample #:	A3L150000-139	
	ND	5.0	mg/L	MCAWW 310.1	12/12/03	3349139
		Dilution Factor: 1				
Total Dissolved Solids		Work Order #: F6PWL1AA		MB Lot-Sample #:	A3L110000-541	
	ND	10.0	mg/L	MCAWW 160.1	12/11-12/12/03	3345541
		Dilution Factor: 1				
Total Dissolved Solids		Work Order #: F6QED1AA		MB Lot-Sample #:	A3L120000-635	
	ND	10.0	mg/L	MCAWW 160.1	12/12-12/15/03	3346635
		Dilution Factor: 1				
Total Dissolved Solids		Work Order #: F6QGN1AA		MB Lot-Sample #:	A3L160000-171	
	ND	10.0	mg/L	MCAWW 160.1	12/16-12/17/03	3350171
		Dilution Factor: 1				
Total Organic Carbon		Work Order #: F6T9M1AA		MB Lot-Sample #:	A3L170000-144	
	ND	1.0	mg/L	SW846 9060	12/16/03	3351144
		Dilution Factor: 1				
Total Organic Carbon		Work Order #: F7CDD1AA		MB Lot-Sample #:	A3L260000-094	
	ND	1.0	mg/L	SW846 9060	12/23/03	3360094
		Dilution Factor: 1				
Total Suspended Solids		Work Order #: F6PKH1AA		MB Lot-Sample #:	A3L120000-636	
	ND	4.0	mg/L	MCAWW 160.2	12/12-12/15/03	3346636
		Dilution Factor: 1				
Total Suspended Solids		Work Order #: F6PK81AA		MB Lot-Sample #:	A3L150000-480	
	ND	4.0	mg/L	MCAWW 160.2	12/12-12/15/03	3349480
		Dilution Factor: 1				

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METHOD BLANK REPORT

General Chemistry

Client Lot #...: PB045 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Suspended Solids		Work Order #: F6PAR1AA		MB Lot-Sample #:	A3L150000-364	
	ND	4.0	mg/L	MCAWW 160.2	12/15/03	3349364
		Dilution Factor: 1				
Turbidity		Work Order #: F6Q9P1AA		MB Lot-Sample #:	A3L160000-326	
	ND	0.50	NTU	MCAWW 180.1	12/10/03	3350326
		Dilution Factor: 1				
Turbidity		Work Order #: F6Q911AA		MB Lot-Sample #:	A3L160000-327	
	ND	0.50	NTU	MCAWW 180.1	12/11/03	3350327
		Dilution Factor: 1				
Turbidity		Work Order #: F6P5F1AA		MB Lot-Sample #:	A3L150000-635	
	ND	0.50	NTU	MCAWW 180.1	12/12/03	3349635
		Dilution Factor: 1				
Turbidity		Work Order #: F6RAC1AA		MB Lot-Sample #:	A3L160000-328	
	ND	0.50	NTU	MCAWW 180.1	12/16/03	3350328
		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

Lot-Sample #...: PB045 **Matrix.....:** WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Cyanide, Total		WO#:F7F5Q1AC-LCS/F7F5Q1AD-LCSD				LCS Lot-Sample#: H3L300000-457	
	106	(88 - 113)			SW846 9012A	12/15/03	3364457
	105	(88 - 113)	0.94	(0-20)	SW846 9012A	12/15/03	3364457

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

Lot-Sample #...: PB045 **Matrix.....:** WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Cyanide, Total		WO#:F7F5Q1AC-LCS/F7F5Q1AD-LCSD				LCS Lot-Sample#: H3L300000-457		
	0.200	0.212	mg/L	106		SW846 9012A	12/15/03	3364457
	0.200	0.210	mg/L	105	0.94	SW846 9012A	12/15/03	3364457

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 #...: PB045 **Matrix.....:** WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride - Automated		Work Order #: F6FP01AC	LCS Lot-Sample#: A3L110000-263		
	101	(90 - 115)	MCAWW 325.2	12/11/03	3345263
		Dilution Factor: 1			
Chloride - Automated		Work Order #: F7D0W1AC	LCS Lot-Sample#: A3L290000-239		
	108	(90 - 115)	MCAWW 325.2	12/29/03	3363239
		Dilution Factor: 1			
Cyanide, Total		Work Order #: F7F7X1AC	LCS Lot-Sample#: H3L300000-517		
	112	(88 - 113)	SW846 9012A	12/18/03	3364517
		Dilution Factor: 1			
Hardness, as CaCO3		Work Order #: F6X6G1AC	LCS Lot-Sample#: A3L170000-416		
	102	(84 - 116)	MCAWW 130.2	12/17/03	3351416
		Dilution Factor: 1			
Hardness, as CaCO3		Work Order #: F683D1AC	LCS Lot-Sample#: A3L230000-125		
	102	(84 - 116)	MCAWW 130.2	12/22/03	3357125
		Dilution Factor: 1			
Nitrate		Work Order #: F6E241AC	LCS Lot-Sample#: A3L100000-598		
	89	(77 - 116)	MCAWW 353.2	12/10/03	3344598
		Dilution Factor: 1			
Nitrate		Work Order #: F6HCL1AC	LCS Lot-Sample#: A3L110000-556		
	92	(77 - 116)	MCAWW 353.2	12/11/03	3345556
		Dilution Factor: 1			
Nitrate		Work Order #: F6NRF1AC	LCS Lot-Sample#: A3L150000-149		
	92	(77 - 116)	MCAWW 353.2	12/13/03	3349149
		Dilution Factor: 1			
Sulfate		Work Order #: F6GNK1AC	LCS Lot-Sample#: A3L110000-463		
	97	(80 - 112)	MCAWW 375.4	12/11/03	3345463
		Dilution Factor: 1			
Sulfate		Work Order #: F7D0X1AC	LCS Lot-Sample#: A3L290000-240		
	90	(80 - 112)	MCAWW 375.4	12/29/03	3363240
		Dilution Factor: 1			

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: PB045 **Matrix.....:** WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Alkalinity		Work Order #: F6EDT1AC	LCS Lot-Sample#: A3L100000-488		
	100	(90 - 127)	MCAWW 310.1	12/10/03	3344488
		Dilution Factor: 1			
Total Alkalinity		Work Order #: F6H3A1AC	LCS Lot-Sample#: A3L120000-137		
	104	(90 - 127)	MCAWW 310.1	12/11/03	3346137
		Dilution Factor: 1			
Total Alkalinity		Work Order #: F6NQ51AC	LCS Lot-Sample#: A3L150000-139		
	99	(90 - 127)	MCAWW 310.1	12/12/03	3349139
		Dilution Factor: 1			
Total Dissolved Solids		Work Order #: F6PWL1AC	LCS Lot-Sample#: A3L110000-541		
	95	(69 - 120)	MCAWW 160.1	12/11-12/12/03	3345541
		Dilution Factor: 1			
Total Dissolved Solids		Work Order #: F6QED1AC	LCS Lot-Sample#: A3L120000-635		
	107	(69 - 120)	MCAWW 160.1	12/12-12/15/03	3346635
		Dilution Factor: 1			
Total Dissolved Solids		Work Order #: F6QGN1AC	LCS Lot-Sample#: A3L160000-171		
	104	(69 - 120)	MCAWW 160.1	12/16-12/17/03	3350171
		Dilution Factor: 1			
Total Organic Carbon		Work Order #: F6T9M1AC	LCS Lot-Sample#: A3L170000-144		
	94	(88 - 115)	SW846 9060	12/16/03	3351144
		Dilution Factor: 1			
Total Organic Carbon		Work Order #: F7CDD1AC	LCS Lot-Sample#: A3L260000-094		
	96	(88 - 115)	SW846 9060	12/23/03	3360094
		Dilution Factor: 1			
Total Suspended Solids		Work Order #: F6PKH1AC	LCS Lot-Sample#: A3L120000-636		
	96	(66 - 119)	MCAWW 160.2	12/12-12/15/03	3346636
		Dilution Factor: 1			
Total Suspended Solids		Work Order #: F6PAR1AC	LCS Lot-Sample#: A3L150000-364		
	93	(66 - 119)	MCAWW 160.2	12/15/03	3349364
		Dilution Factor: 1			

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: PB045 **Matrix.....:** WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Suspended Solids		Work Order #: F6PK81AC		LCS Lot-Sample#: A3L150000-480	
	93	(66 - 119)	MCAWW 160.2	12/12-12/15/03	3349480
		Dilution Factor: 1			
Turbidity		Work Order #: F6P5F1AC		LCS Lot-Sample#: A3L150000-635	
	104	(75 - 125)	MCAWW 180.1	12/12/03	3349635
		Dilution Factor: 1			
Turbidity		Work Order #: F6Q9P1AC		LCS Lot-Sample#: A3L160000-326	
	106	(75 - 125)	MCAWW 180.1	12/10/03	3350326
		Dilution Factor: 1			
Turbidity		Work Order #: F6Q911AC		LCS Lot-Sample#: A3L160000-327	
	88	(75 - 125)	MCAWW 180.1	12/11/03	3350327
		Dilution Factor: 1			
Turbidity		Work Order #: F6RAC1AC		LCS Lot-Sample#: A3L160000-328	
	89	(75 - 125)	MCAWW 180.1	12/16/03	3350328
		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 #...: PB045 **Matrix.....:** WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride - Automated			Work Order #: F6FP01AC		LCS Lot-Sample#:	A3L110000-263	
	73.5	74.2	mg/L	101	MCAWW 325.2	12/11/03	3345263
			Dilution Factor: 1				
Chloride - Automated			Work Order #: F7D0W1AC		LCS Lot-Sample#:	A3L290000-239	
	73.5	79.2	mg/L	108	MCAWW 325.2	12/29/03	3363239
			Dilution Factor: 1				
Cyanide, Total			Work Order #: F7F7X1AC		LCS Lot-Sample#:	H3L300000-517	
	0.200	0.225	mg/L	112	SW846 9012A	12/18/03	3364517
			Dilution Factor: 1				
Hardness, as CaCO3			Work Order #: F6X6G1AC		LCS Lot-Sample#:	A3L170000-416	
	290	295	mg/L	102	MCAWW 130.2	12/17/03	3351416
			Dilution Factor: 1				
Hardness, as CaCO3			Work Order #: F683D1AC		LCS Lot-Sample#:	A3L230000-125	
	290	296	mg/L	102	MCAWW 130.2	12/22/03	3357125
			Dilution Factor: 1				
Nitrate			Work Order #: F6E241AC		LCS Lot-Sample#:	A3L100000-598	
	1.00	0.888	mg/L	89	MCAWW 353.2	12/10/03	3344598
			Dilution Factor: 1				
Nitrate			Work Order #: F6HCL1AC		LCS Lot-Sample#:	A3L110000-556	
	1.00	0.916	mg/L	92	MCAWW 353.2	12/11/03	3345556
			Dilution Factor: 1				
Nitrate			Work Order #: F6NRF1AC		LCS Lot-Sample#:	A3L150000-149	
	1.00	0.918	mg/L	92	MCAWW 353.2	12/13/03	3349149
			Dilution Factor: 1				
Sulfate			Work Order #: F6GNK1AC		LCS Lot-Sample#:	A3L110000-463	
	32.2	31.1	mg/L	97	MCAWW 375.4	12/11/03	3345463
			Dilution Factor: 1				
Sulfate			Work Order #: F7D0X1AC		LCS Lot-Sample#:	A3L290000-240	
	32.2	28.9	mg/L	90	MCAWW 375.4	12/29/03	3363240
			Dilution Factor: 1				

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LABORATORY CONTROL SAMPLE DATA REPORT

General Chemistry

Client Lot #...: PB045 **Matrix.....:** WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Alkalinity			Work Order #: F6EDT1AC		LCS Lot-Sample#: A3L100000-488		
	54.7	55.0	mg/L	100	MCAWW 310.1	12/10/03	3344488
			Dilution Factor: 1				
Total Alkalinity			Work Order #: F6H3A1AC		LCS Lot-Sample#: A3L120000-137		
	44.4	46.3	mg/L	104	MCAWW 310.1	12/11/03	3346137
			Dilution Factor: 1				
Total Alkalinity			Work Order #: F6NQ51AC		LCS Lot-Sample#: A3L150000-139		
	44.4	44.0	mg/L	99	MCAWW 310.1	12/12/03	3349139
			Dilution Factor: 1				
Total Dissolved Solids			Work Order #: F6PWL1AC		LCS Lot-Sample#: A3L110000-541		
	276	262	mg/L	95	MCAWW 160.1	12/11-12/12/03	3345541
			Dilution Factor: 1				
Total Dissolved Solids			Work Order #: F6QED1AC		LCS Lot-Sample#: A3L120000-635		
	276	296	mg/L	107	MCAWW 160.1	12/12-12/15/03	3346635
			Dilution Factor: 1				
Total Dissolved Solids			Work Order #: F6QGN1AC		LCS Lot-Sample#: A3L160000-171		
	276	287	mg/L	104	MCAWW 160.1	12/16-12/17/03	3350171
			Dilution Factor: 1				
Total Organic Carbon			Work Order #: F6T9M1AC		LCS Lot-Sample#: A3L170000-144		
	39.9	37.4	mg/L	94	SW846 9060	12/16/03	3351144
			Dilution Factor: 1				
Total Organic Carbon			Work Order #: F7CDD1AC		LCS Lot-Sample#: A3L260000-094		
	39.9	38.3	mg/L	96	SW846 9060	12/23/03	3360094
			Dilution Factor: 1				
Total Suspended Solids			Work Order #: F6PKH1AC		LCS Lot-Sample#: A3L120000-636		
	32.4	31.0	mg/L	96	MCAWW 160.2	12/12-12/15/03	3346636
			Dilution Factor: 1				
Total Suspended Solids			Work Order #: F6PAR1AC		LCS Lot-Sample#: A3L150000-364		
	32.4	30.0	mg/L	93	MCAWW 160.2	12/15/03	3349364
			Dilution Factor: 1				

(Continued on next page)

LABORATORY CONTROL SAMPLE DATA REPORT

General Chemistry

Client Lot #...: PB045 **Matrix.....:** WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Suspended Solids			Work Order #: F6PK81AC LCS Lot-Sample#: A3L150000-480				
	32.4	30.0	mg/L	93	MCAWW 160.2	12/12-12/15/03	3349480
			Dilution Factor: 1				
Turbidity			Work Order #: F6P5F1AC LCS Lot-Sample#: A3L150000-635				
	1.00	1.04	NTU	104	MCAWW 180.1	12/12/03	3349635
			Dilution Factor: 1				
Turbidity			Work Order #: F6Q9P1AC LCS Lot-Sample#: A3L160000-326				
	1.00	1.06	NTU	106	MCAWW 180.1	12/10/03	3350326
			Dilution Factor: 1				
Turbidity			Work Order #: F6Q911AC LCS Lot-Sample#: A3L160000-327				
	1.00	0.880	NTU	88	MCAWW 180.1	12/11/03	3350327
			Dilution Factor: 1				
Turbidity			Work Order #: F6RAC1AC LCS Lot-Sample#: A3L160000-328				
	1.00	0.890	NTU	89	MCAWW 180.1	12/16/03	3350328
			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 #...: PB045 **Matrix.....:** WATER
Date Sampled...: 12/03/03 **Date Received..:** 12/05/03

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride - Automated		WO#: F6D1W1AK-MS/F6D1W1AL-MSD				MS Lot-Sample #: A3L100302-002	
	111	(43 - 167)			MCAWW 325.2	12/11/03	3345263
	104	(43 - 167)	0.92	(0-23)	MCAWW 325.2	12/11/03	3345263
		Dilution Factor: 1					
Chloride - Automated		WO#: F6JX21E8-MS/F6JX21E9-MSD				MS Lot-Sample #: H3L120208-002	
	127	(43 - 167)			MCAWW 325.2	12/29/03	3363239
	118	(43 - 167)	0.91	(0-23)	MCAWW 325.2	12/29/03	3363239
		Dilution Factor: 1					
Cyanide, Total		WO#: F6JXA1DA-MS/F6JXA1DC-MSD				MS Lot-Sample #: H3L120208-001	
	49 N	(77 - 126)			SW846 9012A	12/18/03	3364517
	50 N	(77 - 126)	2.6	(0-20)	SW846 9012A	12/18/03	3364517
		Dilution Factor: 1					
Cyanide, Total		WO#: F6JX21AX-MS/F6JX21A0-MSD				MS Lot-Sample #: H3L120208-002	
	68 N	(77 - 126)			SW846 9012A	12/15/03	3364457
	64 N	(77 - 126)	4.5	(0-20)	SW846 9012A	12/15/03	3364457
		Dilution Factor: 1					
Hardness, as CaCO3		WO#: F6JX21FQ-MS/F6JX21FR-MSD				MS Lot-Sample #: H3L120208-002	
	100	(10 - 176)			MCAWW 130.2	12/22/03	3357125
	95	(10 - 176)	3.4	(0-23)	MCAWW 130.2	12/22/03	3357125
		Dilution Factor: 1					
Hardness, as CaCO3		WO#: F6KN31AM-MS/F6KN31AN-MSD				MS Lot-Sample #: A3L120289-003	
	96	(10 - 176)			MCAWW 130.2	12/17/03	3351416
	97	(10 - 176)	1.6	(0-23)	MCAWW 130.2	12/17/03	3351416
		Dilution Factor: 1					
Nitrate		WO#: F6DQ41DC-MS/F6DQ41DD-MSD				MS Lot-Sample #: H3L100268-001	
	77	(10 - 163)			MCAWW 353.2	12/10/03	3344598
	77	(10 - 163)	0.0	(0-24)	MCAWW 353.2	12/10/03	3344598
		Dilution Factor: 1					
Nitrate		WO#: F6F1C1C9-MS/F6F1C1DA-MSD				MS Lot-Sample #: H3L110180-001	
	59	(10 - 163)			MCAWW 353.2	12/11/03	3345556
	60	(10 - 163)	0.60	(0-24)	MCAWW 353.2	12/11/03	3345556
		Dilution Factor: 1					

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MATRIX SPIKE SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: PB045 **Matrix.....:** WATER
Date Sampled...: 12/03/03 **Date Received..:** 12/05/03

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Nitrate		WO#: F6H4N1CJ-MS/F6H4N1CK-MSD				MS Lot-Sample #: A3L120102-005	
	68	(10 - 163)			MCAWW 353.2	12/13/03	3349149
	68	(10 - 163)	0.12	(0-24)	MCAWW 353.2	12/13/03	3349149
		Dilution Factor: 1					
Sulfate		WO#: F54TE1AP-MS/F54TE1AQ-MSD				MS Lot-Sample #: A3L050283-002	
	96	(22 - 151)			MCAWW 375.4	12/11/03	3345461
	94	(22 - 151)	0.48	(0-31)	MCAWW 375.4	12/11/03	3345461
		Dilution Factor: 1					
Sulfate		WO#: F6JX21FF-MS/F6JX21FG-MSD				MS Lot-Sample #: H3L120208-002	
	86	(22 - 151)			MCAWW 375.4	12/29/03	3363240
	92	(22 - 151)	1.0	(0-31)	MCAWW 375.4	12/29/03	3363240
		Dilution Factor: 1					
Total Alkalinity		WO#: F6DQ41C9-MS/F6DQ41DA-MSD				MS Lot-Sample #: H3L100268-001	
	93	(10 - 160)			MCAWW 310.1	12/10/03	3344488
	95	(10 - 160)	1.1	(0-24)	MCAWW 310.1	12/10/03	3344488
		Dilution Factor: 1					
Total Alkalinity		WO#: F6F2H1C9-MS/F6F2H1DA-MSD				MS Lot-Sample #: H3L110180-002	
	78	(10 - 160)			MCAWW 310.1	12/11/03	3346137
	76	(10 - 160)	2.2	(0-24)	MCAWW 310.1	12/11/03	3346137
		Dilution Factor: 1					
Total Alkalinity		WO#: F6JX21A8-MS/F6JX21A9-MSD				MS Lot-Sample #: H3L120208-002	
	62	(10 - 160)			MCAWW 310.1	12/12/03	3349139
	65	(10 - 160)	2.5	(0-24)	MCAWW 310.1	12/12/03	3349139
		Dilution Factor: 1					
Total Organic Carbon		WO#: F6GAK1AG-MS/F6GAK1AH-MSD				MS Lot-Sample #: A3L110213-008	
	109	(72 - 136)			SW846 9060	12/16/03	3351144
	111	(72 - 136)	1.8	(0-20)	SW846 9060	12/16/03	3351144
		Dilution Factor: 1					
Total Organic Carbon		WO#: F6JX21FJ-MS/F6JX21FK-MSD				MS Lot-Sample #: H3L120208-002	
	94	(72 - 136)			SW846 9060	12/23/03	3360094
	94	(72 - 136)	0.34	(0-20)	SW846 9060	12/23/03	3360094
		Dilution Factor: 1					

NOTE(S):

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

N Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE DATA REPORT

General Chemistry

Client Lot #...: PB045 **Matrix.....:** WATER
Date Sampled...: 12/03/03 **Date Received..:** 12/05/03

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride - Automated			WO#: F6D1W1AK-MS/F6D1W1AL-MSD				MS Lot-Sample #: A3L100302-002		
	178	25.0	206	mg/L	111		MCAWW 325.2	12/11/03	3345263
	178	25.0	204	mg/L	104	0.92	MCAWW 325.2	12/11/03	3345263
			Dilution Factor: 1						
Chloride - Automated			WO#: F6JX21E8-MS/F6JX21E9-MSD				MS Lot-Sample #: H3L120208-002		
	221	25.0	252	mg/L	127		MCAWW 325.2	12/29/03	3363239
	221	25.0	250	mg/L	118	0.91	MCAWW 325.2	12/29/03	3363239
			Dilution Factor: 1						
Cyanide, Total			WO#: F6JXA1DA-MS/F6JXA1DC-MSD				MS Lot-Sample #: H3L120208-001		
	ND	0.200	0.0972	mg/L	49		SW846 9012A	12/18/03	3364517
			Qualifiers: N						
	ND	0.200	0.0998	mg/L	50	2.6	SW846 9012A	12/18/03	3364517
			Qualifiers: N						
			Dilution Factor: 1						
Cyanide, Total			WO#: F6JX21AX-MS/F6JX21A0-MSD				MS Lot-Sample #: H3L120208-002		
	ND	0.200	0.135 N	mg/L	68		SW846 9012A	12/15/03	3364457
	ND	0.200	0.129 N	mg/L	64	4.5	SW846 9012A	12/15/03	3364457
			Dilution Factor: 1						
Hardness, as CaCO3			WO#: F6JX21FQ-MS/F6JX21FR-MSD				MS Lot-Sample #: H3L120208-002		
	540	1000	1540	mg/L	100		MCAWW 130.2	12/22/03	3357125
	540	1000	1490	mg/L	95	3.4	MCAWW 130.2	12/22/03	3357125
			Dilution Factor: 1						
Hardness, as CaCO3			WO#: F6KN31AM-MS/F6KN31AN-MSD				MS Lot-Sample #: A3L120289-003		
	11.2	200	202	mg/L	96		MCAWW 130.2	12/17/03	3351416
	11.2	200	206	mg/L	97	1.6	MCAWW 130.2	12/17/03	3351416
			Dilution Factor: 1						
Nitrate			WO#: F6DQ41DC-MS/F6DQ41DD-MSD				MS Lot-Sample #: H3L100268-001		
	ND	0.250	0.198	mg/L	77		MCAWW 353.2	12/10/03	3344598
	ND	0.250	0.198	mg/L	77	0.0	MCAWW 353.2	12/10/03	3344598
			Dilution Factor: 1						
Nitrate			WO#: F6F1C1C9-MS/F6F1C1DA-MSD				MS Lot-Sample #: H3L110180-001		
	ND	0.250	0.149	mg/L	59		MCAWW 353.2	12/11/03	3345556
	ND	0.250	0.150	mg/L	60	0.60	MCAWW 353.2	12/11/03	3345556
			Dilution Factor: 1						

(Continued on next page)

MATRIX SPIKE SAMPLE DATA REPORT

General Chemistry

Client Lot #...: PB045 **Matrix.....:** WATER
Date Sampled...: 12/03/03 **Date Received..:** 12/05/03

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Nitrate			WO#: F6H4N1CJ-MS/F6H4N1CK-MSD				MS Lot-Sample #: A3L120102-005		
	0.22	0.250	0.388	mg/L	68		MCAWW 353.2	12/13/03	3349149
	0.22	0.250	0.388	mg/L	68	0.12	MCAWW 353.2	12/13/03	3349149
			Dilution Factor: 1						
Sulfate			WO#: F54TE1AP-MS/F54TE1AQ-MSD				MS Lot-Sample #: A3L050283-002		
	68.4	25.0	92.3	mg/L	96		MCAWW 375.4	12/11/03	3345461
	68.4	25.0	91.9	mg/L	94	0.48	MCAWW 375.4	12/11/03	3345461
			Dilution Factor: 1						
Sulfate			WO#: F6JX21FF-MS/F6JX21FG-MSD				MS Lot-Sample #: H3L120208-002		
	136	25.0	158	mg/L	86		MCAWW 375.4	12/29/03	3363240
	136	25.0	159	mg/L	92	1.0	MCAWW 375.4	12/29/03	3363240
			Dilution Factor: 1						
Total Alkalinity			WO#: F6DQ41C9-MS/F6DQ41DA-MSD				MS Lot-Sample #: H3L100268-001		
	444	500	910	mg/L	93		MCAWW 310.1	12/10/03	3344488
	444	500	921	mg/L	95	1.1	MCAWW 310.1	12/10/03	3344488
			Dilution Factor: 1						
Total Alkalinity			WO#: F6F2H1C9-MS/F6F2H1DA-MSD				MS Lot-Sample #: H3L110180-002		
	255	500	646	mg/L	78		MCAWW 310.1	12/11/03	3346137
	255	500	632	mg/L	76	2.2	MCAWW 310.1	12/11/03	3346137
			Dilution Factor: 1						
Total Alkalinity			WO#: F6JX21A8-MS/F6JX21A9-MSD				MS Lot-Sample #: H3L120208-002		
	316	500	627	mg/L	62		MCAWW 310.1	12/12/03	3349139
	316	500	643	mg/L	65	2.5	MCAWW 310.1	12/12/03	3349139
			Dilution Factor: 1						
Total Organic Carbon			WO#: F6GAK1AG-MS/F6GAK1AH-MSD				MS Lot-Sample #: A3L110213-008		
	ND	25.0	28.2	mg/L	109		SW846 9060	12/16/03	3351144
	ND	25.0	28.8	mg/L	111	1.8	SW846 9060	12/16/03	3351144
			Dilution Factor: 1						
Total Organic Carbon			WO#: F6JX21FJ-MS/F6JX21FK-MSD				MS Lot-Sample #: H3L120208-002		
	2.4	25.0	25.8	mg/L	94		SW846 9060	12/23/03	3360094
	2.4	25.0	25.9	mg/L	94	0.34	SW846 9060	12/23/03	3360094
			Dilution Factor: 1						

NOTE(S):

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

N Spiked analyte recovery is outside stated control limits.

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: H3L100268 **Work Order #...:** F6CQM-SMP F6CQM-DUP **Matrix.....:** WATER

Date Sampled...: 12/09/03 **Date Received..:** 12/10/03

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Dissolved Solids						SD Lot-Sample #:	A3L100133-001	
	1100	1100	mg/L	0.0	(0-20)	MCAWW 160.1	12/11-12/12/03	3345541

Dilution Factor: 1

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: H3L100268 **Work Order #...:** F6DQ4-SMP F6DQ4-DUP **Matrix.....:** WATER

Date Sampled...: 12/09/03 **Date Received..:** 12/10/03

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Turbidity						SD Lot-Sample #:	H3L100268-001	
	0.58	0.56	NTU	3.5	(0-20)	MCAWW 180.1	12/10/03	3350326
		Dilution Factor: 1						
Turbidity						SD Lot-Sample #:	H3L100268-001	
	1.6	1.6	NTU	0.62	(0-20)	MCAWW 180.1	12/16/03	3350328
		Dilution Factor: 1						

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: H3L100268 **Work Order #...:** F6E8D-SMP F6E8D-DUP **Matrix.....:** WATER

Date Sampled...: 12/10/03 **Date Received..:** 12/11/03

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Suspended Solids						SD Lot-Sample #:	A3L110101-002	
	11.0	8.0	mg/L	32	(0-20)	MCAWW 160.2	12/12-12/15/03	3349480

Dilution Factor: 1

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: H3L100268 **Work Order #...:** F6E8R-SMP F6E8R-DUP **Matrix.....:** WATER

Date Sampled...: 12/10/03 **Date Received..:** 12/11/03

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Dissolved Solids						SD Lot-Sample #:	A3L110102-001	
	430	434	mg/L	0.93	(0-20)	MCAWW 160.1	12/12-12/15/03	3346635

Dilution Factor: 1

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: H3L100268 **Work Order #...:** F6FND-SMP F6FND-DUP **Matrix.....:** WATER

Date Sampled...: 12/10/03 **Date Received..:** 12/11/03

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Suspended Solids						SD Lot-Sample #:	A3L110142-001	
	17.0	17.0	mg/L	0.0	(0-20)	MCAWW 160.2	12/12-12/15/03	3349480

Dilution Factor: 1

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: H3L100268 **Work Order #...:** F6FWF-SMP F6FWF-DUP **Matrix.....:** WATER

Date Sampled...: 12/10/03 **Date Received..:** 12/11/03

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Dissolved Solids						SD Lot-Sample #:	A3L110166-002	
	825	868	mg/L	5.1	(0-20)	MCAWW 160.1	12/12-12/15/03	3346635

Dilution Factor: 1

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: H3L100268 **Work Order #...:** F6F1C-SMP F6F1C-DUP **Matrix.....:** WATER

Date Sampled...: 12/10/03 **Date Received..:** 12/11/03

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Turbidity						SD Lot-Sample #:	H3L110180-001	
	3.1	3.3	NTU	8.1	(0-20)	MCAWW 180.1	12/11/03	3350327

Dilution Factor: 1

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: H3L100268 **Work Order #...:** F6F2H-SMP F6F2H-DUP **Matrix.....:** WATER

Date Sampled...: 12/10/03 **Date Received..:** 12/11/03

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Suspended Solids						SD Lot-Sample #:	H3L110180-002	
	4.0	4.0	mg/L	0.0	(0-20)	MCAWW 160.2	12/12-12/15/03	3346636

Dilution Factor: 1

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: H3L100268 **Work Order #...:** F6JXA-SMP F6JXA-DUP **Matrix.....:** WATER

Date Sampled...: 12/11/03 **Date Received..:** 12/12/03

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Turbidity						SD Lot-Sample #:	H3L120208-001	
	74.0	73.0	NTU	1.4	(0-20)	MCAWW 180.1	12/12/03	3349635

Dilution Factor: 5

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: H3L100268 **Work Order #...:** F6JX2-SMP F6JX2-DUP **Matrix.....:** WATER

Date Sampled...: 12/11/03 **Date Received..:** 12/12/03

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Suspended Solids						SD Lot-Sample #:	H3L120208-002	
	8.0	7.0	mg/L	13	(0-20)	MCAWW 160.2	12/15/03	3349364
			Dilution Factor: 1					
Total Dissolved Solids						SD Lot-Sample #:	H3L120208-002	
	834	834	mg/L	0.0	(0-20)	MCAWW 160.1	12/16-12/17/03	3350171
			Dilution Factor: 1					

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: H3L100268 **Work Order #...:** F6KN3-SMP F6KN3-DUP **Matrix.....:** WATER

Date Sampled...: 12/12/03 **Date Received..:** 12/12/03

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Suspended Solids						SD Lot-Sample #:	A3L120289-003	
	18.0	15.0	mg/L	18	(0-20)	MCAWW 160.2	12/15/03	3349364
			Dilution Factor: 1					
Total Dissolved Solids						SD Lot-Sample #:	A3L120289-003	
	2120	2200	mg/L	3.9	(0-20)	MCAWW 160.1	12/16-12/17/03	3350171
			Dilution Factor: 2					

Raw Data

Cyanide

STL Knoxville Cyanide Data Review / Narrative Checklist
Methods: CLP ILM03.0/ILM04.0, SW-846 9012A, and EPA 335.4 - KNOX-WC-0001, Rev 3

Run Date: 12/18/03	Distillation Date: 12/18/03	Lot #(s): H3L100268; H3L110180; H3L120208 (PARTIAL)

Review Items **A. Calibration/Instrument Run QC**	N/A	Y	N	If No, why is data reportable?	2nd ✓
1. Instrument calibrated using ≥ 7 standards plus blank?		✓			✓
2. Correlation coefficient ≥ 0.995 ?		✓			✓
3. Distilled calibration standard(s) analyzed per batch & within control limits ? (CLP = 85-115%R; 9012A/335 = 90-110%R)		✓		□ **[ds1] Reanalysis not performed because HT expired. LCS results in control.** □ **[ds2] % R > upper control limit; samples < RL*.**	✓
4. ICV/CCV analyzed at beginning, end & after every 10 client samples, & within control limits (85-115% R. 90-110% for 335.4; NCDEHNR CCV limits = 90-110%)?		✓			✓
5. ICB/CCB analyzed at beginning, end & after every 10 client samples, & within ± RL ?		✓			✓
B. Sample Results					
1. Are all reported results within the calibration range ?		✓			✓
2. Sample analyses done within holding time (HT) ? *If no, list samples:*		✓		□ *[ht1] HT expired upon receipt.* □ *[ht2] Client requested analysis after HT expired.*	✓
C. Preparation/Matrix QC					
1. LCS done per prep batch & within QC limits? (CLP aqueous = 80-120% R; CLP soil = vendor control limits; 9012A= inhouse control limits; 335.4=90-110%) *If no, list LCS ID:*		✓		□ **[lcs2] Reanalysis not possible - insufficient sample.*** □ **[lcs3] LCS recovery > upper control limit & sample results are < RL.*** □ **[lcs4] Reanalysis not performed because HT expired.***	✓
2. Method blank done per prep batch & absolute value < RL? *If no, list blank ID:*		✓		□ **[mb3] There is no cyanide greater than the RL in the samples associated with method blank.*** □ **[mb5] Reanalysis not possible -- insufficient sample.*** □ [mb7] Concentration of blank is ≥ RL, but sample results are > 10x blank contamination level. □ [ib6] Concentration of blank is ≤ negative RL, but sample results are > 10x RL. □ **[ib7] Reanalysis not performed because HT expired.***	✓
3. MS/DUP or MS/MSD run at required frequency ?		✓		□ [lcsd] Insufficient sample. LCS/LCSD analyzed.	✓
4. Matrix spikes within limits ? (CLP = 75-125%R; 9012A = inhouse control limits; 335.4 = 90-110%R) *If no, list MS ID:* F6JX2			✓	☑ [ms3] LCS acceptable indicating sample matrix effects. □ [ms4] Native analyte concentration >4x spike level. □ [pds1] A post digestion spike (CLP) was analyzed (results within limits of 75-125% recovery). □ [pds2] A post digestion spike (CLP) was analyzed (results outside limits indicating matrix effects).	MS3
5. DUP (or LCS/LCSD or MS/MSD) RPD within limits ? (0-20 RPD if > 5x RL; ± RL if < 5x RL) *If no, list DUP ID:*		✓		□ [rpd2] LCS showed acceptable results. Results indicate lack of sample homogeneity.	✓
D. Other					
1. Are all nonconformances documented appropriately ?	✓				N/A
2. Were MS run #'s assigned correctly?		✓			✓
3. Current IDL data on file ?		✓		Date of last IDL: 10/17/03	✓
4. Calculations checked for error ?		✓			✓
5. All client/project specific requirements met ?		✓			✓
6. Final report acceptable? (Results correct, RLs calculated correctly, units correct, appropriate flags used, **deviations noted in narrative**, dilution factor correct, & preparation / analysis dates correct.)		✓			✓

Analyst: [signature]	Date: 12/30/03	2nd Level Reviewer : [signature]	Date: 1/2/04
Comments:		**Comments:**	

* Such action must be taken in consultation with client.

Author: wheelerd DAW 12/18/03 LACHAT QC 8000 Date : 12/15/2003

Original Run Filename: OM_12-15-2003_04-29-01PM.OMN created 12/15/2003 4:29:01 PM
Original Run Author's Signature: [wheelerd]
Current Run Filename: OM_12-15-2003_04-29-01PM_CN.omn last modified 12/15/2003 5:08:59 PM
Current Run Author's Signature: [wheelerd]
Description: CYANIDE DIST. ON 12/15/03 PER METHODS: EPA335.4 & SW846-9012A H2O

Batch 3364457

Sample	Rep.	Channel 1 Cyanide Conc. (mg/L)	Area (Vs)	Detection Time	MDF	Description
Standard A	1	0.500	35.6	12/15/2003@4:30:54 PM		CNF-2032
Standard B	1	0.400	29.1	12/15/2003@4:31:42 PM		CNF-2033
Standard C	1	0.200	15.7	12/15/2003@4:32:29 PM		CNF-2034
Standard D	1	0.100	8.12	12/15/2003@4:33:17 PM		CNF-2035
Standard E	1	0.0500	4.16	12/15/2003@4:34:05 PM		CNF-2036
Standard F	1	0.0200	1.63	12/15/2003@4:34:52 PM		CNF-2037
Standard G	1	0.0100	0.877	12/15/2003@4:35:40 PM		CNF-2038
Calibration Blank	1	0.00	0.0119	12/15/2003@4:36:28 PM		
DIST/ ICV/LCS	1	✓ 0.212	15.6	12/15/2003@4:38:31 PM		F7F5Q1AC
Known Conc:		0.200				
Calibration:		Table/Fig. 1				
DIST. ICV/LCSD	1	✓ 0.210	15.5	12/15/2003@4:39:18 PM		F7F5Q1AD
Known Conc:		0.200				
ICB	1	ND -0.00831	-0.110	12/15/2003@4:40:05 PM		
LOW CAL. STD	1	✓ 0.0480	3.91	12/15/2003@4:40:53 PM		CNF-2036
Known Conc:		0.0500				
HIGH CAL STD	1	✓ 0.386	28.0	12/15/2003@4:41:40 PM		CNF-2033
Known Conc:		0.400				
CCV1	1	✓ 0.216	15.9	12/15/2003@4:42:27 PM		CNF-2034
Known Conc:		0.200				
CCB1	1	ND -0.00851	-0.124	12/15/2003@4:43:15 PM		
DIST. H2O BLANK	1	ND -0.00626	0.0367	12/15/2003@4:44:02 PM		F7F5Q1AA
H3L120196-F6JVD-OS	1	ND -0.00424	0.180	12/15/2003@4:44:50 PM		

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Author: wheelerd (PJW 12/15/03)

LACHAT QC 8000

(MANUAL DILUTION FACTOR)

Date : 12/15/2003

H3L120196-F6JVD-MS	1		0.152	11.3	12/15/2003@4:45:37 PM		
H3L120196-F6JVD-MSD	1		0.152	11.3	12/15/2003@4:46:24 PM		
H3L100268-F6DQ4	1	ND	-0.00762	-0.0608	12/15/2003@4:47:11 PM		
H3L100268-F6DRG	1	ND	-0.00633	0.0315	12/15/2003@4:47:59 PM		
H3L110180-F6F1C	1	ND	-0.00639	0.0273	12/15/2003@4:48:45 PM		
H3L110180-F6F2H	1	ND	-0.00606	0.0511	12/15/2003@4:49:33 PM		
CCV2	1	✓	0.218	16.0	12/15/2003@4:50:20 PM		CNF-2034
Known Conc:			0.200				
CCB2	1	ND	-0.00858	-0.129	12/15/2003@4:51:07 PM		
H3L120208-F6JX2-OS	1	ND	-0.00624	0.0383	12/15/2003@4:51:54 PM		
H3L120208-F6JX2-MS	1		0.135	10.1	12/15/2003@4:52:42 PM		
H3L120208-F6JX2-MSD	1		0.129	9.69	12/15/2003@4:53:29 PM		
H3L090263-F6AQ8	1	ND	-0.00773	-0.0681	12/15/2003@4:54:16 PM	1.19	(50mL/42mL)
H3L090263-F6AQ9	1	ND	-0.00631	0.0330	12/15/2003@4:55:03 PM		
H3L090263-F6AQA	1	ND	-0.00606	0.0510	12/15/2003@4:55:51 PM	1.11	(50mL/45mL)
H3L090263-F6AQM	1	ND	-0.00601	0.0546	12/15/2003@4:56:38 PM		
H3L090263-F6AQR	1	ND	-0.00538	0.0993	12/15/2003@4:57:26 PM		
H3L090263-F6AQT	1	ND	-0.00625	0.0370	12/15/2003@4:58:13 PM	1.11	50mL/45mL
H3L090263-F6AQX	1	ND	-0.00584	0.0668	12/15/2003@4:59:01 PM		
CCV3	1	✓	0.217	15.9	12/15/2003@4:59:47 PM		CNF-2034
Known Conc:			0.200				
CCB3	1	ND	-0.00899	-0.158	12/15/2003@5:00:35 PM		
H3L090263-F6AQ1	1	ND	-1.62e-4	0.472	12/15/2003@5:01:22 PM		
H3L090263-F6AQ2	1	ND	-0.00592	0.0605	12/15/2003@5:02:09 PM	1.11	(50mL/45mL)
H3L090263-F6AQ4	1	ND	-0.00615	0.0445	12/15/2003@5:02:57 PM		
H3L090263-F6AQ5	1		0.00612	0.920	12/15/2003@5:03:45 PM		
CCV4	1	✓	0.217	15.9	12/15/2003@5:04:32 PM		CNF-2034
Known Conc:			0.200				
CCB4	1	ND	-0.00858	-0.129	12/15/2003@5:05:19 PM		

Author: wheelerd

LACHAT QC 8000

Date : 12/15/2003

Channel Plot # 1

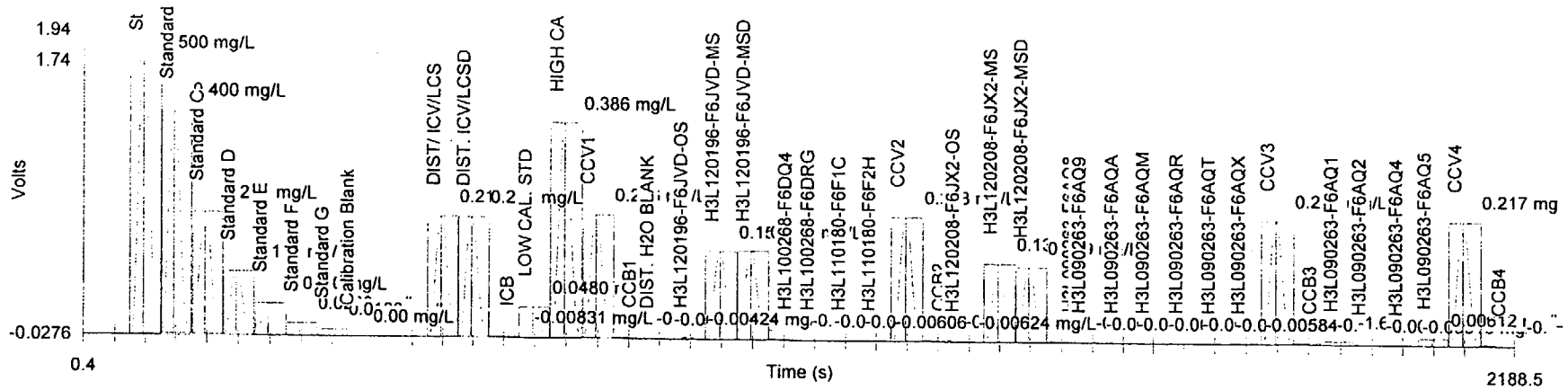


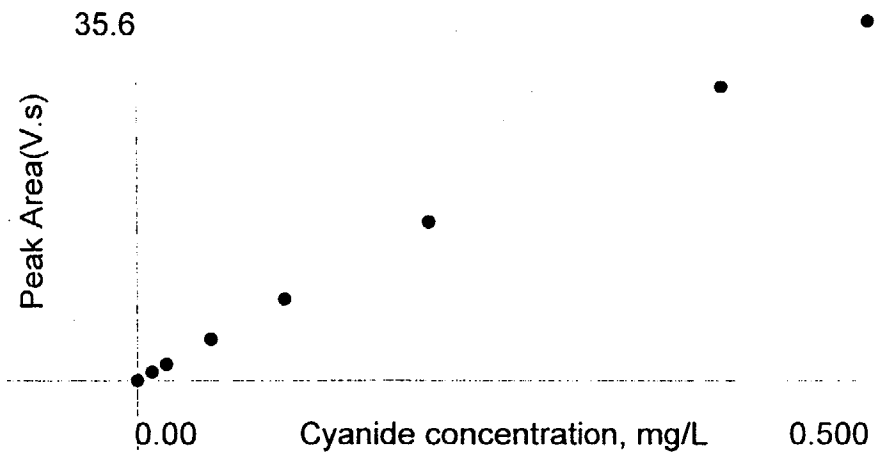
Table 1: Cyanide

	Conc. (mg/L)	Rep	Peak Area (Volt-s)	Peak Height (Volts)	% Residual	Detection Date	Detection Time
1	0.500	1	35.6	1.76	1.6	12/15/2003	4:32:08 PM
2	0.400	1	29.1	1.45	-0.4	12/15/2003	4:32:56 PM
3	0.200	1	15.7	0.795	-6.7	12/15/2003	4:33:44 PM
4	0.100	1	8.12	0.412	-6.5	12/15/2003	4:34:31 PM
5	0.0500	1	4.16	0.210	-2.4	12/15/2003	4:35:19 PM
6	0.0200	1	1.63	0.0829	15.4	12/15/2003	4:36:07 PM
7	0.0100	1	0.877	0.0445	27.7	12/15/2003	4:36:54 PM
8	0.00	1	0.0119	8.25e-4		12/15/2003	4:37:42 PM

1360

DKW 12/15/03

Figure 1: Cyanide



Area = 71.3 * Conc + 0.501
Conc = 0.0140 * Area - 0.00677
Correlation Coefficient (r) = 0.99923

No Weighting

1361

STL Knoxville Cyanide Data Review / Narrative Checklist
Methods: CLP ILM03.0/ILM04.0, SW-846 9012A, and EPA 335.4 - KNOX-WC-0001, Rev 3

Run Date: 12/18/03	Distillation Date: 12/18/03	Lot #(s): H3L120208 (PARTIAL)

Review Items **A. Calibration/Instrument Run QC**	N/A	Y	N	If No, why is data reportable?	2nd ✓
1. Instrument calibrated using ≥ 7 standards plus blank?		✓			✓
2. Correlation coefficient ≥ 0.995 ?		✓			✓
3. Distilled calibration standard(s) analyzed per batch & within control limits ? (CLP = 85-115%R; 9012A/335 = 90-110%R)		✓		□ **[ds1] Reanalysis not performed because HT expired. LCS results in control.** □ **[ds2] % R > upper control limit; samples < RL*.**	✓
4. ICV/CCV analyzed at beginning, end & after every 10 client samples, & within control limits (85-115% R. 90-110% for 335.4; NCDEHNR CCV limits = 90-110%)?		✓			✓
5. ICB/CCB analyzed at beginning, end & after every 10 client samples, & within ± RL ?		✓			✓
B. Sample Results					
1. Are all reported results within the calibration range ?		✓			✓
2. Sample analyses done within holding time (HT) ? *If no, list samples:* _____		✓		□ *[ht1] HT expired upon receipt.* □ *[ht2] Client requested analysis after HT expired.*	✓
C. Preparation/Matrix QC					
1. LCS done per prep batch & within QC limits? (CLP aqueous = 80-120% R; CLP soil = vendor control limits; 9012A= inhouse control limits; 335.4=90-110%) *If no, list LCS ID:* _____		✓		□ **[lcs2] Reanalysis not possible - insufficient sample.*** □ **[lcs3] LCS recovery > upper control limit & sample results are < RL.*** □ **[lcs4] Reanalysis not performed because HT expired.***	✓
2. Method blank done per prep batch & absolute value < RL? *If no, list blank ID:* _____		✓		□ **[mb3] There is no cyanide greater than the RL in the samples associated with method blank.*** □ **[mb5] Reanalysis not possible -- insufficient sample.*** □ [mb7] Concentration of blank is ≥ RL, but sample results are > 10x blank contamination level. □ [ib6] Concentration of blank is ≤ negative RL, but sample results are > 10x RL. □ **[ib7] Reanalysis not performed because HT expired.***	✓
3. MS/DUP or MS/MSD run at required frequency ?		✓		□ [lcsd] Insufficient sample. LCS/LCSD analyzed.	✓
4. Matrix spikes within limits ? (CLP = 75-125%R; 9012A = inhouse control limits; 335.4 = 90-110%R) *If no, list MS ID:* FGJXA			✓	☑ [ms3] LCS acceptable indicating sample matrix effects. □ [ms4] Native analyte concentration >4x spike level. □ [pds1] A post digestion spike (CLP) was analyzed (results within limits of 75-125% recovery). □ [pds2] A post digestion spike (CLP) was analyzed (results outside limits indicating matrix effects).	MS3
5. DUP (or LCS/LCSD or MS/MSD) RPD within limits ? (0-20 RPD if > 5x RL; ± RL if < 5x RL) *If no, list DUP ID:* _____		✓		□ [rpd2] LCS showed acceptable results. Results indicate lack of sample homogeneity.	✓
D. Other					
1. Are all nonconformances documented appropriately ?	✓				N/A
2. Were MS run #'s assigned correctly?		✓			✓
3. Current IDL data on file ?		✓		Date of last IDL: 10/17/03	✓
4. Calculations checked for error ?		✓			✓
5. All client/project specific requirements met ?		✓			✓
6. Final report acceptable? (Results correct, RLs calculated correctly, units correct, appropriate flags used, **deviations noted in narrative**, dilution factor correct, & preparation / analysis dates correct.)		✓			✓

Analyst: [signature]	Date: 12/30/03	2nd Level Reviewer: [signature]	Date: 1/2/04
Comments: Sample treated for sulfide interference.		Comments:	

* Such action must be taken in consultation with client.

Author: wheelerd DW 12/18/03 LACHAT QC 8000 Date : 12/18/2003

Original Run Filename: OM_12-18-2003_04-36-02PM.OMN created 12/18/2003 4:36:02 PM
Original Run Author's Signature: [wheelerd]
Current Run Filename: OM_12-18-2003_04-36-02PM_CN_SULF-.omn last modified 12/18/2003 4:57:04 PM
Current Run Author's Signature: [wheelerd]
Description: CYANIDE DIST. ON 12/18/03 PER METHOD: SW846-9012A
ALL SAMPLES & STANDARDS TREATED FOR SULFIDE W/ BISMUTH NO3 & DISTILLED-

Batch # 3364517

Sample	Rep.	Channel 1 Cyanide Conc. (mg/L)	Area (Vs)	Detection Time	MDF	Description
Standard A	1	0.500	34.3	12/18/2003@4:37:49 PM		CNF-2039
Standard B	1	0.400	27.7	12/18/2003@4:38:36 PM		CNF-2040
Standard C	1	0.200	14.7	12/18/2003@4:39:24 PM		CNF-2041
Standard D	1	0.100	7.47	12/18/2003@4:40:12 PM		CNF-2042
Standard E	1	0.0500	3.56	12/18/2003@4:41:00 PM		CNF-2043
Standard F	1	0.0200	1.53	12/18/2003@4:41:47 PM		CNF-2044
Standard G	1	0.0100	0.777	12/18/2003@4:42:34 PM		CNF-2045
Calibration Blank	1	0.00	0.0390	12/18/2003@4:43:22 PM		
DIST. ICV/LCS	1	✓ 0.225	15.7	12/18/2003@4:45:26 PM		~~F7X~~ F7F7X/RC DW 12/30/03
Known Conc:		0.200				
Calibration:		Table/Fig. 1				
ICB	1	ND -0.00494	-0.0703	12/18/2003@4:46:13 PM		
LOW CAL STD=CNF-2043	1	✓ 0.0488	3.63	12/18/2003@4:47:01 PM		
Known Conc:		0.0500				
HI CAL STD=CNF-2040	1	✓ 0.413	28.6	12/18/2003@4:47:48 PM		
Known Conc:		0.400				
CCV1=CNF-2041	1	✓ 0.216	15.2	12/18/2003@4:48:35 PM		
Known Conc:		0.200				
CCB1	1	ND -0.00525	-0.0912	12/18/2003@4:49:22 PM		
H2O BLANK	1	ND -0.00338	0.0373	12/18/2003@4:50:10 PM		F7F7X/AA
H3L120208-F6JXA-OS	1	ND -0.00331	0.0419	12/18/2003@4:50:57 PM		
F6JXA-MS	1	0.0972	6.95	12/18/2003@4:51:44 PM		

1363

Author: wheelerd

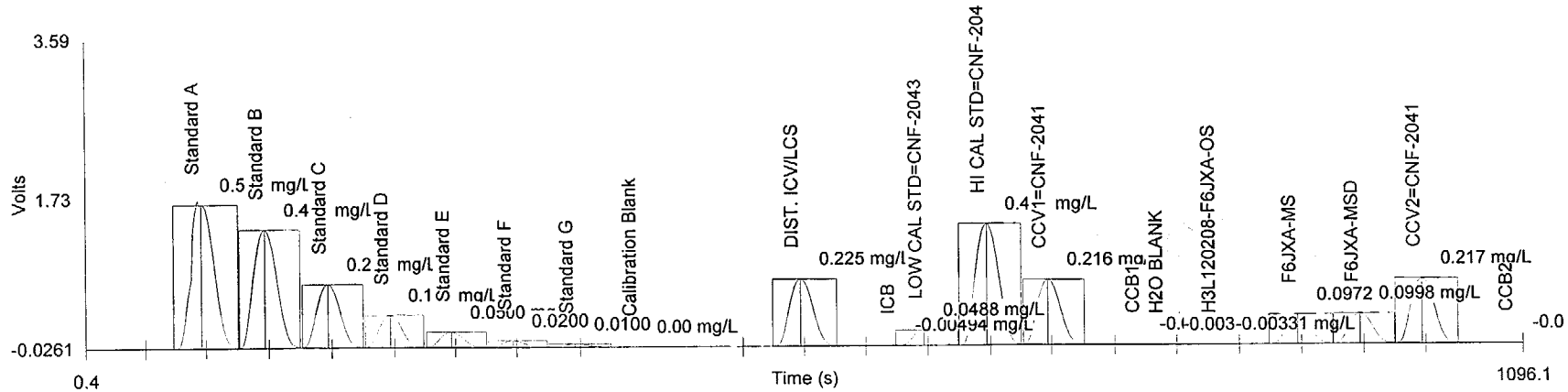
DOW 12/18/03

LACHAT QC 8000

Date : 12/18/2003

F6JXA-MSD	1		0.0998	7.13	12/18/2003@4:52:32 PM		
CCV2=CNF-2041	1	✓	0.217	15.2	12/18/2003@4:53:19 PM		
Known Conc:			0.200				
CCB2	1	ND	-0.00513	-0.0831	12/18/2003@4:54:06 PM		

Channel Plot # 1



1364

Author: wheelerd

DAW 12/18/03

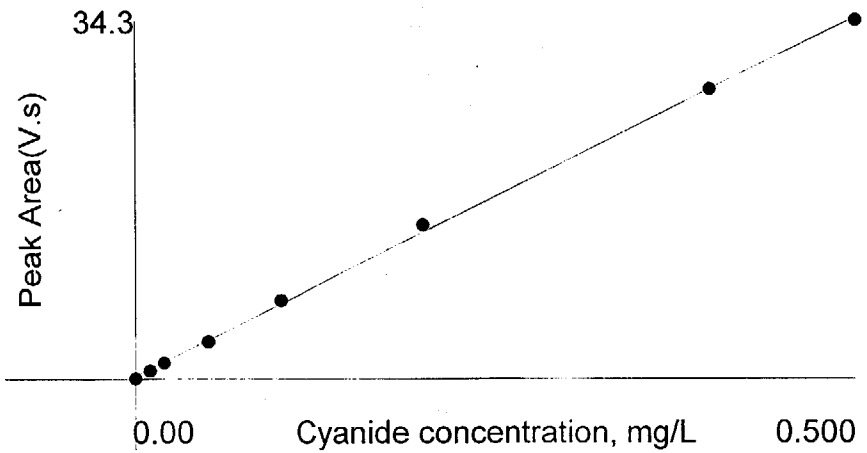
LACHAT QC 8000

Date : 12/18/2003

Table 1: Cyanide

	Conc. (mg/L)	Rep	Peak Area (Volt-s)	Peak Height (Volts)	% Residual	Detection Date	Detection Time
1	0.500	1	34.3	1.69	0.9	12/18/2003	4:39:03 PM
2	0.400	1	27.7	1.38	0.1	12/18/2003	4:39:51 PM
3	0.200	1	14.7	0.740	-5.0	12/18/2003	4:40:39 PM
4	0.100	1	7.47	0.377	-4.5	12/18/2003	4:41:26 PM
5	0.0500	1	3.56	0.179	4.2	12/18/2003	4:42:14 PM
6	0.0200	1	1.53	0.0767	7.1	12/18/2003	4:43:02 PM
7	0.0100	1	0.777	0.0385	19.4	12/18/2003	4:43:49 PM
8	0.00	1	0.0390	7.42e-4		12/18/2003	4:44:37 PM

Figure 1: Cyanide



Area = 68.7 * Conc + 0.277
Conc = 0.0145 * Area - 0.00392
Correlation Coefficient (r) = 0.99967

No Weighting

1365

(* AIR MATRIX LOT TOTAL sample Lot rec'd (mL))

5

STL KNOXVILLE
Wet Chemistry - CN Distillation Worksheet

Analyst/Date DFW 12/15/03 (Prep: 0900-1530)

Lot #	Sample ID	pH ≥ 12 Yes/No	Oxidizing Agent Yes/No	Sulfide Interference Yes/No	Sample Description: Before Distillation	Sample Description: After Distillation	Distillation: Initial Wt/Vol	Distillation: Final Volume	Spike: ID	Spike: Conc. (mg/L)	Spike: Vol. (ml)	Method	
H3L120196	F6JVD	Y	N	N	Turbid	Clear	50mL	50mL				EPA	
	MS								CNI-569	20	.50	335.4	
	MSD								"	"	"		
H3L100268	F6DQ4											SW846	
"	F6DRG											9012A	
H3L110150	F6F1C												
"	F6F2H												
H3L120208	F6JX2												
	MS								CNI-569	20	.50		
	MSD								"	"	"		
H3L090263 (*)	F6AQ8						42.						42
	F6AQ9						50						200
	F6AQA						45.						45
	F6AQM						50						165
	F6AQR						50						1165

Note: Samples were checked for oxidizing agents using **KI** test Paper. If the results were positive, the samples were treated with ascorbic acid. Samples were checked for sulfide interference using lead-acetate paper. If the results were positive, the samples were treated with cadmium carbonate and filtered. Samples were pre-checked with 0-14 pH indicator strips.
For amenable CN, record the start time ——— and end time ——— of the excess chlorine exposure (minimum 1 hour).

Cont'd page 6

Reagent ID: MgC12 CNR-1231 0.25N NaOH CNR-1233 Chloramine T CNR-1235

Sulfamic Acid CNR-1232 Phosphate Buffer CNR-1228 Sulfuric Acid (Mfg/Lot#) CNR-1220

Pyridine/Barbituric Acid CNR-1234

WC020R5.doc, 10/10/00

STL KNOXVILLE
Wet Chemistry - CN Distillation Worksheet

Analyst/Date DFW 12/15/03

Lot #	Sample ID	pH ≥ 12 Yes/No	Oxidizing Agent Yes/No	Sulfide Interference Yes/No	Sample Description: Before Distillation	Sample Description: After Distillation	Distillation: Initial Wt/Vol	Distillation: Final Volume	Spike: ID	Spike: Conc. (mg/L)	Spike: Vol. (ml)	Method	
N3L090263	F6AQT	Y	N	N	Turbid	Clear	45. mL	50.				8W846-9012A	45.
	F6AQX						50.						100.
	F6AQ1					DFW 12/15/03	~~45.~~ 50						1125.
	F6AQ2						45.						45.
	F6AQ4						50.						115.
	F6AQ5												1150.
QA/QC	F7F52/AA	Distilled	Method	H_2O BLANK	DI H_2O								
	-1AC			ICV/LCS					CNI-569	20.	.50		
	-1AD			ICV/LCSD					"		.50		
	CNF-2036			Low Cal Std.					CNI-568		.125		
	CNF-2033			High " "					"		1.0		

Note: Samples were checked for oxidizing agents using **KI** test Paper. If the results were positive, the samples were treated with ascorbic acid. Samples were checked for sulfide interference using lead-acetate paper. If the results were positive, the samples were treated with cadmium carbonate and filtered. Samples were pre-checked with 0-14 pH indicator strips.
For amenable CN, record the start time ——— and end time ——— of the excess chlorine exposure (minimum 1 hour).

Reagent ID: MgC12 CNR-1231 0.25N NaOH CNR-1233 Chloramine T CNR-1235

Sulfamic Acid CNR-1232 Phosphate Buffer CNR-1228 Sulfuric Acid (Mfg/Lot#) CNR-1220

Pyridine/Barbituric Acid CNR-1234

WC020R5.doc, 10/10/00

STL KNOXVILLE
Wet Chemistry - CN Distillation Worksheet

Analyst/Date DFW 12/18/03 (Prep: 1500 - 1330)

Lot #	Sample ID	pH ≥ 12 Yes/No	Oxidizing Agent Yes/No	Sulfide Interference Yes/No	Sample Description: Before Distillation	Sample Description: After Distillation	Distillation: Initial Wt/Vol	Distillation: Final Volume	Spike: ID	Spike: Conc. mg/L	Spike: Vol. (ml)	Method
H3L090263	F6AQ5	Y	N	N	Turbid	Clear	50mL	50mL				SW846
	MS								CNI-569	20	.50	9012A
	MSD								"	"	"	
QA/QC	—	Distilled Method		H_2O BLANK	DI H_2O							
	—			" ICV/LCS					CNI-569	20	.50	
	CNF-2036			Low Cal Std					CNI-568	20	.125	
	" -2033			High " "					"	"	1.0	
H3L120208	F6JXA	Y	N	N (*)	Turbid							
	MS								CNI-569	20	.50	
	MSD								"	"	"	
QA/QC	F7F7X1AA	Distilled Method		#2 BLANK	DI H_2O (*)							
	" -1AC			H_2O ICV/LCS					CNI-569	20	.50	
	—			Calibration BLANK + CCB								

Note: Samples were checked for oxidizing agents using **KI** test Paper. If the results were positive, the samples were treated with ascorbic acid. Samples were checked for sulfide interference using lead-acetate paper. If the results were positive, the samples were treated with cadmium carbonate and filtered. Samples were pre-checked with 0-14 pH indicator strips.
For amenable CN, record the start time ——— and end time ——— of the excess chlorine exposure (minimum 1 hour).

Reagent ID: MgC12 CNR-1231 0.25N NaOH CNR-1233 Chloramine T CNR-1236

Sulfamic Acid CNR-1232 Phosphate Buffer CNR-1228 Sulfuric Acid (Mfg/Lot#) CNR-1220

Pyridine/Barbituric Acid CNR-1234

WC020R5.doc, 10/10/00

(*) ALL SAMPLES & STDS. TREATED W/ BISMUTH NITRATE (ALDRICH Lot# LO 03314KO Exp: 4/29/04)
DISTILLED STANDARDS RECORDED IN LOGBOOK #2490

STL KNOXVILLE
PREPARATION OF FINAL WORKING STANDARD SOLUTIONS
WET CHEMISTRY

Date Made: 12/15/03 Chemist DFW Expiration Date: 12/22/03

ID Number CNF-	Compound Name	Parent ID Number	Conc. of Parent Sol'n	Aliquot Volume (ml)	Dilution Volume (ml)	Final Conc. mg/l
1. 2032	Cyanide	CNI-	20. mg/L	2.5	100	Ø.5
2. 2033	Calib	568		2.0		Ø.4
3. 2034	Stds			1.0		Ø.2
4. 2035				Ø.50		Ø.1
5. 2036				Ø.25		Ø.05
6. 2037				Ø.10		Ø.02
7. 2038				Ø.05		Ø.01

Date Made: Chemist Expiration Date:

ID Number	Compound Name	Parent ID Number	Conc. of Parent Sol'n	Aliquot Volume (ml)	Dilution Volume (ml)	Final Conc. mg/l
1.						
2.						
3.						
4.						
5.						
6.						
7.						

12/17/03

Date Made: Chemist Expiration Date:

ID Number	Compound Name	Parent ID Number	Conc. of Parent Sol'n	Aliquot Volume (ml)	Dilution Volume (ml)	Final Conc. mg/l
1.						
2.						
3.						
4.						
5.						
6.						
7.						

DFW

Reviewed By/Date:

STL KNOXVILLE
PREPARATION OF FINAL WORKING STANDARD SOLUTIONS
WET CHEMISTRY

Date Made: 12/18/03 Chemist DFW Expiration Date: 12/25/03

ID Number CN-	Compound Name	Parent ID Number	Conc. of Parent Sol'n	Aliquot Volume (ml)	Dilution Volume (ml)	Final Conc. mg/l
1. 2039	CN-	CNI-569	20 mg/L	1.25	50 (*)	0.5
2. 2040	CALIB +			1.0		0.4
3. 2041	WORKING			0.500		0.2
4. 2042	STANDARDS			0.250		0.1
5. 2043				0.125		0.05
6. 2044				0.050		0.02
7. 2045				0.025		0.01

(*) Treated for Sulfide (from sample) w/ Bismuth Nitrate

Date Made: Chemist Expiration Date:

ID Number	Compound Name	Parent ID Number	Conc. of Parent Sol'n	Aliquot Volume (ml)	Dilution Volume (ml)	Final Conc. mg/l
1.						
2.						
3.						
4.						
5.						
6.						
7.						

Date Made: Chemist Expiration Date:

ID Number	Compound Name	Parent ID Number	Conc. of Parent Sol'n	Aliquot Volume (ml)	Dilution Volume (ml)	Final Conc. mg/l
1.						
2.						
3.						
4.						
5.						
6.						
7.						

Reviewed By/Date:

WC002R3.DOC, 7/30/02

STL KNOXVILLE
PREPARATION OF INTERMEDIATE STANDARDS - WET CHEMISTRY

Date: 12/15/03 Chemist: DFW

Identification Number: CNI-568

Strength of Concentrated Stock: 2000 mg/l Parent ID: CNS-2003A2

Aliquot of Concentrated Stock: 1.0 ml

Dilution Volume: 100 ml

Final Concentration: 20. mg/l Compound Name: CN Intermed Std (A) = Calib Stds; CCVs; Dist Cal. Stds

Expiration Date: 12/22/03

Date: 12/15/03 Chemist: DFW

Identification Number: CNI-569

Strength of Concentrated Stock: 2000 mg/l Parent ID: CNS-2003B2

Aliquot of Concentrated Stock: 1.0 ml

Dilution Volume: 100 ml

Final Concentration: 20. mg/l Compound Name: CN-Intermed Std (B) = Dist ICV/LCS; LCSD; MS/MSD

Expiration Date: 12/22/03

~~Date: _____ Chemist: _____~~

Identification Number: _____

Strength of Concentrated Stock: _____ mg/l Parent ID: _____

Aliquot of Concentrated Stock: 12/17/03 ml

Dilution Volume: _____ ml

Final Concentration: _____ mg/l Compound Name: _____

Expiration Date: _____

Reviewed By: _____

STL Knoxville
CN STOCK STANDARDS - WET CHEMISTRY

Date: 11/24/03 Chemist: DFW Source Exp. Date: 4/27/05
Identification Number: CNS 2003A2 Lot No.: 974784A Purity: 98.9 Source: FISHER (KCN)
Final Gross Wt.: — g Dilution Vol.: 500 ml
Tare Wt.: — g Concentration: 2000 mg/l
Net Wt.: 2.50 g Compound Name: CN Stock Std Source (A)
Adjusted Net Wt.: — mg Expiration Date: 5/24/05 ~~04~~
(*) (Preservative: 1.00g Potassium Hydroxide (KOH) FISHER 021062 Expires: 10/18/09)

Date: 11/24/03 Chemist: DFW Source Exp. Date: 10/22/05
Identification Number: CNS 2003B2 Lot No.: M02589 Purity: 99.5 Source: JT BAKER (KCN)
Final Gross Wt.: — g Dilution Vol.: 500 ml
Tare Wt.: — g Concentration: 2000 mg/l
Net Wt.: 2.50 g Compound Name: CN Stock Std Source (B)
Adjusted Net Wt.: — mg Expiration Date: 5/24/04
(*) (SAME AS ABOVE —)

Date: Chemist: Source Exp. Date:
Identification Number: Lot No.: Purity: Source:
Final Gross Wt.: g Dilution Vol.: ml
Tare Wt.: g Concentration: mg/l
Net Wt.: g Compound Name:
Adjusted Net Wt.: mg Expiration Date:

Date: Chemist: Source Exp. Date:
Identification Number: Lot No.: Purity: Source:
Final Gross Wt.: g Dilution Vol.: ml
Tare Wt.: g Concentration: mg/l
Net Wt.: g Compound Name:
Adjusted Net Wt.: mg Expiration Date:

11/24/03 DFW

Reviewed By: WC055R1.doc, 4/19/02

Wet Chemistry

Sample Summary

SHAW E & I INC

Client Sample ID: DD3007

General Chemistry

Lot-Sample #...: H3L100268-001 **Work Order #...:** F6DQ4 **Matrix.....:** WATER
Date Sampled...: 12/09/03 **Date Received..:** 12/10/03

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride - Automated	**148**	**20.0**	**mg/L**	**MCAWW 325.2**	**12/11/03**	**3345263**
		Dilution Factor: 20		MDL.....: 5.6		
Cyanide, Total	ND	0.010	mg/L	SW846 9012A	12/15/03	3364457
		Dilution Factor: 1		MDL.....: 0.0030		
Hardness, as CaCO3	**81.6**	**5.0**	**mg/L**	**MCAWW 130.2**	**12/22/03**	**3357125**
		Dilution Factor: 1		MDL.....: 2.1		
Nitrate	ND	0.10	mg/L	MCAWW 353.2	12/10/03	3344598
		Dilution Factor: 1		MDL.....: 0.016		
Sulfate	**13.1**	**5.0**	**mg/L**	**MCAWW 375.4**	**12/11/03**	**3345463**
		Dilution Factor: 1		MDL.....: 0.94		
Total Alkalinity	**444**	**5.0**	**mg/L**	**MCAWW 310.1**	**12/10/03**	**3344488**
		Dilution Factor: 1		MDL.....: 1.3		
Total Dissolved Solids	**697**	**10.0**	**mg/L**	**MCAWW 160.1**	**12/11-12/12/03**	**3345541**
		Dilution Factor: 1		MDL.....: 4.3		
Total Organic Carbon	**5.3**	**1.0**	**mg/L**	**SW846 9060**	**12/24/03**	**3360094**
		Dilution Factor: 1		MDL.....: 0.68		
Total Suspended Solids	**4.0**	**4.0**	**mg/L**	**MCAWW 160.2**	**12/12-12/15/03**	**3349480**
		Dilution Factor: 1		MDL.....: 2.8		
Turbidity	**0.58**	**0.50**	**NTU**	**MCAWW 180.1**	**12/10/03**	**3350326**
		Dilution Factor: 1		MDL.....: 0.50		
Turbidity	**1.6**	**0.50**	**NTU**	**MCAWW 180.1**	**12/16/03**	**3350328**
		Dilution Factor: 1		MDL.....: 0.50		

SHAW E & I INC

Client Sample ID: DD3008

General Chemistry

Lot-Sample #...: H3L100268-002 **Work Order #...:** F6DRG **Matrix.....:** WATER
Date Sampled...: 12/09/03 **Date Received..:** 12/10/03

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride - Automated	**2930**	**50.0**	**mg/L**	**MCAWW 325.2**	**12/11/03**	**3345263**
		Dilution Factor: 50		MDL.....: 14.0		
Cyanide, Total	ND	0.010	mg/L	SW846 9012A	12/15/03	3364457
		Dilution Factor: 1		MDL.....: 0.0030		
Hardness, as CaCO3	**1500**	**25.0**	**mg/L**	**MCAWW 130.2**	**12/17/03**	**3351416**
		Dilution Factor: 5		MDL.....: 10.5		
Nitrate	ND	0.10	mg/L	MCAWW 353.2	12/10/03	3344598
		Dilution Factor: 1		MDL.....: 0.016		
Sulfate	ND	5.0	mg/L	MCAWW 375.4	12/11/03	3345463
		Dilution Factor: 1		MDL.....: 0.94		
Total Alkalinity	**432**	**5.0**	**mg/L**	**MCAWW 310.1**	**12/10/03**	**3344488**
		Dilution Factor: 1		MDL.....: 1.3		
Total Dissolved Solids	**3880**	**50.0**	**mg/L**	**MCAWW 160.1**	**12/11-12/12/03**	**3345541**
		Dilution Factor: 5		MDL.....: 21.5		
Total Organic Carbon	**3.9**	**1.0**	**mg/L**	**SW846 9060**	**12/24/03**	**3360094**
		Dilution Factor: 1		MDL.....: 0.68		
Total Suspended Solids	**7.0**	**4.0**	**mg/L**	**MCAWW 160.2**	**12/12-12/15/03**	**3349480**
		Dilution Factor: 1		MDL.....: 2.8		
Turbidity	**1.3**	**0.50**	**NTU**	**MCAWW 180.1**	**12/10/03**	**3350326**
		Dilution Factor: 1		MDL.....: 0.50		
Turbidity	**7.0**	**0.50**	**NTU**	**MCAWW 180.1**	**12/16/03**	**3350328**
		Dilution Factor: 1		MDL.....: 0.50		

SHAW E & I INC

Client Sample ID: DD3002

General Chemistry

Lot-Sample #...: H3L110180-001 **Work Order #...:** F6F1C **Matrix.....:** WATER
Date Sampled...: 12/10/03 **Date Received..:** 12/11/03

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride - Automated	**21300**	**250**	**mg/L**	**MCAWW 325.2**	**12/29/03**	**3363239**
		Dilution Factor: 250		MDL.....: 70.0		
Cyanide, Total	ND	0.010	mg/L	SW846 9012A	12/15/03	3364457
		Dilution Factor: 1		MDL.....: 0.0030		
Hardness, as CaCO3	**9940**	**125**	**mg/L**	**MCAWW 130.2**	**12/17/03**	**3351416**
		Dilution Factor: 25		MDL.....: 52.5		
Nitrate	ND	0.10	mg/L	MCAWW 353.2	12/11/03	3345556
		Dilution Factor: 1		MDL.....: 0.016		
Sulfate	ND	5.0	mg/L	MCAWW 375.4	12/29/03	3363240
		Dilution Factor: 1		MDL.....: 0.94		
Total Alkalinity	**238**	**5.0**	**mg/L**	**MCAWW 310.1**	**12/11/03**	**3346137**
		Dilution Factor: 1		MDL.....: 1.3		
Total Dissolved Solids	**33600**	**400**	**mg/L**	**MCAWW 160.1**	**12/12-12/15/03**	**3346635**
		Dilution Factor: 40		MDL.....: 172		
Total Organic Carbon	ND	1.0	mg/L	SW846 9060	12/16/03	3351144
		Dilution Factor: 1		MDL.....: 0.68		
Total Suspended Solids	**39.0**	**4.0**	**mg/L**	**MCAWW 160.2**	**12/12-12/15/03**	**3346636**
		Dilution Factor: 1		MDL.....: 2.8		
Turbidity	**3.1**	**0.50**	**NTU**	**MCAWW 180.1**	**12/11/03**	**3350327**
		Dilution Factor: 1		MDL.....: 0.50		
Turbidity	**18.4**	**0.50**	**NTU**	**MCAWW 180.1**	**12/16/03**	**3350328**
		Dilution Factor: 1		MDL.....: 0.50		

SHAW E & I INC

Client Sample ID: DD3001

General Chemistry

Lot-Sample #...: H3L110180-002 Work Order #...: F6F2H Matrix.....: WATER
Date Sampled...: 12/10/03 Date Received..: 12/11/03

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride - Automated	132	20.0	mg/L	MCAWW 325.2	12/29/03	3363239
		Dilution Factor: 20		MDL.....: 5.6		
Cyanide, Total	ND	0.010	mg/L	SW846 9012A	12/15/03	3364457
		Dilution Factor: 1		MDL.....: 0.0030		
Hardness, as CaCO3	313	5.0	mg/L	MCAWW 130.2	12/22/03	3357125
		Dilution Factor: 1		MDL.....: 2.1		
Nitrate	0.58	0.50	mg/L	MCAWW 353.2	12/11/03	3345556
		Dilution Factor: 5		MDL.....: 0.080		
Sulfate	54.4	25.0	mg/L	MCAWW 375.4	12/29/03	3363240
		Dilution Factor: 5		MDL.....: 4.7		
Total Alkalinity	255	5.0	mg/L	MCAWW 310.1	12/11/03	3346137
		Dilution Factor: 1		MDL.....: 1.3		
Total Dissolved Solids	584	10.0	mg/L	MCAWW 160.1	12/12-12/15/03	3346635
		Dilution Factor: 1		MDL.....: 4.3		
Total Organic Carbon	1.2	1.0	mg/L	SW846 9060	12/16/03	3351144
		Dilution Factor: 1		MDL.....: 0.68		
Total Suspended Solids	4.0	4.0	mg/L	MCAWW 160.2	12/12-12/15/03	3346636
		Dilution Factor: 1		MDL.....: 2.8		
Turbidity	5.6	0.50	NTU	MCAWW 180.1	12/11/03	3350327
		Dilution Factor: 1		MDL.....: 0.50		
Turbidity	5.2	0.50	NTU	MCAWW 180.1	12/16/03	3350328
		Dilution Factor: 1		MDL.....: 0.50		

SHAW E & I INC

Client Sample ID: DD3003

General Chemistry

Lot-Sample #...: H3L120208-001 Work Order #...: F6JXA Matrix.....: WATER
Date Sampled...: 12/11/03 Date Received..: 12/12/03

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride - Automated	**48.7**	**1.0**	**mg/L**	**MCAWW 325.2**	**12/29/03**	**3363239**
		Dilution Factor: 1		MDL.....: 0.28		
Cyanide, Total	ND	0.010	mg/L	SW846 9012A	12/18/03	3364517
		Dilution Factor: 1		MDL.....: 0.0030		
Hardness, as CaCO3	**130**	**5.0**	**mg/L**	**MCAWW 130.2**	**12/22/03**	**3357125**
		Dilution Factor: 1		MDL.....: 10.5		
Nitrate	ND	0.10	mg/L	MCAWW 353.2	12/13/03	3349149
		Dilution Factor: 1		MDL.....: 0.016		
Sulfate	**32.6**	**25.0**	**mg/L**	**MCAWW 375.4**	**12/29/03**	**3363240**
		Dilution Factor: 5		MDL.....: 4.7		
Total Alkalinity	**726**	**5.0**	**mg/L**	**MCAWW 310.1**	**12/12/03**	**3349139**
		Dilution Factor: 1		MDL.....: 1.3		
Total Dissolved Solids	**779**	**10.0**	**mg/L**	**MCAWW 160.1**	**12/16-12/17/03**	**3350171**
		Dilution Factor: 1		MDL.....: 4.3		
Total Organic Carbon	**1.6**	**1.0**	**mg/L**	**SW846 9060**	**12/24/03**	**3360094**
		Dilution Factor: 1		MDL.....: 0.68		
Total Suspended Solids	**4.0**	**4.0**	**mg/L**	**MCAWW 160.2**	**12/15/03**	**3349364**
		Dilution Factor: 1		MDL.....: 2.8		
Turbidity	**74.0**	**2.5**	**NTU**	**MCAWW 180.1**	**12/12/03**	**3349635**
		Dilution Factor: 5		MDL.....: 2.5		

SHAW E & I INC

Client Sample ID: DD3004

General Chemistry

Lot-Sample #...: H3L120208-002 **Work Order #...:** F6JX2 **Matrix.....:** WATER
Date Sampled...: 12/11/03 **Date Received..:** 12/12/03

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride - Automated	**221**	**20.0**	**mg/L**	**MCAWW 325.2**	**12/29/03**	**3363239**
		Dilution Factor: 20		MDL.....: 5.6		
Cyanide, Total	ND	0.010	mg/L	SW846 9012A	12/15/03	3364457
		Dilution Factor: 1		MDL.....: 0.0030		
Hardness, as CaCO3	**540**	**25.0**	**mg/L**	**MCAWW 130.2**	**12/22/03**	**3357125**
		Dilution Factor: 5		MDL.....: 10.5		
Nitrate	ND	0.10	mg/L	MCAWW 353.2	12/13/03	3349149
		Dilution Factor: 1		MDL.....: 0.016		
Sulfate	**136**	**25.0**	**mg/L**	**MCAWW 375.4**	**12/29/03**	**3363240**
		Dilution Factor: 5		MDL.....: 4.7		
Total Alkalinity	**316**	**5.0**	**mg/L**	**MCAWW 310.1**	**12/12/03**	**3349139**
		Dilution Factor: 1		MDL.....: 1.3		
Total Dissolved Solids	**834**	**10.0**	**mg/L**	**MCAWW 160.1**	**12/16-12/17/03**	**3350171**
		Dilution Factor: 1		MDL.....: 4.3		
Total Organic Carbon	**2.4**	**1.0**	**mg/L**	**SW846 9060**	**12/23/03**	**3360094**
		Dilution Factor: 1		MDL.....: 0.68		
Total Suspended Solids	**8.0**	**4.0**	**mg/L**	**MCAWW 160.2**	**12/15/03**	**3349364**
		Dilution Factor: 1		MDL.....: 2.8		
Turbidity	**64.4**	**1.0**	**NTU**	**MCAWW 180.1**	**12/12/03**	**3349635**
		Dilution Factor: 2		MDL.....: 1.0		

QC Summary

METHOD BLANK REPORT

General Chemistry

Client Lot #...: PB045 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride - Automated		Work Order #: F6FP01AA		MB Lot-Sample #:	A3L110000-263	
	ND	1.0	mg/L	MCAWW 325.2	12/11/03	3345263
		Dilution Factor: 1				
Chloride - Automated		Work Order #: F7D0W1AA		MB Lot-Sample #:	A3L290000-239	
	ND	1.0	mg/L	MCAWW 325.2	12/29/03	3363239
		Dilution Factor: 1				
Cyanide, Total		Work Order #: F7F5Q1AA		MB Lot-Sample #:	H3L300000-457	
	ND	0.010	mg/L	SW846 9012A	12/15/03	3364457
		Dilution Factor: 1				
Cyanide, Total		Work Order #: F7F7X1AA		MB Lot-Sample #:	H3L300000-517	
	ND	0.010	mg/L	SW846 9012A	12/18/03	3364517
		Dilution Factor: 1				
Hardness, as CaCO3		Work Order #: F6X6G1AA		MB Lot-Sample #:	A3L170000-416	
	ND	5.0	mg/L	MCAWW 130.2	12/17/03	3351416
		Dilution Factor: 1				
Hardness, as CaCO3		Work Order #: F683D1AA		MB Lot-Sample #:	A3L230000-125	
	ND	5.0	mg/L	MCAWW 130.2	12/22/03	3357125
		Dilution Factor: 1				
Nitrate		Work Order #: F6E241AA		MB Lot-Sample #:	A3L100000-598	
	ND	0.10	mg/L	MCAWW 353.2	12/10/03	3344598
		Dilution Factor: 1				
Nitrate		Work Order #: F6HCL1AA		MB Lot-Sample #:	A3L110000-556	
	ND	0.10	mg/L	MCAWW 353.2	12/11/03	3345556
		Dilution Factor: 1				
Nitrate		Work Order #: F6NRF1AA		MB Lot-Sample #:	A3L150000-149	
	ND	0.10	mg/L	MCAWW 353.2	12/13/03	3349149
		Dilution Factor: 1				
Sulfate		Work Order #: F6GNK1AA		MB Lot-Sample #:	A3L110000-463	
	ND	5.0	mg/L	MCAWW 375.4	12/11/03	3345463
		Dilution Factor: 1				
Sulfate		Work Order #: F7D0X1AA		MB Lot-Sample #:	A3L290000-240	
	ND	5.0	mg/L	MCAWW 375.4	12/29/03	3363240
		Dilution Factor: 1				

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METHOD BLANK REPORT

General Chemistry

Client Lot #...: PB045 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Alkalinity		Work Order #: F6EDT1AA		MB Lot-Sample #:	A3L100000-488	
	ND	5.0	mg/L	MCAWW 310.1	12/10/03	3344488
		Dilution Factor: 1				
Total Alkalinity		Work Order #: F6H3A1AA		MB Lot-Sample #:	A3L120000-137	
	ND	5.0	mg/L	MCAWW 310.1	12/11/03	3346137
		Dilution Factor: 1				
Total Alkalinity		Work Order #: F6NQ51AA		MB Lot-Sample #:	A3L150000-139	
	ND	5.0	mg/L	MCAWW 310.1	12/12/03	3349139
		Dilution Factor: 1				
Total Dissolved Solids		Work Order #: F6PWL1AA		MB Lot-Sample #:	A3L110000-541	
	ND	10.0	mg/L	MCAWW 160.1	12/11-12/12/03	3345541
		Dilution Factor: 1				
Total Dissolved Solids		Work Order #: F6QED1AA		MB Lot-Sample #:	A3L120000-635	
	ND	10.0	mg/L	MCAWW 160.1	12/12-12/15/03	3346635
		Dilution Factor: 1				
Total Dissolved Solids		Work Order #: F6QGN1AA		MB Lot-Sample #:	A3L160000-171	
	ND	10.0	mg/L	MCAWW 160.1	12/16-12/17/03	3350171
		Dilution Factor: 1				
Total Organic Carbon		Work Order #: F6T9M1AA		MB Lot-Sample #:	A3L170000-144	
	ND	1.0	mg/L	SW846 9060	12/16/03	3351144
		Dilution Factor: 1				
Total Organic Carbon		Work Order #: F7CDD1AA		MB Lot-Sample #:	A3L260000-094	
	ND	1.0	mg/L	SW846 9060	12/23/03	3360094
		Dilution Factor: 1				
Total Suspended Solids		Work Order #: F6PKH1AA		MB Lot-Sample #:	A3L120000-636	
	ND	4.0	mg/L	MCAWW 160.2	12/12-12/15/03	3346636
		Dilution Factor: 1				
Total Suspended Solids		Work Order #: F6PK81AA		MB Lot-Sample #:	A3L150000-480	
	ND	4.0	mg/L	MCAWW 160.2	12/12-12/15/03	3349480
		Dilution Factor: 1				

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METHOD BLANK REPORT

General Chemistry

Client Lot #...: PB045 **Matrix.....:** WATER

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Suspended Solids		Work Order #: F6PAR1AA		MB Lot-Sample #:	A3L150000-364	
	ND	4.0	mg/L	MCAWW 160.2	12/15/03	3349364
		Dilution Factor: 1				
Turbidity		Work Order #: F6Q9P1AA		MB Lot-Sample #:	A3L160000-326	
	ND	0.50	NTU	MCAWW 180.1	12/10/03	3350326
		Dilution Factor: 1				
Turbidity		Work Order #: F6Q911AA		MB Lot-Sample #:	A3L160000-327	
	ND	0.50	NTU	MCAWW 180.1	12/11/03	3350327
		Dilution Factor: 1				
Turbidity		Work Order #: F6P5F1AA		MB Lot-Sample #:	A3L150000-635	
	ND	0.50	NTU	MCAWW 180.1	12/12/03	3349635
		Dilution Factor: 1				
Turbidity		Work Order #: F6RAC1AA		MB Lot-Sample #:	A3L160000-328	
	ND	0.50	NTU	MCAWW 180.1	12/16/03	3350328
		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

Lot-Sample #...: PB045 **Matrix.....:** WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Cyanide, Total		WO#:F7F5Q1AC-LCS/F7F5Q1AD-LCSD				LCS Lot-Sample#: H3L300000-457	
	106	(88 - 113)			SW846 9012A	12/15/03	3364457
	105	(88 - 113)	0.94	(0-20)	SW846 9012A	12/15/03	3364457

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

Lot-Sample #...: PB045 **Matrix.....:** WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Cyanide, Total		WO#:F7F5Q1AC-LCS/F7F5Q1AD-LCSD				LCS Lot-Sample#: H3L300000-457		
	0.200	0.212	mg/L	106		SW846 9012A	12/15/03	3364457
	0.200	0.210	mg/L	105	0.94	SW846 9012A	12/15/03	3364457

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 #...: PB045 **Matrix.....:** WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride - Automated		Work Order #: F6FP01AC	LCS Lot-Sample#: A3L110000-263		
	101	(90 - 115)	MCAWW 325.2	12/11/03	3345263
		Dilution Factor: 1			
Chloride - Automated		Work Order #: F7D0W1AC	LCS Lot-Sample#: A3L290000-239		
	108	(90 - 115)	MCAWW 325.2	12/29/03	3363239
		Dilution Factor: 1			
Cyanide, Total		Work Order #: F7F7X1AC	LCS Lot-Sample#: H3L300000-517		
	112	(88 - 113)	SW846 9012A	12/18/03	3364517
		Dilution Factor: 1			
Hardness, as CaCO3		Work Order #: F6X6G1AC	LCS Lot-Sample#: A3L170000-416		
	102	(84 - 116)	MCAWW 130.2	12/17/03	3351416
		Dilution Factor: 1			
Hardness, as CaCO3		Work Order #: F683D1AC	LCS Lot-Sample#: A3L230000-125		
	102	(84 - 116)	MCAWW 130.2	12/22/03	3357125
		Dilution Factor: 1			
Nitrate		Work Order #: F6E241AC	LCS Lot-Sample#: A3L100000-598		
	89	(77 - 116)	MCAWW 353.2	12/10/03	3344598
		Dilution Factor: 1			
Nitrate		Work Order #: F6HCL1AC	LCS Lot-Sample#: A3L110000-556		
	92	(77 - 116)	MCAWW 353.2	12/11/03	3345556
		Dilution Factor: 1			
Nitrate		Work Order #: F6NRF1AC	LCS Lot-Sample#: A3L150000-149		
	92	(77 - 116)	MCAWW 353.2	12/13/03	3349149
		Dilution Factor: 1			
Sulfate		Work Order #: F6GNK1AC	LCS Lot-Sample#: A3L110000-463		
	97	(80 - 112)	MCAWW 375.4	12/11/03	3345463
		Dilution Factor: 1			
Sulfate		Work Order #: F7D0X1AC	LCS Lot-Sample#: A3L290000-240		
	90	(80 - 112)	MCAWW 375.4	12/29/03	3363240
		Dilution Factor: 1			

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: PB045 **Matrix.....:** WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Alkalinity		Work Order #: F6EDT1AC		LCS Lot-Sample#: A3L100000-488	
	100	(90 - 127)	MCAWW 310.1	12/10/03	3344488
		Dilution Factor: 1			
Total Alkalinity		Work Order #: F6H3A1AC		LCS Lot-Sample#: A3L120000-137	
	104	(90 - 127)	MCAWW 310.1	12/11/03	3346137
		Dilution Factor: 1			
Total Alkalinity		Work Order #: F6NQ51AC		LCS Lot-Sample#: A3L150000-139	
	99	(90 - 127)	MCAWW 310.1	12/12/03	3349139
		Dilution Factor: 1			
Total Dissolved Solids		Work Order #: F6PWL1AC		LCS Lot-Sample#: A3L110000-541	
	95	(69 - 120)	MCAWW 160.1	12/11-12/12/03	3345541
		Dilution Factor: 1			
Total Dissolved Solids		Work Order #: F6QED1AC		LCS Lot-Sample#: A3L120000-635	
	107	(69 - 120)	MCAWW 160.1	12/12-12/15/03	3346635
		Dilution Factor: 1			
Total Dissolved Solids		Work Order #: F6QGN1AC		LCS Lot-Sample#: A3L160000-171	
	104	(69 - 120)	MCAWW 160.1	12/16-12/17/03	3350171
		Dilution Factor: 1			
Total Organic Carbon		Work Order #: F6T9M1AC		LCS Lot-Sample#: A3L170000-144	
	94	(88 - 115)	SW846 9060	12/16/03	3351144
		Dilution Factor: 1			
Total Organic Carbon		Work Order #: F7CDD1AC		LCS Lot-Sample#: A3L260000-094	
	96	(88 - 115)	SW846 9060	12/23/03	3360094
		Dilution Factor: 1			
Total Suspended Solids		Work Order #: F6PKH1AC		LCS Lot-Sample#: A3L120000-636	
	96	(66 - 119)	MCAWW 160.2	12/12-12/15/03	3346636
		Dilution Factor: 1			
Total Suspended Solids		Work Order #: F6PAR1AC		LCS Lot-Sample#: A3L150000-364	
	93	(66 - 119)	MCAWW 160.2	12/15/03	3349364
		Dilution Factor: 1			

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LABORATORY CONTROL SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: PB045 **Matrix.....:** WATER

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Suspended Solids		Work Order #: F6PK81AC		LCS Lot-Sample#: A3L150000-480	
	93	(66 - 119)	MCAWW 160.2	12/12-12/15/03	3349480
		Dilution Factor: 1			
Turbidity		Work Order #: F6P5F1AC		LCS Lot-Sample#: A3L150000-635	
	104	(75 - 125)	MCAWW 180.1	12/12/03	3349635
		Dilution Factor: 1			
Turbidity		Work Order #: F6Q9P1AC		LCS Lot-Sample#: A3L160000-326	
	106	(75 - 125)	MCAWW 180.1	12/10/03	3350326
		Dilution Factor: 1			
Turbidity		Work Order #: F6Q911AC		LCS Lot-Sample#: A3L160000-327	
	88	(75 - 125)	MCAWW 180.1	12/11/03	3350327
		Dilution Factor: 1			
Turbidity		Work Order #: F6RAC1AC		LCS Lot-Sample#: A3L160000-328	
	89	(75 - 125)	MCAWW 180.1	12/16/03	3350328
		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 #...: PB045 **Matrix.....:** WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride - Automated			Work Order #: F6FP01AC		LCS Lot-Sample#:	A3L110000-263	
	73.5	74.2	mg/L	101	MCAWW 325.2	12/11/03	3345263
			Dilution Factor: 1				
Chloride - Automated			Work Order #: F7D0W1AC		LCS Lot-Sample#:	A3L290000-239	
	73.5	79.2	mg/L	108	MCAWW 325.2	12/29/03	3363239
			Dilution Factor: 1				
Cyanide, Total			Work Order #: F7F7X1AC		LCS Lot-Sample#:	H3L300000-517	
	0.200	0.225	mg/L	112	SW846 9012A	12/18/03	3364517
			Dilution Factor: 1				
Hardness, as CaCO3			Work Order #: F6X6G1AC		LCS Lot-Sample#:	A3L170000-416	
	290	295	mg/L	102	MCAWW 130.2	12/17/03	3351416
			Dilution Factor: 1				
Hardness, as CaCO3			Work Order #: F683D1AC		LCS Lot-Sample#:	A3L230000-125	
	290	296	mg/L	102	MCAWW 130.2	12/22/03	3357125
			Dilution Factor: 1				
Nitrate			Work Order #: F6E241AC		LCS Lot-Sample#:	A3L100000-598	
	1.00	0.888	mg/L	89	MCAWW 353.2	12/10/03	3344598
			Dilution Factor: 1				
Nitrate			Work Order #: F6HCL1AC		LCS Lot-Sample#:	A3L110000-556	
	1.00	0.916	mg/L	92	MCAWW 353.2	12/11/03	3345556
			Dilution Factor: 1				
Nitrate			Work Order #: F6NRF1AC		LCS Lot-Sample#:	A3L150000-149	
	1.00	0.918	mg/L	92	MCAWW 353.2	12/13/03	3349149
			Dilution Factor: 1				
Sulfate			Work Order #: F6GNK1AC		LCS Lot-Sample#:	A3L110000-463	
	32.2	31.1	mg/L	97	MCAWW 375.4	12/11/03	3345463
			Dilution Factor: 1				
Sulfate			Work Order #: F7D0X1AC		LCS Lot-Sample#:	A3L290000-240	
	32.2	28.9	mg/L	90	MCAWW 375.4	12/29/03	3363240
			Dilution Factor: 1				

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LABORATORY CONTROL SAMPLE DATA REPORT

General Chemistry

Client Lot #...: PB045 **Matrix.....:** WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Alkalinity			Work Order #: F6EDT1AC		LCS Lot-Sample#:	A3L100000-488	
	54.7	55.0	mg/L	100	MCAWW 310.1	12/10/03	3344488
			Dilution Factor: 1				
Total Alkalinity			Work Order #: F6H3A1AC		LCS Lot-Sample#:	A3L120000-137	
	44.4	46.3	mg/L	104	MCAWW 310.1	12/11/03	3346137
			Dilution Factor: 1				
Total Alkalinity			Work Order #: F6NQ51AC		LCS Lot-Sample#:	A3L150000-139	
	44.4	44.0	mg/L	99	MCAWW 310.1	12/12/03	3349139
			Dilution Factor: 1				
Total Dissolved Solids			Work Order #: F6PWL1AC		LCS Lot-Sample#:	A3L110000-541	
	276	262	mg/L	95	MCAWW 160.1	12/11-12/12/03	3345541
			Dilution Factor: 1				
Total Dissolved Solids			Work Order #: F6QED1AC		LCS Lot-Sample#:	A3L120000-635	
	276	296	mg/L	107	MCAWW 160.1	12/12-12/15/03	3346635
			Dilution Factor: 1				
Total Dissolved Solids			Work Order #: F6QGN1AC		LCS Lot-Sample#:	A3L160000-171	
	276	287	mg/L	104	MCAWW 160.1	12/16-12/17/03	3350171
			Dilution Factor: 1				
Total Organic Carbon			Work Order #: F6T9M1AC		LCS Lot-Sample#:	A3L170000-144	
	39.9	37.4	mg/L	94	SW846 9060	12/16/03	3351144
			Dilution Factor: 1				
Total Organic Carbon			Work Order #: F7CDD1AC		LCS Lot-Sample#:	A3L260000-094	
	39.9	38.3	mg/L	96	SW846 9060	12/23/03	3360094
			Dilution Factor: 1				
Total Suspended Solids			Work Order #: F6PKH1AC		LCS Lot-Sample#:	A3L120000-636	
	32.4	31.0	mg/L	96	MCAWW 160.2	12/12-12/15/03	3346636
			Dilution Factor: 1				
Total Suspended Solids			Work Order #: F6PAR1AC		LCS Lot-Sample#:	A3L150000-364	
	32.4	30.0	mg/L	93	MCAWW 160.2	12/15/03	3349364
			Dilution Factor: 1				

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LABORATORY CONTROL SAMPLE DATA REPORT

General Chemistry

Client Lot #...: PB045 **Matrix.....:** WATER

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Suspended Solids			Work Order #: F6PK81AC LCS Lot-Sample#: A3L150000-480				
	32.4	30.0	mg/L	93	MCAWW 160.2	12/12-12/15/03	3349480
			Dilution Factor: 1				
Turbidity			Work Order #: F6P5F1AC LCS Lot-Sample#: A3L150000-635				
	1.00	1.04	NTU	104	MCAWW 180.1	12/12/03	3349635
			Dilution Factor: 1				
Turbidity			Work Order #: F6Q9P1AC LCS Lot-Sample#: A3L160000-326				
	1.00	1.06	NTU	106	MCAWW 180.1	12/10/03	3350326
			Dilution Factor: 1				
Turbidity			Work Order #: F6Q911AC LCS Lot-Sample#: A3L160000-327				
	1.00	0.880	NTU	88	MCAWW 180.1	12/11/03	3350327
			Dilution Factor: 1				
Turbidity			Work Order #: F6RAC1AC LCS Lot-Sample#: A3L160000-328				
	1.00	0.890	NTU	89	MCAWW 180.1	12/16/03	3350328
			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 #...: PB045 **Matrix.....:** WATER
Date Sampled...: 12/03/03 **Date Received..:** 12/05/03

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride - Automated		WO#: F6D1W1AK-MS/F6D1W1AL-MSD				MS Lot-Sample #: A3L100302-002	
	111	(43 - 167)			MCAWW 325.2	12/11/03	3345263
	104	(43 - 167)	0.92	(0-23)	MCAWW 325.2	12/11/03	3345263
		Dilution Factor: 1					
Chloride - Automated		WO#: F6JX21E8-MS/F6JX21E9-MSD				MS Lot-Sample #: H3L120208-002	
	127	(43 - 167)			MCAWW 325.2	12/29/03	3363239
	118	(43 - 167)	0.91	(0-23)	MCAWW 325.2	12/29/03	3363239
		Dilution Factor: 1					
Cyanide, Total		WO#: F6JXA1DA-MS/F6JXA1DC-MSD				MS Lot-Sample #: H3L120208-001	
	49 N	(77 - 126)			SW846 9012A	12/18/03	3364517
	50 N	(77 - 126)	2.6	(0-20)	SW846 9012A	12/18/03	3364517
		Dilution Factor: 1					
Cyanide, Total		WO#: F6JX21AX-MS/F6JX21A0-MSD				MS Lot-Sample #: H3L120208-002	
	68 N	(77 - 126)			SW846 9012A	12/15/03	3364457
	64 N	(77 - 126)	4.5	(0-20)	SW846 9012A	12/15/03	3364457
		Dilution Factor: 1					
Hardness, as CaCO3		WO#: F6JX21FQ-MS/F6JX21FR-MSD				MS Lot-Sample #: H3L120208-002	
	100	(10 - 176)			MCAWW 130.2	12/22/03	3357125
	95	(10 - 176)	3.4	(0-23)	MCAWW 130.2	12/22/03	3357125
		Dilution Factor: 1					
Hardness, as CaCO3		WO#: F6KN31AM-MS/F6KN31AN-MSD				MS Lot-Sample #: A3L120289-003	
	96	(10 - 176)			MCAWW 130.2	12/17/03	3351416
	97	(10 - 176)	1.6	(0-23)	MCAWW 130.2	12/17/03	3351416
		Dilution Factor: 1					
Nitrate		WO#: F6DQ41DC-MS/F6DQ41DD-MSD				MS Lot-Sample #: H3L100268-001	
	77	(10 - 163)			MCAWW 353.2	12/10/03	3344598
	77	(10 - 163)	0.0	(0-24)	MCAWW 353.2	12/10/03	3344598
		Dilution Factor: 1					
Nitrate		WO#: F6F1C1C9-MS/F6F1C1DA-MSD				MS Lot-Sample #: H3L110180-001	
	59	(10 - 163)			MCAWW 353.2	12/11/03	3345556
	60	(10 - 163)	0.60	(0-24)	MCAWW 353.2	12/11/03	3345556
		Dilution Factor: 1					

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MATRIX SPIKE SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #...: PB045 **Matrix.....:** WATER
Date Sampled...: 12/03/03 **Date Received..:** 12/05/03

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Nitrate		WO#: F6H4N1CJ-MS/F6H4N1CK-MSD				MS Lot-Sample #: A3L120102-005	
	68	(10 - 163)			MCAWW 353.2	12/13/03	3349149
	68	(10 - 163)	0.12	(0-24)	MCAWW 353.2	12/13/03	3349149
		Dilution Factor: 1					
Sulfate		WO#: F54TE1AP-MS/F54TE1AQ-MSD				MS Lot-Sample #: A3L050283-002	
	96	(22 - 151)			MCAWW 375.4	12/11/03	3345461
	94	(22 - 151)	0.48	(0-31)	MCAWW 375.4	12/11/03	3345461
		Dilution Factor: 1					
Sulfate		WO#: F6JX21FF-MS/F6JX21FG-MSD				MS Lot-Sample #: H3L120208-002	
	86	(22 - 151)			MCAWW 375.4	12/29/03	3363240
	92	(22 - 151)	1.0	(0-31)	MCAWW 375.4	12/29/03	3363240
		Dilution Factor: 1					
Total Alkalinity		WO#: F6DQ41C9-MS/F6DQ41DA-MSD				MS Lot-Sample #: H3L100268-001	
	93	(10 - 160)			MCAWW 310.1	12/10/03	3344488
	95	(10 - 160)	1.1	(0-24)	MCAWW 310.1	12/10/03	3344488
		Dilution Factor: 1					
Total Alkalinity		WO#: F6F2H1C9-MS/F6F2H1DA-MSD				MS Lot-Sample #: H3L110180-002	
	78	(10 - 160)			MCAWW 310.1	12/11/03	3346137
	76	(10 - 160)	2.2	(0-24)	MCAWW 310.1	12/11/03	3346137
		Dilution Factor: 1					
Total Alkalinity		WO#: F6JX21A8-MS/F6JX21A9-MSD				MS Lot-Sample #: H3L120208-002	
	62	(10 - 160)			MCAWW 310.1	12/12/03	3349139
	65	(10 - 160)	2.5	(0-24)	MCAWW 310.1	12/12/03	3349139
		Dilution Factor: 1					
Total Organic Carbon		WO#: F6GAK1AG-MS/F6GAK1AH-MSD				MS Lot-Sample #: A3L110213-008	
	109	(72 - 136)			SW846 9060	12/16/03	3351144
	111	(72 - 136)	1.8	(0-20)	SW846 9060	12/16/03	3351144
		Dilution Factor: 1					
Total Organic Carbon		WO#: F6JX21FJ-MS/F6JX21FK-MSD				MS Lot-Sample #: H3L120208-002	
	94	(72 - 136)			SW846 9060	12/23/03	3360094
	94	(72 - 136)	0.34	(0-20)	SW846 9060	12/23/03	3360094
		Dilution Factor: 1					

NOTE(S):

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

N Spiked analyte recovery is outside stated control limits.

MATRIX SPIKE SAMPLE DATA REPORT

General Chemistry

Client Lot #...: PB045 **Matrix.....:** WATER
Date Sampled...: 12/03/03 **Date Received..:** 12/05/03

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Chloride - Automated			WO#: F6D1W1AK-MS/F6D1W1AL-MSD				MS Lot-Sample #: A3L100302-002		
	178	25.0	206	mg/L	111		MCAWW 325.2	12/11/03	3345263
	178	25.0	204	mg/L	104	0.92	MCAWW 325.2	12/11/03	3345263
			Dilution Factor: 1						
Chloride - Automated			WO#: F6JX21E8-MS/F6JX21E9-MSD				MS Lot-Sample #: H3L120208-002		
	221	25.0	252	mg/L	127		MCAWW 325.2	12/29/03	3363239
	221	25.0	250	mg/L	118	0.91	MCAWW 325.2	12/29/03	3363239
			Dilution Factor: 1						
Cyanide, Total			WO#: F6JXA1DA-MS/F6JXA1DC-MSD				MS Lot-Sample #: H3L120208-001		
	ND	0.200	0.0972	mg/L	49		SW846 9012A	12/18/03	3364517
			Qualifiers: N						
	ND	0.200	0.0998	mg/L	50	2.6	SW846 9012A	12/18/03	3364517
			Qualifiers: N						
			Dilution Factor: 1						
Cyanide, Total			WO#: F6JX21AX-MS/F6JX21A0-MSD				MS Lot-Sample #: H3L120208-002		
	ND	0.200	0.135 N	mg/L	68		SW846 9012A	12/15/03	3364457
	ND	0.200	0.129 N	mg/L	64	4.5	SW846 9012A	12/15/03	3364457
			Dilution Factor: 1						
Hardness, as CaCO3			WO#: F6JX21FQ-MS/F6JX21FR-MSD				MS Lot-Sample #: H3L120208-002		
	540	1000	1540	mg/L	100		MCAWW 130.2	12/22/03	3357125
	540	1000	1490	mg/L	95	3.4	MCAWW 130.2	12/22/03	3357125
			Dilution Factor: 1						
Hardness, as CaCO3			WO#: F6KN31AM-MS/F6KN31AN-MSD				MS Lot-Sample #: A3L120289-003		
	11.2	200	202	mg/L	96		MCAWW 130.2	12/17/03	3351416
	11.2	200	206	mg/L	97	1.6	MCAWW 130.2	12/17/03	3351416
			Dilution Factor: 1						
Nitrate			WO#: F6DQ41DC-MS/F6DQ41DD-MSD				MS Lot-Sample #: H3L100268-001		
	ND	0.250	0.198	mg/L	77		MCAWW 353.2	12/10/03	3344598
	ND	0.250	0.198	mg/L	77	0.0	MCAWW 353.2	12/10/03	3344598
			Dilution Factor: 1						
Nitrate			WO#: F6F1C1C9-MS/F6F1C1DA-MSD				MS Lot-Sample #: H3L110180-001		
	ND	0.250	0.149	mg/L	59		MCAWW 353.2	12/11/03	3345556
	ND	0.250	0.150	mg/L	60	0.60	MCAWW 353.2	12/11/03	3345556
			Dilution Factor: 1						

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MATRIX SPIKE SAMPLE DATA REPORT

General Chemistry

Client Lot #...: PB045 **Matrix.....:** WATER
Date Sampled...: 12/03/03 **Date Received..:** 12/05/03

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Nitrate			WO#: F6H4N1CJ-MS/F6H4N1CK-MSD				MS Lot-Sample #: A3L120102-005		
	0.22	0.250	0.388	mg/L	68		MCAWW 353.2	12/13/03	3349149
	0.22	0.250	0.388	mg/L	68	0.12	MCAWW 353.2	12/13/03	3349149
			Dilution Factor: 1						
Sulfate			WO#: F54TE1AP-MS/F54TE1AQ-MSD				MS Lot-Sample #: A3L050283-002		
	68.4	25.0	92.3	mg/L	96		MCAWW 375.4	12/11/03	3345461
	68.4	25.0	91.9	mg/L	94	0.48	MCAWW 375.4	12/11/03	3345461
			Dilution Factor: 1						
Sulfate			WO#: F6JX21FF-MS/F6JX21FG-MSD				MS Lot-Sample #: H3L120208-002		
	136	25.0	158	mg/L	86		MCAWW 375.4	12/29/03	3363240
	136	25.0	159	mg/L	92	1.0	MCAWW 375.4	12/29/03	3363240
			Dilution Factor: 1						
Total Alkalinity			WO#: F6DQ41C9-MS/F6DQ41DA-MSD				MS Lot-Sample #: H3L100268-001		
	444	500	910	mg/L	93		MCAWW 310.1	12/10/03	3344488
	444	500	921	mg/L	95	1.1	MCAWW 310.1	12/10/03	3344488
			Dilution Factor: 1						
Total Alkalinity			WO#: F6F2H1C9-MS/F6F2H1DA-MSD				MS Lot-Sample #: H3L110180-002		
	255	500	646	mg/L	78		MCAWW 310.1	12/11/03	3346137
	255	500	632	mg/L	76	2.2	MCAWW 310.1	12/11/03	3346137
			Dilution Factor: 1						
Total Alkalinity			WO#: F6JX21A8-MS/F6JX21A9-MSD				MS Lot-Sample #: H3L120208-002		
	316	500	627	mg/L	62		MCAWW 310.1	12/12/03	3349139
	316	500	643	mg/L	65	2.5	MCAWW 310.1	12/12/03	3349139
			Dilution Factor: 1						
Total Organic Carbon			WO#: F6GAK1AG-MS/F6GAK1AH-MSD				MS Lot-Sample #: A3L110213-008		
	ND	25.0	28.2	mg/L	109		SW846 9060	12/16/03	3351144
	ND	25.0	28.8	mg/L	111	1.8	SW846 9060	12/16/03	3351144
			Dilution Factor: 1						
Total Organic Carbon			WO#: F6JX21FJ-MS/F6JX21FK-MSD				MS Lot-Sample #: H3L120208-002		
	2.4	25.0	25.8	mg/L	94		SW846 9060	12/23/03	3360094
	2.4	25.0	25.9	mg/L	94	0.34	SW846 9060	12/23/03	3360094
			Dilution Factor: 1						

NOTE(S):

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

N Spiked analyte recovery is outside stated control limits.

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: H3L100268 **Work Order #...:** F6CQM-SMP F6CQM-DUP **Matrix.....:** WATER

Date Sampled...: 12/09/03 **Date Received..:** 12/10/03

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Dissolved Solids						SD Lot-Sample #:	A3L100133-001	
	1100	1100	mg/L	0.0	(0-20)	MCAWW 160.1	12/11-12/12/03	3345541

Dilution Factor: 1

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: H3L100268 **Work Order #...:** F6DQ4-SMP F6DQ4-DUP **Matrix.....:** WATER

Date Sampled...: 12/09/03 **Date Received..:** 12/10/03

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Turbidity						SD Lot-Sample #:	H3L100268-001	
	0.58	0.56	NTU	3.5	(0-20)	MCAWW 180.1	12/10/03	3350326
		Dilution Factor: 1						
Turbidity						SD Lot-Sample #:	H3L100268-001	
	1.6	1.6	NTU	0.62	(0-20)	MCAWW 180.1	12/16/03	3350328
		Dilution Factor: 1						

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: H3L100268 **Work Order #...:** F6E8D-SMP F6E8D-DUP **Matrix.....:** WATER

Date Sampled...: 12/10/03 **Date Received..:** 12/11/03

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Suspended Solids						SD Lot-Sample #:	A3L110101-002	
	11.0	8.0	mg/L	32	(0-20)	MCAWW 160.2	12/12-12/15/03	3349480

Dilution Factor: 1

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: H3L100268 **Work Order #...:** F6E8R-SMP F6E8R-DUP **Matrix.....:** WATER

Date Sampled...: 12/10/03 **Date Received..:** 12/11/03

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Dissolved Solids						SD Lot-Sample #:	A3L110102-001	
	430	434	mg/L	0.93	(0-20)	MCAWW 160.1	12/12-12/15/03	3346635

Dilution Factor: 1

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: H3L100268 **Work Order #...:** F6FND-SMP F6FND-DUP **Matrix.....:** WATER

Date Sampled...: 12/10/03 **Date Received..:** 12/11/03

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Suspended Solids						SD Lot-Sample #:	A3L110142-001	
	17.0	17.0	mg/L	0.0	(0-20)	MCAWW 160.2	12/12-12/15/03	3349480

Dilution Factor: 1

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: H3L100268 **Work Order #...:** F6FWF-SMP F6FWF-DUP **Matrix.....:** WATER

Date Sampled...: 12/10/03 **Date Received..:** 12/11/03

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Dissolved Solids						SD Lot-Sample #:	A3L110166-002	
	825	868	mg/L	5.1	(0-20)	MCAWW 160.1	12/12-12/15/03	3346635

Dilution Factor: 1

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: H3L100268 **Work Order #...:** F6F1C-SMP F6F1C-DUP **Matrix.....:** WATER

Date Sampled...: 12/10/03 **Date Received..:** 12/11/03

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Turbidity						SD Lot-Sample #:	H3L110180-001	
	3.1	3.3	NTU	8.1	(0-20)	MCAWW 180.1	12/11/03	3350327

Dilution Factor: 1

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: H3L100268 **Work Order #...:** F6F2H-SMP F6F2H-DUP **Matrix.....:** WATER

Date Sampled...: 12/10/03 **Date Received..:** 12/11/03

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Suspended Solids						SD Lot-Sample #:	H3L110180-002	
	4.0	4.0	mg/L	0.0	(0-20)	MCAWW 160.2	12/12-12/15/03	3346636

Dilution Factor: 1

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: H3L100268 **Work Order #...:** F6JXA-SMP F6JXA-DUP **Matrix.....:** WATER

Date Sampled...: 12/11/03 **Date Received..:** 12/12/03

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Turbidity						SD Lot-Sample #:	H3L120208-001	
	74.0	73.0	NTU	1.4	(0-20)	MCAWW 180.1	12/12/03	3349635

Dilution Factor: 5

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: H3L100268 **Work Order #...:** F6JX2-SMP F6JX2-DUP **Matrix.....:** WATER

Date Sampled...: 12/11/03 **Date Received..:** 12/12/03

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Suspended Solids						SD Lot-Sample #:	H3L120208-002	
	8.0	7.0	mg/L	13	(0-20)	MCAWW 160.2	12/15/03	3349364
			Dilution Factor: 1					
Total Dissolved Solids						SD Lot-Sample #:	H3L120208-002	
	834	834	mg/L	0.0	(0-20)	MCAWW 160.1	12/16-12/17/03	3350171
			Dilution Factor: 1					

SAMPLE DUPLICATE EVALUATION REPORT

General Chemistry

Client Lot #...: H3L100268 **Work Order #...:** F6KN3-SMP F6KN3-DUP **Matrix.....:** WATER

Date Sampled...: 12/12/03 **Date Received..:** 12/12/03

PARAM	RESULT	DUPLICATE RESULT	UNITS	RPD	RPD LIMIT	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Total Suspended Solids						SD Lot-Sample #:	A3L120289-003	
	18.0	15.0	mg/L	18	(0-20)	MCAWW 160.2	12/15/03	3349364
			Dilution Factor: 1					
Total Dissolved Solids						SD Lot-Sample #:	A3L120289-003	
	2120	2200	mg/L	3.9	(0-20)	MCAWW 160.1	12/16-12/17/03	3350171
			Dilution Factor: 2					

Raw Data

STL North Canton General Chemistry Data Review Checklist

Parameter(s): Alkalinity, Total

Batch(es): 3344488

Method #/SOP#: 310.1

Review Items	Level I Review			Level II Review		
A. Initial Calibration	YES	NO	N/A	YES	NO	N/A
1. Initial calibration correlation coefficient ≥ 0.995?			✓			✓
2. Calibration curve consist of the minimum number of calibration standards?			✓	✓		
3. ICV analyzed at immediately after calibration and within control limits ? (TRAACS Nitrate/Nitrite, Cyanide 85-115%; all others 90-110%)			✓	✓		
4. ICB analyzed immediately after ICV and within criteria (± RL)?	✓					✓
B. Continuing Calibration						
1. CCV analyzed every 10 samples, at end of sequence and within criteria?			✓	✓		
2. CCB analyzed every 10 samples, at end of sequence & within criteria (±RL)?			✓			✓
C. Sample Results						
1. Were samples with concentrations > the linear range diluted and reanalyzed ?	✓					✓
2. All reported results bracketed by in control QC ?	✓			✓		
3. Sample analyses done within holding time ?	✓			✓		
D. Quality Control						
1. LCS per prep batch and within QC limits ? *(LCSD, where applicable)*	✓			✓		
2. Method blank done per prep batch and < RL. Method blank RL supports the lowest RL reported for the batch?	✓			✓		
3. MS/MSD run at required frequency and evaluated? MS/MSD reported properly and calculated correctly?	✓			✓		
4. Duplicate samples run at required frequency (duplicate sample performed per matrix encountered)?			✓			✓
E. Titrant						
1. Titrant standardized?			✓		✓	
2. If no, standardization expires 12/26/03			✓			
F. Other						
1. Are all nonconformances documented appropriately (NCM or narrative)?			✓			✓
2. Calculations checked for error ?	✓					✓
3. Transcriptions checked for error ?	✓			✓		
4. All client/project specific requirements met ?	✓			✓		
5. Date/time of preparation and analysis verified as correct ?	✓			✓		
6. Units verified as correct?	✓			✓		
7. Dilutions have been properly applied and RL's adjusted appropriately?	✓					✓
8. SOP followed?	✓			✓		
9. Calculations checked at minimum frequency (at least 20%, 100% for QC)?	✓			✓		
10. All reagent and standard numbers recorded in logbook?	✓			✓		
11. Edits dated and initialed			✓	✓		

Comment on any "NO" response(s):

Level I reviewer: Lou F Hyland Date: 12/11/03

Level II Reviewer: Angela Serra Date: 12/11/03

Level I review:

Report Date. 12/10/2003 : 10:48 AM

Calibration Report

Calibration Record # 1728

Calibration Settings

Calibration ID	PH CAL 4-7	Date	12/10/2003
Channel	1	Time	10:48 AM
Probe Type	pH	Temperature	296.30 K 23.15 C
Probe ID	PH ELECTRODE	Analysis Type	Single Line Fit

Calibration Results

Slope	-59.687	CorrCoeff	1.0000
Intercept	-18.180	Equation: Y = (-59.687) X + -18.180)	

Calibration Validity **True** Operator A

	Result	Minimum	Maximum
Slope	-59.687	-250.00	-45.00
Intercept	-18.180	-800.00	200.00
Correlation Coefficient	1.0000	1.00	1.00

Note: "True" means the calibration was within the specified ranges
"False" means the calibration was NOT within the specified ranges

Calibration Data	Standard	Reading
	4.00	160.88
	7.00	-18.18

CALRPRTLive1.SRW

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1411

Severn Trent Laboratories

Analyst Bruce / Loren
LCS
Date 10 Dec. 03

Sample Name	Run Date	Run Time	Conductivity	pH	P-Alk	Total Alk	BiCarbonate	Carbonate	Hydroxide	Fluoride	T Hardness	Acid
PH7-2	12/10/2003	4:45 PM	0000.00	7.0144	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	.00	.00
ALK=54.7	12/10/2003	4:58 PM	0000.00	8.6569	12.2270	54.9579	30.5039	24.4540	0.0000	0.0000	.00	.00
F6DQ4	12/10/2003	5:14 PM	0000.00	8.3409	16.1056	443.9132	411.7021	32.2111	0.0000	0.0000	.00	.00
F6DQ4 MS	12/10/2003	5:37 PM	0000.00	9.6822	231.7813	910.4272	446.8645	463.5627	0.0000	0.0000	.00	.00
F6DQ4 MSD	12/10/2003	5:58 PM	0000.00	9.7329	237.5602	920.8492	445.7289	475.1204	0.0000	0.0000	.00	.00
F6DRG	12/10/2003	6:13 PM	0000.00	8.0041	0.0000	431.5017	431.5017	0.0000	0.0000	0.0000	.00	.00
F6DWG	12/10/2003	6:28 PM	0000.00	8.2573	0.9670	315.7721	313.8381	1.9339	0.0000	0.0000	.00	.00
PH7-3	12/10/2003	6:34 PM	0000.00	7.0164	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	.00	.00

1412

Severn Trent Laboratories

Analyst Bruce / Loren
LCS
Date 12/10/03

Sample Name	Run Date	Run Time	Conductivity	pH	P-Alk	Total Alk	BiCarbonate	Carbonate	Hydroxide	Fluoride	T Hardness	Acid
PH7	12/10/2003	11:29 AM	0000.00	7.0062	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	.00	00
BLK-1	12/10/2003	11:38 AM	0000.00	7.5688	0.0000	5.0716	5.0716	0.0000	0.0000	0.0000	.00	00
BLK-2	12/10/2003	11:47 AM	0000.00	7.0431	0.0000	4.4260	4.4260	0.0000	0.0000	0.0000	.00	00
BLK3	12/10/2003	11:56 AM	0000.00	7.2867	0.0000	4.4399	4.4399	0.0000	0.0000	0.0000	.00	00
PH7A	12/10/2003	12:02 PM	0000.00	7.0082	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	.00	00

1413

Severn Trent Laboratories

Analyst_____
LCS _____
Date _____

Sample Name	Run Date	Run Time	Conductivity	pH	P-Alk	Total Alk	BiCarbonate	Carbonate	Hydroxide	Fluoride	T Hardness	Acid
PH 10	12/10/2003	10:55 AM	0000.00	10.0009	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	.00	.00
BLANK	12/10/2003	11:04 AM	0000.00	8.1079	0.0000	7.9803	7.9803	0.0000	0.0000	0.0000	.00	.00
PH 7	12/10/2003	11:11 AM	0000.00	7.0062	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	.00	.00

STL North Canton General Chemistry Data Review Checklist

Parameter(s): Nitrate

Batch(es): 3344598

Method #/SOP#:

Review Items	Level I Review			Level II Review		
A. Initial Calibration	YES	NO	N/A	YES	NO	N/A
1. Initial calibration correlation coefficient ≥ 0.995?	✓			✓		
2. Calibration curve consist of the minimum number of calibration standards?	✓			✓		
3. ICV analyzed at immediately after calibration and within control limits ? (TRAACS Nitrate/Nitrite, Cyanide 85-115%; all others 90-110%)	✓			✓		
4. ICB analyzed immediately after ICV and within criteria (± RL)?	✓			✓		
B. Continuing Calibration						
1. CCV analyzed every 10 samples, at end of sequence and within criteria?	✓			✓		
2. CCB analyzed every 10 samples, at end of sequence & within criteria (±RL)?	✓			✓		
C. Sample Results						
1. Were samples with concentrations > the linear range diluted and reanalyzed ?			✓			✓
2. All reported results bracketed by in control QC ?	✓			✓		
3. Sample analyses done within holding time ?	✓			✓		
D. Quality Control						
1. LCS per prep batch and within QC limits ? *(LCSD, where applicable)*	✓			✓		
2. Method blank done per prep batch and < RL. Method blank RL supports the lowest RL reported for the batch?	✓			✓		
3. MS/MSD run at required frequency and evaluated? MS/MSD reported properly and calculated correctly?	✓			✓		
4. Duplicate samples run at required frequency (duplicate sample performed per matrix encountered)?			✓			✓
E. Titrant						
1. Titrant standardized?			✓			✓
2. If no, standardization expires						
F. Other						
1. Are all nonconformances documented appropriately (NCM or narrative)?			✓			✓
2. Calculations checked for error ?	✓			✓		
3. Transcriptions checked for error ?	✓			✓		
4. All client/project specific requirements met ?	✓			✓		
5. Date/time of preparation and analysis verified as correct ?	✓			✓		
6. Units verified as correct?	✓			✓		
7. Dilutions have been properly applied and RL's adjusted appropriately?			✓			✓
8. SOP followed?	✓			✓		
9. Calculations checked at minimum frequency (at least 20%, 100% for QC)?	✓			✓		
10. All reagent and standard numbers recorded in logbook?	✓			✓		
11. Edits dated and initialed	✓			✓		

Comment on any "NO" response(s):

Level I reviewer: [signature] Date: 12/10/03

Level II Reviewer: [signature] Date: 12/11/03

Level I review:

BRAN+LUEBBE AACE 5.23

Post-run report

STL NORTH CANTON

TRAACS AUTOANALYZER REPORT

Name of Run	:	031210B	Name of Analysis	:	NO2NO3.ANL
Date of Report	:	12/10/03	System No.	:	2
Date of Run	:	12/10/03	Type of System	:	TRAACS
Operator	:	DB	Start/Stop time	:	21:14 - 21:41
Comment	:				

3344598

Channel	:	1	2
Method	:	NO2	NO2NO3
Unit	:	mg/L	mg/L
Calibr. Fit	:	Linear	Linear
Corr. Coeff.	:	0.9991	0.9999
Base	:	72	50
Gain	:	33	46
Sensitivity	:	0.2535	0.2446
Sample Limit 1	:		
Sample Limit 2	:		

WR 31344 Imidizole
WR 31125 NED
WR 31127 SAN
WR 31128 Sulfanilimide

Pk	Cup		Sample Id	Conc	Conc
0	0	B	Baseline	-0.0525	-0.0021
1	1	P	Primer	0.9756	1.9086
2	1	C	1/2 NO2NO3 NN 3161	0.9908	2.0087
3	2	C	0.5/1 NO2NO3 NN3162	0.5067	0.9824
4	3	C	0.25/0.5 NO2NO3 NN3163	0.2709	0.4959
5	4	C	0.1/0.2 NO2NO3 NN3164	0.1043	0.2061
6	5	C	0.04/0.08 NO2NO3 NN3165	0.0173	0.0869
7	1	H1	High	1.0049	1.9490
8	0	L1	Low	-0.0278	0.0061
9	0	L1	Low	-0.0211	0.0065
10	2	D	Drift	0.4685	0.9863
11	0	B	Baseline	-0.0525	-0.0021
12	0	N	Null	-0.0538N	-0.0016N
13	2	QC1	ICV	0.4582 92%	0.9720 97% 0.5138 103%
14	6	QC2	ICB	-0.0565	0.0056 ✓ 0.0056 ✓
15	7	S	1.0 PPM NO3 NN3159	-0.0438	0.8065 ✓
16	8	S	0.5 PPM NO2 NN 3160	0.4541 ✓	0.5607
17	9	S	LCS 1 PPM NO3 NN3167	-0.0529	0.8880 89%
18	10	S	F6DQ4	-0.0336	0.0056 0.0056

19	11	S	F6DQ4 MS	0.2871	0.4848	0.1977
20	12	S2	F6DQ4 MSD	0.2492	0.4469	0.1977
21	13	S	F6DQ6	-0.0629	0.0099	0.0099
22	2	QC1	CCV	0.5129 103%	1.0568 106%	0.5439 109%
23	6	QC2	CCB	-0.0692	0.0104	0.0104 ✓
24	2	D	Drift	0.4685	0.9863	
25	0	B	Baseline	-0.0525	-0.0021	
26	0	B	FinalBase	-0.0525	-0.0021	

QC Limits

Channel	:	1	2
QC 1	Unused		
QC 2	Unused		
QC 3	Unused		
QC 4	Unused		
QC 5	Unused		
QC 6	Unused		
QC 7	Unused		
QC 8	Unused		
QC 9	Unused		
QC10	Unused		

CORRECTIONS

Channel	:	1	2
Baseline	:	Yes	Yes
Drift	:	Yes	Yes
Carry over	:	Yes	Yes
	%:	8.2	1.5

* ... Sample offscale
\+ ... Result higher than sample limit
\- ... Result lower than sample limit
P ... Standard passed
F ... Standard failed
N ... Value not calculated or not used
R ... Resample after offscale
M ... Peak marker moved manually
D ... Diluted sample

** <END OF REPORT> **

BRAN+LUEBBE AACE 5.23

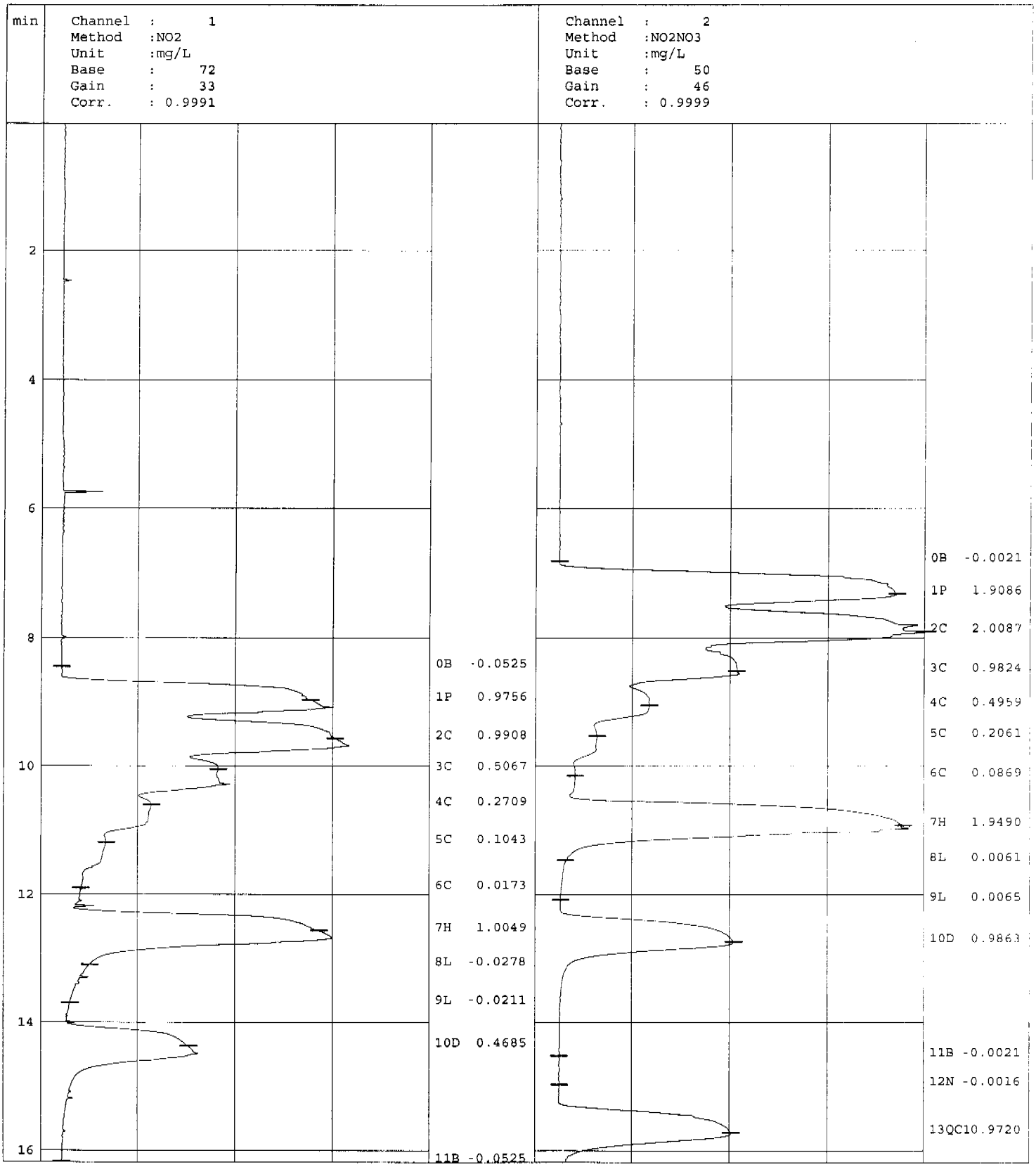
Post run chart

STL NORTH CANTON

TRAACS AUTOANALYZER REPORT

Name of run :031210B.RUN
Comment :

Name of analysis :NO2NO3.ANL

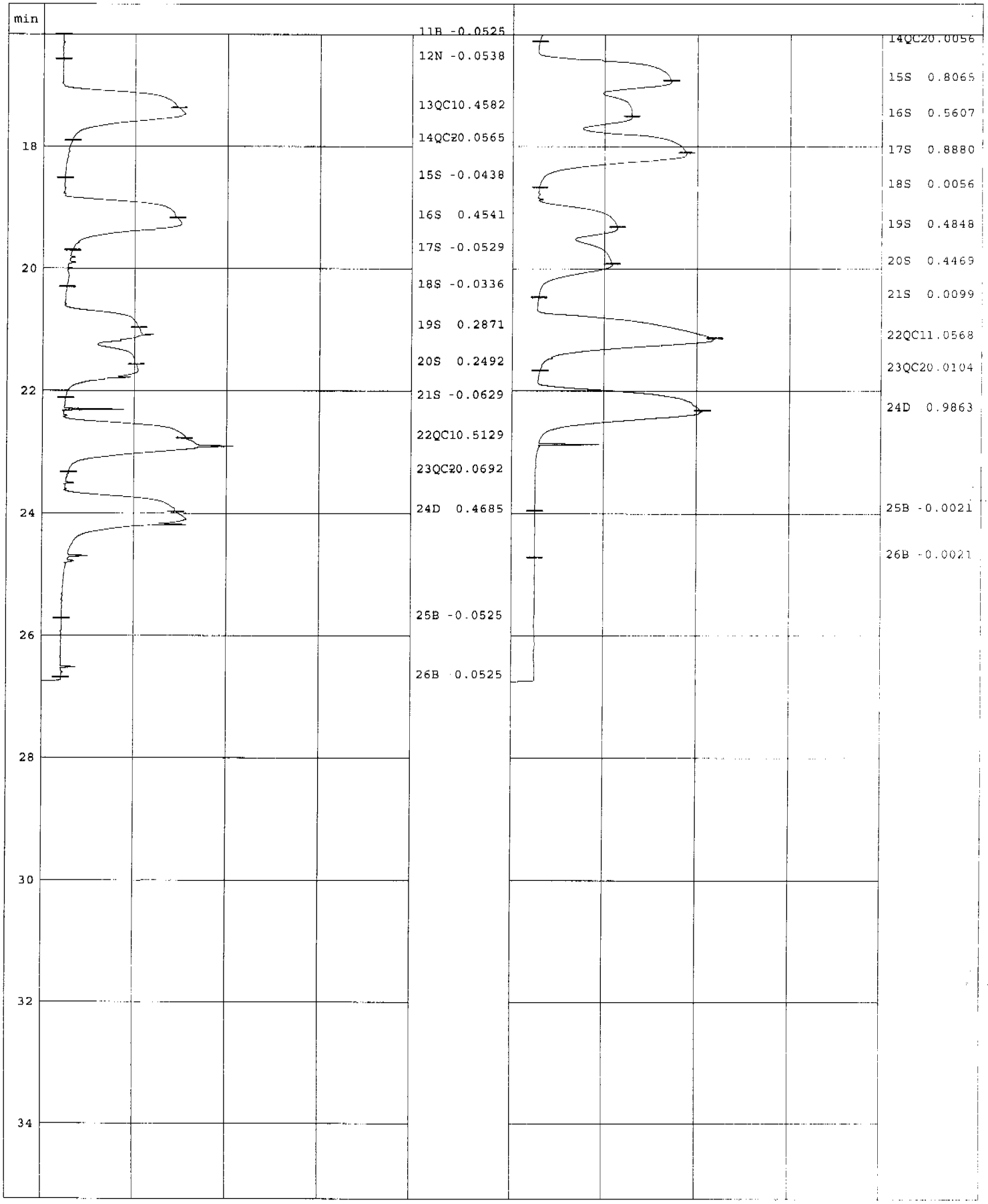


BRAN+LUEBBE AACE 5.23

Post-run chart

Name of run :031210B.RUN
Comment :

Name of analysis :NO2NO3.ANL



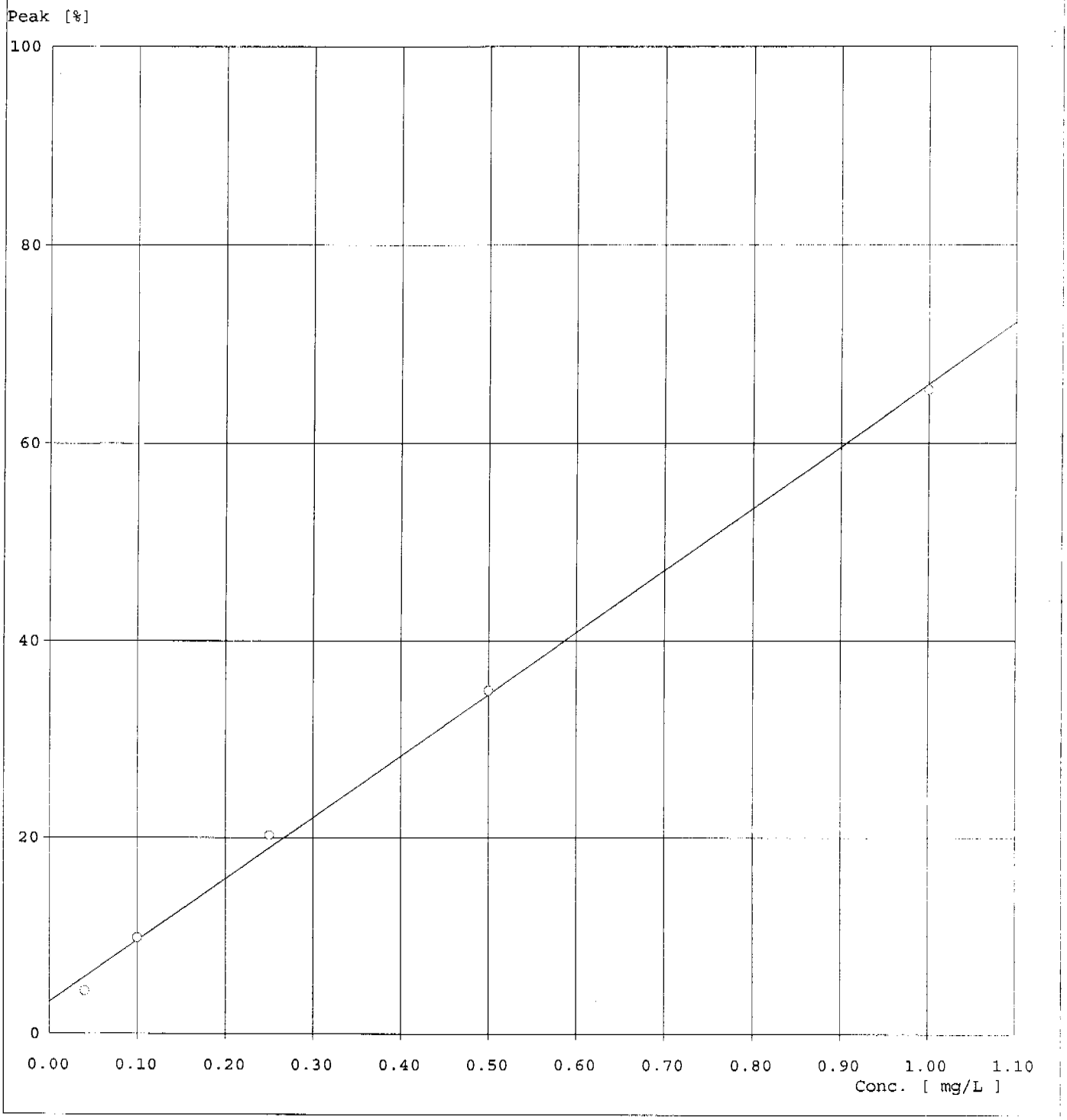
STL NORTH CANTON

TRAACS AUTOANALYZER REPORT

Name of run :031210B.RUN
Comment :

Name of analysis :NO2NO3.ANL

Channel :1
Method :NO2
Curve fit :linear a=0.0000244 b=-0.1358882
Corr. coeff. :0.9991



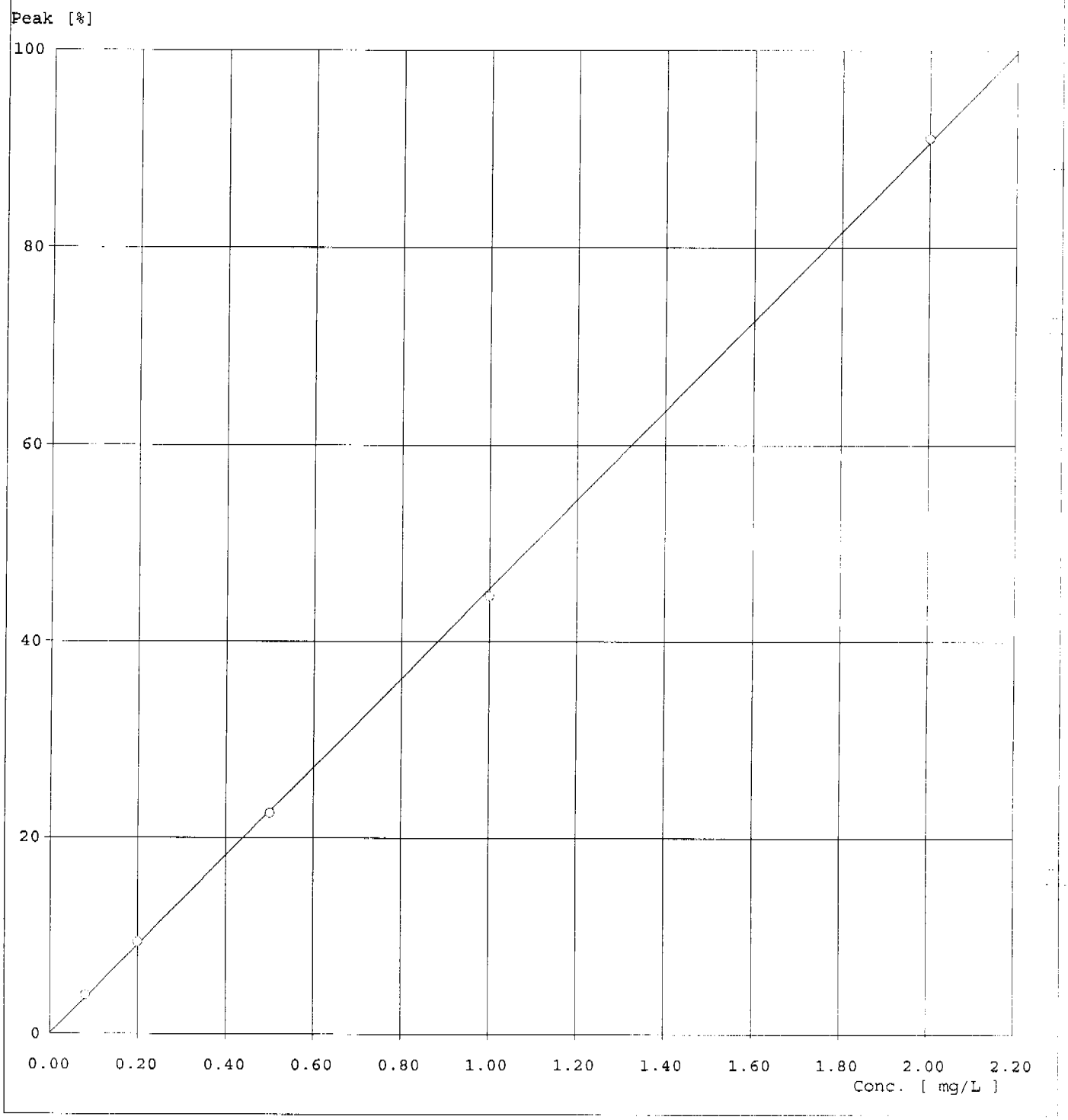
STL NORTH CANTON

TRAACS AUTOANALYZER REPORT

Name of run :031210B.RUN
Comment :

Name of analysis :NO2NO3.ANL

Channel :2
Method :NO2NO3
Curve fit :linear a=0.0000337 b=-0.1353985
Corr. coeff. :0.9999



STL North Canton General Chemistry Data Review Checklist

Parameter(s): Chloride

Batch(es): 334526,21/3/5

Method #/SOP#: 325.2 & 92151

Review Items	Level I Review			Level II Review		
	YES	NO	N/A	YES	NO	N/A
A. Initial Calibration						
1. Initial calibration correlation coefficient ≥ 0.995?	✓			✓		
2. Calibration curve consist of the minimum number of calibration standards?	✓			✓		
3. ICV analyzed at immediately after calibration and within control limits ? (TRAACS Nitrate/Nitrite, Cyanide 85-115%; all others 90-110%)	✓			✓		
4. ICB analyzed immediately after ICV and within criteria (± RL)?	✓			✓		
B. Continuing Calibration						
1. CCV analyzed every 10 samples, at end of sequence and within criteria?	✓			✓		
2. CCB analyzed every 10 samples, at end of sequence & within criteria (±RL)?	✓			✓		
C. Sample Results						
1. Were samples with concentrations > the linear range diluted and reanalyzed ?	✓			✓		
2. All reported results bracketed by in control QC ?	✓			✓		
3. Sample analyses done within holding time ?	✓			✓		
D. Quality Control						
1. LCS per prep batch and within QC limits? *(LCSD, where applicable)*	✓			✓		
2. Method blank done per prep batch and < RL. Method blank RL supports the lowest RL reported for the batch?	✓			✓		
3. MS/MSD run at required frequency and evaluated? MS/MSD reported properly and calculated correctly?	✓			✓		
4. Duplicate samples run at required frequency (duplicate sample performed per matrix encountered)?			✓			✓
E. Titrant						
1. Titrant standardized?			✓			✓
2. If no, standardization expires						
F. Other						
1. Are all nonconformances documented appropriately (NCM or narrative)?			✓			✓
2. Calculations checked for error ?	✓			✓		
3. Transcriptions checked for error ?	✓			✓		
4. All client/project specific requirements met ?	✓			✓		
5. Date/time of preparation and analysis verified as correct ?	✓			✓		
6. Units verified as correct?	✓			✓		
7. Dilutions have been properly applied and RL's adjusted appropriately?	✓			✓		
8. SOP followed?	✓			✓		
9. Calculations checked at minimum frequency (at least 20%, 100% for QC)?	✓			✓		
10. All reagent and standard numbers recorded in logbook?	✓			✓		
11. Edits dated and initialed			✓	✓		

Comment on any "NO" response(s):

Level I reviewer: Rebecca Nolan Date: 12-11-03

Level II Reviewer: Angela Durra Date: 12/12/03

Level I review:

Result Report Konelab 5.4.9 Page: 1

STL - NORTH CANTON
LABORATORY

Date : 2003-12-11
Time : 11.40

Test	CL 2				
Unit	mg/l				
Sample ID:	Result	Dilut	Man.dilut	Resp.	Date and Time
CCV - CL	22.865			0.416	2003-12-11 09.46
CCB - CL	0.212			0.014	2003-12-11 09.46
LCS 1	74.710			0.997	2003-12-11 09.46
CCV - CL	22.613			0.413	2003-12-11 09.46
CCB - CL	0.057			0.011	2003-12-11 09.46
CCV - CL	23.047			0.419	2003-12-11 10.13
CCB - CL	0.227			0.014	2003-12-11 10.13
BLK 1	0.525			0.020	2003-12-11 10.13
F52AX	40.098			0.645	2003-12-11 10.13
F54R3	11.268			0.219	2003-12-11 10.13
F54TE	12.787			0.247	2003-12-11 10.13
F54TM	13.853			0.266	2003-12-11 10.13
F54TQ	9.231			0.182	2003-12-11 10.13
F54TV	9.984			0.196	2003-12-11 10.13
F54T0	13.667			0.262	2003-12-11 10.13
F54 0T	18.997			0.354	2003-12-11 10.13
CCV - CL	22.948 ✓			0.418	2003-12-11 10.15
CCB - CL	0.225 ✓			0.014	2003-12-11 10.15
F541H	27.876			0.491	2003-12-11 10.15
F541L	27.929			0.492	2003-12-11 10.15
F5411	21.917			0.402	2003-12-11 10.15
F542C	24.506			0.442	2003-12-11 10.15
F542H	27.121			0.480	2003-12-11 10.15
CCV - CL	22.990 ✓			0.418	2003-12-11 10.21
CCB - CL	0.214 ✓			0.014	2003-12-11 10.21
BLK2	0.554			0.020	2003-12-11 10.21
LCS2	74.180			0.992	2003-12-11 10.21
F546F	15.638			0.297	2003-12-11 10.21
F546K	74.594			0.996	2003-12-11 10.21
F56A2	45.310			0.703	2003-12-11 10.21
CCV - CL	22.756 ✓			0.415	2003-12-11 10.22
CCB - CL	0.140 ✓			0.012	2003-12-11 10.22
F5W9P	9.802			0.193	2003-12-11 10.22
F5W90	7.738			0.155	2003-12-11 10.22
F51DW	1.033			0.029	2003-12-11 10.22
F6D1E	0.560			0.020	2003-12-11 10.22
CCV - CL	22.617 ✓			0.413	2003-12-11 10.23
CCB - CL	0.185 ✓			0.013	2003-12-11 10.23
F5189	438.638	1+19.0		0.402	2003-12-11 10.28
F5460	318.147	1+19.0		0.302	2003-12-11 10.28
F5463	233.890	1+19.0		0.227	2003-12-11 10.28
CCV - CL	22.814 ✓			0.416	2003-12-11 10.33
CCB - CL	-0.013 ✓			0.010	2003-12-11 10.33
F5464	401.032	1+19.0		0.371	2003-12-11 10.35
F5466	374.730	1+19.0		0.350	2003-12-11 10.35
F5468	209.566	1+19.0		0.205	2003-12-11 10.35
F55CF	620.567	1+19.0		0.534	2003-12-11 10.35
F55CK	316.860	1+19.0		0.300	2003-12-11 10.35
F55CP	589.081	1+19.0		0.513	2003-12-11 10.35
F51DR	864.249	1+19.0		0.680	2003-12-11 10.36
F6D1W	178.502	1+19.0		0.177	2003-12-11 10.36
F6D1W MS	206.316	1+19.0		0.202	2003-12-11 10.36
F6D1W MSD	204.418	1+19.0		0.200	2003-12-11 10.36

Result Report Konelab 5.4.9 Page: 2

STL - NORTH CANTON
LABORATORY

Date : 2003-12-11
Time : 11.40

Test CL 2
Unit mg/l

Sample ID:	Result	Dilut	Man.dilut	Resp.	Date and Time
CCV - CL	22.647			0.413	2003-12-11 10.37
CCB - CL	-0.075			0.008	2003-12-11 10.37
CCV - CL	22.824 ✓			0.416	2003-12-11 10.49
CCB - CL	-0.070 ✓			0.009	2003-12-11 10.49
F6DRG	2932.652	1+49.0		0.841	2003-12-11 10.49
CCV - CL	22.562 ✓			0.412	2003-12-11 10.50
CCB - CL	-0.186 ✓			0.006	2003-12-11 10.50
F6G1X	187.318	1+19.0		0.185	2003-12-11 10.51
F6G04	147.464	1+19.0		0.148	2003-12-11 10.51
CCV - CL	22.864			0.416	2003-12-11 10.51
CCB - CL	-0.082			0.008	2003-12-11 10.51
CCV - CL	22.620			0.413	2003-12-11 11.07
CCB - CL	0.073			0.011	2003-12-11 11.07
F540T MS	43.768			0.686	2003-12-11 11.07
F540T MSD	42.788			0.675	2003-12-11 11.07
CCV - CL	22.651			0.413	2003-12-11 11.08
CCB - CL	-0.112			0.008	2003-12-11 11.08
CCV - CL	22.764			0.415	2003-12-11 11.17
CCB - CL	-0.064			0.009	2003-12-11 11.17
CCV - CL	22.689			0.414	2003-12-11 11.26
CCB - CL	-0.069			0.009	2003-12-11 11.26
CCV - CL	22.640			0.413	2003-12-11 11.27
CCB - CL	-0.183			0.006	2003-12-11 11.27
CCV - CL	22.857			0.416	2003-12-11 11.37
CCB - CL	-0.086			0.008	2003-12-11 11.37
F5461 10X	2e+004	1+49.0	1+9.0	0.700	2003-12-11 11.37
CCV - CL	22.758 ✓			0.415	2003-12-11 11.38
CCB - CL	-0.110 ✓			0.008	2003-12-11 11.38

Calibration results Konelab 5.4.9 Page: 1

STL - NORTH CANTON
LABORATORY

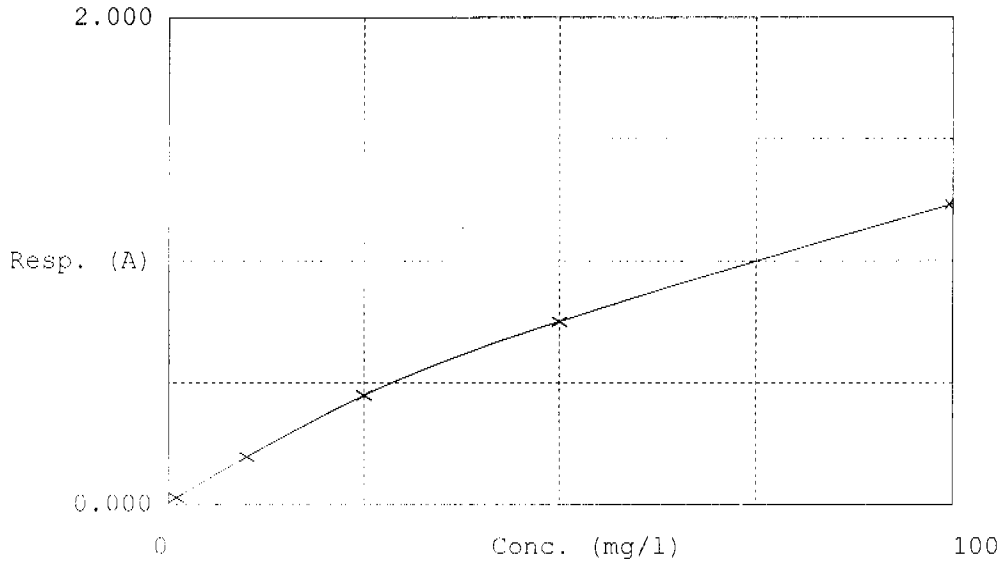
11.12.2003 09:19

Test CL 2

Accepted 12.11.2003 11:08

Corr. coef. 1.000

Errors



	Calibrator	Response	Calc. con.	Conc.	Errors
1	CL-100	0.029	1.0000	1.0000	CL3042 CO1
2	CL-100	0.196	10.0000	10.0000	CL3046 CCV
3	CL-100	0.449	25.0000	25.0000	
4	CL-100	0.752	50.0000	50.0000	
5	CL-100	1.232	100.0000	100.0000	

CL 1,000 ppm
Lot# 2330-03

LCSTN=73.5
Lot#P097506

Test results Konelab 5.4.9 Page: 1

STL - NORTH CANTON
LABORATORY

11.12.2003 11:39

Test: CL 2

Sample Id	Result	Response	Errors
CCV - CL	28.695	0.502	Rule 1 violated
CCB - CL	0.106	0.012	
LCS	77.864	1.027	
CCV - CL	28.143	0.495	Rule 1 violated
CCB - CL	-0.026	0.009	
CCV - CL	22.865	0.416	
CCB - CL	0.212	0.014	
LCS	74.710	0.997	
CCV - CL	22.613	0.413	
CCB - CL	0.057	0.011	
CCV - CL	23.047	0.419	
CCB - CL	0.227	0.014	
BLK	0.525	0.020	
F5189	245.492	2.566	Dil. limit high
F52AX	40.098	0.645	
F54R3	11.268	0.219	
F54TE	12.787	0.247	
F54TM	13.853	0.266	
F54TQ	9.231	0.182	
F54TV	9.984	0.196	
F54T0	13.667	0.262	
F540T	18.997	0.354	
CCV - CL	22.948	0.418	
CCB - CL	0.225	0.014	
F540T MS	49.292	0.745	
F540T MSD	43.947	0.688	
F541H	27.876	0.491	
F541L	27.929	0.492	
F541T	21.917	0.402	
F542C	24.506	0.442	
F542H	27.121	0.480	
F546G	206.629	2.209	Dil. limit high
F5461	1023.193	9.697	Abs. high, Dil. limit high
F5463	182.115	1.985	Dil. limit high
CCV - CL	22.990	0.418	
CCB - CL	0.214	0.014	
F5464	231.155	2.434	Dil. limit high
F5466	221.816	2.349	Dil. limit high
F5468	158.864	1.771	Dil. limit high
BLK2	0.554	0.020	
LCS2	74.180	0.992	
F548E	15.630	0.297	
F548K	74.594	0.996	
F55A2	45.310	0.703	
F55CF	264.193	2.737	Dil. limit high
F55CK	210.599	2.246	Dil. limit high
CCV - CL	22.756	0.415	
CCB - CL	0.140	0.012	
F55CP	265.303	2.747	Dil. limit high
F5W9P	9.802	0.193	
F5W90	7.738	0.155	
F51DR	311.651	3.172	Dil. limit high
F51DW	1.033	0.029	
F6D1E	0.560	0.020	
F6D1W	149.396	1.685	Dil. limit high
F6D1W MS	160.910	1.790	Dil. limit high
F6D1W MSD	160.315	1.785	Dil. limit high

STL - NORTH CANTON
LABORATORY

11.12.2003 11:39

Test: CL 2

Sample Id	Result	Response	Errors
F6D1X	161.603	1.796	Dil. limit high
CCV - CL	22.617	0.413	
CCB - CL	0.185	0.013	
F6DQ4	138.023	1.580	Dil. limit high
F6DRG	454.863	4.486	Dil. limit high
F5189	438.638	0.402	
F546G	318.147	0.302	
F5463	233.890	0.227	
CCV - CL	22.814	0.416	
CCB - CL	-0.013	0.010	
F5464	401.032	0.371	
F5466	374.730	0.350	
FL466	209.566	0.205	
F55CF	620.567	0.534	
F55CK	316.860	0.300	
F55CP	589.081	0.513	
F51DR	864.249	0.680	
F6D1W	178.502	0.177	
F6D1W MS	206.316	0.202	
F6D1W MSD	204.418	0.200	
F6D1X	204.025	0.200	
F6DQ4	155.726	0.156	
F6DRG	2523.064	1.471	Test limit high
CCV - CL	22.647	0.413	
CCB - CL	-0.075	0.008	
CCV - CL	22.824	0.416	
CCB - CL	-0.070	0.009	
F5461	17191.953	1.891	Test limit high
F6DRG	2932.652	0.841	
CCV - CL	22.562	0.412	
CCB - CL	-0.186	0.006	
F6D1X	187.318	0.185	
F6DQ4	147.954	0.148	
CCV - CL	22.864	0.416	
CCB - CL	-0.082	0.008	
CCV - CL	22.620	0.413	
CCB - CL	0.073	0.011	
F540T MS	43.768	0.686	
F540T MSD	42.788	0.675	
F5461 10X	419.594	4.162	Dil. limit high
CCV - CL	22.651	0.413	
CCB - CL	-0.112	0.008	
F5461 10X	2139.210	1.295	Test limit high
CCV - CL	22.764	0.415	
CCB - CL	-0.064	0.009	
CCV - CL	22.689	0.414	
CCB - CL	-0.069	0.009	
F5461 10X	21272.197	1.290	Test limit high
CCV - CL	22.640	0.413	
CCB - CL	-0.183	0.006	
CCV - CL	22.857	0.416	
CCB - CL	-0.086	0.008	
F5461 10X	22512.805	0.700	
CCV - CL	22.758	0.415	
CCB - CL	-0.110	0.008	

STL - NORTH CANTON
LABORATORY

11.12.2003 11:39

Test: CL 2

Sample Id	Result	Response
N	70	
Mean	1143.002	
SD	4148.7432	
CV%	362.97	
Mean response	1.097	
Response SD	1.4405	
Response CV%	131.37	

STL North Canton General Chemistry Data Review Checklist

Parameter(s): Sulfate

Batch(es): 3345461/3

Method #/SOP#: Turb. 9038 & Turb. 375.4

Review Items	Level I Review			Level II Review		
A. Initial Calibration	YES	NO	N/A	YES	NO	N/A
1. Initial calibration correlation coefficient ≥ 0.995?	✓			✓		
2. Calibration curve consist of the minimum number of calibration standards?	✓			✓		
3. ICV analyzed at immediately after calibration and within control limits ? (TRAACS Nitrate/Nitrite, Cyanide 85-115%; all others 90-110%)	✓			✓		
4. ICB analyzed immediately after ICV and within criteria (± RL)?	✓			✓		
B. Continuing Calibration						
1. CCV analyzed every 10 samples, at end of sequence and within criteria?	✓			✓		
2. CCB analyzed every 10 samples, at end of sequence & within criteria (±RL)?	✓			✓		
C. Sample Results						
1. Were samples with concentrations > the linear range diluted and reanalyzed ?	✓			✓		
2. All reported results bracketed by in control QC ?	✓			✓		
3. Sample analyses done within holding time ?	✓			✓		
D. Quality Control						
1. LCS per prep batch and within QC limits ? *(LCSD, where applicable)*	✓			✓		
2. Method blank done per prep batch and < RL. Method blank RL supports the lowest RL reported for the batch?	✓			✓		
3. MS/MSD run at required frequency and evaluated? MS/MSD reported properly and calculated correctly?	✓			✓		
4. Duplicate samples run at required frequency (duplicate sample performed per matrix encountered)?			✓			✓
E. Titrant						
1. Titrant standardized?			✓			✓
2. If no, standardization expires						
F. Other						
1. Are all nonconformances documented appropriately (NCM or narrative)?			✓			✓
2. Calculations checked for error ?	✓			✓		
3. Transcriptions checked for error ?	✓			✓		
4. All client/project specific requirements met ?	✓			✓		
5. Date/time of preparation and analysis verified as correct ?	✓			✓		
6. Units verified as correct?	✓			✓		
7. Dilutions have been properly applied and RL's adjusted appropriately?	✓			✓		
8. SOP followed?	✓			✓		
9. Calculations checked at minimum frequency (at least 20%, 100% for QC)?	✓			✓		
10. All reagent and standard numbers recorded in logbook?	✓			✓		
11. Edits dated and initialed			✓	✓		

Comment on any "NO" response(s):

Level I reviewer: Rebecca Nolan Date: 12-11-03

Level II Reviewer: Angela Sirra Date: 12/12/03

Level I review:

Result Report Konelab 5.4.9 Page: 1

STL - NORTH CANTON
LABORATORY

Date : 2003-12-11
Time : 15.05

Test SULFATE
Unit mg/l

Sample ID:	Result	Dilut	Man.dilut	Resp.	Date and Time
CCV - SO4	25.651			0.200	2003-12-11 12.54
CCB - SO4	-1.288			0.004	2003-12-11 12.54
F6D1E	-1.283			0.004	2003-12-11 12.54
F6D1W	-1.288			0.004	2003-12-11 12.54
F6D1X	27.142			0.210	2003-12-11 12.54
F6DQ4	13.060			0.105	2003-12-11 12.54
F6DRG	4.891			0.050	2003-12-11 12.54
BLK	-1.291			0.004	2003-12-11 12.54
CCV - SO4	24.817			0.194	2003-12-11 13.00
CCB - SO4	-1.352			0.003	2003-12-11 13.00
F6C1L	1.050			0.022	2003-12-11 13.00
F6C2R	31.688			0.240	2003-12-11 13.00
CCV - SO4	24.862			0.195	2003-12-11 13.04
CCB - SO4	-1.348			0.003	2003-12-11 13.04
LCSS04 *	31.081			0.236	2003-12-11 13.04
F52AX *	36.279	1+4.0		0.067	2003-12-11 13.07
F54R3 *	79.922	1+4.0		0.127	2003-12-11 13.07
CCV - SO4	25.475			0.199	2003-12-11 13.24
CCB - SO4	-1.394			0.003	2003-12-11 13.24
F54TE	68.345	1+4.0		0.109	2003-12-11 13.27
F54TE MS	92.308	1+4.0		0.147	2003-12-11 13.27
F54TE MSD	91.864	1+4.0		0.146	2003-12-11 13.27
F54TM	37.806	1+4.0		0.069	2003-12-11 13.27
F54TQ	122.308	1+4.0		0.192	2003-12-11 13.27
F54TV	74.771	1+4.0		0.119	2003-12-11 13.27
F54T0	50.186	1+4.0		0.085	2003-12-11 13.36
F6C2W	81.590	1+4.0		0.129	2003-12-11 13.36
CCV - SO4	24.852			0.195	2003-12-11 13.40
CCB - SO4	-1.445			0.002	2003-12-11 13.40
CCV - SO4	25.079			0.196	2003-12-11 13.53
CCB - SO4	-1.420			0.003	2003-12-11 13.53
F6C3D	245.062	1+9.0		0.192	2003-12-11 13.57
CCV - SO4	25.885			0.201	2003-12-11 13.59
CCB - SO4	-0.831			0.007	2003-12-11 13.59
F[illegible] *	790.366	1+24.0		0.239	2003-12-11 14.16
CCV - SO4	25.955			0.202	2003-12-11 14.38
CCB - SO4	-0.841			0.007	2003-12-11 14.38

Calibration results Konelab 5.4.9 Page: 1

STL - NORTH CANTON
LABORATORY

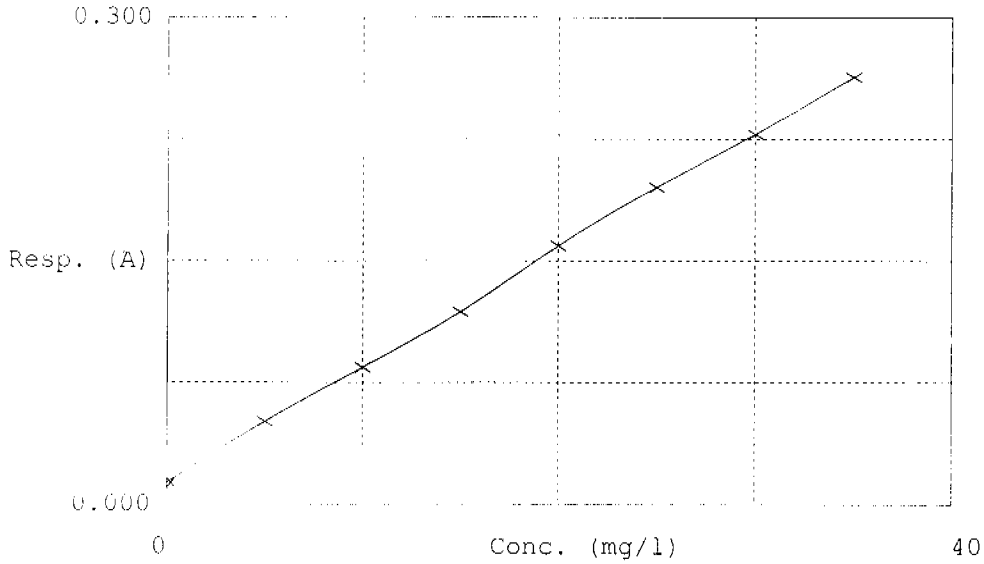
11.12.2003 12:46

Test SULFATE

Accepted 13.11.2003 10:10

Coeff. of det. 1.000

Errors



	Calibrator	Response	Calc. con.	Conc.	Errors
1	SO4-0	0.014	0.0000	0.0000	
2	SO4-1	0.051	5.0000	5.0000	
3	SO4-2	0.085	10.0000	10.0000	
4	SO4-3	0.119	15.0000	15.0000	
5	SO4-4	0.159	20.0000	20.0000	
6	SO4-5	0.196	25.0000	25.0000	
7	SO4-6	0.228	30.0000	30.0000	
8	SO4-7	0.263	35.0000	35.0000	

SU3098 Cal
SU 3100 CCV

SO4 1,000ppm lo# 2175-10

LCSTV = 32.2
Lot# P097506

Test results Konelab 5.4.9 Page: 1

STL - NORTH CANTON
LABORATORY

11.12.2003 15:05

Test: SULFATE

Sample Id	Result	Response	Errors
CCV - SO4	25.651	0.200	
CCB - SO4	-1.288	0.004	
F6C3D	109.502	0.796	Dil. limit high
F6D1E	-1.283	0.004	
F6D1W	-1.288	0.004	
F6D1X	27.142	0.210	
F6DQ4	13.060	0.105	
F6DRG	4.891	0.050	
BLK	-1.291	0.004	
F5189	206.696	1.490	Dil. limit high, Test limit high
F52AX	39.072	0.292	Dil. limit high
F54R3	55.544	0.410	Dil. limit high
CCV - SO4	24.817	0.194	
CCB - SO4	-1.352	0.003	
F54TE	49.928	0.370	Dil. limit high
F54TE MS	59.149	0.436	Dil. limit high
F54TE MSD	58.677	0.432	Dil. limit high
F54TM	37.663	0.282	Dil. limit high
F54TQ	70.774	0.519	Dil. limit high
F54TV	52.484	0.388	Dil. limit high
F54T0	43.571	0.325	Dil. limit high
F6C15	1.050	0.022	
F6C2R	31.688	0.240	
F6C2W	56.448	0.417	Dil. limit high
CCV - SO4	24.862	0.195	
CCB - SO4	-1.348	0.003	
LCSSO4	31.081	0.236	
F6C3D	202.213	0.302	Test limit high
F52AX	36.279	0.067	
F54R3	79.922	0.127	
CCV - SO4	25.475	0.199	
CCB - SO4	-1.394	0.003	
F54TE	68.345	0.109	
F54TE MS	92.308	0.147	
F54TE MSD	91.864	0.146	
F54TM	37.806	0.069	
F54TQ	122.308	0.192	
F54TV	74.771	0.119	
F54T0	50.186	0.085	
F6C2W	81.590	0.129	
CCV - SO4	24.852	0.195	
CCB - SO4	-1.445	0.002	
CCV - SO4	25.079	0.196	
CCB - SO4	-1.420	0.003	
F5189	726.620	0.273	Test limit high
F6C3D	245.062	0.192	
CCV - SO4	25.885	0.201	
CCB - SO4	-0.831	0.007	
F5189	790.366	0.239	
CCV - SO4	25.955	0.202	
CCB - SO4	-0.841	0.007	

STL - NORTH CANTON
LABORATORY

11.12.2003 15:05

Test: SULFATE

Sample Id	Result	Response
N	35	
Mean	104.120	
SD	173.2553	
CV%	166.40	
Mean response	0.264	
Response SD	0.2740	
Response CV%	103.98	

Test results Konelab 5.4.9 Page: 1

STL - NORTH CANTON
LABORATORY

11.12.2003 14:06

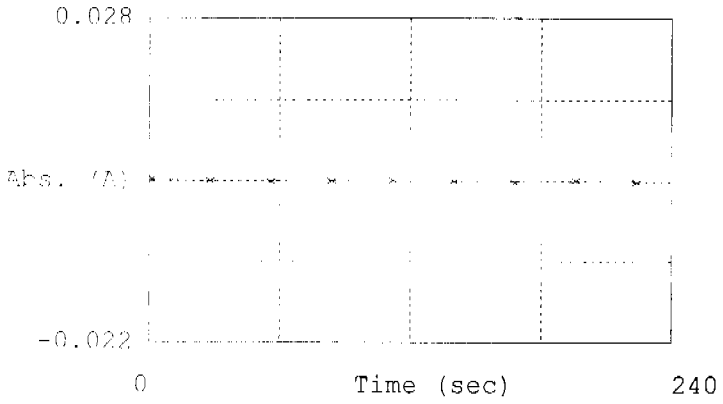
Test S04-KIN

Sample Id BLK

calc 11.12.2003 13:17

Result	Dil.ratio	Rejected	Limit exceeded	Meas.	Limit
-0.0	0.0		Blank init abs. low	-0.0001308	0

Response (A/min)	-0.000
Blank response (A)	-0.000



Main absorbances

0.003
0.003
0.003
0.003
0.003
0.003
0.003
0.003
0.003

Points used 9/9

Test results Konelab 5.4.9 Page: 1

STL - NORTH CANTON
LABORATORY

11.12.2003 14:08

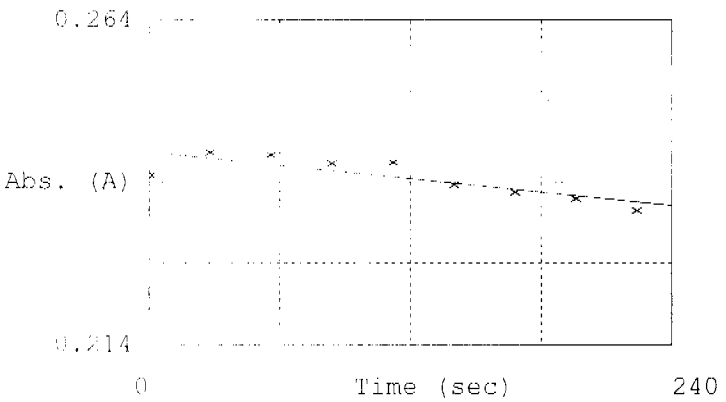
Test S04-KIN

Sample Id LCSS04

calc 11.12.2003 13:38

Result	Dil.ratio	Rejected	Limit exceeded	Meas.	Limit
-0.0	0.0		Blank init abs. low	-0.0003934	0

Response (A/min)	-0.002
Blank response (A)	-0.000



Main absorbances

0.240
0.244
0.243
0.242
0.242
0.239
0.237
0.236
0.235 ✓

Points used 9/9

Test results Konelab 5.4.9 Page: 1

STL - NORTH CANTON
LABORATORY

11.12.2003 14:22

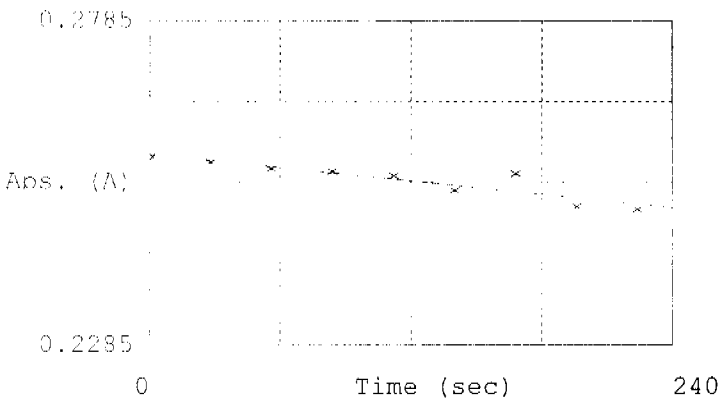
Test S04-KIN

Cuvette no. [illegible]

calc 11.12.2003 14:21

Result	Dil.ratio	Rejected	Limit exceeded	Meas.	Limit
-0.4	0.0	Man.			
-0.5	24.0				

Response (A/min)	-0.002
Blank response (A)	0.019



Main absorbances

0.257
0.257
0.256
0.255
0.254
0.252
0.255
0.250
0.249 ✓

Points used 9/9

Test results Konelab 5.4.9 Page: 1

STL - NORTH CANTON
LABORATORY

11.12.2003 14:23

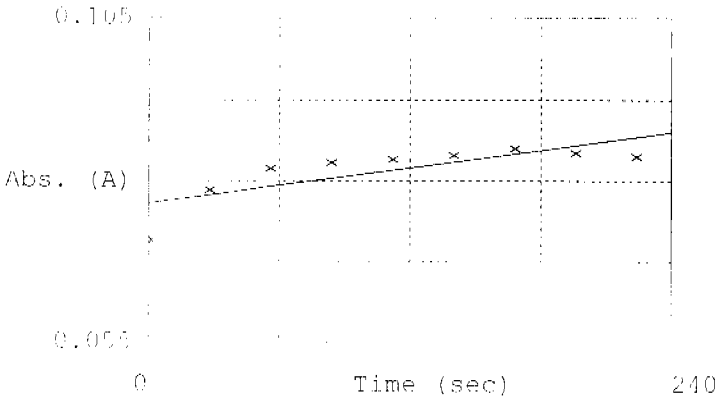
Test S04-KIN

Sample ID 550AY

calc 11.12.2003 14:21

Result	Dil.ratio	Rejected	Limit exceeded	Meas.	Limit
-0.0	0.0	Man.	Point(s) out of curve		
0.1	4.0				

Response (A/min)	0.003
Blank response (A)	0.019



Main absorbances

0.071
0.079
0.082
0.083
0.083
0.084
0.085
0.084
0.084

Points used 9/9

Sample results Konelab 5.4.9 Page: 1

STL - NORTH CANTON
LABORATORY

11.12.2003 14:24

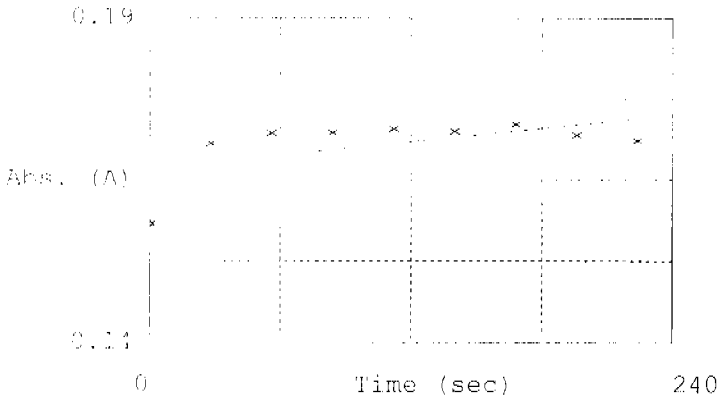
Test S04-KIN

Sample Id F54R3

calc 11.12.2003 14:21

Result	Dil.ratio	Rejected	Limit exceeded	Meas.	Limit
-0.1	0.0	Man.	Point(s) out of curve		
0.1	4.0				

Response (A/min)	0.002
Blank response (A)	0.049



Main absorbances

0.158
0.171
0.172
0.172
0.173
0.173
0.174
0.172
0.171

Points used 9/9

Test results Konelab 5.4.9 Page: 1

STL - NORTH CANTON
LABORATORY

11.12.2003 14:26

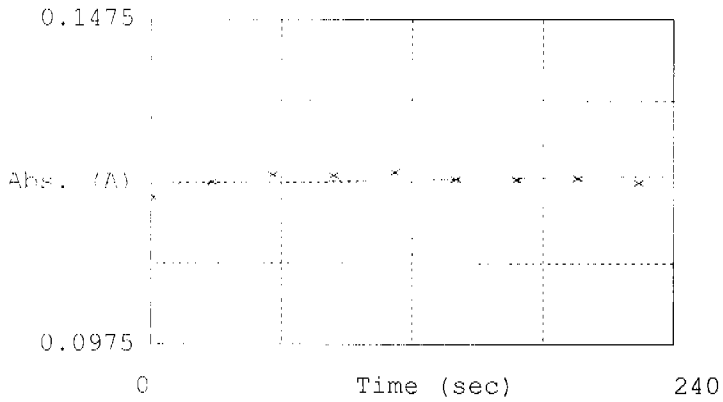
Test S04-KIN

Sample Id F54TE

calc 11.12.2003 14:25

Result	Dil.ratio	Rejected	Limit exceeded	Meas.	Limit
[illegible]	[illegible]	Man.			
0.0	4.0				

Response (A/min)	0.000
Blank response (A)	0.011



Main absorbances

0.120
0.123
0.124
0.124
0.124
0.123
0.123
0.123
0.122

Points used 9/9

Test results Konelab 5.4.9 Page: 1

STL - NORTH CANTON
LABORATORY

11.12.2003 14:27

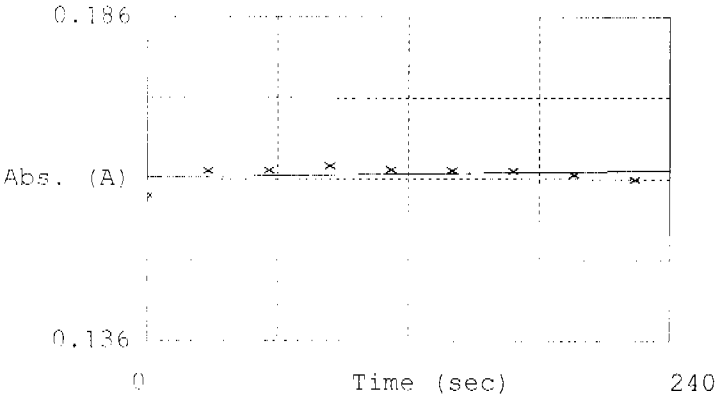
Test S04-KIN

Sample Id F54TE MS

calc 11.12.2003 14:25

Result	Dil.ratio	Rejected	Limit exceeded	Meas.	Limit
-0.1	0.0	Man.			
0.0	4.0				

Response (A/min)	0.000
Blank response (A)	0.012



Main absorbances

0.158
0.162
0.162
0.163
0.162
0.162
0.162
0.162
0.161

Points used 9/9

Test results Konelab 5.4.9 Page: 1

STL - NORTH CANTON
LABORATORY

11.12.2003 14:31

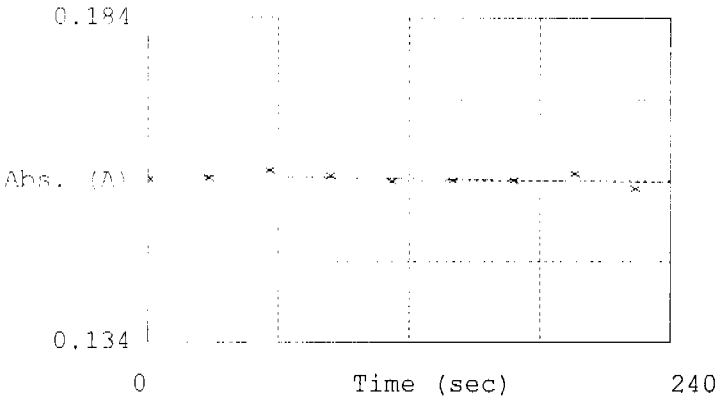
Test S04-KTN

Sample Id F54TE MSD

calc 11.12.2003 14:30

Result	Dil.ratio	Rejected	Limit exceeded	Meas.	Limit
-0.1	0.0	Man.			
-0.0	4.0				

Response (A/min)	-0.000
Blank response (A)	0.011



Main absorbances

0.159
0.160
0.161
0.160
0.159
0.159
0.159
0.160
0.158

Points used 9/9

Test results Konelab 5.4.9 Page: 1

STL - NORTH CANTON
LABORATORY

11.12.2003 14:32

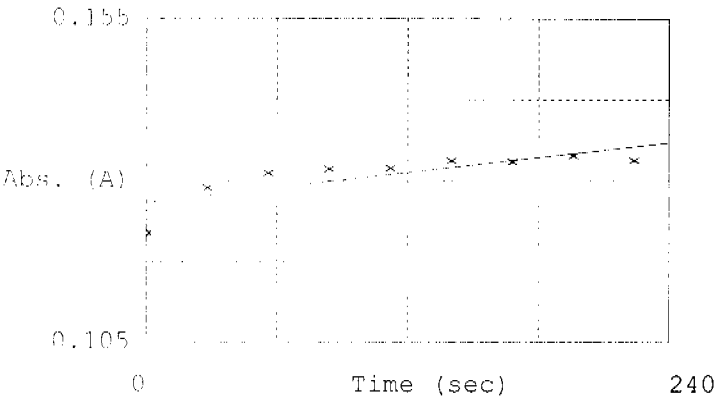
Test S04-KIN

Sample Id F54TM

calc 11.12.2003 14:30

Result	Dil.ratio	Rejected	Limit exceeded	Meas.	Limit
-0.0	0.0	Man.	Point(s) out of curve		
0.1	4.0				

Response (A/min)	0.002
Blank response (A)	0.061



Main absorbances

0.122
0.129
0.131
0.132
0.132
0.133
0.133
0.134
0.133

rerun @ 2X

Points used 9/9

Test results Konelab 5.4.9 Page: 1

STL - NORTH CANTON
LABORATORY

11.12.2003 14:32

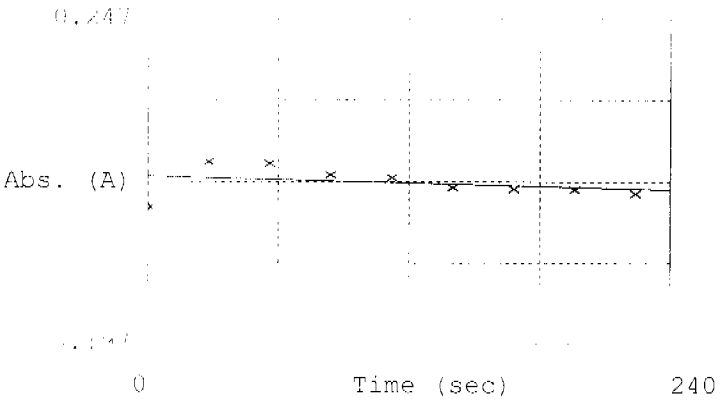
Test S04-KIN

Sample Id F54TQ

calc 11.12.2003 14:30

Result	Dil.ratio	Rejected	Limit exceeded	Meas.	Limit
-0.1	0.0	Man.	Point(s) out of curve		
-0.0	4.0				

Response (A/min)	-0.001
Blank response (A)	0.029



Main absorbances

0.218
0.225
0.225
0.223
0.223
0.221
0.221
0.221
0.220 ✓

Points used 9/9

Test results Konelab 5.4.9 Page: 1

STL - NORTH CANTON
LABORATORY

11.12.2003 14:38

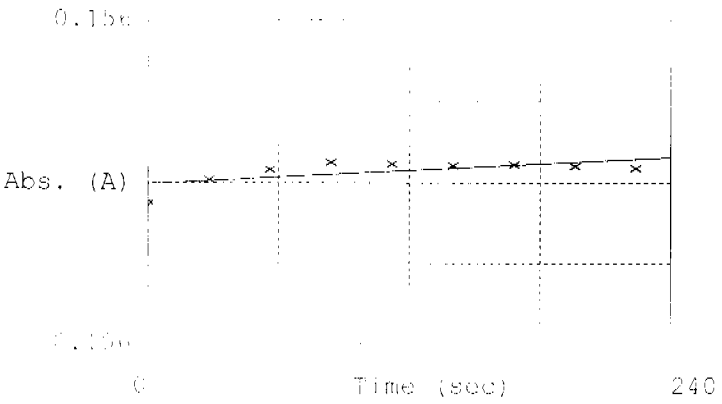
Test S04-KIN

Sample Id F54TV

calc 11.12.2003 14:34

Result	Dil.ratio	Rejected	Limit exceeded	Meas.	Limit
-0.0	0.0	Man.			
[illegible]	4.0				

Response (A/min)	0.001
Blank response (A)	0.016



Main absorbances

0.128
0.132
0.133
0.134
0.134
0.134
0.134
0.134
0.133

Points used 9/9

Test results Konelab 5.4.9 Page: 1

STL - NORTH CANTON
LABORATORY

11.12.2003 14:28

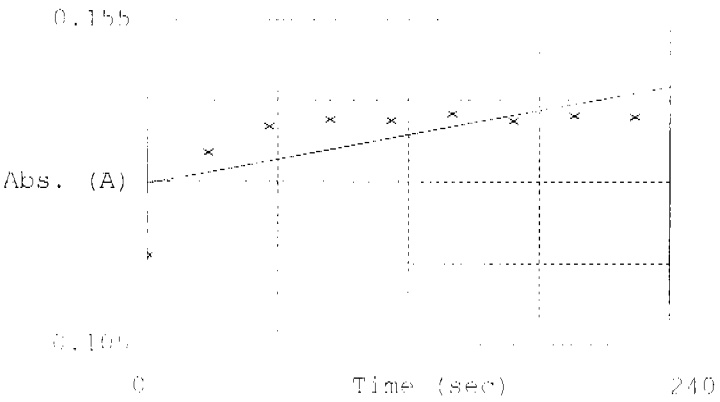
Test S04-KIN

Sample Id F54T0

calc 11.12.2003 14:25

Result	Dil.ratio	Rejected	Limit exceeded	Meas.	Limit
-0.0	0.0	Man.	Point(s) out of curve		
0.2	4.0				

Response (A/min)	0.004
Blank response (A)	0.052



Main absorbances

0.119
0.135
0.138
0.140
0.139
0.140
0.139
0.140
0.140

Points used 9/9

Test results Konelab 5.4.9 Page: 1

STL - NORTH CANTON
LABORATORY

11.12.2003 14:07

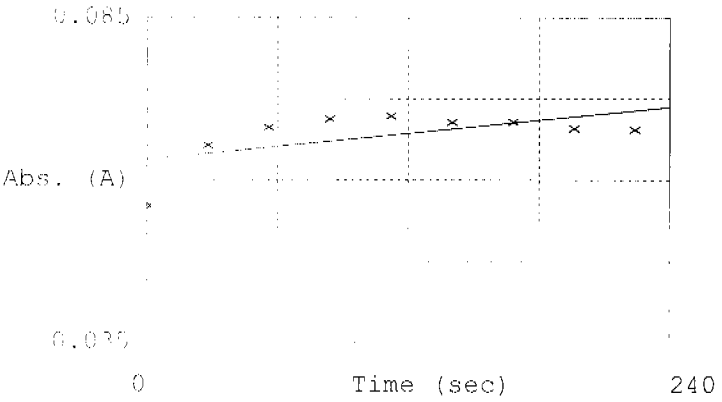
Test S04-KIN

Sample ID F6C15

calc 11.12.2003 13:34

Result	Dil.ratio	Rejected	Limit exceeded	Meas.	Limit
0.0	0.0		Point(s) out of curve		

Response (A/min)	0.002
Blank response (A)	0.046



Main absorbances

0.056
0.065
0.068
0.069
0.070
0.069
0.069
0.068
0.068

Points used 9/9

Test results Konelab 5.4.9 Page: 1

STL - NORTH CANTON
LABORATORY

11.12.2003 14:07

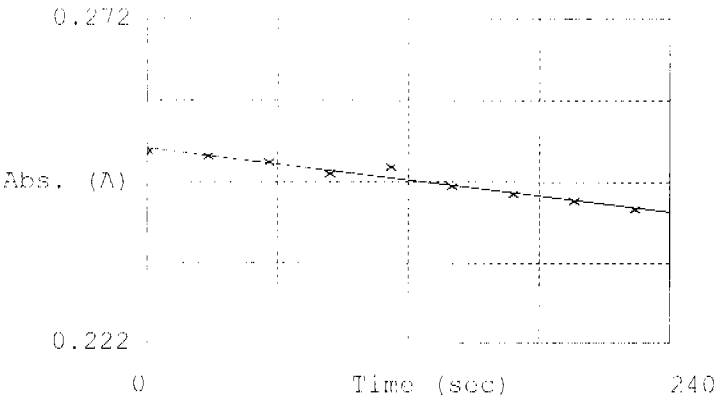
Test SO4-KIN

Sample Id F6C2R

calc 11.12.2003 13:38

Result	Dil.ratio	Rejected	Limit exceeded	Meas.	Limit
-0.0	0.0				

Response (A/min)	-0.002
Blank response (A)	0.004



Main absorbances

0.252
0.251
0.250
0.248
0.249
0.246
0.245
0.244
0.243

Points used 9/9

Test results Konelab 5.4.9 Page: 1

STL - NORTH CANTON
LABORATORY

11.12.2003 14:39

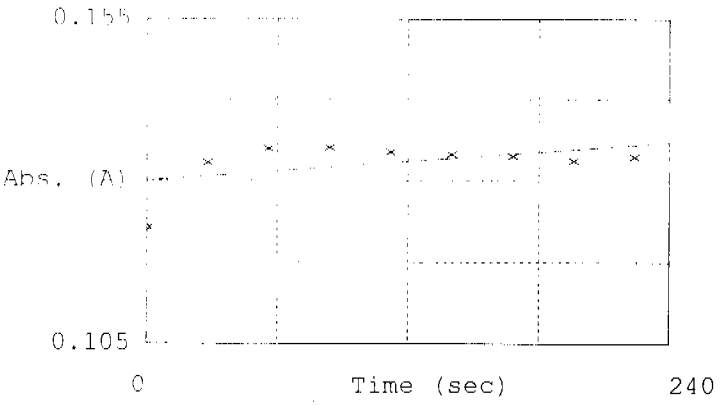
Test S04-KIN

Sample Id F6C2W

calc 11.12.2003 14:34

Result	Dil.ratio	Rejected	Limit exceeded	Meas.	Limit
-0.1	0.0	Man.	Point(s) out of curve		
0.1	4.0				

Response (A/min)	0.001
Blank response (A)	0.001



Main absorbances

0.123
0.133
0.135
0.135
0.134
0.134
0.134
0.133
0.134

Points used 9/9

Test results Konelab 5.4.9 Page: 1

STL - NORTH CANTON
LABORATORY

11.12.2003 14:38

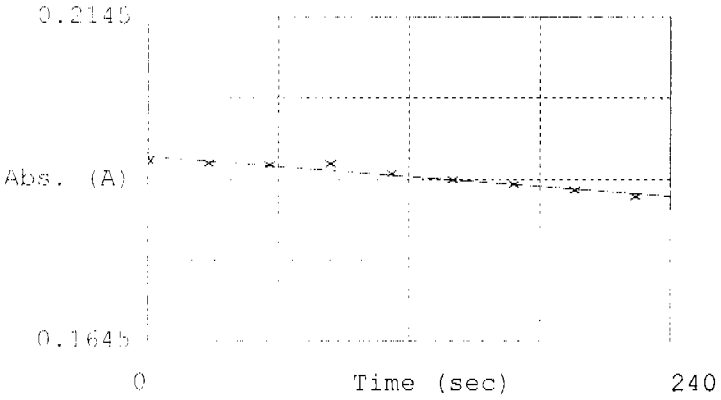
Test S04-KTN

Sample id F6C3D

calc 11.12.2003 14:34

Result	Dil.ratio	Rejected	Limit exceeded	Meas.	Limit
-0.2	0.0	Man.			
-0.2	9.0				

Response (A/min)	-0.002
Blank response (A)	0.003



Main absorbances

0.192
0.192
0.192
0.192
0.190
0.189
0.189
0.188
0.187

Points used 9/9

Test results Konelab 5.4.9 Page: 1

STL - NORTH CANTON
LABORATORY

11.12.2003 14:04

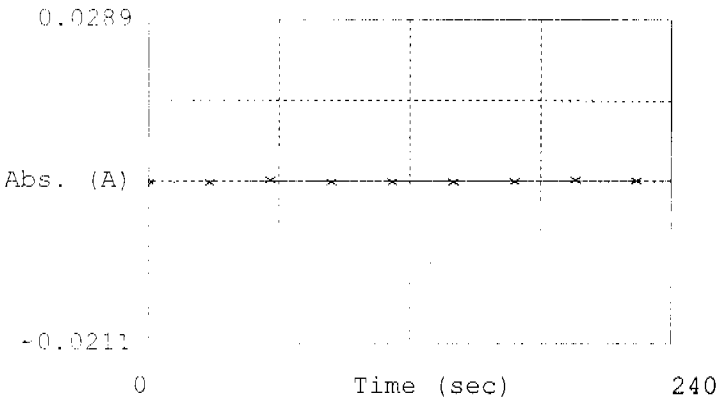
Test S04-KTN

Sample Id F6D1E

calc 11.12.2003 13:09

Result	Dil.ratio	Rejected	Limit exceeded	Meas.	Limit
0.0	0.0		Blank init abs. low	-0.0001667	0

Response (A/min)	0.000
Blank response (A)	-0.000



Main absorbances

0.004
0.004
0.004
0.004
0.004
0.004
0.004
0.004
0.004

Points used 9/9

Test results | Konelab 5.4.9 | Page: 1

STL - NORTH CANTON
LABORATORY

11.12.2003 14:04

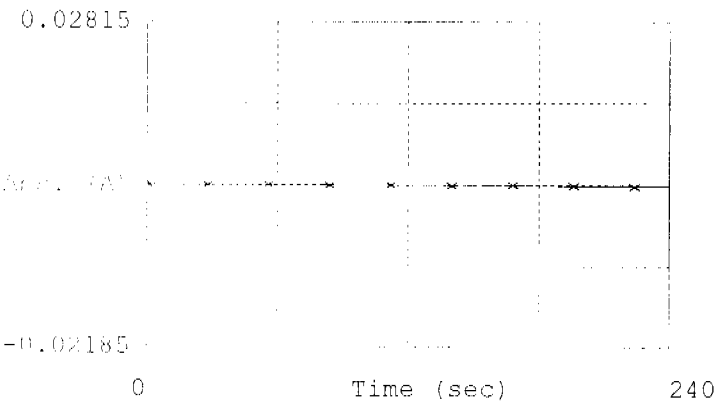
Test JAA-NIN

Sample Id F6D1W

calc 11.12.2003 13:09

Result	Dil.ratio	Rejected	Limit exceeded	Meas.	Limit
-0.0	0.0		Blank init abs. low	-1.929e-0050	

Response (A/min)	-0.000
Blank response (A)	-0.000



Main absorbances

0.003
0.003
0.003
0.003
0.003
0.003
0.003
0.003
0.003

Points used 9/9

Test results | Konelab 5.4.9 | Page: 1

STL - NORTH CANTON
LABORATORY

11.12.2003 14:05

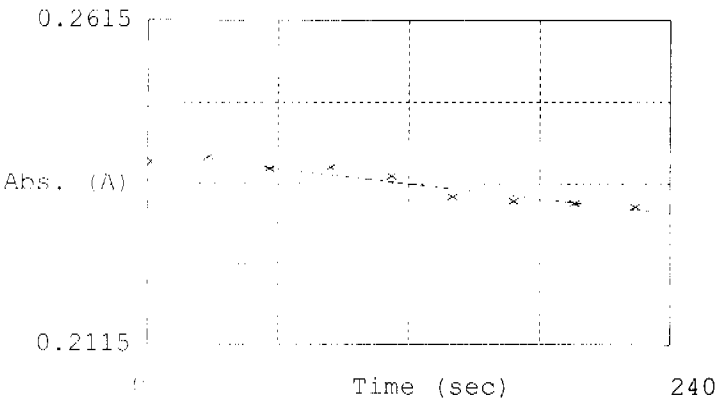
Test SO4-KTN

Sample Id F6D1X

calc 11.12.2003 13:13

Result	Dil.ratio	Rejected	Limit exceeded	Meas.	Limit
-0.0	0.0				

Response (A/min)	-0.002
Blank response (A)	0.029



Main absorbances

0.240
0.241
0.239
0.239
0.238
0.234
0.234
0.233
0.233

points used 9/9

Test results Konelab 5.4.9 Page: 1

STL - NORTH CANTON
LABORATORY

11.12.2003 14:05

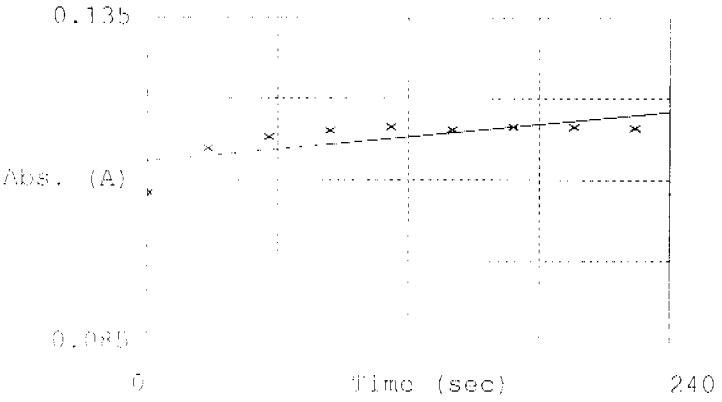
Test S04-KIN

Sample Id F6DQ4

calc 11.12.2003 13:13

Result	Dil.ratio	Rejected	Limit exceeded	Meas.	Limit
0.0	0.0		Point(s) out of curve		

Response (A/min)	0.002
Blank response (A)	0.014



Main absorbances

0.108
0.115
0.117
0.118
0.118
0.118
0.118
0.118
0.118

Points used 9/9

Test results Konelab 5.4.9 Page: 1

STL - NORTH CANTON
LABORATORY

11.12.2003 14:06

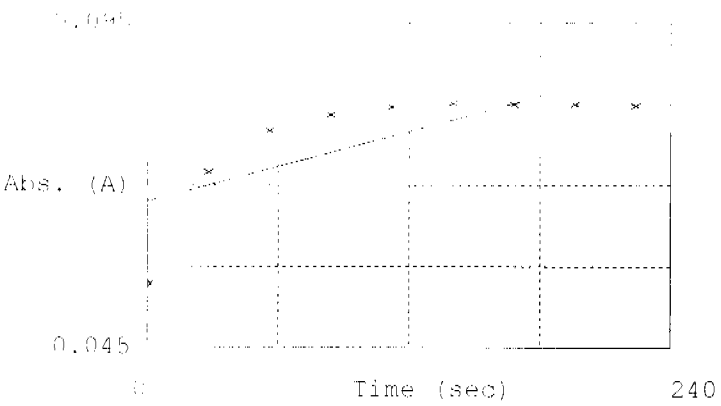
Test S04-KIN

Sample Id F6DRG

calc 11.12.2003 13:13

Result	Dil.ratio	Rejected	Limit exceeded	Meas.	Limit
0.1	0.0		Point(s) out of curve		

Response (A/min)	0.005
Blank response (A)	0.033



Main absorbances

0.055
0.072
0.078
0.081
0.082
0.083
0.082
0.082
0.082

Points used 9/9

STL North Canton General Chemistry Data Review Checklist

Parameter(s): TDS

Batch(es): 3345541

Method #/SOP#: 160.1

Review Items	Level I Review			Level II Review		
A. Initial Calibration	YES	NO	N/A	YES	NO	N/A
1. Initial calibration correlation coefficient ≥ 0.995?			✓			✓
2. Calibration curve consist of the minimum number of calibration standards?			✓			✓
3. ICV analyzed at immediately after calibration and within control limits ? (TRAACS Nitrate/Nitrite, Cyanide 85-115%; all others 90-110%)			✓			✓
4. ICB analyzed immediately after ICV and within criteria (± RL)?			✓			✓
B. Continuing Calibration						
1. CCV analyzed every 10 samples, at end of sequence and within criteria?			✓			✓
2. CCB analyzed every 10 samples, at end of sequence & within criteria (±RL)?			✓			✓
C. Sample Results						
1. Were samples with concentrations > the linear range diluted and reanalyzed ?			✓	✓		
2. All reported results bracketed by in control QC ?	✓			✓		
3. Sample analyses done within holding time ?	✓			✓		
D. Quality Control						
1. LCS per prep batch and within QC limits ? *(LCSD, where applicable)*	✓			✓		
2. Method blank done per prep batch and < RL. Method blank RL supports the lowest RL reported for the batch?	✓			✓		
3. MS/MSD run at required frequency and evaluated? MS/MSD reported properly and calculated correctly?			✓			✓
4. Duplicate samples run at required frequency (duplicate sample performed per matrix encountered)?	✓			✓		
E. Titrant						
1. Titrant standardized?			✓			✓
2. If no, standardization expires						
F. Other						
1. Are all nonconformances documented appropriately (NCM or narrative)?			✓			✓
2. Calculations checked for error ?	✓			✓		
3. Transcriptions checked for error ?	✓			✓		
4. All client/project specific requirements met ?	✓			✓		
5. Date/time of preparation and analysis verified as correct ?	✓			✓		
6. Units verified as correct?	✓			✓		
7. Dilutions have been properly applied and RL's adjusted appropriately?			✓	✓		
8. SOP followed?	✓			✓		
9. Calculations checked at minimum frequency (at least 20%, 100% for QC)?			✓	✓		
10. All reagent and standard numbers recorded in logbook?			✓	✓		
11. Edits dated and initialed			✓	✓		

Comment on any "NO" response(s):

Level I reviewer: Bruce Woodward **Date:** 12/15/03

Level II Reviewer: Angela Serra **Date:** 12/16/03

Level I review:

STL
North Canton, OH
TDS/TSS Logsheet

Analysis:	TDS				
Prep Date:	12/11/03	wt 2. date:	12/12/03	Batch:	3345541
Time in:	16:30	Time out:	3:30		
Temp in:	0:00	Temp out:	175 C	LCS No.	P097506
				LCS Prep:	12/11/03
wt 1. date:	12/12/03	wt 3. date:	12/12/03		
Time out:	11:30	Time out:	9:00 PM	Analyst:	RN
Temp out:	174 C	Temp out:	175 C		TV=276

Sample No.	Tare wt (g)	Sample (ml)	wt 1. (g)	wt 2. (g)	wt 3. (g)	Final wt (g)	diff (g)	Result mg/L	Conductivity Screen
BLK	70.7982	100	70.7979	70.7978		70.7978	-0.0004	-4	NA
LCS	67.4949	100	67.5212	67.5211		67.5211	0.0262	262	NA
F6DWG	67.2913	100	67.3312	67.3310		67.3310	0.0397	397 ✓	670
F6CPD	67.8689	100	67.9389	67.9385		67.9385	0.0696	696 ✓	1250
F6CQM	67.1661	100	67.2761	67.2757		67.2757	0.1096	1096 ✓	2000
F6CQM X	66.2969	100	66.4067	66.4065		66.4065	0.1096	1096 ✓	2000
F6CQ4	67.3986	100	67.4870	67.4866		67.4866	0.088	880 ✓	1650
F6CRF	69.4572	100	69.5183	69.5179		69.5179	0.0607	607 ✓	1160
F6DQ4	67.3292	100	67.3991	67.3989		67.3989	0.0697	697 ✓	1310
F6DRG	67.2204	20	67.3021	67.2981	67.2984	67.2981	0.0777	3885 ✓	8300

94.92%

STL North Canton General Chemistry Data Review Checklist

Parameter(s): NO2/NO3 / NO3 Traacs

Batch(es): 33544553 / 5 / 6

Method #/SOP#:

Review Items	Level I Review			Level II Review		
A. Initial Calibration	YES	NO	N/A	YES	NO	N/A
1. Initial calibration correlation coefficient ≥ 0.995?	✓			✓		
2. Calibration curve consist of the minimum number of calibration standards?				✓		
3. ICV analyzed at immediately after calibration and within control limits ? (TRAACS Nitrate/Nitrite, Cyanide 85-115%; all others 90-110%)				✓		
4. ICB analyzed immediately after ICV and within criteria (± RL)?				✓		
B. Continuing Calibration						
1. CCV analyzed every 10 samples, at end of sequence and within criteria?	✓					
2. CCB analyzed every 10 samples, at end of sequence & within criteria (±RL)?	✓			✓		
C. Sample Results						
1. Were samples with concentrations > the linear range diluted and reanalyzed ?	✓			✓		
2. All reported results bracketed by in control QC ?	✓			✓		
3. Sample analyses done within holding time ?	✓			✓		
D. Quality Control						
1. LCS per prep batch and within QC limits ? *(LCSD, where applicable)*	✓			✓		
2. Method blank done per prep batch and < RL. Method blank RL supports the lowest RL reported for the batch?	✓			✓		
3. MS/MSD run at required frequency and evaluated? MS/MSD reported properly and calculated correctly?	✓			✓		
4. Duplicate samples run at required frequency (duplicate sample performed per matrix encountered)?			✓			✓
E. Titrant						
1. Titrant standardized?			✓			✓
2. If no, standardization expires						
F. Other						
1. Are all nonconformances documented appropriately (NCM or narrative)?			✓			✓
2. Calculations checked for error ?	✓			✓		
3. Transcriptions checked for error ?				✓		
4. All client/project specific requirements met ?				✓		
5. Date/time of preparation and analysis verified as correct ?				✓		
6. Units verified as correct?				✓		
7. Dilutions have been properly applied and RL's adjusted appropriately?				✓		
8. SOP followed?				✓		
9. Calculations checked at minimum frequency (at least 20%, 100% for QC)?			✓	✓		
10. All reagent and standard numbers recorded in logbook?	✓			✓		
11. Edits dated and initialed	✓			✓		

Comment on any "NO" response(s):

Level I reviewer: CC Date: 12/11/03

Level II Reviewer: Angela Dura Date: 12/12/03

Level I review:

BRAN+LUEBBE AACE 5.23

Post-run report

STL NORTH CANTON

TRAACS AUTOANALYZER REPORT

Name of Run	: 031211A	Name of Analysis	: NO2NO3.ANL
Date of Report	: 12/11/03	System No.	: 2
Date of Run	: 12/11/03	Type of System	: TRAACS
Operator	: OC	Start/Stop time	: 10:57 - 12:12
Comment	:		

3345559 — NO2NO3.
555
556 NO3

Channel	:	1	2
Method	:	NO2	NO2NO3
Unit	:	mg/L	mg/L
Calibr. Fit	:	Linear	Linear
Corr. Coeff.	:	0.9990 ✓	0.9999 ✓
Base	:	72	50
Gain	:	33	46
Sensitivity	:	0.2217	0.2357
Sample Limit 1	:		
Sample Limit 2	:		

Pk	Cup		Sample Id	Conc	Conc	
0	0	B	Baseline	-0.0676	-0.0103	
1	1	P	Primer	0.9864	1.9731	
2	1	C	1/2 NO2NO3 NN3161	0.9889	1.9915	
3	2	C	0.5/1 NO2NO3 2	0.5110	1.0171	
4	3	C	0.25/0.5 NO2NO3 3	0.2688	0.5004	
5	4	C	0.1/0.2 NO2NO3 4	0.1062	0.2003	
6	5	C	0.04/0.08 NO2NO3 5	0.0151	0.0708	
7	1	H1	High	1.0130	2.0300	
8	0	L1	Low	-0.0287	-0.0031	
9	0	L1	Low	-0.0237	-0.0025	
10	2	D	Drift	0.4789	1.0315	
11	0	B	Baseline	-0.0676	-0.0103	
12	0	N	Null	-0.0705N	-0.0107N	
13	2	QC1	ICV	0.4595	1.0267	.5672 /.5 = 113%
14	6	QC2	ICB	-0.0663	-0.0079	ND
15	7	QC3	LCS P093505 Tr=21.3	-0.0661	0.9162	x20 = 18.24/21.3 = 86%
16	8	S	LCS 1PPM NO3 NN3167	-0.0662	0.9121	/1.0
17	9	S	0.5 PPM NO2 NN3160	0.4322 /.5	0.5999	
18	10	S	1.0 PPM NO3 NN3159	-0.0649	0.8107	/1.0

BRAN+LUEBBE AACE 5.23

Post-run report

19	11	S	F6E8R	-0.0582	2.2259*	re-run @ dil
20	12	S	F6E8R MS	0.2139	2.1999*	
21	13	S	F6E8R MSD	0.2032	2.2000*	
22	14	S	F6E8T	-0.0582	2.1997*	
23	15	S	F6E8W	-0.0651	0.0039R	.0039
24	16	S	F51FG	-0.0383	0.8245R	
25	17	S	F51FG MS	0.0527	1.1260	
26	2	QC1	CCV	0.4413	0.9783	.5371/.5 = 107%
27	6	QC2	CCB	-0.0529	0.0261	.0261
28	18	S	F51FG MSD	0.0509	1.0948	
29	19	S	F559V 5X	-0.0451	0.1172	X5 = .586
30	20	S	F5591 5X	-0.0647	0.0560	X5 = .28 G
31	21	S	F5593 5X	-0.0592	0.0612	X5 = .306 G
32	22	S	F5595 5X	-0.0671	0.0210	X5 = .105 G
33	23	S	F5598 5X	-0.0653	0.0272	X5 = .136 G
34	24	S	F57TW	-0.0613	0.0136	~~X5~~ OC 12/11/03
35	25	S	F57VC	-0.0645	0.0129	
36	26	S	F57VE	-0.0571	-0.0039	
37	27	S	F556P	-0.0528	-0.0063	
38	2	QC1	CCV	0.4578	0.9806	.5228/.5 = 104.5%
39	6	QC2	CCB	-0.0438	0.0111	.0111
40	28	S	F557A	-0.0449	0.0363	
41	29	S	F557C	-0.0588	0.6256	
42	30	S	F557D	-0.0590	-0.0006	
43	31	S	F6CR0 5X	-0.0656	0.0248	X5 = .124 G
44	32	S	F6CTM 5X	-0.0642	0.0052	X5 = .026 G
45	33	S	F6CTN 5X	-0.0667	0.0010	X5 = .050 G
46	34	S	F6CTR 5X	-0.0650	-0.0004	X5 = ND G
47	35	S	F6CTT 5X	-0.0651	0.0039	X5 = .0195 G
48	36	S	F6C15	-0.0449	-0.0071	~~X5~~ OC 12/11/03
49	37	S	F6C2R	-0.0576	-0.0025	
50	2	QC1	CCV	0.4337	0.9716	.5379/.5 = 107.6%
51	6	QC2	CCB	-0.0337	0.0100	
52	38	S	BLK 2	-0.0606	-0.0054	re-run from here on.
53	39	S	LCS N02N03 2	-0.0641	0.8580	
54	40	S	F6C2R MS	0.1350	0.4675	
55	41	S	F6C2R MSD	0.1460	0.4947	OC 12/11/03
56	42	S	F6C2W	-0.0289	0.0880	
57	43	S	F6C3D	-0.0491	0.0236	
58	45	S	F591H	-0.0567	0.7078	
59	46	S	F5919	-0.0571	0.0079	
60	47	S	F592C	-0.0561	2.2289*	re-run @ dil
61	2	QC1	CCV	0.4463	2.1881*	high
62	6	QC2	CCB	-0.0372	0.1918	

63	48	S	F592M	-0.0473	0.0697R	Re-run all
64	49	S	F592Q	-0.0555	0.0431	
65	50	S	F6CQM	-0.0529	1.3845	
66	51	S	F6CQ4	-0.0562	0.9479	
67	52	S	F6CRF	-0.0601	0.9449	
68	53	S	F6EGE	-0.0507	0.9009	
69	54	S	F6EGR	0.1434	0.5640	
70	2	QC1	CCV	0.4718	1.0406	
71	6	QC2	CCB	-0.0449	0.0195	
72	55	S	DD3001	1.7019*	2.2252*	— re-run @ dil
73	56	S	DD3002	-0.0598R	-0.0089R	
74	57	S	DD3002 MS	0.3093R	0.4996R	
75	58	S	DD3002 MSD	0.2907	0.5009	
76	59	S	F6E8R 5X	-0.0683	2.2153*	— re-run @ dil
77	60	S	F6E8T 5X	-0.0560	1.3791R	
78	61	S	F6DWG	-0.0491	0.0152R	
79	2	QC1	CCV	0.4553	1.0350	
80	6	QC2	CCB	-0.0532	0.0132	
81	2	D	Drift	0.4789	1.0315	
82	0	B	Baseline	-0.0676	-0.0103	
83	0	B	FinalBase	-0.0676	-0.0103	

QC Limits

Reagents
WR31127
25
28
31344
3710

Channel	:	1	2
QC 1	Unused		
QC 2	Unused		
QC 3	Unused		
QC 4	Unused		
QC 5	Unused		
QC 6	Unused		
QC 7	Unused		
QC 8	Unused		
QC 9	Unused		
QC10	Unused		

CORRECTIONS

Channel	:	1	2
Baseline	:	Yes	Yes
Drift	:	Yes	Yes
Carry over	:	Yes	Yes

%:	7.1	1.8

---

* ... Sample offscale
\+ ... Result higher than sample limit
\- ... Result lower than sample limit
P ... Standard passed
F ... Standard failed
N ... Value not calculated or not used
R ... Resample after offscale
M ... Peak marker moved manually
D ... Diluted sample

** <END OF REPORT> **

BRAN+LUEBBE AACE 5.23

Post run chart

STL NORTH CANTON

TRAACS AUTOANALYZER REPORT

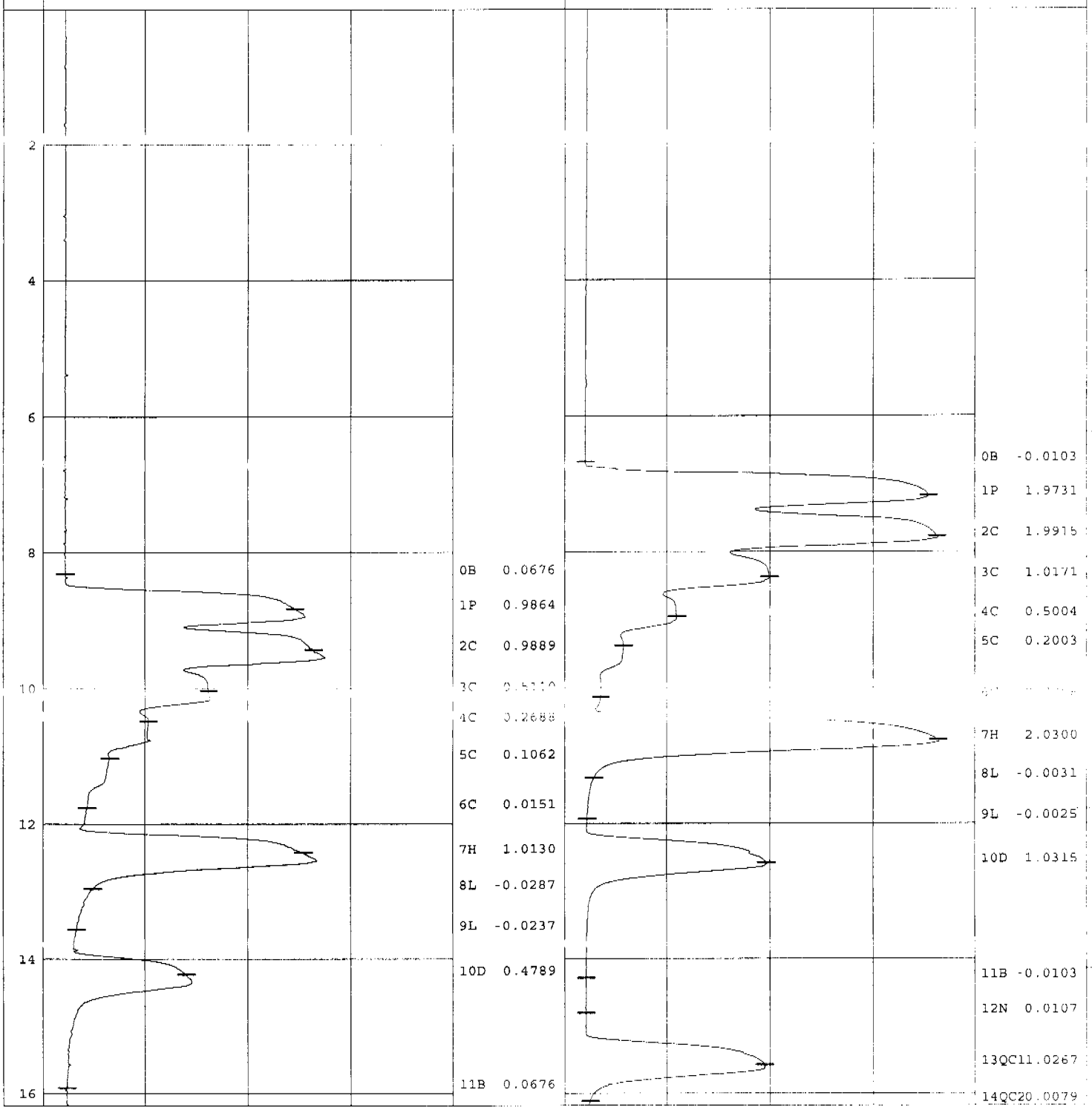
Name of run :031211A.RUN
Comment :

Name of analysis :NO2NO3.ANL

min

Channel : 1
Method :NO2
Unit :mg/L
Base : 72
Gain : 33
Corr. : 0.9990

Channel : 2
Method :NO2NO3
Unit :mg/L
Base : 50
Gain : 46
Corr. : 0.9999

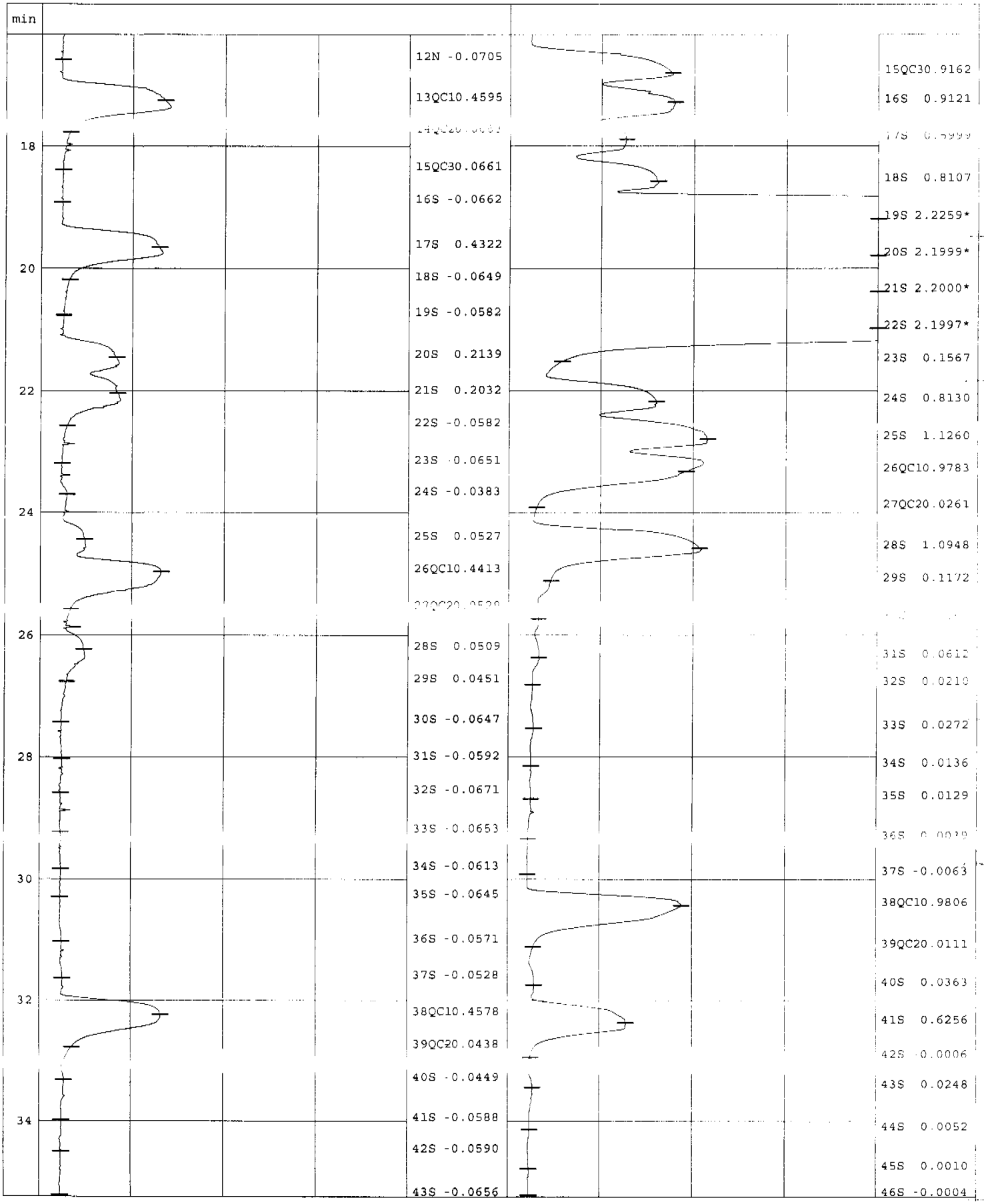


BRAN+LUEBBE AACE 5.23

Post-run chart

Name of run :031211A.RUN
Comment :

Name of analysis :NO2NO3.ANL

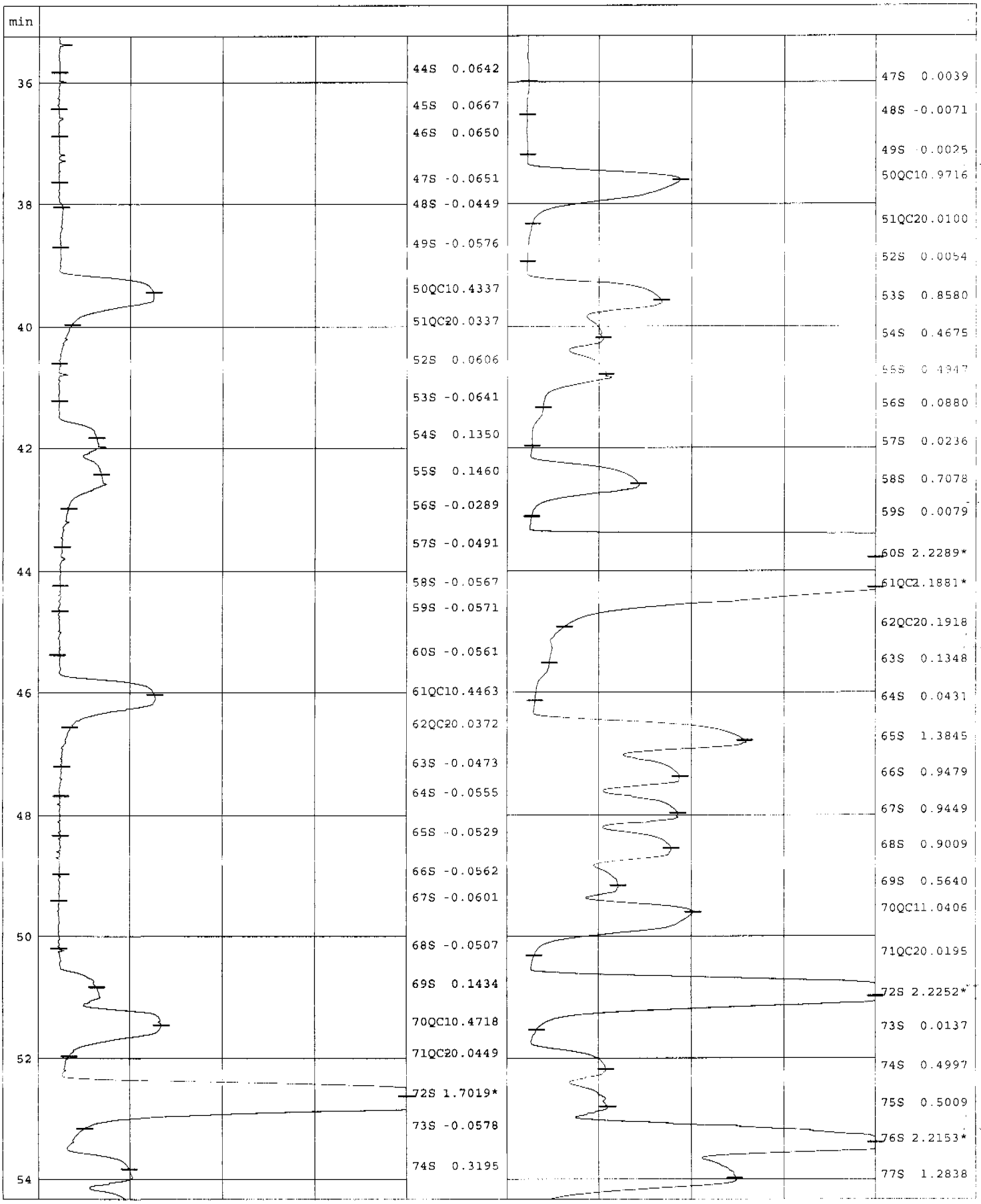


BRAN+LUEBBE AACE 5.23

Post-run chart

Name of run :031211A.RUN
Comment :

Name of analysis :NO2NO3.ANL

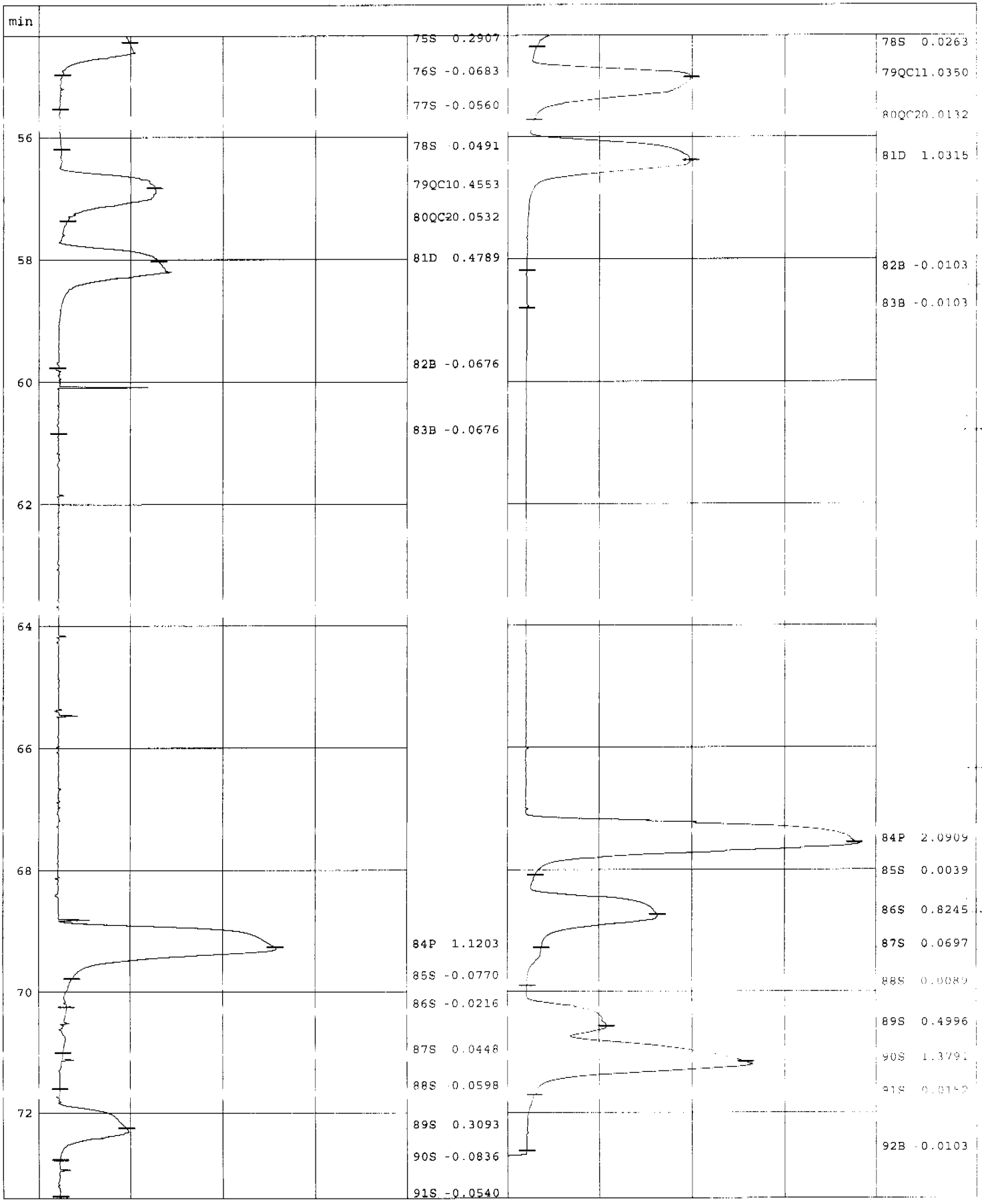


BRAN+LUEBBE AACE 5.23

Post run chart

Name of run :031211A.RUN
Comment :

Name of analysis :NO2NO3.ANL

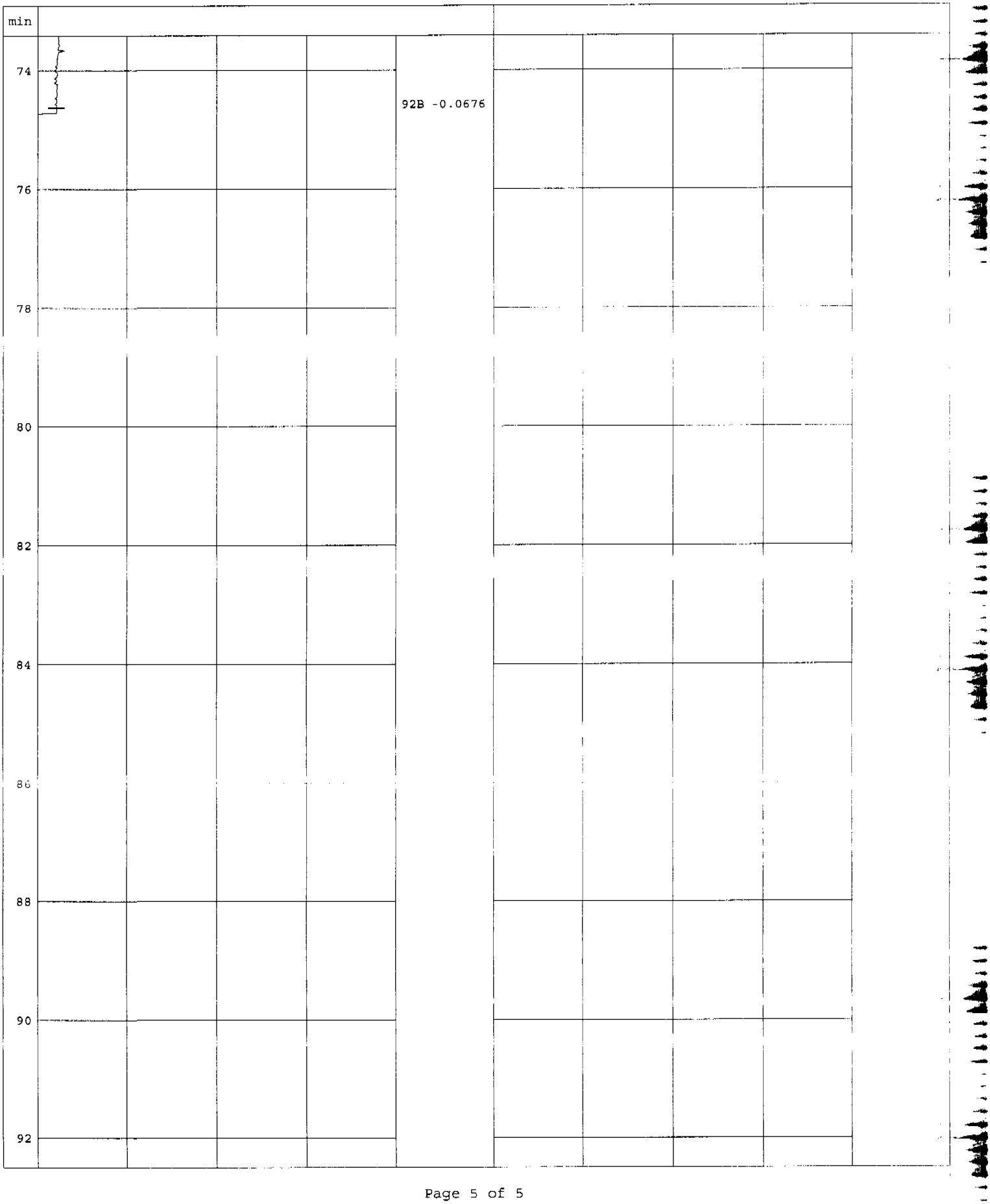


BRAN+LUEBBE AACE 5.23

Post-run chart

Name of run :031211A.RUN
Comment :

Name of analysis :NO2NO3.ANL
92B 0.0103



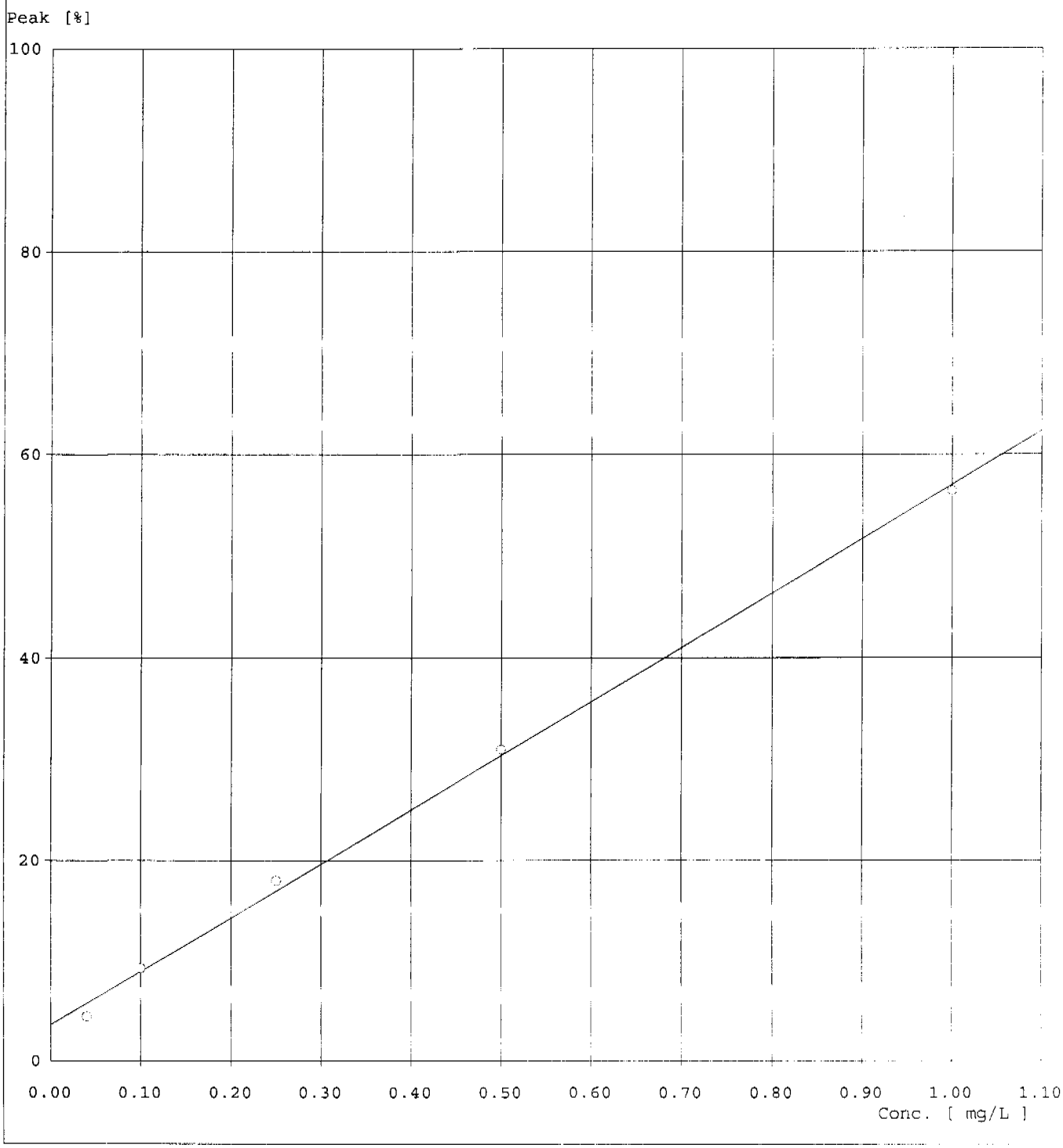
STL NORTH CANTON

TRAACS AUTOANALYZER REPORT

Name of run :031211A.RUN
Comment :

Name of analysis :NO2NO3.ANL

Channel :1
Method :NO2
Curve fit :linear a=0.0000286 b=-0.1703667
Corr. coeff. :0.9990



STL NORTH CANTON

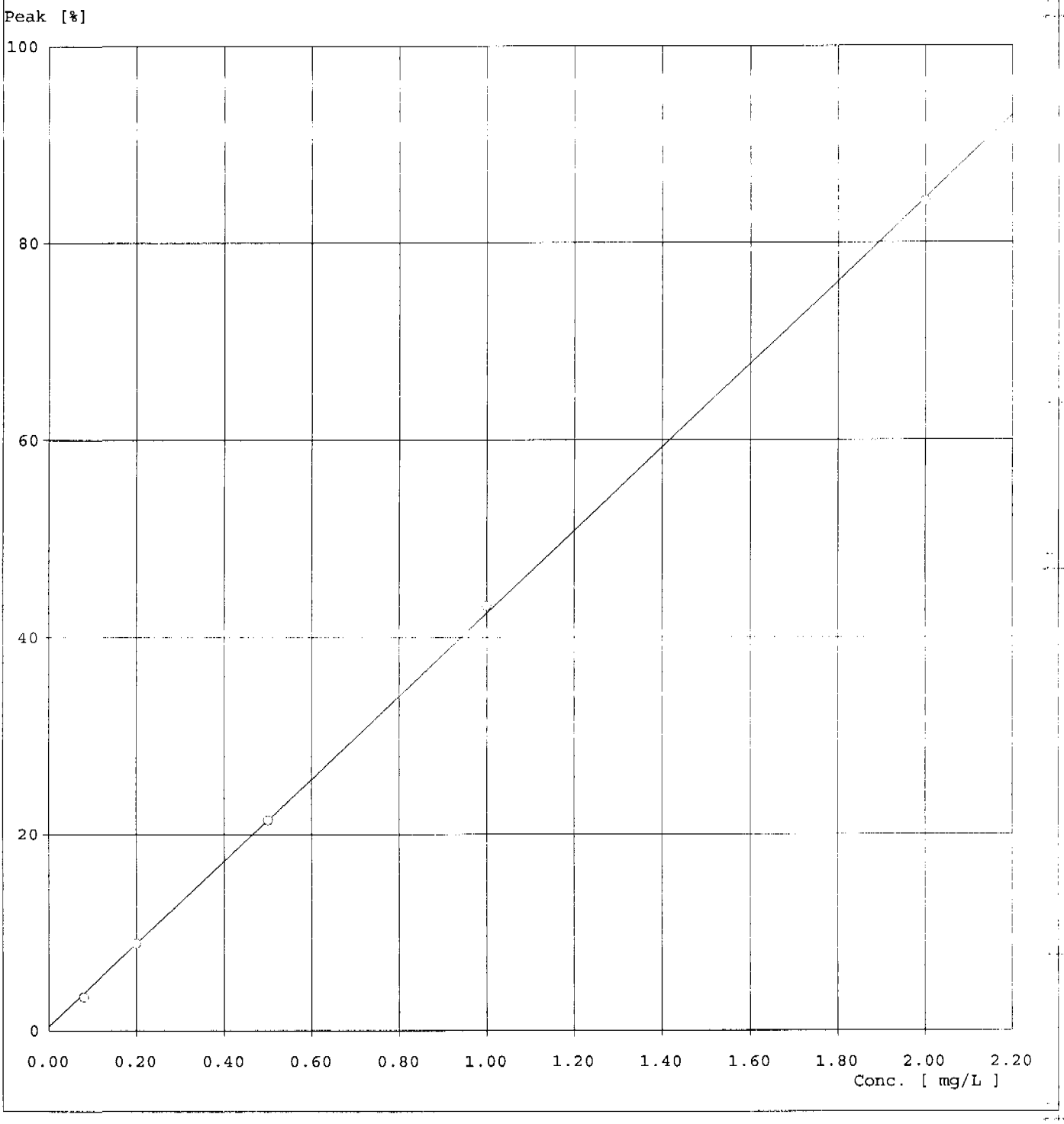
TRAACS AUTOANALYZER REPORT

Name of run :031211A.RUN

Comment :

Name of analysis :NO2NO3.ANL

Channel :2
Method :NO2NO3
Curve fit :linear a=0.0000363 b=-0.1309243
Corr. coeff. :0.9999



GRAN+LUEBBE AACE 5.23

Post-run report

STL NORTH CANTON

TRAACS AUTOANALYZER REPORT

Name of Run	: 031211B	Name of Analysis	: NO2NO3.ANL
Date of Report	: 12/11/03	System No.	: 2
Date of Run	: 12/11/03	Type of System	: TRAACS
Operator	: OC	Start/Stop time	: 13:19 - 13:59
Comment	:		

Channel :	1	2
Method :	NO2	NO2NO3
Unit :	mg/L	mg/L
Calibr. Fit :	Linear	Linear
Corr. Coeff. :	0.9999	0.9999
Base :	72	50
Gain :	37	43
Sensitivity :	0.2885	0.2625
Sample Limit 1 :		
Sample Limit 2 :		

Pk	Cup		Sample Id	Conc	Conc	
0	0	B	Baseline	0.0037	-0.0217	
1	1	P	Primer	0.9994	1.9954	
2	1	C	1/2 NO2NO3	1.0050	1.9909	
3	2	C	0.5/1 NO2NO3	0.4894	1.0187	
4	3	C	0.25/0.5 NO2NO3	0.2491	0.4989	
5	4	C	0.1/0.2 NO2NO3	0.1018	0.2010	
6	5	C	0.04/0.08 NO2NO3	0.0447	0.0704	
7	1	H1	High	1.0082	2.0043	
8	0	L1	Low	0.0067	-0.0160	
9	0	L1	Low	0.0069	-0.0154	
10	2	D	Drift	0.4878	1.0199	
11	0	B	Baseline	0.0037	-0.0217	
12	0	N	Null	0.0034N	-0.0235N	
13	2	QC1	ICV	0.4866	1.0132	. 5266/.5 = 105%
14	6	QC2	ICB	0.0085	-0.0161	ND
15	7	QC3	LCS P093505	0.0087	0.9558	X20 = 19.116/21.3 = 90%
16	8	S	LCS 1PPM NO3	0.0093	0.9429	/1.0
17	10	S	1.0 PPM NO3	0.0100	0.8633	
18	40	S	F6C2R MS	0.0792	0.4012	

re-run Top part.

BRAN+LUEBBE AACE 5.23

Post-run report

19	41	S	F6C2R MSD	0.0807	0.3784	
20	42	S	F6C2W	0.0193	0.0650	
21	43	S	F6C3D	0.0133	0.0066	
22	45	S	F591H	0.0149	0.7155	
23	46	S	F5919	0.0153	-0.0050	
24	47	S	F592C 10X	0.0073	2.1517*	look @ chart - re-run all. QC 12/11/03.
25	2	QC1	CCV	0.4317	1.0150	
26	6	QC2	CCB	0.0106	0.0100	
27	48	S	F592M	0.0096	0.0623	
28	49	S	F592Q	0.0084	0.0024	
29	50	S	F6CQM	0.0102	1.3546	
30	51	S	F6CQ4	0.0077	0.9242	
31	52	S	F6CRF	0.0066	0.9207	
32	53	S	F6EGE	0.0080	0.8961	
33	54	S	F6EGR ↑re-run	0.0912	0.4466	
34	2	QC1	CCV	0.4376	0.9890	.5514 / .5 = 110% NG
35	6	QC2	CCB	0.0136	-0.0008	
36	55	S	DD3001 5X F6F2H	0.3472 (1.736)	0.4640 X5	= (2.32) = (0.584) NG
37	56	S	DD3002 F6F1C	0.0145	-0.0124	
38	57	S	DD3002 MS	0.3192	0.4678	.1436
39	58	S	DD3002 MSD	0.3175	0.4670	.1495
40	59	S	F6E8R 10X	0.0163 (.163)	1.3010 X10	= 13.010 = 12.85 (*) use these
41	60	S	F6E8T 5X	0.0130 (.065)	1.2513 X5	= 6.2565 = 6.1915 Good
42	61	S	F6DWG	0.0081	0.0069	
43	2	QC1	CCV	0.4165	0.9701	.5536 / .5 = 110% NG
44	6	QC2	CCB	0.0149	-0.0027	
45	2	D	Drift	0.4878	1.0199	
46	0	B	Baseline	0.0037	-0.0217	
47	0	B	FinalBase	0.0037	-0.0217	

QC Limits

Channel	:	1	2
QC 1	Unused		
QC 2	Unused		
QC 3	Unused		
QC 4	Unused		
QC 5	Unused		
QC 6	Unused		
QC 7	Unused		
QC 8	Unused		
QC 9	Unused		
QC10	Unused		

Post-run copy

CORRECTIONS

Channel	:	1	2
Baseline	:	Yes	Yes
Drift	:	Yes	Yes
Carry over	:	Yes	Yes
	%:	1.4	1.8

* ... Sample offscale
\+ ... Result higher than sample limit
\- ... Result lower than sample limit
P ... Standard passed
F ... Standard failed
N ... Value not calculated or not used
R ... Resample after offscale
M ... Peak marker moved manually
D ... Diluted sample

** <END OF REPORT> **

BRAN+LUEBBE AACE 5.23

Post-run chart

STL NORTH CANTON

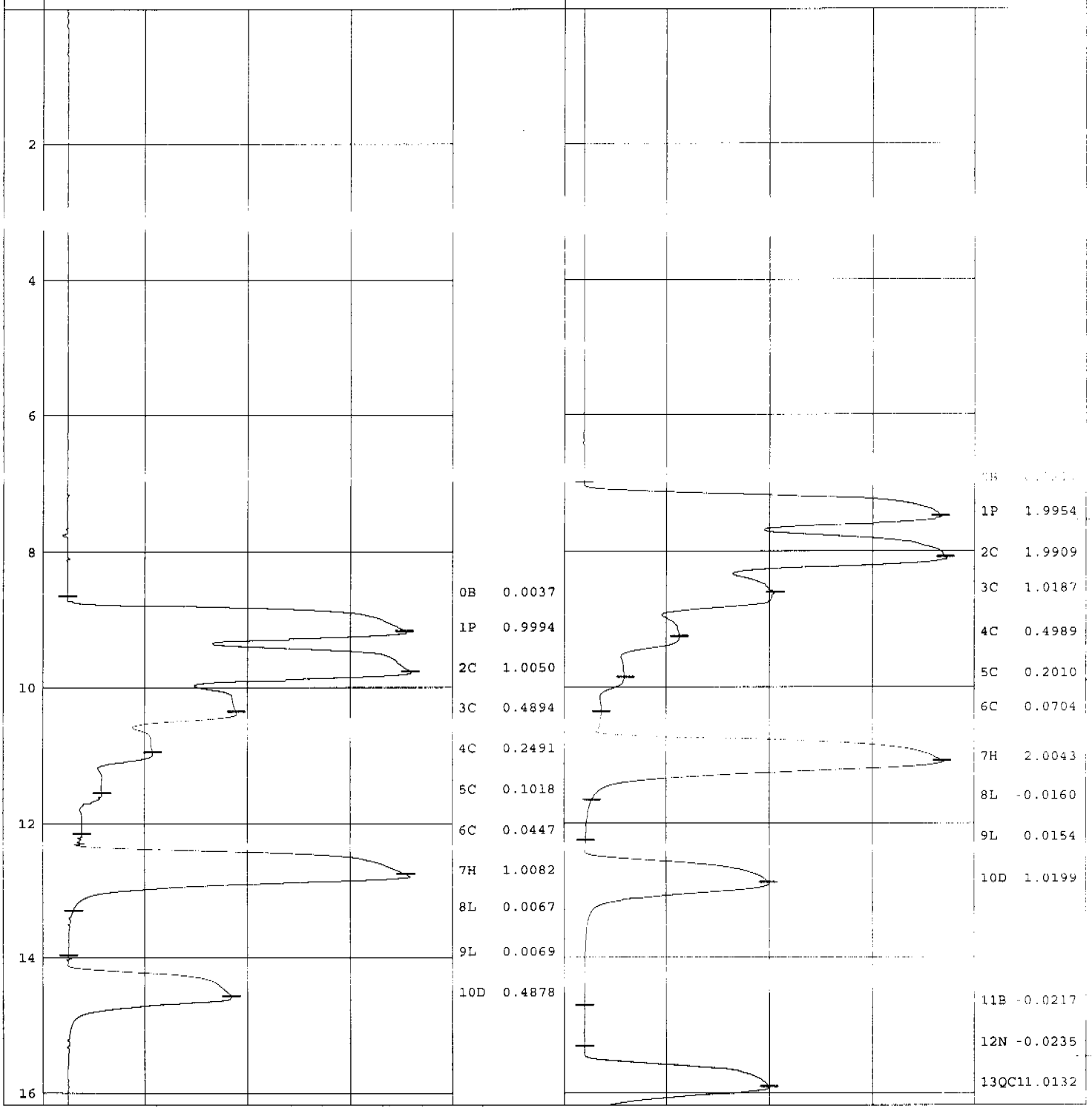
TRAACS AUTOANALYZER REPORT

Name of run :031211B.RUN

Comment :

Name of analysis :NO2NO3.ANL

min	Channel	: 1	Channel	: 2
	Method	:NO2	Method	:NO2NO3
	Unit	:mg/L	Unit	:mg/L
	Base	: 72	Base	: 50
	Gain	: 37	Gain	: 43
	Corr.	: 0.9999	Corr.	: 0.9999

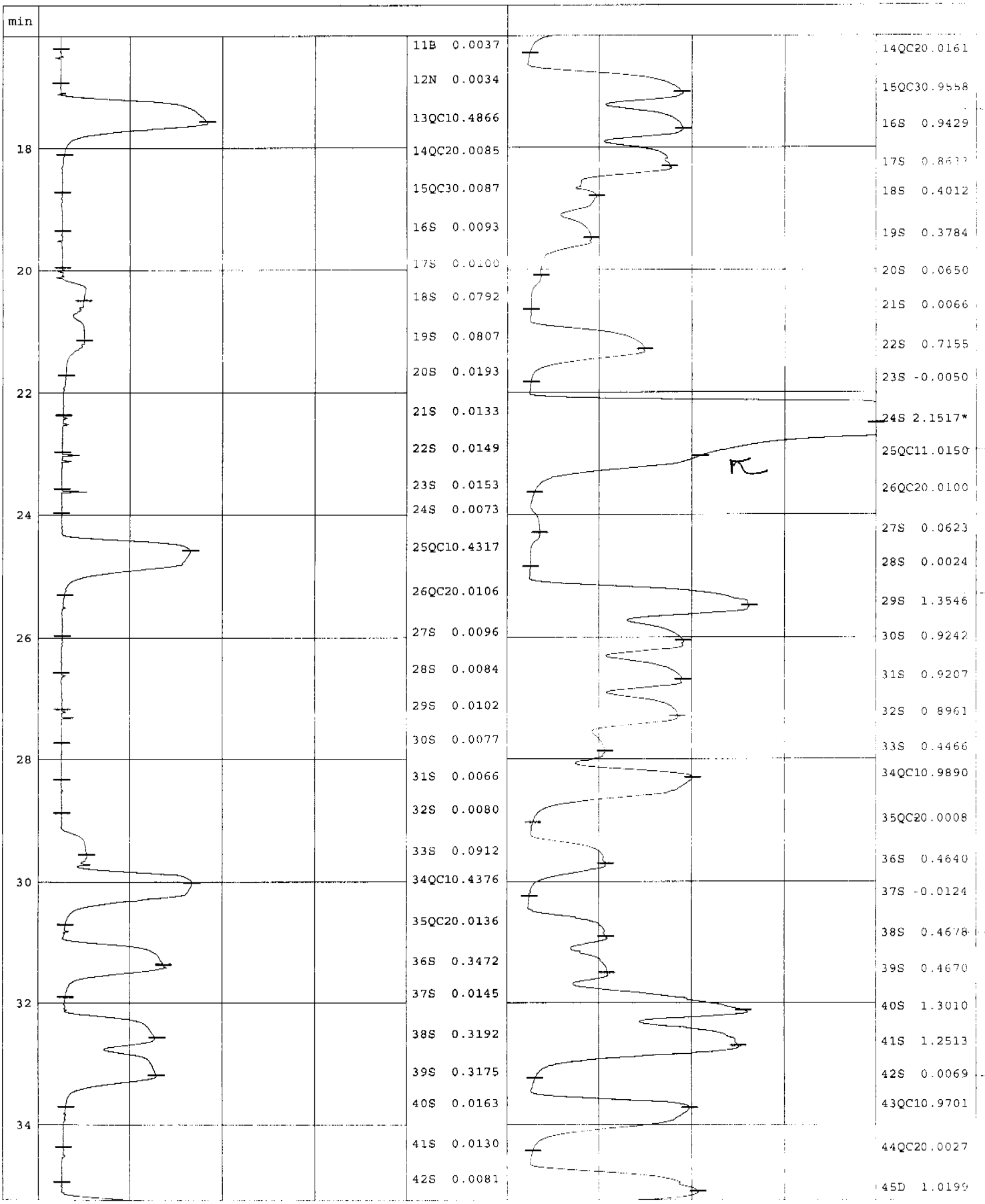


BRAN+LUEBBE AACE 5.23

Post run chart

Name of run :031211B.RUN
Comment :

Name of analysis :NO2NO3.ANL



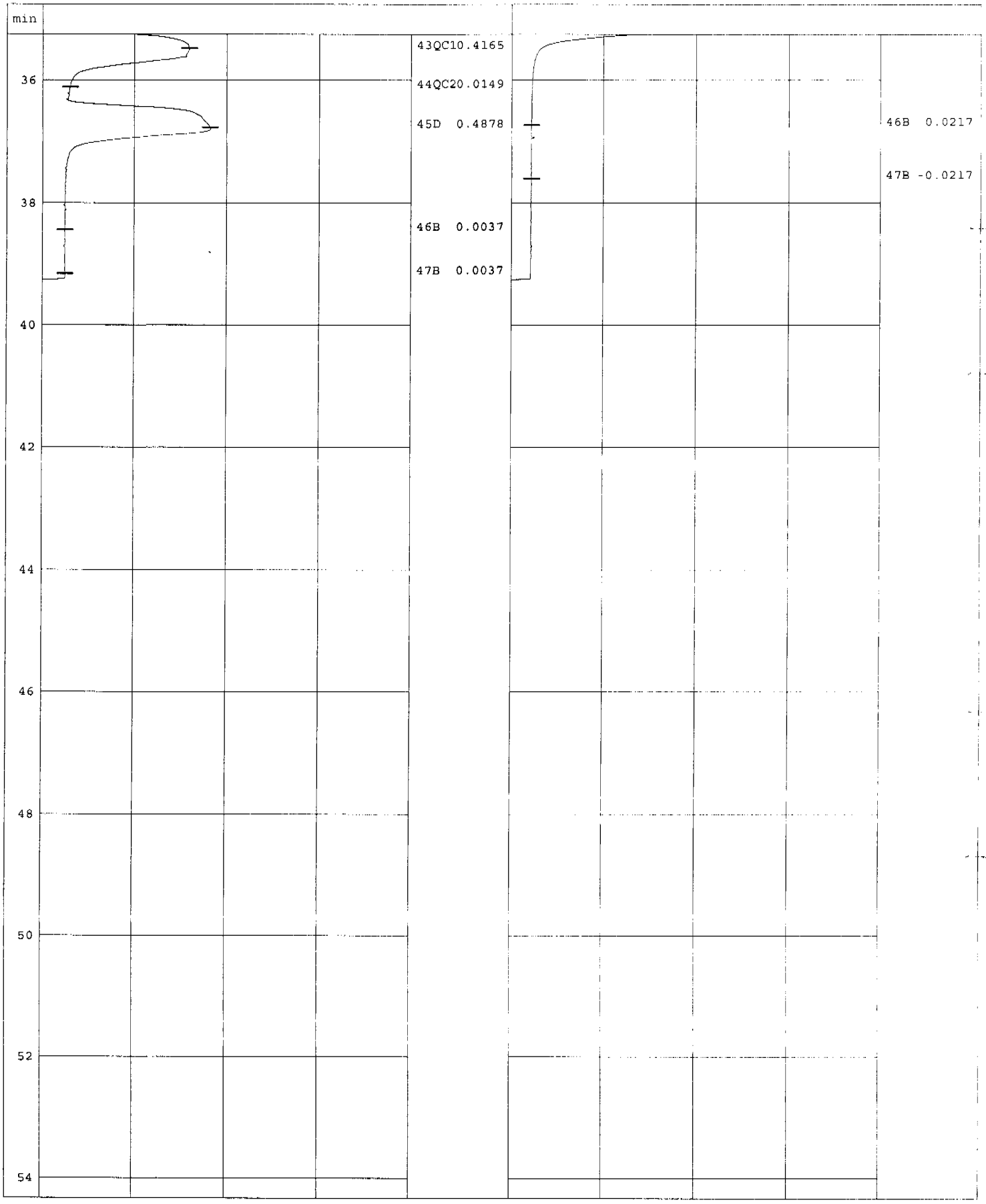
BRAN+LUEBBE AACE 5.23

Post-run chart

Name of run :031211B.RUN

Comment :

Name of analysis :NO2NO3.ANL



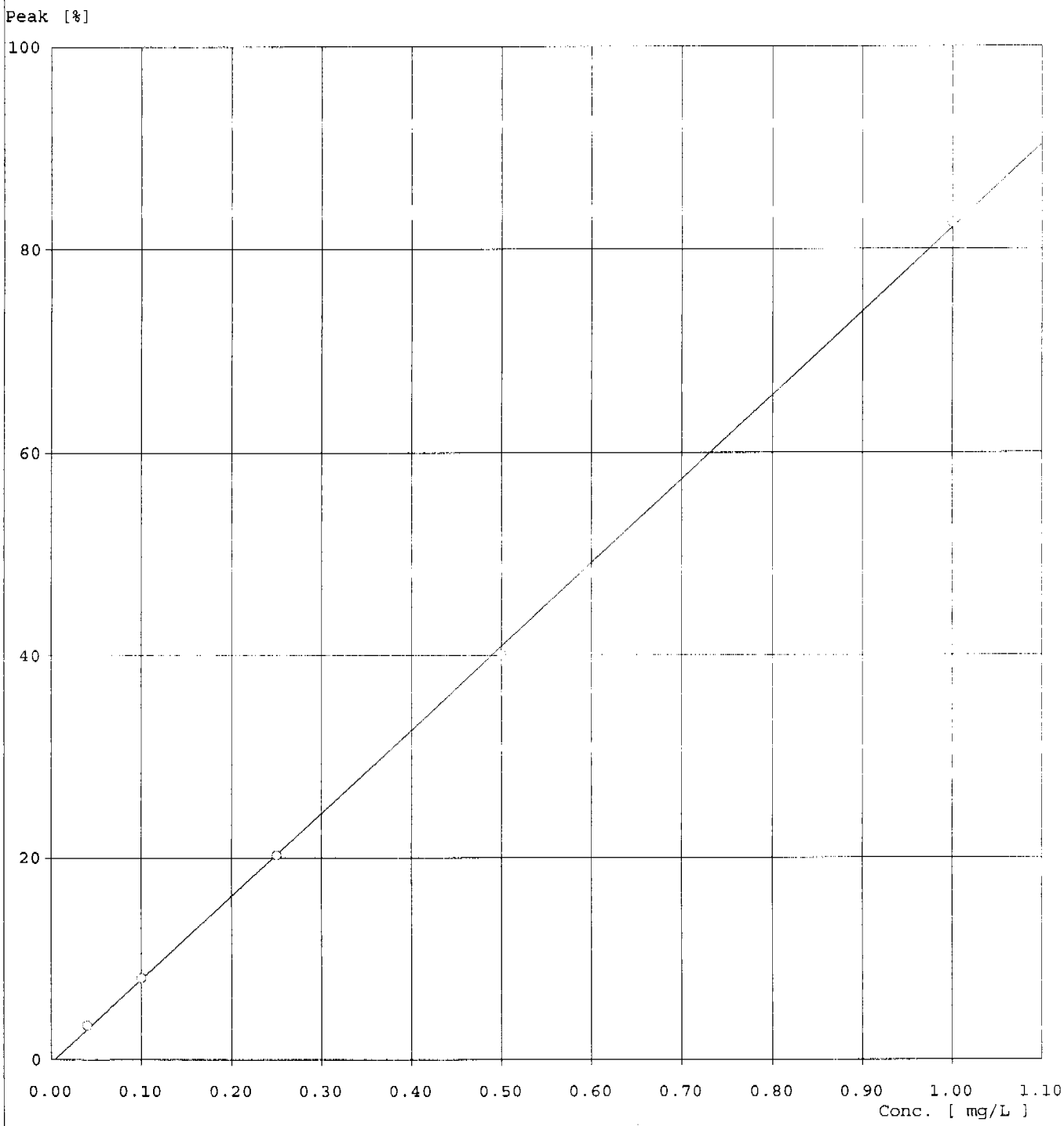
STL NORTH CANTON

TRAACS AUTOANALYZER REPORT

Name of run :031211B.RUN
Comment :

Name of analysis :NO2NO3.ANL

Channel :1
Method :NO2
Curve fit :linear a=0.0000185 b=-0.0697162
Corr. coeff. :0.9999



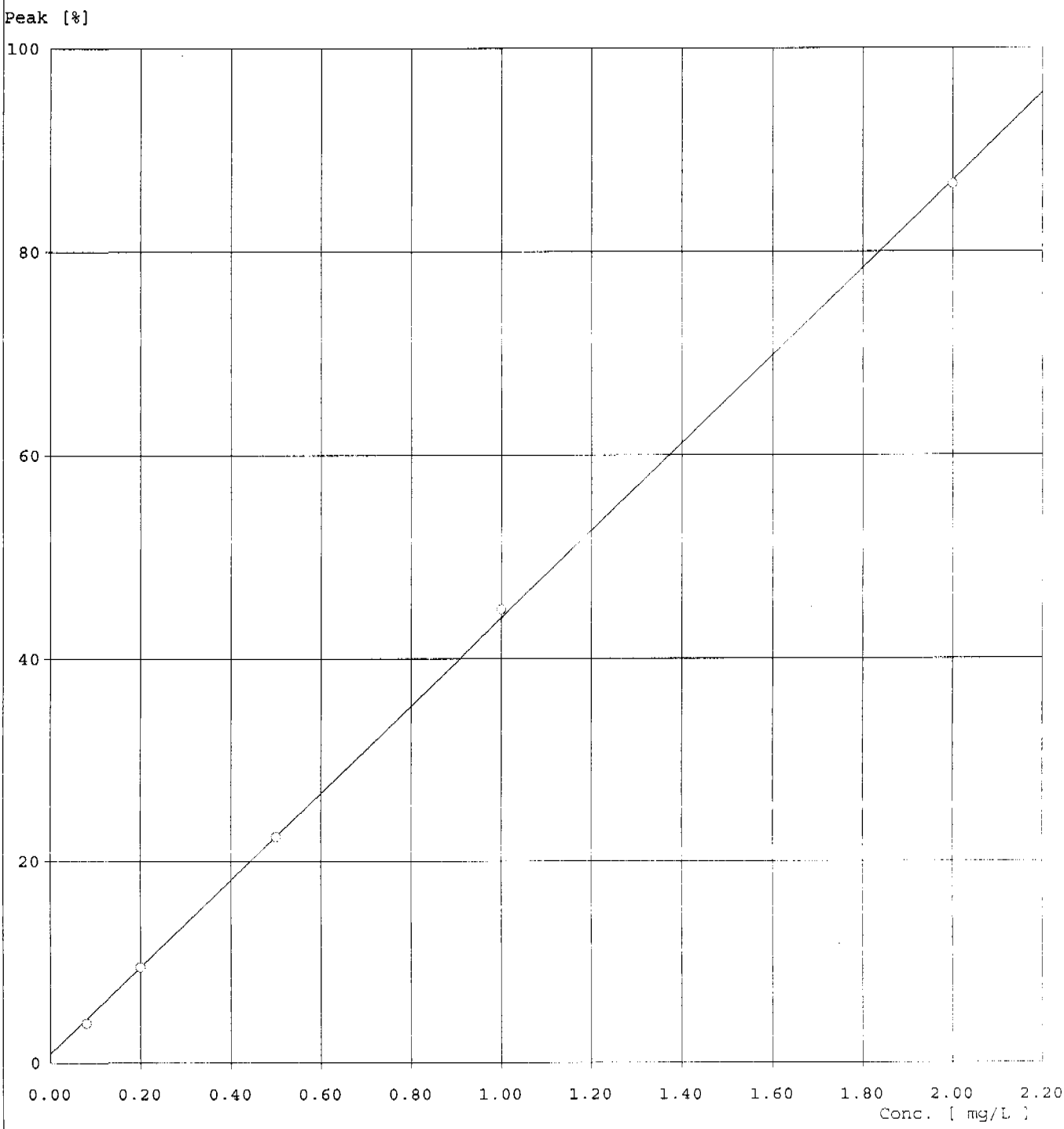
STL NORTH CANTON

TRAACS AUTOANALYZER REPORT

Name of run :031211B.RUN
Comment :

Name of analysis :NO2NO3.ANL

Channel :2
Method :NO2NO3
Curve fit :linear a=0.0000354 b=-0.1322812
Corr. coeff. :0.9999



BRAN+LUEBBE AACE 5.23

Post-run report

STL NORTH CANTON

TRAACS AUTOANALYZER REPORT

Name of Run	: 031211C	Name of Analysis	: NO2NO3.ANL
Date of Report	: 12/11/03	System No.	: 2
Date of Run	: 12/11/03	Type of System	: TRAACS
Operator	: OC	Start/Stop time	: 14:11 - 14:45
Comment	:		

Channel :	1	2
Method :	NO2	NO2NO3
Unit :	mg/L	mg/L
Calibr. Fit :	Linear	Linear
Corr. Coeff. :	0.9998 ✓	1.0000 ✓
Base :	72	50
Gain :	37	43
Sensitivity :	0.2918	0.2662
Sample Limit 1 :		
Sample Limit 2 :		

Pk	Cup		Sample Id	Conc	Conc	
0	0	B	Baseline	0.0005	-0.0168	
1	1	P	Primer	1.0070	1.9898	
2	1	C	1/2 NO2NO3	1.0062	1.9995	
3	2	C	0.5/1 NO2NO3	0.4863	0.9987	
4	3	C	0.25/0.5 NO2NO3	0.2498	0.5053	
5	4	C	0.1/0.2 NO2NO3	0.1027	0.1996	
6	5	C	0.04/0.08 NO2NO3	0.0450	0.0770	
7	1	H1	High	1.0034	1.9883	
8	0	L1	Low	0.0027	-0.0118	
9	0	L1	Low	0.0029	-0.0111	
10	2	D	Drift	0.4864	1.0130	
11	0	B	Baseline	0.0005	-0.0168	
12	0	N	Null	0.0009N	-0.0167N	
13	2	QC1	ICV	0.4987	1.0419	.5432 / .5 = 108%
14	6	QC2	ICB	0.0065	-0.0035	ND
15	7	QC3	LCS P093505	0.0071	1.0075	x 20 = 20.15/21.3 = 95%
16	8	S	LCS 1PPM NO3	0.0078	0.9944	/1.0
17	10	S	1.0 PPM NO3	0.0076	0.9185	/1.0
18	40	S	F6C2R MS	0.0582	0.3693	

19	41	S	F6C2R MSD	0.0636	0.3847
20	42	S	F6C2W	0.0127	0.0734
21	43	S	F6C3D	0.0062	0.0152
22	45	S	F591H	0.0050	0.7775
23	46	S	F5919	0.0038	0.0053
24	47	S	F592C 25X	0.0039	0.5242 x 25 = 13.105
25	2	QC1	CCV	0.4636	1.0893
26	6	QC2	CCB	0.0087	0.0039
27	48	S	F592M	0.0053	0.0745
28	49	S	F592Q	0.0035	0.0119
29	50	S	F6CQM	0.0056	1.5060
30	51	S	F6CQ4	0.0044	1.0546
31	52	S	F6CRF	0.0044	1.0824
32	53	S	F6EGE	0.0056	1.0407
33	54	S	F6EGR	0.0739	0.4630
34	2	QC1	CCV	0.0273	-0.0022
35	6	QC2	CCB	0.0104	0.0041
36	2	D	Drift	0.4864	1.0130
37	0	B	Baseline	0.0005	-0.0168
38	0	B	FinalBase	0.0005	-0.0168

re-run these.

ran out of CCV solution.

QC Limits

Channel	:	1	2
QC 1	Unused		
QC 2	Unused		
QC 3	Unused		
QC 4	Unused		
QC 5	Unused		
QC 6	Unused		
QC 7	Unused		
QC 8	Unused		
QC 9	Unused		
QC10	Unused		

CORRECTIONS

Channel	:	1	2
Baseline	:	Yes	Yes
Drift	:	Yes	Yes
Carry over	:	Yes	Yes
	%:	1.3	1.9

* ... Sample offscale
+ ... Result higher than sample limit
- ... Result lower than sample limit
P ... Standard passed
F ... Standard failed
N ... Value not calculated or not used
R ... Resample after offscale
M ... Peak marker moved manually
D ... Diluted sample

** <END OF REPORT> **

BRAN+LUEBBE AACE 5.23

Post-run chart

STL NORTH CANTON

TRAACS AUTOANALYZER REPORT

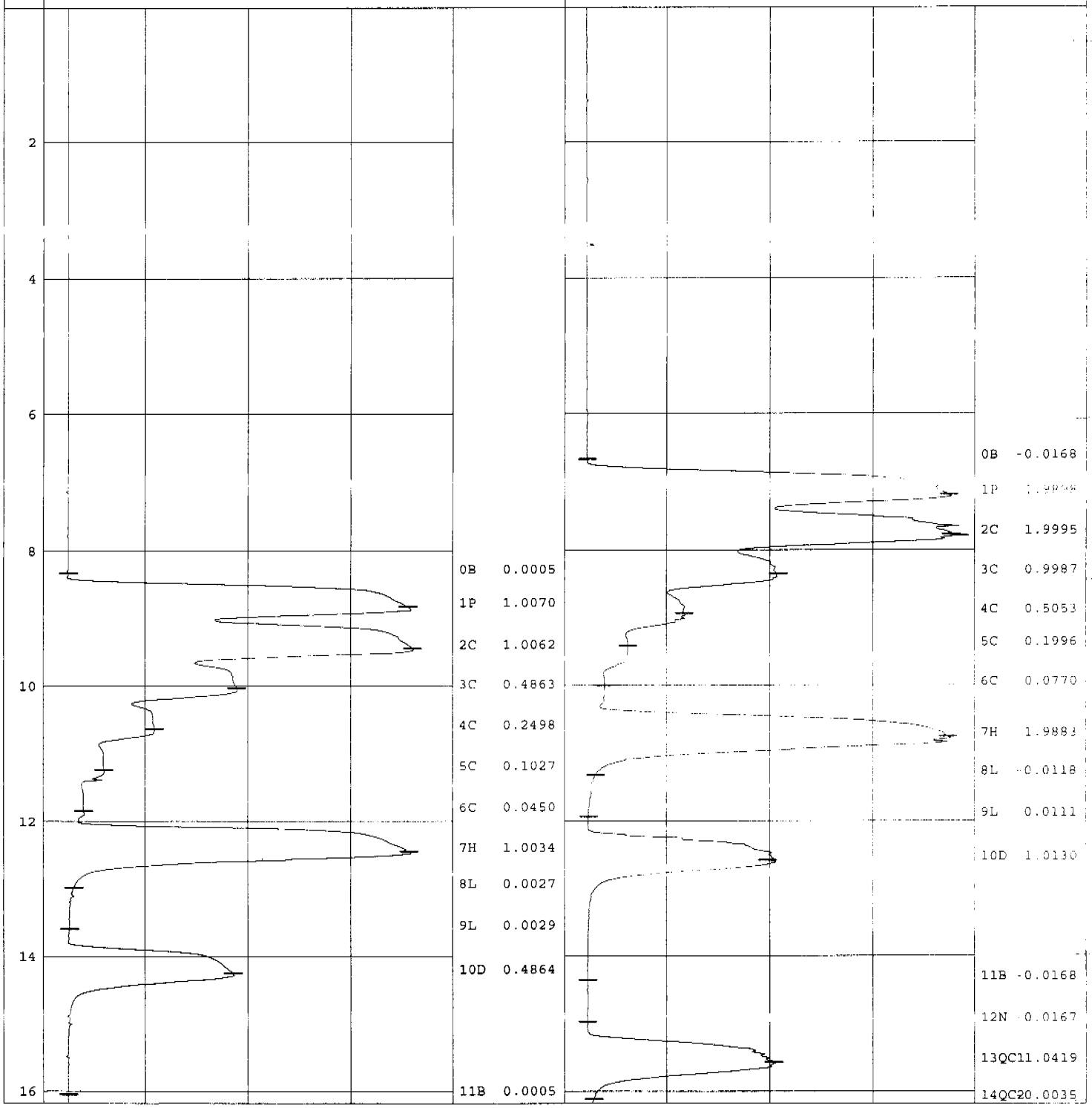
Name of run :031211C.RUN
Comment :

Name of analysis :NO2NO3.ANL

min

Channel : 1
Method :NO2
Unit :mg/L
Base : 72
Gain : 37
Corr. : 0.9998

Channel : 2
Method :NO2NO3
Unit :mg/L
Base : 50
Gain : 43
Corr. : 1.0000

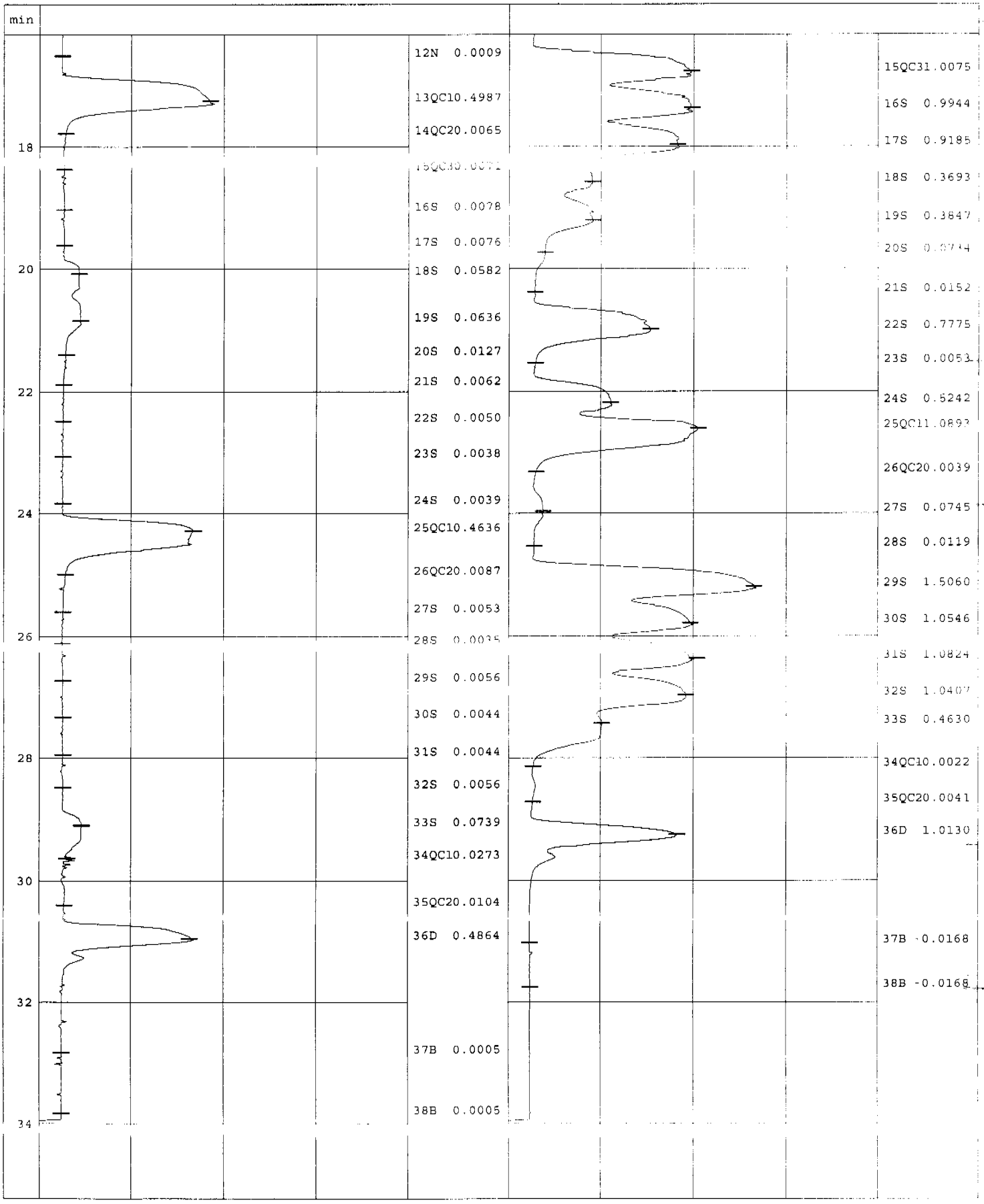


BRAN+LUEBBE AACE 5.23

Post-run chart

Name of run :031211C.RUN
Comment :

Name of analysis :NO2NO3.ANL



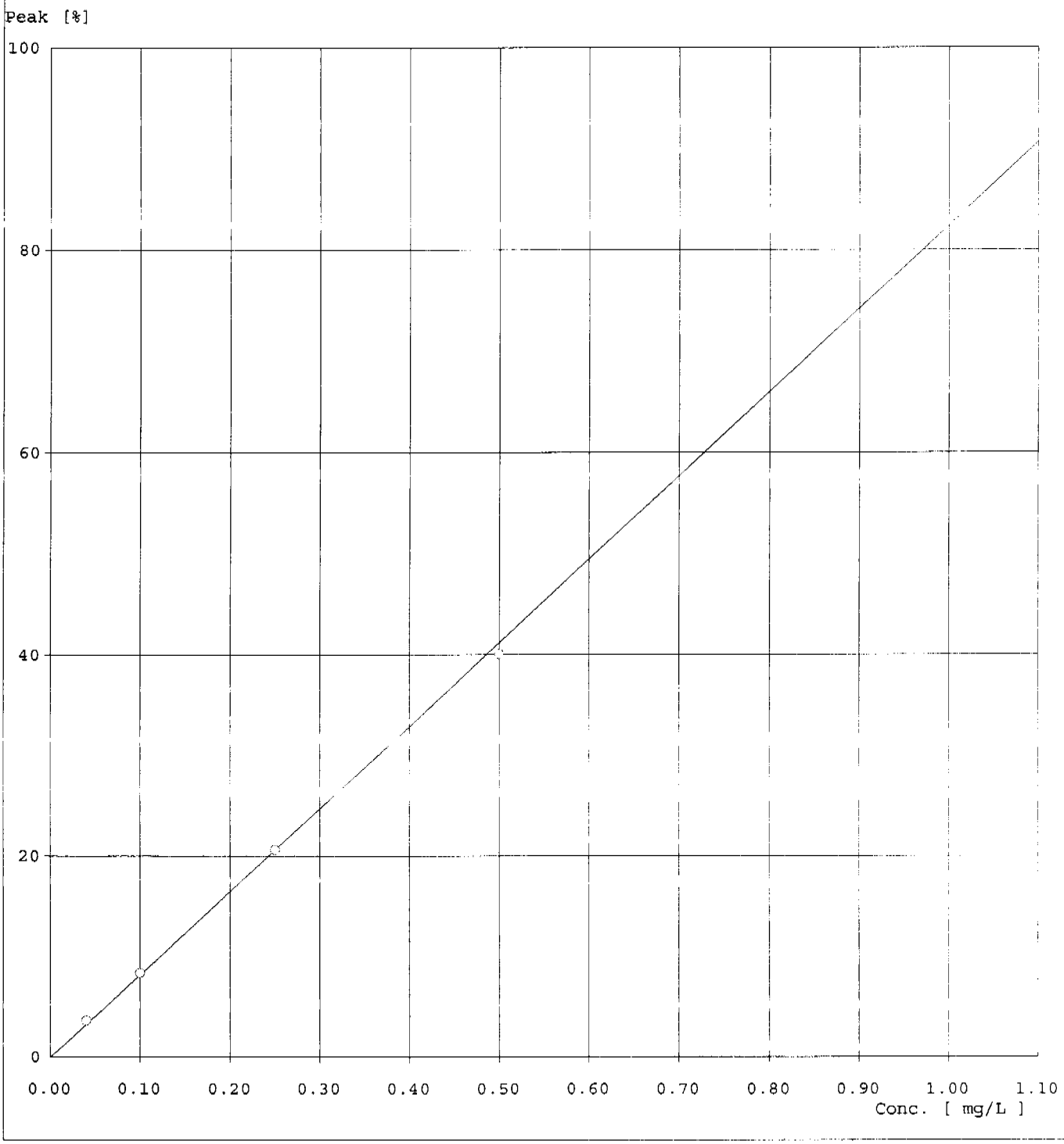
STL NORTH CANTON

TRAACS AUTOANALYZER REPORT

Name of run :031211C.RUN
Comment :

Name of analysis :NO2NO3.ANL

Channel :1
Method :NO2
Curve fit :linear a=0.0000185 b=-0.0742322
Corr. coeff. :0.9998



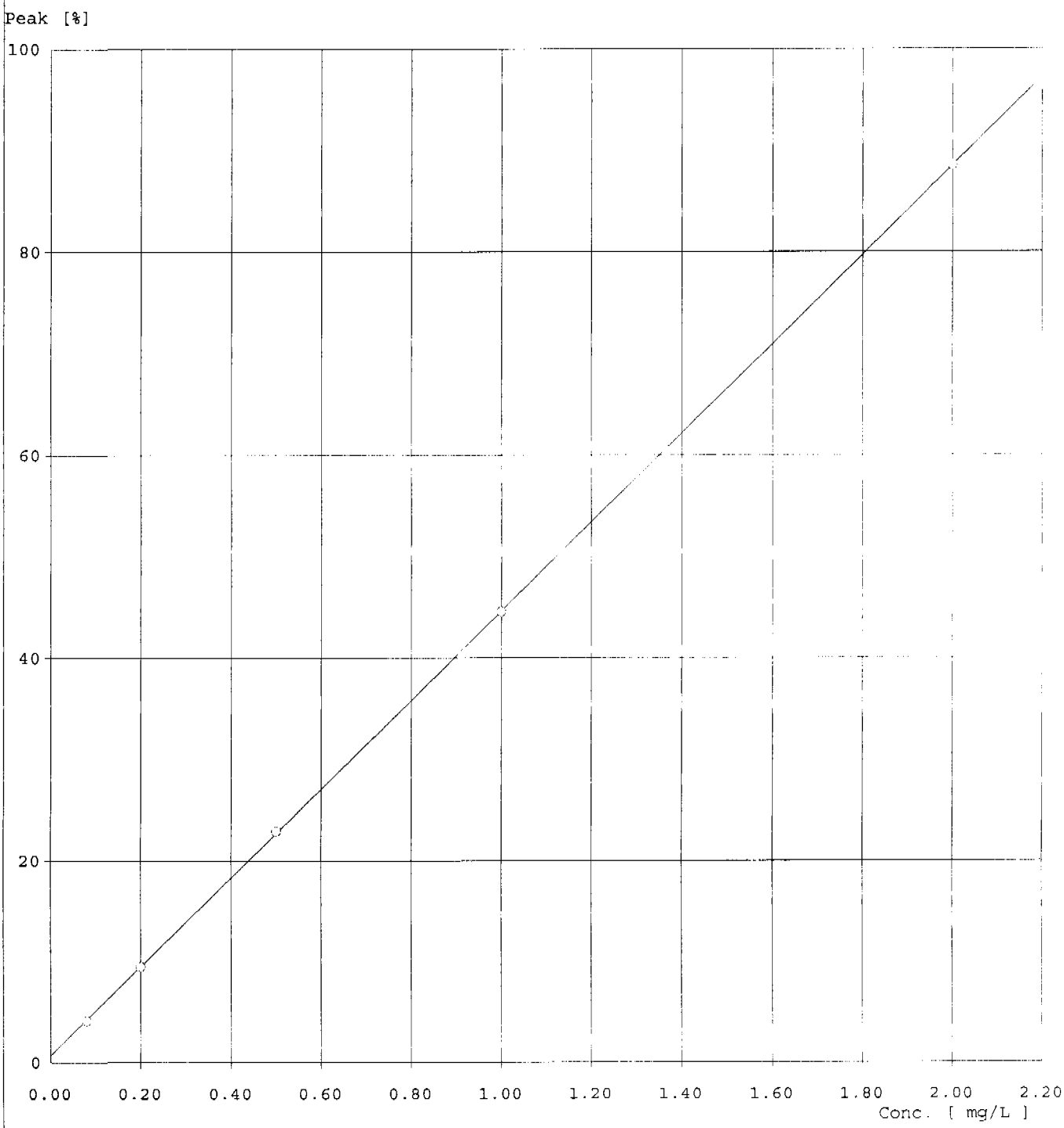
STL NORTH CANTON

TRAACS AUTOANALYZER REPORT

Name of run :031211C.RUN
Comment :

Name of analysis :NO2NO3.ANL

Channel :2
Method :NO2NO3
Curve fit :linear a=0.0000348 b=-0.1425328
Corr. coeff. :1.0000



BRAN+LUEBBE AACE 5.23

Post-run report

STL NORTH CANTON

TRAACS AUTOANALYZER REPORT

Name of Run	: 031211D	Name of Analysis	: NO2NO3.ANL
Date of Report	: 12/11/03	System No.	: 2
Date of Run	: 12/11/03	Type of System	: TRAACS
Operator	: OC	Start/Stop time	: 15:21 - 15:52
Comment	:		

Channel	:	1	2
Method	:	NO2	NO2NO3
Unit	:	mg/L	mg/L
Calibr. Fit	:	Linear	Linear
Corr. Coeff.	:	0.9995	0.9999
Base	:	72	50
Gain	:	37	43
Sensitivity	:	0.2897	0.2706
Sample Limit 1	:		
Sample Limit 2	:		

Pk	Cup		Sample Id	Conc	Conc	
0	0	B	Baseline	-0.0008	-0.0196	
1	1	P	Primer	0.9909	1.9806	
2	1	C	1/2 NO2NO3	1.0089	2.0074	
3	2	C	0.5/1 NO2NO3	0.4781	0.9795	
4	3	C	0.25/0.5 NO2NO3	0.2534	0.5082	
5	4	C	0.1/0.2 NO2NO3	0.1039	0.2059	
6	5	C	0.04/0.08 NO2NO3	0.0458	0.0790	
7	1	H1	High	0.8970	1.7655	
8	0	L1	Low	0.0013	-0.0145	
9	0	L1	Low	0.0014	-0.0143	
10	2	D	Drift	0.4751	0.9776	
11	0	B	Baseline	-0.0008	-0.0196	
12	0	N	Null	-0.0007N	-0.0192N	
13	2	QC1	ICV	0.4814	0.9845	.5031/.5 = 100%
14	6	QC2	ICB	0.0089	-0.0028	ND
15	7	QC3	LCS P093505	0.0066	0.9905	x20 = 19.9/21.3 = 93%
16	8	S	LCS 1PPM N03	0.0078	0.9829	1:10
17	48	S	F592M	0.0071	0.0699	
18	49	S	F592Q	0.0027	0.0076	

19	50	S	F6CQM	0.0033	1.4050
20	51	S	F6CQ4	0.0020	0.9676
21	52	S	F6CRF	0.0017	0.9798
22	53	S	F6EGE	0.0016	0.9454
23	54	S	F6EGR	0.0495	0.4185
24	2	QC1	CCV	0.4285	0.8980 ✓
25	6	QC2	CCB	0.0116	0.0070 NA
26	2	D	Drift	0.4751	0.9776
27	0	B	Baseline	-0.0008	-0.0196
28	0	B	FinalBase	-0.0008	-0.0196

QC Limits

Channel	:	1	2
QC 1	Unused		
QC 2	Unused		
QC 3	Unused		
QC 4	Unused		
QC 5	Unused		
QC 6	Unused		
QC 7	Unused		
QC 8	Unused		
QC 9	Unused		
QC10	Unused		

CORRECTIONS

Channel	:	1	2
Baseline	:	Yes	Yes
Drift	:	Yes	Yes
Carry over	:	Yes	Yes
	%:	0.7	1.2

* ... Sample offscale
\+ ... Result higher than sample limit
\- ... Result lower than sample limit
P ... Standard passed
F ... Standard failed
N ... Value not calculated or not used
R ... Resample after offscale

M ... Peak marker moved manually

D ... Diluted sample

** <END OF REPORT> **

BRAN+LUEBBE AACE 5.23

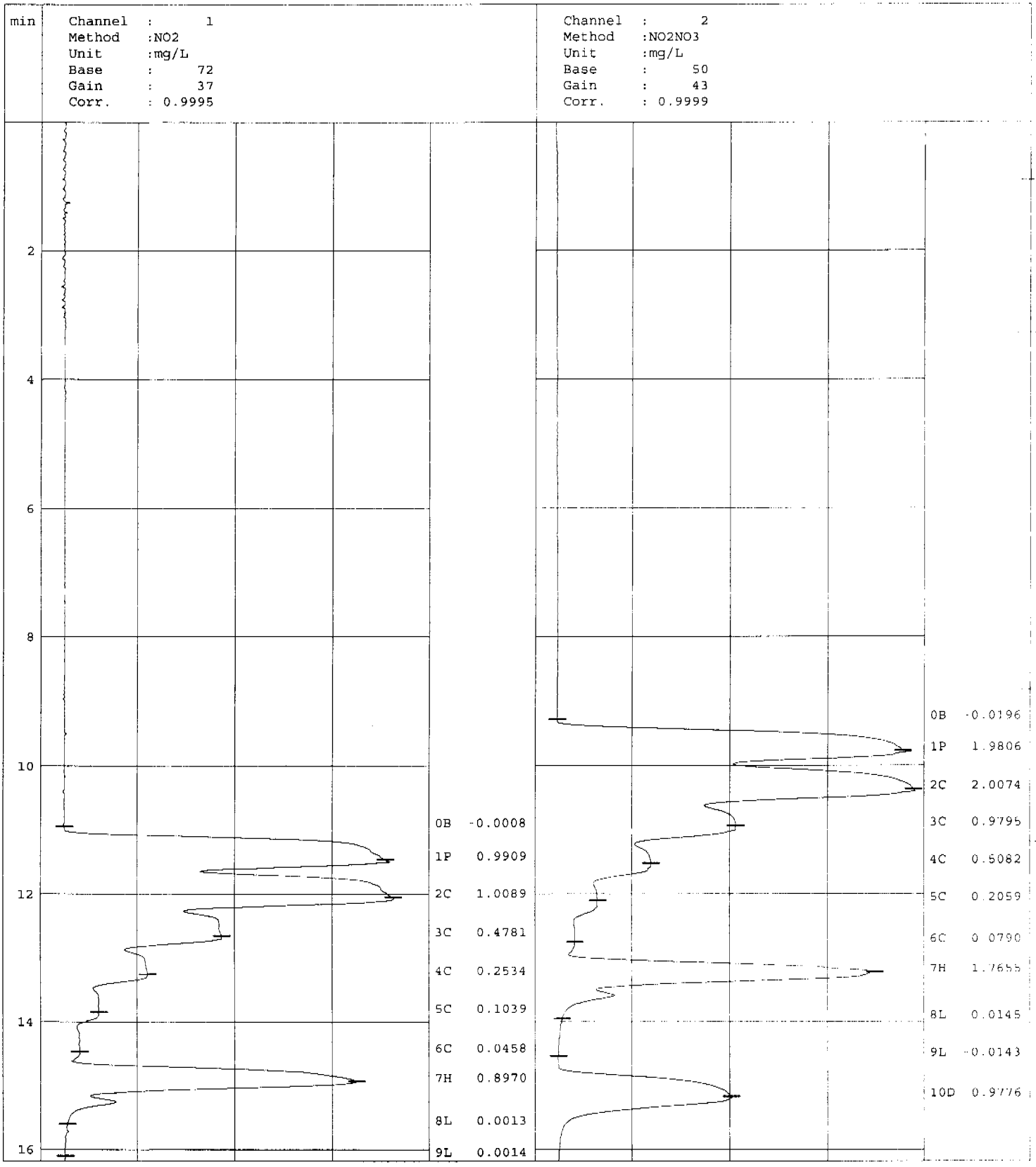
Post-run chart

STL NORTH CANTON

TRAACS AUTOANALYZER REPORT

Name of run :031211D.RUN
Comment :

Name of analysis :NO2NO3.ANL

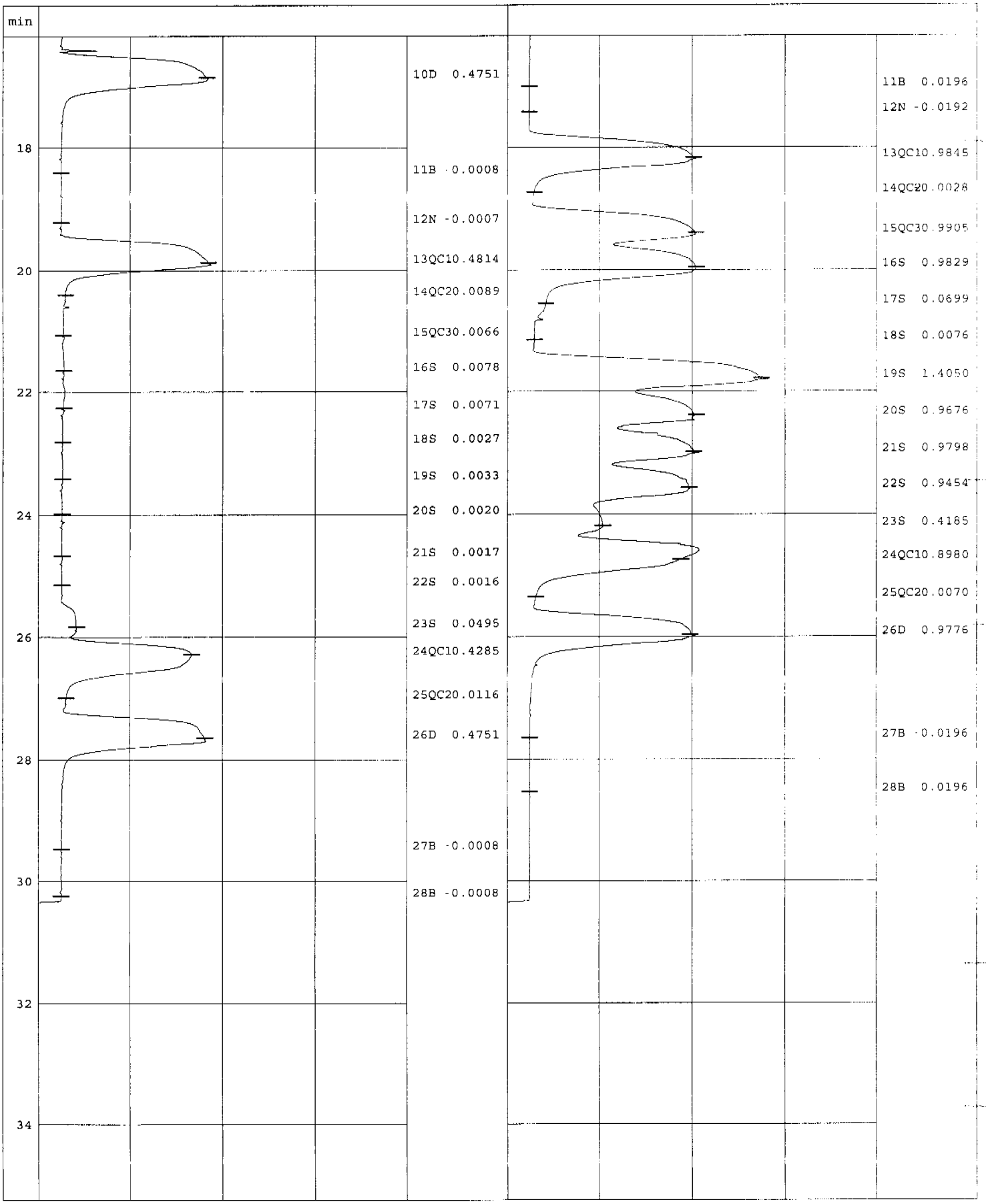


BRAN+LUEBBE AACE 5.23

Post run chart

Name of run :031211D.RUN
Comment :

Name of analysis :NO2NO3.ANL



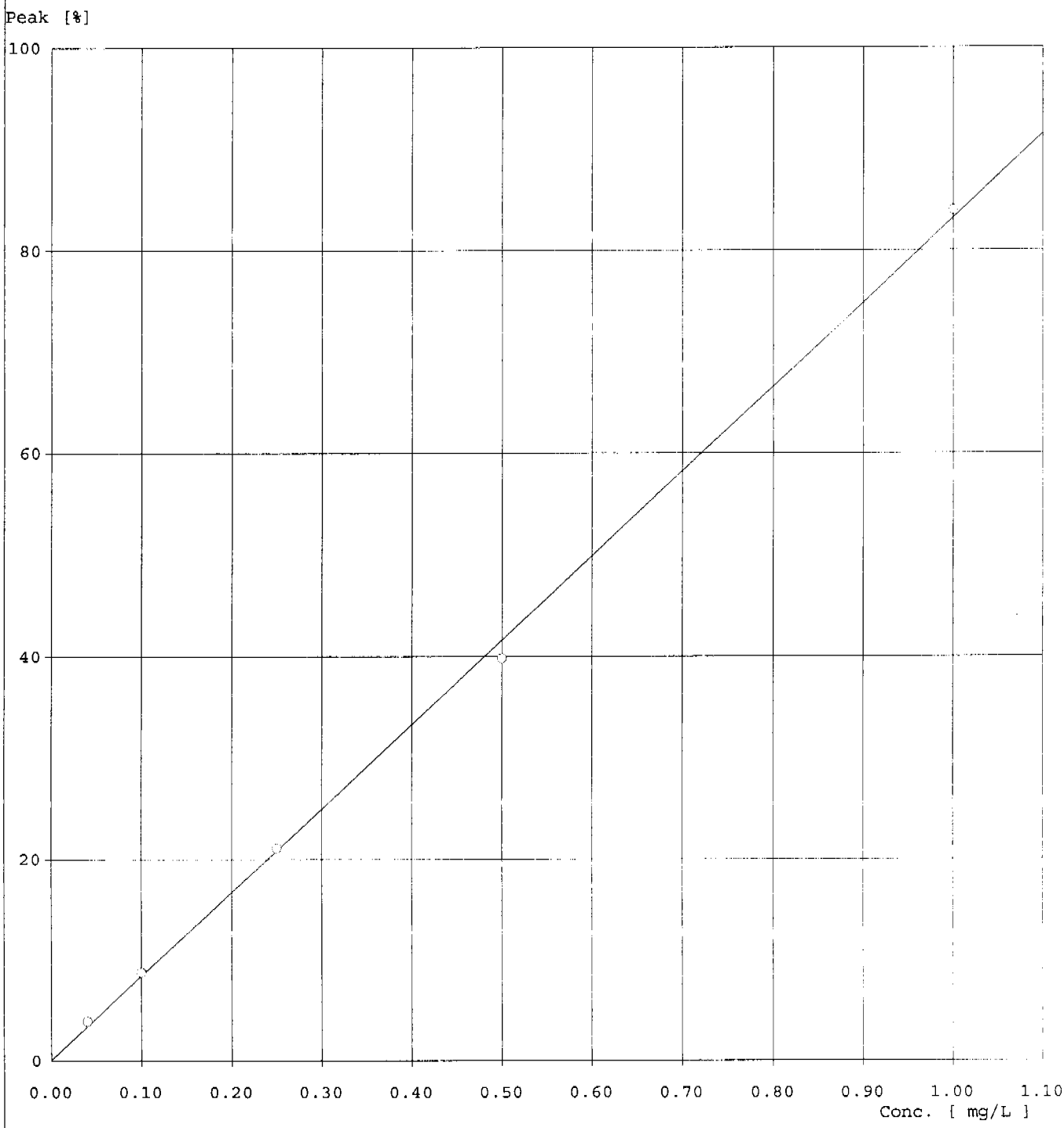
STL NORTH CANTON

TRAACS AUTOANALYZER REPORT

Name of run :031211D.RUN
Comment :

Name of analysis :NO2NO3.ANL

Channel :1
Method :NO2
Curve fit :linear a=0.0000184 b=-0.0758306
Corr. coeff. :0.9995



STL NORTH CANTON

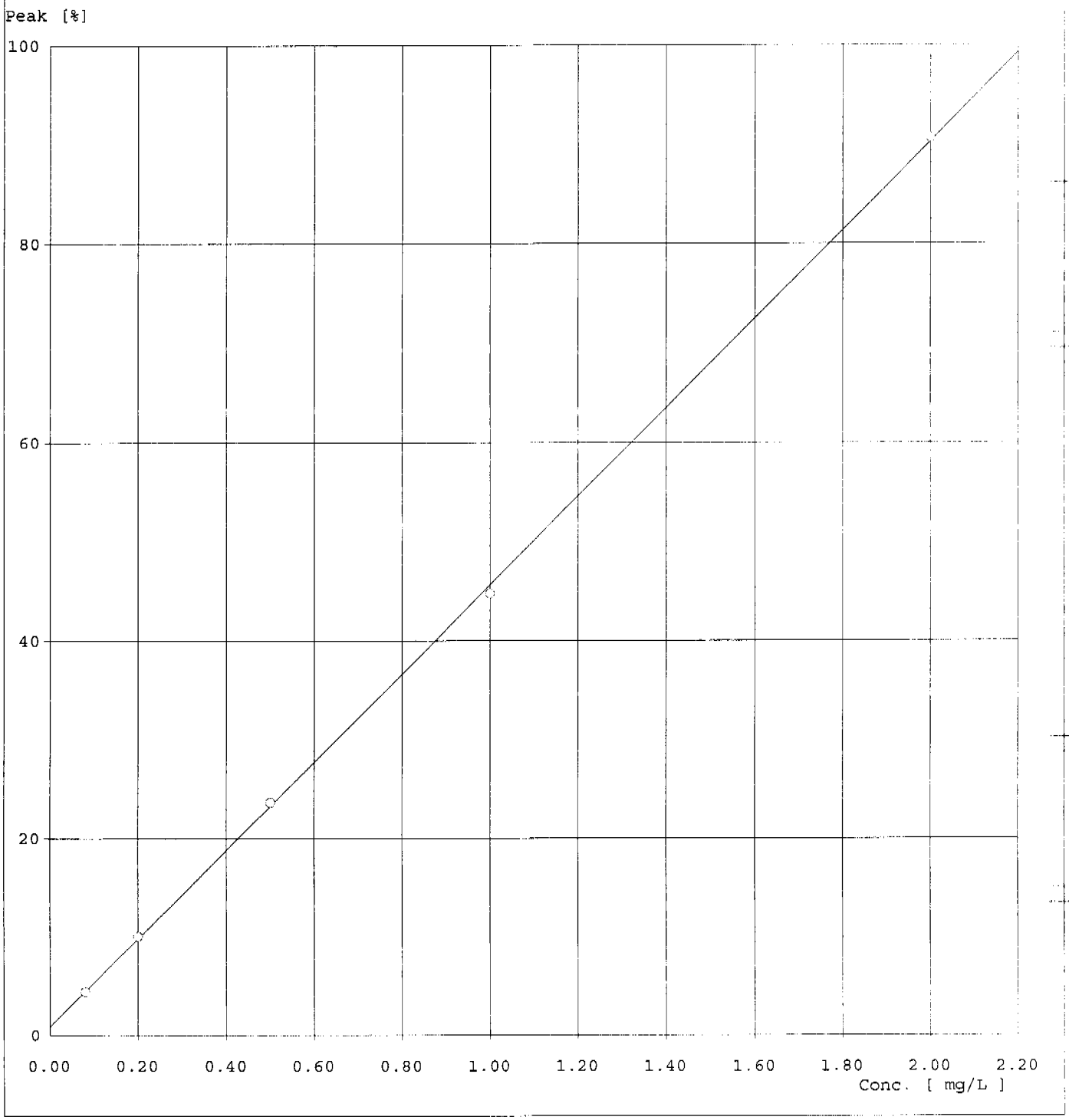
TRAACS AUTOANALYZER REPORT

Name of run :031211D.RUN

Comment :

Name of analysis :NO2NO3.ANL

Channel :2
Method :NO2NO3
Curve fit :linear a=0.0000341 b=-0.1455502
Corr. coeff. :0.9999



WR31127
25
23
31344
3710

3345555 .001 F6F2H 3002 F1C

F6E8R ms
E37
E8W

Severn Trent Laboratories, Inc.
INCOMPLETE ANALYSES - **WET**

WORK ORDER	RAD LVL	QC BATCH	CLIENT	LAB NUMBER	STORAGE LOCATION	EX	MATRIX	SAMPLE DATE	EXPIRE DATE	DUE DATE	DAYS LEFT	QC	RL	UNITS	MS RUN#	SAMPLE COMMENTS	S.D.G. NO.	CLIENT I.D.
METHOD: CM MCAWW		353.2		**Nitrate-Nitrite**														
F51FG-1-CC	MS		423611	A3L040187-003	C92 S51 MS	23	WATER	12/03/03	12/31/03	12/18/03	7F	01	0.1	mg/L		EMS REQ CLT SPEC EXP DEL*CHROMAT*ALL DILUTIONS*RPT ALL/RUN LOWEST DIL.		ISMW-08-01882
F559V-1-A4			529191	A3L060132-001	C107 S49	23	WATER	12/05/03	1/02/04	12/19/03	+8N	01	0.1	mg/L		EXP DEL,REPORT NITRATE ONLY,STRONG ODOR! USE HOOD!		7.4A-1.21
F5591-1-AF			529191	A3L060132-002	C107 S49	23	WATER	12/05/03	1/02/04	12/19/03	+8N	01	0.1	mg/L		EXP DEL,REPORT NITRATE ONLY,STRONG ODOR! USE HOOD!		7.4A-2.21
F5593-1-AF			529191	A3L060132-003	C107 S49	23	WATER	12/05/03	1/02/04	12/19/03	+8N	01	0.1	mg/L		EXP DEL,REPORT NITRATE ONLY,STRONG ODOR! USE HOOD!		7.4A-3.21
F5595-1-AF			529191	A3L060132-004	C107 S49	23	WATER	12/05/03	1/02/04	12/19/03	+8N	01	0.1	mg/L		EXP DEL,REPORT NITRATE ONLY,STRONG ODOR! USE HOOD!		7.4A-4.21
F5598-1-AF			529191	A3L060132-005	C107 S49	23	WATER	12/05/03	1/02/04	12/19/03	+8N	01	0.1	mg/L		EXP DEL,REPORT NITRATE ONLY,STRONG ODOR! USE HOOD!		7.4A-5.21
F57TW-1-AH			541190	A3L080139-001	C110 S61 MS	23	WATER	12/05/03	1/02/04	12/22/03	11F	01	0.1	mg/L		EXP DEL, DISS MET RFF/PRES, SDG# 3L05181.	3L05181	MW-16
F57VC-1-AL			541190	A3L080139-002	C110 S61 MS	23	WATER	12/05/03	1/02/04	12/22/03	11F	01	0.1	mg/L		EXP DEL, DISS MET RFF/PRES, SDG# 3L05181.	3L05181	MW-17
F57VE-1-AL			541190	A3L080139-004	C110 S61 MS	23	WATER	12/05/03	1/02/04	12/22/03	11F	01	0.1	mg/L		EXP DEL, DISS MET RFF/PRES, SDG# 3L05181.	3L05181	FIELD BLANK
F556P-1-A9			364323	A3L060113-001	C102 S50 MS GCS	23	WATER	12/04/03	1/01/04	12/23/03	12F	01	0.1	mg/L		EXP DEL, SDG #3L06113, METDISS FF/PRES.	3L06113	CLF-14C-03/12/04
F557A-1-AL			364323	A3L060113-002	C102 S50 MS GCS	23	WATER	12/05/03	1/02/04	12/23/03	12F	01	0.1	mg/L		EXP DEL, SDG #3L06113, METDISS FF/PRES.	3L06113	CLF-19C-03/12/05
F557C-1-AL			364323	A3L060113-003	C102 S50 MS GCS	23	WATER	12/05/03	1/02/04	12/23/03	12F	01	0.1	mg/L		EXP DEL, SDG #3L06113, METDISS FF/PRES.	3L06113	CLF-07B-03/12/05
F557D-1-AL			364323	A3L060113-004	C102 S50 MS GCS	23	WATER	12/05/03	1/02/04	12/23/03	12F	01	0.1	mg/L		EXP DEL, SDG #3L06113, METDISS FF/PRES.	3L06113	CLF-19B-03/12/05
F6CR0-1-A4			529191	A3L100142-001	C117 S61	23	WATER	12/09/03	1/06/04	12/23/03	12N	01	0.1	mg/L		EXP DEL,REPORT NITRATE ONLY, STRONG ODOR USE HOOD.LIMITED VOLUME.		7.3B-1.21
F6CTM-1-AF			529191	A3L100142-002	C117 S61	23	WATER	12/09/03	1/06/04	12/23/03	12N	01	0.1	mg/L		EXP DEL,REPORT NITRATE ONLY, STRONG ODOR USE HOOD.LIMITED VOLUME.		7.3B-2.21
F6CTN-1-AF			529191	A3L100142-003	C117 S61	23	WATER	12/09/03	1/06/04	12/23/03	12N	01	0.1	mg/L		EXP DEL,REPORT NITRATE ONLY, STRONG ODOR USE HOOD.LIMITED VOLUME.		7.3B-3.21

NO 6X/1

3159 NO3
3160 NO2 NN3161
] 5

1-5 - P091505
2-3

1491

Severn Trent Laboratories, Inc.
INCOMPLETE ANALYSES - **WET**

WORK ORDER	RAD LVL	QC BATCH	CLIENT	LAB NUMBER	STORAGE LOCATION	EX	MATRIX	SAMPLE DATE	EXPIRE DATE	DUE DATE	DAYS LEFT	QC	RL	UNITS	MS RUN#	SAMPLE COMMENTS	S.D.G. NO.	CLIENT I.D.
METHOD: CM MCAWW		353.2		**Nitrate-Nitrite**														
F6CTR-1-AF	__		529191	A3L100142-004	C117 S61	23	WATER	12/09/03	1/06/04	12/23/03	12N	01	0.1	mg/L		EXP DEL,REPORT NITRATE ONLY, STRONG ODOR USE HOOD.LIMITED VOLUME.		7.3B-4.21
F6CTT-1-AF	__		529191	A3L100142-005	C117 S61	23	WATER	12/09/03	1/06/04	12/23/03	12N	01	0.1	mg/L		EXP DEL,REPORT NITRATE ONLY, STRONG ODOR USE HOOD.LIMITED VOLUME.		7.3B-5.21
F6C15-1-AF	__		105777	A3L100170-004	C114 S60 MS	23	WATER	12/08/03	1/05/04	12/23/03	12N	01	0.1	mg/L		REPORT QC, NPDES.		420ED
F6C2R-1-AF	__		105777	A3L100170-005	C114 S60 MS	23	WATER	12/08/03	1/05/04	12/23/03	12N	01	0.1	mg/L		REPORT QC, NPDES.		420D
F6C2W-1-AF	__		105777	A3L100170-006	C114 S60 MS	23	WATER	12/09/03	1/06/04	12/23/03	12N	01	0.1	mg/L		REPORT QC, NPDES.		205S
F6C3D-1-AF	__		105777	A3L100170-009	C114 S60 MS	23	WATER	12/09/03	1/06/04	12/23/03	12N	01	0.1	mg/L		REPORT QC, NPDES.		211S
F6DWG-1-A7	__		396818	A3L100289-003	C118 S63 MS OUT	23	WATER	12/08/03	1/05/04	12/24/03	13N	01	0.5	mg/L		REPORT QC. 8011 OUT.		A-13SZSR
F591H-1-A6	__		364323	A3L090177-001	C110 S49	23	WATER	12/08/03	1/05/04	12/29/03	18F	01	0.1	mg/L		EXP DEL, SDG #3L0611 3, METDISS FF/PRES.	3L06113	SQ-07A-03/12/08
F5919-1-AH	__		364323	A3L090177-002	C110 S49	23	WATER	12/08/03	1/05/04	12/29/03	18F	01	0.1	mg/L		EXP DEL, SDG #3L0611 3, METDISS FF/PRES.	3L06113	SQ-07B-03/12/08
F592C-1-AH	__		364323	A3L090177-003	C110 S49	23	WATER	12/08/03	1/05/04	12/29/03	18F	01	0.1	mg/L		EXP DEL, SDG #3L0611 3, METDISS FF/PRES.	3L06113	SQ-03B-03/12/08
F592M-1-AH	__		364323	A3L090177-004	C110 S49	23	WATER	12/08/03	1/05/04	12/29/03	18F	01	0.1	mg/L		EXP DEL, SDG #3L0611 3, METDISS FF/PRES.	3L06113	SQ-03A-03/12/08
F592Q-1-AH	__		364323	A3L090177-005	C110 S49	23	WATER	12/08/03	1/05/04	12/29/03	18F	01	0.1	mg/L		EXP DEL, SDG #3L0611 3, METDISS FF/PRES.	3L06113	XX-03-03/12/08
F6CQM-1-A6	__		364323	A3L100133-001	C113 S49	23	WATER	12/09/03	1/06/04	12/30/03	19F	01	0.1	mg/L		EXP DEL, SDG #3L0611 3, METDISS FF/PRES.	3L06113	SQ-02-03/12/09
F6CQ4-1-AH	__		364323	A3L100133-002	C113 S49	23	WATER	12/09/03	1/06/04	12/30/03	19F	01	0.1	mg/L		EXP DEL, SDG #3L0611 3, METDISS FF/PRES.	3L06113	SQ-02V1-03/12/09
F6CRF-1-AH	__		364323	A3L100133-003	C113 S49	23	WATER	12/09/03	1/06/04	12/30/03	19F	01	0.1	mg/L		EXP DEL, SDG #3L0611 3, METDISS FF/PRES.	3L06113	SQ-02V2-03/12/09
F6EGE-1-AK	__		409326	A3L100346-002	C114 S60	23	WATER	12/09/03	1/06/04	12/31/03	20N	01	0.1	mg/L		RPT QC.		SANITARY-COMPOSI
F6EGR-1-AW	__		409326	A3L100346-004	C114 S60	23	WATER	12/09/03	1/06/04	12/31/03	20N	01	0.1	mg/L		RPT QC.		OUTFALL 004-COMP

Total Number of Incomplete Analyses = 33

ACTION CODES:

- * - Denotes Client Requested Due Date
- Q - QC Spike With This Sample and Analyses
- S - CLIENT REQ. QC Spike
- # - Expires Before Due Date
- P - To be Prepped
- C - To be Calculated
- E - Expanded Del.
- + - Check Worksheet for Comments
- @ - Additional Compounds
- X - Client Req. Code
- A - To be Analyzed
- ! - Exp. Date Calculated from PREP Date

STATUS CODES:

P - Prepared A - Analyzed C - Completed
O - Out

RQC050 Severn Trent Laboratories, Inc. Run Date: 12/11/03
WET CHEM BATCHSHEET Time: 7:18:47

STL North Canton

PRODUCTION FIGURES - WET CHEM

TOTAL NUMBER	SAMPLE NUMBER	QC	RE-RUN MATRIX	RE-RUN OTHER	MISC NUMBER	TOTAL HOURS	EXPANDED DELIVERABLE

METHOD: CV Demand, Biochemical Oxygen (405.1)
QC BATCH #: **3344509** INITIALS: DATA ENTRY:
PREP DATE: 12/10/03 PREP _____ INITIALS _____
COMP DATE: 12/10/03 ANAL _____ DATE _____
USER: COLONO

Work Order	Lab Number	Structured Analysis	Exp. Del.	Analysis Date	Sample ID:
F6FAT-1-AA	A-3L100000-509-B	XX I 84 CV 03		_____	INTRA-LAB BLANK
F6FAT-1-AC	A-3L100000-509-C	XX I 84 CV 03		_____	INTRA-LAB CHECK
F6FAT-1-AD	A-3L100000-509-L	XX I 84 CV 03		_____	INTRA-LAB CHECK
F6CPD-1-AD	A-3L100126-001	XX I 84 CV 03	B	_____	FINAL DISCHARGE
F6CPG-1-AA	A-3L100126-002	XX I 84 CV 03	B	_____	FINAL DISCHARGE (DUPLICATE)
F6EGE-1-AM	A-3L100346-002	XX I 84 CV 01	A	_____	SANITARY-COMPOSITE
F6EGR-1-A0	A-3L100346-004	XX I 84 CV 01	A	_____	OUTFALL 004-COMPOSITE

Control Limits

(85-115)

F6

(85-115)

STL North Canton General Chemistry Data Review Checklist

Parameter(s): Alkalinity, Total

Batch(es): 3396137

Method #/SOP#: 310.1

Review Items	Level I Review			Level II Review		
A. Initial Calibration	YES	NO	N/A	YES	NO	N/A
1. Initial calibration correlation coefficient ≥ 0.995?			✓			✓
2. Calibration curve consist of the minimum number of calibration standards?			✓			✓
3. ICV analyzed at immediately after calibration and within control limits ? (TRAACS Nitrate/Nitrite, Cyanide 85-115%; all others 90-110%)			✓	✓		
4. ICB analyzed immediately after ICV and within criteria (± RL)?			✓			✓
B. Continuing Calibration						
1. CCV analyzed every 10 samples, at end of sequence and within criteria?			✓	✓		
2. CCB analyzed every 10 samples, at end of sequence & within criteria (±RL)?			✓			✓
C. Sample Results						
1. Were samples with concentrations > the linear range diluted and reanalyzed ?	✓					✓
2. All reported results bracketed by in control QC ?	✓			✓		
3. Sample analyses done within holding time ?	✓			✓		
D. Quality Control						
1. LCS per prep batch and within QC limits ? *(LCSD, where applicable)*	✓			✓		
2. Method blank done per prep batch and < RL. Method blank RL supports the lowest RL reported for the batch?	✓			✓		
3. MS/MSD run at required frequency and evaluated? MS/MSD reported properly and calculated correctly?	✓			✓		
4. Duplicate samples run at required frequency (duplicate sample performed per matrix encountered)?			✓			✓
E. Titrant						
1. Titrant standardized?			✓		✓	
2. If no, standardization expires 12/26/03			✓			
F. Other						
1. Are all nonconformances documented appropriately (NCM or narrative)?			✓			✓
2. Calculations checked for error ?	✓			✓		
3. Transcriptions checked for error ?	✓			✓		
4. All client/project specific requirements met ?	✓			✓		
5. Date/time of preparation and analysis verified as correct ?	✓			✓		
6. Units verified as correct?	✓			✓		
7. Dilutions have been properly applied and RL's adjusted appropriately?	✓					✓
8. SOP followed?	✓			✓		
9. Calculations checked at minimum frequency (at least 20%, 100% for QC)?	✓			✓		
10. All reagent and standard numbers recorded in logbook?	✓			✓		
11. Edits dated and initialed	✓			✓		

Comment on any "NO" response(s):

Level I reviewer: Lou Hylwand Date: 12/12/03

Level II Reviewer: Angela Durica Date: 12/15/03

Level I review:

Report Date: 12/11/03 : 10:33 AM

Calibration Report

Calibration Record # 1730

Calibration Settings

Calibration ID	PH CAL 4-7	Date	12/11/03
Channel	1	Time	10:33 AM
Probe Type	pH	Temperature	295.67 K 22.52 C
Probe ID	PH ELECTRODE	Analysis Type	Single Line Fit

Calibration Results

Slope	-59.773	CorrCoeff	1.0000
Intercept	-18.920	Equation: Y = (59.773) X + (-18.920)	

Calibration Validity **True** Operator A

	Result	Minimum	Maximum
Slope	-59.773	-250.00	-45.00
Intercept	-18.920	-800.00	200.00
Correlation Coefficient	1.0000	1.00	1.00

Note: "True" means the calibration was within the specified ranges
"False" means the calibration was NOT within the specified ranges

Calibration Data	**Standard**	**Reading**
	4.00	160.40
	7.00	-18.92

CALRPRTLive1.SRW

Copyright Hinterland Software Ltd.

1496

Severn Trent Laboratories

Analyst_____
LCS _____
Date _____

Sample Name	Run Date	Run Time	Conductivity	pH	P-Alk	Total Alk	BiCarbonate	Carbonate	Hydroxide	Fluoride	T Hardness	Acid
PH 10	12/11/03	10:40 AM	0000.00	9.9895	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	.00	.00
ALK 44.4 P096506TV=~~54.7~~	12/11/03	10:50 AM	0000.00	8.9349	17.6913	46.3156	10.9330	35.3826	0.0000	0.0000	.00	.00
BLANK	12/11/03	10:59 AM	0000.00	6.9978	0.0000	4.2740	4.2740	0.0000	0.0000	0.0000	.00	.00
PH 7 12/11/03	12/11/03	11:06 AM	0000.00	7.0060	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	.00	.00

1497

Severn Trent Laboratories

Analyst_____
LCS _____
Date _____

Sample Name	Run Date	Run Time	Conductivity	pH	P-Alk	Total Alk	BiCarbonate	Carbonate	Hydroxide	Fluoride	T Hardness	Acid
F6F2H DD3001	12/11/03	11:37 AM	0000.00	8.1646	0.0000	254.6298	254.6298	0.0000	0.0000	0.0000	.00	.00
DD3001 MS	12/11/03	11:54 AM	0000.00	9.7408	170.0976	646.2035	306.0083	340.1952	0.0000	0.0000	.00	.00
DD3001 MSD	12/11/03	12:12 PM	0000.00	9.6919	161.5291	632.2427	309.1845	323.0582	0.0000	0.0000	.00	.00
F6F1C DD3002	12/11/03	12:27 PM	0000.00	7.6005	0.0000	237.8842	237.8842	0.0000	0.0000	0.0000	.00	.00
F6FCE	12/11/03	12:40 PM	0000.00	7.9312	0.0000	197.7918	197.7918	0.0000	0.0000	0.0000	.00	.00
F6FCQ	12/11/03	12:54 PM	0000.00	8.0778	0.0000	245.0194	245.0194	0.0000	0.0000	0.0000	.00	.00
F6FC4	12/11/03	1:07 PM	0000.00	8.0678	0.0000	241.4010	241.4010	0.0000	0.0000	0.0000	.00	.00
F6FA9	12/11/03	1:21 PM	0000.00	8.2796	1.7102	225.6098	222.1895	3.4203	0.0000	0.0000	.00	.00
F6FCR	12/11/03	1:35 PM	0000.00	8.1497	0.0000	253.5168	253.5168	0.0000	0.0000	0.0000	.00	.00
~~F6FCX~~	12/11/03	1:56 PM	0000.00	8.1063	0.0000	243.5759	243.5759	0.0000	0.0000	0.0000	.00	.00
F6FDD	12/11/03	2:05 PM	0000.00	7.0694	0.0000	5.2698	5.2698	0.0000	0.0000	0.0000	.00	.00
F6FCJ	12/11/03	2:18 PM	0000.00	8.1435	0.0000	221.5156	221.5156	0.0000	0.0000	0.0000	.00	.00
F6FC1	12/11/03	2:31 PM	0000.00	8.2117	0.0000	218.0891	218.0891	0.0000	0.0000	0.0000	.00	.00
F6FJH	12/11/03	2:48 PM	0000.00	8.1857	0.0000	396.2664	396.2664	0.0000	0.0000	0.0000	.00	.00
F6FJR	12/11/03	3:04 PM	0000.00	8.2832	12.7509	479.9062	454.4044	25.5017	0.0000	0.0000	.00	.00
PH7-2	12/11/03	3:10 PM	0000.00	7.0080	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	.00	.00

Rerun

more than 10 samples

1498

Severn Trent Laboratories

Analyst_____
LCS _____
Date _____

Sample Name	Run Date	Run Time	Conductivity	pH	P-Alk	Total Alk	BiCarbonate	Carbonate	Hydroxide	Fluoride	T Hardness	Acid
PH7	12/11/03	5:28 PM	0000.00	7.0244	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	.00	.00
F6FDD	12/11/03	5:37 PM	0000.00	6.8611	0.0000	4.6834	4.6834	0.0000	0.0000	0.0000	.00	.00
F6FCJ	12/11/03	5:51 PM	0000.00	8.1539	0.0000	219.6994	219.6994	0.0000	0.0000	0.0000	.00	.00
F6FC1	12/11/03	6:04 PM	0000.00	8.2270	0.0000	216.8178	216.8178	0.0000	0.0000	0.0000	.00	.00
F6FJH	12/11/03	6:20 PM	0000.00	8.2162	5.2507	393.6016	383.1001	10.5015	0.0000	0.0000	.00	.00
F6FJR	12/11/03	6:36 PM	0000.00	8.3718	14.1714	479.7781	451.4354	28.3428	0.0000	0.0000	.00	.00
F6E8R	12/11/03	6:48 PM	0000.00	7.1122	0.0000	15.8752	15.8752	0.0000	0.0000	0.0000	.00	.00
F6E8T	12/11/03	7:01 PM	0000.00	7.7570	0.0000	98.1843	98.1843	0.0000	0.0000	0.0000	.00	.00
F6E8W	12/11/03	7:09 PM	0000.00	4.0411	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	.00	.00
PH7A	12/11/03	7:15 PM	0000.00	7.0102	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	.00	.00

STL North Canton General Chemistry Data Review Checklist

Parameter(s): TDS

Batch(es): 3346635

Method #/SOP#: 160.1

Review Items	Level I Review			Level II Review		
A. Initial Calibration	YES	NO	N/A	YES	NO	N/A
1. Initial calibration correlation coefficient ≥ 0.995?			✓			✓
2. Calibration curve consist of the minimum number of calibration standards?			✓			✓
3. ICV analyzed at immediately after calibration and within control limits ? (TRAACS Nitrate/Nitrite, Cyanide 85-115%; all others 90-110%)			✓			✓
4. ICB analyzed immediately after ICV and within criteria (± RL)?			✓			✓
B. Continuing Calibration						
1. CCV analyzed every 10 samples, at end of sequence and within criteria?			✓			✓
2. CCB analyzed every 10 samples, at end of sequence & within criteria (±RL)?			✓			✓
C. Sample Results						
1. Were samples with concentrations > the linear range diluted and reanalyzed ?			✓	✓		
2. All reported results bracketed by in control QC ?	✓			✓		
3. Sample analyses done within holding time ?	✓			✓		
D. Quality Control						
1. LCS per prep batch and within QC limits ? *(LCSD, where applicable)*	✓			✓		
2. Method blank done per prep batch and < RL. Method blank RL supports the lowest RL reported for the batch?	✓			✓		
3. MS/MSD run at required frequency and evaluated? MS/MSD reported properly and calculated correctly?	X		✓			✓
4. Duplicate samples run at required frequency (duplicate sample performed per matrix encountered)?	✓			✓		
E. Titrant						
1. Titrant standardized?			✓			✓
2. If no, standardization expires						
F. Other						
1. Are all nonconformances documented appropriately (NCM or narrative)?			✓			✓
2. Calculations checked for error ?	✓			✓		
3. Transcriptions checked for error ?	✓			✓		
4. All client/project specific requirements met ?	✓			✓		
5. Date/time of preparation and analysis verified as correct ?	✓			✓		
6. Units verified as correct?	✓			✓		
7. Dilutions have been properly applied and RL's adjusted appropriately?			✓	✓		
8. SOP followed?	✓			✓		
9. Calculations checked at minimum frequency (at least 20%, 100% for QC)?			✓	✓		
10. All reagent and standard numbers recorded in logbook?			✓	✓		
11. Edits dated and initialed			✓	✓		

Comment on any "NO" response(s):

Level I reviewer: Bruce Woodward **Date:** 12/16/03

Level II Reviewer: Angela Dura **Date:** 12/16/03

Level I review:

STL
North Canton, OH
TDS/TSS Logsheet

Analysis: TDS

Prep Date:	12/12/03	wt 2. date:	12/15/03 12/5/03	Batch:	3346635
Time in:	23:45	Time out:	14:30		
Temp in:	98 C	Temp out:	~~4/7/03~~ BW 98	LCS No.	P097506
				LCS Prep:	
wt 1. date:	15-Dec	wt 3. date:	12/15/03		
Time out:	10:30	Time out:	7pm	Analyst:	DB
Temp out:	98 0:00	Temp out:	181		TV=276

Sample No.	Tare wt (g)	Sample (ml)	wt 1. (g)	wt 2. (g)	wt 3. (g)	Final wt (g)	diff (g)	Result mg/L	Conductivity Screen
BLK	69.4263	100	69.4266	69.4270		69.4266	0.0003	3	NA
LCS	66.3888	100	66.4185	66.4184		66.4184	0.0296	296	NA
F6E8D	67.4554	100	67.5474	67.5457	67.5453	67.5453	0.0899	899	1345
F6E8R	67.4715	100	67.5145	67.5145		67.5145	0.043	430	641
F6E8T	70.4205	100	70.4702	70.4705		70.4702	0.0497	497	739
F6E8W	71.1304	100	71.1320	71.1219	71.1217	71.1217	-0.0087	-87	~~70~~
F6FJH	67.1033	100	67.1992	67.1988		67.1988	0.0955	955	1279
F6FJR	68.8611	100	68.9379	68.9380		68.9379	0.0768	768	1229
F6FND	68.0703	100	68.1708	68.1708		68.1708	0.1005	1005	1581
F6FN6	69.7809	100	69.8886	69.8875	69.8880	69.8875	0.1066	1066	1473
F6FVP	68.5226	50	68.6361	68.6325	68.6315	68.6315	0.1089	2178	3020
F6FWF	68.0628	100	68.1500	68.1459	68.1453	68.1453	0.0825	825	1415
F6FWJ	67.744	50	67.8383	67.8380		67.8380	0.094	1880	3370
F6FWR	67.8221	50	67.9178	67.9170	67.9177	67.9170	0.0949	1898	3390
F6F0C	67.7844	25	67.8502	67.8486	67.8479	67.8479	0.0635	2540	4560
F6F0G	66.7131	100	66.7817	66.7802	66.7799	66.7799	0.0668	668	1285
F6F0J	66.2029	100	66.2504	66.2495	66.2495	66.2495	0.0466	466	787
F6F0X	67.2591	100	67.3363	67.3358		67.3358	0.0767	767	1280
F6F1C	69.8469	2.5	69.9312	69.9308		69.9308	0.0839	33560	43600
F6F2H	67.2651	100	67.3236	67.3235		67.3235	0.0584	584	2440
F6G8D	66.5275	100	66.5708	66.5710		66.5708	0.0433	433	818
F6E8R-X	68.1766	100	68.2200	68.2203		68.2200	0.0434	434	641
F6FWF-X	66.4561	100	66.5483	66.5465	66.5429	66.5429	0.0868	868	1415

107.24%

rerun remove from batch 12/16/03 AS

STL North Canton General Chemistry Data Review Checklist

Parameter(s): TSS

Batch(es): 3346636/3349480

Method #/SOP#: 160.2

Review Items	Level I Review			Level II Review		
A. Initial Calibration	YES	NO	N/A	YES	NO	N/A
1. Initial calibration correlation coefficient ≥ 0.995?			✓			✓
2. Calibration curve consist of the minimum number of calibration standards?			✓			✓
3. ICV analyzed at immediately after calibration and within control limits ? (TRAACS Nitrate/Nitrite, Cyanide 85-115%; all others 90-110%)			✓			✓
4. ICB analyzed immediately after ICV and within criteria (± RL)?			✓			✓
B. Continuing Calibration						
1. CCV analyzed every 10 samples, at end of sequence and within criteria?			✓			✓
2. CCB analyzed every 10 samples, at end of sequence & within criteria (±RL)?			✓			✓
C. Sample Results						
1. Were samples with concentrations > the linear range diluted and reanalyzed ?			✓	✓		
2. All reported results bracketed by in control QC ?	✓			✓		
3. Sample analyses done within holding time ?				✓		
D. Quality Control						
1. LCS per prep batch and within QC limits ? *(LCSD, where applicable)*	✓			✓		
2. Method blank done per prep batch and < RL. Method blank RL supports the lowest RL reported for the batch?	✓			✓		
3. MS/MSD run at required frequency and evaluated? MS/MSD reported properly and calculated correctly?			✓			✓
4. Duplicate samples run at required frequency (duplicate sample performed per matrix encountered)?	✓			✓		
E. Titrant						
1. Titrant standardized?			✓			✓
2. If no, standardization expires						
F. Other						
1. Are all nonconformances documented appropriately (NCM or narrative)?			✓			✓
2. Calculations checked for error ?	✓			✓		
3. Transcriptions checked for error ?	✓			✓		
4. All client/project specific requirements met ?	✓			✓		
5. Date/time of preparation and analysis verified as correct ?	✓			✓		
6. Units verified as correct?	✓			✓		
7. Dilutions have been properly applied and RL's adjusted appropriately?			✓	✓		✓
8. SOP followed?	✓			✓		
9. Calculations checked at minimum frequency (at least 20%, 100% for QC)?			✓	✓		
10. All reagent and standard numbers recorded in logbook?			✓	✓		
11. Edits dated and initialed			✓			✓

Comment on any "NO" response(s):

Level I reviewer: Bruce Wadsworth **Date:** 12/15/03

Level II Reviewer: Angela Dura **Date:** 12/15/03

Level I review:

STL
North Canton, OH
TDS/TSS Logsheet

Analysis: TSS

3349480

Prep Date:	12/12/03	wt 2. date:	12/15/03	Batch:	3346636
Time in:	22:45	Time out:	13:00		
Temp in:	104 C	Temp out:	4/13/00	LCS No.	P096507
				LCS Prep:	12/12/03
wt 1. date:	12/15/03	wt 3. date:			TV=32.4
Time out:	9:00	Time out:		Analyst:	DB
Temp out:	4/13/00	Temp out:			

Sample No.	Tare wt (g)	Sample (ml)	wt 1. (g)	wt 2. (g)	wt 3. (g)	Final wt (g)	diff (g)	Result mg/L
BLK 1	0.1134	100	0.1135	0.1135		0.1135	0.0001	1
LCS 1	0.1143	100	0.1174	0.1173		0.1173	0.003	30
F6C1Q	0.113	100	0.1133	0.1131		0.1131	0.0001	1
F6DR1	0.1138	100	0.1143	0.1141		0.1141	0.0003	3
F6CPD	0.1146	100	0.1154	0.1152		0.1152	0.0006	6
F6CPF	0.1132	100	0.1143	0.1141		0.1141	0.0009	9
F6CXH	0.1135	50	0.1136	0.1137		0.1136	0.0001	2
F6EGE	0.1127	100	0.1274	0.1270		0.1270	0.0143	143
F6EGR	0.1137	100	0.1232	0.1230		0.1230	0.0093	93
F6DQ4	0.1145	100	0.1149	0.1150		0.1149	0.0004	4
F6DRG	0.1121	100	0.1128	0.1130		0.1128	0.0007	7
F6E8D	0.1145	100	0.1157	0.1156		0.1156	0.0011	11
F6E8R	0.1133	100	0.1137	0.1135		0.1135	0.0002	2
F6E8T	0.1139	100	0.1137	0.1139		0.1137	-0.0002	-2
F6E8W	0.1112	100	0.1115	0.1113		0.1113	0.0001	1
F6FEJ	0.1129	100	0.1152	0.1148		0.1148	0.0019	19
F6FM1	0.1132	100	0.1136	0.1134		0.1134	0.0002	2
F6FND	0.1157	100	0.1176	0.1174		0.1174	0.0017	17
F6FN6	0.1144	100	0.1152	0.1147		0.1147	0.0003	3
F6FVE	0.1148	100	0.1164	0.1163		0.1163	0.0015	15
F6FWL	0.1137	100	0.1155	0.1152		0.1152	0.0015	15
F6E8D-X	0.1123	100	0.1131	0.1131		0.1131	0.0008	8
F6FND-X	0.1142	100	0.1159	0.1160		0.1159	0.0017	17
F6CXH	0.1123	100	0.1129	0.1129		0.1129	0.0006	6
BLK 2	0.1138	100	0.1138	0.1138		0.1138	0	0
LCS 2	0.1137	100	0.1170	0.1168		0.1168	0.0031	31
F6F3X	0.1115	100	0.1173	0.1172		0.1172	0.0057	57
F6F34	0.1138	100	0.1161	0.1161		0.1161	0.0023	23
F6GWK	0.1136	100	0.1141	0.1142		0.1141	0.0005	5
F6G3P	0.1134	100	0.1136	0.1135		0.1135	0.0001	1
F6G36	0.1139	100	0.1143	0.1140		0.1140	0.0001	1
F6G39	0.1144	100	0.1148	0.1148		0.1148	0.0004	4
F6F1C	0.1136	100	0.1177	0.1175		0.1175	0.0039	39
F6F2H	0.1142	100	0.1146	0.1146		0.1146	0.0004	4
F6F2H-X	0.1145	100	0.1149	0.1150		0.1149	0.0004	4
F6G8D	0.1144	100	0.1150	0.1148		0.1148	0.0004	4

92.59%

* TSS only bottle
-not reported

* pH only bottle

95.67%

STL North Canton General Chemistry Data Review Checklist

Parameter(s): T-Alk / Bi-carb / Carb

Batch(es): 3349138/9/40/41/44

Method #/SOP#: 310.1

Review Items	Level I Review			Level II Review		
A. Initial Calibration	YES	NO	N/A	YES	NO	N/A
1. Initial calibration correlation coefficient ≥ 0.995?	✓					✓
2. Calibration curve consist of the minimum number of calibration standards?	✓			✓		
3. ICV analyzed at immediately after calibration and within control limits ? (TRAACS Nitrate/Nitrite, Cyanide 85-115%; all others 90-110%)			✓	✓		
4. ICB analyzed immediately after ICV and within criteria (± RL)?			✓			✓
B. Continuing Calibration						
1. CCV analyzed every 10 samples, at end of sequence and within criteria?			✓	✓		
2. CCB analyzed every 10 samples, at end of sequence & within criteria (±RL)?			✓			✓
C. Sample Results						
1. Were samples with concentrations > the linear range diluted and reanalyzed ?	✓			✓		
2. All reported results bracketed by in control QC ?	✓			✓		
3. Sample analyses done within holding time ?	✓			✓		
D. Quality Control						
1. LCS per prep batch and within QC limits ? *(LCSD, where applicable)*	✓			✓		
2. Method blank done per prep batch and < RL. Method blank RL supports the lowest RL reported for the batch?	✓			✓		
3. MS/MSD run at required frequency and evaluated? MS/MSD reported properly and calculated correctly?	✓			✓		
4. Duplicate samples run at required frequency (duplicate sample performed per matrix encountered)?	✓			✓		
E. Titrant						
1. Titrant standardized?			✓		✓	
2. If no, standardization expires 12/26/03						
F. Other						
1. Are all nonconformances documented appropriately (NCM or narrative)?			✓			✓
2. Calculations checked for error ?	✓					✓
3. Transcriptions checked for error ?	✓			✓		
4. All client/project specific requirements met ?	✓			✓		
5. Date/time of preparation and analysis verified as correct ?	✓			✓		
6. Units verified as correct?	✓			✓		
7. Dilutions have been properly applied and RL's adjusted appropriately?			✓	✓		
8. SOP followed?	✓			✓		
9. Calculations checked at minimum frequency (at least 20%, 100% for QC)?			✓	✓		
10. All reagent and standard numbers recorded in logbook?			✓	✓		
11. Edits dated and initialed	✓			✓		

Comment on any "NO" response(s):

Level I reviewer: Bruce Woodward **Date:** 12/15/03

Level II Reviewer: Angela Dura **Date:** 12/17/03

Level I review:

1504

Severn Trent Laboratories

Analyst Bmw / LH
LCS
Date 12/2/03

Sample Name	Run Date	Run Time	Conductivity	pH	P-Alk	Total Alk	BiCarbonate	Carbonate	Hydroxide	Fluoride	T Hardness
PH 10 44.4	12/12/03	8:50 AM	0000.00	9.9851	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	.00
ALK P096506TV ~~54.7~~	12/12/03	9:04 AM	0000.00	8.7945	13.5370	46.3950	19.3210	27.0740	0.0000	0.0000	.00
BLANK	12/12/03	9:14 AM	0000.00	6.7641	0.0000	4.1788	4.1788	0.0000	0.0000	0.0000	.00
PH 7	12/12/03	9:20 AM	0000.00	7.0122 ✓	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	.00
PH7	12/12/03	9:40 AM	0000.00	7.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	.00
F6H3C	12/12/03	9:54 AM	0000.00	8.1546	0.0000	211.6431	211.6431	0.0000	0.0000	0.0000	.00
F6H3E	12/12/03	10:16 AM	0000.00	8.1390	0.0000	230.4425	230.4425	0.0000	0.0000	0.0000	.00
F6H3E MS	12/12/03	10:33 AM	0000.00	9.7563	185.6105	658.0425	286.8215	371.2210	0.0000	0.0000	.00
F6H3E MSD	12/12/03	10:51 AM	0000.00	9.5355	123.1787	544.4556	298.0981	246.3574	0.0000	0.0000	.00
F6H3F	12/12/03	11:04 AM	0000.00	8.1511	0.0000	233.4414	233.4414	0.0000	0.0000	0.0000	.00
F6H3G	12/12/03	11:16 AM	0000.00	7.1845	0.0000	24.2225	24.2225	0.0000	0.0000	0.0000	.00
F6H3H	12/12/03	11:30 AM	0000.00	8.1643	0.0000	206.9040	206.9040	0.0000	0.0000	0.0000	.00
F6H3J	12/12/03	11:44 AM	0000.00	8.1261	0.0000	185.5835	185.5835	0.0000	0.0000	0.0000	.00
F6H3K	12/12/03	11:58 AM	0000.00	8.1279	0.0000	224.4872	224.4872	0.0000	0.0000	0.0000	.00
F6H3L	12/12/03	12:11 PM	0000.00	8.2110	0.0000	185.4315	185.4315	0.0000	0.0000	0.0000	.00
PH7A	12/12/03	12:17 PM	0000.00	7.0205 ✓	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	.00
F6H3M	12/12/03	12:26 PM	0000.00	7.1024	0.0000	4.7525	4.7525	0.0000	0.0000	0.0000	.00
F6H3N	12/12/03	12:40 PM	0000.00	8.1561	0.0000	225.9907	225.9907	0.0000	0.0000	0.0000	.00
F6H3P	12/12/03	12:54 PM	0000.00	8.1841	0.0000	257.5119	257.5119	0.0000	0.0000	0.0000	.00
F6H3Q	12/12/03	1:09 PM	0000.00	8.1886	0.0000	276.4124	276.4124	0.0000	0.0000	0.0000	.00

1505

3349138/9
3349140
3349144
3349141, 7 BW 12/15

Analyst BW / LH
LCS _____
Date _____

Sample Name	Run Date	Run Time	Conductivity	pH	P-Alk	Total Alk	BiCarbonate	Carbonate	Hydroxide	Fluoride	T Hardness
F6H3R	12/12/03	1:23 PM	0000.00	8.2619	0.0000	249.2318	249.2318	0.0000	0.0000	0.0000	.00
14 F6H3T	12/12/03	1:33 PM	0000.00	6.8628	0.0000	10.4720	10.4720	0.0000	0.0000	0.0000	.00
F6H3N DUP	12/12/03	1:47 PM	0000.00	8.1415	0.0000	227.9169	227.9169	0.0000	0.0000	0.0000	.00
F6H3T DUP	12/12/03	2:18 PM	0000.00	6.8423	0.0000	10.4793	10.4793	0.0000	0.0000	0.0000	.00
PH-LCS=7.40	12/12/03	3:03 PM	0000.00	7.4363	0.0000	1882.9263	1882.9263	0.0000	0.0000	0.0000	.00
PH7B	12/12/03	3:09 PM	0000.00	7.0205 ✓	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	.00
F6JX2	12/12/03	3:24 PM	0000.00	8.2081	0.0000	316.1326	316.1326	0.0000	0.0000	0.0000	.00
F6JX2 MS	12/12/03	3:43 PM	0000.00	9.3370	133.7020	627.3724	359.9685	267.4039	0.0000	0.0000	.00
F6JX2 MSD	12/12/03	4:01 PM	0000.00	9.4503	145.9585	643.3988	351.4817	291.9171	0.0000	0.0000	.00
F6JXA	12/12/03	4:21 PM	0000.00	8.1688	3.4647	726.4323	719.5028	6.9295	0.0000	0.0000	.00
F6H52	12/12/03	4:30 PM	0000.00	7.2232	0.0000	4.7017	4.7017	0.0000	0.0000	0.0000	.00
F6H36	12/12/03	4:47 PM	0000.00	6.5329	0.0000	18.3602	18.3602	0.0000	0.0000	0.0000	.00
F6H4K	12/12/03	4:59 PM	0000.00	7.6458	0.0000	45.2299	45.2299	0.0000	0.0000	0.0000	.00
F6H4L	12/12/03	5:11 PM	0000.00	6.7191	0.0000	11.4079	11.4079	0.0000	0.0000	0.0000	.00
F6H4M	12/12/03	5:23 PM	0000.00	7.3772	0.0000	42.8089	42.8089	0.0000	0.0000	0.0000	.00
F6H4N	12/12/03	5:35 PM	0000.00	7.5877	0.0000	100.0867	100.0867	0.0000	0.0000	0.0000	.00
PH7C	12/12/03	5:41 PM	0000.00	7.0245 ✓	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	.00
F6H4P	12/12/03	5:54 PM	0000.00	7.9017	0.0000	157.8067	157.8067	0.0000	0.0000	0.0000	.00
ALK LCS=44.4	12/12/03	6:07 PM	0000.00	8.7573	10.5872	43.9580	22.7837	21.1743	0.0000	0.0000	.00
PH 7D	12/12/03	6:14 PM	0000.00	7.0225	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	.00
F6KN3 5X X5	12/12/03	6:31 PM	0000.00	10.1003	101.2910	289.0133 x5 = 1445	86.4313	202.5820	0.0000	0.0000	.00
F6KN3 MS 5X	12/12/03	7:00 PM	0000.00	10.5496	359.6732	829.6297 x5 = 4148	110.2834	719.3463	0.0000	0.0000	.00
F6KN3 MSD 5X	12/12/03	7:34 PM	0000.00	10.5013	342.8705	795.7793 x5 = 3979	110.0383	685.7410	0.0000	0.0000	.00
F6KM4	12/12/03	7:56 PM	0000.00	8.7609	80.0786	1174.2946	1014.1375	160.1571	0.0000	0.0000	.00
11 F6KN1	12/12/03	8:21 PM	0000.00	8.8030	87.0239	1175.2091	1001.1613	174.0478	0.0000	0.0000	.00

1506

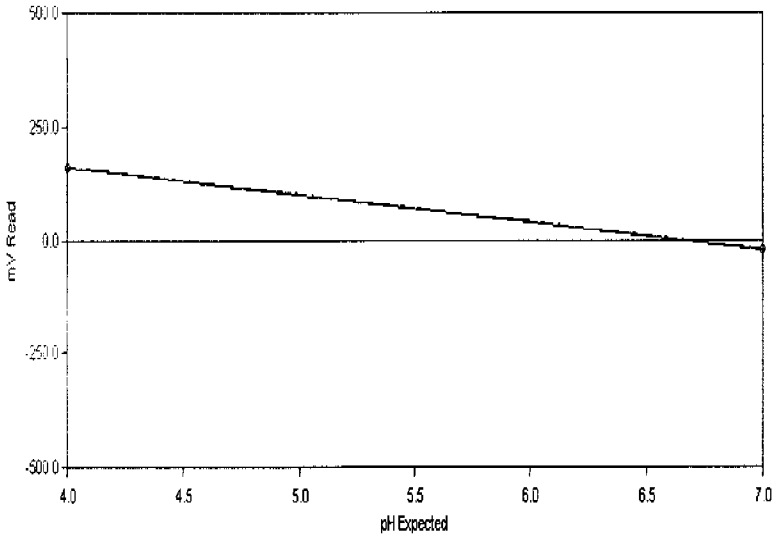
Analyst_____
LCS _____
Date _____

Sample Name	Run Date	Run Time	Conductivity	pH	P-Alk	Total Alk	BiCarbonate	Carbonate	Hydroxide	Fluoride	T Hardness
						3349138/9 3349140	3349144	3349141			
PH 7E	12/12/03	8:27 PM	0000.00	7.0103 ✓	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	.00
F6K2G	12/12/03	8:39 PM	0000.00	7.8840	0.0000	70.1444	70.1444	0.0000	0.0000	0.0000	.00
F6K2N	12/12/03	8:52 PM	0000.00	8.1424	0.0000	99.2348	99.2348	0.0000	0.0000	0.0000	.00
F6K6G	12/12/03	9:05 PM	0000.00	8.1545	0.0000	223.0806	223.0806	0.0000	0.0000	0.0000	.00
F6K8K	12/12/03	9:22 PM	0000.00	8.3123	12.5552	432.8436	407.7333	25.1103	0.0000	0.0000	.00
F6K8K-X	12/12/03	9:38 PM	0000.00	8.2847	9.5559	431.4877	412.3760	19.1117	0.0000	0.0000	.00
F6K8K MS	12/12/03	9:58 PM	0000.00	9.3871	120.3610	711.1577	470.4356	240.7221	0.0000	0.0000	.00
F6K8K MSD	12/12/03	10:18 PM	0000.00	9.4250	119.8282	723.8071	484.1507	239.6564	0.0000	0.0000	.00
F6K8W	12/12/03	10:34 PM	0000.00	8.3311	13.1830	450.1756	423.8096	26.3659	0.0000	0.0000	.00
F6LGP	12/12/03	10:47 PM	0000.00	7.9741	0.0000	72.6872	72.6872	0.0000	0.0000	0.0000	.00
F6LG5	12/12/03	10:59 PM	0000.00	8.1255	0.0000	109.7830	109.7830	0.0000	0.0000	0.0000	.00
PH 7F	12/12/03	11:06 PM	0000.00	7.0163 ✓	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	.00
BLANK A	12/12/03	11:15 PM	0000.00	6.8873	0.0000	4.5663	4.5663	0.0000	0.0000	0.0000	.00
ALK LCS 444	12/12/03	11:28 PM	0000.00	8.6506	7.7280	43.5525	28.0966	15.4559	0.0000	0.0000	.00
PH 7G	12/12/03	11:35 PM	0000.00	7.0184 ✓	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	.00

Report Date: 12/17/03 : 11:46 AM

Calibration Report

Calibration Record # 1731



Calibration Settings

Calibration ID	PH CAL 4-7	Date	12/12/03
Channel	1	Time	8:44 AM
Probe Type	pH	Temperature	295.17 K 22.02 C
Probe ID	PH ELECTRODE	Analysis Type	Single Line Fit

Calibration Results

Slope	-59.610	CorrCoeff	1.0000
Intercept	-19.040	Equation: Y = (-59.610) X + -19.040)	

Calibration Validity **True** Operator A

	Result	Minimum	Maximum
Slope	-59.610	-250.00	-45.00
Intercept	-19.040	-800.00	200.00
Correlation Coefficient	1 0000	1.00	1.00

Note: "True" means the calibration was within the specified ranges
"False" means the calibration was NOT within the specified ranges

Calibration Data

Standard	lot #	Reading
4.00	027703-24	159.79
7.00	035953-24	-19.04
10.00	033158-24	

CALRPRT.SRW

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STL North Canton General Chemistry Data Review Checklist

Parameter(s): N, Trate

Batch(es): 3349149

Method #/SOP#: 353.2

Review Items	Level I Review			Level II Review		
A. Initial Calibration	YES	NO	N/A	YES	NO	N/A
1. Initial calibration correlation coefficient ≥ 0.995?	✓			✓		
2. Calibration curve consist of the minimum number of calibration standards?	✓			✓		
3. ICV analyzed at immediately after calibration and within control limits ? (TRAACS Nitrate/Nitrite, Cyanide 85-115%; all others 90-110%)	✓			✓		
4. ICB analyzed immediately after ICV and within criteria (± RL)?	✓			✓		
B. Continuing Calibration						
1. CCV analyzed every 10 samples, at end of sequence and within criteria?	✓			✓		
2. CCB analyzed every 10 samples, at end of sequence & within criteria (±RL)?	✓			✓		
C. Sample Results						
1. Were samples with concentrations > the linear range diluted and reanalyzed ?	✓			✓		
2. All reported results bracketed by in control QC ?	✓			✓		
3. Sample analyses done within holding time ?	✓			✓		
D. Quality Control						
1. LCS per prep batch and within QC limits ? *(LCSD, where applicable)*	✓			✓		
2. Method blank done per prep batch and < RL. Method blank RL supports the lowest RL reported for the batch?	✓			✓		
3. MS/MSD run at required frequency and evaluated? MS/MSD reported properly and calculated correctly?	✓			✓		
4. Duplicate samples run at required frequency (duplicate sample performed per matrix encountered)?			✓			✓
E. Titrant						
1. Titrant standardized?			✓			✓
2. If no, standardization expires			✓			
F. Other						
1. Are all nonconformances documented appropriately (NCM or narrative)?			✓			✓
2. Calculations checked for error ?	✓			✓		
3. Transcriptions checked for error ?	✓			✓		
4. All client/project specific requirements met ?	✓			✓		
5. Date/time of preparation and analysis verified as correct ?	✓			✓		
6. Units verified as correct?	✓			✓		
7. Dilutions have been properly applied and RL's adjusted appropriately?	✓			✓		
8. SOP followed?	✓			✓		
9. Calculations checked at minimum frequency (at least 20%, 100% for QC)?	✓			✓		
10. All reagent and standard numbers recorded in logbook?	✓			✓		
11. Edits dated and initialed	✓			✓		

Comment on any "NO" response(s):

Level I reviewer: [illegible] Date: 12/15/03

Level II Reviewer: Angela Dima Date: 12/16/03

Level I review:

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Post-run report

STL NORTH CANTON

TRAACS AUTOANALYZER REPORT

Name of Run	:	031212A	Name of Analysis	:	NO2NO3.ANL
Date of Report	:	12/12/03	System No.	:	2
Date of Run	:	12/12/03	Type of System	:	TRAACS
Operator	:	LFH	Start/Stop time	:	11:26 - 12:22
Comment	:				

Batch 3346483

Channel	:	1	2
Method	:	NO2	NO2NO3
Unit	:	mg/L	mg/L
Calibr. Fit	:	Linear	Linear
Corr. Coeff.	:	1.0000	1.0000
Base	:	72	50
Gain	:	37	43
Sensitivity	:	0.2556	0.2501
Sample Limit 1	:		
Sample Limit 2	:		

Pk	Cup		Sample Id	Conc	Conc
0	0	B	Baseline	-0.0039	-0.0146
1	1	P	Primer	0.9875	1.9725
2	1	C	1/2 NO2NO3 NN3161	0.9993	1.9961
3	2	C	0.5/1 NO2NO3 NN3162	0.4994	1.0044
4	3	C	0.25/0.5 NO2NO3 NN3163	0.2544	0.5088
5	4	C	0.1/0.2 NO2NO3 NN3164	0.1002	0.1973
6	5	C	0.04/0.08 NO2NO3 NN3165	0.0367	0.0734
7	1	H1	High	0.9947	2.0117
8	0	L1	Low	-0.0022	-0.0072
9	0	L1	Low	-0.0009	-0.0067
10	2	D	Drift	0.4847	1.0102
11	0	B	Baseline	-0.0039	-0.0146
12	0	N	Null	-0.0051N	-0.0148N
13	2	QC1	ICV	0.4824	0.9948
14	6	QC2	ICB	-0.0015	0.0286
15	7	QC3	LCS P091505	0.0026	1.0009 x20 = 20.018
16	8	S	LCS 1PPM NO3 NN3159	0.0015	0.9181 LCS NO3 batch
17	9	S	F6FM5 5X	0.0708	0.0513 x5 = 0.2565
18	10	S	F6FM7 5X	0.0082	0.0268 x5 = 0.134

Imidicole WR31344
Sulf- WR31128
SAN WR31127
NED WR31125
TriTon WR3932
0.001m Cu sulfate WR3710

NO3 CCV = 0.5124 (103%)
CCB = 0.0286

(94%)

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19	11	S	F6FM8 5X	0.0198	~~0.0258~~ x 5 = 0.099
20	12	S	F6FM9 5X	0.0196	0.0221 x 5 = 0.1105
21	13	S	F6FNC 5X	0.0068	0.0080 x 5 = 0.04
22	14	S	F6FJH	0.0224	0.1227
23	15	S	F6FJR	0.0126	-0.0097
24	16	S	F6FVP	0.0275	0.0413
25	2	QC1	CCV	0.4074	0.9481 ✓
26	6	QC1	CCB	0.0143	0.0450 ✓
27	17	S	F6FWF	0.0226	0.0533
28	18	S	F6FWJ	0.0096	1.7154
29	19	S	F6FWR	0.0049	0.0365
30	20	S	F6F0C	0.0693	0.5414
31	21	S	F6F0C MS	0.2085	0.9677
32	22	S	F6F0C MSD	0.2221	0.9911
33	23	S	F6F0G	0.0300	0.1932
34	24	S	F6F0J	0.0185	0.1270
35	25	S	F6F0X	0.0157	1.1420
36	2	QC1	CCV	0.4018	0.8973
37	6	QC2	CCB	0.0172	0.0545
38	26	S	F6FVE	0.2406	1.6728
39	27	S	F6FWL	0.0281	2.2266*
40	28	S	CAL CK 1.0 N03	0.0079	0.8643R
41	29	S	CAL CK 0.5 NO2	0.4885	0.5419R
42	30	S	F6H4N lcv	0.0027	0.2220 - 0.0027 = 0.2173
43	31	S	F6H4N MS	0.2802	0.6686 - 0.2802 = 0.3884
44	32	S	F6H4N MSD	0.2804	0.6683 - 0.2804 = 0.3879
45	33	S	F6H4M	0.0017	0.9316 - 0.0017 = 0.9299
46	34	S	F6H4P	0.0054	0.3286 - 0.0054 = 0.3232
47	2	QC1	CCV	0.5056	1.0483
48	6	QC2	CCB	-0.0007	0.0391
49	35	S	F6H4K	0.0033	2.2427*
50	36	S	F6H36	0.0015	1.3462R - 0.0015 = 1.3447
51	37	S	F6H4L	0.0002	0.9641R - 0.0002 = 0.9639
52	2	QC1	CCV	0.4877	1.0373
53	6	QC2	CCB	-0.0006	0.0422
54	2	D	Drift	0.4847	1.0102
55	0	B	Baseline	-0.0039	-0.0146
56	0	B	FinalBase	-0.0039	-0.0146

NO3

85-115 CCV 0.4955 (99%)
CCB 0.0373

CCV = 0.5427 (109%)
CCB = 0.0391

CCV = 0.5496 (109%)
CCB = 0.0422

QC Limits

Channel	:	1	2
QC 1	Unused		

QC 2	Unused
QC 3	Unused
QC 4	Unused
QC 5	Unused
QC 6	Unused
QC 7	Unused
QC 8	Unused
QC 9	Unused
QC10	Unused

CORRECTIONS

Channel :	1	2
Baseline :	Yes	Yes
Drift :	Yes	Yes
Carry over :	Yes	Yes
%:	3.7	1.6

* ... Sample offscale
\+ ... Result higher than sample limit
\- ... Result lower than sample limit
P ... Standard passed
F ... Standard failed
N ... Value not calculated or not used
R ... Resample after offscale
M ... Peak marker moved manually
D ... Diluted sample

** <END OF REPORT> **

STL NORTH CANTON

TRAACS AUTOANALYZER REPORT

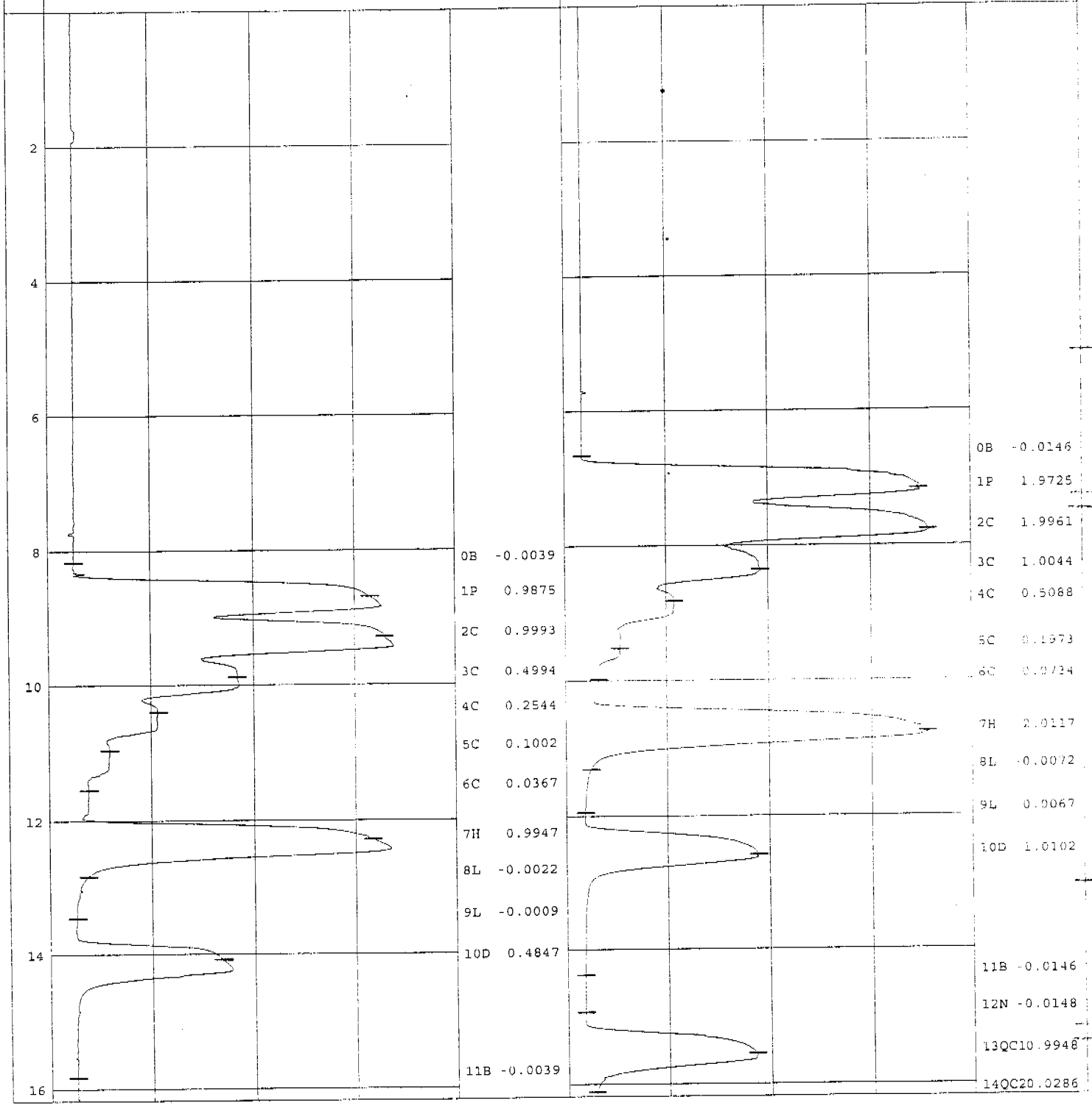
Name of run :031212A.RUN
Comment :

Name of analysis :NO2NO3.ANL

min

Channel : 1
Method :NO2
Unit :mg/L
Base : 72
Gain : 37
Corr. : 1.0000

Channel : 2
Method :NO2NO3
Unit :mg/L
Base : 50
Gain : 43
Corr. : 1.0000



STL NORTH CANTON

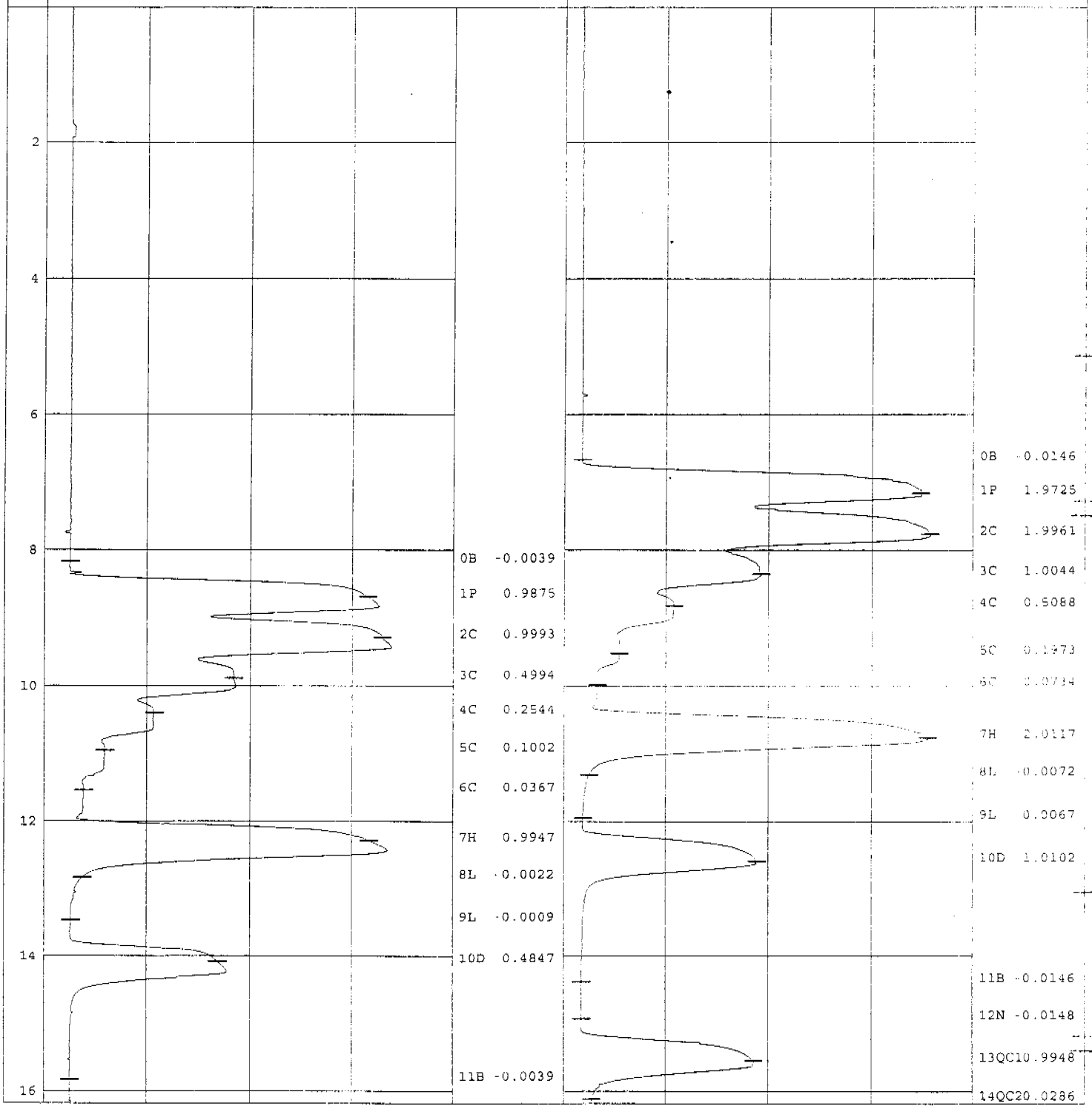
TRAACS AUTOANALYZER REPORT

Name of run :031212A.RUN

Comment :

Name of analysis :NO2NO3.ANL

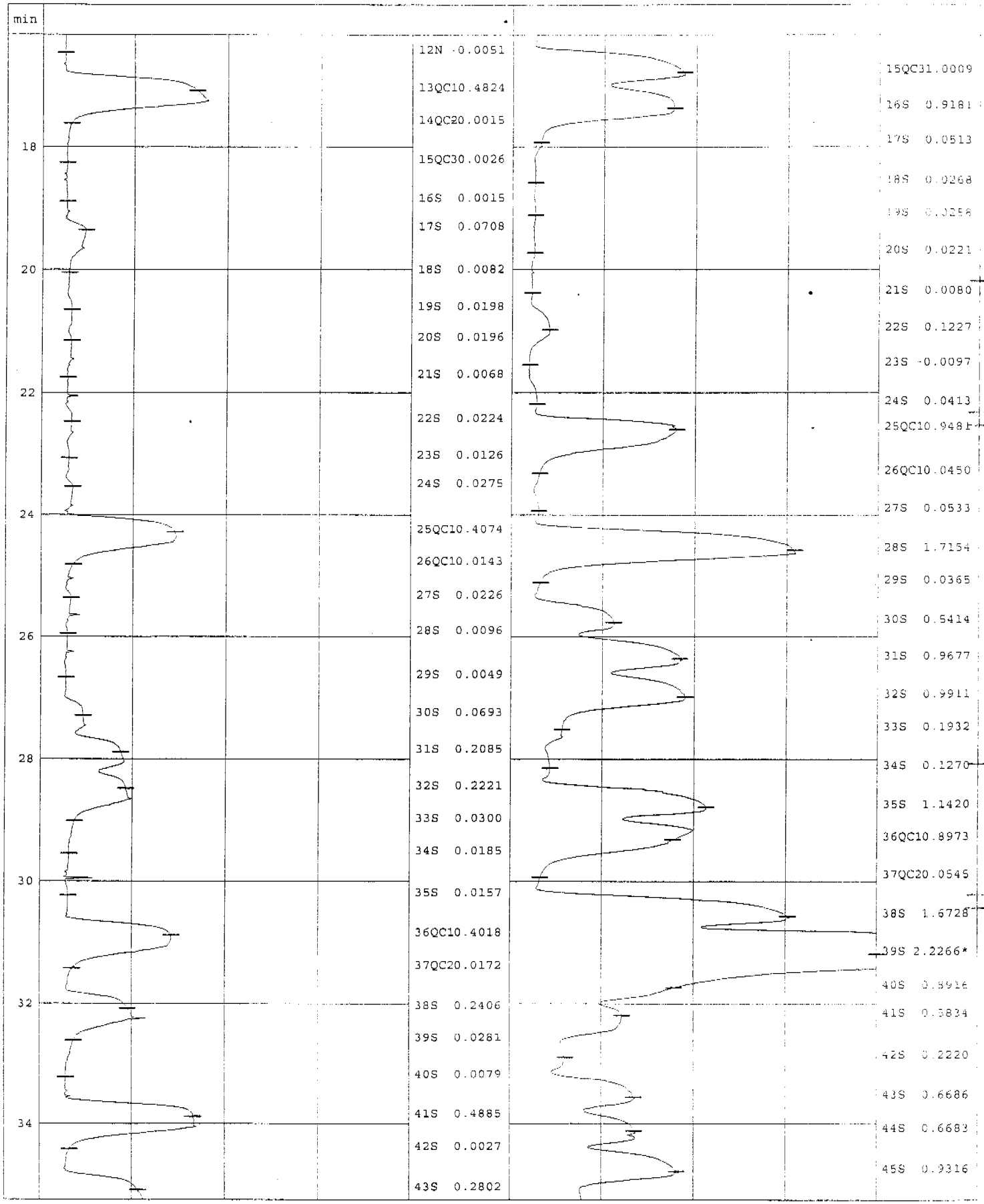
min	Channel 1	Channel 2
	Method :NO2	Method :NO2NO3
	Unit :mg/L	Unit :mg/L
	Base : 72	Base : 50
	Gain : 37	Gain : 43
	Corr. : 1.0000	Corr. : 1.0000



Name of run :031212A.RUN

Name of analysis :NO2NO3.ANL

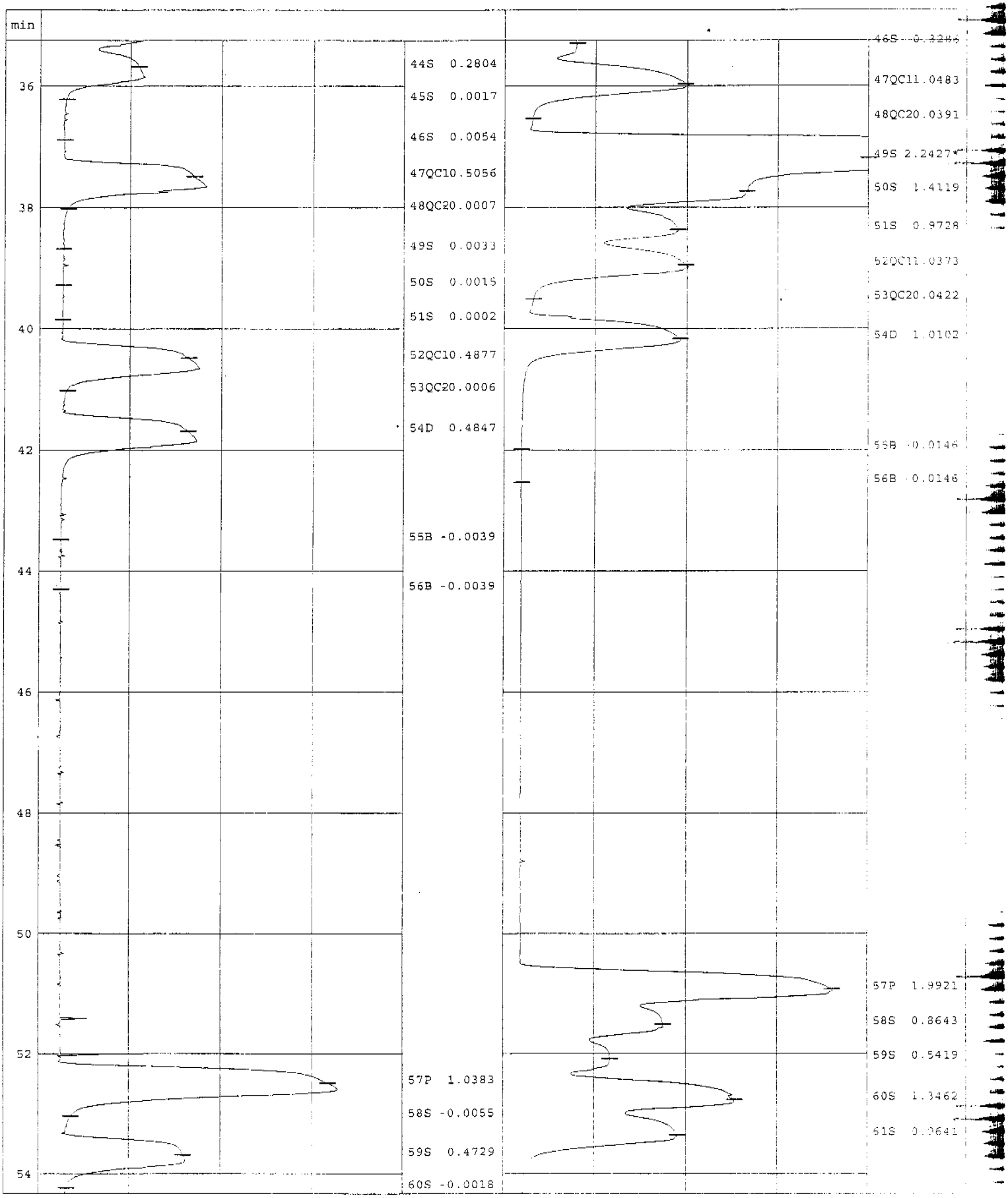
Comment :



Name of run :031212A.RUN

Comment :

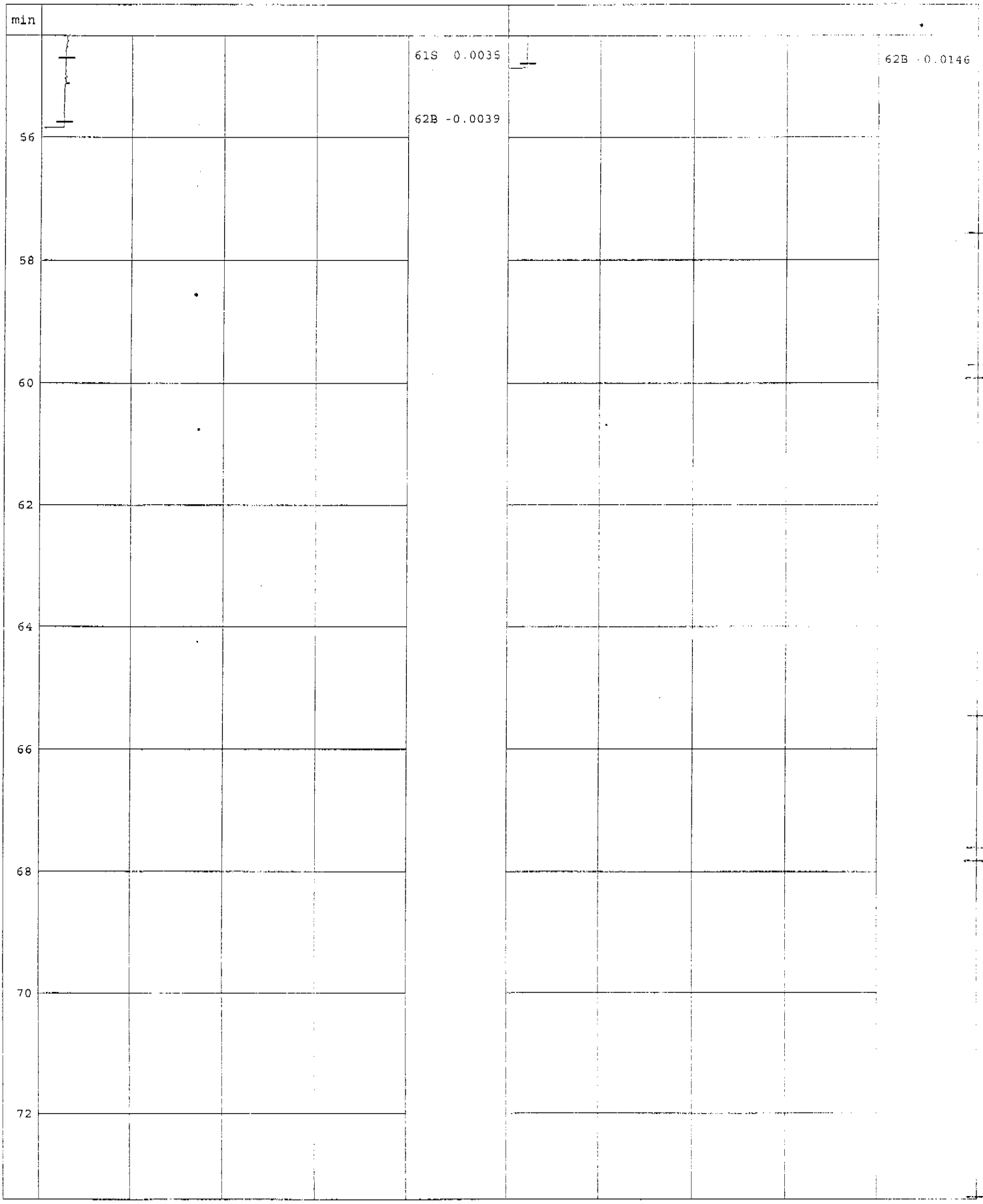
Name of analysis :NO2NO3.ANL



Name of run :031212A.RUN

Name of analysis :NO2NO3.ANL

Comment :



STL NORTH CANTON

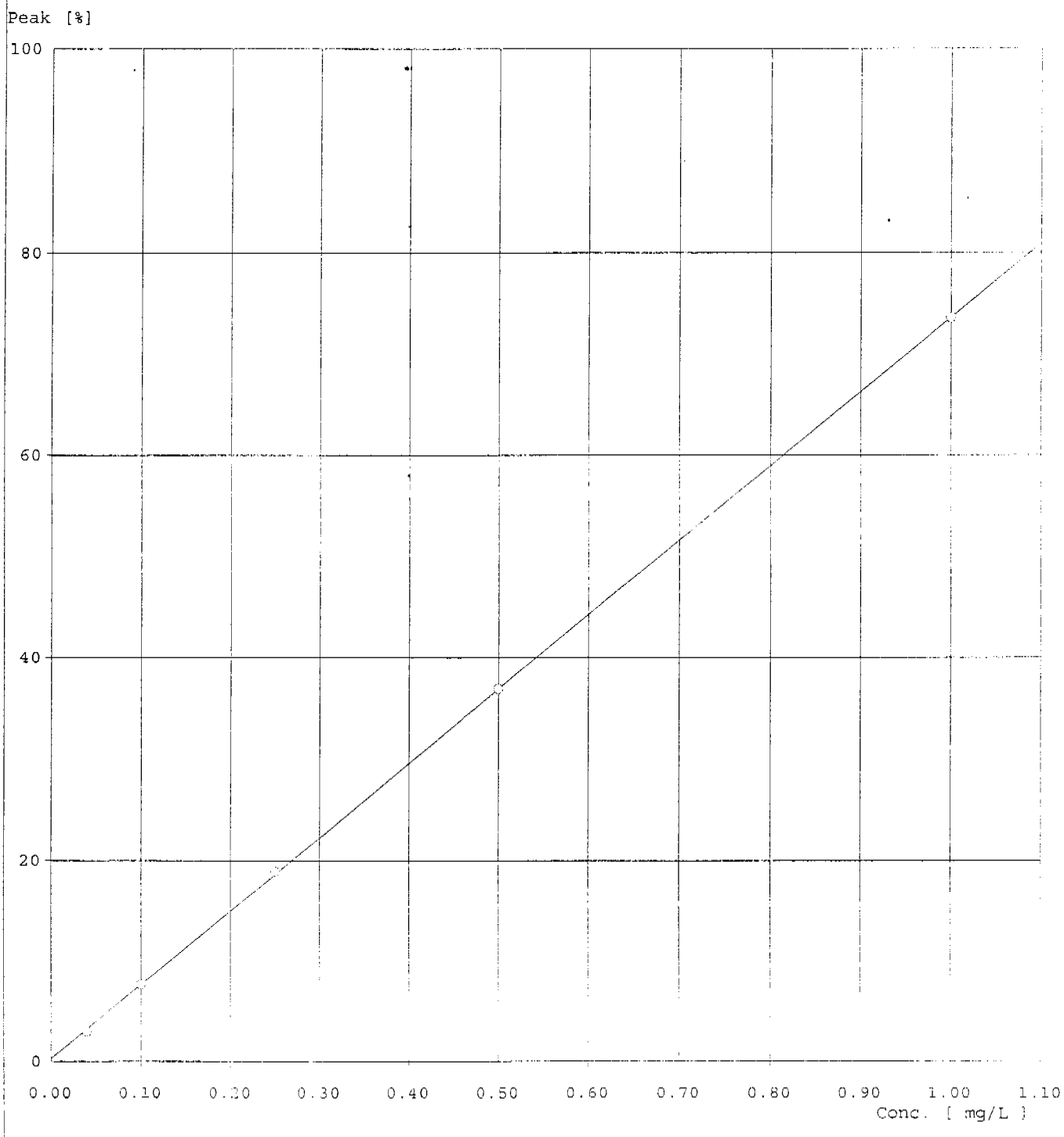
TRAACS AUTOANALYZER REPORT

Name of run :031212A.RUN

Comment :

Name of analysis :NO2NO3.ANL

Channel :1
Method :NO2
Curve fit :linear a=0.0000208 b=-0.0901712
Corr. coeff. :1.0000



STL NORTH CANTON

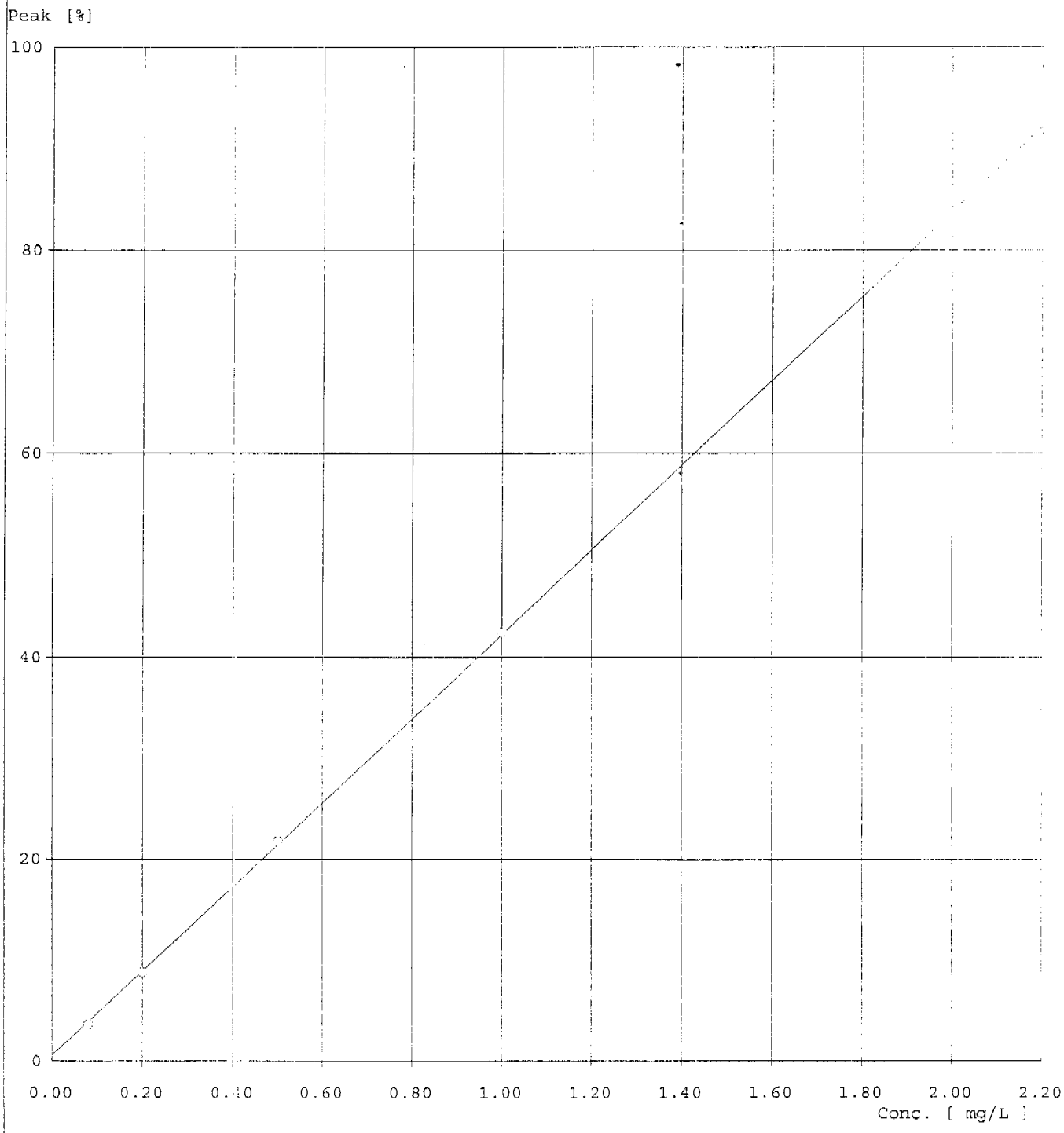
TRAACS AUTOANALYZER REPORT

Name of run :031212A.RUN

Name of analysis :NO2NO3.ANL

Comment :

Channel :2
Method :NO2NO3
Curve fit :linear a=0.0000367 b=-0.1206652
Corr. coeff. :1.0000



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STL NORTH CANTON

TRAACS AUTOANALYZER REPORT

Name of Run	: 031212B	Name of Analysis	: NO2NO3
Date of Report	: 12/12/03	System No.	: 2
Date of Run	: 12/12/03	Type of System	: TRAACS
Operator	: LFH	Start/Stop time	: 13:10 - 13:37
Comment	:		

Channel	:	1	2
Method	:	NO2	NO2NO3
Unit	:	mg/L	mg/L
Calibr. Fit	:	Linear	Linear
Corr. Coeff.	:	0.9999	1.0000
Base	:	72	50
Gain	:	37	43
Sensitivity	:	0.2538	0.2571
Sample Limit 1	:		
Sample Limit 2	:		

Pk	Cup		Sample Id	Conc	Conc
0	0	B	Baseline	0.0150	-0.0151
1	1	P	Primer	0.9824	1.9790
2	1	C	1/2 NO2NO3	1.0031	1.9998
3	2	C	0.5/1 NO2NO3	0.4935	0.9972
4	3	C	0.25/0.5 NO2NO3	0.2498	0.5058
5	4	C	0.1/0.2 NO2NO3	0.0984	0.2031
6	5	C	0.04/0.08 NO2NO3	0.0451	0.0741
7	1	H1	High	0.9973	2.0179
8	0	L1	Low	0.0164	-0.0064
9	0	L1	Low	0.0166	-0.0058
10	2	D	Drift	0.4758	0.9935
11	0	B	Baseline	0.0150	-0.0151
12	0	N	Null	0.0156N	-0.0151N
13	2	QC1	ICV	0.4668	0.9995
14	6	QC2	ICB	0.0187	0.0306
15	7	QC3	LCS P091505	0.0220	1.0409
16	8	S	LCS 1PPM NO3	0.0200	~~0.9574~~
17	27	S	F6FWL 20X	0.0196	0.3692
18	35	S	F6H4K 20X	0.0196	0.3167

NO3 CCV = 0.5327 (107%)
CCB = 0.0119

x20 = 20.818 (98%)

x20 = 7.384

x20 = 6.334

x20 = 0.392

- 0.392

5.942

BRAN+LUEBBE AACE 5.23

Post-run report

								NO3
19	38	S	D3003 FGJXA	0.0340	-0.0182	ND		ND
20	39	S	D3004 FGJX2	0.0399	-0.0087	ND		ND
21	2	QC1	CCV	0.5509	1.0004	CCV =	0.4495	(90%)
22	6	QC2	CCB	0.0207	0.0341	CCB =	0.0134	
23	2	D	Drift	0.4758	0.9935			
24	0	B	Baseline	0.0150	-0.0151			
25	0	B	FinalBase	0.0150	-0.0151			

QC Limits

Channel	:	1	2
QC 1	Unused		
QC 2	Unused		
QC 3	Unused		
QC 4	Unused		
QC 5	Unused		
QC 6	Unused		
QC 7	Unused		
QC 8	Unused		
QC 9	Unused		
QC10	Unused		

CORRECTIONS

Channel	:	1	2
Baseline	:	Yes	Yes
Drift	:	Yes	Yes
Carry over	:	Yes	Yes
	%:	1.5	1.8

---

* ... Sample offscale
\+ ... Result higher than sample limit
\- ... Result lower than sample limit
P ... Standard passed
F ... Standard failed
N ... Value not calculated or not used
R ... Resample after offscale
M ... Peak marker moved manually
D ... Diluted sample

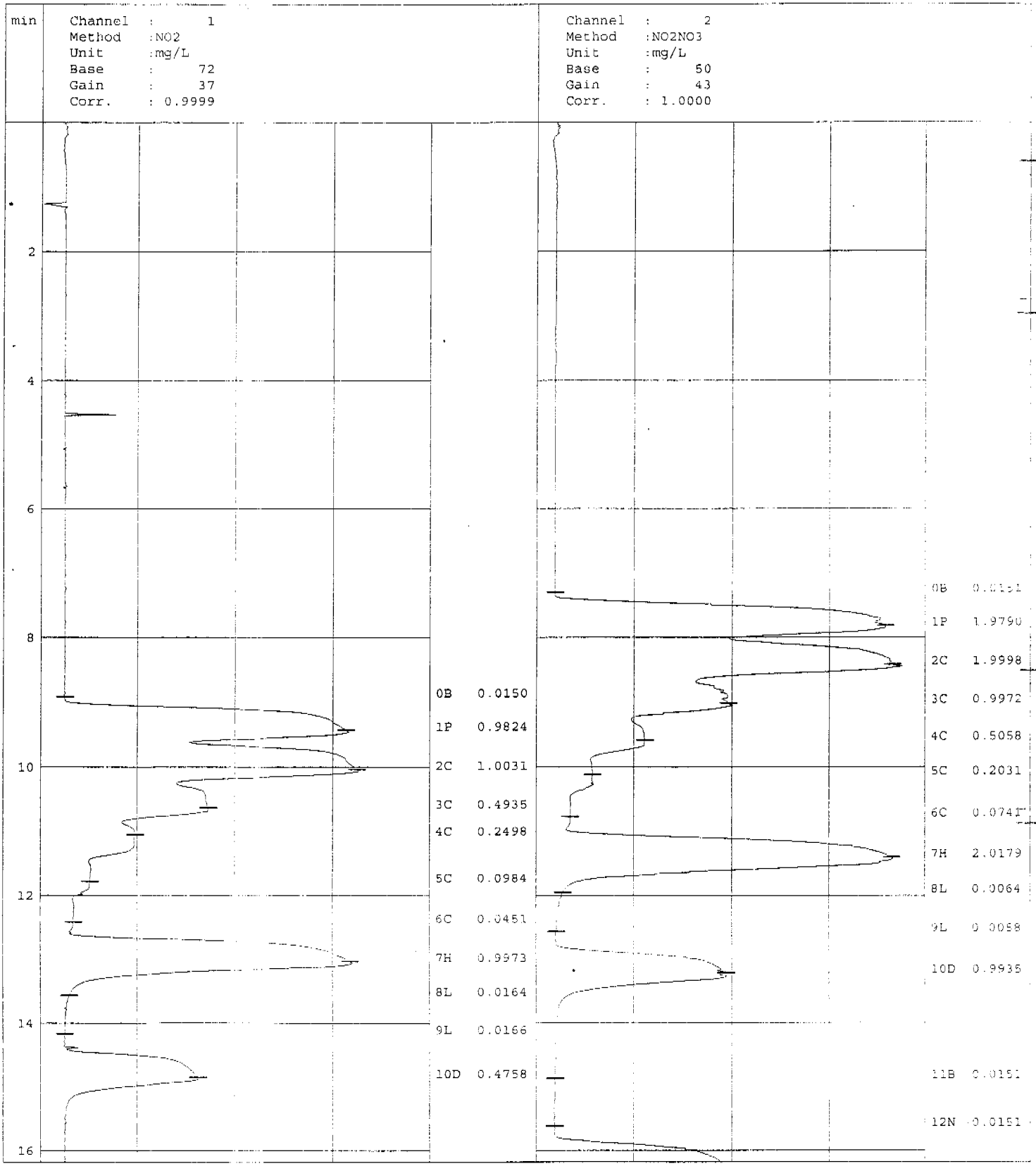
** <END OF REPORT> **

STL NORTH CANTON

TRAACS AUTOANALYZER REPORT

Name of run :031212B.RUN
Comment :

Name of analysis :NO2NO3



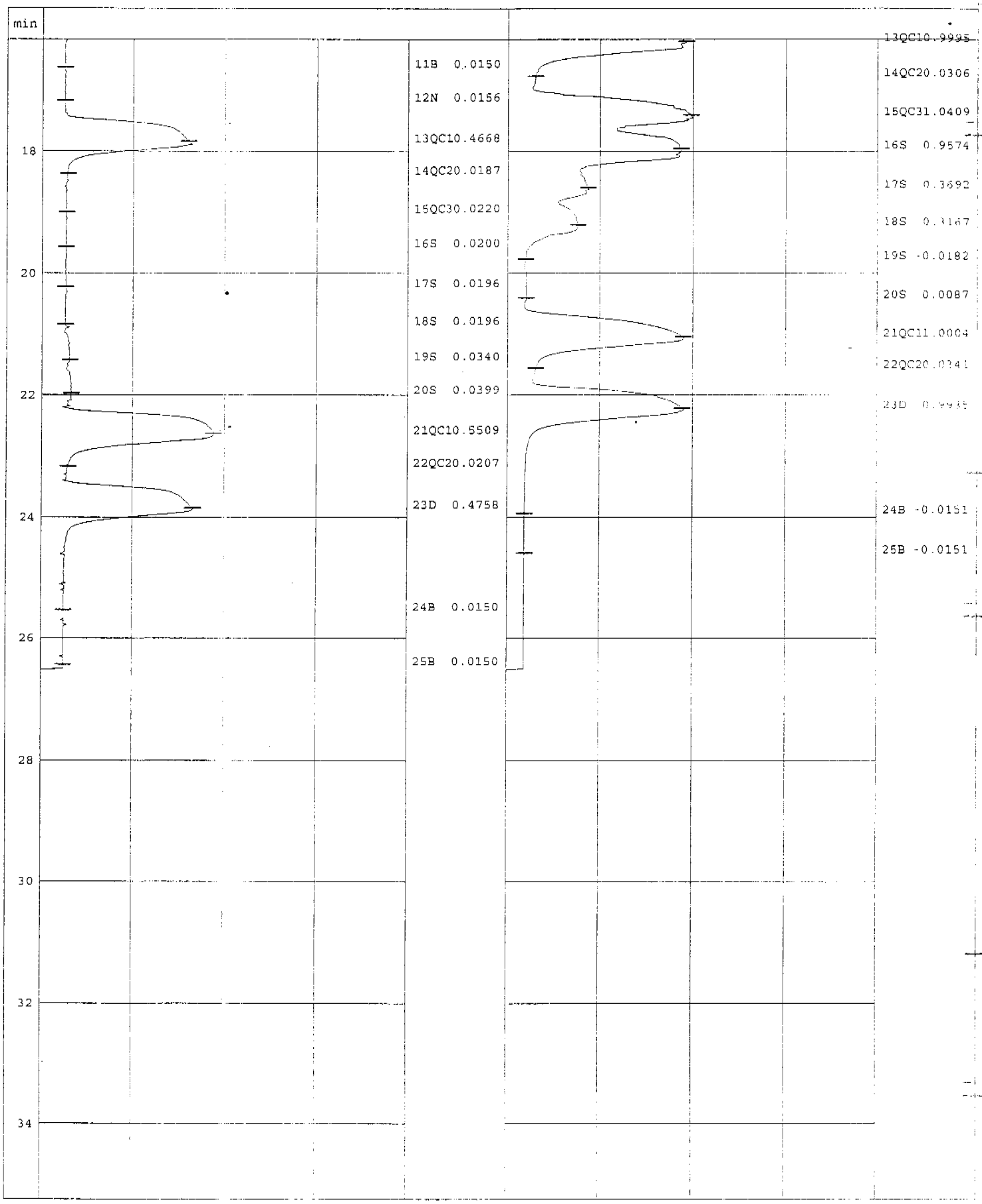
BRAN+LUEBBE AACE 5.23

Post-run chart

Name of run :031212B.RUN

Comment :

Name of analysis :NO2NO3



STL NORTH CANTON

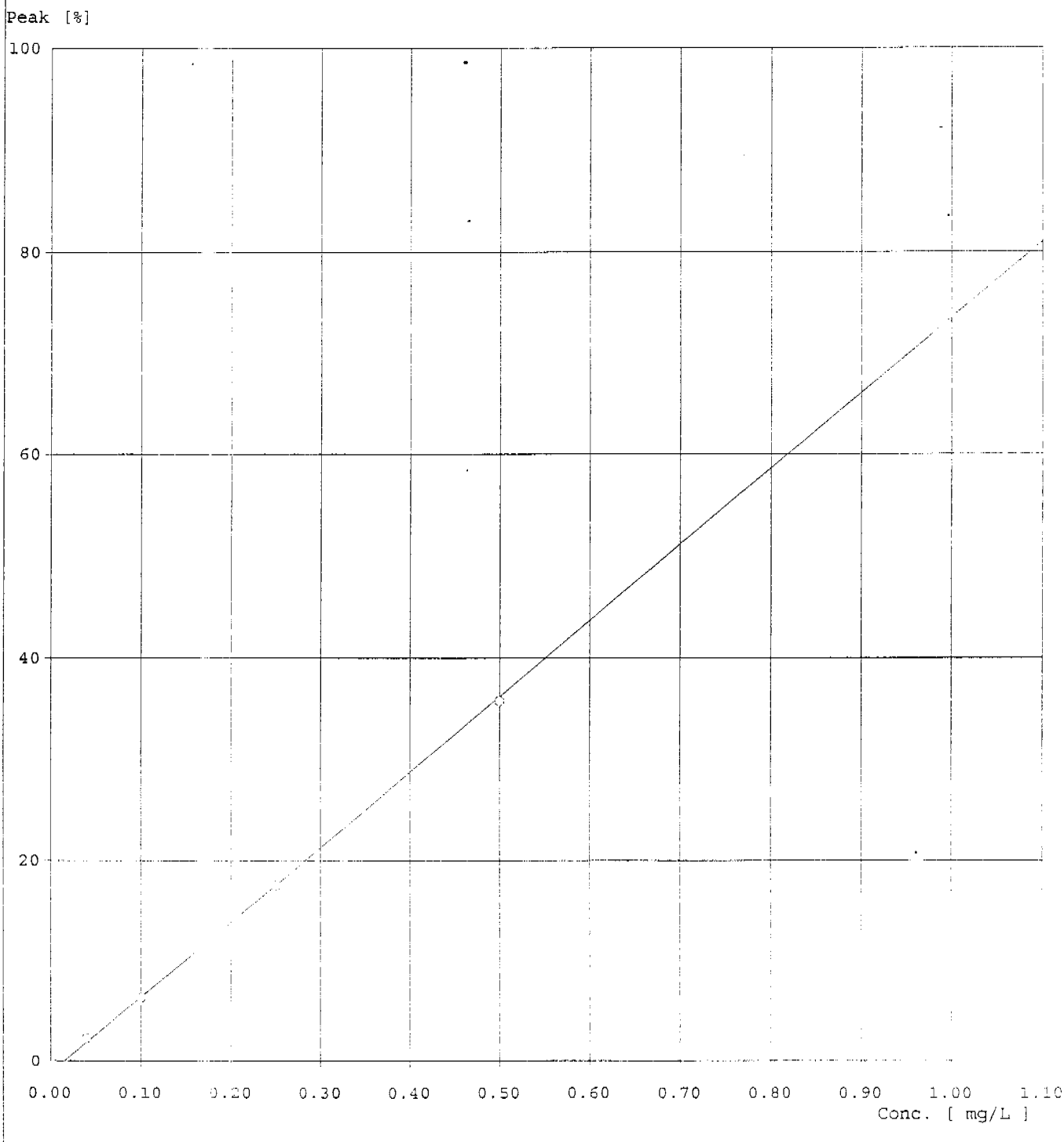
TRAACS AUTOANALYZER REPORT

Name of run :0312[illegible]E.RUN

Name of analysis :NO2NO3

Comment :

Channel :1
Method :NO2
Curve fit :linear a=0.0000204 b=-0.0685689
Corr. coeff. :0.9999



STL NORTH CANTON

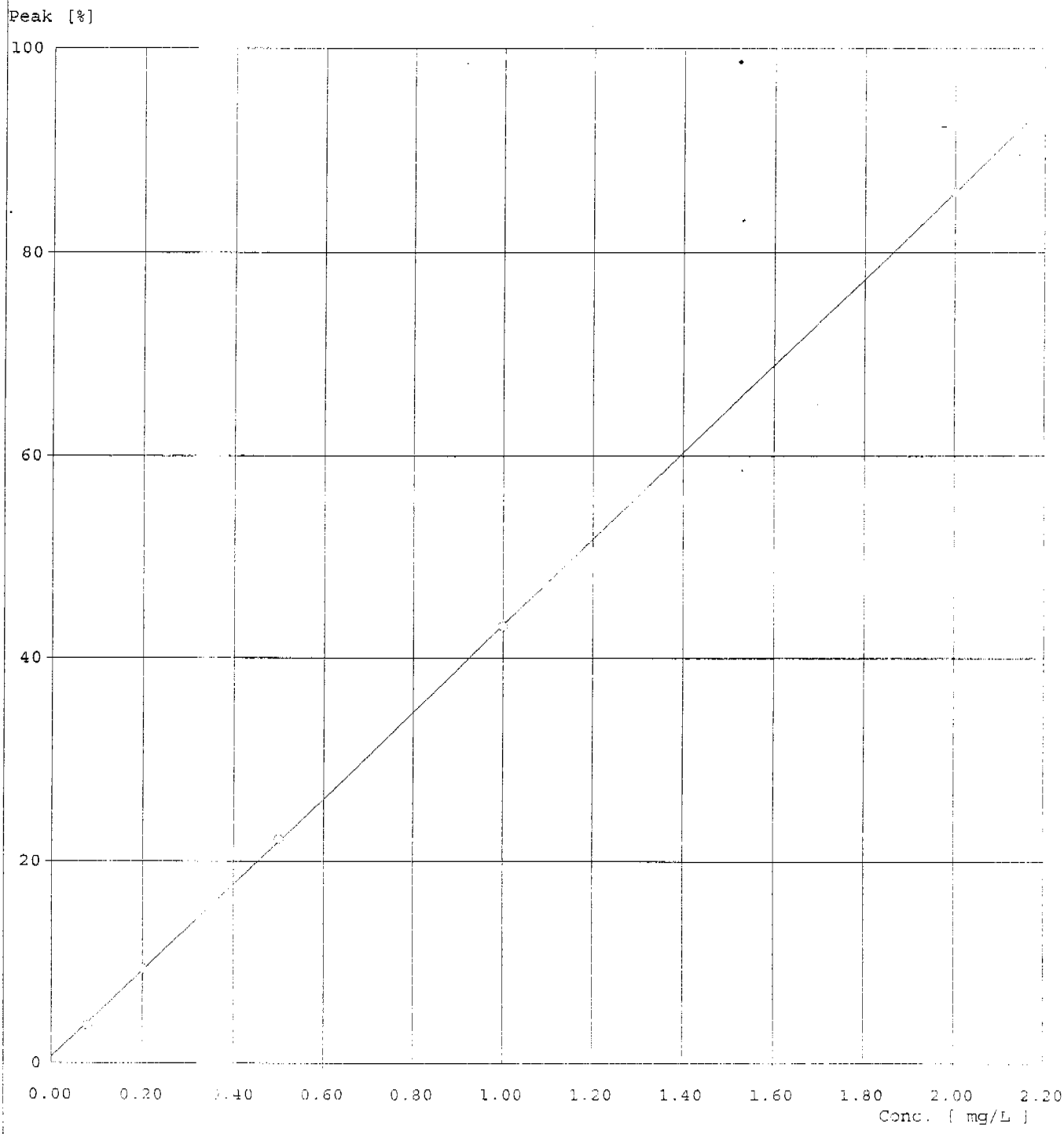
TRAACS AUTOANALYZER REPORT

Name of run :03121[illegible]B.RUN

Comment :

Name of analysis :NO2NO3

Channel :2
Method :NO2NO3
Curve fit :linear a=0.0000358 b=-0.1233875
Corr. coeff. :1.0000



STL North Canton General Chemistry Data Review Checklist

Parameter(s): TSS

Batch(es): 3349363/4

Method #/SOP#: 160.2

Review Items	Level I Review			Level II Review		
A. Initial Calibration	YES	NO	N/A	YES	NO	N/A
1. Initial calibration correlation coefficient ≥ 0.995?			✓			✓
2. Calibration curve consist of the minimum number of calibration standards?			✓			✓
3. ICV analyzed at immediately after calibration and within control limits ? (TRAACS Nitrate/Nitrite, Cyanide 85-115%; all others 90-110%)			✓			✓
4. ICB analyzed immediately after ICV and within criteria (± RL)?			✓			✓
B. Continuing Calibration						
1. CCV analyzed every 10 samples, at end of sequence and within criteria?			✓			✓
2. CCB analyzed every 10 samples, at end of sequence & within criteria (±RL)?			✓			✓
C. Sample Results						
1. Were samples with concentrations > the linear range diluted and reanalyzed ?			✓			✓
2. All reported results bracketed by in control QC ?	✓			✓		
3. Sample analyses done within holding time ?	✓			✓		
D. Quality Control						
1. LCS per prep batch and within QC limits ? *(LCSD, where applicable)*	✓			✓		
2. Method blank done per prep batch and < RL. Method blank RL supports the lowest RL reported for the batch?	✓			✓		
3. MS/MSD run at required frequency and evaluated? MS/MSD reported properly and calculated correctly?			✓			✓
4. Duplicate samples run at required frequency (duplicate sample performed per matrix encountered)?	✓			✓		
E. Titrant						
1. Titrant standardized?			✓			✓
2. If no, standardization expires						
F. Other						
1. Are all nonconformances documented appropriately (NCM or narrative)?			✓			✓
2. Calculations checked for error ?	✓			✓		
3. Transcriptions checked for error ?	✓			✓		
4. All client/project specific requirements met ?	✓			✓		
5. Date/time of preparation and analysis verified as correct ?	✓			✓		
6. Units verified as correct?	✓			✓		
7. Dilutions have been properly applied and RL's adjusted appropriately?			✓			✓
8. SOP followed?	✓			✓		
9. Calculations checked at minimum frequency (at least 20%, 100% for QC)?			✓			✓
10. All reagent and standard numbers recorded in logbook?			✓	✓		
11. Edits dated and initialed			✓			✓

Comment on any "NO" response(s):

Level I reviewer: Bruce Woodward **Date:** 12/15/03

Level II Reviewer: Angela Sera **Date:** 12/16/03

Level I review:

STL
North Canton, OH
TDS/TSS Logsheet

Analysis:	TSS				
Prep Date:	12/15/03	wt 2. date:	15-Dec	Batch:	3349363/4
Time in:	11:00	Time out:	15:00		
Temp in:	104	Temp out:	104	LCS No.	P096507
				LCS Prep:	12/15/03
wt 1. date:	12/15/03	wt 3. date:			
Time out:	13:00	Time out:		Analyst:	BW
Temp out:	104	Temp out:			TV=32.4

Sample No.	Tare wt (g)	Sample (ml)	wt 1. (g)	wt 2. (g)	wt 3. (g)	Final wt (g)	diff (g)	Result mg/L
BLK	0.115	100	0.1150	0.1149		0.1149	-0.0001	-1
LCS	0.1159	100	0.1189	0.1189		0.1189	0.003	30
F6FG2	0.1155	100	0.1162	0.1164		0.1162	0.0007	7
F6JT5	0.1162	100	0.1173	0.1170		0.1170	0.0008	8
F6JVG	0.1125	100	0.1127	0.1128		0.1127	0.0002	2
F6H36	0.1148	100	0.1148	0.1148		0.1148	0	0
F6H4K	0.1152	100	0.1155	0.1155		0.1155	0.0003	3
F6H4L	0.1137	100	0.1137	0.1140		0.1137	0	0
F6H4M	0.1135	100	0.1136	0.1138		0.1136	0.0001	1
F6H4N	0.1138	100	0.1140	0.1140		0.1140	0.0002	2
F6H4P	0.1156	100	0.1163	0.1160		0.1160	0.0004	4
F6JPJ	0.1142	100	0.1158	0.1157		0.1157	0.0015	15
F6JTP	0.1157	100	0.1172	0.1171		0.1171	0.0014	14
F6JXA	0.114	100	0.1147	0.1144		0.1144	0.0004	4
F6JX2	0.1145	100	0.1154	0.1153		0.1153	0.0008	8
F6JX2X	0.1147	100	0.1157	0.1154		0.1154	0.0007	7
F6KM4	0.1126	100	0.1139	0.1135		0.1135	0.0009	9
F6KN1	0.1144	100	0.1157	0.1153		0.1153	0.0009	9
F6KN3	0.1152	100	0.1171	0.1170		0.1170	0.0018	18
F6KN3X	0.114	100	0.1157	0.1155		0.1155	0.0015	15
F6LD5	0.1136	100	0.1175	0.1173		0.1173	0.0037	37
F6JT8	0.1157	100	0.1172	0.1172		0.1172	0.0015	15

92.59%

STL North Canton General Chemistry Data Review Checklist

Parameter(s): Turbidity

Batch(es): 3349035

Method #/SOP#: 180.1

Review Items	Level I Review			Level II Review		
A. Initial Calibration	YES	NO	N/A	YES	NO	N/A
1. Initial calibration correlation coefficient ≥ 0.995?			X			✓
2. Calibration curve consist of the minimum number of calibration standards?			X			✓
3. ICV analyzed at immediately after calibration and within control limits ? (TRAACS Nitrate/Nitrite, Cyanide 85-115%; all others 90-110%)	X			✓		
4. ICB analyzed immediately after ICV and within criteria (± RL)?	X			✓		
B. Continuing Calibration						
1. CCV analyzed every 10 samples, at end of sequence and within criteria?	X			✓		
2. CCB analyzed every 10 samples, at end of sequence & within criteria (±RL)?	X			✓		
C. Sample Results						
1. Were samples with concentrations > the linear range diluted and reanalyzed ?	X			✓		
2. All reported results bracketed by in control QC ?	X					
3. Sample analyses done within holding time ?	X					
D. Quality Control						
1. LCS per prep batch and within QC limits ? *(LCSD, where applicable)*	X			✓		
2. Method blank done per prep batch and < RL. Method blank RL supports the lowest RL reported for the batch?	X			✓		
3. MS/MSD run at required frequency and evaluated? MS/MSD reported properly and calculated correctly?			X			✓
4. Duplicate samples run at required frequency (duplicate sample performed per matrix encountered)?	X			✓		
E. Titrant						
1. Titrant standardized?			X			✓
2. If no, standardization expires						
F. Other						
1. Are all nonconformances documented appropriately (NCM or narrative)?			X			✓
2. Calculations checked for error ?	X			✓		
3. Transcriptions checked for error ?	X					
4. All client/project specific requirements met ?	X					
5. Date/time of preparation and analysis verified as correct ?	X					
6. Units verified as correct?	X					
7. Dilutions have been properly applied and RL's adjusted appropriately?	X					
8. SOP followed?	X					
9. Calculations checked at minimum frequency (at least 20%, 100% for QC)?	X					
10. All reagent and standard numbers recorded in logbook?	X					
11. Edits dated and initialed	X					

Comment on any "NO" response(s):

Level I reviewer: [signature] Date: 12/15/03

Level II Reviewer: QC Date: 12/16/03

Level I review:

STL – NORTH CANTON
TURBIDITY LOGSHEET

Analysis Date 12/12/03

Batch 3349635

Analyst(s) Bruce

Standardization Date

RL .5 NTU

Sample	Meter Reading	Dilution	Result (NTU)	Comments
ICV	9.83		9.83	TV=10.0
ICB	0.03		.03	
LCS	1.04		1.04	TV=1.00
F6J1A	14.8	5X	74.0	
DUP	14.6	5X	73.0	
F6J1X2	32.2	2X	64.4	
CCV	9.87		9.87	TV=10.00
CCB	0.02		0.02	
CCV				
CCB				TV=10.0
DUP				
CCV				
CCB				TV=10.0

12/13/03

STL North Canton General Chemistry Data Review Checklist

Parameter(s): TDS

Batch(es): 3350171

Method #/SOP#: 160.1

Review Items	Level I Review			Level II Review		
A. Initial Calibration	YES	NO	N/A	YES	NO	N/A
1. Initial calibration correlation coefficient ≥ 0.995?			✓			✓
2. Calibration curve consist of the minimum number of calibration standards?			✓			✓
3. ICV analyzed at immediately after calibration and within control limits ? (TRAACS Nitrate/Nitrite, Cyanide 85-115%; all others 90-110%)			✓			
4. ICB analyzed immediately after ICV and within criteria (± RL)?			✓			✓
B. Continuing Calibration						
1. CCV analyzed every 10 samples, at end of sequence and within criteria?			✓			✓
2. CCB analyzed every 10 samples, at end of sequence & within criteria (±RL)?			✓			✓
C. Sample Results						
1. Were samples with concentrations > the linear range diluted and reanalyzed ?			✓	✓		
2. All reported results bracketed by in control QC ?	✓			✓		
3. Sample analyses done within holding time ?	✓			✓		
D. Quality Control						
1. LCS per prep batch and within QC limits ? *(LCSD, where applicable)*	✓			✓		
2. Method blank done per prep batch and < RL. Method blank RL supports the lowest RL reported for the batch?	✓			✓		
3. MS/MSD run at required frequency and evaluated? MS/MSD reported properly and calculated correctly?			✓			✓
4. Duplicate samples run at required frequency (duplicate sample performed per matrix encountered)?	✓			✓		
E. Titrant						
1. Titrant standardized?			✓			✓
2. If no, standardization expires						
F. Other						
1. Are all nonconformances documented appropriately (NCM or narrative)?			✓			✓
2. Calculations checked for error ?			✓	✓		
3. Transcriptions checked for error ?	✓			✓		
4. All client/project specific requirements met ?				✓		
5. Date/time of preparation and analysis verified as correct ?				✓		
6. Units verified as correct?				✓		
7. Dilutions have been properly applied and RL's adjusted appropriately?				✓		
8. SOP followed?	✓			✓		
9. Calculations checked at minimum frequency (at least 20%, 100% for QC)?			✓	✓		
10. All reagent and standard numbers recorded in logbook?	✓			✓		
11. Edits dated and initialed			✓	✓		

Comment on any "NO" response(s):

Level I reviewer: OC Date: 12/17/03.

Level II Reviewer: Anupama Date: 12/18/03

Level I review:

STL
North Canton, OH
TDS/TSS Logsheet

Analysis:	TDS				
Prep Date:	12/16/03	wt 2. date:	12/17/03	Batch:	3350171
Time in:	9:40	Time out:	2:00		
Temp in:	98	Temp out:	179 C	LCS No.	P097506
				LCS Prep:	12/16/03
wt 1. date:	12/17/03	wt 3. date:			
Time out:	11:00	Time out:		Analyst:	BW
Temp out:	180 C	Temp out:			TV=276

Sample No.	Tare wt (g)	Sample (ml)	wt 1. (g)	wt 2. (g)	wt 3. (g)	Final wt (g)	diff (g)	Result mg/L	Conductivity Screen	Take Third Weight	TDS/Cond Comparison
BLK	67.8721	100	67.8729	67.8731		67.8729	0.0008	8	NA		#VALUE!
LCS	66.3625	100	66.3912	66.3916		66.3912	0.0287	287	NA		#VALUE!
F6K6G	66.2009	100	66.2419	66.2415		66.2415	0.0406	406	691		
F6K8K	67.9451	25	67.9559	67.9556		67.9556	0.0105	420		???	#DIV/0!
F6K8W	80.484	100	80.5315	80.5318		80.5315	0.0475	475	825		
F6LGP	67.6274	100	67.6443	67.6446		67.6443	0.0169	169	219		
F6LG5	67.5509	100	67.5693	67.5696		67.5693	0.0184	184	287		
F6L55	67.4931	100	67.5472	67.5475		67.5472	0.0541	541	949		
F6JXA	66.3724	100	66.4503	66.4507		66.4503	0.0779	779	1301		
F6JX2	65.6778	100	65.7612	65.7612		65.7612	0.0834	834	1415		
F6JX2X	66.9646	100	67.0480	67.0482		67.0480	0.0834	834	1415		
F6KM4	69.8884	50	69.9620	69.9624		69.9620	0.0736	1472	2390		
F6KN1	69.9818	50	70.0602	70.0605		70.0602	0.0784	1568	2420		
F6KN3	67.2728	50	67.3786	67.3790		67.3786	0.1058	2116	3240		
F6KN3X	67.5011	50	67.6112	67.6113		67.6112	0.11005	2201	3240		
F6L5X	67.5973	50	67.5978	67.5979		67.5978	0.0005	10	~~4100~~	???	low
F6L50	67.1896	100	67.2228	67.2227		67.2227	0.0331	331	506		
F6L51	67.3607	100	67.3928	67.3930		67.3928	0.0321	321	523		
F6MCG	67.7614	50	67.9291	67.9290		67.9290	0.1676	3352	4870		
F6MCK	70.0573	50	70.1840	70.1842		70.1840	0.1267	2534	4210		
F6MHP	65.1167	100	65.1590	65.1589		65.1589	0.0422	422	694		
F6MHT	67.3772	100	67.3778	67.3779		67.3778	0.0006	6	~~1900~~		low
F6E8W	67.9497	100	67.9503	67.9506		67.9503	0.0006	6			#DIV/0!

STL North Canton General Chemistry Data Review Checklist

Parameter(s): Turbidity

Batch(es): 3350326/27/28

Method #/SOP#: 180.1

Review Items	Level I Review			Level II Review		
A. Initial Calibration	YES	NO	N/A	YES	NO	N/A
1. Initial calibration correlation coefficient ≥ 0.995?			X			✓
2. Calibration curve consist of the minimum number of calibration standards?			X			✓
3. ICV analyzed at immediately after calibration and within control limits ? (TRAACS Nitrate/Nitrite, Cyanide 85-115%; all others 90-110%)	X			✓		
4. ICB analyzed immediately after ICV and within criteria (± RL)?	X			✓		
B. Continuing Calibration						
1. CCV analyzed every 10 samples, at end of sequence and within criteria?	X	X		✓	✓	
2. CCB analyzed every 10 samples, at end of sequence & within criteria (±RL)?	X	X		✓	✓	
C. Sample Results						
1. Were samples with concentrations > the linear range diluted and reanalyzed ?			X			✓
2. All reported results bracketed by in control QC ?	X	X		✓	✓	
3. Sample analyses done within holding time ?	X	X		✓	✓	
D. Quality Control						
1. LCS per prep batch and within QC limits ? *(LCSD, where applicable)*	X			✓		
2. Method blank done per prep batch and < RL. Method blank RL supports the lowest RL reported for the batch?	X			✓		
3. MS/MSD run at required frequency and evaluated? MS/MSD reported properly and calculated correctly?			X			✓
4. Duplicate samples run at required frequency (duplicate sample performed per matrix encountered)?	X			✓		
E. Titrant						
1. Titrant standardized?			X			✓
2. If no, standardization expires						
F. Other						
1. Are all nonconformances documented appropriately (NCM or narrative)?	X			✓		
2. Calculations checked for error ?			X			✓
3. Transcriptions checked for error ?	X			✓		
4. All client/project specific requirements met ?	X					
5. Date/time of preparation and analysis verified as correct ?	X					
6. Units verified as correct?	X					
7. Dilutions have been properly applied and RL's adjusted appropriately?			X			✓
8. SOP followed?	X	X		✓		
9. Calculations checked at minimum frequency (at least 20%, 100% for QC)?			X			✓
10. All reagent and standard numbers recorded in logbook?			X			✓
11. Edits dated and initialed	X			✓		

Comment on any "NO" response(s): See NCM # 01-10421

Level I reviewer: Melissa A. Fuller Gustavel Date: 12/16/03

Level II Reviewer: OC Date: 12/16/03

Level I review:

Clouseau Nonconformance Memo

SEVERN TRENT STL

NCM #: **01-10421**
NCM Initiated By: Melissa Fuller-Gustavel
Date Opened: 12/16/2003
Date Closed:

Classification: **Deficiency**
Status: **QAREVIEW**
Production Area: Classical Chemistry
Tests: 180.1
Lot #'s (Sample #'s): H3L100268 (1,2), H3L110180 (1,2),
QC Batches: 3350326, 3350327, 3350328,

Nonconformance: Holding time violation
Subcategory: Laboratory error: analyst error

Problem Description / Root Cause

Name	Date	Description
Melissa Fuller-Gust	12/16/2003	The samples were run within hold, however the analyst did not homogenize the samples. Samples F6DQ4, and F6DRG were run without being homogenized, and without closing QC. All samples were recreated and rerun outside of hold. Both sets of data will be reported.

Corrective Action

Name	Date	Corrective Action
Melissa Fuller-Gust	12/16/2003	NA

Client Notification Summary

Client	Project Manager	Notified	Response	How Notified	Note	Response	Response Note

Quality Assurance Verification

Verified By	Due Date	Status	Notes
		This section not yet completed by QA.	

Approval History

Date Approved	Approved By	Position
12/16/2003	Melissa Fuller-Gustave	Chemist

(180.1)

Page 1 of 1

STL – NORTH CANTON
TURBIDITY LOGSHEET

Analysis Date 12/10/03

Batch 3350328

Analyst(s) MFG

Standardization Date NA

RL 0.5 NTU

Sample	Meter Reading	Dilution	Result (NTU)	Comments
ICV	9.81		9.81	TV=10.0
ICB	0.02		0.02	
LCS	0.89		0.89	TV=1.00
F6DQ4	1.60		1.60	
↳ DUP	1.61		1.61	
F6DRG	6.96		6.96	
F6F1C	18.40		18.40	
F6F2H	5.24		5.24	
CCV	9.83		9.83	
CCB	0.02		0.02	
CCV				
CCB				TV=10.0
DUP				
CCV				
CCB				TV=10.0

MFG 12/10/03

(180.1)

STL – NORTH CANTON
TURBIDITY LOGSHEET

Analysis Date 12/11/03

Batch 3350327

Analyst(s) MFG

Standardization Date NA

RL 0.5 NTU

Sample	Meter Reading	Dilution	Result (NTU)	Comments
ICV	9.87			TV=10.0
ICB	0.02			
LCS	0.88			TV=1.00
DD3002	3.07			F6F1C
⊥ DUP	3.33			~~F6F2H~~ MFG 12/16/03
DD3001	5.57			F6F2H
CCV	9.87			
CCB	0.02			
F6DQ4	1.21			
F6DRG	1.41			
CCV	9.87			
CCB	0.02			
CCV				TV=10.0
CCB				
DUP				
CCV				TV=10.0
CCB				

MFG 12/16/03

(180.1)

STL – NORTH CANTON
TURBIDITY LOGSHEET

Analysis Date 12/10/03

Batch 33503266

Analyst(s) MFG

Standardization Date NA

RL 0.5 NTU

LCS Lot # A3204

Sample	Meter Reading	Dilution	Result (NTU)	Comments
ICV	9.81			TV=10.0
ICB	0.02			
LCS	1.06			TV=1.00
FL6DQ4	0.58			
1 DUP	0.56			
FL6DRG	1.30			
NO Closing QC				
CCV				
CCB				TV=10.0
DUP				
CCV				
CCB				TV=10.0

STL North Canton General Chemistry Data Review Checklist

Parameter(s): TOC

Batch(es): 3351143/4/5/6

Method #/SOP#: 9060

Review Items	Level I Review			Level II Review		
A. Initial Calibration	YES	NO	N/A	YES	NO	N/A
1. Initial calibration correlation coefficient ≥ 0.995?	✓			✓		
2. Calibration curve consist of the minimum number of calibration standards?	✓			✓		
3. ICV analyzed at immediately after calibration and within control limits ? (TRAACS Nitrate/Nitrite, Cyanide 85-115%; all others 90-110%)	✓			✓		
4. ICB analyzed immediately after ICV and within criteria (± RL)?	✓			✓		
B. Continuing Calibration						
1. CCV analyzed every 10 samples, at end of sequence and within criteria?	✓			✓		
2. CCB analyzed every 10 samples, at end of sequence & within criteria (±RL)?	✓			✓		
C. Sample Results						
1. Were samples with concentrations > the linear range diluted and reanalyzed ?	✓			✓		
2. All reported results bracketed by in control QC ?	✓			✓		
3. Sample analyses done within holding time ? 12/17/03	✗	✓		✓	✗	
D. Quality Control						
1. LCS per prep batch and within QC limits ? *(LCSD, where applicable)*	✓			✓		
2. Method blank done per prep batch and < RL. Method blank RL supports the lowest RL reported for the batch?	✓			✓		
3. MS/MSD run at required frequency and evaluated? MS/MSD reported properly and calculated correctly?	✓			✓		
4. Duplicate samples run at required frequency (duplicate sample performed per matrix encountered)?			✓			✓
E. Titrant						
1. Titrant standardized?			✓			✓
2. If no, standardization expires			✓			
F. Other						
1. Are all nonconformances documented appropriately (NCM or narrative)?			✓			✓
2. Calculations checked for error ?	✓			✓		
3. Transcriptions checked for error ?	✓			✓		
4. All client/project specific requirements met ?	✓			✓		
5. Date/time of preparation and analysis verified as correct ?	✓			✓		
6. Units verified as correct?	✓			✓		
7. Dilutions have been properly applied and RL's adjusted appropriately?	✓			✓		
8. SOP followed?	✓			✓		
9. Calculations checked at minimum frequency (at least 20%, 100% for QC)?	✓			✓		
10. All reagent and standard numbers recorded in logbook?	✓			✓		
11. Edits dated and initialed	✓			✓		

Comment on any "NO" response(s): Samples received expired

Level I reviewer: Lou F Hyland Date: 12/17/03

Level II Reviewer: Angela Dera Date: 12/18/03

Level I review: Samples expired in transit
Sample Receiving will write NCM

Batches
3351143/4/5/6

121503

****
** RUN SETUP **
****

Operator: CL WinTOC Version: 4.1
Data Path: C:\WINTOC~1\DATA10\121503 Firmware Version: 4.1

Report To File: Enabled Naming Mode: Automatic
Prefix: 1215 Index: 0

****
** CONFIGURATION **
****

Analysis Mode: TIC/TOC Spl Intro: Autosampler 53
Remote Start : OFF

Sodium Peroxodisulfate
WR 31230

Loop Size: 1 mL Actual Volume 1mL 5mL 10mL 25mL

Loop A (uL):	1000	5000	10000	25000
Loop B (uL):	1000	5000	10000	25000

Phosphoric acid
WR 31190/31280/31369

Tray Type: 53 Vial Vial Option: Septum Piercing
Needle Depth: 95 % Preacid Volume (uL): 000
Wash Needle Depth: 95 % Preacid Purge Time (min:sec): 0:00

Standard
TC - 3164

	TIC	TOC	TC
Blank	----	----	----
Average:	45	587	0

Linearization Coeff: 60000

Sample Transfer Times (sec)

	Initial Fill			Loop Fill			Sample Inject
	Non-AS	AS	AS w/Sep	Non-AS	AS	AS w/Sep	(all)
1mL:	6.0	4.5	3.5	1.2	1.2	1.0	4.5
5mL:	8.1	7.2	6.8	5.1	5.1	4.2	9.3
10mL:	14.2	12.2	11.0	10.5	10.5	10.5	16.5
25mL:	35.0	35.0	32.0	n/a	n/a	n/a	38.0

LCS
P094516

****
** CALIBRATION **
****

121503

10/09/03 Thu Oct 09 16:24:54 2003

Std. #	Used	Conc. (ppm)	Volume (mL)
1	Yes	1.000	2.000
2	Yes	10.000	2.000
3	Yes	25.000	2.000
4	Yes	50.000	2.000
5	No	0.000	1.000

RF (ugC/k-cnt): 0.9116
R-Squared: 0.9999

Calibration Mode: TOC
Allow Editing: No

Rep	Std. 1	Std. 2	Std. 3	Std. 4	Std. 5
1	3640	22322	56095	110733	-
2	-	-	-	-	-
3	-	-	-	-	-
4	-	-	-	-	-
5	-	-	-	-	-
6	-	-	-	-	-
7	-	-	-	-	-
8	-	-	-	-	-
9	-	-	-	-	-
10	-	-	-	-	-

(* = unused)

****
** METHODS **
****

STLTOC Wed Oct 22 11:42:39 2003

Acid Volume: 2000 uL
Rinse Volume (mL): 20
Oxidant Volume: 1000 uL
Rinses Per Rep: 1
Auto-Repeat Time: 00:00:00 (hr:min:sec)
Rinses Per Sample: 2

	TIC	TOC	TC
React: (min:sec):	02:00	03:00	02:30
Detect: (min:sec):	01:00	03:00	01:30

****
** SEQUENCE **
****

START Tue Oct 28 11:33:45 2003

121503

Start Pos/Vial #: 1, Stop Pos/Vial #: 4

Pos/ Vial	Sample Name	Method	Run Type	# Rep	Vol (mL)	# Blk	Ovr Rng	Remarks
1	zzzz	stltoc	Sample	4	2.000	0	No	
2	ICV	stltoc	Sample	1	2.000	0	No	
3	ICB	stltoc	Sample	1	2.000	0	No	
4	LCS #P094516	stltoc	Sample	1	2.000	0	No	

****
** RESULTS - START **
****

Pos/Vial: 1 Name: zzzz Analyzed: 15Dec2003 07:48
Run ID: 1 Meth: stltoc Vol (mL): 2.000

SAMPLES Rep	Datafile	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (ppm)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (ppm)
1	1215000	605	0.510	0.2552	1972	1.263	0.6313
2	1215001	430	0.351	0.1755	1700	1.015	0.5073
3	1215002	444	0.364	0.1819	1605	0.928	0.4640
4	1215003	443	0.363	0.1814	1665	0.983	0.4913
Avg		480	0.397	0.1985	1735	1.047	0.5235
Std.Dev.		83.25		162.47			
RSD (%)		17.32		9.36			

****

Pos/Vial: 2 Name: ICV Analyzed: 15Dec2003 08:38
Run ID: 1 Meth: stltoc Vol (mL): 2.000

SAMPLES Rep	Datafile	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (ppm)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (ppm)
1	1215004	355	0.283	0.1413	51922	46.795	23.3975

****

121503

Pos/Vial: 3 Name: ICB Analyzed: 15Dec2003 08:53
Run ID: 2 Meth: stltoc Vol (mL): 2.000

SAMPLES		TIC	TIC	TIC	TOC	TOC	TOC
		Area	Mass	Conc	Area	Mass	Conc
Rep	Datafile	(cts)	(ugC)	(ppm)	(cts)	(ugC)	(ppm)
1	1215005	306	0.238	0.1190	1538	0.867	0.4334

****

Pos/Vial: 4 Name: LCS #P094516 Analyzed: 15Dec2003 09:07
Run ID: 3 Meth: stltoc Vol (mL): 2.000

SAMPLES		TIC	TIC	TIC	TOC	TOC	TOC
		Area	Mass	Conc	Area	Mass	Conc
Rep	Datafile	(cts)	(ugC)	(ppm)	(cts)	(ugC)	(ppm)
1	1215006	463	0.381	0.1905	84045	76.077	38.0385

TV= 39.9

****
** RUN SETUP **
****

Operator: CL WinTOC Version: 4.1
Data Path: C:\WINTOC~1\DATA10\121503 Firmware Version: 4.1

Report To File: Enabled Naming Mode: Automatic
Prefix: 1215 Index: 7

****
** CONFIGURATION **
****

Analysis Mode: TIC/TOC Spl Intro: Autosampler 53
Remote Start : OFF

Loop Size: 1 mL	Actual Volume	1mL	5mL	10mL	25mL
	Loop A (uL):	1000	5000	10000	25000
	Loop B (uL):	1000	5000	10000	25000

121503

Tray Type: 53 Vial Vial Option: Septum Piercing
Needle Depth: 95 % Preacid Volume (uL): 000
Wash Needle Depth: 95 % Preacid Purge Time (min:sec): 0:00

	TIC	TOC	TC
Blank	----	----	----
Average:	45	587	0

Linearization Coeff: 60000

Sample Transfer Times (sec)

	Initial Fill			Loop Fill			Sample Inject
	Non-AS	AS	AS w/Sep	Non-AS	AS	AS w/Sep	(all)
1mL:	6.0	4.5	3.5	1.2	1.2	1.0	4.5
5mL:	8.1	7.2	6.8	5.1	5.1	4.2	9.3
10mL:	14.2	12.2	11.0	10.5	10.5	10.5	16.5
25mL:	35.0	35.0	32.0	n/a	n/a	n/a	38.0

****
** CALIBRATION **
****

10/09/03 Thu Oct 09 16:24:54 2003

Std. #	Used	Conc. (ppm)	Volume (mL)
1	Yes	1.000	2.000
2	Yes	10.000	2.000
3	Yes	25.000	2.000
4	Yes	50.000	2.000
5	No	0.000	1.000

RF (ugC/k-cnt): 0.9116
R-Squared: 0.9999
Calibration Mode: TOC
Allow Editing: No

Rep	Std. 1	Std. 2	Std. 3	Std. 4	Std. 5
1	3640	22322	56095	110733	-
2	-	-	-	-	-
3	-	-	-	-	-
4	-	-	-	-	-
5	-	-	-	-	-
6	-	-	-	-	-
7	-	-	-	-	-
8	-	-	-	-	-
9	-	-	-	-	-
10	-	-	-	-	-

(* = unused)

121503

****
** METHODS **
****

STLTOC Wed Oct 22 11:42:39 2003
Acid Volume: 2000 uL Rinse Volume (mL): 20
Oxidant Volume: 1000 uL Rinses Per Rep: 1
Auto-Repeat Time: 00:00:00 (hr:min:sec) Rinses Per Sample: 2

	TIC	TOC	TC
React: (min:sec):	02:00	03:00	02:30
Detect: (min:sec):	01:00	03:00	01:30

****
** SEQUENCE **
****

12/15/03 Mon Dec 15 09:07:58 2003

Start Pos/Vial #: 1, Stop Pos/Vial #: 50

Pos/ Vial	Sample Name	Method	Run Type	# Rep	Vol (mL)	# Blk	Ovr Rng	Remarks
1	F6GG7 40X	stltoc	Sample	4	2.000	0	No	
2	F6GG7 40X MS	stltoc	Sample	1	2.000	0	No	
3	F6GG7 40X MSD	stltoc	Sample	1	2.000	0	No	
4	F6C15	stltoc	Sample	4	2.000	0	No	
5	F6C2R	stltoc	Sample	4	2.000	0	No	
6	F6C2W	stltoc	Sample	4	2.000	0	No	
7	F6C3D	stltoc	Sample	4	2.000	0	No	
8	F6F9Q	stltoc	Sample	4	2.000	0	No	
9	CCV	stltoc	Sample	1	2.000	0	No	
10	CCB	stltoc	Sample	1	2.000	0	No	
11	F6F93	stltoc	Sample	4	2.000	0	No	
12	F6F97	stltoc	Sample	4	2.000	0	No	
13	F6F99	stltoc	Sample	4	2.000	0	No	
14	F6GAE	stltoc	Sample	4	2.000	0	No	
15	F6GAG	stltoc	Sample	4	2.000	0	No	
16	F6GAJ	stltoc	Sample	4	2.000	0	No	
17	F6FWF	stltoc	Sample	4	2.000	0	No	

3351143

121503

18	F6GGW	stltoc	Sample	4	2.000	0 No
19	F6GHW	stltoc	Sample	4	2.000	0 No
20	F6GH0	stltoc	Sample	4	2.000	0 No
21	CCV	stltoc	Sample	1	2.000	0 No
22	CCB	stltoc	Sample	1	2.000	0 No
23	F6GH2	stltoc	Sample	4	2.000	0 No
24	F591H	stltoc	Sample	4	2.000	0 No
25	F5919	stltoc	Sample	4	2.000	0 No
26	F592C	stltoc	Sample	4	2.000	0 No
27	F592M	stltoc	Sample	4	2.000	0 No
28	F592Q	stltoc	Sample	4	2.000	0 No
29	F6CQM	stltoc	Sample	4	2.000	0 No
30	F6CQ4	stltoc	Sample	4	2.000	0 No
31	F6CRF	stltoc	Sample	4	2.000	0 No
32	F6FVP	stltoc	Sample	4	2.000	0 No
33	CCV	stltoc	Sample	1	2.000	0 No
34	CCB	stltoc	Sample	1	2.000	0 No
35	LCS-2	stltoc	Sample	1	2.000	0 No
36	F6GAK	stltoc	Sample	4	2.000	0 No
37	F6GAK MS	stltoc	Sample	1	2.000	0 No
38	F6GAK MSD	stltoc	Sample	1	2.000	0 No
39	F6FWJ	stltoc	Sample	4	2.000	0 No
40	F6FWR	stltoc	Sample	4	2.000	0 No
41	F6F0C	stltoc	Sample	4	2.000	0 No
42	F6F0G	stltoc	Sample	4	2.000	0 No
43	F6F0J	stltoc	Sample	4	2.000	0 No
44	F6F0X	stltoc	Sample	4	2.000	0 No
45	CCV	stltoc	Sample	1	2.000	0 No
46	CCB	stltoc	Sample	1	2.000	0 No
47	F6F1C	stltoc	Sample	4	2.000	0 No
48	F6F2H	stltoc	Sample	4	2.000	0 No
49	CCV	stltoc	Sample	1	2.000	0 No
50	CCB	stltoc	Sample	1	2.000	0 No

****
** RESULTS - 12/15/03 **
****

Pos/Vial: 1 Name: F6GG7 40X Analyzed: 15Dec2003 09:34
Run ID: 4 Meth: stltoc Vol (mL): 2.000

SAMPLES	TIC	TIC	TIC	TOC	TOC	TOC
	Area	Mass	Conc	Area	Mass	Conc

121503

Rep	Datafile	(cts)	(ugC)	(ppm)	(cts)	(ugC)	(ppm)
1	1215007	2959	2.656	1.3281	53501	48.234	24.1172
2	1215008	2915	2.616	1.3081	52792	47.588	23.7940
3	1215009	2936	2.635	1.3177	54021	48.708	24.3542
4	1215010	2762	2.477	1.2384	53715	48.429	24.2147
Avg		2893	2.596	1.2981	53507	48.240	24.1200
Std.Dev.		89.16		522.41			
RSD (%)		3.08		0.98			

F6GG7

x40 = 964.8

****

Pos/Vial: 2 Name: F6GG7 40X MS Analyzed: 15Dec2003 10:24
Run ID: 1 Meth: stltoc Vol (mL): 2.000

spike = 25x40 = 1000

SAMPLES	TIC Area	TIC Mass	TIC Conc	TOC Area	TOC Mass	TOC Conc
Rep Datafile	(cts)	(ugC)	(ppm)	(cts)	(ugC)	(ppm)
1 1215011	1448	1.279	0.6395	52234	47.079	23.5397

x 2x40 = 1883.176

****

Pos/Vial: 3 Name: F6GG7 40X MSD Analyzed: 15Dec2003 10:38
Run ID: 2 Meth: stltoc Vol (mL): 2.000

SAMPLES	TIC Area	TIC Mass	TIC Conc	TOC Area	TOC Mass	TOC Conc
Rep Datafile	(cts)	(ugC)	(ppm)	(cts)	(ugC)	(ppm)
1 1215012	1273	1.119	0.5597	54645	49.277	24.6386

x 80 = 1971.088

****

Pos/Vial: 4 Name: F6C15 Analyzed: 15Dec2003 10:53
Run ID: 3 Meth: stltoc Vol (mL): 2.000

SAMPLES	TIC Area	TIC Mass	TIC Conc	TOC Area	TOC Mass	TOC Conc
Rep Datafile	(cts)	(ugC)	(ppm)	(cts)	(ugC)	(ppm)
1 1215013	85534	77.928	38.9642	2359	1.615	0.8076

121503

E-Low gas pressure. 15Dec2003 11:13

****
** RUN SETUP **
****

Operator: CL WinTOC Version: 4.1
Data Path: C:\WINTOC~1\DATA10\121503 Firmware Version: 4.1

Report To File: Enabled Naming Mode: Automatic
Prefix: 1215 Index: 14

****
** CONFIGURATION **
****

Analysis Mode: TIC/TOC Spl Intro: Autosampler 53
Remote Start : OFF

Loop Size: 1 mL Actual Volume 1mL 5mL 10mL 25mL

Loop A (uL):	1000	5000	10000	25000
Loop B (uL):	1000	5000	10000	25000

Tray Type: 53 Vial Vial Option: Septum Piercing
Needle Depth: 95 % Preacid Volume (uL): 000
Wash Needle Depth: 95 % Preacid Purge Time (min:sec): 0:00

	TIC	TOC	TC
Blank	----	----	----
Average:	45	587	0

Linearization Coeff: 60000

Sample Transfer Times (sec)

	Initial Fill			Loop Fill			Sample Inject
	Non-AS	AS	AS w/Sep	Non-AS	AS	AS w/Sep	(all)
1mL:	6.0	4.5	3.5	1.2	1.2	1.0	4.5
5mL:	8.1	7.2	6.8	5.1	5.1	4.2	9.3
10mL:	14.2	12.2	11.0	10.5	10.5	10.5	16.5
25mL:	35.0	35.0	32.0	n/a	n/a	n/a	38.0

121503

****
** CALIBRATION **
****

10/09/03 Thu Oct 09 16:24:54 2003

Std. #	Used	Conc. (ppm)	Volume (mL)
1	Yes	1.000	2.000
2	Yes	10.000	2.000
3	Yes	25.000	2.000
4	Yes	50.000	2.000
5	No	0.000	1.000

RF (ugC/k-cnt): 0.9116
R-Squared: 0.9999
Calibration Mode: TOC
Allow Editing: No

Rep	Std. 1	Std. 2	Std. 3	Std. 4	Std. 5
1	3640	22322	56095	110733	-
2	-	-	-	-	-
3	-	-	-	-	-
4	-	-	-	-	-
5	-	-	-	-	-
6	-	-	-	-	-
7	-	-	-	-	-
8	-	-	-	-	-
9	-	-	-	-	-
10	-	-	-	-	-

(* = unused)

****
** METHODS **
****

STLTOC Wed Oct 22 11:42:39 2003
Acid Volume: 2000 uL
Rinse Volume (mL): 20
Oxidant Volume: 1000 uL
Rinses Per Rep: 1
Auto-Repeat Time: 00:00:00 (hr:min:sec)
Rinses Per Sample: 2

	TIC	TOC	TC
React: (min:sec):	02:00	03:00	02:30
Detect: (min:sec):	01:00	03:00	01:30

****

121503

** SEQUENCE **

****

12/15/03 Mon Dec 15 09:07:58 2003

Start Pos/Vial #: 4, Stop Pos/Vial #: 50

Pos/ Vial	Sample Name	Method	Run Type	# Rep	Vol (mL)	# Blk	Ovr Rng	Remarks
1	F6GG7 40X	stltoc	Sample	4	2.000	0	No	
2	F6GG7 40X MS	stltoc	Sample	1	2.000	0	No	
3	F6GG7 40X MSD	stltoc	Sample	1	2.000	0	No	
4	F6C15	stltoc	Sample	4	2.000	0	No	
5	F6C2R	stltoc	Sample	4	2.000	0	No	
6	F6C2W	stltoc	Sample	4	2.000	0	No	
7	F6C3D	stltoc	Sample	4	2.000	0	No	
8	F6F9Q	stltoc	Sample	4	2.000	0	No	
9	CCV	stltoc	Sample	1	2.000	0	No	
10	CCB	stltoc	Sample	1	2.000	0	No	
11	F6F93	stltoc	Sample	4	2.000	0	No	
12	F6F97	stltoc	Sample	4	2.000	0	No	
13	F6F99	stltoc	Sample	4	2.000	0	No	
14	F6GAE	stltoc	Sample	4	2.000	0	No	
15	F6GAG	stltoc	Sample	4	2.000	0	No	
16	F6GAJ	stltoc	Sample	4	2.000	0	No	
17	F6FWF	stltoc	Sample	4	2.000	0	No	
18	F6GGW	stltoc	Sample	4	2.000	0	No	
19	F6GHW	stltoc	Sample	4	2.000	0	No	
20	F6GH0	stltoc	Sample	4	2.000	0	No	
21	CCV	stltoc	Sample	1	2.000	0	No	
22	CCB	stltoc	Sample	1	2.000	0	No	
23	F6GH2	stltoc	Sample	4	2.000	0	No	
24	F591H	stltoc	Sample	4	2.000	0	No	
25	F5919	stltoc	Sample	4	2.000	0	No	
26	F592C	stltoc	Sample	4	2.000	0	No	
27	F592M	stltoc	Sample	4	2.000	0	No	
28	F592Q	stltoc	Sample	4	2.000	0	No	
29	F6CQM	stltoc	Sample	4	2.000	0	No	
30	F6CQ4	stltoc	Sample	4	2.000	0	No	
31	F6CRF	stltoc	Sample	4	2.000	0	No	
32	F6FVP	stltoc	Sample	4	2.000	0	No	
33	CCV	stltoc	Sample	1	2.000	0	No	

121503

34	CCB	stltoc	Sample	1	2.000	0 No
35	LCS-2	stltoc	Sample	1	2.000	0 No
36	F6GAK	stltoc	Sample	4	2.000	0 No
37	F6GAK MS	stltoc	Sample	1	2.000	0 No
38	F6GAK MSD	stltoc	Sample	1	2.000	0 No
39	F6FWJ	stltoc	Sample	4	2.000	0 No
40	F6FWR	stltoc	Sample	4	2.000	0 No
41	F6F0C	stltoc	Sample	4	2.000	0 No
42	F6F0G	stltoc	Sample	4	2.000	0 No
43	F6F0J	stltoc	Sample	4	2.000	0 No
44	F6F0X	stltoc	Sample	4	2.000	0 No
45	CCV	stltoc	Sample	1	2.000	0 No
46	CCB	stltoc	Sample	1	2.000	0 No
47	F6F1C	stltoc	Sample	4	2.000	0 No
48	F6F2H	stltoc	Sample	4	2.000	0 No
49	CCV	stltoc	Sample	1	2.000	0 No
50	CCB	stltoc	Sample	1	2.000	0 No

****
** RESULTS - 12/15/03 **
****

Pos/Vial: 4 Name: F6C15 Analyzed: 15Dec2003 11:22
Run ID: 4 Meth: stltoc Vol (mL): 2.000

SAMPLES Rep	Datafile	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (ppm)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (ppm)
1	1215014	81041	73.833	36.9164	2153	1.428	0.7138
2	1215015	77929	70.996	35.4980	2212	1.481	0.7406
3	1215016	74637	67.995	33.9976	2181	1.453	0.7265
4	1215017	66870	60.915	30.4575	2193	1.464	0.7320
Avg		75119	68.435	34.2174	2184	1.456	0.7282
Std.Dev.		6089.46		24.72			
RSD (%)		8.11		1.13			

****

Pos/Vial: 5 Name: F6C2R Analyzed: 15Dec2003 12:12
Run ID: 4 Meth: stltoc Vol (mL): 2.000

121503

SAMPLES Rep	Datafile	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (ppm)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (ppm)
1	1215018	70466	64.193	32.0965	2108	1.386	0.6932
2	1215019	70506	64.229	32.1147	1963	1.254	0.6272
3	1215020	67348	61.351	30.6754	1962	1.253	0.6267
4	1215021	65036	59.243	29.6216	2103	1.382	0.6910
Avg		68339	62.254	31.1271	2034	1.319	0.6595
Std.Dev.		2652.79		82.59			
RSD (%)		3.88		4.06			

F6C2R

****

Pos/Vial: 6 Name: F6C2W Analyzed: 15Dec2003 13:01
Run ID: 5 Meth: stltoc Vol (mL): 2.000

SAMPLES Rep	Datafile	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (ppm)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (ppm)
1	1215022	101619	92.591	46.2954	9605	8.220	4.1102
2	1215023	101121	92.137	46.0685	9596	8.212	4.1061
3	1215024	98060	89.347	44.6733	9513	8.137	4.0683
4	1215025	94766	86.344	43.1720	9646	8.258	4.1289
Avg		98891	90.105	45.0523	9590	8.207	4.1034
Std.Dev.		3168.65		55.76			
RSD (%)		3.20		0.58			

****

Pos/Vial: 7 Name: F6C3D Analyzed: 15Dec2003 13:51
Run ID: 6 Meth: stltoc Vol (mL): 2.000

SAMPLES Rep	Datafile	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (ppm)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (ppm)
1	1215026	81273	74.044	37.0221	63478	57.329	28.6645
2	1215027	78175	71.220	35.6101	64990	58.707	29.3536
3	1215028	79626	72.543	36.2715	65395	59.076	29.5382

121503

4	1215029	79725	72.633	36.3166	67547	61.038	30.5191
Avg		79699	72.610	36.3051	65352	59.038	29.5189
Std.Dev.		1265.71		1679.56			
RSD (%)		1.59		2.57			

F6C3P

****

Pos/Vial: 8 Name: F6F9Q Analyzed: 15Dec2003 14:40
Run ID: 7 Meth: stltoc Vol (mL): 2.000

SAMPLES		TIC Area	TIC Mass	TIC Conc	TOC Area	TOC Mass	TOC Conc
Rep	Datafile	(cts)	(ugC)	(ppm)	(cts)	(ugC)	(ppm)
1	1215030	75100	68.417	34.2086	2991	2.191	1.0957
2	1215031	72289	65.855	32.9274	2574	1.811	0.9056
3	1215032	72606	66.144	33.0719	2406	1.658	0.8291
4	1215033	70642	64.353	32.1767	2419	1.670	0.8350
Avg		72659	66.192	33.0962	2597	1.833	0.9163
Std.Dev.		1840.88		273.21			
RSD (%)		2.53		10.52			

****

Pos/Vial: 9 Name: CCV Analyzed: 15Dec2003 15:29
Run ID: 8 Meth: stltoc Vol (mL): 2.000

SAMPLES		TIC Area	TIC Mass	TIC Conc	TOC Area	TOC Mass	TOC Conc
Rep	Datafile	(cts)	(ugC)	(ppm)	(cts)	(ugC)	(ppm)
1	1215034	778	0.668	0.3341	54310	48.972	24.4859

****

Pos/Vial: 10 Name: CCB Analyzed: 15Dec2003 15:44
Run ID: 9 Meth: stltoc Vol (mL): 2.000

SAMPLES		TIC Area	TIC Mass	TIC Conc	TOC Area	TOC Mass	TOC Conc
Rep	Datafile	(cts)	(ugC)	(ppm)	(cts)	(ugC)	(ppm)

121503

1	1215035	413	0.335	0.1677	1543	0.871	0.4357

****

Pos/Vial: 11 Name: F6F93 Analyzed: 15Dec2003 15:58
Run ID: 10 Meth: stltoc Vol (mL): 2.000

SAMPLES		TIC	TIC	TIC	TOC	TOC	TOC
		Area	Mass	Conc	Area	Mass	Conc
Rep	Datafile	(cts)	(ugC)	(ppm)	(cts)	(ugC)	(ppm)
1	1215036	33575	30.565	15.2823	2954	2.158	1.0788
2	1215037	31666	28.824	14.4122	2919	2.126	1.0629
3	1215038	31322	28.511	14.2554	2902	2.110	1.0551
4	1215039	30356	27.630	13.8152	2893	2.102	1.0510
Avg		31729	28.883	14.4413	2917	2.124	1.0620
Std.Dev.		1349.38		26.92			
RSD (%)		4.25		0.92			

****

Pos/Vial: 12 Name: F6F97 Analyzed: 15Dec2003 16:47
Run ID: 11 Meth: stltoc Vol (mL): 2.000

SAMPLES		TIC	TIC	TIC	TOC	TOC	TOC
		Area	Mass	Conc	Area	Mass	Conc
Rep	Datafile	(cts)	(ugC)	(ppm)	(cts)	(ugC)	(ppm)
1	1215040	49610	45.182	22.5908	3110	2.300	1.1499
2	1215041	48844	44.483	22.2416	3093	2.284	1.1422
3	1215042	46979	42.783	21.3916	3050	2.245	1.1226
4	1215043	44547	40.566	20.2831	3074	2.267	1.1335
Avg		47495	43.254	21.6268	3081	2.274	1.1371
Std.Dev.		2254.62		25.77			
RSD (%)		4.75		0.84			

****

Pos/Vial: 13 Name: F6F99 Analyzed: 15Dec2003 17:37
Run ID: 12 Meth: stltoc Vol (mL): 2.000

121503

F6F99

SAMPLES		TIC	TIC	TIC	TOC	TOC	TOC
		Area	Mass	Conc	Area	Mass	Conc
Rep	Datafile	(cts)	(ugC)	(ppm)	(cts)	(ugC)	(ppm)
1	1215044	24838	22.600	11.3002	2793	2.011	1.0055
2	1215045	23964	21.804	10.9018	2810	2.026	1.0132
3	1215046	23606	21.477	10.7386	2804	2.021	1.0105
4	1215047	21692	19.733	9.8663	2789	2.007	1.0036
Avg		23525	21.403	10.7017	2799	2.016	1.0082
Std.Dev.		1327.04		9.69			
RSD (%)		5.64		0.35			

****

Pos/Vial: 14 Name: F6GAE Analyzed: 15Dec2003 18:26
Run ID: 13 Meth: stltoc Vol (mL): 2.000

SAMPLES		TIC	TIC	TIC	TOC	TOC	TOC
		Area	Mass	Conc	Area	Mass	Conc
Rep	Datafile	(cts)	(ugC)	(ppm)	(cts)	(ugC)	(ppm)
1	1215048	46705	42.533	21.2667	2747	1.969	0.9845
2	1215049	45422	41.364	20.6819	2689	1.916	0.9581
3	1215050	44305	40.346	20.1728	2675	1.903	0.9517
4	1215051	43873	39.952	19.9759	2682	1.910	0.9549
Avg		45076	41.049	20.5244	2698	1.925	0.9623
Std.Dev.		1266.89		33.00			
RSD (%)		2.81		1.22			

****

Pos/Vial: 15 Name: F6GAG Analyzed: 15Dec2003 19:15
Run ID: 14 Meth: stltoc Vol (mL): 2.000

SAMPLES		TIC	TIC	TIC	TOC	TOC	TOC
		Area	Mass	Conc	Area	Mass	Conc
Rep	Datafile	(cts)	(ugC)	(ppm)	(cts)	(ugC)	(ppm)
1	1215052	54555	49.689	24.8446	5361	4.352	2.1759
2	1215053	53657	48.871	24.4353	4711	3.759	1.8796

121503

3	1215054	52440	47.761	23.8806	4693	3.743	1.8714
4	1215055	51322	46.742	23.3711	4670	3.722	1.8610
Avg		52993	48.266	24.1329	4858	3.894	1.9470
Std.Dev.		1411.71		335.25			
RSD (%)		2.66		6.90			

F6GAG

****

Pos/Vial: 16 Name: F6GAJ Analyzed: 15Dec2003 20:04
Run ID: 15 Meth: stltoc Vol (mL): 2.000

SAMPLES		TIC	TIC	TIC	TOC	TOC	TOC
		Area	Mass	Conc	Area	Mass	Conc
Rep	Datafile	(cts)	(ugC)	(ppm)	(cts)	(ugC)	(ppm)
1	1215056	46719	42.546	21.2731	2959	2.162	1.0811
2	1215057	46826	42.644	21.3219	2940	2.145	1.0725
3	1215058	45250	41.207	20.6036	2933	2.139	1.0693
4	1215059	44932	40.917	20.4586	2896	2.105	1.0524
Avg		45931	41.829	20.9143	2932	2.138	1.0688
Std.Dev.		980.43		26.39			
RSD (%)		2.13		0.90			

****

Pos/Vial: 17 Name: F6FWF Analyzed: 15Dec2003 20:54
Run ID: 16 Meth: stltoc Vol (mL): 2.000

SAMPLES		TIC	TIC	TIC	TOC	TOC	TOC
		Area	Mass	Conc	Area	Mass	Conc
Rep	Datafile	(cts)	(ugC)	(ppm)	(cts)	(ugC)	(ppm)
1	1215060	119504	108.894	54.4471	2689	1.916	0.9581
2	1215061	113980	103.859	51.9293	2594	1.830	0.9148
3	1215062	110337	100.538	50.2689	2535	1.776	0.8879
4	1215063	107395	97.856	48.9280	2642	1.873	0.9366
Avg		112804	102.787	51.3934	2615	1.849	0.9243
Std.Dev.		5215.88		65.94			
RSD (%)		4.62		2.52			

121503

****

Pos/Vial: 18 Name: F6GGW Analyzed: 15Dec2003 21:43
Run ID: 17 Meth: stltoc Vol (mL): 2.000

SAMPLES Rep	Datafile	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (ppm)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (ppm)
1	1215064	47803	43.534	21.7672	267224	243.056	121.5279

rerun
10x

A-Linear range exceeded (130ugC). 15Dec2003 21:55

2	1215065	46012	41.902	20.9509	261801	238.112	119.0562
3	1215066	45506	41.440	20.7202	262912	239.125	119.5626
4	1215067	44387	40.420	20.2102	261808	238.119	119.0594
Avg		45927	41.824	20.9121	263436	239.603	119.8016
Std.Dev.		1423.08		2578.57			
RSD (%)		3.10		0.98			

****

Pos/Vial: 19 Name: F6GHW Analyzed: 15Dec2003 22:32
Run ID: 18 Meth: stltoc Vol (mL): 2.000

SAMPLES Rep	Datafile	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (ppm)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (ppm)
1	1215068	20881	18.993	9.4966	2652	1.882	0.9412
2	1215069	20521	18.665	9.3326	2393	1.646	0.8231
3	1215070	20485	18.632	9.3162	2349	1.606	0.8031
4	1215071	19463	17.701	8.8503	2339	1.597	0.7985
Avg		20337	18.498	9.2489	2433	1.683	0.8415
Std.Dev.		609.80		147.71			
RSD (%)		3.00		6.07			

****

Pos/Vial: 20 Name: F6GH0 Analyzed: 15Dec2003 23:21

121503

Run ID: 19 Meth: stltoc Vol (mL): 2.000

F6GH2

SAMPLES Rep	Datafile	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (ppm)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (ppm)
1	1215072	21249	19.329	9.6644	2601	1.836	0.9179
2	1215073	20800	18.919	9.4597	2505	1.748	0.8742
3	1215074	20152	18.329	9.1644	2537	1.778	0.8888
4	1215075	20097	18.279	9.1393	2495	1.739	0.8696
Avg		20574	18.714	9.3569	2534	1.775	0.8876
Std.Dev.		551.46		47.82			
RSD (%)		2.68		1.89			

****

Pos/Vial: 21 Name: CCV Analyzed: 16Dec2003 00:11
Run ID: 20 Meth: stltoc Vol (mL): 2.000

SAMPLES Rep	Datafile	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (ppm)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (ppm)
1	1215076	589	0.496	0.2479	56155	50.654	25.3268

****

Pos/Vial: 22 Name: CCB Analyzed: 16Dec2003 00:25
Run ID: 21 Meth: stltoc Vol (mL): 2.000

SAMPLES Rep	Datafile	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (ppm)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (ppm)
1	1215077	413	0.335	0.1677	1611	0.933	0.4667

****

Pos/Vial: 23 Name: F6GH2 Analyzed: ~~16Dec2003 00:~~39
Run ID: 22 Meth: stltoc Vol (mL): 2.000

SAMPLES TIC TIC TIC TOC TOC TOC

121503

F6 @ H2

Rep	Datafile	Area (cts)	Mass (ugC)	Conc (ppm)	Area (cts)	Mass (ugC)	Conc (ppm)
1	1215078	834	0.719	0.3596	1869	1.169	0.5843
2	1215079	817	0.704	0.3519	1844	1.146	0.5729
3	1215080	804	0.692	0.3459	1848	1.149	0.5747
4	1215081	804	0.692	0.3459	1816	1.120	0.5602
Avg		814	0.702	0.3508	1844	1.146	0.5730
Std.Dev.		14.22		21.79			
RSD (%)		1.75		1.18			

****

Pos/Vial: 24 Name: F591H Analyzed: 16Dec2003 01:29
Run ID: 23 Meth: stltoc Vol (mL): 2.000

SAMPLES	TIC	TIC	TIC	TOC	TOC	TOC
Rep	Datafile	Area (cts)	Mass (ugC)	Conc (ppm)	Area (cts)	Mass (ugC)	Conc (ppm)
1	1215082	39123	35.622	17.8110	2831	2.046	1.0228
2	1215083	37898	34.505	17.2527	2703	1.929	0.9644
3	1215084	36793	33.498	16.7490	2746	1.968	0.9840
4	1215085	35691	32.493	16.2467	2733	1.956	0.9781
Avg		37376	34.030	17.0149	2753	1.975	0.9873
Std.Dev.		1472.37		54.87			
RSD (%)		3.94		1.99			

****

Pos/Vial: 25 Name: F5919 Analyzed: 16Dec2003 02:18
Run ID: 24 Meth: stltoc Vol (mL): 2.000

SAMPLES	TIC	TIC	TIC	TOC	TOC	TOC
Rep	Datafile	Area (cts)	Mass (ugC)	Conc (ppm)	Area (cts)	Mass (ugC)	Conc (ppm)
1	1215086	175164	159.632	79.8158	4061	3.167	1.5834
2	1215087	174971	159.456	79.7279	4306	3.390	1.6950
3	1215088	171843	156.604	78.3022	4395	3.471	1.7356
4	1215089	168300	153.375	76.6873	4388	3.465	1.7324

121503

F5919

Avg	172569	157.267	78.6333	4287	3.373	1.6866
Std.Dev.	3227.75		156.31			
RSD (%)	1.87		3.65			

****

Pos/Vial: 26 Name: F592C Analyzed: 16Dec2003 03:07
Run ID: 25 Meth: stltoc Vol (mL): 2.000

SAMPLES		TIC	TIC	TIC	TOC	TOC	TOC
		Area	Mass	Conc	Area	Mass	Conc
Rep	Datafile	(cts)	(ugC)	(ppm)	(cts)	(ugC)	(ppm)
1	1215090	73259	66.739	33.3695	6925	5.777	2.8887
2	1215091	71534	65.167	32.5833	6788	5.653	2.8263
3	1215092	71389	65.034	32.5172	7017	5.861	2.9307
4	1215093	72230	65.801	32.9005	7029	5.872	2.9361
Avg		72103	65.685	32.8426	6939	5.791	2.8955
Std.Dev.		853.62		111.32			
RSD (%)		1.18		1.60			

****

Pos/Vial: 27 Name: F592M Analyzed: 16Dec2003 03:56
Run ID: 26 Meth: stltoc Vol (mL): 2.000

SAMPLES		TIC	TIC	TIC	TOC	TOC	TOC
		Area	Mass	Conc	Area	Mass	Conc
Rep	Datafile	(cts)	(ugC)	(ppm)	(cts)	(ugC)	(ppm)
1	1215094	65113	59.313	29.6567	4058	3.164	1.5820
2	1215095	64134	58.421	29.2105	4044	3.151	1.5756
3	1215096	63990	58.290	29.1449	4071	3.176	1.5879
4	1215097	63863	58.174	29.0870	4032	3.140	1.5702
Avg		64275	58.550	29.2748	4051	3.158	1.5789
Std.Dev.		569.53		16.92			
RSD (%)		0.89		0.42			

****

121503

Pos/Vial: 28 Name: F592Q Analyzed: 16Dec2003 04:46
Run ID: 27 Meth: stltoc Vol (mL): 2.000

SAMPLES	TIC	TIC	TIC	TOC	TOC	TOC
	Area	Mass	Conc	Area	Mass	Conc
Rep Datafile	(cts)	(ugC)	(ppm)	(cts)	(ugC)	(ppm)
1 1215098	76578	69.764	34.8822	7057	5.898	2.9489
2 1215099	75903	69.149	34.5746	6952	5.802	2.9010
3 1215100	74725	68.075	34.0377	6984	5.831	2.9156
4 1215101	73058	66.556	33.2779	6902	5.757	2.8783
Avg	75066	68.386	34.1931	6973	5.822	2.9110
Std.Dev.	1542.19		64.95			
RSD (%)	2.05		0.93			

****

Pos/Vial: 29 Name: F6CQM Analyzed: 16Dec2003 05:35
Run ID: 28 Meth: stltoc Vol (mL): 2.000

SAMPLES	TIC	TIC	TIC	TOC	TOC	TOC
	Area	Mass	Conc	Area	Mass	Conc
Rep Datafile	(cts)	(ugC)	(ppm)	(cts)	(ugC)	(ppm)
1 1215102	61724	56.224	28.1121	7035	5.878	2.9389
2 1215103	61992	56.468	28.2342	6991	5.838	2.9188
3 1215104	61131	55.684	27.8418	6949	5.799	2.8997
4 1215105	59851	54.517	27.2584	7016	5.860	2.9302
Avg	61174	55.723	27.8616	6997	5.844	2.9219
Std.Dev.	952.86		37.16			
RSD (%)	1.56		0.53			

****

Pos/Vial: 30 Name: F6CQ4 Analyzed: 16Dec2003 06:24
Run ID: 29 Meth: stltoc Vol (mL): 2.000

SAMPLES	TIC	TIC	TIC	TOC	TOC	TOC
	Area	Mass	Conc	Area	Mass	Conc
Rep Datafile	(cts)	(ugC)	(ppm)	(cts)	(ugC)	(ppm)

F6 C94

					121503		
1	1215106	98914	90.125	45.0626	5738	4.695	2.3477
2	1215107	96827	88.223	44.1113	5765	4.720	2.3600
3	1215108	93715	85.386	42.6930	5823	4.773	2.3865
4	1215109	94747	86.327	43.1633	5806	4.757	2.3787
Avg		96050	87.515	43.7575	5783	4.736	2.3682
Std.Dev.		2306.24		38.63			
RSD (%)		2.40		0.67			

****

Pos/Vial: 31 Name: F6CRF Analyzed: 16Dec2003 07:13
Run ID: 30 Meth: stltoc Vol (mL): 2.000

SAMPLES		TIC	TIC	TIC	TOC	TOC	TOC
		Area	Mass	Conc	Area	Mass	Conc
Rep	Datafile	(cts)	(ugC)	(ppm)	(cts)	(ugC)	(ppm)
1	1215110	95704	87.199	43.5995	4645	3.699	1.8496
2	1215111	93251	84.963	42.4815	4550	3.613	1.8063
3	1215112	91667	83.519	41.7595	4546	3.609	1.8044
4	1215113	89701	81.727	40.8635	4543	3.606	1.8031
Avg		92580	84.352	42.1760	4571	3.632	1.8158
Std.Dev.		2538.49		49.42			
RSD (%)		2.74		1.08			

****

Pos/Vial: 32 Name: F6FVP Analyzed: 16Dec2003 08:03
Run ID: 31 Meth: stltoc Vol (mL): 2.000

SAMPLES		TIC	TIC	TIC	TOC	TOC	TOC
		Area	Mass	Conc	Area	Mass	Conc
Rep	Datafile	(cts)	(ugC)	(ppm)	(cts)	(ugC)	(ppm)
1	1215114	139097	126.754	63.3772	348915	317.522	158.7611

Sequence Aborted 16Dec2003 08:23 run continues at 11:07

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****

121503

** RUN SETUP **

****

Operator: CL WinTOC Version: 4.1
Data Path: C:\WINTOC~1\DATA10\121503 Firmware Version: 4.1

Report To File: Enabled Naming Mode: Automatic
Prefix: 1215 Index: 115

****

** CONFIGURATION **

****

Analysis Mode: TIC/TOC Spl Intro: Autosampler 53
Remote Start : OFF

Loop Size: 1 mL	Actual Volume 1mL	5mL	10mL	25mL
Loop A (uL):	1000	5000	10000	25000
Loop B (uL):	1000	5000	10000	25000

Tray Type: 53 Vial Vial Option: Septum Piercing
Needle Depth: 95 % Preacid Volume (uL): 000
Wash Needle Depth: 95 % Preacid Purge Time (min:sec): 0:00

	TIC	TOC	TC
Blank	----	----	----
Average:	45	587	0

Linearization Coeff: 60000

Sample Transfer Times (sec)

	Initial Fill			Loop Fill			Sample Inject
	Non-AS	AS	AS w/Sep	Non-AS	AS	AS w/Sep	(all)
1mL:	6.0	4.5	3.5	1.2	1.2	1.0	4.5
5mL:	8.1	7.2	6.8	5.1	5.1	4.2	9.3
10mL:	14.2	12.2	11.0	10.5	10.5	10.5	16.5
25mL:	35.0	35.0	32.0	n/a	n/a	n/a	38.0

****

** CALIBRATION **

****

10/09/03 Thu Oct 09 16:24:54 2003

121503

Pos/ Vial	Sample Name	Method	Run Type	# Rep	Vol (mL)	# Blk	Ovr Rng	Remarks
1	F6GG7 40X	stltoc	Sample	4	2.000	0	No	
2	F6GG7 40X MS	stltoc	Sample	1	2.000	0	No	
3	F6GG7 40X MSD	stltoc	Sample	1	2.000	0	No	
4	F6C15	stltoc	Sample	4	2.000	0	No	
5	F6C2R	stltoc	Sample	4	2.000	0	No	
6	F6C2W	stltoc	Sample	4	2.000	0	No	
7	F6C3D	stltoc	Sample	4	2.000	0	No	
8	F6F9Q	stltoc	Sample	4	2.000	0	No	
9	CCV	stltoc	Sample	1	2.000	0	No	
10	CCB	stltoc	Sample	1	2.000	0	No	
11	F6F93	stltoc	Sample	4	2.000	0	No	
12	F6F97	stltoc	Sample	4	2.000	0	No	
13	F6F99	stltoc	Sample	4	2.000	0	No	
14	F6GAE	stltoc	Sample	4	2.000	0	No	
15	F6GAG	stltoc	Sample	4	2.000	0	No	
16	F6GAJ	stltoc	Sample	4	2.000	0	No	
17	F6FWF	stltoc	Sample	4	2.000	0	No	
18	F6GGW	stltoc	Sample	4	2.000	0	No	
19	F6GHW	stltoc	Sample	4	2.000	0	No	
20	F6GH0	stltoc	Sample	4	2.000	0	No	
21	CCV	stltoc	Sample	1	2.000	0	No	
22	CCB	stltoc	Sample	1	2.000	0	No	
23	F6GH2	stltoc	Sample	4	2.000	0	No	
24	F591H	stltoc	Sample	4	2.000	0	No	
25	F5919	stltoc	Sample	4	2.000	0	No	
26	F592C	stltoc	Sample	4	2.000	0	No	
27	F592M	stltoc	Sample	4	2.000	0	No	
28	F592Q	stltoc	Sample	4	2.000	0	No	
29	F6CQM	stltoc	Sample	4	2.000	0	No	
30	F6CQ4	stltoc	Sample	4	2.000	0	No	
31	F6CRF	stltoc	Sample	4	2.000	0	No	
32	F6FVP 10X	stltoc	Sample	4	2.000	0	No	
33	CCV	stltoc	Sample	1	2.000	0	No	
34	CCB	stltoc	Sample	1	2.000	0	No	
35	LCS-2	stltoc	Sample	1	2.000	0	No	
36	F6GAK	stltoc	Sample	4	2.000	0	No	
37	F6GAK MS	stltoc	Sample	1	2.000	0	No	
38	F6GAK MSD	stltoc	Sample	1	2.000	0	No	
39	F6FWJ	stltoc	Sample	4	2.000	0	No	

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40	F6FWR	stltoc	Sample	4	2.000	0 No
41	F6F0C	stltoc	Sample	4	2.000	0 No
42	F6F0G	stltoc	Sample	4	2.000	0 No
43	F6F0J	stltoc	Sample	4	2.000	0 No
44	F6F0X	stltoc	Sample	4	2.000	0 No
45	CCV	stltoc	Sample	1	2.000	0 No
46	CCB	stltoc	Sample	1	2.000	0 No
47	F6F1C	stltoc	Sample	4	2.000	0 No
48	F6F2H	stltoc	Sample	4	2.000	0 No
49	F6GGW 10X	stltoc	Sample	4	2.000	0 No
50	CCV	stltoc	Sample	1	2.000	0 No
51	CCB	stltoc	Sample	1	2.000	0 No

****
** RESULTS - 12/15/03B **
****

Pos/Vial: 32 Name: F6FVP 10X Analyzed: 16Dec2003 08:33
Run ID: 32 Meth: stltoc Vol (mL): 2.000

SAMPLES	TIC	TIC	TIC	TOC	TOC	TOC
	Area	Mass	Conc	Area	Mass	Conc
Rep Datafile	(cts)	(ugC)	(ppm)	(cts)	(ugC)	(ppm)
1 1215115	12634	11.476	5.7378	323882	294.703	147.3515

A-Linear range exceeded (130ugC). 16Dec2003 08:46

Sequence Aborted 16Dec2003 08:53

****
** RUN SETUP **
****

Operator: CL WinTOC Version: 4.1
Data Path: C:\WINTOC~1\DATA10\121503 Firmware Version: 4.1

Report To File: Enabled Naming Mode: Automatic
Prefix: 1215 Index: 116

121503

```
*********************************************************************
**                    CONFIGURATION                    **
*********************************************************************

Analysis Mode:  TIC/TOC     Spl Intro:  Autosampler 53
Remote Start :  OFF

Loop Size:  1 mL       Actual Volume  1mL   5mL   10mL   25mL
                    ------------- ---- ---- ----- -----
                     Loop A (uL):  1000  5000  10000  25000
                     Loop B (uL):  1000  5000  10000  25000

Tray Type:            53 Vial  Vial Option:       Septum Piercing
Needle Depth:         95 %    Preacid Volume (uL):          000
Wash Needle Depth:    95 %    Preacid Purge Time (min:sec):   0:00

         TIC   TOC   TC
Blank    ----  ----  ----          Linearization Coeff:  60000
 Average:   45   587    0

                  Sample Transfer Times (sec)
       Initial Fill     |      Loop Fill      | Sample Inject
   Non-AS    AS  AS w/Sep | Non-AS    AS  AS w/Sep |   (all)
   ------  ----- -------- | ------  ----- -------- | -------------
1mL:   6.0   4.5     3.5 |   1.2   1.2     1.0 |     4.5
5mL:   8.1   7.2     6.8 |   5.1   5.1     4.2 |     9.3
10mL:  14.2  12.2    11.0 |  10.5  10.5    10.5 |    16.5
25mL:  35.0  35.0    32.0 |   n/a   n/a     n/a |    38.0

*********************************************************************
**                     CALIBRATION                     **
*********************************************************************

10/09/03  Thu Oct 09 16:24:54 2003

Std. #  Used  Conc. (ppm)  Volume (mL)
------ ---- ----------- -----------     RF (ugC/k-cnt):  0.9116
  1   Yes      1.000       2.000     R-Squared:      0.9999
  2   Yes     10.000       2.000
  3   Yes     25.000       2.000     Calibration Mode:   TOC
  4   Yes     50.000       2.000     Allow Editing:      No
  5   No       0.000       1.000
```

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Rep	Std. 1	Std. 2	Std. 3	Std. 4	Std. 5
1	3640	22322	56095	110733	-
2	-	-	-	-	-
3	-	-	-	-	-
4	-	-	-	-	-
5	-	-	-	-	-
6	-	-	-	-	-
7	-	-	-	-	-
8	-	-	-	-	-
9	-	-	-	-	-
10	-	-	-	-	-

(* = unused)

****
** METHODS **
****

STLTOC Wed Oct 22 11:42:39 2003
Acid Volume: 2000 uL Rinse Volume (mL): 20
Oxidant Volume: 1000 uL Rinses Per Rep: 1
Auto-Repeat Time: 00:00:00 (hr:min:sec) Rinses Per Sample: 2

	TIC	TOC	TC
React: (min:sec):	02:00	03:00	02:30
Detect: (min:sec):	01:00	03:00	01:30

****
** SEQUENCE **
****

S Tue Dec 16 08:58:30 2003

Start Pos/Vial #: 1, Stop Pos/Vial #: 1

Pos/ Vial	Sample Name	Method	Run Type	# Rep	Vol (mL)	# Blk	Ovr Rng	Remarks
1	RINSE	stltoc	Sample	4	2.000	0	No	

****
** RESULTS - S **

121503

****

Pos/Vial: 1 Name: RINSE Analyzed: 16Dec2003 08:59
Run ID: 32 Meth: stltoc Vol (mL): 2.000

SAMPLES Rep	Datafile	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (ppm)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (ppm)
1	1215116	462	0.380	0.1901	20678	18.314	9.1571
2	1215117	398	0.322	0.1609	7312	6.130	3.0651
3	1215118	372	0.298	0.1490	3716	2.852	1.4261
4	1215119	351	0.279	0.1395	2853	2.066	1.0328
Avg		395	0.320	0.1599	8639	7.341	3.6703
Std.Dev.		48.17			8254.54		
RSD (%)		12.17			95.54		

****
** RUN SETUP **
****

Operator: CL WinTOC Version: 4.1
Data Path: C:\WINTOC~1\DATA10\121503 Firmware Version: 4.1

Report To File: Enabled Naming Mode: Automatic
Prefix: 1215 Index: 120

****
** CONFIGURATION **
****

Analysis Mode: TIC/TOC Spl Intro: Autosampler 53
Remote Start : OFF

Loop Size: 1 mL Actual Volume 1mL 5mL 10mL 25mL

Loop A (uL):	1000	5000	10000	25000
Loop B (uL):	1000	5000	10000	25000

Tray Type: 53 Vial Vial Option: Septum Piercing
Needle Depth: 95 % Preacid Volume (uL): 000
Wash Needle Depth: 95 % Preacid Purge Time (min:sec): 0:00

121503

	TIC	TOC	TC
Blank	----	----	----
Average:	45	587	0

Linearization Coeff: 60000

Sample Transfer Times (sec)

	Initial Fill			Loop Fill			Sample Inject
	Non-AS	AS	AS w/Sep	Non-AS	AS	AS w/Sep	(all)
1mL:	6.0	4.5	3.5	1.2	1.2	1.0	4.5
5mL:	8.1	7.2	6.8	5.1	5.1	4.2	9.3
10mL:	14.2	12.2	11.0	10.5	10.5	10.5	16.5
25mL:	35.0	35.0	32.0	n/a	n/a	n/a	38.0

****
** CALIBRATION **
****

10/09/03 Thu Oct 09 16:24:54 2003

Std. #	Used	Conc. (ppm)	Volume (mL)
1	Yes	1.000	2.000
2	Yes	10.000	2.000
3	Yes	25.000	2.000
4	Yes	50.000	2.000
5	No	0.000	1.000

RF (ugC/k-cnt): 0.9116
R-Squared: 0.9999

Calibration Mode: TOC
Allow Editing: No

Rep	Std. 1	Std. 2	Std. 3	Std. 4	Std. 5
1	3640	22322	56095	110733	-
2	-	-	-	-	-
3	-	-	-	-	-
4	-	-	-	-	-
5	-	-	-	-	-
6	-	-	-	-	-
7	-	-	-	-	-
8	-	-	-	-	-
9	-	-	-	-	-
10	-	-	-	-	-

(* = unused)

****
** METHODS **

121503

****

STLTOC Wed Oct 22 11:42:39 2003

Acid Volume: 2000 uL Rinse Volume (mL): 20
Oxidant Volume: 1000 uL Rinses Per Rep: 1
Auto-Repeat Time: 00:00:00 (hr:min:sec) Rinses Per Sample: 2

	TIC	TOC	TC
React: (min:sec):	02:00	03:00	02:30
Detect: (min:sec):	01:00	03:00	01:30

****
** SEQUENCE **
****

S Tue Dec 16 08:58:30 2003

Start Pos/Vial #: 1, Stop Pos/Vial #: 1

Pos/ Vial	Sample Name	Method	Run Type	# Rep	Vol (mL)	# Blk	Ovr Rng	Remarks
1	RINSE	stltoc	Sample	4	2.000	0	No	

****
** RESULTS - S **
****

Pos/Vial: 1 Name: RINSE Analyzed: 16Dec2003 10:01
Run ID: 1 Meth: stltoc Vol (mL): 2.000

SAMPLES Rep	Datafile	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (ppm)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (ppm)
1	1215120	187	0.129	0.0647	3425	2.587	1.2935
2	1215121	194	0.136	0.0679	2236	1.503	0.7516
3	1215122	177	0.120	0.0602	2114	1.392	0.6960
4	1215123	201	0.142	0.0711	1886	1.184	0.5921
Avg		189	0.132	0.0660	2415	1.667	0.8333
Std.Dev.		10.24		688.62			

121503

RSD (%) 5.40 28.51

****
** RUN SETUP **
****

Operator: CL WinTOC Version: 4.1
Data Path: C:\WINTOC~1\DATA10\121503 Firmware Version: 4.1

Report To File: Enabled Naming Mode: Automatic
Prefix: 1215 Index: 124

****
** CONFIGURATION **
****

Analysis Mode: TIC/TOC Spl Intro: Autosampler 53
Remote Start : OFF

Loop Size: 1 mL Actual Volume 1mL 5mL 10mL 25mL

Loop A (uL):	1000	5000	10000	25000
Loop B (uL):	1000	5000	10000	25000

Tray Type: 53 Vial Vial Option: Septum Piercing
Needle Depth: 95 % Preacid Volume (uL): 000
Wash Needle Depth: 95 % Preacid Purge Time (min:sec): 0:00

	TIC	TOC	TC
Blank	----	----	----
Average:	45	587	0

Linearization Coeff: 60000

Sample Transfer Times (sec)

	Initial Fill			Loop Fill			Sample Inject
	Non-AS	AS	AS w/Sep	Non-AS	AS	AS w/Sep	(all)
1mL:	6.0	4.5	3.5	1.2	1.2	1.0	4.5
5mL:	8.1	7.2	6.8	5.1	5.1	4.2	9.3
10mL:	14.2	12.2	11.0	10.5	10.5	10.5	16.5
25mL:	35.0	35.0	32.0	n/a	n/a	n/a	38.0

****
** CALIBRATION **

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****

10/09/03 Thu Oct 09 16:24:54 2003

Std. #	Used	Conc. (ppm)	Volume (mL)
1	Yes	1.000	2.000
2	Yes	10.000	2.000
3	Yes	25.000	2.000
4	Yes	50.000	2.000
5	No	0.000	1.000

RF (ugC/k-cnt): 0.9116
R-Squared: 0.9999
Calibration Mode: TOC
Allow Editing: No

Rep	Std. 1	Std. 2	Std. 3	Std. 4	Std. 5
1	3640	22322	56095	110733	-
2	-	-	-	-	-
3	-	-	-	-	-
4	-	-	-	-	-
5	-	-	-	-	-
6	-	-	-	-	-
7	-	-	-	-	-
8	-	-	-	-	-
9	-	-	-	-	-
10	-	-	-	-	-

(* = unused)

****
** METHODS **
****

STLTOC Wed Oct 22 11:42:39 2003
Acid Volume: 2000 uL
Rinse Volume (mL): 20
Oxidant Volume: 1000 uL
Rinses Per Rep: 1
Auto-Repeat Time: 00:00:00 (hr:min:sec)
Rinses Per Sample: 2

	TIC	TOC	TC
React: (min:sec):	02:00	03:00	02:30
Detect: (min:sec):	01:00	03:00	01:30

****
** SEQUENCE **
****

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12/15/03C Tue Dec 16 11:04:39 2003

Start Pos/Vial #: 32, Stop Pos/Vial #: 51

Pos/ Vial	Sample Name	Method	Run Type	# Rep	Vol (mL)	# Blk	Ovr Rng	Remarks
1	F6GG7 40X	stltoc	Sample	4	2.000	0	No	
2	F6GG7 40X MS	stltoc	Sample	1	2.000	0	No	
3	F6GG7 40X MSD	stltoc	Sample	1	2.000	0	No	
4	F6C15	stltoc	Sample	4	2.000	0	No	
5	F6C2R	stltoc	Sample	4	2.000	0	No	
6	F6C2W	stltoc	Sample	4	2.000	0	No	
7	F6C3D	stltoc	Sample	4	2.000	0	No	
8	F6F9Q	stltoc	Sample	4	2.000	0	No	
9	CCV	stltoc	Sample	1	2.000	0	No	
10	CCB	stltoc	Sample	1	2.000	0	No	
11	F6F93	stltoc	Sample	4	2.000	0	No	
12	F6F97	stltoc	Sample	4	2.000	0	No	
13	F6F99	stltoc	Sample	4	2.000	0	No	
14	F6GAE	stltoc	Sample	4	2.000	0	No	
15	F6GAG	stltoc	Sample	4	2.000	0	No	
16	F6GAJ	stltoc	Sample	4	2.000	0	No	
17	F6FWF	stltoc	Sample	4	2.000	0	No	
18	F6GGW	stltoc	Sample	4	2.000	0	No	
19	F6GHW	stltoc	Sample	4	2.000	0	No	
20	F6GH0	stltoc	Sample	4	2.000	0	No	
21	CCV	stltoc	Sample	1	2.000	0	No	
22	CCB	stltoc	Sample	1	2.000	0	No	
23	F6GH2	stltoc	Sample	4	2.000	0	No	
24	F591H	stltoc	Sample	4	2.000	0	No	
25	F5919	stltoc	Sample	4	2.000	0	No	
26	F592C	stltoc	Sample	4	2.000	0	No	
27	F592M	stltoc	Sample	4	2.000	0	No	
28	F592Q	stltoc	Sample	4	2.000	0	No	
29	F6CQM	stltoc	Sample	4	2.000	0	No	
30	F6CQ4	stltoc	Sample	4	2.000	0	No	
31	F6CRF	stltoc	Sample	4	2.000	0	No	
32	F6FVP 100X	stltoc	Sample	4	2.000	0	No	
33	CCV	stltoc	Sample	1	2.000	0	No	
34	CCB	stltoc	Sample	1	2.000	0	No	
35	LCS-2	stltoc	Sample	1	2.000	0	No	
36	F6GAK	stltoc	Sample	4	2.000	0	No	

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37	F6GAK MS	stltoc	Sample	1	2.000	0 No
38	F6GAK MSD	stltoc	Sample	1	2.000	0 No
39	F6FWJ	stltoc	Sample	4	2.000	0 No
40	F6FWR	stltoc	Sample	4	2.000	0 No
41	F6F0C	stltoc	Sample	4	2.000	0 No
42	F6F0G	stltoc	Sample	4	2.000	0 No
43	F6F0J	stltoc	Sample	4	2.000	0 No
44	F6F0X	stltoc	Sample	4	2.000	0 No
45	CCV	stltoc	Sample	1	2.000	0 No
46	CCB	stltoc	Sample	1	2.000	0 No
47	F6F1C	stltoc	Sample	4	2.000	0 No
48	F6F2H	stltoc	Sample	4	2.000	0 No
49	F6GGW 10X	stltoc	Sample	4	2.000	0 No
50	CCV	stltoc	Sample	1	2.000	0 No
51	CCB	stltoc	Sample	1	2.000	0 No

****
** RESULTS - 12/15/03C **
****

Pos/Vial: 32 Name: F6FVP 100X Analyzed: 16Dec2003 11:07
Run ID: 1 Meth: stltoc Vol (mL): 2.000

SAMPLES		TIC	TIC	TIC	TOC	TOC	TOC
		Area	Mass	Conc	Area	Mass	Conc
Rep	Datafile	(cts)	(ugC)	(ppm)	(cts)	(ugC)	(ppm)
1	1215124	948	0.823	0.4116	35268	31.614	15.8069
2	1215125	910	0.789	0.3943	33352	29.867	14.9336
3	1215126	940	0.816	0.4079	33771	30.249	15.1246
4	1215127	882	0.763	0.3815	34091	30.541	15.2705
Avg		920	0.798	0.3988	34120	30.568	15.2839 x100 = 1528.39
Std.Dev.		30.16		822.67			
RSD (%)		3.28		2.41			

****

Pos/Vial: 33 Name: CCV Analyzed: 16Dec2003 11:57
Run ID: 32 Meth: stltoc Vol (mL): 2.000

SAMPLES	TIC	TIC	TIC	TOC	TOC	TOC
	Area	Mass	Conc	Area	Mass	Conc

121503

Rep	Datafile	(cts)	(ugC)	(ppm)	(cts)	(ugC)	(ppm)
1	1215128	626	0.530	0.2648	54933	49.540	24.7698 ✓

****

Pos/Vial: 34 Name: CCB Analyzed: 16Dec2003 12:11
Run ID: 33 Meth: stltoc Vol (mL): 2.000

SAMPLES	TIC	TIC	TIC	TOC	TOC	TOC
	Area	Mass	Conc	Area	Mass	Conc
Rep Datafile	(cts)	(ugC)	(ppm)	(cts)	(ugC)	(ppm)
1 1215129	331	0.261	0.1304	1705	1.019	0.5096 ✓

MA 12/17/03

****

Pos/Vial: 35 Name: LCS-2 Analyzed: 16Dec2003 12:26
Run ID: 34 Meth: stltoc Vol (mL): 2.000

SAMPLES	TIC	TIC	TIC	TOC	TOC	TOC
	Area	Mass	Conc	Area	Mass	Conc
Rep Datafile	(cts)	(ugC)	(ppm)	(cts)	(ugC)	(ppm)
1 1215130	610	0.515	0.2575	82603	74.763	37.3813

TV= 39.9

****

Pos/Vial: 36 Name: F6GAK Analyzed: 16Dec2003 12:40
Run ID: 35 Meth: stltoc Vol (mL): 2.000

SAMPLES	TIC	TIC	TIC	TOC	TOC	TOC
	Area	Mass	Conc	Area	Mass	Conc
Rep Datafile	(cts)	(ugC)	(ppm)	(cts)	(ugC)	(ppm)
1 1215131	118807	108.259	54.1294	2589	1.825	0.9125
2 1215132	110168	100.384	50.1919	2623	1.856	0.9280
3 1215133	108845	99.178	49.5889	2588	1.824	0.9120
4 1215134	106825	97.336	48.6682	2605	1.840	0.9198
Avg	111161	101.289	50.6446	2601	1.836	0.9181
Std.Dev.	5279.27		16.46			
RSD (%)	4.75		0.63			

121503

****

Pos/Vial: 37 Name: F6GAK MS Analyzed: 16Dec2003 13:29
Run ID: 36 Meth: stltoc Vol (mL): 2.000

SAMPLES	TIC	TIC	TIC	TOC	TOC	TOC
	Area	Mass	Conc	Area	Mass	Conc
Rep Datafile	(cts)	(ugC)	(ppm)	(cts)	(ugC)	(ppm)
1 1215135	17874	16.252	8.1261	31561	28.235	14.1173 x 2 = 28.2346

****

Pos/Vial: 38 Name: F6GAK MSD Analyzed: 16Dec2003 13:44
Run ID: 37 Meth: stltoc Vol (mL): 2.000

SAMPLES	TIC	TIC	TIC	TOC	TOC	TOC
	Area	Mass	Conc	Area	Mass	Conc
Rep Datafile	(cts)	(ugC)	(ppm)	(cts)	(ugC)	(ppm)
1 1215136	17871	16.249	8.1247	32129	28.752	14.3762 X2 = 28.7524

****

Pos/Vial: 39 Name: F6FWJ Analyzed: 16Dec2003 13:58
Run ID: 38 Meth: stltoc Vol (mL): 2.000

SAMPLES	TIC	TIC	TIC	TOC	TOC	TOC
	Area	Mass	Conc	Area	Mass	Conc
Rep Datafile	(cts)	(ugC)	(ppm)	(cts)	(ugC)	(ppm)
1 1215137	50946	46.399	23.1997	5254	4.254	2.1271
2 1215138	50080	45.610	22.8050	5167	4.175	2.0875
3 1215139	47638	43.384	21.6920	5253	4.253	2.1267
4 1215140	47672	43.415	21.7075	5095	4.109	2.0547
Avg	49084	44.702	22.3510	5192	4.198	2.0990
Std.Dev.	1687.57		76.59			
RSD (%)	3.44		1.48			

****

121503

Pos/Vial: 40 Name: F6FWR Analyzed: 16Dec2003 14:47
Run ID: 39 Meth: stltoc Vol (mL): 2.000

SAMPLES Rep	Datafile	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (ppm)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (ppm)
1	1215141	96383	87.818	43.9090	3569	2.718	1.3591
2	1215142	95572	87.079	43.5393	3667	2.808	1.4038
3	1215143	89589	81.625	40.8124	3458	2.617	1.3085
4	1215144	85399	77.805	38.9027	3557	2.707	1.3537
Avg		91735	83.582	41.7909	3562	2.713	1.3563
Std.Dev.		5198.61		85.46			
RSD (%)		5.67		2.40			

Sequence Aborted 16Dec2003 15:36

starts at 15:51 page 42

****
** RUN SETUP **
****

Operator: CL WinTOC Version: 4.1
Data Path: C:\WINTOC~1\DATA10\121503 Firmware Version: 4.1

Report To File: Enabled Naming Mode: Automatic
Prefix: 1215 Index: 145

****
** CONFIGURATION **
****

Analysis Mode: TIC/TOC Spl Intro: Autosampler 53
Remote Start : OFF

Loop Size: 1 mL Actual Volume 1mL 5mL 10mL 25mL

Loop A (uL): 1000 5000 10000 25000
Loop B (uL): 1000 5000 10000 25000

Tray Type: 53 Vial Vial Option: Septum Piercing

121503

Needle Depth: 95 % Preacid Volume (uL): 000
Wash Needle Depth: 95 % Preacid Purge Time (min:sec): 0:00

	TIC	TOC	TC
Blank	----	----	----
Average:	45	587	0

Linearization Coeff: 60000

Sample Transfer Times (sec)

	Initial Fill			Loop Fill			Sample Inject
	Non-AS	AS	AS w/Sep	Non-AS	AS	AS w/Sep	(all)
1mL:	6.0	4.5	3.5	1.2	1.2	1.0	4.5
5mL:	8.1	7.2	6.8	5.1	5.1	4.2	9.3
10mL:	14.2	12.2	11.0	10.5	10.5	10.5	16.5
25mL:	35.0	35.0	32.0	n/a	n/a	n/a	38.0

****
** CALIBRATION **
****

10/09/03 Thu Oct 09 16:24:54 2003

Std. #	Used	Conc. (ppm)	Volume (mL)
1	Yes	1.000	2.000
2	Yes	10.000	2.000
3	Yes	25.000	2.000
4	Yes	50.000	2.000
5	No	0.000	1.000

RF (ugC/k-cnt): 0.9116
R-Squared: 0.9999

Calibration Mode: TOC
Allow Editing: No

Rep	Std. 1	Std. 2	Std. 3	Std. 4	Std. 5
1	3640	22322	56095	110733	-
2	-	-	-	-	-
3	-	-	-	-	-
4	-	-	-	-	-
5	-	-	-	-	-
6	-	-	-	-	-
7	-	-	-	-	-
8	-	-	-	-	-
9	-	-	-	-	-
10	-	-	-	-	-

(* = unused)

121503

****
** METHODS **
****

STLTOC Wed Oct 22 11:42:39 2003
Acid Volume: 2000 uL Rinse Volume (mL): 20
Oxidant Volume: 1000 uL Rinses Per Rep: 1
Auto-Repeat Time: 00:00:00 (hr:min:sec) Rinses Per Sample: 2

	TIC	TOC	TC
React: (min:sec):	02:00	03:00	02:30
Detect: (min:sec):	01:00	03:00	01:30

****
** SEQUENCE **
****

12/16/03 Tue Dec 16 15:33:40 2003

Start Pos/Vial #: 1, Stop Pos/Vial #: 53

Pos/ Vial	Sample Name	Method	Run Type	# Rep	Vol (mL)	# Blk	Ovr Rng	Remarks
1	F6F0C	stltoc	Sample	4	2.000	0	No	
2	F6F0G	stltoc	Sample	4	2.000	0	No	
3	F6F0J	stltoc	Sample	4	2.000	0	No	
4	F6F0X	stltoc	Sample	4	2.000	0	No	
5	CCV	stltoc	Sample	1	2.000	0	No	
6	CCB	stltoc	Sample	1	2.000	0	No	
7	F6F1C	stltoc	Sample	4	2.000	0	No	
8	F6F2H	stltoc	Sample	4	2.000	0	No	
9	F6PDE IAA	stltoc	Sample	1	2.000	0	No	
10	F6PDE MS	stltoc	Sample	1	2.000	0	No	
11	F6PDE MSD	stltoc	Sample	1	2.000	0	No	
12	LCS-3	stltoc	Sample	1	2.000	0	No	
13	F6PDF	stltoc	Sample	1	2.000	0	No	
14	F6PDG	stltoc	Sample	1	2.000	0	No	
15	F6PC1	stltoc	Sample	1	2.000	0	No	
16	F6PC8	stltoc	Sample	1	2.000	0	No	
17	CCV	stltoc	Sample	1	2.000	0	No	
18	CCB	stltoc	Sample	1	2.000	0	No	

335114

335115

121503

19	F6PDH	stltoc	Sample	1	2.000	0 No
20	F6PDJ	stltoc	Sample	1	2.000	0 No
21	F6PDK	stltoc	Sample	1	2.000	0 No
22	F6PDL	stltoc	Sample	1	2.000	0 No
23	F6PDM	stltoc	Sample	1	2.000	0 No
24	F6PDP	stltoc	Sample	1	2.000	0 No
25	F6PDQ	stltoc	Sample	1	2.000	0 No
26	F6KGK	stltoc	Sample	1	2.000	0 No
27	F6KGV	stltoc	Sample	1	2.000	0 No
28	F6KGX	stltoc	Sample	1	2.000	0 No
29	CCV	stltoc	Sample	1	2.000	0 No
30	CCB	stltoc	Sample	1	2.000	0 No
31	F6KG1	stltoc	Sample	1	2.000	0 No
32	F6KG2	stltoc	Sample	1	2.000	0 No
33	F6KG9	stltoc	Sample	1	2.000	0 No
34	F6KHE	stltoc	Sample	1	2.000	0 No
35	F6KHF	stltoc	Sample	1	2.000	0 No
36	F6KHG	stltoc	Sample	1	2.000	0 No
37	F6KHJ	stltoc	Sample	1	2.000	0 No
38	F6KHL	stltoc	Sample	1	2.000	0 No
39	F6KHP	stltoc	Sample	1	2.000	0 No
40	F6KHV	stltoc	Sample	1	2.000	0 No
41	CCV	stltoc	Sample	1	2.000	0 No
42	CCB	stltoc	Sample	1	2.000	0 No
43	F6KFL	stltoc	Sample	1	2.000	0 No
44	F6KFL MS	stltoc	Sample	1	2.000	0 No
45	F6KFL MSD	stltoc	Sample	1	2.000	0 No
46	LCS-4	stltoc	Sample	1	2.000	0 No
47	F6KHX	stltoc	Sample	1	2.000	0 No
48	F6KH0	stltoc	Sample	1	2.000	0 No
49	F6KH1	stltoc	Sample	1	2.000	0 No
50	F6KH2	stltoc	Sample	1	2.000	0 No
51	F6FEJ	stltoc	Sample	1	2.000	0 No
52	CCV	stltoc	Sample	1	2.000	0 No
53	CCB	stltoc	Sample	1	2.000	0 No

****
** RESULTS - 12/16/03 **
****

Pos/Vial: 1 Name: F6F0C Analyzed: 16Dec2003 15:51
Run ID: 40 Meth: stltoc Vol (mL): 2.000

121503

F6F0C

SAMPLES Rep	Datafile	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (ppm)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (ppm)
1	1215145	103396	94.211	47.1054	4359	3.438	1.7192
2	1215146	100541	91.608	45.8041	4498	3.565	1.7826
3	1215147	97114	88.484	44.2422	4471	3.541	1.7703
4	1215148	95034	86.588	43.2941	4539	3.602	1.8012
Avg		99021	90.223	45.1114	4466	3.537	1.7683
Std.Dev.		3696.12		77.08			
RSD (%)		3.73		1.73			

****

Pos/Vial: 2 Name: F6F0G Analyzed: 16Dec2003 16:41
Run ID: 1 Meth: stltoc Vol (mL): 2.000

SAMPLES Rep	Datafile	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (ppm)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (ppm)
1	1215149	170540	155.417	77.7083	7800	6.575	3.2875

A-Linear range exceeded (130ugC). 16Dec2003 16:53

2	1215150	169730	154.678	77.3391	7466	6.271	3.1353
3	1215151	167198	152.370	76.1851	7625	6.416	3.2078
4	1215152	160324	146.104	73.0520	7407	6.217	3.1084
Avg		166948	152.142	76.0711	7574	6.370	3.1848
Std.Dev.		4639.75		176.29			
RSD (%)		2.78		2.33			

****

Pos/Vial: 3 Name: F6F0J Analyzed: 16Dec2003 17:30
Run ID: 2 Meth: stltoc Vol (mL): 2.000

SAMPLES Rep	Datafile	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (ppm)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (ppm)

121503

F6F03

1	1215153	99118	90.311	45.1555	25108	22.352	11.1762
2	1215154	95693	87.189	43.5945	25446	22.660	11.3302
3	1215155	96544	87.965	43.9824	25917	23.090	11.5449
4	1215156	94250	85.874	42.9368	25572	22.775	11.3877
Avg		96401	87.835	43.9173	25510	22.720	11.3598
Std.Dev.		2043.74		334.26			
RSD (%)		2.12		1.31			

****

Pos/Vial: 4 Name: F6F0X Analyzed: 16Dec2003 18:19
Run ID: 3 Meth: stltoc Vol (mL): 2.000

SAMPLES Rep	Datafile	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (ppm)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (ppm)
1	1215157	84974	77.418	38.7090	4932	3.961	1.9804
2	1215158	85060	77.496	38.7482	4859	3.894	1.9471
3	1215159	83053	75.667	37.8334	4750	3.795	1.8974
4	1215160	83476	76.052	38.0262	4829	3.867	1.9334
Avg		84140	76.658	38.3292	4842	3.879	1.9396
Std.Dev.		1027.04		75.32			
RSD (%)		1.22		1.56			

****

Pos/Vial: 5 Name: CCV Analyzed: 16Dec2003 19:09
Run ID: 4 Meth: stltoc Vol (mL): 2.000

SAMPLES Rep	Datafile	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (ppm)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (ppm)
1	1215161	672	0.572	0.2858	54626	49.260	24.6299

****

Pos/Vial: 6 Name: CCB Analyzed: 16Dec2003 19:23
Run ID: 5 Meth: stltoc Vol (mL): 2.000

121503

SAMPLES Rep	Datafile	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (ppm)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (ppm)
1	1215162	448	0.367	0.1837	1451	0.788	0.3938

✓ Blank 2

****

Pos/Vial: 7 Name: F6F1C Analyzed: 16Dec2003 19:38
Run ID: 6 Meth: stltoc Vol (mL): 2.000

SAMPLES Rep	Datafile	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (ppm)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (ppm)
1	1215163	134795	122.833	61.4164	2021	1.307	0.6536
2	1215164	137336	125.149	62.5746	2166	1.439	0.7197
3	1215165	136113	124.034	62.0171	2233	1.500	0.7502
4	1215166	134418	122.489	61.2446	2278	1.541	0.7707
Avg		135665	123.626	61.8132	2174	1.447	0.7236
Std.Dev.		1329.77		112.20			
RSD (%)		0.98		5.16			

****

Pos/Vial: 8 Name: F6F2H Analyzed: 16Dec2003 20:27
Run ID: 7 Meth: stltoc Vol (mL): 2.000

SAMPLES Rep	Datafile	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (ppm)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (ppm)
1	1215167	139823	127.416	63.7081	3490	2.646	1.3231
2	1215168	135885	123.826	61.9132	3176	2.360	1.1800
3	1215169	136654	124.527	62.2637	3229	2.408	1.2042
4	1215170	134236	122.323	61.1616	3166	2.351	1.1755
Avg		136649	124.523	62.2617	3265	2.441	1.2207
Std.Dev.		2343.83		152.36			
RSD (%)		1.72		4.67			

121503

****

Pos/Vial: 9 Name: F6PDE Analyzed: 16Dec2003 21:16
Run ID: 8 Meth: stltoc Vol (mL): 2.000

SAMPLES Rep	Datafile	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (ppm)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (ppm)
1	1215171	34102	31.045	15.5225	13083	11.391	5.6954

****

Pos/Vial: 10 Name: F6PDE MS Analyzed: 16Dec2003 21:31
Run ID: 9 Meth: stltoc Vol (mL): 2.000

SAMPLES Rep	Datafile	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (ppm)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (ppm)
1	1215172	6859	6.211	3.1057	32007	28.641	14.3206

x 2 = 28.6412

****

Pos/Vial: 11 Name: F6PDE MSD Analyzed: 16Dec2003 21:45
Run ID: 10 Meth: stltoc Vol (mL): 2.000

SAMPLES Rep	Datafile	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (ppm)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (ppm)
1	1215173	6310	5.711	2.8555	32503	29.093	14.5467

x 2 = 29.0934

****

Pos/Vial: 12 Name: LCS-3 Analyzed: 16Dec2003 21:59
Run ID: 11 Meth: stltoc Vol (mL): 2.000

SAMPLES Rep	Datafile	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (ppm)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (ppm)
1	1215174	672	0.572	0.2858	85199	77.129	38.5645

121503

****

Pos/Vial: 13 Name: F6PDF Analyzed: 16Dec2003 22:14
Run ID: 12 Meth: stltoc Vol (mL): 2.000

SAMPLES	TIC	TIC	TIC	TOC	TOC	TOC
	Area	Mass	Conc	Area	Mass	Conc
Rep Datafile	(cts)	(ugC)	(ppm)	(cts)	(ugC)	(ppm)
1 1215175	42676	38.861	19.4304	23366	20.764	10.3822

****

Pos/Vial: 14 Name: F6PDG Analyzed: 16Dec2003 22:28
Run ID: 13 Meth: stltoc Vol (mL): 2.000

SAMPLES	TIC	TIC	TIC	TOC	TOC	TOC
	Area	Mass	Conc	Area	Mass	Conc
Rep Datafile	(cts)	(ugC)	(ppm)	(cts)	(ugC)	(ppm)
1 1215176	40676	37.038	18.5188	20132	17.816	8.9082

****

Pos/Vial: 15 Name: F6PC1 Analyzed: 16Dec2003 22:43
Run ID: 14 Meth: stltoc Vol (mL): 2.000

SAMPLES	TIC	TIC	TIC	TOC	TOC	TOC
	Area	Mass	Conc	Area	Mass	Conc
Rep Datafile	(cts)	(ugC)	(ppm)	(cts)	(ugC)	(ppm)
1 1215177	75325	68.622	34.3112	7042	5.884	2.9421

****

Pos/Vial: 16 Name: F6PC8 Analyzed: 16Dec2003 22:57
Run ID: 15 Meth: stltoc Vol (mL): 2.000

SAMPLES	TIC	TIC	TIC	TOC	TOC	TOC
	Area	Mass	Conc	Area	Mass	Conc
Rep Datafile	(cts)	(ugC)	(ppm)	(cts)	(ugC)	(ppm)

F6PC8

121503
1 1215178 47213 42.997 21.4983 18444 16.278 8.1389

****

Pos/Vial: 17 Name: CCV Analyzed: 16Dec2003 23:12
Run ID: 16 Meth: stltoc Vol (mL): 2.000

SAMPLES		TIC	TIC	TIC	TOC	TOC	TOC
		Area	Mass	Conc	Area	Mass	Conc
Rep	Datafile	(cts)	(ugC)	(ppm)	(cts)	(ugC)	(ppm)
1	1215179	530	0.442	0.2211	56313	50.798	25.3988

****

Pos/Vial: 18 Name: CCB Analyzed: 16Dec2003 23:26
Run ID: 17 Meth: stltoc Vol (mL): 2.000

SAMPLES		TIC	TIC	TIC	TOC	TOC	TOC
		Area	Mass	Conc	Area	Mass	Conc
Rep	Datafile	(cts)	(ugC)	(ppm)	(cts)	(ugC)	(ppm)
1	1215180	181	0.124	0.0620	1500	0.832	0.4161

****

Pos/Vial: 19 Name: F6PDH Analyzed: 16Dec2003 23:40
Run ID: 18 Meth: stltoc Vol (mL): 2.000

SAMPLES		TIC	TIC	TIC	TOC	TOC	TOC
		Area	Mass	Conc	Area	Mass	Conc
Rep	Datafile	(cts)	(ugC)	(ppm)	(cts)	(ugC)	(ppm)
1	1215181	65320	59.502	29.7511	9939	8.525	4.2625

****

Pos/Vial: 20 Name: F6PDJ Analyzed: 16Dec2003 23:55
Run ID: 19 Meth: stltoc Vol (mL): 2.000

SAMPLES		TIC	TIC	TIC	TOC	TOC	TOC
		Area	Mass	Conc	Area	Mass	Conc
Rep	Datafile	(cts)	(ugC)	(ppm)	(cts)	(ugC)	(ppm)

121503

F6PDJ

--- -------- ------- ------- ---------- ------- ------- ----------
1 1215182 65356 59.535 29.7675 11343 9.805 4.9024

****

Pos/Vial: 21 Name: F6PDK Analyzed: 17Dec2003 00:09
Run ID: 20 Meth: stltoc Vol (mL): 2.000

SAMPLES	TIC	TIC	TIC	TOC	TOC	TOC
	Area	Mass	Conc	Area	Mass	Conc
Rep Datafile	(cts)	(ugC)	(ppm)	(cts)	(ugC)	(ppm)
1 1215183	68615	62.506	31.2529	10788	9.299	4.6494

****

Pos/Vial: 22 Name: F6PDL Analyzed: 17Dec2003 00:24
Run ID: 21 Meth: stltoc Vol (mL): 2.000

SAMPLES	TIC	TIC	TIC	TOC	TOC	TOC
	Area	Mass	Conc	Area	Mass	Conc
Rep Datafile	(cts)	(ugC)	(ppm)	(cts)	(ugC)	(ppm)
1 1215184	64890	59.110	29.5551	12171	10.560	5.2798

****

Pos/Vial: 23 Name: F6PDM Analyzed: 17Dec2003 00:38
Run ID: 22 Meth: stltoc Vol (mL): 2.000

SAMPLES	TIC	TIC	TIC	TOC	TOC	TOC
	Area	Mass	Conc	Area	Mass	Conc
Rep Datafile	(cts)	(ugC)	(ppm)	(cts)	(ugC)	(ppm)
1 1215185	67510	61.498	30.7492	10812	9.321	4.6604

****

Pos/Vial: 24 Name: F6PDP Analyzed: 17Dec2003 00:52
Run ID: 23 Meth: stltoc Vol (mL): 2.000

SAMPLES	TIC	TIC	TIC	TOC	TOC	TOC
	Area	Mass	Conc	Area	Mass	Conc

121503

F6PDP

Rep	Datafile	(cts)	(ugC)	(ppm)	(cts)	(ugC)	(ppm)
1	1215186	71551	65.182	32.5910	10068	8.643	4.3213

****

Pos/Vial: 25 Name: F6PDQ Analyzed: 17Dec2003 01:07
Run ID: 24 Meth: stltoc Vol (mL): 2.000

SAMPLES	TIC	TIC	TIC	TOC	TOC	TOC
	Area	Mass	Conc	Area	Mass	Conc
Rep	Datafile	(cts)	(ugC)	(ppm)	(cts)	(ugC)	(ppm)
1	1215187	66592	60.662	30.3308	9194	7.846	3.9229

****

Pos/Vial: 26 Name: F6KGK Analyzed: 17Dec2003 01:21
Run ID: 25 Meth: stltoc Vol (mL): 2.000

SAMPLES	TIC	TIC	TIC	TOC	TOC	TOC
	Area	Mass	Conc	Area	Mass	Conc
Rep	Datafile	(cts)	(ugC)	(ppm)	(cts)	(ugC)	(ppm)
1	1215188	150669	137.303	68.6515	13089	11.396	5.6982

****

Pos/Vial: 27 Name: F6KGV Analyzed: 17Dec2003 01:36
Run ID: 26 Meth: stltoc Vol (mL): 2.000

SAMPLES	TIC	TIC	TIC	TOC	TOC	TOC
	Area	Mass	Conc	Area	Mass	Conc
Rep	Datafile	(cts)	(ugC)	(ppm)	(cts)	(ugC)	(ppm)
1	1215189	136019	123.949	61.9743	3158	2.344	1.1718

****

Pos/Vial: 28 Name: F6KGX Analyzed: 17Dec2003 01:50
Run ID: 27 Meth: stltoc Vol (mL): 2.000

SAMPLES TIC TIC TIC TOC TOC TOC

121503

Rep	Datafile	Area (cts)	Mass (ugC)	Conc (ppm)	Area (cts)	Mass (ugC)	Conc (ppm)
1	1215190	230708	210.263	105.1317	11756	10.181	5.0906

****

Pos/Vial: 29 Name: CCV Analyzed: 17Dec2003 02:04
Run ID: 28 Meth: stltoc Vol (mL): 2.000

SAMPLES	TIC	TIC	TIC	TOC	TOC	TOC
Rep	Datafile	Area (cts)	Mass (ugC)	Conc (ppm)	Area (cts)	Mass (ugC)	Conc (ppm)
1	1215191	736	0.630	0.3149	55523	50.078	25.0388

****

Pos/Vial: 30 Name: CCB Analyzed: 17Dec2003 02:19
Run ID: 29 Meth: stltoc Vol (mL): 2.000

SAMPLES	TIC	TIC	TIC	TOC	TOC	TOC
Rep	Datafile	Area (cts)	Mass (ugC)	Conc (ppm)	Area (cts)	Mass (ugC)	Conc (ppm)
1	1215192	261	0.197	0.0984	1363	0.707	0.3537

Blank 3

****

Pos/Vial: 31 Name: F6KG1 Analyzed: 17Dec2003 02:33
Run ID: 30 Meth: stltoc Vol (mL): 2.000

SAMPLES	TIC	TIC	TIC	TOC	TOC	TOC
Rep	Datafile	Area (cts)	Mass (ugC)	Conc (ppm)	Area (cts)	Mass (ugC)	Conc (ppm)
1	1215193	119195	108.612	54.3062	3423	2.585	1.2926

****

Pos/Vial: 32 Name: F6KG2 Analyzed: 17Dec2003 02:47
Run ID: 31 Meth: stltoc Vol (mL): 2.000

121503

KG2

SAMPLES	TIC	TIC	TIC	TOC	TOC	TOC
	Area	Mass	Conc	Area	Mass	Conc
Rep Datafile	(cts)	(ugC)	(ppm)	(cts)	(ugC)	(ppm)
1 1215194	1036	0.903	0.4517	1676	0.993	0.4963

****

Pos/Vial: 33 Name: F6KG9 Analyzed: 17Dec2003 03:02
Run ID: 32 Meth: stltoc Vol (mL): 2.000

SAMPLES	TIC	TIC	TIC	TOC	TOC	TOC
	Area	Mass	Conc	Area	Mass	Conc
Rep Datafile	(cts)	(ugC)	(ppm)	(cts)	(ugC)	(ppm)
1 1215195	217017	197.783	98.8916	7681	6.467	3.2333

****

Pos/Vial: 34 Name: F6KHE Analyzed: 17Dec2003 03:16
Run ID: 33 Meth: stltoc Vol (mL): 2.000

SAMPLES	TIC	TIC	TIC	TOC	TOC	TOC
	Area	Mass	Conc	Area	Mass	Conc
Rep Datafile	(cts)	(ugC)	(ppm)	(cts)	(ugC)	(ppm)
1 1215196	130258	118.697	59.3485	5713	4.673	2.3363

****

Pos/Vial: 35 Name: F6KHF Analyzed: 17Dec2003 03:31
Run ID: 34 Meth: stltoc Vol (mL): 2.000

SAMPLES	TIC	TIC	TIC	TOC	TOC	TOC
	Area	Mass	Conc	Area	Mass	Conc
Rep Datafile	(cts)	(ugC)	(ppm)	(cts)	(ugC)	(ppm)
1 1215197	213776	194.829	97.4144	4782	3.824	1.9120

****

Pos/Vial: 36 Name: F6KHG Analyzed: 17Dec2003 03:45
Run ID: 35 Meth: stltoc Vol (mL): 2.000

121503

SAMPLES Rep	Datafile	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (ppm)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (ppm)
1	1215198	221395	201.774	100.8870	4396	3.472	1.7361

****

Pos/Vial: 37 Name: F6KHJ Analyzed: 17Dec2003 03:59
Run ID: 36 Meth: stltoc Vol (mL): 2.000

SAMPLES Rep	Datafile	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (ppm)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (ppm)
1	1215199	519453	473.472	236.7360	16028	14.075	7.0377

****

Pos/Vial: 38 Name: F6KHL Analyzed: 17Dec2003 04:14
Run ID: 37 Meth: stltoc Vol (mL): 2.000

SAMPLES Rep	Datafile	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (ppm)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (ppm)
1	1215200	160608	146.363	73.1815	5749	4.705	2.3527

****

Pos/Vial: 39 Name: F6KHP Analyzed: 17Dec2003 04:28
Run ID: 38 Meth: stltoc Vol (mL): 2.000

SAMPLES Rep	Datafile	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (ppm)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (ppm)
1	1215201	899	0.778	0.3892	1849	1.150	0.5752

****

Pos/Vial: 40 Name: F6KHV Analyzed: 17Dec2003 04:43

121503

Run ID: 39 Meth: stltoc Vol (mL): 2.000

F6 KHV

SAMPLES	TIC	TIC	TIC	TOC	TOC	TOC
	Area	Mass	Conc	Area	Mass	Conc
Rep Datafile	(cts)	(ugC)	(ppm)	(cts)	(ugC)	(ppm)
1 1215202	419050	381.949	190.9743	6530	5.417	2.7087

****

Pos/Vial: 41 Name: CCV Analyzed: 17Dec2003 04:57
Run ID: 40 Meth: stltoc Vol (mL): 2.000

SAMPLES	TIC	TIC	TIC	TOC	TOC	TOC
	Area	Mass	Conc	Area	Mass	Conc
Rep Datafile	(cts)	(ugC)	(ppm)	(cts)	(ugC)	(ppm)
1 1215203	619	0.523	0.2616	54843	49.458	24.7288

****

Pos/Vial: 42 Name: CCB Analyzed: 17Dec2003 05:11
Run ID: 41 Meth: stltoc Vol (mL): 2.000

SAMPLES	TIC	TIC	TIC	TOC	TOC	TOC
	Area	Mass	Conc	Area	Mass	Conc
Rep Datafile	(cts)	(ugC)	(ppm)	(cts)	(ugC)	(ppm)
1 1215204	220	0.160	0.0798	1465	0.800	0.4002

****

Pos/Vial: 43 Name: F6KFL Analyzed: 17Dec2003 05:26
Run ID: 42 Meth: stltoc Vol (mL): 2.000

SAMPLES	TIC	TIC	TIC	TOC	TOC	TOC
	Area	Mass	Conc	Area	Mass	Conc
Rep Datafile	(cts)	(ugC)	(ppm)	(cts)	(ugC)	(ppm)
1 1215205	111698	101.779	50.8893	4951	3.978	1.9890

****

121503

Pos/Vial: 44 Name: F6KFL MS Analyzed: 17Dec2003 05:40
Run ID: 43 Meth: stltoc Vol (mL): 2.000

SAMPLES	TIC	TIC	TIC	TOC	TOC	TOC
	Area	Mass	Conc	Area	Mass	Conc
Rep Datafile	(cts)	(ugC)	(ppm)	(cts)	(ugC)	(ppm)
1 1215206	15534	14.119	7.0596	28877	25.788	12.8940

x2 = 25.788

****

Pos/Vial: 45 Name: F6KFL MSD Analyzed: 17Dec2003 05:55
Run ID: 44 Meth: stltoc Vol (mL): 2.000

SAMPLES	TIC	TIC	TIC	TOC	TOC	TOC
	Area	Mass	Conc	Area	Mass	Conc
Rep Datafile	(cts)	(ugC)	(ppm)	(cts)	(ugC)	(ppm)
1 1215207	17447	15.863	7.9315	29035	25.932	12.9660

x2 = 25.932

****

Pos/Vial: 46 Name: LCS-4 Analyzed: 17Dec2003 06:09
Run ID: 45 Meth: stltoc Vol (mL): 2.000

SAMPLES	TIC	TIC	TIC	TOC	TOC	TOC
	Area	Mass	Conc	Area	Mass	Conc
Rep Datafile	(cts)	(ugC)	(ppm)	(cts)	(ugC)	(ppm)
1 1215208	544	0.455	0.2274	85174	77.106	38.5531

TV=39.9

****

Pos/Vial: 47 Name: F6KHX Analyzed: 17Dec2003 06:23
Run ID: 46 Meth: stltoc Vol (mL): 2.000

SAMPLES	TIC	TIC	TIC	TOC	TOC	TOC
	Area	Mass	Conc	Area	Mass	Conc
Rep Datafile	(cts)	(ugC)	(ppm)	(cts)	(ugC)	(ppm)
1 1215209	296748	270.463	135.2314	6723	5.593	2.7967

****

121503

Pos/Vial: 48 Name: F6KH0 Analyzed: 17Dec2003 06:38
Run ID: 47 Meth: stltoc Vol (mL): 2.000

SAMPLES	TIC	TIC	TIC	TOC	TOC	TOC
	Area	Mass	Conc	Area	Mass	Conc
Rep Datafile	(cts)	(ugC)	(ppm)	(cts)	(ugC)	(ppm)
1 1215210	235160	214.322	107.1608	17325	15.258	7.6289

****

Pos/Vial: 49 Name: F6KH1 Analyzed: 17Dec2003 06:52
Run ID: 48 Meth: stltoc Vol (mL): 2.000

SAMPLES	TIC	TIC	TIC	TOC	TOC	TOC
	Area	Mass	Conc	Area	Mass	Conc
Rep Datafile	(cts)	(ugC)	(ppm)	(cts)	(ugC)	(ppm)
1 1215211	215321	196.237	98.1186	12045	10.445	5.2223

****

Pos/Vial: 50 Name: F6KH2 Analyzed: 17Dec2003 07:07
Run ID: 49 Meth: stltoc Vol (mL): 2.000

SAMPLES	TIC	TIC	TIC	TOC	TOC	TOC
	Area	Mass	Conc	Area	Mass	Conc
Rep Datafile	(cts)	(ugC)	(ppm)	(cts)	(ugC)	(ppm)
1 1215212	27432	24.965	12.4825	4494	3.561	1.7807

****

Pos/Vial: 51 Name: F6FEJ Analyzed: 17Dec2003 07:21
Run ID: 50 Meth: stltoc Vol (mL): 2.000

SAMPLES	TIC	TIC	TIC	TOC	TOC	TOC
	Area	Mass	Conc	Area	Mass	Conc
Rep Datafile	(cts)	(ugC)	(ppm)	(cts)	(ugC)	(ppm)
1 1215213	92352	84.143	42.0717	11485	9.934	4.9671

121503

****

Pos/Vial: 52 Name: CCV Analyzed: 17Dec2003 07:36
Run ID: 51 Meth: stltoc Vol (mL): 2.000

SAMPLES		TIC	TIC	TIC	TOC	TOC	TOC
		Area	Mass	Conc	Area	Mass	Conc
Rep	Datafile	(cts)	(ugC)	(ppm)	(cts)	(ugC)	(ppm)
1	1215214	553	0.463	0.2315	55032	49.630	24.8150

****

Pos/Vial: 53 Name: CCB Analyzed: 17Dec2003 07:50
Run ID: 52 Meth: stltoc Vol (mL): 2.000

SAMPLES		TIC	TIC	TIC	TOC	TOC	TOC
		Area	Mass	Conc	Area	Mass	Conc
Rep	Datafile	(cts)	(ugC)	(ppm)	(cts)	(ugC)	(ppm)
1	1215215	179	0.122	0.0611	1526	0.856	0.4280

Blank 4

****
** RUN SETUP **
****

Operator: CL WinTOC Version: 4.1
Data Path: C:\WINTOC~1\DATA10\121503 Firmware Version: 4.1

Report To File: Enabled Naming Mode: Automatic
Prefix: 1215 Index: 216

****
** CONFIGURATION **
****

Analysis Mode: TIC/TOC Spl Intro: Autosampler 53
Remote Start : OFF

Loop Size: 1 mL	Actual Volume 1mL	5mL	10mL	25mL
Loop A (uL):	1000	5000	10000	25000
Loop B (uL):	1000	5000	10000	25000

121503

Tray Type: 53 Vial Vial Option: Septum Piercing
Needle Depth: 95 % Preacid Volume (uL): 000
Wash Needle Depth: 95 % Preacid Purge Time (min:sec): 0:00

	TIC	TOC	TC
Blank	----	----	----
Average:	45	587	0

Linearization Coeff: 60000

Sample Transfer Times (sec)

	Initial Fill			Loop Fill			Sample Inject
	Non-AS	AS	AS w/Sep	Non-AS	AS	AS w/Sep	(all)
1mL:	6.0	4.5	3.5	1.2	1.2	1.0	4.5
5mL:	8.1	7.2	6.8	5.1	5.1	4.2	9.3
10mL:	14.2	12.2	11.0	10.5	10.5	10.5	16.5
25mL:	35.0	35.0	32.0	n/a	n/a	n/a	38.0

****
** CALIBRATION **
****

10/09/03 Thu Oct 09 16:24:54 2003

Std. #	Used	Conc. (ppm)	Volume (mL)
1	Yes	1.000	2.000
2	Yes	10.000	2.000
3	Yes	25.000	2.000
4	Yes	50.000	2.000
5	No	0.000	1.000

RF (ugC/k-cnt): 0.9116
R-Squared: 0.9999

Calibration Mode: TOC
Allow Editing: No

Rep	Std. 1	Std. 2	Std. 3	Std. 4	Std. 5
1	3640	22322	56095	110733	-
2	-	-	-	-	-
3	-	-	-	-	-
4	-	-	-	-	-
5	-	-	-	-	-
6	-	-	-	-	-
7	-	-	-	-	-
8	-	-	-	-	-
9	-	-	-	-	-

(* = unused)

121503

10 - - - - -

****
** METHODS **
****

STLTOC Wed Oct 22 11:42:39 2003
Acid Volume: 2000 uL Rinse Volume (mL): 20
Oxidant Volume: 1000 uL Rinses Per Rep: 1
Auto-Repeat Time: 00:00:00 (hr:min:sec) Rinses Per Sample: 2

	TIC	TOC	TC
React: (min:sec):	02:00	03:00	02:30
Detect: (min:sec):	01:00	03:00	01:30

****
** SEQUENCE **
****

12/16/03B Wed Dec 17 08:08:07 2003

Start Pos/Vial #: 1, Stop Pos/Vial #: 3

Pos/ Vial	Sample Name	Method Type	Run Rep	# (mL)	Vol	# Blk	Ovr Rng	Remarks
1	F6GGW 10X	stltoc	Sample	4	2.000	0	No	
2	CCV	stltoc	Sample	1	2.000	0	No	
3	CCB	stltoc	Sample	1	2.000	0	No	

****
** RESULTS - 12/16/03B **
****

Pos/Vial: 1 Name: F6GGW 10X Analyzed: 17Dec2003 08:08
Run ID: 53 Meth: stltoc Vol (mL): 2.000

SAMPLES Rep	Datafile	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (ppm)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (ppm)
1	1215216	1430	1.263	0.6313	28603	25.538	12.7691

121503

2	1215217	1491	1.318	0.6591	28707	25.633	12.8165
3	1215218	1469	1.298	0.6490	28584	25.521	12.7605
4	1215219	1420	1.253	0.6267	28484	25.430	12.7149
Avg		1452	1.283	0.6415	28594	25.531	12.7653
Std.Dev.		33.25		91.38			
RSD (%)		2.29		0.32			

X10 = 127.653

****

Pos/Vial: 2 Name: CCV Analyzed: 17Dec2003 08:58
Run ID: 1 Meth: stltoc Vol (mL): 2.000

SAMPLES		TIC	TIC	TIC	TOC	TOC	TOC
		Area	Mass	Conc	Area	Mass	Conc
Rep	Datafile	(cts)	(ugC)	(ppm)	(cts)	(ugC)	(ppm)
1	1215220	481	0.397	0.1987	53760	48.470	24.2352

****

Pos/Vial: 3 Name: CCB Analyzed: 17Dec2003 09:13
Run ID: 2 Meth: stltoc Vol (mL): 2.000

SAMPLES		TIC	TIC	TIC	TOC	TOC	TOC
		Area	Mass	Conc	Area	Mass	Conc
Rep	Datafile	(cts)	(ugC)	(ppm)	(cts)	(ugC)	(ppm)
1	1215221	499	0.414	0.2069	1558	0.885	0.4426

12/17/03 07:56:59 PAGE 1

Sample Number	SNO SUFFIX	TIME HH:MM:SS	ANAL. EXP. DATE	EXTR. EXP. DATE
F6KGK		14:30	1/06/04	0/00/00
F6KGV		16:30	1/06/04	0/00/00
F6KGX		16:45	1/06/04	0/00/00
F6KG1		16:10	1/06/04	0/00/00
F6KG2		15:30	1/06/04	0/00/00
F6PC1			12/17/03	0/00/00
F6PC8			12/17/03	0/00/00
F6PDE		15:10	12/10/03	0/00/00
F6PDF		14:50	12/10/03	0/00/00
F6PDG		14:32	12/10/03	0/00/00
F6PDH		4:30	12/17/03	0/00/00
F6PDJ		6:30	12/17/03	0/00/00
F6PDK		6:35	12/17/03	0/00/00
F6PDL		6:40	12/17/03	0/00/00
F6PDM		6:45	12/17/03	0/00/00
F6PDP		7:15	12/17/03	0/00/00
F6PDQ		7:20	12/17/03	0/00/00
F6T9N	B	15:10	12/10/03	0/00/00
F6T9N	C	15:10	12/10/03	0/00/00
F6PDE	D	15:10	12/10/03	0/00/00
F6PDE	S	15:10	12/10/03	0/00/00

* * * E N D O F R E P O R T * * *

Expired in transit.
Sample Receiving will write NCM.

STL North Canton General Chemistry Data Review Checklist

Parameter(s): Hardness

Batch(es): 3351416 / ~~3351711~~

Method #/SOP#: 130.2

Review Items	Level I Review			Level II Review		
A. Initial Calibration	YES	NO	N/A	YES	NO	N/A
1. Initial calibration correlation coefficient ≥ 0.995?			✓			✓
2. Calibration curve consist of the minimum number of calibration standards?			✓			✓
3. ICV analyzed at immediately after calibration and within control limits ? (TRAACS Nitrate/Nitrite, Cyanide 85-115%; all others 90-110%)			✓			✓
4. ICB analyzed immediately after ICV and within criteria (± RL)?			✓			✓
B. Continuing Calibration						
1. CCV analyzed every 10 samples, at end of sequence and within criteria?			✓			✓
2. CCB analyzed every 10 samples, at end of sequence & within criteria (±RL)?			✓			✓
C. Sample Results						
1. Were samples with concentrations > the linear range diluted and reanalyzed ?	✓			✓		
2. All reported results bracketed by in control QC ?	✓			✓		
3. Sample analyses done within holding time ?	✓			✓		
D. Quality Control						
1. LCS per prep batch and within QC limits ? *(LCSD, where applicable)*	✓			✓		
2. Method blank done per prep batch and < RL. Method blank RL supports the lowest RL reported for the batch?	✓			✓		
3. MS/MSD run at required frequency and evaluated? MS/MSD reported properly and calculated correctly?	✓			✓		
4. Duplicate samples run at required frequency (duplicate sample performed per matrix encountered)?			✓			✓
E. Titrant						
1. Titrant standardized?	✓		~~✓~~	MK 12/18/03		
2. If no, standardization expires			✓			
F. Other						
1. Are all nonconformances documented appropriately (NCM or narrative)?			✓			✓
2. Calculations checked for error ?	✓			✓		
3. Transcriptions checked for error ?	✓			✓		
4. All client/project specific requirements met ?	✓			✓		
5. Date/time of preparation and analysis verified as correct ?	✓			✓		
6. Units verified as correct?	✓			✓		
7. Dilutions have been properly applied and RL's adjusted appropriately?	✓			✓		
8. SOP followed?	✓			✓		
9. Calculations checked at minimum frequency (at least 20%, 100% for QC)?	✓			✓		
10. All reagent and standard numbers recorded in logbook?	✓			✓		
11. Edits dated and initialed	✓			✓		

Comment on any "NO" response(s): only 1 blank - only 1 batch reported

Level I reviewer: Lori J Hylland **Date:** 12/18/03

Level II Reviewer: Angela Deria **Date:** 12/18/03

Level I review:

		STL North Canton			
	Hardness Titrimetric Logsheet				
Prep Date	12/17/03		Batch	3351416/~~3351417~~	
Anal Date	12/17/03	LCS	P095507		TV =290
Analyst	LFH				
Titrant				Standardization	
Name:	EDTA			Date	12/17/03
Normality	0.02			Intials	LFH
				RL	5M mg/L

Sample No.	Sample Vol	dil	Titrant Vol (ml)	Final Conc mg/L	QC/Calc	
BLANK	25	1	0	0		
LCS	25	1	7.38	295.2	TV=290	
F6KN3	25	1	0.28	11.2		
F6KN3 MS	25	1	5.06	202.4		
F6KN3 MSD	25	1	5.14	205.6		
F6ARF	25	1	4.98	199.2		
F6ARJ	25	1	5.12	204.8		
F6ARQ	25	10	5.26	2104		
F6ARX	25	5	2.14	428		
F6DV5	25	1	0.68	27.2		
F6DWH	25	1	0.58	23.2		
F6DWL	25	25	9.58	9580		
F6DWP	25	5	3.25	650		
F6DWV	25	1	3.02	120.8		
F6G8D	25	1	0	0		
F6E8R	25	1	5.04	201.6		
F6E8T	25	1	4.94	197.6		
F6E8W	25	1	0	0		
F6H36	25	1	2.36	94.4		
F6H4K	25	1	4.75	190		
F6H4L	25	1	1.95	78		
F6H4M	25	1	2.05	82		
F6H4N	25	1	6.92	276.8		
F6H4P	25	1	8.46	338.4		
F6KM4	25	1	5.8	232		Rerun
F6KN1	25	1	5.63	225.2		
F6K2G	25	1	1.32	52.8		
LCS-2	25	1	7.3	292	TV=290	

Sheet1

F6K2N	25	1	0	0	rerun	
F6DQ4	25	1	1.96	78.4		
F6DRG	25	5	7.52	1504		report
F6F1C	25	25	9.94	9940		
F6F2H	25	1	8.5	340		
F6JXA	25	5	3.26	652	rerun	
F6JX2	25	5	2.56	512		
F6JX2 MS	25	5	7.6	1520		
F6JX2 MSD	25	5	7.48	1496		

No second blank analyzed.

Report only 1 batch

AS
12/18/07

STL North Canton General Chemistry Data Review Checklist

Parameter(s): Hardness

Batch(es): 3357125

Method #/SOP#: 130.2

Review Items	Level I Review			Level II Review		
A. Initial Calibration	YES	NO	N/A	YES	NO	N/A
1. Initial calibration correlation coefficient ≥ 0.995?			✓			✓
2. Calibration curve consist of the minimum number of calibration standards?			✓			✓
3. ICV analyzed at immediately after calibration and within control limits ? (TRAACS Nitrate/Nitrite, Cyanide 85-115%; all others 90-110%)			✓			✓
4. ICB analyzed immediately after ICV and within criteria (± RL)?			✓			✓
B. Continuing Calibration						
1. CCV analyzed every 10 samples, at end of sequence and within criteria?			✓			✓
2. CCB analyzed every 10 samples, at end of sequence & within criteria (±RL)?			✓			✓
C. Sample Results						
1. Were samples with concentrations > the linear range diluted and reanalyzed ?	✓			✓		
2. All reported results bracketed by in control QC ?	✓			✓		
3. Sample analyses done within holding time ?	✓			✓		
D. Quality Control						
1. LCS per prep batch and within QC limits ? *(LCSD; where applicable)*				✓		
2. Method blank done per prep batch and < RL. Method blank RL supports the lowest RL reported for the batch?				✓		
3. MS/MSD run at required frequency and evaluated? MS/MSD reported properly and calculated correctly?				✓		
4. Duplicate samples run at required frequency (duplicate sample performed per matrix encountered)?						✓
E. Titrant						
1. Titrant standardized?		✓			✓	✓ AS 12/23/03
2. If no, standardization expires 12/24/03						
F. Other						
1. Are all nonconformances documented appropriately (NCM or narrative)?			✓			✓
2. Calculations checked for error ?	✓			✓		
3. Transcriptions checked for error ?	✓			✓		
4. All client/project specific requirements met ?	✓			✓		
5. Date/time of preparation and analysis verified as correct ?	✓			✓		
6. Units verified as correct?	✓			✓		
7. Dilutions have been properly applied and RL's adjusted appropriately?	✓			✓		
8. SOP followed?	✓			✓		
9. Calculations checked at minimum frequency (at least 20%, 100% for QC)?	✓			✓		
10. All reagent and standard numbers recorded in logbook?	✓			✓		
11. Edits dated and initialed			✓	✓		

Comment on any "NO" response(s):

Level I reviewer: Lora Highland Date: 12/23/03

Level II Reviewer: Anagla Serna Date: 12/23/03

Level I review:

		STL North Canton			
	Hardness Titrimetric Logsheet				
Prep Date	12/22/03		Batch	3357125	
Anal Date	12/22/03	LCS	P095507		TV =290
Analyst	LFH				
Titrant				Standardization	
Name:	EDTA			Date	12/17/03
Normality	0.02			Intials	LFH
				RL	5M mg/L
Sample No.	Sample Vol	dil	Titrant Vol (ml)	Final Conc mg/L	QC/Calc
BLANK	25	1	0	0	
LCS	25	1	7.4	296	TV=290
F6JX2	25	5	2.7	540	
1FQ F6JX2 MS	25	5	7.7	1540	
1FR F6JX2 MSD	25	5	7.44	1488	
F6H4N	25	1	6.8	272	
F6H4P	25	1	8.55	342	
F6KM4	25	1	5.72	228.8	
F6KN1	25	1	5.78	231.2	
F6K2G	25	1	1.08	43.2	
F6K2N	25	1	0	0	
F61VC	25	1	3.85	154	
F632V	25	1	1.95	78	
F6320	25	1	2.48	99.2	
F6321	25	1	2.85	114	
F6322	25	1	2.76	110.4	
F6323	25	1	2.82	112.8	
F633C	25	1	2.26	90.4	
F633F	25	1	3.85	154	
F6DQ4	25	1	2.04	81.6	
F6F2H	25	1	7.82	312.8	
F6JXA	25	1	3.26	130.4	
F61VC (dup)	25	1	3.8	152	
F61VE	25	1	7.26	290.4	
F61VW	25	1	3.56	142.4	

STL North Canton General Chemistry Data Review Checklist

Parameter(s): TOC

Batch(es): 3360094 / 3360095

Method #/SOP#: 9060

Review Items	Level I Review			Level II Review		
	YES	NO	N/A	YES	NO	N/A
A. Initial Calibration						
1. Initial calibration correlation coefficient ≥ 0.995?	✓			✓		
2. Calibration curve consist of the minimum number of calibration standards?	✓			✓		
3. ICV analyzed at immediately after calibration and within control limits ? (TRAACS Nitrate/Nitrite, Cyanide 85-115%; all others 90-110%)	✓			✓		
4. ICB analyzed immediately after ICV and within criteria (± RL)?	✓			✓		
B. Continuing Calibration						
1. CCV analyzed every 10 samples, at end of sequence and within criteria?	✓			✓		
2. CCB analyzed every 10 samples, at end of sequence & within criteria (±RL)?	✓			✓		
C. Sample Results						
1. Were samples with concentrations > the linear range diluted and reanalyzed ?	✓					✓
2. All reported results bracketed by in control QC ?	✓			✓		
3. Sample analyses done within holding time ?	✓			✓		
D. Quality Control						
1. LCS per prep batch and within QC limits ? *(LCSD, where applicable)*	✓			✓		
2. Method blank done per prep batch and < RL. Method blank RL supports the lowest RL reported for the batch?	✓			✓		
3. MS/MSD run at required frequency and evaluated? MS/MSD reported properly and calculated correctly?	✓			✓		
4. Duplicate samples run at required frequency (duplicate sample performed per matrix encountered)?			✓			✓
E. Titrant						
1. Titrant standardized?			✓			✓
2. If no, standardization expires			✓			
F. Other						
1. Are all nonconformances documented appropriately (NCM or narrative)?			✓			✓
2. Calculations checked for error ?	✓			✓		
3. Transcriptions checked for error ?	✓			✓		
4. All client/project specific requirements met ?	✓			✓		
5. Date/time of preparation and analysis verified as correct ?	✓			✓		
6. Units verified as correct?	✓			✓		
7. Dilutions have been properly applied and RL's adjusted appropriately?	✓					✓
8. SOP followed?	✓			✓		
9. Calculations checked at minimum frequency (at least 20%, 100% for QC)?	✓			✓		
10. All reagent and standard numbers recorded in logbook?	✓			✓		
11. Edits dated and initialed	✓			✓		

Comment on any "NO" response(s):

Level I reviewer: Joe F Hylwood Date: 12/26/03

Level II Reviewer: Angela Serra Date: 12/29/03

Level I review:

Batches 3360094
3360095

12303

```
*****************************************************************
**                RUN SETUP                                    **
*****************************************************************

Operator: CL                    WinTOC Version:  4.1
Data Path: C:\WINTOC~1\DATA10\122303    Firmware Version: 4.1

Report To File: Enabled         Naming Mode: Automatic
Prefix: 1223  Index:  0

*****************************************************************
**                CONFIGURATION                                **
*****************************************************************

Analysis Mode: TIC/TOC    Spl Intro: Autosampler 53
Remote Start : OFF

Loop Size: 1 mL     Actual Volume 1mL  5mL  10mL  25mL
                   ------------- ---- ---- ----- -----
                   Loop A (uL): 1000  5000  10000  25000
                   Loop B (uL): 1000  5000  10000  25000

Tray Type:          53 Vial  Vial Option:      Septum Piercing
Needle Depth:       95 %    Preacid Volume (uL):        000
Wash Needle Depth:  95 %    Preacid Purge Time (min:sec):  0:00

        TIC   TOC   TC
Blank   ----  ----  ----        Linearization Coeff: 60000
Average:  45   587    0

                 Sample Transfer Times (sec)
     Initial Fill     |     Loop Fill     | Sample Inject
   Non-AS   AS  AS w/Sep | Non-AS   AS  AS w/Sep |   (all)
   ------ ----- -------- | ------ ----- -------- | ------------
1mL:   6.0   4.5    3.5 |  1.2   1.2    1.0 |    4.5
5mL:   8.1   7.2    6.8 |  5.1   5.1    4.2 |    9.3
10mL:  14.2  12.2   11.0 |  10.5  10.5   10.5 |   16.5
25mL:  35.0  35.0   32.0 |  n/a   n/a    n/a |   38.0

*****************************************************************
**                CALIBRATION                                  **
*****************************************************************
```

Sodium Persulfate
WR31230

Phosphoric Acid
WR31190 | 31280 | 31369

Standard
TC-3106

LCS
#P094516

12303

10/09/03 Thu Oct 09 16:24:54 2003

Std. #	Used	Conc. (ppm)	Volume (mL)
1	Yes	1.000	2.000
2	Yes	10.000	2.000
3	Yes	25.000	2.000
4	Yes	50.000	2.000
5	No	0.000	1.000

RF (ugC/k-cnt): 0.9116
R-Squared: 0.9999
Calibration Mode: TOC
Allow Editing: No

Rep	Std. 1	Std. 2	Std. 3	Std. 4	Std. 5
1	3640	22322	56095	110733	-
2	-	-	-	-	-
3	-	-	-	-	-
4	-	-	-	-	-
5	-	-	-	-	-
6	-	-	-	-	-
7	-	-	-	-	-
8	-	-	-	-	-
9	-	-	-	-	-
10	-	-	-	-	-

(* = unused)

****
** METHODS **
****

STLTOC Wed Oct 22 11:42:39 2003
Acid Volume: 2000 uL Rinse Volume (mL): 20
Oxidant Volume: 1000 uL Rinses Per Rep: 1
Auto-Repeat Time: 00:00:00 (hr:min:sec) Rinses Per Sample: 2

	TIC	TOC	TC
React: (min:sec):	02:00	03:00	02:30
Detect: (min:sec):	01:00	03:00	01:30

****
** SEQUENCE **
****

START Tue Oct 28 11:33:45 2003

12303

Start Pos/Vial #: 1, Stop Pos/Vial #: 4

Pos/ Vial	Sample Name	Method	Run Type	# Rep	Vol (mL)	# Blk	Ovr Rng	Remarks
1	zzzz	stltoc	Sample	4	2.000	0	No	
2	ICV	stltoc	Sample	1	2.000	0	No	
3	ICB	stltoc	Sample	1	2.000	0	No	
4	LCS #P094516	stltoc	Sample	1	2.000	0	No	

****
** RESULTS - START **
****

Pos/Vial: 1 Name: zzzz Analyzed: 23Dec2003 13:26
Run ID: 7 Meth: stltoc Vol (mL): 2.000

SAMPLES Rep	Datafile	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (ppm)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (ppm)
1	1223000	149	0.095	0.0474	1708	1.022	0.5109
2	1223001	126	0.074	0.0369	1642	0.962	0.4808
3	1223002	164	0.108	0.0542	1624	0.945	0.4726
4	1223003	164	0.108	0.0542	1744	1.055	0.5273
Avg		150	0.096	0.0482	1679	0.996	0.4979
Std.Dev.		17.95		56.15			
RSD (%)		11.91		3.34			

****

Pos/Vial: 2 Name: ICV Analyzed: 23Dec2003 14:16
Run ID: 1 Meth: stltoc Vol (mL): 2.000

SAMPLES Rep	Datafile	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (ppm)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (ppm)
1	1223004	514	0.428	0.2138	54301	48.964	24.4818

****

12303

Pos/Vial: 3 Name: ICB Analyzed: 23Dec2003 14:31
Run ID: 2 Meth: stltoc Vol (mL): 2.000

SAMPLES		TIC	TIC	TIC	TOC	TOC	TOC
		Area	Mass	Conc	Area	Mass	Conc
Rep	Datafile	(cts)	(ugC)	(ppm)	(cts)	(ugC)	(ppm)
1	1223005	140	0.087	0.0433	1737	1.048	0.5241

****

Pos/Vial: 4 Name: LCS #P094516 Analyzed: 23Dec2003 14:45
Run ID: 3 Meth: stltoc Vol (mL): 2.000

SAMPLES		TIC	TIC	TIC	TOC	TOC	TOC
		Area	Mass	Conc	Area	Mass	Conc
Rep	Datafile	(cts)	(ugC)	(ppm)	(cts)	(ugC)	(ppm)
1	1223006	708	0.604	0.3022	84552	76.539	38.2696

TV=39.9

****
** RUN SETUP **
****

Operator: CL WinTOC Version: 4.1
Data Path: C:\WINTOC~1\DATA10\122303 Firmware Version: 4.1

Report To File: Enabled Naming Mode: Automatic
Prefix: 1223 Index: 7

****
** CONFIGURATION **
****

Analysis Mode: TIC/TOC Spl Intro: Autosampler 53
Remote Start : OFF

Loop Size: 1 mL Actual Volume 1mL 5mL 10mL 25mL

Loop A (uL): 1000 5000 10000 25000
Loop B (uL): 1000 5000 10000 25000

12303

Tray Type: 53 Vial Vial Option: Septum Piercing
Needle Depth: 95 % Preacid Volume (uL): 000
Wash Needle Depth: 95 % Preacid Purge Time (min:sec): 0:00

	TIC	TOC	TC
Blank	----	----	----
Average:	45	587	0

Linearization Coeff: 60000

Sample Transfer Times (sec)

	Initial Fill			Loop Fill			Sample Inject
	Non-AS	AS	AS w/Sep	Non-AS	AS	AS w/Sep	(all)
1mL:	6.0	4.5	3.5	1.2	1.2	1.0	4.5
5mL:	8.1	7.2	6.8	5.1	5.1	4.2	9.3
10mL:	14.2	12.2	11.0	10.5	10.5	10.5	16.5
25mL:	35.0	35.0	32.0	n/a	n/a	n/a	38.0

****
** CALIBRATION **
****

10/09/03 Thu Oct 09 16:24:54 2003

Std. #	Used	Conc. (ppm)	Volume (mL)
1	Yes	1.000	2.000
2	Yes	10.000	2.000
3	Yes	25.000	2.000
4	Yes	50.000	2.000
5	No	0.000	1.000

RF (ugC/k-cnt): 0.9116
R-Squared: 0.9999
Calibration Mode: TOC
Allow Editing: No

Rep	Std. 1	Std. 2	Std. 3	Std. 4	Std. 5
1	3640	22322	56095	110733	-
2	-	-	-	-	-
3	-	-	-	-	-
4	-	-	-	-	-
5	-	-	-	-	-
6	-	-	-	-	-
7	-	-	-	-	-
8	-	-	-	-	-
9	-	-	-	-	-
10	-	-	-	-	-

(* = unused)

12303

****
** METHODS **
****

STLTOC Wed Oct 22 11:42:39 2003
Acid Volume: 2000 uL Rinse Volume (mL): 20
Oxidant Volume: 1000 uL Rinses Per Rep: 1
Auto-Repeat Time: 00:00:00 (hr:min:sec) Rinses Per Sample: 2

	TIC	TOC	TC
React: (min:sec):	02:00	03:00	02:30
Detect: (min:sec):	01:00	03:00	01:30

****
** SEQUENCE **
****

12/23/03 Tue Dec 23 15:41:40 2003

Start Pos/Vial #: 1, Stop Pos/Vial #: 53

Pos/ Vial	Sample Name	Method	Run Type	# Rep	Vol (mL)	# Blk	Ovr Rng	Remarks
1	F6JX2	stltoc	Sample	4	2.000	0	No	
IFS 2	F6JX2 MS	stltoc	Sample	1	2.000	0	No	} add F10
IFK 3	F6JX2 MSD	stltoc	Sample	1	2.000	0	No	}
4	F60G8	stltoc	Sample	4	2.000	0	No	
5	F60H7	stltoc	Sample	4	2.000	0	No	
6	F60JC	stltoc	Sample	4	2.000	0	No	
7	F60JD	stltoc	Sample	4	2.000	0	No	
8	F60JG	stltoc	Sample	4	2.000	0	No	
9	F60QR	stltoc	Sample	4	2.000	0	No	
10	CCV	stltoc	Sample	1	2.000	0	No	
11	CCB	stltoc	Sample	1	2.000	0	No	
12	F60QW	stltoc	Sample	4	2.000	0	No	
13	F60QX	stltoc	Sample	4	2.000	0	No	
14	F60Q0	stltoc	Sample	4	2.000	0	No	
15	F60Q1	stltoc	Sample	4	2.000	0	No	
16	F60Q4	stltoc	Sample	4	2.000	0	No	
17	F60Q5	stltoc	Sample	4	2.000	0	No	

Batch 3360094

12303

18	F60Q6	stltoc	Sample	4	2.000	0	No
19	F60Q8	stltoc	Sample	4	2.000	0	No
20	F60Q9	stltoc	Sample	4	2.000	0	No
21	F6DQ4	stltoc	Sample	4	2.000	0	No
22	CCV	stltoc	Sample	1	2.000	0	No
23	CCB	stltoc	Sample	1	2.000	0	No
24	F6DRG	stltoc	Sample	4	2.000	0	No
25	F6JXA	stltoc	Sample	4	2.000	0	No
26	F6MCG mck	stltoc	Sample	4	2.000	0	No
27	F6~~GMK~~ MA 12/23/03	stltoc	Sample	4	2.000	0	No
28	F642Q	stltoc	Sample	4	2.000	0	No
29	F6433	stltoc	Sample	4	2.000	0	No
30	F6435	stltoc	Sample	4	2.000	0	No
31	F6436	stltoc	Sample	4	2.000	0	No
32	F644E	stltoc	Sample	4	2.000	0	No
33	F6444	stltoc	Sample	4	2.000	0	No
34	CCV	stltoc	Sample	1	2.000	0	No
35	CCB	stltoc	Sample	1	2.000	0	No
36	LCS-2	stltoc	Sample	1	2.000	0	No
37	F644R	stltoc	Sample	4	2.000	0	No
IAM 38	F644R MS	stltoc	Sample	1	2.000	0	No
IAN 39	F644R MSD	stltoc	Sample	1	2.000	0	No
40	F6QHX (decant)	stltoc	Sample	4	2.000	0	No
41	F6QH7	stltoc	Sample	4	2.000	0	No
42	F6QLE	stltoc	Sample	4	2.000	0	No
43	F6QLG	stltoc	Sample	4	2.000	0	No
44	F6QLK	stltoc	Sample	4	2.000	0	No
45	F6QLN	stltoc	Sample	4	2.000	0	No
46	CCV	stltoc	Sample	1	2.000	0	No
47	CCB	stltoc	Sample	1	2.000	0	No
48	F6VAG	stltoc	Sample	4	2.000	0	No
49	F6VAJ (decant)	stltoc	Sample	4	2.000	0	No
50	F6VAK (decant)	stltoc	Sample	4	2.000	0	No
51	F61T7 (decant)	stltoc	Sample	4	2.000	0	No
52	CCV	stltoc	Sample	1	2.000	0	No
53	CCB	stltoc	Sample	1	2.000	0	No

Batch 3360095

add F10

****

** RESULTS - 12/23/03 **

****

Pos/Vial: 1 Name: F6JX2 Analyzed: 23Dec2003 15:48
Run ID: 4 Meth: stltoc Vol (mL): 2.000

12303

F6JX2

SAMPLES Rep	Datafile	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (ppm)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (ppm)
1	1223007	151691	138.235	69.1173	5912	4.854	2.4270

A-Linear range exceeded (130ugC). 23Dec2003 16:00

2	1223008	151089	137.686	68.8429	5745	4.702	2.3509
3	1223009	150273	136.942	68.4710	5868	4.814	2.4070
4	1223010	144452	131.636	65.8179	5955	4.893	2.4466
Avg		149376	136.125	68.0623	5870	4.816	2.4079
Std.Dev.		3333.87		90.59			
RSD (%)		2.23		1.54			

****

Pos/Vial: 2 Name: F6JX2 MS Analyzed: 23Dec2003 16:38
Run ID: 1 Meth: stltoc Vol (mL): 2.000

SAMPLES Rep	Datafile	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (ppm)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (ppm)
1	1223011	45789	41.698	20.8492	28894	25.804	12.9018

x 2 = 25.8036

****

Pos/Vial: 3 Name: F6JX2 MSD Analyzed: 23Dec2003 16:52
Run ID: 2 Meth: stltoc Vol (mL): 2.000

SAMPLES Rep	Datafile	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (ppm)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (ppm)
1	1223012	44236	40.283	20.1414	28992	25.893	12.9464

x 2 = 25.8928

****

Pos/Vial: 4 Name: F60G8 Analyzed: 23Dec2003 17:06

12303

Run ID: 3 Meth: stltoc Vol (mL): 2.000

SAMPLES Rep	Datafile	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (ppm)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (ppm)
1	1223013	160131	145.928	72.9641	3795	2.924	1.4621
2	1223014	156609	142.718	71.3588	3798	2.927	1.4635
3	1223015	158410	144.359	72.1797	3730	2.865	1.4325
4	1223016	145715	132.787	66.3935	3779	2.910	1.4549
Avg		155216	141.448	70.7240	3775	2.907	1.4533
Std.Dev.		6495.34		31.46			
RSD (%)		4.18		0.83			

F60G8

****

Pos/Vial: 5 Name: F60H7 Analyzed: 23Dec2003 17:56
Run ID: 4 Meth: stltoc Vol (mL): 2.000

SAMPLES Rep	Datafile	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (ppm)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (ppm)
1	1223017	227624	207.452	103.7261	7839	6.611	3.3053
2	1223018	230119	209.726	104.8632	7791	6.567	3.2834
3	1223019	225070	205.124	102.5620	8121	6.868	3.4339
4	1223020	208213	189.758	94.8789	7886	6.653	3.3267
Avg		222756	203.015	101.5076	7909	6.675	3.3373
Std.Dev.		9912.36		146.40			
RSD (%)		4.45		1.85			

****

Pos/Vial: 6 Name: F60JC Analyzed: 23Dec2003 18:45
Run ID: 5 Meth: stltoc Vol (mL): 2.000

SAMPLES Rep	Datafile	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (ppm)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (ppm)
1	1223021	233971	213.238	106.6189	9383	8.018	4.0090

					12303			
2	1223022	225074	205.128	102.5638	9370	8.006	4.0031	
3	1223023	229918	209.543	104.7716	9451	8.080	4.0400	
4	1223024	218427	199.068	99.5342	9225	7.874	3.9370	
Avg		226847	206.744	103.3722	9357	7.995	3.9973	
Std.Dev.		6688.85		95.05				
RSD (%)		2.95		1.02				

F60JC

****

Pos/Vial: 7 Name: F60JD Analyzed: 23Dec2003 19:34
Run ID: 6 Meth: stltoc Vol (mL): 2.000

SAMPLES		TIC	TIC	TIC	TOC	TOC	TOC
		Area	Mass	Conc	Area	Mass	Conc
Rep	Datafile	(cts)	(ugC)	(ppm)	(cts)	(ugC)	(ppm)
1	1223025	322310	293.764	146.8821	14895	13.043	6.5213
2	1223026	320317	291.947	145.9737	14281	12.483	6.2415
3	1223027	313829	286.033	143.0166	14177	12.388	6.1941
4	1223028	322428	293.872	146.9359	14834	12.987	6.4935
Avg		319721	291.404	145.7021	14546	12.725	6.3626
Std.Dev.		4045.64		370.19			
RSD (%)		1.27		2.54			

****

Pos/Vial: 8 Name: F60JG Analyzed: 23Dec2003 20:24
Run ID: 7 Meth: stltoc Vol (mL): 2.000

SAMPLES		TIC	TIC	TIC	TOC	TOC	TOC
		Area	Mass	Conc	Area	Mass	Conc
Rep	Datafile	(cts)	(ugC)	(ppm)	(cts)	(ugC)	(ppm)
1	1223029	137921	125.682	62.8412	9096	7.756	3.8782
2	1223030	136223	124.135	62.0673	8840	7.523	3.7616
3	1223031	132451	120.696	60.3481	9050	7.715	3.8573
4	1223032	131235	119.588	59.7938	8823	7.508	3.7538
Avg		134457	122.525	61.2626	8952	7.625	3.8127
Std.Dev.		3137.06		140.86			
RSD (%)		2.33		1.57			

12303

****

Pos/Vial: 9 Name: F60QR Analyzed: 23Dec2003 21:13
Run ID: 8 Meth: stltoc Vol (mL): 2.000

SAMPLES Rep	Datafile	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (ppm)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (ppm)
1	1223033	99597	90.748	45.3739	6286	5.195	2.5975
2	1223034	98959	90.166	45.0831	6178	5.097	2.5483
3	1223035	98184	89.460	44.7298	6160	5.080	2.5401
4	1223036	93356	85.059	42.5293	6327	5.232	2.6162
Avg		97524	88.858	44.4290	6237	5.151	2.5755
Std.Dev.		2838.10		81.46			
RSD (%)		2.91		1.31			

****

Pos/Vial: 10 Name: CCV Analyzed: 23Dec2003 22:02
Run ID: 9 Meth: stltoc Vol (mL): 2.000

SAMPLES Rep	Datafile	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (ppm)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (ppm)
1	1223037	635	0.538	0.2689	54305	48.967	24.4836

****

Pos/Vial: 11 Name: CCB Analyzed: 23Dec2003 22:17
Run ID: 10 Meth: stltoc Vol (mL): 2.000

SAMPLES Rep	Datafile	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (ppm)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (ppm)
1	1223038	265	0.201	0.1003	1611	0.933	0.4667

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12303

Pos/Vial: 12 Name: F60QW Analyzed: 23Dec2003 22:31
Run ID: 11 Meth: stltoc Vol (mL): 2.000

SAMPLES Rep	Datafile	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (ppm)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (ppm)
1	1223039	121681	110.879	55.4393	6030	4.962	2.4808
2	1223040	119205	108.622	54.3108	5958	4.896	2.4480
3	1223041	116915	106.534	53.2671	5976	4.912	2.4562
4	1223042	110161	100.377	50.1887	5946	4.885	2.4425
Avg		116990	106.603	53.3015	5977	4.914	2.4569
Std.Dev.		4951.52		37.11			
RSD (%)		4.23		0.62			

****

Pos/Vial: 13 Name: F60QX Analyzed: 23Dec2003 23:20
Run ID: 12 Meth: stltoc Vol (mL): 2.000

SAMPLES Rep	Datafile	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (ppm)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (ppm)
1	1223043	2028	1.808	0.9038	9003	7.672	3.8358
2	1223044	2058	1.835	0.9175	9217	7.867	3.9334
3	1223045	1977	1.761	0.8806	9153	7.808	3.9042
4	1223046	1902	1.693	0.8464	8965	7.637	3.8185
Avg		1991	1.774	0.8871	9084	7.746	3.8730
Std.Dev.		68.25		119.96			
RSD (%)		3.43		1.32			

********** Dec. 24

Pos/Vial: 14 Name: F60Q0 Analyzed: 24Dec2003 00:10
Run ID: 13 Meth: stltoc Vol (mL): 2.000

SAMPLES Rep	Datafile	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (ppm)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (ppm)

12303

1	1223047	151174	137.763	68.8816	3358	2.526	1.2630
2	1223048	147724	134.618	67.3092	3376	2.542	1.2712
3	1223049	144960	132.099	66.0494	3342	2.511	1.2557
4	1223050	145887	132.944	66.4719	3488	2.644	1.3222
Avg		147436	134.356	67.1781	3391	2.556	1.2780
Std.Dev.		2743.81		66.14			
RSD (%)		1.86		1.95			

F60Q0

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Pos/Vial: 15 Name: F60Q1 Analyzed: 24Dec2003 00:59
Run ID: 14 Meth: stltoc Vol (mL): 2.000

SAMPLES		TIC	TIC	TIC	TOC	TOC	TOC
		Area	Mass	Conc	Area	Mass	Conc
Rep	Datafile	(cts)	(ugC)	(ppm)	(cts)	(ugC)	(ppm)
1	1223051	143978	131.204	65.6019	3527	2.680	1.3400
2	1223052	139617	127.228	63.6142	3669	2.809	1.4047
3	1223053	136498	124.385	62.1926	3675	2.815	1.4075
4	1223054	130677	119.079	59.5395	3705	2.842	1.4211
Avg		137692	125.474	62.7370	3644	2.787	1.3933
Std.Dev.		5593.31		79.57			
RSD (%)		4.06		2.18			

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Pos/Vial: 16 Name: F60Q4 Analyzed: 24Dec2003 01:48
Run ID: 15 Meth: stltoc Vol (mL): 2.000

SAMPLES		TIC	TIC	TIC	TOC	TOC	TOC
		Area	Mass	Conc	Area	Mass	Conc
Rep	Datafile	(cts)	(ugC)	(ppm)	(cts)	(ugC)	(ppm)
1	1223055	139711	127.314	63.6570	5452	4.435	2.2174
2	1223056	136350	124.250	62.1252	5344	4.336	2.1681
3	1223057	129300	117.824	58.9119	5384	4.373	2.1864
4	1223058	123751	112.766	56.3828	5346	4.338	2.1691
Avg		132278	120.538	60.2692	5381	4.370	2.1852
Std.Dev.		7150.96		50.47			

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RSD (%) 5.41 0.94

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Pos/Vial: 17 Name: F60Q5 Analyzed: 24Dec2003 02:37
Run ID: 16 Meth: stltoc Vol (mL): 2.000

SAMPLES	TIC	TIC	TIC	TOC	TOC	TOC
	Area	Mass	Conc	Area	Mass	Conc
Rep Datafile	(cts)	(ugC)	(ppm)	(cts)	(ugC)	(ppm)
1 1223059	170723	155.583	77.7917	3117	2.306	1.1531
2 1223060	163071	148.608	74.3041	3176	2.360	1.1800
3 1223061	164214	149.650	74.8250	3079	2.272	1.1358
4 1223062	158998	144.895	72.4477	3052	2.247	1.1235
Avg	164251	149.684	74.8421	3106	2.296	1.1481
Std.Dev.	4860.54		53.75			
RSD (%)	2.96		1.73			

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Pos/Vial: 18 Name: F60Q6 Analyzed: 24Dec2003 03:27
Run ID: 17 Meth: stltoc Vol (mL): 2.000

SAMPLES	TIC	TIC	TIC	TOC	TOC	TOC
	Area	Mass	Conc	Area	Mass	Conc
Rep Datafile	(cts)	(ugC)	(ppm)	(cts)	(ugC)	(ppm)
1 1223063	131009	119.382	59.6908	3265	2.441	1.2206
2 1223064	122809	111.907	55.9534	3399	2.563	1.2817
3 1223065	123244	112.303	56.1517	3292	2.466	1.2329
4 1223066	116264	105.941	52.9704	3286	2.460	1.2302
Avg	123331	112.383	56.1916	3310	2.483	1.2413
Std.Dev.	6032.53		60.12			
RSD (%)	4.89		1.82			

****

Pos/Vial: 19 Name: F60Q8 Analyzed: 24Dec2003 04:16
Run ID: 18 Meth: stltoc Vol (mL): 2.000

12303

SAMPLES		TIC	TIC	TIC	TOC	TOC	TOC
		Area	Mass	Conc	Area	Mass	Conc
Rep	Datafile	(cts)	(ugC)	(ppm)	(cts)	(ugC)	(ppm)
1	1223067	212025	193.233	96.6163	5413	4.399	2.1996
2	1223068	207989	189.554	94.7768	5510	4.488	2.2438
3	1223069	198121	180.558	90.2792	5256	4.256	2.1280
4	1223070	193173	176.048	88.0240	5241	4.242	2.1212
Avg		202827	184.848	92.4241	5355	4.346	2.1732
Std.Dev.		8690.91		129.34			
RSD (%)		4.28		2.42			

F6Q98

****

Pos/Vial: 20 Name: F60Q9 Analyzed: 24Dec2003 05:05
Run ID: 19 Meth: stltoc Vol (mL): 2.000

SAMPLES		TIC	TIC	TIC	TOC	TOC	TOC
		Area	Mass	Conc	Area	Mass	Conc
Rep	Datafile	(cts)	(ugC)	(ppm)	(cts)	(ugC)	(ppm)
1	1223071	180894	164.855	82.4274	3613	2.758	1.3792
2	1223072	176154	160.534	80.2670	3792	2.922	1.4608
3	1223073	177877	162.105	81.0524	3800	2.929	1.4644
4	1223074	166521	151.753	75.8765	3758	2.891	1.4453
Avg		175361	159.812	79.9058	3740	2.875	1.4374
Std.Dev.		6210.71		87.09			
RSD (%)		3.54		2.33			

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Pos/Vial: 21 Name: F6DQ4 Analyzed: 24Dec2003 05:55
Run ID: 20 Meth: stltoc Vol (mL): 2.000

SAMPLES		TIC	TIC	TIC	TOC	TOC	TOC
		Area	Mass	Conc	Area	Mass	Conc
Rep	Datafile	(cts)	(ugC)	(ppm)	(cts)	(ugC)	(ppm)
1	1223075	249901	227.759	113.8795	12335	10.709	5.3545
2	1223076	252321	229.965	114.9825	12416	10.783	5.3914
3	1223077	234019	213.282	106.6408	12070	10.467	5.2337

12303

4	1223078	234715	213.916	106.9580	12012	10.415	5.2073

F6D94

Avg	242739	221.230	110.6152	12208	10.593	5.2967
Std.Dev.	9721.66		197.36			
RSD (%)	4.01		1.62			

****

Pos/Vial: 22 Name: CCV Analyzed: 24Dec2003 06:44
Run ID: 21 Meth: stltoc Vol (mL): 2.000

SAMPLES		TIC	TIC	TIC	TOC	TOC	TOC
		Area	Mass	Conc	Area	Mass	Conc
Rep	Datafile	(cts)	(ugC)	(ppm)	(cts)	(ugC)	(ppm)
1	1223079	693	0.591	0.2953	53463	48.200	24.0998

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Pos/Vial: 23 Name: CCB Analyzed: 24Dec2003 06:58
Run ID: 22 Meth: stltoc Vol (mL): 2.000

ICB

SAMPLES		TIC	TIC	TIC	TOC	TOC	TOC
		Area	Mass	Conc	Area	Mass	Conc
Rep	Datafile	(cts)	(ugC)	(ppm)	(cts)	(ugC)	(ppm)
1	1223080	347	0.275	0.1376	1639	0.959	0.4795

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Pos/Vial: 24 Name: F6DRG Analyzed: 24Dec2003 07:13
Run ID: 23 Meth: stltoc Vol (mL): 2.000

SAMPLES		TIC	TIC	TIC	TOC	TOC	TOC
		Area	Mass	Conc	Area	Mass	Conc
Rep	Datafile	(cts)	(ugC)	(ppm)	(cts)	(ugC)	(ppm)
1	1223081	281695	256.741	128.3706	8971	7.643	3.8213
2	1223082	290232	264.523	132.2616	8853	7.535	3.7675
3	1223083	267433	243.740	121.8702	9407	8.040	4.0200
4	1223084	254623	232.063	116.0317	9179	7.832	3.9161
Avg		273495	249.267	124.6335	9102	7.762	3.8812

12303

Std.Dev. 15708.46 243.66
RSD (%) 5.74 2.68

****

Pos/Vial: 25 Name: F6JXA Analyzed: 24Dec2003 08:02
Run ID: 24 Meth: stltoc Vol (mL): 2.000

SAMPLES	TIC	TIC	TIC	TOC	TOC	TOC
	Area	Mass	Conc	Area	Mass	Conc
Rep Datafile	(cts)	(ugC)	(ppm)	(cts)	(ugC)	(ppm)
1 1223085	531064	484.056	242.0281	3984	3.097	1.5483
2 1223086	505135	460.420	230.2102	4097	3.200	1.5998
3 1223087	501386	457.003	228.5014	4235	3.325	1.6627
4 1223088	518821	472.896	236.4480	4146	3.244	1.6221
Avg	514101	468.594	234.2969	4115	3.216	1.6082
Std.Dev.	13565.67		104.63			
RSD (%)	2.64		2.54			

****

Pos/Vial: 26 Name: F6MCG Analyzed: 24Dec2003 08:51
Run ID: 25 Meth: stltoc Vol (mL): 2.000

SAMPLES	TIC	TIC	TIC	TOC	TOC	TOC
	Area	Mass	Conc	Area	Mass	Conc
Rep Datafile	(cts)	(ugC)	(ppm)	(cts)	(ugC)	(ppm)
1 1223089	176659	160.994	80.4972	7403	6.213	3.1066
2 1223090	169919	154.851	77.4253	7175	6.005	3.0027
3 1223091	171636	156.416	78.2078	7328	6.145	3.0724
4 1223092	171827	156.590	78.2949	7328	6.145	3.0724
Avg	172510	157.213	78.6063	7308	6.127	3.0635
Std.Dev.	2895.85		95.76			
RSD (%)	1.68		1.31			

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mc 12/26/03

Pos/Vial: 27 Name: F6~~CM~~K Analyzed: 24Dec2003 09:40
Run ID: 26 Meth: stltoc Vol (mL): 2.000

12303

MC 12/26/03
F6 ~~EMK~~

SAMPLES Rep	Datafile	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (ppm)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (ppm)
1	1223093	100793	91.838	45.9190	4530	3.594	1.7971
2	1223094	101966	92.907	46.4536	4575	3.635	1.8177
3	1223095	101290	92.291	46.1455	4696	3.746	1.8728
4	1223096	96786	88.185	44.0927	4462	3.532	1.7661
Avg		100208	91.305	45.6527	4565	3.627	1.8134
Std.Dev.		2331.92		98.48			
RSD (%)		2.33		2.16			

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Pos/Vial: 28 Name: F642Q Analyzed: 24Dec2003 10:30
Run ID: 27 Meth: stltoc Vol (mL): 2.000

SAMPLES Rep	Datafile	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (ppm)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (ppm)
1	1223097	17324	15.751	7.8754	2972	2.174	1.0870
2	1223098	17378	15.800	7.9000	3086	2.278	1.1390
3	1223099	16675	15.159	7.5796	3184	2.367	1.1837
4	1223100	15687	14.259	7.1293	3128	2.316	1.1581
Avg		16766	15.242	7.6211	3092	2.284	1.1420
Std.Dev.		787.07		89.81			
RSD (%)		4.69		2.90			

****

Pos/Vial: 29 Name: F6433 Analyzed: 24Dec2003 11:19
Run ID: 28 Meth: stltoc Vol (mL): 2.000

SAMPLES Rep	Datafile	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (ppm)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (ppm)
1	1223101	18200	16.549	8.2747	3205	2.386	1.1932
2	1223102	17953	16.324	8.1621	3071	2.264	1.1322

F6433

						12303	
3	1223103	17233	15.668	7.8340	3149	2.335	1.1677
4	1223104	16366	14.878	7.4388	3144	2.331	1.1654
Avg		17438	15.855	7.9274	3142	2.329	1.1646
Std.Dev.		824.03		54.96			
RSD (%)		4.73		1.75			

****

Pos/Vial: 30 Name: F6435 Analyzed: 24Dec2003 12:08
Run ID: 29 Meth: stltoc Vol (mL): 2.000

SAMPLES		TIC	TIC	TIC	TOC	TOC	TOC
		Area	Mass	Conc	Area	Mass	Conc
Rep	Datafile	(cts)	(ugC)	(ppm)	(cts)	(ugC)	(ppm)
1	1223105	17397	15.817	7.9087	3978	3.091	1.5456
2	1223106	17720	16.112	8.0559	4024	3.133	1.5665
3	1223107	17175	15.615	7.8075	3981	3.094	1.5469
4	1223108	16195	14.722	7.3609	3939	3.056	1.5278
Avg		17121	15.566	7.7832	3980	3.093	1.5467
Std.Dev.		657.11		34.74			
RSD (%)		3.84		0.87			

****

Pos/Vial: 31 Name: F6436 Analyzed: 24Dec2003 12:57
Run ID: 30 Meth: stltoc Vol (mL): 2.000

SAMPLES		TIC	TIC	TIC	TOC	TOC	TOC
		Area	Mass	Conc	Area	Mass	Conc
Rep	Datafile	(cts)	(ugC)	(ppm)	(cts)	(ugC)	(ppm)
1	1223109	14862	13.507	6.7533	17263	15.201	7.6006
2	1223110	14990	13.623	6.8116	17793	15.684	7.8422
3	1223111	14864	13.508	6.7542	17736	15.632	7.8162
4	1223112	13790	12.529	6.2647	18031	15.901	7.9506
Avg		14626	13.292	6.6460	17705	15.605	7.8024
Std.Dev.		560.87		321.63			
RSD (%)		3.83		1.82			

12303

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Pos/Vial: 32 Name: F644E Analyzed: 24Dec2003 13:46
Run ID: 31 Meth: stltoc Vol (mL): 2.000

SAMPLES Rep	Datafile	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (ppm)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (ppm)
1	1223113	17815	16.198	8.0992	4196	3.290	1.6449
2	1223114	17336	15.762	7.8809	4485	3.553	1.7766
3	1223115	16475	14.977	7.4885	4377	3.455	1.7274
4	1223116	15877	14.432	7.2159	4353	3.433	1.7165
Avg		16875	15.342	7.6711	4352	3.433	1.7164
Std.Dev.		866.43		119.23			
RSD (%)		5.13		2.74			

****

Pos/Vial: 33 Name: F6444 Analyzed: 24Dec2003 14:36
Run ID: 32 Meth: stltoc Vol (mL): 2.000

SAMPLES Rep	Datafile	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (ppm)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (ppm)
1	1223117	20696	18.825	9.4123	4110	3.211	1.6057
2	1223118	19907	18.105	9.0527	4354	3.434	1.7169
3	1223119	18864	17.155	8.5773	4387	3.464	1.7320
4	1223120	18309	16.649	8.3244	4289	3.375	1.6873
Avg		19444	17.683	8.8417	4285	3.371	1.6855
Std.Dev.		1065.60		123.57			
RSD (%)		5.48		2.88			

****

Pos/Vial: 34 Name: CCV Analyzed: 24Dec2003 15:25
Run ID: 33 Meth: stltoc Vol (mL): 2.000

SAMPLES	TIC Area	TIC Mass	TIC Conc	TOC Area	TOC Mass	TOC Conc

12303

Rep	Datafile	(cts)	(ugC)	(ppm)	(cts)	(ugC)	(ppm)
1	1223121	585	0.492	0.2461	53795	48.502	24.2512

****

Pos/Vial: 35 Name: CCB Analyzed: 24Dec2003 15:39
Run ID: 34 Meth: stltoc Vol (mL): 2.000

SAMPLES	TIC	TIC	TIC	TOC	TOC	TOC
	Area	Mass	Conc	Area	Mass	Conc
Rep Datafile	(cts)	(ugC)	(ppm)	(cts)	(ugC)	(ppm)
1 1223122	215	0.155	0.0775	1511	0.842	0.4211

****

Pos/Vial: 36 Name: LCS-2 Analyzed: 24Dec2003 15:54
Run ID: 35 Meth: stltoc Vol (mL): 2.000

SAMPLES	TIC	TIC	TIC	TOC	TOC	TOC
	Area	Mass	Conc	Area	Mass	Conc
Rep Datafile	(cts)	(ugC)	(ppm)	(cts)	(ugC)	(ppm)
1 1223123	1432	1.264	0.6322	81990	74.204	37.1019

TV=39.9

****

Pos/Vial: 37 Name: F644R Analyzed: 24Dec2003 16:08
Run ID: 36 Meth: stltoc Vol (mL): 2.000

SAMPLES	TIC	TIC	TIC	TOC	TOC	TOC
	Area	Mass	Conc	Area	Mass	Conc
Rep Datafile	(cts)	(ugC)	(ppm)	(cts)	(ugC)	(ppm)
1 1223124	15854	14.411	7.2054	4001	3.112	1.5560
2 1223125	16418	14.925	7.4625	4242	3.332	1.6659
3 1223126	15932	14.482	7.2410	4297	3.382	1.6909
4 1223127	14854	13.499	6.7497	4325	3.407	1.7037
Avg	15764	14.329	7.1646	4216	3.308	1.6541
Std.Dev.	656.29		147.58			
RSD (%)	4.16		3.50			

12303

****

Pos/Vial: 38 Name: F644R MS Analyzed: 24Dec2003 16:57
Run ID: 37 Meth: stltoc Vol (mL): 2.000

SAMPLES Rep	Datafile	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (ppm)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (ppm)
1	1223128	3545	3.190	1.5952	26350	23.485	11.7423

x2 = 23.4846
87%

****

Pos/Vial: 39 Name: F644R MSD Analyzed: 24Dec2003 17:12
Run ID: 38 Meth: stltoc Vol (mL): 2.000

SAMPLES Rep	Datafile	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (ppm)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (ppm)
1	1223129	3944	3.554	1.7771	26255	23.398	11.6990

x2 = 23.398

****

Pos/Vial: 40 Name: F6QHX (decant) Analyzed: 24Dec2003 17:26
Run ID: 39 Meth: stltoc Vol (mL): 2.000

SAMPLES Rep	Datafile	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (ppm)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (ppm)
1	1223130	116669	106.310	53.1549	13227	11.522	5.7611
2	1223131	120366	109.680	54.8400	13046	11.357	5.6786
3	1223132	115052	104.836	52.4179	12831	11.161	5.5806
4	1223133	107846	98.267	49.1336	13112	11.417	5.7087
Avg		114983	104.773	52.3866	13054	11.364	5.6822
Std.Dev.		5252.33		166.42			
RSD (%)		4.57		1.27			

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12303

Pos/Vial: 41 Name: F6QH7 Analyzed: 24Dec2003 18:15
Run ID: 40 Meth: stltoc Vol (mL): 2.000

SAMPLES Rep	Datafile	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (ppm)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (ppm)
1	1223134	125260	114.141	57.0706	7087	5.925	2.9626
2	1223135	124791	113.714	56.8568	6870	5.727	2.8637
3	1223136	124201	113.176	56.5879	6802	5.665	2.8327
4	1223137	116492	106.149	53.0743	6814	5.676	2.8381
Avg		122686	111.795	55.8974	6893	5.749	2.8743
Std.Dev.		4152.00		132.52			
RSD (%)		3.38		1.92			

****

Pos/Vial: 42 Name: F6QLE Analyzed: 24Dec2003 19:05
Run ID: 41 Meth: stltoc Vol (mL): 2.000

SAMPLES Rep	Datafile	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (ppm)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (ppm)
1	1223138	191912	174.898	87.4492	52171	47.022	23.5110
2	1223139	192096	175.066	87.5331	52257	47.100	23.5502
3	1223140	184856	168.466	84.2332	54523	49.166	24.5830
4	1223141	173512	158.126	79.0629	52948	47.730	23.8651
Avg		185594	169.139	84.5696	52974	47.755	23.8773
Std.Dev.		8731.41		1089.19			
RSD (%)		4.70		2.06			

****

Pos/Vial: 43 Name: F6QLG Analyzed: 24Dec2003 19:54
Run ID: 42 Meth: stltoc Vol (mL): 2.000

SAMPLES Rep	Datafile	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (ppm)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (ppm)

12303

1	1223142	69103	62.951	31.4753	7861	6.631	3.3153
2	1223143	70088	63.848	31.9242	7372	6.185	3.0925
3	1223144	68435	62.342	31.1708	7392	6.203	3.1016
4	1223145	66130	60.241	30.1203	7266	6.088	3.0442
Avg		68439	62.345	31.1726	7472	6.277	3.1384
Std.Dev.		1682.42		264.67			
RSD (%)		2.46		3.54			

F6QLG

****

Pos/Vial: 44 Name: F6QLK Analyzed: 24Dec2003 20:43
Run ID: 43 Meth: stltoc Vol (mL): 2.000

SAMPLES		TIC	TIC	TIC	TOC	TOC	TOC
		Area	Mass	Conc	Area	Mass	Conc
Rep	Datafile	(cts)	(ugC)	(ppm)	(cts)	(ugC)	(ppm)
1	1223146	144241	131.443	65.7217	5257	4.257	2.1285
2	1223147	145600	132.682	66.3411	5308	4.303	2.1517
3	1223148	139965	127.546	63.7728	5295	4.292	2.1458
4	1223149	131589	119.910	59.9552	5289	4.286	2.1431
Avg		140348	127.895	63.9477	5287	4.285	2.1423
Std.Dev.		6314.16		21.67			
RSD (%)		4.50		0.41			

****

Pos/Vial: 45 Name: F6QLN Analyzed: 24Dec2003 21:32
Run ID: 44 Meth: stltoc Vol (mL): 2.000

SAMPLES		TIC	TIC	TIC	TOC	TOC	TOC
		Area	Mass	Conc	Area	Mass	Conc
Rep	Datafile	(cts)	(ugC)	(ppm)	(cts)	(ugC)	(ppm)
1	1223150	146907	133.874	66.9368	91869	83.209	41.6046
2	1223151	151327	137.903	68.9514	90094	81.591	40.7955
3	1223152	147767	134.658	67.3288	89357	80.919	40.4596
4	1223153	142467	129.826	64.9132	89004	80.597	40.2987
Avg		147117	134.065	67.0325	90081	81.579	40.7896
Std.Dev.		3642.95		1275.57			

12303

RSD (%) 2.48 1.42

****

Pos/Vial: 46 Name: CCV Analyzed: 24Dec2003 22:22
Run ID: 45 Meth: stltoc Vol (mL): 2.000

SAMPLES		TIC	TIC	TIC	TOC	TOC	TOC
		Area	Mass	Conc	Area	Mass	Conc
Rep	Datafile	(cts)	(ugC)	(ppm)	(cts)	(ugC)	(ppm)
1	1223154	729	0.624	0.3118	55563	50.114	25.0570

****

Pos/Vial: 47 Name: CCB Analyzed: 24Dec2003 22:36
Run ID: 46 Meth: stltoc Vol (mL): 2.000

SAMPLES		TIC	TIC	TIC	TOC	TOC	TOC
		Area	Mass	Conc	Area	Mass	Conc
Rep	Datafile	(cts)	(ugC)	(ppm)	(cts)	(ugC)	(ppm)
1	1223155	300	0.232	0.1162	1875	1.174	0.5870

****

Pos/Vial: 48 Name: F6VAG Analyzed: 24Dec2003 22:50
Run ID: 47 Meth: stltoc Vol (mL): 2.000

SAMPLES		TIC	TIC	TIC	TOC	TOC	TOC
		Area	Mass	Conc	Area	Mass	Conc
Rep	Datafile	(cts)	(ugC)	(ppm)	(cts)	(ugC)	(ppm)
1	1223156	144636	131.804	65.9018	11459	9.910	4.9552
2	1223157	138185	125.923	62.9615	10894	9.395	4.6977
3	1223158	135899	123.839	61.9196	10806	9.315	4.6576
4	1223159	128899	117.458	58.7291	10990	9.483	4.7415
Avg		136904	124.756	62.3780	11037	9.526	4.7630
Std.Dev.		6493.97		291.03			
RSD (%)		4.74		2.64			

****

12303

Pos/Vial: 49 Name: F6VAJ (decant) Analyzed: 24Dec2003 23:40
Run ID: 48 Meth: stltoc Vol (mL): 2.000

SAMPLES Rep	Datafile	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (ppm)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (ppm)
1	1223160	126644	115.403	57.7014	20344	18.010	9.0049
2	1223161	121104	110.353	55.1763	20298	17.968	8.9839
3	1223162	119818	109.180	54.5902	20567	18.213	9.1065
4	1223163	111940	101.999	50.9996	21008	18.615	9.3075
Avg		119876	109.234	54.6169	20554	18.201	9.1007
Std.Dev.		6063.48		324.51			
RSD (%)		5.06		1.58			

****

Dec. 25

Pos/Vial: 50 Name: F6VAK (decant) Analyzed: 25Dec2003 00:29
Run ID: 49 Meth: stltoc Vol (mL): 2.000

SAMPLES Rep	Datafile	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (ppm)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (ppm)
1	1223164	126949	115.681	57.8404	20358	18.022	9.0112
2	1223165	123083	112.157	56.0783	20438	18.095	9.0477
3	1223166	124326	113.290	56.6449	20239	17.914	8.9570
4	1223167	117763	107.307	53.6536	21156	18.750	9.3749
Avg		123030	112.109	56.0543	20547	18.195	9.0977
Std.Dev.		3863.60		413.66			
RSD (%)		3.14		2.01			

****

Pos/Vial: 51 Name: F61T7 (decant) Analyzed: 25Dec2003 01:18
Run ID: 50 Meth: stltoc Vol (mL): 2.000

SAMPLES Rep	Datafile	TIC Area (cts)	TIC Mass (ugC)	TIC Conc (ppm)	TOC Area (cts)	TOC Mass (ugC)	TOC Conc (ppm)

12303

1	1223168	149720	136.438	68.2189	32341	28.946	14.4729
2	1223169	147854	134.737	67.3685	34189	30.630	15.3151
3	1223170	146842	133.814	66.9072	31039	27.759	13.8794
4	1223171	135931	123.868	61.9342	35302	31.645	15.8224

F 6177

Avg	145086	132.214	66.1072	33217	29.745	14.8725
Std.Dev.	6219.15		1897.64			
RSD (%)	4.29		5.71			

****

Pos/Vial: 52 Name: CCV Analyzed: 25Dec2003 02:08
Run ID: 51 Meth: stltoc Vol (mL): 2.000

SAMPLES		TIC	TIC	TIC	TOC	TOC	TOC
		Area	Mass	Conc	Area	Mass	Conc
Rep	Datafile	(cts)	(ugC)	(ppm)	(cts)	(ugC)	(ppm)
1	1223172	754	0.646	0.3231	52280	47.121	23.5607

****

Pos/Vial: 53 Name: CCB Analyzed: 25Dec2003 02:22
Run ID: 52 Meth: stltoc Vol (mL): 2.000

SAMPLES		TIC	TIC	TIC	TOC	TOC	TOC
		Area	Mass	Conc	Area	Mass	Conc
Rep	Datafile	(cts)	(ugC)	(ppm)	(cts)	(ugC)	(ppm)
1	1223173	307	0.239	0.1194	1993	1.282	0.6408

STL North Canton General Chemistry Data Review Checklist

Parameter(s): Chloride

Batch(es): 3363239

Method #/SOP#: 325.2

Review Items	Level I Review			Level II Review		
A. Initial Calibration	YES	NO	N/A	YES	NO	N/A
1. Initial calibration correlation coefficient ≥ 0.995?	✓			✗		
2. Calibration curve consist of the minimum number of calibration standards?	✓			✗		
3. ICV analyzed at immediately after calibration and within control limits ? (TRAACS Nitrate/Nitrite, Cyanide 85-115%; all others 90-110%)	✓			✗		
4. ICB analyzed immediately after ICV and within criteria (± RL)?	✓			✗		
B. Continuing Calibration						
1. CCV analyzed every 10 samples, at end of sequence and within criteria?	✓			✗		
2. CCB analyzed every 10 samples, at end of sequence & within criteria (±RL)?	✓			✗		
C. Sample Results						
1. Were samples with concentrations > the linear range diluted and reanalyzed ?	✓			✗		
2. All reported results bracketed by in control QC ?	✓			✗		
3. Sample analyses done within holding time ?	✓			✗		
D. Quality Control						
1. LCS per prep batch and within QC limits ? *(LCSD, where applicable)*	✓			✗		
2. Method blank done per prep batch and < RL. Method blank RL supports the lowest RL reported for the batch?	✓			✗		
3. MS/MSD run at required frequency and evaluated? MS/MSD reported properly and calculated correctly?	✓			✗		
4. Duplicate samples run at required frequency (duplicate sample performed per matrix encountered)?			✓			✗
E. Titrant						
1. Titrant standardized?			✓			✗
2. If no, standardization expires						
F. Other						
1. Are all nonconformances documented appropriately (NCM or narrative)?			✓			✗
2. Calculations checked for error ?	✓					✗
3. Transcriptions checked for error ?	✓			✗		
4. All client/project specific requirements met ?	✓			✗		
5. Date/time of preparation and analysis verified as correct ?	✓			✗		
6. Units verified as correct?	✓			✗		
7. Dilutions have been properly applied and RL's adjusted appropriately?	✓			✗		
8. SOP followed?	✓			✗		
9. Calculations checked at minimum frequency (at least 20%, 100% for QC)?	✓					✗
10. All reagent and standard numbers recorded in logbook?	✓			✗		
11. Edits dated and initialed	✓					✗

Comment on any "NO" response(s):

Level I reviewer: Rebecca L. Nolan **Date:** 12-29-03

Level II Reviewer: Melissa A. Fuller-Christner **Date:** 12/29/03

Level I review:

Result Report Konelab 5.4.9 Page: 1

STL - NORTH CANTON
LABORATORY

Date : 2003-12-29
Time : 17:26

Test CL 2
Unit mg/l

Sample ID:	Result	Dilut	Man.dilut	Resp.	Date and Time
CCV - CL	23.709			0.407	2003-12-29 10.04
CCB - CL	0.110			0.011	2003-12-29 10.04
ICS CL	79.233			1.011	2003-12-29 10.04
CCV - CL	23.289			0.401	2003-12-29 10.05
CCB - CL	-0.021			0.008	2003-12-29 10.05
CCV - CL	23.828			0.409	2003-12-29 10.37
CCB - CL	0.286			0.014	2003-12-29 10.37
RLS	0.262			0.014	2003-12-29 10.37
CCV - CL	23.877			0.410	2003-12-29 10.49
CCB - CL	0.116			0.011	2003-12-29 10.49
F6TGM	0.638			0.021	2003-12-29 10.49
F6JXA	48.661			0.713	2003-12-29 10.49
CCV - CL	23.871			0.410	2003-12-29 10.51
CCB - CL	-0.028			0.008	2003-12-29 10.51
F6TFT	299.992	1+19.0		0.276	2003-12-29 10.55
F6TF7	122.478	1+19.0		0.123	2003-12-29 10.55
F6TF8	282.194	1+19.0		0.262	2003-12-29 10.55
F6TGA	548.825	1+19.0		0.459	2003-12-29 10.55
F6TGC	131.759	1+19.0		0.132	2003-12-29 10.55
F6TGD	244.066	1+19.0		0.230	2003-12-29 10.55
CCV - CL	23.828			0.409	2003-12-29 11.07
CCB - CL	0.028			0.009	2003-12-29 11.07
F6TGF	353.768	1+19.0		0.319	2003-12-29 11.09
F6TGG	251.677	1+19.0		0.237	2003-12-29 11.09
F6TGJ	291.786	1+19.0		0.270	2003-12-29 11.09
F6TGK	325.757	1+19.0		0.297	2003-12-29 11.09
F6TGL	312.520	1+19.0		0.286	2003-12-29 11.09
F6F2H	132.017	1+19.0		0.132	2003-12-29 11.09
F6JX2	220.653	1+19.0		0.210	2003-12-29 11.31
F6JX2 MS	252.512	1+19.0		0.237	2003-12-29 11.31
F6JX2 MSD	250.168	1+19.0		0.235	2003-12-29 11.31
CCV - CL	23.806			0.409	2003-12-29 11.31
CCB - CL	0.018			0.009	2003-12-29 11.31
CCV - CL	24.178			0.414	2003-12-29 12.01
CCB - CL	0.238			0.013	2003-12-29 12.01
CCV - CL	24.067			0.412	2003-12-29 12.02
CCB - CL	-0.000			0.009	2003-12-29 12.02
CCV - CL	24.054			0.412	2003-12-29 12.23
CCB - CL	-0.028			0.008	2003-12-29 12.23
F6F1C 10X	2e+004	1+24.0	1+9.0	1.063	2003-12-29 12.33
CCV - CL	24.045			0.412	2003-12-29 12.36
CCB - CL	-0.011			0.009	2003-12-29 12.36

See other sheet.

Test results Konelab 5.4.9 Page: 1

STL - NORTH CANTON
LABORATORY

29.12.2003 12:36

Test: CL 2

Sample Id	Result	Response	Errors
CCV - CL	28.177	0.469	Rule 1 violated
CCB - CL	0.231	0.013	
LCS CL	82.833	1.044	
CCV - CL	27.946	0.466	Rule 1 violated
CCB - CL	0.020	0.009	
CCV - CL	23.709	0.407	
CCB - CL	0.110	0.011	
LCS CL	79.255	1.011	
CCV - CL	24.284	0.401	
CCB - CL	-0.021	0.008	
CCV - CL	23.828	0.409	
CCB - CL	0.286	0.014	
[illegible]	0.262	0.014	
F6TFT	206.901	2.121	Dil. limit high
F6TF7	120.790	1.374	Dil. limit high
F6TF8	196.179	2.028	Dil. limit high
F6TGA	264.974	2.625	Dil. limit high
F6TGC	126.743	1.426	Dil. limit high
F6TGD	184.954	1.931	Dil. limit high
F6TGF	237.199	2.384	Dil. limit high
F6TGH	204.197	2.101	Dil. limit high
F6TGJ	215.256	2.194	Dil. limit high
CCV - CL	23.877	0.410	
CCB - CL	0.116	0.011	
F6TGK	229.296	2.316	Dil. limit high
F6TGL	208.739	2.137	Dil. limit high
F6TGM	0.638	0.021	
F6F1C	1078.975	9.687	Abs. high, Dil. limit high
F6F2H	140.953	1.549	Dil. limit high
F6JXA	48.661	0.713	
F6JX2	180.000	1.888	Dil. limit high
F6JX2 MS	187.266	1.951	Dil. limit high
F6JX2 MSD	186.685	1.946	Dil. limit high
CCV - CL	23.871	0.410	
CCB - CL	-0.021	0.008	
F6TFT	204.544	0.279	
F6TF7	122.478	0.123	
F6TF8	282.194	0.262	
F6TGA	548.825	0.459	
F6TGC	131.759	0.132	
F6TGD	244.066	0.230	
CCV - CL	23.828	0.409	
CCB - CL	0.028	0.009	
F6TGF	353.768	0.319	
F6TGH	251.677	0.237	
F6TGJ	291.786	0.270	
F6TGK	325.757	0.297	
F6TGL	312.520	0.286	
F6F2H	132.017	0.132	
F6JX2	220.653	0.210	
F6JX2 MS	252.512	0.237	
F6JX2 MSD	250.168	0.235	
CCV - CL	23.806	0.409	
CCB - CL	0.018	0.009	
CCV - CL	24.178	0.414	
CCB - CL	0.238	0.013	
F6F1C 10X	4140.845	3.919	Dil. limit high

Test results Konelab 5.4.9 Page: 2

STL - NORTH CANTON
LABORATORY

29.12.2003 12:36

Test: CL 2

Sample Id	Result	Response	Errors
CCV - CL	24.067	0.412	
CCB - CL	-0.000	0.009	
F6F1C 10X	20659.563	1.223	Test limit high
CCV - CL	24.054	0.412	
CCB - CL	-0.028	0.006	
F6F1C 10X	21261.709	1.064	
F6F1C 10X	21660.430	1.063	
CCV - CL	24.045	0.412	
CCB - CL	-0.014	0.009	

N	40
Mean	1888.594
SD	5568.2275
CV%	294.83
Mean response	1.336
Response SD	1.6546
Response CV	123.85

Calibration results Konelab 5.4.9 Page: 1

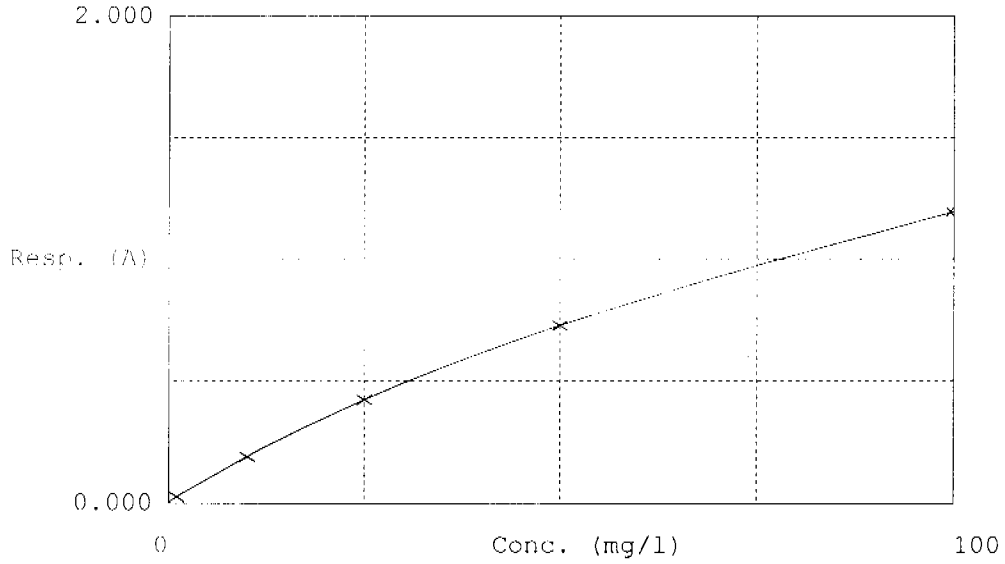
STL - NORTH CANTON
LABORATORY

29.12.2003 09:52

Test CL 2

Accepted 18.12.2003 10:24

Coeff. of det. 1.000



	Calibrator	Response	Calc. con.	Conc.	Errors
1	CL-100	0.028	1.0000	1.0000	
2	CL-100	0.193	10.0000	10.0000	
3	CL-100	0.425	25.0000	25.0000	
4	CL-100	0.727	50.0000	50.0000	
5	CL-100	1.194	100.0000	100.0000	

Cal CL3047
CCV CL3049

LCSTV=73.5
Lot#P097506

CL 1,000 ppm
Lot# 2330-03

STL North Canton General Chemistry Data Review Checklist

Parameter(s): sulfate

Batch(es): 3363240

Method #/SOP#: 375.4

Review Items	Level I Review			Level II Review		
A. Initial Calibration	YES	NO	N/A	YES	NO	N/A
1. Initial calibration correlation coefficient ≥ 0.995?	✓			X		
2. Calibration curve consist of the minimum number of calibration standards?	✓			X		
3. ICV analyzed at immediately after calibration and within control limits ? (TRAACS Nitrate/Nitrite, Cyanide 85-115%; all others 90-110%)	✓			X		
4. ICB analyzed immediately after ICV and within criteria (± RL)?	✓			X		
B. Continuing Calibration						
1. CCV analyzed every 10 samples, at end of sequence and within criteria?	✓			X		
2. CCB analyzed every 10 samples, at end of sequence & within criteria (±RL)?	✓			X		
C. Sample Results						
1. Were samples with concentrations > the linear range diluted and reanalyzed ?	✓			X		
2. All reported results bracketed by in control QC ?	✓			X		
3. Sample analyses done within holding time ?	✓			X		
D. Quality Control						
1. LCS per prep batch and within QC limits ? *(LCSD, where applicable)*	✓			X		
2. Method blank done per prep batch and < RL. Method blank RL supports the lowest RL reported for the batch?	✓			X		
3. MS/MSD run at required frequency and evaluated? MS/MSD reported properly and calculated correctly?	✓			X		
4. Duplicate samples run at required frequency (duplicate sample performed per matrix encountered)?			✓			X
E. Titrant						
1. Titrant standardized?			✓			X
2. If no, standardization expires						
F. Other						
1. Are all nonconformances documented appropriately (NCM or narrative)?			✓			X
2. Calculations checked for error ?	✓					X
3. Transcriptions checked for error ?	✓			X		
4. All client/project specific requirements met ?	✓			X		
5. Date/time of preparation and analysis verified as correct ?	✓			X		
6. Units verified as correct?	✓			X		
7. Dilutions have been properly applied and RL's adjusted appropriately?	✓			X		
8. SOP followed?	✓			X		
9. Calculations checked at minimum frequency (at least 20%, 100% for QC)?	✓					X
10. All reagent and standard numbers recorded in logbook?	✓			X		
11. Edits dated and initialed	✓					X

Comment on any "NO" response(s):

Level I reviewer: Rebecca L. Nolan **Date:** 12-29-03

Level II Reviewer: Melissa A. Fuller-Shustarl **Date:** 12/29/03

Level I review:

Result Report Konelab 5.4.9 Page: 1

STL - NORTH CANTON
LABORATORY

Date : 2003-12-29
Time : 12:35

Test SULFATE
Unit mg/l

Sample ID:	Result	Dilut	Man.dilut	Resp.	Date and Time
CCV - SO4	25.009			0.191	2003-12-29 09.43
CCB - SO4	-0.838			0.003	2003-12-29 09.43
LCS SO4	28.979			0.214	2003-12-29 09.43
CCV - SO4	26.076			0.197	2003-12-29 09.51
CCB - SO4	-0.941			0.003	2003-12-29 09.51
BLK	-0.682			0.005	2003-12-29 10.29
CCV - SO4	25.444			0.193	2003-12-29 10.42
CCB - SO4	-1.049			0.002	2003-12-29 10.42
F6TGM	0.503			0.013	2003-12-29 10.42
F6F1C	-2.738			-0.011	2003-12-29 10.42
CCV - SO4	25.012			0.191	2003-12-29 10.47
CCB - SO4	-1.036			0.002	2003-12-29 10.47
F6TF6	137.067	1+4.0		0.205	2003-12-29 11.00
F6TGA	173.124	1+4.0		0.244	2003-12-29 11.00
F6TGC	159.741	1+4.0		0.231	2003-12-29 11.00
F6TGE	95.743	1+4.0		0.143	2003-12-29 11.00
CCV - SO4	23.594			0.186	2003-12-29 11.06
CCB - SO4	-1.125			0.001	2003-12-29 11.06
F6TGG	86.133	1+4.0		0.144	2003-12-29 11.14
F6TGJ	44.943	1+4.0		0.091	2003-12-29 11.14
F6TGK	115.798	1+4.0		0.183	2003-12-29 11.14
F6TGL	159.101	1+4.0		0.230	2003-12-29 11.14
F6F2R	54.440	1+4.0		0.105	2003-12-29 11.14
F6JXA	32.610	1+4.0		0.066	2003-12-29 11.14
F6JX2	136.390	1+4.0		0.204	2003-12-29 11.27
CCV - SO4	24.189			0.187	2003-12-29 11.29
CCB - SO4	-1.109			0.001	2003-12-29 11.29
CCV - SO4	25.396			0.193	2003-12-29 11.49
CCB - SO4	-1.082			0.002	2003-12-29 11.49
F6TF7	608.736	1+24.0		0.188	2003-12-29 11.51
F6TGD	311.561	1+9.0		0.227	2003-12-29 11.51
CCV - SO4	25.315			0.193	2003-12-29 12.00
CCB - SO4	-0.836			0.003	2003-12-29 12.00
F6TFT	158.486	1+4.0		0.229	2003-12-29 12.08
CCV - SO4	24.552			0.189	2003-12-29 12.16
CCB - SO4	-0.770			0.004	2003-12-29 12.16
F6JX2 MS	157.817	1+4.0		0.229	2003-12-29 12.27
F6JX2 MSD	159.369	1+4.0		0.230	2003-12-29 12.27
CCV - SO4	25.116			0.192	2003-12-29 12.32
CCB - SO4	-1.748			0.004	2003-12-29 12.32

Calibration results Konelab 5.4.9 Page: 1

STL - NORTH CANTON
LABORATORY

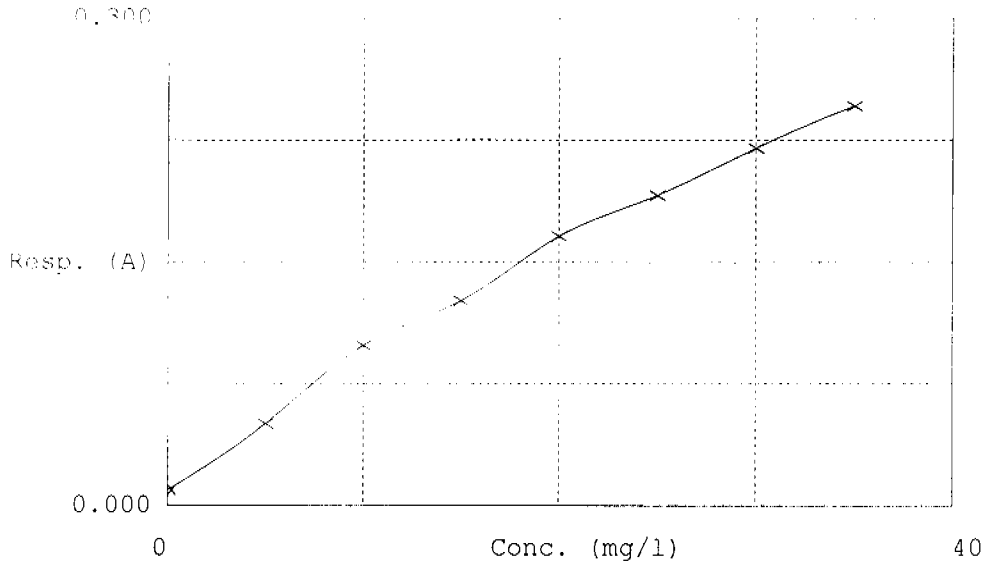
29.12.2003 09:52

Test SULFATE

Acquired 16.12.2003 11:00

Coeff. of det. 1.000 ✓

Errors



	Calibrator	Response	Calc. con.	Conc.	Errors
1	SO4-0	0.010	0.0000	0.0000	
2	SO4-1	0.050	5.0000	5.0000	
3	SO4-2	0.099	10.0000	10.0000	
4	SO4-3	0.127	15.0000	15.0000	
5	SO4-4	0.166	20.0000	20.0000	
6	SO4-5	0.191	25.0000	25.0000	
7	SO4-6	0.220	30.0000	30.0000	
8	SO4-7	0.246	35.0000	35.0000	

Col SU3101
3102
3103
3104
3105
3106
3107

CCV SU3109

LCS TV = 320.21
Lot # P097506

SO4 1,000 ppm
Lot # 2175-10

Test Results Konelab 5.4.9 Page: 1

STL - NORTH CANTON
LABORATORY

29.12.2003 12:34

Test: SULFATE

Sample Id	Result	Response	Errors
CCV - SO4	25.009	0.191	
CCB - SO4	-0.838	0.003	
LCS SO4	28.919	0.214	
CCV - SO4	26.076	0.197	
CCB - SO4	-0.941	0.003	
CCV - SO4	24.577	0.189	
CCB - SO4	5.651	0.057	Rule 1 violated
BLK	-0.682	0.005	
F6TF3	103.313	0.576	Dil. limit high
F6TF7	244.023	1.257	Dil. limit high, Test limit high
F6TF8	91.150	0.518	Dil. limit high
F6TGA	111.035	0.614	Dil. limit high
F6TGC	104.421	0.582	Dil. limit high
F6TGD	168.680	0.893	Dil. limit high
F6TGF	65.205	0.392	Dil. limit high
F6TGG	84.226	0.484	Dil. limit high
F6TGJ	46.541	0.302	Dil. limit high
CCV - SO4	25.444	0.193	
CCB - SO4	-1.049	0.002	
F6TGK	96.917	0.545	Dil. limit high
F6TGL	105.256	0.586	Dil. limit high
F6TGM	0.503	0.013	
F6F1C	-2.738	-0.011	
F6F2H	49.214	0.315	Dil. limit high
F6JXA	39.990	0.270	Dil. limit high
F6JX2	94.685	0.535	Dil. limit high
CCV - SO4	25.012	0.191	
CCB - SO4	-1.036	0.002	
F6TFT	160.532	0.232	
F6TF6	157.067	0.205	
F6TGA	173.124	0.244	
F6TGC	159.741	0.231	
F6TGD	266.281	0.334	Test limit high
F6TGF	85.748	0.143	
CCV - SO4	23.894	0.186	
CCB - SO4	-1.125	0.001	
F6TGG	86.133	0.144	
F6TGJ	44.943	0.091	
F6TGK	115.798	0.183	
F6TGL	159.191	0.230	
F6F1H	54.442	0.105	
F6JXA	42.613	0.066	
F6JX2	136.390	0.204	
CCV - SO4	24.189	0.187	
CCB - SO4	-1.109	0.001	
CCV - SO4	25.290	0.193	
CCB - SO4	-1.082	0.002	
F6TF7	608.736	0.188	
F6TGD	311.561	0.227	
CCV - SO4	25.315	0.193	
CCB - SO4	-0.836	0.003	
F6TFT	152.486	0.229	
F6JXA MS	101.753	0.569	Dil. limit high
F6JX2 MSD	101.135	0.566	Dil. limit high
CCV - SO4	24.552	0.189	
CCB - SO4	-0.770	0.004	
F6JX2 MS	156.403	0.227	

STL - NORTH CANTON
LABORATORY

29.12.2003 12:34

Test: SULFATE

Sample Id	Result	Response	Errors
F6JX2 MSD	158.110	0.229	
F6JX2 MS	157.817	0.229	
F6JX2 MSD	159.369	0.230	
CCV - SO4	25.116	0.192	
CCB - SO4	-0.793	0.004	

N	40
Mean	123.898
SD	104.5366
CV%	84.37
Mean response	0.330
Response SD	0.2517
Response CV%	76.31

Test results Konelab 5.4.9 Page: 1

STL - NORTH CANTON
LABORATORY

29.12.2003 10:48

Test S04-KIN

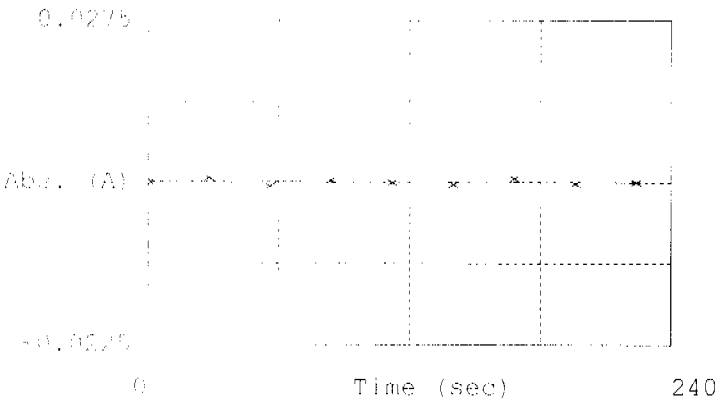
Sample Id BLK

calc 29.12.2003 10:25

Result	Dil.ratio	Rejected	Limit exceeded	Meas.	Limit
-0.0	0.0		Blank init abs. low	-5.969e-0050	

Response (A/min) -0.000

Blank response (A) -0.000



Main absorbances

0.003
0.003
0.002
0.003
0.002
0.002
0.003
0.002
0.002

Points used 9/9

Test results Konelab 5.4.9 Page: 1

STL - NORTH CANTON
LABORATORY

29.12.2003 09:52

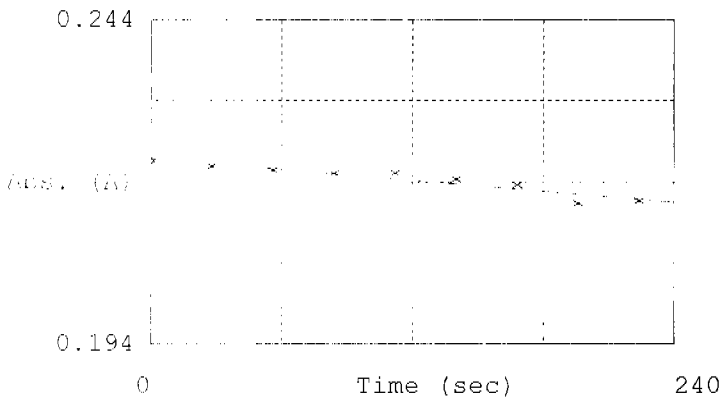
Test S04-KIN

Sample Id LCS S04

calc 29.12.2003 09:49

Result	Dil.ratio	Rejected	Limit exceeded	Meas.	Limit
-0.0	0.0		Blank init abs. low	-0.0001408	0

Response (A/min)	-0.002
Blank response (A)	-0.000



Main absorbances

0.222
0.222
0.221
0.220
0.220
0.220
0.219
0.216
0.216

Points used 9/9

Sample results Konelab 5.4.9 Page: 1

STL - NORTH CANTON
LABORATORY

[illegible] 12:20

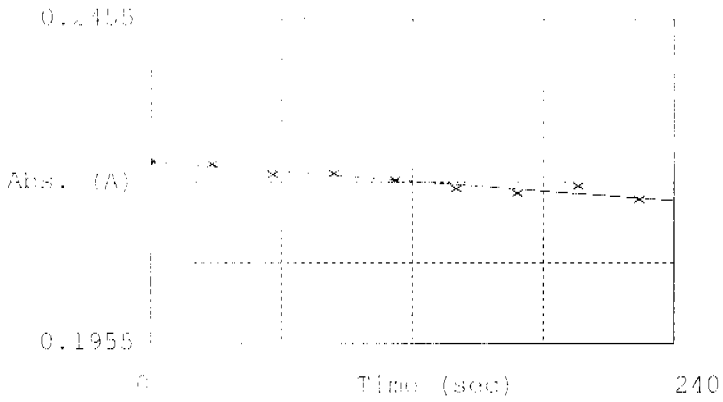
Test S04-KIN

Sample Id F6TFT

calc 29.12.2003 11:47

Result	Dil.ratio	Rejected	Limit exceeded	Meas.	Limit
-0.1	0.0	Man.			
-0.1	4.0				

Response (A/min)	-0.001
Blank response (A)	0.001



Main absorbances

0.224
0.223
0.222
0.222
0.221
0.220
0.219
0.220
0.218

Points used 9/9

Sample results Konelab 5.4.9 Page: 1

STL - NORTH CANTON
LABORATORY

29.12.2003 12:10

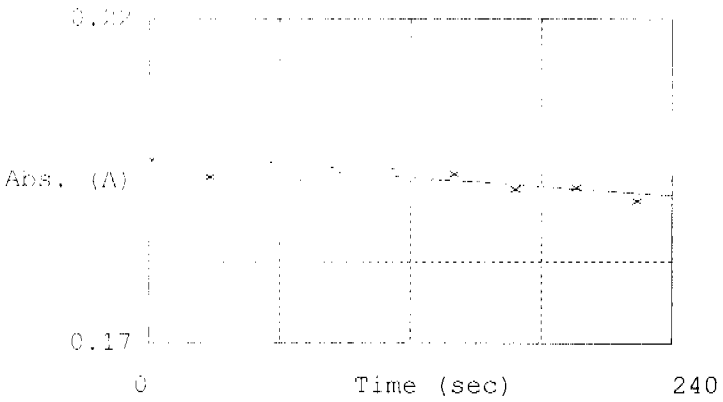
Test S04-KIN

Sample id F6TF7

calc 29.12.2003 12:07

Result	Dil.ratio	Rejected	Limit exceeded	Meas.	Limit
-0.8	0.0	Man.	Blank init abs. low	-0.0003908	0
-0.8	24.0				

Response (A/min)	-0.001
Blank response (A)	-0.000



Main absorbances

0.198
0.196
0.198
0.197
0.197
0.196
0.194
0.194
0.192

Points used 9/9

Sample results Konelab 5.4.9 Page: 1

STL - NORTH CANTON
LABORATORY

29.12.2003 11:56

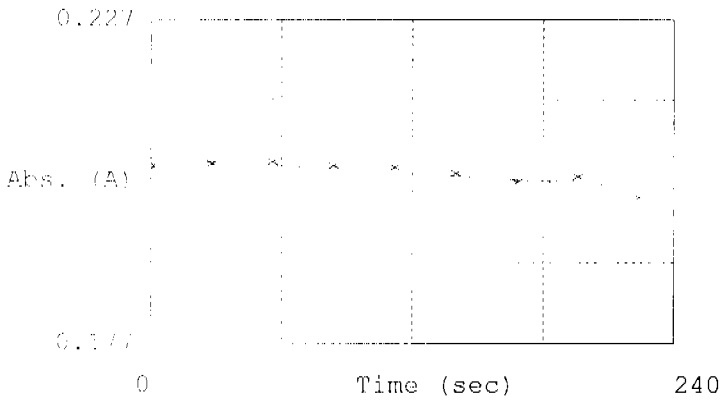
Test S04-KIN

Sample Id F6TF8

calc 29.12.2003 11:47

Result	Dil.ratio	Rejected	Limit exceeded	Meas.	Limit
-0.1	0.0	Man.			
-0.1	4.0				

Response (A/min)	-0.001
Blank response (A)	0.003



Main absorbances

0.204
0.205
0.205
0.204
0.204
0.203
0.202
0.203
0.199

Sample results Konelab 5.4.9 Page: 1

STL - NORTH CANTON
LABORATORY

29.12.2003 11:57

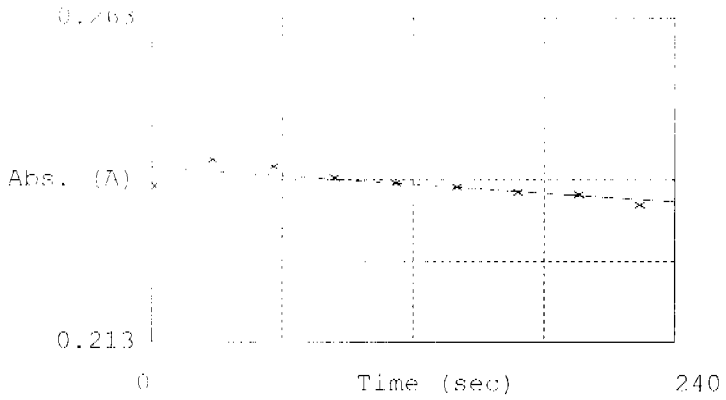
Test S04-KIN

Sample Id 56TGA

[illegible] 29.12.2003 11:47

Result	Dil.ratio	Rejected	Limit exceeded	Meas.	Limit
-0.2	0.0	Man.			
-0.1	4.0				

Response (A/min)	-0.001
Blank response (A)	0.001



Main absorbances

0.237
0.241
0.240
0.238
0.237
0.237
0.236
0.236
0.234

Points used 9/9

Sample results Konelab 5.4.9 Page: 1

STL - NORTH CANTON
LABORATORY

29.12.2003 11:57

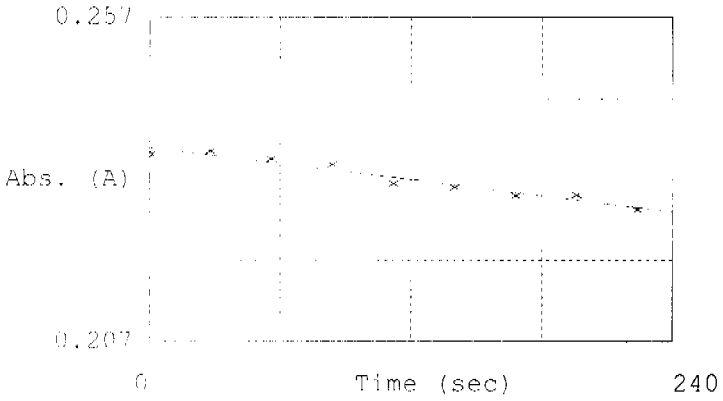
Test S04-KIN

Sample Id F6TGC

calc 29.12.2003 11:53

Result	Dil.ratio	Rejected	Limit exceeded	Meas.	Limit
-0.1	0.9	Man.			
-0.1	4.0				

Response (A/min)	-0.003
Blank response (A)	0.003



Main absorbances

0.236
0.236
0.235
0.234
0.231
0.231
0.229
0.230
0.227

Points used 9/9

Sample results Konelab 5.4.9 Page: 1

STL - NORTH CANTON
LABORATORY

29.12.2003 12:10

Test S04-KJN

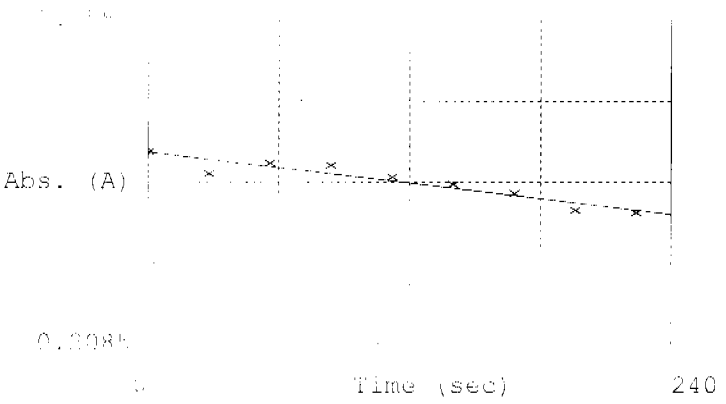
Sample ID [illegible]

Calc 29.12.2003 12:07

Result	Dil.ratio	Rejected	Limit exceeded	Meas.	Limit
-0.4	0.0	Man.	Blank init abs. low	-0.0002784	0
-0.2	9.0				

Response (A/min) -0.002

Blank response (A) -0.000



Main absorbances

0.238
0.235
0.236
0.236
0.234
0.233
0.232
0.229
0.229

Points used 9/9

Sample results Konelab 5.4.9 Page: 1

STL - NORTH CANTON
LABORATORY

29.12.2003 11:58

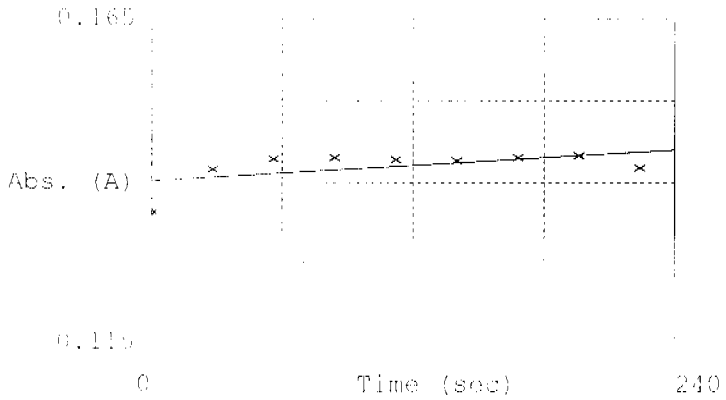
Test S04-KIN

Sample Id F6T8F

Date 29.12.2003 11:53

Result	Dil.ratio	Rejected	Limit exceeded	Meas.	Limit
-0.0	0.0	Man.	Point(s) out of curve		
0.1	4.0				

Response (A/min)	0.001
Blank response (A)	0.009



Main absorbances

0.135
0.142
0.144
0.144
0.144
0.143
0.144
0.144
0.142

Points used 9/9

Sample results Konelab 5.4.9 Page: 1

STL - NORTH CANTON
LABORATORY

29.12.2003 11:58

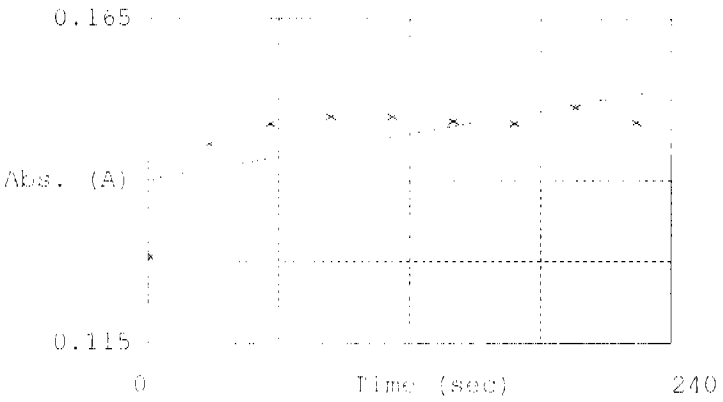
Test S04-K1N

Sample Id F6TGG

calc 29.12.2003 11:53

Result	Dil.ratio	Rejected	Limit exceeded	Meas.	Limit
-0.1	0.6	Man.	Point(s) out of curve		
0.2	4.0				

Response (A/min)	0.004
Blank response (A)	0.004



Main absorbances

0.128
0.146
0.149
0.150
0.150
0.149
0.149
0.151
0.149

Points used 9/9

Sample results Konelab 5.4.9 Page: 1

STL - NORTH CANTON
LABORATORY

29.12.2003 11:59

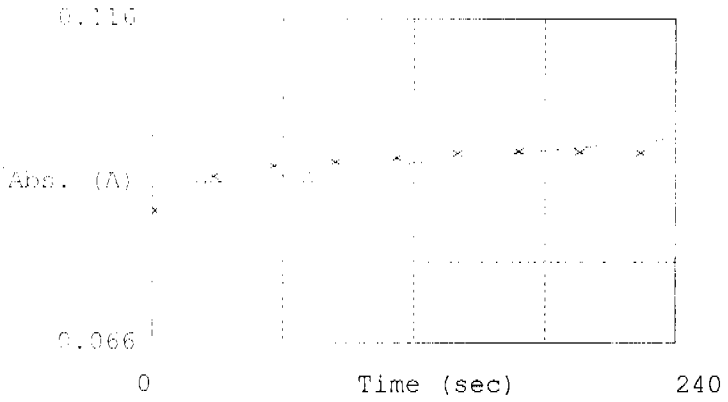
Test SO4-KIN

Sample Id F6TGJ

calc 29.12.2003 11:57

Result	Dil.ratio	Rejected	Limit exceeded	Meas.	Limit
-0.1	0.0	Man.			
0.1	4.0				

Response (A/min)	0.002
Blank response (A)	0.006



Main absorbances

0.086
0.092
0.093
0.094
0.095
0.095
0.096
0.096
0.095

Points used 9/9

Sample results Konelab 5.4.9 Page: 1

STL - NORTH CANTON
LABORATORY

29.12.2003 11:59

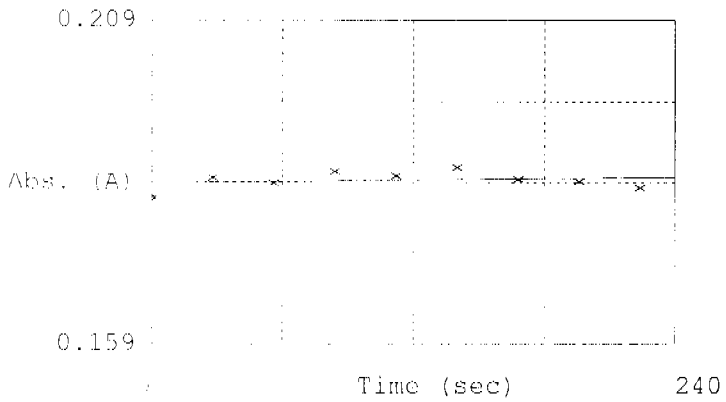
Test JG1-KIN

Sample Id F6TGK

calc 29.12.2003 11:57

Result	Dil.ratio	Rejected	Limit exceeded	Meas.	Limit
-0.1	0.0	Man.			
0.0	4.0				

Response (A/min)	0.000
Blank response (A)	0.004



Main absorbances

0.182
0.185
0.184
0.186
0.185
0.186
0.184
0.184
0.183

Points used 9/9

Sample results Konelab 5.4.9 Page: 1

STL - NORTH CANTON
LABORATORY

29.12.2003 11:57

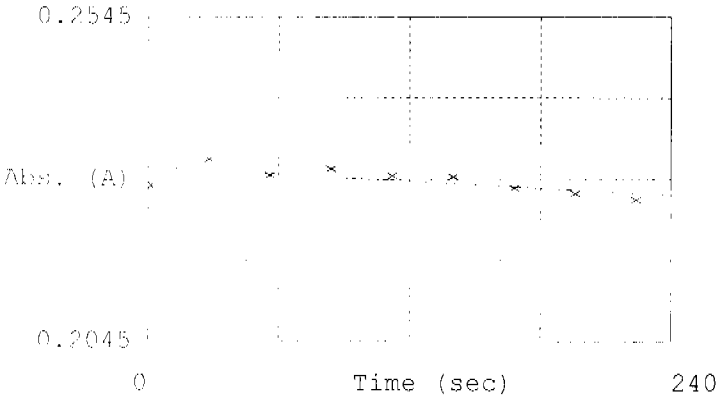
Test SO4-KIN

Sample Id F6TGL

calc 29.12.2003 11:57

Result	Dil.ratio	Rejected	Limit exceeded	Meas.	Limit
-0.1	0.0	Man.			
-0.1	1.0				

Response (A/min)	-0.001
Blank response (A)	0.001



Main absorbances

0.229
0.233
0.230
0.231
0.230
0.230
0.228
0.227
0.226

Points used 9/9

Test results Konelab 5.4.9 Page: 1

STL - NORTH CANTON
LABORATORY

29.12.2003 11:24

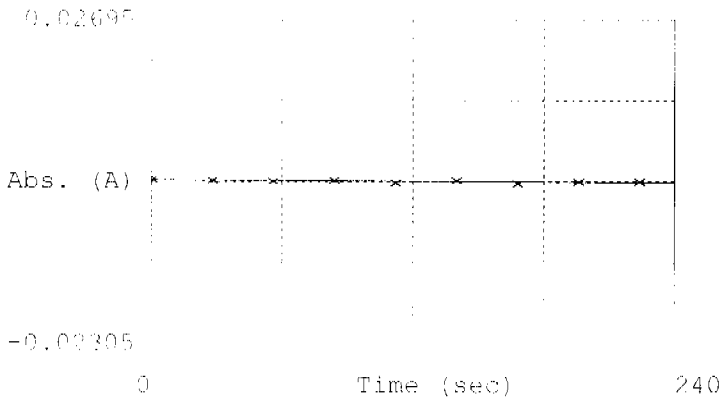
Test S04-KIN

Sample Id F6TGM

calc 29.12.2003 11:20

Result	Dil.ratio	Rejected	Limit exceeded	Meas.	Limit
-0.0	0.0		Blank init abs. low	-1.9e-007	0

Response (A/min)	-0.000
Blank response (A)	-0.000



Main absorbances

0.002
0.002
0.002
0.002
0.002
0.002
0.002
0.002
0.002

Points used 9/9

Test results Konelab 5.4.9 Page: 1

STL - NORTH CANTON
LABORATORY

29.12.2003 11:25

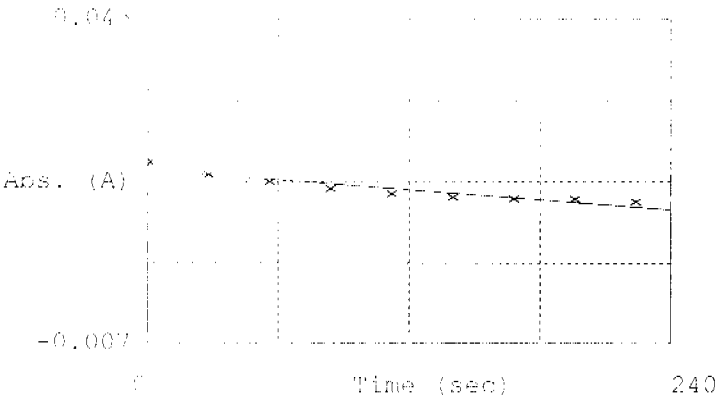
Test S04-KIN

Sample id F6FIC

Calc 29.12.2003 11:20

Result	Dil.ratio	Rejected	Limit exceeded	Meas.	Limit
-0.0	0.0				

Response (A/min)	-0.002
Blank response (A)	0.026



Main absorbances

0.021
0.019
0.018
0.017
0.016
0.016
0.015
0.015
0.015

Points used 9/9

Sample results Konelab 5.4.9 Page: 1

STL - NORTH CANTON
LABORATORY

[illegible] 11:45

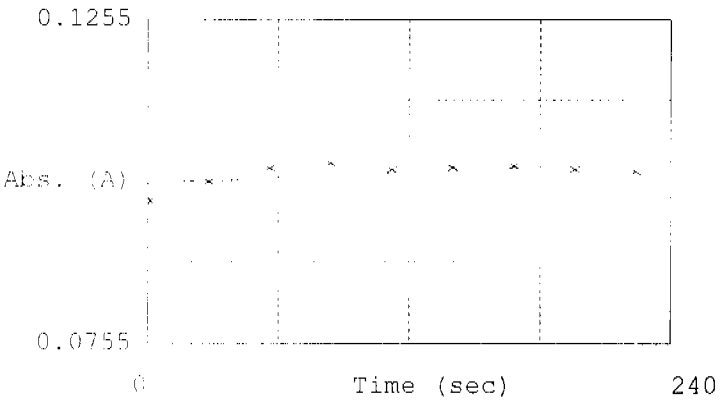
Test SO4-KIN

Sample Id F6F2H

calc 29.12.2003 11:42

Result	Dil.ratio	Rejected	Limit exceeded	Meas.	Limit
-0.0	0.0	Man.			
0.0	4.0				

Response (A/min)	0.001
Blank response (A)	0.001



Main absorbances

0.097
0.100
0.102
0.103
0.102
0.103
0.103
0.102
0.102

[illegible] 4/9

Sample results Konelab 5.4.9 Page: 1

STL - NORTH CANTON
LABORATORY

29.12.2003 11:46

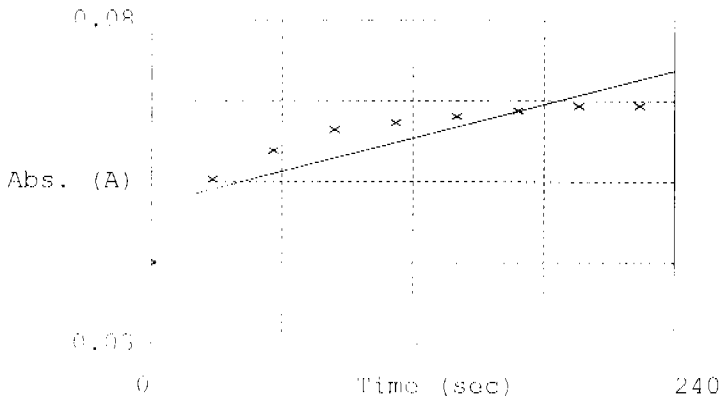
Test 884-KIN

Sample id PO/SA

calc 29.12.2003 11:42

Result	Dil.ratio	Rejected	Limit exceeded	Meas.	Limit
-0.0	0.0	Man.	Point(s) out of curve		
0.3	4.0		Blank init abs. low	-7.724e-0050	

Response (A/min)	0.005
Blank response (A)	-0.000



Main absorbances

0.043
0.055
0.060
0.063
0.064
0.065
0.066
0.067
0.067

Points used 9/9

Sample results Konelab 5.4.9 Page: 1

STL - NORTH CANTON
LABORATORY

30.12.2003 11:45

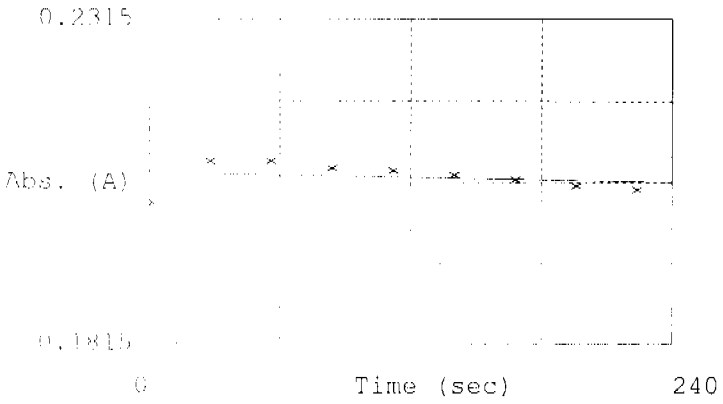
Test S04-KIN

Sample Id F6JX2

calc 29.12.2003 11:42

Result	Dil.ratio	Rejected	Limit exceeded	Meas.	Limit
-0.1	0.0	Man.	Point(s) out of curve		
-0.2	4.0				

Response (A/min)	-0.000
Blank response (A)	0.000



Main absorbances

0.203
0.210
0.210
0.209
0.208
0.208
0.207
0.206
0.205

Points used 9/9

Sample results Konelab 5.4.9 Page: 1

STL - NORTH CANTON
LABORATORY

29.12.2003 12:29

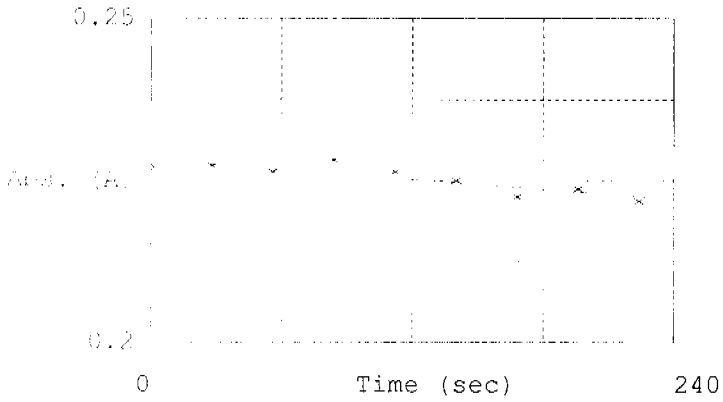
Test S04-KIN

Sample Id F6JXX MS

calc 29.12.2003 12:29

Result	Dil.ratio	Rejected	Limit exceeded	Meas.	Limit
[illegible]	[illegible]	Man.	Blank init abs. low	-0.0002444	0

Response (A/min)	-0.002
Blank response (A)	-0.000



Main absorbances

0.227
0.227
0.226
0.228
0.226
0.225
0.223
0.224
0.222

Points used 9/9

Sample results Konelab 5.4.9 Page: 1

STL - NORTH CANTON
LABORATORY

29.12.2003 12:29

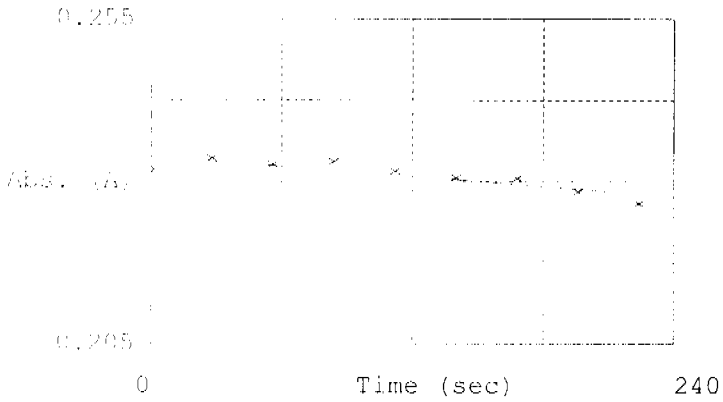
Test S04-KIN

Sample Id F6A55 MSD

calc 29.12.2003 12:29

Result	Dil.ratio	Rejected	Limit exceeded	Meas.	Limit
-0.2	0.0	Man.			
[illegible]	4.0				

Response (A/min)	-0.002
Blank response (A)	0.000



Main absorbances

0.232
0.234
0.233
0.233
0.232
0.231
0.230
0.228
0.227

Points used 9/9

STL 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
H3L100268	1		F6DQ41CF	Solids, Filterable "TDS" (160.1)	12/11/03	Rebecca Nolan	12/12/03	Bruce Woodward
H3L100268	1		F6DQ41CC	Nitrate-Nitrite (353.2, Automated)	12/10/03	Deborah Bolgrin	12/10/03	Deborah Bolgrin
H3L100268	1		F6DQ41A9	Alkalinity, Total (310.1)	12/10/03	Bruce Woodward	12/10/03	Loren Hazelwood
H3L100268	1		F6DQ41CE	Carbon, Total Organic "TOC" (9060)	12/24/03	Loren Hazelwood	12/24/03	Loren Hazelwood
H3L100268	1		F6DQ41CG	Hardness, Total (130.2, titrimetric)	12/22/03	Loren Hazelwood	12/22/03	Loren Hazelwood
H3L100268	1		F6DQ41A8	Turbidity (180.1)	12/10/03	Melissa Fuller-Gustavel	12/10/03	Melissa Fuller-Gustavel
H3L100268	1		F6DQ42A8	Turbidity (180.1)	12/16/03	Melissa Fuller-Gustavel	12/16/03	Melissa Fuller-Gustavel
H3L100268	1		F6DQ41CA	Chloride (325.2, Automated)	12/11/03	Rebecca Nolan	12/11/03	Rebecca Nolan
H3L100268	1		F6DQ41CD	Sulfate (Turbidimetric - 375.4)	12/11/03	Rebecca Nolan	12/11/03	Rebecca Nolan
H3L100268	1		F6DQ41A7	Solids, Total Suspended "TSS" (160.2)	12/12/03	Bruce Woodward	12/15/03	Bruce Woodward
H3L100268	1	S	F6DQ41DC	Nitrate-Nitrite (353.2, Automated)	12/10/03	Deborah Bolgrin	12/10/03	Deborah Bolgrin
H3L100268	1	S	F6DQ41C9	Alkalinity, Total (310.1)	12/10/03	Bruce Woodward	12/10/03	Loren Hazelwood
H3L100268	1	D	F6DQ41DD	Nitrate-Nitrite (353.2, Automated)	12/10/03	Deborah Bolgrin	12/10/03	Deborah Bolgrin
H3L100268	1	D	F6DQ41DA	Alkalinity, Total (310.1)	12/10/03	Bruce Woodward	12/10/03	Loren Hazelwood
H3L100268	1	X	F6DQ41DE	Turbidity (180.1)	12/10/03	Melissa Fuller-Gustavel	12/10/03	Melissa Fuller-Gustavel
H3L100268	1	X	F6DQ41DF	Turbidity (180.1)	12/16/03	Melissa Fuller-Gustavel	12/16/03	Melissa Fuller-Gustavel
H3L100268	2		F6DRG1CR	Hardness, Total (130.2, titrimetric)	12/17/03	Loren Hazelwood	12/17/03	Angela Serra
H3L100268	2		F6DRG1AJ	Solids, Total Suspended "TSS" (160.2)	12/12/03	Bruce Woodward	12/15/03	Bruce Woodward
H3L100268	2		F6DRG1CQ	Solids, Filterable "TDS" (160.1)	12/11/03	Rebecca Nolan	12/12/03	Bruce Woodward
H3L100268	2		F6DRG1CM	Nitrate-Nitrite (353.2, Automated)	12/10/03	Deborah Bolgrin	12/10/03	Deborah Bolgrin
H3L100268	2		F6DRG1AL	Alkalinity, Total (310.1)	12/10/03	Bruce Woodward	12/10/03	Loren Hazelwood
H3L100268	2		F6DRG1CP	Carbon, Total Organic "TOC" (9060)	12/24/03	Loren Hazelwood	12/24/03	Loren Hazelwood
H3L100268	2		F6DRG1AK	Turbidity (180.1)	12/10/03	Melissa Fuller-Gustavel	12/10/03	Melissa Fuller-Gustavel
H3L100268	2		F6DRG2AK	Turbidity (180.1)	12/16/03	Melissa Fuller-Gustavel	12/16/03	Melissa Fuller-Gustavel
H3L100268	2		F6DRG1CL	Chloride (325.2, Automated)	12/11/03	Rebecca Nolan	12/11/03	Rebecca Nolan
H3L100268	2		F6DRG1CN	Sulfate (Turbidimetric - 375.4)	12/11/03	Rebecca Nolan	12/11/03	Rebecca Nolan

STL 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
H3L110180	1		F6F1C1CG	Hardness, Total (130.2, titrimetric)	12/17/03	Loren Hazelwood	12/17/03	Angela Serra
H3L110180	1		F6F1C1A7	Solids, Total Suspended "TSS" (160.2)	12/12/03	Deborah Bolgrin	12/15/03	Bruce Woodward
H3L110180	1		F6F1C1CF	Solids, Filterable "TDS" (160.1)	12/12/03	Deborah Bolgrin	12/15/03	Bruce Woodward
H3L110180	1		F6F1C1A9	Alkalinity, Total (310.1)	12/11/03	Loren Hazelwood	12/11/03	Loren Hazelwood
H3L110180	1		F6F1C1CE	Carbon, Total Organic "TOC" (9060)	12/16/03	Loren Hazelwood	12/16/03	Loren Hazelwood
H3L110180	1		F6F1C1A8	Turbidity (180.1)	12/11/03	Melissa Fuller-Gustavel	12/11/03	Melissa Fuller-Gustavel
H3L110180	1		F6F1C2A8	Turbidity (180.1)	12/16/03	Melissa Fuller-Gustavel	12/16/03	Melissa Fuller-Gustavel
H3L110180	1		F6F1C1CC	Nitrate-Nitrite (353.2, Automated)	12/11/03	Olguita Colon	12/11/03	Olguita Colon
H3L110180	1		F6F1C1CA	Chloride (325.2, Automated)	12/29/03	Rebecca Nolan	12/29/03	Rebecca Nolan
H3L110180	1		F6F1C1CD	Sulfate (Turbidimetric - 375.4)	12/29/03	Rebecca Nolan	12/29/03	Rebecca Nolan
H3L110180	1	S	F6F1C1C9	Nitrate-Nitrite (353.2, Automated)	12/11/03	Olguita Colon	12/11/03	Olguita Colon
H3L110180	1	D	F6F1C1DA	Nitrate-Nitrite (353.2, Automated)	12/11/03	Olguita Colon	12/11/03	Olguita Colon
H3L110180	1	X	F6F1C1DC	Turbidity (180.1)	12/11/03	Melissa Fuller-Gustavel	12/11/03	Melissa Fuller-Gustavel
H3L110180	2		F6F2H1AJ	Solids, Total Suspended "TSS" (160.2)	12/12/03	Deborah Bolgrin	12/15/03	Bruce Woodward
H3L110180	2		F6F2H1CQ	Solids, Filterable "TDS" (160.1)	12/12/03	Deborah Bolgrin	12/15/03	Bruce Woodward
H3L110180	2		F6F2H1AL	Alkalinity, Total (310.1)	12/11/03	Loren Hazelwood	12/11/03	Loren Hazelwood
H3L110180	2		F6F2H1CP	Carbon, Total Organic "TOC" (9060)	12/16/03	Loren Hazelwood	12/16/03	Loren Hazelwood
H3L110180	2		F6F2H1CR	Hardness, Total (130.2, titrimetric)	12/22/03	Loren Hazelwood	12/22/03	Loren Hazelwood
H3L110180	2		F6F2H1AK	Turbidity (180.1)	12/11/03	Melissa Fuller-Gustavel	12/11/03	Melissa Fuller-Gustavel
H3L110180	2		F6F2H2AK	Turbidity (180.1)	12/16/03	Melissa Fuller-Gustavel	12/16/03	Melissa Fuller-Gustavel
H3L110180	2		F6F2H1CM	Nitrate-Nitrite (353.2, Automated)	12/11/03	Olguita Colon	12/11/03	Olguita Colon
H3L110180	2		F6F2H1CL	Chloride (325.2, Automated)	12/29/03	Rebecca Nolan	12/29/03	Rebecca Nolan
H3L110180	2		F6F2H1CN	Sulfate (Turbidimetric - 375.4)	12/29/03	Rebecca Nolan	12/29/03	Rebecca Nolan
H3L110180	2	S	F6F2H1C9	Alkalinity, Total (310.1)	12/11/03	Loren Hazelwood	12/11/03	Loren Hazelwood
H3L110180	2	D	F6F2H1DA	Alkalinity, Total (310.1)	12/11/03	Loren Hazelwood	12/11/03	Loren Hazelwood
H3L110180	2	X	F6F2H1DC	Solids, Total Suspended "TSS" (160.2)	12/12/03	Deborah Bolgrin	12/15/03	Bruce Woodward

STL 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
H3L120208	1		F6JXA1A7	Solids, Total Suspended "TSS" (160.2)	12/15/03	Bruce Woodward	12/15/03	Bruce Woodward
H3L120208	1		F6JXA1A8	Turbidity (180.1)	12/12/03	Melissa Fuller-Gustavel	12/12/03	Bruce Woodward
H3L120208	1		F6JXA1A9	Alkalinity, Total (310.1)	12/12/03	Bruce Woodward	12/12/03	Bruce Woodward
H3L120208	1		F6JXA1CC	Nitrate-Nitrite (353.2, Automated)	12/13/03	Loren Hazelwood	12/13/03	Loren Hazelwood
H3L120208	1		F6JXA1CE	Carbon, Total Organic "TOC" (9060)	12/24/03	Loren Hazelwood	12/24/03	Loren Hazelwood
H3L120208	1		F6JXA1CG	Hardness, Total (130.2, titrimetric)	12/22/03	Loren Hazelwood	12/22/03	Loren Hazelwood
H3L120208	1		F6JXA1CF	Solids, Filterable "TDS" (160.1)	12/16/03	Bruce Woodward	12/17/03	Olguita Colon
H3L120208	1		F6JXA1CA	Chloride (325.2, Automated)	12/29/03	Rebecca Nolan	12/29/03	Rebecca Nolan
H3L120208	1		F6JXA1CD	Sulfate (Turbidimetric - 375.4)	12/29/03	Rebecca Nolan	12/29/03	Rebecca Nolan
H3L120208	1	X	F6JXA1C9	Turbidity (180.1)	12/12/03	Melissa Fuller-Gustavel	12/12/03	Bruce Woodward
H3L120208	2		F6JX21A1	Solids, Total Suspended "TSS" (160.2)	12/15/03	Bruce Woodward	12/15/03	Bruce Woodward
H3L120208	2		F6JX21A4	Turbidity (180.1)	12/12/03	Melissa Fuller-Gustavel	12/12/03	Bruce Woodward
H3L120208	2		F6JX21A7	Alkalinity, Total (310.1)	12/12/03	Bruce Woodward	12/12/03	Bruce Woodward
H3L120208	2		F6JX21FA	Nitrate-Nitrite (353.2, Automated)	12/13/03	Loren Hazelwood	12/13/03	Loren Hazelwood
H3L120208	2		F6JX21FH	Carbon, Total Organic "TOC" (9060)	12/23/03	Loren Hazelwood	12/23/03	Loren Hazelwood
H3L120208	2		F6JX21FP	Hardness, Total (130.2, titrimetric)	12/22/03	Loren Hazelwood	12/22/03	Loren Hazelwood
H3L120208	2		F6JX21FL	Solids, Filterable "TDS" (160.1)	12/16/03	Bruce Woodward	12/17/03	Olguita Colon
H3L120208	2		F6JX21E7	Chloride (325.2, Automated)	12/29/03	Rebecca Nolan	12/29/03	Rebecca Nolan
H3L120208	2		F6JX21FE	Sulfate (Turbidimetric - 375.4)	12/29/03	Rebecca Nolan	12/29/03	Rebecca Nolan
H3L120208	2	S	F6JX21A8	Alkalinity, Total (310.1)	12/12/03	Bruce Woodward	12/12/03	Bruce Woodward
H3L120208	2	S	F6JX21FJ	Carbon, Total Organic "TOC" (9060)	12/23/03	Loren Hazelwood	12/23/03	Loren Hazelwood
H3L120208	2	S	F6JX21FQ	Hardness, Total (130.2, titrimetric)	12/22/03	Loren Hazelwood	12/22/03	Loren Hazelwood
H3L120208	2	S	F6JX21E8	Chloride (325.2, Automated)	12/29/03	Rebecca Nolan	12/29/03	Rebecca Nolan
H3L120208	2	S	F6JX21FF	Sulfate (Turbidimetric - 375.4)	12/29/03	Rebecca Nolan	12/29/03	Rebecca Nolan
H3L120208	2	D	F6JX21A9	Alkalinity, Total (310.1)	12/12/03	Bruce Woodward	12/12/03	Bruce Woodward
H3L120208	2	D	F6JX21FK	Carbon, Total Organic "TOC" (9060)	12/23/03	Loren Hazelwood	12/23/03	Loren Hazelwood
H3L120208	2	D	F6JX21FR	Hardness, Total (130.2, titrimetric)	12/22/03	Loren Hazelwood	12/22/03	Loren Hazelwood

STL 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
H3L120208	2	D	F6JX21E9	Chloride (325.2, Automated)	12/29/03	Rebecca Nolan	12/29/03	Rebecca Nolan
H3L120208	2	D	F6JX21FG	Sulfate (Turbidimetric - 375.4)	12/29/03	Rebecca Nolan	12/29/03	Rebecca Nolan
H3L120208	2	X	F6JX21G8	Solids, Filterable "TDS" (160.1)	12/16/03	Bruce Woodward	12/17/03	Olguita Colon
H3L120208	2	X	F6JX21G9	Solids, Total Suspended "TSS" (160.2)	12/15/03	Bruce Woodward	12/15/03	Bruce Woodward

Sample Receipt Documentation

STL-KNOXVILLE

Sample Delivery Group Assignment Form

SHAW E
PBOW

SDG# PB045

*	DATE REC'D	LOT#	CLIENT ID	VOA	BNA	TOC	ALK	TAL	EXP	DISS	CN	CHL	NIT	SUL	TDS	TSS	TURB	HARD
				8260B	8270C	9060	310.1	6010B	8330	6010B	9012	325.2	353.2	375.4	160.1	160.2	180.1	130.2
1,	12/10/2003	H3L100268	DD3007	X	X	NC	NC	X	X	X	X	NC	NC	NC	NC	NC	NC	NC
2			DD3008	X	X	NC	NC	X	X	X	X	NC	NC	NC	NC	NC	NC	NC
3			DD5001	X														
4	12/11/2003	H3L110180	DD3002	X	X	NC	NC	X	X	X	X	NC	NC	NC	NC	NC	NC	NC
5			DD3001	X	X	NC	NC	X	X	X	X	NC	NC	NC	NC	NC	NC	NC
6			DD5002	X														
7	12/12/2003	H3L120208	DD3003	X	X	NC	NC	X	X	X	X	NC	NC	NC	NC	NC	NC	NC
8			DD3004	QC	QC	QC/NC	QC/NC	QC	QC	QC	QC	QC/NC	QC/NC	QC/NC	QC/NC	QC/NC	QC/NC	QC/NC
9			DD3005	X	X			X	X	X								
10			DD5003	X														
11																		
12																		
13																		
14																		
15																		
16																		
17																		
18																		
19																		
20																		
21																		
22																		
23																		
24																		

NC = NORTH CANTON
A = STL AUSTIN
D= STL DENVER
WS = STL WEST SACRAMENTO
P = PITTSBURGH
IT = IT CORP KNOX
T = TALLAHASSEE

MATRIX: WATER
ANALYTICAL DUE: 12-31-03
REPORT DUE: 1-5-04
CLOSED? YES

1/12/20043:15 PM

H3L100268

Shaw™
Shaw E & I, Inc.

ANALYSIS REQUEST AND CHAIN-OF-CUSTODY RECORD

REFERENCE COC NO.: PB12 09 03STL-K

PAGE 1 OF 1

Project Name/No: PBOW
Sample Team Member: David Kessler
Profit Center: Knoxville
Project Manager: Steve Downey
Project No.: 843656
Required Report Date: 21 DAYS

Sample Shipment Date: 12/9/03
Laboratory Destination: STL- Knoxville
Laboratory Contact: Jamie McKinney
Project Contact/Phone: Maureen McMyler/865-690-3211
Carrier Waybill No.: 836531447439

Bill To: Accounting
Shaw E & I
312 Directors Drive
Knoxville, TN 37923

Report To: Maureen McMyler
Shaw E & I
312 Directors Drive
Knoxville, TN 37923

Sample Number	Sample Type/ Description	Date/Time Collected	Container Type	Sample Volume	Pre-servative	Requested Testing Program	Condition on Receipt	Disposal Record
DD3007	WATER	12/9/03 1320	2 - Amber	1 L	Cool	Explosives by 8830	Custody Seals Intact	
			1 - HDPE	250 mL	HNO3	Total TAL Metals by 6010B/7470A ph<2	Received Temp. 2°C	
			1 - HDPE	250 mL	HNO3	Dissolved TAL Metals by 6010B/7470A ph<2	1 COOLER / FEDEX	
			2 - Amber	1 L	Cool	TCL SVOCs by 8270C	T# 836531447439	
			3 - Glass	40 mL	HCL	TCL VOCs by 8260B	ADF 12-10-03	
			1 - HDPE	1 L	NaOH	Cyanide by 9010/9012 ph>12		
DD3008	WATER	12/9/03 1535	2 - Amber	1 L	Cool	Explosives by 8830		
			1 - HDPE	250 mL	HNO3	Total TAL Metals by 6010B/7470A ph<2		
			1 - HDPE	250 mL	HNO3	Dissolved TAL Metals by 6010B/7470A ph<2		
			2 - Amber	1 L	Cool	TCL SVOCs by 8270C		
			3 - Glass	40 mL	HCL	TCL VOCs by 8260B		
			1 - HDPE	1 L	NaOH	Cyanide by 9010/9012 ph>12		
	WATER		2 - Amber	1 L	Cool	Explosives by 8830		
			1 - HDPE	250 mL	HNO3	Total TAL Metals by 6010B/7470A		
			1 - HDPE	250 mL	HNO3	Dissolved TAL Metals by 6010B/7470A		
			2 - Amber	1 L	Cool	TCL SVOCs by 8270C		
			3 - Glass	40 mL	HCL	TCL VOCs by 8260B		
			1 - HDPE	1 L	NaOH	Cyanide by 9010/9012		
DD5001	TRIP BLANK		2-Glass	40 ml	HCL	TRIP Blank		

Special Instructions:

Possible Hazard Identification:
Non-haz: X Flammable: ____ Poison B: ____ Unknown: ____

Sample Disposal:
Return to Client: ____ Disposal by Lab: X Archive: ____

Turnaround Time:
Normal: X Rush: ____

Level of QC Required:
Definitive: X Project Specific: ____

1. Relinquished by: David Kessler 12 Date: 12/9/03 Time: 1800
2. Relinquished by: Date: Time:
3. Relinquished by: Date: Time:

1. Received by: Andrew D. Flores STL Date: 12-10-03 Time: 09:00
2. Received by: Date: Time:
2. Received by: Date: Time:

Comments:

1667

STL KNOXVILLE
SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST

CLIENT: Shaw E&I PROJECT: PBOW Lot No.: H3L100268

TO BE COMPLETED BY SAMPLE RECEIPT ASSOCIATE:

		YES	NO	NA
1.	Sample Receipt:			
a.	Do sample container labels match COC? (IDs, Dates, Times)	✓		
b.	Is the cooler temperature within acceptance limits? (NOTE: North Carolina, 1668, 1613B: 0-4°C; VOST: 10°C)	✓		
c.	Were samples received with correct chemical preservative (excluding Encore)?	✓		
d.	Were custody seals present/intact on cooler and/or containers?	✓		
e.	Were all of the samples listed on the COC received?	✓		
f.	Were all of the sample containers received intact?	✓		
g.	Were containers received for VOAs received without headspace?	✓		
h.	Were samples received in the appropriate containers?	✓		
i.	Did you check for residual chlorine, if necessary?			✓
j.	Were samples received within 1/2 of the holding time?	✓		
k.	Were samples screened for radioactivity?			✓
l.	For aqueous samples for SOG tests (i.e., 1613B, 1668A, 8290, LR PAHs), does the sample(s) have visible solids present?			✓
	If yes, was SOG staff notified?			✓
m.	Were client's sample documents (RFA/COC) received?	✓		
n.	Has the RFA/COC been relinquished? (Signed, Dated, Timed)	✓		
o.	Are test/parameters listed for each sample?	✓		
p.	Is the matrix of the samples noted?	✓		
q.	Is the date/time of sample collection noted? AXD 12-10-03	✗	✓	
r.	Is the client and project name/No. identified?	✓		
s.	Was the sampler identified on the RFA/COC?	✓		

SAMPLE RECEIVING ASSOCIATE: Andrew D. Flores DATE: 12-10-03

TO BE COMPLETED BY PROJECT MANAGER :

		YES	NO	NA
1.	Project manager "Sample Greet":			
a.	Quote number to be logged-in under 48620			
b.	Informed Login associates of special instructions ?			X

PROJECT MANAGER : pm DATE: 12/16/03

Client Sample ID	Analysis Requested	Condition (see legend)	Comments/Action
DDS001	8260B	6B	NO COLLECTION DATE ON COC

☒ Client informed on 12/16/03 by Conference. Person contacted: M McMyer.
☐ Noted actions in comments section above.
☒ No action necessary; process as is.

Project Manager: pm Date: 12/16/03

STL KNOXVILLE
SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST
LEGEND

Lot No.: 1431L100268

Item	Condition
Cooler:	1a Not received, COC available
	1b Leaking
	1c Other:_____
Temperature:	2a Temp Blank = _____
	2b Cooler Temp = _____
	(cooler temp should be used only if there is no temp blank)
Container:	3a Leaking
	3b Broken
	3c Extra
	3d No labels
	3e Headspace (VOA only)
	3f Other: _____
Samples:	4a Samples received but not on COC
	4b Samples not received but on COC
	4c Holding time expired
	4d Sample received with < ½ holding time remaining
	4e Sample preservative: _____
	4f Other: _____
Custody Seals:	5a None
	5b Not intact
	5c Other:_____
Chain of Custody (COC):	6a Not relinquished by client
	6b Incomplete information
	6c Other:_____
Container Labels:	7a Doesn't match COC
	7b Incomplete information
	7c Marking smeared
	7d Label torn
	7e Other:_____

Other (8): _____

STL KNOXVILLE

SAMPLE LOG-IN (LOT SUMMARY) REVIEW CHECKLIST

CLIENT: Shaw PROJECT: PBOW Lot No.: H3L100268

TO BE COMPLETED BY PROJECT MANAGER:

1. Client Documents (Request for Analysis/Chain of Custody):	YES	NO	NA	
a. Was QuanTIMS lot number documented on all paperwork?	X			
b. Was RFA/COC signed upon receipt, including date/time?		X		STL NC
c. Is preservative check (pH) noted on RFA/COC?		X		
d. Is cooler temperature & custody seal condition noted on COC?		X		

2. Log-in (Lot Folder) Review:	YES	NO	NA
a. Do client IDs on Client Summaries match RFA/COC?	X		
b. Were tests/parameters assigned correctly?	X		
c. Were correct analytical and report due dates assigned?	X		
d. Has the correct fax due date been assigned to the lot?			X
e. Is the correct report format noted in the lot summary?	X		
f. Is percent moisture logged for samples requiring this analysis?			X
g. Are client assigned QC samples properly defined?			X
h. Has a QAS been created for this lot?			X

3. Contract/Subcontract Review:	YES	NO	NA
a. Is there a contract number or PO for this work?	X		
b If the purchase order number is given, is it noted in Lot header?	X		
c. If samples were subcontracted, was copy of COC and associated sample receipt documentation in the folder?		X	

4. SDG Review:	YES	NO	NA
a. If SDG is required, is SDG form in Lot folder?	X		
b Is SDG number noted in Lot header & sample comments?	X		
c. If SDG is complete, has the due date been revised & marked closed?			X

5. Checklist Review:	YES	NO	NA
a. Has Sample Receipt Checklist been filled-out?	X		
b. Was there a CUR?	X		X
c. Were all issues resolved?			X

gm 12/18/03

LOT FOLDER REVIEWED BY: gm DATE: 12/16/03

Severn Trent Laboratories, Inc
SAMPLE ANALYSIS REQUISITION

LABORATORY: STL N Canton
4101 Shuffel Drive NW
North Canton OH 44720,

NEED ANALYTICAL REPORT BY
12/30/03

ATTN:

LAB PURCHASE ORDER: SR055098

CLIENT CODE: 506155 PROJECT MANAGER: Jamie A. McKinney

NUMBER OF SAMPLES IN LOT: 0003

SAMPLE I.D.	SAMPLING DATE	ANALYSIS REQUIRED
H3L100268-001 F6DQ4-1-A7	12/09/03	Solids, Total Suspended "TSS" (160.2) (TSS) METHOD: 160.2
H3L100268-001 F6DQ4-1-A8	12/09/03	Turbidity (180.1) (TURBID) METHOD: 180.1
H3L100268-001 F6DQ4-1-A9	12/09/03	Alkalinity, Total (310.1) (ALK-T) METHOD: 310.1
H3L100268-001 F6DQ4-1-CA	12/09/03	Chloride (325.2, Automated) (CL) METHOD: 325.2
H3L100268-001 F6DQ4-1-CC	12/09/03	Nitrate-Nitrite (353.2, Automated) (NO3) METHOD: 353.2
H3L100268-001 F6DQ4-1-CD	12/09/03	Sulfate (Turbidimetric - 375.4) (SO4-TURB) METHOD: 375.4
H3L100268-001 F6DQ4-1-CE	12/09/03	Carbon, Total Organic "TOC" (9060) (TOC) METHOD: 9060
H3L100268-001 F6DQ4-1-CF	12/09/03	Solids, Filterable "TDS" (160.1) (TDS) METHOD: 160.1
H3L100268-001 F6DQ4-1-CG	12/09/03	Hardness, Total (130.2, titrimetric) (HARDNESS) METHOD: 130.2
H3L100268-002 F6DRG-1-AJ	12/09/03	Solids, Total Suspended "TSS" (160.2) (TSS) METHOD: 160.2

****
* CONTINUED *
****

Severn Trent Laboratories, Inc
SAMPLE ANALYSIS REQUISITION

LABORATORY: STL N Canton
4101 Shuffel Drive NW
North Canton OH 44720,

NEED ANALYTICAL REPORT BY
12/30/03
ROUTINE

ATTN:

LAB PURCHASE ORDER: SR055098

CLIENT CODE: 506155 PROJECT MANAGER: Jamie A. McKinney

NUMBER OF SAMPLES IN LOT: 0003

SAMPLE I.D.	SAMPLING DATE	ANALYSIS REQUIRED
H3L100268-002 F6DRG-1-AK	12/09/03	Turbidity (180.1) (TURBID) METHOD: 180.1
H3L100268-002 F6DRG-1-AL	12/09/03	Alkalinity, Total (310.1) (ALK-T) METHOD: 310.1
H3L100268-002 F6DRG-1-CL	12/09/03	Chloride (325.2, Automated) (CL) METHOD: 325.2
H3L100268-002 F6DRG-1-CM	12/09/03	Nitrate-Nitrite (353.2, Automated) (NO3) METHOD: 353.2
H3L100268-002 F6DRG-1-CN	12/09/03	Sulfate (Turbidimetric - 375.4) (SO4-TURB) METHOD: 375.4
H3L100268-002 F6DRG-1-CP	12/09/03	Carbon, Total Organic "TOC" (9060) (TOC) METHOD: 9060
H3L100268-002 F6DRG-1-CQ	12/09/03	Solids, Filterable "TDS" (160.1) (TDS) METHOD: 160.1
H3L100268-002 F6DRG-1-CR	12/09/03	Hardness, Total (130.2, titrimetric) (HARDNESS) METHOD: 130.2

NEED DETECTION LIMIT AND ANALYSIS DATE INCLUDED IN REPORT.

SHIPPING METHOD: FEDEX DATE: 12/10/03

SEND REPORT TO:

SAMPLE RECEIVED BY: _____ DATE: _____

PLEASE SEND A SIGNED COPY OF THIS FORM WITH REPORT AT COMPLETION OF ANALYSIS.

THANK YOU.

STL Knoxville

INT: _____ 12/10/03 13:26:39

STL N Canton
4101 Shuffel Drive NW
North Canton OH 44720,

RELINQUISHED BY: [illegible] DATE/TIME: 12/10/03

RELINQUISHED BY: _____ DATE/TIME: _____

RECEIVED FOR LAB BY: See attached DATE/TIME: 12-11-03

PLEASE RETURN ORIGINAL SAMPLE ANALYSIS REQUISITION

Shaw™
Shaw E & I, Inc.

ANALYSIS REQUEST AND CHAIN-OF-CUSTODY RECORD

REFERENCE COC NO.: PB12 09 03STL

PAGE 1 OF 1

Project Name/No: PBOW/843656
Sample Team Member: David Kessler
Profit Center: Knoxville
Project Manager: Steve Downey
Project No.: 843656
Required Report Date: 21 days

Sample Shipment Date: 12/09/03
Laboratory Destination: STL-North Canton
Laboratory Contact: Ken Kuzior
Project Contact/Phone: Maureen McMyler/865-690-3211
Carrier Waybill No.: 836531447494

Bill To: Accounting
Shaw E & I
312 Directors Drive
Knoxville, TN 37923

Report To: Maureen McMyler
Shaw E & I
312 Directors Drive
Knoxville, TN 37923

Sample Number	Sample Type/ Description	Date/Time Collected	Container Type	Sample Volume	Pre-servative	Requested Testing Program	Condition on Receipt	Disposal Record
DD3007	WATER	12/9/03 1320	2 - Glass	40 mL	H2SO4	TOC by 9060		
			1 - HDPE	1000 mL	Cool	Alkalinity by 310.1; Chloride by 325.2		
						Nitrate by 353.2; Sulfate by 375.4		
						TDS by 160.1; TSS by 160.2		
						Turbidity by 180.1		
			1 - HDPE	250 mL	HNO3	Hardness by 130.2		
DD3008	WATER	12/9/03 1535	2 - Glass	40 mL	H2SO4	TOC by 9060		
			1 - HDPE	1000 mL	Cool	Alkalinity by 310.1; Chloride by 325.2		
						Nitrate by 353.2; Sulfate by 375.4		
						TDS by 160.1; TSS by 160.2		
						Turbidity by 180.1		
			1 - HDPE	250 mL	HNO3	Hardness by 130.2		
	WATER		2 - Glass	40 mL	H2SO4	TOC by 9060		
			1 - HDPE	1000 mL	Cool	Alkalinity by 310.1; Chloride by 325.2		
						Nitrate by 353.2; Sulfate by 375.4		
						TDS by 160.1; TSS by 160.2		
						Turbidity by 180.1		
			1 - HDPE	250 mL	HNO3	Hardness by 130.2		

Special Instructions:

Possible Hazard Identification:
Non-haz: X Flammable: ____ Poison B: ____ Unknown: ____

Sample Disposal:
Return to Client: ____ Disposal by Lab: X Archive: ____

Turnaround Time:
Normal: X Rush: ____

Level of QC Required:
Definitive: X Project Specific: ____

1. Relinquished by: David Kessler	Date: 12/9/03 Time: 1800	1. Received by: John Dorsett	Date: 12-10-03 Time: 9:40
2. Relinquished by:	Date: Time:	2. Received by:	Date: Time:
3. Relinquished by:	Date: Time:	2. Received by:	Date: Time:

Comments:

1674

STL Cooler Receipt Form/Narrative
North Canton Facility

Lot Number: H3L100268

Client: Shaw Project: ____ Quote#: ____
Cooler Received on: 12-10-03 Opened on: 12-10-03 by: John Doust (Signature)

Fedx ☑ Client Drop Off ☐ UPS ☐ Airborne ☐ FAS ☐ Other: ____
Cooler ☐ Safe ☐ Foam Box ☐ Client Cooler ☑ Other: ____
STL Cooler No#: ____

1. Were custody seals on the outside of the cooler? Yes ☑ No ☐ Intact? Yes ☑ No ☐ NA ☐
   If YES, Quantity ✓
   Were the custody seals signed and dated? Yes ☑ No ☐ NA ☐
2. Shipper's packing slip attached to this form? Yes ☑ No ☐ NA ☐
3. Were custody papers included inside the cooler and relinquished? Yes ☑ No ☐
4. Did you sign the custody papers in the appropriate place? Yes ☑ No ☐
5. Packing material used:
   Peanuts ☐ Bubble Wrap ☑ Vermiculite ☐ Foam ☐ None ☐ Other: ____
6. Cooler temperature upon receipt 0.9 °C (see back of form for multiple coolers/temp)
   METHOD: Temp Vial ☐ Coolant & Sample ☐ Against Bottles ☐ IR ☑ ICE/H_2O Slurry ☐
   COOLANT: Wet Ice ☑ Blue Ice ☐ Dry Ice ☐ Water ☐ None ☐
7. Did all bottles arrive in good condition (Unbroken)? Yes ☑ No ☐
8. Did all bottle labels and tags agree with the custody papers? Yes ☑ No ☐
9. Were samples at the correct pH? (record on back) Yes ☐ No ☐ NA ☑
10. Were correct bottles used for the tests indicated? Yes ☑ No ☐
11. Were air bubbles >6 mm in any VOA vials? Yes ☐ No ☑ NA ☐
12. Was a sufficient amount of sample sent in each bottle? Yes ☑ No ☐

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

√	MACRO	MACRO
1. CHAIN OF CUSTODY		
	SR1A	The chain of custody and sample bottles did not agree. The following discrepancies occurred ____
2. SAMPLE CONDITION		
	SR2A	Sample(s) ____ were received or requested after the recommended holding time had expired.
	SR2B	Sample(s) were received with insufficient volume.
	SR2C	Sample(s) were received in a broken container.
3. SAMPLE PRESERVATION		
	SR3A	Sample(s) ____ were further preserved in sample receiving to meet recommended pH level(s). *Nitric Acid Lot #101503-HNO3; Sulfuric Acid Lot # 112801-H2SO4; Sodium Hydroxide Lot # 101503-NaOH; Hydrochloric Acid Lot # 100902-HCl; Sodium Hydroxide and Zinc Acetate Lot # 112801-CH3COO2ZN/NaOH*
	SR3B	Sample(s) ____ were received with bubble > 6 mm in diameter (cc: PM)
4. Other (see below or back)		

H3L110180

Shaw
Shaw E & I, Inc.

ANALYSIS REQUEST AND CHAIN-OF-CUSTODY RECORD

REFERENCE COC NO.: PB12 10 03STL-K

PAGE 1 OF 1

Bill To: Accounting
Shaw E & I
312 Directors Drive
Knoxville, TN 37923

Report To: Maureen McMyler
Shaw E & I
312 Directors Drive
Knoxville, TN 37923

Project Name/No: PBOW
Sample Team Member: David Kessler
Profit Center: Knoxville
Project Manager: Steve Downey
Project No.: 843656
Required Report Date: 21 DAYS

Sample Shipment Date: 12/10/03
Laboratory Destination: STL- Knoxville
Laboratory Contact: Jamie McKinney
Project Contact/Phone: Maureen McMyler/865-690-3211
Carrier Waybill No.: 839702140125

Sample Number	Sample Type/ Description	Date/Time Collected	Container Type	Sample Volume	Pre-servative	Requested Testing Program	Condition on Receipt	Disposal Record
DD3002	WATER	12/10/03 1200	2 - Amber	1 L	Cool	Explosives by 8830		
			1 - HDPE	250 mL	HNO3	Total TAL Metals by 6010B/7470A ph2		
			1 - HDPE	250 mL	HNO3	Dissolved TAL Metals by 6010B/7470A ↓		
			~~2 - Amber~~ DKK	1 L	Cool	TCL SVOCs by 8270C	Rec'd temp 2°C	
			3 - Glass	40 mL	HCL	TCL VOCs by 8260B	Custody Seals intact	
			1 - HDPE	1 L	NaOH	Cyanide by 9010/9012 ph12	1 Cooler Fedex #	
DD3001	WATER	12/10/03 1620	2 - Amber	1 L	Cool	Explosives by 8830	839702140125	
			1 - HDPE	250 mL	HNO3	Total TAL Metals by 6010B/7470A ph2	MPH 12 11-03	
			1 - HDPE	250 mL	HNO3	Dissolved TAL Metals by 6010B/7470A ph2		
			2 - Amber	1 L	Cool	TCL SVOCs by 8270C		
			3 - Glass	40 mL	HCL	TCL VOCs by 8260B		
			1 - HDPE	1 L	NaOH	Cyanide by 9010/9012	ph12	
	DKK WATER	12/10/03	~~2 - Amber~~	~~1 L~~	Cool	Explosives by 8830		
			~~1 - HDPE~~	~~250 mL~~	HNO3	Total TAL Metals by 6010B/7470A		
			~~1 - HDPE~~	~~250 mL~~	HNO3	Dissolved TAL Metals by 6010B/7470A		
			~~2 - Amber~~	~~1 L~~	Cool	TCL SVOCs by 8270C		
			~~3 - Glass~~	~~40 mL~~	HCL	TCL VOCs by 8260B		
			~~1 - HDPE~~	~~1 L~~	NaOH	Cyanide by 9010/9012		
DD5002	water	12/10/03	2 - Glass	40ml	HCL	TRIP Blank		

Special Instructions:

Possible Hazard Identification:
Non-haz: X Flammable: ___ Poison B: ___ Unknown: ___

Sample Disposal:
Return to Client: ___ Disposal by Lab: X Archive: ___

Turnaround Time:
Normal: X Rush: ___

Level of QC Required:
Definitive: X Project Specific: ___

1. Relinquished by: David Kessler	Date: 12/10/03 Time: 1800	1. Received by: Matthew T. Hanna	Date: 12-11-03 Time: 09:15
2. Relinquished by:	Date: Time:	2. Received by:	Date: Time:
3. Relinquished by:	Date: Time:	2. Received by:	Date: Time:

Comments:

1676

STL KNOXVILLE
SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST

CLIENT: Shaw E+I PROJECT: PBOW Lot No.: H3L110180

TO BE COMPLETED BY SAMPLE RECEIPT ASSOCIATE:

	YES	NO	NA
1. Sample Receipt:			
a. Do sample container labels match COC? (IDs, Dates, Times)	✓		
b. Is the cooler temperature within acceptance limits? (NOTE: North Carolina, 1668, 1613B: 0-4°C; VOST: 10°C)	✓		
c. Were samples received with correct chemical preservative (excluding Encore)?	✓		
d. Were custody seals present/intact on cooler and/or containers?	✓		
e. Were all of the samples listed on the COC received?	✓		
f. Were all of the sample containers received intact?	✓	✓ MFH 12-11-03	
g. Were containers received for VOAs received without headspace?	✓		
h. Were samples received in the appropriate containers?	✓		
i. Did you check for residual chlorine, if necessary?			✓
j. Were samples received within 1/2 of the holding time?	✓		
k. Were samples screened for radioactivity?			✓
l. For aqueous samples for SOG tests (i.e., 1613B, 1668A, 8290, LR PAHs), does the sample(s) have visible solids present?			✓
If yes, was SOG staff notified?			✓
m. Were client's sample documents (RFA/COC) received?	✓		
n. Has the RFA/COC been relinquished? (Signed, Dated, Timed)	✓		
o. Are test/parameters listed for each sample?	✓		
p. Is the matrix of the samples noted?	✓		
q. Is the date/time of sample collection noted?	✓		
r. Is the client and project name/No. identified?	✓		
s. Was the sampler identified on the RFA/COC?		✓	

SAMPLE RECEIVING ASSOCIATE: Matthew F. Hornick DATE: 12-11-03

TO BE COMPLETED BY PROJECT MANAGER :

	YES	NO	NA
1. Project manager "Sample Greet":			
a. Quote number to be logged-in under 48670			
b. Informed Login associates of special instructions ?			X

PROJECT MANAGER : JM DATE: 12/16/03

Client Sample ID	Analysis Requested	Condition (see legend)	Comments/Action
DD3002	8330	3F	Rec'd 1 of 2 containers
DD3001	+	+	+

☒ Client informed on 12/16/03 by Confirmt. Person contacted: M McMyle.
☐ Noted actions in comments section above.
☒ No action necessary; process as is.
Project Manager: JM Date: 12/16/03

STL KNOXVILLE
SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST
LEGEND

Lot No.: H3L110180

Item	Condition
Cooler:	1a Not received, COC available
	1b Leaking
	1c Other:_____
Temperature:	2a Temp Blank = _____
	2b Cooler Temp = _____
	(cooler temp should be used only if there is no temp blank)
Container:	3a Leaking
	3b Broken
	3c Extra
	3d No labels
	3e Headspace (VOA only)
	3f Other: Rec'd 1 of 2 containers
Samples:	4a Samples received but not on COC
	4b Samples not received but on COC
	4c Holding time expired
	4d Sample received with < ½ holding time remaining
	4e Sample preservative: _____
	4f Other: _____
Custody Seals:	5a None
	5b Not intact
	5c Other:_____
Chain of Custody (COC):	6a Not relinquished by client
	6b Incomplete information
	6c Other:_____
Container Labels:	7a Doesn't match COC
	7b Incomplete information
	7c Marking smeared
	7d Label torn
	7e Other:_____

Other (8): _____

STL KNOXVILLE

SAMPLE LOG-IN (LOT SUMMARY) REVIEW CHECKLIST

CLIENT: Shaw PROJECT: PBOW Lot No.: H3L110180

TO BE COMPLETED BY PROJECT MANAGER:

	YES	NO	NA	
1. Client Documents (Request for Analysis/Chain of Custody):				
a. Was QuanTIMS lot number documented on all paperwork?	X			
b. Was RFA/COC signed upon receipt, including date/time?		X		STLNC
c. Is preservative check (pH) noted on RFA/COC?		X		
d. Is cooler temperature & custody seal condition noted on COC?		X		↓
2. Log-in (Lot Folder) Review:	YES	NO	NA	
a. Do client IDs on Client Summaries match RFA/COC?	X			
b. Were tests/parameters assigned correctly?	X			
c. Were correct analytical and report due dates assigned?	X			
d. Has the correct fax due date been assigned to the lot?			X	
e. Is the correct report format noted in the lot summary?	X			
f. Is percent moisture logged for samples requiring this analysis?			X	
g. Are client assigned QC samples properly defined?			X	
h. Has a QAS been created for this lot?			X	
3. Contract/Subcontract Review:	YES	NO	NA	
a. Is there a contract number or PO for this work?	X			
b If the purchase order number is given, is it noted in Lot header?	X			
c. If samples were subcontracted, was copy of COC and associated sample receipt documentation in the folder?		X		
4. SDG Review:	YES	NO	NA	
a. If SDG is required, is SDG form in Lot folder?	X			
b Is SDG number noted in Lot header & sample comments?	X			
c. If SDG is complete, has the due date been revised & marked closed?			X	
5. Checklist Review:	YES	NO	NA	
a. Has Sample Receipt Checklist been filled-out?	X			
b. Was there a CUR?	X			
c. Were all issues resolved?			X	

LOT FOLDER REVIEWED BY: PM DATE: 12/16/03

Severn Trent Laboratories, Inc
SAMPLE ANALYSIS REQUISITION

LABORATORY: STL N Canton
4101 Shuffel Drive NW
North Canton OH 44720,

NEED ANALYTICAL REPORT BY
12/30/03

ok180
12-12-03

ATTN:

LAB PURCHASE ORDER: SR055167

CLIENT CODE: 506155 PROJECT MANAGER: Jamie A. McKinney

C119
12-11-03
AMS

NUMBER OF SAMPLES IN LOT: 0003

SAMPLE I.D.	SAMPLING DATE	ANALYSIS REQUIRED
H3L110180-001 F6F1C-1-A7	12/10/03	Solids, Total Suspended "TSS" (160.2) (TSS) METHOD: 160.2
H3L110180-001 F6F1C-1-A8	12/10/03	Turbidity (180.1) (TURBID) METHOD: 180.1
H3L110180-001 F6F1C-1-A9	12/10/03	Alkalinity, Total (310.1) (ALK-T) METHOD: 310.1
H3L110180-001 F6F1C-1-CA	12/10/03	Chloride (325.2, Automated) (CL) METHOD: 325.2
H3L110180-001 F6F1C-1-CC	12/10/03	Nitrate-Nitrite (353.2, Automated) (NO3) METHOD: 353.2
H3L110180-001 F6F1C-1-CD	12/10/03	Sulfate (Turbidimetric - 375.4) (SO4-TURB) METHOD: 375.4
H3L110180-001 F6F1C-1-CE	12/10/03	Carbon, Total Organic "TOC" (9060) (TOC) METHOD: 9060
H3L110180-001 F6F1C-1-CF	12/10/03	Solids, Filterable "TDS" (160.1) (TDS) METHOD: 160.1
H3L110180-001 F6F1C-1-CG	12/10/03	Hardness, Total (130.2, titrimetric) (HARDNESS) METHOD: 130.2
H3L110180-002 F6F2H-1-AJ	12/10/03	Solids, Total Suspended "TSS" (160.2) (TSS) METHOD: 160.2

XL
1X250
2X40

****
* CONTINUED *
****

Severn Trent Laboratories, Inc
SAMPLE ANALYSIS REQUISITION

LABORATORY: STL N Canton
4101 Shuffel Drive NW
North Canton OH 44720,

NEED ANALYTICAL REPORT BY
12/30/03
ROUTINE

ATTN:

LAB PURCHASE ORDER: SR055167

CLIENT CODE: 506155 PROJECT MANAGER: Jamie A. McKinney

NUMBER OF SAMPLES IN LOT: 0003

SAMPLE I.D.	SAMPLING DATE	ANALYSIS REQUIRED
H3L110180-002 F6F2H-1-AK	12/10/03	Turbidity (180.1) (TURBID) METHOD: 180.1
H3L110180-002 F6F2H-1-AL	12/10/03	Alkalinity, Total (310.1) (ALK-T) METHOD: 310.1
H3L110180-002 F6F2H-1-CL	12/10/03	Chloride (325.2, Automated) (CL) METHOD: 325.2
H3L110180-002 F6F2H-1-CM	12/10/03	Nitrate-Nitrite (353.2, Automated) (NO3) METHOD: 353.2
H3L110180-002 F6F2H-1-CN	12/10/03	Sulfate (Turbidimetric - 375.4) (SO4-TURB) METHOD: 375.4
H3L110180-002 F6F2H-1-CP	12/10/03	Carbon, Total Organic "TOC" (9060) (TOC) METHOD: 9060
H3L110180-002 F6F2H-1-CQ	12/10/03	Solids, Filterable "TDS" (160.1) (TDS) METHOD: 160.1
H3L110180-002 F6F2H-1-CR	12/10/03	Hardness, Total (130.2, titrimetric) (HARDNESS) METHOD: 130.2

NEED DETECTION LIMIT AND ANALYSIS DATE INCLUDED IN REPORT.

SHIPPING METHOD: FEDEX DATE: 12/11/03

SEND REPORT TO: JAMIE MCKINNEY

SAMPLE RECEIVED BY: _____ DATE: _____

PLEASE SEND A SIGNED COPY OF THIS FORM WITH REPORT AT COMPLETION OF ANALYSIS.

THANK YOU.

STL Knoxville

INT: _____ 12/11/03 11:40:47

STL N Canton
4101 Shuffel Drive NW
North Canton OH 44720,

RELINQUISHED BY: [illegible] DATE/TIME: 12/11/03 1:50PM

RELINQUISHED BY: _____ DATE/TIME: _____

RECEIVED FOR LAB BY: _____ DATE/TIME: _____

PLEASE RETURN ORIGINAL SAMPLE ANALYSIS REQUISITION

Shaw™
Shaw E & I, Inc.

ANALYSIS REQUEST AND CHAIN-OF-CUSTODY RECORD

REFERENCE COC NO.: PB12 10 03STL

PAGE 1 OF 1

Project Name/No: PBOW/843656
Sample Team Member: David Kessler
Profit Center: Knoxville
Project Manager: Steve Downey
Project No.: 843656
Required Report Date: 21 days

Sample Shipment Date: 12/10/03
Laboratory Destination: STL-North Canton
Laboratory Contact: Ken Kuzior
Project Contact/Phone: Maureen McMyler/865-690-3211
Carrier Waybill No.: 839702140158

Bill To: Accounting
Shaw E & I
312 Directors Drive
Knoxville, TN 37923

Report To: Maureen McMyler
Shaw E & I
312 Directors Drive
Knoxville, TN 37923

Sample Number	Sample Type/ Description	Date/Time Collected	Container Type	Sample Volume	Pre-servative	Requested Testing Program	Condition on Receipt	Disposal Record
DP3002	WATER	12/10/03 1200	2 - Glass	40 mL	H2SO4	TOC by 9060		
			1 - HDPE	1000 mL	Cool	Alkalinity by 310.1; Chloride by 325.2		
						Nitrate by 353.2; Sulfate by 375.4		
						TDS by 160.1; TSS by 160.2		
						Turbidity by 180.1		
			1 - HDPE	250 mL	HNO3	Hardness by 130.2		
DD3001	WATER	12/10/03 1620	2 - Glass	40 mL	H2SO4	TOC by 9060		
			1 - HDPE	1000 mL	Cool	Alkalinity by 310.1; Chloride by 325.2		
						Nitrate by 353.2; Sulfate by 375.4		
						TDS by 160.1; TSS by 160.2		
						Turbidity by 180.1		
			1 - HDPE	250 mL	HNO3	Hardness by 130.2		
	DKR	12/10/03						

Special Instructions:

Possible Hazard Identification:
Non-haz: X Flammable: ___ Poison B: ___ Unknown: ___

Sample Disposal:
Return to Client: ___ Disposal by Lab: X Archive: ___

Turnaround Time:
Normal: X Rush: ___

Level of QC Required:
Definitive: X Project Specific: ___

1. Relinquished by: David Kessler Date: 12/10/03 Time: 1800
2. Relinquished by: Date: Time:
3. Relinquished by: Date: Time:

1. Received by: David R. Benson Date: 12-11-03 Time: 10:10
2. Received by: Date: Time:
2. Received by: Date: Time:

Comments:

1683

STL Cooler Receipt Form/Narrative **Lot Number:** H3L110180
North Canton Facility

Client: Shaw E & I Project: 343656 Quote#: _____
Cooler Received on: 12-11-03 Opened on: 12-11-03 by: [signature] (Signature)

Fedx ☑ Client Drop Off ☐ UPS ☐ Airborne ☐ FAS ☐ Other: _____
Cooler ☑ Safe ☐ Foam Box ☐ Client Cooler ☐ Other: _____
STL Cooler No#: STL-KNOX

1. Were custody seals on the outside of the cooler? Yes ☑ No ☐ Intact? Yes ☑ No ☐ NA ☐
   If YES, Quantity 2
   Were the custody seals signed and dated? Yes ☑ No ☐ NA ☐
2. Shipper's packing slip attached to this form? Yes ☑ No ☐ NA ☐
3. Were custody papers included inside the cooler and relinquished? Yes ☑ No ☐
4. Did you sign the custody papers in the appropriate place? Yes ☑ No ☐
5. Packing material used:
   Peanuts ☐ Bubble Wrap ☑ Vermiculite ☐ Foam ☐ None ☐ Other : _____
6. Cooler temperature upon receipt 2.9 °C (see back of form for multiple coolers/temp)
   METHOD: Temp Vial ☐ Coolant & Sample ☐ Against Bottles ☐ IR ☑ ICE/H_2O Slurry ☐
   COOLANT: Wet Ice ☑ Blue Ice ☐ Dry Ice ☐ Water ☐ None ☐
7. Did all bottles arrive in good condition (Unbroken)? Yes ☑ No ☐
8. Did all bottle labels and tags agree with the custody papers? Yes ☑ No ☐
9. Were samples at the correct pH? (record on back) Yes ☑ No ☐ NA ☐
10. Were correct bottles used for the tests indicated? Yes ☑ No ☐
11. Were air bubbles >6 mm in any VOA vials? Yes ☐ No ☑ NA ☐
12. Was a sufficient amount of sample sent in each bottle? Yes ☑ No ☐

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

√	MACRO	MACRO
1. CHAIN OF CUSTODY		
	SR1A	The chain of custody and sample bottles did not agree. The following discrepancies occurred _____
2. SAMPLE CONDITION		
	SR2A	Sample(s) _____ were received or requested after the recommended holding time had expired.
	SR2B	Sample(s) were received with insufficient volume.
	SR2C	Sample(s) were received in a broken container.
3. SAMPLE PRESERVATION		
	SR3A	Sample(s) _____ were further preserved in sample receiving to meet recommended pH level(s). *Nitric Acid Lot #101503-HNO3; Sulfuric Acid Lot # 112801-H2SO4; Sodium Hydroxide Lot # 101503-NaOH; Hydrochloric Acid Lot # 100902-HCl; Sodium Hydroxide and Zinc Acetate Lot # 112801-CH3COO2ZN/NaOH*
	SR3B	Sample(s) _____ were received with bubble > 6 mm in diameter (cc: PM)
4. Other (see below or back)		

page 1 of 3

H3L120208

Shaw™
Shaw E & I, Inc.

ANALYSIS REQUEST AND CHAIN-OF-CUSTODY RECORD

REFERENCE COC NO.: PB12 11 03STL-K

PAGE 1 OF 3

Project Name/No: PBOW
Sample Team Member: David Kessler
Profit Center: Knoxville
Project Manager: Steve Downey
Project No.: 843656
Required Report Date: 21 DAYS

Sample Shipment Date: 12/11/03
Laboratory Destination: STL- Knoxville
Laboratory Contact: Jamie McKinney
Project Contact/Phone: Maureen McMyler/865-690-3211
Carrier Waybill No.: 839702140147

Bill To: Accounting
Shaw E & I
312 Directors Drive
Knoxville, TN 37923

Report To: Maureen McMyler
Shaw E & I
312 Directors Drive
Knoxville, TN 37923

Sample Number	Sample Type/ Description	Date/Time Collected	Container Type	Sample Volume	Pre-servative	Requested Testing Program	Condition on Receipt	Disposal Record
DD3003	WATER	12/11/03 1035	1 X - Amber	1 L	Cool	Explosives by 8830		
			1 - HDPE	250 mL	HNO3	Total TAL Metals by 6010B/7470A Ph2		
			1 - HDPE	250 mL	HNO3	Dissolved TAL Metals by 6010B/7470A +		
			2 - Amber	1 L	Cool	TCL SVOCs by 8270C		
			3 - Glass	40 mL	HCL	TCL VOCs by 8260B	Rec'd temp. 3°c	
			1 - HDPE	1 L	NaOH	Cyanide by 9010/9012 Ph12	Custody seals intact	
DD3004	WATER	12/11/03 1355	1 X - Amber	1 L	Cool	Explosives by 8830	2 coolers Fedex#	
			1 - HDPE	250 mL	HNO3	Total TAL Metals by 6010B/7470A Ph2	839702140147	
			1 - HDPE	250 mL	HNO3	Dissolved TAL Metals by 6010B/7470A +	MFH 12-12-03	
			2 - Amber	1 L	Cool	TCL SVOCs by 8270C		
			3 - Glass	40 mL	HCL	TCL VOCs by 8260B		
			1 - HDPE	1 L	NaOH	Cyanide by 9010/9012 Ph12		
	DKK 12/11/03							

Special Instructions:

Possible Hazard Identification:
Non-haz: X Flammable: ____ Poison B: ____ Unknown: ____

Sample Disposal:
Return to Client: ____ Disposal by Lab: X Archive: ____

Turnaround Time:
Normal: X Rush: ____

Level of QC Required:
Definitive: X Project Specific: ____

1. Relinquished by: David Kessler	Date: 12/11/03 Time: 1800	1. Received by: Matthew J. Howard	Date: 12-12-03 Time: 09:00
2. Relinquished by:	Date: Time:	2. Received by:	Date: Time:
3. Relinquished by:	Date: Time:	2. Received by:	Date: Time:

Comments:

1685

page 2 of 3

H3L120208

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ANALYSIS REQUEST AND CHAIN-OF-CUSTODY RECORD

REFERENCE COC NO.: PB12 11 03STL-K

PAGE 2 OF 3

Bill To: Accounting
Shaw E & I
312 Directors Drive
Knoxville, TN 37923

Report To: Maureen McMyler
Shaw E & I
312 Directors Drive
Knoxville, TN 37923

Project Name/No: PBOW
Sample Team Member: David Kessler
Profit Center: Knoxville
Project Manager: Steve Downey
Project No.: 843656
Required Report Date: 21 DAYS

Sample Shipment Date: 12/11/03
Laboratory Destination: STL- Knoxville
Laboratory Contact: Jamie McKinney
Project Contact/Phone: Maureen McMyler/865-690-3211
Carrier Waybill No.: 839702140147

Sample Number	Sample Type/ Description	Date/Time Collected	Container Type	Sample Volume	Pre-servative	Requested Testing Program	Condition on Receipt	Disposal Record
DD3004-MS	WATER	12/11/03 1355	1 - Amber	1 L	Cool	Explosives by 8830		
			1 - HDPE	250 mL	HNO3	Total TAL Metals by 6010B/7470A PH2		
			1 - HDPE	250 mL	HNO3	Dissolved TAL Metals by 6010B/7470A +		
			2 - Amber	1 L	Cool	TCL SVOCs by 8270C		
			3 - Glass	40 mL	HCL	TCL VOCs by 8260B		
			1 - HDPE	1 L	NaOH	Cyanide by 9010/9012 PH12		
DD3004-MSD	WATER	12/11/03 1355	1 - Amber	1 L	Cool	Explosives by 8830		
			1 - HDPE	250 mL	HNO3	Total TAL Metals by 6010B/7470A PH2		
			1 - HDPE	250 mL	HNO3	Dissolved TAL Metals by 6010B/7470A +		
			2 - Amber	1 L	Cool	TCL SVOCs by 8270C		
			3 - Glass	40 mL	HCL	TCL VOCs by 8260B		
			1 - HDPE	1 L	NaOH	Cyanide by 9010/9012 PH12		
DKK 12/11/03								

Special Instructions:

Possible Hazard Identification:
Non-haz: X Flammable: ___ Poison B: ___ Unknown: ___

Sample Disposal:
Return to Client: ___ Disposal by Lab: X Archive: ___

Turnaround Time:
Normal: X Rush: ___

Level of QC Required:
Definitive: X Project Specific: ___

1. Relinquished by: David Kessler	Date: 12/11/03 Time: 1800	1. Received by: Matthew F. Howard	Date: 12-12-03 Time: 09:00
2. Relinquished by:	Date: Time:	2. Received by:	Date: Time:
3. Relinquished by:	Date: Time:	2. Received by:	Date: Time:

Comments:

1686

page 3 of 3

H3L120208

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ANALYSIS REQUEST AND CHAIN-OF-CUSTODY RECORD

REFERENCE COC NO.: PB12 11 03STL-K

PAGE 3 OF 3

Project Name/No: PBOW
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Profit Center: Knoxville
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Required Report Date: 21 DAYS

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Bill To: Accounting
Shaw E & I
312 Directors Drive
Knoxville, TN 37923

Report To: Maureen McMyler
Shaw E & I
312 Directors Drive
Knoxville, TN 37923

Sample Number	Sample Type/ Description	Date/Time Collected	Container Type	Sample Volume	Pre-servative	Requested Testing Program	Condition on Receipt	Disposal Record
DD 3005	WATER	12/11/03 1355	1 X - Amber	1 L	Cool	Explosives by 8830		
			1 - HDPE	250 mL	HNO3	Total TAL Metals by 6010B/7470A Ph2		
			1 - HDPE	250 mL	HNO3	Dissolved TAL Metals by 6010B/7470A +		
			2 - Amber	1 L	Cool	TCL SVOCs by 8270C		
			3 - Glass	40 mL	HCL	TCL VOCs by 8260B		
			~~1 - HDPE~~	~~1 L~~	~~NaOH~~	~~Cyanide by 9010/9012~~ DKK 12/11/03		
DD 5003	Water	12/11/03	2-Glass	40ml	HCL	TRIP BLANK		

Special Instructions:

Possible Hazard Identification:
Non-haz: X Flammable: ____ Poison B: ____ Unknown: ____

Sample Disposal:
Return to Client: ____ Disposal by Lab: X Archive: ____

Turnaround Time:
Normal: X Rush: ____

Level of QC Required:
Definitive: X Project Specific: ____

1. Relinquished by: David Kessler	Date: 12/11/03 Time: 1800	1. Received by: Matthew F. Hoard	Date: 12-12-03 Time: 09:00
2. Relinquished by:	Date: Time:	2. Received by:	Date: Time:
3. Relinquished by:	Date: Time:	2. Received by:	Date: Time:

Comments:

1687

STL KNOXVILLE
SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST

CLIENT: Shaw E&I PROJECT: _____ Lot No.: H3L120208

TO BE COMPLETED BY SAMPLE RECEIPT ASSOCIATE:

	YES	NO	NA
1. Sample Receipt:			
a. Do sample container labels match COC? (IDs, Dates, Times)	✓		
b. Is the cooler temperature within acceptance limits? (NOTE: North Carolina, 1668, 1613B: 0-4°C; VOST: 10°C)	✓		
c. Were samples received with correct chemical preservative (excluding Encore)?	✓		
d. Were custody seals present/intact on cooler and/or containers?	✓		
e. Were all of the samples listed on the COC received?	✓		
f. Were all of the sample containers received intact?	✓		
g. Were containers received for VOAs received without headspace?	✓		
h. Were samples received in the appropriate containers?	✓		
i. Did you check for residual chlorine, if necessary?			✓
j. Were samples received within 1/2 of the holding time?	✓		
k. Were samples screened for radioactivity?			✓
l. For aqueous samples for SOG tests (i.e., 1613B, 1668A, 8290, LR PAHs), does the sample(s) have visible solids present?			✓
If yes, was SOG staff notified?			✓
m. Were client's sample documents (RFA/COC) received?	✓		
n. Has the RFA/COC been relinquished? (Signed, Dated, Timed)	✓		
o. Are test/parameters listed for each sample?	✓		
p. Is the matrix of the samples noted?	✓		
q. Is the date/time of sample collection noted?	✓		
r. Is the client and project name/No. identified?	✓		
s. Was the sampler identified on the RFA/COC?		✓	

SAMPLE RECEIVING ASSOCIATE: Matthew J. Howard DATE: 12-12-03
MJH 12-12-03

TO BE COMPLETED BY PROJECT MANAGER :

	YES	NO	NA
1. Project manager "Sample Greet":			
a. Quote number to be logged-in under 48670			
b. Informed Login associates of special instructions ?			X

PROJECT MANAGER : pm DATE: 12/15/03

Client Sample ID	Analysis Requested	Condition (see legend)	Comments/Action

☐ Client informed on _____ by _____. Person contacted: _____.
☐ Noted actions in comments section above.
☐ No action necessary; process as is.
Project Manager: _____ Date: _____

STL KNOXVILLE

SAMPLE LOG-IN (LOT SUMMARY) REVIEW CHECKLIST

CLIENT: Shaw PROJECT: Moody Lot No.: H3L120208

TO BE COMPLETED BY PROJECT MANAGER:

1. Client Documents (Request for Analysis/Chain of Custody):	YES	NO	NA
a. Was QuanTIMS lot number documented on all paperwork?	X		
b. Was RFA/COC signed upon receipt, including date/time?		X	
c. Is preservative check (pH) noted on RFA/COC?		X	
d. Is cooler temperature & custody seal condition noted on COC?		X	

STLNC

2. Log-in (Lot Folder) Review:	YES	NO	NA
a. Do client IDs on Client Summaries match RFA/COC?	X		
b. Were tests/parameters assigned correctly?		X	
c. Were correct analytical and report due dates assigned?	X		
d. Has the correct fax due date been assigned to the lot?			X
e. Is the correct report format noted in the lot summary?	X		
f. Is percent moisture logged for samples requiring this analysis?			X
g. Are client assigned QC samples properly defined?		X	
h. Has a QAS been created for this lot?			X

3. Contract/Subcontract Review:	YES	NO	NA
a. Is there a contract number or PO for this work?	X		
b If the purchase order number is given, is it noted in Lot header?	X		
c. If samples were subcontracted, was copy of COC and associated sample receipt documentation in the folder?		X	

4. SDG Review:	YES	NO	NA
a. If SDG is required, is SDG form in Lot folder?	X		
b Is SDG number noted in Lot header & sample comments?	X		
c. If SDG is complete, has the due date been revised & marked closed?			X

5. Checklist Review:	YES	NO	NA
a. Has Sample Receipt Checklist been filled-out?	X		
b. Was there a CUR?			X
c. Were all issues resolved?			X

LOT FOLDER REVIEWED BY: JM DATE: 12/15/03

Delete MS/MSD for TDS & TSS and add duplicate.

QA016R10.doc, 9/5/03

BKO
12-15-03

Severn Trent Laboratories, Inc
SAMPLE ANALYSIS REQUISITION

LABORATORY: STL N Canton
4101 Shuffel Drive NW
North Canton OH 44720,

NEED ANALYTICAL REPORT BY
12/30/03

ATTN:

LAB PURCHASE ORDER: SR055228

CLIENT CODE: 506155 PROJECT MANAGER: Jamie A. McKinney

NUMBER OF SAMPLES IN LOT: 0004

C127
12-12-03
AMS

SAMPLE I.D.	SAMPLING DATE	ANALYSIS REQUIRED
H3L120208-001 F6JXA-1-A7	12/11/03	Solids, Total Suspended "TSS" (160.2) (TSS) METHOD: 160.2
H3L120208-001 F6JXA-1-A8	12/11/03	Turbidity (180.1) (TURBID) METHOD: 180.1
H3L120208-001 F6JXA-1-A9	12/11/03	Alkalinity, Total (310.1) (ALK-T) METHOD: 310.1
H3L120208-001 F6JXA-1-CA	12/11/03	Chloride (325.2, Automated) (CL) METHOD: 325.2
H3L120208-001 F6JXA-1-CC	12/11/03	Nitrate-Nitrite (353.2, Automated) (NO3) METHOD: 353.2
H3L120208-001 F6JXA-1-CD	12/11/03	Sulfate (Turbidimetric - 375.4) (SO4-TURB) METHOD: 375.4
H3L120208-001 F6JXA-1-CE	12/11/03	Carbon, Total Organic "TOC" (9060) (TOC) METHOD: 9060
H3L120208-001 F6JXA-1-CF	12/11/03	Solids, Filterable "TDS" (160.1) (TDS) METHOD: 160.1
H3L120208-001 F6JXA-1-CG	12/11/03	Hardness, Total (130.2, titrimetric) (HARDNESS) METHOD: 130.2
H3L120208-002 F6JX2-1-A1	12/11/03	Solids, Total Suspended "TSS" (160.2) (TSS) METHOD: 160.2

1XL
1X250
2X40
001 + 002
did not
rec
-003

DC 12-15-03

****
* CONTINUED *
****

Severn Trent Laboratories, Inc
SAMPLE ANALYSIS REQUISITION

LABORATORY: STL N Canton
4101 Shuffel Drive NW
North Canton OH 44720,

NEED ANALYTICAL REPORT BY
12/30/03
ROUTINE

ATTN:

LAB PURCHASE ORDER: SR055228

CLIENT CODE: 506155 PROJECT MANAGER: Jamie A. McKinney

NUMBER OF SAMPLES IN LOT: 0004

SAMPLE I.D.	SAMPLING DATE	ANALYSIS REQUIRED
H3L120208-002 F6JX2-1-A4	12/11/03	Turbidity (180.1) (TURBID) METHOD: 180.1
H3L120208-002 F6JX2-1-A7	12/11/03	Alkalinity, Total (310.1) (ALK-T) METHOD: 310.1
H3L120208-002 F6JX2-1-E7	12/11/03	Chloride (325.2, Automated) (CL) METHOD: 325.2
H3L120208-002 F6JX2-1-FA	12/11/03	Nitrate-Nitrite (353.2, Automated) (NO3) METHOD: 353.2
H3L120208-002 F6JX2-1-FE	12/11/03	Sulfate (Turbidimetric - 375.4) (SO4-TURB) METHOD: 375.4
H3L120208-002 F6JX2-1-FH	12/11/03	Carbon, Total Organic "TOC" (9060) (TOC) METHOD: 9060
H3L120208-002 F6JX2-1-FL	12/11/03	Solids, Filterable "TDS" (160.1) (TDS) METHOD: 160.1
H3L120208-002 F6JX2-1-FP	12/11/03	Hardness, Total (130.2, titrimetric) (HARDNESS) METHOD: 130.2
H3L120208-002-D F6JX2-1-A3	12/11/03	Solids, Total Suspended "TSS" (160.2) (TSS) METHOD: 160.2
H3L120208-002-D F6JX2-1-A6	12/11/03	Turbidity (180.1) (TURBID) METHOD: 180.1

****
* CONTINUED *
****

Severn Trent Laboratories, Inc
SAMPLE ANALYSIS REQUISITION

LABORATORY: STL N Canton
4101 Shuffel Drive NW
North Canton OH 44720,

NEED ANALYTICAL REPORT BY
12/30/03
ROUTINE

ATTN:

LAB PURCHASE ORDER: SR055228

CLIENT CODE: 506155 PROJECT MANAGER: Jamie A. McKinney

NUMBER OF SAMPLES IN LOT: 0004

SAMPLE I.D.	SAMPLING DATE	ANALYSIS REQUIRED
H3L120208-002-D F6JX2-1-A9	12/11/03	Alkalinity, Total (310.1) (ALK-T) METHOD: 310.1
H3L120208-002-D F6JX2-1-E9	12/11/03	Chloride (325.2, Automated) (CL) METHOD: 325.2
H3L120208-002-D F6JX2-1-FD	12/11/03	Nitrate-Nitrite (353.2, Automated) (NO3) METHOD: 353.2
H3L120208-002-D F6JX2-1-FG	12/11/03	Sulfate (Turbidimetric - 375.4) (SO4-TURB) METHOD: 375.4
H3L120208-002-D F6JX2-1-FK	12/11/03	Carbon, Total Organic "TOC" (9060) (TOC) METHOD: 9060
H3L120208-002-D F6JX2-1-FN	12/11/03	Solids, Filterable "TDS" (160.1) (TDS) METHOD: 160.1
H3L120208-002-D F6JX2-1-FR	12/11/03	Hardness, Total (130.2, titrimetric) (HARDNESS) METHOD: 130.2
H3L120208-002-S F6JX2-1-A2	12/11/03	Solids, Total Suspended "TSS" (160.2) (TSS) METHOD: 160.2
H3L120208-002-S F6JX2-1-A5	12/11/03	Turbidity (180.1) (TURBID) METHOD: 180.1
H3L120208-002-S F6JX2-1-A8	12/11/03	Alkalinity, Total (310.1) (ALK-T) METHOD: 310.1

****
* CONTINUED *
****

Severn Trent Laboratories, Inc
SAMPLE ANALYSIS REQUISITION

LABORATORY: STL N Canton
4101 Shuffel Drive NW
North Canton OH 44720,

NEED ANALYTICAL REPORT BY
12/30/03
ROUTINE

ATTN:

LAB PURCHASE ORDER: SR055228

CLIENT CODE: 506155 PROJECT MANAGER: Jamie A. McKinney

NUMBER OF SAMPLES IN LOT: 0004

SAMPLE I.D.	SAMPLING DATE	ANALYSIS REQUIRED
H3L120208-002-S F6JX2-1-E8	12/11/03	Chloride (325.2, Automated) (CL) METHOD: 325.2
H3L120208-002-S F6JX2-1-FC	12/11/03	Nitrate-Nitrite (353.2, Automated) (NO3) METHOD: 353.2
H3L120208-002-S F6JX2-1-FF	12/11/03	Sulfate (Turbidimetric - 375.4) (SO4-TURB) METHOD: 375.4
H3L120208-002-S F6JX2-1-FJ	12/11/03	Carbon, Total Organic "TOC" (9060) (TOC) METHOD: 9060
H3L120208-002-S F6JX2-1-FM	12/11/03	Solids, Filterable "TDS" (160.1) (TDS) METHOD: 160.1
H3L120208-002-S F6JX2-1-FQ	12/11/03	Hardness, Total (130.2, titrimetric) (HARDNESS) METHOD: 130.2
H3L120208-003 F6J0A-1-AJ	12/11/03	Solids, Total Suspended "TSS" (160.2) (TSS) METHOD: 160.2
H3L120208-003 F6J0A-1-AK	12/11/03	Turbidity (180.1) (TURBID) METHOD: 180.1
H3L120208-003 F6J0A-1-AL	12/11/03	Alkalinity, Total (310.1) (ALK-T) METHOD: 310.1
H3L120208-003 F6J0A-1-CL	12/11/03	Chloride (325.2, Automated) (CL) METHOD: 325.2

****
* CONTINUED *
****

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SAMPLE ANALYSIS REQUISITION

LABORATORY: STL N Canton
4101 Shuffel Drive NW
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NEED ANALYTICAL REPORT BY
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ROUTINE

ATTN:

LAB PURCHASE ORDER: SR055228

CLIENT CODE: 506155 PROJECT MANAGER: Jamie A. McKinney

NUMBER OF SAMPLES IN LOT: 0004

SAMPLE I.D.	SAMPLING DATE	ANALYSIS REQUIRED
H3L120208-003 F6J0A-1-CM	12/11/03	Nitrate-Nitrite (353.2, Automated) (NO3) METHOD: 353.2
H3L120208-003 F6J0A-1-CN	12/11/03	Sulfate (Turbidimetric - 375.4) (SO4-TURB) METHOD: 375.4
H3L120208-003 F6J0A-1-CP	12/11/03	Carbon, Total Organic "TOC" (9060) (TOC) METHOD: 9060
H3L120208-003 F6J0A-1-CQ	12/11/03	Solids, Filterable "TDS" (160.1) (TDS) METHOD: 160.1
H3L120208-003 F6J0A-1-CR	12/11/03	Hardness, Total (130.2, titrimetric) (HARDNESS) METHOD: 130.2

NEED DETECTION LIMIT AND ANALYSIS DATE INCLUDED IN REPORT.

SHIPPING METHOD: FEDEX DATE: 12/12/03

SEND REPORT TO:

SAMPLE RECEIVED BY: _____ DATE: _____

PLEASE SEND A SIGNED COPY OF THIS FORM WITH REPORT AT COMPLETION OF ANALYSIS.

THANK YOU.

STL Knoxville

INT: _____ 12/12/03 12:06:18

STL N Canton
4101 Shuffel Drive NW
North Canton OH 44720,

RELINQUISHED BY: _____ DATE/TIME: _____

RELINQUISHED BY: _____ DATE/TIME: _____

RECEIVED FOR LAB BY: _____ DATE/TIME: _____

PLEASE RETURN ORIGINAL SAMPLE ANALYSIS REQUISITION

page 1 of 2

Shaw™
Shaw E & I, Inc.

ANALYSIS REQUEST AND CHAIN-OF-CUSTODY RECORD

REFERENCE COC NO.: PB12 11 03STL

PAGE 1 OF 2

Project Name/No: PBOW/843656
Sample Team Member: David Kessler
Profit Center: Knoxville
Project Manager: Steve Downey
Project No.: 843656
Required Report Date: 21 days

Sample Shipment Date: 12/11/03
Laboratory Destination: STL-North Canton
Laboratory Contact: Ken Kuzior
Project Contact/Phone: Maureen McMyler/865-690-3211
Carrier Waybill No.: 839702140136

Bill To: Accounting
Shaw E & I
312 Directors Drive
Knoxville, TN 37923

Report To: Maureen McMyler
Shaw E & I
312 Directors Drive
Knoxville, TN 37923

Sample Number	Sample Type/ Description	Date/Time Collected	Container Type	Sample Volume	Pre-servative	Requested Testing Program	Condition on Receipt	Disposal Record
DD 3003	WATER	12/11/03 1035	2 - Glass	40 mL	H2SO4	TOC by 9060		
			1 - HDPE	1000 mL	Cool	Alkalinity by 310.1; Chloride by 325.2		
						Nitrate by 353.2; Sulfate by 375.4		
						TDS by 160.1; TSS by 160.2		
						Turbidity by 180.1		
			1 - HDPE	250 mL	HNO3	Hardness by 130.2		
DD 3004	WATER	12/11/03 1355	2 - Glass	40 mL	H2SO4	TOC by 9060		
			1 - HDPE	1000 mL	Cool	Alkalinity by 310.1; Chloride by 325.2		
						Nitrate by 353.2; Sulfate by 375.4		
						TDS by 160.1; TSS by 160.2		
						Turbidity by 180.1		
			1 - HDPE	250 mL	HNO3	Hardness by 130.2		
DD 3004-MS	WATER	12/11/03 1355	2 - Glass	40 mL	H2SO4	TOC by 9060		
			1 - HDPE	1000 mL	Cool	Alkalinity by 310.1; Chloride by 325.2		
						Nitrate by 353.2; Sulfate by 375.4		
						TDS by 160 1; TSS by 160.2		
						Turbidity by 180.1		
			1 - HDPE	250 mL	HNO3	Hardness by 130.2		

Special Instructions:

Possible Hazard Identification:
Non-haz: X Flammable: ___ Poison B: ___ Unknown: ___

Sample Disposal:
Return to Client: ___ Disposal by Lab: X Archive: ___

Turnaround Time:
Normal: X Rush: ___

Level of QC Required:
Definitive: X Project Specific: ___

1. Relinquished by: David Kessler	Date: 9/11/03 Time: 1800	1. Received by:	Date: 12/12/03 Time: 9:45
2. Relinquished by:	Date: Time:	2. Received by:	Date: Time:
3. Relinquished by:	Date: Time:	2. Received by:	Date: Time:

Comments:

1696

page 2 of 2

Shaw™
Shaw E & I, Inc.

ANALYSIS REQUEST AND CHAIN-OF-CUSTODY RECORD

REFERENCE COC NO.: PB12 11 03STL

PAGE 2 OF 2

Bill To: Accounting
Shaw E & I
312 Directors Drive
Knoxville, TN 37923

Report To: Maureen McMyler
Shaw E & I
312 Directors Drive
Knoxville, TN 37923

Project Name/No: PBOW/843656
Sample Team Member: David Kessler
Profit Center: Knoxville
Project Manager: Steve Downey
Project No.: 843656
Required Report Date: 21 days

Sample Shipment Date: 12/11/03
Laboratory Destination: STL-North Canton
Laboratory Contact: Ken Kuzior
Project Contact/Phone: Maureen McMyler/865-690-3211
Carrier Waybill No.: —

Sample Number	Sample Type/ Description	Date/Time Collected	Container Type	Sample Volume	Pre-servative	Requested Testing Program	Condition on Receipt	Disposal Record
DD3004-MSD	WATER	12/11/03 1355	2 - Glass	40 mL	H2SO4	TOC by 9060		
			1 - HDPE	1000 mL	Cool	Alkalinity by 310.1; Chloride by 325.2		
						Nitrate by 353.2; Sulfate by 375.4		
						TDS by 160.1; TSS by 160.2		
						Turbidity by 180.1		
			1 - HDPE	250 mL	HNO3	Hardness by 130.2		
DD3005	WATER	12/11/03 1355	2 - Glass	40 mL	H2SO4	TOC by 9060		
			1 - HDPE	1000 mL	Cool	Alkalinity by 310.1; Chloride by 325.2		
						Nitrate by 353.2; Sulfate by 375.4		
						TDS by 160.1; TSS by 160.2		
						Turbidity by 180.1		
			1 - HDPE	250 mL	HNO3	Hardness by 130.2		
DKK 12/11/03								

Special Instructions:

Possible Hazard Identification:
Non-haz: X Flammable: ___ Poison B: ___ Unknown: ___

Sample Disposal:
Return to Client: ___ Disposal by Lab: X Archive: ___

Turnaround Time:
Normal: X Rush: ___

Level of QC Required:
Definitive: X Project Specific: ___

1. Relinquished by: David Kessler — Date: 12/11/03 Time: 1800
1. Received by: [signature] — Date: 12/12/03 Time: 9:45
2. Relinquished by: — Date: Time:
2. Received by: — Date: Time:
3. Relinquished by: — Date: Time:
2. Received by: — Date: Time:

Comments:

1697

STL Cooler Receipt Form/Narrative
North Canton Facility

Lot Number: H3L120208

Client: Shaw E and I Inc Project: PBOW Quote#: ____

Cooler Received on: 12/12/03 Opened on: 12/12/03 by: [signature] (Signature)

Fedx ☒ Client Drop Off ☐ UPS ☐ Airborne ☐ FAS ☐ Other: ____

Cooler ☐ Safe ☐ Foam Box ☐ Client Cooler ☒ Other: ____

STL Cooler No#: NA

1. Were custody seals on the outside of the cooler? Yes ☒ No ☐ Intact? Yes ☒ No ☐ NA ☐
   If YES, Quantity 2
   Were the custody seals signed and dated? Yes ☒ No ☐ NA ☐
2. Shipper's packing slip attached to this form? Yes ☒ No ☐ NA ☐
3. Were custody papers included inside the cooler and relinquished? Yes ☒ No ☐
4. Did you sign the custody papers in the appropriate place? Yes ☒ No ☐
5. Packing material used:

Peanuts ☐ Bubble Wrap ☒ Vermiculite ☐ Foam ☐ None ☐ Other: ____

6. Cooler temperature upon receipt 1.9 °C (see back of form for multiple coolers/temp)

METHOD: Temp Vial ☐ Coolant & Sample ☐ Against Bottles ☐ IR ☒ ICE/H_2O Slurry ☐

COOLANT: Wet Ice ☒ Blue Ice ☐ Dry Ice ☐ Water ☐ None ☐

7. Did all bottles arrive in good condition (Unbroken)? Yes ☒ No ☐
8. Did all bottle labels and tags agree with the custody papers? Yes ~~☒~~ No ☒
9. Were samples at the correct pH? (record on back) Yes ☐ No ☐ NA ☒
10. Were correct bottles used for the tests indicated? Yes ☒ No ☐
11. Were air bubbles >6 mm in any VOA vials? Yes ☐ No ☒ NA ☐
12. Was a sufficient amount of sample sent in each bottle? Yes ☒ No ☐

Contacted PM KJK Date: 12-12-03 by: AMS via Voice Mail ☐ Verbal ☑ Other ☐

Concerning: SR1A

√	MACRO	MACRO
1. CHAIN OF CUSTODY		
✓	SR1A	The chain of custody and sample bottles did not agree. The following discrepancies occurred Sample DD3005 on chain of custody but not in cooler
2. SAMPLE CONDITION		
	SR2A	Sample(s) ____ were received or requested after the recommended holding time had expired.
	SR2B	Sample(s) were received with insufficient volume.
	SR2C	Sample(s) were received in a broken container.
3. SAMPLE PRESERVATION		
	SR3A	Sample(s) ____ were further preserved in sample receiving to meet recommended pH level(s). *Nitric Acid Lot #101503-HNO3; Sulfuric Acid Lot # 112801-H2SO4; Sodium Hydroxide Lot # 101503-NaOH; Hydrochloric Acid Lot # 100902-HCl; Sodium Hydroxide and Zinc Acetate Lot # 112801-CH3COO2ZN/NaOH*
	SR3B	Sample(s) ____ were received with bubble > 6 mm in diameter (cc: PM)
4. Other (see below or back)		

STL Cooler Receipt Form/Narrative
North Canton Facility

Client ID	pH	Date	Initials
DD3003	<2	12-17-05	KMS
DD3004	<2 <2 <2		

Cooler	Temp	Method	Coolant

Discrepancies Cont.

Macro Name:

Macro Name:

Macro Name:

Other Anomalies:

Southeast
ACCUTEST
Laboratories

12/23/03

Technical Report for

Shaw E & I, Inc.

PBOW

843656

Accutest Job Number: F21096

Report to:

Total number of pages in report: 106

ACCREDITED IN ACCORDANCE WITH nelac

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Harry Behzadi, Ph.D.
Laboratory Director

Certifications: FL (DOH E83510), NC (573), NJ (FL002), MA (FL946), IA (366), LA (03051), KS (E-10327), SC, AK

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Sample Summary

Shaw E & I, Inc.

Job No: F21096

PBOW
Project No: 843656

Sample Number	Collected Date	Time By	Received	Matrix Code	Matrix Type	Client Sample ID
F21096-1	12/11/03	13:55 DK	12/12/03	AQ	Water	DD3006
F21096-1A	12/11/03	13:55 DK	12/12/03	AQ	Water Filtered	DD3006
F21096-2	12/11/03	00:00 DK	12/12/03	AQ	Water	DD5004

Report of Analysis

Client Sample ID:	DD3006		
Lab Sample ID:	F21096-1	Date Sampled:	12/11/03
Matrix:	AQ - Water	Date Received:	12/12/03
Method:	SW846 8260B	Percent Solids:	n/a
Project:	PBOW		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	C0020035.D	1	12/18/03	KW	n/a	n/a	VC874
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	50	5.0	ug/l	
71-43-2	Benzene	ND	1.0	0.50	ug/l	
75-27-4	Bromodichloromethane	ND	2.0	0.50	ug/l	
75-25-2	Bromoform	ND	2.0	0.50	ug/l	
108-90-7	Chlorobenzene	ND	2.0	0.50	ug/l	
75-00-3	Chloroethane	ND	2.0	1.0	ug/l	
67-66-3	Chloroform	ND	2.0	0.50	ug/l	
75-15-0	Carbon disulfide	1.1	2.0	1.0	ug/l	J
56-23-5	Carbon tetrachloride	ND	2.0	0.50	ug/l	
75-34-3	1,1-Dichloroethane	ND	2.0	0.50	ug/l	
75-35-4	1,1-Dichloroethylene	ND	2.0	0.50	ug/l	
107-06-2	1,2-Dichloroethane	ND	2.0	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
124-48-1	Dibromochloromethane	ND	2.0	0.40	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	2.0	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	2.0	0.30	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	2.0	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	2.0	0.30	ug/l	
100-41-4	Ethylbenzene	ND	2.0	0.50	ug/l	
591-78-6	2-Hexanone	ND	10	2.5	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	10	2.5	ug/l	
74-83-9	Methyl bromide	ND	2.0	1.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	1.0	ug/l	
75-09-2	Methylene chloride	ND	5.0	1.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	10	2.5	ug/l	
100-42-5	Styrene	ND	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	2.0	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.0	0.30	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	2.0	0.50	ug/l	
127-18-4	Tetrachloroethylene	ND	2.0	0.50	ug/l	
108-88-3	Toluene	ND	2.0	0.50	ug/l	
79-01-6	Trichloroethylene	ND	2.0	0.50	ug/l	

ND = Not detected MDL - Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	DD3006		
Lab Sample ID:	F21096-1	Date Sampled:	12/11/03
Matrix:	AQ - Water	Date Received:	12/12/03
Method:	SW846 8260B	Percent Solids:	n/a
Project:	PBOW		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	ND	1.0	0.50	ug/l	
1330-20-7	Xylene (total)	ND	6.0	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		86-115%
17060-07-0	1,2-Dichloroethane-D4	106%		73-126%
2037-26-5	Toluene-D8	101%		86-112%
460-00-4	4-Bromofluorobenzene	101%		83-119%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	DD3006		
Lab Sample ID:	F21096-1	Date Sampled:	12/11/03
Matrix:	AQ - Water	Date Received:	12/12/03
Method:	SW846 8270C SW846 3510C	Percent Solids:	n/a
Project:	PBOW		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	W018263.D	1	12/16/03	ME	12/13/03	OP9295	SW949
Run #2							

	Initial Volume	Final Volume
Run #1	950 ml	1.0 ml
Run #2		

ABN TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	26	16	ug/l	
95-57-8	2-Chlorophenol	ND	5.3	2.1	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	5.3	2.1	ug/l	
120-83-2	2,4-Dichlorophenol	ND	5.3	2.1	ug/l	
105-67-9	2,4-Dimethylphenol	ND	5.3	2.1	ug/l	
51-28-5	2,4-Dinitrophenol	ND	26	11	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	11	7.9	ug/l	
95-48-7	2-Methylphenol	ND	5.3	2.1	ug/l	
	3&4-Methylphenol	ND	5.3	2.1	ug/l	
88-75-5	2-Nitrophenol	ND	5.3	2.1	ug/l	
100-02-7	4-Nitrophenol	ND	26	11	ug/l	
87-86-5	Pentachlorophenol	ND	26	11	ug/l	
108-95-2	Phenol	ND	5.3	2.1	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	5.3	2.6	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	5.3	2.1	ug/l	
83-32-9	Acenaphthene	ND	5.3	1.1	ug/l	
208-96-8	Acenaphthylene	ND	5.3	1.1	ug/l	
120-12-7	Anthracene	ND	5.3	1.1	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.3	1.1	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.3	1.1	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.3	1.1	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.3	2.1	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.3	1.1	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.3	1.1	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.3	2.1	ug/l	
100-51-6	Benzyl Alcohol	ND	5.3	1.1	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.3	1.1	ug/l	
106-47-8	4-Chloroaniline	ND	5.3	2.1	ug/l	
86-74-8	Carbazole	ND	5.3	1.1	ug/l	
218-01-9	Chrysene	ND	5.3	1.1	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.3	1.1	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.3	2.1	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	DD3006		
Lab Sample ID:	F21096-1	Date Sampled:	12/11/03
Matrix:	AQ - Water	Date Received:	12/12/03
Method:	SW846 8270C SW846 3510C	Percent Solids:	n/a
Project:	PBOW		

ABN TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.3	1.1	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.3	1.1	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	5.3	1.1	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	5.3	1.1	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	5.3	1.1	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	5.3	2.1	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	5.3	2.1	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	11	5.3	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.3	2.1	ug/l	
132-64-9	Dibenzofuran	ND	5.3	1.1	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.3	2.1	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.3	2.6	ug/l	
84-66-2	Diethyl phthalate	ND	5.3	2.1	ug/l	
131-11-3	Dimethyl phthalate	ND	5.3	2.1	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	5.3	2.6	ug/l	
206-44-0	Fluoranthene	ND	5.3	1.1	ug/l	
86-73-7	Fluorene	ND	5.3	1.1	ug/l	
118-74-1	Hexachlorobenzene	ND	5.3	1.1	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.3	2.1	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	5.3	2.1	ug/l	
67-72-1	Hexachloroethane	ND	5.3	2.1	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.3	2.1	ug/l	
78-59-1	Isophorone	ND	5.3	1.1	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.3	1.1	ug/l	
88-74-4	2-Nitroaniline	ND	5.3	2.1	ug/l	
99-09-2	3-Nitroaniline	ND	5.3	2.1	ug/l	
100-01-6	4-Nitroaniline	ND	5.3	2.1	ug/l	
91-20-3	Naphthalene	ND	5.3	1.1	ug/l	
98-95-3	Nitrobenzene	ND	5.3	1.1	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.3	2.1	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.3	2.1	ug/l	
85-01-8	Phenanthrene	ND	5.3	1.1	ug/l	
129-00-0	Pyrene	ND	5.3	1.1	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.3	1.1	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	50%		19-90%
4165-62-2	Phenol-d5	31%		10-68%
118-79-6	2,4,6-Tribromophenol	100%		36-137%

ND = Not detected MDL - Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	DD3006		
Lab Sample ID:	F21096-1	Date Sampled:	12/11/03
Matrix:	AQ - Water	Date Received:	12/12/03
Method:	SW846 8270C SW846 3510C	Percent Solids:	n/a
Project:	PBOW		

ABN TCL List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	85%		49-119%
321-60-8	2-Fluorobiphenyl	85%		45-118%
1718-51-0	Terphenyl-d14	103%		46-135%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	DD3006		
Lab Sample ID:	F21096-1	Date Sampled:	12/11/03
Matrix:	AQ - Water	Date Received:	12/12/03
Method:	SW846 8330A SW846 3535A	Percent Solids:	n/a
Project:	PBOW		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GG008374.D	1	12/18/03	MRE	12/17/03	OP9355	GGG396
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	10.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
2691-41-0	HMX	ND	0.20	0.075	ug/l	
121-82-4	RDX	ND	0.20	0.075	ug/l	
99-65-0	1,3-Dinitrobenzene	ND	0.20	0.050	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	0.20	0.050	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	0.20	0.050	ug/l	
35572-78-2	2-amino-4,6-Dinitrotoluene	ND	0.20	0.050	ug/l	
19406-51-0	4-amino-2,6-Dinitrotoluene	ND	0.20	0.050	ug/l	
98-95-3	Nitrobenzene	ND	0.20	0.050	ug/l	
88-72-2	o-Nitrotoluene	ND	0.20	0.050	ug/l	
99-08-1	m-Nitrotoluene	ND	0.20	0.050	ug/l	
99-99-0	p-Nitrotoluene	ND	0.20	0.075	ug/l	
479-45-8	Tetryl	ND	0.20	0.075	ug/l	
99-35-4	1,3,5-Trinitrobenzene	ND	0.20	0.050	ug/l	
118-96-7	2,4,6-Trinitrotoluene	ND	0.20	0.050	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
610-39-9	3,4-Dinitrotoluene	90%		61-124%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	DD3006		
Lab Sample ID:	F21096-1	Date Sampled:	12/11/03
Matrix:	AQ - Water	Date Received:	12/12/03
		Percent Solids:	n/a
Project:	PBOW		

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	20 U	200	20	ug/l	1	12/17/03	12/17/03	SL	SW846 6010B [1]	SW846 3010A [3]
Antimony	3.5 U	5.0	3.5	ug/l	1	12/17/03	12/17/03	SL	SW846 6010B [1]	SW846 3010A [3]
Arsenic	3.5 U	10	3.5	ug/l	1	12/17/03	12/17/03	SL	SW846 6010B [1]	SW846 3010A [3]
Barium	169 B	200	1.1	ug/l	1	12/17/03	12/17/03	SL	SW846 6010B [1]	SW846 3010A [3]
Beryllium	0.80 U	5.0	0.80	ug/l	1	12/17/03	12/17/03	SL	SW846 6010B [1]	SW846 3010A [3]
Cadmium	0.30 U	5.0	0.30	ug/l	1	12/17/03	12/17/03	SL	SW846 6010B [1]	SW846 3010A [3]
Calcium	125000	1000	42	ug/l	1	12/17/03	12/17/03	SL	SW846 6010B [1]	SW846 3010A [3]
Chromium	2.4 U	10	2.4	ug/l	1	12/17/03	12/17/03	SL	SW846 6010B [1]	SW846 3010A [3]
Cobalt	1.0 U	50	1.0	ug/l	1	12/17/03	12/17/03	SL	SW846 6010B [1]	SW846 3010A [3]
Copper	1.4 U	25	1.4	ug/l	1	12/17/03	12/17/03	SL	SW846 6010B [1]	SW846 3010A [3]
Iron	264 B	300	48	ug/l	1	12/17/03	12/17/03	SL	SW846 6010B [1]	SW846 3010A [3]
Lead	2.9 U	5.0	2.9	ug/l	1	12/17/03	12/17/03	SL	SW846 6010B [1]	SW846 3010A [3]
Magnesium	48600	5000	33	ug/l	1	12/17/03	12/17/03	SL	SW846 6010B [1]	SW846 3010A [3]
Manganese	48.8	15	0.60	ug/l	1	12/17/03	12/17/03	SL	SW846 6010B [1]	SW846 3010A [3]
Mercury	0.052 U	1.0	0.052	ug/l	1	12/18/03	12/19/03	SL	SW846 7470A [2]	SW846 7470A [4]
Nickel	0.80 U	40	0.80	ug/l	1	12/17/03	12/17/03	SL	SW846 6010B [1]	SW846 3010A [3]
Potassium	12200	5000	51	ug/l	1	12/17/03	12/17/03	SL	SW846 6010B [1]	SW846 3010A [3]
Selenium	3.6 U	10	3.6	ug/l	1	12/17/03	12/17/03	SL	SW846 6010B [1]	SW846 3010A [3]
Silver	1.9 U	10	1.9	ug/l	1	12/17/03	12/17/03	SL	SW846 6010B [1]	SW846 3010A [3]
Sodium	110000	5000	200	ug/l	1	12/17/03	12/17/03	SL	SW846 6010B [1]	SW846 3010A [3]
Thallium	2.9 U	10	2.9	ug/l	1	12/17/03	12/17/03	SL	SW846 6010B [1]	SW846 3010A [3]
Vanadium	0.60 U	50	0.60	ug/l	1	12/17/03	12/17/03	SL	SW846 6010B [1]	SW846 3010A [3]
Zinc	58.0	20	5.1	ug/l	1	12/17/03	12/17/03	SL	SW846 6010B [1]	SW846 3010A [3]

(1) Instrument QC Batch: MA3609
(2) Instrument QC Batch: MA3612
(3) Prep QC Batch: MP6148
(4) Prep QC Batch: MP6152

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Accutest Laboratories

Report of Analysis

Client Sample ID:	DD3006		
Lab Sample ID:	F21096-1A	Date Sampled:	12/11/03
Matrix:	AQ - Water Filtered	Date Received:	12/12/03
		Percent Solids:	n/a
Project:	PBOW		

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Aluminum	20 U	200	20	ug/l	1	12/17/03	12/17/03	SL	SW846 6010B [1]	SW846 3010A [3]
Antimony	3.5 U	5.0	3.5	ug/l	1	12/17/03	12/17/03	SL	SW846 6010B [1]	SW846 3010A [3]
Arsenic	3.5 U	10	3.5	ug/l	1	12/17/03	12/17/03	SL	SW846 6010B [1]	SW846 3010A [3]
Barium	165 B	200	1.1	ug/l	1	12/17/03	12/17/03	SL	SW846 6010B [1]	SW846 3010A [3]
Beryllium	0.80 U	5.0	0.80	ug/l	1	12/17/03	12/17/03	SL	SW846 6010B [1]	SW846 3010A [3]
Cadmium	0.30 U	5.0	0.30	ug/l	1	12/17/03	12/17/03	SL	SW846 6010B [1]	SW846 3010A [3]
Calcium	119000	1000	42	ug/l	1	12/17/03	12/17/03	SL	SW846 6010B [1]	SW846 3010A [3]
Chromium	2.4 U	10	2.4	ug/l	1	12/17/03	12/17/03	SL	SW846 6010B [1]	SW846 3010A [3]
Cobalt	1.0 U	50	1.0	ug/l	1	12/17/03	12/17/03	SL	SW846 6010B [1]	SW846 3010A [3]
Copper	1.4 U	25	1.4	ug/l	1	12/17/03	12/17/03	SL	SW846 6010B [1]	SW846 3010A [3]
Iron	203 B	300	48	ug/l	1	12/17/03	12/17/03	SL	SW846 6010B [1]	SW846 3010A [3]
Lead	2.9 U	5.0	2.9	ug/l	1	12/17/03	12/17/03	SL	SW846 6010B [1]	SW846 3010A [3]
Magnesium	46400	5000	33	ug/l	1	12/17/03	12/17/03	SL	SW846 6010B [1]	SW846 3010A [3]
Manganese	47.6	15	0.60	ug/l	1	12/17/03	12/17/03	SL	SW846 6010B [1]	SW846 3010A [3]
Mercury	0.052 U	1.0	0.052	ug/l	1	12/18/03	12/19/03	SL	SW846 7470A [2]	SW846 7470A [4]
Nickel	0.80 U	40	0.80	ug/l	1	12/17/03	12/17/03	SL	SW846 6010B [1]	SW846 3010A [3]
Potassium	11300	5000	51	ug/l	1	12/17/03	12/17/03	SL	SW846 6010B [1]	SW846 3010A [3]
Selenium	3.6 U	10	3.6	ug/l	1	12/17/03	12/17/03	SL	SW846 6010B [1]	SW846 3010A [3]
Silver	1.9 U	10	1.9	ug/l	1	12/17/03	12/17/03	SL	SW846 6010B [1]	SW846 3010A [3]
Sodium	106000	5000	200	ug/l	1	12/17/03	12/17/03	SL	SW846 6010B [1]	SW846 3010A [3]
Thallium	2.9 U	10	2.9	ug/l	1	12/17/03	12/17/03	SL	SW846 6010B [1]	SW846 3010A [3]
Vanadium	0.60 U	50	0.60	ug/l	1	12/17/03	12/17/03	SL	SW846 6010B [1]	SW846 3010A [3]
Zinc	13.2 B	20	5.1	ug/l	1	12/17/03	12/17/03	SL	SW846 6010B [1]	SW846 3010A [3]

(1) Instrument QC Batch: MA3609
(2) Instrument QC Batch: MA3612
(3) Prep QC Batch: MP6148
(4) Prep QC Batch: MP6152

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	DD5004		
Lab Sample ID:	F21096-2	Date Sampled:	12/11/03
Matrix:	AQ - Water	Date Received:	12/12/03
Method:	SW846 8260B	Percent Solids:	n/a
Project:	PBOW		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	C0020036.D	1	12/18/03	KW	n/a	n/a	VC874
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	50	5.0	ug/l	
71-43-2	Benzene	ND	1.0	0.50	ug/l	
75-27-4	Bromodichloromethane	ND	2.0	0.50	ug/l	
75-25-2	Bromoform	ND	2.0	0.50	ug/l	
108-90-7	Chlorobenzene	ND	2.0	0.50	ug/l	
75-00-3	Chloroethane	ND	2.0	1.0	ug/l	
67-66-3	Chloroform	ND	2.0	0.50	ug/l	
75-15-0	Carbon disulfide	ND	2.0	1.0	ug/l	
56-23-5	Carbon tetrachloride	ND	2.0	0.50	ug/l	
75-34-3	1,1-Dichloroethane	ND	2.0	0.50	ug/l	
75-35-4	1,1-Dichloroethylene	ND	2.0	0.50	ug/l	
107-06-2	1,2-Dichloroethane	ND	2.0	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
124-48-1	Dibromochloromethane	ND	2.0	0.40	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	2.0	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	2.0	0.30	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	2.0	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	2.0	0.30	ug/l	
100-41-4	Ethylbenzene	ND	2.0	0.50	ug/l	
591-78-6	2-Hexanone	ND	10	2.5	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	10	2.5	ug/l	
74-83-9	Methyl bromide	ND	2.0	1.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	1.0	ug/l	
75-09-2	Methylene chloride	ND	5.0	1.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	10	2.5	ug/l	
100-42-5	Styrene	ND	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	2.0	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.0	0.30	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	2.0	0.50	ug/l	
127-18-4	Tetrachloroethylene	ND	2.0	0.50	ug/l	
108-88-3	Toluene	ND	2.0	0.50	ug/l	
79-01-6	Trichloroethylene	ND	2.0	0.50	ug/l	

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	DD5004		
Lab Sample ID:	F21096-2	Date Sampled:	12/11/03
Matrix:	AQ - Water	Date Received:	12/12/03
Method:	SW846 8260B	Percent Solids:	n/a
Project:	PBOW		

VOA TCL List

CAS No.	Compound	Result	RL	MDL	Units	Q
75-01-4	Vinyl chloride	ND	1.0	0.50	ug/l	
1330-20-7	Xylene (total)	ND	6.0	1.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		86-115%
17060-07-0	1,2-Dichloroethane-D4	104%		73-126%
2037-26-5	Toluene-D8	102%		86-112%
460-00-4	4-Bromofluorobenzene	102%		83-119%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

Shaw™
Shaw E & I, Inc.

ANALYSIS REQUEST AND CHAIN-OF-CUSTODY RECORD

F21096

REFERENCE COC NO.: PB12 11 03ACC

PAGE 1 OF 1

Project Name/No: PBOW
Sample Team Member: David Kessler
Profit Center: Knoxville
Project Manager: Steve Downey
Project No.: 843656
Required Report Date: 21 days

Sample Shipment Date: 12/11/03
Laboratory Destination: Accutest
Laboratory Contact: Sue Bell
Project Contact/Phone: Maureen McMyler/865-560-5271
Carrier Waybill No.: 843490779408

Bill To: Accounting
Shaw E & I
312 Directors Drive
Knoxville, TN 37923

Report To: Maureen McMyler
Shaw E & I
312 Directors Drive
Knoxville, TN 37923

	Sample Number	Sample Type/ Description	Date/Time Collected	Container Type	Sample Volume	Pre-servative	Requested Testing Program	Condition on Receipt	Disposal Record
1	DD3006	WATER	12/11/03 1355	1 - Amber	1 L	Cool	Explosives by 8330		
				2 - Amber	1 L	Cool	Semivolatiles by 8270C		
				3 - Vial	40 mL	HCl	Volatiles by 8260B		
				1 - HDPE	250 mL	HNO3	TAL Metals (Total) by 6010B/7471A		
				1 - HDPE	250 mL	HNO3	TAL Metals (Diss) by 6010B/7471A		
2	DD500X4	WATER	12/11/03	3 - Vial	40 mL	HCl	Volatiles by 8260B		

Special Instructions:

Possible Hazard Identification:
Non-haz: X Flammable: ___ Poison B: ___ Unknown: ___

Sample Disposal:
Return to Client: ___ Disposal by Lab: X Archive: ___

Turnaround Time:
Normal: X Rush: ___

Level of QC Required:
Definitive: X Project Specific: ___

1. Relinquished by: David Kessler Date: 12/11/03 Time: 1800
2. Relinquished by: FedEx Date: Time:
3. Relinquished by: Date: Time:

1. Received by: FedEx Date: Time:
2. Received by: Muna Mohammad Date: 12/12/03 Time: 0915
2. Received by: Date: Time:

Comments:

3.1 3

F21096: Chain of Custody
Page 1 of 2

ACCUTEST Laboratories

ACCUTEST LABORATORIES SOUTHEAST SAMPLE RECEIPT CONFIRMATION

Accutest's Job Number: F21096

Client: Shaw Project: PBOW

Date Received: 12/12/03 Time Received: 0915

# of Coolers Received: 1 Cooler Temperatures: 3.2

Delivery Method: (FedEx) UPS Accutest Courier Greyhound Delivery Other

Air Bill Number:

Cooler Custody Seals Intact ?	(Yes)	No	
Chain of Custody Provided ?	(Yes)	No	
COC Match Bottle Label ID's ?	(Yes)	No	
Sample Labels Present on all bottles ?	(Yes)	No	
All Analyses Marked On COC ?	(Yes)	No	
Are All Bottles Intact ?	(Yes)	No	
Samples Preserved Correctly ?	(Yes)	No	
Correct Number of Containers Used ?	Yes	(No)	
Sufficient Sample Volume ?	(Yes)	No	
Trip Blank Provided ?	Yes	(No)	
Trip Blank on COC ?	Yes	(No)	
Trip Blank Intact ?	Yes	No	(N/A)
Trip Blank Matrix ?	Soil	Water	(N/A)

Number of Encores ? 0

Number of Soil Field Kits ? 0

Summary of Comments: Only one bottle received for 8330 analysis for sample #1. Only two vials received for sample #3.

Signature: Mura Mohammed Date: 12/12/03

ASBD/HW 05/11/03

F21096: Chain of Custody
Page 2 of 2

ACCUTEST Laboratories

GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Instrument Performance Checks (BFB)
- Internal Standard Area Summaries
- Surrogate Recovery Summaries
- Initial and Continuing Calibration Summaries

Method Blank Summary

Job Number: F21096
Account: ITTNKNOX Shaw E & I, Inc.
Project: PBOW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VC874-MB	C0020028.D	1	12/18/03	KW	n/a	n/a	VC874

The QC reported here applies to the following samples: Method: SW846 8260B

F21096-1, F21096-2

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	50	5.0	ug/l	
71-43-2	Benzene	ND	1.0	0.50	ug/l	
75-27-4	Bromodichloromethane	ND	2.0	0.50	ug/l	
75-25-2	Bromoform	ND	2.0	0.50	ug/l	
108-90-7	Chlorobenzene	ND	2.0	0.50	ug/l	
75-00-3	Chloroethane	ND	2.0	1.0	ug/l	
67-66-3	Chloroform	ND	2.0	0.50	ug/l	
75-15-0	Carbon disulfide	ND	2.0	1.0	ug/l	
56-23-5	Carbon tetrachloride	ND	2.0	0.50	ug/l	
75-34-3	1,1-Dichloroethane	ND	2.0	0.50	ug/l	
75-35-4	1,1-Dichloroethylene	ND	2.0	0.50	ug/l	
107-06-2	1,2-Dichloroethane	ND	2.0	0.50	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	0.50	ug/l	
124-48-1	Dibromochloromethane	ND	2.0	0.40	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	2.0	0.50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	2.0	0.30	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	2.0	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	2.0	0.30	ug/l	
100-41-4	Ethylbenzene	ND	2.0	0.50	ug/l	
591-78-6	2-Hexanone	ND	10	2.5	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	10	2.5	ug/l	
74-83-9	Methyl bromide	ND	2.0	1.0	ug/l	
74-87-3	Methyl chloride	ND	2.0	1.0	ug/l	
75-09-2	Methylene chloride	ND	5.0	1.0	ug/l	
78-93-3	Methyl ethyl ketone	ND	10	2.5	ug/l	
100-42-5	Styrene	ND	2.0	0.50	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	2.0	0.50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.0	0.30	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	2.0	0.50	ug/l	
127-18-4	Tetrachloroethylene	ND	2.0	0.50	ug/l	
108-88-3	Toluene	ND	2.0	0.50	ug/l	
79-01-6	Trichloroethylene	ND	2.0	0.50	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.50	ug/l	
1330-20-7	Xylene (total)	ND	6.0	1.0	ug/l	

Method Blank Summary

Job Number: F21096
Account: ITTNKNOX Shaw E & I, Inc.
Project: PBOW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VC874-MB	C0020028.D	1	12/18/03	KW	n/a	n/a	VC874

The QC reported here applies to the following samples: Method: SW846 8260B

F21096-1, F21096-2

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	100%	86-115%
17060-07-0	1,2-Dichloroethane-D4	102%	73-126%
2037-26-5	Toluene-D8	101%	86-112%
460-00-4	4-Bromofluorobenzene	107%	83-119%

Blank Spike Summary

Job Number: F21096
Account: ITTNKNOX Shaw E & I, Inc.
Project: PBOW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VC874-BS	C0020027.D	1	12/18/03	KW	n/a	n/a	VC874

The QC reported here applies to the following samples: Method: SW846 8260B

F21096-1, F21096-2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	125	123	98	44-142
71-43-2	Benzene	25	24.1	96	80-120
75-27-4	Bromodichloromethane	25	23.6	94	75-120
75-25-2	Bromoform	25	24.2	97	60-129
108-90-7	Chlorobenzene	25	23.6	94	82-112
75-00-3	Chloroethane	25	27.9	112	67-148
67-66-3	Chloroform	25	23.9	96	78-118
75-15-0	Carbon disulfide	25	28.5	114	65-147
56-23-5	Carbon tetrachloride	25	24.7	99	69-137
75-34-3	1,1-Dichloroethane	25	23.4	94	75-117
75-35-4	1,1-Dichloroethylene	25	23.8	95	67-134
107-06-2	1,2-Dichloroethane	25	23.8	95	68-121
78-87-5	1,2-Dichloropropane	25	24.4	98	78-122
124-48-1	Dibromochloromethane	25	23.6	94	68-118
156-59-2	cis-1,2-Dichloroethylene	25	23.5	94	81-120
10061-01-5	cis-1,3-Dichloropropene	25	23.0	92	73-115
156-60-5	trans-1,2-Dichloroethylene	25	23.7	95	74-125
10061-02-6	trans-1,3-Dichloropropene	25	23.7	95	69-115
100-41-4	Ethylbenzene	25	24.5	98	82-115
591-78-6	2-Hexanone	125	122	98	60-125
108-10-1	4-Methyl-2-pentanone	125	118	94	61-128
74-83-9	Methyl bromide	25	27.9	112	60-165
74-87-3	Methyl chloride	25	25.9	104	58-152
75-09-2	Methylene chloride	25	24.5	98	66-125
78-93-3	Methyl ethyl ketone	125	120	96	58-127
100-42-5	Styrene	25	22.5	90	58-125
71-55-6	1,1,1-Trichloroethane	25	25.1	100	78-132
79-34-5	1,1,2,2-Tetrachloroethane	25	24.1	96	67-119
79-00-5	1,1,2-Trichloroethane	25	23.9	96	74-115
127-18-4	Tetrachloroethylene	25	25.6	102	75-126
108-88-3	Toluene	25	24.3	97	81-114
79-01-6	Trichloroethylene	25	23.2	93	80-115
75-01-4	Vinyl chloride	25	28.7	115	70-151
1330-20-7	Xylene (total)	75	75.1	100	81-118

Blank Spike Summary

Job Number: F21096
Account: ITTNKNOX Shaw E & I, Inc.
Project: PBOW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VC874-BS	C0020027.D	1	12/18/03	KW	n/a	n/a	VC874

The QC reported here applies to the following samples: Method: SW846 8260B

F21096-1, F21096-2

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	100%	86-115%
17060-07-0	1,2-Dichloroethane-D4	104%	73-126%
2037-26-5	Toluene-D8	102%	86-112%
460-00-4	4-Bromofluorobenzene	100%	83-119%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F21096
Account: ITTNKNOX Shaw E & I, Inc.
Project: PBOW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F21113-1MS	C0020031.D	1	12/18/03	KW	n/a	n/a	VC874
F21113-1MSD	C0020032.D	1	12/18/03	KW	n/a	n/a	VC874
F21113-1	C0020030.D	1	12/18/03	KW	n/a	n/a	VC874

The QC reported here applies to the following samples: Method: SW846 8260B

F21096-1, F21096-2

CAS No.	Compound	F21113-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		125	72.1	58	73.6	59	2	45-127/15
71-43-2	Benzene	ND		25	24.2	97	23.8	95	2	72-125/7
75-27-4	Bromodichloromethane	ND		25	23.6	94	23.1	92	2	72-120/8
75-25-2	Bromoform	ND		25	23.8	95	24.2	97	2	55-127/11
108-90-7	Chlorobenzene	ND		25	23.5	94	23.2	93	1	79-113/7
75-00-3	Chloroethane	ND		25	30.6	122	30.3	121	1	56-164/14
67-66-3	Chloroform	ND		25	24.0	96	23.4	94	3	75-120/8
75-15-0	Carbon disulfide	ND		25	28.7	115	28.2	113	2	60-151/12
56-23-5	Carbon tetrachloride	ND		25	23.9	96	24.0	96	0	56-145/12
75-34-3	1,1-Dichloroethane	ND		25	24.0	96	23.5	94	2	70-122/10
75-35-4	1,1-Dichloroethylene	ND		25	24.2	97	23.7	95	2	61-137/15
107-06-2	1,2-Dichloroethane	ND		25	24.6	98	24.3	97	1	64-124/7
78-87-5	1,2-Dichloropropane	ND		25	24.8	99	24.5	98	1	74-123/8
124-48-1	Dibromochloromethane	ND		25	23.1	92	22.9	92	1	63-119/9
156-59-2	cis-1,2-Dichloroethylene	ND		25	23.3	93	23.2	93	0	74-125/9
10061-01-5	cis-1,3-Dichloropropene	ND		25	22.7	91	22.5	90	1	65-112/10
156-60-5	trans-1,2-Dichloroethylene	ND		25	24.2	97	23.7	95	2	70-127/11
10061-02-6	trans-1,3-Dichloropropene	ND		25	23.4	94	23.1	92	1	59-116/11
100-41-4	Ethylbenzene	ND		25	24.3	97	24.0	96	1	73-119/8
591-78-6	2-Hexanone	ND		125	103	82	105	84	2	54-131/11
108-10-1	4-Methyl-2-pentanone	ND		125	126	101	126	101	0	57-136/11
74-83-9	Methyl bromide	ND		25	29.8	119	30.3	121	2	52-172/16
74-87-3	Methyl chloride	ND		25	27.9	112	27.0	108	3	53-155/19
75-09-2	Methylene chloride	ND		25	25.3	101	25.1	100	1	61-129/11
78-93-3	Methyl ethyl ketone	ND		125	93.6	75	97.9	78	4	51-128/10
100-42-5	Styrene	ND		25	23.5	94	23.0	92	2	64-124/11
71-55-6	1,1,1-Trichloroethane	ND		25	25.0	100	24.4	98	2	72-133/8
79-34-5	1,1,2,2-Tetrachloroethane	ND		25	24.6	98	24.6	98	0	64-120/10
79-00-5	1,1,2-Trichloroethane	ND		25	23.7	95	24.1	96	2	72-116/9
127-18-4	Tetrachloroethylene	ND		25	25.0	100	24.9	100	0	70-126/9
108-88-3	Toluene	ND		25	24.0	96	23.6	94	2	67-123/8
79-01-6	Trichloroethylene	ND		25	22.7	91	22.6	90	0	73-117/10
75-01-4	Vinyl chloride	ND		25	30.8	123	30.4	122	1	63-161/18
1330-20-7	Xylene (total)	ND		75	74.7	100	73.3	98	2	73-122/7

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F21096
Account: ITTNKNOX Shaw E & I, Inc.
Project: PBOW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
F21113-1MS	C0020031.D	1	12/18/03	KW	n/a	n/a	VC874
F21113-1MSD	C0020032.D	1	12/18/03	KW	n/a	n/a	VC874
F21113-1	C0020030.D	1	12/18/03	KW	n/a	n/a	VC874

The QC reported here applies to the following samples: Method: SW846 8260B

F21096-1, F21096-2

CAS No.	Surrogate Recoveries	MS	MSD	F21113-1	Limits
1868-53-7	Dibromofluoromethane	100%	100%	100%	86-115%
17060-07-0	1,2-Dichloroethane-D4	106%	107%	105%	73-126%
2037-26-5	Toluene-D8	100%	101%	102%	86-112%
460-00-4	4-Bromofluorobenzene	100%	99%	103%	83-119%

Instrument Performance Check (BFB)

Job Number: F21096
Account: ITTNKNOX Shaw E & I, Inc.
Project: PBOW

Sample:	VC874-BFB	Injection Date:	12/18/03
Lab File ID:	C0020017.D	Injection Time:	09:23
Instrument ID:	GCMSC		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	23317	28.0		Pass
75	30.0 - 60.0% of mass 95	35853	43.0		Pass
95	Base peak, 100% relative abundance	83290	100.0		Pass
96	5.0 - 9.0% of mass 95	5371	6.4		Pass
173	Less than 2.0% of mass 174	460	0.55	(0.66) [a]	Pass
174	50.0 - 100.0% of mass 95	69240	83.1		Pass
175	5.0 - 9.0% of mass 174	4908	5.9	(7.1) [a]	Pass
176	95.0 - 101.0% of mass 174	67154	80.6	(97.0) [a]	Pass
177	5.0 - 9.0% of mass 176	4515	5.4	(6.7) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VC874-IC874	C0020018.D	12/18/03	09:49	00:26	Initial cal 1
VC874-IC874	C0020019.D	12/18/03	10:16	00:53	Initial cal 5
VC874-IC874	C0020020.D	12/18/03	10:43	01:20	Initial cal 20
VC874-ICC874	C0020021.D	12/18/03	11:10	01:47	Initial cal 40
VC874-IC874	C0020022.D	12/18/03	11:37	02:14	Initial cal 70
VC874-IC874	C0020023.D	12/18/03	12:03	02:40	Initial cal 100

Instrument Performance Check (BFB)

Job Number: F21096
Account: ITTNKNOX Shaw E & I, Inc.
Project: PBOW

Sample:	VC874-BFB	Injection Date:	12/18/03
Lab File ID:	C0020025.D	Injection Time:	13:30
Instrument ID:	GCMSC		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	25280	29.4		Pass
75	30.0 - 60.0% of mass 95	38088	44.3		Pass
95	Base peak, 100% relative abundance	86069	100.0		Pass
96	5.0 - 9.0% of mass 95	6114	7.1		Pass
173	Less than 2.0% of mass 174	460	0.53	(0.64) [a]	Pass
174	50.0 - 100.0% of mass 95	72133	83.8		Pass
175	5.0 - 9.0% of mass 174	5399	6.3	(7.5) [a]	Pass
176	95.0 - 101.0% of mass 174	69845	81.2	(96.8) [a]	Pass
177	5.0 - 9.0% of mass 176	4644	5.4	(6.6) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
VC874-CC874	C0020026.D	12/18/03	13:45	00:15	Continuing cal 40
VC874-BS	C0020027.D	12/18/03	14:12	00:42	Blank Spike
VC874-MB	C0020028.D	12/18/03	14:39	01:09	Method Blank
ZZZZZZ	C0020029.D	12/18/03	15:06	01:36	(unrelated sample)
F21113-1	C0020030.D	12/18/03	15:33	02:03	(used for QC only; not part of job F21096)
F21113-1MS	C0020031.D	12/18/03	16:00	02:30	Matrix Spike
F21113-1MSD	C0020032.D	12/18/03	16:27	02:57	Matrix Spike Duplicate
ZZZZZZ	C0020033.D	12/18/03	16:53	03:23	(unrelated sample)
ZZZZZZ	C0020034.D	12/18/03	17:20	03:50	(unrelated sample)
F21096-1	C0020035.D	12/18/03	17:47	04:17	DD3006
F21096-2	C0020036.D	12/18/03	18:13	04:43	DD5004
ZZZZZZ	C0020037.D	12/18/03	18:41	05:11	(unrelated sample)
ZZZZZZ	C0020039.D	12/18/03	19:34	06:04	(unrelated sample)
ZZZZZZ	C0020040.D	12/18/03	20:01	06:31	(unrelated sample)
ZZZZZZ	C0020043.D	12/18/03	21:27	07:57	(unrelated sample)
ZZZZZZ	C0020049.D	12/19/03	00:25	10:55	(unrelated sample)
ZZZZZZ	C0020050.D	12/19/03	00:54	11:24	(unrelated sample)

Volatile Internal Standard Area Summary

Job Number: F21096
Account: ITTNKNOX Shaw E & I, Inc.
Project: PBOW

Check Std:	VC874-CC874	Injection Date:	12/18/03
Lab File ID:	C0020026.D	Injection Time:	13:45
Instrument ID:	GCMSC	Method:	SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT
Check Std	1322365	10.26	1072844	13.50	570781	16.04	147041	7.49
Upper Limit [a]	2644730	10.76	2145688	14.00	1141562	16.54	294082	7.99
Lower Limit [b]	661183	9.76	536422	13.00	285391	15.54	73521	6.99

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT
VC874-BS	1303490	10.26	1027964	13.50	545121	16.04	140780	7.49
VC874-MB	1274005	10.26	998420	13.50	480401	16.04	135423	7.50
ZZZZZZ	1206280	10.26	954923	13.50	469630	16.04	127416	7.50
F21113-1	1174182	10.26	920995	13.50	458625	16.04	123554	7.50
F21113-1MS	1181222	10.26	933392	13.50	488493	16.04	127558	7.50
F21113-1MSD	1182361	10.26	934877	13.50	494885	16.04	132659	7.49
ZZZZZZ	1149116	10.26	906095	13.50	451238	16.04	131111	7.50
ZZZZZZ	1138725	10.26	898922	13.50	447234	16.04	133861	7.50
F21096-1	1106375	10.26	883668	13.50	438286	16.04	127595	7.50
F21096-2	1099888	10.26	870278	13.50	425100	16.04	122717	7.50
ZZZZZZ	1081898	10.26	860371	13.50	417672	16.04	122455	7.50
ZZZZZZ	1054628	10.26	827816	13.50	410393	16.04	116119	7.50
ZZZZZZ	1032549	10.26	816971	13.50	405180	16.04	119973	7.50
ZZZZZZ	998730	10.26	797409	13.50	391618	16.04	99794	7.50
ZZZZZZ	960854	10.26	779946	13.50	388378	16.04	96898	7.50
ZZZZZZ	977750	10.26	790563	13.50	395085	16.04	93842	7.49

IS 1 = Fluorobenzene
IS 2 = Chlorobenzene-D5
IS 3 = 1,4-Dichlorobenzene-d4
IS 4 = Tert Butyl Alcohol-D10

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Volatile Surrogate Recovery Summary

Job Number: F21096
Account: ITTNKNOX Shaw E & I, Inc.
Project: PBOW

Method: SW846 8260B Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4
F21096-1	C0020035.D	101.0	106.0	101.0	101.0
F21096-2	C0020036.D	101.0	104.0	102.0	102.0
F21113-1MS	C0020031.D	100.0	106.0	100.0	100.0
F21113-1MSD	C0020032.D	100.0	107.0	101.0	99.0
VC874-BS	C0020027.D	100.0	104.0	102.0	100.0
VC874-MB	C0020028.D	100.0	102.0	101.0	107.0

Surrogate Compounds	Recovery Limits
S1 = Dibromofluoromethane	86-115%
S2 = 1,2-Dichloroethane-D4	73-126%
S3 = Toluene-D8	86-112%
S4 = 4-Bromofluorobenzene	83-119%

Initial Calibration Summary

Job Number: F21096
Account: ITTNKNOX Shaw E & I, Inc.
Project: PBOW

Sample: VC874-ICC874
Lab FileID: C0020021.D

Response Factor Report MSVOA5

Method : C:\MSDCHEM\2\METHODS\82601218.M (RTE Integrator)
Title : EPA 624 & SWA 5030B/8260B
Last Update : Thu Dec 18 12:43:16 2003
Response via : Initial Calibration

Calibration Files
1 =C0020018.D 2 =C0020019.D 3 =C0020020.D
4 =C0020021.D 5 =C0020022.D 6 =C0020023.D

		Compound	1	2	3	4	5	6	Avg	%RSD
1)	I	Fluorobenzene	----------	----------	----------	ISTD	----------	----------	----------	
2)		Dichlorodifluoromet	0.266	0.229	0.237	0.233	0.235	0.247	0.241	5.62
3)	P	Chloromethane	0.535	0.462	0.471	0.455	0.452	0.471	0.474	6.46
4)	C	Vinyl Chloride		0.279	0.302	0.302	0.304	0.317	0.301	4.63
5)		Bromomethane		0.162	0.157	0.154	0.148	0.146	0.153	4.21
6)		Chloroethane		0.151	0.153	0.153	0.151	0.154	0.153	0.83
7)		Trichlorofluorometh	0.245	0.219	0.238	0.251	0.260	0.275	0.248	7.73
8)		1,2-Dichlorotrifluo	0.306	0.281	0.303	0.308	0.288	0.299	0.298	3.52
9)		Ethyl ether	0.269	0.282	0.303	0.313	0.295	0.295	0.293	5.31
10)		Acrolein		0.022	0.024	0.026	0.022	0.025	0.024	7.96
11)		Freon 113	0.233	0.233	0.246	0.249	0.235	0.243	0.240	2.95
12)		Acetone		0.169	0.185	0.191	0.173	0.169	0.177	5.56
13)	C	1,1-Dichloroethene	0.487	0.480	0.531	0.535	0.511	0.529	0.512	4.61
14)		Iodomethane	0.368	0.385	0.420	0.430	0.415	0.434	0.409	6.45
15)		Methyl Acetate	0.239	0.243	0.259	0.268	0.255	0.254	0.253	4.29
16)		Carbon Disulfide	0.775	0.734	0.768	0.766	0.733	0.758	0.756	2.40
17)		Methylene Chloride	0.439	0.539	0.575	0.587	0.561	0.576	0.546	10.08
18)		Acrylonitrile	0.128	0.158	0.166	0.168	0.165	0.163	0.158	9.46
19)		Methyl Tert Butyl E	0.600	0.587	0.639	0.662	0.622	0.636	0.624	4.41
20)		trans-1,2-Dichloroe	0.459	0.448	0.476	0.485	0.469	0.482	0.470	3.03
21)		Hexane	0.476	0.459	0.508	0.518	0.489	0.498	0.491	4.39
22)		Vinyl acetate	0.590	0.663	0.670	0.644	0.711	0.619	0.649	6.53
23)		Di-isopropyl ether	1.367	1.336	1.428	1.446	1.362	1.372	1.385	3.05
24)	P	1,1-Dichloroethane	0.517	0.515	0.548	0.565	0.533	0.547	0.538	3.68
25)		ETBE	0.976	0.981	1.083	1.122	1.077	1.106	1.058	5.99
26)		2-Butanone	0.208	0.198	0.217	0.227	0.209	0.209	0.211	4.67
27)		cis-1,2-Dichloroeth	0.285	0.255	0.263	0.270	0.260	0.270	0.267	3.92
28)		2,2-Dichloropropane	0.207	0.199	0.221	0.223	0.208	0.211	0.212	4.19
29)		Bromochloromethane	0.113	0.118	0.127	0.130	0.124	0.129	0.123	5.47
30)	C	Chloroform	0.397	0.383	0.414	0.425	0.400	0.413	0.405	3.69
31)		Tetrahydrofuran		0.119	0.106	0.109	0.106	0.104	0.109	5.66
32)	S	Dibromofluoromethan	0.257	0.259	0.260	0.259	0.261	0.259	0.259	0.49
33)		1,1,1-Trichloroetha	0.323	0.329	0.352	0.364	0.338	0.350	0.342	4.52
34)		Cyclohexane	0.603	0.623	0.689	0.702	0.663	0.685	0.661	5.99
35)		1,1-Dichloropropene	0.287	0.279	0.304	0.314	0.297	0.307	0.298	4.39
36)		Carbon Tetrachlorid	0.301	0.282	0.334	0.339	0.326	0.336	0.320	7.18
37)	S	1,2-Dichloroethane-	0.309	0.313	0.322	0.316	0.314	0.312	0.314	1.35
38)		1,2-Dichloroethane	0.404	0.392	0.424	0.434	0.409	0.414	0.413	3.61
39)		Benzene	0.913	0.893	0.965	0.981	0.940	0.958	0.941	3.53
40)		TAME	0.608	0.616	0.674	0.679	0.657	0.668	0.650	4.68
41)		Trichloroethene	0.257	0.242	0.260	0.270	0.250	0.267	0.257	4.06
42)	C	1,2-Dichloropropane	0.303	0.299	0.329	0.336	0.319	0.323	0.318	4.59
43)		Methylcyclohexane	0.349	0.343	0.385	0.397	0.379	0.391	0.374	6.05
44)		Dibromomethane	0.128	0.135	0.153	0.157	0.149	0.154	0.146	8.20
45)		Bromodichloromethan	0.291	0.292	0.316	0.327	0.313	0.327	0.311	5.20
46)		2-Nitropropane	0.093	0.089	0.098	0.101	0.095	0.093	0.095	4.21

Initial Calibration Summary

Job Number: F21096
Account: ITTNKNOX Shaw E & I, Inc.
Project: PBOW

Sample: VC874-ICC874
Lab FileID: C0020021.D

47)		2-Chloroethyl vinyl	0.150	0.164	0.185	0.193	0.179	0.175	0.174	8.79
48)		cis-1,3-Dichloropro	0.361	0.361	0.392	0.409	0.392	0.410	0.387	5.66
49)		4-Methyl-2-pentanon	0.371	0.355	0.386	0.400	0.367	0.363	0.374	4.39
50)	I	Chlorobenzene-d5	----------ISTD----------							
51)	S	Toluene-d8	1.169	1.165	1.173	1.169	1.169	1.161	1.168	0.37
52)	C	Toluene	1.293	1.241	1.346	1.375	1.309	1.351	1.319	3.66
53)		trans-1,3-Dichlorop	0.399	0.411	0.445	0.466	0.446	0.458	0.438	6.11
54)		1,1,2-Trichloroetha	0.204	0.207	0.221	0.231	0.216	0.219	0.216	4.53
55)		2-hexanone	0.334	0.362	0.410	0.427	0.387	0.370	0.382	8.84
56)		1,3-Dichloropropane	0.429	0.447	0.464	0.480	0.453	0.454	0.454	3.77
57)		Tetrachloroethene	0.310	0.321	0.346	0.360	0.348	0.358	0.340	5.89
58)		Dibromochloromethan	0.288	0.296	0.314	0.328	0.322	0.328	0.313	5.49
59)		1,2-Dibromoethane	0.260	0.258	0.278	0.290	0.277	0.282	0.274	4.59
60)		1-Chlorohexane	0.378	0.390	0.432	0.448	0.433	0.443	0.421	6.97
61)	P	Chlorobenzene	0.912	0.841	0.917	0.932	0.903	0.940	0.907	3.88
62)		1,1,1,2-Tetrachloro	0.304	0.301	0.332	0.341	0.328	0.333	0.323	5.09
63)	C	Ethylbenzene	1.442	1.418	1.527	1.569	1.499	1.511	1.494	3.74
64)		m,p-Xylene	1.085	1.104	1.204	1.238	1.183	1.173	1.165	5.04
65)		o-Xylene	1.108	1.130	1.258	1.291	1.227	1.200	1.202	5.97
66)		Styrene	0.825	0.859	0.972	1.031	0.988	0.973	0.941	8.56
67)	P	Bromoform	0.173	0.180	0.217	0.231	0.227	0.234	0.210	12.77
68)	I	1,4-Dichlorobenzene-d	----------ISTD----------							
69)		Isopropylbenzene	2.465	2.405	2.613	2.668	2.558	2.634	2.557	4.02
70)		Cyclohexanone	0.024	0.031	0.025	0.024	0.024	0.024	0.025	10.42
71)	S	4-Bromofluorobenzen	1.008	0.996	0.986	0.965	0.952	0.944	0.975	2.59
72)	P	1,1,2,2-Tetrachloro	0.628	0.595	0.630	0.620	0.606	0.593	0.612	2.66
73)		trans-1,4-Dichloro-	0.234	0.271	0.293	0.313	0.298	0.300	0.285	10.02
74)		1,2,3-Trichloroprop	0.199	0.179	0.190	0.193	0.178	0.175	0.186	5.06
75)		Bromobenzene	0.699	0.695	0.757	0.773	0.735	0.738	0.733	4.23
76)		n-Propylbenzene	3.152	3.190	3.498	3.565	3.366	3.373	3.357	4.87
77)		1,3,5-Trimethylbenz	2.075	2.124	2.340	2.402	2.253	2.186	2.230	5.65
78)		2-Chlorotoluene	2.364	2.199	2.376	2.408	2.260	2.219	2.304	3.87
79)		4-Chlorotoluene	2.100	2.013	2.169	2.218	2.106	2.154	2.127	3.32
80)		tert-Butylbenzene	1.531	1.360	1.649	1.687	1.592	1.612	1.572	7.42
81)		1,2,4-Trimethylbenz	2.100	2.154	2.407	2.455	2.343	2.391	2.308	6.32
82)		sec-Butylbenzene	2.520	2.586	2.844	2.956	2.816	2.889	2.768	6.32
83)		4-Isopropyltoluene	2.168	2.184	2.437	2.519	2.435	2.480	2.371	6.50
84)		1,3-Dichlorobenzene	1.348	1.300	1.410	1.465	1.409	1.462	1.399	4.61
85)		1,4-Dichlorobenzene	1.348	1.377	1.479	1.516	1.457	1.503	1.447	4.78
86)		Benzyl chloride	1.018	1.065	1.255	1.325	1.260	1.274	1.200	10.48
87)		n-Butylbenzene	1.973	2.064	2.331	2.403	2.310	2.348	2.238	7.84
88)		1,2-Dichlorobenzene	1.265	1.238	1.357	1.385	1.341	1.387	1.329	4.72
89)		1,2-Dibromo-3-Chlor	0.108	0.101	0.108	0.108	0.103	0.102	0.105	3.05
90)		1,2,4-Trichlorobenz	0.626	0.716	0.798	0.854	0.809	0.839	0.773	11.19
91)		Hexachlorobutadiene	0.339	0.337	0.356	0.359	0.338	0.344	0.346	2.81
92)		Naphthalene	1.421	1.510	1.740	1.834	1.740	1.791	1.673	9.96
93)		1,2,3-Trichlorobenz	0.563	0.605	0.696	0.734	0.691	0.717	0.668	10.19
94)	I	Tert Butyl alcohol-d1	----------ISTD----------							
95)		Tert-Butyl alcohol	1.280	1.331	1.303	1.331	1.307	1.352	1.317	1.94
96)		Tert Amyl Alcohol	0.456	0.457	0.535	0.560	0.544	0.571	0.521	9.80
97)		1,4-Dioxane		0.083	0.091	0.090	0.091	0.100	0.091	6.84

(#) = Out of Range

82601218.M Fri Dec 19 09:42:51 2003 RPT1

Continuing Calibration Summary

Job Number: F21096
Account: ITTNKNOX Shaw E & I, Inc.
Project: PBOW

Sample: VC874-CC874
Lab FileID: C0020026.D

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\2\DATA\121803\C0020026.D Vial: 1
Acq On : 18 Dec 2003 1:45 pm Operator: KarenW
Sample : CC874-40 Inst : MSVOA5
Misc : ms2786,vc874,,,,, Multiplr: 1.00
MS Integration Params: Small.p

Method : C:\MSDCHEM\2\METHODS\82601218.M (RTE Integrator)
Title : EPA 624 & SWA 5030B/8260B
Last Update : Thu Dec 18 12:43:16 2003
Response via : Multiple Level Calibration

Min. RRF : 0.001 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	Fluorobenzene	1.000	1.000	0.0	102	0.00	10.26
2		Dichlorodifluoromethane	0.241	0.258	-7.1	113	0.00	4.58
3	P	Chloromethane	0.474	0.484	-2.1	108	0.00	4.94
4	C	Vinyl Chloride	0.301	0.342	-13.6	115	0.00	5.19
5		Bromomethane	0.153	0.162	-5.9	107	0.00	5.78
6		Chloroethane	0.153	0.164	-7.2	109	0.00	5.94
7		Trichlorofluoromethane	0.248	0.254	-2.4	103	0.00	6.33
8		1,2-Dichlorotrifluoroetha	0.298	0.298	0.0	98	0.00	6.65
9		Ethyl ether	0.293	0.300	-2.4	97	0.00	6.64
10		Acrolein	0.024	0.019	20.8#	74	0.00	6.84
11		Freon 113	0.240	0.242	-0.8	99	0.00	7.00
12		Acetone	0.177	0.173	2.3	92	0.00	7.02
13	C	1,1-Dichloroethene	0.512	0.518	-1.2	98	0.00	7.04
14		Iodomethane	0.409	0.428	-4.6	101	0.00	7.30
15		Methyl Acetate	0.253	0.264	-4.3	100	0.00	7.40
16		Carbon Disulfide	0.756	0.744	1.6	99	0.00	7.42
17		Methylene Chloride	0.546	0.574	-5.1	99	0.00	7.62
18		Acrylonitrile	0.158	0.165	-4.4	100	0.00	7.83
19		Methyl Tert Butyl Ether	0.624	0.636	-1.9	98	0.00	7.88
20		trans-1,2-Dichloroethene	0.470	0.472	-0.4	99	0.00	7.92
21		Hexane	0.491	0.519	-5.7	102	0.00	8.20
22		Vinyl acetate	0.649	0.795	-22.5#	125	0.00	8.36
23		Di-isopropyl ether	1.385	1.420	-2.5	100	0.00	8.38
24	P	1,1-Dichloroethane	0.538	0.545	-1.3	98	0.00	8.40
25		ETBE	1.058	1.100	-4.0	100	0.00	8.78
26		2-Butanone	0.211	0.214	-1.4	95	0.00	8.98
27		cis-1,2-Dichloroethene	0.267	0.260	2.6	98	0.00	9.03
28		2,2-Dichloropropane	0.212	0.220	-3.8	100	0.00	9.05
29		Bromochloromethane	0.123	0.126	-2.4	98	0.00	9.31
30	C	Chloroform	0.405	0.407	-0.5	97	0.00	9.34
31		Tetrahydrofuran	0.109	0.106	2.8	99	0.00	9.37
32	S	Dibromofluoromethane	0.259	0.264	-1.9	103	0.00	9.51
33		1,1,1-Trichloroethane	0.342	0.347	-1.5	97	0.00	9.61
34		Cyclohexane	0.661	0.675	-2.1	98	0.00	9.71
35		1,1-Dichloropropene	0.298	0.300	-0.7	97	0.00	9.77
36		Carbon Tetrachloride	0.320	0.322	-0.6	96	0.00	9.81
37	S	1,2-Dichloroethane-d4	0.314	0.319	-1.6	102	0.00	9.91
38		1,2-Dichloroethane	0.413	0.422	-2.2	99	0.00	9.99
39		Benzene	0.941	0.953	-1.3	99	0.00	10.01
40		TAME	0.650	0.675	-3.8	101	0.00	10.02
41		Trichloroethene	0.257	0.249	3.1	94	0.00	10.65
42	C	1,2-Dichloropropane	0.318	0.324	-1.9	98	0.00	10.90

ACCUTEST Laboratories

Continuing Calibration Summary

Job Number: F21096
Account: ITTNKNOX Shaw E & I, Inc.
Project: PBOW

Sample: VC874-CC874
Lab FileID: C0020026.D

43		Methylcyclohexane	0.374	0.378	-1.1	97	0.00	10.90
44		Dibromomethane	0.146	0.151	-3.4	97	0.00	11.04
45		Bromodichloromethane	0.311	0.319	-2.6	99	0.00	11.15
46		2-Nitropropane	0.095	0.100	-5.3	101	0.00	11.34
47		2-Chloroethyl vinyl ether	0.174	0.187	-7.5	99	0.00	11.36
48		cis-1,3-Dichloropropene	0.387	0.398	-2.8	99	0.00	11.60
49		4-Methyl-2-pentanone	0.374	0.387	-3.5	98	0.00	11.69
50	I	Chlorobenzene-d5	1.000	1.000	0.0	103	0.00	13.50
51	S	Toluene-d8	1.168	1.170	-0.2	103	0.00	11.92
52	C	Toluene	1.319	1.308	0.8	98	0.00	12.00
53		trans-1,3-Dichloropropene	0.438	0.453	-3.4	100	0.00	12.15
54		1,1,2-Trichloroethane	0.216	0.220	-1.9	98	0.00	12.38
55		2-hexanone	0.382	0.392	-2.6	94	0.00	12.55
56		1,3-Dichloropropane	0.454	0.459	-1.1	98	0.00	12.57
57		Tetrachloroethene	0.340	0.344	-1.2	98	0.00	12.61
58		Dibromochloromethane	0.313	0.320	-2.2	100	0.00	12.86
59		1,2-Dibromoethane	0.274	0.280	-2.2	99	0.00	13.03
60		1-Chlorohexane	0.421	0.429	-1.9	98	0.00	13.38
61	P	Chlorobenzene	0.907	0.903	0.4	100	0.00	13.53
62		1,1,1,2-Tetrachloroethane	0.323	0.326	-0.9	98	0.00	13.58
63	C	Ethylbenzene	1.494	1.503	-0.6	98	0.00	13.59
64		m,p-Xylene	1.165	1.195	-2.6	99	0.00	13.71
65		o-Xylene	1.202	1.237	-2.9	98	0.00	14.16
66		Styrene	0.941	0.994	-5.6	99	0.00	14.16
67	P	Bromoform	0.210	0.225	-7.1	100	0.00	14.44
68	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	103	0.00	16.04
69		Isopropylbenzene	2.557	2.563	-0.2	99	0.00	14.53
70		Cyclohexanone	0.025	0.026	-4.0	112	0.00	14.71
71	S	4-Bromofluorobenzene	0.975	0.964	1.1	103	0.00	14.75
72	P	1,1,2,2-Tetrachloroethane	0.612	0.627	-2.5	105	0.00	14.82
73		trans-1,4-Dichloro-2-bute	0.285	0.316	-10.9	105	0.00	14.87
74		1,2,3-Trichloropropane	0.186	0.182	2.2	98	0.00	14.92
75		Bromobenzene	0.733	0.746	-1.8	100	0.00	14.98
76		n-Propylbenzene	3.357	3.404	-1.4	99	0.00	14.98
77		1,3,5-Trimethylbenzene	2.230	2.289	-2.6	99	0.00	15.15
78		2-Chlorotoluene	2.304	2.323	-0.8	100	0.00	15.15
79		4-Chlorotoluene	2.127	2.112	0.7	98	0.00	15.26
80		tert-Butylbenzene	1.572	1.609	-2.4	99	0.00	15.54
81		1,2,4-Trimethylbenzene	2.308	2.376	-2.9	100	0.00	15.59
82		sec-Butylbenzene	2.768	2.823	-2.0	99	0.00	15.78
83		4-Isopropyltoluene	2.371	2.438	-2.8	100	0.00	15.90
84		1,3-Dichlorobenzene	1.399	1.426	-1.9	101	0.00	15.98
85		1,4-Dichlorobenzene	1.447	1.471	-1.7	100	0.00	16.07
86		Benzyl chloride	1.200	1.399	-16.6	109	0.00	16.18
87		n-Butylbenzene	2.238	2.342	-4.6	101	0.00	16.36
88		1,2-Dichlorobenzene	1.329	1.351	-1.7	101	0.00	16.50
89		1,2-Dibromo-3-Chloropropa	0.105	0.105	0.0	100	0.00	17.35
90		1,2,4-Trichlorobenzene	0.773	0.824	-6.6	100	0.00	18.35
91		Hexachlorobutadiene	0.346	0.345	0.3	99	0.00	18.51
92		Naphthalene	1.673	1.772	-5.9	100	0.00	18.70
93		1,2,3-Trichlorobenzene	0.668	0.706	-5.7	99	0.00	19.01
94	I	Tert Butyl alcohol-d10	1.000	1.000	0.0	107	0.00	7.49
95		Tert-Butyl alcohol	1.317	1.287	2.3	103	0.00	7.59
96		Tert Amyl Alcohol	0.521	0.533	-2.3	102	0.00	9.81
97		1,4-Dioxane	0.091	0.095	-4.4	112	0.00	11.00

Continuing Calibration Summary

Job Number: F21096
Account: ITTNKNOX Shaw E & I, Inc.
Project: PBOW

Sample: VC874-CC874
Lab FileID: C0020026.D

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( 2.2 %)  2 of  93 compounds'%D > 20
-----------------------------------------------------------------------

  (#) = Out of Range                SPCC's out = 0  CCC's out = 0
   C0020021.D 82601218.M       Fri Dec 19 09:42:35 2003   RPT1
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4.7

4

ACCUTEST Laboratories

GC/MS Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Instrument Performance Checks (DFTPP)
- Internal Standard Area Summaries
- Surrogate Recovery Summaries
- Initial and Continuing Calibration Summaries

Method Blank Summary

Job Number: F21096
Account: ITTNKNOX Shaw E & I, Inc.
Project: PBOW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP9295-MB	W018242.D	1	12/16/03	ME	12/13/03	OP9295	SW949

The QC reported here applies to the following samples: Method: SW846 8270C

F21096-1

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	25	15	ug/l	
95-57-8	2-Chlorophenol	ND	5.0	2.0	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	5.0	2.0	ug/l	
120-83-2	2,4-Dichlorophenol	ND	5.0	2.0	ug/l	
105-67-9	2,4-Dimethylphenol	ND	5.0	2.0	ug/l	
51-28-5	2,4-Dinitrophenol	ND	25	10	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	7.5	ug/l	
95-48-7	2-Methylphenol	ND	5.0	2.0	ug/l	
	3&4-Methylphenol	ND	5.0	2.0	ug/l	
88-75-5	2-Nitrophenol	ND	5.0	2.0	ug/l	
100-02-7	4-Nitrophenol	ND	25	10	ug/l	
87-86-5	Pentachlorophenol	ND	25	10	ug/l	
108-95-2	Phenol	ND	5.0	2.0	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	5.0	2.5	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	5.0	2.0	ug/l	
83-32-9	Acenaphthene	ND	5.0	1.0	ug/l	
208-96-8	Acenaphthylene	ND	5.0	1.0	ug/l	
120-12-7	Anthracene	ND	5.0	1.0	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.0	1.0	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.0	1.0	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.0	1.0	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.0	2.0	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.0	1.0	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.0	1.0	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.0	2.0	ug/l	
100-51-6	Benzyl Alcohol	ND	5.0	1.0	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.0	1.0	ug/l	
106-47-8	4-Chloroaniline	ND	5.0	2.0	ug/l	
86-74-8	Carbazole	ND	5.0	1.0	ug/l	
218-01-9	Chrysene	ND	5.0	1.0	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.0	1.0	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.0	2.0	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.0	1.0	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.0	1.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	5.0	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	5.0	1.0	ug/l	

ACCUTEST Laboratories

Method Blank Summary

Job Number: F21096
Account: ITTNKNOX Shaw E & I, Inc.
Project: PBOW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP9295-MB	W018242.D	1	12/16/03	ME	12/13/03	OP9295	SW949

The QC reported here applies to the following samples: Method: SW846 8270C

F21096-1

CAS No.	Compound	Result	RL	MDL	Units	Q
106-46-7	1,4-Dichlorobenzene	ND	5.0	1.0	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	5.0	2.0	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	5.0	2.0	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	10	5.0	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.0	2.0	ug/l	
132-64-9	Dibenzofuran	ND	5.0	1.0	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.0	2.0	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.0	2.5	ug/l	
84-66-2	Diethyl phthalate	ND	5.0	2.0	ug/l	
131-11-3	Dimethyl phthalate	ND	5.0	2.0	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	5.0	2.5	ug/l	
206-44-0	Fluoranthene	ND	5.0	1.0	ug/l	
86-73-7	Fluorene	ND	5.0	1.0	ug/l	
118-74-1	Hexachlorobenzene	ND	5.0	1.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	2.0	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	5.0	2.0	ug/l	
67-72-1	Hexachloroethane	ND	5.0	2.0	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.0	2.0	ug/l	
78-59-1	Isophorone	ND	5.0	1.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.0	1.0	ug/l	
88-74-4	2-Nitroaniline	ND	5.0	2.0	ug/l	
99-09-2	3-Nitroaniline	ND	5.0	2.0	ug/l	
100-01-6	4-Nitroaniline	ND	5.0	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	1.0	ug/l	
98-95-3	Nitrobenzene	ND	5.0	1.0	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.0	2.0	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.0	2.0	ug/l	
85-01-8	Phenanthrene	ND	5.0	1.0	ug/l	
129-00-0	Pyrene	ND	5.0	1.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	1.0	ug/l	

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	53%	19-90%
4165-62-2	Phenol-d5	32%	10-68%

ACCUTEST Laboratories

Method Blank Summary

Job Number: F21096
Account: ITTNKNOX Shaw E & I, Inc.
Project: PBOW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP9295-MB	W018242.D	1	12/16/03	ME	12/13/03	OP9295	SW949

The QC reported here applies to the following samples: Method: SW846 8270C

F21096-1

CAS No.	Surrogate Recoveries		Limits
118-79-6	2,4,6-Tribromophenol	89%	36-137%
4165-60-0	Nitrobenzene-d5	79%	49-119%
321-60-8	2-Fluorobiphenyl	79%	45-118%
1718-51-0	Terphenyl-d14	89%	46-135%

Method Blank Summary

Job Number: F21096
Account: ITTNKNOX Shaw E & I, Inc.
Project: PBOW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP9295-MB	L020029.D	1	12/17/03	ME	12/13/03	OP9295	SL1074

The QC reported here applies to the following samples: Method: SW846 8270C

F21096-1

CAS No.	Compound	Result	RL	MDL	Units	Q
65-85-0	Benzoic Acid	ND	25	15	ug/l	
95-57-8	2-Chlorophenol	ND	5.0	2.0	ug/l	
59-50-7	4-Chloro-3-methyl phenol	ND	5.0	2.0	ug/l	
120-83-2	2,4-Dichlorophenol	ND	5.0	2.0	ug/l	
105-67-9	2,4-Dimethylphenol	ND	5.0	2.0	ug/l	
51-28-5	2,4-Dinitrophenol	ND	25	10	ug/l	
534-52-1	4,6-Dinitro-o-cresol	ND	10	7.5	ug/l	
95-48-7	2-Methylphenol	ND	5.0	2.0	ug/l	
	3&4-Methylphenol	ND	5.0	2.0	ug/l	
88-75-5	2-Nitrophenol	ND	5.0	2.0	ug/l	
100-02-7	4-Nitrophenol	ND	25	10	ug/l	
87-86-5	Pentachlorophenol	ND	25	10	ug/l	
108-95-2	Phenol	ND	5.0	2.0	ug/l	
95-95-4	2,4,5-Trichlorophenol	ND	5.0	2.5	ug/l	
88-06-2	2,4,6-Trichlorophenol	ND	5.0	2.0	ug/l	
83-32-9	Acenaphthene	ND	5.0	1.0	ug/l	
208-96-8	Acenaphthylene	ND	5.0	1.0	ug/l	
120-12-7	Anthracene	ND	5.0	1.0	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.0	1.0	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.0	1.0	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.0	1.0	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.0	2.0	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.0	1.0	ug/l	
101-55-3	4-Bromophenyl phenyl ether	ND	5.0	1.0	ug/l	
85-68-7	Butyl benzyl phthalate	ND	5.0	2.0	ug/l	
100-51-6	Benzyl Alcohol	ND	5.0	1.0	ug/l	
91-58-7	2-Chloronaphthalene	ND	5.0	1.0	ug/l	
106-47-8	4-Chloroaniline	ND	5.0	2.0	ug/l	
86-74-8	Carbazole	ND	5.0	1.0	ug/l	
218-01-9	Chrysene	ND	5.0	1.0	ug/l	
111-91-1	bis(2-Chloroethoxy)methane	ND	5.0	1.0	ug/l	
111-44-4	bis(2-Chloroethyl)ether	ND	5.0	2.0	ug/l	
108-60-1	bis(2-Chloroisopropyl)ether	ND	5.0	1.0	ug/l	
7005-72-3	4-Chlorophenyl phenyl ether	ND	5.0	1.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	5.0	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	5.0	1.0	ug/l	

ACCUTEST Laboratories

Method Blank Summary

Job Number: F21096
Account: ITTNKNOX Shaw E & I, Inc.
Project: PBOW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP9295-MB	L020029.D	1	12/17/03	ME	12/13/03	OP9295	SL1074

The QC reported here applies to the following samples: Method: SW846 8270C

F21096-1

CAS No.	Compound	Result	RL	MDL	Units	Q
106-46-7	1,4-Dichlorobenzene	ND	5.0	1.0	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	5.0	2.0	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	5.0	2.0	ug/l	
91-94-1	3,3'-Dichlorobenzidine	ND	10	5.0	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.0	2.0	ug/l	
132-64-9	Dibenzofuran	ND	5.0	1.0	ug/l	
84-74-2	Di-n-butyl phthalate	ND	5.0	2.0	ug/l	
117-84-0	Di-n-octyl phthalate	ND	5.0	2.5	ug/l	
84-66-2	Diethyl phthalate	ND	5.0	2.0	ug/l	
131-11-3	Dimethyl phthalate	ND	5.0	2.0	ug/l	
117-81-7	bis(2-Ethylhexyl)phthalate	ND	5.0	2.5	ug/l	
206-44-0	Fluoranthene	ND	5.0	1.0	ug/l	
86-73-7	Fluorene	ND	5.0	1.0	ug/l	
118-74-1	Hexachlorobenzene	ND	5.0	1.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	2.0	ug/l	
77-47-4	Hexachlorocyclopentadiene	ND	5.0	2.0	ug/l	
67-72-1	Hexachloroethane	ND	5.0	2.0	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.0	2.0	ug/l	
78-59-1	Isophorone	ND	5.0	1.0	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.0	1.0	ug/l	
88-74-4	2-Nitroaniline	ND	5.0	2.0	ug/l	
99-09-2	3-Nitroaniline	ND	5.0	2.0	ug/l	
100-01-6	4-Nitroaniline	ND	5.0	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	1.0	ug/l	
98-95-3	Nitrobenzene	ND	5.0	1.0	ug/l	
621-64-7	N-Nitroso-di-n-propylamine	ND	5.0	2.0	ug/l	
86-30-6	N-Nitrosodiphenylamine	ND	5.0	2.0	ug/l	
85-01-8	Phenanthrene	ND	5.0	1.0	ug/l	
129-00-0	Pyrene	ND	5.0	1.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	1.0	ug/l	

CAS No.	Surrogate Recoveries		Limits
367-12-4	2-Fluorophenol	47%	19-90%
4165-62-2	Phenol-d5	30%	10-68%

ACCUTEST. Laboratories

Method Blank Summary

Job Number: F21096
Account: ITTNKNOX Shaw E & I, Inc.
Project: PBOW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP9295-MB	L020029.D	1	12/17/03	ME	12/13/03	OP9295	SL1074

The QC reported here applies to the following samples: Method: SW846 8270C

F21096-1

CAS No.	Surrogate Recoveries		Limits
118-79-6	2,4,6-Tribromophenol	86%	36-137%
4165-60-0	Nitrobenzene-d5	78%	49-119%
321-60-8	2-Fluorobiphenyl	77%	45-118%
1718-51-0	Terphenyl-d14	87%	46-135%

Blank Spike Summary

Job Number: F21096
Account: ITTNKNOX Shaw E & I, Inc.
Project: PBOW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP9295-BS	W018241.D	1	12/16/03	ME	12/13/03	OP9295	SW949

The QC reported here applies to the following samples: Method: SW846 8270C

F21096-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
95-57-8	2-Chlorophenol	50	41.3	83	62-103
59-50-7	4-Chloro-3-methyl phenol	50	42.2	84	64-103
120-83-2	2,4-Dichlorophenol	50	42.9	86	64-103
105-67-9	2,4-Dimethylphenol	50	32.8	66	43-94
51-28-5	2,4-Dinitrophenol	50	35.8	72	12-125
534-52-1	4,6-Dinitro-o-cresol	50	44.5	89	47-119
95-48-7	2-Methylphenol	50	36.9	74	54-91
	3&4-Methylphenol	100	68.3	68	48-86
88-75-5	2-Nitrophenol	50	43.0	86	64-104
100-02-7	4-Nitrophenol	50	17.5	35	22-50
87-86-5	Pentachlorophenol	50	35.0	70	50-111
108-95-2	Phenol	50	18.8	38	25-53
95-95-4	2,4,5-Trichlorophenol	50	44.4	89	66-104
88-06-2	2,4,6-Trichlorophenol	50	43.5	87	60-103
83-32-9	Acenaphthene	50	43.3	87	69-101
208-96-8	Acenaphthylene	50	50.3	101	75-113
120-12-7	Anthracene	50	46.5	93	75-107
56-55-3	Benzo(a)anthracene	50	45.8	92	73-106
50-32-8	Benzo(a)pyrene	50	47.5	95	75-114
205-99-2	Benzo(b)fluoranthene	50	44.0	88	73-110
191-24-2	Benzo(g,h,i)perylene	50	47.6	95	63-115
207-08-9	Benzo(k)fluoranthene	50	46.6	93	73-112
101-55-3	4-Bromophenyl phenyl ether	50	47.9	96	73-103
85-68-7	Butyl benzyl phthalate	50	43.7	87	69-108
100-51-6	Benzyl Alcohol	50	37.5	75	34-104
91-58-7	2-Chloronaphthalene	50	44.5	89	67-102
106-47-8	4-Chloroaniline	50	41.7	83	57-104
86-74-8	Carbazole	50	45.3	91	74-113
218-01-9	Chrysene	50	45.6	91	73-103
111-91-1	bis(2-Chloroethoxy)methane	50	41.7	83	57-103
111-44-4	bis(2-Chloroethyl)ether	50	41.9	84	64-106
108-60-1	bis(2-Chloroisopropyl)ether	50	43.9	88	52-120
7005-72-3	4-Chlorophenyl phenyl ether	50	44.6	89	71-104
95-50-1	1,2-Dichlorobenzene	50	42.6	85	62-100
541-73-1	1,3-Dichlorobenzene	50	40.0	80	59-99
106-46-7	1,4-Dichlorobenzene	50	41.5	83	60-101

ACCUTEST Laboratories

Blank Spike Summary

Job Number: F21096
Account: ITTNKNOX Shaw E & I, Inc.
Project: PBOW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP9295-BS	W018241.D	1	12/16/03	ME	12/13/03	OP9295	SW949

The QC reported here applies to the following samples: Method: SW846 8270C

F21096-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
121-14-2	2,4-Dinitrotoluene	50	43.9	88	69-111
606-20-2	2,6-Dinitrotoluene	50	47.0	94	72-111
91-94-1	3,3'-Dichlorobenzidine	50	43.0	86	42-110
53-70-3	Dibenzo(a,h)anthracene	50	46.9	94	63-115
132-64-9	Dibenzofuran	50	44.5	89	69-104
84-74-2	Di-n-butyl phthalate	50	43.8	88	72-109
117-84-0	Di-n-octyl phthalate	50	38.5	77	68-120
84-66-2	Diethyl phthalate	50	44.1	88	64-110
131-11-3	Dimethyl phthalate	50	46.0	92	44-120
117-81-7	bis(2-Ethylhexyl)phthalate	50	41.8	84	69-115
206-44-0	Fluoranthene	50	44.5	89	73-111
86-73-7	Fluorene	50	43.9	88	70-105
118-74-1	Hexachlorobenzene	50	48.7	97	73-103
87-68-3	Hexachlorobutadiene	50	38.0	76	55-90
77-47-4	Hexachlorocyclopentadiene	50	31.2	62	26-95
67-72-1	Hexachloroethane	50	42.2	84	59-104
193-39-5	Indeno(1,2,3-cd)pyrene	50	47.4	95	63-118
78-59-1	Isophorone	50	43.8	88	68-107
91-57-6	2-Methylnaphthalene	50	42.5	85	66-100
88-74-4	2-Nitroaniline	50	44.4	89	70-111
99-09-2	3-Nitroaniline	50	41.9	84	66-106
100-01-6	4-Nitroaniline	50	43.7	87	65-113
91-20-3	Naphthalene	50	42.9	86	67-101
98-95-3	Nitrobenzene	50	43.7	87	66-106
621-64-7	N-Nitroso-di-n-propylamine	50	43.0	86	64-109
86-30-6	N-Nitrosodiphenylamine	50	49.8	100	74-114
85-01-8	Phenanthrene	50	45.0	90	73-104
129-00-0	Pyrene	50	44.6	89	69-105
120-82-1	1,2,4-Trichlorobenzene	50	42.9	86	64-101

CAS No.	Surrogate Recoveries	BSP	Limits
367-12-4	2-Fluorophenol	56%	19-90%
4165-62-2	Phenol-d5	35%	10-68%
118-79-6	2,4,6-Tribromophenol	98%	36-137%

ACCUTEST Laboratories

Blank Spike Summary

Job Number: F21096
Account: ITTNKNOX Shaw E & I, Inc.
Project: PBOW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP9295-BS	W018241.D	1	12/16/03	ME	12/13/03	OP9295	SW949

The QC reported here applies to the following samples: Method: SW846 8270C

F21096-1

CAS No.	Surrogate Recoveries	BSP	Limits
4165-60-0	Nitrobenzene-d5	88%	49-119%
321-60-8	2-Fluorobiphenyl	88%	45-118%
1718-51-0	Terphenyl-d14	95%	46-135%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F21096
Account: ITTNKNOX Shaw E & I, Inc.
Project: PBOW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP9295-MS	W018245.D	1	12/16/03	ME	12/13/03	OP9295	SW949
OP9295-MSD	W018246.D	1	12/16/03	ME	12/13/03	OP9295	SW949
F21072-2	W018244.D	1	12/16/03	ME	12/13/03	OP9295	SW949

The QC reported here applies to the following samples: Method: SW846 8270C

F21096-1

CAS No.	Compound	F21072-2 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
95-57-8	2-Chlorophenol	ND		100	89.4	89	89.0	89	0	53-102/24
59-50-7	4-Chloro-3-methyl phenol	ND		100	86.9	87	86.4	86	1	60-101/18
120-83-2	2,4-Dichlorophenol	ND		100	88.9	89	87.4	87	2	55-100/24
105-67-9	2,4-Dimethylphenol	ND		100	76.5	77	75.7	76	1	36-98/26
51-28-5	2,4-Dinitrophenol	ND		100	69.9	70	59.6	60	16	14-135/39
534-52-1	4,6-Dinitro-o-cresol	ND		100	93.2	93	87.3	87	7	40-127/24
95-48-7	2-Methylphenol	ND		100	85.5	86	85.2	85	0	46-100/23
	3&4-Methylphenol	ND		200	170	85	169	85	1	43-100/23
88-75-5	2-Nitrophenol	ND		100	90.1	90	91.5	92	2	53-104/25
100-02-7	4-Nitrophenol	ND		100	53.7	54	52.6	53	2	32-81/28
87-86-5	Pentachlorophenol	ND		100	72.1	72	73.3	73	2	44-118/16
108-95-2	Phenol	ND		100	56.3	56	57.9	58	3	31-77/26
95-95-4	2,4,5-Trichlorophenol	ND		100	90.9	91	88.6	89	3	61-102/18
88-06-2	2,4,6-Trichlorophenol	ND		100	89.5	90	86.7	87	3	55-103/21
83-32-9	Acenaphthene	ND		100	90.5	91	89.5	90	1	60-103/20
208-96-8	Acenaphthylene	ND		100	105	105	102	102	3	67-113/20
120-12-7	Anthracene	ND		100	96.5	97	96.2	96	0	71-105/14
56-55-3	Benzo(a)anthracene	ND		100	94.4	94	93.7	94	1	70-103/16
50-32-8	Benzo(a)pyrene	ND		100	99.8	100	99.0	99	1	70-113/16
205-99-2	Benzo(b)fluoranthene	ND		100	91.9	92	92.8	93	1	67-110/17
191-24-2	Benzo(g,h,i)perylene	ND		100	95.6	96	95.4	95	0	63-111/17
207-08-9	Benzo(k)fluoranthene	ND		100	97.8	98	94.4	94	4	68-110/17
101-55-3	4-Bromophenyl phenyl ether	ND		100	98.6	99	96.5	97	2	68-102/16
85-68-7	Butyl benzyl phthalate	ND		100	91.2	91	89.5	90	2	65-108/17
100-51-6	Benzyl Alcohol	ND		100	91.3	91	89.4	89	2	48-106/24
91-58-7	2-Chloronaphthalene	ND		100	94.3	94	91.2	91	3	58-101/22
106-47-8	4-Chloroaniline	ND		100	36.0	36*	41.7	42	15	39-101/21
86-74-8	Carbazole	ND		100	93.2	93	95.9	96	3	71-109/16
218-01-9	Chrysene	ND		100	93.3	93	94.4	94	1	70-100/18
111-91-1	bis(2-Chloroethoxy)methane	ND		100	87.0	87	85.8	86	1	49-100/24
111-44-4	bis(2-Chloroethyl)ether	ND		100	89.3	89	87.5	88	2	54-103/24
108-60-1	bis(2-Chloroisopropyl)ether	ND		100	92.1	92	90.2	90	2	49-109/22
7005-72-3	4-Chlorophenyl phenyl ether	ND		100	90.8	91	90.3	90	1	65-103/18
95-50-1	1,2-Dichlorobenzene	ND		100	95.4	95	95.5	96	0	50-101/22
541-73-1	1,3-Dichlorobenzene	ND		100	90.8	91	89.5	90	1	50-100/23
106-46-7	1,4-Dichlorobenzene	ND		100	90.9	91	89.7	90	1	51-101/23

ACCUTEST Laboratories

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F21096
Account: ITTNKNOX Shaw E & I, Inc.
Project: PBOW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP9295-MS	W018245.D	1	12/16/03	ME	12/13/03	OP9295	SW949
OP9295-MSD	W018246.D	1	12/16/03	ME	12/13/03	OP9295	SW949
F21072-2	W018244.D	1	12/16/03	ME	12/13/03	OP9295	SW949

The QC reported here applies to the following samples: Method: SW846 8270C

F21096-1

CAS No.	Compound	F21072-2 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
121-14-2	2,4-Dinitrotoluene	ND		100	90.1	90	90.6	91	1	65-110/16
606-20-2	2,6-Dinitrotoluene	ND		100	95.5	96	95.2	95	0	65-111/19
91-94-1	3,3'-Dichlorobenzidine	ND		100	78.6	79	83.6	84	6	18-112/22
53-70-3	Dibenzo(a,h)anthracene	ND		100	94.1	94	94.8	95	1	62-111/20
132-64-9	Dibenzofuran	ND		100	91.9	92	91.0	91	1	64-102/17
84-74-2	Di-n-butyl phthalate	ND		100	92.9	93	91.6	92	1	68-107/17
117-84-0	Di-n-octyl phthalate	ND		100	84.0	84	80.7	81	4	58-126/23
84-66-2	Diethyl phthalate	ND		100	92.8	93	91.0	91	2	59-110/18
131-11-3	Dimethyl phthalate	ND		100	94.1	94	93.7	94	0	45-116/25
117-81-7	bis(2-Ethylhexyl)phthalate	ND		100	89.7	90	87.9	88	2	55-120/22
206-44-0	Fluoranthene	ND		100	94.6	95	94.4	94	0	67-108/17
86-73-7	Fluorene	ND		100	91.3	91	90.7	91	1	65-105/17
118-74-1	Hexachlorobenzene	ND		100	99.9	100	99.5	100	0	69-102/16
87-68-3	Hexachlorobutadiene	ND		100	84.6	85	83.2	83	2	45-93/26
77-47-4	Hexachlorocyclopentadiene	ND		100	80.7	81	80.4	80	0	20-92/34
67-72-1	Hexachloroethane	ND		100	103	103	101	101	2	51-105/26
193-39-5	Indeno(1,2,3-cd)pyrene	ND		100	95.8	96	98.5	99	3	66-111/19
78-59-1	Isophorone	ND		100	91.6	92	90.5	91	1	59-103/23
91-57-6	2-Methylnaphthalene	ND		100	90.3	90	88.1	88	2	56-100/23
88-74-4	2-Nitroaniline	ND		100	92.3	92	91.3	91	1	66-107/18
99-09-2	3-Nitroaniline	ND		100	80.6	81	81.6	82	1	47-107/26
100-01-6	4-Nitroaniline	ND		100	89.4	89	92.8	93	4	48-119/21
91-20-3	Naphthalene	5.8		100	97.2	91	93.9	88	3	52-102/23
98-95-3	Nitrobenzene	ND		100	91.0	91	88.3	88	3	56-103/25
621-64-7	N-Nitroso-di-n-propylamine	ND		100	92.9	93	89.0	89	4	57-103/24
86-30-6	N-Nitrosodiphenylamine	ND		100	104	104	101	101	3	72-112/16
85-01-8	Phenanthrene	ND		100	92.1	92	91.5	92	1	69-103/15
129-00-0	Pyrene	ND		100	90.3	90	89.2	89	1	64-107/21
120-82-1	1,2,4-Trichlorobenzene	ND		100	94.0	94	91.9	92	2	54-102/24

CAS No.	Surrogate Recoveries	MS	MSD	F21072-2	Limits
367-12-4	2-Fluorophenol	77%	78%		19-90%
4165-62-2	Phenol-d5	58%	59%		10-68%
118-79-6	2,4,6-Tribromophenol	101%	99%		36-137%

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Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F21096
Account: ITTNKNOX Shaw E & I, Inc.
Project: PBOW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP9295-MS	W018245.D	1	12/16/03	ME	12/13/03	OP9295	SW949
OP9295-MSD	W018246.D	1	12/16/03	ME	12/13/03	OP9295	SW949
F21072-2	W018244.D	1	12/16/03	ME	12/13/03	OP9295	SW949

The QC reported here applies to the following samples: Method: SW846 8270C

F21096-1

CAS No.	Surrogate Recoveries	MS	MSD	F21072-2	Limits
4165-60-0	Nitrobenzene-d5	89%	89%	88%	49-119%
321-60-8	2-Fluorobiphenyl	90%	87%	85%	45-118%
1718-51-0	Terphenyl-d14	91%	87%	62%	46-135%

Instrument Performance Check (DFTPP)

Job Number: F21096
Account: ITTNKNOX Shaw E & I, Inc.
Project: PBOW

Sample:	SL1056-DFTPP	Injection Date:	11/17/03
Lab File ID:	L019683.D	Injection Time:	11:20
Instrument ID:	GCMSL		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	89949	50.5		Pass
68	Less than 2.0% of mass 69	1103	0.62	(1.5) [a]	Pass
69	Mass 69 relative abundance	73294	41.2		Pass
70	Less than 2.0% of mass 69	493	0.28	(0.67) [a]	Pass
127	40.0 - 60.0% of mass 198	88875	49.9		Pass
197	Less than 1.0% of mass 198	966	0.54		Pass
198	Base peak, 100% relative abundance	177992	100.0		Pass
199	5.0 - 9.0% of mass 198	11663	6.6		Pass
275	10.0 - 30.0% of mass 198	33176	18.6		Pass
365	1.0 - 100.0% of mass 198	2453	1.4		Pass
441	Present, but less than mass 443	15208	8.5	(70.9) [b]	Pass
442	40.0 - 100.0% of mass 198	104731	58.8		Pass
443	17.0 - 23.0% of mass 442	21443	12.0	(20.5) [c]	Pass

(a) Value is % of mass 69
(b) Value is % of mass 443
(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
SL1056-IC1056	L019685.D	11/17/03	12:17	00:57	Initial cal 5
SL1056-IC1056	L019686.D	11/17/03	12:47	01:27	Initial cal 25
SL1056-ICC1056	L019687.D	11/17/03	13:17	01:57	Initial cal 75
SL1056-IC1056	L019688.D	11/17/03	13:53	02:33	Initial cal 100
SL1056-IC1056	L019689.D	11/17/03	14:23	03:03	Initial cal 125
SL1056-IC1056	L019690.D	11/17/03	14:57	03:37	Initial cal 50
OP9094-BS	L019692.D	11/17/03	15:57	04:37	Blank Spike
OP9094-MB	L019693.D	11/17/03	16:27	05:07	Method Blank
ZZZZZZ	L019694.D	11/17/03	16:56	05:36	(unrelated sample)
ZZZZZZ	L019695.D	11/17/03	17:26	06:06	(unrelated sample)
ZZZZZZ	L019696.D	11/17/03	17:56	06:36	(unrelated sample)
ZZZZZZ	L019697.D	11/17/03	18:26	07:06	(unrelated sample)
F20594-16	L019698.D	11/17/03	18:56	07:36	(used for QC only; not part of job F21096)
OP9094-MS	L019699.D	11/17/03	19:26	08:06	Matrix Spike
OP9094-MSD	L019700.D	11/17/03	19:56	08:36	Matrix Spike Duplicate
ZZZZZZ	L019701.D	11/17/03	20:26	09:06	(unrelated sample)
ZZZZZZ	L019702.D	11/17/03	20:56	09:36	(unrelated sample)
ZZZZZZ	L019703.D	11/17/03	21:26	10:06	(unrelated sample)
ZZZZZZ	L019704.D	11/17/03	21:56	10:36	(unrelated sample)

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Instrument Performance Check (DFTPP)

Job Number: F21096
Account: ITTNKNOX Shaw E & I, Inc.
Project: PBOW

Sample:	SL1056-DFTPP	Injection Date:	11/17/03
Lab File ID:	L019683.D	Injection Time:	11:20
Instrument ID:	GCMSL		

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
ZZZZZZ	L019705.D	11/17/03	22:26	11:06	(unrelated sample)
ZZZZZZ	L019706.D	11/17/03	22:56	11:36	(unrelated sample)
OP9069-MB	L019707.D	11/17/03	23:26	12:06	Method Blank
ZZZZZZ	L019708.D	11/17/03	23:56	12:36	(unrelated sample)

Instrument Performance Check (DFTPP)

Job Number: F21096
Account: ITTNKNOX Shaw E & I, Inc.
Project: PBOW

Sample:	SL1074-DFTPP	Injection Date:	12/17/03
Lab File ID:	L020027.D	Injection Time:	10:16
Instrument ID:	GCMSL		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	99954	40.9		Pass
68	Less than 2.0% of mass 69	555	0.23	(0.65) [a]	Pass
69	Mass 69 relative abundance	85971	35.2		Pass
70	Less than 2.0% of mass 69	247	0.1	(0.29) [a]	Pass
127	40.0 - 60.0% of mass 198	111481	45.6		Pass
197	Less than 1.0% of mass 198	0	0.0		Pass
198	Base peak, 100% relative abundance	244380	100.0		Pass
199	5.0 - 9.0% of mass 198	16114	6.6		Pass
275	10.0 - 30.0% of mass 198	45557	18.6		Pass
365	1.0 - 100.0% of mass 198	3666	1.5		Pass
441	Present, but less than mass 443	23485	9.6	(71.5) [b]	Pass
442	40.0 - 100.0% of mass 198	168163	68.8		Pass
443	17.0 - 23.0% of mass 442	32861	13.4	(19.5) [c]	Pass

(a) Value is % of mass 69
(b) Value is % of mass 443
(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
SL1074-CC1056	L020028.D	12/17/03	10:35	00:19	Continuing cal 50
OP9295-MB	L020029.D	12/17/03	11:04	00:48	Method Blank
ZZZZZZ	L020030.D	12/17/03	11:35	01:19	(unrelated sample)
ZZZZZZ	L020031.D	12/17/03	12:05	01:49	(unrelated sample)
ZZZZZZ	L020032.D	12/17/03	12:35	02:19	(unrelated sample)
ZZZZZZ	L020033.D	12/17/03	13:05	02:49	(unrelated sample)
ZZZZZZ	L020035.D	12/17/03	14:05	03:49	(unrelated sample)
ZZZZZZ	L020036.D	12/17/03	14:35	04:19	(unrelated sample)
ZZZZZZ	L020037.D	12/17/03	15:05	04:49	(unrelated sample)

Instrument Performance Check (DFTPP)

Job Number: F21096
Account: ITTNKNOX Shaw E & I, Inc.
Project: PBOW

Sample:	SW917-DFTPP	Injection Date:	10/24/03
Lab File ID:	W017549.D	Injection Time:	09:45
Instrument ID:	GCMSW		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	39002	40.6		Pass
68	Less than 2.0% of mass 69	0	0.0	(0.0) [a]	Pass
69	Mass 69 relative abundance	36454	38.0		Pass
70	Less than 2.0% of mass 69	168	0.17	(0.46) [a]	Pass
127	40.0 - 60.0% of mass 198	48726	50.7		Pass
197	Less than 1.0% of mass 198	112	0.12		Pass
198	Base peak, 100% relative abundance	96043	100.0		Pass
199	5.0 - 9.0% of mass 198	6653	6.9		Pass
275	10.0 - 30.0% of mass 198	21441	22.3		Pass
365	1.0 - 100.0% of mass 198	2146	2.2		Pass
441	Present, but less than mass 443	10471	10.9	(77.0) [b]	Pass
442	40.0 - 100.0% of mass 198	69075	71.9		Pass
443	17.0 - 23.0% of mass 442	13598	14.2	(19.7) [c]	Pass

(a) Value is % of mass 69
(b) Value is % of mass 443
(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
SW917-IC917	W017550.D	10/24/03	10:03	00:18	Initial cal 5
SW917-IC917	W017551.D	10/24/03	10:33	00:48	Initial cal 25
SW917-IC917	W017552.D	10/24/03	11:03	01:18	Initial cal 50
SW917-ICC917	W017553.D	10/24/03	11:32	01:47	Initial cal 75
SW917-IC917	W017554.D	10/24/03	12:02	02:17	Initial cal 100
SW917-IC917	W017555.D	10/24/03	12:31	02:46	Initial cal 125
OP8797-BS	W017557.D	10/24/03	13:30	03:45	Blank Spike
OP8797-MB	W017558.D	10/24/03	14:00	04:15	Method Blank
ZZZZZZ	W017559.D	10/24/03	14:29	04:44	(unrelated sample)
ZZZZZZ	W017560.D	10/24/03	14:59	05:14	(unrelated sample)
ZZZZZZ	W017561.D	10/24/03	15:28	05:43	(unrelated sample)
ZZZZZZ	W017562.D	10/24/03	15:58	06:13	(unrelated sample)
ZZZZZZ	W017563.D	10/24/03	16:27	06:42	(unrelated sample)
ZZZZZZ	W017564.D	10/24/03	16:57	07:12	(unrelated sample)
ZZZZZZ	W017565.D	10/24/03	17:26	07:41	(unrelated sample)

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Instrument Performance Check (DFTPP)

Job Number: F21096
Account: ITTNKNOX Shaw E & I, Inc.
Project: PBOW

Sample:	SW949-DFTPP	Injection Date:	12/16/03
Lab File ID:	W018239.D	Injection Time:	10:55
Instrument ID:	GCMSW		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
51	30.0 - 60.0% of mass 198	48496	45.5		Pass
68	Less than 2.0% of mass 69	0	0.0	(0.0) [a]	Pass
69	Mass 69 relative abundance	43064	40.4		Pass
70	Less than 2.0% of mass 69	266	0.25	(0.62) [a]	Pass
127	40.0 - 60.0% of mass 198	54656	51.2		Pass
197	Less than 1.0% of mass 198	0	0.0		Pass
198	Base peak, 100% relative abundance	106688	100.0		Pass
199	5.0 - 9.0% of mass 198	7402	6.9		Pass
275	10.0 - 30.0% of mass 198	23316	21.9		Pass
365	1.0 - 100.0% of mass 198	2436	2.3		Pass
441	Present, but less than mass 443	10281	9.6	(75.3) [b]	Pass
442	40.0 - 100.0% of mass 198	69276	64.9		Pass
443	17.0 - 23.0% of mass 442	13652	12.8	(19.7) [c]	Pass

(a) Value is % of mass 69
(b) Value is % of mass 443
(c) Value is % of mass 442

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
SW949-CC917	W018240.D	12/16/03	11:14	00:19	Continuing cal 50
OP9295-BS	W018241.D	12/16/03	11:43	00:48	Blank Spike
OP9295-MB	W018242.D	12/16/03	12:13	01:18	Method Blank
F21072-2	W018244.D	12/16/03	13:12	02:17	(used for QC only; not part of job F21096)
OP9295-MS	W018245.D	12/16/03	13:41	02:46	Matrix Spike
OP9295-MSD	W018246.D	12/16/03	14:11	03:16	Matrix Spike Duplicate
ZZZZZZ	W018247.D	12/16/03	14:41	03:46	(unrelated sample)
ZZZZZZ	W018249.D	12/16/03	15:40	04:45	(unrelated sample)
ZZZZZZ	W018250.D	12/16/03	16:09	05:14	(unrelated sample)
ZZZZZZ	W018251.D	12/16/03	16:39	05:44	(unrelated sample)
ZZZZZZ	W018252.D	12/16/03	17:09	06:14	(unrelated sample)
ZZZZZZ	W018253.D	12/16/03	17:38	06:43	(unrelated sample)
ZZZZZZ	W018255.D	12/16/03	18:37	07:42	(unrelated sample)
ZZZZZZ	W018256.D	12/16/03	19:07	08:12	(unrelated sample)
ZZZZZZ	W018257.D	12/16/03	19:36	08:41	(unrelated sample)
ZZZZZZ	W018258.D	12/16/03	20:06	09:11	(unrelated sample)
ZZZZZZ	W018260.D	12/16/03	21:04	10:09	(unrelated sample)
ZZZZZZ	W018261.D	12/16/03	21:34	10:39	(unrelated sample)
ZZZZZZ	W018262.D	12/16/03	22:03	11:08	(unrelated sample)

Instrument Performance Check (DFTPP)

Job Number: F21096
Account: ITTNKNOX Shaw E & I, Inc.
Project: PBOW

Sample:	SW949-DFTPP	Injection Date:	12/16/03
Lab File ID:	W018239.D	Injection Time:	10:55
Instrument ID:	GCMSW		

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
F21096-1	W018263.D	12/16/03	22:33	11:38	DD3006

Semivolatile Internal Standard Area Summary

Job Number: F21096
Account: ITTNKNOX Shaw E & I, Inc.
Project: PBOW

Check Std:	SL1074-CC1056	Injection Date:	12/17/03
Lab File ID:	L020028.D	Injection Time:	10:35
Instrument ID:	GCMSL	Method:	SW846 8270C

	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
Check Std	314443	5.24	1222558	6.46	654825	8.85	1037495	11.37	798145	16.34	557863	18.86
Upper Limit [a]	628886	5.74	2445116	6.96	1309650	9.35	2074990	11.87	1596290	16.84	1115726	19.36
Lower Limit [b]	157222	4.74	611279	5.96	327413	8.35	518748	10.87	399073	15.84	278932	18.36

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
OP9295-MB	308921	5.24	1186987	6.45	625512	8.85	984232	11.36	797954	16.33	552225	18.86
ZZZZZZ	326835	5.24	1261322	6.46	652235	8.85	1021970	11.37	787595	16.33	542381	18.86
ZZZZZZ	325654	5.24	1243112	6.45	632307	8.85	1009289	11.36	798331	16.33	559906	18.86
ZZZZZZ	311964	5.24	1176085	6.45	619484	8.85	997390	11.36	795885	16.33	563040	18.86
ZZZZZZ	309887	5.24	1173075	6.46	606307	8.85	944372	11.36	796703	16.33	569533	18.86
ZZZZZZ	294048	5.24	1144520	6.46	604339	8.85	986234	11.37	720713	16.33	518143	18.86
ZZZZZZ	300753	5.24	1172440	6.46	608828	8.85	928838	11.37	746905	16.33	522852	18.86
ZZZZZZ	290324	5.24	737586	6.46	593634	8.85	941252	11.36	768477	16.33	533574	18.86

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Semivolatile Internal Standard Area Summary

Job Number: F21096
Account: ITTNKNOX Shaw E & I, Inc.
Project: PBOW

Check Std:	SW949-CC917	Injection Date:	12/16/03
Lab File ID:	W018240.D	Injection Time:	11:14
Instrument ID:	GCMSW	Method:	SW846 8270C

	IS 1		IS 2		IS 3		IS 4		IS 5		IS 6	
	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
Check Std	135074	4.75	513935	5.91	248472	8.16	348432	10.65	235999	15.57	144097	18.07
Upper Limit [a]	270148	5.25	1027870	6.41	496944	8.66	696864	11.15	471998	16.07	288194	18.57
Lower Limit [b]	67537	4.25	256968	5.41	124236	7.66	174216	10.15	118000	15.07	72049	17.57

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT	IS 6 AREA	RT
OP9295-BS	163995	4.75	616836	5.91	302052	8.16	414550	10.65	270380	15.57	163474	18.07
OP9295-MB	157978	4.75	599530	5.91	294661	8.16	432810	10.64	303689	15.56	189726	18.06
F21072-2	153294	4.76	580572	5.91	293108	8.16	430744	10.65	294714	15.56	179741	18.06
OP9295-MS	152578	4.75	589114	5.91	289689	8.16	397600	10.65	268035	15.57	158948	18.07
OP9295-MSD	144108	4.76	556191	5.91	274163	8.16	382879	10.65	262794	15.57	158600	18.06
ZZZZZZ	150226	4.76	557178	5.91	272142	8.16	388456	10.64	254631	15.56	160071	18.06
ZZZZZZ	140801	4.76	530426	5.91	257876	8.16	370907	10.64	257080	15.56	159422	18.06
ZZZZZZ	180512	4.76	624696	5.92	310168	8.16	447277	10.65	285185	15.56	164713	18.06
ZZZZZZ	179720	4.76	650021	5.91	316960	8.16	448643	10.65	306165	15.56	189683	18.06
ZZZZZZ	158494	4.75	593611	5.91	293724	8.16	412002	10.64	289997	15.56	172338	18.06
ZZZZZZ	146083	4.75	547110	5.90	272185	8.16	395193	10.65	264344	15.56	160442	18.06
ZZZZZZ	196154	4.77	687660	5.92	340395	8.16	476041	10.65	288687	15.56	167728	18.07
ZZZZZZ	156748	4.76	570991	5.91	275734	8.16	404092	10.65	273470	15.56	166572	18.06
ZZZZZZ	197911	4.76	700302	5.91	338441	8.16	488816	10.65	324348	15.56	187228	18.07
ZZZZZZ	165102	4.75	574638	5.91	279714	8.16	399854	10.65	250572	15.57	146238	18.07
ZZZZZZ	156133	4.75	550879	5.91	266271	8.16	393635	10.65	263723	15.56	154650	18.07
ZZZZZZ	183806	4.75	648201	5.91	309493	8.16	445342	10.65	297935	15.56	177936	18.07
ZZZZZZ	176654	4.75	628923	5.90	301478	8.16	430259	10.65	282357	15.56	166197	18.06
F21096-1	161246	4.76	570082	5.90	270461	8.16	384847	10.65	246166	15.56	141892	18.06

IS 1 = 1,4-Dichlorobenzene-d4
IS 2 = Naphthalene-d8
IS 3 = Acenaphthene-D10
IS 4 = Phenanthrene-d10
IS 5 = Chrysene-d12
IS 6 = Perylene-d12

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

ACCUTEST Laboratories

Semivolatile Surrogate Recovery Summary

Job Number: F21096
Account: ITTNKNOX Shaw E & I, Inc.
Project: PBOW

Method: SW846 8270C Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4	S5	S6
F21096-1	W018263.D	50.0	31.0	100.0	85.0	85.0	103.0
OP9295-BS	W018241.D	56.0	35.0	98.0	88.0	88.0	95.0
OP9295-MB	W018242.D	53.0	32.0	89.0	79.0	79.0	89.0
OP9295-MB	L020029.D	47.0	30.0	86.0	78.0	77.0	87.0
OP9295-MS	W018245.D	77.0	58.0	101.0	89.0	90.0	91.0
OP9295-MSD	W018246.D	78.0	59.0	99.0	89.0	87.0	87.0

Surrogate Compounds	Recovery Limits
S1 = 2-Fluorophenol	19-90%
S2 = Phenol-d5	10-68%
S3 = 2,4,6-Tribromophenol	36-137%
S4 = Nitrobenzene-d5	49-119%
S5 = 2-Fluorobiphenyl	45-118%
S6 = Terphenyl-d14	46-135%

Initial Calibration Summary

Job Number: F21096
Account: ITTNKNOX Shaw E & I, Inc.
Project: PBOW

Sample: SL1056-ICC1056
Lab FileID: L019687.D

Response Factor Report MSBNA02

Method : C:\HPCHEM\1\METHODS\8270C.M (RTE Integrator)
Title : SW846 8270C OR EPA 625
Last Update : Mon Nov 17 15:21:07 2003
Response via : Initial Calibration

Calibration Files

5	=L019685.D	25	=L019686.D	50	=L019690.D
75	=L019687.D	100	=L019688.D	125	=L019689.D

		Compound	5	25	50	75	100	125	Avg	%RSD
1)	I	1,4-Dichlorobenzene-d	----------ISTD----------							
2)		1,4-Dioxane	0.492	0.499	0.499	0.491	0.490	0.492	0.494	0.78
3)		N-nitrosodimethylam	0.783	0.847	0.820	0.834	0.795	0.804	0.814	2.98
4)		Pyridine	1.406	1.391	1.341	1.274	1.245	1.332	1.331	4.74
5)		Benzaldehyde	1.193	1.179	0.856	0.586	0.537	0.396	0.791	42.98
6)		Aniline	1.983	2.080	1.950	2.033	1.975		2.004	2.59
7)	S	2-Fluorophenol	1.267	1.356	1.319	1.282	1.263	1.250	1.290	3.12
8)		bis(2-Chloroethyl)e	1.216	1.302	1.267	1.210	1.215	1.540	1.292	9.83
9)	S	Phenol-d5	1.610	1.690	1.656	1.624	1.588	1.588	1.626	2.48
10)	C	Phenol	1.724	1.796	1.739	1.710	1.669	1.679	1.720	2.65
11)		2-Chlorophenol	1.423	1.473	1.482	1.449	1.427	1.453	1.451	1.64
12)		1,3-Dichlorobenzene	1.526	1.667	1.627	1.578	1.542	1.574	1.586	3.34
13)	C	1,4-Dichlorobenzene	1.618	1.652	1.615	1.561	1.528	1.543	1.586	3.10
14)		1,2-Dichlorobenzene	1.552	1.568	1.543	1.491	1.469	1.484	1.518	2.72
15)		Benzyl alcohol	0.907	0.982	0.969	0.953	0.939	0.966	0.953	2.78
16)		bis(2-chloroisoprop	2.579	2.611	2.430	2.412	2.369	2.353	2.459	4.44
17)		2-Methylphenol	1.298	1.310	1.292	1.275	1.275	1.298	1.291	1.08
18)		Acetophenone	2.006	2.146	2.144	2.085	2.089	2.159	2.105	2.74
19)		Hexachloroethane	0.556	0.579	0.545	0.540	0.537	0.542	0.550	2.84
20)	P	N-Nitroso-di-n-prop	0.957	0.996	0.931	0.934	0.928	0.955	0.950	2.72
21)		3&4-Methylphenol	1.350	1.387	1.410	1.378	1.388	1.404	1.386	1.55
22)	I	Naphthalene-d8	----------ISTD----------							
23)	S	Nitrobenzene-d5	0.271	0.324	0.336	0.332	0.330	0.337	0.322	7.81
24)		Nitrobenzene	0.288	0.332	0.332	0.335	0.322	0.326	0.322	5.41
25)		Isophorone	0.641	0.668	0.644	0.654	0.637	0.643	0.648	1.75
26)	C	2-Nitrophenol	0.134	0.177	0.200	0.196	0.199	0.206	0.185	14.58
27)		2,4-Dimethylphenol	0.335	0.359	0.345	0.341	0.333	0.333	0.341	2.96
28)		bis(2-Chloroethoxy)	0.381	0.402	0.384	0.387	0.380	0.379	0.385	2.22
29)		Benzoic Acid	0.164	0.256	0.285	0.293	0.295	0.301	0.266	19.74
		----- Quadratic regression ----- Coefficient = 0.9999								
		Response Ratio = -0.03698 + 0.29157 *A + 0.00245 *A^2								
30)	C	2,4-Dichlorophenol	0.309	0.305	0.305	0.306	0.299	0.298	0.303	1.39
31)		1,2,4-Trichlorobenz	0.311	0.315	0.311	0.308	0.304	0.302	0.309	1.61
32)		Naphthalene	1.024	1.042	1.006	1.007	0.971	0.949	1.000	3.44
33)		4-Chloroaniline	0.435	0.466	0.437	0.447	0.426	0.421	0.439	3.64
34)		2,6-Dichlorophenol	0.280	0.297	0.295	0.290	0.287	0.282	0.288	2.31
35)	C	Hexachlorobutadiene	0.169	0.175	0.165	0.163	0.158	0.160	0.165	3.58
36)		Caprolactam	0.125	0.151	0.148	0.152	0.153	0.157	0.148	7.76
37)	C	4-Chloro-3-methylph	0.290	0.310	0.305	0.309	0.304	0.302	0.303	2.44
38)		2-Methylnaphthalene	0.703	0.761	0.733	0.737	0.723	0.709	0.728	2.91
39)		1-Methylnaphthalene	0.680	0.729	0.703	0.712	0.689	0.687	0.700	2.61
40)		1,2,4,5-Tetrachloro	0.283	0.298	0.290	0.287	0.285	0.281	0.287	2.15
41)	I	Acenaphthene-d10	----------ISTD----------							

Initial Calibration Summary

Job Number: F21096
Account: ITTNKNOX Shaw E & I, Inc.
Project: PBOW

Sample: SL1056-ICC1056
Lab FileID: L019687.D

42)	P	Hexachlorocyclopent	0.236	0.257	0.256	0.256	0.256	0.266	0.254	3.88
43)	C	2,4,6-Trichlorophen	0.365	0.399	0.401	0.400	0.391	0.400	0.393	3.54
44)		2,4,5-Trichlorophen	0.400	0.416	0.428	0.413	0.420	0.424	0.417	2.36
45)	S	2-Fluorobiphenyl	1.348	1.363	1.325	1.291	1.266	1.287	1.313	2.89
46)		1,1'-Biphenyl	1.703	1.841	1.835	1.782	1.777	1.800	1.790	2.80
47)		2-Chloronaphthalene	1.218	1.246	1.193	1.143	1.120	1.124	1.174	4.48
48)		2-Nitroaniline	0.260	0.341	0.380	0.368	0.373	0.377	0.350	13.17
49)		Acenaphthylene	1.810	1.870	1.774	1.762	1.711	1.707	1.772	3.49
50)		Dimethylphthalate	1.408	1.443	1.376	1.365	1.337	1.347	1.379	2.89
51)		2,6-Dinitrotoluene	0.169	0.246	0.292	0.287	0.292	0.295	0.263	18.95

----- Quadratic regression ----- Coefficient = 0.9994
Response Ratio = -0.02042 + 0.29750 *A + 0.00114 *A^2

52)	C	Acenaphthene	1.212	1.247	1.182	1.179	1.150	1.161	1.188	2.98
53)		3-Nitroaniline	0.270	0.370	0.404	0.399	0.399	0.409	0.375	14.18
54)	P	2,4-Dinitrophenol	0.069	0.119	0.177	0.172	0.188	0.206	0.155	33.13

----- Quadratic regression ----- Coefficient = 0.9975
Response Ratio = -0.02334 + 0.14388 *A + 0.01036 *A^2

55)		Dibenzofuran	1.696	1.750	1.720	1.673	1.638	1.648	1.687	2.55
56)		2,4-Dinitrotoluene	0.214	0.354	0.419	0.408	0.416	0.428	0.373	22.04

----- Quadratic regression ----- Coefficient = 0.9993
Response Ratio = -0.02701 + 0.41385 *A + 0.00677 *A^2

57)	P	4-Nitrophenol	0.151	0.189	0.191	0.191	0.183	0.188	0.182	8.51
58)		2,3,4,6-Tetrachloro	0.260	0.312	0.325	0.325	0.319	0.326	0.311	8.24
59)		Fluorene	1.383	1.422	1.387	1.365	1.319	1.317	1.366	3.01
60)		4-Chlorophenyl-phen	0.622	0.632	0.606	0.591	0.576	0.579	0.601	3.87
61)		Diethylphthalate	1.404	1.472	1.412	1.403	1.372	1.357	1.404	2.82
62)		4-Nitroaniline	0.315	0.404	0.419	0.417	0.409	0.422	0.397	10.36
63)	I	Phenanthrene-d10	----------ISTD----------							
64)		4,6-Dinitro-2-methy	0.054	0.108	0.145	0.140	0.148	0.159	0.126	31.20

----- Quadratic regression ----- Coefficient = 0.9982
Response Ratio = -0.02088 + 0.12994 *A + 0.00497 *A^2

65)	C	n-Nitrosodiphenylam	0.592	0.606	0.575	0.566	0.556	0.557	0.575	3.48
66)		1,2-Diphenylhydrazi	0.768	0.809	0.758	0.765	0.743	0.750	0.766	3.05
67)	S	2,4,6-Tribromopheno	0.066	0.080	0.078	0.076	0.077	0.077	0.075	6.45
68)		4-Bromophenyl-pheny	0.195	0.203	0.192	0.191	0.189	0.191	0.193	2.58
69)		Hexachlorobenzene	0.183	0.190	0.183	0.182	0.179	0.180	0.183	2.22
70)		Atrazine	0.226	0.263	0.250	0.243	0.240	0.240	0.243	5.04
71)	C	Pentachlorophenol	0.103	0.137	0.139	0.138	0.138	0.141	0.133	10.88
72)		Phenanthrene	1.213	1.248	1.206	1.183	1.154	1.163	1.194	2.93
73)		Anthracene	1.244	1.290	1.244	1.204	1.170	1.180	1.222	3.75
74)		Carbazole	1.141	1.216	1.168	1.151	1.112	1.123	1.152	3.21
75)		Di-n-butylphthalate	1.373	1.455	1.404	1.377	1.353	1.350	1.385	2.83
76)	C	Fluoranthene	1.138	1.236	1.205	1.179	1.146	1.157	1.177	3.19
77)	I	Chrysene-d12	----------ISTD----------							
78)		Benzidine	0.643	0.690	0.534	0.569	0.527	0.503	0.578	12.72
79)		Pyrene	1.493	1.582	1.551	1.564	1.524	1.522	1.539	2.09
80)	S	Terphenyl-d14	0.819	0.882	0.865	0.871	0.850	0.855	0.857	2.54
81)		Butylbenzylphthalat	0.697	0.798	0.759	0.780	0.769	0.779	0.763	4.59
82)		3,3'-Dichlorobenzid	0.448	0.499	0.443	0.456	0.442	0.427	0.452	5.49
83)		Benzo[a]anthracene	1.263	1.364	1.339	1.348	1.341	1.342	1.333	2.66
84)		Chrysene	1.275	1.318	1.262	1.271	1.256	1.257	1.273	1.82
85)		bis(2-Ethylhexyl)ph	0.973	1.069	1.018	1.047	1.041	1.033	1.030	3.19
86)	I	Perylene-d12	----------ISTD----------							

5.7

5

ACCUTEST

Initial Calibration Summary

Job Number: F21096
Account: ITTNKNOX Shaw E & I, Inc.
Project: PBOW

Sample: SL1056-ICC1056
Lab FileID: L019687.D

87)	C	Di-n-octylphthalate	2.297	2.609	2.426	2.443	2.447	2.422	2.441	4.08
88)		Benzo[b]fluoranthen	1.643	1.799	1.710	1.743	1.706	1.751	1.725	3.04
89)		Benzo[k]fluoranthen	1.527	1.732	1.703	1.638	1.634	1.577	1.635	4.65
90)	C	Benzo[a]pyrene	1.471	1.663	1.575	1.610	1.578	1.588	1.581	3.97
91)		Indeno[1,2,3-cd]pyr	1.231	1.465	1.454	1.541	1.569	1.555	1.469	8.58
92)		Dibenz[a,h]anthrace	1.450	1.574	1.518	1.561	1.518	1.531	1.525	2.84
93)		Benzo[g,h,i]perylen	1.459	1.628	1.568	1.612	1.603	1.601	1.578	3.91

(#) = Out of Range

8270C.M Tue Nov 18 10:27:43 2003

Continuing Calibration Summary

Job Number: F21096
Account: ITTNKNOX Shaw E & I, Inc.
Project: PBOW

Sample: SL1074-CC1056
Lab FileID: L020028.D

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\121703\L020028.D Vial: 2
Acq On : 17 Dec 2003 10:35 am Operator: marke
Sample : cc1056-50 Inst : MSBNA02
Misc : op9295,sl1074,30.0,,,1,1,soil Multiplr: 1.00
MS Integration Params: LSCINT.P

Method : C:\HPCHEM\1\METHODS\8270C.M (RTE Integrator)
Title : SW846 8270C OR EPA 625
Last Update : Wed Dec 10 14:03:27 2003
Response via : Multiple Level Calibration

Min. RRF : 0.001 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	165	-0.04	5.24
2		1,4-Dioxane	0.494	0.425	14.0	140	-0.05	2.82
3		N-nitrosodimethylamine	0.814	0.659	19.0	132	-0.04	3.15
4		Pyridine	1.331	1.231	7.5	151	-0.05	3.16
5		Benzaldehyde	0.791	0.748	5.4	144	-0.03	4.89
6		Aniline	2.004	1.835	8.4	155	-0.03	5.01
7	S	2-Fluorophenol	1.290	1.228	4.8	153	0.00	4.30
8		bis(2-Chloroethyl)ether	1.292	1.205	6.7	156	-0.03	5.04
9	S	Phenol-d5	1.626	1.538	5.4	153	0.00	5.01
10	C	Phenol	1.720	1.830	-6.4	173	0.00	5.02
11		2-Chlorophenol	1.451	1.433	1.2	159	-0.02	5.11
12		1,3-Dichlorobenzene	1.586	1.568	1.1	159	-0.03	5.21
13	C	1,4-Dichlorobenzene	1.586	1.555	2.0	158	-0.03	5.25
14		1,2-Dichlorobenzene	1.518	1.506	0.8	161	-0.03	5.41
15		Benzyl alcohol	0.953	0.859	9.9	146	-0.02	5.37
16		bis(2-chloroisopropyl)eth	2.459	2.122	13.7	144	-0.03	5.49
17		2-Methylphenol	1.291	1.228	4.9	156	0.00	5.49
18		Acetophenone	2.105	2.056	2.3	158	-0.04	5.60
19		Hexachloroethane	0.550	0.514	6.5	155	-0.04	5.68
20	P	N-Nitroso-di-n-propylamin	0.950	0.847	10.8	150	-0.04	5.61
21		3&4-Methylphenol	1.386	1.325	4.4	155	0.00	5.61
22	I	Naphthalene-d8	1.000	1.000	0.0	162	-0.04	6.46
23	S	Nitrobenzene-d5	0.322	0.319	0.9	154	-0.04	5.75
24		Nitrobenzene	0.322	0.312	3.1	152	-0.04	5.76
25		Isophorone	0.648	0.599	7.6	150	-0.04	5.98
26	C	2-Nitrophenol	0.185	0.212	-14.6	172	-0.03	6.07
27		2,4-Dimethylphenol	0.341	0.328	3.8	154	-0.02	6.11
28		bis(2-Chloroethoxy)methan	0.385	0.381	1.0	161	-0.04	6.19
		----------	True	Calc.	% Drift	----------		
29		Benzoic Acid	100.000	98.521	1.5	158	0.00	6.27
		----------	AvgRF	CCRF	% Dev	----------		
30	C	2,4-Dichlorophenol	0.303	0.307	-1.3	163	-0.02	6.33
31		1,2,4-Trichlorobenzene	0.309	0.312	-1.0	162	-0.04	6.40
32		Naphthalene	1.000	0.992	0.8	159	-0.04	6.48
33		4-Chloroaniline	0.439	0.440	-0.2	163	-0.03	6.56
34		2,6-Dichlorophenol	0.288	0.298	-3.5	163	-0.03	6.57
35	C	Hexachlorobutadiene	0.165	0.164	0.6	161	-0.04	6.67
36		Caprolactam	0.148	0.145	2.0	158	-0.05	6.97
37	C	4-Chloro-3-methylphenol	0.303	0.289	4.6	153	0.00	7.15

Continuing Calibration Summary

Job Number: F21096
Account: ITTNKNOX Shaw E & I, Inc.
Project: PBOW

Sample: SL1074-CC1056
Lab FileID: L020028.D

38		2-Methylnaphthalene	0.728	0.725	0.4	160	-0.04	7.31
39		1-Methylnaphthalene	0.700	0.698	0.3	160	-0.04	7.45
40		1,2,4,5-Tetrachlorobenzen	0.287	0.294	-2.4	164	-0.04	7.59
41	I	Acenaphthene-d10	1.000	1.000	0.0	163	-0.04	8.85
42	P	Hexachlorocyclopentadiene	0.254	0.211	16.9	134	-0.05	7.61
43	C	2,4,6-Trichlorophenol	0.393	0.404	-2.8	164	-0.03	7.74
44		2,4,5-Trichlorophenol	0.417	0.416	0.2	158	-0.02	7.80
45	S	2-Fluorobiphenyl	1.313	1.307	0.5	160	-0.04	7.84
46		1,1'-Biphenyl	1.790	1.819	-1.6	161	-0.04	7.96
47		2-Chloronaphthalene	1.174	1.167	0.6	159	-0.05	7.98
48		2-Nitroaniline	0.350	0.338	3.4	145	-0.03	8.18
49		Acenaphthylene	1.772	1.727	2.5	158	-0.04	8.61
50		Dimethylphthalate	1.379	1.306	5.3	154	-0.04	8.51
		----------	True	Calc.	% Drift	----------		
51		2,6-Dinitrotoluene	50.000	52.873	-5.7	167	-0.03	8.61
		----------	AvgRF	CCRF	% Dev	----------		
52	C	Acenaphthene	1.188	1.149	3.3	158	-0.04	8.90
53		3-Nitroaniline	0.375	0.385	-2.7	155	-0.02	8.84
		----------	True	Calc.	% Drift	----------		
54	P	2,4-Dinitrophenol	100.000	118.032	-18.0	180	-0.03	9.00
		----------	AvgRF	CCRF	% Dev	----------		
55		Dibenzofuran	1.687	1.647	2.4	156	-0.04	9.16
		----------	True	Calc.	% Drift	----------		
56		2,4-Dinitrotoluene	50.000	51.825	-3.7	162	-0.04	9.24
		----------	AvgRF	CCRF	% Dev	----------		
57	P	4-Nitrophenol	0.182	0.157	13.7	134	0.04	9.19
58		2,3,4,6-Tetrachlorophenol	0.311	0.317	-1.9	159	-0.02	9.46
59		Fluorene	1.366	1.316	3.7	154	-0.04	9.73
60		4-Chlorophenyl-phenylethe	0.601	0.601	0.0	161	-0.04	9.75
61		Diethylphthalate	1.404	1.272	9.4	146	-0.04	9.69
62		4-Nitroaniline	0.397	0.403	-1.5	156	-0.02	9.87
63	I	Phenanthrene-d10	1.000	1.000	0.0	153	-0.04	11.37
		----------	True	Calc.	% Drift	----------		
64		4,6-Dinitro-2-methylpheno	100.000	120.722	-20.7#	176	-0.04	9.94
		----------	AvgRF	CCRF	% Dev	----------		
65	C	n-Nitrosodiphenylamine	0.575	0.589	-2.4	157	-0.04	9.98
66		1,2-Diphenylhydrazine	0.766	0.711	7.2	143	-0.05	10.02
67	S	2,4,6-Tribromophenol	0.075	0.079	-5.3	155	-0.04	10.19
68		4-Bromophenyl-phenylether	0.193	0.201	-4.1	160	-0.04	10.59
69		Hexachlorobenzene	0.183	0.186	-1.6	156	-0.04	10.83
70		Atrazine	0.243	0.229	5.8	140	-0.03	11.02
71	C	Pentachlorophenol	0.133	0.133	0.0	146	-0.02	11.18
72		Phenanthrene	1.194	1.201	-0.6	152	-0.04	11.41
73		Anthracene	1.222	1.223	-0.1	150	-0.04	11.49
74		Carbazole	1.152	1.138	1.2	149	-0.02	11.83
75		Di-n-butylphthalate	1.385	1.291	6.8	141	-0.03	12.66
76	C	Fluoranthene	1.177	1.180	-0.3	150	-0.02	13.61
77	I	Chrysene-d12	1.000	1.000	0.0	147	-0.04	16.34
78		Benzidine	0.578	0.512	11.4	141	-0.03	13.93

Continuing Calibration Summary

Job Number: F21096
Account: ITTNKNOX Shaw E & I, Inc.
Project: PBOW

Sample: SL1074-CC1056
Lab FileID: L020028.D

79		Pyrene	1.539	1.580	-2.7	149	-0.05	14.01
80	S	Terphenyl-d14	0.857	0.881	-2.8	149	-0.05	14.41
81		Butylbenzylphthalate	0.763	0.719	5.8	139	-0.04	15.48
82		3,3'-Dichlorobenzidine	0.452	0.462	-2.2	153	-0.03	16.36
83		Benzo[a]anthracene	1.333	1.325	0.6	145	-0.04	16.30
84		Chrysene	1.273	1.245	2.2	145	-0.04	16.38
85		bis(2-Ethylhexyl)phthalat	1.030	0.941	8.6	136	-0.04	16.68
86	I	Perylene-d12	1.000	1.000	0.0	144	-0.04	18.86
87	C	Di-n-octylphthalate	2.441	2.295	6.0	136	-0.04	17.80
88		Benzo[b]fluoranthene	1.725	1.750	-1.4	147	-0.05	18.25
89		Benzo[k]fluoranthene	1.635	1.630	0.3	138	-0.05	18.29
90	C	Benzo[a]pyrene	1.581	1.582	-0.1	145	-0.04	18.77
91		Indeno[1,2,3-cd]pyrene	1.469	1.526	-3.9	151	-0.05	20.50
92		Dibenz[a,h]anthracene	1.525	1.510	1.0	143	-0.05	20.53
93		Benzo[g,h,i]perylene	1.578	1.587	-0.6	146	-0.06	20.89

(1.1 %) 1 of 87 compounds'%D > 20

(#) = Out of Range SPCC's out = 0 CCC's out = 0
L019690.D 8270C.M Mon Dec 22 08:48:58 2003

5.7

Initial Calibration Summary

Job Number: F21096
Account: ITTNKNOX Shaw E & I, Inc.
Project: PBOW

Sample: SW917-ICC917
Lab FileID: W017553.D

Response Factor Report MSBNA01

Method : C:\HPCHEM\1\METHODS\8270C.M (RTE Integrator)
Title : SW846 8270C OR EPA 625
Last Update : Fri Oct 24 12:58:44 2003
Response via : Initial Calibration

Calibration Files
5 =W017550.D 25 =W017551.D 50 =W017552.D
75 =W017553.D 100 =W017554.D 125 =W017555.D

		Compound	5	25	50	75	100	125	Avg	%RSD
1)	I	1,4-Dichlorobenzene-d	----------ISTD----------							
2)		1,4-Dioxane	0.410	0.453	0.439	0.454	0.452	0.440	0.441	3.72
3)		N-nitrosodimethylam	0.552	0.594	0.583	0.589	0.580	0.569	0.578	2.62
4)		Pyridine	1.075	1.157	1.154	1.171	1.133	1.119	1.135	3.07
5)		Benzaldehyde	1.034	0.729	0.499	0.461	0.395	0.222	0.557	51.34
6)		Aniline	1.710	1.756	1.673	1.642	1.601	1.539	1.653	4.70
7)	S	2-Fluorophenol	1.151	1.185	1.140	1.153	1.153	1.133	1.153	1.54
8)		bis(2-Chloroethyl)e	1.094	1.160	1.131	1.160	1.139	1.140	1.137	2.13
9)	S	Phenol-d5	1.382	1.406	1.357	1.370	1.347	1.291	1.359	2.89
10)	C	Phenol	1.574	1.612	1.564	1.567	1.555	1.506	1.563	2.19
11)		2-Chlorophenol	1.323	1.365	1.333	1.362	1.341	1.358	1.347	1.30
12)		1,3-Dichlorobenzene	1.522	1.526	1.489	1.502	1.461	1.482	1.497	1.66
13)	C	1,4-Dichlorobenzene	1.572	1.576	1.517	1.543	1.521	1.506	1.539	1.93
14)		1,2-Dichlorobenzene	1.474	1.455	1.411	1.425	1.410	1.375	1.425	2.49
15)		Benzyl alcohol	0.709	0.812	0.789	0.795	0.789	0.783	0.779	4.60
16)		bis(2-chloroisoprop	1.948	1.937	1.860	1.860	1.812	1.766	1.864	3.78
17)		2-Methylphenol	1.144	1.148	1.123	1.133	1.131	1.140	1.137	0.81
18)		Acetophenone	1.808	1.878	1.858	1.849	1.799	1.777	1.828	2.15
19)		Hexachloroethane	0.560	0.584	0.558	0.564	0.555	0.560	0.563	1.89
20)	P	N-Nitroso-di-n-prop	0.804	0.846	0.818	0.810	0.792	0.820	0.815	2.25
21)		3&4-Methylphenol	1.174	1.218	1.172	1.187	1.172	1.166	1.182	1.64
22)	I	Naphthalene-d8	----------ISTD----------							
23)	S	Nitrobenzene-d5	0.314	0.331	0.320	0.328	0.327	0.323	0.324	1.86
24)		Nitrobenzene	0.331	0.323	0.310	0.323	0.319	0.315	0.320	2.21
25)		Isophorone	0.568	0.580	0.559	0.566	0.567	0.577	0.569	1.35
26)	C	2-Nitrophenol	0.182	0.200	0.192	0.203	0.199	0.213	0.198	5.32
27)		2,4-Dimethylphenol	0.331	0.331	0.318	0.329	0.327	0.322	0.326	1.59
28)		bis(2-Chloroethoxy)	0.373	0.376	0.368	0.375	0.363	0.369	0.371	1.30
29)		Benzoic Acid	0.170	0.229	0.242	0.250	0.245	0.260	0.233	13.84
30)	C	2,4-Dichlorophenol	0.281	0.291	0.285	0.295	0.291	0.290	0.289	1.74
31)		1,2,4-Trichlorobenz	0.302	0.304	0.298	0.307	0.302	0.304	0.303	0.94
32)		Naphthalene	1.032	1.030	1.000	1.015	1.004	0.980	1.010	1.94
33)		4-Chloroaniline	0.414	0.423	0.400	0.410	0.397	0.385	0.405	3.38
34)		2,6-Dichlorophenol	0.285	0.293	0.282	0.286	0.284	0.281	0.285	1.46
35)	C	Hexachlorobutadiene	0.174	0.177	0.172	0.177	0.173	0.173	0.174	1.17
36)		Caprolactam	0.091	0.106	0.100	0.105	0.092	0.105	0.100	6.92
37)	C	4-Chloro-3-methylph	0.256	0.272	0.263	0.265	0.262	0.267	0.264	2.06
38)		2-Methylnaphthalene	0.677	0.685	0.661	0.670	0.648	0.648	0.665	2.29
39)		1-Methylnaphthalene	0.653	0.660	0.632	0.645	0.625	0.627	0.640	2.24
40)		1,2,4,5-Tetrachloro	0.288	0.297	0.289	0.295	0.287	0.292	0.291	1.42
41)	I	Acenaphthene-d10	----------ISTD----------							
42)	P	Hexachlorocyclopent	0.094	0.201	0.244	0.252	0.267	0.292	0.225	31.51

----- Quadratic regression ----- Coefficient = 0.9993
Response Ratio = -0.01260 + 0.20886 *A + 0.02725 *A^2

Initial Calibration Summary

Job Number: F21096
Account: ITTNKNOX Shaw E & I, Inc.
Project: PBOW

Sample: SW917-ICC917
Lab FileID: W017553.D

43)	C	2,4,6-Trichlorophen	0.356	0.386	0.388	0.391	0.414	0.405	0.390	5.11
44)		2,4,5-Trichlorophen	0.393	0.411	0.409	0.415	0.406	0.413	0.408	1.94
45)	S	2-Fluorobiphenyl	1.373	1.373	1.376	1.398	1.411	1.402	1.389	1.21
46)		1,1'-Biphenyl	1.700	1.748	1.765	1.750	1.791	1.718	1.745	1.89
47)		2-Chloronaphthalene	1.195	1.206	1.186	1.210	1.217	1.185	1.200	1.11
48)		2-Nitroaniline	0.310	0.333	0.326	0.333	0.327	0.322	0.325	2.65
49)		Acenaphthylene	1.696	1.767	1.738	1.750	1.748	1.734	1.739	1.38
50)		Dimethylphthalate	1.287	1.291	1.239	1.280	1.209	1.278	1.264	2.61
51)		2,6-Dinitrotoluene	0.278	0.307	0.298	0.308	0.296	0.303	0.298	3.71
52)	C	Acenaphthene	1.215	1.236	1.213	1.199	1.200	1.185	1.208	1.45
53)		3-Nitroaniline	0.322	0.348	0.328	0.343	0.328	0.329	0.333	3.12
54)	P	2,4-Dinitrophenol	0.072	0.175	0.198	0.210	0.200	0.215	0.178	30.35

----- Quadratic regression ----- Coefficient = 0.9978
Response Ratio = -0.03207 + 0.20251 *A + 0.00246 *A^2

55)		Dibenzofuran	1.663	1.678	1.651	1.646	1.628	1.567	1.639	2.38
56)		2,4-Dinitrotoluene	0.387	0.410	0.404	0.425	0.388	0.401	0.402	3.56
57)	P	4-Nitrophenol	0.131	0.151	0.146	0.154	0.138	0.145	0.144	5.92
58)		2,3,4,6-Tetrachloro	0.234	0.287	0.279	0.291	0.279	0.295	0.278	7.98
59)		Fluorene	1.274	1.335	1.283	1.312	1.283	1.263	1.292	2.07
60)		4-Chlorophenyl-phen	0.601	0.611	0.593	0.591	0.580	0.581	0.593	1.99
61)		Diethylphthalate	1.301	1.342	1.280	1.326	1.205	1.281	1.289	3.70
62)		4-Nitroaniline	0.308	0.344	0.314	0.341	0.288	0.259	0.309	10.52
63)	I	Phenanthrene-d10	----------ISTD----------							
64)		4,6-Dinitro-2-methy	0.111	0.154	0.161	0.169	0.167	0.149	0.152	14.17
65)	C	n-Nitrosodiphenylam	0.582	0.590	0.589	0.576	0.600	0.608	0.591	1.98
66)		1,2-Diphenylhydrazi	0.799	0.803	0.789	0.766	0.788	0.876	0.803	4.71
67)	S	2,4,6-Tribromopheno	0.087	0.090	0.089	0.089	0.091	0.094	0.090	2.60
68)		4-Bromophenyl-pheny	0.209	0.208	0.210	0.206	0.218	0.213	0.210	2.07
69)		Hexachlorobenzene	0.204	0.205	0.204	0.203	0.213	0.207	0.206	1.88
70)		Atrazine	0.222	0.226	0.217	0.212	0.207	0.200	0.214	4.51
71)	C	Pentachlorophenol	0.073	0.111	0.120	0.128	0.126	0.134	0.115	19.11

----- Quadratic regression ----- Coefficient = 0.9990
Response Ratio = -0.00996 + 0.11611 *A + 0.00300 *A^2

72)		Phenanthrene	1.174	1.169	1.133	1.148	1.168	1.116	1.151	2.01
73)		Anthracene	1.180	1.187	1.156	1.169	1.144	1.123	1.160	2.06
74)		Carbazole	1.091	1.094	1.048	1.114	1.030	1.033	1.068	3.35
75)		Di-n-butylphthalate	1.342	1.442	1.390	1.457	1.313	1.353	1.383	4.14
76)	C	Fluoranthene	1.083	1.126	1.045	1.147	1.014	1.020	1.072	5.19
77)	I	Chrysene-d12	----------ISTD----------							
78)		Benzidine	0.632	0.445	0.346	0.355	0.299	0.266	0.391	34.03

----- Quadratic regression ----- Coefficient = 0.9938
Response Ratio = 0.02562 + 0.41981 *A + -0.05149 *A^2

79)		Pyrene	1.496	1.594	1.541	1.572	1.536	1.675	1.569	3.94
80)	S	Terphenyl-d14	0.880	0.963	0.932	0.938	0.918	1.004	0.939	4.47
81)		Butylbenzylphthalat	0.672	0.787	0.763	0.798	0.724	0.830	0.762	7.46
82)		3,3'-Dichlorobenzid	0.427	0.432	0.410	0.408	0.385	0.369	0.405	5.98
83)		Benzo[a]anthracene	1.197	1.239	1.197	1.214	1.192	1.257	1.216	2.16
84)		Chrysene	1.207	1.212	1.165	1.182	1.160	1.158	1.181	2.04
85)		bis(2-Ethylhexyl)ph	0.964	1.101	1.089	1.129	1.018	1.173	1.079	7.04
86)	I	Perylene-d12	----------ISTD----------							
87)	C	Di-n-octylphthalate	2.373	2.868	3.016	3.031	2.722	3.327	2.890	11.19
88)		Benzo[b]fluoranthen	1.575	1.717	1.703	1.752	1.671	1.828	1.708	4.94
89)		Benzo[k]fluoranthen	1.663	1.782	1.743	1.737	1.712	1.667	1.717	2.69

Initial Calibration Summary

Job Number: F21096
Account: ITTNKNOX Shaw E & I, Inc.
Project: PBOW

Sample: SW917-ICC917
Lab FileID: W017553.D

90)	C	Benzo[a]pyrene	1.464	1.524	1.492	1.508	1.481	1.487	1.493	1.39
91)		Indeno[1,2,3-cd]pyr	1.124	1.191	1.067	1.168	1.191	1.111	1.142	4.38
92)		Dibenz[a,h]anthrace	1.177	1.232	1.130	1.208	1.200	1.106	1.175	4.12
93)		Benzo[g,h,i]perylen	1.320	1.294	1.165	1.231	1.266	1.139	1.236	5.82

(#) = Out of Range

8270C.M Sun Oct 26 12:52:52 2003 MSBNA01

5.7

5

ACCUTEST. Laboratories

Continuing Calibration Summary

Job Number: F21096
Account: ITTNKNOX Shaw E & I, Inc.
Project: PBOW

Sample: SW949-CC917
Lab FileID: W018240.D

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\121603\W018240.D Vial: 2
Acq On : 16 Dec 2003 11:14 am Operator: marke
Sample : cc917-50 Inst : MSBNA01
Misc : op9282,sw949,990,,,1,1,water Multiplr: 1.00
MS Integration Params: LSCINT.P

Method : C:\HPCHEM\1\METHODS\8270C.M (RTE Integrator)
Title : SW846 8270C OR EPA 625
Last Update : Wed Dec 17 09:29:44 2003
Response via : Multiple Level Calibration

Min. RRF : 0.001 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	66	-0.02	4.75
2		1,4-Dioxane	0.441	0.409	7.3	62	-0.09	1.11
3		N-nitrosodimethylamine	0.578	0.631	-9.2	72	0.00	1.71
4		Pyridine	1.135	1.086	4.3	62	-0.10	1.76
5		Benzaldehyde	0.557	0.548	1.6	73	-0.01	4.41
6		Aniline	1.653	1.734	-4.9	69	-0.02	4.50
7	S	2-Fluorophenol	1.153	1.201	-4.2	70	-0.06	3.66
8		bis(2-Chloroethyl)ether	1.137	1.157	-1.8	68	0.00	4.56
9	S	Phenol-d5	1.359	1.452	-6.8	71	-0.01	4.50
10	C	Phenol	1.563	1.648	-5.4	70	-0.01	4.51
11		2-Chlorophenol	1.347	1.404	-4.2	70	-0.01	4.59
12		1,3-Dichlorobenzene	1.497	1.540	-2.9	69	-0.02	4.71
13	C	1,4-Dichlorobenzene	1.539	1.611	-4.7	70	-0.01	4.77
14		1,2-Dichlorobenzene	1.425	1.495	-4.9	70	-0.01	4.89
15		Benzyl alcohol	0.779	0.838	-7.6	70	-0.01	4.89
16		bis(2-chloroisopropyl)eth	1.864	2.016	-8.2	72	0.00	4.99
17		2-Methylphenol	1.137	1.198	-5.4	71	0.00	4.99
18		Acetophenone	1.828	1.992	-9.0	71	0.00	5.11
19		Hexachloroethane	0.563	0.594	-5.5	71	-0.01	5.18
20	P	N-Nitroso-di-n-propylamin	0.815	0.855	-4.9	69	-0.01	5.11
21		3&4-Methylphenol	1.182	1.263	-6.9	71	0.00	5.12
22	I	Naphthalene-d8	1.000	1.000	0.0	68	-0.02	5.91
23	S	Nitrobenzene-d5	0.324	0.335	-3.4	71	-0.02	5.24
24		Nitrobenzene	0.320	0.326	-1.9	71	-0.02	5.25
25		Isophorone	0.569	0.561	1.4	68	-0.02	5.47
26	C	2-Nitrophenol	0.198	0.203	-2.5	72	-0.01	5.54
27		2,4-Dimethylphenol	0.326	0.325	0.3	69	0.00	5.59
28		bis(2-Chloroethoxy)methan	0.371	0.371	0.0	69	0.00	5.67
29		Benzoic Acid	0.233	0.247	-6.0	69	-0.05	5.77
30	C	2,4-Dichlorophenol	0.289	0.301	-4.2	72	-0.01	5.78
31		1,2,4-Trichlorobenzene	0.303	0.317	-4.6	72	-0.01	5.86
32		Naphthalene	1.010	1.041	-3.1	71	-0.01	5.94
33		4-Chloroaniline	0.405	0.419	-3.5	71	0.00	6.00
34		2,6-Dichlorophenol	0.285	0.299	-4.9	72	0.00	6.00
35	C	Hexachlorobutadiene	0.174	0.188	-8.0	74	0.00	6.06
36		Caprolactam	0.100	0.098	2.0	66	-0.02	6.46
37	C	4-Chloro-3-methylphenol	0.264	0.261	1.1	67	0.00	6.56
38		2-Methylnaphthalene	0.665	0.693	-4.2	71	0.00	6.72
39		1-Methylnaphthalene	0.640	0.654	-2.2	70	0.00	6.84
40		1,2,4,5-Tetrachlorobenzen	0.291	0.307	-5.5	72	0.00	6.93

Continuing Calibration Summary

Job Number: F21096
Account: ITTNKNOX Shaw E & I, Inc.
Project: PBOW

Sample: SW949-CC917
Lab FileID: W018240.D

41	I	Acenaphthene-d10	1.000	1.000	0.0	66	-0.02	8.16
		----------	True	Calc.	% Drift	----------		
42	P	Hexachlorocyclopentadiene	50.000	44.278	11.4	55	-0.04	6.91
		----------	AvgRF	CCRF	% Dev	----------		
43	C	2,4,6-Trichlorophenol	0.390	0.409	-4.9	69	-0.03	7.09
44		2,4,5-Trichlorophenol	0.408	0.428	-4.9	69	-0.03	7.15
45	S	2-Fluorobiphenyl	1.389	1.465	-5.5	70	-0.03	7.20
46		1,1'-Biphenyl	1.745	1.861	-6.6	70	-0.03	7.33
47		2-Chloronaphthalene	1.200	1.269	-5.7	71	-0.03	7.36
48		2-Nitroaniline	0.325	0.328	-0.9	67	-0.02	7.52
49		Acenaphthylene	1.739	1.774	-2.0	67	-0.03	7.94
50		Dimethylphthalate	1.264	1.261	0.2	67	-0.02	7.80
51		2,6-Dinitrotoluene	0.298	0.306	-2.7	68	-0.01	7.89
52	C	Acenaphthene	1.208	1.243	-2.9	68	-0.02	8.21
53		3-Nitroaniline	0.333	0.330	0.9	66	-0.02	8.14
		----------	True	Calc.	% Drift	----------		
54	P	2,4-Dinitrophenol	100.000	91.864	8.1	59	0.00	8.33
		----------	AvgRF	CCRF	% Dev	----------		
55		Dibenzofuran	1.639	1.657	-1.1	66	-0.01	8.49
56		2,4-Dinitrotoluene	0.402	0.398	1.0	65	0.00	8.53
57	P	4-Nitrophenol	0.144	0.135	6.2	61	0.00	8.49
58		2,3,4,6-Tetrachlorophenol	0.278	0.277	0.4	66	0.00	8.71
59		Fluorene	1.292	1.316	-1.9	68	0.00	9.04
60		4-Chlorophenyl-phenylethe	0.593	0.598	-0.8	67	0.00	9.08
61		Diethylphthalate	1.289	1.246	3.3	64	0.00	8.94
62		4-Nitroaniline	0.309	0.313	-1.3	66	0.00	9.14
63	I	Phenanthrene-d10	1.000	1.000	0.0	63	-0.02	10.65
64		4,6-Dinitro-2-methylpheno	0.152	0.164	-7.9	64	-0.05	9.20
65	C	n-Nitrosodiphenylamine	0.591	0.604	-2.2	64	-0.05	9.29
66		1,2-Diphenylhydrazine	0.803	0.830	-3.4	66	-0.05	9.34
67	S	2,4,6-Tribromophenol	0.090	0.098	-8.9	69	-0.05	9.46
68		4-Bromophenyl-phenylether	0.210	0.221	-5.2	66	-0.04	9.91
69		Hexachlorobenzene	0.206	0.222	-7.8	68	-0.04	9.97
70		Atrazine	0.214	0.213	0.5	62	-0.02	10.29
		----------	True	Calc.	% Drift	----------		
71	C	Pentachlorophenol	100.000	89.224	10.8	55	-0.03	10.35
		----------	AvgRF	CCRF	% Dev	----------		
72		Phenanthrene	1.151	1.161	-0.9	64	-0.03	10.70
73		Anthracene	1.160	1.181	-1.8	64	-0.02	10.79
74		Carbazole	1.068	1.066	0.2	64	0.00	11.13
75		Di-n-butylphthalate	1.383	1.315	4.9	60	0.00	11.90
76	C	Fluoranthene	1.072	1.055	1.6	63	0.00	12.86
77	I	Chrysene-d12	1.000	1.000	0.0	61	-0.03	15.57
		----------	True	Calc.	% Drift	----------		
78		Benzidine	50.000	37.757	24.5#	53	-0.06	13.21
		----------	AvgRF	CCRF	% Dev	----------		
79		Pyrene	1.569	1.603	-2.2	63	-0.08	13.26
80	S	Terphenyl-d14	0.939	0.950	-1.2	62	-0.06	13.67
81		Butylbenzylphthalate	0.762	0.723	5.1	58	-0.03	14.70
82		3,3'-Dichlorobenzidine	0.405	0.421	-4.0	63	-0.02	15.59

Continuing Calibration Summary

Job Number: F21096
Account: ITTNKNOX Shaw E & I, Inc.
Project: PBOW

Sample: SW949-CC917
Lab FileID: W018240.D

83		Benzo[a]anthracene	1.216	1.217	-0.1	62	-0.03	15.55
84		Chrysene	1.181	1.215	-2.9	63	-0.03	15.62
85		bis(2-Ethylhexyl)phthalat	1.079	0.957	11.3	53	0.00	15.88
86	I	Perylene-d12	1.000	1.000	0.0	66	-0.02	18.07
87	C	Di-n-octylphthalate	2.890	2.354	18.5	52	-0.03	17.06
88		Benzo[b]fluoranthene	1.708	1.684	1.4	66	-0.01	17.46
89		Benzo[k]fluoranthene	1.717	1.754	-2.2	67	-0.01	17.51
90	C	Benzo[a]pyrene	1.493	1.506	-0.9	67	-0.03	17.98
91		Indeno[1,2,3-cd]pyrene	1.142	1.190	-4.2	74	0.00	19.65
92		Dibenz[a,h]anthracene	1.175	1.242	-5.7	73	0.00	19.69
93		Benzo[g,h,i]perylene	1.236	1.332	-7.8	76	0.00	20.00

(1.1 %) 1 of 87 compounds'%D > 20

(#) = Out of Range SPCC's out = 0 CCC's out = 0
W017552.D 8270C.M Wed Dec 17 13:46:39 2003 MSBNA01

5.7

5

GC Semi-volatiles

6

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Surrogate Recovery Summaries
- GC Surrogate Retention Time Summaries
- Initial and Continuing Calibration Summaries

Method Blank Summary

Job Number: F21096
Account: ITTNKNOX Shaw E & I, Inc.
Project: PBOW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP9355-MB	GG008372.D	1	12/18/03	MRE	12/17/03	OP9355	GGG396

The QC reported here applies to the following samples: Method: SW846 8330A

F21096-1

CAS No.	Compound	Result	RL	MDL	Units	Q
2691-41-0	HMX	ND	0.20	0.075	ug/l	
121-82-4	RDX	ND	0.20	0.075	ug/l	
99-65-0	1,3-Dinitrobenzene	ND	0.20	0.050	ug/l	
606-20-2	2,6-Dinitrotoluene	ND	0.20	0.050	ug/l	
121-14-2	2,4-Dinitrotoluene	ND	0.20	0.050	ug/l	
35572-78-2	2-amino-4,6-Dinitrotoluene	ND	0.20	0.050	ug/l	
19406-51-0	4-amino-2,6-Dinitrotoluene	ND	0.20	0.050	ug/l	
98-95-3	Nitrobenzene	ND	0.20	0.050	ug/l	
88-72-2	o-Nitrotoluene	ND	0.20	0.050	ug/l	
99-08-1	m-Nitrotoluene	ND	0.20	0.050	ug/l	
99-99-0	p-Nitrotoluene	ND	0.20	0.075	ug/l	
479-45-8	Tetryl	ND	0.20	0.075	ug/l	
99-35-4	1,3,5-Trinitrobenzene	ND	0.20	0.050	ug/l	
118-96-7	2,4,6-Trinitrotoluene	ND	0.20	0.050	ug/l	

CAS No.	Surrogate Recoveries		Limits
610-39-9	3,4-Dinitrotoluene	99%	61-124%

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Blank Spike Summary

Job Number: F21096
Account: ITTNKNOX Shaw E & I, Inc.
Project: PBOW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP9355-BS	GG008371.D	1	12/18/03	MRE	12/17/03	OP9355	GGG396

The QC reported here applies to the following samples: Method: SW846 8330A

F21096-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
2691-41-0	HMX	2.5	2.6	104	79-119
121-82-4	RDX	2.5	2.7	108	73-119
99-65-0	1,3-Dinitrobenzene	2.5	2.5	100	77-117
606-20-2	2,6-Dinitrotoluene	2.5	2.6	104	77-123
121-14-2	2,4-Dinitrotoluene	2.5	2.5	100	74-119
35572-78-2	2-amino-4,6-Dinitrotoluene	2.5	2.6	104	77-121
19406-51-0	4-amino-2,6-Dinitrotoluene	2.5	2.6	104	76-121
98-95-3	Nitrobenzene	2.5	2.6	104	66-122
88-72-2	o-Nitrotoluene	2.5	2.5	100	68-120
99-08-1	m-Nitrotoluene	2.5	2.5	100	69-120
99-99-0	p-Nitrotoluene	2.5	2.5	100	75-118
479-45-8	Tetryl	2.5	2.1	84	63-122
99-35-4	1,3,5-Trinitrobenzene	2.5	2.5	100	77-115
118-96-7	2,4,6-Trinitrotoluene	2.5	2.4	96	76-113

CAS No.	Surrogate Recoveries	BSP	Limits
610-39-9	3,4-Dinitrotoluene	99%	61-124%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: F21096
Account: ITTNKNOX Shaw E & I, Inc.
Project: PBOW

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP9355-MS	GG008375.D	1	12/18/03	MRE	12/17/03	OP9355	GGG396
OP9355-MSD	GG008376.D	1	12/18/03	MRE	12/17/03	OP9355	GGG396
F21096-1	GG008374.D	1	12/18/03	MRE	12/17/03	OP9355	GGG396

The QC reported here applies to the following samples: Method: SW846 8330A

F21096-1

CAS No.	Compound	F21096-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
2691-41-0	HMX	ND		5	4.9	98	5.2	104	6	73-123/13
121-82-4	RDX	ND		5	5.0	100	5.2	104	4	65-126/13
99-65-0	1,3-Dinitrobenzene	ND		5	4.9	98	5.1	102	4	77-117/12
606-20-2	2,6-Dinitrotoluene	ND		5	6.1	122	5.6	112	9	77-122/16
121-14-2	2,4-Dinitrotoluene	ND		5	5.5	110	5.1	102	8	72-121/15
35572-78-2	2-amino-4,6-Dinitrotoluene	ND		5	5.1	102	5.2	104	2	68-128/17
19406-51-0	4-amino-2,6-Dinitrotoluene	ND		5	5.2	104	5.4	108	4	67-127/16
98-95-3	Nitrobenzene	ND		5	5.0	100	5.2	104	4	73-121/15
88-72-2	o-Nitrotoluene	ND		5	4.9	98	5.1	102	4	75-119/17
99-08-1	m-Nitrotoluene	ND		5	5.0	100	5.2	104	4	66-129/16
99-99-0	p-Nitrotoluene	ND		5	5.0	100	5.2	104	4	75-122/18
479-45-8	Tetryl	ND		5	ND	0*	ND	0*	nc	42-135/15
99-35-4	1,3,5-Trinitrobenzene	ND		5	4.6	92	4.8	96	4	72-116/12
118-96-7	2,4,6-Trinitrotoluene	ND		5	4.6	92	4.8	96	4	70-117/14

CAS No.	Surrogate Recoveries	MS	MSD	F21096-1	Limits
610-39-9	3,4-Dinitrotoluene	95%	99%	90%	61-124%

(a) Outside control limits due to matrix interference.

Semivolatile Surrogate Recovery Summary

Job Number: F21096
Account: ITTNKNOX Shaw E & I, Inc.
Project: PBOW

Method: SW846 8330A Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 [a]
F21096-1	GG008374.D	90.0
OP9355-BS	GG008371.D	99.0
OP9355-MB	GG008372.D	99.0
OP9355-MS	GG008375.D	95.0
OP9355-MSD	GG008376.D	99.0

Surrogate Compounds	Recovery Limits
S1 = 3,4-Dinitrotoluene	61-124%

(a) Recovery from GC signal #1

GC Surrogate Retention Time Summary

Job Number: F21096
Account: ITTNKNOX Shaw E & I, Inc.
Project: PBOW

Check Std:	GGG396-CC355	Injection Date:	12/18/03
Lab File ID:	GG008369.D	Injection Time:	16:01
Instrument ID:	GCGG	Method:	SW846 8330A

	S1 [a] RT
Check Std	14.81

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	S1 [a] RT
OP9355-BS	GG008371.D	12/18/03	17:07	14.81
OP9355-MB	GG008372.D	12/18/03	17:40	14.79
ZZZZZZ	GG008373.D	12/18/03	18:12	14.80
F21096-1	GG008374.D	12/18/03	18:45	14.78
OP9355-MS	GG008375.D	12/18/03	19:17	14.81
OP9355-MSD	GG008376.D	12/18/03	19:50	14.81
ZZZZZZ	GG008377.D	12/18/03	20:23	14.80

Surrogate Compounds

S1 = 3,4-Dinitrotoluene

(a) Retention time from GC signal #1

Initial Calibration Summary

Job Number: F21096
Account: ITTNKNOX Shaw E & I, Inc.
Project: PBOW

Sample: GGG355-ICC355
Lab FileID: GG007223.D

Response Factor Report G1315B

Method : C:\HPCHEM\3\METHODS\8330_EX2.M (Chemstation Integrator)
Title : Explosives by 8330
Last Update : Sun Aug 03 09:26:37 2003
Response via : Initial Calibration

Calibration Files
20 =GG007220.D 100 =GG007221.D 250 =GG007222.D
500 =GG007223.D 750 =GG007224.D 1000 =GG007225.D 2000 =GG007226.D

	Compound	20	100	250	500	750	1000	2000	Avg		%RSD
1)	HMX	3.147	3.143	3.300	3.173	3.296	3.158	3.276	3.213	E3	2.28
2)	RDX	4.852	4.374	4.246	4.027	4.136	3.946	4.049	4.233	E3	7.29
3)	1,3,5-Trinitroben	9.222	8.458	8.828	8.582	8.873	8.497	8.814	8.753	E3	3.04
4)	1,3-Dinitrobenzen	1.199	1.146	1.195	1.163	1.205	1.155	1.194	1.179	E4	2.03
5)	Tetryl	6.521	6.348	6.733	6.550	6.792	6.522	6.745	6.602	E3	2.43
6)	Nitrobenzene	6.992	7.260	7.695	7.579	7.858	7.474	7.736	7.514	E3	4.01
7)S	3,4-Dinitrotoluen	4.993	4.672	4.809	4.689	4.878	4.683	4.846	4.796	E3	2.53
8)	2,4,6-Trinitrotol	8.664	8.025	8.341	8.115	8.411	8.082	8.359	8.285	E3	2.73
9)	4-Amino-2,6-Dinit	5.386	5.479	5.701	5.589	5.794	5.562	5.760	5.610	E3	2.67
10)	2-Amino-4,6-Dinit	7.274	7.356	7.623	7.538	7.802	7.496	7.763	7.550	E3	2.60
11)	2,6-Dinitrotoluen	5.365	5.400	5.602	5.523	5.710	5.491	5.684	5.539	E3	2.41
12)	2,4-Dinitrotoluen	1.093	1.063	1.102	1.083	1.118	1.077	1.120	1.094	E4	1.93
13)	o-Nitrotoluene	4.476	4.732	4.919	4.830	4.970	4.726	4.909	4.794	E3	3.52
14)	p-Nitrotoluene	3.883	3.956	4.120	4.062	4.173	3.998	4.138	4.047	E3	2.62
15)	m-Nitrotoluene	5.060	5.127	5.325	5.254	5.384	5.182	5.342	5.239	E3	2.30

Signal #2

1)	HMX	9.828	9.523	9.739	9.463	9.758	9.381	9.606	9.614	E3	1.74
2)	RDX	9.394	8.073	7.941	7.461	7.370	6.880	6.894	7.716	E3	11.29
3)	1,3,5-Trinitroben	1.813	1.690	1.773	1.729	1.788	1.714	1.777	1.755	E4	2.52
4)	1,3-Dinitrobenzen	1.418	1.368	1.431	1.394	1.441	1.383	1.429	1.409	E4	1.96
5)	Tetryl	1.200	1.154	1.224	1.191	1.232	1.186	1.226	1.202	E4	2.29
6)	Nitrobenzene	3.212	3.311	3.513	3.464	3.568	3.404	3.532	3.429	E3	3.76
7)S	3,4-Dinitrotoluen	6.792	6.350	6.572	6.376	6.590	6.337	6.562	6.511	E3	2.56
8)	2,4,6-Trinitrotol	1.250	1.169	1.221	1.184	1.224	1.177	1.217	1.206	E4	2.45
9)	4-Amino-2,6-Dinit	1.519	1.478	1.545	1.507	1.558	1.497	1.548	1.522	E4	1.96
10)	2-Amino-4,6-Dinit	1.299	1.232	1.282	1.262	1.304	1.254	1.296	1.275	E4	2.11
11)	2,6-Dinitrotoluen	7.555	7.356	7.627	7.495	7.743	7.451	7.700	7.561	E3	1.83
12)	2,4-Dinitrotoluen	0.998	0.957	0.991	0.970	1.004	0.968	1.001	0.984	E4	1.91
13)	o-Nitrotoluene	4.688	5.041	5.277	5.175	5.344	5.069	5.242	5.119	E3	4.28
14)	p-Nitrotoluene	7.389	7.904	8.289	8.131	8.382	8.006	8.270	8.053	E3	4.19
15)	m-Nitrotoluene	7.262	7.656	7.971	7.811	8.044	7.687	7.943	7.768	E3	3.42

(#) = Out of Range

8330_EX2.M Sun Aug 03 10:59:38 2003

Continuing Calibration Summary

Job Number: F21096
Account: ITTNKNOX Shaw E & I, Inc.
Project: PBOW

Sample: GGG396-CC355
Lab FileID: GG008369.D

Evaluate Continuing Calibration Report

Signal #1 : G:\HPCHEM\1\DATA\1218EXP\GG008369.D\DAD1B.CH Vial: 2
Signal #2 : G:\HPCHEM\1\DATA\1218EXP\GG008369.D\DAD1A.CH
Acq On : 18-Dec-2003, 16:01:19 Operator: MIKEE
Sample : CC355-500 Inst : G1315B
Misc : op9355,ggg396,1000,,,10,,WATER Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e

Method : C:\HPCHEM\3\METHODS\8330_EX2.M (Chemstation Integrator)
Title : Explosives by 8330
Last Update : Fri Dec 19 08:56:17 2003
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 200%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	HMX	500.000	523.636	-4.7	106	0.00
2	RDX	500.000	525.267	-5.1	110	0.00
3	1,3,5-Trinitrobenzene	500.000	507.831	-1.6	104	0.00
4	1,3-Dinitrobenzene	500.000	514.719	-2.9	104	0.00
5	Tetryl	500.000	483.753	3.2	98	0.00
6	Nitrobenzene	500.000	522.141	-4.4	104	0.00
7 S	3,4-Dinitrotoluene	500.000	523.466	-4.7	107	0.00
8	2,4,6-Trinitrotoluene	500.000	504.636	-0.9	103	0.00
9	4-Amino-2,6-Dinitrotoluene	500.000	533.389	-6.7	107	0.00
10	2-Amino-4,6-Dinitrotoluene	500.000	528.740	-5.7	106	0.00
11	2,6-Dinitrotoluene	500.000	534.940	-7.0	107	0.00
12	2,4-Dinitrotoluene	500.000	516.373	-3.3	104	0.00
13	o-Nitrotoluene	500.000	500.992	-0.2	99	0.00
14	p-Nitrotoluene	500.000	507.812	-1.6	101	0.00
15	m-Nitrotoluene	500.000	510.183	-2.0	102	0.00

Signal #2

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	HMX	500.000	517.790	-3.6	105	0.00
2	RDX	500.000	501.813	-0.4	104	0.00
3	1,3,5-Trinitrobenzene	500.000	510.293	-2.1	104	0.00
4	1,3-Dinitrobenzene	500.000	514.133	-2.8	104	0.00
5	Tetryl	500.000	470.251	5.9	95	0.00
6	Nitrobenzene	500.000	504.552	-0.9	100	0.00
7 S	3,4-Dinitrotoluene	500.000	507.570	-1.5	104	0.00
8	2,4,6-Trinitrotoluene	500.000	499.204	0.2	102	0.00
9	4-Amino-2,6-Dinitrotoluen	500.000	519.580	-3.9	105	0.00
10	2-Amino-4,6-Dinitrotoluen	500.000	517.521	-3.5	105	0.00
11	2,6-Dinitrotoluene	500.000	528.122	-5.6	107	0.00
12	2,4-Dinitrotoluene	500.000	515.135	-3.0	105	0.00
13	o-Nitrotoluene	500.000	504.594	-0.9	100	0.00
14	p-Nitrotoluene	500.000	512.215	-2.4	101	0.00
15	m-Nitrotoluene	500.000	510.100	-2.0	101	0.00

Average % D = 3.1

Continuing Calibration Summary

Job Number: F21096
Account: ITTNKNOX Shaw E & I, Inc.
Project: PBOW

Sample: GGG396-CC355
Lab FileID: GG008369.D

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(#) = Out of Range                SPCC's out = 0  CCC's out = 0
 GG007223.D 8330_EX2.M       Fri Dec 19 09:10:56 2003
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6.6

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Continuing Calibration Summary

Job Number: F21096
Account: ITTNKNOX Shaw E & I, Inc.
Project: PBOW

Sample: GGG396-CC355
Lab FileID: GG008378.D

Evaluate Continuing Calibration Report

Signal #1 : G:\HPCHEM\1\DATA\1218EXP\GG008378.D\DAD1B.CH Vial: 3
Signal #2 : G:\HPCHEM\1\DATA\1218EXP\GG008378.D\DAD1A.CH
Acq On : 18-Dec-2003, 20:55:34 Operator: MIKEE
Sample : CC355-750 Inst : G1315B
Misc : op9355,ggg396,1000,,,10,,WATER Multiplr: 1.00
IntFile Signal #1: EVENTS.E IntFile Signal #2: events2.e

Method : C:\HPCHEM\3\METHODS\8330_EX2.M (Chemstation Integrator)
Title : Explosives by 8330
Last Update : Fri Dec 19 08:56:17 2003
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 200%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	HMX	750.000	784.531	-4.6	102	0.01
2	RDX	750.000	756.860	-0.9	103	0.02
3	1,3,5-Trinitrobenzene	750.000	750.969	-0.1	99	0.03
4	1,3-Dinitrobenzene	750.000	759.453	-1.3	99	0.03
5	Tetryl	750.000	709.500	5.4	92	0.01
6	Nitrobenzene	750.000	766.876	-2.3	98	0.04
7 S	3,4-Dinitrotoluene	750.000	765.784	-2.1	100	0.02
8	2,4,6-Trinitrotoluene	750.000	741.552	1.1	97	0.03
9	4-Amino-2,6-Dinitrotoluene	750.000	781.636	-4.2	101	0.00
10	2-Amino-4,6-Dinitrotoluene	750.000	774.902	-3.3	100	-0.02
11	2,6-Dinitrotoluene	750.000	779.002	-3.9	101	0.02
12	2,4-Dinitrotoluene	750.000	749.903	0.0	98	0.00
13	o-Nitrotoluene	750.000	756.171	-0.8	97	0.01
14	p-Nitrotoluene	750.000	757.721	-1.0	98	0.01
15	m-Nitrotoluene	750.000	753.627	-0.5	98	0.00

Signal #2

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	HMX	750.000	763.791	-1.8	100	0.01
2	RDX	750.000	706.711	5.8	99	0.02
3	1,3,5-Trinitrobenzene	750.000	757.264	-1.0	99	0.03
4	1,3-Dinitrobenzene	750.000	763.323	-1.8	100	0.03
5	Tetryl	750.000	699.800	6.7	91	0.01
6	Nitrobenzene	750.000	782.916	-4.4	100	0.04
7 S	3,4-Dinitrotoluene	750.000	762.312	-1.6	100	0.02
8	2,4,6-Trinitrotoluene	750.000	742.825	1.0	98	0.03
9	4-Amino-2,6-Dinitrotoluen	750.000	769.094	-2.5	100	-0.01
10	2-Amino-4,6-Dinitrotoluen	750.000	765.487	-2.1	100	-0.02
11	2,6-Dinitrotoluene	750.000	774.549	-3.3	101	0.01
12	2,4-Dinitrotoluene	750.000	745.691	0.6	97	0.00
13	o-Nitrotoluene	750.000	760.891	-1.5	97	0.01
14	p-Nitrotoluene	750.000	763.321	-1.8	98	0.00
15	m-Nitrotoluene	750.000	757.182	-1.0	97	0.00

Average % D = 2.3

Continuing Calibration Summary

Job Number: F21096
Account: ITTNKNOX Shaw E & I, Inc.
Project: PBOW

Sample: GGG396-CC355
Lab FileID: GG008378.D

(#) = Out of Range SPCC's out = 0 CCC's out = 0
GG007224.D 8330_EX2.M Fri Dec 19 09:10:29 2003

Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Instrument Runlogs
- Initial and Continuing Calibration Blanks
- Initial and Continuing Calibration Checks
- High and Low Check Standards
- Interfering Element Check Standards
- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries
- IDL and Linear Range Summaries

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F21096
Account: ITTNKNOX - Shaw E & I, Inc.
Project: PBOW

File ID: IR121703.ASC Date Analyzed: 12/17/03 Methods: SW846 6010B
Analyst: SL Run ID: MA3609
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
11:39	MA3609-ICV1	1		
11:45	MA3609-ICB1	1		
11:52	MA3609-CRI1	1		
11:58	MA3609-ICSA1	1		
12:02	MA3609-ICSAB1	1		
12:28	MA3609-CCV1	1		
12:32	MA3609-CCB1	1		
12:36	ZZZZZZ	1		
12:43	MP6143-MB1	1		
12:47	MP6143-B1	1		
12:51	F21106-2	1		(sample used for QC only; not part of login F21096)
12:55	MP6143-D1	1		
12:58	MP6143-SD1	5		
13:02	MP6143-S1	1		
13:05	MP6143-S2	1		
13:10	ZZZZZZ	1		
13:14	ZZZZZZ	1		
13:18	MA3609-CCV2	1		
13:22	MA3609-CCB2	1		
13:25	ZZZZZZ	1		
13:29	ZZZZZZ	1		
13:33	ZZZZZZ	1		
13:36	ZZZZZZ	1		
13:40	ZZZZZZ	1		
13:43	ZZZZZZ	1		
13:47	ZZZZZZ	1		
13:50	ZZZZZZ	1		
13:54	ZZZZZZ	1		
13:57	ZZZZZZ	1		
14:01	MA3609-CCV3	1		
14:05	MA3609-CCB3	1		
14:09	ZZZZZZ	1		
14:12	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F21096
Account: ITTNKNOX - Shaw E & I, Inc.
Project: PBOW

File ID: IR121703.ASC Date Analyzed: 12/17/03 Methods: SW846 6010B
Analyst: SL Run ID: MA3609
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Dilution Factor	PS Recov	Comments
14:16	ZZZZZZ	1		
14:19	ZZZZZZ	1		
14:23	ZZZZZZ	1		
14:26	ZZZZZZ	1		
14:30	ZZZZZZ	5		
14:34	MP6148-MB1	1		
14:38	MP6148-B1	1		
14:42	F21149-1	1		(sample used for QC only; not part of login F21096)
14:46	MA3609-CCV4	1		
14:50	MA3609-CCB4	1		
14:54	MP6148-D1	1		
14:57	MP6148-SD1	5		
15:01	MP6148-S1	1		
15:04	MP6148-S2	1		
15:09	ZZZZZZ	1		
15:12	ZZZZZZ	1		
15:16	ZZZZZZ	1		
15:19	F21096-1	1		
15:23	F21096-1A	1		
---------->	Last reportable sample/prep for job F21096			
15:27	MP6146-MB1	1		
15:31	MA3609-CCV5	1		
15:35	MA3609-CCB5	1		
---------->	Last reportable CCB for job F21096			
15:39	MP6146-B1	1		
15:43	F21073-5	1		(sample used for QC only; not part of login F21096)
15:47	MP6146-D1	1		
15:50	MP6146-SD1	5		
15:54	MP6146-S1	1		
15:57	MP6146-S2	1		
16:02	ZZZZZZ	50		
16:11	MA3609-CRI2	1		
16:14	MA3609-CCV6	1		
16:19	MA3609-CCB6	1		

Refer to raw data for calibration curve and standards.

INTERNAL STANDARD SUMMARY

Login Number: F21096
Account: ITTNKNOX - Shaw E & I, Inc.
Project: PBOW

File ID: IR121703.ASC Date Analyzed: 12/17/03 Methods: SW846 6010B
Analyst: SL Run ID: MA3609
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1
11:39	MA3609-ICV1	5142
11:45	MA3609-ICB1	5106 R
11:52	MA3609-CRI1	5159
11:58	MA3609-ICSA1	5003
12:02	MA3609-ICSAB1	4962
12:28	MA3609-CCV1	5094
12:32	MA3609-CCB1	4989
12:36	ZZZZZZ	5158
12:43	MP6143-MB1	5026
12:47	MP6143-B1	5056
12:51	F21106-2	5075
12:55	MP6143-D1	5083
12:58	MP6143-SD1	5122
13:02	MP6143-S1	5126
13:05	MP6143-S2	5235
13:10	ZZZZZZ	5015
13:14	ZZZZZZ	5011
13:18	MA3609-CCV2	5098
13:22	MA3609-CCB2	5041
13:25	ZZZZZZ	5022
13:29	ZZZZZZ	5072
13:33	ZZZZZZ	5095
13:36	ZZZZZZ	5075
13:40	ZZZZZZ	5145
13:43	ZZZZZZ	4994
13:47	ZZZZZZ	5090
13:50	ZZZZZZ	5071
13:54	ZZZZZZ	5093
13:57	ZZZZZZ	5098
14:01	MA3609-CCV3	5087
14:05	MA3609-CCB3	5118
14:09	ZZZZZZ	5073
14:12	ZZZZZZ	5080
14:16	ZZZZZZ	5090

INTERNAL STANDARD SUMMARY

Login Number: F21096
Account: ITTNKNOX - Shaw E & I, Inc.
Project: PBOW

File ID: IR121703.ASC Date Analyzed: 12/17/03 Methods: SW846 6010B
Analyst: SL Run ID: MA3609
Parameters: Al,Sb,As,Ba,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Ni,K,Se,Ag,Na,Tl,V,Zn

Time	Sample Description	Istd#1
14:19	ZZZZZZ	5004
14:23	ZZZZZZ	5102
14:26	ZZZZZZ	5034
14:30	ZZZZZZ	5183
14:34	MP6148-MB1	5070
14:38	MP6148-B1	5122
14:42	F21149-1	5082
14:46	MA3609-CCV4	5118
14:50	MA3609-CCB4	5052
14:54	MP6148-D1	5080
14:57	MP6148-SD1	5060
15:01	MP6148-S1	5112
15:04	MP6148-S2	5133
15:09	ZZZZZZ	5079
15:12	ZZZZZZ	5046
15:16	ZZZZZZ	5138
15:19	F21096-1	5158
15:23	F21096-1A	5087
15:27	MP6146-MB1	4934
15:31	MA3609-CCV5	5032
15:35	MA3609-CCB5	5050
15:39	MP6146-B1	4973
15:43	F21073-5	5036
15:47	MP6146-D1	5043
15:50	MP6146-SD1	5051
15:54	MP6146-S1	5101
15:57	MP6146-S2	5108
16:02	ZZZZZZ	5133
16:11	MA3609-CRI2	5135
16:14	MA3609-CCV6	5120
16:19	MA3609-CCB6	5005

R = Reference for ISTD limits. ! = Outside limits.

LEGEND:

Istd#	Parameter	Limits
Istd#1	Yttrium	60-125 %

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F21096
Account: ITTNKNOX - Shaw E & I, Inc.
Project: PBOW

File ID: IR121703.ASC
QC Limits: result < RL

Date Analyzed: 12/17/03
Run ID: MA3609

Methods: SW846 6010B
Units: ug/l

Metal	RL	IDL	ICB raw	final	CCB raw	final	CCB raw	final	CCB raw	final
Aluminum	200	6.6	-11	<200	30.7	<200	12.1	<200	9.4	<200
Antimony	5.0	1.5	-0.70	<5.0	1.5	<5.0	3.5	<5.0	2.6	<5.0
Arsenic	10	2.8	-4.0	<10	-2.0	<10	-1.2	<10	0.69	<10
Barium	200	.5	-0.23	<200	0.14	<200	0.19	<200	0.52	<200
Beryllium	5.0	.3	-0.66	<5.0	-0.82	<5.0	-0.77	<5.0	0.010	<5.0
Cadmium	5.0	.3	-0.48	<5.0	-0.23	<5.0	-0.020	<5.0	0.080	<5.0
Calcium	1000	3.8	-3.1	<1000	4.0	<1000	4.9	<1000	11.9	<1000
Chromium	10	.4	-0.90	<10	-0.44	<10	-0.57	<10	0.44	<10
Cobalt	50	.5	-0.47	<50	-0.46	<50	0.11	<50	0.98	<50
Copper	25	.44	-0.26	<25	1.7	<25	1.7	<25	2.2	<25
Iron	300	7.1	-17	<300	36.0	<300	24.4	<300	42.7	<300
Lead	5.0	1.2	0.11	<5.0	1.4	<5.0	1.3	<5.0	1.1	<5.0
Magnesium	5000	9.9	-7.9	<5000	-0.51	<5000	0.040	<5000	8.5	<5000
Manganese	15	.16	-0.33	<15	0.0	<15	0.060	<15	0.27	<15
Molybdenum	50	.75								
Nickel	40	1.1	-0.72	<40	-0.88	<40	-0.89	<40	0.42	<40
Potassium	5000	14	-150	<5000	-140	<5000	-2.1	<5000	-23	<5000
Selenium	10	2	2.9	<10	3.7	<10	4.3	<10	5.9	<10
Silver	10	.6	-2.4	<10	-1.9	<10	0.48	<10	-0.26	<10
Sodium	5000	150	-510	<5000	-540	<5000	-450	<5000	-200	<5000
Thallium	10	1.5	-8.2	<10	-5.9	<10	0.67	<10	-0.64	<10
Tin	50	1.5	anr							
Vanadium	50	.47	-1.1	<50	-0.32	<50	-0.29	<50	0.44	<50
Zinc	20	.59	-1.1	<20	-0.080	<20	0.010	<20	0.26	<20

(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F21096
Account: ITTNKNOX - Shaw E & I, Inc.
Project: PBOW

File ID: IR121703.ASC
QC Limits: result < RL

Date Analyzed: 12/17/03
Run ID: MA3609

Methods: SW846 6010B
Units: ug/l

Metal	RL	IDL	CCB raw	final	CCB raw	final
Aluminum	200	6.6	9.9	<200	6.0	<200
Antimony	5.0	1.5	-1.7	<5.0	0.21	<5.0
Arsenic	10	2.8	0.22	<10	-0.77	<10
Barium	200	.5	0.33	<200	0.46	<200
Beryllium	5.0	.3	-0.38	<5.0	-0.27	<5.0
Cadmium	5.0	.3	0.14	<5.0	0.040	<5.0
Calcium	1000	3.8	10.3	<1000	14.2	<1000
Chromium	10	.4	-0.64	<10	-0.38	<10
Cobalt	50	.5	-0.020	<50	-0.060	<50
Copper	25	.44	1.4	<25	1.4	<25
Iron	300	7.1	20.8	<300	31.6	<300
Lead	5.0	1.2	2.7	<5.0	2.5	<5.0
Magnesium	5000	9.9	-2.0	<5000	4.5	<5000
Manganese	15	.16	0.16	<15	0.36	<15
Molybdenum	50	.75				
Nickel	40	1.1	-0.51	<40	-0.63	<40
Potassium	5000	14	-170	<5000	-150	<5000
Selenium	10	2	4.8	<10	4.7	<10
Silver	10	.6	-2.3	<10	-0.96	<10
Sodium	5000	150	-1200	<5000	-940	<5000
Thallium	10	1.5	-3.0	<10	-7.0	<10
Tin	50	1.5	anr			
Vanadium	50	.47	-0.53	<50	-0.21	<50
Zinc	20	.59	0.050	<20	-0.080	<20

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F21096
Account: ITTNKNOX - Shaw E & I, Inc.
Project: PBOW

File ID: IR121703.ASC Date Analyzed: 12/17/03 Methods: SW846 6010B
QC Limits: 90 to 110 % Recovery Run ID: MA3609 Units: ug/l

Metal	ICV True	ICV Results	% Rec	CCV True	CCV Results	% Rec	CCV True	CCV Results	% Rec
Aluminum	40000	39100	97.8	40000	39100	97.8	40000	39200	98.0
Antimony	2000	2030	101.5	2000	2020	101.0	2000	2010	100.5
Arsenic	2000	1980	99.0	2000	1960	98.0	2000	1930	96.5
Barium	2000	2010	100.5	2000	2000	100.0	2000	2010	100.5
Beryllium	2000	2060	103.0	2000	2040	102.0	2000	2020	101.0
Cadmium	2000	2060	103.0	2000	2040	102.0	2000	2010	100.5
Calcium	40000	41200	103.0	40000	40500	101.3	40000	39800	99.5
Chromium	2000	1970	98.5	2000	1950	97.5	2000	1930	96.5
Cobalt	2000	1990	99.5	2000	1970	98.5	2000	1940	97.0
Copper	2000	1900	95.0	2000	1900	95.0	2000	1910	95.5
Iron	40000	41000	102.5	40000	40600	101.5	40000	40000	100.0
Lead	2000	2010	100.5	2000	1990	99.5	2000	1990	99.5
Magnesium	40000	41300	103.3	40000	40700	101.8	40000	40300	100.8
Manganese	2000	2010	100.5	2000	1990	99.5	2000	1970	98.5
Molybdenum									
Nickel	2000	2060	103.0	2000	2040	102.0	2000	2010	100.5
Potassium	40000	40600	101.5	40000	40800	102.0	40000	41500	103.8
Selenium	2000	2060	103.0	2000	2040	102.0	2000	2040	102.0
Silver	250	253	101.2	250	253	101.2	250	251	100.4
Sodium	40000	41200	103.0	40000	40900	102.3	40000	40600	101.5
Thallium	2000	1900	95.0	2000	1880	94.0	2000	1880	94.0
Tin	anr								
Vanadium	2000	2020	101.0	2000	2000	100.0	2000	1990	99.5
Zinc	2000	2000	100.0	2000	1970	98.5	2000	1910	95.5

(*) Outside of QC limits
(anr) Analyte not requested

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F21096
Account: ITTNKNOX - Shaw E & I, Inc.
Project: PBOW

File ID: IR121703.ASC Date Analyzed: 12/17/03 Methods: SW846 6010B
QC Limits: 90 to 110 % Recovery Run ID: MA3609 Units: ug/l

Metal	CCV True	CCV Results	% Rec	CCV True	CCV Results	% Rec	CCV True	CCV Results	% Rec
Aluminum	40000	39200	98.0	40000	38800	97.0	40000	39600	99.0
Antimony	2000	2010	100.5	2000	2000	100.0	2000	2030	101.5
Arsenic	2000	1940	97.0	2000	1930	96.5	2000	1950	97.5
Barium	2000	2010	100.5	2000	1980	99.0	2000	2020	101.0
Beryllium	2000	2020	101.0	2000	2020	101.0	2000	2040	102.0
Cadmium	2000	2010	100.5	2000	2010	100.5	2000	2030	101.5
Calcium	40000	39900	99.8	40000	39800	99.5	40000	40200	100.5
Chromium	2000	1930	96.5	2000	1930	96.5	2000	1950	97.5
Cobalt	2000	1950	97.5	2000	1950	97.5	2000	1970	98.5
Copper	2000	1920	96.0	2000	1890	94.5	2000	1930	96.5
Iron	40000	40000	100.0	40000	39900	99.8	40000	40400	101.0
Lead	2000	1980	99.0	2000	1970	98.5	2000	2000	100.0
Magnesium	40000	40500	101.3	40000	40200	100.5	40000	40800	102.0
Manganese	2000	1970	98.5	2000	1960	98.0	2000	1990	99.5
Molybdenum									
Nickel	2000	2010	100.5	2000	2010	100.5	2000	2030	101.5
Potassium	40000	41500	103.8	40000	41000	102.5	40000	41900	104.8
Selenium	2000	2040	102.0	2000	2020	101.0	2000	2050	102.5
Silver	250	251	100.4	250	250	100.0	250	253	101.2
Sodium	40000	41200	103.0	40000	40200	100.5	40000	41400	103.5
Thallium	2000	1870	93.5	2000	1860	93.0	2000	1890	94.5
Tin	anr								
Vanadium	2000	1990	99.5	2000	1980	99.0	2000	2010	100.5
Zinc	2000	1920	96.0	2000	1930	96.5	2000	1940	97.0

(*) Outside of QC limits
(anr) Analyte not requested

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: F21096
Account: ITTNKNOX - Shaw E & I, Inc.
Project: PBOW

File ID: IR121703.ASC
QC Limits: 70 to 130 % Recovery

Date Analyzed: 12/17/03
Run ID: MA3609

Methods: SW846 6010B
Units: ug/l

Metal	CRI True	CRIA True	CRI Results	% Rec
Aluminum	400		363	90.8
Antimony	10		10.3	103.0
Arsenic	20		17.2	86.0
Barium	400		393	98.3
Beryllium	10		9.9	99.0
Cadmium	10		9.5	95.0
Calcium	2000		2000	100.0
Chromium	20		19.0	95.0
Cobalt	100		98.9	98.9
Copper	50		47.2	94.4
Iron	600		628	104.7
Lead	10		10.0	100.0
Magnesium	10000		9320	93.2
Manganese	30		30.1	100.3
Molybdenum	100			
Nickel	80		81.5	101.9
Potassium	10000		10300	103.0
Selenium	10		13.0	130.0
Silver	20		16.6	83.0
Sodium	10000		7490	74.9
Thallium	20		17.5	87.5
Tin	100		anr	
Vanadium	100		99.4	99.4
Zinc	40		40.2	100.5

(*) Outside of QC limits
(anr) Analyte not requested

INTERFERING ELEMENT CHECK STANDARDS SUMMARY
Part 1 - ICSA and ICSAB Standards

Login Number: F21096
Account: ITTNKNOX - Shaw E & I, Inc.
Project: PBOW

File ID: IR121703.ASC Date Analyzed: 12/17/03 Methods: SW846 6010B
QC Limits: 80 to 120 % Recovery Run ID: MA3609 Units: ug/l

Metal	ICSA True	ICSAB True	ICSA Results	% Rec	ICSAB Results	% Rec
Aluminum	500000	500000	508000	101.6	529000	105.8
Antimony		1000	-3.0		979	97.9
Arsenic		1000	-0.39		972	97.2
Barium		500	2.4		521	104.2
Beryllium		500	-1.0		503	100.6
Cadmium		1000	0.73		992	99.2
Calcium	500000	500000	454000	90.8	464000	92.8
Chromium		500	1.2		472	94.4
Cobalt		500	0.14		484	96.8
Copper		500	-3.8		531	106.2
Iron	200000	200000	197000	98.5	199000	99.5
Lead		1000	4.1		994	99.4
Magnesium	500000	500000	530000	106.0	552000	110.4
Manganese		500	0.29		482	96.4
Molybdenum		1000	-5.1		938	93.8
Nickel		1000	2.8		987	98.7
Potassium			-68		-480	
Selenium		1000	7.9		986	98.6
Silver		1000	-0.33		1080	108.0
Sodium			-930		74.2	
Thallium		1000	-8.4		925	92.5
Tin		1000	-8.1		919	91.9
Vanadium		500	1.4		502	100.4
Zinc		1000	1.9		902	90.2

(*) Outside of QC limits
(anr) Analyte not requested

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F21096
Account: ITTNKNOX - Shaw E & I, Inc.
Project: PBOW

File ID: H21219W1.PRN Date Analyzed: 12/19/03 Methods: SW846 7470A
Analyst: SL Run ID: MA3612
Parameters: Hg

	Time	Sample Description	Dilution Factor	PS Recov	Comments
	08:34	MA3612-ICV1	1		
	08:36	MA3612-ICB1	1		
	08:38	MA3612-CRI1	1		
	08:40	MA3612-CCV1	1		
	08:42	MA3612-CCB1	1		
	08:44	MP6152-MB1	1		
	08:46	MP6152-B1	1		
	08:48	F20978-1	1		(sample used for QC only; not part of login F21096)
	08:50	MP6152-D1	1		
	08:51	MP6152-S1	1		
	08:53	MP6152-S2	1		
	08:55	ZZZZZZ	1		
	08:58	ZZZZZZ	1		
	09:00	ZZZZZZ	10		
	09:02	ZZZZZZ	1		
	09:04	MA3612-CCV2	1		
	09:05	MA3612-CCB2	1		
	09:08	ZZZZZZ	1		
	09:10	F21096-1	1		
	09:12	F21096-1A	1		
---------->	Last reportable sample/prep for job F21096				
	09:13	ZZZZZZ	1		
	09:15	ZZZZZZ	1		
	09:17	ZZZZZZ	1		
	09:19	ZZZZZZ	1		
	09:21	ZZZZZZ	1		
	09:23	ZZZZZZ	1		
	09:24	ZZZZZZ	1		
	09:26	MA3612-CCV3	1		
	09:29	MA3612-CCB3	1		
---------->	Last reportable CCB for job F21096				
	09:31	ZZZZZZ	1		
	09:33	ZZZZZZ	1		
	09:35	ZZZZZZ	1		
	09:37	ZZZZZZ	1		

Accutest Laboratories Instrument Runlog
Inorganics Analyses

Login Number: F21096
Account: ITTNKNOX - Shaw E & I, Inc.
Project: PBOW

File ID: H21219W1.PRN
Analyst: SL
Parameters: Hg

Date Analyzed: 12/19/03
Run ID: MA3612

Methods: SW846 7470A

Time	Sample Description	Dilution Factor	PS Recov	Comments
09:38	MA3612-CCV4	1		
09:40	MA3612-CCB4	1		

Refer to raw data for calibration curve and standards.

7.2

7

BLANK RESULTS SUMMARY
Part 1 - Initial and Continuing Calibration Blanks

Login Number: F21096
Account: ITTNKNOX - Shaw E & I, Inc.
Project: PBOW

File ID: H21219W1.PRN
QC Limits: result < RL

Date Analyzed: 12/19/03
Run ID: MA3612

Methods: SW846 7470A
Units: ug/l

Metal	RL	IDL	ICB raw	final	CCB raw	final	CCB raw	final	CCB raw	final
Mercury	1.0	.022	-0.0090	<1.0	-0.010	<1.0	-0.013	<1.0	0.018	<1.0

(*) Outside of QC limits
(anr) Analyte not requested

7.2.1

7

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F21096
Account: ITTNKNOX - Shaw E & I, Inc.
Project: PBOW

File ID: H21219W1.PRN Date Analyzed: 12/19/03 Methods: SW846 7470A
QC Limits: 90 to 110 % Recovery Run ID: MA3612 Units: ug/l

Metal	ICV True	ICV Results	% Rec	CCV True	CCV Results	% Rec	CCV True	CCV Results	% Rec
Mercury	3.0	3.2	106.7	3.0	3.1	103.3	3.0	3.1	103.3

(*) Outside of QC limits
(anr) Analyte not requested

7.2.2

7

ACCUTEST.

CALIBRATION CHECK STANDARDS SUMMARY
Initial and Continuing Calibration Checks

Login Number: F21096
Account: ITTNKNOX - Shaw E & I, Inc.
Project: PBOW

File ID: H21219W1.PRN Date Analyzed: 12/19/03 Methods: SW846 7470A
QC Limits: 90 to 110 % Recovery Run ID: MA3612 Units: ug/l

Metal	CCV True	CCV Results	% Rec
Mercury	3.0	3.1	103.3

(*) Outside of QC limits
(anr) Analyte not requested

7.2.2

7

ACCUTEST. Laboratories

LOW CALIBRATION CHECK STANDARDS SUMMARY

Login Number: F21096
Account: ITTNKNOX - Shaw E & I, Inc.
Project: PBOW

File ID: H21219W1.PRN
QC Limits: 80 to 120 % Recovery

Date Analyzed: 12/19/03
Run ID: MA3612

Methods: SW846 7470A
Units: ug/l

Metal	CRI True	CRIA True	CRI Results	% Rec
Mercury	0.20		0.21	105.0

(*) Outside of QC limits
(anr) Analyte not requested

7.2.3

7

ACCUTEST.

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: F21096
Account: ITTNKNOX - Shaw E & I, Inc.
Project: PBOW

QC Batch ID: MP6148
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 12/17/03

Metal	RL	IDL	MB raw	final
Aluminum	200	6.6	-5.9	<200
Antimony	5.0	1.5	-4.5	<5.0
Arsenic	10	2.8	-2.4	<10
Barium	200	.5	-0.52	<200
Beryllium	5.0	.3	-1.1	<5.0
Cadmium	5.0	.3	-0.82	<5.0
Calcium	1000	3.8	-4.5	<1000
Chromium	10	.4	-1.6	<10
Cobalt	50	.5	-1.3	<50
Copper	25	.44	1.2	<25
Iron	300	7.1	-37	<300
Lead	5.0	1.2	2.6	<5.0
Magnesium	5000	9.9	-16	<5000
Manganese	15	.16	-0.70	<15
Molybdenum	50	.75		
Nickel	40	1.1	-1.5	<40
Potassium	5000	14	-180	<5000
Selenium	10	2	2.4	<10
Silver	10	.6	0.45	<10
Sodium	5000	150	-1200	<5000
Thallium	10	1.5	-4.7	<10
Tin	50	1.5		
Vanadium	50	.47	-2.0	<50
Zinc	20	.59	-1.7	<20

Associated samples MP6148: F21096-1, F21096-1A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: F21096
Account: ITTNKNOX - Shaw E & I, Inc.
Project: PBOW

QC Batch ID: MP6148
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 12/17/03 12/17/03

Metal	F21149-1 Original	DUP	RPD	QC Limits	F21149-1 Original	MS	Spikelot MPFLICP	% Rec	QC Limits
Aluminum	31.0	11.7	90.4 (a)	0-16	31.0	30200	29000	104.0	75-125
Antimony	1.9	0.0	200.0(a)	0-13	1.9	1090	1000	108.8	75-125
Arsenic	0.0	0.0	NC	0-12	0.0	4200	4000	105.0	83-116
Barium	8.3	7.1	15.6 (a)	0-13	8.3	4110	4000	102.5	82-116
Beryllium	0.0	0.0	NC	0-12	0.0	113	100	113.0	86-119
Cadmium	0.0	0.0	NC	0-13	0.0	107	100	107.0	80-115
Calcium	4520	4470	1.1	0-14	4520	30200	25000	102.7	75-125
Chromium	0.0	0.0	NC	0-12	0.0	406	400	101.5	82-120
Cobalt	0.0	0.0	NC	0-14	0.0	1040	1000	104.0	83-117
Copper	1.3	1.1	16.7 (a)	0-13	1.3	518	500	103.3	87-120
Iron	93.0	57.2	47.7 (a)	0-14	93.0	28300	27000	104.5	76-125
Lead	1.7	0.0	200.0(a)	0-10	1.7	1060	1000	105.8	84-118
Magnesium	2320	2300	0.9	0-15	2320	27200	25000	99.5	75-125
Manganese	7.1	6.9	2.9	0-13	7.1	1050	1000	104.3	75-125
Molybdenum									
Nickel	0.0	0.0	NC	0-10	0.0	1060	1000	106.0	81-121
Potassium	1570	1530	2.6	0-18	1570	24400	25000	91.3	76-125
Selenium	6.3	0.0	200.0(a)	0-13	6.3	4490	4000	112.1	84-121
Silver	1.3	0.0	200.0(a)	0-14	1.3	104	100	102.7	77-125
Sodium	3190	3080	3.5	0-10	3190	27100	25000	95.6	75-125
Thallium	0.0	0.0	NC	0-14	0.0	4320	4000	108.0	86-121
Tin									
Vanadium	0.0	0.0	NC	0-14	0.0	1050	1000	105.0	87-118
Zinc	0.0	0.0	NC	0-13	0.0	1040	1000	104.0	82-123

Associated samples MP6148: F21096-1, F21096-1A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) RPD acceptable due to low duplicate and sample concentrations.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: F21096
Account: ITTNKNOX - Shaw E & I, Inc.
Project: PBOW

QC Batch ID: MP6148
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 12/17/03

Metal	F21149-1 Original	MSD	Spikelot MPFLICP	% Rec	MSD RPD	QC Limit
Aluminum	31.0	30500	29000	105.1	1.0	20
Antimony	1.9	1090	1000	108.8	0.0	20
Arsenic	0.0	4170	4000	104.3	0.7	20
Barium	8.3	4090	4000	102.0	0.5	20
Beryllium	0.0	112	100	112.0	0.9	20
Cadmium	0.0	106	100	106.0	0.9	20
Calcium	4520	30500	25000	103.9	1.0	20
Chromium	0.0	405	400	101.3	0.2	20
Cobalt	0.0	1040	1000	104.0	0.0	20
Copper	1.3	518	500	103.3	0.0	20
Iron	93.0	28600	27000	105.6	1.1	20
Lead	1.7	1050	1000	104.8	0.9	20
Magnesium	2320	27500	25000	100.7	1.1	20
Manganese	7.1	1040	1000	103.3	1.0	20
Molybdenum						
Nickel	0.0	1060	1000	106.0	0.0	20
Potassium	1570	25500	25000	95.7	4.4	20
Selenium	6.3	4440	4000	110.8	1.1	20
Silver	1.3	104	100	102.7	0.0	20
Sodium	3190	28700	25000	102.0	5.7	20
Thallium	0.0	4300	4000	107.5	0.5	20
Tin						
Vanadium	0.0	1050	1000	105.0	0.0	20
Zinc	0.0	1040	1000	104.0	0.0	20

Associated samples MP6148: F21096-1, F21096-1A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

7.3.2

7

ACCUTEST Laboratories

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: F21096
Account: ITTNKNOX - Shaw E & I, Inc.
Project: PBOW

QC Batch ID: MP6148
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 12/17/03

Metal	BSP Result	Spikelot MPFLICP	% Rec	QC Limits
Aluminum	29900	29000	103.1	80-120
Antimony	1080	1000	108.0	80-120
Arsenic	4120	4000	103.0	80-120
Barium	4060	4000	101.5	80-120
Beryllium	111	100	111.0	80-120
Cadmium	105	100	105.0	80-120
Calcium	25600	25000	102.4	80-120
Chromium	400	400	100.0	80-120
Cobalt	1030	1000	103.0	80-120
Copper	509	500	101.8	80-120
Iron	28100	27000	104.1	80-120
Lead	1040	1000	104.0	80-120
Magnesium	24600	25000	98.4	80-120
Manganese	1020	1000	102.0	80-120
Molybdenum				
Nickel	1050	1000	105.0	80-120
Potassium	21900	25000	87.6	80-120
Selenium	4410	4000	110.3	80-120
Silver	103	100	103.0	80-120
Sodium	22600	25000	90.4	80-120
Thallium	4250	4000	106.3	80-120
Tin				
Vanadium	1040	1000	104.0	80-120
Zinc	1020	1000	102.0	80-120

Associated samples MP6148: F21096-1, F21096-1A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: F21096
Account: ITTNKNOX - Shaw E & I, Inc.
Project: PBOW

QC Batch ID: MP6148
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 12/17/03

Metal	F21149-1 Original	SDL 1:5	RPD	QC Limits
Aluminum	31.0	0.00	100.0(a)	0-10
Antimony	1.89	0.00	100.0(a)	0-10
Arsenic	0.00	0.00	NC	0-10
Barium	8.27	5.78	30.1 (a)	0-10
Beryllium	0.00	0.00	NC	0-10
Cadmium	0.00	0.00	NC	0-10
Calcium	4520	5070	12.0*(b)	0-10
Chromium	0.00	0.00	NC	0-10
Cobalt	0.00	0.00	NC	0-10
Copper	1.25	4.84	287.2(a)	0-10
Iron	93.0	0.00	100.0(a)	0-10
Lead	1.72	0.00	100.0(a)	0-10
Magnesium	2320	2300	0.7	0-10
Manganese	7.14	5.31	25.6 (a)	0-10
Molybdenum				
Nickel	0.00	0.00	NC	0-10
Potassium	1570	884	43.7*(b)	0-10
Selenium	6.34	0.00	100.0(a)	0-10
Silver	1.30	0.00	100.0(a)	0-10
Sodium	3190	1560	51.2 (a)	0-10
Thallium	0.00	0.00	NC	0-10
Tin				
Vanadium	0.00	0.00	NC	0-10
Zinc	0.00	0.00	NC	0-10

Associated samples MP6148: F21096-1, F21096-1A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested
(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).
(b) Serial dilution indicates possible matrix interference.

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: F21096
Account: ITTNKNOX - Shaw E & I, Inc.
Project: PBOW

QC Batch ID: MP6152
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 12/18/03

Metal	RL	IDL	MB raw	final
Mercury	1.0	.022	0.0	<1.0

Associated samples MP6152: F21096-1, F21096-1A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

7.4.1

7

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: F21096
Account: ITTNKNOX - Shaw E & I, Inc.
Project: PBOW

QC Batch ID: MP6152
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 12/18/03 12/18/03

Metal	F20978-1 Original	DUP	RPD	QC Limits	F20978-1 Original	MS	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	0.0	0.027	200.0(a)	0-20	0.0	3.2	3	106.7	62-131

Associated samples MP6152: F21096-1, F21096-1A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) RPD acceptable due to low duplicate and sample concentrations.

7.4.2

7

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: F21096
Account: ITTNKNOX - Shaw E & I, Inc.
Project: PBOW

QC Batch ID: MP6152
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 12/18/03

Metal	F20978-1 Original	MSD	Spikelot HGFLWS1	% Rec	MSD RPD	QC Limit
Mercury	0.0	3.3	3	110.0	3.1	15

Associated samples MP6152: F21096-1, F21096-1A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

7.4.2

7

ACCUTEST.

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: F21096
Account: ITTNKNOX - Shaw E & I, Inc.
Project: PBOW

QC Batch ID: MP6152
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 12/18/03

Metal	BSP Result	Spikelot HGFLWS1	% Rec	QC Limits
Mercury	3.0	3	100.0	80-120

Associated samples MP6152: F21096-1, F21096-1A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

7.4.3

7

ACCUTEST. Laboratories

Instrument Detection Limits

Job Number: F21096
Account: ITTNKNOX Shaw E & I, Inc.
Project: PBOW

Instrument ID: LEEMANHG2 Effective Date: 08/26/02

Analyte	IDL ug/l
Mercury	.022

The above applies to the following instrument runs:
MA3612

7.5

7

ACCUTEST Laboratories

Instrument Detection Limits

Job Number: F21096
Account: ITTNKNOX Shaw E & I, Inc.
Project: PBOW

Instrument ID: TJATRACE1 Effective Date: 04/15/02

Analyte	IDL ug/l
Aluminum	6.6
Antimony	1.5
Arsenic	2.8
Barium	.5
Beryllium	.3
Cadmium	.3
Calcium	3.8
Chromium	.4
Cobalt	.5
Copper	.44
Iron	7.1
Lead	1.2
Magnesium	9.9
Manganese	.16
Molybdenum	.75
Nickel	1.1
Potassium	13.8
Selenium	2
Silver	.6
Sodium	145
Thallium	1.5
Tin	1.5
Vanadium	.47
Zinc	.59

The above applies to the following instrument runs:
MA3609

Instrument Linear Ranges

Job Number: F21096
Account: ITTNKNOX Shaw E & I, Inc.
Project: PBOW

Instrument ID: TJATRACE1 Effective Date: 10/03/03

Analyte	Linear Range ug/l
Aluminum	1000000
Antimony	100000
Arsenic	50000
Barium	100000
Beryllium	50000
Cadmium	50000
Calcium	500000
Chromium	100000
Cobalt	100000
Copper	100000
Iron	1000000
Lead	100000
Magnesium	1000000
Manganese	50000
Molybdenum	100000
Nickel	100000
Potassium	1000000
Selenium	100000
Silver	1000
Sodium	250000
Thallium	100000
Tin	100000
Vanadium	100000
Zinc	100000

The above applies to the following instrument runs:
MA3609